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SHAWN M. LATOURETTE
Acting Commissioner

Via E-mail
June 11, 2021

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

Re: Review of Jersey City Municipal Utilities Authority Selection and Implementation of Alternatives Report – Appendix J
Jersey City Municipal Utilities Authority (JCMUA), NJPDES Permit No. NJ00108723

Dear Mr. Haytas:

Thank you for your submission dated March 2020 entitled "Review of Jersey City Municipal Utilities Authority 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 Jersey City Municipal Utilities Authority as "Appendix J" 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 J which is specific to Jersey City Municipal Utilities Authority 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 are as follows.

Cover Page

Comment 1: While the cover page of the report includes a date of October 2020, the second page of Appendix J shows a date of March 2020 which appears to be an error. In addition, the header of the report references January 2020. The Department received this report in a timely manner on October 1, 2020. Revise if appropriate.

Section A, Introduction

Comment 2: Section A, Introduction includes a description of various components of Part IV.G. of the NJPDES CSO permit in a bulleted format. However, this section references the "CSO General Permit" whereas the existing March 12, 2015 NJPDES permit is an individual NJPDES CSO permit. References to a general permit are also included in Section B and Section F.2.4, Post Construction Monitoring and LTCP updates. Correct these references so as to not confuse the existing 2015 individual NJPDES CSO permit from the general NJPDES CSO permit which preceded the 2015 individual NJPDES CSO permit.

In addition, while many of the LTCP elements are referenced in the bullets within this section, the Department acknowledges that there is supporting information for many of these LTCP elements in other reports or appendices. In order to ensure that all nine components of the LTCP within this specific appendix are addressed for compliance purposes as well as to promote ease of understanding for public review, supplement this section or Section D with a chart of each of the LTCP elements included in Part IV.G of the NJPDES CSO permit along with the identification of the specific section of another report that serves to address the requirement. Below is a section from Appendix F of the Regional Report which can be used as a model:

Table A-1: Review of Major Requirements of the SIAR

Permit Section	Permit Requirement	SIAR Section Reference
Part IV G1	Characterization Monitoring and Modeling of the Combined Sewer System	Presented in the Regional LTCP as Appendix A
Part IV.G2	Public Participation Process	Presented in the Regional LTCP as Appendix E
Part IV G3	Consideration of Sensitive Area	Presented in the Regional LTCP as Appendix C
Part IV G4	Evaluation of Alternatives	Presented in the Regional LTCP as Appendix D and summarized in Section C of this SIAR
Part IV G5	Cost/Performance Considerations	See Section D.3 of this SIAR
Part IV G6	Operational Plan	See Section F.6 of this SIAR
Part IV G7	Maximizing Treatment at the Existing STP	See Appendix A of this SIAR
Part IV G8	Implementation Schedule	See Section F.5 of this SIAR
Part IV G9	Compliance Monitoring Program	Presented in Section K of the Regional LTCP

Section D, Selection of Recommended LTCP

Comment 3: Section D.2, LTCP Selection Process states the following:

> "The current status of the water quality monitoring and modeling findings as described in Section D.3.3 is the basis for the selection of our LTCP Approach. Based upon the current status of these findings, the JCMUA has selected the Presumption Approach in accordance with N.J.A.C 7:14A-11 Appendix C. As stated in the JCMUA [New] Jersey Pollutant Discharge Elimination (NJPDES) permit section G.4.f.ii, the JCMUA will select an alternative that will:
>
> - Eliminate or capture for treatment no less than 85% by volume of the combined sewage collected in the CSS [combined sewer system] during precipitation events on a hydraulically connected system-wide annual average basis."

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 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 in the DEAR as well as in the LTCP where the minimum percent capture value of 85% must be attained to ensure compliance.

Comment 4: Section D.3.1, Description states the following:

"The factors evaluated during the selection and implementation process were CSO overflows, water quality standards (WQS), non-monetary factors, and cost. CSO overflows and WQS were evaluated using performance data from PCSWMM modeling. The non-monetary factors evaluated during the selection process were public acceptance, environmental impact, social benefits and multi-use consideration. To determine cost, alternatives were evaluated using present worth or total project cost. Detailed descriptions of these factors can be found in the JCMUA DEAR submitted to NJDEP."

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. Regarding the phrase "WQS were evaluated using performance data from PCSWMM modeling", it is the Department's understanding that the Pathogen Water Quality Model is the appropriate tool to evaluate water quality standards from CSO discharges. Revise to clarify that the water quality standards were evaluated using the PATH model based on performance data from the PCSWMM model.

Comment 5: Section D.3.2, Remaining Overflows includes Table D.3-1 which shows the baseline percent capture as well as eight alternatives that were given further evaluation.

Table D.3-1: SIAR Alternatives Overflow Results

Alternative	Overflow Volume (MG)	Volume Captured	Percent Capture	Percent Reduction
Baseline	1,5574	-	-	-
9 Storage Tanks - 0 overflows with I/I, SS, and GI	0	1,5574	100	100
9 Storage Tanks - 4 overflows with I/I, SS, and GI	95.3	1,462	97.8	93.9
9 Storage Tanks - 8 overflows with I/I, SS, and GI	137.6	1,420	97	91.2
9 Storage Tanks - 12 overflows with I/I, SS, and GI	160.6	1,397	96.3	89.7
9 Storage Tanks - 20 overflows with I/I, SS, and GI	364.5	1,193	92.1	76.6
88.3% Capture - 5 Storage Tanks with I/I, SS, and GI	549.6	1,008	88.3	64.7
4 Storage Tanks – 4 sized for 4 overflows, with I/I, SS, and GI	667.3	890	85.7	57.2
6 Storage Tanks – 4 sized for 20 overflows, 2 sized for 4 overflows with I/I, SS, and GI	579.1	978	87.8	62.8

This chart displays the associated percent capture associated with each alternative. Note that there is a decimal missing for the value of "1,5574". In addition, the baseline value of 72% is included in Table F.2.2-1, "Jersey City and Hudson County CSO Volumes and their Percent Captures before and after Recommend LTCP Implementations" and should be added to this table for completeness. The Department acknowledges that the 88.3% percent capture option is ultimately selected in this plan as indicated in Section D.3.6 Selection of Recommended Alternative.

Comment 6: Section D.3.3, Ability to Meet Water Quality Standards further states the following:

"However, PVSC submitted a "Pathogen Water Quality Model (PWQM) Quality Assurance Project Plan (QAPP)" as dated May 19, 2016 (revised January 14, 2017). As described in the QAPP: "The enhanced, validated model will be used to project bacteria concentrations in the waters of the NY/NJ Harbor complex under existing and anticipated future conditions to demonstrate attainment of applicable water quality standards." The subject PWQM QAPP [Quality Assurance Project Plan] was approved by NJDEP. The water quality model was prepared, calibrated, and the results were presented to the NJCSO Group and later to the NJDEP Modeling Evaluation Group (MEG). Currently, the method of determining geometric means of the ambient bacterial quality by "Use Attainment Units" within the waterbodies has not been accepted by NJDEP MEG as a method of demonstrating compliance with the

NJ Water Quality Standard results. So, for the present time, the JCMUA will proceed with the Presumption Approach until an acceptable set of modeling results are presented and accepted by the NJDEP that demonstrates compliance..."

The QAPP is a preliminary work plan that serves as a framework for a modeling report. The QAPP was approved by the Department; however, the PWQM was not submitted until September 2020 and is still pending review. Given that the Department has not yet completed its review, the Department maintains that it is premature to assert that current water quality meets criteria through the model. Revise as appropriate. In addition, the PWQM is germane to the Demonstration Approach whereas the permittee has selected the Presumption Approach. Selection of an approach was a requirement of the March 12, 2015 NJPDES CSO permit \. Note that it is not acceptable to switch between the Presumption Approach (85% wet weather capture) and the Demonstration Approach (modeling based approach) since a commitment was required as part of the 2015 NJPDES CSO permit requirement.

Comment 7: Table D.3.3-2 is entitled "JCMUA CSOs, the Receiving Waters Discharged to & their Characteristics" and includes a breakdown of CSO's by drainage area along with receiving water classifications and other information. Supplement this table with CSO outfall numbers as designed in the NJPDES CSO permit for ease of reference.

Comment 8: Section D.3.4, Non-Monetary Factors explains that non-monetary factors influenced the selection process including public acceptance, environmental impact, social benefits and multi-use consideration. Specific details on the non-monetary factors that influenced the selection process including siting, institutional issues, implementability and public acceptance. Under public acceptance the following is stated:

"…The JCMUA and Arcadis have completed 5 public meetings with presentations of the results of the Preliminary DEAR followed by 30 minutes or more for a question and answer period. In addition to taking the comments of the public into consideration, the JCMUA evaluated the following factors based on criteria from the EPA CSO Guidance for Long-Term Control Plan.

- Environmental Impact – When assessing the environmental impact of a project the impact on nature and the residents must be assessed. Effects on nature and residents include water quality, threats to endangered species, wetlands impacts, soil erosion, flooding, habitat destruction, noise, traffic, and utilities relocation.
- Social Benefit – An alternative that adds positive aspects to the lives of Jersey City residents would be viewed positively by Jersey City residents. An alternative that adds to the physical and or mental well-being of the residents would be preferred.
- Multi-use Considerations – An alternative which serves a use to the public would be beneficial in gaining support for its implementation."

It is then further stated in Section D.3.6, Selection of Recommended Alternative:

"As stated in Section D.2, the JCMUA has elected to proceed with the Presumption Approach. By selecting this approach, the recommended alternative must eliminate or capture for treatment no less than 85% by volume of the combined sewage collected in the CSS during precipitation events on a hydraulically connected system-wide annual average basis. In addition to performance, cost and non-monetary factors were also evaluated when selecting an alternative. Based on public participation and our analysis of the non-monetary factors, it was determined that an alternative which included GI was important to the residents of Jersey City and should be included in the selected plan. …

Section D.3.4 provides an 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. Based on the report, public participation did inform the selection of the selected CSO control alternatives since green infrastructure was part of the selection. 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.

Comment 9: Section D.4.1, JCMUA's Current Recommended LTCP states that the selected Municipal LTCP will consist of a combination of the following alternatives:

- Source Control GI on 7% of impervious areas of Jersey City
- Collection System Controls including sewer subdrainage rehabilitation and sewer separation along Bates Street, Bright Street, and Jersey Avenue to address flooding in the downtown area
- Treatment shaft type Storage Tanks

The Department also notes that Section D.4.1, JCMUA's Current Recommended LTCP states that "The remaining outfalls on the East side will remain unchanged." Refer to the Department's April 4, 2019 letter on Consideration of Sensitive Areas.

Comment 10: Section D.4.2, JCMUA's Possible Regional LTCP Selections states the following:

> "The alternative describe above is referred to in the overall Regional DEAR as Municipal Alternative 1. While this is currently the best option for the JCMUA at the present time there are Regional Alternatives developed by PVSC which are still being considered by the JCMUA. The Regional Alternatives 3b Modified and Alternative 7 are the two being considered for possible implementation."

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 Plan must resolve any implementation issues relating to a 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 11: Section D, JCMUA's Possible Regional LTCP Selections includes Figure D.4.1.-1 as entitled "Jersey City Municipal Utilities Authority Selection and Implementation of Alternatives Report Optimal Green Infrastructure Locations" which provides a useful depiction of these locations as well as a listing of bedrock locations. Figure D.4.1-2 is entitled "JCMUA Grouped Storage Tank Locations" and shows locations for storage tanks as well as alternate locations. However, nine storage tanks are shown in Figure D.4.1-2 whereas only five are selected in the plan. Designate which locations will be utilized.

Comment 12: Regarding the selection of storage as a CSO alternative, climate change can have an impact on sea level rise for the chosen CSO technologies. The Department further notes that in Section C.2, Development and Evaluation of Alternatives it is stated that the "…JCMUA also considered resiliency by accounting for sea level rise by analyzing 100 years of tidal data" in its evaluation of technologies.

Resiliency requirements must also be considered in the design of any infrastructure (e.g., storage). 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 that climate change and resiliency will be accounted for given this selected alternative.

Section E, Financial Capability

Comment 13: Section E.1, Introduction includes the following excerpt:

> "The Financial Capability assessment is a two-step process including Affordability which evaluates the impact of the CSO control program on the residential ratepayers and Financial Capability which examines a permittee's ability to finance the program. Affordability is measured in terms of the Residential Indicator (RI) which is the percentage of median household income spent on wastewater services. Total wastewater services exceeding 2.0% of the median household income are considered to impose a high burden by USEPA. The financial capability analysis uses metrics similar to the municipal bond rating agencies."

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 14: 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, JCMUA 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 [Selection and Implementation of Alternatives Report] based on emergent economic conditions beyond the permittees' control. As detailed in Section F of JCMUA'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/

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 F, Recommended Long-Term Control Plan

Comment 15: Section F.2.1, Recommended LTCP states the following:

> "The JCMUA is committing to negotiate a cost sharing plan for the Regional Alternative with those Permittees in the PVSC Sewer District that have selected the Regional Alternative within an agreed upon timeframe as approved by the NJDEP. If the agreement is reached during that time then the JCMUA accepts the Implementation Schedule as shown in Figure F.4-1 as their LTCP of the projects stated on this schedule through the Summer of 2038 which is the same as currently proposed on both Regional and Municipal LTCP plans. If no agreement is reached on the Regional Plan, the JCMUA LTCP would be the projects shown on Figure F.4-1."

Figure F.4-1, Selected LTCP Implementation Schedule for Design, Construction, and Post Construction Monitoring includes a Gantt chart listing proposed projects from 2020 through 2050. Projects that are scheduled to take place from present time to 2020 through 2027 include:

- Sewer Rehabilitation and I/I Elimination (Phases 5, 6a, 7a, 8)
- Bates and Bright Street to Jersey Avenue Sewer Separation project
- Design for Green Infrastructure to Control 7% of Impervious Cover
- Design for Penhorn Creek Treatment Shaft 1 (Secaucus (W1) to Manhattan (W2))

The next NJPDES permit renewal will include a detailed schedule for these short term projects. The Department also notes that sewer rehabilitation; I/I; and sewer separation stem from the EPA Judicial Consent Decree and these projects are well underway. More specificity is requested for the first five years of planned projects for inclusion into the next NJPDES permit. In addition, given that the design of the treatment shafts are such a critical component of Jersey City MUA's LTCP (both the municipal and regional alternatives), the Department is requesting that the design and construction of at least one treatment shaft be expedited so both elements are within the next five year permit cycle. Revisit the projected start date of this project and provide additional detail on the timeline of this project. Finally, provide additional justification regarding the 30 year timeline for the proposed projects.

Comment 16: Section F.2.1, Recommended LTCP asserts that the Municipal Alternative as proposed in Appendix J is supported by several contentions. Some of these include the following:

- "No facts justify a CSO abatement program that achieves CSO controls substantially greater than the percent capture by volume of this selected LTCP, 88.3%, based on the following:
    - There is no official, confirmed, or quantitative evidence, water quality related or other, that proves achieving a percent capture greater than 85% on the Jersey City CSO's will substantially improve the water quality around Jersey City and outside of Jersey City.
    - While it is accepted that NJDEP has deemed CSOs as a point source that requires CSO abatement controls, the Baseline Monitoring Report and the associated water quality modeling

has provided some data that indicates that the CSO discharges surrounding Jersey City have less of a water quality impact than the Non-Point Sources of pollution upstream of Jersey City. The initial data set certainly support that additional data should be collected with continued refinement of the water quality modeling to better quantify the actual impacts of CSO on the receiving waters around Jersey City and the region. However, until the water quality monitoring and modeling issues are resolved to form conclusions that satisfy the NJDEP requirements, there is no purpose to providing controls substantially higher that the 85% capture criterion until there is a resolution of the water quality issues regarding impacts of CSOs on overall water quality."

The Department agrees that 85% capture is an allowable option under the Presumption Approach and is consistent with Part IV.G.4.f.ii. Nonetheless, the Department does not agree with the excerpted statement from Section F.2.1 as it is speculative in nature and the data and studies do not support these conclusions at this time. In addition, the Pathogen model is currently pending review so it is premature to make these statements. Revise accordingly.

Comment 17: Section F.2.1, Recommended LTCP further states:

- "In accordance with the G. 7. of the permit, "Maximizing treatment at the existing Sewage Treatment Plant (STP)", the selected LTCP described in Section D.4 does convey 100% of the sewage captured and stored in the storage tanks and enhanced inline system to the STP at PVSC. All modeled simulations in the DEAR and this SIAR successfully achieved the required CSO percent captures stated while also meeting the following criteria:

    - There was no increased flooding in the interceptor or in the trunk sewers within Jersey City beyond that which exists now.

    - There is no increase of the existing hydraulic grade line on the Hudson County Force Main (HCFM), because force main flows were maintained and not increased beyond the maximum flow limit available to the JCMUA as per the flow agreement between PVSC and the JCMUA. The subject agreement is dated September 24, 1985 and executed by Robert J. Davenport, former PVSC Chairman and Anthony R. Cucci, former Mayor of Jersey City…"

Comments are as follows:

a) Given that storage is a key component to increasing wet weather capture as selected in this LTCP, the Department acknowledges this confirmation that the Hudson County Force Main and pumps can handle this additional stored flow which will be conveyed to PVSC. Additional detail is provided in Table F.2.2-1. However, provide additional detail on the subject agreement identified above, namely any pumping rates that are memorialized in this agreement.
b) Clarify the draw down time of any storage shafts.
c) Provide additional detail on any current ongoing flooding areas in the interceptor or in the trunk sewers that occurs now and whether the selected CSO controls will address flooding. 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.

Comment 18: Section F.2.1, Recommended LTCP further states:

- "This recommended LTCP is flexible and adaptable to changes during the implementation program period. Changes over the 20- or 30-year period may be deemed necessary based on unforeseen circumstances that will occur over an extended period. The GI, I/I, sewer separation, and storage tanks can be implemented in phases that could change over time for several reasons. Based on this fact the recommended LTCP will also address section G.4.g. iv, where it "….allows for cost effective expansion or retrofitting if additional controls…"are needed in years to come."

The LTCP sets forth a long term plan to address CSOs in compliance with the Federal CSO Control Policy. It is the Department's intent to issue draft NJPDES permits with the selected projects both on a short term basis as well as a long term basis as set forth in the certified LTCP. In sum, the Department will need to approve any changes or amendments to the LTCPs in the future which may require a NJPDES permit modification.

Comment 19: Section F.2.2 Adequate levels of CSO Volume Reduction for Jersey City states the following:

"The objective of this section is to demonstrate that the recommended LTCP also complies with the CSO Capture Volume for Hudson County as described on Table C-8 of the DEAR conditional approval letter from NJDEP dated January 17, 2020 and in the approved Regional DEAR. In that letter, Table C-8 shows that in order for Hudson County to obtain 85% capture of their CSO volume, Hudson County will have to capture an additional 1,260 MG from the Jersey City baseline modeled condition. Based upon this requirement, the JCMUA's modeled results for the baseline condition and the recommended LTCP described in D.4 (i.e. - "Municipal Alternative 1") in the Regional DEAR, we have confirmed and interpreted the numbers shown in Table F.2.2-1.

Table F.2.2-1: Jersey City and Hudson County CSO Volumes and their Percent Captures before and after Recommend LTCP Implementations

Categories	Type of Volume Descriptions	Jersey City CSO Volumes, MG	Jersey City's Percentage of Volume Captured,	Projected Volumes for Hudson County, MG	Hudson Percentage of Volume Captured,
Baseline Condition Before LTCP implementation	Total Wet Weather Volumes	5,651.2	72%	6,411	65%
	Baseline Wet Weather Overflow Volume	1557.4		2,222	
	Volume Captured to PVSC	4093.8		4,189	
Recommended LTCP	Total Wet Weather Volumes	4683.3	88.3%	6,411	85%
	Wet Weather Overflow Volume, MG	549.6		962	
	Volume Captured to PVSC	4133.7		5,449	
Jersey City's Volume Capture versus HC requirement		1007.8		1,260	

Based on the above, the Department notes that this LTCP will achieve 80% of the goal for all of Hudson County."

Since the Presumption Approach has been selected the derivation of percent capture is central to a review of this report. Supplement this report with the specific percent capture equation utilized as well as a detailed table of the numerical values utilized within the equation that was used to derive these results in the tables presented in this section. While the Department acknowledges that the equation was provided as part of the DEAR approval process, it is important that the equation be included in the LTCP for completeness. Approval of this report hinges in part on the inputs and results of this equation being clearly demonstrated and reproducible. In addition, the total wet weather volume for Jersey City for the Baseline Condition and the Recommended LTCP in Table F.2.2-1 is different. Explain.

Comment 20: Section F.2.3, Operational Plan states the following:

> "Upon approval of the LTCP, the recommended LTCP will also provide the required Operations Plan in accordance with G.6. of the CSO permit, "Operational Plan". This Plan will describe the O&M program that would need to be added to the JCMUA's existing O&M Program and Manual to address the final LTCP CSO control facilities in the approved LTCP. The minimum items that will be addressed in the Operational Plan will be as follows:
>
> - operating strategies,
> - green infrastructure maintenance plans for each type of GI
> - staffing and budgeting
> - I/I
> - emergency plans"

The Department recognizes the acknowledgement of O&M as it relates to CSO control technologies, including green infrastructure, and recognizes that this has been addressed in the report. Note that 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. While this comment does not necessitate a response at this time, the Department hereby notes this information for the Administrative Record.

Comment 21: Section F.4, Implementation Schedule states the following:

> "Based upon the conclusions of Section E.3 and F.3 which indicated the citizens of Jersey City carry a Medium Financial Capability Burden and have among the highest property taxes in the U.S.A. Figure

F.4-1 presents is a comprehensive schedule showing all Phases I-A through VI-B to provide a complete LTCP program. The proposed implementation schedule for the LTCP has the following characteristics:

- An extended implementation schedule of 30 years to ease the burden on Jersey City residents especially for the 12.4% of the population who make less than $25,000 per household

- An upfront implementation of the Green Infrastructure (GI), combined Sewer System source controls and repairs in the first 7 years. GI was one of the most requested CSO abatement measures for this LTCP by several attendees of the Supplemental CSO Team and Community Public Meetings during 2018 and 2019.

- Regular post construction monitoring results with LTCP updates every 5.5 years to demonstrate compliance at the completion of each construction phase and prior to the next construction phase to reassess CSO abatement needs and requirements, any new CSO abatement technologies, and any new water quality modeling results which may have emerged since the last phase of construction."

The Department acknowledges and appreciates the front loaded nature of GI within the implementation schedule. As noted previously, revisit the implementation schedule for the treatment shaft design.

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

Sincerely,

Dwayne Kobesky
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