Verification of Continued Attainment in Select Maintenance Areas (2025)

Air Quality Program

Washington State Department of Ecology
Olympia, Washington

June 2025, Publication 25-02-018

Publication Information

This document is available on the Department of Ecology's website at:
https://apps.ecology.wa.gov/publications/SummaryPages/2502018.html

Related Information

2025 Ambient Air Monitoring Network Plan

Contact Information

Air Quality Program

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Olympia, WA 98504-7600
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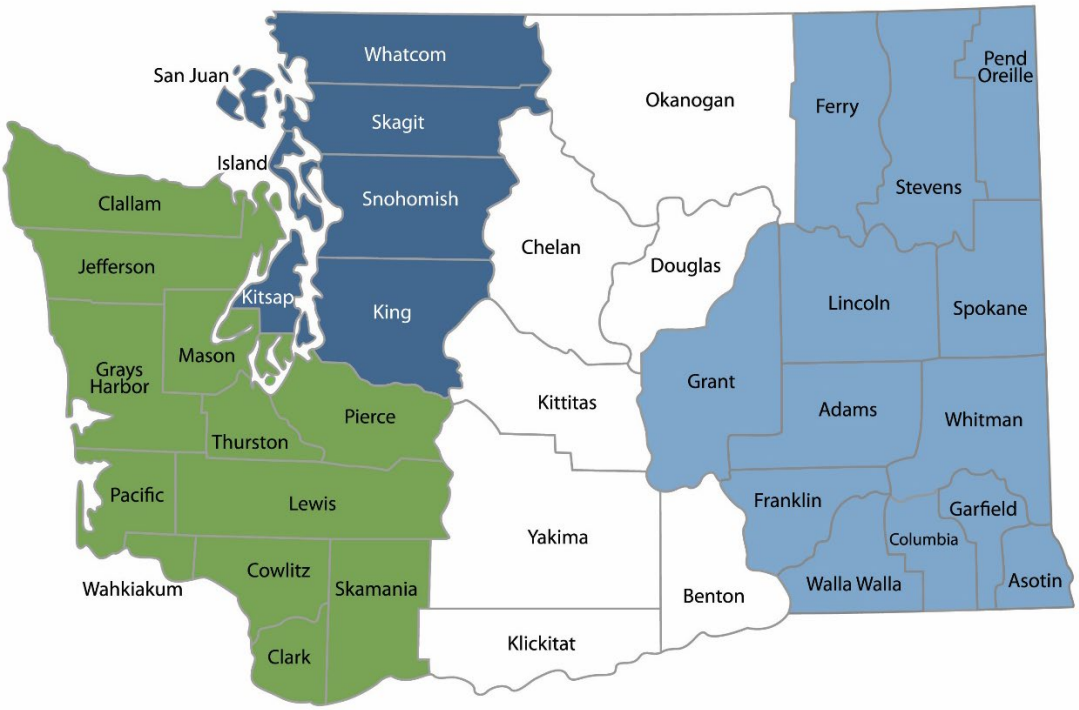
[1] https://fortress.wa.gov/ecy/publications/SummaryPages/2202013.html (not yet available)
[2] www.ecology.wa.gov/contact

Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region 360-407-6300	Northwest Region 206-594-0000	Central Region 509-575-2490	Eastern Region 509-329-3400

Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	P.O. Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	P.O. Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 West Alder Street Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 North Monroe Spokane, WA 99205	509-329-3400
Headquarters	Statewide	P.O. Box 46700 Olympia, WA 98504	360-407-6000

Local Clean Air Agencies

In 1967, Washington's Clean Air Act in Chapter 70A.15 of the Revised Code of Washington (RCW) established procedures for counties to create local clean air agencies (LCAA). Currently, there are seven Local Clean Air Agencies serving 21 counties. Their jurisdictional boundaries are shown on the map below.

Map of Areas Served by Local Clean Air Agencies

Download printable map and contact list at:
https://apps.ecology.wa.gov/publications/SummaryPages/1402010.html

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DEPARTMENT OF
ECOLOGY
State of Washington

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Executive Summary

This document summarizes the calculations for verification of continued attainment of National Ambient Air Quality Standards (NAAQS) in three of Washington's criteria pollutant maintenance areas:

- Spokane County Cabon Monoxide (CO) Maintenance Area
- Spokane County Coarse Particulate Matter (PM_{10}) Maintenance Area
- Whatcom County-Intalco Sulfur Dioxide (SO_2) Maintenance Area

A criteria pollutant maintenance area is a geographic area that failed to consistently attain one or more NAAQS at some point in the past. Most areas rely on monitoring data to demonstrate ongoing attainment. Those maintenance areas that opt to implement a limited maintenance plan option, or where an alternative approach to air quality monitoring had been approved, must submit additional verification data. These data are submitted annually during the first 20 years after the redesignation to attainment unless specified otherwise in the area's maintenance plan.

The Spokane County CO and PM_{10} maintenance areas have approved Limited Maintenance Plans requiring annual verification of continued attainment. The Whatcom County-Intalco SO_2 maintenance plan includes an alternative to monitoring approach to annual verification. Based on 2024 data, these three select maintenance areas continue to attain their respective standards.

For the purposes of the transportation conformity analyses, this document supports the Spokane CO and PM_{10} maintenance areas' ongoing eligibility for the limited maintenance planning option. Under this option, the transportation emissions budget test is not required as part of the transportation planning process. Transportation emissions were not a contributing factor within the Whatcom County-Intalco SO_2 area.

Maintenance Areas

Washington has five criteria pollutant maintenance areas within their 20-year maintenance planning periods as of July 1, 2025. Verification documentation is required for areas that qualified for the Limited Maintenance Plan approach and those whose Maintenance Plans include annual verification requirements. These maintenance areas are marked with an (*). Select maintenance areas demonstrate continued attainment of the NAAQS either through monitoring or through EPA-approved alternate methods. These methods are summarized in Table 1.

The Whatcom County-Intalco SO_2 Area has been redesignated to attainment in December of 2024 and is transitioning from the monitoring method to the approved alternative verification method to demonstrate compliance. To support this transition period, the Northwest Clean Air Agency and Ecology included the verification for the area using the alternative to monitoring approach, in addition to the monitoring data that is available through the end of 2024.

Table 1. Washington areas within maintenance planning period and methods of demonstrating NAAQS attainment and continued maintenance

Maintenance Area (Pollutant)	End of Maintenance Planning Period	Method of demonstrating NAAQS attainment and continued maintenance
Spokane (CO)*	8/30/2025	Modeled onroad, nonroad and residential wood combustion CO emissions
Spokane (PM_{10})*	8/30/2025	Spokane-Augusta PM_{10} monitor (530630021) until March 2021; Spokane-E Broadway Ave PM_{10} monitor (530630017) as of April 1, 2021
Wallula (PM_{10})	9/26/2025	Burbank-Maple St PM_{10} monitor (530710006)
Tacoma ($PM_{2.5}$)	3/12/2035[3]	Tacoma-L St $PM_{2.5}$ monitor (530530029)
Whatcom County Intalco (SO_2)*	1/16/2045[4]	Ferndale-Kickerville Road SO_2 monitor (530730013) and Ferndale-Mountain View Road SO_2 monitor (530730017) until December 2024; Calculated cumulative potential to emit of all stationary SO_2 sources in maintenance area as of January 1, 2025.

* indicates submission of verification documentation is required.

Air quality monitoring data and the location of the monitoring sites are covered in the Annual Network Plan (ANP). The ANP is updated and submitted to EPA annually. The ANP is published concurrently with this document and is available at: 2025 Ambient Air Monitoring Network Plan

[3] The date may change depending on the approved schedule in the 2nd 10-year maintenance plan.
[4] Ibid.

Based on the monitoring data submitted to EPA from the approved monitoring sites, EPA calculates a Design Value (DV) for each monitoring site. The DV is a specific metric that is then compared to the level of the NAAQS to determine whether an area continues to attain the standard. The 2024 Design Values for those maintenance planning areas with monitoring data are summarized in Table 2.

Table 2. 2024 Design Value in criteria pollutant maintenance areas within maintenance planning period

Maintenance Area (Pollutant)	NAAQS (averaging time, year of the standard)	2024 Design Value
Spokane (CO)*	8-hour, 1971	N/A
Spokane (PM_{10})*	24-hour, 1987	0.7 expected exceedances
Wallula (PM_{10})	24-hour, 1987	1.0 expected exceedances
Tacoma ($PM_{2.5}$)	24-hour, 2006	25 µg/m^3
Whatcom County Intalco (SO_2)*	1-hour, 2010	4 ppb[5]

Spokane County CO Maintenance Area

EPA approved an alternate method of verification of attainment of the CO NAAQS and qualification for the limited maintenance plan option under 40 CFR 58.14(C) (Federal Register # 81 FR 45417; July 14, 2016). Under this alternative, EPA considers the limited maintenance plan criteria met and continued attainment of the CO NAAQS verified if the total of the three predominant CO emission source categories calculated as part of the triennial emissions inventory (onroad mobile, nonroad, and residential wood combustion) remain below the corresponding total of the 2002 emission inventory source categories approved at the time the Spokane-area was redesignated to attainment. SRCAA and Ecology compare year 2017, 2020 and 2023 triennial emission analysis results to the baseline 2002.

Verification of Attainment

Total emissions for the 2020 evaluation year were compared to the 2002 attainment year emissions. The 2020 evaluation year was lower than the attainment year; therefore, the Spokane CO maintenance area continues to qualify for the limited maintenance plan option and continued verification of attainment of the CO NAAQS. SRCAA and Ecology's final analysis will be with the 2023 triennial emissions inventory.

[5] The SO_2 monitoring sites were discontinued after December 31, 2024.

Table 3. Spokane CO maintenance area total emissions (tons per year)

	Onroad	Nonroad	Residential Wood Combustion	Total
2002	48,878	23,795	7,199	80,872
2017	18,678	12,586	8,260	39,524
2020	23,123	14,554	9,030	46,708

Spokane County PM_{10} Maintenance Area

The design values for the Spokane County Maintenance Area are based on FEM PM_{10} monitoring data from the Spokane-Augusta Ave (530630021) and Spokane Valley-E Broadway Ave (530630017) monitoring sites in Spokane County, Washington. Spokane Valley-E Broadway Ave became the designated PM_{10} monitor for the Spokane County PM_{10} maintenance area on April 1, 2021. The PM_{10} data from the Spokane-Augusta Ave and Spokane Valley-E Broadway Ave sites were combined for the purpose of National Ambient Air Quality Standard (NAAQS) compliance and limited maintenance plan (LMP) eligibility in this document.

In 2020, 2021, 2022, and 2023, the western United States and Canada experienced severe wildfire seasons, resulting in significant wildfire smoke impacts that caused:

- Eight PM_{10} exceedances on September 12, 13, 14, 15, 16, and 18, 2020; and August 19 and 20, 2023. The exceedances affect the LMP design value and the NAAQS design value.
- Six elevated PM_{10} concentrations: September 17, 2020; August 2, 12, and 13, 2021; and September 12 and 13, 2022. These concentrations are eligible for exclusion from LMP design value calculations following the guidance in the EPA memorandum "Additional Methods, Determinations, and Analyses to Modify Air Quality Data Beyond Exceptional Events."[6]

Ecology placed informational flags ("i-flags") in EPA's Air Quality System (AQS) database on all hourly PM_{10} concentrations on the days listed above. Documentation supporting the exclusion of these values as exceptional events is provided in the Ecology flagging memos "2020 Informational Flagging Request for Wildfire-Affected $PM_{2.5}$, Wildfire- and High Wind-Affected PM_{10}" and "Informational Flagging Request for Ozone, PM_{10}, & $PM_{2.5}$ during 2023 fires"; and the SRCAA flagging memos dated February 2, 2022, and February 10, 2023, included in the Appendix of this document.

The LMP 5-year design value and NAAQS 3-year design value are shown with and without the Ecology i-flagged elevated PM_{10} days.

[6] *Additional Methods, Determinations, and Analyses to Modify Air Quality Data Beyond Exceptional Events* [Memorandum]. Research Triangle Park, NC: Environmental Protection Agency. Retrieved from https://www.epa.gov/sites/production/files/2019-04/documents/clarification_memo_on_data_modification_methods.pdf.

LMP Design Value

A 5-year PM_{10} design value below 98 µg/m^3 demonstrates that the Spokane County Maintenance Area continues to qualify for the LMP approach. With the wildfire smoke exceedances and elevated concentration data removed, Spokane's design value is eligible for the LMP option.

Table 4. Spokane County Maintenance Area LMP Design Values

	2020-2024 LMP Design Value
DV with i-flagged data	212 µg/m^3
DV without i-flagged data	79 µg/m^3

NAAQS Design Value

A 3-year PM_{10} design value at or below 1.0 expected exceedances demonstrates compliance with the PM_{10} NAAQS. The design value is the expected number of annual 24-hour exceedances of 150 µg/m^3, averaged over 3 years. The NAAQS design value is shown with and without the Ecology i-flagged PM_{10} exceedances.

Table 5. Spokane County Maintenance Area NAAQS Design Values

	2022-2024 NAAQS Design Value
DV with i-flagged data	0.7 expected exceedances
DV without i-flagged data	0.0 expected exceedances

The 2023 wildfire smoke impacts generated at total of two PM_{10} exceedances. There were no PM_{10} exceedances associated with wildfire smoke events in 2022 or 2024. The Spokane County PM_{10} contingency measures in the LMP are for road dust, windblown dust, and solid fuel burning devices. The contingency measures do not address wildfire air quality impacts; therefore, they have not been implemented.

Whatcom County - Intalco SO_2 Maintenance Area

The Northwest Clean Air Agency (NWCAA) submitted verification information in support of the annual verification of continued attainment for the Whatcom County Intalco Sulfur Dioxide (SO_2) Maintenance Area. The Whatcom County Intalco SO_2 Maintenance Area was designated as maintenance by the Environmental Protection Agency (EPA) in the Designation of Areas for Air Quality Planning Purposes: Redesignation Request and Associated Maintenance Plan for Whatcom County WA 2010 SO_2 Nonattainment Area; 89 Fed. Reg. 101,896 (Dec. 17, 2024).

Verification Requirement

The EPA-approved Maintenance Plan for the Intalco-Ferndale Sulfur Dioxide Nonattainment Area[7] lists a series of action levels for the verification of continued attainment. These action levels increase in stringency as the potential emissions of SO_2 increase within the Maintenance Area. If the cumulative potential-to-emit (PTE) from all stationary sources within the Maintenance Area is less than 250 tons per year, only the baseline level is needed for the verification. The baseline level requires:

"Annually, for the previous calendar year, NWCAA will calculate the cumulative PTE of all stationary sources in the maintenance area and share the results with Ecology for their inclusion in the Verification of Continued Attainment in Limited Maintenance Areas, which is submitted annually to EPA. This inventory will be based on the information provided in NSR applications and the emissions information collected annually by NWCAA in accordance with NWCAA Regulation 150.2. The emissions inventory will be kept on file by NWCAA for the length of the MP."[8]

Verification of Attainment

The calendar-year 2024 cumulative PTE for all stationary sources within the Maintenance Area was calculated and found to be **less than 1.0 tons/year of SO_2.** Additional information about how emissions were calculated is on file and available for review at NWCAA.

[7] Redesignation to Attainment and 1st 10-year Maintenance Plan for the Intalco-Ferndale Sulfur Dioxide Nonattainment Area, https://apps.ecology.wa.gov/publications/documents/2402023.pdf, Pub. Date 24-02-023.
[8] Ecology's publication "Verification of Continued Attainment in Limited Maintenance Areas" has been renamed to "Verification of Continued Attainment in Select Maintenance Areas"

Appendix A. Maintenance Plan and Flagging Correspondence

SRCAA 2025 Design Value memo

Spokane Regional Clean Air Agency

1610 S. Technology Blvd., Suite 101
Spokane, WA 99224
SpokaneCleanAir.org

Date: March 10, 2025

To: Jill Schulte, Beth Friedman, Sean Lundblad

CC: Cooper Garbe, Caitlin Cannon, April Westby, Mark Rowe

From: Margee Chambers

Subject: Spokane County PM_{10} and CO Design Values for the Ecology State Air Monitoring Network Report

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PM_{10} Design Values

Included in this memo are the 5-year and 3-year design values for the PM_{10} Spokane County Maintenance Area, in Spokane, Washington. The design values are based on FRM and FEM 24-hour PM_{10} monitoring data from the Augusta Avenue site (530630021) and the Broadway Avenue site (530630017), which became the regulatory site in April 2021, replacing the August site, in Spokane, Washington. The PM_{10} data for Augusta and Broadway will be merged and treated as a single site for the purpose of National Ambient Air Quality Standard (NAAQS) compliance and limited maintenance plan (LMP) eligibility.

The Western United States and Canada has been experiencing severe wildfire seasons, resulting in significant wildfire smoke impacts.

- Eight PM_{10} exceedances on: September 12, 13, 14, 15, 16, and 18, 2020; and August 19 and 20, 2023. The exceedances affect the LMP design value and the NAAQS design value.
- Six PM_{10} elevated concentrations: September 17, 2020; August 2, 12, and 13, 2021, and September 12 and 13, 2022, that are eligible for exclusion because they have regulatory significance for the area to meet the LMP design value

LMP Critical Design Value

A 5-year PM_{10} critical design value below 98 $\mu g/m^3$ demonstrates that the Spokane County Maintenance Area continues to qualify for the LMP approach. The LMP critical design value is shown with and without the eight Ecology i-flagged PM_{10} exceedance data and six PM_{10} high concentration data from 2020-2024. With the wildfire smoke exceedances and high concentration data removed, Spokane's design value is eligible for the LMP option.

	2020-2024 LMP Design Value (DV)
DV with i-flagged data	212 $\mu g/m^3$
DV without i-flagged data	79 $\mu g/m^3$

NAAQS Design Value

A 3-year PM_{10} design value at or below 1.0 demonstrates compliance with the PM_{10} NAAQS. The design value is the number of 24-hour exceedances of 150 $\mu g/m^3$, averaged over three years. The NAAQS design value is shown

with and without the two Ecology i-flagged PM_{10} exceedance data from 2022-2024. Spokane's design value is in compliance.

	2022-2024 NAAQS Design Value (DV)
DV with i-flagged data	0.7
DV without i-flagged data	0.0

Please note that wildfire smoke impacts contributed to all of the PM_{10} exceedances. The Spokane County PM_{10} LMP contingency measures are for road dust, windblown dust, and solid fuel burning devices. The contingency measures do not address wildfire air quality impacts; therefore, the PM_{10} contingency measures have not been implemented.

CO Design Value

EPA approved an alternate method of verification of attainment of the CO NAAQS and qualification for the limited maintenance plan option under 40 CFR 58.14(C) (Federal Register # 81 FR 45417; July 14, 2016). Under this alternative, EPA considers the limited maintenance plan criteria met and continued verification of attainment of the CO NAAQS if the total of the three predominate CO emission source categories calculated as part of the triennial emissions inventory (onroad mobile, nonroad, and residential wood combustion) remain below the corresponding total of the 2002 emission inventory source categories approved at the time the Spokane-area was redesignated to attainment. SRCAA and Ecology will compare future year 2017, 2020 and 2023 triennial emission analysis results to the baseline 2002.

Verification of Attainment

Total emissions for the 2020 evaluation year were compared to the 2002 attainment year emissions. The 2020 evaluation year was lower than the attainment year; therefore, the Spokane CO maintenance area continues to qualify for the limited maintenance plan option and continued verification of attainment of the CO NAAQS. SRCAA and Ecology's final analysis will be with the 2023 triennial emissions inventory. As soon as the updated NEI is available, the comparison will be calculated and included in the annual design value memo.

Spokane County CO Emissions in Tons per Year				
Year	**Onroad**	**Nonroad**	**Residential Wood Combustion**	**Total**
2002	49,878 tons/yr	23,795 tons/yr	7,199 tons/yr	80,872 tons/yr
2017	18,678 tons/yr	12,586 tons/yr	8,260 tons/yr	39,524 tons/yr
2020	23,124 tons/yr	14,554 tons/yr	9,030 tons/yr	47,030 tons/yr

Ecology 2024 flagging memo

DEPARTMENT OF ECOLOGY
Air Quality Program
Flagging Memo

April 2024

TO: Scott Dubble, SWRO & Air Quality Operations Unit Supervisor
FROM: Caitlin Cannon, Farren Thorpe, Sam Fox
CC: Ecology: Martha Hankins, Jill Schulte, Melanie Forster, Sean Lundblad, Chris Atherly
Northwest Clean Air Agency: Mark Buford
Puget Sound Clean Air Agency: Kathy Strange
Southwest Clean Air Agency: Uri Papish
Spokane Regional Clean Air Agency: Scott Windsor, Margee Chambers
Yakima Regional Clean Air Agency: Hasan Tahat
Benton Clean Air Agency: Rob Rodger

SUBJECT: Informational Flagging Request for Ozone, PM10, & PM2.5 during 2023 fires.

The Exceptional Events Rule (EER) provides two data qualifier codes:

- Request Exclusion flags (R).
- Informational Only Flags (I).

Agencies use I-flags for informational data and R flags for data points intended for an Air Quality System (AQS) exclusion request. I-flags are initially used to identify values believed to have been affected by an event yet may not be ready for exceptional events demonstration or exclusion request.

The 2023 wildfire smoke season in Washington started early, due to a heat wave in May that affected the Pacific Northwest. Large multi-day wildfires didn't occur in Washington until July, but Canada had many large fires that started in May and burned for several months. The 2023 wildfire season had the most area burned in Canada's recorded history with more than 45 million acres burned, sending smoke to many parts of the USA. Although wildfire smoke was transported from Canada to Washington intermittently in the spring and early summer, most of the smoke was transported east of our state. It wasn't until mid-August that significant Canadian smoke influenced Washington State, which coincided with significant smoke impacts from Washington wildfires in the Cascades. Considerable wildfire smoke impacted most parts of the state from August 17 to August 22, followed by moderate smoke for several more days. A frontal system in late August produced rain and cooler weather, which mostly put an end to the wildfire season. There was also an industrial fire in Longview that sent smoke to Vancouver on July 18 and 19. See Table 1 for a list of 2023 wildfires that caused significant smoke impacts in Washington.

Table 1: Wildfires in 2023 that contributed to smoke events at Washington compliance monitors.

Name	Location	Discovery Date	Total Acres
Kookipi Creek Fire	Lytton, BC	July 8	44,590
Casper Creek Fire	Anderson Lake, BC	July 11	27,180
Adams Lake Complex	Adams Lake, BC	July 12	64,225
Downton Lake Fire	Mt. Penrose, BC	July 13	20,880
Ross Moore lake Fire	Ross Moore Lake, BC	July 21	23,304
Crater Creek Fire	Cathedral Provincial Park, BC	July 23	100,000+
Eagle Bluff Fire	Oroville, WA / Osoyoos, BC	July 29	16,428
McDougall Creek Fire	Kelowna, BC	August 15	33,883
Upper Park Rill Creek Fire	NE of Keremeos, BC	August 18	5,048
Flat Fire	Curry County, OR	July 15	34,242
Bedrock Fire	Lane County, OR	July 22	31,590
Lookout Fire	Lane County, OR	August 8	25,754
Camp Creek Fire	Clackamas County, OR	August 24	2,055
Airplane Lake Fire	Chelan County, WA	July 26	6,956
Sourdough Fire	Whatcom County, WA	August 1	7,377
Dome Peak Fire	Snohomish County, WA	August 9	1,477
Blue Lake Fire	Chelan County, WA	August 14	1,074
Gray Fire	Spokane County, WA	August 18	10,085
Oregon Road Fire	Spokane County, WA	August 18	10,817

Sites, Dates, and Pollutants for 2023 I-Flags

To meet the EER requirements, Ecology's Air Quality Program Policy and Planning Section requests to place an I-flag on all data in AQS associated with the wildfire affected ozone, PM10, and PM2.5 exceedances during 2023. The requested locations and dates are provided as a separate attachment "Flag_List.xlsx", with criteria of having occurred between May 19 and September 18 with daily average concentrations of 15.0 $\mu g/m^3$ or greater for PM2.5, 98.0 $\mu g/m^3$ or greater for PM10, and 65 ppb for ozone. All data flagged show influence from USA wildfires (IT flag), Canadian wildfires (IF flag), or Industrial Accident (IC flag). Additional supporting information are included below, including satellite images, Washington Smoke Blog links, and media posts.

SRCAA 2023 flagging memo

Spokane Regional Clean Air Agency

Date:	February 10, 2023
To:	Caitlin Cannon, Jill Schulte, Beth Friedman
From:	Margee Chambers Margee Chambers
CC:	Ecology: Cooper Garbe Spokane Clean Air: Scott Windsor, Mark Rowe
Re:	Request for Exceptional Event Informational Flagging for: $PM_{2.5}$ exceedances, September 9 – 13, 2022 & October 19, 2022 (6 days) PM_{10} elevated concentrations, September 12 – 13, 2022 (2 days)

The U.S. Environmental Protection Agency's (EPA) Exceptional Event Rule (EER) provides a process for excluding qualifying exceedances from calculations when determining compliance with National Ambient Air Quality Standards (NAAQS). The first step in the process is informational flagging of the data in the monitoring record and entering an event description.

The 2022 wildfire season impacted air quality throughout the western United States. The Spokane Regional Clean Air Agency (Spokane Clean Air) requests that the Washington State Department of Ecology (Ecology) place an informational flag on six $PM_{2.5}$ exceedances and two PM_{10} elevated concentrations recorded at the Spokane - Broadway Avenue monitoring site as exceptional events and enter a description into the EPA Air Quality System (AQS). EPAs Harnett memo states agencies can exclude PM_{10} concentrations between 98-155 µg/m3 threshold in determining eligibility for the PM_{10} LMP option.

Exceedances of the 24-hour $PM_{2.5}$ standard:

Spokane – Broadway Avenue Site (AQS# 530630017)

Flagging description: The September exceedances occurred during a period of severe wildfire smoke impacts, where winds transported smoke from wildfires in California, Oregon and Washington into Spokane County's airshed building PM2.5 and PM10 concentrations and then winds shifted bringing smoke from Idaho and Montana, combined with poor ventilation and nightly inversions trapped the wildfire smoke in the airshed. The October exceedance occurred when smoke from wildfires in Montana and Idaho drifted into the Spokane airshed and poor ventilation and nightly inversions combined with wildfire smoke increased PM2.5 levels in the region.

- 9/9/2022: 41.3 µg/m^3
- 9/10/2022: 44.0 µg/m^3
- 9/11/2022: 68.8 µg/m^3
- 9/12/2022: 103.5 µg/m^3
- 9/13/2022: 63.2 µg/m^3
- 10/19/2022: 37.9 µg/m^3

1

Elevated 24-hour PM_{10} concentrations:

Spokane – Broadway Avenue Site (AQS# 530630017)

Flagging description: Preliminary data shows that the September exceedances occurred during a period of severe wildfire smoke impacts, where initially winds transported smoke from wildfires in California, Oregon and Washington into Spokane County's airshed, then winds shifted and brought smoke from Idaho and Montana wildfires, and a high pressure system trapped the smoke in the region, affecting PM2.5 and PM10 concentrations.

- 09/12/2022: 141.5 $\mu g/m^3$
- 09/13/2022: 99.7 $\mu g/m^3$

Supporting information:

Spokane Clean Air pulled together supporting information (Attachment A) about the wildfire smoke events.

- Spokane Regional Clean Air Agency Augusta air quality monitor graphs and communication / outreach
- Air Quality Alerts and National Weather Service forecasts
- AirNow AQI map and smoke map
- GOES West and NASA World View satellite images
- Cliff Mass Wx and WA Smoke Blogs

SRCAA 2022 flagging memo

Spokane Regional Clean Air Agency

Date: February 2, 2022

To: Jacob Berkey, Jill Schulte, Beth Friedman

From: Margee Chambers

CC: Ecology: Jason Albrecht
Spokane Clean Air: Scott Windsor, Mark Rowe

Re: Request for Exceptional Event informational flagging for:
$PM_{2.5}$ exceedances July 31 and August 1, 2, 3, 12, 13, and 14, 2021 (7 days)
Ozone exceedances July 13, 14 and 31, 2021 (3 days)
Elevated PM_{10} concentrations August 2, 12, and 13, 2021 (3 days)

EPA's Exceptional Event Rule (EER) provides a process for excluding qualifying exceedances from calculations when determining compliance with National Ambient Air Quality Standards (NAAQS). The first step in the process is informational flagging of the data in the monitoring record and entering an event description.

Spokane Regional Clean Air Agency (Spokane Clean Air) requests that the Washington State Department of Ecology (Ecology) place an informational flag on elevated $PM_{2.5}$, PM_{10} and Ozone concentrations recorded at the Spokane - Broadway Avenue, Greenbluff, and Turnbull monitoring sites as exceptional events and enter a description into the U.S. Environmental Protection Agency's (EPA) Air Quality System (AQS).

The elevated concentrations occurred during a period of severe wildfire smoke impacts, where winds transported smoke from regional wildfires in California, Oregon, and Washington.

Exceedances of the 24-hour $PM_{2.5}$ standard:
Spokane – Broadway Avenue Site (AQS# 530630017) Please note that Broadway became a regulatory monitoring site for $PM_{2.5}$ on January 1, 2021. The Augusta site is no longer the regulatory monitoring site.

- 7/31/2021: 53.6 µg m-3
- 8/1/2021: 57.6 µg m-3
- 8/2/2021: 96.4 µg m-3
- 8/3/2021: 72.7 µg m-3
- 8/12/2021: 78.9 µg m-3
- 8/13/2021: 117.7 µg m-3
- 8/14/2021: 67.7 µg m-3

Exceedances of the 8-hour Ozone standard:
Spokane – Greenbluff Site (AQS# 530630046)

- 7/13/2021: 76 ppb
- 7/14/2021: 73 ppb

Spokane – Turnbull Site (AQS# 530630001)

- 7/31/21: 71 ppb

Spokane Clean Air requests that Ecology i-flag concentration data believed to have been significantly affected by the 2021 wildfire smoke exceptional events, but not exceeding the standard. EPAs Harnett memo states agencies can exclude PM_{10} concentrations between 98-155 µg/m3 threshold in determining eligibility for the PM_{10} LMP option.

Elevated 24-hour PM_{10} concentrations:
Spokane – Broadway Avenue Site (AQS# 530630017) Please note that Broadway became a regulatory monitoring site for PM10 on April 1, 2021. The Augusta site is no longer the regulatory monitoring site.

- 8/2/2021: 112.7 µg m-3
- 8/12/2021: 100.6 µg m-3
- 8/13/2021: 144.6 µg m-3

Flagging Request: Please place exceptional event informational flags on July 31, August 1, 2, 3, 12, 13,14, 2021 at the Spokane - Broadway Avenue $PM_{2.5}$ site (AQS site ID #530630017); on July 13, 14, 2021 at the Spokane-Greenbluff site, (AQS site ID #530630046); on July 31, 2021 at the Spokane – Turnbull site (AQS site ID #530630001); and on August 2, 12, 13, 2021 for the Spokane – Broadway PM_{10} site (AQS site ID #530630017). Please use the code "I-Informational" and enter the event description shown below:

> Preliminary review of data suggests that regional wildfires in CA, OR, and WA, winds transporting smoke into Spokane County air shed, contributed to elevated levels of $PM_{2.5}$, PM_{10}, and ozone concentrations in Spokane County.

Spokane Clean Air pulled together supporting information (Attachment A) about the wildfire smoke events that is available upon request.

- Air Quality Alerts and National Weather Service forecasts
- Spokane Regional Clean Air Agency Augusta air quality monitor graphs and communication / outreach
- Airnow AQI map and smoke map
- GOES West and NASA World View satellite images
- Cliff Mass Wx Blogs

Ecology 2021 flagging memo

DEPARTMENT OF ECOLOGY
Air Quality Program

May 7, 2021

TO: Beth Friedman

FROM: Jacob Berkey
CC: Ecology: Martha Hankins, Jason Alberich, Laurie Hulse-Moyer, Farren Herron-Thorpe, Jill Schulte and Melanie Forster
Benton Clean Air Agency: Robin Priddy
Northwest Clean Air Agency: Agata McIntyre, Lyn Tober
Olympic Regional Clean Air Agency: Allie Feldt
Puget Sound Clean Air Agency: Kathy Strange, Betsy Wheelock
Southwest Clean Air Agency: Crystal Moore
Spokane Clean Air Agency: Margee Chambers
Yakima Clean Air Agency: Keith Hurley and Hasan Tahat

SUBJECT: 2020 Informational flagging request for Wildfire affected PM2.5, Wildfire and high wind affected PM 10.

The Exceptional Event Rule (EER) provides two data qualifier codes:

- Request Exclusion flags (R).
- Informational Only Flags (I).

Agencies use I flags for informational data and R flags for data points intended for an Air Quality System (AQS) exclusion request. I flags are initially used to identify values believed to have been affected by an event, yet may not be ready for exceptional events demonstration or exclusion request.

During September 7 through 19 2020, the State of Washington experienced significant wildfire smoke events, which blanketed the state and resulted in exceedances of PM2.5 and PM10. The contributing wildfires were in California, and Oregon, with additional wildfires burning here in Washington. Yakima County experienced additional wildfire smoke impact from September 2 through September 4.

For more information about these events, see the Washington State Smoke Blog:
https://wasmoke.blogspot.com/2020/09/smoky-siege-look-back-at-smoke-storm-of.html

Kennewick experienced three days in October related to high-wind dust. These occurred on October 16, 18, and 30, 2020. Our monitoring data at Kennewick shows these events. Here are the recorded maximum wind speeds for those dates:
10/16/2020: 32.1 mph
10/18/2020: 36.9 mph
10/30/2020: 31.1 mph

- This link from Department of Ecology shows our outreach efforts in regards to the wind event: https://twitter.com/ecyspokane/status/1322295179928170496
- This link is outreach from the National Weather Service regarding the event: https://twitter.com/NWSPendleton/status/1322124202246361090
- To track daily conditions during the time of the wind event check here: http://mesonet.agron.iastate.edu/wx/afos/list.phtml?source=OTX&year=2020&month=10&day=7&drange=yes&year2=2020&month2=10&day2=23&view=prod&order=asc
    - October 16: http://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDOTX&e=202010162318
    - October 18: http://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDOTX&e=202010180505
    - October 30: http://mesonet.agron.iastate.edu/wx/afos/p.php?pil=AFDOTX&e=202010301805

To meet the EER requirements, Ecology's Air Quality Program Policy and Planning Section requests you to place an I flag on all data in AQS associated with the wildfire and high wind affected PM2.5 and PM10 data during 2020.

NWCAA 2025 Verification Memo

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Date: March 14, 2025

To: Jill Schulte, Beth Friedman, Sean Lundblad

Cc: Cooper Garbe, Mark Buford

From: Agata McIntyre Agata McIntyre

Subject: SO_2 PTE in the Whatcom County Intalco SO_2 Maintenance Area

The Northwest Clean Air Agency (NWCAA) submits this information in support of the annual verification of continued attainment for the Whatcom County Intalco Sulfur Dioxide (SO_2) Maintenance Area (the Area). The Area was designated as maintenance by the Environmental Protection Agency (EPA) in the *Designation of Areas for Air Quality Planning Purposes: Redesignation Request and Associated Maintenance Plan for Whatcom County WA 2010 SO_2 Nonattainment Area; 89 Fed. Reg. 101,896 (Dec. 17, 2024).*

Verification Requirement

The EPA-approved Maintenance Plan for the Intalco-Ferndale Sulfur Dioxide Nonattainment Area[1] lists a series of action levels for the verification of continued attainment. These action levels increase in stringency as the potential emissions of SO_2 increase within the Area. If the cumulative potential-to-emit (PTE) from all stationary sources within the Area is less than 250 tons per year, only the baseline level is needed for the verification. The baseline level requires:

"Annually, for the previous calendar year, NWCAA will calculate the cumulative PTE of all stationary sources in the maintenance area and share the results with Ecology for their inclusion in the Verification of Continued Attainment in Limited Maintenance Areas, which is submitted annually to EPA. This inventory will be based on the information provided in NSR applications and the emissions information collected annually by NWCAA in accordance with NWCAA Regulation 150.2. The emissions inventory will be kept on file by NWCAA for the length of the MP."

2024 Cumulative PTE from All Stationary Sources in the Area

The calendar-year 2024 cumulative PTE for all stationary sources within the Area was calculated and found to be less than 1.0 tons/year of SO_2. Additional information about how emissions were calculated is on file and available for review at NWCAA.

[1] Redesignation to Attainment and 1st 10-year Maintenance Plan for the Intalco-Ferndale Sulfur Dioxide Nonattainment Area, https://apps.ecology.wa.gov/publications/documents/2402023.pdf, Pub. Date 24-02-023

Serving Island, Skagit & Whatcom Counties