



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF THE COMMISSIONER

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CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

February 11, 2011

The Honorable Judith A. Enck
Regional Administrator
United States Environmental Protection Agency – Region 2
290 Broadway – 26th Floor
New York, New York 10007-1866

Dear Administrator Enck:

The purpose of this letter is to provide you with New Jersey's recommendations for nitrogen dioxide (NO₂) designations for the new 1-hour 100 parts per billion (ppb) National Ambient Air Quality Standard (NAAQS).¹ Section 107(d)(1)(A) of the Clean Air Act provides that each state submit recommendations for areas to be designated attainment, nonattainment, or unclassifiable, no later than 1 year after the United States Environmental Protection Agency (USEPA) promulgates a new or revised NAAQS. On November 5, 2010, you sent Governor Chris Christie a letter advising that New Jersey make such recommendations for the new NO₂ NAAQS published on February 9, 2010 (Attachment 1).

New Jersey recommends the entire State be designated unclassifiable. New Jersey makes this recommendation because the new standard requires the establishment of near roadway monitoring stations and these are not yet in place. Therefore, there is insufficient data to support an attainment or nonattainment determination for the State at this time based on the current network of monitors.

By July 1, 2012, New Jersey will submit its Annual Monitoring Network Plan that would include plans for implementing the NO₂ monitoring network requirement. New Jersey's ambient air quality data for 2007-2009 meets the new standard, as shown in the attachments to this letter.

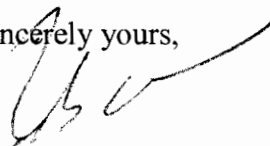
Section 110 (a)(2) of the Clean Air Act (CAA) requires states to complete an Infrastructure State Implementation Plan (SIP) after area designations for a new standard. The Infrastructure SIP for the revised NO₂ NAAQS is due to the USEPA by January 2013. At this time, no guidance has been provided by the USEPA. New Jersey requests that the USEPA provide guidance on the

¹ 75 Fed. Reg. 6474-6475 (February 9, 2010)

necessary elements of the transport portion of the Infrastructure SIP in accordance with Section 110 (a)(2) of the Clean Air Act by the Fall of 2011, in order to provide enough time for States to complete the SIP.

If you have any questions regarding New Jersey's recommendations, please contact Chris Salmi, Assistant Director of the Division of Air Quality, at (609) 292 – 2710.

Sincerely yours,



Bob Martin
Commissioner

Attachments

c: Ray Werner, USEPA Region 2,
Richard Ruvo, USEPA Region 2
John Renella, New Jersey DAG
William O'Sullivan, NJDEP
Chris Salmi, NJDEP
Sharon Davis, NJDEP

Attachment 1:
USEPA Letter to Governor Chris Christie Regarding
NO₂ Designation Recommendations



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

Honorable Chris Christie
Governor of the State of New Jersey
Office of the Governor
PO Box 001
Trenton, NJ 08625

Dear Governor Christie:

On January 22, 2010, the U.S. Environmental Protection Agency (EPA) strengthened the health-based National Ambient Air Quality Standard (NAAQS) for nitrogen dioxide (NO₂) by supplementing the existing standard of 53 parts per billion (ppb) with a 1-hour primary standard of 100 ppb (3-year average of the 98th percentile daily maximum 1-hour concentration) (75 FR 6474, February 9, 2010).¹ This new standard is based on the most recent scientific studies. It will protect public health by reducing exposures to short-term peak concentrations of NO₂ near major roadways and in communities where people live and work, by limiting NO₂ concentrations to levels below those which have been linked to respiratory-related emergency department visits and hospital admissions in the United States.

Under the Clean Air Act (Act), EPA is required to make initial designations within two years of promulgation of a NAAQS.² The Act directs Governors to submit their recommendations to EPA, designating all areas in the state as "attainment," "nonattainment" or "unclassifiable."³ These recommendations must be submitted to EPA by January 25, 2011, one year after the NAAQS was revised. States and tribes should base their recommendations on the latest available NO₂ monitoring data, which we expect will be from 2007-2009 or 2008-2010.

In 2012, EPA will be making initial NO₂ designations for all areas in the country, including both state lands and Indian Country. Attached is a schedule for states, tribes and local air pollution control agencies that indicates the important dates discussed in this letter. Unlike states, tribes are not obligated to submit designation recommendations, but EPA invites them to

¹ The EPA has not yet completed review of the secondary NO₂ NAAQS so no action is required on your part at this time for a secondary NO₂ NAAQS.

² EPA has the discretion to extend the deadline up to one year if there is insufficient information on which to make air quality determinations. See Act §107(d)(a)(B)(i). As noted in the preamble to the final rule, the Agency does not intend to take an additional year to complete designations since one more year of air quality data from current NO₂ monitors would not result in significant new data to inform initial designations.

³ We note that area designations of "attainment" and "unclassifiable" serve as the basis for defining baseline areas for Prevention of Significant Deterioration (PSD) increments. Therefore, we encourage states and tribes to take into consideration potential PSD implications when making recommendations concerning the specific boundaries for such areas.

submit a designation recommendation for Indian Country and/or engage in formal or informal consultation with EPA Regions. More information on tribal consultations is available at <http://www.epa.gov/tribal/consultation/>

The Act provides EPA with the authority to modify states' recommendations as it deems necessary. If EPA intends to make such modifications, EPA will notify states no later than 120 days prior to promulgating the final designations rule (by September 27, 2011). States will then have an opportunity to demonstrate why EPA's proposed modification is inappropriate before designations are finalized.

We anticipate designating most areas in the country as "unclassifiable," indicating that there are insufficient data to determine whether or not the area is attaining the revised NO₂ NAAQS. We believe this approach is appropriate given that: (1) the new near-road monitoring network requirements associated with the revised NO₂ NAAQS are not effective until January 2013, so air quality data from these new monitors will not be available to inform initial designations; and (2) the NO₂ monitors in the existing NO₂ network do not provide adequate evidence to determine whether or not the new NAAQS is met at other locations, especially those closer to NO₂ emission sources such as roadways.

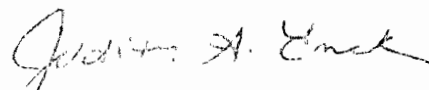
EPA intends to designate as "nonattainment" any area with current air quality data that violates (or that contributes to an area that violates) the NAAQS, as required by the Act.⁴ If you initially submit a recommendation of "unclassifiable" for an area based on the 3-year period 2007-2009 and it is determined that the area experienced a violation of the NO₂ NAAQS based on newly acquired monitoring data for the 3-year period 2008-2010, EPA will provide you with an opportunity to submit a boundary recommendation for that area.

Once the near-roadway monitoring network is fully deployed and three years of air quality data are collected, EPA has the authority to redesignate areas as appropriate from "unclassifiable" to "attainment" or "nonattainment." We anticipate that sufficient data to support redesignations will be available after 2015.

Establishing air quality designations is a key step in improving air quality. Areas that are designated as "nonattainment" for the NO₂ NAAQS will be required to adopt plans to reduce ambient concentrations of NO₂. EPA Region II will keep New Jersey informed of any additional guidance and other support activities concerning implementation of the revised NO₂ NAAQS.

Should you have any questions regarding this matter, please do not hesitate to contact me at 212-637-5000, or have your staff contact Raymond Werner, Chief Air Programs Branch, of my staff at 212-637-3706.

Sincerely,



Judith A. Enck
Regional Administrator

⁴ EPA's latest assessment of NO₂ air quality data is posted at <http://www.epa.gov/airtrends/values.html>.

Enclosure

cc: Bob Martin, Commissioner
New Jersey Department of Environmental Protection

NO₂ Designations Schedule

Action	Date
Revised NO ₂ NAAQS signed	January 22, 2010
State/Tribe submits its recommendations to EPA	January 25, 2011
EPA notifies State/Tribe of any revisions to its recommendations ("120-day letter")	September 27, 2011
EPA promulgates initial NO ₂ designations	January 25, 2012

Attachment 2:

New Jersey's Nitrogen Oxide Designation Recommendation Background Information

Recommendation

New Jersey recommends the entire state be designated unclassifiable with the anticipation that additional monitoring data will be gathered near roadways in the future. New Jersey's ambient air quality data for 2007-2009 meets the new 100 ppb standard; however, New Jersey anticipates installing additional monitors to satisfy USEPA requirements.

Introduction

On January 22, 2010, the United States Environmental Protection Agency (USEPA) revised the primary nitrogen oxide National Ambient Air Quality Standard (NAAQS) by establishing a new 1-hour standard at a level of 100 parts per billion (ppb) to supplement the existing annual standard of 53ppb.² The USEPA also established requirements for a nitrogen oxide monitoring network that will include monitors at locations within 50 meters of major roadways, as well as monitors sited to measure the area-wide nitrogen oxide concentrations that occur more broadly across communities. Section 107(d)(1)(A) of the Clean Air Act requires that Governors of each state submit recommendations for areas to be designated attainment, nonattainment, or unclassifiable, no later than 1 year after the USEPA promulgates a new or revised NAAQS. On November 5, 2010, the USEPA sent Governor Chris Christie a letter advising that New Jersey make such recommendations for the new NO₂ NAAQS published on February 9, 2010.

The letter also indicated that USEPA anticipates designating most areas in the country as "unclassifiable", indicating that there are insufficient data to determine whether or not the area is attaining the revised NO₂ NAAQS. The letter states "We believe this approach is appropriate given that: (1) the new near-road monitoring network requirements associated with the revised NO₂ NAAQS are not effective until January 2013, so air quality data from these new monitors will not be available to inform initial designations; and (2) the NO₂ monitors in the existing NO₂ network do not provide adequate evidence to determine whether or not the new NAAQS is met at other locations, especially those closer to NO₂ emission sources such as roadways."

Based on the current monitoring network, all New Jersey monitors are in attainment of the new 1-hour NO₂ standard. The Elizabeth Lab monitor located at Exit 13 of New Jersey Turnpike near Goethal's Bridge has a steady influx of traffic, but does not meet the citing requirements of the new NAAQS. The NO₂ concentrations at this site are still below the NAAQS at 74 ppb, and have been for over 30 years. Nitrogen dioxide monitoring in New Jersey are further discussed below.

² 75 Fed. Reg. 6474-6475 (February 9, 2010)

Nitrogen Dioxide Monitoring Data

New Jersey Monitoring Data

New Jersey began routine monitoring for NO₂ in 1966. The last year that concentrations exceeded the annual standard of 53 ppb in New Jersey was 1974. As shown in Table 1, the state monitored NO₂ levels at eight locations in 2009. None of the eight monitoring sites recorded exceedances of the annual NO₂ National Ambient Air Quality Standards of 53 ppb during 2009. The new 1-hour NO₂ standard is based on the 3-year average of the 98th percentile of the yearly distribution of 1-hour daily maximum concentrations. Using the three most recent years (2007-2009) of quality-assured air quality data from the current monitoring network, all existing New Jersey monitors are in attainment of the new 1-hour NO₂ standard (See Table 1). The new standard also has a monitoring network requirement that requires monitors within 50 meters of major roadways, as well as monitors sited to measure the area-wide NO₂ concentrations that occur more broadly across communities.

Table 1
New Jersey Ambient Nitrogen Dioxide Monitoring Data
New NO₂ 1-hour Standard = 100ppb

County	Monitoring Sites	Federal Monitor ID	98 th Percentile (ppb)			Design Value (ppb) ^a
			2007	2008	2009	2007-2009
Hudson	Bayonne ^b	340170006	-	-	63	-
Morris	Chester	340273001	36	42	36	38
Essex	East Orange	340131003	65	56	66	62
Union	Elizabeth Lab	340390004	74	77	72	74
Bergen	Leonia ^c	340030006	-	66	68	-
Cumberland	Millville	340110007	39	40	41	40
Mercer	Rider University	340210005	41	43	40	41
Middlesex	Rutgers University	340230011	51	50	51	51

Notes:

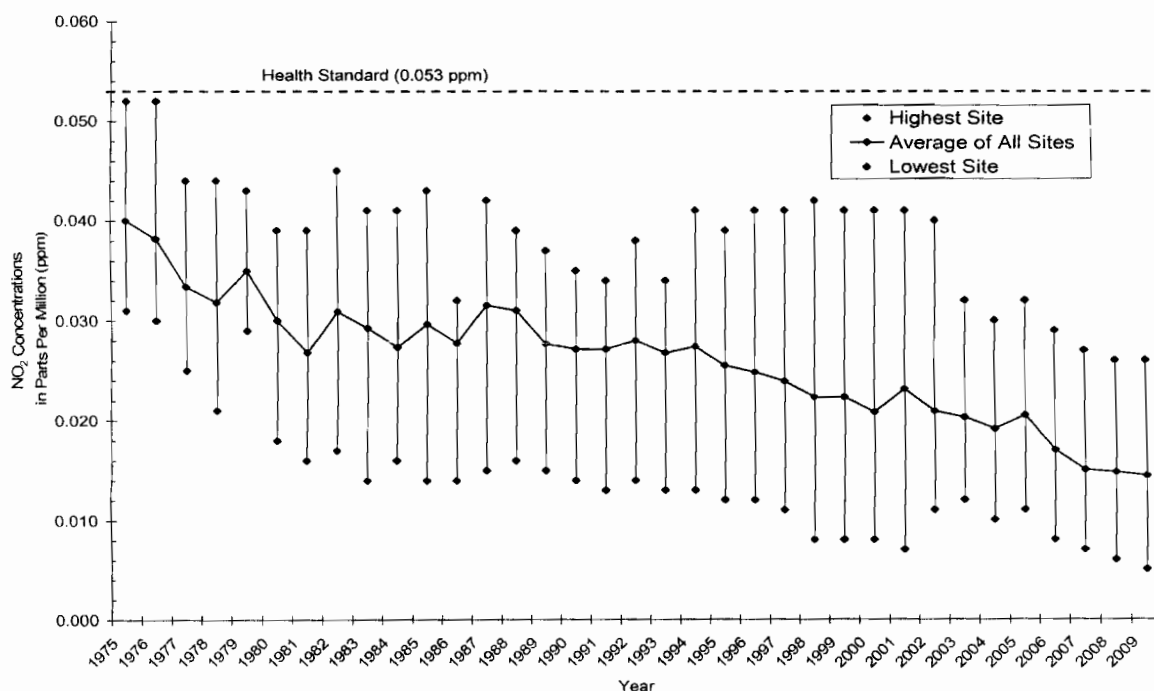
^aThe design value is the 3-year average of the 98th percentile of the yearly distribution of 1-hour daily maximum NO₂ concentrations for any site in the area. The area is in attainment if the design value is less than or equal to 100 ppb.

^bData from October 31 – December 31, 2007 was considered invalid.

^cSite was established on December 7, 2007.

Figure 1 shows a downward trend in NO₂ concentrations, with the highest recorded annual statewide average of 52 ppb in 1975 and 26 ppb in 2009, all below the annual 53 ppb standard. The graph also includes the levels of the sites that measured the highest annual mean and lowest annual mean in each year as points above and below this trend line. These concentrations are all also below the annual 53 ppb standard.

Figure 1
Nitrogen Dioxide Concentrations in New Jersey 1975-2009
12-month (Calendar Year) Average
Parts Per Million (ppm)



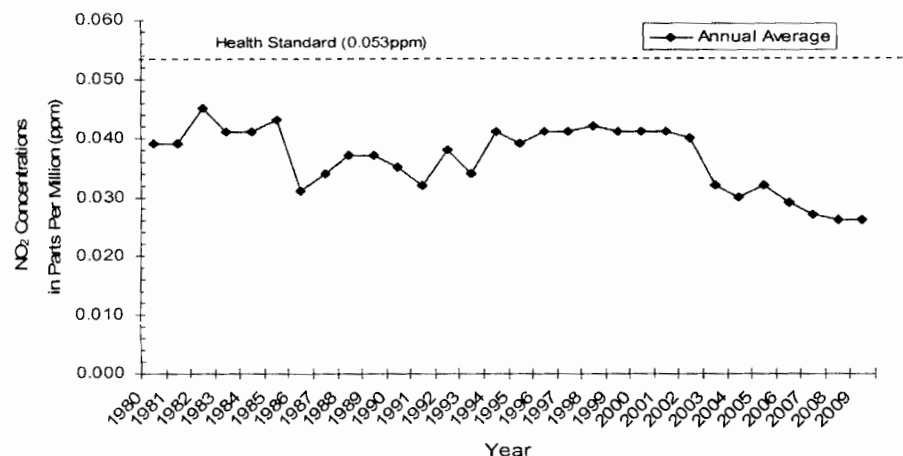
As shown in Table 2 and Figure 2, NO₂ 12-month (calendar year) averages have been below the NAAQS for over 30 years at the Elizabeth Lab monitoring site. Generally, the highest annual NO₂ concentrations in New Jersey are recorded at the Elizabeth Lab monitoring site, followed by the East Orange and Bayonne monitoring sites.

Table 2
Nitrogen Dioxide Concentrations in Elizabeth, New Jersey 1975-2009
12-month (Calendar Year) Average
Parts Per Million (ppm)

Year	1975	1976	1977	1978	1979*	1980	1981	1982	1983	1984	1985
Annual NO ₂ Average	0.052	0.052	0.044	0.034	*	0.039	0.039	0.045	0.041	0.041	0.043
Year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Annual NO ₂ Average	0.031	0.034	0.037	0.037	0.035	0.032	0.038	0.034	0.041	0.039	0.041
Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Annual NO ₂ Average	0.041	0.042	0.041	0.041	0.041	0.040	0.032	0.030	0.032	0.029	0.027
Year	2008	2009									
Annual NO ₂ Average	0.026	0.026									

* The Elizabeth site was out of commission for about half of the year in 1979 for repairs. As a result, there was insufficient data in 1979.

Figure 2
Nitrogen Dioxide Concentrations in Elizabeth Lab, New Jersey 1975-2009
12-month (Calendar Year) Average Parts Per Million (ppm)



New York and Pennsylvania Monitoring Data

All existing New Jersey monitors meet the new 1-hour NO₂ standard, as discussed in the previous section. New Jersey has also reviewed monitoring data in New York and Pennsylvania, which are located within our shared Core Based Statistical Area (CBSA).

CBSA's are further consolidated into combined statistical areas (CSAs). New Jersey is part of two CSAs: 'New York-Newark-Bridgeport, NY-NJ-CT-PA' and 'Philadelphia-Camden-Vineland, PA-NJ-DE-MD.'³ Therefore, the NO₂ monitors located in Pennsylvania and New York can be used as non-source-oriented monitors for New Jersey. The 2005-2007, 2006-2008 and 2007-2009 design values from the monitors in New York State and 2007-2009 design values in Pennsylvania are well under the standard. The monitoring data are shown in Tables 3 and 4.

Table 3
New York Ambient Nitrogen Dioxide Monitoring Data
 New NO₂ 1-hour Standard = 100ppb

State	County	Address	Design Value (ppb)		
			2005-2007	2006-2008	2007-2009
NY	Bronx	200 th Street and Southern Blvd., NY	70	N/A	N/A
NY	Bronx	IS 52 681 Kelly Street, NY	75	70	72
NY	Bronx	200 th Street and Southern Blvd., NY	N/A	N/A	67
NY	Nassau	Eisenhower Park, East Meadow	60	58	58
NY	New York	PS 59, 228 E. 57 TH Street, Manhattan	78	78	N/A

³ U.S. Census Bureau. Metropolitan and Micropolitan Statistical Area Estimates.,
<http://www.census.gov/popest/metro/CBSA-est2008-annual.html>, accessed October 22, 2010.

NY	Queens	Queens College, New York	69	67	67
NY	Suffolk	57 Division Street, Holtsville	45	43	43

Table 4
Pennsylvania Ambient Nitrogen Dioxide Monitoring Data
 New NO₂ 1-hour Standard = 100ppb

State	County	Address	98 th Percentile (ppb)			Design Value (ppb)
			2007	2008	2009	2007-2009
PA	Bucks	Rockview Lane	42	47	43	44
PA	Delaware	Front Street & Norris St	50	54	49	51
PA	Montgomery	State Armory 1046 Belvoir Road	50	48	N/A	N/A
PA	Philadelphia	1501 E Lycoming Ave AMS LAB	62	57	56	58
PA	Philadelphia	500 South Broad Street – Parking Lot (CHS)	64	53	56	58