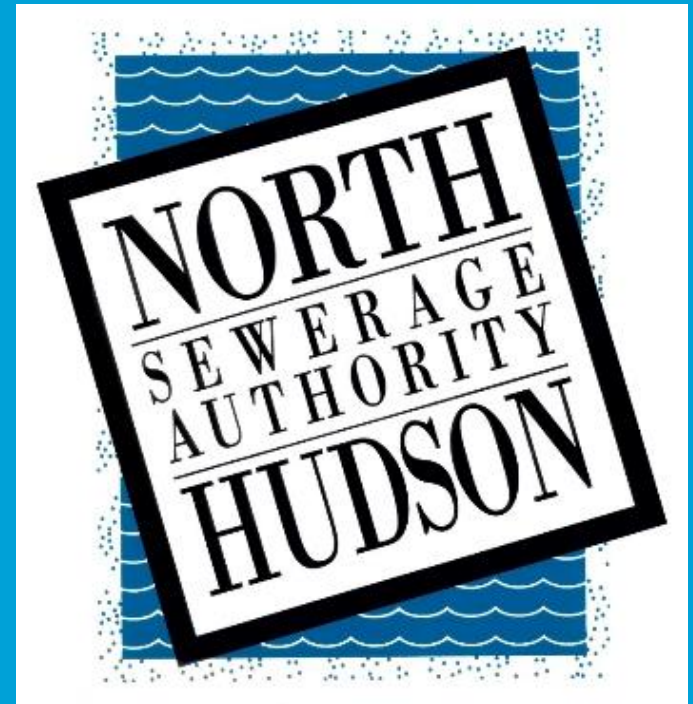


# Approaches to the Alternatives Analysis North Hudson Sewerage Authority

CSO Permittee Network Meeting

Middlesex County Utilities Authority

April 9, 2018



# New Jersey Pollution Discharge Elimination System (NJPDES) Permits require an Alternative Analysis for Developing the LTCP

*D.3.b.v: Step 2 - Development and Evaluation of Alternatives for the LTCP - In accordance with Sections G.2. through G.5. and G.9., the permittee shall submit an approvable Development and Evaluation of Alternatives Report: within 48 months from the effective date of the permit (EDP).*

- *G.2.c.iii: [Supplemental CSO Team] Provide input for consideration in the evaluation of CSO control alternatives;*

*G.4.a: The permittee shall evaluate a reasonable range of CSO control alternatives, in accordance with D.3.a and G.10, that will meet the water quality-based requirements of the CWA using either the Presumption Approach or the Demonstration Approach (as described in Sections G.4.f. and G.4.g).*

*G.4.e: The permittee shall evaluate a range of CSO control alternatives predicted to accomplish the requirements of the CWA..... The permittee shall evaluate the practical and technical feasibility of the proposed CSO control alternative(s), and water quality benefits of constructing and implementing various remedial controls and combination of such controls and activities which shall include, but not be limited to the controls below:*

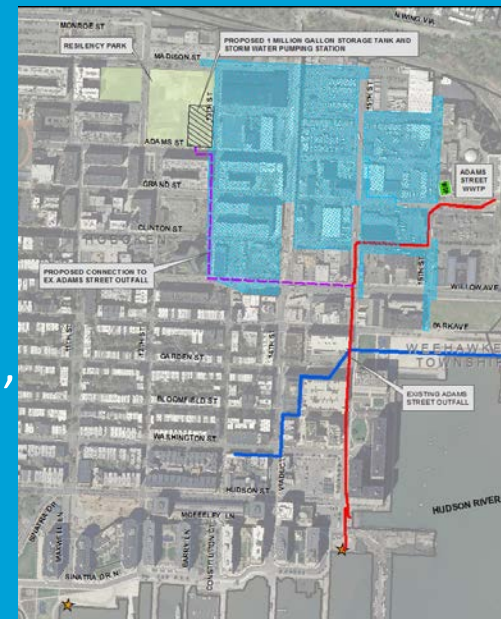
- i. Green infrastructure.*
- ii. Increased storage capacity in the collection system.*
- iii. STP expansion and/or storage at the plant (an evaluation of the capacity of the unit processes must be conducted at the STP resulting in a determination of whether there is any additional treatment and conveyance capacity within the STP). Based upon this information, the permittee shall determine (modeling may be used) the amount of CSO discharge reduction that would be achieved by utilizing this additional treatment capacity while maintaining compliance with all permit limits*
- iv. 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 to free up storage capacity or conveyance in the sewer system and/or treatment capacity at the STP, and feasibility of implementing in the entire system or portions thereof.*
- 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.*

# North Hudson Alternative Analysis Approach

- Integrate Ongoing CSO Control Projects into the LTCP Development Process
- Conduct a CSO Alternative Analysis Concept Workshop to identify CSO control alternatives for each CSO outfall
- Assign engineers to evaluate CSO alternatives for each outfall
- Submit *Development and Evaluation of Alternatives Report* to NJDEP in 2019

# Ongoing Projects to be Integrated into the LTCP development process:

- Sewer Lining
- Hoboken H2 CSO Closure
- Hoboken Southwest Park and Jackson and 7<sup>th</sup> Street Optimization
- Hoboken H6/H7 CSO LTCP Project
- Green Infrastructure Projects
  - Hoboken Green Infrastructure Strategic Plan
  - North Hudson Projects in Weehawken, Union City and West New York



# CSO Alternative Analysis Concept Workshop

- Goal: Develop conceptual approaches and identify technologies for reducing the frequency and volumes of the Authority's CSOs.
- Participants: Authority staff, operational staff, on-call engineers, NJDEP
- 2-Day Workshop
  - Break into teams that focus on ten individual CSO outfalls
  - Use characterization information to identify existing conditions
  - Develop CSO control alternatives to reduce overflows
  - Reassemble to review the alternatives
- Deliverable: Memo with Findings and Recommendations
- Next Step: Assign engineers to evaluate the alternatives by outfall

Thank You

