Testimony of Carter H. Strickland, Jr.
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Before a hearing of the Committee on Environmental Protection
of the Council of the City of New York
on Introductions 628, 629, 630, 321, and 178
concerning stormwater management

November 8, 2007

Good morning, Chairman Gennaro and Committee Members. On behalf of the Administration, I will address the important stormwater management issues that are the subject of this hearing. We welcome the opportunity to work with the Council on stormwater issues, and look forward to an ongoing dialogue about stormwater management.

In my testimony today, I will first discuss general water quality and stormwater management principles, and then the stormwater policy commitments of PlaNYC, Mayor Bloomberg's long-term planning and sustainability plan, and related efforts in Jamaica Bay. I will address the bills before the Committee, and will be available to answer questions, along with my colleague, Brianna Wolf. Representatives of the Department of Environmental Protection (DEP) and the Department of Parks and Recreation will also be available to answer questions.

I. Background

New York is surrounded by a maze of waterways that combine to form a rich, natural estuary. When Henry Hudson first sailed these waters, there were 350 square miles of oyster beds in the estuary, and for a time after settlement, these were a great delicacy. But several hundred years of dumping garbage and piping sewage and industrial wastes into surrounding waters ruined many of our natural resources. The good news is that we have done better, and after spending billions of dollars over many decades on sewer systems and wastewater treatment plants, the City now treats virtually all of its sewage before discharge. That investment means that the New York Harbor is cleaner than it has been in over 100 years, and we are regaining our natural heritage.

But the Harbor is still not clean enough all of the time. Because most of our combined sewer system was constructed before separate storm and sanitary sewers were recognized as state-of-the-art, rainwater is collected along with sewage. Since the majority of land in New York City is developed or paved over with impervious surfaces, stormwater runs off this land and into the combined sewer system instead of into the ground. During significant storms the additional rainfall can overwhelm the capacity of our sewer lines and wastewater treatment plants, and this excess discharge is diverted

to waterbodies through Combined Sewer Overflows (CSOs) to avoid backup into houses or street flooding. CSOs contain raw sewage and therefore increase the levels of fecal coliform, other pathogens, street litter and other floatables, sedimentation and odors, and eventually decrease the levels of dissolved oxygen in receiving waters. These effects limit aquatic wildlife and recreational use as long as contaminant levels remain high. The City's investments in infrastructure projects have resulted in enormous improvements, increasing CSO capture rates from 30 percent in 1980 to 70 percent today.

Nevertheless, there are still CSOs in the City. The pollutants from these discharges are removed quickly from many areas of our Harbor, but linger in many of our man-made and other tributaries, especially those that are small, have limited tidal action, or are adjacent to industrial or former industrial sites with historic discharges. In those waters, the effects of CSOs have created a chronic water quality problem. That is why PlaNYC focuses on improving the water quality of those tributaries, as part of our effort to open 90% of our waterways to recreation.

In general, there are two approaches to improving our water quality, and the City is following both paths. First, by law the City must create a capital plan based on hard infrastructure solutions to improve water quality. These solutions are mandatory and budgeted. As Commissioner Lloyd of DEP testified before this Committee in February, DEP is building two major detention tanks to store sewer flow for gradual release to wastewater treatment plants after storms have abated. One, underneath Flushing Meadows Park, will capture approximately 800 million gallons per year of CSOs, and began operation last spring. The other, at Paerdegat Basin in Canarsie, will be able to detain nearly 1.3 billion gallons of CSOs per year and is scheduled for completion in 2011. DEP is upgrading several pumping stations to increase pumping capacity and divert more CSOs away from narrow, industrialized waterways. The full infrastructure build-out currently envisioned in DEP's Long Term Control Plans will increase CSO capture rates to 75 percent.

Second, to increase CSO capture rates further, the City is exploring the implementation of storm water management systems to reduce the amount of rainfall that flows into the combined sewers. These techniques, collectively known as Best Management Practices (BMPs), have the potential to compensate for some of the dramatic loss of green space that detained stormwater before development, and could be a pragmatic and sustainable approach to further reducing CSOs. I will discuss the City's experience with BMPs shortly. Because the City's CSOs come from temporary surpluses of water that overwhelm the existing infrastructure, we strongly believe that our efforts must be directed to finding those BMPs that most effectively reduce the quantity of water flowing into our combined sewer system, rather than those that may be directed to treating water quality at the source.

Generally speaking, BMPs comprise a wide range of structural technologies and nonstructural techniques to reduce runoff. Some structural technologies rely upon increasing infiltration of rainwater to the soil, and are therefore suitable only for specific

soil types and groundwater table characteristics. Infiltration technologies may have higher maintenance costs if they are completely underground. Examples include porous pavement, infiltration basins, trenches, and bioretention areas with special soil mixtures. Another group of BMPs rely on detention and retention practices to temporarily store stormwater to control runoff, and include rooftop detention, stormwater ponds, and wetlands. Vegetation in infiltration and retention areas will also reduce runoff through biological uptake of water, and will directly improve water quality through the biological uptake of sediment and other pollutants. Manufactured pretreatment technologies include oil/grit separators, water quality access holes, and catch basin inserts. The effectiveness of all of these structural BMPs must be maintained through inspection and cleaning.

In less urbanized areas, it may be possible to manage stormwater by simply retaining natural systems and precluding development. For example, New Jersey's latest stormwater regulations impose a 300-foot buffer around certain pristine streams to protect water quality. Where we have areas of low density, the City has already utilized natural drainage corridors to convey, treat, and detain stormwater prior to its release directly into the harbor by implementing similar natural control systems, such as the Bluebelts network of wetlands that drain water from 10,000 acres in Staten Island. A similar effort uses these space-intensive natural stormwater BMPs in the Kensico Reservoir watershed.

But the City typically does not have existing natural buffers or the space to construct them. Moreover, as recognized in a U.S. Department of Transportation Study, Stormwater Best Management Practices in an Ultra-Urban Setting: Selection and Monitoring (May 2002), the feasibility of various BMP technologies in ultra-urban environments is limited by space and design requirements, and dense land use likely precludes conventional structural BMPs such as extended detention dry ponds, wet ponds, and infiltration basins. BMPs may also include nonstructural techniques such as street sweeping, sewer inlet cleaning and other management measures that may reduce the need for more expensive structural measures. Water conservation incentives and measures may also play a part in protecting our water infrastructure. Accordingly, the City must act responsibly to study and evaluate BMPs, determine whether they can be constructed here in the first place, whether their effectiveness decreases over time, the costs of construction and maintenance, how each one compares with other stormwater management options.

II. City Efforts: PlaNYC 2030 Interagency BMP Task Force, the Jamaica Bay Watershed Protection Plan, and Other Efforts

The Administration is promoting BMPS through two main initiatives.

PlaNYC addresses stormwater management problems on a citywide basis. It created an Interagency BMP Task Force to develop strategies for promoting stormwater management. The group includes representatives from the Mayor's Office of Operations, DEP, the Department of Transportation, the Department of Buildings, the

Department of Parks and Recreation, the Department of Design and Construction, the Department of City Planning, the Office of Management and Budget, Mayor's Office of Contract Services, the Mayor's Office of Capital Projects, the School Construction Authority, and the Economic Development Corporation. The Task Force was launched in May 2007, and to date has had over 35 hours of internal meetings and has held two public stakeholder meetings. The Task Force will create a comprehensive BMP plan by October 2008.

In a pre-existing and now parallel effort, the City developed the Jamaica Bay Watershed Protection Plan and released it on October 1, 2007, as required by Local Law 71. The Jamaica Bay Plan, developed through extensive work over two years, addresses flooding, ecological protection, water quality and planning throughout the watershed. It recognizes that one of the key challenges to the health of the Bay is controlling untreated discharges from the 40 percent of the city that drains into the Jamaica Bay watershed. The impacts of these discharges are heightened by land-side development, bulkhead construction, dredging and wetlands fill, all of which have altered the ecosystem. Based on preliminary estimates of cost and effectiveness, and certain assumptions about the penetration of BMP technologies throughout the watershed, the Jamaica Bay Plan estimated that the use of BMPs could reduce 6 to 24 percent of the untreated discharges to the Bay, at a cost of $400 million to $5.2 billion. Clearly, investments on that scale should be considered carefully.

In order to test DEP's assumptions and estimates, the Jamaica Bay Plan proposed several pilot projects. In the upcoming year, DEP will build a blue roof and a green roof on two existing commercial buildings for a comparative study. In conjunction with the Department of Parks and Recreation and the Gaia Institute, DEP will also construct five innovative designs for tree pits that contain underground water storage devices. DEP will also begin the distribution of 1,000 rain barrels to homeowners, expand its program to remove sediments that block the sewer system, design the introduction of an oyster reef and ribbed mussels (our natural filters), build porous pavement on DEP facility parking lots and other areas, and roll out a water conservation program to reduce discharges. All of these pilot projects, which were included in last year's budget for the 2008 fiscal year, will be rigorously monitored and studied. The results of those studies will allow DEP to set specific CSO reduction targets while increasing sustainability and effectiveness in Jamaica Bay.

In addition, DEP will be letting a contract to support PlaNYC by evaluating the effectiveness of stormwater BMPs contained in the Jamaica Bay Plan with regard to other water bodies. The study will evaluate strategies for high- and low-volume stormwater capture at high and low costs. It will also quantify the benefits from BMPs in new construction compared to BMPs on existing properties of different types. Recommendations from the completed study will become the basis for a DEP-issued BMP Design Manual and revisions to the sewer code to better facilitate stormwater management.

The Interagency BMP Task Force report will incorporate information and suggestions from the Jamaica Bay Plan and its pilot projects, as well as other ongoing and related City efforts such as the work of the Interagency Flooding Task Force and the Department of Transportation's and DEP's inclusion of two large vegetated swales in the Belt Parkway renovation project. The Interagency BMP Task Force report will also reflect the efforts of the Parks Department's Greenstreets program, which has piloted the small-scale diversion of water from roadbeds and sidewalks into planting, and will release a monitoring report on plant mortality, and quantity and quality of runoff within a year. The Interagency BMP Task Force Report will provide for the incorporation of proven "soft infrastructure" solutions into the design and construction of public and private projects on a citywide basis. The Task Force will also examine regulatory and financial incentives for retrofitting existing buildings and facilities, and the financial ways and means for building and maintaining a distributed stormwater control network.

The BMP Task Force Report is but one element of PlaNYC's efforts to improve water quality, preserve natural areas, and protect the city from projected impacts of climate change. Related water quality elements of the plan include the expansion of green, permeable open spaces across the city to reduce storm water runoff, such as the One Million Tree initiative launched on October 9, 2007, the expansion of the Bluebelt program to drain water from 4,000 additional acres on Staten Island and to three locations in Queens (Udalls' Cove and Brookville Boulevard West, Springfield Lake, and Baisley Pond), the adoption of high level storm sewers in appropriate locations, and the development of a comprehensive wetlands policy. The Administration has also proposed a tax abatement for the private construction of green roofs to provide seed money for that industry and, hopefully, to gain information and reduce runoff. Together, these elements will improve the quality of New York City's waters.

The question has been raised about why we cannot adopt specific BMPs that are currently implemented in other cities without further study. The answer is that no other city is like New York City, and no city has adopted BMPs on the scale proposed in New York. For example, Milwaukee has adopted a rain barrel giveaway program, and Chicago has a green roof incentive program and a demonstration project on its city hall. These efforts, while admirable, are simply not on the scale that we need to make a dent in our CSOs. BMPs that work in cities such as Chicago and Milwaukee, which have very suburban characteristics inside the city limits, may not work here. Our strategies must be tailored to New York City's densely built environment, and take into account the overall impermeability of the City's topography. Other programs adopted in Portland and Seattle are suitable for more temperate zones but are untested in our wintry conditions, where frozen ground may limit the control of snowmelt or winter rain and cause considerable damage to other properties or street flooding or icing. Philadelphia has a program to create rainwater parks on empty lots, but that was made possible in part because that city lost 10 percent of its population between 1980 and 2000; fortunately New York City has not faced the same fate.. There is no place like New York, and we must take the time to find the right BMPs to work here.

Related issues are the cost of construction in our dense environment and of maintaining BMPs over time. The City recognizes that any comprehensive stormwater management plan will have to address such costs. BMPs on municipal property will have to be supported by the public budget; DEP's construction and maintenance of the water and sewer system are supported by fees paid by property owners for water and sewer service. BMPs on private land will have to be supported by funds as well, through some combination of tax incentives, credits, and mandated changes to the building and sewer codes. These considerations underscore the importance of pilots to evaluate the effectiveness of strategies used in other cities, using a combination of direct measurement, quantifiable assessments of targets and results, and modeling of impacts.

III. City Council Introductions 630, 628, 629, 321, and 178

Against this background, the bills before the Committee contain many useful and important elements of a comprehensive stormwater management plan. The Administration looks forward to working with the Council on pursuing innovative and alternative techniques to improve water quality. The Administration appreciates the need for a comprehensive stormwater management plan, and for source control measures in particular, and supports the use of BMPs as stormwater management techniques.

Taking the package of stormwater bills as a whole, the Administration is concerned that any mandates for implementation of BMPs on both private and public property would not be useful at this stage in the development of BMP strategies. Various entities within the Administration – including the Interagency BMP Task Force, DEP, the Department of Transportation, and the Parks Department – are developing basic information about the effectiveness of BMPs over time and the costs of construction and maintenance. All of that information will be important to the selection of a sound, affordable City policy, but is not available now. We believe that any stormwater bills have to reflect that uncertainty and cannot prescribe measures that might prove infeasible or unworkable. We must develop sound policy through a thorough planning process first.

Accordingly, I will focus my remarks today on the principal stormwater bill, Intro. 630, as we believe that a study and report that would come out of such bill is necessary before considering the implications of Introductions 628, 629, 321, and 178. The Administration supports the spirit of Intro. 630, but we have concerns about specific elements of the bill that will require further discussion with the Members of this Committee and the Council. Leaving aside details about definitions and deadlines, I will outline here the Administration's principal concerns with the bill in its current form, and make certain suggestions about the framework of future discussions with the Council.

Intro. 630 appears to mandate a study for every waterbody in the City that will be as extensive as the recently completed Jamaica Bay Watershed Protection Plan. The Jamaica Bay Plan has significantly advanced the City's understanding of BMPs and

other aspects of improving the ecological health of the Bay. However, the study required two years and significant resources, and the implementation and monitoring of its recommendations will take several more years. DEP does not have the resources to undertake similar studies for every waterbody. We do not believe that such a study is feasible for every waterbody in the City, and that the mandatory requirements of the proposed stormwater plans will have to be limited.

Intro. 630 also appears to expand the focus of such efforts on BMPs for the control of the quality of stormwater discharged through separate storm sewer systems. Although the City agrees that all untreated discharges must be controlled by BMPs where appropriate, the fact is that CSOs are the major source of water quality problems in New York City right now. We must prioritize efforts that will minimize CSOs, and cannot afford to undertake related efforts that, however well-intentioned, will take the focus off CSOs.

CSO management to date has been achieved primarily by in-pipe and end-of-pipe solutions such as regulator improvements, modifications to treatment plants, and construction of storage tanks. We have already quantified the improvements in capture rate associated with the known end-of-pipe strategies incorporated into consent orders, and are looking at the BMP strategies for cost-effective, additional improvements in the expected CSO capture rate. But we do not believe that the available evidence supports the exclusive use of BMPs to resolve the CSO problem. Ideally, any stormwater management policy will be broad and flexible enough to allow for good, informed choices between BMP and non-BMP strategies, and then informed choices among the various BMP options.

The plan that would be required by Intro. 630 would mandate BMPs on both public and private properties. We should think carefully about the equity of imposing unknown costs for uncertain gains, as well as the oversight that would be required for privately maintained BMPs.

With regard to the plan elements required by Intro.630, many may be sensible in the future, and indeed are even inevitable. However, before the completion of our pilot studies, many required elements are simply infeasible. One example is in Section (c)(1)(ii), which would require a statement of all the properties or areas in each waterbody where each BMP is feasible. To make that statement, we have to have better knowledge of the technical requirements of each BMP and the feasibility of construction in field conditions over time, and that knowledge will come from our pilot projects. We would also have to have more extensive mapping than is currently available. Other mandatory elements would force the City to make premature judgments subject to revision after the pilot projects and other ongoing efforts are completed. Examples include the requirements to set forth the metrics to be used for measurement, for a cost/benefit analysis of each technology, incentives, code amendments, construction standards, right-of-way protections, and modeling to support all of those conclusions.

The mandate in Section (c)(1)(vii) for the "routine and contemporaneous" notice of untreated CSO discharges, the "locations where water quality is likely to be adversely affected by such discharge, and of the nature and duration of water quality conditions that are potentially harmful to users of affected waters" is a matter addressed in the State-issued discharge permits, and those provide the appropriate forum for any changes to permit requirements. If such a requirement were interpreted as requiring real-time measures of the amount of discharges from each CSO outfall, then DEP would be unable to comply.

In summary, we look forward to working with the Council on Intro. 630 to address our concerns and to develop a workable and sensible stormwater management planning process.

We believe that Intros. 628, 629, 321, and 178 should be considered after the City issues its report and can develop a more complete understanding of the costs and benefits of specific stormwater management measures. That being said, I will discuss each of the bills in brief.

Introduction 628 would mandate the diversion of stormwater runoff from adjacent streets into tree pits. This mandate appears to rely on assumptions that runoff from impervious surfaces will benefit street trees, or at least not harm them, and that the area beneath the sidewalk that is created to contain this runoff is stable enough to maintain adequate drainage over time. The Parks Department in particular is concerned that runoff containing varying levels of contaminants, including motor oil and salt, will harm trees and thereby jeopardize our Million Tree initiative. While the City has not reached a final decision on whether its street tree pits can be used for stormwater management, it is convinced that supporting research is still in its infancy.

DEP is currently studying the effectiveness and cost of five advanced tree pits in its Jamaica Bay study, and the construction and monitoring of that pilot will take three years to complete. In addition, the mandatory inclusion of stormwater chambers in all street tree pits would impose significant additional costs, and would therefore drastically limit the budgeted plantings in the Administration's ambitious tree planting program. We believe that is prudent to withhold mandating stormwater diversion towards street trees – the smallest scale and most vulnerable plant installations in New York City – until we can develop information about the short- or long-term impacts of such action.

Regarding Intro. 629, the Administration recognizes the need for the incorporation of stormwater management at the design stage, according to well-thought out standards. These standards should reflect our understanding of construction, operation and maintenance costs, as well as the effects, if any, on property damage, business loss, damage to infrastructure and economic vitality. Such standards should also reflect our understanding of the applicability, cost-effectiveness, efficiency and durability of different BMPs, which will become more evident after our planning process. Finally, such standards should account for oversight and compliance during and after construction. Since this bill refers to standards to be developed through the planning

process anticipated in Intro. 630, the Administration believes that it is premature to impose a shifting standard now on capital projects of a certain size.

Regarding Intro. 321, the Administration has similar concerns related to the application of standards that do not yet and cannot yet exist. We have to know what works first, and the specific cross-reference used as an example in the bill may well be obsolete when the planning process is concluded. It is important not to authorize on-site infiltration BMPs where soil conditions are unsuitable. Finally, this provision again raises the issue of appropriate oversight of privately maintained BMPs. All of these issues will be addressed in the Interagency BMP Task Force report, and in the pilot projects undertaken as a result of the Jamaica Bay Plan.

Finally, Intro. 178 deals with a real problem: dry wells for on-site stormwater drainage. However, this bill would drastically slow the issuance of permits by the Department of Buildings, as DEP would first have to review the methodology and findings of every soil boring and percolation test across the city. There is also a question of whether the bill is consistent with the previous provision, 24-526, dealing with off-site stormwater disposal, and whether the bill would render the off-site storm water disposal requirement a nullity.

Thank you for the opportunity to testify. I and my colleagues in the Administration will be glad to answer any questions that you may have.

TESTIMONY OF MICHAEL GRESTY,[1]
ENVIRONMENTAL ENTREPENEURS (E2)

HEARING ON SUSTAINABLE STORMWATER MANAGEMENT (INTROS. 628, 629, 630, & 321) BEFORE THE COMMITTEE ON ENVIRONMENTAL PROTECTION OF THE COUNCIL OF THE CITY OF NEW YORK

NOVEMBER 8, 2007

My name is Michael Gresty. I am here on behalf of Environmental Entrepreneurs (E2), a national community of business people who believe in protecting the environment while building economic prosperity. Working with NRDC (Natural Resources Defense Council), E2 serves as a champion on the economic side of good environmental policy by taking a reasoned, economically sound approach to environmental issues. E2 is a bipartisan group, working at the local, state, and national levels.

Collectively, our members have been involved in financing, creating or working in the early development of over 800 companies, which created over 400,000 jobs. These members currently represent more than $20 billion in private equity capital that will flow over the next several years into new companies.

In New York, E2 has more than 100 members who are in the mainstream of business and job creation and include prominent figures in industries such as investment, insurance, real estate and communications. We favor a reasoned, economically sound approach to environmental issues and support environmental policies that drive healthy economic growth.

We strongly support the four bills before the Committee today, which would mark a major step forward in the ensuring New York City's sustainability over the coming decades. E2 members believe the combined sewer overflow (CSO) problem is a serious environmental issue

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that the city needs to solve. Among other problems, these combined sewer overflows 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 and impacting economic development.

I would like to discuss briefly the key reasons for our support.

In my professional life, I am the President of Kinetix [business ecology], which provides sustainability strategy consulting services to large corporations, and "high performance design" or green building design and LEED consulting services to real estate developers. We are working on The Edge, a 1.7 million sq. ft residential project in Williamsburg now under construction, the new ONE Hotel and Residences at 40th St and Bryant Park, and on a ten story addition to 450 West 14th Street, which sits astride the new Highline park, as well as numerous other office, residential and mixed use projects in NY and elsewhere.[2] 450 West 14th Street incorporates rainwater cisterns and greywater plumbing to reduce potable water use and runoff to the CSO. We have determined that the stormwater management methods promoted by this legislation are both achievable and effective, but the private development community needs the support of multiple city agencies to make these green design technologies a widespread feature of our urban landscape. For example, at The Edge, although the developer is constructing a waterfront park for conveyance to the City, we were thwarted from implementing rainwater harvesting in cisterns because the Parks Department was reluctant to accept this supplemental approach to irrigation, and because there was no financial incentive for the developer to do so.

[2] Other work developing the green roof at The Conservatory, a LEED-CS Platinum pre-certified project in Celebration, Florida, (www.overturedevelopmentgroup.com) draws on the research of Professor Martin Wanielista, Storm Water Management Academy, University of South Florida, which demonstrates the multiple benefits of green roofs (http://www.stormwater.ucf.edu/research_publications.asp#greenroof), as well as on a two year study with similar results in Seattle by Magnusson Klemencic Associates. (http://enr.construction.com/news/buildings/archives/070416.asp) At Giralda Farms in New Jersey, Madison County requires all stormwater to be returned to the aquifer, and the range of solutions implemented on our project for 4,6 Giralda Farms mirror those promoted by the proposed legislation.

Some elements of the new legislation, such as Intro. 321, would grant DEP expanded authority to allow downspout disconnects, so that rainwater from rooftops can be directed to rain gardens, rain barrels, and other rainwater reuses systems. The comprehensive planning process set forth in Intro. 630 would ensure that all relevant city agencies – from Parks to Buildings to City Planning, and many more – adapt their policies and practices to promote, in a coordinated fashion, the widespread use of "green design" methods for stormwater management.

We also applaud Intro. 630's call for the development of new tax incentives, grant programs, low-interest financing, expedited permitting, and other incentives to encourage private property owners to build new development and retrofit existing development so as to maximize the on-site retention and reuse of stormwater. Perhaps most critically, restructuring current water rates to separate the potable water charges from stormwater disposal charges would create market-based incentives for property owners to minimize the off-site runoff of stormwater into the city's sewers, thereby making potable water conservation and green design techniques to capture and reuse stormwater more financially attractive. The present rate structure assigns absolutely no marginal cost to the discharge of stormwater into the sewer system, despite the significant costs of such discharges to the city's water quality due to combined sewer overflows.

We also support Intro. 630's creation of a citizens' Advisory Committee to assist in the development of the plan. Input from the real estate community would be extremely valuable in developing a plan that not only sounds good on paper, but will be implementable in the context of New York City's private development market.

Finally, in addition to creating a range of other environmental and social benefits than successful stormwater management, the broader use of green design techniques will promote the

growth of local markets associated with their design, construction and maintenance, as well as create new "green collar" employment opportunities for New York construction trades.

In sum, E2 strongly supports the pending legislation and stands ready to work with the Council and the Bloomberg administration towards the development and implementation of an economically sound and environmentally beneficial "Sustainable Stormwater Management Plan." Thank you for the opportunity to make these comments on behalf of Environmental Entrepreneurs.

Testimony of Jordan Barowitz, Director of External Affairs, The Durst Organization
New York City Council Environmental Protection Committee
Thursday, November 8, 2007

Good Afternoon

My name is Jordan Barowitz and I am the Director of External Affairs for The Durst Organization and I testify today in support of Intro 321, 628, 629 and 630.

I'm confident the importance of this legislation and sustainable storm water management has been thoroughly addressed by others today.

The insight that I can provide to the committee is that we have enlisted many of the tenets of Intro 629 into our buildings.

The Durst Organization is New York's leading green builder.

In the last decade, we have built nearly 5 million square feet of environmentally sustainable buildings including the nation's first green office building, and we are currently building the Bank of America Tower, which will be the nation's first LEED Platinum office tower.

At our residential building the Helena we have a black water recycling system that re-uses water for sanitation and irrigation. At the Bank of America tower, we will capture all 10 million gallons of water a year that falls on our "blue roof" and recycle it to flush toilets and make-up cooling tower water lost to condensation. Most importantly both buildings capture and store water during rainstorms.

The point being is that creative and sustainable storm water management solutions can and are being implemented by builders today. These systems are not prohibitively expensive and often pay for themselves over the long-term.

Thank you for your time and I am happy to answer any of your questions.

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TESTIMONY SUBMITTED BY
LAWRENCE M. LEVINE OF THE
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HEARING ON SUSTAINABLE STORMWATER MANAGEMENT (INTROS. 628, 629, 630, *et al.*) BEFORE THE COMMITTEE ON ENVIRONMENTAL PROTECTION OF THE COUNCIL OF THE CITY OF NEW YORK

NOVEMBER 8, 2007

Thank you for the opportunity to testify today on behalf of NRDC and our New York City members. I am Larry Levine, a Project Attorney with NRDC's NY/NJ Harbor-Bight Project. NRDC also offers this testimony as a member of S.W.I.M., or "Storm Water Infrastructure Matters," a coalition of nearly 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.

NRDC appreciates this Committee's continuing interest in the City's combined sewer overflow (CSO) problem. As you know, in the last several years, the Committee has held several hearings on the topic of CSOs: in September 2004, on a state enforcement order against the Department of Environmental Protection (DEP), which requires DEP to develop of a Long Term Control Plan (LTCP) for CSOs, to achieve compliance with the federal Clean Water Act; in October 2006, on DEP's progress to date in developing a city-wide LTCP, which is not scheduled to be complete

until 2017, with implementation requiring an unknown number of additional years; and in February 2007, on the water quality goals of Mayor Bloomberg's PLANYC.

NRDC, too, has a longstanding involvement in efforts to abate the City's CSOs. NRDC has been party to state administrative proceedings, from 1992 to the present, concerning the terms of the permits that govern the city's CSO discharges. In 2006-2007, we participated in two DEP advisory committees established in connection with the LTCP development process; we remain involved in more informal public input into that process. Since late 2006, we have engaged with the Mayor's office in the development and implementation of PLANYC's water quality initiatives. Also, my colleague at NRDC, Brad Sewell, has served as the co-chair of the Jamaica Bay Watershed Protection Plan Advisory Committee, established pursuant to legislation, known as Local Law (L.L.) 71, which originated in this committee in 2005. CSOs and stormwater have been among the many issues addressed in the comprehensive planning process that has unfolded pursuant to that legislation. In fact, DEP and the Mayor's Office of Sustainability and Long Term Planning now point to the CSO elements of the Jamaica Bay plan under L.L. 71 as a model on which they hope to build citywide.

This committee is all-too-familiar with the significance of New York City's CSO problem, and NRDC and others have offered testimony to this Committee defining the problem on many prior occasions. In short, due to our outdated and overburdened sewer system, during rainfall events of as little as one-tenth of an inch, 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.[1] 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 nonetheless carries significant amounts of metals, pesticides, and organic and other 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 CSO and stormwater pollution (as well as excessive nitrogen pollution coming from the city's 14 sewage treatment plants), 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 this 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 – <u>but would still result in nearly 18 billion gallons of CSOs annually</u> accounting for population growth through 2045.[2]

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[1] *See, e.g., In the Matter of Alleged Violations of Articles 17 amd 71 of the Envtl. Conservation Law andPart 750, et seq., of Title 6 of the Official Complication 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. Envtl. 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); *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 NRDC).

[2] These totals are derived from figures given in DEP's June 2007 "Waterbody/Watershed Facility Plan Reports," submitted to NYSDEC pursuant to a 2005 Administrative Consent Order with the state. 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 NRDC's best effort to aggregate the numbers from these multiple reports.

The data in these same plans also reveal that nearly 1/3 of public access points to our waterfront, city-wide, are within less than 3 city blocks (i.e., 750 feet) of a CSO outfall.[3]

NRDC and SWIM Urge Your Support for Intros. No. 628, 629, & 630

The legislation before the Committee today is designed to help bridge the gap between the modest water quality improvements envisioned by DEP's most recent CSO-reduction proposals and the "fishable/swimmable" waters New Yorkers deserve. I would like to use the remainder of my testimony to highlight the purposes and most significant features of Intros. No. 628, 629, & 630, as well as a few amendments that we believe would clarify and improve the legislation. I will also briefly address Intro. No. 321.

Intro No. 630, modeled after Local Law 71 of 2005, which required development of the Jamaica Bay Watershed Protection Plan and established the associated Jamaica Bay Watershed Protection Plan Advisory Committee, would provide for the development of a "Sustainable Stormwater Management Plan" for the city and establish a citizens' advisory committee to assist in that process, including representatives from the environmental, land use, and development communities.

As you know, under L.L. 71, DEP submitted its final Jamaica Bay plan to the Council just over one month ago, and the L.L. 71 advisory committee submitted its comments on the final plan at the beginning of this month. In the view of that advisory committee, the plan "comprehensively catalogues the bay's resources and its problems, and proposes a considered suite of initiatives. In

[3] 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). 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.

the Committee's view, there would be significant benefits for the bay *if* these initiatives were fully developed and implemented in a timely fashion."[4] Although the job of restoring Jamaica Bay is far from complete, we believe this Jamaica Bay planning process has been a strong example of what the focused and combined efforts of city officials and engaged members of the public can achieve.

At the same time, Mayor Bloomberg, through the Water Quality initiatives of PLANYC, and the ongoing work of the Mayor's Office of Long Term Planning and Sustainability – picking up on the ideas advanced by a wide array of stakeholders in DEP's LTCP development process – has begun to engage in a similar planning process to address the city's CSO and stormwater pollution problems through the widespread implementation of stormwater "Best Management Practices" (BMPs). These BMPs are often collectively referred to as "source control," "Low-Impact Development," "Green Infrastructure," or "Better Site Design" techniques. These approaches – such as green roofs, enhanced planting of street trees, permeable pavement, rain gardens and swales, wetlands restoration, and many others – collectively serve to re-make the urban landscape to mimic more closely the way natural systems handle rainwater, using it to green our city before it ever has a chance to enter the sewer system and cause CSOs. Such measures were specifically included in DEP's Jamaica Bay Watershed Protection Plan and, moreover, have been endorsed by the U.S. Environmental Protection Agency and the National Association of Clean Water Agencies (NACWA) as effective – and cost-effective – tools for

[4] Letter from B. Sewell and D. Adamo, Co-Chairs, Jamaica Bay Watershed Protection Plan Advisory Committee, to Council Speaker Quinn and DEP Commissioner Lloyd (11/1/07) (emphasis in original).

reducing CSO and stormwater pollution.[5] Indeed, they are already in wide use in cities such as Chicago, Pittsburgh, Portland, Seattle, Toronto and others.[6]

Drawing lessons from the L.L. 71 process and building upon PLANYC's commitment to using stormwater BMPs to improve water quality around the city, Intro. No. 630 would set the city on a path to a sustainable, long-term approach to stormwater management. It would require, by late next year, the completion of a city-wide Sustainable Stormwater Management Plan, including detailed and measureable goals, milestones, and timelines for implementation, followed by regular reporting to the Council on progress toward implementing the plan. The plan would, among other things, identify financial incentives, regulatory changes, inter-agency coordination, and funding needed to facilitate and promote the widespread implementation of "source control" stormwater BMPs, on both private and public property, in both new and existing development. We believe this legislation is an excellent vehicle for realizing – and perhaps even exceeding – the water quality goals of PLANYC.

NRDC and S.W.I.M. do, however, strongly recommend that the text of Intro. No. 630 be revised to provide, explicitly, that DEP shares the responsibility for developing the Sustainable Stormwater Management Plan with many other key city agencies that have jurisdiction over public and private activities affecting the flow of stormwater into city sewers – including but not limited to the Departments of Transportation, City Planning, Buildings, Parks and Recreation, Design and Construction, and others. The collaboration of many city agencies will be crucial to the success of any stormwater management effort. Attached to this testimony is a list of specific

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[5] *See* http://cfpub.epa.gov/npdes/greeninfrastructure/information.cfm. We also note that DEP is a member of NACWA. *See* http://www.nacwa.org/index.php?option=com_content&task=view&id=3&Itemid=70&.

[6] *See, e.g.*, NRDC, *Rooftops to Rivers* (2006) (avail. at http://www.nrdc.org/water/pollution/rooftops/contents.asp).

amendments to the bill that would implement this recommendation and help clarify the bill in other ways.

Next, **Intro. No. 629** would require that new City-funded capital projects be designed to minimize the post-construction runoff of stormwater into the City's sewer system, using the same menu of "source control" BMPs described in Intro. No. 630. The most important function of this bill is to ensure that during the interim period, before the Sustainable Stormwater Management Plan is complete and its elements codified in specific guidelines and regulations, new city capital projects – such as construction of roads and institutional facilities – will be designed to embody the underlying principles behind Intro. No. 630. Accordingly, it would require that city projects be designed so as to minimize the amount of stormwater and stormwater-related pollution discharged offsite into the city's sewers, through the use of appropriate "source control" BMPs. The attached list of proposed amendments proposes specific language to clarify the applicability of this requirement during the interim period before a comprehensive city-wide plan is complete. That attachment also includes another proposed amendment to expand modestly the range of projects covered by the bill, to ensure that city agencies seize all of the easy opportunities – the "low-hanging fruit" – available to integrate sustainable stormwater management practices into new construction.

Third, **Intro. No. 628** would require that new plantings of trees and other vegetation along our streets and sidewalks – especially the million trees to be planted as part of PLANYC 2030 – are installed in such a way as to maximize their capacity to absorb stormwater. Currently, the Department of Parks and Recreation uses specifications for the installation of street trees that include deep and broad tree pits, use of specially absorbent soils, and other features that act to both capture stormwater that would otherwise runoff into the sewers and to promote the health

and growth of the tree. This legislation would authorize and require that the Department of Parks and Recreation to establish standards binding on all private parties and public agencies engaged in street tree plantings, which ensure that the Departments' know-how is brought to bear to achieve the maximum benefits from the massive tree planting initiative under PLANYC – starting now, even before the more comprehensive Sustainable Stormwater Management Plan called-for by Intro. 630 is complete. The attachment to this testimony includes proposed revisions to this bill to clarify that the Parks Department's standards would apply uniformly to all street tree plantings in the city and would address critical features, such as grading of the sidewalk surrounding a street tree, that go beyond the four corners of the tree pit itself.

Finally, **Intro. 321** would amend outdated city law to provide broader authority for DEP to authorize the use of the entire range of "green" stormwater management strategies, which serve to retain, detain, reuse, and/or infiltrate stormwater on-site, rather than mandating the "disposal" of all stormwater from almost all lots directly into the storm sewer system. This would provide property owners – effective immediately – with new opportunities, subject to DEP oversight, to implement "green" stormwater management practices, on a case-by-case basis, where appropriate. This legislation is wholly consistent with, and serves to complement, Intros. No. 628, 629, & 630, and we urge its passage as well.

* * *

In closing, I would like to thank the Committee for the opportunity to submit testimony on this important legislation. We urge the Committee to pass Intros. 321, 628, 629, and 630, with the revisions proposed in the attachment to this testimony, and look forward to working with the City Council and the Bloomberg administration to achieve further improvements in water quality around the City, for the benefit of all who call it home.

Attachment 1
Testimony of Lawrence M. Levine
November 8, 2007

S.W.I.M. – Proposed Amendments to Intros. No. 628, 629, & 630

Intro. No. 628

- In § 18-104(b), as amended, insert after "including the installation of tree pit guards" the following phrase: "and any other features appurtenant to such plantings".

  Rationale: *Clarifies that all matters related to the installation of street trees and vegetation are covered by this section. For example, in addition to tree pit guards, other "features appurtenant" would include specifications, as appropriate, for the grading of any portion of the street surface to be replaced immediately adjacent to the new planting.*

- At the end of § 18-104(b), as amended, add the following: "No person or agency shall plant any tree or vegetation in a street, or install any street tree guard or other feature appurtenant to such planting, without prior authorization of the commissioner."

  Rationale: *Clarifies that even projects approved of or carried out by other city agencies, such as the Departments of City Planning, Buildings, or Transportation, are subject to the requirements of this section.*

- In § 18-105, as amended, insert after each appearance of the word "trees" the following: "and other vegetation".

  Rationale: *Ensures consistency with § 18-104, which provides jurisdiction over both trees and other vegetation in streets.*

Intro No. 629

- In the new § 224.2, immediately before the final sentence, add the following: "Prior to completion of the sustainable stormwater management plan established prepared pursuant to section 24-526.1 of chapter 5 of title 24 of the administrative code of the city of New York, the agency responsible for the design of each capital project shall consult with the department of environmental protection at the earliest practicable stage in the design process and shall modify the design of such project as deemed necessary by the department of environmental protection to ensure that such project conforms to the requirements of this section."

  Rationale: *Ensures that all projects subject to this section, pursuant to the effective date set forth in § 2 of Intro. No. 629, will, in practice, be designed in accordance with the general design principles set forth in this section, notwithstanding that the sustainable stormwater management plan required under Intro. 630, to which this section refers, may not be complete by the time this section becomes effective.*

- In the final sentence of the new § 224.2, immediately following the words "is paid for in whole or in part from the city treasury and", insert the word "either"; and, immediately preceding the period at the end of the sentence, insert the following: "or has as its primary purpose the construction or substantial reconstruction of, or addition to, any public park, plaza, or other outdoor public space."

  Rationale: *Ensures that capital projects costing below $2 million, but which, by their nature, allow for easy incorporation of sustainable stormwater management techniques, are covered by this section.*

- In § 2 of Intro. 629, replace the semi-colon with a period, and replace all language following that period with the following: "This local law shall also apply to any capital project that receives capital dollars from the city treasury before July 1, 2008, unless the agency responsible for the design of such project determines that such application is not feasible."

  Rationale: *Places the onus on the agency responsible for projects funded before July 1, 2008 to make a determination as to whether or not it would be practicable to revise the project design to conform to the requirements of the new § 224.2.*

Intro. No. 630

- In the new § 24-526.1(a), add a definition for "blue roof," which appears in the text of the legislation, as follows: "'Blue roof'" means flat rooftops designed to detain stormwater temporarily in place for subsequent release to the sewer system or for beneficial reuse, including, but not limited to, use of the method referred to as 'rooftop detention.'"

  Rationale: *Provides a definition for a key term in the legislation, the meaning of which is not otherwise obvious.*

- In the first sentence of the new § 24-526.1(b)(1), insert after "The department" the following language, offset by commas: "in consultation with other appropriate agencies and offices".

  Rationale: *Ensures that all agencies with jurisdiction over public and private activities affecting the flow of stormwater into city sewers – including but not limited to the Departments of Transportation, City Planning, Buildings, Parks and Recreation, Design and Construction, and others – are involved in the development of the plan. (Note also that § 24-526.1(c)(1)(iii) requires the Department of Environmental Protection to include in the Sustainable Stormwater Management Plan "an identification of the agencies and/or office that shall be responsible" for implementing each aspect of the plan and a set of "protocols for inter-agency coordination" with respect to such implementation.)*

- In the last line of the new § 24-526.1(b)(4), replace the words "where revised" with "where such plan has been revised".

Rationale: *Clarifies the language by using parallel construction to that used in a preceding portion of this sub-section.*

- In the new § 24-526.1(d)(1)(v), insert after the words "public open space, parks, and plazas" the following, offset by commas: "whether publicly or privately owned".

  Rationale: *Ensures that privately-owned public spaces, such as plazas constructed on private property in exchange for a floor area bonus under the zoning code, are covered by this sub-section.*

- In the new § 24-526.1(c)(1)(iii)(a), immediately preceding the word "protocols," insert the word "for".

  Rationale: *Minor editorial change to avoid potential mis-interpretation of existing language; demarcates more clearly the scope of the words "and/or", as they appear in this sub-section.*

www.swimmablenyc.org

TESTIMONY SUBMITTED BY
KATE ZIDAR OF THE
STORMWATER INFRASTRUCTURE MATTERS (S.W.I.M.) COALITION
HEARING ON SUSTAINABLE STORMWATER MANAGEMENT
(INTROS. 628, 629, 630, *et al.*) BEFORE THE COMMITTEE ON
ENVIRONMENTAL PROTECTION OF THE COUNCIL OF THE CITY OF
NEW YORK

NOVEMBER 8, 2007

Storm Water Infrastructure Matters (S.W.I.M.) is a coalition dedicated to ensuring swimmable waters around New York City through natural, sustainable storm water management practices in our neighborhoods. The S.W.I.M. Coalition is what happens when passionate and dedicated professionals working with engaged communities share resources. Some of our members have been involved in CSO work in New York City for decades, some for years, but all of us come with water quality experience that represents the wealth of knowledge on sustainable stormwater management resident in New York City. Our membership continues to grow, and today approaches 50 member organizations.

Water quality in the rivers, creeks, and bays surrounding New York City has improved in significant respects since the passage of the Clean Water Act in 1972. But, 30 years later, we still dump approximately 27 billion gallons of untreated sewage mixed with stormwater runoff into the City's waterways through Combined Sewer Overflows (CSO). 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. Separated storm sewer discharges also carry significant amounts of pollutants. Capturing storm water on land can make our waters swimmable, while meeting the city's long-term sustainability goals, reducing energy costs and creating vibrant, healthy and green neighborhoods. To achieve this, multiple **agencies must collaborate** toward this end. To make it sustainable, **community partners must be engaged** in planning, education, and stewardship of stormwater initiatives.

The S.W.I.M Platform

I. Incorporate natural, sustainable storm water management into CSO Long Term Control Plan

II. Involve the public

- Engaged communities can help the city reach its goals with their knowledge and insight
- Education/outreach should include effective public notification
- Decision making process must be transparent
- Create a meaningful public participation process
- City to partner with existing grassroots efforts on pilot projects, studies

III. Incentivize private storm water management

- Create green building code to incentivize progressive storm water practices
- Offer rate reductions for on-site storm water management
- Multiple agency collaboration to ensure most effective

IV. Government reform

- Government reform to strengthen existing laws to encourage progressive storm water practices, i.e. ULURP, building, WAP, watershed planning, lessons learned
- Introduce legislation to require collaborative city/wide watershed planning, i.e. lessons learned through Local Law 71

V. Green NYC

- Mandate multi-agency cooperation to increase community friendly storm water management practices such as:
    - Urban Forestry (green streets, natural areas, parkland, street trees)
    - Wetland management policy
    - Green roofs
    - Permeable pavement
    - Rainwater harvesting
    - Rain gardens
    - Community garden

- Use Bronx River Watershed as a demonstration area for storm water capture through greening

S.W.I.M. supports the call of PlaNYC 2030 to keep sewage out of our waters by re-making the urban landscape to mimic more closely the way natural systems handle rainwater – using it to green our city before it ever has a chance to enter the sewer system and cause CSOs.

Therefore, S.W.I.M. supports the following package of three bills, introduced by New York City Council Member James Gennaro and endorsed by the S.W.I.M (Storm Water Infrastructure Matters) coalition.

Int 0628-2007 Sustainable stormwater management, trees and vegetation.
A Local Law to amend the administration code of the city of New York, in relation to sustainable stormwater management, trees and vegetation

Int 0629-2007 Sustainable stormwater management standards for certain capital projects.
A Local Law to amend the New York city charter, in relation to sustainable stormwater management standards for certain capital projects.

Int 0630-2007 Developing and implementing a sustainable stormwater management plan.
Description: A Local Law to amend the administrative code of the City of New York, in relation to developing and implementing a sustainable stormwater management plan.

Additionally, we support Introduction 0321-2006**, which amends the city code to allow on-site disposal of stormwater runoff.**

The entire coalition would like to thank Councilmember Gennaro for his hard work on this issue and for his leadership in environmental protection.

Kate Zidar
S.W.I.M. Coalition Co-Founding Member

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Testimony of Craig Michaels, Investigator
Riverkeeper, Inc.
RE: Int. No. 628, 629, 630, 321
Hearing Before the Council of the City of New York
Environmental Protection Committee
November 8, 2007

Riverkeeper is a non-profit environmental organization that works to protect the Hudson River and the New York City drinking water supply. We are also part of the SWIM coalition (Storm Water Infrastructure Matters), a broad coalition of environmental groups working to promote better stormwater management throughout the City.

More than 27 billion gallons of raw sewage and polluted stormwater discharge out of 460 combined sewer overflows ("CSOs") into New York Harbor each year. Although water quality in the Harbor has improved significantly over the last few decades, most of the waterfront and its beaches are still unsafe for recreation after it rains. New York City's outmoded sewer system combines sewage from buildings with dirty stormwater from streets. As little as one-tenth of an inch of rain can overload the system, causing the raw sewage to overflow into the Harbor.

Historically, the New York City Department of Environmental Protection (DEP) has focused its efforts primarily on expensive end-of-pipe controls, while more cost-effective source control approaches, which could keep stormwater out of the sewer systems in the first place, have been largely ignored. Indeed, there is a massive imbalance in terms of spending, with billions of dollars spent on end of pipe solutions, and virtually no real budget for source control technologies.

The overarching problem with the end-of-pipe approach is that floods happen at the source: where the rain hits the streets. So spending billions on end-of-pipe improvements is basically a band-aid solution, and it certainly will not help residents in areas that are prone to flooding. While it may be cost prohibitive to expand sewer lines, it may be cheaper and more effective to implement source control technologies like greenstreets.

Fortunately, source control technologies are beginning to get the attention they deserve. As part of Mayor Bloomberg's PlaNYC 2030, an inter-agency Task Force will be focusing on how and where Best Management Practices (BMPs) can be implemented to reduce stormwater impacts throughout the City. BMPs are economically sound alternatives that can reduce the volume of stormwater entering the system. Examples of BMPs include: street trees, greenstreets (smaller vegetated areas on streets); green roofs to capture and/or detain run-off from buildings; tree pits designed to retain water for absorption by trees; and the use of porous pavement in area parking lots. Any excess stormwater that is not captured by source controls then enters the sewage system for eventual treatment.

In keeping with this rising tide of source control implementation, the legislation before the Environmental Protection committee today takes a broad step forward and represents a major achievement in our ongoing efforts to utilize stormwater as a resource and not a waste. This legislation, if enacted, will help make

New York City a greener, more livable city, by providing the necessary mandate for the responsible, cost-effective, and environmentally sound management of stormwater. Along with Mayor Bloomberg's PlaNYC 2030 initiative, these bills will go a long way to making New York the model city that it should be.

City Council *Intro No. 630* would ensure that New York City follows through with the goals outlined in Mayor Bloomberg's PlaNYC 2030, by requiring the development and implementation of a Sustainable Stormwater Management Plan. This plan would reduce stormwater runoff into the City's sewers through the use of better site design and low impact development, technologies endorsed by the U.S. Environmental Protection Agency (EPA), and already in wide use in cities such as Chicago, Pittsburgh, Portland, and Seattle. Examples of these green technologies include: green roofs, planting of street trees, permeable pavement, rain gardens and swales, and wetland restoration, among others.

City Council *Intro. No. 629* would require that new City-funded capital projects be designed to minimize the post-construction runoff of stormwater into the City's sewer system, using the same menu of techniques.

City Council *Intro No. 628* would require that new plantings of trees and other vegetation along City streets and sidewalks – including the million trees to be planted as part of PlaNYC 2030 – are installed in such a way as to maximize their capacity to absorb stormwater.

City Council *Intro No. 321* would sanction on-site disposal of stormwater runoff, thereby allowing for a significant reduction in additions to the City's combined sewer system.

These bills will not only save the City money in the long run, but they will create good jobs, as more BMPs are implemented on the ground throughout the 5 boroughs. Further, these bills will help to address the ever-growing flooding problem that will continue to affect New Yorkers for the foreseeable future. DEP and other agencies need to concentrate on directing as much rainwater as possible away from the overflowing sewer systems, where it quickly overloads the lines and triggers not only raw sewage overflows into our creeks and rivers, but flooding in the streets and homes of area residents. These bills take a step in assuring that flooding problems will be properly addressed.

Source control systems work and the EPA endorses the effectiveness of source control. Cities across the country, including Chicago, Milwaukee, Pittsburgh, Portland, Seattle, and Washington D.C. have recognized the effectiveness of source control and have implemented programs in an effort to control CSOs.

In addition to implementing source controls, the City needs to ensure that new developments planned for the 5 boroughs be required to implement "no-net stormwater runoff" designs. Our streets and buildings can and should be greener, and the City should be investing in more environmentally sustainable designs. The City is working towards this and what the citizens of New York City need right now from our elected officials is strong political support behind source control.

A report put out by MTA in response to the August 2007 flooding noted that any comprehensive plan to address future flooding will "require a change in the institutional culture to include a range of professions and stakeholders involved in the planning and decision process." *Id.* Moreover, the report urged that costs and benefits be analyzed in "not only monetary terms, but also in terms of environmental and community sustainability." *Id.*

New York Harbor, along with the waterways that feed into it, has always been the lifeblood of this City. The vision of having a fishable and swimmable New York Harbor is one that needs to be fully embraced if we are to truly become an environmental city. By increasing the rate of capture of stormwater, and by keeping stormwater out of our sewer systems, we can move in the right direction.

The ideals espoused in PlaNYC are big steps forward, but they represent merely policy positions. This legislation today aims at enacting actual rules and regulations to implement these policy solutions. It is critical that the City Council continue to play a leading role in making this City more sustainable.

If enacted and properly implemented, the bills discussed here today can serve as proof that the leaders of this City are rising to the challenge, listening to the needs of local residents, and mandating that the most cost-effective and environmentally sound long-term solutions be utilized to address the stormwater problems we face.

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Riverkeeper is a non-profit environmental organization dedicated to protecting and restoring the Hudson River Estuary, New York City's upstate drinking water reservoirs, and the rights of all New Yorkers to clean communities and a clean environment. Since 1965, we have brought hundreds of environmental lawbreakers to justice, forcing more than $1 billion in fines and remediation projects.

Contact:
Craig Michaels, Riverkeeper, Inc., 914-478-4501 x242, cmichaels@riverkeeper.org

Resources:

Sustainable Raindrops: http://riverkeeper.org/special/Sustainable_Raindrops_FINAL_2007-03-15.pdf

SWIM Coalition: http://www.swimmablenyc.org

MTA August 8, 2007 Storm Report: http://www.mta.info/mta/pdf/storm_report_2007.pdf

PlaNYC: A Greener, Greater New York: http://www.nyc.gov/html/planyc2030/html/home/home.shtml

BRONX
RIVER

LLIANCE

NYC Sustainable Stormwater Management Legislation
(Intros 628, 629, 630)

City Council Hearing
November 8, 2007
Presented by Teresa Crimmens
Environmental Coordinator
Bronx River Alliance

Capturing storm water on land is a crucial step toward meeting the city's long-term sustainability goal of opening waterways to primary recreation, reducing the urban heat island and creating vibrant, healthy and green neighborhoods. Thank you for giving attention to this important issue, and for inviting the testimony of the Bronx River Alliance.

Established in November 2001 as a non-profit corporation, the Bronx River Alliance acts as a coordinated voice for the river and works collaboratively with public and private partners to protect, improve, and restore the Bronx River corridor and greenway. We are deeply concerned about the impact of combined sewer overflows and polluted storm water on the river's health and its potential as a recreation resource.

The Alliance is a founding member of Storm Water Infrastructure Matters or S.W.I.M., a growing coalition of more than 50 organizations from around the city, which is dedicated to ensuring swimmable waters around New York City through natural sustainable storm water management practices in our neighborhoods.

More than 1,000 people have joined me in paddling the Bronx River in canoes and kayaks this year. I manage a volunteer water quality program in which young people and adults come into direct contact with the water on a weekly basis all year round. Every summer, I see children and adults swimming in the river's estuary within yards of combined sewer outfalls. This contact with the water is not unique to the Bronx River, water-based recreation is rapidly growing in popularity throughout the city. Combined Sewer Overflows (CSOs) discharge 27 billion gallon of untreated sewage and stormwater into the same waters that serve as a recreational haven for so many New Yorkers.

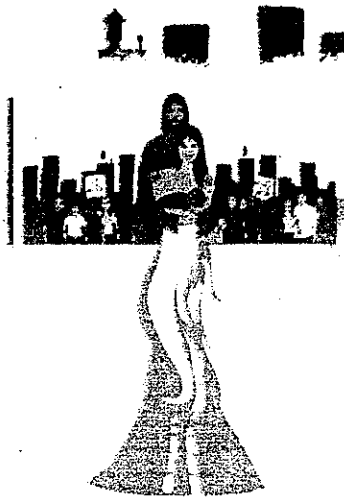
In order to reduce the effects of CSOs on the estuary, NYC must focus on capturing, infiltrating, or otherwise retaining storm water before it enters the combined sewer system. We believe that this approach is environmentally and fiscally responsible because it uses storm water, currently viewed as a waste, as a resource.

The Alliance and S.W.I.M. support the package of three bills (Intros # 628, 629 and 630) that seek to implement the PlaNYC Water Quality Initiative, therefore ensuring that the city follows through with the intent of PlaNYC so that its goals may indeed be achieved by 2030.

Throgh creation of a citywide Sustainable Stormwater Management Plan, **Intro 630** aims to reduce CSO pollution by bringing the technologies of "low-impact development" or "source controls" into neighborhoods and sewersheds.

Some of PlaNYC's goals can be acted on now. Intro 629 aims to reduce stormwater inputs to the combined sewer system from City-funded capital projects. In October, it was announced that New York City will plant one million trees over the next ten years. Intro 628 will help the street tree portion of the million trees program to be designed and installed for maximum capture of stormwater. This will not only reduce flows to the combined system, but also help trees to survive longer by providing them with more water.

I hope that this committee will join me in supporting these bills. Thank you



Youth Ministries for Peace & Justice

Testimony of Youth Ministries for Peace and Justice
Community Development and Planning Center
RE: Three New Bills for Sustainable Stormwater Management

November 7, 2007

Thank you Chairman Gennaro and members of the Environmental Protection Committee for holding today's hearing. My name is Stephen Oliveira. I am the Environmental Justice Organizer at Youth Ministries for Peace and Justice- a non-profit organization located in the Bronx. YMPJ is also a member of the SWIM coalition. The platform is viewable online at www.swimmablenyc.org.

I am here today to urge the passage of legislation to improve water quality through sustainable stormwater management.

Youth Ministries for Peace and Justice (YMPJ) has as its goal the leadership development and formation of young people for a life of peace and justice. The Community Development and Planning Center is committed to developing the leadership of Bronx River residents to have greater power over the redevelopment of their neighborhood. It particularly seeks to engage the creativity and energy of young people and recognize their key role as community stakeholders whose growth is intertwined with the health of their environment. In accordance with the principles of environmental justice, CDAP works to improve the neighborhood's environment, increase the resources and amenities available to residents, and improve the quality and affordability of the housing stock to ensure that current residents are able to continue to enjoy the improvements they create.

Currently, YMPJ is working to implement stormwater management BMPs (source controls) in the Soundview neighborhood, located in the Hunts Point drainage area and more specifically within CSO-shed HP-009. Our overall goal is to reduce stormwater entering the sewer system to alleviate combined sewer overflow (CSO) in the Bronx River during wet weather. With the help of our youth program, we installed several demonstration projects, mini-BMPs if you will, to capture stormwater discharges. On a small scale, these interventions offer very local benefits.

The general intent of the proposed legislation is to ensure swimmable waters around New York City through BMPs. While these BMPs will ensure swimmable waters, there are other outcomes that will happen as a result of this proposed legislation.

Tree pits engineered to retain more stormwater would result in healthier trees and vegetation. Trees and other vegetation would increase curb appeal and lower asthma rates in the community, which are double the national average. An increase in the installation of green roofs, rain barrels, and rain gardens for stormwater retention may also bring much needed jobs to a community that is laden with too many burdens, whether they are environmental or social.

There are many experts here from many organizations that are testifying in support of the proposed legislation of sustainable stormwater management. Our experts, unfortunately, could not be here today. They are still completing the fifth grade.

Not too long ago, YMPJ Youth Organizers led a canoe trip with fifth graders from PS 196 on the Bronx River and also led a workshop along the East River. While the outings were immense successes, the fifth graders took notice of what the Bronx River looked and smelled like in comparison to other areas of the same river up North. Their discovery of CSOs, prompted a YMPJ led letter writing campaign to Mayor Bloomberg.

The class asked me to read one of the many letters that were written to Mayor Bloomberg.

This letter is from one particular student Aumit, and he writes:

Dear Mayor Bloomberg

"My name is Aumit, and I come from PS 196. I am a ten year old boy. Mr. Mayor, this past week me and my 5th grade class went to a park in the East River. While we were there (sic), we learned a lot about CSOs. A CSO stands for Combined Sewer Overflow. That means that when it rains, you know how human waste works inside of sewers? (sic) Well on rainy days the sewers get overflowed (sic) and the sewer treatment plant can't handle it all, and it happens to happen that they dump the human waste into rivers such as the Bronx River, the East River and many more. But the point is me and my class demand that you plant trees near our school. The reason behind this is that we would like you to do something. Mr. Mayor, you are probably wondering, what we want for you to do. What we want is for you to make city workers plant more trees and grass in the New York City area. Especially near our school because we have no trees here. But we do have a CSO, so that's no good. We want more grass because when it rains the soil and grass can soak it up, and less water goes into the sewer, so that means less CSOs. If you decide to accept this proposition (sic), our neighborhood is in the Bronx. We live in Ward Ave. Our school is there too. And hopefully you will help us by sending city workers/ to help plant grass and trees."

Sincerely,

Aumit

The CSO that Aumit writes about, HP-009, discharges 681 million gallons of CSO into the Bronx River yearly, and this is just one of three within close proximity to his community. While HP-009 is rated as the seventh worst city-wide, he observes no trees around his school. By demanding that city worker plant more trees, Aumit understands explicitly that CSOs will be reduced through sustainable stormwater management practices, and he understands implicitly that the environmental inequities faced by the community becomes a little less so.

Youth Ministries for Peace and Justice urges the passage of legislation to improve water quality through sustainable stormwater management. Improvement of water quality through sustainable stormwater management would improve quality of life.

Thank you for your time.

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Clean Ocean Action

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TESTIMONY PRESENTED BEFORE THE NEW YORK CITY COUNCIL, COMMITTEE ON ENVIRONMENTAL PROTECTION

A HEARING ON INTRODUCTION NUMBERS. 628, 629, 630, 321

NOVEMBER 8, 2007

ON BEHALF OF CLEAN OCEAN ACTION

INTRODUCTION:

Thank you, Mr. Chairman, for the opportunity to testify on the proposed Introductions, which seek to enact local laws that will promote sustainable stormwater management measures. My name is David Byer, Water Policy Attorney for Clean Ocean Action. I am here with Anna Will, Pollution Prevention Coordinator for Clean Ocean Action. We represent a broad-based coalition of groups in both New York and New Jersey dedicated to improving the degraded water quality of the marine environment off the New Jersey/New York coast. These waters are known as the New York/New Jersey Bight. It is imperative that both states continue to pursue strong stormwater management measures to continue progress for water quality in the marine environment.

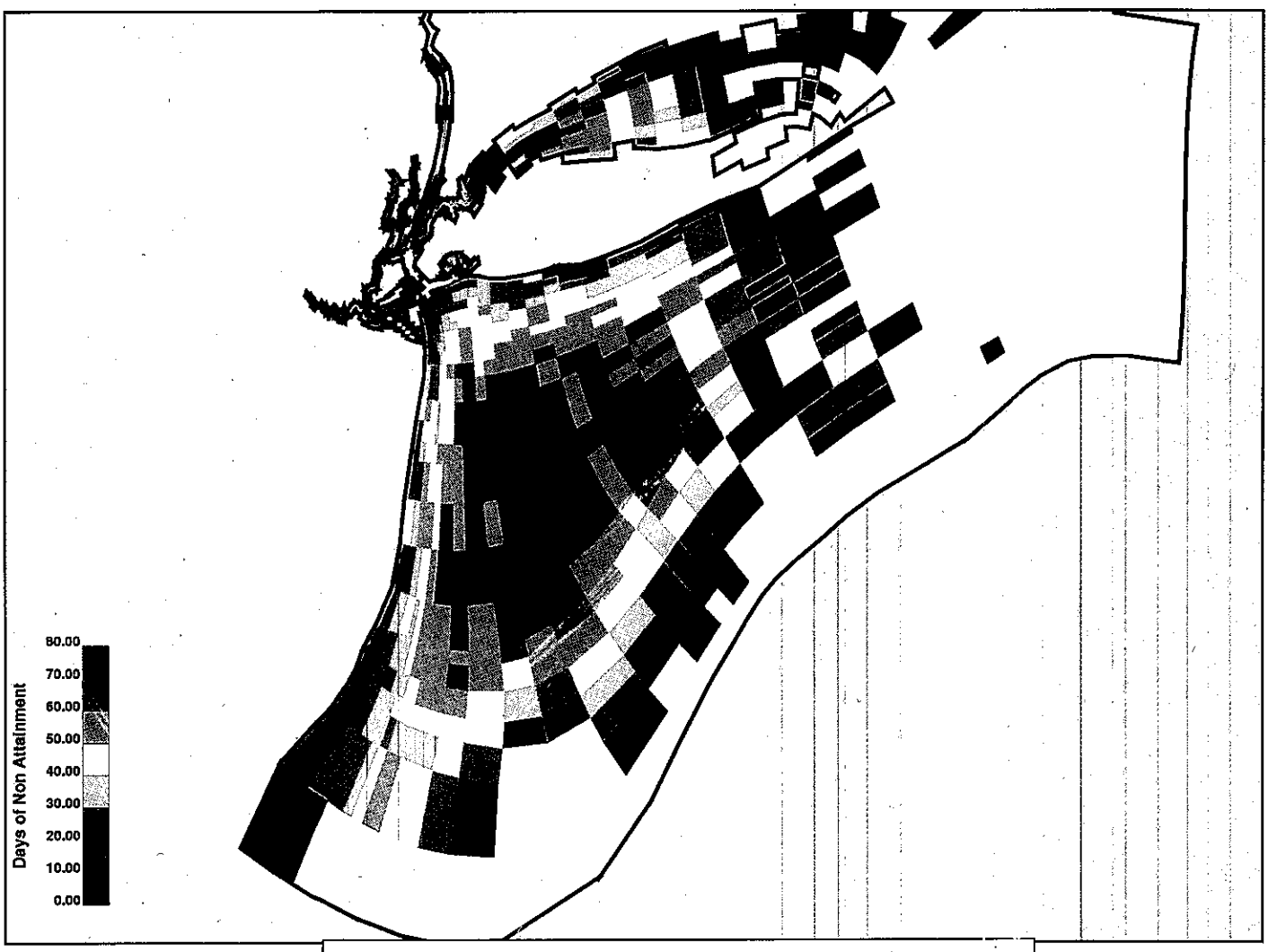
We believe these laws are an integral step toward more sustainable stormwater management. Each year, stormwater runoff and resulting combined sewer overflow (CSO) events, discharge nonpoint source pollutants including harmful debris, pathogens, nutrients, hard metals, and other contaminants into New York's waterways and, by extension, the shared waters of New Jersey. These pollutants can cause floatables incidents, nutrient enrichment, and a depletion of oxygen levels in the NY/NJ Bight waters, damaging the ecology and threatening human health. Stormwater runoff that flows into the NY Harbor also contributes to a massive dead zone in the ocean for over 80 days each year, resulting in a non-attainment area under the Clean Water Act. The attached diagram illustrates the scale of this environmental devastation in the NY/NJ Bight.

The proposed laws promote many sound practices that are crucial to addressing the problems associated with stormwater. For example, maximizing vegetative and tree planting capacities for retention, detention, and stormwater infiltration is vital to reducing nonpoint source pollution that reaches waterways through stormwater runoff and combined sewer overflow events, mimicking more natural hydrology,

and recharging groundwater supplies. It is also notable that the City will take the lead on sustainable stormwater management practices by requiring such standards on capital projects. Another important measure is the requirement that the sustainable stormwater management plan include a protocol for notification of the public of the occurrence of discharges through CSOs. This requirement complements environmental goals with public safety measures. These are just some examples of the sound measures proposed in the Introductions.

In order to protect and restore the water quality of New York City's waterbodies, the City needs to take strong and active steps towards implementing sustainable stormwater management plans. These proposed local laws are an important and good step in that direction. Clean Ocean Action is glad to see this progress and encourages the adoption and implementation of these laws. Thank you.

USEPA Region 2
Dissolved Oxygen Levels Days of Non-Attainment
(conditions unhealthy for marine life)



The dissolved oxygen problem in the New York Bight. Based on calculations and observed data, currently enforceable dissolved oxygen standards are not attained at all times.