



DEPARTMENT OF
ECOLOGY
State of Washington

Area Designation Recommendation and Response to Comments

**for One-Hour 2010 Sulfur Dioxide
National Ambient Air Quality Standard**

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Area Designation Recommendation and Response to Comments

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National Ambient Air Quality Standard**

Air Quality Program
Washington Department of Ecology
Olympia, Washington

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- Alan Newman
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- Lisa Kean
- Kim Allen

Executive Summary

EPA established the one-hour sulfur dioxide (SO₂) National Ambient Air Quality Standard (NAAQS) on June 2, 2010. The new standard allows for adequate protection of public health including children, the elderly, and those with asthma. An area meets the standard if the 99th percentile of daily maximum one-hour concentrations, averaged over three years, is below 75 parts per billion (ppb).

States can assess levels of sulfur dioxide in ambient air using a monitoring or modeling approach. States must provide the assessment results to EPA. Based on the results, states can recommend whether each area of the state is in attainment (meets the standard), nonattainment (does not meet the standard), or unclassifiable (not enough information to determine).

When EPA designates an area as in attainment or unclassifiable, the area can continue to rely on existing permitting programs and control strategies to maintain healthy air. When EPA determines that area is in nonattainment, the state must come up with a plan to bring the area back into attainment. This plan often requires existing facilities to install additional air pollution prevention controls or change their practices to emit fewer pollutants. It can also require new facilities to implement controls achieving the Lowest Achievable Emission Rate for the pollutant of concern.

In 2011, Ecology recommended to EPA to designate all areas of the state as unclassifiable. EPA did not designate areas following the recommendation. Ecology has since collected additional data and, in May 2017, proposed an updated recommendation for public review and comment. Ecology proposed to:

- Designate Lewis and Thurston Counties as in attainment based on air quality modeling and emissions data.
- Withdraw the 2011 recommendation to designate Chelan, Douglas, and Whatcom Counties as unclassifiable. Ecology will make its recommendation to EPA in 2020 after we collect sufficient monitoring data to determine status.
- Designate the remaining 34 counties as in attainment/unclassifiable based on available emissions inventory data, lack of large SO₂ facilities, and high likelihood the areas meet the standard.

The 31-day public comment period was from April 26 through May 26, 2017. No one requested Ecology hold a public hearing on the proposal. We received two comments: one in support and one with a clarifying question. We have included our response to comments in this submittal. We did not make any changes to the proposed recommendation as the result of the public comment period.

The responsibility to submit Washington's recommendation to EPA lies with the director of Ecology. The director is the governor's designee for developing and submitting air quality plans and designation recommendations. EPA will consider a state's recommendation and hold a public comment period before finalizing each area's designation.

2011 Air Quality Designation Recommendation and EPA SO₂ Data Requirements Rule

In 2011, Washington recommended to EPA to designate all areas of the state as "unclassifiable" for the 2010 SO₂ standard (Appendix A. 2011 Area Designation Recommendation Letter). At that time, Ecology did not have sufficient ambient air quality data to support SO₂ attainment designations. EPA has not acted on the 2011 recommendation. Instead, in August 2016, EPA finalized a new SO₂ Data Requirements Rule.¹ This rule clarified how states were to characterize levels of SO₂ in the ambient air in order to determine the area's attainment status.

Under the rule, Ecology identified large facilities or a cluster of facilities emitting 2,000 tons (four million pounds) or more of SO₂ emissions a year. EPA did not require additional SO₂ investigations in the areas where there were no SO₂ sources, or cluster of sources, emitting above the 2,000 tons threshold.

SO₂ Designations Schedule Consent Decree

The federal Clean Air Act requires EPA to designate the areas within two years of revising or issuing a new NAAQS. In 2013, Sierra Club and the Natural Resource Defense Council filed a lawsuit mandating EPA to finalize area designations for the 2010 SO₂ NAAQS. In March 2015, the court entered the consent decree and issued an enforceable order for EPA to complete the area designations. EPA must complete the designations on a schedule that contains three specific deadlines. Only two of them apply to Washington:

- December 31, 2017
- December 31, 2020

The December 31, 2017 deadline applies to 36 counties in Washington. These counties meet the following criteria:

- Do not have sufficient monitoring data, and either
- Do not have facilities that emit 2,000 tons or more of SO₂ emissions a year, or
- Modeling data characterizes levels of SO₂ around large facilities (2,000 tons and more).

The December 31, 2020 deadline applies to areas with large facilities (those that emit above 2,000 tons of SO₂ emissions a year), where the state elects to use a monitoring approach. In Washington, this applies to two aluminum smelters: one located on the border between Chelan and Douglas Counties, and the other located in Whatcom County. The monitoring equipment began operation by January 1, 2017 as required in 40 CFR 51.1203(c)(2). We will use the collected data to characterize the air quality around the facilities. Once we collect and analyze three years of monitoring data (2017-2019), Ecology will propose a recommendation about how

¹ <https://www.epa.gov/so2-pollution/final-data-requirements-rule-2010-1-hour-sulfur-dioxide-so2-primary-national-ambient>

to designate these three counties. In the meantime, Ecology withdraws its 2011 recommendation to designate Chelan, Douglas, and Whatcom Counties as unclassifiable.

Identifying Large SO₂ Facilities

Ecology identified three facilities in Washington that emitted more than 2,000 tons of SO₂ in 2014: two aluminum smelters, and one coal-fired power plant. The table below lists the three facilities, tons of SO₂ they emitted in 2014, and location of each facility by county.

Table 1. Large SO₂-Emitting Facilities in Washington

Facility Name	2014 SO ₂ (tons)	County
Alcoa Primary Metals Intalco Works	4,794	Whatcom
Alcoa Primary Metals Wenatchee Works	2,935	Chelan/Douglas
TransAlta Centralia Generation, LLC	3,037	Lewis

Intalco Works is located in Whatcom County and Alcoa-Wenatchee Works is located in Chelan County, on the border with Douglas County. Neither aluminum smelter is operating at full production at this time. Intalco Works operated at 75 percent capacity in 2016 and Wenatchee Works has curtailed operations since December 18, 2015, but can restart at any time. Even if the facilities do not operate at full capacity at this time, the SO₂ Data Requirements rule requires characterizing the SO₂ concentrations around these facilities. Ecology and EPA approved requests from the two aluminum smelters to install new SO₂ ambient air quality monitoring networks around their plants.

The third facility is TransAlta Centralia Power Plant located in Lewis County near the border with Thurston County. The facility has until December 31, 2020 to meet the state greenhouse gas emission standard or shut down one of the plant's two coal boilers. The facility is required to have the other unit meet the greenhouse gas emission performance standard or shut down the remaining coal boiler no later than December 31, 2025. Ecology chose a modeling approach in order to evaluate levels of SO₂ around the facility.

TransAlta Modeling Results and Attainment Recommendation for Lewis and Thurston Counties

On January 13, 2017, Ecology submitted a modeling report and results to EPA (Appendix B. Ecology's modeling analysis report submitted to EPA in January 2017). In this report, Ecology described its modeling analysis of the SO₂ levels around the TransAlta Centralia Coal Power Plant using the facility's actual emissions reported in 2014-2016 and one year of modeled meteorological data from 2016. The modeled domain includes an area of 50 x 50 kilometers (964 square miles) surrounding TransAlta, and comprises parts of Lewis and Thurston Counties.

In the absence of the local meteorological station, Ecology secured one year (2016) of relevant meteorological data from the University of Washington. While this is less than three years of meteorological data requested by EPA, Ecology believes it is adequate in this case. Obtaining additional meteorological data would require significant time and funding investments by Ecology and the University of Washington. The meteorological data from 2016 used in Ecology's modeling analysis is likely to overestimate SO₂ levels. Nevertheless, SO₂ concentrations in ambient air within 50 km (31 miles) of TransAlta's boundary are projected to remain well below the 2010 one-hour SO₂ NAAQS of 75 parts per billion.

There are no other large sources or clusters of sources emitting large amounts of SO₂ in Lewis and Thurston Counties. Per the 2014 National Emissions Inventory (version one) and Ecology's 2014 Comprehensive Inventory, all other sources of SO₂ emissions besides TransAlta, including natural sources, emitted 101 tons of SO₂ in 2014 in Thurston County and 132 tons in Lewis County. These countywide emissions make up less than a tenth of the 2000-ton threshold used for point sources.

Based on the results of the modeling analysis around TransAlta and emissions inventory, Ecology recommends designating Lewis and Thurston Counties as being in attainment of the 2010 one-hour SO₂ NAAQS.

Unclassifiable/Attainment Designation Recommendation

Ecology recommends designating the remaining 34 counties as unclassifiable/attainment. There are no facilities, or cluster of facilities, that emit 2,000 tons or more of SO₂ pollution a year in these 34 counties. Due to the drastic reductions in both SO₂ emissions and SO₂ concentrations in the ambient air after 1986, Ecology (with EPA approval) reduced the extensive SO₂ monitoring network we operated between 1980 and 1990. The three currently operating SO₂ monitoring stations in the 34 counties show SO₂ concentrations that are well below the one-hour standard. For more information and data on reductions in SO₂ emissions, see EPA's website: <https://www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data>. There are also no identified violations of the standard within the state and along the state borders. It is unlikely that emissions from these counties contribute to violations of the standard in adjacent states.

EPA often uses the designation category of "unclassifiable/attainment" for areas where appropriate air quality data demonstrating attainment are not available, but for which EPA has reason to believe they are likely in attainment and are not contributing to nearby violations. Based on the emissions inventory data and available limited monitoring data, Ecology asserts that these 34 counties are likely attaining the standard.

The table below summarizes Washington designation recommendation:

Table 2. Designation Recommendations, by County

Washington Counties – Designation Recommendations					
Attainment	Attainment/Unclassifiable				No recommendation
Lewis Thurston	Adams Asotin Benton Clallam Clark Columbia Cowlitz Ferry Franklin	Garfield Grant Grays Harbor Island Jefferson King Kitsap Kittitas Klickitat	Lincoln Mason Okanogan Pacific Pend Oreille Pierce San Juan Skagit Skamania	Snohomish Spokane Stevens Wahkiakum Walla Walla Whatcom Whitman Yakima	Chelan Douglas Whatcom

Response to Comments

Ecology held a public comment period on the proposed area designation recommendation from April 26, 2017 through May 26, 2017. During this 31-day public comment period, the public had an opportunity to review the proposal, provide comments, and request a hearing to be held on June 2 at 6 p.m. at Ecology’s Lacey office and via webinar. Since Ecology received no requests for a hearing, we posted a cancelation of the June 2 hearing on Ecology’s Public Involvement Calendar and did not extend the comment period.

Ecology notified the public about the opportunity to comment and request a hearing in the following ways:

- Newspapers – Ecology provided two newspaper notices: one in the Daily Journal of Commerce for statewide coverage and another one in The Chronicle in Lewis County.
- Web site – Ecology posted a notice on two Ecology web pages that provide information about the area designations and SO₂ standards. Ecology also added information about the public comment period and public hearing upon request to Ecology’s Public Involvement Calendar.
- E-mail distribution lists – Ecology sent out email notices to the project-specific email distribution list and to the Air Quality Rule and State Implementation Plan Updates listserv.

Copies of the public notices and related documents are in Appendix C.

Ecology provided the following ways for the public to submit comments on the proposal:

- On-line
- Email: aqcomments@ecy.wa.gov
- Mail: Anya Caudill, Air Quality Program, Washington State Department of Ecology, P.O. Box 47600, Olympia, WA 98504-7600

Ecology received two comments on the proposal. Our response is below. Copies of the comments are in Appendix D.

Comment 1:

The Economic Development Council of Lewis County submitted the following comment:

“Our organization supports the decision that DOE has made in determining that Lewis County is an "Attainment" area. Thank you for thoughtfully researching and measuring our air quality. The EDC agrees with the agency conclusions. We recognize the work that DOE is doing to safeguard our air quality and thank you for your efforts.”

Ecology’s response: Thank you for your support of our proposal.

Comment 2:

Steven Mrazek, BP Cherry Point Refinery, submitted the following comment:

“What is your assessment of the 2 1-hour periods above the standard monitored at the Ferndale-Kickerville Station in March? This makes me concerned.”

Ecology’s response:

Thank you for your question. We worked with Alcoa Aluminum Smelter facility located in Ferndale, Whatcom County, to install two ambient air monitoring stations to evaluate the levels of SO₂ around the facility. For details about the two SO₂ monitoring sites, see the 2016 Annual Monitoring Network Report, submitted to EPA in July 2017. You may contact Mike Ragan at mike.ragan@ecy.wa.gov for a copy of the report.

The two monitoring sites started collecting the SO₂ monitoring data on January 1, 2017. To evaluate compliance with the 2010 one-hour SO₂ NAAQS, we must collect three years of data. An area will meet the standard if the 99th percentile of daily maximum one-hour concentrations, averaged over three years, is below 75 parts per billion (ppb). An exceedance is an incident when the one-hour concentration of SO₂ in the air is above 75 ppb. An exceedance does not automatically lead to a violation of a standard and nonattainment designation.

Between January and May 2017, the Ferndale-Kickerville Road site has recorded one exceedance of the 2010 one-hour SO₂ NAAQS and the Ferndale-Mountain View Road site has recorded two. We continue to monitor the data closely and regularly. The facility is aware of the exceedances as well. Once we collect a full three years of data (2017-2019), we will be able to determine whether either of the monitors is in violation of the 2010 one-hour SO₂ NAAQS. After collecting three years of data, Ecology will submit the monitoring results to EPA. Based on the results, Ecology will have an opportunity to provide a recommendation to EPA about how to designate the area as well as recommend the area’s designation boundaries. We will hold a public comment period before submitting our recommendation to EPA.

Next Steps

EPA will consider Ecology's recommendation and review the relevant air quality data. EPA will notify the Governor if it agrees with or modifies the state's recommendation. Ecology will have an opportunity to respond to EPA's proposal and submit new information or justification, if appropriate. EPA will also offer an opportunity for the public to comment on its proposed designation. By terms of the consent decree discussed above, EPA must issue final designations for these areas by December 31, 2017.

One year after EPA designates an area as in attainment or unclassifiable, the older and less protective annual and 24-hour SO₂ ambient air quality standards will no longer apply in those areas. See WAC 173-476-130 and 40 CFR 50.17 for additional details about this "sunset provision."

Ecology will continue regular evaluations of the air quality for SO₂ compliance in all areas of the state. By July 1, 2018, Ecology will review any changes in emissions at TransAlta and determine if we need to conduct additional modeling to ensure the area continues meeting the standard. EPA may waive this requirement as long as the facility complies with the existing permit limit.

Appendices

Appendix A. 2011 Area Designation Recommendation Letter



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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June 2, 2011

Mr. Dennis J. McLerran
Regional Administrator
U. S. Environmental Protection Agency, Region 10
1200 Sixth Avenue, Suite 900
Seattle WA, 98101-3140

RE: National Ambient Air Quality Standard for Sulfur Dioxide – WA State Designations

Dear Mr. McLerran:

Thank you for your April 4, 2011, letter requesting submission of the state of Washington's recommended designations for the new primary National Ambient Air Quality Standard (NAAQS) for Sulfur Dioxide (SO₂) by June 3, 2011.

On June 3, 2010, the EPA Administrator signed the final rule establishing a new 1-hour primary SO₂ NAAQS of 75 parts per billion (ppb) to protect public health. The rule was published in the Federal Register on June 22, 2010 (75 FR 35520). The Clean Air Act provides each state with an opportunity to recommend designations of attainment (meets the NAAQS), nonattainment (does not meet the NAAQS), or unclassifiable (insufficient information) for all areas of the state.

The Director of the Washington State Department of Ecology has been designated by the Governor with responsibility for the state implementation plan under the Clean Air Act. As the designee of the Governor, I recommend that the entire state of Washington be designated unclassifiable. The state of Washington does not have any ambient monitoring data and air quality modeling analysis that can serve as a basis for designations.

If you have questions about the recommendation, please contact Doug Schneider of my staff at (360) 407-6874 or doug.schneider@ecy.wa.gov.

Sincerely,

Ted Sturdevant
Director

cc: Steve Body, Region 10 EPA
Stu Clark – Ecology, Air Quality Program Manager
Laurie Hulse-Moyer – Ecology, Air Quality Program
Julie Oliver – Ecology, Air Quality Program
Mike Ragan – Ecology, Air Quality Program
Doug Schneider – Ecology, Air Quality Program
Washington Air Quality Managers Group



**Appendix B. Ecology's Modeling Analysis Report
Submitted to EPA in January 2017**



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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January 13, 2017

Janis Hastings, Associate Director
U.S. EPA Region 10
Office of Air, Waste and Toxics
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

RE: Results of the modeling analysis of the levels of sulfur oxides (SO₂) in the ambient air around TransAlta Centralia Power Plant; status of area designation recommendations.

Dear Ms. Hastings:

In July 2016, Washington State Department of Ecology (Ecology) notified the Environmental Protection Agency (EPA) that Ecology plans to model SO₂ concentrations in the ambient air around TransAlta Centralia Generation, LLC (FIPS 53041). EPA requires this modeling under the 2015 Data Requirements Rule for the 2010 1-Hour SO₂ Primary National Ambient Air Quality Standard. This modeling serves as a basis for EPA to designate the area as attainment (meeting the standard), nonattainment (not meeting the standard), or unclassifiable (not enough information) by December 31, 2017.

Ecology modeled TransAlta's 2014-2016 actual emissions using the WRF- MMIF v3.2- AERMET- ADJ_U*- AERMOD (v16216) system. Ecology's modeling analysis shows the SO₂ concentrations around the facility are well below the 75 parts per billion level of the standard. The attached report details Ecology's modelling process and results.

On July 22, 2016, EPA issued a memo providing information on the schedule and process for the area designations, referred to as Round 3. In Washington, this round applies to all areas of the state except two areas where Ecology established a new SO₂ monitoring network. In 2011, Ecology recommended designating all areas of the state as unclassifiable. Ecology will review the need to modify the earlier recommendation based on the results of the modeling analysis at TransAlta. If appropriate, Ecology will submit an updated designation recommendation to EPA by March 31, 2017, after a state-required public comment period (per WAC 173-400-171(12)).

Ms. Janis Hastings
January 13, 2017
Page 2

If you have any questions about this letter, please contact Anya Caudill at Anya.Caudill@ecy.wa.gov or (360) 407-6630.

Sincerely,



Stuart A. Clark, Manager
Air Quality Program

Enclosure: *Technical Report "Air Quality Modeling Results: Levels of Sulfur Dioxide in the Ambient Air Around TransAlta Centralia Generation Power Plant"*

cc Debra Suzuki, EPA Region 10 (w/ enclosure)
Uri Papish, Southwest Clean Air Agency (w/ enclosure)
David Nicol, TransAlta Centralia Generations LLC (w/ enclosure)
Anya Caudill, Ecology (w/ enclosure, for records file)

Air Quality Modeling Results:
Levels of Sulfur Dioxide in the Ambient Air
Around TransAlta Centralia Generation
Power Plant

Technical Report

Prepared By:
Ranil Dhammapala
Air Quality Program
Washington State Department of Ecology

January, 2017

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Introduction

In 2010, the Environmental Protection Agency (EPA) established a new federal 1-hour average National Ambient Air Quality Standard (NAAQS) for sulfur dioxides (SO₂). In 2015, EPA issued the SO₂ NAAQS Data Requirements Rule defining how states should evaluate levels of SO₂ in the ambient air around large industrial facilities or cluster of facilities. The results of the evaluation serve as a basis for EPA to designate each area as attainment (meeting the standard), nonattainment (not meeting the standard) or unclassifiable (not enough data to determine air quality status in the area). The rule offered a choice of three approaches: monitoring, modeling, or establishing a permit limit for the facility to not to exceed 2,000 short tons of SO₂ per year. Under the 2015 rule, EPA required states to submit results of the modeling analysis by January 13, 2017. A state may also recommend to EPA on how to designate the area based on the results of the evaluation.

The Washington State Department of Ecology (Ecology) identified TransAlta Centralia Generation Power Plant (TA), located at 913 Big Hanaford Road, Centralia, WA, as a facility that emitted more than 2,000 tons of SO₂ in 2015. Ecology selected air quality modeling as the tool to further characterize SO₂ levels around TransAlta. The 2015 rule specifies that states can model the most recent actual SO₂ emissions, or the maximum allowable emissions at the facility. Ecology, in consultation with the Southwest Clean Air Agency (SWCAA), elected to model air quality impacts based on the actual emissions rate.

Ecology's modeling analysis shows the SO₂ concentrations around the facility are well below the 75 parts per billion level of the standard. This document details the procedures, inputs and results of SO₂ modeling conducted at TA.



Figure 1: Google Street view of TransAlta- Centralia coal power plant, looking west

Modeling Analysis

After experimenting with AERSCREEN and AERMOD v15181, Ecology chose AERMOD v16216 to provide a more refined analysis of SO₂ impacts, given the two identical 143m tall and 9.1m diameter stacks and complex terrain surrounding the TA facility. Figures 1 and 2 show the facility location.

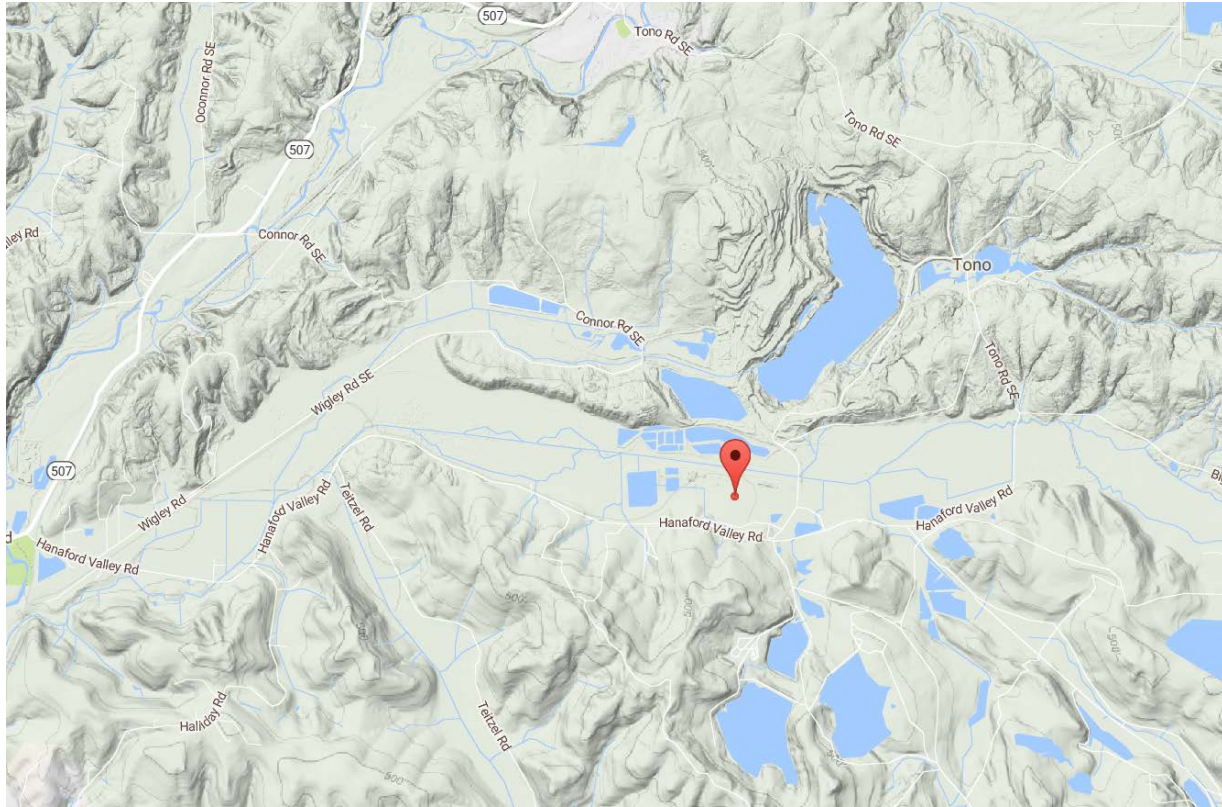


Figure 2: Google Terrain map of TransAlta- Centralia coal power plant

Meteorological Inputs

One year of meteorological data were collected on-site in 1994/ 1995, but the sensor was at 10m above ground level (AGL). Its windrose shown in Figure 3 is reasonably consistent with the valley terrain shown in Figure 2. However, no representative meteorological monitoring site nearby could characterize wind flows at the pollutant release height of 143m. As an alternative, Ecology obtained high resolution meteorological data produced by a mesoscale prognostic model. The University of Washington's Department of Atmospheric Sciences runs the Weather Research and Forecasting (WRF) model at a spatial resolution of 1.33km on a twice- daily basis. The configuration and performance of the UW- WRF system is described elsewhere^{1,2}. Observational nudging was not used since UW-WRF ran in forecast mode. The model configuration did not remain static³ over the time period considered here.

¹ <http://www.atmos.washington.edu/wrfrt/info.html>

² http://www.atmos.washington.edu/~qcreport/verification_index.psp?page=documentation

³ <http://www.atmos.washington.edu/mm5rt/log.html>

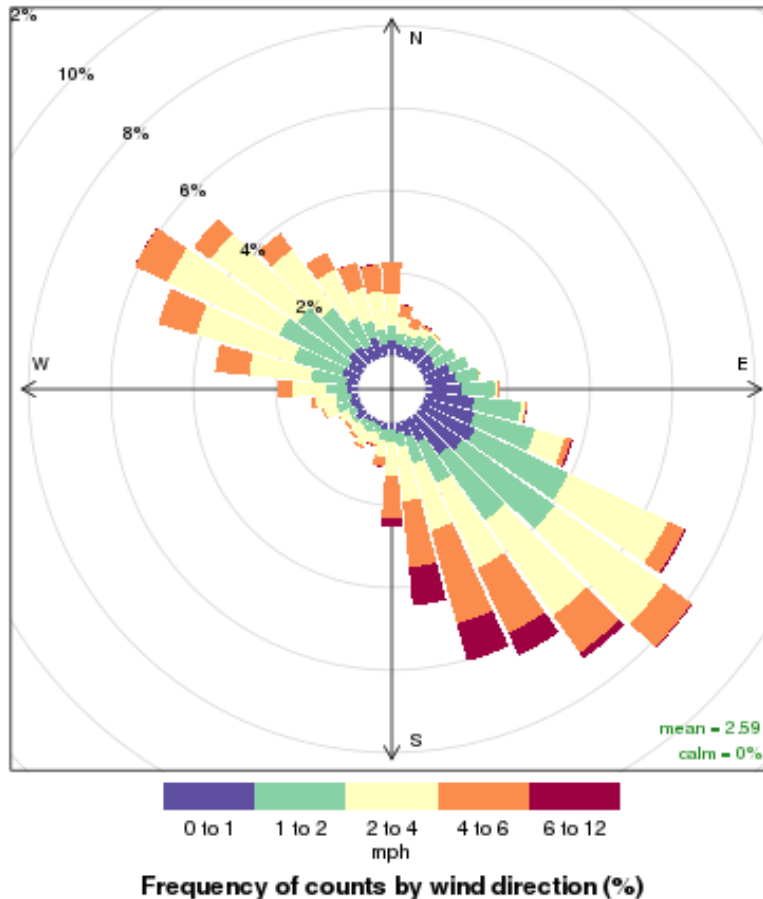


Figure 3: Windrose of 10m on-site data collected from April 1994- April 1995

Initially, Ecology located WRF files from 1 January 2014- 10 September 2016 (almost 2½ years) and configured EPA’s Mesoscale Model Interface Program (MMIF) v3.2 to produce the .SFC and .PFL files for direct use in AERMOD. However, it was brought to our attention that this was not the preferred MMIF configuration for regulatory applications. When we attempted to re-run MMIF and subsequently AERMET, the UW-WRF archive files were no longer easily accessible and we were only able to obtain one year of WRFOUT files. Since the initial MMIF-AERMOD modeling showed 2016 to have higher concentrations than 2014 and 2015, we opted to acquire the 2016 1.33km UW-WRF data in order to remain conservative in our analysis.

We ran MMIF to produce inputs to AERMET, with the PBL_RECALC parameter set to True. Mixing height calculations from WRF can be inaccurate since the PBL parameterization scheme assigns mixing heights to discrete UW-WRF vertical levels. Setting PBL_RECALC to true allows for PBL heights to be re-diagnosed and not constrained to UW-WRF levels. The PFL file contained 11 vertical levels, (2m, 10m, followed by nine levels interpolated using the tops of the following UW- WRF layers: 20, 40, 80, 160, 320, 640, 1200, 2000, 3000 and 4000m). MMIF was run on UW servers due to the large size of the WRFOUT files.

Ecology made some adjustments to the Stage 1, 2 and 3 AERMET input files produced by MMIF:

MMIF extracts vertical temperature differences but not cloud cover data from WRF. Therefore it is preferred if AERMET is supplied with cloud cover data from an observational site to properly process all the MMIF outputs. We obtained 2016 cloud cover data from the National Weather Service site at Centralia Airport (KCLS, about 15km from TA). We amended the Stage 1 and 2 input files to read and quality-check KCLS cloud cover data. Other parameters from the KCLS site were disregarded.

The METPREP section of the Stage 3 AERMET input file was supplied with the “METHOD REFLEVEL SUBNWS” option to process substituted KCLS cloud data. Further the “METHOD STABLEBL ADJ_U*” option was used to adjust anomalously low friction velocities during stable periods, thereby reducing model over-predictions. The ADJ_U* option is justified in this modeling application since it involves a tall stack situated in complex terrain. Terrain higher than the stack height is located >7km from the source.

The surface characteristics around the pseudo- on-site meteorological tower (which WRF- MMIF emulates) are derived from WRF rather than actual conditions. As such AERMET used MMIF’s AERSURFACE output file.

The 10m windrose produced by WRF- MMIF- AERMET (Figure 4) is not completely inconsistent with the 1994/ 1995 on- site windrose shown in Figure 3; WRF might have smoothed out or mis-located localized terrain slightly, causing the shift from southeast to south surface winds. The upper levels mimic the typical southwest flow aloft. As such, we deemed the WRF- MMIF- AERMET meteorological data adequately representative of the area for this application.

When only one year of meteorological data are available, the SO₂ modeling Technical Assistance Document allows the .SFC and .PFL files to be replicated over three years, so design values can be calculated by running the model with actual emissions data. We altered the year in both files and the Julian date in the SFC file accordingly, to facilitate this.

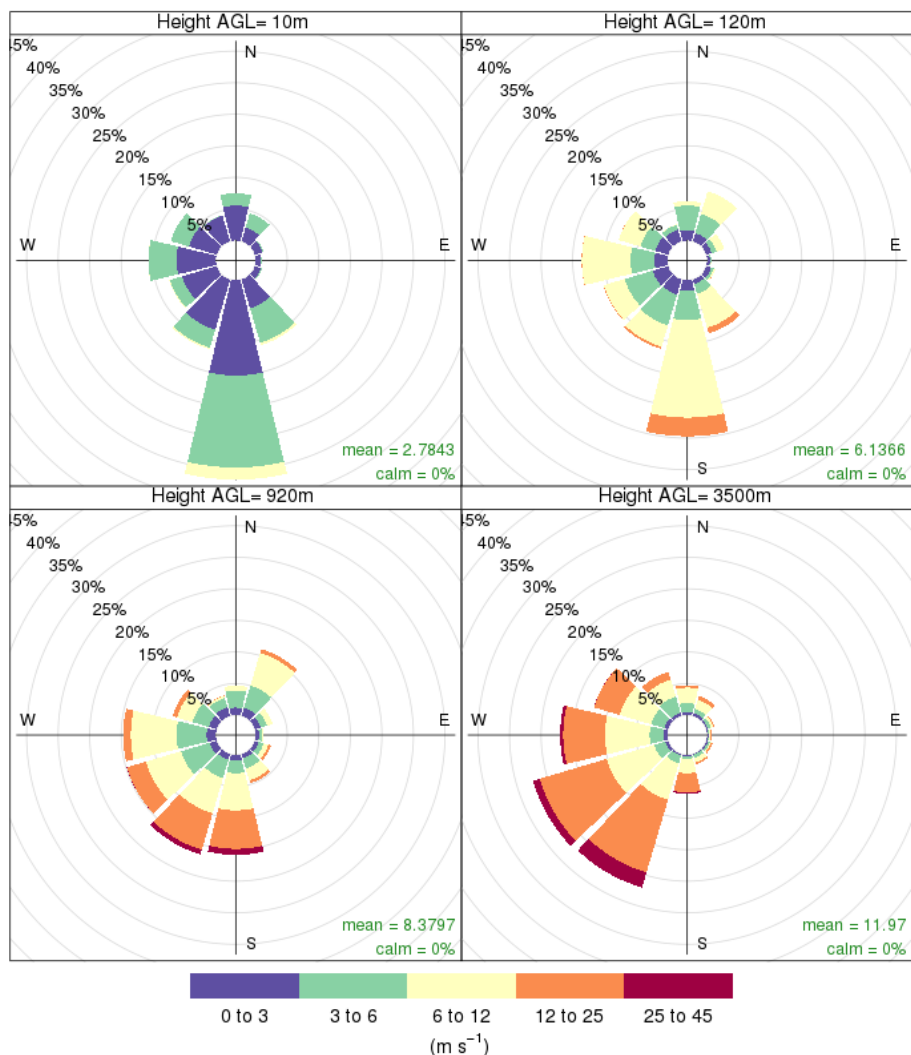


Figure 4: 2016 windroses at different heights over TransAlta, produced by 1.33km WRF- MMIF-AERMET

Emissions and Stack Parameters

Ecology used actual 2014- 2016 SO₂ hourly emission rates reported by the facility to EPA’s Clean Air Markets Division database⁴. As emissions from the final quarter of 2016 were not yet uploaded, they were obtained directly from SWCAA. SWCAA also supplied us with hourly stack exit flowrates and temperatures for both emission units. SO₂ emissions from each of the 26,304 hours were modeled as-is: even unreasonably high rates characteristic of plant malfunction or large values substituted by the CAMD quality checks were nevertheless retained. Data substitution was conducted as follows, to ensure valid stack parameters were available for each of the hours modeled:

1. If SO₂ > 0, retain valid, non-zero stack exit velocities and temperatures. To minimize plume rise and remain conservative in our analysis, we used the lowest temperature and exit velocity reported by the two stacks, during that hour.

⁴ <https://ampd.epa.gov/ampd/>

2. Non-zero stack temperatures had a lower and upper decile of 50°C and 59°C respectively. 50°C was substituted when non-zero emissions rates were present and temperatures were absent.
3. Stack flowrates (and thus, exit velocities) are linearly related to plant operating load. We developed quarterly relationships using stack- specific flow data over the last 3 years and selected the smallest regression coefficients from all 8 linear fits, even though the respective slope and intercept applied to different stacks/ quarters. Missing exit velocities were filled in using this linear model, which keeps plume rise to a minimum.

Due to the tall stack that easily escapes downwash, this modeling disregarded on- site buildings.

The plant does not operate during some spring months due to low power demand. Figure 5 shows how the emissions and stack parameters change with time, and 6 shows the diurnal and seasonal fluctuations in emissions. Lower emissions during nighttime hours are clearly seen in Figure 6.

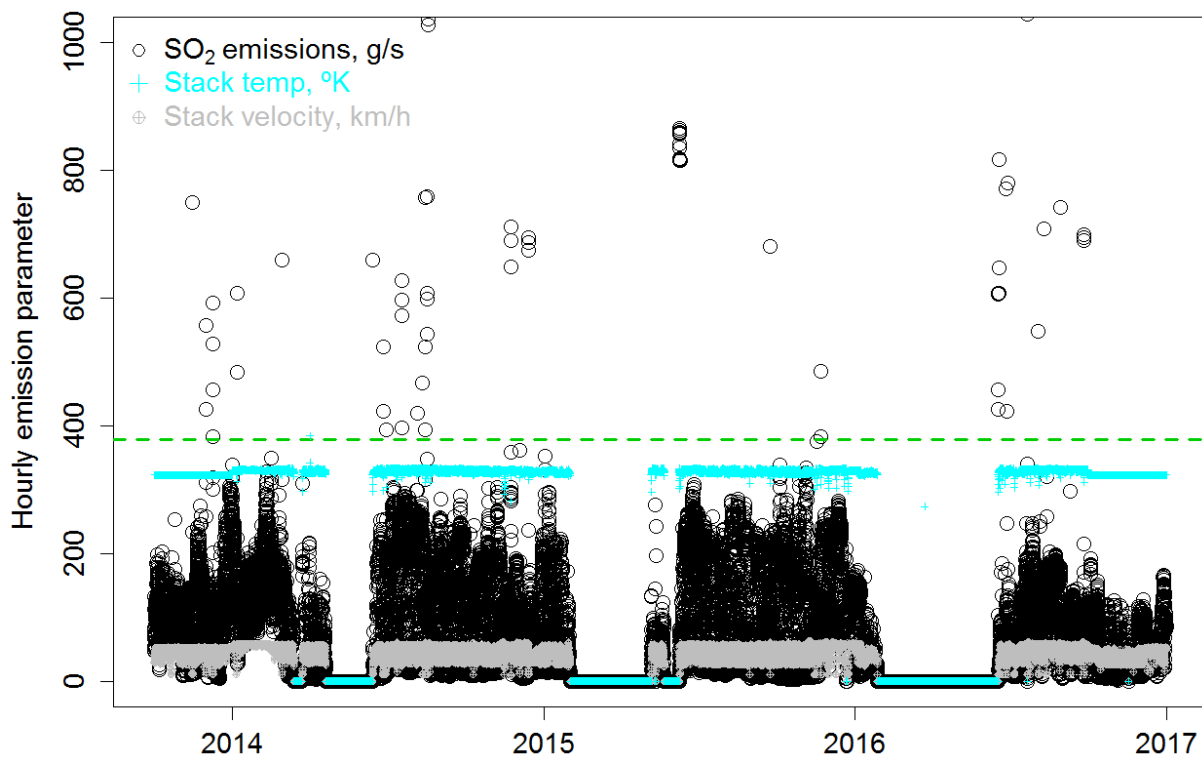


Figure 5: Hourly time series of TA stack parameters. Emissions above the dashed horizontal green line (3000 lb/hr), although retained in this analysis, are considered unreasonably high.

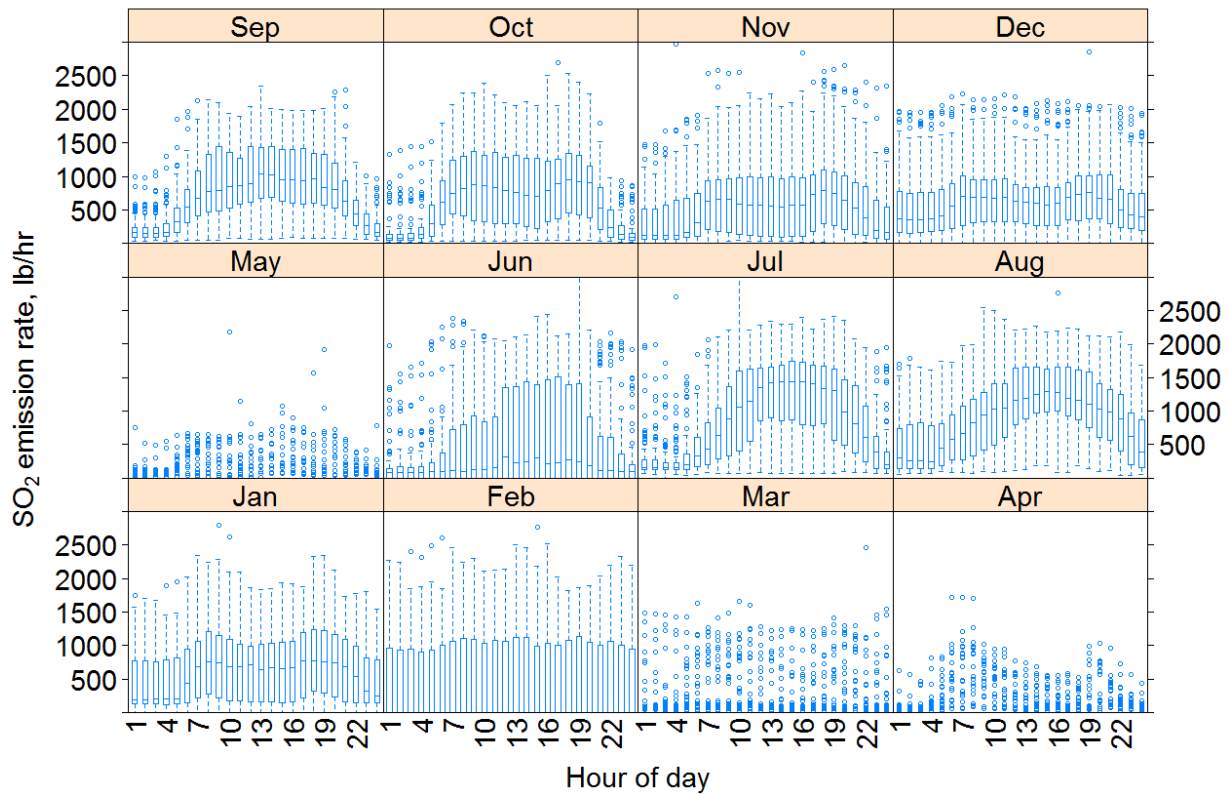


Figure 6: Boxplots of hourly TA SO₂ emission rates from 2014- 2016

Nearby Sources and Background SO₂ Concentrations

In an attempt to determine the significance of nearby sources, Ecology initially conducted AERSCREEN modeling using the 99th percentile of the actual 2014 emissions (2150 lb/hr). The model assumed flat terrain. Ecology also modeled SO₂ emissions from Cardinal Glass (46.6 tons/ yr, 25km to the southwest of TA). Cardinal Glass had a maximum impact less than 5 µg/m³. This is much smaller than SO₂ from TA, even when TA's concentrations were potentially under-estimated by setting the land cover to "forested" (Figure 6). SO₂ sources in Longview and the Tacoma Tideflats are more than 50 km away and emit less than 10 tons of SO₂ annually. Therefore the regional background SO₂ concentration of 13 µg/m³, obtained from <http://www.lar.wsu.edu/nw-airquest/lookup.html>, very likely accounts for all nearby SO₂ sources.

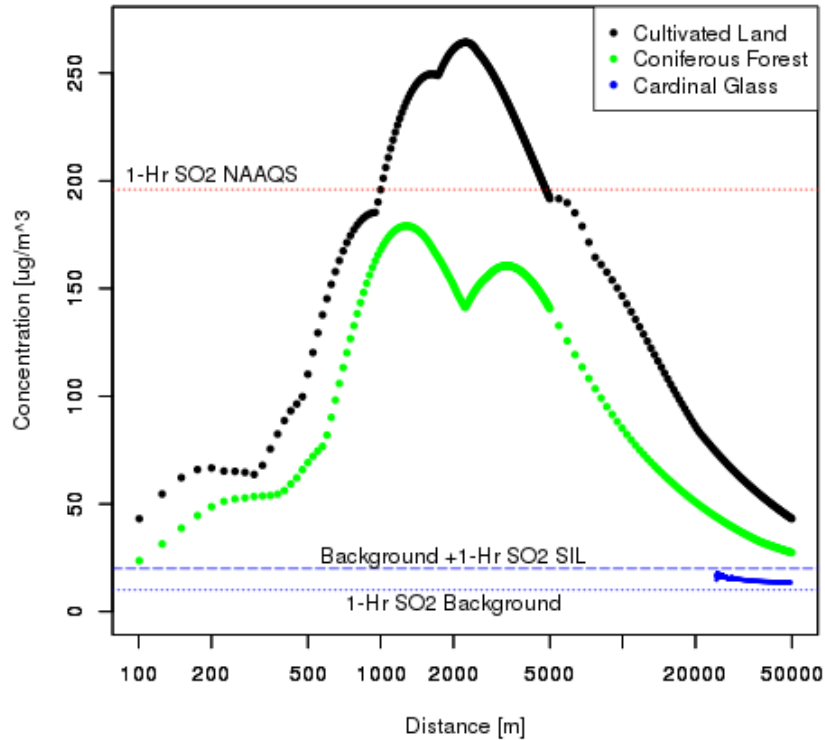


Figure 7: AERSCREEN results for TransAlta and Cardinal Glass SO₂

Modeling Domain

Since Figure 7 shows high concentrations occurring within 20km of the source, we approximately centered a 200m- spaced grid over a 50 km by 50 km domain on the TA facility (i.e. extending about 28km east of TA). AERMAP v11103 was used to process terrain data for a total of 62001 flagpole receptors 1.4m above ground level. We obtained the underlying 1/3 arc second terrain data with NLCD 2011 land cover, from MRLC⁵. Figure 8 shows the modeling domain and results.

AERMOD Results

Ecology added the 3-year average of the 99th percentiles of the highest daily 1-hr SO₂ concentrations at each receptor for 2014-2016, to the static SO₂ background concentration of 13 µg/m³. Figure 8 shows the spatial distribution of model results, inclusive of background. The maximum impacted receptor had an SO₂ design value of 100.7 + 13 = 113.7 µg/m³, or about 44 ppb. The highest impacts occur within or just outside the property boundary, mostly during a few hours in 2016 when light winds and mildly stable conditions coincided with some combination of high emission rates, low stack temperatures or exit velocities.

⁵ <http://www.mrlc.gov/viewerjs/>

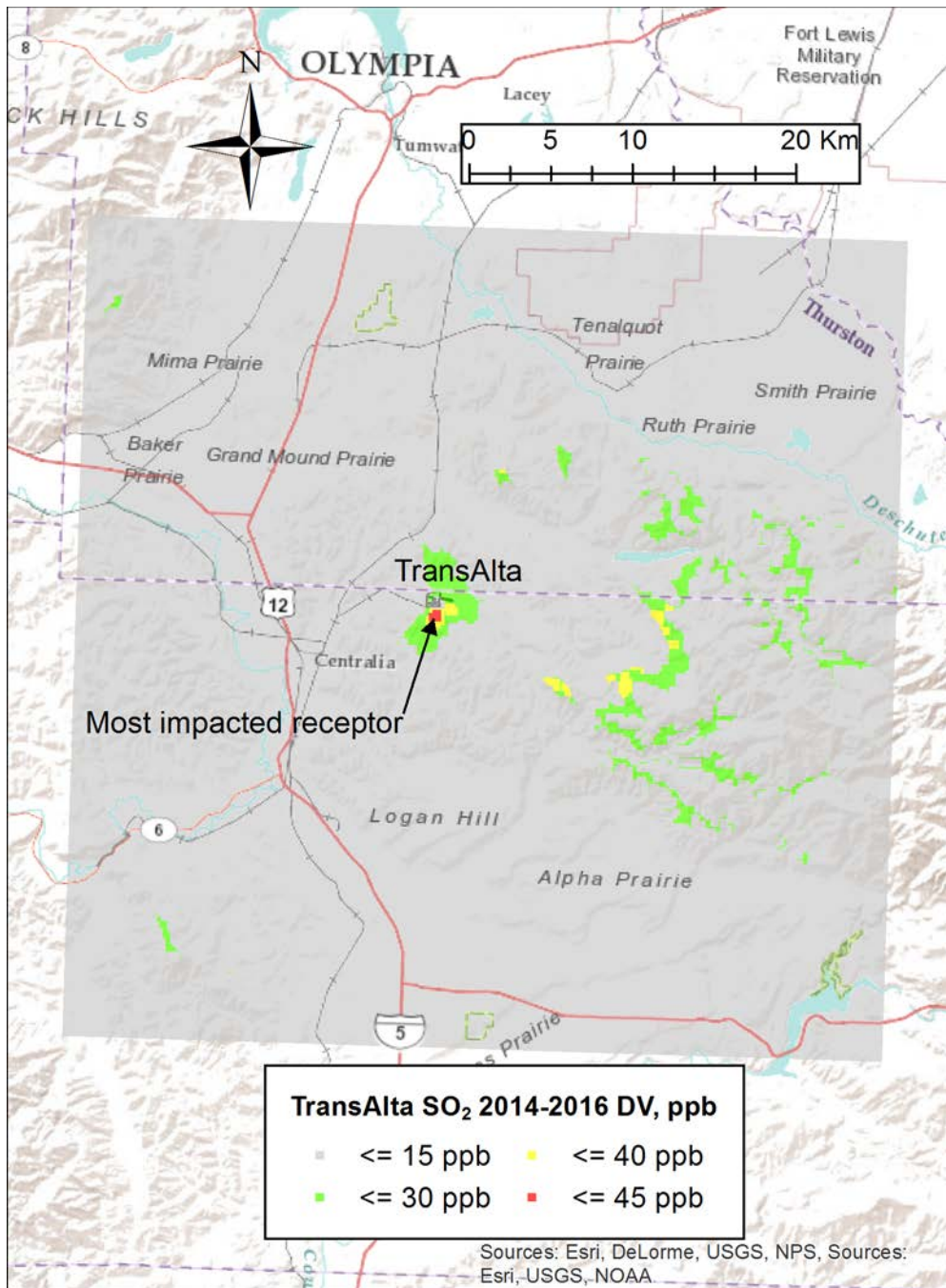


Figure 8: MMIF-AERMET- ADJ_U*- AERMOD modeled 2014-2016 SO₂ design values (inclusive of background) around TransAlta.

Conclusion: SO₂ NAAQS Compliance at TransAlta

Ecology modeled the actual 2014- 2016 SO₂ emissions from TransAlta using the WRF- MMIF v3.2- AERMET- ADJ_U*- AERMOD (v16216) system, making some conservative assumptions. The highest impacted receptor within the 50 x 50km modeling domain is located on elevated terrain about 8km east of the facility, and recorded a 3-year average of the 99th percentile concentration (i.e. design value) of 44 ppb inclusive of background.

This work shows the worst affected receptor is well below the SO₂ standard of 75ppb, confirming that TransAlta's Power Generation facility in Centralia, WA has complied with the 2010 1-hour SO₂ NAAQS.

Electronic files associated with this modeling (except WRFOUT files from the UW) are available on request.

Appendix C. Public Involvement Documents



Notice of Opportunity for Public Comment and to Request a Public Hearing Area Designation Recommendation for the 2010 Sulfur Dioxide National Ambient Air Quality Standard

What is a Designation Recommendation?

The Washington Department of Ecology is opening a public comment period on our recommendation to EPA to designate certain areas of the state as attainment or unclassifiable for the 2010 Sulfur Dioxide (SO₂) National Ambient Air Quality Standard (NAAQS).

The U.S. Environmental Protection Agency (EPA) established the one hour SO₂ NAAQS of 75 parts per billion (ppb) on June 3, 2010¹. The EPA determined that this level allows for adequate protection of public health including children, the elderly, and those with asthma. An area meets the standard if the 99th percentile of daily maximum one hour concentrations, averaged over three years, is below 75 ppb.

States can assess levels of SO₂ in the ambient air using either monitoring or modeling approach. Based on the results, they can recommend whether each area of the state is in attainment (meets the standard), nonattainment (does not meet the standard), or unclassifiable (insufficient information to determine). Since most of the SO₂ air pollution comes from burning fuels rich in sulfur, we focused our evaluation on areas with large facilities that emit more than 2,000 tons of SO₂ a year.

We propose to update our earlier (2011) recommendation to designate all areas of the state as unclassifiable. The updated recommendation includes:

- Designating Lewis and Thurston counties as attainment based on modeling and emissions data.
- Withdrawing the 2011 recommendation to designate Chelan, Douglas, and Whatcom counties as unclassifiable. Ecology will provide its recommendation to the EPA in 2020 after we collect sufficient monitoring data.
- Designating the remaining 34 counties as attainment/unclassifiable based on available emissions inventory data, absence of large SO₂ facilities, and high likelihood of the areas attaining the standard.

If an area is designated as attainment or unclassifiable, the area can continue to rely on existing permitting programs and control strategies to maintain healthy air. If an area is designated nonattainment, state must come up with a plan of how to bring the area back into attainment. This plan often requires existing facilities to install additional air pollution prevention controls or change their practices to emit fewer pollutants. It can also require new facilities to implement controls achieving the Lowest Achievable Emission Rate for the pollutant of concern.

¹ 75 FR 35520, <https://www.gpo.gov/fdsys/pkg/FR-2010-06-22/pdf/2010-13947.pdf>

How to Review the Designation Recommendation?

The proposed designation recommendation is available on-line at:

http://www.ecy.wa.gov/programs/air/sips/pollutants/NAAQs_SO2.htm

To request a hard copy of the proposal, please contact Anya Caudill at Anya.Caudill@ecy.wa.gov or (360) 407-6630. You may also schedule an appointment to review it at Ecology Headquarters, 300 Desmond Drive, Lacey, WA 98503.

To request ADA accommodation or translation service, call Ecology at (360) 407-6800, 711 (relay service), or (877) 833-6341 (TTY).

How to Comment

All comments will become a part of the official public record. We will prepare a response to the comments received. You can give us your comments in the following ways:

1. Submit your comments online at: <http://ac.ecology.commentinput.com/?id=98GVe>
2. E-mail your comments to AQComments@ecy.wa.gov
3. Mail comments to: Department of Ecology, Anya Caudill, PO Box 47600, Olympia, WA 98504
4. Testify or submit written comments at the hearing.

Public Comment Period

April 26, 2017 – May 26, 2017

Request a Public Hearing

The public can request a hearing by contacting Anya Caudill by email at anya.caudill@ecy.wa.gov or by phone at 360-407-6630.

We will receive requests until May 26, 2017. If anyone requests a hearing, we will extend the comment period through June 5, 2017, and hold the hearing at 6 pm on May 31, 2017 at the Department of Ecology, 300 Desmond Drive SE, Lacey, WA 98503. You can find a map and directions on Ecology's website <http://www.ecy.wa.gov/contact.html>. If you choose to attend the hearing, please refrain from wearing strong scented products as they may prevent people with allergies from participating in this public event. We will also have a webinar set up for those who would like to participate in the hearing remotely.

If we do not receive a hearing request, we will post a cancellation of the May 31 hearing on our public involvement calendar: <https://fortress.wa.gov/ecy/publiccalendar/>.

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[Air Quality](#) > [Paths to Cleaner Air](#) > [Air Quality Standards](#) > [Criteria Pollutants](#) > Sulfur Dioxide

Sulfur Dioxide (SO₂)

Sulfur dioxide is a gas or liquid that results from burning fuel with sulfur in it. Common sources include:

- Fossil fuel power plants
- Non-ferrous smelters
- Kraft pulp production

Health Effects

It increases symptoms in people with asthma and irritates the respiratory system.

Sulfur Dioxide National and State Ambient Air Quality Standards (NAAQS)

On April 30, 1971, EPA adopted primary and secondary NAAQS for sulfur oxides, measured as SO₂. The primary standards were 0.14 ppm, averaged over a period of 24 hours and not to be exceeded more than once per year, and 0.030 ppm annual arithmetic mean. The secondary standard was set at 0.50 ppm averaged over a period of 3 hours and not to be exceeded more than once per year.

After periodic reviews of additional scientific information, EPA announced first in 1986 and then in 1996, its decision not to revise the NAAQS for SO₂. In 2010, EPA replaced both the 24-hour and annual standards with a new short-term standard based on the 3-year average of the 99th percentile of the yearly distribution of 1-hour daily maximum SO₂ concentrations. EPA set the level of this new standard at 75 ppb.

Technical Table

Pollutant	Averaging Time	Level	Remarks	Measurement Method	Interpretation Method
Sulfur Dioxide	Annual*	0.02 ppmv	Not to be exceeded in a calendar year	40 C.F.R. Part 50, Appendix A-1 or A-2	WAC 173-476-130(3)
	24-hour*	0.14 ppmv	Not to be exceeded more than once per year		
	3-hour	0.5 ppmv	Not to be exceeded more than once per year		
	1-hour	75 ppbv	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years		

* The annual and 24-hour SO₂ standards will no longer apply to in a specific area one year after EPA has designated an area in attainment for SO₂.

[Contact Us](#)

Public Comment Period:

April 26 - May 26, 2017

Proposed Area Designation for Sulfur Dioxide Ambient Air Quality Standard

Ecology's [proposed recommendation](#) and [public notice](#) are available for review and comment. Ecology will hold a public hearing, if one is requested.

Submit comments [online](#) or by mail:

[Anya Caudill](#)

Air Quality Program

Washington State Department of Ecology

P.O. Box 47600

Olympia, WA 98504-7600

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Public Involvement Calendar

CALENDAR

Public Involvement Calendar

The Public Involvement Calendar is designed to engage the public in our **decision-making process**. We encourage you to read [Frequently Asked Questions about Effective Public Commenting](#).

Activities that are educational only or are co-sponsored by Ecology may be found under the "More Ecology Events" link in the left column of this page. We invite your [feedback](#) about this Public Involvement Calendar.

Public Hearings, Meetings, Workshops, Open Houses (Next 21 days. Use the search feature (right) for events beyond 21 days.)

May 31 2017 6:00PM Public Hearing - Lacey
----- **Sulfur dioxide area designations: Hearing held only if requested by May 26, 2017**

Ecology is recommending EPA designate certain areas of the state as attainment or unclassifiable for the 2010 Sulfur Dioxide (SO₂) National Ambient Air Quality Standard (NAAQS). Comments and requests for a public hearing must be received by May 26, 2017. Hearing will only be held if requested. If a hearing is requested, the comment period will be extended through June 5, 2017. If no hearing request is received by the deadline, cancellation of this hearing will be posted on this calendar.

More Information: [More Information](#)

Location: Dept of Ecology HQ/Southwest Regional Office

300 Desmond Drive SE

Lacey, WA

Sponsor: Ecology
ECY HQ

Contact: Anya Caudill
(360) 791-5499 / ACAU461@ecy.wa.gov

Apr 26 2017 Public Comment Period -
May 26 2017 Sulfur dioxide area designations: opportunity to comment and request a hearing

Ecology is recommending EPA designate certain areas of the state as attainment or unclassifiable for the 2010 Sulfur Dioxide (SO₂) National Ambient Air Quality Standard (NAAQS). Comments and requests for a hearing must be submitted by May 26, 2017. If requested, a hearing will be held on May 31, 2017. If a hearing is requested, the comment period will be extended through June 5, 2017.

More Information: [More Information](#)

Location:

, WA

Sponsor: Ecology
ECY HQ

Contact: Anya Caudill
(360) 791-5499 / ACAU461@ecy.wa.gov

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Proposed Area Designation for Sulfur Dioxide Ambient Air Quality Standard

Public Comment Form

Please note that this comment form is for the purpose of submitting a comment to the Washington State Department of Ecology. Commenter contact information is optional. Contact information is necessary if you want to receive future notices or responses related to this topic.

Commenter Contact Information

All fields are optional unless otherwise indicated.

Submitted by:

Individual

First Name

Last Name

Address

City/Town

United States

Washington

ZIP

Email

Your Comment

Comment period starts April 26 and ends May 26, 2017. Comments are due by May 26, 2017.

To make a comment, please enter comment(s) in the text area. To submit attachments use the "upload a file" button below. Then hit 'Continue' to review your comment(s).

Next steps: After the close of the comment period Ecology will review and respond to comments. We will post the response to comments on our web site and notify those who provided contact information.

Any information (e.g., personal or contact) you provide on this comment form or in an attachment may be publicly disclosed and posted on the Internet.

Proposed Area Designation for Sulfur Dioxide Ambient Air Quality Standard

[VIEW COMMENTS](#)

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Insert comment(s) on the Proposed Area Designation for Sulfur Dioxide Ambient Air Quality Standard



Upload a File

You may attach up to five 30 MB files to accompany your submission. Allowed formats are PDF, doc, docx, and image files. If you experience technical difficulties submitting your comment please contact the person listed at the bottom of this page.

CONTINUE »

Contact

Anya Caudill

r 360- 791-5499

h anya.caudill@ecy.wa.gov

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From: [ECY RE AQComments](#)
To: ["ECY-AQ-RULE-AND-SIP-UPDATES@LISTSERV.WA.GOV"](mailto:ECY-AQ-RULE-AND-SIP-UPDATES@LISTSERV.WA.GOV)
Subject: Washington SIP Notice: Ecology submits a list of SO2 emissions sources to EPA
Date: Wednesday, January 27, 2016 9:33:00 PM

Washington State Department of Ecology provided to the Environmental Protection Agency (EPA) a list of industrial facilities around which the air quality will be evaluated for compliance with the 2010 1-hour Sulfur Dioxide (SO₂) National Ambient Air Quality Standard. The three sources are:

- Alcoa Primary Metals Intalco Works in Whatcom County
- Alcoa Primary Metals Wenatchee Works in Chelan County
- TransAlta Centralia Generation, LLC in Lewis County

For each source on the list, Ecology will notify EPA by July 1, 2016, whether it will evaluate air quality through ambient monitoring or air quality modeling; or if Ecology and the source's owner have agreed to new emission limit(s) that will keep the source(s) SO₂ emissions below the 2,000 tons per year threshold.

Ecology will use the information gained from its evaluation to provide a recommendation to EPA on how each area is meeting the standard. EPA will make the final determination of an area's attainment status.

[EPA SO₂ Information](#)

[EPA SO₂ Data Requirements Rule](#)

[EPA SO₂ Fact Sheet](#)

[About State Implementation Plan \(SIP\) and Area Designations](#)

For more information, please contact Anya Caudill at 360-407-6630 or anya.caudill@ecy.wa.gov.

From: [ECY RE AQComments](#)
To: [ECY RE AQ Rulemaking and SIPs](#)
Subject: Washington SIP Notice: Evaluating Sulfur Dioxide (SO₂) Air Pollution for Air Quality Area Designations
Date: Thursday, May 26, 2016 7:21:12 PM

In January 2016, the Department of Ecology (Ecology) identified the areas around three large sources in Washington to be further evaluated for compliance with the 1-hour Sulfur Dioxide (SO₂) National Ambient Air Quality Standard set by EPA in 2010. The three facilities are:

- Intalco aluminum smelter in Ferndale, Whatcom County
- Alcoa's Wenatchee aluminum smelter in Chelan County
- TransAlta Centralia coal-fired power plant in Lewis County

Ecology has now determined it will use air quality modeling for the area around the coal-fired power plant and will use ambient monitoring for the areas around the two smelters, for determining whether these areas comply with the standard. Below is information on current opportunities to comment on the proposed SO₂ monitoring sites around the two smelters.

2016 Ambient Air Monitoring Network Report Public Comment Period: Ecology is inviting public comments on the proposed locations of the new SO₂ monitoring sites around the two smelters as part of the comment period on Ecology's Annual Ambient Air Monitoring Network Report. The comment period ends on June 20, 2016. For more information, see: [2016 Ambient Air Monitoring Network Report](#). If you have questions, please call Mike Ragan at (360) 407-6877.

Comments must be submitted in writing by letter, e-mail or fax. Send comments to:

Mike Ragan
Air Quality Program
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600
mike.ragan@ecy.wa.gov
FAX: (360) 407-7534

Agreed Orders for Ambient Monitoring: Ecology plans to issue orders to the Intalco aluminum smelter in Ferndale, and Alcoa's Wenatchee smelter, requiring them to do additional monitoring for SO₂ ambient air pollution at specific areas surrounding the plant. You may request a comment period on these orders. The request period runs May 25 – June 9, 2016.

For more information on the orders, visit Ecology's:

- [Intalco's webpage](#)
- [Alcoa Wenatchee webpage](#)

If you have questions, please call Anya Caudill at (360) 407-6630.

Requests for a public comment period must be submitted in writing by letter, e-mail or fax. Send requests to:

Anya Caudill
Air Quality Program
P.O. Box 47600
Olympia, WA 98504
anya.caudill@ecy.wa.gov
Fax: (360) 407-7534

If we don't receive a request for a comment period, Ecology will issue the order without holding one.

To request ADA accommodation for disabilities, or printed materials in a format for the visually impaired, call Ecology at (360) 407-7668. Persons with impaired hearing may call Washington Relay Service at 711. Persons with a speech disability may call TTY at 877-833-6341.

From: [Ecology's Air Quality Rule and State Implementation Plan Updates](#) on behalf of [ECY RE AQComments](#)
To: ECY-AQ-RULE-AND-SIP-UPDATES@LISTSERV.WA.GOV
Subject: Washington SIP Notice: Request for Comment on Proposed Area Designation for Sulfur Dioxide NAAQS
Date: Wednesday, April 26, 2017 2:40:03 PM

Washington State Department of Ecology evaluated the levels of sulfur dioxide (SO₂) in the air in 36 counties. Based on the evaluation, Ecology proposes a recommendation to EPA about how each area is meeting the 2010 SO₂ National Ambient Air Quality Standard.

Ecology's recommendation for area designation:

- Lewis and Thurston Counties — attainment or meeting the standard, based on air quality modeling and emissions inventory data
- Other 34 counties — attainment/unclassifiable, based on available air quality data and absence of large SO₂ sources or emissions
- Chelan, Douglas, and Whatcom Counties — coming in 2020, after we collect monitoring data

[Proposed recommendation](#) and [public notice](#) are available for review and comment during the public comment period: April 26 – May 26, 2017. Ecology will hold a public hearing, if one is requested.

Submit your comments [online](#) or by mail:

[Anya Caudill](#)
Air Quality Program
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

If you would like to be added to the project update distribution list or have questions, contact Anya Caudill by [email](#) or phone at 360-407-6630.



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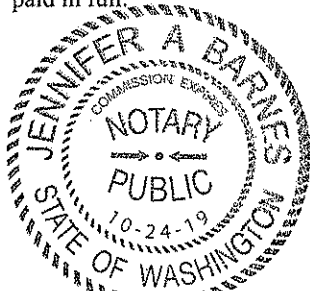
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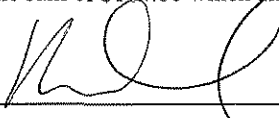
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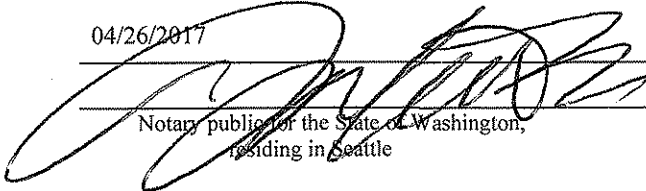
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Subscribed and sworn to before me on
04/26/2017


Notary public for the State of Washington,
residing in Seattle

State of Washington, King County

State of Washington

State of Washington Notice of Opportunity to Comment and Request a Hearing

The Washington Department of Ecology is opening a public comment period on our recommendation to EPA to designate certain areas of the state as attainment or unclassifiable for the 2010 Sulfur Dioxide (SO₂) National Ambient Air Quality Standard (NAAQS).

You may review and comment on the recommendation from April 26, 2017 through May 26, 2017. More information about area designations and the document is available at:

http://www.ecy.wa.gov/programs/air/sips/pollutants/NAAQS_SO2.htm

Public Hearing

We will receive requests until May 26, 2017. If anyone requests a hearing, we will extend the comment period through June 5, 2017, and hold the hearing at 6 pm on May 31, 2017 at the Department of Ecology, 300 Desmond Drive SE, Lacey, WA 98503. You can find a map and directions on Ecology's website <http://www.ecy.wa.gov/contact.html>. If you choose to attend the hearing, please refrain from wearing strong scented products as they may prevent people with allergies from participating in this public event. We will also have a webinar set up for those who would like to participate in the hearing remotely.

If we do not receive a hearing request, we will post a cancellation of the May 31 hearing on our public involvement calendar: <https://fortress.wa.gov/ecy/publiccalendar/>.

To comment: To request a hearing:

Email to AQComments@ecy.wa.gov Email: anya.caudill@ecy.wa.gov

Mail to: Call: 360-407-6783

Anya Caudill

Department of Ecology

PO Box 47600

Olympia, WA 98504-7600

Online: <http://ac.ecology.com/mentinput.com/?id=98GVe>

To request translation of the documents, interpretation at the hearing, ADA accommodation or materials in a format for the visually impaired, call Ecology at 360-

407-6800, Relay Service 711, or TTY 877-833-6341.

Para información en español, manda un correo electrónico al equipo de español de Ecología a preguntas@ecy.wa.gov.

Date of publication in the Seattle Daily Journal of Commerce, April 26, 2017.

4/26(349042)

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Chronicle**

a semi-weekly newspaper, which has been established, published in the English language, and circulated continuously as a semi-weekly newspaper in the City of Centralia, and in Lewis County, Washington, general circulation in Lewis County for more than six (6) months prior to the date of the first publication of the notice hereto attached, and that the said Chronicle was on the 7th day of July 1941, approved as a legal newspaper by the Superior Court of said Lewis County. And that the attached is a true copy and was published in regular issues (and not in supplement form) of said newspaper as LEGAL # 97484
RE:Notice of Opportunity to Comment and Request a Hearing

once each Day for a period of 1 day

commencing on 04/27/2017 and ending on 04/27/2017

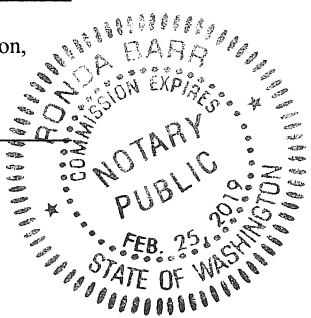
and both regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is the sum of \$ 214.00

Amanda Curry
Subscribed and sworn to before me 04/27/2017

Ronda Barr

Notary Public in and for the State of Washington,
residing at

Chehalis



97484 Notice of Opportunity to Comment and Request a Hearing

**State of Washington
Notice of Opportunity
to Comment and
Request a Hearing**

The Washington Department of Ecology is opening a public comment period on our recommendation to EPA to designate certain areas of the state as attainment or unclassifiable for the 2010 Sulfur Dioxide (SO2) National Ambient Air Quality Standard (NAAQS).

You may review and comment on the recommendation from April 26, 2017 through May 26, 2017. More information about area designations and the document is available at: http://www.ecy.wa.gov/programs/air/sips/pollutants/NAAQs_SO2.htm

Public Hearing
We will receive requests until May 26, 2017. If anyone requests a hearing, we will extend the comment period through June 5, 2017, and hold the hearing at 6 pm on May 31, 2017 at the Department of Ecology, 300 Desmond Drive SE, Lacey, WA 98503. You can find a map and directions on Ecology's website <http://www.ecy.wa.gov/contact.html>.

If you choose to attend the hearing, please refrain from wearing strong scented products as they may prevent people with allergies from participating in this public event. We will also have a webinar set up for those who would like to participate in the hearing remotely.

If we do not receive a hearing request, we will post a cancellation of the May 31 hearing on our public involvement calendar: <https://fortress.wa.gov/ecy/publiccalendar/>.

To comment:
Online: <http://ac.ecology.com/mentioninput.com/?id=98Gve>
Email to AQCComments@ecy.wa.gov

To request a hearing:
Email: anya.caudill@ecy.wa.gov
Call: 360-407-6783

Mail to:
Anya Caudill
Department of Ecology
PO Box 47600
Olympia, WA 98504-7600

To request translation of the documents, interpretation at the hearing, ADA accommodation or materials in a format for the visually impaired, call Ecology at 360-407-6800, Relay Service 711, or TTY 877-833-6341.

Para información en español, manda un correo electrónico al equipo de español de Ecología a preguntas@ecy.wa.gov.

Published: The Chronicle
April 27, 2017

Appendix D. Copies of Public Comments

Lewis County Economic Development Council

Dear DOE,

Our organization supports the decision that DOE has made in determining that Lewis County is an "Attainment" area. Thank you for thoughtfully researching and measuring our air quality. The EDC agrees with the agency conclusions. We recognize the work that DOE is doing to safeguard our air quality and thank you for your efforts.

Cordially,

Matt Matayoshi
Executive Director

From: [Mrazek, Steven](#)
To: [Caudill, Anya \(ECY\)](#)
Subject: RE: Request for Comment on Proposed Area Designation for Sulfur Dioxide NAAQS
Date: Thursday, April 27, 2017 4:06:33 PM

Good Afternoon Anya:

In terms of comments, I have just one – it's more of a question. What is your assessment of the 2 1-hour periods above the standard monitored at the Ferndale-Kickerville Station in March? This makes me concerned.

Hope you are well.

Steve

From: Caudill, Anya (ECY) [mailto:ACAU461@ECY.WA.GOV]
Sent: Wednesday, April 26, 2017 3:08 PM
To: Caudill, Anya (ECY)
Subject: Request for Comment on Proposed Area Designation for Sulfur Dioxide NAAQS

Hello all,

Washington State Department of Ecology evaluated the levels of sulfur dioxide (SO₂) in the air in 36 counties. Based on the evaluation, Ecology proposes a recommendation to EPA about how each area is meeting the 2010 SO₂ National Ambient Air Quality Standard.

Ecology's recommendation for area designation:

- Lewis and Thurston Counties — attainment or meeting the standard, based on air quality modeling and emissions inventory data
- Other 34 counties — attainment/unclassifiable, based on available air quality data and absence of large SO₂ sources or emissions
- Chelan, Douglas, and Whatcom Counties — coming in 2020, after we collect monitoring data

[Proposed recommendation](#) and [public notice](#) are available for review and comment during the public comment period: **April 26 – May 26, 2017**.

Ecology will hold a public hearing, if one is requested.

Submit your comments [online](#) or by mail:

[Anya Caudill](#)
Air Quality Program
Washington State Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

If you would like to be removed from this project update distribution list or have questions,

contact Anya Caudill by [email](#) or phone at 360-407-6630.

Thank you,

Anya Caudill
Environmental Planner
(360) 791-5499
anya.caudill@ecy.wa.gov

[Air Quality Program](#) | [Washington State Department of Ecology](#)