



NEW YORK CITY LAW DEPARTMENT

NACWA • November 2007

Developments in Clean Water Law Seminar

**Climate Change and Water Infrastructure:
*Opportunity and Challenge
for New York City***

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planNYC

A GREENER, GREATER NEW YORK



The City of New York
Mayor Michael R. Bloomberg

Our water system was an engineering marvel when it was created in the early 19th century. But today growth around our reservoirs and the age of our infrastructure make it more and more challenging to maintain the quality and reliability of our supply.

We must also confront the legacy of our industrial past, which treated New York's waterways as a delivery system, rather than as a source of recreation or a vital ecological habitat. Today, our combined sewer system too often renders our waterways unusable.

These two water challenges—ensuring the water we drink is clean and available, and that the waterways surrounding our city are open to New Yorkers—will require continued investment. That's why we will build critical backup systems for our water network infrastructure, continue to upgrade our wastewater treatment facilities, and explore the potential of more natural solutions to cleanse and filter our waterways.

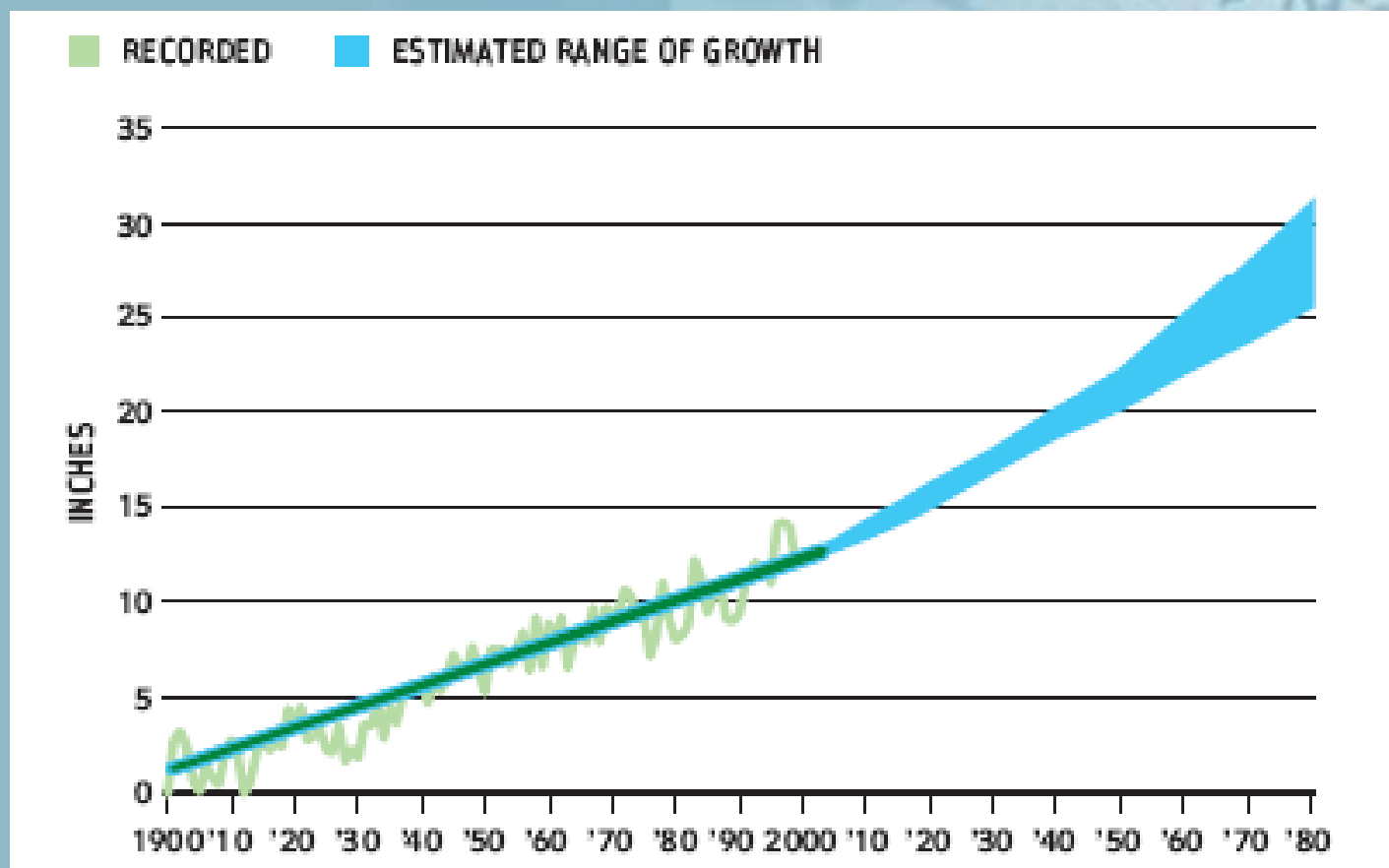
Water

Probable Change and Range for Climate Characteristics, NYC Watershed

	Temperature (°F)	Precipitation (%)	Sea Level Rise (inches)
	Most Probable Change	Most Probable Change	Most Probable Change
2020s	1.5 to 2.0	0 to 2.5	2.0 to 5.9
2050s	3.0 to 3.5	2.5 to 7.5	7.9 to 9.8
2080s	7.5 to 8.0	7.5 to 10.0	15.7 to 17.7

Results are based on selected GCM projections across various emission scenarios.

Average Sea Level, Manhattan



Based on the sea level at the Battery in 1900.

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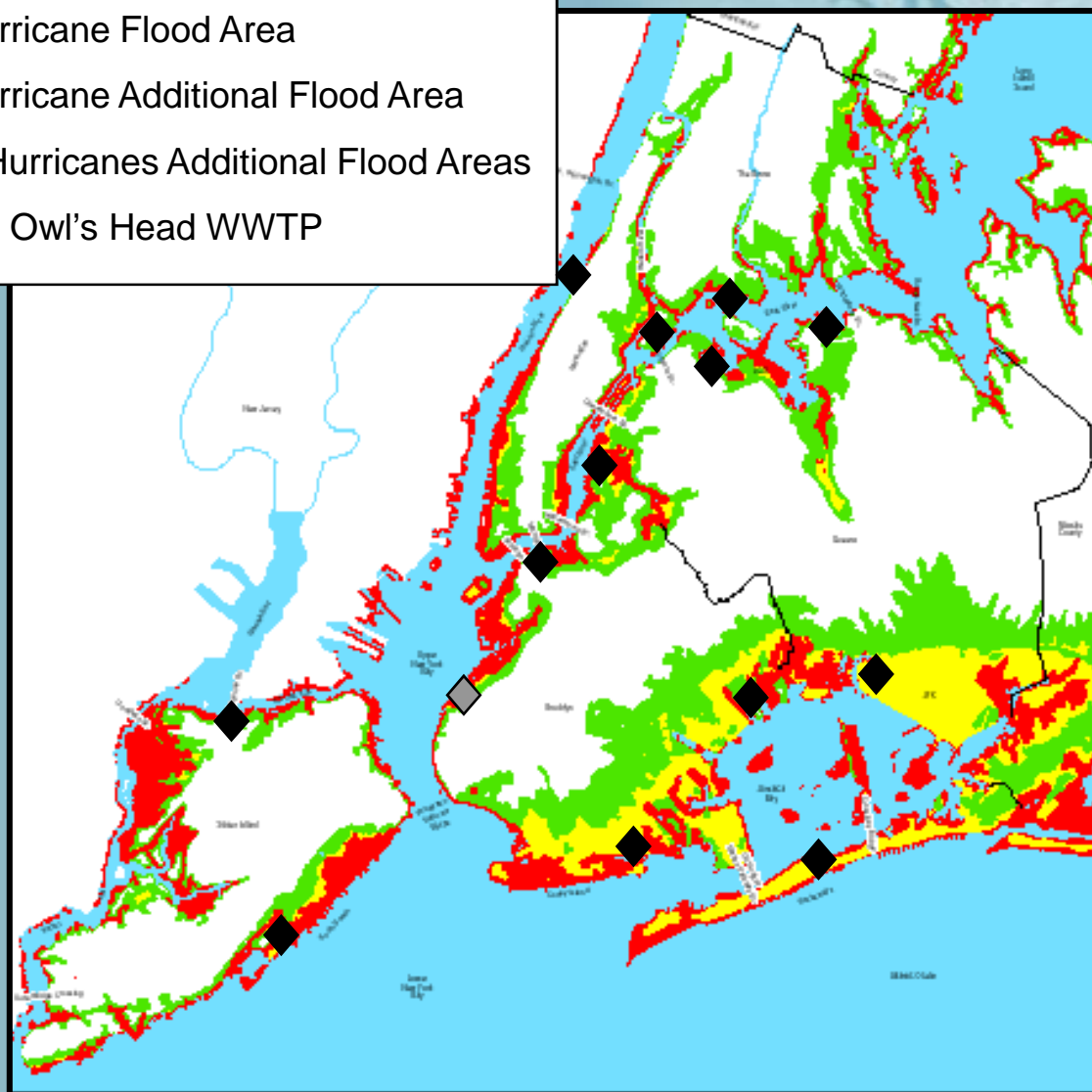
Owl's Head WWTP 2007





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- Category 1 Hurricane Flood Area
- Category 2 Hurricane Additional Flood Area
- Category 3/4 Hurricanes Additional Flood Areas
- ◆ WWTP ◆ Owl's Head WWTP



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CSO Outfalls



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Paerdegat Basin CSO Facilities

**20 MG in-line storage
30 MG retention tank
\$310 million**



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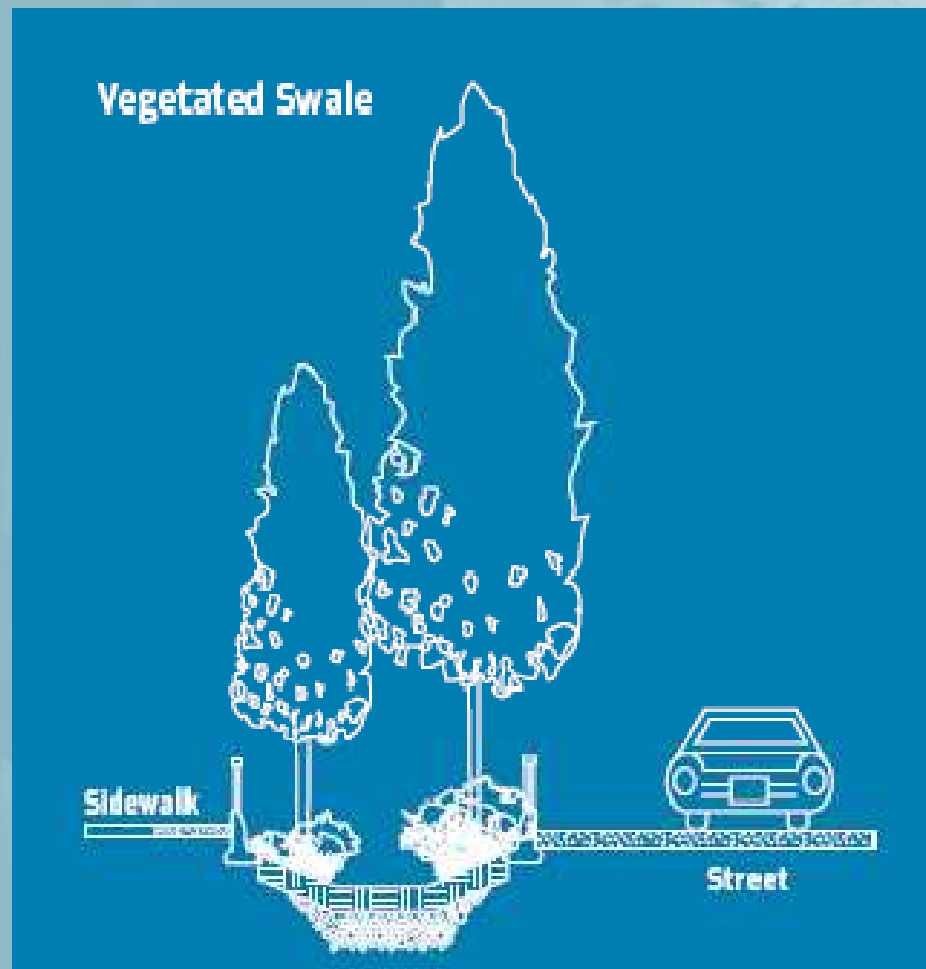
Flushing Bay CSO Facilities

28 MG in-line storage
15 MG retention tank
\$290 million



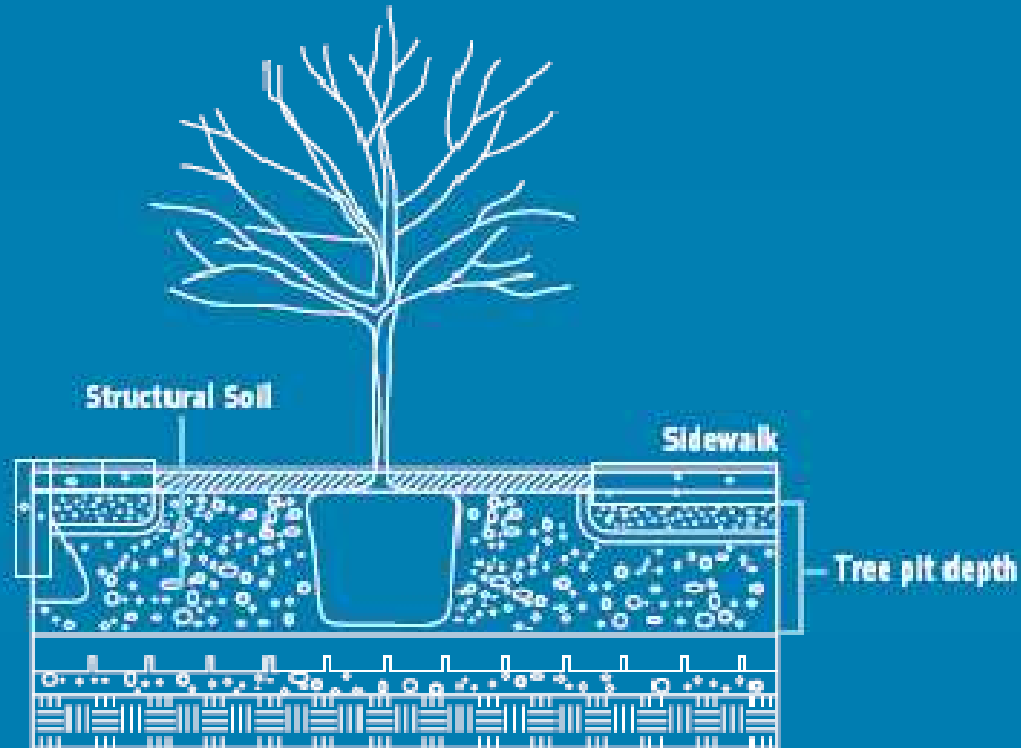
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Reducing Stormwater Runoff



Reducing Stormwater Runoff

Improved Tree Pit Design



Expanded area for roots and
water drainage under sidewalk

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Staten Island Bluebelt: Man-made extended detention basin



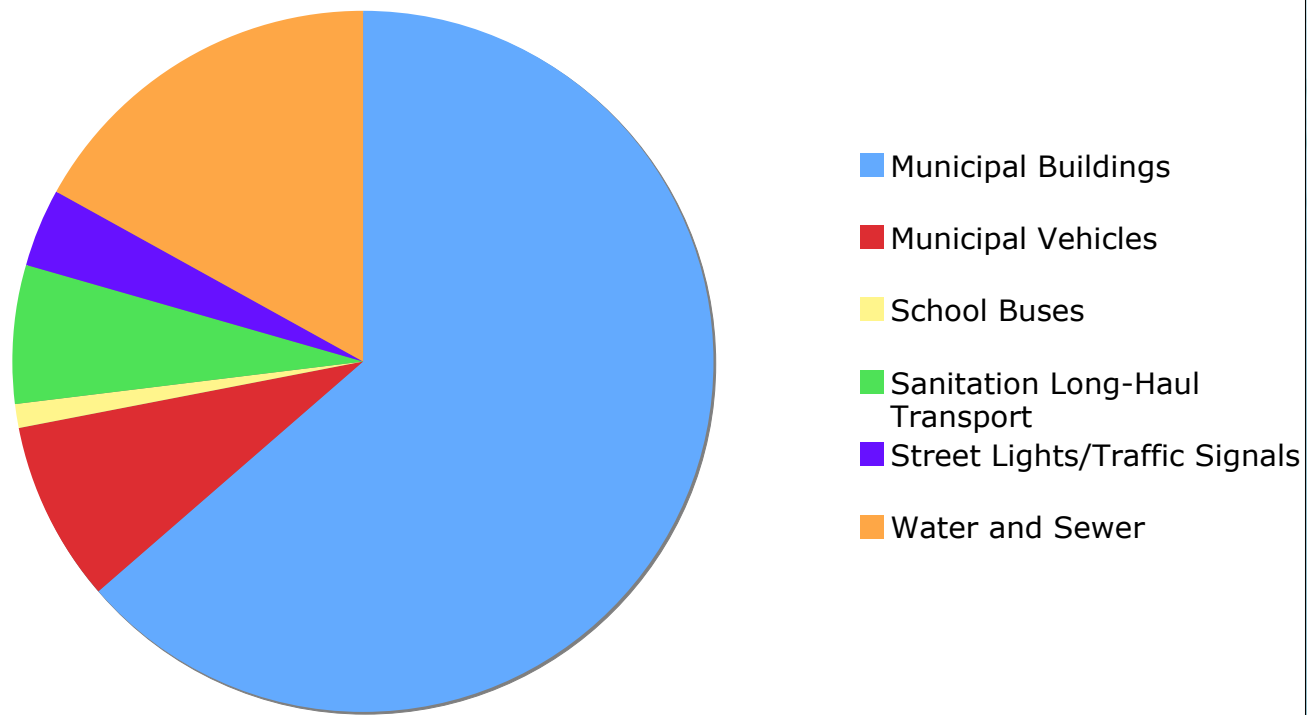
NYC Involvement in National/Regional Climate Change Litigation v. U.S.

- *Massachusetts v. EPA*, 415 F.3d 50 (D.C. Cir. 2005), *rev'd and remanded*, 549 U.S. ___, 127 S. Ct. 1438 (2007)
- *New York v. EPA*, Case No. 06-1131 (D.C. Cir.)
- *California v. NHTSA*, Case No. 06-72317 (9th Cir.)
- *New York v. DOE*, 05 Civ. 7807/7808 (JES) (SDNY) and *NRDC v. DOE*, Case No. 07-1925 (2d Cir.); *Massachusetts v. DOE* (1st Cir.)

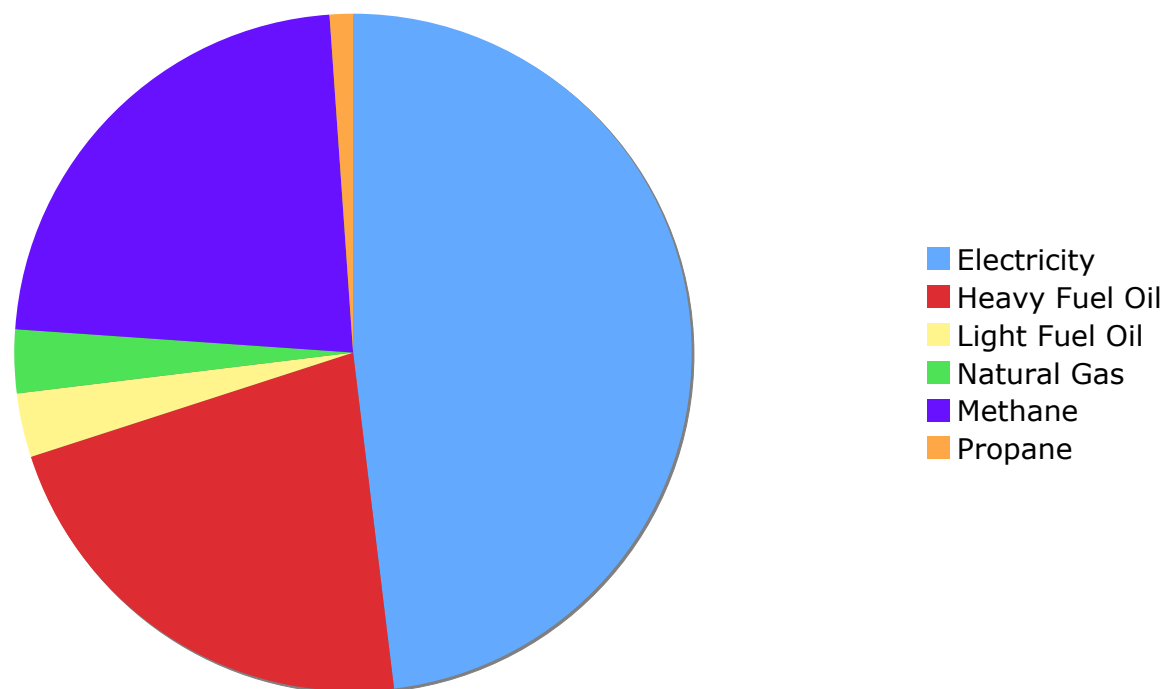
NYC Involvement in Other Climate Change Initiatives

- *Connecticut v. AEP*, 406 F.Supp. 2d 265 (SDNY 2005), appeal pending, Case No. 05-5104 (2d Cir.)
- Frequent *amicus* in other public nuisance litigation
- non-party stakeholder in the Northeast Regional Greenhouse Gas Initiative (RGGI) process
- plaNYC and associated legislation
- Mayoral Climate Action Plan: City signed non-binding commitment to act as if Kyoto goals were mandatory

NYC Municipal Operations: 6.5% of NYC CO₂ Emissions



Water and Sewer: 17% of Municipal CO₂ Emissions





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