



EPA Administrator Gina McCarthy
1200 Pennsylvania Ave. NW
Washington, DC 20460
Dear EPA Administrator McCarthy,

March 17, 2015

RE: Docket Number EPA-HQ-OAR-2008-0699: Revision to the National Ambient Air Quality Standard for Ozone

Dear Administrator McCarthy:

I am writing on behalf of the CUNY School of Law Center for Urban Environmental Reform (“CUER”) to express strong support for the agency proposal to revise the primary National Ambient Air Quality Standard for Ozone downward from its current 75ppb level to a more protective 60 ppb level.

The current ozone standard fails to meet the agency’s obligation to adopt a primary National Ambient Air Quality Standard for Ozone that “allowing an adequate margin of safety, [is] requisite to protect public health.”¹ Indeed EPA has known for nearly a decade that the current 75ppb standard is scientifically and legally inadequate because it fails to protect vulnerable populations.² By contrast, setting the standard at 60 ppb will achieve the public health protections at the heart of the Clean Air Act—preventing up to 7,900 premature deaths in 2025 alone, as well as avoiding 1.8 million childhood asthma attacks and 1.9 million missed days of school each year.³

Moreover, the impacts of ozone pollution are not distributed equally across all communities. Poor and minority communities are much more exposed to ozone pollution, and thus bear a disproportionate share of the ill health effects from the current, inadequate ozone NAAQS. As it implements the legislative directive in Section 109 of the Clean Air Act to set national primary ambient air standards (NAAQS) at a

¹ Clean Air Act § 109(b)(1), 42 U.S.C.A §7409(b)(1).

² See, 2008 Letter from the Clean Air Science Advisory Committee (cautioning that the 75 ppb standard “fails to satisfy the explicit stipulations of the Clean Air Act that you ensure an adequate margin of safety for all individuals, including sensitive populations.”)

³ EPA, Regulatory Impact Analysis of the Proposed Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone, ES-15 (Nov. 2014) <http://www.epa.gov/glo/pdfs/20141125ria.pdf>.

level “requisite to protect the public health” EPA must take this disparate impact into account. EPA must set the ozone NAAQS at a level that protects all Americans, including those most vulnerable to the effects of ozone pollution, and those currently most exposed to the pollution. The congressional directive that the NAAQS include “an adequate margin of safety” means that the NAAQS must be sufficiently stringent to protect everyone, including minority children in New York City’s most impacted neighborhoods, as well other particularly vulnerable populations like the elderly and people with compromised lung function. That is why the CUNY Center for Urban Environmental Reform is urging the EPA to adopt a stronger, more protective standard of 60 parts per billion.

Millions of New Yorkers are Exposed to Too Much Ozone

The New York metro region as a whole ranks unfavorably high for ozone pollution—the 12th worst metro area in the country.⁴ In 2014, Queens, the Bronx, Manhattan and Staten Island all received F grades from the American Lung Association for ozone pollution.⁵ The health impacts that New Yorkers suffer because of these unacceptable levels ozone pollution are nothing short of disastrous. According to the New York Department of Mental Health and Hygiene, ozone pollution is directly responsible for 400 premature deaths in NYC each year, as well as more than 800 asthma-related hospital admissions, and over 4500 asthma-related emergency room visits.⁶

In 2014, Staten Island residents suffered through **28 days** when the air was unhealthy for some or all of them to breathe. Queens residents suffered through 18 such days, and Bronx and Manhattan residents suffered through 10.⁷ The combined population of New Yorkers exposed to days of unhealthy ozone levels exceeds 5.7 million. For perspective, the affected New York City population is roughly equivalent to the entire population of Wisconsin, and is well in excess of the combined total population of Montana, North Dakota, South Dakota, Delaware, Alaska, Vermont and Wyoming. With all due respect, there is no “adequate margin of safety” when millions of New Yorkers are forced to breathe unhealthy air on a regular basis. The NAAQS have not been set at a level “requisite to protect” them.

This is not just a New York problem, however. Nationwide, counties that receive an ‘F’ for ozone quality in the American Lung Association Report have 4.5x higher rates of adult asthma than do counties that receive an ‘A’, as well as 5x the rates of childhood asthma, and 4x the rate of cardiovascular disease.

⁴ American Lung Association, State of the Air 2014: Most Polluted Cities,

<http://www.stateoftheair.org/2014/city-rankings/most-polluted-cities.html>

⁵ American Lung Association, State of the Air 2014, <http://www.stateoftheair.org/2014/states/new-york/queens-36081.html>

⁶ NYC Department of Mental Health and Hygiene, *Air Pollution and the Health of New Yorkers: The Impact of Fine Particles and Ozone 4* (2011) <http://www.nyc.gov/html/doh/downloads/pdf/eode/eode-air-quality-impact.pdf>.

⁷ American Lung Association, State of the Air 2014, <http://www.stateoftheair.org/2014/states/new-york/queens-36081.html>

Ozone Pollution Poses a Serious Threat to Public Health

EPA has recognized that there is “likely to be” a causal relationship between ozone exposure and adverse respiratory health effects.⁸ For years, the Clean Air Science Advisory Committee has been cautioning that some healthy individuals have been shown to have “clinically relevant responses” to exposure to ozone pollution at exposure levels well below the current ozone NAAQS (indeed at 60 ppb.)⁹ Researchers in New York have demonstrated a significant association between ozone exposure levels in the City and asthma emergency department visits and hospitalizations.¹⁰ EPA’s Integrated Science Assessment concluded that there are consistent, positive associations between ozone air pollution and hospital admissions and emergency department visits for respiratory causes. Ozone exposure can also cause or contribute to heart attacks, strokes, and congestive heart failure. There is good evidence that ozone exposure harms newborns, with clear links demonstrated between ozone exposure and low birth weight, as well as between ozone exposure and reduced lung function in newborn babies.¹¹

There is solid experimental evidence documenting adverse health effects, including decreased lung functioning, from ozone exposures above 60 ppb.¹² The Clean Air Science Advisory Committee described these experiments as having been “carried out in rigorous fashion by established investigators at distinguished institutions . . . [using] state-of-the-art techniques.”¹³ Moreover, this experimental data is supported by epidemiological studies which provide real-world documentation that proposed ozone standards above 60 ppb (e.g. the current standard of 75 ppb and much of the proposed

⁸ EPA, *National Ambient Air Quality Standards for Ozone: Proposed Rule*, 79 Fed. Reg. 75234, 75288 (Dec. 17, 2014)

⁹ March 31, 2011 Letter to EPA Administrator Lisa Jackson from the Clean Air Science Advisory Committee concerning Reconsideration of the 2008 Ozone National Ambient Air Quality Standards, [http://yosemite.epa.gov/sab/sabproduct.nsf/f08beb48c1139e2a8525785e006909ac/\\$file/epa-casac-11-004-unsigned+.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/f08beb48c1139e2a8525785e006909ac/$file/epa-casac-11-004-unsigned+.pdf).

¹⁰ Khierbek, I., Wheeler, K., Walters, S., Kass, D., and Matte, T., (2013). *PM_{2.5} and ozone health impacts and disparities in New York City: sensitivity to spatial and temporal resolution*. AIR QUAL. ATMOS. HEALTH 6:473-486. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3661920/>

¹¹ Salam MT, Millstein J, Li YF, Lurmann FW, Margolis HG, Gilliland FD. Birth outcomes and prenatal exposure to ozone, carbon monoxide, and particulate matter: Results from the Children's Health Study. *Environ Health Perspect*. 2005; 113: 1638-1644

¹² Kim, CS; Alexis, NE; Rappold, AG; Kehrl, H; Hazucha, MJ; Lay, JC; Schmitt, MT; Case, M; Devlin, RB; Peden, DB; Diaz-Sanchez, D. (2011). *Lung function and inflammatory responses in healthy young adults exposed to 0.06 ppm ozone for 6.6 hours*. AM. J. RESPIR. CRIT. CARE MED. 183: 1215-1221.

<http://dx.doi.org/10.1164/rccm.201011-1813OC>; Brown, JS; Bateson, TF; McDonnell, WF. (2008). *Effects of exposure to 0.06 ppm ozone on FEV1 in humans: A secondary analysis of existing data*. ENVIRON. HEALTH PERSPECT. 116: 1023-1026. <http://dx.doi.org/10.1289/ehp.11396>; Adams, W. C. (2006) *Comparison of chamber 6.6 hour exposures to 0.04-0.08 ppm ozone via square-wave and triangular profiles on pulmonary responses*. INHALATION TOXICOL. 18: 127-136.

<http://dx.doi.org/10.1080/08958370500306107>; Adams, WC. (2002). *Comparison of chamber and face-mask 6.6-hour exposures to ozone on pulmonary function and symptoms responses*. INHALATION TOXICOL. 14: 745-764. <http://dx.doi.org/10.1080/08958370290084610>.

¹³ March 31, 2011 Letter to EPA Administrator Lisa Jackson from the Clean Air Science Advisory Committee concerning Reconsideration of the 2008 Ozone National Ambient Air Quality Standards: Consensus Responses,

[http://yosemite.epa.gov/sab/sabproduct.nsf/f08beb48c1139e2a8525785e006909ac/\\$file/epa-casac-11-004-unsigned+.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/f08beb48c1139e2a8525785e006909ac/$file/epa-casac-11-004-unsigned+.pdf)

70-60 ppb range) will fail to provide adequate protection for vulnerable populations.¹⁴ EPA must give these important studies significant attention in determining what level of air quality is “requisite to protect the public health.” The evidence is clear that setting the Ozone NAAQS at a level greater than 60 ppb would pose significant risks to children, seniors, and those with cardiovascular disease or compromised lung functions (as from asthma)—populations particularly vulnerable to ozone pollution.

For New York, that would be disastrous. In 2013, 217,562 Queens residents, roughly 1/10 of Queens total population of 2.247 million suffer from asthma, including 43,898 children.¹⁵ In the Bronx, those figures were 134,908 out of a total population of 1.39 million—again 10%.¹⁶ That figure included 34,874 children.¹⁷ For these vulnerable populations, exposure to ozone pollution can irritate sensitive lung tissue, causing wheezing and coughing, and triggering asthma attacks—all of which can lead to missed days of work or school, frightening trips to the emergency room, or, worse, premature death. A 2011 New York City Department of Mental Health and Hygiene Study conclusively demonstrated that reducing ozone levels by 10% would dramatically reduce the health impacts on New Yorkers.¹⁸

Ozone Pollution is an Environmental Justice Issue

Asthma prevalence is inversely proportional to income, with affected individuals 4.5x more likely to live in poverty. In New York, asthma rates for those with annual household incomes below \$15,000 is more than double the rates for households with annual incomes exceeding \$75,000 [15% versus 6.8%].¹⁹ Over 17% of African-American children suffer from Asthma, compared to 8.7% for white children, and 11% for Latino/a children.²⁰ Children under four years of age from low-income areas are more than four times more likely to be hospitalized for asthma than children from high-income areas.²¹ To fulfill the mandate of Section 109 of the Clean Air Act, EPA must make

¹⁴ Katsouyanni, K; Samet, JM; Anderson, HR; Atkinson, R; Le Tertre, A; Medina, S; Samoli, E; Touloumi, G; Burnett, RT; Krewski, D; Ramsay, T; Dominici, F; Peng, RD; Schwartz, J; Zanobetti, A. (2009). *Air pollution and health: A European and North American approach (APHENA)* (Research Report 142). Boston, MA: Health Effects Institute. <http://pubs.healtheffects.org/view.php?id=327>; Stieb, DM; Szyszkowicz, M; Rowe, BH; Leech, JA. (2009). *Air pollution and emergency department visits for cardiac and respiratory conditions: A multi-city time-series analysis*. ENVIRON. HEALTH GLOBAL ACCESS SCI. SOURCE 8: 25. <http://dx.doi.org/10.1186/1476-069X-8-25>; Mar, TF; Koenig, JQ. (2009). *Relationship between visits to emergency departments for asthma and ozone exposure in greater Seattle, Washington*. ANN. ALLERGY ASTHMA IMMUNOL. 103: 474-479; Bell, ML; Peng, RD; Dominici, F. (2006). *The exposure-response curve for ozone and risk of mortality and the adequacy of current ozone regulations*. ENVIRON. HEALTH PERSPECT. 114: 532-536.

¹⁵ American Lung Association, State of the Air 2013, County Rankings: Queens <http://www.stateoftheair.org/2013/states/new-york/queens-36081.html>

¹⁶ American Lung Association, State of the Air 2013, County Rankings: Bronx, <http://www.stateoftheair.org/2013/states/new-york/bronx-36005.html>

¹⁷ *Id.*

¹⁸ NYC Department of Mental Health and Hygiene, *Air Pollution and the Health of New Yorkers: The Impact of Fine Particles and Ozone* at 4.

¹⁹ New York State Asthma Surveillance Summary Report at 28, 37 (Fig. 5-7) (Fall 2009).

²⁰ *Id.* at 42, fig. 5-12.

²¹ New York City Dept. of Mental Health and Hygiene, *Asthma Facts*, 2d. Ed. at 7 (May 2003).

environmental justice a priority. Children in the Bronx and in Queens deserve the opportunity to breathe air that will not harm their health as do children in other environmental justice communities. The current ozone NAAQS must be lowered to a level requisite to protect these particularly vulnerable populations.

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 federal 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. E.O. 12,898 affirmed every American's equal right to breathe clean air, drink clean water, and live on uncontaminated land. As such, it stands for the proposition that low-income neighborhoods and communities of color should not have to bear disproportionate burdens in the form of negative health and welfare outcomes due to pollution. Two decades later, we are still struggling to make that vision a reality.

One place where the disparity between environmental justice's ambition and achievement is clearly visible is in the disparate burdens that communities of color and poor communities bear from ozone pollution. Poor and minority communities are much more exposed to ozone pollution, and thus bear a disproportionate share of the mortality and morbidity stemming from the current, inadequate ozone NAAQS. As it implements the legislative directive in Section 109 of the Clean Air Act to set national primary ambient air standards (NAAQS) at a level "requisite to protect the public health" EPA must take this disparate impact into account. EPA must set the ozone NAAQS at a level that protects all Americans, including those most vulnerable to the effects of ozone pollution, and those currently most exposed to the pollution. The congressional directive that the NAAQS include "an adequate margin of safety" means that the NAAQS must be sufficiently stringent to protect everyone, including minority children in New York City's most impacted neighborhoods, as well other particularly vulnerable populations like the elderly and people with compromised lung function.

Setting the Ozone NAAQS at 6 ppb Makes Good Economic Sense as Well as Good Environmental Sense

Congress and the Courts have repeatedly made it clear that economic considerations must be subordinated to setting the NAAQS at a level requisite to protect public health, and to achieving and maintaining those levels of air quality. The Clean Air Act does not allow economic growth to be accommodated at the expense of the public health.

Nevertheless, revising the Ozone NAAQS down to 60 ppb makes good economic sense. In its estimate of the costs and benefits of a revised ozone standard, EPA calculated that the benefits of a 60 ppb ozone standard would outweigh the benefits by as much as \$31 billion (or possibly cost up to \$5 billion). The actual benefits associated with setting the ozone NAAQS at 6 ppb will likely be much higher. First, there is a long history of EPA and private parties significantly overestimating the costs of complying with pollution reduction requirements. Second, the benefits from reduced ozone pollution are

explicitly incomplete. EPA notes that it was unable to quantify some anticipated health benefits associated with exposure to ozone²² and was able to quantify “only a small portion of the welfare impacts associated with reductions in ozone concentrations.”²³ Thus, the agency calculations showing a likely significant economic benefit from a 60 ppb ozone standard likely overstate the costs, and definitely understate the benefits.

For these reasons, the CUNY Center for Urban Environmental Reform urges EPA to adopt a stronger, more protective standard of 60 parts per billion.

Respectfully submitted,



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About the CUNY Center for Urban Environmental Reform (CUER)

CUER is a justice initiative at CUNY School of Law dedicated to developing new avenues of participation and new opportunities for citizen empowerment in environmental decision-making. Drawing from the emerging human rights norms of participation, access to information, transparency and intergenerational equity, CUER seeks to revitalize participatory environmental decision-making to help community members, scholars and policymakers communicate in a way that leads to better, more sustainable decision-making. In doing so, the Center facilitates important social conversations about the acceptability of environmental risks and the need for their equitable distribution.

Many of the standard techniques of environmental decision-making reduce society's ability to include issues of distributive justice and overall fairness in the decision. As a result, environmental policies have been repeatedly accused of perpetuating environmental injustice — with poor and minority communities consistently allocated a larger share of environmental bads while having access to fewer environmental goods. CUER's emphasis on environmental citizenship is an attempt to surface these justice dynamics that are too often ignored. Framing environmental choices as questions of fundamental equality in a political community, rather than as private choices about property, helps emphasize the role that power, access to information, and inequality play in shaping environmental outcomes.

²² EPA, Regulatory Impact Analysis of the Proposed Revisions to the National Ambient Air Quality Standards for Ground-Level Ozone, at ES-12 (Nov. 2014) <http://www.epa.gov/glo/pdfs/20141125ria.pdf>.

²³ *Id.*

