



Chapter 173-423 WAC Clean Vehicles Program Rulemaking

An Environmental Justice Assessment (per RCW 70A.02.060)

For the

Climate Pollution Reduction Program

Washington State Department of Ecology
Olympia, Washington

October 2025, Publication 25-14-077

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¹ www.ecology.wa.gov/contact

Language Access

Under the state Environmental Justice law (RCW 70A.02), Ecology is required to conduct Environmental Justice Assessments during development of certain significant actions. This Assessment provides information about the potential impacts to overburdened communities and vulnerable populations, and strategies to mitigate identified harms and fairly distribute known benefits. For translation, interpretation, or accessibility assistance, please contact Courtney Cecale at courtney.cecale@ecy.wa.gov or (360) 480-6270.

Bajo la ley estatal de Justicia Medioambiental (RCW 70A.02), Ecología está obligada a realizar Evaluaciones de Justicia Medioambiental durante el desarrollo de ciertas medidas importantes. Esta evaluación proporciona información sobre los posibles impactos en las comunidades sobrecargadas y las poblaciones vulnerables, y las estrategias para mitigar los daños identificados y distribuir justamente los beneficios conocidos. Para asistencia de traducción, interpretación o accesibilidad, por favor póngase en contacto con Courtney Cecale escribiendo a courtney.cecale@ecy.wa.gov o llamando al (360) 480-6270.

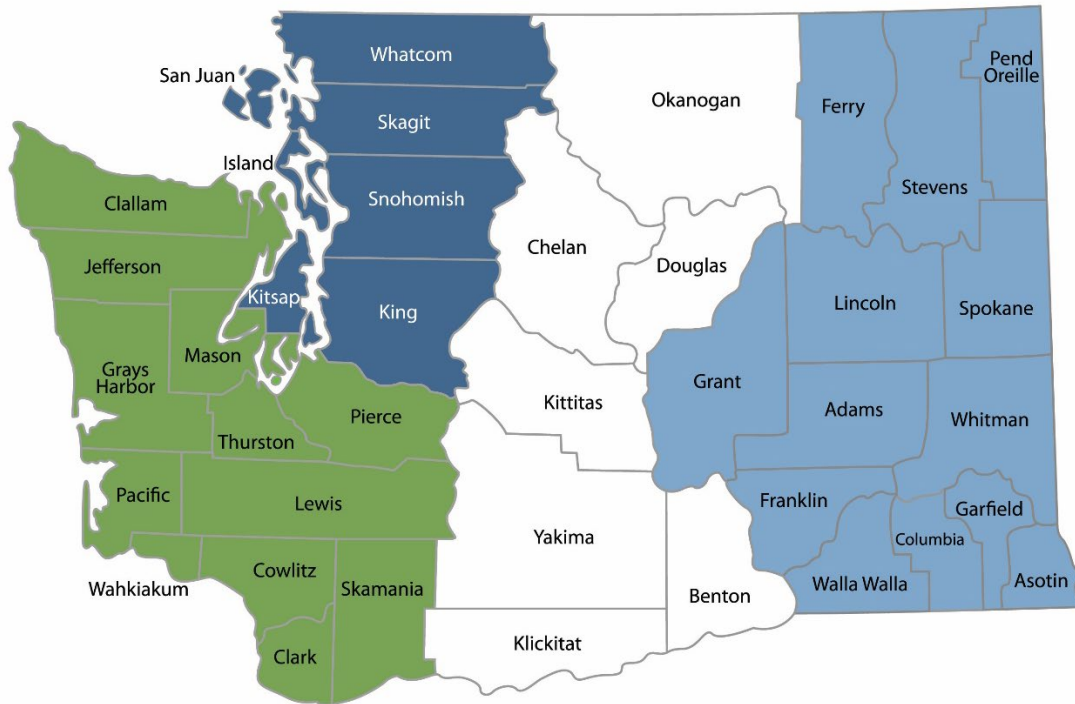
根据华盛顿州环境正义法(RCW 70A.02)，生态管理署在制定某些重大行动时必须进行环境正义评估。该评估需提供对负担过重社区和弱势群体潜在影响的信息，以及减轻已明确的危害和公平分配已知利益的策略。如需笔译、口译或无障碍协助，请联系 Courtney Cecale，电子邮件：courtney.cecale@ecy.wa.gov或电话 (360) 480-6270。

Theo luật Công Bằng Môi Trường của tiểu bang (RCW 70A.02), Bộ Môi Sinh được yêu cầu tiến hành Đánh Giá Công Bằng Môi Trường trong quá trình triển khai một số hành động quan trọng. Đánh giá này cung cấp thông tin về các tác động tiềm ẩn đối với các cộng đồng đang chịu tổn hại và các nhóm dân cư dễ bị tổn hại cũng như các chiến lược nhằm giảm thiểu tác hại đã xác định và phân chia công bằng các lợi ích đã biết. Để được hỗ trợ về thông dịch, giải thích hoặc sự giúp đỡ cho người khuyết tật, vui lòng liên hệ với Courtney Cecale theo địa chỉ courtney.cecale@ecy.wa.gov hoặc (360) 480-6270.

주 환경부는 중요한 조치를 계획할 때 환경 정의 평가를 수행해야 합니다. 이 평가는 취약계층 지역사회와 취약인구에 대한 잠재적 영향 관련 정보와, 확인된 피해를 완화하고 알려진 혜택을 공정하게 분배하기 위한 전략을 제공합니다. 번역, 통역, 또는 장애인 서비스 지원은 담당자 (Courtney Cecale)에게 이메일 courtney.cecale@ecy.wa.gov 또는 전화 (360) 480-6270으로 문의하십시오.

Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region
360-407-6300

Northwest Region
206-594-0000

Central Region
509-575-2490

Eastern Region
509-329-3400

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

Chapter 173-423 WAC

Clean Vehicles Program Rulemaking

An Environmental Justice Assessment (per RCW 70A.02.060)²

Climate Pollution Reduction Program
Washington State Department of Ecology
Olympia, WA

October 2025 | Publication 25-14-077



DEPARTMENT OF
ECOLOGY
State of Washington

² <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.02&full=true#70A.02.010>

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Executive Summary

Ecology is adopting amendments to our Clean Vehicles Program Rules (Chapter 173-423 WAC) to incorporate changes to the Advanced Clean Trucks and Heavy-Duty Low NO_x Omnibus regulations adopted by the California Air Resources Board (CARB), in accordance with RCW 70A.30.010.

This statute states that Ecology shall adopt rules to implement the motor vehicle emission standards of the state of California, including the zero-emission vehicle program, and shall amend the rules from time to time, to maintain consistency with the California motor vehicle emission standards. These regulations are an essential policy tool for addressing climate change and improving air quality in Washington.

The Advanced Clean Trucks program applies to medium- and heavy-duty engine and vehicle manufacturers. It requires manufacturers to gradually sell more new zero-emission models in Washington through model year 2035, and provides flexibility to manufacturers by allowing the purchase of credits from other manufacturers to meet this requirement thereby offering choice to manufacturers regarding which models to transition to zero-emissions technology.

The Heavy-Duty Low NO_x Omnibus regulation applies to heavy-duty internal combustion engine manufacturers and requires them to meet more protective air quality standards, particularly on oxides of nitrogen and particulate matter, starting in model year 2026.

The amendments to these programs respond to industry concerns by easing compliance requirements for the heaviest vehicles while maintaining emissions reductions. They also streamline implementation of the standards and maintain consistency with state and federal laws. Adopting these amendments ensures that the regulations remain in effect, as without consistency with California's laws the program may become legally unenforceable.

Ecology heard from members of, and organizations representing, overburdened communities and vulnerable populations impacted by this rulemaking during the informal and formal public comment periods. Feedback from these groups was supportive of the rulemaking and the air quality and noise reduction benefits it will bring to communities.

Some harms were identified, including potentially increased particulate matter emissions from tires containing 6PPD-q, a compound toxic to Coho salmon and several other plant and animal species; increased electricity demand from electric trucks and vans; and the current higher cost of zero-emission vehicles on small businesses. Work elsewhere in the state, from Ecology's 6PPD research team to utilities to WSDOT's zero-emission vehicle rebate program (WAZIP), act to mitigate these harms.

Environmental Justice Assessment

Purpose of the Environmental Justice Assessment

The Environmental Justice (EJ) Assessment process helps assess the environmental justice impacts of Significant Agency Actions (SAAs). The assessment informs and supports consideration of overburdened communities and vulnerable populations when making decisions. This information assists with the equitable distribution of environmental benefits, the reduction of environmental harms, and the identification and reduction of health disparities.

The EJ assessment process aligns with Washington’s Environmental Justice law called the Healthy Environment for All (HEAL) Act ([RCW 70A.02](https://app.leg.wa.gov/RCW/default.aspx?cite=70A.02)³), as well as federal commitments in the [Performance Partnership Agreement](https://www.epa.gov/environmentaljustice/technical-guidance-assessing-environmental-justice-regulatory-analysis)⁴ with the EPA. The assessment process draws on best practices established in [Technical Guidance for Assessing Environmental Justice in Regulatory Analysis](https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf)⁵ and [Promising Practices for EJ Methodologies in NEPA Reviews](https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf)⁶.

Environmental justice assessments are to be completed for the following actions:

- The development and adoption of significant legislative rules as defined in RCW.05.328⁷
- The development and adoption of any new grant or loan program that a covered agency is explicitly authorized or required by statute to carry out
- A capital project, grant, or loan award of at least \$12,000,000 or a transportation project, grant, or loan of at least \$15,000,000
- The submission of agency request legislation to the office of the governor or the office of financial management for approval
- (Covered actions are expected to expand in 2025)

This assessment is not required to be a comprehensive or an exhaustive examination of all potential impacts of a significant agency action and does not require novel quantitative or economic analysis of the proposed significant agency action.

The time and resource investment, and depth of assessment, will be influenced by the reasonable applicability of the questions to the agency action.

Ecology plans to update this document and incorporate what we learn through practice, community engagement, Tribal consultation, and any guidance we may receive from the Environmental Justice Council.

This Environmental Justice Assessment is adapted for publication and does not include internal agency process instructions.

³ <https://app.leg.wa.gov/RCW/default.aspx?cite=70A.02&full=true>

⁴ <https://ecology.wa.gov/About-us/Accountability-transparency/Government-coordination/Partnering-with-the-EPA>

⁵ <https://www.epa.gov/environmentaljustice/technical-guidance-assessing-environmental-justice-regulatory-analysis>

⁶ https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf

⁷ <https://app.leg.wa.gov/RCW/default.aspx?cite=34.05.328>

Section 1: Background

The information in this section is provided for the Office of Financial Management's [dashboard](#)⁸ which includes all covered agency's Environmental Justice Assessment notices.

1. Descriptive title of project/action:

Chapter 173-423 WAC, Clean Vehicles Program Rulemaking

2. Date EJ Assessment initiated:

November 20, 2024

3. Ecology Program/Office:

Climate Pollution Reduction Program

4. Point of contact for EJ Assessment:

Nikki Harris

5. Significant Agency Action type, select one or more:

- ☒ Rulemaking
- ☐ New grant or loan program
- ☐ New capital project, grant, or loan of \$12 million or more
- ☐ Request legislation
- ☐ Other, explain:

6. Write a short summary of the action.

Ecology is considering amendments to Chapter 173-423 WAC, the Clean Vehicles Program rule. Washington law (RCW 70A.30.010) requires Ecology to adopt certain California regulations to maintain consistency with California's emissions standards for new motor vehicles and engines. To date, Ecology has delivered on this Legislative requirement to adopt regulations consistent with the following California programs: Advanced Clean Cars, Advanced Clean Cars II, Advanced Clean Trucks, and Heavy-Duty Low NOx Omnibus standards.

⁸ <https://ofm.wa.gov/budget/budget-related-information/agency-activities/environmental-justice-assessment-notices>

Ecology is currently considering amendments to Washington regulations that will track amendments to California’s Advanced Clean Trucks and Heavy-Duty Low-NOx Omnibus regulations currently adopted and/or under consideration by the California Air Resources Board (CARB). These amendments are important to streamline program implementation, provide additional compliance flexibility, and maintain consistency with other states and the federal government. The Advanced Clean Trucks regulations apply to medium- and heavy-duty engine and vehicle manufacturers and require zero-emission models to make up an increasing percentage of new vehicle sales in Washington, starting with engine model year 2025. The Heavy-Duty Low-NOx omnibus regulation applies to heavy-duty internal combustion engine manufacturers and requires them to meet more protective air quality standards, particularly on oxides of nitrogen and particulate matter, starting in model year 2026.

Ecology is also inviting public input about additional California motor vehicle emissions standards the agency should consider adopting in a future rulemaking to comply with the requirements in Chapter 70A.30 RCW and efficiently and cost-effectively reduce greenhouse gas emissions from transportation in line with Washington’s greenhouse gas emissions reduction mandates in RCW 70A.45.020.

7. Identify the method(s) for the public to comment on this proposed action for this assessment.

Ecology is initiating this environmental justice assessment and the rulemaking process and will provide engagement opportunities that include public meetings and comment periods. Ecology will host an initial public information session on December 10, 2024 from 10:00 AM-Noon. As we schedule additional opportunities for feedback and participation, we will share them through our website and distribution list. Please visit the rulemaking’s webpage or sign up for email updates here:

https://public.govdelivery.com/accounts/WAECY/subscriber/new?topic_id=WAECY_233. Please contact Nikki Harris at nikki.harris@ecy.wa.gov for comments or questions.

8. Create/provide an Ecology webpage with information about this proposed action.

Provide link here: <https://ecology.wa.gov/regulations-permits/laws-rules-rulemaking/rulemaking/wac-173-423>

Section 2: Notification that an Environmental Justice Assessment has been Initiated

This section instructs Ecology staff to notify OFM about the initiation of the action.

Section 3: Identify Affected Tribes

This section summarizes preliminary planning for Tribal Consultation. Ecology must offer consultation with Tribes on significant agency actions that affect federally recognized Tribes' rights and interest in their tribal lands.

Preparing for Tribal Consultation

1. Is the proposed action likely to have any local or regional impacts to federally reserved Tribal rights and resources, including but not limited to, those protected by treaty, executive order, or federal law? Choose one of the following:

☒ Yes: The proposed amendments will keep the Clean Vehicles Program enforceable by keeping our program in line with the requirements in California's program. The changes mainly increase flexibility for manufacturers in meeting the low- and zero-emission sales requirements under each standard. The changes maintain the majority of emissions reductions from the program through the existing requirement of offsets. However, Ecology estimates the changes may result in up to 55 fewer zero-emission semi-trucks sold in 2026, whose emissions would not be offset. As vehicle operations and sales can vary significantly, it is not possible to put a reasonable estimate on increased emissions from these vehicles.

The Clean Vehicles Program rule also has the potential to increase 6PPD-q in stormwater runoff, although the scientific record is not clear on whether there will be an increase or decrease in stormwater runoff or how large the increase or decrease would be. Tire manufacturers use 6PPD to reduce cracking and tire blowouts, which reacts with ozone in the air to create 6PPD-q. As the tire wears, this chemical is deposited in the environment. The increased weight of electric trucks may be associated with increased tire wear, including increased 6PPD-q emissions. This could particularly impact Tribal rights and resources because 6PPD-q has a negative impact on the salmon populations, particularly Coho salmon, that Tribes depend on. Clean alternatives to 6PPD are currently being researched, including through work at Ecology, but are not commercially available yet, and there is ongoing research to the impact of heavier vehicles on tire wear, including methods of tire strengthening that reduce wear.⁹

☐ No

☐ Unsure

2. List any federally recognized Tribes that are expected to be affected by the proposed action. If it is determined during consultation that Tribes do not wish to be included, then do not include them.

This action will have a statewide impact and will therefore affect all federally recognized Tribes in Washington State.

⁹ apps.ecology.wa.gov/publications/documents/2304017.pdf

3. If it is determined at any other point in the process of the assessment that Tribes have self-identified as being potentially impacted by the action, then include them in the assessment and offer consultation.

N/A: No Tribes self-identified as being potentially impacted by the action.

4. Describe plans to offer consultation to identified Tribes.

Ecology offered Government-to-Government consultation to Tribes when the rulemaking was announced on November 20, 2024. To date, Ecology has not received a request for formal consultation regarding this rulemaking, but we will continue to notify Tribes of their opportunity to do so at each phase of the rulemaking. In January 2025, a virtual Tribal Forum was held to provide information on the rulemaking and allow Tribes to provide input or ask questions. A total of 31 attendees were present at this Tribal Forum. Representatives from the following Tribes were in attendance: Swinomish, Suquamish, Confederated Tribes of the Colville Reservation, Lummi Nation, Snoqualmie, Puyallup, Jamestown S’Klallam, and Cowlitz. Additionally, an Ecology staff member called the Natural Resource Directors of Tribes who had not already registered for the Tribal Forum to inform them of the rulemakings, the Tribal Forum, and answer any questions they may have. Finally, Ecology plans to hold informal forums with Tribes in fall 2025 on clean transportation matters and will offer time during those forums to discuss matters related to this rulemaking.

Section 4: Offer Consultation

This section directs Ecology staff to offer consultation with Tribes on significant agency actions that affect federally recognized Tribes’ rights and interest in their tribal lands.

Section 5: Summary of Tribal Consultation & Engagement

Tribal consultation is intended to inform the answers to all questions in this section.

Summary of Tribal Consultation

1. Describe potential impacts (including harms and benefits) to federally recognized Tribal rights and interests in their tribal lands.
 - Do not share sensitive data or location information attributable to individual sites.
 - Do not share any information that Tribes have requested that you not share.

The adoption of CARB's Advanced Clean Trucks (ACT) and Heavy-Duty Low NO_x Omnibus (Omnibus) amendments is not expected to have any additional impact on Tribal rights or the ability for Tribes to use Tribal lands. However, the proposed amendments will keep the Clean Vehicles Program enforceable, and therefore any already identified impacts from the Clean Vehicle Program will remain.

The Clean Vehicles Program may have an impact on Tribal rights and/or the ability for Tribes to use Tribal lands through a potential increase of 6PPD-quinone (6PPD-q) in stormwater runoff due to zero-emission truck weight. The program requires manufacturers to sell increasing numbers of zero-emission trucks in Washington over time. Tire manufacturers use the chemical 6PPD to reduce cracking and tire blowouts, but it reacts with ozone in the air to create 6PPD-q. As the tire wears, this chemical is deposited in the environment. The increased weight of electric trucks relative to their internal combustion engine counterparts may be associated with increased tire wear, which likely increases 6PPD-q emissions. This could particularly impact Tribal rights and resources because 6PPD-q has a negative impact on the salmon populations, particularly Coho salmon, that Tribes depend on. What little research exists in this area is not conclusive on the impact of 6PPD-q emissions from heavier vehicles, but Ecology is actively investigating clean alternatives to 6PPD. The tire industry is also planning for heavier electric vehicles through changes to tire chemical makeups that reduce wear at higher weights. Emerging evidence shows that 6PPD-q may have an even wider array of impacts beyond neurotoxicity to Coho salmon and other freshwater fish populations, such as reducing diversity (and therefore resilience) in fungal communities, impacts to photosynthesis of certain aquatic plants, and potential bioaccumulation in humans.¹⁰ The Clean Vehicles Program will remain in contact with the 6PPD research team to continue to learn how the standards impact salmon populations.

2. Describe potential impacts related to Tribal rights and interests that are not in Tribal lands?

The adoption of CARB's ACT and Omnibus amendments is not expected to have any additional impacts on Tribal rights or interests not on Tribal lands. However, the proposed amendments will keep the Clean Vehicles Program enforceable, and therefore any already identified impacts from the Clean Vehicle Program will remain.

The Clean Vehicles Program may impact Tribal rights and interests not on Tribal lands through a potential increase of 6PPD-quinone (6PPD-q) in stormwater runoff due to zero-emission truck weight. See answer to question 1 above for further information.

3. Summarize recommendations from Tribes to:
 - a. Mitigate or eliminate potential harms from the action

¹⁰ [Environmental fate, toxicity, and mitigation of 6PPD and 6PPD-Quinone: Current understanding and future directions - ScienceDirect](#)

Ecology did not receive any recommendations from Tribes to mitigate or eliminate potential harms from this rulemaking.

b. Equitably distribute benefits from the action

Ecology did not receive any recommendations from Tribes to equitably distribute benefits from this rulemaking.

4. Describe how consultation, engagement, and analyses of impacts to Tribes has informed the development of the action. If it has not, explain why.

Ecology did not receive any recommendations from Tribes that would inform the development of this rule, although as mentioned above Ecology ensured that Tribes would have opportunity to provide recommendations. Additionally, Washington law (RCW 70A.30.010) requires Ecology to adopt certain California regulations to maintain consistency with California's emissions standards for new motor vehicles and engines. Ecology is adopting these regulations by reference, so they are substantially similar to California's regulations as required under the federal Clean Air Act.

5. Describe any plans to continue consultation or engagement with Tribes related to this action.

Ecology will continue to provide information to Tribes on the implementation of the Clean Vehicles Program, including the amendments adopted in this rulemaking. Ecology also plans to hold informal forums with Tribes in fall 2025 on clean transportation matters and will offer time during those forums to discuss matters related to this rulemaking.

Section 6: Identification of Overburdened Communities & Vulnerable Populations

This section identifies overburdened communities and vulnerable populations, as identified in the [definitions of RCW 70A.02](#), who will be affected by the action.

Identify Overburdened Communities and Vulnerable Populations

1. Identify the geographic area(s) anticipated to be affected by the action.

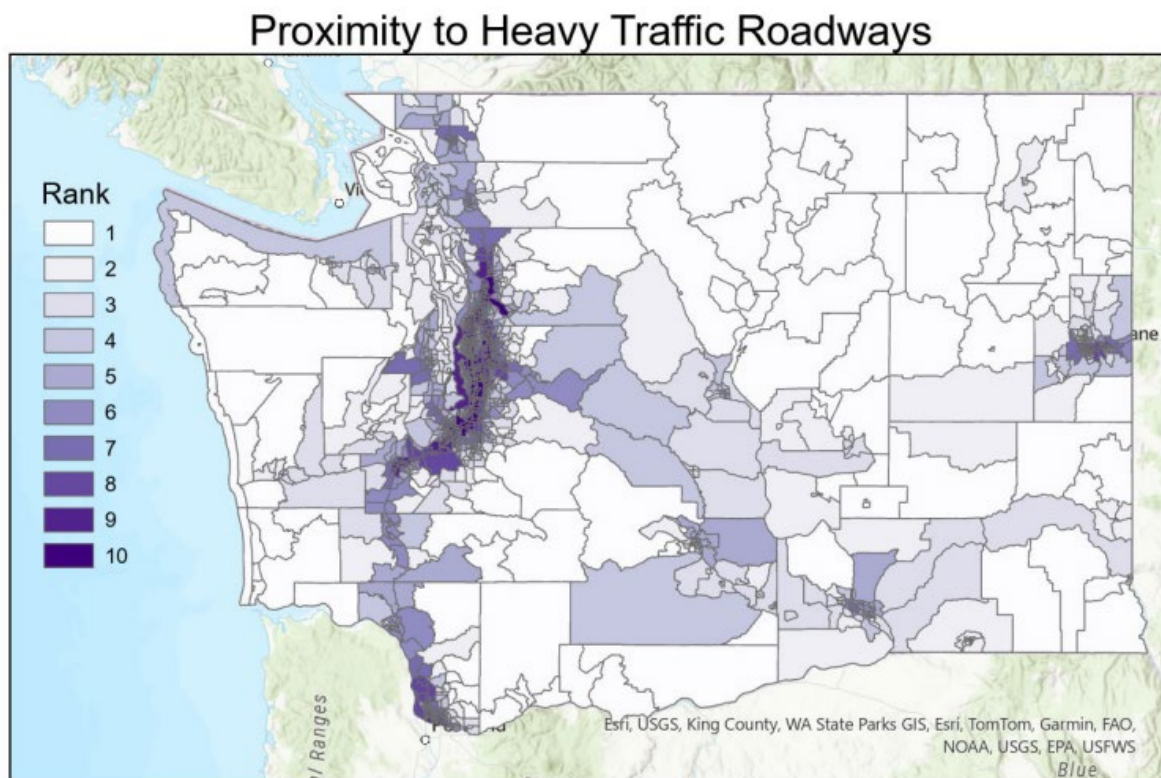
This administrative change is a statewide action that is not expected to directly create new impacts to overburdened communities and vulnerable populations above and beyond what is expected from the Clean Vehicles program already. These amendments primarily ensure the program remains enforceable – i.e., without these amendments, it is likely the program will no

longer be in effect. Therefore, below we discuss the impacts of the Clean Vehicles program to ensure understanding of the impacts this rulemaking will maintain.

Figure 1 highlights the communities along major roadways such as I-5 (particularly in Clark, Thurston, Pierce, King, Snohomish, Skagit, and Whatcom counties), along I-90 (particularly in King and Spokane counties), and other major traffic areas, such as northwest Kitsap County and the Tri-Cities. Overburdened communities and vulnerable populations near major roadways are most likely to be indirectly impacted by this rulemaking for the following reasons:

- Zero-emission vehicles tend to be heavier than similar internal combustion engine vehicles and may lead to an increase in stormwater runoff of 6PPD-q from tire wear particles. 6PPD-q is associated with neurotoxicity to Coho salmon and other freshwater fish that have cultural, commercial, and ecological importance to Tribes and other residents of the Pacific Northwest.
- Traffic noise along heavy traffic roadways may be reduced due to the Clean Vehicles program's increased zero-emission vehicle sale requirements. Electric vehicles are significantly quieter than traditional vehicles, because some vehicle noise comes from internal combustion engines, especially with medium- and heavy-duty vehicles.
- Air pollutant emissions are expected to be reduced due to the Clean Vehicles program's increased zero-emission vehicle sales requirements, as well as the requirements of manufacturers to certify their remaining internal combustion engines to more stringent air quality standards.
- Overburdened communities, particularly those located along major transportation corridors, will benefit most from the improved air quality that comes from reducing tailpipe emissions. Communities will realize these benefits through reduced exposure to the emissions that lead to cardio-respiratory issues, and communities along major roadways can achieve larger reductions than those farther from roadways as these emissions are coming from vehicles.
- Any construction projects (including those to install charging infrastructure and account for increased electricity consumption) that indirectly result from this rulemaking process will need to be assessed independently for environmental justice impacts as they arise, which is beyond the scope of this rulemaking process.

Figure 1. Proximity to Heavy Traffic Roadways



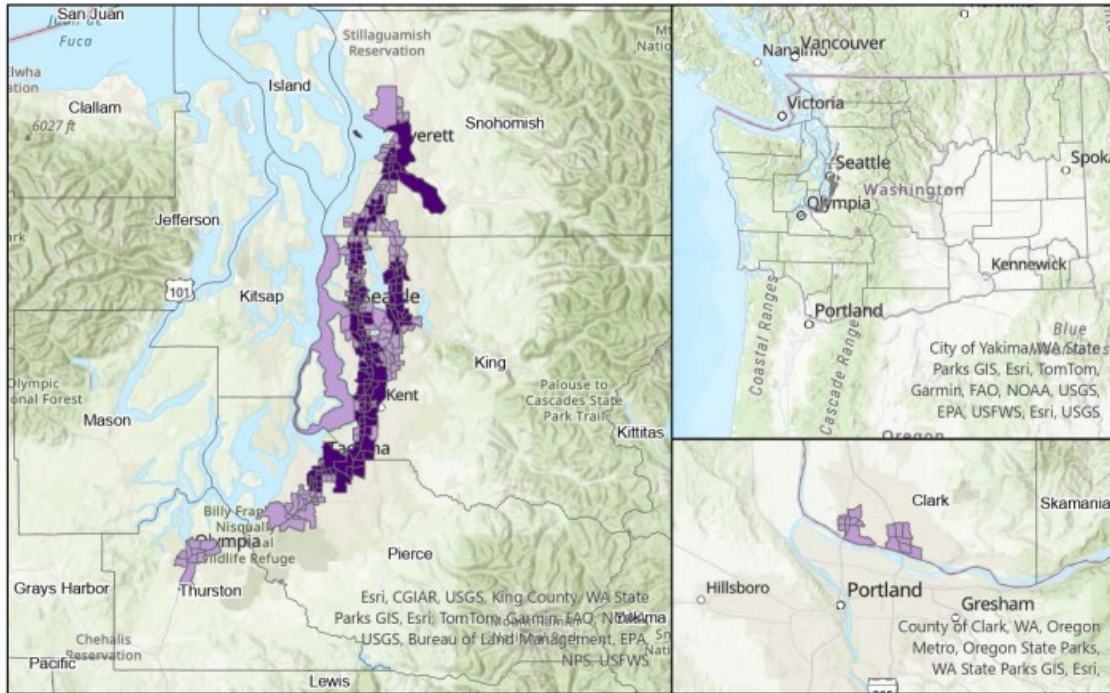
This map provides an overview of communities in Washington that have close proximity to heavy traffic roadways. Communities with close proximity to heavy traffic roadways are most likely to be indirectly impacted by this rulemaking.

2. When applicable, using the Washington State Department of Health's Environmental Health Disparities Map (EHD Map), identify the EHD Map rankings for all census tracts likely to be impacted by the action.

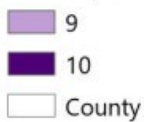
Since this is a statewide action, all census tracts are impacted by the action, including census tracts ranked 9 and 10. See Figure 2 below for specifically identified census tracts.

Figure 2. Proximity to Heavy Traffic Roadways Rank 9 and 10 Census Tracts

Proximity to Heavy Traffic Roadways Rank 9 and 10 Census Tracts



Proximity to Heavy Traffic Roadways Rank 9 and 10



3. From the rankings identified in question 2, are there any census tracts ranked 9 and 10?

☒ Yes

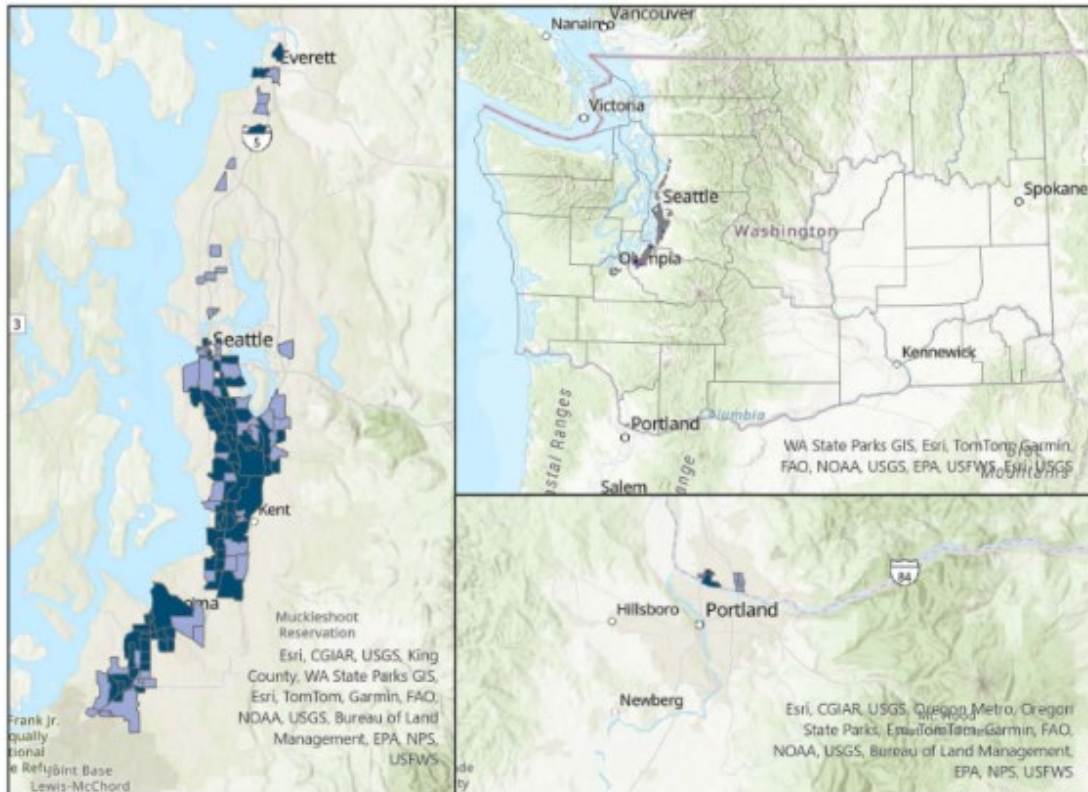
☐ No

If yes, describe.

There are census tracts in and around Vancouver, Seattle, Tacoma, Everett, and Spokane that have an overall ranking of 9 and 10. See Figure 3 below for detail on the specifically identified census tracts.

Figure 3. Overall EHD Rank 9 and 10 of Proximity to Heavy Traffic Roadways 9 and 10 Census Tracts

Overall EHD Rank 9 and 10 of Proximity to Heavy Traffic Roadways 9 and 10 Census Tracts



Overall EHD Rank 9 and 10



4. Please describe additional cumulative health considerations relevant to this action. As mentioned previously, communities with close proximity to heavy traffic roadways are most likely to experience the indirect impacts from this rulemaking, including health considerations.

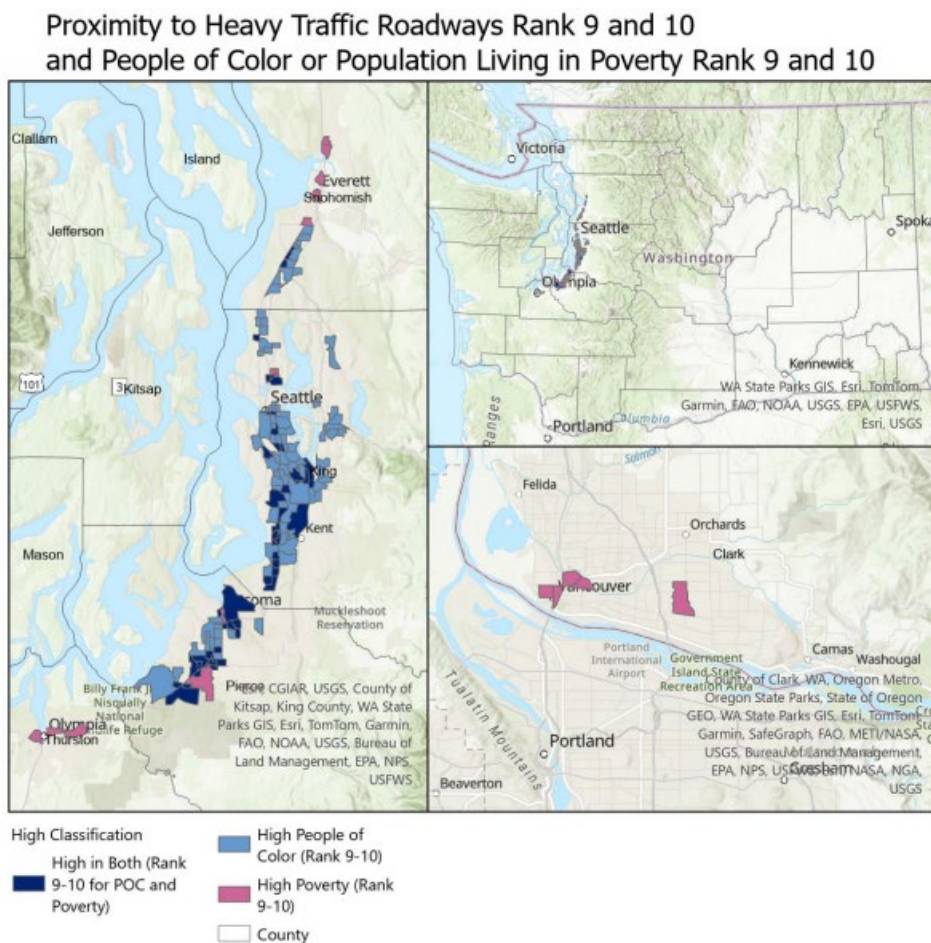
There are no additional health considerations relevant to this action than the ones outlined in the response to question 1 above.

5. Identify areas likely to be impacted by the action that are at or above the 80th percentile (in state) for the “People of color” and “Low income” socioeconomic indicators. You can

do this by looking at the EHD map rankings for these individual indicators (rank 9 or higher roughly approximates those census tracts at or above the 80th percentile), and/or by downloading the appropriate data on these indicators from the Washington Tracking Network or the Census Bureau's American Community Survey 5-year estimates and running additional analysis to determine percentiles.

Figure 4 below identifies the areas likely to be impacted by the action that meet the criteria defined above. They are located along the I-5 corridor in Thurston, Pierce, Snohomish, and Clark counties and are concentrated in the major cities of Vancouver, Olympia, Tacoma, Seattle, and Everett.

Figure 4. Proximity to Heavy Traffic Roadways Rank 9 and 10 and People of Color or Population Living in Poverty Rank 9 and 10



6. Using the EHD map and/or data from Washington Tracking Network, identify any other indicators pertaining to socioeconomic characteristics, health disparities, and/or climate

and environmental impacts at or above the 80th percentile (in state) that are relevant to this action.¹³

Figures 5-7 below identify other relevant characteristics to this action for consideration. They include the prevalence of asthma, cancer, and coronary heart disease relative to proximity to heavy traffic roadways. Vehicle emissions – from tailpipes, brake wear, and tire wear – contain pollutants and carcinogens that cause and worsen cardiorespiratory health issues such as asthma and coronary heart disease. The Clean Vehicles program will directly reduce these pollutants from tailpipes and brakes as zero-emission vehicles have both no tailpipe emissions and regenerative braking, which significantly reduces brake wear. However, as identified above, there may be an increase in particulate matter from electric vehicle tire wear relative to internal combustion engine vehicle tire wear. Therefore, we note the prevalence of these other characteristics in Washington communities as various aspects of this rule may impact cumulative health outcomes both positively and negatively in these communities.

¹³ As appropriate for the action, you may also consult the [Climate Vulnerability Index](#) and/or the [Climate Mapping for a Resilient Washington](#) interactive maps for supplementary data on climate impacts, beyond what is available via WTN.

Figure 5. Asthma Prevalence in Census Tracts with Both High Proximity to Heavy Traffic Roadways and High EHD Overall Rank

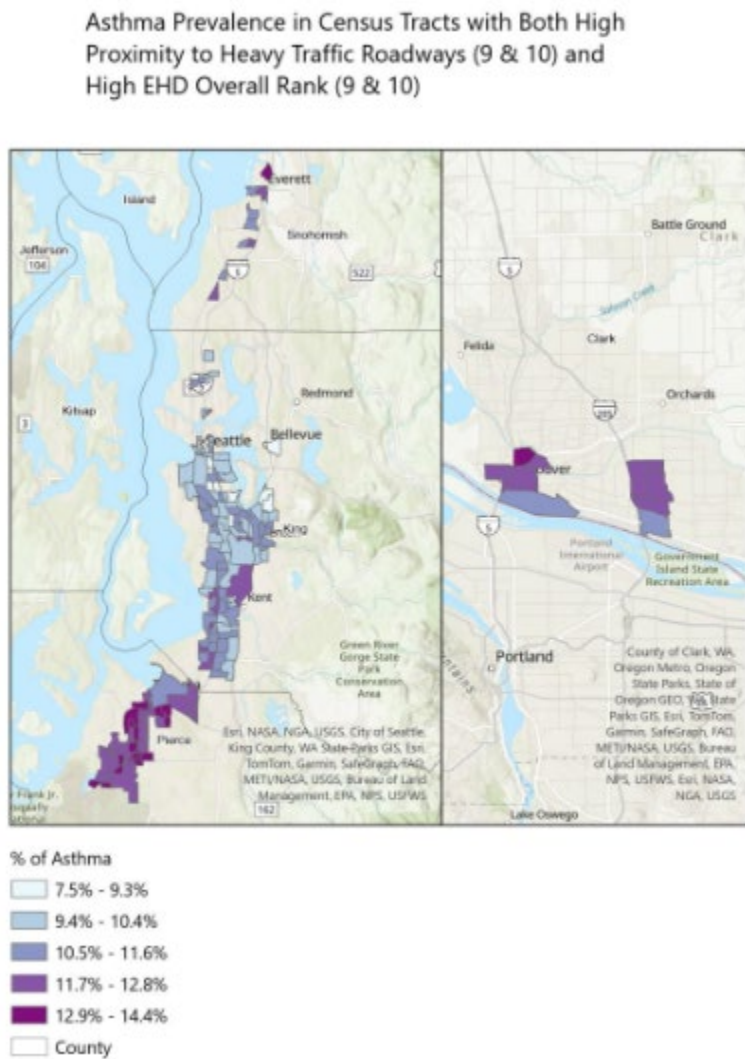


Figure 6. Cancer Prevalence in Census Tracts with Both High Proximity to Heavy Traffic Roadways and High EHD Overall Rank

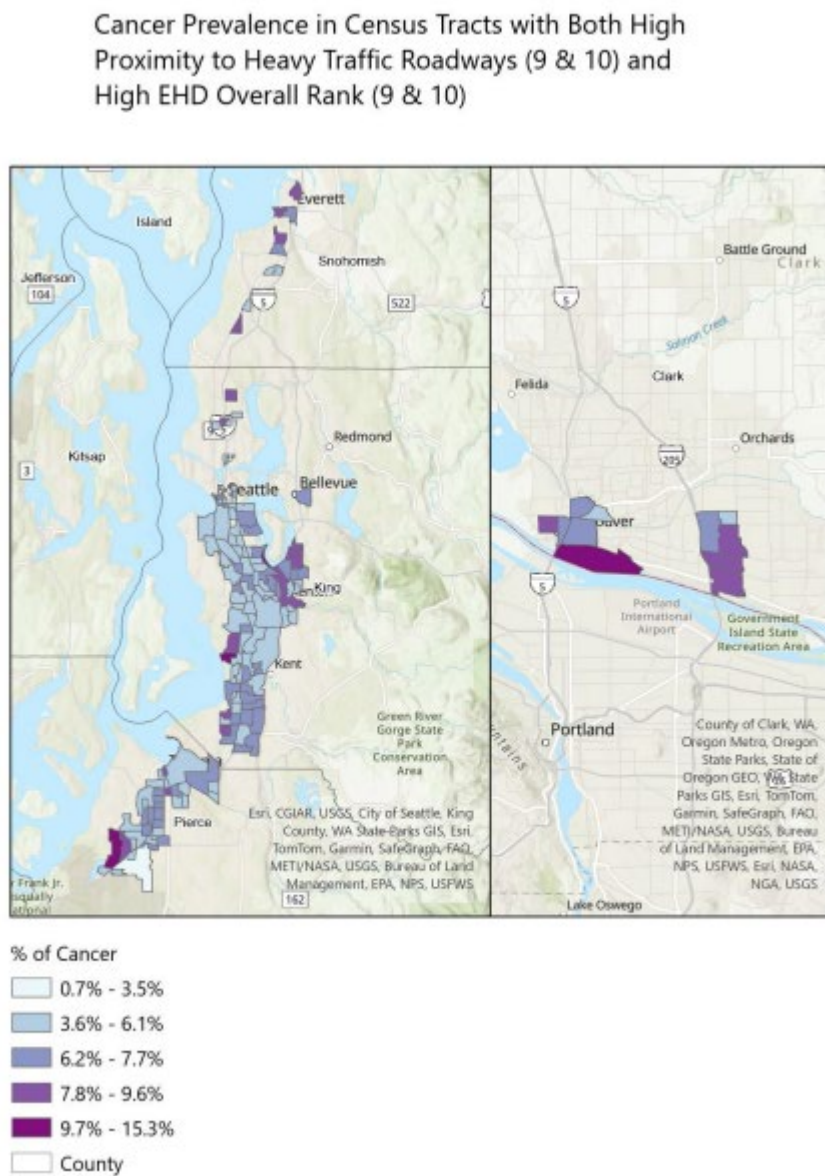
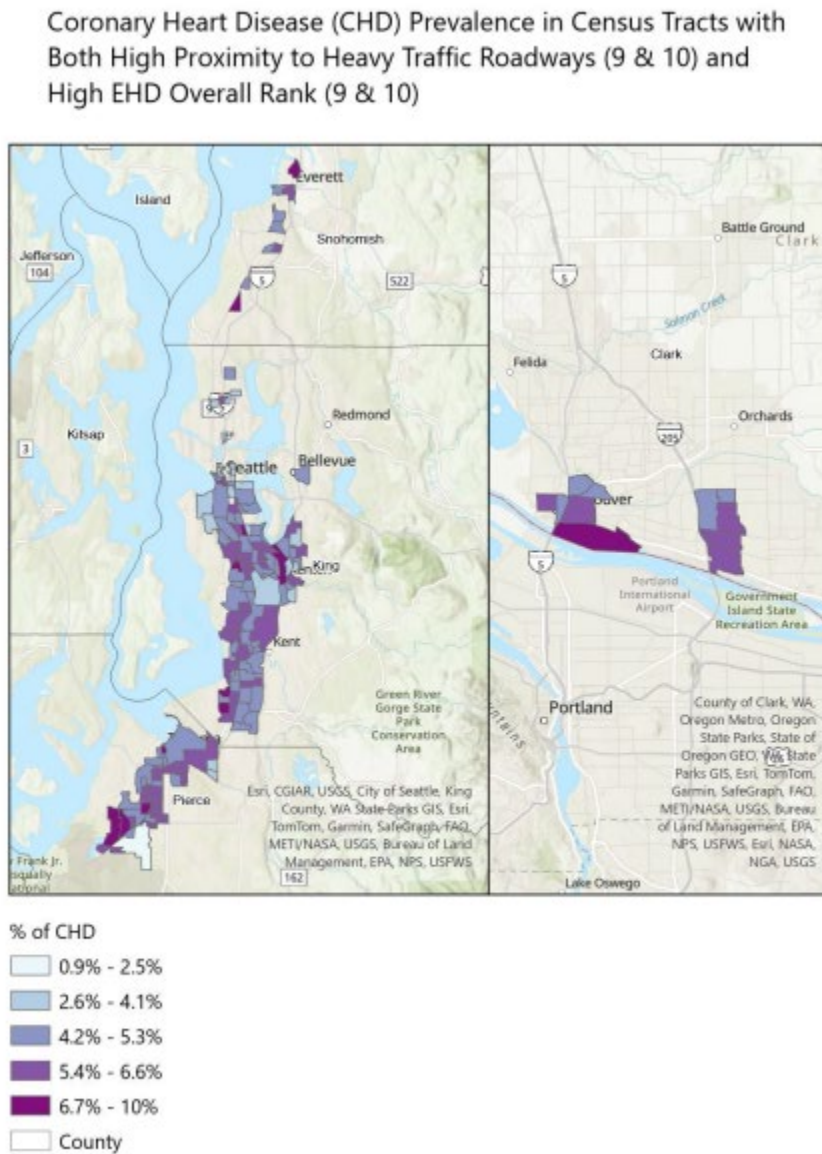


Figure 7. Coronary Heart Disease Prevalence in Census Tracts with Both High Proximity to Heavy Traffic Roadways and High EHD Overall Rank



7. Identify additional overburdened communities and vulnerable populations that are likely to be affected by the action.

No additional overburdened communities or vulnerable populations are likely to be directly affected by this action. All Washingtonians are expected to indirectly be impacted through changes to the commercial trucking industry as they transition from internal combustion engine to zero-emission vehicles, as these vehicles travel across the entirety of the state's road network.

8. Through community engagement, were additional overburdened communities and vulnerable populations identified who are likely to be affected by the action? Describe additional communities or populations identified, and the reasons they would be considered overburdened and vulnerable.

No additional communities were identified through community engagement for this rulemaking.

9. Through Tribal Consultation, were additional overburdened communities and vulnerable populations identified who are likely to be affected by the action? Describe additional communities or populations identified, and the reasons they would be considered overburdened and vulnerable.

No additional communities were identified while conducting Tribal Consultation for this rulemaking.

Section 7: Summary of Community Engagement

This section summarizes community engagement activities. Community Engagement should be tailored to specifically reach overburdened communities and vulnerable populations. Community engagement is required for all significant agency actions, but the engagement methods will vary depending on the size, scope, and topic of the project. The level, type, and form of engagement is based on the likelihood that the actions may cause environmental harm or may affect the equitable distribution of environmental benefits to an overburdened community or a vulnerable population.

1. Describe the engagement activities with identified overburdened communities and vulnerable populations.

Ecology held a series of public meetings to engage with people, communities, and organizations interested in this rulemaking. We advertised these meetings through our program's email distribution lists, included them on Ecology's public outreach calendar¹⁴, and we sent targeted outreach emails to 15 organizations who we know have interest in this topic or who had organizational missions focused on climate policy or community-based climate efforts. The outreach email highlighted opportunities for engagement and an option to meet with our team to discuss the rulemaking. One meeting was held with Earthjustice and Duwamish River Community Coalition after they requested to learn more about this rulemaking.

Our public meetings included a virtual community-focused forum held in the evening during the formal comment period in an effort to allow community members to attend outside of typical

¹⁴ [Events Listing - Washington State Department of Ecology](#)

work hours; approximately 11 community members attended this community forum, including one member from the Clark County Climate Advisory Committee. The recordings of these meetings were also added to the rulemaking website to allow for any interested persons to learn about the rule.

2. What actions were taken to help address barriers to meaningful engagement?

To increase access to information and comment opportunities, Ecology offered a virtual public meeting and a formal public hearing after typical work hours during the formal and informal comment periods to allow community members to attend. Additionally, we have provided translations of the rulemaking description in Spanish, Korean, Chinese, Ukrainian, Russian, and Vietnamese in rulemaking notices and the rulemaking webpage to be more accessible to non-English speaking members of the public.

3. Identify overburdened communities or vulnerable populations potentially affected by the action who were not engaged and explain why not.

We have not identified any specific communities that were not engaged in the rulemaking process. This rulemaking will be effective statewide.

4. Summarize recommendations from members of overburdened communities and vulnerable populations to mitigate or eliminate potential harms from the action and/or equitably distribute benefits from the action.

Ecology held a community forum on this rulemaking in addition to public meetings, comment periods, and public hearings. Ecology held an informal public comment period and received support for the rulemaking as proposed from members of overburdened communities and vulnerable populations as it mitigated and/or eliminated potential harms to their communities. During the informal comment period, Ecology also received support from organizations that work with members of overburdened communities and vulnerable populations, including Duwamish River Community Coalition and Earthjustice.

Ecology also held a formal comment period from May 15 to July 3, 2025. During the formal public comment period, members of the public (including some who identified themselves as a member of an overburdened community) generally supported the rulemaking to reduce negative health and climate impacts from vehicle emissions. Other members of the public opposed the rulemaking with concerns of the economic impacts to small business owners. Members of the following communities commented throughout this rulemaking process on their personal experience of poor air quality as a result of proximity to heavy traffic roadways: Yakima, Briarcrest, Seattle, Georgetown, South Park, West Seattle, Tacoma, Port of Seattle, SeaTac, Vancouver, and along transportation corridors in Clark County, Cowlitz County, and throughout Washington and neighboring states. Additional information on the 16 overburdened communities identified by Ecology are in the table below.

Some communities that have already been identified by Ecology as overburdened did provide support for the Clean Vehicles Program and the amendments made in this rulemaking process because of the expected air quality and climate benefits that would result.

Table 1: Overburdened communities highly impacted by criteria air pollution ¹⁵

Area ¹	Estimated Population	Size (approximate square miles)	Elevated Air Pollutants
<u>Ellensburg</u>	16,273	6	Fine particles (PM _{2.5}), cumulative criteria air pollution
<u>Everett</u>	83,973	17	Fine particles (PM _{2.5})
<u>George and West Grant County</u>	2,206	118	Fine particles (PM _{2.5})
<u>King County, South</u>	204,300	68	Fine particles (PM _{2.5}), cumulative criteria air pollution
<u>Mattawa</u>	4,398	12	Fine particles (PM _{2.5})
<u>Moxee Valley</u>	5,793	38	Fine particles (PM _{2.5}), cumulative criteria air pollution
<u>Puyallup, Northeast</u>	9,574	3	Cumulative criteria air pollution
<u>Seattle, North and Shoreline</u>	39,997	5	Fine particles (PM _{2.5}), cumulative criteria air pollution
<u>Seattle, South</u>	192,634	44	Fine particles (PM _{2.5}), cumulative criteria air pollution
<u>Spokane and Spokane Valley</u>	147,407	42	Fine particles (PM _{2.5}), cumulative criteria air pollution
<u>Tacoma, South and East</u>	133,463	28	Fine particles (PM _{2.5}), cumulative criteria air pollution
<u>Tri-Cities to Wallula</u>	112,708	173	Particle pollution (PM _{2.5} and PM ₁₀), ozone, cumulative criteria air pollution

¹⁵ [Overburdened communities - Washington State Department of Ecology](#)

<u>Vancouver</u>	103,388	29	Fine particles (PM _{2.5}), cumulative criteria air pollution
<u>Wenatchee and East Wenatchee</u>	32,183	10	Fine particles (PM _{2.5})
<u>Yakima Valley, Lower</u>	54,838	157	Fine particles (PM _{2.5}), cumulative criteria air pollution
<u>Yakima, East</u>	59,803	16	Fine particles (PM _{2.5}), cumulative criteria air pollution

5. Describe any plans for ongoing engagement with overburdened communities and vulnerable populations related to this action.

There are no additional outreach events planned at this time specific to this action; Ecology is hosting informal dialogue sessions on clean transportation issues in fall 2025 that will offer time to speak on this rulemaking but are scoped to include clean transportation issues broadly. Ecology will continue to provide information on the implementation of the Clean Vehicles Program via the relevant email lists and the Ecology webpage, including on those planned meetings. Additionally, any future events will be posted on our webpage and shared via the relevant email lists.

Section 8: Potential Environmental Benefits & Harms from Action

This section summarizes anticipated benefits and harms from the potential action, and to assess impacts on overburdened communities and vulnerable populations. The level, type, and form of engagement is based on the likelihood that the actions may cause environmental harm or may affect the equitable distribution of environmental benefits to an overburdened community or a vulnerable population. Answers to the questions in this section may have helped in strategizing our approach to engagement.

Identify Potential Environmental Benefits & Harms from Action

1. Describe the anticipated benefits (direct and/or indirect) from this action.

This rulemaking adopts a number of amendments the California Air Resources Board has adopted for their Advanced Clean Trucks (ACT) and Heavy-Duty Low NO_x Omnibus (Omnibus)

programs. These amendments do several things, all aimed at increasing manufacturer flexibility in complying with the law while maintaining emissions reductions:

- Exempting Omnibus-compliant semi-trucks in 2026 from ACT.
 - Starting with model year 2026, Omnibus sets pollution standards for combustion engines in vehicles weighing 10,000 pounds or more. We’re proposing to reduce ACT requirements in 2026 for each Omnibus-compliant engine sold, easing ACT compliance by an estimated 30% for semi-trucks in that year only.
 - Ecology estimates this may reduce sales of zero-emission semi-trucks by roughly 55 vehicles total relative to the baseline of 183 zero-emission semi-trucks needed to be sold overall in Washington in 2026 to be in compliance with ACT. In other words, roughly 55 of the 183 zero-emission semi-trucks required to be sold in 2026 may be internal combustion engine semi-trucks instead due to this proposed rule. Note that sales of semi-trucks year-to-year in Washington are highly variable and these represent best estimates based on past sales.
 - This may result in increased tailpipe emissions of greenhouse gases, particulate matter, NO_x, and other pollutants relative to a compliance scenario due to additional combustion engine semi-trucks sold. Emissions estimates vary significantly depending on what route these vehicles would serve on, but new vehicles are generally operated on regional or long-haul routes (i.e., the shortest to the longest routes). They are unlikely to be used for port drayage, which is almost exclusively operated using second- or third-life used trucks and operates in and around overburdened communities.
- Allowing secondary manufacturers to buy/sell credits to increase credit usage.
 - This would allow manufacturers who aren’t regulated by ACT to participate in the ZEV credit market, increasing credit liquidity for the benefit of manufacturers without impacting emissions reductions.
 - Examples of secondary manufacturers include RV manufacturers, who buy the engine/electric powertrains from a primary regulated manufacturer and then construct an RV body on top of the powertrain.
- Additional time (three years instead of one year) for manufacturers to make up a shortfall and for vehicles to earn credits and deficits when they are delivered for sale, as opposed to when they reach the final purchaser (e.g., the fleet that ordered the vehicle).
 - This allows for greater annual fluctuations in product and sales mix, allowing manufacturers more time to make up a sales shortfall without impacting emissions reductions. Vehicles must still be sold into the Washington market.
- Allowing manufacturers to sell “legacy” engines – engines that meet today’s emission standards, not the standards that will come into effect in 2026 – as up to 10% of their sales in model year 2026.

- This does not create new emissions overall, as legacy engines must be offset through community projects or increased zero-emission vehicle sales. However, it does give manufacturers flexibility to bring a mix of products to market.
- Allowing manufacturers to sell legacy engines before the California Air Resources Board (CARB) has certified their Omnibus-compliant engines in the same category in 2026.
 - To ensure that engines meet the emissions standards, CARB requires new engine designs to be certified in their testing facilities. Given the time needed for this, this change allows manufacturers to continue to sell their existing product while awaiting certification. This does not impact overall emissions as legacy engines are still subject to the 10% sales cap in 2026 as mentioned above.

Ecology anticipates that communities near major roadways are most likely to be indirectly impacted from this rulemaking due to the increase of zero emission vehicles that will likely result from this rulemaking. While the amendments under consideration in this rulemaking will not directly increase or decrease the impacts expected from the Clean Vehicles program, without these amendments the program may become unenforceable. As a result, here we associate impacts of the program with those of the amendments. The potential benefits of this rulemaking include:

- Air pollutant emissions are expected to be reduced due to the Clean Vehicles Program's increased zero-emission vehicle sales requirements, as well as the requirements of manufacturers to certify their remaining internal combustion engines to more stringent air quality standards. Omnibus is expected to reduce over 35,000 tons of NO_x emissions through 2050 through cleaner engine requirements on manufacturers. Meanwhile, ACT will reduce all types of tailpipe emissions from regulated vehicles by requiring increased zero-emission truck sales, reducing contributions to climate change and pollutants that cause cardio-respiratory illnesses like asthma. With Advanced Clean Trucks in place, Washington is estimated to realize significant pollution reductions, including:
 - Eliminating approximately 47 million metric tons of carbon dioxide by the end of 2050.
 - Realizing a 47% reduction in NO_x emissions from medium- and heavy-duty vehicles and 73% reduction in PM_{2.5} emissions through 2045.
- Overburdened communities, particularly those located along major transportation corridors, will benefit most from the improved air quality that comes from reducing tailpipe emissions. Communities will realize these benefits through reduced exposure to the emissions that lead to cardio-respiratory issues, and communities along major roadways can achieve larger reductions than those farther from roadways as these emissions are coming from vehicles.
- Traffic noise along heavy traffic roadways may be reduced due to the Clean Vehicles program's increased zero-emission vehicle sale requirements. Electric vehicles are significantly quieter than internal combustion engine vehicles at low speeds, and the Clean Vehicles program requires manufacturers to sell increasing amounts of new zero-

emission vehicles over time in Washington. Traffic noise comes from the engine and wind displacement by the vehicle.¹⁶

2. Who will primarily benefit from this action?

This administrative change is a statewide action that is not expected to directly create new impacts to overburdened communities and vulnerable populations above and beyond what is expected from the Clean Vehicles program already. These amendments improve the enforceability of the program. Therefore, in this section we discuss the impacts of the Clean Vehicles program so as to ensure understanding of the impacts this rulemaking will have.

Figure 1 in Section 6 highlights the communities along major roadways such as I-5 (particularly in Clark, Thurston, Pierce, King, Snohomish, Skagit, and Whatcom counties), along I-90 (particularly in King and Spokane counties), and other major traffic areas, such as northwest Kitsap County and the Tri-Cities.

Overburdened communities and vulnerable populations near major roadways are most likely to be indirectly impacted by this rulemaking given the expected benefits listed above, as they and the program are focused on regulating the impacts of tailpipe emissions from on-road medium- and heavy-duty vehicles, which are the primary source of many pollutants that are deleterious to public health and called out as specific layers/inputs – such as proximity to high traffic roadways and exposure to diesel exhaust – on the Environmental Health Disparities map.

3. How is the action expected to benefit specifically overburdened communities or vulnerable populations? If there is no benefit, identify potential barriers to benefitting from the action.

It is likely that overburdened communities near major roadways are most likely to benefit from this rulemaking. For a list of benefits, see question 1 of this section above. Ecology has not identified any barriers that would specifically prevent overburdened communities or vulnerable populations from the benefits of this rulemaking.

4. Describe anticipated harms (direct and/or indirect) from this action.

Ecology has also considered some potential harms, such as:

- Zero-emission vehicles tend to be heavier than similar internal combustion engine vehicles and may lead to an increase in stormwater runoff of 6PPD-q from tire wear particles.
 - 6PPD-quinone is used in tires to reduce rubber degradation over time. Also known as 6PPD-q, this chemical is released in tire dust as tires wear down from

¹⁶ [What causes road noise? | Physics Today | AIP Publishing](#)

the friction on the road. Tire wear particles then wash into stormwater and negatively impact aquatic life caught and consumed by nearby communities.

- The primary impact of note here is to Coho salmon populations, which are culturally, commercially, and ecologically important to Tribes and other residents in the Pacific Northwest. Emerging evidence shows that 6PPD-q may have an even wider array of impacts beyond neurotoxicity to Coho salmon and other freshwater fish populations, such as reducing diversity (and therefore resilience) in fungal communities, impacts to photosynthesis of certain aquatic plants, and potential bioaccumulation in humans.¹⁷
- Some estimates indicate that for every additional 1,000 lbs. of vehicle weight (the average weight of a current light-duty EV battery), tire wear increases by 20-26%, but the scientific record is inconclusive on the impact of heavier vehicles on tire wear.¹⁸ There is little conclusive, available research on the tire emissions impact of heavy-duty zero-emission vehicles.¹⁹ However, it is possible that tire wear increases are similar between all classes of vehicles, and recent research has found that replacing internal combustion engine vehicles with electric vehicles may result in significant increases to microplastics and other particulate matter of various sizes.²⁰
- Note that many factors impact tire wear, including but not limited to vehicle weight total and distribution, road material, rolling resistance, tire material, road conditions (weather and temperature), tire pressure, and more.²¹ Current work in the tire industry is directed at improving tire durability and wear for heavier vehicles as the industry transitions to electric vehicles.
- Increased electricity consumption/infrastructure needs
 - It is likely that this rulemaking will increase electricity consumption, grid impacts, and infrastructure needs by maintaining enforceability of the Clean Vehicles program.
 - The state has done extensive work to forecast demand for charging and hydrogen refueling infrastructure as a part of the state's Transportation Electrification Strategy.
 - Any construction projects (including those to create increased charging infrastructure and account for increased electricity consumption) that indirectly result from this rulemaking process will need to be assessed independently for

¹⁷ [Environmental fate, toxicity, and mitigation of 6PPD and 6PPD-Quinone: Current understanding and future directions - ScienceDirect](#)

¹⁸ [Do No Harm — Emissions Analytics](#)

¹⁹ [Scientists call for deeper investigation and standardization of methodologies for measuring and assessing tire wear emissions in first-of-its-kind “State of Knowledge” papers - Tire Industry Project](#)

²⁰ [Projecting airborne tire wear particle emissions in the United States in the era of electric vehicles - ScienceDirect](#)

²¹ [Accelerated Tire Wear under Controlled Conditions. II. Some Factors that Influence Tire Wear in: Rubber Chemistry and Technology Volume 46: Issue 4 | Rubber Chemistry and Technology](#)

environmental justice impacts as they arise, which is beyond the scope of this rulemaking process.

- Utilities are required to plan for future electricity demand and all major utilities in the state have issued Transportation Electrification Infrastructure Plans to plan for the transition.
- More work is needed, and Ecology is supporting this work through the EV Council, which coordinates state agencies on transportation electrification work, and through our fleet reporting data, which will be provided to utilities for planning purposes.
- Increased economic burden on small business owners
 - It is possible that this rulemaking causes an increased economic burden on small business owners that operate medium and heavy duty vehicles. Zero-emission trucks and vans are currently more expensive upfront by sometimes significant margins of 2-3x relative to their internal combustion engine counterpart.
 - However, fleets are not required by these standards to purchase vehicles, and these standards do not outlaw the sale of internal combustion engines in medium- and heavy-duty vehicles. In fact, half of compliance each year can come from plug-in hybrid vehicles.
 - Over the next decade, zero-emission vehicles (ZEVs) and charging/refueling infrastructure are projected by several reputable sources, including the state's own Transportation Electrification Strategy, to become increasingly common, more affordable, and more capable.
 - Due to this anticipated increase in infrastructure, all weight classes of ZEVs are projected to become the most affordable and convenient option for most people and businesses by the early 2030s, with many becoming more affordable to own and operate before 2030.

5. Who will primarily experience the harms?

This is a statewide action. However, it is possible that small business owners experience an economic impact as an indirect result of this rulemaking. Communities located in close proximity to heavy traffic roadways may experience the potential increase in tire particulate matter emissions from heavier zero-emission vehicles.

6. Describe how the action may harm overburdened communities or vulnerable populations? Be as specific as possible.

This is a statewide action. Communities located in close proximity to heavy traffic roadways may experience an increase in tire particulate matter emissions, including 6PPD-q and microplastics, from heavier zero-emission vehicles, if new materials are unable to be

substituted in to reduce these impacts. It is also possible that overburdened communities and vulnerable populations may disproportionately experience the economic impact on small business owners due to the concentration of small businesses with vehicle fleets in low-income communities and communities overburdened by air quality, such as near port communities. Research from the Northwest Seaport Alliance (NWSA) highlights this concern with specific examples.²²

In Fall 2023, the NWSA – which is the port authority representing the Ports of Seattle and Tacoma – gathered information from drayage truck drivers on a number of issues through an online survey and via outreach at events like Trucker Appreciation Week. NWSA received survey responses from 129 drivers. Approximately 60% were owner-operators and 40% were employee drivers. Roughly 5,000 drayage vehicles visit the ports every day, indicating that the drivers of up to 3,000 of those vehicles are operated by small businesses in the near-port communities highly overburdened by air quality concerns. These air quality concerns partially stem from the operation of these vehicles, which are generally both older and significantly cheaper than the average truck due to being on their second or third owner. Moving these drivers to zero-emission vehicles can improve air quality, but raises the economic equity concerns mentioned at the beginning of this response.

As manufacturers make more zero-emission options available and lower the amount of internal combustion engine vehicles sold, small businesses may face a more limited selection of traditional vehicles if they are competing for them with larger fleets. While this is not inherently harmful, if manufacturers are unable or unwilling to bring prices of zero-emission alternatives down over time, as requirements increase this could increase costs for all fleets, which would have a disproportionate impact on small businesses due to their lower revenue.

7. Describe how the action would address environmental and health disparities.

This rulemaking addresses environmental and health disparities by lowering vehicle tailpipe emissions in Washington state. This action primarily results in a reduction in air pollutants, that create health concerns in Washington residents, and results in a reduction in greenhouse gas emissions, that contribute to climate change.

Section 9: Options to Eliminate, Reduce, or Mitigate Harms and Equitably Distribute Benefits

This section summarizes options identified for eliminating, reducing, or mitigating harms, as well as options for equitably distributing anticipated benefits. The answers in this section

²² [Puget Sound ZE Truck Collaborative Roadmap.pdf](#)

should be informed by engagement, answers from the previous subsections, and any legislative or regulatory boundaries that limit possible decision making.

Identify Options to Eliminate, Reduce, or Mitigate Harms & Equitably Distribute Benefits

1. Describe options to reduce, mitigate, or eliminate the identified probable harms to overburdened communities and vulnerable populations; and options to equitably distribute the benefits.

At this time, Ecology is adopting these amendments by reference. Therefore, no changes can be made to the amendments to address harms. Ecology staff have worked with staff internally as well as at WSDOT to ensure workstreams that are addressing the identified harms can do the utmost to address concerns, such as through researching alternatives to 6PPD for tires and providing rebate funding to small businesses purchasing zero-emission vehicles.

Ecology is actively undertaking efforts to mitigate 6PPD-q runoff, possibly by reducing or eliminating the use of 6PPD-q in tires, through research partnerships with universities and consultancies. They are currently working towards a 6PPD alternatives assessment which was funded by the Legislature in the 2022 session. The current estimated completion date for that assessment is in 2026, although the work may take more time.¹⁶ The staff working on this assessment reported that some alternatives to 6PPD under exploration include graphene and carbon nanotubes. Silica may also be a way to reduce tire wear overall from heavier vehicles, as tires can be designed for different vehicle weights.

The state is also offering a voucher program through WSDOT, called WAZIP, which will provide rebates for the purchase of zero-emission vehicles. While the program's design is not finalized, it will likely include additional incentive money for small businesses. This will offset impacts of higher cost vehicles on small businesses. The program has roughly ~\$126 million in funding for the current biennium from the Legislature.

2. Describe methods chosen for this action to reduce, mitigate, or eliminate the identified probable harms to overburdened communities and vulnerable populations; and methods chosen to equitably distribute the benefits. You must consider the following methods, but are not limited to them:
 - Eliminating the disparate impact of environmental harms on overburdened communities and vulnerable populations;
 - Reducing cumulative environmental health impacts on overburdened communities or vulnerable populations;
 - Preventing the action from adding to the cumulative environmental health impacts on overburdened communities or vulnerable populations;

- Providing equitable participation and meaningful engagement of vulnerable populations and overburdened communities in the development of the significant agency action;
- Prioritizing equitable distribution of resources and benefits to overburdened communities;
- Promoting positive workforce and job outcomes for overburdened communities;
- Meeting community needs identified by the affected overburdened community;
- Modifying substantive regulatory or policy requirements; and
- Any other mitigation techniques, including those suggested by the council, the office of equity, or representatives of overburdened communities and vulnerable populations.

N/A. Ecology is adopting these amendments by reference and therefore cannot consider additional changes.

3. If the agency determines it does not have the ability or authority to eliminate, reduce, or mitigate environmental harms caused by the action, or address the equitable distribution of environmental benefits, explain why that determination was made.

Ecology is actively undertaking efforts to mitigate 6PPD-q runoff, possibly by reducing or eliminating the use of 6PPD-q in tires, through research partnerships with universities and consultancies. They are currently working towards a 6PPD alternatives assessment which was funded by the Legislature in the 2022 session. The current estimated completion date for that assessment is in 2026, although the work may take more time.²³ The staff working on this assessment reported that some alternatives to 6PPD under exploration include 77PD, CCPD, combined with graphene platelets and carbon nanotubes that can reduce leakage of 6PPD from tire particles and mitigate tire cracking, respectively. Different tire chemistries involving various levels of carbon black or silica may also be a way to reduce tire wear overall from heavier vehicles, as tires can be designed for different vehicle weights. There are various trade-offs for industry to consider in these chemistries – silica use increases tire efficiency and fuel economy, reducing greenhouse gas emissions, but increases tire wear at the point of accelerating and braking a vehicle significantly. Carbon black has lower tire wear but less efficiency, and is generally used with heavier vehicles.

The state is also offering a voucher program through WSDOT, called WAZIP, which will provide rebates for the purchase of zero-emission vehicles. While the program's design is not finalized, it will likely include additional incentive money for small businesses. This will offset impacts of higher cost vehicles on small businesses. The program has roughly \$126 million in funding for the current biennium from the Legislature.

²³ [Focus On: Reducing Sources of 6PPD](#)