

CSO LONG-TERM CONTROL PLAN (LTCP)

This is the 3rd volume of North Hudson Sewerage Authority (NHSA)'s newsletter series explaining our NJDEP-mandated CSO LTCP.

Volume 1 discussed CSOs and why limiting the number of over flows means a cleaner Hudson River.

Volume 2 reviewed the first step in the Plan: system characterization or, put simply, the development of a detailed understanding of our combined sewer system and its environmental impact on the Hudson River.

In this Volume, we discuss the second step: the development of several general, workable options to reduce the CSO overflows into the Hudson River.

It is our intention that this series of newsletters, along with other public outreach efforts, will encourage you to get involved in our environmental mission. Understanding how the combined sewer system works and why it is important to reduce CSO discharges into our waterways is important for anyone who cares about our environment.

We hope our efforts at public education will result in greater public participation in our long-term CSO planning.



A Newsletter of the North Hudson Sewerage Authority

THIRTY, NORTH HUDSON RIVER
VOL 3

WHAT ARE THE POTENTIAL OPTIONS?

We started by analyzing more than 50 engineering alternatives that might reduce CSOs. As a first step, we wanted to identify various options that would work in our system. Subsequently, we will select from this list of options to create combinations that can effectively reduce our CSO discharges.

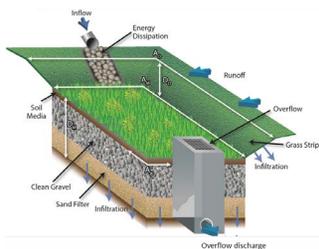
Here are the types of approaches that, in different combinations, would work:

1. Install Underground Storage Tanks - Detain combined flow and slowly release for treatment
2. Perform End-Of-Pipe/ Contact Basin treatment - Treat combined flow right before it has been discharged into the water way
3. Wastewater Treatment System Upgrade - Increase system capacity and optimize treatment process
4. Pump Stations - Convey flow to the optimal location to treat
5. Separate the combined sewer system -Separate storm water from the combined sewer system to increase out sewer system capacity during wet weather events
6. Green Infrastructure - Reduce storm water infiltration into the sewer system

HOW WOULD IT WORK?

The goal of the LTCP is to reduce and treat the combined overflow. Here are some examples of how it might work to achieve that objective:

Collecting Excess Flow Using Storage Tanks and Green Infrastructure.



Both storage tanks and green infrastructure prevent excess flows from entering the sewer system during rainstorms, combining with regular sewer flow, by-passing (because of the high volume) the treatment plants and discharging into the river. Underground storage tanks have already been installed under parks in Hoboken, and others are in the works. The tanks store the rainwater and then later release it for treatment. Also, a variety of green infrastructure projects have been completed throughout our service area: rain gardens, detention basins, permeable pavement, and green roofs -- all of which effectively absorb rainwater.

End-Of-Pipe and Contact Basin Treatment



of treatment facilities at the outfall along the Hudson River shoreline or in the water itself. Some of these treatment facilities might be large and considered undesirable along the Hoboken, Weehawken and West New York riverfronts. However, end-of-pipe treatment is an effective approach from the point of view of doing the job of cleaning the CSOs before discharging into the River.

Wastewater Treatment Plant Upgrade



This category includes several different ways to reduce CSOs. One of the system upgrades is to increase the capacity of the wastewater

treatment plants by adding storage tanks at the treatment plants that will effectively decrease the stress of overflow during wet weather events. This solution requires space on our plant sites in Hoboken and West New York which needs further examination.

Building Storm Sewers

This option is limited to the few remaining undeveloped sections of our service area, particularly northwest Hoboken. With the inclusion of a 1 million gallon storage tank under the new City-owned Northwest Resiliency Park, there is an opportunity to build a storm sewer system which will separate rain water from normal sewage flow and provide more capacity, thus reducing CSO events.

NEXT STEP: SELECTION OF ALTERNATIVES

In order to achieve the goal of CSO capture, NHSA will have to choose among these multiple groups of alternatives to form a program. That's the next step, and our next newsletter will outline the preferred approach. The selection will be informed by public feedback, engineering issues, and cost.

Join North Hudson to discuss the development of the LTCP and its progress at our next public meeting on November 18th. The meetings are held at North Hudson's office at 1600 Adams Street, Hoboken.

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www.nhudsonsa.com/thrive/cso.html