Testimony of Carter H. Strickland, Jr.
Commissioner, New York City Department of Environmental Protection
before the
New York City Council Committee on Environmental Protection
concerning
Air Quality Impacts and Ways to Measure and Address Them in NYC Environmental Justice Communities
250 Broadway, 16th Floor
February 28, 2014, 1 pm

Good morning Chairman Richards and Members. I am Carter Strickland, Commissioner of the New York City Department of Environmental Protection (DEP). Thank you for the opportunity to testify on air quality impacts and ways to measure and address them in NYC environmental justice communities. I am joined by Dr. Tom Matte, Assistant Commissioner for Environmental Surveillance and Policy at the Department of Health and Mental Hygiene. First, congratulations to you, Mr. Chairman, on your appointment to this committee. DEP looks forward to working with you and this committee over the next four years.

Improving our city's air quality remains an important public health goal and one in which city government can play a large role. Now that emission-reduction control strategies have been applied to most of the stationary and mobile sources of air pollution inside and outside the City's boundaries, federal, state and local governments are focusing on finding control strategies for smaller sources that could be better regulated or that have been unregulated to date. In 2007, PlaNYC, the city's first long term sustainability plan set the ambitious goal to "achieve the cleanest air quality of any big U.S. city" by the year 2030. Since then the City has made significant strides toward achieving this goal. Along with air quality initiatives by other City agencies, DEP is responsible for updating and enforcing the Air Pollution Control Code (Air Code), which has the goal of preserving, protecting, and improving the air resources of the city. We hope to come before you soon to testify on the re-introduced revised Air Code for its adoption this year.

While New York City's air quality has improved, air pollution in New York City remains a significant environmental threat. The Department of Health and Mental Hygiene (Health) estimates that fine particle pollution—our most harmful pollutant overall—causes an average of more than 2,000 deaths, approximately 1,500 hospital admissions for lung and heart conditions, and 5,000 emergency department admissions for asthma each year, based on levels in 2009-11.

Particle pollution and most other harmful air pollutants in cities, like oxides of nitrogen, sulfur dioxide, and ozone, come from fuel combustion. These pollutants affect all New Yorkers in all kinds of neighborhoods and demographic groups. In fact, the accompanying map shows that some of the worst air quality is in the Upper East Side of Manhattan, on both sides of 96th Street, and this pattern is true for other transportation corridors and areas with a high concentration of large buildings that use dirtier grades of heating oil. However, a disproportionate burden of public health harm from air pollution falls on the most vulnerable New Yorkers—the very old, the very young, and those living in neighborhoods with the highest rates of poverty and pre-

existing respiratory and cardiovascular health conditions, which are exacerbated by air pollution. For example, Health estimates that rates of emergency department visits for asthma exacerbated by fine particle exposures are four times higher in high-poverty neighborhoods, compared to low-poverty neighborhoods. In other words, in NYC, unlike other cities or nationwide, we do not observe consistent differences in levels of fine particulate matter ($PM_{2.5}$) by neighborhood poverty, but there are strong differences in $PM_{2.5}$-attributable health events due to underlying neighborhood susceptibility. So while all New Yorkers have a stake in cleaner air, those in our most vulnerable neighborhoods have the most to gain from efforts to reduce emissions in their own communities and elsewhere in the city, as air does not stay within neighborhood boundaries.

In the rest of my testimony, I will talk about what the City is doing to monitor air pollution, its sources and impacts, and how we are working to reduce local emissions. I will then speak to the implications of air pollution and control efforts for environmental justice (EJ) communities. Finally, I will touch on remaining challenges, including passage of a revised, updated Air Code, to achieving the cleanest possible air quality for all New Yorkers.

The New York State Department of Environmental Conservation (DEC) conducts routine air quality monitoring in New York City and throughout the state, as required by federal regulations. DEC tracks hourly, daily and annual trends in overall air quality in the NYC metro area to determine whether the City is complying with the federal Clean Air Act, and to help forecast days when air quality will be poor. DEC monitors are located at about 25 sites around the city, mostly on rooftops at some distance away from heavy traffic and other emission sources. These locations are deliberately chosen to detect citywide trends rather than to pinpoint neighborhood-by-neighborhood variation. Routine DEC monitoring is not designed to compare pollution levels at different locations within the city. Most pollutants are monitored at just a few locations; for example, NO_x and PM chemical constituents are monitored at only a few sites. A map of the monitoring locations is appended to this testimony.

While the State performs the majority of air quality monitoring, and the State and the U.S Environmental Protection Agency (EPA) address many of the largest stationary sources as well as mobile sources, the New York City Air Code seeks to fill the gaps by controlling smaller but widespread emission sources such as boilers, as well as other sources not addressed by the federal and state regulatory schemes. Enforcement strategies have proven to be an effective mechanism in controlling these pollutants and also in addressing citizen complaints. For example, a boiler may malfunction and generate smoke and fumes, leading citizens to register a smoke odor complaint through the 311 system, and DEP will respond by sending an inspector and taking other steps to correct the issue. DEP can also respond through programmatic corrective policies, such as revising engineering criteria and requiring an annual combustion efficiency test that will require owners to tune their boilers, resulting in more frequent maintenance.

To best understand how to revise the NYC Air Code and local policies to improve air quality for all communities, the City has been monitoring air quality throughout all five boroughs. Health and Queens College are conducting the New York City Community Air Survey (NYCCAS) to evaluate how common criteria pollutants, including fine particles, black carbon, oxides of nitrogen, sulfur dioxide, and ozone differ across New York City. As part of the City's

sustainability initiative, PlaNYC, this program studies how pollutants from local sources such as traffic, boilers, and restaurants affect air quality in different neighborhoods.

NYCCAS is designed to assess pollution across the five boroughs at street level based on established air pollution research methods. Monitoring locations represent a wide variety of NYC environments, including busy downtown streets, locations near highways, parks, and quiet suburban roads. Most of the original NYCCAS sites (80%) were chosen at random to ensure a good representation of all types of neighborhoods that vary in the density of traffic and buildings—major local pollution sources in New York and other large cities. The remaining 20% of sites were selected to ensure that at least one monitor is placed in every Community District, in some neighborhoods with large transportation facilities or long-term construction, and near some major highway interchanges and other locations with heavy traffic.

From 2009-2011 NYCCAS air pollution measurements were taken at 150 locations throughout the City in each season. As the data showed fairly stable geographic patterns, the number of locations monitored was routinely reduced to accommodate budget reductions and allow for measuring other pollutants. From 2011-2013 measurements were taken at 100 sites and since then routine air quality monitoring occurs at 60 sites. Currently, the density of monitors per square mile is about 80% higher in the Community Districts with the highest concentration of poverty compared to more affluent neighborhoods. Monitors are mounted 10 to 12 feet off the ground on public light poles or utility poles. The monitors use a small battery-powered pump and filters to collect air samples. The results have been disseminated in several public reports and scientific publications. A map of the monitor locations is appended to this testimony.

Here are a few key findings. NYCCAS has shown that any of the important local sources of air pollution affect neighborhoods across the city to some extent, but have their greatest impact on ambient air quality in the most densely developed and trafficked communities. High-density neighborhoods burn more fuel for heat and hot water and have more emissions from other sources such as commercial cooking. They also tend to have more traffic and emissions from vehicles. All fuels burned to heat buildings produce some air pollution. Heating equipment in many large City buildings that are concentrated in the most developed and populous neighborhoods burn residual oil (also known as No. 4 or No. 6 oil), which emits much more pollution than regular home heating oil (No. 2, or distillate oil) or natural gas.

New Yorkers burn more than one billion gallons of heating oil every year, which, prior to recent heating oil policies, accounted for nearly 14% of $PM_{2.5}$ pollutants emitted into our air—more $PM_{2.5}$ emissions than all cars and trucks in the city combined. This particulate matter contains many pollutants that are associated with respiratory and cardiac diseases. Stack controls found on large power plants don't make sense for controlling emissions from relatively small building boilers, so the most cost-effective solution was to clean up the fuel that is burned. The City worked with the State to pass legislation that limited the sulfur content of No. 2 fuel oil statewide to less than 15 parts per million (ppm)—the same level as that used in clean diesel fuel for trucks. Then the City worked with the Council to pass legislation that limited the sulfur content of No. 4 fuel oil to no more than 1,500 ppm after October 1, 2012. Finally, the City promulgated a rule that bars permits for new No. 6 oil boilers after July 1, 2012, requires all existing No. 6 boilers to burn No. 4 fuel oil by 2015 (i.e., lowering sulfur levels from over 3,000 ppm to under

1,500 ppm), and requires all boilers to burn the cleanest fuel—ultra-low sulfur No. 2 oil or natural gas by 2030.

The second component of the legislation was to have all new boilers/burners meet the emission equivalent to combustion of the new, ultra-low sulfur No. 2 fuel oil. State law now requires ultra-low sulfur No. 2 fuel oil (15 ppm sulfur content) for use in residential, commercial or industrial heating applications beginning on July 1, 2012. Therefore, by 2030 all boilers/burners would be required to meet the emissions equivalent of ultra-low sulfur No. 2 fuel oil with a sulfur content of 15 ppm compared to the current No. 2 fuel oil sulfur content of 2,000 ppm. Upon full implementation, these regulations will reduce the amount of fine particles emitted from heating buildings by at least 63%. They could lower the overall concentration of fine particles in the City's air from all sources by 5%. We estimate that once all 10,000 No. 4 and No. 6 boilers are converted to burn No. 2 oil, there will be a net annual reduction of more than 700 tons of particulate matter, more than 6,000 tons of nitric oxide and nearly 9,000 tons of sulfur dioxide. The new regulations will also cut carbon dioxide emissions by more than 200,000 pounds per year. These air quality improvements could prevent approximately 200 deaths, 100 hospitalizations, and 300 emergency room visits for illnesses caused by air pollution each year.

DEP has been aggressively reviewing those buildings that are not in compliance with this important regulation and our efforts have proven successful. Out of the over 5,000 buildings that burn No. 6 fuel oil, approximately 650 buildings still need to convert to No. 4 fuel or cleaner and those buildings have been issued a violation. After one violation, DEP can request a cease-and-desist order that would terminate the use of the boiler until the fuel has been changed and would require a temporary boiler be provided to tenants. Of course, the focus is on compliance, and by having this option, it is forcing building owners to come to DEP with a compliance schedule for at least switching the boiler to No. 4 fuel oil, which costs approximately $10,000.

To help ensure compliance with the clean heating regulation, DEP set out to make the filing of fuel burning equipment easier. DEP's Clean Air Tracking System (CATS), is a new online process for building owners submitting new applications or renewals for boilers. It expedites the boiler registration process, enables online payments, and allows for better tracking of compliance. Building owners can apply for and obtain registrations online, saving them multiple visits to city agency offices.

As I mentioned earlier, traffic is a significant mobile source that causes a substantial increase in emissions from transportation, primarily cars, buses, and trucks, on a daily basis. Every year these vehicles contribute approximately 11% of the local $PM_{2.5}$ and 28% of the nitrogen oxide emissions. The City has been actively finding ways to reduce emissions from motor vehicles, including investments to expand the use of mass transit and 'zero emissions' active transportation like cycling and walking, greening of city-owned vehicle fleets with more hybrids, passing and enforcing rules to use cleaner fuels across the city and reduce unnecessary emissions like idling.

There have been several initiatives and regulations that address this significant source of pollution. One such important proposal became law when DEP worked with the Council to

further reduce idling affecting one of our most sensitive populations by limiting vehicle idling to no more than one minute when adjacent to a school—public or private—and to three minutes everywhere else. DEP has conducted extensive outreach to motorists to educate them about the law by distributing literature about the pollutants emitted from idling vehicles. We have also increased enforcement. Such efforts have resulted in increased compliance with this law. Of course most idling that occurs on our streets is in congested traffic. Making faster progress on reducing vehicle emissions will require more efforts to encourage public and active transportation.

In addition to the one-minute idling law, DEP has proposed amending the Air Code to prohibit all refrigeration trucks, including their secondary diesel engines, from idling longer than three minutes. DEP would then promulgate a rule that will set forth technologies that a refrigeration truck with an independent refrigeration system shall use to prevent the truck, including auxiliary power units, from idling for longer than three minutes at a particular location. Such a rule would allow DEP to be flexible in enforcement and sensitive to cargo needs such as ambient temperature. We are hopeful that this Council will work with us in making sure the Air Code is updated to reflect such important changes to the existing Code, which has only undergone piecemeal changes since 1970.

There are also a number of local laws that improve the City's fleet by reducing emissions from various types of vehicles. Local Law 77 of 2003 was the first aimed at reducing emissions from various types of vehicles. It requires any diesel-powered non-road vehicle, fifty horsepower and greater, that is owned, operated, or leased by, or operated on behalf of a City agency be powered by ultra-low sulfur diesel fuel (ULSD) and utilize the best available technology (BAT) for reducing the emission of pollutants. DEP promulgated a rule specifying that diesel particulate filters (DPFs) that reduce PM by a minimum of 85 percent are deemed to be BAT. DEP continues to review the technology every six months.

Local Law 39 of 2005 requires all City-owned and -operated diesel-powered vehicles greater than 8,500 lbs., such as garbage collection trucks and DEP's truck fleet, to use ULSD to reduce pollutants. In order to lower the emission of harmful pollutants into the environment, these vehicles also must install emission reduction devices.

All on-road diesel vehicles are powered by ULSD (since the passage of Local Law 39, EPA has required ULSD to be sold nationwide for the on-road fleet). The City is also requiring that the entire fleet use a diesel particulate filter, without enabling a waiver to use a less-effective emission control device as was originally permitted by the law. As of Fiscal Year 2012, 93% of the required vehicles used an emission reduction device, which falls just short of the required mandate of 100% by Fiscal Year 2012.

The City is doing even more to ensure compliance with this law by requiring the use of at least five percent biodiesel in the City's fleet during the fall, spring, and summer months, as well as a pilot program to determine if a 20% biodiesel blend can be used successfully during the winter. In addition the City worked with the Council to use biodiesel in City-owned building heating systems, as biodiesel is a cleaner and more sustainable replacement for petroleum-based diesel fuels. Local Law 73 of 2013 requires City-owned buildings to use a minimum of five percent

biodiesel as of October 1st, 2014, with a pilot program to use ten percent biodiesel in City-owned buildings. This requirement may be extended to all buildings throughout the city based on the success of the City program.

Local Law 41 of 2005 requires all City-licensed sightseeing diesel buses to use ULSD to reduce pollutants. In addition, to lower the emission of harmful pollutants into the environment, these vehicles must install emission reduction devices. As of Fiscal Year 2012, 100% of the required vehicles use best available retrofit technology (BART). Also, all diesel vehicles are powered by ULSD.

Local Law 42 (LL42) of 2005 required that by September 1, 2006, certain general education diesel fuel-powered school buses be powered by ULSD. In addition, LL 42 required that by September 1, 2007, all of these school buses use BART to reduce emissions. As of Fiscal Year 2012, the Department of Education (DOE) was using ULSD for their fleet of school buses with vehicles manufactured after 2001. DOE is also going beyond the scope of the requirements of the legislation to reduce the emission of pollutants from Type C and D general education school buses by retrofitting special education buses with BART. Of DOE's total fleet, 96% are using emission control devices with 43% using the best available devices. This piece of legislation is particularly beneficial to EJ communities as many of these bus depots are in EJ areas.

To go even further than the existing school bus regulation, DEP and DOE have proposed in the revision of the Air Code an earlier phase-out date for Type A and B buses. The proposal would require pre- 2007 Type A and B school buses to be retired from the Department of Education fleet by September 1, 2020, two years sooner than would have been required under the current Code. The existing Code currently requires all diesel fuel-powered school buses to be retired 16 years from date of manufacture. The proposal sets forth the accelerated timeframe for this type of bus to be retired, as they cannot be retrofitted with a closed crankcase ventilation system, as required by the current Code, due to spatial constraints. The proposed provision would allow DOE to achieve a cleaner school bus fleet more rapidly.

Local Law 40 requires all contractors managing the solid waste disposal program or recycling program for the Department on Sanitation to use ULSD. It also requires these vehicles to be equipped with emissions reduction technology to reduce the pollutants their vehicles emit into the environment. As of Fiscal Year 2012, all contractor vehicles were in compliance with this legislation or had received an appropriate waiver. As many of the transfer stations are located in EJ communities, the law will be especially valuable.

This combination of regulations has dramatically reduced emissions from the City fleet. The estimated average PM emission percentage reduction per vehicle in Fiscal Year 2011 through Fiscal Year 2012 is 48.99 percent.

Finally, at the end of the 2013, the City Council passed Local Law 145, which requires all operators of heavy-duty trade waste vehicles that provide commercial waste removal services in the City meet the 2007 EPA standard by 2020, and aligns the private service providers with the City's efforts to upgrade its own fleet. This policy was promoted by the New York City Business Integrity Commission (BIC), the City agency that licenses all commercial waste

operators in the city, and strongly supported by environmental groups like the Environmental Defense Fund (EDF). DEP will work closely with BIC to ensure full compliance across the private fleet.

Heavy-duty trade waste hauling vehicles are found in every city neighborhood and routinely expose residents to PM and nitrogen oxide (NO_x) emissions at street level. The impact is even greater in areas where there are transfer stations, commercial corridors and high construction. Today, 85% of the private fleet (approximately 7,000 garbage and dump trucks) is composed of truck model years of 2007 or older. BIC and EDF estimated that without this law, only 37% of the fleet would meet the 2007 standard through natural turnover and attrition. By accelerating this turnover, the City will benefit from a reduction of 40% of PM and 35% of NO_x generated by this fleet. The PM reduction is the equivalent of taking 27,000 delivery trucks or 1,300 intercity coach buses off the road every year from 2020 to 2030.

There is also another vehicle initiative that is helping to improve the air quality in EJ communities. The Hunts Point Clean Trucks Program (Program) funded through the U.S. Federal Highway Administration's Congestion Mitigation Air Quality (CMAQ) Program, which provides funding for programs in air quality nonattainment and maintenance areas for ozone, carbon monoxide, and particulate matter that aim to reduce transportation related emissions. The Program is a unique environmental initiative led by the New York City Department of Transportation (DOT) aiming to promote sustainable transportation and a cleaner environment in the South Bronx. It targets truck owners serving the Hunts Point and Port Morris communities and offers attractive rebate incentives for the purchase of advanced vehicle technologies such as new diesel, hybrid electric, compressed natural gas, and battery electric vehicles. Rebate incentives are also available for truck scrappage and the installation of exhaust retrofit technologies.

Through the use of advanced vehicle technologies the program seeks to retire, replace, repower, or retrofit up to 500 older trucks with newer and more environmentally friendly vehicles. The overall goal is to reduce diesel pollution and improve air quality and public health. In order to implement a successful program, DOT and its program partners understand the importance of building strong relationships and partnerships with members of the Bronx community. For this reason, the program looks to engage stakeholders, government agencies and the local community in every step of this initiative.

While air quality is an important component of making the City's air cleaner, the analysis behind each regulation and the permitting process is a significant component in ensuring that the process is transparent and fair. The City Environmental Quality Review manual requires a socio-economic assessment as well as several other criteria that are listed below in the enumeration of factors to be considered in the State Environmental Quality Review (SEQR) regulations. The manual guides the process not only in the context of developing a project, but also in deciding on regulations, such as the No. 6 fuel oil rule. In essence, the environmental review encapsulates many issues that would be reviewed under an environmental justice analysis.

For example, the SEQR regulations state that a project may have a significant effect on the environment if it may reasonably be expected to have any of the following consequences: a

substantial adverse change in existing air quality, ground or surface water quality or quantity, traffic or noise levels; a substantial increase in solid waste production; a substantial increase in potential for erosion, flooding, leaching, or drainage problems. The extensive list continues, but germane to this hearing are: the creation of a hazard to human health; changes in two or more elements of the environment, no one of which has a significant effect on the environment, but when considered together result in a substantial adverse impact on the environment; or two or more related actions undertaken, funded, or approved by an agency, none of which has or would have a significant impact on the environment, but when considered cumulatively would meet one or more of the above-stated criteria.

The reduction of particulate matter from large sources that I have discussed, including residential and commercial fuel combustion as well as non-road and on-road diesel fuel, has greatly benefited the City. However, there is a significant source of particulate matter that is largely unregulated, and that is from commercial char broilers, which can emit an estimated 1,400 tons of particulate matter per year. Health estimated that those emissions, which are concentrated in our most populous neighborhoods, contribute to hundreds of the premature deaths caused by $PM_{2.5}$, and that the use of control technologies could prevent more than 80% of these premature deaths. DEP is hopeful that by working with the Council we can revise the Air Code and require that all char broilers install control devices which will help all communities.

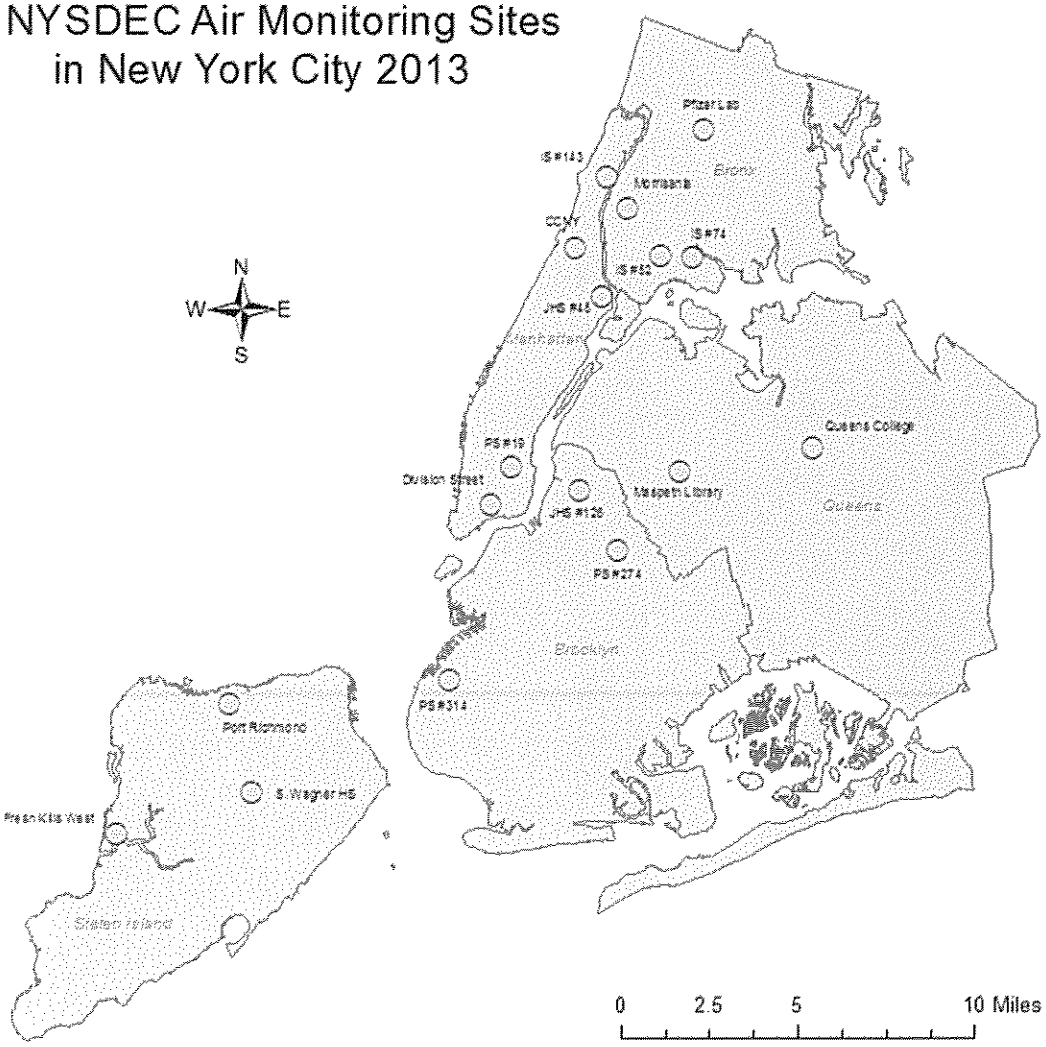
We've used data to set priorities and improve air quality across the city. However, New York City air pollution remains at levels that cause serious illness and premature mortality, and we need to do more, particularly to protect the most vulnerable populations. Ozone levels have not improved substantially in recent years, following trends seen in other major U.S. cities. Ozone is formed downwind from major sources of NO_x. Reduced NO_x emissions in metro area counties upwind of New York City will be required in order to bring down ozone levels in the City.

Further improvements in NO_x and other traffic-related pollutants in our most congested neighborhoods will require continued and expanded local, regional and federal efforts to address on-road sources which account for approximately 10% of $PM_{2.5}$ emissions and 25% of NO_x emissions locally. Traffic-related pollution also contributes carcinogenic pollutants such as benzene and formaldehyde, which are found to occur at high levels in areas of high traffic density. Increased efforts to reduce congestion and adopt low-emission vehicles are needed.

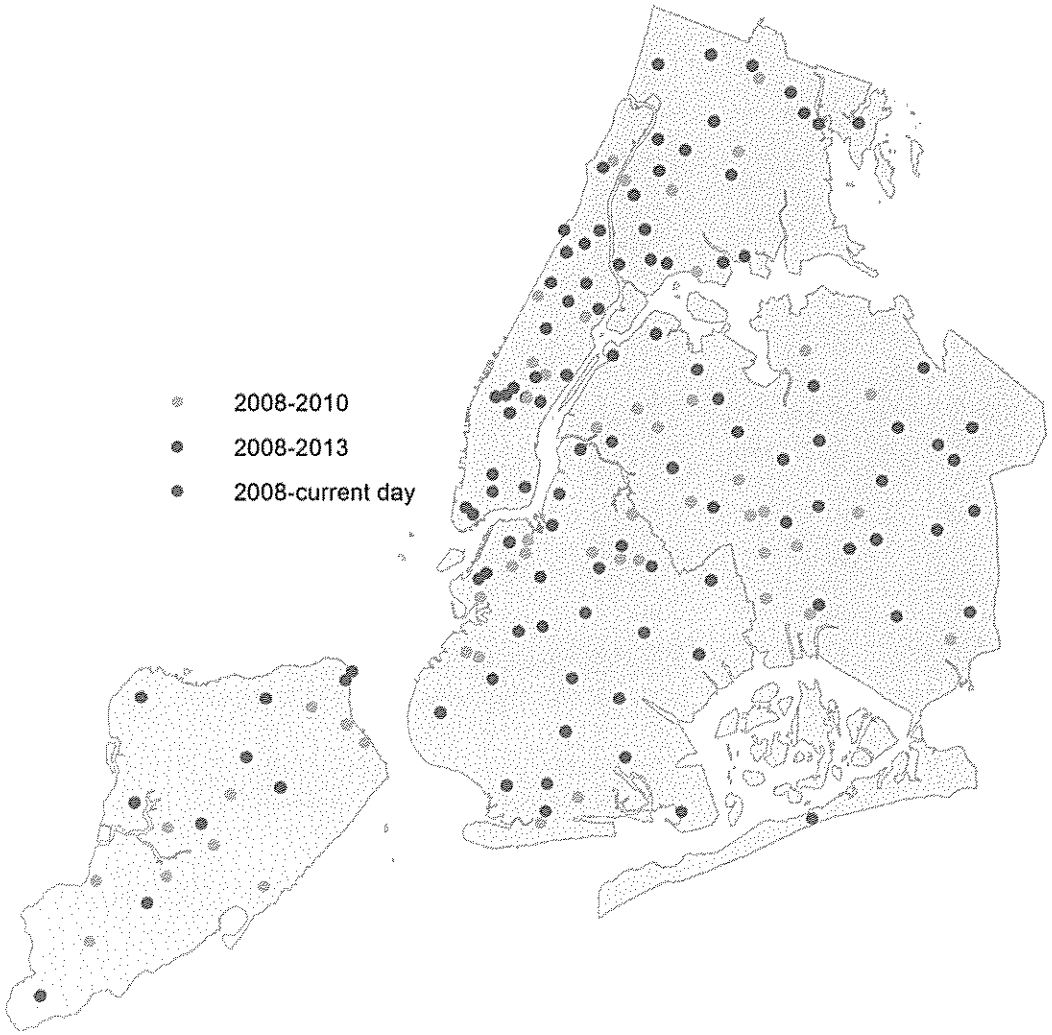
In the partial revisions over the last 40 years, the Air Code has focused on the reduction of particulate matter from large sources, including residential and commercial fuel combustion, as well as non-road and on-road diesel fuel. The regulation of these large sources now allows the City to focus on smaller, yet pervasive sources that, when viewed as a whole, contribute a significant amount of particulate matter. These sources include commercial char broilers, coal and wood-fired ovens, and fireplaces. By focusing on these sources, a revised Air Code will continue to reduce particulate matter emissions throughout the City and ultimately save lives.

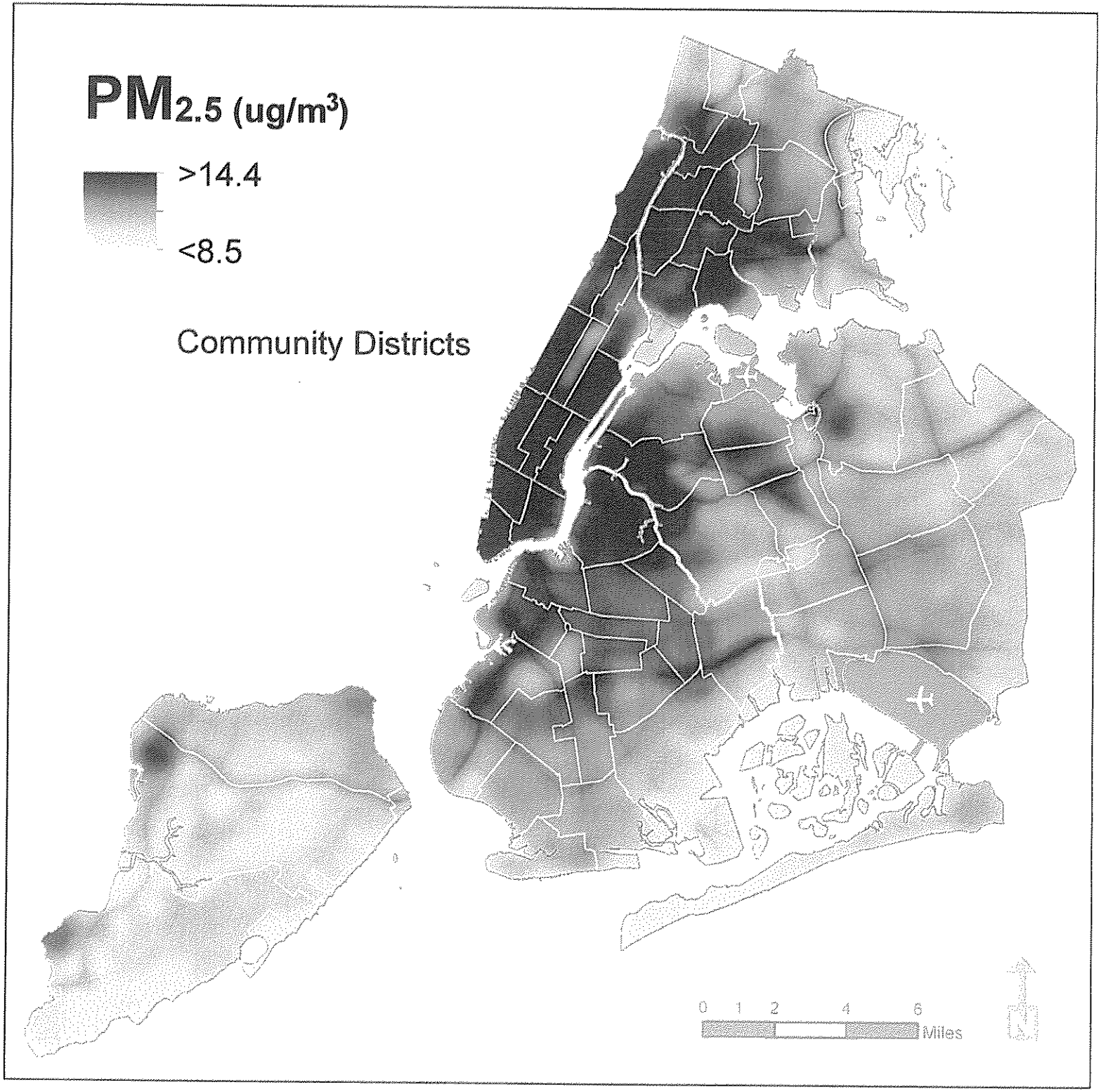
Thank you for the opportunity to testify. I will be glad to answer any questions.

NYSDEC Air Monitoring Sites in New York City 2013



NYC DOHMH New York City Community Air Survey Monitoring Locations

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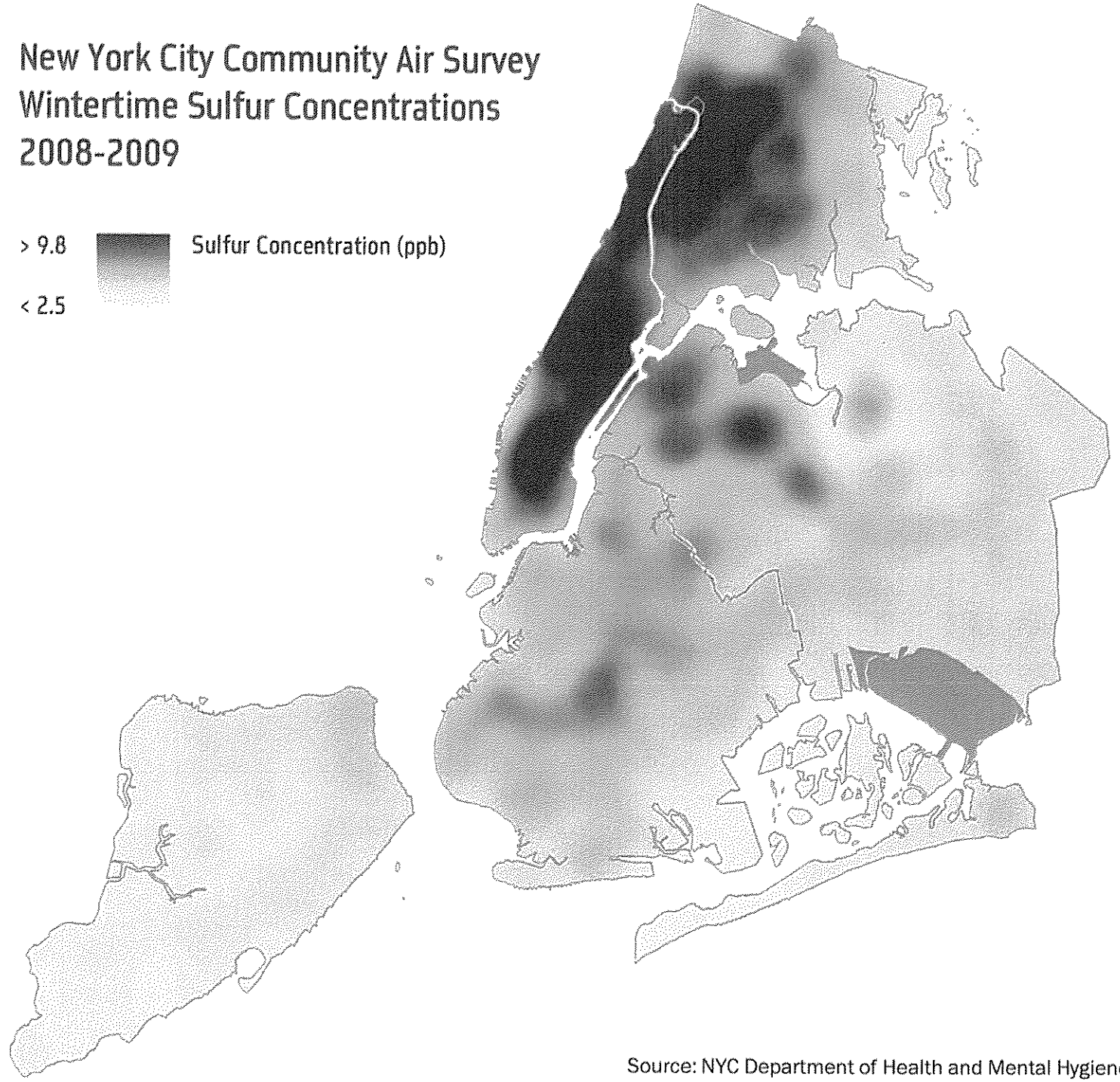
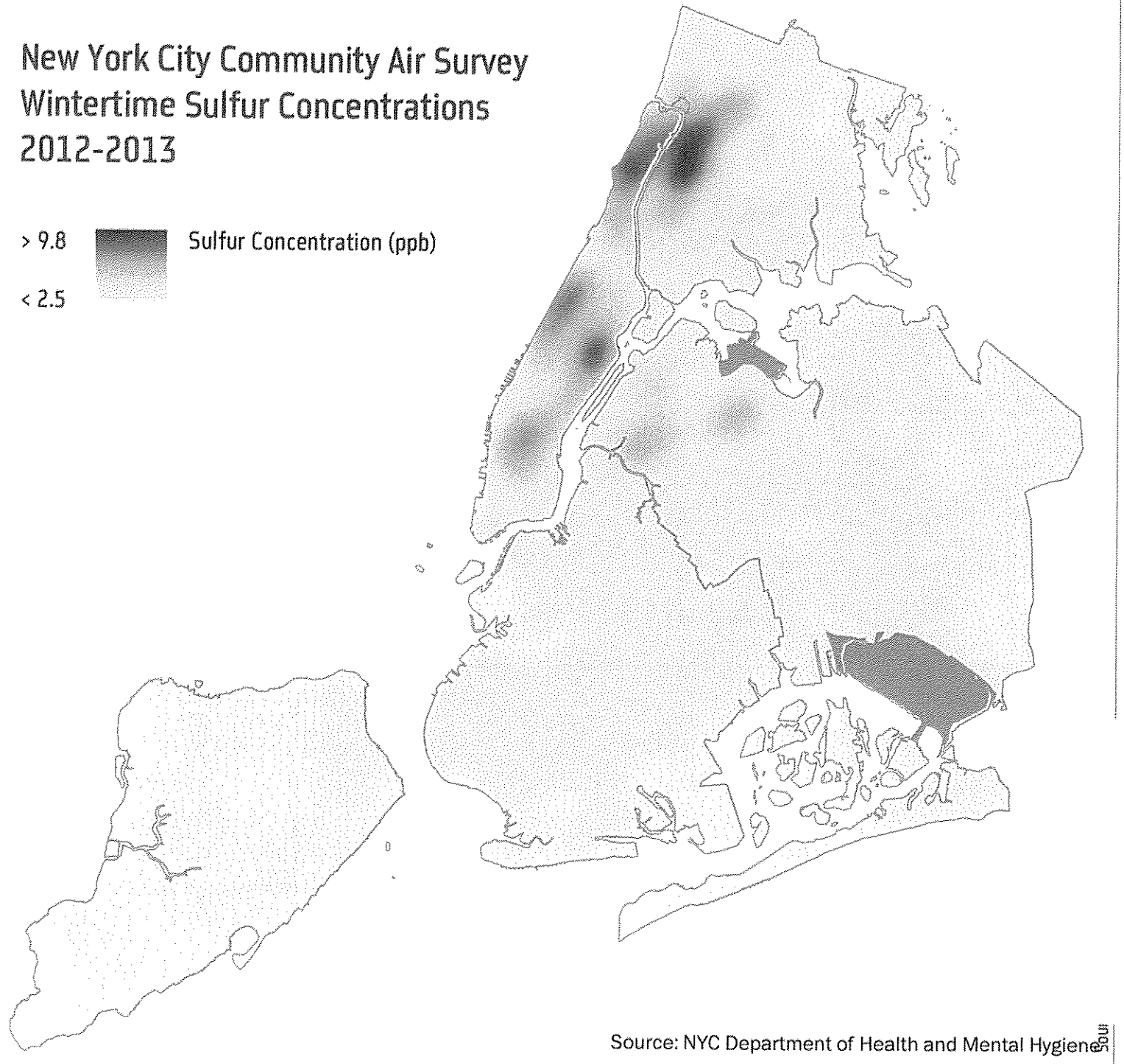
New York City Community Air Survey
Wintertime Sulfur Concentrations
2008-2009



Source: NYC Department of Health and Mental Hygiene

New York City Community Air Survey
Wintertime Sulfur Concentrations
2012-2013



Source: NYC Department of Health and Mental Hygiene

Sane Energy Project Comments for City Council Environmental Protection Committee Hearing:
Air Quality Impacts, Measures and Mitigation in Environmental Justice Communities, Feb. 28. 2014

We will focus on the effect of vehicle traffic on air quality.

One of the worst sources of air pollution in NYC is truck and car exhaust. In EJ communities, idling trucks are responsible for much of the immediate particulate matter that causes asthma. Even Fresh Direct *subscribers* hate their idling trucks.

The solution is obvious and doable:

The City must move to mandate that all local fleets convert to either electric or biodiesel by 2030. Ideal targets include delivery trucks such as mail, UPS, Fedex, grocery delivery services, furniture delivery trucks, food cart trucks, etc. Any truck that is part of a regular fleet operating in the 5 boroughs, that returns to a home base at night or during their shift, should be converted to electric.

An outfit in the Bronx, Smith Electric Vehicles, has been building electric delivery trucks, creating local jobs. California is road testing Proterra's zero-emissions bus, and Canadians have completed a trial period with a new Chinese bus capable of 155 miles before a recharge is needed.

Large 18-wheelers must transfer, as most already do, to smaller local trucks at points outside residential areas. Most trucks making deliveries into Manhattan already have transferred their load from highway trucks to smaller trucks that fit on city streets. If those trucks were electric, New York would be a cleaner and quieter city immediately.

Fast chargers are ideal for trucks that do multiple trips, and overnight charging is both cheaper and greener—the daytime grid runs on coal and gas, the nighttime grid runs on hydro and wind. As green car expert, John Voelker explained at a forum hosted by Sane Energy Project last year, *even on the dirtiest grid*, electric cars are still a better choice for the environment. (See our website for video.)

Hybrids may be useful as an interim vehicle, but the cost of installing chargers will be greatly offset by immediate and long term savings. Nonetheless, incentives should be provided to hasten the process. Private car owners should be incentivized by a City tax credit to buy electric vehicles.

The City should expand and speed up its current program to install charging stations in parking garages; to convert the taxi, bus, garbage and police fleets. Every parking lot, especially at malls, schools, churches, and stadiums, should be mandated to build shading solar panel carports.

Film and concert crews should be required to use electric or biodiesel generators.

Every opportunity to change from fossil fuel to electric or biodiesel should be explored, but especially in areas that are currently truck hubs such as waste disposal points, or food hubs such as Hunts Point.

The contentious battles that are splitting communities over placement could be at least partially solved if trucks were no longer polluting or noisy, and electric vehicles are neither. Rather than driving out job opportunities, particularly the kinds of unskilled jobs and light manufacturing that remains in so few parts of the city, fixing the truck problem could prevent both the ongoing health crisis in those areas, and stave off the inevitable gentrification that will happen if the remaining light industry is removed from what are otherwise desirable waterfront locations. Let Williamsburg, Greenpoint and Gowanus be the lesson. Lose the small factories and warehouses and the developers always follow, pushing out low-income residents, getting the place rezoned, or at best, providing lesser housing that bars low-income tenants from using amenities that are exclusive to luxury tenants in the same development.

There are better solutions, and they are available now.

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FOR THE RECORD

Sane Energy Project Comments for City Council Environmental Protection Committee Hearing:
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We will focus on how boiler conversions were sold as a benefit to EJ communities, and how that as played out in reality.

The previous administration created, as part of its PlanYC, an energy roadmap for New York City that relies heavily on the use of fracked shale gas. In the plan it is called "natural gas," however we want to emphasize that there is at this point, very little conventional gas still available; almost all gas is fracked, wherever it is extracted.

In 2011, local laws were changed to phase out the use of heavy heating oils number 6 and number 4. At that time, there were 10,000 buildings burning number 6 oil, about 1% of all building stock in the city. A widely quoted claim was that these10,000 buildings were responsible for levels of pollution equal to that of all cars and trucks on the road in NYC.

The law required that buildings stop using number 6 oil by 2015, and stop using number 4 oil by 2030. Buildings were not required to convert to gas, and had the option to convert to either number 2 oil, biodiesel, or biodiesel blends. However, because Con Ed and National Grid needed a volume of customers to make the construction of new pipelines profitable, the former mayor set as a goal converting 50% of all buildings, not just the 1% that had been burning heavy oils.

For the first 3 years of the program, public education forums sponsored by Con Ed and Clean Heat focused almost entirely on gas conversions, and therefore most buildings sought to convert to gas. Only recently, in the past 4-6 months, has Clean Heat begun to offer true education on conversion to number 2 oil or biodiesel, and we are grateful they are now doing so.

In the beginning, there was almost a frenzy of panic as buildings sought to meet deadlines, followed by anger and frustration at the pace Con Ed handled the conversions. Public forums were contentious. While the former mayor touted the conversions as a cure for the city's asthma rates, and a balm to the Environmental Justice community, coop and condo owners on the upper east side and along Central Park West scurried to get in on "cheap" natural gas prices, hoping to save on fuel costs.

To supply all this invented demand for gas, the City and Con Ed contracted for several new pipelines and pipeline upgrades, including the Spectra pipeline into the West Village, the Williams/Transco upgrade into Harlem at 134th street, other upgrades at existing city gates on the West Side, and even went so far as to change a federal law that enabled the Williams/Transco pipeline to be built in Gateway National Park in the Rockaways. These projects are but the first of many proposed gas infrastructure projects for New York, including pipelines, compressor stations, new and refitted power plants, storage caverns and LNG ports, by the latest count more than 30 projects.

Meanwhile, most city-owned buildings, or the vast majority of NYCHA housing, ~~was~~ WERE exempted from converting based on a provision exempting large landlords. Even Scott Stringer, though he is well known as an anti-fracking advocate, wrote a report demanding that city owned housing be converted to gas to clean up the air for the EJ community. Such were the misperceptions prevalent at the time.

Conversions were sold to an unsuspecting public as a means of "cheap, clean" heating fuel and a way to help EJ communities. Shale gas, it turns out, is neither clean nor cheap, and the effect on EJ communities has had unforeseen consequences.

Heating with natural gas is *not* clean.
According to the City's own Clean Heat experts, it actually creates MORE particulate matter, the cause of asthma, than number 2 oil or biodiesel. And, according to Henry Gifford, a boiler expert and engineer, when a boiler burning number 6 fuel malfunctions, you see black smoke rising. However, when a boiler burning gas malfunctions, you don't see anything, but carbon monoxide is released.

Then there are the related issues of fracking, which creates toxic emissions that have been documented to travel in a radius of 200 miles. NYC sits well within 100 miles of frack drill sites. The pipelines and compressor stations that move the gas are sources of emissions as well, as are existing, aging pipelines.

FOR THE RECORD

So while city skies might LOOK cleaner, whether the air is actually any better is debatable. If preventing asthma had been the *actual* goal, the city would have pushed to convert to liquid fuels with lower emissions, such as number 2 oil or biodiesel—not shale gas.

All these emissions are not just polluting, they are greenhouse gases that speed climate change and sea level rise.

Burning gas as heating fuel is a suicidal choice for a coastal city like NY, as it will further increase sea level rise and extreme weather. The environmental justice communities in the Rockaways and along the coasts and rivers are the most vulnerable to [redacted] flooding. After Sandy, utilities did not rush in with rebuilding efforts that could have provided distributed renewable energy like wind and solar—exactly the resources shoreline communities have in spades. Instead, legislators pushed forward a plan for the Rockaway gas pipeline, which could destroy marine habitats and endanger local residents in immediate and long term ways.

Gas boiler conversions harm EJ communities on a financial level as well as an environmental level.

Converting to gas is *not* cheap: conversions run in the hundreds of thousands or millions of dollars, while conversions to 2 oil or biodiesel cost about $10,000. Conversions to liquid fuels, it should be noted, do not require new pipelines or public infrastructure to be built (the cost of which are passed on as utility rate increases).

Buildings that convert to shale gas will be subject to volatile price increases, and renters, especially low-income and rent-regulated tenants, are being unfairly burdened. Those whose landlords have converted are charged for the landlord's capitol "improvement" and see rent increases, not a reduction, *even if* the landlord's heating costs are temporarily reduced.

I'll use my own building as an example:
It's a 100-unit building in the Bronx and had been burning number 6 oil. The landlord converted to gas last Spring, at a cost of $262,000, a capitol improvement that was passed on to all the rent-stabilized tenants, most of whom are Hispanic, elderly, and on fixed incomes. A per-room surcharge was applied, averaging about $100 per apartment, a hardship that many tenants could not afford, causing them to move out (a situation that allows the landlord to raise the rent using a vacancy rate). Note that tenants in market-rate apartments were not given a surcharge, only the rent stabilized tenants.

Meanwhile, the heat continues to flow at extraordinary rates, and all winter, even on the coldest days this past year, you could look up and see many of the single pane casement windows open because apartments are so overheated. If this landlord had made use of the right incentives, windows could have been replaced, insulation, efficiency and conservation methods could have reduced energy use by at least 30%. If this landlord had used Passive House retrofit standards (the building standard in Europe) they could have reduced their energy use for *the rest of time* by almost 80%. I'll also note that this building was vetted for solar capacity, and having a large, unobstructed roof would have been the perfect candidate for solar thermal to heat hot water. Instead, the boiler will run all summer.

If we want to reduce air pollution, reducing the volume of ANY fuel used is the low-hanging fruit. NEGAwatts are the cheapest, easiest, best option for better air quality, and efficiency measures are great jobs creators!

In summary, gas boiler conversions are harmful to the EJ community and to the rest of New York on an air quality level, on a climate change level, and on a financial level.

The plan to convert boilers to gas was backwards thinking; using the fossil fuels of the last century, not the innovations of the modern world. As former DEP commissioner Al Appleton said, we need a Marshall Plan for renewable energy. We should not spend one more dime on fossil fuel infrastructure.

We need the existing fossil fuel infrastructure to be the LAST GENERATION of its kind.
Any NEW energy infrastructure built must be renewable

That cannot happen fast enough. We have already reached multiple climate tipping points.
This is in fact an emergency and the use of shale gas is NOT the right solution for the EJ or any other community.

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EARTHJUSTICE

ALASKA CALIFORNIA FLORIDA MID-PACIFIC NORTHEAST NORTHERN ROCKIES
NORTHWEST ROCKY MOUNTAIN WASHINGTON, D.C. INTERNATIONAL

FOR THE RECORD

Testimony
of
Alok Disa

on behalf of
Earthjustice

before the
New York City Council Committee on Environmental Protection

regarding
Air quality impacts of lead emissions from aircraft in NYC environmental justice communities

February 28, 2014

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INTRODUCTION

Good afternoon and thank you, Chairman Richards and members of the Committee on Environmental Protection. I am Alok Disa, a litigation assistant with Earthjustice.

Earthjustice is a non-profit public interest law organization dedicated to defending the right of all people to a healthy environment – the air we breathe, the food we eat, the water we drink. A main pillar of our work is limiting toxic air emissions. Of all the toxic elements spewed out into the environment from industrial activity, one of the most dangerous is lead. While great strides have been made in eliminating lead from gasoline and from paint, leading to widespread public health benefits, significant sources of lead air pollution remain. The U.S. Environmental Protection Agency (EPA) has identified general aviation aircraft engines as the single largest source of airborne lead emissions. However, this source remains unregulated.

On behalf of the environmental organization Friends of the Earth, we have sought to compel the EPA to adopt emissions limits for lead from aircraft engines. To date, EPA has failed to propose any limits, despite the impacts on human health and, particularly, communities of color and low-income communities.

We appreciate the opportunity to present testimony before the Committee to raise awareness of this issue in New York City and to highlight some areas where action may be taken to prevent the harms associated with lead emissions.

THE CONSEQUENCES OF LEAD EXPOSURE ARE WELL-DOCUMENTED

Without chronicling the scientific literature, it is important to state that the harmful effects of lead exposure are well-documented and not in dispute. Indeed, EPA readily acknowledges the harms associated with exposure to lead. Lead is a toxin that can impair almost every system in the body[1]. While the nervous system is most sensitive to lead exposure, studies have also shown

[1] Agency for Toxic Substances & Disease Registry. "Lead Toxicity: What Are the Physiologic Effects of Lead Exposure." Available at http://www.atsdr.cdc.gov/csem/csem.asp?csem=7&po=10.

adverse effects on the renal, gastrointestinal, cardiovascular, reproductive and endocrine systems.[2] Consequences can range from IQ loss and behavioral issues, to coma and even death in extreme cases.[3] Prenatal exposure can impact pregnancy outcomes and affect early childhood development.[4] Children are most at risk, but lead can be stored in bone mass, meaning health consequences can be felt later in life, even after exposure has been eliminated.[5]

Perhaps the most alarming fact about lead, however, is that there is no safe level of exposure. Study after study has shown that even trace amounts of lead in the bloodstream can be linked to negative health outcomes.[6]

Based on the mounting, unequivocal body of scientific evidence, in 2008 the EPA revised its standards for allowable levels of airborne lead emissions down tenfold to 0.15 micrograms per cubic meter.[7] More recently, in 2012 the Centers for Disease Control and Prevention (CDC) revised its reference level for lead, and the threshold for "lead poisoning" is now 5 micrograms per deciliter, down from 10 micrograms.[8] These revisions were designed to protect children and other at-risk populations and are an acknowledgement that lead is dangerous even at levels once considered to be safe.

Recognizing that there is no safe level of lead, the public health community has mobilized around a strategy that emphasizes primary prevention as their chief objective. Both the EPA

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[2] *Id.*
[3] *Id.*
[4] *Id.*
[5] Oregon Department of Human Services. "Health Effects of Lead Exposure." Available at https://public.health.oregon.gov/HealthyEnvironments/HealthyNeighborhoods/LeadPoisoning/MedicalProvidersLaboratories/Documents/introhealtheffectsmedicalprovider.pdf.
[6] Advisory Committee on Childhood Lead Poisoning Prevention of the Centers for Disease Control and Prevention. Low Level Exposure Harms Children: A Renewed Call for Primary Prevention. 2012.
[7] US Environmental Protection Agency. "Fact Sheet: Revisions to Lead Ambient Air Monitoring Requirements." Available at: http://www.epa.gov/air/lead/pdfs/Leadmonitoring_FS.pdf.
[8] Centers for Disease Control and Prevention. *CDC Response to Advisory Committee on Childhood Lead Poisoning Prevention Recommendations in* "Low Level Lead Exposure Harms Children: A Renewed Call of Primary Prevention."

and CDC state that "the most important step parents, doctors and others can take is to prevent lead exposure before it occurs."[9, 10]

LEAD EXPOSURE AFFECTS THE MOST VULNERABLE POPULATIONS

Lead is particularly harmful to children.[11] Lead is associated with IQ loss, learning disabilities, attention deficit, and behavioral problems.[12] Elevated blood lead levels (BLLs) in students are associated with decreased academic performance.[13]

Based on current CDC estimates, over 450,000 children nationwide are thought to have lead poisoning.[14] In 2012, over 8,000 children were newly identified as suffering from lead poisoning in New York City alone.[15] The harmful effects on children are thought to be irreversible.

In addition, lead exposure disproportionately impacts low-income communities, immigrants and people of color. In a study of over 48,000 schoolchildren in Chicago, researchers found BLLs among non-Hispanic black students were more than double those of non-Hispanic white students.[16] Lead remains in the paint and pipes of many older apartment buildings, which tend to be concentrated in low-income neighborhoods. Even newly-built affordable housing is often built on sites where land is cheap, such as former industrial facilities, and where the threat of lead in the soil remains.

Environmental justice communities are more susceptible to contaminants like lead. New research shows that poverty fundamentally alters the way the body responds to pollutants,

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[9] US Environmental Protection Agency. "Learn About Lead." Available at http://www2.epa.gov/lead/learn-about-lead.
[10] Centers for Disease Control and Prevention. Blood Lead Levels in Children. Available at http://www.cdc.gov/nceh/lead/ACCLPP/Lead_Levels_in_Children_Fact_Sheet.pdf.
[11] US Environmental Protection Agency. "Learn About Lead."
[12] *Id.*
[13] National Center for Healthy Housing. "Issue Brief: Childhood Lead Exposure and Educational Outcome."
[14] Advisory Committee on Childhood Lead Poisoning Prevention of the Centers for Disease Control and Prevention. Low Level Exposure Harms Children: A Renewed Call for Primary Prevention.
[15] New York City Department of Health & Mental Hygiene. "Report to the New York City Council on Progress in Preventing Childhood Lead Poisoning in New York City." September 30, 2013.
[16] Chicago Department of Public Health. Policy Brief, July 2013. "Healthy Homes: Policy Options for Preventing Lead Exposure."

exacerbating their effect on our most vulnerable communities.[17] In other words, "the toxicity of lead may be stronger in a child also exposed to the stress of poverty."[18]

DESPITE PROGRESS, THE PROBLEM OF LEAD EXPOSURE PERSISTS

In addition to the national phase out of lead from motor vehicle gasoline, New York City has an impressive array of regulations and codes aimed at limiting the public's exposure to lead. To a large extent the City's efforts have been a success. Following the passage of Local Law 1 of 2004, cases of lead poisoning have declined significantly.

Nevertheless, lead exposure remains a reality for New Yorkers and for communities across the country, and lead emissions from general aviation aircraft—the single largest source of lead air pollution—continue to contribute to this problem. Aircraft that burn leaded aviation gasoline (avgas) generate almost half of all lead emitted into the air on a yearly basis.[19] Of the 21 areas in the U.S. currently in non-attainment for the national air quality standards for lead, all have at least at one airport servicing aircraft using leaded avgas, and most have several such facilities.[20]

Across the country there are almost 20,000 airports in which leaded avgas is used,[21] and there are 6 such airports in New York City – LaGuardia Airport, East 34th Street Heliport, JFK International Airport, Pan Am Metroport Heliport, Downtown Manhattan Heliport, and New York Skyports Seaplane Base – emitting an estimated total of 0.7 tons of lead into the city's air every year.[22] Just looking at the two biggest airports, last year approximately 10% of the flights

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[17] Konkel, Lindsey. "Stress + pollution = health risks for low-income kids." *Environmental Health News* 6 Jun 2012.
[18] *Id.*
[19] US Environmental Protection Agency. "Regulatory Update: EPA Response to the 2006 Petition from Friends of the Earth Regarding Lead Emissions from Piston-Engine Aircraft." July 2012.
[20] "Advance Notice of Proposed Rulemaking on Lead Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline." 75 Federal Register 22439 (28 April 2012).
[21] US Environmental Protection Agency, 2012.
[22] US Environmental Protection Agency. 2008. *Lead Emissions from the Use of Leaded Aviation Gasoline in the United States: Technical Support Document.*

leaving JFK[23] and 20% of the flights leaving LaGuardia[24] -- a total of 115,161 total flights – were of planes fueled by leaded avgas.

The emission of lead by aircraft taking off from and landing at the City's airports presents a risk to the health of the surrounding communities around the city's airports and, especially, of the children who live, play or attend school in those communities. A 2011 study out of Duke University found that children who live within one kilometer of airports where avgas is used had noticeably higher blood lead levels than children living further away.[25] This increase was enough to push some of the children in the study above the reference level for lead and into the range where medical treatment is advised.[26]

Putting this into a local context, LaGuardia alone is responsible for 0.3 tons of lead air emissions every year.[27] Looking at the surrounding community, almost 20,000 people live within 1 mile of LaGuardia, over 85% of them non-white.[28] More than 3,000 of those individuals are living below the poverty line.[29]

Furthermore, the use of leaded avgas may also present a risk to airport workers. In a study of aircraft maintenance personnel in Korea, workers at airports that used avgas were found to have elevated blood lead levels compared to similar workers in airports without avgas.[30]

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[23] Flight data found at http://www.airnav.com/airport/KJFK. For this analysis, we considered the air taxi and transient general aviation categories. Using the same method EPA used in their analysis on p.4 of their October 2008 Technical Support Document, we then assumed that 72% of those planes are piston-engine aircraft.
[24] Flight data found at http://www.airnav.com/airport/KLGA.
[25] Miranda et al. "A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels." *Environmental Health Perspectives*, October 2011.
[26] *Id.*
[27] US EPA, 2008.
[28] US Census Bureau. 2000. American FactFinder. http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml. (Report generated on July 2011).
[29] *Id.*
[30] Park et al. "Blood Lead Levels and Types of Aviation Fuel in Aircraft Maintenance Crew." *Aviation, Space and Environmental Medicine*, October 2013.

EPA INACTION

In 2006, Friends of the Earth filed a petition asking EPA to regulate lead emissions from avgas-fueled aircraft under the Clean Air Act. Over seven years have passed and EPA has yet to formally acknowledge the dangers of these emissions with an endangerment finding, let alone propose any limits on lead emissions. Instead, EPA has suggested that more data regarding demographics and air lead levels at and around airports would allow the Agency to make a judgment on whether lead emissions from aircraft fueled by leaded aviation gasoline are a danger to public health. EPA has estimated that it would take up to three years in order to make a judgment on whether regulation of lead emissions is warranted.

At some point, the impetus to study a problem must give way to action. EPA has known about the problem of lead in aviation gas for decades. Initial priority was given to phasing out lead from motor fuel. Now it is time to move on lead in aviation fuel. Given all of the evidence of the human health risks posed by lead pollution, delay of another three years is simply unacceptable. The additional analyses proposed by EPA are unnecessary, and we have urged the Agency to move ahead with an endangerment finding for lead from aircraft engines without further delay.

NOW IS THE TIME FOR ACTION

Given the CDC's revised level for lead poisoning, to 5 micrograms per deciliter, this is not a time to be complacent. New numbers suggest that about 1 in 38 young children have lead poisoning.[31] While public health experts argue for more testing and preventive measures, budget cuts at the federal level have deprived funding for such programs, amounting to what some have described as "an abandonment of children." The problem has not been solved, and this is not an issue of the past. If anything, based on what we know now, we should be moving more vigorously to reduce and ultimately eliminate any exposure.

[31] Young, Alison. "Lead poisoning toll revised to 1 in 38 young kids." *USA Today*, 4 April 2013.

The reality is that we know enough about the prevalence and severity of lead's toxicity to warrant action against all known sources. The accumulated effect of lead present in our air, water, soil and food results in significant public health and economic costs, burdening communities across the country and in our own backyard. We urge the City Council to make the issue of lead in avgas an environmental health priority by pushing EPA to act now.

SUMMARY

Avgas is the leading contributor to lead air pollution in this country. There is no safe level of lead exposure. Taken together, those two facts demand an aggressive policy limiting every source of lead. EPA has the authority to remove lead from aviation fuel across the country. We urge the Council and the wider environmental justice community to press EPA to end the years of delay and to take the immediate action necessary to protect the health of our communities.

To: NYC Council Committee on Environmental Protection

From: Eastern Queens Alliance, Inc.
PO Box 300818, Jamaica, NY 11540
Date: February 28, 2014

Topic: Oversight—Air Quality Impacts and Ways to Measure and Address them in NYC Environmental Justice Communities with Focus on JFK Airport

The Problem

The EQA's Platform looks to maximize the Quality of Life in Southeast Queens by promoting a safe, clean, healthy environment. We are calling for the establishment of a local environmental air quality monitoring program for the protection of the environment and the enforcement of environmental justice policies. This has been a target platform item for the last several years. Recently, the Alliance has held several public meetings as well as meetings with our elected officials regarding the proposed extension of Runway 4L/22R which will result in aircraft flying 100+ feet lower over our communities. At these meetings we presented and discussed airport related air and noise pollution.

The Eastern Queens Alliance is calling for monitoring and evaluating the potential environmental health hazards to the Southeast Queens communities associated with airport-related emissions and noise pollution. This entails performing local air and noise monitoring in the communities adjacent to JFK Airport for point source pollution along with analyzing the emission profile in our local communities. We believe that the collection of data on exposure and adverse health outcomes associated with emissions and noise pollution from operations at JFK airport, correlated with community health data on related health issues, particularly cardio-vascular diseases, asthma, diabetes, hearing impairment, ADD, and ADHD, will reveal that there is a significant correlation between air quality, noise pollution and the health of those residing in Southeast Queens. We are calling for the collection and analysis of data to assess the extent to which it is likely that the health of the community is being affected by its proximity to a major airport and its related operations and to determine effective ways to ameliorate those resultant harms and risks.

Demographics and Environmental Justice

Most of the Eastern Queens Alliance Communities lie immediately north of JFK airport with only Idlewild Park Preserve as a partial buffer. Primarily, these are communities of one and two family homes,

with some garden apartments in R3-1,R3-2 zones with commercial strips and some commercial overlays in Community Boards 13 and 12. It also includes two major homeless shelters, as well as a multitude of group homes. Interestingly, while some of the highest incomes in Queens are located in these communities, many of the lowest are also present, with the homeless, rental of basements, and a number of people renting out rooms to make ends meet. Some of the highest percentages of foreclosures are also found in these communities.

There are three major parks in study area—Idlewild Park Preserve, Brookville Park, and Springfield Park—all of which are a part of the Idlewild system with a brackish intertidal flow. Based on the 2000 US Census, the demographics of community immediately adjacent to the western boundary of JFK airport Springfield Gardens (zip 11413), NY is 2.7% White, 91.5% Black or African American/African-Caribbean and African, 0.3% American Indian or Native Alaskan, 0.6% Asian, 1.3% Other Single Race and 3.5% Two or more races, with 4.4% Hispanic or Latino. The median age is 35.6 with 6.0% under 5 years of age, 9.7 between 5 and 18 years of age and 10.4% over 65 years of age. These demographics are largely still in tact.

The proximity of communities in Southeast Queens to JFK Airport places them under the threat of airport-related pollution as well as the constant expansion of airport-related businesses. As it is, the neighborhood streets are overrun with diesel trucks going to and from airfreight establishments both within and outside of the airport, trying to avoid congestion on truck routes. The city recently sold off parcels of ecologically valuable land along Rockaway Boulevard for the siting of a police impound lot and a school bus parking lot. There is currently real consideration being given to the expansion of JFK Airport by an additional 400 Sq. Acres.

ENVIRONMENTAL HARMS AND RISKS

Air Pollution in the JFK Airshed

Kennedy International Airport is the second largest source of volatile organic compounds (VOCs) in New York City. LaGuardia was identified as a major source of NO_x. In addition to aircraft emissions, consider the food service and other airport- related industries that move into the surrounding community, bringing with them increased amounts of diesel fuel emissions from industry trucks. The ground service and ground access vehicles (e.g., passenger cars) serve as additional sources of air polluting fossil fuels,

The fact is that air travel and airports are here to stay. Air travel is expected to double nationally by the year 2017 and a number of airports, JFK Airport included, have plans to expand runways to accommodate the increased demands. For example, the EA for the proposed 4L/22R Runway Extension Project talks about the need to make it possible for the A380 to take off and land at JFK. Many see such expansion as desirable for obvious financial reasons. However, for the residents of the surrounding community, it is critical that the posed risks be identified and that a program of mitigation be developed and pursued..

Consultants from EOHSI of Rutgers University with whom we work tell us:

"Emissions from airports are primarily a combination of mobile source combustion emissions and fugitive emissions from fueling activities, though point sources from power facilities and maintenance operations at larger airports exist. Emissions from operation of airports include emissions from a variety of fuels, jet engines, diesel engines from ground service equipment (GSE), and gasoline and diesel engines from ground access vehicles (GAV) as well as stationary sources that support the operation of the airport such as power generation, HVAC systems, engine test stands, parking lots, fuel storage and commercial enterprises within terminals or servicing the travelers. Unlike other emissions sources within urban settings which are declining due to national, state and local control programs, the ***emissions from airports are increasing due to both the growth in air traffic and lack of technology-forcing control programs (NESCAUM 2003). For example, emissions of nitrogen oxides (NOx) from electrical utilities, industry and on-road vehicles either decreased or grew modestly (<3%) from 1970 to 1998, while emissions from aircraft grew by 133% and further growth is predicted over the next decade. Pollutants originating from emissions associated with operations from airports include primary emissions from fuels and combustion products and secondary pollutants from reactions that occur in the atmosphere. Pollutants of concern include criteria pollutants (particulate matter -PM2.5 and PM10, nitrogen dioxide, sulfur dioxide, carbon monoxide, lead and precursors of ozone) and Hazardous Air Pollutants (HAPs) (volatile organic compounds, carbonyls and metals on particulate matter – often on fine and ultrafine particles that penetrate deep into the lungs).***

Emissions from jet engines vary with engine speed, being the highest when using maximum power during take-off but is also important during idling or while the plane taxi's (Moussiopoulos et al 1997, Pison et al 2004). ***These emissions will be released at or near ground level so will be dispersed to the nearby community and subsequently added to the general background urban air. Releases include unsaturated, small chain hydrocarbons that can react with ozone and nitrogen oxides to form carbonyls that are respiratory irritants.***

Two recent studies examined the potential exposure and health impacts of emissions to LaGuardia Airport, NY (Lin et al 2008, Cohen et al 2008),which handles approximately one half the number of passengers that fly into and out off JFK and considerably less cargo than JFK (30,000 metric tons for LaGuardia vs 1.6 million metric tons for JFK). Increased rates of hospital admissions for respiratory conditions were identified for residents living within 5 miles of LaGuardia, Queens and Rochester Airport, Rochester compared to residents living more than 5 miles from the airports... The region that an airport impacts air quality can differ from the region affected by noise as the latter is more dependent upon the flight path that aircraft take during take-off and landing while ***air emissions from an airport will disperse in all directions, dependent upon the wind direction and speed in addition to emission directly from aircraft.*** *A clear increase in noise (from 16 to 35 decibels) was measured in homes near LaGuardia Airport, and the two homes near JFK airport that were in the study. ...*

JFK Airport is larger source of pollutants than the airports in the New York area or examined in other studies (REF). ***Thus, conducting a comprehensive sampling program focused on the community adjacent to the airport and including constituents specific to emissions from jet fuel activities, in addition to characterizing the PM2.5 mass loading which has been shown to be linked in to adverse respiratory and cardiovascular outcomes in urban settings (REF), could provide information documenting that the community surrounding JFK airport has increased exposure to air pollutants from airport emissions that are associated with adverse health outcomes. Further, these data can then help identify what steps might be taken to reduce those emissions and the resulting exposures."***

In summary, carbon dioxides, volatile organic compounds (VOCs) and nitrogen oxides (NO_x) the air pollutants emitted by aircraft and airport-related industry—release a variety of toxic chemicals such as benzene and formaldehyde. A 1993 EPA health risk assessment concluded that aircraft engines were responsible for approximately 10.5 percent of the cancer cases within a 16-square-mile area surrounding Chicago's Midway airport. The National Resources Defense Council warns that "the same conclusion might apply to people living immediately adjacent to airports all over the country." Recent studies support these findings.

In the June 18, 2012, Volume 77, No. 117 of the Federal Register, the EPA extensively details the health concerns associated with exposure to airport-related air pollution. They tell us that:

- *NOX emissions from aircraft and other mobile and stationary sources contribute to the formation of ozone. In addition, NOX emissions at low altitude also react in the atmosphere to form secondary fine particulate matter (PM2.5), particularly ammonium nitrate.*

- *Ozone and its precursors can be transported hundreds of miles downwind from precursor emissions, resulting in elevated ozone levels even in areas with low local VOC or NOX emissions.*

- *NOX emitted by aircraft engines can react in the atmosphere to form nitrate, a component of PM2.5. Particulate matter ... can be principally characterized as discrete particles ... small enough to penetrate to the thoracic region (including the tracheobronchial and alveolar regions) of the respiratory tract (referred to as thoracic particles). ... Fine particles are produced primarily by combustion processes and by transformations of gaseous emissions (e.g., SOX, NOX and VOC) in the atmosphere. ... These particles can remain in the atmosphere for days to weeks and travel hundreds to thousands of kilometers.*

- *Nitrogen dioxide (NO2) ... can dissolve in water droplets and further oxidize to form nitric acid which reacts with ammonia to form nitrates, an important component of ambient PM. NOX and VOC are the two major precursors of ozone.*

- *People who are more susceptible to effects associated with exposure to ozone can include children, the elderly, and individuals with respiratory disease such as asthma. Those with greater exposures to ozone, for instance due to time spent outdoors (e.g., children and outdoor workers), are of particular concern. Ozone can irritate the respiratory system, causing coughing, throat irritation, and breathing discomfort. Ozone can reduce lung function and cause pulmonary inflammation in healthy individuals. Ozone can also aggravate asthma, leading to more asthma attacks that require medical attention and/or the use of additional medication. Thus, ambient ozone may cause both healthy and asthmatic individuals to limit their outdoor activities. In addition, there is suggestive evidence of a contribution of ozone to cardiovascular-related morbidity and highly suggestive evidence that short-term ozone exposure directly or indirectly contributes to non-accidental and cardiopulmonary-related mortality,*

- *Scientific studies show ambient PM is associated with a series of adverse health effects. ... health effects associated with short-term exposures (hours to days) to ambient PM2.5 include mortality, cardiovascular effects, such as altered vasomotor function and myocardial ischemia, and hospital admissions and emergency department visits for ischemic heart disease and congestive heart failure, and respiratory effects, such as exacerbation of asthma symptoms in children and hospital admissions and emergency department visits for chronic obstructive pulmonary disease and respiratory infections. ...long-term exposure (months to years) to PM2.5 is associated with the development/progression of cardiovascular disease, premature mortality, and respiratory effects, including reduced lung function growth in children, increased respiratory symptoms, and asthma development.*

- *The EPA has concluded that the findings of epidemiologic, controlled human exposure, and animal toxicological studies provide evidence that is sufficient to infer a likely causal relationship between respiratory effects and short-term NO2 exposure. The ISA concludes that the strongest evidence for such a relationship comes from epidemiologic studies of respiratory effects including symptoms, emergency department visits, and hospital admissions.*

Up to 90 percent of the hydrocarbon and carbon monoxide emissions from aircraft occur when planes idle and taxi on the runway. Idling and taxiing airplanes can emit hundreds of tons of VOCs and NO_x annually; and a December, 1998 article by David Holzman identified John F. Kennedy International Airport as the second largest source of volatile organic compounds (VOCs) in New York City. LaGuardia was identified as a major source of NO_x.

In addition to aircraft emissions, consider the food service and other airport- related industries that move into the surrounding community, bringing with them increased amounts of diesel fuel emissions from industry trucks. The ground service and ground access vehicles (e.g., passenger cars) serve as additional sources of air polluting fossil fuels.

As industry develops and airports expand, our wetlands and other green spaces are being paved over to build facilities and parking. For example, an expanded JFK airport will result in 400 sq acres wetland destruction with landfill. Recently, the PANYNJ, in its presentation of a revised EA for the 4L/22R Runway Extension has called for the removal of over 312 trees that they are labeling as aviational hazards. Without grass and vegetation, the resulting rainwater runoff causes increased flooding to the streets and homes of a community that already suffers from high water tables. The paving of our green spaces further compounds our exposure to the environmental and health hazards brought on by the airport industry, since plants absorb carbon dioxide, a major pollutant introduced by the airport industry.

Today, the NYC Economic Development Corporation (EDC) and the City Administration Services own tracts of land just north of JFK airport, immediately adjacent to Thurstin Basin and Idlewild Park that seem to be earmarked for industrial uses instead of open space, parkland and recreational waterfront. Furthermore, the following other harms and risks exist in the communities adjacent to JFK Airport

Noise Pollution

Residents within our community can testify to the disruption caused by air traffic at all hours of the day and night. In the course of numerous arrivals and departures, airplanes fly in uncomfortably close proximity to our rooftops, often shaking our homes and making conversation virtually impossible. Studies show that the noise levels associated with airplanes is a potential source of health problems for communities within the poison circle. Links between aircraft noise and high blood pressure levels are

particularly pronounced. Researchers have calculated that for every extra 10 decibels of aircraft noise, the risk of hypertension is increased by 14%.

Aircraft noise at night is especially disturbing, and can result in sleep interruption. Residents report being awakened in terror in the middle of the night from the loud noise of low-flying aircraft. Often, it is difficult to return to sleep. When individuals return to sleep, they may be disrupted again by air traffic. Sleep deprivation can result; and sleep deprivation has been linked to high blood pressure, a major cause of stroke and heart attack. In addition to high blood pressure, studies show that sleep-deprived people tend to develop problems regulating their blood sugar, which may put them at increased risk for diabetes.

In children, chronic aircraft noise exposure is not only associated with possible increased blood pressure, it can also impair reading comprehension and long-term memory. Could this explain, at least in part, some of the reasons for the poor performance of many of our students on math and English language arts standardized tests?

Water Pollution

Emissions from aircraft and airport-related industry are major sources of water pollution, which can be hazardous to the environment and physical health of surrounding communities. The deposition of particulate matter from emissions can be found in our waters, on our soil and on our vegetation. That which is deposited on soil also ends up in our waters after rain events or watering.

Dioxins from spilled jet fuel, di-ethelyne glycol from de-icing fluids and dissolved jet exhaust particulates commonly flood airport tarmacs. These toxic chemicals seep into the ground, streams and surrounding wetlands, depleting the water of oxygen, placing our local plant and animal life at risk, and increasing the likelihood that our saltwater streams will become unhealthy, stagnant pools that harbor mosquitoes.

Finally, proposed projects for the area only serve to increase air and water pollution, keeping in mind that the communities adjacent to JFK are already well within the airport's poison circle and wetlands and ground water are already being polluted by surface runoff.

These environmental issues also raise serious questions of environmental justice. It appears that other communities in the vicinity of the airport, are not contending with many of the issues that the largely African-American/African-Caribbean, Southeast Queens Communities are.

To address these problems, the Eastern Queens Alliance has advocated for:

1. Local monitoring of the air quality and airport-generated noise within communities immediately adjacent to JFK airport for point source pollution. Right now the nearest monitors are in Northeastern Queens. There are only two end-of-runway noise monitors in our Southeast Queens communities to assess noise pollution
2. The requirement of macro-environmental impact statements that address the total, cumulative impact of all projects planned within a community within a five or ten year window to address the issue of multiple harms and risks coming from multiple sources.
3. A fair share of flight patterns in and out of JFK Airport
4. The incorporation of open landscaped areas to serve as buffers and environmental "mitigators" with all industrial projects within close proximity to residential areas.
5. The preservation of its parks and open spaces, with an emphasis on Idlewild Park Preserve and ecologically sensitive adjacent areas immediately north of JFK Airport.

Submitted by: Barbara E. Brown

Barbara E. Brown, Chairperson
Eastern Queens Alliance, Inc.

EARTHJUSTICE

ALASKA CALIFORNIA FLORIDA MID-PACIFIC NORTHEAST NORTHERN ROCKIES
NORTHWEST ROCKY MOUNTAIN WASHINGTON, D.C. INTERNATIONAL

FOR THE RECORD

Testimony
of
Alok Disa

on behalf of
Earthjustice

before the
New York City Council Committee on Environmental Protection

regarding
Air quality impacts of lead emissions from aircraft in NYC environmental justice communities

February 28, 2014

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INTRODUCTION

Good afternoon and thank you, Chairman Richards and members of the Committee on Environmental Protection. I am Alok Disa, a litigation assistant with Earthjustice.

Earthjustice is a non-profit public interest law organization dedicated to defending the right of all people to a healthy environment – the air we breathe, the food we eat, the water we drink. A main pillar of our work is limiting toxic air emissions. Of all the toxic elements spewed out into the environment from industrial activity, one of the most dangerous is lead. While great strides have been made in eliminating lead from gasoline and from paint, leading to widespread public health benefits, significant sources of lead air pollution remain. The U.S. Environmental Protection Agency (EPA) has identified general aviation aircraft engines as the single largest source of airborne lead emissions. However, this source remains unregulated.

On behalf of the environmental organization Friends of the Earth, we have sought to compel the EPA to adopt emissions limits for lead from aircraft engines. To date, EPA has failed to propose any limits, despite the impacts on human health and, particularly, communities of color and low-income communities.

We appreciate the opportunity to present testimony before the Committee to raise awareness of this issue in New York City and to highlight some areas where action may be taken to prevent the harms associated with lead emissions.

THE CONSEQUENCES OF LEAD EXPOSURE ARE WELL-DOCUMENTED

Without chronicling the scientific literature, it is important to state that the harmful effects of lead exposure are well-documented and not in dispute. Indeed, EPA readily acknowledges the harms associated with exposure to lead. Lead is a toxin that can impair almost every system in the body[1]. While the nervous system is most sensitive to lead exposure, studies have also shown

[1] Agency for Toxic Substances & Disease Registry. "Lead Toxicity: What Are the Physiologic Effects of Lead Exposure." Available at http://www.atsdr.cdc.gov/csem/csem.asp?csem=7&po=10.

adverse effects on the renal, gastrointestinal, cardiovascular, reproductive and endocrine systems.[2] Consequences can range from IQ loss and behavioral issues, to coma and even death in extreme cases.[3] Prenatal exposure can impact pregnancy outcomes and affect early childhood development.[4] Children are most at risk, but lead can be stored in bone mass, meaning health consequences can be felt later in life, even after exposure has been eliminated.[5]

Perhaps the most alarming fact about lead, however, is that there is no safe level of exposure. Study after study has shown that even trace amounts of lead in the bloodstream can be linked to negative health outcomes.[6]

Based on the mounting, unequivocal body of scientific evidence, in 2008 the EPA revised its standards for allowable levels of airborne lead emissions down tenfold to 0.15 micrograms per cubic meter.[7] More recently, in 2012 the Centers for Disease Control and Prevention (CDC) revised its reference level for lead, and the threshold for "lead poisoning" is now 5 micrograms per deciliter, down from 10 micrograms.[8] These revisions were designed to protect children and other at-risk populations and are an acknowledgement that lead is dangerous even at levels once considered to be safe.

Recognizing that there is no safe level of lead, the public health community has mobilized around a strategy that emphasizes primary prevention as their chief objective. Both the EPA

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[2] *Id.*
[3] *Id.*
[4] *Id.*
[5] Oregon Department of Human Services. "Health Effects of Lead Exposure." Available at https://public.health.oregon.gov/HealthyEnvironments/HealthyNeighborhoods/LeadPoisoning/MedicalProvidersLaboratories/Documents/introhealtheffectsmedicalprovider.pdf.
[6] Advisory Committee on Childhood Lead Poisoning Prevention of the Centers for Disease Control and Prevention. Low Level Exposure Harms Children: A Renewed Call for Primary Prevention. 2012.
[7] US Environmental Protection Agency. "Fact Sheet: Revisions to Lead Ambient Air Monitoring Requirements." Available at: http://www.epa.gov/air/lead/pdfs/Leadmonitoring_FS.pdf.
[8] Centers for Disease Control and Prevention. *CDC Response to Advisory Committee on Childhood Lead Poisoning Prevention Recommendations in* "Low Level Lead Exposure Harms Children: A Renewed Call of Primary Prevention."

and CDC state that "the most important step parents, doctors and others can take is to prevent lead exposure before it occurs."[9, 10]

LEAD EXPOSURE AFFECTS THE MOST VULNERABLE POPULATIONS

Lead is particularly harmful to children.[11] Lead is associated with IQ loss, learning disabilities, attention deficit, and behavioral problems.[12] Elevated blood lead levels (BLLs) in students are associated with decreased academic performance.[13]

Based on current CDC estimates, over 450,000 children nationwide are thought to have lead poisoning.[14] In 2012, over 8,000 children were newly identified as suffering from lead poisoning in New York City alone.[15] The harmful effects on children are thought to be irreversible.

In addition, lead exposure disproportionately impacts low-income communities, immigrants and people of color. In a study of over 48,000 schoolchildren in Chicago, researchers found BLLs among non-Hispanic black students were more than double those of non-Hispanic white students.[16] Lead remains in the paint and pipes of many older apartment buildings, which tend to be concentrated in low-income neighborhoods. Even newly-built affordable housing is often built on sites where land is cheap, such as former industrial facilities, and where the threat of lead in the soil remains.

Environmental justice communities are more susceptible to contaminants like lead. New research shows that poverty fundamentally alters the way the body responds to pollutants,

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[9] US Environmental Protection Agency. "Learn About Lead." Available at http://www2.epa.gov/lead/learn-about-lead.
[10] Centers for Disease Control and Prevention. Blood Lead Levels in Children. Available at http://www.cdc.gov/nceh/lead/ACCLPP/Lead_Levels_in_Children_Fact_Sheet.pdf.
[11] US Environmental Protection Agency. "Learn About Lead."
[12] *Id.*
[13] National Center for Healthy Housing. "Issue Brief: Childhood Lead Exposure and Educational Outcome."
[14] Advisory Committee on Childhood Lead Poisoning Prevention of the Centers for Disease Control and Prevention. Low Level Exposure Harms Children: A Renewed Call for Primary Prevention.
[15] New York City Department of Health & Mental Hygiene. "Report to the New York City Council on Progress in Preventing Childhood Lead Poisoning in New York City." September 30, 2013.
[16] Chicago Department of Public Health. Policy Brief, July 2013. "Healthy Homes: Policy Options for Preventing Lead Exposure."

exacerbating their effect on our most vulnerable communities.[17] In other words, "the toxicity of lead may be stronger in a child also exposed to the stress of poverty."[18]

DESPITE PROGRESS, THE PROBLEM OF LEAD EXPOSURE PERSISTS

In addition to the national phase out of lead from motor vehicle gasoline, New York City has an impressive array of regulations and codes aimed at limiting the public's exposure to lead. To a large extent the City's efforts have been a success. Following the passage of Local Law 1 of 2004, cases of lead poisoning have declined significantly.

Nevertheless, lead exposure remains a reality for New Yorkers and for communities across the country, and lead emissions from general aviation aircraft—the single largest source of lead air pollution—continue to contribute to this problem. Aircraft that burn leaded aviation gasoline (avgas) generate almost half of all lead emitted into the air on a yearly basis.[19] Of the 21 areas in the U.S. currently in non-attainment for the national air quality standards for lead, all have at least at one airport servicing aircraft using leaded avgas, and most have several such facilities.[20]

Across the country there are almost 20,000 airports in which leaded avgas is used,[21] and there are 6 such airports in New York City – LaGuardia Airport, East 34th Street Heliport, JFK International Airport, Pan Am Metroport Heliport, Downtown Manhattan Heliport, and New York Skyports Seaplane Base – emitting an estimated total of 0.7 tons of lead into the city's air every year.[22] Just looking at the two biggest airports, last year approximately 10% of the flights

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[17] Konkel, Lindsey. "Stress + pollution = health risks for low-income kids." *Environmental Health News* 6 Jun 2012.
[18] *Id.*
[19] US Environmental Protection Agency. "Regulatory Update: EPA Response to the 2006 Petition from Friends of the Earth Regarding Lead Emissions from Piston-Engine Aircraft." July 2012.
[20] "Advance Notice of Proposed Rulemaking on Lead Emissions from Piston-Engine Aircraft Using Leaded Aviation Gasoline." 75 Federal Register 22439 (28 April 2012).
[21] US Environmental Protection Agency, 2012.
[22] US Environmental Protection Agency. 2008. *Lead Emissions from the Use of Leaded Aviation Gasoline in the United States: Technical Support Document.*

leaving JFK[23] and 20% of the flights leaving LaGuardia[24] -- a total of 115,161 total flights – were of planes fueled by leaded avgas.

The emission of lead by aircraft taking off from and landing at the City's airports presents a risk to the health of the surrounding communities around the city's airports and, especially, of the children who live, play or attend school in those communities. A 2011 study out of Duke University found that children who live within one kilometer of airports where avgas is used had noticeably higher blood lead levels than children living further away.[25] This increase was enough to push some of the children in the study above the reference level for lead and into the range where medical treatment is advised.[26]

Putting this into a local context, LaGuardia alone is responsible for 0.3 tons of lead air emissions every year.[27] Looking at the surrounding community, almost 20,000 people live within 1 mile of LaGuardia, over 85% of them non-white.[28] More than 3,000 of those individuals are living below the poverty line.[29]

Furthermore, the use of leaded avgas may also present a risk to airport workers. In a study of aircraft maintenance personnel in Korea, workers at airports that used avgas were found to have elevated blood lead levels compared to similar workers in airports without avgas.[30]

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[23] Flight data found at http://www.airnav.com/airport/KJFK. For this analysis, we considered the air taxi and transient general aviation categories. Using the same method EPA used in their analysis on p.4 of their October 2008 Technical Support Document, we then assumed that 72% of those planes are piston-engine aircraft.
[24] Flight data found at http://www.airnav.com/airport/KLGA.
[25] Miranda et al. "A Geospatial Analysis of the Effects of Aviation Gasoline on Childhood Blood Lead Levels." *Environmental Health Perspectives*, October 2011.
[26] *Id.*
[27] US EPA, 2008.
[28] US Census Bureau. 2000. American FactFinder. http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml. (Report generated on July 2011).
[29] *Id.*
[30] Park et al. "Blood Lead Levels and Types of Aviation Fuel in Aircraft Maintenance Crew." *Aviation, Space and Environmental Medicine*, October 2013.

EPA INACTION

In 2006, Friends of the Earth filed a petition asking EPA to regulate lead emissions from avgas-fueled aircraft under the Clean Air Act. Over seven years have passed and EPA has yet to formally acknowledge the dangers of these emissions with an endangerment finding, let alone propose any limits on lead emissions. Instead, EPA has suggested that more data regarding demographics and air lead levels at and around airports would allow the Agency to make a judgment on whether lead emissions from aircraft fueled by leaded aviation gasoline are a danger to public health. EPA has estimated that it would take up to three years in order to make a judgment on whether regulation of lead emissions is warranted.

At some point, the impetus to study a problem must give way to action. EPA has known about the problem of lead in aviation gas for decades. Initial priority was given to phasing out lead from motor fuel. Now it is time to move on lead in aviation fuel. Given all of the evidence of the human health risks posed by lead pollution, delay of another three years is simply unacceptable. The additional analyses proposed by EPA are unnecessary, and we have urged the Agency to move ahead with an endangerment finding for lead from aircraft engines without further delay.

NOW IS THE TIME FOR ACTION

Given the CDC's revised level for lead poisoning, to 5 micrograms per deciliter, this is not a time to be complacent. New numbers suggest that about 1 in 38 young children have lead poisoning.[31] While public health experts argue for more testing and preventive measures, budget cuts at the federal level have deprived funding for such programs, amounting to what some have described as "an abandonment of children." The problem has not been solved, and this is not an issue of the past. If anything, based on what we know now, we should be moving more vigorously to reduce and ultimately eliminate any exposure.

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[31] Young, Alison. "Lead poisoning toll revised to 1 in 38 young kids." *USA Today*, 4 April 2013.

The reality is that we know enough about the prevalence and severity of lead's toxicity to warrant action against all known sources. The accumulated effect of lead present in our air, water, soil and food results in significant public health and economic costs, burdening communities across the country and in our own backyard. We urge the City Council to make the issue of lead in avgas an environmental health priority by pushing EPA to act now.

SUMMARY

Avgas is the leading contributor to lead air pollution in this country. There is no safe level of lead exposure. Taken together, those two facts demand an aggressive policy limiting every source of lead. EPA has the authority to remove lead from aviation fuel across the country. We urge the Council and the wider environmental justice community to press EPA to end the years of delay and to take the immediate action necessary to protect the health of our communities.

LEHMAN COLLEGE

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FOR THE RECORD

Testimony for the February 28th, 2014 Public Hearing on Air Quality Impacts and Ways to Measure and Address them in NYC Environmental Justice Communities

My name is Juliana Maantay, and I am submitting this written testimony for the public hearing on "Air Quality Impacts and Ways to Measure and Address them in NYC Environmental Justice Communities," being held on February 28, 2014 by the NYC Council's Committee on Environmental Protection. I am a Professor of Urban Environmental Geography at City University of New York (Lehman College and the CUNY Graduate Center), and I direct a research center there, "The Urban GISc Lab." I will first briefly outline my credentials, to demonstrate why I believe I am well-qualified to discuss Environmental Justice (EJ) in NYC, and then will synopsize my research findings on the subject of EJ, air pollution, and asthma hospitalization.

I have been conducting research on Environmental Justice (EJ) in NYC for about 25 years. I've been a full-time professor for over 16 years, holding appointments in the CUNY School of Public Health, the CUNY doctoral program in Earth and Environmental Sciences at the Graduate Center, and in the Department of Earth, Environmental, and Geospatial Sciences at Lehman College in the Bronx. Prior to my academic career, I was employed for approximately 17 years as an urban planner, environmental analyst, and project manager, by the NYC Department of Environmental Protection, the NYC Department of City Planning, the Regional Plan Association, and not-for-profit community-based organizations and private sector planning firms. My educational background is in architectural design, environmental analysis, urban planning, and environmental geography. In 2012, I received a Fulbright Distinguished Chair award from the US State Department's US-UK Fulbright Commission to conduct a study on the relationships amongst health, deprivation, and vacant and derelict urban land (brownfields), comparing the situation in New York City and Glasgow, Scotland. I have also written two college textbooks on analyzing the urban environment and the geospatial analysis of environmental health.

My research focus is environmental health justice in NYC - making the links between poor environmental conditions, poverty, race/ethnicity, and adverse health outcomes, and this work has been supported by the National Atmospheric and Oceanic Administration (NOAA); the US Environmental Protection Agency; the National Institutes of Environmental Health Sciences; the National Center on Minority Health and Health Disparities; and the USDA, among others. Geographic Information Science (GISc), a computerized mapping and spatial analysis technology, is used in this research as the underlying framework with which to analyze the spatial correspondence of race/ethnicity and class with environmental benefits and burdens, to ascertain whether or not certain sub-populations within the city, and certain geographies within the city, are disproportionately burdened by pollution and the resultant poor health conditions, or, conversely, if these populations experience a lack of access to health-promoting environmental features, such as healthy food choices, parks and open space, recreational and physical activity opportunities, and so forth.

Research done at the Urban GISc Lab has covered the relationship between health, socio-economic class, race/ethnicity, and various environmental factors, such as:

- The location of polluting facilities and land uses and asthma hospitalizations;
- Proximity to noxious land uses (noise pollution, odor, traffic congestion, traffic safety, visual blight, quality-of-life issues);

- Vulnerability to flooding;
- Access to parks, open spaces, and physical activity sites;
- Access to healthy foods (incidence of obesity);
- Community gardens, urban agriculture, and "food deserts";
- Neighborhood walkability for the elderly;
- Changes to Industrial Zones ("Expulsive" Zoning);
- Residential segregation by race/ethnicity and disease prevalence.

In this work, we found that not only are there health inequalities, not only are poor people and communities of color more likely to have higher rates of adverse health outcomes, but that there are disproportionate environmental burdens, as well. We have found significant relationships between health outcomes and environmental factors, as well as disproportionate impacts of such relationships on the poor and "minority" populations. For instance, in a 2007 study (Maantay, 2007) on air pollution and asthma hospitalization, we found that there are epidemic rates of asthma and asthma hospitalization in low-income communities in the Bronx. Bronx residents, especially children under 15 years, suffer from asthma hospitalization rates that are among the highest in the nation. The Bronx also has many facilities that are known sources of air pollution, and one of the highest volumes of vehicular traffic in the nation. There is a significant increase in asthma hospitalization rates for those residing near major sources of air pollution.

GISc was used to map and analyze the major mobile and stationary sources of air pollutants in the Bronx, relative to the location of residents admitted to the hospital for asthma, employing an ecological study design. Proximity analysis found that people living near (within specified distance buffers) noxious land uses were up to 66 percent more likely to be hospitalized for asthma, were 30 percent more likely to be poor, and 13 percent more likely to be from a "minority" population, than those outside the buffers. This study demonstrates that local levels of air pollution, often concentrated in low-income urban communities, correlate geographically with asthma hospitalization rates.

The populations in the Bronx in closest proximity to noxious land uses are those with higher risk of asthma hospitalization and higher likelihood of being poor and of "minority" status. Regardless of whether the high asthma hospitalization rates are due to environmental causes or result primarily from poverty and other socio-demographic factors, the findings of this research point to a health and environmental justice crisis.

"[A] society that allows such a pattern of coincidence [between poor populations and poor environment] to persist has failed to equally protect its citizens. This failure, itself, constitutes an environmental injustice. Whether the result of...putting economic profits over the health of people, or benign neglect, this disproportionate risk can and does lead to disastrous results." From: White, H.L., 1998. Race, class, and environmental hazards. In: *Environmental Injustices, Political Struggles.* Camacho, D., ed. Durham, NC: Duke University Press. Page 75.

Listed below are some relevant publications, based on the Urban GISc Lab's research, that detail these findings pertaining to EJ issues in NYC. The papers with the asterisks are being submitted with this document, and most of the remainder can be found at the website
https://www.researchgate.net/profile/Juliana_Maantay/contributions/?ev=prf_act

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*Maroko, A.R., **Maantay, J.A.,** and Grady, K., 2011. Using Geovisualization and Geostatistics to Explore Respiratory Disease and Environmental Health Justice in New York City, in Maantay, J.A., and McLafferty, S., eds., *Geospatial Analysis for Environmental Health*, Springer-Verlag, pp. 39-66.

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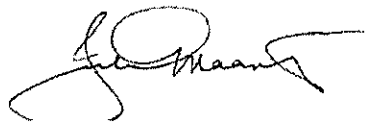

February 21, 2014

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WE ACT For Environmental Justice

Testimony to the New York City Council Committee on Environmental Protection
February 28, 2014

For the past 25 years, WE ACT—based in Northern Manhattan -- has been working on the nexus between transportation, air quality and public health, and has developed a model of community-based research, community action, and policy advocacy. We partner with the Columbia Children's Environmental Health Center where I am a co-Principal Investigator, to better understand the exposure of residents to environmental toxins and their health outcomes.

The Northern Manhattan neighborhoods of East, West, Central Harlem and Washington Heights, house two sewage treatment plants, and one-third of NYC's diesel bus fleet with buses idling outside homes, schools and playgrounds. Millions of trucks annually cross into Northern Manhattan from two uptown bridges, the Triboro and the George Washington Bridge. And in Washington heights, buses coming into the Port Authority station at West 181st street have no mandate to use diesel retrofits and are still a serious cause for concern in that neighborhood.

Northern Manhattan has no monopoly on negative impacts from transportation – related air pollution In the South Bronx, and Hunts Point, areas of Brooklyn like Red Hook, Sunset Park, and Greenpoint-Williamsburg, diesel truck traffic is overwhelming. Unregulated small businesses like dry cleaners and auto body shops also contribute to air pollution and air toxics, as well as buildings that are burning #6 heating oil. No wonder that these are the same communities experiencing an asthma epidemic with the highest rates of hospitalization and death from asthma coming from East Harlem and the South Bronx.

Dr. Perera has discussed the relationship of air pollution exposure to asthma, obesity, developmental delays, and behavioral problems in children, specifically children in Northern Manhattan.

Numerous studies document the problem, so I will discuss ways that NYC can address these impacts:

- Mayor DeBlasio should issue an Executive Order on Environmental Justice (building on the 1994 Executive Order by President Clinton and the recent affirmation of that order by President Obama that directs NYC agencies to develop plans to address the disproportionate impact of pollution in communities of color and low income.
- The NYC Council should develop legislation that mandates the use of an Equity and Health screening tool such as a Health Impact Assessment (HIA) to assess the impacts of potential regulations, land use and other decision making that could affect the health and sustainability of EJ communities.
- Draft legislation to establish funding and criteria for a technical assistance grant program to assist the public in the permit review process.
- Begin conducting supplemental compliance and enforcement inspections of regulated facilities to ensure that facilities are operating in compliance with the Environmental Compliance Law.
- Establish a work group to develop recommendations for conducting a disproportionate adverse environmental impact analysis as a component of the EIS, and a work group to identify reliable sources of existing human health data and recommend means to incorporate such data into the environmental review process.
- Propose draft revisions to the full environmental assessment form to, among other things, include information that can be used to identify adverse environmental impacts which bear disproportionately on potential environmental justice areas.
- Increase penalties for non-compliance with clean heat regulations and develop an earlier timeframe for the phase out of #6.
- Make NYSERDA grants available to small landlords in EJ communities for conversion to clean heat.
- Targeted enforcement of idling laws especially for delivery trucks and school buses.
- Develop a public hearing on indoor air quality and its impacts on health because 80 percent of outdoor air pollutants come indoors. There needs to be a focus on the impacts of building materials and products on health especially in low income areas where residents are living in poorly maintained housing, as well as housing code enforcement of mold repairs.

Thank you for holding this important hearing.

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New York City Environmental Justice Alliance testimony to the New York City Council as part of the Environmental Protection Oversight Hearing: Air Quality Impacts, Measures and Mitigation in Environmental Justice Communities.

Friday, February 28th, 2014

Founded in 1991, NYC-EJA is a non-profit city-wide membership network linking grassroots organizations from low-income neighborhoods and communities of color in their struggle for environmental justice. NYC-EJA empowers its member organizations to advocate for improved environmental conditions and against inequitable environmental burdens. Through our efforts, member organizations coalesce around specific common issues that threaten the ability of low-income and communities of color to thrive, and coordinate campaigns designed to affect City and State policies. Addressing disproportionate burdens and cumulative impacts on vulnerable communities is central to our agenda.

Improvements in air quality have a major impact on the health and well-being of all New Yorkers. Recent successes include efforts to phase out the most polluting heating oils (Numbers 4 and 6). Conversions to cleaner heating fuels resulted in significant citywide reductions in sulfur dioxide (SO2) and fine particulate matter (PM2.5). In addition, City Council legislation, passed in 2013, to curb emissions from commercial waste haulers shows a strong commitment to reduce diesel exhaust generated by polluting truck traffic.

Despite recent successes, air quality in NYC remains a grave concern. According to the NYC Department of Environmental Protection, "air pollution in NYC is a significant environmental threat which contributes to an estimated 6% of annual deaths."[1] Air pollution has also been linked with asthma, cardiovascular and respiratory diseases, and cancer. According to the American Lung Association, particulate matter (PM2.5) "can increase the risk of heart attacks and strokes, and increase the need for medical attention, hospital admission and emergency department visits."[2] In addition, the NYC Department of Health and Mental Hygiene estimates that "that current (2009-2011) levels of PM2.5 still cause annually more than 2,000 deaths, 4,800

[1] NYC Department of Environmental Protection. 2014. Air Pollution. [online] Available from: http://www.nyc.gov/html/dep/html/air/index.shtml
[2] American Lung Association. 2013. State of the Air 2013. [online] Available from: http://www.stateoftheair.org/2013/key-findings/

emergency department visits for asthma, and 1,500 hospitalizations for respiratory and cardiovascular disease."[3]

These numbers are particularly relevant in environmental justice neighborhoods with elevated rates of asthma and other related diseases. Areas like the South Bronx and North and Southwest Brooklyn are particularly vulnerable, given the existing environmental burdens created by the concentration of industrial facilities, land-based waste transfer stations, power plants, clusters of smaller sources of pollution (e.g., dry cleaners and auto-body repair shops), and high truck traffic. Diesel emissions associated with transportation corridors, expressways, and truck routes are also a major source of air pollution. According to a report by Mount Sinai's Children's Environmental Health Center "evidence is overwhelming that exposure to diesel exhaust causes cancer and premature death and that it also exacerbates asthma and other respiratory illnesses."[4]

The South Bronx has one of the highest concentrations of truck traffic in New York City, this includes truck trips to/from 9 waste transfer stations constituting the destination of hundreds of contaminating diesel truck trips per day, and food distribution trucks to/from the Hunts Point Food Distribution Center and the Fulton Fish Market. Asthma rates in the South Bronx are some of the highest in the country – eight times the national average. So are rates of other diseases and illnesses tied to air pollution. Until recently, Hunts Point had one of the smallest resident-to-parkland ratios while being surrounded by three major highway arteries - The Bruckner Expressway, the Cross Bronx Expressway and the Sheridan Expressway.

Brooklyn communities are also impacted by air pollution. North Brooklyn has 15 waste transfer stations permitted for over 20,000 tons of waste per day, constituting the highest concentration of waste transfer stations in the city. Bushwick ranks 8th in the city in the number of asthma hospitalizations in New York City, at 5.3 per 1,000 residents. Sunset Park is home to 2 transfer stations and 3 power plants. In addition, this community is crossed by the Gowanus Expressway carrying approximately 200,000 vehicles per day.[5] According to Lutheran Medical Center's Community Service Plan 2014-2017, asthma is one of the top 5 health concerns in Sunset Park, predominantly affecting low-income and population of color, in an area where 37% of the residents do not have health insurance.[6]

While the impacts of climate change are still being researched, extreme heat events have been linked with increases in morbidity and mortality. This poses additional burdens on vulnerable communities who on a daily basis may be subject to poor air quality. In environmental justice communities the cumulative impact of multiple sources of air pollution also poses a huge challenge to public health.

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[3] New York City Department of Health and Mental Hygiene; et al. 2013. New York City Trends in Air Pollution and its Health Consequences. [online] Available from: http://www.nyc.gov/html/doh/downloads/pdf/environmental/air-quality-report-2013.pdf

[4] Children's Health Center, Icahn School of Medicine at Mount Sinai. 2013. New York State's Children and the Environment. [online] Available from: http://www.mountsinai.org/static_files/MSMC/Files/Patient%20Care/Children/Childrens%20Environmental%20Health%20Center/NYS-Children-Environment.pdf

[5] New York State Department of Transportation. 2013. Gowanus Expressway Repair and Interim Deck Replacement Project. [online] Available from: https://www.dot.ny.gov/regional-offices/region11/projects/project-repository/gowanus-interim-deck-replacement/faq.html

[6] Lutheran Medical Center. 2014. Community Service Plan 2014-2017. [online] Available from: http://www.lutheranmedicalcenter.com/Data/Documents/2013LHC_CSP.pdf

According to Part 487 of New York State's Article X Power Plant Siting Law, an environmental justice area is defined as "a minority or low-income community that may bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."[7] Numerous studies have shown that environmental justice communities are more likely to be subject to air pollution. Children, seniors, and people of color are considered most vulnerable to the negative health impacts associated with poor air quality.

Recommendations

Cleaner air will result in improved quality of life, reduced rates of asthma and other chronic respiratory diseases, and better health outcomes for the most vulnerable communities. In order to reduce the vulnerability of environmental justice communities the Environmental Protection Committee should consider the following recommendations:

1. Cumulative impacts:
The cumulative impact of multiple sources of air pollution in environmental justice communities poses a huge challenge to public health. Therefore, the City should analyze the cumulative impacts of air pollutants in neighborhoods with a disproportionate burden of major emitters, clusters of smaller sources of air pollution, and polluting truck traffic. In addition, the City should require Health Impact Assessments that document cumulative impacts on vulnerable populations and mitigate negative health impacts for any new major projects.

2. Diesel Emissions & Truck Traffic:
Unnecessary truck traffic, congestion and pollution generated by thousands of waste trucks result in a disproportionate burden on the three communities that concentrate NYC's waste transfer stations: South Bronx, North Brooklyn, and Southeast Queens. New York City creates almost 40,000 tons of garbage every day. This garbage is trucked to transfer stations in a small handful of NYC neighborhoods and then trucked back out of the City. Every day, garbage trucks needlessly travel thousands of miles throughout New York City polluting our air with diesel fuel, clogging our streets, and diminishing our quality of life. These impacts are greatest in those few low-income and communities of color where old truck-dependent transfer stations are clustered, and along the truck routes used to haul garbage. Reducing the number of diesel truck trips in and out of these communities, and the full implementation of the Comprehensive Solid Waste Management Plan (as well as implementing strategies for a cleaner truck fleet), will result in cleaner air for all New Yorkers.

3. Air Quality Monitoring
The NYC Community Air Survey (NYCCAS) demonstrates how citywide air quality monitoring can improve our understanding of air pollutants and inform policy decisions. While NYCCAS has expanded access to information about criteria air pollutants, there are additional air toxics impacting vulnerable communities that require special attention. The City should build on the work begun by NYCCAS and strengthen citywide air quality monitoring by: codifying NYCCAS into law to secure a long-term commitment to ongoing air quality monitoring;

[7] New York State Department of Environmental Conservation. 2011. Part 487: Analyzing Environmental Justice Issues in Siting of Major Electric Generating Facilities Pursuant to Public Service Law Article 10. [online] Available from: http://www.dec.ny.gov/regs/83336.html

increasing resources for additional air monitoring and improved neighborhood level data; targeting additional air quality monitors in environmental justice communities; funding continuous year-round air quality monitoring; expanding the monitored pollutants to include additional air toxics; and ensuring that most impacted communities participate in the design and implementation of NYCCAS. In addition, the City should support community-based efforts to assess local air quality, train local residents on how to collect and interpret air quality data, and implement mitigation measures.

4. Climate change & Extreme Heat Events:
Extreme heat events associated with climate change are a major risk for those with chronic respiratory conditions. The City should prioritize the needs of vulnerable communities by prioritizing mitigation efforts that reduce the disproportionate impacts of poor air quality during heat waves and high heat days; improving alert systems and outreach to vulnerable populations; and addressing the urban heat island effect. In particular, dirty peaker power plants – the most polluting mini-power generators that kick-in when energy consumption is highest and the grid is taxed – should be replaced with renewable energy sources.

5. Mold & Indoor Air Quality
The impact of mold on indoor air quality and public health is a major concern in low-income communities living in poor housing conditions. After Superstorm Sandy, mold emerged as a critical post-disaster impact that requires special attention. The City should consider legislation that would regulate mold remediation, building on previous efforts to address lead exposures.

NYC-EJA commends the NY City Council Committee on Environmental Protection for holding this oversight hearing, creating an opportunity for public comment on this important discussion to improve air quality for all New Yorkers. We hope you find our recommendations useful, and look forward to participating as the conversation moves forward.

CUNY CENTER for URBAN

ENVIRONMENTAL REFORM

February 28, 2014 Testimony of Rebecca Bratspies, Director of the CUNY Center for Urban Environmental Reform before the New York City Council Committee on Environmental Protection

My name is Rebecca Bratspies. I am a professor at CUNY School of Law, and a resident of Astoria, Queens. I am here on behalf of the CUNY Center for Urban Environmental Reform (CUER), of which I am the director. CUER's mission is to enhance the legitimacy of environmental decision-making, and to increase the fairness of environmental decisions, by expanding participation, building civic capacity, and increasing access to environmental information.

At CUER, we are dedicated to the belief that environmental justice is a critical aspect of social justice and that communities are entitled to participate fully and meaningfully in environmental decisions that affect them.

Thank you for the opportunity to talk with you today about environmental justice in New York City. I am going to talk briefly about environmental justice in general, and about NYC air quality. I will then talk about what the Council can do to support environmental justice communities going forward. I am going to describe an initiative that the CUNY Center for Urban Environmental Reform currently runs in a number of Queens schools, and will focus in on one particular environmental justice campaign that emerged from this program. We think this program is a good way to build community capacity, while also supporting Core Curriculum learning goals. We would welcome the support of the City Council to expand this program to more neighborhoods and to reach more school children with our message of environmental empowerment, and with our program that cultivates student capacities at the intersection of science, art, and civics by drawing on their real-world experience in their own communities here in New York City.

Environmental Justice

Two decades ago, President Clinton signed Executive Order 12,898—*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.* This Order directed the government to tackle the long-neglected problems of environmental racism, and environmental injustice. It affirmed the basic principle that everyone is entitled to fair treatment and meaningful involvement in the environmental decisions that affect them, their families, and their communities. It stand for the proposition that low-income neighborhoods and communities of color should not bear disproportionate burdens of industrial pollution, waste handling, bus and truck depots, or other polluting activities. Executive Order 12,898 affirmed every American's equal right to breath clean air, drink clean water, and live on uncontaminated land.

Two decades later, we are still struggling to make that vision a reality.

Environmental Justice and Air Quality

In 2013, Queens got an F from the American Lung Association for ozone pollution, and a B in particulate matter pollution.[1] The Bronx received a D for ozone and a C for particulate matter. The New York metro region as a whole ranks unfavorably high—one of the top 20 metro areas for ozone pollution, in the top 15% or 20% for particulate matter, depending on whether the measurement is annual or daily exposure.[2] Queens and New York Counties tied for second dirtiest counties for short-term particulate exposure.

These pollutants are cause respiratory ailments, and lung cancer, as well as causing or contributing to heart attacks, strokes, and congestive heart failure. They also harm the central nervous system and cause reproductive or developmental harms. Children, the elderly and those with cardiovascular disease or compromised lung functions (as from asthma) are particularly vulnerable.

In Queens, 217,562 individuals, roughly 1/10 of Queens total population of 2.247 million suffer from asthma, including 43,898 children.[3] In the Bronx, those figures are 134,908 out of a total population of 1.39 million—again 10%.[4] That figure included 34,874 children. Nationwide, counties that receive an 'F' for ozone quality have 4.5 higher rates of adult asthma than do counties that receive an 'A', as well as 5 times the rates of childhood asthma, 4 times the rate of cardiovascular disease, and people are 4.5 times more likely to live in poverty.[5]

The data on exposure to these air pollutants and on asthma are generated on a county-wide basis, meaning that the statistics I just quoted cover the entire borough of Queens. Were the pollution actually evenly distributed throughout Queens and the Bronx, this data would be adequate. The story it would tell would be grim—one in every 10 persons suffering from asthma—but it would provide meaningful information to citizens and policymakers. But, neither the pollution nor the asthma cases are evenly distributed. Asthma prevalence is inversely proportional to income, with asthma rates for those with annual household incomes below 15,000 more than double those for households with annual incomes exceeding 75,000 [15% versus 6.8%].[6] Over 17% of African-American children suffer from Asthma, compared to 8.7% for white children, and 11% for Latino/a children.[7] Children under four years of age from low-income areas are more than four times as likely to be hospitalized for asthma than children from high-income areas.[8]

The available data cannot capture the local differences in air quality that drive these different health outcomes in neighborhoods within each borough.

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[1] American Lung Association, State of the Air 2013, County Rankings: Queens http://www.stateoftheair.org/2013/states/new-york/queens-36081.html
[2] Id. at http://www.stateoftheair.org/2013/states/new-york/queens-36081.html
[3] Id.
[4] American Lung Association, State of the Air 2013, County Rankings: Bronx, http://www.stateoftheair.org/2013/states/new-york/bronx-36005.html
[5] American Lung Association, State of the Air 2013, at 12.
[6] New York State Asthma Surveillance Summary Report at 28, 37 (Fig. 5-7) (Fall 2009).
[7] *Id.* at 42, fig. 5-12.
[8] New York City Dept. of Mental Health and Hygiene, Asthma Facts, 2d. Ed. at 7 (May 2003)

This is the great insight of environmental justice—environmental harms are clustered and that poor and minority communities are disproportionately likely to suffer. These same groups are also much less likely to have access to environmental amenities like parks, green spaces and street trees. Without careful attention to the dynamics of environmental injustice, efforts to improve the overall environmental may not reach these overburdened communities, and in some cases, even increases their burdens. The City Council must make environmental justice a priority. Children in the Bronx and in Queens deserve the same opportunity to breathe air that will not harm their health as do children in other communities.

One thing the City Council can do is to help develop more fine-grained data. County level, or zip code level studies do not capture New York City's environmental justice experience. The information is out there—EPA has a tremendous repository of information from GIS mapping, from permit filings and from the toxic release inventory. Were that information compiled into a comprehensive report about air quality in New York City on a neighborhood by neighborhood basis, it would be a tremendous resource for communities trying to advocate for better air quality. One model for this is the New York City Department of Mental Health and Hygiene Asthma Facts Report. The Department should be issuing its third Asthma Facts Report very soon. This report breaks down asthma cases, including hospitalizations, deaths and missed school days, by neighborhood. Asthma is a rough proxy for poor air quality but we need similarly nuanced and granular reports that focus directly on neighborhood air quality, particularly with regard to particulate matter and ozone exposures. I encourage the City Council to read the Asthma Facts Report when it is released, and to consider funding a similarly fine-grained air quality study. Making this data available in a usable fashion to local community groups would greatly increase their ability to participate in decision-making, and to advocate for cleaner air within their communities.

That said, data and access to data is only half the story. The other half is civic capacity to participate in decision-making. CUER's mission is to help build that civic capacity.

CUER's Mayah's Lot Project

Our most important project to date is an environmental justice education project built around CUER's environmental justice comic book titled *Mayah's Lot. Mayah's Lot* tells the story of a young girl who inspires her urban neighbors to save a vacant lot from becoming an industrial toxic waste facility, while learning about administrative law and citizen science along the way.

As you can see from the copies I provided along with my testimony, *Mayah's Lot* is a visually stunning book. It provides an accessible entry point into these very complex conversations for students, engaging even reluctant readers. As a tool for environmental education, *Mayah's Lot* has received critical acclaim, and has been adopted and disseminated by Illinois EPA and Mississippi DEC, and featured prominently on EPA's environmental justice blog.

Using *Mayah's Lot* and the accompanying video, CUER runs 6-8 week civic and environmental capacity building workshops in public schools. The education project includes place-based, hands-on civics, science, and arts education. The curriculum is aligned with the common core, but attuned to the lived experience of the students in each class. Each class identifies an environmental justice

issue in their community, and strategizes about how to collect data and to marshal that data to advocate for social change.

I urge the city council to support the *Mayah's Lot* project and to help us bring this civic capacity building and environmental education to communities across New York City.

Current Environmental Justice Campaign at PS85Q

Finally, I would like to draw your attention to one specific environmental justice campaign that emerged from the CUER's *Mayah's Lot* project.

At PS85Q, a Title I school in Astoria Queens,[9] CUER worked with the 5th grade. PS85 is located directly adjacent to the elevated N/Q subway line (approximately 50 feet away). The students identified subway noise as their biggest environmental justice issue.

The N/Q trains pass by PS85Q 24-30 times per hour.[10] Each train takes 30-40 seconds,[11] eating up 20% of instruction time. Students complain the noise interferes with their concentration; making it hard to take tests, to concentrate, to hear their teacher. The noise levels routinely top 90 dB—a level of noise that vastly exceeds ANSI standards of 35dB for exterior noise;[12] the World Health Organization recommendations of 35dB external noise for instructional spaces;[13] and the New York School Construction Authority standards of 45 dB for new or renovated schools.[14] The New York City Department of Environmental Protection noise standards recommend that noise in schools near elevated subways should not exceed 35 dB LA during teaching sessions.[15]

After reading *Mayah's Lot,* and learning about environmental decision-making, the students of PS85Q decided to take action. They collected noise data from their classrooms, and wrote and signed a petition calling on the DOE and the MTA to reduce the noise burden in the school. Working with *Mayah's Lot* artist Charlie LaGreca, they transformed the subway into a cartoon noise villain, and spent weeks designing their own comic books that defeated the noise villain in story and picture.

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[9] PS85Q serves 574 elementary school students, nearly 70% of whom are eligible for free lunches (69.2%). The student body is 30% Hispanic/Latino, 25% East and South Asian, 3% Black and African American, and 41% White. NYC DOE Quality Review Report 2012-2013, http://schools.nyc.gov/OA/SchoolReports/2012-13/Quality_Review_2013_Q085.pdf. Nearly 11% of the students are English Language Learners. NY DOE Comprehensive Educational Plan 2013-2013, http://schools.nyc.gov/documents/oaosi/cep/2012-13/cep_Q085.pdf.

[10] Sixteen N trains (eight in each direction) run past the school during rush hour, roughly one every 6-7 minutes; fourteen Q trains (seven in each direction) also run past the school during that time window, roughly one every 7-9 minutes. Overall, this means 30 trains passes the school between 7:50 and 8:54AM—one every 2 minutes. http://www.mta.info/nyct/service/pdf/tncur.pdf; http://www.mta.info/nyct/service/pdf/tqcur.pdf. The rest of the day 24 trains an hour pass the school.

[11] The students and parents confirmed these numbers through direct observations.

[12] American National Standards Institute, Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools (2002).

[13] WORLD HEALTH ORGANIZATION, GUIDELINES FOR COMMUNITY NOISE, Section 4.3.2 (1999).

[14] School Construction Authority, Design Standards, available at http://www.nycsca.org/Business/WorkingWithTheSCA/Design/Pages/DesignStandards.aspx.

[15] NYC DEP, A Guide to New York City's Noise Code, http://www.nyc.gov/html/dep/pdf/noise_code_guide.pdf (November 2011). The NYC DEP does not have authority to regulate the MTA, so these guidelines are in the nature of recommendations rather than binding legal obligations.

This student engagement prompted CUER to begin a wider investigation of schools burdened by the noise associated with elevated subway trains across the city. We are in the early stages of this broader study, but what we have found so far has been shocking. Thirty years ago, the MTA and DoE measured noise at PS85Q. They documented noise levels above 90 dB in this school, and similarly unacceptable noise levels at nine other schools.[16] At the time, they promised to fix things. Yet, fast forward 30 years—we are still measuring those same 90+dB noise levels today. Moreover, PS85Q is not alone—CUER has identified up to 20 other schools that may be in a similar situation. This is a serious environmental justice issue.

CUER made a video to document the scope of the noise problem at PS85Q,[17] and helped parents hold a rally outside the school.[18] The New York Times wrote a story about the problem.[19] Elected officials including former Councilmember Vallone and current Councilmember Costa Constantinides attended the rally and have been very supportive.

Unfortunately, the MTA and the DoE have made no commitments to resolve the problem—either at PS85, or on a city-wide basis. And this is a problem that can be resolved! The DoE could install appropriate Outdoor-Indoor Transmission Class materials and appropriate ventilation (including air conditioning) to dramatically reduce the noise inside the building. The MTA could install rubber padding under the tracks and/or construct a sound barrier to reduce the noise overall.

I urge City Council to support the students of PS85Q and to use your influence to persuade the DoE and MTA to take the steps necessary to provide all children in New York City with an appropriate learning environment, including one that is quiet enough not to harm their health or interfere with their ability to learn.

Conclusion

In conclusion, I thank you for your attention to environmental justice as an important social policy issue. I urge you to:

1) Fund and request research that analyzes environmental data on a fine-grained neighborhood by neighborhood level;
2) Support projects like *Mayahs Lot* that bring civic capacity and environmental awareness to schools; and
3) Support the students and parents at PS85Q and at other schools around the city by advocating for noise mitigation.

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[16] Study Excerpt Attached to this testimony.
[17] PS85Q has a Noise Problem, https://www.youtube.com/watch?v=fTcJy3j4sJg&feature=youtu.be.
[18] Tess McRae, PS85 Calls for an End to Train Noise, Queens Chronicle (Dec. 26th, 2013) http://www.qchron.com/editions/western/ps-calls-for-an-end-to-train-noise/article_24432a95-dcd2-553f-ae7d-1a56f2d6c77f.html.
[19] Cara Buckley, Parents Push to Quiet Roar from Trains Near Queens School, New York Times (Dec. 3, 2013) http://www.nytimes.com/2013/12/04/nyregion/parents-push-to-quiet-roar-from-trains-near-queens-school.html?_r=0.

AMERICAN LUNG ASSOCIATION®
IN NEW YORK

Testimony of Michael Seilback

Re: Oversight: Air Quality Impacts, Measures and Mitigation in Environmental Justice Communities

February 28, 2014

Thank you for taking the time for this hearing today. My name is Michael Seilback and I am the Vice President of Public Policy & Communications for the American Lung Association of the Northeast.

The American Lung Association celebrates our 110th anniversary this year. For half of our history we have fought for clean and healthy air. Healthy air is central to our mission, which is to save lives by improving lung health and preventing lung disease. We know that polluted air can shorten lives, and worsen lung diseases like asthma and chronic obstructive pulmonary disease and can even cause lung cancer.

Air pollution can harm anyone, even healthy adults, but for many, pollution can threaten their lives and leave them with long-term consequences. Children and teens; older adults; people who have chronic lung diseases, such as asthma; those who have cardiovascular disease and diabetes; and those with low incomes—all are more vulnerable. Children and adolescents are at risk of developing complications now that could follow them around the rest of their lives; lives that may be cut short from exposure to harmful pollutants. We need every step we can take to provide cleaner, healthier air for all of us.

The American Lung Association is committed to reducing the disproportionate health burdens borne by too many communities.

The American Lung Association's State of the Air report 2013 discussed environmental justice (EJ):

> The burden of air pollution is not evenly shared. Low-income populations and some racial and ethnic groups are among those who often face higher exposure to pollutants and who may experience greater responses to such pollution. Many studies have explored the differences in harm from air pollution to racial or ethnic groups and people who are in a low socioeconomic position, have less education, or live nearer to major sources,[76] including a workshop the American Lung Association held in 2001 that focused on urban air pollution and health inequities.[77]
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> Many studies have looked at differences in the impact on premature death. Results have varied widely, particularly for effects between racial groups. Some studies have found no differences among races,[78] while others found greater responsiveness for Whites and Hispanics, but not African Americans,[79] or for African Americans but not other races or ethnic groups.[80] Other researchers have found greater risk for African Americans from air toxics, including those pollutants that also come from traffic sources.[81]
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> Socioeconomic position has been more consistently associated with greater harm from air pollution. Recent studies show evidence of that link. Low socioeconomic status consistently increased the risk of premature death from fine particle pollution among 13.2 million Medicare recipients studied in the largest examination of particle pollution mortality nationwide.[82] In the 2008 study that found greater risk for premature death for African Americans, researchers also found greater risk for people living in areas with higher unemployment or higher use of public transportation.[83] A 2008 study of Washington, DC found that while poor air quality and worsened asthma went hand-in-hand in areas where Medicaid enrollment was high, the areas with the highest Medicaid enrollment did not always have the strongest association of high air pollution and asthma attacks.[84] However, two other recent studies in France have found no association with lower income and asthma attacks.[85]

Scientists have speculated that there are three broad reasons why disparities may exist. First, groups may face greater exposure to pollution because of factors ranging from racism to class bias to housing market dynamics and land costs. For example, pollution sources may be located near disadvantaged communities, increasing exposure to harmful pollutants. Second, low social position may make some groups more susceptible to health threats because of factors related to their disadvantage. Lack of access to health care, grocery stores and good jobs, poorer job opportunities, dirtier workplaces or higher traffic exposure are among the factors that could handicap groups and increase the risk of harm. Finally, existing health conditions, behaviors, or traits may predispose some groups to greater risk. For example, diabetics are among the groups most at risk from air pollutants, and the elderly, African Americans, Mexican Americans and people living near a central city have higher incidence of diabetes.[86]

Communities of color also may be more likely to live in counties with higher levels of pollution. In a 2011 analysis of the population and air quality reported in the American Lung Association's *State of the Air 2009* report, researchers found that non-Hispanic Blacks and Hispanics were more likely to live in counties that had worse problems with particle pollution. Non-Hispanic Blacks were also more likely to live in counties with worse ozone pollution. Income groups, by contrast, differed little in these exposures. However, since few rural counties have monitors, the primarily older, non-Hispanic white residents of those counties lack information about the air quality in their communities.[87]

Unemployed people, those with low income or low education and non-Hispanic Blacks were found to be more likely to live in areas with higher exposures to particle pollution in a 2012 study. However, the different racial/ethnic and income groups were breathing often very different kinds of particles; the different composition and structure of these particles may have different health impacts.[88]

Being in heavy traffic, or living near a road, may be even more dangerous than being in other places in a community. Growing evidence shows that the vehicle emissions coming directly from those highways may be higher than in the community as a whole, increasing the risk of harm to people who live or work near busy roads.

The number of people living "next to a busy road" may include 30 to 45 percent of the population in North America, according to the most recent review of the evidence. In January 2010, the Health Effects Institute published a major review of the evidence by a panel of expert scientists. The panel looked at over 700 studies from around the world, examining the health effects. They concluded that traffic pollution causes asthma attacks in children, and may cause a wide range of other effects including: the onset of childhood asthma, impaired lung function, premature death and death from cardiovascular diseases, and cardiovascular morbidity. The area most affected, they concluded, was roughly 0.2 mile to 0.3 mile (300 to 500 meters) from the highway.[89]

Children and teenagers are among the most vulnerable—though not the only ones at risk. A Danish study found that long-term exposure to traffic air pollution may increase the risk of developing chronic obstructive pulmonary disease (COPD). They found that those most at risk were people who already had asthma or diabetes.[90] Studies have found increased risk of premature death from living near a major highway or an urban road.[91] Another study found an increase in risk of heart attacks from being in traffic, whether driving or taking public

transportation.[92] Urban women in a Boston study experienced decreased lung function associated with traffic-related pollution.[93]

In New York City, we need to do a better job of obtaining localized neighborhood-level air quality data: we need to do a better job of making sure that environmental justice voices are at the decision-making table; and we need to continue working on our progress to reduce air pollutants. Some specific recommendations include:

Codify the Department of Health & Mental Hygiene's Community Air Survey: This landmark program involves the use of mobile air quality monitors which are stationed for short periods of time in various locations. The data that is collected has been used to help illustrate major air quality concerns include vehicle traffic and home heating oil. Its important to not only codify the program, but to expand it. We should ensure that EJ communities are being monitored and analyzed in a way that leads to healthier air for all of the five boroughs including EJ communities. We also need to ensure that EJ groups have a say in how this program is run. While this program has been very successful, it has lacked the open participation that EJ communities deserve to provide.

Encourage quicker retirement of old dirty heating fuel: New York City is in the early stages of transitioning from dirty bunker heating fuel to cleaner #2 home heating oil. We know that the sooner, the transition occurs, the sooner our air quality will improve.

Improve indoor air quality (IAQ): Major sources of indoor air quality problems include secondhand tobacco smoke; mold and rodents. New York City should expand the pilot mold remediation program and expand it to include as many buildings as possible. We should look to ensure that tenants are aware of their buildings smokefree policies and work to promote smokefree housing in all New York City residences including NYCHA properties.

Support state and federal efforts that work to prevent roll back of air quality initiatives: It is becoming increasingly common to see proposals from Albany and Washington, which aim to roll back the Clean Air Act and other state-level healthy air initiatives. We encourage the Council to use every tool they have available to help give support to our delegation's efforts to protect healthy air and reject roll back proposals. Additionally, we must support measures from Albany and Washington which give the EPA and the DEC additional ability to curb emissions from all pollution sources including (but not limited to) industry, power plants, and mobile sources.

Continue to push for innovative healthy air solutions: New York City has a long history of leading the way on air quality issues. We must do everything possible to work with green technology companies to bring the promise of renewable energy and cleaner transportation options to all communities across the city.

Thank you for the opportunity to talk to you about this important issue today.

For more information contact: Michael Seilback, Vice President, Public Policy & Communications for the American Lung Association of the Northeast, 631.415.0946 or mseilback@lungne.org.

Testimony Submitted by Rebecca Sanchez to NYC Council @ **Environmental Protection Oversight Hearing: Air Quality Impacts, Measures and Mitigation in Environmental Justice Communities – February 28, 2014**

Good Afternoon, my name is Rebecca Sanchez and I am an UPROSE member. I am here on behalf of UPROSE. Founded in 1964, UPROSE is Brooklyn's oldest Latino Community based organization. Our mission shifted in 1996 to organizing, advocacy and developing intergenerational, indigenous leadership through activism around a host of environmental and climate justice issues. We aim to ensure and heighten community awareness and involvement, develop participatory community planning practices, and promote sustainable development with justice and governmental accountability.

Sunset Park is the largest SMIA (Significant Maritime Industrial Area) in NYC. It is also a community with 130,000 people with the most vulnerable living amidst the environmental burdens.

Among the environmental burdens in our community, there is 1 waste transfer station, 1 marine transfer station, and 3 power plants yielding 957 MW in Sunset Park, the Gowanus Expressway with 200, 000 cars per day and 15, 000 trucks, brownfields and a lack of open space.

According to Lutheran Medical Center's Community Service Plan 2014-2017, Asthma is one of the top 5 health concerns, predominantly affecting low-income and population of color, in an area where 37% of the residents do not have health insurance

In order to reduce the vulnerability of our community, the Environmental Protection Committee should consider the following recommendations:

- **The cumulative impact of multiple sources of air pollution in environmental justice communities poses a huge challenge to public health.** Therefore, the City should analyze the cumulative impacts of air pollutants in neighborhoods with a disproportionate burden of major emitters, clusters of smaller sources of air pollution, and polluting truck traffic. In addition, the City should require Health Impact Assessments that document cumulative impacts on vulnerable populations and mitigate negative health impacts for any new major projects.
- **Extreme heat events associated with climate change are a major risk for those with chronic respiratory conditions.** The City should prioritize the needs of vulnerable communities by prioritizing mitigation efforts that reduce the disproportionate impacts of poor air quality during heat waves and high heat days; improving alert systems and outreach to vulnerable populations; and reducing the urban heat island effect.
- **Unnecessary truck traffic, congestion and pollution generated by thousands of waste trucks result in a disproportionate burden on the three communities that concentrate**

NYC's waste transfer stations: South Bronx, North Brooklyn, and Southeast Queens. Reducing the number of diesel truck trips in and out of these communities, and full implementation of the Solid Waste Management Plan (as well as implementing strategies for a cleaner truck fleet), will result in cleaner air for all New Yorkers.

- **The NYC Community Air Survey demonstrates how air quality monitoring can improve our understanding of air pollutants and inform policy decisions.** The City should build on the work begun by NYCCAS and strengthen citywide air quality monitoring by: codifying NYCCAS into law; increasing resources for additional air monitoring and improved neighborhood level data; targeting additional air quality monitors in environmental justice communities; funding year-round air quality monitoring; and ensuring community oversight of how and where air quality monitors are deployed.
- **Support community-based efforts to monitor local air quality, train local residents on how to collect and interpret air quality data, and implement mitigation measures.**
- **The impact of mold on indoor air quality and public health is a major concern in low-income communities burdened with poor housing stock.** After Superstorm Sandy, mold emerged as a critical post-disaster impact that requires special attention. The City should pass mold legislation that is modeled after previous legislation designed to address lead exposures.

Cleaner air will result in improved quality of life, reduced rates of Asthma and other chronic respiratory diseases, and better health outcomes for the most vulnerable communities -- particularly for low-income and communities of color:

Thank you for your time.

UPROSE

SUSTAINABLE SOUTH BRONX

Testimony from Angela Tovar, Director of Policy and Research, SSBX

My name is Angela Tovar; I am the Director of Policy and Research at Sustainable South Bronx, a nonprofit and environmental justice organization located on the Hunts Point Peninsula.
I want to begin by thanking Chairperson Richards and the Environmental Committee for the opportunity to testify. I am here to offer my opinion on the impact of air quality and how it can be measured and addressed in overburdened communities like the South Bronx.

The South Bronx has a long history of being overburdened with unfavorable land uses that have resulted in poor air quality and health and quality of life issues for community residents. It's well known that South Bronx residents suffer from overwhelmingly high rates of asthma. Asthma rates in the South Bronx are some of the highest in the country – eight times the national average. So are rates of other diseases and illnesses tied to air pollution. In Hunts Points alone, it is estimated that approximately 15,000 trucks pass through local streets on a daily basis many of which are going back and forth to the Food Distribution Center. The high concentration of waste transfer stations in the neighborhood contributes significantly to the challenges that residents. The South Bronx hosts 9 waste transfer stations and on a typical day, nearly 6,000 tons is hauled in and out of the community requiring about 1400 diesel truck trips. Even worse, because of the current configuration of the transportation network, trucks travel locally to enter the Peninsula meaning that they have to travel by schools, parks and senior centers along the way.

The issues that contribute to poor air quality move beyond diesel truck emissions. There are very few parks and green spaces that help mitigate poor air quality in the community. While there is 7,002 acres of park space in the Bronx, only 252 acres or 3.5% are in Council District Additionally community residents are largely impacted by emissions from our large scale buildings. We know that just 1 percent of all buildings in the city produce 86 percent of the total soot pollution -more than all the cars and trucks in New York City combined. Currently the South Bronx has 656 multi-family buildings that have yet to undergo a conversion from number 6 oil to a cleaner alternative.

I believe that there are plans that are both in motion and ideas proposed that will allow air quality mitigation to move forward. I believe that this begins with a strategy to address cumulative impacts of air pollution in environmental justice communities like the South Bronx. I believe the City should require Health Impact Assessments that analyze and document cumulative impacts on vulnerable populations and mitigate negative health impacts for any new major projects.

I also encourage the city to move forward with existing legislation and plans that alleviate truck traffic on local streets. The City must move forward with the full implementation of the solid waste management plan. It is critical that The City move forward each borough accountable for waste handling and a plan that utilizes marine and rail instead of relying on truck based trips. The next step is the passage of Capacity Reduction Legislation which would eliminate several hundred truck trips in the South Bronx every day. We would still handle more waste than most communities, but it would be a significant reduction. Finally the city must pass Intro 15, which supports recommendations to the area in and around the Sheridan expressway, which includes

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constructing ramps from the Bruckner expressway directly to Hunts Point which will get trucks off local streets.

I believe we can also ensure that Council and other leaders join community groups in prioritizing support particularly in our EJ communities for initiatives that if successful can have alleviate and address some of the impacts. These include program like the Hunts Point Clean Truck Program which aims to reduce emissions from hundreds of older trucks through the use of advanced vehicle technologies and cleaner fuels that are cost effective and better for the environment. And NYC Clean Heat which a program that seeks to improve air quality and eliminating heavy oil use and accelerating the adoption of the cleanest fuels.

Finally, I believe The City should Support community-based efforts to both monitor local air quality and become stewards of the local community. We need to train local residents on how to collect and interpret air quality data, and implement mitigation measures.

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To: NYC Council Committee on Environmental Protection

From: Eastern Queens Alliance, Inc.
PO Box 300818, Jamaica, NY 11540

Date: February 28, 2014

Topic: Oversight—Air Quality Impacts and Ways to Measure and Address them in NYC Environmental Justice Communities with Focus on JFK Airport

The Problem

The EQA's Platform looks to maximize the Quality of Life in Southeast Queens by promoting a safe, clean, healthy environment. We are calling for the establishment of a local environmental air quality monitoring program for the protection of the environment and the enforcement of environmental justice policies. This has been a target platform item for the last several years. Recently, the Alliance has held several public meetings as well as meetings with our elected officials regarding the proposed extension of Runway 4L/22R which will result in aircraft flying 100+ feet lower over our communities. At these meetings we presented and discussed airport related air and noise pollution.

The Eastern Queens Alliance is calling for monitoring and evaluating the potential environmental health hazards to the Southeast Queens communities associated with airport-related emissions and noise pollution. This entails performing local air and noise monitoring in the communities adjacent to JFK Airport for point source pollution along with analyzing the emission profile in our local communities. We believe that the collection of data on exposure and adverse health outcomes associated with emissions and noise pollution from operations at JFK airport, correlated with community health data on related health issues, particularly cardio-vascular diseases, asthma, diabetes, hearing impairment, ADD, and ADHD, will reveal that there is a significant correlation between air quality, noise pollution and the health of those residing in Southeast Queens. We are calling for the collection and analysis of data to assess the extent to which it is likely that the health of the community is being affected by its proximity to a major airport and its related operations and to determine effective ways to ameliorate those resultant harms and risks.

Demographics and Environmental Justice

Most of the Eastern Queens Alliance Communities lie immediately north of JFK airport with only Idlewild Park Preserve as a partial buffer. Primarily, these are communities of one and two family homes,

with some garden apartments in R3-1,R3-2 zones with commercial strips and some commercial overlays in Community Boards 13 and 12. It also includes two major homeless shelters, as well as a multitude of group homes. Interestingly, while some of the highest incomes in Queens are located in these communities, many of the lowest are also present, with the homeless, rental of basements, and a number of people renting out rooms to make ends meet. Some of the highest percentages of foreclosures are also found in these communities.

There are three major parks in study area—Idlewild Park Preserve, Brookville Park, and Springfield Park—all of which are a part of the Idlewild system with a brackish intertidal flow. Based on the 2000 US Census, the demographics of community immediately adjacent to the western boundary of JFK airport Springfield Gardens (zip 11413), NY is 2.7% White, 91.5% Black or African American/African-Caribbean and African, 0.3% American Indian or Native Alaskan, 0.6% Asian, 1.3% Other Single Race and 3.5% Two or more races, with 4.4% Hispanic or Latino. The median age is 35.6 with 6.0% under 5 years of age, 9.7 between 5 and 18 years of age and 10.4% over 65 years of age. These demographics are largely still in tact.

The proximity of communities in Southeast Queens to JFK Airport places them under the threat of airport-related pollution as well as the constant expansion of airport-related businesses. As it is, the neighborhood streets are overrun with diesel trucks going to and from airfreight establishments both within and outside of the airport, trying to avoid congestion on truck routes. The city recently sold off parcels of ecologically valuable land along Rockaway Boulevard for the siting of a police impound lot and a school bus parking lot. There is currently real consideration being given to the expansion of JFK Airport by an additional 400 Sq. Acres.

ENVIRONMENTAL HARMS AND RISKS

Air Pollution in the JFK Airshed

Kennedy International Airport is the second largest source of volatile organic compounds (VOCs) in New York City. LaGuardia was identified as a major source of NO_x. In addition to aircraft emissions, consider the food service and other airport- related industries that move into the surrounding community, bringing with them increased amounts of diesel fuel emissions from industry trucks. The ground service and ground access vehicles (e.g., passenger cars) serve as additional sources of air polluting fossil fuels,

The fact is that air travel and airports are here to stay. Air travel is expected to double nationally by the year 2017 and a number of airports, JFK Airport included, have plans to expand runways to accommodate the increased demands. For example, the EA for the proposed 4L/22R Runway Extension Project talks about the need to make it possible for the A380 to take off and land at JFK. Many see such expansion as desirable for obvious financial reasons. However, for the residents of the surrounding community, it is critical that the posed risks be identified and that a program of mitigation be developed and pursued..

Consultants from EOHSI of Rutgers University with whom we work tell us:

"Emissions from airports are primarily a combination of mobile source combustion emissions and fugitive emissions from fueling activities, though point sources from power facilities and maintenance operations at larger airports exist. Emissions from operation of airports include emissions from a variety of fuels, jet engines, diesel engines from ground service equipment (GSE), and gasoline and diesel engines from ground access vehicles (GAV) as well as stationary sources that support the operation of the airport such as power generation, HVAC systems, engine test stands, parking lots, fuel storage and commercial enterprises within terminals or servicing the travelers. Unlike other emissions sources within urban settings which are declining due to national, state and local control programs, the ***emissions from airports are increasing due to both the growth in air traffic and lack of technology-forcing control programs (NESCAUM 2003). For example, emissions of nitrogen oxides (NOx) from electrical utilities, industry and on-road vehicles either decreased or grew modestly (<3%) from 1970 to 1998, while emissions from aircraft grew by 133% and further growth is predicted over the next decade. Pollutants originating from emissions associated with operations from airports include primary emissions from fuels and combustion products and secondary pollutants from reactions that occur in the atmosphere. Pollutants of concern include criteria pollutants (particulate matter -PM2.5 and PM10, nitrogen dioxide, sulfur dioxide, carbon monoxide, lead and precursors of ozone) and Hazardous Air Pollutants (HAPs) (volatile organic compounds, carbonyls and metals on particulate matter – often on fine and ultrafine particles that penetrate deep into the lungs).***

Emissions from jet engines vary with engine speed, being the highest when using maximum power during take-off but is also important during idling or while the plane taxi's (Moussiopoulos et al 1997, Pison et al 2004). ***These emissions will be released at or near ground level so will be dispersed to the nearby community and subsequently added to the general background urban air. Releases include unsaturated, small chain hydrocarbons that can react with ozone and nitrogen oxides to form carbonyls that are respiratory irritants.***

Two recent studies examined the potential exposure and health impacts of emissions to LaGuardia Airport, NY (Lin et al 2008, Cohen et al 2008),which handles approximately one half the number of passengers that fly into and out off JFK and considerably less cargo than JFK (30,000 metric tons for LaGuardia vs 1.6 million metric tons for JFK). Increased rates of hospital admissions for respiratory conditions were identified for residents living within 5 miles of LaGuardia, Queens and Rochester Airport, Rochester compared to residents living more than 5 miles from the airports... The region that an airport impacts air quality can differ from the region affected by noise as the latter is more dependent upon the flight path that aircraft take during take-off and landing while ***air emissions from an airport will disperse in all directions, dependent upon the wind direction and speed in addition to emission directly from aircraft.*** *A clear increase in noise (from 16 to 35 decibels) was measured in homes near LaGuardia Airport, and the two homes near JFK airport that were in the study. ...*

JFK Airport is larger source of pollutants than the airports in the New York area or examined in other studies (REF). ***Thus, conducting a comprehensive sampling program focused on the community adjacent to the airport and including constituents specific to emissions from jet fuel activities, in addition to characterizing the PM2.5 mass loading which has been shown to be linked in to adverse respiratory and cardiovascular outcomes in urban settings (REF), could provide information documenting that the community surrounding JFK airport has increased exposure to air pollutants from airport emissions that are associated with adverse health outcomes. Further, these data can then help identify what steps might be taken to reduce those emissions and the resulting exposures."***

In summary, carbon dioxides, volatile organic compounds (VOCs) and nitrogen oxides (NO_x) the air pollutants emitted by aircraft and airport-related industry—release a variety of toxic chemicals such as benzene and formaldehyde. A 1993 EPA health risk assessment concluded that aircraft engines were responsible for approximately 10.5 percent of the cancer cases within a 16-square-mile area surrounding Chicago's Midway airport. The National Resources Defense Council warns that "the same conclusion might apply to people living immediately adjacent to airports all over the country." Recent studies support these findings.

In the June 18, 2012, Volume 77, No. 117 of the Federal Register, the EPA extensively details the health concerns associated with exposure to airport-related air pollution. They tell us that:

- *NOX emissions from aircraft and other mobile and stationary sources contribute to the formation of ozone. In addition, NOX emissions at low altitude also react in the atmosphere to form secondary fine particulate matter (PM2.5), particularly ammonium nitrate.*

- *Ozone and its precursors can be transported hundreds of miles downwind from precursor emissions, resulting in elevated ozone levels even in areas with low local VOC or NOX emissions.*

- *NOX emitted by aircraft engines can react in the atmosphere to form nitrate, a component of PM2.5. Particulate matter ... can be principally characterized as discrete particles ... small enough to penetrate to the thoracic region (including the tracheobronchial and alveolar regions) of the respiratory tract (referred to as thoracic particles). ... Fine particles are produced primarily by combustion processes and by transformations of gaseous emissions (e.g., SOX, NOX and VOC) in the atmosphere. ... These particles can remain in the atmosphere for days to weeks and travel hundreds to thousands of kilometers.*

- *Nitrogen dioxide (NO2) ... can dissolve in water droplets and further oxidize to form nitric acid which reacts with ammonia to form nitrates, an important component of ambient PM. NOX and VOC are the two major precursors of ozone.*

- *People who are more susceptible to effects associated with exposure to ozone can include children, the elderly, and individuals with respiratory disease such as asthma. Those with greater exposures to ozone, for instance due to time spent outdoors (e.g., children and outdoor workers), are of particular concern. Ozone can irritate the respiratory system, causing coughing, throat irritation, and breathing discomfort. Ozone can reduce lung function and cause pulmonary inflammation in healthy individuals. Ozone can also aggravate asthma, leading to more asthma attacks that require medical attention and/or the use of additional medication. Thus, ambient ozone may cause both healthy and asthmatic individuals to limit their outdoor activities. In addition, there is suggestive evidence of a contribution of ozone to cardiovascular-related morbidity and highly suggestive evidence that short-term ozone exposure directly or indirectly contributes to non-accidental and cardiopulmonary-related mortality,*

- *Scientific studies show ambient PM is associated with a series of adverse health effects. ... health effects associated with short-term exposures (hours to days) to ambient PM2.5 include mortality, cardiovascular effects, such as altered vasomotor function and myocardial ischemia, and hospital admissions and emergency department visits for ischemic heart disease and congestive heart failure, and respiratory effects, such as exacerbation of asthma symptoms in children and hospital admissions and emergency department visits for chronic obstructive pulmonary disease and respiratory infections. ...long-term exposure (months to years) to PM2.5 is associated with the development/progression of cardiovascular disease, premature mortality, and respiratory effects, including reduced lung function growth in children, increased respiratory symptoms, and asthma development.*

- *The EPA has concluded that the findings of epidemiologic, controlled human exposure, and animal toxicological studies provide evidence that is sufficient to infer a likely causal relationship between respiratory effects and short-term NO2 exposure. The ISA concludes that the strongest evidence for such a relationship comes from epidemiologic studies of respiratory effects including symptoms, emergency department visits, and hospital admissions.*

Up to 90 percent of the hydrocarbon and carbon monoxide emissions from aircraft occur when planes idle and taxi on the runway. Idling and taxiing airplanes can emit hundreds of tons of VOCs and NO_x annually; and a December, 1998 article by David Holzman identified John F. Kennedy International Airport as the second largest source of volatile organic compounds (VOCs) in New York City. LaGuardia was identified as a major source of NO_x.

In addition to aircraft emissions, consider the food service and other airport- related industries that move into the surrounding community, bringing with them increased amounts of diesel fuel emissions from industry trucks. The ground service and ground access vehicles (e.g., passenger cars) serve as additional sources of air polluting fossil fuels.

As industry develops and airports expand, our wetlands and other green spaces are being paved over to build facilities and parking. For example, an expanded JFK airport will result in 400 sq acres wetland destruction with landfill. Recently, the PANYNJ, in its presentation of a revised EA for the 4L/22R Runway Extension has called for the removal of over 312 trees that they are labeling as aviational hazards. Without grass and vegetation, the resulting rainwater runoff causes increased flooding to the streets and homes of a community that already suffers from high water tables. The paving of our green spaces further compounds our exposure to the environmental and health hazards brought on by the airport industry, since plants absorb carbon dioxide, a major pollutant introduced by the airport industry.

Today, the NYC Economic Development Corporation (EDC) and the City Administration Services own tracts of land just north of JFK airport, immediately adjacent to Thurstin Basin and Idlewild Park that seem to be earmarked for industrial uses instead of open space, parkland and recreational waterfront. Furthermore, the following other harms and risks exist in the communities adjacent to JFK Airport

Noise Pollution

Residents within our community can testify to the disruption caused by air traffic at all hours of the day and night. In the course of numerous arrivals and departures, airplanes fly in uncomfortably close proximity to our rooftops, often shaking our homes and making conversation virtually impossible. Studies show that the noise levels associated with airplanes is a potential source of health problems for communities within the poison circle. Links between aircraft noise and high blood pressure levels are

particularly pronounced. Researchers have calculated that for every extra 10 decibels of aircraft noise, the risk of hypertension is increased by 14%.

Aircraft noise at night is especially disturbing, and can result in sleep interruption. Residents report being awakened in terror in the middle of the night from the loud noise of low-flying aircraft. Often, it is difficult to return to sleep. When individuals return to sleep, they may be disrupted again by air traffic. Sleep deprivation can result; and sleep deprivation has been linked to high blood pressure, a major cause of stroke and heart attack. In addition to high blood pressure, studies show that sleep-deprived people tend to develop problems regulating their blood sugar, which may put them at increased risk for diabetes.

In children, chronic aircraft noise exposure is not only associated with possible increased blood pressure, it can also impair reading comprehension and long-term memory. Could this explain, at least in part, some of the reasons for the poor performance of many of our students on math and English language arts standardized tests?

Water Pollution

Emissions from aircraft and airport-related industry are major sources of water pollution, which can be hazardous to the environment and physical health of surrounding communities. The deposition of particulate matter from emissions can be found in our waters, on our soil and on our vegetation. That which is deposited on soil also ends up in our waters after rain events or watering.

Dioxins from spilled jet fuel, di-ethelyne glycol from de-icing fluids and dissolved jet exhaust particulates commonly flood airport tarmacs. These toxic chemicals seep into the ground, streams and surrounding wetlands, depleting the water of oxygen, placing our local plant and animal life at risk, and increasing the likelihood that our saltwater streams will become unhealthy, stagnant pools that harbor mosquitoes.

Finally, proposed projects for the area only serve to increase air and water pollution, keeping in mind that the communities adjacent to JFK are already well within the airport's poison circle and wetlands and ground water are already being polluted by surface runoff.

These environmental issues also raise serious questions of environmental justice. It appears that other communities in the vicinity of the airport, are not contending with many of the issues that the largely African-American/African-Caribbean, Southeast Queens Communities are.

To address these problems, the Eastern Queens Alliance has advocated for:

1. Local monitoring of the air quality and airport-generated noise within communities immediately adjacent to JFK airport for point source pollution. Right now the nearest monitors are in Northeastern Queens. There are only two end-of-runway noise monitors in our Southeast Queens communities to assess noise pollution
2. The requirement of macro-environmental impact statements that address the total, cumulative impact of all projects planned within a community within a five or ten year window to address the issue of multiple harms and risks coming from multiple sources.
3. A fair share of flight patterns in and out of JFK Airport
4. The incorporation of open landscaped areas to serve as buffers and environmental "mitigators" with all industrial projects within close proximity to residential areas.
5. The preservation of its parks and open spaces, with an emphasis on Idlewild Park Preserve and ecologically sensitive adjacent areas immediately north of JFK Airport.

Submitted by: Barbara E. Brown

Barbara E. Brown, Chairperson
Eastern Queens Alliance, Inc.

Frederica Perera DrPH, PhD
Professor Mailman School of Public Health, Columbia University
Director of the Columbia Center for Children's Environmental Health
Testimony before the
New York City Council Committee on Environmental Protection
February 28, 2014

Introduction

I am Dr. Frederica Perera, Director of the Columbia Center for Children's Environmental Health and Professor of Environmental Health Sciences at the Columbia University Mailman School of Public Health in Manhattan. The Center was founded in 1998 with joint funding from the National Institute of Environmental Health Sciences and the US EPA with the mission to improve the health and development of children by identifying environmental toxicants that increase their risk of disease. In 1998 we knew that there was substantial human exposure to environmental toxicants, and rates of neurodevelopmental disorders and chronic illnesses, such as childhood asthma and obesity, were on the rise. There was mounting evidence of socio-economic and ethnic disparities in both exposures and rates of disease. While it was clear that these diseases had multiple causes, environmental exposures were known or suspected to contribute. It had also become evident over the previous decades that the placenta does not adequately protect the fetus from environmental toxicants and that, due to their rapid development and immature defense systems, the developing fetus, infant and child are especially susceptible to environmental toxicants.[1] Moreover, there was emerging evidence that the *in utero* environment could help shape health over the lifecourse. This knowledge and the fact that, unlike genetic susceptibility factors, environmental exposures are by nature preventable, prompted us to focus on the relation between early-life exposures to common environmental pollutants and neurodevelopmental disorders, asthma, indicators of cancer risk, and more recently, obesity and metabolic disorders in children. In my testimony, I will focus on our Center's findings which link air pollution exposure to adverse health and developmental effects in childhood, many of which may have lasting impacts.

Center Research on Air Pollution Health Impacts

The Center has conducted studies of cohorts of mothers and children followed from pregnancy. Our largest study began in 1998 with a cohort of African American and Dominican women and children who live in Northern Manhattan and the South Bronx. We enrolled pregnant mothers and continue to follow-up with the children, many of whom are reaching adolescence. We have conducted repeat interviews and personal and home air monitoring to assess exposures to air pollution and other toxicants during pregnancy and childhood. All of the mothers in our study had measurable exposure to polycyclic aromatic hydrocarbons (PAH), a class of air pollutants emitted by motor vehicles, residential fuel burning, and other combustion sources. We have also measured biomarkers of exposure, preclinical effect, and susceptibility in small samples of blood and urine collected from the mothers and children over the course of the study. And we have conducted clinical assessments of children's development and health at birth and as they grew older.

Today I will share with you the results of the Center's investigations which demonstrate the health impacts in children from air pollution and the need for protective measures. Throughout our fifteen years of research, we have linked air pollutants with a number of health outcomes, including asthma, developmental delay, behavioral problems and obesity. These chronic conditions have lasting effects

which can impact both current and future health and wellbeing. And they impose large economic costs on families and society.

One of our health outcomes of interest is asthma, a chronic disease which has disproportionately high rates in Northern Manhattan and the South Bronx as well as other disadvantaged communities in the city. Our Center's researchers have observed that high air pollution exposure is associated with a number of respiratory and allergic disease outcomes, including asthma incidence, ER visits, wheeze, and allergic sensitization. Children with high exposure to pyrene, a major type of PAH, during the prenatal and early childhood periods had higher odds of wheeze, ER visits and current asthma at ages 5-6 years.[2] Moreover, childhood exposure to fine particulate matter ($PM_{2.5}$) was a significant predictor of new wheeze at ages five and seven years.[3]

Center researchers have utilized geographic information systems (GIS) to explore impacts of neighborhood sources of air pollution on health. These analyses found that living close to an area with high density of traffic, four-way intersections, highways and commercial buildings is associated significantly with respiratory problems in our cohort.[4] Furthermore, neighborhoods will high rates of asthma not only had high densities of truck routes, but burned low-grade, "dirty" heating oil than neighborhoods with lower asthma rates. We found that PAH and other air pollutants penetrate readily into the indoor air. Levels of black carbon (coming from sources like diesel trucks and oil furnaces) were high in homes of children with asthma.[5]

In addition to these effects of air pollution on asthma, our research has linked developmental delay and obesity with exposure to air pollutants. Prenatal PAH exposure is associated with anxiety, depression, and attention problems in young children. The more PAH-DNA adducts found in the newborns' cord blood (a biological marker of exposure), increased the likelihood of the child having symptoms of attention problems and anxiety/depression.[6,7] Attention and behavioral problems are known to negatively impact academic success.

Further, children of women exposed to high levels of PAH during pregnancy were 80% more likely to be obese at age 5, and more than twice as likely to be obese at age 7, compared with children of mothers with lower levels of exposure. The 7-year-olds whose mothers were in the highest exposure group had, on average, 2.4 lbs. more fat mass than children of mothers with the least exposure.[8]

It is important to note that mounting evidence points to interactions between environmental pollutants, and between pollutants and stress due to poverty, leading to magnified effects compared to exposure to just one factor. This issue is particularly relevant to low-income communities of color ("environmental justice" communities) where multiple toxic exposures routinely co-occur along with high levels of psychosocial stress. We found that combined exposure to PAH and cockroach allergen in the home predicted cockroach sensitization at the age of 5-7 years most strongly among children with high prenatal PAH levels.[9] Additionally, combined prenatal exposure to airborne PAH and postnatal secondhand smoke resulted in increased likelihood of respiratory and asthma-like symptoms at five to six years of age.[10] There is also evidence from our research that combined exposure to pollutants and material hardship results in greater negative impacts on children's development.[11]

Conclusion

The evidence from our Center's research right here in New York City indicates that air pollution poses serious risks to the health and development of children, especially when experienced prenatally and in the early years-during these periods of greatest susceptibility. this evidence, along with that from

research by others, warrants more stringent measures to reduce air pollution. Reducing air pollution through a child-centered preventive policy would benefit every resident in New York City but it would be particularly impactful for "environmental justice" communities.

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Testimony on air quality impacts and ways to measure and address them in NYC environmental justice communities

Presented on February 28, 2014

Thank you for the opportunity to provide testimony today. My name is Maya Pinto and I am a Senior Researcher and Policy Analyst at ALIGN. ALIGN is a long-term alliance of worker and community organizations united for a just and sustainable New York.

Firstly, I would like to commend Chairperson Richards and members of the Environmental Protection Committee for calling this hearing to shine a light on air quality issues affecting New York City's environmental justice communities.

I will focus my comments on the negative air quality impacts of the commercial waste management system on the city, especially on low-income communities and communities of color, and on the opportunity to dramatically reduce these impacts by transitioning to a franchise system of waste collection for which ALIGN and our coalition partners in the Transform Don't Trash NYC coalition are currently advocating.

New York City's businesses generate over 4 million tons of solid waste each year, and the system in place to handle that waste is highly polluting, inefficient, and inequitable. While the city's residential waste is handled by a relatively rational system that utilizes clean trucks and is moving towards borough equity, New York City's commercial waste collection industry is a "Wild West" lacking adequate regulatory oversight. While a handful of carters struggle to maintain high environmental standards, hundreds of companies deploy over 4,000 dirty trucks to collect waste along crisscrossing routes, emitting diesel pollution that damages public health. A single block can be serviced by up to 10 different carters. The vast majority of waste is transported by heavy truck to and from waste transfer stations in a handful of low-income communities and communities of color in North Brooklyn, the South Bronx, and Southeast Queens, which suffer negative health impacts as a result—these communities suffer elevated asthma rates up to five times the city's average rate.

Diesel pollution causes over 1,100 premature deaths, 2,200 non-fatal heart attacks, and almost 40,000 asthma attacks in New York State each year. Diesel pollution poses a three times greater cancer risk than all other 181 EPA-tracked air toxins combined.

Furthermore, diesel-burning waste trucks emit particulate matter, which includes black carbon, a global warming agent 2,000 times more potent over a 20-year period than carbon dioxide. Half of the black carbon in the U.S. is emitted by diesel fuel

engines.

Working with many of the groups in this room, the City took a significant step toward addressing the gross inequity in the solid waste management system by passing the 2006 Solid Waste Management Plan (SWMP). When fully implemented, the SWMP will more equitably distribute waste transfer stations and replace long-haul truck transport of solid waste with rail and barge transport to reduce diesel emissions by millions of metric tons. And the City should be commended for recent clean truck legislation that places stricter emissions standards on commercial waste trucks.

But the City can and must do more. The clean waste truck legislation will not eliminate overlapping truck routes and reduce the number of commercial waste trucks on the road. No enacted City policy currently calls for an enforceable commercial recycling and composting targets that will reduce the amount of waste being sent to overburdened communities.

We urge the Environmental Protection committee to support full implementation of the SWMP, capacity reduction legislation that will reduce the amount of waste sent to the overburdened communities of North Brooklyn, South Bronx, and Southeast Queens, and to support Transform Don't Trash NYC's call for a commercial waste collection franchise system that would accomplish the following:

- Establish a series of franchise zones throughout the city that would each be serviced by a single hauler, eliminating overlapping truck routes, and cutting millions of excess waste truck miles travelled and diesel emissions; and,
- Increase commercial recycling rates, currently abysmally low at 16 to 26%, by establishing an enforceable recycling target, which would reduce the amount of waste going to waste transfer stations in overburdened communities.

Thank you and we look forward to working productively with the Environmental Protection Committee, Council, and administration to improve air quality and build an environmentally just solid waste management system in New York City.

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FOR THE RECORD

Testimony of Bertha Lewis
President

before

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

Oversight - Air Quality Impacts and Ways to Measure and Address them in NYC Environmental Justice Communities

February 28, 2014

Good afternoon. My name is Bertha Lewis. I am the President of The Black Institute.

The mission of The Black Institute is to shape intellectual discourse and dialogue to impact public policy uniquely from a Black perspective (a perspective which includes all people of color in the United States and throughout the Diaspora). The Black Institute (TBI) is an "Action Tank" – A think tank that takes action. By imploring a three-part strategy: Knowledge (research, data gathering, polling and academic partnerships); Leadership (civic education, training and development); and Community (ground organizing and issue based campaigns), TBI changes the direction of public debate, trains and educates new leadership and develops initiatives to build wealth, build power and deliver justice to Black people and people of color. Our four areas of focus are Economic Fairness, Education, *Environmental Justice*, and Immigration.

I want to thank Chair Donovan Richards and the Members of the Committee on Environmental Protection for holding this oversight hearing on Air Quality Impacts and Ways to Measure and Address them in NYC Environmental Justice Communities.

My advocacy on environmental justice issues spans decades. My previous organization ACORN was the lead plaintiff in a lawsuit against the Bloomberg Administration's Solid Waste Management Plan (SWMP), in great part, due to its environmental justice impacts.

While some have vocally proclaimed that SWMP will help correct a century or more of environmental injustice, the reality is that it attempts to shift the burden to another large population of black and brown people. That is why I have again focused my current organization, TBI, on the SWMP and why I am calling for a new, modern solid waste management plan that will actually reduce pollution in communities of color.

MTSs DO NOT belong in ANY residential neighborhood ANYWHERE in the City. In fact, regulations exist today, that prohibit MTSs from being built close to public housing, parks, playgrounds and schools. Unfortunately, the Bloomberg Administration created a loophole in order to avoid having the one of these MTS not comply with these laws. I urge you to read the Talking Trash Report, which explains the flaws in Bloomberg's Solid Waste Management Plan and proposes modern, progressive solutions that will fairly address the sanitation burdens in our City.

2 Simple Ideas to Improve Air Quality in Environmental Justice Communities

1. Cleaning Up Commercial Garbage Trucks

Much has changed in the air pollution world since the SWMP was approved in 2006. Federal rules have come into effect that require new truck engines to emit 90% less particulate matter (PM) than pre-2007 engines. Today, highly effective diesel particulate filters (DPFs) that enable diesel engines to meet this goal are standard equipment on new truck engines. A New York City local law accelerated the adoption of this technology in the DSNY fleet, but not in the fleet of private trucks that collect and transport the City's commercial waste.

An immediate and key short-term objective that the Committee can take is to urge Mayor de Blasio to make the cleanup of the private trucks that carry commercial waste. Unlike the 97% of DSNY trucks that are equipped with DPFs (the other 3% operate on Compressed Natural Gas (CNG) the commercial garbage trucks are older and 90% of them pre-date 2007. As a result, they are not equipped with particulate filters and are subsequently responsible for 93% of the overall pollution from solid waste removal in NYC.

At the end of 2013, the City adopted Local Law 145 that requires private trucks to reduce emissions by using the best available emission-control technologies by 2020. This will require the use of particulate filters or comparably effective technologies. The emissions benefits of this step will be dramatic. If Local Law 145 is implemented as written, fleet-wide particulate emissions will drop by 70%, compared to today's baseline of dirty trucks. This will reduce pollution in every neighborhood that produces or receives commercial waste in the City, including the low-income communities and communities of color that house many of the transfer stations today.

Based on a DSNY estimate, at a cost of $20,000 per truck, the overall cost of retrofitting the older, dirtier trucks with DPFs would be $77.4 million. Providing low-cost financing (rather than a direct subsidy) can get this job done. In fact, this approach was successfully used by the Port Authority of New York and New Jersey to accelerate the cleanup of dirty trucks at the Ports of Newark and Elizabeth, and is currently being used by the City at the Hunts Point market.

2. Streamlining Commercial Waste Truck Routes

Unfortunately, cleaning up private trucks that carry commercial waste will not eliminate the concerns of communities that live with trucks rumbling through their neighborhoods. Unlike the City's system of residential waste removal, New York's commercial waste removal is an uncoordinated array of carting companies and routes, where a single block with five restaurants could have five different haulers, each with its own truck, picking up waste nightly and taking it to five different transfer stations. To minimize the impact of collecting the City's commercial waste, truck routes through residential neighborhoods should be limited and streamlined.

These two proposals will provide benefits to all New Yorkers; especially the communities that currently house the City's transfer stations and truck routes.

I again want to thank Chair Richards and the Committee on Environmental Protection for holding this hearing. I look forward working with you to create environmental policies that successfully address air quality issues in environmental justice communities.

Testimony of Kirsten Feldman
Coalition Partner
Pledge 2 Protect
before
The Council of the City of New York
Committee on Environmental Protection

Oversight - Air Quality Impacts and Ways to Measure and Address them in NYC Environmental Justice Communities

February 28, 2014

Good afternoon. My name is Kirsten Feldman. I am on the Board of Asphalt Green and two environmental organizations. My Jamaican grandmother lived in Brooklyn, but I live in Manhattan.

I initially believed that the SWMP and the East 91st Street Marine Transfer Station would improve the health of children throughout the City. But I have learned that this premise is totally false and ...worse, that a new group of vulnerable children will be at risk. What are we doing....and why?

Asphalt Green is a non-profit recreation facility that serves 34,000 children -- 52% are children of color who receive free services. They live primarily in East Harlem, but also in Brooklyn, the Bronx and Queens. We are the PE department and after school program for these public school children. We are also neighbors with two NYCHA housing developments that have 5,700 residents, including 1,600 children...this would be the largest public housing population and the largest group of children of color near any transfer station in all 5 boroughs. A significant decline in our fee paying outdoor day camp enrollment would reduce the number of public school children we can serve by over 12,000. What are we doing...and why?

In our environmental study we learned 3 new things:

1) Tugboats are now much dirtier then trucks. There will be toxic tugboats fumes along the waterfront communities of Queens, Brooklyn and Staten Island as tugboats go up and down the narrow East River moving barges.

2) Air pollution at our site will be 4x more then the City disclosed...4x more!; and

3) Commercial garbage truck traffic will NOT go down in overburdened neighborhoods.

But yet ....a new population of children will be harmed. What are we doing...and why?

The entrance ramp to the MTS is within ELEVEN feet of our front door and cuts directly through the sidewalk used by the children entering Asphalt Green. There is NO other place in NYC where 2 million visits per year intermingle with hundreds of garbage trucks, fuel tankers trucks, and emergency vehicles every day. We fear that it will be a matter of WHEN... NOT IF a child is injured or killed at Asphalt Green.

I have personally visited every single transfer station in Brooklyn and Queens and there is NOT A SINGLE ONE next to a playground of our size...or any size. What are we doing ...and why?

City regulations prohibit private transfer stations from locating within 400 feet of public housing, schools, playgrounds and parks for important reasons. Why is the City exempting itself from this common sense rule?

Given its proximity to the FDR, Yorkville is already one of only four remaining sulphur dioxide pollution hotspots that exist in our City. Adding an MTS at E91st will only make an unfortunate situation worse.

Chairman Donovan, we invite you and all members of this Committee to come and tour our facility and see our programs in action. It's the moral obligation of our City's leaders to protect the health and safety of children of ALL races and ALL boroughs. We simply believe that a solution that involves harming more children is reckless and irresponsible..... it is not a solution at all. New York can and must find a better way.

Ask yourselves…What are we doing….and why?

Thank You.

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Public Health Impacts of Airports

Citation and Abstract	Notes	Implications to EQA studies
Fay JA, Heywood JB, Linden LH. Jet aircraft air pollutant production and dispersion. *AIAA J.* 1971;9(5):841-850. In this paper two aspects of pollution from jet engines are considered in detail. Firstly, it is shown that at or near full load, the most important air pollutants are nitric oxide and soot, and the production processes of these two pollutants are then discussed. A kinetic analysis shows that nitric oxide is formed mainly in the combustor primary zone, in regions of the flow where the equivalence ratio is greater than 0.8, and that freezing occurs as the gas is diluted and cooled in the secondary zone. Calculated results for nitric oxide concentrations in the combustion products are presented and compared with existing experimental data. The mechanisms important in the formation of carbon in the fuel-rich regions of the primary zone are received. The oxidation of this carbon in the remainder of the combustor is then considered, and the oxidation rates attainable within the combustor are computed from existing rate data. Secondly, the dispersion of the exhaust plume in the atmosphere is analyzed,	It is perceived that nitric oxide and soot are the most important air pollutants from jet engines.	Nitric oxide rapidly oxidizes in air to form nitrogen dioxide, which is a major air pollutant. Long term-exposure to pollution containing soot increases the risk of coronary heart disease, respiratory conditions and other adverse conditions. **test for particulate matter and nitrogen dioxide.* **check prevalence of coronary heart diseases in Southeast Queens and/or incidences and admission rates of similar conditions in Southeast Queens.*

the two effects considered being the entrainment of surrounding air due to turbulent motion of the jet and the motion induced by the buoyancy of the trail. For short times, mixing proceeds as in ordinary wake; for longer times, mixing is dominating by motion induced by buoyancy.		
Schlenker W, Walker WR. *Airports, air pollution, and contemporaneous health.* 2011. Network delays originating from large airports in the Eastern United States increase runway congestion in California, which in turn increases daily pollution levels around California airports. Airports are some of the largest sources of air pollution in California, and we use the daily variation in pollution that originates several thousand miles away to estimate the contemporaneous health effects of pollution as well as the external health cost of airport congestion. We find that daily variation in airport congestion significantly impacts the health of local residents, and this effect is largely driven by carbon monoxide (CO) exposure. Our estimates suggest that airport-driven CO exposure increases hospitalization rates for asthma, respiratory, and heart related emergency room admissions that are an order of magnitude larger than conventional CO dose-response estimates: A one standard deviation increase in daily pollution levels leads to an additional $1 million in	It is perceived that airports are some of the largest sources of air pollution in California. The authors have the belief that recurrent airport congestion significantly impacts the health of local residents as a result of elevated carbon monoxide exposure and this contemporaneously increases hospitalization rates for asthma, respiratory and heart related conditions.	**measure levels of carbon monoxide and check for prevalence and hospital admission rates for asthma, respiratory and heart related conditions.*

hospitalization costs for respiratory and heart related admissions for the 6 million individuals living within 10km (6.2 miles) of the 12 largest airports in California. The health effects are largest for infants and elderly, but we also observe significant changes in the health of the broader adult population. Importantly, these health effects occur at levels of CO exposure far below existing EPA mandates, and our results suggest there may be sizable morbidity benefits from lowering the existing CO standard. Lastly, we contribute to the growing literature which suggests that transportation congestion has significant external cost beyond idle travel time		
Passchier W, Knottnerus A, Albering H, Walda I. Public health impact of large airports. *Rev Environ Health.* 2000;15(1-2):83-96. Large airports with the related infrastructure, businesses and industrial activities affect the health of the population living, travelling and working in the surroundings of or at the airport. The employment and contributions to economy from the airport and related operations are expected to have a beneficial effect, which, however, is difficult to quantify. More pertinent data are available on the largely negative, health effects of environmental factors, such as	The authors identified that there is a potential problem of air, noise and soil pollution, accident risk, and landscape changes caused by the aviation system, but comprehensive assessments of the cumulative impacts are not available.	**Contrast results of air samples taken in Southeast Queens with air samples from other parts of the New York City may be a preliminary step to take in quantifying and identifying air pollution.*

air and soil pollution, noise, accident risk, and landscape changes. Information on the concurrent and cumulative impact of these factors is lacking, but is of primary relevance for public health policy. A committee of the Health Council of the Netherlands recently reviewed the data on the health impact of large airports. It was concluded that, generally, integrated health assessments are not available. Such assessment, as part of sustainable mobility policy, should accompany the further development of the global aviation system.		
Hu S, Fruin S, Kozawa K, Mara S, Winer AM, Paulson SE. Aircraft emission impacts in a neighborhood adjacent to a general aviation airport in southern california. *Environ Sci Technol.* 2009;43(21):8039-8045. Real time air pollutant concentrations were measured downwind of Santa Monica Airport (SMA), using an electric vehicle mobile platform equipped with fast response instruments in spring and summer of 2008. SMA is a general aviation airport operated for private aircraft and corporate jets in Los Angeles County, California. An impact area of elevated ultrafine particle (UFP) concentrations was observed extending beyond 660 m downwind and 250 m perpendicular to the wind on the downwind side of SMA.	Elevated levels of ultrafine particles were observed around Santa Monica Airport and it is noted that elevated levels of NOx (nitric oxides and nitrogen dioxide), VOC (volatile organic compounds), CO2 (carbon dioxide) and CO (carbon monoxide) have been reported to be around airports.	**test for NOx, VOC, CO2 and CO*

Aircraft operations resulted in average UFP concentrations elevated by factors of 10 and 2.5 at 100 and 660 m downwind, respectively, over background levels. The long downwind impact distance (i.e., compared to nearby freeways at the same time of day) is likely primarily due to the large volumes of aircraft emissions containing higher initial concentrations of UFP than on-road vehicles. Aircraft did not appreciably elevate average levels of black carbon (BC), particle-bound polycyclic aromatic hydrocarbons (PB-PAH), although spikes in concentration of these pollutants were observed associated with jet takeoffs. Jet departures resulted in peak 60-s average concentrations of up to 2.2×10^6 cm^{-3}, 440 ng m^{-3}, and 30 µg m^{-3} for UFP, PB-PAH, and BC, respectively, 100 m downwind of the takeoff area. These peak levels were elevated by factors of 440, 90, and 100 compared to background concentrations. Peak UFP concentrations were reasonably correlated ($r^2 = 0.62$) with fuel consumption rates associated with aircraft departures, estimated from aircraft weights and acceleration rates. UFP concentrations remained elevated for extended periods associated particularly with jet departures, but also with jet taxi and idle, and operations of propeller aircraft. UFP measured downwind of SMA had a median mode of about 11		

nm (electric mobility diameter), which was about half of the 22 nm median mode associated with UFP from heavy duty diesel trucks. The observation of highly elevated ultrafine particle concentrations in a large residential area downwind of this local airport has potential health implications for persons living near general aviation airports.		
Zhu Y, Fanning E, Yu RC, Zhang Q, Froines JR. Aircraft emissions and local air quality impacts from takeoff activities at a large international airport. *Atmos Environ.* 2011;45(36):6526-6533. Real time number concentrations and size distributions of ultrafine particles (UFPs, diameter <100 nm) and time integrated black carbon, PM2.5 mass, and chemical species were studied at the Los Angeles International Airport (LAX) and a background reference site. At LAX, data were collected at the blast fence (w140 m from the takeoff position) and five downwind sites up to 600 m from the takeoff runway and upwind of the 405 freeway. Size distributions of UFPs collected at the blast fence site showed very high number concentrations, with the highest numbers found at a particle size of approximately 14 nm. The highest spikes in the time series profile of UFP number concentrations were correlated with individual aircraft takeoff.	Results of the study show a correlation between the measured highest spikes of ultrafine particles and jet take offs; and conversely, low concentration of ultrafine particles when no take-off is occurring.	**measure ultrafine particles around airport during peak take offs.*

Measurements indicate a more than 100-fold difference in particle number concentrations between the highest spikes during takeoffs and the lowest concentrations when no takeoff is occurring. Total UFP counts exceeded 107 particles cm_3 during some monitored takeoffs. Time averaged concentrations of PM2.5 mass and two carbonyl compounds, formaldehyde and acrolein, were statistically elevated at the airport site relative to a background reference site. Peaks of 15 nm particles, associated with aircraft takeoffs, that occurred at the blast fence were matched with peaks observed 600 m downwind, with time lags of less than 1 min. The results of this study demonstrate that commercial aircraft at LAX emit large quantities of UFP at the lower end of currently measurable particle size ranges. The observed highly elevated UFP concentrations downwind of LAX associated with aircraft takeoff activities have significant exposure and possible health implications.		
Kurniawan JS, Khardi S. Comparison of methodologies estimating emissions of aircraft pollutants, environmental impact assessment around airports. *Environ Impact Assess Rev.* 2011;31(3):240-252. Emissions of air pollutants from aircraft in large urban areas are a health concern to nearby residents. This study examined	The authors report that airports are a major contributor to carbon monoxide and respirable suspended particles.	**test air quality and measure ambient carbon monoxide and suspended particles*

hourly concentrations of CO, NO_x, SO_2, and respirable suspended particles (RSP) taken in the vicinity of Hong Kong International Airport (HKIA) and Los Angeles International Airport (LAX). The LAX data cover the period August 1997 through March 1998 and the HKIA all of 2000 and 2001. The average concentration as a function of wind speed and direction was estimated by nonparametric regression. The error variance of the nonparametric regression results was also estimated. The results show that SO_2 can be used to identify wind speeds and directions associated with emissions from aircraft. Using this assumption and the nonparametric regression plots for the other pollutants one can identify the impact of aircraft on local air quality. At LAX, CO and NO_x are dominated by emissions from ground vehicles going in and out of the airport. However, near HKIA, aircraft are an important contributor to CO and RSP. At both sites, nonparametric regression identified other, smaller sources as well.		
Moussiopoulos N, Sahm P, Karatzas K, Papalexiou S, Karagiannidis A. Assessing the impact of the new athens airport to urban air quality with contemporary air pollution models. *Atmos Environ.* 1997;31(10):1497-1511. The new airport of Athens will be constructed in the Spata area	The authors report that wind flow is an effect modifier to migration of airport pollutants	**take note of wind flow when taking air samples*

to the east of the Athens basin. In an attempt to study how the airport operation influences air quality in Athens, the wind flow and pollutant transport in the Athens basin and the Spata area are studied by applying a set of contemporary models, all constituents of the EUMAC Zooming Model (EZM): (1) the nonhydrostatic prognostic mesoscale model MEMO for simulating air flow and the dispersion of inert pollutants, and (2) two photochemical dispersion models, the three-dimensional model MARS and the three-layer model MUSE for describing the dispersion of reactive pollutants. Simulations were performed for meteorological conditions favouring the occurrence of air pollution episodes. Emphasis is put on the influence of the airport emissions on air quality assuming that the airport is operating either at its old location (Hellenikon) or at Spata. Comparison of simulation results for one selected scenario achieved with all three models reveals similar diurnal variations of nitrogen oxides in the Athens basin and the Spata area. The model results show that under conditions favoring air mass penetration from Athens to the Spata area the resulting pollutant transport causes an increase in air pollution levels without, however, leading to the exceedance of air quality standards. In the opposite case, the pollutant transport cannot		

have a noticeable adverse influence on the Athens air quality because of both the relatively high urban air pollution levels and the fact that the penetration depth is small.		
Bastress EK. Impact of aircraft exhaust emissions at airports. *Environ Sci Technol.* 1973;7(9):811-816. Aircraft contribute a minor fraction of the total air pollutant burden in metropolitan areas in the U.S. but the impact of aircraft emissions is more serious in the vicinity of airports. This article concentrates on current approaches to defining and evaluating this impact. Public exposures of some pollutants at U.S airports appear to exceed current standards, and thus emission control measures have been proposed. Aircraft emission control regulations are likely to become more stringent with time to offset effects of increasing air traffic at airports. Evaluation of the impact of aircraft pollutant emissions in the U.S has been carried out in two rather distinct phases – the first phase concerned the contribution by aircraft to regional air pollutant burdens and the second phase covered effects of aircraft emissions in the immediate vicinities of airports. The next phase of this evaluation is likely to pertain to implementation of methods for controlling the impact of aircraft emissions and	The authors report that impacts of aircraft emissions is more serious in residential dwellings in proximity to airports	**it is pertinent to conduct series of air sampling*

evaluation of the effectiveness of these control methods.		

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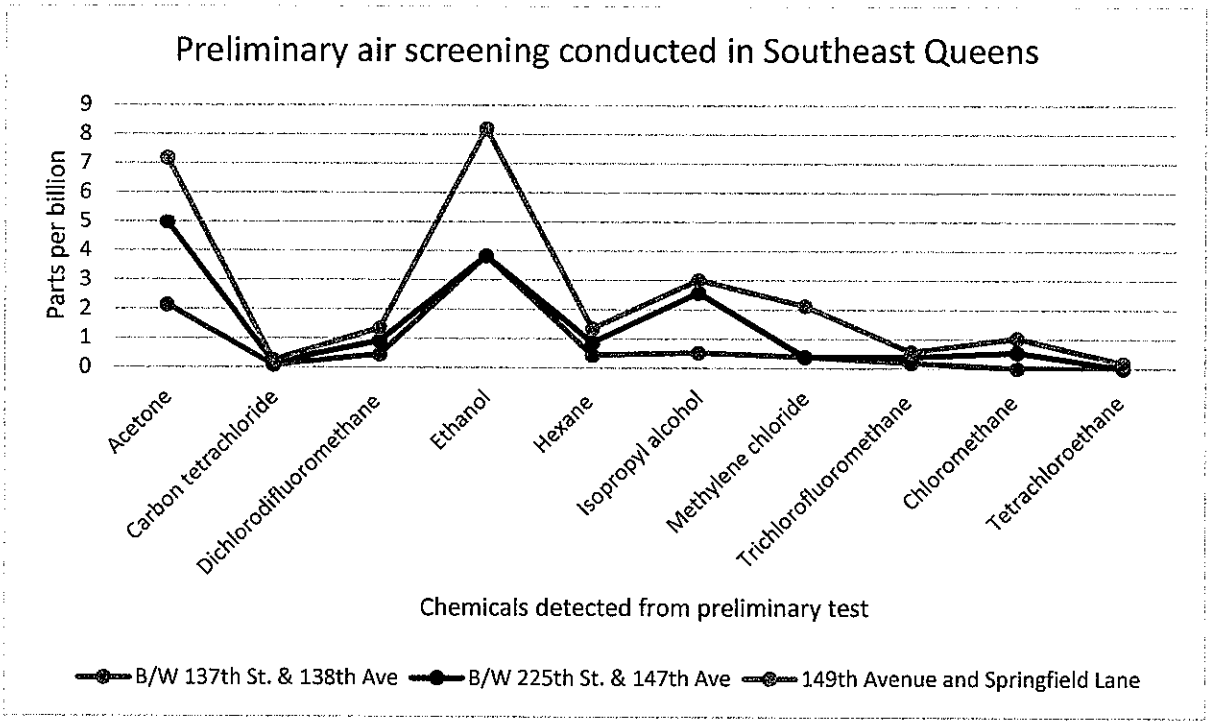
List of chemicals detected	B/W 137th St. & 138th Ave	B/W 225th St. & 147th Ave	149th Avenue and Springfield Lane
Acetone	2.14 parts per billion	2.84 parts per billion	2.21 parts per billion
Carbon tetrachloride	0.08 parts per billion	0.08 parts per billion	0.08 parts per billion
Dichlorodifluoro-methane	0.45 parts per billion	0.46 parts per billion	0.44 parts per billion
Ethanol	3.83 parts per billion	180 parts per billion	4.36 parts per billion
Hexane	0.44 parts per billion	0.43 parts per billion	0.48 parts per billion
Isopropyl alcohol	0.52 parts per billion	2.06 parts per billion	0.44 parts per billion
Methylene chloride	0.38 parts per billion	ND	1.75 parts per billion
Trichlorofluoro-methane	0.19 parts per billion	0.19 parts per billion	0.18 parts per billion
Chloromethane	ND	0.54 parts per billion	0.49 parts per billion
Tetrachloroethane	ND	ND	0.17 parts per billion

*ND – non-detected



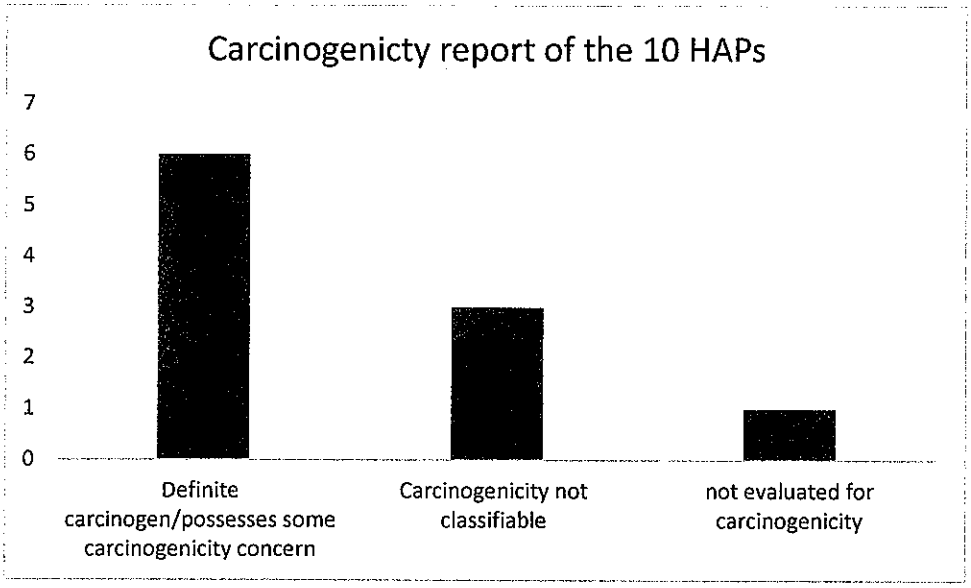
There are 10 hazardous air pollutants (HAPs) that comprise the vast majority of HAPs reported to occur in aircraft and/or ground support equipment (GSE) exhaust. They are listed in the table below with their possible health effects that occur from long and short term exposure.

Chemical name	Routes of exposure	Effects from short term exposure	Effects from long term exposure	Carcinogen
Formaldehyde	Inhalation, skin and/or eye contact	Eye, nose, and throat irritation and effects on the nasal cavity.	respiratory symptoms and eye, nose, and throat irritation	IARC group1: Carcinogenic to humans
Acetaldehyde	Inhalation, skin and/or eye contact	Irritation- Eye, nose, Throat, Skin, narcosis, pulmonary edema	Resemble effects of alcoholism which includes liver cirrhosis	IARC Group 2B possibly carcinogenic to humans
Benzene	Inhalation, skin and/or eye contact	Drowsiness, dizziness, headaches, and unconsciousness, can irritate the skin, eyes, and upper respiratory tract. Redness and blisters may result from dermal exposure to benzene	Affects the bone marrow, excessive bleeding, damage to the immune system, causes structural and numerical chromosomal aberrations.	IARC group1: Carcinogenic to humans
Toluene	Inhalation, skin and/or eye contact	Cardiac arrhythmia, CNS dysfunction with symptoms including fatigue, sleepiness, headaches, and nausea. CNS depression and death have occurred at higher levels of exposure	CNS depression with symptoms including drowsiness, ataxia, tremors, cerebral atrophy, nystagmus (involuntary eye movements), and impaired speech, hearing, and vision. Neurobehavioral effects have been observed in occupationally exposed workers	IARC Group3: Not classifiable as to its carcinogenicity to humans
Acrolein	Inhalation, skin and/or eye contact	Irritation - Eye, Nose, Throat, Lung, Skin, sensitizer for asthma and dermatitis	Heart, eyes, skin, respiratory system effects	IARC Group3: Not classifiable as to its carcinogenicity to humans
1,3 butadiene	Inhalation, skin and/or eye contact	Irritation of the eyes, nasal passages, throat, and lungs. Neurological effects are blurred vision, fatigue, headache, and vertigo. Dermal	increase in cardiovascular diseases, such as rheumatic and arteriosclerotic heart diseases and effects on the blood	IARC group1: Carcinogenic to humans

		exposure could cause frostbite		
xylene	Inhalation, skin and/or eye contact	associated with dyspnea and irritation of the nose and throat; gastrointestinal effects such as nausea, vomiting, and gastric discomfort; mild transient eye irritation; and neurological effects such as impaired short-term memory, impaired reaction time, performance decrements in numerical ability, and alterations in equilibrium and body balance	neurological effects such as headache, dizziness, fatigue, tremors, incoordination, anxiety, impaired short-term memory, and inability to concentrate. Labored breathing, impaired pulmonary function, increased heart palpitation, severe chest pain, abnormal EKG, and possible effects on the kidneys have also been reported	IARC Group3: Not classifiable as to its carcinogenicity to humans
lead	Inhalation, skin and/or eye contact	In children can cause permanent damage to the brain and nervous system, leading to behavior and learning problems, lower IQ, and hearing problems, slowed growth and anemia	Nervous and cardiovascular system effects (increased blood pressure and hypertension), decreased kidney function, reproductive problems	IARC Group 2A: inorganic lead is probably carcinogenic to humans
Naphthalene	Inhalation, skin and/or eye contact	hemolytic anemia, damage to the liver, and, in infants, neurological damage. Symptoms of acute exposure include headache, nausea, vomiting, diarrhea, malaise, confusion, anemia, jaundice, convulsions, and coma	cataracts and retinal hemorrhage	IARC Group 2B possibly carcinogenic to humans

Propionaldehyde	Inhalation, skin and/or eye contact	Irritation of eyes, skin, nose, throat; cough, sore throat; eye and skin pain, redness	Paucity of information	Not evaluated

List of 10 HAPs retrieved from publication of the Federal Aviation Administration http://www.areco.org/pdf/aircrafthaps_rpt.pdf.



60% of the listed 10 hazardous air pollutants associated with airports are either definite carcinogens or possess some level of carcinogenicity concern to humans (formaldehyde, benzene, 1,3 butadiene, acetaldehyde, naphthalene & inorganic lead). Of these 60%, 30% are known carcinogens (formaldehyde, benzene, 1,3 butadiene), 20% are possible carcinogens (acetaldehyde & naphthalene) and 10% are probable carcinogens (inorganic lead).

Toxics release inventory by the United States Environmental Protection Agency (EPA): This is a program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. U.S. facilities in different industry sectors must report annually how much of each chemical is released to the environment and/or managed through recycling, energy recovery and treatment. A release of a chemical means that it is emitted to the air or water, or placed in some type of land disposal. The information submitted by facilities is compiled in the Toxics Release Inventory (TRI).

Facilities that are included in TRI include:

- Facilities involved in manufacturing
- Facilities involved in metal mining
- Electric power generation companies
- Chemical manufacturing companies
- Hazardous waste treatment facilities

The aviation sector is excluded and not required to report how much chemical is released into the environment, this maybe because of the ambiguity of definitively stating the level of chemicals emitted by aircrafts and ground support equipment support exhausts.

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African American Environmentalist Association

Testimony of

Dan Durett
Director
New York Office

Before the

THE NEW YORK CITY COUNCIL

COMMITTEE ON ENVIRONMENTAL PROTECTION

COUNCILMEMBER DONOVAN RICHARDS, CHAIRMAN

on

AIR QUALITY IMPACTS AND WAYS TO MEASURE AND ADDRESS THEM IN NYC ENVIRONMENTAL JUSTICE COMMUNITIES

February 28, 2014

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Mr. Chairman and members of the committee, my name is Dan Durett and I am the Director of the African American Environmentalist Association (AAEA) New York Office. I am a native of New York City and have three decades of experience in addressing environmental justice issues. I am including some information about myself and that will be followed by specific information about air pollution sites in and around New York City.

I was raised in Brooklyn, New York. My mother and father, a nurse's aide and maintenance worker, raised me and my five siblings in the Marcy Public Housing Projects. I attended the State University of New York at Binghamton, earning a BS degree in history. I earned my MS degree in history from Clark Atlanta University in 1973. I went on to complete a graduate degree at Emory University in 1976. As a student at Emory, I became interested in the environmental field because of his work in historic preservation and urban environmental issues.

From 1995-1998, I worked with the United Negro College Fund (UNCF) and while there established a department of Environmental Education Program. Today, I also work part time as the director of the Minority Programs Office for the National Council for Science and the Environment (NCSE) and I am responsible for outreach at minority serving institutions.

New York City is similar to other cities when it comes to disproportionate pollution impacts. It is important to document these impacts, but it is also important to do something about this problem. Our organization president is submitting testimony that describes AAEA's work in providing vehicles to protect vulnerable communities throughout the nation and throughout New York.

Racial Demographics

The 2010 Census showed that the United States population on April 1, 2010, was 308.7 million. Out of the total population, 38.9 million people, or 13 percent, identified as Black alone. In addition, 3.1 million people, or 1 percent, reported Black in combination with one or more other races. Together, these two groups totaled 42.0 million people. Thus, 14 percent of all people in the United States identified as Black, either alone, or in combination with one or more other races. New York State is 17.5 percent African American and 18.2 percent Latino.[1]

New York's Minorities Pay the Price for Fossil-Fuel Air Pollution

New York is no exception to this national crisis. In New York City, it is estimated that there are 2,290 deaths, 1,580 hospitalizations, 546 asthma-related emergency room visits, 1,490 cases of chronic bronchitis, and 46,200 asthma attacks yearly attributable to power plant pollution.[2] The New York City area has also been ranked as one of the top five U.S. metropolitan areas for particulate air pollution.[3] And again, these adverse effects disproportionately affect minority communities. In one study, nonwhites in New York City were found to be hospitalized twice as many times as whites on days when ozone levels were high.[4]

That African Americans and other minorities are disproportionately affected by air pollution in New York is not surprising when considering the fact that the majority of air-polluting power plants in the New York metropolitan area are located in African American and other minority communities. For example, of the 23 counties in New York State which fail to meet Federal air pollution standards, 37.7% of them are populated by people of color.[5]

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[1] U.S. Census, 2010, The Black Population 2010, p. 1.
[2] *See* Death, Disease & Dirty Power: Mortality and Health Damage Due to Air Pollution from Power Plants, Clean Air Task Force (October 2000).
[3] *See* New York's Dirty Power Plants, Clear the Air – the National Campaign Against Dirty Power.
[4] *See* Martha H. Keating, AIR INJUSTICE, at 4 (October 2002).
[5] *See* Clear the Air: People of Color in Non-Attainment Counties.

Based on figures from the 2010 U.S. Census, New York State's population is only 17.5 percent African American and 18.2 percent Latino.[6] However, in communities that are predominantly minority, such as Queens, the Bronx, and Brooklyn, there are a disproportionate number of fossil-fuel power plants emitting air pollutants. In the Bronx, which is 43.4% African American and 54.3% Latino, there are two power plants, Harlem River Yards and Hell Gate. In Brooklyn, which is 35.8% African American and 19.8% Latino, there are seven power plants, the 23rd and 3rd Plant, Brooklyn Navy Yard, Gowanus, Hudson Ave., Narrows, the North First St. Plant, and Warbasse Cogen. In Queens, which is 20.9% African American and 27.9% Latino, there are six power plants, Astoria, Poletti (replacement plant), Far Rockaway, JFK Cogeneration, Ravenswood, and the Vernon Blvd. Plant. In total, there are 24 power plants in the New York metropolitan area, only a handful of which are in areas where minorities do not comprise the majority of the population.[7]

Fossil-Fuel Power And Disproportionately Impacts

Serious health effects disproportionately fall on the shoulders of low-income and minority communities, including African American and Latino communities. For instance, the percentage of African Americans and Hispanics living in areas that do not meet national standards for air quality is considerably higher than that of whites.[8]

[6] U.S. Census, 2010, The Black Population 2010, p. 1.
[7] Id.
[8] *See* Martha H. Keating, AIR INJUSTICE, at 3 (October 2002).

Racial Demographics Around Power Plants In Vulnerable Communities[9]

Plant	Location	2010 Census % Black/Af. Am. by Zip Code	2010 Census % Hispanic or Latino by Zip Code	County	2010 Census % County Black/Af. Am.	2010 Census Hispanic Or Latino Hispanic	Owner
Harlem River Yards	E. 132nd Street and Pc/Rr/R/R Bronx, NY 10454	31.6	73.5	Bronx	43.4		NYPA
Hell Gate	East 132nd to E 134th Street Locust Ave. to East River Bronx, NY10454	31.6	73.5	Bronx	43.4	54.3	NYPA
Bronx zoo				Bronx			
23rd and 3rd Plant	23rd & 3rd Avenues Brooklyn, NY 11232	7.3	57.8	Kings Brooklyn Borough	35.8	19.8	NYPA
Brooklyn Navy Yard	63 Flushing Ave Brooklyn Navy Yard Bldg 41 Brooklyn, NY 11205	34.4	21.2	Kings Brooklyn Borough	35.8	19.8	Brooklyn Navy Yard Cogenerati on Partners
Gowanus	27th Street & Third Ave. Brooklyn, NY 11232	37.3	57.8	Kings Brooklyn Borough	35.8	19.8	ConEd (Astoria)
Hudson Ave [Closed 2011]	1-11 Hudson Ave Brooklyn, NY 11201	15.1	12.4	Kings Brooklyn Borough	35.8	19.8	ConEd
Narrows	53rd Street & First Ave. Brooklyn, NY 11232	37.3	57.8	Kings Brooklyn Borough	35.8	19.8	Astoria Generating Co.

[9] Developed from TRC Report. 2010 Census.

Plant	Location	2010 Census % Black/Af. Am. by Zip Code	2010 Census % Hispanic or Latino by Zip Code	County	2010 Census % County Black/Af. Am.	2010 Census Hispanic Or Latino Hispanic	Owner
North First Street Plant	North 1st Street & River Street Brooklyn, NY 11249	36.4	64.2	Kings Brooklyn Borough	35.8	19.8	NYPA
Warbasse Cogen	2701 West 6th Street Brooklyn, NY 11224	12.6	16.3	Kings Brooklyn Borough	35.8	19.8	Warbasse Houses Inc.
East River	801 East 14th Street New York, NY 10009	23.6	16.3	New York Manhattan Borough	18.4	25.8	ConEd
Waterside [Closed & Destroyed 2006]	700 First Ave. New York, NY 10017 (Manhattan)	3.3	6.5	New York Manhattan Borough	18.4	25.8	ConEd
Danskammer [Closed]	994 River Road Newburgh, NY 12550	22.1	32.8	Orange	11.4	18.8	Central Hudson Gas & Electric (Dynegy)
Roseton	992 River Road Newburgh, NY 12550	22.1	32.8	Orange	11.4	18.8	Central Hudson Gas & Electric (Dynegy)
Astoria	31-01 20th Ave. Long Island City, NY 11105	2.2	19.7	Queens	20.9	27.9	Astoria
Charles Poletti [Dismantled Replaced w/ new plant]	31-03 20th Ave. Astoria, Queens NY 11105	2.2	19.7	Queens	20.9	27.9	NYPA
Far Rockaway	1425 Bay 24th Street Far Rockaway, NY 11691	50.1	25.2	Queens Borough	20.9	27.9	Keyspan

Plant	Location	2010 Census % Black/Af. Am. by Zip Code	2010 Census % Hispanic or Latino by Zip Code	County	2010 Census % County Black/Af. Am.	2010 Census Hispanic Or Latino Hispanic	Owner
JFK Cogeneration	JFK International Airport Bldg. 49 Jamaica, NY 11430 (Queens)	68.5	28.3	Queens	20.9	27.9	Kiac Partners
Ravenswood	38-54 Vernon Blvd., Long Island City, NY 11101	20.8	34.5	Queens	20.9	27.9	ConEd (Keyspan)
Vernon Blvd. Plant	42 – 30 Vernon Blvd. Queens, NY 11101	20.8	34.5	Queens	20.9	27.9	NYPA
Arthur Kill	4401 Victory Blvd. Staten Island, NY 10314	4.3	13.0	Richmond	11.6	17.7	ConEd
Pouch Terminal	Lynhurst Ave. and Edgewater Staten Island, NY 10305	4.4	17.2	Richmond	11.6	17.7	NYPA
Bowline Point	140 Samsondale Ave. West Haverstraw, NY 10993	18.1	42.2	Rockland	12.8	15.7	Southern Energy (Mirant)
Lovett [Demolished]	37 Elm Ave. Tomkins Cove 10986 (Stony Point)	2.8	8.9	Rockland	12.8	15.7	Southern Energy (Mirant)

Plant	Location	2010 Census % Black/Af. Am. by Zip Code	2010 Census % Hispanic or Latino by Zip Code	County	2010 Census % County Black/Af. Am.	2010 Census Hispanic Or Latino Hispanic	Owner
Indian Point	Broadway Buchanan, NY 10511 (Courtlandt)	3.1	15.9	Westchester Village of Buchanan Town of Courtlandt	15.8 3.1 5.4	22.8 16.0 12.8	Entergy

The racial demographics in the Harlem Rivers Yards / Hell Gate power plant(s) zip code are 31.6% African American and 73.5% Latino. NYPA operates this gas turbine facility, which produces 79.9 megawatts of power. The facility consists of two General Electric LM6000 gas turbines that utilize a selective catalytic reduction unit to minimize emissions of oxides of nitrogen. The gas turbines operate as simple cycle units, employing a spray inter-cooling system to optimize power output.[10]

The racial demographics in the 23rd and 3rd plant zip are 7.3% African American and 57.8% Latino. NYPA operates this gas turbine facility that produces 79.9 megawatts of power. The facility consists of two General Electric LM6000 gas turbines that utilize a selective catalytic reduction unit to minimize emissions of oxides of nitrogen. The gas turbine operates as a simple cycle unit, employing a spray inter-cooling system to optimize power output.[11]

The racial demographics in the Brooklyn Navy Yard power plant zip code are 34.4% African American and 21.2% Latino. The facility is a 286-megawatt (MW) gas-fired power plant. The original Title V permit was issued on 12/5/2000 and it was renewed on 1/8/2008. This is a modification to the Title V permit

[10] DEC

renewal. This modification is to include conditions recently promulgated under the regulations 6 NYCRR Parts 243, 244, 245. These regulations require facilities to obtain/possess at least as many "allocations" of sulfur dioxide (SO2) & Oxides of Nitrogen (NOx) as they emit into atmosphere during a specified period of time.

The plant consists of two Siemens V84.2 gas turbines, each equipped with a Heat Recovery Steam Generator. Gas Turbine air inlet cooling technology may be installed and operated at the plant on each of the combustion turbines. In addition, two distillate oil-fired emergency generators are provided. The plant supplies electricity to Con Edison and the Navy Yard, and supplies steam to Con Edison, the Navy Yard, and the Red Hook Water Pollution Control Plant.[12]

The racial demographics in the Gowanus power plant zip code are 37.3% African American and 57.8% Latino. Gowanus is a 551 MW fuel oil and natural gas facility consisting of 32 simple cycle combustion turbine units situated equally across four generating barges located in Gowanus Bay in the borough of Brooklyn, New York City. The facility is one of the largest floating generating stations in the world. The Gowanus facility can be controlled remotely and can start with as little as fifteen minutes notice. The units are flexible from an operating perspective and are available year-round to offer system- peaking capacity. With 16 of 32 units equipped for dual-fuel firing, the site has options regarding fuel selection. In addition, the facility was the first generating station to resume operations following the Black Out in August 2003.[13]

The racial demographics in the Hudson Avenue power plant [Closed 2011] zip code are 15.1% African American and 12.4% Latino. The facility is creating future emission reduction credits (ERCs), based on the permanent shutdown of the four (4) very large Combustion Engineering boilers, Boilers Nos. 71, 72, 81 and 82, identified as Emission Sources 00071, 00072, 00081 and 00082;

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[11] DEC
[12] http://www.dec.ny.gov/dardata/boss/afs/permits/261010018500008_r1_1.pdf
[13] http://www.uspowergen.com/portfolio/astoria-generating/gowanus/

respectively in Emission Unit H-A0001 at the Con Edison - Hudson Avenue Station located at 1 Hudson Avenue in Brooklyn, New York 11201. These four (4) very large boilers were permanently shut down and ceased operation on February 7, 2011. The facility is working on plans to permanently remove the boilers and demolish their stack. All four boilers have been disabled in accordance with the closure plan submitted with the Title V permit application. A new plant could possibly be located here at some point in the future.[14]

The racial demographics in the Narrows power plant zip code are 37.3% African American and 57.8% Latino. The Narrows plant is a floating power station located in Brooklyn about one mile south of Gowanus along the east side of Upper New York Bay. The facility is about half the size of Gowanus (283 MW) and consists of 16 simple-cycle combustion turbine units on two floating power barges. All of the units at Narrows have dual-fuel capability and can be started remotely. The units at Narrows also provide critical system peaking capacity and can be started in fifteen minutes. Throughout the year the units serve as peaking resources.[15]

The racial demographics in the North First Street Plant zip code are 36.4% African American and 64.2% Latino. The facility consists of one simple cycle combustion turbine (GE LM6000) which fires only natural gas. The turbine employs a spray intercooling system to optimize power output. The unit is equipped with selective catalytic reduction to control emissions of oxides of nitrogen and catalytic oxidation to control emissions of carbon monoxide. Other equipment on-site include gas and air compressors, cooling tower lube oil cooling system, water treatment and storage system, ammonia storage and injection system, raw water storage, and auxiliary electrical systems. The stack is approximately 107 feet in height and 144 inches in diameter. The facility generates a maximum 47 megawatts of power. The turbine will not operate

[14] DEC

below 50 percent load except during periods of start-up or shut down.[16]

The racial demographics in the Warbasse Cogen power plant zip code are 12.6% African American and 16.3% Latino. The facility will consist of two high-pressure steam boilers and three diesel-fired internal combustion engines to provide emergency power. The facility supplies steam heat, hot water, chilled water and electricity to the 8,000 residents of the nearby Amalgamated Warbasse Housing complex. Warbasse was originally built in 1964 and included a cogeneration plant based on three, high pressure, dual-fuel (oil and natural gas) fired boilers; two, 6 MW steam turbine generators and five, one thousand ton absorption refrigeration machines. This plant provides all of the thermal and electric requirements of the complex. Developments in the field of energy generation during the late 1980's offered Warbasse the opportunity to improve the economics of its energy generation.[17]

The racial demographics in the East River power plant zip code are 23.6 African American and 16.3% Latino. Con Edison declared full commercial operation of its East River Repowering Project on April 5, 2005, when the second of two state-of-the-art, natural-gas-fired steam generators began providing power to New York's electricity grid. The first unit had become operational on April 1, 2005. In full operation, the units produce approximately 350 megawatts of electricity. The repowering of Con Edison's East River generating station was undertaken to enhance an already environmentally beneficial steam system, and is capable of producing 3.2 million pounds of steam per hour. Steam is used for heating, hot water, and in some buildings, to power air conditioning chillers. The use of steam-powered chillers reduces the load on the electric system during times of peak summer demand. The two steam-electric generators have up-to-date emission-control technology and burn natural gas 100 percent of -the time,

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[15] DEC
[16] DEC
[17] DEC

making East River one of the cleanest power generating facilities in New York.[18]

The racial demographics in the Danskammer power plant [closed, proposal to reopen] zip code are 22.1% African American and 32.8% Latino. Danskammer is located on the shore of the Hudson River in the Town of Newburgh, New York, upstream of the larger oil-fired Roseton Generating Station. Danskammer units 1 and 2 burn oil (72 and 73.5 MWe nameplate capacity), whereas units 3 and 4 are coal-fired (147.1 and 239.4 MWe nameplate capacity). All four of these major units can also run on natural gas. Units 5 and 6 are small internal combustion engines of 2.7 MWe nameplate capacity each. The station was built by Central Hudson Gas & Electric in the 1930s, and sold to Dynergy in the 1990s as part of electricity deregulation. It has been the target of a prolonged environmental lawsuit over its cooling system. Danskammer is currently closed but a new owner could reopen the facility.[19]

The racial demographics in the Roseton power plant zip code are 22.1% African American and 32.8% Latino. Dynegy Inc. sold this dual fuel-fired electric power plant in New York to a subsidiary of Castleton Commodities International LLC for $19.5 million. The 1,210 megawatt Roseton facility is 43 miles north of New York City in the town of Newburgh, Orange County. The plant is capable of running on both natural gas and fuel oil.[20]

The racial demographics in the Astoria power plant zip code are 2.2% African American and 19.7% Latino. Combined-cycle technology enables NYPA's 500-mw power plant to generate 50 percent more electricity from its fuel than it would with a conventional single-cycle power system. Under this dual-phase system, two combustion turbine-generators operate in conjunction with two heat-recovery steam generators and a steam turbine-generator.

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[18] DEC
[19] Wikipedia
[20] New York Business Journal, May 2, 2013.
http://www.bizjournals.com/newyork/news/2013/05/01/castleton-buys-roseton-power-plant.html

The $120-million Astoria Energy 575 MW power plant, Phase II is part of a 1,000-MW combined-cycle plant located in Astoria, Queens. The plant consists of two gas turbines and two auxiliary transformers. The project began in February 2009 and was completed last May. The facility is expected to decrease nitrogen oxide air emissions by 1,222 tons per year.[21]

The racial demographics in the Charles Poletti power plant [dismantled, replaced with new plant] zip code are 2.2% African American and 19.7% Latino. In 1974 the NY Power Authority purchased the #6 oil fired unit from Con Edison while it was still under construction. In 1998 it was decided to replace the power plant with a new, state-of-the-art, 500 megawatt combined cycle power plant. The Poletti Power Plant ceased operations on January 31, 2010. The Poletti Power Plant de-commissioning encompasses three separate projects: 1) the de-mineralized water plant, 2) the fuel oil yard and 3) the Unit #6 power plant. These projects were to take place over a five-year period from 2010 – 2014. The first two projects have been completed and planning for the third is underway and scheduled for completion by December 31, 2014.[22]

The racial demographics in the Far Rockaway power plant zip code are 50.1% African American and 25.2% Latino. The Long Island Power Authority proposed to close its power plant in Far Rockaway by 2013, part of a move that the authority claims will save its customers about $76 million through 2015. LIPA, in a partnership with National Grid, said it would try to close the Far Rockaway plant as well as one in Glenwood Landing, both of which are the least used facilities in the fleet and account for less than 2 percent of LIPA's total energy requirements, the state authority said. The Far Rockaway plant, which opened in 1953, has one unit, is fueled by natural gas and capable of producing

[21] New York Power Authority. http://nypa.gov/facilities/ccp/cchow.htm
[22] Queens Buzz. http://www.queensbuzz.com/ny-power-authority-deconstructs-poletti-power-plant-cms-994

100 megawatts of electricity.[23]

The racial demographics in the JFK Cogeneration power plant zip code are 68.5% African American and 28.3% Latino. The facility consists of two (2) identical General Electric LM 6000 combustion turbines equipped with supplementary fired duct burners and heat recovery steam generators (HRSGs). The turbines are permitted to fire both natural gas and light distillate fuel oil. The renewal permit covers the upgrades of the two combustion turbines from LM 6000 PA to LM 6000 PC Sprint units. This facility is not a PSD source. Kennedy International Airport Co-generation Partners (KIAC Partners) is located in the middle of the central terminal area of the J.F. Kennedy International Airport, Building No. 49, in Jamaica, New York.

The KIAC co-generation plant supplies electricity to the JFK International Airport and to the Consolidated Edison (Con Ed) Power Distribution Grid, and also supplies steam to the airport's central heating and refrigeration plant. Each gas combustion turbine is equipped with a supplementary fired duct burner and Heat Recovery Steam Generator (HRSG). The gross heat capacity of the co-generation plant is 469 mmBTU/HR for each gas turbine and 718 mmBTU/HR each of the combined gas turbine and duct burner operation, which is based on the higher heating value (HHV) of natural gas. The cogeneration units are individually vented through two exhaust stacks, which vent emissions from each gas turbine and associated duct burner unit. The combustion turbines fire natural gas as the primary fuel with light distillate oil (0.2% sulfur) as the backup fuel. Light distillate oil firing is limited to 4.8 million gal/yr per combustion turbine. The duct burners are limited to natural gas firing. Each of the General Electric LM6000 PC Sprint gas combustion turbines is designed with water injection as the first level of NOx control and Selective Catalytic Reduction (SCR) as the secondary NOx control system, for both residual combustion turbine NOx and

[23] Five Towns Patch, June 16, 2011. http://fivetowns.patch.com/groups/editors-picks/p/lipa-to-shutter-far-rockaway-power-plant

duct burner NOx reduction. The SCR catalyst as the dual function of CO oxidation to CO2 and NOx reduction to N2 and H2O. The KIAC Cogeneration facility operates and maintains Continuous Emission Monitors (CEM) and continuous data recorder NOx, CO Oxygen and Ammonia to monitor the emissions from each combustion turbine/duct burner.[24]

The racial demographics in the Ravenswood power plant zip code are 20.8% African American and 34.5% Latino. Ravenswood was originally built and owned by Consolidated Edison of New York Inc. (Con Edison) in 1963. The first two units constructed in 1963 were Ravenswood 10 and 20, each having a generating capacity of approximately 385 megawatts. Then, in 1965, Ravenswood 30 (commonly called "Big Allis") was commissioned with a generating capacity of nearly 981 megawatts, which at the time was the largest electric generating facility in the world. In the 1970s, multiple combustion turbine units were installed in a simple cycle configuration to meet peak power demands.

Due to deregulation of the energy markets in New York State, Con Edison was required to sell all of its "in-city" generating stations in New York City including Ravenswood. In 1999, Con Edison transferred ownership of Ravenswood to KeySpan Energy (KeySpan) for $597 million. In 2004, KeySpan constructed a new unit, Ravenswood 40, using combined cycle technology with generating capacity of 250 megawatts.

National Grid acquired KeySpan in 2007, but due to its involvement in electrical transmission the New York Public Service Commission required National Grid to sell Ravenswood to ensure competition in the market. So on August 26, 2008, Ravenswood was sold by National Grid to TransCanada Corporation for $2.9 Billion.[25]

The racial demographics in the Vernon Blvd Plant zip code are 20.8% African American and 34.5% Latino. NYPA operates this gas turbine facility that

[24] DEC
[25] Wikipedia. http://en.wikipedia.org/wiki/Ravenswood_Generating_Station

produces 79.9 megawatts of power. The facility consists of two General Electric LM6000 gas turbine which utilize a selective catalytic reduction unit to minimize emissions of oxides of nitrogen. The gas turbines operate as a simple cycle unit, employing a spray inter-cooling system to optimize power output.[26]

The racial demographics in the Arthur Kill power plant are 4.3% African American and 13.0% Latino. Arthur Kill Generating is a gas-fired plant with a design capacity of 931.7 MWe. It has 3 unit(s). The first unit was commissioned in 1959 and the last in 1970. It is operated by NRG Energy.[27]

The racial demographics in the Pouch Terminal power plant are 4.4% African American and 17.2% Latino. NYPA operates this gas turbine facility that produces 44 megawatts of power. The facility consists of a General Electric LM6000 gas turbine which utilizes a selective catalytic reduction unit to minimize emissions of oxides of nitrogen. The gas turbine operates as a simple cycle unit, employing a spray inter-cooling system to optimize power output.[28]

The racial demographics in the Bowline Point power plant are 18.1% African American and 42.2% Latino. Bowline is located on the western shore of the Hudson River approximately 37.5 miles north of the Battery at the southern tip of Manhattan. It consists of two existing units that burn either natural gas or #6 oil to produce a combined output of approximately 1,139 MW. Unit 1 began operation in September 1972 and Unit 2 began operation in May 1974.[29] Bowline is a 1200 megawatt oil-fired power plant located in Haverstraw, New York, formerly owned by Orange and Rockland and purchased by Mirant. Bowline.[30]

Mr. Chairman, I submit this information, not as any sort of indictment of our valued electricity utilities, but as a template for establishing a baseline for

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[26] DEC
[27] Global Observatory. http://globalenergyobservatory.org/geoid/2169
[28] DEC
[29] DEC. http://www.dec.ny.gov/docs/permits_ej_operations_pdf/bowlinefs.pdf
[30] Riverkeeper. http://www.riverkeeper.org/campaigns/stop-polluters/power-plants/hudson-river-power-

future siting decisions. These large air pollution sources should be considered with the many other pollution sources in vulnerable communities in deciding where to site future facilities. If there are numerous emitting facilities in minorities, they should not be the site of future polluting facilities. It really is as simple as that.

plants/

African American Environmentalist Association

Testimony of

FOR THE RECORD

Norris McDonald
President

Before the

THE NEW YORK CITY COUNCIL

COMMITTEE ON ENVIRONMENTAL PROTECTION

COUNCILMEMBER DONOVAN RICHARDS, CHAIRMAN

on

AIR QUALITY IMPACTS AND WAYS TO MEASURE AND ADDRESS THEM IN NYC ENVIRONMENTAL JUSTICE COMMUNITIES

February 28, 2014

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Mr. Chairman and members of the committee, my name is Norris McDonald and I am the founder and president of the African American Environmentalist Association (AAEA). I will address two items today: 1) asthma and 2) legislation that could help mitigate air pollution and asthma in New York City. Dan Durett is Director of the AAEA New York Office and he will address air pollution sources in and around New York City.

I am a chronic acute asthmatic, I have been intubated twice (1991 & 1996) and have almost died numerous times from asthma. I am delighted to say today that my asthma is under control. However, asthma in vulnerable communities in New York City is not under control.

Asthma is a very serious problem in potential environmental justice areas in New York City. According to the Citizen's Committee for Children of New York:

> In New York City, over 39,000 children under the age of 15 visited the emergency room because of asthma in 2010. About 7,400 children – five out of every 1,000 – had cases that were serious enough that they needed to be hospitalized.
>
> ...we know that nearly one-third (32.3 percent) of children who made asthma-related emergency room visits were from the Bronx. Further, certain neighborhoods in the south Bronx and upper Manhattan have much higher rates of asthma hospitalization than the rest of the city. In Hunts Point and Mott Haven in the Bronx, the asthma hospitalization rate is 12.2 per 1,000 children; in East Harlem it's 11.4. Both are more than double the citywide rate of 5 per 1,000 children.
>
> Given the troubling number of children suffering with asthma and high asthma hospitalization rates in many communities, we must do all that we can to protect investments in the asthma prevention and control services children need.[1]

[1] Citizens Committee for Children of New York, 2/28/2013.
http://www.cccnewyork.org/blog/concentrations-of-risk-asthma-and-poor-housing-conditions/

Numerous environmental justice leaders and organizations in New York City have documented disproportionate asthma demographics for decades. I am sure you will hear many examples of these problems in the Bronx, Harlem, Queens and Brooklyn. New York City needs an environmental justice law that can be used to mitigate or even eliminate stationary and mobile sources of air pollution that can cause and exacerbate asthma.

Respiratory ailments affect African Americans at rates significantly higher than whites. Asthma attacks, for example, send African Americans to the emergency room at three times the rate of whites (174.3 visits per 10,000 people for African Americans versus 59.4 visits per 10,000 people for whites), and African Americans are hospitalized for asthma at more than three times the rate of whites (35.6 admissions per 10,000 people for African Americans versus 10.6 admissions for every 10,000 people for whites).[2] Similarly, the death rate from asthma for African Americans is twice that of whites (38.7 deaths per million versus 14.2 deaths per million).[3]

Mr. Chairman, today there is no law that protects communities from an environmental justice perspective. The is no national law, no state law and no city law that can be used to directly address and mitigate disproportionate pollution impacts in poor and minority communities. AAEA has drafted national, state and city environmental justice legislation over the past ten years to address this problem. We will continue to push for the passage of legislation that will protect vulnerable communities from environmental injustice.

AAEA assisted in drafting legislation that was introduced by Councilmember Charles Barron in 2004 with seven cosponsors (Attachment A). The legislation was derived from national legislation drafted by AAEA (Attachment B). The petition/lawsuit provision has been an impediment to getting

[2] Id.
[3] Id.

substantive national legislation introduced in the U.S. Congress. Such legislation, that has been introduced by different members of Congress, only includes the soft path components. These soft path components include such items as working groups, public participation, annual reports and advisory committees. This approach has been taken because legislators believe this is the only sort of legislation that has a chance of passing.

The Barron legislation has some very good components, such as Section 24-197:

> § 24-197. Moratorium. (1) If the report finds toxic chemical emissions and environmental pollution in quantities sufficient to cause significant adverse effects on human health, the environment or the economy in an affected area, such area shall be designated as a protected area, and there shall be a moratorium on the siting or permitting of any new toxic chemical facility in any affected area.
> (2) A new toxic chemical facility may be sited or permitted in such an affected area during this period only if:
>
> (a) the need for the activity is approved by the appropriate governing entity;
> (b) the owner or operator of the facility demonstrates to the Department that the facility will develop a plan to maintain a comprehensive pollution prevention program; and
> (c) the facility demonstrates to the appropriate governing entity that it will minimize uncontrolled releases into the environment.
>
> (3) The moratorium shall continue in effect in such a protected area until the Commissioner determines, based upon findings of fact to support the action taken and upon petition of any interested party, that the levels of environmental pollution will not cause significant adverse effects on human health, the environment or the economy, and that such levels have been maintained at the affected area for such time period as the Commissioner determines is sufficient to restore healthful air quality levels.
> § 24-198. Endorsement. If the report does not find significant adverse impacts of environmental pollution on human health in a proposed area, and if a petitioner requests an advance designation for a proposed area, there shall be a Department endorsement on the siting or permitting of any new facility. A new facility may still be placed on the moratorium list if:
>
> (1) The activity, as determined by the Department, could adversely affect health in such a manner that health effects will not

be known or detected until a future date; an endorsement may continue in effect in such an area unless and until the Commissioner determines, upon petition of any interested party, that healthful air quality levels have not been maintained at the area due to the activities of the covered facility.

A citizen lawsuit provision should be added to put teeth in the petition to the Commissioner of the Department of Environmental Protection so that if the petition fails to protect a covered area, the local law provides the legal foundation for the action. The endorsement provision in any new environmental justice bill that might be introduced could be expanded to include a wide variety of approvals from local stakeholders.. The national bill provisions are included below:

SEC. 3. PURPOSES AND POLICIES.

The purposes of this Act are--

1. To provide a **citizen lawsuit provision** to allow potential **victims** of environmental race discrimination to enforce the EJA and the regulations promulgated thereunder.
2. To provide a **citizen endorsement provision** to allow potential **beneficiaries** of nonpolluting economic development to enforce the EJA and the regulations promulgated thereunder

SEC. 7. PETITION RELATING TO ENVIRONMENTALLY DISADVANTAGED COMMUNITIES.

(a) RIGHT TO PETITION- (1) Any citizen residing in a State in which a new pollution releasing facility for the management of solid waste (including a new facility for the management of hazardous waste) is proposed to be constructed in an environmentally disadvantaged community may submit a petition to the appropriate entity (described in paragraph (2)) to prevent the proposed facility from being issued a permit to be constructed or to operate in that community.

(2) A petition under paragraph (1) shall be submitted in accordance with the following subparagraphs:

(A) In the case of a facility for the management of hazardous waste, the petition shall be submitted to the Administrator or, in the case of a State with an authorized program under section 3006, to the State.

(B) In the case of a facility for the management of municipal solid waste, the petition shall be submitted to the Administrator or, in appropriate cases, as determined under regulations implementing this section, to the State.

(2) Subject to paragraph (3), the EPA shall approve the petition if it is established that--

(A) the proposed facility will be located in a health, environmental or economically disadvantaged community; and

(B) the proposed facility may adversely affect--

(i) the human health of such community or a portion of such community; or

(ii) the air, soil, water, or other elements of the environment of such community or a portion of such community.

(3) After the petitioner has satisfied the requirement of paragraph (2), the EPA shall approve the petition only if the proponent(s) of the proposed facility establishes that --(A) there is no alternative location within the State for the proposed facility that poses fewer risks to human health and the environment than the proposed facility (according to standards for comparing the degree of risk to human health and the environment promulgated in regulations by the Administrator for purposes of this section); and(B) the proposed facility--

(i) will not release contaminants; or

(ii) will not engage in any activity that is likely to increase the cumulative impact of contaminants on any residents of the environmentally disadvantaged community; and

(iii) the project represents clear economic benefit to the community.

(4) ENDORSEMENT. If EPA has determined that there are no significant adverse impacts of environmental pollution on human health in a proposed area, and if a petitioner requests an advance designation of a proposed area, there shall be an endorsement on the siting or permitting of any new facility. A new facility may still be placed on the moratorium list if--

(1) the activity, due to its nature, and as determined by EPA, could negatively affect health at some future date;

The endorsement shall continue in effect in such an area until the Administrator determines, upon petition of any interested party, that the health-based levels identified pursuant to Section 8 have not been maintained at the area due to the activities of the covered facility.

(5) If more than one petition relating to the same facility is submitted, the petitions may be consolidated by the appropriate official to promote the efficient resolution and disposition of the petitions.

The city environmental justice bill incorporated the national language with

modifications.

Mr. Chairman, AAEA is prepared to provide any assistance needed in getting a New York City Environmental Justice Act passed. If we can be of assistance to you and the committee, please do not hesitate to contact us.

ATTACHMENT A

New York City Environmental Justice Act

Int. No. 404

By Council Member Barron

A Local Law to amend the administrative code of the city of New York to require city agencies to develop and implement policies and programs to ensure nondiscriminatory compliance with environmental, energy, health and safety laws, to ensure equal protection of the public health and to promote environmental justice and economic development in underdeveloped communities.

Be it enacted by the Council as follows:

Section 1. A new subchapter 10 is hereby added to chapter 1 of title 24 of the administrative code of the city of New York to read as follows:

Subchapter 10
Environmental Justice
§ 24-191 Definitions.
§ 24-192 Commission on environmental justice.
§ 24-193 Health, environmental research, data collection and analysis assessing disproportionate impact.
§ 24-194 Determination of affected and non-affected areas.
§ 24-195 Petitions relating to environmentally disadvantaged and advantaged communities.
§ 24-196 Study of affected and non-affected areas.
§ 24-197 Moratorium.
§ 24-198 Endorsement.
§ 24-199 Interagency environmental justice working group.
§ 24-199a Agency strategies.

§ 24-191. Definitions. For purposes of this section, the following terms shall have

the following meanings:

(1) "Affected area" shall mean any area determined by the Department of Environmental Protection to suffer disproportionately from negative health, environmental or economic impacts.

(2) "Brownfield" shall mean any previously developed and presently polluted area selected by local community designation and supported by Department of Environmental Protection analysis that is targeted for re-development.

(3) "City agency" shall mean (a) any city entity represented on the working group; (b) any other entity that conducts any city program or activity that substantially affects human health or the environment; or (c) any city agency that implements any program, policy or activity applicable to low-income residents.

(4) "Commissioner" shall mean the Commissioner of the Department of Environmental Protection.

(5) "Commission" shall mean the Commission on Environmental Justice.

(6) "Department" shall mean the Department of Environmental Protection.

(7) "Environmentally disadvantaged community" shall mean any area within two miles of the borders of a site on which a facility for the management of solid waste, including a facility for the management of hazardous waste, is proposed for construction and in which both of the following conditions are met, using the most recent data from the Census Bureau:

(a) the percentage of the population consisting of all individuals who are of African, Hispanic, Asian, Native American Indian, Pacific Island or Native Alaskan ancestry is greater than either: (i) the percentage of the population in the borough of all such individuals; or (ii) the percentage of the population in the community of all such individuals; or

(b) twenty percent or more of the population consists of individuals who are living at or below the poverty line, or the area has a per capita income of eighty percent or less of the national average for the most recent twelve month period for which statistics are available; and

(c) the area contains one or more of the following:(i) an operational facility for the management of hazardous waste; (ii) a facility for the management of hazardous waste that is no longer in operation but that formerly accepted hazardous waste; (iii) a site at which a release or threatened release of hazardous substances, within the meaning of the Comprehensive Environmental Response, Compensation and Liability Act, has occurred; (iv) a facility for the management of municipal solid waste; (v) a facility whose owner or operator is required to submit a toxic chemical release form under section 313 of the Emergency Planning and Community Right-to-Know Act of 1986, if the releases reported on such form are likely to adversely affect the health of the community or a portion of the community.

(8) "Environmental justice" shall mean equal protection from environmental and public health hazards for all people regardless of race, income, culture or social status.

(9) "Fair treatment" shall mean policies and practices that will minimize the likelihood that a minority or low-income community will bear a disproportionate share of the adverse environmental consequences, or be denied reasonable access to the environmental benefits resulting from a city program or policy.

(10) "Management," when used in connection with solid waste, including hazardous waste, shall mean treatment, storage, disposal, combustion, recycling or other handling of solid waste, but does not include any activities that take place in a materials recovery facility or any other facility that prepares, transfers, or utilizes non-hazardous recyclable materials for purposes other than energy recovery.

(11) "Pollution releasing facility," also known as "PRF," shall mean any facility that is permitted on the following list: Comprehensive Environmental Response, Compensation and Liability Act of 1980, also known as "CERCLA"; Resource Conservation Recovery Act, also known as "RCRA-Large"; Clean Air Act; Clean Water Act; Federal Insecticide, Fungicide and Rodenticide Act, also known as "FIFRA"; Emergency Planning and Community Right-To-Know Act of 1986, or any dangerous source of pollution that is determined by the local community and confirmed by DEP, or any facility that: (a) is subject to reporting requirements under the Emergency Planning and Community Right-To-Know Act of 1986; (b) generates, treats, stores or disposes of a hazardous waste as defined in section 3001 of the Solid Waste Disposal Act; (c) is subject to section 112 or 129 of the Clean Air Act; (d) is subject to sections 307 or 311 of the Federal Water Pollution Control Act; (e) is subject to the Federal Insecticide, Fungicide and Rodenticide Act; or (f) is subject to the requirements concerning material safety data sheets for hazardous chemicals under the Occupational Safety and Health Act of 1970.

(12) "Nonpollution releasing facility," also known as "NRF," shall mean any facility that is not permitted under the following: Comprehensive Environmental Response, Compensation and Liability Act of 1980, also known as "CERCLA"; Resource Conservation and Recovery Act, also known as "RCRA (large)"; Clean Air Act; Clean Water Act; Federal Insecticide, Fungicide and Rodenticide Act, also known as "FIFRA"; Emergency Planning and Community Right-to-Know Act of 1986; or any facility that is a source of pollution as determined by the local community and confirmed by the Department of Environmental Protection.

(13) "Protected area" shall mean any affected area protected by local community designation and supported by Department of Environmental Protection analysis.

(14) "Release" shall have the same meaning as used in section 101(22) of the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act of 1986, and shall also include any release which results in exposure to persons within a workplace.

(15) "Toxic chemicals" shall mean:

(a) All hazardous substances as defined in Section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980;

(b) All materials registered pursuant to the Federal Insecticide, Fungicide and Rodenticide Act;

(c) All chemicals subject to Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986;

(d) All contaminants identified in the Safe Drinking Water Act;

(e) All chemicals listed by the National Toxicology Program, also known as "NTP," as known or probable human carcinogens; and

(f) All materials subject to the requirements concerning material safety data sheets for hazardous chemicals under the Occupational Safety and Health Act of 1970.

§ 24-192. Commission on Environmental Justice. A commission shall be established to: (1) advise City agencies on environmental justice and related community issues; (2) review and analyze the impact of current city laws and policies on the issue of environmental justice; (3) assess the adequacy of city laws to address the issue of environmental justice; (4) coordinate children's programs with recommendations related to environmental justice; (5) develop criteria to assess whether communities in the city may be experiencing environmental justice issues; and (6) recommend options to the mayor for addressing issues, concerns or problems related to environmental justice that result from review, including prioritizing areas of the city that need immediate attention.

1. Composition. The commission shall consist of the following twenty members: a chairperson, to be designated by the mayor; the Department of Environmental Protection Commissioner, or the Commissioner's designee; the chairperson of the Council Environmental Protection Committee, or the chairperson's designee; the chairperson of the Council Land Use Committee, or the chairperson's designee; the chairperson of the Council Sanitation and Waste Management Committee, or the chairperson's designee; the chairperson of the Council Waterfronts Committee; the chairperson of the Council Parks and Recreation Committee; the chairperson of the Council Select Committee on Civil Rights; the Chairperson of the Council Select Committee on Community Development; a community board member from each borough; one member of an environmental justice organization; one member from an environmental organization; one member from the business community; one member from a health-related institution; and one member from the general public with interest or expertise in environmental justice issues. The following requirements shall be complied with:

(a) The term of each member shall be two years where, upon the conclusion of a term, members shall continue to serve until a successor is appointed. A member who is appointed after a term has begun shall serve

only for the rest of the term and until a successor is appointed;

(b) A member may not be appointed to more than two consecutive terms;

(c) The department shall provide staff for the commission;

(d) The commission shall meet at the times and places that the chairman determines;

(e) A majority of members of the commission shall constitute a quorum for the transaction of business;

(f) A member of the commission: (1) may receive compensation; and (2) is entitled to reimbursement for expenses under the applicable city rules and regulations.

2. Commission reporting requirement. On or before October 1 of each year, the commission shall submit to the mayor and the council and make available on the city's official website, an annual report detailing the commission's findings and recommendations.

§ 24-193. Health, environmental research, data collection and analysis assessing disproportionate impact. To the extent permitted by other applicable law, including section 552a of Title 5 of the USC, also known as the Privacy Act of 1974, the Commissioner of the Department of Environmental Protection, or the head of such other agency as the Mayor may direct, shall collect, maintain and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin or income. To the extent practicable and appropriate, city agencies shall use this information to determine whether City programs, policies and activities have disproportionately adverse health, environmental or economic effects on minority populations and low-income populations.

(1) In connection with the development and implementation of agency strategies, the Commissioner, or the head of other such city agency as the Mayor may direct, shall collect, maintain and analyze information on the race, national origin, and income level, and other accessible and appropriate information, for areas surrounding facilities or sites if such facilities or sites become the subject of a significant city environmental, administrative or judicial action.

(2) Impact from city facilities. The Commissioner, or head of such other City agency as the mayor may direct, shall collect, maintain and analyze information on the race, national origin and income level, and other accessible and appropriate information, for areas surrounding city facilities that are: (a)subject to the reporting requirements of the federal Emergency Planning and Community Right-to-Know Act as mandated in executive order no. 12856; and (b) expected to have a substantial environmental, health or economic effect on surrounding populations.

(3) Information sharing. In carrying out the responsibilities set forth in this section, each agency, to the extent practicable and appropriate, shall share information and eliminate unnecessary

duplication of efforts through the use of existing data systems and cooperative agreements among agencies and with community boards. Except as prohibited by other applicable law, information collected or maintained pursuant to this section shall be made available to the public.

(4) Public comment. Through public hearings and other public forums, City agencies shall provide minority populations and low-income populations the opportunity to participate in the development and implementation of measures pursuant to this section.

§ 24-194. Determination of affected and non-affected areas.

1. Determining health, environmental, economic effects. Within six months from the date this law takes effect, the Commissioner, in consultation with the department of health, shall determine the most appropriate designation to measure health-related affected and non-affected areas, including census blocks, census tracts or other appropriate geographic unit. The Commissioner shall determine the most appropriate designation to measure environmentally affected and non-affected areas, including census blocks, census tracks, or other appropriate geographic unit. The Commissioner, in consultation with the Department of City Planning, Economic Development Corporation, Department of Business Services and Office of the Corporation Counsel, shall determine the most appropriate designation to measure economically affected and non-affected areas, including census blocks, census tracks, neighborhoods, communities or other appropriate geographic unit.

2. Compilation of list. The Commissioner shall consider and utilize all appropriate and available data compiled pursuant to any health, environmental or economic regulatory authority and other sources, including but not limited to, available data on the presence of lead-based paint and toxic chemicals from mobile vehicles. For each appropriate geographic unit the Commissioner shall calculate and compile in a database:

a. the total weight of each toxic chemical released into the ambient environment, and whenever possible, shall adjust the estimates to account for the severity of health issues, toxicity of the chemicals and level of economic development;

b. the total weight of toxic chemicals released into waterways and land, and whenever possible, shall adjust the estimates to account for the severity of health issues, toxicity of the chemicals and level of economic development.

3. Within six months from the date this law takes effect, the commissioner shall review the methodology used to compile and summarize information collected under section 313 of the Emergency Planning and Community Right-to-Know Act, and publish for public comment, any proposed changes to the methodology necessary to calculate and compile the information required in subsection two of this section.

4. Publication of list. (1) Within twelve months from the date this law takes

effect, and every five years thereafter, the Commissioner shall publish a list, in rank order, of the findings on: the rates and demographics of illness by borough or geographic unit; the weight of toxic chemicals measured in each borough or geographic unit; and the level of economic development for each borough or geographic unit. (2) Within twelve months from the date this law takes effect, and every five years thereafter, the Commissioner shall publish a list of the geographic units with: the highest and lowest concentration of total illnesses and toxic chemical releases, with regard to the level of economic development.

5. The Commissioner shall revise and republish the list described in subsection (d)(2) of this section no later than five years after the date of the initial publication, and not less frequently than every five years thereafter, using data compiled during the preceding five-year period.

§ 24-195. Petitions Relating to Environmentally Disadvantaged and Advantaged Communities.

(1) Any person residing in any borough in which a new facility for the management of solid waste, including a new facility for the management of hazardous waste, is proposed for construction, may submit a petition to the appropriate entity to protest the proposed facility from being issued a permit or operating in that community. A petition under paragraph (1) shall be submitted in accordance with the following subparagraphs:

(a) In the case of a facility for the management of hazardous waste, the petition shall be submitted to the Commissioner.

(b) In the case of a facility for the management of municipal solid waste, the petition shall be submitted to the Commissioner or, in appropriate cases, as determined under regulations implementing this section, to the Department of Sanitation.

(2) The Department or other authorized agency shall disapprove the petition if it is established that:

(a) the proposed facility will be located in a non-affected community, and the proposed facility will not adversely affect the health of such community; or

(b) there is no reasonable alternative location within the State for the proposed facility that poses fewer risks to human health and the environment than the proposed location, according to standards for assessing the degree of risk to human health and the environment promulgated in regulations by the Commissioner for purposes of this section; and the proposed facility either: (i) will not release contaminants; and (ii)will not engage in any activity that is likely to increase the cumulative impact of contaminants on residents of environmentally disadvantaged communities; and (iii) the project represents clear economic benefit to the community.

§ 24-196. Study of affected and non-affected areas. (1) Within 24 months from the date this law takes effect, the Commissioner, in consultation with the Department of Sanitation, Department of Health, Department of Transportation, the Metropolitan Transit Authority, Department of City Planning, Economic

Development Corporation and Department of Business Services, shall evaluate and determine the most appropriate designation of environmentally affected and non-affected areas, either census blocks, census tracks, neighborhoods, communities or other appropriate geographic unit. The Commissioner, in consultation with the New York City Economic Development Corporation and the Department of Business Services, shall evaluate and determine the most appropriate designation of economically affected and non-affected areas, either census blocks, census tracks, neighborhoods, communities or other appropriate geographic unit, and shall issue for public comment a report identifying the nature and extent, if any, of acute and chronic impacts on human health, the environment or economy in affected areas as compared to less affected areas. Such impacts shall include, but not be limited to, cancer, birth defects, infant mortality rates, respiratory diseases, air, water, land, retail, institutional, commercial and industrial issues.

(2) For each designated geographic unit, the report shall seek to: (a) isolate the impacts of environmental pollution and uncontrolled releases from the effects of other factors such as health care availability, substance abuse or diet; (b) rank the relative risks posed by the toxic chemicals present in affected areas and by the varied sources of toxic chemicals, both individually and cumulatively; (c) suggest measures to remedy the impacts of pollution in high population density areas; (d) evaluate the levels below which release of toxic chemicals, either individually or cumulatively, must be reduced to avoid adverse impact on human health; and (e) determine the economic impact on such areas; as a result of the report in communities where the Commissioner has determined that adverse health, environmental or economic impacts exist DEP shall also make this information readily available to members of the community by providing information directly to the affected communities in the affected areas about the release of toxic chemicals, the potential effects of such exposure and potential economic impacts.

§ 24-197. Moratorium. (1) If the report finds toxic chemical emissions and environmental pollution in quantities sufficient to cause significant adverse effects on human health, the environment or the economy in an affected area, such area shall be designated as a protected area, and there shall be a moratorium on the siting or permitting of any new toxic chemical facility in any affected area.

(2) A new toxic chemical facility may be sited or permitted in such an affected area during this period only if:

(a) the need for the activity is approved by the appropriate governing entity;

(b) the owner or operator of the facility demonstrates to the Department that the facility will develop a plan to maintain a comprehensive pollution prevention program; and

(c) the facility demonstrates to the appropriate governing entity that it will minimize uncontrolled releases into the environment.

(3) The moratorium shall continue in effect in such a protected area until the Commissioner determines, based upon findings of fact to support the action

taken and upon petition of any interested party, that the levels of environmental pollution will not cause significant adverse effects on human health, the environment or the economy, and that such levels have been maintained at the affected area for such time period as the Commissioner determines is sufficient to restore healthful air quality levels.

§ 24-198. Endorsement. If the report does not find significant adverse impacts of environmental pollution on human health in a proposed area, and if a petitioner requests an advance designation for a proposed area, there shall be a Department endorsement on the siting or permitting of any new facility. A new facility may still be placed on the moratorium list if:

(1) The activity, as determined by the Department, could adversely affect health in such a manner that health effects will not be known or detected until a future date; an endorsement may continue in effect in such an area unless and until the Commissioner determines, upon petition of any interested party, that healthful air quality levels have not been maintained at the area due to the activities of the covered facility.

§ 24-199. Interagency environmental justice working group.

(1) Creation and composition. There is hereby established the Interagency Working Group on Environmental Justice, comprising the heads of the following executive agencies and offices, or their designees:

(a) Department of Environmental Protection;
(b) Department of City Planning;
(c) Department of Sanitation;
(d) Department of Transportation;
(e) Economic Development Corporation;
(f) Department of Business Services;
(g) Office of the Corporation Counsel;
(h) Metropolitan Transit Authority;
(i) Any other official of the city that the Mayor may designate;
(j) Council on the Environment of New York City;
(k) Administration for Children's Services; and
(l) Community Justice Exchange;

(2) Functions. The working group shall:

(a) Provide guidance to City agencies on criteria for identifying disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(b) Coordinate with, and provide guidance to, each city agency, to develop or revise environmental justice strategies and conduct and coordinate research, as required by this act, in order to ensure that the administration, interpretation and enforcement of programs, activities, and policies are undertaken in a consistent manner;

(c) Assist in coordinating data collection, maintenance and analysis required under this Act;
(d) Examine existing data and studies on environmental justice;
(e) Hold public meetings and otherwise solicit public participation and consider complaints;
(f) Develop interagency model projects on environmental justice that evidence cooperation among city agencies.

(3) Public participation. The working group shall:

(a) Hold public meetings and otherwise solicit public participation, as appropriate, for the purpose of fact-finding with regard to implementation of this act and prepare for public review a summary of the comments and recommendations provided; and
(b) Receive, consider, and in appropriate instances, conduct inquiries concerning complaints regarding environmental justice and the implementation of this Act by city agencies.

(4) Annual reports.

(a) Each fiscal year following enactment of this act, the working group shall submit to the Mayor, a report of the final environmental justice strategies of this act and annual progress made in implementing those strategies; and
(b) A copy of each report submitted to the mayor shall be submitted to the speaker of the council.

§ 24-199a. Agency strategies. Each city agency shall develop an agency-wide environmental justice strategy that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies or activities on minority populations and low-income populations.

1. Each strategy developed shall identify programs, policies, planning, public participation processes, rulemaking and enforcement activities related to human health or the environment that should be revised to:

i. Promote enforcement of all health and environmental statutes in areas with minority populations or low-income populations;
ii. Ensure greater public participation;
iii. Improve research and data collection relating to the health of, and environment of, minority populations and low income populations; and
iv. Identify differential patterns of use of natural resources among minority populations and low-income populations.

2. Each strategy developed shall include, where appropriate, a timetable for undertaking identified revisions.

§ 2. This local law shall take effect ninety days after its enactment into law.

ATTACHMENT B

Drafted by the Environmental Justice Coalition

Environmental Justice Act of 20__ (Introduced in Senate/House)

S./H.R._____

1- - th CONGRESS

2nd Session

S./H.R. _____

To establish a program to ensure nondiscriminatory compliance with environmental, health, and safety laws, to ensure equal protection of the public health and to promote economic development in underdeveloped communities. To require Federal agencies to develop and implement policies and practices that promote environmental justice, and for other purposes.

IN THE SENATE OF THE UNITED STATES

January___ (legislative day, January___), 20__

Mr./Ms_____ (for himself, Ms./Mr_____, and Mr./Ms._____) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works/Committee on Energy and Commerce

---

A BILL

To establish a program to ensure nondiscriminatory compliance with environmental, health, and safety laws, to ensure equal protection of the public health and to promote economic development in underdeveloped communities. To require Federal agencies to develop and implement policies and practices that promote environmental justice, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the `Environmental Justice Act of 2005'.

SEC. 2. FINDINGS.

The Congress finds that--

1. EPA does not have the authority to prevent the construction of a proposed polluting facility. EPA does not have the authority to approve the construction of a proposed nonpolluting facility. If subsequent to the issuance of an

operating permit the EPA were to find a civil rights violation, the EPA would have no power to stop the operation or even to provide any other form of relief to the victimized community.

2. EPA's only remedy against an environmental civil rights violating state is to attempt to cut off financial assistance to the violating state. EPA has never requested a cut-off of financial assistance to a state for such a violation. Moreover, the cut off of such funds can only occur if the U.S. Congress does not object.

3. Courts have ruled that victims of environmental racial discrimination have no standing to privately enforce federal agency civil rights regulations.

4. A community may file a civil rights complaint with the EPA only after a state has already issued a permit to operate the facility being opposed.

5. Of the 130 environmental justice complaints filed by minority communities across the nation between 1992 and 2002, only four (4) have been fully investigated and EPA has ruled against all of those complainants. And even if EPA ruled in favor of such complainants for an environmental civil rights violation, the agency would be powerless to provide any relief to the complaining community.

6. Although environmental and health data of toxic chemical releases are not routinely collected and analyzed by income and race, racial and ethnic minorities and lower income Americans may be disproportionately exposed to toxic chemicals in their residential and workplace environments.

7. Victims of civil rights discrimination may file a complaint with the EPA. (40 C.F.R. 7.120)

8. The EPA will accept environmental civil rights complaints but only after a State has granted an operating permit. (40 C.F.R. 7.120 (b)(2))

9. The EPA does not investigate whether State departments of environment are complying with its civil rights obligation. (40 C.F.R. 7.80)

10. The EPA cannot provide any effective relief to a civil rights complainant under its own regulations.

11. The sole relief available for victims of environmental civil rights violations is through a private action against a state if the community can prove intentional discrimination. To date, no such action has been successful. [Examples]

SEC. 3. PURPOSES AND POLICIES.

The purposes of this Act are--

3. To provide a **citizen lawsuit provision** to allow potential **victims** of environmental race discrimination to enforce the EJA and the regulations promulgated thereunder.

4. To provide a **citizen endorsement provision** to allow potential **beneficiaries** of nonpolluting economic development to enforce the EJA and the regulations promulgated thereunder.

5. To establish the criteria for determining potential violations and endorsable violations based on comparative community health statistics, comparative community pollution sources and comparative community economic development.

6. To address: a) acts of discrimination, b) existing comparative community health, c) existing comparative community pollution sources, d) existing comparative economic analyses and planned economic development and cumulative impacts.

7. To direct to accept and investigate all community complaints and recommendations related to development projects, whether filed before or after issuance of construction and operating permits.

8. To empower citizens, and EPA at the request of citizens, to obtain injunctions to prevent construction and operation of discriminatory polluting facilities and operations that violate the EJA regulations. To empower citizens, and EPA at the request of citizens, to endorse the construction and operation of nondiscriminatory nonpolluting facilities and operations that do not violate EJA regulations.

9. To provide a definitive permitting process regarding demographics for citizens, developers, government agencies and investors.

10. To direct the U.S. Environmental Protection Agency (EPA) to develop EJA regulations.

11. To establish a new EPA **Office of Health Protection (OHP)** to investigate community health statistics and to coordinate research and related activities with the following offices.

12. To expand the EPA **Office of Environmental Justice (OEJ)** to provide adequate staff and resources to investigate community pollution sources.

13. To direct the EPA **National Center for Environmental Economics (NCEE)** to investigate community economic impacts.

14. To establish the Office of Health Protection as the lead office for coordinating scientific research activities with OEJ and NCEE. The OHP, in consultation with OEJ and NCEE, will develop criteria for establishing disparate community impacts related to proposed projects. These offices will provide appropriate outreach to the public, States, counties and cities to assure that they are aware of the availability of this service. EPA, through the OHP, in consultation with OEJ and NCEE, will provide timely reports to communities requesting assistance in evaluating proposed facilities.

15. To rename and expand EPA's current Office of Children's Health Protection to the Office of Health Protection. the OHP would provide research and policy development to protect all vulnerable populations: children, low-income and disadvantaged minority communities and aging populations. The new OHP will also coordinate the 2002 Memorandum of Understanding (MOU) between the Department of Health and Human Services (HHS) and EPA on developing a **nationwide environmental health tracking network**. The Office of Health Protection, in addition to collecting health statistics, will research, analyze, develop and provide to the public, requesting communities and individuals, the latest **science policy** information and decisions that impact the environment and health of minority and disadvantaged communities. The OHP, in consultation with NCEE, will also establish and maintain information that provides an objective basis for assessment of health effects by income and race;

16. To identify those areas with the largest releases of toxic chemicals to the air, land, water, and workplace. To identify those areas that are subject to the most severe loadings of toxic chemicals, through all media.

17. To require the collection of data on environmental health effects so that impacts on different individuals or groups can be understood. To assess the health effects that may be caused by emissions in those areas of highest environmental impact;

18. To ensure that groups or individuals residing within Affected Areas have the opportunity and the resources to participate in the technical process which will determine the possible existence of adverse health impacts;

19. To identify those activities in high environmental impact areas found to have significant adverse impacts on human health;

20. To incorporate environmental equity considerations into planning and implementation of all Federal environmental programs and statutes. To require that actions be taken by authorized Federal agencies to curtail those activities found to be having significant adverse impacts on human health in those areas of highest impact; and

21. To ensure that significant adverse health impacts that may be associated with environmental pollution in the United States are not distributed inequitably.

22. To focus Federal agency attention on the environmental and human health conditions in minority and low-income communities;

23. To ensure that all Federal agencies develop practices that promote environmental justice;

24. To increase cooperation and coordination among Federal agencies as they seek to achieve environmental justice;

25. To provide minority, low-income, and Native American communities greater access to public information and opportunity for participation in decisionmaking affecting human health and the environment;

26. To mitigate the inequitable distribution of the burdens and benefits of Federal programs having significant impact on human health and the environment; and

27. To hold Federal agencies accountable for the effects of their projects and programs on all communities.

SEC. 4. DEFINITIONS.

For the purposes of this Act:

(1) The term 'Administrator' means the Administrator of the United States Environmental Protection Agency.

(2) The term 'Affected Area' means any area determined by EPA, pursuant to other provisions of this Act, that suffers disproportionately from negative health, environmental or economic impacts.

(3) The term 'Protected Area' means any Affected Area protected by local community designation and supported by EPA analysis.

(4) The term 'Brownfield' means any previously developed and currently polluted area selected by local community designation and supported by EPA analysis that is targeted for redevelopment.

(5) The term 'Pollution Releasing Facility' (PRF) means any facility that is permitted on the following list: Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), Resource Conservation Recovery Act (RCRA-Large), Clean Air Act, Clean Water Act, Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Emergency Planning and Community Right-to-Know Act of 1986 or any dangerous undocumented source of pollution that is determined by the local community and confirmed by EPA. Specifically, any facility:

(A) subject to reporting requirements under the Emergency Planning and Community Right-to-Know Act of 1986;

(B) that generates, treats, stores or disposes of a hazardous waste as defined in section 3001 of the Solid Waste Disposal Act;

(C) subject to section 112 or 129 of the Clean Air Act;

(D) subject to sections 307 or 311 of the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.);

(E) subject to the Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C. 136 et seq.); or

(F) subject to the requirements concerning material safety data sheets for hazardous chemicals under the Occupational and Safety and Health Act of 1970 (15 U.S.C. 615 et seq.). For the purpose of this Act the term `toxic chemical facility' shall include any facility that releases a toxic chemical.

(6) The term 'Nonpollution Releasing Facility' (NRF) means any facility that is not permitted on the following list: CERCLA, RCRA (Large), Clean Air Act, Clean Water Act, FIFRA, Emergency

Planning and Community Right-to-Know Act of 1986 or is not an undocumented source of pollution as determined by the local and confirmed by EPA. An NRF does not include specific items listed under Section 4, Part 5.

(7) The term `toxic chemicals' means--

(A) all hazardous substances as defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (42 U.S.C. 9601(14);

(B) all materials registered pursuant to the Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C. 136 et seq.);

(C) all chemicals subject to section 313 of the Emergency Planning and Community Right-to-Know Act of 1986;

(D) all contaminants identified in the Safe Drinking Water Act (42 U.S.C. 300g-1);

(E) all chemicals listed by the National Toxicology Program as known or probable human carcinogens; and

(F) all materials subject to the requirements concerning material safety data sheets for hazardous chemicals under the Occupational and Safety and Health Act of 1970 (15 U.S.C. 615 et seq.).

(8) The term `release' shall have the same meaning as used in section 101(22) of the Comprehensive Environmental Response, Compensation and Liability Act of 1990 as amended by the Superfund Amendments and Reauthorization Act of 1986, and shall also include any release which results in exposure to persons within a workplace.

(9) The term `toxic chemical facility' means any facility means any facility listed under Pollution Releasing Facility as defined in Sec. 4 (5).

(10) The term 'environmental justice' means the fair treatment of people of all races, cultures, and socioeconomic groups with respect to the development, adoption, implementation, and enforcement of laws, regulations, and policies affecting the environment.

(11) The term `fair treatment' means policies and practices that will minimize the likelihood that a minority, low-income, or Native American community will bear a disproportionate share of the adverse environmental consequences, or be denied reasonable access to the environmental benefits, resulting from implementation of a Federal program or policy.

(12) The term `Federal agency' means-

(A) each Federal entity represented on the Working Group;

(B) any other entity that conducts any Federal program or activity that substantially affects human health or the environment; and

(C) each Federal agency that implements any program, policy, or activity applicable to Native Americans.

(13) The term `Working Group' means the interagency working group established by Section 11.

(14) The term `Advisory Committee' means the advisory committee established by Section 13.

(15) The term `environmentally disadvantaged community' means an area within 2 miles of the borders of a site on which a facility for the management of solid waste (including a facility for the management of hazardous waste) is proposed to be constructed and in which both of the following conditions are met, determined using the most recent data from the Bureau of the Census:

(A)(i) The percentage of the population consisting of all individuals who are of African, Hispanic, Asian, Native American Indian, Pacific Island, or Native Alaskan ancestry is greater than either--

(I) the percentage of the population in the State of all such individuals, or

(II) the percentage of the population in the United States of all such individuals; or

(ii)(I) twenty percent or more of the population consists of individuals who are living at or below the poverty line, or

(II) the area has a per capita income of 80 percent or less of the national average, for the most recent 12-month period for which statistics are available.

(B) The area contains one or more of the following:

(i) A facility for the management of hazardous waste that is in operation.

(ii) A facility for the management of hazardous waste that is no longer in operation but that formerly accepted hazardous waste.

(iii) A site at which a release or threatened release of hazardous substances (within the meaning of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980) has occurred.

(iv) A facility for the management of municipal solid waste.

(v) A facility whose owner or operator is required to submit a toxic chemical release form under section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (42 U.S.C. 11023), if the releases reported on such form are likely to adversely affect the human health of the community or portion of the community, as determined by the entity that would be appropriate under subsection (a)(2) if a petition were filed with respect to the facility.

(16) The term `management', when used in connection with solid waste (including hazardous waste), means treatment, storage, disposal, combustion, recycling, or other handling of solid waste, but does not include any activities that take place in a materials recovery facility or any other facility that prepares, transfers, or utilizes nonhazardous recyclable materials for purposes other than energy recovery.

(17) The terms `release' and `contaminant' have the meanings prescribed by the Administrator for purposes of this section.

SEC. 5. IDENTIFICATION OF AFFECTED AND NONAFFECTED AREAS

(a) DETERMINATION OF IMPACTED AND NONIMPACTED AREAS- Within six months after the date of enactment, the Administrator in consultation with the Agency for Toxic Substances and Disease Registry, Centers for Disease Control, the National Institute for Environmental Health Sciences, the National Center for Health Statistics and the Bureau of the Census, shall determine the most appropriate designation of health-related Affected and Nonaffected Areas, either census blocks, census tracks, neighborhoods, communities, cities, counties, States or other appropriate geographic unit. The Administrator shall determine the most appropriate designation of environmentally Affected and Nonaffected Areas, either census blocks, census tracks, neighborhoods, communities, cities, counties, States or other appropriate geographic unit. The Administrator in consultation with the Department of Commerce, Department of Labor, Department of Treasury and the Bureau of the

Census, shall determine the most appropriate designation of economically Affected and Nonaffected areas, either census blocks, census tracks, neighborhoods, communities, cities, counties, States or other appropriate geographic unit.

(b) PUBLICATION OF LIST- Within twelve months after the date of enactment of this Act, the Administrator shall publish a list, in rank order, of the total demographic of illnesses, weight of toxic chemicals released in each county and level of economic development for the established geographic unit in the United States during the most recent five-year period for which data are available. If less than five years of data are available the Administrator shall use available data until further information is reported.

(c) COMPILATION OF LIST- (1) In compiling the list under subsection (a), the Administrator shall consider and utilize all appropriate and available data compiled pursuant to any health, environmental or economic regulatory authority and other sources, including available data on the presence of lead-based paint and toxic chemicals from mobile vehicles.

(2) For each appropriate geographic unit the Administrator shall calculate and compile in a data base--

(A) the total weight of toxic chemicals released into the ambient environment;

(B) the total weight of toxic chemicals released into each environmental media (air, water, land, workplace); and

(C) the total weight of each toxic chemical released into the ambient environment, and into each environmental media (air, water, land, workplace);

and whenever possible shall adjust the estimates of each of the items in subparagraphs (A) through (C) to account for the severity of health issues, toxicity of the toxic chemicals and level of economic development.

(3) Within six months after the date of enactment the Administrator shall review the methodology used to compile and summarize information collected under section 313 of the Emergency Planning and Community Right-to-Know Act, and publish for public comment any proposed changes to the methodology necessary to calculate and compile the information required in paragraph (1).

(4) The Administrator shall revise and republish the list described in subsection (c) by the date that is five years after the date of initial publication, and not less frequently than every five years thereafter, using data compiled during the preceding five-year period.

(a) AFFECTED AND NONAFFECTED AREAS- (1) Within twelve months after the date of enactment, and every five years thereafter, the Administrator shall publish a list of the one hundred counties or other appropriate geographic unit with the highest and lowest total illnesses, toxic chemical releases and economic development based on the list

published in subsection (b). Such counties or other appropriate geographic unit shall be designated as `Affected or Nonaffected Areas'.

SEC. 6. TECHNICAL ASSISTANCE GRANTS.

(a) IN GENERAL- Subject to appropriations, and in accordance with rules promulgated by the Secretary of Health and Human Services in consultation with the Administrator, the Secretary may award a grant to any individual or group of individuals who may be affected by a release or threatened release of a toxic chemical from any toxic chemical facility in an environmental high impact area.

(b) GRANT REQUIREMENTS- (1) A grant awarded under this section shall--

(A) be designed to facilitate access by representatives of environmental high impact areas to the activities that involve public participation under this Act and any other related law.

(B) be used to obtain technical assistance; and

(C) be in an amount not to exceed $50,000.

(2) Each grant recipient shall be required, as a condition of the grant, to pay a non-Federal share equal to 20 percent of the grant amount. The Administrator may waive the 20 percent contribution requirement if the grant recipient demonstrates financial need to the satisfaction of the Administrator. Not more than one grant may be made with respect to each environmental high impact area for the period of a grant (as determined by the Administrator). At the end of the period, a grant may be renewed if the Administrator determines that the renewal is necessary to facilitate public participation.

(3) Grants under this subsection shall be considered to be grants under section 117(e) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 as amended by the Superfund Amendments and Reauthorization Act of 1986, and shall be funded in the same manner.

SEC. 7. PETITION RELATING TO ENVIRONMENTALLY DISADVANTAGED COMMUNITIES.

(a) RIGHT TO PETITION- (1) Any citizen residing in a State in which a new pollution releasing facility for the management of solid waste (including a new facility for the management of hazardous waste) is proposed to be constructed in an environmentally disadvantaged community may submit a petition to the appropriate entity (described in paragraph (2)) to prevent the proposed facility from being issued a permit to be constructed or to operate in that community.

(2) A petition under paragraph (1) shall be submitted in accordance with the following subparagraphs:

(A) In the case of a facility for the management of hazardous waste, the petition shall be submitted to the Administrator or, in the case of a State with an authorized program under section 3006, to the State.

(B) In the case of a facility for the management of municipal solid waste, the petition shall be submitted to the Administrator or, in appropriate cases, as determined under regulations implementing this section, to the State.

(2) Subject to paragraph (3), the EPA shall approve the petition if it is established that--

(A) the proposed facility will be located in a health, environmental or economically disadvantaged community; and

(B) the proposed facility may adversely affect--

(i) the human health of such community or a portion of such community; or

(ii) the air, soil, water, or other elements of the environment of such community or a portion of such community.

(3) After the petitioner has satisfied the requirement of paragraph (2), the EPA shall approve the petition only if the proponent(s) of the proposed facility establishes that --(A) there is no alternative location within the State for the proposed facility that poses fewer risks to human health and the environment than the proposed facility (according to standards for comparing the degree of risk to human health and the environment promulgated in regulations by the Administrator for purposes of this section); and(B) the proposed facility--

(i) will not release contaminants; or

(ii) will not engage in any activity that is likely to increase the cumulative impact of contaminants on any residents of the environmentally disadvantaged community; and

(iii) the project represents clear economic benefit to the community.

(4) ENDORSEMENT. If EPA has determined that there are no significant adverse impacts of environmental pollution on human health in a proposed area, and if a petitioner requests an advance designation of a proposed area, there shall be an endorsement on the siting or permitting of any new facility. A new facility may still be placed on the moratorium list if--

(1) the activity, due to its nature, and as determined by EPA, could negatively affect health at some future date;

The endorsement shall continue in effect in such an area until the Administrator determines, upon petition of any interested party, that the health-based levels identified pursuant to Section 8 have not been maintained at the area due to the activities of the covered facility.

(5) If more than one petition relating to the same facility is submitted, the petitions may be consolidated by the appropriate official to promote the efficient resolution and disposition of the petitions.

SEC. 8. MORATORIUM.

If the report under Section 8 finds significant adverse impacts of environmental pollution on human health, environment or economy in Affected Area, there shall be a moratorium on the siting or permitting of any new toxic chemical facility in any Affected Area shown to emit toxic chemicals in quantities found to cause significant adverse impacts on human health. Such area shall be designated as a Protected Area. A new toxic chemical facility may be cited or permitted in such an Affected Area during this period only if--

(1) the need for the activity is approved by appropriate governing entity;

(2) the owner or operator of the facility demonstrates to EPA that the facility will develop a plan and maintain a comprehensive plan and ma pollution prevention program; and

(3) the facility demonstrates to the appropriate governing entity that it will minimize uncontrolled releases into the environment.

The moratorium shall continue in effect in such a Protected Area until the Administrator determines, upon petition of any interested party, that the health-based levels identified pursuant to section 401(5) have been attained at the Affected Area.

SEC. 9. INTERAGENCY ENVIRONMENTAL JUSTICE WORKING GROUP.

(a) CREATION AND COMPOSITION- There is hereby established the Interagency Working Group on Environmental Justice, comprising the heads of the following executive agencies and offices, or their designees:

(1) The Department of Defense.
(2) The Department of Health and Human Services.
(3) The Department of Housing and Urban Development.
(4) The Department of Labor.
(5) The Department of Agriculture.
(6) The Department of Transportation.
(7) The Department of Justice;
(8) The Department of the Interior.
(9) The Department of Commerce.
(10) The Department of Energy.
(11) The Environmental Protection Agency.
(12) The Office of Management and Budget.
(13) The Office of Science and Technology Policy.
(14) The Office of the Deputy Assistant to the President for Environmental Policy.
(15) The Office of the Assistant to the President for Domestic Policy.
(16) The National Economic Council.
(17) The Council of Economic Advisers.
(18) Any other official of the United States that the President

may designate.

(b) FUNCTIONS- The Working Group shall--

(1) provide guidance to Federal agencies on criteria for identifying disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(2) coordinate with, provide guidance to, and serve as a clearinghouse for, each Federal agency as it develops or revises an environmental justice strategy as required by this Act, in order to ensure that the administration, interpretation and enforcement of programs, activities, and policies are undertaken in a consistent manner;

(3) assist in coordinating research by, and stimulating cooperation among, the Environmental Protection Agency, the Department of Health and Human Services, the Department of Housing and Urban Development, and other Federal agencies conducting research or other activities in accordance with section 7;

(4) assist in coordinating data collection, maintenance, and analysis required by this Act;

(5) examine existing data and studies on environmental justice;

(6) hold public meetings and otherwise solicit public participation and consider complaints as required under subsection (c);

(7) develop interagency model projects on environmental justice that evidence cooperation among Federal agencies; and

(8) in coordination with the Department of the Interior and after consultation with tribal leaders, coordinate steps to be taken pursuant to this Act that affect or involve federally-recognized Indian Tribes.

(c) PUBLIC PARTICIPATION- The Working Group shall--

(1) hold public meetings and otherwise solicit public participation, as appropriate, for the purpose of fact-finding with regard to implementation of this Act, and prepare for public review a summary of the comments and recommendations provided; and

(2) receive, consider, and in appropriate instances conduct inquiries concerning complaints regarding environmental justice and the implementation of this Act by Federal agencies.

(d) ANNUAL REPORTS- (1) Each fiscal year following enactment of this Act, the Working Group shall submit to the President, through the Office of the Deputy Assistant to the President for Environmental Policy and the Office of the Assistant to the

President for Domestic Policy, a report that describes the implementation of this Act, including, but not limited to, a report of the final environmental justice strategies described in section 6 of this Act and annual progress made in implementing those strategies.

(2) The President shall transmit to the Speaker of the House of Representatives and the President of the Senate a copy of each report submitted to the President pursuant to paragraph (1).

(a) CONFORMING CHANGE- The Interagency Working Group on Environmental Justice established under Executive Order No. 12898, dated February 11, 1994, is abolished.

SEC. 10. FEDERAL AGENCY STRATEGIES.

(a) AGENCY-WIDE STRATEGIES- Each Federal agency shall develop an agency-wide environmental justice strategy that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

(b) REVISIONS- Each strategy developed pursuant to subsection (a) shall identify programs, policies, planning, and public participation processes, rulemaking, and enforcement activities related to human health or the environment that should be revised to--

(1) promote enforcement of all health and environmental statutes in areas with minority populations, low-income populations, or Native American populations;

(2) ensure greater public participation;

(3) improve research and data collection relating to the health of and environment of minority populations, low-income populations, and Native American populations; and

(4) identify differential patterns of use of natural resources among minority populations, low-income populations, and Native American populations.

(b) TIMETABLES- Each strategy developed pursuant to subsection (a) shall include, where appropriate, a timetable for undertaking revisions identified pursuant to subsection .

SEC. 11. FEDERAL ENVIRONMENTAL JUSTICE ADVISORY COMMITTEE.

(a) ESTABLISHMENT- There is established a committee to be known as the `Federal Environmental Justice Advisory Committee'.

(b) DUTIES- The Advisory Committee shall provide independent advice and recommendations to the Environmental Protection Agency and the Working Group on areas relating to environmental justice, which may include any of the following:

(1) Advice on Federal agencies' framework development for integrating socioeconomic programs into strategic planning, annual planning, and management accountability for achieving environmental justice results agency-wide.

(2) Advice on measuring and evaluating agencies' progress, quality, and adequacy in planning, developing, and implementing environmental justice strategies, projects, and programs.

(3) Advice on agencies' existing and future information management systems, technologies, and data collection, and the conduct of analyses that support and strengthen environmental justice programs in administrative and scientific areas.

(4) Advice to help develop, facilitate, and conduct reviews of the direction, criteria, scope, and adequacy of the Federal agencies' scientific research and demonstration projects relating to environmental justice.

(5) Advice for improving how the Environmental Protection Agency and others participate, cooperate, and communicate within that Agency and between other Federal agencies, State or local governments, federally recognized Tribes, environmental justice leaders, interest groups, and the public.

(6) Advice regarding the Environmental Protection Agency's administration of grant programs relating to environmental justice assistance (not to include the review or recommendations of individual grant proposals or awards).

(7) Advice regarding agencies' awareness, education, training, and other outreach activities involving environmental justice.

(c) ADVISORY COMMITTEE- The Advisory Committee shall be considered an advisory committee within the meaning of the Federal Advisory Committee Act (5 U.S.C. App.).

(d) MEMBERSHIP- The Advisory Committee shall be composed of at least 25 members appointed by the President. Members shall include representatives of--

(1) community-based groups;

(2) industry and business;

(3) academic and educational institutions;

(4) State and local governments, federally recognized tribes, and indigenous groups; and

(5) nongovernmental and environmental groups.

(e) MEETINGS- The Advisory Committee shall meet at least twice annually. Meetings shall occur as needed and approved by the Director of the Office of Environmental Justice of the Environmental Protection Agency, who shall serve as the officer required to be appointed under section 10(e) of the Federal Advisory Committee Act (5 U.S.C. App.) with respect to the Committee (in this subsection referred to as the `Designated Federal Officer'). The Administrator of the Environmental Protection Agency may pay travel and per diem expenses of members of the Advisory Committee when determined necessary and appropriate. The Designated Federal Officer or a designee of such Officer shall be present at all meetings, and each meeting will be conducted in accordance with an agenda approved in advance by such Officer. The Designated Federal Officer may adjourn any meeting when the Designated Federal Officer determines it is in the public interest to do so. As required by the Federal Advisory Committee Act, meetings of the Advisory Committee shall be open to the public unless the President determines that a meeting or a portion of a meeting may be closed to the public in accordance with subsection (c) of section 552b of title 5, United States Code.

(f) DURATION- The Advisory Committee shall remain in existence until otherwise provided by law.

SEC. 12. HUMAN HEALTH AND ENVIRONMENTAL RESEARCH, DATA COLLECTION AND ANALYSIS.

(a) DISPROPORTIONATE IMPACT- To the extent permitted by other applicable law, including section 552a of title 5, United States Code, popularly known as the Privacy Act of 1974, the Administrator of the Environmental Protection Agency, or the head of such other Federal agency as the President may direct, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practical and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health, environmental or economic effects on minority populations and low-income populations.

(b) INFORMATION RELATED TO NON-FEDERAL FACILITIES- In connection with the development and implementation of agency strategies in section 4, the Administrator of the Environmental Protection Agency, or the head of such other Federal agency as the President may direct, shall collect, maintain, and analyze information on the race, national origin, and income level, and other readily accessible and appropriate information, for areas surrounding facilities or sites expected to have a substantial environmental, human health, or economic effect on the surrounding populations, if such facilities or sites become the subject of a substantial Federal environmental administrative or judicial action.

(c) IMPACT FROM FEDERAL FACILITIES- The Administrator of the Environmental Protection Agency, or the head of such other Federal agency as the President may direct, shall collect, maintain, and analyze information on the race, national origin, and income level, and other readily accessible and appropriate information, for areas surrounding Federal facilities that are--

(1) subject to the reporting requirements under the Emergency Planning and Community Right-to-Know Act (42 U.S.C. 11001 et seq.) as mandated in Executive Order No. 12856; and

(2) expected to have a substantial environmental, human health, or economic effect on surrounding populations.

(d) INFORMATION SHARING- (1) In carrying out the responsibilities in this section, each Federal agency, to the extent practicable and appropriate, shall share information and eliminate unnecessary duplication of efforts through the use of existing data systems and cooperative agreements among Federal agencies and with State, local, and tribal governments.

(e) PUBLIC COMMENT- Federal agencies shall provide minority populations and low-income populations the opportunity to participate in the development, design, and conduct of activities undertaken pursuant to this section.

FOR THE RECORD

Testimony of State Senator Liz Krueger
Before the Environmental Protection Committee
Air quality impacts and ways to measure and address them in NYC environmental justice communities.
February 28th, 2014

Good afternoon. I am State Senator Liz Krueger and I represent the 28th State Senate District, encompassing communities on the East Side and Midtown of Manhattan. Thank you for the opportunity to provide testimony today on the serious concerns I have regarding the potential impact on air quality of the proposed construction and operation of a Marine Transfer Station (MTS) at East 91st Street as part of the City's Solid Waste Management Plan (SWMP).

As a result of traffic congestion, old building stock using oil burning boilers, population density, and other contributing factors, the neighborhoods surrounding the 91st St. Marine Transfer Station have a long history of suffering from some of the poorest air quality in our City. The Stanley Isaacs Houses, one of the largest NYCHA projects in Manhattan, is less than 300 ft. from the entrance ramp to the 91st St. MTS where diesel burning garbage trucks would line up, idle, and spew exhaust into the surrounding community. The implementation of the 91st St. MTS would create a *new* health hazard near low income housing already suffering from poor air quality.

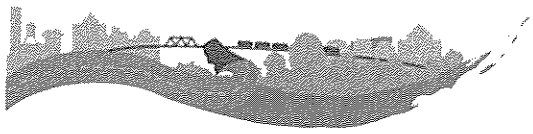
Not only is the area home to low income housing, but the ramp to the 91st St. MTS bisects the playing fields of Asphalt Green, where young, developing lungs from all around the City will be acutely exposed to these same pollutants. With dozens of schools sending thousands of children to Asphalt Green for recreational activities each week, permitting diesel-fuel trucks and other heavy polluters to constantly idle nearby imperils a population particularly susceptible to respiratory ailments.

Put simply, the principles of environmental justice are not met through the implementation of the 91st St. MTS. On the contrary, the conditions against which I and other environmental justice proponents have fought over the years will be worsened. Instead of alleviating a problem at the root of the environmental justice movement, we would be adding to the burden already placed on low income communities and children around the City. Creating a new example of environmental *injustice* in no way helps the cause, and I urge the members of this committee to further examine the issue of poor air quality effecting the discussed area.

In addition to stricter recycling regulations and the multitude of other environmentally friendly possible means of trash removal, a more responsible and worthwhile endeavor for the use of funds currently reserved for the construction of the 91st St. MTS, would be to implement a City wide "clean garbage truck pilot program".

I implore this committee to take the concerns outlined above into account when addressing possible ways to improve air quality in the City and specifically in neighborhoods especially effected by burning of fossil fuels.

Thank you again for the opportunity to submit testimony on these important issues.



SOUTHERN BRONX RIVER WATERSHED ALLIANCE
and a New Vision for the South Bronx

Testimony of the Southern Bronx River Watershed Alliance
on Air Quality before the City Council Committee on Environmental Protection
February 28, 2014

My name is Dave Powell and I am the Coordinator of the Southern Bronx River Watershed Alliance. Our member organizations are Mothers on the Move, Nos Quedamos, Pratt Center for Community Development, The POINT CDC, Sustainable South Bronx, Tri-State Transportation Campaign and Youth Ministries for Peace and Justice. Our mission is to advance a community-based transportation and land use plan for social and environmental justice in the South Bronx.

For over six decades, the transportation network and highway infrastructure of the South Bronx have produced negative health, safety and economic outcomes for residents. The South Bronx is host to the Hunts Point Food Distribution Center, the largest food distribution center in the nation. With no direct connection to any highway, the 15,000+ daily truck trips associated with the Center must use neighborhood streets to enter and exit Hunts Point, causing health and safety issues for residents, aggravation for truck drivers and lost productivity for local businesses. The current roadway configuration contributes to some of the highest asthma rates in the United States and severely compromises pedestrian safety, particularly around the Bruckner and Sheridan expressways.

In 2006, the Alliance convened a series of neighborhood-based charrettes to address the these issues, emerging with a series of transportation and land use priorities which came to be known as the Community Plan. In December 2013, the NYC Dept. of Transportation and the NYC Dept. of City Planning completed The Sheridan Expressway-Hunts Point Transportation and Land Use Study (SEHP Study). The recommendations from the SEHP Study largely mirror long-standing community priorities for the area. If implemented, these recommendations will dramatically improve resident health and pedestrian safety.

The City recommendations revolve around three large-scale improvements:

- Construction of ramps for direct vehicular access from the Bruckner Expressway to the Hunts Point peninsula, home to the Food Distribution Center and other businesses (**slide 1**),
- Closure of two Sheridan ramps that pour truck traffic into busy pedestrian intersections; Hunts Point Avenue/Bruckner Boulevard and Westchester/Whitlock Avenues (**slide 2**),
- Conversion of the Sheridan Expressway – an incomplete Robert Moses-era highway – into a boulevard that calms traffic and allows residential access to the Bronx River waterfront (**slides 3 and 4**).

These and the other changes recommended by the SEHP Study team would take thousands of commercial vehicles off of local streets – reducing diesel emissions, especially in proximity to schools and housing where they are most harmful, improve respiratory health, increase pedestrian safety, create better access to green spaces and create the potential for affordable

housing and local economic development – all of which are desperately needed in the South Bronx.

However, there are no guarantees that the recommendations will be implemented. Implementation requires commitments from both Mayor de Blasio and Governor Cuomo.

For Mayor de Blasio and the City Council, these recommendations provide a clear blueprint for improving air quality and respiratory health in the South Bronx. Constructing ramps from the Bruckner directly onto Oak Point Avenue in Hunts Point will get trucks off local streets, where they create a physical threat to pedestrians, act as barrier to the Bronx River and compromise the respiratory health of residents. No place is this intervention needed more than in the Hunts Point neighborhood where one out of every three children is diagnosed with asthma.

With a car ownership rate of well under 30%, the South Bronx is a majority pedestrian and public transit area, yet our streets are among the most dangerous and congested in the City. Air quality in the area can improve, but only with decisive action from the City and State to address the current highway-dominated transportation network.

We are excited to be working with Council Members Arroyo and Palma who have recently introduced Resolution 15 (**attached**), calling on the State to implement the SEHP Study recommendations. This resolution has been referred to the Transportation Committee and we are hopeful that it will be passed quickly and unanimously to send a strong message to Albany that the New York City Council wants expeditious implementation of health and safety measures on some of New York City's most dangerous and polluted streets.

We ask that each member of this Committee support Resolution 15 when presented for vote to the entire City Council to implement these critical environmental improvements for the South Bronx. We must together seize the current moment in which Hunts Point businesses, South Bronx community groups and elected officials have forged consensus, in order to bring health, safety and economic improvements to communities that have endured the burdens of the current highway network for far too long.

###

CONTACT: Dave Powell, SBRWA Coordinator: dave.sbrwa@gmail.com 718.328.5622 x17

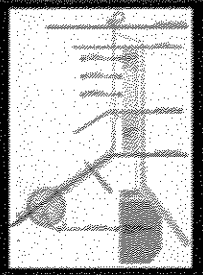
City Recommendation: Direct Access

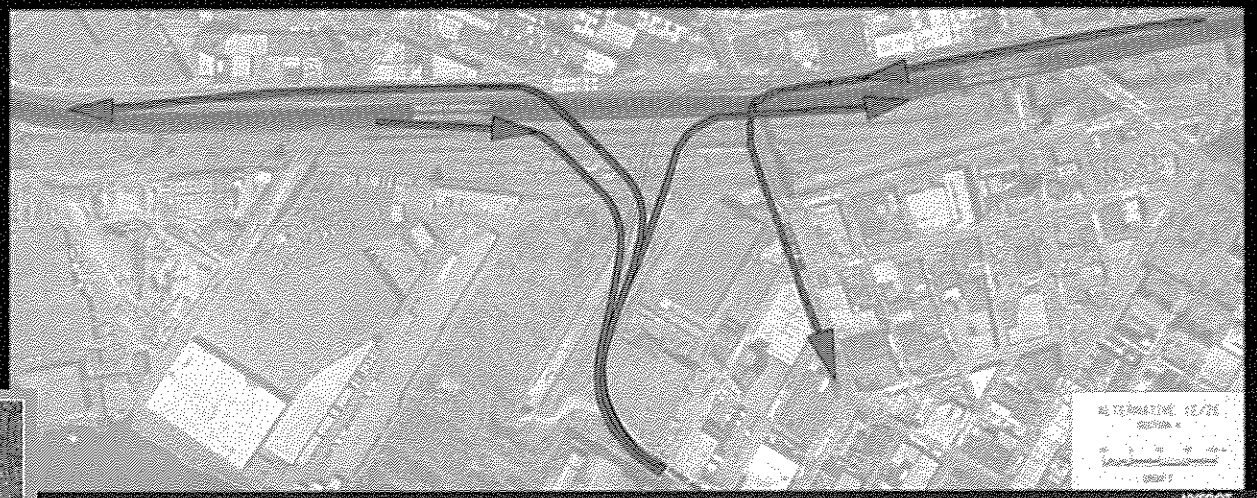
RE-DESIGNING THE SHERIDAN EXPRESSWAY

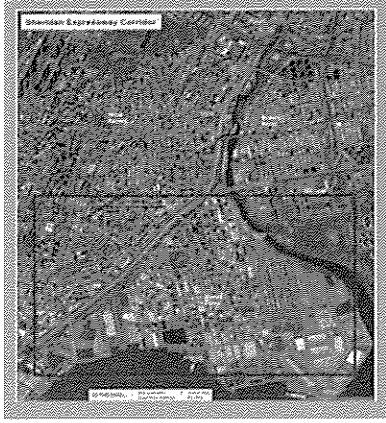
Ramps at Oak Point

Set the stage for changes to the Sheridan by constructing new ramps to/from the Bruckner Expressway providing direct vehicle access to the Hunts Point peninsula

- Construct a full interchange with east bound on/off ramps being a priority for changes to the Sheridan Expressway



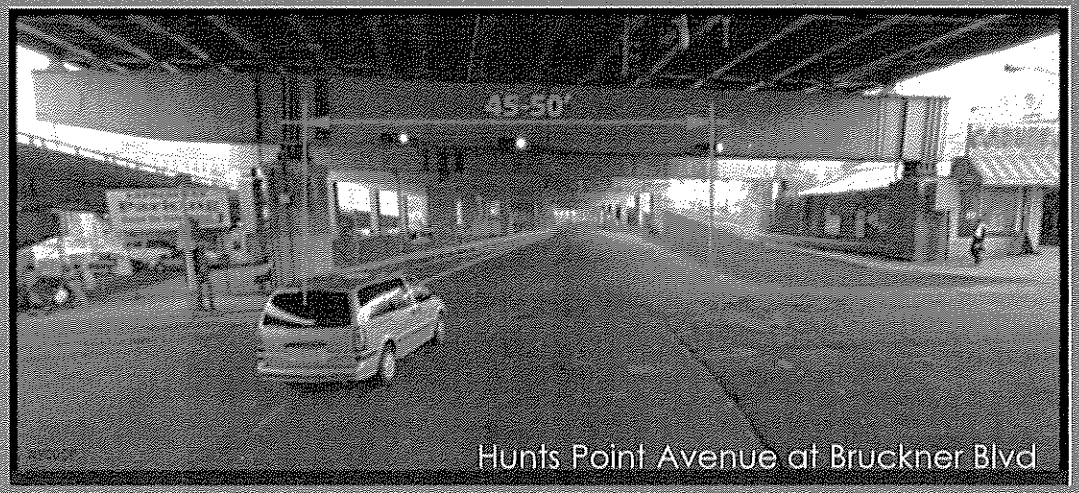




SOUTHERN BRONX RIVER WATERSHED ALLIANCE

and a New Vision for the South Bronx

City Recommendation: Close Ramps



Hunts Point Avenue at Bruckner Blvd

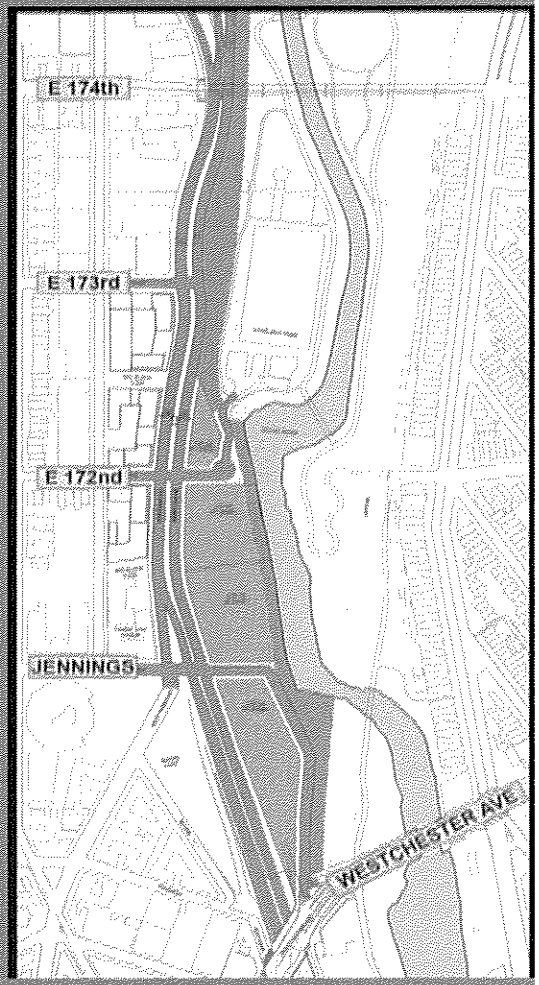
New ramps from the Bruckner to HP will facilitate the closure of two Sheridan Expressway ramps

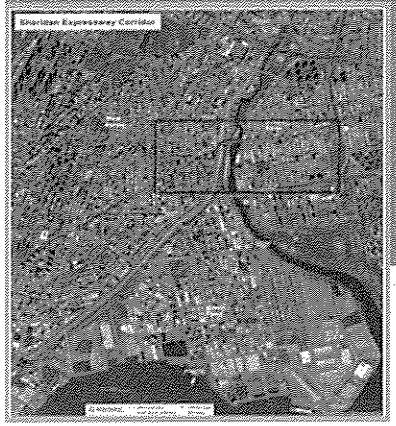
Whitlock Avenue at Westchester

NYC DCP

SOUTHERN BRONX RIVER WATERSHED ALLIANCE
and a New Vision for the South Bronx

City Rec: crosswalks on the Sheridan

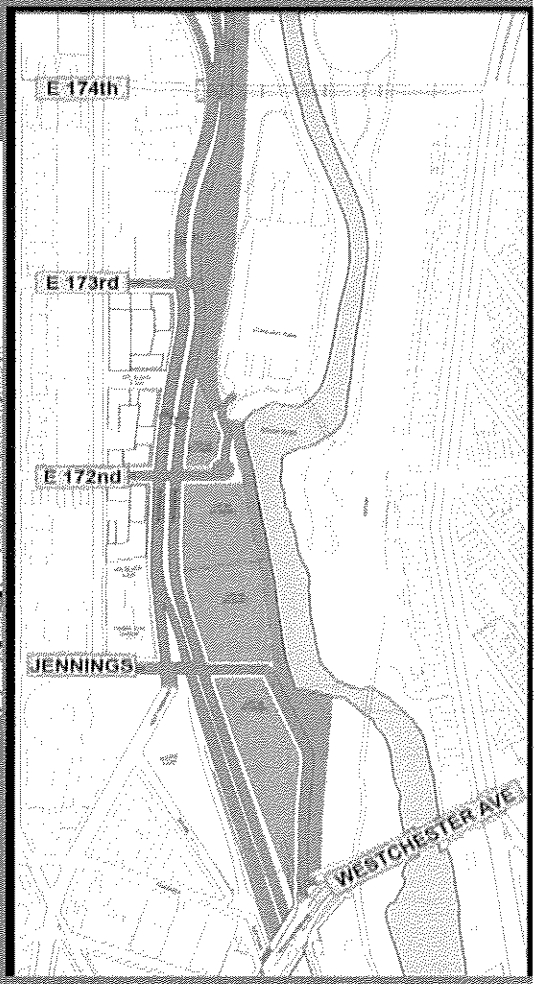


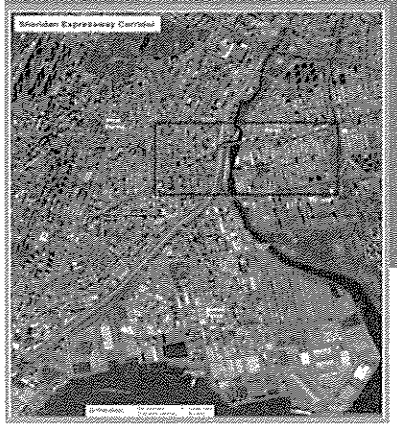


At grade portion of the Sheridan, between E 173rd St and Jennings Ave

SOUTHERN BRONX RIVER WATERSHED ALLIANCE
and a New Vision for the South Bronx

City Rec: new developable land





At grade portion of the Sheridan, between E 173rd St and Westchester Ave

SOUTHERN BRONX RIVER WATERSHED ALLIANCE
and a New Vision for the South Bronx

0015-2014
Res. ~~No. 2042~~
Transportation

Res. No.

Resolution calling upon the Governor and the New York State Department of Transportation to implement the recommendations of the Sheridan-Hunts Point Land Use and Transportation Study.

By Council Member Palma

Whereas, In June 2013, multiple City agencies, led by the New York City Department of City Planning and the New York City Department of Transportation, completed its Sheridan-Hunts Point Land Use and Transportation Study (the Study) and made a series of final recommendations regarding what should be done with the 1.25 mile long Sheridan Expressway (the Sheridan) corridor in the Bronx, which connects the Bruckner Expressway and the Cross Bronx Expressway, as well as adjacent areas; and

Whereas, The Sheridan was part of an abandoned highway plan to enable development throughout the Bronx, the consequence of which is a lack of efficient connectivity that impedes the economic growth of the area; and

Whereas, The Sheridan has created well-documented negative impacts on the surrounding communities, especially related to poor air-quality caused by vehicle emissions, deadly intersections and physical isolation from services and amenities; and

Whereas, The final recommendations of the Study include the construction of direct access ramps from the elevated Bruckner Expressway to the Hunts Point peninsula which hosts the Hunts Point Food Distribution Center, the largest wholesale food distribution market in North America, and these ramps would aid in the efficient transportation of goods while also removing substantial truck traffic from local streets; and

Whereas, The recommendations also include the installation of crosswalks, stoplights and other facilities to help make the corridor more pedestrian friendly and to improve access to the Bronx River waterfront and associated parks; and

Whereas, The envisioned reconstruction would include the transformation of a portion of the Sheridan into an at-grade local boulevard, opening up developable land currently in the Sheridan footprint and would close at least two Sheridan ramps that are currently causing major overcrowding and impacting pedestrian safety; and

Whereas, Implementing the recommendations of the Study would yield significant health and economic benefits while improving neighborhood cohesion and transportation in a currently overburdened area of the Bronx; now, therefore, be it

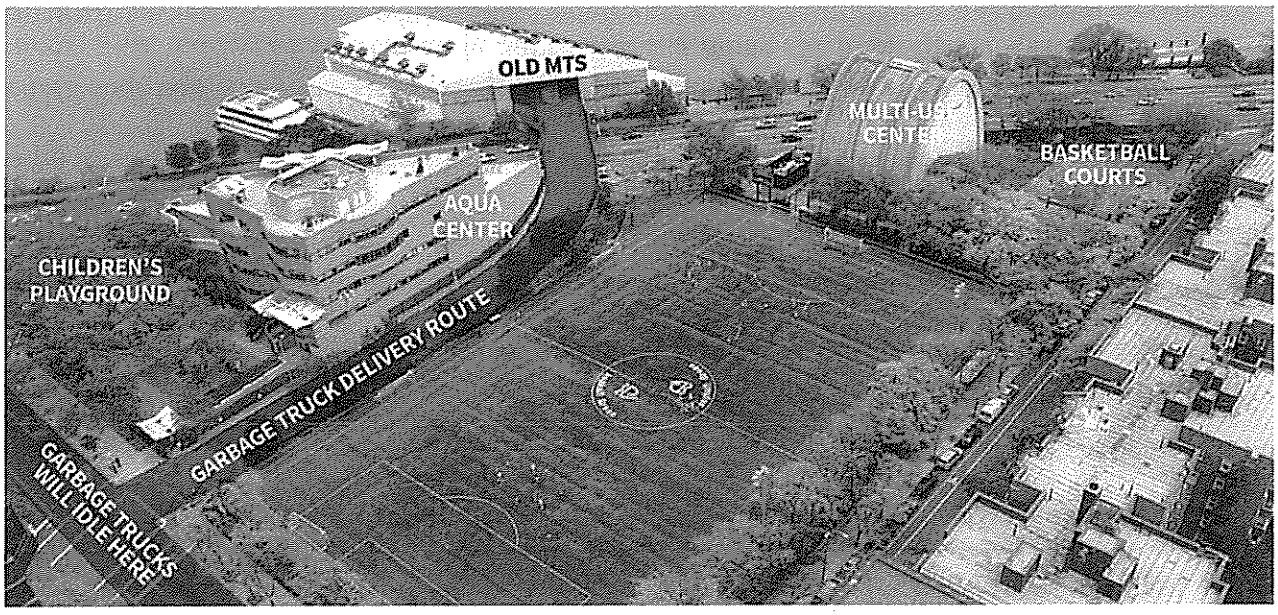
Resolved, That the Council of the City of New York calls upon the Governor and the New York State Department of Transportation to implement the recommendations of the Sheridan-Hunts Point Land Use and Transportation Study.

JM
Res2042/2013
LS 240/2014

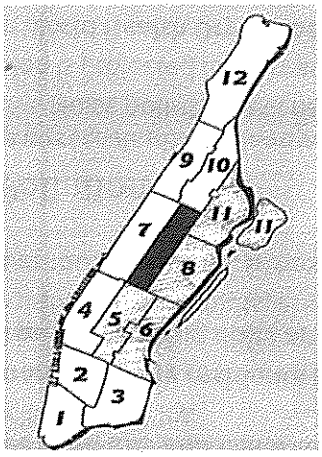
PLEDGE 2 PROTECT

Take the Pledge: Pledge 2 Protect

Garbage stations do not belong in ANY residential community – especially next to Homes, Schools, Parks and Playgrounds.

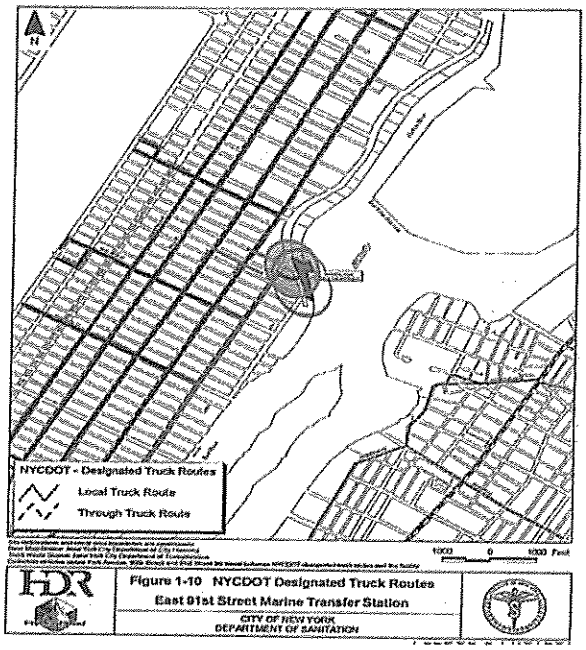


Pledge 2 Protect is a growing coalition of residents, organizations, businesses, educators and parents who oppose the **East 91st Street Marine Transfer Station (MTS)**. The E 91st St. MTS does not help The City meet the goals of the Solid Waste Management Plan (SWMP). In fact, it makes the goals harder to reach by increasing pollution, health and safety risks, and costs.



Only 4 of the 12 Manhattan districts are slated to use the E. 91st MTS.

Trucks will travel from as far south as Union Square down from 142nd St, and as far west as 8th Ave to the East River.



PLEDGE 2 PROTECT

TAKE THE PLEDGE 2 PROTECT BY VISITING P2PNYC.ORG

/PLEDGE2PROTECT @p2pnyc P2PNYC.ORG

PLEDGE 2 PROTECT

KNOW THE FACTS: WHY THE EAST 91ST STREET MTS IS BAD FOR OUR CITY

Wrong Location

- There are **3x more residents and children living within a ¼ mile of the East 91st St. MTS** location than any other waste transfer facility in the City.
- There are **62% more minority residents living in this area** than at other sites.
- More than **1,100 public housing units are located within two blocks of the site** – only one other proposed MTS location has any public housing units, and that site's total is 33.
- There are **2x the amount of parks, fitness/recreational areas and bike/pedestrian paths** than at other sites.

Air and Noise Pollution

- **Truck emissions next to Asphalt Green will exceed new EPA safety standards.** The MTS will increase air pollution in the area by 16%. Noise pollution will negatively impact children's hearing, development, and learning abilities.
- The garbage station is projected to **increase child hospitalization rates by up to 8%.**
- In June 2012, the **World Health Organization reclassified diesel fumes as carcinogenic (cancer-causing).**

Dangerous Garbage Trucks

- **Up to 500 garbage trucks a day will cut through Asphalt Green's playing field and playground (designated for children under 5).** Children must cross the entry ramp where trucks will be idling and spewing toxic fumes.
- These **trucks will carry thousands of tons of both residential and HAZARDOUS commercial garbage** from Union Square to East Harlem, from 8th Avenue to the East River, across every major cross street.

Toxic Emissions from Barges

- After being "tipped" and "containerized", **garbage processed at the MTS will be transported by barge and tug boat down the East River**, past Queens, Brooklyn, Manhattan and onto Staten Island.
- **Prevailing winds will carry toxic emissions from the barges into the boroughs** of Staten Island, Brooklyn, and Queens.
- Replacing trucks with tug boats will **increase pollution by almost 50%.**

Post-Superstorm Sandy Flooding Threat

- New zoning maps since Superstorm Sandy have reclassified the **MTS location as a Flood Zone 1, the highest category of risk for flooding.**
- The proposed **facility will be approx. 6 feet below the new FEMA flood-base level.**

High Cost to the City – There are more important spending priorities.

- The MTS has **mushroomed from an initial cost of $45 million to a quarter of a billion dollars**, and that is WITHOUT any retrofitting due to Superstorm Sandy or any project overruns.
- The **MTS will raise the cost for transporting trash from $90/ton to almost $240/ton**, costing taxpayers almost 3x the amount to process trash as it does today.
- **The savings from not building the MTS could be used to:** clean up commercial garbage trucks; improve citywide recycling; and fund critical educational and social programs.

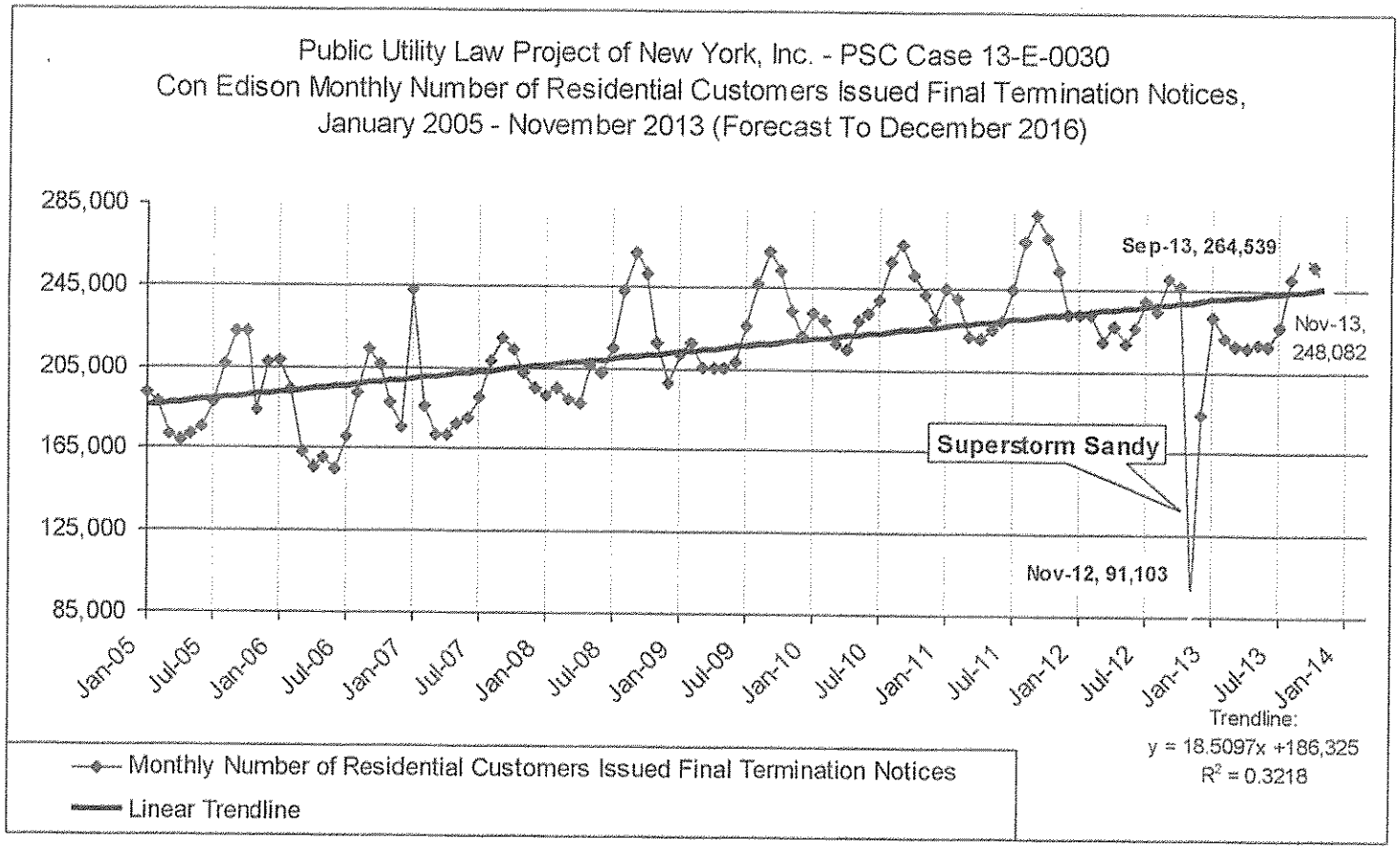
10/31/2013

PLEDGE 2 PROTECT

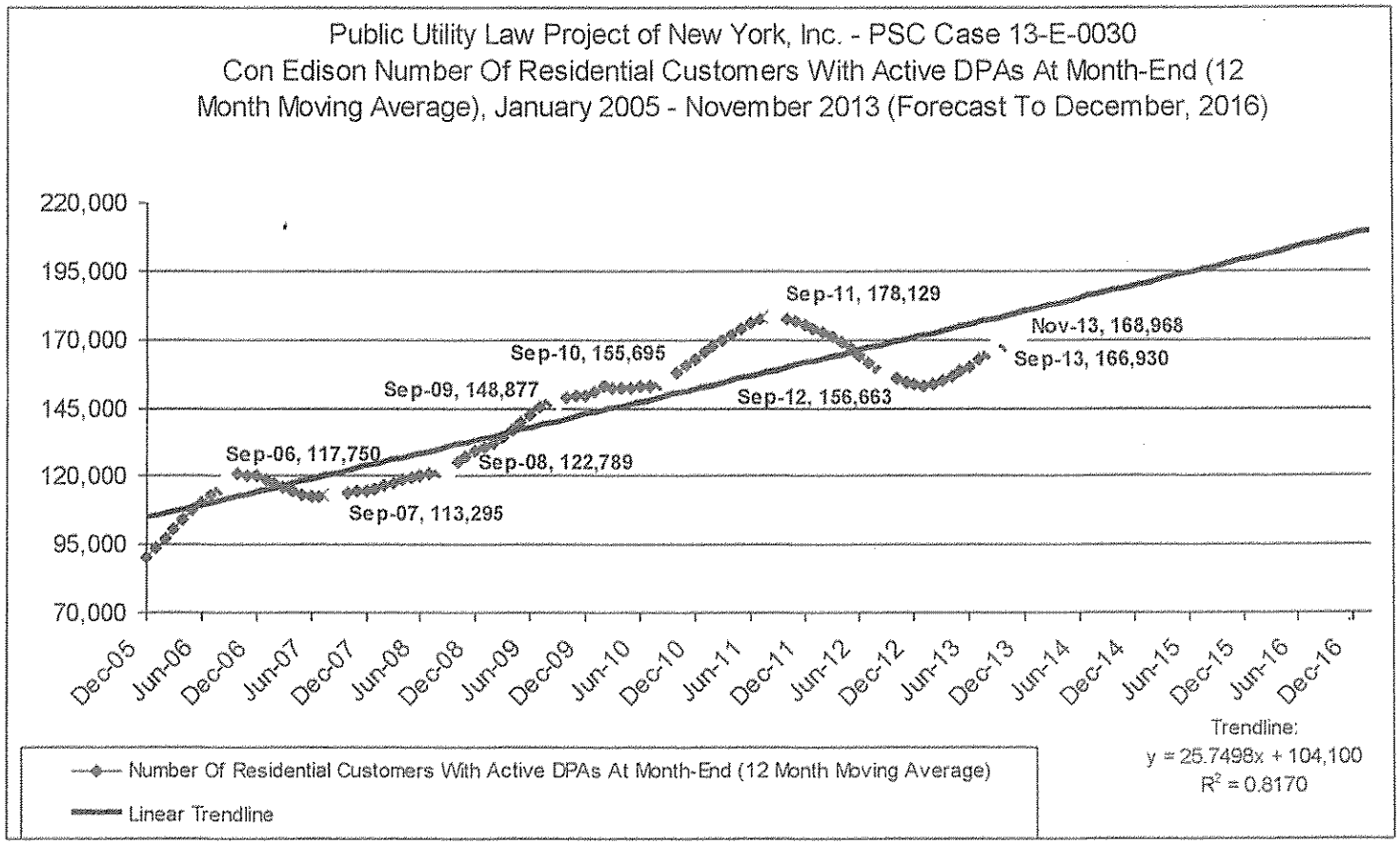
TAKE THE PLEDGE 2 PROTECT BY VISITING P2PNYC.ORG

/PLEDGE2PROTECT @p2pnyc P2PNYC.ORG

Con Edison data through November 2013 shows an increase in the number of final termination notices sent, after a drop due to policy changes after Hurricane Sandy.



Con Edison data through November 2013 shows indicates a rising trend in the number of residential customers with deferred payment agreements (DPAs).



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

February 28, 2014

Richard D. Donovan, NYC Councilman, Chair
Committee on Environmental Protection
250 Broadway, 16th Floor
New York, New York. 10007

Reference: Oversight: Air Quality Impacts, Measures and Mitigation in Environmental Justice Communities.

On behalf of the North Shore Waterfront Conservancy of Staten Island, Inc., (NSWC) and the environmental justice communities that we advocate on behalf of. We would like to thank Chair Donovan and other members of the Committee on Environmental Protection for the opportunity to testify today on the air quality impacts to Staten Island's North Shore EJ communities.

For residents living on Staten Island's North Shore waterfront which incidentally is also the location of where industrial activity takes place. It is not uncommon to begin and end each day questioning what is that odor? This question goes along with difficulties in breathing, a tickle in the back of throat, coughing, throat and eye irritations. And of course asthma inhalers.

We have approximately 51 locations that contribute to our air quality problems everything from New York Container Terminal at the NY/NJ Port Authority Howland Hook facility, to the numerous autobody shops, salvages yards, dry docks, dredging(s) in the Kill Van Kull and Lower Newark Bay to the NYC DEP's Port Richmond Sewer Treatment Plant, truck routes such as Richmond Terrace. As well as the heavily traveled commercial rivers Kill Van Kull, Arthur Kill and Lower Newark Bay to the 11 or so construction projects that are taking place on Staten Island's North Shore simultaneously. Most of which are all claiming that no mitigation is required for their activities.

There are odors that can be tasted on our tongues that are the chemical and/or metallic odors. There are also the odors that smell as if plastic is being burned and or wood. The odors are some times acidic, sulfur smelling and fumes from diesel operated equipment. There is also the every present odor of VOCs (volatile organic compounds). That are so frequent that most people barely look up from whatever they are doing to take notice.

Staten Island's industrial waterfront is also across from New Jersey's industrial waterfront and to our knowledge the only government agency that has jurisdiction over the two is the U.S. Environmental Protection Agency. Which in previous discussions with the EPA they have stated that they do not want to be in a position of having to be a mediator between the two states. In addition because of how the winds travel Staten Island receives air pollution from as far away as Ohio and Pennsylvania.

Staten Island has some of the highest numbers of residents with cancer in New York City and until recently those numbers were contributed to smoking. But NSWC has said frequently that not everyone on Staten Island smokes therefore there must be a common factor that is also in play with these high cancer numbers, such as what is in our environment. Then in recent studies by the World Health Organization, they stated that lung cancer is in direct relationship to air pollution.
http://www.cancer.org/cancer/news/world-health-organization-outdoor-air-pollution-causes-cancer

And even though this news confirmed our suspicions nothing has been done in our communities to mitigate these findings, nor does there seem to be a plan to do anything.

For starters what we are asking for air monitors? Air monitors that are sophisticated enough to be able to distinguish what is in our air so that the point source can be identified and the problem corrected. This project should be handled by the environmental agencies and not left up to the residents to try and perform- especially since we have neither the time, resources and/or authority to put together for such an endeavor.

This endeavor may require a partnership of the environmental agencies city, state and federal levels to place air monitors in locations that are known to have emissions and or air pollution problems. It will also require government agencies sharing information with one another and with the public to combat this problem.

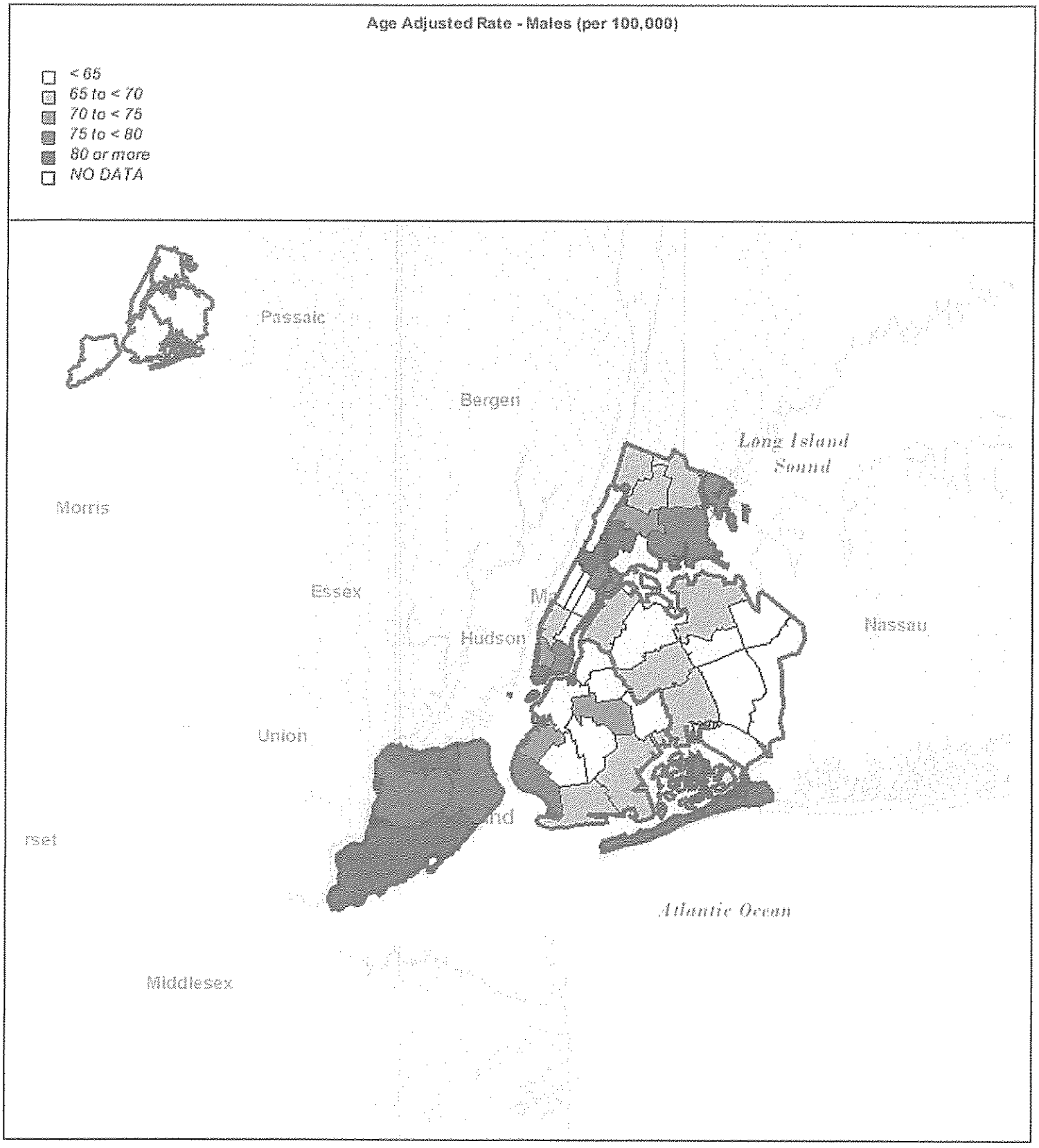
It shouldn't be enough to treat the illness, when we really should be working simultaneously to eliminate the things in our environment that can cause serious upper respiratory illnesses and cancer that can lead to death.

Thank you for your time and consideration and we look forward to hearing back from the NYC, City Council Environmental Protection Committee on this most urgent matter.

Sincerely,

Beryl A. Thurman, Executive Director/President
NSWC

Lung and Bronchus Cancer by Neighborhood (UHF 42), 2003-2007



Environmental Public Health and Sustainability Tracking Portal.
More information can be found at: http://nyc.gov/health/tracking.
May 13, 2011

NYC Health

South Bronx Unite
www.SouthBronxUnite.com @SouthBronxUnite SouthBronxUnite@gmail.com

New York City Council Committee on Environmental Protection

Hearing on Air Quality Impacts, Measures and Mitigation in Environmental Justice Communities

Statement of Dr. Melissa Barber and Arthur Mychal Johnson on behalf of South Bronx Unite

February 28, 2014

My name is Arthur Mychal Johnson. I am a resident of the Mott Haven neighborhood in the South Bronx and a member of South Bronx Unite, a coalition of residents, organizations and allies. I am here with my neighbor and colleague, Dr. Melissa Barber, to give testimony to this committee about the critical need for additional oversight on air quality impacts, measures and mitigation in the Mott Haven and Port Morris sections of the South Bronx and to ask for both immediate intervention as well as long term enhanced protections to guard against further harm to our community and other similar environmental justice communities.

Over the course of the last several decades, our community has been plagued with devastating health impacts of an extensive concentration of highway systems encircling our community and an oversaturation of industrial and diesel truck-intensive facilities inundating our neighborhood.

The South Bronx community suffers from asthma rates eight times the national average and asthma hospitalization rates 21 times that of other New York City neighborhoods. We have:

- 30,000 cases of pediatric asthma
- 100,000 cases of adult asthma
- 40,000 cases of chronic bronchitis
- 300,000 cases of cardiovascular disease

Twelve years ago, Congressman José Serrano sponsored and the U.S. EPA administered the "South Bronx Environmental Health and Policy Study," in which NYU researchers had 40 students from South Bronx schools located near major highways and industrial facilities wear backpacks capable of monitoring diesel soot from air samples. They found that:

(1) On every third day particulate matter exceeded the federal limits, the National Ambient Air Quality Standard of 35 micrograms per cubic meter levels,

(2)The levels of asthma in the South Bronx were significantly contributed to by diesel truck emissions from the area's highway and industrial facility saturation, and

(3) The solution to this problem was to reduce the already overburdened rates of truck traffic in the community and to provide for more open space.[1]

NYU's devastating findings are made all the more alarming when read in conjunction with the study done by Dr. Frederica Perera at the Columbia University Center for Children's Environmental Health. Her analysis compared the learning ability of 183 children

[1] http://www.icisnyu.org/south_bronx/admin/files/SouthBronxBrochure.pdf

from Harlem, Washington Heights and the South Bronx with the level of air pollutants they were exposed to before birth.[2] The moms were nonsmokers and wore air monitors while they were pregnant. The study showed that in-utero exposure to air pollutants is linked to delayed cognitive development at age 3. The children exposed to high levels of city air pollution while in the womb were three times more likely to have mental deficiencies than other kids. Forty-two of the children exposed to high levels of air pollution, such as auto exhaust, while in the womb, were tested and scored 5.7 points lower on cognitive test.

Some of our city agencies perpetuate this unconscionable cycle by overlooking the effects of policy decisions that increase harm to environmental justice communities. In the case of the South Bronx, the New York City Economic Development Corporation (EDC) and Industrial Development Agency (IDA) have been acting to not only encourage but to *heavily subsidize more* diesel truck intensive businesses to relocate to the South Bronx from other parts of the city. The most egregious and recent example is the proposed relocation of FreshDirect's trucking operation to the South Bronx waterfront.

In February of 2012, then Mayor Bloomberg and Governor Cuomo publicly announced their joint intention to give nearly $130 million in public subsidies to FreshDirect, two days before the sole public hearing on the City portion of the subsidies. The company seeks to build a 500,000 square foot warehouse and fueling station on public waterfront land in a zone A flood zone and would bring 3,000 vehicle trips (including 1,000 diesel truck trips) every day through our community.

EDC and IDA staff oversaw and approved the company's cursory environmental assessment that was based off of a 20 year old Environmental Impact Statement. EDC and IDA concluded that a thousand additional daily diesel truck trips would *not* negatively impact local residents. But we, along with more than 50 South Bronx and other city-wide organizations, disagree and are supported by scientific findings.

Research has documented the gravity of diesel exhaust, particularly in vulnerable environmental justice communities. Diesel exhaust contains many carcinogens, which have been linked to lymphomas,[3,4] leukemias[1,2] and lung,[5,6] larynx, bladder and stomach cancers. Diesel exhaust also increases fine particulate pollution, especially that of PM 2.5.[7] PM 2.5 is a complex mixture of small particles and liquid droplets, less than 2.5 microns in size, made up of acids (nitrates and sulfates), organic chemicals, metals, and dust particles that reach the lung's alveolar spaces, penetrate the blood and cause systemic effects. These systemic effects include but are not limited to asthma, coughing, difficulty breathing, decreased lung function, delayed and stunted

[2] http://nypost.com/2006/05/30/air-more-stinky-kids-less-thinky/

[3] Frumkin H, TThun MJ. Diesel exhaust. CA Cancer J Clin 2001;51:193-8.4

[4] http://www.cancer.org/Cancer/CancerCauses/OtherCarcinogens/Pollution/dieselexhaust

[5] Garshick E, Schenker MB, Munoz A, et al. A case-control study of lung cancer and disease exhaust exposure in railroad workers. Am Rev Respir Dis 1987;135:1242-8.2.

[6] Parent ME, Rousseau MC, Boffetta P, Cohen A, Siemiatycki J. Exposure to diesel and gasoline engine emissions and the risk of lung cancers. American Journal of Epidemiology 2007;165:53-62

[7] http://www.dec.ny.gov/chemical/60582.html

fetal growth and premature death in people with heart or lung disease.[5, 8, 9, 10] PM 2.5's effect on human health is not linear. Even small increases of this particle in the environment have very significant impact and exponential cumulative effect on human health.[11, 12] And perhaps most importantly, PM 2.5 was not regulated nor measured 20 years ago when the Environmental Impact Statement, upon which FreshDirect relies, was conducted on our area. These and other concerns are included in the expert affidavit attached to our testimony for your reference from Dr. Leopoldo Segal, an Instructor of Medicine at the New York University School of Medicine, whose research focuses on airway inflammation and lung function associated with the inhalation of environmental irritants.

So, we have two requests of you today, one of which is immediate and one of which is long term.

First, we ask you to join the call of our local City Council Member and now Speaker of City Council, Melissa Mark-Viverito, along with Council Member Maria del Carmen Arroyo, State Senator José Serrano and U.S. Congressman José Serrano – all of whom have called for an immediate moratorium on all development on Harlem River Yard, which is the public waterfront land on which FreshDirect proposes to build, until a thorough review of the current uses of the land and the cumulative effects of such uses on the residents of the South Bronx is done, taking into full account the socio-economic makeup of the neighborhood and the current overburdened citing of waste transfer stations, fossil fuel power plants and diesel truck-intensive businesses that line the inaccessible waterfront.

Second, we ask you to consider passing legislation that would require a form of heightened review for projects proposed to be cited in overburdened and vulnerable communities. Such legislation could also require further implementation *and maintenance* measures to improve air quality standards in environmental justice communities, and it could address current poor air quality by allocating immediate funding for planting thousands of trees, building green walls by highways and industrial facilities, restoring and remediating open green space and allowing access to shorelines, among other ideas included, for example, in the Mott Haven-Port Morris Waterfront Plan.

Thank you for this opportunity to testify today. Our community, like others across the city, deserves to have the same opportunity to live full and healthy lives without having to constantly fight for the right to breathe.

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[8] http://www.epa.gov/air/particlepollution/index.html

[9] Tecer LH, Alagha O, Karaca F, Tuncel G, Eldes N. Particulate matter (PM (2.5), PM(10-2.5), and PM(10)) and children's hospital admissions for asthma and respiratory diseases: a bidirectional case-crossover study. J Toxicol Environ Health A 2008;71:512-20.7.

[10] Rich DQ, Demissie K, Lu SE, Kamat L, Wartenberg D, Rhoads GG. Ambient air pollutant concentrations during pregnancy and the risk of fetal growth restrictions. J Epidemiol Community Health 2009;63:488-96.8.

[11] Dominici F, Peng RD, Bell ML, et al. Fine particulate air pollution and hospital admission for cardiovascular and respiratory diseases. JAMA 2006;295:1127-34.

[12] Pope CA, 3rd, Burnett RT, Thun MJ, et al. Lung cancer, cardiopulmonary mortality, and long-term exposure to fine particulate air pollution. JAMA 2002; 287:1132-41.10.

ATTACHMENT I

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF BRONX

SOUTH BRONX UNITE!, et al.,	:	
Petitioners,	:	Index No.
	:	IAS Justice
-against-	:	
NEW YORK CITY INDUSTRIAL DEVELOPMENT AGENCY, NEW YORK CITY ECONOMIC DEVELOPMENT CORPORATION, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, EMPIRE STATE DEVELOPMENT CORPORATON, FRESH DIRECT LLC, UTF TRUCKING, INC., and HARLEM RIVER YARD VENTURES, INC.,	:	**AFFIDAVIT OF LEOPOLDO N. SEGAL, M.D. IN SUPPORT OF VERIFIED PETITION**
Respondents.	:	
For a Judgment Pursuant to Article 78 of the CPLR and for Declaratory Relief Pursuant to CPLR 3001	:	

State of New York)
) ss:
County of New York)

LEOPOLDO N. SEGAL, M.D., being first duly sworn, deposes and says:

1. My name is Leopoldo N. Segal, MD. I am an Instructor of Medicine at the New York University School of Medicine in the division of Pulmonary, Critical Care and Sleep Medicine. I am board certified in Internal Medicine, Pulmonary Medicine and Critical Care Medicine and my research focus is on airway inflammation and lung function associated with the inhalation of environmental irritants. I am also the author of many peer reviewed journal articles and I regularly participate in scientific conferences dealing with environmental impact on human health. My curriculum vitae is attached.

2. I was contacted by New York Lawyers for Public Interest (NYLPI) to review and comment on the potential health impacts of the proposed Fresh Direct development as discussed in the Environmental Assessment Form (EAF) and accompanying documentation presented by the New York City Industrial Development Agency. The

conclusions expressed are based upon my expertise and upon my review of the following documents: Fresh Direct EAF and accompanying documents, the 1993 Final Environmental Impact Statement for the Harlem River Yard Project and the 2006 Technical Memorandum for the Fed Ex Project at the Harlem River Yards.

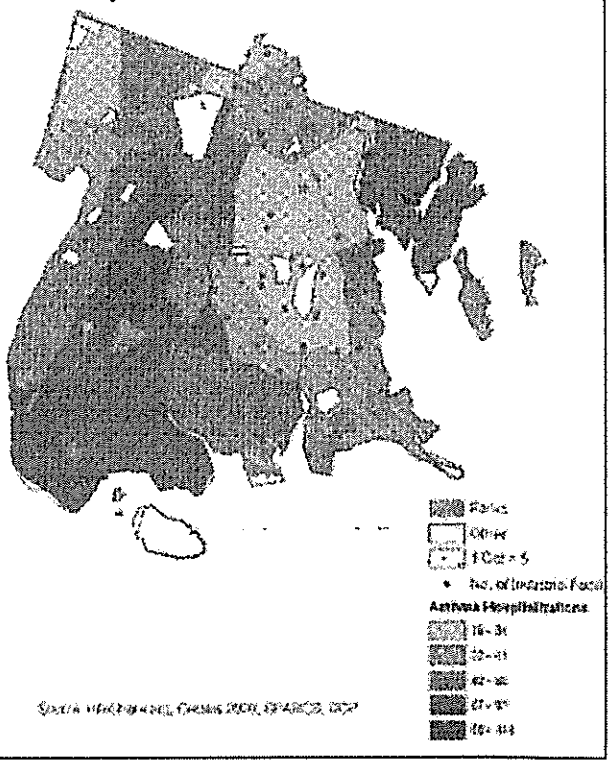
3. In my opinion, there are three major public health issues that have not been adequately considered by the IDA. First, this project will be located in an area where there is substantial data demonstrating significant deleterious health effect among residents due to poor air quality. Secondly, PM 2.5, a major pollutant that has significant proven association with disease, has not been adequately addressed in the reviewed documents. Finally, the degree of increased pollution load from the proposed project has been minimized in the EAF. The project proposes a significant increase in truck traffic in the surrounding area, which raises concerns about the worsening of air quality in an increasingly residential area with a significant number of vulnerable residents.

Current Health Status in the Project Area:

4. The South Bronx is an area with well-recognized adverse health effects due to environmental exposure to pollution. Vulnerable subjects are those portions of the population that are more sensitive to pollution and thus more likely to have an adverse health effect from exposure. Vulnerable subjects include children and older adults, as well as individuals with heart or lung diseases, including chronic obstructive pulmonary disease (COPD) and asthma.[2] The recent State of the Air Report issued in April 2012 by the American Lung Association shows that more than 20% of residents in the Bronx are children and more than 10% are older than 65 years old.[3] Furthermore, there are more than 30,000 cases of pediatric asthma, more than 100,000 cases of adult asthma and more than 40,000 cases of chronic bronchitis in the Bronx. Cardiovascular disease, which has clearly been associated with poor air quality and more directly with fine particulate matter, i.e. PM 2.5, is prevalent in the Bronx affecting 20% of the total population (more than 300,000 cases).[3] Asthma rates in the Bronx are eight times higher than the national average.[4] In a different study, Spira-Cohen et al showed that in children with asthma at four South Bronx schools, exposure to PM 2.5 was the most significant cause of pollution-related asthma exacerbations.[5] These exacerbations include higher required use of medication to control their asthma, visits to the emergency department, and even hospitalization with various degree of severity. Another study has shown that children living in the South Bronx during ages 0–5 years are exposed to a high density of traffic and industrial facilities, which may contribute to chronic respiratory morbidity.[6] The study, published by the Institute for Civil Infrastructure Systems from the Robert F. Wagner Graduate School of Public Service, shows that there is an increased asthma hospitalization rate associated with high industrial density especially in the South Bronx (**Figure 1**).[7] This increased incidence of respiratory symptoms makes such populations particularly vulnerable to exacerbations from ambient pollution and compels a careful consideration of the public health implications of pollution from the proposed Fresh Direct project.

5. Particulate matter and especially particles smaller than 2.5 microns (PM 2.5) have a significant impact on human health. A growing and substantial body of research has associated PM 2.5 exposure with: respiratory irritation, coughing, or difficulty breathing; decreased lung function; asthma, especially in children and other sensitive groups; chronic bronchitis; respiratory infections; heart disease; fetal growth and premature death.[2,8,9] Further, there is a direct association which means that the higher the level of PM 2.5 exposure the higher the risk for human health. This also implies that the closer to traffic that people live or spend significant amounts of time the higher the impact on human health as shown by the incidence of asthma among children whose schools were in close proximity to major roads in the Bronx. Significant morbidity and mortality associations were found for each 10 µg/m3 increase in PM2.5, such as ischemic heart disease, dysrhythmias, heart failure and cardiac arrest, and among nonsmokers, for pneumonia and influenza.[10] Each 10 µg/m3 elevation in fine particulate air pollution was associated with approximately a 4%, 6%, and 8% increased risk of all-cause, cardiopulmonary, and lung cancer mortality, respectively.[1] Conversely, the lower the level of PM 2.5 the higher the life expectancy. Pope and colleagues have shown that a decrease of 10 µg/m3 in PM2.5 was associated with an estimated increase in mean (±SE) life expectancy of 0.61±0.20 year (p= 0.004).[11] As shown by the Harvard Six Cities Study, a 16-year prospective cohort study, PM2.5 is positively associated with overall mortality, cardiopulmonary causes, and lung cancer.[12] An 8-year extended follow-up confirmed that increased PM 2.5 was associated with lung cancer and cardiovascular deaths; conversely improved overall mortality was associated with lower PM2.5.[13] As shown in the NIH's Women's Health Initiative, each 10 µg/m3 of PM2.5 exposure was associated with a 24% increase in the risk of cardiovascular event (Hazard Ratio 1.24; 95% CI 1.09-1.41) and a 76% increase in the risk of death from cardiovascular disease (Hazard Ratio 1.76; CI 1.25-2.47).[14]

Figure 1: Bronx County Asthma Hospitalization Rates per 10,000 people by zip code for the year 2000 and how these hospitalizations are related to the density of industrial facilities



6. Particulate matter promotes inflammation of the lungs and exacerbates underlying lung disease and reduces the efficacy of lung-defense mechanisms.[15,16] Diesel exhaust

increases PM 2.5 concentration and has been associated with inflammation in the lung and worsening lung function.[17,18]

7. In addition, diesel exhaust is known to contain many substances that are classified as carcinogens (**Table 1**). Examples of these are acrolein, benzene, arsenic, cadmium and toluene. Lung cancer is the major cancer thought to be linked to diesel exhaust. Several studies of workers exposed to diesel exhaust have shown significant increases in risk of lung cancer.[19,20] Several studies have found possible links between diesel exhaust and other cancers, including cancers of the larynx (voice box), stomach, and bladder. Studies have also found links to blood system cancers such as lymphomas and leukemias (including childhood leukemia). [21,22] In the case of this project, the increase in truck traffic will certainly impact on the levels of diesel exhaust to which South Bronx residents will be exposed, which could increase the incidence of cancer and other illness in this susceptible population. Furthermore, the resident's exposure to diesel exhaust pollutants extends along truck routes, which should be carefully considered especially since this is a densely populated area with susceptible residents.

Table 1: Diesel Exhaust pollutants

Contaminant	Note
acetaldehyde	IARC Group 2B carcinogens
acrolein	IARC Group 3 carcinogens
aniline	IARC Group 3 carcinogens
antimony compounds	Toxicity similar to arsenic poisoning
arsenic	IARC Group 1 Carcinogens, endocrine disrupter
benzene	IARC Group 1 Carcinogens
beryllium compounds	IARC Group 1 Carcinogens
biphenyl	It has mild toxicity.
bis(2-ethylhexyl)phthalate	endocrine disrupter
1,3-butadiene	IARC Group 2A carcinogens
cadmium	IARC Group 1 Carcinogens, endocrine disrupter
chlorine	
chlorobenzene	It has "low to moderate" toxicity.
chromium compounds	IARC Group 3 carcinogens
cobalt compounds	
cresol isomers	
cyanide compounds	
dibutyl phthalate	endocrine disrupter
1,4-dichlorobenzene	Carcinogen
dioxins and dibenzofurans	
ethyl benzene	
formaldehyde	IARC Group 1 Carcinogens
inorganic lead	endocrine disrupter
manganese compounds	
mercury compounds	IARC Group 3 carcinogens
methanol	It may cause blindness.
methyl ethyl ketone	It may cause birth defect.
naphthalene	IARC Group 2B carcinogens
nickel	IARC Group 2B carcinogens
5-Nitroacenaphthene	One of the strongest carcinogens known
n-nitrosodiphenyl	
phenol	endocrine disrupter
phosphorus	
polycyclic organic matter, including polycyclic aromatic hydrocarbons (PAHs)	
polychlorinated biphenyls	
selenium compounds	IARC Group 3 carcinogens
styrene	IARC Group 2B carcinogens
toluene	IARC Group 3 carcinogens
xylene isomers and mixtures: o-xylenes, m-xylenes, p-xylenes	IARC Group 3 carcinogens

Background contamination

8. The United States Environmental Protection Agency has set National Ambient Air Quality Standards (NAAQS) for six major pollutants: lead, ozone, sulfur dioxide, oxides of nitrogen, carbon monoxide and PM 2.5. Sulfur dioxide (SO2) is produced primarily when fossil fuels (e.g., oil, coal) are combusted, as well as by various engineering or industrial processes (e.g., metal smelting). Although both SO2 emissions and ambient levels in the United States generally declined between 1986 and 1995, in 1995 Bronx County had the highest daily maximum SO2 of all counties in New York State.[23]

9. In addition to PM 10, PM 2.5 was added to the NAAQS in 1997 because of growing evidence of a stronger association between human health and PM2.5 than with PM 10. For example, Tercer et al. showed that PM 2.5 had a greater association with hospital admissions due to asthma than PM 10.[24] Further, PM 2.5 is more clearly associated with inducing inflammation as it more easily penetrates the lung, while PM 10 tends to be coarse and is inhaled into the large airways of the lung. Particles less than 2.5 microns

Finally, the effects on the health of the residents will not be limited to the area where the project will be located but also the truck areas where it could be expected a significant increment of pollution mainly from diesel exhaust. As stated before, this is especially important in an area with well-recognized vulnerable population where the effect of increased pollution on human health may be of significance. I therefore strongly recommend a new Environmental Impact Statement assessing current status of pollutants regulated under NAAQS and evaluating carefully the project's contribution to the pollutant load.

Respectfully submitted on this 11 day of June 2012:

Leopoldo N. Segal, M.D.

Sworn to before me this
11th day of June 2012

Jessica Marie St John
Notary Public, State of New York
No. 01ST6253299
Qualified in Kings County
Commission Expires 12/19/2015

Notary Public

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CURRICULUM VITAE

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PERSONAL DATA

Born	La Plata, Argentina
Citizenship	Argentina
Visa Status	Permanent Resident
Marital Status	Married
Languages	Fluent in English and Spanish

EDUCATION

Year	Degree	Institution
1992-1998	M.D	Universidad Nacional de La Plata, School of Medicine, Argentina
2011-Current	M.S.	Clinical and Translational Science Institute, New York University

POSTDOCTORAL TRAINING

Year	Specialty	Mentor or Director	Place of Training
1999-2003	Residency, Internal Medicine	LM Gagliardi, M.D.	Spanish Hospital, Argentina
2004-2007	Residency, Internal Medicine	SB Fiel, M.D.	Morristown Memorial, NJ
2007-2010	Pulmonary/Critical Care	W Rom M.D.	NYU School of Medicine

LICENSURE AND CERTIFICATION

Year	Type of license or certification
2003	USMLE Certificate, FSMB & NBME
2007	Internal Medicine, ABIM
2009	Pulmonary Medicine, ABIM
2010	Critical Care Medicine, ABIM

HOSPITAL APPOINTMENTS

Year	Hospital Title	Hospital
2003-2004	Intensive Care Attending	Juncal Hospital, Buenos Aires, Argentina
2010-Current	Instructor of Medicine	NYU School of Medicine

HONORS/ AWARDS

Year	Achievement
2003	Acting Chief Resident, Spanish Hospital, Buenos Aires, Argentina
2005	Outstanding Intern Award, Morristown Memorial Hospital
2006	Outstanding Resident Award, Morristown Memorial Hospital
2006	First Place Oral Presentation Research Day, Atlantic Health System
2007	Outstanding Resident Award, Morristown Memorial Hospital
2010	Physician Scientist Training Program, NYU Clinical and Translational Science Institute
2011	Michael Saperstein Medical Scholars Research Fund, NYU Department of Medicine
2011	The Dorothea Zucker-Franklin Award for Excellence in Research, NYU York School of Medicine
2012	The Peter Elsbach Award for Excellence in Research, NYU York School of Medicine
2012	Translational Research Scholars Program (KL2), NYU CTSI

MEMBERSHIPS IN PROFESSIONAL SOCIETIES

Year	Society
2004-Present	American College of Physicians
2004-Present	American Thoracic Society
2004-Present	Fellow, American College of Chest Physicians

TEACHING EXPERIENCE

Year	Name of course	Contact hours
2007-Present	Physiology, 1st yr course	25 hours/yr
2009-Present	Introduction to Bedside Diagnosis	25 hours/yr

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Peer Reviewed Publications:

1. **Segal LN,** Oei E, Oppenheimer BW, Goldring RM, Bustami R, Ruggiero S, Berger KI, Fiel S B Evolution of pattern of breathing during a spontaneous breathing trial predicts successful extubation. Intensive Care Med. 2010; 36(3):487-95.

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Abstracts:

1. **Segal LN**, Fiel, SB, Ruggiero S, Scoopo F, Oei E. Use of the rate of change of the RSBI during spontaneous breathing trial as an accurate predictor of weaning outcome. Critical Care Medicine 2005; 33 (12):A20

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3. Epstein M, Ibrahim S, **Segal LN**, Bustami R. Obstructive Sleep Apnea Is a Risk Factor for Pulmonary Embolism. Proc Am Thorac Soc 2007; 4:A557

4. **Segal LN**, Oppenheimer BW, Goldring RM, Helwig A, Lau S, Reibman J, Berger KI. The role of oscillometry during methacholine challenge testing. Am J Respir Crit Care Med 2008;177:A949.

5. Abi Fadel D, Goldring RM, Oppenheimer BW, **Segal LN**, Helwig A, Reibman J, Berger KI. Impulse Oscillometry Detects Distal Airway Dysfunction in the Presence of Abnormal Spirometry. Am J Respir Crit Care Med 2009;179;A5085

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8. **Segal LN**, Kulkarni R, Fujita Y, Nolan A, Rom WN, Weiden MD. Azithromycin suppresses inflammatory cytokines and induces inhibitory transcription factors in alveolar macrophages. Am J Respir Crit Care Med 2011.

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RESEARCH SUPPORT

KL2 (PI Leopoldo Segal) 01/12-12/14
NIH/CTSI
Title: Chronic Obstructive Pulmonary Disease Microbiome and Cytokine Study
Yearly direct $62.500

Michael Saperstein Medical Scholars Research Fund (PI Leopoldo Segal) 07/11-06/12
New York University Department of Medicine
Yearly direct $19.000

Physician Scientist Training Award (PI Leopoldo Segal) 07/10-12/11
Clinical and Translational Science Institute (CTSI), NYU School of Medicine
Yearly direct $90.000

5T32 ES007267-18 (PI William Rom) 01/11-12/11
NIH/NIEHS
Title: Molecular and Cell Biology in Environmental Medicine Training
Yearly direct $52.000

CTSI Developmental Funds Award (PI Leopoldo Segal) 07/10-06/12
CTSI, NYU School of Medicine
Yearly direct $15.000

Mott Haven-Port Morris Waterfront Plan

The Mott Haven-Port Morris Waterfront Plan would provide residents access to a public waterfront that, for decades, has been inaccessible. The plan is consistent with three rezonings on adjacent land, provides a logical solution to climate change effects on significant maritime industrial areas (SMIAs) and gives the community open space to counteract severe health consequences caused by an oversaturation of highways and truck-intensive businesses in the South Bronx. These vacant coastal sites are located within a flood zone, and if properly designated as protected open space, could significantly mitigate dangerous effects of storm surge flooding of existing power plants and waste transfer stations along the South Bronx waterfront. Each site has also been included as an area of significance in the Vision 2020 NYC Comprehensive Waterfront Plan, and several sites are currently proposed for elimination from SMIA designation.

A – Bronx Kill Waterfront Park - This site is the last significant open green space on the Mott Haven-Port Morris waterfront and, of particular note, lines the Bronx Kill waterway, which has served as a canoeing and kayaking destination for South Bronx community groups, who have been forced to access the waterway from Randall's Island despite its potential access from the South Bronx shore. The Bronx Kill has also been included in Vision 2020 NYC Comprehensive Waterfront Plan as an area in which to explore improvements and support habitat restoration and, where feasible, the navigability of the Bronx Kill for kayaks and canoes. In addition to a boat launch, the Bronx Kill Waterfront Park has also been re-envisioned to contain a low-cost earth and rock auditorium as well as low cost soccer fields, basketball courts and a playground. The site would also contain a memorial to the Ranachqua Native Americas, as historic evidence exists of a Ranchaqua settlement and burial ground on the site. The southern extension of the Bronx Kill Waterfront Park would stretch along the coast line from St. Ann's Avenue to the Hell's Gate Bridge, directly connecting the park to the **"Randall's Island Connector"**, a pedestrian and bicycle bridge connecting the South Bronx to Randall's Island. This coastal site is also important because it is located in a flood zone of an SMIA and is adjacent to a fossil fuel power plant. This proposal can help mitigate the effects of climate change and potential flooding of industry and electrical infrastructure on the waterfront in the future.

B – Park Avenue Boat Launch/Waterfront Park - This site is located on Park Avenue where it meets the Harlem River and is west of the Major Deegan Expressway. It is already green space, and building on the site is prohibited. It is one of the few areas with actual water access and is not blocked by the Oak Point Link rail. It is already being used as an ad hoc fishing and boat launch site.

C – Lincoln Avenue Waterfront Park - This site is proposed to encompass Lincoln Avenue to Alexander Avenue from East 132nd Street to the Harlem River. This site is already being used as an ad hoc fishing site and is easily accessible by pedestrians. It provides direct access to the waterfront, and in a recent project conducted by Meta Local Collaborative, community residents expressed overwhelming enthusiasm for using this space for relaxation, celebrations and recreation. MIT produced a plan for this waterfront site, and renderings have been prepared by local architects.

D – Alexander Avenue Extension - This site is proposed to encompass Alexander Avenue to Willis Avenue from East 132nd Street to the Harlem River. This site would be an extension of the Lincoln Avenue Waterfront Park. The site is a vital part of the Mott Haven-Port Morris waterfront and is currently being used sporadically for a motorcycle training course that could easily be relocated to another site off of the waterfront.

E – East 132nd StreetPier - This site is located at East 132nd Street where it meets the East River. There was a pier here previously and even a floating pool in 1902. In the 1980s, a ConEd explosion destroyed the pier, and the company never replaced it. It is already being used as an ad hoc fishing site.

F – Historic Port Morris Gantries - This site is located between East 134th Street and East 135th Street at the East River. The Historic Port Morris Gantries were recently recognized by the Historic Districts Council (HDC) during its "Six to Celebrate" program which identified significant projects on the basis of architectural and historic merit of the area, level of threat to the neighborhood, strength and willingness of the local advocates and potential for HDC's preservation support to be meaningful. At roughly four stories tall, the Port Morris Gantries stand as a reminder of New York City's rich nautical heritage. Established in 1902 by the New York and College Point Ferry Company, the 134th Street ferry slip fostered the development of a market, hotels, restaurants and stables nearby. Today the site is still owned by the city, but has been mostly unused since the 1990s.

G – Waterfront Connecting Path –The Mott Haven-Port Morris Waterfront would significantly benefit from a bike/walk/run path along the entire shoreline from Park Avenue in the west to East 135th Street in the east which would connect the Park Avenue Boat Launch to the Lincoln Avenue Waterfront Park (extended by the Alexander Avenue Waterfront Park), which would lead to the open space adjoining the Bronx Kill waterway/boat launch and then continue to the East 132nd Street Pier and finally the Historic Port Morris Gantries. Providing connectivity between these vital waterfront access points in Mott Haven-Port Morris would assist in the success of each point.

Mott Haven-Port Morris Waterfront Plan

Playground

Amenities: Football - Soccer Fields
Earth and rock Auditorium

Water Access

Gazebo/Kiosk

Walk/Bike Path

A – Bronx Kill Waterfront Park
B – Park Avenue Boat Launch and Waterfront Park
C – Lincoln Avenue Waterfront Park
D – Alexander Avenue Extension of Lincoln Avenue Waterfront Park

E – East 132nd Street Pier
F – Historic Port Morris Gantries
G – Mott Haven-Port Morris Waterfront Connecting Path

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: CINDY HAMBRO

Address: _____

I represent: _____

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: Feb 28, 14

(PLEASE PRINT)

Name: ANNIE WILSON

Address: PO Box 458, NEW YORK, NY 10009

I represent: New York Environmental Law & Justice Project

Address: 351 Broadway, Suite 300, New York, NY 10013

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2/28/2014

(PLEASE PRINT)

Name: Natalie Cronin

Address: 444 E 82nd St. #1G NY, NY 10028

I represent: My Family / Community

Address: 444 E 82nd St. #1G NY, NY 10028

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2-28-14

(PLEASE PRINT)

Name: PEGGY SHEPARD

Address: 4165 W. 140th St.

I represent: WE ACT

Address: 1854 Amsterdam Ave. NYC 10031

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

AIR QUALITY / TRAFFIC! *Date:* 2/28/14

(PLEASE PRINT)

Name: KIM FRACZEK

Address: 250 Moore St.

I represent: SANE ENERGY PROJECT.

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2-28-2014

(PLEASE PRINT)

Name: Norris McDonald, NY NY 10027

Address: 203 W. 107th Street, 2-A

I represent: African American Environmentalist

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Dan Durott

Address: 203 W. 107th St 1A NY NY 10025

I represent: African American Environmentalist Assn

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☑ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Edelie Baumohn

Address: 766 A 22nd St

I represent: NYC Env. Justice Alliance

Address: Same as above

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2/28/1987

(PLEASE PRINT)

Name: Rebecca Sanchez

Address: 1610a 22nd St. Brooklyn, NY

I represent: UPROSE

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2/28/14

(PLEASE PRINT)

Name: MICHAEL SEICHACK

Address: 71 W 38th St NY NY

I represent: AMERICAN LUNG ASSOCIATION

Address:

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: CAROL TWEEDY

Address: 1435 Lexington

I represent: Asphalt Green

Address: 555 E 90 St NYC 10128

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: KIRSTEN FELDMAN

Address: 876 PARK AVENUE, NY, NY 10075

I represent: ASPHALT GREEN

Address: 555 ~~EAST~~ 91ST STREET. NY, NY

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Omar Rodriguez

Address: _____

I represent: The Point CDC

Address: 940 Garrison Ave Bx, NY ~~10455~~ 10474

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☑ in favor ☐ in opposition

SWMP, CAPACITY REDUCTION TRANSFORM DON'T TRASH NYC

Date: 2-28-14

(PLEASE PRINT)

Name: JUSTIN WOOD

Address: NY NY

I represent: ~~NY~~ NYLPI

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

TRANSFORM DON'T TRASH NYC, SWMP ☑ in favor ☐ in opposition

Date: 2.28.14

(PLEASE PRINT)

Name: MAYA PINTO

Address: 50 BROADWAY

I represent: ALIGN

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2.28

(PLEASE PRINT)

Name: Angela Tovar

Address: 1231 Lafayette Ave 4th #112

I represent: Sustainable South Bronx

Address:

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Andy Lachman

Address: 1175 York

I represent: Parent Leaders of Boys Schools (PLUS)

Address: 1175 York Ave

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☒ in opposition 2.28

Date: _____

(PLEASE PRINT)

Name: Michael A. Cole

Address: 1700 Yorke Ave

I represent: —

Address:

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☑ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Denise Katzen

Address: 201 Madison Ave

I represent: Environment

Address: Same As Above

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 02/28/2014

(PLEASE PRINT)

Name: Juan Camilo Osorio

Address: _____

I represent: NYC Environmental Justice Alliance

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Justin Wood

Address: _____

I represent: NY Lawyers for the Public Interest

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 02/28/2014

(PLEASE PRINT)

Name: David Sheffer

Address: _____

I represent: Youth Minister for Peace / NYC Env. Justice Alliance

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 02/28/2014

(PLEASE PRINT)

Name: Anusha Venkataraman

Address: _____

I represent: El Puente / NYC Env. Justice Alliance

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2/28/14

(PLEASE PRINT)

Name: Bertha Lewis

Address: _____

I represent: The Black Institute

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☑ in opposition

Date: 2/28/14

(PLEASE PRINT)

Name: FRANCES DAVIS

Address: 1780 1 AVE 25# NEWYORK NY. 10128

I represent: ~~Me~~ MYSelf

Address: Same

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 28 FEB. 2014

(PLEASE PRINT)

Name: ROBERTO GAUTIER

Address: 140 CADMAN PLAZA WEST

I represent: 140 CPW PEACE + QUIET COMMITTEE

Address: 140 CADMAN PLAZA WEST

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Frederica Perera Columbia

Address: 40 E. 94th St. NYC University

I represent: Columbia University Center

Address: for Children's Environmental Health

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Rebecca Bratspies

Address: 22-13 37th St. Astoria

I represent: CUNY Center for Urban Envt'l Reform

Address: 2 Court Square, LIC

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2/28/14

(PLEASE PRINT)

Name: Mychal Johnson

Address: 335 E. 140th ST

I represent: South Bronx Unite

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 02/28/2014

(PLEASE PRINT)

Name: Melissa BARBER

Address: 80 Bruckner Blvd. #6F Bronx NY 10454

I represent: South Bronx Unite

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. ______ Res. No. ______
☐ in favor ☐ in opposition

Date: ______

(PLEASE PRINT)

Name: ERROL GOLDSTEIN

Address: [illegible]

I represent: NATURAL RESOURCES DEFENSE COUNCIL

Address: 40 W 20 ST NY NY

THE COUNCIL
THE CITY OF NEW YORK

DUMP

Appearance Card

I intend to appear and speak on Int. No. ______ Res. No. ______
☐ in favor ☒ in opposition

Date: ______

(PLEASE PRINT)

Name: Diane Courtney

Address: 500 E 69th ST

I represent: ______

Address: ______

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. ______ Res. No. ______
☐ in favor ☐ in opposition

Date: 2/28/14

(PLEASE PRINT)

Name: Ana Melendez

Address: 3462 3RD Avenue 11F Bx NY 10456

I represent: We Stay Nos Quedamos / NYCEJA

Address: 754 Melrose Ave Bx 10451

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: DARA HUNT

Address: 402 E 90th Street, NY NY 10128

I represent: _____

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2/28/14

(PLEASE PRINT)

Name: Carter Strickland

Address: _____

I represent: DEP / Commissioner

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2/28/2014

(PLEASE PRINT)

Name: Deryl Thielman

Address: P.O. Box 140502, SI. NY. 10314

I represent: North Shore Waterfront Conservancy of SI.

Address: Same as above

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: Feb. 28, 2014

(PLEASE PRINT)

Name: Carol Holmes

Address: 321 East 92nd St. Apt. 3, NY 10128

I represent: Resident on 92nd St. since 1973, I remember the stink of garbage & diesel

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2/28

(PLEASE PRINT)

Name: Thomas Natte

Address: Assistant Commissioner, Health Department for Environmental Surveillance and Policy

I represent: _____

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Joel Kupferman

Address: _____

I represent: NY Env. Project Env. Law & Justice Prct

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Dave Powell

Address: 1384 Stratford Ave Bx

I represent: Soutnern Bronx River Watershed Alliance

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Alok Disa

Address: _____

I represent: Earthjustice

Address: 48 Wall St, Floor 19, New York, NY 10005

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2-28-2014

(PLEASE PRINT)

Name: DR MAXINE LUBNER

Address: 1725 YORK AVE #27B

I represent: NYC residents!

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2-28-14

(PLEASE PRINT)

Name: Dan Wiley

Address: _____

I represent: Congresswoman Velázquez

Address: _____

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

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

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

☐ in favor ☐ in opposition

Date: 2/28/2014

(PLEASE PRINT)

Name: Geoffery Mullings

Address: 1560 Pelham Parkway South

I represent: _____

Address: _____

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