



**Testimony**

**of**

**Trevor McProud  
Director, Public Health Engineering  
New York City Department of Health and Mental Hygiene**

**before the**

**New York City Council Committee on Parks and Recreation**

**on**

**Oversight - Examining Water Quality at the Parks Department's Beaches**

**April 16, 2019  
250 Broadway – 14<sup>th</sup> Floor  
New York City**

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Good afternoon, Chair Grodenchik and members of the Parks Committee. My name is Trevor McProud, and I am the Director of Public Health Engineering within the Division of Environmental Health. On behalf of Commissioner Barbot, thank you for the opportunity to testify about the Department's Beach Surveillance and Monitoring Program.

New York City's beaches function as an important recreational resource for city residents and neighboring communities. All beaches operated within the New York City limits must be permitted with the Health Department. There are eight public beaches operated by the Parks Department and 17 privately operated (members only) beaches within New York City limits. Beach season typically runs from Memorial Day weekend to Labor Day weekend, though for the last number of years the season has been extended one weekend post Labor Day.

#### Beach Surveillance and Monitoring

The Health Department is responsible for beach surveillance and monitoring for all permitted City beaches. The program is comprised of two major areas: routine water quality monitoring at beaches for compliance with water quality standards, and compliance inspection of beach facilities in accordance with New York City and New York State health codes. The results of routine water quality monitoring and inspections are compiled in Department's Annual Surveillance and Monitoring Beach Reports.

Starting one month before the beach season, the Health Department monitors and samples each beach on a weekly basis with the exception of the Rockaway and Breezy Point beaches, which are sampled bi-weekly. In addition to routine water quality monitoring, the Health Department monitors on a daily basis the regional wet weather conditions and occasional Waste Water Treatment Plant bypasses, operational upsets and spills. This information can be used to assess and make beach status determinations.

There are three swimming classifications for New York City beaches which are determined by assessing water quality, rainfall and pollution events, on-site sanitary surveys, and/or historical information: Open for Swimming and Wading; Warning – Not Recommended for Swimming and Wading; Closed – Temporarily Restricted for Swimming and Wading.

City, State and federal regulations mandate the use of enterococcus as the indicator organism for evaluating the microbiological quality of marine recreational beach water. Enterococci are indicators of the presence of fecal material in water and of the possible presence of disease-causing bacteria, viruses and protozoa. These pathogens can sicken swimmers and others who use the water for recreation. State water quality regulations provide two standards for the maximum allowable enterococci concentrations for bathing beaches: for any single sample it is 104 Colony Forming Units (CFU), and for an average of a 5-sample-set within a 30-day period it is 35 CFU. When one or both of these water quality standards are exceeded, the Health

Department takes action to notify the public of the potential risks and conducts resampling to either confirm, remove or escalate the notification as appropriate.

Additionally, the Health Department has set rainfall thresholds to protect swimmers' health. Because most of the city has combined stormwater and sewer systems, high levels of precipitation may result in wastewater bypassing the treatment system and overflowing into local waterbodies. These bypasses pose a public health threat to nearby beaches, and when these thresholds are met, a public notification is issued in the same way as done for sample result exceedances.

The Health Department collects water samples from New York City beaches on a routine basis for scientific analysis. During sampling, an onsite sanitary survey inspection is performed to identify any existing and/or potential sources of pollution that are likely to affect beach water quality. Water samples are collected at knee-depth in three feet of water, from the center, left and right of the beach. At larger beaches, such as Coney Island and Rockaway, samples are taken from multiple locations to ensure adequate representation and reliable results. The collected samples are delivered to the Health Department's Public Health Laboratory for analysis, and analysis for enterococci is completed in 24 hours. If the analysis reveal that the samples results are above the criteria for the beach to be open for swimming and wading, the Health Department will issue a beach advisory or potentially a closure, depending on the extent of the pollution.

In addition to routine water sampling, the Health Department also conducts annual safety inspections and complaint inspections at bathing beaches to assure that all staff, especially lifeguards and supervisors, have proper certificates and coverage, including CPR certification; all required life-saving equipment is available, including rescue tubes, spine boards, first aid kits and resuscitation equipment; and there is proper signage posted on site. The inspections also evaluate beach facility hygiene, and direct observations of conditions are supplemented by interviews with lifeguards and other personnel.

#### Public Notification and Communication

It is essential that the public is aware whether the conditions at the New York City beaches are safe for recreational activity. When the status of any beach changes, the Health Department notifies the public through a number of ways. Beach operators are notified by phone, email and/or text as to the necessary on-site postings. The Health Department developed easy-to-interpret signs for beach closures and warnings, and beach operators are required to post these signs in designated areas visible to beachgoers. A "Warning" sign indicates that swimming and wading are not recommended, and a "Closed" sign indicates that swimming and wading are not permitted by order of the Department.

The Health Department administers "Know Before You Go," a free texting service introduced in 2014 that enables subscribers to learn the status of any of the eight public beaches in New York City before they go to the beach. This tool also can be used to deliver notifications of high priority water quality warnings or closures as well as safety related messages such as warnings for high rip currents, closures for extreme weather and when beaches open and close for the season. Currently, there are 11,752 English-language subscribers and 559 Spanish-language subscribers. We also provide updates on our website, which includes a list of city beaches by borough, their respective status, and recent sample results. Information is also available via Notify NYC, 311, and Health Department press releases when necessary.

#### 2018 Program Results and Past Trends

Between April and September 2018, the Department conducted routine water quality monitoring and sample collection at all 25 permitted beaches, and over 1500 samples were collected and analyzed. Of those 1500 samples, only 3.6% exceeded the maximum allowable enterococci limit (4.2% for public beaches and 3.2% for private beaches). This decreased from 15.3% (4.9% for public beaches and 22.1% for private beaches) in 2017. Of the 2,675 total beach days in the summer season (collectively across all 25 beaches), there were 356 beach notification days (355 days with a warning posted and one closure day). This decreased from 848 warning days in 2017.

In general, the water quality at New York City Beaches is acceptable to fully support the important benefits that they provide in a healthy and safe manner. An analysis of our data over the last 10 years shows that the number of beach notification days is correlated with seasonal precipitation totals. It is difficult to say definitively, but the relatively higher number of exceedances that was experienced in 2017 and the elevated notification days at certain beaches in 2018 are likely influenced by local weather patterns, and therefore potentially vulnerable to ongoing climate trends. The National Oceanic and Atmospheric Administration (NOAA) has documented a 71% increase in the amount of precipitation that falls during heavy events in the Northeast United States and that extreme rainfall events in May to October have increased 2 to 4 times in the region. It may be reasonable to expect that beach notifications could increase if these normal and extreme climate trends are consistent at our local level.

Additionally, within the next two years, there will be revised water quality standards issued by New York State. These were passed by the Environmental Protection Agency in 2012, and currently being finalized at the state level. The standards will be more stringent than those currently used, and as a result, we are expecting more beach notification days. In this case, more notification days will not mean that the water quality is getting worse, as the water will be held to a stricter standard to allow recreational beach activities.

Thank you for the opportunity to testify today. I am happy to answer any questions.



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**Hearing before the New York City Council  
Committee on Parks & Recreation  
Hearing: Beach and Water Quality  
April 16, 2019**

**Testimony By: Liam Kavanagh, First Deputy Commissioner**

Good morning, Chair Grodenchik, Members of the Parks Committee, and other Members of the City Council. My name is Liam Kavanagh, First Deputy Commissioner at NYC Parks. Thank you for inviting us today to discuss the current quality of our beaches and the waters surrounding it.

NYC Parks is the chief steward of 14 miles of beaches; last summer, we estimated 16.2 million people visited citywide. The beaches are permitted by the Health Commissioner and are open typically from the Saturday before Memorial Day, until the Sunday after Labor Day, in accordance with Local Law 181, enacted in Fall 2017. Eight beaches are public and they are located in four boroughs—Brighton/Coney Island, and Manhattan Beach in Brooklyn, Orchard Beach in the Bronx, Rockaway Beach in Queens, and Cedar Grove, Midland, South and Wolfe's Pond Beach in Staten Island.

Parks handles the daily cleaning of the beach during the season. The agency removes debris from sand, frequently empties trash receptacles and cleans comfort stations. Water testing is done weekly by DOHMH and passed down to Parks for public broadcast; our agency posts results on the bulletin boards at all beach comfort stations. DOHMH will notify Parks if the water quality reaches levels necessary to place the beach under Advisory, where swimming or wading is not recommended, or Closure, where such activities are prohibited. In those cases, Parks will post specific signs indicating the beach's status, and DOHMH will inform Parks when the beaches are ready to be reopened. Information regarding beach status is available through Notify NYC, DOHMH's website (to which Parks' beach webpage is linked), or via text (sending the message "BEACH" to 877-877) in order to get real-time opening, closing, and water quality information.

To conclude, I appreciate the Council's interest and advocacy regarding this topic, and look forward to our continued work with DOHMH and your colleagues to make New York City's beaches cleaner and safer than ever. DOHMH and NYC Parks enjoy a close working relationship, and are always happy to participate in a dialogue about how to get even better. I would like to thank you again for inviting me to speak today and testify, and to thank DOHMH for their remarks, and I will now be pleased to answer any questions that you may have.



**Testimony of:**

**Michael Dulong, Senior Attorney, Riverkeeper, Inc.**

**before the**

**New York City Council  
Committee on Parks and Recreation**

**on**

**Water Quality at the Parks Department's Beaches**

**April 16, 2019**

Thank you, Chairman Grodenchik and the New York City Council Committee on Parks and Recreation, for the opportunity to testify concerning city beach closures.

Riverkeeper is a member-supported watchdog organization dedicated to defending the Hudson River and its tributaries and protecting the drinking water supply of nine million New York City and Hudson Valley residents. As part of our mission, we sample water quality throughout New York City, monitor city shorelines for evidence of pollution, and we have been fighting for decades to clean up the sewage discharges that cause beach closures and often make waterways throughout the five boroughs unsafe to fish, swim or even touch.

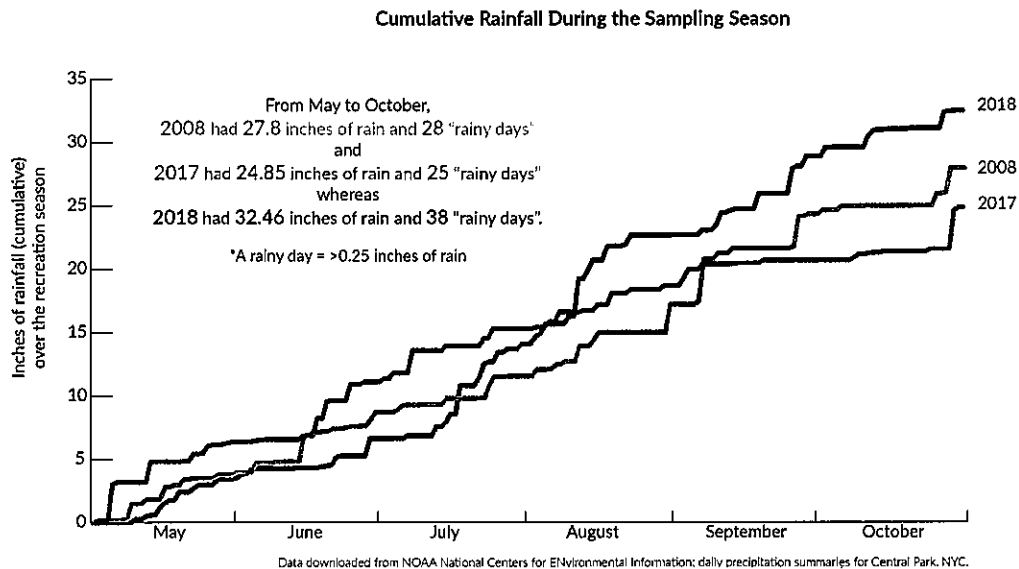
### **Raw Sewage Discharges and Polluted Runoff Cause Beach Closures and Warnings**

As you know, on days when it has not recently rained, city waters that are exposed to tidal flushing are safe to swim in. However, it is another story during and following precipitation. Storm runoff mixes with sewage to overwhelm the city's antiquated sewer system, sending more than 20 billion gallons of raw sewage into waterways each year. That is enough volume to fill the Empire State Building 72 times. These sewage discharges flow from 450 outfalls dotting nearly every shoreline in New York.

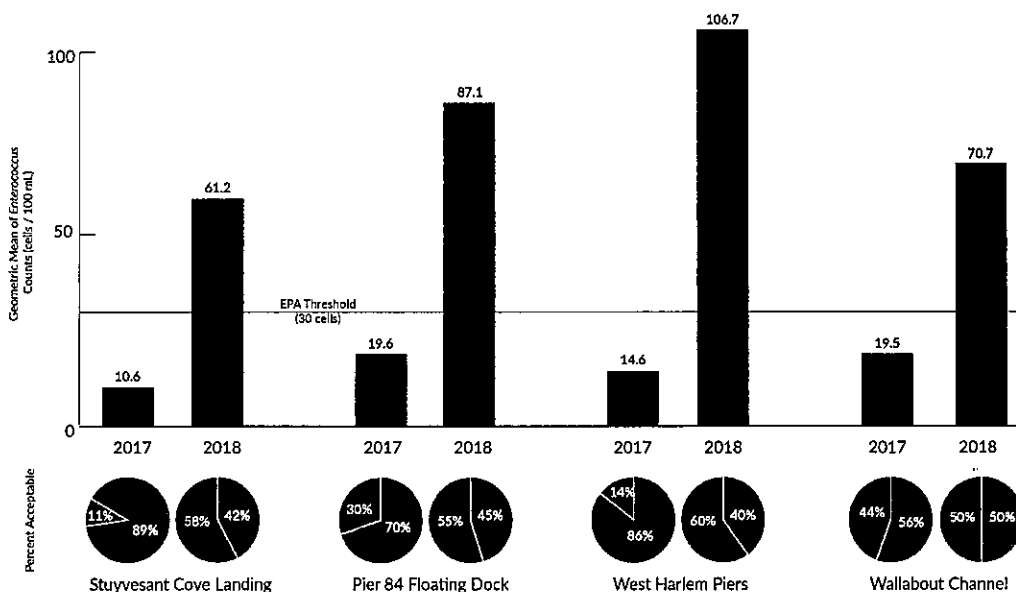
Combined sewer overflows contain untreated human waste, trash, ammonia, pesticides, nutrients, petroleum products, pathogenic bacteria and viruses, and other toxins. Contact with these pollutants can cause significant health impacts, including intestinal illnesses, rashes, and infections.

In 2018, at public beaches there were 49 warning days and 1 closure day. That is more than double the 22 warning days in 2017 and more than four times the warning days in 2016, of which there were only 12. There were 16 warning days in 2015. (Note that conditions at private beaches were different, and private beach warning days spiked in 2017.)

So, what happened in 2018? It was one of the wettest years on record, with 32.46 inches of rain and 38 “rainy days” (>0.25 inches of rain) from May to October. Compare that to 24.85 inches and 25 “rainy days” over the same period during 2017.



And, here in New York, with rain comes sewage. From 2016 (a relatively dry year) to 2018, the number of days with a combined sewer overflow rose by 44%—from 85 days to 122. The water quality sampling results taken by New York City Water Trails Association were terrible in 2018 and significantly worse than in 2017. These graphs reflect a small sample of that data:



Indeed, New York City Department of Health and Mental Hygiene’s (DOHMH) 2018 Beach Surveillance and Monitoring Report is congruent with our data, stating that “[t]hese exceedances may be due, in part, to particular precipitation and temperature patterns this year,

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which are consistent with recent increases in the summer heat index, as well as increases in total precipitation in the Northeast United States.”

These problems are only expected to grow worse. According to the New York City Panel on Climate Change, our region can expect to see a 1–8% increase in precipitation by the 2020s, and 4–11% increase by the 2050s. The mean annual temperatures are projected to increase by 4.1°F to 5.7°F by the 2050s, and by 5.3°F to 8.8°F by the 2080s. So, we can expect to see beach closures and warnings increase in the future.

Unfortunately, the Beach and Surveillance and Monitoring Report is misleading in that it states only a fraction of the warning days were caused by wet weather. That is false. Nearly all of the pathogens that trigger beach closures are delivered to our waters by precipitation-related discharges, no matter whether those dangers are recognized through water quality modeling, on-site sampling, or visible signs of floating sewage.

### **Every City Waterway Should Be Considered Parkland**

Recreation in city waters is not limited to beaches. In fact, nearly every single waterbody in New York City is used by residents to fish, swim, and/or kayak. They should be able to do so without fear of contamination and resulting illness. Last year, *The New York Times* promoted the idea of building a beach in Manhattan. That is more than possible and should be the Council’s goal. In the late 19th century, before heavy industrialization, it was a reality.

We should envision the future of our waterways as community parks and sanctuaries for wildlife—even while also continuing to support water-dependent industries. Waters such as Newtown Creek, Bronx River, and Flushing Bay are relatively calm, where there is less current, smaller wave action, and less boat traffic. They are safe places where people should be able to enjoy water recreation. Just a few feet off the city’s crowded shoreline is a different world, and if you have not experienced it firsthand, I would like to invite you all on Riverkeeper’s boat this year.

### **Current City Plans to Reduce Sewage Overflows Will Not Prevent Beach Closures**

The New York City Department of Environmental Protection is currently developing the final two of its 11 long term control plans to control sewage discharges. Not a single one of these plans will bring city waters into compliance with Clean Water Act standards. Moreover, they are based on 2008 rainfall data, and they do not prepare for climate change projections, in terms of increased precipitation, higher temperatures and sea level rise.

### **Recommended Actions**

What can the City Council do to quell beach closures and warnings? Riverkeeper urges three actions today:

- First, pass legislation that will not only require green roofs and green infrastructure for new and modified buildings, but will provide financing



programs to make green roofs attractive. Green roofs and infrastructure reduce the amount of runoff that causes sewer overflows.

- Second, separate out stormwater fees from City water rates. Rates are currently tied to only consumption. This rate structure allows big box stores with enormous stormwater runoff volumes from roofs and parking lots to potentially pay less than a single home owner. Water rates should instead be set equitably so that polluters pay for their runoff and are incentivized to reduce it.
- Third, we urge direct City oversight over plans to reduce sewage and make our sewer system resilient against climate change impacts. The New York City Department of Environmental Protection (DEP) is avoiding Council and public oversight by not sharing sewage control plans before they are provided to the state Department of Environmental Conservation for approval. The DEP is currently drafting a plan to control pollution in the City's open waters: the Hudson, East and Harlem Rivers, New York Bay, Arthur Kill and Kill Van Kull, and the western portion of Long Island Sound. This plan, called the "Citywide/Open Waters Long Term Control Plan," will directly affect numerous city beaches. There is a meeting tonight starting at 6:30 at CUNY School of Law, 2 Court Square West, Long Island City. I hope you will join us there.

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Riverkeeper thanks the Parks and Recreation Committee for the opportunity to participate in today's hearing and for the important role that the City Council continues to play in stewarding our water recreation resources. We look forward to continuing to work with the Council to ensure clean, healthy, usable and enjoyable waters for all New York City residents.

Contact:

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**STATEMENT OF THE NATURAL RESOURCES DEFENSE COUNCIL BEFORE THE  
NEW YORK CITY COUNCIL COMMITTEE ON PARKS AND RECREATION  
REGARDING WATER QUALITY AT THE PARKS DEPARTMENT'S BEACHES**

April 16, 2018

Good afternoon, Chairman Grodenchik and members of the committee. Thank you for convening this important hearing. My name is Kate Fritz; I am here on behalf of the Natural Resources Defense Council ("NRDC"). As you may know, NRDC is a national, non-profit legal and scientific organization that has been active on a wide range of environmental health, resource protection, and quality-of-life issues around the world and in New York City since the organization was founded in 1970. Beach and recreational water quality are of significant interest to NRDC, which has advocated for pollution reductions in waterways throughout the region for decades. NRDC attorneys Eric Goldstein and Larry Levine assisted in the preparation of this statement.

NRDC has reviewed the last several years of Department of Health and Mental Hygiene's Beach Surveillance and Monitoring Program Reports. These reports are informative, and the work of the Department has been helpful in alerting the public as to water quality conditions at city beaches.

Nevertheless, and despite the progress that has been made over the years in reducing pollution discharges into New York's waterways, climate change is posing new challenges to beach water quality. Increased precipitation from climate change is likely to trigger more frequent combined sewer overflows, posing significant long-term threats to beach water quality. It is essential that the City develop its sewer infrastructure in anticipation of more rainfall in the future.

Combined sewer overflows cause significant problems after even modest rainstorms. This condition occurs almost every time it rains in New York City; raw sewage, pet waste, trash, and polluted runoff flow mix with huge volumes of rainwater and are funneled into local waterways where people swim, fish, and boat. People who come into contact with such contaminated water can suffer health impacts including intestinal illnesses, rashes, and infections.

The City seeks to manage these risks through monitoring and beach closure. However, trends in precipitation indicate that sewage pollution from storm water runoff will only get worse in the coming decades. From 2016 (a relatively dry year) to 2018, the number of days with a combined sewer overflow rose by 44%—from

85 days to 122 days. In other words, NYC experienced sewage overflows, on average, once every 3 days in 2018.<sup>1</sup>

Though not all sewage overflows result in a beach quality issue that triggers a public notification, the beach quality trends roughly map on to the CSO trends. The Health and Mental Hygiene Department's 2018 Report noted that bacterial exceedances at City beaches are consistent with recent increases in the summer heat index, as well as increases in total precipitation in the Northeast United States.<sup>2</sup> Of the 356 notification days given at City beaches in 2018, 216 (approximately 60%) were issued as a result of rainfall events.<sup>3</sup> The percentage for 2017 was 11%,<sup>4</sup> and for 2016 was 40%.<sup>5</sup> This data shows that increased precipitation threatens water quality at the City's beaches, and that climate change will make this problem worse.

The Mayor's Office and the Department of Environmental Protection are currently developing a New York City Long-Term Sewage Control Plan. This plan is likely to shape billions of dollars in sewer infrastructure investments. If done well, the Plan could help safeguard beach water quality in the face of climate change by reducing or eliminating sewage overflows. However, the Mayor's Office does not currently intend to make this plan available for public review before submitting it to the State.

One important step the that you, Chairman Grodenchik, and your Council colleagues could take is to urge the Mayor's Office and DEP to release the Long-Term Sewage Control Plan, in draft form, for public review. Such a step would give the City Council and all New Yorkers an opportunity to see what the Administration is planning, and allow experts a chance to help strengthen the plan.

Thank you for your attention. NRDC stands ready to work with you to help New York prepare for the urgent challenges climate change will cause for water quality at New York City's beaches.

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<sup>1</sup> Source: NYC data extracted from NY State Department of Environmental Conservation.

<sup>2</sup> Department of Health and Mental Hygiene's Beach Surveillance and Monitoring Program Report (2018), p. 10.

<sup>3</sup> Data derived from Department of Health and Mental Hygiene's Beach Surveillance and Monitoring Program Report (2018), Appendix B.

<sup>4</sup> Data derived from Department of Health and Mental Hygiene's Beach Surveillance and Monitoring Program Report (2017), Appendix B.

<sup>5</sup> Data derived from Department of Health and Mental Hygiene's Beach Surveillance and Monitoring Program Report (2016), Appendix B.

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**Appearance Card**

**1**

I intend to appear and speak on Int. No. \_\_\_\_\_ Res. No. \_\_\_\_\_

☐ in favor ☐ in opposition

Date: 4/16/19

(PLEASE PRINT)

Name: Michael Dulong

Address: \_\_\_\_\_

I represent: Riverkeeper, Inc.

Address: 20 Secor Rd Ossining NY 10562

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Date: \_\_\_\_\_

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Name: Trevor McBroud

Address: \_\_\_\_\_

I represent: DORM HHS Admins Part

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**3**

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☐ in favor ☐ in opposition

Date: \_\_\_\_\_

Name: Liam Kavanagh (PLEASE PRINT) First Deputy Commissioner

Address: The Arsenal

I represent: NYC Parks

Address: \_\_\_\_\_

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**4**

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Date: \_\_\_\_\_

(PLEASE PRINT)

Name: KATE FRITZ

Address: 455 Suydam St Brooklyn, NY 11237

I represent: NRDC

Address: \_\_\_\_\_

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