

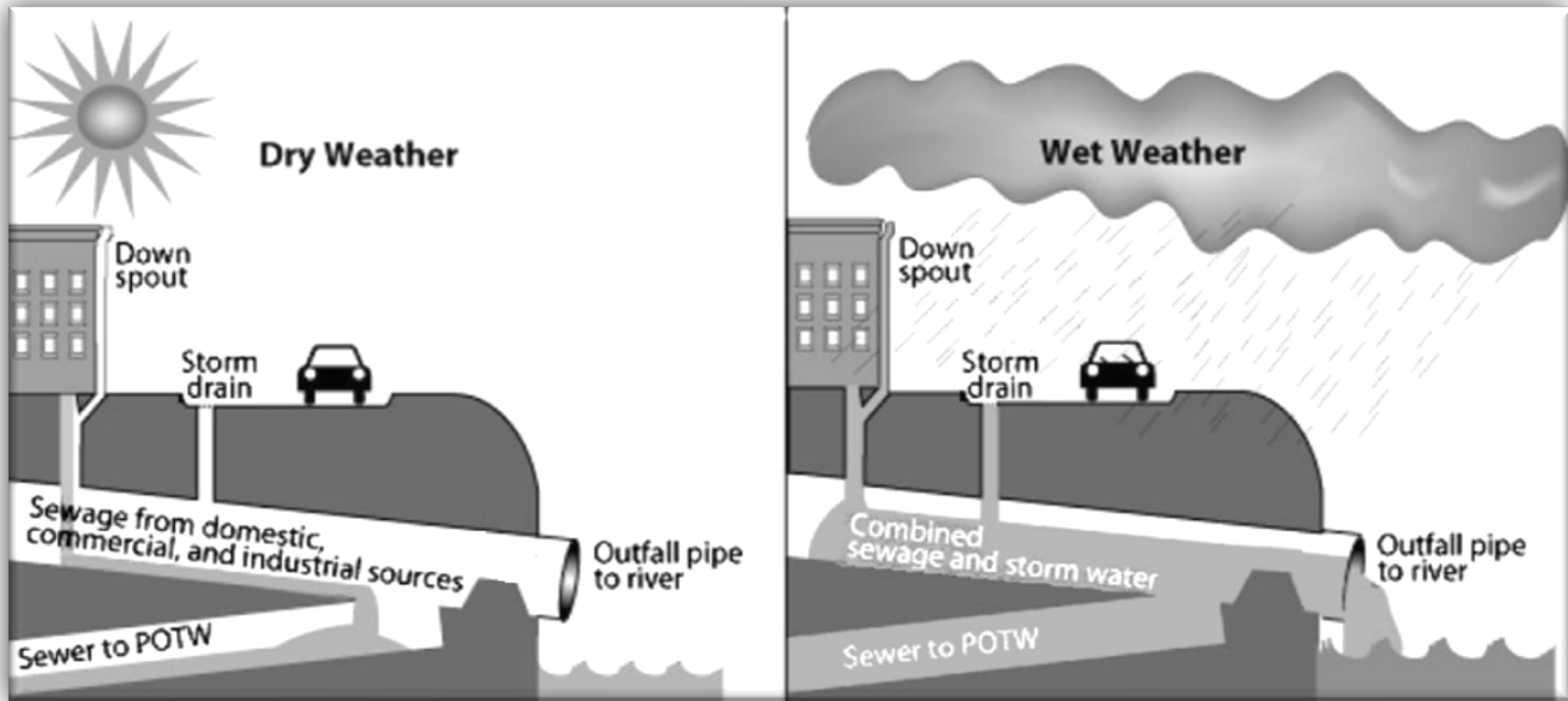
NJ CSO Program Update

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Bureau Chief
Bureau of Surface Water Permitting
Division of Water Quality

July 9, 2019



What is a CSO?

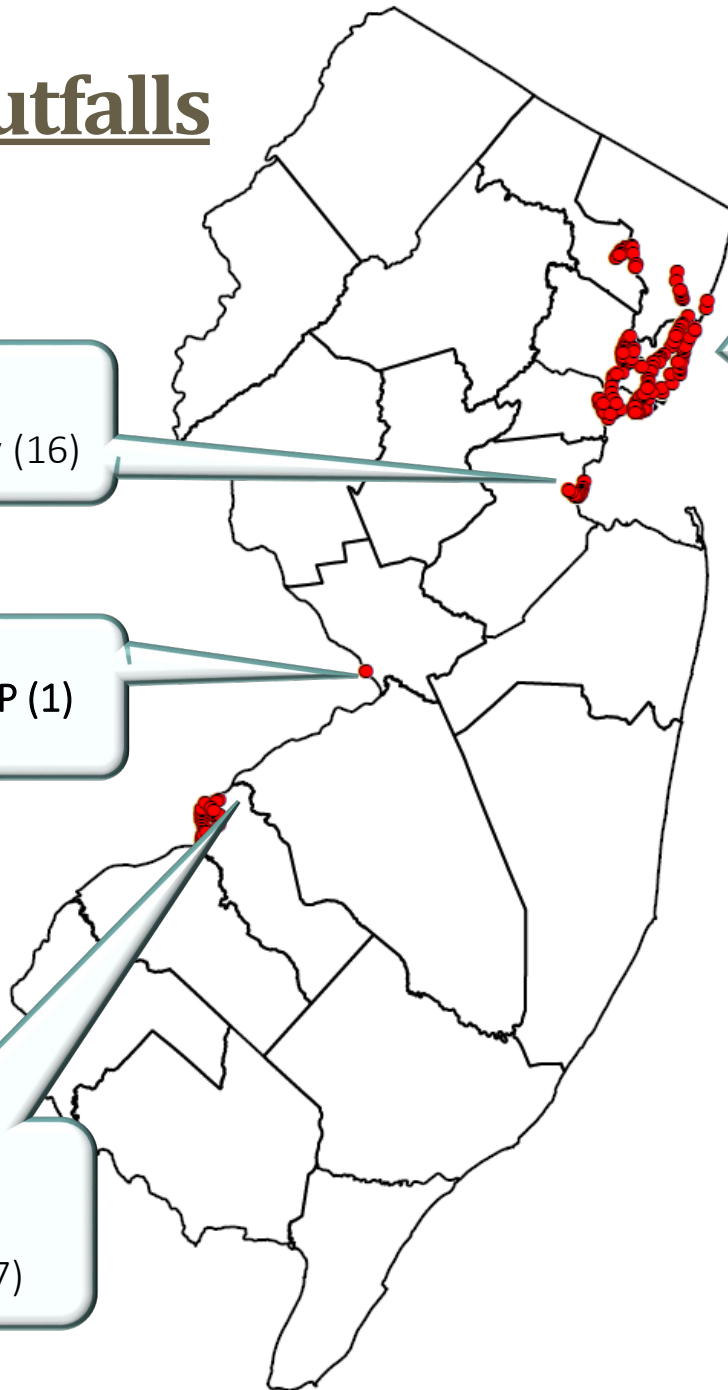


NJ CSO Outfalls

- MCUA**
- Perth Amboy (16)

- Trenton STP (1)**

- CCMUA (1)**
- Camden (22)
 - Gloucester (7)



- BCUA**
- Fort Lee (2)
 - Hackensack (2)
 - Ridgefield Park (6)
- Joint Meeting**
- Elizabeth (29)
- North Bergen**
- Woodcliff (1)
 - Guttenberg (1)
- North Hudson SA (10)**
- PVSC**
- East Newark (1)
 - Harrison (6)
 - Bayonne (28)
 - Kearny (5)
 - Paterson (23)
 - Jersey City (21)
 - Newark (18)
 - N Bergen MUA (9)

CSO STPs and Municipalities

MCUA
○ Perth Amboy

Trenton STP
○ Trenton

CCMUA
○ Camden
○ Gloucester



BCUA
○ Fort Lee
○ Hackensack
○ Ridgefield Park

Joint Meeting
○ Elizabeth

North Bergen
○ Woodcliff
○ Guttenberg

North Hudson SA
○ Hoboken
○ Union City
○ Weehawken
○ West New York

PVSC
○ Bayonne
○ East Newark
○ Harrison
○ Kearny
○ Paterson
○ Jersey City
○ Newark
○ North Bergen

What Has NJDEP Done?

- 25 Individual CSO permits were issued on March 12, 2015, effective July 1, 2015.
- Required DMR Submittals for each outfall
- Sensitive Areas, Compliance Monitoring, Public Participation and System Characterization were due **July 1, 2018**.
- Development and Evaluation of Alternatives were due on **July 1, 2019**.
- Long Term Control Plan (LTCP) is due **June 1, 2020**.

An ambitious schedule with cascading permit requirements.



NJDEP CSO Website - www.state.nj.us/dep/dwq/cso.htm

Governor Phil Murphy • Lt. Governor Sheila Oliver

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STATE OF NEW JERSEY
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DIVISION OF WATER QUALITY



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Combined Sewer Overflow

The Department is committed to working with Combined Sewer Overflow (CSO) permittees and CSO communities to reduce or eliminate CSOs. The Department provides permittees in meeting their permit obligations by providing technical assistance, guidance, and training.

The individual CSO permits, effective on July 1, 2015, encourage permittee and [community collaboration](#) on the planning and development of projects that will provide urban redevelopment opportunities, improve water quality, beautify neighborhoods, and improve the overall quality of life in our urban communities.

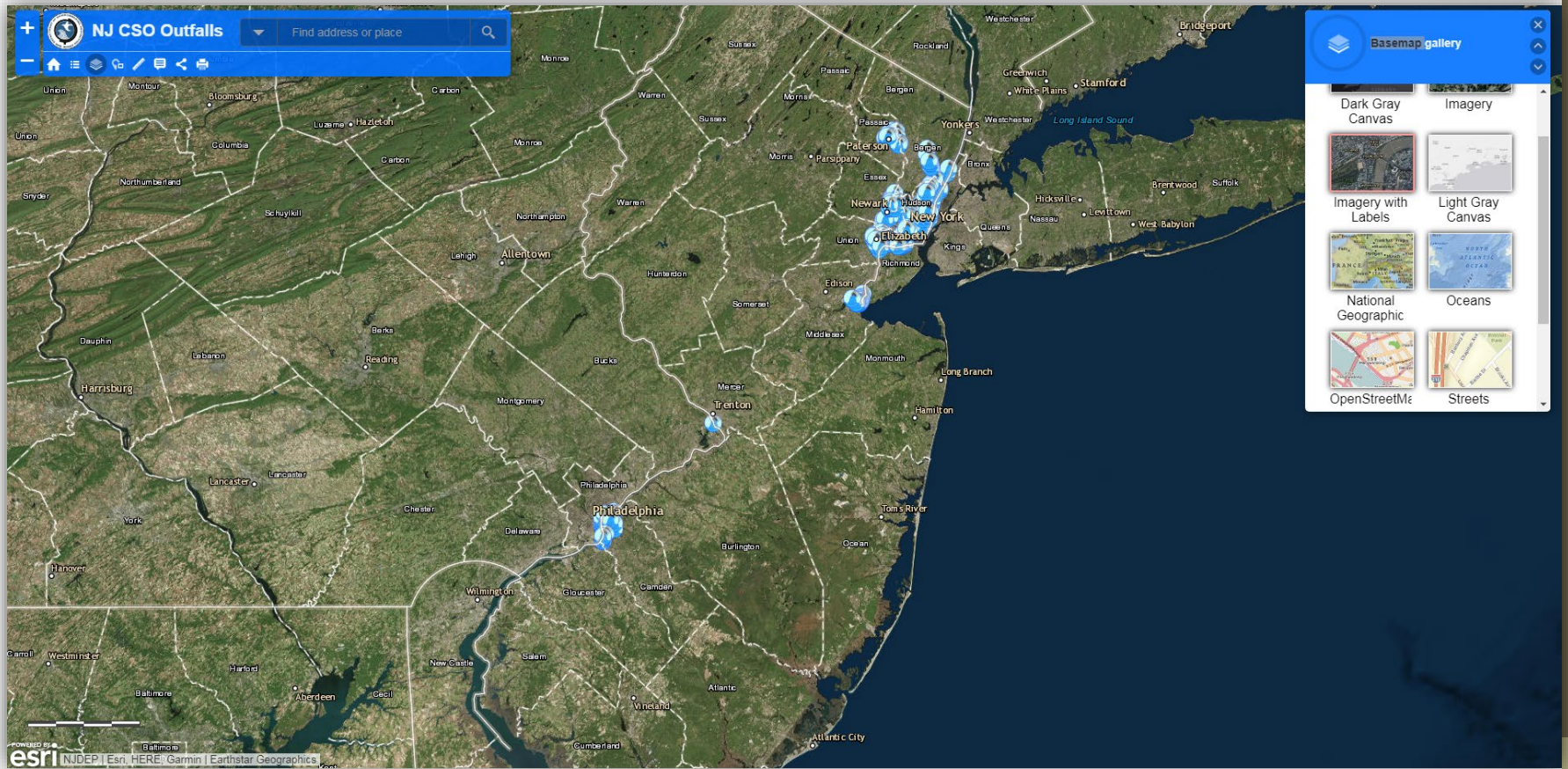
Since the issuance of the first NJPDES permits to regulate CSOs, the total number of CSO outfalls in New Jersey has been reduced from 281 to 210; a reduction of more than 20%. Additionally, solids and floatables control devices are installed at nearly every CSO outfall to prevent debris greater than one half inch from entering the sewer system.

The 25 individual permits, issued March 2015, cover the remaining outfalls in 21 municipalities. The individual permits including the response to comments document can be found on the toolbar. These permits build upon the previous general permit requirements; permittees should consider what work has already been performed and how past achievements may be incorporated into new efforts to satisfy the new individual CSO permit requirements.

Featured Topics

- [Long Term Control Plan Submittals](#) **NEW!**
- [Public Participation Process Report Guidance](#) **NEW!**
- [Evaluating Green Infrastructure: A CSO Control Alternative for LTCPs](#) **NEW!**
- [Wet Weather Flow Treatment and Disinfection Demonstration Project Report](#)
- [CSO Sewer Maps](#)
- [CSO Outfall Interactive Map](#)
- [Forming and Utilizing Your Supplemental CSO Team](#)
- [New CSO Funding Options](#)
- [Join our CSO email list](#)

CSO Interactive Map



CSO Interactive Map can be found at NJDEP DWQ CSO Webpage

CSO Interactive Map

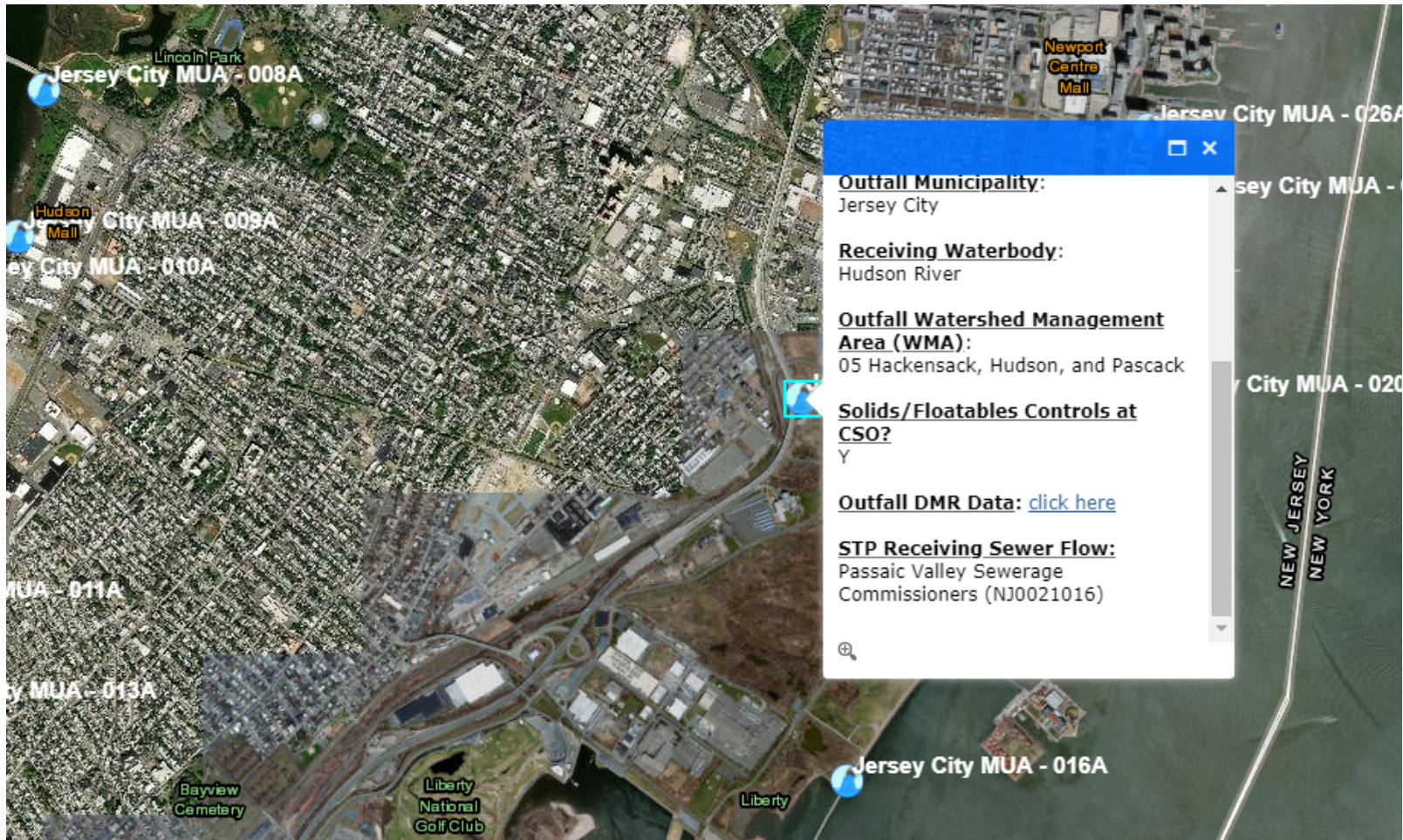
The screenshot displays an interactive map titled "NJ CSO Outfalls". The map shows an aerial view of Jersey City with several monitoring locations marked by blue circular icons. The locations are labeled as follows:

- Jersey City MUA - 008A (near Lincoln Park)
- Jersey City MUA - 009A (near Hudson Mall)
- Jersey City MUA - 010A
- Jersey City MUA - 011A
- Jersey City MUA - 013A
- Jersey City MUA - 016A

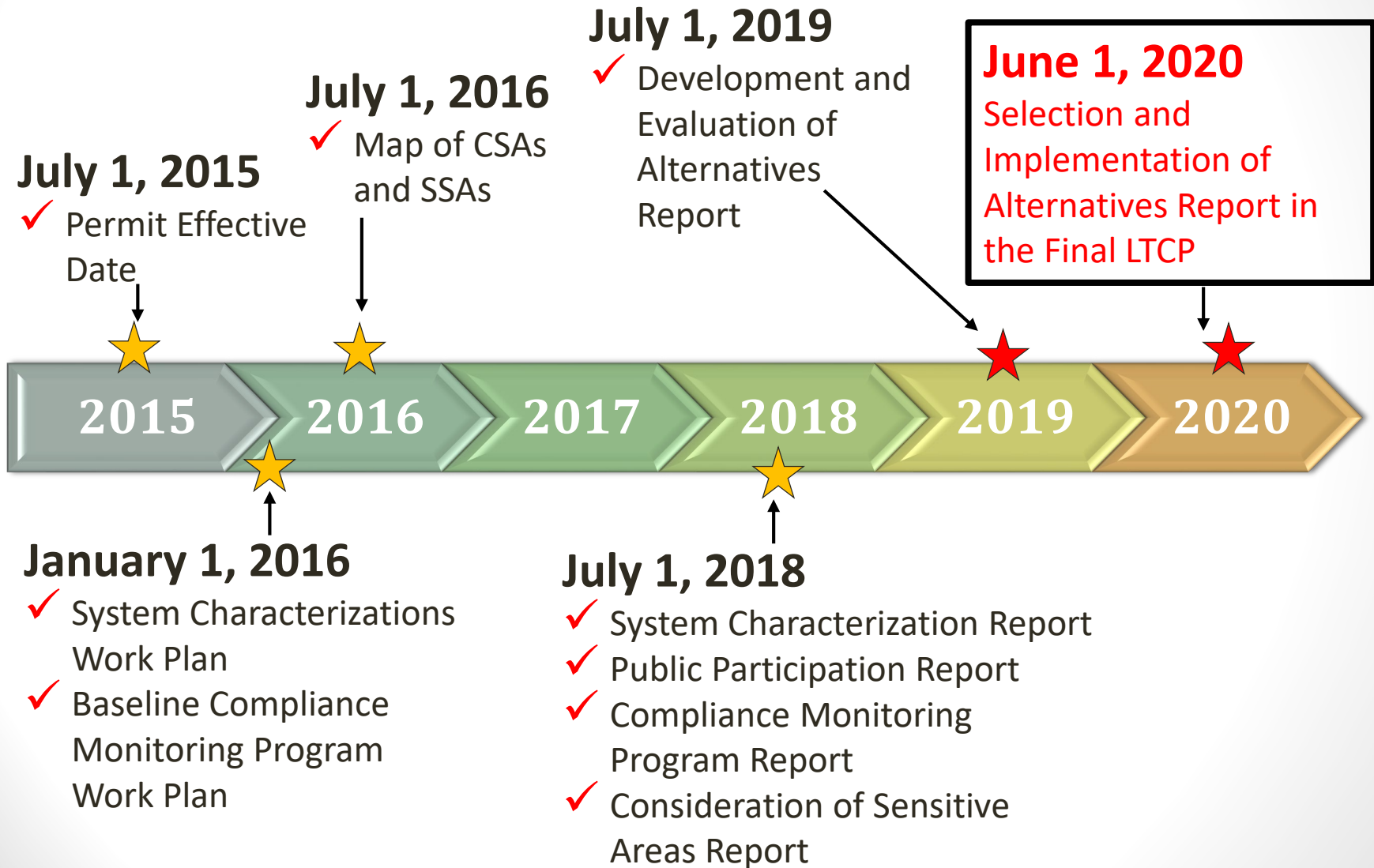
A popup window is open for "Jersey City MUA - 018A", providing the following details:

- Permittee:** Jersey City MUA
- NJPDES #:** NJ0108723
- Monitored Location (i.e. DSN):** 018A
- Alternate Outfall Identifier:** Mill Creek
- Outfall Municipality:** Jersey City
- Receiving Waterbody:** Hudson River
- Outfall Watershed Management Area (WMA):** [Location icon]

CSO Interactive Map



Timeline



Public Participation

NJPDES Permit Part IV.G.2

Implementation shall actively involve the affected public throughout each of the **3 Steps of the LTCP process**. The affected public includes:

- rate payers (including rate payers in the separate sewer sections)
industrial users of the sewer system
- persons who reside downstream from the CSOs
- persons who use and enjoy the downstream waters, and
- any other interested persons



Camden Smart Initiative
Ferry Avenue Rain Garden



Public Participation

NJPDES Permit Part IV.G.2

A Public Participation Process Report shall include the following elements:

- **Conduct outreach** to inform the affected/interested public ...through **various methods** which may include: public meetings, direct mailers, billing inserts, newsletters, press releases to the media, postings of information on the permittee's website, hotline, development of advisory committees, etc.; and to
- Invite members of the affected/interested public to join a **Supplemental CSO Team** to work with the permittee's assigned staff, consultants and/or contractors.

Public Participation

NJPDES Permit Part IV G 2

THE NEWARK WATER DEPARTMENT

SUSTAINABLE STORMWATER STEWARDS

ADOPT A CATCH BASIN

RAIN BARREL GIVEAWAY

WHY IS A RAIN BARREL?

It helps reduce the amount of rainwater that runs off your property and into the sewer system. It helps prevent flooding and reduces the amount of water that goes to the sewer.

WHY IS A CATCH BASIN?

It catches leaves and other debris before they can get into the sewer system. This helps prevent clogs and keeps the sewer system running smoothly.

GREEN INFRASTRUCTURE (GI) REFORMERS ARE FIGHTING TO MAKE SURE RESIDENTS AND BUSINESS OWNERS UNDERSTAND THE PROBLEM AND HOW WE ALL CAN HELP FIX THE PROBLEM.

When roads and basements flood due to heavy rain, it's often a mixture of **raw sewer water**. A significant portion of Newark's sewer system transports stormwater and wastewater in one pipe called a "combined" sewer. Rainwater that falls on sidewalks, rooftops and lawns often overflows our water treatment capacity and results in the water being sent "untreated" directly into the Passaic River or having that dirty water leak up into basements or onto the street out of sewer drains.

HERE'S THE PROBLEM:

Many homeowners are unaware of the extra money paid for water bills each month make it possible for Newark's Department of Water and Sewer Utilities to tackle the immense job of keeping Newark's aging system working and safe for residents, workers and visitors.

With these funds, the department is working to keep catch basins clean, test and maintain netting facilities, keep detailed maps of our sewer infrastructure, clean and open up previously blocked drainage sites and rehabilitate hundreds of miles of sewer lines. Though this is good work, **much more needs to be done!**

WHAT RESIDENTS CAN DO

Keep your car maintained
When cars leak oil or fluids, these chemicals can pollute the soil and are washed into the sewer system when it rains. Don't dump oil or fluids from your car into storm drains!

Join the "Adopt-a-Catch-Basin Program"
By volunteering to keep a catch basin near you clear of leaves, litter and other debris, the City of Newark Office of Sustainability is offering a free rain barrel giveaway and training for using and maintaining a rain barrel.

Think twice before using fertilizers and pesticides.
Consider weather alternatives to toxic lawn products and think to make sure it's not going to rain when you apply products. The chemicals can easily wash off and pollute the system.

WHAT NEWARK CAN DO

State and federal regulations mandate that Newark fix this problem. City government officials are researching the extent of the problem and looking at various solutions. The GI Reformers want to make sure residents and business owners are aware of green infrastructure remedies and their costs.

What's Going On Under Your Streets? Follow Your Flush!

What is a Combined Sewer?

Most of Elizabeth's sewers are **combined sewers**, which means that they carry both sanitary sewage and stormwater in one piping system. When it rains, to prevent flooding at storm drains and in basements, the sewers fill up and release excess flow to nearby water bodies, called **Combined Sewer Overflows (CSOs)**. Elizabeth has 73 **basins** where CSOs discharge, called **catch basins**, and floatable matter such as pathogens, oxygen-demanding pollutants, suspended solids, nutrients, toxics and floatable matter can be discharged to receiving streams including the Passaic River. Elizabeth is working with the New Jersey Department of Environmental Protection (NJDEP) and the US Environmental Protection Agency (EPA) to reduce the number of CSO events that take place every year to improve **water quality** in Elizabeth's receiving streams.

When it's dry...

When it's wet...

- 1 Wet Weather Event (Rainfall)
- 2 Wastewater from your home (toilets, sinks, shower drains)
- 3 Combined Sewer Network - Sanitary + Storm Water
- 4 JMEUC Wastewater Treatment Plant
- 5 Combined Sewer Overflow (CSO) to Arthur Kill

The City of Elizabeth, Keeping Your Community Green & Clean

- 1 Trumbull Street Green Infrastructure (under construction)
- 2 Trumbull Street Green Infrastructure (architectural rendering)
- 3 Solids/Floatables Control Facilities - netting frame being lowered
- 4 Venona Gebhardt Pumping Station - netting frame being lowered
- 5 Levee along Elizabeth River
- 6 Headwall for Elizabeth River Levee
- 7 Venona Gebhardt Pumping Station - precast concrete structure

Characterization Monitoring and Modeling of the Combined Sewer System

NJPDES Permit Part IV.G.1

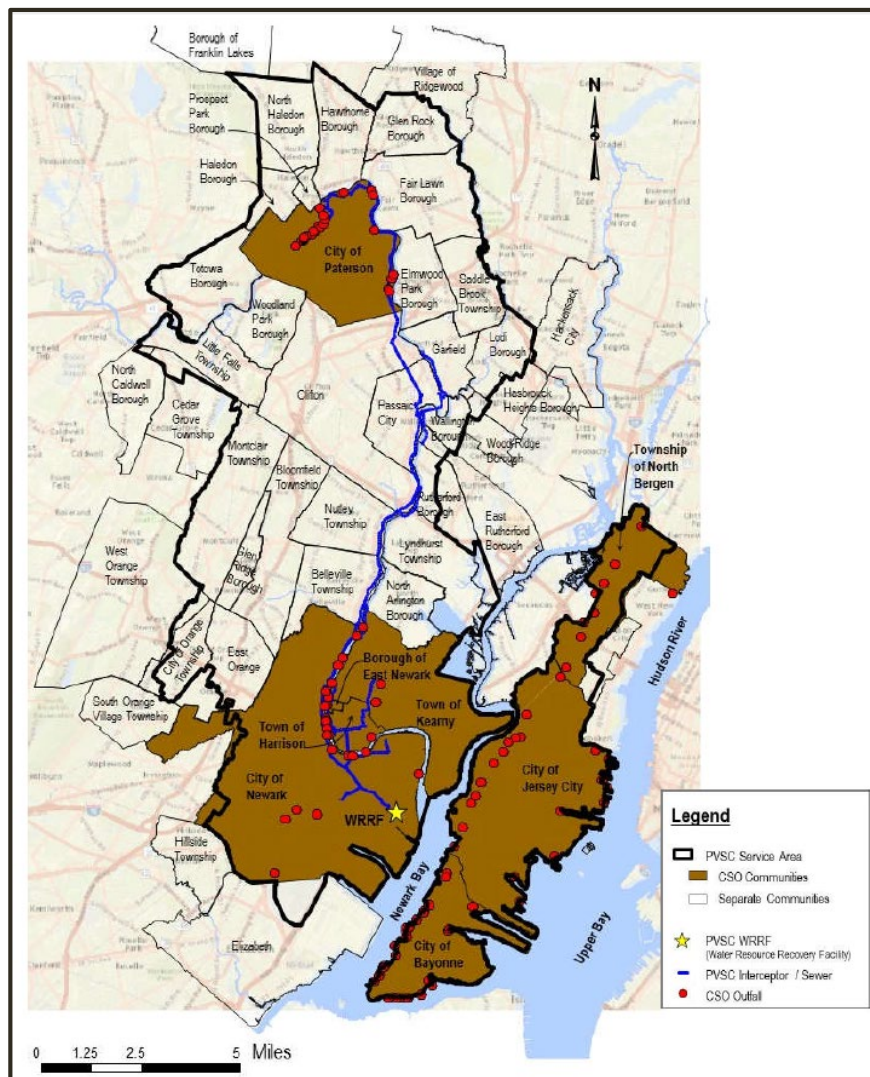


Figure C-2 of PVSC System Characterization Report
PVSC Service Area with CSO Outfall Locations

Purpose of the Combined Sewer System Characterization

How does the Combined Sewer System function when it rains throughout a year?

- Analysis of relationship between rainfall, CSO discharge and Wet Weather Flows at treatment plants
- Which discharge? How much? How often?
- How do CSO discharges relate to rainfall amount and duration?
- Where does flooding occur?
- Characterization of the discharges (both CSO and stormwater)

Need enough analysis to inform alternatives evaluation

Foundation of the LTCP

JCMUA
Rain Gauge # 3



Question: What will the CSO Program be focused on during the next three months?



Alternatives Analysis Review

- Alternatives Analyses will be posted on CSO webpage
- Multi-disciplinary review:
 - CSO Team Leaders, Alternatives Analysis Team Leads, CSO Program, Stormwater, Municipal Finance and Construction, TWA –
 - **Minimum of 7 reviewers on each report**
- DEP intends to conduct a comprehensive and prompt review
- DEP's response is crucial to the next step
LTCP submittal



What Is the DEP Looking for in the Alternatives Analysis?

Generally:

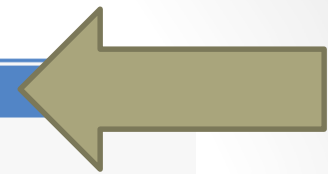
- Are the alternatives presented practical and technically feasible?

Specifically:

- 1) Were all 7 CSO control strategies considered?
- 2) Are multiple alternatives presented?
- 3) What input did the Supplemental CSO Team have?

How can the public provide input on the alternatives analysis?

Permittee	DEP Team Lead
Camden County Municipal Utility Authority The City of Camden The City of Gloucester Trenton Sewer Authority	Armando Alfonso Armando.Alfonso@dep.nj.gov (609) 633-7021
Bergen County Utilities Authority Fort Lee Boro Hackensack City Ridgefield Park Village The Joint Meeting of Essex and Union Counties The City of Elizabeth	Nancy Kempel Nancy.Kempel@dep.nj.gov 609-292-4860
North Bergen Woodcliff STP Town of Guttenberg Adams Street WTP River Road WTP	Joe Mannick Joe.Mannick@dep.nj.gov 609-292-4860
The City of Perth Amboy Middlesex County Utilities Authority Passaic Valley Sewerage Commission Bayonne City MUA Jersey City MUA City of Newark North Bergen Township MUA East Newark Borough Harrison Town Kearny Town Paterson City	Dwayne Kobesky Dwayne.Kobesky@dep.nj.gov 609-292-4860



LTCPs in Permits!

- When the LTCPs are submitted, DEP will conduct a multi-disciplinary review.
- The DEP committed to issuing individual permits, not Administrative Consent Orders or Judicial Consent Decrees.
- The permits have a 5 year duration; LTCPs could be 20 years

L-T-C-P



Questions?

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