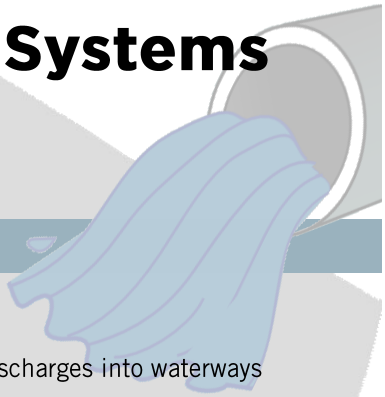
New Jersey's Combined Sewer Systems By the Numbers



The Problem

The combined-sewer overflow (CSO) problem is significant

217	The number of places ("outfalls") in New Jersey where diluted raw sewage discharges into waterways
7 billion or 23 billion	The number of gallons per year of CSO discharge, depending on who you ask (a combined figure from 16 municipal reports or a 2012 estimate from the USEPA)
$2 billion to $9.3 billion	The range of estimated costs of fixing the CSO systems, depending on who you ask (a combined figure from 15 municipal reports or a 2008 estimate from the USEPA)

Growing, Stressed, Challenged

New Jersey's cities are becoming the state's economic-growth engine

17	The percentage of the state's population living in combined-sewer cities
27	The percentage of New Jersey's population growth between 2008 and 2013 that took place within the 21 CSO cities
10	The employment growth rate in New Jersey's 21 CSO cities between 2003 and 2013 (more then double the state-wide employment growth rate of 4 percent)
20	The percentage of the state's population and employment growth projected for these urban areas between now and 2040
66	The percentage of the state's transit assets (as measured by weekday transit boardings) in these cities, making them attractive places for commercial investment
23.7	The percentage of the population in the 21 CSO municipalities aged 22 to 34. This age group comprises only 16.9 percent of the state's total population

New Jersey's combined-sewer cities have high fiscal distress levels

36	The percentage of the state's population below the poverty line that lives in these cities

Camden, Hoboken, Newark and Jersey City exemplify some of New Jersey's urban water challenges

541	The number of RiverLINE train delays in Camden in 2011 and 2012 due to water main breaks, rainstorms and other water-related events, accounting for 40 percent of total delays.
20	The average number of water main breaks per year in Hoboken since 2000, which come from pipes as much as 157 years old
70	The percent of Newark's land area that is covered by impervious surfaces where rainwater cannot be absorbed into the ground but instead flows into the underground combined sewer system
54	The diameter in inches of the Jersey City sewer main that ruptured in November 2014, suspending service on the Hudson-Bergen Light Rail Line and sending raw sewage into the Hudson River for many days

The Permits

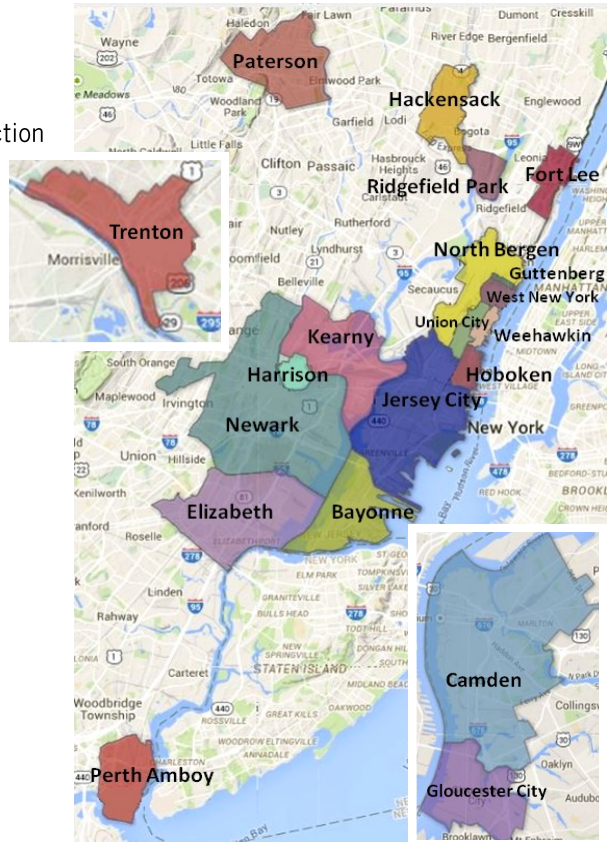
Many different entities hold CSO permits

17 Municipal departments and utilities that manage sewage collection

8 Sewage treatment plants, one of which also manages sewage collection

CSO Permittees (With Numbers of Outfalls)

Sewer Treatment Authority	City	Number of Outfalls
Bergen County Utility Authority (10)	Ridgefield Park	(6)
	Fort Lee	(2)
	Hackensack	(2)
Camden County Municipal Utilities Authority (36)	Camden	(29)
	Gloucester City	(7)
Joint Meeting of Essex and Union Counties (28)	Elizabeth	(28)
Middlesex County Utilities Authority (16)	Perth Amboy	(16)
North Bergen Municipal Utility Authority (2)	North Bergen	(1)
	Guttenberg	(1)
North Hudson Sewerage Commission (10) (also manages sewer collection)	West New York	(combined 10 outfalls)
	Hoboken	
	Union City	
	Weehawken	
Passaic Valley Sewerage Authority (114)	Bayonne	(30)
	Paterson	(24)
	Jersey City	(21)
	Newark	(17)
	Harrison	(7)
	North Bergen	(9)
	Kearny	(5)
	East Newark	(1)
Trenton Sewer Authority (1)	Trenton	(1)



The Solutions

CSO solutions that combine green and grey infrastructure can produce more benefits

3.8 billion The additional gallons per year in CSO reductions from New York City's green-and-gray plan as compared to the all-gray plan for the same price

68 million The estimated net cost savings in dollars of integrating green infrastructure into the City of Lancaster (Pa.)'s CSO plan, which has also generated $2.8 million annually in energy, air quality, and climate-related benefits

4.3 million The number of gallons of stormwater captured each year by Camden's green-infrastructure projects, including new parks, rain gardens, more than 992 trees and more than 120 rain barrels. This stormwater would otherwise be contributing to overflows of the combined sewer system into Camden's streets, parks, homes and waterways

CSO fixes will take a long time

3 to 5 The number of years a city or utility has to adopt its Long Term Control Plan, depending on whether it's for an individual place or a broader region

20+ The number of years most places expect to take to implement the plan and make the required upgrades

National Perspective

859 Total number of municipalities nationwide that have (or have had) combined-sewer systems

84 Number of municipalities nationwide that still need to upgrade their CSOs or adopt Long Term Control Plans

21 Number of those municipalities that are in New Jersey (25 percent)

Data sources: The American Community Survey, New Jersey Department of Labor, North Jersey Transportation Planning Authority and the Delaware Valley Regional Planning Commission; *Water Infrastructure in New Jerseys CSO Cities: Elevating the Importance of Upgrading New Jersey's Urban Water Systems*, 2014, Daniel J. Van Abs, PhD, PP/AICP; *Ripple Effects: The State of New Jersey's Water Infrastructure and Why It Matters*, 2014, Chris Sturm and Nick Dickerson; and other sources.

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