

June 15, 2015

Mr. H. Curtis Spalding, Regional Administrator
United States Environmental Protection Agency Region 1
EPA New England
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Re: Connecticut State Implementation Plan for Clean Air Act Section 110(a) Infrastructure Elements: Prohibitions on Interstate Air Pollution

Dear Administrator Spalding:

Pursuant to section 110(a)(1) and (2) of the Clean Air Act (CAA), the State of Connecticut is required to submit any necessary revisions to its State Implementation Plans (SIPs) to provide for the implementation, maintenance and enforcement of any revised or new national ambient air quality standard (NAAQS). Such revisions are commonly referred to as "infrastructure SIPs."

The Connecticut Department of Energy and Environmental Protection (DEEP) submitted Connecticut's infrastructure SIP on December 28, 2012 for the 2008 ozone NAAQS. Upon review of the 2012 submittal, the U.S. Environmental Protection Agency (EPA) did not act on the portion of that SIP which addressed the CAA §110(a)(2)(D)(i)(I) (i.e. good neighbor) requirements. The good neighbor provisions of the CAA require a state to demonstrate that emissions from within its borders do not contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to any NAAQS. As demonstrated in the enclosed package, this revision to the Connecticut's SIP, as identified in 40 CFR 52, subpart H, satisfies the CAA section 110(a)(2)(D)(i)(I) "good neighbor" requirements for the 2008 ozone NAAQS. This submission also includes the necessary documentation to satisfy the public participation requirements of 40 CFR 51, Appendix V, Section 2.1. The structure of this submission is as follows:

- Enclosure A: Final SIP technical support document demonstrating that Connecticut complies with the CAA good neighbor requirements for the 2008 ozone NAAQS
- Enclosure B: Notice of comment period and opportunity for public hearing
- Enclosure C: Certification of the public review process
- Enclosure D: Response to public comments

An electronic copy of this submission has also been mailed to the copy recipients listed below. I certify that such copy is an exact copy of this paper submission.

Based on air quality modeling and guidance issued by EPA on January 22, 2015, this current SIP revision supplements DEEP's December 2012 submittal and, as further set forth in the attached

document, clearly indicates that emissions from Connecticut do not contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to the 2008 ozone NAAQS. In an effort to provide a more thorough analysis that examines the period prior to EPA's modeling year of 2018, DEEP also employed supplemental analysis using a "weight of evidence" methodology to examine historical ozone data back to 2007.

While this SIP revision demonstrates that Connecticut meets its clean air obligation to its neighbors, it is both unfortunate and a clear violation of law that many of our upwind neighbors cannot say the same about their air pollution impacts on Connecticut. It is also unfortunate that EPA chose to base its regional air quality modeling results in 2018. States with marginal nonattainment areas, like Connecticut, are required to attain the 2008 ozone NAAQS by July 2015 and on the worst air quality days over 95% of air pollution impacts at key ozone monitors can be attributed to upwind sources. Illegal interstate air pollution transport is subjecting millions of people in Connecticut to additional and unnecessary years of exposure to unhealthy air quality. At the least, EPA should have gauged this impact based on the period when nonattainment designations were first made and identified illegal contributors as of 2012. Instead EPA is providing six additional years, which only serves to benefit polluters as modeled air quality improvements reduce both the magnitude and scope of air quality impacts from upwind sources.

Connecticut has made the required demonstration using the parameters provided by EPA as the health of Connecticut's citizens continues to be negatively affected by unlawful levels of air pollution emanating from upwind states. This transported air pollution remains out of our regulatory reach and continues to burden both our public health infrastructure and our economic infrastructure. Connecticut is forced to bear the additional costs of health impacts and additional localized emission control requirements. As we expect EPA to begin the administrative process necessary to "bump up" Connecticut to the next worse classification with respect to the 2008 ozone NAAQS, DEEP reminds EPA that it is simply not equitable, just, or legal to assign a state the responsibility for addressing a problem that is impossible for it to successfully address alone. EPA must fully and effectively address transport in a timely manner. If you have any questions related to this submittal, please contact Anne Gobin, Air Management Bureau Chief at (860) 424-4152.

Sincerely,



Michael Sullivan
Deputy Commissioner

Cc: David Conroy, EPA New England
Anne Gobin, DEEP Air Bureau

A request to hold the hearing identified above may be made by any person by electronic mail to paul.bodner@ct.gov or by telephone (860-424-3383). Such a request must be made by 4:00 PM on May 27, 2015. If no request for a hearing is received on or before that date, the hearing will be cancelled. Information on the status of the hearing will be posted on DEEP's website at http://www.ct.gov/deep/cwp/browse.asp?a=2586&deepNav_GID=1511 as of May 29, 2015. Questions concerning the public hearing may be directed to 860-424-3383 or paul.bodner@ct.gov.

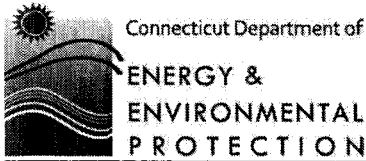
The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act. Please contact us at (860) 418-5910 or deep.accommodations@ct.gov if you: have a disability and need a communication aid or service; have limited proficiency in English and may need information in another language; or if you wish to file an ADA or Title VI discrimination complaint. Any person needing a hearing accommodation may call the State of Connecticut relay number - 711. Requests for accommodations must be made at least two weeks prior to any agency hearing.

April 21, 2015

Date



Michael Sullivan
Deputy Commissioner



ENCLOSURE B

Notice of Intent to Revise the State Implementation Plan for Air Quality: Meeting the Clean Air Act's Ozone Transport Requirements for the 2008 Ozone NAAQS

The Commissioner of the Department of Energy and Environmental Protection (DEEP) hereby gives notice of intent to amend the State Implementation Plan (SIP) to address sections 110(a)(1) and (2) of the Clean Air Act (CAA) with respect to the 2008 8-hour ozone national ambient air quality standard (NAAQS). The CAA section 110(a)(1) and (2) requirements, which are referred to as infrastructure requirements, provide that a state must demonstrate its ability to implement, maintain and enforce a revised NAAQS.

This SIP revision supplements a previous revision dated December 28, 2012, by demonstrating that emissions from Connecticut sources do not contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to the 2008 ozone NAAQS. The demonstration is based on DEEP's technical analysis of recent measured ozone data, ozone transport modeling conducted by the U.S. Environmental Protection Agency (EPA), and DEEP's review of emission trends and projections.

The authority to adopt this SIP revisions is granted by sections 22a-5 and 22a-174 of the Connecticut General Statutes. This notice is required pursuant to 40 Code of Federal Regulations 51.102. The SIP revision will be submitted to the EPA for review and inclusion into Connecticut's SIP.

A copy of the proposed SIP revision is available for public inspection during normal business hours from Paul Bodner at DEEP's Bureau of Air Management, Planning and Standards Division, 5th Floor, 79 Elm Street, Hartford, CT. The SIP revision is also posted on DEEP's website at the following location:

http://www.ct.gov/deep/cwp/view.asp?a=2684&Q=564608&deepNav_GID=1619

All interested persons are invited to comment on the proposed request. Comments should be submitted no later than 5:00 PM on June 5, 2015 to Paul Bodner via electronic mail to paul.bodner@ct.gov; via facsimile to 860-706-5339; or via postal carrier to DEEP, Bureau of Air Management, 5th Floor, 79 Elm Street, Hartford, CT 06106-4064.

In accordance with 40 CFR 51.102, DEEP will hold a hearing at the time and location set out below **only if a request for such a hearing is made on or before May 27, 2015 at 4:00 PM.**

PUBLIC HEARING
June 4, 2015 at 1:00 PM
Department of Energy and Environmental Protection, 5th Floor, Ensign Room
79 Elm Street
Hartford, CT 06106

ENCLOSURE C

Certification of Public Participation Process

This certifies in accordance with the provisions of Title 40 Code of Federal Regulations Part 51.102 that the following actions were taken by the Connecticut Department of Energy and Environmental Protection (DEEP) regarding revisions to the Connecticut State Implementation Plan (SIP) for air quality to address the sections 110(a)(1) and (2) of the Clean Air Act (CAA) with respect to the 2008 8-hour ozone national ambient air quality standard (NAAQS).

- 1) DEEP published the public notice for this SIP revision on April 24, 2015. The public notice scheduled a public hearing for June 4, 2015, to be held only if a request for hearing was received. No request for hearing was made, so none was held.
- 2) The record remained open for receipt of written comments through June 5, 2015.
- 3) In accordance with the notice, materials were available for review on DEEP's website and at DEEP's headquarters in Hartford, CT from April 24, 2015 through June 5, 2015.
- 4) On April 24, 2015, copies of the notice were e-mailed to the directors of air pollution control agencies in New York, New Jersey, Rhode Island and Massachusetts, as well as to Region I of the U.S. Environmental Protection Agency.
- 5) The public notice and links to the proposed SIP revision document were published on the following DEEP websites on April 24, 2015:
 - DEEP's Public Notice Page (scheduled for removal on June 30, 2015)
(http://www.ct.gov/deep/cwp/browse.asp?a=2586&deepNav_GID=1511)
 - DEEP's SIP Revisions Page
(http://www.ct.gov/deep/cwp/view.asp?a=2684&q=331234&deepNav_GID=1619)

June 15, 2015

Date



Michael Sullivan
Deputy Commissioner

ENCLOSURE D

RESPONSE TO PUBLIC COMMENTS

Regarding Revision to the State Implementation Plan for Air Quality

Demonstration that Connecticut Complies with the Good Neighbor Requirements of Clean Air Act Section 110(a)(2)(D)(i)(I) for the 2008 Ozone National Ambient Air Quality Standard

On April 21, 2015, the Deputy Commissioner of the Department of Energy and Environmental Protection (DEEP) published a notice of intent to revise the State Implementation Plan (SIP) for Air Quality. The SIP revision addresses the requirement of Clean Air Act (CAA) §110(a)(2)(D)(i)(I) to demonstrate that emissions from sources in Connecticut do not contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to the 2008 ozone national ambient air quality standard (NAAQS). Pursuant to such notice, public comments were accepted through June 5, 2015. In addition, the notice included the opportunity for members of the public to request a public hearing. No such requests were made, so a public hearing was not held.

I. Overview

This document summarizes the SIP revision as proposed for public review, the comments received and DEEP's responses.

II. Summary of the Revisions as Proposed

Sections 110(a)(1) and (2) of the CAA require all states to submit any necessary revisions to their State Implementation Plans (SIP) to provide for the implementation, maintenance and enforcement of any revised or new NAAQS. Such revisions are commonly referred to as "infrastructure SIPs." The U.S. Environmental Protection Agency (EPA) revised the ozone NAAQS in March 2008 and completed the designation process to identify nonattainment areas in July 2012. The Connecticut Department of Energy and Environmental Protection (DEEP) subsequently submitted Connecticut's infrastructure SIP on December 28, 2012.

The current SIP revision supplements DEEP's December 2012 submittal, further addressing the CAA section 110(a)(2)(D)(i)(I) (i.e., good neighbor) requirements. This CAA provision requires states to demonstrate that emissions from sources located within their boundaries do not contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to any NAAQS. DEEP analyzed EPA modeling released on January 22, 2015, recent ozone monitoring data and projected future Connecticut emission trends and concluded that Connecticut meets its good neighbor requirements for the 2008 ozone NAAQS.

III. Comments and Responses

DEEP received comments from four parties: 1) Scott Griffin, New York State Department of Environmental Conservation (e-mail dated May 12, 2015); 2) William O'Sullivan, New Jersey Department of Environmental Protection (letter dated May 22, 2015); 3) Anne Arnold, Environmental Protection Agency Region 1 (letter dated May 29, 2015); and 4) Josh Berman, Sierra Club (letter dated June 5, 2015).

Comments are summarized below, with DEEP responses. The complete set of comments is included in Attachment D-1.

New York State Department of Environmental Conservation (NYSDEC)

Comment: NYDEC noted that Table 2 on Page 9 of the proposed revision incorrectly indicates that the Millbrook (Dutchess County) and Mt. Ninham (Putnam County) monitors are located in the NY/NJ/CT nonattainment area.

DEEP Response: DEEP thanks NYDEC for pointing out the need for this correction. The final SIP revision document corrects Table 2 and other portions of the document. DEEP notes that the correction does not change any of the conclusions of the SIP revision.

New Jersey Department of Environmental Protection (NJDEP)

Comment: NJDEP expressed its commitment to assist Connecticut with attaining the ozone health standard in the region and support of Connecticut's efforts to implement more stringent reasonably available control technology (RACT) requirements for the 2008 ozone NAAQS. NJDEP encouraged DEEP to take further action to reduce emissions from electric generating units and demand-side management units on peak electric demand days when ozone levels are typically elevated.

DEEP Response: DEEP recognizes and appreciates NJDEP's efforts to reduce emissions to address ozone air quality issues in the NY/NJ/CT nonattainment area. As NJDEP noted, DEEP is in the process of developing RACT requirements for Connecticut sources. While DEEP submitted a RACT SIP in July 2014, it is currently conducting a stakeholder process to develop a regulatory proposal that must be the subject of a separate and distinct public administrative process. DEEP encourages NJDEP and other interested parties to monitor and participate in the process to establish RACT requirements for the 2008 ozone NAAQS. DEEP maintains a web page with information on the RACT initiative (see: http://www.ct.gov/deep/cwp/view.asp?a=2684&q=546804&deepNav_GID=1619).

Environmental Protection Agency Region 1 (EPA)

Comment #1: EPA offered initial support of DEEP's conclusion that Connecticut's emissions do not significantly contribute to nonattainment or maintenance of the 2008 ozone standard in downwind states.

DEEP Response: DEEP appreciates EPA’s informal assessment indicating Connecticut meets the CAA good neighbor provisions for the 2008 ozone NAAQS. It follows from this informal assessment that current emission control measures are sufficiently stringent to meet the CAA good neighbor provision for the 2008 ozone NAAQS.

Comment #2: EPA noted that DEEP’s proposal relied on several analyses to support its conclusions, including EPA modeling conducted to support the Cross-State Air Pollution Rule (CSAPR). EPA indicated that the CSAPR modeling procedures were developed and conducted to address transport relative to the 1997 ozone standard, not the current 2008 standard. As a result, EPA commented that DEEP’s final SIP revision should put greater emphasis on EPA’s January 2015 modeling analysis, which used procedures directed at the 2008 ozone standard.

DEEP Response: EPA is correct in noting that modeling procedures used for CSAPR differ from those used in the January 2015 guidance document and that these two distinct data sets do not lend themselves to direct comparisons. While the CSAPR modeling may not be directly applicable to the 2008 NAAQS, DEEP still views the CSAPR results as a useful depiction of Connecticut’s impacts on downwind areas during the timeframe when EPA established designations for the 2008 NAAQS in 2012. The final SIP revision document has been revised to address EPA’s comments.

Sierra Club

Comment #1: The Sierra Club commented that “Connecticut must address its significant impacts to New York and New Jersey monitors within the shared NY/NJ/CT nonattainment area, as neither the Clean Air Act nor EPA’s Good Neighbor SIP guidance memo purports to relieve states of the obligation to address all significant interstate impacts in their Good Neighbor SIPs.” The Sierra Club also commented that “an upwind state cannot ignore significant interstate impacts simply because those impacts are projected to occur in a multistate nonattainment area of which the state is a part.” The Sierra Club also noted that the EPA (January 22, 2015) modeling results do not enable DEEP to determine what fraction of Connecticut’s contributions to the New Jersey and New York portions of the nonattainment area are due to sources located in Connecticut’s portion of the nonattainment area versus the rest of the Connecticut. Resultantly, Sierra Club commented that DEEP cannot assume “that emission reductions within the nonattainment area – which Connecticut will need to identify once the multistate area fails to attain the 2008 NAAQS by this July -- will alleviate Connecticut’s significant contribution to nonattaining monitors in the New York and New Jersey.

DEEP Response: DEEP agrees that all three states within the multistate nonattainment area have an obligation under CAA §110(a)(2)(D)(i)(I) to address any significant interstate transport impacts within the shared nonattainment area. Based on the approach described in EPA’s January 2015 guidance memorandum and the associated modeling results, Connecticut’s existing emission control programs are sufficient to address its good neighbor obligations to all downwind states, including New York and New Jersey in 2018.

As part of its weight of evidence analysis, DEEP identified three CT-impacted monitors in the New York and New Jersey portions of the multistate area that, despite having compliant 2014 design values, may have the potential to violate the 2008 NAAQS in 2015/2016. As indicated in

Sierra Club's comments, they believe EPA will soon begin the administrative process necessary to "bump up" the NY/NJ/CT nonattainment area to the next worse classification with respect to the 2008 ozone NAAQS. The Greater Connecticut nonattainment area faces similar "bump-up" action by EPA. Such actions will trigger attainment planning requirements for both the NY/NJ/CT multi-state area and the Greater CT area. This planning process will likely require DEEP to assess additional control measures and their ability to provide for expeditious attainment throughout each nonattainment area. The resulting suite of current and possible new control programs (including RACT for municipal waste incinerators and other major sources) will apply statewide and serve the dual purpose of meeting CAA requirements for Connecticut's nonattainment areas and further reducing Connecticut's statewide contribution to interstate transport in the New York and New Jersey portions of the multistate area as well as in other downwind areas.

The final version of the Good Neighbor SIP revision document has been modified to more fully incorporate the above response.

Comment #2: The Sierra Club recommended that Connecticut "base its analysis of significant contributions on historic, not projected future emissions, as projected emissions will understate the magnitude of interstate contributions and ultimately hamper Connecticut's ability to achieve necessary air quality improvements." The Sierra Club advocated using modeling from the period when designations were made to identify contributing states and points out that marginal areas have a July 2015 attainment deadline.

DEEP Response: The DEEP's weight-of-evidence analysis relied on modeling data from the time period when designations were finalized. DEEP used EPA's CSAPR modeling results for 2012 to identify all monitors impacted by Connecticut above the 1% (of the 2008 NAAQS) threshold, conservatively including both those monitors modeled to have 2012 nonattainment/maintenance issues and those modeled as being in attainment. DEEP then compiled 2014 design values to determine current compliance at each monitor and analyzed recent 4th-high values and historic data to evaluate the prospects for maintenance of the NAAQS through 2016, including in marginal areas subject to a 2015 attainment deadline (e.g., Dukes County, MA). This weight-of-evidence analysis, when coupled with EPA's modeling for 2018 and DEEP's analysis of projected emission trends through 2025, supports the conclusion that Connecticut meets the CAA good neighbor provisions for the 2008 NAAQS.

Comment #3: The Sierra Club recommended that Connecticut "base its analysis of maintenance monitors on historic, not projected future, monitor values, as projected future attainment may understate the need for emission reductions." The Sierra Club notes that "Ozone levels fluctuate based on a number of factors including the strength of the economy and climatic conditions such as temperature, precipitation, and wind flow." Sierra Club commented that the summers of 2013 and 2014 were wet and cool in much of the Northeast resulting in low ozone levels, so "Connecticut's reliance on 2013 and 2014 monitored ozone levels to conclude that historically non-attaining monitors should not be treated as maintenance monitors is severely underprotective and, ultimately, detrimental to Connecticut's efforts to improve its air quality."

DEEP Response: DEEP recognizes that ozone levels can fluctuate year to year due to economic and weather-related variability. DEEP's weight-of-evidence methodology also examines historical data back to 2007, a period which included a variety of economic and summer weather

conditions, to evaluate the potential for CT-impacted downwind monitors to violate the 2008 NAAQS before 2018. DEEP disagrees with the assertion that this approach is in any way detrimental to Connecticut's efforts to improve air quality. DEEP's methodology exceeded the parameters of EPA's January 2015 guidance memorandum and provided a more reasoned analysis for this time period.

Comment #4: The Sierra Club commented that "Connecticut should consider the significance of contributions not merely to existing monitor sites, but also to other non-monitor locations in downwind states."

DEEP Response: States in the Northeast potentially impacted by Connecticut emissions operate extensive ozone networks in accordance with requirements specified in 40 CFR 58 App. D. DEEP believes these networks are sufficiently dense to enable identification and evaluation of Connecticut's impacts on downwind states.

Attachment D-1

Public Comments Received

From: [Griffin, Scott L \(DEC\)](#)
To: [Bodner, Paul](#)
Cc: [Bielawa, Robert D \(DEC\)](#)
Subject: Comment on Good Neighbor SIP
Date: Tuesday, May 12, 2015 1:39:21 PM

Hi Paul – We had one minor comment on CT's proposed Good Neighbor SIP for the 2008 Ozone NAAQS. Table 2 on page 9 has the monitors within the NY/NJ/CT nonattainment area shaded. There are two monitors in NY that are shaded but not actually part of the tri-state nonattainment area: Millbrook (Dutchess Co.) and Mt. Ninham (Putnam Co.).

Thanks
Scott

Scott Griffin, P.E.
Environmental Engineer I
NYS Dept. of Environmental Conservation
Bureau of Air Quality Planning
625 Broadway, Albany NY 12233-3251
518.402.8396 | Scott.Griffin@dec.ny.gov



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

Mail Code 401-02

P.O. Box 420

Trenton, NJ 08625-0420

TEL (609) 292-6722

FAX (609) 633-8236

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

May 22, 2015

Mr. Paul Bodnar
Department of Energy and Environmental Protection
Bureau of Air Management
5th Floor, 79 Elm Street
Hartford, CT 06106-4064

Dear Mr. Bodnar:

Thank you for the opportunity to comment on Connecticut's April 20, 2015 "Demonstration that Connecticut Complies with the Good Neighbor Requirements of Clean Air Act Section 110 (a)(2)(D)(i)(I) for the 2008 Ozone National Ambient Air Quality Standard," which includes actions to address the interstate transport of ozone. As a state partner with Connecticut in a shared multi-state nonattainment area, New Jersey recognizes the need for continued cooperative involvement in solving regional air quality issues, such as unhealthy ozone levels. We are committed to assisting Connecticut attaining the ozone health standard throughout the region.

New Jersey recognizes Connecticut's air pollution control measures implemented to reduce ozone levels within the state and regionally. We support the provision in Connecticut's plan to reduce ozone precursors, including implementing more stringent reasonably available control technology (RACT) requirements for the 2008, 75 ppb ozone NAAQS. We encourage further action to reduce emissions from Electric Generating Units and demand-side management units, especially on peak electric demand days when ozone levels are typically elevated.

Should you have any questions regarding this letter, please contact Sharon Davis, Section Chief for the Bureau of Air Quality Planning, at (609) 292-6722.

Sincerely,

William O'Sullivan
Director

cc: Richard Ruvo, United States Environmental Protection Agency Region 2
David Conroy, United States Environmental Protection Agency Region 1
Jane Herndon, NJDEP
Chris Salmi, NJDEP
Sharon Davis, NJDEP
Ray Papalski, NJDEP

A handwritten signature in dark ink, appearing to be 'Ray Papalski', is written across the lower portion of the page. The signature is fluid and cursive, with the first name 'Ray' being particularly prominent.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 1
5 Post Office Square, Suite 100
Boston, MA 02109-3912

May 29, 2015

Paul Bodner
Department of Energy and Environmental Protection
Bureau of Air Management
79 Elm Street
Hartford, CT 06106-5127

Dear Mr. Bodner:

On April 24, 2015, the Connecticut Department of Energy and Environmental Protection submitted to EPA a proposed State Implementation Plan (SIP) revision to meet the Clean Air Act §110(a)(2)(D)(i)(I) infrastructure requirements for the 2008 ozone standard. This SIP is also referred to as the "transport" SIP and/or the "good neighbor" SIP. The Clean Air Act requires states to address emissions that significantly contribute to nonattainment or maintenance of the ozone standard in downwind states.

EPA has reviewed Connecticut's proposed SIP revision. We agree with the proposal's conclusion that Connecticut's emissions do not significantly contribute to nonattainment or maintenance of the 2008 ozone standard in downwind states. Thus, Connecticut meets the good neighbor requirements based on emission reduction measures currently in place.

This conclusion is consistent with the guidance and preliminary air quality modeling that EPA issued in January 2015.¹ In fact, this modeling is one of several analyses that Connecticut includes in its proposal to support its conclusion. EPA recommends that Connecticut give more weight to the January 2015 modeling and discuss this analysis earlier in the submittal. We believe this analysis should form the basis of the SIP submittal, in contrast to the proposal's current emphasis on modeling that EPA previously performed for CSAPR (the Cross State Air Pollution Rule). We note that the CSAPR modeling had been conducted for purposes of transport with respect to the 1997 ozone standard, not the current 2008 ozone standard.

We encourage you to submit the final SIP revision to EPA as soon as possible, since EPA is under a court deadline to issue findings of failure to submit for this requirement by June 30, 2015.

If you have any questions on this issue, please contact Richard Burkhart at 617-918-1664.

Sincerely,

A handwritten signature in black ink that reads "Anne E. Arnold".

Anne E. Arnold, Manager
Air Quality Planning Unit

¹ See EPA Memorandum entitled, *Information on the Interstate Transport "Good Neighbor" Provision for the 2008 Ozone National Ambient Air Quality Standards (NAAQS) under the Clean Air Act (CAA) Section 110(a)(2)(D)(i)(I)*, from Stephen D. Page to Regional Air Division Directors, dated January 22, 2015.



June 5, 2015

VIA ELECTRONIC MAIL

Paul Bodner
DEEP, Bureau of Air Management
79 Elm St., 5th Floor
Hartford, CT 06106-4064
Paul.Bodner@ct.gov

**RE: Notice of Intent to Revise the State Implementation Plan for Air Quality:
Meeting the Clean Air Act's Ozone Transport Requirements for the 2008
Ozone NAAQS**

Dear Mr. Bodner:

On behalf of its more than 16,000 members in Connecticut, the Sierra Club respectfully submits the following comments regarding Connecticut's "Good Neighbor" State Implementation Plan (SIP) for the 2008 ozone National Ambient Air Quality Standard (NAAQS). Ground-level ozone, also known as "smog," is a harmful air contaminant that causes a host of adverse health impacts, particularly in children and other sensitive populations. Of particular concern, ozone is well understood to trigger asthma attacks. Connecticut currently experiences some of the highest ozone levels in the Eastern United States and its childhood asthma rate—11.3%¹—far exceeds the national average of 8.3%.² Interstate transport of ozone and ozone precursors contributes significantly to Connecticut's nonattainment status. Recent modeling by EPA projects that in 2018, eight different upwind states will continue to contribute at least 0.75 ppb to ozone levels in Connecticut.

In order to achieve ozone levels in Connecticut that will meet the 2008 NAAQS, and even more so in order to meet the forthcoming 2015 NAAQS, Connecticut will need to utilize the tools available under the Clean Air Act to ensure that upwind sources of ozone precursors curtail their emissions. One of the mechanisms with the greatest potential to compel upwind states to address their contribution to Connecticut's ozone problem is the Good Neighbor SIP requirements of Section 110(a)(2)(D)(i) of the Clean Air Act. Pursuant to Section 110(a)(2)(D)(i), each Good Neighbor SIP "shall . . . contain adequate provisions . . . prohibiting, any source within the State from emitting any air pollutant in amounts which will—(I) contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect

¹ Connecticut Department of Public Health, The Burden of Asthma in Connecticut: 2012 Surveillance Report (2012), at viii, available at <http://www.ct.gov/dph/cwp/view.asp?a=3137&q=398480>.

² See Center for Disease Control and Prevention, Asthma Surveillance Data (for 2013), <http://www.cdc.gov/asthma/asthmadata.htm>.

to any such national primary or secondary ambient air quality standard.³ Because of the importance of interstate transport to Connecticut attainment of EPA's 2008 ozone NAAQS, it is critical that in developing its own Good Neighbor SIP, Connecticut employ the same robust methodology that it would like to see upwind states utilize.

In light of these considerations, the Sierra Club urges the following modifications to Connecticut's SIP submittal:

- Connecticut must address its significant impacts to New York and New Jersey monitors within the shared New York-New Jersey-Connecticut nonattainment area, as neither the Clean Air Act nor EPA's Good Neighbor SIP guidance memo purports to relieve states of the obligation to address all significant interstate impacts in their Good Neighbor SIPs;
- Connecticut should base its analysis of significant contributions on historic, not projected future emissions, as projected emissions will understate the magnitude of interstate contributions and ultimately hamper Connecticut's ability to achieve necessary air quality improvements;
- Connecticut should base its analysis of maintenance monitors on historic, not projected future, monitor values, as projected future attainment may understate the need for emission reductions; and
- Connecticut should consider the significance of contributions not merely to existing monitor sites, but also to other non-monitor locations in downwind states.

Addressing these shortcomings with Connecticut's Good Neighbor SIP submittal will help Connecticut lead by example and clean up the air while eliciting necessary emission reductions from upwind states.

I. Connecticut Cannot Disregard Its Significant Impacts to New York and New Jersey Monitors within the New York-New Jersey-Connecticut Nonattainment Area

Connecticut has not adequately addressed significant modeled impacts on monitors in New York and New Jersey that are part of the 2008 ozone NAAQS New York-New Jersey-Connecticut nonattainment area. Nothing in the plain language of the Clean Air Act or in EPA's January 22, 2015 guidance suggests that an upwind state can ignore significant interstate impacts in its Good Neighbor SIP simply because those impacts are projected to occur in a multistate nonattainment area of which the upwind state is a part. Moreover, such an approach lacks a rational foundation where, as here, the underlying modeling does not indicate whether the contributing Connecticut sources are themselves located within the same nonattainment area. Indeed, according to EPA's 2011 National Emission Inventory, Connecticut's second, third and fourth largest sources of the ozone precursor nitrogen oxides—the CRRA/Mid-Connecticut

³ 42 U.S.C. § 7410(a)(2)(D)(i)(I).

municipal waste incinerator, the Covanta Southeastern Connecticut municipal waste incinerator, and Bradley International Airport—are located in portions of the state outside of the New York-New Jersey-Connecticut nonattainment area.

The Clean Air Act’s Good Neighbor provision requires Section 110(a)(2)(D)(i)(I) SIPs to “contain adequate provisions . . . prohibiting, any source within the State from emitting any air pollutant in amounts which will . . . contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any such national primary or secondary ambient air quality standard.”⁴ It does not purport to carve out interstate impacts where the downwind state is part of a larger multi-state nonattainment area that contains a portion of the upwind state.

Likewise, EPA’s January 22, 2015 Good Neighbor SIP memo omits any suggestion that a state’s Good Neighbor SIP can ignore significant impacts on sites in downwind states that are part of a multi-state nonattainment area, instead interpreting Section 110(a)(2)(D)(i)(I) to require each Good Neighbor SIP to “prohibit emissions that will significantly contribute to nonattainment of a NAAQS, or interfere with maintenance of a NAAQS, in a downwind state.”⁵

It would be arbitrary and capricious for Connecticut to ignore its significant modeled impacts on monitors in New York and New Jersey in its Good Neighbor SIP given the limitations of modeling relied upon by the State. Only a portion of the State of Connecticut (three of eight counties) is located within the NY-NJ-CT nonattainment area. From EPA’s January 2015 guidance memo and technical support document, it is not possible to determine whether Connecticut’s significant contribution to New York and New Jersey monitors in the multistate nonattainment area is coming from Connecticut sources located within the nonattainment area, from Connecticut sources located elsewhere in the state, or from some combination of the two. Indeed, given that three of the four largest sources of nitrogen oxides in the state are located in Hartford and New London Counties—which are outside of the NY-NJ-CT nonattainment area—there is reason to expect that the significant impacts to New York and New Jersey are not entirely attributable to sources within the nonattainment areas. Consequently, it cannot be assumed that emission reductions within the nonattainment area—which Connecticut will have to identify once the multistate area fails to attain the 2008 NAAQS by this July—will alleviate Connecticut’s significant contribution to nonattaining monitors in New York and New Jersey.

Moreover, Connecticut cannot credibly contend that nonattainment areas are sized to include all significant contributing sources. In fact, Connecticut contends the exact opposite. *See Mississippi Commission on Environmental Quality v. EPA*, 12-1309 et al., (D.C. Cir. June 2, 2015). Were that true, there would never be a need for Good Neighbor SIPs at all. But as EPA’s source apportionment modeling demonstrates, this is not the case and there remain numerous significant cross-state linkages beyond the boundaries of existing nonattainment areas. Consequently, Connecticut cannot rely on the fact that some as-yet-unquantified portion of its

⁴ 42 U.S.C. § 7410(a)(2)(D)(i)(I) (emphasis added).

⁵ Memo from Stephen D. Page, Director, U.S. EPA office of Air Quality Planning and Standards to Regional Air Division Directors, Regions 1 – 10 regarding Information on the Interstate Transport “Good Neighbor” Provision for the 2008 Ozone National Ambient Air Quality Standards (NAAQS) under Clean Air Act (CAA) Section 110(a)(2)(D)(i)(I) (Jan. 22, 2015) (emphasis added).

contribution to the nonattaining New York and New Jersey monitors may have originated in the Connecticut portion of the New York-New Jersey-Connecticut nonattainment area as a basis for failing to address all significant modeled impacts on these monitors in its Good Neighbor SIP.

Further, as a prudential matter, Connecticut stands to lose significantly under its proffered interpretation of the Clean Air Act's Good Neighbor SIP provisions. According to EPA's modeling, in 2018, New York will contribute over 16 ppb to one of the Fairfield, Connecticut ozone monitors and New Jersey will contribute over 8 ppb to this same monitor.⁶ If New York and New Jersey were to likewise attempt to omit consideration of modeled impacts to Connecticut monitors in the NY-NJ-CT nonattainment area in those states' Good Neighbor SIPs, this would greatly hamper Connecticut's ability to timely attain the 2008 ozone NAAQS.

II. The Determination of Significant Contribution Should Be Based on Historical, Not Projected Future Emissions Data

The Sierra Club agrees with Connecticut that use of future emission projections to identify the significance of a State's contributions is overly conservative and inappropriate in light of the need for marginal areas to attain the 2008 ozone NAAQS by July 2015. As Connecticut correctly identifies:

EPA's selection of 2018 disregards the plight of several marginal attainment areas with attainment deadlines of 2015 (with compliance based on 2014 design values). This oversight likely reduces the number of upwind states identified by EPA as significantly contributing to marginal areas and will lead to delays in securing needed upwind emission reductions.⁷

Sierra Club further agrees with DEEP that it is "more appropriate to identify contributing states based on modeling for a year from the period of data (i.e., 2008-2011) used to establish designations, rather than a future year, since emissions from the 2008-2011 [are] directly influenced EPA's determination of whether an area should be designated as attainment or nonattainment."⁸ While recognizing the limitations of the modeling provided by EPA in its January 2015 guidance memo (which includes only 2018 projected contributions), Sierra Club nevertheless urges Connecticut to heed its own advice and base its significant contribution analysis on historic emission data.

III. Analysis of Maintenance Monitors Should Be Based on Recent, Not Projected Future Design Values

⁶ EPA Jan. 22, 2015 Memo at 10.

⁷ Connecticut Department of Energy and Environmental Protection Bureau of Air Management, Draft Revision to the State Implementation Plan for Air Quality, at 3 (Apr. 20, 2015).

⁸ *Id.*

Consistent with the logic of using recent historical rather than projected future emissions for determining significant contributions, Connecticut should use recent historical rather than projected future design values to determine which monitors are “maintenance” monitors.

Ozone levels fluctuate based on a number of factors including the strength of the economy and climatic conditions such as temperature, precipitation, and wind flow. As Ozone Transport Commission (OTC) Modeling Committee Chair Jeff Underhill explained in his fall 2014 presentation to the OTC, recent modeling efforts have significantly under-predicted the severity of recent monitored ozone levels in Connecticut.⁹ While photochemical models are good predictive tools, “they don’t predict variations in future weather,”¹⁰ instead relying on historic weather patterns. Recent cool and wet summers in the Northeast in 2013 and 2014 produced anomalously low ozone levels throughout much of the region, and a shift in larger scale weather patterns pushed the areas of highest ozone concentration during this period northward from Maryland up to Connecticut.

Connecticut’s reliance on 2013 and 2014 monitored ozone levels to conclude that historically non-attaining monitors should not be treated as maintenance monitors is severely underprotective and, ultimately, detrimental to Connecticut efforts to improve its air quality. Due to weather-driven lower ozone levels in 2013 and 2014, many monitors recorded 2012 – 2014 design values that were far lower than in the past. Because these lower monitored values are likely a product of weather phenomena and not necessarily the product of permanent and enforceable emission reductions, it is likely that ozone levels will rise again in the future. By focusing only on whether monitors would come back into attainment in 2015 or 2016, Connecticut’s Step 2/3 analysis placed undue weight on 2013 and 2014 monitor values. The unusually low 2014 monitor values are included in all of Connecticut’s Step 2/3 calculations and, as a result, inappropriately skew projected design values downward. Notably, EPA’s approach to identifying maintenance monitors, which relied on projected future emissions, is similarly flawed and likewise underestimates the number of monitors with current design values at or near 75 ppb that may struggle to maintain the NAAQS in the future.

Instead, Connecticut should follow the example of North Carolina and treat as maintenance monitors any monitors with current or recent design values near the NAAQS based on EPA’s prior finding that “historical data indicates that attaining counties with air quality levels within 3 ppb of the standard are at risk of returning to nonattainment” and even monitors 3-5 ppb below the standard “have a reasonable likelihood of returning to nonattainment.”¹¹ This approach, unlike the Step 2/3 analysis undertaken by Connecticut, does not place undue weight on the anomalous 2013 and 2014 ozone monitor values, but instead recognizes that areas that have struggled to meet the 2008 ozone standard in the recent past are likely to continue to struggle to meet it in the future.

⁹ Jeff Underhill, Ozone Transport Commission, Modeling Committee Update, at slide 12 (presented in Crystal City, Virginia on Nov. 19, 2014).

¹⁰ *Id.* at slide 11.

¹¹ EPA, Corrected Response to Significant Public Comments on the Proposed Clean Air Interstate Rule, Dkt. No. OAR-2003-0053, at 148 (Mar. 2005); *see also North Carolina v. EPA*, 531 F.3d 896, 909, *modified on reh’g* 550 F.3d 1176 (D.C. Cir. 2008) (per curiam) (quoting CAIR response to comments).

IV. Connecticut Should Evaluate and Address in Its Good Neighbor SIP Significant Contributions to Locations Beyond Existing Monitor Sites

Section 110(a)(2)(D)(i)(I) requires states in their Good Neighbor SIPs to curtail emissions that interfere with attainment or maintenance of the NAAQS in “any other State.” It does not purport to limit its scope to existing ozone monitor locations in those other states. Connecticut should evaluate and address the significance of its contributions not merely to all locations in downwind states.

Narrowing the scope of Good Neighbor SIPs to impacts at monitor locations undermines both the goals of the Clean Air Act and Connecticut’s efforts to ensure robust emission reductions from impacting upwind states. The Clean Air Act seeks to ensure clean air in all locations and for all people, not merely for those who live and spend time near ozone monitors. Moreover, limiting the analysis of significant contributions to existing monitor sites ultimately does not serve to benefit Connecticut. Inclusion of impacts to non-monitor locations will drive additional emission reductions from upwind states, which, as discussed above, are critical to Connecticut’s attainment of the 2008 ozone NAAQS. Connecticut should request that EPA provide modeled information on the significance of impacts at all locations and should build its Good Neighbor SIP around alleviating all significant impacts, not merely those at existing monitor locations.

Thank you for your consideration.

Respectfully submitted,



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current measured attainment levels will continue through 2015. In addition, for 2016, the Dukes County monitor would need the sum of the 2014 and 2015 4th-high values to be 169 ppb or higher to produce a violating 2016 design value. Such a summed value hasn't happened over a consecutive two-year period since prior to 2007, providing added confidence that year-to-year meteorological differences are not likely to result in future violations at that monitor. Based on this information, it is highly likely that the Duke County monitor will continue to maintain compliance with the 2008 NAAQS through 2016 and likely beyond,¹⁶ supporting the conclusion that Connecticut complies with CAA §110(a)(2)(D)(i)(I) requirements in the Dukes County area.

Similarly, Table 3 shows that 2014 design values at all of the other 31 CT-impacted monitors are compliant with the 2008 ozone NAAQS of 75 ppb. Of the 26 monitors (including the Dukes County MA, discussed above) that are located outside the NY/NJ/CT nonattainment area, none have measured 4th-high values since at least 2008 that, if repeated, would result in violating design values in 2015 and/or 2016. When current design values are considered together with historical data, DEEP concludes there is a high probability that those 26 monitors will maintain compliance with the 2008 NAAQS through at least 2016.

All 6 CT-impacted monitors in the New York and New Jersey portions of the NY/NJ/CT area (shaded in Table 3) have measured 2014 design values that comply with the 2008 NAAQS. In addition, 3 of the monitors have not measured any 4th-high values since at least 2008 that, if repeated, would result in violations in 2015 and /or 2016. The remaining 3 monitors (i.e., Richmond County NY, Westchester County NY, and Monmouth County NJ) also currently comply with the 2008 NAAQS, but have measured 4th-high values as recently as 2011/2012 that, if repeated, would cause them to violate the 2008 NAAQS in 2015 and/or 2016. Note that all 3 of these higher risk monitors are located in the multi-state NY/NJ/CT nonattainment area.

In light of the information presented above, DEEP concludes that Connecticut is currently meeting CAA §110(a)(2)(D)(i)(I) requirements based on 2014 design values and is likely to continue meeting those requirements through at least 2016 in downwind areas outside the NY/NJ/CT area. Although historical data indicate there is some risk that three monitors in New York and New Jersey could fall out of compliance in 2015/2016, the CAA requires Connecticut to work with the other two states to achieve and maintain compliance at all monitors in the multi-state NY/NJ/CT area, which includes the at-risk monitors.

Based on current design values in Connecticut, DEEP anticipates that EPA will soon begin the administrative process necessary to “bump-up” the NY/NJ/CT nonattainment area to the next worse classification with respect to the 2008 ozone NAAQS. The Greater Connecticut nonattainment area faces similar “bump-up” action by EPA. Such actions will trigger attainment planning requirements for both the NY/NJ/CT multi-state area and the Greater CT area. This planning process will likely require DEEP to assess additional control measures and their ability to provide for expeditious attainment throughout each nonattainment area. The resulting suite of current and possible new control programs (including RACT for municipal waste incinerators and other major sources) will apply statewide and serve the dual purpose of meeting CAA requirements for Connecticut’s nonattainment areas and further reducing Connecticut’s statewide

¹⁶ See the previous discussion examining EPA’s recent transport modeling for 2018 (released January 2015), as well as the discussion below regarding DEEP’s projected downward trends in NOx emissions through 2025.

contribution to interstate transport in the New York and New Jersey portions of the multistate area as well as in other downwind areas.

Methodology Step 3: Weight of Evidence Analysis of Emission Trends

Connecticut has implemented numerous regulations to reduce the emissions of both nitrogen oxides (NO_x) and volatile organic compounds (VOCs), the primary precursors to the formation of ground level ozone.¹⁷ Reasonably available control technology (RACT) has been required for major sources of NO_x in Connecticut since 1996, with multiple updates since, as well as a current effort to both update and strengthen RACT¹⁸ for the 2008 ozone NAAQS. In cooperation with the other states of the Ozone Transport Commission (OTC), Connecticut co-initiated the first NO_x budget trading program for electricity generating units (EGUs) and other large point sources of NO_x in 1999. While many states outside of the ozone transport region (OTR) have since implemented EGU controls to meet CAA Title IV, NO_x Budget, CAIR¹⁹ and/or CSAPR requirements, many have not been required to implement RACT for all major NO_x sources. In addition, several nonattainment areas have been granted NO_x waivers under CAA §182(f), avoiding otherwise required controls and negatively impacting downwind areas. This has resulted in significantly higher emissions and emission rates in most upwind states, as shown in Figures 1 and 2. By comparison, Connecticut's ozone season emissions and emission rates from EGUs and other large NO_x sources are among the very lowest of any state in the eastern US.

In addition to regulatory programs designed to achieve emission reductions from large point sources, Connecticut has implemented and regularly updates regulations to stay current with the strict California low emission vehicle program, establishing the most stringent new motor vehicle control program allowed, as authorized by CAA § 177. Connecticut's long-standing statewide vehicle emission inspection and maintenance program ensures vehicles emission control systems remain effective as they age. Connecticut has also implemented various state and federal incentive programs for diesel vehicle retrofits and replacements, as well as incentives to establish a network of charging stations to encourage the growth of electric vehicle use in the state. In addition, Connecticut has long been a leader in funding and implementing a wide variety of energy efficiency strategies and recently finalized a Comprehensive Energy Strategy²⁰ in 2013 that is designed to create a path toward a cheaper, cleaner, and more reliable energy future for the state. This effort has served to maintain emission reductions achieved on high electric demand days and reduces the need for older, smaller and relatively dirtier emission units to operate on days when air quality is already compromised by overwhelming interstate

¹⁷ More details on adopted CT control programs are available in previous SIP revisions for ozone, fine particles, and regional haze.

¹⁸ DEEP submitted Connecticut's 2008 RACT SIP to EPA on July 17, 2014. For details, see: http://www.ct.gov/deep/cwp/view.asp?a=2684&q=546804&deepNav_GID=1619

¹⁹ Recent analyses by the State of Maryland and other states indicate that EGUs in several states do not always operate installed NO_x controls at optimal levels, including during high ozone events. Although such practices are allowed under the seasonal budgets of the CAIR and CSAPR programs, the excess emissions contribute to downwind ozone violations. DEEP encourages EPA to require that upwind states' good neighbor SIPs include, among all other necessary actions, enforceable measures to ensure optimized operation of installed controls.

²⁰ Connecticut's Comprehensive Energy Strategy is available at: <http://www.ct.gov/deep/cwp/view.asp?a=4120&q=500752>

Figure 1: 2007 and 2013 Ozone Season NOx Emissions from CAMD Sources

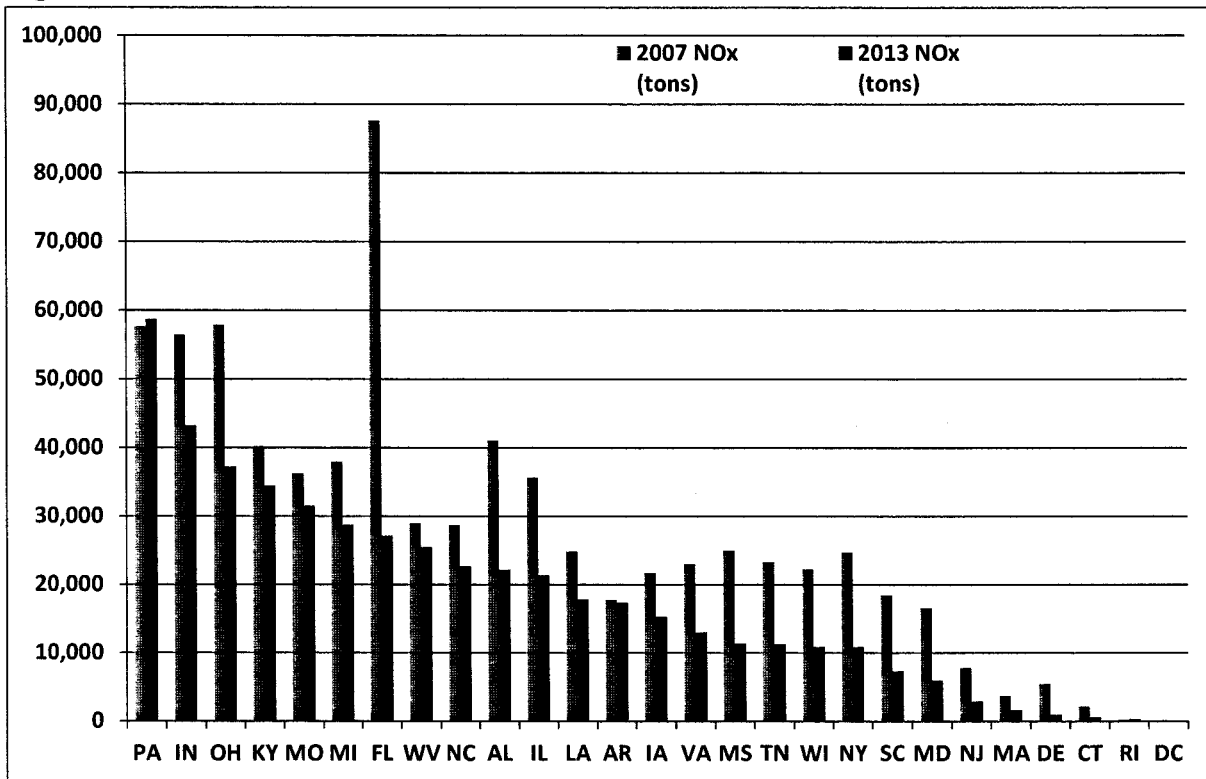
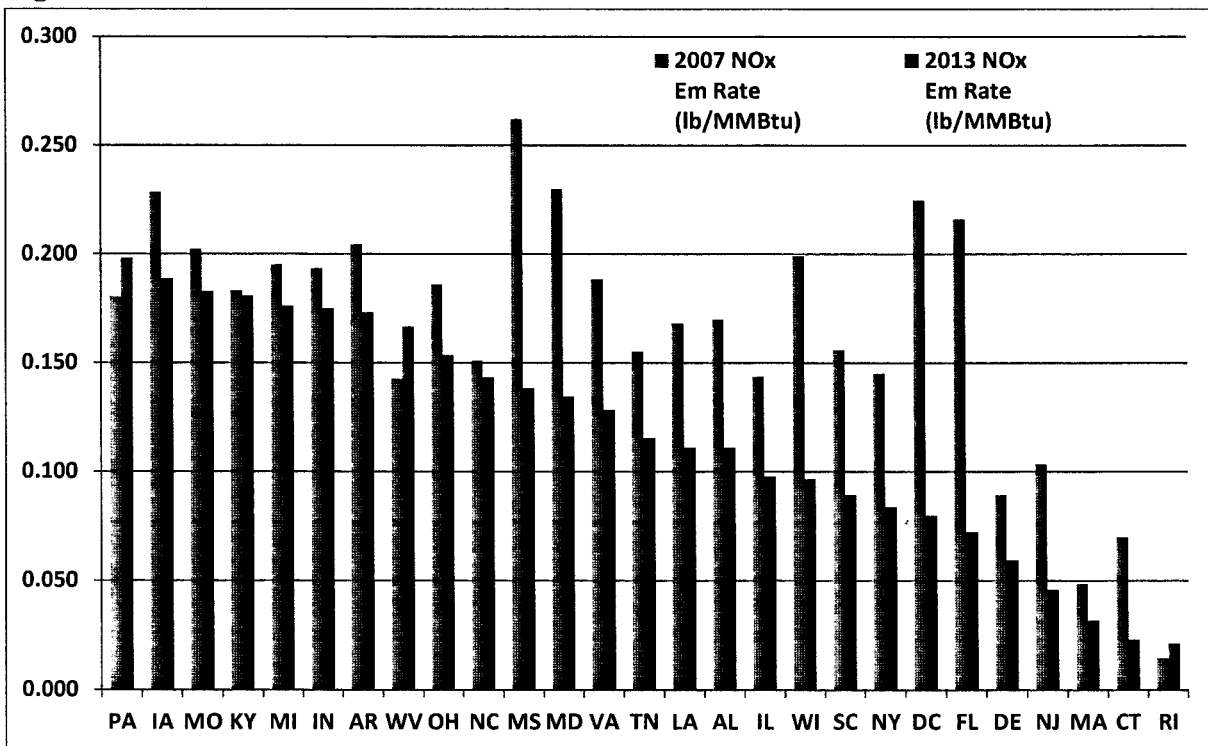


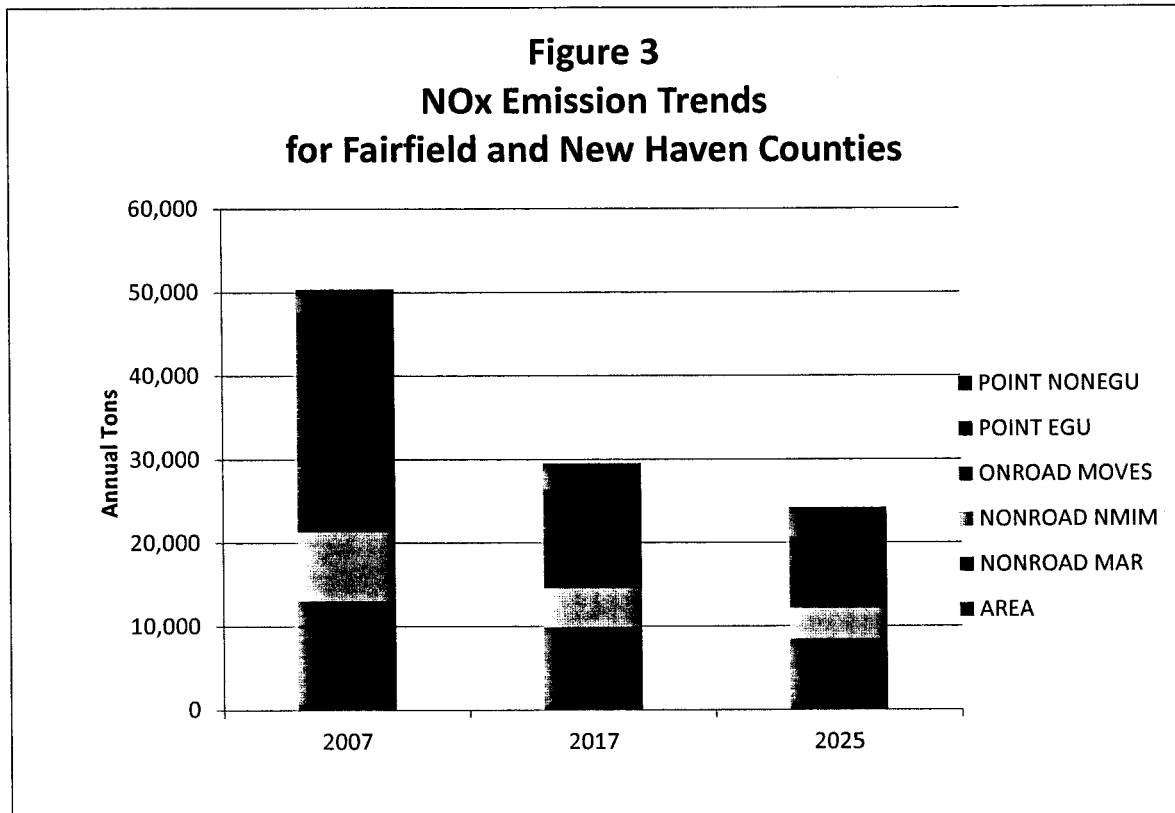
Figure 2: 2007 and 2013 Ozone Season NOx Emission Rates for CAMD Sources



Source: [EPA Clean Air Markets Division \(CAMD\) Air Markets Program Data](#)

transport. Connecticut has also kept current with VOC RACT, including implementing rules consistent with all of EPA’s control techniques guideline (CTG) requirements.

Together with federal measures for non-road and onroad fuels, vehicles and engines, Connecticut’s control programs have been responsible for a steady decline in ozone precursor emissions for over two decades. Figure 3 shows recent trends in Connecticut’s NOx emissions since 2007, with projections out to 2025, including adopted control programs, as prepared for Connecticut’s recent PM_{2.5} Maintenance SIP²¹. Overall, total NOx emissions are projected to decline by 52% between 2007 and 2025, including an 18% decline between 2017 and 2025. Additional NOx emission reductions are expected in the post 2017 period because Figure 3 does not include programs such Connecticut’s most recent revisions to the low emission vehicle (LEV) regulations, EPA’s Tier 3 vehicle and fuel standards or planned updates to Connecticut’s NOx RACT regulations.



Note: Emission trends were prepared by DEEP for Connecticut’s Redesignation and Maintenance SIP for the PM_{2.5} NAAQS, which was approved by EPA in September 2013. Emission trends for all of Connecticut are similar to those depicted here for the Connecticut portion of the NY/NJ/CT PM_{2.5} area.

²¹ Connecticut’s Redesignation Request and Maintenance Plan for the 1997 and 2006 PM_{2.5} NAAQS is available at: http://www.ct.gov/deep/cwp/view.asp?a=2684&Q=506534&deepNav_GID=1619. The plan was approved by EPA on 9/24/2013. Note that Figure 3 provides emission trends for the Connecticut portion of the NY/NJ/CT PM_{2.5} maintenance area. Emission trends for the entire state of Connecticut are similar to those presented.

The projected future decline in Connecticut's emissions adds to the weight of evidence presented earlier that Connecticut has met, and will continue to meet, the "good neighbor" provisions of CAA §110(a)(2)(D)(i)(I) through 2018 and beyond for the 2008 ozone NAAQS. In addition, Connecticut is required by the CAA to work with New York and New Jersey to achieve and maintain attainment with the NAAQS throughout the NY/NJ/CT area, addressing any remaining uncertainty regarding nonattainment/maintenance issues for monitors in the shared nonattainment area.²²

Summary and Conclusions

This SIP revision addresses Connecticut's "good neighbor" obligations under CAA §110(a)(2)(D)(i)(I), evaluating whether emissions from sources in Connecticut contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to the 2008 ozone NAAQS. DEEP's analyses included a review of:

- EPA's January 2015 guidance memorandum and preliminary transport modeling results;
- Recent and historical ozone monitoring data; and
- DEEP projections of expected emission trends in Connecticut through 2025.

As described earlier, DEEP's analyses resulted in the following findings:

- Results from EPA's January 2015 guidance and transport modeling show that ozone contributions from Connecticut emissions are expected to be below the screening threshold at all out-of-state monitors identified as having either nonattainment or maintenance concerns in 2018. Therefore, in accordance with EPA's January 2015 guidance memorandum, Connecticut complies with the CAA §110(a)(2)(D)(i)(I) good neighbor provisions for the 2008 ozone NAAQS.
- As weight of evidence, DEEP analyzed recent monitoring data for 32 key downwind monitors that were selected based 2012 results from EPA's CSAPR modeling. Current 2014 design values at all of the monitors are compliant with the 2008 NAAQS. In addition, a review of recent and historical measured ozone data indicates that 29 of the 32 monitors are very likely to maintain compliance with the 2008 NAAQS through 2016. The other 3 monitors, which meet the NAAQS in 2014 but have some risk of non-compliance in 2015 and/or 2016, are all located in the multi-state NY/NJ/CT nonattainment area. The CAA requires Connecticut to work with the other two states to achieve and maintain compliance at all monitors in the multi-state area, which includes the at-risk monitors.²²
- As further weight of evidence, DEEP projections show that emissions from Connecticut sources continue to decline in the 2007-2025 timeframe. DEEP projects a 40% reduction in NOx emissions expected between 2007 and 2017, and more than an 18% additional reduction projected in the 2017-2025 timeframe. Resultantly, Connecticut's impacts on downwind areas should continue to decline, thereby ensuring Connecticut does not interfere with long-term maintenance of the 2008 NAAQS in downwind areas.

²² See page 11 for additional discussion regarding Connecticut's CAA obligation to provide for expeditious attainment of the 2008 ozone NAAQS in both the NY/NJ/CT and Greater Connecticut areas.

Based on the analyses described in this SIP revision, DEEP concludes that Connecticut complies, and will remain in compliance with the good neighbor provisions of CAA §110(a)(2)(D)(i)(I) for the 2008 ozone NAAQS.

ENCLOSURE A

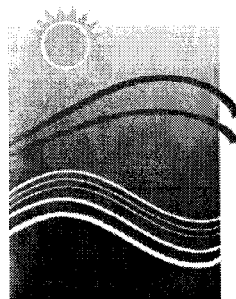
FINAL

June 11, 2015

**Revision to the
State Implementation Plan
for Air Quality**

**Demonstration that Connecticut Complies with the
Good Neighbor Requirements of
Clean Air Act Section 110(a)(2)(D)(i)(I) for the
2008 Ozone National Ambient Air Quality Standard**

**Prepared by the
Bureau of Air Management**



Connecticut Department of

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Demonstration that Connecticut Complies with the Good Neighbor Requirements of Clean Air Act Section 110(a)(2)(D)(i)(I) for the 2008 Ozone National Ambient Air Quality Standard

Summary

Sections 110(a)(1) and (2) of the Clean Air Act (CAA) require all states to submit any necessary revisions to their State Implementation Plans (SIP) to provide for the implementation, maintenance and enforcement of any revised or new national ambient air quality standard (NAAQS). Such revisions are commonly referred to as “infrastructure SIPs.” The U.S. Environmental Protection Agency (EPA) revised the ozone NAAQS in March 2008 and completed the designation process to identify nonattainment areas in July 2012. The Connecticut Department of Energy and Environmental Protection (DEEP) subsequently submitted Connecticut’s infrastructure SIP¹ on December 28, 2012.

This current SIP revision supplements DEEP’s December 2012 submittal, further addressing the CAA 110(a)(2)(D)(i)(I) (i.e., good neighbor) requirements to demonstrate that emissions from sources in Connecticut do not contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to the 2008 ozone NAAQS. DEEP’s analysis of recent EPA modeling conducted for a potential new transport rule², recent ozone monitoring data and projected future Connecticut emission trends demonstrates that Connecticut meets its good neighbor requirements for the 2008 ozone NAAQS.

Background and Introduction

On March 12, 2008, EPA promulgated revisions³ to the primary and secondary ozone NAAQS. Specifically, EPA established identical primary and secondary 8-hour standards at a level of 75 parts per billion, based on the 3-year average of the fourth-highest value of the yearly distribution of 8-hour daily maximum concentrations. EPA promulgated initial designations⁴ on April 30, 2012, assigning two marginal nonattainment areas in Connecticut: the Greater Connecticut Nonattainment Area (Hartford, Litchfield, New London, Tolland and Windham Counties and Mashantucket Pequot and Mohegan Tribes of Connecticut); and the New York-Northern New Jersey-Long Island NY-NJ-CT Nonattainment Area (a multi-state area including Connecticut’s Fairfield, Middlesex and New Haven Counties, as well as counties in northern New Jersey and downstate New York).

¹ CT’s Infrastructure SIP is posted at: http://www.ct.gov/deep/cwp/view.asp?a=2684&Q=514044&depNAV_GID=1619

² Memorandum from Stephen Page to EPA Regional Air Directors, Regions 1-10 on Good Neighbor SIP Provision for the 2008 Ozone NAAQS, January 22, 2015. The memorandum, as well as more information regarding EPA’s approach for addressing transport, is posted at: <http://www.epa.gov/airtransport/ozonetransportNAAQS.html>

³ The NAAQS revisions were published in the 3/27/2008 Federal Register and became effective on 5/27/2008.

⁴ The designations rulemaking was published in the 5/21/2012 Federal Register, and became effective 7/20/2012.

Pursuant to CAA §110(a)(1) and (2), all states are required to submit any necessary revisions to their State Implementation Plans (SIP) to provide for the implementation, maintenance and enforcement of any revised or new NAAQS. States are required to maintain a comprehensive air quality management infrastructure, including enforceable emission limitations, an ambient monitoring program, an enforcement program, air quality modeling, and adequate personnel, resources, and legal authority. The “good neighbor” provisions of CAA §110(a)(2)(D)(i) further require each SIP to prohibit emissions from within the state that contribute significantly to nonattainment or maintenance of a NAAQS in any other state, or which interfere with programs to prevent significant deterioration of air quality or to achieve reasonable progress toward the national visibility goal for Federal class I areas (national parks and wilderness areas).

Based on timing requirements set forth in the CAA, states were required to submit ozone infrastructure SIP revisions by March 2011. However, state nonattainment area designations remained unknown in March 2011 due to legal challenges to the 2008 ozone NAAQS and subsequent EPA reconsideration of the standard. As such, DEEP deemed it ineffective and inefficient to submit an infrastructure SIP until the level of the standard and area designations were known. Following EPA’s completion of designations in July 2012, DEEP submitted Connecticut’s ozone infrastructure SIP on December 28, 2012, after meeting the public participation requirements of 40 CFR 51, Appendix V, Section 2.1.

On January 3, 2013, EPA issued a finding that the Connecticut submittal was complete for the required elements of CAA §110(a)(2)(A), (B), (C), (D)(i)(II), (D)(ii), (E)-(H), and (J)-(M) because they met the completeness criteria outlined in 40 CFR Part 51 appendix V. EPA elected to make no finding with respect to CAA §110(a)(2)(D)(i)(I), citing the D.C. Circuit’s 2012 opinion in *EME Homer City Generation v. EPA*, 696 F.3d 7, 31 (D.C. Cir. 2012), which concluded that a SIP cannot be deemed to lack a required submission or deemed deficient for failure to meet the CAA §110(a)(2)(D)(i)(I) obligation until after the EPA quantifies that obligation. Upon review of this decision, on April 29, 2014 the U.S. Supreme Court further clarified CAA §110(a)(2)(D)(i)(I) and held that despite the lack of EPA guidance, states are required to meet their good neighbor requirements in a timely manner.⁵

On January 22, 2015, EPA issued partial guidance⁶ (January 2015 guidance) to assist states with preparing SIP revisions to address the requirements of CAA §110(a)(2)(D)(i)(I) for the 2008 ozone NAAQS. The guidance discussed methodologies previously used to comply with CAA “good neighbor” requirements and presented new, preliminary EPA ozone modeling results⁷ for 2018 based on emission reductions anticipated from previously adopted air pollution control programs. Consistent with the approach utilized during the development of the Cross State Air Pollution Rule (CSAPR), EPA’s preliminary modeling identified states that are projected to contribute at or above the screening threshold (i.e., 1% or more of the NAAQS) to nonattainment/maintenance concerns in other states in 2018. Pursuant to EPA’s guidance, states whose modeled air quality impacts to at least one downwind nonattainment/maintenance monitor are greater than or equal to the screening threshold are required to take action to address transport. States whose air quality impacts to all downwind nonattainment/maintenance

⁵ *EPA v. EME Homer City Generation, L.P.* 134 S.Ct 1584, 1600-01 (2014).

⁶ See: <http://www.epa.gov/airtransport/GoodNeighborProvision2008NAAQS.pdf>

⁷ See: <http://www.epa.gov/airtransport/O3TransportAQModelingTSD.pdf>

monitors are below the screening threshold have no additional emission reduction obligation for the 2008 NAAQS under the good neighbor provisions of CAA §110(a)(2)(D)(i)(I).

EPA held an ozone transport workshop on April 8, 2015. EPA indicated that it was working to incorporate updated emissions budgets into its modeling and would release updated modeling during the summer of 2015. EPA also indicated it could propose rulemaking towards the end of 2015 for a federal implementation plan (FIP) backstop, to take effect in states that do not submit approvable good neighbor SIPs in a timely manner.

EPA's January 2015 guidance refers to a four-step process developed previously by EPA to address ozone transport:

- 1) Identify downwind air quality problems;
- 2) Identify upwind states that contribute enough to those downwind air quality problems to warrant further review and analysis;
- 3) Identify the emissions reductions necessary to prevent an identified upwind state from contributing significantly to those downwind air quality problems; and
- 4) Adopt permanent and enforceable measures needed to achieve identified emission reductions.

Connecticut's good neighbor SIP revision is consistent with the four-step process outlined in EPA's January 2015 guidance. As described below, DEEP examined the results of EPA's recent transport modeling for 2018 and analyzed recent ambient monitoring data at key downwind sites to demonstrate that Connecticut complies with the requirements of CAA §110(a)(2)(D)(i)(I) for the 2008 NAAQS.

Methodology

The "good neighbor" provisions of CAA §110(a)(2)(D)(i)(I) require each state's SIP to prohibit emissions that significantly contribute to nonattainment in, or interfere with maintenance by, any other state with respect to any NAAQS. DEEP used the following methodology to identify and address Connecticut's good neighbor obligation.

1. DEEP examined the results of EPA's modeling set out in the January 2015 guidance to:
 - Identify monitors outside of Connecticut that are projected to have nonattainment or maintenance issues in 2018.
 - Determine if the modeled impacts associated with emissions from Connecticut sources are projected to exceed the screening threshold at any of the nonattainment/maintenance monitors in 2018.
2. To supplement the findings of EPA's preliminary modeling for 2018, DEEP conducted a weight-of-evidence (WOE) analysis examining monitoring data at key downwind monitors to assess both current compliance and the likelihood for continued NAAQS compliance in the 2014-2016 timeframe.

- DEEP used EPA's CSAPR⁸ modeling results for 2012 to identify all out-of-state monitors where Connecticut's ozone contributions were at least 1% of the 2008 NAAQS (i.e., 0.75ppb or greater). The 2012 results, though developed by EPA using some methods unique to the 1997 ozone NAAQS, were viewed by DEEP as a useful depiction of Connecticut's impacts on downwind areas during the timeframe when EPA established designations for the 2008 NAAQS.
 - DEEP then analyzed recent measured data to determine each monitor's current compliance status with the 2008 NAAQS based on 2014 design values.
 - In order to assess the likelihood for near-term maintenance of the standard at the CT-impacted monitors, DEEP used 2013 and 2014 4th-high values to calculate the 4th-high measured ozone levels that would need to occur in 2015 and 2016 to violate the 2008 NAAQS. DEEP then examined historical ozone monitoring data, gathered over a variety of economic and summer weather conditions, to determine whether, and how often, such 4th-high values have actually occurred since 2007. Based on that analysis, DEEP judged whether it was likely that each monitor would continue to maintain compliance with the 2008 ozone NAAQS through 2016.
3. As additional WOE, DEEP also examined projected emission trends out to 2025 from Connecticut sources to further assess the longer term implications for maintenance at the key group of CT-impacted monitors.

The following sections document the application of the above methodology and DEEP's findings regarding Connecticut's compliance with CAA §110(a)(2)(D)(i)(I) for the 2008 ozone NAAQS.

Methodology Step 1: Examination of EPA's Preliminary Transport Modeling for 2018

In the January 2015 guidance, EPA released preliminary ozone modeling results⁹ for 2018 calculated based on emission reductions anticipated from previously adopted state and federal control programs. EPA used the CSAPR modeling approach to assess the effects of interstate transport on attainment and maintenance of the 2008 ozone NAAQS. EPA modeled 2011 base year and 2018 projected emissions using the Comprehensive Air Quality Model with Extensions (CAMx), version 6.10 and 2011 meteorological data. Results from 2011 and 2018 were used to

⁸ See: <http://www.epa.gov/crossstaterule/techinfo.html>. EPA's modeling for the Cross-State Air Pollution Rule (CSAPR) includes source apportionment results for 2012, providing estimates of Connecticut's contributions to downwind monitors at the time EPA established designations for the 2008 ozone NAAQS. It is important to note that EPA's CSAPR modeling procedures were developed for the 1997 ozone NAAQS and differed in some respects from procedures used in EPA's Jan 2015 preliminary modeling for the 2008 NAAQS (e.g., selection criteria for the set of high ozone days used to develop relative response factors). DEEP's use of CSAPR results is restricted to identifying out-of-state monitors projected to have impacts from Connecticut sources in 2012 of 0.75 ppb or more (i.e., 1% or more of the 2008 NAAQS). DEEP's WOE analysis then evaluated measured ozone levels at the key CT-impacted monitors to determine current NAAQS compliance, as well as to assess the likelihood for continued compliance through 2016.

⁹ EPA has posted a memorandum, technical support document, and related data files documenting the January 2015 preliminary modeling at: <http://www.epa.gov/airtransport/ozonetransportNAAQS.html>.

develop a relative response factor (RRF) for each ozone monitoring site, which is the fractional change in the modeled 8-hour daily maximum ozone levels between the two years.

EPA then used a methodology described in its draft guidance for attainment demonstration modeling¹⁰ to identify ozone monitoring sites that it projected would be in nonattainment or would have maintenance issues with the 2008 ozone NAAQS in 2018. The approach entailed calculating the maximum and average of the monitored ozone design values for the five years centered on the 2011 base year (2009 – 2013) for each ozone monitor. Those values were multiplied by the corresponding RRFs to project average and maximum 2018 design values. Sites with average projected 2018 design value that exceeded 75 ppb, the 2008 ozone NAAQS, were identified as projected 2018 nonattainment monitors. Monitoring sites with 2018 average projected design values below the NAAQS but with 2018 maximum projected design values that exceeded the NAAQS were identified as projected 2018 maintenance monitors.

The EPA also performed nationwide state-level ozone source apportionment modeling using the CAMx Ozone Source Apportionment Technology/Anthropogenic Precursor Culpability Analysis (OSAT/APCA) technique to quantify the contribution of 2018 oxides of nitrogen (NOx) and volatile organic compound (VOC) emissions from all sources in each state to projected 2018 ozone concentrations at monitoring sites. If a state's interstate transport impact in 2018 equaled or exceeded the screening threshold of 1% of the ozone NAAQS at a nonattainment or maintenance monitor in another state, then the upwind state is "linked" to the downwind state, potentially requiring additional emission reductions to meet the CAA good neighbor provision. If the modeling shows a state does not contribute above the screening threshold to any downwind problem monitor, then EPA concludes that no further action is needed to comply with the CAA good neighbor provision.

Table 1 summarizes EPA's 2018 modeling results, showing Connecticut's impacts at projected out-of-state¹¹ nonattainment/maintenance monitors located in the eastern half of the country¹². EPA's modeling projects that 10 monitors in 8 eastern states (i.e., KY, MD, MI, MO, NJ, NY, PA, and WI) will have nonattainment and/or maintenance issues in 2018. Emissions from Connecticut are projected to have a maximum impact in 2018 of 0.41 ppb at the monitor in Suffolk County NY, with impacts at all other monitors of concern being 0.08 ppb or less. Connecticut impacts at the monitors of concern are all well below the 1% screening threshold of 0.75 ppb for the 2008 NAAQS. Therefore, in accordance with EPA's January 2015 guidance, Connecticut complies with the CAA §110(a)(2)(D)(i)(I) good neighbor provisions for the 2008 ozone NAAQS. Further weight-of evidence supporting that conclusion is provide below.

¹⁰ EPA, "Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5, and Regional Haze- December 2014 DRAFT" http://www.epa.gov/scram001/guidance/guide/Draft_O3-PM-RH_Modeling_Guidance-2014.pdf

¹¹ EPA's modeling projects that four Connecticut monitors will have nonattainment and/or maintenance concerns in 2018. While upwind states are required to address their contributions to Connecticut under CAA §110(a)(2)(D)(i)(I), Connecticut's obligation to address in-state ozone problems are governed by CAA nonattainment provisions, which are not the subject of this SIP revision.

¹² EPA included Texas in its analysis of eastern states. EPA's modeling results indicate Connecticut emissions have negligible impact (i.e., reported by EPA as 0.00 ppb) at any of the 15 Texas monitors identified by the modeling as having nonattainment or maintenance issues in 2018.

Table 1
Connecticut Contributions to Eastern U.S. Monitors
Projected by EPA Modeling
to Have 2018 Nonattainment or Maintenance Issues ¹

State	County	Projected 2018 Nonattainment Level ² (ppb)	Projected 2018 Maintenance Level ² (ppb)	Connecticut Contribution ³ (ppb)
Kentucky	Jefferson	73.7	76.4	0.00
Maryland	Harford	79.4	82.1	0.01
Michigan	Allegan	74.5	77.5	0.00
Missouri	Saint Charles	74.1	77.4	0.00
New Jersey	Camden	72.3	76.0	0.01
New Jersey	Gloucester	74.0	76.3	0.08
New York	Richmond	74.6	76.2	0.07
New York	Suffolk	78.2	79.8	0.41
Pennsylvania	Philadelphia	74.7	78.0	0.03
Wisconsin	Sheboygan	75.4	77.8	0.00

- 1) EPA also included Texas in its analysis of eastern states. EPA's modeling results indicate Connecticut emissions have negligible impact (i.e., reported by EPA as 0.00 ppb) at any of the 15 Texas monitors identified by the modeling as having nonattainment or maintenance issues in 2018.
- 2) EPA has posted a memorandum, technical support document, and related data files documenting the January 2015 preliminary modeling at: <http://www.epa.gov/airtransport/ozonetransportNAAQS.html>. Note that the "Projected 2018 Nonattainment Level" in the table corresponds to EPA's results for "average design values" and the "Projected 2018 Maintenance Level" in the table corresponds to EPA's results for "maximum design values". The two monitors that are shaded in the table were identified by EPA's modeling as having both nonattainment and maintenance issues in 2018. All other listed monitors were identified as having maintenance issues in 2018.
- 3) EPA's modeling results indicate Connecticut's contributions at all these key locations are much less than the 1% screening threshold (i.e., 0.75 ppb for the 2008 NAAQS). Therefore, based on EPA's guidance memorandum, Connecticut complies with the CAA §110(a)(2)(D)(i)(I) good neighbor provisions for the 2008 ozone NAAQS.

Methodology Step 2: Weight of Evidence Analysis of Recent Ozone Monitoring Data

DEEP supplemented the findings of EPA's preliminary modeling for 2018 with a WOE analysis of recent monitoring data to determine current NAAQS compliance, as well as to assess the likelihood for continued compliance through 2016, at key downwind monitors.

DEEP identified key downwind monitors using EPA's CSAPR modeling results for 2012.¹³ The 2012 results were selected because they provide estimates of Connecticut's contributions to downwind monitors at the time EPA established designations for the 2008 ozone NAAQS. The CSAPR results were used to identify all out-of-state monitors with projected impacts from Connecticut emissions that equaled or exceeded the 1% screening threshold (i.e., 0.75 ppb) in 2012. Selection was not restricted to just those monitors with modeled nonattainment/maintenance issues, but included all downwind monitors with Connecticut impacts at or above the threshold. This conservative approach provided a larger set of monitors of potential concern to include in DEEP's analysis of recent monitoring data.

Applying the procedure described above, DEEP identified 32 downwind monitors impacted by Connecticut emissions. The locations of these monitors are listed in Table 2 along with their official designation status with respect to the 2008 ozone NAAQS. Of the 32 monitors, 23 are located in areas currently designated as unclassifiable/attainment for the 2008 NAAQS. The other 9 monitors are located in four areas currently designated as nonattainment by the EPA for the 2008 NAAQS (Seaford, DE; Dukes County, MA; Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE; and New York-N. New Jersey-Long Island, NY-NJ-CT).

DEEP next examined recent measured ozone levels and found that 2014 design values for all 32 CT-impacted monitors are compliant with the 2008 ozone NAAQS. Table 3 summarizes 2014 ozone design values¹⁴ for each CT-impacted monitor. Table 3 also lists the calculated minimum 4th-high ozone value that would need to occur in 2015 for each monitor to violate the standard based on 2015 design values. The most recent year¹⁵ that such a 4th-high value actually occurred is also noted for each monitor. Similarly, the table provides the critical sum of 4th-high values in 2015 and 2016 that would need to occur (or be surpassed) for the 2016 design value to violate the standard. The last column of Table 3 notes the most recent consecutive years for which the critical summed value actually occurred.

To illustrate how to interpret Table 3, note that the Dukes County MA (Martha's Vineyard) monitor has a compliant 2014 design value of 68 ppb. Dukes County is designated as nonattainment (see Table 2) for the 2008 NAAQS, despite measuring compliant design values for both 2013 and 2014. That monitor would need to record a 4th-high value of 104 ppb or greater in 2015 to result in a 2015 design value that violates the 2008 NAAQS. The monitor has not recorded such a 4th-high value since prior to 2007, indicating a strong likelihood that

¹³ See Footnote 8 for a discussion of how CT used the CSAPR modeling.

¹⁴ The 2012 and 2013 data that are part of the 2014 design value calculation have previously been certified by each state and were obtained from a data set maintained by Maine DEP. Connecticut DEEP obtained 2014 data from EPA's Air Quality System (AQS) database, as accessed on June 8, 2015.

¹⁵ DEEP examined data from 2007 through 2013, from the Maine DEP data set, and 2014 data from EPA's AQS.

Table 2
Monitors Impacted by Connecticut Emissions in 2012¹

State	County	Location	Official Designation for 2008 Ozone NAAQS
Delaware	Sussex	Lewes	Seaford, DE - Marginal Nonattainment
Maine	Cumberland	Cape Elizabeth	Unclassifiable/Attainment
	Hancock	Bar Harbor-Cadillac Mt Summit	Unclassifiable/Attainment
	Hancock	Bar Harbor-McFarland Hill	Unclassifiable/Attainment
	Knox	Port Clyde-Marshall Pt	Unclassifiable/Attainment
	York	Kennebunkport	Unclassifiable/Attainment
Massachusetts	Barnstable	Truro	Unclassifiable/Attainment
	Dukes	Wampanoag Laboratory - Martha's Vineyard	Dukes County, MA – Marginal Nonattainment
	Essex	Lynn	Unclassifiable/Attainment
	Essex	Newbury	Unclassifiable/Attainment
	Essex	Haverhill	Unclassifiable/Attainment
	Hampden	Chicopee	Unclassifiable/Attainment
	Hampshire	Amherst	Unclassifiable/Attainment
	Hampshire	Ware	Unclassifiable/Attainment
	Norfolk	E Milton (Blue Hill)	Unclassifiable/Attainment
	Suffolk	Boston-Long Island	Unclassifiable/Attainment
	Suffolk	Boston-Roxbury	Unclassifiable/Attainment
	New Hampshire	Hillsborough	Peterborough
Rockingham		Portsmouth-Pierce Isle	Unclassifiable/Attainment
Rockingham		Rye-Odiorne State Park	Unclassifiable/Attainment
New Jersey	Atlantic	Brigantine	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE - Marginal Nonattainment
	Monmouth	Monmouth Univ	New York-N. New Jersey-Long Island, NY-NJ-CT – Marginal Nonattainment
	Passaic	Ramapo	
New York	Richmond	NYC-Susan Wagner HS	
	Suffolk	Riverhead	
	Suffolk	Holtsville	
	Westchester	White Plains	
	Dutchess	Millbrook	Unclassifiable/Attainment
	Putnam	Mt Ninham	Unclassifiable/Attainment
Rhode Island	Kent	W Greenwich	Unclassifiable/Attainment
	Providence	E Providence	Unclassifiable/Attainment
	Washington	Narragansett	Unclassifiable/Attainment

¹ Monitors listed are all those identified using EPA's CSAPR modeling results as incurring impacts from CT emissions amounting to at least 1% of the 2008 ozone NAAQS of 75 ppb in 2012, regardless of whether the impacted monitor was projected by the modeling to have nonattainment/maintenance issue in 2012. Six other monitors (4 in ME, 2 in MA) are no longer in operation and are not considered here. Modeling results indicate that CT impacts at all other non-CT monitors are less than the 1% threshold.

Table 3
Compliance Status of Monitors Impacted by Connecticut Emissions in 2012^{1,2,3}

State	County & Location of Monitor	2014 Design Value (ppb)	2015 4th-High That Would Cause 2015 Violation (ppb)	Most Recent Year with 4th-High \geq 2015 Critical Value	Sum of 2015 & 2016 4 th -Highs That Would Cause 2016 Violation (ppb)	Most Recent Consecutive Years with Sum \geq 2016 Critical Value
DE	Sussex (Lewes)	74	89	pre-2007	161	pre-2007
ME	Cumberland (Cape Elizabeth)	68	90	pre-2007	162	pre-2007
	Hancock (Bar Harbor-Cadillac Mt)	66	95	pre-2007	163	pre-2007
	Hancock (Bar Harbor-McFarland Hill)	63	97	pre-2007	166	pre-2007
	Knox (Port Clyde-Marshall Pt)	66	90	pre-2007	166	pre-2007
	York (Kennebunkport)	73	86	pre-2007	162	pre-2007
MA	Barnstable (Truro)	69	98	pre-2007	169	pre-2007
	Dukes (Martha's Vineyard)	68	104	pre-2007	169	pre-2007
	Essex (Lynn)	69	92	pre-2007	165	2007-2008
	Essex (Newbury)	69	93	pre-2007	164	pre-2007
	Essex (Haverhill)	68	96	pre-2007	164	pre-2007
	Hampden (Chicopee)	70	91	2007	162	2007-2008
	Hampshire (Amherst)	62*	107*	pre-2007	167*	pre-2007
	Hampshire (Ware)	71	91	pre-2007	160	2007-2008
	Norfolk (E Milton-Blue Hill)	70	90	pre-2007	161	2007-2008
	Suffolk (Boston-Long Island)	66	97	pre-2007	168	pre-2007
	Suffolk (Boston-Roxbury)	58	115	pre-2007	174	pre-2007
NH	Hillsborough (Peterborough)	70	91	pre-2007	158	pre-2007
	Rockingham (Portsmouth-Pierce Isle)	68	94	pre-2007	160	pre-2007
	Rockingham (Rye-Odiorne State Park)	68	89	pre-2007	158	2007-2008

Table 3 (continued)
Compliance Status of Monitors Impacted by Connecticut Emissions in 2012 ^{1,2,3}

State	County & Location of Monitor	2014 Design Value (ppb)	2015 4th-High That Would Cause 2015 Violation (ppb)	Most Recent Year with 4th-High \geq 2015 Critical Value	Sum of 2015 & 2016 4th-Highs That Would Cause 2016 Violation (ppb)	Most Recent Consecutive Years with Sum \geq 2016 Critical Value
NJ	Atlantic (Brigantine)	69	97	pre-2007	167	pre-2007
	Monmouth (Monmouth Univ)	72	93	pre-2007	164	2011-2012
	Passaic (Ramapo)	69	94	pre-2007	163	pre-2007
NY	Richmond (NYC-Susan Wagner HS)	73	85	2011	156	2011-2012
	Suffolk (Riverhead)	75	86	pre-2007	164	2007-2008
	Suffolk (Holtsville)	71	92	pre-2007	166	2007-2008
	Westchester (White Plains)	75	82	2008	154	2011-2012
	Dutchess (Millbrook)	69	95	pre-2007	160	pre-2007
	Putnam (Mt Ninham)	67	95	pre-2007	162	2007-2008
RI	Kent (W Greenwich)	70	88	2007	161	2007-2008
	Providence (E Providence)	73	88	2007	164	2007-2008
	Washington (Narragansett)	74	86	pre-2007	165	pre-2007

¹ Monitors listed are those identified using EPA's CSAPR modeling results as incurring impacts from CT emissions amounting to at least 1% of the 2008 ozone NAAQS of 75 ppb in 2012. Six other monitors (4 in ME, 2 in MA) are no longer in operation and are not considered here. Modeling results indicate that CT impacts at all other non-CT monitors are less than the 1% threshold. The 2014 design values are from EPA's Air Quality System (AQS), as accessed on June 8, 2015.

² Monitors that are shaded in the table are located in the NY/NJ/CT nonattainment area.

³ All CT-impacted monitors have 2014 design values that comply with the 2008 NAAQS. As shown in the last four columns of Table 3, all monitors located outside the NY/NJ/CT nonattainment area are likely to maintain compliance status through 2016, based on the recent history of 4th-high values compared to the calculated 4th-high values in 2015 and 2016 that would need to occur to cause a violation. When considered along with EPA's recent preliminary transport modeling and projected future emission reductions (discussed below), DEEP concludes there is a high probability that maintenance of the 2008 NAAQS will continue beyond 2016 at these sites outside the NY/NJ/CT area. Although there are 3 monitors in NJ and NY that have recently (i.e., 2011/2012) measured 4th-highs that, if repeated, would cause them to fall back into violation in 2015 and/or 2016, they are located in the NY/NJ/CT nonattainment area. Therefore, Connecticut is obligated by the CAA to work with NY and NJ to achieve and maintain attainment with the NAAQS throughout the area. See page 11 for further discussion regarding Connecticut's CAA obligation to attain.

* EPA's AQS indicates that the Amherst, MA monitor did not meet data completeness requirements in 2014.