COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 1 2 CITY COUNCIL CITY OF NEW YORK 3 ----- Х 4 TRANSCRIPT OF THE MINUTES 5 Of the 6 COMMITTEE ON ENVIRONMENTAL 7 PROTECTION, RESILIENCY AND WATERFRONTS 8 -----Х 9 May 7, 2025 Start: 1:14 p.m. 10 Recess: 4:08 p.m. 11 Council Chambers - City Hall HELD AT: 12 B E F O R E: James F. Gennaro, 13 Chairperson 14 COUNCIL MEMBERS: 15 Alexa Avilès Justin L. Brannan 16 Robert F. Holden Kristy Marmorato 17 Sandy Nurse Lincoln Restler 18 Rafael Salamanca, Jr. 19 Susan Zhuang 20 21 22 23 24 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 2
2	A P P E A R A N C E S (CONTINUED)
3	Angela Licata
4	Deputy Commissioner, DEP
5	Beth DeFalco Deputy Commissioner, DEP
6	Melissa Enoch
7	Assistant Commissioner New York City Department of Environmental Protection
8	Matt Drury Chief of Citomida Levislatics Define
9	Chief of Citywide Legislative Affairs
10	Marit Larson Parks Asst. Commissioner of Natural Resources
11	Em Ruby
12	Riverkeeper
13	Paul Gallay Project Director, Resilient Coastal Communities
14	Project at the Center for Sustainable Urban Development, Columbia University
15	Alia Soomro – NY League of Conservation Voters
16	Michelle Luebke, SWIM Coalition
17	John Leyva
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1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS32SERGEANT AT ARMS: This is a microphone check for3the Committee on Environmental Protection and4Waterfronts recorded in the Chambers by Shaquilla5Walker(SP?) on May 7, 2025.

SERGEANT AT ARMS: Good afternoon and welcome to 6 7 today's New York City Council hearing Committee on Environmental Protection. If you would like to 8 9 testify today, please see one of the Sergeant at Arms in the back to fill out a testimony slip. No one may 10 11 approach the dais at any time during today's hearing. Please silence all electronic devices. Chair, you 12 13 may begin.

14 CHAIRPERSON GENNARO: Thank you. [GAVEL] Good 15 afternoon. I'm Council Member Jim Gennaro, father of the bride and Chair of the Committee on Environmental 16 Protection, Resiliency and Waterfronts. Today, we 17 18 will hold an oversight hearing on nature based 19 solutions for climate resiliency and disaster 20 preparedness. Additionally, we'll be hearing two 21 Intro.'s sponsored by me and two Resolutions 2.2 sponsored by my colleague Julie Menin. Julie can't 23 be here today but we look forward to hearing her Resolutions. 24

1 COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 4 2 Intro. 1253, which would require DEP to notify 3 Council Members whenever the city installs a new 4 bioswale, rain garden or other bioretention system in 5 the public right of way within their district. 6 That's that bill.

7 Intro. 1254, which would create a greened acre metric to measure stormwater captured by green 8 9 infrastructure installed by the city and set a greened acre goal for MS4 areas. Many in the 10 11 audience, of course DP knows but people who may be 12 watching, you know the city has two kinds of sewage 13 drainage areas. One is where the sanitary sewer is 14 and the storm sewers are combined. We call those 15 combined sewer whatever and the other area I guess 16 it's about one-third of the city or whatever but I'm 17 sure DEP will tell us. We call those areas that have 18 separate dedicated sanitary sewers that go through 19 the sewage treatment plant and the storm flow runs to 20 a local water body. We call those MS4 areas. I mean 21 it just doesn't run right out. You take out 2.2 floatables and stuff like that but uhm, so that is what MS4 means. 23

And then Reso 131 calling on the New York State legislature to pass and the governor to sign a bill 1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS52A6872A and S5921A. The New York State Deforestation-3Free Procurement area. You know hyphen between4Deforestation and free. Deforestation-free like5that's what we're going for.

Next Reso, Proposed Reso, Number 143A to
recognize the contributions of the Federal Endangered
Species Act to the natural environment of New York
City.

While there was no universally agreed upon 10 11 definition for nature based solutions, we're getting back to the oversight topic now. The term is often 12 13 understood to encompass a range of ecosystem related 14 strategies including ecosystem based adaptation, 15 ecosystem based management, green infrastructure, 16 blue/green infrastructure. I don't know what that is 17 but I'll find out. Natural infrastructure and 18 ecosystem based disaster risk reduction.

Research indicates that nature based solutions
can be just as if not more effective at addressing
environmental hazards then traditional grey
infrastructure. Nature based climate adaptations can
be more resilient, have lower maintenance needs, be
deployed with greater flexibility, and feature cobenefits like improving air and water quality,

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 6 2 increasing habitat for wildlife and providing social 3 and recreational benefits for people as well. By 4 contrast, grey infrastructure - hey, nothing wrong with grey infrastructure. Grey infrastructure 5 projects can often be very expensive to install and 6 7 maintain, can come with serious project permitting and funding delays and in some instances have severe 8 9 negative impacts on the environment for some times insufficient levels of additional protection. 10

11 In New York City, we've used this nature based -12 we, meaning you know DEP, us, whatever. We've used a 13 nature based program. We've used this nature based 14 paradigm to successfully address local flooding 15 conditions in Staten Island, Queens in the Bronx and 16 increased our resiliency to heat by expanding local 17 tree cover, which has been particularly important in 18 high heat vulnerability neighborhoods.

We've used green infrastructure assets like rain gardens and bioswales to manage nearly two billion gallons of stormwater annually, reducing combined sewer overflows, combined sewage overflow events by wait for it, nearly 800 million gallons a year and we've used green infrastructure assets to increase resiliency to storm surge through efforts like having

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 7
2	living breakwaters projects. To have the Living
3	Breakwaters Project and Coastal Wetlands Restoration
4	work, to name a few, but every year, climate change
5	exacerbates disordered weather patterns, reminding us
6	that there is much more work yet to be done. At this
7	hearing, I'm hoping to shine a spotlight on some of
8	the great nature based climate and resiliency work
9	that the city is already undertaking. We've been
10	doing this a long time, and so, I'm sure that DEP is
11	going to have a very good story to tell. This
12	hearing hoping to shine a spotlight on some of the
13	great nature based climate resiliency work that the
14	city is already undertaking so that we can see what
15	opportunities we have to expand this work in the
16	future. And you know this all ties into what we're
17	doing with our last bill with the comprehensive
18	stormwater management plan. It's all one big you
19	know, one big effort.
20	I'd like to thank the Committee Staff,
21	Legislative Counsels Natasha Bynum to my right and
22	Sierra Townsend, Policy Analyst Ricky Chawla and
23	Andrew Bourne, Financial Analyst Tanveer Singh as
24	well as my own Legislative Director Josh Gachette.
25	You know the staff is sitting to my left, for all

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 8 2 their hard work. And I want to recognize that we're 3 joined by Council Members Holden and Marmorato. Thev have joined us. It's always a pleasure to be with 4 them and now I'll turn it over to Committee Counsel 5 to give the affirmation to the witnesses. 6 7 COMMITTEE COUNSEL: Good morning. Please raise your right hand. Do you affirm to tell the truth, 8 9 the whole truth and nothing but the truth before this Committee and to respond honestly to Council Member 10 11 questions? 12 Thank you, you may begin when you're ready. 13 CHAIRPERSON GENNARO: I just want to say that 14 notwithstanding that fact that the Committee Counsel 15 said it was good morning instead of afternoon. The 16 affirmation still takes, okay. It's not like a time 17 thing. There's no loopholes here, so. 18 ANGELA LICATA: I do it all day. 19 CHAIRPERSON GENNARO: Yeah, so like you know, 20 you're affirmed like that's it. Let me just get your 21 testimony and let me get my pen so I can make some 2.2 notes and uhm, yeah please state your name for the 23 record and proceed with your good testimony. ANGELA LICATA: Good afternoon Chair Gennaro and 24 members of the Committee on Environmental Protection, 25

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 9 2 Resiliency and Waterfronts. I am Angela Licata, 3 Deputy Commissioner of Sustainability at the Department of Environmental Protection and I am 4 5 joined today by Deputy Commissioner of Public Affairs and Communication Beth DeFalco and several other 6 7 colleagues from DEP and the Department of Parks and Recreation to talk about nature based solutions for 8 9 climate resilience and disaster preparedness. DEP has a longstanding history of using nature 10 11 based solutions to improve harbor water quality. Newer systems focus on managing stormwater in areas 12 13 that are prone to flooding. Nature based solutions 14 can be advantageous when they are brought online more 15 quickly and with less construction disruption than 16 long-term sewer construction. They also have 17 meaningful local improvements. 18 Before we talk more about these tools, we should 19 talk about our changing climate. 20 Climate change is bringing more severe and 21 frequent rainstorms to New York City. In 2020, the National Oceanic and Atmosphere Administration 2.2 23 reclassified New York City from a coastal temperate zone to a humid subtropical climate zone. 24 Α recognition that we now live in a different world 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 10
2	than we were in a few decades ago. The more severe
3	rainstorms have brought new challenges to our
4	stormwater management system. Traditionally, sewers,
5	often referred to as gray infrastructure, are the
6	main line of defense in a storm. New York City has
7	approximately 7,500 miles of sewers, which were
8	designed to effectively manage stormwater for a
9	temperate climate. Our sewers continue to protect
10	fully against 98 percent of rain events, but the
11	system is not designed to handle the most extreme
12	storms we now face. The sewer system can get
13	overwhelmed when the amount of water produced by the
14	storm is greater than the capacity of the pipes.
15	This generally means that for most sewers can handle
16	between 1.2 and 1.75 inches of rain per hour. This
17	used to be rare for most of the city but is now a
18	regular occurrence.
19	We have to expand our stormwater management
20	system if we want to meet the needs of today, let
21	alone tomorrow. Upsizing sewers alone is not
22	financially and logistically feasible.
23	Building above ground is almost always cheaper
24	and faster than building below. Our best strategy is
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1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 11
2	to use a combination of both gray and green
3	infrastructure in the right place and measure.
4	Green infrastructure absorbs water into the
5	ground in areas with good soil. It can also green
6	neighborhoods, improve air quality, create cooling,
7	improve aesthetics and provide habitat for
8	pollinators.
9	A few years ago, we started to identify
10	opportunities where we could site and design green
11	infrastructure to go above and beyond the CSO
12	Reduction, that's Combined Sewer Overflow Reduction,
13	which is what the program principally was charged
14	with doing in its origin. You'll find these
15	strategies in large, underutilized medians and you
16	will also see the cloudburst management program that
17	we'll discuss below coming soon. With over 16,000
18	green infrastructure assets constructed -
19	CHAIRPERSON GENNARO: I kind of lost my place. I
20	think I have a different version of the -
21	ANGELA LICATA: I'm starting with the paragraph
22	with over 16,000 green infrastructure assets.
23	CHAIRPERSON GENNARO: Okay, hang on, hang on.
24	Got it, got it, thank you.
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1	COMMITTEE ON ENVIRONMENTAL PROTECTION,
2	RESILIENCY AND WATERFRONTS 12 ANGELA LICATA: And over \$1.4 billion committed,
3	the New York City Green Infrastructure program is now
4	the largest of its kind in the nation and continues
5	to grow. In 2024 alone, we added 2,500 green
6	infrastructure assets in our city through a
7	combination of rain gardens and infiltration basins
8	in our sidewalks, as well as new green infrastructure
9	on public and private lots.
10	In keeping with the topic of the hearing today, I
11	would like to tell you a little bit about how DEP
12	uses nature based solutions and tools and discuss the
13	implementation challenges.
14	DEP's Bluebelt program dates back to the early
15	1990's. Bluebelts are ecologically rich stormwater
16	management practices that work in tandem with our
17	sewer infrastructure. They incorporate natural or
18	engineered water features, such as streams, ponds and
19	wetlands to convey, store, filter and slow the flow
20	of stormwater to manage and alleviate and prevent
21	flooding.
22	As an added benefit, Bluebelts include open
23	spaces with native vegetation that reduce runoff and
24	pollution and provide wildlife habitat. Bluebelts
25	are connected to storm sewer pipes, so they are part
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1 COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 13 2 of the sewer system network. They work with nature 3 preserving and restoring natural drainage corridors, 4 like the streams, the ponds and the wetlands, using 5 these natural systems to store and filter the 6 stormwater.

7 In addition to these stormwater benefits, Bluebelt networks help improve the city's ecological 8 9 health and in some cases provide community amenities. As Bluebelts use wetlands and ponds to manage 10 11 stormwater, they are primarily sited at locations 12 with existing water bodies and separate storm sewer 13 networks. Most of them are in Staten Island because Staten Island has the most intact water courses and 14 15 water bodies than the other boroughs. Over the last ten years, DEP has built Bluebelts for approximately 16 17 one third of Staten Island's land area. In Staten 18 Island, we are continuing to build out Bluebelts in 19 New Creek, Lemon Creek, Arden Heights, and Butler 20 Manor watersheds. The US Army Corp of Engineers is 21 commencing construction of Bluebelts in South Beach 2.2 Watershed of Staten Island as part of an interior 23 drainage of the South Shore of Staten Island Seawall. DEP has completed 96 Bluebelt assets across three 24 25 boroughs. In addition to Staten Island, DEP has

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 14
2	created some Bluebelts in Queens and the Bronx and is
3	looking to expand the program into other boroughs.
4	DEP looks for opportunities to implement
5	Bluebelts and watersheds near to flood vulnerable
6	areas. Many times, these flood vulnerable areas are
7	nearby or within existing historic waterways. They
8	are often located on New York City Parks property, so
9	DEP is partnering with the Parks Department to
10	identify opportunities where park land could provide
11	the space necessary to detain stormwater. Where
12	there is no obvious parks partnership, DEP looks for
13	other city owned or vacant land opportunities.
14	In addition to the stormwater and flooding
15	benefit, the Bluebelt program is also a community
16	amenity. The majority of Bluebelt sites are open to
17	the public and offer open space experience. The
18	public can access the sites via gravel walking paths
19	that afford access to green space, rich with
20	wildlife, wild flowers and wetlands.
21	The program also leads multiple educational tours
22	each year and hosts an annual citizen science project
23	where local students learn hands on about fish
24	migration, water quality and scientific methods. A
25	popular adopted Bluebelt project gives the community
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COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 15 2 an opportunity to get involved by adopting sites and 3 keeping them free of litter and weeds. The Bluebelt 4 program also supports local community groups each year by sponsoring cleanup events on city properties. 5 Transitioning to rain garden, green medians and 6 7 porous pavement, we can recognize that green infrastructure comes in a variety of shapes and sizes 8 9 including curbside rain gardens, greened medians with underground stormwater retention, porous pavements 10 11 and infiltration basins.

Each of these installations or assets allows 12 13 water to flow in and then seep through layers of 14 engineered soil and stone into the ground underneath. 15 We have now installed more than 16,000 green 16 infrastructure assets in the public right of way 17 around the city, and the majority of these about 18 7,000 are rain gardens. We are building more than 19 just the rain gardens you see on the sidewalk and 20 porous pavements in the streets. We have also 21 retrofitted over 250 public parks, playgrounds and NYCHA properties with green infrastructure and we 2.2 23 have over 100 additional properties in planning and design. This includes projects funded through our 24 25 public private partnership with the trust for public

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS162land, which has delivered 54 greened community school3yards. Information about various types of green4infrastructure and a map of the right of way assets5around the city are included at the end of this6testimony.

As we have spoken before about maintaining green infrastructure, we know that it is critical and it can also be a challenge. We strive to keep our rain gardens healthy and performing by visiting them every four to six weeks.

Rain gardens are a design so that water flows 12 into them. If there is litter on the street, that 13 14 water can bring litter into the garden. As you might 15 imagine high pedestrian traffic areas tend to 16 accumulate litter in the rain gardens as well. We 17 use a data driven approach to maintenance crew 18 deployment and routing. Where our inspection data 19 show high need areas, we send crews more frequently 20 and where the data shows less need, we deploy crews 21 less frequently.

We also supplement liter control with a borough based contractor support contract. More time spent on litter control means less crew time available for other work like soil enhancement, tree pruning,

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 17
2	plantings and horticultural services that are
3	important for maintenance staff, recruitment job
4	satisfaction, training advancement and of course the
5	health of the rain garden. We cannot meet the city's
6	stormwater management needs with infrastructure alone
7	in public space. There must be stormwater management
8	systems on private property as well. So, DEP
9	provides financial incentives for installing green
10	infrastructure on private property. Through our
11	capitally funded GI grant program, we funded \$13
12	million across 32 different sites primarily building
13	green roofs.
14	To compliment this program and fund even more
15	green infrastructure on private lands in 2021, we

To date, we funded over \$9.5 million in private green infrastructure that manages 11 million gallons of stormwater a year on private properties. Private owners who have participated in our program include Greenwood Cemetery, H+H Health and Hospitals, Jacobi

launched resilient New York City Partners.

program offers an innovative pay for performance

contract to fund even larger projects on private

lands with large amounts of site level impervious

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area.

COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 18 Medical Center and Pratt Institute. DEP is currently working on a project at the Brooklyn Navy Yard and is coordinating with several new potential partners.

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5 The city alone cannot manage stormwater because 6 most property in the city is privately owned. It's 7 roughly about 50 to 60 percent. That makes the 8 unified stormwater rule one of our most powerful 9 tools for onsite stormwater management.

10 Starting in early 2022, it requires every site 11 that disturbs 20,000 square feet or more of soil or 12 adds 5,000 square feet or more of new impervious 13 surfaces to manage a certain amount of stormwater on 14 their site.

15 They must submit a stormwater pollution prevention plan or a SWPPP, which controls - which 16 17 requires controls to be in place during construction 18 to protect our sewers and waterbodies from soil 19 erosion. As the sites redevelop they're performing 20 better during wet weather than they were before 21 development. Since this rule was implemented, over 1,400 sites are meeting the new online stormwater 2.2 management requirements and an additional 200 sites 23 constructed or will soon be constructing green 24 infrastructure to further reduce their stormwater 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 19
2	runoff. Examples of these projects can be found all
3	over the city. One example includes 585 Union Street
4	in Gowanus. This nine story 230,000 square foot
5	building will occupy the entire lot. Before the
6	stormwater rule was in effect, a development like
7	this likely would have just managed stormwater in an
8	underground attention tank. With our rule, they are
9	building a 6,000 square foot green roof and a robust
10	detention system. We even noticed them touting their
11	green roof under building amenities on their website.
12	We also have our largest green infrastructure
13	project to date nearing design completion. The
14	Tibbetts Brook daylighting project in the Bronx. The
15	Tibbetts Brook originates in Yonkers and flows
16	through Van Cortlandt Park before discharging into
17	Hester and Piero's Mill Pond. In the early 1900s the
18	brook was diverted into an 8 foot diameter tunnel
19	that connects to a combined sewer flowing to Wards
20	Island Wastewater Resource Recovery Facility.
21	Burying streams and creeks and merging them with
22	sewers underground was a common strategy as our city
23	developed but a century later, we are experiencing
24	unforeseen consequences. Flowing a waterway into a
25	combined sewer reaches that sewer's capacity quickly.

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 20 2 The Tibbetts Brook connection has led to significant 3 issues over the years. Instead of building more 4 infrastructure like storage tanks to try to hold a brook, we are going to daylight the brook, 5 disconnecting it from the sewer system and allowing 6 7 it to flow more naturally.

Once completed, not only will this project reduce 8 9 combined sewer overflows to Harlem River by 220 million gallons a year, but it will allow for the 10 11 creation of a new public greenway between Van Cortlandt Park and West 230th Street enhancing 12 13 connectivity and access as part of the Empire State Trail. And it bears repeating and mentioning that 14 15 this a project and partnership with the Department of 16 Parks and Recreation.

17 A cloudburst is a sudden, heavy downpour in a short amount of time. Cloudbursts can overburden the 18 19 sewer system and cause flooding. Cloudburst 20 management systems capture stormwater until the sewers can handle the flow. Cloudburst management 21 projects often feature special community amenities 2.2 23 and open spaces that can be used by the public on dry days. For example, the cloudburst project designed 24 for NYCHA's South Jamaica Houses is a sunken 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 21
2	basketball court that will absorb and divert
3	stormwater during future storms. Most days, the
4	basketball court will provide recreation for
5	residents. During cloudburst events, the stormwater
6	will intentionally be diverted to the court, which
7	will hold the water safely until the rain even is
8	over, taking that rain water off the street and out
9	of the sewers. And we provided some picture of that
10	for you in the testimony.
11	Cloudburst hubs a large scale cloudburst
12	projects, generally designed for a multi-block area
13	where directing, collecting, storing, and
14	transferring stormwater can have a meaningful benefit
15	on localized flood attenuation and the added benefit
16	of CSO reduction. We use existing land and retrofit
17	public spaces to allow for more enhanced stormwater
18	management. These can be implemented more quickly
19	than larger nature based solutions that may rely on
20	identification of vacant lands or property
21	acquisition. These projects require close
22	coordination with our colleagues at Parks Department,
23	at Transportation, at Department of Education, School
24	Construction Authority and of course NYCHA.
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1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 22
2	Stormwater Master Plan in 2024 Stormwater
3	Analysis; DEP's green and gray infrastructure teams
4	are coordinating to develop a stormwater master plan
5	for the city that will lead to a more resilient
6	system overall. This comprehensive stormwater master
7	plan that will assess necessary upgrades, engineer
8	amended drainage plans and set funding priorities.
9	This planning process will take years but the results
10	will be targeted approaches to capital investments
11	including nature based solutions where it could help
12	manage surface flooding and longer term gray
13	infrastructure upgrades.
14	In 2024, DEP released the 2024 Stormwater
15	Analysis, which is the first building block for the
16	master plan. This stormwater management update
17	highlighted the city's challenges with managing
18	stormwater in a changing climate and examine
19	stormwater challenges and solutions in four case
20	study locations.
21	Of course stormwater management cannot be done by
22	DEP and a silo. Work will need to be coordinated
23	among the city agencies mentioned. Fundamental
24	policy decisions will need to be made, in particular
25	the acceptable levels of service and the level of

COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS

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2 acceptable flooding in our environment and DEP will 3 work to inform these decisions.

Most of DEP's work is paid for by water and sewer 4 rates. We constantly think about how to balance our 5 needs, the demands of New Yorkers for providing 6 7 better service and especially floodwater protection 8 and the needs to manage our rates to be affordable. 9 DEP aggressively pursues outside funding for our work and we have had strong successes receiving 10 11 funding, including federal funding. In particular, 12 our cloudburst projects have been receiving building resilient infrastructure and community BRIC grants 13 14 from FEMA. The federal government recently announced 15 that FEMA or the Federal Emergency Management Agency, 16 is ending the BRIC program and canceling all BRIC 17 applications from federal fiscal years 2020 through 2023. 18

We are still figuring out what impact this may have. We remain in close conversation with our city and state partners as it pertains to our federal funding streams and will work with these partners to try to mitigate and minimize impact as much as possible.

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1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 24
2	Before I conclude, I will speak briefly about the
3	two pieces of legislation being heard today. We have
4	been discussing the bills with your staff and look
5	forward to continued conversations. The first bill
6	on today's agenda is Intro. 1253, which would require
7	DEP to notify the local Council Member 30 days before
8	installing a bioretention system in a right of way.
9	We generally support this bill but want to make some
10	edits. The Department of Design and Construction
11	manages most of DEP's GI projects. DEP and DDC both
12	recognize the importance of speaking with the
13	community and elected officials and we have robust
14	outreach plans that are already in place.
15	We have spoken to DDC about this bill and they
16	are happy to supplement these outreach plans to fill
17	any gaps. We would like to continue discussions with
18	DDC and the Council to determine the best way to do
19	that and to make some changes to the bill before it
20	is passed.
21	The second bill is Intro. 1254, which would
22	require DEP to install 2,400 green acres in the MS4
23	or the Municipal Separated Storm Sewer areas by 2035.
24	As we discussed with your staff last week, we are

25 fully committed to expanding GI across the city but

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 25
2	we believe that the greened acre metric is not the
3	best indicator of progress. As a quick background,
4	for those listening, MS4- oh, I said that already.
5	In this system, separate pipes carry wastewater
6	and stormwater as opposed to the combined sewer area,
7	where the wastewater and stormwater are in one pipe.
8	So, as the Chair said earlier, 60 percent of the
9	city has combined sewers and about 40 percent are MS4
10	areas or direct drainage. Our first concern for
11	greened acres is that we no longer rely on that as an
12	indicator for our GI program with New York State DEC.
13	At one point in the program, when it began in 2012,
14	there was a greened acre target but we have since
15	realized that it is not a good metric because of the
16	concept of greened acres does not fully capture what
17	the green infrastructure does.
18	We continue to report greened acres however, in
19	our New York City Greened Infrastructure annual
20	report and we brought a few extra copies of the
21	greened infrastructure annual report, it was just
22	released on April 30^{th} . Another concern is that we
23	don't know if GI is the best tool to address
24	stormwater management and water quality needs in all
25	of the MS4 areas.
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1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 26
2	As I have described today, DEP has developed a
3	suite of tools because different tools are best
4	suited for different goals and for different areas of
5	the city. Mandating a fixed amount of greened acres
6	could be counterproductive because it could require
7	us to install GI where it is not going to be
8	effective.
9	Finally, the bill's mandate may not be
10	achievable. For the past 13 years, we have been
11	installing GI across combined sewer areas, with our
12	16,000 assets, we have just reached 2,800 greened
13	acres. The bill requires nearly the same amount of
14	greened acres to be installed in the MS4 areas over
15	the next ten years. There may simply not be enough
16	time or enough space in the MS4 areas to accomplish
17	that.
18	A minority of the city is MS4 as we stated and GI
19	is not appropriate for much of that area. For
20	example, we know that many areas with separated
21	sewers in the city like South East Queens have high
22	ground water tables, which makes them ineligible for
23	green infrastructure. We share the Council's goals
24	of expanding stormwater management infrastructure

through the MS4 areas and we appreciate the Council's

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 27 continued support of our efforts. 2 We have already 3 started installing GI in strategic MS4 areas such as 4 school yards and street medians with partners like DOT, DOE, and the Trust for Public Land. 5 As Council is aware, it is important to remember 6 7 that while green infrastructure provides many community benefits, the goal of the program is simply 8 9 to green the city. These are engineered systems that are built to enhance the way the city manages 10 11 stormwater by reducing CSOs, improving water quality, and reducing flooding where possible. 12 13 Thank you again to the Council, especially to the Committee and Chair Gennaro for your continued 14 15 support of nature-based solutions for stormwater 16 management and other challenges. My colleagues and I 17 are now happy to answer any questions that you may 18 have. 19 CHAIRPERSON GENNARO: Thank you Deputy 20 Commissioner Licata. We appreciate your 21 comprehensive testimony as always and all the good 2.2 work you've done that you know DEP has done green 23 infrastructure. And before I commence my questioning - uhm, I have to step out for a just a minute, so I 24 think I'm going to recognize Council Member Holden 25

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 28 2 for questions. I'll be very brief. What's the 3 matter? You okay? I'm just saying you know -4 COUNCIL MEMBER HOLDEN: Alright. 5 CHAIRPERSON GENNARO: Yeah so I -COUNCIL MEMBER HOLDEN: Thank you, alright. 6 7 CHAIRPERSON GENNARO: I recognize Council Member 8 Holden to start and then I'll do my thing. 9 COUNCIL MEMBER HOLDEN: Alright, thank you. Thank you Chair and thank you Deputy Commissioner. 10 11 Just a couple of questions and uh I don't think I 12 have to be brief now so I can go on. 13 The average cost of installing a bioswale or a rain garden, what is that? Because I asked another 14 15 question and I didn't get an answer at another 16 hearing. Do you have that? The average cost? 17 ANGELA LICATA: Yeah, it's somewhere between 18 \$15,000 and \$20,000. 19 COUNCIL MEMBER HOLDEN: Alright. 20 ANGELA LICATA: And one other important point is 21 that our green infrastructure program is generally our most cost effective CSO strategy at this point 2.2 23 and time. There were times in the past decades when we invested a lot in gray infrastructure, including 24 combined sewer overflow holding tanks but those costs 25

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS292have escalated and the economy of scale that we3achieved is no longer available, so the green4infrastructure that we're installing now is among the5most cost effective solution.

6 COUNCIL MEMBER HOLDEN: Do you know how many 7 bioswales were installed in Queens for instance? Or 8 you know a ballpark?

9 ANGELA LICATA: I don't have that breakdown. We 10 can certainly -

11 COUNCIL MEMBER HOLDEN: Because I'd like to - see we have to measure outcomes. So, for instance if you 12 13 know in my district we have a lot of storm runoffs, 14 some water runoff going into the New Town Creek, 15 which is further polluting the creek. You know that 16 it's a vicious cycle. As we get bigger storms, 17 there's more runoff, more sewer backups. We've 18 invested a lot into sewer systems that still can't 19 like you mentioned, in a cloudburst or the sewers weren't made to handle the amount of water. And then 20 21 I'm always battling residents in my district that pave over their yards and then have a constant 2.2 23 problem with the Department of Buildings going over and not finding anything wrong with that. And then I 24 have to send it back and I said, yes, there's a law. 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 30
2	Did you know this and no, sometimes buildings doesn't
3	trickle down. But here's the biggest problem, I
4	mentioned this to the Commissioner. I have a lot of
5	national grid work being done in my district. I have
6	a lot of Con Ed work. They're installing new
7	electric lines both above and below ground and in Con
8	Ed - I mean in National Grid; they're installing gas
9	lines. A lot of tearing up the roadbeds, a lot of
10	tearing up the sidewalks. Yet and I discovered on
11	all these projects, they're paving over the green
12	strip at the curb, which is so counterproductive.
13	We're putting in bioswales all over the place, yet
14	the bigger picture, we're not - we're paving over
15	green space and just based on no particular plan,
16	there's no particular coordination. I mentioned this
17	to the Commissioner a number of times, yet I just had
18	a project near my office, they're doing the same
19	exact thing. They're actually paved - we have more
20	concrete then before the project. Why is that?
21	ANGELA LICATA: Yeah, that's disturbing and my
22	understanding is that there's supposed to put back
23	what was originally there. So, I would love to -
24	COUNCIL MEMBER HOLDEN: But even if like it was
25	paved over before, why would you pave it over again?

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 31
2	ANGELA LICATA: They don't have the same mandate
3	that we have. We can encourage that -
4	COUNCIL MEMBER HOLDEN: Who's they?
5	ANGELA LICATA: National Grid. Wait, they're
6	doing it in the public realm. They're working on our
7	streets. They're working for the public. They're
8	working for the city, right?
9	ANGELA LICATA: Right.
10	COUNCIL MEMBER HOLDEN: What do you mean their
11	mandates?
12	ANGELA LICATA: Yeah, no and I could not agree
13	more and I think that what we could do is meet with
14	them and see if we could encourage them and DOT to
15	see what the cost differential might be.
16	COUNCIL MEMBER HOLDEN: Because you know I have
17	been bringing this up for several years. You know
18	that? And this Commissioner heard this from me a
19	number of times. You're probably hearing it for the
20	first time but nothing changes and because you know,
21	it's frustrating. When I'm trying to - I'm trying to
22	you know put my finger in you know the dike and you
23	know hold back something and then you know battling
24	the green spaces on peoples homes and getting them
25	fined because they don't know the law. But then you

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 2 have National Grid doing it on a massive scale, 3 entire blocks and I could show you and I sent 4 pictures to DEP.

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ANGELA LICATA: I would appreciate seeing those 5 6 pictures.

7 COUNCIL MEMBER HOLDEN: And I'll say look, you know here's a strip of four feet wide and the whole 8 9 block as far as you can see has been paved over because you know what, the homeowner says yeah, I 10 11 want that paved over. I don't want to have grass 12 there and I get it but that's not good for us and I 13 try to tell people, don't pave over your - and have 14 some green strips and then you get people putting 15 astroturf, which you know I don't want. I think 16 that's illegal too. You know I don't know how porous 17 it is but can we actually get a program -18 CHAIRPERSON GENNARO: Bob, I just want to tell 19 you this. I'm just going to give you more latitude. 20 You've got a good thing going here, so keep it up. 21 ANGELA LICATA: Yeah, I just want to respond by 2.2 saying that we would like to work with you to see how 23 we might be able to address this problem because I cannot agree more that it's a missed opportunity.

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1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 33
2	CHAIRPERSON GENNARO: Well, you know, should I
3	have you know Chair, should we come up with a local
4	law that would require - is that what is needed here?
5	If we have a local law that would require the City of
6	New York anytime there is construction that that has
7	to be a green strip at the curb. That's not the
8	homeowners property. They don't understand that
9	sometimes and I have a big argument with them. Like
10	they're trying to oppose a tree being planted or
11	they're trying to oppose - they wanted that area you
12	know concrete and I said, no, no, it's got to be
13	green. We need more green. We need more you know
14	where the runoff can go into the ground rather than
15	our sewers.
16	So, if that takes a local law, let me know and
17	I'll introduce it.
18	CHAIRPERSON GENNARO: And what I'll do, I'm just
19	- I've got my Legislative Director, Josh if you could
20	you know write that up and just have a few moments
21	with Council Member Holden at his convenience after
22	the hearing or when he leaves the hearing, make sure
23	we get that on paper.
24	COUNCIL MEMBER HOLDEN: Thank you Chair. Thank
25	you.

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 34
2	CHAIRPERSON GENNARO: Sure, my pleasure. This is
3	why we have hearings. This is why we do this. It's
4	not just me to wear my three piece suit and look
5	nice.
6	You should have seen me on Sunday, my tuxedo.
7	Forget about it. Yeah, forget about it. Angela's
8	seen some of the pictures already.
9	ANGELA LICATA: Council Member, I was just going
10	to add that we also do regular meetings with the
11	utilities, so I think that that's something that
12	we'll put at the top of our agenda for the next
13	meeting that we have with them and can report back to
14	you after that.
15	COUNCIL MEMBER HOLDEN: Thank you.
16	CHAIRPERSON GENNARO: Thank you and Council
17	Member Marmorato. If I'm going to do for Holden, I
18	have to do for Marmorato. It's only fair and plus I
19	really like the Bronx. And so, I recognize Council
20	Member Marmorato for questions.
21	COUNCIL MEMBER MARMORATO: Thank you Chair. So,
22	last year I did a walk through with DEP team and I
23	kind of felt like the only thing I walked away with
24	was to tell my constituents to constantly report
25	flooding through 311, and we have been just

1	COMMITTEE ON ENVIRONMENTAL PROTECTION,
	RESILIENCY AND WATERFRONTS 35
2	constantly devasted by flooding with every single
3	rainstorm to the point where people kind of feel like
4	this is the natural way of life and they have to like
5	combat it on their own and they don't think to put
6	the 311 calls because this is just normal to them.
7	Is there any way that we can do another walk
8	through in my district because now you're saying that
9	you're coming up with all these different kinds of
10	solutions to help combat the flooding? If we can
11	identify areas in different portions of the
12	neighborhood just to see what we can do or at least
13	get the conversation started to have the ball rolling
14	where eventually we can offset some of the flooding.
15	And especially with the City of Yes, I have focus
16	point is my biggest - one of my bigger flooding zones
17	and we have somebody coming in that's going to build
18	six three family houses right next to wetlands and
19	it's just like, this is already a street that floods
20	constantly when it rains.
21	So, I just want to know if we can at least start
22	a conversation. Just get an understanding and at
23	least inform me so I can inform my constituents and

see how we can like fix things or make things better.

1	COMMITTEE ON ENVIRONMENTAL PROTECTION,
2	RESILIENCY AND WATERFRONTS 36 Because I know you're not going to redo my sewers.
3	There's no money in the budget for all of this.
4	ANGELA LICATA: No, we can absolutely set that up
5	and one of the things as Deputy Commissioner
6	mentioned earlier about the unified stormwater rule.
7	The stormwater rule is as those new buildings come up
8	and come on line, they're going to start managing
9	stormwater that otherwise was not managed before in
10	the same way. So, hopefully that will be some of the
11	benefit. We can certainly take a look if there are
12	any green infrastructure opportunities or if there's
13	a more simple solution to what the flooding maybe.
14	Whether that's a street regrading or other issues.
15	Figure out first of all what's causing the flooding.
16	COUNCIL MEMBER MARMORATO: Okay, great thank you.
17	I'd like to get in contact with you guys sooner or
18	later because now is kind of more of the rainy season
19	I feel. Okay, thank you so much. Thank you Chair
20	and congratulations.
21	CHAIRPERSON GENNARO: Thank you Council Member,
22	appreciate that. As is my sort of pattern, I'll go
23	through your written testimony and then I have
24	prepared questions from staff and oh, I will mention
25	to Bob though, do you know the DEP Borough
1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 37
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2	Commissioner Mr. Lopez, Alfonzo Lopez? Do you know
3	who he is BOB?
4	COUNCIL MEMBER HOLDEN: Yes.
5	CHAIRPERSON GENNARO: Yeah, he's like a really
6	good guy and you go to him, he's my constituent. He
7	lives right near my DO and he used to work for the
8	Mayor's Office. He does a great job as the Borough
9	Commissioner and he sometimes is a great first stop.
10	Some times the last stop as well because he's a
11	closer and so, you should tell Alfonzo that I
12	mentioned him okay.
13	Oh and we're joined by Council Member Restler.
14	Very happy to have him here. If I had his hair I'd
15	be Governor but that's another story. Usually I make
16	a lot of notes here.
17	Yeah, on uh, now my page doesn't qualify - my
18	page - the page in my testimony doesn't connect with
19	your page because DEP was nice enough to give me like
20	a large print version of your testimony but this has
21	to do with the citywide Bluebelt locations and you
22	indicated in your statement where there's no obvious
23	parks you know partnership, DEP looks for other city
24	owned and vacant land opportunities and I was just
25	wondering how sort of structured that was. Is this

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2 like an ongoing initiative or is there some sort of 3 metric that they use or some sort of specified, you 4 know periodic outreach to do this. I just wondered 5 about like the mechanics of how those interactions 6 with you know other city owned or vacant land 7 opportunities, how does that work?

ANGELA LICATA: Council Member, are you talkingabout the green infrastructure or Bluebelts?

CHAIRPERSON GENNARO: Yeah, Bluebelts. Yeah, DEP 10 11 looks for opportunities to implement Bluebelts and watersheds or whatever, and then and so it goes, it 12 13 talks about uhm, you know the ongoing interaction 14 with the Parks Department and you know - whether 15 there's no obvious Parks Department, DEP looks for 16 other city owned or vacant land opportunities and I 17 was just wondering how that has been you know - how that's been set out and how that works. 18

ANGELA LICATA: Yeah, that's an excellent question and it really varies according to the area that we're studying. So, historically when we develop the Bluebelt program in Staten Island, the idea was that the traditional way of sewering would be much more expensive and would also require and mean that wetlands would be drained and most likely

 1
 RESILIENCY AND WATERFRONTS
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 2
 eliminated, which would not be not be easy to permit

 3
 through New York City DEC, who at that time had

 4
 developed strict regulations to protect wetlands that

 5
 were greater than 12.4

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CHAIRPERSON GENNARO: Right, 12.4 yeah.

7 ANGELA LICATA: Yeah, so what we did is we were 8 able to sewer the various streets and developed 9 networks with homes that had no storm sewers and we 10 were then able to locate where those might then be 11 intersected in a way that is configured as like a 12 ribbon is the way I've always tried to think about 13 it.

14 And then that stormwater could be developed into 15 a park amenity, such as some type of a pond. Maybe 16 already wetland that was situated within a park that 17 needed to be rehabilitated, restored, and upgraded. 18 And so, we were able to comingle all of those 19 benefits together with the Parks Department and we 20 created many beautiful amenities for the community as 21 well as obviously incredible stormwater management. 2.2 At certain locations where there was not already 23 a park or a wetland feature, we were looking at private property acquisition and we acquired quite a 24

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COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 40 2 lot of land in Staten Island to do then the very same 3 thing. 4 CHAIRPERSON GENNARO: How many acres did the DEP purchase in its - because I remember that they were 5 doing like a land act thing in Staten Island. 6 Is 7 that still growing or was that sort of planned and is 8 now complete? 9 ANGELA LICATA: Yeah, I don't have the number off the top but we could certainly get that to you 10 11 because that was not only an acquisition for the benefit of stormwater management but as you know 12 13 preservation of land and created quite a lot of land 14 that is now in the public realm in Staten Island. 15 And we're trying to replicate -16 CHAIRPERSON GENNARO: And now is that land once 17 purchased, uhm does it have parks land designation? ANGELA LICATA: Some of those lands were 18 19 transferred to parks if they had a park land need and 20 use and could maintain it. A lot of the property is 21 managed by DEP itself. CHAIRPERSON GENNARO: Okay because once it has 2.2 23 parklands, park land designation, it would have to be alienated in order to be used for something else and 24 25 so.

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2	ANGELA LICATA: Yeah, unless it was considered an
3	enhancement or an amenity to the parks. So, there
4	were a lot of parks in Staten Island, gratefully they
5	had acquired those properties and they had protected
6	them but they were in desperate need of
7	rehabilitation and an opportunity to regrade them in
8	certain instances or enhance their natural features
9	was available to us and the results were stunning.
10	And those neighborhoods, some in the adjoining
11	neighborhoods have indicated that their property
12	values actually increased as a result of that
13	Bluebelt program.
14	CHAIRPERSON GENNARO: Great, so the answer is
15	that you know once the need is perceived, uhm DEP
16	goes out and tries to figure out a way to make it
17	happen. I'm just wondering if there was like a big
18	board someplace about you know because
19	notwithstanding having a first in the nation green
20	infrastructure, look at our flooding problems, look
21	at the bill we just passed last week, but the
22	comprehensive stormwater management plan, which is
23	really just putting like the cherry on top of what
24	you all are doing with regard to stormwater
25	management and so, notwithstanding all we've done,

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 42 RESILIENCY AND WATERFRONTS 2 it's just like nature has caught up and is like 3 overtaking us and we're going to be I guess doing a 4 lot of gray infrastructure you know going forward but that's not the subject of this hearing. And so, let 5 me see what else I have in your statement. 6 7 This is going to be question, this is - I'm going to give myself a little bit of latitude here. 8 Uhm, 9 part of the statement is information about various types of green infrastructure and a map of you know 10 11 right of way assets around the city are included at 12 the end of this testimony. Okay and so, whoever 13 wants to step forward from the Parks Department, I have a question about the city's right of way and 14 15 trees. We're going to call Marit Larson. 16 ANGELA LICATA: 17 CHAIRPERSON GENNARO: Sure. 18 ANGELA LICATA: Commissioner. 19 CHAIRPERSON GENNARO: I think the Counsel is 20 going to want to do the affirmation thing. COMMITTEE COUNSEL: Good afternoon. Please raise 21 2.2 your right hand. Do you affirm to tell the truth, the whole truth and nothing but the truth before this 23 Committee and to respond honestly to Council Member 24

25

questions?

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 43
2	CHAIRPERSON GENNARO: Pardon?
3	COMMITTEE COUNSEL: Yes.
4	CHAIRPERSON GENNARO: Okay.
5	MARIT LARSON: I do.
6	CHAIRPERSON GENNARO: Okay.
7	COMMITTEE COUNSEL: Thanks, you may begin when
8	you're ready and please just state your name and
9	title for the record.
10	CHAIRPERSON GENNARO: Yeah, I'm going to ask a
11	question and when they answer, they'll state their
12	name.
13	This is a little, I'm giving myself a little
14	latitude here. Uhm, I've got a bill that I'm
15	contemplating, which is very much in line with you
16	know DEP thinking about how to increase or maintain
17	the city's tree canopy and it's just a stone fact
18	that uhm, that you know we all know about the right
19	of way that the city you know reserves for itself. I
20	happen to live on the street where the city has a 60
21	foot wide right of way, that it maintains but the
22	street is only 28 feet wide. A pretty average size
23	street but the city's right of way is 60 feet. So,
24	from the center of the street to the curb, it would
25	be what did I say, 20 feet? So, it's 14 feet to the

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 44
2	curb, then it would go another 16 feet and there is
3	this notion that trees that are planted on the little
4	strip of grass between the curb and the sidewalk,
5	those are like city trees. Anything that's on like
6	the property side of the sidewalk is like fair game
7	for tree contractors, for you know residents to hire
8	tree contractors to take down trees and uhm, and it
9	happens all the time. And trees within the right of
10	way, whatever the right of way is, those trees are
11	not allowed to be cut down and so, I have a bill in
12	the offing, uhm that would - well we're still kind of
13	playing with it but it would mandate, you know it
14	would mandate more education on the part of parks to
15	both I don't think too many residents are taking that
16	in their own trees but both the residents and for
17	contractors that do tree removal and tree servicing
18	in order to I mean, I live in an area that has many,
19	many old growth trees and properties get redeveloped.
20	Trees that are deep into the property, 100 years old,
21	what are you going to do? You're not going to tell a
22	person what they can do like with their trees.
23	But with regard to trees that are in the city
24	right of way, you know that is a real loss of tree
25	canopy and you know adds to the urban heat island

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS452effect and so, I guess you're probably wondering if3there's a question in your future but let me see if I4can get there.

Uhm, you know what is the Parks Departments 5 current disposition regarding the phenomenon of trees 6 7 that are on the property side of the sidewalk but within the city right of way? Because I've called 8 9 the Parks Department when I've seen this happen, when they're just about to kind of like put like the 10 11 chainsaw and I take out my Council identification and 12 say, I have to make a phone call and then somebody 13 comes down from forestry and they take a measurement 14 and they say, I'm sorry, you can't take this tree 15 down but at my current age and weight, I cannot be everywhere and so, uhm, so I was wondering what 16 17 exists now in the Parks Department in terms of some 18 effort to try to educate people to not do this and to 19 the extent that this happens would those that 20 perpetrate this be subject to the same kind of 21 penalties that one who cuts a tree that's between like the curb and the sidewalk, which everybody knows 2.2 23 is a city tree. Anybody who does that like knows they're guilty but so how does the Parks Department 24 handle this because like old growth trees are being 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 46
2	lost every day to this phenomenon and the Parks
3	Department can't be every place either but you know
4	to the extent that there was some you know concerted
5	effort to try to control this phenomenon. I'm
6	wondering what the Parks Department does regarding
7	that.
8	MATT DRURY: Sure. Matt Drury, I'm the Chief of
9	Citywide Legislative Affairs for New York City Parks.
10	Thanks for having us and mazel tov to your daughter
11	and family.
12	CHAIRPERSON GENNARO: Oh, you missed it. You
13	missed it pal. I'm telling you.
14	MATT DRURY: Yeah, it sounds like quite the to
15	do.
16	Uhm, so firstly, thank you for your support and
17	your vigilance apparently in terms of monitoring
18	this.
19	CHAIRPERSON GENNARO: Not apparently. I'm
20	stating this as fact.
21	MATT DRURY: Yes, very much so and that's
22	appreciated and in those instances, as you noted, we
23	do you know if it is a tree within the right of way
24	as it's defined -
25	

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 47
2	CHAIRPERSON GENNARO: Right but I'm wondering how
3	the parks is going into the Ivory Tower and you know
4	identifying this as a problem and coming up like with
5	a solution.
6	MATT DRURY: Yeah, so firstly -
7	CHAIRPERSON GENNARO: Oh, by the way, just a
8	second. I got a question. Josh, did we put this
9	bill in?
10	JOSH GACHETTE: Yes.
11	CHAIRPERSON GENNARO: Oh okay, so yeah, I'll say
12	that Josh said yes because he is not - okay, so the
13	bill is in?
14	MATT DRURY: Yup and we would be happy to kind of
15	engage with you further on it. We think there are
16	definitely opportunities, always opportunities to
17	improve communication and education. It is
18	admittedly - it can be a little you know confusing or
19	uhm, challenging to kind of envision the right of way
20	_
21	CHAIRPERSON GENNARO: My question is really like,
22	what's going on now in the Parks Department?
23	MATT DRURY: Right, I think I can thankfully
24	report and we can circle back to our teams to get
25	more metrics here.

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 48 2 CHAIRPERSON GENNARO: Hmm, you're kind of looking 3 for it now. MATT DRURY: I am to be clear, it's an important, 4 it's something we take very seriously and if we're 5 you know if we become aware of a situation where a 6 7 tree may be removed that is indeed in the right of way. For example, if we get like a tree uh, you know 8 9 if we get the notion that someone is doing tree related work or whether our permit process or what 10 11 have you. If that comes to our attention. That's 12 something where we work very closely with that 13 property owner to make sure they're well aware. 14 CHAIRPERSON GENNARO: Yeah, that's not happening. 15 MATT DRURY: That the penalties remain the same. 16 CHAIRPERSON GENNARO: That's not happening. 17 MATT DRURY: Can we be doing more? You know I'm 18 sure we could and we'd be happy to work with you and 19 your team on that. 20 CHAIRPERSON GENNARO: Let me make the thing real 21 simple and so, so you're the intergovernmental 2.2 person, okay and you're good at your job you know and 23 so, you gave the perfect answer for an intergovernmental person to give and I - but the 24

other witness is perhaps is more involved in like -

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 49
2	MATT DRURY: Not in our street tree canopy. So,
3	our forestry director who oversees our park and
4	street trees and Commissioner Larson is incredible.
5	You can hear from her about a variety of different
6	things, largely focused on our natural areas, and
7	sort of which is more closer to the sort of directly
8	Jermain topic of this hearing. So, our Assistant
9	Commissioner for forestry is not here at the moment.
10	CHAIRPERSON GENNARO: Yeah but I couldn't resist
11	when we mentioned like the right of way, of course
12	it's going to ring a bell with me, so I'm going to -
13	because I know there's a big right of way problem in
14	terms of tree removal.
15	MATT DRURY: Yeah, we'd be happy -
16	CHAIRPERSON GENNARO: Which DEP hates when that
17	happens.
18	MATT DRURY: Of course, happy to engage with our
19	forestry team, which again focused more squarely on
20	street trees. Not here at the moment but happy to
21	take this back. We are aware of the bill. We want
22	to work with you and your team on that.
23	CHAIRPERSON GENNARO: Okay, yeah because this is
24	a big you know, a big loss and you know homeowners
25	don't even know of the existence of a right of way.
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COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 50 2 I suspect that tree contractors do but they're just 3 happy to take the money and take the job and that's 4 what happens. So thank you for that. We're joined by Council Member Avilès. Oh, okay, okay and so 5 thank you for that. 6 7 Did you know about the bill before this or you're 8 just hearing about it now? 9 MATT DRURY: No, no, I believe we were aware. CHAIRPERSON GENNARO: Oh, okay, yeah because this 10 11 is something we have to figure out some way we do 12 education and enforcement and penalties on this 13 because planting trees all over the place, but you 14 have a tree that's 75 or 85 years old, I mean you 15 know that's the kind of tree canopy that you know you 16 can't snap your fingers and make that happen. And 17 so, so now you know that is coming. 18 Okay, back to DEP and it's talking about managing 19 the green infrastructure. We strive to keep - I'm 20 reading. We strive to keep our rain gardens healthy and performing by visiting rain gardens every four to 21 six weeks and then there's this whole data driven 2.2 23 thing where you try to like figure all that out. And when the team, which I assume is a DEP team goes to 24

the rain garden, uhm, now litter is removed from it

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 51 2 when you go and visit the rain garden or do they just 3 make an assessment of it? Like, what happens when 4 the team goes to the rain garden? ANGELA LICATA: When they're deployed, they are 5 managing and bike cleaning and then they're also 6 7 assessing for vegetation, what plants may need to be 8 replaced. 9 CHAIRPERSON GENNARO: Yeah, because you're getting ahead of me because like the rain gardens 10 sometimes become like six foot tall weeds and shame 11 on the homeowner for not - I mean come on. 12 This 13 thing is in front of your house, you got six feet 14 tall weeds, and so, that's uh, some people just like 15 to be neglectful and they're comfortable with that. 16 And so, your folks go the site, pull out a garbage 17 which is unsightly and with regard to managing the 18 height of the flora that's there, do they cut it and 19 make a note that maybe there should be other flora in 20 here instead of the weeds that have taken over from 21 the flora that was planted when it was first created 2.2 as a rain garden? How does all that work? 23 Those are very, very timely ANGELA LICATA: questions. I'm so happy to be able to answer them 24 25 now because we are in part of the program where we've

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 52 2 been building assets for over ten years and we are 3 assessing in a very analytical way, what is the rain 4 garden potentially in need of? Are we experiencing a 5 tremendous amount of trash and why is that? Is it potentially located next to a bus stop? What else 6 7 may be going on? What could we do with Sanitation to 8 be able to maybe address the street more routinely 9 because as you know, the rain garden would not be the only place where the litter would be observed 10 11 generally speaking.

12 It's in an area where there's also a lot of 13 litter on the adjacent roadway. So, we've been in 14 discussions with them. In regards to vegetation, 15 that's exactly what we do. We look at what trimming 16 is needed and what planting, where we generally have 17 the opportunity to do that in the spring and the fall 18 because that's when plants like to be pruned and 19 that's when plants generally like to be replanted or 20 planted for the first time, seeding can also happen. 21 In some locations, we determine whether or not that 2.2 planting pallets appropriate. Maybe it needs to be 23 modified. So, we're also taking note of that and triaging that and then in the most extreme cases, 24 25 does that rain garden sit well within that particular

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 53 2 community. We have some business districts where a 3 rain garden may be under attack, which is the way I look at it because there's a lot of commercial 4 activity there. There's just - it's a rough go for a 5 particular rain garden. 6 7 CHAIRPERSON GENNARO: Right. ANGELA LICATA: So, the idea would be maybe that 8 9 needs to be more of an infiltration basin. The thing about what we observed from the street level -10 CHAIRPERSON GENNARO: So, if you're taking it 11 12 from a rain garden to a penetration basin -13 ANGELA LICATA: Yeah, those are the ones where -14 CHAIRPERSON GENNARO: Yeah, what does that look 15 like? ANGELA LICATA: In some locations, instead of a 16 17 rain garden where it's a vegetated top, we have 18 either a concrete top or a planted strip on top. 19 Generally speaking because the homeowner would like to maintain the look and feel of what was there 20 before and what is on continuous look and feel to 21 2.2 their block. The important thing as far as DEP is 23 concerned as we look at those rain gardens or infiltration basins, whatever the typology may be, is 24 25 how is it performing for stormwater and I'm pleased

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 54 2 to be able to say, in most cases, that's where 3 they're performing extremely well. Those assets are 4 still taking stormwater into the inlets and then that is infiltrated in the ground. And so, that's what's 5 really important. Many people don't realize, they 6 7 think only what appears on the surface is what's been 8 developed or built but the engineering that goes into 9 the asset is actually occurring for the entire five feet below the surface. 10

11 CHAIRPERSON GENNARO: Right, yes this is a much 12 different kind of absorption then the grass strip 13 that's just like down the street because there's a 14 lot of you know subterranean engineering that makes 15 that happen.

16 Many years ago, I passed a bill about like some 17 of the plantings on center medians. This is like 18 before the days of rain gardens. Like, drought 19 resistant plantings or whatever. I don't know if 20 that's a thing. I forgot about that bill like 20 21 years ago. Is that part of the mix in terms of like 2.2 where the rain gardens are? Because uhm, I know 23 they're meant to absorb water but sometimes we don't want the vegetation dying and so, sometimes like the 24 drought resistant planting could potentially in this 25

1 COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 55 2 case, although that bill was written for just median 3 plantings that had nothing to do with rain gardens. 4 I don't know if drought resistant plantings are part 5 of the menu for what gets planted there. Is that a 6 thing?

7 ANGELA LICATA: I think that's right. I mean 8 within the rain garden itself, we want it to not be 9 so much drought tolerant but to also be a plant that 10 can accept a lot of water and be able to survive in a 11 more moist environment.

12 CHAIRPERSON GENNARO: Oh okay, alright. Okay, 13 fair enough, fair enough, good point there. And right below that, you talk about in your statement 14 15 more time spent on litter control means less crew 16 time available for other work like swale enhancement, 17 tree pruning plantings and horticultural services. 18 They're important for maintenance staff, recruitment - so these are DEP people that are involved in soil 19 20 enhancement, tree planting, horticultural, so does 21 the Parks Department get jealous or how does that 2.2 work?

ANGELA LICATA: We actually use some of the Parks titles because that's the type of work that is actually happening.

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 56 2 CHAIRPERSON GENNARO: Oh, I see, so you have some 3 parks titles that are actually -4 ANGELA LICATA: But they are DEP yeah and I want to give a shout out to OMB. Our task force Steven 5 Lomberg and Salina Young, and Jeona Parisse have been 6 7 really, really supportive and have been really great 8 partners, thought partners on looking at the 9 budgeting that is necessary to maintain these assets as we grow the program. They've been very 10 11 cooperative with us. We just got an additional 25 12 seasonals that were approved by OMP that we're trying 13 to onboard. Currently we have about 61 staff. Also, we've been working very closely with OMB on the types 14 15 of vehicles that we need for maintenance purposes and they've been working very hard to help us understand 16 17 those types of budgetary needs frankly. But we do 18 have a very robust staff. We also have a program 19 that was just funded that is a workforce development 20 program whereby we will be privatizing some of the green infrastructure assets about a thousand of them 21 2.2 to the DOE fund and they will help us not only to 23 train but also to recruit staff that could then move into the city's pipeline because a lot of the jobs 24 that we have under the Green Infrastructure program 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 57
2	are in fact entry level jobs and they do build life
3	skills for those employees and when there are
4	seasonal employees, if they're good workers, we tend
5	to offer them a permanent job as well.
6	CHAIRPERSON GENNARO: Great and I remember OMB
7	fondly. I started my - I worked at OMB from 1983 to
8	1985 and so I think a lot of my colleagues are
9	retired but if you need, oh you worked for OMB as
10	well?
11	ANGELA LICATA: I started my career at OMB as
12	well.
13	CHAIRPERSON GENNARO: Oh yeah so uhm, I was going
14	to say if you need anything from them, mention my
15	name but you should mention your own name because
16	they don't know who I am anymore.
17	So, what I'm going to do is I'm going to finish
18	going through my statement and before I get to my
19	prepared questions, I'm going to call on Council
20	Member Avilés to ask her questions. This is a very
21	busy time of year for Council Members where they got
22	primary coming up. I'm not supposed to talk about
23	politics but you know it's a reality that people are
24	running around doing things and so, thank you for
25	your attention to the SWPPP. I know this is - its

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 58 2 got developers going out of their minds. I've spoken 3 with the Commissioner about it. There are things 4 coming down the you know - things coming down the line regarding how we maintain like a good balance 5 between getting the benefits from the SWPPP and 6 7 getting projects to move. And so, right now we have one and not the other and so, we're going to get 8 both. So, any developers watching on wherever this 9 is broadcast should know. So, I've had protective 10 conversations with the Commissioner on that. 11

12 Yeah, you talked about BRIC grants from FEMA and 13 the new administration ending the BRIC program and you talked about you know you're trying to figure out 14 15 what impact this may have. Where do we think this is 16 going? You know kind of difficult to imagine that 17 the state is going to help us out because even when 18 we get federal funds, that we get federal funds 19 through the state, we don't get them and so, by the 20 formula that has been made for all kinds of you know like whether it's the Bond Act, federal funds, 21 2.2 whatever and so uhm, we're just like a small town on 23 the Hudson and we get cheated all the time. So, in the absence of BRIC funding, what do you 24

25 think the prognosis is and what is going to be the

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS592sort of like the result of that kind of not so good3prognosis? We could always do bad news here. We do4bad news at hearings so.

ANGELA LICATA: It's very upsetting and 5 disturbing after all of the successes that we had in 6 7 securing over \$240 million in BRIC funding. I don't know where this is going to end necessarily. We're 8 9 in - as we said in the testimony conversations with the oversights. The one thing I know is that we are 10 11 funded in the city for cloudburst that we plan on 12 doing. We are about 60 percent design, so we have a 13 budget estimate for those. We believe that we can 14 accomplish those four with the current city funding. 15 What would be - and we have an additional two, one 16 that was funded under another federal program and 17 another project that also currently has funding. So, 18 that would bring us to about five or six.

The impact would be if the BRIC funding is eliminated that we could not reach further down our list. So, when we developed our cloudburst projects, we had about 31 cloudburst hubs that look very good to us in terms of cost benefit and the amount of flooding that would be alleviated. We were hoping with that federal funding to be able to leverage that

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 60
2	and get further down the list, so that's the impact
3	in short.
4	CHAIRPERSON GENNARO: Okay, yeah, thank you.
5	ANGELA LICATA: You're welcome.
6	CHAIRPERSON GENNARO: Uh and getting to the
7	bills. I think your testimony on Intro. 1253 is
8	fine. That's about the notification thing. I want
9	to loop in DDC. You know there's a smart and a less
10	smart way to do anything. We want to do that the
11	smart way and that's sounds very reasonable.
12	1254 with the MS4 areas. I mean I hear you in
13	terms of what you've been able to you know do in the
14	combined sewer areas. What we're trying to get at
15	with 1254 is that a lot of the green infrastructure
16	has gone into the 60 percent with the city with
17	combined sewers because of the CSO problem and the
18	CSO consent order and it was really an attempt to
19	kind of like you know level the playing field like a
20	little bit because the MS4 areas, you know we're not
21	getting that kind of you know greenery but as you you
22	know mention there are impediments there and areas
23	that would be completely - you know that we couldn't
24	consider at all by virtue of the you know high water
25	table.

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 61
2	I still want to do something though and so, uhm,
3	you know I took all of your you know analysis you
4	know to heart here but I think we're still of the
5	mind that we want to try to you know work in a
6	concerted way with DEP to get like something done.
7	Do you have a follow up? Do you have a response to
8	that? What are your thoughts on what I just said?
9	ANGELA LICATA: Yeah, first our appreciation for
10	your attention to this issue because it is very
11	important to - although it is only about 30 percent
12	of the city, it is very important to address flooding
13	concerns in the MS4 area. And so, we do have - I
14	mean the good news is approximately \$28 million in
15	upcoming projects within the MS4 area and we've
16	completed quite a lot of projects to date. We are
17	struggling with a metric for how to measure the
18	amount that we could complete in the MS4 area but we
19	certainly do track the water quality volume because
20	in the MS4 area, the goal is not CSO reduction. But
21	the goal rather is to treat the stormwater and to
22	eliminate the pollutants that don't ever get to a
23	wastewater resource recovery facility before its
24	discharge. You mentioned earlier in your opening
25	remarks that we do treat for inflatables. We get

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 62
2	that through the catch basin hoods but you're right,
3	there are other pollutants in the stormwater that we
4	want to address.
5	So, certainly needs to be part of the strategy.
6	It needs to be part of our attention and not to
7	mention of course the flooding controls that are
8	necessary there. You're also very correct in your
9	mentioning of the state consent order change. So, in
10	2023, the modification to the order that we
11	renegotiated with the New York State DEC -
12	CHAIRPERSON GENNARO: Yeah, talk about that.
13	Talk about that.
14	ANGELA LICATA: Yeah, sure.
15	CHAIRPERSON GENNARO: Help me out there. I'm not
16	very facile with that.
17	ANGELA LICATA: Yeah, no, but I could tell you're
18	recalling that some of that occurred and yes, what we
19	have there is a volumetrical for CSO reduction. We
20	want to reduce CSOs by 1.6 billion gallons a year
21	through green infrastructure measures. As well as we
22	now have a monetary obligation to spend but the state
23	did recognize that we need to build resilience in the
24	City of New York and so, we pushed very hard for them
25	to accept that under that consent order, there could

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 63
2	be spending that would improve water quality in the
3	MS4 and then also be co-benefits with resiliency.
4	So, we do have that opportunity at this point.
5	CHAIRPERSON GENNARO: Thank you and with regard
6	to areas in South East Queens and other areas of the
7	city that have no storm sewer infrastructure. I
8	guess they would not be MS4 areas right because they
9	don't have storm sewers. So, like what are they
10	called? So, to me, in order to be an MS4 area,
11	you've got a dedicated sanitary sewer and you've got
12	the stormflow that goes out to a local water way with
13	sort of minimal treatment lets say. But if you don't
14	have any storm sewer infrastructure, is that an MS4
15	area or what is it?
16	ANGELA LICATA: No, it's not and especially in
17	areas in South East Queens like we said the high
18	water table is an issue, so that might not be the
19	right fit.
20	CHAIRPERSON GENNARO: Well, I'm just saying but
21	they have a high water table. They have flooding
22	problems and they have no storm sewer infrastructure
23	whatsoever. I think they would benefit from that
24	right? I mean-
25	

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 64
2	ANGELA LICATA: Not necessarily. Depending if
3	what you're looking for is to reduce flooding, a
4	green infrastructure in a high water table -
5	CHAIRPERSON GENNARO: No, but I'm just saying,
6	you know putting aside the green infrastructure, I'm
7	just talking about you know South East Queens I think
8	is a great candidate for gray infrastructure because
9	you know at least they will have drains that will
10	take the water away. You know to have - because
11	right now South East Queens is with no storm sewer,
12	those parts that don't have storm sewers, it's
13	already one big green infrastructure thing. You know
14	you don't have anything to catch the stormwater and
15	you know to try and process it and you know
16	assimilate it but the natural you know areas, then
17	like the non-paved areas. Like that's all there is
18	and so, this is sort of a commercial for like gray
19	infrastructure in those areas. Yeah, I think the
20	green infrastructure, not the ticket but so, those
21	areas are not designated as MS4? They're just -
22	ANGELA LICATA: They're not but they're also
23	receiving probably more money then most parts of the
24	city for gray infrastructure upgrades.
25	

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 65
2	CHAIRPERSON GENNARO: This is one of the - I know
3	that there's a lot of projects going on down there
4	but what we don't have and may not have for a long
5	time is you know even one piece of paper left for
6	access. This is like the build out date for you know
7	South East Queens and other areas of the city that
8	don't have any storm sewer infrastructure. You know
9	this is the date certain by which we're going to
10	build out this infrastructure and as we contemplate
11	things, like going from 1.75 inches per hour to 2.1
12	or whatever the number is going to be depending upon
13	you know how the comprehensive stormwater management
14	plan works out in terms of increased you know storm
15	sewer capacity, you know we still have areas of the
16	city -
17	So, we got areas of the city that have 1.75 going
18	up to some number bigger than that. You still have
19	areas that are like at zero and so, this is my point
20	you know that I think - and one of the reasons why I
21	want to do that - that bill that we just did because
22	there are areas of the city that just don't have any

23 storm sewer infrastructure, combined with the high 24 water table, I mean, you know they're really getting 25 it both ways since we ramped down use of the you know

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 66 2 former Jamaica water service wells from 100 mgd to 3 whatever it is today. Some low number. Well, but some waters pump to waste, right? 4 Otherwise storm sewers - but like wouldn't subway 5 tunnels flood because as we shut down the wells and 6 7 you know like the water table like resumed to pre-8 Jamaica water service you know levels. Oh, so right 9 now, so when you say nothing is being pumped, it means like it's not being pumped for portable use? 10 11 Uhm, so there's zero going into the distribution 12 system but I think there's still some water being 13 pumped to waste and I guess how much water is that 14 and where does it go? 15 ANGELA LICATA: I don't know what the quantity of 16 that is but it's from various parts of the aquafers 17 you know and we've had these discussions in the past 18 before, so I don't think that the pumping that's 19 happening in the epiglacial is getting down to where

20 the Jamaica supply was in the Magothy.
21 CHAIRPERSON GENNARO: Right, right but I'm just

22 saying the water that gets pumped to waste to the 23 extent that that happens, like where does it go? 24 ANGELA LICATA: Into the sewer system and 25 generally speaking that requires a DEP permit. 1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS672CHAIRPERSON GENNARO: Oh, okay so - oh it would3go into - it would go into a sewer which would - and4that's not a combined sewer area, so it would go to a5local waterbody, okay.

ANGELA LICATA: Or the sanitary sewer wherethere's no storm sewer.

8 CHAIRPERSON GENNARO: Oh yeah, then we're talking 9 capacity problems potentially you know. Wow, I don't 10 think I'm going to work with DEP any time soon. It 11 seems very complicated you know I don't know if I got 12 it up here to figure all that stuff out.

13 And with that, oh okay, yeah. I have to excuse myself again. I'm going to put one of my colleagues 14 15 Did you have an MRI where you get the contrast? on. You know and then they say this contrast is pretty 16 17 funky stuff you know, so they said like, drink like 18 there's no tomorrow for like the next like two days. 19 I'm like what did you just like put in me, you know. 20 This is on the record. Yeah, this is classic Gennaro 21 colliculi that's going on the record that people could read 100 years from now you know. People will 2.2 23 say like what was contrast and so, uhm, yeah so that's the story as if people needed to hear that or 24 whatever but. And I've had contrast before where 25

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS682they didn't give me the speech you know but yesterday3like I got the speech you know saying like you know4this is pretty funky stuff, you should like get this5out of your system as soon as possible.

Now with everyone so enlightened now about the
toxins coursing through my body right, this is the
perfect time to go from you know go from toxic to
wonderful with my colleague Council Member Avilés who
I now recognize for guestions.

11 COUNCIL MEMBER AVILÉS: Thank you. Thank you 12 Chair Gennaro. Hi everyone. So, I'm going to ask 13 you probably a couple of disconnected questions. So, 14 forgive me and I didn't get to hear your testimony, 15 so it may be covering some things that were in fact 16 in your testimony. And as I understand it, it's DEP 17 and Parks Department? Okay, thank you.

18 So, I guess let's start with the 2023 Consent 19 Decree, Consent Order Modification that requires DEP 20 to track the constructed green infrastructure assets 21 in a data set that the state refers to as the New 2.2 York City Green Hub. Additionally, DEP maintains a 23 green infrastructure data set, New York City open data. Are the two data sets the same? Do they 24 communicate? 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 69
2	ANGELA LICATA: So, they are not the same and I
3	will explain the difference. The green hub as a
4	tracking system is looking - it's what DEP uses to
5	keep track of the areas that we have visited and
6	assess for appropriateness for green infrastructure.
7	So, it's assets that have also been rejected and
8	assets that we're carrying forward into the process
9	and we're looking at that during the various stages
10	of planning, investigation as I mentioned. You might
11	have boring information with tech work, design and
12	construction. And then the open data set is really
13	available for communities to better understand the
14	assets that most certainly will be implemented.
15	Those are the ones that are in design heading to
16	construction or have been constructed.
17	COUNCIL MEMBER AVILÉS: Got it. So, if I
18	understand correctly it means the green hub is more
19	the preplanning development data set that you utilize
20	internally and New York City open data captures ones
21	that are in process, like in construction?
22	ANGELA LICATA: Exactly, that are designed and
23	most certainly expected to lead to a constructed
24	asset.
25	

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 70
2	COUNCIL MEMBER AVILÉS: Great. We don't hear
3	that DEP must calculate the volume of the combined
4	sewer overflow reduction attributable to green
5	infrastructure assets. Is that also, I understand
6	that that's part of the consent order? Is that
7	metric also available on New York City open data?
8	ANGELA LICATA: I don't know if it's on open
9	data. No, okay but we do track it and this is our
10	annual report which was just issued April 30 $^{ m th}$. We
11	have a yearly report and we look at the number of
12	assets. It gives you the type of asset that was
13	constructed. Obviously where the asset was built and
14	the volume managed that we roll up. So, we have an
15	estimated about 600 million gallons a year that is
16	now being addressed with our Green Infrastructure
17	program.
18	COUNCIL MEMBER AVILÉS: So, when you say the
19	volume managed, it also - that also includes the
20	reduction?
21	ANGELA LICATA: That's our CSO abated.
22	COUNCIL MEMBER AVILÉS: Great and so the beautiful
23	report I assume is findable online, on DEPs website?
24	ANGELA LICATA: Yes, yes.
25	

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 71
2	COUNCIL MEMBER AVILÉS: Okay great. In terms of
3	- I wonder in terms of natural nature based
4	solutions. I wondered if DEP has ever considered
5	using street creeks and how it engages with using you
6	know kind of the natural geography where water is
7	kind of moving underneath? Because we see the
8	natural geography certainly directs water regardless
9	of what we do in the built infrastructure, so I was
10	curious around how DEP is using you know our natural
11	geography to manage some element of water management?
12	ANGELA LICATA: Yeah, we spoke a little bit about
13	that earlier. The history of the Bluebelt program
14	and how that took into account and respected the
15	existing streams that were present and low
16	depressional points that might have existed within
17	parks. Some of those were wetlands and they were
18	greater than 12.4 acres that were protected by DEC,
19	you would at least have to get a permit. There were
20	some areas that were outside in adjacent areas of
21	those wetlands and they were vulnerable to
22	redevelopment. DEP worked with the Parks Department
23	to utilize a lot of the natural areas that they
24	protected by creating these park lands. And then we
25	also purchased property that had naturally wet
I	

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2 features or topography that allowed for storage by 3 creating ponds and extended detention areas.

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So, that is something that we've done. There's a 4 5 team here behind me that is still looking at how best to continue to promote those practices citywide. 6 А 7 lot of those assets that I described as part of the Bluebelt program occurred in Staten Island, which was 8 9 the most intact borough of course, but there are opportunities elsewhere and we do have some examples 10 11 that are more limited in physical extent but do exist 12 in the outer boroughs and they are going through all of that material now to see where the opportunities 13 14 currently exist and where they can be created.

15 COUNCIL MEMBER AVILÉS: Right, right no, I have a 16 recent example of some students that were studying 17 some resiliency elements within Red Hook and noted 18 that uhm where they thought they would finding salt 19 water, they were finding fresh water and noted in 20 looking at some old maps that the fresh water was 21 finding its way in certain parts of the neighborhood because it reflected the natural topography. 2.2 It's 23 still part of the question whether it was flooding or at least they thought it was flooding. They thought 24 it was salt water because we have rain that in fact, 25
1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 73
2	it was something slightly different. So, of course
3	we were thinking what are the kind of nature based
4	solutions that you could potentially do but also even
5	Greenwood Cemetery, which is a really significant
6	piece of land that really helps flood mitigation for
7	Sunset Park and that whole entire area in the other
8	part of my district. So, just curious about how DEP
9	certainly is looking at all these opportunities and
10	where it's kind of matching what makes sense.
11	I know the built environment is really
12	challenging in certain regards and there a probably
13	other variables, so just curious about this new thing
14	that I heard about, which is probably old news to you
15	all about street creeks and uhm what other kind of
16	nature based solutions we could continue to employ
17	there. So, uhm just really quickly, in terms of I
18	think huge support or certainly of nature based
19	solutions, so thank you for all the work that you all
20	have managed to deploy throughout the city.
21	Obviously, it's really critical for the future of our
22	city regarding climate change, but in terms of the
23	bioretention systems that were installed, like how
24	many were installed over the last year?
25	

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 74 2 ANGELA LICATA: It was in my testimony; we set up 3 2,400 assets this past year. COUNCIL MEMBER AVILÉS: And that's across the 4 5 city, right? ANGELA LICATA: Yeah. 6 7 COUNCIL MEMBER AVILÉS: Okay. ANGELA LICATA: And that's a total of about 8 9 16,000 now. COUNCIL MEMBER AVILÉS: Got it and I think you 10 11 probably covered this as well. In terms of you know 12 I quess managing those assets in terms of cleaning 13 and doing all of that, is that a DEP function or is 14 that shared with another agency? 15 ANGELA LICATA: It is a DEP function and we've 16 been working very hard to develop crews as the assets 17 come online that can do the maintenance that is 18 required. And we were discussing earlier that we 19 have about 60 staff or so that are online now. We 20 have another 25 seasonals that were approved by OMB. 21 We have eight of those in the pipeline. We need to get them onboarded as quickly as possible. 2.2 And so, 23 we feel that we're well resourced. Of course we need specialty equipment as well now because we have 24 25 increased our typology. The goal is to develop a

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 75 2 toolbox that is as robust as possible so that we can 3 customize the fit when we're in the landscape in New York City. As we know, our neighborhoods are very 4 5 different. The areas in what you can fit in comfortably within a community, what a community will 6 7 accept really varies across the city.

COUNCIL MEMBER AVILÉS: And in terms of like on a 8 9 middle level, like in Sunset Park, we have had medians that are being raised and primarily because 10 11 the train line runs underneath. So, there may be a more technical reason why we did this but of course 12 we see vegetation. We're very excited about it. 13 But I'm curious around what is the collaboration 14 15 for these kinds of projects? Like is there a resiliency lens that is being used when these kinds 16 17 of projects are coming online? I guess I'm curious 18 about what vegetation that is put in there and 19 there's a consistent problem with trash but 20 apparently since it's under construction, I 21 understand the contractor is currently responsible 2.2 for that but when that moves away, does that become 23 part of DEP? Is it Parks? Is it DOT? ANGELA LICATA: It's not DEP. 24

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 76
2	COUNCIL MEMBER AVILÉS: It's not DEP, okay. It
3	might be Parks. It might not be either.
4	MATT DRURY: Well yeah, I mean it depends on the
5	stretch is the short answer. Like whether it's
6	designated. There are certain stretches that are
7	designated to screen streets like per an MOU with DOT
8	and that's the case but broadly speaking, you know I
9	think that's a DOT/Department of Sanitation.
10	COUNCIL MEMBER AVILÉS: Is there - I guess uh,
11	we'll get there, especially with the project but in
12	terms of the lens, I'm curious like is there a
13	resiliency nature based lens put onto these projects
14	before they are built out or is that only done when
15	requested?
16	ANGELA LICATA: I will say - I can answer from my
17	own perspective so and I really appreciate and I like
18	your observation because one of the things that we
19	know in order to achieve our goals, we're going to be
20	working in the right of way and we're definitely
21	going to need the public realm, so any of the land
22	that is in the city's possession to be part of the
23	solution. So, we do try when we initiate a project,
24	to look at it through that resiliency lens, to work
25	with the owner of the property that maybe DOT in some

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS772instances and to see how they have of course3transportation goals and we need to manage and meet4those but how can we and where can we have5partnerships that work with them?

6 So, when DEP initiates a project, that's how we 7 look at it and we are transforming some very large 8 medians in the city. I do not - I'm not familiar 9 enough with yours that you mentioned, so I would need 10 to see those on a map and work with the project 11 management team.

12 COUNCIL MEMBER AVILÉS: Yeah, I can follow up. 13 Last question and thank you for the generosity of 14 time. Similarly the BQE structure, right? Everybody 15 knows the BQE and its glory. Uhm, I was curious 16 about have there been any studies around how we 17 manage water? Because now, like I'm thinking Third 18 Avenue if you're familiar with Brooklyn right? We 19 have the BQE running. It's constantly flooded right? 20 It's managing the water that's coming from the 21 structure, the super structure above, including the 2.2 water that's below because the neighborhood runs 23 downward, right? Has DEP looked at any kind of nature based potential solution around how to manage 24 that kind of waterflow? And I guess what I'm 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 78
2	thinking of is like, uh where is that? In Spain,
3	they have the Averda where they were using these
4	green - I don't know what they're called. A
5	structure that holds a highway, doing kind of plant
6	based in those structures both for air quality but
7	also for some water.
8	So, I was curious like has DEP struggled at all
9	with - are there any interventions around this
10	infrastructure that could help either with water or
11	air or noise? I mean those are the three challenges
12	among others that come from the structure itself.
13	ANGELA LICATA: Yeah, I'd really like to take a
14	look at that. Where is that in Spain? I'm sure we
15	can Google and make some -
16	COUNCIL MEMBER AVILÉS: I'll have to get back -
17	ANGELA LICATA: If it's vertical or horizontal and
18	to answer your question pointedly with respect to the
19	BQE, we did look very early on. We had a lot of
20	environmental stakeholders that rightly pointed out
21	that this looks like a missed opportunity because we
22	have all this space here and all this water running
23	off of the elevated highway. What can we do in that
24	area below the elevated portions of the roadway? It
25	was very difficult to identify ecological choices

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 79
2	that would survive in that very dank you know, very
3	light deprived environment. So, we shied away from
4	that. Maybe it's time to go and revisit that because
5	I was getting a vision of something maybe more
6	vertical that might make sense in a location like
7	that. Through the MS4 permit, we have and we are
8	continuing to evaluate all what we call arterial
9	highways. Forgive me for the jargon but that is the
10	roadways in the city where we have these major
11	arterials. They may be state owned. They may be
12	city owned and where is that water running and what
13	are the opportunities that we might have to address
14	that water, either in terms of volume or in terms of
15	water quality. So that is a study that is still in
16	progress and it is being cross shared between DOT and
17	DEP.
18	COUNCIL MEMBER AVILÉS: And when is the timeframe
19	for the study?
20	ANGELA LICATA: It's the last year of - three
21	years, it's probably more like a five year study but
22	we have been discovering new information about
23	ownership on arterial highways as well. As where the
24	water is going. The benefit of that project, the
25	biggest benefit of that project is not just the

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 80
2	intelligence around the water routing but is also
3	because to do the TB inspection, to understand the
4	direction of the water, we've had to do a lot of
5	cleaning. So, we're getting a lot of benefit from
6	the contractor to do a lot of maintenance and
7	cleaning along the way.
8	COUNCIL MEMBER AVILÉS: Got it. Thank you so
9	much. Thank you Chair.
10	CHAIRPERSON GENNARO: Thank you Council Member
11	Avilés, always a pleasure and now it's also my
12	pleasure to recognize Council Member Restler for
13	questions.
14	COUNCIL MEMBER RESTLER: Thank you so much Chair
15	and I want to thank the DEP team for your thoughtful
16	work on these issues and your partnership in District
17	33. Just specifically want to recognize Deputy
18	Commissioner Licata for her initiative in revamping
19	the New Town Creek Long Term Control Plan and I want
20	to thank Melissa for her partnership, particularly in
21	McCarren Park where we have two sites that I think
22	are going to be tremendous green infrastructure
23	projects for our community that we're really grateful
24	for your all's responsiveness and partnership in our
25	community.

1	COMMITTEE ON ENVIRONMENTAL PROTECTION,
2	RESILIENCY AND WATERFRONTS 81 You know I had the privilege for stepping in for
3	our Chair at the Budget Hearing and forgive me if the
4	stuff in my brain didn't stick exactly the right way
5	but the thing that I was kind of kicking myself after
6	the hearing that I felt like I should have pushed the
7	Commissioner on more, was that I think he said
8	basically that you all have identified 86 locations
9	where we have severe flooding risks and it's going to
10	cost about \$30 billion to upgrade our infrastructure
11	to better protect communities in those areas. We've
12	got about \$10 billion funded and it's at 30 year
13	timeline. Is that broadly - did I get those things
14	right? Okay, so I was listening.
15	Uhm, and I know there aren't magic wands and I
16	know that doing \$30 billion of work can't happen in a
17	year or two and at the same time, it's really
18	freaking hard to look a community in the eye and say,
19	yes we recognize you have a severe flooding crisis in
20	your community. You're a high vulnerable area and we
21	are going to get to it in 30 years. Like, how do we
22	- how do we - I don't know square that circle? Like
23	help me you know think through this because to me
24	that just feels like, I appreciate the reasonable
25	constraints that you face and at the same time, the

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 82 2 answer is totally acceptable, right and so what can -3 and I know you're spending more on capital money. You know the DEP Capital Budget has increased 4 significantly including more funding going to issues 5 like the things that we all care about - the focus of 6 7 this hearing today. I realize there's improvements 8 happening under Commissioner Aggarwala's leadership 9 and this team. So, I'm not missing that but help me square the circle. You know how do we look that 10 11 community in the eye and say we will get to this in 30 years. 12

BETH DEFALCO: There's a recent taskforce report 13 14 that might be worth and we can get you a copy of it. 15 Looking into in terms of funding structure and the way that we think about funding these projects 16 17 because yeah, \$30 billion; DEP can't pay for that the 18 way that we pay for infrastructure upgrades is 19 through water bills, which you don't want to raise 20 for everybody in the city.

So, yes, it's a problem and some green infrastructure can be incredibly beneficial because often you can build anything above ground faster and less costly than you can build below ground and it's less disruptive but does it convey or move as water

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 83
2	as you want as gray infrastructure? Not always. The
3	way that you - I think funding is going to be the
4	largest challenge in the way that we think about
5	funding now and in the long term and what kind of
6	funding can you put in place that is consistent,
7	steady and can't be touched. I think is probably the
8	biggest challenge.
9	COUNCIL MEMBER RESTLER: Just to be clear, if
10	there were more resources available, DEP would have
11	the capacity to speed up the timelines?
12	BETH DEFALCO: Uhm, well it depends on what you
13	want to do. If you're talking about speeding up the
14	timeline to do a double barrel sewer in Queens,
15	construction timeline is a construction timeline.
16	So, I don't think - it's a very simple question with
17	a very complicated answer.
18	COUNCIL MEMBER RESTLER: I mean yes and no. I'm
19	not - I mean look I'm not - this is not about like
20	how do we green a median. That's not what I'm
21	talking about. I'm talking about the 86 areas that
22	you identified that are the most critical flooding
23	risks in the city that require our immediate and
24	aggressive attention and we're telling those
25	communities we're going to fix it in 30 years.

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 84 2 That's what I'm talking about. So, if you're telling 3 that the critical path challenge that we need to 4 resolve is funding, then let's have that conversation about funding. If you're telling me that it's 5 something else, then let's have the conversation 6 7 about something else but I think I'm being clear.

8 ANGELA LICATA: I think you're being clear. I′m 9 going to give you a slightly different answer which is that you need to get started and the good news is 10 11 right here in this room we have some of the engineers 12 who are working on pulling out there priorities from 13 the 86 that were identified. And really 14 understanding where they can make significant impacts 15 and that's reducing street flooding. In the short 16 run, we have medium term and then long term that was 17 part of that you know 30 year strategy. Many 18 projects are already starting design and they are 19 already advancing to the Department of Design and 20 Construction, already DEP is amending drainage plans 21 to be able to share with the Department of Design and 2.2 Construction. So, again, I just wanted to get back 23 to it's a long timeframe to get it all done but you need to get started and I just wanted to suggest to 24 you that we have hit the ground running. 25 I truly

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 85
2	credit this Committee for its leadership on Intro.
3	1150, which is going to have us report out on the
4	master planning. Every two years I think the first
5	planning report is going to be due in 2027. So, we
6	really look forward to being transparent and to
7	obviously the hard work that's ahead but again, you
8	have to get started and I believe that this team has
9	really made every effort to do so.
10	COUNCIL MEMBER RESTLER: Yeah.
11	ANGELA LICATA: And you'll see a lot of spending
12	coming up on that.
13	COUNCIL MEMBER RESTLER: Yeah, look I hear you
14	that the best way to move forward is to move forward
15	right and to start work and anywhere and everywhere
16	we can. I think that you know it's really important
17	to me that we figure out from a citywide vantage
18	point new funding strategies and specific ways that
19	we can turn a 30 year plan into a 10 or 12 year plan,
20	right? And what are the things that we can do
21	together to actually make that achievable because we
22	don't have 30 years to wait right and we can only
23	imagine how many horrific storms there are going to
24	be in that time period and it's just not viable for
25	us to look at things that way.

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 86
2	So, I appreciate the response. I think - I know
3	there aren't easy answers. If there were you would
4	have provided them right. You're all good at your
5	jobs. I'm not claiming otherwise. I just you know I
6	think that we're not yet organized in the way that we
7	need to be and it's hard when we don't have
8	cooperation from the federal government, which you
9	know we've obviously entered into that realm as well.
10	One other thing I just want to ask and I think I
11	in so many words try to ask this question at every
12	hearing. Greedily as the Council Member for the $33^{\rm rd}$
13	Council District, you know my job is to be focused on
14	my 170,000 people. Uhm and have as much of DEPs
15	attention as possible in our Council District. We've
16	had some good, really good experience. I mentioned
17	the two projects a McCarren where the Farmers Market
18	is and the kind of McCarren Asphalt lot. Again,
19	where Melissa and John and the team have been
20	terrific. We have other projects that we would
21	really like to pursue. That would be great. In
22	Northern Greenpoint, that we think would be great. I
23	mean terrific opportunities. When we talk to Kevin
24	Moran and the leadership at the DOE, you know on the
25	kind of Chief Operating Officer at the DOE, they

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 87
2	really want to be partnering more and we have schools
3	where we would love to be partnering together.
4	Like how do we - what advise do you have for me
5	to get more important projects in flood zones onto
6	your list? Like how do we - how do I do a better job
7	of advocating for my community so that I have even
8	more exciting projects to celebrate?
9	ANGELA LICATA: On schools, have you been in
10	contact with the Trust for Public Land?
11	COUNCIL MEMBER RESTLER: Yes.
12	ANGELA LICATA: Okay. Do you have any sites that
13	are eligible?
14	COUNCIL MEMBER RESTLER: We have one more that
15	we're doing starting this year. Well, we have
16	completed two TPO projects since I've been the
17	Council Member. We have one more that we're going to
18	announce imminently in South Williamsburg that I'm
19	really excited about. So, we're - that for sure but
20	yes, so we worked with TPL. I think is there any -
21	okay, and we can continue to do that. Are there
22	other mechanisms to partner with the DOE on DOE sites
23	other than through TPL or is that the best way to do
24	it?
25	

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 88
2	ANGELA LICATA: We have a program with schools
3	Melissa do you want to come up and talk about that?
4	Yeah, let's bring Melissa.
5	COUNCIL MEMBER RESTLER: Have you sworn Melissa
6	in yet?
7	ANGELA LICATA: Assistant Commissioner.
8	COMMITTEE COUNSEL: Not yet. Hi, before you
9	testify, I'm just going to swear you in quickly.
10	Please raise your hand. You're doing that. Do you
11	affirm to tell the truth, the whole truth and nothing
12	but the truth before this Committee and to respond
13	honestly to Council Member questions?
14	MELISSA ENOCH: Yes.
15	COMMITTEE COUNSEL: Fantastic, go ahead.
16	MELISSA ENOCH: Great, so to answer the question
17	about our partnership with schools. So, we have
18	prioritized a lot of different CSO sheds across the
19	city for implementation of green infrastructure
20	retrofits at schools. We've identified those. We
21	have \$30 million worth of projects in construction on
22	those properties right now. That's in addition to
23	the projects that Angela mentioned with Trust for
24	Public Land where we've funded them for 54 projects
25	already.

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2 They have a really great formula. Theirs is such 3 that they look around at you know if there's adequate 4 green space in communities and how they might be able to get more play spaces in for community members. 5 So, we like to partner with them because it results 6 7 in a much bigger project. So, that is an ongoing 8 partnership. It's citywide. That's combine sewer 9 and MS4. We fund them as much as they have capacity for and then on this other side of the program, we 10 11 work with the School Construction Authority. They give us their upcoming capital projects. 12 We like to 13 integrate green infrastructure that way. As they 14 redevelop some of their playgrounds, we also provide 15 funding that way as well.

16 COUNCIL MEMBER RESTLER: We will try and do a 17 better job of integrating into SCA projects. I think 18 we have a couple potential opportunities there and 19 then just with Parks, is there anything more we can 20 do? I mean playground, Green Fund Playground are 21 examples of like sites that we're putting some 2.2 funding into those sites. Would really love to 23 maximize DEP investments as well. Any advice on how we could get that to happen? 24

25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 90
2	MELISSA ENOCH: We've been working with the Parks
3	Capital Team on both of those sites and I think part
4	of it is what's your vision and you've done a great
5	job of coming to us with what the vision is, and so
6	that - our two capital teams can get together and say
7	what works for stormwater management. What works for
8	parks for programming and I think that is really the
9	best way. I know it feels a little slow and
10	cumbersome because you're bringing one and you're
11	asking us to evaluate. That is because we've
12	evaluated a lot of the sites in Greenpoint and in
13	your district previously and hadn't been able to come
14	up with a cost effective project without these other
15	partners.
16	COUNCIL MEMBER RESTLER: Okay.
17	MELISSA ENOCH: So, I think it's a good strategy.
18	ANGELA LICATA: I just wanted to - oh I was just
19	going to mention one other site if I may, which is
20	the Gateway to Greenpoint.
21	COUNCIL MEMBER RESTLER: Yeah, which is great.
22	ANGELA LICATA: And that will begin construction
23	this summer. So, those opportunities that you bring
24	to us, where you know that there is maybe land that
25	is not utilized to its highest efficiency or highest

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS912level of productivity. We appreciate I think those3are one offs but to the extent that you find those4sites, I think identifying them for us is really5helpful. Sorry Marit.

MARIT LARSON: Not at all, I'm Marit Larson, 6 7 Assistant Commissioner of Natural Resources and Planning at the Parks and I just wanted to speak to 8 9 Parks role in green infrastructure site planning and design for design for a second. Not so much in 10 11 necessarily your district Council Member but citywide but we have a long history of looking for 12 opportunities both when we are doing our own capital 13 14 redesigns and are partnering you know very closely 15 with DEP as you know to especially to bring in funding to add those stormwater capture 16 17 opportunities. We've also sought grant opportunities 18 on our own and have gone in parallel over the last 19 ten years, well going on 15 years with DEP looking at 20 those opportunities in your district and others. So, it's part of our process all together and to 21 probably add but maybe it goes without saying, we are 2.2 23 fundamentally because of our ability to provide just

25 vegetated surfaces, our tree canopy, our soils. It's

the natural based of stormwater capture via our

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 92
2	a function that's critical throughout the Park
3	system.
4	COUNCIL MEMBER RESTLER: No, I just have to fund
5	it all. So, you know I mean we put \$15 million aside
6	for McCarren Park. I mean it's not an insignificant
7	amount of money and we put \$5 million into Greenpoint
8	Playground. We're trying our best to direct the
9	resources that we have access to to the areas that
10	are - where there's a resiliency opportunity and
11	where we can mitigate flooding. It's less to me
12	about - I mean like that is the thing that we have to
13	prioritize and these areas are flood zones, and there
14	is like a major health and safety risk that I feel a
15	deep obligation to prioritize in the resources we
16	have going to these places and I'm grateful for the
17	partnership from DEP. I wish that the city I mean
18	and you all come up with the resources to handle your
19	portions. I wish the city - I wish that parks had
20	resources to work with us, that you would prioritize
21	these areas as well. It's really just up to me to
22	come up with the money and then you'll cooperate,
23	which I'm grateful for the cooperation but like, I
24	don't know Matt, you're looking at me like I'm wrong
25	but it's true. You guys are nice enough and that's
I	

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS932fine but it's like totally my job to come up with3every single penny where the project doesn't even get4taken off the shelf.

5 MATT DRURY: I mean I guess I'd say we have like 6 a \$1.2 billion capital plan and like 80 percent of it 7 is you know funded by the sort of mayoral/admin. So, 8 I don't know if I quite agree with that, like the 9 onus of every like capital improvement in the Park 10 system.

11 COUNCIL MEMBER RESTLER: No, I'm saying in the areas where we have major flood risks, where I'm 12 13 looking for leadership from the Parks Department to 14 invest resources to help us, I'm getting cooperation 15 and everyone is nice and you've joined all the calls 16 and you helped work with DEP on the projects but I'm 17 not seeing any money. It's just whatever money I can 18 bring to the table and if I come up with enough money 19 for the project to work, it can work and if I don't, it doesn't. That's what I'm - I'm not saying that 20 21 everything that the Parks Department does is - so. 2.2 MATT DRURY: Got it, understood. 23 COUNCIL MEMBER RESTLER: Chair, thank you for your generosity and time. 24

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 94
2	CHAIRPERSON GENNARO: No, I want to thank you
3	Council Member Restler for Chairing the hearing of
4	this Committee and doing a great job by all reports
5	and you know just to -
6	COUNCIL MEMBER RESTLER: You didn't hear from
7	DEP.
8	CHAIRPERSON GENNARO: What's that?
9	COUNCIL MEMBER RESTLER: You didn't hear from
10	DEP.
11	CHAIRPERSON GENNARO: No, you know.
12	COUNCIL MEMBER RESTLER: I got a number of
13	reports from the Deputy Commissioner that my failure
14	to provide pizza was a major failing.
15	CHAIRPERSON GENNARO: Well, I understand that you
16	know to quote Robert DeNiro, I hear things and uhm
17	but regarding the 30 year time horizon, you know I've
18	had conversations with the Commissioner and it all
19	depends upon you know the speed at which we can -
20	it's all about money. About like, so the more money
21	like the quicker it can happen and you know the more
22	robust capacity that we can build, which gets me to
23	my point about the rental payment and I know that
24	everyone and DEP hates the rental payment and they
25	cannot say that but what this Administration has
I	

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 95
2	unfortunately done, I don't think it's the Mayor, I
3	think it's the budget director. This is a problem
4	and uhm, so I'm working with State Legislatures to
5	get a bill done that will just shut off the rental
6	payment. There is a state bill that says that we the
7	Council should be coconspirators with the
8	Administration at setting what the rental payment
9	level should be. We don't want to be part of that.
10	You know so, you know, so like the Administration
11	wants to stick the knife in four inches and we pull
12	it out two inches, and it's just like and that's a
13	win. It isn't. And so, you know the next mayor,
14	whether it's this mayor again or somebody else, just
15	won't have the rental payment as an option if I had
16	my way.
17	COUNCIL MEMBER RESTLER: I'm with you 100
18	percent.
19	CHAIRPERSON GENNARO: So, that's going to be key
20	thing because now do they not only put the rental
21	payment for one year, which is what it always used to
22	be when we're paying off the old pre-1985 debt. They
23	put the rental payment and then they baseline it.
24	And so, then the next years rental payment, then like
25	that gets baselined and so, it just becomes, it's

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 96 2 going to become the thing that just like eats up like 3 you know DEP's capital budget because a lot of our 4 money is going to things other than water and sewer and you can pretend to disagree with what I'm saying. 5 I know that you all support the Administration but I 6 7 mean you know the rental payment, the time has got to qo. So, thank you very much Council Member, 8 9 appreciate that.

So, now we're going to the lightening round okay. 10 11 Short questions, short answers, some questions 12 actually; we have some great prepared questions from 13 staff. Some you know in the course of the hearing, a bunch of them got asked but some that we should put 14 15 on the record. Play NYC committed the city to 16 constructing 300,000 feet, probably square feet of 17 porous parking lanes. Oh alright, not square feet, 18 we're talking like lanes of constructing 300,000 feet 19 of porous - is it parking lanes? Would it be like 20 parking lots or are we talking about like lane miles? 21 What's that? Oh, lane miles or whatever to capture 2.2 stormwater in the Bronx and Brooklyn. Can you 23 provide an update on the city's progress towards the construction of porous you know porous pavement 24 25 lanes? I messed that one up but I think you got most

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 97
2	of it. You got the gist of it. How are we doing on
3	the porous payment? Play NYC?
4	ANGELA LICATA: So happy you asked. We do have
5	plans for 330,000 linear feet of porous and the
6	status is varying. Last year we began construction
7	on a first large scale, porous pavement contract in
8	Brooklyn and 20,000 linear feet have been constructed
9	out of 38,000 linear feet. We have another project
10	which will be - actually two additional projects
11	which will result in 142,000 linear feet that we'll
12	bid this year and then we have about another 100,000
13	linear feet in design and about 50,000 linear feet
14	planned for design in the Bronx. So, that is our
15	strategy for taking the porous pavement in the areas
16	of the Bronx where we have had some high bedrock but
17	not too high, where we can actually be able to dig a
18	little more shallowly than our rain gardens, which we
19	talked about earlier being five feet. These are only
20	going down to about two feet.
21	CHAIRPERSON GENNARO: Right. Thank you. Thank
22	you.
23	ANGELA LICATA: You're welcome.
24	CHAIRPERSON GENNARO: Thank you for that. Uhm,
25	uh, in your testimony you mentioned that green

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 98 2 infrastructure can only be used where soil conditions 3 allow infiltration but would you agree that other 4 types of green infrastructure, such as the tension systems can be successfully implemented in areas with 5 Bedrock or a high ground water table? Kind of a good 6 7 follow up to what you just said. ANGELA LICATA: Yes and that is true. Detention 8 9 systems and tanks work really well because they have a closed bottom. So, we're not relying on 10 11 infiltrating. We're not exacerbating the ground 12 water condition. You're absolutely right. Then 13 we're really relying on the orifice size or the 14 slower release into the sewer system. 15 CHAIRPERSON GENNARO: Right. 16 ANGELA LICATA: Exactly right. 17 CHAIRPERSON GENNARO: Okay. Uh, okay this is a 18 Parks question. Well Parks and DEP. What are Parks 19 and DEP's respective roles in siting, designing, 20 installing, and maintaining green infrastructure in 21 parks? 2.2 MARIT LARSON: I can start from the Parks 23 Perspective. CHAIRPERSON GENNARO: Sure, just state your name. 24 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 99
2	MARIT LARSON: Marit Larson, Assistant
3	Commissioner of Natural Resources and Planning.
4	There are a number of ways that we work together with
5	DEP to ensure that we are designing and implementing
6	stormwater green infrastructure wherever possible in
7	parks. Both to manage our own stormwater runoff and
8	when appropriate manage runoff from the right of way.
9	One is that Parks designs and constructs GI
10	retrofits on parkland with DEP funding and
11	occasionally passed with grants funding, grant
12	funding to take runoff from outside the parks.
13	We also partner with parks with DEP in programs
14	such as our community parks initiative, where we're
15	building new parks and then adding DEP funding to be
16	able to add green infrastructure components into
17	those systems. That program has been going on for
18	ten plus years and finally, we collaborate with DEP
19	on opportunities to retrofit green infrastructure
20	into parks to capture neighborhood runoff where DEP
21	takes the lead. We still work very, very closely
22	with them of course because wherever that's possible,
23	we need to make sure that we're still protecting our
24	resources and providing park functions and some of
25	the bigger programs of course we've talked about

1 COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 100 2 today, the Cloudburst and Bluebelt programs and we're 3 continuing - we've worked with them for decades as 4 you've heard. Staten Island and continue to work 5 with them as they expand their programs to other 6 boroughs.

7 CHAIRPERSON GENNARO: Thank you. Appreciate that. What is the status of the Tottenville 8 9 Shoreline Restoration project? Sub question, can you explain what elements of this project incorporate 10 11 nature based solutions. So, the overall status and 12 what elements of the project incorporate nature based 13 solutions, Tottenville Shoreline Restoration project. 14 MERIT LARSON: Sure that's a project that has 15 been in development since Sandy, as opposed Sandy 16 Coastal Resiliency Project that incorporates Nature 17 based design elements throughout. It includes hybrid 18 reenforce stoons, revetments, earth and berms, 19 bioswales, along the top course of the earth and 20 reinforced berms where there is new coastal - where there will be coastal access and waterfront access 21 2.2 for the first time. The project is in - it was about 23 to enter a procurement. It's in its final design stage and while we were very thrilled to get FEMA 24 BRIC funding to complete the project and mass the 25

COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 101 appropriate, you know the budget we needed, we're now

3 paused with the FEMA on pause.

1

2

So, at this point, we're reassessing what it is that we might be able to do at the site. We're very disappointed of course because it's a long time coming and we'll be looking to see whether there's any approach that's feasible at this point. We have state and city funding in addition.

CHAIRPERSON GENNARO: Thank you. Thank you, 10 11 appreciate that. We were talking about the MS4 areas and like the tricky things about getting green 12 infrastructure in there. Here's the question. 13 What are the most common types of green infrastructure 14 15 that DEP and other partnering agencies have been able 16 to install in MS4 areas? We kind of touched on this 17 a little bit but just to kind of clarify it.

18 ANGELA LICATA: Yeah we have. It's very varied. 19 As we've been discussing, we've been looking to be 20 very strategic in the MS4 area by identifying 21 locations where we can get multiple benefits. We can improve the water quality by removing the pollutant 2.2 loads and we can also address and reduce flooding. 23 So, we have a number of public onsite projects that 24 we're doing with the Trust for Public Land and the 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 102
2	Parks Department. We have two really excellent
3	examples of our cloudburst. Project 1 is going to be
4	in St Albans right of way. Another is at the Rufus
5	King Park.
6	CHAIRPERSON GENNARO: Oh, that used to be in my
7	district.
8	ANGELA LICATA: There we go.
9	CHAIRPERSON GENNARO: I just lost it.
10	ANGELA LICATA: Yeah St Albans right of way is in
11	design and Rufus King Park, we have bid the
12	procurement.
13	CHAIRPERSON GENNARO: What are you going to do in
14	Rufus King?
15	ANGELA LICATA: So, that's going to be Cloudburst
16	management, working with some opportunity to direct
17	water from the streets and to utilize the low laying
18	areas and wet areas of the park.
19	CHAIRPERSON GENNARO: Okay, thank you.
20	ANGELA LICATA: We also have another one at
21	Archie Spigner Park, which is also looking to be Bid
22	soon. I'm going to put it that way and we have the
23	Montbéliard Cloudburst Hub, the design will start in
24	FY29. That's very close and drains to Thurston
25	Basin.

COMMITTEE ON ENVIRONMENTAL PROTECTION,

1RESILIENCY AND WATERFRONTS1032CHAIRPERSON GENNARO: Thank you. Thank you.3Okay, continuing our lightening round. Does DEP4consider co-benefits when selecting green5infrastructure for stormwater management such as6urban heat reduction?

1

7 ANGELA LICATA: Right, so that is most related to 8 when we're doing the green infrastructure, such as a 9 rain garden where we would have a tree or vegetation and some of the school yard projects where we've been 10 11 able to develop some of the green roofs associated 12 with the development of underground storage tanks. 13 So, we need to have that green element mainly to 14 achieve the cooling effect that we desire. And 15 that's why even those are the hardest to maintain, we 16 still try to promote that where it's possible for 17 that type of vegetation to thrive and to be supported 18 by our maintenance.

19 CHAIRPERSON GENNARO: Thank you. The Counsel was 20 trying to explain the question to me. You know but 21 I'm a little obtuse you know so I'll have the Counsel 22 ask the question.

COMMITTEE COUNSEL: Sure, I will ask it. The question I know that you mentioned in your testimony the green infrastructure is not - or the green acre

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 104
2	metric rather is not totally conducive both to
3	measure CSO reduction or to measure other sort of
4	benefits of green infrastructure like street
5	flooding. Does DEP believe or know of any other
6	metric that would better capture green
7	infrastructures impact on street flooding reduction
8	or on any of the other co-benefits?
9	ANGELA LICATA: Yeah, and I'm struggling - we're
10	struggling with this but we want to work with you on
11	how to address that question best to explain a green
12	acre is one inch of water over an acre of land.
13	That's just essentially meant to be a volume metric
14	target. So, it's never a greening an acre. It's to
15	be an efficient way of having water managed for the
16	CSO program. It's infiltrating it. It's taking it
17	out when the storm event occurs. Putting in the
18	vans, putting it in storage so that the rain event
19	can pass so that the CSO does not occur.
20	In the MS4 area, it's really about pollutant
21	removal and this is going to get even wonkier, which
22	is the same definition as water quality volume. It
23	took me the longest time to understand what does that
24	mean. The Chairman may know that better than I do
25	with your educational background but the water

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 105 2 quality volume is about having enough of the 3 pollutants removed. So, you're treating the water. 4 It's really a treatment metric. So, two different metrics but we'd like to work with you to figure out 5 a way to better relate that and to track that in a 6 7 way that's meaningful.

8 We're certainly tracking it. I heard earlier 9 from Council Member Holden that we have to build a measure of success. We do measure it. We are 10 11 measuring it today. What is the water quality 12 volume, how many stormwater you know management do we have? We're constantly looking at those metrics. 13 We 14 know how much we're achieving through our unified 15 stormwater rule. We know how much we're achieving through the projects that we're developing. 16 OMB 17 holds us to account on that and we hold ourselves to 18 a high standard. How to relate that in a way that 19 meaningful to the public is something that we're 20 struggling with.

CHAIRPERSON GENNARO: They have it and so, the Counsel to the Committee had the last word, actually you had the last word. I'm really grateful. It's you know - to have you come here and talk about how we have the best green infrastructure program in the

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 106
2	country and a lot of this stuff came out of the
3	comprehensive stormwater management plan that the
4	Council and I did, I think in 2008. That was really
5	done for CSOs. That was like the big thing. Now,
6	like the new one is more about flooding but you know
7	as time goes on, we have to have new and different
8	and, better you know stormwater management plans in
9	place as mother nature and climate change and take us
10	down this road. And so, this concludes the
11	questioning. We're grateful to DEP and Parks for
12	being here. Always great to engage with you do great
13	things for you know the city's environment and the
14	city's parks on behalf of the people that we serve.
15	That almost sounded like a speech. Okay, so it
16	wasn't. It was just all you know, it just came out.
17	I don't know, it happens and so. Thank you all very
18	much and so, I thank the panel. If the Sergeants who
19	ever could queue up. I just have to take a break for
20	a second. I'm going to say goodbye to Angela and
21	company and I'll be back in a moment and if we could
22	have - oh, oh no we have live witnesses right? We
23	have witnesses. We have in person witnesses and we
24	have virtual right? So, we're going to do the people
25	first right? They showed up. They should get on

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS1072first, okay and so if you could call the first3witness, I'm going to say goodbye to the panel and4then I'll be right back.

[02:21:05]-[02:27:55] Okay, we're starting the 5 public participation part and in order to do that by 6 7 the numbers, I have to read the following into the 8 I now open the hearing for public testimony. record. 9 I remind members of the public that this is a formal government proceeding and that decorum shall be 10 observed at all times. As such, members of the 11 public shall remain silent at all times. 12

13 The witness table is reserved for people who wish 14 to testify. No video recording or photography is 15 allowed from the witness table. Further, members of 16 the public may not present audio or video recordings 17 as testimony but may submit transcripts of such 18 recordings to these Sergeant at Arms for inclusion in 19 the hearing record.

If you wish to speak at today's hearing, please fill out an appearance card with the Sergeant at Arms and wait to be recognized. When recognized, you will have two minutes to speak on today's hearing topic of Nature based solutions for climate resiliency and disaster preparedness and proposed Intro.'s 1253 and

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 108
2	1254 as well as proposed Resolutions 131 and 143A.
3	If you have a written statement or additional written
4	testimony you wish to submit for the record, please
5	provide a copy of that testimony to the Sergeant at
6	Arms. You may also email written testimony to
7	testimony@council.nyc.gov. Let me say that again,
8	testimony@council.nyc.gov within 72 hours of this
9	hearing. Audio and video recordings will not be
10	accepted. And with that, I have the pleasure of
11	calling the first witness - that would be Em Ruby of
12	Riverkeeper.
13	EM RUBY: Good afternoon Council Member. I'm Em
14	Ruby, the Advocacy and Policy Coordinator at
15	Riverkeeper. Thank you, Chairperson Gennaro and
16	Members of the Committee, for your leadership to
17	promote nature-based solutions for climate
18	resiliency, and I appreciate the opportunity to
19	testify today.
20	Nature based solutions for climate resiliency are
21	absolutely critical for New York City's adaptation to
22	climate change. Riverkeeper strongly supports
23	efforts by the Council and DEP to expand the use of
24	nature based solutions to address climate threats
25	citywide. However, we do have some concerns
COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 109 regarding the two bills being introduced today and 2 3 how they propose to do so. 4 We oppose Intro. 1254. Riverkeeper appreciates 5 the Council's intent to ensure development of green infrastructure in the MS4 area, and that is a goal 6 7 which we have supported through the inclusion of GI in the MS4 area and the CSO Consent Order 8 9 Modification of 2023. We supported that modification. 10 11 However, we oppose this bill as the greened acre

12 target goal, we believe would undermine DEP's efforts 13 to reduce CSOs in the most polluted waters in the 14 city. While failing to drive meaningful flood 15 mitigation and other key benefits to communities 16 within the MS4 areas.

A greened acre is a unit that was created to measure the volume reduction of CSO and is a key target to ensure DEP is meeting its CSO reduction requirements to help remediate the impairments of most New York City waters.

A greened acre of green infrastructure is specific to CSO control for water quality improvement and cannot be used for flood risk reduction, which I

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 110	
2	believe this bill is attempting to do so and I know	
3	that Deputy Commissioner Licata also spoke to this.	
4	Setting a greened acre target in the MS4 area	
5	would result in widely disbursed and poorly planned	
6	infrastructure assets, having little benefit either	
7	in reducing pollution to water ways or to reducing	
8	street flooding.	
9	By setting a mandatory target of 2,400 greened	
10	acres over ten years in the MS4 area, this	
11	legislation will also place a significant burden on	
12	DEP. Currently DEP does not have the resources to	
13	meet this target and would have to take funding from	
14	the CSO program to do so.	
15	As a result, there is a one to one tradeoff in	
16	which every dollar spent in the MS4 areas decreases	
17	the funding for green infrastructure in the CSO	
18	areas. At which could risk DEP falling out of	
19	compliance with the CSO consent order.	
20	In order to achieve effective flood reduction and	
21	pollution control, green infrastructure in MS4 areas	
22	must be thoughtfully deployed in conjunction with	
23	gray infrastructure and other assets. For New York	
24	City neighborhoods to use green infrastructure well	
25	to significantly reduce street flooding, strategies	

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 111 RESILIENCY AND WATERFRONTS 2 like the Cloudburst program and the Bluebelt program, 3 which were spoken about today are needed. That 4 coordinate resilience on a neighborhood scale. Installing green infrastructure rain gardens and 5 bioswales will not have the kind of intended flood 6 reduction effect. 7

While we appreciate the intent of this bill as 8 9 written, we believe that it would have a significant negative effect including by diverting resources from 10 11 the city's very successful green infrastructure program in CSO areas while not significantly reducing 12 13 stormwater pollution or street flooding in the MS4 areas and we would like to work further with the 14 15 Committee and the Chair to find a more effective 16 solution.

17 CHAIRPERSON GENNARO: And certainly you have my 18 commitment. I always work with Riverkeeper and we 19 would be happy to continue the dialogue. Ι 20 appreciate the dialogue you've had you know you and your colleagues at Riverkeeper. There's been good 21 engagement. I think we keep it going and so I look 2.2 23 forward to that collaboration and I appreciate you being here and giving us the benefit of your views on 24 the record and your patience and you know waiting so 25

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS1122long to give your testimony. And please give my best3to everyone at Riverkeeper. I can go all the way back4to when Riverkeeper was founded, so it's just like -5EM RUBY: Well, you're not wearing your hat today6Chair.

7 CHAIRPERSON GENNARO: No, I'm not wearing my hat 8 I know and I like the hat because it keeps my balding 9 head from getting too much sun. So, I do appreciate that and yes, that is my go to hat when I'm on Zooms 10 11 and I always appreciate Riverkeeper and what they 12 bring to the table in terms of making a better environment and also their fashion statement with 13 14 their T-shirts and hats.

15 EM RUBY: Well, thank you very much and we look forward to working with you guys on this effort. As 16 17 I just, I just want to reemphasize, we really 18 appreciate the effort to expand nature based 19 resilience and nature based solutions for climate 20 resilience across the city, including in the MS4 21 areas and so we want to make sure that that happens 2.2 and so we look forward to working with you guys. 23 CHAIRPERSON GENNARO: Me too. Thank you so much and all the best Em. 24

25 EM RUBY: Thank you.

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 113 2 CHAIRPERSON GENNARO: Okay there are two more 3 slips that were filled out. I don't think that 4 people are still here but just to be thorough, 5 Christopher Leon Johnson and Peter, I can't read that, Peter Mallonousky (SP?). And so if oh, with the 6 7 Billion Oaster Project. 8 Seeing no one, we'll move onto the online. So I

9 have to okay, Section two of the public testimony
10 would be the folks that are going to be participating
11 at Zoom.

At the beginning of Zoom testimony - oh, oh, 12 13 that's just the note for me to read it. Okay, we 14 will now turn to remote testimony. Once your name is 15 called, a member of our staff will unmute you and the Sergeant at Arms will give you the go ahead to begin. 16 17 Please wait for the Sergeant at Arms to announce that 18 you may begin before delivering your testimony, 19 otherwise there will be like a spot where we can't 20 hear you. So, here we go. My God we got yeah, we've 21 qot - he's a really important quy, yeah. Well, it is my great pleasure and honor to call 2.2 23 my long time friend and colleague Paul Gallay

24 formerly of DEC, formerly of Riverkeeper. He was at

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 114 2 Riverkeeper now with Columbia Climate School. So, 3 Paul Gallay, please Zoom in. 4 SERGEANT AT ARMS: You may begin. 5 PAUL GALLAY: Thank you. I'm here and hopefully you all can hear me. 6 7 CHAIRPERSON GENNARO: Yes. PAUL GALLAY: Mr. Chairman and the other members 8 9 of the Council, thank you for this opportunity to testify. I am current Director of the Resilient 10 11 Coastal Communities Project. A partnership between the Columbia Climate School and the New York City 12 Environmental Justice Alliance, which seeks to foster 13 14 new collaborations between environmental justice 15 communities, practitioners, and researchers, to help 16 develop actionable, fundable, and equitable solutions 17 to flood risks that also deliver complementary 18 benefits, like habitat restoration, job creation, and 19 greater community cohesion and put into practice the Climate School's commitment to fairness, social 20 21 justice, and anti-racism. 2.2 I also represented DEC in negotiations with the 23 City of New York on the original 1192 CSO Consent Order and while with Riverkeeper engaged closely with 24 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 115	
2	the state and the city on the 2012 modified order.	
3	So, this goes way back for me.	
4	We are advocating for eight specific initiatives.	
5	We have submitted written testimony earlier today and	
6	I'm not going to read that testimony obviously but I	
7	will summarize the eight recommendations for scaling	
8	up green infrastructure, which are detailed in the	
9	written testimony and attached to the written	
10	testimony is the resilient coastal Communities	
11	Projects 2024 green infrastructure handbook, which	
12	studies the work in New York City and Hoboken and	
13	Portland Oregon, Los Angeles, New Orleans,	
14	Philadelphia, and [INAUDIBLE 02:39:22] in the Yucatan	
15	State in Mexico.	
16	And we feel that these other cities offer some	
17	great examples that can be borrowed into the work	
18	that's being done by DEP and other agencies here in	
19	New York City.	
20	SERGEANT AT ARMS: Your time is expired.	
21	CHAIRPERSON GENNARO: Paul, I'm going to give you	
22	a little latitude to continue so please continue and	
23	you know try to summarize but I'm going to give you a	
24	little latitude here.	
25		

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 116 2 PAUL GALLAY: Good. We urge the City Council to 3 support the following eight ideas relating to natural 4 and nature based measures and hopefully this can be within the time that you're giving me. Scale up the 5 green infrastructure solutions, such as the New York 6 7 City Cloudburst program and to the extent money is 8 being taken away from the BRIC program, use the 9 city's legal power if this process has been deficient the way this money is being taken away, you should 10 11 sue and get that money back. Simply stated. 12 Number two, center equity by prioritizing 13 historically underserved in high risk communities but 14 risk is not evenly distributed, the city must direct 15 GI funding and technical support towards front line 16 neighborhoods that have historically been underserved 17 and underrepresented. 18 Three, expand use of real time data tools to 19 drive targeted GI deployment initiative like Flood 20 net have already demonstrated how low cost, real time 21 centers can radically improve stormwater management. More about that in my written testimony. 2.2

Four, commit to long term sustained funding forGI implementation and maintenance, a theme that has

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 117	
2	already been examined today and so I won't continue	
3	to do so.	
4	Five, invest in education and workforce	
5	development to build long term capacity. New York	
6	must invest in the people who will build, maintain	
7	and innovate this infrastructure. We urge the	
8	creation of training programs, curriculum, and	
9	integration and certification pathways to grow the	
10	local green workforce.	
11	Six, center community codesign and all green	
12	infrastructure and resilience planning. Community	
13	trust, buy in and local expertise are essential to	
14	long term success of these investments.	
15	Seven, foster cross section collaboration and	
16	continuous innovation harness the strengths of its	
17	academic institutions, community organizations and	
18	designed professionals to advance green	
19	infrastructure research. Hopefully our green	
20	infrastructure handbook will be helpful with that.	
21	And finally, treat green infrastructure as	
22	essential climate infrastructure. This is the sum	
23	up. Green infrastructure and nature based solutions	
24	are core to how we must now think about flood	
25	resilience, public health, proven equity and long	

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 118 2 term sustainability. Green infrastructure must be 3 embedded across all levels of planning, policy, and 4 capital investment to ensure New York is not only reacting to disaster but actively and proactively 5 shaping a greener, safer future. So, thank you for 6 7 the extra time.

CHAIRPERSON GENNARO: Paul, thank you you know 8 9 for your - I mean we've been colleagues for many decades and you know staff here should know that 10 11 we're being addressed by a bonified environmental hero who is like still hitting it and still you know 12 13 putting a ball in the bleachers and uhm, we really 14 appreciate you Paul and thanks for all your great 15 advocacy. I wanted to make sure you got your points on the record. We're certainly going to you know 16 17 delve into the written testimony and really 18 appreciate all the work that you continue to do on 19 behalf of New Yorks environment. 20 PAUL GALLAY: I couldn't be more grateful to you. 21 Thank you Chairman. 2.2 CHAIRPERSON GENNARO: Thank you Paul, appreciate

23 it.

He really is a hero this guy, just so you know, I wasn't just saying that. Uhm, okay from the New York

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 119 League of Conservation Voters, Alia Soomro. Alia, 2 3 right? I said that right I think. ALIA SOOMRO: Yeah, you said that right. 4 SERGEANT AT ARMS: You may begin. 5 CHAIRPERSON GENNARO: Yeah, finally I said it 6 7 right finally, yeah. 8 ALIA SOOMRO: Thank you. Good afternoon. Μv 9 name is Alia Soomro and I am the Deputy Director for New York City Policy at the New York League of 10 11 Conservation Voters. Thank you Chair Gennaro and members of the Committee on Environmental Protection 12 13 for the opportunity to testify today. 14 New York City is vulnerable to multiple types of 15 climate risks, including but not limited to extreme 16 rainfall, sea level rise, coastal and inland 17 flooding, extreme heat, high ground water tables, or 18 a mix of all of the above. Climate change can also 19 amplify the impact of environmental injustices. 20 Preexisting social and economic challenges combined with the uneven distribution of climate change 21 impacts can make low income and communities of color 2.2 23 more vulnerable than others. With the climate denying presidential administration actively cutting 24 environmental regulations and funding, NYLCV urges 25

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 120 2 New York City to work with the state to prioritize 3 and invest in multi-hazard climate resilience and mitigation measures, including a mix of green and 4 gray infrastructure and natural and nature based 5 solutions along the city's coast. Centering 6 7 environmental justice and equity must be a key part in all climate and environmental planning and 8 9 policies.

NYLCV recommends the city continue investing in 10 11 smaller, stormwater management solutions, such as 12 raingardens, bioswales, permeable pavement, and wetland restoration. Green infrastructure should 13 continue to be prioritized and funded by DEP and be 14 15 expanded and implemented equitably so that all 16 neighborhoods can receive the environmental benefits 17 that come with them.

18 While the green infrastructure program has made 19 progress over the last few years, funding for 20 maintenance and operation is key. When it comes to 21 the related legislation, NYLCV has some concerns about Intro. 1253, a bill that would require DEP to 2.2 notify the local Council Member when DEP installs a 23 new bioswale, rain garden, or other bioretention 24 25 system in the public right of way.

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS1212Given the urgency of the climate crisis -
SERGEANT AT ARMS: Your time has expired.3SERGEANT AT ARMS: Your time has expired.4CHAIRPERSON GENNARO: Alia, we work together.5I'm going to give you a little latitude as well, so6please continue.

7 ALIA SOOMRO: Okay, thank you. Just given the urgency of the climate crisis, we think that a bill 8 9 requiring notice for small scale green infrastructure projects could slow down the city's existing work. 10 11 Moreover, the public is already notified of the 12 installation of new GI assets in the right of way through DDC, which is responsible for the 13 construction of these installations. That it 14 15 includes a 14 day public notice, which is sent out to 16 local elected officials as well as the signed up to 17 receive notifications through DDC's anywhere portal. 18 So, we're happy to continue working with you 19 Council Member Gennaro and other advocates to get the

20 bill where it needs to be but we just want to 21 emphasize that we think that green infrastructure 22 projects need more funding, maintenance and 23 operations.

And then wrapping up, we encourage the city to continue prioritizing cloudburst infrastructure and

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 122	
2	the Bluebelt program, and lastly, we hope the city	
3	makes progress in the coming years to develop an	
4	equitable, voluntary bioprogram. We look forward to	
5	working with you Council Member and the rest of the	
6	Council and other advocates. Thank you for the	
7	opportunity to testify.	
8	CHAIRPERSON GENNARO: Thank you Alia and I have a	
9	question for you. You ready? Little League	
10	Conservation Voters I guess, well not trivia because	
11	it's a big deal. Who is Paul Elston?	
12	ALIA SOOMRO: I'm not sure actually.	
13	CHAIRPERSON GENNARO: Paul Elston founded the	
14	League of Conservation Voters.	
15	ALIA SOOMRO: Okay, that's good to know.	
16	CHAIRPERSON GENNARO: And so I go back. Yeah, so	
17	here we are, you know we got this great institution.	
18	There's so much work and you know and particularly	
19	the people at LCV should know who Paul Elston is and	
20	so, uhm yeah he was the - he was the - he wasn't the	
21	day to day person but he was like the founder and	
22	like got it together and like raised the money and	
23	did all that and he's a great philanthropist and a	
24	good guy and so, I just wanted to get his name on the	
25	record because he is a very, you know he's got a	

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 123	
2	great legacy and that should - and people should know	
3	that so that's why I'm taking this opportunity to	
4	mention his name. He's been out of the league	
5	business for a long time but he is the founder, Paul	
6	Elston and now you have something - now you have	
7	something on everyone else at LCV. You know	
8	something they don't and so, Alia great to have you	
9	with us. Always appreciate your testimony and the	
10	great collaboration with the Leagues. Please say	
11	hello to everybody from me.	
12	ALIA SOOMRO: That sounds great, thank you.	
13	Thanks for the opportunity. Have a good day.	
14	CHAIRPERSON GENNARO: Okay, you bet, take care.	
15	Bye.	
16	ALIA SOOMRO: Bye.	
17	Michelle, it looks like Luebke, the SWIM	
18	Coalition. Always happy to hear from the SWIM	
19	Coalition, Michelle Luebke.	
20	MICHELLE LUEBKE: Did she say you may begin?	
21	SERGEANT AT ARMS: You may begin.	
22	MICHELLE LUEBKE: Sorry, hi, good afternoon. My	
23	name is Michelle Luebke and I am the Program Manager	
24	at the Stormwater Infrastructure Matters or SWIM	
25	Coalition. Thank you for the opportunity to deliver	

1COMMITTEE ON ENVIRONMENTAL PROTECTION,
RESILIENCY AND WATERFRONTS1242public testimony and thank you to Chairman Gennaro3and members of the Committee for your leadership on4promoting nature based solutions for climate5resiliency and protecting water resources in New York6City.

SWIM Coalition is a group of more than 70
organizations dedicated to ensuring fishable,
swimmable waters around New York City through
sustainable stormwater management practices and has
long advocated for nature based solutions to address
flooding, stormwater, and climate resiliency.

13 Not only because green infrastructure has the 14 capability to manage water in highly urbanized areas 15 but also because of the myriad co-benefits associated 16 with greening our cities. While the SWIM Coalition 17 typically supports promoting green infrastructure 18 throughout the city and has actively worked with the 19 Council and the DEP to expand the use of nature based 20 solutions to address climate threats citywide, we 21 have major concerns that the two bills being introduced today will not be effective solutions and 2.2 23 may have unintended adverse impacts particularly in environmental justice communities. 24

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 125	
2	In opposition to Intro. 1253, there are already	
3	notifications as has been mentioned to Council	
4	Members when new GI assets are being installed and we	
5	fear additional requirements could slow down or	
6	prevent new GI from being installed. We strongly	
7	oppose Intro. 1254 because the greened acre target	
8	goal does not accomplish what we understand the bill	
9	is intended to do which is address flooding and may	
10	in fact result water quality through the city. Two	
11	solutions we do support are earmarking the \$303	
12	million rental payment from the New York City	
13	Waterboard to replace the \$300 million in funds lost	
14	to Cloudburst, Coastal Resiliency and other climate	
15	projects being funded through the FEMA BRIC grant	
16	program. That will help address a lot of the MS4	
17	flooding issues and also including an additional \$4	
18	million to fund implementation of the unified	
19	stormwater rule, including 15 additional staff at DEP	
20	which will increase effectiveness of this program.	
21	SERGEANT AT ARMS: Your time has expired.	
22	CHAIRPERSON GENNARO: Please continue.	
23	MICHELLE LUEBKE: Thank you. Thank you for	
24	hearing our reasoning for opposing these bills. We	
25	will be submitting our written testimony with our	

1	COMMITTEE ON ENVIRONMENTAL PROTECTION, RESILIENCY AND WATERFRONTS 126	
2	concerns addressed in greater detail. We echo our	
3	partners at Riverkeeper in extending the offer to	
4	gladly work further with Council and DEP to find	
5	effective solutions for our common goals. Thank you.	
6	CHAIRPERSON GENNARO: I certainly appreciate your	
7	testimony. I could not agree with you more on the	
8	rental payment, which is why I'm going to do	
9	everything I can to make the rental payment go away	
10	within a year and that would really be a great thing	
11	and so, always appreciate collaborating with the SWIM	
12	Coalition. We appreciate your very intense advocacy	
13	and your enlightened perspective on everything that	
14	we try to do here. We depend upon you and we thank	
15	you for coming through.	
16	MICHELLE LUEBKE: Well, we thank you for your	
17	leadership.	
18	CHAIRPERSON GENNARO: Thank you. Okay and then	
19	the last witness we have is John Leyva. If I	
20	pronounced that right.	
21	SERGEANT AT ARMS: You may begin.	
22	JOHN LEYVA: Hi, unfortunately I'm not in a good	
23	environment to really comment but I'll just say I	
24	agree with both bills as written and I think they	
25	should both be passed and like again, I'm not in a	

COMMITTEE ON ENVIRONMENTAL PROTECTION, 1 RESILIENCY AND WATERFRONTS 127 2 good situation to speak right now. I'm picking up my 3 son from school. Sorry, I apologize. CHAIRPERSON GENNARO: No, you know we certainly 4 5 appreciate people going out of their way to make sure that they're part of our process, which is exactly 6 7 what you are doing. You're doing something very 8 important, picking up your son but you want to make sure that you get your voice on the record and that 9 you get your views heard and you are exactly the kind 10 11 of witness that we love to have. Someone who is not 12 in a game but has profound views that they want to 13 put on the record and so, that is who you are John and we appreciate your presence here today. Thank 14 15 you so much and good luck with your son. 16 JOHN LEYVA: Thank you sir. 17 CHAIRPERSON GENNARO: Okay, you bet. 18 If we have inadvertently missed anyone that has 19 registered to testify today and has yet to be called, 20 please use the Zoom raise hand function. If you are 21 testifying remotely and you will be called in the 2.2 order that your hand has been raised. If you are 23 testifying in person, please come to the dais. Anyone? Seeing none, I will now close the hearing. 24 Thank you to the members of the Administration and 25

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2	members of the public who have joined us today. This
3	hearing is adjourned. Let me do the gavel and make
4	it official [GAVEL]. Thank you all very much. God
5	Bless. Thank you to the Sergeants. Let's hear for
6	the Sergeants. [APPLAUSE]
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CERTIFICATE

World Wide Dictation certifies that the foregoing transcript is a true and accurate record of the proceedings. We further certify that there is no relation to any of the parties to this action by blood or marriage, and that there is interest in the outcome of this matter.



Date June 30, 2025