Air Quality in Overburdened Communities Highly Impacted by Air Pollution Rulemaking: Introduction to Emissions Reduction

Wednesday, July 23, 2025

Chapter 173-448 WAC

DEPARTMENT OF ECOLOGY
State of Washington

Agenda

- Introduction
- Scope of emissions reduction
- Emissions reduction options
- Discussion

Ecology Staff

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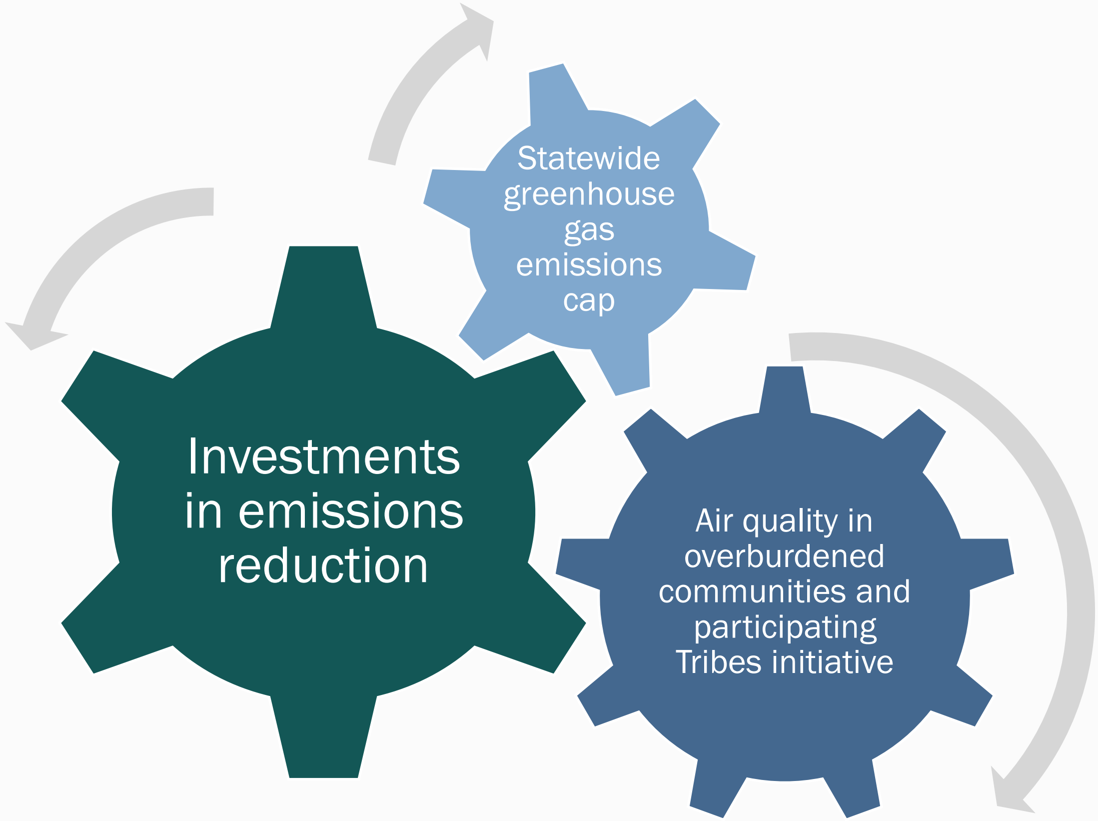
Climate Commitment Act Context

Cap and invest

- Statewide reductions in greenhouse gas emissions
- Portion of funds directed to benefit overburdened communities

Environmental justice provision

- Improving air quality in overburdened communities highly impacted by air pollution and participating Tribes



Rulemaking Timeline

Rulemaking announcement
October 10, 2024

Workshop 1
Rulemaking background
December 12, 2024

Workshop 2
Pollutants and emission sources
March 6, 2025

Workshop 3
Air quality targets
May 21, 2025

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Emissions reduction
July 23, 2025

Review draft rule
Fall 2025

Informational webinar
Updates and implementation
TBD

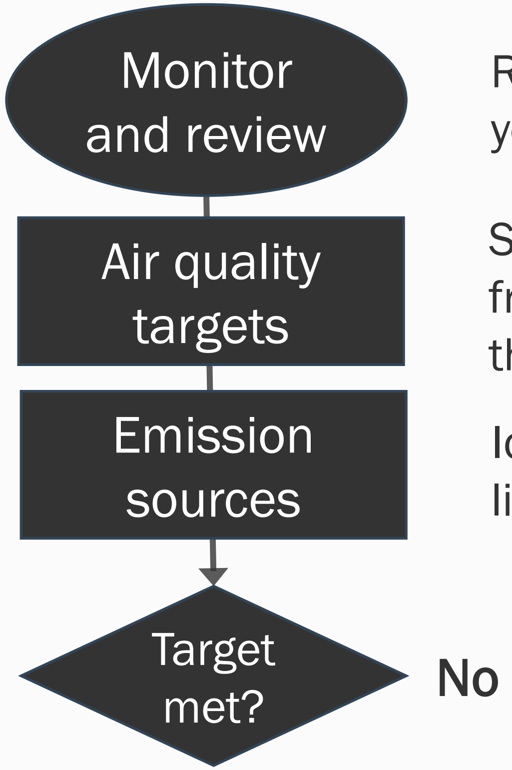
Rulemaking proposal
TBD

Rulemaking webpage

Scope of Emissions Reduction

Tentative Emissions Reduction Framework

RCW 70A.65.020[1]

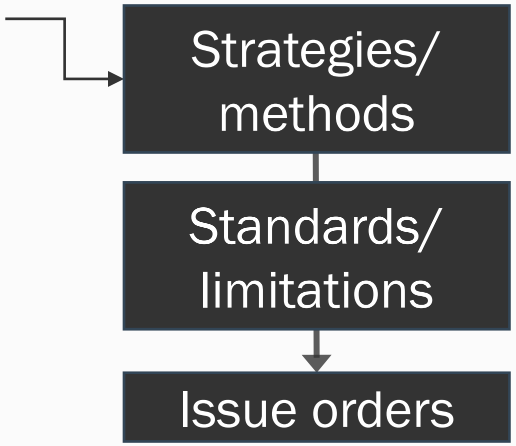


Report air quality trends every 2 years (2)(a)

Set targets using monitoring data from neighboring communities or the national air quality standards (2)(b)(i)

Identify greatest contributors and list high priority significant emitters (1)(c) & (2)(b)(ii)

Determine whether the air quality target has been met



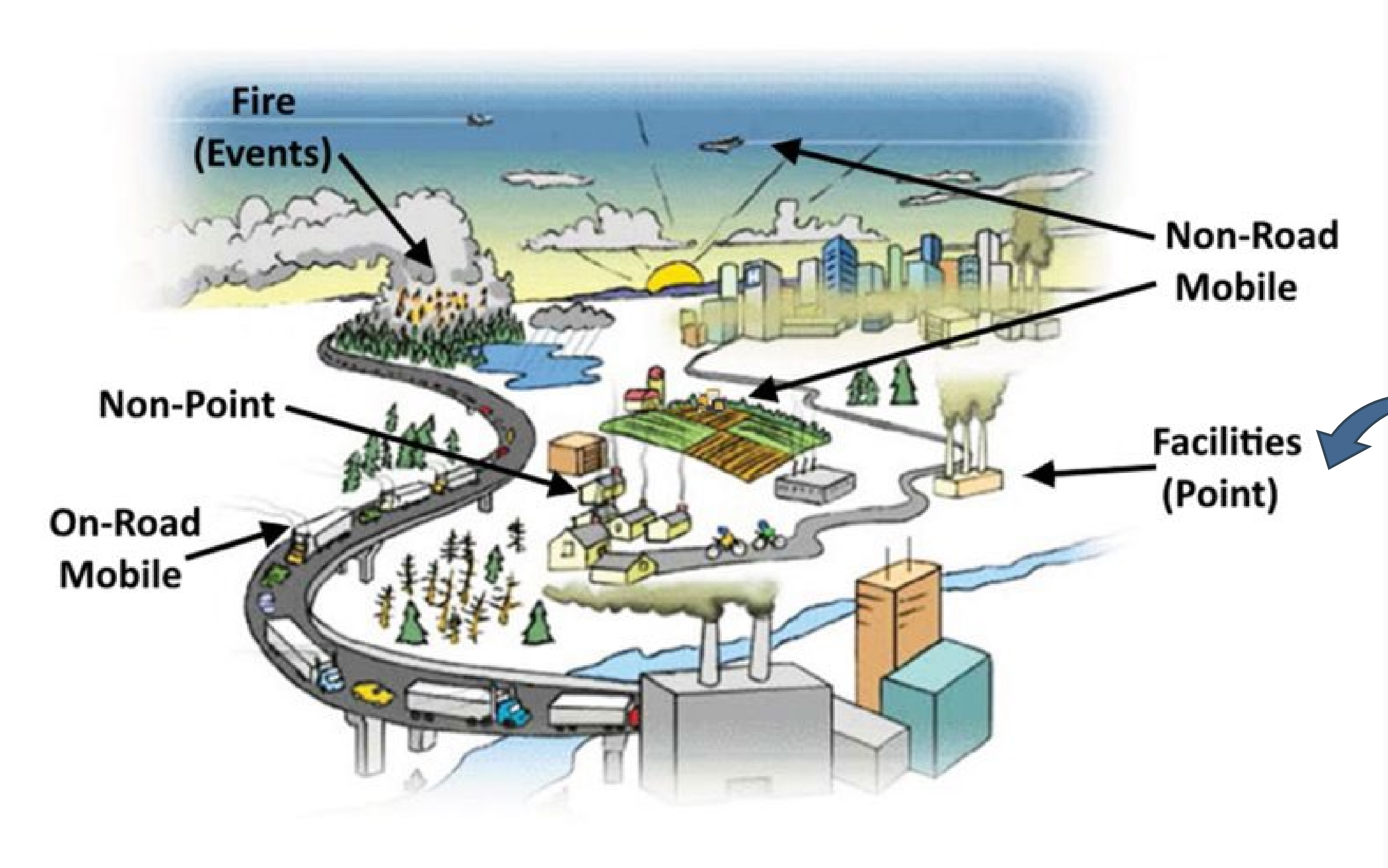
Adopt emission control strategies or methods to achieve reduction targets (2)(b)(iii)

Adopt stricter standards or limitations; consider mitigation (2)(b)(iv)

Issue orders to reduce emissions as necessary and proportionately (2)(b)(v) & (2)(c)

[1]https://app.leg.wa.gov/RCW/default.aspx?cite=70A.65.020

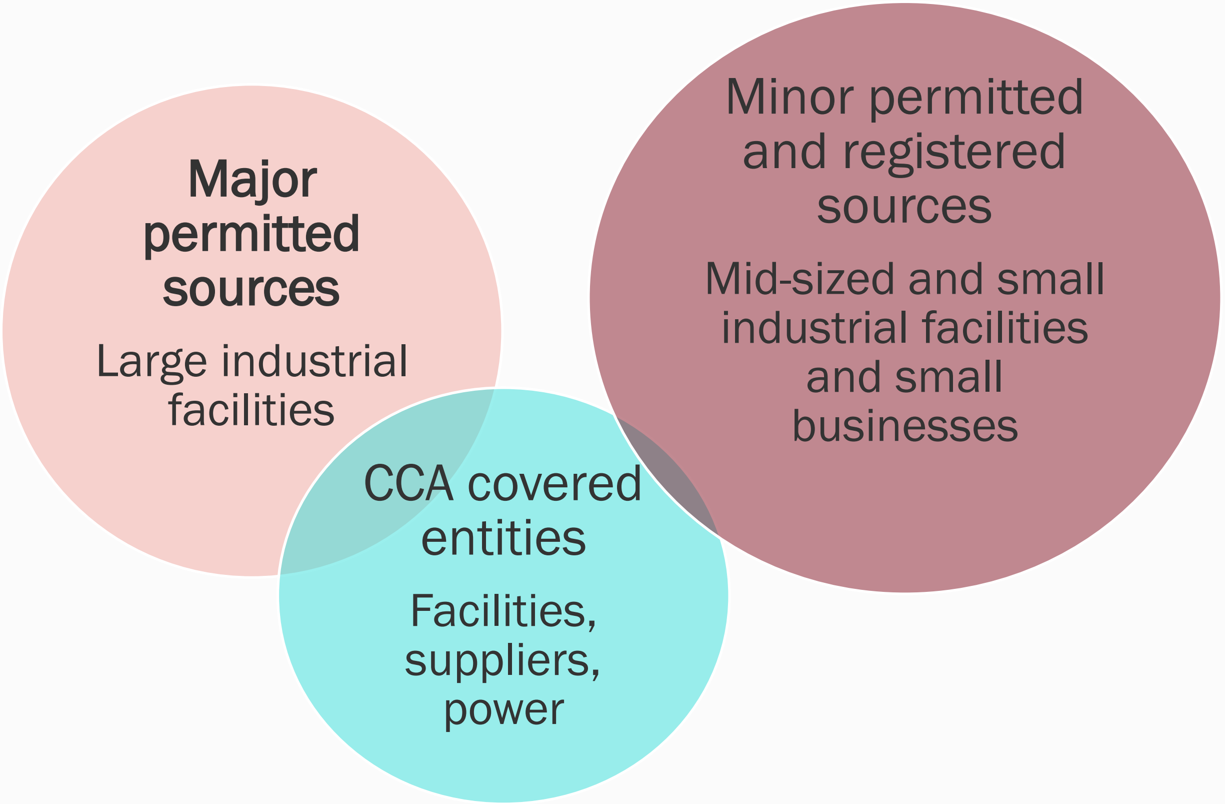
Greatest Contributors and High Priority Emitters



- Greatest contributors could be source categories that have the biggest impact on a community

- And high priority emitters could be those permitted and registered sources that this rulemaking may address

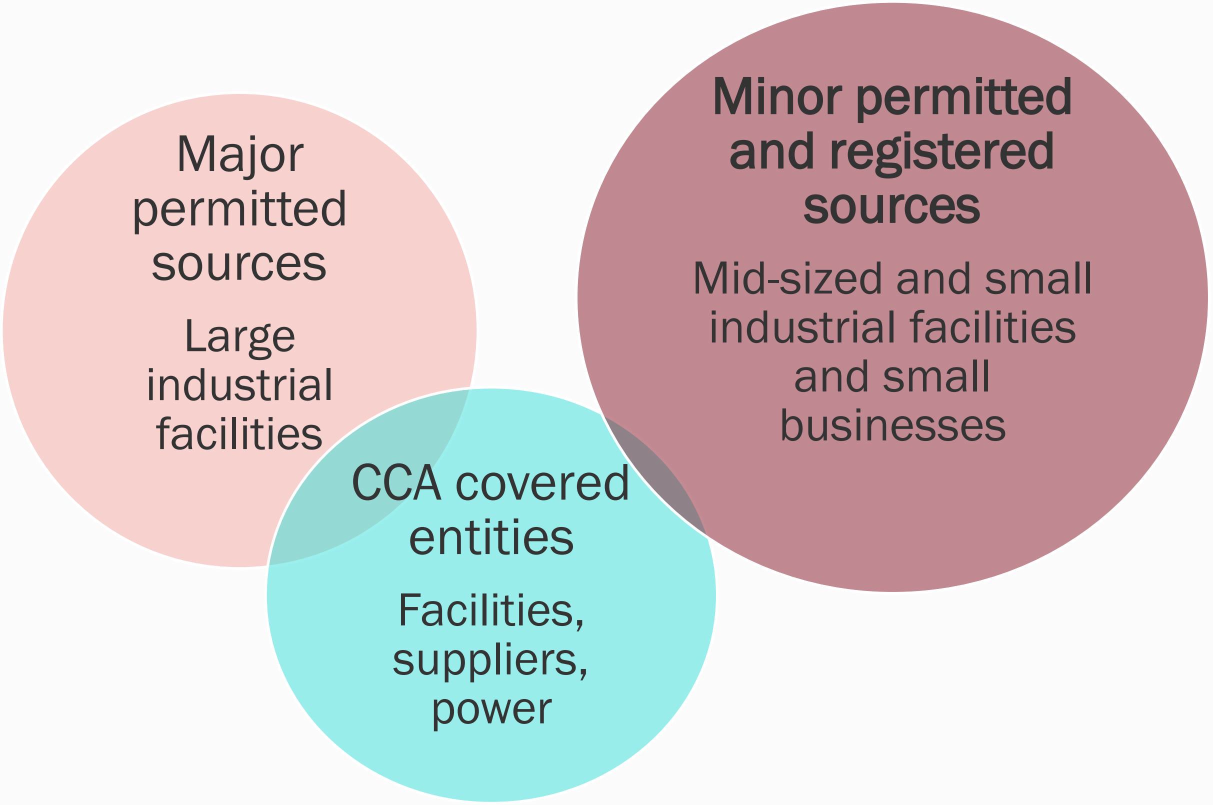
Permitted and Registered Sources



Major Sources of Criteria Air Pollution

- Potential to emit >100 tons per year
- Examples include refineries, cement plants, and paper mills

Permitted and Registered Sources (2)



Minor permitted sources

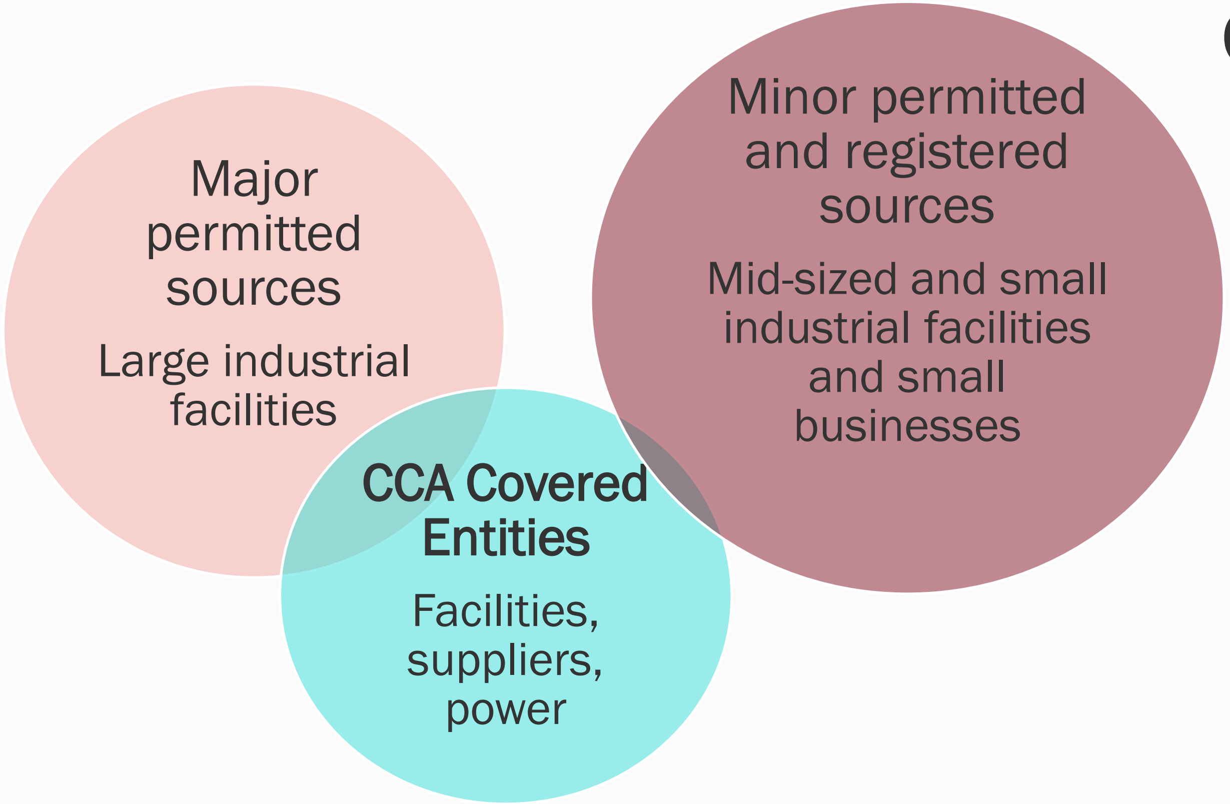
- Non-major source required to get air quality permit to construct

Registered sources

- Defined by category
- Includes minor permitted sources and sources that do not get permits
- Required to report emissions

Examples include dry cleaners, food processors, gravel yards, and autobody paint shops

Permitted and Registered Sources (3)



CCA covered entities

- Actual emissions >25k MT per year CO_2e
- Emission Intensive, Trade-Exposed industries (EITEs)

Emission Reduction Options

Emission reduction strategies

Education and incentives

- Outreach and education
- Grant programs
- Rebates

Compliance and enforcement

- Technical assistance
- Inspections
- Enforcement

Standards

- Air quality standards
- Emission standards
- Emission limitations

Strategy: Air Quality in Overburdened Communities Grant Program

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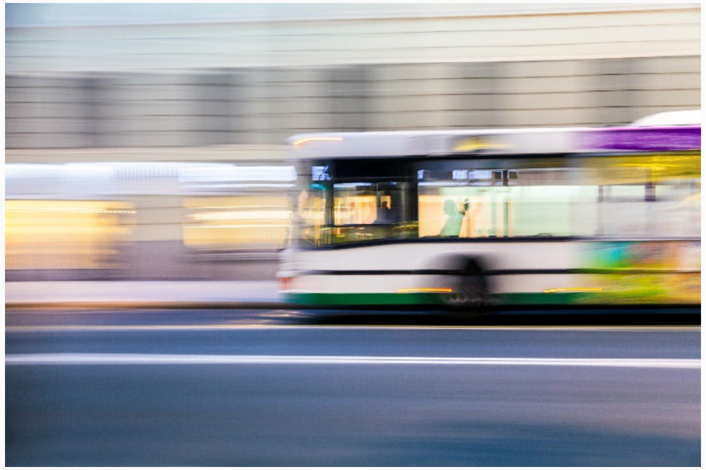


Other Emission Reduction Strategies

Addressing High Priority Emitters

- Assess compliance with current requirements
- Could be new monitoring and reporting requirements
- Receive enforceable orders after adopt stricter standards

Types of Standards

Air quality standard

- Limits exposure to pollutant in ambient air
- **Example:** The concentration of $PM_{2.5}$ in the ambient air cannot exceed an average of 9 $\mu g/m^3$ for a year.

Emission standard

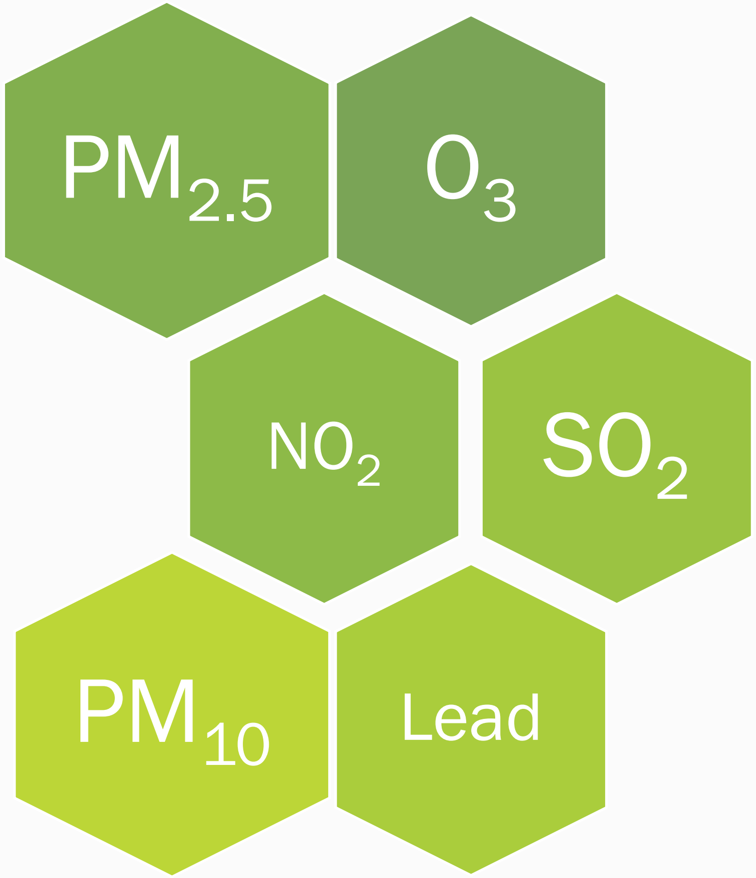
- Limits emissions of source category or group of sources
- **Example:** Emissions of particulate matter cannot exceed 0.46 g/m^3 from any piece of combustion equipment.

Emission limitation

- Limits emissions of single source
- **Example:** Emissions of particulate matter from the glass furnace at the glass manufacturing facility cannot exceed 13.1 lb./h.

Air Quality Standard: NAAQS

- EPA sets National Ambient Air Quality Standards (NAAQS) for criteria air pollutants (CAPs)
  - Protect public health
- Evaluate if air quality in Washington meets NAAQS
- Develop strategies to improve or maintain air quality below the NAAQS



EPA NAAQS

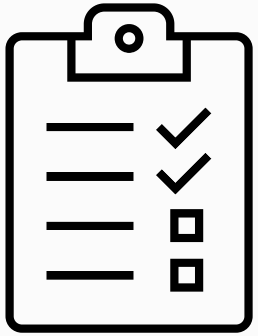
Emission Limitations

- New/expanding facilities receive emission limits in permits
  - Cannot cause or contribute to an air quality problem
  - In areas with unhealthy air, requires other emission reductions in area to offset new emissions
- Technology-based
- Consider technical and economic feasibility

Emission Limitation Example: RACT

Reasonably available control technology (RACT) for existing sources:

1. What emission controls are technically feasible?
2. Cost to install controls?
3. How much would controls reduce emissions?
4. Calculate cost per ton of emissions reduced.
5. Compare cost per ton to a threshold determined to be “reasonable.”
6. Issue orders establishing stricter emission limits for equipment that has “reasonable” controls.



Emission Standards

- Applies to certain types of emissions or sources
- Appropriate when there is a group of sources that are causing or contributing to an air quality problem

Air Quality Standard

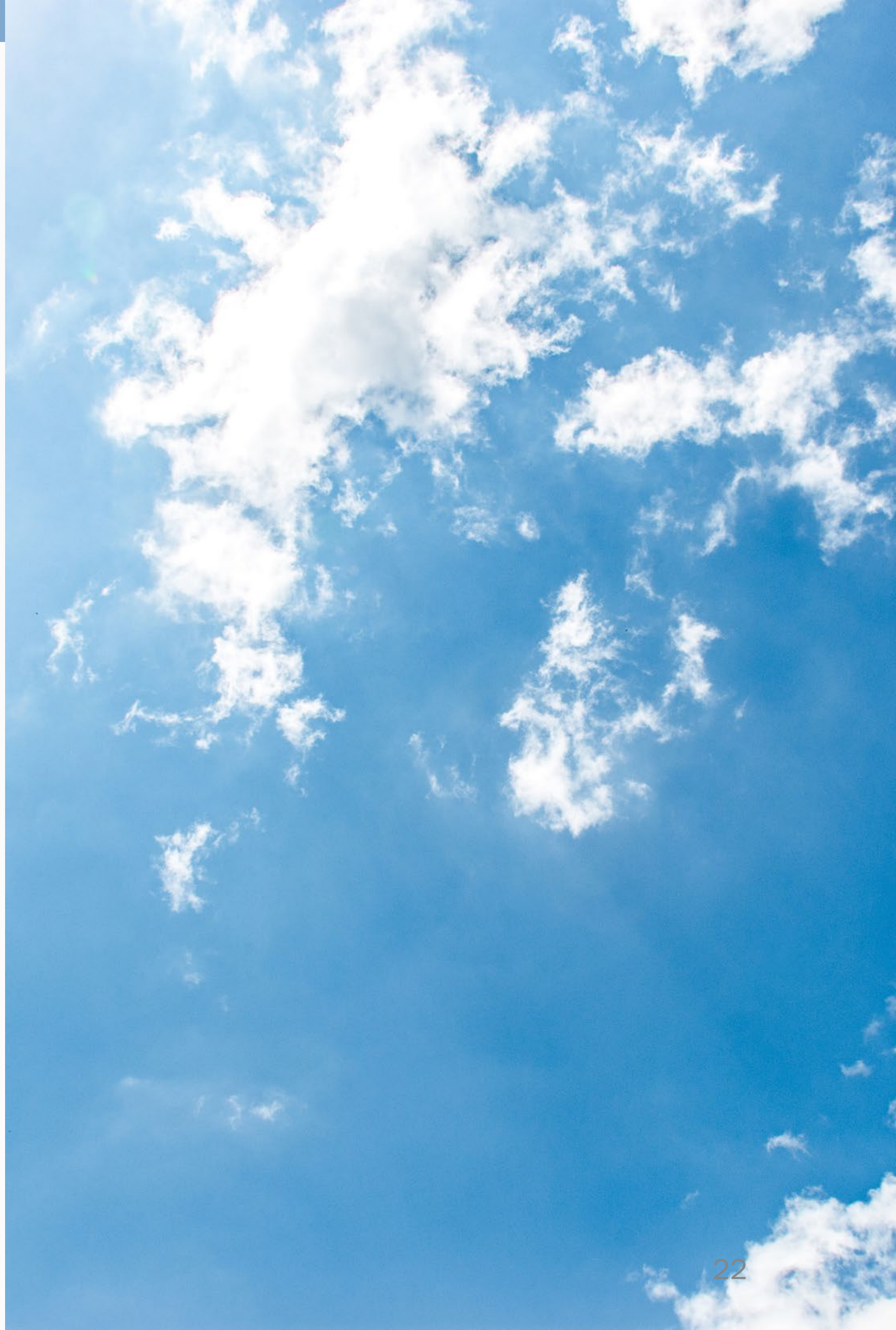
Set a standard stricter than NAAQS

Statewide standard

- Health-based
- Could be seasonal

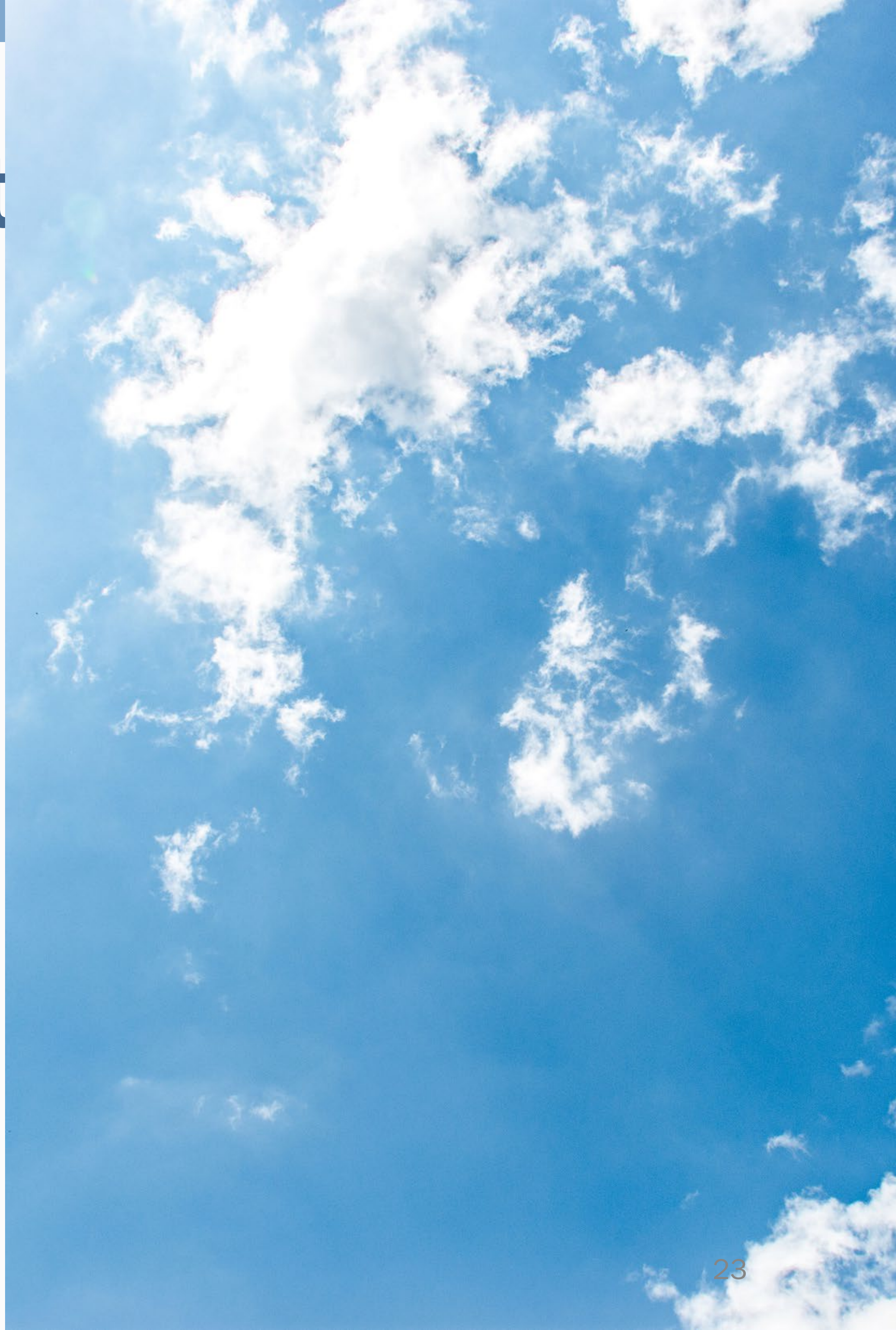
Localized standards

- Treat air quality targets as air quality standards



Air Quality Standard Considerat

- May impact permitting for new or modified sources
- Does not define requirements in orders issued to sources
- Statewide standard could bring in communities that are not considered “overburdened”
- Localized standards could mean different standards for each community



Emission Limitations

Set stricter emission limits for high priority emitters through case-by-case control technology analysis

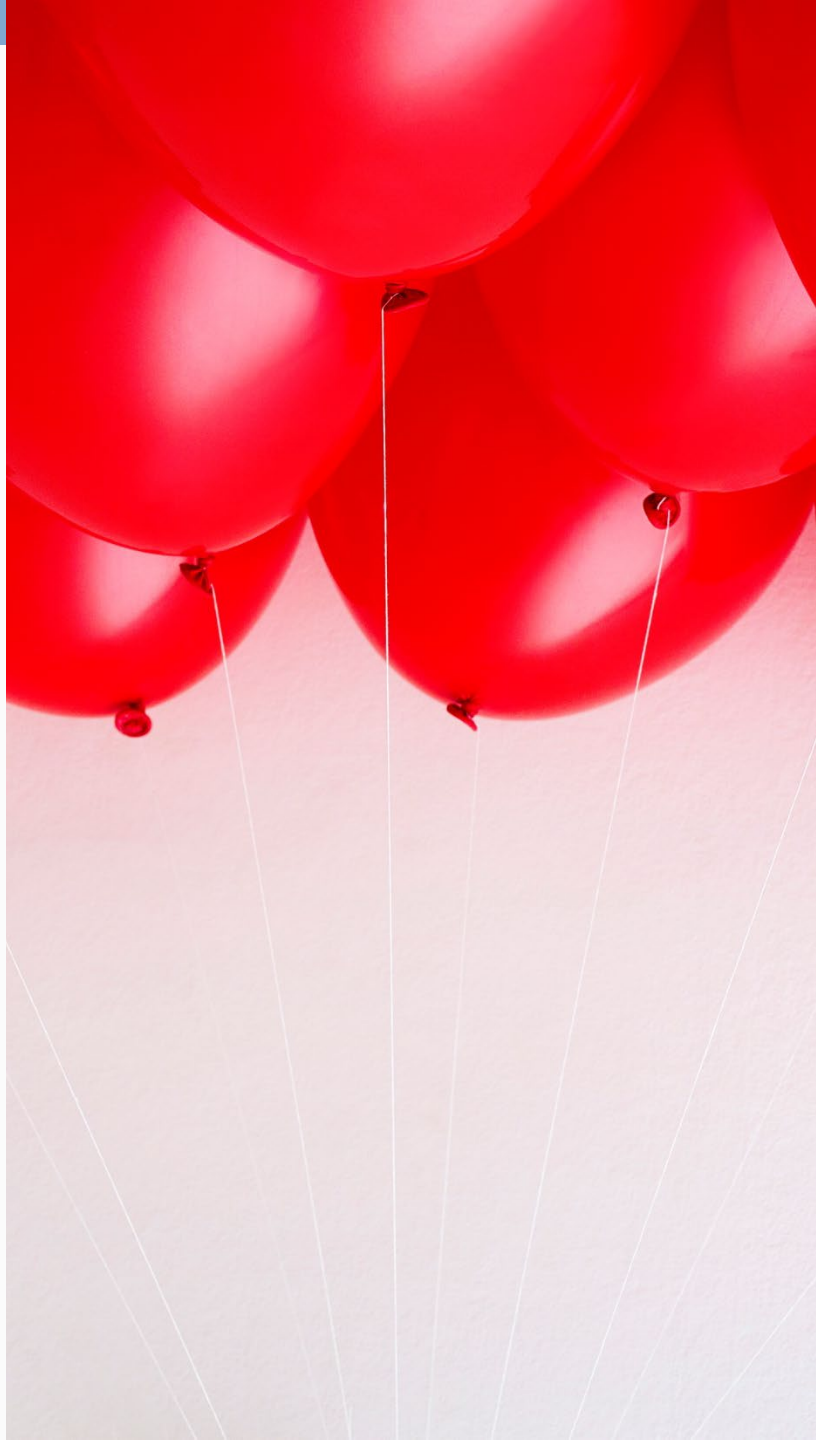
- Facility or equipment-specific limits on emissions
- Could compare health benefits of reductions to cost to install control equipment

Emission Limitation Considerations

- Technically complex
- Time intensive
- May not reduce emissions if:
  - Not technically feasible
  - Too expensive to reduce emissions

Technology-Based Emission Standard

- Similar to technology-based emission limits, but covers a whole category of emissions sources
- Highly technical
- Different types of sources would likely need different rulemakings
- Most appropriate for groups of the same type of source that impact a community



Facility-Specific Emissions Caps

Facility-wide limit on CAPs emissions of high priority emitters

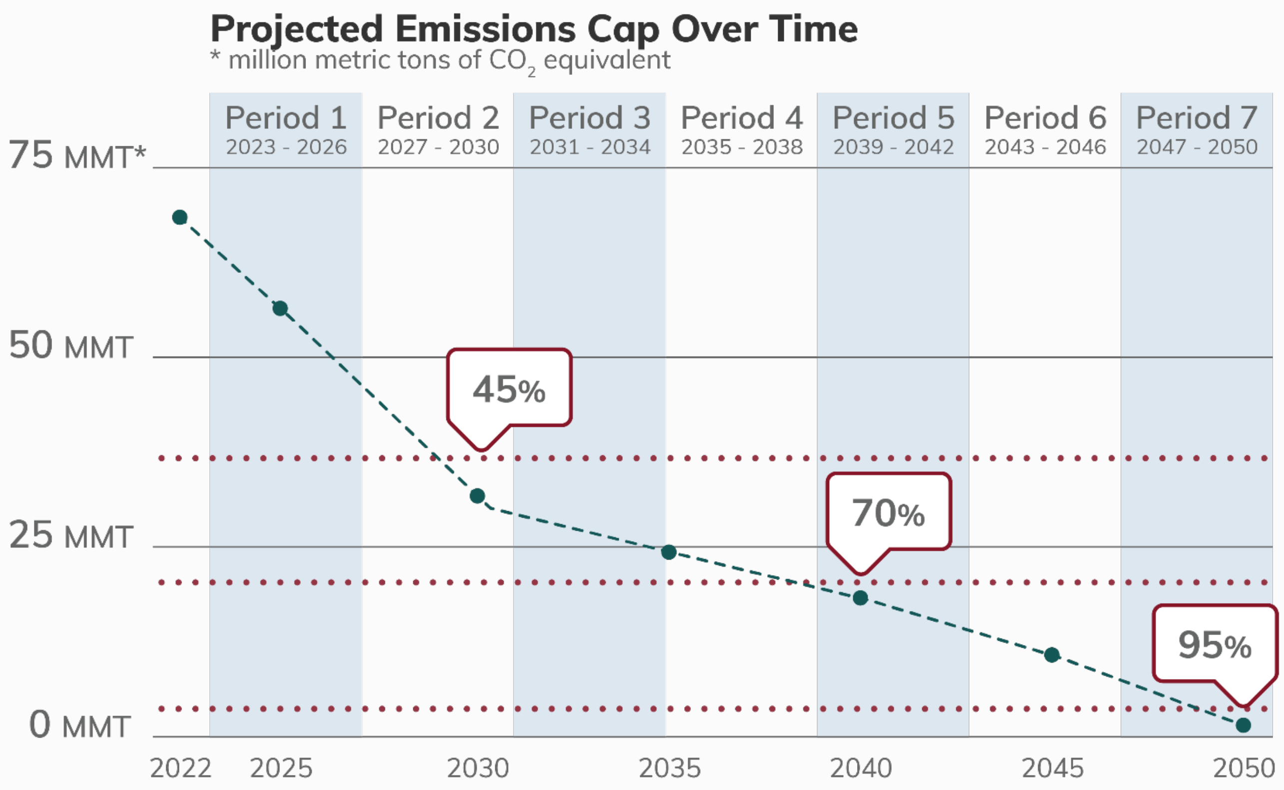
- Require percentage emission reduction from baseline of actual emissions and options to reduce emissions:
  - On-site emission reductions
  - Off-site mitigation actions in community
- Example: If reduction target requires a 15% community-wide reduction in emissions, then the facility would be required to reduce emissions by 15%.

Facility-Specific Emissions Caps Considerations

- Could apply to many types of facilities without in-depth technology analyses
- Flexibility to use operational changes or mitigation to reduce emissions
- Could require facilities to submit emissions reduction and control plan
- Could include exemption if further reductions are financially infeasible

Emissions Reduction Timeline

- EJ section of CCA does not provide a timeline for emissions reductions in OBCs
- EJ report tracks progress every 2 years
- Re-identify communities every 6 years
- Significant time for sources to plan and implement emissions reductions
- Example: Greenhouse gas emissions limits



Questions and Answers

Looking Ahead

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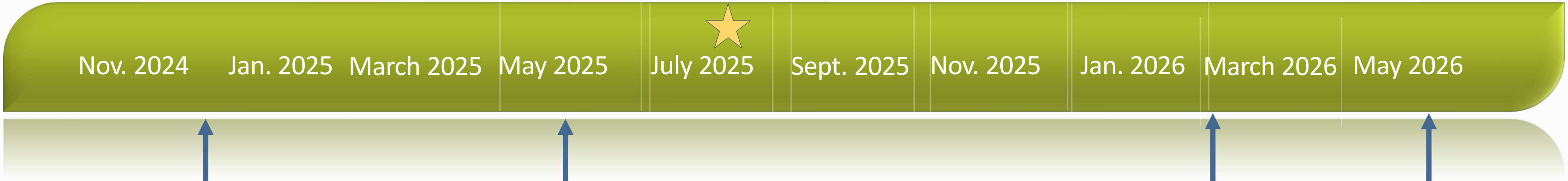

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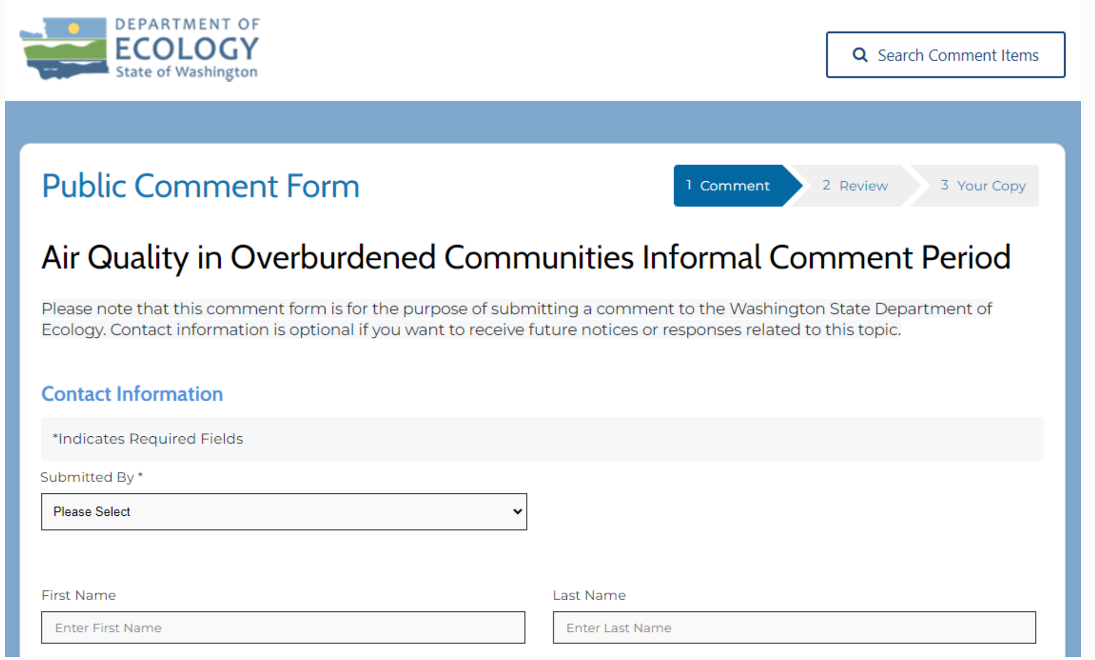
More Information and Resources

- Rulemaking webpage
  https://ecology.wa.gov/regulations-permits/laws-rules-rulemaking/rulemaking/wac-173-448

- Public comment form
  https://aq.ecology.commentinput.com/?id=peMcrVEmd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Thank you!

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