



State of New Jersey

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SHAWN M. LATOURETTE
Acting Commissioner

SHEILA OLIVER
Lt. Governor

Via E-mail
June 11, 2021

Rocco Russomanno, Town Engineer
Town of Harrison
318 Harrison Avenue
Harrison, NJ 07029

Re: Review of Town of Harrison Combined Sewer Overflow Long Term Control Plan, Selection and Implementation of Alternatives Report – Appendix I
Town of Harrison, NJPDES Permit No. NJ00108871

Dear Mr. Russomanno:

Thank you for your submission dated October 1, 2020 entitled “Town of Harrison Combined Sewer Overflow Long Term Control Plan, Selection and Implementation of Alternatives Report”, as submitted, in a timely manner, to the New Jersey Department of Environmental Protection (the Department).

This report was submitted by the Passaic Valley Sewerage Commission (PVSC) on behalf of the Town of Harrison as “Appendix I” in the “Selection and Implementation of Alternatives for Long Term Control Planning for Combined Sewer Systems – Regional Report” (Regional Report), where it was prepared in accordance with Part IV.D.3.b.vi of the above referenced New Jersey Pollutant Discharge Elimination System (NJPDES) permit. The Regional Report serves to comply with the Long-Term Control Plan (LTCP) submittal requirements as due on October 1, 2020.

The Regional Report presents a “Regional Alternative” for all PVSC’s combined sewer communities as well as a “Municipal Alternative” which is shown in the individual appendices for each of its eight (8) member combined sewer municipalities. This subject letter serves to provide a response to Appendix I which is specific to the Town of Harrison whereas a response to the Regional Report is provided under separate cover.

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 June 2018 “System Characterization Report” (approved by the Department on April 12, 2019); the June 30, 2018 “NJCSO Group Compliance Monitoring Program Report” (approved by the Department on March 1, 2019); the June 2018 “Public Participation Process Report” (approved by the Department on March 29, 2019); the

June 2018 “Identification of Sensitive Areas Report” (approved by the Department on April 8, 2019) and the June 2019 Development and Evaluation of Alternatives Regional Report (DEAR) (approved by the Department on January 17, 2020).

The below represents the Department’s initial comments. The Department reserves the right to further comment on these issues. Comments below are organized by report section where the majority of the specific subject matter is discussed within those sections of the letter. Revisions to the Executive Summary may be required as a result of comments on specific sections of the report. Comments are as follows:

Executive Summary

Comment 1: Section ES.1, Background includes the following statement regarding the LTCP:

“This report has been developed cooperatively with the Passaic Valley Sewerage Commission (PVSC) Combined Sewer Overflow Group and is attached to the PVSC Regional Report (Regional Report). Accordingly, this report references the Regional Report and incorporates and makes use of information in the Regional Report without specifically duplicating that information.”

The Department acknowledges that Section A.1, Report Background includes a listing of the nine LTCP elements and the relevant sections of the relevant reports. Section A.1 also includes explanatory language for the nine LTCP elements to facilitate ease of understanding for public review and transparency. This information is helpful to understand the context of the report as are the various summaries of the supporting reports for the LTCP. While this comment does not necessitate a response, this information is noted for the Administrative Record.

Comment 2: Section ES.2, Control Approach and Level of Control includes the following statement regarding the LTCP:

“.....Under Part IV.G.4.f and the EPA’s Combined Sewer Overflow Control Policy (1994) the Town has elected to comply with the Presumptive Approach’s requirement for 85% capture of combined sewage entering the collection system during wet weather, as the targeted level of control. ...”

Section ES.4, Selected Plan then states the following:

“The Town has been diligently separating sewers over the past decades and more recently through redevelopment over the past 5 years. The separation work represents a significant investment on the part of the Town, this includes investments made directly by the Town for offsite improvements and well as the value of concessions provided by developers that could have gone to other efforts. The Town will continue these separation efforts to achieve their LTCP goals.”

Table ES-1 then includes the following:

Table ES-1: Summary of Overflows, Typical Year 2015 Baseline and Alternative 1

Outfall	Baseline 2015 (Typical Year)			Alternative 1 (Typical Year)			Change		
	# of Events	Volume (MG)	Duration (HR)	# of Events	Volume (MG)	Duration (HR)	# of Events	Volume (MG)	Duration (HR)
H-001A	26	2.3	129	25	2.1	123	-1	-0.2	-6
H-002A	26	2.3	214	24	2.3	211	-2	0.0	-3
H-003A	40	14.1	158	40	13.9	157	0	-0.1	-1
H-004A	5	0.2	23.2	0	0.0	0.0	-5	-0.2	-23
H-005A	30	7.4	208	0	0.0	0.0	-30	-7.4	-208
H-006A	35	11.2	190	33	10.7	187	-2	-0.5	-3
H-007A	37	9.0	109	37	9.0	109	0	0.0	0
Total	40	46.4	281*	40	38.0	277*	--	-8.4	-4*

***Town Wide Total**

The Department concurs that CSO reduction efforts subsequent to the issuance of the March 12, 2015 NJPDES CSO permit should “count” towards compliance with the objectives of the LTCP. This includes the completion of sewer separation for H-004A. However, provide additional information regarding the historical timeline for sewer separation for H-005A as well as the future timeline. See also Comment 10.

Comment 3: Section ES.2, Control Approach and Level of Control also includes the following statement:

“...The Town of Harrison’s CSO discharge to the Passaic River, which is designated as SE-2. Sampling and modeling indicate that Passaic River is compliant with pathogen water quality standards...”

With regard to the sampling data for the Baseline Compliance Monitoring Program see Comment 5 below. Regarding the phrase that modeling is compliant with pathogen water quality standards, know that the Department is in receipt of the “Calibration and Validation of the Pathogen Water Quality Model,” September 2020 as submitted by the NJ CSO Group. Because this model is currently pending review the Department maintains that it is premature to assert that current water quality meets criteria through the model. Revise as appropriate. See also Comment 9.

Comment 4: Section ES.4, Selected Plan describes that the Town of Harrison has been separating sewers over the past years and intends to utilize sewer separation as its primary CSO control alternative. This section states the following:

“Separation of CSO-004A’s 3.3 acre drainage areas has been completed. Harrison was issued a Minor Modification to their Permit on June 25, 2018 to reflect the separation and the removal of the outfall. The separation included the installation of water quality devices that the Town has assumed ownership of and maintenance responsibility for.

Separation of CSO-005A’s 87.1 acre drainage area has been partially completed with new storm and sanitary sewers installed from the upstream end of the drainage area to South Second Street effectively separating an area of 37.6 acres. The installation of new sanitary sewers connected directly to the PVSC interceptor has reduced the sanitary load, however, there will not be a meaningful reduction in CSO volume or frequency until the new storm sewers are extended past the regulator to the outfall. This will be accomplished when the remaining 49.5 acres are separated...”

For completeness describe which water quality devices were utilized as part of the sewer separation project. In addition, indicate if it is known if the Town intends to use the same or similar device(s) as part of the drainage basin associated with CSO-005A to ensure compliance with the Stormwater Management Rules at N.J.A.C. 7:8.

Section A, Introduction

Comment 5: Section A.5, Water Quality Requirements and Baseline Compliance Monitoring states the following:

“Sampling of the Passaic River was conducted as part of the Baseline Compliance Monitoring Report (BCMR). Three sampling locations were located adjacent to Harrison or immediately upstream and downstream of Harrison, identified as Baseline Compliance Monitoring Points 10 11, and B6, as depicted in Figure A-2. The data collected from these three monitoring locations is depicted on Figure A-3, Figure A-4 and Figure A-5. As discussed later, the receiving waters of the Passaic River adjacent to Harrison is meeting water quality standards for pathogens.”

Similarly, Section D.1 Introduction states:

“...the Passaic River adjacent to Harrison is compliant with water quality standards 100% of the time, therefore, the LTCP projects will have little impact to water quality in the Passaic River in term of frequency of attainment of water quality standards. There may be some reduction in terms of overall pollutant load...”

Ambient water quality data was the subject of the June 30, 2018 “NJCSO Group Compliance Monitoring Program Report.” As described in the Department’s March 1, 2019 letter regarding this report, the Department articulated concern regarding the fact that the rainfall totals for the sampling period of April 17, 2016 to April 28, 2017 were below normal conditions and that roughly half the data had qualifiers. However, the primary goal of the baseline monitoring is to provide a snapshot to characterize the water quality conditions in the NY/NJ Harbor Area to represent baseline and existing conditions. As a result, despite the limitations to the wet weather data set, the Department found that the recent data collection effort, in concert with the ongoing New Jersey Harbor Dischargers Group Monitoring Network, provided sufficient information for the purposes of data characterization for baseline and existing conditions and the Compliance Monitoring Program was approved. In fact, page 35 of the Compliance Monitoring Program report states the following:

“The [Baseline Compliance Monitoring Program] BCMP was not designed to provide an adequate data volume for assessing attainment of water quality standards, which would have required five samples per month at each sampling location to compute monthly geometric means.”

While the Department acknowledges that there are multiple data points for the sampling locations depicted in Figure A-3, Figure A-4 and Figure A-5, the Department can not discern whether or not there were five samples per month for the months presented. Present this data in tabular format or revise the statement that current data is compliant with water quality standards if less than five samples per month are available. In addition, clarify whether or not that this statement is intended to mean compliance with water quality standards for pathogens.

Comment 6: Section A.8, Public Outreach provides a thorough update of public outreach and input that has taken place subsequent to submission of the June 2018 Public Participation Process report as submitted and approved by the Department. Public outreach took place through three primary methods namely monthly

meetings of local community-based outreach groups (e.g., Harrison TIDE); meetings held by the regional PVSC CSO supplemental team; and through town council meetings. A summary of questions raised during some of these meetings has also been completed in Appendix I for completeness.

Future public participation 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. One 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.

Section B, Screening of CSO Control Technologies

Comment 7: Section B provides an overview of the DEAR and includes Table B-1: Source Control Technologies Summary Screening Table. As described within this table, flooding was a consideration in the selection of CSO control technologies. Provide additional detail as to any issues related to CSO related flooding and any areas prone to flooding within Harrison. Explain if this flooding is strictly related to sewer backups, stormwater flooding, or tidal inundation.

In addition, describe the areas prone to flooding and explain if this flooding is strictly related to sewer backups, stormwater flooding or tidal inundation. Flooding of combined sewage in streets is a public health concern and is not acceptable. The LTCP must address the elimination of street flooding where this should be the utmost priority.

Section D, Selection of Recommended LTCP

Comment 8: Section D.2.1, Performance Objective states the following:

“The Town of Harrison has elected to use the Presumptive Approach to comply with Part IV.G.4.f criteria ii of the NJPDES permit, more specifically to achieve 85% capture by volume of wet weather inflow, as follows:

- Elimination or the capture for treatment of no less than 85% by volume of the combined sewage collected in the Combined Sewer System (CSS) during precipitation events on a hydraulically connected system-wide annual average basis.”

Section D.3.2, Remaining Overflows includes Figure D-1, Sample Wet Weather Periods Graph as well as an explanation of the Total Wet Weather Volume Entering the CSS along with the percent capture equation including input values as follows:

“

- Total Wet Weather Volume Entering CSS – calculated from 2015 Baseline modeling results:

Formula:

$$\% \text{ Capture} = 1 - \left(\frac{\text{Overflow Volume}}{\text{Total Wet Weather Volume Entering CSS}} \right)$$

- Total Wet Weather Volume Entering CSS = 255.6 MG
- 2015 Baseline % Capture = $1 - \left(\frac{46.4 \text{ MG}}{253.8 \text{ MG}} \right) = 81.7\%$
- Alternative 1 % Capture = $1 - \left(\frac{38.0 \text{ MG}}{253.8 \text{ MG}} \right) = 85.0\%$

”

The derivation of percent capture is central to a review of this report. The Department notes that Harrison undertook additional combined sewer system monitoring under a NJDEP approved Quality Assurance Project Plan (QAPP) as detailed in Appendix C. This metering was used to enhance the calibration of the Harrison portion of the PVSC districtwide InfoWorks ICM model and can help ensure accuracy for the percent capture assessment.

Supplement this report with a detailed table of the numerical values utilized to derive these results in the tables presented in this section. Approval of this report hinges in part on the inputs and results of this equation being clearly demonstrated and reproducible. Note that the value of 255.6 MG appears to be in error whereas the value elsewhere in the report is listed as 253.8 MG.

Comment 9: Section D.3.3, Ability to Meet Water Quality Standards includes discussion of the results of the Pathogen Water Quality Model produced by PVSC. Specifically, this section concludes that the Passaic River adjacent to Harrison consistently meets water quality standards and that CSOs are a relatively small component of pathogen loadings as well as other conclusions. As described in Comment 3, the Department has not completed its review on this September 2020 report and these conclusions are premature. Clarify the status of the Department’s review of this report in this section.

Comment 10: Section D.3.5.5, Sewer Separation Costs states the following:

“...Based on the cost estimates the Town has invested \$11.1M in sewer separation (\$1M to separate CSO-004A and \$10.1M for partial separation of CSO-005A to date). The estimated value of the separation to be completed by the redevelopment is an additional \$15.3M. Thus, the Town is about 40% through making the total investment. If the redevelopment does not come to pass in a timely manner as discussed later in this report, the Town would be required [to] complete the separation. If the Town completes the separation, they may elect to only install a new storm or sanitary sewer system to complete the separation, rather than both a storm and sanitary sewer system as is being done through redevelopment. It is assumed that maintenance costs on the new systems would be similar to the cost of maintaining the existing system. There would however be additional costs associated with maintaining the water quality devices required at the stormwater discharge locations.”

In Section E.3.1, Affordability Impacts of the Proposed CSO Controls, Table E-3 is included as follows:

Table E-3: Harrison’s Selected CSO Controls

Wet Weather Control Types	Capital Costs	Incremental Annual O&M Costs
Green Infrastructure Program (future)	\$750,000	\$31,400
Sewer Separation (if not completed through redevelopment)	\$15,300,000	\$0.0
Total	\$16,100,000	\$31,400

The Department acknowledges that \$11.1M has already been invested in sewer separation and that this cost is being utilized to justify the proposed 20 year implementation schedule. However, as noted in Comment 1, it is unclear as to how the Town of Harrison would be eligible for an extended schedule based on the financial capability assessment if the costs may be borne by a developer in the future. Provide discussion as to why the analysis in Section E as proposed is justified or provide an alternate implementation schedule in Section F or in the Gantt chart in Section F.5, Implementation Schedule. See also Comment 12.

Section E, Financial Capability

Comment 11: Section E.3.4 Potential Impacts of the COVID-19 Pandemic in Affordability states the following:

“...The projections and conclusions concerning the affordability of the Municipal Control Alternative proposed in this SIAR by Harrison and Harrison’s financial capability to finance the CSO control program are premised on the baseline financial conditions of Harrison as well as the economic conditions in New Jersey and the United States generally at the time that work on this SIAR commenced...”

The methodology and assumptions are described where information is provided showing the projected O&M costs; debt service and capital expenditures; and revenue requirements. However, additional clarification is needed to conduct a complete analysis. Specifically, 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 12: Section E.3.4, Potential Impacts of the COVID-19 Pandemic in Affordability states the following:

“Given the current and likely continuing uncertainties as to the New Jersey and national economic conditions, Harrison will be reticent to commit to long term capital expenditures for CSO controls without the incorporation of adaptive management provisions, including provisions to revise and reschedule the long term CSO controls proposed in this SIAR based on emergent economic conditions beyond the permittees’ control. As detailed in Section F of Harrison’s SIAR, these provisions could include scheduling the implementation of specific CSO control measures to occur during the five-year NJPDES permit cycles. A revised affordability assessment should be performed during review of the next NJPDES permit to identify controls that are financially feasible during that next permit period.”

The Department agrees that financial capability and economic conditions are critical components of the LTCP review. As a separate process, the Department is currently conducting rulemaking for New Jersey’s Environmental Justice Law (N.J.S.A. 13:1D-157) as signed by Governor Murphy on September 18, 2020, as indicated on the Department’s website: <https://www.nj.gov/dep/ej/>.

As noted in this section, as well as in Section F.8, Adaptive Management, an Adaptive Management approach could serve as a compliance “check in” as the projects proceed and an Adaptive Management requirement could be a component of the next NJPDES permit renewal. The Department agrees that 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.

Section F, Recommended Long Term Control Plan

Comment 13: Section F.4, Implementation Cost Opinion includes Table F-1, Annual Costs of CSO LTCP expressed in 2020 Dollars. Describe what the costs for “permitting” are utilized for and why this value is constant except for Year 2040 and 2041.

Comment 14: Section F.5, Implementation Schedule includes a summary of the selected CSO control program where a summary of the schedule is included in Section ES.5, Operational Plan and Schedule as follows:

Years 1-10 – Green Infrastructure Program

Years 12-20 – Sewer separation of CSO-005A drainage area, provided it is not accomplished sooner through redevelopment.

Years 20 and 21 – System monitoring and verification of performance.

Each Permit Cycle – Review and update to Town Water Conservation ordinance(s)

The Department appreciates the proactive inclusion of Green Infrastructure where a specific amount of \$750,000 is proposed to be set aside where those costs could cover the installation of approximately 20 rain gardens as stated in Section D.3.5.6. As stated in Section D.4.3, Green Stormwater Infrastructure, this alternative was selected for inclusion in the LTCP based on its value for public outreach and education where it is also noted that the community’s awareness, understanding and appreciation of combined sewers is a key component in the public participation component of the LTCP. Note that an operations and maintenance plan as well as a clear delineation of the parties responsible for that maintenance in order to ensure that such features are properly maintained is required. Provide confirmation that the Town of Harrison will be responsible for green infrastructure maintenance.

Comment 15: Section F.5, Implementation Schedule, as excerpted above shows that sewer separation is not proposed to begin until Year 12. It is unclear why sewer separation is so delayed in the implementation schedule. Sewer separation would have the most significant impact on addressing a reduction in the continued discharge of pathogen loadings to the waterway via the discharge of combined sewage and should not be delayed until Year 12. As noted in Section F.5.3, Year 11-15, which includes a breakdown for the sewer separation project, Year 12 will include commencement of a proposed feasibility study to determine a route for the new sewer; Year 13 will include commencement of property acquisition, field work and the design process; Year 14 will begin the detailed design process; and Year 15 would include the acquisition of necessary property or easements. Section F.5.4, Years 16-20 further states that Year 16 will include the completion of the detailed design process; Year 17 will allow bids to be received and construction contracts to be awarded; Years 18 to 20 would be the construction of the separate sewer system; and Year 20 would be for monitoring the system for 2 years and to recalibrate the model. Based on this proposed timeline it would not be until Year 20 until the project would be completed. This is further illustrated in Section F.7, CSO Reduction Versus Time, where the proposed LTCP will not result in any reduction in CSOs flows until 2039. Revisit the schedule as the proposed schedule is not justified. In addition, more specificity is requested for the first five years of planned projects for inclusion into the next NJPDES permit.

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

Sincerely,



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CSO Team Leader
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