



Preliminary Regulatory Analyses:

Including the:

- Preliminary Cost-Benefit Analysis
- Least-Burdensome Alternative Analysis
- Administrative Procedure Act Determinations
- Regulatory Fairness Act Compliance

Chapter 173-476 WAC, Ambient Air Quality Standards

Chapter 173-400 WAC, General Regulations for Air Pollution Sources

By

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For the

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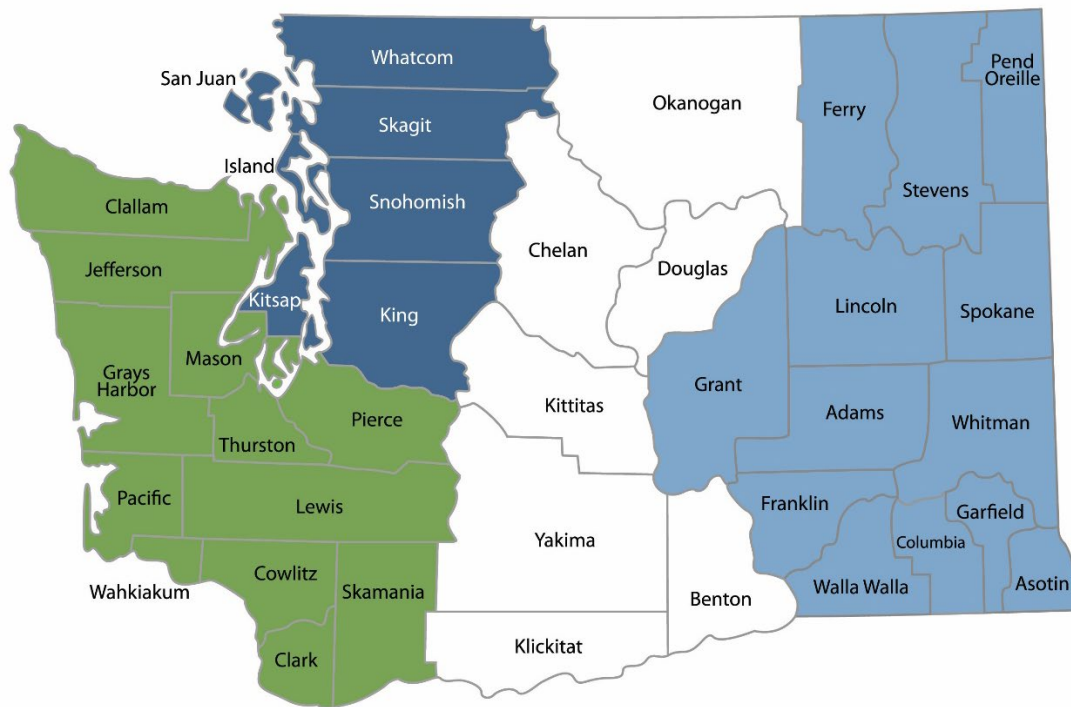
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State of Washington

Table of Contents

Abbreviations and Acronyms	7
Executive Summary	8
Chapter 1: Background and Introduction	11
1.1 Introduction	11
1.2 Background and reasons for the proposed rule amendments	12
1.3 Summary of the proposed rule amendments.....	13
1.4 Document organization	13
Chapter 2: Baseline and Proposed Rule Amendments	15
2.1 Introduction	15
2.2 Baseline	15
2.3 Proposed rule amendments	18
2.3.1 Update ambient air quality standards	19
2.3.2 Update “cause or contribute” threshold values	20
2.3.3 Remove automatic exemption below “cause or contribute” threshold values to align with court rulings	24
2.3.4 Specify when additional analysis may be required when modeled emissions are below “cause or contribute” values.....	25
2.3.5 Other edits for clarity and consistency	26
Chapter 3: Likely Costs of the Proposed Rule Amendments	28
3.1 Introduction	28
3.2 Cost analysis.....	28
3.2.1 Update ambient air quality standards	28
3.2.2 Update “cause or contribute” threshold values	29
3.2.3 Remove automatic exemption below “cause or contribute” values to align with court rulings	31
3.2.4 Specify when additional analysis may be required when modeled emissions are below “cause or contribute” values.....	31
3.2.5 Other edits for clarity and consistency	31
3.3 Environmental justice costs	31
Chapter 4: Likely Benefits of the Proposed Rule Amendments	33
4.1 Introduction	33
4.2 Benefits analysis.....	33
4.2.1 Update ambient air quality standards	33
4.2.2 Update “cause or contribute” threshold values	34
4.2.3 Remove automatic exemption below “cause or contribute” values to align with court rulings	35
4.2.4 Specify when additional analysis may be required when modeled emissions are below “cause or contribute” values.....	36
4.2.5 Other edits for clarity and consistency	36
4.2.6 Environmental justice benefits	36
Chapter 5: Cost-Benefit Comparison and Conclusions.....	37

5.1 Summary of costs and benefits of the proposed rule amendments	37
5.2 Conclusion.....	38
Chapter 6: Least-Burdensome Alternative Analysis	39
6.1 Introduction	39
6.2 Goals and objectives of the authorizing statute	39
6.3 Alternatives considered and why they were excluded	40
6.3.1 Not updating 2024 PM _{2.5} standards given EPA challenges	41
6.3.2 Not specifying analysis type and trigger below “cause or contribute” values.....	41
6.3.3 Adopting more-stringent standards than the federal.....	42
6.4 Conclusion.....	42
Chapter 7: Regulatory Fairness Act Compliance	43
References.....	44
Appendix A: Administrative Procedure Act (RCW 34.05.328) Determinations	45

Abbreviations and Acronyms

APA	Administrative Procedure Act
CAA	Clean Air Act
DC	District of Columbia
EPA	Environmental Protection Agency
µg	Microgram
m ³	Cubic meter
NAAQS	National Ambient Air Quality Standards
NO ₂	Nitrogen dioxide
NSR	New Source Review
O ₃	Ozone
PM	Particulate matter
PM _{2.5}	Fine particulate matter
ppbv	Parts per billion by volume
ppmv	Parts per million by volume
RCW	Revised Code of Washington
RFA	Regulatory Fairness Act
SIL	Significant Impact Level
SO ₂	Sulfur dioxide
tpy	Tons per year (tons/year)
US	United States
US CAA	United States (federal) Clean Air Act
WA CAA	Washington State Clean Air Act
WAC	Washington Administrative Code

Executive Summary

This report presents the determinations made by the Washington State Department of Ecology as required under Chapter 43.83B RCW, for the proposed amendments to the Ambient Air Quality Standards rule (Chapter 173-476 WAC; the “ambient air quality rule”) and the section of the General Regulations for Air Pollution Sources rule that addresses new air pollution sources in attainment or unclassifiable areas (WAC 173-400-113; the “new source rule”). This includes the:

- Preliminary Cost-Benefit Analysis
- Least-Burdensome Alternative Analysis
- Administrative Procedure Act Determinations
- Regulatory Fairness Act Compliance

In 2024, under the federal Clean Air Act (US CAA), the Environmental Protection Agency (EPA) lowered the maximum allowable National Ambient Air Quality Standards (NAAQS) for fine particulate matter (PM_{2.5}) and sulfur dioxide (SO₂) to protect public health and public welfare. Under statute, Washington must comply with these requirements, including adopting NAAQS, and maintaining source requirements capable of meeting NAAQS through State Implementation Plans.

The proposed rule amendments would make corresponding changes to the ambient air quality rule and new source rule. While these are separate chapters in the state code, their contents work together to administer State Implementation Plans. For this reason, the following list of proposed amendments are presented by theme, and may occur in one or both rules. Appropriate chapters and subsections are referenced in more detail in section 2.3.

The proposed rule amendments would:

- Update ambient air quality standards for:
 - Fine particulate matter (PM_{2.5})
 - Sulfur dioxide (SO₂)
- Update “cause or contribute” threshold values for:
 - Fine particulate matter (PM_{2.5})
 - Sulfur dioxide (SO₂)
 - Nitrogen dioxide (NO₂)
 - Ozone (O₃)
- Remove automatic exemption below “cause or contribute” values to align with court rulings.*
- Specify when additional analysis may be required when modeled emissions are below “cause or contribute” values.*

- Make minor edits for clarity and consistency, without material change to requirements.

* These proposed changes are related. Removing automatic exemption alone would leave uncertainty as to what analysis may be required when modeled emissions are below the threshold values, so the proposed amendments would also address this uncertainty.

We identified the following costs and benefits of the proposed rule amendments, as compared to the baseline of existing state and federal laws and rules:

Costs:

- Additional cumulative impact analysis at new minor sources: \$12,000 to \$24,000 every other year. The present value of this cost stream is approximately \$109,000 to \$218,000 over 20 years.
- Unlikely but technically possible costs of approximately \$20 million at a hypothetical minor facility if cumulative impact analysis indicates additional emissions controls are necessary. This type of source is not reflected in actual facility and ambient air data, but it represents an unknown type of new or modified large minor source locating in an area with higher ambient concentrations of criteria pollutants, or with sufficiently enough nearby sources of the same pollutant, to be likely to cumulatively cause or contribute to violations of the ambient air quality standards.

Benefits

- Assurance that new minor sources would not cause or contribute to violations of ambient air quality standards. While minor sources have fewer emissions, lower screening levels for minor sources would eliminate risk of multiple sources collectively causing ambient air quality violations and associated environmental and public health harms.
- To offset the costs to an unlikely but possible hypothetical minor source described above, considering just mortality and healthcare costs, additional controls would need to reduce sulfur dioxide emissions by between 22 and 108 tons over 2 years (11 to 54 tons per year, at a source emitting up to 100 tons per year). The number of tons needed to offset costs would be lower if we included unquantified benefits to the environment – acid rain formation, harms to aquatic life, harms to plant foliage – and additional harms to people through formation of additional fine particulate matter and increased haze.
- Transparency and predictability of when and what analysis may be required when modeled emissions are below “cause or contribute” screening values, rather than undefined and uncertain needs for additional analysis, information, data, or activities.
- Improved clarity in rule language, facilitating clear expectations for those required to comply with the amended rules. This includes removal of obsolete requirements, rewording without material impact to requirements, and updating references to current baseline regulations.

We conclude, based on a reasonable understanding of the quantified and qualitative costs and benefits likely to arise from the proposed rule amendments, as compared to the baseline, that the benefits of the proposed rule amendments are greater than the costs.

Least-Burdensome Alternative

We assessed alternative proposed rule content, and determined whether they met the goals and objectives of the authorizing statute. Of those that would meet the goals and objectives, we determined whether those chosen for inclusion in the proposed rule amendments were the least burdensome to those required to comply with them.

We considered the following alternative rule requirements and did not include them in the proposed rule amendments.

- Not updating 2024 PM_{2.5} standards given EPA challenges.
- Not specifying analysis type and trigger below “cause or contribute” values.
- Adopting more-stringent standards than the federal.

After considering alternatives, within the context of the goals and objectives of the authorizing statute, we determined that the proposed rule represents the least-burdensome alternative of possible rule requirements meeting the goals and objectives.

Regulatory Fairness Act

This rulemaking is exempt from further analysis under the Regulatory Fairness Act, per RCW 19.85.025(4), as the proposed rule amendments do not impose compliance costs on existing businesses and are not likely to affect small businesses in the future.

Chapter 1: Background and Introduction

1.1 Introduction

This report presents the determinations made by the Washington State Department of Ecology as required under Chapter 43.83B RCW, for the proposed amendments to the Ambient Air Quality Standards rule (Chapter 173-476 WAC; the “ambient air quality rule”) and the section of the General Regulations for Air Pollution Sources rule that addresses new air pollution sources in attainment or unclassifiable areas (WAC 173-400-113; the “new source rule”). This includes the:

- Preliminary Cost-Benefit Analysis
- Least-Burdensome Alternative Analysis
- Administrative Procedure Act Determinations
- Regulatory Fairness Act Compliance

The Washington Administrative Procedure Act (APA; RCW 34.05.328(1)(d)) requires Ecology to evaluate significant legislative rules to “determine that the probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the law being implemented.” Chapters 1 – 5 of this document describe that determination.

The APA also requires Ecology to “determine, after considering alternative versions of the rule...that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives” of the governing and authorizing statutes. Chapter 6 of this document describes that determination.

The APA also requires Ecology to make several other determinations (RCW 34.05.328(1)(a) – (c) and (f) – (h)) about the rule, including authorization, need, context, and coordination. Appendix A of this document provides the documentation for these determinations.

The Washington Regulatory Fairness Act (RFA; Chapter 19.85 RCW) requires Ecology to evaluate the relative impact of proposed rules that impose costs on businesses in an industry. It compares the relative compliance costs for small businesses to those of the largest businesses affected. Chapter 7 of this document documents that analysis, when applicable.

All determinations are based on the best available information at the time of publication. We encourage feedback (including specific data) that may improve the accuracy of this analysis.

1.2 Background and reasons for the proposed rule amendments

The federal Clean Air Act (US CAA)² is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, the law authorizes the Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare. Under Chapter 70A.15 RCW, Washington must comply with the requirements of the US CAA, including adopting NAAQS and maintaining source requirements capable of meeting NAAQS through a State Implementation Plan. State Implementation Plans are submitted to the EPA for approval and are part of maintaining Washington's delegated authority to administer the Clean Air Act.

In 2024, the EPA lowered the maximum allowable NAAQS levels of:

- Fine particulate matter (PM_{2.5})³: From 12 micrograms per cubic meter of air to 9 micrograms per cubic meter of air.
- Sulfur dioxide (SO₂): Adding a new secondary annual standard of 10 parts per billion.

Amendments to the ambient air quality rule are needed to ensure state ambient air quality standards align with the national standards, and comply with state and federal law.

Because of their relationship with ambient air quality standards, we also propose updating the "cause or contribute" threshold emissions values to match EPA recommended "significant impact levels" (SILs). "Cause or contribute" values in state rule and SIL values in federal guidance are analogous in their use as a screening tool to help meet ambient air quality standards. They are used in the process of determining whether a new air emissions source, or a modification to an existing source, would *cause or contribute to a violation of ambient air quality standards*. In this way, as federal and state ambient standards are updated, SIL guidance and state "cause or contribute" values also need to be updated to ensure compliance.⁴

Proposed new sources or modifications first compare modeled emissions values to the "cause or contribute" values. If they exceed the values, then additional modeling of cumulative impacts to ambient air quality is needed to ensure that permitting the source would not result in a violation of NAAQS.

In 2013, a federal rule exempting sources with modeled impacts below SIL values from additional analysis was challenged and overturned in federal court.⁵ While Ecology has since

² 42 U.S.C. §§ 7401 et seq.

³ Fine particulate matter (PM_{2.5}) is particulate matter with a diameter of 2.5 microns or less.

⁴ SIL values may also be updated periodically based on new science and changing atmospheric conditions.

⁵ *Sierra Club v. EPA*, 705 F.3d 458 (D.C. Cir. 2013). The rule was vacated because it allowed permitting authorities to automatically exempt sources with projected impacts below the SILs from having to make the demonstration required under 42 USC § 7475(a)(3), even in situations where the demonstration may require a more comprehensive air quality analysis.

omitted parts of its rules related to the ruling when submitting Washington’s State Implementation Plan to the EPA for approval, we are taking this opportunity to amend the rule permanently to reflect the court’s ruling and add specificity to our agency’s process in areas where the court left discretion and regulatory uncertainty.

Other amendments in this rulemaking include edits for clarity and consistency where necessary.

1.3 Summary of the proposed rule amendments

The proposed rule amendments would make corresponding changes to the ambient air quality rule and new source rule. While these are separate chapters in the state code, their contents work together to administer State Implementation Plans. For this reason, the following list of proposed amendments are presented by theme, and may occur in one or both rules. Appropriate chapters and subsections are referenced in more detail in section 2.3.

The proposed rule amendments would:

- Update ambient air quality standards for:
 - Fine particulate matter (PM_{2.5})
 - Sulfur dioxide (SO₂)
- Update “cause or contribute” threshold values for:
 - Fine particulate matter (PM_{2.5})
 - Sulfur dioxide (SO₂)
 - Nitrogen dioxide (NO₂)
 - Ozone (O₃)
- Remove automatic exemption below “cause or contribute” values to align with court rulings.*
- Specify when additional analysis may be required when modeled emissions are below “cause or contribute” values.*
- Make minor edits for clarity and consistency, without material change to requirements.

* These proposed changes are related. Removing automatic exemption alone would leave uncertainty as to what analysis may be required when modeled emissions are below the threshold values, so the proposed amendments would also address this uncertainty.

1.4 Document organization

The chapters of this document are organized as follows:

- **Chapter 2 - Baseline and the proposed rule amendments:** Description and comparison of the baseline (what would occur in the absence of the proposed rule amendments) and the proposed rule requirements.

- **Chapter 3 - Likely costs of the proposed rule amendments:** Analysis of the types and sizes of costs we expect impacted entities to incur as a result of the proposed rule amendments.
- **Chapter 4 - Likely benefits of the proposed rule amendments :** Analysis of the types and sizes of benefits we expect to result from the proposed rule amendments.
- **Chapter 5 - Cost-benefit comparison and conclusions :** Discussion of the complete implications of the Cost-Benefit Analysis.
- **Chapter 6 - Least-Burdensome Alternative Analysis:** Analysis of considered alternatives to the contents of the proposed rule amendments.
- **Chapter 7 - Regulatory Fairness Act Compliance:** When applicable. Comparison of compliance costs for small and large businesses; mitigation; impact on jobs.
- **Appendix A - APA Determinations:** RCW 34.05.328 determinations not discussed in chapters 5 and 6.

Chapter 2: Baseline and Proposed Rule Amendments

2.1 Introduction

We analyzed the impacts of the proposed rule amendments relative to the existing rules, within the context of all existing requirements (federal and state laws and rules). This context for comparison is called the baseline and reflects the most likely regulatory circumstances that entities would face if Ecology does not adopt the proposed rule amendments.

2.2 Baseline

The baseline for our analysis generally consists of existing laws and rules. This is what allows us to make a consistent comparison between the state of the world with and without the proposed rule amendments. We summarize the applicable rules and laws below and discuss applicable sections and subsections to rule amendments in section 2.3.⁶ Our baseline includes, but is not limited to:

- The federal Clean Air Act (42 U.S.C. § 7401 et seq.)
- EPA guidance on Significant Impact Levels (SILs) and Cumulative Analyses⁷
- Court rulings interpreting the law: *Sierra Club v. EPA* (705 F.3d 458 (D.C. Cir. 2013))
- The Washington Clean Air Act (Chapter 70A.15 RCW)
- The existing ambient air quality rule (Chapter 173-476 WAC, Ambient Air Quality Standards)
- The existing new source rule (WAC 173-400-113, New sources in attainment or unclassifiable areas – Review for compliance with regulations)⁸

Federal Clean Air Act and associated federal regulations

The federal Clean Air Act (US CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, the law authorizes the EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public

⁶ Where appropriate, rule and statutory language may be paraphrased throughout this document for the purposes of synthesis, brevity and plain language. Summaries presented here do not supersede statute, adopted rules, or the rule as amended or proposed to be amended.

⁷ [Significant Impact Levels and Cumulative Analyses](https://www.epa.gov/nsr/significant-impact-levels-sils-cumulative-analyses); <https://www.epa.gov/nsr/significant-impact-levels-sils-cumulative-analyses>. We note that guidance is not typically part of a regulatory baseline beyond being a way that regulations are implemented, but in this state-federal context, federal guidance plays a role in maintaining Washington's delegated authority to enforce the Clean Air Act. We discuss this further in this section.

⁸ Note that this rulemaking is not proposing to amend other sections of Chapter 173-400 WAC, General Regulations for Air Pollution Sources.

health and public welfare and to regulate emissions of hazardous air pollutants. NAAQS⁹ are made up of six common, widespread pollutants called “criteria pollutants”:

- Ground-level ozone
- Particulate matter
- Carbon monoxide
- Sulfur dioxide
- Nitrogen dioxide
- Lead

The US CAA identifies two types of national ambient air quality standards for criteria pollutants:¹⁰

- Primary standards provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly.
- Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

Emissions sources are also categorized in the US CAA as major or minor. The thresholds for these are typically expressed in tons, and can vary by pollution type and attainment status. Generally speaking, a major-source is any stationary source which emits or has the potential to emit 100 tons/year (tpy) or more of any New Source Review (NSR)-regulated pollutant for listed sources described in 40 CFR 52.21 (b)(1). A non-listed source is any stationary source which emits, or has the potential to emit, 250 tpy of an NSR-regulated pollutant.

To facilitate permitting, federal regulation directs states to develop State Implementation Plans that outline:

- Prevention to Significant Deterioration (PSD) for new major sources in areas that meet NAAQS.
- Nonattainment new source review (NNSR).

New sources and modifications that do not require a major-source NSR permit may instead require a minor-source NSR permit prior to construction or modification. The US CAA and the EPA's regulations are less prescriptive regarding minor NSR program requirements. These are typically designed and carried out by the designated air permitting authority (e.g. Ecology) once approved by the EPA to ensure legally enforceable procedures under the US CAA. An air permitting authority would also

⁹ 40 CFR part 50

¹⁰ [NAAQS Table](https://www.epa.gov/criteria-air-pollutants/naaqs-table); <https://www.epa.gov/criteria-air-pollutants/naaqs-table>

typically submit new or revised NSR rules to the EPA for approval into the State Implementation Plan.¹¹

EPA Significant Impact Levels Guidance

Under federal requirements for the preparation, adoption, and submittal of State Implementation Plans,¹² an applicant must demonstrate that the proposed major source or modification will not cause, or contribute to, a violation of NAAQS. However, the US CAA does not specify how a permit applicant or permitting authority is to make this demonstration, rather, federal law authorizes the EPA to determine how the analysis is to be conducted, including the use of air quality models.¹³ In this context, the EPA has historically derived pollutant-specific concentration levels known as “significant impact levels” (SILs) to identify the degree of air quality impact that “causes or contributes to” a violation of a NAAQS or PSD increment.

In this way, SILs serve as source level screening thresholds that the EPA, and states with delegated authority, may use along with other information to make “cause or contribute” determinations without site-specific analysis.¹⁴ EPA evaluates if the revision of an existing SIL value or additional new SIL value is needed for use in NSR permit applications when new NAAQS are federally adopted, or enough time has passed that atmospheric conditions have changed. As such, SIL values for SO₂ and NO₂, Ozone, and PM_{2.5} have been updated by the EPA in 2010, 2018, and 2024 via guidance.¹⁵

The SIL values identified by the EPA in guidance have no binding effect and permitting authorities may decide to use them for permitting actions. Permitting authorities retain the discretion to apply and justify different approaches and to require additional information from the permit applicant to make the required air quality impact demonstration.¹⁶ SILs have been part of Washington’s SIP since 1995.¹⁷

Sierra Club v. EPA

In 2013, the D.C. Circuit Court ruled that SILs may serve as a permissible *screening tool*, but they cannot be used in a categorical presumption of compliance that eliminates the discretion or obligation of additional analysis, when appropriate.¹⁸ 2018 and 2024 EPA guidance documents state that source values below recommended SIL do not reflect a final determination by the EPA that the proposed source does not cause or contribute to

¹¹ 40 CFR 51.166

¹² 40 CFR 51.165(a)(3)

¹³ 40 CFR 51.165(e)

¹⁴ Note that “cause or contribute” values in state language are generally interchangeable with federal “SIL” values for all intents and purposes.

¹⁵ See [EPA SIL guidance](https://www.epa.gov/nsr/significant-impact-levels-sils-cumulative-analyses): <https://www.epa.gov/nsr/significant-impact-levels-sils-cumulative-analyses>, and [legal memorandum attached to 2018 guidance](https://www.epa.gov/sites/default/files/2018-04/documents/sils_guidance_2018.pdf): https://www.epa.gov/sites/default/files/2018-04/documents/sils_guidance_2018.pdf for deeper discussion.

¹⁶ EPA, 2024

¹⁷ Submitted to the EPA in March 1993. Approved in June 1995. See 60 FR 28726.

¹⁸ Such as in situations where the existing air quality is already close to the NAAQS

a violation. A determination that a proposed source does not cause or contribute to a violation can only be made by a permitting authority on a permit-specific basis.

Washington Clean Air Act (Chapter 70A.15 RCW)

Washington Clean Air Act (Chapter 70A.15 RCW; WA CAA) establishes air pollution prevention as state policy and designates Ecology and local air pollution control authorities as responsible for implementation of state programs and regulations.¹⁹ Relevant to the current rulemaking:

- RCW 70A.15.1005 requires Washington to comply with the requirements of the US CAA.
- RCW 70A.15.2260 requires renewable permits for the operation of air contaminant sources.
- RCW 70A.15.6240 explicitly allows Ecology to accept delegation of federal clean air act programs (e.g., PSD permitting program).

Ambient air quality rule: Chapter 173-476 WAC

This chapter sets and implements ambient air quality standards in Washington, which must comply with the US CAA under the WA CAA. It establishes maximum acceptable levels in the ambient air for the following criteria pollutants: particulate matter, lead, sulfur dioxide, ozone, nitrogen dioxide, and carbon monoxide.

New source rule: WAC 173-400-113

This chapter allows permitting authorities to approve new or modified sources in an attainment or unclassified area only if they do all of the following:

- Comply with all applicable federal and state emission limits.
- Implement best available control technology for any new or increased pollutants.
- Demonstrate that modeled values will not cause or contribute to violations of ambient air quality standards.
- Demonstrate that modeled values will not cause or contribute to violations of ambient air quality standards in nonattainment areas.

2.3 Proposed rule amendments

The proposed rule amendments would:

- Update ambient air quality standards for:
 - Fine particulate matter (PM_{2.5})

¹⁹ Note that RCW 70.94 was reorganized and recodified as Chapter 70A.15 RCW in 2020.

- Sulfur dioxide (SO₂)
- Update “cause or contribute” threshold values for:
 - Fine particulate matter (PM_{2.5})
 - Sulfur dioxide (SO₂)
 - Nitrogen dioxide (NO₂)
 - Ozone (O₃)
- Remove automatic exemption below “cause or contribute” values to align with court rulings.*
- Specify when additional analysis may be required when modeled emissions are below “cause or contribute” values.*
- Make minor edits for clarity and consistency, without material change to requirements.

* These proposed changes are related. Removing automatic exemption alone would leave uncertainty as to what analysis may be required when modeled emissions are below the threshold values, so the proposed amendments would also address this uncertainty.

2.3.1 Update ambient air quality standards

Baseline

Federal

The US CAA authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) for the protection of public health and welfare and to regulate emissions of hazardous air pollutants. Federal NAAQS values are made up of six principal pollutants, three of which have been recently updated by Federal rule and relevant for the current state rulemaking:

- PM_{2.5} (primary, annual): **9 µg/m³**
- SO₂ (secondary, annual): **10 ppbv** (*parts per billion by volume*)
- SO₂ (secondary, 24-hour): **None**

State

RCW 70A.15.1005 require Washington to comply with the requirements of the US CAA, which implicitly includes NAAQS. State ambient air quality standards, located in WAC 173-476-110 and WAC 173-476-130, are as follows:

- PM_{2.5} (primary, annual): **12 µg/m³**
- SO₂ (secondary, annual): 0.02 ppmv (parts per million by volume; equivalent of **20 ppbv**)
- SO₂ (secondary, 24-hour): **140 ppbv**

We note that the baseline 24-hour standard was made obsolete by the 1-hour standard of 75 ppbv in WAC 173-476-130(1)(d). It is not mathematically possible to record a 24-hour average as high as 140 ppbv without violating the 1-hour standard of 75 ppbv.

Proposed

Under the proposed rule amendments, state ambient air quality standards would match the federal NAAQS, with levels of:

- PM_{2.5} (primary, annual): **9 µg/m³**
- SO₂ (secondary, annual): **10 ppbv**
- SO₂ (secondary, 24-hour): **None**

The amendments would retain the 1-hour SO₂ standard of 75 ppbv.

Expected impact

The proposed amendments would ensure that the state's ambient air quality standards align with the US CAA including NAAQS. Adoption of this rule amendment does not guarantee EPA approval of State Implementation Plan revisions. There is certainty of disapproval, however, in the absence of adopting this rule amendment. Under disapproval, a Federal Implementation Plan (FIP) would be developed by the EPA, and would likely align with the federal NAAQS.

Because it is likely that under the baseline the federal NAAQS would apply to Washington under a Federal Implementation Plan, we do not expect there to be a difference between the proposed rule amendments and the baseline. We therefore do not expect this proposed amendment to result in costs as compared to the baseline. We similarly do not expect benefits resulting from the applicable NAAQS not changing, but the proposed amendments would result in the benefit of Washington retaining delegated authority to implement the NAAQS.

We note that the removal of the secondary, 24-hour SO₂ standard may appear to reduce stringency of state ambient air quality standards. However, this baseline 24-hour standard was made obsolete by the 1-hour standard of 75 ppbv (WAC 173-476-130(1)(d)). It is not mathematically possible to record a 24-hour average as high as 140 ppbv without violating the 1-hour standard of 75 ppbv. Thus removal of the 24-hour standard has no material impact.

2.3.2 Update “cause or contribute” threshold values

Baseline

Federal

Under 40 CFR 51.165(b)(1-3) a new major source or major source modifications in areas designated attainment or unclassifiable that cause, or contribute to, a violation of National Ambient Air Quality Standard (NAAQS) would be denied approval without compensatory emission reductions. Significant Impact Level (SIL) values may be used as a screening tool to determine whether source emissions or modifications cause or contribute to a NAAQS violation. Current federally recommended SIL values are as follows:

- SO₂ (1-hour): **7.86 µg/m³**^{20,21}
- PM_{2.5} (annual): **0.13 µg/m³**²²
- NO₂ (1-hour): **7.5 µg/m³**²³
- Ozone (8-hour): **1.0 ppm**²⁴

State

Cause or contribute values (analogous to federal SIL values) are contained in WAC 173-400-113(4) Table 4a. “cause or contribute” values are referenced by WAC 173-400-113(3) for regulating major and minor new sources and modifications impacting attainment or unclassifiable areas and WAC 173-400-113(4a-c) regulating major new sources and modifications impacting nonattainment areas.

- SO₂ (1-hour): **30 µg/m³**
- PM_{2.5} (annual): **0.3 µg/m³**
- NO₂ (1-hour): **None**
- Ozone (8-hour): **None**

Relevant to the application of “cause or contribute” values to minor source review, we note that the legislature recognizes that air emissions from thousands of small individual sources are major contributors to air pollution in many regions of the state. RCW 70A.15.1005 declares that the policy of the state is to “achieve significant reductions in emissions from those small sources whose aggregate emissions constitute a significant contribution to air pollution in a particular region”.

Proposed

The proposed rule amendments would update “cause or contribute” screening levels to match EPA recommended values:

- SO₂ (1-hour): **7.86 µg/m³**
- PM_{2.5} (annual): **0.13 µg/m³**

²⁰ See [EPA Guidance Concerning the Implementation of the 1-hour SO₂ NAAQS for the Prevention of Significant Deterioration Program](https://www.epa.gov/sites/default/files/2020-09/documents/appwso2.pdf): <https://www.epa.gov/sites/default/files/2020-09/documents/appwso2.pdf>

²¹ Note that some Federal values are approximated from parts per million (ppm) for consistency with other state values

²² See [2024 EPA supplement to the 2018 guidance on Significant Impact Levels for PM_{2.5}](https://www.epa.gov/system/files/documents/2024-04/supplement-to-the-guidance-on-significant-impact-levels-for-ozone-and-fine-particles-in-the-psd-permitting-program-4-30-2024.pdf) : <https://www.epa.gov/system/files/documents/2024-04/supplement-to-the-guidance-on-significant-impact-levels-for-ozone-and-fine-particles-in-the-psd-permitting-program-4-30-2024.pdf>

²³ See [2010 EPA General Guidance for Implementing an interim 1-hour NO₂ Significant Impact Level](https://www.epa.gov/sites/default/files/2015-07/documents/appwno2.pdf) <https://www.epa.gov/sites/default/files/2015-07/documents/appwno2.pdf>

²⁴ See [2024 Supplement to the Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program](https://www.epa.gov/system/files/documents/2024-04/supplement-to-the-guidance-on-significant-impact-levels-for-ozone-and-fine-particles-in-the-psd-permitting-program-4-30-2024.pdf): <https://www.epa.gov/system/files/documents/2024-04/supplement-to-the-guidance-on-significant-impact-levels-for-ozone-and-fine-particles-in-the-psd-permitting-program-4-30-2024.pdf>

- NO₂ (1-hour): **7.5 µg/m³**
- Ozone (8-hour): **1.0 ppm**

Expected impact

The proposed “cause or contribute” values come directly from the most recent EPA SIL guidance, designed to meet the most recent EPA adopted NAAQS, and therefore would be the most likely to meet ambient air quality standards proposed by this rule when applied to permitting decisions. This is no longer the case for the out-of-date baseline “cause or contribute” thresholds.²⁵

The EPA is clear that adopting any SIL value, including EPA’s recommended SIL values, is at the discretion of the permitting authority as part of an approvable State Implementation Plan. The EPA is also clear that SILs help reduce the burden on permitting authorities and permit applicants to conduct otherwise time-consuming and resource-intensive air dispersion modeling where such modeling was unnecessary to demonstrate that a permit applicant meets the requirements of the US CAA.²⁶ Ecology engineers concur that calculating alternative state “cause or contribute” values is not practical. If we did not update the “cause or contribute” values, their value as a screening tool would diminish as they diverge from up-to-date science, and their continued use could result in additional effort by Ecology or emissions sources to ensure NAAQS would not be violated.²⁷

Because Ecology must comply with the US CAA (as directed by the WA CAA) and meet federal NAAQS, there is limited discretion in amending “cause or contribute” values and therefore limited impact for the purposes of this analysis. If we were to consider alternative methods of air quality determination, the proposed rule would represent a strict benefit to permittees by avoiding a more costly regulatory process.

Minor sources

We note that the EPA is largely silent on applying SIL values to new source review of minor sources.²⁸ Therefore, it is within Ecology’s discretion to propose more stringent “cause or contribute” values for new minor sources or modifications covered under WAC 173-400-113(3).²⁹ Minor sources have generally more homogeneous production methods than major sources and emit lower volumes of pollutants compared to major

²⁵ Based on discussions of facility emissions and ambient air concentrations with Ecology engineers.

²⁶ See EPA, 2018.

²⁷ In practice, to maintain protective ambient air quality levels for the public and environment until a revised rule is adopted, Ecology has already been incorporating the EPA guidance levels. While we are unable to include this as part of the baseline under the Administrative Procedure Act (chapter 34.05 RCW), we note that if this current practice was taken into consideration as part of the baseline, these proposed amendments would not result in a change.

²⁸ See Section 165(a)(3) of the US CAA and CFR40.51.165(b)(2)

²⁹ To ensure the state “achieve significant reductions in emissions from those small sources whose aggregate emissions constitute a significant contribution to air pollution in a particular region” as required by RCW 70A.15.1005.

sources by definition.³⁰ For this reason many new minor sources are authorized under general orders.³¹ As demonstrated by their technical support documentation and Ecology review, new minor sources that fall under general orders would emit well below existing and proposed values and not be impacted by the proposed rule amendments.³²

Minor new source review is subject to cumulative impact analysis if modeled emissions exceed “cause or contribute” values.³³ However, the instances in which we expect the proposed amendment to directly lead to new analysis are limited to special cases because:

1. The proposed amendment would only trigger cumulative impact analysis for *future* minor new source review when there is new construction or a modification. Note that minor sources permitted under general orders already had this analysis done, and so would not need to do them again. If Ecology developed an entirely new general order or update previously conducted analysis, however, it would potentially trigger cumulative impact analysis.
2. Many minor sources do not operate continuously at design rate, while modeled emission default to a 24-hour cycle when used for compliance demonstrations (i.e. are conservative). If modeled emissions initially show that a minor source exceeds “cause or contribute” thresholds, adjusting model assumptions to reflect actual operations can be sufficient to remain below “cause or contribute” thresholds. Usually, there will be permit terms to ensure a source does not deviate from the model assumptions.
3. Emissions could be high enough that cumulative impact analysis would have been required anyway under both current and proposed “cause or contribute” values for associated pollutants (SO₂ 1-hr, PM_{2.5} Annual, O₃ 8 hour).
4. A cumulative impact analysis would have been required under the current rule because of violating other criteria values in the baseline that would not be affected by the proposed rule amendments. The proposed amendments would not be the driver for needing to do a cumulative impact analysis.

If a cumulative impact analysis is required as a direct result of the proposed rule amendments, such an analysis may find that the new source meets standards without additional emissions controls. Given that federal SIL values are developed on a national basis, and that Washington generally has low existing background concentrations for many criteria pollutants, this is the most likely outcome for most minor sources. In other

³⁰ See [40 CFR § 70.2](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-70/section-70.2) for a full updated list: <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-70/section-70.2>

³¹ See [General Orders for Air Quality Permits](https://ecology.wa.gov/regulations-permits/permits-certifications/air-quality-permits/air-quality-general-orders); <https://ecology.wa.gov/regulations-permits/permits-certifications/air-quality-permits/air-quality-general-orders>

³² Communications with Ecology engineers. See Chapter 3 for additional discussion and summary.

³³ Note that this excludes minor sources that are permitted under general orders.

words, a minor source would incur costs of doing a cumulative impact analysis, but would not be likely to need to incur costs of additional emissions controls.

Overall, we do not expect these proposed rule amendments to result in costs or benefits related to major sources. We do, however, expect potential impacts to relatively few minor emissions sources, resulting in costs and benefits of additional cumulative impact analysis in cases where all three of the following apply:

- Adjustment for actual operation timing still results in modeled emissions above “cause or contribute” threshold values.
- Other emissions (not amended in the proposed rule) are not the driver of additional analytic requirements.
- Cumulative impact analysis would not be required under the baseline.

2.3.3 Remove automatic exemption below “cause or contribute” threshold values to align with court rulings

Baseline

State

The current rule, in 173–400–113(3), states that “Allowable emissions from the proposed new source or the increase in emissions from the proposed modification will not cause or contribute to a violation of any ambient air quality standard. *If the modeled concentrations of allowable emissions from the proposed new source or the increase in emissions from the proposed modification are below the levels in Table 4a, the proposed source does not contribute to a violation of an ambient air quality standard.* [emphasis added]”

Federal

Federal case law³⁴ determined that relying on SILs as a categorical presumption of compliance with ambient air quality standards violated the CAA.³⁵ In adopting the court’s decision, 2018 and 2024 EPA guidance states that source values below recommended SILs do not reflect a final determination by the EPA that the proposed sources do not cause or contribute to a violation. Rather, “To show that the proposed source will not have a significant or meaningful impact on air quality, permit applicants and permitting authorities may elect to use these Significant Impact Level (SIL) values (air quality concentration values) as a compliance demonstration tool.” (EPA, 2018).

Washington’s currently EPA-approved State Implementation Plan adopts 173–400–113(3) by reference, except for the second sentence. The second sentence was not

³⁴ *Sierra Club v. EPA*, 2013; see section 2.2 for discussion

³⁵ *Sierra Club v. EPA*, 705 F.3d 458 (D.C. Cir. 2013)

submitted by Ecology to ensure the State Implementation Plan is consistent with the federal court decision.

Proposed

The proposed rule amendments would remove language stating in definite terms that emissions below “cause or contribute” values do not contribute to a violation of an ambient air quality standard. They would replace it with WAC 173-400-113(3)(c) stating that, “A permitting authority may require a cumulative impact analysis even if modeled values do not exceed the values in Table 4a if there is information that indicates the impact of the proposed new source or modification could result in a violation of an ambient air quality standard when added to the impact of nearby sources or existing background concentrations.”

Expected impact

The proposed amendments would allow permitting discretion in situations where emissions below “cause or contribute” values may still lead to a violation of ambient air quality standards. This brings the rule into conformity with the EPA and federal court’s interpretation of the legal use of SILs in State Implementation Plans for US CAA permitting actions. Because compliance with federal court standing and the US CAA is required, there are no impacts from this amendment to major sources or modifications for the purposes of this analysis.

As discussed in section 2.3.2, the EPA is largely silent on applying SIL values to minor source review. By association, the court’s 2013 decision on source values below recommended SILs does not directly apply to minor sources. This means that removing automatic determinations for minor sources covered under WAC 173-400-113(3) falls within Ecology’s discretion. While the amendment opens the technical possibility for new requirements on minor sources or modifications, it is practically unlikely given limited information suggesting minor sources could still lead to a violation of ambient air quality standards. We do not expect this proposed amendment to result in likely costs or benefits as compared to the baseline.

2.3.4 Specify when additional analysis may be required when modeled emissions are below “cause or contribute” values

Baseline

In its 2013 decision (see section 2.2), the DC circuit court cited the potential impacts of nearby sources and existing background concentrations as reasons for vacating the EPA rule allowing categorical exemptions for emissions sources below SILs. However, neither the court nor the EPA explicitly defined an alternative process, only stating that permitting authorities retain the discretion to require additional information from the permit applicant to make the required air quality impact demonstration.

As discussed in section 2.3.3 above, Washington’s currently EPA-approved State Implementation Plan adopts by reference 173–400–113(3), except for the second sentence: *“If the modeled concentrations of allowable emissions from the proposed new source or the increase in emissions from the proposed modification are below the levels in Table 4a, the proposed source does not contribute to a violation of an ambient air quality standard.”*

Proposed

The proposed rule amendments would remove the sentence above from the rule language and replace it with WAC 173-400-113(3)(c):

“A permitting authority may require a cumulative impact analysis even if modeled values do not exceed the values in Table 4a if there is information that indicates the impact of the proposed new source or modification could result in a violation of an ambient air quality standard when added to the impact of nearby sources or existing background concentrations”

Expected impact

Based on the court’s ruling, and currently approved State Implementation Plan, all practical options remain available to Ecology’s permit engineers in making an air quality impact demonstration when source values are below “cause or contribute” values in the absence of the proposed amendment. There is no specific methodology required for additional analysis, information, or data.

We note that cumulative impact analysis is a broad term for the set of analyses completed per industry standard to estimate a source’s contribution to ambient air pollutant concentrations, and whether it would result in violation of NAAQS given other nearby sources. There is source-specific variability to what completing these analyses requires, but it represents a customized minimal effort required to scientifically understand the impacts of a new source and to meet the baseline standard of performing an analysis to make permitting decisions, as established by the court ruling. We therefore do not expect costs to result from this proposed amendment, as it is unlikely that a lesser set of analyses would suffice under the baseline.

In comparison to the baseline, this proposed amendment would:

- Restrict the universe of possible analyses to a cumulative impact analysis.
- Narrow the conditions under which the analysis could be triggered (i.e. only if there is information that indicates the impact of the proposed new source or modification could result in a violation of an ambient air quality standard when added to the impact of nearby sources or existing background concentrations).

This represents a benefit to permittees, compared to baseline, by providing transparency and predictability to an otherwise undefined federally delegated process that already includes, among other options, the proposed amendment.

2.3.5 Other edits for clarity and consistency

For completeness, we list other edits in the proposed rule below that only clarify language, or correct errors without changing any rule requirements. These include the following:

1. Remove WAC 173-476-130(5) Sunset provision. This section is no longer necessary as Washington no longer has nonattainment to which this section would apply.

2. Change the date on which all referenced federal regulations are adopted from January 1, 2016 to December 31, 2024 (WAC 173-476-020(2)). The referenced regulations are part of the baseline.
3. Remove “for Nonattainment Area Impacts” in the title of Table 4a. This aligns the title with the fact it applies to sections of WAC 173-400-113 governing impact to attainment (WAC 173-400-113(3)) and non-attainment areas (WAC 173-400-113(4)). As requirements to use the values listed in the table, rather than the table title, this would not change rule requirements.
4. Edit WAC 173-400-113(3) and 173-400-113(4)(a) to describe violations when emissions exceed “cause or contribute” values, instead of not violating when emissions are below or do not exceed “cause or contribute” values. This phrasing is more consistent with CFR 40 CFR 51.165(b), and keeps subsections of the rule consistent. By amending “are below” when referring to conditions that are not violations in WAC 173-400-113(3), these edits would also correct an error that implies emissions that equal the table values constitute a violation. This was never Ecology’s intent or practice, and it is highly unlikely that a source’s emissions would precisely equal the threshold.
5. Edit WAC 173-400-113(4)(c) to read “...reduce modeled impact *to* the values in Table 4a *or less*...” instead of the baseline’s “...reduce modeled impact *below* the values in Table 4a...”. This edit would correct an error in this section that incorrectly implies reducing or offsetting emissions to table values would lead to the denial of a permit. This was never Ecology’s intent or practice, and it is highly unlikely that a source’s emissions would precisely equal the threshold.
6. Amendments to WAC 173-400-113(3)(a) clarify that exceeding values in Table 4(a) will trigger a cumulative impact analysis.
7. Amendments to WAC 173-400-113(3)(b) clarify that if the analysis indicates a violation of ambient air quality standards the proposed new source will be considered to cause or contribute to a violation.

Chapter 3: Likely Costs of the Proposed Rule Amendments

3.1 Introduction

We analyzed the likely costs associated with the proposed rule amendments, as compared to the baseline. The proposed rule amendments and the baseline are discussed in detail in Chapter 2 of this document.

3.2 Cost analysis

The proposed rule amendments would:

- Update ambient air quality standards for:
 - Fine particulate matter (PM_{2.5})
 - Sulfur dioxide (SO₂)
- Update “cause or contribute” threshold values for:
 - Fine particulate matter (PM_{2.5})
 - Sulfur dioxide (SO₂)
 - Nitrogen dioxide (NO₂)
 - Ozone (O₃)
- Remove automatic exemption below “cause or contribute” values to align with court rulings.*
- Specify when additional analysis may be required when modeled emissions are below “cause or contribute” values.*
- Make minor edits for clarity and consistency, without material change to requirements.

* These proposed changes are related. Removing automatic exemption alone would leave uncertainty as to what analysis may be required when modeled emissions are below the threshold values, so the proposed amendments would also address this uncertainty.

3.2.1 Update ambient air quality standards

We do not expect this proposed rule amendment to result in costs as there is no likely difference between ambient air quality standards under the proposed rule and those that would likely be implemented under the baseline.

3.2.2 Update “cause or contribute” threshold values

EPA guidance establishes that using updated SIL values (“cause or contribute” values in state rules) as a screening tool for new major source review helps ensure federal ambient standards (from which SILs were derived) are met. Ecology is required to meet federal standards under our authorizing statute and federal delegation. Because alternative implementation tools are both limited and would potentially be more costly to permittees (e.g., additional facility-specific, detailed analysis to ensure its emissions do not cause or contribute to a violation of ambient air quality standards), costs to major emissions sources associated with the proposed amendment are limited for purposes of this analysis.

Federal guidance is silent however on applying SIL values to minor source review; which is a permitting function typically outlined by state and local agencies. Therefore, it is within Ecology’s discretion to apply “cause or contribute” values, along with amendments, to new minor sources covered under WAC 173-400-113(3) (see section 2.3.2 for a full discussion).

The primary cost of the rule on minor sources would be borne by those required to perform a cumulative impact analysis because of the amendment. If cumulative impact analysis indicated the source would cause or contribute to a violation of air quality standards, there would also be costs associated with criteria-specific emissions control technology or production changes.³⁶ As discussed in section 2.3.2, these limited potential cases are narrowly applicable to new individual permits not under a general order, with 24-hour emissions cycles, reporting modeled emissions below the “cause or contribute” thresholds in the current rule, but above the proposed lower threshold values.

Our analysis of these costs is limited by the fact we cannot predict the number or type of future new sources or modifications. As a proxy, we consider 2024 and 2025 modeled emissions from individual minor source permits as if the rule had applied. Note that this illustration only provides insights into costs to the degree that future permit activity is similar to the past. At the time of publication, we could not identify potential likely activities (e.g., new or developing industries or shifts in geographic distribution of industries to Washington that are not represented in existing permits) that were also likely to be impacted by the proposed rule amendments. We therefore focus on the 2024 and 2025 permit and emissions data.

We looked at 14 modeling analyses included in new source applications received between 2024 and 2025.

- Six of the 14 showed modeled emissions falling between current and proposed “cause or contribute” values for criteria amended by the rule.

³⁶ Since technology or production requirements resulting from a cumulative impact analysis are set to ensure compliance with the NAAQS, it could be argued that these incremental costs are out of the scope of this analysis. We discuss them here to be conservative.

- Among those six, five reported model emissions exceeding multiple other baseline criteria limits, indicating the proposed rule amendments would not be a driver for the requirement to do a cumulative impact analysis.
- This leaves only one applicant that would have been required to undergo a cumulative impact analysis due under the proposed lower “cause or contribute” threshold values (specifically for SO₂) but was not required to do so under the existing rule.³⁷

Performing cumulative air impact analysis for minor sources is rare, and there is limited information about their costs. Engineers at Ecology estimate the cost of cumulative impact analyses for major sources can require 50 to 100 hours of consultant time at roughly \$200 an hour – a range of \$10,000 to \$20,000 per analysis. If we factor in bidding, gathering materials, and other permittee labor and overhead not directly captured in the contract, total costs of the analysis could range from \$12,000 to \$24,000 assuming a rate of 20% of the contract cost. Given that these costs would have only occurred once in the observed two year period, our expected value of annualized cost for this component is \$6,000 to \$12,000 a year.³⁸

Depending on the findings of a cumulative impact analysis, future sources like the one described above could be required to adjust production, technologies, or behaviors to meet associated permit requirements. However, there is limited evidence in this instance and in general, to support frequent or material new requirements or controls. The minor new source identified in our permitting data for example will likely meet the standard without additional control, because at the time of this writing, the cumulative impact is expected to show a sufficiently low background concentration of SO₂ and find that the source would not cause or contribute to a violation of NAAQS when accounting for background SO₂ concentrations and nearby emissions sources.

We considered whether it was likely that a minor source would have attributes that would be different enough from the minor sources in our data (various emissions, geography, nearby sources) to have a different cumulative impact analysis result. The single instance in our data represents a relatively small minor source. A large minor source, perhaps located in an area with higher ambient concentrations of criteria pollutants, or with sufficiently enough nearby sources of the same pollutant, could theoretically be required to install additional controls under the proposed rule amendments.

Ecology engineers posited an example of a large minor source with additional controls driven by one pollutant as likely to install a bag house on a combustion turbine, at a potential cost of \$20 million. While we do not expect this to happen based on available data, we acknowledge that there is a non-zero chance that a future source with highly specific attributes as discussed in this section could arise in Washington, be required to do cumulative impact analysis driven purely by the proposed rule amendments to “cause or contribute” threshold values, and find in

³⁷ The applicant in focus reported a modeled SO₂ 1-hr value of 17 µg/m³, whereas the baseline value is 30 µg/m³ and proposed in the rule is 7.8 µg/m³ (See Section 2.3.2). All other modeled emissions for other pollutants fell below baseline and proposed cause or contribute values.

³⁸ Note that analysis of minor sources may be less costly than analysis of major sources from which these estimates are based. To be conservative, we chose not to make downward adjustments.

their additional cumulative impact analysis that additional controls are required beyond the best achievable control technology required under the baseline.

But we have not seen this happen in Washington, because such a large minor source would also likely have undergone cumulative impact analysis under the baseline, as with the majority of minor sources in our dataset with emissions falling between the baseline and proposed values.

3.2.3 Remove automatic exemption below “cause or contribute” values to align with court rulings

As discussed in section 2.3.3, this amendment brings the rule into conformity with the federal court’s determination on the legal use of SILs in State Implementation Plans for US CAA permitting actions for major sources. Because compliance with federal court standing and the US CAA is required, there are no costs directly associated with this amendment for the purposes of this analysis.

We note that this amendment opens the technical possibility for new requirements (costs) on new minor sources or modifications that show model emissions below “cause or contribute” values. However, it is practically unlikely given there is little information to suggest that minor sources with individual permits in Washington could still lead to a violation of ambient air quality standards when below “cause or contribute” values. The “cause or contribute” values are derived for major sources, and should thus be conservative for minor sources.

3.2.4 Specify when additional analysis may be required when modeled emissions are below “cause or contribute” values

Restricting the universe of analyses available to Ecology following *Sierra Club v. EPA*, 2013, and conditions under which they are triggered, provides transparency and predictability to an otherwise undefined federally delegated process. No new costs are expected to be generated by this amendment.

3.2.5 Other edits for clarity and consistency

Edits for clarity and consistency are not expected to impose a cost, as they would not change any regulatory requirements. See section 2.3.5 for details.

3.3 Environmental justice costs

In previous sections, we identified limited and infrequent costs of the proposed rule amendments, occurring for one minor source every other year. These would come in the form of additional analytic costs, but we do not believe it is likely that they would result in changes to

emissions control technologies that are due to choices within Ecology's discretion.³⁹ As such, it is unlikely the proposed rule amendments would significantly affect market prices (e.g., of goods produced in an affected minor source's industry). We therefore do not expect significant distributional impacts as a result of the proposed rule amendments.⁴⁰

³⁹ See Chapter 6 for discussion of alternative rule content considered during rule development, that was not included in the proposed rule. Community engagement and input are documented in the Environmental Justice Assessment for this rulemaking, and included in the rule file, when a final rule is adopted.

⁴⁰ As noted in section 3.2.2, there is technically a non-zero chance a minor source with specific attributes (as not reflected in our data) that would result in it needing to add control technology as a result of the proposed rule amendments. In this case, costs could be passed on to some degree to consumers, which is less affordable in terms of disposable and discretionary income for low-income communities. However, to pass the majority of costs on, such a minor source would need to have relatively little competition in its industry, which is more likely in heavy-industry and major sources than in activities performed by minor sources.

Chapter 4: Likely Benefits of the Proposed Rule Amendments

4.1 Introduction

We analyzed the likely benefits associated with the proposed rule amendments, as compared to the baseline. The proposed rule amendments and the baseline are discussed in detail in Chapter 2 of this document.

4.2 Benefits analysis

The proposed rule amendments would:

- Update ambient air quality standards for:
 - Fine particulate matter (PM_{2.5})
 - Sulfur dioxide (SO₂)
- Update “cause or contribute” threshold values for:
 - Fine particulate matter (PM_{2.5})
 - Sulfur dioxide (SO₂)
 - Nitrogen dioxide (NO₂)
 - Ozone (O₃)
- Remove automatic exemption below “cause or contribute” values to align with court rulings.*
- Specify when additional analysis may be required when modeled emissions are below “cause or contribute” values.*
- Make minor edits for clarity and consistency, without material change to requirements.

* These proposed changes are related. Removing automatic exemption alone would leave uncertainty as to what analysis may be required when modeled emissions are below the threshold values, so the proposed amendments would also address this uncertainty.

4.2.1 Update ambient air quality standards

We do not expect this proposed rule amendment to result in benefits related to changes in ambient air quality as there is no likely difference between ambient air quality standards under the proposed rule and those that would likely be implemented under the baseline.

The amendments would, however, result in Washington being able to retain delegated authority and ongoing ability to implement state-specific ambient air quality standards.

4.2.2 Update “cause or contribute” threshold values

As discussed in section 3.2.2, we reviewed 14 applications from minor sources received between 2024 and 2025.

- Six of the 14 showed modeled emissions falling between current and proposed “cause or contribute” values for criteria amended by the rule.
- Among those six, five reported model emissions exceeding multiple other baseline criteria limits, indicating the proposed rule amendments would not be a driver for the requirement to do a cumulative impact analysis.
- This leaves only one applicant that would have been required to undergo a cumulative impact analysis due under the proposed lower “cause or contribute” threshold values (specifically for SO₂) but was not required to do so under the existing rule.⁴¹

Depending on the findings of a cumulative impact analysis, future sources like the one described above could be required to adjust production, technologies, or behaviors to meet associated permit requirements. However, there is limited evidence in this instance and in general, to support frequent or material new requirements or controls. The minor new source identified in our permitting data for example will likely meet the standard without additional control, because at the time of this writing, the cumulative impact is expected to show a sufficiently low background concentration of SO₂ and find that the source would not cause or contribute to a violation of NAAQS when accounting for background SO₂ concentrations and nearby emissions sources.

We considered whether it was likely that a minor source would have attributes that would be different enough from the minor sources in our data (various emissions, geography, nearby sources) to have a different cumulative impact analysis result. The single instance in our data represents a relatively small minor source. A large minor source, perhaps located in an area with higher ambient concentrations of criteria pollutants, or with sufficiently enough nearby sources of the same pollutant, could theoretically be required to install additional controls under the proposed rule amendments. Any change in production or control technology as a result of Ecology’s discretion to regulate minor sources would lead to environmental and public benefits to Washington in the form of avoided damages to the environment and human health.⁴²

To align with the large minor source hypothetically affected by the proposed rule amendments discussed in section 3.2.2, we consider potential emissions reductions associated with reduced emissions of sulfur dioxide from a single large minor source. As discussed, this is not a likely result of the proposed rule amendments, but does have a non-zero probability of arising in the

⁴¹ The applicant in focus reported a modeled SO₂ 1-hr value of 17 µg/m³, whereas the baseline value is 30 and proposed in the rule is 7.8 (See section 2.3.2). All other modeled emissions for other pollutants fell below baseline and proposed cause or contribute values.

⁴²

case that such a source comes to exist in the future despite not being reflected in our facility application data. Avoided harms (benefits) to public health and the environment would vary considerably depending on location, the surrounding area, and population attributes, as well as by the type of emissions source.

In 2019, the EPA estimated avoided healthcare costs of approximately \$73,000 to \$420,000 per ton of sulfur dioxide emissions coming from various mobile sources.⁴³ A 2016 paper estimated a national average cost per ton of sulfur dioxide of between \$20,000 and \$34,000 for mortality alone.⁴⁴ Dollar values are updated for inflation to 2026-dollars using Federal Reserve Bank of St. Louis, 2026. These costs do not reflect environmental damages caused by acid rain formation, which contributes to harms to aquatic life through water acidification and to plant life through foliage destruction. Sulfur dioxide also contributes to the formation of fine particulate matter (PM_{2.5}), as well as reducing visibility due to haze which reduces the benefits the public gets from outdoor activities like recreation or visiting national parks and landmarks.

To equal the rough approximation of \$20 million compliance cost at our hypothetical facility, it would need to reduce sulfur dioxide emissions by between 22 and 108 tons over two years to balance compliance costs with avoided healthcare and mortality costs, excluding any environmental impacts which would reduce these equivalent tonnage values. A minor source is defined as emitting less than 100 tons per year, which overlaps with the range above, and would fall higher in the range, if not above it, if avoided environmental damages were included in monetized costs of sulfur emissions.

But we have not seen this happen in Washington, because such a large minor source would also likely have undergone cumulative impact analysis under the baseline, as with the majority of minor sources in our dataset with emissions falling between the baseline and proposed values.

4.2.3 Remove automatic exemption below “cause or contribute” values to align with court rulings

As described in section 2.3.3, this amendment brings the rule into conformity with the federal court’s interpretation of the legal use of SILs in State Implementation Plans for US CAA permitting actions for major sources. Because compliance with federal court standing and the US CAA is required, there are no direct benefits associated with this amendment for the purposes of this analysis.

We note that this amendment opens the technical possibility for new requirements on new minor sources or modifications that show model emissions below “cause or contribute” values.

⁴³ Wolfe, P, K Davidson, C Fulcher, N Fann, M Zawacki, KR Baker, 2019. [Monetized health benefits attributable to mobile source emission reductions across the United States in 2025](https://www.epa.gov/benmap/mobile-sector-source-apportionment-air-quality-and-benefits-ton). Science of The Total Environment. Volume 650, Part 2, 10 February 2019, Pages 2490-2498. <https://www.epa.gov/benmap/mobile-sector-source-apportionment-air-quality-and-benefits-ton>.

⁴⁴ Jinhyok, H, PJ Adams, HO Gao, 2016. [Public Health Costs of Primary PM_{2.5} and Inorganic PM_{2.5} Precursor Emissions in the United States](https://pubmed.ncbi.nlm.nih.gov/27153150/). Environ Sci Technol. 2016 Jun 7;50(11):6061-70. <https://pubmed.ncbi.nlm.nih.gov/27153150/>.

Any change in production or technological control as a result from ecology's discretion to regulate minor sources would lead to environmental and public benefits to Washington in the form of avoided damages to the environment and human health. However, Ecology has determined that this is an unlikely scenario given there is little information to suggest that minor sources with individual permits in Washington could still lead to a violation of ambient air quality standards when below "cause or contribute" values.

4.2.4 Specify when additional analysis may be required when modeled emissions are below "cause or contribute" values

Restricting the universe of analyses available to Ecology following *Sierra Club v. EPA*, 2013, and conditions under which they are triggered, provides transparency and predictability to an otherwise undefined federally delegated process. This ability to set predictable expectations as to when analysis may be required and limiting it to cumulative impact analysis is a qualitative benefit to the regulated community.

4.2.5 Other edits for clarity and consistency

See section 2.3.5 for details. Edits for clarity and consistency provide a qualitative benefit to the regulated community by communicating the requirements of the rule without materially changing them, and reducing likelihood of needing extra time and effort to clarify expectations.

4.2.6 Environmental justice benefits

In previous sections, we identified limited and infrequent impacts of the proposed rule amendments, occurring for one minor source every other year. These would come in the form of additional analytic requirements, but we do not believe it is likely that they would result in changes to emissions and ambient air pollutant concentrations that are due to choices within Ecology's discretion.⁴⁵ As such, it is unlikely the proposed rule amendments would significantly change the public's criteria pollutant exposure. We therefore do not expect significant distributional impacts as a result of the proposed rule amendments.⁴⁶

⁴⁵ See Chapter 6 for discussion of alternative rule content suggested during rule development, that was not included in the proposed rule. Community engagement and input are documented in the Environmental Justice Assessment for this rulemaking, and included in the rule file, when a final rule is adopted.

⁴⁶ As noted in section 2.3.2 and discussed further in sections 3.2.2 and 4.2.2, there is technically a non-zero chance a minor source with specific attributes (as not reflected in our data) that would result in it needing to add control technology as a result of the proposed rule amendments. In this case, the public and environment would benefit from reduced exposure to criteria pollutants and the environmental and health harms they cause. The associated avoided costs include, but are not limited to reduced healthcare costs, mortality costs, quality of life costs, and reduced availability and quality of environmental goods and services.

Chapter 5: Cost-Benefit Comparison and Conclusions

5.1 Summary of costs and benefits of the proposed rule amendments

We identified the following costs and benefits of the proposed rule amendments, as compared to the baseline of existing state and federal laws and rules. Taken in summary from Chapters 3 and 4, these are:

Costs:

- Additional cumulative impact analysis at new minor sources: \$12,000 to \$24,000 every other year. The present value of this cost stream is approximately \$109,000 to \$218,000 over 20 years.^{47, 48}
- Unlikely but technically possible costs of approximately \$20 million at a hypothetical minor facility if cumulative impact analysis indicates additional emissions controls are necessary. This type of source is not reflected in actual facility and ambient air data, but it represents an unknown type of new or modified large minor source locating in an area with higher ambient concentrations of criteria pollutants, or with sufficiently enough nearby sources of the same pollutant, to be likely to cumulatively cause or contribute to violations of the ambient air quality standards.

Benefits

- Assurance that new minor sources would not cause or contribute to violations of ambient air quality standards. While minor sources have fewer emissions, lower screening levels for minor sources would eliminate risk of multiple sources collectively causing ambient air quality violations and associated environmental and public health harms.
- To offset the costs to such a hypothetical minor source described above (unlikely, based on facility data), considering just mortality and healthcare costs, additional controls would need to reduce sulfur dioxide emissions by between 22 and 108 tons over 2 years (11 to 54 tons per year, at a source emitting up to 100 tons per year). The number of tons needed to offset costs would be lower if we included unquantified benefits to the environment – acid rain formation, harms to aquatic life, harms to plant foliage – and

⁴⁷ To better understand streams of monetized costs or benefits over time, Ecology uses present values, which convert these streams into current dollars by accounting for inflation and the opportunity cost of having funds later rather than now (e.g., the risk-free interest someone could have received if they had the funds now and invested them). We estimate the 20-year present value using a Social Rate of Time Preference (discount rate) approximated by the long-run real rate of return on US Treasury I Bonds, which is currently approximately 1%. For current I Bond return rates, see US Treasury Department, 2026. [Bonds Interest Rates](https://treasurydirect.gov/savings-bonds/i-bonds/i-bonds-interest-rates/). <https://treasurydirect.gov/savings-bonds/i-bonds/i-bonds-interest-rates/>

⁴⁸ It is not likely that this will result in additional emissions controls or process changes. See section 3.2.2 for discussion.

additional harms to people through formation of additional fine particulate matter and increased haze.

- Transparency and predictability of when and what analysis may be required when modeled emissions are below “cause or contribute” screening values, rather than undefined and uncertain needs for additional analysis, information, data, or activities.
- Improved clarity in rule language, facilitating clear expectations for those required to comply with the amended rules. This includes removal of obsolete requirements, rewording without material impact to requirements, and updating references to current baseline regulations.

5.2 Conclusion

We conclude, based on a reasonable understanding of the quantified and qualitative costs and benefits likely to arise from the proposed rule amendments, as compared to the baseline, that the benefits of the proposed rule amendments are greater than the costs.

Chapter 6: Least-Burdensome Alternative Analysis

6.1 Introduction

RCW 34.05.328(1)(e) requires Ecology to “...[d]etermine, after considering alternative versions of the rule and the analysis required under (b), (c), and (d) of this subsection, that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives stated under (a) of this subsection.” The referenced subsections are:

- (a) Clearly state in detail the general goals and specific objectives of the statute that the rule implements;
- (b) Determine that the rule is needed to achieve the general goals and specific objectives stated under (a) of this subsection, and analyze alternatives to rule making and the consequences of not adopting the rule;
- (c) Provide notification in the notice of proposed rulemaking under RCW 34.05.320 that a preliminary cost-benefit analysis is available. The preliminary cost-benefit analysis must fulfill the requirements of the cost-benefit analysis under (d) of this subsection. If the agency files a supplemental notice under RCW 34.05.340, the supplemental notice must include notification that a revised preliminary cost-benefit analysis is available. A final cost-benefit analysis must be available when the rule is adopted under RCW 34.05.360;
- (d) Determine that the probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the statute being implemented.

In other words, to be able to adopt the rule, we must determine that the requirements of the rule are the least burdensome set of requirements that achieve the goals and objectives of the authorizing statute(s).

We assessed alternative proposed rule content, and determined whether they met the goals and objectives of the authorizing statute. Of those that would meet the goals and objectives, we determined whether those chosen for inclusion in the proposed rule amendments were the least burdensome to those required to comply with them.

6.2 Goals and objectives of the authorizing statute

The authorizing statute for this rule is Chapter 70A.15 RCW, Washington Clean Air Act. Its goals and objectives (found in RCW 70A.15.1005) are extensive, and include, but are not limited to:

- Preserve, protect, and enhance air quality for current and future generations.
- Protect essential air resources from harmful pollution levels.
- Improve air quality statewide as a matter of public interest.

- Secure and maintain air quality levels that protect human health and safety, including sensitive populations.
- Comply with the requirements of the federal Clean Air Act.
- Prevent injury to plant and animal life and property.
- Foster comfort and convenience of Washington's inhabitants.
- Promote economic and social development.
- Facilitate enjoyment of the state's natural attractions.
- Protect public welfare, visibility, and scenic, aesthetic, historic, and cultural values.
- Prevent air pollution problems that interfere with enjoyment of life, property, or natural attractions.
- Prevent areas with acceptable air quality from deteriorating to harmful levels.
- Ensure air pollution control strategies lessen negative impacts on air, water, and land.
- Consider energy efficiency and conservation in control strategy decisions.
- Equitably share costs of air protection and control programs among contributing sources.
- Encourage and support regional air pollution control programs.
- Safeguard public interest through an intensive, progressive, coordinated statewide prevention and control program.
- Provide for distribution of responsibilities and coordination among state, regional, local, federal governments, organizations, and individuals.
- Use all known, available, and reasonable methods to reduce, prevent, and control air pollution.
- Recognize that air pollution problems cross political boundaries and are compounded by population and geography.
- Achieve significant reductions from small sources whose aggregate emissions significantly contribute to regional air pollution.
- Incorporate air pollution goals into the missions and actions of state agencies.

6.3 Alternatives considered and why they were excluded

We considered the following alternative rule requirements and did not include them in the proposed rule amendments. Each section below explains why we did not include these alternatives.

- Not updating 2024 PM_{2.5} standards given EPA challenges.
- Not specifying analysis type and trigger below “cause or contribute” values.
- Adopting more-stringent standards than the federal.

We also considered not amending the rule at this time. For discussion of alternatives to rulemaking, see Appendix A section B(2).

6.3.1 Not updating 2024 PM_{2.5} standards given EPA challenges

Based on informal public comment, we considered not adopting the 2024 PM_{2.5} NAAQS or the associated lowered SIL value because EPA is asking the court to vacate the stricter standard.

In June 2026, the US Court of Appeals DC Circuit upheld the 2024 PM_{2.5} standard of 9 µg/m³. Ecology must adopt the revised 2024 standard to comply with the federal Clean Air Act, a stated objective of RCW 70A.15.1005.

6.3.2 Not specifying analysis type and trigger below “cause or contribute” values

Based on informal public comment, we considered only omitting language in WAC 173-400-113(3) that states “if allowable emissions from the proposed new source are below “cause or contribute” values, the proposed source will not be considered to cause or contribute to a violation of ambient air quality standards.”; but not add specificity in WAC 173-400-113(3)(c) which states: “A permitting authority may require a cumulative impact analysis even if modeled values do not exceed the values in Table 4a if there is information that indicates the impact of the proposed new source or modification could result in a violation of an ambient air quality standard when added to the impact of nearby sources or existing background concentrations.”.

To meet its goal of complying with the federal Clean Air Act, Ecology must revise the current language to remove the conflict with the outcome of a court challenge against EPA which determined that permitting authorities may not exempt sources from doing a thorough analysis (cumulative impact analysis) if circumstances warrant.

Adding WAC 173-400-113(3)(c) aligns with the US CAA's allowance and EPA's SIL guidance that permitting authorities should use discretion and review proposed sources on a case-by-case basis. Given the court's ruling, and currently approved State Implementation Plan, this means that all practical options remain available to Ecology's permit engineers in making an air quality impact demonstration when source values are below “cause or contribute” values without WAC 173-400-113(3)(c). In comparison, the proposed amendment would define the analyses (a cumulative impact analysis), and warranting circumstances under which the analysis could be triggered (i.e. only if there is information that indicates the impact of the proposed new source or modification could result in a violation of an ambient air quality standard when added to the impact of nearby sources or existing background concentrations). In this way, the alternative of omitting WAC 173-400-113(3)(c) from the proposed rule, would have been more burdensome to covered parties.

6.3.3 Adopting more-stringent standards than the federal

Under the US CAA, states must have air quality standards in place that are at least as stringent as federal standards adopted by the EPA. We considered adopting standards that are more stringent, but we are not proposing more stringent standards as part of the proposed rule amendments. This is because this alternative would have been more likely to impose additional regulatory costs without sufficiently identifiable benefits. Standards that are more stringent than the federal standards – and thus also standards in other states using the federal values – would likely create additional costs and complications for implementation and enforcement of potentially inconsistent or dual regulations. Additionally, Ecology relies on the scientific rigor of the EPA analysis that supports the federal standards, and does not currently have the resources and capability that would be necessary to conduct an equally rigorous analysis to support more-stringent standards.

6.4 Conclusion

After considering alternatives, within the context of the goals and objectives of the authorizing statute, we determined that the proposed rule represents the least-burdensome alternative of possible rule requirements meeting the goals and objectives.

Chapter 7: Regulatory Fairness Act Compliance

We analyzed the compliance costs of the adopted rule amendments in Chapter 3 of this document. Based on past new source applications, we estimated that one facility every two years would need to perform additional analysis (cumulative impact analysis) under the parts of the proposed rule within Ecology's discretion. Other impacts would come from federal law with which we are required to comply under RCW 70A.15.1005.

In analyzing new source application data, we identified that new emissions sources with attributes similar to a single facility in our dataset (that would have needed to perform additional cumulative impact analysis if the proposed amendments had been in force when that facility submitted its application) would need to undergo this additional analysis. The existing business that owns and runs this facility employs more than 50 people, and moreover does not need to undergo any additional analysis itself as an existing source. (Only new sources or modifications would incur these additional analytic costs.) As future affected facilities would likely have similar attributes, it is likely they would employ similar numbers of employees. This rulemaking is therefore exempt from further analysis under the Regulatory Fairness Act, per RCW 19.85.025(4), as the proposed rule amendments do not impose compliance costs on existing businesses and are not likely to affect small businesses in the future.

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Appendix A: Administrative Procedure Act (RCW 34.05.328) Determinations

- A. RCW 34.05.328(1)(a) – Clearly state in detail the general goals and specific objectives of the statute that this rule implements.

See Chapter 6.

- B. RCW 34.05.328(1)(b) –

1. Determine that the rule is needed to achieve the general goals and specific objectives of the statute.

See chapters 1 and 2.

2. Analyze alternatives to rulemaking and the consequences of not adopting this rule.

Chapter 173-476 WAC. This rulemaking intends to update air quality standards to align with revised federal standards for fine particulate matter (PM_{2.5}) adopted by EPA in March 2024 and sulfur dioxide adopted by EPA in December 2024. The consequence of not adopting these revised standards is that Ecology would remain out of compliance with the federal Clean Air Act. Under the federal Clean Air Act, states must have air quality standards in place that are at least as stringent as federal standards adopted by the EPA.

Chapter 173-400 WAC. This rulemaking intends to update several “cause or contribute” threshold values, also known as significant impact levels (SILs), and associated provisions used by Ecology and local permitting authorities in permitting new or modified sources of air pollution. The newly revised SIL values would match those recommended by EPA since Ecology last revised any of the SIL values. The EPA-recommended SIL values are based on the current National Ambient Air Quality Standards (NAAQS). The consequence of not adopting the revised SIL values is that the values used by permitting authorities under this rule would not be based on the current NAAQS. The consequence of not revising the SIL-related provisions is that the rule will remain in conflict with the outcome of a 2013 legal challenge filed by the Sierra Club against EPA. That case determined that the federal rule which contained similar language to what Ecology is proposing to revise was vacated because it allowed proposed sources to be automatically exempted from fully demonstrating that the source would not cause or contribute to a violation of an air quality standard.

Please see the Least Burdensome Alternative Analysis, Chapter 6 of this document, for discussion of alternative rule content considered.

- C. RCW 34.05.328(1)(c) - A preliminary cost-benefit analysis was made available.

When filing a rule proposal (CR-102) under RCW 34.05.320, Ecology provides notice that a preliminary cost-benefit analysis is available. At adoption (CR-103 filing) under RCW 34.05.360, Ecology provides notice of the availability of the final cost-benefit analysis.

- D. **RCW 34.05.328(1)(d) – Determine that probable benefits of this rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the statute being implemented.**

See Chapters 1 – 5.

- E. **RCW 34.05.328 (1)(e) - Determine, after considering alternative versions of the analysis required under RCW 34.05.328 (b), (c) and (d) that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives stated in Chapter 6.**

Please see Chapter 6.

- F. **RCW 34.05.328(1)(f) - Determine that the rule does not require those to whom it applies to take an action that violates requirements of another federal or state law.**

The proposed rule amendments would not require covered parties to violate existing state and federal law. Ecology is proposing to update air quality standards to reflect the current NAAQS already in effect. Additionally, Ecology is proposing to update the screening thresholds and related provisions used in the permitting process to match those that are recommended by EPA based on the current NAAQS.

- G. **RCW 34.05.328 (1)(g) - Determine that the rule does not impose more stringent performance requirements on private entities than on public entities unless required to do so by federal or state law.**

The proposed rule amendments would not impose more stringent performance requirements on private entities than on public entities. All regulated sources of air pollution must comply with the requirements of both chapters.

- H. **RCW 34.05.328 (1)(h) Determine if the rule differs from any federal regulation or statute applicable to the same activity or subject matter.**

Chapter 173-476 WAC. No. The rule amendments do not differ from federal regulations.

Chapter 173-400 WAC. SIL-related provisions. Yes. The amendments to the SIL-related provisions keep in place a difference from federal regulations in that the rule applies the SILs as a screening threshold to minor sources as well as major sources. Under the federal rules, SIL values are only applied to major sources.

Chapter 173-400 WAC. SIL values. With respect to updates to the SIL values, there is no difference between federal values adopted into rule and subsequent recommended values provided by EPA to permitting authorities for use in the permitting process.

- If **yes**, the difference is justified because of the following:

- ☒ (i) A state statute explicitly allows Ecology to differ from federal standards.

The [federal Clean Air Act, Section 116 \(Section 7416 of U.S. Code\)](#) allows that states may adopt air quality standards and regulations that are more stringent than federal

standards. The federal standards (NAAQS) represent the minimum required to protect public health.

Clean Air Act, Section 116:

“Nothing in this chapter shall preclude or deny the right of any State or political subdivision thereof to adopt or enforce (1) any standard or limitation respecting emissions of air pollutants or (2) any requirement respecting control or abatement of air pollution.”

☐ (ii) Substantial evidence that the difference is necessary to achieve the general goals and specific objectives stated in Chapter 6.

I. RCW 34.05.328 (1)(i) – Coordinate the rule, to the maximum extent practicable, with other federal, state, and local laws applicable to the same subject matter.

The amendments to Chapters 173-400 WAC were shared and coordinated in routine meetings with state and local clean air agency permitting staff. Local clean air agencies who adopt this rule, or their own rules similar to this one, provided input on how they use SIL values in their permitting process.

The amendments to both chapters were shared with EPA prior to proposal for review against federal clean air rule requirements.