3.10 Air Quality

Many natural and human activities generate air pollutants that can affect human and environmental health. Air quality is closely tied to transportation (including motor vehicles, trucks, and buses), which is a major contributor of air pollutants in the Portland-Vancouver area. This section evaluates the long-term and temporary effects of the No-Build Alternative and the network improvements of the Modified LPA for two types of air pollutants:

- Mobile source air toxics (MSAT). The Clean Air Act identifies 188 air toxics, of which MSAT are a subset of nine pollutants emitted by vehicles. These nine pollutants are also included in the Oregon Department of Environmental Quality's (DEQ) Toxic Air Contaminant Priority List. Although MSAT pollutants pose potential public health concerns, there are currently no thresholds to identify the significance of project impacts.
- Criteria pollutants. These pollutants have federally established limits based on human health and environmental criteria.

Information presented in this section is based on the Air Quality Technical Report, including details of the emissions analyses for MSAT and criteria pollutants. Greenhouse gas emissions are discussed in Section 3.12, Energy, and Section 3.19, Climate.

3.10.1 Changes or New Information Since 2013

The Columbia River Crossing (CRC) Final EIS and Record of Decision were completed in 2011, with design refinements addressed in subsequent NEPA reevaluations in 2012 and 2013. Since then, the following changes and new information have affected potential impacts to air quality:

- Updated analysis to address National Ambient Air Quality Standards (NAAQS) and other federal guidance, such as FHWA's Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents (FHWA 2023) and FHWA's Frequently Asked Questions for Conducting Quantitative MSAT Analysis for FHWA NEPA Documents.
- Revised methodology based on updated ODOT Air Quality Manual and WSDOT Guidance on Addressing Air Quality, Greenhouse Gas Emissions, and Energy for WSDOT projects.
- Removed an assessment for localized carbon monoxide at congested intersections, as the region's 20-year carbon monoxide maintenance period ended in 2017. Therefore, transportation projects in the region are no longer required to demonstrate conformity.
- Updated the analysis based on updated traffic modeling data.
- Calculated criteria pollutants using the U.S. Environmental Protection Agency's (EPA's) Motor Vehicle Emissions Simulator Model (MOVES) (version 3.1.0).
- Deleted reference to the Portland Air Toxics Solution study, as it only projected emissions to 2017.
- Added a summary of Oregon State Toxic Air Contaminant Program, which was most recently amended in November 2021.
- Changes to the design of the CRC project's LPA to develop a Modified LPA, including design options.

Table 3.10-1 compares the impacts and benefits of the CRC LPA as identified in the Final EIS (2011) to those of the Modified LPA as a result of the changes listed above, which include many updates in the analysis methodology and traffic modeling data. Based on the analysis described in this section, the effects of the

Modified LPA would be similar to those of the CRC LPA. Both the CRC LPA; overall, the Modified LPA would reduce the emissions of air quality pollutants compared to existing conditions.

Table 3.10-1. Comparison of CRC LPA Effects and Modified LPA Effects

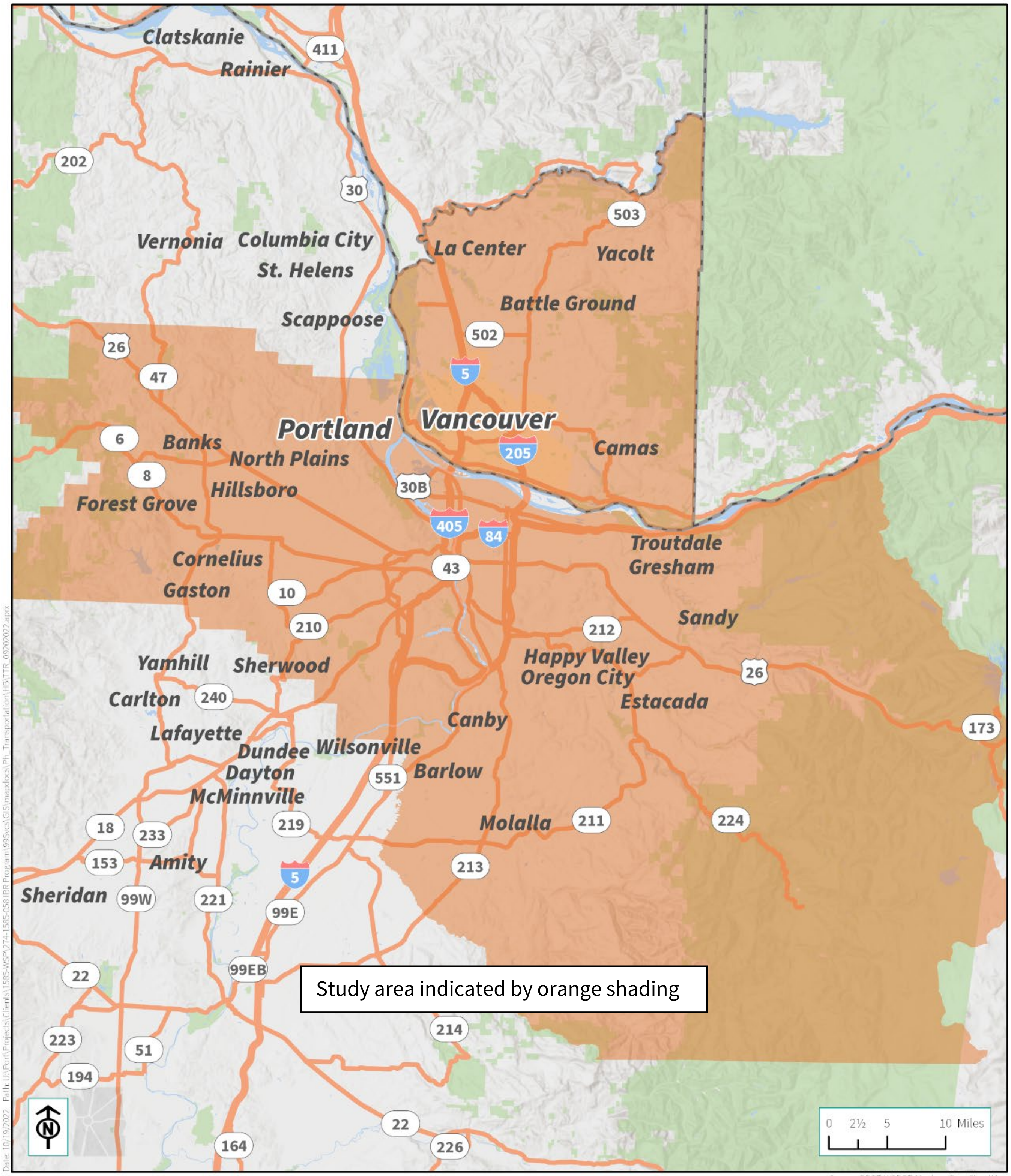
Technical Considerations	CRC LPA Effects as Identified in the 2011 Final EIS	Modified LPA Effects as Identified in this Section	Explanation of Differences
Change in VMT used to calculate air pollutant emissions – Difference from Existing (2005 in CRC LPA and 2015 in Modified LPA).	• 40% (2030)	• 33% (2045)	• Variations in methodology such as the base year of analysis and MSAT study area.
MSATs Emissions (2030 in CRC LPA and 2045 in Modified LPA) – Difference from Existing (2005 in CRC LPA and 2015 in Modified LPA). [a]	• 1,3-Butadiene: -53% • Acetaldehyde: N/A • Acrolein: -52% • Benzene: -57% • Diesel Particulate Matter: -93% • Ethylbenzene: N/A • Formaldehyde: -48% • Naphthalene: -37% • Polycyclic Organic Matter: N/A	• 1,3-Butadiene: -100% • Acetaldehyde: -87% • Acrolein: -91% • Benzene: -72% • Diesel Particulate Matter: -90% • Ethylbenzene: -32% • Formaldehyde: -89% • Naphthalene: -95% • Polycyclic Organic Matter: -95%	• CRC LPA MSAT emissions are in units of pounds per summer day and Modified LPA MSAT emissions are in tons per year. • Additional differences include analysis years, updates to future volume projections, updates to federal air emissions standards, and updates to EPA's emission factor model.
Regional Criteria Pollutant Emissions (2030 in CRC LPA and 2045 in Modified LPA) – Difference from Existing (2005 in CRC LPA and 2015 in Modified LPA).[b]	• Carbon Monoxide (winter): -26% • Nitrogen Dioxide: -74% • Sulfur Dioxide: N/A • Volatile Organic Compounds: -56% • Total PM10a: -92% • Total PM2.5b: -91%	• Carbon Monoxide: -70% • Nitrogen Dioxide: -81% • Sulfur Dioxide: -11% • Volatile Organic Compounds: -54% • Total PM10a: -1% • Total PM2.5b: -59%	• CRC LPA Regional Criteria Pollutant Emissions are in tons per day and Modified LPA Regional Criteria Pollutant Emissions are in tons per year.

Source: CRC 2011
Notes:
a MSAT Emissions for CRC are in pounds per day and for Modified LPA are in tons per year.
b Regional Criteria Pollutant Emissions for CRC are in tons per day and for Modified LPA are in tons per year.
Key: CRC = Columbia River Crossing; EIS = Environmental Impact Statement; EPA = Environmental Protection Agency; LPA = Locally Preferred Alternative; MSAT = Mobile Source Air Toxics; N/A = not applicable; VMT = vehicle miles traveled

3.10.2 Existing Conditions

The study area is shown in Figure 3.10-1. Oregon DEQ measures air pollutant levels with a network of air monitoring and sampling equipment at more than 40 sites throughout the state, including the study area. Washington State Department of Ecology (Ecology) does not operate many monitors in the Vancouver area because the monitors operated by DEQ fulfill the federal monitoring requirements for the metropolitan area. Over the last 10 years, pollutant concentrations have been trending mostly downward for most locations, with most exceptions corresponding to wildfire smoke events. DEQ implements several programs that regulate emissions of air toxics and monitors ambient levels present at various locations across Oregon. DEQ uses this concentration data to develop strategies to reduce ambient levels of air toxics in the state. The Air Quality Technical Report includes tables of recent monitoring data for criteria pollutants and air toxics.

Figure 3.10-1. Air Quality Study Area



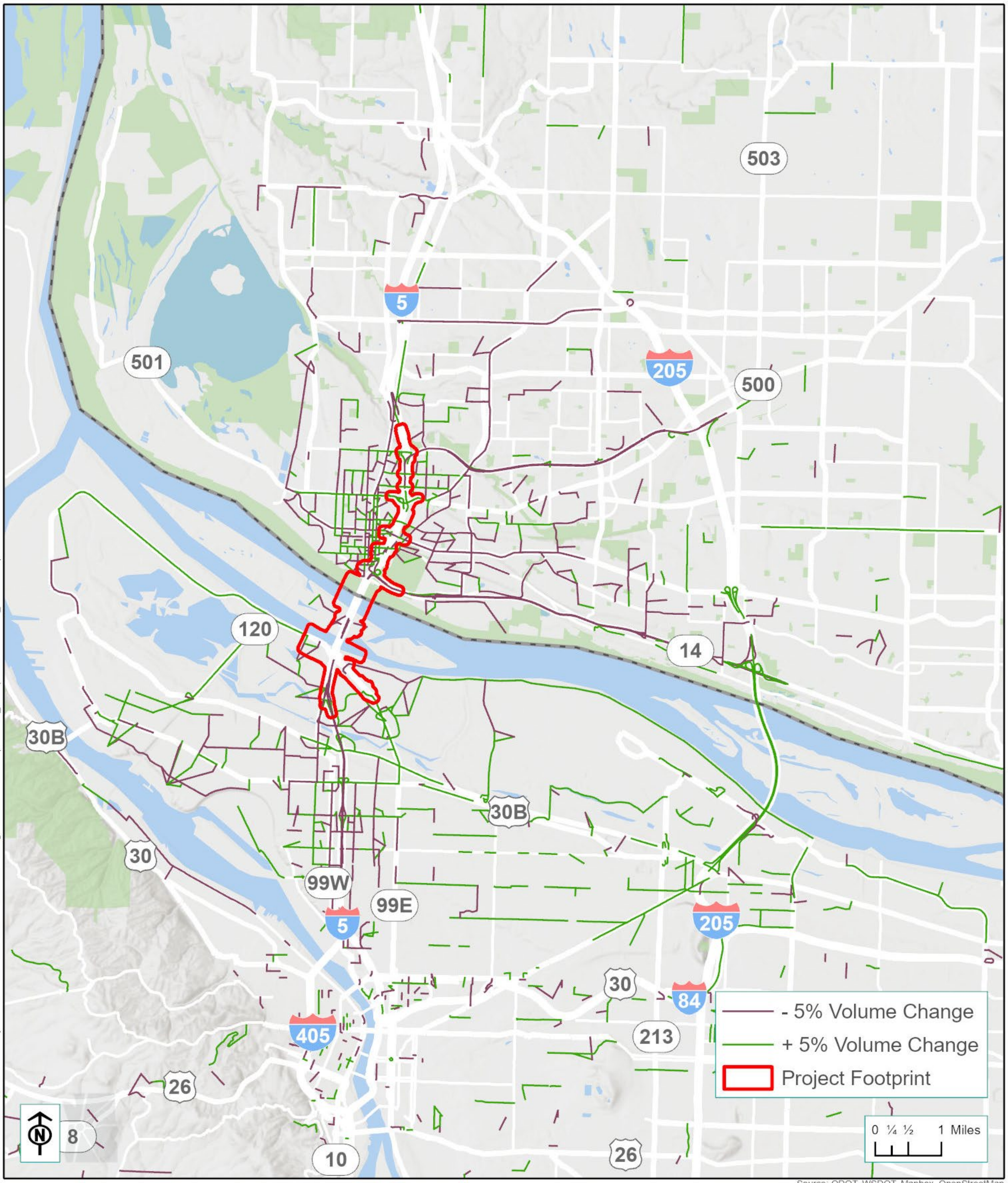
Air Quality Pollutants and Standards

Mobile Source Air Toxics

MSAT emissions are the subset of air toxics emitted by mobile sources. The priority MSAT pollutants include benzene, 1,3-butadiene, naphthalene, polycyclic organic matter, formaldehyde, acrolein, ethylbenzene, acetaldehyde, and diesel particulates. Exposure to these pollutants over time can affect human health. Unlike criteria pollutants, MSAT pollutants do not have regulatory standards.

The EPA's MOVES 3.1.0 model was used to estimate the MSAT emissions (in tons per year) for existing conditions, the No-Build Alternative and the Modified LPA. The analysis was performed according to FHWA guidance that recommends estimating emissions for roadway segments that are expected to have a change in volume of more than 5% compared to the No-Build Alternative. The roadway network used for the emissions analysis is shown by the roadway segments highlighted in Figure 3.10-2.

1 **Figure 3.10-2. Roadway Emissions Analysis Network**



The MOVES model estimates emissions from this MSAT network based on details from regional travel demand modeling (traffic volumes, speeds, and vehicle mix) and region-specific MOVES inputs that describe the climate, fuel supply, and vehicle registration. DEQ and Ecology provided data files to run two MOVES models to determine the emissions on Oregon and Washington roadway segments, using regional conditions for each state. Existing conditions modeled for MSAT pollutant emissions are shown in Table 3.10-2 and Table 3.10-3.

Criteria Pollutants

The EPA has developed NAAQS for six major air pollutants. Areas previously designated nonattainment areas that are now in compliance with air quality standards are classified as “attainment” areas or “maintenance areas.” A table of the current NAAQS is found in the Air Quality Technical Report.

Portland is in attainment for all NAAQS. The area was previously designated as nonattainment for carbon monoxide and 1-hour ozone. As of October 2, 2017, the 20-year transportation conformity planning period associated with the Carbon Monoxide Maintenance Plan was completed. All measures and requirements contained in the Carbon Monoxide Maintenance Plan must be complied with until the EPA approves a revision to the state plan; however, transportation projects are no longer required to demonstrate NAAQS compliance with the transportation conformity requirements of 40 Code of Federal Regulations Part 93 subpart A.

In 2005, EPA revoked the 1-hour ozone standard. At the time, the Portland- Vancouver region was subject to an ozone maintenance plan. The maintenance plan, including regional commitments for transportation strategies to address ozone, is still in effect.

The criteria pollutant emissions analysis followed the same methodology described for the MSAT analysis to provide a comparison of emissions between existing and future conditions. Existing conditions modeled for criteria pollutant emissions are shown in Table 3.10-3.

Oregon State Implementation Plan

As part of Oregon’s State Implementation Plans for ozone, control strategies were identified to reduce emissions of volatile organic compounds and oxides of nitrogen, which are precursors to the formation of ozone (DEQ 2020). Although transportation conformity is no longer required after the ozone standard was revoked, the following strategies that apply to the roadway network are still in place:

- Motor Vehicle Inspection Program (Oregon Administrative Rules [OAR] 340-256-0300 through 0470) that defines the emissions testing programs required for vehicles registered in Portland.
- Public education and outreach that encourages people to voluntarily reduce emissions, such as not mowing lawns and driving less on Clean Air Action Days (now called Air Pollution Advisories).
- Employee Commute Options Program (OAR 340-242-0010 through 0290): Program requirements now focus on larger employers (100 or more employees) and reduce the survey requirements from annual to every two years.

As part of Oregon’s State Implementation Plan for carbon monoxide, Transportation Control Measures (TCMs) were identified to reduce emissions by reducing vehicle use (DEQ 2004). Although transportation conformity is no longer required after the 20-year maintenance period, the following TCMs were applicable between the years of 2006 and 2017 and are examples of strategies that have been used to reduce emissions:

- Transit Service Increase: Regional transit service revenue hours (weighted by capacity) are increased 1% per year. The increase is assessed on the basis of a five-year rolling average of actual hours for assessments conducted between 2006 and 2017.
- Bicycle Paths: Jurisdictions and government agencies must program a minimum total of 28 miles of bicycle paths or trails within the Portland metropolitan area between the years 2006 and 2017. Bicycle paths must be consistent with state and regional bikeway standards. A cumulative average of 5 miles of

bikeways or trails per biennium must be funded from all sources in each Metropolitan Transportation Improvement Program. Facilities subject to this TCM must be in addition to those required for expansion or reconstruction projects under Oregon Revised Statutes 366.514.

- Pedestrian Paths: Jurisdictions and government agencies must program at least 9 miles of pedestrian paths in mixed-use centers between the years 2006 and 2017, including the funding of a cumulative average of 1.5 miles in each biennium from all sources in each Metropolitan Transportation Improvement Program. Facilities subject to this TCM must be in addition to those required for expansion or reconstruction projects under Oregon Revised Statutes 366.514, except where such expansion or reconstruction is located within a mixed-use center.

3.10.3 Long-Term Effects

No-Build Alternative

Air pollutant emissions from the regional transportation system would continue, including from idling vehicles during bridge openings under the No-Build Alternative (Table 3.10-2 and Table 3.10-3). Although vehicle miles traveled (VMT) would increase substantially between now and 2045, emissions of most MSAT and criteria pollutants would go down because of more stringent regulation of fuels and emissions.

Table 3.10-2. Mobile Source Air Toxics Emissions (Tons per Year)

Pollutant	Existing (2015)	No-Build Alternative (2045)	Modified LPA (2045)	Modified LPA Difference from Existing	Modified LPA Difference from No-Build Alternative
MSAT Study Area Daily VMT	2,763,000	3,776,000	3,680,000	33%	-3%
1,3-Butadiene	0.94	0.00	0.00	-100%	0%
Acetaldehyde	3.3	0.5	0.4	-87%	-13%
Acrolein	0.32	0.03	0.03	-92%	-11%
Benzene	15.9	4.4	4.3	-73%	-1%
Diesel Particulate Matter	16.1	1.8	1.6	-90%	-13%
Ethylbenzene	20.0	13.6	13.5	-33%	-1%
Formaldehyde	4.99	0.57	0.51	-90%	-12%
Naphthalene	0.64	0.03	0.03	-95%	-7%
Polycyclic Organic Matter	0.27	0.01	0.01	-96%	0%

Notes:
Percentage differences calculated prior to rounding.
Key: LPA = Locally Preferred Alternative; MSAT = Mobile Source Air Toxics; VMT = vehicle miles traveled

Table 3.10-3. Regional Criteria Pollutant Emissions (Tons per Year)

Pollutant	Existing (2015)	No-Build Alternative (2045)	Modified LPA (2045)	Modified LPA Difference from Existing	Modified LPA Difference from No-Build Alternative
MSAT Study Area Daily VMT	2,763,000	3,776,000	3,680,000	33%	-3%
Carbon Monoxide	5,680	1,820	1,730	-70%	-5%
Nitrogen Dioxide	1,210	270	230	-81%	-16%
Sulfur Dioxide	3.2	3.0	2.8	-11%	-6%
Volatile Organic Compounds	1,814	836	830	-54%	-1%
Total PM_{10}[a]	64	74	63	-1%	-15%
Total $PM_{2.5}$[b]	26.2	12.5	10.8	-59%	-14%

Notes:
Percentage differences calculated prior to rounding.
a Total PM_{10} emissions are the sum of PM_{10} exhaust, PM_{10} brake wear, and PM_{10} tire wear.
b Total $PM_{2.5}$ emissions are the sum of $PM_{2.5}$ exhaust, $PM_{2.5}$ brake wear, and $PM_{2.5}$ tire wear.
Key: LPA = Locally Preferred Alternative; MSAT = Mobile Source Air Toxics; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; PM_{10} = particulate matter less than or equal to 10 microns in diameter; VMT = vehicle miles traveled

Modified LPA

The Modified LPA would not cause long-term adverse air quality impacts. Emissions reductions vary by pollutant, ranging from a decrease of 1% to 16%, with minor differences between the Modified LPA and the No-Build Alternative (Table 3.10-2 and Table 3.10-3).

Air pollutant emissions are expected to be substantially lower in the future than under existing conditions for all pollutants evaluated, except total PM_{10}, which would only be about 1% lower. The predicted emissions reduction is almost entirely due to EPA regulations, fuel and engine standard improvements. On a regional basis, future differences between the Modified LPA and No-Build Alternative are small within the accuracy of the estimation methods.

Compared to the No-Build Alternative, the Modified LPA would lower emissions of MSAT and criteria pollutants by improving traffic flow and reducing VMT within the study area. The Modified LPA with the single-level fixed-span bridge configuration may slightly reduce operational emissions due to the lower profile grade of the bridges compared to the Modified LPA with the double-deck fixed-span bridge configuration, which would reduce acceleration and braking of vehicles crossing the bridges. The long-term effects of the Modified LPA with the single-level movable-span bridge configuration would be similar to those of the single-level fixed-span bridge configuration from vehicle emissions on the roadway. The Modified LPA with the single-level movable-span bridge configuration would have a higher vertical navigation clearance than the existing bridge, which could result in fewer bridge openings and reduced idling compared to the No-Build Alternative. However, the Modified LPA with the single-level movable-span bridge configuration would have increased idling compared to the Modified LPA with the double-deck fixed span and the single-level fixed span bridge configuration.

Compared to the Modified LPA with one auxiliary lane, the analysis of the long-term effects of the Modified LPA with two auxiliary lanes using the regional travel demand model shows no statistical difference in pollutant emissions (Table 3.10-4 and Table 3.10-5); pollutant emissions are within a 1% difference.

The Modified LPA would have the same long-term effect on air quality with or without the I-5 C Street ramps at the SR 14 interchange, with the centered I-5 mainline or the westward shift, and with each of the park and ride site options.

Table 3.10-4. Mobile Source Air Toxics Emissions Modified LPA with One and Two Auxiliary Lanes (Tons per Year)

Pollutant	Modified LPA with One Auxiliary Lane(2045)	Modified LPA with Two Auxiliary Lanes (2045)	Difference Between Modified LPA with One and Two Auxiliary Lanes
MSAT Study Area Daily VMT	3,679,627	3,694,221	0.4%
1,3-Butadiene	0.00	0.00	0.0%
Acetaldehyde	0.42	0.42	-0.6%
Acrolein	0.03	0.03	-0.3%
Benzene	4.33	4.33	0.0%
Diesel Particulate Matter	1.57	1.56	-0.6%
Ethylbenzene	13.47	13.47	0.0%
Formaldehyde	0.51	0.50	-0.4%
Naphthalene	0.03	0.03	-0.2%
Polycyclic Organic Matter	0.01	0.01	0.0%

Key: LPA = Locally Preferred Alternative; MSAT = Mobile Source Air Toxics; VMT = vehicle miles traveled

Table 3.10-5. Regional Criteria Pollutant Emissions Modified LPA with One and Two Auxiliary Lanes (Tons per Year)

Pollutant	Modified LPA with One Auxiliary Lane (2045)	Modified LPA with Two Auxiliary Lanes (2045)	Difference Between Modified LPA with One and Two Auxiliary Lanes
MSAT Study Area Daily VMT	3,679,627	3,694,221	0.4%
Carbon Monoxide	1,725.6	1,731.5	0.3%
Nitrogen Dioxide	225.7	223.4	-1.0%
Sulfur Dioxide	2.8	2.8	0.3%
Volatile Organic Compounds	830.4	830.4	0.0%
Total PM_{10}[a]	63.2	62.7	-0.8%
Total $PM_{2.5}$[b]	10.8	10.7	-0.3%

Notes:

a Total PM_{10} emissions are the sum of PM_{10} exhaust, PM_{10} brake wear, and PM_{10} tire wear.

b Total $PM_{2.5}$ emissions are the sum of $PM_{2.5}$ exhaust, $PM_{2.5}$ brake wear, and $PM_{2.5}$ tire wear.

MSAT Health Effects

Within the study area, there may be localized areas where ambient concentrations of MSAT with the Modified LPA could be different from the No-Build Alternative. The magnitude and duration of potential localized concentration increases cannot be reliably quantified because of uncertainty in future emissions, weather patterns, exposure pathways, and causation of effects.

By FHWA standards, the information needed to credibly predict project-specific health impacts due to changes in MSAT emissions is incomplete or unavailable. Because of the level of uncertainty associated with limitations in the methodologies for forecasting health impacts, comparing the No-Build Alternative and Modified LPA MSAT estimates would not be useful to decision-makers, who would need to weigh this information against project benefits such as reducing traffic congestion, accident rates and fatalities, and improved access for emergency response.

Regional Effects

The pollutant emissions estimated by the MOVES model for the Modified LPA are summarized in Table 3.10-4 (MSAT) and Table 3.10-5 (criteria pollutants). Future emissions would be substantially lower than existing emissions for all MSAT and criteria pollutants, except for total PM_{10}, which would only be about 1% lower, consistent with national trends. MSAT emissions would decrease substantially over time as fuel and engine regulations are implemented. Total PM_{10} emissions do not show the same trend because they include emissions from brake wear and tire wear, which do not decrease over time.

Future 2045 emissions for the Modified LPA are less than 2045 No-Build Alternative for all pollutants. The emissions shown for the roadway segments are meant to present the difference between the No-Build Alternative and the Modified LPA—the MOVES model results do not represent the total emissions for the entire study area. There are no thresholds to determine the significance of MSAT emissions or criteria pollutant emissions for projects in areas that EPA has designated as in attainment of the NAAQS.

3.10.4 Temporary Effects

No-Build Alternative

The No-Build Alternative would not involve construction and therefore would not result in construction-related air quality effects.

Modified LPA

Construction-related activities would result in temporary air emissions, which could include increases in particulate matter in the form of fugitive dust (from demolition, ground clearing and preparation, grading, stockpiling of materials, on-site movement of equipment, and transportation of construction materials) and exhaust emissions from material delivery trucks, construction equipment, and workers’ private vehicles. Dust emissions increase during dry weather, construction activities, or high wind conditions. Temporary impacts to air quality from construction activities would occur during the 9- to 15-year construction period, which is expected to last from 2 to 10 years in a location. Locations of elevated emissions would likely occur directly next to the construction activities, staging areas, and material hauling routes.

3.10.5 Indirect Effects

The Modified LPA may indirectly affect development and increase motor vehicle trips on other roadways if traffic diverts to avoid tolls. The Transportation Technical Report contains more information on the traffic modeling that was completed to address tolling. The potential for such diversion has been accounted for in the traffic forecasting used to evaluate air quality effects. No additional indirect effects would occur under the Modified LPA.

3.10.6 Potential Avoidance, Minimization, and Mitigation Measures

Long-Term Effects

Regulatory Requirements

The requirements of Oregon's State Implementation Plan would continue to be implemented by the state; there are no regulatory requirements that would be directly implemented by the IBR Program.

Project-Specific Mitigation

Long-term air quality impacts are not expected to occur because of the Modified LPA, and project-specific mitigation for long-term impacts is not proposed.

Temporary Effects

Regulatory Requirements

To protect and minimize temporary effects on air quality during construction, standard and regulatory mitigation measures such as best management practices would be implemented.

Standard and regulatory measures for air quality that would be required of construction contractors in Oregon are:

- Comply with Division 208 of OAR 340, which addresses visible emissions and nuisance requirements. Subsection of OAR 340-208 places limits on fugitive dust that causes a nuisance or violates other regulations. Violations of the regulations can result in enforcement action and fines. The regulation provides that the following reasonable precautions be taken to avoid dust emissions (OAR 340-208, Subsection 210):
  - Use of water or chemicals, where possible, for the control of dust during project construction.
  - Application of water or other suitable chemicals on materials stockpiles and other surfaces that can create airborne dust.
  - Full or partial enclosure of stockpile materials in cases where application of water or other suitable chemicals is not sufficient to prevent particulate matter from becoming airborne.
  - Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials.
  - Adequate containment during sandblasting or other similar operations.
  - Covered open-bodied trucks when transporting materials likely to become airborne.
  - Prompt removal from paved areas of earth or other material that does or could become airborne.
- Comply with ODOT Standard Specifications Section 290, which has requirements for environmental protection, including air pollution control measures. These control measures are designed to minimize vehicle track-out, fugitive dust, and idling. These measures would be documented in the erosion and sediment control plan developed prior to construction. To reduce the impact of construction delays on traffic flow and resultant emissions, road or lane closures would be restricted to non-peak traffic periods when possible.

- Comply with the Clean Diesel Construction Standard (OAR-731-005-0800) that requires public improvement contracts in the amount of $20 million or more to include a percentage of nonroad diesel equipment that meet EPA Tier 4 Exhaust Emissions Standards for nonroad diesel equipment, depending on the year of construction. If not equipped with a Tier 4 compression ignition engine, the equipment must be retrofitted with a verified diesel oxidation catalyst or verified diesel particulate filter.
- Comply with Oregon House Bill 2007, known as the “Clean Diesel Bill," which authorizes the Environmental Quality Commission of the DEQ to adopt rules for certification of approved retrofit technologies of diesel engines that power medium- and heavy-duty trucks. The legislation includes prohibitions on registering and titling older diesel engines in Clackamas, Multnomah, and Washington Counties after specified deadlines, unless the older diesel engines are equipped with retrofit technologies established by the Environmental Quality Commission or DEQ. This bill also includes policy for clean diesel in public contracts, requiring at least 80% of the total fleet vehicles and equipment to be powered by model year 2010 or newer engines and meet EPA Tier 4 exhaust emission standards.

Standard and regulatory mitigation measures for air quality in Washington include:

- Spray exposed soil with water or other dust palliatives.
- Cover all trucks transporting materials, wetting materials in trucks, or providing adequate freeboard (space from the top of the material to the top of the truck).
- Remove particulate matter deposited on paved public roads.
- Minimize delays to traffic during peak travel times.
- Place quarry spall aprons where trucks enter public roads.
- Gravel or pave haul roads.
- Plant vegetative cover as soon as possible after grading.
- Minimize unnecessary idling of on-site diesel construction equipment.
- Locate diesel engines, motors, or equipment as far away as possible from existing residential areas and other sensitive areas.
- Minimize hours of operation near sensitive receptor areas and rerouting diesel truck traffic away from sensitive receptor areas.
- Educate vehicle operators to shut off equipment when not in active use to reduce idling.
- Use cleaner fuels as appropriate.
- Include detours and strategic construction timing (such as night work) on the traffic control plans to continue moving traffic through the area and reducing backups and delays to the traveling public to the extent possible.
- Work with partners to promote ridesharing and other commute trip reduction efforts for employees working on the Modified LPA.

Project-Specific Mitigation

- Encourage all contractors to minimize impacts to surrounding communities such as using newer low-emitting construction equipment and electric equipment, and avoiding haul routes through residential areas.