

Testimony of Vincent Sapienza, P.E.
Acting Commissioner, New York City Department of Environmental Protection
before the
New York City Council Committee on Environmental Protection
concerning

**Introduction 1346 - in relation to water pollution control, including provisions relating to
stormwater management and control of discharges into storm sewers**
250 Broadway
December 13, 2016

Good afternoon, Chairman Constantinides and Members of the Committee. I am Vincent Sapienza, Acting Commissioner of the New York City Department of Environmental Protection (DEP). With me are Angela Licata, Deputy Commissioner for Sustainability, and Eric Landau, Deputy Commissioner of Public Affairs and Communications, as well as other DEP staff.

Thank you for the opportunity to testify in support of Introduction 1346, which seeks to ensure that the City has adequate legal authority to implement and enforce the terms of the Municipal Separate Storm Sewer System (MS4) Permit recently issued to the City by the New York State Department of Environmental Conservation (DEC). This Permit, issued in August 2015, requires that the City undertake a series of actions with the goal of reducing pollutants that discharge to the MS4 System and from City facilities that drain directly to surrounding waters. Executive Order 429 (October 15, 2013) conferred upon DEP the authority to act on behalf of the City and to coordinate the efforts of City agencies with respect to the City's MS4 Permit. Thus, the focus of the proposed legislation is to provide DEP with the authority to fulfill this role – both memorializing DEP's coordinating role and establishing new authority for DEP to administer and enforce certain Permit-required programs.

The Permit builds on the City's work, in conjunction with its regulators, to continually improve water quality in the surrounding waters. The City has invested over \$10 billion since the early 2000s toward this important effort, and today harbor water quality is the best it has been in over 100 years of testing!

As you know, the City is served by both combined and separate sewer systems. In the combined sewer area, which comprises approximately 60% of the City, DEP has implemented three major efforts to reduce combined sewer overflows. First, DEP implemented a series of best management practices (BMPs) to enhance the functioning of the combined sewer system. Second, DEP has committed \$4.2 billion over the past 10 years toward CSO control. This includes \$2.7 billion in commitments toward the construction of gray infrastructure projects, such as CSO tanks. In addition, DEP is implementing its \$1.5 billion Green Infrastructure program, which retains, detains and uses stormwater by means of a suite of BMPs. Additional investments will be made as a result of the Long-Term Control planning process. The remaining 40% of the City, known as the MS4 area, is served by a separate storm sewer system that carries stormwater runoff to the harbor rather than to the 14 wastewater treatment plants. The MS4 Permit regulates certain activities in the City's MS4 area.

In order to comply with the terms of the Permit, the City must demonstrate to DEC by August 1, 2017 that it has adequate legal authority to administer all Permit requirements.

This bill includes amendments to the NYC Charter, which will clarify DEP's role in coordinating the City's implementation of the Permit, and to the Administrative Code, which will grant DEP the authority to administer three of the programs required under the Permit.

The proposed revisions to the New York City Administrative Code will provide DEP and other pertinent City agencies with adequate authority to comply with and administer the MS4 Permit requirements. Upon reviewing the City's current legal authority, the Law Department determined that supplemental legal authority in three MS4 programs is warranted:

- Industrial/Commercial Stormwater Sources;
- Construction/Post-Construction Stormwater Management; and
- Illicit Discharge Detection and Elimination.

The Industrial and Commercial Stormwater Sources Program addresses the discharge of pollutants of concern to the MS4 from industrial and commercial sites/sources under an existing state permitting program. The MS4 Permit requires the City to take on certain enforcement roles that were previously held by DEC. In doing so, the Permit requires the City to prepare and maintain an inventory of such sources and to develop a plan to inspect and assess them to determine whether they generate significant contributions of pollutants to impaired waters and whether they are in compliance with the State permit. The responsibilities for the regulated community will remain the same as those under existing State law.

The bill proposes the adoption of a new subchapter 5-A of title 24 of the New York City Administrative Code providing DEP with the authority to:

- Inspect unpermitted facilities in the separately sewered portions of the City, or "MS4 Area," to determine if they should be referred to the State for permitting;
- Inspect permitted facilities to ensure that they are in compliance with the Permit and have the requisite Stormwater Pollution Prevention Plans (SWPPPs) which, under State law, they must develop and maintain on site. The new subchapter clarifies that facilities must make SWPPPs available to DEP for inspection;
- Receive and collect information from permitted facilities;
- Take enforcement action; and
- Require installation, implementation, and maintenance of control measures to ensure compliance with applicable State law.

The Construction Site Stormwater Runoff Control and Post-Construction Stormwater Management Program requirements derive from an existing State permit and apply to site development and redevelopment activities that result in a land disturbance of one acre or more in the MS4 Area. The MS4 Permit requires the City to take over the review and enforcement role of this program. In doing so, the Permit requires the City to develop, implement, and enforce a program to address stormwater runoff from construction activities, and to establish and update an inventory of post-construction stormwater management practices, as well as to inspect those practices to ensure that they are performing properly. This program will initially affect construction sites that disturb more than one acre of land, but that one-acre threshold may be

reduced following a study that is required under the MS4 Permit. As with the first program, the responsibilities for the regulated community will be generally similar to those under existing State law.

Accordingly, the proposed local law will regulate stormwater discharges from construction sites within the MS4 area. Under the proposed legislation DEP would:

- Enforce existing State law relating to the review and “acceptance” of SWPPPs prior to the commencement of construction in the MS4 area;
- Issue permits for covered construction activities in the MS4 area, requiring compliance with construction and post-construction stormwater management controls described in approved SWPPPs, including long-term maintenance of post-construction facilities;
- Inspect construction sites and enforce compliance with approved SWPPPs during construction; and
- Require maintenance easements on private property allowing inspection of post-construction stormwater management facilities to ensure that they are properly maintained throughout their useful life and replaced when necessary.

The MS4 Permit requires the City to examine the lot size soil disturbance threshold that will trigger construction and post-construction requirements. Currently, the threshold is one acre, but DEP anticipates that, at the conclusion of the lot size study, a reduced lot size will be implemented that will increase the number of regulated construction sites.

Through the rulemaking process, DEP will establish permit application requirements as well as SWPPP acceptance and review procedures. DEP is mindful of the need to ensure that the new permitting process is simple and efficient, and is devising a permitting system that will expeditiously process applications and plans. The legislation requires DEP to specify time periods for reviewing SWPPPs in its rules. Conforming revisions to DOB’s Building, Plumbing and Construction Codes, and DOT’s Code are also being proposed.

The Illicit Discharge Detection and Elimination Program (IDDE) requires the City to develop, implement, and enforce a program for the detection and elimination of illicit non-stormwater discharges to the MS4 area. DEP’s existing IDDE program is robust and applies Citywide. The changes proposed to DEP’s existing legal authority include adding a new subsection to the Administrative Code explicitly prohibiting unauthorized non-stormwater discharges to storm sewers. Facilities affected will be those that discharge prohibited non-stormwater effluent into the MS4 system.

Upon passage of this legislation, DEP will be proposing rules to implement the three programs I have discussed. All rules will be promulgated pursuant to the City Administrative Procedure Act, which provides notice and ample opportunity for comment to all who would be affected by the new rules. Our goal is to start this process in spring 2017.

DEP’s engagement with, and outreach to, the large number of stakeholders has been active and continues as the development of this stormwater management initiative progresses. We have briefed Council staff, community boards, environmental organizations, engineers, architects and developers, affected unions, as well as sister agencies, the Economic Development Corporation,

and Industrial Business Zones. We will also be following up on the lot-size threshold study in collaboration with the Urban Green Council and the Real Estate Board of New York.

We look forward to continuing collaboration with the Council in putting this comprehensive program in place that is the next step toward making New York Harbor even cleaner.

Again, thank you for this opportunity to testify. I will be glad to answer any questions.



**Testimony of Felice Farber, Director External Affairs
The General Contractors Association of New York
NYC Council Committee on Environmental Protection
Hearing on Intro 1346
December 13, 2016**

Thank you Chairman Constantinides and members of the Environmental Protection Committee. I am Felice Farber, Director of External Affairs for the General Contractors Association of New York. We appreciate the opportunity to comment today on Intro 1346.

The GCA represents the city's unionized heavy civil and public works contractors that build and rehabilitate the city's parks, roads, bridges, water and wastewater network and other public facilities.

We support the City's efforts to seek legislative authority to implement the requirements of the state Municipal Separate Storm Sewer System (MS-4) Permit and we look forward to working closely with DEP and the Council protect New York's waterways and ensure compliance with all environmental regulations.

As this issue is quite complex, we urge the Council to take their time in reviewing and moving forward with this enabling legislation. There are several issues that must be addressed.

First, Intro 1346 clearly spells out the requirements for a developer to obtain the necessary construction permits and to obtain the SWPPP. As the requirements of the MS-4 permit also apply to public works projects, the requirements for City agencies to follow must also be clearly spelled out in the legislation. It should not be the contractor's responsibility to develop the SWPPP post bid and risk, at significant financial exposure, alternative direction from the City or its consultants on the required prevention measures.

Second, Intro 1346 sets forth the opportunity for the City to issue a stop work order or a cease and desist order. It is not clear the difference between the two and what factors would trigger either action. Moreover, there is no opportunity to cure before either of these stark actions are taken or any sense of the range of non-compliance that would be required to issue a stop work order or a cease and desist order. While many of these issues will be addressed in the rule-making process, a clear framework must first be laid out in the authorizing legislation.

Finally, Intro 1346 allows for the imposition of both criminal and civil penalties. Criminal penalties are quite severe and there must be some guidelines or framework spelled out in the legislation as to the sorts of actions that would rise to the level of criminal violations. Such a significant consequence should not be left wide open for rule-making.

We appreciate the opportunity to comment today and look forward to working with the Council and the Administration on this important legislation.

Testimony Submitted by
Jennifer T. Nersesian, Superintendent
Gateway National Recreation Area

Before the Committee on Environmental Protection
The Council of the City of New York

December 13, 2016

I am Jennifer Nersesian, Superintendent of Gateway National Recreation Area, a unit of the U.S. Department of the Interior's National Park Service. I am here to offer the following comments on behalf of Gateway National Recreation Area and its role as natural resource steward of a major portion of the Jamaica Bay estuary, including the Jamaica Bay Wildlife Refuge. The National Park Service and Gateway National Recreation Area appreciate the opportunity to testify today regarding Introduction Number 1346, a Local Law to amend the New York City Charter, the administrative code of NYC, the NYC plumbing code, and the NYC building code relative to stormwater management and control of discharges into storm sewers.

The National Park Service mission to "...preserve unimpaired the natural and cultural resources of the National Park System, for the enjoyment, education and inspiration of this and future generations" is supported by the goals of the Jamaica Bay Watershed Protection Plan (JBWPP). Stormwater discharge control and management under Introduction Number 1346 is in keeping with the spirit of the JBWPP. In order to fulfill the more specific park mission: "...to protect significant park resources and create high quality opportunities for visitors to enjoy," Gateway National Recreation Area natural

resource managers and researchers have been working cooperatively with key non-government groups, city, state, and federal agencies to assist with implementation of Best Management Practices to reduce stormwater runoff and minimize water and sediment contamination in Jamaica Bay and Staten Island. When Local Law 71 was passed, I was pleased to have members of my staff participate for the National Park Service on the JBWPP Advisory Committee that was created by the law under the leadership of then Councilman James Gennaro. We have been encouraged by the spirit of cooperation that Local Law 71 inspired and due to the efforts of many government and non-governmental entities, we remain optimistic about the future of the Jamaica Bay's aquatic ecosystems. We continue to view the overall goal of restoring and sustaining the water and sediment quality and ecological integrity of Jamaica Bay as the highest priority for Gateway National Recreation Area, its wildlife, its millions of visitors, and the City of New York.

The National Park Service is encouraged by the progress made since the JBWPP was released and implemented. This newly introduced Local Law underscores New York City Council's commitment to the overall plan objectives, especially with respect to ecosystem restoration project support. Although further research is needed to find a clear link between cause and effect pertaining to saltmarsh and other habitat loss in Jamaica Bay, restorative measures have yielded over 120 acres of re-established saltmarsh and other estuarine features over the past 12 years. Jamaica Bay remains one of the largest and most productive coastal ecosystems in the northeastern United States, and includes the largest tidal wetland complex in the New York metropolitan area. The functions and values of this resource to fish and wildlife have been well documented and are also well

known by those concerned, including yourselves. The National Park Service therefore applauds the planned water pollution control improvements, including the reduction of nitrogen reduction discharged from wastewater treatment facilities over the next 10 years. This is a very encouraging continuation of improvements to the overall water quality of the bay and its watershed.

From a resource management perspective, The National Park Service is greatly concerned about getting over the water quality hurdle as quickly as possible because most of the resource management strategies being developed for the bay are contingent upon good water quality for success. Once the Bay's waters and sediments are improved to a sustainable high level of quality, ecosystem restoration efforts, such as shellfish and seagrass beds, that have been absent from the bay for decades, will no longer be viewed as high risk endeavors. Partners will be more willing to support these and other ecosystem restoration efforts, and the future of the Bay will again be bright. We encourage NYCDEP and all involved partners to take the next big step toward such sustainability, and plan to reduce to nitrogen loading by another 50% by 2030.

The National Park Service is also encouraged by the implementation of pilot projects such as the wastewater treatment plant algal scrubbers, the Paerdegat Basin restoration (including the storm water tanks and tidal wetland creation), the Green Infrastructure Plan, and Streetside Swale/Enhanced Tree Pit Pilots. All these, and other pilots that improve watershed conditions, will contribute to the goals of the plan. The one missing element, sediment contamination abatement, is perhaps one of the most challenging

technologically and in terms of gaining public support. As the JBWPP mentions, nearly 50% of Jamaica Bay sediments are contaminated at various levels. Since the sediments represent a critical habitat interface with the water column and are capable of supporting the basis of the aquatic food web, improving the Bay's sediment quality must be viewed as a second critical element, along with water quality improvement, in our quest for a healthy and sustainable estuarine ecosystem. We therefore, encourage NYCDEP and all involved partners to focus on this important task in coordination with the National Park Service and all involved partners.

The National Park Service and Gateway National Recreation Area greatly appreciate the work and support of New York City Council's Committee on Environmental Protection. We look forward to sustained mutual support, from and to the Council and the many other partners involved in protecting and enhancing the Jamaica Bay estuarine ecosystem. We are extremely grateful for the dedication and knowledge shared by the many talented staff members throughout the agencies, universities, and organizations. In the spirit of the original intent of Local Law 71, we urge you to support any and all immediate actions contained in Introduction Number 1346 pertaining to the most critical concern at hand, the continued reduction of water and sediment contaminants in the Bay, as well as implementation of other key steps to reduce stormwater runoff and other management practices recommended by the Jamaica Bay Watershed Protection Plan Advisory Committee throughout the Jamaica Bay Watershed.

I thank you again for your support and interest in this endeavor, and for the opportunity to submit this testimony.

Public Testimony New York City Council, Committee on Environmental Protection

Re: Int. No. 1346 - Water pollution control, including provisions relating to stormwater management and control of discharges into storm sewers

December 13, 2016

Roland Lewis
President and CEO
Waterfront Alliance



The Waterfront Alliance is a non-profit civic organization and coalition of more than 900 community and recreational groups, educational institutions, businesses, and other stakeholders committed to restoring and revitalizing New York Harbor and the surrounding waterways.

Clean water is a critical concern not only for the members of our Alliance but for millions of people who inhabit our island metropolis. Over the last generation, thanks to progress spurred by the Clean Water Act and capital improvements made by the City and the State, many of New York's waterways are clean enough for regular recreational use, as more people are boating, fishing and swimming in our shared waters. New York Harbor is also now a more conducive place for fish, shellfish, and marine bird populations, even as commercial shipping grows.

While toxins in the marine environment have been reduced considerably, significant problems persist, caused by generations of pollution and neglect. We still have a long way to go in order to meet the standards of "fishable and swimmable" waters. Our waterways must not only be protected but improved, as healthy habitats will foster the well-being of millions of residents and visitors, as well as improve the regional economy. Not surprisingly, as less pollution washes up on local shores, water-related tourism and recreation enjoy corresponding growth. Across our region, networks of civic groups and concerned citizens have contributed to improving our habitats through beach cleanups, oyster restoration programs, and citizen-based water quality testing.

Yet cooperation among government actors at the local, state, and federal levels is critical. The NYC Department of Environmental Protection, NYS Department of Environmental Conservation (DEC) and the Environmental Protection Agency (EPA) all have a role in the management of combined sewer outfall (CSO) discharges, and the preparation of long term control plans (LTCP) to mitigate these challenges. As this legislation acknowledges, the sanitary and storm sewer systems are separated in an area covering more than one-third of the City. The municipal separate storm sewer systems (MS4) also contribute pollution to our waterways, and should be held to the same standards as CSO discharge.

Earlier this year, we learned of a new draft enforcement order between the City and the State DEC regarding the development and review of LTCPs, CSO

permitting and other enforcement activities. We were co-signatories to a letter to DEC requesting greater public involvement and inclusion of civic groups, local elected officials, and independent experts in continued discussions of those plans. Beyond additional disclosure and stakeholder participation, the letter aired serious concerns about possible limitations on capital investment for clean water infrastructure, as the agreement was based on expenditure targets, rather than outcome-based targets using the latest and best standards.

Controlling stormwater at its source is essential to reducing combined sewer overflow and pollutant runoff into our waterways. This requires intervention on land as well as in the water. We recognize the City's ongoing work to address these challenges through large-scale infrastructure projects, such as upgrading our sewage treatment plants, and smaller interventions to counteract the impermeability of streets and sidewalks through street-greening programs that absorb rainwater. We applaud the City's efforts to introduce green infrastructure (GI) in certain "target" CSO areas, but encourage greater review and oversight by this Committee to ensure that DEP will meet its long-term goals for effective and widespread implementation, including not only MS4 areas but all CSO areas as well.

At the same time, we also acknowledge that incentives for property owners to make investments to their own buildings and land area can produce better outcomes. Our Waterfront Edge Design Guidelines program, or WEDG, incorporates points toward certification for applying best practices in stormwater management. The City should expand incentives for natural functions such as porous pavement and green rooftops through tax credits or lower usage fees, while at the same time rethinking how rate payments can accurately reflect a property's contribution to discharge and pollution, rather than usage.

We also recognize that the challenges facing NYC DEP should not be borne by that agency alone, and that the Departments of Transportation (DOT), Buildings (DOB), and Design and Construction (DDC) must all have a responsibility to support green infrastructure development and stormwater management that contribute to clean waterways. A frequent concern among waterfront stakeholders is the absence of a centralized office within the City to advocate for water-dependent uses at the shoreline. A lead waterfront agency would provide a central actor for all policies and funding needs related to water-dependent uses citywide. We encourage the creation of a single local government body—such as a Mayor's Office of the Waterfront—to serve as a lead actor to coordinate planning efforts, studies, funding, and technical assistance to waterfront users.

Taking care of the environment is the responsibility of everyone – developers, engineers, politicians, teachers, scientists – just as waterfront access is a right shared by all. We thank you for the opportunity to present this testimony, and look forward to working with you to protect our waterways for future generations.



The North Shore Waterfront Conservancy of Staten Island, Inc.
P.O. Box 140502
Staten Island, New York 10314

December 6, 2016

Chair Costas Constantinides,
Councilman Donovan Richards
New York City Council
Environmental Protection Committee

Reference: Intro. No 1346, A Local Law to amend the New York City Charter, the administrative code of the city of New York, the New York City plumbing code and the New York City Building Code, in relation to water pollution control, including provisions relating to storm water management and control of discharges into storm sewers.

On behalf of the North Shore Waterfront Conservancy of Staten Island, Inc., (NSWC/NSWCSI) and the North Shore Environmental Justice Communities that we advocate on behalf of. We are in favor of more oversight being placed on businesses/industries and what they can discharge into creeks, ponds, rivers and bays that are thorough out and surround Staten Island.

We believe that before any tainted water discharge is allowed into our creeks, ponds, rivers and bays, which for Staten Island are known food resources for its people population. Business and Industrial discharges must first undergo filtration and treatment on site and then be routed into our Sewer Treatment Plants for further treatment before being discharged into our waters. At no point and time should any business or industry be allowed to discharge directly into Staten Island's waters, especially the impaired ones.

There should also be a provision in the intro., that when a business or industry is caught and is known as a chronic offender in illegally committing pollution crimes, that their licenses for operating be revoked and that the owners or operators cannot start up similar businesses under a different name.

We noticed that there is no mention in how variances are being issued for development projects that are adjacent to impaired waters, for example with the Wheel and Retail Space in St. George, Staten Island, the developers received a variance to discharge directly into the Kill Van Kull a known impaired river. We believe that there should be policy or at the very least guidance that

would give clear language in whether variances should be issued and under what circumstances and how this can be done so that it does not further complicate the pollution problems of impaired waters.

Storm Water Management Program:

There is also no mention in the intro., of how existing wetlands should be viewed as a much desirable natural retention area for storm water, especially when those wetlands are near existing residential communities. We believe that there should also be a means in the intro., of getting private property owners that may own these wetlands not to develop them, but instead to work with the City in keeping them in their entirety and in their natural state so that they can continue to provide a vital public service in storm water runoff retention and flood protection to the existing communities. NYS DEC's regulations involving fresh water wetlands are 45 years old and do not take into consideration the present devastating impacts of Climate Change as it relates to existing urban communities today.

Whether the rest of New York City recognizes it or not - we live in a watershed.

http://watershedatlas.org/fs_indexwater.html

It is essential in protecting Staten Islanders living in low line, over developed areas on the North Shore, and by keeping their heads above water, that the City and NYC DEP is going to have to fill the gap left open by NYS DEC, and take a much more aggressive approach in dealing not only with our topography issues. But in dealing with Climate Change's heavier rain falls by featuring our existing wetlands as part of the islands' storm water retention program. It was done for Mid Island with the Bluebelt it needs to be expanded and done for the North Shore too.

Post Construction Storm Water Management:

In 2016, I was fortunate enough to go to a conference in Portland, Oregon and while I was there I visited a few communities to investigate their post-construction storm water work. Portland has a similar hilly topography as Staten Island. And apparently their residential and commercial areas had been plagued by Urban Flooding. Their solution was to take the initiative of not only using a storm water drainage system, but also to use bioswales and to place rain gardens in front and back yards of private residences at no expense to the property owners to help with downhill storm water management/retention. This program was considered essential by their Environmental Services City of Portland to move them forward to meet the EPA's Clean Water Act deadlines.

<http://portlandnursery.com/video/water-saving/video-raingarden.shtml>

In this regard, they are light years ahead of New York City in dealing with their post-construction storm water system. And in this intro., we should be matching Portland, Oregon's actions to provide a better storm water management service to Staten Islanders. Heavier rain down pours that are flooding streets and properties on Staten Island demand that the City and DEP not address this storm water problem with a one size fits all approach. The grading and the catch basins system that is on the North Shore is inadequate and is not meeting the needs of our communities.

This has been an ongoing complaint that we have made with DEP to which they have tried to pass the problem off to NYC DOT. We are having a very hard time understanding that if this somehow falls under both of their jurisdictions, why are they passing the buck back and forth to each other like 8-year old's? We would like to know how DEP as the lead agency is going to mitigate this problem? Because what we need are storm drains that can carry the water underground to containment areas for filtration then to the sewer treatment plant for further cleaning and release into surrounding waters.

The technology is available, why is DEP reluctant to use it? We have an urgent storm water infrastructure situation that needs to be fixed now.

Thank you for your time and consideration and we look forward to seeing mitigations that successfully move us into a sustainable position.

Sincerely,



Beryl A. Thurman, Executive Director/President
NSWC

www.nswcsi.org

www.sinorthshoreresiliency.org



RIVERKEEPER.

Testimony of Sean Dixon, Staff Attorney
Riverkeeper, Inc.

New York City Council, Environmental Protection Committee
December 13, 2016

Re: Int. No 1346 - In relation to water pollution control, including provisions relating to stormwater management and control of discharges into storm sewers.

Good afternoon. I would like to begin by thanking Council Members Constantinides and Richards, as well as the entire Environmental Protection Committee for giving Riverkeeper an opportunity to testify in support of Int. 1346, a bill granting the City authority to manage and control stormwater pollution.

Riverkeeper is a member-supported watchdog organization whose mission includes safeguarding the environmental, recreational and commercial integrity of the waters of the Hudson River, including the East River and the waterways of New York City. For 50 years, Riverkeeper has been working with the communities, advocates, citizen scientists, businesses, and industries along New York City's waterways on stormwater control and the elimination of water pollution.

Overall, Riverkeeper supports this bill and the DEP's efforts to build a new stormwater pollution management and enforcement program. The DEP's separate stormwater system team, for the past year and a half, has been working diligently to develop the City's first-ever MS4 stormwater management plan with robust community input and transparency. That said, this bill – designed with that plan in mind – can and should have a larger impact. As such, Riverkeeper respectfully requests that the Council widen the lens through which it views today's proposal.

First and foremost, then, Riverkeeper asks the Council to broaden the bill's reach. As stated in the draft bill, the Council today considers granting the DEP authority to regulate, study, investigate, and enforce – on public and private property – stormwater runoff, water pollution discharges, and any adverse impacts on water quality. Indeed the charter would be amended to challenge the City's agencies to, as a laudable and appropriate goal, "*control[] and eliminate[e] pollution of waters within and about the city of New York.*" In a proposed new section within the City's administrative code, 5-A, the Council clearly and unambiguously notes that "*A high percentage of impervious area correlates with a higher rate of stormwater runoff, which generates greater pollutant loadings to the city's separate stormwater and combined sewer systems.*"

From performance standards governing long-term stormwater management and nonpoint source pollution control to groundwater recharge, material handling and storage, and equipment maintenance, **this bill highlights a host of pathways for pollution that must be managed, controlled, and ultimately eliminated.** The City has a clean water interest in, as this bill notes, managing construction and post-construction activities, as well as ensuring compliance with performance standards at industrial and commercial sites.

Unfortunately, then, the bill (in Section 24-550 of Subchapter 2) then limits the DEP's authority to implement water pollution protection to only those parts of the City within the separate storm sewer system and the City's 2015 MS4 Permit.

Of particular note, this bill limits post-construction and maintenance programs to just MS4 areas. Indeed, the bill constrains the entire program – training, compliance, recordkeeping, the DEP's ability to enter and inspect properties, and enforcement – to MS4 area activities. Subchapter 3 similarly limits the DEP's ability to oversee industrial stormwater sources to only those in MS4 areas.

Riverkeeper asks that the City Council broaden the bill to include the combined storm sewer system. As drafted, this laudable bill only protects around 40% of City waterways (and thereby, only partly addresses public health, economic, and ecosystem function impacts caused by water pollution). All residents and all waterways deserve an agency with the authority to protect, enforce, and oversee clean water compliance.

Second, we ask that the Council provide the DEP with the means to enforce these water pollution prevention and control provisions.

For years – at city, state, and federal agencies – declining environmental budgets have led to shrinking staffs and diminishing capacities. Enforcement and oversight, in the case of pollution from sources such as industrial facilities or construction sites, can be staff-intensive activities and are often the first budgets to be cut. Riverkeeper asks, when it considers the City budget, that the Council give the DEP the tools it needs to fully build this program, walk the City's development projects through these new permit systems, and help immediately bring the City's industrial and commercial operators into compliance with the law.

The DEP does not just need adequate funds to work externally, it also needs the ability to drive internal New York City agency compliance. Fiscal support is key here, but so too is moral, legislative, and oversight support by the Council. Riverkeeper asks that this committee work with Council leadership to make sure the Departments of Design and Construction, Buildings, Transportation, and Parks, the Economic Development Corporation, the NYC Housing Authority, and other agencies do everything they can to assist the DEP, ensure that their actions and approvals do not work counter to the DEP's efforts to control stormwater pollution, and work toward cumulatively "smart" stormwater planning with the DEP and local communities.

Finally, Riverkeeper would like to echo the concerns submitted in writing and by testimony today of our partner organizations including the SWIM Coalition and NRDC. This bill should direct DEP to broaden its green infrastructure program beyond certain "priority" watersheds in order to bring greener streetscapes and cleaner waters to all corners and communities of the City. The bill should also provide for a new class of "qualified inspectors" beyond experts in erosion and sediment control who are skilled and certified in post-construction stormwater infrastructure upkeep and maintenance.

In closing, Riverkeeper would like to again acknowledge our appreciation for the DEP's work to-date developing this bill and educating the community. We thank Council Members Constantinides and Richards for their leadership, and for the invitation to testify today. If we can be of any assistance, Riverkeeper is at the disposal of the Council.

Thank you.

TESTIMONY OF
JOAN LEARY MATTHEWS
SENIOR ATTORNEY
NATURAL RESOURCES DEFENSE COUNCIL

BEFORE THE
NEW YORK CITY COUNCIL
COMMITTEE ON ENVIRONMENTAL PROTECTION

DECEMBER 13, 2016

Re: Stormwater Management / Int. No. 1346

Good morning Mr. Chairman and members of the Committee. I am Joan Leary Matthews, Senior Attorney in the Water Program at the Natural Resources Defense Council. I appreciate the opportunity to testify today.

In my current role, I lead NRDC's Urban Water Management Team, overseeing NRDC's work nationwide on issues including stormwater pollution, combined sewer overflows, and green infrastructure. Until this past spring, I served for several years as the director of the Clean Water Division for the U.S. Environmental Protection Agency's Region 2, where I directed the agency's Clean Water Act, Safe Drinking Water Act, and other programs for New York, New Jersey, eight Indian Nations, Puerto Rico, and the U.S. Virgin Islands.

My NRDC colleague Larry Levine, who is unable to attend today, serves on the Steering Committee of the Storm Water Infrastructure Matters (S.W.I.M.) Coalition. S.W.I.M. represents over 70 organizations dedicated to ensuring swimmable and fishable waters around New York City through natural, sustainable stormwater management practices in our neighborhoods. The Coalition's members are a diverse group of community-based, citywide, regional and national organizations, water recreation user groups, institutions of higher education, and businesses. While I do not testify today on behalf of the Coalition, the views expressed here are fully aligned with the Coalition's efforts.

The biggest ongoing sources of water pollution to New York City waters are stormwater runoff from the City's municipal separate storm sewer system ("MS4"), which serves about a third of the City's land area, and raw sewage discharges ("combined sewer overflows") from the combined sanitary/storm sewers that serve about half of the City's land area. CSO discharges, too, are triggered by excessive stormwater runoff entering the sewer system. MS4 and CSO pollution fouls our waters, often rendering them unsafe for recreation and degrading habitat for fish and wildlife. DEP studies indicate that we cannot clean up our waters without addressing both of these stormwater pollution problems.

NRDC strongly supports Int. No. 1346 and applauds DEP and the Mayor for introducing it. The bill provides for a much-needed -- and decades-overdue -- program to regulate polluted runoff -- a.k.a. "stormwater" -- from development projects and industrial sites in MS4 areas.¹

¹ Under federal regulations, large cities were required to have Clean Water Act permits to reduce pollution from their municipal storm sewer systems by the 1992. New York State never issued the required permit to the City until 23 years later, putting the City far behind the rest of the country in controlling stormwater pollution.

The bill's statement of policy correctly explains that:

A high percentage of impervious area correlates with a higher rate of stormwater runoff, which generates greater pollutant loadings to the city's separate stormwater and combined sewer systems. Pollutants found in urban runoff include, but are not limited to, nitrogen, phosphorus, silt and sediment, pathogens, floatables, petroleum hydrocarbons, heavy metals, and polycyclic aromatic hydrocarbons (PAHs).... Improperly designed and constructed stormwater management practices increase the velocity of stormwater runoff thereby increasing erosion and sedimentation...Stormwater runoff, soil erosion and nonpoint source pollution can be controlled and minimized through the regulation of stormwater runoff from land development activities. Regulation of land development activities by means of performance standards governing long-term stormwater management and site design produces development compatible with the natural functions of a particular site and thereby mitigates the adverse effects of [stormwater runoff on water quality].²

Improved stormwater management is also essential to mitigate neighborhood flooding. Reducing runoff from development projects will complement DEP's efforts to improve drainage with new or expanded storm sewers in various parts of the city.

As discussed below, we urge the Committee to further strengthen the bill in several respects. Our recommendations focus mainly on provisions to promote green infrastructure solutions in private development projects and municipal capital projects, *citywide*. Also, as discussed below, we request that the Committee hold a separate oversight hearing on the City's efforts to address CSOs – which are now at a critical juncture – and on the City's efforts to promote green infrastructure on already-developed public and private property.

First, we urge the Committee to strengthen Int. No. 1346 by directing DEP to develop new stormwater regulations for development projects not only within the separately sewered (“MS4”) portions of the city, but also in the half of the city served by combined sewers. Covering the MS4 area is necessary to comply with the City's new “MS4” permit under the Clean Water Act. But improving regulation in combined sewer areas is also necessary to ensure compliance with the City's Clean Water Act obligations to reduce overflows of raw sewage (“combined sewer overflows” or “CSOs”), which discharge from hundreds of locations in all five boroughs, scores of times each year, totaling over 20 billion gallons of overflow annually. Moreover, citywide regulations requiring “retention” of runoff from new development and redevelopment projects would drive the widespread use of green infrastructure solutions – like green roofs, rain gardens, roadside plantings, and parks – that not only stop stormwater pollution at the source, but also create new green spaces that improve our neighborhoods and public health.

In CSO areas, current DEP regulations require only “detention” of runoff – temporarily capturing runoff for slow release into the sewer system. This approach typically relies on below-ground holding tanks that do not providing any green space, and by DEP's admission, is less effective than “retention” using green infrastructure. Although DEP has promised to revisit its detention rule, to consider shifting to a

² Int. No. 1346, Section 8 (proposed section 24-540 of the Administrative Code).

retention approach, it has not done so.³ City Council should amend Int. No. 1346 to require DEP to do so, as part of a citywide stormwater rulemaking.

Second, the Committee should also strengthen Int. No. 1346 to support a key provision of the City’s MS4 permit, which requires the City to expand its green infrastructure efforts on municipal properties and rights-of-way into MS4 areas. Until now, the City’s green infrastructure investments, through DEP’s green infrastructure program, have focused on CSO areas. The MS4 permit now requires the City to do the following, in the MS4 area:

Consider and if feasible and cost-effective, incorporate runoff reduction techniques and green infrastructure during planned municipal upgrades, including municipal rights of way. Some examples include bioswales, green streets, replacement of closed drainage with grass swales, replacement of the existing islands in the parking lots with rain gardens, or curb cuts to route the flow through below-grade infiltration areas or other low cost improvements that provide runoff treatment or reduction.⁴

This clearly requires the participation of all City agencies that design and implement capital projects. But the permit itself provides no mechanism to ensure that these agencies develop protocols to ensure that green infrastructure is, in fact, incorporated where feasible into all City projects. While Int. No. 1346 authorizes DEP to “coordinate” City agencies’ compliance with the permit, DEP lacks the authority to develop protocols that other agencies should use to integrate green infrastructure into their own capital projects, nor does DEP have the capacity to ensure that other agencies develop and implement their own protocols. The Committee should amend Int. No. 1346 to direct all City agencies to develop, submit to City Council, and implement specific operational protocols that ensure they incorporate green infrastructure into their capital projects.

Third, we urge the Committee to amend the “effective date” provision to avoid unnecessary delay in the effectiveness of new construction, post-construction, and industrial stormwater rules. Section 22(2) of the bill provides that the construction, post-construction, and industrial stormwater requirements shall not take effect before “final approval” by NYSDEC of the “storm water management program (SWMP)” developed under the NYC MS4 permit. The Committee should amend this language to allow for the possibility that DEC will approve certain *portions* of the SWMP before others. The SWMP is a lengthy and complex document detailing the City’s plans to implement the entire permit, which include, but are not limited to, the topics covered by this legislation. Some provisions of the SWMP may prove more controversial than others, and DEC may choose to approve certain important, non-controversial portions of the SWMP individually, rather than waiting until all aspects of the SWMP are final. For example, DEP is launching a stakeholder process concerning development of post-construction stormwater regulations. We are hopeful that this process will lead to a consensus approach, supported by DEP, developers, environmental organizations, and others, which can be approved quickly by DEC. City Council should authorize DEP to have these rules – and others promulgated under Int. 1346 – take effect as soon as DEC approves the relevant portion of the SWMP. This will help avoid what could be several years of delay, as DEC reviews the entire SWMP.

³ Then-DEP Commissioner Strickland made this commitment in a letter to NRDC, in response to NRDC’s comments on the rule. <http://swimmablenyc.info/wp-content/uploads/2012/01/CHS-ltr-to-L.-Levine-re-Stormwater-Rule-12-21-2011.pdf>

⁴ NYC MS4 Permit, Part IV.G.2. <http://www.dec.ny.gov/chemical/102611.html>

Fourth, we recommend a revision to the bill to clarify that inspectors who certify proper operation and maintenance of post-construction stormwater practices must be qualified in post-construction stormwater management. Further explanation is provided in an appendix at the end of this testimony.

Finally, we urge the Committee to hold a separate oversight hearing on the City's overall efforts to address CSOs and to promote green infrastructure. DEP has made significant investments in CSO reduction since the 1990s, but we still have over 20 billion gallons of overflow per year, so much more remains to be done. City Council involvement is essential to ensure that DEP develops and implements effective long-term CSO cleanup plans, and to ensure DEP improves upon its green infrastructure program to protect our waters and improve our neighborhoods citywide.

- **CSO Consent Order:** The City's CSO program is developed and implemented primarily under the terms of Consent Orders negotiated in secret between DEP and the New York State Department of Environmental Conservation. These orders have been negotiated and renegotiated several times since the early 1990s. DEP and DEC are currently renegotiating a new order, which will determine how much – and where – the City reduces CSOs *for the next 25 years*. The CSO cleanup plans that DEP has proposed to the state are woefully inadequate, as they would leave hundreds of millions, and in some cases over a billion, gallons of overflows annually into individual water bodies, such as the Bronx River and Flushing Creek.⁵ And yet, as in the past, the new CSO order is being negotiated without input from local elected officials, or from their constituents whose waterways are fouled by raw sewage (*i.e.*, all New Yorkers), until after DEP and DEC have reached a deal.⁶ The City Council should assert itself before these decisions have been made.⁷
- **Green Infrastructure Program:** DEP's green infrastructure program has its origins in City Council legislation, which addressed both CSO areas and separately sewered areas.⁸ In practice, however, the program has been focused entirely on the CSO areas.⁹ Over the last several years, DEP has built, or has in design or construction, thousands of "bioswales" in certain CSO drainage areas. Yet, DEP reports that it is falling far short of its targets under the current CSO

⁵ A brief overview of S.W.I.M.'s critiques of these plans can be found here: <http://swimmablenyc.info/?p=2706>. A 2-page fact sheet on the process of developing cleanup plans can be found here: http://swimmablenyc.info/wp-content/uploads/2008/03/LTCP-general_1.3.16_updated.pdf. A full citizens' guide to CSOs and the planning process can be found here: <http://swimmablenyc.info/wp-content/uploads/2016/03/workbook-3.8.16-2-4.pdf>. Detailed comments on DEP's proposed CSO plans, submitted by S.W.I.M. and some of our member organizations, can be found here: http://swimmablenyc.info/?page_id=8.

⁶ DEC puts out a proposed consent order for public comment before it is signed. However, this public comment period happens only after years of secret negotiations, following the City's signature on the deal and the City Comptroller's approval. Given the enormous disincentive to reopening negotiations at that point, public comments virtually never – if ever – result in changes to a proposed order.

⁷ A June 2016 article in *City Limits* also provides helpful background on the current DEP-DEC negotiations. "City and State Remain at Impasse Over Clean Water Moves," <http://citylimits.org/2016/06/23/city-and-state-remain-at-impasse-over-clean-water-moves/>.

⁸ In 2008, the Mayor's Office of Sustainability developed a "Sustainable Stormwater Management Plan," focused on green infrastructure, pursuant to Local Law 5 of 2008.

⁹ DEP's 2010 "Green Infrastructure Plan" focused on CSO areas. Under the current CSO Consent Order, the City is required to meet green infrastructure targets derived from the Green Infrastructure Plan.

Consent Order, “greening” less than half of the area targeted for 2015.¹⁰ DEP’s official “contingency plan” to catch-up, and to meet its more ambitious future targets, is simply to continue with its current approach.¹¹ And DEP has called into question whether it should even continue to aim for those targets, suggesting that large portions of the City simply do not need any new green infrastructure.¹²

Further, DEP has not launched any significant green infrastructure efforts for the MS4 areas of the City.

There are many opportunities for DEP to improve upon its current green infrastructure program, and all of them have been implemented, in one form or another, in cities around the country. Some of these opportunities – like adopting new stormwater regulations *citywide*, as well as ensuring that green infrastructure is integrated into City projects wherever feasible and cost-effective – are related directly to the legislation before the Committee today, as discussed above. Others would be appropriate topics for a future hearing. For example:

- **Large-scale grant program for green infrastructure retrofits:** NRDC is working closely with DEP on a collaborative effort to develop an innovative, community supported grant program to fund and build green infrastructure retrofits on privately owned land, in both CSO and MS4 areas of the City. This program can be designed not only to improve water quality, but also to leverage DEP’s green infrastructure investments to make quality-of-life improvements in underserved neighborhoods, create green-collar jobs, and support the city’s climate resiliency. Active engagement by the City Council would help make this innovative program a success and ensure that it reaches communities most in need.

Together with DEP, we have conducted extensive outreach to community-based organizations, property owners and managers, engineering firms, ecosystem market investors, and the philanthropic sector. Each of these stakeholder groups has expressed support and excitement for the program. In September, DEP issued a Request for Information on how to structure the program¹³ and by the November received responses representing over 100 organizations. We anticipate that the new incentive program will launch in 2017—and anticipate that pilot projects conducted in partnership with community-based organizations could start earlier.

- **Stormwater fees:** The Committee should explore opportunities for DEP to more equitably generate a dedicated revenue stream for stormwater management, using a stormwater fee structure that would provide incentives to property owners to reduce their stormwater runoff. Currently, wastewater and storm water are charged as a single fee, which is calculated at 159% of the metered water charge. While this formula makes sense

¹⁰ See the S.W.I.M. Coalition’s summary of this report here, including a link to the report itself: <http://swimmablenyc.info/?p=2822>

¹¹ *Id.*

¹² *Id.*

¹³ DEP, Request for Information (RFI), Management of a Green Infrastructure Private Property Incentive Program, Sept. 19, 2016, <https://a856-cityrecord.nyc.gov/RequestDetail/20160912013>.

for wastewater, it does not accurately address stormwater runoff on a customer's property.

Properties with large impervious surfaces have a greater impact on the City's stormwater management expense than those with less impervious space, or those that manage runoff from their impervious space on-site. For instance, a large non-residential property may use very little potable water but have a large amount of impervious surface, and therefore contribute a significant amount of stormwater runoff.

Conversely, multifamily residential properties use more water than such a non-residential property, but contribute much less runoff to the city sewer system because of its smaller impervious footprint. This inequitable pricing scheme puts an unfair burden on many ratepayers – including affordable housing residents – and fails to create incentives for sustainable stormwater management.

By restructuring rates to create a separate stormwater fee – based on a property's impervious area, not potable water usage – the City can create a more equitable rate structure, incentivize green infrastructure on private property, and generate a dedicated revenue source for storm water management. Approximately 2,000 municipalities around the country, both large and small, now have a separate

stormwater fee.¹⁴ There are many models that the City could draw from in order to implement a rate restructuring effort; for example, Philadelphia made a revenue-neutral transition to a stormwater fee from a previous rate structure that was very similar to New York's current rate structure.¹⁵

In 2009, at the instruction of the Water Board, DEP conducted a study of rate restructuring, including the potential for a stormwater fee.¹⁶ DEP subsequently instituted a pilot stormwater fee for stand-alone parking lots, affecting a very small number of properties that previously paid no water and sewer bill. Since then, neither DEP nor the Water Board has proposed any further restructuring. NRDC and the SWIM Coalition have repeatedly called on DEP and the Water Board to undertake this restructuring.¹⁷

Thank you for the opportunity to testify today. NRDC looks forward to working with City Council, the Mayor's Office, DEP, and other City agencies on these issues in the months and years ahead.

¹⁴ <https://www.wku.edu/engineering/civil/fpm/swusurvey/>

¹⁵ A July 2016 *City Limits* article provides more context on the stormwater fee issue in New York City, including a comparison to Philadelphia. *City Limits*, "Stormwater is New Challenge to City's Clean Water Plans," July 12, 2016, <http://citylimits.org/2016/07/12/stormwater-is-new-challenge-to-citys-clean-water-plans/>.

¹⁶ http://www.nyc.gov/html/dep/html/press_releases/09-14pr.shtml. A longer version of the rate study is available here: http://www.nyc.gov/html/dep/pdf/water_board/dep_water_rate_study_03182010.pdf.

¹⁷ See NRDC's 2016 testimony to the Water Board (https://www.nrdc.org/sites/default/files/media-uploads/nrdc_water_rate_testimony_to_nyc_water_board_-_may_2016.pdf) and S.W.I.M.'s 2015 testimony (<http://swimmablenyc.info/wp-content/uploads/2015/05/Final-S.W.I.M.-Coalition2015-Letter-to-NYC-Water-Board-.pdf>).

APPENDIX – “Qualified Inspectors” for maintenance of post-construction controls

Long-term maintenance of post-construction stormwater controls is essential; if they are not maintained properly, then their benefits will be short-lived. We applaud DEP for proposing in the bill that, after completion of construction on a covered development project, the property owner must obtain a “maintenance permit” and must periodically renew that permit based on a certification of proper operation and maintenance of post-construction stormwater controls. The bill authorizes property owners to rely on “qualified inspectors” to make that certification. It defines a qualified inspector to be “a person who is knowledgeable in the principles and practices of erosion and sediment control, with the qualifications to be established by the rules of the department.” Such expertise is appropriate when inspecting stormwater controls at active construction sites, where erosion and sedimentation are the main issues of concern. However, for purposes of inspecting post-construction controls – which serve a different purpose and, from an engineering perspective, are quite different in nature – the bill should require that qualified inspectors have relevant knowledge and expertise in post-construction stormwater control.



Tuesday, December 13, 2016

To: NYC City Council Committee for Environmental Protection

RE: Public Testimony for Intro 1346-2016

Thank you for inviting S.W.I.M. Coalition to attend this hearing and testify on **Intro. 1346-2016**

Stormwater Infrastructure Matters Coalition represents over 70 organizations dedicated to ensuring swimmable and fishable waters around New York City through natural, sustainable stormwater management practices. Our members are a diverse group of community-based, citywide, regional and national organizations, water recreation user groups, institutions of higher education, and businesses.

We respectfully offer the following testimony:

- We support the proposed legislation which grants DEP the authority to develop new rules for reducing runoff from development/redevelopment projects in the MS4 areas of the city, however, are concerned that the City is being required to do the job without any additional resources.
- Regarding maintenance of stormwater management practices on private properties, we urge the City Council to ensure the legislation is robust enough to give DEP all the tools it needs to ensure adequate maintenance of these practices. We recognize the ability to take enforcement action in court against a negligent property owner is a useful tool. However, we also believe DEP should have the authority to enter onto a private property to perform maintenance if the owner is delinquent, and to collect expenses from the owner. Legislation should give DEP authority to take both types of actions.
- The bill requires the property owner to certify every five years, based on inspection by a "qualified inspector," that all post-construction stormwater management practices have been properly maintained. However, the definition of "qualified inspector" requires only expertise in erosion and sediment control, not in post-construction stormwater practices. We urge the City Council to more specifically require inspectors to have expertise in post-construction stormwater management practices. This is particularly important in New York City where many conventional erosion and sediment control measures may not be appropriate, thus, requiring expertise in other stormwater management practices, including various green infrastructure practices.
- Additionally, we request that City Council amend the bill so the post-construction section applies citywide. See section 24-550 of the bill: "This subchapter governs certain land development activities within the MS4 area." In contrast, note that a preceding section of the bill, which states the general "policy" underlying the bill, acknowledges that runoff from impervious areas "generates greater pollutant loadings to the city's separate stormwater and combined sewer systems."



We would like to take this opportunity to share some thoughts even though they are not directly related to the proposed legislation.

- We urge the City to expand the Green Infrastructure (GI) program, including the GI Grants Program, citywide so that GI becomes a tool to manage stormwater in MS4 areas. Expansion of GI is important not only for managing stormwater in MS4 areas but also in developing and implement Combined Sewer Overflow Long Term Control Plans for many of our waterbodies, whose watersheds often encompass both CSO and MS4 areas. A holistic, watershed-based approach to GI, rather than sewer-type based GI, is necessary for efficient uses of resources and for improving water quality.
- We also urge the 14 city agencies involved in the stormwater management program to fully cooperate with the DEP. Stormwater management, unlike wastewater or combined sewer management, requires actions by all city agencies that generate stormwater. Without the cooperation of the other involved agencies, the DEP will not be able to meet the requirements of the MS4 permit. We hope the City Council will indeed “monitor the operation and performance of city agencies” throughout this process so that the DEP, as the lead agency, can do its job properly and efficiently.
- Finally, as previously stated, we have concerns regarding the fiscal burden the MS4 permit and the expanded authority of the DEP places on the DEP and, thus, the water rate payers. We hope the DEP will re-evaluate the water rate structure to create a rate structure that is equitable in terms of affordability but also in terms of pollution generated (i.e., stormwater fee).

We thank the City Council Committee for Environmental Protection for empowering NYC DEP with the authority to implement and enforce the terms of the Permit and to specifically oversee and/or enforce requirements regarding activities that have the potential to contribute pollutants to stormwater runoff and the water bodies surrounding New York City.

Sincerely,

Julie A. Welch
Program Manager

On Behalf of the Stormwater Infrastructure Matters (S.W.I.M.) Coalition Steering Committee

Sean Dixon, Riverkeeper
Andrea Leshak, NY/NJ Baykeeper
Larry Levine, Natural Resources Defense Council
Michelle Luebke, Bronx River Alliance
Paul Mankiewicz, The Gaia Institute
Tatiana Morin, New York City Soil & Water Institute
Jaime Stein, Pratt Institute
Shino Tanikawa, New York City Soil & Water Conservation District



Testimony of

R. Lawrence Swanson
Director
Waste Reduction and Management
Institute
Interim Dean
School of Marine and Atmospheric
Sciences

Concerning

Storm Water Management in New York
City

Before

The Council of the City of New York

December 13, 2016

Dana Swanson

I am Dr. Larry Swanson, Director of the Waste Reduction and Management Institute and Interim Dean of the School of Marine and Atmospheric Sciences. It is an honor to be able to speak to you today. I am pleased that New York City is seeking to remediate the consequences of storm water discharge.

Introduction

Storm water runoff, combined sewer overflows (CSOs), and sewage effluent are perhaps the greatest contributors to marine pollution in the New York metropolitan region. Storm water from the region was a factor contributing to the major wash-ups of marine debris on New Jersey and New York beaches in 1987 and 1988, respectively, when it was estimated that tourist-related total expenditure losses amounted to around \$1.3 – \$5.4 billion (Swanson and Zimmer, 1990; Swanson et al., 2016). In July 1988, some 6.7 inches of rain fell (normal was about 3.1 inches at that time) totally overwhelming the stormwater and CSO systems of the City (Swanson and Zimmer, 1990). Attendance at Jones Beach State Park dropped by 1.3 million visitors in July/August 1988 relative to 1987 and it took five years for the attendance at the park to recover.

More recently, it has been shown in Florida and Cape Cod that home values along the coasts decline when water quality declines. In Florida, the measures of water quality were chlorophyll *a*, dissolved oxygen, and turbidity (Florida Realtors, 2015). Eutrophication driven by excessive nitrogen loading was the measure used on the Cape (Cape Cod Commission, 2015). Storm water typically contains many pollutants (causing deleterious effects) such as petroleum hydrocarbons, fertilizers, pesticides, herbicides, toxic metals, nutrients, pathogens, sediments, brine and salts.

With regard to the latter, I applaud the City Council for passing legislation barring hydrofracking waste brine as a road deicer. This nicely complements the U.S. Environmental Protection Agency's prohibition of such waste being discharged into Water Pollution Control Plants (WPCPs). I want to note that Suffolk County helped set the example for such prohibitions for the nation. Government has invested heavily in cleaning up New York Harbor, Long Island Sound, as well as other regional water bodies. To allow excessively polluting fracking waste to be disposed in either way could have led to many adverse effects as it circulated through our waterways.

Remediation Measures

Freshwater input to our rivers, bays, and estuaries is important as it drives the natural cycle of physical processes in these waterbodies. However, WPCPs, CSOs, and storm water discharges have redistributed and concentrated natural flows so that in many areas of the region physical processes have been modified -- often in negative ways. For example, historically much fresh water from rainfall and streams was distributed broadly around the harbor but is now concentrated by seven WPCPs delivering about 850 million gallons per day to the East River. This has modified its salt balance and that of western Long Island Sound. So using distributed storm water systems can lessen the impact of discharging large volumes at point locations -- this has benefits physically and ecologically. Broad distribution will become increasingly important as rainfall (as projected by the National Center for Atmospheric Research) becomes more intense and of greater volume due to climate change—particularly here in the Northeast (Prein et al., 2016).

Thus, it is crucial to intercept stormwater runoff prior to it reaching our prime waterways, not only to reduce flow but to limit pollution that will be picked up along its path. Limiting impermeable surfaces is extremely important in this regard as is retention of storm water by each property owner. According to the New York City Department of Environmental Protection (NYCDEP, n.d.), some 72 percent of the City is already blanketed with impermeable surfaces.

It is important to keep these impermeable surfaces clean to lessen the tonnage and toxicity of materials that can be picked up and transported to our coastal waters. By impeding the velocity of the stormwater stream, erosion of soils and transport of debris will be reduced.

The City should extend its already bold program of constructing green roofs, rain gardens, swales, constructed wetlands, and provide incentives to developers to do the same. These interventions already seem to be having a positive impact around Jamaica Bay. They are effective sinks for most pollutants. However, provisions for maintenance are imperative.

A conundrum concerns that of using natural wetlands to intercept storm water. Wetlands do treat and recharge storm water, but excessive volumes can modify and even destroy them. The unprecedented loss of wetland islands in Jamaica Bay is extremely complex. Disturbance at outfalls often leads to growth and development of the invasive common reed, *Phragmites*. Consider the fringes of Jamaica Bay. There is some evidence that the release of hydrogen sulfide from marsh sediments contributes to marsh die-off—perhaps associated with nitrogen discharged from WPCPs, CSOs, and storm water (Kolker, 2005). Sedimentary lenses, even deltas from sand and debris, can develop, burying wetland substrate. So use natural wetlands

guardedly for stormwater management. New York City and Long Island have already lost far too much of this essential resource.

Technologies of last resort include such devices as swirl concentrators and storage tunnels—both of which the City has used successfully. With regard to the former, as storm water enters the main waterway, a swirl concentrator can separate debris and sediments from the water to be discharged. Some contaminants will attach to these materials and be removed as well. An issue with this type of technology is that maintenance is a must. Storage tunnels such as the CSO retention facility in Flushing Bay could also alleviate some of the stress of excessive storm water. These too could be expensive and access to property limiting. But to have the opportunity to be able to treat this water post-storm event is a benefit.

Finally, public education is an imperative. We constantly need to be reminded to be good environmental citizens and be creative in how to get our message out. Figure 1 is a poster we produced a few years ago with support from New York Sea Grant, the U.S. EPA, Clean Streets/Clean Beaches, and the Jersey City Clean Communities. See Figure 2, the title slide for a video made for grade school children around the same time entitled *The Great Garbage Chase*. This too was sponsored by New York and New Jersey Sea Grant.

Summary

Storm water is a major contributor to the degradation of our local waterways. The most effective means of reducing the threats are to:

clean streets,

capture for retention and reuse beginning on the property of origin,
limit impermeable surfaces,
impede and retard flows,
recharge using green roofs, rain gardens, swales, constructed wetlands,
treat using hardware to remove sediment and debris as a last resort,
distribute broadly to avoid large point sources, and
educate the public.

In the end we want to reduce the pollutant impact of storm water on our waterways and to avoid altering the physics of estuarine circulation.

I certainly support the proposed amendments to Section 1, Paragraphs 2 and 3, Section 1403, Local Law 24 of 1977. My concern is that there are no provisions for resources identified in the amendments to implement many of the important actions necessary to have an effective law.

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Dana Swanson

Figure 1. Poster for subways and bulletin boards.

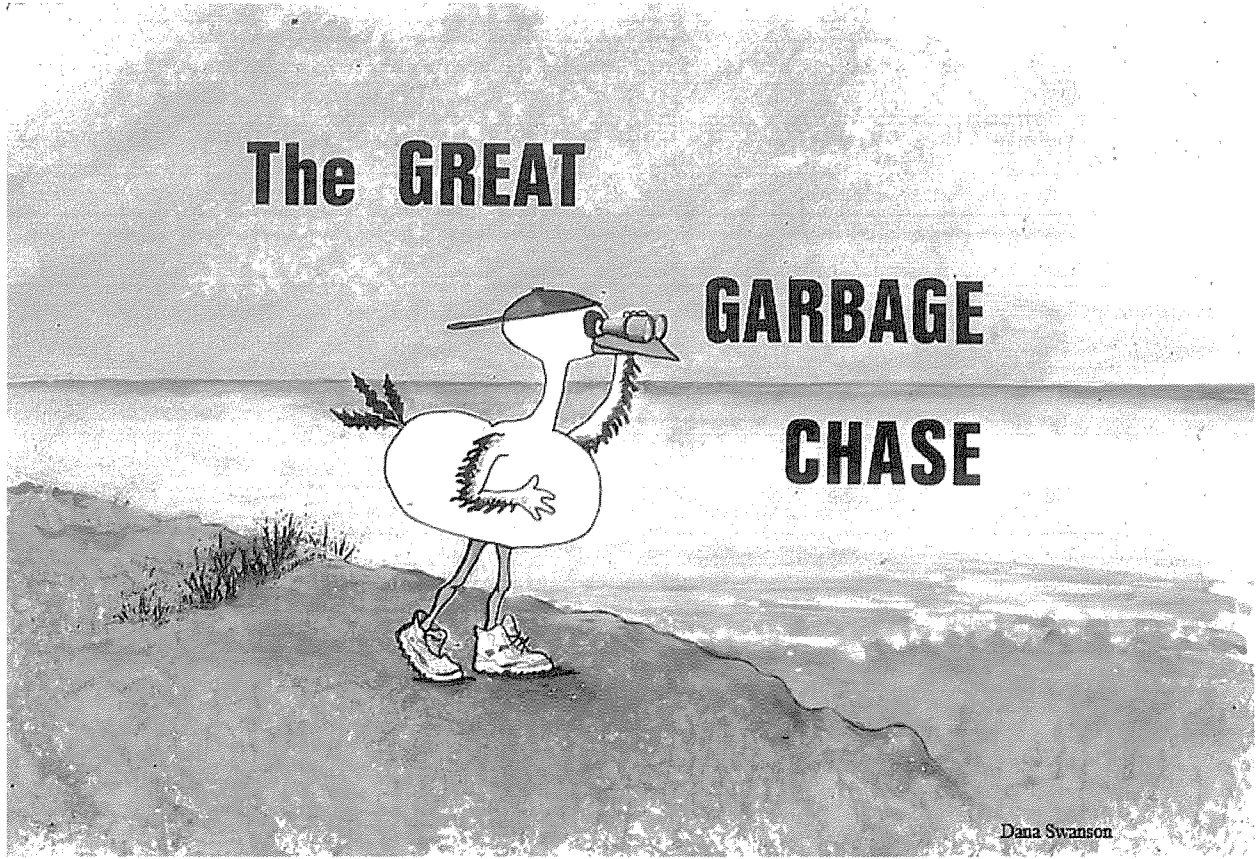


Figure 2. Cover slide for video entitled The Great Garbage Chase.



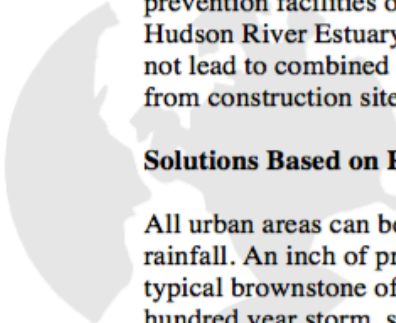
The Gaia Institute

December 13, 2016

Honorable Costa G. Constantinides, Chair
Committee on Environmental Protection
City Hall
New York, NY 10007

Dear Chair Constantinides and Members of the Committee on Finance
& Members of the Committee on Environmental Protection

Problem & Context: Maintaining Water Quality Outside the Combined Sewer District



More than ten percent of the 300 square miles of NYC is outside the combined sewer system. Runoff from these buildings and landscapes is not directed into one of the 14 water pollution prevention facilities of the City, but flows directly into the receiving waters of the greater Hudson River Estuary, Long Island Sound, & Jamaica Bay. This is valuable because this does not lead to combined sewer discharge, but can put these water bodies at risk with direct inputs from construction sites, buildings, parking lots, roadways, and commercial & industrial zones.

Solutions Based on Runoff Capture: Urban Landscapes, Street-sides, & Construction Sites

All urban areas can be characterized by the runoff they can generate from a given amount of rainfall. An inch of precipitation on an acre generates about 27,000 gallons of runoff, while a typical brownstone of 25' X 60' produces a little less than 1,000 gallons per inch of rain. A hundred year storm, say about 8" of rain, moves some 200,000 gallons from an acre or 7,500 gallons off a Brownstone.

To put these volumes in green infrastructure context, the runoff from an inch over an acre could be captured in an enhanced tree pit 5' wide and 200 feet long, while a 20' long tree-pit could capture a full 4" off the Brownstone.

This implies that any time construction is permitted, if green infrastructure components are designed at proper scale *before* the process begins, and scale to capture a large storm.

Where runoff from urban landscapes and construction zones are matched with large volume runoff capture features, ON THE CONSTRUCTION SITE, these can be transformed into the rain-garden like features shown here.

A zero discharge goal ensures environmental quality through the construction process, and as green infrastructure develops, the air purification contributes to health of New Yorkers, cooling the City, and dropping the burden of air conditioning in the process.

The work of the Gaia Institute couples ecological engineering and restoration with the integration of human communities in natural systems. While much environmental engineering has the worthy aim of minimizing harm, the Gaia Institute explores, through research and development, design and construction, how human activities and waste products can be treated to increase ecological productivity, biodiversity, environmental quality, and economic well being.



By situating large-scale storm water capture facilities at sites of future green infrastructure, the large supply of waste-stream components, 19,500 tons/day of waste concrete, glass, & brick, much of it far below background, in terms of contaminants, could be used to construct aquifers beneath street-side swales, rain gardens, and other green infrastructure. Literally on top of this, the Mayor's Office of remediation could potentially supply more than 100 tons of pristine soil from glacial deposits, providing clean City soils in the process. Only adequate maintenance insures function and long-term contribution to water and environmental quality, however.

If building permits with high zero-discharge volumes, i.e, capacity to capture 50-100 years storm,- are fast tracked, this would strongly incentivize developers and contractors to build future water and environmental quality into their projects in the MS4 zones of the City.

Paul S. Mankiewicz, Ph.D.
Director



December 13, 2016

44 W 28 St, 12th Floor
New York, NY 10001
T: (212) 481-9740
F: (212) 481-7185
plumbingfoundation.org

Costa G. Constantinides
Chair of the Committee on Environmental Protection
New York City Council
250 Broadway, Suite 1808
New York, NY 10007

**RE: LETTER OF SUPPORT FOR
INTRO. 1346 OF 2016**

CHAIRMAN

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DEPUTY DIRECTOR

Terence O'Brien

Dear Chairman Constantinides:

The Plumbing Foundation is a nonprofit association of licensed contracting firms, engineering associations, manufacturers, and suppliers whose mission is to ensure the public health through the enactment and enforcement of safe plumbing codes. The Foundation seeks to ensure water efficiency, and a greener more environmental New York City through progressive collective thinking in the plumbing industry. In connection with that mission we regularly meet with, and testify before, legislative and regulatory bodies that pass laws and promulgate regulations which affect the plumbing industry. As such, the Foundation supports Intro. 1346. Intro. 1346 would amend both the NYC Plumbing and Administrative Codes in relation to water pollution relating to stormwater management and water discharges into the municipal's separated storm sewers, commonly known as MS4. The reduction of pollutants into rivers and oceans by MS4 permits is paramount to the environment.

As we understand the bill, Intro. 1346 accepts the legal power, granted by the State, for NYC's Department of Environmental Protection (DEP) to officially accept the permitting and enforcement of the MS4 process from NYS's Department of Environmental Conservation (DEC) to NYC's DEP. This administrative change is rational since DEP has been actively performing the work and is more familiar with the City's sewer systems than a State agency.

However, the bill has a couple of issues which must be addressed in order for Foundation to fully support the bill:

- 1) As we understand the MS4 process, currently DEC permitting is required on land parcels of 1 acre or larger. As written this bill appears to require MS4 permitting in any and every instance where earth is altered in applicable areas with separate sewers no matter the size of the property. We agree that more MS4 permitting is required but within reason.

We are aware that cities such as Philadelphia require MS4 permitting on projects over 25,000 square feet (sqf). Without some limitations, all construction projects (new buildings/ expansions to existing buildings, parking strips, sidewalks etc.), will be subject to MS4 permitting and the construction process will be unnecessarily lengthened with additional costs. Also, there will be an unnecessary bureaucratic burden for DEP on small projects. MS4 permits should not be required for small projects outside the status quo compared to other large US cities. The bill must list a reasonable square footage for an effected area as to when MS4 permitting shall be required. The Foundation suggests 25,000 sqf.

- 2) Intro. 1346 defines the term "Qualified person" to be "...a person who is knowledgeable in the principles and practices of stormwater management and treatment, with the qualifications to be established by the rules of the department." The Foundation considers this can only be a licensed master plumber (LMP) and the bill should be amended to be specific and not allow this to be determined by rule. Moreover, the maintenance required post-construction appears to be work that only a licensed plumber should be doing. Lastly, since this bill does seek to amend the Plumbing Code, where only a plumber can perform such plumbing work, logically the only qualified person should be a LMP for the purpose of this bill.

Sincerely,



Terence O'Brien
Deputy Director

TO/cvm

cc: Bill Murray, Committee on Environmental Protection
Samara Swanston, Counsel for Committee on Environmental Protection

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: _____

Name: Paul Markowicz (PLEASE PRINT)

Address: 99 Bay

I represent: Samuel

Address: 99 Bay Bx 10464

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: _____

Name: Pamela Pettyjohn (PLEASE PRINT)

Address: 3207 Mesmaid Ave

I represent: Coney Island Beautification Project

Address: Inc.

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1376 Res. No. _____

in favor in opposition

Date: 12/13/16

Name: Police Farber (PLEASE PRINT)

Address: _____

I represent: General Contractors Association

Address: 60 E 42nd St

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: _____

(PLEASE PRINT)

Name: JOSI SOIGAR

Address: 217 Water Street, NY 16

I represent: Waterfront Alliance

Address: 317 Water St NY 14

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1346 Res. No. _____

in favor in opposition

Date: December 13, 2016

(PLEASE PRINT)

Name: Beryl Thurman

Address: 121 Hebron Ave SE NY 10302

I represent: North Shore Waterfront Conservancy of SE

Address: PO Box 140502, SE NY 10314

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 12/13/16

(PLEASE PRINT)

Name: Larry Swanson

Address: School of Marine & Atmospheric Sciences

I represent: Stony Brook, NY

Address: Stony Brook 11794-5000

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**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1346 Res. No. _____

in favor in opposition

Date: 12-13-2016

(PLEASE PRINT)

Name: Julie A. Welch

Address: _____

I represent: S.W.I.M Coalition - Stormwater Infrastructure Matters

Address: 121 Ave of the Americas, Suite 501

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1346 Res. No. _____

in favor in opposition

Date: _____

(PLEASE PRINT)

Name: Sean Dixon

Address: _____

I represent: River Keeper

Address: _____

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1346 Res. No. _____

in favor in opposition

Date: _____

(PLEASE PRINT)

Name: Jean Matthews

Address: _____

I represent: NRDC

Address: _____

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**THE COUNCIL
THE CITY OF NEW YORK**

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in favor in opposition

Date: 12/13/16

(PLEASE PRINT)

Name: Jennifer Nersesian

Address: 210 New York Ave Staten Island NY

I represent: National Park Service

Address:

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. 1346 Res. No. _____

in favor in opposition

Date: 12.13.16

(PLEASE PRINT)

Name: WILL ELKINS

Address: 62 GREENPOINT AVE BK, NY 11222

I represent: NEWTOWN CREEK ALLIANCE

Address:

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 12/13/16

(PLEASE PRINT)

Name: Vincent Sorprenza

Address: Acting Commissioner DEP

I represent: _____

Address: _____

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**THE COUNCIL
THE CITY OF NEW YORK**

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I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 12/13/16

(PLEASE PRINT)

Name: Angela Licata

Address: Dep. Comm. for Sustainability
DEP

I represent:

Address: (Not testifying)

Please complete this card and return to the Sergeant-at-Arms

**THE COUNCIL
THE CITY OF NEW YORK**

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

in favor in opposition

Date: 12/13/16

(PLEASE PRINT)

Name: Eric Landau

Address: DEP Commissioner DEP

I represent:

Address: (Not testifying)

Please complete this card and return to the Sergeant-at-Arms