Village of Ridgefield Park Supplemental CSO Team

Meeting Number 8

Commissioner’s Conference Room

Village of Ridgefield Park Municipal Building

May 28, 2019, 10 am

Group Meeting Minutes

1. Introduction
   a. Meeting began at 10 am with introductions. Several members of the general public were in attendance in addition to the Supplemental CSO Team.
   b. John Dening opened the meeting with a safety discussion about proper ladder usage.
   c. John Dening welcomed new attendees and presented a recap of the topics discussed at all meeting held to date and opened for questions. John explained the purpose of the meeting and the role of the Supplemental CSO team. No questions were asked at that time.

2. Presentation by John Dening about the Development and Evaluation of Alternative Controls (see power points).

3. Discussion and Questions
   a. The following outlines the questions that were asked and the discussions that followed:
      Question: If there is no extra capacity at BCUA, will Ridgefield Park be required to pay for the cost of expansion?
      Answer: Yes, if additional capacity is needed at BCUA Ridgefield Park and any other entities that need the capacity will cover the cost of the expansion.

   b. Question: If we stop sending storm water to BCUA will our bill be reduced?
      Answer: Ridgefield Park will pay for the amount of flow into the plant measured at the BCUA meter. Ultimately, for any solution that is proposed the costs will be compared and evaluated.

   c. Question: How much of Ridgefield Park is currently separated?
      Answer: Approximately half of Ridgefield Parks wastewater system is separated.

   d. Question: Should the State share in some of the costs due to the fact that much of the storm water resulted from the construction of Route 80 and the reconstruction of North Avenue?
      Answer: This would be a legal matter for the Village to investigate.

   e. Question: Would we need to run a new sewer line along Teaneck Road?
      Answer: At this time, we are looking at more general broad solutions. Specific streets are not being considered at this time.
f. Question: What percentage of the flow could be reduced by green infrastructure such as bioswales, pervious pavement and rain gardens?
Answer: Many factors such as soil characteristics/infiltration capacity will have to be studied to determine the performance of any green initiatives.

g. Question: If we separate the sewer system will that solve the problem?
Answer: Separation will keep storm water from entering the BCUA treatment plant, Nevertheless, storm water may still need some level of treatment before being discharged.

h. Question: What if we implement CSO controls and the water quality does not improve due to the tidal nature of the waterways?
Answer: The overall water quality may not improve, but the permit requires a reduction in the overflows regardless. The DEP is looking for permittees to do whatever can be done feasibly. The ultimate goal would be for all waterways to be fishable and swimmable, but the DEP recognizes that the solution must be affordable.

i. Question: Are there any other movements underway to address other causes of river pollution?
Answer: Yes, the riverkeeper and the baykeeper are consistently looking for ways to improve water quality. In addition, the NJDEP is targeting stormwater from separate sewer systems through NJPDES Permits.

j. Question: If a tank is put in the Village could businesses continue to operate on the property?
Answer: Most likely a business could operate or a park could be built over the storage tank after it is completed. The tank would be below ground except for a pump station and a few manholes. Depends on the type of business and what they would want to put on top of the tank.

k. Question: Could a tank be located on the property under the Route 80 bridge?
Answer: That is a possibility that can be explored.

l. Question: Could a tunnel follow the railroad right of way?
Answer: It is unlikely that that would be feasible due to railroad restrictions and rules.

m. Lastly, a general discussion about the need for a boat ramp concluded the discussion.
n. The next meeting of the Supplemental CSO Team will be held in September.

4. Meeting concluded at noon.

Minutes submitted by Donna Gregory
<table>
<thead>
<tr>
<th>Initials</th>
<th>Name</th>
<th>Organization</th>
<th>Email</th>
<th>Phone Number</th>
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<tbody>
<tr>
<td>JOE</td>
<td>John Rolak</td>
<td>Mott MacDonald</td>
<td><a href="mailto:john.rolak@mottmac.com">john.rolak@mottmac.com</a></td>
<td>973-912-2521</td>
</tr>
<tr>
<td>DMG</td>
<td>John Denning</td>
<td>Mott MacDonald</td>
<td><a href="mailto:john.dening@mottmac.com">john.dening@mottmac.com</a></td>
<td>973-912-2464</td>
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<tr>
<td>DON</td>
<td>Donna Gregory</td>
<td>Mott MacDonald</td>
<td><a href="mailto:donna.gregory@mottmac.com">donna.gregory@mottmac.com</a></td>
<td></td>
</tr>
<tr>
<td>FMG</td>
<td>Flo Muller</td>
<td>Ridgefield Park Shade Tree Commission</td>
<td><a href="mailto:flomart@nj.rr.com">flomart@nj.rr.com</a></td>
<td>201-814-9019</td>
</tr>
<tr>
<td>ROE</td>
<td>Mark Olson</td>
<td>Chairman, Green Team</td>
<td><a href="mailto:mark-olson@verizon.net">mark-olson@verizon.net</a></td>
<td>201-440-5989</td>
</tr>
<tr>
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<td>Stephen Quinn</td>
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<td>201-440-5652</td>
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<td>Linda Quinn</td>
<td>Ridgefield Park Environmental Commission</td>
<td><a href="mailto:linda.quinn125@gmail.com">linda.quinn125@gmail.com</a></td>
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<tr>
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<td>John Ponticorvo</td>
<td>Wanda Canoe Club</td>
<td><a href="mailto:jponvicorvo@aol.com">jponvicorvo@aol.com</a></td>
<td>201-803-3643</td>
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<tr>
<td>ANL</td>
<td>John</td>
<td>Bd of Comm.</td>
<td><a href="mailto:Johnanlian@yahoo.com">Johnanlian@yahoo.com</a></td>
<td>201-943-1110</td>
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<tr>
<td>GGD</td>
<td>Gerard</td>
<td></td>
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<td>201-448-4684</td>
</tr>
<tr>
<td>LEO</td>
<td>Leslie Olson</td>
<td>R.P. Green Team R.P. Environ. Cms</td>
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<td>201-440-5989</td>
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<td>NJDEP</td>
<td><a href="mailto:stepen.sedger@deign.com">stepen.sedger@deign.com</a></td>
<td>609-292-1660</td>
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<tr>
<td>RHP</td>
<td>Rachael Rep</td>
<td>NJDEP</td>
<td><a href="mailto:Rachael.rep@dep.nj.gov">Rachael.rep@dep.nj.gov</a></td>
<td>609-292-977</td>
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<tr>
<td>NKC</td>
<td>Nancy</td>
<td>NJDEP</td>
<td><a href="mailto:nancy.kempel@dep.nj.gov">nancy.kempel@dep.nj.gov</a></td>
<td>609-633-7021</td>
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</tr>
<tr>
<td>GLA</td>
<td>Guillemin</td>
<td>1st Presb. Church</td>
<td><a href="mailto:pastor@ridgefieldparkmo.org">pastor@ridgefieldparkmo.org</a></td>
<td>201.410.4629</td>
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Development and Evaluation of Alternative Controls

Village of Ridgefield Park
Supplemental CSO Team Meeting #8

May 28, 2019

Safety Topic
Ladders

1. Pick the Right Ladder for the Job
   - Type
   - Length
   - Material

2. Inspect the Ladder
   - Corrosion
   - Rot
   - Clean

3. Set up the Ladder
   - 4:1 Rule
   - Level Ground
   - 3’ Above Roof

4. Use the Ladder
   - Keep centered
   - 3 Points of Contact
   - Proper footwear
   - Use a toolbelt
Ridgefield Park Supplemental CSO Team

Meeting No. 8 Agenda

Refresher – In meeting #7 we covered:
- Submissions Status
- Comments from NJDEP on Characterization and Public Participation Reports
- Preliminary Evaluation of Alternatives
- NJ CSO Group Coordination
- Draft Report Outline
- Future Public Participation
- Upcoming Schedule

Ridgefield Park Supplemental CSO Team

Meeting No. 8 Agenda

- Submissions Status
- Public Participation Status
- Development and Evaluation of Alternatives
  - Coordination with BCUA
  - Future Baseline
  - Preliminary Alternatives
- Upcoming Schedule
Ridgefield Park Supplemental CSO Team

DEP review status – July 1, 2018 submittals

• **Consideration of Sensitive Areas Report:** NJ CSO Group report; DEP comment letter dated 9/20/2018; revised report submitted to DEP on 10/19/2018. DEP comment letter dated 3/01/19. Approved 4/8/19

• **Baseline Compliance Monitoring Program Report:** NJ CSO Group report; DEP comment letter dated 9/7/2018; revised report submitted to DEP on 10/5/2018. DEP Approval letter dated 3/01/19.


• **System Characterization Reports:** comment letter dated 12/17/2018, Revised Report submitted 2/11/19. NJDEP Approval letter dated 03/11/19

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Public Participation Comment Letter

To all members of the BCUA CSO Group

April 23, 2019

Dear Members of the BCUA CSO Group:

I am writing to inform you of the New Jersey Department of Environmental Protection’s (DEP) review of the Public Participation Process Report required by Part D of the landfill’s March 11, 2019, letter. The report provides an overview of the public participation process that was implemented for the proposed landfill expansion. The report includes details on the number of public meetings held, the number of comments received, and the actions taken in response to those comments.

The report also includes a summary of the comments received and the DEP’s response to those comments. The DEP has determined that the proposed landfill expansion meets the requirements of Part D of the landfill’s March 11, 2019, letter.

I encourage all members of the BCUA CSO Group to review the report and provide any additional comments or suggestions you may have.

Thank you for your continued support.

Sincerely,

[Signatures]

[Name]

[Title]

[Organization]
Public Participation Comment Letter

Response Due May 23, 2019
Delivered May 22
Looking for Planned and Future Activities
Actively Engage Public
Through LTCP Submission June 1, 2020

Since last submission:
- Jan SCSO Team Meeting
- Posted SCSO Team Meeting Minutes
- Added John Porticorvo – Wanda Canoe Club
- Presented to Town Caucus April 4th
- BCUA SCSO Team Meetings
- Ridgefield Park Earth Day

The Department requests that the previous submission be supplemented with additional information within 30 days of the date of this letter to detail planned and/or future efforts to actively engage the affected public in the Alternatives Analysis. This supplement may be in the form of a letter, presentation, or supplement to this plan itself.

Public Participation Comment Letter

Since last submission:
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Public Participation Comment Letter

Proposed:

• Continue SCSO Team Meetings
• Seek additional SCSO Team Members
• Present to Council
• Newsletter Article
• Public and Community Group Meetings
• Earth Day 2020

Ridgefield Park Supplemental CSO Team

Meeting Minutes
Ridgefield Park Supplemental CSO Team

Meeting Minutes

Meeting Minutes

Meeting Minutes

Meeting Minutes

Meeting Minutes
Ridgefield Park Supplemental CSO Team

Future Public Participation Activities

- Looking for Supplemental CSO Team to liaise with public and other groups.
- Suggest Activities
- New member(s)

Ridgefield Park Supplemental CSO Team

What does the permit say about Development and Evaluation of Alternatives?

The permittee shall evaluate a reasonable range of CSO control alternatives that will meet the water quality-based requirements of the CWA.

The Development and Evaluation of Alternatives Report shall include a list of control alternative(s) evaluated for each CSO enabling the permittee, ...to select the alternatives to ensure the CSO controls will meet the water quality-based requirements of the CWA.

The permittee shall evaluate the practical and technical feasibility of the proposed CSO control alternative(s), and water quality benefits and give the highest priority to controlling CSO discharges to sensitive areas.

The permittee shall select either the Demonstration or Presumption Approach.
Ridgefield Park Supplemental CSO Team

Range of Alternatives

- Green Infrastructure
- Storage
- Treatment Plant Expansion
- Infiltration / Inflow Reduction
- Sewer Separation
- End-of-Pipe Treatment
- WWTP Bypass

Range of alternatives, different levels of control, numerous combinations

Ridgefield Park Supplemental CSO Team

The Big Picture

BCUA Facilities
- Transport
- Treatment
InfoWorks ICM Model was Used to Estimate Sewer Flow Capacity near WPCF:

<table>
<thead>
<tr>
<th>Trunk Sewer</th>
<th>Estimated Max Flow (mgd)*</th>
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<tr>
<td>Main Trunk Sewer</td>
<td>115</td>
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<tr>
<td>Overpeck Trunk &amp; Relief Sewers</td>
<td>95</td>
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<tr>
<td>Total Max Peak Flow to WPCF</td>
<td>210</td>
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</table>

* Based on average wet well elevations and no system surcharge.
Ridgefield Park Supplemental CSO Team
Development and Evaluation of Alternatives Report

Arcadis evaluation:
• Hydraulic and Process Capacity of each Treatment Unit:
  • Influent Pumping Station
  • Grit Removal
  • Primary Settling Tanks
  • Secondary Aeration Tanks
  • Final Settling Tanks
  • Chlorination and Dechlorination
  • Outfall

Arcadis Evaluated:
• Existing Plant Capacity
• Bypassing of Secondary Treatment
  • Process Improvements
    − Needed to Meet NJPDES Permit Limits with Bypass
    − Construction and O&M Costs for Process Improvements Required
• Expanding STP Capacity
  • Treatment Improvements using
    − Ballasted Flocculation
    − Cost for Construction and O&M
Ridgefield Park Supplemental CSO Team

Development and Evaluation of Alternatives Report

BCUA Water Pollution Control Facility

Preliminary Information

<table>
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<th>Description</th>
<th>Max Flow (mgd)</th>
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<tr>
<td>NJPDES Permitted*</td>
<td>94</td>
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<tr>
<td>Average Daily Flow</td>
<td>75</td>
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<td>Treatment Capacity (10 state standard)</td>
<td>105</td>
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<tr>
<td>Existing Hydraulic Capacity</td>
<td>220</td>
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<tr>
<td>Max. Peak Flows</td>
<td>&gt;200</td>
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Trunk Sewer

<table>
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<th>Estimated Max Flow (mgd)*</th>
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<td>Main Trunk Sewer</td>
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<tr>
<td>Overpeck Trunk &amp; Relief Sewers</td>
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<tr>
<td>Total Max Peak Flow to WPCF</td>
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* BCUA is currently undertaking a TMDL Study to potentially increase

Mott MacDonald | Presentation
21

Ridgefield Park Supplemental CSO Team

Development and Evaluation of Alternatives Report

Chemically Enhanced High Rate Treatment

Figure 6. CEPT Alternative Block Flow Diagram
Chemically Enhanced High Rate Treatment

Ridgefield Park Supplemental CSO Team
Development and Evaluation of Alternatives Report

<table>
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<tr>
<th>Alternative</th>
<th>Construction Cost</th>
<th>Operation Costs</th>
<th>20-Year Present Worth</th>
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<td>Chemically Enhanced High Rate Treatment</td>
<td>$32M-$127M ($64M)</td>
<td>$0.8M</td>
<td>$44M-$139M ($76M)</td>
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<td>Ballasted Flocculation</td>
<td>$55M-$220M ($110M)</td>
<td>$1.2M</td>
<td>$73M-$238M ($128M)</td>
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Class 5 Cost Estimate (+100% -50%)
Village of Ridgefield Park
Preliminary Alternatives

Area available: 0.8 Acres

Ownership: Village of Ridgefield Park

Land use considerations:
DPW Operations
BCUA Interceptor
Ridgefield Park Supplemental CSO Team
Development and Evaluation of Alternatives Report – Screening Process

Strategies considered:
- Bioretention (raingardens, bioswales, etc.)
- Pervious pavement
- Dry wells

Potential locations considered:
- City right-of-way – curb strip
- City right-of-way – shoulder in non-parking locations
- City public and school properties
- Parking lanes
- Parking lots
- Roofs – dry wells

Ridgefield Park Supplemental CSO Team
Development and Evaluation of Alternatives Report – Screening

Maximize inline storage capacity
Maximize inline storage capacity

Works best with large flat pipes, which are not typical in Ridgefield Park.
Ridgefield Park Supplemental CSO Team
Development and Evaluation of Alternatives Report – Screening

NJ CSO Group Coordination

- Levels of Control
  - 0 Overflows
  - 4 Overflows
  - 8 Overflows
  - 12 Overflow
  - 20 Overflows
  - 85% Capture
Ridgefield Park Supplemental CSO Team

NJ CSO Group Coordination – Agreed with BCUA Modeled Output

- **Levels of Control**
  - 0 Overflows
  - 4 Overflows
  - 8 Overflows
  - 12 Overflow
  - 20 Overflows
  - 85% Capture

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### Existing Conditions

<table>
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<th>Outfall No.</th>
<th>Outfall Name</th>
<th>Annual Total</th>
<th>Maximum</th>
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<td><strong>No. Overflow Events</strong></td>
<td><strong>Overflow Volume (Mgal)</strong></td>
<td><strong>Duration (hours)</strong></td>
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<tr>
<td>001A</td>
<td>Bergen Turnpike</td>
<td>44</td>
<td>12.99</td>
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<td>002A</td>
<td>Main Street and Bergen Turnpike</td>
<td>37</td>
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<tr>
<td>003A</td>
<td>Christie Street</td>
<td>59</td>
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<td>004A</td>
<td>Mount Vernon Street</td>
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<td>Industrial Avenue</td>
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<td>006A</td>
<td>Hackensack Avenue</td>
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<td><strong>System-wide Maximum</strong></td>
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<td><strong>23.41</strong></td>
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Ridgefield Park Supplemental CSO Team

Future Baseline Conditions - 2050

- Required by Permit

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<th>Population</th>
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<td>1970</td>
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<td>1980</td>
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<td>1990</td>
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<td>2000 (US Census)</td>
<td>12,873</td>
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<td>2010 (US Census)</td>
<td>12,729</td>
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<td>2017 (US Census 7-Year Estimate)</td>
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Future Baseline Conditions

<table>
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<tr>
<th>Data Source</th>
<th>Projected Population to 2050 - Conservative (people)</th>
<th>Projected Population to 2050 – All Sources (People)</th>
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<tbody>
<tr>
<td>NJTPA</td>
<td>17,960</td>
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<td>BCUA Projections</td>
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<tr>
<td>Average</td>
<td>16,720</td>
<td>16,100</td>
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Ridgefield Park Supplemental CSO Team

Future Baseline Conditions

- Future growth associated with Skymark and outside of combined area.

Ridgefield Park Supplemental CSO Team

Control Programs

- Eliminate Regulator 006
Ridgefield Park Supplemental CSO Team

Control Programs

• Eliminate Regulator 006
• Eliminate Internal Regulators
Ridgefield Park Supplemental CSO Team

Control Programs

• Eliminate Regulator 006
• Eliminate Internal Regulators
• Sewer Separation

Preliminary Cost $150-$200M
Ridgefield Park Supplemental CSO Team

Control Programs

- Eliminate Regulator 006
- Eliminate Internal Regulators
- Sewer Separation
- Consolidated Storage
Ridgefield Park Supplemental CSO Team
Control Programs

- Eliminate Regulator 006
- Eliminate Internal Regulators
- Sewer Separation
- Consolidated Storage
Ridgefield Park Supplemental CSO Team

Control Programs

- Eliminate Regulator 006
- Eliminate Internal Regulators
- Sewer Separation
- Consolidated Storage

- Preliminary Cost $40-$90M
Ridgefield Park Supplemental CSO Team

Control Programs

- Eliminate Regulator 006
- Eliminate Internal Regulators
- Sewer Separation
- Consolidated Storage
- Tunnel
Ridgefield Park Supplemental CSO Team

Control Programs

• Eliminate Regulator 006
• Eliminate Internal Regulators
• Sewer Separation
• Consolidated Storage
• Tunnel
• Green Infrastructure
Ridgefield Park Supplemental CSO Team
Control Programs

- Eliminate Regulator 006
- Eliminate Internal Regulators
- Sewer Separation
- Consolidated Storage
- Tunnel
- Green Infrastructure
- End of Pipe Treatment
Ridgefield Park Supplemental CSO Team

Development and Evaluation of Alternatives Report – DRAFT Outline

- Introduction
- General Information
- Public Participation Update
- Water Quality Objectives
- Development of Alternatives
  - Development and Screening Levels
- Costing
- Available Land Analysis
- Alternatives Evaluation
- Summary
- References

Ridgefield Park Supplemental CSO Team

Long term control plan submission and NJDEP review status

**Step 1.**
- System Characterization Report
  - NJDEP Approval on 3/11/2019
- Baseline Compliance Monitoring Program Report
  - NJDEP Approval on 3/1/2019
- Consideration of Sensitive Areas Report
  - NJDEP Approval on 4/8/2019
- Public Participation Process Report
  - NJDEP Approval Pending

**Step 2.**
- Development and Evaluation of Alternatives – Due on 7/1/2019

**Step 3.**
- Selection and Implementation of Alternatives Report
- Final LTCP – Due on 6/1/2020
Ridgefield Park Supplemental CSO Team

Upcoming Schedule

Mid to Late January 2019: Complete initial screening to identify viable alternatives

Mid-March 2019: Detailed evaluation of viable alternatives (cost, sizing, benefits)

Mid-April 2019: Refine alternatives

Mid-May 2019: Finalize alternatives, draft report submission

June 2019: Submit final report to NJDEP

July 1, 2019 – Development and Evaluation of Alternatives Report Due to NJDEP

- Develop Comprehensive List of Alternatives
- Screen Alternatives
- Evaluate Alternatives
- Cost Estimates
- Coordinate with other Members of BCUA Group
- Produce and Submit Report
Final Questions?

Thank You?