# New York State Department of Environmental Conservation

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Peter M. Iwanowicz Acting Commissioner

December 15, 2010

COPY FOR YOUR INFORMATION

Ms. Judith Enck **Regional Administrator** United States Environmental Protection Agency 290 Broadway, 26th Floor New York, New York 10007-1866

Dear Regional Administrator Enck:

On February 9, 2010, EPA strengthened its National Ambient Air Quality Standard (NAAQS) for nitrogen dioxide (NO2) by establishing a new, one hour primary NAAQS at the level of 100 parts per billion (ppb). This revision of the NAAQS requires New York, as a partner with EPA in administering the Clean Air Act, to make recommendations to EPA no later than January 22, 2011 for areas to be designated attainment, nonattainment and/or unclassifiable.

As such, on behalf of Governor David Patterson, I am submitting New York State's designation recommendations for the new, one hour primary NAAOS NO<sub>2</sub> standard. This new standard will protect the public health by limiting exposures to short-term peak concentrations of NO2 (which primarily occur near major roads) and by limiting community-wide NO2 concentrations to levels below those that have been linked to respiratory-related emergency department visits and hospital admissions in the United States.

Compliance with the standard is based on the three-year average of the 98th percentile of the annual distribution of daily maximum one hour average concentrations. To determine compliance with the new standard, EPA is establishing new ambient air monitoring and reporting requirements for NO2. The addition of a new, one hour NO2 standard and changes to the NO2 monitoring network include the following requirements:

# Community Wide Monitoring:

A minimum of one monitor must be placed in any urban area with a population greater than or equal to one million people in order to access community-wide concentrations. Some NO2 monitors already in operation in New York State may meet the community-wide monitor siting requirement of at least one monitor within an urban area with a population greater than or equal to one million people. However, the siting of additional monitors would be necessary to fully comply with the new requirements.

## Near Road Monitoring:

New York does not, at this time, have a state-wide near-road monitoring network that meets the specific requirements under the new NAAQS that at least one monitor be located near a major road in urban areas with a population greater than or equal to 500,000 people, as well as have monitors located in other areas where maximum concentrations are expected. A second monitor is required near major roads under other specific conditions.

#### Monitoring to Protect Susceptible and Vulnerable Populations:

We expect that New York will host at least one of these additional monitors, which must begin operating no later than January 1, 2013.

New York intends to make the required submission of a monitoring plan for NO<sub>2</sub> by the June 2012 deadline, six months prior to the January 1, 2013 monitoring start date. Thereafter, the expanded network of NO<sub>2</sub> monitors are expected to be fully deployed in New York, and three years of air quality collected, enabling EPA to re-designate areas in 2016 or 2017 (depending on when monitoring sites become operational) based on the air quality data from the new monitoring network.

EPA expects to identify, or "designate", areas as attaining or not attaining the new standard by January 2012, within two years of establishing the new NO<sub>2</sub> standard. These designations will be based on the existing community-wide monitoring network. Areas with monitors recording violations of the new standards will be designated "nonattainment." EPA anticipates designating all other areas of the country as "unclassifiable" to reflect the fact that there is insufficient data available to determine if those areas are meeting the revised NAAQS.

Based on an analysis of New York's metropolitan areas and a comparison to the new requirements under the  $NO_2$  NAAQS, the Department has determined that several areas of New York State would be subject to the new NO<sub>2</sub>monitoring requirements. Those areas, and the level of monitoring that would be required consistent with EPA requirements, are as follows:

Designated Metropolitan Statistical Area	<b>Recommended Monitoring</b>	Existing Monitoring		
Buffalo-Niagara Falls Population: 1,124,309	e .			
New York-Northern New Jersey-Long Island Population: 19,006,798	2 Near-road and 1 Community-based required	1 Community-based Monitor		
Albany-Schenectady-Troy Population: 853,919	1 Near-road required	None		
Poughkeepsie-Newburgh- Middletown Population: 672,525	1 Near-road required	None		
Rochester Population: 1,034,090	1 Near-road required and 1 Community-based required	None		
Syracuse Population: 643,794	1 Near-road required	None		

Prior to making any attainment designation recommendation, the Department must fully evaluate the existing NO<sub>2</sub> monitoring stations and the associated data that has been collected to determine if nonattainment has been indicated. Only two Core-Based Statistical Areas (CBSAs) within New York State have existing NO<sub>2</sub> monitors in place (meaning that they have been monitoring NO<sub>2</sub> since at least 2005): Buffalo-Niagara Falls and New York- Northern New Jersey – Long Island. There is also one monitor in Steuben County (western New York) that is outside of a designated Metropolitan Statistical Area (MSA).

While these monitors do not fully satisfy the revised location criteria for monitoring, the Department has calculated the following design values in accordance with EPA's criteria (three year 98<sup>th</sup> percentile average of the annual distribution of daily maximum 1-hour average concentrations), for the following rolling three year periods, for those monitoring locations for which NO<sub>2</sub> monitoring data was available beginning in 2005 (parts per billion):

			Three Year 98th Percentile Average (p		
City	County	Location	2005-07	2006-08	2007-09
New York	Bronx	200th Street and Southern Blvd	70	N/A	N/A
New York	Bronx	IS 52, 681 Kelly St	75	70	72
New York	Bronx	200th Street and Southern Blvd	N/A	N/A	67
New York	New York	PS 59, 228 E. 57th St	78	78	N/A
New York	Queens	Queens College	69	67	67
East Meadow	Nassau	Eisenhower Park	60	58	58
Amherst	Erie	Audubon Golf Course	49	48	44
Buffalo	Erie	Trailer,185 Dingens St	79	82	86
Addison	Steuben	8301 Ackerson Rd, Pinnacle SP	N/A	N/A	11

## New York – Northern New Jersey – Long Island:

The six monitoring stations within the New York MSA all have design values below the 100 ppb standard for the three-year rolling time periods shown. EPA would require at least two "near road" and one "community-wide" monitor for this MSA to fully establish attainment. Two of the monitoring locations within this MSA may qualify as "community-wide" monitors: Queens College (Queens) and 200<sup>th</sup> Street and Southern Blvd (Bronx).

The historical record for these monitoring stations provides a perspective on how NO<sub>2</sub> design values have changed over time, and also provides a context for the current design values within the proposed one-hour standard. The following chart shows a consistent decline in the 98<sup>th</sup> Percentile Values over the time period shown, with a slight uptick in concentrations from 2007-2009, with the exception of the monitoring station at Queens College, where concentration values remained nearly level during that timeframe.

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#### **Buffalo-Niagara Falls:**

The two NO<sub>2</sub> monitoring stations within this CBSA have design values well below the 100 ppb standard for the running three year design value periods beginning in 2005 and ending in 2009. EPA would require at least one "near road" and one "community-wide" monitor for this CBSA to fully establish attainment. The existing monitors in this CBSA do not meet these requirements.

The historical record of 98<sup>th</sup> Percentile NO<sub>2</sub> concentrations in the following graph reveals a steep decline in concentration values at the Dingens St. monitoring station in the late seventies. Both monitoring stations show a slight decline in concentrations from about 1980 to the present, with the exception of two notable spikes for the Dingens St. station, centered around 1987 and 2007, respectively. The monitoring data for the station located at Pinnacle State Park in Steuben County is included for reference purposes even though it is outside the boundaries of the CBSA (2005-2007 data only).

#### Albany-Schenectady-Troy, Poughkeepsie-Newburgh-Middletown, Rochester, Syracuse:

There is no active or recent (since 2005) NO<sub>2</sub> monitoring within these CBSAs, so the attainment status of these areas cannot be determined and are thus unclassifiable.

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## **Adjacent States:**

In addition to assessing the existing monitoring data within New York State, the Department has also assessed NO<sub>2</sub> monitoring data from neighboring states Connecticut and New Jersey (as both are part of the New York Metropolitan Area, or "NYMA") in order to determine if New York emissions contribute significantly to nonattainment in, or interfere with maintenance by, any other state as a result of the interstate transport of pollutants.

The calculated 98<sup>th</sup> percentile values, and the calculated design values for 2007-09 for New Jersey and Connecticut are shown in the following tables (the New Jersey counties located within the New York Metropolitan Area are shaded grey). None of the design values in either state exceed the NO<sub>2</sub> primary standard of 100 ppb:

Design Values: New Jersey						
County	Monitoring Sites	Federal Monitor ID	98th Percentile (ppb)			Design Value (ppb
			2007	2008	2009	2007 - 2009
Hudson	Bayonne	340170006	2 C	-	63	No. Contraction
Morris	Chester	340273001	36	42	36	38
Essex	East Orange	340131003	65	56	66	62
Union	Elizabeth Lab	340390004	74	77	72	74
Bergen	Leona	340030006	-	66	68	
Cumberland	Millville	340110007	39.	40	41	40
Mercer	Rider University	340210005	41	43	40	41
MiddJlesex	Rutgers University	340230011	51	50	51	51

Design Values: Connecticut						
County	Monitoring Sites	Federal Monitor ID	98th Percentile (ppb)			Design Value (ppb)
			2007	2008	2009	2007 - 2009
Fairfield	Westport	09-001-9003	57	52	48	52
Hartford	East Hartford / McAuliffe	09-003-1003	49	44	- 46	46
. Litchfield	Thomaston	09-005-0004	40	32	34	35
New Haven	New Haven / Criscuolo	09-009-0027	64	54	52	57

Since there are no monitors indicating non-attainment in either state, New York State cannot, at this time, be deemed to contribute to, or interfere with, attainment of the NO<sub>2</sub> NAAQS in the other states within the New York Metropolitan Area boundary.

# **Recommendations:**

The Department lacks NO<sub>2</sub> monitoring data for New York State that meets EPA's monitoring requirements of "near road" and "community-wide" monitoring for the purposes of this NAAQS. No nonattainment is indicated based on the remaining data, however, in either New York State or the other states in the New York Metropolitan Area (i.e., Connecticut and New Jersey). As such, the Department recommends that the following statistical areas, as well as the remainder of the state, be designated as "unclassifiable" with respect to the national primary ambient air quality standard for NO<sub>2</sub>.

- New York Northern New Jersey Long Island, NY-Metropolitan Statistical Area (NYMA MSA)
- Buffalo-Niagara Falls, CBSA
- Albany-Schenectady-Troy, CBSA
- Poughkeepsie-Newburgh-Middletown, CBSA
- Rochester, CBSA
- Syracuse, CBSA

We believe that each of these recommendations is consistent with Section 107(d) of the Clean Air Act.

Should you have any questions regarding these recommendations, please do not hesitate to contact me at (518) 402-8537 or David J. Shaw, Director of the Department's Division of Air Resources, at (518) 402-8452.

Sincerely,

J. Jared Snyder
Assistant Commissioner
Office of Air Resources, Climate Change
& Energy

Enclosure

cc: D. Shaw R. Sliwinski M. Reis J. Close C. McCarthy



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#### PUBLIC NOTICE

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#### NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

## "NEW YORK STATE DESIGNATION RECOMMENDATIONS FOR OXIDES OF NITROGEN WITH RESPECT TO THE REVISED ONE-HOUR AMBIENT AIR QUALITY STANDARD"

Notice is hereby given that the NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (Department) has submitted recommendations on the attainment status of New York State with respect to nitrogen dioxide (NO<sub>2</sub>) to the United States Environmental Protection Agency (EPA) for approval.

On February 9, 2010, EPA revised its National Ambient Air Quality Standard (NAAQS) for NO<sub>2</sub> by establishing a new, one hour primary NAAQS at the level of 100 parts per billion (ppb). This revision of the NAAQS requires New York, as well as other states, to make recommendations to EPA no later than January 22, 2011 for areas to be designated as attainment, nonattainment and/or unclassifiable.

After a review of the available ambient air monitoring data for  $NO_2$  according to the requirements of the revised NAAQS rulemaking (75 FR 6474), the Department has determined that the present monitoring does not meet the requirements of the revised rule in all respects. Therefore, a designation of "unclassifiable" has been recommended to the EPA for the entire state. Requirements for future monitoring, however, will enable the Department to establish the attainment status within the time required under federal rules.

All inquiries regarding this action should be submitted to Mr. James Close, New York State Department of Environmental Conservation, 625 Broadway  $-2^{nd}$  Floor, Albany, New York, 12233-3251 or by e-mail to airsips@gw.dec.state.ny.us. Mr. Close can also be reached at (518) 402-8396.