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425.01 Introduction

This chapter contains policies to be followed when state transportation projects trigger air quality, greenhouse gas, or energy analyses.

WSDOT ensures our projects meet all state and federal air quality requirements. The Clean Air Act requires conformity determinations for projects in nonattainment and maintenance areas and addresses criteria pollutants. A conformity determination ensures a project will not cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS) set by EPA to protect human health and welfare. Pollutant concentrations can increase, as long as the result does not exceed the standard.

NEPA requires documenting and, as applicable, comparing air quality and energy effects of project alternatives. The NEPA requirement may encompass criteria pollutants, mobile source air toxics (MSAT), greenhouse gases, and energy, depending on the project. In addition, temporary construction emissions (fugitive dust), are evaluated qualitatively for larger projects and WSDOT commits to construction best management practices to reduce fugitive dust emissions through NEPA.

WSDOT policy requires addressing the greenhouse gas emissions and climate change in NEPA documents. This chapter covers greenhouse gas emissions; information on WSDOT climate adaptation and resiliency approach is in [Chapter 412](#). Federal policy on considering greenhouse gas emissions under NEPA has changed overtime. In January 2021, the White House Council on Environmental Quality (CEQ) rescinded the 2019 Draft NEPA Guidance on Consideration of Greenhouse Gas Emissions. The Council is now “reviewing, for revision and update, the 2016 Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews.”¹

425.02 Applicable statutes, regulations, executive orders, & agreements

U.S. Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), and regional clean air agencies regulate ambient air quality in Washington. Permits and approvals required pursuant to these statutes are listed in [Section 425.07](#).

¹ https://ceq.doe.gov/guidance/ceq_guidance_nepa-ghg.html, accessed March 9, 2021.

425.02(1) Federal

- National Environmental Policy Act (NEPA) [42 USC 4321-4370](#) and federal implementing regulations [23 CFR 771](#) (FHWA) and [40 CFR 1500-1518](#) (CEQ).
- Clean Air Act (CAA) [42 USC 7401-7431](#) et seq. and [Clean Air Act and Amendments \(CAAA\)](#) of 1990.
- [40 CFR 93](#) Federal conformity regulations, including exempt projects in [40 CFR 93.126](#).
- [23 CFR 450](#) FHWA regulations for statewide and metropolitan transportation planning and programming are defined in Planning Assistance and Standards
- FHWA [Technical Advisory T 6640.8A](#) for NEPA documents, Section 8 for Air Quality and Section 22 for Energy.
- President's [Executive Order 13423](#) *Strengthening Federal Environmental, Energy, and Transportation Management*.
- U.S. Department of Transportation Guidance on Fuel Consumption and Air Pollution, including [USDOT Order 5610.1C](#) and [Energy Requirements for Transportation Systems](#)

425.02(2) State

- State Environmental Policy Act (SEPA) and state implementing regulations [WAC 197-11](#) and [WAC 468-12](#).
- Washington Clean Air Act, [RCW 70A.15](#).
- [WAC 173-420](#) state conformity regulations, including exempt projects in [WAC 173-420-110](#) and [WAC 173-420-120](#).
- [WAC 173-400-040\(9\)](#) state fugitive dust regulations.
- [RCW 39.35D](#) requires that new “major facility projects” achieve the Leadership in Energy and Environmental Design (LEED) silver building rating standard.

425.02(3) Local

- [Memorandum of Agreement on Fugitive Dust from Construction Projects](#) (1999) between WSDOT and the Puget Sound Clean Air Agency (PSCAA).
- [Guide to Handling Fugitive Dust from Construction Projects](#) (1997) from Construction Projects by the Associated General Contractors (AGC) of Washington

425.03 Considerations during project development**425.03(1) Planning****Conformity**

Regional conformity is determined for MPO Transportation Improvement Plans (TIP) when the MPO includes a maintenance or nonattainment area. See External Engagement below for more information.

Greenhouse Gas Emissions

WSDOT is working with other agencies to improve the methods and tools to evaluate transportation emissions reduction strategies, including electrification and mode shift to reduce vehicle miles travelled. Transportation sector GHG emissions are best addressed at the region, state, and transportation systems level where multiple projects can be analyzed

in aggregate. Most current plans at these broader levels, however, do not yet provide the emissions analysis that would put a proposed transportation improvement project in a larger context. WSDOT recognizes the public's interest in these issues and the need to disclose GHG emissions at the project level for major public projects. The differences in GHG emissions between project alternatives are typically small and closely follow changes in VMT.

425.03(2) Scoping

During the scoping stage, determine which type of analysis is likely to be needed for your project. Note that the analysis of air quality, energy, and greenhouse gas emissions typically uses the same tools and inputs related to traffic.

Public scoping comments on large projects also informs the analysis. [Chapter 400](#) explains the importance of public and agency outreach during pre-NEPA and scoping of our environmental documents. Often the members of the public raise concerns around issues that may seem outside the project. These concerns may indicate cumulative effects, that should be captured early and considered as important context for the project. A project team may decide to address greenhouse gas emissions as both a direct effect and a cumulative effect as regards future climate change.

425.03(3) Design

Follow the guidance that is posted on the [Air quality, energy and greenhouse gas emissions](#) website.

Prepare conformity demonstration, if needed, and address relevant NEPA requirements.

Project NEPA documents should disclose all the effects and respond to public and agency concerns. The proposed project should highlight ways to address the direct and indirect effects, and ways to be resilient to climate and other hazards. See the [cumulative effects & climate resiliency](#) webpage for additional guidance.

425.03(4) Construction

Track and manage commitments across project stages.

Take measures to reduce fugitive dust and use fuel efficiently. As appropriate, consider materials choices to reduce embodied emissions.

425.03(5) Maintenance and Operations

Ensure compliance with environmental commitments made during project development. Maintain and operate the facility for longevity and efficiency to reduce operational and embodied emissions.

425.04 Analysis & documentation requirements

This section describes analysis and documentation requirements based on regulatory requirements. Determine the level of detail based on project complexity and size, expected severity of impacts, and potential for public controversy.

The [decision tree](#) identifies the triggers for conformity, MSAT, GHG, and energy analyses.

425.04(1) Analysis & documentation for NEPA

NEPA requires documenting and comparing environmental effects of project alternatives for projects that are not categorically excluded. These effects include air quality, energy, and greenhouse gas emissions. The type of analysis and discussion required for a project depends on a variety of project factors, including, but not limited to, location, traffic volume, and documentation type (EA, EIS, etc.).

The WSDOT [Air Quality, Greenhouse Gas, and Energy Guidance](#) and [decision tree](#) help analysts determine which analyses are required for their project and provide guidance in completing the required analyses.

In addition to text included in a project's environmental document, a discipline report or technical memo should be prepared when a quantitative analysis requiring EPA's Motor Vehicle Emissions Simulator (MOVES) is conducted and for most projects requiring an EA or EIS. There may be projects elevated to the EA or EIS level that do not require a full discipline report, such as when there are significant concerns over just one element. In all cases, the level of detail in a discipline report should reflect the complexity and concerns of the proposed project.

One discipline report should address all air quality, energy, and greenhouse gas analyses conducted for a project. For each alternative, describe the affected environment, current conformity status, latest planning assumptions, analysis methodology and results, potential operational and construction impacts, recommended mitigation, and the results of any interagency coordination. Refer to the WSDOT Air Quality, Greenhouse Gas, and Energy Guidance for specific information to include in the discipline report and use the WSDOT Air Quality, Greenhouse Gas, and Energy Discipline Report Template to document a project.

Refer to the WSDOT Air Quality, Energy & Greenhouse Gas Emissions web page for more information.

Criteria Pollutants

NEPA documentation must include documentation that a project meets all applicable conformity requirements and a full conformity statement. See the analysis and documentation for conformity section below. Refer to the WSDOT Air Quality, Greenhouse Gas, and Energy Guidance for information on conformity statements.

Mobile Source Air Toxics (MSATs)

WSDOT follows the FHWA requirements for MSATs. Refer to their [2016 Updated Interim Guidance on MSATs](#). Information on how to apply the requirements are available in the WSDOT Air Quality, Greenhouse Gas, and Energy Guidance along with current thresholds and text to include in environmental documentation.

Greenhouse Gas Emissions (GHG)

It is WSDOT policy to address climate change and greenhouse gas emissions in our environmental documentation. Find information on climate adaptation on our [Addressing climate change in planning and project documents webpage](#).

A tiered approach based on the type of environmental documentation (CE, EA, EIS) focuses analysis resources on the data available at different levels of documentation, and the usefulness of the results in decision making.

Exhibit 1 identifies the recommended analysis for each documentation type. There may be instances when deviating from these recommendations is warranted. Such circumstances should be discussed with WSDOT headquarters air quality staff.

Because of the overlap in triggers, tools, and inputs, GHG analysis should be completed at the same time as air quality and energy analyses. However, WSDOT believes GHG emissions are an issue of global concern and, therefore, should be described as cumulative effects in NEPA and SEPA documentation.

Refer to the WSDOT Air Quality, Greenhouse Gas, and Energy Guidance for template language to use at each documentation level and for details on how to complete and document these analyses.

Exhibit 425-1 GHG analysis based on NEPA or SEPA classification

Documentation	Operational	Construction	Maintenance
NEPA and SEPA CE	No evaluation	No evaluation	No evaluation
DCE/SEPA Checklist	Qualitative	Qualitative	Qualitative
EA	Quantitative or Qualitative ^{2,3}	Qualitative	Qualitative
EIS	Quantitative ³	Quantitative	Quantitative

² At the EA level, the type of analysis completed will depend on data available and tools being used for other project analyses.

³ If the project is included in a planning study that underwent a quantitative GHG emissions analysis, a qualitative analysis may be sufficient.

Energy

WSDOT follows the direction in [FHWA's Energy Technical Advisory](#). Energy analysis is not typically required for non-EIS level documentation because energy consumption is typically not a key decision-making criterion. More often, other project benefits like congestion reduction, improved travel time, and improvements in level-of-service (LOS) are project goals and reduction of energy consumption is an additional effect.

Information on how to complete and document an energy analysis is in the WSDOT Air Quality, Greenhouse Gas, and Energy Guidance document.

Temporary Construction Effects

EA and EIS documents must address construction effects:

- For criteria pollutants (including fugitive dust) and MSAT emissions, a simple qualitative description is sufficient.
- Estimate GHG and energy using FHWA's Infrastructure Carbon Estimator (ICE) Tool. ICE accommodates most project types. However, in the case of project that may not be

compatible with ICE, such as a large bridge, consult with the WSDOT headquarters air quality staff to identify an alternate approach. Typical projects report construction GHG emissions at both the EA and EIS level. Construction-related energy use should only be included in EIS-level documents. The current version of the tool is hosted by Minnesota Department of Transportation (MNDOT) and can be found on the [MNDOT Greenhouse Gas Analysis webpage](#). Direct any questions about tool versions to the WSDOT headquarters air quality staff.

- If project construction will last more than five years at one location, additional requirements must be met. This is a very rare occurrence; consult with the WSDOT headquarters air quality staff for more information.

Requirements on handling and disposing of asbestos are covered in [Chapter 447](#).

Fugitive Dust

For projects involving earthwork, construction plans and specifications should be evaluated to identify possible dust producing activities and appropriate best management practices (BMPs). In King, Kitsap, Pierce, and Snohomish counties, BMPs are required for all WSDOT projects per our [Memorandum of Agreement with the Puget Sound Clean Air Agency \(MOA\)](#).

It is WSDOT policy to minimize fugitive dust from project construction throughout the state. WSDOT will:

- Require the appropriate use of BMP on all WSDOT projects. The BMPs to be included are found in the Associated General Contractors of Washington (AGC) publication, *Guide to Handling Fugitive Dust from Construction Projects from Construction Projects*.
- Evaluate the construction plans and specifications for each WSDOT project to identify possible fugitive dust producing activities.
- Ensure that the duties of WSDOT project engineers or other persons in charge of project sites include observing and reporting potential fugitive dust problems during the course of their work. They shall also ensure implementation of BMPs in accordance with the contract.

BMPs prevent or reduce fugitive dust emissions. Common methods are outlined in the [Guide to Handling Fugitive Dust from Construction Projects from Construction Projects](#) by the Associated General Contractors (AGC) of Washington and are not mutually exclusive. In summary, the BMPs

- Limit creation or presence of dust-sized particles. Cover exposed surfaces, use dust suppressants, install erosion control, minimize surface disruptions, pave dirt access roads, reschedule “dusty” work with consideration to wind and weather, reduce vehicle speeds, minimize spills.
- Reduce wind speed at ground level.
- Bind dust particles together. Apply flocculating agents, spray water.
- Remove and capture fugitive dust from the source. Filter fabric around catch basin, street sweepers, wheel wash, vehicle scrape.

Although water can be one of the main control agents for dust, it is important to plan ahead for water shortages and consider the use of other measures.

425.04(2) Analysis & documentation for SEPA only (No federal nexus)

Projects without a federal nexus should follow procedures similar to NEPA (above) for SEPA.

425.04(3) Analysis & documentation for Conformity

Transportation conformity requirements ([40 CFR 93](#)) in the Clean Air Act apply in nonattainment and maintenance areas to ensure that transportation projects do not cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS). Transportation projects must be found to conform before they are adopted, accepted, approved, or funded. Projects not exempt from conformity require a conformity determination regardless of the type of NEPA document they are evaluated with.

WSDOT's GIS workbench includes air quality maps showing current nonattainment and maintenance areas. In recent years, several areas have had maintenance requirements expire and requirements in several other areas will expire in the next few years. Check that conformity requirements are current before undertaking an analysis. If you are uncertain of the status of the project's area, contact the WSDOT headquarters air quality staff.

Conformity must be redetermined for any FHWA or FTA project if one of the following occurs:

- A significant change in the project's design concept and scope
- Three years elapse since the most recent major step to advance the project
- Initiation of a supplemental environmental document for air quality purposes

Major steps include NEPA process completion, start of final design, acquisition of a significant portion of the right-of-way, and construction (including Federal approval of plans, specifications, and estimates). ([40 CFR 93.104\(d\)](#))

In addition to WSDOT-specific guidance referenced below, [FHWA's transportation conformity website](#) provides federal direction, interpretation, and resources.

Exempt Projects

Projects exempt from conformity are listed in federal and state regulations ([40 CFR 93.126](#) and [WAC 173-420-110](#)). These are mostly projects that maintain existing transportation facilities, improve mass transit, or are considered to have a neutral impact on air quality.

Some projects, like park and ride lots, may reduce regional air emissions but can increase emissions locally, which is why they are exempt from regional but not project-level conformity analysis.

Both the federal and state exempt lists include the category "hazard elimination program" for projects that are normally air quality neutral, like removing fallen rock from the road or replacing guardrails. However, not all projects with hazard elimination program funds are automatically exempt from conformity analysis. For example, if installation of a new traffic signal or re-striping to add new lanes is funded by the program, then conformity analysis is required.

A metropolitan planning organization (MPO), in consultation with partner agencies, may also determine that a project on the exempt list has the potential for adverse emissions impacts and requires analysis.

425.04(4) Region-Level Analysis

Regional conformity analysis is conducted by an MPO for their four-year transportation improvement program (TIP) (see [Chapter 200](#)). An MPO must demonstrate through modeling that the emissions from the package of planned projects remain below the motor vehicle emissions budget for the region. WSDOT's Planning Office coordinates annual MPO TIP conformity review with the consultation partners and affected MPOs.

Projects requiring a region-level conformity determination must be included in a conforming plan. See [WAC 173-420-120](#) for projects exempt from regional analysis. If project design concept or scope changes in a way that could affect region-level emissions, the regional-level conformity determination must be updated.

A project conformity determination must identify that the following conditions apply:

- Project is in a conforming program
- The whole project is included in the regional analysis and conforming TIP
- Project design and scope is not significantly different from the conforming TIP

425.04(5) Project-Level Analysis

Transportation conformity regulations require project-level quantitative, or "hotspot," determinations for nonexempt projects within carbon monoxide (CO) or particulate matter (PM_{2.5} or PM₁₀) nonattainment and maintenance areas. Exempt projects are listed in [40 CFR 93.126](#) and [40 CFR 93.128](#).

All project alternatives must be analyzed for the existing year, estimated year of completion, and design year (end year of current transportation plan). [FHWA's Technical Advisory](#) describes the requirements for CO hot-spot analysis; it has not been updated to reflect PM analysis requirements.

Motor Vehicle Emissions Simulator Model

EPA's [Motor Vehicle Emissions Simulator Model](#) (MOVES) is the required model for conformity analysis. WSDOT also requires the use of MOVES for MSAT, GHG, and energy analysis.

EPA announced the most recent version, MOVES3, in the [Federal Register on January 7, 2021](#), which starts a two-year grace period during which both MOVES3 and the previous version, MOVES 2014, are acceptable. After January 9, 2023, MOVES3 will be required for both regional and hotspot analysis.

Carbon Monoxide (CO)

Transportation conformity regulations require analysis of all intersections with at least a 10 percent increase in volume or a degradation to LOS D or worse with the project.

Refer to the WSDOT Air Quality, Greenhouse Gas, and Energy Guidance for more information on how to complete and document a CO hotspot analysis.

When the total predicted one-hour CO concentrations (standard is 35 ppm) are less than the eight-hour CO standard (9 ppm), no separate eight-hour analysis is necessary.

FHWA has released a [Carbon Monoxide Categorical Hotspot Finding](#) that satisfies project-level conformity requirements for eligible projects. For projects outside the parameters of FHWA's finding, Washington State Intersection Screening Tool (WASIST) is approved for hot-spot analysis throughout the state. Because WASIST is based on MOVES 2014 when the MOVES3 grace period ends in January 2023, WASIST will no longer be approved for CO hotspot analyses. Because CO maintenance requirements are ending across the state, WSDOT does not plan to update WASIST.

Particulate Matter (PM)

A project-level particulate matter (PM_{2.5} or PM₁₀) conformity determination is required for all nonexempt projects located in particulate matter nonattainment or maintenance areas.

[40 CFR 93.123\(b\)\(1\)](#) requires that the following project types be evaluated through interagency consultation to determine if they are "projects of air quality concern" (POAQC); any project determined to be a POAQC requires a quantitative PM hotspot analysis. These project types include:

- New or expanded highway projects that have a significant number or significant increase in the number of diesel vehicles
- Projects affecting intersections that are at or will change to a Level of Service (LOS) D, E, or F with a significant number of diesel vehicles
- New or expanded bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location
- Projects in or affecting locations, areas, or categories of sites which are identified in the PM₁₀ or PM_{2.5} applicable implementation plan as sites of violation or possible violation

If a project is one of these types, contact the WSDOT headquarters air quality staff, who will coordinate the POAQC interagency consultation process. If the interagency consultation partners concur that a project meeting one of these definitions is not a POAQC, a hot-spot analysis is not required. A project-level conformity determination is still required for projects determined to not be POAQC.

For all other project types, a hot spot analysis is not required and the project documentation should clarify that EPA has determined that projects not listed in [40 CFR 93.123\(b\)\(1\)](#) meet the Clean Air Act's requirements.

425.04(6) Multi-Modal and Non-Road Requirements

Rail, ferry, and aviation projects require a different type of conformity analysis (general conformity). Consult the WSDOT headquarters air quality staff for assistance on these.

Required Documentation

A project-level conformity determination must be documented in the NEPA document.

Use the [WSDOT Air Quality, Greenhouse Gas, and Energy Discipline Report Template](#) to document the project technical analysis.

425.05 External engagement

425.05(1) *Planning*

MPOs with air quality maintenance or nonattainment areas must show that their transportation improvement plans (TIP) meet regional transportation conformity requirements. Each year, the WSDOT Planning Office coordinates review of the TIPs with affected MPOs and statewide consultation partners:

- Ecology
- EPA Region 10
- FHWA Division Office
- FTA Region
- WSDOT Planning
- WSDOT Air Quality

Once partners agree that an MPO has adequately addressed conformity requirements, the FHWA Division Office issues letters to the MPO documenting the approval.

425.05(2) *Project-level consultation*

Projects in air quality nonattainment or maintenance areas must meet project level-air quality requirements (see analysis and documentation section). Some projects require consultation to determine if a hotspot analysis is required. For these projects, the partners listed above should be included, along with the local MPO and, if there is one, local air quality agency. The WSDOT headquarters air quality staff coordinates project-level consultation.

425.06 Internal roles and responsibilities

425.06(1) *Planning division*

Regarding conformity, the WSDOT planning division coordinates the annual conformity consultation process to review and approve the conformity determination in MPO Transportation Improvement Plans (TIP). Consultation partners include WSDOT, FHWA, EPA Region 10, FTA, and Ecology.

At the corridor or region planning level, WSDOT may conduct preliminary GHG analyses.

425.06(2) *Project engineer*

For projects requiring a quantitative analysis of air quality, energy, or greenhouse gas emissions, the project office supplies traffic data to the air quality analyst. The type of traffic data required depends on the specific analysis required and should be discussed early with the air quality analyst.

425.06(3) *Environmental coordinator*

The environmental coordinator identifies the type of analysis required for individual projects. The analysis and documentation section of this chapter describes the triggers for different types of analyses.

The project team should reach out to the planning office to determine whether any relevant planning has been conducted that would inform the project-level analysis.

425.06(4) Environmental technical experts

Air quality analysts perform the technical analysis, WSDOT staff or consultants may fulfil this role. WSDOT air quality staff review consultant work to ensure requirements are met and the analysis is technically sound.

425.06(5) Environmental services office

The WSDOT headquarters air quality staff is part of the WSDOT Environmental Services Office (ESO) and is available to consult on projects requiring quantitative analysis. This specialist also leads all required project-level conformity consultations and participates in the conformity review of MPO TIPs.

425.07 Applicable permits & approval process

Regional clean air agencies may require air quality permits for the following activities:

- Land clearing burns
- Demolition of structures containing asbestos
- Asphalt batching, mixing concrete, crushing rock, or other temporary sources (new source construction)

425.08 Mitigation

Project documentation should describe any recommended mitigation measures and commitments to stakeholders for the design, construction, and post-construction phases. The documentation should also describe whether additional mitigation measures were considered and why these were not included.

WSDOT commits to best management practices (BMPs) to control fugitive dust during construction. These include measures that

- Limit creation or presence of dust-sized particles: Cover exposed surfaces, use dust suppressants, install erosion control, minimize surface disruptions, pave dirt access roads, reschedule “dusty” work with consideration to wind and weather, reduce vehicle speeds, minimize spills
- Reduce wind speed at ground level
- Bind dust particles together: Apply flocculating agents, spray water
- Remove and capture fugitive dust from the source: Filter fabric around catch basin, street sweepers, wheel wash, vehicle scrape

Additional best practices used to reduce GHG emissions and energy use, in addition to air pollution, include:

- 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) to continue moving traffic through the area and reduce backups and delays to the traveling public to the extent possible
- Promote ridesharing and other commute trip reduction efforts for employees working on the project

425.09 Abbreviations and acronyms

AADT	Average Annual Daily Traffic
BMP	Best Management Practices
CAA	Clean Air Act (Federal)
CAAA	Clean Air Act Amendments
CAWA	Clean Air Washington Act
CEQ	Council on Environmental Quality
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CO	Carbon Monoxide
CO ₂	carbon dioxide
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
GHG	Greenhouse Gas
LOS	Level of Service
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxic
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO _x	Nitrogen Oxides
O ₃	Ozone
PM ₁₀	Course particulate matter, smaller than 10 micrometers in diameter
PM _{2.5}	Fine particulate matter, smaller than 2.5 micrometers in diameter
POAQC	Project of air quality concern
SEPA	State Environmental Policy Act (for Washington)
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
TCM	Transportation Control Measure
TIP	Transportation Improvement Program
VMT	vehicle miles traveled

425.10 Glossary

Air Quality Analysis – An evaluation of various air pollutants at the project level based on specific project location and type. This evaluation should include discussion of construction phase emissions such as fugitive dust, odors, and asbestos if applicable. This evaluation may include discussion of other air related concerns identified in project development.

Average Annual Daily Traffic (AADT) – The estimated average daily number of vehicles passing a point or on a road segment over the period of one year.

Carbon Monoxide (CO) – A by-product of the burning of fuels in motor vehicle engines. Though this gas has no color or odor, it can be dangerous to human health. Motor vehicles are the main source of carbon monoxide, which is generally a wintertime problem during still, cold conditions.

Conformity – Projects are in conformity when they do not (1) cause or contribute to any new violation of any standards in any area, (2) increase the frequency or severity of any existing violation of any standard in any area, or (3) delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

Construction GHG Emissions – Primarily GHG emissions from the fuel used by the equipment that builds the project.

Criteria Pollutants – Carbon monoxide, sulfur dioxide, particulate matter, ground level ozone, lead, and nitrogen dioxide.

Embodied GHG Emissions – GHG emissions generated from the energy used to extract materials, fabricate them for construction, and transfer them to construction site. Embodied GHG emissions are also referred to as “cradle to site” GHG emissions.

Exempt Projects – Listed in federal and state regulations ([40 CFR 93.126](#) and [WAC 173-420-110](#)), these are mostly projects that maintain existing transportation facilities or are considered to have a neutral impact on air quality. See also [WAC 173-420-120](#) for projects exempt from regional analysis.

Fugitive Dust – Particulate matter that is suspended in the air by wind or human activities and does not come out of an exhaust stack.

Greenhouse Gases (GHG) – Greenhouse gases absorb and emit radiation within the thermal infrared range. Common GHGs in the Earth’s atmosphere include water vapor, carbon dioxide, methane, nitrous oxide, ozone, and chlorofluorocarbons.

Hot-Spot Analysis – Estimate of localized CO, PM_{2.5}, and PM₁₀ pollutant concentrations and a comparison of those concentrations to the National Ambient Air Quality Standards. Uses an air quality dispersion model to analyze the effects of emissions on air quality near the project. (See 40 CFR 93.101 and 40 CFR 93.116.)

Lifecycle GHG Emissions – Referred to as “cradle to grave emissions” that include embodied GHG emissions and GHG from energy used to demolish and/or dispose of materials after completion of usable life.

Maintenance Area – Area previously in nonattainment now in compliance with NAAQS and under a maintenance plan. Areas previously in nonattainment must be under a maintenance plan for 20 years after regaining compliance with the standard.

Metropolitan Transportation Improvement Program (MTIP) – A fiscally constrained prioritized listing or program of transportation projects covering a period of four years and formally adopted by an MPO in accordance with [23 CFR 450](#), as required for all regionally significant projects and projects requesting federal funding.

Mobile Source – Any nonstationary source of air pollution such as cars, trucks, motorcycles, buses, airplanes, and locomotives.

Mobile Source Air Toxic (MSAT) – A priority group of nine volatile gases or small particulate compounds coming from the tailpipe of a vehicle: 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. EPA has determined that these compounds have significant contributions from mobile sources and contribute to cancer and non-cancer health problems.

Nonattainment Area – An area that does not meet one or more of the NAAQS for the criteria pollutants designated in the Clean Air Act.

Operational GHG Emissions – “Tailpipe” GHG emissions from vehicles using the project facility or nearby facilities affected by the project.

Ozone (O₃) – Ground level ozone forms in the atmosphere as a result of complex sunlight activated chemical transformations between nitrogen oxides (NO_x) and hydrocarbons (i.e., O₃ precursors).

Particulate Matter (PM₁₀ and PM_{2.5}) – Particles with a diameter of less than 10 microns or 2.5 microns, respectively. Sources of particulate matter include sea salt, pollen, smoke from wildfires and wood stoves, road dust, industrial emissions, and agricultural dust. These particles are small enough to be drawn deep into the lungs where they can contribute to a variety of respiratory and cardiovascular health problems.

Project of Air Quality Concern (POAQC) – POAQCs located in PM nonattainment and maintenance areas require a quantitative hot-spot analysis. EPA has identified the following categories of projects that maybe projects of air quality concern: New or expanded highway projects that have a significant number or significant increase in the number of diesel vehicles. Projects with intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles. New or expanded bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.

Regionally Significant Project – A nonexempt transportation project that serves regional transportation needs, major activity centers in the region, major planned developments, or transportation terminals, and most terminals. Such projects are normally included in the modeling of a metropolitan area’s transportation network, including, at a minimum, all principal arterial highways and all fixed guide way transit facilities that offer an alternative to regional highway travel ([40 CFR 93.101](#)).

Regional Transportation Improvement Program (RTIP) – A fiscally constrained prioritized listing/program of transportation projects for a period of six years that is formally adopted by a Regional Transportation Planning Organization in accordance with [RCW 47.80](#), as required for all regionally significant projects and projects requesting federal funding.

State Implementation Plan (SIP) – Required by federal law ([40 CFR Part 51](#)), this state plan describes how the state will meet and maintain compliance with the National Ambient Air Quality Standards (NAAQS). Specific plans are developed when an area does not meet the NAAQS and include controls to quickly reduce air pollution in a nonattainment area and provide controls to keep the area in compliance. WSDOT projects must conform to the SIP before the FHWA and the EPA can approve construction.

Transportation Improvement Program (TIP) – A staged, multiyear program of multimodal transportation projects covering a metropolitan planning area consistent with the state and metropolitan transportation plan and developed pursuant to [23 CFR 450](#). The entire program must conform to the NAAQS before any federal funding can be used for nonexempt projects.