



State of New Jersey

PHIL MURPHY
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
Acting Commissioner

SHEILA OLIVER
Lt. Governor

Via E-mail
June 11, 2021

Tom Laustsen, Chief Operating Officer
Passaic Valley Sewerage Commissioners
600 Wilson Avenue
Newark, NJ 07105

Tim Boyle, Superintendent
Bayonne City Municipal Utilities Authority
610 Avenue C, Room 11
Bayonne, NJ 07002

Bridgite Goncalves, Chief Financial Officer
Borough of East Newark
34 Sherman Avenue
East Newark, NJ 07029

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

Richard Haytas, Senior Engineer
Jersey City Municipal Utilities Authority
555 Route 440
Jersey City, NJ 07305

Robert J. Smith, Town Administrator
Town of Kearny
402 Kearny Avenue
Kearny, NJ 07032

Kareem Adeem, Assistant Director of Public Works
City of Newark
239 Central Avenue
Newark, NJ 07102

Frank Pestana, Executive Director
North Bergen Municipal Utilities Authority
6200 Tonnelle Avenue
North Bergen, NJ 07047

Frederick Margron, Town Engineer
City of Paterson
111 Broadway
Paterson, NJ 07505

Re: Review of Selection and Implementation of Alternatives for Long Term Control Planning for Combined Sewer Systems – Regional Report
Passaic Valley Sewerage Commissioners, NJPDES Permit No. NJ0021016
Bayonne City Municipal Utilities Authority, NJPDES Permit No. NJ0109240
Borough of East Newark, NJPDES Permit No. NJ0117846
Town of Harrison, NJPDES Permit No. NJ0108871
Jersey City Municipal Utilities Authority, NJPDES Permit No. NJ0108723
City of Newark, NJPDES Permit No. NJ0108758
North Bergen Municipal Utilities Authority, NJPDES Permit No. NJ0108898
City of Paterson, NJPDES Permit No. NJ0108880
Town of Kearny, NJPDES Permit No. NJ0111244

Dear Permittees:

Thank you for your submission dated September 2020 entitled: “Selection and Implementation of Alternatives of the Long Term Control Planning for Combined Sewer Systems – Regional Report” (Regional Report) as submitted to the New Jersey Department of Environmental Protection (the Department). The regional 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) permits. The regional report serves to comply with the Long-Term Control Plan (LTCP) submittal requirements as due on October 1, 2020.

The “Selection and Implementation of Alternatives for Long Term Control Planning for Combined Sewer Systems – Regional Report” includes individual appendices developed by PVSC and each of its 8 member combined sewer municipalities. 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 and PVSC. This subject letter serves to provide a response to the Regional Report whereas a response to the individual appendices are provided under separate covers.

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 are as follows.

General Comment

This Regional Report outlines the recommended final selection of LTCP based on the 85% capture criterion being achieved across the PVSC combined sewer system. This Regional Alternative consist of the following three CSO controls:

- The construction of a parallel interceptor to the main interceptor.
- Secondary bypass at the PVSC WRRF to increase wet weather flow treatment capacity to 720 MGD.
- Local CSO control technologies required by each of the 8 member municipalities under the Regional Alternative.

Table H-5 highlights the differences and similarities between the Municipal and Regional Alternative CSO control technologies selected. While the comments in this letter focus mainly on the first two CSO control technologies, i.e., Parallel Interceptor + WRRF Secondary Bypass to 720 MGD, comments on the required local technologies are submitted under the individual comment letter for each of the municipalities. Specific

comments regarding the local control technologies as required by the Regional Alternative are addressed under the individual comment letters. Note without implementing the local control technologies, as required by the Regional Alternative, the 85% capture goal can not be attained.

Executive Summary

Comment 1: Section ES-3, Approach, includes the following statement:

“...The CSO Policy describes three major steps in the overall LTCP approach: system characterization, development and evaluation of alternatives, and selection and implementation of controls.”

The Department agrees that the CSO Control Policy describes these components to the LTCP process which are also outlined in Part IV.D.3.b of the NJPDES permit. However, another component of the LTCP process specified within the CSO Control Policy is Compliance Monitoring Program as outlined in Part IV.G.9 of the NJPDES permit. Clarify this statement in Section ES-3.

Comment 2: Section ES-3 also includes the following statement:

“...Each of the municipalities have selected the Presumption Approach. Under this approach, CSO controls are presumed to protect the water quality based requirements of the CWA if at least 85% of the combined sewage collected in the CSS during precipitation events is captured or treated, provided the permitting authority determines that such presumption is reasonable.”

The Department acknowledges that the permittees have selected the Presumption Approach namely item ii:

“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 2015 NJPDES CSO permit requires selection of either the Presumption Approach or the Demonstration Approach. The Department acknowledges that the permittees have selected the Presumption Approach as shown above.

Comment 3: Section ES-7, Recommended Long Term Control Plan, includes the following statement:

“Since the submission of the Regional DEAR, PVSC and the eight other Permittees have conducted several meetings to discuss the decided upon two options for the recommended LTCP. The first is the Municipal Alternative, where each Permittee independently implements CSO control technologies to achieve no less than 85% capture by volume of wet weather flow within their geographic boundary’s combined sewer system. Secondly, there is the Regional Alternative where the 85% capture criterion is achieved across the PVSC District as a combined effort of all the Permittees. Not all Permittees will reach 85% capture individually in the Regional Alternative, but the combination of CSO control technologies used across the entire region will meet this criterion. This alternative primarily consists of two major improvements: 1) construction of a parallel interceptor the main interceptor, and 2) construction of a secondary bypass at the PVSC Water Resources Recover[y] Facility (“WRRF”) which increases wet weather flow treatment capacity to 720 MGD. These improvements will then be coupled with local CSO control technologies in order to constitute the entire Regional Alternative.”

It is then further stated:

“Table ES-1 summarizes the alternative (either the Municipal Alternative or the Regional Alternative) that each Permittee has selected. For those permittees that have selected the Regional Alternative, those Permittees are committing to working towards a negotiated cost allocation/sharing Agreement for the Regional Alternative (prior to beginning the implementation of the Regional Alternative). If these cost allocation/sharing negotiations are not successful, each of these Permittees would then implement the Municipal Alternative as discussed in each of the Permittee’ individual Selection and Implementation of Alternatives Reports included in **Appendices F** through **N**.”

The due date for the LTCPs was October 1, 2020 where all CSO combined sewer municipalities have tentatively selected the Regional Approach, with the exception of Kearny who accepted the Municipal Approach as specified in Table ES-1, Permittee Alternative Selection.

Once all technical comments have been resolved, it is the Department’s intent to issue draft NJPDES permits with the selected projects and the final NJPDES permit based on the selected approaches included in the LTCPs as certified by the individual permittees. The NJPDES CSO permit at Part IV.D.3.b.vi requires submission of an approvable LTCP. Those municipalities that have selected the Regional Alternative must resolve any implementation issues relating to the cost-sharing plan in order to ensure that the plan is viable and to ensure the development of an appropriate NJPDES permit. In sum, any issues relating to implementation must be resolved prior to approval of the LTCP. While this comment does not necessitate a response at this time, the Department hereby notes this information for the Administrative Record.

Comment 4: Table ES-2 as entitled “Regional PVSC Treatment District LTCP CSO Control Technologies” includes columns for the CSO Control Technology as well as the Quantity/Size and Unit. While it is understood that the CSO Control Technologies do have different units, a footnote or description should be included to explain that these units do not allow a direct comparison of any resultant reduction in CSO volume based on implementation of the control technologies.

Comment 5: The following is stated in Section ES-9, Implementation Schedule:

“...This schedule assumes that a regional cost-sharing approach is negotiated by the participating municipalities...In addition to the capital improvements presented in **Table ES-3**, it is anticipated that negotiations for regional cost sharing between participating Permittees will span a 6-month period. The negotiations are not expected to affect the overall implementation schedule for the program as design and implementation of projects, particularly Green Infrastructure, sewer separation, and I/I reduction projects, common to both the Regional and Municipal Plans can proceed while negotiations are underway.”

See Comment 3 above.

Section A, Introduction and Background

Comment 6: In Section A.2, Title of Plan and Approval, a signature page is included for Marc Ferko of the Office of Quality Assurance. Note that the Office of Quality Assurance is not required to sign off on this LTCP and this can be removed from Section A.2 as well as from Section A.4.

Comment 7: Regarding the certification page included in Section A, note that 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”.

The Department acknowledges that a modified version of the above referenced certification statement is included in the report and has been signed consistent with the version utilized in other previous reports.

Section B, Regulatory Requirements

Comment 8: Under Section B.2.1, Nine Minimum Controls, the Nine Minimum Controls (NMCs) are listed including item 4 which is “Maximization of flow to the wastewater treatment plant.” While the Department acknowledges that bypass is an important element of the LTCP, this CSO control also works toward the goal of maximizing flow to the wastewater treatment plant. While this comment does not necessitate a response at this time, the Department hereby notes this information for the Administrative Record.

Comment 9: Under Section B.5, Need for Regional Approach, the following is stated:

“Although the CSO Permittees own and maintain independent yet hydraulically connected sections of the CSS within the PVSC Treatment District, they have acknowledged the need for a regional approach. The PVSC CSO communities have collaborated and worked cooperatively to provide consistency in the development, selection, and implementation of their respective LTCPs and Regional LTCP alternatives per the requirements of their NJPDES permits, as enumerated in Section B.2.”

This statement should be clarified to explain that Kearny will be utilizing a municipal approach.

Section C, Existing Conditions

Comment 10: Under Section C.2, PVSC Treatment District Area, the following is stated:

“The PVSC Treatment District is comprised of combined and separate sewer areas that contribute flow to the PVSC WRRF. The combined sewer areas include several different municipalities who own and operate the CSSs and the combined sewer outfalls located within their jurisdiction. Separate sewer areas comprise the majority of the drainage area but only contributes approximately 40 percent of the flow to the PVSC WRRF. **Figure C-2** shows the municipalities and the type of sewer network they operate.”

Combined sewers serve eight of the municipalities within the PVSC Treatment District and collect surface runoff from the combined sewer service area. The total combined area is approximately 22,099 acres and makes up approximately 26 percent of the Total Combined Sewer Service Area.”

Clarify the estimation of 22,099 acres which make up approximately 26% of the total sewer service area.

Comment 11: Under Section C.3.4, Baseline Compliance Monitoring Program, the following is stated:

“A review indicated that the data collected under the BCMP is sufficient for the intended goal of calibrating the water quality model to be used for PVSC and NJCSO communities’ LTCPs.”

While a work plan for the Pathogen Water Quality Model (PWQM) has already been submitted, the calibration of this model is the subject of the report entitled “Calibration and Validation of the Pathogen Water Quality Model,” September 29, 2020 as submitted by the NJ CSO Group where this report is currently under review by the Department. As noted in more detail in Comment 15 below, the BCMP did have data limitations. The Department reserves the right to further evaluate whether or not the data collected under the BCMP is sufficient for the intended goal of calibrating the water quality model as part of its subsequent review of the September 2020 report. Revise this to clarify that the PWQM is currently pending review.

Comment 12: Under Section C.5, Sensitive Areas, the following is stated:

“In compliance with this condition, PVSC prepared a Sensitive Areas Report on behalf of the Permittees. The study involved a comprehensive review of online databases, direct observations and correspondence with regulatory agencies and local environmental organizations to identify potential sensitive areas within the PVSC Treatment District and in the associated receiving waters.”

While the above excerpt accurately characterizes the Sensitive Areas Report dated June 2019, refer to the Department’s letter dated April 8, 2019.

Section F, Pollutant Loads and Predicted Water Quality

Comment 13: In Section F.2.3, Baseline Percent Capture, the following table is included:

Table F-2: Typical Year Percent Capture

	PVSC WRRF
Total CSO Volume (MG)	4.563
% Capture	69%

Note: Each one of the eight municipalities further refined their baseline models after the submission of their SCR. The flow and CSO values reported in the SIAR reflect the most up-to-date results.

While this table provides the baseline, the resultant calculations for percent capture are broken down for each combined sewer municipality and are included later in the document under Table H-7, Percent Capture and Volume Reduction for each Permittee for the Regional and Municipal Alternatives. However, in the “Development and Evaluation of Alternatives for Long Term Control Planning for Combined Sewer Systems – Regional Report” (DEAR) dated June 2019, baseline capture values of 83.7% capture for the PVSC Interceptor Communities and 65.3% for the Hudson Force Main Communities are identified in Table C-8, Typical Year Capture. Clarify how the 69% capture was derived. In addition, clarify any changes to the model or resultant baseline percent capture values as included in the “Note” in Table F-2 above.

The Department acknowledges that the permittee has selected the Presumption Approach as a means of compliance namely 85% capture of wet weather. As a result, the derivation of percent capture is central to a review of this report. Please supplement this report with a detailed table of the numerical values utilized within the equation that was used to derive these results. Approval of this report hinges in part on the inputs and results of this equation being clearly demonstrated and reproducible.

Comment 14: In accordance with the Federal CSO Control Policy, the assessment of system-wide CSO control alternatives is required to be based on an “average” or “typical” rainfall year. However, in Section F.3.1.1., Baseline Attainment, the following is stated:

“... River flow was used in the analysis to choose the typical year, so river flow and water elevations for 2004 are part of the baseline condition.”

While river flow was a factor in the initial proposal for the Typical Year analysis as presented to the Model Evaluation Group and the Department, river flow was subsequently eliminated from the factors as appropriately shown in Table C-10. Address accordingly.

Comment 15: Section F.3.1.3, Projection Analysis discusses attainment and non-attainment of water quality standards as part of a gap analysis including the use of a 100% CSO Control scenario. As follows:

“...If CSOs were the primary reason for non-attainment of water quality criteria, then some level of CSO control between baseline conditions and 100% control could conceivably result in attainment of the criteria. This level of CSO control would close the gap between attainment and non-attainment of water quality criteria. In many cases, other sources of bacteria, such as stormwater, are large enough that even 100% CSO control is not enough to meet criteria. In this case the 100% CSO Control scenario shows the highest level of water quality that can be achieved by CSO control only, and additional control scenarios can be analyzed that can be incorporated into a cost-benefit analysis.”

As described in the Department’s March 1, 2019 letter regarding the Compliance Monitoring Program, 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. However, regarding the above excerpts, the Department disagrees with the statement that an analysis can be conducted regarding the attainment against water quality standards given available data. In fact, this is stated on page 35 of the Compliance Monitoring Program report as follows:

“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.”

Based on the above, revise the statement regarding CSO discharges and the attainment against water quality standards.

Section G, Public Participation

Comment 16: In Section G.2.1, PVSC Sewerage District Supplemental CSO Team, there is a likely error in that the term “Error! Reference Source Not Found” is shown on page 85. Note that this term is also included twice on page 108. Please correct.

Comment 17: In Section G.3, Future Public Participation, the following is stated:

“PVSC and each of the CSO Permittees are committed to active public participation and consultation during the planning, design and construction of CSO control projects. Future public participation will be designed to educate the public about the status of the program; progress in implementing the program; to inform neighborhood residents and businesses before, during, and after construction; and to report on progress in reducing CSOs and improving water quality as a result of the program on an as-needed basis as determined necessary by the Permittee.”

It is further stated later in Section H.4.4, Non-Monetary Factors:

“For instance, throughout the LTCP process it was clear that the public desired a plan that would include green infrastructure. The use of green infrastructure provides the community with several benefits including increased green space, reduction of heat island effect and the potential for green jobs.”

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. 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. In addition, 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.

Section H, Selection of Recommended LTCP

Comment 18: Regarding the selected CSO projects, note that 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 19: Provide additional detail as to any issues related to CSO related flooding for the combined sewer municipalities and clarify if the implementation of the Regional Alternative will address any ongoing flooding concerns since flooding of combined sewage in streets is a public health concern and is not acceptable. Note that the LTCP must address the elimination of street flooding where this should be the utmost priority.

Comment 20: Section H.3.5, Comparison of the Two Approaches, includes Table H-1, Comparison of the Presumption Approach and Demonstration Approach. This table implies that water quality sampling of CSOs and receiving waterbodies is only required for the Demonstration Approach. Note that the Presumption Approach also requires an assessment of ambient data under the Compliance Monitoring Program as per Part IV.G.9 of the NJPDES permit. Specifically, 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. Note that the monitoring locations, sampling frequency and the extent of monitoring of the PVSC Supplemental Monitoring Network were designed for the purpose of developing a receiving water model to address the following objectives:

1. Assess attainment of water quality standards
2. Define the baseline conditions in the receiving water
3. Assess the relative impacts of CSOs
4. Gain sufficient understanding of the receiving water to support evaluation of proposed CSO control alternatives
5. Support the review and revision, as appropriate, of water quality standards.

In addition, as stated in Part IV.G.9.c of the NJPDES CSO permit:

“c. The above monitoring must be completed for the baseline CMP Report and then at intervals as determined by the Department based on the implementation schedule in the approved LTCP but no less than once per permit cycle...”

This monitoring will be utilized in addition to other tools and measures that will be outlined in the next NJPDES CSO permit renewal in order to track compliance as CSO measures are incorporated. While a response to this comment is not required, the Department wishes to note that the regional ambient monitoring effort must ensure compliance with these permit conditions.

Comment 21: Under Section H.4.3, Ability to Meet Water Quality Standards, the following is stated:

“Based upon the findings of previous studies and reports submitted and approved by NJDEP (including the System Characterization Report, the Receiving Water Quality Modeling Report, the Baseline Compliance Monitoring Program Report, and the Pathogen Water Quality Modeling Report, among others), the CSO discharges are not precluding the attainment of water quality standards in any of the receiving waters PVSC or its member communities discharge to under baseline conditions.”

The Department disagrees with the assertion that available information demonstrates that the alternatives will result in full attainment of the existing pathogen water quality criteria as well as the statement that the remaining CSO discharges will not preclude the attainment of the water quality standards for bacteria or the designated uses of the receiving waters.

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. However, regarding the above excerpt, the Department disagrees with the statement that an analysis can be conducted regarding the attainment against

water quality standards given available data. In fact, this is stated on page 35 of the Compliance Monitoring Program report as follows:

“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.”

Based on the above, delete or revise the statement regarding CSO discharges and the attainment against water quality standards.

Comment 22: In Section H.4.4, Non-Monetary Factors, Section H.4.5, Cost Opinion and Section H.5, Description of the Recommended LTCP there are references to municipalities choosing between the Regional and Municipal Alternatives. Section H.5, Description of the Recommended LTCP states the following:

“**Table H-4** summarizes the alternative (either the Municipal Alternative or the Regional Alternative) that each Permittee has selected. For those Permittees that have selected the Regional Alternative, those Permittees are committing to working towards a negotiated cost allocation/sharing Agreement for the Regional Alternative prior to beginning the implementation of the Regional Alternative. If these cost allocation/sharing negotiations are not successful, each of these Permittees would then implement the Municipal Alternative as discussed in each of the Permittees’ individual Selection and Implementation of Alternatives Reports included in **Appendices F-N**. Any Permittee selecting the Regional Alternative may instead choose to implement their Municipal Alternative at any time during the negotiations.”

Once all technical comments have been resolved, it is the Department’s intent to issue draft NJPDES permits with the selected projects and the final NJPDES permit based on the selected approaches included in the LTCPs as certified by the individual permittees. The NJPDES CSO permit at Part IV.D.3.b.vi requires submission of an approvable LTCP. Those municipalities that have selected the Regional Alternative must resolve any implementation issues relating to the cost-sharing plan in order to ensure that the plan is viable and to ensure the development of an appropriate NJPDES permit. In sum, any issues relating to implementation must be resolved prior to approval of the LTCP. While this comment does not necessitate a response at this time, the Department hereby notes this information for the Administrative Record.

Comment 23: Section H.5, Description of Recommended LTCP includes Table H-7:

Table H-7: Percent Capture and Volume Reduction for each Permittee for the Regional and Municipal Alternatives

Municipality	Baseline		Municipal Alternative		Regional Alternative	
	Annual CSO (MG)	% Capture	Annual CSO (MG)	% Capture	Annual CSO (MG)	% Capture
Bayonne	747	49%	205	86%	319	78%
East Newark	17	77%	11	85%	11	85%
Harrison	47	82%	38	85%	38	85%
Jersey City	1557	72%	550	88%	1145	78%
Kearny	255	75%	99	85%	99	85%
Newark	1319	77%	686	88%	174	96%
North Bergen	274	77%	176	86%	186	85%
Paterson	353	82%	283	85%	283	85%
Totals – System Wide CSO / Percent Capture	4,569	69%	2,048	86%	2,255	85%

Note: Each one of the eight municipalities further refined their baseline models after the submission of their SCR. The flow and CSO values reported in the SIAR reflect the most up-to-date results.

Describe how the regional and each municipality’s percent capture was calculated. In addition, expand on the “Note” included under Table H-7 to ensure transparent documentation of any percent capture values. The Department acknowledges that the percent capture results for the Regional Report have been calculated based upon a hydraulically connected system.

Section I, Financial Capability

Comment 24: In Section I.1, Introduction, the following is stated:

“While a regional alternative would result in lowered overall costs for the control of CSOs within the PVSC service area, the basis of this allocation remains under discussion as of the writing of this report. Under this approach both the costs of the regional facilities such as a relief interceptor and the resultant savings would be allocated amongst the PVSC municipalities with combined sewer systems. As the basis of this allocation remains under discussion as of the writing of this SIAR, this document focuses on implementation of the Municipal Control Alternative. Should the Permittees come to agreement on the cost allocation for the Regional Control Plan, the FCA will be revisited to reassess the affordability and schedule for implementation of the LTCP.”

Similarly, it is stated later in the document in Section J.4, Financial Impacts:

“The financial impacts and Financial Capability Assessment associated with the Recommended Regional Plan for each Permittee cannot be finalized until the cost allocation negotiations associated with this plan are completed as this will dictate the share of the total \$1,175 million capital cost each municipality will pay. PVSC is not a municipality involved in the negotiations, but is providing the WRRF Secondary Bypass, so this cost excludes the \$45 million for the bypass. It can be stated that the financial impacts of the Regional Plan will be less than or equal to that presented for the Municipal

Plan for each Permittee given the significant cost savings available. The Financial Capability Assessment for each Permittee under the Municipal Plan is presented in the individual SIARs for each municipality appended to this report.”

It is unclear how the Department can accurately assess the financial capability assessment for each town, with the exception of the Town of Kearny who has chosen the Municipal Alternative, and the resultant 40-year schedule for the Regional Alternative, if the overall price tag is not yet finalized. Please clarify.

Comment 25: Section I.5.4, Potential Impacts of the COVID-19 Pandemic on Affordability:

“Given the current and likely continuing uncertainties as to the New Jersey and national economic conditions, PVSC and the combined sewer municipalities 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 LTCP based on emergent economic conditions beyond their control. 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/>

The Department agrees that 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 a future NJPDES permit action. 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 J, Implementation of the Recommended Long Term Control Plan

Comment 26: In Section J.2, Regional Alternative Agreement, the following is stated:

“...It is important to note that the proposed 6-month schedule for negotiations does not equate to an extension of time before implementation needs to begin. There are many projects that can be initiated while negotiations are finalized, including Green Infrastructure, separation and I/I reduction projects, which can be broken into smaller design contracts and phased in a way that allows progress on implementation while negotiations are underway. Additionally, design of projects common to both the Regional and Municipal plans can proceed as needed to meet schedule milestones for projects planned in the first 5-year permit cycle.”

A similar statement is included in Section J.5, Implementation Schedule. The Department agrees that the NJPDES permit will contain a list of projects and a detailed schedule for the first five year permit cycle; however, there will also be a listing of longer term projects for subsequent NJPDES permit cycles to ensure consistency with any approved LTCP. As stated previously, those municipalities that have selected the

Regional Alternative must resolve any implementation issues relating to the cost-sharing plan in order to ensure that the plan is viable and to ensure the development of an appropriate NJPDES permit.

Comment 27: Table J-1 is entitled “Implementation Schedule of Regional Alternative with 5-year Permit Cycles” which includes a useful breakdown of projects in five year increments. Provide a Gantt chart to indicate the start and end time for each of these projects as well as any overlap between projects.

Comment 28: In Section J.6, Basis for LTCP Development and Implementation Schedule, the following is stated:

“The LTCP development and implementation schedule is based on the construction schedule for each project, and the financing schedule for the overall LTCP. The schedule of projects proposed within each municipality is based on that proposed by each respective municipality in their Municipal Plan SIAR for that particular project. The exception to this is the pump station and force main upgrade proposed by Bayonne, which is not part of their Municipal plan. These pump station and force main improvements are proposed in the first 10 years of the program given their ability to convey more flow to the PVSC WRRF. The Regional Plan allows municipalities to reduce capital improvements within their municipal boundaries due to the benefit provided by the Parallel Interceptor and WRRF bypass. Therefore, some projects from the Municipal Plan are common to both the Municipal Plan and the Regional Plan, while others are reduced in size or eliminated.”

Regarding the excerpt above, it appears that the pump station and force main upgrade are part of the Municipal Alternative as identified in Table H-5. Correct accordingly.

Comment 29: In Section J.7, CSO Reduction Versus Time, the following is stated:

"The approximate CSO reduction improvements completed over each 5-year permit cycle is presented in **Figure J-1**. These improvements will provide a significant CSO reduction that is front loaded over the first 5 to 15 years. The greatest CSO reduction of any individual project is achieved through the construction of the PVSC WRRF secondary bypass, which will be completed by 2026. This project, combined with pump station and force main improvements in Bayonne and storage, separation, GI and I/I reduction projects in various communities is projected to reduce CSO by approximately 1.2 billion gallons (BG) by 2026..."

Figure J-1 is included as follows:

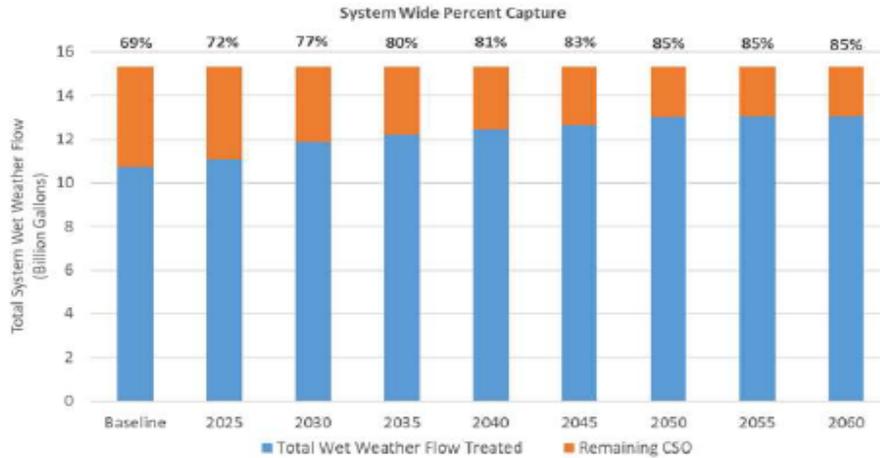


Figure J-1: Approximate System Wide CSO Reduction Improvements Completed Over Each 5-year Permit Cycle

The Department agrees with the front loaded nature of the Regional Alternative and concurs that projects with the most benefit for increasing wet weather capture should be prioritized. Specifically, the Department maintains that the bypass project and parallel interceptor are critical to the reduction of CSOs in the short term and to ensure that the plant has the ability to treat additional wet weather flows. It is unclear why the bypass project is slated for an alternate timeframe of 2026 to 2031 since the bypass was already approved in a NJPDES permit action dated December 10, 2019. In addition, the bypass has been the topic of numerous CSO supplemental team meetings and is acknowledged in the EPA Administrative Order CWA 02-2018-3009. Similarly, construction and implementation of the parallel interceptor is critical to the projected percent capture under the Regional Alternative where many of these municipalities are Environmental Justice communities. Revisit the timeline for the bypass and parallel interceptor projects.

Comment 30: In Section J.8, Performance Criteria, the following is stated:

“...For the selected Presumption Approach, the National CSO Policy and the NJPDES Permit requires an 85% wet weather capture on an annual system wide basis for the Typical Year. Wet weather capture will be determined on a system wide basis using an updated H&H model that will be calibrated using post construction monitoring data and evaluated over the Typical Year, which has been previously approved by the NJDEP. This is the performance criteria that will be used for the LTCP capital projects.”

The Department agrees that a rerun of the H&H model following completion of significant projects is appropriate to continually monitor percent capture over time and to provide an assessment of compliance against 85% wet weather capture. The Department 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.

Section K, Post Construction Compliance Monitoring Plan

Comment 31: Section K.2, Overview of Approach, the following is stated:

“For the purposes of addressing the NJPDES Permit PCCMP ambient monitoring requirements, PVSC and the Permittees plan to utilize water quality sampling data collected by the existing NJ/NY Harbor

Dischargers Group sampling program to supplement the findings of the collection system modeling and to support the water quality modeling efforts, to be performed upon the implementation of all CSO control measures to verify that the remaining CSOs are not precluding the attainment of water quality standards for pathogens. For purposes of defining the implementation of all CSO control measures, implementation of all CSO Control measures is defined as the implementation of all projects within NBMUA, Guttenberg, and all NJ CSO Group Permittees.”

It is then further stated:

“As mentioned in Section F of this report, results of the 100% control conditions during the typical rainfall year (2004) for the receiving yielded mixed results and indicate that CSO control will not improve attainment of the criteria for pathogens. Post construction monitoring will serve its role in demonstrating that CSOs will be reduced to the levels predicted in the recommended plan based on the typical year conditions to meet the CWA requirements. Pathogen loads, contributed by the remaining CSOs, based on post construction monitoring will be compared to non-CSO loads to the receiving waters estimated in the LTCP (or Baseline Compliance Monitoring Report previously approved by NJDEP). Any reductions in non-CSO loads as a result of then-current water quality compliance requirements in the receiving waters will also be considered. This information, as developed and made available during post construction monitoring, will be used to assess CSO compliance with the current NJPDES Permit and WQS.”

Revise this statement that the CSO discharges are not precluding compliance with current water quality standards under baseline conditions.

Comment 32: Table K-1 is included in Section K.5, Post-Construction Compliance Monitoring Data. This table refers to North Bergen and Guttenberg as the relevant municipalities which appears to be an error since this is the PVSC system. Revise accordingly.

Comment 33: In Section K.6.1, Approach, the following is stated:

“PVSC and the Permittees will evaluate the performance of the CSO control measures through the use of its H&H model. The following steps will be used to determine compliance with the Performance Criteria:

1. Collect flow monitoring and rainfall data during post-construction monitoring period of each phase of CSO control measures. Perform QA/QC on the data.
2. If needed, once every five years, 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 this LTCP.
3. Recalibrate and/or validate the updated H&H model, if needed, using the flow and rainfall data collected during the 12-month post-construction monitoring period.
4. Perform continuous simulation using the updated H&H model for the typical year (2004) and calculate percent capture for verification of compliance with milestone CSO reductions towards the 85% capture requirements of the Presumption Approach.”

Regarding item 1, In order to assess trends associated with the effects of climate change, the Department is evaluating a requirement to install flow meters at certain CSO regulators or outfalls to assess CSO trends over time in the next NJPDES permit for this facility dependent on the timing of CSO improvements. 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 regulators or 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, to help inform future model runs, and/or to provide updated measurements of volume, frequency and duration. Address the viability of flow meters to measure flow trends for key CSO outfalls.

Regarding item 3, in accordance with Adaptive Management since significant reductions in percent capture will likely occur prior to 2026, the next NJPDES permit may require a rerun of the H&H model to provide an assessment of compliance against the minimum 85% wet weather capture requirement. However, note that any effort to recalibrate the H&H model should be performed after consultation with the Department. Revise accordingly.

Comment 34: Section K.7, Future Regulatory Requirements, states the following:

“Given the impact of upstream loading, it is recommended that any future regulatory effort to further reduce bacteria loadings to the receiving streams be assigned to background and non-CSO contributors.”

This statement seems misplaced in the CSO LTCP as it refers to regulatory efforts that extend beyond the context of CSO controls. Revise accordingly.

Section L, Revision of Operation and Maintenance Plans

Comment 35: As noted within the LTCP, 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.

Please incorporate these changes to the report and submit a revised version of the regional report 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, appearing to read "Dwayne Kobesky". The signature is written in a cursive, slightly slanted style.

Dwayne Kobesky
CSO Team Leader
Bureau of Surface Water & Pretreatment Permitting

- C: Marzooq Alebus, Bureau of Surface Water and Pretreatment Permitting
Teresa Guloy, Bureau of Surface Water and Pretreatment Permitting
Joseph Mannick, Bureau of Surface Water and Pretreatment Permitting
Susan Rosenwinkel, Bureau of Surface Water and Pretreatment Permitting
Adam Sarafan, Bureau of Surface Water and Pretreatment Permitting
Stephen Seeberger, Bureau of Surface Water and Pretreatment Permitting
Brian Salvo, Bureau of Surface Water and Pretreatment Permitting