

CITY COUNCIL
CITY OF NEW YORK

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TRANSCRIPT OF THE MINUTES

Of the

COMMITTEE ON PARKS AND RECREATION

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December 16, 2014
Start: 10:11 a.m.
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HELD AT: 250 Broadway - Committee Room
14th Floor

B E F O R E: Mark Levine

COUNCIL MEMBERS:

Darlene Mealy
Fernando Cabrera
James G. Van Bramer
Andrew Cohen
Alan N. Maisel
Mark Treyger

A P P E A R A N C E S (CONTINUED)

Bram Gunther,
Chief of Forestry, Horticulture, Natural Resources
New York City Parks Department
President of the Natural Areas Conservancy

Sarah Charlotte Powers
Executive Director
Natural Areas Conservancy

Kate Spellman, Chief of Staff
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Erika Swensen, Research Social Scientist
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Eric Sanderson, Ecosystem and Landscape Ecologist
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Susan Albin, Ornithologist
PhD in Ecology, Evolution, and Natural Resources
Director of Conservation Science
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Tupper Thomas, Executive Director
New Yorkers for Parks

Linda Cox, Executive Director
Bronx River Alliance and
Bronx River Administrator
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Christina Taylor, Executive Director
Friends of Van Cortlandt Park

Robert Bate, President
Brooklyn Bird Club

Suzanne Corber
Save the Putnam Trail Campaign

Johanna Clearfield, Founder and Director
Urban Wildlife Coalition

David Bird

[sound check]

CHAIRPERSON LEVINE: Good morning everybody. We need to call this meeting of the Parks Committee to order. [gavel] Today, we'll be examining New York City's natural areas. I'm pleased that we're joined by Council Member Maisel from Brooklyn, and Council Member Cohen from the Bronx. Today, we'll be examining, as I mentioned, New York City's natural areas. We'll look at the state of these vital resources, the conservancy created to protect them, and the groundbreaking surveys underway to assess and catalog their ecology. Much of the outside world, and even a few New Yorkers think of our City as a concrete jungle with 8.4 million people packed into an area of only 305 square miles, it would be easy to assume that every inch of land here must be fully built up.

Yet, within the five boroughs, there are no less than 10,000 acres of undeveloped parkland, including forests, river systems, fresh water wetlands and saltwater marshes. Every one of the five boroughs includes natural areas from Pelham Bay Park in the Bronx to Freshkills Nature Preserve in Brooklyn to Inwood Hill Park in Manhattan to Alley

Pond Park in Queens to the Evergreen Park Reserve in Staten Island to North Brother Island in the East River. Together, all the natural areas in the city would be enough to cover the Island of Manhattan from its southern tip all the way north to 125th Street. The astonishing diversity of life in these ecosystems again defies common perceptions of the big city.

Our natural areas are home to no fewer than 2,000 species of plants and 350 species of birds. Our forests and wetlands are also critical environmental infrastructure helping to improve area water quality, mitigate extreme temperatures, sequester carbon, absorb storm runoff, and reduce the impacts of UV radiation. But, these vital resources are under threat from misuse and neglect. Harmed by illegal recreation, invasive species infestation, and the negative effects of climate change. The Parks Department's Natural Resource Group is charged with tackling these challenges. The division is composed of biologists, natural resource manager, and restoration ecologists to develop and implement programs for the protection, acquisition, and restoration of the Park system's natural resources.

In light of the Park's Department's ongoing budget challenges, we'll be looking to learn today about the resource constraints faced by the NRG including the decimation of the Park's Rangers Program, which today has a headcount of only 12 for the entire system. Complementing the NRG is the newly created natural resource areas-- Natural Areas Conservancy or NAC. Formed in 2012 by the Parks Department as a vehicle for raising private funds to bolster fragile green and blue spaces throughout the city. Today, we'll be looking to learn about the finances and operations of this hybrid public-private entity with comparisons to and distinctions from the more common single park conservancies around the city.

We'll also be learning today about the two landmark studies of our city's echo system, which NAC and its partners are currently completing. This research includes the first ever comprehensive ecological assessment of all 10,000 acres of the city's natural areas providing an inventory of biodiversity and the evaluation of ecological health. A second study will offer an in-depth analysis of patterns of public use in natural areas based on

thousands of interviews and observations of park goes by the United States Forest Service and NAC. Together, these two projects will provide policymakers with unprecedented tools for planning and resource allocation.

In our hearing today, I hope we'll be able to address some of the following questions:

- How do we balance the need for environmental preservation especially wildlife conservation with the need to make natural areas accessible to all New Yorkers?

- Does the usership of these areas match the diversity of our city? If not, how can we make sure that New Yorkers from every community can enjoy these wonderful places?

- How can we prevent harmful or illegal activity in our natural areas with such a miniscule number of park rangers performing enforcement?

I look forward to hearing from the Administration, advocates and the public on these and other questions in what will be the City Council's first ever hearing on this important topic. And I would like to start by welcoming the Administration to present its testimony on this issue. Thank you.

[Pause, background comments]

CHAIRPERSON LEVINE: If you can introduce yourselves and then we have a formality now of swearing or affirming in Administration testifiers, which I'll ask Kris to do for us.

[Pause]

BRAM GUNTHER: Hi, I'm Bram Gunther. I'm the Chief of Forestry, Horticulture, Natural Resources for the New York City Parks Department. I'm President of the Natural Areas Conservancy.

SARAH CHARLOTTE POWERS: I'm Sarah Charlotte Powers, and I'm the Executive Director of the Natural Areas Conservancy.

KATE SPELLMAN: [off mic] I'm Kate Spellman, Chief of Staff [sic] for the Parks Department.

KRIS SARTORI: Kris Sartori, Committee Council. Do you affirm to tell the truth, the whole truth, and nothing but the truth in your testimony before Council Members today?

BRAHAM GUNTHER: Yes.

SARAH CHARLOTTE POWERS: Yes.

BRAHAM GUNTHER: Before I start, I want to introduce our First Deputy Commissioner Liam

Cavanaugh is here today, and we have lots of friends in the audience. Good morning, Chair Levine, and members of the Committee on the Parks and Recreation Council. My name is Bram Gunther. I'm the Chief, as I said, of Forestry, Horticulture, and Natural Resources for the Parks Department. And as I also said, I'm the President of the Natural Areas Conservancy. I'm here with my colleagues, Sarah the Executive Director of the Natural Areas Conservancy to talk about the relationship between Parks and the Natural Areas Conservancy, and from now on the NAC. And how together they make for world class urban nature conservation.

But first, a little bit about myself.

I'm a native New Yorker born and raised here. I have a Masters Degree in Environmental Management from Yale, but it was as an urban park ranger in the Bronx, particularly in Van Cortlandt Park where I really learned to love nature especially nature in the city. I've dedicated the last 25 years of my life to managing and protecting New York City's natural areas to make this a better place for everyone who lives and visits this great city. So I'm going to refer people-- Occasionally, I'm going

to refer to a Power Point. So the map up on the screen now gives you-- Obviously it's a map of the entire city, and it gives you a sense of where our natural areas reside.

I hope that people can see that. They're spread across the city, of course, but they're clustered in certain places like the north end of the Bronx and Staten Island and East End of Queens and the southern end of Brooklyn. Parks and Recreation is the steward of approximately 30,000 acres of land. Fourteen percent of New York City including more than 5,000 individual properties ranging from Coney Island Beach and Central Park to community gardens in vast pocket parks. New York City has more parkland than many U.S. cities with about 21% of our city's land covered in tree canopy. Despite this-- Next item. Despite this, New York City is portrayed as a city of brick and concrete, commerce, and culture, a place that is beyond nature. But it's not true. It's a city of wild nature and snaking waterways, too, a place like no other along the Eastern Seaboard.

New York City is where the Hudson River meets the Atlantic Ocean, and New England meets the Mid-Atlantic. Because of this, our city was founded

here where the harbor was deep enough for ships, rich enough for an incredible diversity of fish, animals, and plants. Where people could live and prosper because of our abundant resources. Parks and Recreation manages over 10,000 acres of forest, woodlands, freshwater wetlands and salt marshes, all of which still support an extraordinary amount of plants and animals including rare, threatened and endangered species. These natural areas comprise a third of the parks portfolio and represent one of the largest holdings of our city's natural heritage. I'll refer you back to the Power Point. This is a breakdown within the 10,000 acres. This is a breakdown of freshwater wetlands, salt marsh, grassland and forest by acres. And I hope everyone can see it.

Natural areas used to be considered loss in New York City. Places of untamed parkland mostly on the city's edges were for historical reasons. They were preserved by undeveloped. In the 1980s, this view changed. These spaces were no longer seen as lost lands, but an important piece of our history and valuable in their own right, and thus need our active protection. Today, they are understood as

critical infrastructure for the resiliency in the face climate change, and the capacity to clean up our air and water for their beauty, sanctuary, and accessibility.

Next slide. The Natural Resources Group was formed by the Parks Department in 1984. It is the oldest publicly funded ecological restoration and conservation unit in the country, and highlights New York City's vision and pioneering spirit. NRG has established national and international models for urban forest and wetland restoration. Its objective then and today is to conserve and restore New York City's natural resources to increase environmental and public health. NRG's initial efforts were to inventory and document the ecological quality of our natural areas.

Some places were in great shape, and some were suffering from decades of dumping and invasive species. On the basis of these inventories, NRG developed management plans for numerous parks. This original work transformed the agency's view of these spaces from marginal to central. In 1990, 567,000 gallons of household heating oil spilled into the Arthur Kill. As restitution for this spill, the

first the time via NRG's actions asked for fair compensation for environmental damage. Exxon paid \$15 million to the oil spill trustees. A portion of this money was used to restore the destroyed marshes along the Kill, and launched NRG's Salt Marsh Restoration Team. Their work restoring degraded urban salt marshes was copied worldwide.

Next slide. So this gives you a sense-- Again, I know, at least for me, it's a little harder to see from here. But this gives you a sense citywide where NRG is working, and the kind of programs that we're focused on from forest and wetlands restoration to studies of amphibians and birds, and lots of other things that we were focused on in conserving our natural areas. In 1991, NRG was a recipient of a huge grant for that time, \$6.1 million to reforest parkland. Native trees were planted in parks from the North Bronx to Southern Staten Island. This work led a few years later to the creation of the Native Plant Center, a 14-acre nursery on Staten Island that grows over 400,000 plants a year for ecological restoration projects region wide. The Native Plant Center like NRG itself was the first of its kind in an urban center.

In 1996, NRG received \$17 million of Clean Air, Clean Act Water Bond or a Clean Air, Clean Water Bond Act money to restore primarily degraded wetlands. These funds resulted in wetlands restorations across the city and decade long partnerships with the Army Corps of Engineers, State Department of Environmental Conservation and Department of Environmental Protection. And led to large scale restorations in Alley Creek, Paerdegat Basin, Sound View and Marine Park. Also noteworthy was the restoration of the Bronx River. Spurred by community action bond-backed money was used to clean the river, including removing 77,000 tires from its water. And, in fact, if you look up at the screen now, there are some of those tires.

In 2001, the Bronx River Alliance was created, a public-private partnership representing the interests and values of the community, and allowing for a permanent ecological management presence along the river. Today, alewife not recorded since the 1600s--alewife is a fish, and beaver have returned, and old industrial parcels turned into gorgeous and active parkland. Let me take a second to show you some of these slides. This

is the Bronx River today. The top left slide is what it looked like in the '70s and the '60s. And you can see the restored concrete plant park. And then to the left of it is an engineered bioswales that obviously creates for beauty but captures storm water.

Next slide. This is the alewife that I just mentioned. It's native spawning grounds are in the north end of the Bronx River, and we've just finished--completed construction on the first fish passage in the lower end of the Bronx River. Next slide. These are some more wetlands restorations effort. This is in Calvert Vaux Park. Next slide. This is Pugsley Creek in the Bronx. Next slide. This is Soundview Park, and this is Freshkills Park in Staten Island. And I do want to point out the goats that have been essential in helping us remove some of these invasive species. I don't know their names, but they eat an enormous amount of vegetation. And is there one more slide? This is Marine Park and Garretson Greek in Brooklyn, and I show you these three slides in particular. The one to the left is what it looked like before it was restored. The one in the middle is a day after the 22-acre restoration.

And that one to the right is what it looked like the day after Hurricane Sandy. In 2000-- And this is the last one of Alley Pond Park in Queens.

In 2002, NRG began the Forever Wild Program to create nature preserve status for the city's most ecologically valuable land. We have designated 51 preserves since program's inception. In these spaces exist 1,450 native species, 140 of which have some form of designation as endangered, threatened or rare. Over 220 species of native bees inhabit our five boroughs. These wild places provide to New York City a great number of benefits. They capture billions of gallons of storm water each year and protect against storm surges. They clean our air. New York City trees remove about 2,200 tons of pollution each year and will cool rising temperatures caused by climate change. Our street population alone about 600,000 trees.

Just under a quarter of the city's tree population provides benefits estimated at \$121 million annually. The benefits these places provide as it relates to making our city beautiful and more peaceful are incalculable. The historical loss of these ecosystems, for example, we've lost 85% of our

freshwater and salt marsh habitats in the last 100 years. And the threats faced by the remaining parcels make the need for sound ecological management of our natural areas vital. The primary threats to our natural lands are invasive plants. NRG works with in-house crews and contractors to remove them. When faced with invasive pests like the Asian longhorn beetle, they work with federal and state partners to eradicate them. The sound management of these areas has significant implications for health and safety. Our population is predicted to rise by a million people by 2030. These areas will be critical for managing events like storms, flooding, increased precipitation and heat levels, as I mentioned. And in addition, managing these spaces well is critical for providing out living space for density increasing and in creating long-term bonds with the community stewards.

NRG is first and foremost a conservation and restoration unit. We raise capital dollars to restore sites, and utilize both in-house expertise and partnerships to preserve our work. Where data existed like our initial inventories of natural areas or funding for monitoring was available, we used this

information to guide our management. In a great example of data information informing restoration information about the value of trees stemming from the U.S. Forest Service led to the Million Trees Campaign, which has allowed us to develop a unique model for forest restoration. We use contractors to prepare restoration site, typically so overrun by invasive plants that big machinery is necessary to remove them. But planting and we've planted so far over 400,000 native trees, and over 200,000 native shrubs and ground cover, is done by community stewards and volunteers. We've engaged thousands of people in this way spawning a generation of natural area stewards informing intimate bonds between the agency and local communities.

Let me give you a few pictures of some of our forest restoration work. This was a portion of Van Cortlandt Park before, and those were all invasive vines. And the next one is what it looks like after we've spent a season working with volunteers planting these new tree set sap lines. The next one is what-- So at the very north end of Van Cortlandt Park is a mature oak tulip forest, and this is the ultimate goal of some of our restoration as it

relates to Van Cortlandt Park. Next slide. This is some work in Father Macris Park in Staten Island. This is what it looked like before. Again, overrun by invasive species. But then after-- Next slide. After working with volunteers, this is what it looked like soon after. Is there one? Oh, no.

Over the past 30 years, NRG has restored nearly 2,000 acres of natural areas bringing back to life salt marshes, estuaries, ponds, forests, meadows and streams. This includes forestland in Van Cortlandt Park, as I just showed you, Forest Park, and the Greenbelt, and salt marshes in Pugsley Creek and Calvert Vaux. We actively conserve thousands of additional acres sustaining investments in natural areas including in over \$35 million that was part of the Million Trees Campaign. NRG is the primary entity within parks managing and advocating for these spaces, and is considered a national expert on urban ecological restoration. NRG played a significant and integral role in PlaNYC, and the Strategic Initiative on Rebuilding Resiliency. And continues to work closely with the Mayor's Office of Rebuilding and Resiliency.

Recently, the Council passed Local Laws 10 and 11 requiring that only native plants are used when restoring parks' natural area. A victory for natural areas conservation restoring. Moving forward, NRG is focused on further cultivating community stewardship. And restoring a network of trails to bring people appropriately back into these wonderful spaces to enjoy their benefits first hand. In fact, NRG just created its first ever stewardship team to directly link restoration efforts to public engagement and participation, partners. NRG has partnered with many organizations over the years. These partnerships are critical. They range from federal, state and local government agencies, national and regional conservation organizations to local groups as varied botanical gardens to small community organizations.

Many of them are here today. One important partnership is our relationship with the U.S. Forest Service. NRG's role as a long-term land management unit in the Forest Service is groundbreaking work on quantifying the economic value of urban trees and community stewardship networks led to the establishment of the Urban Field Station, a

picture which is up on the screen now. The Urban Field Station is the scientific hub for long-term research on urban ecology conservation and community stewardship. It engages over 60 institutions on research projects citywide. It is located in Fort Totten, Queens. Ten scientists from the Urban-- from the Forest Service, from the Natural Areas Conservancy, and NRG work at the field station. It is sponsored directly or through partnerships. As I said, there are 60 scientific studies on a vast number of subjects.

Recently, our work with the Forest Service and Drexel University was featured in the New York Times. Building upon scientific instrumentation that was placed in Alley Pond Park about four years ago that collects data on storm water capture, we added Smart Forest instrumentation that will collect live data on forest health including temperatures, wind, and moisture. The live data emanating from this small section of Alley Pond Park will reveal how our forest and green spaces react to climate change, and inform how we will restore and design for resiliency. The Natural Areas Conservancy represents a new model of public-private partnership. The

Natural Areas Conservancy was founded in June 2012 with the goal adding capacity and resources to NRG and the care of New York City's forest and wetlands.

The NAC works citywide using science and data to directly inform and advance natural resource management throughout the city. The Natural Areas Conservancy is built on the premise that natural areas are critical infrastructure. It conducts research, supplements the city's natural resource management staff. Creates data sets and inventories as planning tools. Offer public programming to achieve our goal of establishing a citywide constituency around conservation, and brings increased rigor and resources in using nature-based designs and managing critical public resources.

Next slide. I just want to quickly mention that since the Million Trees Campaign started, our relationship with community stewards and volunteers has increased steadily over of the year. Many of these people will stay with us over the long haul, particularly since they were directly involved in planting these trees, and so they have some ownership. And then lastly, this some slides of restoring and conserving ecosystems with the

community, which is what the Natural Areas Conservancy is very much focused on. The Natural Areas Conservancy is building upon the known and anticipated role the natural areas will play in helping to address issues of landscape resiliency and equality, and building social networks, community cohesion, education, and improving human health. Matching the restoration expertise of NRG with the information collecting and analyzing capacity and scales of the NAC yield and unparalleled urban conservation team. I would now like to introduce you to Sarah Charlotte Powers, the Executive Director of the Natural Areas Conservancy. Thank you for having me.

[Pause]

SARAH CHARLOTTE POWERS: Hello, everybody. Thank you, Chair Levine, and members of the Parks Committee for convening this important hearing. As a Bronx native who has dedicated my professional life to urban conservation, I appreciate the opportunity to speak to you today about the work of the Natural Areas Conservancy. I have spent thousands of hours in New York City's forest and wetlands. And I'm driven by the assertion that all

New Yorkers benefit from having meaningful access to the natural world. I have a Masters in Environmental Management from Yale, and have worked in this field for the past 15 years.

The Natural Areas Conservancy was founded, as Bram mentioned, to work closely but independently with the Parks Department and its Natural Resources Group to advance data driven best management practices for the natural areas in New York City. The Natural Areas Conservancy has a similar structure to other park conservancies in that we are a non-profit organization governed by an independent board of directors, and funded through private philanthropy. Unlike other conservancies, however, we work citywide conducting research and creating data driven best management practices for the natural areas of New York City. In addition to our Board of Directors, we work closely with our Advisory Board, which represents more than 20 of the leading academic, non-profit and government partners in our field. We will be hearing from several members of the Natural Areas Conservancy Advisory Board later this morning.

In the past 2-1/2 years, the Natural Areas Conservancy has conducted the first ever assessment of the health of all of its 10,000 acres of New York City parks natural areas. We partnered with the U.S. Forest Service to expand this effort to include a social assessment completing more than 1,600 interviews of park users to understand how they use and value natural areas across the city. Our landscape architect and hydrologic engineer have synthesized and vetted more than 100 potential wetland restoration projects. And have created concept designs for parity sites leading to millions of dollars of new funding for the restoration of Sunset Cover and Spring Creek.

In response to a shortage after Hurricane Sandy, we produced 105,000 beach grass plants in 2013, which were used in dune restorations in Staten Island and the Rockaways. This year, we established a 3.25-acre production field, which we anticipate will yield 300,000 plants this year, and in years to come. We've also been working to engage New Yorkers and to raise the visibility of New York City's forests and wetlands. In 2014, we hosted ten well-attended public events across the five boroughs. As

a young organization, we are proud of our relatively long list of accomplishments. I will focus the majority of my comments today on one of the most exciting achievements of our short tenure, the completion of the first ever citywide Ecological and Social Assessments in New York City.

Our Ecological and Social Assessments encompass more than 10,000 acres of wetlands, grasslands, and forests. These studies have resulted in a comprehensive data set establishing a benchmark of the ecological condition for natural areas, and providing valuable information about how these places are used and valued by park users. The Natural Areas Conservancy Ecological Assessments were conducted in more than 50 parks by teams of professional scientist. And they included more than 1,100 research plots in New York City, an in-depth study of the health of more than 25 salt marsh complexes. Assessments of freshwater wetlands, and more than 1,600 interviews of park users conducted by the U.S. Forest Service. This is the largest data set for ecological health for any urban area in the nation. It provides us with an opportunity to shift from an opportunistic to a data driven decision-making

approach for restoration conservation and the creation of resilient landscapes.

I'm going to pause for a brief moment, and just highlight. Our field crews, as I mentioned, visited more than 50 parks, and part of the work that they did was categorizing the different types of habitats that exist across the city. And I'll just flip briefly through a few slides. This is North Atlantic Coastal Grasslands. This is up in Pennsylvania Avenue Landfill in Brooklyn. This is Northern Dune Atlantic Coastal Grassland in Shrub lands. This is in Marine Park in Brooklyn. This is in Oak-Hickory Forest in Forest Park in Queens. High Salt Marsh and Pelham Bay Park in the Bronx. High Salt Marsh in a different season in the Bronx and Pelham Bay. Atlantic and Gulf Coast Clean, Pond Shore and Perry Group. [sic] This is in Richmond Parkway in Staten Island. This is a gorgeous photo of the Atlantic Intertidal Shore Group in Pelham Bay Park. This represents the southernmost extent of the New England geology, which spans all the way up through New England, into Maine, and into Southern Canada.

And now, focusing back on our Ecological Assessments, our research focused on the following questions:

- What is the condition of natural areas in New York City?

- What is common and what is rare?

- What long-term management strategies can we recommend to improve degraded areas, and protect high quality landscapes?

To give you a sample of the types of information that we've collected, and how it is useful, we'll describe some of our findings from Van Cortlandt Park and Marine Park. Van Cortlandt Park is one of the most intact parks in the city representing a lower New England oak-tulip forest. Marine Park by contrast is a relatively recently restored maritime forest with species that are adapted to its coastal environment including adaptations for salt, water spray, and coastal conditions. Van Cortlandt Park, as you know, is a very large park. It has almost 700 acres for forest versus about 200 acres at Marine Park, which also contains over 100 acres of newly restored salt marsh.

Van Cortlandt Park is one of the city's most diverse parks with over 100 species of trees. Whereas the coastal forest in Marine Park representative of both its location and its newly restored condition has about 22 species. And as you know, we focus a lot of our work on managing in bases, and Van Cortlandt has a majority of native species in its understory, which represents a hopeful future for its long-term trajectory. Whereas, Marine park requires more active management, having only about 40% native species in its understory. These differences highlight the diversity of our ecosystems, as well as some of the challenges and opportunities present to restore and protect our natural areas in many ways to match their individuality and their character.

The Natural Areas Conservancy data set allows for this type of nuance compared to the one-size-fits-all restoration model. Our Salt Marsh Assessment like our Forest Assessment reveals both the healthy of individual sites, but also the relative health of the-- Sorry. --of the Long Island Sound, Jamaica Bay and Staten Island salt marshes. This chart shows the percentage of native versus non-

native marsh plants, and also shows that the marshes in Staten Island as a whole have a lower percentage of invasive plants, and a higher level of health overall. This information can feed into NRG's work, and provide greater capability to restore sustainable and robust coastal landscapes.

In addition to collecting information about the health of our natural areas, we also examine how communities that surround them are using these places. In partnership with the U.S. Forest Service we conducted a Social Assessment. This assessment looked at the use patterns of park visitors in nearly 40 parks and included direct interviews, observations of human use, and signs of use. I'll share just two examples of the early results. In Canarsie Park--this is the graph of the bottom--43% of park users had traveled less than five blocks to get to the park, which is sort of what you might expect. It's a neighborhood park and people are walking there from their homes nearby. But more than 30% reported traveling a mile or more to get to Canarsie Park.

This sort of information shifts our understanding of neighborhood parks versus

destination parks. Another finding, and this is the chart above. This is a summation of all the interviews conducted in Jamaica Bay. It shows that while 15% of park visitors are engaged in active stewardship, another 10% identified themselves as no/but showing that there is low hanging fruit in terms of increasing community stewardship in this region. Our assessment represents the largest study of ecological and human health across the country, and we receive numerous requests locally, nationally, and internationally from governments and organizations who are eager to replicate our efforts.

Urban conservation is a growing field, and we're helping to keep New York City on the cutting edge of this discipline by integrating groundbreaking information about urban ecology with information about how and why people use natural spaces. Already we've begun working closely with NRG and Advisory Board to set conservation targets and prioritize restoration projects based on ecological value, sustainability and cost. In the next year, we plan to ramp up our public programming and will create a web based platform for New Yorkers to learn

about how to access natural areas, and the increase--
and the incredible diversity of these special places.

I'll take a moment to highlight the work
that we're doing in coastal resiliency and coastal
restoration. The New York City Parks Department and
the Natural Areas Conservancy are working closely
with the Mayor's Office of Recovery and Resiliency
established by Mayor de Blasio to advance the city's
plans for immediate recovery and long-term resilience
against a range of climate risks such as sea level
rise, heat, precipitation, and coastal storms. This
is done through initiatives that aim to strengthen
coastal defenses, upgrade buildings, protect
infrastructure and make neighborhoods safer and more
vibrant. In many cases, natural areas play a key
role in reducing the types of risks that climate
change will bring. That is why natural
infrastructure plays such a prominent role in the
city's resiliency program. To that end, the Natural
Areas Conservancy has hired a hydrologic engineer and
a landscape architect. Working together with the NRG
Wetlands Team our staff has created a database of
over 100 potential wetland restoration projects, and

has created concept plans shown in this slide for the highest priority sites.

In 2014, our initial concept plan yielded more than 9.5 million new dollars in grant funds to restore two parks properties in the Jamaica Bay Watershed. In addition, the Natural Areas Conservancy responded quickly to the shortage of beach grass materials needed for coastal restoration after Hurricane Sandy. We have been partnering with the Natural Resources Group's Native Plant Center to cultivate beach grass resulting in over 400,000 beach grass plants over the last two years, which were used to restore dunes in Staten Island and the Rockaways. The beach grass plants will help to mitigate the effect of storm surges, rising sea levels and other coast impacts.

Looking forward, the Natural Areas Conservancy seeks to ensure that our world-class natural areas are yet another place where New York City shines as leading among cities. We will continue to perform rigorous science to partner with the public sector to use data to enhance management and engage the public in creating green jobs. Thank you to New York City Parks for this fruitful

partnership and to the City Council for your commitment to Parks and Conservation.

CHAIRPERSON LEVINE: Thank you both for that very informative and exciting testimony. Mr. Gunther, can you tell us about what NRG's metrics are. I assume some of your work does appear in what the Parks submits for the Mayor's Management Report.

BRAM GUNTHER: Yes. As it relates to forests, our primary metric is how many trees and how many shrubs and groundcover have gone on the ground, and then how many community stewards we work with. Over time, we do have two special studies that are looking at tree mortality over time since we will have planted about 500,000 trees and forests by the time the Million Trees Campaign is done. We clearly want to know what conditions allow for the best survival. What conditions might make for more mortality, and what issues are doing best. So we do have those studies going on.

CHAIRPERSON LEVINE: But is there an annual goal of trees planted, for example?

BRAM GUNTHER: As it relates to forests, the annual goal has been 40,000 a year, but we've exceeded that since 2007.

CHAIRPERSON LEVINE: And is invasive versus native species another core metric? It seems to be very widely in that park.

BRAM GUNTHER: Yes, particularly in the work that Sarah just described, the understanding of the composition of an ecosystem. You know, for native species versus non-native species. As it relates to forest restoration, the native species the are the primary threat. So to prepare a site to be restored we need at a minimum two years of invasive species removal. That's how overrun some of these areas are. So, yes, we understand the level of invasive species, but I don't have any direct metrics on how many specific invasive plants are in a particular site.

CHAIRPERSON LEVINE: But you do have a breakdown by park on invasive versus native, which you cited it for several parks. So is there not a system wide goal that we would get to 90% native by a certain date?

BRAM GUNTHER: Our goal is of the 90 sites that we restored through the Million Trees Campaign, which are forests across the city, our goal is to have each one of those particular habitats be

primarily native species that are self-sufficient.
Overall, our goal is to restore all of these
forestland, to remove the invasive, to plant natives.
To tend to them and cultivate them particularly
within the first five years where it's most important
for their establishment. And then to maintain them
over time so invasives don't come back.

CHAIRPERSON LEVINE: Thank you. I just
want to acknowledge we've been joined by our
colleague Darlene Mealy from Brooklyn. Oh, forgive
me. And Fernando Cabrera from the Bronx. Thank you
both. You restored 2,000 acres of forest or natural
areas in general?

BRAM GUNTHER: Natural areas in general,
yes.

CHAIRPERSON LEVINE: So the goal is to
restore all 10,000.

BRAM GUNTHER: If needed, right. So some
of what the ecological assessment that's going on
will tell us the quality of a particular site. There
are some sites that don't need a lot of restoration
work, but need long-term conservation in that park.
Which is a mixture of experts who are visiting this
site and seeing where it is, and then working with

community members to help us watch and attend to the site. And then a lot of other sites do need some serious restoration work in the ways that I've just described.

CHAIRPERSON LEVINE: Correct. At the current pace of restoration, when will we achieve the ultimate goal of having all this area restored?

BRAM GUNTHER: In all natural areas, wetlands and forests? I don't know if I can answer that explicitly.

CHAIRPERSON LEVINE: Will it be in our lifetime?

BRAM GUNTHER: It could be. [laughter]

CHAIRPERSON LEVINE: In his lifetime.

BRAM GUNTHER: Yeah, if there--

CHAIRPERSON LEVINE: [interposing] In Alan Maisel's lifetime. [laughter]

BRAM GUNTHER: Definitely. If there's enough, if there are the right resources and the right interests it can be done, and the restoration work in New York City is not cheap particularly as it relates to wetlands. But there is a lot of obviously both federal and state and local money post-Sandy for this type of work. So I think as the city both is

more focused on it, and realizes the protection that these spaces can afford in combination with other protective measures, my sense is that the popularity for this and the money for this will only increase.

CHAIRPERSON LEVINE: Well, let's about the money for a money. What is the budget of the NRG?

BRAM GUNTHER: So the budget of the NRG as it-- [Coughs] Excuse me. Is about about-- So for forests and I'll break it down between capital money and expense money. For forest restoration our budget has been for the last several years \$3.5 million a year. That capital money, as I described before, is used to prepare--to hire contractors to prepare sites, and to procure our native plants. The rest is done through volunteers or in-house crews. As it relates to wetland restoration, which is almost exclusively grant funded, we have about \$20 million now. It changes every year since it is based upon grant money. And that \$20 million is used either independently or in combination with the Army Corps of Engineers, DEC, or DEP to restore these wetland complexes.

CHAIRPERSON LEVINE: So that added up to \$23.5 million on the capital side per year. How many acres of restoration does that buy us?

BRAM GUNTHER: In terms of wetlands, it probably gets us about 20 acres a year. You know, some years we're going to have more. Like last year or the year before we did 100 acres of restoration with White Island, which is this island right off of Gerritsen Creek and Marine Park. That was done with a lot of Army Corps money and it took a long time for it to blossom. But on average it's about a million dollars an acre for wetlands restoration depending upon where you're working.

CHAIRPERSON LEVINE: Well, if I'm doing my math right, then at the current pace we have 400 years to go to get all 10,000 acres. I realize we may not need to restore every acre, but I don't know who the youngest member of this committee is, but I don't think any of us will be around in 400 years.

BRAM GUNTHER: Right. On the other hand, as I said, on any given year you can get a lot more grant money. You can get federal money through the Army Corps of Engineers. And so, there might be watershed years in which you have a lot of money for

a very specific chain of sites. Then that might in turn be the most difficult sites. So the most complex sites are where we need the most help from our federal and State partners. Some of the easier sites can probably be done more easily with in-house crews and for less money. So I'm giving you averages, but obviously there are some more complicated and more expensive sites that--

CHAIRPERSON LEVINE: [interposing] But the baseline city contribution on average for the capital budget is how much?

BRAM GUNTHER: So \$3.5 million--

CHAIRPERSON LEVINE: [interposing] That's the 3.5, yeah.

BRAM GUNTHER: --for the forest restoration. As it relates to wetlands, it is primarily grant funding.

CHAIRPERSON LEVINE: And on the expense side, what is your budget and what is your staffing currently?

BRAM GUNTHER: So the staffing budget in total is about 12 to 13 million dollars a year. We have 75 staff altogether. Forty-one of them are city lines, 34 of them are grant lines.

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2 CHAIRPERSON LEVINE: Are park rangers
3 part of your team or is that reported to a different
4 area?

5 BRAM GUNTHER: A different--a different
6 chain.

7 CHAIRPERSON LEVINE: [interposing] Who
8 does that report up to?

9 SARAH CHARLOTTE POWERS: It reports up
10 through our-- Sorry through our Assistant
11 Commissioner of Republic Programs. The rangers are
12 under that division.

13 CHAIRPERSON LEVINE: Got it and do they
14 primarily work in natural areas?

15 SARAH CHARLOTTE POWERS: I don't know
16 that I would say they primarily work in natural
17 areas, although they do visit and monitor natural
18 areas as part of their--as part of their broader job/

19 CHAIRPERSON LEVINE: And so am I right
20 that there are only 12 rangers today?

21 SARAH CHARLOTTE POWERS: We just double-
22 checked. There are actually 28--

23 CHAIRPERSON LEVINE: [interposing] Oh,
24 okay.

25 SARAH CHARLOTTE POWERS: --ranger.

CHAIRPERSON LEVINE: What was it at its peak?

SARAH CHARLOTTE POWERS: A great question for our First Deputy Commissioner.

BRAM GUNTHER: In the '80s and '90s it was in the 100s.

CHAIRPERSON LEVINE: Right, and that's the area in which you and some of the other great names in the horticulture world today--

BRAM GUNTHER: [interposing] Thank you.

CHAIRPERSON LEVINE: --from-- I think Adrian Benepe who started as a park ranger. I think Terrence Braddock [sic] started as park ranger.

BRAM GUNTHER: [interposing] That's correct. yes.

CHAIRPERSON LEVINE: And now we only have 28 in the whole city, which makes you wonder where the next great generation of leaders is going to come from.

[background comment]

CHAIRPERSON LEVINE: But on a serious note, these rangers play a critical function not only in education, which you all care about, but also I think in enforcement to some extent, no?

BRAM GUNTHER: The rangers are in my mind are essential in being able to teach local community members, and particularly school kids about our natural areas, about our parkland. And in particular using these natural spaces as part of the science curriculum. And they've gotten better and better and better at weaving this into the state curricula or curriculum or whatever that word is, and our presence in the park, right? And that presence in the park has clear impacts I think on people's behavior.

CHAIRPERSON LEVINE: Right. So who dose handle enforcement? Is it PEP officers?

BRAM GUNTHER: Yes.

CHAIRPERSON LEVINE: And I'm almost scared to ask, but how many PEP officers are assigned to the natural areas?

SARAH CHARLOTTE POWERS: They're not exclusively assigned to the natural areas--

CHAIRPERSON LEVINE: [interposing] Okay.

SARAH CHARLOTTE POWERS: --but they monitor in the natural areas as part of their-- as part of their work and their route. They also respond to requests from MNO staff and from NRG staff to address particular concerns in the natural areas.

CHAIRPERSON LEVINE: Right, but we know that on any given shift there may only be less half a dozen PEPs on duty say in the whole borough of the Bronx, right. So, natural areas only get a piece of that. So they are largely unattended, right?

SARAH CHARLOTTE POWERS: Yes, there are not fixed staff in--fixed enforcement staff in the natural areas.

CHAIRPERSON LEVINE: Does that not leave us vulnerable to any kind of unauthorized or harmful uses of these natural areas, which are so sensitive?

BRAM GUNTHER: It leaves us vulnerable to a certain extent, but my response would be that's where the challenge of community stewardship comes. That the more the community and the people who are representing the community take an active role in the protection and conservation of their parks, the more like that type of damage and behavior will decrease. We experienced that explicitly in the Marine Park neighborhood, as we spent 20 years working with them over these restoration sites. So we have seen that directly impacted. I don't think there will ever be enough PEP to patrol area of 10,000 acres. It's a

lot of land. So that's why we're focused on community stewardship.

CHAIRPERSON LEVINE: Great. Your core staff, as you mentioned, is about 70 or so I think.

BRAM GUNTHER: It's 73.

CHAIRPERSON LEVINE: Right. So how does that compare to historical levels? You were founded in 1984, your division. Are we at the peak level of staffing or are we down from the peak?

BRAM GUNTHER: No, we're at one of our highest points.

CHAIRPERSON LEVINE: So you've had a nice steady growth in this division?

BRAM GUNTHER: Yeah, and again I emphasize that a lot of it is due to our capacity to get grants. Our work over the years has become more and more important. And, particularly when people have started to focus, you know, their ecological interest in study in cities versus rural areas, which represents a shift in general from rural and suburban places back to the city. We've been able to secure more grants to restore these places for quality of life with increasing population. And then the City

through PlaNYC and other natural area projects has invested more money.

CHAIRPERSON LEVINE: Are there any parts of the areas that you manage, of our natural areas that you manage that are not open to the public?

BRAM GUNTHER: There's Hallett Sanctuary in Central Park, which is at the lower end. And what else? There's another site, but I can't remember off the top of my head.

CHAIRPERSON LEVINE: You may be thinking of North Brother Island.

BRAM GUNTHER: Oh, yes. Yes, thank you. North Brother Island. Where we have spent some good time doing restoration work, I guess.

CHAIRPERSON LEVINE: Right. Philosophically, there attention between the imperative of preserving these lands, and with particular attention to flora and fauna, and especially you mentioned so many endangered species. But on the other hand, we want New Yorkers to enjoy them, and the benefits from these incredible resources. Could you say a word about where you'd like to see us on that spectrum of managing that balance?

BRAM GUNTHER: Yeah, I can be pretty specific. I agree with you that these areas should not be pristine and quarantined. They should be full of people enjoying our parkland. To that effect, we have just started-- (coughs) Excuse me. --a new program to formalize our 233 miles of trails through our natural areas. Some of the trails should be, as I said, formalized. They should be open. There should be clear access. There should be signage. They should be bringing people into the park to enjoy first hand the beauty and the sanctuary. And they should be places where people gather. And they were going to close off trails that are cutting straight through valuable ecological land. And if people are walking or riding their bikes on these areas, they will damage our ecology, which brings so many benefits directly to the city's clean air and clean water. So, yes, we very, very much believe in that, and, in fact, taken some of our capital money to start formalizing these trails in Alley Pond Park. Closing the ones that are more vulnerable to ecological damage, and opening up in a very, what we hope a visible way for trails to bring the people in.

CHAIRPERSON LEVINE: I have a number of additional questions particularly on the NAC, but I'm going to pause and open up to my colleagues. Okay, first up we're going to have Council Member Maisel.

COUNCIL MEMBER MAISEL: Thank you very much, Mr. Chairman. You mentioned White Island. I actually I was going to ask that question that I didn't see White Island on any of your material. Several years ago when I was an Assemblyman I worked with the Gerritsen Beach community, DEC and Parks in the restoration and haven't heard-- I was there last spring. Last summer actually. I took a boat trip to see what was going on. In fact, it looks like the Phragmites is, in some cases, are back. The goal was to get rid of Phragmites. I know it's incredibly difficult to do, but I haven't heard any official explanation as to what's going on there. But I'm also interested in the other areas along Bergen Avenue, the West Side of Spring Creek and along Paerdegat Avenue where the restoration group-- If you have any information, I'm curious about the progress. I keep getting questioned about it in meetings and I really don't know.

And lastly, sometime in the spring I wrote the Administration about using federal funds to clean up the areas like Shebang Creek. We have probably thousands of boats that just sunk during Sandy, and docks that fell apart, and they're all over the place. And I haven't gotten an answer from the Administration, but it seems to me that we're running out of time to get federal money to do these kinds restorations or these removals. The boats have sunk. There is oil in the boats. There's a huge amount of ecological damage that is going to come about. Do you know of any efforts to get the money to do this? It's very expensive. I don't have to tell you.

BRAM GUNTHER: Yeah, we are focused on removing the marine debris as we call it, as form of restoration. And, in fact, in some of our direct experience and through the literature, if you remove some of this debris, whether it's wood, litter or the boats in the case. Although that's a direct effect of Sandy, you can then have salt marshes on their own come back, pop back up. So we are focused on getting some of that money. We did get, as Sarah mentioned in part through the help of the David Collective Blog

[sic] and the Natural Areas Conservancy about \$10 million for the restoration of Spring Creek and Sunset Cove. And that includes removing some of this marine debris. And we're focused on doing citywide. Not just in that area, but where the citywide wetland complexes are in Staten Island, Jamaica Bay, and the Long Island Sound.

COUNCIL MEMBER MAISEL: So what's happening with White Island?

BRAM GUNTHER: White Island is still under contract so some of the invasive species that will inevitably come back. I don't want to give anybody a false impression that you can eradicate them 100%. You can control them, partly through good planting, and partly through in-house and community management. So we have a contractor who is going to come back in the spring to do more invasive control. I think it's the last year of the contractor punch list. And then what we'll have to do internally, and with the neighborhood is when necessary go there and maybe have stewardship volunteer where we all get together---

COUNCIL MEMBER MAISEL: [interposing] I mean right now White Island is off limits to the

local community. In years past it was always a recreation area. Do you anticipate that at some point White Island will be open?

BRAM GUNTHER: I don't know for sure. I think for us to be able to bring out the community to help us with the conservation of this site, we're going to need some level of it being open. But I don't know the specific plans.

COUNCIL MEMBER MAISEL: In terms of removing the boats, when I looked into this last year, I found myself in a difficult situation in that Maritime Law interferes with the removal of boats because if the boat owners-- If there is identification of the boat, the boat owners are technically responsible.

BRAM GUNTHER: [interposing] Right.

COUNCIL MEMBER MAISEL: And none of these agencies wanted to deal with it because the first person that has to be contacted is the boat owner. And how do you get in touch with the boat owner? How do you enforce it. It seems like an impossible job unless somebody is able to say, you know, what, we're not going to go through this. We're just going to get rid of the boats.

BRAM GUNTHER: Yeah, I don't know directly. I don't know that much about those laws. I think at some point we'll have to grapple with their removal. I mean it's not cheap to remove that.

COUNCIL MEMBER MAISEL: Yeah, that's why--that's why the federal funds--

BRAM GUNTHER: [interposing] Yes.

COUNCIL MEMBER MAISEL: --and the federal funds are probably going to run out soon. And then we will have lost a golden opportunity to get rid of the boats from Sandy. And there have been boats that have been accumulating for years. It's not just Sandy. They're sunken and they're just all over the place. I'd be happy to talk to you about this after.

BRAM GUNTHER: Yep, yep, that would be great.

COUNCIL MEMBER MAISEL: Thank you.

BRAM GUNTHER: Thank you.

CHAIRPERSON LEVINE: Thank you. Thank you, council member. Now, next up is Council Member Cohen.

COUNCIL MEMBER COHEN: Thank you for your testimony. Regarding-- You said you had \$23.5 million for restoration, \$3.5 for forest restoration.

It doesn't strike me as an enormous amount of money.

Does that even keep you sort of an equilibrium? I

mean are we--are getting more acreage out of invasive species than we're removing?

BRAM GUNTHER: In the places where we have worked, we are winning the battle against invasive species. Obviously invasive species don't come around in one particular way. They're like water. They'll find the space in whichever way they can. That's again where our long-term conservation efforts come into place. The in-house crews, whatever NAC can supplement, and our relations with the community. Because we know that if we stay ahead of the curve as much as we can, the damage from invasive species is decreased. So if you can catch them up front, that's the way to handle them. And that is what our long-term focus is on both restoring sites that need them, and simultaneously conserving them and shepherding them over time. And that's, as I said, a mixture of activities.

COUNCIL MEMBER COHEN: You would say really it's a policy of containment, so to speak?

CHAIRPERSON LEVINE: Well, no, I would say it's a policy of active restoration and

conservation. I wouldn't use the word containment.

I would say they're both at the same time. \$3.5

million a year has allowed us to plant. I don't know

the exact acreage off the top of my head, but it's

allowed us to plant 75 to 80,000 native plants a

year. And if they're planted in the right way, and

we have both 30 years of experience, and we read the

literature on it. If we plant them purposely close

together so they both grow faster, you know, get up

into the canopy more quickly. And according to the

literature and our experience the more quickly a

forest gets to that canopy cover to a certain size,

the more likely they can fend off the invasive

species on their own. They are most vulnerable when

they're very, very small. So it's active

restoration, and active conservation at the same

time.

COUNCIL MEMBER COHEN: Can you say one way or the other, though, if you think we're sort of net positive or more net negative on the battle of--

BRAM GUNTHER: [interposing] Net positive.

COUNCIL MEMBER COHEN: Net positive.

Okay. You know, I'm sorry. I'm forgetting your name.

BRAM GUNTHER: Oh, okay.

COUNCIL MEMBER COHEN: You had sort of a positive outlook on Van Cortlandt Park, but I've seen projections that are very negative on invasive species in Van Cortlandt Park. You know, they're continuing to spread. I don't know--

SARAH CHARLOTTE POWERS: Yeah, you know, so I think of the benefits of the assessment work that was done over the last two years is that it really let us compare across all of the sites in the city at the same time and using the same metrics. Which we have never been able to do before. So over the next year as we look at that data with our staff and in conjunction with the Parks Department, we'll have a much better understanding of what sort of developing conditions of sites is. And how the work that we've done in the past in terms of restoration has yielded results over time. So there's been a few studies that have looked restorations that were done in the '90s, and how those sites have faired relative to sites that were in a similar condition at that

time. And those sites are in better condition now than their sort of non-restored counterparts. So we know that the intervention of agencies are successful. But it really lets us home where we work and how we work in a different way. So I think, you know, to echo Bram, we are generally optimistic, but we are looking to be more nuanced in our approach and hopefully to make our dollars go further by being strategic about where we spend them.

COUNCIL MEMBER COHEN: I think I, too, would like to take the opportunity to maybe meet off line to talk about Van Cortlandt Park because I am concerned about invasive species there. Thank you.

CHAIRPERSON LEVINE: Thank you Council Member Cohen. Next up, Council Member Cabrera.

COUNCIL MEMBER CABRERA: Thank you so much, Mr. Chair, and thank you for your testimony today. It was very, very informative. I have a few questions. First, do you have a-- Is there a map of trails. You were talking about trails. Is there a map and is that aligned? [sic]

BRAM GUNTHER: Of the work that we've done in the past year analyzing trails has yielded us a lot of internal mapping. And as I was mentioning,

of the 233 miles of trails, some of them are what are called desire lines, and speak for informalized trails, and some of them are historical formalized trailers like Cass Gallagher Trail for example in Van Cortlandt Park. Individual parks sometimes have formal trail maps. We now need to take all the GIS work and all the mapping that we have, understand that network, analyze it. And then make some decisions about where we want to enhance existing trails and where we want to close up those desire lines.

COUNCIL MEMBER CABRERA: How long would it take you to put a real map together?

BRAM GUNTHER: Oh, we could probably-- I mean putting the actual map together is not overly complicated. What's more complicated is understanding what the composition of each one of these trails, where they go, what's the ecology on the periphery of these trails, and making those decisions as I mentioned about where we want to bring people, and where we want to keep sort of human crowding out.

COUNCIL MEMBER CABRERA: And how long would it take you to do that?

BRAM GUNTHER: It's a good question. I can't answer you explicitly. I know that some of the capital money that we are using now just relates to a quarter of the trail network in Alley Pond Park. And that's about \$1.5 to \$2 million worth of money that we've taken to just understand that complex of trails and a portion of that one park. Now, Alley Pond is really big and stretches into lots of different areas. So I can't answer you explicitly. I'm sorry.

COUNCIL MEMBER CABRERA: Okay. In terms of the million dollars-- From what I heard it's about a million dollars an acre for you to do especially with the marsh--

BRAM GUNTHER: [interposing] Yeah.

COUNCIL MEMBER CABRERA: --areas. That's a lot of money per acre, isn't it? I mean, what is-- Explain to me why does it cost so much?

BRAM GUNTHER: It is primarily labor costs in this region of the country.

COUNCIL MEMBER CABRERA: It's labor related.

BRAM GUNTHER: Yeah, I mean we have to--

COUNCIL MEMBER CABRERA: [interposing]
For that, you mean? [sic]

BRAM GUNTHER: You have to hire. You need big machinery, right? It's not-- It can't be done by hand. You need expert people to run the machinery. There is soil and sand costs. So those are the primary factors influencing the costs of wetlands restoration in New York City, and I'm only speaking about the city.

COUNCIL MEMBER CABRERA: Are we going to-- Costing us a million dollars an acre, I mean are we really thinking that we're going to be able to eventually--? I mean it's almost following on the Chairman's question. He had more of an overarching question, but are we realistically going to be able to afford, and at the same time cover all the territory that we need to cover at an million dollar an acre. And I see inflation probably looming on the horizon, which means these rates will start going back up. Do you think that realistically we could?

BRAM GUNTHER: Can we restore? So we have about 1,600 acres of salt marsh. So as I mentioned before, not every patch of all those 1,600 acres need a restoration focus.

COUNCIL MEMBER CABRERA: So how many do we need?

2 BRAM GUNTHER: I don't know off the top
3 of my head.

4 COUNCIL MEMBER CABRERA: You don't know.

5 BRAM GUNTHER: I would say at minimum
6 three-quarters of them, but--

7 COUNCIL MEMBER CABRERA: [interposing]
8 [off mic] Three-quarters. That's a so big. [sic]

9 BRAM GUNTHER: But there are areas in
10 which they're in good shape historically, and they
11 don't need the same type of attention and investment
12 as some of the other sites. The Natural Areas
13 Conservancy and its assessments, ecological
14 assessments particularly as it relates to salt
15 marshes is going to tell us where we get the biggest
16 bang for our buck, which I think in terms of coastal
17 resilience is where we're most focused on in the
18 city. And there are going to be certain sites where
19 investment in those areas is really going to take us
20 a long ride.

21 COUNCIL MEMBER CABRERA: Let me ask you
22 another question. Is there-- Has anybody--probably
23 not, but I have this urge to ask you this question.
24 Is there anybody who has been able to figure out
25 across the whole world how to have-- How to purge us

with invasive species and at the same time have tree?
I mean nobody has been able to figure that out?

BRAM GUNTHER: Well, I--

COUNCIL MEMBER CABRERA: [interposing]

Are there places where you have invasive plants, and
at the same time you have nice healthy trees growing?

BRAM GUNTHER: That is the state of
affairs here in New York City now. We have a mixture
of healthy habitats that are made up primarily of the
native species. And we have other habitats that are
overrun by invasives. And the balance is one of the
things that we are both focused on, and then being
ahead of the curve. The more ahead of the curve we
can be, as a city, the more we control the impact
that the invasive species have on our natural areas.

COUNCIL MEMBER CABRERA: Because my fear
is that those invasive plants are-- Obviously,
they'll find a way to come back, right? So is there
a way-- Is there a strategy that when they do come
back, it does not affect whatever we put in place?

BRAM GUNTHER: So the strategy is
twofold. One, we have to do a good sound restoration
based upon our 30 years of experience, based upon the
data that's being collected by both NRG and NAC. And

if we do sound restoration, over time that ecosystem does a good job of protecting itself. Part two, as I've mentioned, is working with community members, Bronx being a great example. And the more robust that relationship is, the more we can work on a regular basis both experts and community stewards side-by-side to catch the invasive species before they become a critical mass. So that's our strategy, and it works across the world.

COUNCIL MEMBER CABRERA: One last question. It's two questions to one, but just for the sake of time here. What's the biggest illegal activity that takes place in natural areas. And also, how do you facilitate for children in our public schools to be able to take advantage of their natural areas? What organized structure do we have in place?

BRAM GUNTHER: So the-- the most common illegal activity is dumping still. Although we have gotten much better because some of the early work at NRG that I was describing in the '80s when they were inventorying these places, they realized that one of the things that we most needed to protect in natural lands is just our grounds around our parks. And that

decreased the amount of dumping significantly. I can't give you an actual number. So a lot of these places still have the guardrail, but certain types of dumping if you can just step over the guardrail. So it's dumping. It's also off road, off trail use whether it's mountain bikes or ATVs. I think those are the two primary illegal activities, and there is partying going on, but I think the partying goes up and down depending upon the season and where you are.

COUNCIL MEMBER CABRERA: I don't expect much of that will be taking place as of right now, right?

BRAM GUNTHER: Yes.

COUNCIL MEMBER CABRERA: And then the schools, if you can--

BRAM GUNTHER: Yes.

COUNCIL MEMBER CABRERA: --answer that and then I'll turn it back to the Chairman.

BRAM GUNTHER: So the school is the primary domain of the urban park rangers as we've been talking about. And the urban park rangers have a sophisticated curriculum to use natural area and parkland as integral to the science study of the state and local schools. So they're constantly

bringing school kids from second grade to high school in to enjoy our parkland, to help us study it. And in some cases, with middle school and high school students they are citizen scientists for us. We don't do a lot of direct education, but we do have some experience in using citizen scientists. A good example is that we work with the Museum of Natural History to study native bees in New York City, and that was done in great part with both people in their back yards. But also with school kids going and collecting data on the bees. And that three-year study revealed that in the city alone we have more than 220 native species in the five boroughs, which I find amazing. But anyway, that was done through these types of programs.

COUNCIL MEMBER CABRERA: How many students from the Bronx have taken advantage of your program?

BRAM GUNTHER: I don't know the numbers off the top of my head, but historically--

COUNCIL MEMBER CABRERA: [interposing] Do you know it citywide?

BRAM GUNTHER: No.

COUNCIL MEMBER CABRERA: If you could get us those numbers, that would be very helpful.

BRAM GUNTHER: Yes.

COUNCIL MEMBER CABRERA: Thank you so much, and keep up the great work.

BRAM GUNTHER: Thank you very much.

CHAIRPERSON LEVINE: Thank you Council Member Cabrera. Just an observation. With 1,600 acres of wetlands needing restoring at over a million dollars an acre, that's \$1.6 billion, which sound like a lot, but over ten years, for example, it's a project this city can handle.

BRAM GUNTHER: And we've restored of those 16 acres over--

CHAIRPERSON LEVINE: [interposing] It's 1,600.

BRAM GUNTHER: --over 150 to 200 of them over time. A lot has gone on recently with, you know, White Island being 100 acres just there. So, it decreases--

CHAIRPERSON LEVINE: [interposing] So about \$1.4 billion to go--

BRAM GUNTHER: [interposing] Yes.

[laughs]

2 CHAIRPERSON LEVINE: --but doable for a
3 city of this scale spread out over a sufficient
4 number of years.

5 BRAM GUNTHER: Yes.

6 CHAIRPERSON LEVINE: Your capital
7 projects, do they run through the Parks Department's
8 Capital Division?

9 BRAM GUNTHER: Yes, they do.

10 CHAIRPERSON LEVINE: And from the moment
11 you get funded until the moment-- I guess you don't
12 do ribbon cuttings in natural areas, but do then--

13 BRAM GUNTHER: [interposing] We do,
14 actually. In fact, we had a beautiful ribbon cutting
15 in Sound View Park a month or two months ago.

16 CHAIRPERSON LEVINE: Oh, wonderful.
17 What's the average length of time to complete a
18 project, and are there outliers that take
19 particularly long? We're familiar with this
20 phenomena in parks and playgrounds. I'm curious to
21 know how it plays out in natural areas.

22 BRAM GUNTHER: With no impediments, we
23 could do a wetlands restoration in two to three
24 years. You know, there's a lot of work that goes
25 on. The two years is probably more likely.

CHAIRPERSON LEVINE: Is there such a long with a project with no impediments? [laughter]

BRAM GUNTHER: Not likely, but sometimes they can be minimal, right. And sometimes they're more-- A good example is that some of the Marine Park work took a long-- Some of it was initial bond-backed money, but to get the local matches to meet the federal matches, you have some of that stuff. But if you work straight, which is what we plan to do in Spring Creek and Sunset Cove, you can do some of these sites in two years.

CHAIRPERSON LEVINE: Great, and much of that is tied up in the design process--

BRAM GUNTHER: [interposing] Uh-huh.

CHAIRPERSON LEVINE: --correct? And letting all the contracts, et cetera.

BRAM GUNTHER: Yeah.

CHAIRPERSON LEVINE: Have you thought about how to engineer this to be a more timely capital process?

BRAM GUNTHER: So, yeah. Yes, remember Sarah was describing, and it's still up on the screen, that one of the things that the Natural Areas Conservancy has added to NRG is this data set or this

big comprehensive list of restoration opportunities citywide. And in each one of those opportunities, we have a whole compilation of information that helps us make the decision of where we should work. Where it's the most cost-effective. Where we get the most bang for our dollar, and where we can move most efficiently. So these types of planning tools allow us to make these types of decisions. They're not going to transcend the procurement process, but they give us some capacity to make very efficient and effective decisions.

CHAIRPERSON LEVINE: I think Sarah is dying to say something, you know, right?

SARAH CHARLOTTE POWERS: Yeah, you know, I am. [laughter] I know read my Bonny [sic] light was. I was just going to add for all 120 potential wetland restoration sites that have been identified on Parks' property-- And we have 50 types of data about each project that lets us know things about proximity to other sites, available founding, available stewardship from the local communities. And we are working, as shown in this slide, on creating concept designs for the sort of top 20 of those. So by the time they are teed up for funding,

we already have a really strong sense of what the project will be. You know, sort of pre-contract drawings of what the scope of work will be. And we have already pulled in all of the other interest data, which provides the ability to start the funding process. We have a level of information that otherwise wouldn't usually be sort of complete until the end of year one. So it really speeds things up and allows us to pick sites based on much better information, which is a way to move the process forward.

CHAIRPERSON LEVINE: So few of your capital projects, if any, are funded by Council Member discretionary allocations, is that right?

BRAM GUNTHER: Yes.

CHAIRPERSON LEVINE: Which gives you the advantage of this kind of central, very strategic planning on-- In a way it sounds like you have a really good rubric for.

BRAM GUNTHER: Uh-huh.

CHAIRPERSON LEVINE: That's a little different from engineering any give capital process to shave off just a few months. You did describe some steps to do that, but is that currently the

system in place? In other words, even with those smart techniques in place, we're stilling taking two to three years, even when there are no impediments on a project? Is that right?

BRAM GUNTHER: On average about two years
Yeah, about two to three years probably for--

CHAIRPERSON LEVINE: [interposing] Okay.

BRAM GUNTHER: --some of these, for some of these sites although we're getting better and better and better at it.

CHAIRPERSON LEVINE: Now, Kate is jumping in.

KATE SPELLMAN: Yes, I was just going to say that, as you've heard from Commissioner Silver, we are doing everything we can to significantly streamline the overall capital process. Which obviously includes NRG's work. Commissioner Silver made this reply around from day one, and we think we have already identified some significant improvements to the design portion of our capital process that will allow us to deliver projects more quickly and efficiently. So it continues to be number one on his priority list, and we're eager to keep you updated as we achieve progress on all things.

CHAIRPERSON LEVINE: We need to be kept updated. Thank you. A couple of questions for you Sarah on the NAC. In a park like Van Cortlandt that's come up a lot, and Council Member Cohen left. But you've got the Van Cortlandt Park Conservancy. You've got Friends of Van Cortlandt Park. You've got the Parks Department, and you've got the Natural Resource Group, and you've got the Natural Areas Conservancy. So, I counted five entities that are doing something in that park. How do you keep from stepping on each other toes, and what exactly is the domain of the NAC in that mix?

SARAH CHARLOTTE POWERS: That's a good question. So, our work to date has really been focused on primary research taking the research of others, and sort of pulling it together to create new tools that can be used by all park managers. So we meet regularly with the park administrators for all parks that contain natural areas. And we've been focused so far on getting everybody on the same page in terms of understanding what they have in their parks. And what resources are available in terms of best practices for managing those spaces. So it's really attempting to infuse better and sort of new

information into the work that everybody does. We do some sort of work on the ground, but again it's really intended to supplement the work of the Natural Resources Group. So I guess Bram may want to jump in and talk a little bit about the relationship between NRG and some of the other park conservancies. But our focus is really on providing better information and creating tools. And where available, providing supplemental funding to expand that sort of space-- the case and scope of these projects.

CHAIRPERSON LEVINE: Got it. So you don't have operating functions the way many of the other conservancies do, similar?

SARAH CHARLOTTE POWERS: So far, the place where we've had this sort of significant upgrading capacity is in the plant production that I described. So we have seven full-time people work on plant production. To date, I think we've had like two or three people working on forest management directly sort of on the ground. And most of the rest of our work has been focused on planting and research.

CHAIRPERSON LEVINE: Got it. Are you on a fiscal year, a calendar year or fiscal year, or are you on the same fiscal year as the City?

SARAH CHARLOTTE POWERS: No, we're actually on the same fiscal year as the City Parks Foundation, which has served as our fiscal sponsor for an initial two years. We have our April 1st fiscal year.

CHAIRPERSON LEVINE: Okay. So you are not separately incorporated in a 501(c)(3)?

SARAH CHARLOTTE POWERS: We now are, but we adopted their fiscal year because all of our initial funding went through them. And so, we are now independent a 501(c)(3), but we've maintained their fiscal year.

CHAIRPERSON LEVINE: [interposing] Got it. This explains why I couldn't find your 990s on the web.

SARAH CHARLOTTE POWERS: Yeah, we-- this is our first year as a 501(c)(3).

CHAIRPERSON LEVINE: Okay, but it does raise the question of how the public can grapple with-- Get a view of your financial activity, right?

SARAH CHARLOTTE POWERS: So we do-- we have an independent accounting. We kept financials sort of since the beginning of our tenure, which we shared with the Parks Department, and we would be happy to share with everyone.

CHAIRPERSON LEVINE: So what is your annual budget?

SARAH CHARLOTTE POWERS: We've spent about \$2 million per year for the last two years, and we're only two years old.

CHAIRPERSON LEVINE: Okay, so are you-- Are you at a one and a half million per year pace, or are you growing from that?

SARAH CHARLOTTE POWERS: It will partially depend on the availability of funding. So we're looking next year again at about a \$2 million annual budget.

CHAIRPERSON LEVINE: And your staffing, how big?

SARAH CHARLOTTE POWERS: We have-- In 2014, we had 15 full-time staff, and again, 7 of those were doing plant production. So those are more entry-level jobs. Seven are full-time sort of technical staff, both scientists and then we have

sort of a small development team, and then we have 25 seasonal staff, most of whom were master level research scientists.

CHAIRPERSON LEVINE: Got it. So we've talked a lot about transparency on the committee. We haven't done a hearing on this topic yet. We will probably early in 2015, but we've thought about this in terms of the conservancies because it's a little piece of the Parks' world that the public doesn't have the complete view into. Even when the 990s are posted, it can be an 18-month lag with the way fiscal years work and then how much time you have to prepare your taxes. And then, how long it takes to get posted publicly. So 900s really don't offer any kind of timely information. Would you be open to some sort of more regular financial reporting that would be accessible to the public.

SARAH CHARLOTTE POWERS: I mean I think so, yeah.

BRAM GUNTHER: Yeah yeah, we have nothing to hide-- [laughter]

CHAIRPERSON LEVINE: [interposing] I believe you.

2 BRAM GUNTHER: --in both our fundraising
3 and our activities and, you know, we, the NAC is
4 about increasing the agency, and I know the capacity
5 to do good work, which has a direct positive impact
6 on everybody who lives and works here. So we are
7 completely open to that.

8 CHAIRPERSON LEVINE: Great.

9 SARAH CHARLOTTE POWERS: And we have all
10 of our donations up to date. So we do that in
11 January.

12 CHAIRPERSON LEVINE: So some of the data
13 you have presented to us I guess it was based on the
14 U.S. Forest Service research on usage. It was really
15 fascinating. Do you have a total number of park
16 users in natural areas a year?

17 SARAH CHARLOTTE POWERS: We do not. We
18 looked at... And again in conjunction with the
19 Forest Service, the methodology is confined to a
20 single season. And the park was visited one weekend
21 day, one week day, and one evening. So what we have
22 is a more sort of a snapshot of sort of the ways in
23 which these sites are being used. It's not sort of a
24 comprehensive study of the number of park users. But
25 we do have information about sort of what activities

people are doing in those places. And how they characterize their own experience in natural areas.

CHAIRPERSON LEVINE: But you could estimate, no?

SARAH CHARLOTTE POWERS: Well, yes we could, but--

CHAIRPERSON LEVINE: [interposing] It's in the millions I assume.

BRAM GUNTHER: Yeah, I would expect. We have a colleague from our Forest Service who oversaw the research. And she's going to follow us up.

CHAIRPERSON LEVINE: Okay, got it. We'll be sure to interrogate you. [laughter] Do you have a sense based on the data that has come into you about the demographics of the park, of natural area users? Do they reflect the diversity of our city?

SARAH CHARLOTTE POWERS: It's a good question. Erica, I believe we did not look at what in relation we looked at in terms of demographics in the study.

ERIKA SWENSEN: [off mic]

SARAH CHARLOTTE POWERS: But we-- but we did not include that as a question for people that were interviewed for example. What we do have and

what we've started to look at is sort of the proximity of using some of this information in the proximity of natural areas to people's different income levels and to sort of different demographics as recorded.

CHAIRPERSON LEVINE: So the interviews and surveys collected no demographic data on not even gender, age, let alone ethnicity or--

ERICA SWENSEN: [off mic]

CHAIRPERSON LEVINE: You know, I'm being told I'm breaking protocol by forcing you to testify from your seat. So, we'll get back to these questions in a moment. [laughter] So you have time to prepare your thoughts.

SARAH CHARLOTTE POWERS: What I would say is we would be happy to provide you with sort of a highlighted summary of the questions that we asked, and the type of data that they're likely to reveal. As we continue to crunch our results, we can get a feel and kind of the flavor of the information that we will be providing once we finish.

CHAIRPERSON LEVINE: You probably can guess the point I'm getting at here is that it's certainly possible that it's more middle to upper

income New Yorkers who are using these areas. I don't know it sure. We'll see what the data says. You're shaking your head no. You don't think that's the case.

BRAM GUNTHER: I don't actually.

CHAIRPERSON LEVINE: Okay.

BRAM GUNTHER: I think actually that the geographic spread of our natural areas represents a wide spectrum of use. I mean obviously there's Central Park and that has a particular demographic, but these areas across the city are in places that represent all types of people. And so, I'm not quoting the data here; just my own direct experience. It's vastly diverse. And one of the things that I mentioned before, and one of the things that we're focused on is being able to use natural areas as a way to alleviate density as the city continues to grow and grow and grow. And that is going to be having even more of a diversity of people using these areas. And then when the trails are opened up, and they're visible and they're known about, it will increase that diversity even more. But again, that's based upon my experience. I cannot directly quote you that.

SARAH CHARLOTTE POWERS: Right, the one thing that we do know already for a lot of parks is how far people are traveling. And so, we have pretty good information about the demographics of the neighborhoods, and the fact that there's a lot of use by, you know, close neighbors to those parks of those patrons. But we will be happy to follow up and get you some more information.

CHAIRPERSON LEVINE: And the last question following up on Council Member Cabrera's point about school visits. So would it be, it's the park rangers who would have that data because they're hosting all the visits, right? Is that why you don't have it off the top of your head?

BRAM GUNTHER: Yes.

CHAIRPERSON LEVINE: Okay. With only-- Was it 28? I can't remember the number of park rangers.

SARAH CHARLOTTE POWERS: Twenty-eight.

CHAIRPERSON LEVINE: Twenty-eight park rangers, it's hard to imagine that we're--that we're coordinating tens of thousands of school children visiting. Maybe I'll be pleasantly surprised, but maybe [background comments, laughter] it seems like

the biggest, perhaps the single biggest argument for replenishing the ranks of the Parks rangers other than producing the next great generation of leaders. In the parks world they used to get kids in to these extraordinary areas right in our midst that you do really need a professional guide to appreciate let along safety issues. But we have a park ranger--I don't know if it's permanent, but often stationed at Inwood Hill Park at a ranger station here. And it's just an amazing resources for the kids in the neighborhood. And I would like to see that throughout the city if possible. So, great. Thank you all very, very much for your testimony.

SARAH CHARLOTTE POWERS: Thank you.

BRAM GUNTHER: Thank you for having us.

CHAIRPERSON LEVINE: All right.

[Pause, background comments]

CHAIRPERSON LEVINE: So now, we would like to call up our next panel, including Erika Swensen from the Park Service; Eric Sanderson from the Wildlife Conservation Society; and Susan Albin from New York City Audubon Society.

[Pause]

CHAIRPERSON LEVINE: I'm going to ask the Sergeant to put a three-minute clock on.

[Pause, background comments]

CHAIRPERSON LEVINE: Welcome to you all. Erika, since we didn't catch for recording purposes some of your very important comments before, and just so we make sure that our folks watching us at home on web stream-- I'm sure there are vast, vast legions of people following us on this exciting topic. Could you just sort of briefly summarize how your team has approached collecting demographic data, first?

ERIKA SWENSEN: Absolutely.

CHAIRPERSON LEVINE: Okay.

ERIKA SWENSEN: Absolutely. Well, good morning still and thank you Chairman and thank you Committee. It's an honor. I'm Erika Swensen of the United States Forest Service. I'm a Research Social Scientist and I'm our team leader for our office here in New York City. And I just want to say one thing because I'm going to answer about your questions. But it is a real delight for us to be in New York City. Why is the Forest Service in New York City working so intimately with the New York City Parks Department as well as the Natural Areas Conservancy?

Because we are kindred spirits. Listening this morning, a lot of what you all are interested in is balance between managing ecological health, and human wellbeing, and access to these democratic spaces.

It's exactly what the Forest Service has been managing and dealing with. Sometimes the trials and tribulations for the past 100 year and so, too, the Parks Department. So we really are kindred spirits, and we learn a lot from each other and we're honored to be in the city, and to learn from a lot of innovators here in New York.

So having said that, two years ago we were invited into this, I think, historic project to assess ecological, urban ecological areas. Now, this is something that we all know is there is a bias against the urban nature in the city. Where is it? What is it? Does it even matter? And then there is a whole heck of a lot given the millions of people who benefit from the these spaces. The Forest Service manages, or indirectly or directly manages 850 million acres nationwide. 130 million are classified as urban forest. And I will tell you that on many of our national forests we do not receive as many visitors as you do in your Van Cortlandt Park.

So, just to give you that kind of perspective about why these spaces matter.

So two years ago, in brief we were invited to do a social assessment. Again, another novel approach from our colleagues in New York City. Often it's about conservation first, and not about constituency. But this group of very brave people decided that we're going to assess ecological health, but we want to know how to prioritize. You know, the humanness of the park. How were people valuing these spaces. So what we sought to do over the past two summers looking at PQs-- And we didn't do it all. It's almost the tip of the iceberg, but we assessed how people, we observed how people were using the natural areas citywide. And close to 5,000 acres. So we swept through every inch of the park.

We also went along the perimeter because that interaction between the neighborhood, let's say Canarsie Park and across the street in the community, that's a very interesting space about how people access. Or they sometimes feel that there's a barrier to their parks, and we looked at that area, too. And then we did an interview. So we interviewed, 1,600 random interviews. So randomized.

We didn't say, Oh, there's an older person or there's a younger person. We went every fifth person and randomized those interviews, and asked them what they were doing? How often they come? Are they engaged in any other ways? Where else do they go in the city? And just to highlight four quick things or maybe five. I just want to give you the sense of what we found. We are still tallying the numbers. [bell] And we're very happy to give you that report early in the new year because we're still-- We don't have those exact percentages and numbers for you at this very moment. But shortly you will have that, and we will be delighted to give that report to your committee.

But we obviously found that it's a tough numbers game. You are always going to find more people on a basketball court than you are in part of the natural areas. So the value inherent in those natural areas isn't necessarily the numbers game. It's what people are getting from these spaces. And going back to Canarsie Park actually the first summer, I was moved by coming upon a person who was-- He was part of our random count, so we went to him and he was being quiet sitting there in a natural

area. And I said, What do you do? He said, Oh, I'm not doing anything. Then he starts to speak as most New Yorkers do, I'm actually getting ready for my day. This is how I center myself. I come out here. I live a couple blocks away, and, you know, I try and put aside the things that are frustrating me. I try and put it-- You know, get things into perspective, and then I go to my job. He's a New York City bus driver.

My goodness, you know, reducing the stress levels in terms of being able to center oneself. That's a different head count, if you will, than the experience of playing basketball. Basketball is also very valuable for sports and recreation. But you see it's a different kind of experience. So fundamentally, we must look at these spaces with a new lens. You know, not the same old counts that we do. They are very different and special places, our special places. And after Hurricane Sandy, we went out in the first summer in the Rockaways, and you know what? No one hardly mentioned Hurricane Sandy because they were there enjoying the park. So by the nature of being in a

local park superseded any of the travesties in many ways that seem to happen to them.

But they were there. They were enjoying the park. They're with friends. They were socializing. A very powerful statement about the meaning of these spaces. We call it mad love. We found a lot of people angry. We found people angry wondering, Why is that trail here? This should be over here. This and that. And for us as researchers, it's a good thing. That means people care, that they're engaged. That they're noticing what people do in the parks. That they're right there and they're watching. We found, and Sarah mentioned it, too, that these are local parks. So many people overwhelmingly say, I come here everyday. Now what else do we all do everyday? We go to work. A child will go to school or in a college program or whatnot.

Maybe you work out of the gym, but everyday you go to your park or once a week. Phenomenal numbers. Phenomenal numbers. The last three things. We found high ecological knowledge. This not that people in cities don't know their environment it's ridiculous. We found people

speaking endlessly. This is when the horseshoe crabs come in, or the Parks Department is doing this, and I think they should plant X, Y, Z. Like these kind of conversations were just replete throughout the natural areas. I mentioned the idea about parks and the natural areas specifically being respite, a centering point for people reducing stress levels. But we also saw a lot of what you call unsanctioned activities.

We see this in the national forests, the same sort of beautiful view or vista that you might go to look is also a great place to crack open a beer, if you will or have a drink. And we see evidence of these. We know what we saw surprisingly in New York City parks? Bagged trash. I can't tell you how often we came upon people bagging their trash. Now, again you're not supposed to be doing some of these things in the park, but the fact that New Yorkers take the time to actually bag it is they're kind of meeting you halfway. We respect this space. We value this space. So these are subtle, but I think very powerful clues in to why these spaces are so special, and how they're being used. And I'm going to leave it at that, because you may

2 have questions and I have other people here. But I
3 think you for your interest.

4 CHAIRPERSON LEVINE: That was quite a
5 parks pep talk.

6 ERIKA SWENSEN: Oh, okay. [laughter]

7 CHAIRPERSON LEVINE: Thank you very much.
8 Just to clarify, the U.S. Forest Service does not
9 actually manage any forest land in the city, right?

10 ERIKA SWENSEN: We manage no-- We own no
11 land in the city, and have no regulatory authority
12 over any land in the city. We are here to help and
13 add value, and share some of our experiences.

14 CHAIRPERSON LEVINE: Well, that is
15 wonderful. It's really music to my ears, and I think
16 probably everyone on the committee's ears. I
17 certainly feel like the federal perspective on
18 parkland dramatically under-values urban parks. And
19 I think if you look at the money that Parks allocated
20 if you were to compare on a per-user basis, I don't
21 think any of the relevant Congressional committees
22 overseeing your agency have urban representatives. I
23 could be wrong about that, but that's a topic for
24 another hearing. Maybe we'll do it jointly with the
25 Council's Committee on Federal and State Affairs.

ERIKA SWENSEN: That sounds good to me.

CHAIRPERSON LEVINE: Great. So, you'll be back. Thank you very much.

ERIKA SWENSEN: Thank you.

CHAIRPERSON LEVINE: All right, Mr. Sanderson.

ERIC SANDERSON: Yeah. Thank you very much, Chairman, for having me. I'm an Ecosystem and Landscape Ecologist, a Ph.D. Ecologist working for the Wildlife Conservation Society. And I've worked on conservation issues all around the world, and I'm here to try to bring that historical perspective to the conversation we're having here. I wrote this book, on the natural history in New York City, ten years of research about describing on a block-by-block basis the ecology of this island where we are right now. And we discovered something really extraordinary, which you reinforced in your comments and Bram mentioned. But just for everybody who's listening, this particular island has more communities per acre than Yellowstone National Park does today compared to some of the federal lands. More plants on Manhattan Island 400 years ago than are in Yosemite National Park today. More birds than

Great Smokey Mountain National Parks. This country has been settled from the west toward the east. Then by the time we got here, we're thinking maybe should create some national parks and conserve a little bit of nature. Manhattan would probably have been the place. I mean we would have Mannahatta National Park, Mannahatta being the original Lenape name. And that's because of the extraordinary biogeography of this place. When the glaciers came to a halt 14,000 years ago, they stopped right here in the midst of New York City. That's why there is that ring [sic] across Brooklyn and Queens and across Staten Island. And that means the soil south of that ring were not glaciated. Whereas, everything north of that was scraped away, and had to be re-derived north of that. Wherein in the estuaries as was mentioned you get these ingredients of salt water where the ocean and the Hudson River meet. And create the ingredients of salt and tide that can be both damaging as in the hurricane conditions, but also very nourishing and very productive in terms of the environment.

We're also in the migratory pathways for birds. I'm sure Susan will make some comments about

that. But all the birds that are going to the north from South American along their line of flight pass through here. The same with fish, them coming up the Hudson River. The Alewife that Bram mentioned earlier. It's all part of these age-old progresses in nature of which this place, this particular place is a key place. And that's true for cities all over the world that they're in places of high diversity. And they're there because it's a really good place for people to live, too. You know, really what species need are really the same thing that people need. And that's why I'm on the Board of the National Aviary [sic] Committee. Because I think it's so important, not just to conserve the nature here, but to conserve the human relationship to nature.

And that's something that's true for the natural areas of our park system. It's true for the natural areas managed by the states or the federal agencies in the city. It's also true for people's back yards, and their front yards, and for the built environment as well. And just in that context, we at the Wildlife Conservation Study launched a new website that allows people to actually see that, to

actually see the performance of the environment on a block-by-block basis for Manhattan. And we're extending it now for the rest of the city. We can see how many carbon emissions come from every block. And where the storm water goes, and how much biodiversity it has. And you can put in your idea for what you would like to see for your neighborhood [bell] both radical, and interesting and then share it with everyone else.

CHAIRPERSON LEVINE: [off mic] Is that site [on mic] live yet?

ERIC SANDERSON: It is. Yeah, it's in beta form Mannahatta2409.org.

CHAIRPERSON LEVINE: Okay.

ERIC SANDERSON: And Mannahatta, M-A-N-N-A-H-A-T-T-A 2409.org. And 2409 goes to you point before that, you know, it's taken 400 years of change to get to the place where we are now. It might take 400 years into the future--

CHAIRPERSON LEVINE: [interposing] Oh, yeah.

ERIC SANDERSON: --to find a way for a city to work with its nature in a way that's mutually sustainable.

2 CHAIRPERSON LEVINE: What is the status
3 of endangerment among many species here? I think the
4 numbers are shockingly high. There have been in the
5 hundreds of species that are endangered right and
6 plants app--

7 ERIC SANDERSON: [interposing] Well, we
8 have to remember there are many species that have
9 been extracted that are no longer here before, right.
10 And they may be living in other parts of New York
11 State or other parts of the country. There are a
12 number of threatened endangered species both in the
13 plants and the animals, Piping Plover, for example.
14 There are several orchid species that are listed in
15 New York State that are found in New York City.
16 Because it has this really interesting ecology, some
17 of the best places for some of these species are in
18 New York City. And as you may know, a new species of
19 frog was discovered two years ago on Staten Island.
20 New to science and not being discovered before.

21 CHAIRPERSON LEVINE: Another source of
22 pride for Staten Island.

23 ERIC SANDERSON: That's right.
24 [laughter] But, you know, I mean-- You know, too,
25 you know the Mayor's interest in, you know, parks for

the whole city many of the maps that you showed, showed the best natural areas in the city are in the Outer Boroughs. They're in the Bronx, they're in Brooklyn, they're in Queens, they're in Staten Island. And so in that sense, those areas are actually fortunate and favored over places like Manhattan, unfortunately.

CHAIRPERSON LEVINE: Great, and will there be a book signing after this hearing.

ERIC SANDERSON: [laughter] No. Thank you very much.

CHAIRPERSON LEVINE: Thank you very much as well, and now Susan Albin, please.

SUSAN ALBIN: It's still morning, right? Good morning, Chairman Levine and committee members, and thank you for giving me the opportunity to speak on behalf of the natural resources and spaces in the city. My name is Susan Albin. I am an Ornithologist with a PhD in Ecology, Evolution, and Natural Resources. And I'm the Director of Conservation Science for New York City Audubon. New York City's Audubon's mission is to protect wild birds and habitat for all New Yorkers, and our membership is approximately 10,000 individuals. And basically I

want to echo the points that my colleagues have made, the people who have spoken before me. I cannot state strongly enough the value of open space and natural areas for the health of the city, for wildlife, and for people. And one thing we haven't mentioned very much is for the economy of the city. Birding, for example, bird watching is a really quickly growing recreational activity. And it brings a lot of money into those areas where the birds go because they need to eat. They need to get around. They buy equipment. So it's also natural areas are good for the economy and the city as well.

New York City Audubon works in all five boroughs of the city. So I think what makes my testimony a little unique is that I speak for the bird. And as Eric said, there are about 350-- I think actually, Chairman Levine, you also said there are about 350 species of birds that use New York City at some point in time in their lifecycle. They're protected federally. They're migratory birds, and we need to protect them as well when they're here. Birds use the city during winter, during migration and for breeding. In fact, we just finished our Christmas bird count, the 115th count and it's the

114th year. And it actually started in Central Park. The first Christmas bird count, one of the first one was in Central Park. And it was started by a curator of birds from the American Museum of Natural History, Frank Chapman. So also part of that team, and very important to the team were the urban park rangers who accompanied all our birders throughout Central Park when they were doing the count. So that was a really good partnership.

Birds use the parks also as wintering, and also in migration. People come flocking to Central Park to see birds, and even the little pocket parks are important. And here I want to echo what Bram has said about natural, the native species. We need native species to attract the invertebrates that the birds eat. We need the plants for pollinators. There is a pollinating decline throughout the world, and that's bad for food. We don't have all the food that we need. Anyhow, so these pocket parks are really important, and parks like Bryant Park you go there and think it's full of life, and activities and ice skating right, but it's also- [bell] It's also really important for migratory birds, and we've found

some incredible birds passing through on their migration.

I just have one more point I'd like to make is about breeding birds, and New York City Audubon has been leading an effort for a little over 30 years of the yearly count of the number of breeding birds, the long-legged wading birds. We call them Harvard [sic] Herons in the city. On the islands in the city there are about nine species that we have been counting. They're nesting on city park islands as well as national parkland. And it's not just the islands that are important for these birds. It's also the areas where they find their food. The upland areas where the resources start. So the clean water and all that that goes with them. And birds aren't stupid. [laughs] If they don't find what they like here, they'll leave because they can fly. [laughter] So they've been here, and we have them. We've been watching them and, you know, you don't have to go onto the nesting island.

You can have video cameras to do that. But even just to watch the birds fly over is just-- I don't know. I'm a little prejudiced, but it just makes your heart leap. [background comment] Yeah.

And that also has been a very good partnership especially with the Natural Resources Group of the City Parks. They've been doing surveys with us for all these years, and we get our research permits from them as well. And now, with the Natural Areas Conservancy, we are going to be also working on doing more of those surveys with them as well. So just in summary, I would like to say that pouring resources, money, and time into the natural areas is a win-win-win situation. We win for the birds, of course. We win for New Yorkers and we win for New York City as well. And thank you for your time.

CHAIRPERSON LEVINE: A pleasure. I'd ask Bram about where he thinks on the continuum-- Where we should be on the continuum between preservation and conservation of wildlife and habitats and openness and New Yorkers. And it does seem like we're moving toward bringing--and I think this is a good thing--bringing more people into these areas by expanding parks, trail networks and publicizing them better. Are you worried that we might be getting out of balance on this critical spectrum?

SUSAN ALBIN: Yeah, I worry all the time.
[laughs] I think they need to be mindful. This is a

2 double-edged sword. We want people to experience
3 wildlife and where it is because if they know it
4 they'll protect it. But on the other hand, if we
5 bring people out to some of these nesting islands, we
6 will be chasing away the very thing that we're going
7 there to look--to look at. So especially with birds,
8 they are very sensitive to disturbance. So I think
9 if we had control. We need--well, we need more
10 enforcement. If we had controlled visitation. And I
11 don't mean necessarily people holding onto a rope and
12 going on a tour. But you can go to visit a site
13 during a certain of year. Or, for example on the
14 islands in--

15 CHAIRPERSON LEVINE: [interposing] The
16 East River? No.

17 SUSAN ALBIN: --Brooklyn. No, that's
18 something that actually I should have said Bay and
19 Brooklyn where we have the horseshoe crabs and shore
20 birds. I can't tell you. It's amazing to get the
21 kids out there to count horseshoe crabs. And it's--
22 you should all come out there. It's just incredible.
23 But, we need to make sure that those--that that part
24 of the beach allows those horseshoe crabs to come out
25 and lay their eggs. And allows the shore birds that

are eating those eggs, allows them time to eat those eggs so that they can bulk up for migration and continue and breed. So we need limited-- We need limited access or mindful access to the resources.

CHAIRPERSON LEVINE: Okay, very good. My colleague Council Member Cabrera has a question.

COUNCIL MEMBER CABRERA: Thank you so much, Mr. Chairman, and I appreciate your passion for what you're doing. I have two totally unrelated questions. The first one is: Why do I find often or maybe I don't have enough regarding this, but it's been my observation that I see so few minorities. Members of our communities involved in conservancies. Can you share what's been your experience? Are there road blocks? What's going on with that?

[Pause, background comments]

SUSAN ALBIN: I can start.

ERIC SANDERSON: Go ahead.

SUSAN ALBIN: You're absolutely right, and that--I worry about that, too. That troubles me. In New York City Audubon we've had programs where we actually do track the ethnicity of our constituents and people that we bring on board. There's a program that we do where part of the measurable outcomes is

how many different people. It's also different people like hearing impaired people. It's not just ethnicities. And we want to get more diverse people because the more diverse people-- It's really, you know, you get different aspects and you get different perspectives as well of the value of the resources and interpretation of why you want them to be there. So, we're trying. We are really trying.

COUNCIL MEMBER CABRERA: What can we do? What can we actually-- Is there like--is there part of the conservancies, do they have like a strategic plan to say how do we reach out to the community? For example, Van Cortlandt, which I really don't live too far from there, and you have different parks in the Bronx. And yet, I don't see too much minorities involved. Even today on my way here and I'm looking, and this is not an indictment or a particular group. I just would like to see our diversity, you know.

ERIKA SWENSEN: Well, if I could just comment on that, and it's such an important question. So working with the Parks Department and other groups around the city a couple of years ago, we did something called STUMA [sic], and what we did was we did a census of stewardship groups. We cast that net

very wide of all people in New York City. Not individuals, organizations that are caring for the land in some way, shape, or form. And that data is available online. It's on the New York City Urban Field Station website, and what you find is that there are a wide, wide number of-- I mean a large number of diverse groups managing New York City's landscape, but they're not recognized necessarily in the form of a conservancy. They're mom and pop shops.

You know, we have more stewardship groups along the Queens-Brooklyn border. We have more stewardship groups in the South Bronx. We have more stewardship groups in the places where there is less green. And these are small groups of friends and neighbors who have organized. Some incorporated as a 501(c)(3). Some haven't done that. They're operating on budgets, may, you know, \$1,000 or \$2,000 a year, and they're managing the environment where they live. So the one thing, though, the take-away message for me in all of that is that, you know, this notion of wanting a natural and healthy environment is within us. And so, no matter where you touch down in New York City, there is going to be someone who wants to

get a potted plant going, or do a little rain garden or do something.

And we need to meet people where they are, and sometimes they're right on their doorstep. And they're not joining those, you're right, those big conservancy groups. Somehow those messages sometimes still need--and this is true nationwide--those messages need to be redefined. There need to be other ways of meeting people where they are so that feel included. That they can feel part of the process, and they can also participate where they don't have to necessarily write a check. Now, that is another barrier. You know, I'm coming out with a book next year. We'll have a book signing together [laughter], *Planting Trees Strengthens the Roots of Democracy*. And it's two-year study of a million trees being planted through volunteers.

And we found that for most first-time tree planters in New York City who, you know, came from a diverse background in New York that gave them the confidence. Planting that tree didn't turn them into knee-jerk environmentalists. What it turned them into was good citizens. So they went out and they said, Wow, I planted this tree. You know, I can

do this stuff, and they started to vote, or they got involved in their neighborhood association. So, you know, we have to meet people to along where they are, what their interests are locally. But also that there is a diversity of interests. People might be interested in their local environment, but they're also interested in politics, and fair housing, and a whole array of things that are sometimes bundled together. So those are the messages when the larger conservation groups I think that are starting to pay attention that it's not just the environment that we're interested in. We're interested in a whole range of issues.

COUNCIL MEMBER CABRERA: Well, I think you almost presented a tell there. You already were able to identify all of those groups, those stewardship groups. Maybe someone should, maybe the larger group make-- Why don't they have an invitation? Have a dinner or have a breakfast and invite them all. Maybe they don't have the financial resources that usually they are noted for. But the conservancy like you said they can be engaged in work. Because, you know, work is money as well. So the second question is more related to-- Well, this

is a strange question. I always have this question. This is my chance to ask it, Mr. Chairman. So here it is.

CHAIRPERSON LEVINE: Wow, what a buildup.

COUNCIL MEMBER CABRERA: Do we have, do we actually have-- You know, we have a rat problem. So, here in New York City does first of all our natural areas do they have a rat problem? And second of all, do we have birds that we could somehow entice them to come more often to New York City to be able to help us with this rat problem that we have. They said it was not in the millions. It was recalculated the other day I think to 30 million. Still one for every-- Four rats for every New Yorker. So, can you help me out here.

SUSAN ALBIN: [laughs] I hope so. Well, first of all, it's not the rats fault that they do so well here. It's because they do well around humans. And we produce a lot of waste and part of the reason that the rats is hanging out in parks is that we have garbage cans overflowing, and we need more people out there to empty the garbage can. So, yes, natural areas have rats. There are also are restaurants and

things that in the natural areas that bring rats to them. What were you going to say.

ERIC SANDERSON: [off mic] I was just going to say it does bother me to have all the rats, too. Probably more than the--

SUSAN ALBIN: Yeah, probably more.

ERIC SANDERSON: [off mic] Because it's eventually the perdition in the natural areas.

COUNCIL MEMBER CABRERA: Yeah, I will say that the--

SUSAN ALBIN: [interposing] But, but, but the--

COUNCIL MEMBER CABRERA: [interposing] But I want to make this point clear. I was seeing and assimilating that we have a larger problem in the natural areas. I just think that, you know, I think of owls or any other kind of birds that they could be our aviation unit here [laughter] to eradicate some of the rats.

SUSAN ALBIN: [off mic]

COUNCIL MEMBER CABRERA: Maybe you can share that because it wasn't on the mic. Yes.

SUSAN ALBIN: Yeah, we have--we have a large growing population of hawks in the city and

they do eat rats and they also eat pigeons. So now our responsibility is rat control. How are we controlling our rats? And one way we're controlling rats as humans is by poisoning them, and a lot of our hawks--many of our hawks who die, especially the young ones have died from secondary poisoning from rat poison.

COUNCIL MEMBER CABRERA: I didn't know that.

SUSAN ALBIN: So from eating poisoned rats. You know, one of our Snowy Owls that came down-- We had a whole big eruption last year of Snowy Owl. There was a Snowy Owl on Governor's Island that was found with a very high level of rat poison in its system. So I think we need to work on how we control rats, and the hawks would help us a lot in controlling the rats. And a lot of birds will eat rats. I know owls [sic] will eat rats, gulls will eat rats. There are a lot of birds if given the opportunity they'll eat them.

COUNCIL MEMBER CABRERA: Well, let's give them the opportunity. [laughter] Mr. Chairman, I vote for an initiative to feed all the hawks and all the birds. They could be our allies. Thank you so

much. It was very informative, and also I'm having a lot of fun here today. [laughter]

CHAIRPERSON LEVINE: Thank you very much. Thank you, panel.

SUSAN ALBIN: Thank you.

CHAIRPERSON LEVINE: Next up, we have Tupper Thomas from New Yorkers for Parks; Linda Cox, Bronx River Alliance; Christina Taylor from Friends of Van Cortlandt Park; Robert Bate, Brooklyn Bird Club.

[Pause, background comments]

CHAIRPERSON LEVINE: Whenever you're ready, Tupper.

TUPPER THOMAS: Okay. Good afternoon. I'm Tupper Thomas, the ED of New Yorkers for Parks. Thank you very much for this opportunity to salute our 10,000-Acre Natural Areas Portfolio. This is a public servant, these areas who walk all year round the clock and never ask for a bonus. But you shouldn't assume that means there is not a need for more support. It needs a higher sustained level of higher sustained level of skilled maintenance to keep doing this irreplaceable work. Natural areas comprise roughly a third of our parkland serving

three key citywide goals. They provide infrastructure, eco system management, and open space of a kind that many New Yorkers would never otherwise know. Natural areas are infrastructure heartier than bridges, harder to replicate than data networks. Their marshes drink storm water, their forests filter air, and their species help define the estuaries that make New York so attractive to many living things, birds, hipsters, and retirees. [laughter] At a time when any hurricane season might hobble our business district or cut off our highways, common sense demands that we maintain these places with professional crews. So does fiscal management. In light of the more than \$40 million of capital that the City has provided to natural areas since 2004, we must, we must continue to manage these areas. These thriving ecosystems need maintenance just as a basketball court or playgrounds do. Their sensitive ecology does best under the care of trained crews. As a former park administrator, I salute the NRG for managing more than 5,000 volunteers this year. But we also know that volunteers light work of basic task. They do great around the edges, but only these pros can really set strategic and scientific

direction for our stewardship. We can ill afford to let money for these crews dwindle by 2017, right when our hurricane season luck may run out. The Parks Department has worked creatively to fund managers and crews from long--from time-limited sources. But we should face up to the natural area's perpetual need for support.

The Natural Areas Conservancy just remember differs from other conservancies in scope and time. It roves the city sending volunteers to parks that are not otherwise going to get funding for study or for fine tuning. And it manages places not just to earn loyal use-- It manages places not just to earn loyal uses this year, but to sustain citizens [bell] as well. Natural areas are a legacy. We have Ed Toaf [sp?] out there in the Native Plant Center growing over 600 species of native plants right there on Staten Island with the other famous things on Staten Island. This bank literally hedges us against the wildest risk inherent in climate change, which is the chance that we will not know how to reboot our ecology after tampering with so much. Staff at the Native Plant Center represents a modest insurance policy. And with a \$6 million challenge grant in the

offing for forest restoration more support to NAC seems like a cheap down payment. So those giving up on the connections to the natural areas opens for kids and seniors, Prospect Park, for instance holds a special place in my heart, but only holds space for a limited number in its wild areas. The same goes for Central Park. The hard-working 10,000 acres here with proper care can thrive as many New Yorkers portal to nature, and is the home for a range of life, whose uses and services we look to--we overlook to our peril.

CHAIRPERSON LEVINE: Thank you, Tupper. Could you explain when you said that funding might dwindle off by 2017, does that mean that Sandy money has some sort of five-year life span?

TUPPER THOMAS: Well, I think that there's a number of different funding sources that have been used over time. And so they must be replenished as these come out. So a Million Trees had some money. There are lots of other things. So we just have to be sure not only that the money that's there now, but in my experience the capital is only the beginning. The really longer term commitment has to be towards maintenance. Because

you can come in with a big capital thing as Bram talked about using all kinds of equipment and get rid of everything. But it takes a while before all of that grows, and you have to be able to maintain it every time. In my mind, there is not nearly enough staff to do that properly. So if you're talking about 400 years until it's all fixed capitally, it it's not maintained, you're going to take 800 years. [laughs] So I think the maintenance money for maintaining these natural areas is enormously significant as is public access.

CHAIRPERSON LEVINE: Well, in every park natural or otherwise.

TUPPER THOMAS: [interposing] Yes.

CHAIRPERSON LEVINE: We had a staff today for the NRG of about I think 74.

TUPPER THOMAS: Yeah.

CHAIRPERSON LEVINE: What do we need to do this job right?

TUPPER THOMAS: Now, I think that the point of the study that they've done is to show what are the differences in the different kinds of landscapes and the different uses that happen in them. So I would love to hear what the Parks

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2 Department would have to say about what they need in
3 a place like Prospect. We have 200 acres of natural
4 area, most of which has had capital renovation, and
5 at least six full-time people. So if it's six per
6 200, I'd say that's a heavily used park. But I think
7 over time there's going to need to be a much, much
8 stronger maintenance workforce that is currently
9 there.

10 CHAIRPERSON LEVINE: That would be I
11 guess 300 for the whole system, which is--

12 TUPPER THOMAS: Yeah, 300 or 400. It
13 would depend on the areas and the types of
14 maintenance.

15 CHAIRPERSON LEVINE: [interposing] It's
16 like four, at least four times that we have today.

17 TUPPER THOMAS: Probably.

18 CHAIRPERSON LEVINE: You mentioned a \$6
19 Million Challenge Grant. I'm not familiar with what
20 that is.

21 TUPPER THOMAS: [interposing] Yes.

22 CHAIRPERSON LEVINE: You said it was a \$6
23 Million Challenge Grant in the offering for forest--

24 TUPPER THOMAS: [interposing] Yes.

25 CHAIRPERSON LEVINE: --restoration.

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2 TUPPER THOMAS: I thought that they--that

3 NAC, that Sarah was going to talk about it in her

4 testimony. So there is one.

5 CHAIRPERSON LEVINE: So in other words, a

6 donor has put this on the table?

7 TUPPER THOMAS: Yes.

8 CHAIRPERSON LEVINE: Is it-- are you at

9 liberty to tell us the donor? Is it a private donor?

10 Is it anonymous?

11 SARAH CHARLOTTE POWERS: [off mic]

12 CHAIRPERSON LEVINE: Maps three to one.

13 TUPPER THOMAS: Ditto.

14 CHAIRPERSON LEVINE: Got it. Right.

15 SARAH CHARLOTTE POWERS: [off mic]

16 CHAIRPERSON LEVINE: All right, here I go

17 asking someone who is not on the mic to speak again,

18 but--

19 TUPPER THOMAS: [interposing] Right,

20 Sarah.

21 CHAIRPERSON LEVINE: --are we helpful so

22 at least we're meeting the goal?

23 SARAH CHARLOTTE POWERS: [off mic]

24 CHAIRPERSON LEVINE: Not very close.

25 Okay.

SARAH CHARLOTTE POWERS: [off mic]

CHAIRPERSON LEVINE: Okay. So any donors who are within earshot right now, please step up.

TUPPER THOMAS: Please do.

CHAIRPERSON LEVINE: Okay, excellent. Thank you so much, Tupper. I really appreciate it.

LINDA COX: Are you ready for me to speak?

CHAIRPERSON LEVINE: [off mic] Yes, you may.

LINDA COX: Hi. Yes. Yeah, thank you for the opportunity. I'm Linda Cox. I'm the Executive Director of the Bronx River Alliance, and which has been mentioned a lot today, and the Bronx River Administrator for New York City Parks. The Bronx River Alliance works with maybe more than 100 organizations to reclaim the river as a resource for the communities along it. And we mean a resource in many ways, an educational resource. As Council Member Cabrera was asking questions about how many children are involved. For example, we've brought out about 900 students last year. We brought out more than 400 in the last 2-1/2 months to really use the river as a living classroom, and for their

teachers to really learn how to help them to be part of that.

We strive to make it a resource for job creation and job training working with many people to place them in green jobs with time. We use it as a green and safe corridor for transportation. So we have a lot of things on our mind as far as what our natural areas along the Bronx shore can mean to people. But I do want to note that sometimes it really is the river as a natural resource, and as a wildlife resource. It is actually most exciting to community residents. And two examples of that were actually mentioned by Bram today. One is that when Jose the Beaver turned up on the Bronx River in 2007, people were thrilled. And when Justin Beaver turned up and joined Jose on the river people were thrilled again partly just because it's cool. It's exciting to think of this after hundreds without a beaver in New York City at all. And also as a signifier of a revitalization of the Bronx, and that was not lost on the people who really live closest to that river in the Bronx.

Another example will really come this spring when we open up this fish ladder the first in

New York City for the first time. And we'll see Alewife herring coming upstream to spawn the freshwater reaches of the river for the first time again in hundreds of years. And again, people are strangely enthralled by this. People who never thought they cared a bit about a fish are switched on by this. And I think again part of it is because it does signify something about the renaissance of the Bronx. And it is unique and special to the Bronx, and that means a lot to Bronx residents. So these gains in natural resources of Bronx would not be achieved without this deep embedded community involvement and stewardship. But it is also important to really have that paired with the kind of technical expertise and scientific research that the Natural Areas Conservancy and Natural Resources Group are bringing to this work.

We work very closely and very effectively with the Natural Resources Group. We wouldn't have that fish ladder if it wasn't for the Natural Resources Group's leadership on that whole project. And when we go out and find invasive vegetation, which we do [bell] our conversation crew, we're doing it following a management plan developed by the

Natural Resources Group. So it's a very effective partnership, and I think it's one that means something not just for the natural resources and the our families [sic] of New York City, but also for the life of the community.

CHAIRPERSON LEVINE: A really inspiring story. Are you a conservancy that does operating work or are you simply doing programming and advocacy? Am I asking the right question there? Do you understand what I'm asking?

LINDA COX: We never quite know how to answer that question whether we're a conservancy at all, but when it comes to the operating work, our conservation crew actively works on natural areas of the New York City parkland. And they go in and do work that very few Parks employees do with the exception really of Natural Resources Group employees. So, yes, when it comes to the other areas of parkland in New York City we have a very heavy role in the development of that new parkland. And then when it comes to the active acknowledgement of that parkland, we care. We work closely with Parks on that, but we do have trouble raising the dollars

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2 around the maintenance of those areas. That's just a
3 hard lift for us.
4 CHAIRPERSON LEVINE: What is your annual
5 budget?
6 LINDA COX: Our budget is--
7 CHAIRPERSON LEVINE: [interposing] Or how
8 much do you raise?
9 LINDA COX: The dollars that we're
10 bringing into this work from outside the Parks
11 Department is about a million dollars a year.
12 CHAIRPERSON LEVINE: Right, and how many
13 acres is it total?
14 LINDA COX: Of the Bronx River Corridor?
15 CHAIRPERSON LEVINE: Yeah.
16 LINDA COX: Oh, it's--it's about 860
17 acres.
18 CHAIRPERSON LEVINE: So it's not much
19 considering the scale of the parkland in New York
20 City.
21 LINDA COX: You definitely do not want to
22 rely on those private dollars alone to ring enough
23 resources to the care of the parkland along the Bronx
24 River. You need public dollars for that.
25

CHAIRPERSON LEVINE: So after all the donors watching the webcast give the matching grant for the NAC, they're going to give money to the Bronx River Alliance to help you out.

LINDA COX: Actually, I think that the NAC would say as the Board of the Bronx River Alliance would say, No, we want both to happen at the same time. [laughter]

CHAIRPERSON LEVINE: A very political answer. You should run for office. Thank you very much, Linda. Christina.

CHRISTINA TAYLOR: Thank you. Good afternoon and thank you for having me today. My name is Christina Taylor. I'm the Executive Director for the Friends of Van Cortlandt Park. The Friends is an independent community based organization, which actively promotes the conversation and improvement of Van Cortlandt Park through environmental educational and restoration and enhancement of the park. The Friends focus the majority of our efforts on the natural areas of Van Cortlandt Park. This focus has evolved over time, as we realize that this was not a priority for the Parks Department. We don't blame the Parks Department for not making the metro area a

priority, as we understand that they have to focus their limited budget on areas such as sporting fields, playgrounds, and the perimeter of the park.

However, there is a definite need to make the metro areas more of a priority. Van Cortlandt Park is the third largest park in New York City with 1,146 acres. Over half the park is comprised of natural areas with other 600 areas of forest, and almost 60 acres of freshwater wetlands, and a lake. 553 acres of the park is designated for the wild. Unfortunately, the forest of Van Cortlandt Park is not very healthy especially with three highways cutting through the park and segmenting and disturbing the forest. Recently the Parks Department did a master plan for the park, and part of it stated that at the current rate of expansion without increased management Norway Maples would dominate another 50 acres by 2032 killing the understory, and preventing succession of the native forest.

Norway Maples are a non-native species that currently dominate 130 acres of the forest. In addition, the Master Plan states that at the current rate of expansion without increased management, 30 acres of forest will be killed by invasive vines by

2032. Both these statements are cause for alarm and need to be addressed. Over the last ten years, there have been a crew of four full-time employees dedicated to forest restoration in the park. In addition to general forest restoration, this crew is also responsible for removing hazardous conditions such as dead and dangerous trees and falling limbs. The Van Cortlandt Park Forest Restoration Crew is a result of mitigation funding from the current infiltrations having being built in the park and that funding will run out in June 2015.

Currently, Parks is trying to find extensions for this funding, but right now there are no definite plans. And it's very possible that come next summer we will have no staff dedicated to forest restoration in Van Cortlandt Park. In addition, Natural Resources Group does have a crew of approximately five dedicated to forest restoration in the Bronx. However, they spend most of their time in Pelham Bay, and only come to Van Cortlandt a few times a month. The Friends of Van Cortlandt Park assist where we can by having volunteers to remove non-native invasive plants, and planting native trees and shrubs. But without a dedicated crew also

working in the forests, there is no way our volunteers can keep up with the work that needs to get done.

Besides the forests there is also the wetlands. We have over half of all the freshwater wetlands in the Bronx and Van Cortlandt Park, and there has never been a park staff dedicated to working on the wetlands in the park. The Master Plan points out many concerns about this wetland, including the highways blocking overland flows a large part that discharges street drainage into the wetlands and lake, and the lake needs to be dredged again. The Friends of Van Cortlandt Park are dedicated to restoration and enhancement of Van Cortlandt Park especially the [bell] natural areas. We'll do what we can, but we're a small non-profit with a small staff. We believe that New York City Department of Parks needs to make the metro areas more of a priority, and they need the support of the New York City Council to do so.

CHAIRPERSON LEVINE: I was listening to a very sobering analysis. So, I'm guessing you would back up Council Member Cohen's assertion that in the

battle against invasive species in Van Cortlandt
we're treading water at best?

CHRISTINA TAYLOR: I think we're winning,
but it's a very, very slow battle. I've been doing
this for 15 years, and there are areas of the park
that I've been working on that long. I see a very
big difference, but we still have to continually go
out and maintain those areas, and those are just very
small areas. We haven't even gotten to a lot of the
areas that need to get done yet.

CHAIRPERSON LEVINE: Okay. Thank you
very much. Robert.

ROBERT BATE: All right, my name is
Robert Bate, and I'm President of the Brooklyn Bird
Club. The Brooklyn Bird Club is 105 years old this
year, so we've been intimately involved with Brooklyn
for many years and the wild areas of New York. And,
you know, it's like what I came to say was, you know,
it's like we speak in support of the natural areas.
I think that goes without say. Much of it has been
covered. One thing that Chairman Levine brought up,
which I think is incredibly important and it's a
personal pet project of mine, is to get urban park
rangers back in the park. I've watched them in

agent, and they're brilliant. You know, they really--they understand. They get the mission of protecting the park. They understand park usage and they understand the natural habitat.

They know what's going on so they're enforcement, if you will. If they have any enforcement powers. They have all of the enforcement powers of PEP officers. They come from an educational point of view. So when they interact with somebody in the park, you know, they start a conversation. Because most of the problems that exist in the park are due to basically ignorance. You know, it's like as a birder, and I've only been a birder for maybe seven years. So, I know what the other side. I've lived in New York City for 30 years, but I want more. You know, I understand what it's like to be in a park, and kind of know kind of have just a regular New Yorker's view of the park. And then I understand what it's like to be a birder walking through Central Park or Prospect Park during April or May when the waves of migration are coming through.

And the number--the activity that's going on in the wild world. You know, it's like it's

something that you miss unless you attend to. You know, and it's like, you know, I-- You know, we talk about diversity in the park. I have a pair of binoculars around my neck when I go through the parks. So everybody says do you see the hawk? Everybody loves the hawk. They can see the hawk. They love the Snowy Owls last winter because they can see the Snowy Owls. They don't see the Winter Wren, you know, darting underneath a bush. You know, they don't see the song birds on the top of the tree, you know. But, you know, if you look there's a lot going on. There's a lot of wildlife that's dependent on, you know, on our taking care of these natural spaces. And I really love the urban park rangers. They're really just--they're brilliant at their jobs. They understand the mission.

I would love to see-- And the other thing is I think it will save the park money. You know, if you--the number of dollars you put into putting urban park rangers back in the park will save money that is being wasted in all the maintenance. You know, Tupper talked about maintenance. That's the other thing. People love capital projects. You know, open a thing and there's ribbon cutting

ceremonial. At Marine Park there's starting to be Phragmites coming back. Somebody has got to get in there and get them before they get established, you know, that kind of thing. And there's got to be-- You know, there's got to be urban park rangers, you know, talking to the kids that are drinking out there on the platform or running their dogs in the marsh and that kind of stuff. [bell] Let them know what's going on. So, anyway, that's pretty good.

One other thing I would just did want to say about the relationship of invasives is there is a relationship between the trees, the bugs, and the birds, you know. Like the trees and the bugs are at a constant war evolutionarily so that when you bring in a tree from Europe say, all our bugs find it incredibly distasteful. They will not eat it. It's barren for them. They don't touch a Norway Maple. So, you know, so then there are no bugs. You have all this forest. Like someone said, a forest of Norway Maples that no bugs are living on. Well, there are no birds there either. It's kind of a silence kind of thing. So thanks very much.

CHAIRPERSON LEVINE: Okay. Thanks to our panel. Okay, our final panel will be Johanna

Clearfield from the Coalition for Urban Wildlife;
Scott Francisco from the Brooklyn Bridge Forest;
Suzanne Corber from the Save the Putnam Trail; and
David Bird. [laughter] And I'd like to acknowledge
that we've been joined by my colleague, Council
Member Mark Treyger from Brooklyn.

[Pause, background comments]

SUZANNE CORBER: Could I go first,
please?

CHAIRPERSON LEVINE: We're on a tight
schedule.

SUZANNE CORBER: I guess we all are. I
don't mind going first.

CHAIRPERSON LEVINE: Go ahead.

SUZANNE CORBER: I'm Suzanne Corber. I'm
a Bronx resident. I work on the Save the Putnam
Trail Campaign. You asked Chair Levine who uses the
trails in parks. From my experience I would say that
a large segment is lower-income people that have no
other way of getting out of the city. This is one of
their ways to kind of vacation and get out of the
hustle and bustle. But I wanted to talk to you about
the Putnam Trail because I think it is an example of
how a natural resource has been treated in the park.

The trail runs through Forever Wild preserve, which the city designated as among the most valuable natural ecosystems in the city. It also runs through wetlands, which the city has described as having significant ecological benefits to all New Yorkers.

These lands also meet New York State's definition of environmentally sensitive areas because they offer aquifer recharge, et cetera. Despite that fact, the Parks Department has the plans on the table to widen this eight-foot historic trail to 15 to 16 feet, and to pave 10 feet of that width. And they made this decision without having first obtained an environmental impact statement to determine how changes would impact wildlife and environmentally sensitive surroundings. The trail, if you know the geography, is between the lake and the pond, and some forest area to the west with turtle, salamanders, frogs, raccoon, all kinds of animals crossing the trail.

This plan I think would hard, you know, the wildlife biodiversity over time because obviously it will become mostly a bike trail with fast moving bikes. On Friday, I received a communication from Parks that identified initial stakeholders on the

trail designed in 2008 as two elected officials, Transportation Alternatives and DOT. My question back was, Where were the environmental agencies, DEP and DEC. DEP should care because at some point they'll have to take the brook that runs parallel to the trail out of the combined sewer. So whatever changes are made to the Putnam Trail at this time, will impact those day lining [sic] plans. DEC should care because they have protection of the wetlands, which already are under stress due to water runoff from highways, and paved golf paths nearby.

Some would say that these agencies were excluded because initial funding came from Federal Transportation funds. But nearly half of that money, \$2.4 million was provided by the City. And federal funds always accommodate for environmentally sensitive areas. They don't dictate engineering design. In short, a comprehensive look is still needed for this area to make certain that wildlife biodiversity is preserved [bell] and the health of wetlands and the lake water is improved. We urge the proper finding be found in order to this kind of work. Thank you.

CHAIRPERSON LEVINE: Thank you. Okay, so next I guess will be Suzanne. Sorry for your name, Joanna.

JOHANNA CLEARFIELD: Suzanne is good. [laughter] My name is Johanna Clearfield, and I am the Founder and Director of a grassroots organization, Urban Wildlife Coalition. It is a group of animal advocacy as well as hands-on rehabilitators who go out and rescue basically whatever they find. So it could be a sparrow, a pigeon, a squirrel. you name it. I also am currently a delegate for Brad Lander's district participatory budget, and I want to just convey or just relate to you that it was overwhelmingly stated by everyone in the budget meetings that they want more PEP. We want more PEP. [laughs] All God's children need more PEP. It was really--it was really overwhelming that that came up on everybody's agenda. We really do need those Park Enforcement Police. I personally work with rehabilitators in Prospect Park who are constantly finding mangled water birds. They get the bait caught in their throats. They get crippled and die because there are not-- No one is

surveilling how these--how the people who are fishing get rid of their bait.

I actually only have three minutes. So I'm going to be the buzz killer in the room, and bring up the issue of the federal government coming into our parks and killing our geese. It's relatively recently. It's 2009 was the first time the fed through the USDA-- Their subdivision is called Wildlife Services, which should really be Wild Death Services because they primarily come and kill our birds. For some reason, this does not seem to be on the agenda of any of the conservancies or any of the wildlife groups to make them stop. So I'm doing everything I can in my world with the people I know, but I really wanted to be the voice of that today. That really needs to stop. There is no environmental impact survey that justifies it. I've done articles as well.

I do some freelance writing for several papers, and I followed the money, and a lot of that comes from the NRA who then have people in the USDA who are making money from contracts to kill the geese. It's a money, for-profit situation. And they come into Inwood Park. They come into Van Cortlandt

Park, and I would argue that, or I would suggest that if we are all focused on the human relationship to nature, which is so important and so valuable. That when these federal officers and these government workers come in and call and trap and kill our geese in our communities, it has a very traumatizing effect on the community. In Prospect Park it was so traumatizing that the only resolution that was finally--the measure that was decided on was to just get rid of all the geese. So that nobody in the neighborhood has to go through the trauma of seeing our geese rounded up and killed. There is now a zero tolerance policy for geese in Prospect Park. I have video of families on-- [bell] Sorry.

CHAIRPERSON LEVINE: It's okay. Finish your thoughts.

JOHANNA CLEARFIELD: Okay, I have video because I am 100 years old. I have been living in parks for all of my New York life. I used to take video of the families who used to come to the water, feed the geese. The relationship of those families with those geese-- Eric Adams has talked about that being a huge part of his childhood. So has Letitia James. Prospect Park now has a zero tolerance policy

for geese. They won't let any geese. They have goose busters who come and they disturb all the nests so there are no offspring. And what I'm saying overall is that there needs to be a mission statement or an oversight committee that looks at how we are-- What's our approach to the human relationship to nature. Because I would suggest that this is very damaging and needs to stop. The killing of our geese needs to stop.

CHAIRPERSON LEVINE: Okay. Thank you for bringing up those important points. It would help to delve into that further in a later hearing. Thank you. And so, are you Mr. Bird? Is that correct.

DAVID BIRD: Yes, David Bird. Yes.

CHAIRPERSON LEVINE: Go ahead.

DAVID BIRD: Thank you. I'm a person with a sort of working environment and in wildlife protection for much of my life. I've also spent some time in the real estate field. I'm self-taught on the nature side. But I've put enough time in that I'm now actually working on a book on natural area management using eco-parting principles from all the recent science, scientific developments like genetics and things like that have come along. I am here

1 today because I want to re-echo what many of these
2 people said about the importance of nature in the
3 city. As a person who worked in real estate, people
4 talked about the tourism value. But we all know the
5 difference in prices between your apartment looking
6 on Central Park and your apartment looking the other
7 way.
8

9 And I know the building I live in, the
10 Spuyten Duyvil on Palisade Avenue--I'm sorry my
11 council member left to form this committee [sic]--the
12 difference between looking at the view of the river
13 and looking at the other side, it's a quantifiable
14 number. But there are number of issues involved in
15 protecting nature in the city. And particularly
16 tricky for those of us who also like people. There
17 is often a split between the environment and the
18 people lovers. Usually the environmentalists kind of
19 kind of want to save the whales, and they wouldn't
20 care that much if the people-- They talk about there
21 are too many people. I think we need to get beyond
22 those kinds of splits. And, I think there are a
23 number of issues affecting nature protection in the
24 city, which are not going to be easily addressed.
25

One of them you started talking about, and it was actually related to these comments before. We have a number of conflicting-- You know, we as a society suffer from a multiple personality disorder. We want to cut budgets, and yet we want to spend money on stimulus packages. You know, we have to figure out maybe instead of using a stimulus package to build more highways we should have kept more of those teachers that we cut. There are those kinds of issues, and those play out in all of our human activities. I'm going to talk about three things that really the--that really impact nature in the city, and that we need to improve. And I want to thank Bram and his staff and the work he's been doing because these people care a tremendous amount about the city. They care about nature, but I think they care about nature as part of the city as one of those ways to heal the relationship between people and nature.

But I think there are a number of things we can do that would be much better. I think we need to incorporate, and I think with the new science going on, not all of which I'm familiar with, some of this maybe coming down the pipe. We need to

incorporate principles of what's called landscape ecology. Landscape ecology means you look at a whole region, and you say, it's not just the number of trees because some place you might want to have meadows, which the Parks Department recognizes. Some places you might want to have shrubbery. Some places you might want to have wetlands. In an area that's built, you're not going to have perfect nature. We don't want black bears [bell] in Central Park. I'm sorry. May I keep going?

CHAIRPERSON LEVINE: Sure.

DAVID BIRD: Sure. So right now in the city we have a number of city-owned sites such as Charleston Woods, Treasure Hill that are at risk. Twenty-five acres were just destroyed this summer there. This is an EDC project. Parks was going to get 40 acres that is going to go down to 20. That land was sold off to pay for an environmental impact statement that a group that I'm involved with, Metro, had a lawsuit to call for a \$2 million [sic] impact statement. I was involved for many years as Chair of the Conservation Committee for Audubon, and Chair of the Board for two years. We did a lot of work on

Staten Island. As somebody else said, that's where the nature is in the Outer Boroughs more.

I was at Inwood yesterday and did a-- I mean on Sunday did a bird count there, and it's got great stuff there. So the point is Gulf Port Marsh it's site identified in the studies we did with Audubon. 400 acres now is being filled. On a coastal area they're putting in fill at a time when we're all talking about spending money to save wetlands. Now, some of this was already post-industrial, but it had recovered. Similarly right now, some of that money from Croton Filtration is being used to a capital project in Pelham Bay Park, which is going to repave an area that had become wild. Very damaging. There's two new, big new paths put in. And I was really glad to hear the smart cutting measurement idea where you analyze the paths. You say how many do we need? Do we have too many? So all those kinds of conflicts--

CHAIRPERSON LEVINE: [interposing] If you can kind of wrap up only because--

DAVID BIRD: Sure.

CHAIRPERSON LEVINE: --we're way over time.

DAVID BIRD: And in the Parks Department I think particularly we could do better. I think there is a big problem with the million tress in the sense that many areas choose a program of their own. You do have to control the invasives. There's been a big issue, which hasn't--wasn't raised here today about the use of herbicides, poisons to do that, which has been going on throughout the city, which I think we could do better than doing that. I'm not a 100% against pesticides on all occasions, but I think we need a better approach to do that. And within the Parks Department you have a lot of balkanization. You mentioned it already when people talk about the education in the natural areas. Well, that's a different department. You have multiple groups working on these issues, and you folks could do a good job--

CHAIRPERSON LEVINE: [interposing] Thank you.

DAVID BIRD: --by coordinating that and making that--

CHAIRPERSON LEVINE: [interposing] Thank you very much.

DAVID BIRD: --more rational.

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2 CHAIRPERSON LEVINE: Thank you, Mr. Bird.

3 Thanks to our panel. Thanks to everyone who came

4 today. This concludes our hearing. [gavel]

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C E R T I F I C A T E

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



Date December 20, 2014