



State of New Jersey

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October 2, 2019

Hugo Poli
Commissioner of Department of Public Works
Ridgefield Park Village
234 Main Street
Ridgefield Park, NJ 07660

Re: Review of Development and Evaluation of Alternatives
Village of Ridgefield Park, NJPDES Permit No. NJ0109118

Dear Mr. Poli:

Thank you for your submission dated July 1, 2019 to the New Jersey Department of Environmental Protection (the Department or NJDEP) which contains the “Development and Evaluation of Alternatives” (hereafter “the report”) for the Village of Ridgefield Park. This report was submitted in a timely manner and was prepared in response to Part IV.D.3.v of the above referenced NJPDES permits. The report is part of the development of the Long-Term Control Plan (LTCP) submittal requirements, of which the next deliverable is due on June 1, 2020.

Ridgefield Park is part of the system that is served by the Bergen County Utilities Authority (BCUA) Little Ferry Sewage Treatment Plant (STP) (NJ0020028) along with the other combined sewer municipalities within the BCUA sewer service area namely the Borough of Fort Lee (NJ010034517) and the City of Hackensack (NJ0108766). This subject letter serves to provide a response to the Development and Evaluation of Alternatives report specific to the Village of Ridgefield Park. However, as a reminder, the ‘Selection and Implementation of Alternatives’ report, which is due on June 1, 2020, must be submitted as a single, coordinated LTCP in accordance with the permittees’ compliance schedule extension letter of September 29, 2019 as acknowledged in the October 9, 2015 minor modification..

The overall objective of the Development and Evaluation of Alternatives Report is to develop and evaluate a range of 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). Such evaluation shall include a range of CSO control alternatives for eliminating, reducing, or treating CSO discharge events. This subject report builds on other previously submitted LTCP reports referenced in Part IV.D.3.b of the NJPDES permit, which includes an approved hydrologic, hydraulic and water quality model and other information in the July 1, 2018 “Sewer System Characterization Report” (approved by the Department on March 11, 2019); the July 1, 2018 “Supplemental CSO Team Public Participation Process Report” (approved by the Department on June 26, 2019); the June 27, 2018 “BCUA CSO Group Public Participation Process Report” (approved by the Department on June 26, 2019); the June 30, 2018 “NJCSO Group Compliance Monitoring Program Report” (approved by the Department on March 1, 2019); and the June 2018 “Identification of Sensitive Areas Report” (approved by the Department on April 8, 2019).

As per Part IV.G.4.e.i – vii of the above referenced NJPDES permits, the Development and Evaluation of Alternatives for the LTCP shall include, but not be limited to, an evaluation of the following CSO control alternatives:

- i. Green infrastructure.
- ii. Increased storage capacity in the collection system.
- iii. Sewage Treatment Plant (STP) expansion and/or storage at the plant while maintaining compliance with all permit limits.
- iv. Inflow and Infiltration (I/I) reduction to meet the definition of non-excessive infiltration and non-excessive inflow as defined in N.J.A.C. 7:14A-1.2 in the entire collection system that conveys flows to the treatment works.
- v. Sewer separation.
- vi. Treatment of the CSO discharge.
- vii. CSO related bypass of the secondary treatment portion of the STP in accordance with N.J.A.C. 7:14A-11.12 Appendix C, II C.7.

A general overview of the information provided for the CSO control alternatives, as provided in response to Part IV.G.4.e, can be summarized below where the Department’s comments follow:

- **Green Infrastructure (GI)** technologies are generally described in Section 4.3 (Green Infrastructure) where the report includes a description of the ancillary environmental, social and economic benefits of GI to the community. GI is also described in Section 7.4.6 (Green Infrastructure) where it explained on page 127 “...the anticipated green infrastructure is expected to consist primarily of bioswales and permeable pavement.” It is further stated that the breakdown between the two technologies will depend on field conditions.
- Regarding **increased storage capacity in the collection system**, the report considered sewer system optimization in Section 4.5 (Sewer System Optimization) including additional conveyance, regulator modifications, outfall consolidation/relocation and real time controls. As discussed on pages 51-54, these control alternatives will not be considered further given limited applicability or due to their being minimal volume available in the existing pipes.
- As discussed in Section 4.6 (Storage), various **storage** technologies were evaluated including pipeline storage, tunnel storage and point storage (tanks or industrial discharge detention). Section 7.4.2 (Control Program 2 – Consolidated Tank Storage) and 7.4.3 (Control Program 3 – Consolidated Tunnel Storage) further analyzes these alternatives and includes detailed siting information particularly around the outfall location.
- **Sewage Treatment Plant (STP) Expansion** is discussed in Section 4.7 (Sewage Treatment Plant Expansion or Storage) where it is explained on page 56 that the Village of Ridgefield Park transports their combined sewer flows to BCUA. There is also a statement that BCUA is investigating additional treatment capacity and wet weather blending as part of their alternatives analysis report.
- **Inflow and infiltration (I/I) reduction** is described in Section 4.4 (Infiltration and Inflow Control) as well as a description of advanced sewer inspection and maintenance in subsection 4.4.2 (Advanced System Inspection and Maintenance). It is stated on page 51 that “The Village of Ridgefield Park has no authority beyond its borders to enforce I/I reduction.”

- **Sewer separation** is described in Sections 4.8 (Sewer Separation) and evaluated in 7.4.5 (Control Program 5 – Sewer Separation). It is stated on page 126 that sewer separation is difficult to implement because “public acceptance of the project a significant concern” and sewer separation is “a very costly alternative, as such may not be preferred.”
- The report evaluates **satellite treatment** (i.e., treatment of the CSO discharge) namely Peracetic Acid (PAA) Disinfection in Section 4.9 (Treatment of CSO Discharge) as well as in Section 7.4.4 (Control Program 4 Consolidated End-of-Pipe Treatment). This alternative was analyzed as consolidated treatment. A description of the treatment train, including screening, primary treatment and PAA is included in Section 7.4.4 (Control Program 4 – Consolidated End of Pipe Treatment) on page 115.

Specific Comments

Comment 1

The section entitled “Issue and Revision Record” includes the following text:

“This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it.”

This comment needs to be deleted since the document is now an open public record.

Comment 2

A discussion of public participation and the CSO supplemental team is included in Section 2.1 (Public Participation Process Update) and a subsection is included within Section 7.4 (Preliminary Control Program Alternatives) regarding public acceptance for each control program description. As per Part IV.G.2 of the NJPDES CSO permit, public participation shall actively involve the effected public throughout each of the three steps of the LTCP process including the Development and Evaluation of Alternatives phase. The Department acknowledges that a list of meetings and agendas for the CSO Supplemental Team, as well as a discussion of other public outreach, is included in either the June 27, 2018 “BCUA CSO Group Public Participation Process Report” (approved by the Department on June 26, 2019) or the July 1, 2018 “Supplemental CSO Team Public Participation Process Report” regarding the Village of Ridgefield Park. The involvement of a local community group, the Village of Ridgefield Park Supplemental (SCSO) CSO Team, is described in this section on page 22 as well as a description of several local community outreach activities that have already occurred along with a description of additional activities that are planned for the future.

Moving forward, public participation is a required element of the ‘Selection and Implementation of Alternatives’ for the LTCP. Continued public participation must be provided to garner public input regarding CSO control alternatives where a description of such activities must be included in the LTCP. The discussion should include a description of the public participation activities that occurred during the

development of these reports, the feedback opportunities provided, and how feedback was considered. It is also recommended that members of the CSO Supplemental Team and Village of Ridgefield Park SCSO members be provided a copy of the LTCP in advance of the June 1, 2020 due date to the Department.

Comment 3

Section 3.1 (applicable Water Quality Standards) on page 29 states the following:

“Discharges from combined sewer overflows contribute pathogens, and thus the parameter of interest for CSOs is the bacterial standards.”

While the Department agrees that pathogens are intended to serve as an indicator parameter for CSOs, please note that the CSO Control Policy requires controls adequate to meet the water quality based requirements of the Clean Water Act. While this comment does not necessitate a response at this time, the Department hereby notes this information for the Administrative Record.

Comment 4

In Section 3.3.1 (Presumption Approach) the following is stated as one of the three requirements of the Presumption Approach:

“Elimination or removal of no less than the mass of the pollutants, identified as causing water quality impairment.”

Please note that this quote is a truncated version of what is contained in the Federal CSO Control Policy. Please revise accordingly.

Comment 5

Section 3.3.2 (Demonstration Approach) states the following on page 31:

“The Baseline Compliance Monitoring Program and Model Development undertaken by the NJ CSO Group (includes Ridgefield Park) indicates that complete elimination of all CSO discharges within the Gateway Region (Passaic River, Hackensack River, Newark Bay, and Overpeck Creek will not bring the Hackensack River above Overpeck Creek into compliance with pathogens due to other pollutant loads.”

It is premature to draw this conclusion. Please revise this statement.

Comment 6

The NJPDES permit requires that the permittee select either the Presumption or Demonstration Approach as defined in the Federal CSO Control Policy as well as in the NJPDES permit. Performance objectives are discussed in Section 7.2 (Presumptive and Demonstrative Approaches) where the frequency of CSO events is described within this section and in other sections of the report. Two of the alternatives for the Presumption Approach, namely the attainment of 85% capture and four overflows or less, are referenced throughout the report. However, on page 31 the following is stated:

“...Accordingly, the Village of Ridgefield Park will be undertaking a Demonstrative Approach in the development of their LTCP to evaluate the maximum pollutant reduction benefits reasonably attainable.”

It has not been acknowledged in the report that the approach will be applicable to the entire hydraulically connected system.

While this comment does not necessitate a response at this time, a final selection is required to be made in the ‘Selection and Implementation of Alternatives’ report as part of the LTCP submission due on June 1, 2020. Note that if the Presumption Approach is selected, the percent capture equation utilized to calculate any baseline and the other percent capture values itemized in the CSO Control Policy for each hydraulically connected system must be included for report completeness.

Please refer to **Comment 7** below regarding the selection of the Presumption versus Demonstration Approach with respect to a hydraulically connected system.

Comment 7

In Section 7.2.3.2 (Wet Weather Capture Volume) an equation is provided for percent capture which shows a system wide value of 69.5% for Ridgefield Park. The Executive Summary also references baseline percent capture in Table 6 (Summary of Percent Capture Achieved by Each Control Program).

The Department acknowledges that the hydraulically connected system is defined within the Notes and Definitions in Part IV of the NJPDES permit as “The entire collection system that conveys flows to one Sewage Treatment Plant (STP)...” While the definition of hydraulically connected system allows the permittees to “segment a larger hydraulically connected system into a series of smaller inter-connected systems,” if it is the City’s and the BCUA CSO Group’s intention to define hydraulically connected systems that are smaller, segmented portions of the ‘entire collection system,’ this information needs to be consistent throughout all four reports submitted by the members of the BCUA CSO Group, and a justification for the segmentation of those communities must be provided to and approved by the Department.

Comment 8

In Section 3.3.1 (Presumption Approach), on page 30, the report states:

“The “Presumption” Approach refers to a program that, once fully implemented, is presumed to meet WQS.”

However, the federal and state regulations, and the NJPDES permit states that:

“The permittee shall submit, as per Section D.3.b.v, the Evaluation of Alternatives Report that will enable the permittee, in consultation with the Department, the public, owners and/or operators of the entire collection system that conveys flows to the treatment works, to select the alternatives to ensure the CSO controls will meet the **water quality-based requirements of the CWA**, will be protective of the existing and designated uses in accordance with N.J.A.C. 7:9B, give the highest priority to controlling CSOs to sensitive areas, and address minimizing impacts from SIU discharges.” (emphasis added)

Please revise the language in the report to reflect that the CSO control alternatives will be evaluated to meet the “water quality-based requirements of the CWA.”

Comment 9

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. As stated within the May 2018 report entitled “Typical Hydrological Year Report”, 2004 was selected as the typical hydrological year. While a long-term precipitation data set (i.e. greater than 30 years) was considered as part of this analysis, a more recent period was used in the ultimate selection of 2004 in order to consider local climate change. While use of the year 2004 does consider climate change, please be sure to consider resiliency requirements in the design of any infrastructure (e.g., storage and satellite treatment). 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.

While this comment does not necessitate a response at this time, these protective measures should be a consideration in the LTCP.

Comment 10

In Section 4.3 (Green Infrastructure) and Section 7.46 (Control Program 6 Green Infrastructure) green infrastructure is discussed. Detailed information is included regarding the siting of potential GI projects, a map as Figure 7-18 (Ridgefield Park Land Use Map) as well as land use information. In addition, an assessment is included regarding the portion of impervious area to be controlled by green infrastructure as 2.5%, 5%, 7.5% and 10%. All percentages are equated to a reduction in CSO volume, frequency and duration in order to attain these targets and the changes from the baseline are depicted in Tables 7-24 through 7-27. The Department acknowledges the inclusion of this quantitative metric for GI which is needed in order to establish that any volumetric credit is given towards overall CSO reduction goals. However, please describe how the volumes included in this table were derived in order to quantify any volumetric decrease in CSO flow from GI measures.

In addition, the Village of Ridgefield Park is advised to evaluate its potential GI projects in accordance with the January 2018 GI guidance document prepared by the Department for LTCPs, entitled, “Evaluating Green Infrastructure: A Combined Sewer Overflow Control Alternative For Long Term Control Plans” at https://www.nj.gov/dep/dwg/pdf/CSO_Guidance_Evaluating_Green_Infrastructure_A_CSO_Control_Alternative_for_LTCPs.pdf. Please note the Department’s GI guidance manual is not intended to be the sole resource for evaluating this alternative, nor is this document intended to provide detailed design guidance for GI as this guidance can be found in the New Jersey Stormwater Best Management Practices Manual (see http://www.njstormwater.org/bmp_manual2.htm) nor is intended to be an endorsement of any proprietary software or work product. This guidance provides case studies, links, and resources to assist a CSO permittee with including GI as part of its CSO Long Term Control Plan.

Comment 11

There is limited discussion within the report in Section 4.7 (STP Expansion or Storage) regarding the required evaluation of the alternatives concerning STP Expansion and CSO-related bypass. The Department acknowledges that the Village does not own/operate the BCUA treatment plant; however, coordination between the three combined sewer municipalities and BCUA is essential in order to properly determine what would be needed to increase flow to the STP, as well as the STP expansion alternatives, including CSO-related bypass. This information must be clearly understood by all members of the BCUA

CSO group in order for all of the CSO control alternatives to be accurately evaluated in terms of need and sizing.

As such, specific information regarding the additional flow that will be able to be conveyed to BCUA from all three municipalities, both during and after the wet weather events, is needed. For example, please identify the current average and peak conveyance capacity of the interceptor as well as if there is adequate conveyance capacity to divert any additional CSO flow to BCUA. In addition to identifying the current wet weather conveyance capacity of the interceptor, please provide a summary of what will be needed to increase the conveyance capacity to divert additional CSO flow from the Village to BCUA. Accordingly, documentation regarding coordination of this information among the members of the BCUA CSO Group is needed.

Comment 12

Linear storage (pipelines and tunnels) and point source storage (tanks and industrial discharge detention) are discussed in Section 4.6 (Storage) and more detailed discussion is provided in Sections 7.4.2 (Control Program 2: Consolidated Tank Storage), and 7.4.3 (Control Program 3: Consolidated Tunnel Storage). While siting information has been included through a description of each area near the outfall as well as through maps of the areas, please supplement these sections with additional discussion as to whether or not these areas could sustain the needed volume of the estimated tank and tunnel sizes referenced in Table 7-5 (CP-2 Consolidated Storage, Typical Year Overflow Summary 20 Overflows) and 7-8 (CP-3 Tunnel Storage, Typical Year Overflow Summary 0 Overflows). If storage is being considered at any available properties near the outfalls, please describe whether or not any potential storage tanks would be surface or subsurface and, if subsurface, whether or not consideration has been given to any amenities such as parks, parking lots or GI. In addition, please elaborate as to whether or not BCUA could accept stored tank flow or if there are any conveyance limitations that would prevent such.

Comment 13

In Section 4.8.3 (Combined Sewer Separation), on page 58, the report states, “Currently, sewer separation projects are subject to water quality requirements by the State when Land Use permits are required.” For clarification, any sewer separation projects that meet the definition of ‘major development’ under the Stormwater Management regulations at N.J.A.C. 7:8 will have to meet the applicable water quality, water quantity, and groundwater recharge requirements of those regulations, not only when Land Use permits are required. Please revise the report for accuracy.

Comment 14

While cost analyses are provided within the report, particularly in Section 7.4 (Preliminary Control Program Alternatives), please note that the Department is not commenting on any cost analysis at this time and will defer its comments until the LTCP submission. This includes any conclusions regarding the selection of any preliminary CSO control alternatives, present value calculations, and the cost range of any CSO control alternatives, as these cost estimates will be revised based on the revisions to the sizing of the alternatives chosen in the Selection and Implementation of Alternatives Report due June 1, 2020.

Comment 15

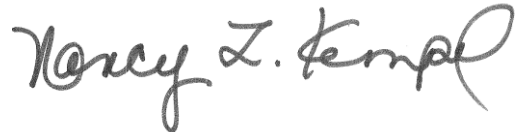
Section 7.4 includes a robust discussion of the six control program alternatives with individual subsections for each including description, analysis, institutional issues, implementability, public acceptance, performance summary and cost summary. In addition, a summary rating with weighted scores is provided as Table 7-31 (Summary Rating of Control Programs) on page 137 along with additional general discussion in Section 7.5.1 (Evaluation Factors). Summary information is also included in Tables 1-7 in the Executive Summary. However, these alternatives show a singular approach through the implementation of one alternative as opposed to a mix of various alternatives. In addition, please note the coordination between the three combined sewer municipalities and BCUA is essential in order to properly determine what would be needed to increase flow to the STP, as well as the STP expansion alternatives, including CSO-related bypass. This information must be clearly understood by all members of the BCUA CSO group in order for all of the CSO control alternatives to be accurately evaluated in terms of need and sizing of the other alternatives.

Comment 16

In Section 7.3.1.2.(Institutional Issues), on p 91 the report states, “State highways through the Village of Ridgefield Park include Route 46, I-80 and significant areas of NJ Turnpike, which is administered by the State DOT.” Please note that the NJ Turnpike is under the jurisdiction of the New Jersey Turnpike Authority, not the NJDOT. While this comment does not require a response, the permittee should retain this information for future reference.

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

Sincerely,



Nancy L Kempel
CSO Team Leader
Bureau of Non-Point Pollution Control

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