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**TESTIMONY SUBMITTED ON BEHALF OF  
STORM WATER INFRASTRUCTURE MATTERS (S.W.I.M.)**

**HEARING BEFORE THE NEW YORK CITY COUNCIL  
ON PROPOSED REVISIONS TO  
ZONING TEXT CONCERNING STREET TREES AND YARDS**

**APRIL 15, 2008**

Thank you for the opportunity to testify today concerning the proposed revisions to zoning text concerning street trees and residential yards. This testimony is offered on behalf of S.W.I.M., or “Storm Water Infrastructure Matters,” a coalition of more than 50 organizations, including community and environmental groups, environmental justice organizations, architects, water engineers, and community development corporations, that are dedicated to ensuring swimmable waters around New York City through natural, sustainable storm water management practices in our neighborhoods. As active stakeholders in our neighborhoods, S.W.I.M. coalition members have a wealth of knowledge about planned development and re-development projects and local stormwater infrastructure problems.

**For the reasons explained below, S.W.I.M. strongly supports adoption of the proposed zoning text amendments. However, we also call on this Committee to adopt a limited number of important revisions to the proposed text amendments, and to exercise continuing oversight of implementation of these text amendments, including by the Department of Parks and Recreation.**

## **Pollution Problems: Stormwater as a Waste**

Water quality in the rivers, creeks, and bays surrounding New York City has improved in significant respects since the passage of the landmark federal Clean Water Act in 1972. But, 30 years later, substantial sources of pollution still remain. Excessive stormwater runoff is at the root of much of the city's water pollution problems.

As you know, the sewer system in most of NYC carries both rainwater and raw sewage through the same network of pipes and sewage treatment plants. The combined sewer system is big enough to handle all of the city's sewage but, when it rains as little as one-tenth of an inch, the combined volume of sewage and rain water exceeds the capacity and the city diverts untreated sewage directly into our waterways. These combined sewer overflows ("CSOs") release pathogens and other pollutants into the water, posing a danger to the public health, damaging the ecology, and frequently making our waters unsuitable for many recreational activities.

New York City annually dumps some 27 billion gallons of raw sewage and polluted stormwater, spewing from approximately 460 CSO outfalls, into virtually every waterbody surrounding New York City – from the Hudson, East, and Bronx Rivers, to Jamaica and Flushing Bays, to Newtown Creek, to the Gowanus Canal, and many more.<sup>1</sup> Preliminary estimates by the Department of Environmental Protection (DEP) indicate that nearly 1/3 of public access points to

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<sup>1</sup> See, e.g., *In the Matter of Alleged Violations of Articles 17 and 71 of the Env'tl. Conservation Law and Part 750, et seq., of Title 6 of the Official Compilation of Codes, Rules, and Regs. of the State of New York by The City of New York and the New York City Department of Environmental Protection*, Order on Consent, No. C02-20000107-8 (N.Y. Dept. Env'tl. Conserv., 1/14/05), at Whereas Clauses ¶ 5; Design Trust for Public Space and NYC Office of Environmental Coordination, *Sustainable New York City*, at 21 (Jan. 2006) (avail. at [http://www.nyc.gov/html/oec/downloads/pdf/sustainable\\_nyc\\_final.pdf](http://www.nyc.gov/html/oec/downloads/pdf/sustainable_nyc_final.pdf)); see also HydroQual, *Combined Sewer Overflows to New York Harbor Waters from New York City Watersheds for an Average Precipitation Year (JFK 1988) Current Conditions (2003 Dry Weather Flow, 2003) Operations (2004)* (on file with Natural Resources Defense Council (NRDC)).

our waterfront, city-wide, are within less than 3 city blocks (i.e., 750 feet) of a CSO outfall.<sup>2</sup>

Pathogens and other pollutants released from CSOs cause beach closures, restrict shellfish uses, and damage our waterways' aesthetic qualities and ability to support human recreation and aquatic and marine life.

In some areas of the city, a system of separate stormwater sewers avoids the CSO problem. But these sewers carry significant amounts of metals, pesticides, bacteria, and other organic and inorganic pollutants washed by rain water off of our streets, parking lots, yards, and other surfaces, depositing that pollution directly into our waters, untreated in any way.

Due to in large part to CSO and stormwater pollution, New York City – 35 years after the passage of the Clean Water Act – remains a long way from restoring its waterways to “fishable and swimmable” condition, as promised in that landmark federal law.

Under a series of plans DEP submitted to the New York State Department of Environmental Conservation (NYSDEC) in June of last year, DEP proposes an array of end-of-pipe and other engineering fixes that, by DEP's estimate (which is still under review by NYSDEC), would reduce CSO discharges by approximately 11 billion gallons per year – but would still result in over 17 billion gallons of CSOs annually.<sup>3</sup> These DEP plans also fail to address polluted runoff discharged through separate storm sewers.

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<sup>2</sup> This is based on a preliminary database of access points developed by Metropolitan Waterfront Alliance (MWA). See DEP, Open Waters and East River Waterbody/Watershed Facility Plan, at 7-5 (June 2007) (submitted to the New York State Department of Environmental Conservation (“NYSDEC”)). MWA has since updated the database, although DEP has not yet re-calculated its figures on the proximity of CSO outfalls to these access points.

<sup>3</sup> These figures are derived from figures given in DEP's June 2007 “Waterbody/Watershed Facility Plan Reports,” submitted to NYSDEC. Because DEP's several reports do not report their data in consistent format, nor has DEP provided any cumulative city-wide totals, these estimates reflect our best effort to aggregate the numbers from these multiple reports. Note that the projected CSO volume reduction and projected remaining CSO volume add up to

**The Solution to Pollution Problems:**  
**Urban Soils are the Reservoir and Filter that Support Trees and Filter Runoff**

While much of the original soil cover of New York City has been paved over, every tree planting opens up access to this below-ground filter and water reservoir for vegetation. Optimizing the size of this filter and water reservoir is a key first step towards extending the green cover over the City streets while holding and cleaning runoff from our roadways. Every cubic foot of good tree-pit soil can hold three gallons of water; every cubic yard of soil can hold enough water to support about a week of tree growth. The proposed zoning amendments before the Committee today are part of a broader plan to spread these natural-life support filters throughout the City.

**PLANYC Solutions: Stormwater as a Resource**

Mayor Bloomberg’s “PLANYC 2030” calls for keeping sewage and polluted storm runoff out of our waters by re-making the urban landscape to mimic more closely the way natural systems handle rainwater – using stormwater to green our city before it ever has a chance to enter the sewer system. PLANYC also recognizes that the combined efforts of multiple executive agencies of the city – including the Department of City Planning (DCP), and the Department of Buildings (DOB), which ensures compliance with DCP’s zoning regulations – are needed to accomplish this task.<sup>4</sup> New York City Local Law 5 (2008), signed into law just two months ago, provides for the development of a Sustainable Stormwater Management Plan to identify specific policy changes and other initiatives needed to implement this aspect of PLANYC.

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more than the current 27 billion gallons per year because DEP’s reports account for future increases in sanitary sewage flow into the sewer system due to population growth.

<sup>4</sup> PLANYC: Water Quality, at 58.

PLANYC specifically explains that urban trees – both along streets and on other public and private property – provide an efficient means of stormwater capture. Trees also provide many other benefits to the city, including moderating the climate (and thereby saving energy), sequestration of carbon dioxide (thereby mitigating global warming pollution), filtering the air (thereby mitigating harmful air pollution), neighborhood beautification, and increasing property values. A city-sponsored study concluded that “New York City’s street trees are a valuable asset, providing approximately . . . \$172 per tree (\$15 per capita) in net annual benefits to the community. . . . [T]rees are providing \$5.60 in benefits for every \$1 spent on tree planting and care.”<sup>5</sup>

### **Recommended Improvements to Proposed Zoning Text Revisions**

In testimony to the Planning Commission in December 2007, S.W.I.M. applauded the goals of both the Street Tree and Yards Text Amendments to increase vegetative cover throughout the City. We strongly support the City Council’s adoption of these proposals.

At the Planning Commission hearing, we also recommended a number of ways in which the proposed amendments could be strengthened, to ensure that the required street tree and yard plantings will actually provide the touted stormwater benefits, as well to ensure that newly planted trees receive adequate water even to survive. The drafts of both the Street Tree Planting and Yards Text Amendments before the Committee today have not been revised to address the concerns we raised. We hope that our central concerns will be addressed by the NYC

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<sup>5</sup> Paula Peeper, et al. (2007). New York City, New York Municipal Forest Resource Analysis," Center for Urban Forest Research, U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station (available online at [http://www.milliontreesnyc.org/downloads/pdf/nyc\\_mfra.pdf](http://www.milliontreesnyc.org/downloads/pdf/nyc_mfra.pdf)), at pp. 2-3.

Department of Parks and Recreation when they establish the pertinent rules and guidelines for street tree pit and planting strip design. We ask your Committee and the City Council at large to encourage DPR to adopt rules and guidelines that maximize the efficacy of street tree plantings and yard plantings for storm water retention and drainage, and amelioration of the urban heat island effect. We also call on the Council to encourage close coordination between DPR and the Department of Transportation to develop new specifications for related issues over which DOT exercises legal authority – specifically, facilitating the flow of stormwater from streets and sidewalks to planted areas, by requiring the use of curb inlets adjacent to street tree pits and planting strips and permeable pavement along the adjoining sidewalk area.

In addition, S.W.I.M. asks the Committee to adopt a limited number of specific revisions to the proposed text amendments, before sending the proposals to the full Council. It is important to include the following revisions concerning enhanced stormwater capture in the zoning text itself, as they would likely be beyond the authority of City agencies to implement through regulations or guidelines alone.

1. The Street Tree Text Amendment should be revised to provide for spacing between trees of 20 feet, rather than 25 feet, consistent with existing guidelines of the Department of Parks and Recreation. (See proposed § 26-41.)
2. The Street Tree Text Amendment should explicitly provide that, in the event of a conflict between these amendments and the recently adopted parking lot zoning requirements concerning street trees (Zoning Resolution § 37-95), the general Street Tree regulations currently before the committee should govern. (For example, one significant conflict is that the parking lot rule provides an unqualified exemption from the street tree planting requirement if DPR determines on-site planting to be impracticable, whereas the Street Tree proposal, in that situation, requires tree-planting in an “alternative location” to be determined by DPR. (See proposed § 26-41.))

3. The Yards Text Amendment should be revised to require that impervious surfaces in front-yards be graded to direct drainage to the mandatory planted areas, to the extent practicable. (See proposed § 23-451.) If drainage were, instead, directed to the street, most of the potential stormwater benefits of the Yards Text Amendment would be lost.

In closing, we thank you for this opportunity to testify on these important proposals and applaud the Council's work to further the greening of New York City.