Certification of Rhode Island State Implementation Plan (SIP) Adequacy Regarding Clean Air Act Sections 110(a)(1) and (2) for the 2015 Ozone National Ambient Air Quality Standard (NAAQS)

Rhode Island Department of Environmental Management
Office of Air Resources

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Infrastructure Certification for the 2015 Ozone National Ambient Air Quality Standard

This is the certification by the Rhode Island Department of Environmental Management (RIDEM) to the U.S. Environmental Protection Agency (EPA) that the existing Rhode Island State Implementation Plan (SIP) adequately meets the basic (or "infrastructure") requirements of Sections 110(a)(1) and (2) of the Clean Air Act (CAA) for the 2015 National Ambient Air Quality Standards (NAAQS) for ozone.

On October 1, 2015, EPA lowered the primary and secondary NAAQS for ozone to 70 parts per billion (ppb).[1] The CAA requires that all states submit SIPs to meet the requirements of CAA Sections 110(a)(l) and 110(a)(2) within 3 years after promulgation of a new or revised NAAQS. This SIP is commonly referred to as an "infrastructure" SIP because its purpose is to ensure that a state's SIP contains the necessary structural elements needed to implement a new or revised NAAQS.

On December 5, 2019, EPA published a *Finding of Failure to Submit a Clean Air Act 110 State Implementation Plan for Interstate Transport for the 2015 NAAQS*[2] for seven states that had not submitted SIPs. RI is listed as one of those states. This certification will serve as Rhode Island's SIP for the 2015 ozone NAAQS.

Section 110(a)(1) provides the procedural and timing requirements for SIP submittals. Section 110(a)(2) lists the basic elements that all SIPs must contain, including emissions inventories, ambient air quality monitoring and data systems, programs for enforcement of control measures, and adequate resources to implement the plan. Section 110(a)(2)(D)(i) specifically requires that the Infrastructure SIP prohibit emissions that will significantly contribute to nonattainment, or interfere with maintenance, of a NAAQS in downwind states. This requirement is commonly referred to as the "Good Neighbor" provision. Appendix A addresses the "Good Neighbor provisions.

Thirteen elements of Sections 110(a)(1) and (2) must be addressed in infrastructure SIPs. Those elements and the sections of the Rhode Island program that are consistent with those elements are identified in Table 1. The Rhode Island SIP, which was approved in May 1972, and its numerous subsequent revisions fulfill most of these requirements. Other Section 110(a)(2) requirements are fulfilled by Section 23-23, 23-23.1 and 36-14 of the Rhode Island General Laws (RIGL) and by Rhode Island Air Pollution Control Regulations contained in Title 250, Chapter 120, Subchapter 5 of the Rhode Island Code of Regulations (RICR) that have been incorporated into or submitted to the EPA for incorporation into the Rhode Island SIP. Applicable sections of the above RIGL are appended to this submittal for incorporation into the SIP.

[1] National Ambient Air Quality Standards for Ozone Final Rule, 80 FR 65292 (October 26. 2015).
[2] Finding of Failure to Submit, 84 FR 66612 (December 5, 2019).

Table 1: Rhode Island's Compliance with CAA Section 110(a)(1) and (2) SIP requirements

CAA Section	110(a) Requirement	Corresponding Rhode Island Requirements
110(a)(2)(A) Emission limits and other control measures	Include enforceable emission limitations and other control measures, means, or techniques, as well as schedules and timetables for compliance.	**RIGL § 23-23-5 "Powers and duties of the director"** authorizes the RI DEM Director "to make, issue, and amend rules and regulations … for the prevention, control, abatement, and limitation of air pollution…. . The director may prohibit emissions, discharges and/or releases and may require specific control technology**." § 23-23-5 and other applicable sections of § 23-23, Rhode Island's "Clean Air Act," are appended to this submittal for incorporation into the SIP.** **Measures that limit emissions of ozone precursors and the framework for implementation of those measures are found in the following Rhode Island Code of Regulations (250-RICR-120-05):** Part 9 – Air Pollution Control Permits Part 11- Petroleum Liquids Marketing and Storage Part 15 – Control of Organic Solvent Emissions Part 19 – Control of Volatile Organic Compounds (VOCs) from Surface Coating Operations Part 21- Control of VOCs from Printing Operations Part 25- Control of VOC Emissions from Cutback and Emulsified Asphalt Part 26- Control of Organic Solvent Emissions from Manufacturers of Synthesized Pharmaceutical Products Part 27 – Control of Nitrogen Oxide Emissions Part 29 – Operating Permits Part 30 – Control of VOCs from Automobile Refinishing Operations Part 31 – Control of VOCs from Commercial and Consumer Products Part 32 – Control of VOCs from Marine Vessel Loading Operations Part 33- Control of VOCs from Architectural Coatings and Industrial Maintenance Coatings

CAA Section	110(a) Requirement	Corresponding Rhode Island Requirements
		Part 34 - Rhode Island Motor Vehicle Inspection/Maintenance Program Part 35 – Control of VOCs and Volatile Hazardous Air Pollutants from Wood Products Manufacturing Operations Part 36 – Control of Emissions from Organic Solvent Cleaning Part 37 – Rhode Island's Low Emissions Vehicle Program Part 39 – Hospital/Medical/Infectious Waste Incinerators Part 43 – General Permits for Smaller-Scale Electric Generation Facilities Part 44 – Control of Volatile Organic Compounds from Adhesives and Sealants Part 45 – Rhode Island Diesel Engine Anti-Idling Program Part 51 - Control of VOC Emissions from Fiberglass Boat Manufacturing
110(a)(2)(B) Ambient Air quality monitoring/data system	Provide for establishment and operation of appropriate devices, methods, systems and procedures to monitor, compile and analyze ambient air quality data, and to make these data available to the EPA	**Section VI of the 1972 RI SIP** specifies requirements for the operation of an Air Quality Surveillance Network. The latest annual air monitoring network plan for Rhode Island was submitted to EPA on July 24, 2020. As specified in that plan, ozone is currently monitored year-round at the State's East Providence site and March – September at sites in East Matunuck, Narragansett and W. Greenwich. NOx is measured E. Providence, Providence and W. Greenwich. VOCs are measured at sites in E. Providence, W. Greenwich, Pawtucket and Providence. A variety of additional parameters related to ozone formation and transport are also measured at the E. Providence site, which is part of the EPA's NCore and PAMS networks. Data collected by network monitors are reviewed, validated and sent to the EPA air quality system no later than 90 days after the end of a calendar quarter. Air monitoring network plans are compiled and submitted to the EPA annually and include an explanation of proposed changes to the network.
110(a)(2)(C) Program for enforcement, PSD	Include a program providing for enforcement of all SIP measures and the regulation of construction of new or	**§ 23-23-10, 23-23-11 and 23-23-14 of the RIGL** provide DEM with civil and criminal enforcement authorities, including the authority to assess penalties.

CAA Section	110(a) Requirement	Corresponding Rhode Island Requirements
and NSR	modified stationary sources to assure that NAAQS are achieved The program must include permitting requirements that meet prevention of significant deterioration (PSD) and nonattainment New Source Review (NSR) requirements.	**250-RICR-120-05-9, "Air Pollution Control Permits,"** sets forth requirements for new and modified major and minor stationary sources. §9.7 of the regulation contains the requirements for new and modified minor sources. §9.8 of the regulation contains the new source review requirements applicable to major stationary source or major modifications located in nonattainment areas. §9.9 contains the new source review requirements applicable to major stationary sources or major modifications located in attainment or unclassifiable areas (PSD). Rhode Island will amend 250-RICR-120-05-9 as needed, to be consistent with any updates in EPA's PSD requirements within 3 years of promulgation of the Federal amendments and will incorporate the updated modeling procedures into the State's "Air Quality Modeling Guidelines" when they are finalized. **250-RICR-120-05-9** requires minor source installations and modifications with the potential to emit one hundred pounds or more per day, or ten pounds or more per hour of any air contaminant or combination of air contaminants to obtain a preconstruction permit. §9.7.3(A)(1) of that regulation requires BACT for such sources and §9.7.3(A)(4) specifies that emissions cannot "cause or contribute to air pollution in violation of any applicable state or national ambient air quality standard."

CAA Section	110(a) Requirement	Corresponding Rhode Island Requirements
110(a)(2)(D)(i)(I) Interstate transport provisions	Include provisions prohibiting any source or other type of emissions activity in one state from contributing significantly to nonattainment, or interfering with maintenance, of the NAAQS in another state.	The RI SIP currently contains adequate provisions prohibiting sources from emitting air pollutants in amounts which will contribute significantly to nonattainment, or interfere with maintenance, of any NAAQS, including the 2015 ozone NAAQS in RI or in any other state[3]. RI's SIP also contains adequate provisions to prevent interference with measures by any other state to prevent significant deterioration of air quality or to protect visibility. RI may make changes that it believes in its discretion are appropriate, while continuing to fulfil this obligation. No source or sources within RI have been identified as contributing significantly to non-attainment or maintenance of the 2015 ozone NAAQS in any other state or are the subject of an active finding under section 126 of the CAA with respect to ozone or any other air pollutant. Additional demonstration that RI does not contribute significantly to non-attainment or maintenance of the 2015 ozone NAAQS in any other state is provided in Appendix A.
110(a)(2)(D)(i)(II) Interstate transport provisions – PSD and visibility	Include provisions prohibiting any source or other type of emissions activity in one state from contributing significantly to nonattainment, or interfering with PSD measures or measures to protect visibility in another state.	**250-RICR-120-05-9, "Air Pollution Control Permits,"** sets forth PSD requirements for new and modified stationary sources. **The Rhode Island Regional Haze SIP** demonstrates that Rhode Island sources do not significantly impact visibility in any downwind Class I area
110(a)(2)(D)(ii) Interstate and international transport provisions	Provide adequate provisions to prevent endangerment of public health due to interstate and international transport of pollutants.	**250-RICR-120-05-9, "Air Pollution Control Permits,"** sets forth PSD requirements for new and modified stationary sources. §9.16 (C) of this regulation specifies that notice must be provided to any State, Federal Land Manager or Indian Governing Body whose lands may be affected by emissions from a proposed major source
110(a)(2)(E)	Provide for adequate personnel, funding	**§ 23-23-5 of the RIGL** provides the Director of DEM with the legal authority

[3] The Department has prepared a separate SIP revision addressing the CAA §110(a)(2)(D)(i)(I) ("good neighbor") requirements to demonstrate that emissions from sources in RI do not significantly contribute to nonattainment in, or interfere with maintenance by, any other state with respect to the 2015 ozone NAAQS. RIDEM's analysis of recent EPA's and Ozone Transport Commission's (OTC) 2023 modeling demonstrates that RI meets its good neighbor requirements for the 2015 NAAQS.

CAA Section	110(a) Requirement	Corresponding Rhode Island Requirements
Adequate personnel, funding and authority	and legal authority under state law to carry out the SIP and demonstrate adherence to conflict of interest requirements.	to enforce air pollution control requirements. **Section III of the RI SIP** specifies the RI DEM's legal authority to implement SIP measures. No other agency or organization participates in the implementation or enforcement of those measures in Rhode Island. **§ 23-23-5 of the RIGL** provides for the assessment of operating permit fees from air emissions sources, allows for DEM to assess preconstruction permit fees and establishes a general revenue reserve account within the general fund to finance the state clean air programs. **250-RICR-120-05 28, "Operating Permit Fees,"** requires major sources to pay annual operating permit fees. **The RI DEM "Rules and Regulations Governing the Establishment of Various Fees"** sets forth permit fee requirements for air emissions sources and the legal authority to collect those fees. In addition to Federal funds and operating permit and preconstruction permit fees, RI DEM receives State funding to implement its air programs, including programs that apply to sources that are smaller than those that are required to obtain operating permits. Air pollution permits and enforcement orders issued by RI DEM are not subject to review or approval of any state board. All Rhode Island public officials and employees are subject to Rhode Island's" Code of Ethics", RIGL § 36-14, which includes conflict of interest requirements. RIGL § 36-14 is appended to this submittal for incorporation into the Rhode Island SIP.
110(a)(2)(F)	Establish a system to require stationary	**Section IV of the RI SIP** sets forth an emissions surveillance program.

CAA Section	110(a) Requirement	Corresponding Rhode Island Requirements
Stationary source monitoring and reporting	sources to monitor emissions and to submit periodic emissions reports and for the state to correlate those reports with emission limits and standards.	**§ 23-23-5(16) and 23-23-13 of the RIGL** requires any facility that emits air contaminants to keep records and submit those records to the Department. **§ 23-23-5(16) of the RIGL** provides RI DEM with the authority to require sources to install and maintain monitoring equipment and to maintain records of, and periodically report, information as may be necessary to enable the state to determine whether such sources are in compliance with applicable air pollution control requirements. Air Pollution Control Regulation No. 14 (as approved into the SIP) implements that authority. **Under § 23-23-13 of the RIGL and Rhode Island's public records act (RIGL Title 38)** emissions data are made available to the public and are not protected as trade secret or proprietary information. **250-RICR-120-05-6, "Continuous Emissions Monitors,"** requires stationary sources specified in Title 40 of CFR Part 51, Appendix P, parts 1-5, "Minimum Emissions Monitoring Requirements," to install, calibrate, operate, and maintain a continuous emission monitoring system and to record and report the total process operating time of the equipment for each calendar quarter to the RI DEM Office of Air Resources. 250-RICR-120-05-6 also specifies that RI DEM will use the resulting CEM data to determine compliance with applicable emission limits and/or operating and maintenance requirements and that the data collected must be kept for at least two years. **250-RICR-120-05-9, "Air Pollution Control Permits,"** allows RI DEM to require emissions testing of a permitted process within 180 days of initial startup and provides that preconstruction permits issued may contain emissions testing requirements. Additionally, the regulation allows RI DEM to require the use of instrumentation to monitor and record emission data. (§9.10(B)(2) & §9.10(B)(6)(d))

CAA Section	110(a) Requirement	Corresponding Rhode Island Requirements
		250-RICR-120-05-14 "Record Keeping and Reporting" requires emission sources to report annually emissions and other data to RI DEM. **250-RICR-120-05-29, "Operating Permits"** requires that all permits contain periodic monitoring sufficient to provide a reasonable assessment of the source's compliance status and, where applicable, compliance assurance monitoring. All records and supporting information, including "all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit" must be retained for at least five years (§29.10(D)((1)(b)).
110(a)(2)(G) Emergency episodes	Provide for authority to address activities causing imminent and substantial endangerment of public health, including contingency plans to implement the emergency episode provisions of the SIP.	**Section V of the RI SIP** specifies RI DEM's Emergency Episode Authority and Procedures. **§ 23-23-16 of the RIGL** allows the Director of RI DEM to order a source to cease operations if it is determined that emissions from the source pose an immediate danger to public health or safety. **§ 23-23.1-5 of the RIGL** sets forth specifications for the proclamation of air pollution episodes and issuance of orders. § 23-23.1-5 of § 23-23.1, Rhode Island's "Air Pollution Episode Control Act" is appended to this document for incorporation into the SIP. The combination of **RIGL §§ 10-1-1, 23-23.1-7, 23-23.1-8, 42-17.1-2, 10-20**, and **250-RICR-120-05-7**, taken together with **RIGL §§ 23-23-16, 23-23.1-5 and 250-RICR-120-05-10**, provide authority comparable to 42 U.S.C. § 7603 of the Clean Air Act (Emergency Powers). **250-RICR-120-05-10, "Air Pollution Episodes,"** specifies criteria for calling and measures to be implemented during air pollution alerts, warnings and episodes.

CAA Section	110(a) Requirement	Corresponding Rhode Island Requirements
110(a)(2)(H) Future SIP revisions	States must have the authority to revise their SIPs in response to changes in the NAAQS, availability of improved methods for attaining the NAAQS, or in response to an EPA finding that the SIP is substantially inadequate.	**§ 23-23-5 of the RIGL** allows the Director of RI DEM to "make, issue, and amend rules and regulations ….. for the prevention, control, abatement, and limitation of air pollution."
110(a)(2)(J) Consultation with government officials, public notifications, PSD and visibility protection	Provide a process for consultation with local governments and Federal Land Managers concerning implementation of requirements necessary to attain the NAAQS and to ensure the prevention of significant deterioration of air quality and visibility protection. States must implement procedures to notify the public if a NAAQS is exceeded in an area and to enhance public awareness of measures that can be taken to prevent exceedances. .	**§ 23-23-5 of the RIGL** specifies that the RI DEM Director shall "advise and consult with agencies of the United States, agencies of the state, political subdivisions and industries and any other affected groups in furtherance of the purposes of this chapter." **250-RICR-120-05-9, "Air Pollution Control Permits,"** sets for a procedure for public comment on proposed major source permits. §9.16(C) specifies that notices of public comment periods must be, at a minimum, distributed to: *C. At a minimum, a copy of the public notice shall be sent to:* *1. The permit applicant;* *2. The Regional Administrator of the EPA;* *3. The chief executives of the city or town where the source would be located;* *4. Any comprehensive regional land use planning agency;* *5. Any State, Federal Land Manager or Indian Governing Body whose lands may be affected by emissions from the proposed source.* **250-RICR-120-05-10, "Air Pollution Episodes,"** specifies criteria for and measures to be implemented during air pollution alerts, warnings and episodes. **RI DEM's website** includes near real-time air quality data, air quality

CAA Section	110(a) Requirement	Corresponding Rhode Island Requirements
		predictions and a record of historical data. Hourly data are also sent to EPA's AIRNOW database and are used to prepare regional and national air quality maps. Alerts are sent by email to a large number of affected parties – emissions sources, concerned individuals, schools, health and environmental agencies and the media. Alerts include information about the health implications of elevated pollutant levels and list actions that reduce emissions. **The Annual Monitoring Network Plan** contains summaries of the year's air quality design values for criteria pollutants. The summaries are sent to a mailing list of interested parties and posted on the RI DEM website. **250-RICR-120-05-9, "Air Pollution Control Permits,"** specifies requirements for PSD and visibility protection.
110(a)(2)(K) Air quality modeling/data	Provide for air quality modeling for predicting effects on air quality of emissions from any NAAQS pollutant and submission of such data to EPA upon request.	**250-RICR-120-05-9, "Air Pollution Control Permits,"** requires the submittal of air quality modeling to evaluate the impacts of new and modified major sources on ambient air quality and specifies that the EPA must receive notice of the public comment period that is mandated prior to issuance of a major source permit.
110(a)(2)(L) Permitting fees	Require each major stationary source to pay permitting fees to cover the cost of reviewing, approving, implementing and enforcing a permit.	**§ 23-23-5 of the RIGL** provides for the assessment of operating permit fees and preconstruction permit fees for air emissions sources. **250-RICR-120-05-28, "Operating Permit Fees,"** requires major sources to pay annual operating permit fees. **The RI DEM "Rules and Regulations Governing the Establishment of Various Fees"** sets forth permit fee requirements for air emissions sources and the legal authority to collect those fees.
110(a)(2)(M) Consultation/	Provide for consultation and participation in SIP development by local political	**§ 23-23-5 of the RIGL** provides for the RI DEM Director to consult and cooperate with the cities and towns.

CAA Section	110(a) Requirement	Corresponding Rhode Island Requirements
Participation by affected local entities	subdivisions affected by the SIP	

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Appendix A

Proposed
Rhode Island Good Neighbor SIP for the 2015 NAAQS

Supplement to the Rhode Island Infrastructure SIP for the 2015 NAAQS to Address the Interstate Transport Provision under Clean Air Act Section 110(a)(2)(D)(i)(1)

Introduction

This state implementation plan (SIP) revision addresses the interstate transport provision under Clean Air Act (CAA) Section 110(a)(2)(D)(i)(I), otherwise known as the "Good Neighbor" provision, for the 2015 ozone national ambient air quality standards (NAAQS). Section 110(a)(2)(D)(i)(I) of the CAA requires that states provide adequate provisions prohibiting emissions from sources within the state 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 NAAQS. Based on a weight-of-evidence analysis, the Rhode Island Department of Environmental Management (RIDEM) concludes that the existing limits and controls in the Rhode Island SIP are sufficient to ensure that emissions from sources within Rhode Island will not significantly contribute to nonattainment in, or interfere with maintenance by, any area relating to the 2015 ozone NAAQS.

Background

On October 1, 2015 the Environmental Protection Agency (EPA) promulgated a revision to the ozone NAAQS lowering the level of both the primary and secondary standards from 75 parts per billion (ppb) to 70 parts per billion (ppb).[4]

Area designations for the 2015 ozone NAAQS were issued on November 6, 2017, with additional designations issued in April and July of 2018.[5] The areas closest to Rhode Island designated nonattainment are the Greater Connecticut nonattainment area and the New York/Northern New Jersey-Long Island nonattainment area.

As previously stated, infrastructure SIPs addressing CAA § 110(a)(1) and (2), certifying the adequacy of the SIP with respect to the revised standard, were due October 1, 2018. The EPA provided guidance in a March 27, 2018 memorandum which described a framework for addressing interstate transport and reviewed relevant modeling results and air quality projections with respect to the 2015 ozone NAAQS.[6] In accordance with EPA guidance, this review of modeling results, monitoring data, emissions data, and existing rules and controls supports Rhode Island's negative declaration in relation to its contribution to nonattainment or maintenance of the 2015 ozone NAAQS in any other area.

[4] National Ambient Air Quality Standards for Ozone Final Rule, 80 FR 65292 (October 26. 2015).
[5] 80 FR 54232, 83 FR 25776, 83 FR 35136
[6] Information on the Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I). Memorandum from Peter Tsirigotis, Director, EPA OAQPS to Regional Air Division Directors, Regions 1-10. March 27, 2018. https://www.epa.gov/sites/production/files/2018-03/documents/transport_memo_03_27_18_1.pdf

Rhode Island Contribution to Downwind Receptors

The EPA provided information to assist states in developing SIPs to fulfill interstate transport requirements for the 2015 ozone NAAQS. In a 2015 memo,[7] the EPA stated their intention to use the four-step framework of the Cross State Air Pollution Rule (CSAPR) rule. The CSAPR framework adopted to address the "Good Neighbor" provision, and previously used in several federal rulemakings, involves first identifying receptors that are projected to be unable to attain or maintain the NAAQS in the future analysis year, then identifying states contributing to downwind nonattainment or maintenance receptors in amounts that warrant further analysis. The Notice of Data Availability (NODA) and subsequent updates provide the results of analyses that may be used to evaluate interstate transport with respect to the 2015 ozone NAAQS.[8]

The March 27, 2018 memorandum identified 11 receptors projected to be in nonattainment in 2023 (average design value greater than or equal to 71.0 ppb in the eastern US) and six additional receptors projected to be maintenance receptors in 2023 (maximum design value greater than or equal to 71.0 ppb in the eastern US). These receptors are listed in Table 1with Rhode Island's projected contribution. Rhode Island does not contribute greater than or equal to the one percent significant contribution threshold, 0.7 ppb, to a projected nonattainment or maintenance receptor, or any other area regardless of attainment status. Furthermore, Rhode Island's contribution to ozone in downwind areas has likely decreased in the past several years due to emissions reductions from control programs as described below.

Table 1: Rhode Island contribution to projected nonattainment and maintenance receptors in the eastern US.[9]

Monitor ID	State	County	Average 2023 DV (ppb)	Maximum 2023 DV (ppb)	Rhode Island Contribution (ppb)
Projected Nonattainment Areas (Average 2023 DV ≥ 71.0)					
90013007	Connecticut	Fairfield	71.0	75.0	0.02
90019003	Connecticut	Fairfield	73.0	75.9	0.02
361030002	New York	Suffolk	74.0	75.5	0.00
480391004	Texas	Brazoria	74.0	74.9	0.00
482011039	Texas	Harris	71.8	73.5	0.00
484392003	Texas	Tarrant	72.5	74.8	0.00

[7] Memorandum from Janet McCabe, Acting Assistant administrator, OAQPS, to Regions 1-10, "Implementing the 2015 Ozone National Ambient Air Quality Standards," October 1, 2015, https://www.epa.gov/sites/production/files/2015-11/documents/20151001memo_-_ozone_naaqs_implementation.pdf .

[8] "Notice of Availability of the Environmental Protection Agency's Preliminary Interstate Ozone Transport Modeling Data for the 2015 Ozone National Ambient Air Quality Standard (NAAQS)," 82 FR 1733. January 6, 2017; Memorandum from Stephen D. Page, Director, OAQPS, to Regional Air Division Directors, Regions 1-10, "Supplemental Information on the Interstate Transport State Implementation Plan Submissions for the 2008 Ozone National Ambient Air Quality Standards under the Clean Air Act Section 110(a)(2)(D)(i)(I)," October 27, 2017.

[9] 2015 Ozone NAAQS Interstate Transport Assessment Design Values and Contributions, May 2018. https://www.epa.gov/sites/production/files/2018-05/updated_2023_modeling_dvs_collective_contributions.xlsx

Monitor ID	State	County	Average 2023 DV (ppb)	Maximum 2023 DV (ppb)	Rhode Island Contribution (ppb)
550790085	Wisconsin	Milwaukee	71.2	73.0	0.00
551170006	Wisconsin	Sheboygan	72.8	75.1	0.00
Projected Maintenance Areas (Maximum 2023 DV ≥ 71.0)					
90010017	Connecticut	Fairfield	68.9	71.2	0.01
90099002	Connecticut	New Haven	69.9	72.6	0.02
360810124	New York	Queens	70.2	72.0	0.04
481210034	Texas	Denton	69.7	72.0	0.00
482010024	Texas	Harris	70.4	72.8	0.00
482011034	Texas	Harris	70.8	71.6	0.00

The March 27, 2018 memorandum also contained projected average and maximum 8-hour ozone design values at individual monitoring sites nationwide based on EPA's updated modeling for 2023. The average and maximum 8-hour ozone design values predicted by this modeling for monitors in Rhode Island is well below the 70 ppb standard, suggesting that Rhode Island ozone concentration will be well below the 2015 ozone NAAQS in 2023.

Table 2: EPA Predicted 2023 8-Hour Ozone Concentrations in Rhode Island

Site	Average Design Value	Maximum Design Value
440030002	60.4	60.7
440071010	59.5	61.1
440090007	62.6	64.0

Ambient Air Quality Monitoring Trends of Ozone

Ozone design values for Rhode Island sites have generally decreased over time, but values have fluctuated both slightly above and slightly below the 2015 ozone NAAQS of 70 ppb. Based on the 2014-2016 design values, all counties in Rhode Island have been classified as Attainment/Unclassifiable for the 2015 standard. Although Rhode Island is currently designated as an attainment area for the 2015 ozone NAAQS, the monitored ozone design values slightly exceed the 2015 ozone NAAQS.

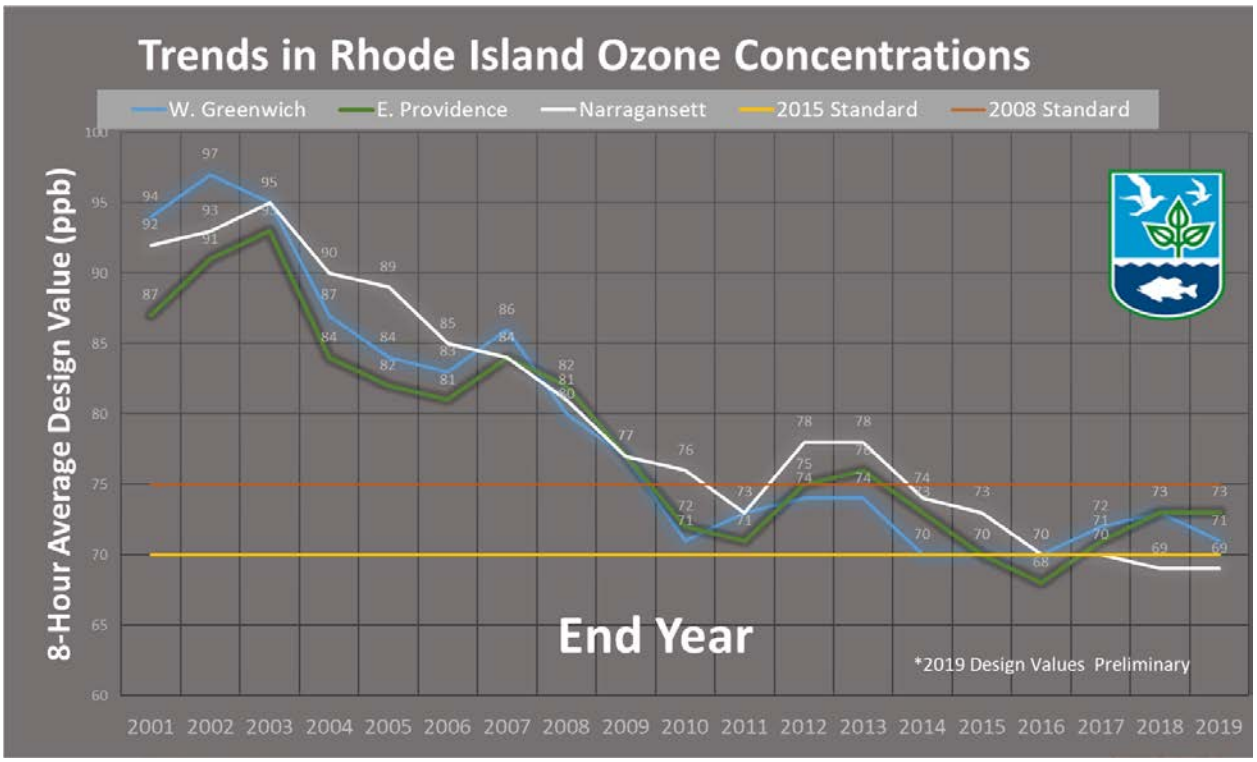

Figure 1: Ozone Trends 2001-2019 (Source Rhode Island 2020 Annual Monitoring Network Plan and 5-Year Network Assessment)

The March 27, 2018 memo identified the both the in-state contribution and contribution from upwind states to projected concentrations for 2023 as listed below in Table 3:

Table 3: Contribution in Rhode Island

Site	In State Contribution	Upwind States Contribution
440030002	0.65	34.69
440071010	2.93	30.22
440090007	11.80	28.36

The projected contributions suggest that the elevated design values can be attributed to transport of pollutants from upwind states. Rhode Island is dependent on Federal actions requiring emissions reductions in upwind states in order for the State to achieve and maintain healthy air quality.

Rhode Island Emissions of Ozone Precursors

Rhode Island prepares a comprehensive air emissions inventory every three years as required by EPA's Air Emissions Reporting Requirements (AERR) which requires states to collect and submit emissions data for criteria pollutants to EPA's Emissions Inventory System (EIS). Data from all known point sources in Rhode Island is entered into the Emissions Inventory System (EIS) along with estimates for nonpoint categories and model inputs for nonroad and onroad emissions models. From this data EPA builds the National Emissions Inventory (NEI).

Summary data from the NEI is presented below for 2011, 2014 and 2017. Projected 2023 data was obtained from EPA 2011 Version 6.3 modelling platform data.[10] Emissions of ozone precursors have decreased for the period 2011-2017 and are projected to be lower in 2023 than in 2017 (Figure 2 and Figure 3).

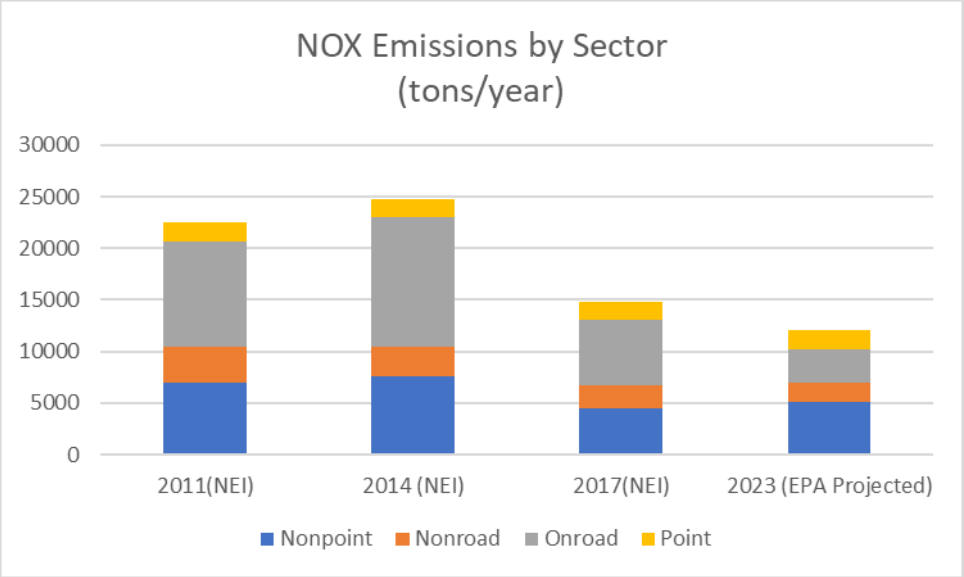

Figure 2: NOx Emissions

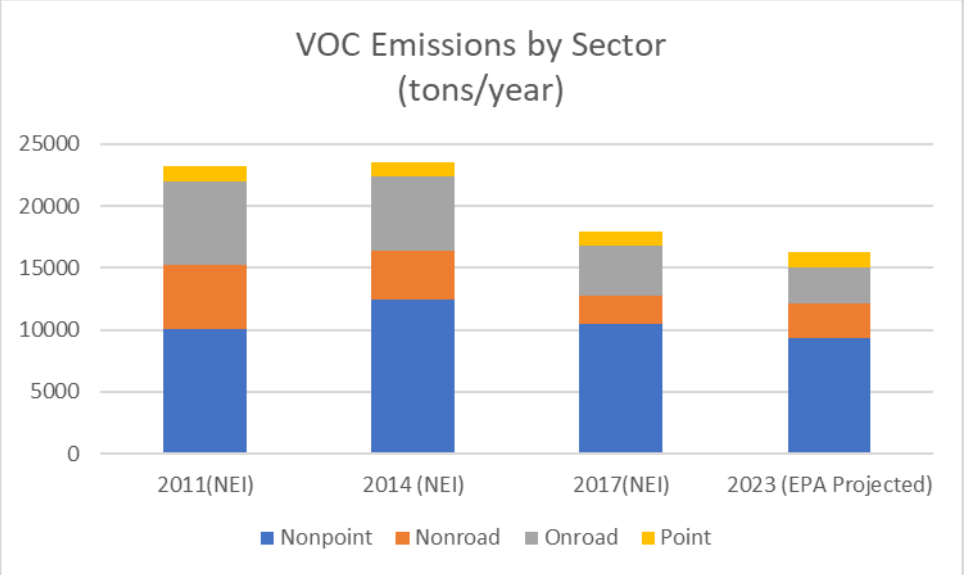

Figure 3: VOC Emissions

[10] 2023 EPA projections: Version 6.3, 2011 Emissions Modeling Platform, ftp://newftp.epa.gov/air/emismod/2011/v3platform/reports/2011en_and_2023en/

Emissions Reduction Efforts and Control Measures

In 2018 and 2019, Rhode Island adopted several air pollution control regulations based on EPA Control Techniques Guidelines (CTGs) that represent Reasonably Available Control Technology (RACT) for several industry sectors. As a state within the Ozone Transport Region, Rhode Island has been subject to and has strived to meet SIP requirements equivalent to those of marginal nonattainment areas. As a member-state of the Ozone Transport Commission, Rhode Island actively participates in development of regional control strategies of ozone precursor emissions and regularly assesses the applicability and appropriateness of OTC model rules for Rhode Island sources.

Efforts to reduce air pollution from mobile sources include adoption of California's vehicle emissions standards, inspection and maintenance of vehicle emissions control systems, enhancement of emissions control technology upgrade programs for diesel engines, and participation in regional and state-specific efforts to build and incentivize zero emission vehicle infrastructure and ownership. The emissions reduction efforts described here will result in lower contributions of ozone precursors from sources or activities within Rhode Island to downwind areas, and lead to greater air quality benefits locally and regionally.

Conclusion

In summary, based on the guidance specified in EPA's January 2018 memorandum and the results of the 2023 modeling that was issued with that memorandum, RI DEM certifies that air emissions from sources in Rhode Island do not contribute significantly to nonattainment or maintenance of the 2015 ozone NAAQS in other states. Monitored ozone concentrations at sites that are often downwind of Rhode Island further support this assertion.

The submittal of this document to the EPA as an amendment to the Rhode Island SIP fulfills the "Good Neighbor" Provision requirements in Section 110(a)(2)(D)(i)(I) of the CAA and completes Rhode Island's fulfillment of the elements specified in Sections 110(a) (1) and (2) of the CAA for the 2015 ozone NAAQS.