Oregon Department of Environmental Quality

Sept. 13-14, 2018

Oregon Environmental Quality Commission meeting

Agency Staff Report

Rulemaking, Action Item D

Update to Oregon State Implementation Plan for Ozone Standard to Address Infrastructure and Interstate Transport Clean Air Act Requirements

Table of Contents

DEQ recommendation to the EQC

DEQ recommends that the Environmental Quality Commission:

- Approve the two reports for EPA submittal as seen in attachments A and B of this report
- Approve incorporating the reports into the Oregon Clean Air Act State Implementation Plan, OAR 340-200-0040
- Revise OAR 340-200-0040 as seen on page 21 of this report
- Direct DEQ to submit the SIP revision to the U.S. Environmental Protection Agency for approval.

Proposed EQC motion:

"I move that the Oregon Environmental Quality Commission approve the two reports shown in attachments A and B of the staff report for this item; approve incorporating those two reports into the Oregon Clean Air Act State Implementation Plan; revise OAR 340-200-0040 as seen on page 21 of the staff report for this item; and direct DEQ to submit the SIP revision and plans to U.S. EPA for approval."

Overview

Short summary

Oregon must update its Clean Air Act State Implementation Plan by Oct. 1, 2018, to document that DEQ has the authority, regulations and enforcement capability to implement the current National Ambient Air Quality Standards for Ozone. This update must also include an assurance that DEQ air quality programs are adequate to prevent significant ozone transport to neighboring states.

The proposed commission actions would make these two updates to the State Implementation Plan. With EQC approval, DEQ will submit the required plan updates to the U.S. Environmental Protection Agency.

The proposal includes the following actions:

- Approve Attachment A to this proposal titled "Infrastructure SIP Submittal for Purposes of Clean Air Act Sections 110(a)(1) and (2) for the 2015 Ozone NAAQS". Attachment A is a "crosswalk" that identifies Oregon Administrative Rules and Oregon Revised Statutes that demonstrate DEQ has the necessary authorities in place to implement the requirements of Clean Air Act Sections 110(a)(1) and (2) with respect to the 2015 Ozone standard
- Approve Attachment B to this proposal, titled "Oregon State Implementation Plan Submittal Addressing the Interstate Transport of Ozone (O_3)"
- Amend Oregon Administrative Rule 340-200-0040 to include these actions as an update of the Oregon State Implementation Plan and direct DEQ to submit the update to EPA as a SIP amendment.

Brief history

The federal Clean Air Act (42 U.S.C §7410) requires state and local air pollution control agencies to adopt strategies that will minimize air pollution. The collection of these strategies is called the State Implementation Plan, or, more commonly, the SIP. A SIP must demonstrate that a state has the adequate administrative programs and enforceable emission controls in place to maintain compliance with National Ambient Air Quality Standards, or NAAQS. EPA sets NAAQS for six pollutants that are widespread, come from various sources, and are known to harm public health and the environment. Those six federally regulated pollutants are: ozone, lead, sulfur dioxide, nitrogen dioxide, carbon monoxide and particulate matter.

When EPA issues new or revised NAAQS, EPA and states have the following responsibilities:

- Within two years of revising the NAAQS for a criteria pollutant, EPA is required to designate areas as meeting (attainment areas) or not meeting (nonattainment areas) the standard. Designations are based on the most recent set of air monitoring data. (See CAA Section 107(d)(1)(B); 42 U.S.C. § 7407(d)(1)(B).)

- Within three years, states are required to submit SIP updates that show adequate regulatory and administrative infrastructure to meet the new standard. (See CAA Section 110(a)(1); 42 U.S.C. §7410(a)(1)). Infrastructure SIP submittals must include the basic program requirements for managing air quality required in Section 110(a)(2) of the CAA. Those required elements are listed in Table 1.
- Within three years of area designations, states are required to submit nonattainment area SIPs to EPA for any criteria pollutant for which the standard is not met. Each nonattainment area SIP must outline the strategies and emissions control measures that show how the area will improve air quality and meet the national ambient air quality standards. (*See* CAA Section 172; 42 U.S.C. § 7502.)

In 2015, EPA revised the primary and secondary ozone standards from 75 parts per billion to 70 ppb. DEQ adopted the 2015 ozone NAAQS and submitted that revision to EPA with a Regional Haze Progress Report in July 2017. EPA approved that SIP submission, among other submissions, on May 24, 2018 (83 FR 24034).

On Nov. 16, 2017, (82 FR 54232), EPA designated all counties in Oregon except Marion County "attainment/unclassifiable." EPA determined that some of the 2014 – 2016 data collected at the Salem monitor did not meet established criteria[1]. DEQ recertified and resubmitted 2015 data to EPA and EPA found Marion County's design value below the 2015 ozone criterion. On April 30, 2018 (83 FR 25776), EPA designated all of Oregon, including Marion County, as "attainment/unclassifiable" for ozone.

DEQ conducts ambient air quality monitoring as the Code of Federal Regulations requires (40 C.F.R. section 58.10). This rule requires state and local air quality agencies to develop and submit an annual ambient air quality monitoring network plan to EPA by July 1 of each year. The DEQ ambient air quality monitoring network is designed in response to CFR regulations, EPA's National Monitoring Strategy, state and local needs, requirements of air quality maintenance plans and SIPs for non-attainment areas. Appendix D to 40 CFR Part 58 lists the monitoring objectives state networks must be designed to meet:

- Provide air pollution data to the general public in a timely manner.
- Support compliance with ambient air quality standards and emissions strategy development.
- Support for air pollution research studies.

To meet these objectives, collectively, monitoring sites must be capable of providing broad information, including:

- Highest concentrations expected to occur in the area covered by the network;
- Typical concentrations in areas of high population density;
- The impact of significant sources or source categories on air quality;
- General background concentration levels;

[1] Appendix A to 40 CFR part 58 and QA Handbook for Air Pollution Measurement Systems, EPA-454/B-17-001, January 2017.

- Extent of regional pollutant transport among populated areas and in support of secondary standards; and
- Pollution impacts on visibility, vegetation damage, or other welfare-based impacts.

DEQ and the Lane Regional Air Pollution Agency currently monitor ozone concentrations at 11 locations statewide. Four monitors are in the Portland metropolitan area, two are in Salem, two in Eugene-Springfield, one in Medford-Ashland, one in Hermiston and one in The Dalles. DEQ's most recent report to EPA summarizes monitoring data through 2016 and shows Oregon in compliance with the ozone standard. Figure 1, excerpted from the Oregon Air Quality Annual Report, illustrates Oregon's ozone compliance.

Table 1 Required Clean Air Act Infrastructure Elements	
Section 110(a)(2)(A)	Emission limits and other control measures
Section 110(a)(2)(B)	Ambient air quality monitoring/data system
Section 110(a)(2)(C)	Program for enforcement of control measures
Section 110(a)(2)(D)(i)	I Prong 1: Interstate transport - significant contribution
Section 110(a)(2)(D)(i)	I Prong 2: Interstate transport - interfere with maintenance
Section 110(a)(2)(D)(i)	II Prong 3: Interstate transport - prevention of significant deterioration
Section 110(a)(2)(D)(i)	II Prong 4: Interstate transport - protect visibility
Section 110(a)(2)(D)(ii)	Interstate and international pollution abatement
Section 110(a)(2)(E)	Adequate authority and resources
Section 110(a)(2)(F)	Stationary source monitoring system
Section 110(a)(2)(G)	Emergency power
Section 110(a)(2)(H)	Future SIP revisions Section 110(a)(2)(J) Consultation with government officials; Public notification; PSD and visibility protection
Section 110(a)(2)(K)	Air quality modeling/data Section 110(a)(2)(L) Permitting fees
Section 110(a)(2)(M)	Consultation/participation by affected local entities

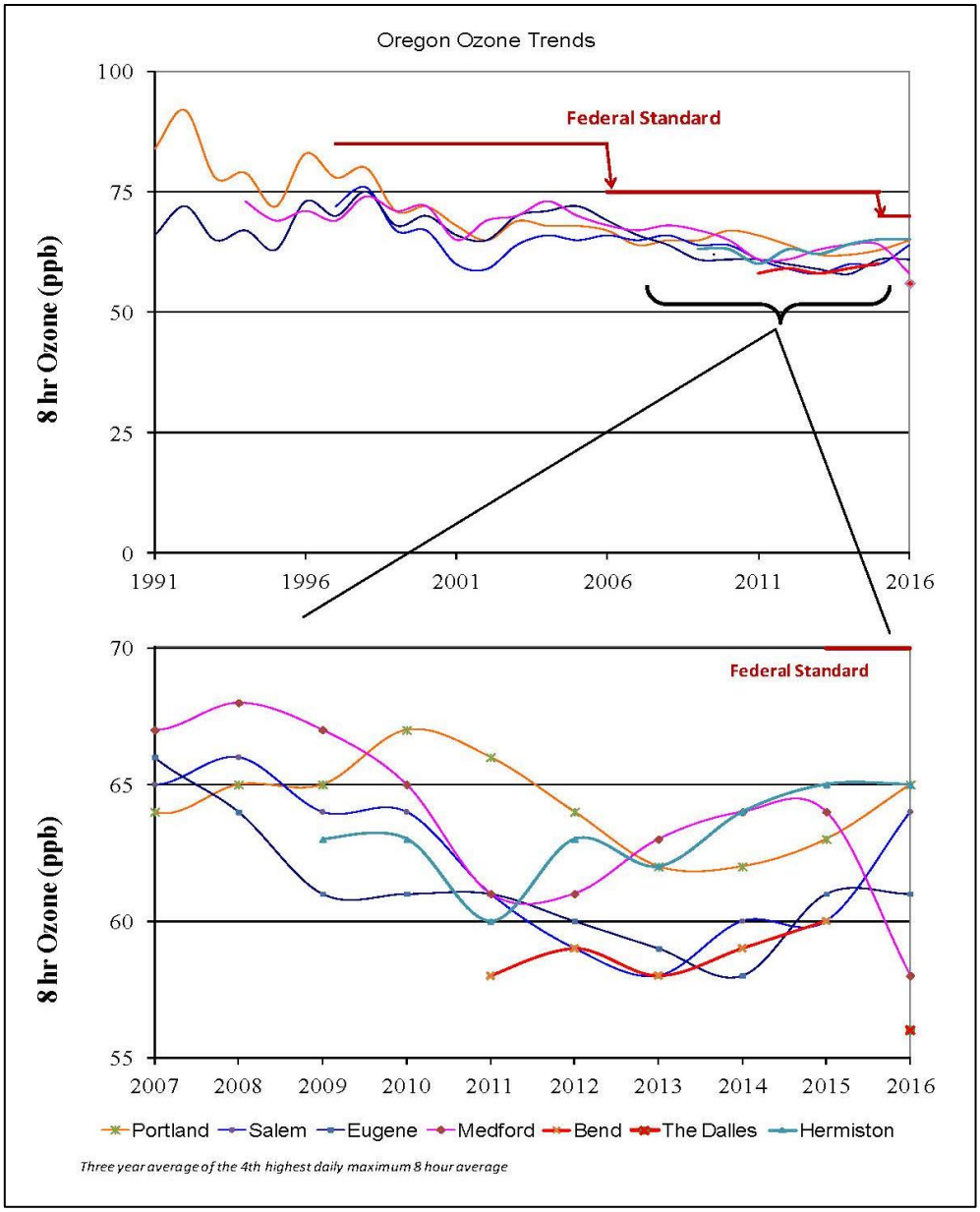

Figure 1: Ozone trends in Oregon through 2016. From Oregon Air Quality Annual Report 2016. https://www.oregon.gov/deq/FilterDocs/OrAirQualityAnnualReport2016.pdf

Regulated parties

The proposed rule amendment would document the most recent update to the Oregon SIP, which is a submission of SIP elements required by Section 110(a) of the CAA. This update to Oregon's SIP does not add or remove any parties regulated by DEQ.

Request for other options

DEQ must adopt the proposed rule amendment to allow DEQ's submission of SIP updates to EPA required by EPA's revision of the ozone NAAQS. The proposed rule amendment updates the ozone infrastructure and interstate transport elements of the SIP. Because DEQ must submit these SIP updates, DEQ did not request input for other options.

Infrastructure SIP: Other documentation

Crosswalk: DEQ is submitting what is referred to as a "crosswalk" for EQC approval and submittal to EPA (Attachment A). DEQ developed the crosswalk in collaboration with EPA Region 10 as an informal guide to show how essential DEQ rules address required infrastructure SIP elements of CAA Section 110(a)(2)(A) - 110(a)(2)(M). The crosswalk is included with this proposal for EQC approval and submittal to EPA as DEQ's demonstration that the Oregon SIP meets the infrastructure requirements to implement, maintain and enforce the ozone NAAQS, but the crosswalk is not considered part of the official Oregon SIP. The Oregon Administrative Rules that constitute the federally-approved Oregon SIP are listed in subpart MM of 40 C.F.R, part 52.

Interstate Transport: The interstate transport provision in the CAA, section 110(a)(2)(D)(i), (also called "the good neighbor" provision) requires each state to demonstrate that the state's control strategies are adequate to prevent emissions from contributing significantly to downwind states having problems attaining or maintaining national air quality standards. Attachment B to this proposal is DEQ's required interstate transport submission pertinent to the 2015 ozone NAAQS.

Public Involvement

DEQ posted the draft Infrastructure and Interstate Transport SIP submittals, as well as rulemaking information, on a rulemaking web page: Ozone 2018 Infrastructure and Interstate Transport SIP Submissions Rulemaking Page. The rulemaking webpage included a link by which members of the public could submit written comments electronically.

DEQ held a public comment period from June 25 to 4 p.m. Aug. 3, 2018. DEQ held a public hearing at the DEQ Portland office and by teleconference, on Thursday, July 26, 2018, at 6 p.m. No one attended the public hearing in person or by teleconference. Two parties submitted written comments. Submitted comments and DEQ responses are included in a later section of this report.

Fees and Fiscal Impact

This rulemaking does not involve fees or have a fiscal impact beyond the cost of the rulemaking and air planning staff resources at DEQ.

Statement of Need

What need would the proposed rule address?

The Clean Air Act requires that, within three years of a NAAQS revision, a state must demonstrate that the state's air quality program provides the means to implement, maintain and enforce the new standard, as well as prevent significant interstate transport of emissions. In 2015, EPA revised the primary and secondary ozone NAAQS to 70 ppb and Oregon must update the infrastructure and interstate transport elements of the State Implementation Plan by Oct. 1, 2018. This proposed rule would document Oregon DEQ's completion of the required infrastructure and interstate transport submittals as part of Oregon SIP.

How will DEQ know the rule addressed the need?

EPA's approval of DEQ's infrastructure and interstate transport SIP submittals and publication in the Federal Register will indicate that the rule has met the need.

Rules affected, authorities, supporting documents

Lead division

Air Quality

Program or activity

Air Planning

Chapter 340 action

Amend: OAR 340-200-0040

Statutory authority - ORS

468.020 468.065

Statute implemented - ORS

468A

Fee Analysis

This rulemaking does not involve fees.

Statement of fiscal and economic impact

This proposal would not have a fiscal impact on DEQ beyond the air planning section resources required to draft and submit the infrastructure and interstate transport SIP elements, conduct the required public process, and present the rule adoption recommendation to the EQC.

Statement of Cost of Compliance

State and federal agencies; Local Governments; Public; Large Businesses

This proposed rule amendment pertains to submitting SIP elements required by the 2015 revision of the ozone standard, not adoption of the standard itself, which occurred in 2017. DEQ is the state agency to bear the cost of compliance in this case because the ozone NAAQS is a federal requirement under the CAA and DEQ is required to implement the standard in Oregon.

In adopting the 2015 ozone NAAQS, the federal government evaluated the potential fiscal impact and that impact has already been imposed at the federal and state levels, as well as on large businesses and the public. Cost of compliance of submitting the two required SIP elements rests with DEQ, rather than federal agencies, the public or large businesses.

Small businesses – businesses with 50 or fewer employees

For each of the following aspects of costs potentially borne by small business, DEQ is unable to determine this based on available information. However, DEQ would not expect small businesses to bear any cost of compliance with the CAA requirements satisfied by DEQ's submission of the SIP updates referenced in this proposal.

Documents relied on for fiscal and economic impact

No documents were necessary, as DEQ does not expect any fiscal impact beyond DEQ resources associated with this proposal.

Advisory committee

DEQ did not appoint an advisory committee for the proposed permanent rule amendment. This rulemaking proposal is necessary to align Oregon Administrative Rules with CAA SIP submittal requirements. The proposed changes are required to demonstrate that Oregon DEQ has the appropriate rules, programs and agreements in place to implement the CAA. As such, there was no policy choice to be made which an advisory committee's input could help inform.

Housing cost

As ORS 183.534 requires, DEQ evaluated whether the proposed rule would have an effect on the development cost of a 6,000-square-foot parcel and construction of a 1,200-square-foot detached, single-family dwelling on that parcel. DEQ determined the proposed rule would have no effect on the development costs because the proposed rule simply documents DEQ's submission of two CAA-required SIP update.

Federal relationship

Relationship to federal requirements

ORS 183.332, 468A.327 and OAR 340-011-0029 require DEQ to attempt to adopt rules that correspond with existing equivalent federal laws and rules unless there are reasons not to do so. The proposed rule is not different from or in addition to federal requirements. The proposed rule amendment simply documents DEQ's completion of CAA-required submittals.

What alternatives did DEQ consider if any?

DEQ must submit the infrastructure and interstate transport SIP elements to EPA. The rule amendment is required to document that submission. DEQ must adopt the rule amendment to implement the 2015 ozone NAAQS and did not consider other options for this proposal.

Land Use

Land-use considerations

In adopting new or amended rules, ORS 197.180 and OAR 340-018-0070 require DEQ to determine whether the proposed rules significantly affect land use. If so, DEQ must explain how the proposed rules comply with state wide land-use planning goals and local acknowledged comprehensive plans.

Under OAR 660-030-0005 and OAR 340 Division 18, DEQ considers that rules affect land use if:

- The statewide land use planning goals specifically refer to the rule or program, or
- The rule or program is reasonably expected to have significant effects on:
    - Resources, objectives or areas identified in the statewide planning goals, or
    - Present or future land uses identified in acknowledged comprehensive plans.

To determine whether the proposed rule involves programs or actions that affect land use, DEQ reviewed its Statewide Agency Coordination plan, which describes the DEQ programs that have been determined to significantly affect land use. DEQ considers that its programs specifically relate to the following statewide goals:

Goal	Title
5	Open Spaces, Scenic and Historic Areas, and Natural Resources
6	Air, Water and Land Resources Quality

9 Ocean Resources
11 Public Facilities and Services
16 Estuarial Resources

Statewide goals also specifically reference the following DEQ programs:

- Nonpoint source discharge water quality program – Goal 16
- Water quality and sewage disposal systems – Goal 16
- Water quality permits and oil spill regulations – Goal 19

Determination

DEQ determined that this proposed rule amendment does not affect land use under OAR 340-018-0030 or DEQ's State Agency Coordination Program.

Advisory Committee

Advisory committee

DEQ did not convene an advisory committee because this rulemaking proposal is necessary to align Oregon Administrative Rules with federally revised NAAQS under the CAA. The proposed changes are required to demonstrate that Oregon DEQ has the appropriate rules, programs and agreements in place to implement the CAA. As such, there was no policy choice to be made which an advisory committee's input could help inform

EQC prior involvement

DEQ shares general rulemaking information with the EQC through the Director's Report. DEQ did not present additional information specific to this proposed rule amendment.

Public Notice

DEQ provided notice of the proposed rulemaking and hearing by:

- On June 25, 2018, filing notice with the Oregon Secretary of State for publication in the July 2, 2018 *Oregon Bulletin*
- Email to EPA on June 27, 2018.
- Posting notice on the DEQ rulemaking web page: Ozone 2018 Infrastructure and Interstate Transport SIP Submissions Rulemaking Page
- Mailing approximately 10,442 interested parties on the following DEQ lists through GovDelivery:
  - Rulemaking
  - Air Quality Maintenance Plans

    - DEQ Public Notices
- Emailing the following key legislators:
    - State Senator Michael Dembrow, Chair, Senate Committee on Environment and Natural Resources
    - State Representative Ken Helm, Chair, House Committee on Energy and Environment
    - State Representative Brad Witt
    - State Senator Lew Frederick
- By linking to the DEQ web page identified above in Facebook and Twitter postings on June 25, 2018.
- Posting on the DEQ event calendar: DEQ Calendar

Request for other options

DEQ did not consider other options for this proposal. DEQ must submit the infrastructure and interstate transport SIP elements to EPA. The rule amendment is required to document that submission. DEQ must adopt the rule amendment to implement the 2015 ozone NAAQS.

Public Hearing

DEQ held one public hearing. DEQ received no comments at the hearing. Later sections of this document include a summary of the comments received during the open public comment period, DEQ's responses, and a list of the commenters. Original comments are on file with DEQ.

Presiding Officers' Record

Hearing 1

Date: Thursday, June 26, 2018

Place: DEQ, 700 NE Multnomah St., Conference Room 601, Portland, OR 97232

Start Time: 4 p.m.

Ending Time: 7 p.m.

Presiding Officer: Karen Williams

The presiding officer was present in the hearing room between 4 and 7 p.m. and opened the conference call at approximately 4:10 p.m. The public notice on the rulemaking webpage and the GovDelivery notice listed the public hearing start time as 6 p.m., however on the DEQ Calendar, the public hearing time was listed as 4 to 7 p.m. No members of the public attended the public hearing or called into the

teleconference. The presiding officer announced on the teleconference line and recorded at approximately 6:40 p.m. that the hearing would conclude and the teleconference line would close at 6:45 p.m. No person presented any oral testimony or written comments at the July 26, 2018 public hearing.

As Oregon Administrative Rule 137-001-0030 requires, the presiding officer summarized the content of the rulemaking notice.

Public comment period

DEQ accepted public comment on the proposed rulemaking from June 25, 2018, until 4 p.m. on Friday, Aug. 3, 2018.

Summary of comments and DEQ responses

The following table organizes public comments received by the close of the public comment period, and DEQ's responses. Original comments are on file with DEQ.

DEQ did not change the proposed rule in response to comments, but did change parts of the SIP Revision Addressing Interstate Transport of Ozone.

List of Comments

Comment #	Comment Summary	Commenter Numbers
1	Date of Oregon ozone designations	1
2	Reference for EPA analytic year choice	1
3	Request for explanation of EPA analytic year choice	1
4	Inclusion Shoshone-Bannock Tribes of Fort Hall Reservation	1
5	Identify states and designation of receptors	1
6	Haze in Columbia Gorge National Scenic Area	2
7	Comment withdrawal: Request for explanation of EPA analytic year choice	1

Comment 1

Page 4 (section 1.1): The third sentence cites one date for the 2015 ozone designations for Oregon, April 30, 2018. We recommend adding to this sentence the date of the first round of designations for Oregon, November 16, 2017.

Response

DEQ added the following paragraph to Section 1.1:

> On November 16, 2017 (82 FR 54232), EPA designated all counties in Oregon except Marion County "attainment/unclassifiable." EPA excepted Marion County because EPA determined that some of the 2014 – 2016 data collected at the Salem monitor did not meet established criteria. DEQ recertified and resubmitted 2015 data to EPA and EPA found Marion County's design value below the 2015 ozone criterion. On April 30, 2018 (83 FR 25776), EPA designated all of Oregon, including Marion County, as "attainment/unclassifiable" for ozone based on DEQ's annually submitted monitoring data.

Comment 2

Page 4 (footnote 6): We recommend adding a reference to section 1.2 for more information.

Response

DEQ added the following reference to footnote 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) (March 27, 2018), p. 3.

Comment 3

Page 5 (section 1.2): Please provide more explanation about whether Oregon agrees or disagrees with the EPA's choice of 2023 as an analytic year and why.

Response

The commenter withdrew this comment on August 3, 2018 before the public comment period closed. DEQ made no changes to the Interstate Transport SIP revision in response to this comment.

Comment 4

Page 6 (section 3): On January 19, 2017, the EPA determined that the Shoshone-Bannock Tribes of the Fort Hall Reservation were eligible to be treated in the same

manner as a state under Clean Air Act section 110(a)(2)(D). In the section on Oregon's contribution to neighboring states, please explain how your analysis addresses the Fort Hall Reservation in Idaho.

Response

DEQ added the following sentence and footnotes to Section 2 (Downwind Receptors).

> Aside from California, there are no nonattainment or maintenance receptors in the states bordering Oregon, including Washington, Nevada, Idaho and the Fort Hall Reservation.
>
> Footnote: On January 19, 2017, the EPA determined that the Shoshone-Bannock Tribes of the Fort Hall Reservation were eligible to be treated in the same manner as a state under Clean Air Act section 110(a)(2)(D). Letter to Oregon Governor Kate Brown from Dennis J. McLerran, EPA Regional Administrator.
>
> Footnote: The nearest air quality monitoring site to the Fort Hall Reservation is AQS Site ID 160230101 (Idaho Falls, Craters of the Moon) and has a 2017 8-hr ozone design value of 0.060 ppm. (https://www.epa.gov/air-trends/air-quality-design-values).

Comment 5

Page 6 (table 1): Table 1 lists the counties in which the receptors are located, but it does not identify the states in which they are located. We suggest adding the state information, e.g., making the county column into a county/state column or adding "(all sites are in California)" to the table title. Additionally, there is a third receptor that has a 0.34 ppb contribution from Oregon that is not listed in table 1 (AQS ID 60392010 in Madera County, CA). Although it may not be necessary to include receptors with this level of contribution from Oregon, we suggest addressing this discrepancy. Also, please identify which monitoring sites are nonattainment receptors and which are maintenance receptors. Because all receptors are below the threshold you have selected, another option to consider is having the table show only the receptors with the highest contributions from Oregon, i.e., one nonattainment receptor and one maintenance receptor.

Response

DEQ added the Madera County receptor site to Table 6 and indicated that all receptor sites are in the state of California. EPA did not make the distinction between nonattainment and maintenance sites in the reference from which DEQ obtained downwind receptor site information: Attachment C tables to EPA's March 27, 2018 memo. Through personal communication on August 7, 2018, with Claudia Vaupel, EPA Region 10, and by referencing the spreadsheet titled, "2015 Ozone NAAQS Interstate Transport Assessment Design Values and Contributions," at this location: https://www.epa.gov/airmarkets/march-2018-memo-and-supplemental-information-regarding-interstate-transport-sips-2015, DEQ applied EPA's definition of nonattainment and maintenance sites described on page 4 of the March 27, 2018

memo. DEQ added a column to Table 6 and indicated the status of each monitoring receptor site.

Comment 6

The Columbia River Gorge National Scenic Area is already severely impaired by air pollution. The Gorge stands among the most polluted places in the country, including Pittsburgh and Los Angeles. A 2005 joint study by the U.S. Forest Service and National Park Service studied twelve federally managed areas around the West and found that the Columbia River Gorge National Scenic Area and Sequoia National Park had by far the worst "annual standard visual range[s]" of the twelve areas. Similarly, a 2000 Forest Service study of air quality monitoring data from 39 federally managed "visibility protected" areas in the West found that the Scenic Area has "the highest levels of haze" and "the sixth worst visibility pollution of these areas."

Gorge air quality has been monitored for the last twenty years. The Forest Service has documented that visibility impairment occurs on at least 95% of the days that have been monitored. While there is no lack of data on the air quality issues in the NSA, there is a lack of action on the part of DEQ to remediate the issues. Friends asks that DEQ reevaluate its air quality programs and set enforceable limits so that unmitigated haze is no longer the scourge of the National Scenic Area.

Response

DEQ's infrastructure plan, submitted as Attachment 1 in the Rulemaking Notice, lists Oregon Administrative Rule 340-223 (Regional Haze Rules) as one element of DEQ's air quality program to maintain compliance with the 2015 ozone standard. Regional Haze Rules protect and restore visibility in Class I wilderness areas in Oregon; while the Columbia Gorge National Scenic Area is not a Class I area, the Gorge NSA is located between two Class I areas – Mt. Hood and Mt. Adams (Washington) Wilderness Areas, and DEQ expects that the Gorge NSA visibility will benefit from Oregon's and Washington's long-term regional haze progress. DEQ worked with the Columbia River Gorge Commission and Washington state to develop an air quality strategy for the Gorge. DEQ implements that strategy and tracks progress through the Regional Haze Plan and Regional Haze Plan Progress Reports. Although it is not required, DEQ tracks Gorge visibility conditions along with Class I area conditions and if DEQ finds that Gorge visibility is not improving, DEQ will reassess and consider how to modify its Gorge strategy. DEQ submitted a required Regional Haze progress report to EPA in July 2017 which EPA approved in May 2018 as adequate to meet the state's visibility goals. Figure 4 in this report shows a long term positive trend for Gorge visibility on both the haziest and clearest days. DEQ's Regional Haze progress report is available here: https://www.oregon.gov/deq/aq/Pages/Haze.aspx

DEQ did not change the infrastructure or interstate transport SIP submissions, but acknowledges the importance of the issue – visibility in the Gorge NSA – the commenter has raised.

Comment 7

The Environmental Protection Agency submitted comments on July 30, 2018 on the proposed rulemaking, "Update to Oregon State Implementation Plan for Ozone Standard to Address Infrastructure and Interstate Transport Clean Air Act Requirements."

In our comments, we requested that ODEQ provide additional explanation regarding the use of 2023 as the analytic year in section 1.2 on page 5. This message is being sent to formally withdraw this comment. Upon further review, we have found section 1.2 to be sufficient.

Response

DEQ acknowledges the commenter's withdrawal of their July 30, 2018 comment related to the 2023 analytic year. DEQ made no changes to the Interstate Transport SIP revision in response to this comment.

Commenters

Comments received by close of public comment period

The table below lists people and organizations that submitted public comments about the proposed rule by the deadline. Original comments are on file with DEQ.

#	Name	Organization	Comment Number
1	Gina Bonifacino	U.S. Environmental Protection Agency	1, 2, 3, 4, 5, 7
2	Steven D. McCoy	Friends of the Columbia Gorge	6

Implementation

Notification

The proposed rule would become effective upon filing on approximately Sept. 17, 2018. DEQ would notify affected parties by posting a bulletin in GovDelivery to the topic lists below, reaching approximately 10,440 subscribers:

- Rulemaking
- Air Quality Maintenance Plans
- DEQ Public Notices

Compliance and enforcement

- Affected parties – this rulemaking does not change compliance or enforcement for any affected parties.
- DEQ staff – this rulemaking does not change compliance or enforcement responsibilities for any DEQ staff.

Measuring, sampling, monitoring and reporting

- Affected parties - this rulemaking does not change measuring, sampling, monitoring or reporting for any affected parties.
- DEQ staff - this rulemaking does not change measuring, sampling, or monitoring responsibilities for any DEQ staff. The rulemaking fulfills DEQ's reporting responsibility to EPA. DEQ's SIP Coordinator, working with the Air Quality Planning Section planner, will submit the SIP revisions to EPA.

Systems

- Website – EPA's approval of the Infrastructure and Interstate Transport SIP submissions will be posted on this website: https://www.epa.gov/sips-or.
- Database – This rulemaking has no effect on DEQ databases.
- Invoicing – This rulemaking has no effect on invoicing.

Training

- Affected parties – Implementation of this rulemaking does not require training of any affected parties.
- DEQ staff - Implementation of this rulemaking does not require training of DEQ staff.

Five-year review

ORS 183.405

Requirement

Oregon law requires DEQ to review new rules within five years after EQC adopts them. The law also exempts some rules from review. DEQ determined whether the rule described in this report is subject to the five-year review. DEQ based its analysis on the law in effect when EQC adopted this rule.

Exemption from five-year rule review

The Administrative Procedures Act exempts the proposed rule from the five-year review because the proposed rule would amend or repeal an existing rule. ORS 183.405(4).

Draft Rule – With Edits Highlighted

Key to Identifying Changed Text:

~~Strikethough: Deleted Text~~
Underline: New/inserted text

DEPARTMENT OF ENVIRONMENTAL QUALITY

Division 200
GENERAL AIR POLLUTION PROCEDURES AND DEFINITIONS

340-200-0040
State of Oregon Clean Air Act Implementation Plan

(1) This implementation plan, consisting of Volumes 2 and 3 of the State of Oregon Air Quality Control Program, contains control strategies, rules and standards prepared by DEQ and is adopted as the State Implementation Plan (SIP) of the State of Oregon under the FCAA, 42 U.S.C.A 7401 to 7671q.

(2) Except as provided in section (3), revisions to the SIP will be made under the EQC's rulemaking procedures in OAR 340 division 11 of this chapter and any other requirements contained in the SIP and will be submitted to the EPA for approval. The SIP was last modified by the EQC on ~~March 22, 2018~~ Sept. 13, 2018.

(3) Notwithstanding any other requirement contained in the SIP, DEQ may:

(a) Submit to the EPA any permit condition implementing a rule that is part of the federally-approved SIP as a source-specific SIP revision after DEQ has complied with the public hearings provisions of 40 CFR 51.102; and

(b) Approve the standards submitted by LRAPA if LRAPA adopts verbatim, other than non-substantive differences, any standard that the EQC has adopted, and submit the standards to EPA for approval as a SIP revision.

(4) Revisions to the State of Oregon Clean Air Act Implementation Plan become federally enforceable upon approval by the EPA. If any provision of the federally approved State Implementation Plan conflicts with any provision adopted by the EQC, DEQ must enforce the more stringent provision.

Statutory/Other Authority: ORS 468.020 & 468A
Statutes/Other Implemented: ORS 468A.035 & 468A.135

Draft Rule – With Edits Included

Division 200
GENERAL AIR POLLUTION PROCEDURES AND DEFINITIONS

340-200-0040
State of Oregon Clean Air Act Implementation Plan

(1) This implementation plan, consisting of Volumes 2 and 3 of the State of Oregon Air Quality Control Program, contains control strategies, rules and standards prepared by DEQ and is adopted as the State Implementation Plan (SIP) of the State of Oregon under the FCAA, 42 U.S.C.A 7401 to 7671q.

(2) Except as provided in section (3), revisions to the SIP will be made under the EQC's rulemaking procedures in OAR 340 division 11 of this chapter and any other requirements contained in the SIP and will be submitted to the EPA for approval. The SIP was last modified by the EQC on Sept. 13, 2018.

(3) Notwithstanding any other requirement contained in the SIP, DEQ may:

(a) Submit to the EPA any permit condition implementing a rule that is part of the federally-approved SIP as a source-specific SIP revision after DEQ has complied with the public hearings provisions of 40 CFR 51.102; and

(b) Approve the standards submitted by LRAPA if LRAPA adopts verbatim, other than non-substantive differences, any standard that the EQC has adopted, and submit the standards to EPA for approval as a SIP revision.

(4) Revisions to the State of Oregon Clean Air Act Implementation Plan become federally enforceable upon approval by the EPA. If any provision of the federally approved State Implementation Plan conflicts with any provision adopted by the EQC, DEQ must enforce the more stringent provision.

Statutory/Other Authority: ORS 468.020 & 468A
Statutes/Other Implemented: ORS 468A.035 & 468A.135

Supporting Documents

Attachment A: Infrastructure SIP Submittal for Purposes of Clean Air Act Sections 110(a)(1) and (a)(2) for the 2015 Ozone NAAQS.

- Pages 23 through 58

Attachment B: Oregon State Implementation Plan Submittal Addressing the Interstate Transport of Ozone (O_3)

- Pages 59 through 73

Infrastructure SIP Submittal for Purposes of Clean Air Act Sections 110(a)(1) and (a)(2) for the 2015 Ozone NAAQS

Submitted to: U.S. Environmental Protection Agency, Region 10
By: Oregon Department of Environmental Quality
October 2018

Air Quality Division
Air Planning
700 NE Multnomah St.
Suite 600
Portland, OR 97232
Phone: 503-229-5696
800-452-4011
Fax: 503-229-6762
Contact: Karen Williams
www.oregon.gov/DEQ

DEQ is a leader in restoring, maintaining and enhancing the quality of Oregon's air, land and water.

State of Oregon
Department of Environmental Quality

This report prepared by:

Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232
1-800-452-4011
www.oregon.gov/deq

Contact:
Karen Williams
503-229-5519

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
Ozone Definition	*Oregon's definitions related to ozone and ozone precursors.*	Oregon Revised Statutes: ORS 468 Environmental Quality General ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption ORS 468A Air Quality ORS 468A.025 Air Purity Standards; Air Quality Standards; Treatment and Control of Emissions; Rules. Requires controls necessary to achieve ambient air quality standards and prevent significant impairment of visibility. ORS 468A.035 General Comprehensive Plan. Requires DEQ to develop a general comprehensive plan for the control or abatement of air pollution. ORS 468A.055 Notice Prior to Construction of New Sources; Order Authorizing or Prohibiting Construction; Effect of No Order; Appeal ORS 468A.070 Measurement and Testing of Contamination Sources; Rules Oregon Administrative Rules: OAR 340-200-0020 General Air Quality Definitions (36) "Criteria pollutant" means any of the following regulated pollutants: nitrogen oxides, volatile organic compounds, particulate matter, PM10, PM2.5, sulfur dioxide, carbon monoxide, and lead. (97) "Nitrogen oxides" or "NOx" means all oxides of nitrogen except nitrous oxide.

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		(107) "Ozone precursor" means nitrogen oxides and volatile organic compounds. (108) “Ozone season” means the contiguous 3 month period during which ozone exceedances typically occur, i.e. June, July, and August. (134) “Regulated air pollutant” or “Regulated Pollutant” means (a)(A) Nitrogen oxides or any VOCs; (B) Any pollutant for which an ambient air quality standard has been promulgated, including any precursors to such pollutants; (190) "Volatile organic compounds" or "VOC" means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, that participates in atmospheric photochemical reactions. OAR 340-200-0025 Abbreviations and Acronyms (79) “O3” means ozone. OAR 340-250-0030 General Conformity Definitions (22) "National ambient air quality standards" or "NAAQS" means those standards established pursuant to Section 109 of the Act and include standards for carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone, particulate matter (PM_{10}), and sulfur dioxide (SO_2). (25) “Precursors of a criteria pollutant” means: (a) For ozone, nitrogen oxides (NOx), unless an area is exempted from NOx requirements under Section 182(f) of the Act, and volatile organic compounds (VOC);

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		OAR 340-256-0010 Motor Vehicles Definitions (45) "Oxides of Nitrogen" or NOx means oxides of nitrogen except nitrous oxides.
§110(a)(2)(A) Emission limits & other control measures	*Include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance as may be necessary or appropriate to meet the applicable requirements of this Act.*	Oregon Revised Statutes: ORS 468 Environmental Quality Generally; Public Health and Safety; General Administration ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption ORS 468A Air Quality, Public Health and Safety, Air Pollution Control ORS 468A.010 Policy. Calls for joint responsibility for "a coordinated statewide program of air quality control and to allocate [responsibility] between the state and the units of local government . . . ." ORS 468A.015 Purpose of air pollution laws ORS 468A.020 Rules and Standards. Gives Environmental Quality Commission (EQC) authority to adopt rules and standards to perform function vested by law. ORS 468A.025 Air Purity Standards; Air Quality Standards; Treatment and Control of Emissions; Rules: EQC may establish… -(1) areas of state and prescribe air pollution & contamination levels -(3) air quality standards including emission standards -(4) emission treatment and control provisions ORS 468A.035 General Comprehensive Plan. Oregon Department of Environmental Quality (DEQ) shall develop a general

Attachment 1: Infrastructure SIP Submittal CAA section 110(a)(2)(A)-(M) Requirements Checklist		
Section 110(a) Element	Summary of Element	How Addressed
		comprehensive plan for the control or abatement of air pollution ORS 468A.040 Permits; Rules. Provides that the EQC may require permits for air contamination sources, type of air contaminant, or specific areas of the State. ORS 468A.045 Activities Prohibited Without Permit; Limit on Activities with Permit ORS 468A.050 Classification of Air Contamination Sources; Registration and Reporting; Registration and Reporting of Sources; Rules; Fees ORS 468A.055 Notice Prior to Construction of New Sources; Order Authorizing or Prohibiting Construction; Effect of No Order; Appeal ORS 468A.070 Measurement and Testing of Contamination Sources; Rules ORS 468A.310 Federal operating permit program approval; rules; content of plan ORS 468A.315 Emission Fees for Major Sources; Base Fees; Basis of Fees; Rules ORS 468A.350 - .455 Motor Vehicle Pollution Control. Provides authority to implement emissions reductions programs related to motor vehicles. ORS 468A.625-.645 Chlorofluorocarbons and Halon Control ORS 468A.650-.660 Aerosol Spray Control ORS 468A.990 Penalties Oregon Administrative Rules:

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		OAR 340-200-0020 General Air Pollution Procedures and Definitions -0020 Definitions Defines "significant emissions rates," "significant impact," "significant impact level," de minimis emission levels, and plant site emission limits (PSELs) for specific air pollutants and precursors. TABLE 1: Significant Air Quality Impact TABLE 2: Significant Emission Rates TABLE 4: De Minimis Emission Levels TABLE 5: Generic PSELs Defines "Federal Major Source" as major stationary source defined in part D of Title I of the CAA for ozone nonattainment areas, with exceptions. Defines and acknowledges CAA Section 182(f) and 182(f)(1) which require SIP provisions for "NOx in ozone nonattainment areas" and application of SIP provisions "developed for major VOC sources and major NOx sources in ozone nonattainment areas." OAR 340-202 Ambient Air Quality Standards and PSD Increments. Defines ambient air quality standards for all NAAQS. Specifies PSD increments & ceilings. - 0090 Ozone -0100 Nitrogen Dioxide - 0210 Ambient Air PSD Increments (1)(a)(D) Nitrogen Dioxide for Class I areas (1)(b)(D) Nitrogen Dioxide for Class II areas - 0220 Ambient Air Ceilings OAR 340-204 Designation of Air Quality Areas. Designates air quality areas in Oregon: Air Quality Control Regions and nonattainment, maintenance, PSD, special control, motor vehicle inspection boundary and oxygenated gas control areas.

		OAR 340-216 Air Contaminant Discharge Permits. Federally-enforceable, state operated permit program. This rule also serves as the administrative permit mechanism used to implement the major and minor new source review programs. The SIP-approved minor NSR program applies major source NSR-PSD requirements to any source with emissions over the significant emission rate. OAR 340-222 Stationary Source Plant Site Emission Limits. Establishes criteria and method for regulating plant site emission limits of permit holders, to protect ambient air quality standards, PSD increments & visibility. OAR 340-223 Regional Haze Rules Establish requirements for certain sources emitting air pollutants that reduce visibility and contribute to regional haze in Class I areas. - 0070: Additional NOx Requirements for the Foster-Wheeler Boiler at Boardman Coal-Fired Power Plant. OAR 340-224 New Source Review. Establishes permit program and requirements for major new and modified sources to avoid violation of an ambient air quality standard or PSD increment. -0025(4) Major modification for ozone precursors -0045: Requirements for Sources in Sustainment Areas -0050: Requirements for Sources in Nonattainment Areas. (3)(a) Sources impacting other designated areas that emit ozone precursors (VOC or NOx) above certain limits considered to have significant impact if within 100 km of designated ozone area. -0055: Requirements for Sources in Reattainment Areas -0060: Requirements for Sources in Maintenance Areas. (2) Source must demonstrate Net Air Quality benefit by one of three requirements with (c) being allocation from growth allowance; (3)(a)

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		same as -0050(3)(a). (7) Sources exempt from (2) in Medford Maintenance Area for NOx offsets and Salem Maintenance Area for VOC and NOx offsets. -0070: Prevention of Significant Deterioration Requirements for Sources in Attainment or Unclassified Areas. (4)(a) Sources impacting other designated areas that emit ozone precursors (VOC or NOx) above certain limits considered to have significant impact if within 100 km of designated ozone area. -0245 through -0270 State New Source Review: Requirements for Sources in multiple designated areas. -0520: Net Air Quality Benefit Emission Offsets: Requirements for Demonstrating Net Air Quality Benefit for Ozone Areas. Requires offsets for VOC and NOx for sources that will be located "within an ozone designated area or closer to the nearest boundary of an ozone designated area than the ozone impact distance," defined as "the distance in kilometers from the nearest boundary of an ozone designated area within which a source of VOC or NOx is considered to significantly affect that designated area. The determination of significance is made by either" a formula or a demonstration method such as topographic analysis or dispersion modeling. OAR 340-226 General Emission Standards. Requires highest and best practicable treatment and control, consideration of impact of selected control methods, typically achievable control technology. Includes operating & maintenance and grain loading requirements, and additional control requirements for stationary sources of air contaminants. -0400 Alternative Emission Controls (Bubble) (1)for VOC and NOx

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		OAR 340-232 Emission Standards for VOC Point Sources Regulates sources of VOC which contribute to the formation of photochemical oxidants, mainly ozone. OAR 340-236 Emission Standards for Specific Industries: Emission Limits OAR 340-242 Rules Applicable to the Portland Area - 0010-0290 Employee Commute Options (ECO) Program. Requires larger employers to provide commute options to encourage employees to reduce auto trips to the work site. -300-0390 Voluntary Maximum Parking Ratio Program. Encourages property owners to voluntarily locate and design facilities that need less parking by building in a more pedestrian, bicycle and transit friendly manner. Includes incentives (#0340) -0400-0440 Industrial Emission Management Program. Applies to VOC and NO_x sources and to new major sources and major modifications that emit CO in Portland Metro area. Includes Unused PSEL Donation Program and Industrial Growth Allowance (incentives) - 0500-0520 Gasoline Vapors from Gasoline Transfer and Dispensing Operations - 0600-0630 Motor Vehicle Refinishing - 0700-0750 Spray Paint OAR 340-250 General Conformity. Implements requirements under Section 176(c) of the Clean Air Act with respect to the conformity of general federal actions to the applicable implementation plan - 0020 Applicability: sets emissions rates for federal actions in nonattainment and maintenance areas.

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		- 0038 Criteria for Determining Conformity of General Federal Actions. OAR 340-252 Transportation Conformity. Establishes policy, criteria, and procedures for demonstrating and assuring conformity of planning activities to an applicable implementation plan developed pursuant to section 110 and Part D of the CAA. OAR 340-256 Motor Vehicles. Air pollution control for mobile sources including motor vehicle inspection and maintenance program and fee schedule (fees: 340-256-0320). OAR 340-258 Motor Vehicle Fuel Specifications. Establishes requirements for fuel content for those distributing, refining, blending, supplying or selling gasoline for use in motor vehicles; applies Nov. 1 – Feb. 29 in CO maintenance areas. -0200 Certification of Pollution Control Systems: All motor vehicles, not exempted, registered in seven counties shall be equipped with a pollution control system and comply with emission standards. -0340 Light Duty and Heavy Duty Gasoline Motor Vehicle Emission Control Basic Test Method -0355 Emissions Control Test Method for OBD Test Program -0358 Emissions Control Test Method for Self-Service Testing Program -0380 Emission Control System Inspection: Light Duty Motor Vehicle Emission Control Test Criteria for Basic Program -0390 Emission Control System Inspection: Heavy Duty Gasoline Motor Vehicle Emission Control Test Criteria -0400 Emission Control System Inspection: Light Duty Motor Vehicle Emission Control Standards for Basic Program

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		-0420 Emission Control System Inspection: Heavy-Duty Gasoline Motor Vehicle Emission Control Standards OAR 340-268 Emission Reduction Credits (ERC). Addresses creation and banking of Emission Reduction Credits.
§110(a)(2)(B) Ambient air quality monitoring & data analysis system	*Provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to (i) monitor, compile, and analyze data on ambient air quality, and (ii) upon request, make such data available to the Administrator;*	Oregon Revised Statutes: ORS 468 Environmental Quality Generally; Public Health and Safety; General Administration ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption. ORS 468A Air Quality, Public Health and Safety, Air Pollution Control ORS 468A.025 Air Purity Standards; Air Quality Standards; Treatment and Control of Emissions; Rules. Requires controls necessary to achieve ambient air quality standards and prevent significant impairment of visibility. ORS 468.035 (a-e, m) Functions of the Department. Authority to conduct & supervise inquiries and programs to assess and communicate air conditions and to obtain necessary resources (assistance, materials, supplies, etc.) to meet these responsibilities. ORS 468A.055 Notice Prior to Construction of New Sources; Order Authorizing or Prohibiting Construction; Effect of No Order; Appeal ORS 468A.070 Measurement and Testing of Contamination Sources; Rules. Authority to establish a measurement and testing program pursuant to rules adopted by the EQC.

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		Oregon Administrative Rules: OAR 340-200 General Air Pollution Procedures and Definitions. Defines "Criteria Pollutant" at (31) as nitrogen oxides, volatile organic compounds, particulate matter, PM10, PM2.5, sulfur dioxide, carbon monoxide, or lead. Also specifically defines NOx and SO2 as precursors to PM2.5 at (71), and NOx and VOCs as precursors to ozone at (71). Defines significant emissions rates, de minimis emission levels, and plant site emission rates for specific air pollutants and precursors. OAR 340-212 Stationary Source Testing and Monitoring. Sets requirements, methods, and criteria for emission monitoring and reporting. -0110 Applies to all stationary sources and portable sources required to have permits by OAR 340-216. DEQ Reports: 2015 Oregon Five-Year Ambient Network Assessment, September 2015. 2017 Oregon Annual Ambient Air Monitoring Network Plan. Submitted to Environmental Protection Agency, Region 10 on June 20, 3017 and approved by EPA on May 10, 2018. For more information, see: https://www.oregon.gov/deq/FilterDocs/AQmonitoringplan.pdf NOTE: A comprehensive air quality monitoring plan, intended to meet the requirements of 40 CFR part 58, was submitted by DEQ on December 27, 1979 (40 CFR 52.1970) and was approved by the EPA on March 4, 1981 (46 FR 15136). The air quality monitoring plan is updated every year to reflect the latest monitoring network. This plan includes, among other

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		things, the locations for the nitrogen dioxide monitoring network. Oregon provides an annual air quality data report to the public on the DEQ website. The most recent report is located here: https://www.oregon.gov/deq/FilterDocs/OrAirQualityAnnualReport2016.pdf. Oregon sends real time air monitoring information for ozone, particulate matter, and carbon monoxide to EPA's AIRNow web page at http://www.airnow.gov and also provides the information on the ODEQ Air Quality Index (AQI) website at https://oraqi.deq.state.or.us/home/map.
§110(a)(2)(C) Program to enforce control measures, regulate modification & construction of stationary sources and a permit program	*Include a program to provide for the enforcement of the measures described in subparagraph (A) and regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, including a permit program as required in parts C and D of this subchapter;*	*Two elements identified in section 110(a)(2) include requirements that are not governed by the 3-year submission deadline of section 110(a)(1). The requirements pertain to part D, of title I of the CAA, which addresses plan requirements for nonattainment areas. Therefore, the following section 110(a)(2) elements are considered by EPA to be outside the scope of infrastructure SIP actions: (1) section 110(a)(2)(C) to the extent it refers to permit programs (known as "nonattainment new source review") required under part D; and (2) section 110(a)(2)(I) in its entirety. EPA does not expect infrastructure SIP submittals to include regulations or emission limits developed specifically for attaining the relevant standard. Those submittals are due at the time the nonattainment area planning requirements are due (18 months following designation).* Oregon Revised Statutes: ORS 468 Environmental Quality Generally; Public Health and Safety; General Administration ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		ORS 468.035 (j, k) Functions of the Department -j Shall seek enforcement of state air quality pollution laws -k Shall compel compliance with any rule, standard, order, permit or condition ORS 468.065 Issuance of Permits; Consent; Fees; Use. Provides authority and requirements to DEQ for issuing permits, the content of those permits, fee schedules, and reporting. ORS 468.070 Denial, Modification, Suspension or Revocation of Permits. Provides authority to deny, modify, suspend or revoke a permit if ODEQ finds a material misrepresentation or false statement in the application; failure to comply with the permit; or violation of an applicable law, rule, standard or order. ODEQ may also modify a permit if it is necessary for the proper administration, implementation or enforcement of the provisions in applicable laws. ORS 468.090-.140 Enforcement. Provides DEQ with authority to investigate complaints, investigate and inspect sources for compliance, access records, commence enforcement procedures, and impose civil penalties. ORS 468.920-.963 Environmental Crimes. Authorizes and provides categories related to criminal enforcement and associated fines. ORS 468.996-.997 Civil Penalties. Provides additional penalties for persons who intentionally or recklessly violate provisions of specific chapters of ORS, including 468 and 468A or any rule, standard, or order pursuant to ORS 468 and 468A “which

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		results in or creates the imminent likelihood for an extreme hazard to the public health or which causes extensive damage to the environment." ORS 468A Air Quality, Public Health and Safety, Air Pollution Control ORS 468A.025 Air Purity Standards; Air Quality Standards; Treatment and Control of Emissions; Rules. Requires controls necessary to achieve ambient air quality standards and prevent significant impairment of visibility. ORS 468A.035 General Comprehensive Plan. Requires DEQ to develop a general comprehensive plan for the control or abatement of air pollution. ORS 468A.040 Permits; Rules. EQC may require permits for air contamination sources, etc. ORS 468A.045 Activities Prohibited Without Permit; Limit on Activities With Permit. Prohibits any person from discharging, emitting or allowing to be discharged or emitted any air contaminant for which a permit is required. Prohibits construction, installation, modification, operation, increase in emissions, etc. of any air contamination source for which a permit is required. ORS 468A.050 Classification of Air Contamination Sources; Registration and Reporting; Registration and Reporting of Sources; Rules; Fees ORS 468A.055 Notice Prior to Construction of New Sources; Order Authorizing or Prohibiting Construction; Effect of No Order; Appeal. Provides authority to EQC (or DEQ) to establish notice requirements

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		prior to construction of new sources, issue orders to prohibit the construction of a new source, and lays out an appeal process. ORS 468A.070 Measurement and Testing of Contamination Sources; Rules ORS 468A.310 Federal operating permit program approval; rules; content of plan ORS 468A.990 Penalties for air pollution offenses. Establishes that violations of any rule or standard or order issued by a regional authority relating to air pollution is a Class A misdemeanor and that each day of violation of constitutes a separate offense. <u>Oregon Administrative Rules</u>: OAR 340-012 Enforcement Procedure and Civil Penalties. Establishes enforcement actions to encourage compliance with environmental regulations and to protect public health & the environment. OAR 340-202 Ambient Air Quality Standards and PSD Increments. Defines ambient air quality standards for all NAAQS. Specifies PSD increments & ceilings. - 0090 Ozone - 0100 Nitrogen Dioxide OAR 340-210 Stationary Source Notification Requirements. Establishes registration requirements for stationary air contaminant sources not subject to ACDP or title V permits and regulates construction & modification of these sources and air pollution control equipment. OAR 340-214 Stationary Source Reporting Requirements. Establishes reporting requirements for stationary sources, and requires recordkeeping on the nature, type and amount of emissions.

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		- 0120 Enforcement of Reporting requirements - 0350 Enforcement action criteria for excess emissions OAR 340-216 Air Contaminant Discharge Permits (ACDP). Federally-enforceable state operation permit program. This rule also serves as the administrative permit mechanism used to implement the major and minor new source review programs. The SIP-approved minor NSR program applies major source NSR-PSD requirements to any source with emissions over the significant emission rate. OAR 340-224 Major New Source Review. Regulates construction and modification of proposed major sources within nonattainment & maintenance areas and federal major sources and modifications within attainment & unclassified areas. NOTE: EPA most recently approved revisions to Oregon's PSD program on October 11, 2017 (82 FR 47122).
§110(a)(2)(D)(i)(I) Interstate transport as it relates to significant contribution to nonattainment and interference with maintenance	*Contain adequate provisions* *(i) prohibiting, consistent with the provisions of this subchapter, any source or other type of emissions activity 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 to any such national primary or secondary ambient air quality standard, or*	<u>CAA section 110(a)(2)(D)(i)(I) Interstate Transport as it relates to significant contribution to nonattainment and interference with maintenance:</u> The Oregon SIP submission addressing the Interstate transport of ozone is attached.
§110(a)(2)(D)(i)(II) Interstate transport as it relates to PSD and visibility	*(II) interfere with measures required to be included in the applicable implementation plan for any other State under part C of this subchapter to*	*Oregon's Administrative Rules are consistent with federal requirements per Appendix N of 40 CFR 50 pertaining to the notification of interstate pollution abatement.*

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
	prevent significant deterioration of air quality or to protect visibility,	<u>Oregon rules and statutes that specifically address CAA section 110(a)(2)(D)(i)(II) Interstate transport as it relates to PSD:</u> <u>Oregon Revised Statutes</u>: ORS 468 Environmental Quality Generally; Public Health and Safety; General Administration ORS 468A Air Quality, Public Health and Safety, Air Pollution Control <u>Oregon Administrative Rules</u>: OAR 340-200 General Air Pollution Definitions and Procedures. Defines general air pollution terms. - 0020 General Air Quality Definitions (6) "Affected States" Specifies neighboring states. OAR 340-202 Ambient Air Quality and PSD Increments. Defines ambient air quality standards for all NAAQS. Specifies PSD increments & ceilings. - 0210 Ambient Air Increments, Table 1 - 0220 Ambient Air Ceilings OAR 340-209 Public Participation. Specifies the requirements for notifying the public of certain permit actions and providing an opportunity for the public to participate in those permit actions. - 0060 Persons Required to be Notified. Includes state notification. OAR 340-216 Air Contaminant Discharge Permits (ACDP). Federally enforceable state operation permit program. This rule also serves as the administrative permit mechanism used to implement the major and

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		minor new source review (NSR) programs. The SIP-approved minor NSR program applies major source NSR-PSD requirements to any source with emissions over the significant emission rate. OAR 340-224 New Source Review. Regulates construction and modification of proposed major sources within nonattainment, maintenance and re-attainment areas and federal major sources and modifications within attainment, unclassified and sustainment areas. Oregon rules and statutes that specifically address CAA section 110(a)(2)(D)(i)(II) Interstate transport as it relates to visibility: OAR 340-223 Regional Haze Rules: Establishes requirements for certain industrial sources that contribute to regional haze in Class I areas, for the purpose of implementing Best Available Retrofit Technology requirements. NOTE: On May 17, 2018, EPA approved a progress report to Oregon's Regional Haze SIP (83 FR 22853) and determined that the existing regional haze SIP is adequate to meet the state's visibility goals and requires no substantive revision at this time. OAR 340-224 New Source Review. Regulates construction and modification of proposed major sources within nonattainment, maintenance and re-attainment areas and federal major sources and modifications within attainment, unclassified and sustainment areas.
§110(a)(2)(D)(ii) Interstate and international pollution	*(ii) insuring compliance with the applicable requirements of sections 126 and 115 (relating to interstate and international pollution abatement);*	Oregon Revised Statutes: ORS 468.020 Rules and Standards Requires public hearing on any proposed rule or standard prior to adoption

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		Oregon Administrative Rules: OAR 340-209 Public Participation: specifies the requirements for notifying the public of certain permit actions and providing an opportunity for the public to participate in those permit actions. - 0060 Persons Required to be Notified: includes state notification. NOTE: State regulations are consistent with Federal requirements in Appendix N of 40 CFR part 50 pertaining to the notification of interstate pollution abatement.
§110(a)(2)(E)(i) Adequate personnel, funding and authority to carry out plan	*Provide (i) necessary assurances that the state (or, except where the Administrator deems inappropriate, the general purpose local government or governments, or a regional agency designated by the state or general purpose local governments for such purpose) will have adequate personnel, funding, and authority under state (and, as appropriate, local) law to carry out such implementation plan (and is not prohibited by any provision of federal or state law from carrying out such implementation plan or portion thereof);*	Oregon Revised Statues: ORS 468.035 Functions of Department (d, h). Authority to employ personnel, purchase supplies, enter into contracts, and to receive, appropriate and expend federal and other funds for purposes of air pollution research and control ORS 468A.045 Functions of Director; Delegation. Power to hire, assign, reassign, and coordinate personnel of the department Interagency Agreements: Intergovernmental Agreement between DEQ and LRAPA: DEQ has entered into an intergovernmental agreement to delegate it's authority to implement the requirements of the Clean Air Act in Lane County, Oregon to the Lane Regional Air Protection Agency. For more information, please see the Intergovernmental Agreement between DEQ and LRAPA (DEQ Agreement #057-18). DEQ's Performance and Partnership Agreement (PPA) with EPA. The Oregon Performance Partnership Agreement describes how DEQ and EPA Region 10 will work together to protect Oregon's

Attachment 1: Infrastructure SIP Submittal CAA section 110(a)(2)(A)-(M) Requirements Checklist		
Section 110(a) Element	Summary of Element	How Addressed
		environment. The PPA is an agreement documenting the commitments of EPA and DEQ regarding implementation of federally-delegated environmental programs and is the result of a several month negotiation process. The PPA's Air Quality appendix contains program-specific work plans for the Oregon Air Quality program along with commitments for FTE and funding support. EPA Region 10 and DEQ signed the current PPA on 7/1/16 (expires 10/31/19). Note: DEQ received CAA section 105 grants from EPA and DEQ matches those grants through the state's General Fund. DEQ's PPA with EPA contains more information.
§110(a)(2)(E)(ii) Comply with state boards	*(ii) requirements that the state comply with the requirements respecting state boards under section 128 of this title, and*	Oregon Revised Statutes: ORS 468 Environmental Quality Generally; Public Health and Safety; General Administration - 035(c) Functions of Department Authority to advise, consult, and cooperate with other states, state and federal agencies, or political subdivisions on all air quality control matters. ORS 468A Air Quality, Public Health and Safety, Air Pollution Control Formation and oversight of regional air quality control agencies: ORS 468A.105 Formation of regional air quality control authorities ORS 468A.135 Function of authority; rules. ORS 468A.155 Rules authorizing regional permit programs.

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		ORS 468A.165 Compliance with state standards required; hearing; notice <u>Oregon Administrative Rules</u>: OAR 340-200-0100: Purpose OAR 340-200-0110: Public Interest OAR 340-200-0120: Disclosure of Potential Conflicts of Interest Note: EPA approved OAR 340-200-0100 through OAR 340-200-0120 as meeting the requirements of CAA section 128 on January 22, 2003 (68 FR 2891). Lane Regional Air Protection Agency rules: LRAPA Title 12, Section 025 (recodified to LRAPA Title 13, Section 025): Conflict of Interest. Note: EPA approved LRAPA Title 12, Section 025 (recodified to LRAPA Title 13, Section 025) as meeting CAA section 128 on March 1, 1989 (54 FR 8538).
§110(a)(2)(E)(iii) oversee local & regional governments/agencies	*(iii) necessary assurances that, where the state has relied on a local or regional government, agency, or instrumentality for the implementation of any plan provision, the state has responsibility for ensuring adequate implementation of such plan provision;*	<u>Oregon Revised Statutes</u>: ORS 468 Environmental Quality Generally; Public Health and Safety; General Administration ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption ORS 468.035 (c) Functions of Department. Authority to advise, consult, and cooperate with other states, state and federal agencies, or political subdivisions on all air quality control matters. ORS 468A Air Quality, Public Health and Safety, Air Pollution Control

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		ORS 468A.010 Policy. Calls for joint responsibility for "a coordinated statewide program of air quality control and to allocate [responsibility] between the state and the units of local government . . . ." ORS 468A.025 Air Purity Standards; Air Quality Standards; Treatment and Control of Emissions; Rules. Requires controls necessary to achieve ambient air quality standards and prevent significant impairment of visibility. ORS 468A.035 General Comprehensive Plan. Requires DEQ to develop a general comprehensive plan for the control or abatement of air pollution. ORS 468A.040 Permits; Rules. Provides that the EQC may require permits for air contamination sources, type of air contaminant, or specific areas of the State. ORS 468A.050 Classification of Air Contamination Sources; Registration and Reporting; Registration and Reporting of Sources; Rules; Fees ORS 468A.070 Measurement and Testing of Contamination Sources; Rules ORS 468A.100-180 Regional Air Quality Control Authorities. Describes the establishment, role, and function of Regional Authorities. <u>Oregon Administrative Rules</u>: OAR 340-200 General Air Pollution Procedures and Definitions -0010 Specifies that Lane Regional Air Protection Agency (LRAPA) has authority in Lane County -0020 defines a "Regional Agency".

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		-0040 describes inclusion of the regional agency's actions into the SIP. OAR 340-204 Designation of Air Quality Areas. Includes Designation of Control Areas within Lane County. OAR 340-216 Air Contaminant Discharge Permits. Relating to ACDP includes authorities for LRAPA and inclusion in the SIP.
§110(a)(2)(F) Stationary source emissions monitoring and reporting system	*require, as may be prescribed by the Administrator* *(i) the installation, maintenance, and replacement of equipment, and the implementation of other necessary steps by owners or operators of stationary sources to monitor emissions from such sources,* *(ii) periodic reports on the nature and amounts of emissions and emissions-related data from such sources, and* *(iii) correlation of such reports by the state agency with any emission limitations or standards established pursuant to this Act, which reports shall be available at reasonable times for public inspection;*	Oregon Revised Statues: ORS 468 Environmental Quality Generally; Public Health and Safety; General Administration ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption ORS 468.035 (b, d) Functions of Department. Authority to conduct & supervise inquiries and programs to assess and communicate air conditions and to obtain necessary resources (assistance, materials, supplies, etc.) to meet these responsibilities. ORS 468A Air Quality, Public Health and Safety, Air Pollution Control ORS 468A.025 (4) Air Purity Standards; Air Quality Standards; Treatment and Control of Emissions; Rules. Commission shall adopt rules, require permit conditions for operation and maintenance of pollution control equipment, and require typically achievable control technology for new, modified and existing sources of air contaminants or precursors for stationary sources ORS 468A.070 Measurement and Testing of Contamination Sources; Rules

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		ORS 468A.310 Federal operating permit program approval; rules; content of plan ORS 468A.365 Certification of Motor Vehicle Pollution Control Systems and Inspection of Motor Vehicles; Rules. Designate methods and standards for testing systems and inspecting motor vehicles <u>Oregon Administrative Rules</u>: OAR 340-209 Public Participation OAR 340-212 Stationary Source Testing and Monitoring. Requires facilities to monitor and report emissions, including requirements for monitoring methods and design, and Monitoring & Quality Improvement plans, etc. OAR 340-214 Stationary Source Reporting Requirements. Requires stationary sources to maintain written records to determine compliance with emission rules, limitations or control measures for any regulated air pollutant and provides requirements for reporting and recordkeeping. OAR 340-222 Stationary Source Plant Site Emission Limits - 0080 Plant Site Emission Limit Compliance: Specifies permittee must monitor and maintain records to demonstrate compliance. Specifies frequency and method of monitoring for PSELs. OAR 340-224-0070 New Source Review, Prevention of Significant Deterioration Requirements for Sources in Attainment or Unclassified Areas. (1)(a)(B) Preconstruction Air Quality Monitoring required for ozone unless data or modeling shows VOC less than 100 tons/year or if ozone concentrations less than 50% of ozone

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		ambient standard with full season of monitoring. OAR 340-225 Air Quality Analysis Requirements OAR 340-232 Emission Standards for VOC Point Sources -0100 Testing Vapor Transfer and Collection Systems, (4) Recordkeeping and Reporting. -0140 Petroleum Refinery Leaks, (3) Monitoring, Recordkeeping, Reporting OAR 340-236 Emission Standards for Specific Industries OAR 340-250 General Conformity. Implements requirements under Section 176(c) of the Clean Air Act with respect to the conformity of general federal actions to the applicable implementation plan OAR 340-258-0010 through 0310: Motor Vehicle Fuel Specifications, record keeping and reporting. Note: Oregon submits data to the National Emissions Inventory for the six criteria pollutants. EPA compiles the emissions data and provides it to the public at the following website: https://www.epa.gov/air-emissions-inventories
§110(a)(2)(G) Authority to declare air pollution emergency and notify public	*Provide for authority comparable to that in section 303 of this title and adequate contingency plans to implement such authority;*	Oregon Revised Statues: ORS 468 Environmental Quality Generally; Public Health and Safety; General Administration ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		ORS 468A Air Quality, Public Health and Safety, Air Pollution Control ORS 468A.310 Federal operating permit program approval; rules; content of plan ORS 468.115 Enforcement in Cases of Emergency. Authorizes the DEQ Director, at the direction of the Governor, to enter a cease & desist order for polluting activities that present an imminent and substantial danger to public health <u>Oregon Administrative Rules</u>: OAR 340-206 Air Pollution Emergencies. Air pollution emergency episode procedures. Authorizes the DEQ Director to declare an air pollution alert or warning, or to issue an advisory to notify the public. The Department shall notify the Governor when declaring an emergency. This section describes the existing emergency episode procedures in place. -0010 Air Pollution Emergencies -0030 Episode Stage Criteria for Air Pollution Emergencies OAR 340-214 Stationary Source Reporting Requirements
§110(a)(2)(H) Future SIP revisions	*Provide for revision of such plan* *(i) from time to time as may be necessary to take account of revisions of such national primary or secondary ambient air quality standard or the availability of improved or more expeditious methods of attaining such standard, and* *(ii) except as provided in paragraph (3)(C), whenever the Administrator finds on the basis of information available to the Administrator that the plan is substantially inadequate to attain the national ambient air*	<u>Oregon Revised Statues</u>: ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption ORS 468A.035 General Comprehensive Plan. Requires DEQ to develop a general comprehensive plan for the control or abatement of air pollution. ORS 468A.070 Measurement and Testing of Contamination Sources; Rules <u>Oregon Administrative Rules</u>:

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
	quality standard which it implements, or to otherwise comply with any additional requirements established under this Act;	OAR 340-200 General Air Pollution Procedures and Definitions - 0040 State of Oregon Clean Air Act Implementation Plan. Provides for revisions to Oregon's SIP and submittal of revisions to the EPA - this includes standards submitted by a regional authority and adopted verbatim to DEQ rules.
§110(a)(2)(I) Nonattainment requirements	*in the case of a plan or plan revision for an area designated as a nonattainment area, meet the applicable requirements of part D (relating to nonattainment areas);*	*Two elements identified in section 110(a)(2) include requirements that are not governed by the 3-year submission deadline of section 110(a)(1). The requirements pertain to part D, of title I of the CAA, which addresses plan requirements for nonattainment areas. Therefore, the following section 110(a)(2) elements are considered by EPA to be outside the scope of infrastructure SIP actions and are not addressed in this SIP submittal: (1) section 110(a)(2)(C) to the extent it refers to permit programs (known as "nonattainment new source review") required under part D; and (2) section 110(a)(2)(I) in its entirety. EPA does not expect infrastructure SIP submittals to include regulations or emission limits developed specifically for attaining the relevant standard. Those submittals are due at the time the nonattainment area planning requirements are due (18 months following designation).*
§110(a)(2)(J) (section 121 consultation)	*Meet the applicable requirements of section 121 (relating to consultation), …*	<u>Oregon Revised Statues</u>: ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption ORS 468.035 (a, c, f-g) Functions of department -a. encourages voluntary cooperation with local govt. and others in restoring & preserving air quality

Attachment 1: Infrastructure SIP Submittal CAA section 110(a)(2)(A)-(M) Requirements Checklist		
Section 110(a) Element	Summary of Element	How Addressed
		-c. Shall advise, consult, and cooperate with state & federal agencies and political subdivisions in air quality control matters -f. Shall provide advisory technical consultation and services to local & state agencies ORS 468A.010 (1) b & c Policy Facilitates cooperation between state and local government in air quality control <u>Oregon Administrative Rules</u>: OAR 340-209 Public Participation. Provides for notification to, and participation by, the public in certain permit actions. OAR 340-224 New Source Review Note: On April 15, 2015, the Oregon Environmental Quality Commission adopted revisions updating the PSD program in Oregon. OAR 340-252 Transportation Conformity OAR 340-223 Regional Haze Rules
§110(a)(2)(J) (section 127 public notification)	*Meet the applicable requirements of… section 127 (relating to public notification)*	<u>Oregon Revised Statutes</u>: ORS 468 Environmental Quality Generally; Public Health and Safety; General Administration ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption ORS 468.035 (a, c, f-g) Functions of department -a. encourages voluntary cooperation with local govt. and others in restoring & preserving air quality -e. shall conduct and supervise air pollution control education programs

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		ORS 468A Air Quality, Public Health and Safety, Air Pollution Control <u>Oregon Administrative Rules</u>: OAR 340-206 Air Pollution Emergencies. Provides for public notification for both emergency and non-emergency air quality conditions. OAR 340-209 Public Participation. Specifies the requirements for notifying the public of certain permit actions and providing an opportunity for the public to participate in those permit actions. -0060 Persons Required to be Notified: includes state notification OAR 340-216 Air Contaminant Discharge Permits OAR 340- 252 Transportation Conformity OAR 340-223 Regional Haze Rules Oregon participates and submits information to the EPA's AIRNOW and Enviroflash Air Quality Alert programs which provide information to the public on local air quality. Oregon also provides the AQI to the public at **https://oraqi.deq.state.or.us/home/map**.
§110(a)(2)(J) PSD & visibility protection	*Meet the applicable requirements of … part C (relating to prevention of significant deterioration of air quality and visibility protection);*	*The US EPA does not believe that the visibility element of 110(a)(2)(J) is triggered by a NAAQS revision. Therefore, the visibility protection element of 110(a)(2)(J) is not addressed within this crosswalk. For more information, please see 77 FR 6044.* <u>Oregon Revised Statutes</u>: ORS 468 Environmental Quality Generally; Public Health and Safety; General

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		Administration ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption ORS 468A Air Quality, Public Health and Safety, Air Pollution Control ORS 468A.025 Air Purity Standards; Air Quality Standards; Treatment and Control of Emissions; Rules. Requires controls necessary to achieve ambient air quality standards and prevent significant impairment of visibility. <u>Oregon Administrative Rules</u>: OAR 340-202 Ambient Air Quality Standards and PSD Increments - 0200-0220 PSD Increments Specifies ambient air increments & ceilings. OAR 340-204 Designation of Air Quality Areas - 0050-0060 Designation & re-designation of PSD areas. OAR 340-216 Air Contaminant Discharge Permits (ACDP). Federally enforceable state operation permit program. This rule also serves as the administrative permit mechanism used to implement the major and minor new source review (NSR) programs. The SIP approved minor NSR program applies major source NSR-PSD requirements to any source with emissions over the significant emission rate. OAR 340-224 New Source Review. Regulates construction and modification of proposed major sources within nonattainment, maintenance and re-attainment areas and federal major sources

Attachment 1: Infrastructure SIP Submittal CAA section 110(a)(2)(A)-(M) Requirements Checklist		
Section 110(a) Element	Summary of Element	How Addressed
		and modifications within attainment, unclassified and sustainment areas. OAR 340-225 Air Quality Analysis Requirements - 0050-0060 In PSD areas. Requirements for analysis and demonstrating compliance with standards and increments. - 0090 Requirements for Demonstrating a Net Air Quality Benefit NOTE: EPA most recently approved revisions to Oregon's PSD program on October 11, 2017 (82 FR 47122).
§110(a)(2)(K) Air quality modeling/data	*Provide for:* *(i) the performance of such air quality modeling as the Administrator may prescribe for the purpose of predicting the effect on ambient air quality of any emissions of any air pollutant for which the Administrator has established a national ambient air quality standard, and* *(ii) the submission, upon request, of data related to such air quality modeling to the Administrator;*	Oregon Revised Statutes: ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption ORS 468.035 (b) Functions of department. May conduct studies, investigations, etc. to determine air quality. Oregon Administrative Rules: OAR 340-224-0250 Requirements for Sources in Nonattainment Areas OAR 340-225 Air Quality Analysis Requirements (includes modeling). - 0040 Air Quality Models Refers to modeled estimates of ambient concentrations. - 0045 Requirements for Analysis in Maintenance Areas - 0050 Requirements for Analysis in PSD Class II and Class III Areas - 0060 Requirements for Demonstrating Compliance with Standards and Increments in PSD Class I Areas - 0070 Requirements for Demonstrating Compliance with AQRV Protection

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
§110(a)(2)(L) Major Stationary source permitting fees	*Require the owner or operator of each major stationary source to pay to the permitting authority, as a condition of any permit required under this Act, a fee sufficient to cover* *(i) the reasonable costs of reviewing and acting upon any application for such a permit, and* *(ii) if the owner or operator receives a permit for such source, the reasonable costs of implementing and enforcing the terms and conditions of any such permit (not including any court costs or other costs associated with any enforcement action),* *until such fee requirement is superseded with respect to such sources by the Administrator's approval of a fee program under title V;*	<u>Oregon Revised Statutes:</u> ORS 468 Environmental Quality Generally; Public Health and Safety; General Administration ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption ORS 468.065 Issuance of Permits: Content; Fees; use. Commission may establish a schedule of fees for permits based upon cost of filing & investigating application, issuing or denying permit, carrying out Title V requirements and determining compliance. ORS 468A Air Quality, Public Health and Safety, Air Pollution Control ORS 468A.040 Permits; Rules. Provides that the EQC may require permits for air contamination sources, type of air contaminant, or specific areas of the State. <u>Oregon Administrative Rules</u>: OAR 340-216 Air contaminant Discharge Permits- Requires payment of permit fees. - 0020 (8020 Table 2) ACDP Fee Schedule - 0090 (8010 Table 1) Sources Subject to ACDP and Fees
§110(a)(2)(M) Consultation/Participation by affected local entities	*Provide for consultation and participation by local political subdivisions affected by the plan.*	<u>Oregon Revised Statutes</u>: ORS 468 Environmental Quality Generally; Public Health and Safety; General Administration ORS 468.020 Rules and Standards. Requires public hearing on any proposed rule or standard prior to adoption

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		ORS 468A Air Quality, Public Health and Safety, Air Pollution Control ORS 468A.025 Air Purity Standards; Air Quality Standards; Treatment and Control of Emissions; Rules. Requires controls necessary to achieve ambient air quality standards and prevent significant impairment of visibility. ORS 468.035 (a, c, f-g) Functions of department -a. encourages voluntary cooperation with local govt. and others in restoring & preserving AQ -c. Shall advise, consult, and cooperate with state & federal agencies and political subdivisions in AQ control matters -f. Shall provide advisory technical consultation and services to local & state agencies -g. Shall develop & conduct demonstration programs with local govt. ORS 468A.010 (1) b & c Policy. Calls for joint responsibility for "a coordinated statewide program of air quality control and to allocate [responsibility] between the state and the units of local government." ORS 468A.035 General Comprehensive Plan. Requires DEQ to develop a general comprehensive plan for the control or abatement of air pollution. ORS 468A.040 Permits; Rules. Provides that the EQC may require permits for air contamination sources, type of air contaminant, or specific areas of the State. ORS 468A.055 Notice Prior to Construction of New Sources; Order Authorizing or

Attachment 1: Infrastructure SIP Submittal

CAA section 110(a)(2)(A)-(M) Requirements Checklist

Section 110(a) Element	Summary of Element	How Addressed
		Prohibiting Construction; Effect of No Order; Appeal ORS 468A.070 Measurement and Testing of Contamination Sources; Rules ORS 468A.100-180 Regional Air Quality Control Authorities. Describes the establishment, role, and function of Regional Authorities. <u>Oregon Administrative Rules</u>: OAR 340-200 General Air Pollution Procedures and Definitions - 0010 Specifies that Lane Regional Air Protection Agency (LRAPA) has authority in Lane County. - 0020 defines a "Regional Agency". - 0040 describes inclusion of the regional agency's actions into the SIP. OAR 340-204 Designation of Air Quality Areas. Includes Designation of Control Areas within Lane County. OAR 340-216 Air Contaminant Discharge Permits. Relating to ACDP includes authorities for LRAPA and inclusion in the SIP.

Oregon State Implementation Plan Revision Addressing the Interstate Transport of Ozone (O_3)

Clean Air Act Section 110(a)(2)(D)(i)(I)

Submitted to: U.S. Environmental Protection Agency, Region 10

By: Oregon Department of Environmental Quality

October 2018

This report prepared by:

Oregon Department of Environmental Quality
700 NE Multnomah Street, Suite 600
Portland, OR 97232
1-800-452-4011
www.oregon.gov/deq

Contact:
Karen Font Williams
503-229-5519

Table of Contents

Executive Summary

This report presents the Oregon Department of Environmental Quality's submission of a State Implementation Plan element required by the "good neighbor" provision of Section 110(a)(2)(D)(i)(I) of the Clean Air Act that is due within three years from a U.S. Environmental Protection Agency revision of a National Ambient Air Quality Standard. In 2015, EPA revised the primary and secondary ozone NAAQS to 70 ppb. DEQ is required to submit a SIP by October 1, 2018, that prohibits any source or other emissions activity within Oregon from emitting air pollutants in amounts that will contribute significantly to nonattainment or interfere with maintenance of the 2015 ozone NAAQS in another state.

To assist states in completing their interstate transport submissions, EPA completed modeling to identify receptor sites that are projected to have problems attaining or maintaining the NAAQS in 2023. EPA then projected each state's contribution to those downwind receptors. The model's projected and apportioned contributions to 2023 ozone concentrations were based on emissions inventory and meteorological data from 2011. EPA has indicated that the states may use this modeling to support their interstate transport SIP submittals and that EPA accepts 2023 as a projection year. DEQ finds EPA's modeling methodology and assumptions result in projections for Oregon that indicate no significant impact to a downwind monitor of interest.

EPA's modeling shows that Oregon's 2023 projected maximum ozone contribution to a downwind receptor site is 0.57 parts per billion. This concentration does not exceed a significant threshold of 0.70 ppb. DEQ reviewed National Emissions Inventory data back to 2008 to discern nitrogen oxide and volatile organic compound emission trends in Oregon over that time period. DEQ found that NOx emissions are trending downward. VOC emissions, with the influence of wildfires subtracted, are also trending downward. DEQ's ambient ozone and NO_2 monitoring does not indicate upward trends through 2016, in spite of increasing population and vehicle miles traveled, and on April 30, 2018, EPA classified the entire state of Oregon as attainment/unclassifiable with respect to the 2015 ozone NAAQS.

DEQ concludes that emissions from Oregon sources do not contribute significantly to downwind nonattainment or maintenance receptors in other states. DEQ also concludes that current control strategies appear adequate to prevent interstate transport of ozone to other states.

1. Introduction

The purpose of this report is to present the Oregon Department of Environmental Quality's submission of a State Implementation Plan element required by the "good neighbor" provision of Section 110(a) of the Clean Air Act[1] when the U.S. Environmental Protection Agency revises a National Ambient Air Quality Standard. In 2015, EPA revised the primary and secondary ozone NAAQS to 70 ppb[2]. Within three years from the NAAQS revision, Oregon must demonstrate that its air quality program is adequate to prevent interstate transport of pollutant emissions that contribute significantly to nonattainment or interfere with neighboring states' ozone NAAQS maintenance.

1.1 Background

DEQ adopted the 2015 ozone NAAQS and submitted that revision to EPA with a Regional Haze Progress Report in July 2017. EPA approved that SIP submission, among other submissions, on May 24, 2018[3].

On November 16, 2017 (82 FR 54232), EPA designated all counties in Oregon except Marion County "attainment/unclassifiable." EPA excepted Marion County because EPA determined that some of the 2014 – 2016 data collected at the Salem monitor did not meet established criteria. DEQ recertified and resubmitted 2015 data to EPA and EPA found Marion County's design value below the 2015 ozone criterion. On April 30, 2018 (83 FR 25776), EPA designated all of Oregon, including Marion County, as "attainment/unclassifiable" for ozone[4] based on DEQ's annually submitted monitoring data.[5]

To assist states in completing their interstate transport submissions, in January 2017, EPA completed modeling that estimates each state's current and future ozone contribution to downwind receptors that are projected to have problems attaining or maintaining the NAAQS in 2023[6]. In two memos released in October 2017 and March 2018[7], EPA provided states guidance on applying the modeling results and referenced a threshold of 1% of the ozone NAAQS (0.70 parts per billion) over which a state, in prior EPA rulemakings,[8] had been deemed to be contributing significantly to a downwind state's nonattainment or maintenance problems. EPA's March 2018 guidance memo also references EPA's four-step framework to address the requirements of the good neighbor provision:

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;

---

[1] Clean Air Act §110(a)(2)(D)(i)(I), 42 U.S.C. §7410
[2] National Ambient Air Quality Standards for Ozone Final Rule, 80 FR 65292 (October 26, 2015)
[3] Air Plan Approval; OR; Infrastructure Requirements for the 2010 Nitrogen Dioxide, 2010 Sulfur Dioxide, and 2012 Fine Particulate Matter Standards (May 24, 2018), 83 FR 24034.
[4] Final rules: 83 FR 25776 (Oregon table p. 25827) and 82 FR 54232 (Oregon table p. 54270)
[5] Oregon Air Quality Annual Report (2016): http://www.oregon.gov/deq/FilterDocs/OrAirQualityAnnualReport2016.pdf
[6] EPA chose 2023 as the analytic year to align with anticipated attainment year for moderate ozone nonattainment areas. 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) (March 27, 2018), p. 3.
[7] Supplemental Information on the Interstate Transport State Implementation Plan Submissions for the 2008 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I) (October, 27, 2017) and 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) (March 27, 2018).
[8] Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone (October 27, 1998), 63 FR 57356; Clean Air Interstate Rule (CAIR) Final Rule (May 12, 2005), 70 FR 25162; Cross-State Air Pollution Final Rule (CSAPR) (August 8, 2011), 76 FR 48208; CSAPR Update for the 2008 Ozone NAAQS Final Rule (October 26, 2016), 81 FR 74504.

3. Identify the emissions reductions necessary (if any), considering cost and air quality factors, to prevent an identified upwind state from contributing significantly to those downwind air quality problems;
4. Adopt permanent and enforceable measures needed to achieve those emissions reductions.

1.2 EPA Analysis Overview

To assist states in completing framework steps 1 and 2, EPA used an air quality model[9] that predicted 2023 interstate ozone contributions to nonattainment and maintenance areas.[10] EPA modeled predicted emissions within states and across state lines for the year 2023, based on emissions inventory and meteorological data from 2011. EPA selected 2023 as the analytic year in the model primarily because in that year, EPA anticipates attainment for moderate ozone nonattainment areas.[11] Several eastern and Midwest states are affected by litigation, which EPA also factored into the choice of 2023.

EPA used the CAMx v6.4 model to project the 2023 future year design values, following EPA's 2014 modeling guidance.[12] The guidance recommends using model predictions from a 3 x 3 array of 12 km grid cells surrounding a monitoring site. EPA modeled contributions (ozone source apportionment) from emissions in each state to ozone concentrations at the projected 2023 nonattainment and maintenance receptors. The model's projected and apportioned contributions to 2023 ozone concentrations were based on emissions inventory and meteorological data from 2011.

EPA conducted an operational model performance evaluation to examine the ability of the CAMx modeling system to simulate 2011 ozone measured concentrations. This evaluation graphically and statistically compared model predictions to observations. The evaluation, performed with CAMx v6.32, showed the 2011 model performance statistics to be within or close to ranges found in other recent peer-reviewed applications, and correspond closely to observed 8-hour daily maximum ozone concentrations' magnitude, temporal fluctuations, and geographic differences. EPA documented this work in the "Air Quality Modeling Technical Support Document for the 2015 Ozone NAAQS" (Dec. 2016). EPA's base emissions inventory data, the projected 2023 emissions, and EPA's modeling methodology were subject to a public comment period that ended April 6, 2017, and EPA modified the modeling platform and projected emissions in response to comments received.[13]

DEQ considers the 2011 base year emissions inventory used in the modeling to be representative, and also finds the projected 2023 emissions reasonable for Oregon. For example, in projecting 2023 emissions, EPA's emissions inventory took into account state rules and announced shutdowns of electric generating units,[14] such as Oregon's 2020 shutdown of the Boardman power plant, announced in 2010[15]. EPA's model also used emissions inventory projections that considered states, such as Oregon, that have adopted California's Low Emission Vehicles III program.[16] Based on DEQ's review of the technical

[9] Comprehensive Air Quality Model with Extensions (CAMx v6.40) User's Guide, http://www.camx.com/, Ramboll Environ (December 2016).
[10] Notice of Data Availability – Preliminary Interstate Ozone Transport Modeling Data for the 2015 Ozone NAAQS (January 2017).
[11] Supplemental Information on the Interstate Transport State Implementation Plan Submissions for the 2008 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I) (October, 27, 2017) p. 3.
[12] Draft Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM2.5 and Regional Haze (December 3, 2014).
[13] Technical Support Document: Additional Updates to Emissions Inventories for the Version 6.3, 2011 Emissions Modeling Platform for the Year 2023, October 2017. Available at https://www.epa.gov/air-emissions-modeling/additional-updates-2011-and-2023-emissions-version-63-platform-technical.
[14] Technical Support Document: Updates to Emissions Inventories for the Version 6.3, 2011 Emissions Modeling Platform for the Year 2023, December 2016, p. 33. Available at: https://www.epa.gov/sites/production/files/2017-01/documents/2011v6.3_2023_update_emismod_tsd_dec2016_002.pdf
[15] PGE Boardman Site Summary. Available at: https://www.oregon.gov/deq/Programs/Pages/PGE-Boardman.aspx
[16] More About Low Emission Vehicle Regulations. Available at: https://www.oregon.gov/deq/aq/programs/Pages/ORLEV-More.aspx

supporting documents, the results of the model performance evaluation and the modifications made in response to public comment, DEQ finds that the modeled data provided by EPA in the March 27, 2018, memorandum accurately simulate likely Oregon ozone contributions to downwind receptors.

2. Downwind Receptors

DEQ relies on EPA's modeling to identify downwind nonattainment and maintenance receptors that may be impacted by emissions from sources in Oregon. EPA's model predicts that Oregon ozone contributions in 2023 could be received by several nonattainment and maintenance receptors in downwind states, most in California. Aside from California, there are no nonattainment or maintenance receptors in the states bordering Oregon, including Washington, Nevada, Idaho and the Fort Hall Reservation.[17,18] Tables listing all potential downwind receptors from Oregon, as EPA presented in the March 2018 memo, are included in Appendix A.

3. Oregon Contribution to Neighboring States

At downwind nonattainment and maintenance receptor sites, Oregon modeled contributions in 2023 range from 0.01 to 0.57 ppb. The 11 sites with highest contributions from Oregon are included in Table 1. EPA has referenced 0.70 ppb as a threshold to indicate significant contribution to downwind states' nonattainment or maintenance receptors. EPA's modeling shows that Oregon is not projected to contribute significantly to nonattainment and maintenance areas downwind, with the greatest contribution being 0.57 ppb. Because Oregon's projected emissions are not deemed to contribute significantly to downwind receptors, DEQ finds that no further analysis is warranted.

Table 1: Nonattainment and maintenance receptors with the 11 highest predicted Oregon ozone contributions.

Site ID	County (all sites in CA)	2023 Ozone Concentration (ppb) from OR	Monitoring Site Receptor Status[19]
60670012	Sacramento	0.57	Nonattainment
60990006	Stanislaus	0.47	Nonattainment
60675003	Sacramento	0.45	Maintenance
60470003	Merced	0.42	Maintenance
61072010	Tulare	0.40	Nonattainment
60290232	Kern	0.39	Nonattainment
60290007	Kern	0.37	Nonattainment
60190242	Fresno	0.35	Nonattainment
60290008	Kern	0.34	Nonattainment
60290014	Kern	0.34	Nonattainment
60392010	Madera	0.34	Nonattainment

[17] On January 19, 2017, the EPA determined that the Shoshone-Bannock Tribes of the Fort Hall Reservation were eligible to be treated in the same manner as a state under Clean Air Act section 110(a)(2)(D). Letter to Oregon Governor Kate Brown from Dennis J. McLerran, EPA Regional Administrator.
[18] The nearest air quality monitoring site to the Fort Hall Reservation is AQS Site ID 160230101 (Idaho Falls, Craters of the Moon) and has a 2017, 8-hr ozone design value of 0.060 ppm (https://www.epa.gov/air-trends/air-quality-design-values).
[19] Personal communication, Claudia Vaupel, Region 10 EPA, August 7, 2018; Derived from "2015 Ozone NAAQS Interstate Transport Assessment Design Values and Contributions," at this location: https://www.epa.gov/airmarkets/march-2018-memo-and-supplemental-information-regarding-interstate-transport-sips-2015

4. Air Quality Trends and Maintenance Programs

In addition to referencing EPA's modeling of Oregon's 2023 emissions, DEQ reviewed NOx and VOC trends based on three periods of National Emissions Inventory[20] data from Oregon: 2008, 2011 and 2014. DEQ finds that total NOx emissions across all sectors in Oregon have decreased steadily since 2008, from approximately 179,670 tons to 156,590 tons. The decrease would have been larger if not for an approximately 9,000 ton increase in NOx emissions from wildfires from the 2011 to the 2014 EI. Similarly, total VOC emissions in Oregon decreased from approximately 1.69 million tons in the 2008 NEI to 1.62 million tons in the 2014 NEI. Again, the VOC decrease was dampened by wildfire contribution of more than 100,000 tons from the 2011 NEI to the 2014 NEI. Tables 2 and 3 show the NOx and VOC emissions, respectively, by sector from Oregon sources.

[20] National Emissions Inventory. Available at: https://www.epa.gov/air-emissions-inventories/national-emissions-inventory-nei

Table 2: Oregon NOx emissions by sector, 2008 – 2014 National Emissions Inventory.

POLLUTANT	SECTOR	2008 Tons	2011 Tons	2014 Tons
Nitrogen Oxides	Biogenics - Vegetation and Soil	11,987.5	12,188.3	11,837.9
Nitrogen Oxides	Bulk Gasoline Terminals	3.4	3.0	3.9
Nitrogen Oxides	Commercial Cooking	0.0		0.0
Nitrogen Oxides	Fires - Agricultural Field Burning	78.4	255.7	295.8
Nitrogen Oxides	Fires - Prescribed Fires	5,874.9	9,716.7	4,906.8
Nitrogen Oxides	Fires - Wildfires	3,419.8	4,505.2	13,924.6
Nitrogen Oxides	Fuel Comb - Comm/Institutional - Biomass	45.1	304.0	303.8
Nitrogen Oxides	Fuel Comb - Comm/Institutional - Coal		0.0	0.0
Nitrogen Oxides	Fuel Comb - Comm/Institutional - Natural Gas	494.1	1,710.0	1,844.8
Nitrogen Oxides	Fuel Comb - Comm/Institutional - Oil	17.8	1,177.2	113.9
Nitrogen Oxides	Fuel Comb - Comm/Institutional - Other	2.0	84.2	84.1
Nitrogen Oxides	Fuel Comb - Electric Generation - Biomass		134.5	142.1
Nitrogen Oxides	Fuel Comb - Electric Generation - Coal	8,695.0	4,048.0	3,231.0
Nitrogen Oxides	Fuel Comb - Electric Generation - Natural Gas	1,447.2	907.2	970.1
Nitrogen Oxides	Fuel Comb - Electric Generation - Oil	123.0	46.0	0.0
Nitrogen Oxides	Fuel Comb - Electric Generation - Other	21.7	116.3	167.6
Nitrogen Oxides	Fuel Comb - Industrial Boilers, ICEs - Biomass	1,490.2	5,292.3	3,799.3
Nitrogen Oxides	Fuel Comb - Industrial Boilers, ICEs - Coal	0.0	393.9	448.8
Nitrogen Oxides	Fuel Comb - Industrial Boilers, ICEs - Natural Gas	1,822.9	3,985.1	3,487.6
Nitrogen Oxides	Fuel Comb - Industrial Boilers, ICEs - Oil	216.5	1,161.6	774.7
Nitrogen Oxides	Fuel Comb - Industrial Boilers, ICEs - Other	11.0	216.9	165.3
Nitrogen Oxides	Fuel Comb - Residential - Natural Gas	1,929.1	2,106.5	1,935.7
Nitrogen Oxides	Fuel Comb - Residential - Oil	264.2	233.4	120.6
Nitrogen Oxides	Fuel Comb - Residential - Other	155.2	231.5	177.8
Nitrogen Oxides	Fuel Comb - Residential - Wood	1,546.4	1,741.8	668.5
Nitrogen Oxides	Industrial Processes - Cement Manuf		969.0	1,279.0
Nitrogen Oxides	Industrial Processes - Chemical Manuf	349.0	387.3	245.5
Nitrogen Oxides	Industrial Processes - Ferrous Metals	553.6	420.0	367.5
Nitrogen Oxides	Industrial Processes - Mining	0.8	0.6	0.0
Nitrogen Oxides	Industrial Processes - NEC	737.5	616.3	592.2
Nitrogen Oxides	Industrial Processes - Non-ferrous Metals	43.9	61.2	67.2
Nitrogen Oxides	Industrial Processes - Oil & Gas Production		40.8	32.7
Nitrogen Oxides	Industrial Processes - Petroleum Refineries	14.6	10.1	
Nitrogen Oxides	Industrial Processes - Pulp & Paper	3,364.6	2,587.4	2,217.3
Nitrogen Oxides	Industrial Processes - Storage and Transfer	24.4	3.0	1.0
Nitrogen Oxides	Miscellaneous Non-Industrial NEC	11.5	28.2	81.8
Nitrogen Oxides	Mobile - Aircraft	1,016.7	1,121.1	1,550.0
Nitrogen Oxides	Mobile - Commercial Marine Vessels	5,427.0	3,010.6	2,234.7
Nitrogen Oxides	Mobile - Locomotives	13,425.1	10,968.6	8,303.1
Nitrogen Oxides	Mobile - Non-Road Equipment - Diesel	17,805.6	15,832.2	13,308.4
Nitrogen Oxides	Mobile - Non-Road Equipment - Gasoline	3,275.9	3,393.9	3,191.0
Nitrogen Oxides	Mobile - Non-Road Equipment - Other	2,413.3	1,449.5	861.7
Nitrogen Oxides	Mobile - On-Road Diesel Heavy Duty Vehicles	36,968.6	25,764.2	19,772.0
Nitrogen Oxides	Mobile - On-Road Diesel Light Duty Vehicles	980.2	1,557.1	5,231.8
Nitrogen Oxides	Mobile - On-Road non-Diesel Heavy Duty Vehicles	3,893.7	628.1	484.5
Nitrogen Oxides	Mobile - On-Road non-Diesel Light Duty Vehicles	48,536.3	53,031.9	45,646.1
Nitrogen Oxides	Solvent - Graphic Arts		1.0	1.0
Nitrogen Oxides	Solvent - Industrial Surface Coating & Solvent Use	35.5	36.6	16.5
Nitrogen Oxides	Waste Disposal	1,152.0	1,044.5	1,700.9
	Total	179,675.2	173,522.4	156,590.7

Table 3: Oregon VOC emissions by sector, 2008 – 2014 National Emissions Inventory.

POLLUTANT	SECTOR	2008 Tons	2011 Tons	2014 Tons
Volatile Organic Compounds	Agriculture - Livestock Waste			731.8
Volatile Organic Compounds	Biogenics - Vegetation and Soil	1,296,968.5	913,055.1	1,109,626.8
Volatile Organic Compounds	Bulk Gasoline Terminals	98.2	2,110.4	281.5
Volatile Organic Compounds	Commercial Cooking	137.0	41.0	223.2
Volatile Organic Compounds	Fires - Agricultural Field Burning	176.4	593.2	705.5
Volatile Organic Compounds	Fires - Prescribed Fires	142,476.2	235,605.4	113,166.3
Volatile Organic Compounds	Fires - Wildfires	104,246.4	107,499.1	261,704.6
Volatile Organic Compounds	Fuel Comb - Comm/Institutional - Biomass	26.5	49.2	75.5
Volatile Organic Compounds	Fuel Comb - Comm/Institutional - Coal		0.0	0.0
Volatile Organic Compounds	Fuel Comb - Comm/Institutional - Natural Gas	8.6	71.4	80.4
Volatile Organic Compounds	Fuel Comb - Comm/Institutional - Oil	0.1	2.2	7.5
Volatile Organic Compounds	Fuel Comb - Comm/Institutional - Other		3.1	3.1
Volatile Organic Compounds	Fuel Comb - Electric Generation - Biomass		3.4	5.1
Volatile Organic Compounds	Fuel Comb - Electric Generation - Coal	71.5	59.6	55.6
Volatile Organic Compounds	Fuel Comb - Electric Generation - Natural Gas	277.6	112.0	159.4
Volatile Organic Compounds	Fuel Comb - Electric Generation - Oil	0.2	0.0	0.1
Volatile Organic Compounds	Fuel Comb - Electric Generation - Other	6.1	49.7	71.8
Volatile Organic Compounds	Fuel Comb - Industrial Boilers, ICEs - Biomass	262.1	416.2	311.9
Volatile Organic Compounds	Fuel Comb - Industrial Boilers, ICEs - Coal	0.0	1.8	2.0
Volatile Organic Compounds	Fuel Comb - Industrial Boilers, ICEs - Natural Gas	54.9	175.9	266.7
Volatile Organic Compounds	Fuel Comb - Industrial Boilers, ICEs - Oil	0.8	7.2	39.0
Volatile Organic Compounds	Fuel Comb - Industrial Boilers, ICEs - Other	3.0	15.7	16.9
Volatile Organic Compounds	Fuel Comb - Residential - Natural Gas	112.9	123.3	113.3
Volatile Organic Compounds	Fuel Comb - Residential - Oil	10.3	9.1	4.7
Volatile Organic Compounds	Fuel Comb - Residential - Other	6.0	8.5	6.9
Volatile Organic Compounds	Fuel Comb - Residential - Wood	15,172.7	16,783.1	7,290.3
Volatile Organic Compounds	Gas Stations	8,054.6	4,503.5	5,759.2
Volatile Organic Compounds	Industrial Processes - Cement Manuf	14.4	14.4	19.4
Volatile Organic Compounds	Industrial Processes - Chemical Manuf	55.1	154.7	47.1
Volatile Organic Compounds	Industrial Processes - Ferrous Metals	130.9	119.5	89.7
Volatile Organic Compounds	Industrial Processes - Mining	0.8	0.6	0.0
Volatile Organic Compounds	Industrial Processes - NEC	265.2	833.4	804.4
Volatile Organic Compounds	Industrial Processes - Non-ferrous Metals	441.1	277.1	294.1
Volatile Organic Compounds	Industrial Processes - Oil & Gas Production		53.3	43.7
Volatile Organic Compounds	Industrial Processes - Petroleum Refineries	44.8	33.0	11.8
Volatile Organic Compounds	Industrial Processes - Pulp & Paper	5,491.0	5,082.0	5,552.4
Volatile Organic Compounds	Industrial Processes - Storage and Transfer	895.7	1,198.3	1,004.9
Volatile Organic Compounds	Miscellaneous Non-Industrial NEC	2,958.3	2,760.1	897.6
Volatile Organic Compounds	Mobile - Aircraft	264.7	356.1	581.3
Volatile Organic Compounds	Mobile - Commercial Marine Vessels	181.8	68.9	56.5
Volatile Organic Compounds	Mobile - Locomotives	715.5	585.7	422.3
Volatile Organic Compounds	Mobile - Non-Road Equipment - Diesel	1,819.7	1,553.6	1,362.1
Volatile Organic Compounds	Mobile - Non-Road Equipment - Gasoline	30,856.3	27,195.7	22,148.6
Volatile Organic Compounds	Mobile - Non-Road Equipment - Other	615.4	355.2	193.0
Volatile Organic Compounds	Mobile - On-Road Diesel Heavy Duty Vehicles	2,409.3	1,985.4	1,441.8
Volatile Organic Compounds	Mobile - On-Road Diesel Light Duty Vehicles	146.6	647.9	2,027.3
Volatile Organic Compounds	Mobile - On-Road non-Diesel Heavy Duty Vehicles	2,509.7	281.2	249.0
Volatile Organic Compounds	Mobile - On-Road non-Diesel Light Duty Vehicles	37,753.3	39,560.7	34,413.8
Volatile Organic Compounds	Solvent - Consumer & Commercial Solvent Use	24,260.2	24,466.1	25,993.2
Volatile Organic Compounds	Solvent - Degreasing	3.8	2,540.0	2,430.2
Volatile Organic Compounds	Solvent - Dry Cleaning	855.8	5.6	5.0
Volatile Organic Compounds	Solvent - Graphic Arts	1.3	616.0	5,975.8
Volatile Organic Compounds	Solvent - Industrial Surface Coating & Solvent Use	982.1	6,121.4	4,746.3
Volatile Organic Compounds	Solvent - Non-Industrial Surface Coating	5,723.0	4,482.4	4,595.8
Volatile Organic Compounds	Waste Disposal	1,758.3	5,654.5	3,517.8
	Total	1,689,325	1,408,302	1,619,634

In addition to overall downward trending NOx and VOC emissions, DEQ finds that ozone and NO_2 ambient monitoring indicate relatively steady concentrations in recent years in spite of wildfires, population growth, higher than normal maximum and minimum temperatures in recent years[21] and an increase in vehicle miles traveled.[22] DEQ maintains an ambient monitoring network of more than 30 stations statewide and has most recently summarized monitoring data in the 2016 Air Quality Annual Report.[23]

DEQ has monitored ozone at six locations in the cities of Bend, Eugene, Medford, Portland, Salem and Hermiston since the mid-1990s and recently installed an additional station in The Dalles. Figure 1 is excerpted from DEQ's 2016 annual report and shows that ozone concentrations – calculated as a three year average of the fourth highest daily maximum – overall have trended downward since the 1990s. DEQ monitors nitrogen dioxide at two locations in the cities of Portland and Tualatin, along the Interstate 5 corridor. Figure 2 illustrates that NO_2 concentrations appear to be relatively steady with no discernable trend in the past six years. DEQ concludes that control strategies are adequate to minimize transport of NOx to downwind states.

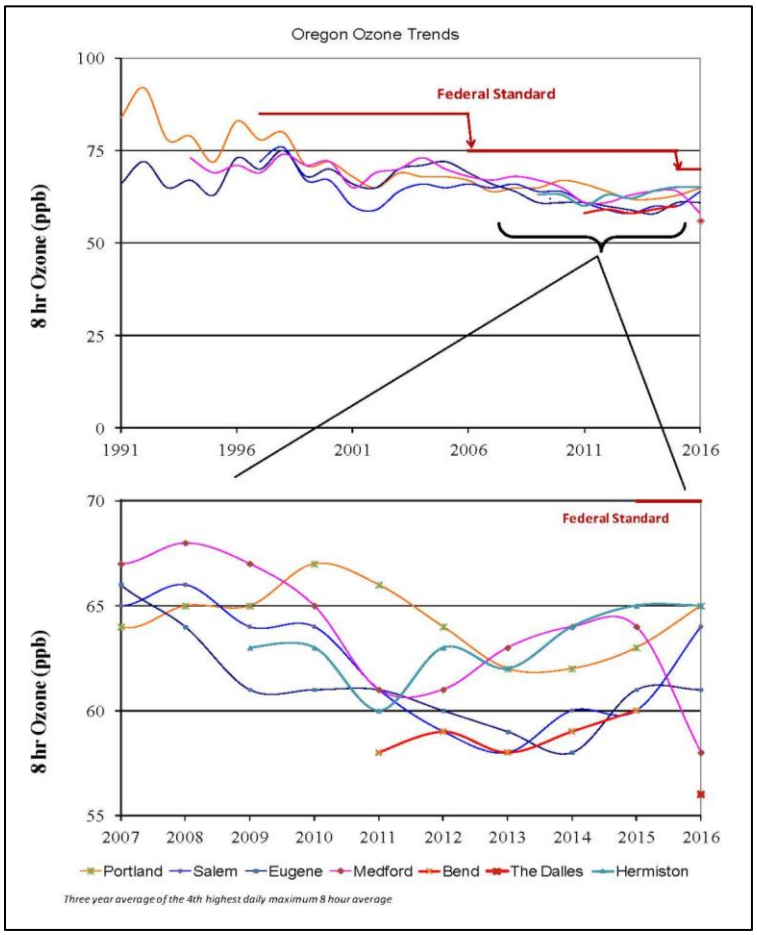

Figure 1: Ozone trends 2007 - 2016 in Oregon, from DEQ 2016 Air Quality Annual Report.

[21] National Weather Service: https://www.wrh.noaa.gov/pqr/pdxclimate/pg13.pdf, https://www.wrh.noaa.gov/pqr/pdxclimate/pg34.pdf,
[22] Oregon Dept. of Transportation: https://www.oregon.gov/ODOT/Data/Documents/VMT_Statewide_Graph.pdf
[23] https://www.oregon.gov/deq/FilterDocs/OrAirQualityAnnualReport2016.pdf

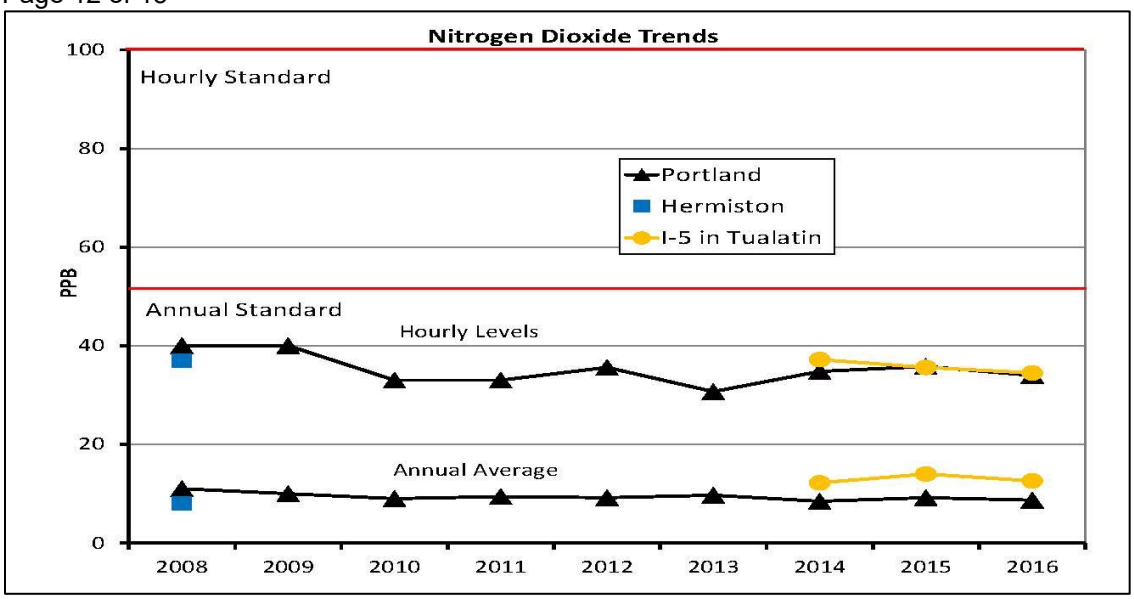

Figure 2: Nitrogen dioxide trends 2008 – 2016 in Oregon, from DEQ 2016 Air Quality Annual Report.

To maintain compliance with the ozone NAAQS and minimize potential pollutant transport to neighboring states, DEQ will continue implementing control strategies such as those referenced in the 2007 Portland Air Quality Area Ozone Maintenance Plan[24]:

- Motor Vehicle Inspection Program (OAR 340-256-0300 through 0470);
- Emission Standards for VOC Point Sources (Reasonably Available Control Technology) for existing major industrial facilities (OAR 340-232-0010 through 0230);
- New Source Review Program for new and expanding major industrial facilities (OAR 340-224-0010 through 0100 and 340-225-0010 through 0090);
- Barge Loading Rules and Stage I vapor recovery systems that control VOCs from gasoline delivery operations (included within OAR 340-232);
- Aerosol Paint Rules that lower VOC content from spray paints sold in the Portland area (OAR 340-242-0700 through 0750);
- Motor Vehicle Refinishing Rules that require low-emitting painting methods at autobody shops (OAR 340-242-0600 through 0630); and
- Public education and outreach that encourages people to voluntarily reduce emissions, such as not mowing lawns and driving less on Clean Air Action Days (now called Air Pollution Advisories).

In the first half of 2019, DEQ intends to update rules pertaining to the Vehicle Inspection and Maintenance program, an important control strategy for reducing VOCs, NOx, and toxic pollutants. DEQ will be modeling[25] VOC, NOx and toxics emissions prevented with the current I/M program.

Throughout 2018, DEQ will be engaged in a rulemaking pertaining to reducing air toxics risk from stationary sources. DEQ plans to present rules to the Oregon Environmental Quality Commission in November 2018. Stationary, permitted sources will be required to report on toxics emissions and use a tiered screening process to assess their emissions for risk above action levels. DEQ will require certain facilities to reduce toxic emissions. These rules will require reporting on about 600 toxic air pollutants and provide risk based concentrations to assess and manage risk from about 230 pollutants, including

[24] Portland Air Quality Area Ozone Maintenance Plan (2007). Available at: https://www.oregon.gov/deq/aq/Pages/Maintenance-Areas.aspx
[25] As calculated with MOVES (Motor Vehicle Emissions Simulator), MOVES 2014 and MOVES2014a Technical Guidance, EPA-420-B-15-093, November 2015.

VOCs. Maintenance of current regulations and anticipated adoption of the updated rules identified above will assure that Oregon's ozone precursor emissions will continue to decline and not increase over the projected inventory.

5. Conclusions

DEQ concludes that Oregon emissions from Oregon sources do not contribute significantly to downwind nonattainment or maintenance receptors in other states. EPA's CAMx model projects 2023 ozone concentrations from Oregon to be less than a significant level of 0.70 ppb at downwind receptors in neighboring states. DEQ has relied on EPA model results to support this conclusion, as well as data from emission inventories and DEQ's ambient air monitoring network. Emission inventories indicate downward trends in VOC and NOx emissions, even with influence from wildfires in the 2014 emission inventory. DEQ's monitoring data shows NO_2 concentrations monitored in high volume traffic corridors to be relatively steady in spite of increased population and vehicle miles traveled. Oregon will continue implementing existing control strategies as described in 2007 Portland Ozone Maintenance Plan, such as the vehicle inspection program and emissions standards for VOC sources. Oregon's current control strategies appear adequate to prevent significant interstate transport of ozone to neighboring states.

Appendix A

Appendix A Figure 1: Ozone concentrations (ppb) outside California attributed to interstate transportation as calculated by EPA CAMx model. From EPA memo, 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), March 27, 2018.

Contributions to 2023 Nonattainment and Maintenance Sites Outside of California (Part 2)

Site ID	County	State	2023en Average	2023en Maximum	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY
40130019	Maricopa	AZ	69.3	71.4	0.00	0.09	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.02	0.05	0.00	0.00	0.00	0.00	0.00	0.22	0.06	0.00	0.00	0.02	0.00	0.00	0.01
40131004	Maricopa	AZ	69.8	71.0	0.00	0.14	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.01	0.06	0.00	0.00	0.00	0.00	0.00	0.11	0.06	0.00	0.00	0.03	0.00	0.00	0.00
80050002	Arapahoe	CO	69.3	71.3	0.34	0.33	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.12	0.11	0.00	0.00	0.00	0.02	0.00	0.30	1.23	0.00	0.00	0.04	0.00	0.00	1.04
80350004	Douglas	CO	71.1	73.2	0.32	0.32	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.12	0.10	0.00	0.00	0.00	0.02	0.00	0.36	1.08	0.00	0.00	0.04	0.00	0.00	1.00
80590006	Jefferson	CO	71.3	73.7	0.41	0.31	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.24	0.10	0.00	0.00	0.00	0.02	0.00	1.02	0.83	0.00	0.00	0.04	0.00	0.00	0.81
80590011	Jefferson	CO	70.9	73.9	0.36	0.38	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.18	0.10	0.00	0.00	0.00	0.02	0.00	0.94	1.04	0.00	0.00	0.03	0.00	0.00	1.03
80690011	Larimer	CO	71.2	73.0	0.25	0.37	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.05	0.10	0.00	0.00	0.00	0.03	0.00	0.40	1.05	0.00	0.00	0.10	0.00	0.00	0.88
81230009	Weld	CO	70.2	71.4	0.27	0.24	0.00	0.00	0.77	0.00	0.00	0.00	0.00	0.08	0.04	0.00	0.00	0.00	0.03	0.00	1.05	0.54	0.00	0.00	0.05	0.00	0.00	0.58
90010017	Fairfield	CT	68.9	71.2	0.06	0.00	0.01	6.24	0.04	17.31	0.29	0.07	1.04	0.15	0.00	5.11	0.01	0.06	0.03	0.15	0.30	0.03	0.01	1.27	0.02	0.68	0.26	0.07
90013007	Fairfield	CT	71.0	75.0	0.07	0.01	0.02	6.94	0.06	14.12	0.40	0.07	1.84	0.21	0.00	6.32	0.02	0.11	0.02	0.31	0.44	0.04	0.01	1.51	0.01	1.10	0.24	0.08
90019003	Fairfield	CT	73.0	75.9	0.07	0.01	0.02	7.75	0.06	15.80	0.43	0.06	1.60	0.21	0.01	6.56	0.02	0.12	0.02	0.28	0.45	0.04	0.01	1.91	0.01	1.14	0.20	0.08
90099002	New Haven	CT	69.9	72.6	0.09	0.01	0.03	5.06	0.04	15.03	0.32	0.15	1.17	0.24	0.01	4.87	0.02	0.04	0.04	0.12	0.41	0.04	0.02	1.26	0.04	0.61	0.25	0.10
240251001	Harford	MD	70.9	73.3	0.13	0.01	0.00	0.07	0.09	0.16	0.42	0.07	2.77	0.35	0.02	4.32	0.00	0.11	0.04	0.43	0.74	0.05	0.00	5.05	0.04	2.78	0.24	0.12
260050003	Allegan	MI	69.0	71.7	0.16	0.02	0.00	0.00	0.16	0.00	0.05	0.09	0.19	1.31	0.01	0.05	0.00	0.04	0.05	0.65	2.39	0.06	0.00	0.04	0.05	0.11	1.95	0.12
261630019	Wayne	MI	69.0	71.0	0.17	0.03	0.00	0.01	0.08	0.06	0.20	0.12	3.81	0.62	0.05	0.18	0.00	0.05	0.04	0.27	1.12	0.09	0.00	0.16	0.07	0.23	1.08	0.18
360810124	Queens	NY	70.2	72.0	0.12	0.02	0.06	8.57	0.07	13.55	0.35	0.12	1.88	0.32	0.02	7.16	0.04	0.09	0.05	0.13	0.58	0.07	0.07	1.56	0.03	1.01	0.38	0.14
360850067	Richmond	NY	67.1	68.5	0.12	0.02	0.00	10.53	0.09	6.57	0.37	0.09	2.05	0.36	0.01	10.41	0.00	0.10	0.04	0.36	0.70	0.07	0.00	1.67	0.02	1.54	0.30	0.12
361030002	Suffolk	NY	74.0	75.5	0.12	0.02	0.01	8.88	0.06	18.11	0.23	0.20	1.76	0.34	0.03	6.86	0.00	0.05	0.05	0.22	0.60	0.07	0.02	0.99	0.06	0.81	0.25	0.14
480391004	Brazoria	TX	74.0	74.9	0.23	0.06	0.00	0.00	0.08	0.00	0.04	0.06	0.06	0.90	0.05	0.01	0.00	0.04	0.05	0.28	26.00	0.14	0.00	0.02	0.06	0.02	0.40	0.27
481210034	Denton	TX	69.7	72.0	0.15	0.04	0.00	0.00	0.13	0.01	0.09	0.03	0.08	1.23	0.03	0.04	0.00	0.09	0.03	0.14	26.69	0.10	0.00	0.05	0.05	0.04	0.08	0.25
482010024	Harris	TX	70.4	72.8	0.08	0.03	0.00	0.00	0.05	0.00	0.14	0.04	0.05	0.20	0.03	0.02	0.00	0.14	0.02	0.26	25.62	0.08	0.00	0.06	0.03	0.05	0.07	0.14
482011034	Harris	TX	70.8	71.6	0.16	0.03	0.00	0.00	0.04	0.00	0.09	0.04	0.05	0.68	0.02	0.01	0.00	0.10	0.03	0.09	25.66	0.07	0.00	0.03	0.02	0.03	0.22	0.15
482011039	Harris	TX	71.8	73.5	0.19	0.03	0.00	0.00	0.06	0.00	0.04	0.06	0.05	0.58	0.03	0.01	0.00	0.03	0.04	0.30	22.82	0.08	0.00	0.02	0.04	0.01	0.28	0.20
484392003	Tarrant	TX	72.5	74.8	0.30	0.04	0.00	0.00	0.14	0.01	0.09	0.05	0.10	1.71	0.05	0.05	0.00	0.08	0.07	0.15	27.64	0.15	0.00	0.05	0.09	0.05	0.13	0.28
550790085	Milwaukee	WI	71.2	73.0	0.06	0.01	0.00	0.00	0.08	0.02	0.04	0.23	0.87	0.76	0.02	0.33	0.00	0.02	0.03	0.31	1.22	0.04	0.00	0.12	0.09	0.59	13.39	0.09
551170006	Sheboygan	WI	72.8	75.1	0.06	0.03	0.00	0.00	0.14	0.02	0.04	0.10	1.10	0.95	0.04	0.41	0.00	0.02	0.02	0.31	1.65	0.06	0.00	0.10	0.07	0.64	9.09	0.12

Appendix A Figure 2: Ozone concentrations (ppb) in California attributed to interstate transportation as calculated by EPA CAMx model. From EPA memo, 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), March 27, 2018.

Contributions to 2023 Nonattainment and Maintenance Sites in California (Part 2)

Site ID	County	State	2023 Average	2023 Maximum	NE	NV	NH	NJ	NM	NY	NC	ND	OH	OK	OR	PA	RI	SC	SD	TN	TX	UT	VT	VA	WA	WV	WI	WY
60190007	Fresno	CA	79.2	79.4	0.00	0.51	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.03	0.08	0.00	0.00	0.05	0.00	0.00	0.01
60190011	Fresno	CA	78.6	81.2	0.00	0.44	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.03	0.09	0.00	0.00	0.05	0.00	0.00	0.01
60190242	Fresno	CA	79.4	82.2	0.00	0.64	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.03	0.10	0.00	0.00	0.07	0.00	0.00	0.01
60194001	Fresno	CA	73.3	74.4	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
60195001	Fresno	CA	79.6	81.2	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00
60250005	Imperial	CA	73.3	74.6	0.00	0.09	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.03	0.05	0.00	0.00	0.00	0.00	0.00	0.20	0.05	0.00	0.00	0.02	0.00	0.00	0.04
60251003	Imperial	CA	79.0	80.0	0.00	0.25	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.02	0.06	0.00	0.00	0.00	0.00	0.00	0.09	0.06	0.00	0.00	0.02	0.00	0.00	0.03
60290007	Kern	CA	77.7	81.3	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.00	0.02	0.10	0.00	0.00	0.15	0.00	0.00	0.03
60290008	Kern	CA	71.3	72.8	0.00	0.31	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.10	0.00	0.00	0.01
60290014	Kern	CA	74.1	75.2	0.00	0.38	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.08	0.00	0.00	0.00
60290232	Kern	CA	73.7	75.2	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.17	0.00	0.00	0.00
60295002	Kern	CA	75.9	76.8	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.00	0.00	0.05	0.00	0.00	0.02
60296001	Kern	CA	70.9	72.4	0.00	0.58	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.02	0.00	0.00	0.00
60370002	Los Angeles	CA	73.3	75.1	0.00	0.12	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.16	0.03	0.00	0.00	0.04	0.00	0.00	0.01
60370016	Los Angeles	CA	86.1	88.9	0.00	0.14	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.02	0.15	0.00	0.00	0.00	0.00	0.00	0.18	0.03	0.00	0.00	0.05	0.00	0.00	0.02
60371201	Los Angeles	CA	79.8	79.8	0.00	0.17	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.13	0.09	0.00	0.00	0.05	0.00	0.00	0.03
60371701	Los Angeles	CA	78.1	79.1	0.00	0.11	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.02	0.15	0.00	0.00	0.00	0.00	0.00	0.19	0.03	0.00	0.00	0.05	0.00	0.00	0.02
60372005	Los Angeles	CA	72.3	74.6	0.00	0.08	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.21	0.06	0.00	0.00	0.04	0.00	0.00	0.02
60376012	Los Angeles	CA	85.9	87.4	0.00	0.18	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.03	0.16	0.00	0.00	0.00	0.00	0.00	0.21	0.08	0.00	0.00	0.07	0.00	0.00	0.04
60379033	Los Angeles	CA	76.3	77.2	0.00	0.15	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.02	0.19	0.00	0.00	0.00	0.00	0.00	0.15	0.04	0.00	0.00	0.07	0.00	0.00	0.02
60392010	Madera	CA	72.1	72.9	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.01	0.12	0.00	0.00	0.06	0.00	0.00	0.02
60470003	Merced	CA	69.9	71.0	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00
60650004	Riverside	CA	76.7	76.7	0.00	0.14	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.13	0.03	0.00	0.00	0.03	0.00	0.00	0.01
60650012	Riverside	CA	83.6	85.1	0.00	0.24	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.00	0.00	0.08	0.00	0.00	0.00
60651016	Riverside	CA	85.2	85.5	0.00	0.28	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.01	0.00	0.00	0.00
60652002	Riverside	CA	72.4	73.0	0.00	0.18	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.04	0.07	0.00	0.00	0.00	0.00	0.00	0.22	0.04	0.00	0.00	0.02	0.00	0.00	0.02
60655001	Riverside	CA	79.5	80.1	0.00	0.11	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.04	0.12	0.00	0.00	0.00	0.00	0.00	0.26	0.03	0.00	0.00	0.07	0.00	0.00	0.02
60656001	Riverside	CA	78.3	81.6	0.00	0.19	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.04	0.07	0.00	0.00	0.02	0.00	0.00	0.02
60658001	Riverside	CA	87.0	87.9	0.00	0.15	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.12	0.03	0.00	0.00	0.06	0.00	0.00	0.01
60658005	Riverside	CA	83.2	84.4	0.00	0.14	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.11	0.03	0.00	0.00	0.06	0.00	0.00	0.01
60659001	Riverside	CA	73.7	75.9	0.00	0.15	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.00	0.00	0.04	0.00	0.00	0.01
60670012	Sacramento	CA	74.5	75.9	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.20	0.00	0.00	0.00
60675003	Sacramento	CA	69.9	71.3	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00
60710005	San Bernardino	CA	96.2	98.1	0.00	0.25	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.02	0.20	0.00	0.00	0.00	0.00	0.00	0.13	0.03	0.00	0.00	0.07	0.00	0.00	0.01
60710012	San Bernardino	CA	84.1	85.8	0.00	0.15	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.02	0.11	0.00	0.00	0.00	0.00	0.00	0.12	0.06	0.00	0.00	0.04	0.00	0.00	0.03
60710306	San Bernardino	CA	76.2	77.4	0.00	0.06	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.00	0.00	0.04	0.00	0.00	0.00
60711004	San Bernardino	CA	89.8	91.0	0.00	0.14	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.02	0.15	0.00	0.00	0.00	0.00	0.00	0.22	0.04	0.00	0.00	0.05	0.00	0.00	0.02
60712002	San Bernardino	CA	93.1	95.0	0.00	0.16	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.01	0.23	0.00	0.00	0.00	0.00	0.00	0.13	0.01	0.00	0.00	0.08	0.00	0.00	0.00
60714001	San Bernardino	CA	86.0	88.5	0.00	0.19	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.03	0.01	0.00	0.00	0.05	0.00	0.00	0.00
60714003	San Bernardino	CA	94.1	95.8	0.00	0.21	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.01	0.25	0.00	0.00	0.00	0.00	0.00	0.12	0.08	0.00	0.00	0.15	0.00	0.00	0.01
60719002	San Bernardino	CA	80.0	81.4	0.00	0.14	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.05	0.10	0.00	0.00	0.00	0.00	0.00	0.28	0.05	0.00	0.00	0.04	0.00	0.00	0.04
60719004	San Bernardino	CA	88.4	88.7	0.00	0.20	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.01	0.23	0.00	0.00	0.00	0.00	0.00	0.11	0.07	0.00	0.00	0.14	0.00	0.00	0.01
60990006	Stanislaus	CA	74.8	75.7	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.00	0.00	0.11	0.00	0.00	0.01
61070006	Tulare	CA	69.1	71.9	0.00	0.05	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.00
61070009	Tulare	CA	76.1	77.2	0.00	0.11	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.07	0.00	0.00	0.00
61072002	Tulare	CA	68.9	71.4	0.00	0.21	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.16	0.00	0.00	0.00
61072010	Tulare	CA	73.1	73.9	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.17	0.00	0.00	0.00
61112002	Ventura	CA	70.5	72.2	0.00	0.18	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.02	0.16	0.00	0.00	0.00	0.00	0.00	0.13	0.08	0.00	0.00	0.08	0.00	0.00	0.03