

CITY COUNCIL
CITY OF NEW YORK

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TRANSCRIPT OF THE MINUTES

of the

COMMITTEE ON ENVIRONMENTAL PROTECTION

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HELD AT: 250 Broadway
Committee Room, 16th Floor

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Chairperson

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CHAIRPERSON GENNARO: How about that? Okay. We're good. And so we're--we have sound, and I'm told we have television, like a live feed. We have to wait - - that's great. Okay. Welcome everyone. My name is Jim Gennaro, Chair of this Committee, and today we will hear Intro 834, a Local Law to amend the New York City Charter, in relation to convening the New York City Panel on Climate Change regularly for the purpose of producing a report on climate change adaptation in New York City. For more than ten years, the Committee on Environmental Protection has examined climate change impacts and demonstrated leadership initiatives to reduce greenhouse gas emissions locally. I was the sponsor of Local Law 22 of 2008, the New York City Climate Protection Act, although I myself - - call for a 20% reduction, I thought - - I wasn't sure I would be able to convince everyone in the administration - - they said, we'll see the 20, we'll raise you ten, let's make it 30. And yeah, that's not a deal I was going to walk away from. So, I want - - special thanks to the Bloomberg Administration for making Local Law 22 of 2008,

you know, the great law that it is, which we call the New York City Climate Protection Act. - - that City government reduces greenhouse gas emissions by 40% from a 2006 baseline level by 2017. That's for the City Government sector, and directly - - citywide greenhouse gas emissions from all sources, private and public, be reduced by 30% from a 2005 baseline, by 2030. On December 16th, 2011, this Committee also held an oversight hearing on climate change impacts, climate change impacts and mitigation measures. This hearing demonstrated that more can be done and needs to be done to address climate change impacts and adaptation measures in New York City. CO₂ increases, and normally - - continue. For example, on December 2018--2011, right after our oversight hearing, the - - Atmospheric Administration reported worldwide CO₂ levels at 392.19 - - okay and you've got to give me the units. We're talking, when we're talking scientific speak I can't just cite numbers - - units, okay. We're just having a little fun here. By April 8th, although, you know, climate change and - - is not fun, but you know, we can have a

good time while we're solving it. There's no law against that. By April 8th, - - passed a law - - against having fun? Okay.

MALE VOICE: - -

CHAIRPERSON GENNARO: Yes, no.

Yes, well. Yeah. Yeah, I don't - - come back to that right at this point in my statement, but - - and I'll try to come up with something. By April 8th of 2012, worldwide CO₂ levels had risen to - - .53, parts per million, four degrees since December of last year. Recent data, also from the--okay, so you get the idea. This is happening. The vast majority of scientists agree that the impacts of climate change include damage to ecosystems, such as coasts and coastlines, and to buildings and property from severe weather, and sea level rise and adverse health impacts.

PlaNYC's most recent climate change update - - impacts, - - mitigation measures. Okay. Well, I mean, we'll talk about that during the hearing, certainly, PlaNYC and - - great job. Next--oh. NYSERDA funding. Okay. NYSERDA - - climate report, which - - that within New York City and New York State climate change impacts are likely

1 to be - - but some households and sectors are
2 particularly vulnerable to climate change. Where
3 public health is concerned, impacts - -
4 susceptible populations can be deadly; but if you
5 do the right adaptation measures--you know what?
6 Let's - - we're kind of going on and on here, and
7 we're taking away from the good people who have
8 given their time and talent towards - - so - - in
9 December and we felt it really would be a good
10 idea, something that came out of there, which has
11 been, which is also included in the most recent
12 PlaNYC update, would be to mandate that the New
13 York City Panel on Climate Change, which was
14 convened in 2008, and produced a deliverable in
15 2010, which opined on various mitigation measures
16 that the City can do; we believe that this panel
17 should be institutionalized, they should meet
18 every two years and make public reports on its
19 findings. The panel will assess the city's
20 current infrastructure - - citizens, under
21 plausible future climate scenarios and proposed
22 adaptation measures based on those scenarios. And
23 recent data on climate change from a variety of
24 government sources supports the institutionalizing
25

the New York City Panel on Climate Change, and not work of this important panel to chance in the future. So, this was a good idea - - and the Mayor did a good thing in putting this together in 2008. They created a good product in 2010 that's been adopted, and we think that this should be ongoing. This was stated in PlaNYC's most recent update. This is - - City that this panel really should be further institutionalized and meet on a regular basis. So, basically the bill we have before us today is essentially - - PlaNYC, a good document to get very good ideas from and - - now and at the end of our terms is to make sure that the good work of PlaNYC to the extent that it can be crystallized into local law is certainly a good idea, and that will certainly oblige your future Councils and future administrations to heed the good work of PlaNYC, and this is one of the things that we think we should be doing quite a bit between now and when we leave. And I'm grateful to the staff for putting this - - together. We're joined by Council Member Koppell, from the Bronx. We have other members joining us. With that said, we'd like to call the first witness. From the

1
2 Bloomberg Administration we have Adam Freed, who
3 is representing the administration. He's with the
4 Office of Long Term Planning and Sustainability.
5 Everyone knows Adam. And we're grateful to have
6 you with us, Adam. He's taking the floor by
7 himself, he is. Adam, no help whatsoever? - - So
8 with that said, we'll follow - - hear in the
9 Committee - - swear the witness, and then you can
10 state your name for the record and proceed with
11 your good testimony. Thank you.

12 SAMARA SWANSTON: Hi. Do you swear
13 or affirm to tell the truth, the whole truth, and
14 nothing but the truth today?

15 ADAM FREED: I do. - - My name is
16 Adam Freed, and I am the Deputy Director of Mayor
17 Bloomberg's Office of Long Term Planning and
18 Sustainability. Good morning, Jim Gennaro,
19 Committee Members. My name is Adam Freed. I'm
20 the Deputy Director of the Mayor's Office of Long
21 Term Planning and Sustainability. On behalf of
22 the Administration, I appreciate the opportunity
23 to testify on Intro 834 and discuss New York
24 City's efforts to ensure that our climate change
25 initiatives are guided by the best available

science. This has been a hallmark of PlaNYC, Mayor Bloomberg's long term sustainability plan, and our climate resilience program, which was cited by the National Academies of Science's America's Climate Choices committee as one of the most comprehensive approaches so far in the United States. And this is also the subject of a - - of a hearing that happened last December. I personally want to thank the Chair and the Committee Members for their continued leadership on these incredibly important issues, and active partnership with our office and the administration to address the long-term challenges that face the city. The Administration supports the intent of the bill to institutionalize the regular adoption of New York City specific climate change projections, which are the foundation on which our climate resilience program is based, and a process to ensure that our efforts are based on the latest scientific information. PlaNYC, as you noted, includes an initiative to achieve these very goals. This includes institutionalizing the New York City Panel on Climate Change, which was convened by Mayor Bloomberg in 2008 to develop

City-specific climate change projections and to advise the City on scientific issues related to climate change. The NPCC consists of leading climate and social scientists, economists, and risk management and insurance experts. While this bill meets the broad intent of our initiative, there are several elements of the bill as currently drafted that we suggest be amended. The current bill broadens the scope of the NPCC to include topics that the panel is not constituted to address, and could divert the advisory panel's energy from critical scientific issues that remain unresolved. To best meet the City's scientific needs, the NPCC should focus on four critical activities. One, the regular adoption of New York City-specific climate change projections; two, the development of indicators to track changes in our climate and climate impacts; three, the provision of guidance on how to use climate projections and uncertainty ranges; and four, the periodic reporting on emerging issues related to climate science and modeling. This last activity includes addressing gaps in our current knowledge that are essential to effectively plan for climate change,

including the potential acceleration of sea level rise due to rapid ice melt and projections for wet bulb temperature, which is the combination of heat and humidity; wind, the frequency and intensity and the coastal storms; the relationship of air and surface temperatures on the urban heat island effect; and hourly rainfall. The NPCC developed and released the City's first official climate change projections in 2009. This work was funded through a \$350,000 grant from the Rockefeller Foundation. The panel projects that by mid-century, New York City's average temperatures will rise by three to five degrees Fahrenheit, and sea levels could rise by more than two feet. With rapid ice melt, this could be more like four and a half feet by the end of the century. By the end of the century, the city's climate may be more similar to North Carolina than present-day New York. While New Yorkers currently experience an average of 14 a year with temperatures over 90 degrees Fahrenheit, by the 2080s it could be more than 60 days a year, which is a very dramatic impact on our infrastructure, on our natural resources, and as you mentioned in your opening

statement, public health. These changes pose real and significant risks for New York City and have informed our climate resilience efforts, as detailed in December, and in the PlaNYC 2012 Progress Report released on Sunday. As our climate and the state of climate science continues to evolve, it is essential to reevaluate and update our projections. The current bill would require the NPCC to update its projections at least once every two years. This, however, could cause unnecessary expenses and undue confusion and redundancy in resilience planning and implementation efforts. Instead, adoption of new projections should be timed to take advantage of updated climate models and findings of the Intergovernmental Panel on Climate Change, which are released every four to five years. This would not prevent the NPCC from making amendments or recommendations to their projections on a more frequent basis, but would enable the development of new information and models to dictate this timeline rather than an arbitrary deadline. Thus, we recommend that the NPCC adopt new projections at least once every five years rather than once

every two years. Since the NPCC's projections were issued in 2009, the National Oceanic and Atmospheric Administration funded the Consortium for Climate Risk in the Urban Northeast, CCRUN, through its Regional Integrated Sciences and Assessments program. The mission of the CCRUN, which is comprised of scientists from Columbian University, City College of the City University of New York, the Stevens Institute of Technology in New Jersey, the University of Massachusetts-Amherst, and Drexel University, and I'll note that many of the scientists and people active in the CCRUN are also active and served on the NPCC. The mission of the CCRUN is to serve stakeholder needs in assessing and managing risks from climate variability and change. The creation of the CCRUN and the forthcoming National Climate Assessment, due to be completed by the US Global Change Research Program in 2013, could obviate the need for the NPCC to develop its own climate change projections. The NPCC could use existing models and information instead to adopt New York City-specific projections. If additional research or modeling is necessary, the City could work with

1 the CCRUN or regional scientific and academic
2 institutions to procure this information, which
3 would then be independently reviewed and vetted by
4 the NPCC and included in their adopted
5 projections. I thank you for the opportunity to
6 testify about this bill and to discuss the
7 Administration's efforts to increase the city's
8 resilience as well as your continued partnership
9 and leadership on these issues. We look forward
10 to working with you to revise the bill and ensure
11 that our climate risks are addressed through
12 informed decision-making, based on the latest
13 scientific information. I'm happy to discuss this
14 and answer any questions you may have.

16 CHAIRPERSON GENNARO: Thank you,
17 Adam. We certainly appreciate you being here, and
18 for your very concise statement. That kind of
19 gets right to, right to the points that you want
20 to make, which--thank you for being economical in
21 your statement. As for, when you turn to the last
22 page, about this interplay between the CCRUN and
23 the NPCC, saying that if CCRUN is planning - -
24 don't need NPCC to duplicate it, they can, you
25 know, pretty much tailor it to what we're looking

1
2 at here in New York City. That's basically what
3 you're saying, right?

4 ADAM FREED: You know, I think, and
5 we've done some research on how other cities
6 around the world deal with scientific projections,
7 and a number of cases, looking at London, that
8 they can rely on a nationally-funded UK set;
9 Tokyo, a lot of these are provided by the federal
10 government. As we see in the US, the federal
11 government is not in the climate change business,
12 per se. My hope would be that the CCRUN can
13 provide a lot of the scientific modeling, which is
14 what they're doing for the northeast region, from
15 Philadelphia to Boston and the cities in between.
16 But, I still very much support and believe we need
17 to have a specific panel advising the City that
18 can take the models that they're doing, vet them,
19 ensure that they meet the high standard that we've
20 had. If there are gaps in that knowledge, then we
21 can fill that. Again, have the NPCC service--we
22 think the distinction is that they adopt
23 projections rather than develop them themselves.

24 CHAIRPERSON GENNARO: Right.

25 ADAM FREED: In 2009 they did the

1 modeling, they--you know, we had grant funding to
2 do that.

3
4 CHAIRPERSON GENNARO: Right.

5 ADAM FREED: I think there's enough
6 of--

7 CHAIRPERSON GENNARO: [Interposing]
8 They did everything is what you're saying.

9 ADAM FREED: They did everything.
10 I think there's a scientific infrastructure now
11 that they can adopt and vet rather than produce it
12 themselves.

13 CHAIRPERSON GENNARO: Sure.
14 That's, that sounds fine. If people want to save
15 us time and trouble, we're all for that. Now,
16 NPCC came out with their findings in 2010, did
17 that - - inform the work of some city taskforce?
18 Tell us the composition of that taskforce, and how
19 that exchange works. So, you have the NPCC. They
20 - - in 2008, they came out with their - - in 2010,
21 that led to this taskforce that you're talking
22 about, and then that got parlayed kind of into
23 what?

24 ADAM FREED: Sure. So, they day
25 after, actually, in 2008, that we launched the

NPCC, the Mayor convened and kicked off the New York City Climate Change Adaptation Taskforce. It's a taskforce of 41 city, state and federal agencies and private sector companies--anyone who operates, owns or regulates critical infrastructure in the City. And we included our natural resources and ecosystems as part of the City's critical infrastructure. So, there are 12 city agencies on it, reflecting the fact that we actually don't control a lot of our infrastructure. 15 private companies, ranging from Con Edison, Verizon and our telecommunications, Army Corps of Engineers, AmTrak, - - rail freight. And the taskforce used the projections. And I think that's the role of the NPCC is to provide the scientific information that those people who own and operate and govern, and make investment decisions related to our infrastructure, our buildings, public health, can leverage that scientific information. So, using those projections at the building block to identify what our potential risks could be to climate change for critical infrastructure, and then work together to develop coordinated

1 strategies to mitigate those risks. That was an
2 effort that went on for about two years. They
3 mayor recently reconvened the task force to try to
4 develop a quantitative assessment rather than a
5 qualitative assessment that was completed a year
6 or two ago. And they're working forward on that.

8 CHAIRPERSON GENNARO: All right.
9 So the taskforce is still in existence. And they
10 continue to get marching orders from the mayor on
11 what they should be doing. And you envision the
12 role of this newly constituted NPCC to continue to
13 funnel the information that they need to continue
14 their good work, right?

15 ADAM FREED: Everything that we
16 want to make sure is data driven based on the best
17 available and latest science, and that is the role
18 of the NPCC, to make sure if we see new trends
19 emerging, new models, shifting from a baseline of
20 sea level rise to rapid ice melt changes,
21 anticipated temperature impacts, that we can
22 incorporate those into our plan so that we're
23 planning from a common baseline.

24 CHAIRPERSON GENNARO: And - - and
25 the name of this taskforce is what?

ADAM FREED: New York City Climate Change Adaptation Taskforce.

CHAIRPERSON GENNARO: I'm just--and the taskforce exists pursuant to an executive order - - or what?

ADAM FREED: We - - I think it's--

CHAIRPERSON GENNARO: [Interposing]

- -

ADAM FREED: Yeah, the Mayor's Office. The Mayor convened it. And the mission of it I hope will evolve and change over time as, you know, adaptation and climate rezoning is incorporated into planning, and it's not a separate effort. So, the mission of it is to identify the risks that we face in the critical infrastructure, and to develop strategies to reduce those risks. And I think the charge and the composition of the task force will evolve over time as we're able to implement it. And I'll note, you asked what is the connection to the implementation. And a number of projects, we've already seen how climate change, sea level rise, temperature increases, are being incorporated into--whether it's raising the elevation of pumps

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2 at some of our wastewater treatment plants,
3 putting in flood barriers in some of our plants,
4 elevating the entire Willets Point development
5 site out at the flood plane--

6 CHAIRPERSON GENNARO: [Interposing]
7 Right.

8 ADAM FREED: --60-acre site. All
9 that work is informed by projections produced by
10 the NPCC.

11 CHAIRPERSON GENNARO: So, the
12 question would be that we're taking the time and
13 trouble now, based on the findings and review, and
14 based on what you think - - the NPCC, so my
15 question is, would it make any sense to continue
16 to mandate that this taskforce also continue to -
17 - is that - - to do that? Because - - walking out
18 the door, you know, whatever, how many months, 18,
19 17, whatever it is.

20 ADAM FREED: 620 some-odd.

21 CHAIRPERSON GENNARO: Yeah. And
22 certainly, I mean, we already have it in law that
23 they have some long-term planning and
24 sustainability - - the NPCC. You know, you have
25 to kind of draw the line somewhere on like what

1
2 you're - - and what you're not, but if you're
3 going to do the NPCC and never - - put together -
4 - and, like, do the hand off to the taskforce, do
5 we need to take the extra step and make sure the
6 taskforce - - I mean, this is the question.

7 ADAM FREED: Yeah.

8 CHAIRPERSON GENNARO: I mean, if I
9 had thought about it, like, before this, maybe I
10 would have put it in the bill. It's not in the
11 bill now, so I guess the question to entertain is
12 whether or not that's something, you know, you all
13 think would be a good idea to do.

14 ADAM FREED: You know, I think
15 ensuring that we have the flexibility needed to
16 either create another taskforce or a different
17 effort - - and can evolve our efforts, we're
18 working and have a CDC grant to work out--Center
19 for Disease Control--impacts of climate change on
20 public health, and that may result on certain
21 actions. I would hesitate to create an
22 institutional requirement for a taskforce that
23 could prevent that flexibility from shifting, the
24 composition of it shifting. Again, the hope is
25 that we don't need the taskforce to focus on this

1 because it's incorporated into the long term
2 planning that we're doing. When that occurs,
3 we're not sure, but--

4
5 CHAIRPERSON GENNARO: [Interposing]
6 Right now there is a taskforce, and it makes a lot
7 of sense to have it, and people that are outside
8 of government that are on it. And these are the
9 people who are making decisions on, you know, - -
10 infrastructure and development - - I'm just
11 thinking, this is kind of - - to Council, that
12 perhaps there should be the, you know, some
13 reference to some kind of entity that should exist
14 to, like, receive this good work. You know - -
15 because we mandate it by law. And, you know,
16 they'll I'm sure at least figure out something,
17 some good and useful purpose to do with this. But
18 - - I think I like the taskforce notion that there
19 should be some kind of entity that is - - and
20 without tying the administration's hands or, like,
21 future administrations' hands, and we don't want
22 to get in the way of flexibility. I think it
23 should be at least in the bill or in - - I just
24 think it should be somewhere that if we're going
25 through the trouble to create this entity that's

1 shake hands on. And, but I just think there has
2 to be something - - the taskforce. I think that
3 would just make sense to kind of - - whether in
4 the bill or - - the intent is to kind of recognize
5 the taskforce, that is just as much the recipient
6 of this as they the Office of Long Term Planning.
7 And so, yeah, thanks. Thanks. Appreciate that.
8 I'm going to recognize Council Member Koppell in a
9 moment. I also want to recognize Liz Crowley, who
10 was here, and Council Member Vallone who is
11 chairing a hearing next door for Public Safety,
12 and had to make an appearance there as well.
13 Council Member Lander was here as well. And with
14 that said, I recognize Council Member Koppell.

16 COUNCIL MEMBER KOPPELL: Thank you.
17 Just because I was confused by the comment you
18 made in your statement, you say here the current
19 bill broadens the scope of NPCC to include topics
20 that the panel is not constituted to address and
21 could divert the advisory panel's energy from
22 critical scientific issues that remain unresolved.
23 And I read the bill, it's a short bill, and I
24 don't see anything there that is irrelevant to the
25 mission of the agency as I understand it, or the

1 panel, and I don't know what their energy could be
2 diverted to. So, you just saying that doesn't
3 mean anything to me.
4

5 ADAM FREED: Sure. I think the two
6 main issues that raised concerns were looking at
7 the impacts on infrastructure and looking at the
8 impacts of the climate changes where the panel is
9 made up of academic scientists. It's not actually
10 - - on in-depth knowledge of the City's
11 infrastructure, which is very vast and complex,
12 with 90,000 miles of underground cables, 14
13 wastewater treatment plants from varying decades,
14 7,600 miles of sewer lines, - - about 800 combined
15 sewer and storm - - falls. So, looking at what
16 the impacts are on the infrastructure and
17 evaluating that is something that, which is why we
18 pulled together the infrastructure operators to
19 leverage the science to take those experts who
20 understand what the science and what those impacts
21 could be on our infrastructure--Department of
22 Health, looking at and bringing in epidemiologists
23 to look at what is the impact on public health on
24 vulnerable populations from the climate
25 projections. The NPCC itself does not have that

1 expertise, that capability in the current
2 panelists who are on that. So, ensuring that we
3 can look at what are the scientific issues, what
4 are the climate models telling us, what are the
5 likely hazards that we face, rather than the
6 impacts that those hazards can bring onto the
7 city.

8
9 COUNCIL MEMBER KOPPELL: Well, if I
10 may, is somebody else doing the latter part?

11 ADAM FREED: That is the New York
12 City Climate Change Adaptation Taskforce, the 41
13 city, state, federal agencies, private companies,
14 that are actually taking the climate science,
15 leveraging that to look at what are the impacts.
16 They identified over 100 types of unique
17 infrastructure that could be impacted by climate
18 change. We're now doing the quantitative
19 assessment on that to measure the relative hazards
20 that we face. Then we have the Department of
21 Health that is running a three-year CDC funded
22 grant to come up with an assessment of the impacts
23 of climate change on public health, vulnerable
24 populations, and to develop strategies to reduce
25 those risks. So, you know, that's the

1
2 infrastructure we put in place, about 15
3 initiatives in PlaNYC to leverage the scientific
4 information to identify the risks and take steps
5 to reduce those.

6 COUNCIL MEMBER KOPPELL: Well, so
7 are you saying to me that this NPCC is only
8 looking at scientific models of what's going to
9 happen to the climate?

10 ADAM FREED: Correct.

11 COUNCIL MEMBER KOPPELL: Is that
12 what you're saying? That's all that it does?

13 ADAM FREED: That is what the--in
14 2009 they issued Climate Risk Information, which
15 were the climate projections. They then worked
16 with us and the serve as an advisory role, so we
17 are looking at whether the relevant approach is to
18 develop a risk-based approach. We have some
19 people there on the risk management - - who helped
20 us think through the approach that we took. But
21 their strength, and I think the tremendous value
22 that--and the gap that we need filled--is what is
23 the science, what is the information, how is that
24 changing. New models are continually coming out
25 about sea level rise, what's the relationship

1
2 between air and surface temperature, as we try to
3 mitigate urban heat island effect, which is a huge
4 variant in public health risks throughout the
5 city. So, having a scientific body that can
6 provide us with that information is absolutely
7 essential.

8 COUNCIL MEMBER KOPPELL: But
9 doesn't the latter part of your statement suggest
10 that some federal agency is doing that?

11 ADAM FREED: It is our hope the
12 federal agency may have funded a consortium of
13 academic scientists and others to develop some
14 information. Now, it's unclear what real
15 information will come out of it. So, our hope is
16 that through a national climate assessment,
17 through the CCRUN we'll get a lot of building
18 blocks that the NPCC can then adopt and vet and
19 use. We want to make sure we have our own body
20 and aren't reliant on other people. And if there
21 are gaps identified then we can work with them to
22 figure out how we fill those gaps and make sure
23 that it is vetted that there is a uniform
24 scientific body providing the City with the best
25 information and giving it a stamp of approval, so

1
2 that we have everyone working off of a common
3 benchmark.

4 COUNCIL MEMBER KOPPELL: And the
5 taskforce, how many people on the taskforce?

6 ADAM FREED: There are 41
7 organizations and entities.

8 COUNCIL MEMBER KOPPELL: It sounds
9 kind of unwieldy to me.

10 ADAM FREED: We've found it not
11 unwieldy. We break it down into groups around the
12 different sectors that we face in the city,
13 telecommunications, transportation, energy. We
14 have some of us that are looking at waterfront
15 areas, and our water supply system and drinking
16 water, and our natural resources. So, it has not
17 proven to be unwieldy.

18 COUNCIL MEMBER KOPPELL: Mr.
19 Chairman, if I might interrupt you for a moment.

20 CHAIRPERSON GENNARO: Sure.

21 COUNCIL MEMBER KOPPELL: I think
22 this is, this doesn't really make too much sense,
23 if I may say so. I don't have a problem with
24 there being a group that would validate other
25 information, but I don't think there's too much

1 point in sort of duplicating the work which other
2 agencies, which may have more resources, can do,
3 if it's being done. I think the important work
4 that a New York City panel can do is what is
5 assigned in the discussions now to this taskforce,
6 not the NPCC. Because they're essentially, I mean
7 you can have a group that will try to validate the
8 information, but we know that there are national--
9 and private--academic institutions - -that provide
10 us information. I mean, if we just have a panel
11 that validates information that I believe is
12 mostly generated or can mostly be generated
13 without spending city money, it is of marginal
14 significance. What is important is to study what
15 the city should be doing in light of that
16 information. That's the really important task.
17 So we have it a little upside down here in my
18 opinion. The important work should be done by--
19 and by the way, I don't say that the group that I
20 see as being important should not also look at the
21 issues that, you know, that this narrow group that
22 you sort of are defining should look at. That can
23 be part of their task. But I think, Mr. Chairman,
24 as I read the bill, the bill properly broadens the
25

1
2 assessment, and quite contrary to what the
3 spokesperson, Mr. Freed, is saying, quite contrary
4 to what he's saying, I think that that's the
5 important work. He says the current bill broadens
6 the scope to include topics that the panel is not
7 constituted to address and could divert the
8 advisory panel's energy from critical scientific
9 issues that remain unresolved. I think the
10 panel's energy and efforts should be addressed at
11 precisely those other issues, which by the way is
12 encompassed in your bill description. And yeah,
13 they can also look at the scientific information
14 available and make some assessment of it, but the
15 City of New York is not well-suited to be the
16 leader of the study of overall climate change.
17 That really should be done on a broader basis.
18 This panel should not be constituted to duplicate
19 that work, is what they would be doing.

20 CHAIRPERSON GENNARO: And I'm just
21 going to jump in here. And I think that
22 definitely Mr. Freed had said at the outset of the
23 statement that in - - when this was put together
24 that - - infrastructure - - you know, national
25 scientific - - to kind of deal with that, and now

1 there is. So - - call upon those folks to redo
2 that, maybe give them sort of like more of a
3 validation and not to repeat it and reinvent the
4 wheel. And notwithstanding the fact that Mr.
5 Freed made a statement, doesn't like the broadened
6 scope of the new panel, and I've been challenging
7 him; that doesn't mean I fully agree with him.
8 And I think that's certainly a really good
9 discussion to have. But I do continue to believe
10 that the - - that's been struck, which--the panel,
11 which you know, to get kind of colloquial, is like
12 the - - and the taskforce, who are like the
13 implementers and the people who, you know, do
14 things on the ground in the real world--not to say
15 that the academic world isn't real, but I think
16 this paradigm where you have like the - - doers,
17 is a good one, and I think to strike the right
18 balance of responsibilities, which is - - I think
19 your point certainly makes sense. I think my
20 point of making reference, you know, to a
21 taskforce in the bill or the intent certainly
22 makes sense, because want to make sure that we
23 have a handoff - - to the doers. So that's sort
24 of my colloquial take on that. And I mean, you

1
2 know, certainly we should be fully apprised of all
3 of the doing as we take this - - the tracks.

4 COUNCIL MEMBER KOPPELL: Well, in
5 fact you do right now in the bill. The taskforce
6 is mentioned in the bill. So, I think you've done
7 a very nice job with the bill. I wouldn't change
8 it at all.

9 CHAIRPERSON GENNARO: The focus is
10 - - I feel - - yeah. And so.

11 COUNCIL MEMBER KOPPELL: To put a
12 panel together to study climate change is sort of
13 a general issue. I don't think it's--it's
14 probably not necessary and that certainly
15 shouldn't be the only focus. The focus should be
16 on what is the city doing in response, what are
17 the options that the City has, at the very least.

18 CHAIRPERSON GENNARO: And I think
19 I'll let Mr. Freed speak to that- -

20 ADAM FREED: Thank you, Mr.
21 Chairman. I agree that the scope of what is in
22 the bill is very much what we should be doing and
23 what we are doing. My comment is, is that having
24 everything done by a New York City Panel on
25 Climate Change, that could become unwieldy, and

1 there are multiple efforts that are underway. I
2 had mentioned the Department of Health is looking
3 at the vulnerable populations, the impact climate
4 change will have on public health. I believe by
5 the end of the year we'll have a taskforce that's
6 convening of all of the infrastructure operators,
7 will have a scientific panel. It is our hope that
8 CCRUN and the National Climate Assessment provide
9 us with a lot of the information we need, that may
10 not be the case. And certainly to make sure that
11 we have the - - projection, there is some work
12 that may need to be done, and have that then
13 procured and then vetted, and have that third
14 party validator and verifier, which is very much
15 in line with the best practices of earth science.
16 I think that is why, it's a multi-faceted
17 component in terms of reporting on and ensuring
18 that there is a transparent process to it, and
19 that there is someone who is evaluating that is
20 very much the goal and I think intent behind the
21 law that requires every Mayor to have an update to
22 the long term sustainability plan once every four
23 years, an annual progress report that documents
24 the actions that are going on. We spent a lot of
25

1 time looking and putting together the 13
2 initiatives in PlaNYC that--and having a goal
3 about increasing the city's resilience to climate
4 risks, and in our progress report detail each of
5 the steps in that. And again, there is also
6 issues with incorporating it into the city's
7 hazard mitigation plan, which is going to be begun
8 next year through the Office of Emergency
9 Management, including climate change as a risk for
10 that for the first time. So, I think our
11 responses are incredibly multi-faceted and broad,
12 because it involves a lot of different agencies, a
13 lot of different activities under the PlaNYC
14 umbrella. Each of these entities has a critical
15 role, the NPCC being the scientific role. But the
16 broad scope that's in the bill I just think
17 applies to many different parties, not just the
18 panel.

19
20 COUNCIL MEMBER KOPPELL: My
21 response to that is that all of that is true, and
22 maybe this isn't the group that pulls all that
23 together, but somebody ought to pull it all
24 together, and this seems to me to be at least the
25 logical group to pull it all together.

ADAM FREED: And then - - the
Office of Long Term Planning--

COUNCIL MEMBER KOPPELL:
[Interposing] To pull all together the efforts
specifically related to climate change. There are
other issues, environmental issues that are
involved, but if you have one group that says
they're looking just at climate change, they
should not only be looking at the scientific
knowledge on what's happening, but also how the
city is responding. That's what the bill says.
I'm not making--I think the bill should remain
just the way it is.

ADAM FREED: I would argue that's
the charge of the Mayor's Office of Long Term
Planning and Sustainability, to look at the issue
to ensure that we have a coordinated response to
it and to be transparent and accountable and
reporting to it.

COUNCIL MEMBER KOPPELL: But that
office has a broader function, not just climate
change. This deals with just the issue of climate
change; it impacts other things too, but if you
have one group that's responsible for looking at

1
2 climate change, I think you want them to do more
3 than just validating other information that comes
4 from different academic studies and national-based
5 studies. Anyway. That's - - Mr. Chairman.

6 CHAIRPERSON GENNARO: I just want
7 to give people a--folks, like, how blessed a life
8 I lead, right? So, I put the bill forward, and
9 you know, you've got your perspectives and I've
10 got the former Attorney General sort of, like,
11 advocating for me. I don't see any former
12 Attorney General next to you, you know? So, I'm
13 thinking kind of like, - - like a knife to a
14 gunfight, you know what I mean? And so what can I
15 tell you? And so, when he shows up next time
16 with, I guess, Robert Abrams, then, you know,
17 we'll know--

18 ADAM FREED: [Interposing] - -

19 CHAIRPERSON GENNARO: - - pile it
20 on. I think I'd put, you know, two former
21 Attorney Generals up against Oliver any day. And
22 I think I would do well in that. So, thank you
23 Oliver. I - - just went right according to plan,
24 so that was great. That was great.

25 COUNCIL MEMBER KOPPELL: That was

great.

CHAIRPERSON GENNARO: - - and we're also joined by Council Member Levin, and thanks to you for being here today. And with that said, Adam, thank you very much for your testimony and for the partnership. Next time you come, we'd like to know what you're going to do. All right? Okay, very good. Okay. And I'll call the next panel. We have Paul Gallay from Riverkeeper. Thanks for being here, Paul. Catherine McVay Hughes, from Board 1 in Manhattan. And it's my understanding that Catherine McVay Hughes at our last hearing I think you stated that you didn't get a chance to testify earlier, and we're trying to make it up a little bit. I understand you have a time commitment. Thank you for having an ongoing interest in the - - of this Committee. We certainly appreciate you being here. I'm sorry we couldn't get you on last time in a timely way, but we're kind of making it up today. So - - great. And Buck Moorehead - - that will be on this panel.

- -

[pause]

CHAIRPERSON GENNARO: And just to

1
2 let the next panel know that they're on deck, we
3 have Sabrina Terry from Uprose, and two
4 representatives of the Metropolitan Waterfront
5 Alliance, Kara Matthews, Courtney - - We don't
6 know if there's two separate statements from the
7 MWA.

8 KARA MATTHEWS: There's not - -

9 CHAIRPERSON GENNARO: Oh, okay.
10 All right, - - next panel, but we have the panel
11 before us - - that the Counsel will swear in the
12 witnesses. - - okay? Okay, you know what you're
13 getting. Okay. Just, good luck.

14 SAMARA SWANSTON: All right. Would
15 you please raise your right hands? Do you swear
16 or affirm to tell the truth, the whole truth, and
17 nothing but the truth today?

18 UNISON: Yes, I do.

19 CHAIRPERSON GENNARO: Thank you.
20 Thank you all for being here. And - - hear the
21 statements in the order that I called the names.
22 We'll start with Paul and we'll work from the left
23 to my right, and hopefully I have statements from
24 folks if they have written statements. And does
25 anyone on this panel have a written statement that

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was circulated?

SABRINA TERRY: I submitted it.

CHAIRPERSON GENNARO: Okay. All right. We've got from - - and Paul and Buck, you're just going to - - okay. So, thank you. Thank you all for coming, and for the purposes of Paul's statement, I can take my glasses off. All right? So, I'll just listen. So, it's a pleasure to see you, Paul.

PAUL GALLAY: It's a pleasure to see you too, Mr. Chairman. And I myself never made it above Assistant Attorney General, but was please to sort of make it - - the best I can do. I'm proud to be President of Riverkeeper.

CHAIRPERSON GENNARO: Hear, hear. You took the line right out of my mouth. I was going to say, yeah. You've found something terrific. And the great job that you do there and in the DEC - - major motion picture, you know? So, please.

PAUL GALLAY: Yeah, Ishtar, maybe. Riverkeeper is a membership organization that has been in existence for 46 years and our job is to protect the quality of the Hudson River and its

tributaries, and also to help safeguard the drinking water supply for New York City and the downstate region. And I appreciate the opportunity to speak in support of the Intro. I'm going to talk briefly about the extent of risk that you are addressing, talk a little bit about some of the responses to date, and potential responses, and we'll talk about the benefit of the panel as you envision it. There are good reliable scientific studies that show that we may be looking at as much as 55 inches of sea level rise between now and 2080, and the main source for that, the main source for many of the things that I say, is going to be the New York State Taskforce on Sea Level Rise, whose report was released at the very end of the Patterson administration on December 31, 2010. Not only do you have the problem of sea level rise, you have the problems associated with storm surges, extreme weather events, that would work synergistically--a storm--with sea level rise to cause damage to both infrastructure and to vulnerable communities. You have the issues associated with temperature increase, changes in precipitation patterns. All

1 of these things are going to be a real toxic boom
2 when it comes to maintaining the quality of life
3 and protecting the infrastructure and protecting
4 our vulnerable communities, protecting us all for
5 that matter. I think the risk is self-evident.
6 But in the different categories of infrastructure
7 that I urge you to consider should this intro
8 succeed, of course sewage treatment--more about
9 that in a moment, we are a water group, after all.
10 Storm water management, fuel storage, energy
11 generation, communications, transportation, and
12 solid waste management. Now, the strategies that
13 would allow you to respond to this extraordinary
14 risk, are also, it's not something - - loud and
15 clear, clean white slate about. The Sea Level
16 Rise Taskforce has 14 recommendations, a number of
17 those recommendations worth taking note of--I'll
18 get into some of those in a moment and we can talk
19 a little bit more about response. But long story
20 short, given the extent of the risk, the 570 miles
21 of coastline, the numbers of combined sewer
22 overflow and storm water outflows, the recreation
23 facilities that would be endangered by climate
24 change, and the fact that we have millions of
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1 people really qualify as vulnerable citizens,
2 indicate that we really have got to go all in on
3 adaptation response. And I'm going to restrict my
4 comments to adaptation, because this is what this
5 panel is about. Lord knows there's lots we could
6 say about what we're not doing in this country and
7 what we're trying to do in this city on negation
8 and avoidance, but we're here to talk about
9 adaptation, which is a damned good thing,
10 considering the limited effort being made
11 nationally and how we can only do so much in New
12 York City on mitigation. Now, the benefits of a
13 panel such as you are envisioning with this intro
14 are extraordinary. And so many of them come down
15 to the value of a strategy that will not just
16 harness the best scientific minds, the mind - -
17 community, the resource institutions, the Mayor's
18 Office of Long Term Sustainability and Planning,
19 all of these entities have a hugely important
20 role. I mean, you're drivers, and we elected you
21 all and elected the Mayor and his people to drive
22 and to lead. But the communities, the vulnerable
23 communities, if they are not part of the
24 equations, it's going to be a little bit like the
25

1 sound of one hand clapping. You're not going to
2 get the results you need in terms of adaptation if
3 you don't have the communities as much in the mix
4 as you do the great men and women who are running
5 things from the top down. So, this panel can be a
6 clearinghouse for information, making sure that
7 every community board--I'm not going to talk about
8 community boards; I'll leave that to you, Cathy.
9 The different districts that you all represent in
10 the Council, the different local organizations--I
11 mean, just to give you an idea of how many groups
12 there are working in the different districts on
13 climate--how many of you knew that there is a
14 Sustainable Flatbush Organization? How many of
15 you knew that there's a White Roof Project? I
16 mean, it's great that we're all playing jazz and
17 we're all playing our own music, but we need a
18 clearing house that brings the energy of what's
19 going on in Flatbush to Melrose, to - - you've got
20 to have coordination. When it comes right down to
21 it, this is the central point of my testimony.
22 You need the grassroots, the community-based
23 organizations, the people who have the
24 relationships and the power to make change at
25

street level and at shoreline level, working just as hard as the Mayor's Office of Long Term Planning and Sustainability. I can't say much more, anything much more important than that. Best practices, I think you can play a role in helping to harness best practices. I'm proud to say that one of my board members, Paul Zofnass, has worked with a group of professors and students at Harvard University to come up with something called the Zofnass Program for Sustainable Infrastructure, which is literally a program to bring - - to infrastructure projects so that we are making sure that they are sustainable much the same as we like to try to make sure that our buildings are sustainable. It's really a great initiative, and again, we've got to be effective and efficient in bringing together all of these different groups. So, if you're going to play jazz, at least let's be a combo on it. So, I'm going to end immediately, because there's lots of folks who want to talk today, and I don't have much more to say. And I'll just try to make this little stump speech. This is New York City. We lead, which is a good thing, because given the

1
2 extent of the risk to our infrastructure and to
3 our vulnerable communities, we'd better lead.

4 Thank you very much.

5 CHAIRPERSON GENNARO: Thank you.

6 Thank you very much, Paul, for being here and also
7 for your statement and - - any questions or
8 comments for Cathy and for the panel in its
9 entirety. So, thank you sir. We'll get back to
10 you in one moment. And Cathy, please.

11 CATHERINE McVAY HUGHES: Good

12 afternoon, Chairperson Gennaro. My name is Cathy
13 McVay Hughes. I'm Vice-Chair of Community Board
14 1, and I'm here to testify on behalf of Community
15 Board 1 regarding climate change. I would say
16 based on your description, Community Board 1 is
17 one of those vulnerable populations, considering
18 we're bounded by the Hudson River on the west and
19 the East River on the east side. I'm proud to
20 report that at last night's full board meeting,
21 Community Board 1 unanimously voted to support
22 your intro number 3834, which is a Local Law to
23 amend the New York City Charter in relation to
24 convening the New York City Panel on Climate
25 Change regularly for the purpose of producing a

report on climate change adaptation. New York City CB1 supports additional research in the area of climate change, as it has in the past. I'll go into one such infrastructure project. ON January 25th, 2012, CB1 passed a resolution that the Army Corp. of Engineers to expeditiously conduct a study about the feasibility of installing storm surge barriers to protect New York City. This resolution was a result of a series of meetings and reports dating back to 2008. In 2008, Mayor Bloomberg convened the New York City Panel on Climate Change, NPCC, composed of leading scientists, social scientists, academics and risk management experts to advise the City on climate change. The NPCC projects that by mid-century, New York City's average temperature will rise by three to five degrees Fahrenheit and sea levels could rise by more than two feet, which would cover a lot of Community Board 1. By the end of the century, the City's climate may be similar to North Carolina than present day New York City, and sea levels could rise by as much as four and a half feet. On December 16th, 2011, David Bragdon, Chairperson of the New York City Long-Term

1 Planning and Sustainability Office, state at a New
2 York City Council Oversight Hearing of the
3 Environmental Protection Committee, that his
4 agency would commence a study of storm surge
5 barriers. According to Douglas Hill, a consulting
6 engineer and adjunct lecturer for the School of
7 Marine Atmospheric Sciences at Stony Brook
8 University, relative sea level has been rising
9 inexorably in New York City over the past 140
10 years, at an average rate of .27 meters or 10.7
11 inches, due to both geological subsidence and the
12 warming trend in the 20th century. There is
13 little doubt that New York City will be exposed to
14 major coastal flooding within the next several
15 decades, as sea level rises and storms may become
16 more frequent and severe. The flooding caused by
17 such a surge, which happened in the 19th century,
18 could be calamitous in particular to those living
19 within several blocks of the Hudson River. That's
20 us right here. According to one hurricane expert,
21 one who participated in the drafting of a
22 significant US Army Corp. of Engineers study of
23 storms and evacuation of New York City, a Category
24 3 hurricane could cause 30-foot storm surges,
25

1 flood hundreds of miles of the city's coast and
2 force evacuation of over 2.5 million residents.
3 The Federal Transit Administration has stated that
4 the combined economic and physical damage losses
5 from subway tunnel flooding under a 100-year storm
6 surge were estimated at \$48 billion at current sea
7 levels, and \$84 billion with four feet of sea
8 level rise, assuming a linear recover and an
9 estimate subway outage time of three to four
10 weeks. Direct physical damage alone was estimated
11 at \$10 billion for the former, and \$16 billion for
12 the latter. Given all this data and research, it
13 seems that a prudent response would be a
14 comprehensive study of storm surge barriers to
15 prevent New York City from being flooded. Storm
16 surge barriers have been built in London and
17 Rotterdam, and are being built in Venice to
18 protect those cities, and could be protective of
19 New York City. Community board 1 calls upon New
20 York City Council to support our request that the
21 Army Corp. of Engineers conduct a study about the
22 feasibility of installing storm surge barriers,
23 and that this study include consideration of
24 environmental and ecological impact of storm surge
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1
2 barriers. The City should not only rely on
3 evacuation and remediation activities at the time
4 of a weather-related disaster, but should
5 seriously evaluate what should be done ahead of a
6 disaster that might reduce or eliminate the
7 effects of a weather calamity. Again, - -
8 complete support in your panel. Thank you very
9 much.

10 CHAIRPERSON GENNARO: Thank you
11 very much for your strong support for what we're
12 trying to do here. And also for just being the
13 personification of what Paul is trying to get
14 across, about how people at the grassroots have
15 such a stake. And no one makes the case better
16 than actual stakeholders themselves. And thank
17 you for that. And I'll have something to say
18 about your statement, but we're going to hear from
19 Buck. Buck, good to see you.

20 BUCK MOOREHEAD: Good to see you.

21 CHAIRPERSON GENNARO: Okay.

22 BUCK MOOREHEAD: Good to see you
23 again.

24 CHAIRPERSON GENNARO: - - got to
25 make sure that's--how's that?

BUCK MOOREHEAD: Good to see you again. That's better?

CHAIRPERSON GENNARO: Yes.

BUCK MOOREHEAD: Yes. Buck Moorehead. I will say, I'm representing Building Consensus for Sustainability today. And I didn't actually write that down, and I didn't think it clearly, because I've been here so many times whether - - but, I want to talk--I full support this hearing and the efforts of the Committee to actually institutionalize something about this climate change bill, or what's established now. And I was listening and was actually informed by the discussion earlier. And what I would suggest--and my discussion is going to be fully about the process, because I think that ultimately what the City Council's value added here, which would be enormous, would be to institutionalize a process to follow moving forward. The question came up about the respective roles and the kind of ambiguity, and I - - and I haven't been following this particularly closely, I have to admit, but when I read the bill I wasn't sure quite who was doing what. And I think there's tremendous room

1 for this science-based, you know, obviously
2 understanding science has to be there. There had
3 to be a panel initially that did that, now there's
4 a movement toward using information that's
5 developed; but having a panel that exists that
6 actually vets that information, I think has value
7 for New York City. It wouldn't be a big
8 investment, but it would kind of take other--
9 gather information and vet it. That's clear. But
10 that could be established, that could be clarified
11 effectively in the bill that you're writing. But
12 the more important--I think that this discussion,
13 and you brought it up, this idea of dealing with
14 the taskforce itself. This climate change is--no
15 one knows what's going to happen, we just know
16 it's going to happen. It's happening now. It's
17 going to happen. This reference to plausible
18 future, that is, you know, that there be agreement
19 reached around plausible futures is really
20 critical. Reaching agreement around plausible
21 futures by the right stakeholders is really
22 crucial to Paul's point and to Community Boards.
23 Not necessarily top down, but bottom up and - -
24 it's very complex to do that. And the fact that
25

1 there's a taskforce that has 41 members, I'm not
2 surprised at all. It could have been 100, because
3 this is--climate change, you have impacts that are
4 crossing borders. New York City doesn't control--
5 New York City can't do anything that would need to
6 happen by itself to mitigate or to adapt to what
7 the impacts are going to be. And so, it's correct
8 that there is a taskforce that is federal, state,
9 you know, whatever. It should be as inconclusive
10 as possible with the right people there, but they
11 should also include Community Board 1 should be a
12 part of that taskforce, or some representation
13 across the board. So, I think that, again, what
14 I'm saying is it's not simple at all. It should
15 be happening perpetually, this taskforce, and
16 tying back intimately, whether it's three or four
17 years, five years, based on science, checking in
18 to what those plausible future are, because the
19 plausible futures will change based on the
20 science. So that's why we check back on the
21 science. But right now there are plausible
22 futures that people can act on. But the key thing
23 in this from a process standpoint is that no one
24 can forecast what's going to happen. And you're
25

not going to get agreement about what the exact future is, so you agree on plausible futures, maybe three or four--I don't know what the taskforce is doing, but three or four plausible futures. Then you reach agreement among stakeholders about actions that address as many of those futures as possible. Because you want to get agreement about what to do--what do we do, not what it's going to be, what do we do now. And those decisions take years to implement sometimes. So, we can't have a group, you know, we can't have a group that's meeting every five years that's doing that, or even two years. That's kind of an ongoing thing. And we can't have communities that are kind of in the dark about what a taskforce is doing either. Now that has to be a very open, transparent, inclusive taskforce. I'm sure Ms. Swanston over there can craft a couple paragraphs - - but I'm saying that that would be of enormous value, would be a--institutionalize a process. I think you're correct. The taskforce should be there front and center, because they are--that's what really matters, that the City is - - but is obligated to convene a taskforce, and don't tell

1
2 them who to pull in, because that will happen on
3 its own, or - - even how frequently. Anyway, I'll
4 end my comment there.

5 CHAIRPERSON GENNARO: Thank you,
6 Buck. It's always a pleasure to have you with us.
7 And usually it's, you're - - but - - is tough to
8 find someplace else.

9 BUCK MOOREHEAD: Albany.

10 CHAIRPERSON GENNARO: Albany. So,
11 I thank - - for all of her efforts and the many
12 things that she does. So, I'm going to start with
13 you and work backwards. Yes, so it makes sense to
14 have as many things set in stone, at least some
15 kind of template. And I think to some degree that
16 we were kind of spoiled by the Bloomberg
17 administration, because they take this various
18 seriously and came up with PlaNYC and then came up
19 with the Office of Long Term Planning and
20 Sustainability. And that's great. But, you know,
21 but we have to think about future administrations
22 and then, you know, not tell them in any kind of
23 overly prescriptive way how to do things, but...
24 I'm also getting to your point about you know,
25 bringing in the community, when we did with PlaNYC

1 as most people in this room know, when the
2 Bloomberg Administration did PlaNYC and I was part
3 of the initiative and - - by the Committee, and
4 there is all kinds of outreach in the local
5 community, and you probably participated in - -
6 and I think that was a glorious way to do it and I
7 think it reaped rewards, but again this is the way
8 the Bloomberg Administration does things, which is
9 great, but so you have to--we want to make sure
10 that we keep that template going forward. So, I
11 think it's--right now it's to make sure that we
12 absolutely get our point across - - by putting
13 forward, you know, we want this done the way the
14 Bloomberg Administration did it. You know? And I
15 think there's a way to do that without tying
16 peoples' hands and being really overly
17 prescriptive and just making sure that everyone
18 has a seat at the table. And I think that's your
19 point, you know. And so, we're going to, you
20 know, work to craft that so that we are, you know,
21 true to that spirit. And thank you. And for
22 Catherine, you did really good discussion, you
23 know, regarding the barriers and all the things
24 that could be constructed. And the way to really,

you know, do that is to, you know, work with all the stakeholders. And, you know, the - - that this stuff is just like so much money and who is going to pay for it and - - it's going to be hard to, you know, come up with the money that we need for all these good things - - so much of our federal leadership regards climate change as kind of analogous to sort of flat earth people, or whatever. And this is the, this is just what we're dealing with. Please.

CATHERINE McVAY HUGHES: Right.

So, you'll probably recall last August in 2011, before the ten-year anniversary not only was there the earthquake in New York City, but we also had, we were about half an inch at Battery Park from flooding, and so it's a real issue. And so, what we're urging is a study.

CHAIRPERSON GENNARO: Right.

CATHERINE McVAY HUGHES: To determine the feasibility of the storm barriers. And if all these other great cities have done it--

CHAIRPERSON GENNARO: [Interposing]

Oh, sure. And by no way am I trying to--

CATHERINE McVAY HUGHES:

1 [Interposing] We spent - - rebuilding lower
2
3 Manhattan.

4 CHAIRPERSON GENNARO: Believe me,
5 I'm not, you know, trying to pour cold water on
6 the need to, you know, bring good information
7 forward and, you know, make people take a look.
8 And the best way to ultimately, you know, - - the
9 only thing you can, in your power, to make your
10 point. And I think that's what you're trying to
11 say. And but it just--I don't want to be
12 pessimistic, but you know that there's this whole
13 notion of some people who just will not see,
14 notwithstanding anything that gets brought
15 forward, but that's, you know, a bigger
16 discussion. And certainly better to light a
17 candle than curse the darkness. And--

18 CATHERINE McVAY HUGHES:
19 [Interposing] And we were one of the neighborhoods
20 that were also evacuated due to the hurricane in
21 August - -

22 CHAIRPERSON GENNARO: Right. And
23 so, and - - I will direct staff to take a look at
24 the - - are you sure - -

25 CATHERINE McVAY HUGHES: Yes, we

1
2 passed a resolution on January 24th in 2012. So,
3 I can get you that resolution.

4 CHAIRPERSON GENNARO: Sure.

5 CATHERINE McVAY HUGHES: It's also
6 on our website, yes.

7 CHAIRPERSON GENNARO: Okay, if you
8 can get it to staff--

9 CATHERINE McVAY HUGHES:
10 [Interposing] Definitely.

11 CHAIRPERSON GENNARO: Or staff can
12 talk to Catherine, and then we'll find out whether
13 it's going to be - - as the Chair of this
14 Committee or the Committee, or the Council as a
15 body, that we should do something to--we should -
16 - what's his - - I don't know if you can use that
17 - - should send a letter to Colonel - - and just
18 give him the work to do. He's a very able guy
19 and...

20 CATHERINE McVAY HUGHES: And I also
21 want to reiterate, last August we were evacuated
22 because, you know, it could have been a lot worse,
23 because, you know, I remember going to emergency
24 preparedness meetings, and if the eye had hit
25 Atlantic City like they thought, at high tide, it

would have been terrible. It would have been terrible.

CHAIRPERSON GENNARO: It's certainly good to be lucky, but better to be prepared.

CATHERINE McVAY HUGHES: We were lucky.

CHAIRPERSON GENNARO: But - - be lucky every time, and people couldn't - - be lucky every time, and I don't think casinos would be making any money, right, if people were lucky all the time. And so, thank Catherine. We'll follow up on this, on the resolution to go to the Army Corp.

CATHERINE McVAY HUGHES: Thank you.

CHAIRPERSON GENNARO: Certainly. And, with regard, Paul, to the gospel of grassroots, yeah, I mean this was how PlaNYC came together, and I think this how our response to climate change also has to come together, and you know, figure out how to balance out the grassroots of whether that's more of like a taskforce thing or like a panel thing, you know. I'm thinking perhaps more and more with Buck, that it's really

like the taskforce, you know, that is kind of on the ground, you know, making sure people are kind of like - - and whereas the panel is almost like a, sort of like a more high level sort of - - agency kind of thing. And I think the taskforce is like whether, whether - - about like what we're actually going to do and who we're going to evolve. Do you see it that way?

PAUL GALLAY: I think the panel can be brainwaves or it can be any other waves, but the long and short is, as you pointed out, there's not a lot of enthusiasm for spending money about anything these days.

CHAIRPERSON GENNARO: Right.

PAUL GALLAY: For obvious reasons. In my experience, people will spend money for things that they feel they have some ownership of, that they're brainwaves have become somehow meaningfully involved in, and that if you want to get money to deal with climate change adaptation, have your panel have some sort of meaningful liaison with enough people who are in communities who can tell one another about successes and give them a sense of opportunity, not just a sense of

1 danger. It's a little bit like, and this is maybe
2 a bad metaphor for a climate change discussion,
3 but you know, there's an iceberg and you see
4 what's above the waterline, and there's more going
5 on below the waterline. So, just make sure you
6 have an effective process of having a two-way flow
7 of information, because otherwise people are just
8 going to say, you know, that's what they're doing
9 in downtown Manhattan, that's not--

10
11 CHAIRPERSON GENNARO: [Interposing]

12 No, I got you.

13 PAUL GALLAY: --something that I
14 really want to put my shoulder to.

15 CHAIRPERSON GENNARO: Right, right.

16 CATHERINE McVAY HUGHES: Yeah.

17 CHAIRPERSON GENNARO: Catherine?

18 CATHERINE McVAY HUGHES: Community-
19 based participation - -

20 BUCK MOOREHEAD: If I could just
21 add to that also, I think that the panel would in
22 the best circumstance be a member of the
23 taskforce. They would be part of it. They would
24 be, it wouldn't be that every person has to be
25 there at every meeting, but the panel is

1
2 represented on the taskforce, that way they're
3 part of--as Paul said, people are hearing what
4 that panel is doing, and what they need, and maybe
5 they need to do research or whatever. We're a
6 piece of it, you know, - - kind of level, frankly.
7 They're the science component of it, but there's
8 going to be people on the taskforce who are coming
9 from all levels of responsibility and influence,
10 and it's all kind of an interconnected web.

11 PAUL GALLAY: There's a science of
12 public engagement too. It's a softer science, but
13 you know, I have seen so many taskforce reports
14 and so many panels that only existed in the ether
15 of - - and I think you need as much talent on the
16 science of bringing the public into this as you
17 possibly can get. Because when we at Riverkeeper
18 started bringing the public into our water quality
19 sampling initiatives and started to get different
20 tributaries of the Hudson, volunteer sampling,
21 that's when the government started spending money
22 in different towns on the water quality
23 infrastructure. Same thing with the New York City
24 Green Infrastructure Plan. The Swim Coalition,
25 which is 80 or 90 groups, drove that plan as much

as the great men and women at the Mayor's Office and the DEP. You know, \$2.4 billion for green infrastructure sounds like a lot until you realize it's over 20 years. We've got to keep pressing on issues like this, and we need the grassroots support to do it.

CHAIRPERSON GENNARO: Thank you, Paul. And this will be the last - - Catherine.

CATHERINE McVAY HUGHES: We also have the Harbor School on Governors Island.

CHAIRPERSON GENNARO: I'm all over the Harbor School.

CATHERINE McVAY HUGHES: So, which has students from all over the City and state.

CHAIRPERSON GENNARO: Sure, sure.

CATHERINE McVAY HUGHES: Harness their - -

CHAIRPERSON GENNARO: I've been-- people I represent in the 24th District in Central Queens are - - a lot of my capital money that I can allocate as an individual Council Member, I - - finding its way to Governors Island and I take care of the schools in my District but, personally the money I can allocate as a member, a lot of

1
2 that money has found its way to the Harbor School,
3 and it's in everyone's interest that that school
4 succeeds. And one of these days I'll actually go
5 there. It's on my list. My money has made it
6 there - - but... And - - do a great job. And Paul,
7 if you can get us the information on what the - -
8 for infrastructure or whatever, I would--I don't
9 know if that's something that's on, I mean there's
10 lots of - - infrastructure, everyone from DEP down
11 to whomever. And I need more of that and I would
12 like more of it--

13 [crosstalk]

14 PAUL GALLAY: --end of the week.

15 CHAIRPERSON GENNARO: Okay, great.

16 And you know, you know how to get to the people on
17 my team. So, I want to thank this panel for a
18 great presentation and really thank you all for
19 taking the time to be here and - - okay?

20 CATHERINE McVAY HUGHES: Thank you
21 very much.

22 CHAIRPERSON GENNARO: Sure, sure.

23 [pause]

24 CHAIRPERSON GENNARO: Okay. And we
25 are going to bring up, what is going to be the

1
2 last panel. We have two people from MWA, whether
3 it's Kara or Courtney, whoever wants to come
4 forward to present testimony, that would be great.
5 Ms. Terry from Uprose. Catherine Skopic, it looks
6 like. Catherine Skopic - -

7 CATHERINE SKOPIC: - -

8 CHAIRPERSON GENNARO: Oh, pardon
9 me, okay. And Robert Trentlyon. I don't think
10 I'm saying your name right. I'm sorry.

11 ROBERT TRENTLYON: Trentlyon.

12 CHAIRPERSON GENNARO: Oh, it's a Y.

13 ROBERT TRENTLYON: Close enough.

14 CHAIRPERSON GENNARO: Robert
15 Trentlyon, please come forward. And if the
16 Sergeants can make provisions to seat all the
17 witnesses is - - Yeah, I'm directing the Sergeants
18 to make those provisions. If people could kind of
19 just skootch over a little bit. You know? Is
20 that a real word, skootch? I mean, it's used a
21 lot. I mean, it is now. It doesn't work for
22 Scrabble? Okay. I'm going to turn off the
23 microphone so none of this will be on the record.

24 [pause]

25 CHAIRPERSON GENNARO: Okay. This

looks like it's going to be a great panel. We certainly appreciate you all being here. Counsel for the Committee, Samara, will swear everybody in.

SAMARA SWANSTON: Would you please raise your right hands? Do you swear or affirm to tell the truth, the whole truth, and nothing but the truth today?

VOICES: [off mic]

CHAIRPERSON GENNARO: Thank you. Thank you all for being here, and - - from my left and to my right. And we'll start with the representative from Metropolitan Waterfront Alliance. It's either going to be Courtney or Kara, right?

KARA MATTHEWS: Yes. I'm Kara Matthews from Metropolitan Waterfront Alliance. I'm actually reading Courtney's testimony, she had - - this morning, so.

CHAIRPERSON GENNARO: Okay.

KARA MATTHEWS: I'm just subbing. MWA is a coalition of over 640 businesses, community and recreational groups.

CHAIRPERSON GENNARO: Okay, sure.

1
2 Please, continue. I thought that you hadn't said
3 your name for the record, but you did. So, it was
4 my mistake. So, please continue.

5 KARA MATTHEWS: Okay. 640

6 businesses, community and recreational groups,
7 educational institutions, and other stakeholders
8 committed to transforming the New York and New
9 Jersey Harbor and its waterways to make them
10 cleaner and more accessible, a vibrant place to
11 play, learn and work, with great parks, great
12 jobs, and great transportation for all. MWA
13 comments New York City for its progressive
14 leadership in addressing climate change impacts on
15 the City. New York City is recognized nationwide
16 for its climate change assessments, mitigation
17 strategies and adaptation strategies. We support
18 the proposed amendments to Local Law 22, and look
19 forward to working with the city on this and more
20 of the city's climate change work. MWA and many
21 of its partners have a unique perspective on
22 climate change adaptation that we believe should
23 be reflected in the proposed amendments. The New
24 York City waterfront is particularly vulnerable to
25 impacts from climate change, be it the frequency

and intensity of storms, sea level rise, or local flooding due to storm surges. Therefore, we propose additional language regarding the New York City waterfront and other edits to the proposed amendments. The New York City waterfront management advisory board was newly reinstated as of last year, and has begun to meet twice per year to review the progress on the City's implementation of the New York City Comprehensive Waterfront Plan. Goal 8 of the plan, identify and pursue strategies to increase the City's resilience to climate change and sea level rise, describes the challenges facing the city's waterfront. This includes impacts to parks, esplanades, piers, beaches, boat launches, residential and commercial buildings, the working waterfront, and industrial areas of the waterfront, and impacts on our transportation systems from storm surges and flooding from climate change and sea level rise. For these reasons, MWA recommends including in the New York City Panel on Climate Change, representatives of waterfront related NGOs and one to two representatives of the New York City Waterfront

1 Management Advisory Board. MWA also recommends
2 that in subsection 4, the following language is
3 included to ensure plans such as the New York City
4 Comprehensive Waterfront Plan, that include
5 climate change sections are included in the
6 assessment of plans, giving new findings and
7 climate change predictions. Adaptation plan
8 assessment, analysis and assessment of the New
9 York City Climate Change Adaptation Taskforces or
10 any other applicable department or office, active
11 or adopted adaptation plans, or section of the
12 plans that address climate change impacts, in
13 light of the panel's current findings and
14 predictions on climate change, data, and impacts.
15 In order to make sure the panel is effective and
16 responsive to a changing environment, MWA
17 recommends the panel meet at least once every
18 year, as opposed to the once every two years that
19 was proposed in the original amendment. Many
20 successful climate change working groups around
21 the country meet as frequently as bimonthly. In
22 addition, we propose the addition to the word
23 Waterfront, to section 2, to charge the panel with
24 the task of analyzing specific threats to the
25

City's waterfront, and developing an adaptation strategy to mitigate these risks as part of the report produced by the panel. MWA's general recommendations include more specific information about metrics for climate change indicators. MWA recommends that before determining climate risk factors and infrastructure impacts, policymakers must first look at climate change scenarios. For this reason, we suggest swapping section 3.4 with section 3.5. Analyzing and assessing climate change scenarios will give decision-makers the background to determine focus areas for mitigation and adaptation strategies. The analysis for determining climate risk factors and infrastructure impacts should assess the physical, economic and social vulnerability under varying climate scenarios. The proposed amendments did state the panel will meet to develop tools to assist in implementing procedures, actions, and programs to address current and future impacts on vulnerable citizens. In order for this to be effective, a method of communication between the panel and vulnerable citizens must be established. In order to accomplish this, we are proposing the

following addition to the section 3 of the amendment. The panel should develop a community or borough-level communications strategy in order to ensure the public is informed about the findings of the panel. As part of this strategy, the panel should aim to create a brief high-level version of the report that can be distributed to city residents, particularly those who have been deemed vulnerable citizens, in order to educate them about potential risks and the adaptation measures that can be taken to mitigate those risks. To ensure the effectiveness of communication measures, it will be essential to gauge the current level of knowledge and opinions on climate change, and how it will affect New York City as well as the willingness of residents to learn about climate change in order to take action. It will be essential for the panel to take advantage of existing modes of communication or through public forums. Some existing modes of communication include the City's website, newsletters, community boards, and through community-based organizations to gather this information and to distribute educational

information. Including information on climate risks, storm vulnerabilities and emergency evacuation procedures can also be effectively communicated through inclusion on tax bills, signs on public transit and at events. MWA welcomes New York City to participate in City of Water Day, on July 14th, 2012, by providing climate change adaptation resources and information at a booth or a table. This event attracts over 20,000 residents in New York City. MWA's 2012 Waterfront Conference will be held on May 18th, 2012, and will include a panel devoted to the topic of climate change adaptation. The panel will address the ways we can move forward as a region in the implementation of the New York State, New York City and New Jersey Municipal Climate Change Adaptation strategies. Implementation of any climate change adaptation strategy will involve many levels of political, jurisdictional planning, and financial complexity that we are only beginning to address. MWA looks forward to increasing the level of dialog about these issues and working with its government partners and alliance partners to work for progress in climate

change adaptation planning and implementation.

Thank you for the opportunity to testify today.

CHAIRPERSON GENNARO: Thank you.

Again, thank you for being so specific about your recommendations with actually text prepared. That is most welcome when it's put in that format; we certainly do appreciate that. And - - questions or comments for everyone on the panel. So, thank you. Thank you very much. And Ms. Terry, right?

SABRINA TERRY: Yes.

CHAIRPERSON GENNARO: And - -

SABRINA TERRY: Yes, I am.

CHAIRPERSON GENNARO: - - grab a copy of your statement.

SABRINA TERRY: Great.

CHAIRPERSON GENNARO: Okay. I'm ready.

SABRINA TERRY: Great, so.

CHAIRPERSON GENNARO: Just state your name for the record and proceed.

SABRINA TERRY: Sabrina Terry. Environmental Justice Planner for Uprose. So, good afternoon and thank you for the opportunity to testify before you today. My name is Sabrina

1 Terry, and I am the policy analyst for the
2 Environmental Justice Planner, Uprose, Brooklyn's
3 oldest Latino community-based organization. We
4 are a multi-cultural, multi-racial environmental
5 justice organization that builds
6 intergenerational, indigenous leadership,
7 mobilizes Sunset Park community residents on
8 issues of sustainable and just development, and
9 promotes governmental accountability and
10 participatory community planning practices.
11 Sunset Park is a waterfront community, located in
12 Brooklyn Community Board 7. It is home to 127,000
13 residents, most of whom are immigrants from the
14 Spanish-speaking Caribbean, Mexico, China, and the
15 Middle East. And Sunset Park is one of the six
16 significant maritime industrial areas designated
17 by the New York City Department of City Planning.
18 This designation attests to the fact that Sunset
19 Park harbors significantly more industries within
20 its boundaries than surrounding neighborhoods,
21 industries that pose numerous health threats to
22 the residents of the neighborhoods. Our working
23 class community of color also has a 90% risk of
24 storm surges within the next 10 years that will
25

cover a significant portion of the neighborhood, according to data that was provided by the Office of Emergency Management. Uprose is an active member of the New York City Environmental Justice Alliance, a coalition of grassroots organizations that advocate for improved environmental conditions and against inequitable environmental burdens by influencing City and State policies. We are also an active member of the Environmental Justice Leadership Forum on Climate Change, that advocates for climate justice policies that recognizes and addresses the burden placed on communities of color and low-income communities by the rapidly changing climate. We applaud the City Council's initiative to amend the City Charter for the purpose of strengthening the NYC Panel on Climate Change and producing a report that could assist communities such as Sunset Park. We are concerned, however, that preliminary outline of the amendments do not explicitly include the following. One, communities with inequitable environmental burdens, or also known as Environmental Justice Communities, included in the criteria or definition of vulnerable citizens.

Low-income communities of color are often more at risk because they live in geographically susceptible areas in close proximity to noxious facilities, which become public health threats in the context of extreme weather. The definition of vulnerable must take into account communities whose circumstances will require additional support. The second point we have has been--I'm going to echo a lot of what was said on the previous panel, which is a community-based research model that aims to strengthen and coordinate capacity on a local level, a participatory model will ensure that local knowledge is leveraged while simultaneously educating the community on their unique susceptibilities. This will also produce resolutions that are crafted in a manner that fit the unique culture and urban fabric of each community. Lastly, a more inclusive model could help encourage communities to leverage their own resources, thus becoming more self-sufficient and resilient. So, we are expressing these concerns based on our intimate experiences fighting for climate justice in Sunset Park as well as the

greater New York City. We urge you to recognize these additions that we have raised about the proposed amendments, and to sincerely address them so that the charter revision, excuse me, will truly accomplish their intent. In conclusion, we support the proposed amendment, as it will help to ensure a safer and more resilient city. Please count on our resources, knowledge, and skills to achieve shared goals. Thank you.

CHAIRPERSON GENNARO: Thank you, Ms. Terry. And I thank Uprose for all the work that they're doing - - it's been a pleasure to have you before the committee many times. And these are two very concrete recommendations that you've asked me to address and asked me to be sincere when I address them. And I will be sincere when I address them. I think sincerity is a good thing, so, thank you for asking me that. A pleasure to have you here. And Ms. Skopic, right? Ms. Skopic?

CATHERINE SKOPIC: Yes. My name is Catherine Skopic.

CHAIRPERSON GENNARO: Oh, Skopic.

CATHERINE SKOPIC: Yes.

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CHAIRPERSON GENNARO: Pardon me.

CATHERINE SKOPIC: That's okay.

CHAIRPERSON GENNARO: A C at the end, okay. And I have your comments before me. Okay, thank you. Please proceed.

CATHERINE SKOPIC: I'm Chair of the Environmental task force of the Congregation of - - within the Cathedral Church of St. John the Divine, and as such, I'm one of the eight founding members of The New New York, which a new group that focuses on renewable energy education. And I'm also Anglican Consultative Council Representative to the United Nations. So, I have a prepared statement. I have a few statements, responses to what's been said, but are not within my statement.

CHAIRPERSON GENNARO: - - it's a pleasure.

CATHERINE SKOPIC: Okay. Thank you for this opportunity to speak with you this afternoon about the importance of this local law to amend the New York City Charter, in relation to governing the New York City Panel on Climate Change regularly for the purpose of producing a

report on climate change adaptation in New York City. Congratulations to Samara Swanston, James Gennaro, of the Committee on Environmental Protection, and the Council Members who have worked on this important law, as well as Samara's assistants. And to Mayor Bloomberg, who in so many ways has contributed to the improvement of our City's environment. If you were to refer to the 2002 Oxford American College Dictionary, which some of us may have done, you would find that the Holocene, that began about 10,000 years ago, is a geological epoch relating to the present, and is the second epoch in the Quaternary period after the Pleistocene. However, referring to the Holocene as the present epoch is inaccurate. As most of you probably know, global scientists have updated this information, because for the first time in history, human activity has altered the planet. We have entered a new epoch. We are now in the Anthropocene epoch, anthro referring to human. Things are moving quickly. My name is Catherine Skopic, as I've said, and I'm an educator, artist, and environmentalist. I've been with the United Nations as a member of Civil

Society, engaged in the on-going process of preparing for Rio+20 taking place this year. This is the 20th anniversary of the first earth summit in Rio de Janeiro in 1992. I would like to take with me a commitment from the City in regards to its climate when I go. During one of the reports we heard from the global scientific conference at the UN, there was a report that stated that we have nine planetary boundaries that we've identified at this global scientific conference that took place a couple months ago. And three of the nine are either near or at the tipping point, and those three planetary boundaries that are in greatest danger are: one, climate change; two, bio-diversity; and three, the nitrogen cycle. In light of this, this new law being proposed today is right on target, as they say, in addressing the climate challenges we face here in the city.

Before the start of the industrial age, carbon dioxide content in the atmosphere was 280 parts per million, that's ppm. We are now way above that. In fact, there's even a website where you can find out the exact carbon dioxide at the moment, and that's www.CO2now.org, if you're

1 interested. Looking there you would find that in
2 March of 2010, we were at 391.8. The next year,
3 in March 2011, we were at 392.40. And this year
4 March it was 394.45. So, if you were to chart
5 this data of the CO₂ level, parts per million, from
6 the time record have been kept, you'll see we're
7 on a steadily increasing curve, and that you would
8 know that this is causing havoc for all of earth's
9 systems. The hottest summers have occurred within
10 the last three decades. We've just had one of the
11 warmest, driest winters on record. I've lived in
12 New York City since 1968, and this past fall, for
13 the first time, we experienced an evacuation--that
14 has been already referred to--for parts of the
15 City due to the oncoming storm and expected
16 flooding. Most of this one bypassed us, but there
17 will be more storms in the future. In fact, James
18 Hanson, one of our top scientists and a former
19 NASA scientists wrote a book published in 2009,
20 Storms of My Grandchildren--The Truth about the
21 Coming Climate Catastrophe and Our Last Chance to
22 Save Humanity. James identified, has identified
23 350 parts per million as the level we must get
24 back down to for our survival. And James Hanson
25

1 and Bill McKibben are working together on this.
2 You may have heard of Bill McKibben's 350.org,
3 involving efforts to accomplish CO₂ reduction in
4 over 180 countries around the world. So, at this
5 moment I just want to take a moment from my script
6 to say, responding to Adam's remarks, I do agree
7 with Kara and Courtney, who wrote that, that why
8 wait two years? I think it would be helpful to
9 have an interim report every year and then a major
10 report every year. So, I would go for, so if I
11 were to change it to in any direction - - as
12 opposed to what Adam said, four. And also as to
13 the makeup of the Committee, there's no reason why
14 a member of the task force could not be a member
15 of this group, bringing with them all of their
16 current scientific information. So, that would be
17 in addition to all the grassroots contributions
18 that are being made, so that you have both the
19 scientific and the local. And I do believe it's
20 important to change the Charter, because as
21 wonderful as Mayor Bloomberg is in so many ways,
22 there will be other mayors down the road. And if
23 we've actually changed the Charter, we would be
24 more likely to have this report coming on a
25

regular basis, so I do think this is essential that we pass this legislation. Anecdotally, I just want to say that I live in this area, and I'm often walking along the river, let's say from Chambers up to Houston St., and during high tide when there is a storm, it is not uncommon to see water washing up on - - I've seen it several times. So, we have to take these things into consideration. Okay. And just as humans have impacted the planet in negatives, humans can impact the planet in positive ways. We can work to adapt to, mitigate, and prepare for results of past behavior that cannot be changed at this point, and work to change the things that can be, for ourselves, future generations, and the very planet itself. And this piece of legislation does just that, helps us to prepare for and to adapt to the changes already set in motion, and in so doing makes us ever more mindful of our present behaviors, their effect on our earth, and the need to change our ways. For starts, we can move to renewable energy sources in as big a way as possible. And for here at this point, I'd like to put in a plug for the North Atlantic Offshore Wind

1 Project. I just came back from a conference and I
2 got a lot of information about that, and I found
3 that because of our electricity service and how it
4 works into the - - and so forth, we'd be very
5 prime for receiving energy from this project.
6 Again, in closing, congratulations Samara
7 Swanston, James Gennaro, the Committee on
8 Environmental Protection, and Council Members, for
9 your foresight and service to the citizens of New
10 York and the world, for this brilliant and much-
11 needed piece of legislation. Thank you.
12

13 CHAIRPERSON GENNARO: Thank you.

14 Thank you, Ms. Skopic for - - and like I told you
15 earlier, witnesses, please stay and - - after the
16 final witness - - may have comments for anybody -
17 - I've got your statement and - - before about the
18 ability to--about admitting it to the record. I
19 believe the testimony of Professor Bowman, is that
20 right?

21 ROBERT TRENTLYON: That's right.

22 CHAIRPERSON GENNARO: I'd be
23 honored if you could do that, his remarks are very
24 concise and very apt, and I would really
25 appreciate if you would do that. But certainly

1
2 with your statement, I need you to state your name
3 for the record, and then you can proceed.

4 ROBERT TRENTLYON: Do you want me
5 to read his first?

6 CHAIRPERSON GENNARO: No, yours
7 first. You know, - - you go first.

8 ROBERT TRENTLYON: Thank you, Mr.
9 Chairman. I'm really surprised that everyone is
10 here this morning, and Greenwich Village en masse
11 is going to a 10:00 a.m. meeting at the American
12 Indian Museum to stop NYU's expansion plans. And
13 everyone else is filling buses to Albany to lobby
14 against fracking. I am here to testify, but I'm
15 not sure whether I should be testifying for or
16 against this plan. I certainly like the idea of
17 including representation from the vulnerable
18 public. I don't think of myself as one of the
19 vulnerable - - but I am aware that if a major
20 hurricane hits New York City, they are the ones
21 who will be most affected, and based on what
22 happened in New Orleans, they are the ones most
23 likely to die. Did the last ad hoc NPCC report
24 mention the number of deaths that could occur?
25 Loss of life is definitely a risk factor. I want

1 to state that the NPCC report does provide a very
2 important services in describing the pace of
3 climate change, but if it does not do a better job
4 dealing with calamities, it can descend upon a
5 good portion of New York City residents, it is
6 really worth institutionalizing the report? The
7 many risk factors, loss of life, loss of
8 residences, loss of jobs due to the impossibility
9 of getting to work, the impact of the greatest
10 city in the world coming to a standstill for weeks
11 or months because of no working transit system
12 should be a paramount concern of the NPCC.
13 Certainly most people in this room realize that
14 I'm an advocate for a study of storm surge
15 barriers, and I am appreciative that both Long
16 Term Planning and city Planning will commence the
17 study of storm surge barriers in June, but unless
18 NPCC, which presently has no interest in storm
19 surge barriers and has not adequately addressed
20 risk factors, makes a major change, I would have
21 to be against institutionalizing an NPCC report
22 every two years. I realize that the theory of
23 resilience is very popular in governmental circles
24 at this time. In Douglas Hill's editorial, which
25

I am sure many of those in this room have read, he enumerates what risk factors were not covered in the last NPCC report. I should first point out to the committee though Doug now lives in Huntington, he was born in the Bronx, and received his BA and his PHD in engineering from CCNY. The five risk factors that have been ignored according to the American Society of Engineers are: Keep safety at the forefront of public priorities, quantify the risks, communicate the risks to the public and decide how much risk is acceptable, rethink the whole system, including land use and place safety first. I think part of the problem is that no engineers participated in the last NPCC document. In trust that if this legislation is passed, they will participate in both the discussions and in the writing of the next report. I'm just a concerned layman who has been reading some of the literature in the field and talking to many of the experts. I personally think that it's been proven that storm surge barriers work. Not only in Nearby Stamford, New Bedford and Providence, but also around the world. Secondly, no one is leveling with members of the public about the

1 degree of danger that they are in, and thirdly,
2 much of the land use policy the city has ignored
3 the dangers of future sea level rises by
4 continuing development in areas at sea level. In
5 believe that the City Council is the body of
6 government which is closest to the citizens of New
7 York City, and is first to reflect their concerns.
8 That is why I am sure that the Council will take
9 steps to make sure that NPCC will be more
10 inclusive in what it publishes in the future,
11 giving equal weight to the risk factors. I've
12 spent much time talking to members of the public,
13 and they don't have a clue about what impact
14 global warming will have on them. They are aware
15 of sea rises in the future, but they are not aware
16 of the danger they face personally, or the damage
17 their property could sustain. Most of their
18 assets are in their home. The MOMA show last year
19 gave an impression of how the city would cope with
20 the storm surges. I think it was quite
21 imaginative, but I would hardly say that it was an
22 adequate solution. To those who say storm surge
23 barriers won't work in the long run, I would
24 probably agree, but if they give New York City 100
25

1 to 200 years of safety, I think the public would
2 agree that it would be the expense. The
3 approximate \$10 billion planning and construction
4 cost is very cheap compared to insurance
5 companies' estimate that a Katrina-like storm
6 would cause \$200 billion in damage to property and
7 in work time lost. Barriers at The Narrows,
8 Arthur Kill and Throgs Neck could protect much of
9 New York City. Another plan that would consist of
10 a barrier from the Rockaways to Sandy Hook and
11 Throgs Neck would be of equal cost with the first
12 plan. I believe both plans will be studied by the
13 Office of Long Term Planning and Sustainability,
14 in conjunction with City Planning's Waterfront
15 Department. New York City's storm surge barriers
16 could be planned and built within 10 years, four
17 years for planning, six years for construction.
18 The new barriers in New Orleans took only five
19 years, and they were much more extensive. The
20 reason it has taken 30 years to build most storm
21 surge barriers is that much of the time is spent
22 getting the public and government to agree to
23 them. Unfortunately, both often have to be shown
24 by experiencing a major hurricane. What a waste
25

1 of time, resources, and lives. Bob Yaro of RPA
2 told me it usually takes two hurricanes; after the
3 first one people are lulled into thinking that it
4 won't happen again. It takes the second one to
5 convince them. I certainly hope we can learn from
6 other cities' hesitancy. Everyone is talking
7 about spending money on infrastructure, setting up
8 infrastructure banks. There would be no better
9 infrastructure project in this century than storm
10 surge barriers that would protect our beloved
11 city. That's the--

12
13 CHAIRPERSON GENNARO: [Interposing]
14 Thank you, yes.

15 ROBERT TRENTLYON: --first.

16 CHAIRPERSON GENNARO: That's your
17 statement, and then if you'd just go right into
18 Professor Bowman's, which is quite short.

19 ROBERT TRENTLYON: This is the
20 statement by Malcolm Bowman, School of Marine and
21 Atmospheric Sciences, Stony Brook University. He
22 also happens to be the Chair of the Department.
23 I'm now speaking as Malcolm Bowman. My name is
24 Malcolm Bowman, and I am Professor of Physical
25 Oceanography and Distinguished Service Professor

1 at the State University of New York at Stony
2 Brook. I am an expert on the tides, circulates,
3 waves, sediment transport and flushing
4 characteristics of the bays, estuaries, rivers,
5 inland seas, and coastal oceans surrounding
6 Metropolitan New York, Long Island, and the New
7 York Bight. My research is focused on storm surge
8 prediction, extreme waves and tsunami, rising sea
9 levels and other climate change issues. I was
10 appointed by Mayor Michael Bloomberg to serve on
11 the New York City Panel on Climate Change,
12 established in 2008. The panel met for one year,
13 culminating in the 2010 report, "Climate Change
14 Adaptation in New York City: Building a Risk
15 Management Response." I was responsible for
16 contributing to the projections of the magnitude
17 and rate of regional climate change. Thank you
18 for reading into the record this testimony on the
19 proposal to amend the New York City Constitution
20 in relation to reconvening the New York City Panel
21 on Climate Change for the purpose of producing a
22 regular series of reports on climate change issues
23 that are relevant to the future security and
24 survival of New York City. I support the proposal
25

1 to institutionalize the Panel. There is a
2 continuing and urgent need to evaluate the latest
3 science, environmental issues, economic threats,
4 infrastructure protection, societal concerns and
5 engineering solutions, centered around climate
6 change in all its manifestations. These concerns
7 and proposed solutions must be brought to the
8 attention of the City Council and the Mayor's
9 Office of Sustainability and Long Term Planning by
10 leading climate science, engineering and policy
11 experts on a regular basis. However, in my
12 opinion, the Panel needs to include wider
13 representation from various professional groups
14 and agencies than hitherto fore, it needs to meet
15 at least annually, and it needs to present a bi-
16 annual report to the Council. I recommend that
17 the proposed Panel be reconstituted to include
18 representatives, beyond those already suggested,
19 from the New York Academy of Sciences, the
20 Metropolitan Transport Authority, the Port
21 Authority of New York and New Jersey, The Nature
22 Conservancy, the Metropolitan Section of the
23 American Society of Civil Engineers, New York
24 State Society of Professional Engineers, and the
25

US Army Corps of Engineers (observer status).

Many or most of the proposed mitigation measures to protect the city against the twin threats of rising sea level and storm surges will eventually involve major excavation, beach nourishment and engineering works of a regional nature. Future Panel agendas must include feasibility and cost/benefit studies of storm surge barriers, which may be found to be the most cost effective long-term solution for protecting the hundreds of miles of shoreline of Metro New York for the foreseeable future. Such analysis were glaringly absent from the 2010 report. I also recommend that the Chair of the Panel be elected from within its members, and that the Chair rotate every two years to ensure the widest selection and evaluation of all relevant issues. Finally, many lessons can be learned from the experience of our European counterparts, particularly the U.K., Netherlands, Italy, and the Russian Federation as they move forward in protecting their major cities from the imminent threats of rising sea level, storm surges, and other manifestations of climate change. Respectfully submitted, Stony Brook, NY,

25th of April.

CHAIRPERSON GENNARO: Thank you.

ROBERT TRENTLYON: I hope you tell Malcolm Bowman that I read his speech better than my own.

CHAIRPERSON GENNARO: - - may know that Stony Brook is my Alma Mater, both for undergraduate and graduate, and - - institution of higher learning, - - I was happy to have that read into the record, and certainly it reinforces your point, Robert, about the barriers being part of the thinking that we go through when we talk about climate change adaptation. And if I have anything to say about it, and I think I do a little bit, I'm going to make sure that every, you know, possible good idea is put on the table, even though it may be hard to get some kind of consensus on, and may be even harder to fund. And so, I want to thank you for your very invaluable contribution to the hearing here today, and for your patience in waiting to give us your testimony. And Ms. Skopic, thank you for informing me, as a trained geologist - -

CATHERINE SKOPIC: Anthropocene.

CHAIRPERSON GENNARO: The Anthropocene epoch. When I woke up this morning I thought I was living in the Holocene. You know what I mean? And so... It just goes to show you what I don't know. And so I guess I have to go back to Stony Brook and get an update on geology timetables. So, thank you for that.

CATHERINE SKOPIC: If I could make just a brief comment.

CHAIRPERSON GENNARO: Brief, yes.

CATHERINE SKOPIC: Okay.

CHAIRPERSON GENNARO: Because I'm running out of time.

CATHERINE SKOPIC: In addition to the mitigation, everything that's written, it would be interesting to see a component that works on educating to prevent the kinds of behaviors that lead to this situation. As an educator it's very important to - - connect up with educational groups who are doing it, but to have some kind of recognition that part of the mitigation is educating for the future.

CHAIRPERSON GENNARO: Certainly. And I think New York City has done, you know, more

than its part in, first of all, putting forward our sort of groundbreaking Local Law 22, which is going to reduce greenhouse gases 30%, and all the education that we do in so many realms. And now we are really a beacon to other cities on the way to environmental sustainability. I think that we certainly can always do more, but - - this hearing is more about it's coming and, you know, how to deal with it than - - stopping it. You know, we're not, and so we're going to do that. That was kind of delightful music that we just heard, a better ring - - iPhone issues. The James Bond theme is that music, my ringtone. - - And thank you for the website that you put forth, the CO2now, the data, and all of those things that you - - we do hope that you are still in touch with your good friend Samara, who was mentioned several times in your statement. And so you're like part of the family now. You're in. You're in. - - And Ms. Terry, I want to acknowledge the good work of Uprose, and we certainly do appreciate the wonderful perspective that you and others EJ community certainly bring forward, with the real hope that you will stay part of this process as we

1
2 move forward. And - - two points that you make
3 here in your statement, which we will duly
4 consider, and we thank you for taking the time to
5 bring this forward today. And the MWA, if I ever
6 do a course on - - testimony that - - presented
7 before this committee, I think this would be
8 exhibit A. You make the case, you have the
9 language, this is what we want to see, this is why
10 we want to see it, this is how we want to say it,
11 this is why we think this should be expressed
12 within the bill. And so if we have a little
13 course for people to take before they come and
14 testify before this Committee - - so, I thank you.
15 And also, the references of City of Water Day and
16 conference coming up on May 18th, I will, we will
17 make a note to staff that if I'm able to
18 participate and able - - attend, I would like
19 staff to check up with the MWA regarding that.
20 And then, just - - so, and - - close connection.
21 And just - - MWA, right, - -

22 KARA MATTHEWS: He's not.

23 CHAIRPERSON GENNARO: He's not.

24 Okay, you have to talk into the microphone, sorry.

25 KARA MATTHEWS: No, he used to be

the program director, but now - -

CHAIRPERSON GENNARO: Okay. Oh, yes. He was program director back when the MWA gave me my big environmental award that I got. That was probably - - a couple of years ago. And I've - - Hey, Tish. Okay, we're - - and I think that's really the only award I've ever gotten. Yeah, imagine that. - - I'm kidding. But I certainly remember that, and I thank the MWA for all the great waterfront work. And also the - - program or whatever it was, is very - - it was just a good time, it was just like a big time. Sometimes you go to these awards things and they're all so very stuffy and everything, and this was just on the water, it was a great time, and it--

KARA MATTHEWS: [Interposing] You got a boat parade?

CHAIRPERSON GENNARO: Pardon?

KARA MATTHEWS: You got a boat parade?

CHAIRPERSON GENNARO: A parade?

KARA MATTHEWS: Oh, it was too many years ago. But yeah, we have like a boat parade

at our event.

CHAIRPERSON GENNARO: Oh, I just got a--I got a life preserver. I got a life preserver that I actually do use, because I'm a boat owner. And so yeah, it's--so rather than hanging on walls, it's in a boat. So.

KARA MATTHEWS: That's great.

CHAIRPERSON GENNARO: It comes in very handy, and my daughter likes to float on it as well - - and so. It has my award kind of written on it and then--anyway. - - Wonderful panel and you've brought forth so many great perspectives. And I thought this was going to be like a little crazy hearing, but this is something that the administration wants and something that I do want to, and, you know - - but it is - - we do want to get this right, and you know, we certainly have the commitment of the Bloomberg Administration, and - - work very well with them. - - Office - - Office. - - Oh, they did? Okay. And so, - - no they do, and we will work with them and all of you to fashion a bill that does everything it needs to do and needs to be, and I want - - here today. And, you know, with that

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said, I'm going to adjourn the hearing. And we're

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out of time, because there is another hearing that

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is going to commence here in five minutes. So,

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this is perfect timing. And I want to thank you

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all, and with that said, this hearing is

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adjourned.

C E R T I F I C A T E

I, Erika Swyler, certify that the foregoing transcript is a true and accurate record of the proceedings. I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.



Signature

Date 5/10/2012