Washington State
Department of Transportation

Environmental Manual

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Engineering and Regional Operations
Development Division, Environmental Services Office

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Chapter 100 Purpose and Overview

The *Environmental Manual* M 31-11 and the WSDOT Environmental webpages support WSDOT's Environmental Policy Statement and our Stewardship Agreement with FHWA. It also provides guidance for compliance with state and federal environmental laws and regulations for all phases of project delivery.

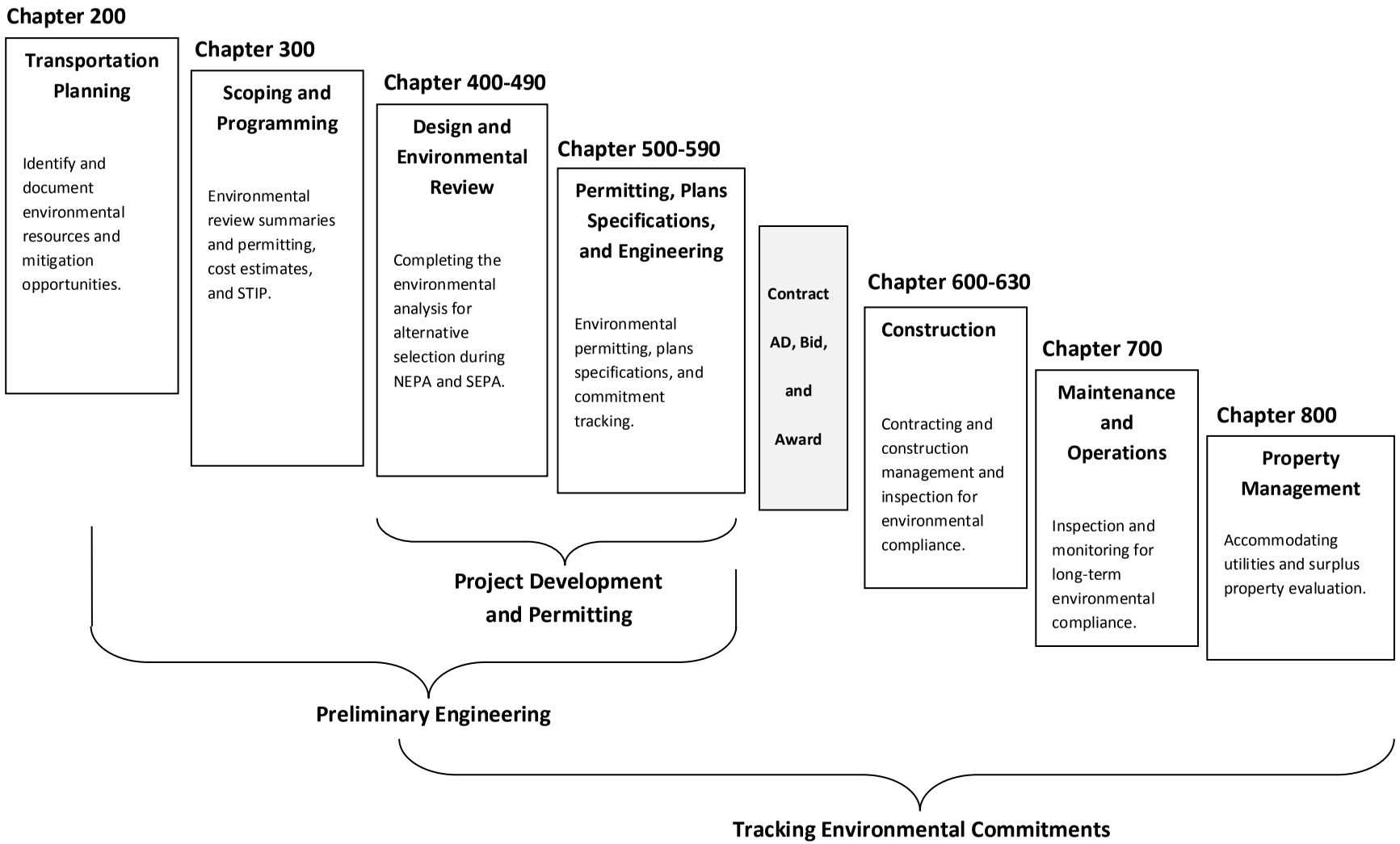
Exhibit 100-1 identifies the major planning, engineering, and environmental activities associated with each phase of the project delivery.

This manual and the supporting webpages apply to state owned and operated facilities. The intended users are WSDOT staff and consultants working on WSDOT projects. Local governments and transit agencies may also use this guidance in accordance with the *Local Agency Guidelines* M 36-63.

This manual and supporting WSDOT webpages replace all previous editions. Updating guidance material is a continuous process due to the ever-changing nature of environmental laws and regulations. It is the user's responsibility to use the most current information available.

Comments and suggestions for improving the manual are welcome. Contact the WSDOT Environmental Procedures Coordinator at 360-705-7493 or use the Feedback Form.

WSDOT Transportation Decision-Making Process and Environmental Manual Organization



Chapter 200 Environmental considerations in transportation planning

200.01 Introduction and overview
200.02 Secretary's Executive Orders, policy statements, and state requirements
200.03 Right-sizing
200.04 Federal Planning and Environmental Linkages (PEL)

200.01 Introduction and overview

This chapter describes how considering environmental context can inform decisions during transportation planning, and how the planning process can inform the environmental review process. It also describes the federal Planning and Environmental Linkages (PEL) process and the authorities supporting federal PEL.

Transportation planning is a decision-making process that evaluates the transportation system to identify performance issues, consider alternatives, and make recommendations at a corridor, network, or subarea level. It involves engagement with the public, government agencies (federal, state, local, tribal), organizations, and various transportation interests to inform decision-making by:

- Identifying current and future transportation needs.
- Providing opportunities for the public to have a meaningful impact on plans and programs that affect them.
- Identifying environmental resources that need to be protected.
- Maximizing health, safety, and economic well-being.

Federal, state, local, and tribal governments develop transportation plans that are subject to federal regulations, state laws, legislative provisos, agency guidelines and expectations, and/or local ordinances. For more information on transportation planning, see the *Joint Transportation Committee Transportation Resource Manual* and the Washington Transportation Plan Phase 2, Appendix A.

See WSDOT's Environmental Guidance for Planning Studies webpage for more information on integrating transportation planning and environmental review, including technical guidance for PEL teams.

200.02 Secretary's Executive Orders, policy statements, and state requirements

This section provides WSDOT Secretary's Executive Orders and Policy Statements that direct agency planning activities related to considering environmental context.

The Secretary's Executive Order (E 1018.03) is the agency's Environmental Policy Statement. This policy statement provides that the cultural, historic, and environmental context should be considered in all WSDOT plans. It also directs WSDOT to engage all communities that are likely to be affected by proposed transportation plans, including minority and low-income populations and those with limited English proficiency.

The Secretary's Executive Order (E 1102.00) directs WSDOT to protect and preserve Washington's wetlands, to ensure no net loss of wetlands caused by department actions, and to increase the long-term quantity and quality of wetlands. Planners must identify areas of potential wetland impact as early as possible in system and corridor planning processes and use the information to inform project scoping and advance mitigation planning.

A 2013 federal court injunction requires WSDOT to significantly increase efforts to remove barriers in western Washington that block salmon and steelhead from accessing upstream habitat. The injunction specifically applies to culverts in the Puget Sound and Washington coast area. More information about the injunction, a list of fish passage barriers relevant to the injunction, and WSDOT's progress in complying with the injunction can be found in WSDOT's Annual Fish Passage Progress Report.

The Secretary's Executive Order on Protections and Connections for High Quality Natural Habitats (E 1031.02) directs WSDOT to promote and support PEL processes that identify potentially affected fish and wildlife habitats as early as possible. This should be done during the planning process. Early consideration of fish and wildlife habitat protection and connectivity increases the likelihood that reasonable approaches can be incorporated into projects.

See WSDOT's Environmental Guidance for Planning Studies webpage for technical guidance on how to include fish and wildlife habitat connectivity information in transportation plans.

200.03 Right-sizing

Transportation plans can vary greatly in size and scope. Therefore, it is important to right-size efforts to incorporate environmental information.

This section describes flexible, scalable, and adaptable approaches to including environmental context in transportation plans and planning studies. Planning and environmental staff should work together to develop the best approach for the planning effort.

An early review of environmental information can inform future planning level or project level decisions. Examples of planning level decisions include identifying desired performance and recommendations to close performance gaps. Examples of project level decisions include developing the Purpose and Need, refining alternatives, and identifying stakeholders and potential site-specific concerns. These efforts can also be spatially scaled, from studying a corridor to planning for service levels for a particular mode of transportation (such as Amtrak Cascades service).

WSDOT develops two types of modal plans: state owned plans and state interest plans. State owned plans include recommendations for facilities or services that WSDOT owns or manages. These plans include the Highway System Plan, Ferry System Plan, and the Intercity Passenger Rail Service Plan. These plans may include recommendations for projects.

State interest plans include recommendations for facilities or services that are not WSDOT owned or managed but have a statewide impact. These plans include the Active Transportation Plan, Aviation System Plan, Public Transportation Plan, Rail Plan, and Freight Systems Plan. These plans may include recommendations for WSDOT projects only.

The Washington Transportation Plan, Phase 2 is a roll-up of the state owned and state interest plans and meets FHWA requirements for the long-range statewide transportation plan. This plan may include a financially constrained project list.

For every transportation plan, follow:

- WSDOT's Guidance for Considering Impacts of Climate Change in WSDOT Plans.
- WSDOT's Community Engagement Plan and Environmental Justice (EJ) requirements, which include identifying EJ and Limited English Proficiency populations in the study area.
- Applicable state and federal laws, rules, and guidance.

For plans that recommend one or more projects, use the GIS Workbench to conduct a planning-level environmental screening of the following environmental contextual factors that are associated with state highways and right of way:

- Fish passage barriers.
- Climate vulnerability.
- Stormwater facilities and retrofit priorities.
- Hazardous materials contamination sites.
- Wetland mitigation sites.
- Habitat connectivity priorities and areas with high risk of animal vehicle collisions.
- Chronic environmental deficiencies (streambank erosion risks).
- Noise walls.
- Historic bridges.

Also, collect demographic data for the study area.

This level of environmental screening should:

- Identify existing environmental assets that must be protected.
- Detect other key environmental factors that have the potential to influence the scope of future investments.
- Determine if additional environmental review is necessary prior to project development.

The plan should describe how each of the environmental assets, public and agency involvement, and regulatory requirements influenced decision-making.

However, this high-level screening does not examine the full range of environmental and social issues that may need in-depth review during site-specific project development. Additional environmental data will likely need to be collected and analyzed in more detail once potential project locations and solutions become clearer. Refer to the discipline chapters (Chapters 420 – 460) to learn more about the natural and human environmental project-level review requirements.

If a planning effort is leading to a defined project, please work with your environmental staff to determine the likely environmental classification. There are two primary paths depending on the significance of anticipated future project impacts.

The first path is for plans that are likely to lead to a project that will be classified as a NEPA Categorical Exclusion, SEPA Categorical Exemption, or require a SEPA checklist. Typically, these are less complex projects that do not require a formal process for defining Purpose and Need, alternatives screening, or public involvement. For these plans, conduct a planning-level environmental review that includes some or all of the relevant information in WSDOT's Environmental Review Summary and Environmental Classification Summary database forms. The review should be right-sized for the project and include as much

environmental information as is useful for developing early strategies to avoid or minimize environmental impacts.

The second path is for plans that are likely to recommend a large or complex transportation project that would typically require a NEPA Environmental Assessment (EA) or NEPA/SEPA Environmental Impact Statement (EIS). This includes projects that will consider alternatives and require public engagement. For these plans, we recommend following the federal Planning and Environmental Linkage (PEL) process described in Section 200.05.

200.04 Federal Planning and Environmental Linkages (PEL)

WSDOT uses the phrase "federal PEL", or simply "PEL", to describe planning efforts that follow the requirements of one or more federal authorities for integrating planning and environmental review. These authorities are intended to increase the amount of useful and relevant information coming from the planning process. Compliance with the federal requirements described in the following sections can result in a planning product that the federal lead agency (FHWA or FTA) agrees may be adopted or used in NEPA. The definitions for "adopt" vs. "use" in NEPA are provided in Section 200.04(5).

Federal PELs are generally recommended for plans or planning studies that are likely to lead to a major capital improvement or policy decision. PELs provide transportation and environmental context and can be used to make project or planning decisions. Examples of project decisions include developing a Purpose and Need statement, recommending alternatives to be evaluated in NEPA, establishing logical termini and independent utility, and identifying stakeholders. Examples of planning decisions include tolling and modal choice. WSDOT can also use PEL to recommend the NEPA classification of future projects, for example, EA or EIS.

PEL*s* are not recommended for funded projects that already have a clear solution. Instead, these projects should move directly into NEPA.

The outcome of a federal PEL is incorporated into a NEPA EA or EIS. A similar process that achieves similar benefits can also be used to inform a SEPA EIS.

The following sections describe the requirements and benefits of a federal PEL. See Chapter 460 for Environmental Justice requirements.

200.04(1) Benefits of considering environmental context during planning

There are many benefits of considering the environmental context and human and natural resource trends early during transportation planning. The following is a list of some key benefits of linking planning and environment.

- **Building relationships –** Early consultation and collaboration with tribes, local agencies, and resource agencies improves communication and strengthens relationships.
- **Improving the quality of environmental information –** Early interagency and tribal coordination and data sharing helps to quickly identify environmental priorities and project constraints. It also helps ensure that the best available environmental information is used in planning decisions.
- **Reducing duplication of effort –** A planning-level environmental review can minimize duplication of effort by carrying forward planning decisions and analysis into the NEPA/SEPA process. This includes Purpose and Need, identification of preliminary alternatives, and the elimination of unreasonable alternatives.

- **Focusing the NEPA/SEPA review –** Early identification of key environmental resources can help tailor the NEPA/SEPA environmental review (Chapter 400). These include environmentally sensitive areas and resources in the project area that have lengthy environmental clearance processes that can affect the project schedule and budget.
- **Identifying potential mitigation strategies –** Assessing potential impacts and coordinating with the appropriate resource agencies can help determine the types of mitigation needed. Early collaboration can also help identify mitigation partners and the types of mitigation that are available. At the planning-level, mitigation is typically discussed at a regional or watershed scale.
- **Shortening permitting timelines –** Building relationships with permitting agencies can help resolve differences on key issues early in the transportation planning process. This ultimately leads to streamlined permit decisions and project delivery.
- **Delivering better on-the-ground outcomes –** Early and continued coordinated involvement with stakeholders and the public, including historically disadvantaged populations, helps WSDOT create programs and projects that effectively serve the community's transportation needs.

200.04(2) PEL authorities

Federal regulations applicable to FHWA and FTA have included provisions on PEL (40 CFR 1500.4 & 1501.12) for State DOTs since 1978 when CEQ first published their NEPA regulations that encourage integrating planning and environmental processes.

There are three other main authorities that support PEL:

- 23 CFR 450.318 & 450.212 – Metropolitan & statewide and nonmetropolitan transportation planning and programming.

  Note: The requirements in 23 CFR 450.212 (a)-(c) and 23 CFR 450.318 (a)-(d) are identical, but 23 CFR 450.318 refers to metropolitan planning and 23 CFR 450.212 refers to nonmetropolitan planning. Select and cite the appropriate authority used in the PEL or cite both authorities if applicable.
- 23 USC 168 – Integration of planning and environmental review.
- 23 USC 139 – Efficient environmental reviews for project decision-making and One Federal Decision.

See PEL Authorities graphic for a visual summary of the authorities (PDF xxx).

WSDOT planning and environmental staff and the federal lead (FHWA or FTA) should work together to decide which one or more PEL authorities should be used to support the planning effort. This decision is usually based on the desired outcomes for NEPA and the authority or authorities that the environmental staff believe would result in the most useful and relevant information.

The PEL must clearly state which one or more authorities will be used throughout the planning effort, and the PEL must meet all requirements for the authority or authorities chosen.

See Section 200.04(5) for information on adoption and use of planning products in NEPA, which can help determine which authority to use during the PEL effort.

200.04(3) Internal roles and responsibilities

The PEL process is a collaborative approach that involves experts from several offices within WSDOT. The following offices have a key role.

Region/Modal Planning Office

- Leads the PEL effort.
- Identifies any other relevant planning efforts and determines how they relate to the PEL.
- Determines scope and goals of PEL with assistance from Region/Modal Engineering Office.
- Leads stakeholder and agency coordination with assistance from the Region/Modal Environmental Office.

Region/Modal Engineering Office

- Assists Region/Modal Planning Office with determining scope and goals of PEL.
- Coordinates with Region/Modal Environmental Office to review potential environmental impacts of future projects and PEL recommendations.

Region/Modal Environmental Office

- Advises the Region/Modal Planning Office on the types of planning information that are useful and relevant for NEPA.
- Assists coordination with federal, tribal, state, and local environmental, regulatory, and resource agencies.
- Researches and provides information describing the environmental context for the PEL study area and the potential environmental impacts of future projects and PEL recommendations.
- Helps right-size the study and analysis using GIS data, windshield surveys, coordination with subject matter experts, or site-specific analysis as appropriate.
- Communicates environmental information to the PEL team so that potential budget, schedule, and permitting issues are clearly understood and taken into consideration throughout the process.

Region/Modal Communications Office

- Leads public engagement efforts.

M2 (multimodal, multidisciplinary) Team

- Core team of subject matter experts from headquarters, modes, and divisions.
- Includes representation from WSDOT's Active Transportation Division, Capital Program Development and Management, Development Division, Environmental Services Office, Maintenance, Office of Equal Opportunity, Public Transportation Division, Rail, Freight, and Ports Division, Traffic, and Transportation Safety and Systems Analysis.
- Reviews and provides subject matter expertise and statewide perspective on draft and final PEL products.
- Focuses on consistency with modal plans, policies, and agency messaging.
- Identifies performance gaps.

Headquarters Multimodal Planning and Data Division

- Facilitates review by Headquarters subject matter experts.

Headquarters Environmental Services Office

- Provides statewide experience and technical assistance.
- Provides direction for compliance with applicable rules and regulations.
- Reviews work products, for example coordination plans and draft documents.
- Serves as quality assurance reviewer before PEL document is submitted to Federal lead agency for review and approval.

PEL Document Signatory

- Typically includes the Region/Modal Planning Manager, Region/Modal Administrator, Director of Multimodal Planning and Data Division, and Director of Headquarters Environmental Services Office.
- Approves the final PEL on WSDOT's behalf.

Other Offices

- The PEL process also typically includes involvement from WSDOT Traffic offices, consultant staff, and liaisons at US Fish and Wildlife Services (USFWS), National Marine Fisheries Services (NMFS), US Army Corps of Engineers (Corps), and Washington Department of Ecology (Ecology). Other offices may be involved as needed.

200.04(4) PEL documentation

The federal requirements for PEL are written with larger, NEPA EA/EIS, projects in mind. A PEL should include enough information to show that it fulfills all of the requirements of one or more of the federal PEL authorities (see Section 200.05). The study should be right-sized, with the appropriate type and amount of analysis for use in future planning or NEPA.

FHWA created a PEL questionnaire that helps with documentation and the transition from planning to NEPA. The questionnaire is consistent with the planning regulations for FHWA and FTA (23 CFR 450) and should be included in the final PEL document as an executive summary, chapter, or appendix. These questions should be used as a guide throughout the PEL process, not just completed near the end of the process.

The final PEL must contain all substantive materials, for example, technical letters, memos, reports, and studies, that were used to make decisions during the PEL process.

The PEL may include other content, such as:

- Purpose and Need.
- Project goals.
- Alternatives development and evaluation criteria.
- Recommended alternative(s).
- Logical termini and independent utility.
- Transportation analysis.
- Affected environment and mitigation strategies.
- Agency coordination and public involvement.

The PEL objective and desired outcomes for NEPA should determine which content is relevant.

200.04(5) Adoption and use of PEL planning products in NEPA

One of the main benefits of PEL is that it allows planning analyses and decisions to be carried forward into the environmental review process. This helps reduce duplication between the planning and environmental review processes which can lead to more efficient project delivery. However, it is important to remember that planning and NEPA are separate processes.

The current federal authorizations for PEL define a statutory process for adopting or using PEL planning products in NEPA (23 CFR 450.212 & 450.318, 23 USC 168, 23 USC 139, and 40 CFR 1500.4 & 1501.12).

The term "planning product" means a decision, analysis, study, or other documented information that is the result of an evaluation or decision-making process during transportation planning. Common examples of planning products include the establishment of a Purpose and Need Statement and the elimination of unreasonable alternatives. Refer to Chapter 400 for information on purpose and need and reasonable alternatives.

To "adopt" a planning product means to take the planning product into the NEPA process where it will remain unchanged. An adopted planning product is still circulated and made available for comment with other environmental documents during NEPA, but generally the product was finalized during the PEL process and does not need to be re-evaluated. IMPORTANT: 23 USC 168 is the only PEL authority that allows planning products and decisions (for example, the Purpose and Need Statement or the elimination of unreasonable alternatives) to be adopted into the NEPA process.

To "use" a planning product in NEPA means to introduce the planning product as useful and relevant information to be evaluated through the typical environmental review process. Unlike a planning product that is adopted under 23 USC 168, these products are considered 'draft'. Examples of this include a draft Purpose and Need Statement or a recommendation to eliminate unreasonable alternatives – to use these planning products in NEPA, they would need to be circulated and subject to revision based on agency and public review. 23 CFR 450.212 & 450.318, 23 USC 139, and 40 CFR 1500.4 & 1501.12 allow planning products and decisions to be "used" in the NEPA process.

200.04(6) Requirements for 23 USC 168

There are ten requirements that must be met for FHWA or FTA to adopt planning products into the environmental review process under PEL authority 23 USC 168. These requirements are provided in 23 USC 168(d), and listed below (paraphrased) by project phase.

During planning, the federal lead agency should concur that the following are met:

- The planning product is developed through a planning process that was conducted in accordance with applicable federal law.
- The planning product is developed in consultation with the appropriate federal and state resource agencies and Native American tribes (See Section 200.04(13)).
- The planning product is the result of a planning process that included multidisciplinary consideration of systems-level or corridor-wide transportation needs and potential effects on the human and natural environment.

- Public notice is provided that resulting planning products may be adopted during a subsequent environmental review process.
- The planning product has a rational basis centered on reliable and reasonably current data and scientific methods.
- The planning product is documented in sufficient detail to support the decision or results of the analysis and to meet requirements for use in the environmental review process.

During project scoping and programming:

- The federal lead agency must agree that there is no significant new information or circumstance that has reasonable likelihood of affecting the continued validity or appropriateness of the planning product.
- The federal lead agency must agree that the planning product is appropriate for adoption and use in the environmental review process.
- The planning product must be approved no more than five years before the environmental review process is initiated. (If more than five years have passed, you must verify that the planning information is still valid, i.e., there are no significant changes, to use the information in the environmental review process).

During environmental review:

- A notice of intent to incorporate a planning product must be provided. The planning product must also be provided for review and comment by the public, as well as interested federal, state, local, and tribal governments. Any resulting comments must be considered (See Sections 200.04(13) and 200.04(14)).

If the planning product is necessary for a cooperating agency to issue a permit, review, or approval for the project, then there must also be concurrence with that agency (23 USC 168(d)). See Chapter 400.02(4) for more information on cooperating agencies.

If the requirements under 23 USC 168(d) are met, then the planning product can be adopted into the NEPA document and any planning decisions that were made during the PEL process do not need to be re-evaluated during NEPA.

200.04(7) Requirements for 23 CFR 450.318 & 450.212

There are six requirements that must be met for FHWA or FTA to use planning products in the environmental review process under PEL authorities 23 CFR 450.318 & 450.212. These requirements are provided in 23 CFR 450.318(a)-(d) & 23 CFR 450.212 (a)-(c) and are listed below (paraphrased) by project phase.

During planning, the federal lead agency must concur that the following are met:

- The planning process involves interested state, local, tribal, and federal agencies.
- The planning products go through a public review process.
- There is a reasonable opportunity for anyone interested to comment.
- FHWA and FTA review the planning documents, as appropriate.

During project scoping and programming:

- The federal lead agency must agree that decisions are documented in a form that is identifiable and available for review during the NEPA scoping process and can be appended to or referenced in the NEPA document.

During environmental review:

- The federal lead agency must agree that incorporating the planning products will help establish or evaluate the NEPA Purpose and Need, reasonable alternatives, impacts, or mitigation of impacts.

If the requirements under 23 CFR 450.318(a)-(d) & 23 CFR 450.212 (a)-(c) are met, then the planning product can be used as relevant information to be evaluated through the typical environmental review process.

200.04(8) Requirements for 23 USC 139

There are six requirements that must be met to eliminate unreasonable alternatives under PEL authority 23 USC 139. These requirements are provided in 23 USC 139(f)(4)(E)(ii) and are (paraphrased):

- The lead agency must independently review the alternative evaluation process.
- There is a reasonable opportunity for public review and comment.
- The eliminated alternative must be reasonably considered.
- The alternative is eliminated only after considering public comments.
- Participating and cooperating agencies must be consulted to ensure that the eliminated alternative is not necessary for compliance with NEPA.
- Agencies with jurisdiction must be consulted to ensure that the eliminated alternative is not necessary for a permit or approval.

If the requirements under 23 USC 139(f)(4)(E)(ii) are met, then the planning product can be used as relevant information to be evaluated through the typical environmental review process.

Note: FHWA recommends using PEL authority 23 USC 139 to eliminate alternatives because it is the most directly applicable authority for considering and eliminating unreasonable alternatives. However, if using 23 USC 139 to eliminate unreasonable alternatives, then you must also use one of the other authorities (23 CFR 450.318 & 450.212, 23 USC 168, or 40 CFR 1500.4 & 1501.12) to establish the Purpose and Need that is required for eliminating the alternatives. Ultimately, WSDOT may decide which PEL authority to use to eliminate alternatives.

200.04(9) Requirements for 40 CFR 1500.4 and 1501.12

If you cannot meet the requirements listed in Section 200.04(7) or 200.04(8) to use the planning product in the NEPA process, then you can still introduce the planning product into the NEPA process as information that requires additional work or further action. For example, if there was no public review during the PEL process, then the planning products may still be referenced in the NEPA document and reviewed through the NEPA process in accordance with 40 CFR 1500.4(l) & 1501.12.

To do this, WSDOT must:

- Cite the incorporated planning products within the NEPA document and briefly describe the content.
- Make the planning products reasonably available for inspection by potentially interested persons during the NEPA comment period.

Proprietary data that is not available for review and comment cannot be incorporated into the NEPA document.

200.04(10) Additional requirements applicable to all PEL Authorities

Decisions made during a PEL process must be documented in a format that can be included in the NEPA document as an appendix or by reference. A key consideration is how the PEL will meet standards established by NEPA regulations and guidance. One way to do this is to use NEPA-like language such as 'Purpose and Need', 'affected environment', and 'environmental impacts'. Another example is to use the term 'logical termini' instead of 'project area' or 'study area'. It is preferred to use the NEPA-like language in PEL, but if you choose to use planning terms, the PEL Questionnaire asks for the reason, definitions, and examples or a list of terms.

You must also verify that the information in the planning product is still valid if using it in the environmental review process more than 5 years after the planning product's approval. Any new information should be reviewed through the environmental review process, rather than through revisions to the approved planning product.

200.04(11) PEL Purpose and Need

The Purpose and Need is the foundation of NEPA and the environmental decision-making process. It allows for alternative development, analysis, and selection. See Chapter 400 for more information about NEPA Purpose and Need. Federal statutes and regulations for developing a Purpose and Need Statement during transportation planning that can be applied to the NEPA process are provided 23 USC 168, 23 CFR 450.318 & 450.212, and 40 CFR 1500.4 & 1501.12.

It is necessary to establish a clear Purpose and Need during PEL that is compatible with the NEPA process. In PEL, the Purpose and Need Statement can take various forms, depending on the desired outcomes of the planning study. Consult with the appropriate federal and state resource agencies and Native American tribes when developing a PEL Purpose and Need Statement.

Note: The NEPA federal lead agency (FHWA or FTA) must concur on the final PEL Purpose and Need Statement for it to be adopted in NEPA.

For large corridor studies, the Purpose and Need can be a general statement of the vision and goals for the corridor. This approach is recommended for PEL studies that recommend multiple projects or program-level policies or decisions. The Purpose and Need should be general enough to address the issues of each recommended project or decision, and you may need to establish a more specific Purpose and Need for each recommendation during NEPA. It is recommended to follow the requirements under 23 CFR 450.318 & 450.212 or 40 CFR 1500.4 & 1501.12 for establishing a Purpose and Need for a large corridor study that can be used and further evaluated during NEPA. Those requirements are listed in Section 200.04(7) and 200.04(9).

For planning studies that are leading directly to a defined project, the Purpose and Need should have the same amount of detail as one that is developed during the NEPA process. In this case, the goal is to establish a Purpose and Need that can be adopted into NEPA unchanged. To do this, follow the requirements under 23 USC 168. The requirements are listed in the Section 200.04(6).

For any PEL effort, it is strongly recommended to use the NEPA term "Purpose and Need", rather than using planning terms such as goals and objectives.

200.04(12) Alternatives development, evaluation, and elimination of unreasonable alternatives

WSDOT may eliminate unreasonable alternatives through the PEL process by meeting the requirements in 23 CFR 450.318(a)-(d) & 450.212(a)-(c), 23 USC 168, or 23 USC 139(f)(4)(E)(ii). Unreasonable alternatives are alternatives that do not meet the Purpose and Need or are infeasible. Infeasible alternatives are alternatives with fatal flaws. Common examples of fatal flaws include alternatives that have unacceptable significant environmental impacts, excessively high costs, or are impractical from an engineering standpoint. However, there may be other types of fatal flaws identified through the PEL process. Eliminating unreasonable alternatives during PEL allows for a more efficient environmental review because those alternatives can be excluded from the detailed analysis and evaluation that occurs during NEPA.

Alternatives only need to be developed to a 'conceptual level' for evaluation and elimination during the PEL process. This means that alternatives may be evaluated, scored, prioritized, and/or screened out without the need to advance engineering designs beyond a very conceptual project area.

The requirements for eliminating unreasonable alternatives under 23 CFR 450.318 and 450.212, 23 USC 168, and 23 USC 139 are the same as those listed in Section 200.04(6), 200.04(7), and 200.04(8). REMEMBER - Use 23 USC 168 if the goal is to adopt the decision to eliminate alternatives and not re-evaluate that decision during NEPA.

Note: it is strongly recommended to use the NEPA term "alternative", rather than using planning terms such as concept, strategy, or option.

200.04(13) Resource agency and tribal government coordination

WSDOT's policy is to invite resource agencies and tribes with jurisdiction or permitting or approval authority to participate in the PEL process. The goal is to get concurrence with these agencies and tribes on key planning decisions, such as establishing the Purpose and Need Statement and eliminating unreasonable alternatives. However, concurrence is not required.

One of the benefits of PEL is to make decisions during the planning process that do not need to be revisited during the NEPA process. This means that the PEL process is the best opportunity for stakeholders to shape future projects. Also, any resource agency and tribal government coordination that occurs during PEL counts toward NEPA/SEPA project-level scoping.

It's especially important to engage any organization that will need to make a decision on a project resulting from a PEL effort. For example, a regulatory agency (such as the USFWS) may require a multi-year study before concluding consultation. Learning this information during the PEL process can allow WSDOT to complete the study and consultation prior to starting NEPA. This information is important for meeting the time limits in 40 CFR 1501.10 that require agencies to complete EAs within one year and EISs within two years.

WSDOT may establish a resource agency or tribal committee, or a general technical advisory committee that includes any interested stakeholders with jurisdiction or expertise. However, federal PEL regulations do not require the establishment of a formal resource agency, tribal, or technical advisory group.

WSDOT must consult with tribal governments on a government-to-government basis. This consultation is distinct from any invitations to participate as part of a general stakeholder advisory group. Continue requesting tribal participation until you receive a response. Tribes may accept or decline the invitation to participate or may just request to stay informed during the PEL process.

WSDOT has liaisons at the USFWS, NMFS, Corps, and Ecology who can assist in the PEL consultation process as appropriate. Contact WSDOT's ESA Liaison Program Manager to discuss the PEL effort with WSDOT's Endangered Species Act (USFWS and NMFS) liaisons. Contact WSDOT's Permit Liaison Program Manager to discuss the project with WSDOT's permitting (Corps and Ecology) liaisons.

WSDOT should make an extra effort to engage any agency that must make a future NEPA decision for a project resulting from the PEL effort. For example, if the PEL is leading to a project that will require a Section 404 of the Clean Water Act permit, then WSDOT should strongly encourage the Corps to be involved during the PEL process.

If an invitation to participate in the PEL process is declined by a resource agency or tribe, the federal lead agency (FHWA or FTA) may still agree that the final planning products may be adopted or used in NEPA. In this case, document which agencies and tribes were invited and whether they responded to the invitation. If an agency responded to the invitation but didn't actively participate in the PEL process, document any suggestions or comments they provided to WSDOT and how they were considered.

WSDOT must document all resource agency and tribal comments, including how each comment was considered. This should be done at major concurrence points, such as establishing the Purpose and Need Statement and eliminating unreasonable alternatives. WSDOT must also provide draft and final planning products to any interested federal, state, local, and tribal governments for review and comment, even if they declined to participate in the PEL process. WSDOT must document comments on the draft and final planning products, including how each comment was considered.

To use the final planning products in the NEPA process, the federal lead agency must determine that the resource agency and tribal consultation was adequate or that WSDOT provided a reasonable opportunity for resource agencies and tribes to comment.

200.04(14) Community Engagement

Including members of the affected community in the PEL process helps to identify issues, improve understanding of the study's recommendations, and foster relationships with the public. WSDOT policy for community engagement is detailed in *Design Manual* Exhibits 210-1 through 210-4, 23 CFR 450.210, and in WSDOT's Community Engagement Plan.

Refer to Chapter 460 for Environmental Justice requirements for planning studies. The planning team determines the appropriate community engagement strategy based on the affected community's needs and values. One recommended method for ensuring community engagement throughout the entire PEL process is to establish a community advisory group. This helps ensure public input at major concurrence points, such as establishing the Purpose and Need Statement and eliminating unreasonable alternatives. However, federal PEL regulations do not require the establishment of a formal community advisory group.

If using PEL authority 23 USC 168, then WSDOT must provide public notice that resulting planning products may be adopted for use in NEPA (23 USC 168 (d)(4)).

WSDOT should make planning materials available to the public throughout the PEL process. WSDOT should make additional effort to engage the public at key decision points in the process (for example, when establishing the Purpose and Need Statement and eliminating unreasonable alternatives). These are the best practices for making public comment most effective. However, at a minimum, WSDOT must provide the final PEL products to the public for review and comment.

WSDOT must consider any public comments received during the PEL process. WSDOT should document each comment and how each comment was considered. Any public engagement that occurs during PEL counts toward NEPA/SEPA project-level scoping.

Chapter 300 Project scoping and programming

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300.01 Introduction

During the project scoping and programming phase, WSDOT develops a plan to identify and address transportation facility performance needs and creates a preliminary budget for consideration by the state legislature. The process is required by state law (RCW 47.05.010) and is limited to solving safety and operational performance needs identified in WSDOT's modal plans, as well as addressing environmental factors.

Scoping defines time and cost-of-work estimates for each proposed project. It is important that estimates be as realistic as possible and consider budget and schedule implications of environmental documentation, permitting and compliance monitoring, as well as engineering work.

Programming refines and prioritizes the list of proposed projects. The process is based on the recommendations gathered during Planning from community engagement activities and the costs and schedules developed during Project Scoping.

Scoping and programming fulfills the needs for WSDOT to:

- Create and submit to the legislature a ten-year investment program as defined in RCW 47.05.030. The legislature considers and approves this program along with a 2-year budget. The approved program and budget can include legislative modifications. For details, see WSDOT's project delivery plan website.
- Create fiscally-constrained lists of projects to be submitted for inclusion on the Statewide Transportation Improvement Program (STIP) (that includes the Transportation Improvement Programs (TIP) developed by Metropolitan Planning Organizations (MPOs)) as required by 23 CFR 450.218. Projects on the STIP are eligible for federal funding. For details on this process, see WSDOT's STIP webpage.

Through this process:

- WSDOT creates a financially constrained list of projects for consideration by the legislature. The list is based on realistic schedules and cost estimates that include all phases of the work.
- The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) approve the STIP. A project must be included in the TIP and the STIP to be eligible for federal funding (Title 23 USC and the Federal Transit Act). For details on this process, see WSDOT's Local Programs website.
- The legislature considers and approves WSDOT's 6- to 10-year Capital Improvement and Preservation Program (CIPP) along with a 2-year budget. The approved plan and budget can include legislative modifications.

300.02 Project scoping

This section provides agency policies for project scoping. Chapter 400 explains the importance of public and agency outreach (public scoping) during pre-NEPA and scoping of our environmental documents.

Practical Solutions is a two-part strategy that includes practical solutions planning and practical design, as defined in WSDOT Executive Order (EO) E 1090 and described in detail in Chapter 1100 of the *Design Manual* and the Practical Solutions planning webpage. This process defines the method WSDOT uses to scope and design projects.

WSDOT's practical design process consists of seven primary procedural steps listed below, providing the basis for modal choice, alternative development, and selection of design elements. Minimize re-work by documenting the Practical Design process in enough detail to help fulfill National Environmental Policy Act (NEPA) documentation requirements.

WSDOT's Practical Design Process Steps include:

1. Assemble an advisory team. The Project Engineer will usually invite Environmental staff to participate on the Advisory Team (see *Design Manual* Section 1100.04).
2. Clearly identify the baseline and contextual needs (see *Design Manual* Chapter 1101).
3. Identify the land use and transportation context for the project location (see *Design Manual* Chapter 1102), including the environmental, economic, and social demographic data that indicate livability and travel characteristics.
4. Select design controls compatible with the context (see *Design Manual* Chapter 1103).
5. Formulate and evaluate potential alternatives that resolve the baseline/contextual need and are bound by design controls (see *Design Manual* Chapter 1104).
6. Select design elements employed and/or changed by the selected alternative(s) (see *Design Manual* Chapter 1105).
7. Determine design element dimensions consistent with the alternatives' performance needs, context, and design controls (see *Design Manual* Chapter 1106).

The Basis of Design (BOD) is used to document the outcomes of applying these procedural steps. A BOD is required for all projects. The BOD should serve as the background and context for detailed environmental analysis and documentation.

One of the major responsibilities of the advisory team environmental staff is to assist the team in establishing appropriate environmental measures, such as the number of square feet of impact to Category I and II wetlands. The environmental staff also ensure:

- The process, participants, and decisions made by the team comply with NEPA and State Environmental Policy Act (SEPA) requirements.
- The team considers all appropriate environmental disciplines (such as Section 4(f), Section 106, ESA, noise, etc.). See the User Guide for Corridor Sketch Summaries for additional key WSDOT environmental assets to consider.
- Decisions are included in the project's supporting documentation.

During project scoping, all major costs of the project are used to prepare a realistic schedule and cost estimate. Scoping is described in the *Design Manual* Chapter 300. The process is documented in the Project Profile and identifies the transportation needs that have generated the project, the purpose or goal of the work, and the recommended solution.

The Environmental Review Summary (ERS) is attached to the Project Profile as a part of the Project Summary package. It:

- Documents known baseline environmental conditions.
- Describes potential environmental impacts, mitigation options, and anticipated permits necessary for the project.
- Establishes project classification (see Section 300.03) and anticipated level of environmental documentation required (see Chapter 400) for the project. The Region Environmental Manager approves the ERS, which indicates concurrence with the anticipated project NEPA and/or SEPA Classification.

For many projects, the WSDOT Geographic Information System (GIS) Workbench coupled with a site visit provides sufficient information to complete the ERS for projects classified as Categorical Exclusions (CEs). Additional detailed analysis may be required for projects that require an Environmental Assessment (EA) or Environmental Impact Statement (EIS). The ERS database includes fully integrated help screens that provide detailed guidance for completing the ERS forms. Contact your Region Environmental Office or Program Management Office to get set up to work in the database.

For CE level projects, the information in the ERS is exported to the Environmental Classification Summary (ECS9database and becomes the basis for NEPA/SEPA environmental documentation (see Chapter 400 for more information).

300.03 Project classification

The project classification determines the anticipated level of environmental documentation required for a WSDOT project. It is based on the information contained in the ERS and can change as more information is discovered.

State projects with a federal nexus are subject to NEPA and SEPA. Projects that have only state funding and no federal nexus follow SEPA guidelines. If future funding is undetermined, NEPA guidelines are usually followed so the project can qualify for federal funding in the future. See the NEPA & SEPA guidance webpage.

300.04 NEPA classifications

Projects with federal dollars or approvals are subject to NEPA and fall into one of the three classifications described below.

1. **NEPA Class I projects –** These actions are likely to have significant impact on the environment because of their effects on land use, planned growth, development patterns, traffic volumes, travel patterns, transportation services, or natural resources. They require preparation of an EIS (see Chapter 400) because the action is likely to have significant adverse environmental impacts. Projects that usually require an EIS, as defined in 23 CFR 771.115, are:

   - New controlled-access freeways.
   - Highway project of four or more lanes in a new location.
   - New construction or extension of fixed rail transit facilities (e.g., rapid rail, light rail, commuter rail, automated guideway transit) not within the existing right of way.
   - New construction or extension of a separate roadway for buses or high occupancy vehicles not located within an existing highway facility.

   Although examples are given, it is important to remember that the context and intensity of the potential impacts, and the level of controversy on environmental grounds, determine the need for an EIS, not the size of the project.

2. **NEPA Class II projects –** These actions are Categorical Exclusions (CEs). These actions are not likely to cause significant adverse environmental impacts, meet the definition contained in 40 CFR 1508.1, and are excluded from completing an EA or EIS. A completed ECS Form serves as the environmental documentation for these types of projects (see Chapter 400).

   Each federal agency is required to identify its own categories of actions that qualify as CEs, although all USDOT agencies agree that Class II projects typically:

   - Do not induce significant impacts to planned growth or land use.
   - Do not require the relocation of significant numbers of people.
   - Do not have a significant impact on any natural, cultural, recreational, historic, or other resource.
   - Do not involve significant air, noise, or water quality impacts.
   - Do not have significant impacts on travel patterns.
   - Do not otherwise, either individually or cumulatively, have significant environmental impacts.

   a. **FHWA –** CEs are described in 23 CFR 771.117. Under the 2020 CE Programmatic Agreement (PCE) with FHWA, WSDOT approves the NEPA documentation for all Class II (CE) Projects described in 23 CFR 771.117 (c) and (d). These actions normally do not require further approval or documentation by FHWA. Environmental documentation for CE projects is accomplished by completion of the ECS Form, which is approved by the Region Environmental Manager (see Chapter 400). The NEPA documentation process for Local Agencies is described in the WSDOT Local Programs NEPA Categorical Exclusions Guidebook.

      WSDOT may request FHWA review and signature for individual projects on a case-by-case basis (PCE - Section IV(B)(1)).

b. **FTA –** CEs are described in 23 CFR 771.118. FTA has its own process and worksheets for documenting CEs.

c. **Federal Railroad Administration (FRA) –** CEs are described in 23 CFR 771.116. FRA has its own process and worksheets for documenting CEs. Contact the WSDOT Rail Division Environmental Compliance Manager for assistance.

d. **Federal Aviation Administration (FAA) –** CEs are described in FAA Order 5050.4 Chapter 6. FAA has its own process for documenting CEs.

3. **NEPA Class III projects –** When the potential environmental impacts of a proposed project are not clearly understood, an EA is prepared. The EA determines the extent and level of environmental impact.

   The content and complexity of an EA will vary depending on the project. See Chapter 400 and the WSDOT Environmental Impact Statement (EIS)/Environmental Assessment (EA) Processes webpage for details on EA documentation and procedure.

300.05 SEPA classifications

Chapter 400 explains WSDOT's SEPA responsibilities and how NEPA documentation can satisfy SEPA requirements. Many of our actions are exempt from the SEPA process. If an action is not exempt, it is either found to have non-significant or significant impacts.

WSDOT serves as the SEPA lead agency on actions undertaken by our agency. As such, we are required to determine the level of environmental review and documentation required for an action. The SEPA determinations fall into one of three broad categories: Determination of Significance (DS), Determination of Nonsignificance (DNS) and a Categorical Exemption (CE).

- **Determination of Significance (DS) –** May be issued for actions that are likely to result in a probable significant adverse environmental impact. A DS requires that an EIS be completed for the action. ***Note:*** if an action has a probable significant adverse impact, the project team may immediately begin the EIS process without issuing a DS.
- **Determination of Nonsignificance (DNS) –** Issued for actions that are not likely to have a significant adverse environmental impact but are not categorically exempt.
- **Categorical Exemption (CE) –** Covers actions identified by statute or rule that are unlikely to cause significant adverse environmental impacts.

  The types of projects that qualify as categorically exempt can be found in:

  - RCW 43.21C.035 – 43.21C.0260 – Statutory Exemptions
  - WAC 197-11-800 – Categorical exemptions listed in state SEPA rules.
  - WAC 197-11-860 – Nine categorical exemptions specific to WSDOT.
  - WAC 468-12-800 – WSDOT categorical exemptions based on WSDOT's interpretation of the categorical exemptions listed in state SEPA rules.

300.06 Revision of project scope and classification

See Section 400.06 for details on project re-evaluations and preparation of supplementary environmental documentation.

300.06(1) NEPA Reclassification

A revised ECS must be processed for any major change in a project classification if the project involves federal funds or approvals (NEPA). The 2020 CE Programmatic Agreement with FHWA allows WSDOT to approve the NEPA classification. Minor changes may be handled informally.

300.06(2) SEPA Reclassification

A significant change in the scope of a state funded project with no federal nexus (SEPA only) usually requires revision of the ERS. This may include reassessment of the environmental classification. The Region Environmental Office, in coordination with the Region Program Management Office, determines if the ERS needs to be revised and the environmental classification changed. Any changes in classification are documented by a note to the file or a follow-up memo.

300.07 Highways Over National Forest Lands

WSDOT and the United States Forest Service (USFS) established procedures through a Memorandum of Understanding (MOU) for coordination of transportation activities on national Forest lands in 1991 (updated in May 2019). The MOU covers coordination, project programming and planning, pre-construction, rights of way, construction/reconstruction, maintenance, signs, access control, and third party occupancy. The agreement does not apply to local agency projects. Elements that pertain to environmental analysis and documentation include the stipulation that:

- WSDOT will coordinate with USFS at project inception for projects using or affecting National Forest Service lands or interests.
- WSDOT and USFS will agree on needed environmental documents and lead agency responsibilities. WSDOT will have the primary responsibility for highway related projects.
- WSDOT and USFS will cooperate in development of a single set of environmental documents for each project and jointly seek public involvement when necessary.
- Draft and final environmental documents will be circulated to each agency for review before distribution for public comment.

300.08 Project types with special requirements

Fish passage and chronic environmental deficiencies (CED) projects follow a different planning and scoping process than standard transportation projects. These project types are constructed to improve fish habitat or access to fish habitat and have specific coordination and approval requirements with Washington Department of Fish and Wildlife (WDFW) and the Tribes.

Project scoping for Washington State Department of Transportation Ferries Division (WSF) projects is described in the *Terminal Design Manual* Chapters 200 and 205.

300.08(1) Fish passage projects - Fish Passage Delivery Planning

WSDOT created the fish passage program in 1991 to inventory, prioritize, and correct fish passage barriers along state highways.

WSDOT corrects fish passage barriers mainly through stand-alone projects or as part of larger transportation projects. Sometimes highway barriers are corrected in partnerships with local agencies, Tribes, enhancement groups, and other project sponsors. Other barriers are corrected when culverts are replaced at the end of their useful life.

WSDOT's 2030 Fish Passage Delivery plans are available on WSDOT's Fish Passage website. You can also find the latest Fish Passage Delivery Plan updates in the 'Fish Passage Program Delivery' tab (see 'Fish Barrier Plan' spreadsheet) in WSDOT's Fish Passage Database. These lists include information on fish barrier corrections that are planned as stand-alone fish passage projects or through larger transportation projects.

300.08(2) Stand-alone I-4 Funded Fish Passage Projects

These projects are part of the WSDOT Environmental Retrofit Subprogram (I-4). The sole purpose of these projects is to correct fish passage barriers.

The Environmental Services Office (ESO) contracts with the WDFW's Fish Passage Program for project support for I-4 funded, injunction barrier corrections. WDFW's fish passage agreement does not include support for barriers corrected through larger transportation projects or barriers corrected outside of the culvert injunction case area. The Agreement is available on the 'Fish Passage Program Delivery' tab in WSDOT's Fish Passage Database.

The following tasks are covered by the WDFW Agreement managed by ESO's Stream Restoration Program Manager:

- WDFW Fish Passage Biologists and engineers provide technical support
- Verify fish passage barrier status
- Verify fish species present and habitat information
- Attend interdisciplinary team site visits
- Review and comment on the preliminary hydraulic design (PHD)
- Identify fish work windows for permitting
- May provide input on design build Request for Proposals
- Biologists issue Hydraulic Project Approvals (HPAs)
- Biologists provide construction support

WDFW project support biologist and engineer assignments are found in the 'Fish Passage Program Delivery' tab (see 'WSDOT_Fish_Passage_WDFW_Work' spreadsheet) of WSDOT's Fish Passage Database. This spreadsheet also includes project assignments for WSDOT staff working on fish passage projects, including the Project Engineering Offices (PEOs), Headquarters Hydraulics engineers, and ESO Stream Restoration biologists.

Larger Transportation Projects

WSDOT considers fish barrier correction for transportation projects that alter the roadway prism or add infrastructure within the existing right of way. Protect and maintain any previously corrected barriers.

Use the 'WSDOT Sites' data layer in the GIS Workbench to locate fish passage barriers and corrected barriers within or adjacent to the planning study area.

Contact WSDOT's Stream Restoration Program Manager to verify information and determine if the fish passage inventory needs an update. Updating fish passage inventories during planning helps us identify future funding needs.

Barriers corrected through larger transportation projects are permitted by WDFW Local Area Biologists, rather than WDFW Fish Passage Biologists.

ESO Stream Restoration Program biologists are available to provide technical assistance and support on fish barriers corrected through larger transportation projects, including culvert injunction compliance.

300.08(3) Chronic Environmental Deficiency (CED) Projects

A Chronic Environmental Deficiency (CED) is a site along a state highway that is adjacent to a waterbody, where recent, frequent repairs or maintenance (typically 3 times in 10 years) to WSDOT infrastructure cause adverse impacts to fish or fish habitat. These sites are often subject to frequent streambank erosion, sedimentation, flooding, washouts, or other environmental threats that if left unaddressed can require emergency repairs, result in road closures, and reduce the safety of the traveling public.

In 2002 WSDOT signed a Memorandum of Agreement (MOA) with WDFW, in which WSDOT agreed to establish the CED Program. The purpose of the CED Program is to satisfy compensatory mitigation requirements under the HPA permitting process for highway maintenance activities identified in Section VIII of the MOA. The CED Program implements a specific process between WSDOT and WDFW to collaboratively develop and construct long-term solutions that reduce impacts to fish from repetitive repairs, maximize improvements to fish habitat, and meet WSDOT's infrastructure preservation needs. To support this, WSDOT developed a funding category to provide an inventory, scoping, prioritization, and programming process for CED correction projects. The MOA was most recently updated in 2016.

Addressing Chronic Environmental Deficiencies

The CED program is implemented from within the Headquarters Stream Restoration Program at WSDOT by the CED Coordinator, who oversees the inventory, assessment, scoping, and prioritization of CED projects through a collaborative process with WDFW. This process includes four general steps:

1. Nomination and analysis
2. Concept selection and stakeholder coordination
3. Project funding and implementation
4. Post-project monitoring

The CED Coordinator works closely with WSDOT Hydrology and regional staff to assess CEDs and develop project alternatives, and then facilitates a stakeholder concurrence process with WDFW to select a preferred solution for CED correction projects. When funds are designated for a CED project, WSDOT regional staff become responsible for overseeing its design and construction.

Two project documents are produced by the CED program that document the proposed conceptual designs and agreement with WDFW on a proposed CED solution. These include:

- **Site and Reach Assessment** prepared by a geomorphologist or hydrologist, that evaluates the processes occurring in the watershed and identifies the mechanism for failure. It discusses alternative solutions and provides a recommendation. The site and reach assessment also identifies actions to maintain the highway infrastructure until a permanent solution is constructed.
- **CED Concurrence form** signed by WDFW and WSDOT headquarters and regional staff. This form summarizes the considered alternatives and documents agreement with the proposed conceptual design.

WSDOT documents its progress addressing CEDs in the CED Annual Report, which is published early each calendar year and distributed to WDFW and other stakeholders. More information on the CED process and links to relevant documents are located on the CED website.

CED Roles and Responsibilities

The CED process involves staff throughout WSDOT, including the following headquarters and regional staff:

- **Environmental Services Office (ESO) –** The CED Coordinator oversees the CED program and the CED process, including CED nomination, stakeholder outreach and concurrence, prioritization, and reporting. They provide biological technical assistance and coordinate with regional staff and WDFW regarding CED nominations, conceptual designs, concurrences, and prioritization.
- **Hydraulics Office –** Hydrology Staff work closely with the CED coordinator to approve CED nominations and prioritize CED sites. They prepare site and reach assessments and conceptual project designs and provide technical assistance to regional staff throughout project development and implementation.
- **Regional Maintenance –** The Regional Maintenance Environmental Coordinator (RMEC) and Maintenance Superintendents recommend potential new CED sites, provide updates on the status of active CEDs, and assist with prioritization of CED projects.
- **Regional Environmental Manager –** Serves as the regional point of contact for the CED process, concurrence, and CED project implementation. They assist with regional and stakeholder coordination, and early permit coordination.
- **Project Engineer –** Participates in CED project pre-scoping and scoping to ensure that CED proposals are constructable and feasible.
- **Regional Program Management –** Scopes and programs CED construction projects and provides preliminary cost estimates.

CED Project Scoping

The CED Coordinator prioritizes the project relative to other CEDs based on potential benefits to fish and aquatic habitat, risk to infrastructure and safety, maintenance burden, and WDFW and stakeholder input or partnership opportunities. The prioritization is used by the Capital Program Development and Management (CPDM) to queue projects for funding approval.

As described in the MOA, WSDOT is obligated to make a good-faith effort to fund and construct CED projects and can do so using any source. Most CED projects are funded through a stand-alone retrofit program in the Highway Construction Improvement (I-4) Program. CEDs are also repaired as part of fish passage improvement projects, highway safety and mobility projects, and occasionally using other funding sources, such as emergencies, highway preservation, or through partnerships with other entities.

The scoping and design process for CED projects differs depending on the funds used for construction.

CEDs Corrected using Stand-alone CED I-4 Funds

1. CPDM issues scoping instructions to regional staff each fall for priority CED projects.
2. Regional program management contacts the CED coordinator for all project documentation, and then scopes and programs the CED project based on the agreed-on conceptual design.
3. Once funding is received, the project is assigned to a Project Office for design, permitting, and construction with oversight from CED program staff.

CEDs Corrected as part of Fish Passage Correction Projects

1. The CED Coordinator works closely with ESO Fish Passage Program staff to identify planned fish barrier removal projects that are also CEDs.
2. If a concurrence form has not yet been approved for an active CED, the CED Coordinator will lead a concept selection and concurrence with WDFW and regional staff to identify and agree on an appropriate CED solution.
3. The CED problem is addressed in the Preliminary Hydraulic Design (PHD) for the Fish Barrier Removal Project.
4. The project is scoped, designed, and constructed through WSDOT's Fish Passage process, with input from CED Coordinator. See Section 300.08(2) for more information.
5. The completed project is monitored through WSDOT's Fish Passage Monitoring program.

CEDs Corrected during Other Transportation Projects

1. The Region contacts the CED Coordinator early during the project scoping phase to screen for active CEDs in the vicinity of the project limits.
2. The CED Coordinator notifies the Region of CEDs located in the project vicinity and determines if a reach analysis was previously prepared, and a conceptual design agreed-on by WDFW.
3. The Region determines which deficiencies would be corrected during the proposed transportation project.
4. If stakeholder concurrence on a CED concept has not been completed or is out of date, the CED Coordinator initiates a reach analysis and obtains WDFW agreement on a CED project concept.
5. The Region works with the CED coordinator and hydrologist to ensure the scope is compatible with the concept in CED reach assessment and concurrence.
6. The Project Office designs, permits, and constructs the CED project as part of the transportation project, with oversight from CED program staff.

CEDs Corrected during an Emergency Repair

1. During planning of an emergency construction project, the Project Engineer or the RMEC (depending on funding source of the emergency repair) contacts the CED Coordinator to determine if a reach assessment has been completed and if a concurrence form has been signed. If so, the CED Coordinator and Hydrologist may recommend incorporating the agreed-upon CED concept into the emergency repair.
2. The Project Office determines the feasibility of constructing the proposed CED concept during the emergency response. Construction of emergency projects often occurs during high flows and challenging conditions, and at times there are funding limitations associated with emergency funds.
3. The Region works with WDFW to design and permit the project under emergency conditions with input from the CED Coordinator.

300.09 Environmental database resources

300.09(1) WSDOT's GIS Workbench

WSDOT's GIS Workbench is an internal data system available for use by WSDOT staff in preparing the "Env Context" portion of the ERS. The Workbench is a user-friendly interface covering a wide range of environmental resources gathered from a variety of public agency and WSDOT sources.

The database has over 500 layers of environmental and natural resource management data, in the following major data categories:

- **General Reference –** Transportation routes, political and administrative boundaries, major public lands, geographic reference.

- **Environmental Data –** Air quality, fish and wildlife, priority species and habitats, geology and soils, groundwater and wells, hazardous materials, hydrography, plants, and water quality, Fish Passage and Chronic Environmental Deficiencies.

Other environmental data are included on the WSDOT Geospatial Open Data Portal and the WSDOT Online Map Center. Data on WSDOT fish passage culverts is available to all WSDOT employees through WSDOT's Fish Passage Database and is also contained in WDFW's Fish Passage Web Map. WDFW's fish passage inventory protocols are described in the Fish Passage Inventory, Assessment, and Prioritization Manual (WDFW 2019).

The data provided to WSDOT staff through the GIS Workbench is usually sufficient for the Project Summary's ERS form. However, some data require field verification. For example, wetland data available from the GIS Workbench are not always reliable and may show wetlands as absent when they are present or may show wetlands as present when they are not. Field work by a qualified wetland biologist is necessary to determine the presence or absence of wetlands.

300.09(2) Expansion of GIS Workbench

GIS resources for environmental data are expanding rapidly. WSDOT staff work with federal, state, and local agencies to maintain a collection of the best available data for statewide environmental analysis. New data resources are continuously being incorporated into the WSDOT GIS Workbench. To facilitate getting the best data into the system, contact the ESO Environmental Information Program with information about newly identified data resources.

300.09(3) Citing a GIS Database

The GIS Workbench itself should not be cited as a data source or referenced on paper or digitally. Data source or reference citation should be specific to the exact dataset viewed using the GIS Workbench. The proper citation format for digital data is evolving, but typically includes the name of the data system, the name of the agency that maintains/updates the data, and the date of the data retrieval. If the data comes from an Internet website, the title of the site should be included with the full Uniform Resource Locator (URL). The citation information can be found in the Metadata (Item Description) for each Workbench dataset.

300.10 Applicable statutes and regulations

- 42 United States Code (USC) 4321 *National Environmental Policy Act of 1969 (NEPA)*
- 23 Code of Federal Regulations (CFR) Part 771 *Environmental Impact and Related Procedures*
- 23 CFR Part 774; 49 USC Section 303 *Policy on Lands, Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites*
- 36 CFR Part 800 *Protection of Historic and Cultural Properties*
- 40 CFR Parts 1500-1508 *Council for Environmental Quality Regulations for Implementing NEPA*
- WAC 197-11 *SEPA Rules*
- WAC 468-12 *WSDOT Agency SEPA Procedures*
- RCW 43.21C *State Environmental Policy Act (SEPA)*

300.11 Abbreviations and acronyms

BOD	Basis of Design
CE	Categorical Exclusion (NEPA) or Categorical Exemption (SEPA)
CIPP	Capital Improvement and Preservation Program
CFR	Code of Federal Regulations
DNS	Determination of Nonsignificance (SEPA)
DS	Determination of Significance (SEPA)
EA	Environmental Assessment (NEPA)
ECS	Environmental Classification Summary
EIS	Environmental Impact Statement
EO	Executive Order
ERS	Environmental Review Summary
ESO	Environmental Services Office
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FRA	Federal Railroad Administration
GIS	Geographic Information System
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
PCE	CE Programmatic Agreement with FHWA
RCW	Revised Code of Washington
RTPO	Regional Transportation Planning Organization
SEPA	State Environmental Policy Act
STIP	Statewide Transportation Improvement Program
URL	Uniform Resource Locator
USDOT	United States Department of Transportation
USFS	United States Forest Service
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife

300.12 Glossary

Categorical Exclusion – A NEPA action defined by a specific agency through CFR or FR that does not individually or cumulatively have a significant environmental effect (see Section 300.04).

Categorical Exemption – A SEPA action defined through WAC that does not individually or cumulatively have a significant environmental effect (see Section 300.05).

Federal Nexus – A project has a federal nexus when a federal agency must take an action on a project. Before the federal agency takes an action, environmental impacts must be evaluated under NEPA. Common actions that create a Federal Nexus include:

- Federal land decision required within the project area.
- Federal money is used on the project.
- Federal permits or approvals are required.

Chapter 400 Environmental review (NEPA/SEPA) and transportation decision making

400.01 Environmental review in project development
400.02 Roles and responsibilities
400.03 Identifying the type of environmental document
400.04 NEPA/SEPA procedures and recent changes
400.05 Ensuring environmental document quality
400.06 Using existing environmental documents
400.07 Documenting an Environmental Impact Statement (EIS)
400.08 Documenting an Environmental Assessment (EA)
400.09 Categorical Exclusions/Exemptions (CEs)
400.10 Environmental document legal considerations
400.11 Applicable statutes and regulations
400.12 Abbreviations and acronyms
400.13 Glossary

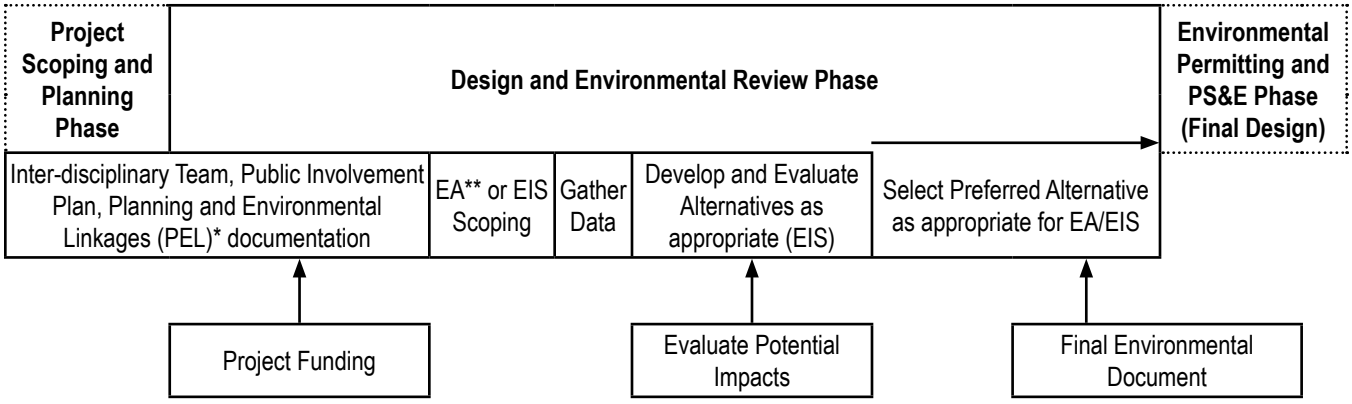
400.01 Environmental review in project development

WSDOT projects transition from Transportation Planning (Chapter 200) and Project Scoping and Programming (Chapter 300) phases of the WSDOT Transportation Decision Making Process to the Environmental Review phase when the project receives federal or state funding. The Environmental Review phase includes:

- Building upon previous planning and outreach efforts to involve the public, tribes, and federal and state resource agencies in the decision-making process.
- Establishing the type of environmental documentation.
- Developing and analyzing alternatives.
- Analyzing and documenting environmental impacts.
- Selecting an alternative and making environmental commitments (work on permits begins in this phase).
- Finalizing and approving the project.

The Environmental Review phase is illustrated in Exhibit 400-1.

Exhibit 400-1 Environmental Review and Transportation Decision Making



*Note: PEL refers to the approach of considering environmental goals in planning and using work done in planning to inform the environmental process. See Section 200.05 for more information on PEL.

**Note: Scoping for an EA is optional.

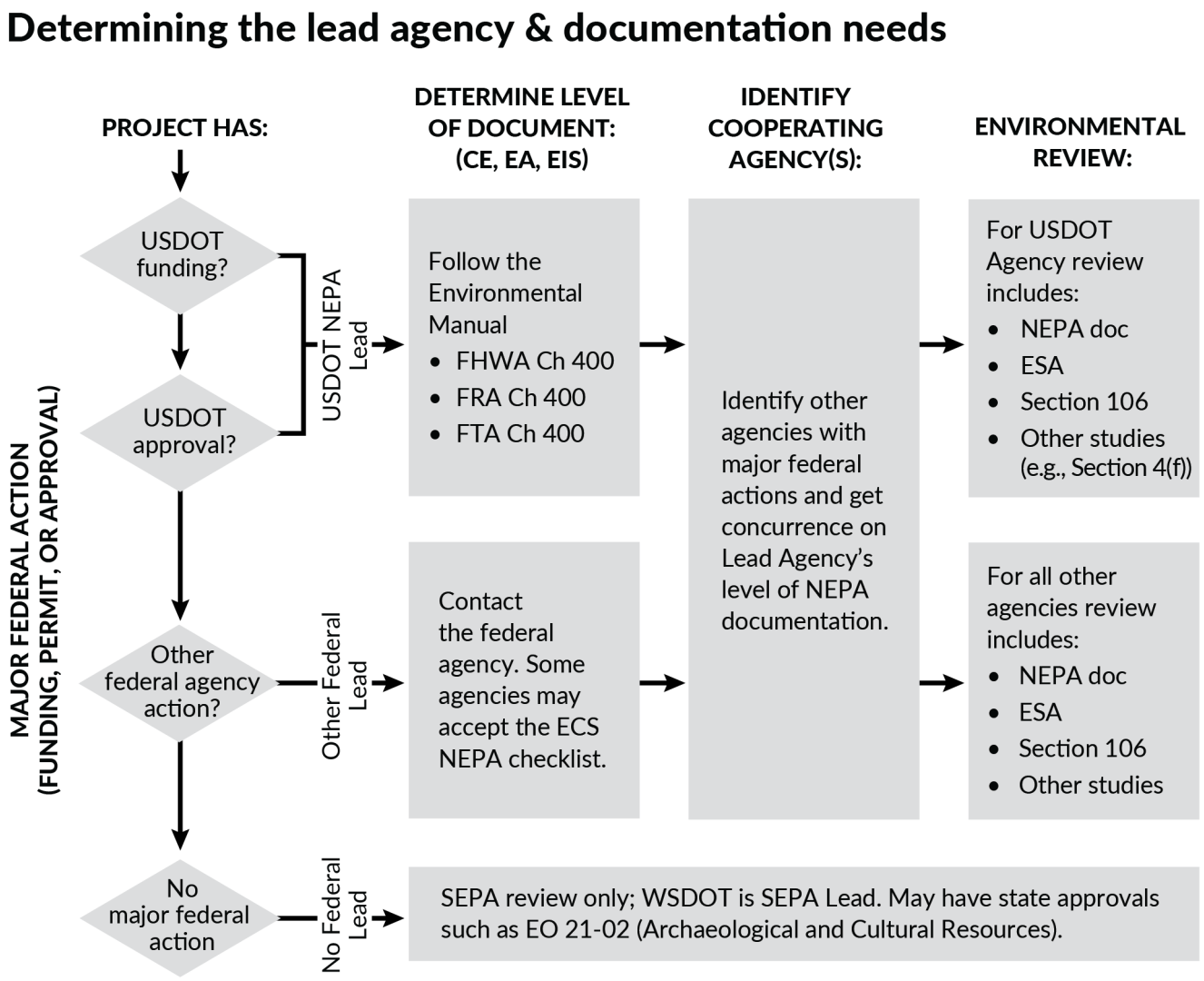
The Environmental Review phase ends with approval of environmental documentation including:

- NEPA/SEPA (Chapter 400)
- Endangered Species Act (Chapter 436)
- Section 106 of the National Historic Preservation Act (Chapter 456)
- Section 4(f) of the United States Department of Transportation Act (Chapter 457)
- Section 6(f) Outdoor Recreation Resources (Chapter 457)

For the traditional design-bid-build project delivery process, environmental documents are finalized, then environmental permits can be issued, and the Plans, Specifications, and Estimates (PS&E) phase can begin. Also, if applicable, the Federal Highway Administration (FHWA) can approve an Access Revision Report (formerly known as an Interchange Justification Report or IJR) – refer to *Design Manual* Chapter 550 for a description of the required procedures, analysis, and coordination with the environmental documentation process. Contact WSDOT's NEPA/SEPA Program Manager for questions about the environmental review process for design-build projects.

WSDOT projects are required to comply with National Environmental Policy Act (NEPA) when those projects involve a federal action. That federal action could be an approval (land use, access break, etc.), funding, or a permit. When WSDOT initially scopes a project, it determines whether a project will require NEPA, and the likely documentation path (Exhibit 400-2). This decision is routinely made between the federal lead, Program Management, and the region/modal office.

Exhibit 400-2 Determining the lead agency & documentation needs



400.02 Roles and responsibilities

400.02(1) The Council on Environmental Quality

Congress created the Council on Environmental Quality (CEQ) when NEPA was passed in 1969 and signed by President Nixon in January 1970. CEQ is part of the Executive Office of the President, and it ensures that Federal agencies meet their obligations under NEPA. CEQ oversees NEPA implementation, principally by issuing regulations and guidance. CEQ also reviews and approves Federal agency NEPA procedures, approves alternative arrangements for compliance with NEPA for emergencies, and helps to resolve disputes between Federal agencies and with other governmental entities and members of the public. Another of CEQ's major responsibilities is to develop and recommend national policies to the President that promote the improvement of environmental quality.

400.02(2) Environmental Protection Agency

The Environmental Protection Agency (EPA) has a responsibility under Section 309 of the Clean Air Act to review Environmental Impact Statements (EISs) prepared by other federal agencies. EPA reviews Draft EISs to identify and recommend appropriate mitigation measures and to evaluate the adequacy of the information provided in the EIS. EPA also reviews Final EISs to ensure that the lead agency has taken EPA's comments into account.

Section 309 of the Clean Air Act also requires that EPA makes their reviews public. EPA does this by posting EPA comment letters on EISs in the EIS database. EPA also provides notices of availability of EISs in the Federal Register.

400.02(3) Lead agencies

Federal and state laws require designation of an agency to lead the environmental review process. 40 CFR 1501.7 lists factors to consider in determining federal lead agency, as well as the process for resolving lead agency disputes. The primary role of the federal NEPA lead agency is decision making. They also provide guidance and independently evaluate the adequacy of the environmental document (see 42 USC 4332(D)(ii) and 23 CFR 771.109). Guidance for determining lead agency for State Environmental Policy Act (SEPA) is found in WAC 197-11-922.

Federal NEPA leads are determined by considering a project's federal nexus. A federal nexus involves a federal action including federal funding, permitting, or approval of the proposed action. Most WSDOT projects involve FHWA as the NEPA lead.

Agencies may co-lead the environmental review if the project is funded by more than one federal agency or if more than one federal agency has approval responsibilities. Potential NEPA co-leads include, but are not limited to:

- Federal Transit Administration (FTA)
- Federal Aviation Administration (FAA)
- Federal Railroad Administration (FRA)
- National Park Service (NPS)
- US Army Corps of Engineers (Corps)
- United States Coast Guard (USCG)
- United States Forest Service (USFS)

Each federal agency has its own unique regulations and processes to implement NEPA. WSDOT staff is advised to contact any federal lead or co-lead agency to understand their NEPA requirements and define the role of each co-lead before settling on a strategy to complete NEPA. If your project will require a US Coast Guard Section 9 permit, refer to the MOA between the US Coast Guard and FHWA for NEPA coordination requirements (Appendix B).

For local agency projects funded by FHWA, the local government agency, WSDOT, and FHWA, share co-lead agency status under NEPA. Together, the co-lead agencies approve and sign the NEPA environmental document. However, the local agency is generally the lead agency responsible for SEPA.

WSDOT is the SEPA lead agency (WAC 197-11-926) for transportation projects it proposes on the state system. In accordance with state law, WSDOT has adopted its own rules and procedures for implementing SEPA (WAC 468-12). WSDOT's SEPA responsibilities are based on its authority to site, design, construct and operate state transportation facilities. WSDOT signs NEPA EAs and EISs as SEPA Lead and places the documents in the SEPA Register.

Federal lead agencies are required to report projects in the Federal Infrastructure Projects Permitting Dashboard within 90 calendar days of initiating a project (for example, via an EIS Notice of Intent (NOI) or Environmental Assessment (EA) Initiation Letter). See the current Federal Permitting Dashboard Reporting Standard for additional reporting requirements. Within 21 calendar days of entering a project into the permitting dashboard, the federal lead agency must invite other agencies with financial, environmental review, authorization, or other project responsibilities to become cooperating or participating agencies in NEPA (42 USC 4370m-2). The roles and responsibilities for cooperating and participating agencies are described in Section 400.02(4) and Section 400.02(5).

400.02(4) Cooperating agencies

Under NEPA, any federal agency with jurisdiction must be asked to become a cooperating agency (Section 400.02(3)). By serving as a cooperating agency, the agency can ensure that any NEPA document needed for the project will be crafted to also satisfy the NEPA requirements for its jurisdictional responsibility. WSDOT's policy is to invite non-federal agencies and tribes to be cooperating agencies when they have jurisdiction or special expertise. See Exhibit 400-3 for examples of potential cooperating agencies.

Cooperating agencies participate in EIS or EA scoping to identify potential environmental impacts, alternatives, mitigating measures, and required permits. They review and comment on EA/EIS level projects and may also prepare special studies or share in the cost of the environmental documentation. For EIS level projects, concurrence on key milestones is required from cooperating agencies whose authorization is required for the project. The terms and requirements of agency involvement under SEPA are like that of NEPA. For regulatory guidance, see CEQ 40 CFR 1501.8, 23 CFR 771.111, WAC 197-11-408(2)(d), WAC 197-11-410(1)(d), WAC 197-11-724, and WAC 197-11-920.

For NEPA EISs, the lead agency, in coordination with the project sponsor and the cooperating agencies, develop a permitting timetable, identify a project point of contact, and define and agree on roles and expectations at the beginning of the project. Project teams will define the roles and expectations in a Coordination Plan.

1. **Requesting Cooperation –** According to CEQ regulations, federal agencies with jurisdiction must accept cooperating agency status. The federal NEPA lead can accept an agency's decision to decline cooperating agency status if the agency's written response to the request states that its NEPA regulations do not require an EIS in response to the proposed action (40 CFR 1501.8(c)).

2. **WSDOT as a Cooperating Agency –** Other agencies may ask WSDOT to become a cooperating agency for actions where WSDOT is not the lead agency. This could occur on projects when a landholding agency, such as the USFS, Bureau of Land Management, Bureau of Indian Affairs, or a tribal government, proposes a project that could impact WSDOT facilities. County and municipal transportation organizations could also involve WSDOT as a cooperating agency for SEPA compliance.

3. **Local Agencies –** Local jurisdictions that receive funds through WSDOT's Local Programs Office can be cooperating agencies as well. More information regarding Local Agencies can be found in the Local Programs NEPA Categorical Exclusions Guidebook.

Exhibit 400-3 ***Potential Cooperating Agencies***

Agency	Jurisdiction
Bureau of Indian Affairs	Tribal trust lands
Environmental Protection Agency (EPA)	Clean Air Act, Hazardous Waste Sites, Sole Source Aquifers, Water Supply
Federal Agency Land Manager: Bureau of Land Management (BLM) Department of Defense (DoD) General Services Administration (GSA) National Park Service (NPS) US Fish and Wildlife Service (USFWS) US Forest Service (USFS)	Land transfer from: Public Lands Military Facilities Federal Buildings National Park System National Wildlife Refuge National Forest System
Federal Aviation Administration (FAA)	Airspace, hazardous wildlife, airport facilities, and other air transportation activities
Federal Emergency Management Agency (FEMA)	Regulatory floodway
Federal Motor Carrier Safety Administration (FMSCA)	Regulates trucking industry, provides funding to State DOTs for modernizing motor carrier infrastructure such as weigh-in-motion scale equipment
Federal Transit Administration (FTA)	Projects with transit funding
National Oceanic and Atmospheric Administration (NOAA) Fisheries	Endangered Species Act (ESA), fish and wildlife natural habitat, wetlands, stream relocations, estuaries
National Park Service (NPS)	Impacts to properties funded thru the Land and Water Conservation Fund (LWCF) Act (Section 6(f)) and review of some Section 4(f) Evaluations
Rural Electrification administration (REA)	Relocation of utilities constructed or assisted with REA loans
Tribal Governments	Tribes with expertise or jurisdiction
US Army Corps of Engineers (USACE)	Section 10 and Section 404 Permits, including wetland fill activities
US Coast Guard (USCG)	Projects involving water crossings (bridges or culverts)
US Fish & Wildlife Service (USFWS)	Areas funded under various fish and wildlife related grant programs or projects affecting threatened and endangered species (ESA)
Washington State Agencies: Dept. of Archaeology & Historic Preservation (DAHP) Dept. of Ecology (DOE) Dept. of Fish and Wildlife (WDFW) Dept. of Natural Resources (WDNR)	Agency with expertise or jurisdiction: Historic, cultural, and archaeological sites Wetlands, water quality, stream relocations, estuaries Fish and wildlife natural habitat, wetlands, water quality, stream relocations, estuaries Use of state-owned aquatic lands

400.02(5) Participating agencies

Federal transportation law also allows "participating agency" status. This term is unique to United States Department of Transportation's (USDOT's) compliance with NEPA. The intent of the participating agency is to encourage governmental agencies with an interest in the proposed project to be active participants in the NEPA EIS evaluation. Designation as a participating agency does not indicate project support. However, it does give invited agencies opportunities to provide input at key decision points in the process and allows for involvement in a project's environmental review, coordination plan, and concurrence on project schedule.

Any federal, state, tribal, regional, and local governmental agencies that may have an interest in the project should be invited to serve as participating agencies (Section 400.02(3)). Non-governmental organizations and private entities cannot serve as participating agencies. A participating agency differs from a cooperating agency in the level of involvement that agency has in a project. An agency with jurisdiction by law or special expertise in regard to environmental impacts should be more involved, and therefore invited to be a cooperating agency. An agency with limited interest, or a small action associated with the larger project should be invited to be a participating agency. ***Note:*** a cooperating agency is also a participating agency, but a participating agency is not a cooperating agency (See FHWA Environmental Review Toolkit FAQ).

Care should be taken when evaluating your list of potential participating agencies. It is not necessary to invite agencies that have only a tangential, speculative, or remote interest in the project. The same agencies listed in Exhibit 400-3 may be asked to be participating agencies.

The roles and responsibilities of participating agencies include but are not limited to:

- Identifying potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project.
- Participating in the NEPA process, especially regarding the development of the Purpose and Need statement; range of alternatives; methodologies; and the level of detail for the analysis of alternatives.
- Providing meaningful and timely input on unresolved issues.

Expectations and commitments about agency participation should be addressed in the Coordination Plan. It is appropriate to tailor an agency's participation to its area of interest or jurisdiction.

400.02(6) Tribal coordination

WSDOT recognizes the sovereign rights, interest, and expertise of Tribes in the environmental review process. There are several state and federal laws regarding consultation and coordination with Tribes during environmental review.

Secretary's Executive Order 1025.01 directs WSDOT to enter Tribal Consultation with tribes who have ancestral homelands within the state boundaries, including those having reservations located outside of the state, on all decisions that may affect tribal rights and interests. The executive order is based on the Centennial Accord between the Federally Recognized Indian Tribes in Washington State and the State of Washington. The Centennial Accord is available on the Governor's Office of Indian Affairs website.

Tribes can be involved in four capacities under NEPA:

- As a cooperating agency (with expertise and/or jurisdiction).
- As a participating agency on EIS projects.
- As a consulted party.
- As an affected community.

See Chapter 530 and the WSDOT Model Comprehensive Tribal Consultation Process for NEPA webpage for guidance on when and how to consult with tribes during the NEPA environmental review process on projects.

400.02(7) 400.02(7) Public involvement/community engagement

Public involvement is at the heart of NEPA, along with a systematic interdisciplinary approach. WSDOT strives to engage affected communities before, during, and after projects. This includes under-represented and under-served communities. The goal is to ensure all voices are heard, with an emphasis on the fair and meaningful involvement all people. FHWA and FTA's regulations reinforce the idea that public involvement is essential to the project development process (23 CFR 771.105(d)).

For projects requiring an EA or EIS, NEPA and SEPA require notification and circulation of environmental documents to allow consideration of public input before decisions are made. Lack of public notice can justify an appeal of the procedural aspects of NEPA and SEPA processes and delay projects.

For exempt projects (Categorical Exclusions (CEs)), there are no public notice requirements for NEPA or SEPA, but open houses, newsletters, and other virtual or in person public outreach are encouraged for any transportation projects. The project's complexity and/or level of controversy should be used to judge the right amount of public involvement.

WSDOT's agency guidance on public involvement is detailed in *Design Manual* Exhibits 210-1 through 210-4 and in WSDOT's Community Engagement Plan.

400.02(8) WSDOT internal roles and responsibilities

See the NEPA/SEPA Documentation Roles and Responsibility Table for a summary of WSDOT and FHWA NEPA/SEPA agency and staff roles and responsibilities.

Projects with WSDOT as the Lead Agency

When WSDOT is the lead agency, the region and modal offices lead the project, manage the process, and conduct the analysis. ESO supports the region and modal offices by developing policies, programs, and initiatives to implement the agency's environmental policy and to assist with project delivery.

The ESO Director is the Responsible Official for all NEPA EIS/EAs and SEPA EISs in draft, final, supplemental and adoption formats. This applies to all projects where WSDOT is the lead agency, including ferry and rail projects.

Projects with a Local Public Agency as the Lead Agency

Local Programs Office oversees the distribution of federal funds to cities and counties. The Local Programs office reviews NEPA environmental documents submitted by local governments for approval by FHWA. The *Local Agency Guidelines* M 36-63 provides more details on NEPA and SEPA procedures for local government projects.

400.03 Identifying the type of environmental document

Projects are classified for environmental review during Project Scoping (See Chapter 300). This process is documented using WSDOT's Environmental Review Summary (ERS) for WSDOT-led projects. Local agency scoping is handled differently, according to each local jurisdiction's process. Chapter 300 contains a detailed description of the NEPA and SEPA classification systems. The NEPA or SEPA classification reflects the level of potential environmental impact or controversy and controls the type of environmental document as shown below.

- Class I projects require an EIS and result in a Record of Decision (ROD).
- Class II projects are Categorically Excluded from the NEPA process or Categorically Exempt from the SEPA process. For FHWA projects, NEPA Categorical Exclusions are documented with WSDOT's Environmental Classification Summary (ECS) form. FTA and FRA use CE worksheets to document their decisions – WSDOT staff complete these worksheets for FTA/FRA review. For local agency projects see the *Local Agency Guidelines* M 36-63. If you need access to the appropriate form to document a NEPA CE contact the ESO NEPA/SEPA staff.
- Class III projects require a NEPA EA or a SEPA checklist to determine project impacts. Depending on level of impact indicated by these documents, an EA results in a Finding of No Significant Impact (FONSI) or an NOI to develop an EIS (if project impacts are found to be significant). Similarly, under SEPA, a SEPA checklist leads to a Determination of Non-Significance (DNS), or a Determination of Significance (DS) and Scoping Notice to draft an EIS. (WAC 197-11-315).

Over the years, WSDOT, Ecology, and the legislature have worked to align transportation project CEs under SEPA with FHWA's NEPA CEs. However, some project development actions that are excluded from NEPA review may still require SEPA review. Likewise, some actions categorically exempt under SEPA may require additional documentation for the NEPA process.

400.04 NEPA/SEPA procedures and recent changes

WSDOT's procedures supporting these policies can be found on the NEPA & SEPA webpage. Project teams should follow the direction in this manual and follow the online procedures. The webpage allows the reader to follow a step-by-step process for completing NEPA and SEPA documentation.

NEPA for transportation projects often changes with each reauthorization of federal surface transportation acts. Over the last 20 years, Congress has focused on streamlining environmental review to expedite transportation projects. USDOT agencies then update their implementing regulations, policies, and guidance. WSDOT's NEPA/SEPA program updates our manual and websites to reflect the changes in federal law.

In July 2020, CEQ comprehensively updated its NEPA regulations (40 CFR 1500-1508). In the proposed rulemaking (Federal Register Document 2019-28106), CEQ described the effort as intended to facilitate "more efficient, effective, and timely NEPA reviews by Federal agencies by simplifying regulatory requirements, codifying certain guidance and case law relevant to these proposed regulations, revising the regulations to reflect current technologies and agency practices, eliminating obsolete provisions, and improving the format and readability of the regulations". The final rule became effective September 14, 2020, and applies to all new NEPA efforts starting after that date. The new rule does not apply to NEPA efforts that were already underway before September 14, 2020.

Recent major changes to NEPA include creating a Coordinated Project Plan with all Participating Agencies, establishing a permitting timetable with a comprehensive schedule of completion dates, and tracking projects on a permitting dashboard. There are also several new limitations on judicial review, requiring that challenges be filed within two years of a ROD (compared to the default six-year limit), limiting litigants to only those that commented on the original NEPA, and requiring the courts to consider impacts of the court decision on jobs and the economy when issuing a project stay during litigation.

In 2022, CEQ revised its NEPA regulations to restore some of the basic elements of its 1978 NEPA regulations. One of these was restoring the requirement for federal agencies to evaluate all relevant environmental impacts of projects and decisions, including cumulative effects.

Note: WSDOT did not change its policies regarding cumulative effects after the 2020 rule went into effect. Instead, WSDOT continued to consider cumulative effects in NEPA documents (EAs and EISs).

The 2022 rulemaking is considered 'Phase 1' of revisions to the 2020 CEQ NEPA regulations. CEQ anticipates a 'Phase 2' to begin in late 2022 to continue revisions to its 2020 regulations. Phase 2 is expected to include rule changes that further support the current Administration's commitments to environmental justice and climate change.

400.05 Ensuring environmental document quality

NEPA requires agencies to disclose environmental impacts of their decisions in a way that is understandable to the public and to decision-makers. Your project's environmental document should be well written and technically accurate. Clear writing helps the public and agency reviewers understand the project and its impacts.

400.05(1) Document standards and Plain Talk

WSDOT's environmental documents follow the agency wide standards set in the *Communications Manual* M 3030. Documents prepared for external audiences, especially those that circulate to the public and agencies for review and comment, also must use the agency wide standards.

EISs and EAs should be as concise as possible. 40 CFR 1502.7 states that the text of a final EIS shall be 150 pages or fewer. Proposals of unusual scope and complexity shall be 300 pages or fewer unless a senior agency official of the lead agency approves in writing a statement to exceed 300 pages and establishes a new page limit. 40 CFR 1501.5(f) states that the text of a NEPA EA shall be no more than 75 pages, not including appendices, unless a senior agency official approves in writing an assessment to exceed 75 pages and establishes

a new page limit. Ecology's SEPA handbook states that SEPA EISs should not exceed 75 pages unless the proposal is of unusual scope or complexity, in which case it may not exceed 150 pages. Page limits serve as useful reminders that the objective is to summarize the relevant information and not to include every detail. The main body of the document should focus on what is relevant to the decision and include enough information to support the decision without having to refer to additional supporting materials. ***Note:*** These page limits apply only to text. Graphics, figures, and tables do not count toward the page limit for EAs and EISs (see FHWA memorandum and 40 CFR 1502.7).

Supporting materials for technical and legal reviewers, such as technical memos and discipline reports, correspondence, public and agency comments, etc., should be provided in the appendices, or incorporated by reference. Guidance for determining when, and procedures for how, to write discipline reports can be found on the NEPA & SEPA webpage.

The American Association of State Highway and Transportation Officials' (AASHTO's) Handbook on Preparing High-Quality NEPA Documents for Transportation Projects is an excellent resource. The handbook focuses on the preparation of EISs and EAs, but many of the tips in the handbook also apply to CEs.

Discipline reports, intended for specific technical audiences, do not need to adhere to the standard reader friendly format. However, they should be clearly written following the plain language principles (EO 05-03). ESO's NEPA Specialist has access to examples of reader friendly environmental documents and can provide those to others upon request. National examples of high-quality NEPA documents are posted on AASHTO's Center for Environmental Excellence.

400.05(2) Publication standard messages

Several standard messages must be included in all environmental documents to meet federal requirements. Standard messages include:

- Availability of environmental document
- Title VI information and policy
- Americans with Disabilities Act (ADA) information and policy

Consultant logos are not allowed in WSDOT environmental documents because those documents are owned by the agency.

400.05(3) Document accessibility

Section 508 of the Rehabilitation Act of 1973 (29 USC 794 d) requires state agencies that received federal funds to provide accessible websites and documents. There are currently no requirements to make graphics with NEPA documents Section 508 compliant. See Web Accessibility and Section 508 webpage for guidance on making webpages and pdfs accessible.

400.06 Using existing environmental documents

CEQ's NEPA regulations and SEPA rules allow the use of existing documents to reduce duplication and unnecessary paperwork (RCW 43.21C.034 and WAC 197-11-600). If an analysis has already been done for the proposed project or a similar project, use it if it is still up to date. Existing documents can be used in any of the following ways:

- Adoption (40 CFR 1506.3 and WAC 197-11-630)
- Addendum (40 CFR 1502.9 and WAC 197-11-625)
- Incorporation by Reference (40 CFR 1501.12 and WAC 197-11-635)
- Supplemental EIS (40 CFR 1502.9 and WAC 197-11-620)

400.06(1) Re-evaluations

1. **NEPA –** WSDOT conducts NEPA re-evaluations, in compliance with 23 CFR 771.129-130 and 2019 Joint NEPA Re-evaluation Guidance for FHWA, FRA and FTA, when it is necessary to determine whether existing documents adequately address environmental impacts of a project. It is important to have conversations early with the federal NEPA lead agencies to determine if a formal re-evaluation is required.

   In practice, WSDOT and FHWA re-evaluate the NEPA documentation when:

   - WSDOT re-evaluates NEPA documents if major steps to advance the action have not occurred within three years of the most recent Federal action. In other words, the three-year clock starts over every time FHWA takes an action. Following approval of the FHWA decision document (CE, ROD, or FONSI), WSDOT must consult with FHWA prior to further FHWA approvals (such as authority to undertake final design, acquisition of a significant portion of right of way, or approval of the PS&E) to determine if the NEPA document is still valid.
   - There is a substantial change in regulations, existing conditions, project scope, or proposed action, and it is uncertain if a supplemental environmental document is required. These changes will need to be addressed regardless of the time since the last FHWA approval. Examples include added access likely to require a review of the traffic, air quality and noise impacts, or shifts in alignment. Likewise, changes in ESA-listed species that are impacted by the project may create the need to develop a supplemental environmental document.
   - Major steps to advance the project (such as right of way or construction funding authorizations) have not occurred within three years of a ROD, FONSI, or issuance of the environmental document. Factors that may contribute to the need for a re-evaluation include an outdated traffic analysis (affecting the noise and air analysis) or wetland delineation.

   WSDOT or the federal NEPA lead can initiate a NEPA re-evaluation. FHWA will likely re-evaluate environmental documentation at key points of the project development: Final Design, Right of Way Acquisition, and Construction. The FHWA Area Engineer may make an informal note to the project file or request that the project office complete a formal re-evaluation.

For CEs, project changes can typically be documented with a new categorical exclusion.

There is no required format for a written re-evaluation. Check with the federal NEPA lead to ensure you are following their procedures.

For FHWA, re-evaluations can be documented with a letter, memo, or in the ERS/ECS database within the Environmental Documentation tab (when printed, Part 2 of the ECS form will identify the document as a reevaluation). When determining which method to use, consider how much explanation is needed, how extensive the changes are, and whether action has already been taken on the project (e.g., acquisition). Answers to relevant questions in a NEPA re-evaluation should be brief and to the point. A two to three sentence explanation may be adequate. However, project teams should incorporate as much additional information as required to explain changes in environmental impacts and support conclusions.

The re-evaluation needs to address all the environmental elements and how the impacts have or have not changed. If there are changes, the supporting updated analysis is attached to the re-evaluation showing that the new impacts are not adverse (or significant). One of the purposes of the re-evaluation is to demonstrate for the administrative record, if appropriate, that there is no need for a supplemental document and to ask the federal lead agency if they concur. Federal review and approval of the re-evaluation document is required.

A re-evaluation is not a supplemental environmental document. If supplemental information is required by the FHWA Area Engineer, a re-evaluation cannot be used.

2. **SEPA –** (WAC 197-11, WAC 197-11-600(4), 197-11-620) SEPA requires a re-evaluation if changes occur to a project or its surroundings, or if potentially significant, new, or increased adverse environmental impacts are identified during other phases of project development. SEPA has no specific requirements for re-evaluation. The region or modal office determines if the approved environmental document or exemption designation is still valid:
   - If the project changes and the analysis of new information does not change the significance of the project's impacts, the changes are noted in an addendum to the original environmental documentation or determination.
   - If project changes result in significant adverse environmental impacts, changes are documented with supplemental environmental information (i.e., through an EIS, or Supplemental EIS).

     The re-evaluation process is not used for CEs. Project changes are documented with a new categorical exemption or an addendum may be used if changes do not substantially change the analysis of significant impacts and alternatives and do not result in any new significant adverse impacts (WAC 197-11-600(4)(c) and 625).

400.06(2) Supplemental documents

Supplemental documents are drafted when existing environmental documents don't cover the full breadth or scope of impacts of a project. Supplemental documents are generally required (23 CFR 771.130 and 40 CFR 1502.9):

- When there is a substantial change in the project scope.
- If the project's selected alternative changes.
- When a new alternative outside the scope of the ones considered in the original analysis is being considered.
- When impacts or mitigation requirements have substantially changed since issuance of the environmental documents.

The FHWA Area Engineer or other federal lead will determine when a NEPA supplemental document is required. NEPA supplemental documents include a Supplemental DEIS (SDEIS) or Supplemental FEIS (SFEIS). A new DEIS may be warranted if, for example, there has been a fundamental change in the Purpose and Need. EAs can also be supplemented by following the same rules.

SEPA supplemental documents include a Supplemental EIS (SEIS), or an addendum to a DEIS or FEIS (WAC 197-11-620). Scoping is not required for a SEPA SEIS or supplementing and adopting an EA, but it is required for a new DEIS.

There is no required format for a supplemental NEPA EIS. Because the process is like that of an EIS, there is a Draft and a Final SEIS. However, the FHWA Technical Advisory T 6640.8A on pages 49 and 50 directs that the following information be supplied:

- Sufficient information to briefly describe the proposed action.
- The reason why the SEIS is being prepared.
- Status of a previous DEIS or FEIS.
- Only address changes that required the SEIS to be written and new information that was not available.
- Reference and summarize previous EIS as appropriate.
- Update status of compliance with NEPA and the results of any re-evaluations.

Supplemental environmental documents shall be reviewed and distributed in the same manner as the original DEIS. See the WSDOT NEPA & SEPA guidance webpage for guidance.

400.06(3) Using NEPA documents for SEPA

All WSDOT projects with a federal nexus must consider NEPA and SEPA documentation requirements. WSDOT's procedures align NEPA and SEPA so that WSDOT's NEPA documentation meets the requirements of SEPA. If a project does not trigger NEPA, then WSDOT will still need to comply with SEPA requirements using the direction in this chapter.

If a NEPA EIS is prepared, then a SEPA EIS is not required (RCW 43.21C.150 and WAC 197-11-610(3)). The NEPA EIS documentation satisfies all SEPA requirements and there is no need to formally adopt the NEPA EIS for SEPA. SEPA-only EISs for state transportation projects are very rare. Significant impacts are likely to involve federal permits or approvals, thus triggering NEPA.

A NEPA EA is the functional equivalent of the SEPA checklist. For SEPA compliance, we recommend WSDOT projects issue a DNS concurrent with the EA, but no separate SEPA checklist is necessary (WAC 197-11-610(2)). Any major changes that occur with the issuance of the FONSI must be reflected in the project file – a memo will suffice.

WSDOT uses the ECS form to document NEPA CEs. SEPA allows the lead agency to use NEPA documents instead of preparing a SEPA checklist (WAC 197-11-610(2)) - for WSDOT projects, the ECS is that document. If a project is a NEPA CE, complete the NEPA ECS form and no additional SEPA documentation is required. At the discretion of the project team, a SEPA checklist may be used to supplement the ECS form. The DNS, along with the ECS or a SEPA checklist, would then be sent out for public review as determined appropriate by the project team. See Section 400.08(2) for more information on SEPA checklists.

400.07 Documenting an Environmental Impact Statement (EIS)

An EIS is prepared for projects that are likely to significantly affect the environment or when there is substantial controversy on environmental grounds. The EIS process is similar for both NEPA and SEPA. See the NEPA & SEPA webpage for step-by-step guidance.

If you are considering using a Programmatic or Tier 1 EA/EIS for a broad strategic program, plan, or policy level decision (not project site-specific) make sure you discuss this in the NEPA Strategy Meeting with ESO.

400.07(1) Scoping process

To determine the scope of issues relating to a proposed action, a NEPA EIS must go through a scoping process (40 CFR 1501.9, 23 CFR 771, 23 CFR 771.123, WAC 197-11-408). Scoping is not required for a NEPA supplemental EIS; however, the co-lead agencies may decide to hold an open house early in the supplemental EIS process. Scoping may be helpful during the preparation of an EA, but it is not required.

The purposes of scoping are:

- To present the project Purpose and Need and solicit comments.
- To present the range of alternatives that will be considered in the environmental document and solicit comments.
- To initiate the public involvement process, invite, and solicit comments from affected persons, businesses, organizations, agencies, and tribes.
- To identify potential environmental impacts and benefits of the proposed action.
- Begin documenting the rationale for subsequent decisions.

It is important to keep in mind that USDOT funding or policy changes can change or add new requirements to NEPA. Guidance for how to design the scoping process and on new NEPA regulations is provided on the NEPA & SEPA guidance webpage.

Essential elements of scoping

1. **Notice of Intent (NOI) –** NEPA CEQ regulations require that an NOI to prepare an EIS be published in the Federal Register prior to initiating EIS scoping. Project teams may include the scoping notice in the NOI. Once complete, the federal lead sends the NOI to be published in the Federal Register. 40 CFR 1501.10 states that agencies shall complete EISs within 2 years unless a senior agency official of the lead agency approves a longer

period in writing and establishes a new time limit. Two years is measured from the date of the issuance of the NOI to the date a ROD is signed. Include a notice statement in the DEIS that a combined FEIS/ROD might be prepared.

2. **Coordination plan –** 23 USC 139(g)(1)(A) requires the development of a coordination plan for public and agency participation in, and comment on, the environmental review process. The coordination plan is developed no more than 90 days after publication of the NOI. 23 USC 139(g)(1)(B)(i) requires that a schedule for the completion of the environmental review process be included as part of the coordination plan. Concurrence on the project schedule from each of the project's participating agencies is required.

3. **Purpose and need statement –** The Purpose and Need Statement explains the importance of and reason for the project. It demonstrates problems that exist or will exist if a project is not implemented. The Purpose and Need Statement drives the process for alternative development, analysis, and selection. It should clearly demonstrate that a "need" exists and should define the "need" in terms understandable to the public such as mobility, safety, or economic development. WSDOT considers multimodal and environmental context and assets in a project's need.

   The lead agency makes the final decision on the project's Purpose and Need. However, they must provide opportunities for participating agencies and the public to comment on the Purpose and Need, and they must consider the input provided by these groups. The opportunity for involvement occurs during EIS scoping.

   FHWA guidance on developing a draft Purpose and Need statement is found on their Environmental Review Toolkit website. Also see AASHTO Practitioner's Handbook 07 on defining the Purpose and Need.

4. **Alternatives to the proposal –** The environmental document includes a comparison of impacts for different alternatives to the proposal. An EIS must discuss the No-Build alternative and a reasonable range of build alternatives that are feasible and meet the Purpose and Need for the proposed action.

   Although the lead agencies make the final decision on the project's range of alternatives, they must provide opportunities for involvement by participating and cooperating agencies and the public. The opportunity for involvement occurs during EIS scoping. Comments and responses are documented during the scoping process.

   The DEIS evaluates the alternatives to the action and discusses why other alternatives, that may have been initially considered, were eliminated from further study.

   a. **NEPA criteria for alternatives –** The No-Build alternative must be included and serves as the baseline condition for comparison of all other alternatives. The No-Build alternative may include improvements that have not been constructed but are already funded in a separate project. Normal maintenance activities (such as safety improvements) that are part of routine operation of an existing roadway also may be included. Alternatives must have logical termini, independent utility, and must not restrict consideration of alternatives for other reasonably foreseeable transportation improvements (23 CFR 771.111(f)). Typical alternatives may include:
      - Improvements to the existing facility.
      - Multimodal transportation alternatives.
      - Alternative routes and/or locations.

- A combination of the above alternatives.
- For guidance on alternative development, see FHWA Technical Advisory T 6640.8A.

b. **SEPA criteria for alternatives –** If a NEPA EIS is prepared, then a SEPA EIS is not required (RCW 43.21C.150 and WAC 197-11-610(3)). Still, it is useful to note that the SEPA Rules (WAC 197-11-440(5)) require an EIS to describe and present the proposal and other reasonable alternative courses of action. The use of the word reasonable is intended to limit the number and range of alternatives and the level of analysis required for each alternative. Reasonable alternatives include:

- Actions that could easily attain or approximate a proposal's objectives at a lower environmental cost, or decreased level of environmental degradation.
- The "no action" alternative, which shall be evaluated and compared to other alternatives.
- Alternatives over which an agency has authority to control impacts, either directly or indirectly, through requirement of mitigation measures.

5. **Evaluate scoping comments –** All scoping comments received from the public and other agencies must be evaluated to determine the relevance of each comment. All relevant issues must be addressed in the environmental document.

   Lead agencies are not required to send a written response to every individual comment received. However, to maintain credibility during the environmental process, all scoping comments – whether relevant or not – need to be evaluated and addressed.

   Comments may be listed individually or grouped and summarized under general headings. Responses may be as simple as stating that the issue will be addressed in detail in the environmental document. If an issue raised during scoping will not be addressed in the environmental document, the response should explain the reason why it will not be included.

   Comments received during scoping and responses to those comments may be documented in a scoping report for the project file. Discuss the scoping process and the comments received in the section of the environmental document that describes public and agency participation and comments received. Comments and responses may also be summarized in handouts at public meetings and in newsletters.

   Scoping comments must be taken into consideration before developing the final Purpose and Need Statement and the range of alternatives that will be evaluated in the environmental document.

400.07(2) Draft Environmental Impact Statement (DEIS)

A DEIS identifies project alternatives, which are compared to each other to present an analysis of the alternatives' relative impacts on the environment. It may identify a recommended course of action if one alternative is clearly preferred by the lead agency. The DEIS summarizes the early coordination and EIS scoping process, the alternatives considered and any analysis, identifies key issues, and presents pertinent information obtained through these efforts.

1. **Affected environment –** NEPA regulations (40 CFR 1502.15) require environmental documents to succinctly describe the existing environment of the area(s) to be affected or created by the proposed action. Descriptions should be no longer than is necessary for the reader to understand the relative impacts of the alternatives. Data and analysis should be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced.

   It is recommended that the description of the affected environment and the discussion of impacts and mitigation measures be combined in the same chapter of the environmental document.

2. **Analysis of impacts - Direct, Indirect, and Cumulative Effects –** Under CEQ regulations (40 CFR 1502.16) the discussion of impacts forms the scientific and analytical basis for a comparison of alternatives. The severity of potential impacts and the type, size, and location of the facility will dictate the scope of the impact analysis. Project teams may elect to complete discipline reports if additional information or technical detail is needed to support the analysis presented in the EIS or EA. These reports should be "right-sized" to adequately address the issue without over analysis. Guidance for completing a discipline report can be found on the WSDOT NEPA & SEPA webpage and on individual discipline webpages.

   The draft EIS should define the issues and provide a clear basis for choice among the alternatives (40 CFR 1502.14). Agencies shall:

   - Rigorously explore and objectively evaluate all reasonable alternatives.
   - Briefly discuss alternatives that were eliminated from detailed study and explain why they were dropped.
   - Devote substantial treatment to each alternative considered in detail, including the proposed action, so reviewers may evaluate their comparative merits.
   - Include a discussion of the no action alternative.
   - Identify the agency's preferred alternative or alternatives.
   - Include appropriate mitigation measures not already included in the proposed action or alternatives.
   - Evaluate all alternatives to a comparable level of detail. The lead agency may choose to develop the preferred alternative to a higher level of detail (23 USC 139(D)) if the preferred alternative has been identified in the document with FHWA/lead federal agency approval.

   FHWA allows flexibility in the level of design detail that can be added to a DEIS or FEIS. More detailed design may be necessary in order to evaluate impacts, mitigation, or issues raised by agencies or the public (FHWA Technical Advisory T 6640.8A Section V, Part E-G).

   The environmental document must discuss impacts on both the natural (air, water, wildlife, etc.) and built (historic, cultural, social, etc.) environment for each alternative. Impacts may be temporary, such as the short-term impacts associated with the Construction phase of a project, or permanent, such as the long-term impact of increasing runoff and contamination from a widened highway. A summary of adverse impacts remaining after mitigation should follow the discussion of all impacts.

NEPA and SEPA require analysis of direct, indirect, and cumulative effects. See Chapter 412 for guidance on analysis of indirect and cumulative effects. Climate change implications of the project should also be discussed, as appropriate. See the WSDOT cumulative effects & climate resiliency webpage for the most recent climate change guidance and contact information.

It's important to also document the project's beneficial effects and efforts to minimize impacts. It is recommended that the project team keep a list of adverse effects that were avoided or minimized as part of project development. As the team develops the EIS, make sure to document benefits associated with the project and clearly present them in the EIS.

3. **Mitigation of impacts –** The environmental document must discuss the proposed means to mitigate the identified environmental impacts. Mitigation may include:
   - Avoiding the impact altogether.
   - Minimizing impacts by limiting the scale of the action.
   - Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
   - Reducing or eliminating the impact over time by preservation and maintenance operations.
   - Compensating for the impact by replacing or providing substitute resources or environments.

4. **Publish and circulate the DEIS –** Circulation of a Draft EIS is required under federal and state regulations (23 CFR 771.123, WAC 197-11-455 and WAC 468-12-455). All copies sent out during the circulation of the DEIS are free of charge. After initial circulation, a fee may be charged which is not more than the cost of printing.

   The project office must distribute NEPA DEISs before the document is filed with the Environmental Protection Agency (EPA) for publication in the Federal Register. To ensure the document is distributed before filing, the documents should be distributed to the EPA at the same time it is distributed to the public and agencies. FHWA will post EIS projects to the permitting dashboard, as described in the Preparing an EIS procedure located on the WSDOT EIS/EA Processes webpage.

   The date of issuance/filing/publication of the DEIS, is the date that the EPA publishes its Notice of Availability (NOA). The date of the NOA is the date used to track the 45-day comment period.

5. **Public hearing –** Under NEPA, public hearings are required for all NEPA EIS projects.

   Under SEPA, public hearings are held when (WAC 197-11-502, 197-11-535, 468-12-510):
   - The lead agency determines that a public hearing would assist in meeting its responsibility to implement the purposes and policies of SEPA.
   - When two or more agencies with jurisdiction over a proposal make written requests to the lead agency within 30 days of the issuance of the draft EIS.
   - When 50 or more persons residing within a jurisdiction of the lead agency, or who would be adversely affected by the environmental impacts of the proposal, make written requests to the lead agency within 30 days of issuance of the draft EIS.

   Refer to *Design Manual* Chapter 210 for hearing requirements and procedures.

400.07(3) Final EIS (FEIS)

The FEIS contains WSDOT's final recommendation and preferred alternative(s), including analysis of alternatives; lists or summarizes (by group) the comments received on the DEIS, and WSDOT's response to them; summarizes public involvement; and describes procedures required to ensure that mitigation measures are implemented. The FEIS needs to identify specific mitigation commitments, or it needs to describe the process that will be used to finalize the mitigation commitments, why those commitments can't currently be finalized, and the time frame in which they will be finalized. The FEIS also documents compliance with environmental laws and Executive Orders.

Chapter 590 provides guidance on how to incorporate environmental commitments into project contracts. This is important for NEPA/SEPA commitments as well as regulatory permit commitments.

The estimated total cost of preparing both the DEIS and FEIS must be published inside the cover of the FEIS (40 CFR 1502.11). The estimate should include the costs of agency full-time equivalent personnel hours, contractor costs, and other direct costs. If practicable, and noted where not practicable, the estimate should include costs incurred by cooperating and participating agencies, applicants, and contractors.

The FEIS is prepared after the close of the 45-day public comment period for the DEIS. Public and agency comments on the DEIS are evaluated to determine if:

- The document sufficiently identifies and analyzes the impacts and mitigation of a proposed action or if additional studies are required.
- Impacts of the preferred alternative fall within an envelope of impacts for alternatives described in the DEIS (especially if a modified or hybrid alternative is selected as preferred).

1. **Review and publication of the FEIS –** The FEIS is reviewed for legal sufficiency (23 CFR 771.125(b)) prior to FHWA formal approval of the document. The review is conducted by FHWA legal staff. Legal counsel has 30 days to review the document, and additional time may be required to address their comments and determine if the revisions are acceptable. The document is reviewed for compliance with FHWA and CEQ NEPA laws and regulations to minimize opportunities for procedural challenges in court. Comments are incorporated into the text and the document is signed by WSDOT.

2. **Notice of Availability (NOA) and distribution of the FEIS –** After approval, the region or modal office distributes copies of the FEIS or a notice that it is available (40 CFR 1502.19(d), WAC 197-11-460).
    - A NEPA FEIS must be distributed before the document is filed with EPA for publication of the FEIS NOA in the Federal Register.
    - A SEPA FEIS is issued within 60 days of the end of the comment period of the DEIS unless the proposal is unusually large in scope, the environmental impact associated with the proposal is unusually complex, or extensive modifications are required to respond to public comments.

400.07(4) Record of Decision (ROD)

Under NEPA, the lead federal agency issues a ROD following the FEIS. The ROD explains the reasons for the project decision, summarizes any mitigation measures that will be incorporated in the project, and documents any required Section 4(f) approval (40 CFR 1505.2). The ROD must be made available to the public with appropriate public notice provided as required by 40 CFR 1506.6(b). However, there is no specific requirement for publication of the ROD itself, either in the Federal Register or elsewhere. It is WSDOT's practice to publish an NOA for the ROD in the same newspapers previously used for other project notices.

A draft ROD is generally created by WSDOT for FHWA and is written based on the FEIS. The draft ROD is submitted to FHWA along with the draft FEIS during the environmental review and approval process. See the NEPA & SEPA guidance webpage for procedures.

After circulation of the DEIS and consideration of comments received, the ROD should be combined with the FEIS into a single document (23 CFR 771.124), eliminating the 30-day review public review period between the final EIS and ROD, unless:

1. The FEIS makes substantial changes to the proposed action relevant to the environmental or safety concerns that were documented in the DEIS or

2. There are significant new circumstances or information relevant to environmental concerns that bear on the impact of the proposed action (as compared to the DEIS).

In April 2019, the USDOT issued guidance on the use of a combined FEIS/ROD and errata sheets for NEPA review. This assists with implementation of the combined FEIS/ROD process and errata sheet provisions in 49 USC 340a and 23 USC 139(n)(2).

400.08 Documenting an Environmental Assessment (EA)

400.08(1) NEPA Environmental Assessments (EA)

1. **Prepare the EA –** The purpose of the EA is to determine the extent and severity of environmental impacts. As described for an EIS, the EA should be succinct, describe impacts to both the natural and built environment, and account for direct, indirect, and cumulative effects. If the analysis identifies significant environmental impacts, an EIS must be prepared. Refer to the NEPA & SEPA webpage for additional guidance on preparing an EA.

    a. **Scoping –** Scoping is recommended, but not required for an EA (40 CFR 1501.9, 23 CFR 771.119). Because scoping is optional for an EA, an NOI is not required. Advertisement of the optional scoping meeting in a local newspaper or on the project website is sufficient. For more information on the project scoping process, see Chapter 300.

    b. **Alternatives to the proposal –** The environmental document includes a comparison of impacts for different alternatives to the proposal. An EA must discuss the No-Build alternative but may include only one build alternative.

2. **Issue Notice of Availability (NOA) –** (30 day public review period) After approval of an EA, the region or modal office distributes copies of the EA or a notice that an EA is available to interested parties (40 CFR 1506.6(b), WAC 197-11-460). We recommend project teams also issue a SEPA DNS concurrent with the release of the EA, since the EA functions as a SEPA checklist. ***Note:*** the SEPA DNS only has a 14-day comment period, but project teams may elect to extend that to 30 days to match the NEPA EA comment period. For procedures see the WSDOT NEPA & SEPA guidance webpage or contact the Environmental Services NEPA/SEPA Program for assistance.

   a. The lead agency determines if a formal public hearing is required for an EA. Factors for consideration:
      - There are identified environmental issues (e.g., heavy traffic volumes on local streets, visual quality), which should be discussed in a public forum.
      - WSDOT has a substantial interest in holding a hearing to further public comment and involvement.
      - An agency with jurisdiction over the proposal (permitting agency) requests a hearing.

3. **Finding of No Significant Impact (FONSI) –** The federal lead issues the FONSI. The FONSI describes why the action does not have a significant impact and that further environmental evaluation is not needed. It includes or references the EA and identifies any mitigation commitments on the project. The FONSI includes any decisions or agreements that led to the FONSI.

   The FONSI is issued by sending an NOA to affected resource agencies, tribes, and interested public. For procedures and timing considerations see the WSDOT NEPA & SEPA guidance webpage or contact the Environmental Services NEPA/SEPA Program for assistance.

4. **Time Limits –** 40 CFR 1501.10 states that agencies shall complete EAs within 1 year unless a senior agency official of the lead agency approves a longer period in writing and establishes a new time limit. One year is measured from the date of agency decision to prepare an EA to the publication of the EA or FONSI.

400.08(2) SEPA Checklist

If your project is subject to NEPA, then NEPA documentation satisfies WSDOT's SEPA obligations (see 400.06(3) Using NEPA documents for SEPA). If your project does not trigger NEPA, then you must determine the appropriate SEPA compliance path. WSDOT's ECS form may be used as a SEPA checklist. If a project team decides to use the SEPA checklist, refer to Ecology's guidance for completing the checklist on its website. At WSDOT, much of the information needed to complete the SEPA checklist can be found on the GIS – Environmental Workbench. Region and modal staff use GIS to answer the SEPA checklist questions.

Region and modal Environmental Managers review the ECS or SEPA checklist and determine the significance of project impacts. If the project's adverse impacts are minor, the region issues a DNS. If the project is likely to result in significant adverse environmental impacts, the agency issues a DS and begins scoping for an EIS (see Section 400.07). However, SEPA-only EISs are very rare. Projects with significant impacts are likely to involve federal permits or approvals, thus triggering NEPA.

Agency procedures for completing SEPA are listed in WAC 468-12. Those procedures, along with WAC 197-11, and RCW 43.21C define the SEPA process.

400.09 Categorical Exclusions/Exemptions (CEs)

CEs are defined as projects that do not individually or cumulatively have a significant environmental effect (see Chapter 300 for descriptions and detailed explanation). Some projects are Categorically Excluded from the NEPA process or Categorically Exempt from the SEPA process. NEPA and SEPA identify conditions that might elevate an action from its exempt status.

FHWA NEPA environmental procedures (23 CFR 771.117) describe conditions when otherwise excluded activities require further documentation to justify the exclusion. Likewise, Ecology conditions each category of exemption to describe when the exemption does not apply (WAC 197-11-800). Also, SEPA rules do not allow the use of certain exemptions in designated critical areas (WAC 197-11-908).

Within WSDOT, the authority to determine that a project meets the criteria/category of being a CE rests with the region or modal Environmental Manager, and the Local Program Environmental Engineer for Local Programs projects. A CE is documented in WSDOT's ECS database for highway projects. FTA and FRA use CE worksheets to document their decisions – WSDOT staff complete these worksheets for FTA/FRA review. Whereas FHWA has delegated some decisions regarding CEs to WSDOT, FTA and FRA have not and must sign the CE as a NEPA document.

400.09(1) NEPA CEs (Categorical Exclusions)

Categorical Exclusions are projects that, by definition (23 CFR 771.117(a)), do not have significant environmental impacts. WSDOT has a programmatic agreement with FHWA that allows WSDOT to approve NEPA Categorical Exclusions (23 CFR 771.117(c) or "c-list" projects and 23 CFR 771.117(d) or "d-list" projects). Projects with unusual circumstances as described in 23 CFR 771.117(b) require review and approval by FHWA.

D-list projects require some additional documentation to verify that the CE designation is appropriate. Subject-specific analysis should be "right-sized" to reflect the level of environmental impact. This can usually be accomplished within WSDOT's ECS form, or with a letter to the file with a very short summary of analysis to support the CE status. This analysis should be included in the project file and attached to the NEPA documentation.

Environmental documentation for c-list and d-list CE-level projects is accomplished in the ERS/ECS. A signed copy of the ECS serves as the official NEPA documentation for the project file. Guidance for completion of the form and who can sign the document is provided in ERS/ECS online "help". Contact HQ environmental staff for assistance if you do not have access to the ERS/ECS database.

Projects that include utility installations along or across a transportation facility are typically considered c-list projects covered by 23 CFR 771.117(c)(2), although FHWA requires verification of the CE for each installation. Within the interstate system these projects also require ESA and Section 106 documentation (*Utilities Manual* Section 120.12) that show no impacts to their respective resources will result from the project.

400.09(2) SEPA CEs (Categorical Exemptions)

There is no requirement to document exemptions in SEPA, but it is WSDOT's practice to document in the ECS form to ensure SEPA was considered. SEPA categorical exemptions are listed in SEPA law (RCW 43.21C) in the State SEPA Procedures (WAC 197-11-800), within the State SEPA Procedures under Agency Specific Procedures (WAC 197-11-860), and in WSDOT's Agency SEPA Rules (WAC 468-12-800). The region or modal Environmental Manager determines if a project is exempt from SEPA.

400.09(3) Emergencies

According to FHWA's Environmental Review Toolkit, *most* emergency work can be documented under a CE. The Toolkit section entitled *How is the NEPA Process different in an Emergency?* provides information on documenting emergency projects and repairs, both as a CE and if the action requires a higher level of review.

Many emergency repairs involve simple solutions that don't require permitting and won't impact sensitive resources. These may not even need a completed ECS form because they likely fall under various normal maintenance and repair programmatic agreements.

Many emergency repairs involve simple solutions that don't require permitting and won't impact sensitive resources. These may not even need a completed ECS form because they likely fall under various normal maintenance and repair programmatic agreements.

If there is an immediate threat to public health or safety, emergency repairs should begin as soon as it is safe to do so. Emergency repairs involving water resources (e.g., wetlands, creeks, rivers, and jurisdictional ditches) may require after-the-fact consultation and permitting once the imminent threat has subsided (e.g., landslide or undermined / lost roadway section). These activities can almost always be classified as CEs under 23 CFR 771.117(c)(9) or other applicable c-listed categories. This documentation often occurs after the event and after the repair is made.

Most Emergency Relief projects and emergency repairs qualify as a categorical exclusion under 23 CFR 771.117(c)(9), which includes the repair, reconstruction, restoration, retrofitting, or replacement of eligible facilities if the work:

- Occurs within the existing right-of-way.
- Conforms to the pre-existing design, function, and location as the original.
- Is commenced within two years of the date of disaster.

Emergencies may also prompt permanent repairs to restore the roadway to its pre-disaster condition (e.g., permanent restoration), which could involve other non-emergency actions like removing a fish barrier. This type of work may start after environmental documentation and permitting is complete.

In either of the scenarios above, the project team will consult with applicable local, state, federal, or tribal agencies to determine the appropriate path forward.

Although some repair actions qualify as NEPA CEs, the exclusion does not apply to other regulations such as the ESA, Section 106, the Clean Water Act, or Section 4(f). There are different criteria for each of these in emergency situations, where what constitutes an emergency varies based on the regulation. See the FHWA's Environmental Review Toolkit for more information.

400.10 Environmental document legal considerations

400.10(1) Statute of Limitations

1. **NEPA Statute of Limitations (SOL) –** 23 CFR 771.139 establishes a 150-day statute of limitations on claims against USDOT and other federal agencies for permits, licenses, or approval actions taken by a federal agency if:
   - The action relates to a highway project funded or approved by FHWA.
   - A statute of limitations notification was published in the Federal Register announcing the action.
   - The action is final under the federal law.

   If no statute of limitations notice is published, the period for filing claims is determined by the applicable Federal law. If no statute of limitations is specified, then a 6-year claims period applies.

   It is WSDOT's policy to publish a Statute of Limitations (SOL) notice in the Federal Register to expedite the resolution of issues affecting transportation projects. Typically, an SOL will be issued for all EISs and EAs. An SOL should also be issued for CEs that have known controversy.

2. **SEPA Notice of Action Taken (NAT) –** This is an optional process for the purpose of limiting potential court challenges of an environmental document. Publishing a NAT limits the appeal period to 21 days after the last newspaper publication of the NAT.

   WSDOT's practice is to publish a NAT any time there is reason to believe challenges to the environmental document will be filed. Substantial controversy or known threats of challenges by project opponents are indicators that judicial review is likely. By limiting appeals to a certain time period, project schedules are less likely to be disrupted. The decision to publish a NAT is made by the project office. Normally the Environmental Manager of a region or modal office will write and sign the NAT.

   RCW 43.21C.080 describes the process for publishing the NAT.

400.10(2) Administrative record

The administrative record is a formal catalogue documenting the agency's decision-making process for a project and is required when a project challenge will be resolved in the courts. It reflects the project history, environmental evaluation, and prior decisions. A good administrative record shows the public and the courts that project decisions were not made in an arbitrary and capricious manner. It is important to include electronic and paper records that support why project decisions were made, as well as agency and public comments and responses to comments to document how opposing views were considered.

Individuals (region, modal, and HQ environmental staff) who have participated in and supported decision-making should maintain electronic and paper files appropriately.

You must maintain the records that support your administrative decision before, or at the same time as, the decision. It is not appropriate to reconstruct a record after a decision is made. This section identifies the appropriate content and structure of an administrative record. More procedures and helpful guidance on maintaining an Administrative Record can be found on the NEPA & SEPA webpage.

1. **When to prepare a formal administrative record –** All projects must be documented to support key decisions. A formal administrative record must be prepared for projects requiring an EIS where substantial controversy exists or in the likelihood of a legal challenge. Formal documentation is optional for other projects.

   Project files on all projects should be kept in an orderly manner throughout the life of the project, whether an administrative record is prepared. As decisions are made on the project, they should be recorded and filed.

2. **Who prepares an administrative record –** Preparing an administrative record is a collaborative effort between the Attorney General's Office (AGO) and the WSDOT project team. In many cases the Federal Lead agency may also be named in a legal challenge, in which case the State's AG will work with the Federal agency's legal counsel to compile the administrative record. If the Federal agency is named as a defendant, the case will usually be defended by the US Attorney in Federal court. The AGs Office is ultimately responsible for defending our decisions in court. As such, project teams should give the AGO due deference in determining what should go into the record. Once documents are identified and organized by the project team, the AGO will determine the contents of the Administrative Record.

3. **Administrative record contents –** An administrative record should contain all federal, state, regional, or local actions. These include corridor approval, corridor adoption, design approval, and region-approved transportation master plans or programs. It may also contain other related material.

   Project teams can support the administrative record by:

   - Documenting the decisions on how it approached environmental review and the information that supported those decisions.
   - Including the name of the project in the subject line of emails related to the project.
   - Keeping track of your individual emails and files that show a change in direction for a project – you do not need to save every email about a project if it doesn't add substantive merit to the record (e.g., meeting logistics, side notes tacked onto an email string that aren't relevant to the subject matter of the communication). Although you must keep relevant information, it is okay to clean your email folders of items that are not substantive.
   - Retaining Substantive emails that contain direction on a course of action. These emails are public records – DO NOT DELETE THEM.
   - Realizing the project team is the focal point for retaining project records. (Keep in mind that public record requests are different from the administrative record.)

   The administrative record of an EIS should contain the following elements, as applicable, in chronological order:

   - Table of contents
   - Project prospectus
   - Environmental Classification Summary (ECS)
   - Regional transportation plans or studies
   - Route studies
   - Notice of Intent (NOI)
   - Minutes of EIS scoping meeting(s)

- Discipline specific and Interdisciplinary Team meeting minutes and recommendations
- Agency meeting minutes and phone call summaries
- Comments from public open houses
- Public hearing transcript
- Correspondence from agencies or the public and responses to them (both letters and emails)
- Interoffice communications relating to project development
- Discipline reports
- Draft and final EIS
- Copy of all references cited in the DEIS and FEIS
- Official notices
- Record of Decision (ROD)
- Corridor, design, and access plan approvals
- Affidavit of publication of Notice of Action Taken (NAT)
- Other relevant evidence such as local zoning or planning reports, government studies, questionnaires, or university studies

The administrative record need not include every item in the project file. Generally, items that do not relate to a major project decision should not be included. Project teams should consult with the Attorney General's Office to determine if the project will need an administrative record. If the AG's Office recommends that an administrative record be prepared, the project team should coordinate closely with an Assistant Attorney General when preparing the record.

400.10(3) Reporting Requirements

23 USC 157 requires lead agencies to report the number of CEs (c-list and d-list, separately), EAs, and EISs issued each year, as well as the number of d-list CEs, EAs, and EISs that were pending at the time of reporting, and the length of time it took to complete each EA and EIS. For EAs and EISs that were pending at the time of reporting, the lead agency must also report the percentage of the proposed actions that have identified funding and all other required federal, state, and local activities that are completed (i.e., only remaining approval is the approval of NEPA itself).

400.11 Applicable statutes and regulations

400.11(1) National Environmental Policy Act (NEPA)

President Nixon signed NEPA in January 1970 as the "national charter for protection of the environment" (PL 91 190, as amended). The intent of NEPA (40 CFR 1500 – 1508) is to help public officials make decisions that are based on an understanding of environmental consequences, and take actions that protect, restore, and enhance the environment. NEPA procedures also inform the public of the environmental information before federal actions or decisions are made.

NEPA implementing regulations applicable to all federally aided projects were developed by the CEQ and are codified as 40 CFR 1500 – 1508. FHWA regulations applicable to federally aided highway projects are codified as 23 CFR 771 and 23 USC 139.

400.11(2) Other Federal Environmental Statutes

In addition to NEPA, there are several other federal statutes that govern federal-aid highway projects. FHWA and other federal leads require documentation of compliance with the following laws prior to completing NEPA (i.e., approval of the ECS, or publishing a FONSI or FEIS) for a project.

1. **Endangered Species Act –** Section 7 of ESA requires federal agencies to confer with the US Fish and Wildlife Service or National Marine Fisheries Service (see Chapter 436 for details).
2. **Section 106 –** Section 106 of the National Historic Preservation Act applies to transportation projects affecting historic property listed on or eligible for listing on the National Register of Historic Places (see Chapter 456 for details).
3. **Section 4(f) Evaluation –** Projects requiring funding or approval from a USDOT agency must comply with Section 4(f) of the USDOT Act of 1966 which established the requirement for consideration of park and recreational lands, wildlife and waterfowl refuges, and historic sites when siting transportation facilities. The law, codified in 49 USC 303 and 23 USC 138, is implemented by the FHWA through 23 CFR 774 (see Chapter 457 for details).
4. **Section 6(f) –** Outdoor Recreation Resources – Section 6(f) of the Land and Water Conservation Fund (LWCF) Act of 1965 prohibits the conversion of property acquired or developed with LWCFA grant funds to a non-recreational purpose without the approval of the NPS (see Chapters 455 and 457 for details).
5. **Title VI –** Under 49 CFR 21.5 a recipient may not select a site or location of a facility if the purpose of that selection, or its effect when made, is to exclude individuals from participation in, to deny them the benefits of, or to subject them to discrimination under any program or activity to which this rule applies, on the grounds of race, color, or national origin.

400.11(3) State Environmental Policy Act (SEPA)

SEPA (RCW 43.21C), adopted in 1971, directs state and local decision makers to consider the environmental consequences of their actions. State SEPA Rules are maintained by the Washington State Department of Ecology (Ecology). The SEPA Rules (WAC 197-11), and Ecology's guidance, the SEPA Handbook, are posted on the Ecology SEPA webpage.

The WSDOT's Agency SEPA procedures (WAC 468-12, as amended) are located at the Office of the Code Reviser website.

400.12 Abbreviations and acronyms

AASHTO	American Association of State Highway and Transportation Officials
CE	Categorical Exclusion (NEPA) or Categorical Exemption (SEPA)
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
Corps	United States Army Corps of Engineers
DEIS	Draft Environmental Impact Statement (NEPA/SEPA)

DNS	Determination of Non-significance (SEPA)
DS	Determination of Significance (SEPA)
EA	Environmental Assessment (NEPA)
EIS	Environmental Impact Statement (NEPA/SEPA)
EPA	Environmental Protection Agency
ERS/ECS	Environmental Review Summary / Environmental Classification Summary
ESA	Endangered Species Act
ESO	Environmental Services Office
FAA	Federal Aviation Administration
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FONSI	Finding of No Significant Impact (NEPA)
LWCF	Land and Water Conservation Fund Act
MOU	Memorandum of Understanding
NAT	Notice of Action Taken (SEPA)
NEPA	National Environmental Policy Act
NPS	National Park Service
NOA	Notice of Availability (of a NEPA document)
NOI	Notice of Intent (to prepare a NEPA EIS)
OFD	One Federal Decision
PEL	Planning and Environmental Linkages
RCW	Revised Code of Washington
ROD	Record of Decision (NEPA)
SDEIS	Supplemental Draft Environmental Impact Statement (NEPA/SEPA)
SEIS	Supplemental Environmental Impact Statement (NEPA/SEPA)
SFEIS	Supplemental Final Environmental Impact Statement (NEPA/SEPA)
SEPA	State Environmental Policy Act
USC	United States Code
USCG	United States Coast Guard
USDOT	United States Department of Transportation
USFS	United States Forest Service
WAC	Washington Administrative Code

400.13 Glossary

Categorical Exclusion/Exemption – An action that does not individually or cumulatively have a significant environmental effect, as defined in NEPA/SEPA regulations, and is classified as excluded (NEPA) or exempt (SEPA) from requirements to prepare an EA/SEPA checklist or EIS. See Sections 300.04 and 300.05.

Cumulative Effect – Effects on the environment that result from the incremental effects of the action when added to other past, present, and reasonably foreseeable actions, regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.8). See Chapter 412 for additional guidance on cumulative effects.

Degree (of Significance) – In considering the degree of the effects, consider:

- Short- and long-term effects.
- Beneficial and adverse effects.
- Effects on public health and safety.
- Effects that would violate Federal, State, Tribal, or local law protecting the environment.

Direct Effect – Direct effects are caused by the proposed action and occur at the same time and place. Direct effects may occur during construction or operation of the project. Effects may be ecological, aesthetic, historic, cultural, economic, social, or health related. (40 CFR 1508.8).

Discipline Report – A detailed WSDOT report or memo to document the environmental analysis in the rare cases where the environmental impacts are so substantial, the required analysis is so complex, or the pertinent dataset is so large, that the analysis cannot reasonably be included within the environmental document. A discipline report is typically included in the appendix of the environmental document. A discipline report may also be written if the subject specific analysis is needed to support some other permit or approval requirement independent of the NEPA/SEPA process.

Effects (or Impacts) – Changes to the human environment that are from the proposed action or alternatives that are reasonably foreseeable, including direct effects, indirect effects, and cumulative effects. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effects will be beneficial. (40 CFR 1508.1).

Environmental Document – Includes documents prepared in response to state and federal environmental requirements such as: Environmental Impact Statements (NEPA and SEPA), Environmental Assessments (NEPA), SEPA Threshold Determinations (DS, DNS, and MDNS) and associated SEPA checklists, Section 4(f) Evaluations, Section 106 Reports, Environmental Justice Reports, and other documents.

Environmental Review – Is the consideration of environmental factors required by NEPA and SEPA. The "environmental review process" is the procedure used by agencies and others to consider the environment in decision making.

Federal Nexus – A determination that a federal agency:

- Is a proponent of a specified proposal (usually by providing funding)
- Must issue a federal approval (for example a permit, license, or other entitlement such as a request to use federal funds or federal land) for the proposal to proceed.

A federal nexus (even on an otherwise non-federal proposal) typically triggers the need for the federal agency or agencies to comply with various federal statutes. These include but are not limited to NEPA, Section 106 of the National Historic Preservation Act, Section 4(f) of the USDOT Act, Section 6(f) of the LWCF Act, and Section 7 of ESA.

Indirect Effect (NEPA) – Indirect effects are caused by the proposed action or alternative and occur later in time or are farther removed in distance but are still reasonably foreseeable. Indirect effects may include effects related to changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8). See Chapter 412 for additional guidance on indirect effects.

Logical termini – Logical termini for project development are defined as (1) rational end points for a transportation improvement, and (2) rational end points for a review of the environmental impacts. The environmental impact review frequently covers a broader geographic area than the strict limits of the transportation improvements.

Mitigation – NEPA (40 CFR 1508.20) and SEPA (WAC 197-11-768) mitigation means avoiding, minimizing, rectifying, rehabilitating, restoring, reducing or eliminating the environmental impact over time by preservation and maintenance operations during the life of the action. Mitigation can also mean compensating for the impact by replacing or providing substitute resources or environments for those impacted by the project.

Planning and Environmental Linkages (PEL) – A collaborative and integrated approach to transportation decision-making that (1) considers environmental, community, and economic goals early in the planning process, and (2) uses the information, analysis, and products developed during planning to inform the environmental review process. See Chapter 200 and the Environmental Guidance for Planning Studies webpage for additional PEL guidance.

Potentially Affected Environment – The affected area (national, regional, or local) and its resources, such as listed species and designated critical habitat under the Endangered SpeciesAct.

Practical Solutions – An approach to making project decisions that focuses on the specific problems the project is intended to address. This performance-based approach looks for lower cost solutions that meet outcomes that WSDOT, partnering agencies, communities and stakeholders have identified. With practical solutions, decision-making focuses on maximum benefit to the system, rather than maximum benefit to the project. Focusing on the specific project need minimized the scope of work for each project so that system-wide needs can be optimized. For additional information see *Design Manual* Chapter 1100 and the WSDOT Practical Solutions webpage.

Purpose and Need – The Purpose and Need statement explains to the public, decision makers, and stakeholders why the project should be implemented. The Purpose and Need statement is the foundation for determining which alternatives will be considered.

Reasonable Alternatives – Reasonable range of alternatives that are technically and economically feasible and meet the purpose and need for the proposed action. (40 CFR 1508.1)

Responsible Official – Official of the lead agency who has been delegated responsibility for complying with NEPA and SEPA procedures.

Scoping (public and agency scoping) – A formal process for engaging the public and agencies to comment on the project Purpose and Need statement, identify the range of alternatives, environmental elements and impacts, and mitigation measures to be analyzed in an EIS or an EA. It should not be confused with internal scoping to set a project's budget.

SEPA Checklist – A standard form used by state and local agencies to obtain information about a proposal and to assist them in making a threshold determination. It includes questions about the proposal, its location, possible future activities, and questions about potential impacts of the proposal on each element of the environment. The SEPA rules under WAC 197-11-960 list the information required in an SEPA checklist.

Significant Impact – Under NEPA (40 CFR 1501.3), agencies must analyze the potentially affected environment and degree of the effects of the action. Significance varies with the setting of the proposed action (i.e., the potentially affected environment). For instance, in the case of a site-specific action, significance would usually depend only upon the effects in the local area. Consider:

- The type, quality, and sensitivity of the resource involved.
- The location of the proposed project.
- The duration of the effect (short or long term).
- The setting of the proposed action and the surrounding area.

Under SEPA, WAC 197-11-330 specifies a process, including criteria and procedures, for determining whether a proposal is likely to have a significant adverse environmental impact.

Threshold Determination (SEPA) – The threshold determination process is the process used to evaluate the environmental consequences of a proposal and determine whether the proposal is likely to have any "significant adverse environmental impacts." The SEPA lead agency makes this determination and documents it as either a DNS, or a DS. A DS requires preparation of an EIS. State and local agencies use the SEPA checklist (see above) to help make a threshold determination.

Tribal Consultation – As defined in WSDOT Executive Order E 1025, tribal consultation means respectful, effective communication in a cooperative process that works towards a consensus, before a decision is made or action is taken on actions that affect identified tribal rights and interests.

Chapter 412 Indirect and cumulative effects

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412.01 Introduction

This chapter provides the policy direction regarding the assessment of indirect and cumulative effects for projects requiring a NEPA environmental assessment (EA) or a NEPA/SEPA environmental impact statement (EIS). This chapter also contains WSDOT's policy regarding the consideration of climate change as a cumulative effect. Find direction regarding Endangered Species Act indirect effects and cumulative effects in Chapter 436.

NEPA requires that any agency proposing a major federal action that may significantly affect the environment, consider the environmental impacts of the proposed action, any unavoidable adverse environmental impacts, and the relationship between local short term uses and long-term productivity of the environment (42 U.S.C. § 4332(c)). 40 CFR 1508.1(q) provides definitions and criteria for major federal actions.

SEPA rules direct state agencies to identify and evaluate probable impacts, alternatives and mitigation measures, emphasizing important environmental impacts and alternatives (including cumulative, short-term, long-term, direct and indirect impacts).

The CEQ NEPA regulations require federal agencies to evaluate three types of effects in environmental reviews: (i) direct effects, which are "caused by the action and occur at the same time and place;" (ii) indirect effects, which are "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable;" and (iii) cumulative effects, which result from "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions".

Indirect effects should be considered as part of direct effects for all projects. Cumulative effects analysis is required only for EAs and EISs. Projects or activities that are categorically excluded do not have the potential for significant impacts and therefore do not trigger a cumulative effects analysis.

Exhibit 412-1 Highlights the distinctions between direct, indirect and cumulative

Distinctions between direct, indirect, and cumulative effects			
Type of Effect	**Direct**	**Indirect**	**Cumulative**
Nature of effect	Typical, predictable	Reasonably foreseeable, probable	Reasonably foreseeable
Cause of effect	Project	Project's direct effects	Project's direct and indirect effects *together with* effects of other activities
Timing of effect	Project construction and implementation	At some future time after direct effects	Past, present, or in the future
Location of effect	Within project impact area	Within boundaries of systems affected by project	Within boundaries of systems affected by the project

Adapted from: *NCHRP Report 403, Guidance for Estimating the Indirect Effects of Proposed Transportation Projects* (1998), reprinted in AASHTO Practitioner's Handbook #12 (2016)

412.01(1) Recent changes

On September 14, 2020, new federal NEPA implementing regulations took effect (see Chapter 400). The 2020 CEQ NEPA rules eliminated the terms indirect effects and cumulative impacts. The revised regulations repealed the prior definition of "cumulative impacts" and limited the consideration of effects to those "that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives". **Despite this 2020 rule change, WSDOT's management direction has been to continue considering cumulative effects in NEPA documents (EAs and EISs).**

In 2022, CEQ revised its NEPA regulations to restore some of the basic elements of its 1978 NEPA regulations. One of these was restoring the requirement for federal agencies to evaluate all relevant environmental impacts of projects and decisions, including cumulative effects. The 2022 rulemaking is considered 'Phase 1' of revisions to the 2020 CEQ NEPA regulations. CEQ anticipates a 'Phase 2' to begin in late 2022 to continue revisions to its 2020 regulations. Phase 2 is expected to include rule changes that further support the current Administration's commitments to environmental justice and climate change.

At the state level, WSDOT has new direction as a result of the passage of Senate Bill 5141, known as the Health Equity for All (HEAL Act). Project teams should follow the direction in Chapters 458 and 460 regarding the use of the Environmental Health Disparity tool and consider cumulative human health effects. Environmental justice is an important topic that should be considered during the assessment of direct, indirect, and cumulative effects.

412.02 Applicable statutes, regulations, & executive orders

412.02(1) Federal

- National Environmental Policy Act (NEPA), 42 USC Section 4321. 42 USC 4332(c) re: relationship to long term productivity of the environment
- CEQ NEPA Implementing Regulations – 40 CFR 1500 - 1508 (***Note:*** WSDOT refers to the 1978 version)
- FHWA and FTA Rules – 23 CFR 771

412.02(2) State

- State Environmental Policy Act (SEPA), RCW 43.21C, and RCW 43.21C.031.
- SEPA implementing regulations are WAC 197-11-792 and WAC 197-11-060(4).
- RCW 70A.02 Environmental Justice, also referred to as the HEAL Act.

412.02(3) Local

- N/A

412.03 Considerations during project development

412.03(1) Planning

Chapter 200 explains how planning projects (any pre-NEPA plan) can consider environmental issues. Cumulative effects include long-term issues like climate change and land use conversion. These issues can be effectively considered at a planning level to inform the proposed solutions.

412.03(2) Scoping

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. For example, a pattern of development in the flood plain, increased flooding, and concerns surrounding future climate change projections.

412.03(3) Design

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.

412.03(4) Construction

- N/A

412.03(5) Maintenance and Operations

- N/A

412.04 Analysis & documentation requirements

412.04(1) Right size to classification (CE, EA, EIS)

Indirect effects

Any project regardless of NEPA classification may have indirect effects. These should be assessed and described alongside direct effects. This is consistent with both the 1978 and the 2020 versions of the CEQ NEPA regulations. WSDOT project teams should follow the AASHTO's guide "*Practitioner's Handbook #12: Assessing Indirect and Cumulative Impacts under NEPA*."

Cumulative effects

The level of the environmental document being prepared will dictate whether a cumulative effects analysis should be prepared. If so, the scope of the cumulative effects analysis should be limited to those resources that are directly affected by the proposed action. If a project will not impact a resource, it will not contribute to a cumulative effect on the resource. The one exception to this is climate change impacts. Regardless of project impacts, WSDOT's EAs and EISs should include a discussion of climate change, see below.

- **Categorical Exclusion (CE): Not Required –** These projects are by definition minor projects without significant environmental impacts, and as such should not require a cumulative effects analysis. There may be unusual circumstances requiring such an analysis, but this should be very rare.
- **Environmental Assessment (EA): Required –** These are projects in which the significance of environmental impacts is unknown. As one of the primary purposes of the EA is to help decision makers and the public understand whether an EIS is needed, you need to consider potential cumulative effects. The degree to which resources may be impacted will determine the extent of the cumulative effects analysis needed. Where direct and indirect effects are found to be present, you will need to complete a cumulative effects analysis.
- **Environmental Impact Statement (EIS): Required –** These are projects in which there are anticipated significant environmental impacts, and a cumulative effects analysis may assist decision makers and the public in making informed decisions. The cumulative effects analysis should include substantial information about affected resources, past actions that have contributed to trends, and reasonably foreseeable effects.

412.04(2) Analysis & Methodology

Indirect effects should be documented with the direct effects. It is not necessary to document the indirect effects separately.

The NEPA project lead determines the approach for documenting cumulative effects. Options are to:

1. Prepare a separate chapter or section on cumulative effects.
2. Integrate the disclosure of cumulative effects within the individual discipline studies and report within those chapters or sections.

In either case, a separate cumulative effects discipline report or technical memo may help to keep the document size to a minimum.

As explained in the SEPA Handbook, "When describing the environmental impacts of a proposal, the lead agency should consider direct, indirect, and cumulative impacts. For example:

- A new residential development may propose to place fill in a wetland in order to construct a road (a direct impact).
- The new road may encourage increased development in the area because of the improved access (an indirect impact). *[Note that if the development is already forecast by a locally approved plan, the road project is not inducing the growth, but the relationship can be noted.]*
- Increased runoff and contaminants from the development would be added to the volumes and levels of contamination from similar developments surrounding the wetland (cumulative impacts)."

Recommended resources

WSDOT is following the 1978 CEQ NEPA regulations with regard to indirect and cumulative effects analysis.

WSDOT project teams should use the AASHTO guidance for cumulative effects analysis. AASHTO's guide "Practitioner's Handbook #12: Assessing Indirect and Cumulative Impacts under NEPA" recommends five general stages, and five analytical steps:

I. Information gathering

II. Initial assessment of cumulative effects

III. Determining the scope and methodology (count what counts)

IV. Conducting the analysis

   1) Describe resource conditions and trends

   2) Summarize proposed project's effects on key resources

   3) Describe other actions and their effects on key resources

   4) Estimate combined effects

   5) Consider minimization and mitigation (be sure to reflect the distinction between the proposed action and other actions)

V. Documentation

WSDOT has useful information in GIS on several topics, including climate change and natural hazards. Local agencies maintain land use information as well as emergency management plans that contain valuable information on flooding and other natural hazards. Transportation planners can reach out to locals, tribes, and representatives from traditionally underrepresented, underserved, and overburdened communities to find out what issues are of most concern. The State Department of Health's Environmental Health Disparities tool is a great resource.

Indirect effects

Any project, regardless of NEPA classification, may have indirect effects. These should be assessed and described alongside direct effects. This is consistent with both the 1978 and the 2020 versions of the CEQ NEPA regulations.

Analysis of indirect effects is needed when effects are reasonably foreseeable and have a reasonably close causal relationship to the proposed action. A separate indirect effects analysis is not recommended, except in rare cases when a project is likely to cause otherwise unplanned changes in land use patterns.

Most indirect effects are derived from project-related changes in land uses. Under the Growth Management Act, land use changes are controlled by local planning decisions. However, indirect effects may be associated with a transportation project if the project affects the rate and pattern of land use development. For example, if WSDOT constructs a bypass route around a town, the rate of planned growth around the new route may increase. WSDOT's projects should consider the potential indirect effects, including whether there is a likelihood that development and economic vitality along the original route may decline. Other examples of indirect effects include changes in wildlife habitat selection or migration patterns due to direct project-related effects on habitat, for example – increased park use due to improved access.

It is very important to determine if the project is likely to support planned land use. Ask whether the project will alter the type, rate, or timing of planned growth. Consider whether there is potential for indirect effects on either the natural or the human environments (including environmental justice populations).

To evaluate the potential for indirect effects, consider the likelihood of development in the project area following project construction. Carefully examine the land use discipline study for your project (See Chapter 455 for land use analysis). Consider the following:

- Look at population and land use trends in the project area and region or subarea. How has the area developed? How fast is it planned to develop? Will the project affect the rate of development? Are people building in the area? Look at the pattern of zoning. Has it recently changed or is it about to change?
- Review the local comprehensive plans. Is the project area within the urban growth boundary or outside it? Is the local jurisdiction considering changes in the urban growth boundary to allow for growth or are they concentrating on infill? Confirm that the proposed project is aligned with the transportation element of the plan. Would the transportation project support other modal decisions contained within adopted plans? Do the city planners expect the project to support or encourage development?

Document your conclusion and describe the indirect effects associated with the proposed action. If your project is likely to induce growth that is not planned, refer to AASHTO's guide "Practitioner's Handbook #12: Assessing Indirect and Cumulative Impacts under NEPA" for direction and national best practices.

Cumulative effects

For EAs and EISs, potential cumulative effects should be considered as early as possible in the NEPA process. Use information from existing environmental documents and other relevant information such as natural resource plans, local comprehensive plans, existing zoning, recent building permits, and interviews with local government. These may also be good sources for information on past actions.

Quantifying cumulative effects may be difficult, since a large part of the analysis requires projections about what may happen in a project area. The analyst must develop a list of reasonably foreseeable future actions taken by governmental and private entities. We recommend coordinating with the authors of the social, environmental justice, and land use and transportation studies to capture the information they have on future actions. Coordinate your outreach to other agencies and the public so that you understand the likely future context for the project and the surrounding area.

A cumulative effect analysis builds upon information derived from direct and indirect effect. This makes it tempting to postpone the identification of cumulative effects until the direct and indirect effect analyses are well under way. However, early consideration of cumulative effects may facilitate the design of alternatives to avoid or minimize impacts. Do not defer the consideration of cumulative effects. Instead, as you begin to consider a project's potential direct and indirect effects, start outlining the potential cumulative effects as well. As more information about direct and indirect effects becomes available, use it to further refine the cumulative effects analysis. If you determine that cumulative effects are not an issue, document that decision along with the reasons for the decision.

Climate Change and Greenhouse Gases

WSDOT developed the nation's first DOT project-level guidance for GHG analysis and climate change in 2009. WSDOT's direction is scaled to the NEPA classification; project-level NEPA Environmental Impact Statements and Environmental Assessments must disclose project-level greenhouse gas (GHG) emissions and consider ways to address extreme weather and potential climate threats.

Greenhouse gases – The emission of greenhouse gases (such as carbon dioxide) and issues related to global climate change should be discussed in environmental assessments and environmental impact statements as a cumulative effects. The discussion should include efforts currently underway in Washington State to reduce GHG emissions and the effects of current projects on GHG emissions (see the Addressing climate change webpage. Find also more information in the Air Quality, Greenhouse Gases, Energy Chapter 425).

Climate change & project resilience – Project teams are expected to examine available information about climate trends and to use the results of WSDOT's assessment of vulnerable infrastructure. By doing this, project teams will satisfy WSDOT's directive to consider ways to make their proposed projects more resilient to future climate impacts and severe storm events. Past trends for a specific resource (water, habitat, air) may not be accurate predictions for the future; instead, we need to look at science-based projections of the changing climate as part of our analysis of cumulative effects. WSDOT advises project teams to use the current climate projections available from the University of Washington's Climate Impacts Group in combination with the WSDOT Climate Impacts Vulnerability Assessment (completed

November 2011) and *WSDOT's Guidance for Project-Level Climate Change Evaluations*, or contact WSDOT's NEPA/SEPA Program Manager.

Endangered Species Act

The Endangered Species Act (ESA) requires consideration of cumulative effects as part of the Section 7 consultation process but defines cumulative effects differently than NEPA. Under the ESA, cumulative effects include "those effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation" (50 CFR § 402.02). This definition differs from the NEPA/SEPA definition in two key ways: (1) only "future state or private activities" are considered, and (2) the impacts must be "reasonably certain" to occur, not just reasonably foreseeable. The distinction between general and ESA definitions should be taken into account when preparing cumulative effects analyses that are intended to serve both laws.

412.04(3) Required documentation for cumulative effects

WSDOT projects that are preparing a NEPA EA or EIS should document the analysis of cumulative effects in the same way they did under the 1978 CEQ NEPA regulations. WSDOT project teams should follow the documentation requirements described in:

1. AASHTO's guide "Practitioner's Handbook #12: Assessing Indirect and Cumulative Impacts under NEPA." That direction is consistent with WSDOT policy and SEPA rules.
2. WSDOT's procedures for climate change and greenhouse gas.

Cumulative effects can either be discussed in individual sections on each element of the environment or included in a separate section. A separate section is most appropriate when there are a lot of cumulative effects that are interrelated across disciplines. Most project teams find it useful to have a separate discipline report or technical memo to document the details of methodology and findings. In some cases where there are few cumulative effects, a project team can write cumulative effects entirely within the EA or EIS.

Whatever approach you take, be sure that the reader can find your discussion of cumulative effects.

412.05 External engagement

Public involvement and inclusive engagement are central to NEPA and SEPA. It is part of how you successfully identify direct, indirect, and cumulative effects of a proposed project. We must reach out to others. Work with your project team, communications, tribal liaison, and the other subject matter experts to find out what they've heard about cumulative effects. Tribal leaders and staff have very deep knowledge of the trends that have adversely impacted tribal resources. This information is very useful in preparing the cumulative effects analysis and in identifying potential mitigation. Environmental justice community members and local government staff have very valuable insights as well.

412.06 Internal Roles and responsibilities

The following offices have a key role in indirect and cumulative effects analysis. See NEPA Roles Table for more information about general NEPA documentation roles.

412.06(1) Region/Modal Planning Office

Conduct environmental screening to locate WSDOT assets that are vulnerable to climate threats. Consult with local planning partners to determine availability of additional area-specific climate data. Use this information to document how climate change and extreme weather vulnerability are considered and to propose practical long-term solutions that improve resilience. Provide documentation and recommendations to environmental staff.

412.06(2) Region/Modal Environmental Office

Identify resource areas that require a cumulative effects analysis under NEPA. Pre-pare analysis or review analysis prepared by environmental technical experts.

412.06(3) Environmental technical experts

Perform technical analysis to determine effects, including cumulative effects, for the range of environmental disciplines evaluated under NEPA. Consultants may also fulfill this role. WSDOT environmental technical experts can provide assistance developing consultant scopes of work. WSDOT environmental technical experts re-view consultant work to ensure requirements are met and the analysis is technically sound.

412.06(4) Headquarters Environmental Services Office

The Environmental Services Office (ESO) keeps the indirect and cumulative effects guidance current and consistent with rules and regulations. The ESO NEPA Specialist provides support and technical assistance with EA and EIS projects. The NEPA/SEPA Program Manager is available to consult on cumulative effects and cli-mate analysis.

412.07 Mitigation

It is the project team's responsibility to define mitigation for direct and indirect effects. Mitigation requirements are discussed within the other discipline chapters. With regard to cumulative effects and potential mitigation, refer to the AASHTO practitioners guide.

412.08 Applicable permits & approval process

There are no permits or approvals associated with indirect or cumulative effects.

412.09 Abbreviations and acronyms

AASHTO	American Association of State Highway and Transportation Officials
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
NEPA	National Environmental Policy Act
SEPA	State Environmental Policy Act

412.10 Glossary

Cumulative Effect – Effects on the environment that result from the incremental effects of the action when added to other past, present, and reasonably foreseeable actions, regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.8).

Cumulative Impact/Effect (NEPA) – The impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (This is the CEQ definition as it was established 1978. See note in introduction regarding the repeal effective 9/14/2020.)

Cumulative Effects (ESA) – Effects of future state or private activities, not involving federal activities, that are reasonably certain to occur within the action area of the federal action subject to consultation (50 CFR 402.02). ***Note:*** NEPA and ESA share a common threshold for determining whether to consider the potential for the action to change the rate of growth thereby increasing the indirect effects of an action. Therefore, the same causal relationship should be used for writing the NEPA document as for writing the biological opinion for ESA compliance (see EM Section 436.05).

Direct Effect – Direct effects are caused by the proposed action and occur at the same time and place. Direct effects may occur during construction or operation of the project. Effects may be ecological, aesthetic, historic, cultural, economic, social, or health related. (40 CFR 1508.8).

Effects (or Impacts) – Changes to the human environment that are from the proposed action or alternatives that are reasonably foreseeable, including direct effects, indirect effects, and cumulative effects. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effects will be beneficial. (40 CFR 1508.1).

Indirect Effect (NEPA) – Indirect effects are caused by the proposed action or alternative and occur later in time or are farther removed in distance but are still reasonably foreseeable. Indirect effects may include effects related to changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (40 CFR 1508.8).

Induced Growth or Growth Inducing Effect – Terms used as examples of an indirect effect related to changes in the pattern of land use, population density, or growth rate. (WSDOT discourages the use of these terms because they are vague and confuse the local decisions regarding planned growth under the Washington State Growth Management Act with project-specific effects).

Irretrievable – Impossible to retrieve or recover.

Irreversible – Impossible to reverse.

Mitigation – According to 40 CFR 1508.20, includes: (a) Avoiding the impact; (b) Minimizing impacts by limiting the degree or magnitude; (c) Rectifying the impact by repairing, rehabilitating, or restoring; (d) Reducing or eliminating the impact over time; and (e) Compensating by replacing or providing substitute resources.

Reasonably Foreseeable – An action is reasonably foreseeable if it is considered "likely to occur" and isn't too "speculative." Reasonably foreseeable impacts are predictable and probable. They are not impacts that are just merely possible. EPA's Consideration of Cumulative Impacts in EPA Review of NEPA Documents (May, 1999) states that "Court decisions . . . have generally concluded that reasonably foreseeable future actions need to be considered even if they are not specific proposals. The criterion for excluding future actions is whether they are "speculative." The NEPA document should include discussion of future actions to be taken by the action agency. The analysis should also incorporate information based on the planning documents of other federal agencies, and state and local governments. For example, projects included in a 5-year budget cycle might be considered likely to occur while those only occurring in 10-25 year strategic planning would be less likely and perhaps even speculative."

Language from court decisions can be helpful in formulating questions and criteria as practitioners proceed with analysis to determine which actions may be reasonably foreseeable. For example, one court case defined "reasonably foreseeable" as an action that is "sufficiently likely to occur, that a person of ordinary prudence would take it into account in making a decision." Sierra Club v. Marsh, 976 F.2d 763, 767 (1st Cir. 1992) (Sierra Club IV). Courts have also recognized that "An environmental impact is considered 'too speculative' for inclusion in an EIS (Environmental Impact Statement) if it cannot be described at the time the EIS is drafted with sufficient specificity to make its consideration useful to a reasonable decision maker." Dubois v. US. Dept. of Agriculture, 102 F.3d 1273,1286 (1st Cir. 1996).

Factors that indicate whether an action or project is "reasonably foreseeable" for the purposes of cumulative effects analysis include: whether the project has been federally approved; whether there is funding pending before any agency for the project; and whether there is evidence of active preparation to make a decision on alternatives to the project. Clairton Sportmen's Club v. Pennsylvania Turnpike Commission, 882 F. Supp 455 (W.D. Pa 1995).

Resource – Referred to in NEPA and SEPA implementing regulations as "natural or depletable" resources (CEQ 1502.16, WAC 197-11-440(6)) and renewable or nonrenewable resources (WAC 197-11-444). FHWA Technical Advisory T 6640.8A (October 30, 1987) refers to "natural, physical, human, and fiscal resources" in guidance on irreversible and irretrievable commitments of resources.

Resource Study Area – A Resource Study Area is specific for each resource and focused on the area where cumulative effects on the resource are expected to occur. It may be the same or larger than the study area for direct and indirect effects.

Significance – The significance of a potential impact on the natural or built environment depends upon context, setting, likelihood of occurrence, and severity, intensity, magnitude, or duration of the impact. Almost every transportation project that would be recognized as major federal action, no matter how limited in scope, has some adverse impact on the environment.

Review and consideration of case law can help clarify interpretations of the term "significance." In deciding whether a project will significantly impact the environment, case law suggests that agencies should review the proposed action in light of the extent to which the action will cause adverse environmental effects in excess of those created by existing uses in the affected area and the absolute quantitative adverse environmental effects of the action itself, including the cumulative harm. In any proposed major federal action, the public must have an opportunity to submit factual information on this issue which might bear on the department's threshold decision of significance. Hanley V. Kleindienst, 471 F.2d 823 (2nd Cir. 1972, cert. denied, 412 U.S. 908 (1973). If you are concerned about the role that the level of significance and controversy may have, you should consult your Attorney General's office or other legal counsel.

Chapter 420 Earth (Geology and Soils)

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420.01 Introduction

Geology and soils discussions are primarily focused on hazards to the highway or hazards that the highway may pose on existing hazards. However off-highway activities such as development of borrow pits or mitigation sites also need to be evaluated.

Geologic hazards include seismic activity: ground shaking, surface rupture, liquefaction and differential settlement that must all be considered in the design of highway structures. Other geologic hazards include shallow and deep landslides. Soil related hazards my include high shrink-swell soils and saline soils that require consideration when designing highway structures.

Highway projects may cause or reactivate landslides by removing materials that support the slope or removing the vegetation and changing the local runoff patterns so that slopes vulnerable to landslides receive additional water.

Highway development may cover over mineral resources or important farmlands, irreversibly committing the resources to the highway system.

Finally, off-highway development is sometimes needed to create borrow pits, mitigation sites, and construction sites. Geologic hazards and resources effects need to be evaluated at these locations as well as within the highway corridor.

Although soil erosion is a concern, protecting soils and stabilizing them to prevent erosion is a covered in the surface water chapter of this manual (Chapter 430) and the design of temporary and permanent erosion control and stormwater facilities are covered in the *Hydraulics Manual* M 23-03 and the *Highway Runoff Manual* M 31-16.

420.02 Applicable statutes, regulations, executive orders, & agreements

- 42 United States Code (USC) Chapter 55. National Environmental Policy Act of 1969 (NEPA)
- 23 CFR 771 Environmental Impact and Related Procedures
- 40 CFR 1500-1508 National Environmental Policy Act Implementing regulations
- 7 CFR 658 Farmland Protection Act
- 30 CFR 700 Surface Mining Reclamation and Enforcement
- USDOT Policy statement on climate change adaption. (2011)

- USDOT Climate Adaption Plan - Ensuring Transportation Infrastructure and System Resilience (2014)
- FHWA Order 5520. Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events (2014)
- Executive Order 12898 - Environmental Justice

420.02(1) State

- RCW 47.01.260 Authority of WSDOT on state highway system design
- WAC 197-11 SEPA Rules
- WAC 468-12 Transportation Commission and Transportation Department State Environmental Policy Rules
- Governor's Directive on Acquisitions of Agricultural Resource Land

420.02(2) Local

- Grading Permit – Specifics vary for each jurisdiction

420.03 Considerations during project development

420.03(1) Planning

During the planning phase it would be expected that the Regions use geologic and soil mapping to identify areas of potential geologic hazards and prime and important farmlands, as well as soil indicators such as soil chemistry, depth to groundwater, etc. that may influence the engineering design of the project. Hydric soils may serve as gross level mapping of wetlands if other wetland mapping is not available. It would be expected that the Region would use the information to develop alternatives that minimized impacts to resources as well as limited threats to the highway from geologic hazards to the greatest extent possible.

The Region would also be expected to identify possible local permits that may be required.

420.03(2) Scoping

During scoping it would be expected that the Regions would use the information developed in planning to develop a project concept that considered the constraints put forward and identify additional specialized studies or permitting that were needed to move to design.

420.03(3) Design

It would be expected that the Region would use the preliminary and specialized studies to develop a design using the guidance provided in the *Geotechnical Design Manual* M 46-03 and other applicable design manuals to develop a project that that that is resilient through its design life. It would be expected that the Region develop information: drawings quantities and other information needed for local permitting efforts.

Construction

During construction best management practices are implemented to prevent and minimize erosion of soil to protect water resources. Certified inspectors check the BMPs regularly and after precipitation events. These are practices are described in greater detail in Chapter 430 as well as the *Highway Runoff Manual* M 31-16.

Maintenance and Operations

Maintenance and operations requirements for geology and soil are generally limited to the safety of the public and WSDOT structures. For example, a seismic event would trigger the need for bridge inspections, the depending on the severity of the event, the highway may need to be closed until it is inspected and deemed to be safe. Similarly, landslides may force a highway closure until the site can be inspected and determined to be safe before debris can be removed and the highway reopened.

420.04 Analysis & documentation requirements

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

420.04(1) Analysis & documentation for NEPA

The National Environmental Policy Act (NEPA) requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations are given due weight in project decision making.

At a minimum the general topographic and geologic setting, significant features and landforms, soil types and their properties, and known geologic hazards within the project area should be identified. Geologic hazards include such things as highly erodible soils, landslides, debris flows, seismic hazards (e.g., faults and areas subject to liquefaction), volcanic hazards, subsidence, rockfall and other critical/sensitive areas.

The analysis evaluates the potential for direct construction and operations impacts on identified geologic and soil conditions for all project alternatives, including the “no-build” option. Potential impacts to mineral resources and prime farmlands should also be evaluated.

The analysis should also describe the potential for identified geologic hazards to impact project alternatives. Mitigation measures, commitments, and monitoring procedures associated with geologic hazards should be described. If no geologic hazards or potential impacts are anticipated, the conclusion should be stated in the environmental documents.

The results of the analysis should be written directly into the project’s environmental document (EIS, EA or CE) with supporting information included in the appendices if needed. In rare cases when warranted by the nature of the project, the analysis can be documented in a separate discipline report, which supplements the environmental document.

420.04(2) Analysis & documentation for SEPA only (No federal nexus)

The SEPA requirements are the same as the federal requirements.

420.04(3) Analysis & documentation for local permits

Off highway actions may be subject local critical area ordinance or grading permits. Specific local permit requirements vary throughout the state. Additional permitting information can be found in Chapter 500.

420.05 External engagement

Geology and soils impact analyses do not require a specialized external engagement process beyond the standard NEPA/SEPA scoping, public noticing, accepting agency and public comments, and responding to comments appropriate to the level of the environmental review process.

420.06 Internal roles and responsibilities

420.06(1) Region/Modal Environmental Manager

The Region/Modal environmental manager's role is to oversee the general preparation of environmental review documents, providing expert guidance to Region staff to as to the type of analysis needed and identifying need for specialized analysis. The manager provides quality assurance and quality control. The manager is responsible for disseminating new or updated guidance and verifying that the guidance is being followed. The manger is also responsible for reporting to ESO when guidance is not adequate, confusing, or in need of revision.

420.06(2) Project Engineer

It is the project engineer's role and responsibility to oversee that all engineering studies and technical reports are prepared consistent with *Geotechnical Design Manual* M 46-03 and provide appropriate levels of analysis to support the environmental review process and permitting activities to the environmental staff.

420.06(3) Region Environmental Coordinator

The region environmental coordinator role is to oversee the development of the environmental review documents. The coordinator is responsible to for exchange of information between the project engineer and the environmental review specialists on the team and to ensure that any environmental requirements are incorporated into the project design as well as engineering information needed for permits and other agency approvals is provided.

420.06(4) ESO

ESO role is primarily to keep the guidance current with evolving and changing rules and regulations. ESO staff also provide expert assistance for developing scopes of work for consultants and internal WSDOT staff as well as reviewing environmental documents.

420.07 Applicable permits & approval process

Generally, there are no local permits or approvals needed to address geologic and soil resources. Highway projects are exempt from local agency critical areas ordinances and grading permits.

However off-highway projects may need to local agency and/or Tribal approvals. For example, when WSDOT replaced the SR520 floating bridge, the site that was used to build the pontoons was subject to local permitting. Similarly, if WSDOT developed a borrow pit to provide fill, that borrow pit would likely be subject to local critical areas ordinances and require grading permits.

For more information on the permitting process, see Chapter 500.

420.08 Mitigation

Impacts to geologic and soil resources are usually minimized to the extent practicable by adjusting the project alignment to avoid these resources. Mitigation of any residual impacts is usually in the form of financial compensation to the owner of the property for loss of future income. For example, a highway project may bisect a farmer's land, leaving a portion of his land inaccessible to his equipment. If the farmland could not be avoided by a realignment, the mitigation would likely to purchase the land and/or provide compensation for lost revenue. In more extreme cases segregating a farmer's land may make the whole operation not feasible from a financial perspective and the entire site may need to be purchased.

Geologic hazards are usually avoided to the extent practicable by adjusting the alignment, but many hazards such as ground shaking are regional and not avoidable. The *Geotechnical Design Manual* M 46-03 provides specific guidance on engineering solutions to address geologic hazards.

420.09 Abbreviations and acronyms

420.10 Glossary

Hydric soil – a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.

Prime and important farmland – includes all land that is defined as prime, unique, or farmlands of statewide or local importance.

Saline soils – Soils with high concentrations of salts in the soil profile

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Chapter 425 Air Quality, Greenhouse Gases, Energy

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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 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 PM_{10}) 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 PM_{10}) 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 PM_{10} 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 emissons, 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 PM_{10} 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 (O_3) – 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., O_3 precursors).

Particulate Matter (PM_{10} 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.

Chapter 430 Stormwater and Water quality

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430.01 Introduction

WSDOT must evaluate potential stormwater, groundwater, and water quality impacts prior to submitting permit applications to resource agencies so project construction can proceed. These water quality obligations emerge through several laws and regulations including the Clean Water Act (CWA), Safe Drinking Water Act, and Washington State's Water Pollution Control laws and regulations (RCW 90.48 and WAC 173-201A).

Chapter 600: Construction covers aspects of erosion and sediment control and includes a section on water quality during construction. For additional water-related considerations for other disciplines, see Chapters 431: Wetlands, 432: Special flood hazard area, 420: Earth (Geology and Soils), and 436: Fish, Wildlife & vegetation.

430.02 Applicable statutes, regulations, executive orders, & agreements

This section identifies the primary statutes and regulations applicable to water quality issues.

430.02(1) Federal

- **National Environmental Policy Act –** The National Environmental Policy Act (NEPA), 42 USC 4321, requires that all major actions sponsored, funded, permitted, or approved by federal agencies undergo environmental planning. This planning ensures that environmental values, such as impacts to water quality, receive appropriate consideration during decision making. 23 CFR 771 and 40 CFR 1500–1508 (CEQ) contain Federal implementing regulations. For details on NEPA procedures see Chapter 400.
- **Clean Water Act –** The Water Pollution Control Act, better known as the Clean Water Act (CWA), 33 USC 1251 et seq., provides federal regulation of water pollution sources. In Washington State, the Environmental Protection Agency (EPA) has delegated administrative authority of the CWA to the Department of Ecology (Ecology) except on tribal and Federal lands (and discharges to tribal waters).
- **Safe Drinking Water Act –** The Safe Drinking Water Act (SDWA) sets national primary drinking water standards, regulates underground injection of fluids, and allows for designation of Sole Source Aquifers (SSA). Implementation of the SDWA is delegated to individual states.

430.02(2) State

- **State Environmental Policy Act –** The State Environmental Policy Act (SEPA) requires that all major actions sponsored, funded, permitted, or approved by state and/or local agencies undergo planning to ensure environmental values receive consideration during decision making, including impacts to water quality. WAC 197-11 and WAC 468-12 (WSDOT) describe state implementing regulations. For details on SEPA procedures see Chapter 400.
- **State Water Quality Laws and Rules –** The Water Pollution Control Act (RCW 90.48) is the primary water pollution law for Washington State, which requires the use of all known, available, and reasonable methods of prevention, control, and treatment (AKART) to prevent and control the pollution of the waters of the state of Washington. State statute prohibits the discharge of pollutants into waters of the state unless authorized. WAC 173-201A identifies and mandates water quality standards pertaining to surface waters.

  RCW 90.48 also mandates that all underground water be protected. WAC 173-200 identifies and mandates groundwater quality standards to maintain the highest quality of the state's groundwater and to protect existing and future beneficial uses of the groundwater.
- **Accommodation of Stormwater Runoff Onto Right of Way Executive Order (E 1103) –** This Secretary's Executive Order (E1103.00) is a reference on accommodation of stormwater from adjacent properties onto WSDOT right of way. It cites multiple offices, manuals, procedures, and state and federal laws that provide requirements and policies on this subject.
- **Drinking Water – Source Water Protection –** Protection of drinking water sources (surface and groundwater) is mandated by the SDWA.

  In Washington, RCW 43.20.050 designates the State Department of Health (DOH) as lead agency for assuring safe and reliable public drinking water supplies, in cooperation with local health departments and water purveyors. State regulations (WAC 246-290-135 for Group A systems; WAC 246-291 for Group B systems) provide for two types of area based controls for source protection of wells and springs serving as sources of public water supplies:
- **Underground Injection Control –** The Underground Injection Control (UIC) Program, authorized by the SDWA, is designed to prevent contamination of underground sources of drinking water from the use of injection wells.

  The national UIC Program is administered by the EPA under 40 CFR 144. Ecology was delegated authority by the EPA to administer the program in Washington State, and operates under RCW 43.21A.445 and RCW 90.48 and WAC 173-218. All new underground control activities must treat the "waste" fluid before injection.
- **Growth Management Act (GMA) –** This statute (RCW 36.70A), combined with Article 11 of the Washington State Constitution, mandates development and adoption by local jurisdictions of ordinances that classify, designate, and regulate land use in order to protect critical areas. Aquifer recharge areas are one type of critical area and are regulated through local Critical Aquifer Recharge Area (CARA) ordinances. Under the GMA, state agencies must comply with local comprehensive plans and development regulations; likewise, local agencies should coordinate with WSDOT. See the section of Local Critical areas Ordinances below for more information and links.

- **Local Critical Areas Ordinances –** The purpose of Critical Aquifer Recharge Area (CARA) ordinances is to provide cities and counties with a mechanism to classify, designate, and regulate areas deemed necessary to provide adequate recharge and protection to aquifers used as sources of potable (drinking) water. Unless the local laws conflict with state law, WSDOT must meet the requirements of local regulations. Local planning departments should be contacted to determine the location or descriptive criteria of geologically hazardous areas that may impact the project.

  Additional information on local implementation of CARAs may be available at websites for the appropriate local jurisdictions.

430.02(3) Local

- N/A

430.02(4) Tribal

- Several federal environmental laws authorize EPA to treat eligible federally recognized Indian tribes as a state (TAS) for the purpose of implementing and managing certain environmental programs and functions, and for grant funding. Tribes must apply for and receive EPA approval for each specific program or function.

  Some tribes have applied for and received EPA approval to adopt specific water quality standards that may be stricter than those required by Ecology. For projects where stormwater is discharging within tribal lands or waters, coordinate with your region's environmental staff to determine what standards apply. Information about Section 401 Water Quality Certification is available in Section 430.03 and Chapter 530: Tribal Approvals.

430.02(5) Interagency Agreements

Appendix B contains the following interagency agreement pertaining to stormwater and water quality:

- **Implementing Agreement Regarding Application of the *Highway Runoff Manual* (HRM) –** In February 2009, WSDOT and Ecology signed an implementing agreement committing WSDOT to apply the HRM statewide to direct the planning, design, construction, and maintenance of stormwater facilities. The implementing agreement was most recently amended and revised in March 2019.
- **Sole Source Aquifers (SSA) -** This 2014 Memorandum of Understanding between the Federal Highway Administration (FHWA) Washington Division, EPA Region 10, and WSDOT assures that each highway project that is to receive FHWA financial assistance is designed and constructed in a manner that will prevent the introduction of contaminants into a SSA in quantities that may create a significant hazard to public health.
- **Highways & Drinking Water Well Sanitary Control Areas "Screening Criteria" -** This 2006 agreement between WSDOT and the DOH clarifies expectations, establishes project screening criteria, and facilitates communication among WSDOT, DOH, and water purveyors when a proposed highway project intersects with the sanitary control area of a public water supply.

430.03 Considerations during project development

430.03(1) Planning

See the Stormwater & water quality webpage for guidance and resources on the following requirements:

- Determine whether a project has the potential to discharge to impaired waters on the 303(d) list or covered by a Total Maximum Daily Load (TMDL) and identify the pollutants of concern.
- Identify existing BMPs using as-builts, WSDOT's GIS Workbench, hydraulics reports, the Stormwater BMP Specifications (SWABS) database, field verification, and guidance in the HRM.
- Identify stormwater retrofit needs using web guidance.

430.03(2) Scoping

- Due to changes under CWA Section 401, Individual Water Quality Certifications require additional steps be taken prior to application. It is important during scoping to determine whether the project will or has the potential to, discharge pollutants into waters of the United States and defer to the information below in the design stage.

See the Stormwater & water quality webpage for guidance and resources on the following requirements:

- Confirm whether a project has the potential to discharge to impaired waters on the 303(d) list or covered by a Total Maximum Daily Load (TMDL) and identify the pollutants of concern. Use the guidance found in Identifying Impaired Water Bodies for the Environmental Review Summary (ERS).
- Document stormwater features and discharge points when preparing hydraulics reports.

See the Hydraulics & hydrology and *Highway Runoff Manual* webpages for guidance and resources on the following requirements:

- Confirm impacts to existing BMPs and address mitigation for those impacts. See the HRM for more information about assessing impacts on existing BMPs.
- Read the Stormwater Retrofit Guidance section on the Hydraulics & hydrology webpage which includes considerations for scoping stand-alone stormwater retrofits, a site visit checklist, and instructions for determining cost-effectiveness and feasibility of stormwater retrofits. The scoping engineer must include seed money for the Puget Sound Basin retrofit requirement (if applicable) following the guidelines in the Retrofit Cost-Effectiveness and Feasibility (RCEF) document.
  - Complete a stormwater retrofit assessment for all fish passage projects prior to Project Summary submittal for HQ review. A separate assessment is required for each fish passage site in a project.
  - Determine if the project will add enough new impervious surface to trigger HRM requirements for stormwater treatment and/or flow control. If so, preliminarily select BMPs that could be used from Chapter 5 of the HRM to meet these requirements and the potential locations where they would be cited.

430.03(3) Design

- Document stormwater treatment and flow control BMP information in SWABS.
- Review *Geotechnical Design Manual* Chapter 3 for well decommissioning and piezometer removal requirements.
- Identify any man-made stormwater connections to our system and follow the Accommodation of Stormwater Runoff Onto Right of Way Executive Order (E1103.00) to permit each accordingly.
- Apply for a water rights permit for project work that uses surface water or groundwater. Temporary water rights can be granted for dust control during construction. Find information about water rights permits on the Wetlands & other waters webpage.
- If a project may alter groundwater and impact a wetland, (e.g., draining a wetland, altering natural drainage patterns, increasing or decreasing water levels), see Chapter 431: Wetlands or the Wetlands & other waters webpage for guidance.

See the Stormwater & water quality webpage for guidance and resources on the following requirements:

- Projects that require a federal permit or approval and discharge or have the potential to discharge pollutants into water of the United States must receive a Water Quality Certification (WQC) from the appropriate Section 401 certifying agency or tribe.
- As of September 11, 2020, **Individual 401 certifications** require: a prefiling request to be submitted 30 days prior to application as well as a Draft Water Quality Monitoring and Protection Plan (WQMPP). The pre-filling request is a mandatory precursor that starts the application process. The WQMPP needs to be prepared to ensure State Water Quality Standards will be met during in-water work.
- Prior to beginning in-water work, review environmental permits and approvals to determine project-specific requirements for in-water work and sampling.
- Whether or not a sampling report is prepared for a project, WSDOT must comply with the state surface water quality standards (WAC 173-201A) when performing in-water work unless a project has an extended temporary area of mixing granted by Ecology in a 401 certification.
- Complete the Surface Water Technical Guidance to calculate annual pollutant loads and assess potential impacts to receiving waters. The results help identify differences in impacts between project alternatives and can be included in discipline reports and other NEPA/SEPA documentation.
- Determine if a stormwater discipline report is necessary. Use the Stormwater Discipline Report Checklist to make sure all project-related stormwater impacts are considered in the discipline report.
- Determine if a groundwater discipline report is necessary. Use the Groundwater Discipline Report Checklist to make sure all project-related groundwater impacts are considered in the discipline report.
- Consider connections to special flood hazard areas. Refer to Chapter 432: Special Flood Hazard Area for more information on special flood hazard areas.
- Construction projects must apply for coverage under the Construction Stormwater General Permit (CSWGP) if the project has the potential to discharge stormwater to surface waters and will either disturb one or more acres of soil, or is part of a larger common plan that will disturb one or more acres of soil.

- WSDOT transfers CSWGP coverage to the contractor, except for special cases which must be approved by the Assistant State Construction Engineer, so the contractor becomes responsible for implementing all permit requirements. WSDOT's role shifts to inspecting projects for compliance with the CSWGP and contract enforcement.
- Prepare a Stormwater Pollution Prevention Plan (SWPPP) for all work, even when not applying for coverage under the CSWGP. The SWPPP is made up of two plans, the Spill Control and Countermeasure (SPCC) plan and Temporary Erosion and Sediment Control (TESC) plan. More information about SPCC plans is available in Chapter 447 Hazardous Materials and Solid Waste. The TESC plan must identify stormwater-related erosion risks at construction sites and document plans for minimizing those risks. Develop a preliminary TESC plan to be included in the project contract as an appendix. If the project is design-build, the contractor must develop a TESC plan for WSDOT review and comment.
- Review the SWPPP prior to construction to ensure all requirements are included.
- Submit monthly discharge monitoring reports (DMRs) to Ecology's WQWebPortal once CSWGP coverage is granted, even if construction has not started or there have been no discharges. DMRs must be submitted monthly until the CSWGP coverage terminates or permit coverage is transferred to the contractor.

See the *Highway Runoff Manual* and Hydraulics & hydrology webpages for guidance and resources on the following requirements:

- If the project will add enough new impervious surface to trigger HRM requirements for stormwater treatment and/or flow control, use the HRM to select appropriate BMPs for a project. Use the TMDL considerations in Chapter 5 of the HRM to choose appropriate BMPs if discharging to impaired waters on the 303(d) list or covered by a Total Maximum Daily Load (TMDL) based on the pollutant(s) of concern.
- Develop a Hydraulics Report and *BMP Maintenance Manual* for all BMPs.

430.03(4) Construction

See the Stormwater & water quality webpage for guidance and resources on the following requirements:

- All WSDOT and contractor staff performing CSWGP-related site inspections must be current Certification for Erosion and Sediment Control Leads (CESCL). See the Environmental training webpage for more information.
- Report spills and illicit discharges that might impact the stormwater drainage system. If a spill or illicit discharge occurs, immediately follow the reporting procedures on WSDOT's Report a spill webpage.
- Ensure that all in-water work meets applicable water quality standards and follow reporting protocols. For Individual 401 Certifications, the contractor must prepare a Final WQMPP for Ecology approval prior to in-water work.

For more information on environmental commitments during construction, see Section 600.03.

430.03(5) Maintenance and operations

Perform inspection and maintenance activities and enter records into the Highway Activity Tracking System (HATS) database and conduct quarterly QA/QC.

430.03(6) Stormwater and water quality resources

Refer to the following resources for additional guidance and tools:

1. **GIS Workbench –** The WSDOT GIS Environmental Workbench provides a GIS interface for internal WSDOT users. It has numerous environmental and natural resource management data layers from federal, state, and local agencies that provide useful information for water quality analyses. Available databases include water resource inventory areas (WRIAs) and sub-basins, major shorelines, 303(d)s and TMDLs, and NPDES municipal stormwater permit areas.

2. **FHWA Guidance Documents and Resources**
   - **FHWA Technical Advisory –** FHWA Technical Advisory T 6640.8A (October 30, 1987) provides guidelines for preparing environmental documents.
   - **FHWA Environmental Review Toolkit and Guidebook –** This online resource contains several guidance documents and federal MOAs on topics related to stormwater and water quality, the CWA, and coastal zone management.

3. **Department of Ecology Resources**
   - **Water Quality 305(b) Assessment –** The CWA Section 305(b) requires Washington State to prepare a water quality assessment report every five years and submit it to EPA. In addition, EPA requires the state to submit certain assessment data annually for compilation in a national report. For access to the data and a description of requirements for ecoregions, stream/river basins, estuaries, and lakes, refer to the *Washington State's Current Water Quality Assessment*.
   - **Watershed Basin Reports and Action Plans (Local or State Plans) –** Many watershed and basin plans include specific recommended action items on priority environmental issues. The stormwater analysis should address the guidance outlined in watershed/basin action plans related to water quality.
   - **Water Quality Atlas –** The Water Quality Atlas is a web-based map application to obtain information about water quality in Washington State. Available datasets include 303(d)s and TMDLs, and NPDES municipal stormwater permit areas, among others.

430.04 Analysis & documentation requirements

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

430.04(1) Analysis & documentation for NEPA

WSDOT estimates potential water quality impacts during scoping and through the NEPA and SEPA environmental documentation process. If the project may result in adverse impacts to water quality, NEPA and SEPA require impact analyses to be completed and recorded in the environmental document (see Chapter 400).

1. **Determining the Necessary Level of Effort**

   Stormwater - A proposed project generally needs to analyze stormwater impacts when the project could affect receiving waters by:

   - Increasing the amount of pollutants discharged to receiving waters.
   - Presenting a risk of eroded sediments or spilled pollutants entering receiving waters.
   - Involving construction or other work in or over surface water bodies, their buffers, or floodplains.
   - Using, diverting, obstructing, or changing the natural flow or bed of receiving waters.

   Groundwater - A proposed project generally needs to analyze groundwater impacts when:

   - Introducing enough stormwater or wastewater into an aquifer or its recharge zone to create a significant adverse environmental impact.
   - Stormwater or wastewater discharges produced by any project alternatives are likely to enter SSAs, CARAs, or WPAs in quantities sufficient to produce a significant adverse environmental impact.
   - When other potential impacts to groundwater are identified.

   Situations where build options reduce the amount of pollutants to receiving waters may also require impact analyses if significant differences exist in the water quality benefits provided by each of the alternatives. Document the analysis of stormwater and groundwater impacts as part of the environmental document for the project (i.e., ECS, EA, or EIS). In rare cases, when warranted by the nature of the project, the analysis can be documented in a separate discipline report which supplements the environmental document. In these situations, use the Stormwater Discipline Report Checklist or the Groundwater Discipline Report Checklist to help ensure adequate consideration of all project-related impacts in the report.

   If uncertainty exists as to whether impacts may occur, perform a preliminary investigation of the impacts from each of the alternatives. Project managers can also contact the regional water quality lead for assistance. End the investigation if it becomes apparent no significant impacts or differences exist among the alternatives. In the project file, explain why the project did not need a stormwater or groundwater impact analysis.

2. **Methodology for Analyzing Surface Water Impacts –** Calculate annual pollutant loads to assess potential impacts of a project. The Surface Water Technical Guidance describes the two appropriate methods to use in the scoping stage of a project. Do not use other pollutant loading methodologies when analyzing impacts from stormwater.

3. ***Highway Runoff Manual* –** The *Highway Runoff Manual* M 31-16 summarizes stormwater management requirements and describes approved methods of managing stormwater runoff known as Best Management Practices. Used together, HRM and *Hydraulics Manual* M 23-03, provide tools for designing effective stormwater collection, conveyance, and treatment systems for highways, ferry terminals, park and ride lots, and other transportation-related facilities.

   The project stormwater designer must first follow HRM Chapter 2 guidelines for integrating the planning and design of stormwater-related project elements into the context of WSDOT's project development process. Then the designer must use Chapter 3 to determine the applicable minimum requirements for a specific project. In

most cases, this process will spur the need to design construction and post construction BMPs according to the criteria in Chapters 4, 5, and 6. Chapter 6 describes and links to WSDOT's *Temporary Erosion and Sediment Control Manual* M 3109 (TESCM).

The TESCM describes how to meet the requirements of the National Pollutant Discharge and Elimination System (NPDES) Construction Stormwater General Permit (CSWGP). It covers Stormwater Pollution Prevention Plans (SWPPP), BMP selection, discharge sampling and reporting, and other compliance-related issues, as well as potential effects to receiving water during construction.

Ecology approved the TESCM and HRM as equivalent to the Ecology *Stormwater Management Manuals* for Western and Eastern Washington for compliance with Ecology-issued stormwater permits.

Standard BMP options from the HRM fit most projects. See HRM Section 1-4 on who to contact when a site presents a challenge and does not lend itself easily to the approaches prescribed in the manual.

4. **303(d) and TMDL Impaired Water Bodies**

   Ecology may assign WSDOT specific action items, compliance timelines, and waste load allocations (WLAs) when a TMDL identifies WSDOT discharges as a source or conveyer of the pollutant of concern. Ecology includes EPA-approved TMDLs that contain WLAs and/or actions for WSDOT in Appendix 3 of WSDOT's NPDES Municipal Stormwater Permit.

   For 303(d)s and TMDLs approved by EPA that do not specifically identify WSDOT stormwater discharges as a pollutant source, projects should avoid discharging stormwater to the impaired water body and avoid adverse impacts where feasible. Follow the guidance on WSDOT's Stormwater & water quality webpage to determine if stormwater from a project will discharge to an impaired water body. For more information on TMDLs or 303(d) listings, contact the Stormwater Branch in the Environmental Services Office, or visit Ecology's Water Quality Improvement website.

430.04(2) Analysis & documentation for SEPA only (No federal nexus)

SEPA requirements are the same as federal requirements.

430.05 External engagement

WSDOT participates in external engagement during the project development process. WSDOT develops Environmental Impact Statements (EIS) to describe environmental impacts, project benefits, and mitigation measures for projects with probable impacts to the natural or built environment. Through the EIS, the public is consulted and involved in the decision-making process.

430.06 Internal roles and responsibilities

430.06(1) Region/Modal Environmental Manager

- Signs water quality permit applications.
- Oversees the development of stormwater and groundwater discipline reports.
- Supports and decides on conflicting environmental issues.

- Evaluates stormwater and water quality non-compliance and determines if ECAP is applicable.
- Supports stormwater compliance during design and construction phases of projects.

430.06(2) Project Engineer/Design and Construction

- Prepares design plans in compliance with water quality requirements.
- Develops and completes stormwater hydraulic reports.
- Identifies stormwater BMPs that are necessary and included in a project.
- Ensures mitigation requirements are incorporated into the design and contract.
- Ensures stormwater and other water quality permit commitments are covered in the project contract.
- Develops and gets approval on any stormwater deviation from the HRM.
- Ensure construction compliance with stormwater and water quality permit conditions and mitigation requirements.
- Identifies non-compliance with permit requirements or regulations and completes ECAP documentation.
- Develops stormwater BMP Maintenance Plans for stormwater features.

430.06(3) Region Environmental Coordinator/Permit Specialist/Biologist/ Stormwater Hydraulic Engineer

- Identifies in the ERS stormwater treatment needs and water quality discharges to TMDLs, impaired waters, and 303d waters.
- Identifies the need for stormwater and groundwater discipline reports.
- Identifies in the ECS stormwater treatment needs and water quality discharges to TMDLs, impaired waters, and 303d waters.
- Coordinates the internal review of stormwater and groundwater discipline reports.
- Submits for water quality permits and approvals.
- Identifies stormwater and water quality mitigation and permit commitments through CTS to the Design PE.
- Identifies stormwater and water quality non-compliance and processes with Construction ECAP documentation.
- Identifies and coordinates mitigation for listed endangered species.

430.06(4) HQ Environmental Services Office

- Supports regions and modes on the development and completion of impact analysis documents.
- Provides technical assistance on impact analysis documents.
- Provides policy and guidance on stormwater and water quality reports.

430.06(5) Area Maintenance

- Responsible for maintaining stormwater treatment facilities.

430.06(6) Region Maintenance Environmental Coordinator

- Coordinates with services and local agencies.
- Supports area maintenance and ensures correct permits are in place.
- Reviews In-water work windows, interference in streams, critical areas, stormwater runoff, and 303d/TMDL.

430.06(7) Region Hydraulic Engineer

- Responsible for reviewing and accepting the Stormwater Hydraulic Report.
- Ensures designs comply with long term permanent stormwater requirements.
- Evaluates and coordinates deviations from the HRM for approval with Ecology.
- Supports stormwater compliance for local programs and developer services clients.
- Liaison for local jurisdictions.
- Supports stormwater construction.

430.06(8) State Stormwater Hydraulic Engineer

- Works with regions on HRM deviations and Ecology approval.

430.07 Applicable permits & approval process

WSDOT must comply with all applicable federal, state, and local laws, regulations, policies, and plans. Consider obligations for each water quality permit or approval listed in this section during design and environmental review.

Stormwater and water quality requirements and BMPs get developed and implemented through Section 401 Water Quality Certifications, NPDES permits, WSDOT's HRM, and project-specific BMPs. See the additional information for Stormwater & water quality related permits and approvals.

430.07(1) Federal

- N/A

430.07(2) State

- CWA Section 401 – Water Quality Certification – This certification requires tribal consultation or approval under federal statutes. The Confederated Tribes of the Chehalis Reservation, Kalispel Tribe of Indians, Makah Tribe, Port Gamble S'Klallam Tribe, Puyallup Tribe of Indians, Spokane Tribe of Indians, and Tulalip Tribe have authority to approve Section 401 Water Quality Certifications.
- CWA NPDES Construction Stormwater General Permit
- CWA NPDES Industrial Stormwater General Permit
- CWA NPDES WSDOT Municipal Stormwater General Permit
- CWA NPDES Bridge and Ferry Terminal General Permit

430.07(3) Local

For more information on the permitting process, see Chapter 500 Environmental permitting.

430.08 Mitigation

Guidance and resources for mitigation options can be found on the Stormwater & water quality webpage. Mitigation options include:

- Stormwater retrofit
- HRM required treatment
- Special or newly researched BMPs
- Assistance with watershed priorities set through watershed planning

430.09 Abbreviations and acronyms

AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BA	Biological Assessment
BMP	Best Management Practice
CARA	Critical Aquifer Recharge Area
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CSWGP	Construction Stormwater General Permit
CTS	Commitment Tracking System
CWA	Clean Water Act
DOH	Washington State Department of Health
Ecology	Washington State Department of Ecology
EA	Environmental Assessment
ECS	Environmental Classification Summary
EIS	Environmental Impact Statement
ERS	Environmental Review Summary
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FHWA	Federal Highway Administration
GIS	Geographic Information System
GMA	Growth Management Act
HPA	Hydraulic Project Approval
HIRUN	Highway Runoff Dilution and Loading Stormwater model
HRM	*Highway Runoff Manual* M 31-16
MHHW	Mean Higher High Water
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
RCEF	Retrofit Cost-Effectiveness and Feasibility
RCW	Revised Code of Washington State
SCA	Sanitary Control Area

SDWA	Safe Drinking Water Act
SEPA	State Environmental Policy Act
SPCC	Spill Prevention, Control, and Countermeasures Plan
SSA	Sole Source Aquifer
SWABS	Stormwater BMP Specifications database
SWPPP	Stormwater Pollution Prevention Plan
TESCM	*Temporary Erosion and Sediment Control Manual* M 3109
TMDL	Total Maximum Daily Load
UIC	Underground Injection Control
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
WAC	Washington Administrative Code
WLA	Waste Load Allocation
WPA	Wellhead Protection Area
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation
WSF	Washington State Ferries
WQMPP	Water Quality Monitoring and Protection Plan

430.10 Glossary

These definitions provided context for the Stormwater process. Some terms may have other meanings in a different context.

Council on Environmental Quality (CEQ) – Coordinates Federal environmental efforts and works closely with agencies and other White House offices on the development of environmental policies and initiatives.

Critical Aquifer Recharge Area (CARA) – An area designated by a city or county for protection under the Growth Management Act that has a critical recharging effect on aquifers used for potable water.

Groundwater – Water that occurs below the surface of the earth, contained in pore spaces. It is either passing through or standing in the soil and underlying strata and is free to move under the influence of gravity.

Group A water systems regularly serve 15 or more residential connections or 25 or more people/day for 60 or more days per year. All remaining systems are designated Group B.

Group B wells serve a single residential connection and are not considered public water supplies but are generally regulated by local ordinances.

***Highway Runoff Manual* (HRM) –** WSDOTs *Highway Runoff Manual* M 31-16 directs the planning and design of stormwater management facilities that meet state and Federal regulations for new and redeveloped Washington state highways, rest areas, park-and-ride lots, ferry terminals, and highway maintenance facilities throughout the state.

Injection Well – Any disposal system designed to place fluids, including highway runoff and treated wastewater from on-site sewage disposal systems, into the subsurface. Such systems include bored, drilled, or dug holes; for example, dry wells, French drains, and drain fields.

National Pollution Discharge Elimination System (NPDES) – Pollution control permits that require point source dischargers to obtain permits. These are issued to WSDOT and other entities, by Ecology, for construction stormwater, municipal separate storm sewer systems, industrial, and sand and gravel operations.

Sanitary Control Area (SCA) – An area (minimum radius 100 ft) maintained around a public water source (surface or well) for the purpose of protecting that source from existing and potential sources of contamination. No sources of contamination may be constructed within the sanitary control area without the permission of the DOH and the water purveyor. DOH guidance identifies stormwater runoff and spills resulting from vehicular accidents on roadways as potential sources of contamination.

Sole Source Aquifer (SSA) – An aquifer designated by EPA that (1) supplies 50 percent or more of the drinking water to the population living over the aquifer, (2) has distinct hydrogeological boundaries, and (3) for which there is no economically feasible alternative source of drinking water if it should become contaminated.

Source Water Protection Area – Area protected for drinking water supplies; these include Wellhead Protection Areas and Sanitary Control Areas.

Stormwater – That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body or a constructed infiltration facility.

Surface Water – All water naturally open to the atmosphere, such as rivers, lakes, reservoirs, ponds, streams, wetlands, seas, and estuaries.

Total Maximum Daily Load (TMDL) – A requirement of the Clean Water Act, TMDLs consist of a watershed-based pollution control plan developed to address water quality impairment.

Watershed – The land area that drains into a surface waterbody; the watershed for a major river may encompass several smaller watersheds that ultimately combine at a common point.

Waters of the State or State Waters – Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and watercourses located within the jurisdiction of the state of Washington. (RCW 90.48.020)

Wellhead Protection Area – Area managed by a community to protect groundwater drinking water supplies.

Wellhead Protection Areas (WPA) – A portion of the zone of contribution for a Group A well or spring, as determined by delineation criteria based on the estimated time of travel for a particle of water from the zone boundary to its eventual arrival at the well. Water purveyors are required to inventory all known and potential groundwater contamination sources within the WPA and complete a susceptibility assessment every five years. Additional information is available in DOH's *Wellhead Protection Guidance Document*.

Chapter 431 Wetlands and other waters

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431.01 Introduction

This chapter presents policies to be followed when planning work in or near wetlands or other waters of the state or of the United States. It includes information on describing and assessing wetlands and other waters, determining impacts (adverse effects), compensating for unavoidable impacts, and links to related information. Work described in this chapter that applies to wetlands may also apply to other waters. Project teams should follow the guidance in this chapter and the step-by-step procedures on our Wetlands and other waters webpage.

Washington State Department of Transportation (WSDOT) *Wetlands Protection and Preservation* Secretary's Executive Order (EO) E 1102.00 directs employees to protect and preserve Washington's wetlands, to ensure no net loss of wetland acreage and function is caused by department actions, and to increase the quantity and quality of wetlands in the long term. These activities must be implemented in planning, designing, constructing, and maintaining the state's transportation system. Employees, our contractors and consultants must avoid impacts to wetlands and other waters where practical; minimize impacts when wetland impacts are unavoidable; provide compensatory mitigation for unavoidable impacts; and protect, preserve, and maintain wetlands under department stewardship.

WSDOT's environmental policies direct employees to protect and preserve state natural resources while providing for cost-effective delivery and operation of transportation systems. Our Strategic Plan webpage details WSDOT's values, including integrity and sustainability, that reinforce protection and preservation of wetlands and other waters.

See Exhibit 431-1 for a flow chart of work to be performed throughout the project phases, from Planning to Maintenance and operations.

431.02 Applicable statutes, regulations, executive orders, & agreements

431.02(1) Federal

- 42 United States Code (USC) 4321 National Environmental Policy Act of 1969 (NEPA)
- Clean Water Act of 1977 (Section 404)
- Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (2008)
- Rivers and Harbors Act of 1899 (Section 10)
- Title 23: Highways Part 771 – Environmental Impact Related Procedures (23 CFR 771)
- Title 33 Navigation and Navigable Waters, Part 332 Compensatory Mitigation for Losses of Aquatic Resources (33 CFR § 332.2)
- Title 40: Protection of Environment (40 CFR § 1500 – Purpose and Policy, Part 1508 - Definitions)

431.02(2) State

- Environmental mitigation in highway construction projects – Public lands first or other sites that avoid loss of long-term, commercially significant agricultural lands (RCW 47.01.305)
- Environmental mitigation - Exchange agreements (RCW 47.12.370)
- Governor's EO 89-10 *Protection of Wetlands*
- Procurement of Goods and Services (RCW 39.26)
- State Environmental Policy Act (SEPA)
- WSDOT Secretary's EO E 1102.00 *Wetlands Protection and Preservation*
- WSDOT Strategic Plan
- Shoreline Management Act RCW 90.58 and WAC Title 173
- Optional Shoreline process RCW 90.58.356
- Water Rights RCW 90.03 WAC 173-152

431.02(3) Local

- Shoreline ordinances and Shoreline Master Program (see local agency webpages).

431.02(4) Agreements

- Interagency wetland mitigation guidance: Wetland Mitigation in Washington State Part 1 – Agency Policies and Guidance and Part 2 – Developing Mitigation Plans
- The Environmental Protection Agency (EPA) and United States Army Corps of Engineers (Corps) "Exempt Construction or Maintenance of Irrigation Ditches" joint memo provides information including terms and definitions as well as guidance for how both agencies will work together to apply these exemptions. This memorandum refers to citations 404(f) (1)(C) and 404(f)(2) of the Clean Water Act (CWA) as well as 33 CFR 323.4(c).

431.03 Considerations during project development

431.03(1) Planning

Planners screen proposed projects to identify the potential for wetlands and other waters in the planning study area. If the planner identifies possible wetlands or other waters in the planning study area, they notify the region environmental coordinator who can prepare to coordinate wetland and stream reconnaissance for scoping as project-level information develops.

Identifying mitigation opportunities and needs during planning, corridor studies, and scoping phases allows time to coordinate with other planning efforts and forecast compensation needs. Early coordination aids in planning sustainable and effective watershed-based solutions and may expand the range of mitigation options for project impacts.

WSDOT must protect existing compensatory mitigation sites. See the Environmental guidance for planning studies webpage for information on how to conduct environmental screening to identify WSDOT compensatory mitigation sites in a study area.

WSDOT must protect existing compensatory mitigation sites. See the Environmental planning webpage for information on how to conduct environmental screening to identify WSDOT compensatory mitigation sites in a study area.

431.03(2) Scoping

WSDOT environmental teams begin considering compensatory mitigation options as soon as they think impacts to wetlands and other waters in the project area may occur. During scoping and environmental review, WSDOT considers available compensatory mitigation options in the following order:

1. Wetland mitigation banks (established by WSDOT or others)
2. In-Lieu Fee Programs (established by a non-profit entity or a government agency involved in natural resource management)
3. Advance mitigation established by WSDOT (permittee-responsible mitigation)
4. Constructing a new WSDOT compensation site concurrently with the project (permittee-responsible mitigation)

The 2008 Final Rule on Compensatory Mitigation for Losses of Aquatic Resources expresses a preference for using credit from mitigation banks as a first choice, credit from an in-lieu fee programs as a second choice, and permittee-responsible mitigation as least desirable. Project specifics provide additional context for determining which mitigation option is the most suitable choice.

Find information on how to determine compensatory mitigation options in case impacts are unavoidable during Scoping on the Wetlands & other waters webpage.

WSDOT Geographic Information Systems workbench

The WSDOT Geographic Information Systems (GIS) workbench is a comprehensive collection of GIS datasets that can be used to approximate the location and extent of known wetlands that is accessible to WSDOT employees. The workbench contains map data from several sources helpful in determining if wetlands may be present including the National Wetland Inventory, local wetland inventories, WSDOT mitigation site locations, hydric soils, topography, satellite imagery, and infrared and true-color aerial photographs.

The workbench provides general information at a small scale suitable for screening for environmental impacts in the early stages of planning and scoping. Wetland biologists (biologists; see Section 431.06 Roles and Responsibilities) pair this office-based activity with a field assessment scaled to suit the purposes of the investigation. It can be a first phase of a wetland and stream reconnaissance or assessment. The workbench doesn't provide enough information to determine presence or absence of wetlands for permitting purposes.

Wetland and stream reconnaissance

A reconnaissance survey confirms the presence or absence of wetlands and other waters based on a field visit by a biologist. Reconnaissance may include estimation of wetland category, stream water type, and buffers depending on the necessary level of information to address project needs. WSDOT staff can use reconnaissance to inform the preliminary design and avoid and minimize impacts to wetlands and other waters.

If the reconnaissance survey concludes no wetlands or other waters are present in the project area, no further wetland work needs to be done unless the project area changes. The Region/Modal Environmental Manager documents this in the Environmental Review Summary and Environmental Classification Summary (ERS-ECS) database. No further action is needed.

If wetlands or other waters are present, the permit/environmental coordinators must identify permit needs and enter preliminary information into ERS. They continue the mitigation sequence (see Section 431.08 Mitigation) started during Planning and strategize to avoid and minimize impacts.

Biologists don't complete reconnaissance for every project. Biologists may skip this step for projects with known wetlands and other waters and begin documenting existing conditions with a wetland and stream assessment. Either a wetland and stream reconnaissance or assessment is required to complete the ECS. Wetland permit applications require a wetland and stream assessment.

Find information on how to:

- Conduct a wetland, stream and tidal water reconnaissance survey, determine which agency has jurisdiction over the waters and your permitting needs during Scoping on the Wetlands & other waters webpage.
- Identify applicable permits and approvals in Section 431.07.

431.03(3) Design

Wetland and stream assessment

A Wetland and Stream Assessment is a detailed field study of wetlands and other aquatic resources within the project area. Biologists may conduct an assessment instead of a reconnaissance if detailed wetland information is needed during scoping. If wetlands or other aquatic resources will be impacted by a transportation project, the permit application submittal will require a Wetland and Stream Assessment Report.

A wetland and stream assessment includes delineating:

- Boundaries of wetlands and other aquatic resources
- Ordinary High Water Mark (OHWM) of streams/tributaries and lakes
- High Tide Line (HTL) of tidal waters

Survey should collect ditch centerlines to include in the assessment.

Biologists use the Washington State Wetland Rating System to determine the category of wetlands based on the functions and values the wetlands provide. They classify the wetlands using one or more national methods. More complex projects may need additional functional assessment to develop detail.

A Wetland and Stream Assessment Report summarizes the field data and includes:

- A map showing:
  - Surveyed wetland boundaries
  - Surveyed OHWM
  - HTL and mean high water
  - Ditches that meet United States Army Corps of Engineers (Corps) criteria for Waters of the US
  - Regulatory buffers
  - Study area limits
- A narrative describing the wetlands and other waters
- Photographs
- Data sheets including
  - Wetland delineation
  - Wetland rating and figures
  - Functions analysis

WSDOT staff use this information to show how the project avoids and minimizes impacts where possible, determine unavoidable impacts, and document compensatory mitigation for unavoidable impacts.

The Corps considers wetland delineations valid for five years from the date of the field work. If the project is delayed beyond the five year time frame, the field work and report will need to be updated before submitting the permit application.

Find information on how to:

- Assess and document wetlands and other waters in a Wetland and Stream Assessment Report during Preliminary Design on the Wetlands & other waters webpage.
- Determine which agencies have jurisdiction over any wetlands or other waters assessed during Scoping on the Wetlands & other waters webpage.

Identifying impacts to wetlands and other waters

WSDOT staff identify impacts to wetlands and other waters by comparing the surveyed wetland boundaries to the project footprint during environmental review. A short description of wetland impacts may be included directly in the environmental review document. The environmental coordinator writes a separate Wetland Discipline Report if the impacts are environmentally controversial or complex. If no compensatory mitigation is required, wetland reconnaissance documentation is all that is required.

Common transportation project activities that may impact wetlands or other waters include:

- Filling wetlands
- Draining wetlands
- Altering natural drainage patterns
- Increasing or decreasing water levels
- Discharging sediment or toxicants in runoff
- Mechanically removing wetland vegetation
- Compacting wetland soils
- Using wetlands as staging areas
- Altering wetland or stream buffer areas
- Shading impacts to wetlands
- Converting aquatic resource

Impacts to wetlands and other aquatic resources include:

- **Permanent –** when work results in the permanent loss of wetlands or other aquatic resources.
- **Long-term temporary –** When work affects wetland functions, and the functions are restored in a year or more following impacts.
- **Short-term temporary –** When work affects wetland functions, but functions are restored within one year or within one growing season following impacts.
- **Indirect –** When work may affect the functions of wetlands or other aquatic resources.
- **Loss of a wetland –** When the entire area of the wetland is permanently impacted or no longer provides any functional value.
- **Aquatic resource conversions –** For example, converting a wetland to a stream channel during a fish passage barrier correction, or a forested or scrub-shrub wetland to an emergent wetland.

Regulators may not require compensatory mitigation for unavoidable impacts for projects designed for aquatic habitat restoration or enhancement, such as projects specifically built for fish barrier correction, if they result in net increases in aquatic resource functions and values.

See Washington State Department of Ecology's (Ecology) Interagency wetland mitigation guidance webpage for detailed definitions of the different types of impacts and when regulators may require compensatory mitigation.

Find information on how to:

- Document impacts and find the Wetland Discipline Report Checklist during Preliminary Design on the Wetlands & other waters webpage.
- Write appropriately sized discipline reports on the NEPA & SEPA webpage.

See Section 431.08 Mitigation for information on developing Mitigation Plans.

431.03(4) Construction

See Chapter 600: Construction for considerations of wetlands and other waters during and at the end of construction including:

- Submitting a right-of-way plan
- Submitting an as-built plan

Find information on how to initiate compensation site monitoring and apply for a permit modification on the Environmental during construction webpage.

431.03(5) Maintenance and Operations

Site coordination during monitoring period

Region or mode compensatory mitigation site manager coordinates with the wetland monitoring group throughout the monitoring period by:

- Reviewing the monitoring manager's proposed fieldwork schedule to coordinate management and monitoring activities (e.g. to make sure weed spraying isn't conducted just before the monitoring visit.)
- Sending documentation of management activities to the wetland monitoring group for inclusion in the annual monitoring report.
- Responding to feedback from the wetland monitoring group regarding emerging problems at the site. For example, if the wetland monitoring group sees invasive weed species, they will notify the site manager so that weed control can take place.
- Reviewing draft monitoring reports before they are submitted to the permitting agencies.

The ESO wetland monitoring group:

- Coordinates and conducts monitoring activities for compliance with permits.
- Provides management recommendations based on site observations and data to inform the adaptive management cycle.
- Facilitates annual meetings with the regions/modes to review site development.
- Provides annual monitoring reports for site compliance.

Concluding monitoring

At the end of the monitoring period, the wetland monitoring group documents that WSDOT has replaced the acreage and functions of the impacted wetlands and other waters. They request concurrence from regulators that permit obligations have been met.

The wetland monitoring group continues to monitor compensatory mitigation sites while waiting for either a release from further monitoring from the regulators or concurrence that permit conditions have been met.

The WSDOT maintenance division or environmental restoration crews protect compensatory mitigation sites that remain in WSDOT ownership after monitoring in perpetuity. They follow the long-term management plan for the site. See Section 431.08 Mitigation for WSDOT's long-term responsibilities for compensatory mitigation sites.

431.04 Analysis & documentation requirements

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

431.04(1) Analysis & documentation for NEPA

Wetland and Stream Assessment Report is required for NEPA documentation if wetlands or other waters are present. WSDOT submits the Wetland and Stream Assessment Report and as part of the permit application.

WSDOT performs Section 404(b)(1) analysis as part of the NEPA document for individual permits to submit with the Section 404 permit application.

Environmental coordinators write a Wetland Discipline Report if impacts are environmentally controversial or complex. The Wetlands Discipline Report Checklist can be found on the Wetlands & other waters webpage during Preliminary Design.

Analysis & documentation for SEPA only (No federal nexus)

Analysis and documentation for SEPA-only projects are the same as for NEPA.

431.05 External engagement

For most Nationwide Permits (NWPs), the Corps will send the project description, impacts numbers, and drawings out for a 10-day Agency & Tribal Review. All tribal and agency comments must be addressed before the Corps can verify the work under a NWP.

For Individual Permits, the Corps will issue a joint public notice (15-30 days depending on the activity) with the Section 401 certifying agency or tribe once they have a complete application.

431.06 Internal roles and responsibilities

431.06(1) Planner

- Conducts environmental screening for potential wetlands and other waters.
- Notifies the region environmental coordinator if obvious wetlands or other waters are in the study area.

431.06(2) Project Engineer

- Works with environmental managers and permit coordinators to request a reconnaissance from a WSDOT regional or headquarters environmental office or consultant.
- Works with environmental managers and permit coordinators to request a wetland and stream assessment from a WSDOT regional or headquarters environmental office or consultant.
- Provides the biologist the project description, purpose, and location, project plan sheets including the study area or area of potential effect, written right of entry for access to non-DOT property, and survey crew.

431.06(3) Region/Modal Biology Programs, Environmental Services Office Wetland Program, or Consultant

- Biologists must meet the minimum qualifications for wetland biologists (PDF 565KB).
- Performs wetland and stream reconnaissance and prepares the Wetland and Stream Reconnaissance Memo to provide to the project engineer, environmental coordinator, and permit coordinator.
- Performs wetland, stream, and other waters assessment, evaluates and documents ditches, evaluates wetland and stream buffers, and prepares the Wetland and Stream Assessment Report.
- Writes the Conceptual Mitigation Plan.
- Writes the Draft and Final Mitigation Plan.
- WSDOT biology staff review and comment on consultant prepared reports/plans.

431.06(4) Region Environmental Coordinator

- Fills out the ERS
- Determines potential unavoidable impacts with Region Permit Coordinator and Biologist.
- Documents impacts in the environmental review document or a wetland discipline report.
- Plans for and documents avoidance and minimization of impacts.

431.06(5) Region Permit Coordinator

- Fills out the ERS.
- Determines potential unavoidable impacts with Region Environmental Coordinator and Biologist.
- Plans for and documents avoidance and minimization of impacts.
- Applies for permits.

431.06(6) Region/Modal Environmental Manager

- Reviews and approves documentation that goes into ECS.

431.06(7) Environmental Services Office Wetland Monitoring Group

- Monitor WSDOT owned mitigation banks and compensatory mitigation sites.
  - Communicate with site managers in the region/mode and restoration crews and provide site observations and data to inform adaptive management of mitigation sites to achieve permit requirements.
- Write annual monitoring reports.
- Write and submit emails to regulatory agencies to request closeout of permit monitoring requirements for mitigation banks and compensatory mitigation sites.

431.07 Applicable permits & approval process

Apply for one or more of the following permits when work is in or over a wetland or stream:

- Navigable waters permit under Section 10 of the Rivers & Harbors Act
- Discharge permit under Section 404 of the Clean Water Act
- Administrative Order for fill in non-federally regulated wetlands

See the Graphic depiction of the Limits of Corps Regulatory Jurisdiction on the Corps' webpage.

Permits under Section 10 of the Rivers & Harbors Act and Section 404 of the CWA require a Water Quality Certification per Section 401 of the CWA. See Chapter 430 Surface Water for information on Water Quality Certifications and compliance with Section 401 of the CWA.

431.07(1) Section 10 of the Rivers & Harbors Act

The purpose of the Rivers and Harbors Act is to ensure the free flow of interstate commerce on our aquatic "highways", or navigable waters. Navigable waters are tidally influenced waters currently or historically used to transport commerce, such as Puget Sound, Lake Washington, and the Columbia River. You will need a Section 10 permit from the Corps when you work on a structure in or over a navigable water of the US.

Check the lists of Navigable Waters in Washington State (PDF 100KB) on the Streams, Rivers, and Tidal Waters page of the Corps Permit Guidebook to see if the Corps has Section 10 jurisdiction of the waterbody.

Use the same permit processes as the Section 404 discharge permits, below, to obtain coverage under Section 10.

431.07(2) Section 404 Nationwide Permits

The Corps issues programmatic permits covering activities that have minimal individual and cumulative adverse environmental effects every five years. The Corps will verify projects fit under one or more of the NWPs. Permit coordinators can use Section 5 of the Corps' User's Guide for Nationwide Permits in Washington State (PDF 2.27MB), the Corps' 2017 NWP Summary Chart (PDF 110KB) to find out if an activity is covered by an NWP.

To be covered under an NWP, the work must also follow the:

- National General Conditions - broad conditions that apply to all NWPs nation-wide. See Section 4 of the User's Guide.

- Regional General Conditions – Corps Seattle District conditions that apply to all NWPs for work in Washington. See Section 3 of the User's Guide.
- NWP-specific Regional Conditions – Corps Seattle District conditions that apply only when work will be verified under that NWP. See Section 5 of the User's Guide.

431.07(3) Section 404 Individual Permits

Permit coordinators need to apply for an Individual Permit for work that cannot be verified under the NWPs.

431.07(4) Section 404 Regional General Permits

Section 404 of the Clean Water Act also allows the Corps to issue 5-year Regional General Permits (RGPs) for certain types of activities, similar to the NWPs. There are currently no RGPs that WSDOT work can use at this time.

Exemptions from Section 404 Permits

Work in or over navigable waters is not exempt from getting a permit under Section 10 of the Rivers and Harbors Act.

The maintenance or emergency repair of transportation structures or riprap that was previously authorized may be exempt from getting a permit under Section 404 of the Clean Water Act (33 CFR 323.4). This can include bank stabilization, culvert repairs, and bridge footing scour repairs.

To be exempt, work must be consistent with the previously authorized work in the following ways:

- **Scope –** The purpose of the work must be the same as the purpose of the previous work.
- **Character –** The material must be of the same type and size (or one size larger) as was previously placed.
- **Size –** The footprint of the work must be the same as the previous footprint.

The repair must also be done within a "reasonable period of time" after the damage occurs to be exempt.

If you are certain the work is exempt, it is not necessary to submit a permit application or request approval from the Corps. If you are not sure if the work is exempt, contact the liaison program for help.

431.07(5) Non-federally regulated wetlands

For waters of the state under Ecology's jurisdiction, and where there is no Corps jurisdiction, Ecology will issue an Administrative Order that the work is consistent with the State Water Pollution Control Policy and other state laws (Chapter 430). Follow the procedures on the Wetlands & other waters webpage during Final Design to apply for an Administrative Order from Ecology. Coordinate with the tribes and the Environmental Protection Agency early in the design process for work in waters of the state on tribal lands to find out what approval is needed for the work.

431.07(6) Shoreline permits and approvals

Shoreline permits and approvals may be required for work within 200 ft. of a shore-line of statewide significance. Shorelines include floodways, wetlands, and all ma-rine waters along the Puget Sound and Pacific Ocean. The Department of Ecology is responsible for implementing the Shoreline Management Act, which directs local governments to develop Shoreline Master Programs (SMP). Local governments issue Shoreline permits and approvals, following their SMP. Types of Shoreline Permits & approvals:

- Substantial Development Permits
- Conditional Use Permits
- Variance
- Exemption Issued by Local Government
- Exemption (optional shoreline process for WSDOT only RCW 90.58.356)

Many WSDOT projects within 200 ft. of shoreline jurisdiction qualify for the optional shoreline process under RCW 90.58.356. The optional shoreline process allows WSDOT to perform certain maintenance, repair, safety, and replacement work without applying for a shoreline permit or approval. Check RCW 90.58.356 to determine if your project meets the criteria for this process.

If the project does not require a permit and will cost more than $1 million to plan and design, send written notification of the project prior to construction to all:

- Agencies, federal and state, with jurisdiction in the area, including the Ecology Regional Planner.
- Agencies with facilities or services that may be impacted by the project, including utility companies, transit systems, and schools.
- Adjacent property owners within 300 feet of the shoreline jurisdiction area.

If there are dozens to hundreds of property owners that require notification under the optional shoreline process or if the local agency's permit process is simple, consider applying for a shoreline permit or approval instead.

If your project doesn't meet the criteria for an optional shoreline process, apply for a shoreline permit or approval during final design. See the local SMP and coordinate with local government staff to determine which permit you need. Sometimes local governments have different criteria for different types of shoreline permits and approvals.

Coastal Zone Management Certification

Ecology evaluates federal activities and permit applicants (15 CFR 930.39) to en-sure consistency with the state's Coastal Zone Management Program (CZMP). This applies to projects within the 15 coastal counties. Washington State does not have a stand-alone law on Coastal Zone Management, but Ecology looks at how the project is consistent with the state's the Shoreline Management Act, Water Pollu-tion Control Act, and the Ocean Resources Management Act.

Water Rights

Ecology issues water right permits to applicants that need to withdraw any amount of surface water or more than 5,000 gallons per day of groundwater (RCW 90.03 and WAC 173-152). WSDOT or the contractor may need to acquire a temporary water right permit for dust control or watering a mitigation site if potable water is not available near a site.

431.08 Mitigation

WSDOT's Wetland Protection and Preservation Secretary's EO is to mitigate for all adverse effects to wetlands in accordance with Governor's EO 89-10.

WSDOT uses the mitigation sequence outlined in state and federal EOs and state and federal regulations. Mitigation sequencing requires the applicant to:

1. **Avoid** impacts to wetlands and other aquatic resources.
2. **Minimize unavoidable impacts.**
3. **Compensate for unavoidable impacts** through required compensatory mitigation.

Avoidance is the preference because it has the greatest reliability and is the simplest, most effective way to preserve and protect wetlands.

The Federal Highway Administration Mitigation of Environmental Impacts section of the Environmental Review Toolkit webpage summarizes parts of 40 CFR § 1500, 1508, and 23 CFR 771 that pertain to mitigation.

431.08(1) Selecting a compensatory mitigation option

WSDOT develops mitigation strategies that result in the greatest ecological benefit while making efficient use of financial resources. Compensatory mitigation should make ecological sense in the landscape context in which it occurs. WSDOT prioritizes compensation projects that restore environmental processes at the site scale or at a larger landscape scale. Find more information about evaluating landscape and site scale environmental processes on Ecology's Watershed Characterization webpage.

WSDOT follows guidance in the Final Rule on Compensatory Mitigation for Losses of Aquatic Resources (2008) uses mitigation credits established prior to project impacts when possible. Agencies must approve mitigation bank and in-lieu fee program instruments, including identification of initial sites, before any credits are released for use. If the impacts are not in the service area of an approved third-party mitigation bank or in-lieu fee program, permittee-responsible mitigation may be the only option. WSDOT uses credit from previously implemented compensatory mitigation before considering construction of a new compensatory mitigation sites when possible. See the Wetlands & other waters webpage during Final Design for how to purchase third-party mitigation credits or use advance WSDOT mitigation credits.

If credits aren't available from mitigation banks, in-lieu fee programs, or advance mitigation sites, then WSDOT plans permittee-responsible mitigation.

WSDOT can only use agricultural lands of long-term commercial significance for compensatory mitigation when there no other options (RCW 47.01.305). Washington law directs WSDOT to consider public and private lands before using agricultural lands. WSDOT must make every effort to avoid net loss of commercial agricultural lands.

Like any other project, existing wetlands and other waters must be documented prior to construction of permittee-responsible compensatory mitigation sites in a Wetland and Stream Assessment Report. The mitigation design team uses the baseline resource conditions to determine the area available for different types of compensatory mitigation (e.g. restoration, establishment, enhancement, and preservation). The wetland monitoring group uses digital files (MicroStation design or GIS shapefiles) of the delineations of pre-existing wetlands or other waters to evaluate how many acres of each type of mitigation has been provided after the site has been constructed.

431.08(2) Developing Conceptual and Draft Mitigation Plans

WSDOT documents the full mitigation sequence, including avoidance and minimization measures, unavoidable impacts and compensatory mitigation proposals in Conceptual, Draft and Final Wetland and Stream Mitigation Plans.

A Conceptual Mitigation Plan contains general information to allow for discussion of the design alternatives and proposed mitigation. WSDOT staff can bring the Conceptual Mitigation Plan to pre-application meetings and append it to the environmental review document. See Ecology's Interagency wetland mitigation guidance webpage for information on what biologists include in a Conceptual Mitigation Plan.

State and federal regulatory agencies evaluate the mitigation concept to determine if it would adequately compensate for the expected project impacts. A commitment to the mitigation option must be made during the NEPA process, leaving sufficient time to develop an appropriate detailed Wetland and Stream Mitigation Plan and design for the application.

Biologists document how the project avoids and minimizes impact to wetlands or other waters in a Draft Wetland and Stream Mitigation Plan. They describe the project, the remaining unavoidable impacts, and the approach for providing compensatory mitigation.

Regulatory agencies will determine the adequacy of the proposed compensatory mitigation after they review the compete project proposal and Wetland and Stream Mitigation Plan.

Complete Wetland and Stream Mitigation Plans include:

- Details of impact avoidance
- Details of minimization
- Proposed compensatory mitigation for unavoidable impacts
- A plan for establishing a legal mechanism to protect the compensatory mitigation property in perpetuity
- An outline of a Long-Term Management Plan to implement after the compensatory mitigation site permit obligations are met

As of March 2015, the Corps and Ecology require Wetland and Stream Mitigation Plans to contain a commitment to develop a 10-Year Long-Term Management Plan. This requirement does not affect the ongoing requirement for perpetual stewardship of compensatory mitigation sites.

Additional work necessary to develop the Wetland and Stream Mitigation Plan for submittal with the application varies depending on the compensatory mitigation option chosen.

Mitigation Bank & In-Lieu Fee Programs – A Mitigation Bank Credit Use Plan or an In-Lieu Fee Program Use plan must be submitted.

Advance Mitigation – Advanced Mitigation Plans are approved at the time the site is authorized. It includes details of how the advance mitigation credit will be developed and used, briefly explains how the available credit compensates for project impacts, and provides a ledger showing the debits and remaining credit value.

Permittee-Responsible Mitigation – The Draft Mitigation Plan includes all the information needed for WSDOT to plan appropriate mitigation. It includes the rationale for selecting the site, data describing baseline (pre-construction) conditions, a detailed mitigation plan (including a grading plan and planting plan), and goals, objectives, and performance standards.

If WSDOT plans to develop more wetland area than needed for compensation of the project impacts, WSDOT can propose that the excess be available for use by other projects. The permitting agencies won't approve the value for later use unless it is documented in the Wetland and Stream Mitigation Plan that excess credit generated can be used for other projects.

See Ecology's Interagency wetland mitigation guidance webpage for information on how to write Conceptual, Draft and Final Mitigation Plans.

See the Wetlands & other waters webpage during Preliminary Design for information on how to:

- Use available WSDOT mitigation credits.
- Write Credit Use and Mitigation Plans.
- Develop a Long-Term Management Plan.

See the Wetlands & other waters webpage during Final Design for information on how to purchase third-party mitigation credits.

431.08(3) Establishing the mechanism for compensatory mitigation site protection

The 2008 Final Rule on Compensatory Mitigation for Losses of Aquatic Resources requires long-term compensatory mitigation site protection. Long-term site protection must be in perpetuity. Another natural resource management entity may provide the long-term management with or without direct property transfer to their ownership.

Consider opportunities to develop partnerships in mitigation development with other natural resource management entities or local jurisdictions. If possible, establish willing partners to transfer compensatory mitigation sites to manage long-term. Qualified natural resource entities must agree to restrict the use of the property to preserve the natural and beneficial values of the wetland (RCW 47.12.370).

WSDOT most often uses recordings on the right-of-way plan or a sundry site plan that identify it as a compensatory mitigation site with the Corps permit number as the long-term site protection mechanism. If the site won't be maintained for the long term in WSDOT ownership, another legal mechanism for long-term protection must be developed.

WSDOT environmental staff and project managers coordinate with the region real estate services office to develop the long-term protective mechanisms for land transferred to other ownership. Conservation easements, restrictive covenants, or other mechanisms may be suitable for long-term protection.

WSDOT project managers and environmental staff also coordinate with the region real estate services office and legal counsel as needed to develop any compensatory mitigation site transfer mechanism. See RCW 47.12.370 on the Washington State Legislature webpage for the requirements for environmental mitigation exchange agreements. Regulatory agencies only allow transfer of compensatory mitigation site ownership to other parties for long-term management after meeting all performance criteria during monitoring. There must be an agreement that the new entity will protect the environmental functions in perpetuity.

431.08(4) Final Wetland and Stream Mitigation Plan development

WSDOT submits the permit application when further design refinements are not likely to change the wetland and other waters impacts. Reports supporting the application may include one or more Wetland and Stream Assessment Reports and a Draft Wetland and Stream Mitigation Plan. See Final design on the Wetlands & other waters webpage for MicroStation and AutoCAD application drawing pattern templates.

After the permit application has been submitted, WSDOT finalizes the Draft Wetland and Stream Mitigation Plan in coordination with the permitting agencies. The Final Wetland and Stream Mitigation Plan is completed after the appropriate agencies have provided written conditional approval of the Draft Wetland and Stream Mitigation Plan. WSDOT prepares the final mitigation design, approved by the permitting agencies, for contract during the design phase with development of the final Plans, Specifications and Estimates.

431.08(5) Monitoring

The ESO wetland monitoring group evaluates each compensatory mitigation site annually. They compare the site's performance to criteria established in the Wetland and Stream Mitigation Plan and environmental permits.

The wetland monitoring group collects quantitative data to evaluate mitigation sites according to the WSDOT Wetland Mitigation Site Monitoring Methods (PDF 98KB). This document describes methods to collect data on factors specific to each site's performance criteria.

Find the most recent two years of Monitoring Reports on the See the Wetlands & other waters webpage under Tools & resources.

431.08(6) WSDOT's long-term responsibilities for compensatory mitigation sites

WSDOT owns most of its compensatory mitigation sites. They will remain in state ownership in perpetuity. WSDOT transfers ownership of some compensatory mitigation sites to entities that have agreed to keep the area as a compensatory mitigation site after monitoring is complete.

WSDOT may transfer department-owned wetlands to qualified entities that agree to restrict the use of the property consistent with preservation of the wetland and other aquatic resources after permit obligations have been met (RCW 47.12.370). Any such transfer must

include an approved legal mechanism for long-term protection. WSDOT regions evaluate this option to reduce agency risk.

For WSDOT-owned sites, the regions transfer long-term stewardship to either the maintenance division or environmental restoration crews after the regulatory agencies concur that permit obligations have been met.

431.09 Abbreviations and Acronyms

Corps	US Army Corps of Engineers
Ecology	Washington State Department of Ecology
ECS	Environmental Classification Summary
ERS	Environmental Review Summary
EO	Executive Order
EPA	Environmental Protection Agency
ERS	Environmental Review Summary
GIS	Geographic Information System
HTL	High Tide Line
NEPA	National Environmental Policy Act
NWP	Nationwide Permit
OHWM	Ordinary High Water Mark
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
WQC	Water Quality Certification
WQMPP	Water Quality Monitoring and Protection Plan
WSDOT	Washington State Department of Transportation

431.10 Glossary

This glossary provides reader friendly context for terms in this chapter. The associated links provide technical definitions. These terms may have other meanings in other chapters. Many of the terms below are included in the definitions in Title 33 Navigation and Navigable Waters, Part 332 Compensatory Mitigation for Losses of Aquatic Resources: 33 CFR § 332.2.

Advance Mitigation – Compensatory mitigation that is accepted by regulatory authorities as being established before an impact occurs. This is a form of permittee -responsible mitigation.

Buffer – An upland, wetland, or riparian area that protects or enhances wetlands or aquatic resource functions from disturbances associated with adjacent land uses.

Compensatory Mitigation – The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, or in certain circumstances preservation of wetlands or other aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Enhancement – Changing a wetland to improve specific aquatic resource functions. Enhancement results in a gain in aquatic function but does not result in a gain in wetland area.

Establishment – Converting an upland area to a wetland or other aquatic resource. Establishment results in a gain in wetland area and functions. (Equivalent to the term 'creation' used previously.)

Impact – Adverse effect, whether direct, indirect, temporary, or cumulative. Typical adverse effects to wetlands or other waters include filling, draining, altering natural drainage patterns, increasing or decreasing water levels, discharging sediment or toxicants from runoff, mechanically removing wetland vegetation, altering wetland or stream buffers, or compacting wetland soils.

In-Lieu Fee Program – A program administered by a governmental or nonprofit natural resources management entity that provides compensatory mitigation and sells mitigation credits. With regulatory approval, the obligation to provide compensatory mitigation is transferred from the permittee to the in-lieu fee entity when the credit purchase is complete.

Mitigation – Avoiding adverse impacts to wetlands, streams and other aquatic resources, where practical; minimizing unavoidable impacts; and compensating for all remaining unavoidable impacts.

Mitigation Bank – A property developed for the purpose of providing compensatory mitigation in advance of authorized impacts to aquatic resources where wetlands are established, restored, enhanced, or preserved. A mitigation bank may sell credits to and assume the mitigation obligations of third parties. With regulatory approval, the mitigation obligation is transferred when the credit purchase is finalized.

Mitigation Sequence – An ordered approach to mitigation that involves analyzing the affected environment, determining the effects of projects, avoiding and minimizing adverse impacts, and compensating for the remaining unavoidable impacts.

Permittee-Responsible Mitigation – Compensatory mitigation for which the permittee retains full responsibility.

Preservation – Removing a threat to or preventing a decline of aquatic resources by implementing legal or physical mechanisms to provide permanent protection. Preservation does not result in a gain of wetland area or functions.

Restoration – Changing a site so natural or historic functions are returned to a former or degraded wetland. For tracking net gains in wetland area, restoration is divided into Re-establishment and Rehabilitation. Re-establishment results in a gain in wetland area; rehabilitation results in a gain in aquatic resource function, but not in area.

Waters of the state – Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and watercourses within the jurisdiction of the state of Washington (RCW 90.48.020).

Waters of the United States – Briefly, all waters that are:

1. Used in interstate commerce, including tidally influenced waters.
2. Interstate waters including interstate wetlands.
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds.
4. Some impoundments.
5. Tributaries of the above.
6. Territorial seas.
7. Wetlands adjacent to waters.
8. Excludes prior converted croplands and waste treatment ponds.

Wetland – In general, wetlands are areas that are normally wet enough to support plants typically adapted for life in saturated soil conditions. Washington State and federal jurisdictional definitions of wetlands are slightly different.

Wetland and Stream Assessment Report – Describes the location, classification, ratings and functional assessment for each wetland based on field work by a qualified wetland biologist and a land survey. The project area for this report should include all potential work areas so the report does not have to be updated unless the project area changes.

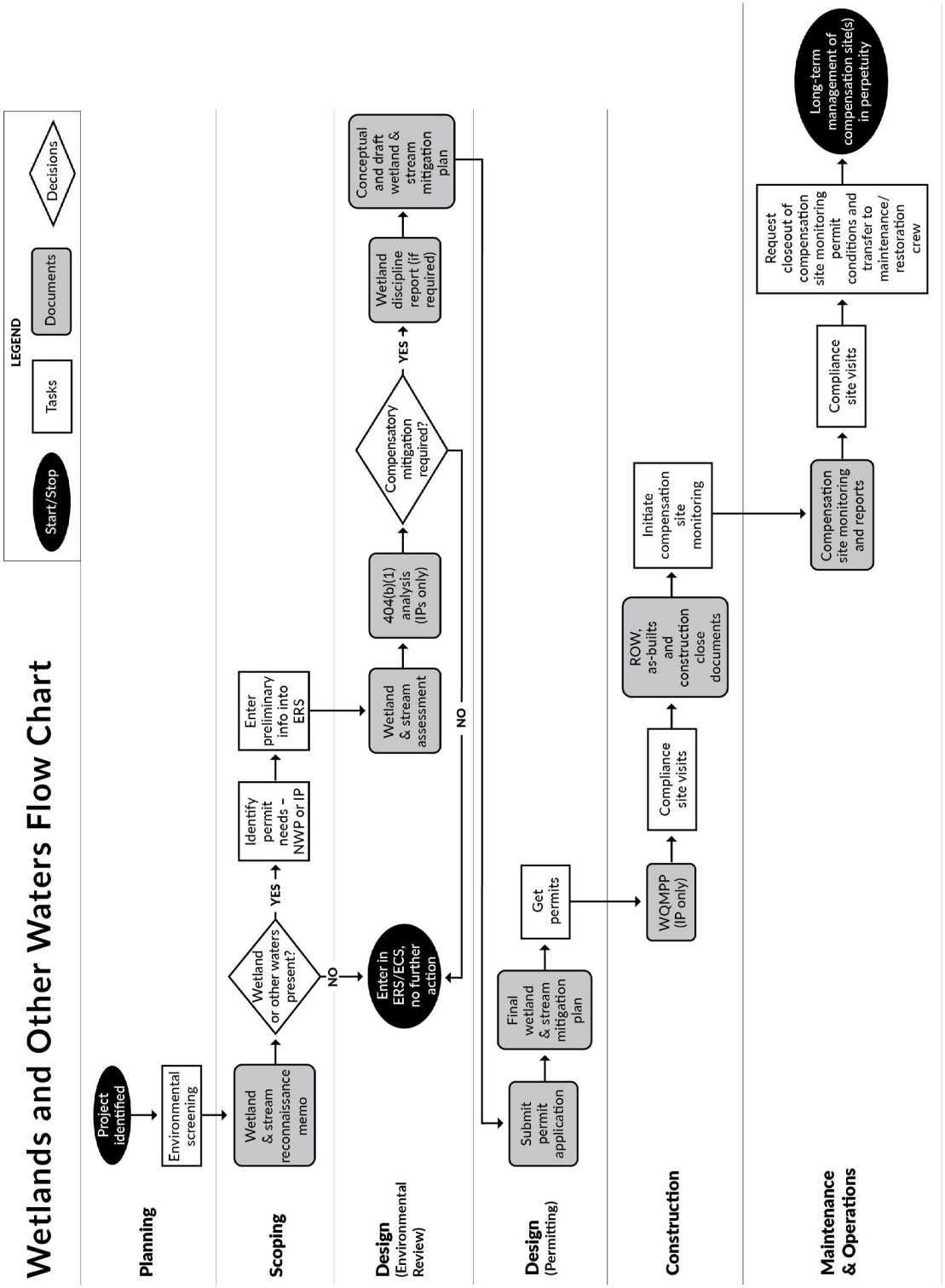
Wetland and Stream Mitigation Plan – Describes measures taken to avoid and minimize wetland impacts and the way compensatory mitigation will be accomplished. This plan may have several iterations and levels of detail depending on the stage of design and discussions with regulatory agencies. It is finalized as permits are issued, and often is incorporated into the permit conditions.

Wetland Discipline Report – Uses the wetland boundaries and categories in the Wetland and Stream Assessment Report and the project footprint for each alternative to estimate impacts to wetlands and other waters. It may be updated as design modifications change the adverse impacts.

Wetland Reconnaissance Memo – Describes the presence or absence of wetlands based on a brief field visit. The project area for this report should include the potential work areas for all alternatives.

431.11 Exhibits

Exhibit 431-1 Wetlands and Other Waters Flow Chart



Chapter 432 Special Flood Hazard Area

432.01 Introduction
432.02 Applicable statutes, regulations, executive orders, & agreements
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432.01 Introduction

This chapter addresses the potential impact of WSDOT projects on special flood hazard areas. The National Environmental Policy Act (NEPA), requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations are given due weight in project decision making. For work in special flood hazard areas that requires permit approval, environmental documentation must explain the impacts the project will have on these areas, and on the resources within those areas. The State Environmental Policy Act (SEPA), mandates a similar procedure for state and local actions.

The primary concern with floodplain is increasing the frequency or severity of flooding caused by obstructing flood flows or filling floodplain storage. Flood flows are obstructed by under sizing hydraulic structures or blocking natural flow paths causing flood water to back up behind the highway. Filling floodplain storage also increases flooding by reducing the floodplain attenuation of peak flows.

Consequently, all WSDOT projects that encroach upon a regulatory special flood hazard area must have a floodplain discipline report. In addition, during the design process, the Project Engineer must also develop a Specialty Hydraulics Report, to evaluate the project's potential effects on the floodplain and floodway.

The WSDOT Floodplain Discipline Report Checklist includes floodplain issues to be addressed in project development, and sources of information. Other references, documents, MOUs, Interagency Agreements, and permits included in this chapter add relevant details.

The *Hydraulics Manual* M 23-03 provides details and requirements for preparing the Specialty Hydraulics Report.

Process guidance documents "Flood Risk Assessment Process for WSDOT Fish Passage Projects (Exhibit 432-2)" and "Outreach to Local Governments on Flood Risk Assessment for WSDOT Fish Passage Projects (Exhibit 432-3)" have been prepared and are discussed further in Sections 432.04 and 432.05, respectively. The current versions of the documents have been attached as exhibits in Section 432.11.

432.02 Applicable statutes, regulations, executive orders, & agreements

432.02(1) Federal

- 42 United States Code (USC) Chapter 55. National Environmental Policy Act of 1969 (NEPA)
- 16 USC Chapter 35. Endangered Species Act of 1973 (ESA)
- 42 USC Chapter 50. National Flood Insurance
- 23 CFR 771 Environmental Impact and Related Procedures
- 23 CFR 650 Subpart A; Location and Hydraulic Design of Encroachments on Flood Plains
- 40 CFR 1500-1508 National Environmental Policy Act Implementing regulations
- 44 CFR 60.3 Flood plain management criteria for flood-prone areas
- Public Law 92 234, 87 Stat. 975. Flood Disaster Protection Act (1973)
- Presidential Executive Order (E.O.) 11988 Floodplain Management (May 24, 1977)
- FHWA Technical Advisory T 6640.8A (October 1987)
- USDOT Policy statement on climate change adaption. (2011)
- USDOT Climate Adaption Plan - Ensuring Transportation Infrastructure and System Resilience (2014)
- FHWA Order 5520. Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events (2014)

432.02(2) State

- RCW 47.01.260 Authority of WSDOT on state highway system design
- RCW 77.55 Construction Projects in State Waters
- RCW 77.57 Fishways, Flow, and Screening
- RCW 86.16 The Flood Control Management Act of 1935
- RCW 86.26 State Participation in Flood control Maintenance
- WAC 173-145 Administration of the flood control assistance account program
- WAC 173-158 Flood Plain Management
- WAC 197-11 SEPA Rules
- WAC 220-660 Hydraulic Code Rules
- WAC 468-12 Transportation Commission and Transportation Department State Environmental Policy Rules
- Governor's Directive on Acquisitions of Agricultural Resource Land
- WDFW Memorandum of Agreement (MOA) for Transportation Activities

432.02(3) Local

- Floodplain Development Permit – Specifics vary for each jurisdiction

432.03 Considerations during project development

The level of analysis for special flood hazard areas changes with the stage of project development. Analysis maybe very generalized and qualitative for during planning and become very detailed and quantitative during design.

432.03(1) Planning

During the planning phase of a project it is expected that the project planners identify special flood hazard areas. EO 11988 requires that floodplains be avoided when practicable, consequently documentation is required to demonstrate that alternatives have been considered to minimize floodplain impacts. Local floodplain development permit requirements should also be identified.

432.03(2) Scoping

During the scoping process it is expected that project engineers are considering project designs that accommodate floodplain issues that were identified in the planning stage. These considerations include sizing hydraulics structures to minimize flood flow obstruction, identifying locations that may need to be acquired for compensatory storage. It is also expected that project engineers will consult with the ESO Fish Passage Program to determine if hydraulic structures are located on fish bearing water courses that will require specialized design to ensure fish passage.

432.03(3) Design

During the design process it is expected that project engineers and HQ Hydraulics Section will be working together, to provide a quantitative analysis of the project impacts on floodplains including changes in flood flows, sizing of hydraulics structures and provisions for compensatory storage if needed. In addition, the design team shall consider the effects of scour and climate change to ensure the project is resilient to changes that may occur over the design life of the project. The design team is also responsible for preparation of the technical engineering materials to support the Federal, State and local permits from the Federal Emergency Management Agency, the US Army Corps of Engineers, the US Coast Guard, Washington Department of Fish and Wildlife, as well as the local jurisdiction.

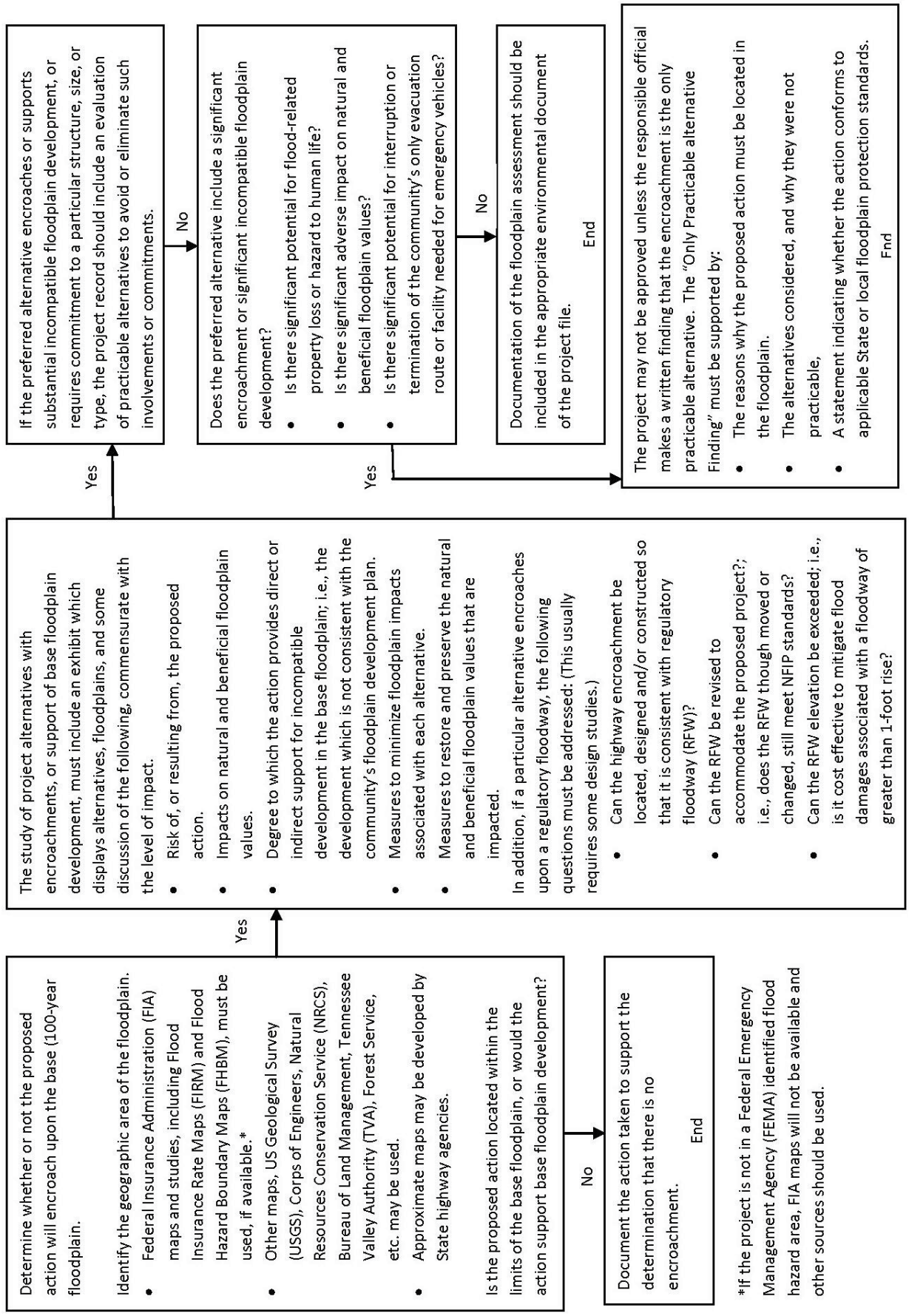
432.03(4) Construction

There are no construction requirements for Floodplains. However, if a project requires a Conditional Letter of Map Revision (CLOMR) or Letter of Map Revision (LOMR) As-Built survey data is required to comply with the local permits.

432.03(5) Maintenance and Operations

There are no maintenance and operations requirements for Floodplains.

Exhibit 432-1 The 1998 FHWA Environmental Flowchart on Floodplains



432.04 Analysis & documentation requirements

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

432.04(1) Analysis & documentation for NEPA

A Floodplain Discipline Report must be completed whenever a proposed project intersects with, or is located in, a special flood hazard area, particularly when the placement of new fill, structures, in-water structures (such as wood, barbs or weirs), bridges, channel modifications or re-locations are involved within a floodway.

The WSDOT Floodplain Discipline Report Checklist ensures that floodplain issues are considered in the design of projects. The discipline report should provide the information required for an EIS, EA, or CE, and for floodplain development permits. The extent of analysis should be proportionate to the level of impact without over analyzing or providing unnecessary information.

The checklist includes these sections:

1. Introduction and preliminary drainage survey.
2. Affected environment, shown mainly by mapping regulatory floodplains.
3. Studies and coordination including flood history, climate impacts vulnerability assessment and identification of permits required.
4. Summary. The summary should include enough detail so it can be included in an EIS with only minor modification.

The 1998 FHWA Environmental Flowchart on Floodplains (Exhibit 432-1) provides an overview of floodplain issues.

432.04(2) Analysis & documentation for SEPA only (No federal nexus)

The requirements are the same as federal.

432.04(3) Analysis & documentation for local floodplain development permits

As described further in Section 432.07, local floodplain development ordinances are the key regulatory instrument governing floodplain management. Local ordinances must comply with minimum federal standards set by FEMA in the NFIP; however, local jurisdictions may adopt more stringent regulations.

This process is described in Sections 432.05 and 432.07 and the current guidance documents are attached as Exhibits 432-2, 432-3 and 432-6. However, HQ Hydraulics Section should be contacted to obtain the most up to date guidance.

432.05 External engagement

Floodplain impacts follow the standard NEPA/SEPA scoping, public noticing, accepting agency and public comments, and responding to comments appropriate to the level of the environmental review process. However, all floodplain development requires to follow the FEMA Procedures for No-Rise Certification For Proposed Developments in the Regulatory Floodway guidance document. In addition, external engagement may, however, inform the development of the projects as other resources such as cultural, wetland, and farmland are commonly found in floodplains. Altering the floodplain may also trigger Environmental Justice concerns.

It is necessary, however, to engage the local floodplain management agency early in the development process to determine what is necessary to obtain a floodplain development permit in the affected community. Generally, the special flood hazard area that the project encroaches upon determines the levels of analysis required to obtain a floodplain development permit.

WSDOT has developed a special flood risk assessment process for fish passage projects (Exhibit 432-2) along with companion guidance for outreach to local government (Exhibit 432-3). This guidance lays out a process for the Regions to reach out to local governments about fish passage projects that have been identified within their jurisdiction. The Regions should share the fish passage delivery plan with the local government representatives and discuss the FEMA effective FIRMs for each crossing in their jurisdiction, WDSOT's flood risk assessment process, and WSDOT's hydraulic modeling approach. As fish passage projects are developed, the Regions should meet with the local jurisdictions, as needed, throughout the design process to share modeling results; zero rise analyses; CLOMR and LOMR processes, if needed and the overall floodplain development permitting approach.

432.06 Internal roles and responsibilities

432.06(1) Region/Modal Environmental Manager

The Region/Modal environmental manager's role is to oversee the general preparation of environmental review documents, providing expert guidance to Region staff to as to the type of analysis needed and identifying need for specialized analysis. The manager provides quality assurance and quality control. The manager is responsible for disseminating new or updated guidance and verifying that the guidance is being followed. The manger is also responsible for reporting to ESO when guidance is not adequate, confusing, or in need of revision.

432.06(2) Project Engineer

It is the project engineer's role and responsibility to oversee that all engineering studies and technical reports are prepared consistent with *Hydraulics Manual* M 23-03 and provide appropriate levels of analysis to support the environmental review process and permitting activities to the environmental staff.

It is also the Project Engineers responsibility to reach out to local floodplain development managers to secure floodplain development permits.

432.06(3) Region Environmental Coordinator

The region environmental coordinator role is to oversee the development of the environmental review documents. The coordinator is responsible to for exchange of information between the project engineer and the environmental review specialists on the team and to ensure that any environmental requirements are incorporated into the project design as well as engineering information needed for permits and other agency approvals is provided.

432.06(4) ESO

ESO role is primarily to keep the guidance current with evolving and changing rules and regulations. ESO staff also provide expert assistance for developing scopes of work for consultants and internal WSDOT staff as well as reviewing floodplain discipline reports and environmental review documents.

432.06(5) Headquarters Hydraulics Section

HQ Hydraulics role is to provide guidance to project engineers, other WSDOT engineering staff, and consultants in the preparation of hydrologic and hydraulic analyses as described in Chapter 1 of the HM and HQ Hydraulics Section also prepares specialized hydraulic studies and reviews consultant work products for concurrence by the State Hydraulic Engineer.

HQ Hydraulics oversees the preparation of Preliminary and Final Hydraulic Design (PHD and FHD) for fish passage projects. The PHD or flood risk assessment technical memorandum is used to coordinate with local agency floodplain managers to facilitate the floodplain development permit process. Floodplain mitigation measures (compensatory storage or larger structures), if needed, would be included in the FHD.

432.07 Applicable permits & approval process

Local floodplain development ordinances are the key regulatory instrument governing floodplain management. Local ordinances must comply with minimum federal standards set by FEMA in the NFIP; however, local jurisdictions may adopt more stringent regulations. The specifics of each permit are unique to each community.

For more information on the permitting process, see Chapter 500.

432.08 Mitigation

The National Flood Insurance Program (NFIP) prohibits encroachments within the regulatory floodway unless it can be demonstrated that the proposed encroachments would not increase the 100-year flood levels. Hydraulic and hydrologic analysis is required to document a No-Rise Certification.

Some local jurisdictions are also adding “compensatory storage” requirements to their floodplain ordinances. These statutes require the excavation of floodplain storage areas to compensate for fill placed in floodplains. They may also stipulate elevation requirements for the location of the compensatory storage area.

432.09 Abbreviations and acronyms

BFE	Base Flood Elevation
CMZ	Channel Migration Zone
CLOMR	Conditional Letter of Map Revision
FAPG	Federal Aid Policy Guide
FCAAP	Flood Control Assistance Account Program
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
LOMC	Letter of Map Change
LOMR	Letter of Map Revision
NFIP	National Flood Insurance Program
SFHA	Special Flood Hazard Area

432.10 Glossary

Avulsion – A sudden, dramatic shift of the river into a new course or channel.

Base Flood Elevation (BFE) – The elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year. The BFE is shown on the Flood Insurance Rate Map (FIRM) for zones AE, AH, A1–A30, AR, AR/A, AR/AE, AR/A1– A30, AR/AH, AR/AO, V1–V30 and VE.

Compensatory Storage – The NFIP floodway standard in 44CFR 60.3 (d) restricts new development from obstructing the flow of water and increasing flood heights. However, this provision does not address the need to maintain flood storage. Especially in flat areas, the floodplain provides a valuable function by storing floodwaters. When fill or buildings are placed in the flood fringe, the flood storage areas are lost and flood heights will go up because there is less room for the floodwaters. This is particularly important in smaller watersheds which respond sooner to changes in the topography.

Community –

1. A group of people living in the same locality and under the same government, or a political subdivision of a state or other authority that has zoning and building code jurisdiction over a particular area.

2. A political entity that has the authority to adopt and enforce floodplain ordinances for the area under its jurisdiction.

3. A network of individuals and families, businesses, governmental and nongovernmental organizations and other civic organizations that reside or operate within a shared geographical boundary and may be represented by a common political leadership

Flood – A general and temporary condition of partial or complete inundation of 2 or more acres of normally dry land area or of 2 or more properties (at least 1 of which is the policyholder's property) from:

1. Overflow of inland or tidal waters; or

2. Unusual and rapid accumulation or runoff of surface waters from any source; or

3. Mudslides (i.e., mudflows) which are proximately caused by flooding and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.; or
4. Collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined above.

A flood inundates a floodplain. Most floods fall into three major categories: riverine flooding, coastal flooding, and shallow flooding. Alluvial fan flooding is another type of flooding more common in the mountainous western states.

Floodplain – Any land area susceptible to being inundated by flood waters from any source; usually the flat or nearly flat land on the bottom of a stream valley or tidal area that is covered by water during floods.

Floodplain Boundaries – Lines on flood hazard maps that show the limits of the 100- and 500-year floodplains.

Floodway – A "Regulatory Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Communities must regulate development in these floodways to ensure that there are no increases in upstream flood elevations.

Regulatory Floodplain – The currently effective floodplain that has been mapped under the NFIP.

Special Flood Hazard Area – An area having special flood, mudflow or flood-related erosion hazards and shown on a Flood Hazard Boundary Map (FHBM) or a Flood Insurance Rate Map (FIRM) Zone A, AO, A1-A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-A30, V1-V30, VE or V. The SFHA is the area where the National Flood Insurance Program's (NFIP's) floodplain management regulations must be enforced and the area where the mandatory purchase of flood insurance applies. For the purpose of determining Community Rating System (CRS) premium discounts, all AR and A99 zones are treated as non-SFHAs.

Zone A – Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Zones AE and A1 A30 – Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. Base Flood Elevations (BFEs) are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Zone AH – Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet. Base Flood Elevations (BFEs) derived from detailed hydraulic analyses are shown in this zone. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Zone AO – Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet. Average flood depths derived from detailed hydraulic analyses are shown in this zone. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Some Zone AO have been designated in areas with high flood velocities such as alluvial fans and washes. Communities are encouraged to adopt more restrictive requirements for these areas.

Zone AR – Areas that result from the decertification of a previously accredited flood protection system that is determined to be in the process of being restored to provide base flood protection. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Zone A99 – Areas subject to inundation by the 1-percent-annual-chance flood event, but which will ultimately be protected upon completion of an under-construction Federal flood protection system. These are areas of special flood hazard where enough progress has been made on the construction of a protection system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes. Zone A99 may only be used when the flood protection system has reached specified statutory progress toward completion. No Base Flood Elevations (BFEs) or depths are shown.

Zone V – Areas along coasts subject to inundation by the 1-percent-annual-chance flood event with additional hazards associated with storm-induced waves. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

Zone VE and V1-30 – Areas subject to inundation by the 1-percent-annual-chance flood event with additional hazards due to storm-induced velocity wave action. Base Flood Elevations (BFEs) derived from detailed hydraulic analyses are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply. indicates additional coastal flooding hazards such as storm waves. Study is detailed and BFEs are shown.

Zone X, B (moderate-rise zones) – An area of moderate flood hazard that is determined to be outside the Special Flood Hazard Area between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood.

Zone X, C (low-rise zones) **– An area of minimal flood hazard that is determined to be outside the Special Flood Hazard Area and higher than the elevation of the 0.2-percent-annual-chance (or 500-year) flood.**

432.11 Exhibits

The 1998 FHWA Environmental Flowchart on Floodplains (Exhibit 432-1)

Flood Risk Assessment Process for WSDOT Fish Passage Projects (Exhibit 432-2)

Outreach to Local Governments on Flood Risk Assessment for WSDOT Fish Passage Projects (Exhibit 432-3)

Exhibit 432-2 Flood Risk Assessment Process for WSDOT Fish Passage Projects

Per the Coordination Meeting between Washington State Department of Transportation (WSDOT), Federal Emergency Management Agency (FEMA), Washington State Department of Ecology and Washington Department of Fish and Wildlife on 12/15/20, consult HQ Hydraulics Office's Preliminary Hydraulic Design (PHD) Tracking spreadsheet for preliminary determination of special flood hazard area (SFHA) zone (check status here: HQ PHD STATUS).

Begin coordination with local governments (locals) for all WSDOT Fish Passage projects early in the process and on-going during the PHD development. Confirm WSDOT's assessment of whether the project is within a FEMA regulatory floodway or SFHA zone and/or will require a floodplain development permit with the locals. Also, confirm the local floodplain management codes for flood risk assessment methodology with the locals. For more guidance on reaching out to locals, refer to WSDOT's *Outreach to Local Governments on Flood Risk Assessment for WSDOT Fish Passage Projects*.

1. HQ Hydraulics completes an internal flood hazard memo after the draft PHD. This memo defines the FEMA floodway classification and informs the region of flood hazard risks. (Note: memo completed for all projects.) This memo is for the project team to assess project risks to make decisions; this memo can be used to coordinate with locals, but it is not official documentation for permitting.

2. For projects within FEMA regulatory floodways based on FEMA's effective flood maps (e.g., Floodway Zone AE):

    a. HQ Hydraulics conducts no-rise analysis based on FEMA's standards.[1]

    b. If there is no rise in Base Flood Elevation (BFE):

        i. Region requests that the local review and approve the no-rise certification.

        ii. Region submits floodplain development permit application to the local (if required per local code).

    c. If there is a reduction in BFE OR changes to the extent of the floodway:

        i. Region submits floodplain development permit application to the local.

        ii. HQ Hydraulics submits Letter of Map Revision (LOMR) to FEMA through the local after construction is completed based on as-built conditions.[2]

    d. If there is a rise in BFE:

        i. Region submits floodplain development permit application to the local and HQ Hydraulics submits Conditional Letter of Map Revision (CLOMR) application to FEMA through the local.[3]

        ii. HQ Hydraulics submits LOMR to FEMA through the local after construction is completed based on as-built conditions.[2]

[1] For Design-Build Projects, the Design-Builder conducts the no-rise analysis.
[2] For Design-Build Projects, the Design-Builder prepares and submits LOMR.
[3] For Design-Build Projects, the Design-Builder prepares and submits CLOMR.

3. For projects not in a regulatory floodway, but in a SFHA based on FEMA's effective flood maps (e.g., Floodplain Zone A):
    a. HQ Hydraulics establishes the existing conditions model and conducts no-rise analysis based on floodplain impacts not greater than 1 foot from existing conditions model.[1] (Note: Locals may have a more restrictive requirement.)
    b. If there is no rise above 1 foot:
        i. Region requests that the local review and approve the no-rise certification.
        ii. Region submits a floodplain development permit application to the local (if required per local code).
    c. If there is a reduction in the existing condition elevation OR changes to the extent of the floodplain:
        i. Region submits floodplain development permit application to the local.
        ii. HQ Hydraulics submits LOMR if requested to FEMA through the local after construction is completed based on as-built conditions.[2]
    d. If there is a rise above 1 foot:
        i. Region submits a floodplain development permit application to the local and HQ Hydraulics submits CLOMR application to FEMA through the local.[3]
        ii. HQ Hydraulics submits LOMR to FEMA through the local after construction is completed based on as-built conditions.[2]

Exhibit 432-3 Outreach to Local Governments on Flood Risk Assessment for WSDOT Fish Passage Projects

WSDOT's *Flood Risk Assessment Process for WSDOT Fish Passage Projects* includes coordinating with local governments early in project development (refer to the process document for more information regarding floodplain analysis). Note: pursuing a floodplain development permit does not preclude a project from qualifying for a Fish Habitat Enhancement Project (FHEP) hydraulic project approval (HPA). The following are suggested talking points and considerations for coordination with local governments:

- Prepare for outreach with the local government (local):
  - Region reviews FEMA's effective flood maps at each barrier site to determine if it's within a FEMA regulatory floodway or special flood hazard area (SFHA) zone by doing the following:
    - For sites that have a Preliminary Hydraulic Design (PHD) started, check status here: HQ PHD STATUS.
    - For other sites, check with HQ Hydraulics.
  - Region reviews the local code. It is important to note whether the local's floodplain development regulations fall under their Critical Areas Ordinance (CAO). If the flood regulations are included within the CAO and the project ultimately qualifies for FHEP, the project will apply for a floodplain development permit but should not be subject to any other local permits.
  - Prior to meeting with the local, it is recommended to have a prep meeting that includes the PEO, HQ Hydraulics, and Region Environmental to discuss the agenda for meeting with the local. Suggested topics include:
    - Project overview
    - WSDOT's *Flood Risk Assessment Process* and modeling approach with SRH2D
    - Permitting approach
  - The sooner the Region engages with the local, the better, to keep the hydraulic work progressing.
- When reaching out to the local, request that the local's floodplain manager attend the meetings.
- Initially provide the local with a list of upcoming projects within their jurisdiction. Update the list as needed and refer to the list as the projects develop. Contact the ESO Fish Passage Delivery Team for any questions on the delivery plan.
- If the local says that a project does NOT need a floodplain development permit, contact ESO Permitting & Compliance Program Manager regarding next steps.
- For projects within a FEMA regulatory floodway or SFHA, coordinate with the local throughout the no-rise analysis and CLOMR or LOMR (if needed) processes, as well as the floodplain development permitting process.

For reference:

- 44 CFR 60.3 Flood plain management criteria for flood-prone areas
- RCW 47.01.260 Authority of WSDOT on state highway system design
- ORIA's Floodplain Development Permit webpage, which has links to WAC, RCW and CFR
- RCW 77.55.181 Fish habitat enhancement project (WDFW code)

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Chapter 436 Fish, wildlife and vegetation

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436.01 Introduction

Sensitive wildlife, fish, plants, and their habitat require special consideration during project planning and development. Many federal, state, and local regulations apply to projects that may affect natural resources. The Washington State Department of Transportation's (WSDOT) policy is to follow and comply with all federal and state mandated regulations (RCW 47.04.280). Therefore, WSDOT biologists are involved in all stages of project development, evaluating potential adverse effects and recommending impact avoidance or minimization measures.

Projects with a federal nexus, meaning they have federal funding, requires a federal permit, or takes place on federal lands, must follow the most prominent laws; the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). All projects, regardless of funding source, must comply with Section 9 of the ESA, the State Environmental Policy Act (SEPA) (RCW 43.21C), Migratory Bird Treaty Act (MBTA), Marine Mammal Protection Act (MMPA), Bald and Golden Eagle Protection Act (BGEPA), and local ordinances.

Ferry, rail, airport, or non-motorized transport systems are subject to the same policies, procedures, and permits that apply to road systems, but are generally funded under different authorities such as Federal Transit Administration (FTA), Federal Railway Administration (FRA), or Federal Aviation Administration (FAA). Each of these federal agencies may have slightly different approaches for document preparation, review, and submittal procedures or overall process goals and directives regarding fish, wildlife, and vegetation resources.

Washington State Ferries (WSF) must follow strict guidelines to work in nearshore environments (see Section 436.06). These guidelines include avoidance of eelgrass and forage fish spawning habitat, restrictions on construction materials, and specific Best Management Practices (BMPs) for removal of creosote treated wood associated with docks, pilings, and piers. In addition, some regulations may be more applicable to non-road projects. For example, ferry projects occur within marine waters and require consideration of regulations under the MMPA and the Shoreline Protection Act.

Public use airports must address specific wildlife hazards on or near airports. These issues are addressed in the Federal Aviation Administration (FAA) Publication, *Hazardous Wildlife Attractants On or Near Airports* (No. 150/5200-33B, August 28, 2007).

The main focus of this chapter is to summarize regulations associated with fish, wildlife, and vegetation resources

436.02 Applicable statutes, regulations, executive orders, & agreements

436.02(1) Federal

- 42 United States Code (USC) 4321 National Environmental Policy Act of 1969 (NEPA)
- Endangered Species Act (ESA)
- Fishery Conservation and Management Act (Magnuson-Stevens Act)
- Migratory Bird Treaty Act (MBTA)
- Bald and Golden Eagle Protection Act (BGEPA)
- Marine Mammal Protection Act (MMPA)
- National Forest Management Act
- Northwest Forest Plan

436.02(2) State

- WDFW RCW 77.12.240
- WSDOT State Habitat Connectivity Policy. Executive Order: "Protections and Connections for High Quality Natural Habitats."
- RCW 47.85.020 – A streamlining process that requires WSDOT to maintain programmatic agreements and permits, including the Programmatic Biological Assessment and General Hydraulic Project Approvals (HPA). Also implements a multiagency effort with Washington Department of Fish and Wildlife (WDFW) to streamline the HPA permit process for fish passage barrier correction projects.
- WSDOT and WDFW have agreed on HPA application and review procedures through a Memorandum of Agreement (MOA) Concerning Implementation of the Fish and Wildlife Hydraulic Code for Transportation Activities (henceforth referred to as the WDFW-WSDOT Hydraulic Code MOA). This WDFW-WSDOT Hydraulic Code MOA includes information on the Fish Passage Retrofit Program, the Chronic Environmental Deficiency (CED) Program, and deferred mitigation for maintenance and emergency activities.
- RCW 77.55 Construction Projects in State Waters – WDFW laws for fish screens, fishways, and fish passage.
- RCW 77.57 Fishways, Flow, and Screening – WDFW's laws for HPA permitting.
- WAC 220-660 – WDFW's Hydraulic Code rules for HPA permits.

436.02(3) Local

- Local Comprehensive Plans and Critical Area Ordinances (CAO) – For additional details see Chapter 455.

436.03 Considerations during project development

436.03(1) Planning

Sensitive wildlife, fish, plants, and their habitat require special consideration during project planning. Many federal, state, and local regulations apply to projects that may affect natural resources. Some considerations include timing restrictions to avoid or minimize project effects to species, and anticipated time to complete ESA consultation. Based on the location and preliminary nature of the project, many environmental issues can be anticipated. During scoping, the Environmental Coordinator and Project Biologist may be able to determine

whether the project will be covered by a USFWS/NMFS programmatic consultation or will require an individual consultation. Depending on the project, the Fish and Wildlife Program may prepare a Habitat Connectivity memorandum for the region.

436.03(2) Scoping

During the Scoping phase, the Project Biologist will determine those state and federal regulations that will likely apply to the project. Bridge projects often require a bird management plan to comply with the MBTA. Projects with in-water pile driving may require a monitoring plan to determine if predicted noise levels are accurate. In marine waters, projects that generate underwater noise will likely require an MMPA Incidental Harassment Authorization for marine mammals. If your project requires a HPA permit, see if your project qualifies for any existing GHPAs.

436.03(3) Design

The Project Biologist works closely with the Project Engineer obtain details regarding stormwater design, new pollution generating impervious surface, pile driving and other project elements that may affect species and habitats. It is during the Design phase that the Project Biologist conducts early coordination with USFWS/NMFS liaisons. These initial pre-BA meetings are coordinated and facilitated by the Fish and Wildlife Program. The programmatic form or an individual BA are prepared by the biologist during this phase and submitted by the region. The programmatic consistency finding, letter of concurrence, or biological opinion must be received prior to construction.

Many I-4 fish passage and chronic environmental deficiency project qualify for WDFW's Fish Habitat Enhancement Process (FHEP). FHEP is a streamlined process that does not require SEPA or local permits or, except for Floodplain Development permits. WDFW requires applicants to submit a FHEP sponsorship letter and a form for most FHEP projects. However, WDFW does not require FHEP sponsorship letters and FHEP cover sheet for WSDOT-sponsored fish passage barrier removal FHEP projects that are on WDFW fish passage list.

If applicable, the biologist must also prepare an MMPA application and receive the IHA prior to construction. Similarly, coordination with the USFWS regarding the MBTA and BGEPA must be completed prior to construction.

436.03(4) Construction

Projects that require in-water work nearly always include work site isolation and moving fish out of the work area. In marine waters, MMPA compliance usually includes marine mammal monitoring. The Project Biologist is responsible for coordinating these efforts. Other requirements may include implementation of bird protection plans and monitoring specific habitat enhancement measures such as large wood placement in a stream. The Project Biologist is responsible for reinitiating ESA consultation if, among other things, the project changes significantly, allocated take limits are exceeded, or when a new species is proposed for listing.

WSDOT activities need to follow the Hydraulic Code in RCW 77.55 and HPA permit provisions. Details of the Hydraulic Code WAC only apply when the HB includes them within the HPA provisions. If compliance issues arise, WDFW first seeks voluntary compliance when issues arise through education and technical assistance through HPA early coordination, the permit application process, and onsite compliance and technical visits. WDFW can perform

compliance inspections without notification (WDFW-WSDOT Hydraulic Code MOA). When voluntary compliance does not occur, WDFW may use a range of increasingly strict enforcement rules which ranges from issuing notices of correction and stop work orders to penalties. Additional details about these tools are available in WAC 220-660-480.

WDFW's HPA Compliance Program complements WSDOT's existing Environmental Compliance Assurance Procedure (ECAP) process. Our agencies have a long history of working well together when non-compliance issues arise during construction and maintenance activities. We anticipate this will continue as WSDOT staff continue to follow ECAP and closely collaborate with WDFW when potential HPA non-compliance issues arise.

436.03(5) Maintenance and Operations

In some situations, a Maintenance activity may require a separate ESA consultation and other environmental permitting. Maintenance activities that may affect freshwater habitats are usually covered under the 4(d) rule. In terrestrial areas where potential disturbance to listed species may occur, the Fish and Wildlife Program has prepared species specific BMPs that avoid or minimize impacts to sensitive wildlife and vegetation. There are no Operations phase requirements for Fish, Wildlife, and Vegetation.

436.04 Analysis & documentation requirements

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

436.04(1) Analysis & documentation for NEPA

NEPA, 42 USC 4321, requires that all major actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to fish and wildlife are given due weight in decision making. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (NEPA). WSDOT's policy is to follow all guidance and direction provided by the federal lead agency on NEPA related documents. The analysis of impacts to fish, wildlife and vegetation can be recorded directly in the project's environmental document. In rare cases when warranted by the nature of the project, the analysis can be documented in separate Fish, Wildlife, and Vegetation discipline reports. Templates and checklists provide document requirements for WSDOT projects. For additional details on NEPA procedures see Chapters 400 and 412.

436.04(2) Analysis & documentation for SEPA only (No federal nexus)

WSDOT typically documents SEPA as part of the NEPA documentation when both NEPA and SEPA are required. Find step-by-step guidance for compliance with SEPA rules in the Washington State Department of Ecology's (Ecology) SEPA Handbook. For additional details Chapter 400.

436.04(3) Analysis & documentation for ESA

Both the state and federal agencies regulate threatened and endangered species in Washington. WSDOT complies with the ESA, which is administered by the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS). The USFWS is primarily responsible for terrestrial and freshwater species, while NMFS responsibilities lie mainly with marine wildlife and anadromous fish. Significant sections of the Act include:

- **Section 4** of the ESA allows for the listing of species as threatened or endangered based on habitat loss or degradation, over utilization, disease or predation, inadequacy of existing regulation mechanisms, or other human caused factors. Section 4(d) allows for the promulgation of regulations to provide for the protection and conservation of listed species. It may allow for "take" of threatened species.

  In July 2000, NMFS adopted a rule under Section 4(d) of the ESA (65 FR 42422), which allows take of threatened fish species. Under this rule, the take prohibition is not applied to threatened species when the take is associated with one of NMFS's 13 approved programs or limits. The 13 limits can be considered exceptions to the 4(d) take prohibition. NMFS has determined that these programs, activities, and criteria contribute to species conservation and therefore it is not necessary to impose take prohibitions. NMFS updates the rule to include new species listed as threatened. The rule applies to any agency, authority, or private individual subject to U.S. jurisdiction that applies for coverage under the rule. In 2003, WSDOT applied for and received approval as part of the Regional Road Maintenance Program (RRMP) for take exception under the 4(d) rule.

  WSDOT's routine, unscheduled, and emergency/disaster maintenance activities are covered under the Routine Road Maintenance limit along with 29 other cooperating agencies. The program defines general practices (such as adaptive management, monitoring, and training) and specific Best Management Practices that WSDOT uses to avoid adverse effects to aquatic environments.

- **Section 7** of the ESA requires each federal agency to ensure actions it carries out, authorizes, permits, or funds do not jeopardize the continued existence of any threatened or endangered species. It describes consultation procedures and conservation obligations.

  All projects with a federal nexus are subject to Section 7 of the ESA and an analysis is required to ensure compliance with the ESA. The project biologist – either a WSDOT biologist or a consulting biologist – conducts a preliminary evaluation to determine the level of project effects on listed species or designated critical habitat. Depending on the level of effect, preparation of a "no effect" letter or a biological assessment (BA) will be required. Templates are required for projects with FHWA as the lead action agency. WSDOT has developed extensive guidance and protocols for ESA Section 7 Compliance.

  There are three primary types of documentation that can be completed: No Effect Letter or Assessment, Programmatic Biological Assessment, or Individual Biological Assessment. For each listed species evaluated, a BA must arrive at one of three conclusions:

  - The action will have "no effect" on the species.
  - The action "may affect, not likely to adversely affect" the species.
  - The action "may affect, likely to adversely affect" the species.

  BAs prepared for WSDOT must follow specific guidance developed through cooperative agreements and in collaboration with FHWA, NMFS, and USFWS. The guidance standardizes analyses, improves consistency and facilitates quality control reviews. The

guidance is updated regularly and the website should be checked regularly for current guidance. Guidance includes:

- BA Preparation Seminars taught regularly by WSDOT.
- Consulting biologists on contract with WSDOT must be qualified to write BAs for WSDOT.
- Required methods for analyzing the effects of stormwater on ESA listed fish species.
- Identifying the extent of aquatic and terrestrial noise effects.
- Required method for analyzing delayed consequences of a project.

BAs are submitted to the appropriate Service (USFWS or NMFS) depending on the species addressed. A non-federal agency (such as WSDOT) designated by a federal action agency may submit a BA for informal consultation. During informal consultation, the Service reviews the BA and ascertains if they concur with the effect determination conclusions. If the agency concurs in writing, then no further consultation is needed. The agency may request additional information before giving concurrence and the project biologist should respond to such requests within two weeks. However, if the Service does not concur with the effect determinations, the consultation enters formal consultation at the request of the federal action agency.

Formal consultation involves a "may affect, likely to adversely affect" determination for one or more listed species or designated critical habitats. Formal consultation packages are submitted to the Service(s) by the federal action agency (i.e., FHWA, FTA, U.S. Army Corps of Engineers). During formal consultation, NMFS/USFWS may recommend modifications to eliminate or reduce adverse effects. If effects can be reduced to an insignificant or discountable level, then consultation proceeds informally. Formal consultation ends when NMFS/USFWS issues a biological opinion (BO). The ESA mandates that BOs be completed within 135 days, although extensions are possible at the request of the consulting Service. However, formal consultations typically take much longer (averaging 300 days or more) and this timeline should be factored into project schedules. Questions on current consultation timelines can be directed to the Environmental Services Office Fish and Wildlife Program.

- **Section 9** of the ESA prohibits a "take" of listed species. "Take" is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, capture, or collect or attempt to engage in such conduct" (1532(18)). Through regulations, the term "harm" is defined as "an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." Section 4(d) of the ESA allows for each service (USFWS and NMFS) to develop special rules (4(d) rules) to conserve species listed as threatened. These protections allow some take of threatened species that does not interfere with survival and recovery.

  Section 4(d) protective rules for threatened species may apply Section 9 take prohibitions to threatened species. There may be an "exception" from the prohibitions if a program adequately protects listed species. In other words, the 4(d) rule can "limit" the situations to which the take prohibitions apply. Many of WSDOT maintenance activities are covered under existing Section 4(d) rules. All projects are required to conduct an ESA review. If during the review it appears that incidental take cannot be avoided, the project will be modified or a federal nexus identified for Section 7 consultation.

- **Section 10** of the ESA lays out guidance on permits that may be issued to authorize "take" as defined in Section 9.
  - Section 10(a)1(A) allows permits for take of listed threatened or endangered species for scientific research or purposes of propagation or survival.
  - Section 10(a)1(B) allows permits for incidental take of threatened or endangered species through the development and approval of Habitat Conservation Plan (HCP).

WSDOT has made ESA compliance an agency wide priority. Therefore, all WSDOT projects are required to comply with Section 9 of the ESA (prohibited acts). If the project has a federal nexus, such as federal funding, permitting, or is on federal lands, it is also subject to Section 7 of the ESA. Projects located on lands covered by an HCP must comply with rules defined in the plan. Standard maintenance operations are covered under Section 4(d) Rules for fish species under NMFS jurisdiction.

WSDOT identifies potential effects to listed or proposed species and critical habitats associated with a proposed action and then attempts to avoid, minimize, or eliminate these effects. For some actions, WSDOT conducts preliminary environmental reviews to identify likely effects early in the project design. This approach allows for design adjustments if effects to listed or proposed species or critical habitats are identified.

Analysis & documentation for MMPA

The Marine Mammal Protection Act establishes responsibilities for conservation and management to protect marine mammals. It establishes a moratorium on the taking and importation of marine mammals and marine mammal products. The MMPA defines "take" as "to hunt, harass, capture, or kill" any marine mammal or attempt to do so. WSDOT projects that involve marine waters, as well as the Columbia River up to Bonneville Dam, must consider potential effects of project activities and operation on marine mammals. If a project will impact marine mammals, a permit request for incidental harassment may be required from NOAA. Contact the Environmental Services Office Fish and Wildlife Program for additional information and guidance.

Analysis & documentation for MBTA and BGEPA

Two federal regulations administered by the USFWS mandate WSDOT's responsibilities to minimize impacts to protected bird species.

The Migratory Bird Treaty Act (MBTA) makes it unlawful to take, import, export, possess, sell, purchase, or barter any migratory bird, with the exception of the taking of game birds during established hunting seasons. The law also applies to feathers, eggs, nests, and products made from migratory birds. This law is of particular concern when birds nest on bridges, buildings, signs, illumination, and ferry dock structures. WSDOT has developed guidance on avoiding active nests during highway construction, bridge maintenance, bridge inspection, and other relevant activities to ensure compliance with the MBTA. See Regional or Headquarters biology staff on how to proceed if guidance is necessary.

The Bald and Golden Eagle Protection Act (BGEPA), similar to the MBTA, makes it unlawful to take, import, export, sell, purchase, or barter any bald or golden eagle, their parts, products, nests, or eggs. "Take" includes pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing eagles. All WSDOT projects must comply with the BGEPA. To avoid potential disturbance to bald eagles, the National Bald Eagle Management Guidelines (guidelines) provide recommendations that will likely avoid

take for a list of activities. WSDOT biologists and consultants address compliance with the BGEPA through a Bald Eagle form that documents compliance with the National Bald Eagle Management Guidelines. If take is unavoidable, contact regional or headquarters biologists on how to proceed.

State law also requires authorization to handle, kill, or collect wildlife of the state. The Washington State Department of Fish and Wildlife (WDFW) administers this law under RCW 77.12.240 and applies to all wildlife. If you believe your project may require take of state wildlife, including birds, amphibians, reptiles, invertebrates, and mammals, contact the Environmental Services Office Fish and Wildlife Program.

Analysis & documentation for Fishery Conservation and Management Act (Magnuson-Stevens Act)

Under the Fishery Conservation and Management Act of 1976, NMFS was given legislative authority to regulate the fisheries of the United States. In 1996, this Act was amended to emphasize the sustainability of the nation's fisheries and create a new habitat conservation approach called Essential Fish Habitat (EFH). In 1999 and 2000, the Pacific Fishery Management Council (PFMC) added provisions for the protection of EFH to three Fishery Management Plans (Coastal Pelagics, Groundfish, and Pacific Coast Salmon) in the Pacific Northwest. Federal agencies, and agencies working on their behalf, must consult with the NMFS on all activities, or proposed activities, authorized, funded, or undertaken by the agency that have or may have an adverse effect to EFH. The WSDOT *Biological Assessment Preparation Manual* contains a chapter detailing WSDOT procedures for completing EFH consultations with NMFS.

Construction in State Waters

A Memorandum of Agreement (MOA) between WSDOT and WDFW addresses transportation construction work in state waters. The purpose of the MOA is to establish and promote mutual agreement of the needs and mandates of the respective agencies, to facilitate the consistent and efficient administration of Hydraulic Project Approvals (HPAs) for transportation projects under RCW 77.55 (Construction Projects in State Waters), and WAC 220-660 (Hydraulic Code Rules); to ensure that fish passage at transportation projects is facilitated through RCW 77.57 (Fishways, Flow, and Screening); and facilitate the implementation of the WSDOT Chronic Environmental Deficiency Program.

436.05 External engagement

436.05(1) Working on Public Lands

Specific regulations apply to projects located on public lands. These projects may include a federal nexus as described previously, or not. In either case, public land managers (US Forest Service (USFS), Bureau of Land Management (BLM), Washington State Department of Natural Resources (DNR), National Park Service (NPS), and others) may require additional review to meet their regulatory obligations and mission goals. WSDOT policy encourages coordination and cooperation with public land agencies and adherence to their regulations.

National Forest Management Act (NFMA, 16 USC 1604 (g)(3)(B)) requires the Secretary of Agriculture to assess forest lands, develop a management program based on multiple use, sustained-yield principles, and implement a resource management plan for each unit of

the National Forest System. The NFMA applies directly to lands administered by the USFS, but also provides direction for BLM land management plans. The BLM and USFS have integrated NEPA requirements with their land management regulations. In 2008, the USFS implemented new planning rules that offer a more strategic approach to land management plan development, amendment, and revision, as well as expanded public involvement.

The USFS has developed forest specific "forest plans" which identify "species of concern" found within each forest. Species lists are comprised of several categories of species such as federally listed species, USFS sensitive species, survey and manage species, and state listed species. Forest plans can cover a wide range of species (mollusks, lichens, mammals, and others). Individual forest staff or regional foresters decide which designated species to include on its species of concern list. Project requirements are associated with species ranking. However, actions on federal land must always comply with the ESA (see Section 436.03).

Northwest Forest Plan (NWFP) is a management plan affecting federal forest lands within the range of the northern spotted owl in western Washington, Oregon, and northern California. The standards and guidelines set forth in this plan supersede any existing forest plans within the range of the spotted owl. All WSDOT projects occurring on federal forest lands within the range of the northern spotted owl must follow the standards and guidelines within the NWFP.

WSDOT projects that involve federal forest lands must comply with regulations under the NFMA and the NWFP. The USFS policy (FSM 2670.32) states that all programs and activities will be reviewed in a Biological Evaluation (BE) to determine the potential effect of such proposed activities on sensitive species. Guidance for developing BEs is located in the USFS Manual or the BLM Policy Manual. In most cases, WSDOT BA formats and programmatic documents can meet USFS and BLM requirements by adding in information on sensitive species. Further, the policy states that impacts of such activities must be avoided or minimized and any permitted activities must not result in a loss of viability or create significant trends towards Federal listing. Similar to the USFS policy, the BLM Manual 6840 describes policy regarding special status species on BLM lands. Lists of special status and sensitive species for USFS and BLM as well as recent policy can be obtained from the Interagency Special Status/Sensitive Species Program.

The regional or state office of the federal agency responsible for the affected federal lands should be contacted to obtain a species of concern (special status or sensitive) list, information on necessary surveys and other guidance on needed documentation. Depending on the federal land ownership, this could include, but is not limited to, coordination with BLM, USFS, or NPS. Before any ground disturbing activity can occur, surveys may be required for each managed species that may be present in the project area.

436.05(2) Working on Tribal Lands

Projects on tribal lands may be subject to tribal laws that regulate fish, wildlife, and habitat. Projects not on tribal land could affect treaty reserved resources or species of tribal significance. The appropriate tribal biologist should be contacted to discuss any regulations that may apply to the project. Contact the WSDOT Tribal Liaison for more information or guidance.

436.06 Internal Roles and responsibilities

436.06(1) Project Engineer

The Project Engineer provides a detailed project description to the Project Biologist.

436.06(2) Project Environmental Office

The Project Environmental Office is responsible for preparing HPA permit applications and HPA commitments, and resolving HPA issues.

436.06(3) Project Biologist

The project biologist can be either a WSDOT biologist or consultant. The project biologist conducts early coordination with state and federal agencies, works with the Project Engineer in addressing and minimizing environmental issues associated with the project, and prepares and submits environmental documents. This role requires a thorough understanding of ESA, MMPA, MBTA, and other federal and state regulations, and detailed knowledge of species biology.

436.06(4) Region/Mode Lead Biologist

The Lead Biologist provides technical assistance to project biologists and conducts quality assurance and quality control for all environmental documents.

436.06(5) ESO Permitting Compliance Program

The Permitting Compliance Program manages the HPA program including GHPAs.

436.06(6) ESO Fish and Wildlife Program

The Fish and Wildlife Program facilitates early coordination meetings between the Project Biologist, Project Engineer and USFWS/NMFS liaisons. The Program provides technical assistance throughout the process and conducts additional quality assurance and quality control services.

436.06(7) ESO Liaison Program

The Liaison Program provides technical assistance early in the ESA consultation process, ensuring that the Project Biologist has addressed all ESA concerns prior to document submittal.

436.07 Applicable permits & approval process

436.07(1) Federal

Endangered Species Act (ESA) – If a project may affect a proposed or listed species, or proposed or designated critical habitat, WSDOT must obtain a Letter of Concurrence, Biological Opinion, or Programmatic Consistency Finding from the USFWS or NMFS.

The Fish and Wildlife Program also maintains ESA Section 10(a)1(A) permits that cover handling of some listed species.

Fishery Conservation and Management Act (Magnuson-Stevens Act) – If a project may affect essential fish habitat, WSDOT must prepare and submit an Essential Fish Habitat Assessment to NMFS. This assessment is included in an individual biological assessment or programmatic form. When ESA species are not present, a stand-alone EFH assessment may be required.

Migratory Bird Treaty Act (MBTA) – The Fish and Wildlife Program applies for an annual MBTA permit from the USFWS that covers most compliance issues. The project biologist will determine if a project requires the preparation of a Bird Protection Plan. This document includes measures to avoid or minimize impacts to nesting birds.

Bald and Golden Eagle Protection Act (BGEPA) – If a project may affect an active or inactive eagle nest, the project biologist will prepare a Bird Protection Plan, and coordinate with the Fish and Wildlife Program to obtain authorization from the USFWS.

Marine Mammal Protection Act (MMPA) – Projects that may disturb marine mammals must apply for an Incidental Harassment Authorization from NMFS.

436.07(2) State

- WDFW RCW 77.12.240 authorizes take of species under the jurisdiction of WDFW. The Fish and Wildlife Program applies for an annual permit from the WDFW that covers most compliance issues
- The Washington Department of Fish and Wildlife (WDFW) requires HPA permits for hydraulic projects in, over, or near state waters RCW 77.55. WDFW defines a hydraulic project as "construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state." RCW 77.55.011 HPA permit provisions include measures that avoid and minimize impacts to fish life and fish habitat as WSDOT performs authorized activities. Provisions also cover requirements for notification, reporting, and compliance. Additional information about project activities that trigger HPAs and the permitting process is available on the WDFW website and the WSDOT Fish webpage.
- Shoreline Management Acts (SMA). For more details see Chapter 431.

436.07(3) Local

- Local Comprehensive Plans and Critical Area Ordinances (CAO) – For more details see Chapter 455.

For more information on the permitting process, see Chapter 500.

436.08 Abbreviations and acronyms

AKART	All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment
BA	Biological Assessment
BE	Biological Evaluation
BGEPA	Bald and Golden Eagle Protection Act
BO	Biological Opinion
BMP	Best Management Practice
BLM	Bureau of Land Management
CAO	Critical Area Ordinance

EFH	Essential Fish Habitat
ESA	Endangered Species Act
GHPA	General Hydraulic Project Approval
HCP	Habitat Conservation Plan
HPA	Hydraulic Project Approval
MBTA	Migratory Bird Treaty Act
MMPA	Marine Mammal Protection Act
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NOAA	National Oceanic and Atmospheric Administration
NWFP	Northwest Forest Plan
NMFS	National Marine Fisheries Service
PFMC	Pacific Fishery Management Council
RRMP	Regional Road Maintenance Program
Service(s)	United States Fish and Wildlife Service and National Marine Fisheries Service
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WDFW	Washington State Department of Fish and Wildlife

436.09 Glossary

Candidate Species – Any species of fish, wildlife, or plant considered for possible addition to the list of endangered and threatened species. These are taxa for which NMFS or USFWS has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions.

Critical Habitat – Under the Endangered Species Act, (1) the specific areas within the geographic area occupied by a federally listed species on which are found physical or biological features essential to conserving the species, and that may require special protection or management considerations; and (2) specific areas outside the geographic area occupied by a federally listed species when it is determined that such areas are essential for the conservation of the species.

Effects of the Action (ESA) – Effects that are caused by the proposed action and are later in time but are still reasonably certain to occur. (50 CFR 402.02)

Endangered Species – Any species which is in danger of extinction throughout all or a significant portion of its range.

Federal Nexus – A project with a federal nexus either has federal funding, requires federal permits, or takes place on federal lands.

Habitat – The physical or natural environment where a species or population may live.

Incidental Take (ESA) – Take of listed species that results from, but is not the intention of, carrying out an otherwise lawful activity.

Jurisdiction – Governing authority which interprets and applies laws and regulations.

Listed Species – Any species of fish, wildlife, or plant which has been determined to be endangered or threatened under Section 4 of the ESA.

Programmatic Biological Assessment – A biological assessment that establishes conditions allowing multiple actions on a program, regional or other basis to proceed through streamlined consultation processes with the Services.

Proposed Species – Any species of fish, wildlife, or plant that is proposed by NMFS or USFWS for federal listing under Section 4 of the ESA.

Take – Defined under the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct," including modification to a species' habitat.

Threatened Species – Any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Viability – Ability of a population to maintain sufficient size so it persists over time despite normal fluctuations in numbers; usually expressed as a probability of maintaining a specific population for a defined period.

Watershed – Basin including all water and land areas that drain to a common body of water.

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Chapter 446 Noise

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446.01 Introduction

Noise is defined as unwanted sound. The Federal Highway Administration (FHWA) developed noise regulations to investigate traffic noise impacts in areas where humans exist adjacent to highways and effective control of the undesirable effects of traffic noise. The regulation requires investigation of actions that have the potential to alter the existing traffic noise environment such as the proposed construction of a new highway, significantly changing the horizontal or vertical alignment of an existing highway, increasing the number of through-traffic lanes.

Noise levels near roadways depend on six variables:

1. Traffic volume
2. Traffic speed
3. Percent of heavy trucks
4. Distance from the roadway
5. Intervening topography
6. Atmospheric conditions

Generally, traffic noise increases with heavier traffic volumes, higher speeds, and more heavy trucks.

WSDOT uses several strategies to control traffic noise at nearby noise sensitive receivers:

- Construct noise barriers (walls or earthen berms)
- Reduce traffic speeds
- Coordinate with local agencies to prevent “noise sensitive” development near highways
- Preserve existing buffer zones and beneficial topographic features
- Support local jurisdictions to establish principal routes for buses and trucks

See the noise study process flow chart in the Exhibit below and for detailed information see WSDOT’s Noise webpage.

446.02 Applicable statutes, regulations, executive orders, & agreements

446.02(1) Federal

- 42 United States Code (USC) 4321 National Environmental Policy Act of 1969 (NEPA)
- Federal Noise Control Act (42 USC 4901) and companion legislation (23 USC 109(i))
- FHWA Procedures for Abatement of Highway Traffic Noise And Construction Noise (23 CFR 772)

446.02(2) State

- State Noise Legislation (RCW 70A.20) and implementing regulations

The Washington State Department of Ecology (Ecology) is responsible for implementation under the following regulations:

- **WAC 173-58** – Establishes standard procedures for measuring sound levels of sources regulated by Ecology, including, but not limited to, environmental noise, motor racing vehicles, construction, float planes, and railroads.
- **WAC 173-60** – Establishes the maximum noise levels allowed in different environments and Environmental Designations for Noise Abatement (EDNA) standards as measured at the property line. Highway traffic is exempt from this regulation, but it does apply to highway construction noise at night from 10 p.m. to 7 a.m.
- **WAC 173-62** – Sets noise emission standards for new motor vehicles operating on public highways and provides methods for evaluating motor vehicle noise levels.

446.02(3) Local

Local Noise Ordinances – Noise from construction or maintenance on transportation facilities during nighttime hours (typically, 10 p.m. to 7 a.m.) are subject to local ordinances and may require a noise variance or exemption.

446.03 Noise considerations during project development

446.03(1) Highway Projects

Planning

Under Section 1310 of MAP-21, the Federal lead agency may adopt and use planning products in the environmental review process of a project, even where planning begins at the local level. This can provide an opportunity for noise-compatible land use planning or reconsideration of project alternatives.

Scoping

Determine if the project is a Type 1, Type 2, or Type 3 project according to the definitions in 23 CFR 772.5 and WSDOT Noise Policies and Procedures (2020) or identify what information is needed to make this determination during design phase. Refer to the current retrofit barrier priority list and determine whether there are any retrofit (Type 2) noise barriers within the project corridor.

If the project is Type 1 and there is high density housing within the project corridor that do not already have a noise wall, conduct a noise screening analysis following WSDOT Noise Policies and Procedures (2020) to determine potential need for noise barriers. This information can help to provide more accurate project cost estimates prior to design phase.

Recommend including replacement of access doors on existing noise walls within project as necessary.

Design

The intent of the WSDOT Noise Policies and Procedures (2020) is to minimize and avoid noise impacts from transportation systems and facilities. Many of the Technical Guidance documents in Section 446.02, above, also function as Policy Guidance.

Related guidance is available in the following documents.

1. **FHWA Highway Traffic Noise Analysis and Abatement, Policy and Guidance –** The basis for all state noise policies and the accompanying guidance used to support state DOT policy development.
   - Federal Rule 23 CFR 772, July 2010
   - Highway Traffic Noise: Analysis and Abatement Guidance, December 2011
   - FHWA Noise Measurement Handbook – Final Report 2018.
   - FHWA Consideration of Existing Noise Barrier in a Type 1 Noise Analysis – FHWA-HEP-12-051
2. **FHWA Guidance on Construction Noise –** FHWA guidance on highway construction noise from the FHWA Special Report Highway Construction Noise: Measurement, Prediction, and Mitigation (May 2, 1977). Additional information can be found in the FHWA Construction Noise Handbook (August 2006).
3. **FHWA Guidance on Pavement as a Noise Abatement Measure –** Outlines when states can consider the use of quieter pavements for noise abatement (2016).
4. **FHWA Environmental Review Toolkit –** Contains links to numerous references on highway construction and traffic noise analysis and abatement.
5. **FHWA Recommended Best Practices for the Use of TNM –** Provides TNM users with the best sources for information and input data that are critical to the development of an accurate model of highway traffic noise (2015).
6. **NCHRP Supplemental Guidance on the Application of FHWA's TNM –** Provides State Department of Transportation staff and other transportation professionals with technical guidance on using TNM (2014).

WSDOT Guidance

1. **Noise Policy and Procedures (2020)** – Both technical procedures and policy guidance for addressing roadway traffic and construction noise is included in the document.
2. **Guidance for Noise Modeling (2020)** – Technical procedures and guidance for traffic noise modeling using FHWA's Traffic Noise Model (TNM).
3. ***Biological Assessment Manual*** – Evaluation of noise impacts for fish and wildlife is located in the *Biological Assessment Manual*, Part 2: Guidance on Specific Biological Assessment Topics, under Chapter 7: Noise Impact Assessment.
4. ***Roadside Manual*** **M 25-30** – Provides additional information on safety, visual quality, and maintenance that may be useful for designers of noise barriers.
5. ***Design Manual*** **Chapter 1130** – Gives general guidelines that local jurisdictions and private developers should follow when considering development and noise impacts on state highways.
6. ***Design Manual*** **Chapter 1600** – Provides information on design choices for designers to use to minimize potential noise impacts from rumble strips and quieter options where needed.

FTA lead/co-lead projects

For many projects involving passenger rail, transit, and/or park and ride facilities, FTA criteria applies as outlined in *FTA Transit Noise and Vibration Impact Assessment Manual*, September 2018 (Report No. 0123). Noise studies are also required for these facilities.

An Interagency Agreement for coordinated noise analysis and abatement policy and procedures has been developed by FTA, FHWA, WSDOT, and Sound Transit. The current agreement (as of February 2001) documents an agreed upon noise methodology and criteria for integrated highway and transit projects. A copy of the agreement is included in Appendix B of the EM.

FTA technical guidance for mass transportation noise analysis is available in the FTA Noise and *Vibration Impact Assessment Manual*, September 2018 (Report No. 0123). The FTA General Noise Assessment Spreadsheet is designed as an aid in using the FTA General Noise Assessment Procedures.

FRA Lead/Co-Lead Projects

Evaluation of railroad sound levels is regulated under 42 USC 4916 and WAC 173-58. Rail projects may require a vibration analysis. Rail projects may also require a horn noise analysis if a new rail crossing is created, or an existing crossing is modified to introduce new horn warning signals. A process to address train horn noise and establish community quiet zones is now available through the Federal Rail Administration (FRA).

WSF Projects

Ferry projects are considered multimodal facilities and are typically addressed under FTA criteria and policy for noise and vibration. Noise studies following FHWA criteria may also be required for these facilities. Ferry projects may require an Incidental Harassment Authorization (IHA) permit for pile driving in water. Biological Assessments (BA) should address noise impacts to species listed under the Endangered Species Act. Ferry vessels are regulated for noise under RCW 79A.60.

WSDOT Airports

WSDOT airports have noise compatible land use guidelines.

Construction

Ensure Contractor complies with noise variance conditions set by local jurisdictions for night work. Respond to community complaints in a timely manner. Provide Design Builder with timely comments on potential design changes and/or updated noise study to ensure that they achieve the same results as in the original environmental documentation.

For more information on environmental commitments during construction see Chapter 600.

Maintenance and Operations

Repair noise wall panels damaged by errant vehicles, paint over graffiti.

446.04 Analysis & documentation requirements

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

446.04(1) Analysis & documentation for NEPA

When noise impacts are found or anticipated on highway projects a full noise analysis and report must be completed following WSDOT Noise Policies and Procedures (2020). Noise analysis, where there are federal funds or a federal nexus associated with the project, must include the entire project corridor and both sides of the highway regardless of whether there are Type 1 activities along the entire project corridor or not.

If no noise impacts are anticipated on a highway project a noise screening analysis can be conducted using a 'straight-line' model or under specific conditions the FHWA Traffic Noise Screening Tool (TNST) can be used following WSDOT Noise Policies and Procedures (2020). A simple memorandum report format is acceptable.

446.04(2) Analysis & documentation for SEPA only (No federal nexus)

If there are no federal funds or no federal nexus associated with the project, the same applies as it does for NEPA above, however, in Appendix 1 of WSDOT Noise Policies and Procedures (2020) there is an option to analyze only those areas and only the side of the roadway where Type 1 activities are occurring on the project. For projects with no federal funds or federal nexus, areas where no Type 1 activities are occurring may be eliminated from the analysis and reporting.

446.04(3) Analysis & documentation for projects under FTA/FRA under NEPA/SEPA

For projects involving passenger rail, transit, and/or park and ride facilities, FTA criteria applies as outlined in FTA Transit Noise and Vibration Impact Assessment for both NEPA and SEPA documentation. Reporting under NEPA would include a full noise and vibration report and a simpler memorandum format could be used under SEPA reporting.

446.05 External engagement

446.05(1) Methods of public outreach for noise abatement

The WSDOT Air Quality, Noise and Energy Program manager, with the project engineering office, will decide on the appropriate method and level of initial public involvement.

Depending on the size, controversy, and impact of the project, public outreach may include:

- Open houses
- Community group briefings
- Environmental document hearings
- Mailers
- Workshops
- Community polling
- Joint WSDOT / Citizen committees

For communities where noise levels are above the impact criteria and abatement is not proposed for construction and there is significant community concern about noise, the project design team may augment its community involvement activities to conduct specific outreach. This is intended to determine if there are other possible low-cost solutions to address the community concerns within the existing project budget (WSDOT Noise Policies and Procedures 2020, Appendix 2). These would not be eligible for federal-aid highway funds.

It is generally assumed that noise abatement is desired by a community, however, if there is opposition to the proposed abatement by the community the project engineering office will be responsible for:

- Ensuring that the department is aware of these concerns
- Documenting the concerns
- Considering changes to the design if possible
- Responding to those who expressed concerns
- Working with the WSDOT Air Quality, Noise and Energy Program manager, conduct a poll of eligible property owners and residents

446.06 Internal roles and responsibilities

446.06(1) Region/modal environmental manager

Final review of noise discipline report and NEPA/SEPA documentation.

446.06(2) Project engineer office

The Project Office provides traffic data, MicroStation design files including alignments, cross sections, contours, and structures out to 500 feet from the edge of pavement to the noise analyst. The Project Office reviews the draft and final noise discipline report to ensure that it aligns with the project description and they incorporate any noise walls recommended for construction into the final design.

For some larger projects (e.g., Megaprograms) the staff editor performs a final editorial review. If there are any conflicts with construction of the proposed noise wall (e.g., buried utilities or overhead powerlines), the Project Office communicates these to the noise analyst. If the noise wall requires changes in the alignment due to these conflicts the noise analyst must update the noise study.

446.06(3) Region environmental coordinator

The environmental coordinator reviews the draft and final noise discipline report to ensure that it aligns with the project description, ensures the format is consistent with the other discipline reports, and checks for grammatical errors.

446.06(4) Environmental services office

The Air Quality, Noise and Energy Program manager reviews the draft and final noise discipline report to ensure that it is consistent with the FHWA regulations and WSDOT Noise Policies and Procedures, that the methodology is technically correct, and checks for grammatical errors. During the final design stage, the Air Quality, Noise and Energy Program manager ensures that the designed top of wall elevation is consistent with what was proposed in the noise discipline report. The Program manager also leads all consultations with FHWA if needed to clarify any policy or regulatory questions or changes.

The Air Quality, Noise and Energy specialists conduct air quality and noise and energy studies, provide technical assistance and advice pertaining to air quality and noise and vibration issues on projects, working with the environmental coordinator and the Project Office obtain nighttime noise variances or exemptions for night work in various jurisdictions and working with Local Programs provide technical reviews of air quality and noise reports.

446.07 Applicable permits & approval process

The only permits required for noise are variances or exemptions from state and local noise regulations for construction and maintenance activities during nighttime hours (WAC 173-60). Nighttime noise limits are typically in effect between 10 pm and 7 am but vary by jurisdiction or type of land use adjacent to the construction noise source. For details, see the WSDOT Local permits and approvals webpage. The application process will vary by jurisdiction and Tribe. Contact the Air Quality, Noise and Energy Program manager for information or assistance.

For more information on the permitting process, see Chapter 500.

446.08 Mitigation

Avoiding or minimizing noise impacts through the design process is always the first choice, but it is not viable in all locations. Where noise impacts are present, a noise barrier or berm near the source or the receiver provides the most efficient form of noise mitigation (abatement). Regardless of the type of noise abatement proposed, it must meet both feasibility and reasonableness criteria to be considered noise abatement and be eligible for federal funds. Any noise abatement constructed is required to be maintained in-perpetuity.

For projects where noise impacts occur and noise abatement does not meet the feasibility and reasonableness criteria and there are substantial concerns from the community regarding noise, other options can be considered that will not provide noise reduction but can either give the perception of noise reduction or address other community issues using a 'green to gray' approach (WSDOT Noise Policies and Procedures, 2020, Appendix 2). These community-scale options are intended to enhance community participation. They are not eligible for federal funds and must be within available project scopes and budgets.

WSDOT cannot use quieter pavement or insulation of non-institutional and non-public use facilities.

446.09 Abbreviations and acronyms

BA	Biological Assessment
CFR	Code of Federal Regulations
DOT	Department of Transportation
EDNA	Environmental Designation for Noise Abatement
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
MAP-21	Moving Ahead for Progress in the 21st Century Act
NEPA	National Environmental Policy Act
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
TNM	Traffic Noise Model
USC	United States Code
WSDOT	Washington State Department of Transportation
WAC	Washington Administrative Code
WSF	Washington State Ferries

446.10 Glossary

Abatement – Reduction in degree or intensity sometimes referred to as noise mitigation.

Approach – In Washington State defined as within one decibel of the federal noise abatement criteria (NAC).

Barrier – A solid wall or earth berm located between the roadway and receiver location that provides noise reduction.

Design Year – The future year used to estimate the probable traffic volume for which a highway is designed, usually 20 years from the beginning of construction for WSDOT projects.

Environmental Designation for Noise Abatement (EDNA) – an area or zone within which maximum permissible noise levels are established.

Existing Noise Level – Modeled traffic noise level(s) based on the Existing Year peak hour traffic data. Current noise measurements can also be used as Existing Year where no roadway exists.

Impacted Community – Noise sensitive receptor sites (such as schools or neighborhoods) where people would be exposed to substantially increased noise levels or noise levels that approach abatement criteria.

Noise Abatement Criteria (NAC) – Noise levels that when approached or exceeded are traffic noise impacts. NAC vary by activities and/or land use.

Noise Compatible Land Use – Planning of non-noise sensitive land use development and activities adjacent to sources of high noise levels.

Roadway – The entire width between the right of way boundary lines of a publicly maintained travel way when any part thereof is open to the public use for purposes of motorized vehicular travel. May also be referred to as a street, road, or highway.

Traffic Noise Impacts – When the predicted Design Year traffic noise levels approach (within 1 dBA) or exceed the NAC or when the predicted Design Year traffic noise levels substantially exceed (≥ 10 dBA) the Existing Year noise levels.

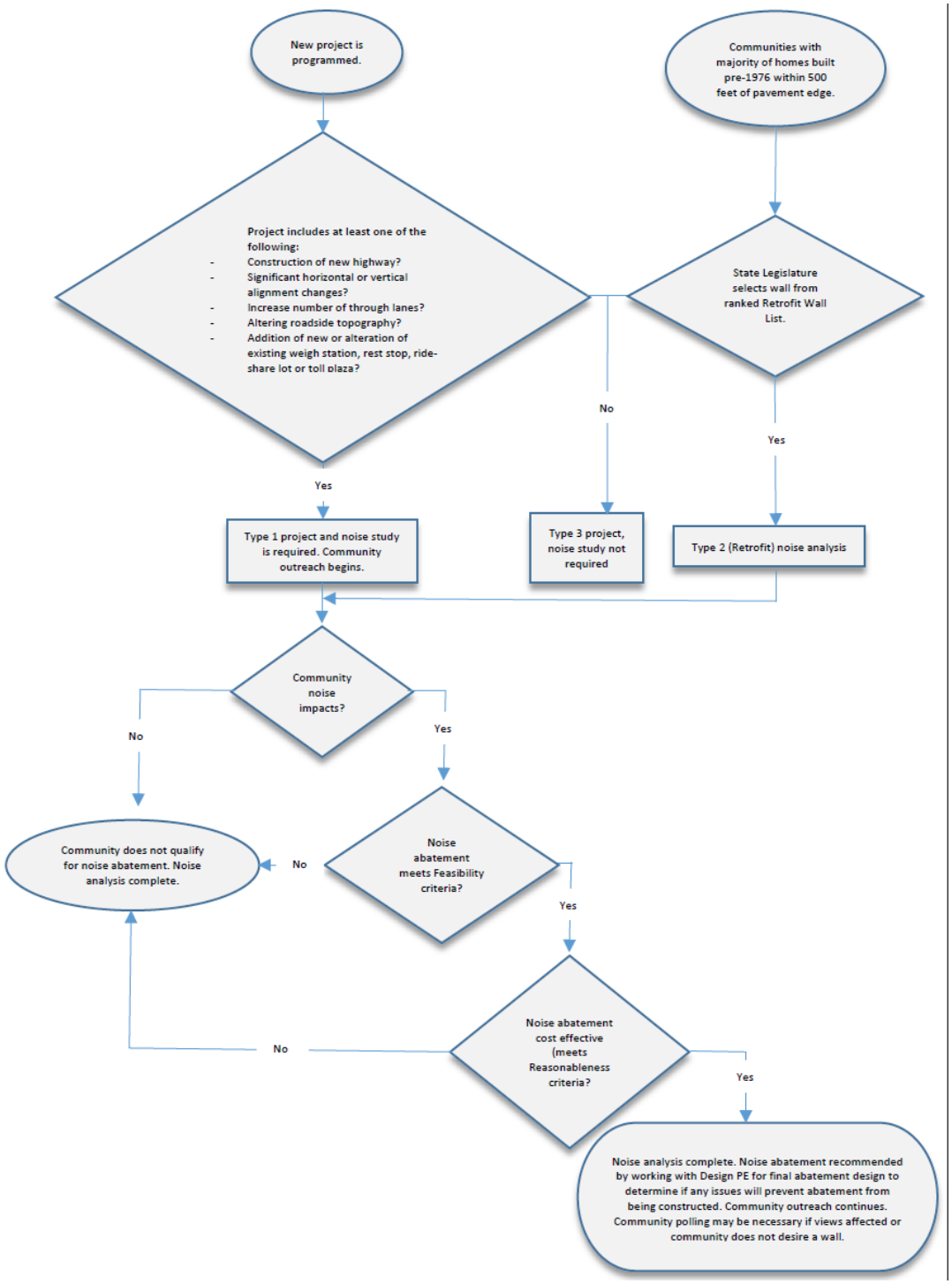
Type 1 Project – Construction of a new highway; significant realignment of an existing highway (either horizontal or vertical realignment); increasing the number of through traffic lanes on an existing roadway; or changing the near road topography to create a new line-of-sight from noise sensitive receivers to the roadway.

Type 2 Project (noise wall retrofit) – Noise abatement on an existing highway targeting residences that existed before May 14, 1976 when traffic noise evaluations were first required.

Type 3 Project – Federal projects that do not meet the requirements of a Type 1 or Type 2 project and do not require a noise analysis.

446.11 Exhibit

Exhibit 446-1 Traffic noise study process



Chapter 447 Hazardous Materials (HazMat) and Solid Waste

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447.01 Introduction

This chapter contains policies for dealing with known or unknown hazardous and regulated materials (HazMat) encountered on WSDOT right-of-way (ROW) during the planning, scoping, property acquisition, and construction stages of projects. WSDOT conducts hazardous materials investigations that meet regulatory requirements as early as possible in the project development process. WSDOT has a responsibility to consider HazMat issues that may impact a WSDOT project when encountered or improperly managed throughout the lifecycle of a project in order to:

- Provide increased safety by mitigating potential dangers to WSDOT personnel, contract employees, the public and the environment from exposures to hazardous or regulated materials,
- Reduce the likelihood of project redesign, delay, or termination and costs increases.
- Reduce the possibility and costs of litigation against WSDOT during both design and construction.
- Minimize and manage agency cleanup risk and liability.

WSDOT must abide by numerous federal, state, and local regulations that govern the handling, transporting and disposal of HazMat. WSDOT projects have the potential to encounter or generate solid waste, which may not designate as hazardous or dangerous waste.

Visit the WSDOT HazMat webpage for additional information and procedural guidance on addressing HazMat issues.

447.02 Applicable statutes, regulations, executive orders, and agreements

447.02(1) Laws and Regulations

Numerous federal, state, and local regulations govern HazMat issues and related topics and below is a list of the most common regulations that apply to WSDOT projects.

447.02(2) Federal Laws and Regulations

- 15 USC 2601 Toxic Substances Control Act
- 42 USC 7401 et seq. Clean Air Act
- 40 CFR Parts 61 to 71 National Emission Standards for Hazardous Air Pollutants
- 40 CFR 763 Asbestos Hazard Emergency Response Act
- 29 CFR 1926.1101 Occupational Safety and Health Act Asbestos
- 40 CFR Part 112 Oil Pollution Prevention
- 40 CFR Part 312 All Appropriate Inquiries
- 29 USC 651 et seq. Occupational Safety and Health Act
- 33 USC 1251 et seq. Clean Water Act
- 42 USC 300f et seq. Safe Drinking Water Act
- 42 USC 4321 et seq. National Environmental Policy Act
- 42 USC 6901 et seq. Resource Conservation and Recovery Act
- 42 USC 9601 et seq. Comprehensive Environmental Response, Compensation, and Liability Act

447.02(3) State Regulations

- Chapter 173-160 WAC Minimum Standards for Construction and Maintenance of Wells
- Chapter 173-200 WAC Water Quality Standards for Groundwaters of the State of Washington
- Chapter 173-201A WAC Water Quality Standards for Surface Waters of the State of Washington
- Chapter 173-204 WAC Sediment Management Standards
- Chapter 173-303 WAC Dangerous Waste Regulations
- Chapter 173-340 WAC Model Toxics Control Act
- Chapter 173-350 WAC Solid Waste Handling Standards
- Chapter 173-360 WAC Underground Storage Tank Regulations
- Chapter 197-11 WAC State Environmental Policy Act
- Chapter 296-62 WAC General Occupational Health Standards
- Chapter 296-155 WAC Labor and Industries Safety Standards for Construction Work
- Chapter 296-843 WAC Hazardous Waste Operations
- Chapter 296-62-077 WAC Labor and Industries Asbestos Regulations

447.02(4) Local Clean Air Agency Regulations

- Article 4 Asbestos Control Standards Puget Sound Clean Air Agency
- Rule 6.3 Asbestos Olympic Region Clean Air Agency
- Regulation I, Article IX, Section 9, Asbestos Control Standards Spokane Clean Air Agency
- 476 Standards for Asbestos Control, Demolition and Renovation Southwest Region Clean Air Agency
- Article 3.07 Asbestos Control Yakima County Clean Air Agency
- Regulation 1, Article 8 Asbestos Benton County Clean Air Agency
- Section 570 – Asbestos Control Standards Northwest Clean Air Agency
- Washington State Department of Ecology (Ecology) Regional Offices (NW, Central, and Eastern)

447.02(5) WSDOT Executive Orders

- WSDOT Environmental Policy Statement E 1018.03 Environmental Policy Statement
- Secretary's Executive Order E 1033.03 Employee Safety

447.03 Considerations during project development

447.03(1) Planning

There are no planning requirements for HazMat at this time.

447.03(2) Scoping

Region staff determines how to proceed with hazardous materials documentation based on the likelihood that a project will encounter contamination. This is a professional judgment made during project scoping when staff completes the Environmental Review Summary (ERS) in the Project Summary Database (Section 300.02).

Region staff answers the questions in the ERS to determine if further investigations should be scoped into the project to identify potential HazMat issues at a site or within the project area. They also use the information to assess potential project impacts (including to the project budget and schedule), mitigations, and required permits or approvals.

Please see well decommissioning requirements for the removal of piezometers and the decommissioning of wells (see *Geotechnical Design Manual* Chapter 3).

Additional information regarding the ERS Hazmat documentation is located at the WSDOT HazMat Investigations and Documentation webpage.

447.03(3) Design

Cleanup costs for contaminated properties can be extraordinary and cleanup actions can take many years. For this reason, WSDOT seeks to minimize liability by identifying the nature and extent of contamination at properties prior to acquisition and construction. This process is commonly known as completing "due diligence."

Region staff reviews the ERS information and determines if additional investigations are necessary. Types of further investigations will be discussed later in this chapter within both sections 447.03 and section 447.04 'Analysis and Documentation Requirements' and may include Hazardous Materials Discipline Reports for NEPA/SEPA, Phase I and II Environmental Site Assessments, and Asbestos Good Faith Inspection reports.

If the region staff classify a project as a NEPA Categorical Exclusion, the information from the ERS is transferred to the Environmental Classification Summary (ECS) and becomes the hazardous materials NEPA documentation for the project (Section 300.04). Although both forms ask the same questions, the supporting information and level of detail required in an ECS is greater.

During the Design phase of a project WSDOT staff follows the Design Environmental Compliance Assurance Procedure (ECAP) as described in *Design Manual* Section 225.05(1). The Design ECAP includes steps for notifying WSDOT management and regulatory agencies.

Additional information regarding the ECS Hazmat documentation is located at the WSDOT HazMat Investigations and Documentation webpage.

Hazardous Materials Discipline Reports for NEPA/SEPA

WSDOT conducts hazardous material investigations that meet regulatory requirements as early as possible in the project development process. It is essential that the extent and risk of liability be identified before property acquisition. WSDOT identifies potentially contaminated sites through research and environmental documentation completed during the NEPA/SEPA process to determine if a right-sized discipline report will be required. There are three levels of right-sized discipline reports based on project complexity:

- Comprehensive discipline report
- Standard discipline report
- Memorandum

Phase I and II Environmental Site Assessments

WSDOT performs investigations called Environmental Site Assessments (ESAs) on known or suspected contaminated properties identified in the initial ERS review and/or the right-sized discipline report. The ESAs may be performed either independent of, or in conjunction with, the NEPA/SEPA process; however, ESAs are not necessary to satisfy NEPA/SEPA environmental documentation requirements. The Environmental Protection Agency (EPA) recognizes two American Society for Testing and Materials (ASTM) International Standards, which WSDOT uses to meet compliance when conducting ESAs:

- Phase I ESA (ASTM E 1527-05 / 1527-13)
- Phase II ESA (ASTM E 1903-11)

Asbestos Good Faith Inspections

WSDOT performs pre-bid asbestos Good Faith Inspections (GFI) on all suspect materials found in buildings, bridges, culverts and other structures that will be disturbed during renovation or demolition activities associated with capital construction projects. The asbestos GFI must be performed by an accredited Asbestos Hazard Emergency Response Act (AHERA) Building Inspector. The AHERA Building Inspector must be a WSDOT employee or a consultant retained by WSDOT. The AHERA Building Inspector determines the level of inspection necessary to identify the presence or absence of asbestos containing materials (ACM) that could be disturbed by the work. The AHERA Building Inspector also must write a concise asbestos GFI report that summarizes their inspection and findings of the presence or absence of ACM.

WSDOT must provide the concise asbestos GFI report as part of the bid package to notify contractors of the presence or absence of ACM prior to bid opening, satisfying the Communications of Hazards requirement pursuant to Chapter 296-62-07721 WAC. If a project bid package does not communicate the presence or absence of ACM prior to bid opening, WSDOT staff will initiate the Design ECAP.

Planning for sediment management

Projects that occur in marine or freshwater environments, including ferry terminals and bridge crossings, may need to evaluate and characterize sediment for chemical contamination. WSDOT uses the Sediment Management Standards (Chapter 173-204 WAC), promulgated by Ecology, to sample and evaluate sediments that may be disturbed. The sediment regulations impose a number of specific requirements, including special sampling and laboratory analysis procedures that make early coordination critical to WSDOT project schedules.

If a project will involve dredging, WSDOT also follows the requirements of the Dredged Material Management Program (DMMP) administered by the US Army Corps of Engineers. The DMMP provides criteria for in-water disposal of dredged sediment. If the sediments are not suitable for open-water disposal, they will need to be disposed of at an appropriate upland disposal facility.

447.03(4) Construction

Managing HazMat During Construction

WSDOT contractors are responsible for the safe management and disposal of known or suspected HazMat when encountered at a site, as described by Contract Plan Sheets or the use of a Special Provision, and should manage HazMat in a cost-effective manner in accordance with all federal, state, and local laws, regulations, and standards.

Even with advanced planning, it is not possible for WSDOT to know the entire history of every site, and encounters of unknown hazardous or regulated materials may occur. WSDOT remains prepared for unexpected situations during construction by having policies and procedures in place for the following:

- Encountering unknown underground storage tanks (USTs)
- ACM not previously identified
- Lead based paint

- Encountering unknown contamination
- Responding to spills from construction activities
- Reporting spills caused by the traveling public

If the contract does not address unknown encounters, the PE works with the region environmental office, a consultant, or ESO HazMat Program and the contractor to coordinate the management of these materials. The WSDOT contractors are also responsible for managing all HazMat that is brought or generated on site during all construction activities.

These unexpected situations require rapid response actions to minimize impacts to the environment and the project work. WSDOT staff follows the Construction Environmental Compliance Assurance Procedure (ECAP) as described in *Construction Manual* M 41-01. The Construction ECAP includes steps for notifying WSDOT management and regulatory agencies. The subsections below describe each situation and related reporting requirements in more detail.

WSDOT must appropriately manage the material prior to reuse or disposal at a permitted disposal facility willing to accept the material. For more information about HazMat during construction, visit the Hazardous Materials Investigations and Documentation webpage.

Only qualified WSDOT HazMat Specialists, Certified Industrial Hygienists, and qualified consultants and/or contract personnel are qualified to handle HazMat and collect samples. If a contractor hires or utilizes qualified consultants or personnel, the Project Engineer should include the WSDOT HazMat Program on all correspondence.

The management of HazMat may include any or all of the activities listed below.

Visit the WSDOT HazMat webpage for information on each topic:

- Identifying the type, concentration, and extent of the contamination
- Stockpiling and covering HazMat or otherwise containing liquids
- Sampling and submitting samples for laboratory analysis
- Labeling containers and drums
- Characterizing the material for reuse, or disposal at a permitted disposal facility able to accept the material
- Submitting information to regulatory agencies

If project waste materials designate as dangerous waste, WSDOT assumes responsibility as the generator of the waste for reporting purposes. Per Chapter 173-303 WAC, WSDOT must obtain a Resource Conservation and Recovery Act (RCRA) Environmental Protection Agency (EPA) Site Identification (ID) number from Ecology. WSDOT is required to track and count quantities of all Dangerous Waste generated and disposed. While the EPA Site ID number remains open in Ecology's system, the PE is required to submit an Annual Report1 to Ecology due no later than March 1st of each year.

Where possible, the PE should consider the opportunity to minimize WSDOT's future cleanup liability, cleanup areas where final construction might prevent or obstruct future cleanup, and perform cleanup to protect environmentally sensitive areas. Visit the HazMat webpage for more information about cleanup options.

[1]Ecology implemented an electronic submittal process for annual reports. For user guide information see www/ecy.wa.gov/programs/hwtr/waste-report/index.html

Encountering unknown underground storage tanks (USTs)

Due to potential explosion hazards and the specific statues and regulations associated with UST decommissioning, USTs require special consideration when encountered at a WSDOT site. When a contractor encounters a UST, WSDOT policy is for the contractor to stop work in the immediate area and notify the WSDOT Project Engineer (PE). The PE will initiate the Construction ECAP.

Ecology has the authority over all "regulated" USTs in Washington State pursuant to Chapter 173-360 WAC. Some USTs are exempt in accordance with WAC 173-360-110, but may be regulated by local agencies. WSDOT or the contractor must contact the local fire marshal, health department, and planning department to determine local requirements.

Local health and fire departments may also require notification of UST site closures.

- Pierce County Health Department Permit
- Pierce County Health Department Process
- King County Health Department

A registered UST Decommissioner will know local regulations regarding tank removal.

If there is a confirmed release from a regulated UST, Chapter 173-340 WAC will also apply. In the case of a confirmed release, WSDOT must ensure that Ecology receives notification within 24 hours. A status report is then due to Ecology within 20 days.

A Washington State certified International Fire Code Institute (IFCI) UST Decommissioner must be utilized to remove regulated USTs and a Washington State certified UST Site Assessor must be present during removal to sample and document UST closure activities. Thirty days prior to removing a regulated UST, a 30-Day Notice is due to Ecology. WSDOT can ask Ecology to waive this requirement if it will cause schedule delays. The ESO HazMat program has certified UST Site Assessors to assist in UST removal.

If there is no contamination discovered during a regulated UST removal, Ecology must receive a Closure and Site Assessment Notice, a Site Check/Site Assessment Checklist, and a Site Assessment Report within 30 days. If there is contamination from a regulated UST or an exempted UST identified as referenced in WAC 173-360A-0110 Ecology must receive a Site Characterization Report within 90 days. The reports should contain required information detailed in the 2003 Ecology document *Guidance for Site Checks and Site Assessments for Underground Storage Tanks*. For more information, see the Ecology UST webpage.

Encountering unknown contamination

When a contractor encounters unknown hazardous or regulated materials, usually identified by sight or smell, WSDOT policy is for the contractor to stop work in the immediate area and notify the WSDOT PE. The PE initiates the Construction ECAP and should coordinate with the region environmental office, a consultant, or ESO HazMat Program to determine whether WSDOT workers can safely continue working in the immediate area.

The PE follows notification procedures established in Construction ECAP to determine internal and external reporting requirements. The region environmental office, a consultant, or ESO HazMat Program can help to coordinate any required regulatory reporting. Per WAC 173-340-300, WSDOT is required to report to Ecology hazardous substances that

may be a threat to human health or the environment based on best professional judgment. WAC 173-340-300(2)(b) does provide a non-exhaustive list of reportable events and some examples are presented below.

- Contamination in a water supply well.
- Free product such as petroleum product or other organic liquids on the surface of the ground or in the groundwater.
- Any contaminated soil or unpermitted disposal of waste materials that would be classified as a hazardous waste under federal or state law.
- Any abandoned containers such as drums or tanks, above ground or buried, still containing more than trace residuals of hazardous substances.
- Sites where hazardous substances have leaked or been dumped on the ground.
- Leaking underground petroleum storage tanks not already reported under WAC 173-340-450.

If project waste materials designate as dangerous waste, WSDOT assumes responsibility as the generator of the waste for reporting purposes. Per Chapter 173-303 WAC, WSDOT must obtain a Resource Conservation and Recovery Act (RCRA) Environmental Protection Agency (EPA) Site Identification (ID) number from Ecology. WSDOT is required to track and count quantities of all Dangerous Waste generated and disposed. While the EPA Site ID number remains open in Ecology's system, the PE is required to submit an Annual Report2 to Ecology due no later than March 1st of each year.

WSDOT Regional Project Offices should provide copies of all Ecology letters related to contamination on WSDOT properties to ESO HazMat Program within 30 days of receipt. The ESO HazMat Program tracks the information and uses it for GASB 49 reporting.

Responding to spills from construction activities

Spills caused by WSDOT contractors during project construction are the responsibility of the contractor to clean up, report, and dispose of properly. Ecology and Local Jurisdiction Health Departments require confirmation sampling to verify that the spill was adequately cleaned up and to avoid having the site location listed on Ecology's facility database. The Contractor should hire a qualified consultant at their expense to conduct the remedial cleanup activities, and the Regional Project Office may contact the ESO HazMat Program when a spill has occurred to oversee that the cleanup process was appropriately completed.

As a way to prevent and respond to spills on project sites, WSDOT requires contractors to prepare and implement a Spill Prevention Control and Countermeasures (SPCC) Plan for all projects. The SPCC Plan is a Type 2 Working Drawing and must address the required elements in their respective order as identified in *Standard Specifications* Section 1-07.15(1), including reporting requirements. The contractor may not begin any onsite construction activities until the Type 2 Working Drawing review and comment process in *Standard Specifications* Section 1-05.3 is completed. The SPCC Plan must remain on site at all times until the completion of the project. The SPCC Plan shall be considered a living document that is required to be updated to reflect current site conditions. For example, if the Contractor adds additional spill kits or moves the existing spill kits to another location of the project, this must be reflected in an updated SPCC Plan.

[2] Ecology implemented an electronic submittal process for annual reports. For user guide information see www/ecy.wa.gov/programs/hwtr/waste-report/index.html

If a spill occurs on a project, WSDOT staff follows the Construction ECAP. Visit the WSDOT Spill Prevention Control and Countermeasures webpage for additional guidance, resources, and training information. WSDOT has a Spill Reporting Flow Chart (pdf 42 kb) that contractors and staff can use as a quick reference for how to report spills.

Reporting spills caused by the traveling public (Third-Party)

WSDOT personnel or Contract personnel may be a witness to or have to respond to an inadvertent spill from a Third-Party accident. If a spill from the traveling public occurs within a WSDOT construction project or ROW, WSDOT personnel shall immediately notify Washington State Patrol (WSP) and Ecology to report the spill, and if possible, identify the responsible party. WSDOT must report a spill if they have knowledge of a spill that may threaten human health or the environment, or where sites have been leaked or been dumped on the ground pursuant to WAC 173-340-300(3)(b)(iv)(viii). If the spill is an immediate threat to human health or the environment (e.g., tank truck leaking into a water body), WSDOT personnel within their limits of expertise should take action to contain the spill until Ecology or the WSP arrive on the scene. Cleanup costs may be recovered at a later date if and when the responsible party is identified.

In accordance with the Revised Code of Washington (RCW) 70.136.030, the WSP is the "hazardous materials incident command agency" along state and interstate highway corridors and coordinates all activities at the scene of a spill. Should WSDOT enter into an emergency assistance agreement with the WSP, the agreement does not obligate WSDOT to assist as WSDOT would be considered exercising the "Good Samaritan" law in pursuant to RCW 70.136.050, and WSDOT would not be liable for any civil damages resulting from the manner in which it conducted the cleanup except for gross negligence or willful or wanton misconduct.

Ecology is not obligated to respond to every spill on WSDOT ROW. Upon receiving notification from the WSP Incident Commander, Ecology's Spill Response Team will determine if the release warrants a response. In accordance with RCW 90.56.020 and 90.56.350, Ecology is obligated to respond and cleanup spills of oil or other hazardous substances that have discharged or have the potential to discharge into the Waters of the State. In addition, other factors may influence the lack of a response such as limited resources.

The cleanup of spills by the traveling public is regulated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 9607(b), which states, "There shall be no liability under subsection (a) of this section for a person otherwise liable who can establish by a preponderance of the evidence that the release or threat of release of a hazardous substance and the damages resulting therefrom were caused solely by—

(1) an act of God;

(2) an act of war;

(3) an act or omission of a third party other than an employee or agent of the defendant, or than one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly, with the defendant (except where the sole contractual arrangement arises from a published tariff and acceptance for carriage by a common carrier by rail), if the defendant establishes by a preponderance of the evidence that (a)

he exercised due care with respect to the hazardous substance concerned, taking into consideration the characteristics of such hazardous substance, in light of all relevant facts and circumstances, and (b) he took precautions against foreseeable acts or omissions of any such third party and the consequences that could foreseeably result from such acts or omissions; or

(4) any combination of the foregoing paragraphs" (see also RCW 70.105.040).

In most cases spills are reported to Ecology through the Environmental Report Tracking System (ERTS). This information is sometime then relayed to either the WSDOT Incident Response Team (ICR) or Regional Maintenance Offices. The WSDOT Hazardous Materials Program occasionally receives notification letters of Third-Party Spills, or through a tracking system called GASB which identifies sites that have been listed on Ecology's databases.

WSDOT can assume financial liability for a Third-Party spill if the spill is not reported, or a liable party (individual who caused the spill) was not identified, then under RCW 70A.300.060, WSDOT as the owner of the property or facility will assume liability of any future cleanup of contamination left in place. Under CERCLA, persons may be held strictly liable for releases or threatened release of hazardous substances at properties they owned or operated at the time of release. This rule means that a potentially responsible party may be liable for contamination based solely on property ownership without regard to fault. Petroleum products are specifically excluded from the CERCLA "hazardous substances" in accordance with 42 U.S.C. 9601(14), however are still considered hazardous substances under MTCA.

Reusing or disposing of project waste materials

WSDOT is ultimately responsible for the reuse and disposal of project waste materials. Disposal of materials can be costly and may impact project schedules. It is for these reasons that WSDOT coordinates the sampling and characterization of HazMat as described above. The decision to reuse or dispose of project waste materials is influenced by the following factors:

- Type and level of contamination (e.g., petroleum product vs. solvents)
- Future site use (e.g., residential vs. industrial, a parking lot or roadway)
- Site access and presence of environmentally sensitive areas
- Permit requirements and environmental commitments

WSDOT addresses the reuse and disposal of solid wastes during construction in *Standard Specifications* Sections 2-01.2, 2-02.3, and 2-03.3(7). If a contractor provides a disposal site, they are required by Section 2-03.3(7)C to provide the PE with the location of the disposal site and copies of required permits and approvals before they transport any waste off the project site. The Contractor shall provide the Engineer with a copy of the shipping manifest or bill of lading for each load indicating the quantity of material hauled to disposal, and bearing the disposal site operator's confirmation for receipt of each load of material. The PE keeps a copy of the disposal documentation in the project file.

When HazMat is addressed by a project Special Provision, WSDOT includes a description of the materials and identifies the type of disposal facility that will accept the materials. As a common practice, WSDOT does not direct contractors where to take materials for disposal. It is required that contractors dispose of waste in accordance with all applicable federal, state, and local laws and regulations.

The WSDOT HazMat webpage provides information about and disposal options for the types of waste listed below. Consult the region environmental office, a consultant, or ESO HazMat Program with project-specific questions.

- Solid Waste
- Dangerous Waste
- ACM
- Lead-Based Paint
- Treated Wood

Using construction specifications and provisions

When WSDOT staff follows the policies in this chapter and the procedures on the HazMat webpages, WSDOT can reasonably anticipate and address HazMat issues prior to the advertisement of a project. During construction, WSDOT may need to have a contractor handle and manage issues such as contaminated soil or water, USTs, ACM, cementitious material or wastes, lead based paint, potentially hazardous chemicals such as detergents, polymers, dust palliatives, concrete curing compounds, form release oils, or spills. WSDOT relays this information to contractors bidding on the work in four main ways:

- *Standard Specifications* M 41-10, which are standard protocols that are required for all WSDOT projects.
- *General Special Provisions*, which are provisions written to describe specific construction requirements and are available for use on multiple projects.
- *HazMat Special Provisions and Plans Sheets*, which are project-specific amendments that describe the location of, and how to handle, HazMat issues requiring special attention.
- *Hazardous Materials Management Plans*, which are project-specific supplements to a HazMat Special Provision and provide detailed instructions for managing materials.

For complex issues, the region environmental office, a consultant, or ESO HazMat Program are available to assist with writing or reviewing HazMat Project-Specific Special Provisions. Often these provisions define areas with differing types or depths of contaminated soil or water. The Project-Specific Special Provision describes how the Contractor will handle and manage the material. Information about how WSDOT will characterize the material for disposal is also often included.

Further information about how specifications and provisions address HazMat topics is available on the WSDOT Investigations and Documentation webpage.

Maintenance and Operations

No Maintenance and Operations activities are being performed by the ESO HazMat Program at this time.

447.04 Analysis & documentation requirements

447.04(1) Right-sizing hazmat discipline report for NEPA/SEPA

A right-sized HazMat Discipline Report (Report) is prepared to satisfy project NEPA/SEPA requirements for environmental documentation. Region staff in coordination with the ESO HazMat Program determine the appropriate level of effort required when they complete the ERS. The purpose of the Report is to identify all potential hazards encountered during a project which may:

- Affect the environment or human health during construction
- Create significant construction impacts
- Incur cleanup risk and liability for WSDOT.

The right-sized Report must document significant unavoidable adverse impacts that WSDOT cannot reasonably mitigate. Whenever possible, include the Report directly in the NEPA/SEPA document. Factors such as project size and type of construction activities, past and current land use in an area, excavation depths and acquisition plans help WSDOT staff determine the best approach. WSDOT provides Right Size Guidance that describes three levels of Reports, as well as situations where no documentation may be required. Right-size is a common term used to describe the level of detail necessary to analyze a specific project given the setting and anticipated impacts. The level of detail must be sufficient to allow region staff to make informed decisions regarding the selection of alternatives and mitigation measures. Region staff should be able to use the Report to assess budget and schedule impacts and decide when to engage in early coordination with regulatory agencies. The documentation must provide site-specific recommendations for additional investigations needed prior to acquisition and construction. Right-sizing keeps documentation short and concise as required by NEPA/SEPA.

447.04(2) Phase I Environmental Site Assessment (Phase I ESA)

Although similar to a HazMat Discipline Report for NEPA/SEPA, a Phase I ESA as a standalone document does not fully satisfy NEPA requirements. The purpose of a Phase I ESA is to evaluate the environmental conditions of an individual's property as part of a real estate transaction and assess the likelihood of assuming liability from any contamination which may determine the property to be considered as a Recognized Environmental Condition REC3; whereas, NEPA documents a comprehensive study that details all potential significant impacts from various disciplines relating to the entire project footprint. WSDOT routinely uses the HazMat Discipline Report for NEPA/SEPA in the environmental document to identify potentially contaminated properties; WSDOT does not automatically complete Phase I ESAs for all individual sites. A Phase I ESA in full compliance with the ASTM standard should be conducted for properties that may be substantially contaminated and require WSDOT acquisition. If the proposed acquisition is considered substantially contaminated and may pose a significant financial risk, WSDOT must complete a Phase I ESA prior to acquisition to fulfill the requirements of 40 Code of Federal Regulations (CFR) Part 312, Standards and Practices in order to meet "All Appropriate Inquiry" (AAI) as defined by the USEPA and qualify

[3] A *recognized environmental condition (REC)* refers to the presence or likely presence of any hazardous substance or petroleum product on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term is not intended to include "de minimis" conditions that do not present a threat to human health and/or the environment and that would not be subject to an enforcement action if brought to the attention of appropriate governmental agencies.

for one of the defenses under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)—aka the Superfund law—to limit cleanup liability and potentially recover future cleanup costs. WSDOT also uses the information to assess potential impacts on project design and construction. In accordance with 40 CFR 312.21, an Environmental Professional must complete the Phase I ESA. Additional information regarding a Phase I ESA is available on the WSDOT HazMat Investigations and Documentation webpage.

Under current federal and state hazardous waste cleanup statutes, all former, current, and future property owners can be held individually liable for 100 percent of the cleanup cost for a contaminated property. This is referred to as "joint and several liability" and means that when WSDOT acquires contaminated property, it may be held liable for any or all cleanup and restoration costs regardless of the "degree of guilt." WSDOT can also be held liable as a prior owner, thus, selling land does not protect the department from liability.

To claim protection from liability as an innocent landowner, contiguous property owner, or bona fide prospective purchaser; property owners, including state and local governments, must conduct an AAI within one year prior to purchasing or acquiring the property as referenced in 40 CFR 312.20(a) and pursuant to CERCLA section 101(35)(B), and must purchase without knowing, or having reason to know, of contamination on the property.

Notwithstanding paragraph (a) of the above section, in accordance with 40 CFR 312.20(b) the following components of the AAI must be conducted or updated within 180 days of and prior to the date of purchase or acquisition of the subject property:

- Interviews with past and present owners, operators, and occupants (see 40 CFR 312.23)
- Searches for recorded environmental cleanup liens (see 40 CFR 312.25)
- Reviews of federal, tribal, state, and local government records (see 40 CFR 312.26)
- Visual inspections of the facility and of adjoining properties (see 40 CFR 312.27)
- The declaration by an Environmental Professional (see 40 CFR 312.21(d))

If the inquiry and subsequent site investigation identifies actual soil and/or groundwater contamination, the purchaser may pursue a "private right of action" with past or current owners of the property. A private right of action is a legal claim authorized by MTCA (70A.305.080) under which a person may recover costs of remedial action from other persons liable under the Act provided that a cleanup is "substantially equivalent" to a cleanup performed or supervised by Ecology. If the source of contamination is on an adjacent property, the persons liable for the adjacent contamination could be responsible for costs associated with cleanup of a site and costs to repair damages to natural resources.

WSDOT also uses property appraisals performed by the WSDOT Real Estate Services Office (RESO) as described in the *Right of Way Manual* M 26-01. *Right of Way Manual* Chapter 4 instructs appraisers to document potential HazMat issues on parcels such as odd soil odors or colors, the presence of tanks or drums, and suspected asbestos containing materials. If observed, the manual provides directions on how to proceed with the appraisal.

If acquiring contaminated properties, WSDOT RESO staff follows the steps outlined in *Right of Way Manual* Chapter 6 to identify and mitigate risk as much as possible. Actions may include, but are not limited to, valuing the property as clean and holding funds in escrow for cleanup, including an indemnification clause, or a creating a Prospective Purchaser Agreement. Once the purchase of a contaminated property is complete, the RESO is required to report the information to the Environmental Services Office (ESO).

ESO tracks contaminated properties that WSDOT owns, and their associated cleanup liability, and uses the information to report to the Washington State Office of Financial Management. This reporting is required by the Governmental Accounting Standards Board (GASB) Statement 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*. When appropriate, WSDOT tracks remaining residual contamination in WSDOT right of way (regardless of liability) after a MTCA cleanup.[4]

447.04(3) Phase II Environmental Site Assessment (Phase II ESA)

A Phase II ESA is performed to investigate sites that may have contamination based on the findings of the HazMat Discipline Report for NEPA/SEPA or Phase I ESA. The Phase II ESA is conducted to characterize the nature and extent of potentially contaminated media prior to acquisition and construction. WSDOT uses information obtained in previous reports, planned areas of construction, and acquisition plans when conducting the assessment. A Phase II ESA is limited in scope and will not always identify all the contamination on a site.

When site specific documentation exists in the Ecology files for the planned acquisition or construction areas a Phase II ESA may not be necessary. Additional information regarding a Phase II ESA is available on the WSDOT HazMat Investigations and Documentation webpage.

WSDOT may identify or encounter contamination during geotechnical exploration drilling. As described in the *Geotechnical Design Manual* M 46-03, prior to any drilling activities crews complete a geotechnical field exploration and an environmental assessment[5]. The manual also provides procedures for planning, storing, and disposing of potentially contaminated material generated during drilling activities. Additional information regarding Geotechnical Soil Boring Procedures is available on the WSDOT HazMat Investigations and Documentation webpage.

Identifying the extent of contamination through a Phase II ESA helps WSDOT:

- Select project alternatives and/or mitigation options.
- Prepare real estate transactions and determine fair market property value.
- Determine appropriate property management options.
- Identify construction impacts and associated costs for mitigation and/or disposal of material.
- Consider worker health and safety needs.

Selection of analytical methods and proper sample-handling techniques are critical to a successful Phase II ESA. Most laboratory methods are selected based on the specific objective of the Phase II ESA, although many are dictated by specific provisions of regulatory requirements. Laboratory analysis must be performed by an accredited analytical laboratory, pursuant to WAC 173-50. Improper or incomplete sample or analysis collection may invalidate sampling results or make the results legally indefensible. Proper handling of samples is also crucial to obtaining usable and defensible data, which includes selecting of correct sample containers, properly storing and transporting, meeting holding time requirements, and following strict chain-of-custody protocols.

[4] An Implementation Agreement (IA) was signed in 2015 between Ecology and WSDOT. WSDOT has agreed to update the *Right of Way Manual*, utility manuals and right of way plan sheets to identify residual contamination for select sites after a MTCA cleanup has taken place. Ecology submits the proposed IA sites to WSDOT for approval. The ESO HazMat Program and regional environmental managers will review the proposed IA site documentation to affirm, modify, or reject the proposal.

[5] The Environmental Assessment, at a minimum, should address environmentally sensitive areas, potential cultural resources, and documented or suspect contamination.

Per the ASTM standard, field sampling and report writing should be performed only by or under the direct guidance of an Environmental Professional, which may be a WSDOT employee or a consultant retained by WSDOT.

447.04(4) Asbestos Good Faith Inspection (GFI)

The purpose of the pre-bid asbestos GFI is to determine the presence or absence of ACM in suspect materials found in buildings, bridges, culverts, and other structures that will be disturbed during renovation or demolition activities, and to sufficiently notify employees and contractors of asbestos hazards that may be present and could be disturbed by the work. The asbestos GFI is completed with the intent of complying with and providing an AHERA-level assessment in accordance with federal, state, and local asbestos laws and regulations. These statutes are generally focused on identifying airborne emissions of asbestos fibers. This information can be used to address public and worker health concerns about exposure to ACM during construction, renovation, demolition and general housekeeping activities.

An asbestos GFI must be conducted pre-bid by an accredited AHERA Building Inspector prior to any renovation or demolition in accordance with 40 CFR, Part 763, Subpart E, Appendix C, and Chapter 296-62-07721 WAC. Local Clean Air Agencies may also have specific requirements and directives which must be met, in addition to Washington State Department of Labor & Industries (LNI) and other applicable asbestos regulations listed in EM 447.02. Pursuant to Chapter 296-62-07703 WAC, an "Accredited inspector" means any person meeting the accreditation requirements of the Federal Toxic Substance Control Act (TSCA). The AHERA Building Inspector must be a WSDOT employee or a consultant retained by WSDOT.

An AHERA Building Inspector reviews available existing objective data to aid in the identification of suspect materials that may contain ACM. Existing data can include as-built information and corresponding design plans and specifications, and previously written asbestos GFI reports. After reviewing existing objective data, the AHERA Building Inspector determines the level of additional inspection necessary, which can include performing a site visit to visually inspect to identify and/or collect material samples for laboratory analysis in order to determine the presence or absence of ACM. The scope of the visual inspection and/or sampling should consider site specific conditions and/or project specifics (i.e., full demolition, renovation, or minor repair). An asbestos GFI is not required if WSDOT assumes the suspect materials to be disturbed are ACM, however, this information must be provided in the project bid package to ensure contractors are notified of the presence or absence of ACM prior to bid opening.

After completing the GFI, the AHERA Building Inspector will write a concise GFI report that summarizes their inspection and findings of the presence or absence of ACM. Once completed, the asbestos GFI report must be uploaded into the WSDOT ECM Portal for documentation and tracking. The ESO HazMat Program can provide assistance with uploading completed asbestos GFI reports into the WSDOT ECM Portal.

WSDOT staff and consultants that are accredited AHERA Building Inspectors are qualified to perform asbestos GFI work and write a concise asbestos GFI report summarizing their inspection and findings of the presence or absence of ACM. If region staff need additional assistance with conducting GFIs, preparing GFI reports, or reviewing GFI reports, please contact the ESO HazMat Program for assistance.

447.05 External involvement

When applicable, Local Clean Air Agencies and LNI are required to be notified prior to ACM abatement and demolition. Abatement of ACM must be performed by an accredited abatement contractor with certified supervisors and workers. ACM waste generated during construction must be properly stored, transported and disposed of in a permitted landfill.

447.06 Internal roles and responsibilities

The region environmental offices, consultants retained by WSDOT, and the ESO HazMat Program supports WSDOT's capital construction program to effectively align with all phases of WSDOT project delivery and all delivery methods used by WSDOT to ensure actions and business practices comply with applicable federal, state and local hazardous and solid waste management laws & regulations.

447.07 Applicable permits and approvals

Below are the most common permits or approvals that may be required as part of a HazMat investigation:

- Well installation and decommissioning associated with Geotech and Construction
- Asbestos abatement and demolition
- Waste disposal at an approved facility
- Dangerous waste / RCRA identification

More information on HazMat permits and approvals is available on the HazMat webpage.

For more information on the permitting process, see Chapter 500.

447.08 Mitigation

The impacts and mitigation measures address typical impacts that WSDOT may encounter on construction projects. The typical impacts apply to sites of concern identified in the HazMat Discipline Report for NEPA/SEPA. Sites of concern are rated based on relative risk to impact the project (low, moderate, or high) and the level of complexity to manage the site (straightforward or complicated). Standard impacts and mitigation measures typically apply to sites with low or moderate risk that are straightforward to manage.

Generally, sites ranked with low or moderate risk and straightforward complexity are situations that can be reasonably predicted based on experience and where mitigation measures can effectively control and/or minimize the impact based on best professional and engineering judgment. Mitigation measures are actions taken prior to and during construction to avoid or reduce the hazardous material impact. Mitigation measures prevent or reduce environmental impacts, minimize construction costs, and avoid or reduce WSDOT's future long-term cleanup costs associated with managing, remediation, and monitoring work.

The table detailing select mitigation measures is organized by Environmental (Direct, Indirect, Cumulative), Construction and Liability impacts and is available on the HazMat webpage. HazMat Discipline Report writers should select only the appropriate standard impacts and mitigation measures and tailor them for the project.

447.09 Abbreviations and acronyms

ACM	Asbestos Containing Materials
AHERA	Asbestos Hazard Emergency Response Act
ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
Ecology	Washington State Department of Ecology
ECAP	Environmental Compliance Assurance Procedure
ECS	Environmental Classification Summary
ERS	Environmental Review Summary
ESA	Environmental Site Assessment
ESO	Environmental Services Office
GASB	Governmental Accounting Standards Board
HazMat	Hazardous and Regulated Materials
LNI	Washington State Department of Labor and Industries
MTCA	Model Toxics Control Act
NEPA	National Environmental Policy Act
PE	Project Engineer
RCRA	Resource Conservation and Recovery Act
SEPA	State Environmental Policy Act
SPCC	Spill Prevention Control and Countermeasures
USEPA	United States Environmental Protection Agency
USC	United States Code
UST	Underground Storage Tank
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

447.10 Glossary

WSDOT uses the common term "Hazardous materials" to describe waste materials that require special handling and disposal. The term covers all types of contaminated or hazardous media including dangerous waste and regulated materials. The definitions below describe the different terms found in state and federal regulations.

Asbestos Containing Material – Any material containing more than 1% asbestos.

Dangerous Waste – Solid wastes designated in WAC 173-303-070 through WAC 173-303-100 as dangerous or extremely hazardous or mixed waste. Dangerous waste includes all federal hazardous waste, plus certain wastes exhibiting specific characteristics based on toxicity and persistence. The regulatory requirements for disposal of dangerous waste are more complex than the requirements for disposal of problem waste and place additional responsibility both on WSDOT as the generator and on the contractor for safe handling and disposal.

Hazardous Substance – Hazardous substance designated under CERCLA 40 CFR 116 that pose a threat to public health or the environment. Federal regulation of hazardous substances excludes petroleum, crude oil, natural gas, natural gas liquids or synthetic gas usable for fuel. State regulation of hazardous substances is more stringent and includes petroleum products, as addressed in WAC 173-340-200.

Hazardous Waste – Solid wastes designated in 40 CFR 261 and regulated as hazardous and/or mixed waste by the USEPA. Mixed waste includes both hazardous and radioactive components; waste that is solely radioactive is not regulated as hazardous waste. Hazardous waste includes specific listed waste that is generated from particular processes or activities or exhibits certain reactive, corrosive, toxic, or ignitable characteristics. Hazardous waste is also regulated by Ecology as dangerous waste and State-only dangerous waste.

Solid Waste – State regulation Chapter 173-350 WAC defines "solid waste," "waste materials," or "wastes" as all putrescible and nonputrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials. See WAC 173-350-021 to determine if a material is solid waste.

Chapter 455 Land Use and Transportation

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455.01 Introduction

Land use is a term that describes the modification and management of the natural environment for human purposes. Land use and transportation are closely related. Transportation decisions affect land use by modifying accessibility to an area. Land use decisions affect transportation by changing traffic patterns around that area.

This chapter includes policies relating to the integration of land use and transportation, including bicycling and pedestrian facilities, transit, farmland, resource conservation areas, recreational lands, and wild and scenic rivers.

455.02 Applicable statutes, regulations, executive orders, and MOUs

455.02(1) Land Use

Federal statutes, regulations, executive orders, and MOUs that specifically regulate land use include:

- **Rivers and Harbors Act –** Section 10 of the Rivers and Harbors Act (33 USC 410 et seq.) is administered by the Army Corps of Engineers (Corps).
- **Farmland Protection Policy Act (FPPA) of 1981 –**7 USC 73 § 4201-4209. Implementing regulations are in the Code of Federal Regulations (CFR) - 7 CFR 658 and are administered by the Natural Resources Conservation Service (NRCS).
- **Section 6(f) –** Land and Water Conservation Fund (LWCF) Act codified at 54 USC 2003 § 200301-200310. In Washington State, the Recreation and Conservation Office (RCO) administers funding in accordance with RCW 79A.25.
- **National Trails System Act –** 16 USC 1241-1251.
- **Wilderness Act –** 16 USC 1131-1136.
- **Wild and Scenic Rivers Act (WSRA) –** PL 90-542, 16 USC Chapter 28.
- **Environmental consequences –** 40 CFR 1502.16(a)(5) – requires that Environmental Assessments (EAs) and Environmental Impact Statements (EISs) include a discussion of possible conflicts between the proposed action and the federal, tribal, regional, state, and local land use plans objectives, policies, controls, and regulations.

State statutes, regulations, executive orders, and MOUs that specifically regulate land use include:

- **Scenic River System Act –** RCW 79A.55.
- **Aquatic Lands Act –** RCW 79.105. In Washington State, the Department of Natural Resources's (DNR) implementing regulations are in WAC 332-30.
- **Farmland Preservation –** Executive Order 80-01.
- **Farmland and Forest Preservation MOU between Washington State Conservation Commission and WSDOT (1982) –** requires coordination between WSDOT and appropriate Washington State Conservation Commission and Conservation District to assure that roadway projects minimize agricultural land conversions. A copy of the MOU is available in Appendix B.
- **Forest Practices –** RCW 76.09
- **Growth Management Act (GMA) –** RCW 36.70A (including local Critical Areas Ordinances).
- **Environmental Mitigation in Highway Construction Projects –** RCW 47.01.305
- **Shoreline Management Act (SMA) –** RCW 90.58

455.02(2) Transportation

Federal statutes, regulations, executive orders, and MOUs that specifically regulate transportation include:

- **USDOT Bicycle and Pedestrian Policy Statement –** CFR Title 23 Highways, Title 42 The Public Health and Welfare, and Title 49 Transportation.
- **Section 10 of the River and Harbors Act (1899) –** 33 USC 403.
- **General Bridge Act –** 33 USC Section 525 (formerly Section 9 of the Rivers and Harbors Act) and implementing regulations 33 CFR Parts 114-115.
- **National Trails System Act –** 16 USC 1241-1251.
- **FAA Regulations (1975) –** 14 CFR Part 77, 23 USC 318, 23 CFR 620 Subpart A.
- **FRA Regulations (1999) –** 64 Fed. Reg. 28545.
- **FHWA and FTA Regulations –** 23 CFR 771.

State statutes, regulations, executive orders, and MOUs that specifically regulate transportation include:

- **Aviation –** RCW 14.12, RCW 36.70A.510, and RCW 36.70.547.
- **Bicycle/Pedestrian Traffic –** RCW 47.30.020 and RCW 47.30.030.
- **City Streets as Part of State Highways –** RCW 47.24.
- **Design Standards –** WAC 468-18-040.
- **State Environmental Policy Act (SEPA) –** WAC 197-11 and WAC 468-12.
- **Transportation Facilities and Services of Statewide Significance –** RCW 47.06.140.
- **Vehicular Traffic – Essential Public Facilities –** Growth Management Act (GMA) RCW 36.70A.
- **DNR Easements –** RCW 47.12 grants WSDOT authority to obtain an easement from DNR highway, ferry, rail and other state transportation projects.
- **Secretary's Executive Order E 1113 –** Sustainability

455.03 Land Use and Transportation considerations during project development

455.03(1) Planning

See Chapter 200, it explains WSDOT's transportation planning and environmental linkage efforts. Determine if a WSDOT transportation plan has been done for your project area.

Determine the existing and planned land uses that are adjacent to, and served by, the study area. Land use is controlled by city and county governments through the comprehensive planning process under the Growth Management Act (GMA). WSDOT plans must be consistent with adopted comprehensive plans developed under GMA. In addition, determine if there are federal land management plans, metropolitan and regional multimodal plans, areas habitat plans, or tribal land use plans that are relevant to your project area.

Consider planned development, population growth, changes in land use, effects on communities and the environment, future demand on the system, applicable or likely zoning changes, travel trends, and other relevant issues for your planning product's conclusions and recommendations.

Review WSDOT's modal and system plans on the Statewide Plans webpage to ensure your project's land use considerations are consistent with applicable approved statewide plans.

Under 23 USC 168(d), the Federal lead agency may adopt and use planning products in the environmental review process of a project.

455.03(2) Scoping

See Chapter 300 for more information on Scoping.

Review any relevant planning products.

The following are documented in the Environmental Review Summary (ERS) Land Use tab to help determine the level of analysis needed for National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA). These assessments are usually conducted as a desktop exercise and do not require field verification.

- Determine if there are any properties within the project limits that used funds from the federal Land and Water Conservation Fund (LWCF) Act (1965) or any other RCO grant funds. If yes, refer to the Section 455.04(2) and Section 6(f) guidance.
- Determine if there is a Wild and Scenic River (state or federally designated, 'study river', or on the Nationwide Rivers Inventory (NRI) in or near the project area. If yes, refer to the Wild and Scenic Rivers guidance.
- Determine if the project is located on a state or national scenic byway. If yes, the project may need a visual assessment. Refer to Chapter 459 and WSDOT's visual resources webpage.
- Determine if your project area includes designated farmland. If yes, refer to WSDOT's Farmland guidance.

455.03(3) Design

The design of state transportation improvement projects should support approved land use and transportation plans.

Follow the Design Standards in WAC 468-18-040.

Refer to *Design Manual* Section 1102.02 for Land Use context.

Refer to *Design Manual* Section 1102.03 for Transportation context.

Early consultation is required with the Natural Resources Conservation Service (NRCS) and appropriate state and local agricultural agencies where farmlands are directly or indirectly impacted by any alternative (see WSDOT's Farmland guidance).

Consultation with the National Park Service (NPS) is required for projects that may affect rivers in the NRI that are suitable for inclusion in the Wild and Scenic Rivers System.

If NEPA is complete, then there may still be design needs for permitting. For example, wetland mitigation site design can impact farmlands.

455.03(4) Construction

Take measures to reduce impacts to all modes of transportation and surrounding land uses during construction. Implement agreed-upon mitigation actions during construction to offset construction impacts. For more information on incorporating environmental commitments into contracts, see Section 590. For information on commitments during construction, see Section 600.03.

If construction has significant impacts to traffic, as defined in *Design Manual* Chapter 1010, follow the approved Transportation Management Plan.

455.03(5) Maintenance and Operations

WSDOT owns and manages approximately 100,000 acres of unpaved land adjacent to the highway system. Performance criteria for maintaining these areas is outlined in region maintenance area Integrated Roadside Vegetation Management Plans.

455.04 Analysis and documentation requirements

The land use and transportation analyses are core elements, providing the basis for modal choice, alternative development, and selection of design elements. The project's study or identified influence area should be large enough to encompass a greater area than just the highway corridor and should allow for adequate evaluation of the relationship between land use and transportation in the project vicinity. The potential effects of projects on transit, pedestrians, bicycles, rail crossings, ferry operations, airport safety zones, parking, local development patterns, and vehicle traffic on adjacent and connecting roadways need to be evaluated and discussed in the environmental document. The effects can be positive or negative, temporary, or long-term. Mitigation for unavoidable impacts should also be discussed. Consult with local, regional, and tribal entities to ensure consistency with land use plans.

The goal of the analysis is to help decision makers understand the effect the transportation project has on land use and development patterns. The analysis must:

- Describe any direct project impacts resulting from the conversion of land to transportation uses. The analysis should include a discussion of the temporary (construction) impacts and long term (operational) impacts. It is best to include a map showing the existing and proposed right of way lines, existing land use (as described in the adopted comprehensive plan) and acreage to be converted to transportation uses in support of the analysis.
- Determine if the project is consistent with the existing adopted comprehensive plans and development policies. In Washington State, land use is controlled by city and county governments through the comprehensive planning process required by the GMA. The state Local Project Review Act of 2001 precludes WSDOT from revisiting land use decisions included in the adopted comprehensive plan during project review. To receive Federal funding, a transportation project must be consistent with local planning (i.e., the goals and objectives of the project should match the goals and objectives stated in the comprehensive plan).
- Describe development trends in the study area and any reasonably foreseeable impacts caused by development that may occur in response to the project. This includes potential development or redevelopment of buildable lands within the influence area of the transportation project. These changes are driven and constrained by social and economic factors beyond WSDOT or the local public agency's control. Such effects are difficult to predict and often controversial. Projects that do not increase vehicle capacity, change the Level of Service (LOS), or significantly reduce travel time are unlikely to change land use. However, projects that add transit or active transportation capacity can have positive impacts on land use and economic development. Project teams should also review the potential impacts of planned local development or redevelopment on the project. See Chapter 412 for more information on indirect and cumulative effects.
- Discuss actions that were taken to avoid, minimize, or mitigate direct land use impacts. Potential or recommended mitigation measures for indirect impacts should also be described. The discussion should include the party responsible for such mitigation and the likelihood of implementation of such measures. See more in Section 455.08 Mitigation.
- Evaluate and compare the potential impact for all alternatives, including the No-Build alternative (see Section 400.07). The results of this analysis should inform the indirect effects analysis conducted for other disciplines and support the cumulative effects analysis.

455.04(1) Right size to classification (CE, EA, EIS) or level of significance to land use and transportation

Determine the level of detail that is needed based on complexity/size of project and severity of impacts.

Projects classified as Categorical Exclusions / Categorical Exemptions (CE – see Chapter 300) typically do not require analysis for potential land use impacts under 23 CFR 771.117(a) because, by definition, these projects:

- Do not induce significant impacts to planned growth or land use.
- Do not require relocation of significant numbers of people.
- Do not have significant impacts on travel patterns.
- Do not have significant environmental impacts.

For CEs, document:

- The potential direct project impacts to resource lands (critical areas, shorelines, forest/timber lands, mineral resource lands, farmland, scenic highways and byways, and parks and recreation lands) by completing the appropriate section of the ERS/ECS form and/or a SEPA Checklist (see Chapter 400).
- The temporary construction impacts to traffic and ways to minimize those impacts in the ERS/ECS form (see *Design Manual* Chapter 1010) or by completing a SEPA checklist. If the project has significant construction impacts to traffic, as defined in *Design Manual* Chapter 1010, attach a copy of the Transportation Management Plan to the ECS form.

More detailed analysis may be needed for complex projects that do not qualify as a CE. This may include projects:

- With substantial direct land use effects (positive or negative) despite proposed mitigation (e.g., a project with a large number of right of way acquisitions or displacements).
- With substantial indirect effects (positive or negative) on land use despite proposed mitigation (e.g., a project that would cause sizable changes in planned development within the study area, or a project found to be inconsistent with planned growth).
- In fast growing areas with significant amounts of undeveloped land, where additional analysis is needed to determine probable effects (e.g., construction of a new interchange in a rural area).

455.04(2) Analysis and documentation for NEPA

This section describes the analysis requirements and what to consider when evaluating the significance of potential impacts for actions that are subject to NEPA.

Land Use

Large, complex, or environmentally controversial projects will need more detailed documentation of the land use analysis. Because the land use analysis influences many other disciplines (transportation, noise, air quality, visual, and social) it is important to thoroughly document the participants, assumptions, methodologies, results, and uncertainties to provide transparency and legal sufficiency. This may be done in a technical appendix to the environmental document.

Four key areas should be documented:

1. Identify and explain key underlying assumptions (such as growth rates) and explain how those assumptions were made.
2. Describe the methods used to develop land use forecasting results. Explaining the inherent advantages and limitations in the analysis process and data sources can be especially useful in establishing a “reasoned basis” for the methodology.
3. Summarize and explain the land use analysis results including an explanation of patterns in the data, causal relationships, and anomalous or unexpected results.
4. Systematically review assumptions, data, and results to ensure internal consistency across related disciplines (noise, air quality, visual quality, and social) to make sure they do not contradict the land use analysis results.

Growth Management Act (GMA)

RCW 36.70A.070 requires that cities and counties that are subject to the GMA include a land use element in their comprehensive plan. Determine existing and planned land uses in cities and counties and how the project may affect local land use decisions.

Transportation

The transportation analysis supports the Purpose and Need by providing quantitative measures that demonstrate the effectiveness of the proposed project. It may also provide a method of comparing the relative merits of the alternatives.

The transportation analysis should consider the significance of estimated induced demand. Induced demand is the volume of traffic that is drawn to a new or expanded road by providing additional capacity. The induced demand comes from numerous sources, including trips diverted from other routes, discretionary trips that may not have been made without the service improvement, and improved access to employment and other activity locations.

Induced demand may be estimated using models, such as travel or trip generation models. Although models may be used to approximate results, all models rely on assumptions and are inherently limited. Therefore, known assumptions and limitations should be documented with any modeling results.

Section 24 of FHWA's Technical Advisory TA 6640.8A states that the analysis should include:

- A review of the local comprehensive transportation and land use plans (see *Design Manual* Chapter 1102).
- An evaluation of the proposed project's consistency with traffic requirements generated by planned land use. The discussion should include effects (both positive and negative) on safety, vehicles, transit, freight, bicycles, pedestrians, and parking.
- A discussion of how the project's short-term impacts (both positive and negative) and use of resources contribute to the enhancement of the area's long-term productivity.

Compliance with FHWA's Interim Guidance on the Application of Travel and Land Use Forecasting in NEPA is recommended, but not required for projects that use a travel demand model.

Farmland

The Federal Farmland Protection Policy Act (FPPA) is intended to minimize the extent to which federal activities contribute to the conversion of farmland to nonagricultural uses. The FPPA requires agencies to examine the impact of their programs and projects before they approve any activity that would convert farmland to other uses. WSDOT complies with this requirement by completing the appropriate form in coordination with the NRCS.

The NRCS recognizes three categories of farmland (see Section 455.10 Glossary for definitions) based on their soil types:

- Prime Farmland.
- Unique Farmland.
- Farmland of statewide or local importance.

The following are exempt from farmland analysis:

- Lands with soil types not suitable for crops (for example, sand dunes).
- Farmlands that have already been converted to industrial, commercial, residential, or recreational use.
- Farmlands already committed to urban development (for example, land within the adopted Urban Growth Area (UGA) and other urbanized areas.

The definition in 7 CFR 658.2(a) includes specific information to better understand how urban development lands are determined that will help project teams decide whether a project is exempt from analysis.

Because the rating is based on soil type, soils such as timber land, vacant land, and open space that has never been farmed may be designated as prime farmland. Therefore, for all non-exempt projects, the WSDOT project office should refer to the Land Use webpage for the documentation process and the NRCS farmlands webpage for FPPA procedural requirements.

State law RCW 47.01.305 also directs WSDOT to use public lands for wetland mitigation sites before using land designated as agricultural land of long-term commercial significance (as defined in RCW 36.70A) for highway projects. If public lands are unavailable, WSDOT is directed to make every effort to avoid any net loss of agricultural lands.

Notify the NEPA Specialist immediately if eminent domain is being considered. See more in Section 455.08 Mitigation.

Wild and Scenic Rivers

The Wild and Scenic Rivers Act (WSRA) designates certain rivers (or river segments) for special protection to preserve them in a free-flowing condition for the benefit and enjoyment of present and future generations. The act also identifies various "study rivers" for possible inclusion in the Wild and Scenic Rivers System. Currently, all of the designated Wild and Scenic Rivers in Washington State are administered by the United States Forest Service (USFS) in accordance with 36 CFR 297. See Chapter 457 for guidance on how the WSRA applies to Section 4(f) (of the Department of Transportation Act of 1966) resources.

Closely examine the management plan and coordinate with the appropriate USFS office early in the environmental review and design process. Projects in a designated or study wild and scenic river that require a Section 404 permit from the Corps also require completion of a written Endangered Species Act (ESA) Section 7 determination by the USFS. Find more guidance on how to comply with the Wild & Scenic Rivers Act and NRI on our Land Use webpage.

Federally designated Wild and Scenic Rivers within Washington include:

- Skagit River from the pipeline crossing at Sedro-Wooley upstream to and including the mouth of Bacon Creek and tributaries as listed below:
  - The Cascade River from its mouth to the junction of its North and South Forks.
  - The South Fork to the boundary of the Glacier Peak wilderness Area.
  - The Suiattle River from its mouth to the boundary of the Glacier Peak Wilderness Area at Milk Creek.

  - The Sauk River from its mouth to its junction with Elliot Creek.
  - The North Fork of the Sauk River from its junction with the South Fork of the Saul to the boundary of the Glacier Peak Wilderness Area.
- Klickitat River from Wheeler Creek to the confluence with the Columbia River, classified as a recreational river.
- White Salmon River from the confluence of Gilmer Creek (near the town of BZ Corner) to the confluence with Buck Creek; classified as a part wild and part scenic river.

Federally designated Study Rivers within Washington State include:

- Skagit River from Mount Vernon to and including the mouth of Bacon Creek, plus additional segments of the Sauk, Suiattle, and Cascade tributaries.
- Klickitat River upstream of the confluence of the Little Klickitat River to the Yakama Indian Reservation boundary.
- Snake River from the town of Asotin to the Oregon state line.
- White Salmon River upstream of the confluence with Gilmer Creek.

The President's 1979 Environmental Message Directive on Wild and Scenic Rivers requires federal agencies to protect and manage rivers in the NRI that are suitable for inclusion in the Wild and Scenic Rivers System as part of their normal planning and environmental review process. The directive, a listing of NRI rivers in Washington State, and the procedure for consulting on projects that may affect these rivers is available on the NPS's NRI website.

Section 6(f) of the Federal Land and Water Conservation Fund Act (LWCF)

Projects that impact recreational lands require special consideration. Chapter 457 describes United States Department of Transportation (USDOT) specific requirements for considering impacts to recreation and resource lands (i.e., Section 4(f) properties). However, there are a number of federal and state grants given to recreation managers that require some type of compensation when lands are converted and can no longer be used for recreational purposes.

The LWCF is a federal grant program which helps pay for the acquisition of outdoor recreation sites and facilities. Grants are awarded to cities, counties, Native American Tribes, state agencies, and park and school districts. In Washington State the Recreation and Conservation Office (RCO) oversees many grant programs including the LWCF and represents the interests of the NPS to ensure compliance with federal requirements.

Section 6(f) of the LWCF prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the NPS or their state designee. Therefore, a Section 6(f) analysis is also required if the project must use land purchased or improved using LWCF funding.

If property purchased or improved through LWCF is impacted by a project, the property owner (grant sponsor) is responsible for compliance with all 6(f) requirements even if the impact is caused by another party, such as WSDOT. Therefore, conversion of a Section 6(f) property to transportation uses requires early coordination with RCO and the property owner (grant sponsor) to ensure:

- All practical alternatives to property conversion have been evaluated and no reasonable alternative exists to the conversion that would meet the project's purpose and need.

- A mutually acceptable replacement property is found. The replacement property is reasonably equivalent in usefulness and location and fulfills the same recreational functions as the original property.
- The replacement property has an equal or greater fair market value than the original property.
- The public has been informed of the proposed conversion, been given a minimum of 30 days to comment on the change and their comments have been considered and adequately addressed by RCO/NPS.
- The replacement property is not designated recreation land owned by another public agency (i.e., you cannot replace a park with an existing park and thereby reduce the total amount of recreation land available to the community).
- A partial conversion will not adversely affect the recreational function of the remainder. If the remainder is not viable, the whole parcel must be replaced.
- NEPA, ESA, Section 106 of the National Historic Preservation Act (NHPA), and all other Federal approval requirements have been satisfactorily completed for the project as well as the conversion. Remember: the environmental approvals must include review of the portion of the recreation land to be converted and the proposed replacement site (*LWCF State Assistance Program Manual* Chapter 8 (E)(3)(g)).

The Federal regulations stipulate that the environmental review be conducted in a neutral and factual manner and should not include statements that promote or justify the action precipitating the conversion.

WSDOT project teams should coordinate with RCO as soon as the possibility of conversion is discovered to minimize project delay by ensuring:

- Agreement on the extent of impact caused by the project.
- The replacement property (if proposed) is determined acceptable by RCO prior to expenditure on appraisals or environmental review.

If RCO discovers an unauthorized conversion, RCO must notify WSDOT of the violation. RCO's notice will require that the project cease immediately until WSDOT satisfactorily completes the conversion process. WSDOT will also need to provide additional documentation to RCO. This documentation could include discussion of alternatives considered and a description of the work that required the use of a Section 6(f) property without prior notification and coordination with RCO. Standard procedures for working with RCO are described in their manual (RCO *Manual 7* Section 3(6)).

The Recreation and Conservation Funding Board (RCFB) must approve conversions of Section 6(f) properties. The conversion approval process can be very lengthy, so plan for this in the overall project schedule. RCO advises that any request for a conversion approval be pursued as soon as a potential conversion is identified. The complicated conversion process includes several administrative tasks before a proposal will be reviewed by the RCFB. Furthermore, the RCFB meets on a quarterly schedule, and the proposal must be received at least six weeks in advance of a decision by the RCFB. Further details regarding the approval process and document requirements should be sought from an RCO Grant Manager.

Small conversions of less than 5 acres or 10 percent of the Section 6(f) property (whichever is smaller) may be accomplished under a less complex process. To qualify, the conversion must meet specific minimum size and cost requirements. WSDOT project teams must coordinate with RCO for small conversions. Size and cost requirement and the review process are described on RCO's website in *Manual 7* Section 3).

Because properties purchased with LWCF are to be used for recreation, LWCF properties (Section 6(f) properties) qualify as Section 4(f) properties (see Chapter 457). Although all Section 6(f) properties are Section 4(f) properties, two different processes are needed to assess a project's impacts to satisfy federal requirements. While Section 6(f) and Section 4(f) often apply to the same resources they are parts of different laws and there are some key differences:

- Section 6(f) applies only to properties acquired or improved with LWCF.
- Section 4(f) applies to all publicly owned parks, recreation areas and wildlife and waterfowl refuges regardless of the funding source.
- Section 6(f) applies to all programs and policies for all federal agencies. Section 4(f) only applies to USDOT programs and policies.
- Mitigation for impacts to Section 6(f) requires replacement with land of equal value, location, usefulness, and function as the impaired property. Mitigation for Section 4(f) impacts is much more flexible and may not require replacement.

Comparison of Section 6(f) and Section 4(f) below summarizes the differences between Section 6(f) and Section 4(f).

Exhibit 455-1 Comparison of Section 6(f) and Section 4(f)

Law	Section 6(f)	Section 4(f)
Legislative Reference	Land and Water Conservation Fund Act, Section 6(f).	Section 4(f) of DOT Act
Purpose	Preserve, develop, and assure the quality and quantity of outdoor parks and recreation areas and refuges for present and future generations.	Avoid use of public parks, waterfowl and wildlife refuges, and significant historic sites.
Application	Applies to programs and policies of any federal agency and can apply to fully state funded projects where no federal nexus exists. When projects impact recreational lands purchased or improved with Land and Water Conservation Funds.	Applies only to programs and policies undertaken by USDOT agencies. When projects impact significant public parks, recreation areas, wildlife and waterfowl refuges, and significant historic sites are "used" for a highway project regardless of funding source.
Mitigation	Requires that impacted resourced be replaced with lands of equal value, location, and usefulness.	Allows flexible mitigation opportunities.
Final Approval	NPS through RCO.	USDOT Agency lead.
Relationship to Each Other	Section 4(f) is not an integral part of the Section 6(f) process.	Section 6(f) may influence the decision making during the consideration of minimization of harm during the Section 4(f) evaluation process, but they are independent processes.

For more information about Section 4(f) evaluations see Chapter 457.

Documentation and procedural requirements for complying with NEPA differ between federal lead agencies. Conversion of a 6(f) property cannot be accomplished until we have satisfied all the NEPA, ESA, and Section 106 requirements for both the property proposed to be converted and the proposed replacement property. The exact requirements will vary depending on individual circumstances and the other federal agencies involved. Early coordination with RCO, NPS, and any land-owning agencies involved is recommended to ensure that our process meets their requirements and eliminate rework.

The RCO also manages many other state and federal grant programs, aside from the Land and Water Conservation Fund Program. These grants fund public recreation sites and facilities (such as parks, trails, trailheads, boat launches, habitat areas and gun ranges), and habitat improvements. RCO awards grants to counties, cities, nonprofit organizations, lead entities, state and federal agencies and Native American tribes. Decisions on granting and conversion of lands that have received grants occur through one of two funding boards: the Recreation and Conservation Funding Board and the Salmon Recovery Funding Board.It is important to research potentially impacted trails, parks, habitat areas, etc. to determine if RCO grant funds have been used to purchase and/or support the site. Impacts to these funded sites are handled in a similar manner to what is described in the section above concerning 6(f). Early coordination with RCO and the land owner (grant sponsor) is important to ensure all compliance and conversion policies are followed as outlined in the signed project agreement form, as found in RCO *Manual 7* Section 3.

Resource Conservation Areas

Resource Conservation Areas have previously been called Beautification Areas, Landscape Areas, Landscape or Conservation Easements, or Environmental Commitment Areas on Right of Way Plans and Real Estate Services Maps. They are natural areas, outside of limited access areas, that were purchased or set aside to provide a natural, vegetated buffer between the highway and adjacent land uses.

It is FHWA and WSDOT policy that impacts these areas must be avoided - see 2016 FHWA letter regarding impacts to Resource Conservation Areas. However, due to the constrained, linear character of highway facilities, project impacts may be unavoidable. If impacts are unavoidable, they must be minimized and mitigated. See the *Roadside Policy Manual* M 3110 for more information.

Transit

The state's multimodal system supports local and regional transit operators. Buses and vanpools use state highways, park and rides, and other WSDOT managed assets. WSDOT projects have the potential to benefit and impact transit operations by changing traffic flow and travel patterns. Highway, ferry, and rail construction projects may affect travel time, relocate or remove transit stops, or change pedestrian access to transit stops by adding median barriers or relocating cross walks. Consult with the WSDOT Regional Transit Coordination Division in the Central Puget Sound area and with the WSDOT Public Transportation Division elsewhere in the state to locate the transit agencies most likely to be affected by your proposed project. Early and continuous coordination with local and transit agencies should be undertaken to maximize the potential benefits to transit operations of the proposed project and mitigate any negative construction or operational impacts.

The environmental review should include potential impacts to the transit system. Areas of concern include the effect on existing transit operations (area and frequency of service, travel time, and patronage), access to transit by people walking and bicycling, changes in traffic distribution, local circulation patterns, and parking. Impacts include temporary (detours, temporary route closures, etc.) and long-term.

For more information on assessing environmental impacts related to transit, refer to the Federal Transit Administration (FTA) Transportation Impacts webpage.

Waterborne Navigation and Ferry Facilities

Ferry Terminals are typically located in navigable waters within the corporate limits of cities where harbor lines have been established by the state Harbor Lines Commission. According to the State Constitution (Article XV Harbors and Tide Waters), harbor areas are "forever reserved for landings, wharves, streets, and other conveniences of navigation and commerce."

The DNR manages the use of harbor areas in accordance with the Aquatic Lands Act (RCW 79.105). These areas are also subject to local land use regulations, including shoreline, critical area, and zoning regulations.

U.S. Homeland Security regulations (33 CFR 165) impose security zones at ferry terminals and around vessels. A 25-yard separation zone is required when vessels are at the dock, and a 100-yard separation zone is required when the vessel is in route. Potential impacts to these security zones should be addressed in the land use analysis.

Ferry Terminal projects often receive FTA funds, and/or the facilities may have received FTA funding. Washington State Ferries (WSF) projects may also be subject to FTA requirements. FTA procedures are described on their website. The process for complying with the NEPA and federal surface transportation statutes is defined in the joint Federal Highway Administration (FHWA)/Federal Railroad Administration (FRA)/FTA Environmental Impact and Related Procedures (23 CFR 771).

Road projects typically have little impact on waterborne navigation. However, river crossings may affect shipping routes or access to port facilities. Section (V)(G)(11) of FHWA Technical Advisory TA 6640.8A requires an analysis of potential impacts to waterborne navigation and a discussion of mitigation for adverse impacts. Any project that requires a Section 9 (of the Rivers and Harbors Act) permit must also show evidence of coordination with the U.S. Coast Guard (USCG) in accordance with the FHWA/USCG Memorandum of Agreement (MOA). Early coordination is required during the project planning phase, prior to formal project initiation (see the table in Section V for specific requirements). Where the preferred alternative requires a Section 9 permit, the NEPA documentation should include an exhibit showing the horizontal and vertical navigational clearances for each permit activity.

Highway projects adjacent to ferry terminals may affect ferry loading and unloading procedures, transit access, or parking. Coordination with WSF terminal operations staff and a discussion of the affects (both beneficial and adverse) to ferry operations should be included in the environmental document. Signal timing, turning movements, access to parking, transit stops, pedestrian flow and bicycle connections may be important factors.

The environmental document must evaluate the effect of proposed ferry operations on the adjacent street system for vehicular traffic, transit access, pedestrian flow, and bicycle access.

Rail Facilities

There are over 3,000 miles of railroad lines in Washington, providing mobility for freight and passengers moving into, out of, within, and through the state. Two Class I railroads, the BNSF Railway and the Union Pacific Railroad, as well as 23 short-line railroads, operate through communities in Washington.

The Palouse River and Coulee City (PCC) rail system, owned and operated by WSDOT, is the longest short-line freight rail system in Washington. WSDOT contracts with private railroads to operate each of the branches.

In addition, Sound Transit owns and operates some rail lines, such as the Point Defiance Bypass route in Tacoma, and commuter light rail.

WSDOT works with a diverse group of federal agencies depending on who owns or regulates the rail line, including the FHWA, FRA, FTA, and Surface Transportation Board (STB). FHWA is typically the lead when a multimodal transportation project includes work on, over, or adjacent to rail facilities. Types of projects include grade crossing improvements, nearby roadway intersection improvements, and infrastructure improvements to support passenger rail service. When FHWA is the sole lead federal agency, apply the *Design Manual* Chapter 1350 policies and procedures for coordinating highway and rail projects. It also includes requirements for conducting a safety analysis for at-grade crossings and signalized intersections in the vicinity of rail crossings.

If FRA is the federal lead, the EA/EIS must assess the direct, indirect, and cumulative impacts on both passenger and freight transportation, by all modes, including bicycles and pedestrians. The analysis should address local, regional, national, and international perspectives and include a discussion of construction and long-term impacts on vehicular traffic congestion. When FRA is the federal lead, refer to their agency-specific information on assessing environmental impacts on the FRA & NEPA website. As of November 28, 2018, FRA conducts environmental reviews according to its revised NEPA legislation and regulations contained in 23 CFR Part 771, Environmental Impact and Related Procedures, and 23 CFR Part 774, Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4(f)) for transportation projects.

The STB is an economic-regulatory agency and has jurisdiction over rail related proposals that include construction of new rail lines and connecting track, rail line abandonments, as well as discontinuing rail service. These types of projects are generally proposed by freight railroads and do not typically involve WSDOT. STB's environmental rules can be found at 49 CFR 1105. The environmental rules implement various environmental statutes that include NEPA, the NHPA, ESA, and the Coastal Zone Management Act.

Aviation Facilities

WSDOT manages and operates 16 airports. These serve the general public and play key roles in emergency response, search and rescue, and fire suppression. Capital projects to improve these airports may be subject to Federal Aviation Administration (FAA) rules as well as SEPA. FAA retains jurisdiction, but WSDOT Aviation is required by law to review all development permits and ordinances and then comment on whether there are potential impacts to the airspace based on the submitted information.

Any proposed highway construction or alteration in the vicinity of a public or military airport will require early coordination with WSDOT's Aviation Division. WSDOT Aviation is required to review projects within the areas of these projects and then make a determination of their potential impacts to the airport. Projects located within 3.8 miles of an airport may require an obstruction evaluation and must comply with FAA regulations to ensure that airway highway clearances are adequate for the safe movement of air and highway traffic (23 USC 318 and 23 CFR 620 Subpart A, Highway Improvements in the Vicinity of Airports).

The guidance addresses:

- The effect of airports on adjacent land use and appropriate environmental documentation of proposed airport actions.
- The kinds of information on existing and planned land use that should be provided in an environmental document for highway projects within 3.8 miles of an airport, including "significance thresholds" for various land use related topics.

Aviation also has an Airport Mapping Application that can help determine if the project could potentially impact the airspace. A WSDOT Airports and Compatible Land Use Guidebook is also available by contacting a WSDOT Aviation Planner.

Review of the *Airport Stormwater Design Manual* M 3041 is recommended to evaluate potential impacts from the construction and operation of stormwater detention facilities in close proximity to airports.

If the Federal Aviation Administration (FAA) is the lead federal agency, the environmental document must evaluate the effect of airport expansion or rehabilitation projects on the local transportation network, including effect on parking, transit, vehicle congestion, travel time, and traffic patterns. FAA guidance on how land use compatibility should be addressed in airport planning and NEPA documents is found in FAA Orders 1050.1E and 5050.4B. Contact the WSDOT Aviation Division for assistance.

Bicycling and Pedestrian Facilities

The state's 2022 Move Ahead Washington transportation package contains significant investments in transit and active transportation – including projects to improve safety for bicyclists and pedestrians. WSDOT projects often include these elements. The Active Transportation Plan 2020 and Beyond (PDF 19.1MB), is a compass for creating the future of walking, biking and rolling on or across state highways in Washington. It is used in decisions to help connect people to where they want to go, whether they use active transportation for the whole trip or just a part of it, such as the walk to a bus stop, the bike ride to work or rolling home from a ferry terminal.

The FHWA Bicycle and Pedestrian Policy is to incorporate safe and convenient walking and bicycling facilities into transportation projects and to go beyond minimum standards to provide safe and convenient facilities for these modes. Bicycle and pedestrian facility projects should be defined as standalone projects and not be inappropriately segmented from larger highway projects in order to simplify their environmental review.

Projects must consider impacts of construction of pedestrian access routes and bicycle and pedestrian lanes, paths, and facilities in order to verify the appropriate use of the FHWA CE (23 CFR 771.117(c)(3)). This CE applies regardless of needing right of way or total project cost.

Section 7 of FHWA's Technical Advisory T 6640.8A states that the environmental document should discuss current and anticipated use of the bicycle and pedestrian facility, potential impacts, and measures to avoid or reduce adverse impacts. This applies to formal trails and informal pathways with identified use by bicyclists and pedestrians. If the preferred alternative would sever an existing major route for non-motorized transportation traffic, the proposed project needs to provide a reasonable alternative route or demonstrate that such a route exists (23 USC 109(m)).

When new bicycle and pedestrian facilities are proposed as part of a highway project, the environmental document should:

- Include sufficient information to explain the basis for providing the facilities (e.g., proposed bicycle facility is a link in the local plan, or sidewalks will reduce project access impact to the community).
- Identify the facilities to be included in the preferred alternative.

455.04(3) Analysis and documentation for SEPA only (no federal nexus)

For projects with no federal nexus, WSDOT project teams should still follow the analysis and documentation requirements in Section 455.04(2). Exceptions include the Wild and Scenic Rivers Act and the FPPA, which only apply to federal activities.

455.04(4) Other Considerations

This section describes other considerations that should be included during environmental review.

Scenic River System Act

RCW 79A.55 established a scenic river system in Washington State. The system is managed by the State Parks and Recreation Commission to "protect and preserve the natural character of rivers with outstanding natural, scenic, historic, ecological, and recreational values". The protected lands include river and publicly owned or leased lands up to one quarter mile on each side of the river. The State Parks Commission has developed and adopted management policies for the public lands along designated rivers. RCW 79A.55.040 requires that the management policies be integrated into local Shoreline Management Master Plans.

State designated Scenic Rivers include:

1. The Skykomish River from the junction of the north and south forks of the Skykomish (within the jurisdiction of Snohomish County):
    a. Downstream approximately fourteen miles to the junction of the Sultan River.
    b. Upstream approximately twenty miles on the south fork to the junction of the Tye and Foss rivers (within the jurisdiction of King County).
    c. Upstream approximately eleven miles on the north fork to its junction with Bear Creek (within the jurisdiction of Snohomish County).

2. The Beckler River from its junction with the south fork of the Skykomish River upstream approximately eight miles to its junction with Rapid River (within the jurisdiction of King County).

3. The Tye River from its junction with the south fork of the Skykomish River approximately fourteen miles to Tye Lake (within the jurisdiction of King County).

4. The Little Spokane River from the upstream boundary of the state park boat put in site near Rutter Parkway and downstream to its confluence with the Spokane River (within the jurisdiction of Spokane County).

Shoreline Management Act

The Shoreline Management Act (SMA) aims to "prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines" (RCW 90.58). SMA also recognizes that "shorelines are among the most valuable and fragile" of the state's resources.

The SMA provides for the management and protection of the state's shoreline resources by requiring planning for their reasonable and appropriate use. The area regulated under the Act includes lands within two hundred (200) feet of designated shorelines as well as certain wetlands, river deltas, floodways and floodplains associated with such shorelines.

The SMA establishes a balance of authority between local and state governments. Cities and counties have the primary review responsibility for development along their shorelines, and the state (through the Washington State Department of Ecology) has authority to review local master programs and local shoreline development permit decisions.

Shorelines of the state include:

- All marine waters;
- Streams with greater than twenty cubic feet per second (20 cfs) mean annual flow;
- Lakes twenty (20) acres or larger; Upland areas called shorelands that extend two hundred (200) feet landward, in all directions on a horizontal plane, from the edge of the ordinary high watermark (OHWM) of these waters; and
- The following areas when they are associated with one of the above:
  - Wetlands and river deltas; and
  - Floodways and contiguous floodplain areas landward two hundred (200) feet from such floodways.

National Trails System Act

The National Trails System Act 1968 (16 USC 1241-1251) requires federal agencies that abandon roadways, utility right of way, or other properties suitable for improving or expanding the national trails system to consider the possibility of using the abandoned right of way to extend the national trail system.

Safe Routes to Schools

WSDOT oversees the Safe Routes to Schools grant program. This provides funds for pedestrian and bicyclist safety infrastructure improvements within two miles of a school (typically, also includes preliminary engineering, and right of way). Local agencies, Tribes and schools identify biking and walking routes. Areas that include state routes have typically undergone some evaluation by the WSDOT region as well.

WSDOT's Active Transportation Division can provide project teams with information on how to coordinate proposed projects near schools. Efforts to avoid, minimize, or mitigate adverse impacts and coordinate with school officials should be discussed in the environmental document.

Parking

If a project provides, removes, or relocates parking, the local jurisdiction's zoning, road standards, and off-street parking regulations may apply. Links to appropriate city and county regulations can be found by searching the Municipal Research and Services Center (MRSC) website.

455.05 External engagement

The conversion of a 6(f) property to transportation uses requires that the public has been informed of the proposed conversion, been given a minimum of 30 days to comment on the change, and their comments have been considered and adequately addressed by the RCO and NPS.

455.06 Internal roles and responsibilities

The following represent typical roles and responsibilities for key offices. Actual roles and responsibilities may vary within the regions and modes.

455.06(1) Planner

Conduct environmental screening for potential land use impacts. Notifies the NEPA Specialist and region environmental if land use impacts are anticipated. Review GMA comprehensive plans and other local, regional, state, and tribal land use plans for consistency with the plan's recommendations. Coordinate the annual process to review and approve the conformity determination in Metropolitan Planning Organization (MPO) Transportation Improvement plans (TIP), See Chapter 425.

455.06(2) Project engineer

Oversee all engineering studies and technical reports are prepared as needed and provide appropriate levels of analysis to support the environmental review process and permitting activities to the environmental staff. Coordinate with Region Environmental to discuss potential environmental impacts of the project. Ensure that the Practical Design process is documented in the project in sufficient detail to support the administrative record and environmental documentation. The *Design Manual* Chapter 1100 describes Practical Design.

455.06(3) Region environmental

Oversee the development of environmental review documents. Research and provide information describing the environmental context for the project commensurate with the level of design detail provided and the potential environmental impacts of the project. Right-size the research and analysis using GIS data, windshield surveys, coordination with subject matter experts, or site-specific analysis as appropriate. Communicate environmental information to the environmental and engineering teams so that potential budget, schedule, and permitting issues are clearly understood, taken into consideration throughout the process, and incorporated as needed for permits and other agency approvals.

455.06(4) Environmental services office

The primary role of the Environmental Services Office (ESO) is to keep the guidance current with evolving and changing rules and regulations. ESO staff also provide expert assistance for developing scopes of work for consultants and internal WSDOT staff as well as reviewing environmental documents. The ESO NEPA Specialist is available to consult on projects requiring Land Use and Transportation analyses. For EAs and EISs, the NEPA Specialist also reviews Land Use and Transportation analyses for procedural accuracy, substantive adequacy, and legal sufficiency.

455.07 Applicable permits and approvals

Clean Water Act

Projects in a "designated" or "study" wild and scenic river area may require a Section 404 permit from the Corps for compliance with the Clean Water Act, and an ESA Section 7 determination by the USFS.

Navigable waters

Projects that impact waterborne navigation require a Section 9 Bridge Permit from the USCG. Any project that requires a Section 9 Bridge Permit must also show evidence of coordination with the USCG in accordance with the FHWA/USCG MOA.

Projects that include plans for a bridge or structure over or involving waters of the US where the navigable portions of rivers or other waterways involved in the project are not within a single state may require a Section 9 (of the Rivers and Harbors Act) permit.

Section 6(f) of the Federal Land and Water Conservation Fund Act (LWCF)

The conversion of a Section 6(f) property to a transportation use also requires approval by the RCFB.

Forest Practices

The DNR requires a forest practices permit for certain work on private or state forest lands (RCW 76.09; WAC 222). Project activities that trigger permits include: converting timberland to other uses, harvesting timber, and installing/replacing water crossings on forest roads.

Aquatic Use Authorization

The DNR requires an Aquatic Use Authorization permit if work is performed on state-owned aquatic lands. Coordinate with your WSDOT Real Estate Services office to work with DNR to determine if your project is on state-owned aquatic lands (RCW 79.105; WAC 332.30). If an Aquatic Use Authorization is needed, WSDOT Real Estate Services typically submits the permit to DNR.

Critical Areas Permits

The GMA directs locals agencies to develop comprehensive plans and ordinances that protect locally delineated wetlands, wellhead protection areas, frequently flooded areas, geographically hazardous areas, fish and wildlife habitat, and other conservation areas (RCW 36.70A; RCW 36.70B; WAC 365-190; WAC 365-195; WAC 365-196). Local governments typically require a Critical Areas permit if work is performed within areas designated by their critical areas ordinance.

Property acquisition

Local permits and approvals, for example building and demolition permits, may apply.

For more information on the permitting process, see Chapter 500.

455.08 Mitigation

The environmental 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.

RCW 47.01.305 requires that WSDOT considers agricultural lands of long-term commercial significance, as defined in RCW 34.70A.030, when reviewing and selecting sites to meet environmental mitigation requirements under NEPA. It also requires WSDOT to consider using public lands first before using land defined as agricultural land of long-term commercial significance, as defined in RCW 36.70A. If public lands are not available that meet the required environmental mitigation needs, then WSDOT may use other sites while making every effort to avoid any net loss of agricultural lands that have a designation of long-term commercial significance.

Mitigation for impacts to Section 6(f) properties requires replacement with land of equal value, location, usefulness, and function as the impaired property. See Section 455.04(2).

Refer to Section 2.2(7) of the *Roadside Policy Manual* for mitigation of unavoidable impacts to Resource Conservation Areas.

The NPS NRI website provides guidance on how to avoid, minimize, and mitigate adverse effects on NRI rivers.

Chapter 490 provides guidance on how to incorporate environmental commitments into project contracts. This is important for NEPA/SEPA commitments as well as regulatory permit commitments.

455.09 Abbreviations and acronyms

4(f)	Section 4(f) of the Department of Transportation Act of 1966
6(f)	Section 6(f) of the Federal Land and Water Conservation Fund Act (LWCF)
CE	Categorical Exclusion (NEPA); Categorical Exemption (SEPA)
CEQ	Council for Environmental Quality
CFR	Code of Federal Regulations
Corps	United States Army Corps of Engineers
EA	Environmental Assessment (NEPA/SEPA)
EIS	Environmental Impact Statement (NEPA/SEPA)
ERS/ECS	Environmental Review Summary / Environmental Classification Summary
ESA	Endangered Species Act
ESO	Environmental Services Office
FAA	Federal Aviation Administration
FCIR	Farmland Conversion Impact Rating form
FHWA	Federal Highway Administration
FPPA	Farmland Protection Policy Act
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GMA	Growth Management Act
LOS	Level of Service
LWCF	Land and Water Conservation Fund Act
MOA	Memorandum of Agreement
MRSC	Municipal Research and Services Center of Washington
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
NRI	Nationwide Rivers Inventory
NPS	National Park Service
RCO	Washington State Recreation and Conservation Office
RCW	Revised Code of Washington
RCFB	Recreation and Conservation Funding Board
SEPA	State Environmental Policy Act
STB	Surface Transportation Board
USC	United States Code
USCG	United States Coast Guard
USDOT	United States Department of Transportation
USFS	United States Forest Service
WAC	Washington Administrative Code
WSF	Washington State Ferries

455.10 Glossary

These definitions provide context for the Land Use analysis. Some terms may have other meanings in a different context.

Essential Public Facilities – As defined under GMA, essential public facilities that are typically difficult to site, including airports, state or regional transportation facilities, and services of statewide significance as defined in RCW 47.06.140 (including improvements to such facilities and services identified in the statewide multimodal plan) and other public facilities that are typically difficult to site.

Farmland of Statewide or Local Importance – FPPA defines farmland of statewide or local importance as land used for the production of food, feed, fiber, forage, or oilseed crops, as determined by the state or local government agency or agencies, using U.S. Department of Agriculture guidelines.

Federal Nexus – A determination that at least one federal agency is involved as a proponent of a specified proposal and/or as an agency that needs to act on a federal permit, license, or other entitlement (such as a request to use federal funds or federal land) needed to implement the proposal. A federal nexus (even on an otherwise non-federal proposal) typically triggers the need for the federal agency or agencies to comply with various federal statutes include, but not limited to, NEPA, Section 106, Section 4(f), Section 6(f), and ESA Section 7.

Indirect Effects – The indirect land use effects involve potential development, or redevelopment of buildable lands within the influence of the transportation project. These changes are driven and constrained by social and economic factors beyond WSDOT or the local public agency's control. Such effects are difficult to predict and often controversial. Projects that do not increase capacity, change the level of service (LOS), or significantly reduce travel time are unlikely to change land use.

Level of Service (LOS) – LOS describes the minimum amount of a public facility which must be provided to meet the community's basic needs and expectations. Please consult with Multimodal Planning and Data Division and Traffic Operations for current best practices.

Prime Farmland – As defined in the FPPA, Prime Farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor, and without intolerable soil erosion. Prime farmland includes land that possesses the above characteristics and may include land currently used as cropland, pastureland, rangeland, or forestland. It does not include land already in or committed to urban development or water storage.

Resource Conservation Areas – Previously called Beautification Areas, Landscape Areas, Landscape or Conservation Easements, or Environmental Commitment Areas on Right of Way Plans and Real Estate Services Maps, these are natural areas outside of the limited access hachures that were purchased or set aside to provide a natural, vegetated buffer between the highway and adjacent land uses.

Section 6(f) Property – Any property acquired or developed with financial assistance under Section 6(f) of the federal LWCF Act. See Section 455.04(2).

Transportation Facilities and Services of Statewide Significance – Defined in RCW 47.06.140 to include the interstate highway system, interregional state principal arterials including ferry connections that serve statewide travel, intercity passenger rail services, intercity high-speed ground transportation, major passenger intermodal terminals excluding all airport facilitates and services, the freight railroad system, the Columbia/Snake navigable river system, marine port facilities, and services that are related solely to marine activities affecting international and interstate trade, and high capacity transportation systems serving regions as defined in RCW 81.104.015.

Unique Farmland – As defined in the FPPA, Unique Farmland is land other than prime farmland that is used for production of specific high value food and fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farming methods. Examples of such crops include lentils, nuts, annually cropped white wheat, cranberries, fruits, and vegetables.

Urban Growth Area (UGA) – UGAs are those areas designated by a county pursuant to the GMA, which are planned to support urban development and densities within the next 20 years. Growth within UGAs is intended to be urban, and growth outside of UGAs can only occur if it is not urban in nature. These rules are to concentrate growth and reduce urban sprawl into natural areas and landscapes.

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Chapter 456 Cultural resources

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456.01 Introduction

It is WSDOT policy to avoid, minimize or mitigate adverse impacts to cultural resources in planning, constructing, operating, or maintaining the state's transportation system. The term *cultural resources* refers to sites, buildings, structures, districts, and objects fifty-years of age or older. Archaeological sites include precontact and historic-era surfaces, buried or underwater features, and artifacts. Historic properties consist of buildings and structures such as buildings, roads, bridges, railways, vessels, canals, ditches, geological features, and other features of the landscape.

Transportation projects and maintenance activities sponsored or performed by WSDOT Regions and Modes have potential to impact cultural resources. These actions are subject to compliance with state and federal regulations that govern the treatment of archaeological, historical, and cultural resources.

456.02 Applicable statutes, regulations, & executive orders

456.02(1) Federal

- Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations 36 CFR 800
- Section 4(f) of the Department of Transportation Act 49 USC 303
- Historic Bridge Program 12 U.S.C 144(g)
- National Environmental Policy Act of 1969 (NEPA) 42 US 4321
- Archaeological Resources Protection Act 43 CFR 7.6-7.11
- Curation of Federally Owned and Administered Archaeological Collections 36 CFR 79

456.02(2) State

- Centennial Accord
- Governor's Executive Order 21-02 Archeological and Cultural Resources
- State Environmental Policy Act WAC 197-11 and WAC 468-12
- Abandoned and Historic Cemeteries Act RCW 68.60
- Indian Graves and Records Act RCW 27.44
- Archaeological Sites and Resources Protection Act RCW 27.53
- Archaeology and Historic Preservation RCW 27.34.200

456.02(3) Local

Some local jurisdictions have local landmark or cultural resources ordinances

456.03 Cultural resources considerations during project development

456.03(1) Planning

Chapter 200 explains how planning projects (any pre-NEPA plan) can consider environmental issues. Project teams should check to see if a planning study has been done in their project area, and if so, refer to any cultural resources documented in that study.

Cultural resources compliance begins with notifying the Region, Division, or Mode WSDOT Cultural Resources Specialist (CRS) of the proposed activity. This notification must include the project location, scope and extent of planned work, and funding sources and required permits.

456.03(2) Scoping

Consideration of project impacts to cultural resources (i.e., archaeological sites, buildings, historic highway bridges, or cultural places) early in the planning process will help identify potential scope and scheduling impacts.

Coordinate with the Region, Division, or Mode CRS to identify the appropriate regulatory environment and compliance process for the proposed activity. State (Governor's Executive Order 21-02) and federal (Section 106 of the National Historic Preservation Act 36 CFR 800) regulations follow similar steps in the compliance process: (1) define the project's Area of Potential Effect (APE), (2) initiate consultation with interested and affected parties, (3) identify cultural resources in the project area, and determine project impacts, and (4) work with consulting parties to avoid, minimize or mitigate adverse impacts to cultural resources. Mitigation to resolve adverse effects is achieved through consultation and formalized in an agreement. All these steps are done by or under the direct supervision of the Region, Division, or Mode Cultural Resources Specialist in coordination with the Project Engineer and Environmental Manager.

456.03(3) Design

The Region, Division, or Mode CRS will work with the project office to define the project area, identify consulting parties, and initiate consultation under GEO 21-02 or Section 106 (36CFR800). The majority of WSDOT projects are subject to review under Section 106, and primarily follow the alternative compliance process illustrated in Exhibit 400-1 and defined in the Statewide Programmatic Agreement (PA) with the Department of Archaeology and Historic Preservation (DAHP), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA). A CRS will exempt certain activities presumed to have minimal or no potential to effect cultural resources from Section 106 review per Stipulation VII and Appendix B of the Statewide PA.

456.03(4) Construction

Consult the Region, Division, or Mode CRS to develop a project specific Inadvertent Discovery Plan (IDP) for the unanticipated discovery of cultural resources or human skeletal remains during construction. An IDP is required for all projects as stipulated in sections 1-07.16(4) Archaeological and Historical Objects and 1-07.16(4) Inadvertent Discovery of Human Skeletal Remains of the *Standards Specifications* manual. The IDP must be kept on site and provides guidance for the treatment of cultural resources if encountered during project activities. The IDP must be provided to the construction inspectors, the Project Engineer, and the construction contractor Project Manager and Foreman.

Archaeological monitoring may be required if results of the cultural resources survey indicate resources are likely to be encountered in the project area during construction (see General Special Provisions 071604.GR1 - Construction Procedures for Discovery of Archaeological and Historic Objects).

456.03(5) Maintenance and Operations

Notify the Region CRS of highway maintenance activities that include ground disturbing activities. The WSDOT Maintenance Program Cultural Resources Checklist provides a mechanism to review ground disturbing maintenance work for potential impacts to cultural resources. In the case of maintenance activities that occur on tribal reservations, or federal lands, WSDOT must comply with provisions of Maintenance agreements with the affected tribes or federal land-owning agencies (USFS, NPS, BLM, BIA, USFWS, etc.). Certain maintenance activities may also be subject to review under GEO 21-02.

456.04 Analysis & documentation requirements

Section 106 is a separate regulatory process from NEPA, however, Section 106 compliance must be documented prior to NEPA completion (regardless of NEPA classification). The level of detail that is needed for compliance with Section 106 and state requirements depends on the scale and scope of the project. The size of the area of potential effect and the project activities are the key factors.

456.04(1) Analysis & Methodology

Federal

Section 106 of the National Historic Preservation Act (36 CFR 800): Federally funded projects or permitted activities, or projects that occur on federal (including Indian/tribal) land are subject to review under Section 106 of the National Historic Preservation Act (implementing regulations 36 CFR 800, see below). Section 106 is a consultative process and federal requirement to avoid, minimize or mitigate impacts to historic properties. Historic properties consist of sites, districts, traditional cultural properties, buildings and structures such as roads, bridges, railways, vessels, and other features of the landscape. WSDOT recognizes the historical significance of roads and highways in Washington State and considers project impacts to roadways at least 50 years of age and deemed significant according to the National Register criteria as determined by the CRS-Historian. The evaluation methods developed by WSDOT and described in the Guidelines for Identifying and Evaluating the Historic Significance of Washington State Highways (PDF 57KB) focus on engineered features. This approach takes into consideration the original alignment, road prism and site distance that reflect the historic character of a roadway.

Projects impacting historic highway bridges must also comply with stipulations of the Historic Bridge Program (23 U.S.C. 144(g)) requiring that WSDOT provide an opportunity for the sale or donation of National Register eligible or listed bridges proposed for demolition as part of a replacement project. The WSDOT Cultural Resources Compliance Guidance for Historic Bridge Projects (PDF 113KB) provides a step-by-step guide to the Section 106 and Section 4(f) review process for highway bridges, as illustrated in Exhibit 400-3.

The majority of WSDOT projects are reviewed under Section 106 and primarily follow the alternative compliance process illustrated in Exhibit 400-1 and defined in the Statewide Programmatic Agreement (PA) with the Department of Archaeology and Historic Preservation (DAHP), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA). WSDOT, on behalf of FHWA or FTA, will (1) define the area of potential effect (APE), (2) initiate consultation with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), Tribes and other interested and affected parties, (3) identify historic properties with potential to be impacted by project activities within the APE or oversee and review work done by consultants hired to identify historic properties, (4) determine NRHP eligibility of resources and project effects, and (5) work with the Region and consulting parties to develop ways to avoid, minimize or mitigate adverse impacts to cultural resources. Mitigation to resolve adverse effects is achieved through consultation and formalized in a legally binding agreement, either a Memorandum of Agreement (MOA) or Programmatic Agreement (PA).

Section 106 is a separate regulatory process from NEPA and must be completed for projects that are Categorical Exemptions under NEPA. While both NEPA and NHPA require federal agencies to consider project impacts to historic properties, projects that are categorical exclusions under NEPA are not exempt from Section 106 review.

Section 106 is a procedural law whereas Section 4(f) of the US Department of Transportation Act is a substantive law that requires avoidance to use of NRHP eligible or listed historic properties, if prudent and feasible. Section 4(f) applies only to agencies within the US DOT. Requirements for documentation of the Section 4(f) resource (historic property) differ by level of use or impact (see Section 4(f) Evaluation Guidance)

A prescribed list of activities presumed to have minimal or no potential to affect cultural resources may be exempted from Section 106 and GEO 21-02 review per stipulations of the Statewide Programmatic Agreement and GEO 21-02 MOU. The Region, Division, or Mode CRS will determine if a project meets criteria for exemption. If the activity cannot be exempted, the region, Division, or Mode CRS will provide guidance on Section 106 or GEO 21-02 consultation for the proposed project.

The Program Comment for Common Post-1945 Concrete and Steel Bridges issued by the ACHP in 2012 exempts common (mass produced) post-1945 concrete and steel bridges and culverts from Section 106 review. The intent of the Program Comment is to streamline the review process for those structures lacking distinction; that have not previously been listed or determined eligible for listing on the National Register; and that are not located in or adjacent to historic districts. A list of exceptions to the Program Comment (Bridge Program Comment Excepted Bridges List), identify structures of exceptional quality that remain subject to Section 106 review.

The 2005 Section 106 Exemption Regarding Effects to the Interstate Highway System by the Advisory Council of Historic Preservation (ACHP) excludes the majority of Interstate Highway Features from consideration as historic properties under Section 106 of the National Historic Preservation Act (NHPA). FHWA maintains a list (by state) of Nationally and Exceptionally Significant Features of the Federal Interstate Highway System that identify interstate highway bridges and segments of highway containing bridges determined by the FHWA to be of exceptional national significance in Washington State. These properties are subject to review under Section 106.

State (No federal nexus)

State funded activities are subject to review under Governor's Executive Order (GEO) 21-02 and will follow the process outlined in the Memorandum of Understanding (MOU) with the Department of Archaeology and Historic Preservation. The MOU will be developed with DAHP and Tribes regarding state funded transportation projects reviewed under GEO 21-02. GEO 21-02 is in effect however we are still developing a review process. Our existing process under GEO 05-05 will be followed until a new agreement is in place.

Projects reviewed under Section 106 are not required to undergo a separate State level review for compliance with Governor's Executive Order 21-02. State funded projects with no federal permit or nexus undergo a similar review process to Section 106, as illustrated in Exhibit 400-2. The Region, Division, or Mode CRS will work with the project office to determine the area of impact and initiate consultation with DAHP and interested tribes subject to GEO 21-02. Certain projects with minimal or no potential to effect cultural resources may be exempted from review per provisions of the GEO 21-02 Memorandum for Understanding (MOU). The Region, Division, or Mode CRS will determine if the project meets the criteria for exemption.

The GEO 21-02 compliance process is ongoing until project impacts are determined and an approach to avoid, minimize, or mitigate any impacts is developed and formalized through an MOU agreement with the Department of Archaeology and Historic Preservation.

Required Documentation

Cultural resources study documents shall be prepared by the Region, Division, or Mode CRS or by consultants under the direction of the WSDOT CRS for compliance with GEO 21-02 and Section 106. The survey report will conform to the Department of Archaeology and Historic Preservation reporting guidelines and provide substantive information on each archaeological site or historic structure within the study area, including a physical description, recommendation on significance (NRHP eligibility), and justification for the findings. Properties recommended eligible for NRHP listing must possess significance under the National Register Criteria and possess integrity necessary to convey that significance. Cultural resources consultants may recommend eligibility determinations but the formal determination of eligibility must be made by the Region, Division, or Mode CRS. A general historical context and ethnographic background should be provided and supported by maps and photographs of the project area. Survey results will also address the potential for resources to be encountered during construction and the need for archaeological monitoring. The Environmental Coordinator will develop a project specific Inadvertent Discovery Plan (IDP) using WSDOT IDP template (DOCX 62.5KB) to provide guidance for the unanticipated discovery of resources during construction. If archaeological monitoring is required, a monitoring report will be submitted to consulting parties for review by the Region, Division, or Mode CRS.

If an adverse impact to cultural resources will occur because of project activities and avoidance is not feasible, mitigation will be required. Mitigation measures to resolve the adverse impact will be developed through consultation and formalized in an agreement (Memorandum of Understanding for GEO 21-02, or Memorandum of Agreement (MOA) for Section 106).

Section 4(f) documentation to comply with the US Department of Transportation Act may be required to address project impacts to NRHP eligible or listed cultural resources, if no feasible or prudent alternative is possible to minimize harm (see Section 4(f) Evaluation Guidance).

456.05 External engagement

Section 106 of the National Historic Preservation Act is a consultative process that requires input from interested and affected parties and the public on federally funded or permitted projects or those on federal land. Section 106 consultation is initiated by the Region Environmental Manager with consulting parties, including the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), Tribes, partner agencies and the public when a proposed project has potential to affect historic properties. Consultation is an iterative process and provides an opportunity for stakeholders and the public to weigh in on decision making throughout the Section 106 review process.

Federally recognized tribes have a specific role in the Section 106 process, per the implementing regulations in 36CFR800. Federally recognized tribes maintain the right to ask for government-to-government consultation with federal agencies, and the level of tribal participation in technical consultation is decided by the tribes, not by WSDOT. Federally recognized tribes are not considered the “public” and can request separate meetings outside of and in addition to public meetings.

Stipulations of the Historic Bridge Program (23 U.S.C. 144(g)(5)) require WSDOT to provide an opportunity for the adoption or reuse of historic highway bridges proposed for demolition as part of a replacement project. Proposals are welcome from the public and must demonstrate the recipient can successfully (a) relocate or preserve the bridge in place, and (b) maintain its historic character.

456.06 Internal Roles and responsibilities

456.06(1) Region/Mode Environmental Manager

Consult with Tribes annually on proposed transportation projects and maintenance activities planned for the Region, Division, or Mode, as required per stipulations of the Statewide Programmatic Agreement and GEO 21-02 MOU.

Coordinate with the Region, Division, or Mode CRS to develop mitigation measures and consult on formal agreements (MOU per GEO 21-02, or MOA per Section 106).

456.06(2) Project Engineer

Coordinate with the Region, Division, or Mode CRS assigned to the project to identify potential cultural resources concerns during project planning and scoping and develop the project APE.

Work with CRS to avoid or minimize impacts to cultural resources impacted by project design, or to develop potential mitigation to resolve adverse effects. Mitigation costs are the responsibility of the project and come from project funds.

456.06(3) Environmental Coordinator

Work with the Region, Division, or Mode CRS to determine appropriate state or federal regulatory environment for projects and determine exemptions, if applicable. Work with the CRS and Project Engineer to develop the project APE, identify consulting parties and participate in consultation under the applicable state or federal regulation.

If cultural resources survey is required, work with the CRS to develop a Scope of Work for consultants. Cultural resources work must be reviewed by the Region, Division, or Mode CRS for compliance and quality, prior to submission to consulting parties.

Work with the project CRS to develop mitigation strategies to resolve adverse impacts to cultural resources, assist in consultation, and draft agreement documents.

Review with Region CRS maintenance activities (see checklist for cultural resources for maintenance activities) for potential impacts to cultural resources.

Consult CRS to identify environmental commitments for construction, including archaeological monitoring and curation requirements. The WSDOT project office, with the aid of the project CRS, is responsible to address curation of archaeological collections in contracts with cultural resource consultants.

The Environmental Coordinator, with input from the project CRS, will develop a project specific IDP to address the unanticipated discovery of cultural resources during project activities.

456.06(4) Cultural Resources Specialists

Each WSDOT Region, Mode, and Division has an assigned Cultural Resources Specialist, either place-based in the Region or Mode or within the Cultural Resources Program at Headquarters. The CRS reviews all Region, Mode, and Division projects for their potential to impact cultural resources, determines if exemptions from the Statewide Section 106 Programmatic Agreement can be applied. If the project can be exempted, the CRS documents the exemption and notifies the Project Manager. If the project cannot be exempted, the CRS works with the Project Manager to develop an Area of Potential Effects description and map, and coordinates consultation with DAHP, federal agencies, tribes, and the public to complete the steps of the Section 106 process. The ESO Cultural Resources Program Manager will be notified by either the Region, Division, or Mode CRS or the Environmental Manager when issues arise with consulting parties that might have agency-wide implications for WSDOT, or that might set a precedent for other WSDOT projects. The Cultural Resources Program Manager is responsible for developing statewide WSDOT policies regarding cultural resources, and provides expert technical assistance for any Region, Division, or Mode project that encounters difficulties in cultural resources compliance.

456.07 Mitigation

If cultural resources cannot be avoided during project planning or construction, mitigation is required to resolve adverse effects to NRHP eligible or listed resources. Mitigation will be determined through consultation and formalized in an agreement (MOU per GEO 21-02, or MOA per Section 106). The Statewide Programmatic Agreement provides guidance for mitigating project impacts. Mitigation efforts must always be commensurate to the scope of the project, be reasonable, cost effective and designed to address the actual effects of the project on historic properties. Standard mitigation measures are often applied, but development of creative mitigation measure is encouraged. Common mitigation measures include excavation, relocation, rehabilitation, recordation, screening, signage and public interpretation. Consult the Region, Division, or Mode CRS and the ESO Cultural Resources Program Manager to develop appropriate mitigation measures.

456.08 Applicable permits & approval process

State funded projects subject to review under GEO 21-02 may require an Archaeological Site Alteration & Excavation Permit issued by the Department of Archaeology and Historic Preservation (DAHP) for alterations to sites (as defined under RCW 27.53.030(3)). Precontact sites, regardless of NRHP eligibility status, and NRHP eligible or listed historic-era sites require a permit for alterations or disturbance. Alterations are defined as any level of disturbance that would change or potentially impact a site but primarily include archaeological excavation, removal and collection of artifacts.

The Section 106 compliance process fulfills obligations for the DAHP permit. Archaeological investigations or disturbance of sites, including excavation or removal of archaeological resources from federal lands require a permit issued under the Archaeological Resources Protection Act (ARPA) 16 U.S.C 470. ARPA permits are completed by a WSDOT CRS (qualified applicant) and outline the nature and location of the archaeological investigation or research, and arrangements for curation of artifacts and records.

456.09 Abbreviations and acronyms

ACHP	Advisory Council on Historic Preservation (federal)
BLM	Bureau of Land Management, U.S. Department of the Interior
Corps/COE	US Army Corps of Engineers
CRS	Cultural Resources Specialist
DAHP	Department of Archaeology and Historic Preservation
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GOIA	Governor's Office of Indian Affairs
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
SHPO	State Historic Preservation Officer
TCP	Traditional Cultural Property
THPO	Tribal Historic Preservation Officer

456.10 Glossary

Adverse Effect – Occurs when an effect on an historic property diminishes the integrity of the property's aspects of integrity (see below). See also Determination of Effect (Criteria of adverse Effect: 36 CFR 800.9(b)).

Advisory Council on Historic Preservation – An independent federal agency, established under the NHPA, which: (1) advises the President and Congress on matters of historic preservation; (2) carries out Section 106 reviews; and (3) provides technical assistance in historic preservation actions.

Affect (Verb) – Action that may change the character of an historic property.

Area of Potential Effect (APE) – The geographic area or areas which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. The APE is three dimensional including auditory, visual and ground disturbing activities. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking. The APE should be defined before historic properties are identified and not on land ownership (36 CFR 800.2(c).

Building – A construction created to shelter any form of human activity, including animal husbandry.

Centennial Accord – The Centennial Accord Plan was created in accordance with the 1989 Centennial Accord and the 1999 Centennial Accord Implementation Guidelines. The Centennial Accord mandated that each state agency must have a procedure to implement effective government-to-government relations.

Consulting Party – In the Section 106 process, consulting parties include the State Historic Preservation Officer (SHPO), Indian Tribes, representatives of local governments, applicants for federal assistant or approvals, and organizations and individuals with legal or economic relation to the undertaking, or who have concerns with the undertaking's effect on historic properties.

Criteria for Evaluation (National Register Eligibility Criteria) – Standards used for determining the eligibility of properties for inclusion in the National Register of Historic Places (36 CFR 60.4(a-d)). See National Register Bulletin 15, pp. 11-24.

Cultural Resource – A place, object, location or site of an event that is important to a community or region's history, traditions, beliefs, customs, or social institutions.

Cultural Resource Specialist (CRS) – A WSDOT employee meeting the Secretary of the Interior's Professional Qualification Standards (per 36 CFR 61) who advises department staff on policies relating to items of historic/archaeology significance that may be affected by a project and who conducts regulatory compliance procedures.

Cultural Resources Management – The body of laws and regulations pertaining to historic, archaeological, and cultural properties, and the manner in which those directives are implemented.

Department of Archaeology and Historic Preservation (DAHP) – This agency houses the Washington State Historic Preservation Officer (SHPO) who serves as SHPO and director of the agency. SHPO locations in state governments are unique to each state.

Determination of Effect – A finding, by a federal agency in consultation with SHPO and consulting parties, pursuant to compliance with Section 106 (see definition) that a proposed undertaking will have an effect on historic properties. If an effect is identified, the Criteria of Adverse Effect is applied to determine potential Adverse Effect (see definition). Other possibilities are determinations of No Effect and No Adverse Effect.

Determination of Eligibility – Per Section 106 of the NHPA, formal recognition of a property's eligibility for inclusion, but not actual listing, in the National Register of Historic Places. Determinations of Eligibility may be prepared on National Register Registration Forms (NPS 10-900).

District – A significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. May be an archaeological or historic district or may contain elements of both.

Effect – Occurs when an undertaking may alter characteristics that qualify a property for inclusion in the National Register (Criteria of Effect: 36 CFR 800.9(a)).

Eligible – A property is eligible for inclusion in the National Register of Historic Places if it meets the National Register Criteria (see Criteria for Evaluation).

Historic Preservation – Identification, evaluation, recordation, documentation, curation, acquisition, protection, management, rehabilitation, restoration, stabilization, maintenance and reconstruction, or any combination of the foregoing activities relating to historic properties.

Historic Property – A property or cultural resource that is listed in or eligible for listing in the National Register of Historic Places, and, under SEPA, in state and local historic registers, including eligible properties that have not yet been discovered or evaluated (such as archaeological sites). Historic properties may be buildings or other structures, objects, sites, districts, archaeological resources, and traditional cultural properties (landscapes).

Historic Site (Section 4(f)) – Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that are included in, or are eligible for inclusions in, the National Register.

Memorandum of Agreement (MOA) – A formalization of the means of resolving adverse effects agreed upon by the consulting parties, serving to specify mitigation, identify responsibility, render Advisory Council on Historic Preservation comment, and acknowledge effects of the undertaking on historic properties. See also Programmatic Agreement (PA).

Mitigation Measures – Actions required to mitigate adverse effects to historic properties. Usually stipulated in an MOA/PA.

National Register of Historic Places – The nation's official listing of properties significant in national, state and/or local history, meeting one or more criteria for evaluation (36 CFR 60.4). Listing is commemorative but may require compliance by property owners with federal/state/local laws and regulations. May also provide private property owners with opportunities to take advantage of preservation incentives, such as easements and tax relief.

Nomination – Official request to have a property listed in the National Register. Documentation is placed on a National Register of Historic Places Registration Form (NPS 10-900) and submitted to the CLG (if appropriate), the SHPO, and the Keeper of the National Register (see definitions). See National Register Bulletin 16A.

Object – A construction primarily artistic in nature or relatively small in scale.

Programmatic Agreement (PA) – A formal, legally binding agreement typically for a large or complex project or types of undertakings developed under Section 106 that would otherwise require several individual actions (i.e., when effects cannot be fully determined prior to project approval). The agreement is between WSDOT and other state and/or federal agencies. Management Plans (see definition) are often stipulated in PAs (36 CFR 800.13(a)). There are two basic kinds of programmatic agreements:

- A PA that describes the actions that will be taken by the parties in order to meet their Section 106 compliance responsibilities for a specific transportation project, called here a project-specific PA.
- A PA that establishes a process through which the parties will meet their Section 106 responsibilities for an agency program, a category of projects, or a particular type of resource, called here a procedural PA.

Site – The location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing structure.

State Historic Preservation Officer (SHPO) – Coordinates cultural resource preservation activities in each state; one SHPO per state, usually appointed by the governor. SHPO is charged with reflecting the interests of the state and its citizens in preserving their cultural heritage, which involves a variety of responsibilities (36 CFR 61.4(b)). In Washington State, the SHPO is a governor appointed position housed in the Department of Archaeology and Historic Preservation (DAHP), which reviews projects for compliance with Section 106 of the National Historic Preservation Act.

Structure – Functional constructions made usually for purposes other than creating shelter.

Traditional Cultural Property – A place eligible for inclusion in the National Register of Historic Places because of its association with cultural practices or beliefs of a living community that are (a) rooted in that community's history, and (b) important in maintaining the cultural identity of the community. The concept is based upon the introductory section of the National Historic Preservation Act, which states that "the historical and cultural foundations of the Nation should be preserved as a living part of our community life in order to give a sense of orientation to the American people."

Tribal Historic Preservation Officer (THPO) – Authorized by the 1992 Amendments to the National Historic Preservation Act. When approved by NPS, THPO replaces SHPO in compliance process on "tribal" lands (Section 101(d)(2)).

Undertaking – Any activity that can result in changes in the character or use of historic properties. The activity must be under the direct or indirect jurisdiction of a federal agency or licensed or assisted by a federal agency (36 CFR 800.2(o)).

456.11 Exhibit

Exhibit 456-1 WSDOT Curation Policy

I. WSDOT POLICY ON THE CURATION OF ARCHAEOLOGICAL COLLECTIONS

This document outlines WSDOT's policy on the curation of artifacts and records recovered during investigations undertaken in compliance with either Section 106 of the National Historic Preservation Act (NHPA) as amended ("Section 106") or the Washington State Archaeological Resources and Sites Act (Chapter 27.53 RCW). Federal regulations establish standards for the preparation and curation of archaeological collections. An archaeological collection is defined as all artifacts, field notes, maps, photographs and other records generated or recovered during an archaeological investigation.

Nothing in this policy shall be construed as to preclude consultation with Tribes per the Centennial Accord, or other agreements establishing the rights of Tribes to government-to-government consultation.

A. Factors in Determining a Curation Facility

In Washington State, there are two main factors that must be considered in determining where archaeological collections will be curated. The first factor is land ownership, as under federal and state law recovered artifacts legally belong to the owner of the property at the time of excavation. The second factor is the regulation under which the archaeological collection was made.

Additional factors that can influence the selection of the curation facility include whether the collection contains artifacts from the historic-era, whether there have been previous archaeological investigations at the same site, the volume of the collections, and the location of the curation facility relative to the location of the archaeological site. In some cases, the curation facility has been selected as part of negotiations for a large or complex project that may be subject to negotiated agreements such as a Memorandum of Agreement (MOA) or a Programmatic Agreement (PA).

B. Federal and State Laws, Regulations and Guidance

1. 36 CFR 79 and the National Historic Preservation Act

Federal regulations (36 CFR 79, "Part 79" herein) establish standards for federal agencies to preserve archaeological collections recovered under the authority of Section 110 of the NHPA (16 U.S.C. 470h-2). The mandates under Section 110 are largely applicable to federally owned or controlled properties, however, 36 CFR 79.4(a)(2)(v) states that records and documents relating to Section 106 compliance are subject to the 36 CFR 79 regulation. Under the implementing regulations for Section 106 of the NHPA (36 CFR 800), the Advisory Council on Historic Preservation (ACHP) has issued guidance* regarding the treatment of archaeological sites and artifacts. When data recovery is undertaken as a resolution of adverse effects, the ACHP guidance specifies that "appropriate arrangements for curation of archaeological materials and records should be made." A MOA or PA should include a provision for curation of archaeological artifacts and

**Recommended Approach for Consultation on Recovery of Significant Information From Archaeological Sites*, effective June 17, 1999

records at an appropriate facility, if archaeological investigations are undertaken. Curation must be in accordance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, which defines proper curation standards as including the following four criteria:

- Curation facilities have adequate space, facilities and professional personnel.
- Archaeological specimens are maintained so that their information values are not lost through deterioration and records are maintained to a professional archival standard.
- Curated collections are accessible to qualified researchers within a reasonable time of having been requested.
- Collections are available for interpretive purposes, subject to reasonable security precautions.

2. Native American Graves Protection and Repatriation Act (NAGPRA)

The Native American Graves Protection and Repatriation Act (NAGPRA 1990) protects Native American graves and sacred objects on Federal and tribal lands. Subpart B of NAGPRA applies to the discovery of human remains, funerary objects, sacred object or objects of cultural patrimony on federal or tribal land after November 16, 1990. The law regulates discoveries made during intentional archaeological investigations as well as inadvertent discoveries. If human remains are identified, §10.6 outlines the preferred custody of the human remains and associated objects; tribal custody is preferred, however it is possible that a tribe may request a third party repository temporarily house NAGPRA items. Consultation is required throughout the process; §10.5 outlines the consultation requirements.

If burials or sacred objects are found on federal land during an archaeological survey conducted under Section 106, the federal agency landowner is required to consult with the Tribe concerning treatment of the remains or sacred objects.

3. Archaeological Sites and Resources Act (Chapter 27.53 RCW)

The Washington State Archaeological Sites and Resources Act (Chapter 27.53 RCW) requires an archaeological excavation and removal permit, pursuant to Chapter 25-48 WAC, in order to excavate within the boundaries of an archaeological site on public and private lands in Washington State, unless there is a federal nexus for the project which would require compliance with Section 106. If the project is on public lands, permit applicants must identify the curation facility that will receive the collections from the project. This facility must meet Part 79 standards. If the project is conducted on private land, the records must be stored at a curation facility even if the private landowner wishes to retain custody of the artifacts. Excavation permit applicants may temporarily store collections in a repository that meets Part 79 standards until the appropriate Tribe establishes facilities that meet Part 79 standards.

4. Indian Graves and Records Act (Chapter 27.44 RCW) and Historic Cemeteries and Graves (Chapter 68.60 RCW)

The Washington State Indian Graves and Records Act (Chapter 27.44 RCW) allows "examination" of Native American graves or cairns on non-federal or non-tribal lands within the State of Washington as long as the collected material is "destined for reburial or perpetual preservation in a duly recognized archaeological repository" (RCW 27.44.020).

If human remains are identified on non-federal or non-tribal lands within the state of Washington, several laws outline the process that must be followed (RCWs 68.50.645, 27.44.055, and 68.60.055). There is no expectation that these human remains will be curated.

C. Expectations for Collecting Artifacts during Archaeological Investigations

There are generally three types of archaeological investigations conducted for WSDOT projects: survey (during which a site would be identified); testing (during which a site would be evaluated); and data recovery (during which unavoidable impacts to a site would be mitigated).

Normally, WSDOT will not have purchased right-of-way (ROW) when survey and testing studies are conducted for proposed projects. It is more likely that WSDOT would have purchased the required ROW before undertaking data recovery (excavation), although this is not always the case. Therefore, it is important that the status of property ownership during each phase of archaeological investigation be known. Recovered artifacts legally belong to the owner of the property at the time of excavation. A private landowner's consent will be required to curate artifacts at the selected repository.

1. Survey

Generally, no artifacts are collected during survey. Exceptions would include unique or rare artifacts (such as a pre-contact fluted projectile point) or artifacts that would be in danger of being destroyed if not collected from the site.

If investigations at a site identified during survey continue and change into testing, the associated field records generated by WSDOT or its consultants during the survey (maps, photographs, field notes) are expected to be curated with the subsequent testing collections.

2. Testing

Testing of an archaeological site is usually carried out under a site-specific testing plan which will be approved by WSDOT in advance of the fieldwork. The testing plan should outline the research design including artifact analysis. It is generally expected that artifacts and samples will be collected during testing efforts. The resulting collections would be curated at a repository that would be identified prior to fieldwork.

If testing will be conducted prior to WSDOT purchasing the required ROW, WSDOT will attempt to determine before testing is initiated whether the property owner intends to donate the collection to a repository that meets Part 79 Standards. The property

owner may be asked to sign a letter of intent to donate the collections prior to the start of testing. A deed of gift would be signed by the landowner at the time of transfer of custody.

If investigations at a site will continue from testing into a data recovery phase, WSDOT will typically retain the artifacts recovered during testing until the data recovery report is completed. The repository should be consulted at this point to discuss whether the materials from the testing phase and data recovery phase should be treated as separate collections or one large, multi-phase collection; particularly if there is a significant amount of time between phases of archaeological investigation.

If no further investigation will be conducted or if another consultant will conduct the next investigation, WSDOT shall direct the transfer of the testing collection to the selected repository.

3. Data Recovery

Archaeological sites determined to be eligible for the National Register of Historic Places are usually eligible under Criterion D for their ability to yield information important in history or prehistory. Archaeological data recovery excavations involve the recovery of that important information, which is contained in the artifacts, identified features, and associated records. The purpose of curation is to retain and preserve this information for future researchers. Archaeological data recovery generally involves a large expenditure of public funds, and it is important that these collections be preserved for the public benefit.

When data recovery excavations will be conducted prior to WSDOT purchasing the required ROW, WSDOT will attempt to determine before excavations are initiated whether the property owner intends to donate the collection to a repository that meets Part 79 Standards. The property owner may be asked to sign a letter of intent to donate the collections prior to the start of excavation. A deed of gift would be signed at the time of transfer of custody.

4. Monitoring

Archaeological monitoring during active construction projects is another type of activity WSDOT conducts. Typically, a monitoring plan outlines the types of artifacts that would be considered significant if discovered and identified during the project, and designates a curation facility. If an archaeological site is identified during monitoring but it is not considered a significant site, the artifacts will not be collected.

In rare cases a unique isolated artifact may be identified during monitoring and selected for collection. Disposition of these artifacts would be on a case-by-case basis.

D. Disposition of Archaeological Artifacts and Records from State Land, Federal Land, or Tribal Land

When archaeological sites are identified during cultural resource studies for Federal-aid or State funded projects, WSDOT is responsible for the disposition of the artifacts and records at the conclusion of the project. The status of property ownership at the time of the archaeological excavations will determine whether artifacts are curated in a repository or returned to a private property owner. Archaeological collections are not to be permanently stored at a consultant's office. It is the responsibility of the WSDOT Project Engineer with

assistance from the Cultural Resources Specialist to ensure that archaeological collections are curated at a facility that meets the standards of Part 79 at the conclusion of the project. WSDOT is responsible for including language regarding curation in contracts with cultural resource consultants.

1. Collections from State Property

When WSDOT owns fee title to a property at the time archaeological testing is conducted, or when artifacts are recovered from property owned by another state agency, WSDOT will curate the collections at the University of Washington's Burke Museum (per the terms of Participation Agreement GCA-6616), unless otherwise negotiated as a specific mitigation measure.

2. Collections from Federal Land

When artifacts are recovered from federally owned land the collection is the property and responsibility of that federal agency. Unless there is an existing programmatic agreement with the federal agency specifying curation requirements†, WSDOT will submit the collection to the federal agency or their designated repository at the conclusion of the project.

3. Collections from Tribal Land

When artifacts are recovered from tribal land, the decision on where to curate the collection is made by the tribe. Over a dozen tribes in Washington and in neighboring states have curation facilities. Some tribes without curation facilities have built relationships with third party curation facilities such as the Burke Museum.

E. Disposition of Collections from Private Property

When WSDOT will conduct an archaeological investigation on private property, the WSDOT Cultural Resources Specialist (CRS) must discuss the issue of archaeological collections and their disposition with the landowner in advance of the fieldwork. This includes temporary easements.

When artifacts could be recovered from privately owned land, the WSDOT CRS will suggest that the landowner donate the artifacts to a facility that complies with the Part 79 standards. If the landowner agrees to donate the artifacts, the WSDOT CRS should ask the owner to sign a letter of intent to donate (if the collections have not been excavated yet) or the selected museum's deed of gift agreement (if the collections have been excavated). The deed of gift agreement allows the museum to acquire legal title to the artifacts.

When a property owner expresses a desire to have artifacts returned, the WSDOT CRS should determine whether the owner wishes to retain the entire artifact assemblage or is only interested in certain artifacts. If the owner is only interested in keeping a selection of artifacts, the WSDOT CRS should ask the owner to donate the remainder to a museum that meets Part 79 standards. If the property owner declines to sign a letter of intent to donate or a deed of gift agreement, then the artifacts must be returned to the landowner.

† As of July 2012, the only programmatic agreement WSDOT has entered into with a land owning federal agency is the US Forest Service.

If possible, the artifacts should not be returned until all consultation is completed, the requested analyses are completed, and a final report is accepted by WSDOT. It is important to note that records and documentation from the archaeological studies do not belong to the property owner and must be submitted to a curation facility that meets Part 79 Standards. WSDOT will submit the records to the Burke Museum unless a tribal museum meeting Part 79 Standards requests to curate the documentation.

F. Disposition of Collections Collected under an MOA or PA

For large or complex projects, WSDOT will typically enter into a MOA or PA to address cultural resources. Because the consultation process to develop an agreement document must weigh numerous factors, and because addressing curation issues could be a mitigation measure, development of the MOA will be negotiated among consulting parties in order to address specific concerns. Curation should be addressed within the MOA including designating the repository, or creating one, to house the archaeological collections.

G. Submitting Collections to the Selected Curation Facility

Collections should be submitted to the selected repository as soon as is practical after approval of the final report by WSDOT, unless otherwise stated in an MOA or other formal agreement. It is not acceptable for collections to remain in the care of consultants or WSDOT indefinitely.

1. Facility-Specific Curation Guidelines

Once the curation facility is selected and before data recovery is undertaken, WSDOT will request the facility's curation guidelines for the preparation of an incoming collection. WSDOT or its consultant will prepare the collection to meet these guidelines prior to delivering the collection to the facility.

If the selected facility does not have any specific guidelines for the preparation of incoming collections, WSDOT or its consultant will follow minimum curation guidelines developed by WSDOT that are consistent with Part 79.

2. Documentation Accompanying the Collection

WSDOT or its consultant should prepare a packing inventory listing the contents of each box and a collections transmittal form (which will be provided by the repository). The selected repository will also likely have a deed of gift or similar document to transfer title of the collection to the museum.

3. Payment of Curation Fees

Curation fees are to be considered part of the project compliance or mitigation cost and must be included in project budgets.

H. Curation of Legacy Collections

Legacy collections are those archaeological collections made prior to the passage of Part 79 in 1990. WSDOT's legacy collections date to the 1950s.

The WSDOT will consider the appropriateness of integrating the study of legacy collections in cases where WSDOT will be investigating or otherwise impacting a site that has been previously excavated. If feasible, the WSDOT CRS will identify the location of the legacy collections (including records). If the legacy collections are not stored at a facility that meets Part 79 standards, then WSDOT will determine if the collection should be transferred to another repository.

If data recovery will be conducted at a site with legacy collections, WSDOT shall consider the feasibility of incorporating review and/or analysis of the legacy collections as part of the data recovery effort. The review/analysis should be conducted prior to data recovery to provide context for current investigation and to potentially reduce the sampling that will be required. It is anticipated that this approach will reduce the overall cost of data recovery efforts to WSDOT.

II. WSDOT POLICY ON THE USE OF MUSEUMS AND INFORMATION CENTERS AS POTENTIAL MITIGATION

Because Section 106 of the NHPA and NEPA do not provide limits on potential mitigation measures, and because both Section 106 and the Centennial Accord require WSDOT to conduct good-faith consultation and implement effective government-to-government relations with tribes with lands or resources affected by WSDOT's projects, WSDOT must evaluate the appropriateness of mitigation measures on a case-by-case basis.

WSDOT will carefully consider the issues and concerns raised during consultation and develop mitigation measures to address the specific adverse effects of a particular project.

Consistent with Section 106, WSDOT will take into account "the magnitude of the undertaking and the nature of its effects upon historic properties, the likely effects on historic properties, and the relationship of the Federal involvement to the undertaking" (§800.6(a)(4)) when considering appropriate resolution of adverse effects.

A. Exhibits/Displays

WSDOT has prepared exhibits, displays and other types of public information such as books and documentaries, on cultural resources, as mitigation for impacts to those cultural resources. In addition, WSDOT will encourage the repositories that hold collections generated during WSDOT projects to exhibit or display those collections as the repository deems appropriate; decisions on whether to exhibit or display are made by the repository.

B. Stand-Alone Facilities

In cases where a WSDOT project may have long-term adverse effects on a community or neighborhood, WSDOT will consider development of stand-alone facilities such as information centers as a mitigation measure. The time that a stand-alone facility is needed will be determined through consultation for each project.

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457.10 Glossary

457.01 Introduction

Section 4(f) of the Department of Transportation Act of 1966 declares a national policy to "preserve the natural beauty of the countryside, public park and recreation land, wildlife and waterfowl refuges, and historic sites." It is one of the most stringent and complex environmental laws related to transportation. As a result, Section 4(f) is also one of the most frequently litigated environmental statutes and the most common cause of court injunctions delaying projects (FHWA *Success in Stewardship* Newsletter, March 2008).

Section 4(f) is a federal requirement and must be considered in any NEPA document involving a USDOT agency (FHWA, FTA, FRA, and FAA). This work may be:

- Included in the NEPA document and supported by appropriate documentation.
- Evaluated separately and documented in an Individual Section 4(f) Evaluation.

Section 4(f) prohibits the incorporation of land from a Section 4(f) resource into a transportation facility unless there is no feasible and prudent alternative to the use of that land. The law also protects Section 4(f) properties from proximity impacts that substantially diminish the use or value of the resource. Substantial proximity impacts are considered to be a "Constructive Use" even though the project does not actually use land from the resource. FHWA requires a Section 4(f) Evaluation be completed for proximity impacts when they substantially impair the activities and attributes that qualified the Section 4(f) property for protection. Such impacts may include:

- Noise
- Vibrations
- Aesthetics
- Access

See the FHWA Section 4(f) webpage and WSDOT Land use webpage for additional guidance, templates and resources.

User note: Section 4(f) is sometimes confused with Section 6(f) of the Federal Land and Water Conservation Fund Act (LWCF). WSDOT's compliance with Section 6(f) of LWCF is defined in Chapter 455, Land Use.

457.01(1) Identifying a Section 4(f) Property

Section 4(f) applies to historic sites of significance, significant publicly owned parks and recreation areas, wildlife and waterfowl refuges.

Historic sites of national, state, or local significance qualify as Section 4(f) properties regardless of ownership or public access. Historic sites must be on or eligible for inclusion on the National Register of Historic Places to be protected.

Parks and recreation areas must be open to the public to qualify, but wildlife and waterfowl refuges may restrict access to preserve quality habitat. Privately owned recreational properties may qualify for consideration under Section 4(f) if a government agency has a permanent interest in the land (such as an easement).

Publicly owned facilities such as parks, recreation areas and wildlife and waterfowl refuges are assumed to be significant unless the public Official with Jurisdiction concludes that the entire site is not significant. FHWA must conduct an independent evaluation of the property and concur with the Official's decision.

If the publicly owned facility is primarily used for transportation and is an integral part of the local transportation system, the requirements of Section 4(f) would not apply since it is not solely serving a transportation purpose and not solely a recreational purpose. See FHWA's Section 4(f) Policy Paper for more detailed guidance.

The Wild and Scenic Rivers Act (WSRA) designates certain rivers (or river segments) for special protection to preserve them in a free-flowing condition for the benefit and enjoyment of present and future generations. The act also identifies various "study rivers" for possible inclusion in the Wild and Scenic Rivers System. Currently, all of the designated Wild and Scenic Rivers in Washington State are administered by the United States Forest Service (USFS) in accordance with 36 CFR 297.

A comprehensive management plan is in place for all WSRA-designated rivers. The plan describes the use and type of construction allowed in each segment of the river. River segments designated for recreational use, segments in publicly owned public parks, recreation areas, or wildlife and waterfowl refuges, and segments with historic or archeological sites, are subject to Section 4(f). Segments that are privately owned (except for historic and archeological sites on private land) and segments on publicly owned lands closed to the general public (e.g., military bases, Indian Reservations, etc.) and whose primary purpose is not a Section 4(f) use, are not subject to Section 4(f). If the management plan does not identify a specific function for the river segment, then Section 4(f) does not apply.

For projects led by FRA, see their Additional Information on Section 4(f) and Programmatic Evaluations.

For projects led by FTA, see their standard operating procedure for guidance on the recommended timing of the Section 4(f) processes to improve understanding in the transit context.

457.02 Applicable statutes, regulations, executive orders, & agreements

457.02(1) Federal

- 42 United States Code (USC) 4321 National Environmental Policy Act of 1969 (NEPA)
- 23 CFR 774
- 23 U.S.C 138 Preservation of Parkland
- 49 U.S.C. 303 Policy on lands, wildlife and waterfowl refuges, and historic sites
- Section 4(f) of the Department of Transportation Act 1966
- Section 106 of the *National Historic Preservation Act 1966*
- Section 6(f) of the Land and Water Conservation Fund Act 1965

457.02(2) State

- Not applicable

457.02(3) Local

- Not applicable

457.03 Considerations during project development

457.03(1) Planning

Identify Section 4(f) properties in and near the proposed project area.

457.03(2) Scoping

Identify Section 4(f) properties in and near the proposed project area.

457.03(3) Design

Document Section 4(f) properties in and near the project area consistent with the types of use. Document the research and explain where the resources are and why we made the call. Include surrounding properties to ensure they aren't impacted.

457.03(4) Construction

Ensure that staging areas and the project activities do not affect surrounding Section 4(f) properties that were identified near the project area.

457.03(5) Maintenance and Operations

There are no requirements for Section 4(f).

457.04 Analysis & documentation requirements

This section describes analysis and documentation requirements based on regulatory requirements for USDOT agencies (FHWA, FTA, FRA, and FAA). Determine level of detail based on complexity/size of project, expected severity of impacts, and potential for public controversy.

457.04(1) Analysis & documentation for NEPA

WSDOT policy requires Section 4(f) consideration in any NEPA document. However, not all NEPA actions require a full Section 4(f) evaluation. The NEPA document needs to identify if any Section 4(f) resources exist in the project area. If the project will involve more than minor ROW acquisition or involve any relocations, the NEPA document should include information about what research was done to determine if any Section 4(f) resources were present. If there are Section 4(f) properties, there should be documentation attached to address use of those resources (e.g. De minimis or Individual Evaluation), or information about why such documentation is not necessary (e.g. the resource is not acquired, or an exemption applies such as Temporary Occupancy).

Right size your document to fit your project. Four approaches are typically used:

Exceptions

Refer to 23 CFR 774, FHWA Section 4(f) Tutorial and Section 4(f) Policy Paper for background, fundamental definitions and requirements of Section 4(f). Review the list of Other Considerations to identify properties that do not fit neatly into the Section 4(f) definition.

23 CFR 774.13 lists seven exceptions to the requirements for Section 4(f) approval. The most common exceptions that WSDOTs uses are (a) for historic bridges and (b) temporary occupancy.

Railroads and rail transit line exemption

Section 11502 of the FAST Act (23 U.S.C. 138(f) and 49 U.S.C. 303(h)) exempts rail road and rail transit lines that are in use or that were historically used for transportation of goods or passengers from Section 4(f) review. The exemption applies regardless of whether the railroad or rail transit line is listed on or is eligible for listing on the NRHP. However, the exemption does not apply to:

- Rail stations or transit stations.
- Bridges or tunnels located on a rail line that has been abandoned, lines that have been rail banked, and lines that have been reserved for future transportation of goods or passengers.

Interstate Exemption from Section 106 and Section 4(f)

Federal agencies no longer need to consider the vast majority of the Interstate System as historic property under Section 106 and Section 4(f) requirements. However, under Section II of the ACHP's Section 106 exemption, certain elements of the Interstate System, such as bridges, tunnels, and rest stops, shall be excluded from the exemption's provisions if they have national and/or exceptional historic significance. Find the list of significant Interstate Highways elements on FHWA's List of Nationally Exceptionally Significant Features of the Federal Interstate Highway System webpage.

De minimis impacts

A *de minimis* impact is one that, after taking into account any measures to minimize harm (such as avoidance, minimization, mitigation or enhancement measures), results in either:

- A Section 106 finding of no adverse effect or no historic properties affected on a historic property; or
- A determination that the project would not adversely affect the activities, features, or attributes qualifying a park, recreation area, or refuge for protection under Section 4(f).

Programmatic Section 4(f) Evaluation

FHWA developed five Programmatic Section 4(f) Evaluations that can be used to streamline the evaluation process. Using a programmatic saves time by eliminating circulation of the draft, legal sufficiency review, and coordination with other federal agencies (DOI, USDA, and HUD). Coordination with the Official with Jurisdiction is still required. FHWA provides more detailed explanation of each of the Nationwide Section 4(f) Programmatic Evaluation categories on their webpage. If the project impacts a Section 4(f) property and it does not qualify for a programmatic evaluation, exception, or *de minimis*, then an individual Section 4(f) Evaluation must be completed.

The description and criteria for the five Programmatic Section 4(f) Evaluations are:

1. **Independent Walkway and Bikeways –** Only applies to independent bikeway or walkway projects that impact recreation and park areas for active recreation and open space. The Official with Jurisdiction over the Section 4(f) property must give his/her approval in writing that the project is acceptable and consistent with the designated use and that all possible planning to minimize harm has been done.

   This programmatic cannot be used if the project would require the use of:
   - Critical habitat of endangered species.
   - Land from a publicly owned wildlife or waterfowl refuge.
   - Land from a historical site of local, state or national significance.
   - Unusual circumstances such as major impacts, adverse effects or controversy.

2. **Historic Bridges –** Applies to bridges to be replaced or rehabilitated with federal funds. The bridge must be on, or eligible for, the National Register of Historic Places (NRHP). The FHWA Division Administrator concurs with the facts presented in the alternatives, findings and mitigation.

   The FAST Act exempts common post 1945 bridges from Section 4(f) to align with requirement of Section 106 of the National Historic Preservation Act (Sec 1303, 23 USC 138(e)).

3. **Minor Involvement with Historic Sites –** Applies when the project improves the operational characteristics, safety, and/or physical condition of the highway on the existing alignment. The historic site must be located adjacent to the existing highway to qualify for the programmatic. Such projects include:
   - "4 R" work (resurfacing, restoration, rehabilitation and reconstruction).
   - Safety improvements (shoulder widening and correction of substandard curves or intersections).
   - Traffic operation improvements (signalization, channelization, turning and climbing lanes).
   - Bicycle and pedestrian facilities as part of a larger project.
   - Bridge replacements on the same alignment.
   - Construction of additional lanes.

   This programmatic **cannot** be used:
   - For a project including removal or alteration of historic buildings, structures, or objects on the historic site.
   - For a project requiring an EIS, unless the Section 4(f) impact is discovered after approval of the EIS.
   - For a project that requires disturbance or removal of archaeological resources that are important to preserve in place. The State Historic Preservation Office (SHPO) and/or the Advisory Council on Historic Preservation (ACHP) must concur in the determination.
   - The impacts on the historic attributes of the property must be minor. Minor is narrowly defined as "no effect" or "no adverse effect" under Section 106 of the National Historic Preservation Act and 36 CFR 800. The ACHP must concur with the "no effect" determination.

   The SHPO must agree, in writing, with the impact assessment and the proposed mitigation.

4. **Minor Involvement with Parks, Recreation Areas, and Waterfowl and Wildlife Refuges –** Applies when the project improves the operational characteristics, safety, and/or physical condition of the highway on the existing alignment. The public park, recreation lands, or wildlife and waterfowl refuge must be located adjacent to the state highway. Such projects include:
   - "4 R" work (resurfacing, restoration, rehabilitation, and reconstruction).
   - Safety improvements (shoulder widening and correction of substandard curves or intersections).
   - Traffic operation improvements (signalization, channelization, turning an climbing lanes).
   - Bicycle and pedestrian facilities as part of a larger project.
   - Bridge replacements on the same alignment.
   - Construction of additional lanes.

The total amount of land to be acquired from any site shall not exceed:

Total Size of Section 4(f) Site	Maximum to be Acquired
< 10 acres	10 percent of site
10–100 acres	1 acre
>100 acres	1 percent of site

This programmatic **cannot** be used:

- For construction of a highway in a new location.
- For a project that requires an EIS.
- For projects that impair the intended use of the remaining Section 4(f) land. The determination includes proximity impacts and is made by FHWA in concurrence with the Officials with Jurisdiction over the Section 4(f) property.

Impairment shall be documented. Show the size, use, and nature of the impairment.

Document noise, air and water pollution, wildlife and habitat effect, aesthetic values, and other impacts deemed relevant.

Coordinate with the appropriate Federal Agency if the Section 4(f) property is encumbered by a Federal Interest. Ascertain the agency's position on the land conversion or transfer. The programmatic does not apply if the agency objects. Federal Interest includes:

- Purchase or improvement with federal funds through the Land and Water Conservation Funds Act, Federal Aid in Fish Restoration Act (Dingle-Johnson Act), the Federal Aid in Wildlife Act (Pittman-Robertson Act).
- Former designation as federal surplus property.

The Officials with Jurisdiction over the Section 4(f) lands must agree, in writing, with the impact assessment and the proposed mitigation.

5. **Transportation Projects That Have a Net Benefit to a Section 4(f) Property –** Applies to federally assisted transportation improvement projects on existing or new alignments. The Administration and Officials with Jurisdiction will make the determination.

Individual Section 4(f) evaluation

Identifies and evaluates avoidance alternatives and identifies and evaluates measures to minimize harm to the Section 4(f) property. An avoidance alternative must avoid using any Section 4(f) property. An alternative that avoids one Section 4(f) property but uses a different Section 4(f) property instead, is not an avoidance alternative. If the Section 4(f) evaluation concludes that there is no avoidance alternative that is feasible and prudent, and more than one reasonable alternative uses a Section 4(f) property, then the project sponsor must evaluate which alternative would cause the least overall harm.

An individual Section 4(f) evaluation is processed in two phases — a draft and a final — both of which must be submitted to the FHWA Division Office or Federal Lands Division Office for review and approval. The Section 4(f) evaluation is subject to a legal sufficiency review by FHWA's Office of Chief Counsel. The review is intended to ensure that Section 4(f) requirements have been met.

A Section 4(f) individual evaluation can be submitted as part of and EA or EIS or documented as a separate document. For projects eligible as a CE, the Section 4(f) evaluation should be a separate document.

If the proposed project has multiple Section 4(f) resources in the vicinity, with varying types of use, document each resource accordingly. If an individual Section 4(f) Evaluation is required, it should include information on all the Section 4(f) resources in the vicinity. If there are no uses that require an Individual Section 4(f) Evaluation, then each resource can be documented separately using the appropriate template (exception, *de minimis*, etc).

Analysis & documentation for SEPA only (No federal nexus)

There are no state Section 4(f) requirement as it is a federal requirement and only considered for projects involving a USDOT agency.

Analysis & documentation for Section 6(f)

Find more detailed guidance for the Section 6(f) process and a comparison between Section 4(f) and Section 6(f) in Chapter 455.

Analysis & documentation for Section 106

A property containing significant cultural resources is considered a Section 4(f) property. Section 106 of the National Historic Preservation Act defines the process for determining the significance of a cultural resource. Therefore, completion of a Section 106 evaluation is an integral part of the Section 4(f) evaluation. Both laws mandate consideration of cultural resources, but here are some key differences you should be aware of:

- Section 4(f) requires a special effort be made to avoid the use of cultural resources by documenting that all possible planning was used to avoid the resources and minimize harm. Section 106 requires consideration of the project effects on cultural resources.
- Section 4(f) applies only to USDOT agencies. Section 106 applies to any federal agency.
- Section 4(f) applies to actual use or occupancy of the site. Section 106 involves assessment of adverse effect on the property. A direct correlation cannot be made between “use” and “effect.”
- The Section 106 process is integral to the Section 4(f) process when cultural resources are involved. The Section 4(f) process is not integral to the Section 106 process.
- The Section 4(f) process applies a more stringent analysis with respect to totally avoiding cultural resources than the Section 106 process.
- Archeological resources not considered important for preservation in place are covered by exception 23 CFR 774.13 (b) and do not require a Section 4(f) evaluation.

457.05 External engagement

457.05(1) De Minimis

The public must be informed of the *de minimis* determination and given an opportunity to comment on the decision. This may be done as part of the NEPA public notice process for an EA or EIS. If your project is a CE, it can be accomplished in a newsletter, city council meeting, or project open house. The notice should fully describe the impacts to the Section 4(f) resource.

457.05(2) Individual Evaluation

An Individual Section 4(f) Evaluation must be circulated to the Department of Interior for a 30 day comment period, and if applicable to the Department of Housing and Urban Development, and it should also be incorporated into and circulated with the NEPA document if an EA or EIS is prepared.

457.05(3) Section 106 and 4f

The official(s) with jurisdiction must be informed of the intent to make a *de minimis* impact determination and must concur in a finding of no adverse effect or no historic properties affected in accordance with 36 CFR Part 800. Compliance with 36 CFR Part 800 satisfies the public involvement and agency coordination requirement for *de minimis* impact findings for historic sites.

WSDOT shall seek and consider the views of the public in a manner that reflects the nature and complexity of the undertaking and its effects on historic properties, and the likely interest of the public in the effects on historic properties pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR 800, as amended. Consistent with the intent of 36 CFR Part 800.3(c-f), public involvement in the Section 106 process is based on a demonstrated interest, including any landowner whose land may be affected by an undertaking. Public comment and the release of information pertaining to cultural resources hereunder shall be consistent with 36 CFR 800.2(d), 800.3(e), and 800.1 l(c) (l and 3).

457.06 Internal roles and responsibilities

457.06(1) Region/Modal Environmental Manager

Signs *de minimis* and Individual Section 4(f) documents.

457.06(2) Region Environmental Coordinator

Works with HQ ESO and FHWA to determine how to document any Section 4(f) uses. FHWA is the decision-maker.

457.06(3) WSDOT HQ ESO

Supports project offices when identifying and documenting activities that may impact a Section 4(f) property.

457.07 Applicable permits & approval process

To secure federal approval and funding for transportation projects that use Section 4(f) properties, WSDOT must demonstrate that:

- There are unique problems or unusual factors that prohibit use of alternatives that avoid these properties.
- The cost of alternatives that avoid these properties is extraordinary.
- The social, economic and environmental impacts or community disruption resulting from an alternative that avoids Section 4(f) properties reach an extraordinary magnitude.

FHWA and other USDOT agencies may not approve a transportation program or project that uses such properties unless:

- The use will have no more than *de minimis* impact.
- There is no feasible and prudent alternative and all possible planning has been done to minimize harm.

The FHWA Engineer signs and approves all Section 4(f) use documentation. You must also obtain concurrence with the property's Official with Jurisdiction (OWJ) on all uses and most activities that meet the exceptions listed in 23 CFR 774.

Individual Section 4(f) evaluations are processed in two distinct stages: draft and final. Draft evaluations must be circulated to the U.S. DOI and shared with the official(s) with jurisdiction. The public may review and comment on a draft evaluation during the NEPA process. When a project is processed as a CE the Section 4(f) evaluation must be circulated independently to the U.S. DOI. In all cases, final Section 4(f) evaluations are subject to FHWA legal sufficiency review prior to approval (23 CFR 774.5(d)).

There are no permits associated with Section 4(f).

457.08 Mitigation

Measures to avoid, minimize, or mitigate impacts or enhance the resource should be considered before the *de minimis* determination is made. FHWA makes the *de minimis* determination based on a review of the project documentation. Detail the work that was done, including any mitigation, required to support the *de minimis* determination in the NEPA document. Written concurrence from the Officials with Jurisdiction must be included in the document.

If an individual Section 4(f) analysis of avoidance alternatives concludes that there is no feasible and prudent avoidance alternative, then the FHWA may only approve the alternative that causes the least overall harm to the Section 4(f) property. 23 CFR 774.3(c) includes a list of factors to consider in making this determination of least overall harm. These factors include the ability to mitigate adverse impacts to Section 4(f) property; the relative severity of remaining harm, after mitigation, to Section 4(f) property; and the relative significance of each Section 4(f) property.

Chapter 490 provides guidance on how to incorporate environmental commitments into project contracts. This is important for NEPA/SEPA commitments as well as regulatory permit commitments.

457.09 Abbreviations and acronyms

4(f)	Section 4(f) of the Department of Transportation Act of 1966
6(f)	Section 6(f) of the Federal Land and Water Conservation Fund Act (LWCF)
FAST Act	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FRA	Federal Railroad Administration
FAA	Federal Aviation Administration
NRHP	National Register of Historic Places
SAFETEA-LU	Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users
USDOT	United States Department of Transportation
SHPO	State Historic Preservation Officer
THPO	Tribal Historic Preservation Officer

457.10 Glossary

All Possible Planning – All reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects.

Constructive Use – A constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

***De minimis* Impact –** For historic sites, *de minimis* impact means that the appropriate administering agency has determined, in accordance with 36 CFR 800, that no historic property is affected by the project or that the project will have "no adverse effect" on the historic property in question. For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact is one that will not adversely affect the features, attributes or activities qualifying the property for protection under Section 4(f).

Feasible and Prudent Avoidance Alternative – A feasible and prudent avoidance alternative avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property.

Historic Site (Section 4(f)) – Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places. The term includes properties of traditional religious and cultural importance to an Indian Tribe or Native Hawaiian organization that are included in, or are eligible for inclusion in, the National Register.

Officials With Jurisdiction – As defined in 23 CFR 774.17, officials of the agency that owns or administers the property in question. For historic sites, the SHPO or THPO may serve as the Official with Jurisdiction.

Programmatic Section 4(f) Evaluations – Can be used in place of individual evaluations for highway projects where uses are considered minor. To date there are five programmatic evaluations that have been approved for use nationwide. See Section 447.03 of this chapter for criteria and FHWA Nationwide Section 4(f) Programmatic Evaluation webpage.

Section 4(f) Property – A publicly owned park, recreation area, or wildlife and water fowl refuge of national, state, or local significance. Also includes historic sites of national, state or local significance.

Use – "Use" of a Section 4(f) property occurs:

- When land is permanently incorporated into a transportation facility.
- When a temporary occupancy of land has an adverse impact on the resource that the park, recreation area, refuge or historic site was created to protect.
- When there is a constructive use of the property.

Chapter 458 Social and community effects

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458.01 Introduction

Section 109(h) of the Federal Aid Highway Act requires an assessment of the "social, economic, and environmental impacts" under NEPA. The Social and community effects analysis is prepared for projects that trigger a NEPA EA or EIS to examine how the proposed transportation improvement affects the people who live, work, and play in the vicinity of the project.

Generally, those working on the Social and community effects analysis will closely coordinate with the project's communications team, Office of Equal Opportunity and the preparers of Noise, Air Quality, Section 4(f), Hazardous Materials, Public Services and Utilities, Transportation and Visual Impact analyses. This information is also used to inform the project's Environmental justice analysis to determine whether adverse impacts to a community are high and disproportionate.

The purpose of the Social and community effects analysis is to: Gather community input, summarize the community's existing conditions, and disclose the proposed project's impact on residential and commercial properties, public services, community connectivity.

New in the 2021 Manual, Title VI and Environmental Justice analyses have moved out from under this chapter, into a new Chapter 460.

Displacement of people and businesses to make room for a transportation project affects both the social network and the economy of a community. WSDOT follows a standard, systematic process for relocation in compliance with the Uniform Relocation Assistance and Real Property Acquisition Polices Act of 1970 as amended. The legal requirements and relocation process are described in our *Right of Way Manual* Chapter 12.

Public services include schools, churches, community centers, day care facilities, hospitals, nursing homes, medical and dental clinics, fire stations, police stations, cemeteries, and social service providers. Utilities include publicly and privately owned electric power, gas, oil and petroleum products, steam, chemicals, communication, cable television, water, sewage, drainage (other than those used for highway drainage), irrigation, fire or police signal systems, and similar lines.

Transportation projects have both negative and positive effects on public services. Often there are short-term impacts on public services and utilities during construction. In some cases, a project impacts a community's access to essential services, which may result in equity impacts. Public services and utilities often benefit from transportation projects through improved access or travel time.

458.02 Applicable statutes, regulations, & executive orders

458.02(1) Federal

- National Environmental Policy Act (NEPA), 42 USC 4321 and Federal implementing regulations 23 CFR 771 (FHWA) and 40 CFR 1500-1508 (CEQ).
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended). See 49 CFR 24 for USDOT implementing regulations.

458.02(2) State

- State Environmental Policy Act (SEPA), RCW 43.21C. State SEPA Rules are codified in WAC 197-11. WSDOT's agency SEPA Procedures are in WAC 468-12.
- RCW 8.26 *Relocation assistance — real property acquisition policy* and WAC 468-100 *Uniform relocation assistance and real property acquisition*.
- RCW 47.04.280
- WSDOT's Community Engagement Plan

458.03 Social & community considerations during project development

458.03(1) Planning

Contact the HQ Multimodal Planning and Data Division for direction.

458.03(2) Scoping

If the project is scoped as a NEPA EA or EIS, determine the potential impacts to the community through community engagement activities.

458.03(3) Design

Document your outreach and analysis by following the requirements in section 458.04 below and our agency Community Engagement Plan. Develop a project specific Community Engagement Plan for EA and EIS level projects.

458.03(4) Construction

Track commitments made to the community to ensure they are carried out.

458.03(5) Maintenance and Operations

Track commitments made to the community to ensure they are carried out.

458.04 Analysis & documentation requirements

458.04(1) Right size to classification (CE, EA, EIS)

WSDOT's policy is to follow FHWA guidance relative to Title VI, Environmental Justice, and FHWA's Technical Advisory T 6640.8A. The Social and Community Effects analysis described in this manual summarizes the TA guidance and examines the effect of transportation improvements on four areas:

- The distribution of benefits and burdens of the project.
- Impacts to the social network.
- Impacts to the local and/or regional economy.
- The effect of residential and commercial relocations.

Projects classified as a NEPA Categorical Exclusion are not required to conduct a Social and community effects analysis. EAs and EISs require a Social and community effects analysis.

The level of environmental documentation required for a Social and community effects analysis for an EA/EIS can vary greatly depending on the scale of the project, the severity of the potential impacts, and the level of public controversy. In addition, the name used for the analysis should be tailored to your project. For example, some project teams elect to combine socioeconomic or Social and community effects with environmental justice, while others feel the public will prefer to see a separate environmental justice report. While there is flexibility in the format and titles, the methods of analysis and the documentation of conclusions must follow the direction of the federal NEPA Lead and WSDOT policy.

458.04(2) Analysis & Methodology

Federal

The Social and community effects analysis evaluates the transportation project's impact on the ability of the community to function as a whole. It describes both positive and negative effects. The level of discussion should reflect the severity and extent of the impact. If an analysis is required, focus the analysis on issues of greatest interest to the local community. Use information from the public scoping meetings, interviews with local officials and leaders, and the public involvement process to identify focus areas. At a minimum, the analysis should include a discussion of the following issues for each alternative including the no build:

- Changes in community cohesion (splitting or isolating areas, generating new development, and separation from services).
- Changes in travel patterns, travel time and accessibility for all modes.
- Direct and indirect impacts to social services caused by displacing households (school districts, churches, law enforcement, fire protection, and recreation areas).
- Highway, traffic, bicyclist, and pedestrian safety, and changes in overall public safety.
- Impacts to human health (see 12-Step Social and community Effects Analysis Process).
- Project benefits to the community.
- Project effects on elderly, disabled, and transit dependent populations within the study area.

Although some of these elements are measurable and can be drawn directly from analysis of other disciplines (Air, Noise, Transportation, Public Service and Utilities), the analysis requires consideration of the affected community's perception of the severity of the impacts and proposed mitigation measures. Therefore, the analysis will, by nature, be qualitative and require early, continuous and meaningful engagement with the community. A robust system for recording and tracking issues is essential for project success.

Health

Use the Environmental Health Disparities Map (EHD Map) to determine the 'Environmental Health Disparities' ranking value for your project area's Census tract. See our Social & community web page to learn more about using the map. Use the data in the EHD Map to inform your description of the community's context and help determine the level of community engagement to assess potential impacts from the project. Summarize the negative environmental impacts that are already burdening the community and potential benefits to help inform the Environmental justice analysis (see Chapter 460). Summarize the potential community health benefits associated with the transportation project. Benefits can include improved transit, safer bicycle and pedestrian connections, improved air quality, or anything perceived by the community to improve their quality of life.

Economic effects

If economic development is listed as a primary goal in the project purpose and need, the EA or EIS should include the following elements in addition to those listed above.

- Overall effect of the project on the regional economy and compatibility with regional economic development and transportation plans.
- Agreements reached for using the transportation investment to support both public and private economic development plans.
- Opportunities to minimize or reduce impacts on established business districts by private or public means.

The environmental document should discuss economic effects if the transportation project is likely to have a substantial adverse effect on a large segment of the economy, or creates land use changes that are not part of an approved local or regional plan. Clearly explain the compatibility of the project with adopted comprehensive plans and coordination with local officials and any impacted business owners.

Economic benefits and impacts can include:

- Changes in the type of development and its effect on government revenues and expenditures.
- Changes in employment opportunities.
- Changes in business vitality due to retail sales, changes in access, visibility, or competition from new business development resulting from the project (e.g., development of a new shopping mall at a new interchange location).
- Impacts to existing highway related and drive-by businesses in the study area (such as motels, gas stations and convenience stores).

Consult FHWA's technical advisory (T 6640.8A) and the NCHRP Report 456 - Guidebook for Assessing the Social and Economic Effects of Transportation Projects (Part A) (trb.org).

Relocations

To evaluate relocation impacts, use the process described in our *Right of Way Manual*. WSDOT Real Estate Services can develop generalized relocation data for use during the environmental documentation phase of a project. The information is developed by visual inspection of the study area and from readily available secondary and community sources. Generalized data may include:

- An estimate of the number of households to be displaced and family characteristics (minorities, income levels, age, family size and owner/tenant status).
- An estimate of the divisive or disruptive effect of relocations on the community, such as separation of residences from community facilities or separation of neighborhoods.
- An estimate of the impact on the families likely to be displaced.
- An estimate of the number of businesses to be displaced and the general effect of the dislocation on the community's economy.
- A general description of the housing available for sale in the area and the ability of WSDOT to provide replacement housing for the type of families likely to be displaced.
- A general description of special relocation advisory services that will be necessary for identified unusual conditions.
- A description of the actions proposed to remedy insufficient replacement housing, including housing of last resort.
- A description of the types of transportation (all modes) used by those being relocated to reduce a decrease in their mobility.
- Results of consultation with local officials, social agencies and community groups regarding the impacts on the affected community.

Parcel specific information, such as the names and addresses of potential displacements, is not available at this stage of the process and should not be included in the environmental document. However, the Social and community effects analysis must give the number and type of businesses that are impacted and in addition to the race/ethnicity of the business owner and employees. The relocation information should be summarized in sufficient detail to adequately explain the relocation situation, anticipated problems, and proposed solutions. Aerial exhibits showing the relationship of the proposed alignments and proposed right of way boundaries to parcel boundaries clearly identifies possible impacts. A table identifying parcels, value, and generated tax revenue may assist in identifying the magnitude of the impacts. The environmental document must include a statement that:

- The acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.
- Relocation resources are available to all people being relocated without discrimination in compliance with WSDOT's Limited English Proficiency Plan.

Coordination with local governments, organizations and affected parties to reduce relocation impacts is encouraged by FHWA for large projects with a substantial number of displacements. The environmental document should explain the process used and how affected parties helped develop options to minimize adverse effects in the environmental document.

Public services & utilities

Under FHWA's NEPA implementing regulations, impacts to public services and utilities are considered in the Social and community effects analysis. At a minimum the analysis should identify public services and utilities within one-half mile of the project center line and:

- Document direct impacts due to right of way acquisition.
- Describe anticipated changes in emergency service response times based on changes in travel time or access. Discuss positive and negative effects based on the project's traffic analysis.
- Determine if the anticipated changes in service demand are consistent with adopted comprehensive plans (for public services and utilities) based on the project's anticipated residential and/or commercial relocations.
- Describe potential utility relocations (temporary and permanent) for each alternative and their anticipated short-term and long-term impacts.
- Describe how short-term (construction) impacts will be addressed (public outreach, notification of power cuts, detours, delay of emergency response etc.).

Both long- and short-term impacts should be considered for all of the alternatives including the no-build. These impacts may include relocation or in place accommodation of utility lines, service outages, or delayed response time of emergency services due to detours. If an EJ population has been identified in the study area, access to public services and utilities should be included in the determination of "disproportionately high and adverse impacts."

WSDOT project environmental documentation and permitting may include an analysis and discussion of utility impacts. Inclusion of the utility in the project permitting documentation avoids delays to the project schedule by eliminating difficulties the utility may encounter when acquiring separate environmental permitting. *Utilities Manual* Section 600.09(4) provides for guidance, procedure, and a discussion of the advantages and disadvantages of including utility relocation impacts in the project's environmental documentation and permits.

State (No federal nexus)

There are no state requirements to conduct a Social and community effects analysis. Under SEPA, impacts to public services and utilities are considered as part of the analysis of a project's effect on the built environment.

RCW 47.04.280 lists Economic vitality as a transportation system goal to, "promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy". State multimodal transportation projects often support planned developments and regional economic strategies.

458.05 External engagement

Public involvement is a critical element of the Social and community effects analysis that is completed for an EA or EIS. It is used to define the scope of the social analysis, evaluate the effect of alternatives on the community, and develop mitigation. WSDOT's commitment to inclusive community engagement should be carefully considered during project development. WSDOT's strategic plan contains policy direction on developing and maintaining stakeholder relationships, both traditional and with under-represented, under-served communities. The goal is to engage stakeholders before, during and after projects, and in general outreach.

More than any other discipline, the social analysis relies on interaction with the affected communities. The analysis should focus on issues of the most concern to the people who live, work, and play in the vicinity of the project. Public outreach can be used to:

- Collect descriptive information about the community.
- Identify key issues for analysis to support scope and budget decisions.
- Communicate WSDOT proposed efforts to avoid and minimize adverse effect and collect public perception of a project's impact (or lack of impact) to the social network.
- Collect public input on project design and mitigation and demonstrate WSDOT response to community concerns.
- Demonstrate and document compliance with Federal requirements for public input into the decision making process.

WSDOT policy requires staff to follow the Model Comprehensive Tribal Consultation Process when working with tribal governments. See Chapters 400 and 530 for more information on Tribal Coordination. Contact the WSDOT Tribal Liaison Office for assistance.

Refer to our Community Engagement Plan (PDF 2.1MB) for engagement best practices.

458.06 Internal Roles and responsibilities

Roles and responsibilities in this subject area overlap with those in several other subject areas depending on the specifics of the proposed project.

458.06(1) Project Engineer

Identify local leaders and stakeholders to engage in the project development process and work with project Communicator to identify additional interested or affected parties.

The WSDOT LEP Plan requires project managers to:

- Make every effort to provide services, either through translation or interpreter, prior to scheduled meetings, such as public hearings, or project meetings.
- Pay for the translation of vital documents and interpreter services including summary newsletters, brochures, public notices for meetings and summary documents for open houses or environmental hearings. Interpreter services should be provided upon request for open houses and hearings.

458.06(2) Environmental Coordinator / Consultant

Conduct the Social and community effects analysis.

458.06(3) Communicator

Work with the Project Engineer to develop community engagement strategies and a project-specific community engagement plan, if needed.

458.06(4) WSDOT HQ Environmental Services Office

Review the Social and community effects analysis.

458.07 Mitigation

WSDOT uses community input when considering appropriate mitigation measures to address the transportation impacts as required by Federal and State laws. The project team then pursues and negotiates reasonable project related mitigation in good faith with the community.

NEPA, SEPA, the federal Environmental Justice Executive Order and the Secretary's Executive Order (E 1018.03) all provide policy direction that support mitigating project impacts – this includes mitigating impacts to the human environment (community mitigation) in addition to the natural environment.

458.08 Applicable permits & approval process

There are no associated permits or approvals associated with Social and community effects.

458.09 Abbreviations and acronyms

Abbreviations and acronyms used in this chapter are listed below.

ADA	Americans with Disabilities Act
CEP	Community Engagement Plan
CFR	Code of Federal Regulations
EA	Environmental Assessment
EIS	Environmental Impact Statement
FHWA	Federal Highway Administration
RCW	Revised Code of Washington
Title VI	Title VI of the Civil Rights Act of 1964
WAC	Washington Administrative Code

458.10 Glossary

Community Cohesion – The ability of people to communicate and interact with each other in ways that lead to a sense of community, as reflected in the neighborhood's ability to function and be recognized as a singular unit.

Public Service – Public services include, schools, churches, community centers, day care facilities, hospitals, nursing homes, medical and dental clinics, fire stations, police stations, cemeteries, and social service providers.

Utility – Privately publicly, or cooperatively owned lines, facilities, and systems for producing, transmitting, or distributing communications, cable television, electric power, light, heat, gas, oil, crude products, water, steam, waste, stormwater not connected with highway drainage, and other similar commodities, including fire or police signal systems, street lighting systems, and traffic control systems which directly or indirectly serve the public. See *Utilities Manual* Chapter 2.

Utility Relocation – The adjustment or replacement of utility facilities required by a highway project, including removing and installing facilities, acquiring necessary property rights in the new location, moving or rearranging existing facilities, or changing the type of facility to provide any necessary safety and protective measures. See WSDOT Utilities Accommodation Policy M 22-86.

Relocation Assistance – When the acquisition of right of way requires the displacement of any family, individual, farm, business, nonprofit organization, or their personal property, that party or organization may be entitled to payments, separate and distinct from the acquisition compensation, in order to alleviate the costs of moving and replacement housing. Such payments and matters pertaining to eligibility are the subject of See Chapter 12 of the *Right of Way Manual* M 26-01.

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Chapter 459 Visual impacts

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459.01 Introduction

Most people primarily experience their environment through visual cues, so visual perception is an important topic when analyzing environmental quality. Highway projects can impact visual quality through changes to the relationship between people and their surrounding physical environment. Public concern over adverse visual impacts could be a major source of project opposition, so evaluating and openly communicating changes with the affected population is very important to a project's success.

The location, design, and maintenance of highway, ferry, rail, and aviation facilities may adversely or positively affect the visual features of the landscape that are experienced by people. This chapter focuses on highway projects, but the same, or similar, requirements apply to other transportation modes and facilities (see Section 459.02).

Because of the public nature and visual importance of transportation projects, both negative and positive visual impacts must be adequately assessed and considered during project development. Understanding the sensitivity of viewer groups is as important as understanding the physical environment and the proposed project actions.

In discussing and reviewing the visual impacts of a highway project, the Landscape Architect should consider both the view *from* the road and the view *toward* the road. Research has shown that the view from the road is the basis for much of what people know about the everyday environment and their mental image of their surroundings. Visual cues can also contribute to traffic calming and stress reduction for motorists. However, the project should balance the desire for pleasing vistas for travelers with protecting views from surrounding homes or vantage points. The designer must carefully plan to ensure the facility blends into the community and its environment. (For related information on historic and cultural resources, (see Chapter 456).

459.02 Applicable statutes, regulations, executive orders, & agreements

459.02(1) Federal

- **National Environmental Policy Act –** The National Environmental Policy Act (NEPA), 42 USC 4321, Section 101(b)(2) states that it is the "continuous responsibility" of the federal government to "use all practicable means" to "assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings." For details on NEPA procedures (see Chapters 400 and 412).

Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500-1508. According to the Council on Environmental Quality implementing regulations, environmental analysis is to consider impacts on urban quality, historic and cultural resources, and the design of the built environment" (Section 1502.6). Agencies shall "identify methods and procedures . . . to insure that presently unquantified environmental amenities and values may be given appropriate consideration" (Section 1507.2).

- **Highway Beautification Act –** The Highway Beautification Act of 1965 was enacted to provide effective control of outdoor advertising and junkyards, protect public investment, promote the safety and recreational value of public travel, and preserve natural beauty, and provide landscapes and roadside development reasonably necessary to accommodate the traveling public. Implementing procedures are set forth in 23 CFR 750, 751, and 752.
- **National Historic Preservation Act –** Implementing regulations for Section 106 of the National Historic Preservation Act of 1966 (see Section 456.02), adopted in 1976, define criteria of adverse effect (36 CFR 800.5) to include the "introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features."
- **DOT Act, Section 4(f) –** This act declares a national policy to make a special effort to preserve the natural beauty of the countryside and public park and recreation sites, wildlife and waterfowl refuges, and historic sites." For details on Section 4(f) see Chapters 400, 455, and 457.
- **Wild and Scenic Rivers Act –** This act, as amended, directs that "each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included, without, insofar as it is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration, primary emphasis shall be given to protecting its esthetic, scenic, historic, archaeological, and scientific features." For information on wild and scenic rivers in Washington (see Chapter 455).

459.02(2) State

- **State Environmental Policy Act –** The State Environmental Policy Act (SEPA), requires that all major actions sponsored, funded, permitted, or approved by state and/or local agencies undergo planning to ensure environmental considerations such as impacts related to aesthetics and visual quality are given due weight in decision making. State implementing regulations are in WAC 197-11 and WAC 468-12.
- **Highway Beautification Act –** Washington's Highway Beautification Act (RCW 47.40.010), adopted in 1961, declared improvement and beautification of any state highway right of way to be a "proper highway purpose." The act specifically mentions the following improvements: "planting and cultivating of any shrubs, trees, hedges or other domestic or native ornamental growth; the improvement of roadside facilities and viewpoints; and the correction of unsightly conditions."
- **Open Space Land Preservation –** In RCW 84.34, the legislature declared that "it is in the best interest of the state to maintain, preserve, conserve and otherwise continue in existence adequate open space lands for the production of food, fiber and forest crops, and to assure the use and enjoyment of natural resources and scenic beauty for the economic and social well-being of the state and its citizens." Open space was defined as including any land area that would preserve visual quality along highway, road, and street corridors or scenic vistas. One of the criteria to be used in determining open space classification for current use or conservation futures is whether granting this classification would preserve visual quality along highway, road, and street corridors or scenic vistas (RCW 84.34.037).

459.03 Considerations during project development

A Visual Impact Assessment (VIA) is intended to provide decision makers with information on both the positive and negative visual quality impacts that may result from a project. The assessment, along with mitigation recommendations, provides designers with information on minimizing negative impacts on visual quality, and concepts to enhance existing visual quality and community aesthetics within the scope of the project.

459.03(1) Planning

Complex or controversial projects that may trigger the need for a more thorough evaluation should consider the public involvement approach to help define visual quality within the area of visual effect. The public involvement approach is explained in Section 5.4 Visual Quality, *Guidelines for the Visual Impact Assessment of Highway Projects* (FHWA, 2015). Information about visual preferences gathered from public workshops will provide the VIA author important information to better understand what the public values visually within the project corridor.

459.03(2) Scoping

A project's scoping document defines the geographic extent of the project. It also establishes the topics explored in the project's environmental review process. Preparers should participate in the scoping process, both to inform the scope of the project and to better understand the scope of the anticipated VIA and use the findings of the scoping document and any public scoping comments for an initial understanding of anticipated impacts on visual resources or viewers. Public scoping comments may identify visual resources that neighbors consider essential to the visual identity of their community, or it may identify visual resources that travelers consider essential to their traveling experience.

459.03(3) Design

Conceptual design studies and preliminary design plans illustrate the proposed project and help to identify potential impacts to visual resources and viewers. The level of detail available during the early stages of the design will vary and can include the area of potential effect to alternative alignments, the number of lanes, the location of intersections and interchanges, and the potential for bridges, retaining walls, and other structures. In addition to providing a rough understanding of the visual character of the proposed project, early studies and plans often include features proposed for demolition, vegetation removal limits, existing and proposed grading, and other proposed project features. Authors should use these early studies and plans to understand the extent to which existing features would be removed and where new or modified landforms, pavement, structures, or utilities would occur. Sometimes these early studies and plans even include proposed aesthetic design treatments, such as ornamental lighting or architectural enhancements, included in the project to mitigate adverse impacts.

459.03(4) Construction

Construction timing (time of year, duration, phasing, and nighttime construction activities), methods of construction, equipment needed, even erosion control or re-vegetation measures, if known, may be useful background information for the VIA author.

After Design, Construction carries out the mitigation strategies that address visual impacts resulting from a project. It is important to ensure that the Project delivers these mitigation strategies and carefully manage any proposed changes that come via Design-Bid-Build or Design-Build Contracts. Design Build is a method of project delivery in which WSDOT executes a single contract with one entity (the Design-Builder) for design and construction services to provide a finished product. Design-Bid-Build is the traditional form of project delivery in which WSDOT provides the complete design documents and the Contractor builds the design after the bidding process. Changes during construction for Design-Bid-Build are in the form of change orders where modifications to the agreed upon work is documented. Design changes may occur during the design build process as well. It is important to communicate what these changes are and how these changes may effect what was originally assessed in the VIA. For example, when an Alternative Technical Concept is proposed, decision makers should consider the visual aspects of the change and understand how the visible change(s) would affect sensitive viewer groups or views toward sensitive resources.

459.03(5) Maintenance and Operations

During the preliminary design phase of a project, many design features that will affect visual resources, viewers, and visual quality are being determined. Mitigation measures and opportunities for enhancement are also likely to have been introduced. Visual impacts caused by operations and maintenance activities that will affect the project design, mitigation, or enhancement elements will need to be assessed to confirm that these design features, which may be critical to the public's acceptance of a project, remain effective indefinitely. Operational features that may affect visual quality include functional and ornamental lighting in the corridor, vehicular headlights, changeable message signs, vegetation removal, and glare from reflective materials. Maintenance issues typically are related to use of nighttime lights to perform roadwork on the facility.

459.04 Analysis & documentation requirements

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

459.04(1) Analysis & documentation for NEPA

WSDOT uses Federal Highway Administration (FHWA) VIA guidance. For more information on VIA methodology and procedures, see the Environmental disciplines web page for Visual Impacts. Visual assessments must be sized appropriately to anticipated project impacts (see Chapter 300 for project classifications). The following are guidelines for the level of analysis necessary:

- For projects that are **Categorically Excluded (CE)**, the visual analysis and minor documentation is done within the Environmental Classification Summary (ECS). It is assumed that, when projects follow WSDOT roadside policy and environmental permit conditions, visual impacts will be minimized and mitigated to an acceptable level.
- For projects with **Documented Categorical Exclusion (DCE)**, the visual analysis should be abbreviated but a discussion of the visual aspects should be adequately covered in a memo, to be attached to the Environmental Review Summary (ERS) or the Environmental Classification Summary (ECS).

- **Exceptions requiring a VIA that might not otherwise be indicated by lower level permitting –** Projects where sensitive viewers will experience noticeable changes but which only require low-level documentation, will benefit from a more in-depth review of visual impacts. Issues such as removing screening vegetation or providing more visibility to lighting or the highway fall into this category. Other aspects that may trigger the need for a more thorough evaluation include projects:
  - On a State or National Scenic Byway or an All-American Road
  - Along a designated Wild and Scenic River or within a National Scenic Area
  - On Tribal, U.S. Forest Service, or National Park land
  - Adjacent to a public park, recreation area, wildlife and waterfowl refuge, and public or private historical sites (Section 4(f) or 6(f) area – any visual analysis would be in coordination with the Section 4(f) or Section 6(f) technical study)
  - In a rural community that values its view of stars and the night sky if new or brighter lighting is being proposed

  People viewing from these locations can be especially sensitive to visual changes.

  Documentation must include an analysis of viewer sensitivity and potential impacts, and may be in the form of a memo or short report depending on the degree of impacts found in the analysis.

For an **Environmental Impact Statement (EIS)**, a VIA must be completed where the project changes the roadside or facility character. These are typically the projects with large areas of cut or fill, new or larger structures, or new or greatly expanded alignments. Project examples include:

- Changes in road alignment
- Expansion of the roadway and/or addition of major structures
- New interchanges
- Changes to historic buildings or other structures
- Ferry terminal improvements
- Increased lighting
- Removal of screening or large areas of vegetation
- Substantial grade changes

The VIA shall follow the methodology either in *the Visual Impact Assessment for Highways Projects* (FHWA Office of Environmental Policy, 1988) or *Guidelines for the Visual Impact Assessment of Highway Projects* (FHWA, 2015). These two guidance documents evaluate similar aspects of visual quality but use slightly different terms. The 1988 document and the associated training manual provide more technical clarity for the user as to how to look at visual impacts and describe them. The 2015 document places more emphasis on collaborative approaches to find out the preferences and sensitivity of viewers and incorporate that into the assessment. This emphasis on capturing what the community wants as an aesthetic environment provides additional support on statements that a project would have adverse, neutral or beneficial impacts.

- During project development, visual impacts, including aesthetics, light, glare, and night sky impacts, shall be considered for all project alternatives. The views from the road or facility and views toward the road or facility that will be in existence during the construction phase and the operational phase must be evaluated.

- The VIA is documented within the Environmental Review process, the EA, or the or EIS after a detailed analysis of potential viewers, their sensitivities and the project area. A photographic log of the affected viewshed is part of that documentation. The documentation must include an analysis of all representative views from and toward the facility throughout the project length.
- The VIA, using the newer guidance would engage the public to understand in depth the expected changes to the visual environment.

The number of views needed depends upon the geographic extent of the project; setting in the landscape; the extent of change or impact to resources expected in a particular location; the effects on the identified viewer groups; and the viewers' sensitivity to changes in the view. If there is more than one landscape unit within the project limits, analyze a minimum of one viewpoint per landscape unit as viewed from the project and as viewed towards the project.

Project alternatives will need to be sufficiently developed prior to completing the analysis in order to completely describe the changes each alternative will have on the visual environment. Describe and analyze any large cuts or fills, walls, bridges, changes to character due to extensive vegetation removal or addition of structures, and horizontal and vertical alignments with respect to their influence on views toward or from the project. When projects are completed by Design-Build methods, visual outcomes can be somewhat uncertain. The use of design guidelines can reduce uncertainty of the final project visual outcomes. The VIA should include a discussion of the flexibility in outcomes.

459.04(2) Non Road Project Requirements

Environmental documentation for aviation, ferry, or rail projects must address aesthetics and visual issues during the environmental review process, including specific details about lighting; height, size, and location of structures; and alignment and use of the facility that might impact viewers.

Federal agencies follow different methodologies, but all include the requirement for a visual assessment. For example, the Federal Rail Administration, The Federal Aviation Administration, the U.S. Forest Service, and the Bureau of Land Management have their own methodologies, which vary slightly from the FHWA methodology. Projects must determine and follow the appropriate methodology for their project type.

Non-road projects often affect the visual environment differently than highway projects. Analyze the temporary or permanent nature of the visual impacts, such as the presence of flights overhead at intervals throughout the day, addition of beacon lights or ferries docked within a terminal periodically.

459.05 External engagement

Refer to Section 3.2.1 Public and Private Interests of FHWA's VIA Guidelines for Highway Projects (FHWA-HEP-15-029) to learn more about the importance of external engagement to capture both public and private interests during visual impact assessment.

459.06 Internal roles and responsibilities

All visual analyses are to be performed and written by, or coordinated through, the Region Landscape Architect, or through the Headquarters (HQ) Roadside and Site Development Section for regions without a Landscape Architect.

459.07 Applicable permits & approval process

Although there are no permits or approvals associated with Visual Impacts, the VIA is part of a larger environmental review process, which in turn is part of a still larger highway project development process. As part of this process, the VIA is intended to provide decision makers with information on the adverse and beneficial impacts on visual quality that can influence the selection of a preferred project alternative. The VIA provides designers with the information they need to most effectively mitigate adverse impacts on visual quality while implementing concepts to enhance existing visual quality.

459.08 Mitigation

Provide mitigation measures and opportunities to avoid or minimize visual impacts in the report. Assume the baseline of Context Sensitive Design principles during design, and restoration according to the *Roadside Policy Manual* M 3110.

The WSDOT roadside policy is found in the *Roadside Policy Manual* M 3110. It covers the requirements for roadside restoration, which is the baseline that can be assumed for addressing a project's visual impacts within the roadside.

Mitigation for visual impacts may also be in the form of public art as identified in the NEPA/SEPA process and through good faith negotiations with the affected community. See Chapter 950 of the *Design Manual* M 22-01 for guidance regarding public art and community identified mitigation on WSDOT facilities and within its rights of way.

459.09 Abbreviations and acronyms

Abbreviations and acronyms used in this chapter are listed below.

CE	Categorically Excluded
DCE	Documented Categorical Exclusion
EA	Environmental Assessment
ECS	Environmental Classification Summary
EIS	Environmental Impact Statement
ERS	Environmental Review Summary
FHWA	Federal Highway Administration
NEPA	National Environmental Policy Act
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act
VIA	Visual Impact Assessment

459.10 Glossary

Landscape Unit – An area or volume of distinct landscape character that forms a spatially enclosed unit at ground level, differentiated from other areas by its slope and its pattern of land cover. A unique segment of the landscape. Not all projects will have multiple landscape units.

Scenic Byway – Public road having special scenic, historic, recreational, cultural, archaeological, and/or natural qualities that have been recognized as such through legislation or some other official declaration for its scenic, historic, recreational, cultural, archaeological, or natural qualities. Washington State Scenic Byways are designated in RCW 47.39.020.

Viewshed – All the surface areas visible from an observer's viewpoint.

Viewer Group – Classes of viewers differentiated by their activity, awareness, and values.

Viewer Sensitivity – The viewer's variable receptivity to the elements within the environment they are viewing. Sensitivity is affected by viewer activity and awareness, exposure to the project, and cultural and community values. Indication of viewer sensitivity can be found in local zoning codes, planning documents, laws, and advocacy groups such as Scenic Byway organizations.

Visual Function – The component of a transportation project that is designed and experienced primarily from a visual perspective; includes positive guidance and navigation, distraction screening, corridor continuity, roadway and adjacent property buffering, and scenic view preservation.

Visual Quality – Character of the landscape, which generally gives visual value to a setting.

Chapter 460 Environmental justice

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460.01 Introduction

Environmental Justice (EJ) populations include minority and low-income populations (DOT Order 5610.2(a)). Most areas of Washington State have EJ populations that can potentially be impacted from a proposed WSDOT project by project-related activities such as property acquisition that may displace people or construction effects like increased noise. Your project's strategic engagement with individuals and groups within the study area will help identify impacts to EJ populations. Work with them to determine how best to avoid, minimize, or mitigate disproportionately high and adverse impacts.

New in 2021, we separated the environmental justice requirements and analysis from Chapter 458 Social and community effects to clarify the role of each analysis. An Environmental justice analysis can include the information from a Social and community effects analysis, but should also rely on other analyses to make an effects determination for a project.

New state requirements will take effect July 1, 2023 for transportation projects over $15 million and other activities. We are developing procedures to comply with the state environmental justice requirements set forth in RCW 70A.02.

This chapter provides direction necessary for project teams to meet EJ requirements during the environmental review process for transportation improvement projects. A detailed environmental justice analysis is required during the environmental review of transportation projects that require a NEPA EIS or EA. Projects that are classified as exempt from a detailed analysis under NEPA still consider impacts to EJ communities following our EJ Decision Matrix and documentation requirements listed in Section 460.04.

The fundamental principles of environmental justice are to:

- Avoid, minimize, and mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- Ensure full and fair participation by all potentially affected communities in the transportation decision making process.
- Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income population.

EJ is a component of Title VI (Civil Rights Act 1964), that was extended through EO 12898 to eradicate, mitigate and avoid disproportionately high and adverse effects to low income and minorities, and Indian tribes during NEPA process, when they are required.

As a recipient of Federal financial assistance, the Washington State Department of Transportation (WSDOT) is subject to the requirements of various Federal nondiscrimination laws and regulations including Title VI of the Civil Rights Act, Section 504 of the Rehabilitation Act, the Americans with Disabilities Act (ADA), the Executive Orders for Environmental Justice and Limited English Proficiency (LEP) populations. These laws and Executive Orders are intended to protect the Civil Rights of all individuals affected by programs and/or activities of a Federal recipient/subrecipient.

Title VI has the responsibility to ensure that no person shall on the ground of race, color or national origin, be excluded from participation, in be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. The Civil Rights Restoration Act from 1987 specifies that recipients of federal funds must comply with civil rights laws in all areas, not just the particular program or activity that receives federal funding. National origin coverage under Title VI was extended to Limited English Proficiency (LEP) people through court decisions and Executive Order.

WSDOT's responsibilities under these laws include, but are not limited to:

- Identifying and addressing disparate impact and disproportionate high and adverse effects associated with our projects, programs, and activities.
- Ensuring that we make every effort to provide benefits, services, and access equally to all groups. Access considerations include multimodal options for all groups relative to their needs, practices, and culture.
- Avoiding, or if not possible, minimizing the hardships associated with displacement or residents and businesses.
- Providing equal access to information and meaningful involvement in the decision-making process regardless of race, color, income, disability, or national origin.
- Ensuring that communications with the public are inclusive of persons with limited English proficiency (LEP).
- Documenting our decision-making processes.

Environmental Justice (EJ) and Title VI of the Civil Rights Act (Title VI) address the distribution of the physical, social, and economic impacts of a proposed project and it's potential alternatives. Protection of the community's civil rights and the fair distribution of a project's burdens and benefits lie at the heart of the environmental justice analysis. The requirements within the Limited English Proficiency Executive Order 13166 helps ensure 'full and fair participation by all potentially affected communities…'.

460.02 Applicable statutes, regulations, executive orders, & agreements

The federal and state policies that guide the evaluation of environmental justice for transportation projects, include.

460.02(1) Federal

- 42 United States Code (USC) 4321 National Environmental Policy Act of 1969 (NEPA)
- Title VI of the Civil Rights Act of 1964 as amended in 1987.
- Environmental Justice Presidential Executive Order 12898.
- Limited English Proficiency Presidential Executive Order 13166.
- Section 504 of the Rehabilitation Act of 1973.
- Title II of the Americans with Disabilities Act (ADA) of 1990.
- Tribal Government Tribal considerations are also addressed under both Section 4(f), 49 USC 303 and Section 106 of National Historic Preservation Act 16 USC 470f.
- Department of Transportation (DOT) Order 5610.2(a), Final DOT Environmental Justice Order, issued May 2, 2012.
- Advancing Racial Equity and Support for Underserved Communities Through the Federal Government Executive Order 13985 issued January 20, 2021.
- Tackling the Climate Crisis at Home and Abroad Presidential Executive Order 14008.
- Consultation and Coordination With Indian Tribal Governments Presidential Executive Order 13175.

460.02(2) State

- RCW 70A.02 Environmental Justice, also referred to as the Healthy Environment for All (HEAL) Act.
- Secretary's EO E 1018 Environmental Policy Statement.
- Governor's Executive Order 93-07 *Affirming Commitment to Diversity and Equity in the Service Delivery and the Communities of the State* (1993).
- Secretary's EO E 1087 Title VI Policy

460.03 Considerations during project development

460.03(1) Planning

Project teams should check to see if a planning study has been done in their project area, and if so, refer to any EJ information documented in that study.

Planning teams should contact the Multimodal Planning and Data Division for direction on how to address environmental justice in a planning study. See Chapter 200 for agency policies on engaging EJ communities if you are using a Planning and Environmental Linkages (PEL) approach and consult with the NEPA/SEPA program and your federal lead agency.

460.03(2) Scoping

Determine if there are any Environmental Justice populations in the project area. If present, follow our EJ Decision matrix to scope the expected impacts and analysis for NEPA. Use this information to determine what level of community engagement should be conducted to inform the project elements. Demographic information should also inform the project's communication strategies to reach those who may need interpretation and translation services.

460.03(3) Design

Follow the Analysis and document direction in section 460.04 below. Conduct community engagement when appropriate for the project following agency Community Engagement Plan. Revisit the analysis if the project elements change that could impact the community including detour routes.

460.03(4) Construction

Track commitments made to the community to ensure they are carried out.

460.03(5) Maintenance and Operations

Track commitments made to the community to ensure they are carried out.

460.04 Analysis & documentation requirements

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

460.04(1) Analysis & documentation for NEPA

It is WSDOT practice to analyze environmental justice impacts for all projects. Project teams must use demographic data and community outreach to inform their EJ analysis. Project teams must use demographic data from the U.S. Census and the Office of the Superintendent (OSPI) to inform their EJ disproportionate impacts and Title VI disparate impacts analyses. To add community health context to your analysis, use the WA Environmental Health Disparities (EHD) Map to find the health ranking(s) for the project area.

The demographic profile should identify the existence of minority groups (by race, color, national origin) and low-income populations. Native Americans are designated as a minority population under the Civil Rights Act. They are also protected under the Environmental Justice Executive Order (Presidential Executive Order 12898). Section 4-401 of the executive order requires consideration of the potential human health risks associated with the consumption of pollutant bearing fish or wildlife. Use the tribe's consultation area maps available on the WSDOT Environmental GIS Workbench to evaluate a project's potential effect on natural resources.

The demographics also provides information on the percentage of the population with Limited English Proficiency (LEP). In accordance with the Limited English Proficiency Executive Order (Presidential Executive Order 13166) WSDOT requires that all vital documents identified through a Four Factor analysis be provided if the demographic analysis shows that five percent of the population, or 1,000 individuals within the study area, speak English 'less than "very well". See our Environmental Justice webpage for how to make this determination.

The LEP data should inform your project's communication and outreach need for language services including interpretation and translation.

If the demographic analysis shows a presence within the study area and identifies likely impacts, the environmental document should contain information broken down by race. The EJ analysis should discuss potential impacts identified in various studies in. Once you have determined the level of documentation required, conduct the analysis concurrently with, or slightly after, the following discipline studies:

- Air
- Noise
- Transportation (including goods movement)
- Public Services
- Social and community (health, economics, relocations, utilities, cohesion)
- Stormwater
- Floodplains
- Cultural Resources
- Section 4(f)
- Hazardous Materials
- Visual Impacts

The project team must document what engagement activities took place, how they were made accessible to EJ populations and how the project outcomes were influenced by the people potentially being impacted.

Some Categorically Excluded (CEs) projects require a review for impacts to Environmental Justice communities, but do not require a detailed study because, by definition they:

- Do not have any significant environmental impacts.
- Do not change access control or affect traffic patterns.
- Do not require more than minor right of way acquisition or displace residents or businesses.
- Do not require temporary road closures or detours during construction.

Determine the level of documentation CE level projects by using the following steps:

1. Check our list of 'Projects Exempt from Detailed EJ Analysis' on the Environmental Justice webpage and document exemption status on the ECS form, if applicable. Attach demographic data and note any LEP populations.

2. If the project is not exempt and no EJ populations are present in the project area, attach the EJ Decision Matrix and demographic data showing the absence of an EJ population.

3. If the project has an EJ population present, but does not impact that population, attach the EJ Decision Matrix, demographic data and write to the ECS how the project will not have affects. No memo is required.

4. If the project may impact an EJ population, define project effects on EJ populations in an EJ Memo using the resources on our Environmental Justice webpage. Refer to community engagement activities to inform your determination.

For EA and EIS level projects, the analysis should include an examination of the effects for each alternative, including the No-build. The environmental document must include a comparison of the distribution of a project's burdens and benefits by the social groups

identified in the demographic analysis. The effects on these groups should be described to the extent these effects can be reasonably predicted. There is no need to be exhaustive with this comparison. Discuss impacts to the groups in proportion to the severity of the related impacts.

EISs should include a Title VI disparate analysis. This analysis determines if the project is likely to have a disparate impact by comparing the least impacted group to the most impacted group in the study area. If the project team, in consultation with the federal NEPA lead, determines it will have a "disparate impact" they must either choose a "less-discriminatory alternative" or document a "substantial legitimate justification". WSDOT's procedures for a combined Title VI and EJ analysis are on the Environmental Justice web page.

The EJ analysis compares the adverse impacts (burdens) to the EJ population to the adverse impact to the non-EJ population within the study area. The discussion should address:

- Whether minority or low-income populations bear a "disproportionately high and adverse impact".
- Possible mitigation measures to avoid or minimize any adverse impacts.
- Special relocation considerations for affected groups and the measures proposed to resolve these relocation concerns.
- Public response to the project and proposed mitigation. Include a discussion of how the project design was changed to address public concerns.

A "disproportionately high and adverse" determination may be made if the:

- Severity of the adverse impact is appreciably greater for protected populations than for non-protected populations.
- Adverse environmental impacts occur more in areas with protected populations (regardless of severity) than in areas without protected populations.
- Proposed mitigation is needed to reduce either the level of severity or number of adverse effects for protected populations.
- Project benefits do not affect protected populations to the same degree as other populations.
- Project is controversial and public comment shows that protected populations: do not feel that the project benefits them or that the proposed mitigation is inadequate.

A determination of "disproportionately high and adverse impacts" does not preclude the project proceeding. However, it will require additional community engagement to ensure that:

- Alternatives have been discussed and are clearly understood.
- Mitigation strategies have been explained and are understood.
- The effectiveness of mitigations will be monitored, if needed.
- The community has an opportunity for meaningful participation in the process to select the alternative and mitigation measures and their preferences are taken into consideration.

Refer to FTA's Title VI web page for Title VI and EJ compliance information when a project has a federal nexus with FTA. This FTA FAQ provides additional clarification on EJ analysis and requirements.

Analysis & documentation for SEPA only (No federal nexus)

It is WSDOT practice to analyze environmental justice impacts for all projects. SEPA does not contain requirements for conducting an EJ analysis; however, WSDOT is implementing new state environmental justice policy requirements contained in RCW 70A.02. Many of the requirements will take effect July 1, 2023, including the requirement to conduct an assessment of transportation projects over $15 million. We are developing procedures to comply with the new law, these will be posted on the website.

Note that SEPA documentation is not required if you have documented NEPA.

460.05 External engagement

Presidential Executive Order 12898 and Title VI of the Civil Rights Act of 1964 require WSDOT "to promote nondiscrimination" to the" greatest extent allowed by the law". This includes equal access to information and an equal opportunity to participate in the decision making process. WSDOT tracks its performance with this requirement and submits an annual report to FHWA documenting efforts to engage all persons, regardless of color, race, gender, age, income, disability, or national origin. See the WSDOT Community Engagement Plan for considerations to make during your outreach.

Project teams should develop outreach and engagement strategies to reach all of the populations affected by their project. Tailor outreach techniques to reach the EJ, low income, and LEP populations in your study area. Document what you did and how public input affected the project design. Guidance for how to write a public involvement plan is available from the WSDOT Communications Office and is available to WSDOT employees.

WSDOT policy requires staff to follow the Model Comprehensive Tribal Consultation Process when working with tribal governments. Contact the WSDOT Tribal Liaison Office for assistance. Refer to Chapters 400, 456 and 530 for more direction on engaging with tribal communities.

460.06 Internal roles and responsibilities

460.06(1) Project Engineer

Scopes the appropriate level of community engagement by working with the Title VI Liaison and their Communications office to ensure potential impacts are identified early in project development. Government to government consultation with the affected Tribes as well as environmental justice requirements must be incorporated into the project's delivery process.

The WSDOT LEP Plan requires project managers to:

- Make every effort to provide services, either through translation or interpreter, prior to scheduled meetings, such as public hearings, or project meetings.
- Pay for the translation of vital documents and interpreter services including summary newsletters, brochures, public notices for meetings and summary documents for open houses or environmental hearings. Interpreter services should be provided upon request for open houses and hearings.

460.06(2) Environmental Coordinator / Consultant

Meets with technical leads for the related disciplines listed above and uses information gathered during community engagement to conduct the Environmental justice analysis, as needed.

460.06(3) WSDOT HQ Environmental Services Office

Reviews all Environmental justice analyses, including methodologies and oversees the related guidance.

460.06(4) Office of Equal Opportunity

The WSDOT Office of Equal Opportunity (OEO) serves as a resource to project teams through their Title VI Liaisons who can help make connections with communities.

OEO also participates in FHWA's annual review of the Environmental Justice analyses done for projects Categorically Excluded from NEPA. OEO makes recommendations for improving the methods to help ensure the analyses adequately address any disproportionately high and adverse impacts to EJ communities.

460.06(5) Communicator

Help scope and support community engagement activities related to a project and help provide language services, interpretation or translation, based on the languages determined in the LEP analysis.

460.07 Applicable permits & approval process

There are no permits or signatory approvals associated with compliance with federal or state Environmental Justice requirements. Federal and state permits and approvals require satisfactory documentation of Tribal consultation and compliance with civil rights and cultural resources laws and federal environmental justice executive orders.

460.08 Mitigation

NEPA, SEPA, the federal Environmental Justice Executive Orders and the Secretary's Executive Order (E 1018.03) contain clear policy direction regarding the mitigation of project impacts – this includes mitigating impacts to the human environment (community mitigation) in addition to the natural environment.

If you determine that the project's effects are disproportionately high and adverse, disclose your finding in the environmental document. A finding of "disproportionate high and adverse" will not stop a project if it can be shown that the project serves a significant regional need. But such a determination requires additional analysis to demonstrate that further avoidance, minimization, mitigation and enhancement measures are not practicable. Alternatives may be considered "not practicable" if they:

- Would not satisfy the project's purpose and need.
- Have more severe adverse effects on other areas of the environmental (Wetlands, Section 4(f)).
- Have greater social, economic, environmental or human health effects.

Support your determination with evidence and reference technical analysis. Include the results of public outreach efforts to EJ/low-income populations in the environmental document. Do this by considering the mitigation measures, including those suggested by the impacted community to address their specific needs. The proposed mitigation must match the type of impact the project has on the individuals to be considered appropriate. For example, an impact to community cohesion may not be mitigated by reducing noise levels.

WSDOT uses community input when considering appropriate mitigation measures to address the transportation impacts as required by Federal and State laws. The project team then pursues and negotiates reasonable project related mitigation in good faith with the community.

460.09 Abbreviations and acronyms

Abbreviations and acronyms used in this chapter are listed below.

ADA	Americans with Disabilities Act
CEP	Community Engagement Plan
CFR	Code of Federal Regulations
EA	Environmental Assessment
EIS	Environmental Impact Statement
EJ	Environmental Justice`
FHWA	Federal Highway Administration
LEP	Limited English Proficiency
RCW	Revised Code of Washington
Title VI	Title VI of the Civil Rights Act of 1964
WAC	Washington Administrative Code

460.10 Glossary

These definitions apply in the context of Environmental Justice analysis. Some terms may have other meanings in a different context.

Adverse Effects (Environmental Justice) – The totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to:

- Bodily impairment, infirmity, illness, or death caused by air, noise, water pollution, vibration, and soil contamination.
- Destruction or disruption of man-made or natural resources.
- Destruction or diminution of aesthetic values.
- Destruction or disruption of community cohesion or a community's economic vitality; access to public and private facilities and services.
- Adverse employment effects.
- Displacement of persons, businesses, farms, or nonprofit organizations.
- Increased traffic congestion.
- Isolation, exclusion or separation of minority or low-income individuals from the broader community.
- Denial of, reduction in, or significant delay in the receipt of benefits of DOT programs, policies, or activities.

Adverse effects are determined by both the individuals affected and the judgment of the analyst.

Disproportionately High and Adverse Effect – An adverse effect that: (a) is predominantly borne by a minority population and/or a low income population; or (b) is suffered by the minority population and/or low income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low income population.

Environmental impacts - Environmental benefits or environmental harms, or the combination of environmental benefits and harms, resulting or expected to result from a proposed action.

Environmental Justice (Federal Definition EPA) – The fair treatment and meaningful involvement of all people regardless of race, color, culture, national origin, income, and educational levels with respect to the development, implementation, and enforcement of protective environmental laws, regulations, and policies.

Environmental Justice (State Definition) – The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, rules, and policies. Environmental justice includes addressing disproportionate environmental and health impacts in all laws, rules, and policies with environmental impacts by prioritizing vulnerable populations and overburdened communities, the equitable distribution of resources and benefits, and eliminating harm.

Limited English Proficient – Individuals who do not speak English as their primary language and who have a limited ability to read, speak, write, or understand English. These individuals may be entitled to language assistance with respect to a particular type of service, benefit, or encounter. Federal laws particularly applicable to language access include Title VI of the Civil Rights Act of 1964, and the Title VI regulations, prohibiting discrimination based on national origin, and Executive Order 13166 issued in 2000.

Low Income – A household income that is at or below the federally designated poverty level for a household of four as defined the U.S. Health and Human Services.

Low-Income Population – Any readily identifiable group of low-income persons who live in a geographic area, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed DOT program, policy, or activity.

Minority – A person who is:

- Black (a person having origins in any of the black racial groups of Africa).
- Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or the Spanish culture or origin, regardless of race).
- Asian/Pacific Islander (a person having origins in the Far East, Southeast Asia, or the Indian subcontinent).
- Pacific Islander (a person having origins in any of the Pacific Islands).
- American Indian or Alaskan Native (any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition).

Minority Population – Any readily identifiable group of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.

Overburdened community - A geographic area where vulnerable populations face combined, multiple environmental harms and health impacts, and includes, but is not limited to, highly impacted communities as defined in RCW 19.405.020.

Transportation Equity – The fairness with which benefits and costs are distributed.

Vulnerable populations - Population groups that are more likely to be at higher risk for poor health outcomes in response to environmental harms, due to adverse socioeconomic factors, such as unemployment, high housing and transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively affect health outcomes and increase vulnerability to the effects of environmental harms and sensitivity factors, such as low birth weight and higher rates of hospitalization. "Vulnerable populations" includes, but is not limited to:

- Racial or ethnic minorities
- Low-income populations
- Populations disproportionately impacted by environmental harms
- Populations of workers experiencing environmental harms

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Chapter 490 Tracking environmental commitments during design

490.01 Commitments must be tracked
490.02 Identify environmental commitments during environmental review and design
490.03 Perform a constructability review
490.04 Reflect environmental commitments in project design
490.05 Track environmental commitments during design
490.06 Respond to noncompliance events during design
490.07 Applicable statutes and regulations
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490.01 Commitments must be tracked

The Revised Code of Washington (RCW) 47.85.040 states that the Washington State Department of Transportation (WSDOT) must develop, implement, and maintain an environmental compliance data system to track permit conditions and environmental commitments. WSDOT's E 1018 *Environmental Policy Statement* requires all WSDOT employees to know and adhere to all environmental commitments applicable to their duties. This invariably requires staff to track commitments because they apply to various phases of the project (design/construction/maintenance) and are performed by WSDOT, the contractor/Design-Builder, or both. The WSDOT Commitment Tracking System (CTS) web application is built specifically to help our agency implement these requirements. WSDOT is expected to clearly communicate all project commitments to supporting design offices, construction project staff, and to the contractor/Design-Builder as stated in the WSDOT *Plans Preparation Manual* M 22-31 Division 4 and WSDOT *Design-Build Manual* M 3126 Chapter 4. For Design-Build projects, both WSDOT and Design-Builder staff are responsible for tracking commitments during project design; refer to the project's Request for Proposal (RFP), Section 2.8 *Environmental* for more project-specific information regarding the Design-Builder's responsibilities.

Title 23, Part 771.109 of the Code of Federal Regulations requires the Federal Highway Administration (FHWA) to ensure that WSDOT implements commitments as stated in the environmental documents. The FHWA assures this is accomplished as a part of their program management responsibilities, which includes reviews of design, plans, specifications, and estimates (PS&E). This also includes FHWA construction inspections.

490.02 Identify environmental commitments during environmental review and design

Identifying environmental commitments early in design ensures that the complete design package is developed with compliance in mind before it goes out for bid. The WSDOT *Plans Preparation Manual* Division 4 requires WSDOT to identify all project environmental commitments. In most cases, commitments will be in writing, but note that some commitments may be delivered electronically or verbally. These commitments may result from:

- Planning activities.
- Federal review process via the National Environmental Policy Act (NEPA).
- Washington State review process via the State Environmental Policy Act (SEPA).
- Tribal participation and consultations.
- Design efforts, including field activities.
- Permit acquisition.

It is WSDOT policy (*Design Manual* M 22-01 Section 225.04) that a project commitment file be established as soon as NEPA/SEPA documents are completed. The Region/Mode/Megaprograms Environmental Office is responsible for creating and maintaining the commitment file as a project progresses through its development process. This file serves as the repository for all final environmental commitments leading to development of the contract.

490.03 Perform a constructability review

The WSDOT *Master Deliverables List* (MDL) is a comprehensive list of project deliverables organized by project phases. Section PSE.50 of the MDL requires that constructability reviews be performed during design. WSDOT must ensure all environmental commitments are constructible. If WSDOT identifies a non-constructible commitment, then the Region/Mode/Megaprograms Environmental Office must resolve the issue prior to delivering the environmental commitment file to the Project Engineer; this may be accomplished through communication with the source of the commitment (e.g., the appropriate resource agency).

490.04 Reflect environmental commitments in project design

WSDOT's E 1018 *Environmental Policy Statement* requires that WSDOT communicate compliance requirements to contractors/Design-Builders. The project design must reflect commitments from the environmental review process and the permits. Provide a copy of the commitment file to the Project Engineer responsible for design elements (such as structures, roadway, or stormwater), so they can ensure the project incorporates all design phase commitments into contract documents, and that those commitments get closed out. See Chapter 590 to incorporate environmental commitments into the contract, and Chapter 600 for information on closing commitments upon completion. WSDOT staff can use CTS to track commitments and generate a commitment file including all the environmental commitments that must be considered during the design phase of a project; refer to the help menu within CTS for instructions on how to use CTS to manage commitments and generate a list of all commitments.

490.05 Track environmental commitments during design

Environmental commitments must be tracked to determine how and when they are fulfilled, including those for which the contractor/Design-Builder is responsible. For each commitment, include a description, source of the commitment, responsible party (e.g., WSDOT, contractor/Design-Builder, or both), and applicable project phase(s) (e.g., design, construction, or maintenance).

As commitments are fulfilled, update the commitment file to reflect their status as closed; if appropriate, also document how the commitment was fulfilled. Inquire with the Project Office Designers to discuss design commitments that are not incorporated or have a status of open. The Region/Mode/Megaprograms Environmental Office is responsible for clearly communicating to the Project Engineer the status of all commitments in the commitment file.

Project teams may use CTS to track and manage environmental commitments. For your convenience, CTS contains commitments for some common and general permits and approvals; refer to the help menu within CTS for instructions on how to add and update commitments to a project and generate reports, including commitment close-out reports.

490.06 Respond to noncompliance events during design

WSDOT employees are obligated to report noncompliance (RCW 47.85.030(3)(a)). Section 225.05 of the *Design Manual* states the purpose of the Environmental Compliance Assurance Procedure (ECAP) for the design phase of a project, and provides instruction on how to recognize and rectify environmental noncompliance events.

490.07 Applicable statutes and regulations

- Applicability and responsibilities – 23 Code of Federal Regulations; 771.109
- Transportation Project Delivery and Review – 47.85 RCW

490.08 Abbreviations and acronyms

CTS	Commitment Tracking System
ECAP	Environmental Compliance Assurance Procedure
FHWA	Federal Highway Administration
JARPA	Joint Aquatic Resources Permit
MDL	Master Deliverables List
NEPA	National Environmental Policy Act
PS&E	Plans, Specifications, and Estimates
RCW	Revised Code of Washington
RFP	Request for Proposal
SEPA	State Environmental Policy Act

490.09 Glossary

These definitions provide context for tracking commitments in design. Some terms may have other meanings in a different context.

Commitment – An obligation that WSDOT makes within an environmental document or agreement for the project; or an expectation imposed upon WSDOT by another agency through a permit or approval for the project. Commitments can be either the agency's or the contractor's/Design-Builder's responsibility to implement.

Commitment File – This file serves as the repository for all final environmental documents leading to development of the contract.

Commitment Tracking System – The Commitment Tracking System (CTS) is a WSDOT web application that allows you to store commitments in a secure computer network server, plus manage the responsibility (WSDOT, contractor/Design-Builder, or both) and implementation method (guidance document or contract) for the commitment. It also allows you to store compliance records, document the status, and report details about commitments from their inception through project delivery and on to maintenance.

Chapter 500 Environmental permitting

500.01 Introduction
500.02 Scoping
500.03 Roles and responsibilities
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500.05 Submit a complete permit application and obtain permits
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500.01 Introduction

Washington State's transportation system policy goals include environmental protection: "To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment (RCW 47.04.280(1)(e))." WSDOT is committed to protecting the quality of our air, water, cultural, and natural resources.

Under our Environmental Policy Statement (WSDOT Executive Order 1018.03), WSDOT's employees are directed to conduct business in a safe, secure, and environmental sustainable manner that protects the human and natural environment of the state. WSDOT's efforts to ensure our activities meet this commitment include:

- Promote sustainable practices to reduce greenhouse gas emissions and protect natural habitat and water quality.
- Work with the tribes and federal, state, and local agencies to adequately protect our state's natural and cultural resources.
- Consult with tribes in order to protect treaty reserved rights and resources.
- Strive for the most effective and efficient environmental review and approval processes.
- Incorporate environmental commitments (such as permit conditions) into project-level contracts and track them throughout project delivery.
- Participate in training concerning the department's environmental stewardship responsibilities as appropriate to their job functions.
- Be familiar with and adhere to all environmental commitments, policies, and procedures applicable to their activities.
- Report compliance concerns and review environmental performance measures as a basis to continually improve the department's environmental performance.

500.02 Scoping

The permit process begins during project scoping (Chapter 300) when the Environmental Review Summary (ERS) is completed. Project Environmental Coordinators identify which permits would be required based on the initial scope of the project and the regulatory requirements. Understanding project and location activities is important to successfully identify permits and approvals. Here are examples of some project activity and locations that may require permits:

- Within 200 ft. of a Shoreline of Stateside significance requires a shoreline permit or exemption.
- Projects with federal funding, federal permits, or on federal land (federal nexus).
- Impacts on sensitive resources such as cultural resources, wetlands, and waterbodies.

We first seek to avoid impacting protected resources. When we cannot avoid impacts, we obtain environmental permits to comply with these laws. Resource agencies issue permits that include conditions so our work will have minimal impacts to the environment and, when needed, provide direction on mitigation to offset those impacts.

Use the list of common permits and approvals list below to determine which permits may be required for your project. This list does not include approvals obtained as part of the early design stage of the project such as Endangered Species Act Compliance or the State Environmental Policy Act. Most of these permits and approvals are obtained during the late design stage. See the discipline chapters of this *Environmental Manual* for policy that applies to a single permit or approval. This chapter includes information that applies to multiple permits. Consult the Office of Regulatory Assistance and Innovation's (ORIA) Regulatory handbook or resource agency staff to obtain information about permits and approvals not included in this chapter. Here is a list of the common environmental permits and approvals that are typically issued after the early design phase:

- Stormwater and water quality (*Environmental Manual* Chapter 430
  - NPDES Municipal General Permit (Stormwater& Water Quality webpage)
  - NPDES Construction Stormwater General Permit (Stormwater& Water Quality)
  - NPDES Bridge and Ferry Terminal Washing General Permit (Stormwater& Water Quality webpage)
  - NPDES Industrial Stormwater General Permit (Washington State Ferries Eagle Harbor Repair Facility) (Stormwater& Water Quality webpage)
  - NPDES Sand & Gravel Permit (Stormwater& Water Quality webpage)
  - NPDES Aquatic Plant & Algae Management (Stormwater& Water Quality webpage)
  - NPDES Aquatic Mosquito Control General Permit (Stormwater& Water Quality webpage)
  - Section 401 Water Quality Certification (Stormwater& Water Quality webpage)

- Wetlands and other waters *Environmental Manual* Chapter 431
  - Corps Sect. 404 (Wetlands and other waters webpage)
  - Section 10 Bridge permit (Wetlands and other waters webpage)
  - Section 9 Coast Guard (Wetlands and other waters webpage)
  - Shoreline permits/approvals (Wetlands and other waters webpage)
  - Coastal Zone Management Act (CZMA) Consistency Certification (Wetlands and other waters webpage)
  - Water Rights (Environmental during construction webpage)
- Special Flood Area (*Environmental Manual* Chapter 432)
  - Floodplain Development Permits (Floodplains webpage)
- Fish, wildlife, and vegetation (*Environmental Manual* Chapter 436)
  - Hydraulic Project Approval (Fish webpage)
  - Incidental Take Authorization (Marine Mammals webpage)
- Noise (*Environmental Manual* Chapter 446)
  - Noise variances (Noise webpage)
- Land Use and Transportation (*Environmental Manual* Chapter 455)
  - Critical Areas (Land Use webpage)
  - Forest Practices (Land Use webpage)
  - Aquatic Use Authorization (Land Use webpage)
- Cultural Resources (*Environmental Manual* Chapter 456)
  - Archeological Resources Protection Act Permit (Cultural Resources & archeology webpage)

Clearing and Grading permits have some unique aspects because of WSDOT's plenary authority. In general, you do not need a building, grading or clearing permit from the local agency for transportation-related work, such as state highway or bridge construction (RCW 36.70A.200(5)). This includes retaining walls, noise walls and activities required by a regulatory condition or requirement, such as stormwater facilities or mitigation sites. Some local agencies may use building, grading and clearing permit applications for their critical area or floodplain permits. Check with the city or county where the work will occur. See the Growth Management Act Critical Areas Ordinance and Floodplain Development Permit if the local government does use building, grading and clearing permits to meet other permit needs. Work on rest areas, ferry terminals and connections between state and local roadways may not be exempt.©

500.03 Roles and responsibilities

Effective communication between the environmental staff, the design team, and the resource agencies is crucial to build trust and efficiently permit a project. This section provides general guidance for the major groups involved in the permitting process. Be sure to follow guidance on WSDOT's Environmental discipline webpages and region/ferries processes for permitting projects, if applicable.

500.03(1) Resource agencies

- Understand the project(s) they are being asked to permit.
- Help WSDOT determine permitting requirements (e.g., what is needed for a complete application, mitigation requirements) through verbal and written communication and conducting site visits.
- Review applications and issue permits.
- Provide technical and regulatory guidance.
- Conduct site visits during construction to verify compliance with permits.
- Provide close outs of permits whose sites meet the requirements.

500.03(2) Environmental Manager/Assistant Manager/Supervisors

- Track environmental scope, schedule, and budget.
- Oversee environmental staff.
- Help resolve environmental issues and disagreements.
- Ensure compliance with federal, state, local, and tribal environmental requirements.
- Foster good relationships with the resource agencies.
- Review draft permit applications to ensure they are complete.
- Notify resource agencies when required by the permits.
- Record annual usage of general permits and report this annually to the Environmental Services Office (ESO).

500.03(3) Project Environmental Coordinator

- Coordinate with the Design Team to understand the project's scope, schedule, budget, and project footprint.
- Determine which permits a project may require.
- Coordinate with environmental technical experts to determine a project's impact to that resource and ensure completion of permit supporting documentation (e.g., wetland delineation, mitigation plan).
- Determine if design changes affect permitting requirements.
- Fill out the permitting section of the ERS and Environmental Classification Summary (ECS).
- Coordinate early and throughout the project with resource agencies to identify permit requirements and discuss opportunities to avoid and minimize impacts to natural and cultural resources.
- Ensure project coordination with appropriate Tribal contacts (when applicable) occurs during the permit application process.
- Gather information and fill out permit applications.
- Ensure consistency between project design, environmental documentation, and the permit application.
- Submit complete and accurate permit applications to the agencies.
- Track and assign permit conditions to ensure fulfillment.
- Ensure environmental commitments are reflected in the construction contract.

500.03(4) WSDOT Environmental Technical Experts (Headquarters, Regions, and Ferries)

- Identify project impacts on sensitive areas such as wetlands (Chapter 431), streams (Chapter 430), floodplains (Chapter 432), cultural resources (Chapter 456), fish and wildlife habitat (Chapter 436), and sites with hazardous waste (Chapter 447).
- Document the impacts in technical reports or memos.
- Develop mitigation options when resource impacts are unavoidable.
- Help Project Environmental Coordinators answer technical permitting questions.
- Provide assistance during construction as needed.

500.03(5) Design Team

- Provide project definition during scoping phase.
- Provide project design information to help the Project Environmental Coordinator determine permitting requirements and complete the permit application.
- Provide project drawings for the permit application package that meet the resource agency requirements.
- Design the project to avoid and minimize impacts to environmental resources.
- Communicate design changes to environmental staff.
- Review permit applications to ensure consistency with design.
- Incorporate environmental commitments into the construction contract.
- Ensure plan sheets show sensitive areas.

500.03(6) ESO Compliance Solutions Branch

- Communicate permitting policy and process changes to regions, maintenance, Ferries, and other project environmental offices.
- Create interagency agreements with resource agencies.
- Develop and maintain permitting guidance.
- Provide training to the regions, Ferries, and other project environmental offices.
- Provide policy and technical support for Hydraulic Project Approval (HPA), Shoreline Management, Critical Areas Ordinance, Aquatic Land Use Authorization, Coastal Zone Management Consistency Certification, National Point Discharge Elimination System (NPDES) Bridge & Ferry Terminal General Permit, Water Rights, Clearing & Grading, and Floodplain permits and approvals (Permitting and Compliance Program),
- Negotiate general permits (General Hydraulic Project Approvals (GHPAs) and NPDES Bridge and Ferry Terminal General Permit) and report annual usage to the resource agencies (Permitting Compliance Program).
- Provide policy and technical support for Section 404 of Clean Water Act, Section 10 Bridge , Section 401 of the Clean Water Act, and Section 9 Coast Guard permits (Permitting Liaison Program).
- Review environmental permitting bills from the legislature to determine their potential impact on WSDOT.
- Organize statewide environmental coordinator roundtable meetings to discuss resource updates and lessons learned (Permitting and Compliance Program).
- Lead the interagency Permitting Steering committee and other groups to meet the requirements set in RCW 47.85.020 (Permitting Liaison Program).

500.03(7) ESO Policy Branch

- Provide policy and technical support for Noise Variances (Air and Noise Program).
- Provide policy and technical support for Archaeological Resource Protection Permit (Cultural Resource Program).

500.03(8) ESO Stormwater Branch

- Provide policy and technical support for Section 402 permits, including NPDES Municipal and NPDES Construction Stormwater General Permits.

500.03(9) ESO Biology Branch

- Provide policy and technical support for Incidental Take Authorizations under the Marine Mammal Protection Act (Fish and Wildlife).

500.03(10) Regional Maintenance Environmental Coordinator (RMEC)*/ Maintenance Staff

- Implement the Regional Road Maintenance Program to avoid and minimize impacts to fish and aquatic species.
- Use WSDOT general permits for maintenance activities where possible.
- Obtain project-specific environmental permits to ensure compliance with federal, state, local, and tribal environmental requirements.
- Review long-term commitments from construction projects to ensure they can be fulfilled by WSDOT maintenance.
- Communicate environmental requirements and provide training to maintenance staff.
- Enter general permits usage into the Highway Activity Tracking System (HATS) database and conduct quarterly QA/QC.

500.04 Identify the Required Permits and Coordination

WSDOT conducts studies and gathers information during the environmental review phase (Chapter 400) to determine what permits are required for a project. The Project Environmental Coordinator works closely with the Design Team to obtain a good understanding of the funded project scope to successfully identify the permits. The Project Environmental Coordinator needs to know which activities trigger various permits. For example, any work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or fresh waters of the state requires a HPA permit (see RCW 77.55.011(11)). See the scoping section above for detailed information on permits, statutory authorities, and guidance for the most commonly used federal, state, and local permits and approvals.

WSDOT often discusses permit requirements during coordination with the resource agencies. There are many benefits for early project coordination including but not limited to; understanding what permits are needed and what information is required. See the identify permit and early coordination section for more information. Great communication with resource agencies throughout the design process can prevent schedule delays.

* RMECs have similar permitting responsibilities for maintenance activities as Project Environmental Coordinators listed above.

Resource agencies issue most permits during the second half of the design phase. The timing may be different for Design-Build projects (or those using different contracting methods). Refer to the *Design-Build Manual* M 3126 for information regarding risks and strategy associated with environmental permitting of Design-Build projects. As the permits are issued, WSDOT reviews the conditions to ensure they can be implemented during construction. During the plans, specifications, and estimates (PS&E) phase, commitments from the permits are incorporated into the contract before advertising the project for bids (Chapter 590).

In addition to the agency specific permit information, WSDOT must consider the agreements we have with resource agencies for some permits that may apply to various phases both before and after permit issuance.

Resource agency staff and WSDOT's permitting liaisons are another great resource for answering WSDOT's permitting questions, including help with identifying permits and determining if the project is permittable. Project Environmental Coordinators are encouraged to coordinate early with these staff to discuss project details and to identify information the regulators need to process the application. Resource agency coordination is an opportunity to obtain technical feedback to avoid and minimize environmental impacts. This coordination also provides an opportunity to ask about how long the review process may take. The extent of early coordination should be proportionate to the level of environmental risk a project presents. For example, the level of early coordination for a project that expands the roadway, impacts wetlands, or requires in-water work should be more time intensive than a paver project.

Having a clear understanding of permitting timelines will help WSDOT avoid project delays and surprises. WSDOT environmental staff should coordinate closely with the design team to ensure the project schedule accurately reflects amount of time it will take to obtain environmental permits and approvals.

Project Environmental Coordinators and designers can reduce the time it takes to obtain permits and approvals by finding ways to avoid and minimize environmental impacts. For example, designers can steepen a road embankment or use retaining walls to avoid direct wetland impacts. Avoiding wetland impacts may prevent WSDOT from having to obtain a permit from the Corps. Federal and state policies and directives require WSDOT to first avoid and then minimize wetland impacts. Contact your region Biologist or visit the WSDOT's Wetlands and Other Waters webpage for additional information.

Project Environmental Coordinators can also check the WSDOT Fish and Stormwater & water quality webpages to see if the project activities are covered by existing general permits. One of the most commonly used general permits for preservation projects is the Bridge Maintenance and Preservation GHPA for bridge washing, painting, general maintenance and repair, and deck replacement.

Once a Project Environmental Coordinator has determined which permits are needed, the time frame to obtain each permit should be reflected in the project schedule along with any predecessors. Sometimes permits can be predecessors for other permits. This will allow the project team to determine the critical path. The project schedule should allow adequate time for environmental permits to be obtained and permit requirements (environmental commitments) to be incorporated into the PS&E (or Request for Proposal for Design Build project).

500.05 Submit a complete permit application and obtain permits

WSDOT uses the Joint Aquatic Resource Permit Application (JARPA) to obtain the aquatic permits from federal, state, and local resource agencies. JARPA is a single permit application for activities in or along aquatic environments. A multiagency committee created an application that applicants can use to apply for more than one permit at a time. However, some agencies require using a different application form. A complete permit application package submittal is typically comprised of three main parts:

- A completed permit application
- Permit drawings
- Supporting documents

WSDOT can reduce permitting schedule delays by submitting a complete permit application package to the resource agencies and by addressing comments from the reviewing agency. To reduce these delays, WSDOT collaborated with the Corps Seattle District, Ecology, and the Washington Department of Fish and Wildlife (WDFW) to develop and maintain complete permit application guidance (RCW 47.85.020(3)). This guidance identifies the information WSDOT is required to provide for the agencies to determine our application is complete. You may access complete permit application guidance on WSDOT's Environmental discipline webpages.

Project teams must perform internal reviews to ensure quality and consistency before submitting permit application materials to the resource agencies (RCW 47.85.020(4)).

Once the agencies notify you that your permit submittal is complete, a "regulatory review clock" starts for some of the resource agencies. This term refers to the time an agency has to issue a permit decision to WSDOT. Some agencies have statutory requirements that set a maximum number of days they have to issue a permit decision. For example, WDFW has 45 days to issue Hydraulic Project Approval permits (RCW 77.55.021(7)b). The ORIA *Environmental Regulatory Handbook* provides permit information, including how long it takes agencies to issue certain permits.

Local agencies (city, town, code city, or county) must make a final determination on all permits required for a project on a state highway no later than 90 days after we submit a complete permit application to the greatest extent practicable for WSDOT projects that cost less than five hundred million dollars (RCW 47.01.485).

500.06 After permit issuance/permit modifications

Once a resource agency issues a permit, WSDOT should immediately review the conditions to ensure its requirements are feasible and constructible. Engineers responsible for the project design and construction should review the environmental commitments. If WSDOT identifies a permit condition that is unclear or is not feasible, staff should first work with the resource agency permit writer. If there are unresolvable issues with the resource agency, the permit decision may need to be appealed. Appeal times vary depending on the agency issuing the permit. Follow appeal processes as outlined in the permit or within existing interagency agreements.

WSDOT's construction contracts must reflect the environmental commitments for which the contractor is responsible (Chapter 590).

Sometimes the scope of a project changes after the permit issuance.

Environmental staff evaluates the impacts of the change to determine whether WSDOT needs to adapt environmental approvals or obtain new permits or permit modifications. **Design and Construction engineering staff need to notify the Project Environmental Coordinator immediately when a project modification is proposed.** The Project Environmental Coordinator will evaluate the scope change(s) to determine if a permit modification or additional permits are necessary. The Project Environmental Coordinator will coordinate with the appropriate resource agencies as needed to make this determination. If the change requires a permit modification, it must be secured before the contractor is allowed to do the work within the area that requires permit coverage. Some Design-Build projects obtain permits during the early design phase prior to RFP issuance. Permit modifications may be needed after the Design-Builder determines the final design.

500.07 Manage permits and conditions during construction

WSDOT is ultimately responsible for ensuring compliance with environmental permits and approvals during construction (Chapter 600). WSDOT employees have a role in ensuring that the contractor's work is compliant with the environmental permits. Staff conduct field inspections to ensure that project activities comply with permit conditions and environmental commitments (RCW 47.85.030(3)). Visit the Environmental during construction webpage to access discipline-specific compliance guidance and other *Environmental Manual* chapters for discipline-specific compliance policy.

500.08 Links to permitting resources

- WSDOT Environmental Discipline webpages
- JARPA
- ORIA *Environmental Regulatory Handbook*

500.09 Abbreviations and acronyms

Corps	US Army Corps of Engineers
ECS	Environmental Classification Summary
EPA	Environmental Protection Agency
ERS	Environmental Review Summary
ESO	Environmental Services Office
GHPA	General Hydraulic Project approval
HPA	Hydraulic Project Approval
JARPA	Joint Aquatic Resource Permit Application
NPDES	National Pollutant Discharge Elimination System
NOI	Notice of Intent
ORIA	Office of Regulatory Innovation and Assistance
PS&E	Plans, Specifications, & Estimates
RMEC	Regional Maintenance Environmental Coordinator

500.10 Glossary

Approval – General term referring to any document other than a permit that needs a signature by someone in authority at the agency having statutory jurisdiction over that activity. The document may be called an approval, certification, concurrence, easement, or license, all of which represent an agency signifying, "Yes we authorize you to conduct this activity as long as you do it in this manner." An approval may specify conditions under which the activity is performed.

General Permit – Also referred to as a "Programmatic Permit," a general permit is issued by a federal or state agency to cover a specific type of activity in a certain geographic area (national, statewide, or regional). For certain NPDES general permits, WSDOT must submit a "Notice of Intent" (NOI) to request coverage under the permit for a particular activity; the agency may approve or disapprove coverage.

Individual Permit – A permit issued to WSDOT by a resource agency for a particular activity or project that is not covered by a General Permit; usually needed for more complex or extensive projects.

JARPA – JARPA is a single permit application for activities within or near aquatic environments. Multiple resource agencies (federal, state, and local) developed application that applicants can use to apply for multiple aquatic permits. However, some state and local agencies may require separate permit applications.

Permit – A document required by law and issued by a resource agency or tribe that authorizes a specific type of activity under certain conditions.

Programmatic Permit – Also referred to as a "General Permit" a programmatic permit is issued to WSDOT to cover a certain type of activity such as bridge washing/cleaning, culvert maintenance, or bridge debris removal.

Chapter 530 Tribal Approvals

530.01 WSDOT Policy for Working With Tribes
530.02 Treaty Rights
530.03 Section 401 Water Quality Certification by Tribes
530.04 Section 106 Consultation
530.05 Archaeological Resources Protection Act Permit
530.06 Hydraulic Project Approval
530.07 Tribal Law
530.08 Permit Assistance

530.01 WSDOT Policy for Working With Tribes

WSDOT has a unique relationship with tribes due to their legal status, rights reserved through treaties, and cultural interests throughout the state. Tribes retain many sovereign rights that are guaranteed under treaties and federal laws. WSDOT maintains as government-to-government relationship with 35 federally recognized Tribes. We recognize that each federally recognized Tribe is a distinctly sovereign nation. WSDOT employees will consult with Tribes on all decisions that affect their rights and interests. Consultation is independent from the public involvement process. Our goal is to create durable intergovernmental relationships that promote coordinated transportation partnerships in service to all of our citizens. Each reservation in the state constitutes a bordering jurisdiction for state agencies and projects may be subject to various Tribal permits or approvals.

530.02 Treaty Rights

Between 1853 and 1856, treaties were negotiated with tribes in the Washington Territory. In these treaties, tribes reserved a number of rights, including the "right of taking fish, at all usual and accustomed grounds and stations," which was "further secured to said Indians, in common with all citizens of the Territory." This phrase is at the heart of the tribal treaty fishing right, and has given rise to the important concept of "usual and accustomed areas" of the treaty tribes, or "U&A areas." These areas may extend beyond a tribe's reservation land and also apply to landless tribes. Supreme Court decisions and federal law have affirmed the continued validity of treaties. Federal agencies are bound by their trust responsibility and may require a project to address impacts to tribal treaty rights before issuing a permit. Early consultation with affected tribes is recommended to identify and resolve issues and thereby avoid delays in permitting.

It is important to note, however that tribal areas of interest for consultation are not limited U&A areas. Tribal Consultation Area maps are available on the GIS Workbench. A summary of court adjudicated tribal fishing areas is available in the WSDOT Model Comprehensive Tribal Consultation Process for the National Environmental Policy Act.

530.03 Section 401 Water Quality Certification by Tribes

In Washington State, two agencies (EPA and Ecology) and eight tribes have Section 401 certification authority. The EPA has Section 401 certification authority for activities on most Tribal lands and on Federal lands with exclusive jurisdiction within the state of Washington. Find tribes with Section 401 certification authority on EPA's Tribes Approved for Treatment as a State webpage. Ecology is authorized to make Section 401 certification decisions for activities on all other public (non-federal) and private lands in the state. See Chapter 430 for background on surface water quality standards and documentation and the WSDOT Stormwater & water quality webpage for Section 401 certification.

Similar to the Department of Ecology, tribes have "Certified," "Certified Subject to Conditions," or "Denied Without Prejudice" activities covered by certain Nationwide permits (NWPs) within their jurisdiction. Contact the tribe for more information on these permits.

530.04 Section 106 Consultation

Tribes have a consultation role under Section 101 and 106 of the National Historic Preservation Act (NHPA). A Tribal Historic Preservation Office (THPO) can be established by the tribe pursuant to the NHPA and assert jurisdiction otherwise exercised by the SHPO on Indian lands. The following tribes have certified THPOs: Confederated Tribes of Colville, Confederated Tribes of Chehalis, Lummi Nation, Makah Nation, Nooksack Tribe, Port Gamble S'Klallam Tribe, Samish Indian Nation, Sauk Suiattle Indian Tribe, Skokomish Indian Tribe, Spokane Tribe of Indians, Squaxin Island Tribe, Stillaguamish Tribe of Indians, Suquamish Tribe, Swinomish Indian Tribal Community, and Confederated Tribes and Bands of Yakama Nation.

WSDOT must consult with tribes on projects located within a tribe's Consultation Area. Section 106 consultation usually occurs during the design/environmental review phase of a project; see Chapter 456 for background on Section 106.

530.05 Archaeological Resources Protection Act Permit

Under federal statute, tribal governments approve this permit when the project or activity is on tribal trust land. The Bureau of Indian Affairs issues the permit. See Chapter 456 for background on cultural resources and the WSDOT Federal, State, and Local Permits webpage for details on this permit and statutory authority. Contact Bureau of Indian Affairs, Portland Office, and the affected tribe(s) for details on how to apply.

530.06 Hydraulic Project Approval

The Washington State Department of Fish and Wildlife (WDFW) requires a Hydraulic Project Approval (HPA) for all non-tribal entities performing HPA activities on tribal trust lands and reservations. Several Tribes, such as the Yakama Nation, also issue approvals similar to an HPA. If you have a project on tribal trust lands or reservation, contact the Tribe's natural resources office and WDFW's biologist assigned to the project to determine whether an HPA and/or similar tribal approval applies. We recommend you coordinate with WDFW and the Tribe to ensure that any permit conditions are not in conflict with one another. Because of the complicated nuances of state, tribal, and federal law and jurisdiction, we recommend you discuss any questions of jurisdiction with ESO's Assistant Attorney General.

530.07 Tribal Law

On reservation land, tribal laws may require permits and approvals similar to those required by counties and cities. These permits and approval are required when WSDOT works outside of the highway right of way on the adjacent reservation land. In cases where WSDOT has an easement rather than ownership, the tribe may retain jurisdiction to issue permits and approvals. Examples of permits that may apply include Tribal Environmental Policy Act (TEPA) determinations; critical areas approvals; clearing, grading, and building permits; land use approvals; noise variances; and utility permits. Contact the WSDOT Tribal Liaison for assistance in coordinating tribal permits on reservation land.

530.08 Permit Assistance

WSDOT's Tribal Liaison is a central resource for tribal access and problem solving on natural or cultural resource issues relating to tribes for regions and offices that do not have a dedicated Tribal Liaison position. Consultation area maps for tribes are available on the GIS Environmental Workbench.

See the WSDOT Tribal contacts webpage for tribal contacts. The WSDOT Centennial Accord Plan includes WSDOT's Executive Order E 1025.01 on Tribal Consultation.

See the WSDOT Tribal Liaison webpage for tribal contacts, links to tribal treaties, relevant statutes, and WSDOT's Centennial Accord Plan and Communication and Consultation Protocols. The WSDOT Centennial Accord Plan includes WSDOT's Executive Order E 1025.01 on Tribal Consultation.

Contact tribal government for assistance with permits or approvals on projects that may affect tribal lands.

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Chapter 590 Incorporating environmental commitments into contracts

590.01 Reflect the environmental commitments in WSDOT's contracts
590.02 Incorporate environmental commitments into contracts
590.03 Glossary

590.01 Reflect the environmental commitments in WSDOT's contracts

WSDOT tracks and identifies commitments during the design process (see Chapter 490), as well as through construction and sometimes into maintenance (see Chapter 600). WSDOT *Plans Preparation Manual* M 22-31 Division 4 and WSDOT *Design-Build Manual* M 3126 Chapter 4 require that contract-relevant environmental commitments be communicated to the contractor/Design-Builder, respectively. If they aren't incorporated into the contract, the contractor/Design-Builder is not obligated to implement the commitments WSDOT makes. Constructing the project is conditioned upon environmental commitments from, for example, National Environmental Policy Act documents, Washington State Environmental Policy Act documents, Endangered Species Act documents, interagency agreements, permits, and other environmental approvals.

In addition, the WSDOT *Environmental Policy Statement* E 1018 directs WSDOT employees to communicate compliance requirements to contractors/Design-Builders.

WSDOT has prepared a set of crosswalk documents for programmatic environmental commitments to show who is responsible and how they will be implemented; that is, the crosswalk documents identify the *Standard Specification*, *General Special Provision*, or *Standard Plan* for contract-relevant commitments. These crosswalk documents allow project teams to focus on contract-relevant commitments that are not covered by an existing specification, leading to the development of Special Provisions. The following crosswalk documents may be accessed through WSDOT's Environmental guidance webpage, under the *Tools*, *templates* & *links* tab of the respective discipline's webpage:

- Hydraulic Project Approval Provisions for Water Crossings, accessible on WSDOT's Fish webpage.
- Hydraulic Project Approval Provisions for Fish Passage Projects, accessible on WSDOT's Fish webpage.
- General Hydraulic Project Approval – WSDOT Bridge Maintenance and Preservation, accessible on WSDOT's Fish webpage.
- Nationwide Permits – Standard commitments, accessible on WSDOT's Wetlands & other waters webpage.
- Programmatic Biological Assessment Minimization Measures for U.S. Fish and Wildlife Service and the National Marine Fisheries Service, accessible on WSDOT's Endangered Species Act & Essential Fish Habitat webpage.
- NPDES Construction Stormwater General Permit (Transfer of Coverage), accessible on WSDOT's Stormwater & water quality webpage.

For your convenience, the WSDOT Commitment Tracking System (CTS) web application contains these crosswalk documents and associated programmatic commitments; refer to the help menu within CTS for instructions on how to copy programmatic documents and their commitments into your project.

590.02 Incorporate environmental commitments into contracts

The Region/Mode/Megaprograms Environmental Office is responsible for creating and maintaining the commitment file (WSDOT *Design Manual* M 22-01 Section 225.04). Commitments assigned to the contractor/Design-Builder must be incorporated into contracts. For Design-Bid-Build projects, commitments for which the contractor is responsible are added into contracts during the Plans, Specifications and Estimates (PS&E) phase. For Design-Build projects, commitments for which the Design-Builder is responsible are added into the Request for Proposal (RFP); refer to the *Design-Build Manual* M 3126 Chapter 4, as well as the instruction boxes within RFP Template, Section 2.8 *Environmental*, for more information about incorporating commitments into the RFP. The level of detail incorporated into commitments differs by project delivery method (e.g., Design-Bid-Build or Design-Build). For example, commitments incorporated into Design-Bid-Build contracts are typically fairly precise because the contracting occurs further along in design. Alternatively, commitments incorporated into Design-Build RFPs may be more conceptual because they are described early in the design phase.

For each commitment, identify which contract document will address the requirement. Per Section 590.01, refer to crosswalk documents or CTS to find contract coverage information for common and general commitments. Note, both delivery methods (i.e., Design-Bid-Build and Design-Build) may reference *Standard Specifications* and General Special Provisions (GSPs) in contracting documents. If it is determined that an environmental-specific Special Provision is needed for the project, or if an existing Standard Specification needs to be changed, the Region/Mode/Megaprograms Environmental Office should coordinate with the Project Office, appropriate headquarters (HQ) Subject Matter Expert(s) (SME), and HQ Environmental Compliance Lead; for Design-Build projects, you should also coordinate with the RFP Template Technical Requirement SME for the given section (e.g., 2.8 *Environmental*, 2.30 *Water Crossings*).

The Project Office is responsible for facilitating an Environmental Commitments Meeting (*Plans Preparation Manual* M 22-31 Division 4). An Environmental Commitments Meeting isn't the same as a preconstruction meeting, as it occurs during procurement (see Chapter 600 for more information on preconstruction meetings). During the Environmental Commitments Meeting, the Region/Mode/Megaprograms Environmental Office and the Design and Construction Project Engineers (or designees) review the commitment file to ensure responsibility for each commitment has been correctly assigned, and that contract documents accurately and thoroughly reflect commitments. Likewise, any commitments added or changed during procurement still need to be updated and tracked in the commitment file; see Chapter 490 for information on tracking commitments during design and Chapter 600 on closing commitments upon completion. It is the responsibility of the Region/Mode/Megaprograms Environmental Office to clearly communicate to the Project Engineer at the Environmental Commitments Meeting how commitments are addressed within the contract. If using CTS to track commitments, refer to the help menu within CTS for instructions on how to create a Contract Coverage report.

590.03 Glossary

These definitions provided context for incorporating commitments into contracts. Some terms may have other meanings in a different context.

Commitment – An obligation that WSDOT makes within an environmental document or agreement for the project; or an expectation imposed upon WSDOT by another agency through a permit or approval for the project. Commitments can be either the agency's or the contractor's/Design-Builder's responsibility to implement.

Commitment File – This file serves as the repository for all final environmental documents leading to development of the contract.

Commitment Tracking System – The Commitment Tracking System (CTS) is a WSDOT web application that allows you to store commitments in a secure computer network server, plus manage the responsibility (WSDOT, contractor/Design-Builder, or both) and implementation method (guidance document or contract) for the commitment. It also allows you to store compliance records, document the status, and report details about commitments from their inception through project delivery and on to maintenance.

Environmental Commitments Meeting – A project-level meeting facilitated by the Project Office between the Design, Construction, Plans, and Environmental Offices used to incorporate commitments into contract.

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Chapter 600 Construction

600.01 Overview
600.02 Roles and responsibilities
600.03 Environmental commitments by discipline
600.04 Preparation for construction
600.05 Compliance during construction
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600.01 Overview

Secretary's Executive Order E 1018 *Environmental Policy Statement* directs all employees to be familiar with and adhere to all environmental commitments, policies, and procedures applicable to their activities. WSDOT employees take a role in ensuring that the contractor's work complies with the environmental documents and permits by incorporating environmental permits into contract documents, monitoring for compliance during construction, enforcing the contract, and taking other measures described in these sections.

After the design phase, a project should have a complete set of environmental documentation, permits, and approvals. In addition, a project will have a final set of plans, specifications, and estimates (PS&E). At this time, the project is publicly advertised and WSDOT accepts bids for completion of the work. The contract is then awarded. The contractor and WSDOT share commitments at a preconstruction meeting. Construction, including work plan submittals, begins soon thereafter. As construction is completed, the contract is closed out and maintenance of the project begins.

Because the contractor is responsible for implementing a substantial number of environmental commitments that WSDOT made during project development, it is crucial to review all environmental documents, permits and approvals to ensure contractor relevant permit requirements make it into the contract (see Chapter 590).

Chapters 490 and 590 explain how environmental commitments are tracked and incorporated into contract documents. Consistent implementation of commitments is necessary to achieve accountability during construction that leads to good relationships with tribes, resource agencies, and the public. The following sections of this chapter identify policies to ensure environmental compliance throughout construction. See WSDOT's Environmental during construction webpage for discipline-specific procedures on ensuring environmental compliance.

600.02 Roles and responsibilities

WSDOT builds trust and fosters positive relationships with the tribes, resource agencies, and the public by implementing the following roles and responsibilities during construction. Some of the tasks may be done by staff other than those identified below depending on how each Region/Mode/Megaprograms is structured.

600.02(1) WSDOT Region/Mode/Megaprograms Environmental Manager

- Ensure environmental staff are adequately trained to effectively support environmental compliance.
- Establish clear expectations for environmental staff.
- Foster good communication with resource agencies and the construction team.
- Communicate WSDOT-owned commitments, especially all from the environmental review, permitting, and consultation processes, to the Project Engineer (PE) to ensure they are fulfilled.
- Implement the Design and Construction Environmental Compliance Assurance Procedure (ECAP) (the Design ECAP located in the WSDOT *Design Manual* M 22-01 Section 225.05(1) and Construction ECAP located in the WSDOT *Construction Manual* M 41-01 Section 1-07.5).
- Work closely with the PE to resolve issues as they arise.
- Ensure noncompliance events are documented in the Commitment Tracking System (CTS) web application (per the Revised Code of Washington (RCW) 47.85.040(3)).
- Document and share lessons learned to prevent recurring issues.

600.02(2) WSDOT Project Engineer

- Manage the contract in accordance with the *Construction Manual* M 41-01.
- Ensure project office staff have the necessary training and equipment to ensure compliance with permit requirements.
- Discuss environmental topics at the preconstruction meeting and review the environmental contract provisions (RCW 47.85.030(2)).
- Establish submittals, schedule, and compliance expectations for the contractor and their subcontractors.
- Ensure the contractor's submitted plans (such as the Temporary Erosion and Sediment Control (TESC) Plan, Spill Control and Countermeasures (SPCC) Plan, and Temporary Stream Diversion (TSD) Plan) meet WSDOT's technical and timing requirements before accepting them.
- Establish compliance expectations of the contractor related to permit required discharge sampling, monthly data reporting, and Best Management Practices (BMPs) adaptive management.
- Implement ECAP. Stop work being performed by the contractor that violates the contract provisions or environmental requirements and notify the Region/Mode/Megaprograms Environmental Manager (RCW 47.85.030(4)).
- Communicate with the Region/Mode/Megaprograms Environmental Manager as needed.
- Check with environmental staff about proposed design changes and change orders to ensure they are permitted.

600.02(3) WSDOT Environmental Coordinator and/or Project Office Inspector

- Review all environmental commitments for the project.
- Determine water quality monitoring requirements for the project, if in-water work will occur, and develop a strategy or plan to ensure compliance.
- If the Project team uses the CTS web application to track and manage commitments, ensure the project has been entered into.
- Coordinate with the PE to provide advance notifications to resource agencies to ensure compliance with environmental requirements.
- Attend the preconstruction meeting and participate in discussing environmental requirements.
- Ensure the contractor follows the conditions of the nighttime noise variance.
- Review the contractor's environmental compliance plans (like the TESC Plan, SPCC Plan, and TSD Plan) and forward any concerns to the PE.
- Ensure the contractor creates and maintains a Site Log Book to comply with the National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit (CSWGP).
- Ensure the contractor installs high visibility fencing (HVF) to protect sensitive areas as a first order of work in accordance with the Plans and *Standard Specifications*.
- Ensure the contractor installs and maintains all BMPs in accordance with their TESC Plan and the CSWGP.
- Ensure the contractor's Erosion and Sediment Control (ESC) Lead submits erosion control inspection reports by the end of next working day following their inspection.
- Conduct site visits to verify that the contractor's ESC Lead's inspections are adequate and to ensure issues are resolved.
- Review design modifications and change orders to ensure they comply with environmental requirements.
- Meet with resource agency staff when they visit the project site to document their concerns or recommendations.
- Notify the PE when the project is not in compliance – initiate ECAP, as necessary.
- Ensure the contractor samples site discharges as required per the CSWGP. Coordinators can receive automatic email notifications via Washington State Department of Ecology (Ecology) WQWebPortal whenever the contractor submits data.
- Sample water quality as required per in-water work related permits, and ensure results from any in-water work sampling are sent to the Ecology federal permit lead.
- If the project footprint increases, impacts to environmental resources change, or work means and methods are inconsistent with environmental requirements, permit modifications will likely be necessary; refer to Chapter 500 and the relevant discipline chapters' *Applicable permits & approval process* sections in this manual.
- For Design-Bid-Build projects, close out commitments once they are fulfilled (close-out reports are the responsibility of the Design-Builder for Design-Build projects).

600.02(4) WSDOT Environmental Technical Experts (Region/Modes/ Megaprograms Headquarters)

- Verify environmentally sensitive areas in the field that need to be protected.
- Review plans as requested and provide comments to the PE and the environmental coordinator/project inspector.
- Install fish exclusion BMPs, and relocate fish per the fish exclusion protocols and permit requirements.
- Monitor noise during nighttime work.
- Monitor for cultural and archaeological resources.
- Monitor for identified protected fish, birds, and other species.
- Assess and support the PE in managing discovery of unknown suspect hazardous or regulated materials.

600.02(5) Resource agencies

- Provide technical and regulatory guidance.
- Review project changes and issue new or modifications to permits or approvals if necessary.
- Conduct site visits during construction to verify compliance.
- Communicate concerns if compliance is not achieved and corrections are needed.

600.02(6) WSDOT Environmental Services Office (Headquarters)

- Assess and collaborate with Headquarters (HQ) Construction Office to update environmental *Standard Specifications*, *General Special Provisions*, and *Standard Plans*.
- Communicate regulatory changes and lessons learned to the Region/Mode/ Megaprograms.
- Develop and maintain ECAPs.
- Provide environmental compliance training.
- Track noncompliance events to look for trends and to identify lessons learned.
- Ensure the Region/Mode/Megaprograms record noncompliance events in CTS.
- Submit annual violation report (RCW 47.85.040) to the Washington State Legislature and Ecology.

600.03 Environmental commitments by discipline

Specific policies, practices, and requirements exist to protect the environment throughout the life of the project, including prior to, during and post construction. WSDOT and the contractor must implement a variety of BMPs to protect the resources outlined in the following sections. The implementation of BMPs should be incorporated into applicable commitments, be part of the Environmental Compliance Notebook (see Section 600.04(1)) and closed out upon completion (see Section 600.06(1)). See WSDOT's Environmental during construction webpage for discipline-specific procedures on ensuring environmental compliance.

600.03(1) Geology & soils

WSDOT minimizes impacts to the environment by limiting vegetation and soil disturbance (Chapter 420). WSDOT provides clearing limits to the contractor in the contract plans. *Standard Specifications* Section 1-08.4 requires the contractor to install HVF to designate the clearing limits in the field. HVF must be installed as a first order of work. *Standard Specifications* Section 1-07.16(2) defines additional requirements for the contractor to protect vegetation.

WSDOT restricts the amount of soil the contractor can disturb within the clearing limits. Within the clearing limits, contractors are required to install BMPs to prevent disturbed soil from eroding. Refer to *Standard Specifications* Section 8-01.3 for contractor requirements. WSDOT's expectations for controlling erosion are covered in *Construction Manual* Sections 8-01 and 9-14, and in the *Temporary Erosion and Sediment Control Manual* M 3109.

Many areas of Washington are prone to geologic hazards. Two hazards that are frequently addressed along transportation corridors are landslide prone areas and areas that are subject to earthquake caused instability. Projects in these areas often require ground improvements to mitigate the risks caused by these geologic hazards. Typical ground improvement techniques that could cause impacts to adjacent water bodies include the following:

- Stone columns – Stone columns are a ground improvement technique that combines soil densification and partial replacement of unstable material with crushed rock. The operation includes injection of compressed air or water into the ground as a probe is vibrated to funnel aggregate to the end of the probe. The injection of air or water into the ground may cause surface turbidity at or near the injection location. Ecology expects WSDOT to implement BMPs to prevent impacts to water bodies when doing stone column ground improvement work. Ecology also expects WSDOT to visually monitor adjacent water bodies for air percolation and perform water quality sampling if a sheen or turbidity is observed.
- Grout injection techniques and replacement of soil with grout such as compaction grouting, jet grouting, and deep soil mixing – These techniques consist of mixing cement grout with site soils typically below the ground water elevation. This injection technique may cause surface turbidity at or near the injection location. Ecology expects WSDOT to implement BMPs to prevent impacts to water bodies when performing grout injection techniques.

Additional subsurface construction such as directional drilling for utilities and drilled columns for bridge abutments can impact adjacent water bodies when drilling muds escape from the bore/shaft and into the environment. Ecology expects WSDOT to implement BMPs to prevent impacts to water bodies when performing grout injection techniques.

WSDOT has policies to address soil and other geotechnical issues in WSDOT *Geotechnical Design Manual* M 46-03, during construction for design bid build and design build projects.

Please see well decommissioning requirements for the removal of piezometers and the decommissioning of wells (see *Geotechnical Design Manual* Chapter 3).

600.03(2) Air

WSDOT's policy implements BMPs for preventing pollutants that impact air quality during construction. Local air pollution authorities are concerned with fugitive dust, which is particulate matter suspended by wind or human activities. *Standard Specifications* Section 1-07.5(4) requires the contractor to follow the rules of the local air pollution authority. A list of BMPs to prevent fugitive dust is available from the Associated General Contractors of Washington in the publication, *Guide to Handling Fugitive Dust From Construction Projects*. In the counties under the Puget Sound Clean Air Agency's jurisdiction (King, Kitsap, Pierce, and Snohomish), WSDOT projects must follow the *Memorandum of Agreement with Puget Sound Clean Air Agency – Fugitive Dust*.

WSDOT has a no idle policy that directs employees to turn off engines when their vehicles are not in motion.

Refer to Chapter 425 for additional guidance.

600.03(3) Stormwater & water quality

Refer to **Chapter 430** and WSDOT's Stormwater & water quality and Environmental during construction webpages for policy and procedures on ensuring compliance related to stormwater, water quality and groundwater.

600.03(4) Wetlands & other waters

WSDOT's Wetlands Protection and Preservation policy E 1102.00 directs employees to protect wetlands during construction. The contractor is required to restore any fencing damaged or removed throughout the life of the project (see *Standard Specifications* Section 8-01.3(1)). Wetlands that are not permitted for impact must be protected by HVF (See Section 600.09). Maintaining the fence will ensure that contractors don't cause impacts to areas that have not been permitted.

Changes to the limits of work require re-evaluation of wetlands. If the impacts to wetlands change, the project permits and mitigation requirements may also need to change. These changes must be coordinated through the project environmental coordinator and provided to the wetland mitigation design team, so that WSDOT can apply for permit amendments.

The PE and Construction Inspectors should seek assistance from the Region or HQ wetland biologist supporting the project as needed to evaluate wetland issues that arise during construction. The environmental coordinator should secure approval from permitting agencies before deviating from mitigation plans and permits. If a deviation occurs before you receive approval, the PE should work with the Region environmental coordinator to report the deviation to permitting agencies.

Compacted soils can decrease the success of wetland compensation sites by changing surface hydrology and increasing competition pressure on native plants. When constructing wetland compensatory mitigation sites, use the following measures to minimize soil compaction:

- Use low ground pressure equipment
- Restrict access points on the compensation site
- Limit paths or roadways within the site
- Rip or till compacted soils
- Use mats such as steel or plastic plates or hog fuel to reduce compaction caused by equipment

600.03(5) Fish, wildlife & vegetation

See Chapter 436 and WSDOT's Environmental during construction webpage for policy and procedures on ensuring compliance related to fish, wildlife and vegetation.

600.03(6) Noise

Noise generated during construction affects both people and wildlife. Chapter 446 states that WSDOT's policy is to comply with the local jurisdiction's noise ordinance. If night work is planned, the project may have a noise variance with specific conditions. WSDOT and the contractor must follow all conditions pertaining to the noise variance.

Chapter 436 states that conditions that protect wildlife from noise originate from consultations for ESA, Marine Mammal Protection Act, Migratory Bird Treaty Act, and Gold and Bald Eagle Protection Act. The contract provisions will contain specific noise requirements that must be followed by the contractor. These typically take the form of timing restrictions and in-water work windows. In some cases, the trained biologists are required to be on site during pile driving in-water.

600.03(7) Hazardous materials & solid waste

See Chapter 447 and WSDOT's Environmental during construction webpage for policy and procedures on ensuring compliance related to hazardous materials (HazMat) and solid waste management.

600.03(8) Transportation

WSDOT's policy is to protect pedestrians and the traveling public as they travel through construction projects. *Construction Manual* Section SS 1-07.23(1) clarifies the responsibilities for the PE to oversee contractor compliance for protecting pedestrians during construction and mitigation for any impacts. WSDOT must also ensure minimal disruption to existing modes of transportation. Refer to *Construction Manual* Section SS 1-07.17 for policy related to railroad traffic. See Chapter 455 and WSDOT's Environmental during construction webpage for more information on land use and transportation.

600.03(9) Cultural resources

It is WSDOT policy to avoid impacts to archaeological and historic resources that may be encountered during construction (Chapter 456). *Standard Specifications* Section 1-07.16(4) provides an overview of compliance procedures and policies pertaining to historic and archaeological resources during construction, including the inadvertent discovery of human skeletal remains.

A project specific Inadvertent Discovery Plan (IDP) or Unanticipated Discovery Plan (UDP), developed by a Region/Mode/Megaprograms Cultural Resources Specialist, is required to address the unanticipated discovery and treatment of cultural resources that may be encountered during construction. Should archaeological materials or (suspected) human remains be discovered during project activities, refer to the IDP/UDP and notify the appropriate federal, state, and tribal partners. The Contractor shall (1) notify the PE of any such finds, and (2) cease all work adjacent to the discovery in an area adequate to provide for the total security and protection of remains.

600.03(10) Public services & utilities

Construction Manual Section SS 1-07.23(1) describes how WSDOT ensures the contractor minimizes impacts to public services, including but not limited to, public works departments, schools and buses, or police and fire services. *Standard Specifications* Section 1-07.23(1) requires the contractor to conduct all operations with the least possible inconvenience to the public and to provide adequate safeguards to protect the life, health, safety, and property of the public. The contractor must also protect the rights of property owners and businesses adjacent to WSDOT projects.

Impacts to public services vary from project to project, making it difficult to develop standard specifications to address these issues. WSDOT may include special provisions in their contracts to meet the commitments made to local jurisdictions during the environmental review and permitting processes.

WSDOT is committed to a successful partnership with public and private utility companies. *Construction Manual* Section SS 1-07.17 addresses responsibilities for both the PE and the contractor to coordinate project work with utility companies when necessary. The *Utilities Manual* M 22-87 explains that utility companies are required to obtain their own permits and are responsible for compliance when working within WSDOT Right of Way (See Chapter 458).

600.04 Preparation for construction

600.04(1) Prepare an Environmental Compliance Notebook for the project

WSDOT's *Construction Manual* Section 1-05.1 states that it is WSDOT policy is to incorporate all environmental commitments into the contract. Compiling all the environmental requirements, reference materials, and contact information into one place is a useful tool for PEs and their staff. The project can prepare an Environmental Compliance Notebook (or Binder) in order to accomplish this task. WSDOT's *Construction Manual* Section 1-05.1 recommends that the PE use relevant information from the Environmental Compliance Notebook during the preconstruction meeting (See Section 600.04(2)) and throughout the project. The environmental coordinator should communicate with the Project Office to determine who is responsible for preparing and maintaining the Environmental Compliance Notebook.

A list of commitments, or the commitment file, is an important component of the Environmental Compliance Notebook. See Chapter 490 for information on establishing a commitment file, and Chapter 590 for incorporating commitments into contracts. WSDOT staff can use CTS to generate and maintain a commitment file (including all environmental commitments that must be considered during the life of the project) for inclusion in the Environmental Compliance Notebook. Refer to the help menu within CTS for instructions on how to use CTS to manage commitments and generate a list of all commitments.

An Environmental Compliance Notebook includes, but is not limited to, the following information:

- Contacts (e.g., WSDOT Region/Mode/Megaprograms Environmental, Design and Construction Offices; contractor/Design-Builder; resource agencies; emergency spill reporting)
- Commitment file
- Environmental notification requirements
- Permits and Approvals
- Inspection forms/checklists
- UDP or IDP
- TESC Plan
- SPCC Plan
- Any other project-specific plans and associated necessary forms (e.g., TSD Plan, Wetland/Stream Mitigation Plan; Fish and Aquatic Species Exclusion Plan)
- Good Faith Inspection (GFI) report(s)
- A copy of the Design and Construction ECAPs

It is recommended that an electronic copy of the Environmental Compliance Notebook be saved to the project files and that a copy is always accessible at the project site.

For Design-Build projects, refer to the project-specific Request for Proposal (RFP) for submittal requirements and schedules (See WSDOT *Design-Build Manual* M 3126 Chapter 4 for more information).

600.04(2) Discuss environmental compliance at the preconstruction meeting

Standard Specifications Section 1-07.9(1) states that the contractor has responsibility for compliance requirements associated with all parts of the Work necessary to complete the contract. *Construction Manual* Section 1-05 requires the PE to discuss the project with the contractor and exchange a variety of information, including compliance expectations. In most cases, the PE and contractor discuss the project and exchange information at a preconstruction meeting. A preconstruction meeting occurs after contract award and prior to construction activities. RCW 47.85.030 requires WSDOT to conduct preconstruction meetings, as does the *Memorandum of Agreement concerning the Implementation of the Fish and Wildlife Hydraulic Code for Transportation Activities*. WSDOT uses this meeting to establish environmental expectations with the contractor. An expectation will be that environmental commitments cannot be changed through innovative cost saving proposals or other similar contractor suggested changes. Alternatively, for projects with complex environmental issues, it may be necessary to hold an additional environmental-specific preconstruction meeting.

Staff from the Region/Mode/Megaprograms Environmental Office should coordinate with the PE to determine if and how to support the PE at preconstruction meetings. Consider discussing the following topics at the preconstruction meeting:

- Locations and protection of environmentally sensitive areas
- Risky elements of the construction project
- Schedule for earth work and implementation of BMPs
- Inspections and documentation (e.g., GFI reports)
- Expected content and schedule of submittals from the contractor, such as the TESC, SPCC, and TSD Plans
- Verification that credentials exist and are current for the environmental work, for example: CESCL certification and 40-hour HazMat certification

600.04(3) Take environmental training

Although the contractor is responsible for compliance when delivering a project, RCW 47.85.040 instructs WSDOT to continue efforts to improve training and compliance. Specifically, WSDOT must provide training in environmental procedures and permit requirements for those responsible for project delivery. Note that some permits or approvals may have specific training requirements (e.g., the NPDES Municipal Stormwater Permit requires that all WSDOT staff responsible for designing and implementing TESC Plans take WSDOT's Construction Site Erosion & Sediment Control Training). WSDOT staff can find a listing of instructor-led and online courses relevant to environmental compliance in WSDOT's Learning Management System (LMS) course catalog. Staff may also contact the Region/Mode/Megaprograms Environmental Office or HQ Environmental Services Office for additional training opportunities.

600.04(4) Provide notifications and submittals to resource agencies

Project permits and approvals often require WSDOT to provide notifications or submittal to resource agencies prior to beginning or completing certain activities. Failure to provide required notifications or submittal is a noncompliance event. The PE should work with staff and from the Region/Mode/Megaprograms Environmental Office to determine which and when activities require notifications and submittals for the project.

Examples of activities or situations that might trigger a notification and/or a submittal include:

- Geotechnical activities like pile driving and removal, and well installation and removal.
- Underground storage tank removal
- Demolitions
- Preconstruction meeting
- Request for Chemical Treatment
- In-water work
- Completion of project work
- Noncompliance with a permit condition or regulation
- Sampling that indicates an exceedance
- Stream restoration/reclamation
- Permitted work within wetlands

- Removal of contaminated soil
- Stream diversions
- Mining (including surface pits)
- Wetland or stream mitigations site construction, which requires Right of Way plan or Sundry Site plan submittal

600.04(5) Mark clearing limits and protect sensitive areas

All WSDOT projects have boundaries that must be marked to keep contractors from clearing land not permitted for impacts. *Construction Manual* Section SS 2-01.3(1) provides instructions on marking clearing limits. The *Temporary Erosion and Sediment Control Manual* M 3109 and the *Standard Specifications* Section 1-08.4 requires these limits be marked prior to the start of clearing activities. Flagging, staking, and silt fence, for example, are some appropriate methods to define the project boundary. It is the responsibility of the Region/Mode/Megaprograms Environmental Office to compare the permit drawing to the contract plans and confirm the permitted area of impact is correctly shown in the plans with the HVF symbol.

WSDOT contracts require HVF to be installed as a first order of work. Use HVF to protect sensitive areas and their buffers where impacts are not permitted. The HVF shall be maintained throughout the life of the project. Sensitive areas include, but are not limited to:

- Wetlands and their buffers
- Surface water features and their buffers
- Mitigation areas
- Areas of vegetation to be preserved
- Archaeological and historical features
- Known Contaminated areas beyond clearing limits

600.05 Compliance during construction

600.05(1) Enforce the contract during construction

WSDOT's policy, as explained in Chapter 590, is to fully supplement contracts with environmental commitments. As a result, enforcing the contract is the best way to obtain compliance with a majority of WSDOT's commitments and avoid additional impacts.

The contract is defined in *Standard Specifications* Section 1-04.2 and includes: Addenda, Proposal Form, Special Provisions, Contract Plans, Amendments to the Standard Specifications, *Standard Specifications*, and *Standard Plans*. *Standard Specification* Section 1-05 describes the authority of the engineer, assistant engineers, and inspectors, which is critical to enforcing the contract. Refer to *Construction Manual* Section 1-05 for more information about the PE's authority, and Section 8-01 for contract enforcement expectations (specifically with regard to erosion control).

WSDOT employees must make sure the contractor's work complies with the environmental documents and permits. Tracking commitments using CTS or other commitment tracking tool assists the project in overseeing environmental compliance during construction, especially if the commitments have been accurately tied to specific contract documents (see Chapter 590). When a project is not complying with a permit or environmental regulation,

the PE must immediately order the contractor to stop all nonconforming work and implement measures necessary including reporting (RCW 47.85.030(4)). Refer to ECAP to learn more about how to recognize and rectify environmental noncompliance and ensure prompt notification to WSDOT management and resource agencies (Design ECAP located in the WSDOT *Design Manual* Section 225.05(1) and Construction ECAP located in the WSDOT *Construction Manual* Section 1-07.5).

600.05(2) Respond to project modifications

There are times during construction when the scope of the project changes in order to accommodate additional work, save money, shorten project timelines, minimize impacts to traveling public, or for safety. These are all legitimate reasons, but the impacts of the change must be evaluated to determine whether WSDOT needs to obtain permit amendments, apply for a new permit, or re-evaluate impacts to comply with permits and approvals like NEPA/SEPA, ESA, and Section 106 of the National Historic Preservation Act. If so, WSDOT must allow extra time to obtain additional permits or approvals. Make sure to coordinate with the Region/Mode/Megaprograms Environmental Office when a project modification is proposed. Also, ensure that updated or new commitments are entered into CTS or other commitment tracking tool (see Chapter 490).

For Design-Build projects, refer to the project-specific RFP for more information on how to respond to project modifications (see WSDOT *Design-Build Manual* Chapter 4 for more information).

600.05(3) Respond to noncompliance

WSDOT employees are obligated to report noncompliance (RCW 47.85.030(3)(a)). WSDOT's ECAP (as described in the *Design Manual* Section 225.05(1) and the *Construction Manual* Section 1-07.5), provides instructions on how to respond to a noncompliance event, including the requirement to record all noncompliance events into CTS (regardless as to whether the project is using CTS for commitment tracking purposes).

600.06 Construction close out for environmental

Policies associated with construction close out are described below. See WSDOT's Environmental during construction webpage for discipline-specific procedures as-sociated with construction close out.

600.06(1) Close commitments upon completion

WSDOT is committed to tracking commitments (RCW 47.85.040), which includes closing them upon completion. All commitments need to be closed out to ensure no future liability and appropriateness for final payment. For Design-Bid-Build projects, the environmental coordinator is typically responsible for closing out commitments once they are fulfilled. Most construction commitments are performed by the contractor, so achieving contract physical completion should be cause for closing out the commitment; however, it is recommended that projects close out commitments as appropriate throughout the life of the project to avoid more work at the time of project completion. The environmental coordinator confirms with the PE (or designee) that the work associated with each commitment is complete, and updates the commitment file to reflect the status as closed; if appropriate, how the commitment was fulfilled should also be documented.

For Design-Build projects, the Design-Builder must prepare an Environmental Commitment Close Out Report per the RFP (see WSDOT *Design-Build Manual* Chapter 4, as well as the instruction boxes within RFP Template, Section 2.8 Environmental, for more information).

Closing out commitments is a difficult task considering the volume of commitments. However, WSDOT employees that use CTS to track and manage commitments can easily close commitments using the "Commitment Status" feature; refer to the help menu within CTS for instructions on how to close out commitments within CTS.

600.06(2) Prepare Right of Way or Sundry Site plans and as-built reports for wetland and stream mitigation efforts

Submit the Right of Way or Sundry Site plan as evidence of permanent compensatory mitigation site protection as required by the Corps 404 and Ecology 401 permits. See the permit conditions for the submittal due date for Right of Way/Sundry Site plans.

Meet with the PE (or designee) to discuss Right of Way/Sundry Site submittal requirements for the compensation site. Transmit the Right of Way/Sundry Site plan update request to the Region Right of Way Office (Ferries and Megaprograms projects work with the Region or HQ Right of Way Office, depending on the project). The Right of Way engineer will develop a draft Right of Way/Sundry Site plan update including text that shows the permit number. The area to be protected in perpetuity must be labeled as "Mitigation Site" with the compensatory mitigation site name. Review the Right of Way/Sundry Site plan draft for accuracy and submit to the GeoMetrix Office. The GeoMetrix Office will prepare the Right of Way/Sundry Site map in accordance with the permit conditions.

Go to the Manage compensatory mitigation sites section on WSDOT's Environmental during construction webpage to find instruction on how to prepare as-built reports.

600.06(3) Initiate post-construction monitoring

Wetland mitigation monitoring

If a wetland compensatory mitigation site was constructed for the project, WSDOT is obligated to monitor wetland mitigation sites for up to ten years. As construction nears completion, the PE must submit information to the HQ Wetland Program so monitoring can commence. The wetland monitoring group needs the as-built plans to begin monitoring. Include the as-built plan when you submit the monitoring start-up form. Go to the Manage compensatory mitigation sites section on WSDOT's Environmental during construction webpage to find the monitoring start-up form and instructions.

Fish passage

ESO's Stream Restoration Program takes the lead on monitoring and storing information on WSDOT fish passage projects.

WSDOT evaluates all fish passage projects immediately upon completion of construction to ensure they conform to construction permits and design plans. Sites are also evaluated for their ability to pass fish using WDFW's barrier assessment methods.

In accordance with the U.S. v. WA Culvert Injunction, representatives from tribal nations and state agencies subject to the injunction agreed upon and finalized the Monitoring Implementation Guidelines in September 2015, which are the basis of WSDOT's Fish Passage Monitoring Plan.

The Monitoring Plan provides a protocol that can be broadly applied to ensure a consistent and efficient post-project monitoring process for all WSDOT fish passage projects, and satisfies all state and federal permit requirements. WSDOT's Fish Passage Monitoring Plan and Injunction Post-Project Monitoring Template are available for download from the "Fish Passage Program Delivery" tab of WSDOT's Fish Passage Database. Fish Passage monitoring results are available for barriers corrected since 2013, through WSDOT's Fish Passage Database, and are available and accessible to all WSDOT staff. Monitoring reports can be generated through the database for each site monitored. Monitoring reports are also available publicly online through WSDOT's interactive Fish Passage Webmap; click on a corrected barrier and select "more info" under the site attributes (reports available for barriers corrected since 2013).

600.06(4) Coordinate long-term maintenance

WSDOT regularly makes project-level commitments that require long-term care. Ensure that the commitment file includes long-term commitments, and coordinate with WSDOT's Maintenance and Operations personnel. It is vital that Maintenance and Operations personnel receive a copy of and understand these long-term compliance expectations, including maintenance for mitigation sites. WSDOT must maintain these sites in perpetuity. Transition from post construction wetland monitoring to maintenance is specifically described in Chapter 700. If using CTS to track commitments, ensure that long-term commitments are assigned to the maintenance phase of the project; refer to the help menu within CTS for instructions on how to assign project phase to a commitment and how to produce a report that specifically lists maintenance phase commitments.

600.07 Applicable statutes and regulations

- Transportation Project Delivery and Review – Chapter 47.85 RCW
- Water Pollution Control – Chapter 90.48 RCW
- Water Quality Standards for Surface Waters of the State of Washington – Chapter 173-201A WAC

600.08 Abbreviations and acronyms

CESCL	Certified Erosion and Sediment Control Lead
CSWGP	Construction Stormwater General Permit
CTS	Commitment Tracking System
ECAP	Environmental Compliance Assurance Procedure
Ecology	Washington State Department of Ecology
ESA	Endangered Species Act
ESO	Environmental Services Office
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
PE	Project Engineer
PS&E	Plans, Specifications, and Estimates
RCW	Revised Code of Washington
RFP	Request for Proposal
SEPA	State Environmental Policy Act
SPCC	Spill Prevention, Control and Countermeasures
TESC	Temporary Erosion and Sediment Control
TSD	Temporary Stream Diversion
WAC	Washington Administrative Code

600.09 Glossary

These definitions provide context to achieve environmental compliance.

Commitment – An obligation that WSDOT makes within an environmental document or agreement for the project; or an expectation imposed upon WSDOT by another agency through a permit or approval for the project. Commitments can be either the agency's or the contractor's responsibility to implement.

Commitment File – This file serves as the repository for all final environmental documents leading to development of the contract.

Commitment Status – The status of commitments (opened, closed, cancelled, etc.) in the WSDOT Commitment Tracking System (CTS).

Commitment Tracking System – The Commitment Tracking System (CTS) is a WSDOT web application that allows you to store commitments in a secure computer network server, plus manage the responsibility (WSDOT or contractor) and implementation method (guidance document or contract) for the commitment. It also allows you to store compliance records, document the status, and report details about commitments from their inception through project delivery and on to maintenance.

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700.01 Environmental requirements for maintenance and operations
700.02 WSDOT maintenance and operation plans and policies
700.03 Interagency agreements for maintenance activities
700.04 Permits and approvals
700.05 WSDOT manuals
700.06 Abbreviations and acronyms

700.01 Environmental requirements for maintenance and operations

The purpose of this chapter is to summarize environmental requirements and procedures that apply to the Washington State Department of Transportation (WSDOT) Maintenance and Operations Program.

At WSDOT, highway maintenance includes both maintenance and operations. The maintenance service objective, stated in the State Highway Systems Plan, is to "maintain and operate state highways on a daily basis to ensure safe, reliable, and pleasant movement of people and goods."

Maintenance work is performed to care for and maintain the highway and associated features so it substantially retains its original intended use and function. Maintenance activities include patching pavement, cleaning ditches and culverts, repairing slopes and streambank stabilization structures, controlling vegetation, and painting stripes on the road surface.

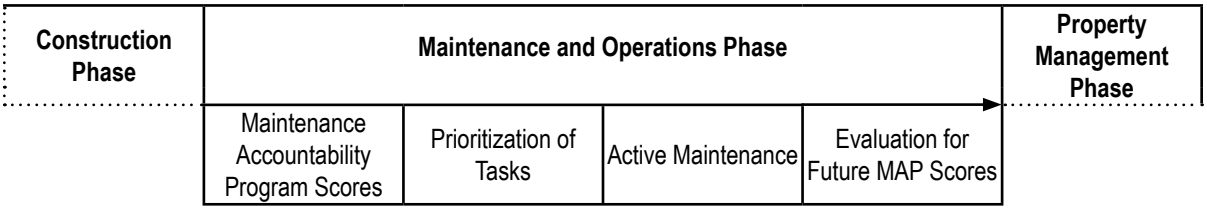
Operations activities provide a direct service to ensure reliable use of the highway system. Activities include operating rest areas, reversible lane gates, highway lighting, traffic signals, snow and ice control, and keeping the roads operational during a disaster.

700.01(1) Project management phases and maintenance

Often environmental commitments made years before during design and environmental review and environmental permitting and PS&E will require ongoing maintenance and attention. Exhibit 700-1 illustrates the relationship between maintenance and operations and preceding phases of WSDOT's transportation decision making process.

Among the maintenance activities that may impact the environment are painting, sanding, anti-icing, applying herbicide, mowing and brush control, restoring native plants, and maintaining drainage facilities. Materials stored and used at maintenance facilities also have the potential to adversely impact the environment. The Maintenance and Operations Office provides environmental support at WSDOT facilities by assessing for the presence of hazardous or contaminated materials; managing disposal of hazardous or problematic waste; and providing basic regulatory awareness to Maintenance and Operations personnel.

Exhibit 700-1 Maintenance and Operations Phase



700.02 WSDOT maintenance and operation plans and policies

WSDOT's E 1018 *Environmental Policy Statement* issued by executive order on April 7, 2009 makes it clear that WSDOT will comply with environmental requirements and that it is each individual employee's responsibility to ensure that happens.

In 2003, WSDOT received coverage under the Regional Road Maintenance Program (RRMP) approved by NOAA along with the *Regional Road Maintenance Endangered Species Act Program Guidelines* that include various general practices and specific practices (such as BMPs) that WSDOT will use to avoid and minimize adverse impacts to fish and aquatic habitat. In areas where none of the referenced documents apply, and there is potential for a maintenance activity to harm a fish or aquatic habitat protected under the ESA, BMPs will still be utilized to avoid and minimize adverse impacts.

The organizational structure of the program includes Regional Maintenance Environmental Coordinator (RMEC) positions that are dedicated to support environmental compliance in each of the regions. WSDOT uses statewide Regional Maintenance Environmental Coordinator Meetings to identify and announce any modifications or changes to the RRMP. New technologies are also discussed at these meetings. Modifications are shared with NOAA Fisheries for concurrence to maintain the status of "ESA compliant." Additional forums are utilized or created if needed to adequately include key stakeholders (i.e., federal and state regulatory agencies and additional WSDOT personnel) in changes of applicable environmental protection practices.

The Environmental Compliance Assurance Process for the maintenance program were updated in 2015. The purpose is to provide notification information and procedures to prevent noncompliance events or violations. These procedures cover notification for spills, planned in-water work, emergency in-water work, BMP performance, and violations.

Training is an important part of implementing the RRMP. All new maintenance staff are trained on how to apply the program during the annual maintenance academy. Training includes both classroom and field courses to understand how to apply BMPs to achieve environmental outcomes. Training is also provided at the regional level on an as needed basis to ensure field operations are up to date on current compliance expectations.

WSDOT ESO also provides training on Guidance for the Protection of Terrestrial Species protected under ESA. Guidance documents are in place for each of the region maintenance areas. They identify special management areas and BMPs to avoid and minimize impacts to terrestrial species including birds, plants and animals.

WSDOT has developed Plans for maintaining vegetation along our highways to provide a "how to" guide for managing roadsides at the maintenance area level throughout the state. These plans determine the right tool or combination of tools, for the right plant at the right place and time. Vegetation management plans cover mowing and trimming, selective use of herbicides, improving soils, planting native plants, and the care of wetland mitigation sites. The Secretary's Executive Order E 1102 *Wetlands Protection and Preservation* directs WSDOT employees to protect and preserve wetlands and manage wetland mitigation sites and other department owned wetlands for long-term stewardship.

700.02(1) Deteriorating Culverts and Preservation

The culvert injunction requires the State to correct fish barrier culverts at the end of the culvert's useful life. Prior to programming a deteriorating culvert for replacement using I-4 Funding, a Level 2 inspection must be completed documenting a poor or critical culvert condition.

WSDOT maintenance staff conduct routine culvert inspections, twice a year, once before the fall/winter storms and once after the rainy season has ended to ensure they are clean and in good operating condition. Culverts may be inspected more or less frequently based on the past history of the particular culvert. When conducting a Level 1 inspection, if maintenance staff observe a problem exists with the culvert, they will describe the condition in the Highway Asset Tracking System (HATS), and the region hydraulic engineer will be alerted.

If the Level 1 inspection results in a poor or critical rating, then it is assigned to a Hydraulic Engineer for a Level 2 inspection. Level 2 inspection is conducted by a Hydraulic engineer and is a more extensive evaluation of the culvert including hydraulic capacity, ability of the culvert to pass wood and sediment, and an evaluation of the potential risks to the highway and will result in recommendations and timeline to correct deficiencies.

700.02(2) Fish Passage Project Adaptive Management

When a Stream Restoration Monitoring Biologist monitors site and observes project at risk of losing fish passage or stream function, they shall notify Fish Passage Delivery, Hydraulics, and Region Environmental. The Region Environmental Manager and Fish Passage Tribal Liaison will notify and coordinate with WDFW and the Tribes. Hydraulics staff evaluate problematic sites and writes memos with recommendations for repair or retrofit. Hydraulics memos are sent to the Fish Passage Delivery Program Manager who will forward to the Region Engineering Manager, Region Environmental Manager, and CPDM, with a request for scoping and cost estimating for the repair or retrofit. The region is responsible for scoping, designing, permitting, and constructing the fish passage repair or retrofit. Once the repairs are made, a Stream Restoration Program monitoring will inspect the project for compliance and report findings in WSDOT's Fish Passage Database.

The culvert injunction requires WSDOT to monitor barrier corrections and evaluate whether their efforts to provide fish passage are effective in meeting the standards of the injunction. The injunction requires WSDOT to take reasonable steps to maintain their culverts in such a manner as to provide fish passage and to protect salmon habitat. Furthermore, WSDOT must correct problems within a reasonable amount of time, when any culvert corrected under the injunction remains a barrier culvert after attempted correction, or again becomes a barrier culvert following an initially successful correction.

The WDFW MOA also outlines WSDOT requirements for work related to emergency culvert work and fish passage barrier replacement.

700.03 Interagency agreements for maintenance activities

The following interagency agreements apply to the maintenance program activities. Appendix B includes an index to all of WSDOT's environmental interagency agreements. Interagency agreements also exist at the regional level. For example, some regions may have agreements with their district USFS office, district WDFW, or local agency environmental departments.

700.03(1) MOA Between WDFW and WSDOT – July 2016

The MOA describes how WSDOT and WDFW will cooperate to ensure that state transportation projects protect fish life and habitats, and ensure consistent and uniform application of RCW 77.55 (construction in state waters) and WAC 220-660 (hydraulic code rules). It includes procedures for emergency/disaster maintenance and repair. Appendix F of the MOA is maintenance guidelines.

The WDFW MOA outlines WSDOT's obligation to create and maintain an effective Chronic Environmental Deficiencies (CED) program to maintain some of the benefits of the agreement. The purpose of the CED program is to develop and implement long-term solutions at locations where frequent highway maintenance and repairs have negative impacts on fish and fish habitat. See 300.xx for more information on this program. To efficiently implement the program, WSDOT maintenance staff are tasked with notifying the CED Coordinator of potential new CED sites, providing updates on the status of active CEDs, and assisting with prioritization of CED projects.

700.03(2) MOU on Highways Over National Forest Lands

This June 2019 MOU establishes procedures for coordinating transportation activities on national forest lands.

Provisions applicable to maintenance and operations:

- WSDOT will coordinate with USFS on maintenance activities that might affect national forest lands, including: removal/disposal of dangerous trees, disposal of slash or other waste, material source or storage, changes to drainage patterns, snow and avalanche control, and rock scaling.
- WSDOT will work with USFS to develop roadside vegetation management plans.
- WSDOT will furnish and maintain all standard highway signs, including guide signs requested by the USFS.
- WSDOT will coordinate with USFS for third party occupancy or use by utility facility installations on WSDOT easements.
- Specifies responsibilities for signage for maintenance or emergency activities.
- Specifies responsibilities for control of access to WSDOT easements by USFS or its permitees.

700.04 Permits and approvals

As noted under Section 700.02, the RMEC is responsible for coordinating or processing required permits and approvals applicable to WSDOT maintenance activities at the regional level. This may include Federal, State, and Local Permits. Most WSDOT maintenance activities are covered by general or programmatic permits (e.g. NPDES permits and General HPAs). Many of these permits are located on the WSDOT Environmental permits & approvals webpage.

In 2014, Ecology issued a NPDES Municipal Stormwater Permit to WSDOT. This permit covers the management of WSDOTs stormwater conveyance system. The Maintenance and Operations Office supports management and compliance with the permit.

Additionally, when maintenance activities are carried out on tribal lands, environmental protection measures may be required by the tribal government or the U.S. Environmental Protection Agency (USEPA). Local governments may also have authority to issue permits regulating activities in their jurisdiction.

700.05 WSDOT manuals

Technical guidance is summarized by reference to the WSDOT manuals described below. Refer to these documents for details. Most manuals can be accessed online from the WSDOT Publications Services webpage.

***Maintenance Manual* M 51-01 –** This manual covers procedures for highway maintenance. In several chapters, maintenance activities have environmental implications: emergency operations (hazardous materials spills), drainage maintenance (aquatic habitat, water quality, wetlands, shorelines), bridge repair, roadside maintenance (integrated vegetation management), snow and ice control, and procuring materials from quarries or pits.

***Maintenance Accountability Process Manual* –** This document is the primary tool used by the Maintenance Office for evaluating program service delivery and identifying budget investment choices.

***Roadside Manual* M 25-30 –** This manual provides consistent guidelines for roadside management, and supplements guidelines in the *Roadside Policy Manual* M 3110. It is organized around a framework of roadside functions: operational, environmental, visual, and auxiliary. Environmental functions include water quality preservation, protection, and improvement; stormwater detention and retention; wetland and sensitive area protection; noxious weed control; noise control; habitat protection and connectivity; air quality improvement; and erosion control. Sections of the manual offer resources on designated and sensitive areas, wetlands, water quality, wildlife, and noise abatement.

700.06 Abbreviations and acronyms

BMP	Best Management Practice
ESA	Endangered Species Act
HPA	Hydraulic Project Approval
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
PS&E	Plans, Specifications, and Estimates
RRMP	Regional Road Maintenance Program
RMEC	Regional Maintenance Environmental Coordinator
USFWS	United States Forest Service
USEPA	United State Environmental Protection Agency

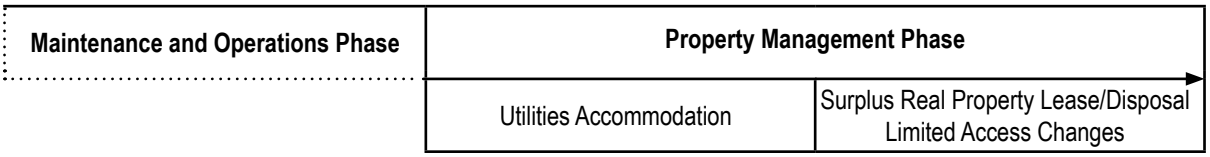
Chapter 800 Property Management and Disposal

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800.01 Overview

The property management phase of the Transportation Decision-Making Process has three major elements: utility accommodation, surplus real property lease/disposal, and changes in limited access as shown in Exhibit 800-1.

Exhibit 800-1 Property Management Phase



This chapter describes the environmental policies related to each of these elements and provides links to the appropriate manuals that describe the procedures for accomplishing this work.

800.02 Environmental commitments for utilities accommodation

The *Utilities Accommodation Policy* M 22-86 enables the department to allow the installation of public and private utilities within the state right of way provided that they do not interfere with the free and safe flow of traffic, or otherwise impair visual quality. This policy was established in cooperation with the Federal Highway Administrations and is consistent with state law and the American Association of State Highway and Transportation Officials (AASHTO) guidelines.

Utility companies may request permission from WSDOT to install their facilities within the state rights of way under WSDOT-issued permits or franchises. These projects are almost always funded by the utility without any state or federal funding. The process is described in *Utilities Manual* Chapter 1. Utility funded projects are exempt from SEPA per WAC 197-11-800(23). In addition, utility projects seldom have a federal nexus and typically don't trigger NEPA review unless proposed within interstate rights of way. When proposed within the interstate system FHWA will require NEPA, ESA, and Section 106 compliance, as listed the *Utilities Manual* Section 120.12. To ensure your project is in compliance, coordinate review efforts with the Region Utilities Office.

800.02(1) Utility work performed as part of WSDOT projects

Design Manual Chapter 510 describes the region's responsibility to ascertain ownership of all utilities and arrange for necessary adjustment of utilities, including relocation, if necessary.

Utilities Manual Chapter 6 describes general practices, policies, and procedures with respect to coordinating WSDOT project with utilities when a utility company's facilities are impacted. It includes detailed procedures and examples for preparing PE agreements and construction agreements. It also includes information on roles and responsibilities, necessary agreements, cost responsibilities, environmental permitting and documentation, project award, and subsurface utility engineering.

For WSDOT projects, potential impacts to utilities must be disclosed during the environmental documentation phase. Impacts to the built and social environment are considered under Social and Community effects (see Chapter 458). The analysis must also consider potential impacts to the natural and manmade environment caused by relocating utility lines. This may be done as part of the WSDOT project or by the utility company. See Section 458.06 and *Utilities Manual* Section 600.09(4) for guidance.

800.03 Environmental considerations in real property disposal/lease

WSDOT may determine that real property owned and under the jurisdiction of WSDOT is no longer required for transportation purposes, or that a non-highway use of WSDOT property should be allowed. If it is in the public interest, WSDOT may lease or dispose of the property by sale or exchange to entities listed in the *Right of Way Manual* M 26-01, or as detailed in state law.

The legislature has mandated that WSDOT surplus and sell properties no longer needed for transportation purposes. Region RES offices periodically review the properties they manage and determine if any should be declared surplus. They also periodically receive requests from the public to lease portions of WSDOT right of way. Region RES determines if these actions are appropriate by preparing a lease/disposal review package for circulation through various disciplines of WSDOT, including region Environmental staff. Region Environmental staff reviews the property for consideration of the environmental issues listed below. The HQ Environmental Services Office provides technical assistance upon request. If the region determines it is appropriate to sell or lease the reviewed properties, Real Estate Services (RES) completes the necessary steps to complete the transaction as further detailed in Chapter 11 of the *Right of Way Manual*.

The Region/Modal Environmental Manager determines if property is eligible for lease or disposal. The decision should take into account the environmental effect of the action, including:

- The potential of the property to fulfill a future transportation need such as stormwater treatment, stream enhancement, noise walls, bridge replacement and roadway realignment.
- The potential for the property to provide environmental mitigation. The potential for the proposed land use to adversely impact the safe and proper operations or maintenance of the highway presently or in the foreseeable future.
- The need to comply with NEPA documentation requirements before seeking FHWA approval of the action.

When FHWA approval is required before WSDOT can make a lease or disposal decision, WSDOT's action triggers a federal nexus. If a federal nexus is created, NEPA, NHPA, and ESA documentation must be completed prior to lease or disposal (23 CFR 771.117(d)(6)). Two common real estate decisions requiring FHWA concurrence or approval include:

1. When property being considered for lease or disposal is located within the right of way of an interstate highway or within the project limits of any project that FHWA reserves stewardship over.

2. If a parcel considered for lease or disposal was purchased with federal funding and the parcel will be sold for less than fair market value.

If either of these conditions is met the region RES staff will notify region Environmental staff that NEPA has been triggered. NEPA is not required for transactions on non-interstate facilities sold/leased at fair market value.

Property is not appropriate for lease or disposal if:

- It is suitable for a future transportation need such as stormwater treatment, stream enhancement, noise walls, bridge replacement and roadway realignment.
- It is suitable for retention to restore, preserve, or improve the scenic beauty adjacent to the highway.
- It is suitable for inclusion in WSDOT's wetlands inventory.
- It is needed for a park and ride lot, flyer stop, or other programmed or known future highway needs.
- It is suitable for water quality or flow control treatment facility location for future proposed widening or retrofit requirements.
- Hazardous material is present on the site or any necessary cleanup has not been completed.

If none of these environmental uses for the property become evident during the review, the property may be suitable for lease or disposal. If a lease/disposal is denied for any of these uses, region management should be involved to discuss the cost analysis required to retain the property, which may include assessments, ongoing costs to clear the property of illegal dumping or cleaning of frequent houseless encampments.

The Region/Modal Environmental Manager will determine the appropriate level of environmental documentation and resources to be expended for each property review. A typical office review of a candidate property includes completion of an Environmental Checklist (Form 220-015). However, in some situations, completion of the checklist may not be necessary due to the size, location, or existing knowledge about the property. In other situations, the checklist may not provide enough information and an Environmental Classification Summary (ECS) form should be completed. The following documentation options may be considered:

- Completion of a memo to file explaining why it was not necessary to complete the Environmental Checklist documenting that there are no endangered species, or historic/cultural concerns associated with the property. At a minimum, the following statement should be included in the explanation: "Complies with NEPA (23 CFR 771.117(d) List), ESA and Section 106 of the NHPA." An explanation should be provided for why no further documentation is needed, such as "the lease/disposal will not lead to construction." Attach a copy of the memo to the electronic engineering review for disposal/lease file.

- Completion of an Environmental Checklist (Form 220-015 or Environmental Classification Summary).
- Completion of an WSDOT Local Programs or state ECS. If this option is chosen, the Region/Modal Environmental Office must attach a copy of the ECS to the RES-ER ECM property review package.
- The proposed lease or disposal may be addressed as part of a larger action in an EA/EIS. If this option is selected, the appropriate document must be referenced in the comment section of the RES-ER ECM property review package and a short summary of the environmental issues attached.

The HQ Environmental Services Office will not conduct a separate environmental review of lease and disposal actions unless specifically requested to do so by the Region/Modal Environmental Manager. If the region recommends lease or disposal of the property, the Environmental Checklist or other documentation is submitted to Headquarters by the region RES office.

800.04 Environmental considerations in disposal of pit sites

WSDOT owns and manages several mineral resources sites across the state commonly referred to as pit sites. Mineral resource sites include gravel pits, rock quarries, or barrow pits developed to produce mineral aggregates for highway projects. If the property to be disposed of is, or was a pit site, the following additional documentation needs to be included in the disposal review package:

- Pit Evaluation Report (Form 350-023)
- Reclamation Plan
- Hazardous Materials Assessment and Remediation Reports

Any suspected hazardous materials on WSDOT property should be reported to the Area Maintenance Superintendent (inside the operating right of way), Region RES Manager (outside the operating right of way), and Capital Facilities Manager. Areas of responsibility may overlap, but these managers maintain close lines of communications and will make sure the HQ Environmental Services Office and Attorney General's Office are consulted for assessment, remediation, and determination of liability. See Chapter 447 for background and technical guidance on hazardous materials.

800.05 Environmental considerations for changes in limited access

Environmental impacts and/or benefits resulting from changes in access control must be disclosed during the environmental documentation phase of the project. This is typically done as part of the discussion of impacts to the built environment and can influence land use and transportation (Chapter 455), or the social and community network (Chapter 458). If a change in limited access control is included in the preferred alternative, you must complete the Environmental Checklist (Form 220-015) or complete as found in the Access Request Checklist following the procedure described in *Design Manual* Chapter 530.

See *Design Manual* Chapter 520 for a general description of the types of access control on state highways, their purpose, and uses. See *Design Manual* Chapter 530 or the Access and Hearings webpage for a description of the process and requirements for Modifications to Limited Access.

800.06 Statutes and regulations

- 23 CFR 645 *Accommodating Utility Facilities*
- 23 CFR 771.117 *Categorical Exclusions*
- 23 CFR 710.409 *Disposal of excess real property*
- 23 CFR 710.405 *ROW use agreements*
- Chapter 47.44 RCW *Franchises on State Highways*
- Chapter 47.52 RCW *Limited Access Facilities*
- RCW 47.12.120 *Lease of Unused Highway Land or Air Space*
- RCW 47.12.063 *Surplus Real Property Program* (disposal)
- WAC 468-34 *Utility Lines – Franchises and Permits*
- Highways Over National Forest Lands MOU with the United States Forest Service

800.07 Abbreviations and acronyms

AASHTO	American Association of State Highway and Transportation Officials
CFR	Code of Federal Regulations
EA/EIS	Environmental Assessment/Environmental Impact Statement
ECS	Environmental Classification Summary
ESA	Endangered Species Act
FHWA	Federal Highway Administration
HQ	WSDOT Headquarters
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
PS&E	Plans, Specifications, and Estimates
RES-ER ECM	Real Estate Services Electronic Review Software within WSDOT's Electronic Content Management (ECM) system
RCW	Revised Code of Washington
RES	Real Estate Services
ROW	Right of Way
WAC	Washington Administrative Code
WUCC	Washington Utility Coordination Council

800.08 Glossary

Franchise – A utility accommodation document that defines utility ownership, type, size, location, construction methods, maintenance, duration, and other information related to the utility installation operating on highway right of way, toll facilities, and the state ferry system.

Utility – Privately, publically, or cooperatively owned lines, facilities, and systems for producing, transmitting, or distributing communications, cable television, electric power, light, heat, gas, oil, crude products, water, steam, waste, stormwater (not connected to highway drainage) and other similar commodities, including any fire or police signal systems, street light systems, and traffic control system interties, which directly or indirectly serve the public (see *Utilities Manual* Chapter 2).

Limited Access – WSDOT controls access to and from the state highway to preserve the safety and efficiency of the facility. Limited access control is accomplished by purchasing the access rights from adjacent property owners. See *Design Manual* Chapter 520 for a policy guidance, implementing regulations, a description of the types of access control, their uses and benefits.

Appendix A Executive Orders

Environmental executive orders issued at the federal and state level can address a variety of policy matters, and they remain active until rescinded. The following are some active executive orders on environmental matters that may affect transportation projects:

Presidential Executive Orders

11514	Protection and enhancement of environmental quality
11988	Floodplain management
11990	Protection of wetlands
12898	Environmental Justice
13006	Locating Federal Facilities on Historic Properties in Our Nation's Central Cities
13007	Indian Sacred Sites
13112	Invasive Species
13166	Improving Access to Services for Persons With Limited English Proficiency
13175	Consultation and Coordination With Indian Tribal Governments
13186	Responsibilities of Federal Agencies To Protect Migratory Birds
13274	Environmental Stewardship and Transportation Infrastructure Project Reviews
13287	Preserve America
13693	Planning for Federal Sustainability in the Next Decade
13766	Expediting Environmental Reviews and Approvals for High Priority Infrastructure Projects
13778	Waters of the US
13807	Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects

Other Presidential Executive Orders can be found at the National Archives website.

Governor's Executive Orders

80-01	Farmland Preservation
80-18	Environmental Permit Processing
81-18	Review of Federal Environmental Documents
89-10	Protection of Wetlands
90-04	Protection of Wetlands
02-03	Sustainable Practices by State Agencies
04-01	Persistent Toxic Chemicals
05-01	Establishing Sustainability and Efficiency Goals for State Operations
05-03	Plain Talk
21-02	Archaeological and Cultural Resources
06-02	Regulatory Improvement
14-04	Washington Carbon Pollution Reduction and Clean energy Action (superseded EO 09-05)
12-02	Workforce Diversity and Inclusion (superseded EO 93-07)

WSDOT Executive Orders

E 1010	Certification of Documents by Licensed Professionals
E 1018	Environmental Policy Statement
E 1025	Tribal Consultation
E 1031	Protections and Connections for High Quality Natural Habitats
E 1032	Project Management
E 1087	Title VI Policy
E 1090	Moving Washington Forward: Practical Solutions
E 1102	Wetlands Protection and Preservation
E 1103	Accommodation of Stormwater Runoff Onto Right of Way

Appendix B Interagency agreements

Over the years, WSDOT has entered into agreements with various agencies to clarify how they intend to deal with various environmental matters. These agreements include Memoranda of Understanding (MOUs), Memoranda of Agreement (MOAs), Implementing Agreements (IAs), and other interagency agreements. However, as circumstances change, these agreements (or parts of them) can become obsolete, and the agencies will occasionally void, replace, or amend their agreements. If you have questions about the status of an agreement, contact the WSDOT Environmental Services Office at 360-705-7493.

WSDOT's current agreements with other agencies on various environmental matters that affect WSDOT's business practices, include the following:

Agreement With	Subject/Link to Agreement
Ecology, WDFW	Alternative Mitigation Policy Guidance for Aquatic Permitting
FHWA, NMFS,USFWS	Assessing Stormwater Effects in Biological Assessments
CTUIR, FHWA	Coordination and Consultation on State Transportation Activities
Ecology	Coordination and Cooperation on Environmental Issues Under Ecology Jurisdiction
USCG, FHWA	Coordinating to Improve Bridge Planning and Permitting
DOH	Drinking Water Well Protection (Sanitary Control Areas)
WSCC	Farmland and Forest Preservation
PSCAA	Fugitive Dust
USFS	Highways Over National Forest Lands
Ecology	*Highway Runoff Manual* Implementing Agreement
ACHP, FHWA, SHPOs	Historic Properties (Nationwide)
ACHP, FHWA, WSHPO	Historic Properties (Statewide Programmatic Agreement Implementing Section 106)
WDFW	Hydraulic Project Approvals Including Fish Passage and Chronic Environmental Deficiencies
FHWA, WSDOT	NEPA Programmatic Categorical Exclusions (PCE)
FHWA, WSDOT	Stewardship and Oversight Agreement
FHWA, FTA, Sound Transit	Noise Methodology and Criteria
FHWA, USEPA	Sole Source Aquifers
WDNR	Utilities on Bridges Over Aquatic Lands
ACOE, Ecology, FHWA, NMFS, USEPA, USFWS, WDFW	Wetland Compensation Bank Program
Ecology	Use of Environmental Covenant Alternatives at WSDOT Sites

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Appendix C Letters, Memos and Directives

Environmental policy and procedure is often set in response to requests by other governmental agencies. These letters, memos and directives remain active until rescinded or superseded. The following documents influence environmental processes associated with transportation projects.

Letters

- FHWA, Division Administrator Dan Mathis letter regarding impacts to Resource Conservation Areas, 2016

Project Delivery Memos

- WSDOT Chief of Staff, Jerry Lindsey PDM 09-02 – High visibility Fence Clarifications, 2009

Directional Memos

- WSDOT Director Environmental Services, Megan White, Directional Memo ESO 2010-02 – guidance on the Avoidance of Agricultural Lands of Long-term Commercial Significance, 2010

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