

SR 167 Master Plan  
Planning and Environmental Linkages Study

# Attachment A, Appendix A. Environmental Resource Next Steps and Implementation Considerations Tables

---

Final Study

JUNE 2023



Prepared by:  
Washington State Department of Transportation



# Introduction

---

The environmental resource next steps and implementation consideration tables should be used by environmental planners and NEPA practitioners to have a starting point for transitioning from planning to implementation and NEPA reviews. This information also provides useful context for ongoing coordination and collaboration with the public and partner agencies. Refer to *Appendix A, Sources and Additional Resources of Attachment B, Existing and Future Conditions Report*, for a list of data sources and references relied on to develop this appendix. Refer to *Chapter 6* of the SR 167 Master Plan PEL Study for a summary of next steps related to phasing and funding and continued collaboration and coordination.

Needs and next steps were analyzed for anticipated impacts for both construction and operations phases of the projects, and they are categorized and described by the following topics:

- **Who:** Agencies and partners that have the potential to be included in coordination.
- **Why:** Regulatory requirements, NEPA and SEPA processes, permits, approvals, and cumulative and indirect impacts to consider when assessing an environmental resource. Refer to *Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report* for a full list of regulatory requirements including Executive Order 12898, Title VI of the Civil Rights Act, and RCW 70A.02 (HEAL Act).
- **How:** Potential measures to avoid, minimize, or mitigate for impacts to environmental resources within the project area. Commitments to mitigate known and unanticipated impacts to environmental resources are required to be documented and managed via WSDOT's Commitment Tracking System (CTS).
- **When:** Timing considerations for any applicable documentation, consultation, permits and approvals, and mitigation measures in order for environmental resource impacts to be appropriately assessed and managed prior to project completion.

# Next Steps and Implementation Considerations Tables

---

The following environmental resources are included in the next steps tables within this section.

- Air Quality
- Climate Change and Climate Vulnerability
- Cultural Resources and Historic Bridges
- Environmental Justice and Equity Priority Areas (includes social resource considerations)
- Fish and Wildlife Habitat
- Fish Passage Barriers
- Flood Hazards
- Geologic Hazards
- Hazardous Materials
- Land Use
- Noise
- Recreational Resources, including Potential Section 4(f) and Section 6(f) Resources
- Visual Resources
- Water Quality and Stormwater
  - Wetlands

# Air Quality, Climate Change, and Climate Vulnerability

**Table 1. Air Quality, Climate Change, and Climate Vulnerability - Next Steps and Implementation Considerations**

Topic and Next Step	Environmental Resource Considerations - Air Quality, Climate Change and Climate Vulnerability
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• U.S. Environmental Protection Agency (U.S. EPA)</li> <li>• Washington State Department of Ecology (Ecology)</li> <li>• Puget Sound Clean Air Agency</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements.</p>
Why? - NEPA and SEPA Considerations	<p>For EA and EIS projects the following is required. Some requirements may differ between air quality and climate change and climate vulnerability.</p> <ul style="list-style-type: none"> <li>• <b>Technical Report:</b> For an EA, the technical report does not include an operational energy analysis using MOVES. (air quality)</li> <li>• <b>Energy Analysis:</b> Required for EIS projects. (air quality)</li> <li>• <b>Mobile Source Air Toxics (MSAT) Analysis:</b> Required for projects that have a meaningful impact on traffic. A quantitative analysis is required if a project has more than 140,000 average annual daily traffic. (air quality)</li> <li>• <b>Greenhouse Gas Emissions (GHG) analysis:</b> A quantitative operational greenhouse gas analysis is required with the MOVES model. The Infrastructure Carbon Estimator model is used for construction and maintenance emissions. (air quality and climate change and climate vulnerability)</li> </ul> <p>Other requirements and considerations include:</p> <ul style="list-style-type: none"> <li>• <b>Conformity:</b> Required if a transportation project is located in a maintenance or nonattainment area. A hot spot analysis or qualitative analysis is required to complete a conformity statement. (air quality)</li> <li>• <b>Climate Change &amp; Project Resilience Analysis:</b> Required to satisfy WSDOT’s directive to consider ways to make their proposed projects more resilient to future climate impacts and severe storm events. (climate change and climate vulnerability)</li> </ul>
Why? - Potential Permits and Other Approvals	<p>The following is required related to air quality, but these items may occur after environmental review prior to construction/implementation:</p> <ul style="list-style-type: none"> <li>• <b>Burn Permit:</b> Required if a project includes outdoor burning of vegetation.</li> <li>• <b>Notice of Construction Permit:</b> Required for any new or modified air pollution source prior to project work that affect the level of air contaminants emitted.</li> <li>• <b>Asbestos Site Inspection:</b> Required for any project demolishing a structure.</li> </ul>
Why? - Cumulative or Indirect Considerations	<p>Scenarios were evaluated using projected traffic volumes for future years; therefore, project-specific air quality analyses should analyze the indirect effects of the Final Study Recommendations and projected traffic growth to air quality. Potential indirect or cumulative effects may also include the following.</p> <ul style="list-style-type: none"> <li>• Projects may also need to analyze indirect effects of greenhouse gas emissions, which may include benefits.</li> <li>• Some projects may require an energy consumption analysis associated with electricity use for projects.</li> <li>• Cumulative impacts related to future projects developed along the SR 167 corridor that increase contributions to GHG and climate change.</li> </ul>

Topic and Next Step	Environmental Resource Considerations - Air Quality, Climate Change and Climate Vulnerability
How? - Mitigation Strategies	<p>Refer to WSDOT Environmental Manual Chapter 425.08 for BMPs to control fugitive dust during construction and to reduce GHG emissions, energy use, and air pollution. Environmental commitments to mitigate known and unanticipated impacts to air quality are required to be documented and managed via WSDOT’s Commitment Tracking System (CTS).</p> <p>Impacts to climate change and climate vulnerability, as well as cumulative impacts, shall be mitigated per guidance provided in the AASHTO Practitioner’s Handbook.</p>
When? - Critical Schedule Considerations	<p>The White House Council on Environmental Quality (CEQ) rescinded the 2019 draft NEPA guidance for greenhouse gases and is updating the federal guidance. Once new guidance is published, WSDOT’s evaluation would need to reflect any changes made to the federal guidance.</p> <p>Air quality analyses should be performed once:</p> <ul style="list-style-type: none"> <li>• The project location’s attainment and maintenance status are identified.</li> <li>• Traffic projections are available.</li> </ul>

# Cultural Resources and Historic Bridges

**Table 2. Cultural Resources and Historic Bridges - Next Steps and Implementation Considerations**

Topic and Next Step	Environmental Resource Considerations - Cultural Resources and Historic Bridges
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• FHWA and WSDOT</li> <li>• Advisory Council on Historic Preservation</li> <li>• Department of Archaeology and Historic Preservation (DAHP)</li> <li>• Tribal Historic Preservation Officers (THPO) and other Tribal entities</li> <li>• National Park Service (NPS)</li> <li>• Other interested and consulting parties</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements. Refer to WSDOT Environmental Manual Chapter 456 for more information on statutes and regulations, and Chapter 456.02(3) for information on local regulations, including landmark or cultural resources ordinances.</p>
Why? - NEPA and SEPA Considerations	<p>For all projects subject to NEPA and SEPA the following is required:</p> <ul style="list-style-type: none"> <li>• <b>Area of Potential Effects (APE):</b> Define this area for cultural resources – may vary for built historic and archaeological resources. Required to determine locations where analysis and documentation would occur.</li> <li>• <b>Comprehensive DAHP WISAARD Search:</b> Required to compile all known and recorded cultural resource sites in the APE.</li> <li>• <b>Study Documentation and Survey Report:</b> Required to 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.</li> <li>• <b>Section 4(f) Documentation:</b> Required under 23 CFR 774 to address project impacts to NRHP eligible or listed cultural resources, if no feasible or prudent alternative is possible to minimize harm. Refer to Recreational, Section 4(f), and Section 6(f) Resources section for further details on Section 4(f) requirements.</li> </ul> <p>Further documentation and consultation differ depending on the scale of the project:</p> <ul style="list-style-type: none"> <li>• <b>Section 106 Review and ACHP Consultation:</b> Required for NEPA projects to confirm findings of cultural resources documentation, including whether project has an adverse effect to historic resources.</li> <li>• <b>DAHP and THPO Consultation:</b> Required by NEPA and SEPA projects to confirm findings of cultural resources documentation, including whether project has an adverse effect to historic resources.</li> <li>• <b>Cultural Resources Compliance Process for Historic Bridges:</b> Per the 2018 Programmatic Agreement between FHWA, FTA, DAHP, ACHP, and WSDOT, required for projects with the potential to affect historic bridges to appropriately document impacts and mitigation measures.</li> </ul>
Why? - Potential Permits and Other Approvals	<ul style="list-style-type: none"> <li>• <b>Archaeological Site Alteration and Excavation Permit:</b> Required by DAHP for any excavation, alteration, defacement, or removal of archaeological objects, resources, or artifacts from archaeological sites or Native American graves, cairns or glyptic records, or non-Native American historic cemeteries or graves.</li> <li>• <b>Archaeological Resources Protection Act Permit:</b> Required by NPS for archaeological investigations or disturbance of sites, including excavation or removal of archaeological resources from federal lands.</li> </ul>

Topic and Next Step	Environmental Resource Considerations - Cultural Resources and Historic Bridges
Why? - Cumulative or Indirect Considerations	<p>Potential indirect or cumulative impacts may include:</p> <ul style="list-style-type: none"> <li>• Indirect effect of increased new building development in project areas.</li> <li>• Cumulative noise and vibration impacts to NRHP-eligible resources from projects in the Final Study Recommendations in combination with other past, present, and future projects.</li> </ul>
How? - Mitigation Strategies	<p>Project designs should be adjusted or designed to avoid effects to historic resources. If avoidance is not possible and adverse effects to historic properties are identified, refer to WSDOT Environmental Manual Chapter 456.07 for details on mitigation efforts to resolve adverse effects to NRHP eligible or listed resources. Consultation is required with the appropriate WSDOT Region, Division, or Mode CRS, the ESO Cultural Resources Program Manager, and local Tribes to develop and formalize appropriate mitigation measures in a Memorandum of Agreement or a Programmatic Agreement. Common strategies for mitigation include excavation, relocation, rehabilitation, recordation, screening, signage, and public interpretation. Environmental commitments to mitigate known and unanticipated effects to cultural resources and historic bridges is required to be documented and managed via WSDOT’s Commitment Tracking System (CTS).</p>
When? - Critical Schedule Considerations	<p>When the project alignment is identified the APE delineation and DAHP WISAARD search can be performed. Depending on the type of project, level of analysis, and potential effects, projects may require fieldwork in addition to a literature search for a better understanding of the resource. The cultural resources study documentation and survey report must be completed prior to developing Section 4(f) documentation. Section 106 and DAHP/THPO consultation shall be ongoing throughout the NEPA process.</p>

## Environmental Justice and Equity Priority Areas

**Table 3. Environmental Justice - Next Steps and Implementation Considerations**

Topic and Next Step	Environmental Resource Considerations - Environmental Justice
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• FHWA and WSDOT</li> <li>• Tribes</li> <li>• General public, identified environmental justice (EJ) communities in EPAs, CBOs, partners, committees, local jurisdictions</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for a full list of regulatory requirements including Executive Order 12898, Title VI of the Civil Rights Act, and RCW 70A.02 (HEAL Act).</p>
Why? - NEPA and SEPA Considerations	<p>Pre-NEPA scoping should include:</p> <ul style="list-style-type: none"> <li>• Community engagement with partners, partners, tribes, and the public which includes environmental justice populations.</li> <li>• Study the community demographics to determine populations present and compare these data to a reference community.</li> <li>• Identifying language service (translation) needs if 5% of the population of 1,000 people in the study area speak English less than 'very well'.</li> </ul> <p>For EA and EIS projects the following is required:</p> <ul style="list-style-type: none"> <li>• <b>Study Area:</b> A study area of 0.5 miles is used to collect existing demographic and community profile information.</li> <li>• <b>Engagement:</b> Documentation of engagement including how engagement was accessible to EJ populations and how input changed the project.</li> <li>• <b>Impacts with Other Disciplines:</b> Use the analyses from other discipline reports or sections of EA/EIS to understand effects of air quality, noise, transportation, etc. and where they occur.</li> <li>• <b>Impacts Determination:</b> Determine whether the severity of the impact is adverse and considerably greater for minority and/or low-income populations than for non-EJ populations. Also needs to include an evaluation of cumulative effects.</li> <li>• <b>Title VI Disparate Analysis:</b> EIS projects should include this analysis to determine if the project may have a disparate impact by comparing the least and most impacted groups.</li> <li>• <b>EJ Memo or Discipline Report:</b> Projects with complex or significant impacts may require a discipline report. An EJ Memo is generally required for projects requiring relocation of a person or property, and a discipline report is required if the project would displace more than 10 residences or businesses.</li> </ul> <p>SEPA does not contain specific requirements for conducting environmental justice analysis. Project mitigation should follow the steps laid out in WSDOT Environmental Manual Section 460.08.</p>
Why? - Potential Permits and Other Approvals	<p>There are no permits or signatory approvals associated with compliance with federal or state Environmental Justice requirements.</p>
Why? - Cumulative or Indirect Considerations	<p>Potential indirect or cumulative effects may include:</p> <ul style="list-style-type: none"> <li>• Indirect effect of increased housing prices and business rent around project areas, or indirect effect of additional affordable housing near transit stations.</li> <li>• Cumulative impacts on businesses and the community from projects in the Final Study Recommendations in combination with other past, present, and future projects.</li> </ul>



Topic and Next Step	Environmental Resource Considerations - Environmental Justice
How? - Mitigation Strategies	<p>Refer to WSDOT Environmental Manual Chapter 460.08 for details on how to appropriately document avoidance, minimization, mitigation, and enhancement measures regarding environmental justice and affected communities. Mitigation for Disproportionately High and Adverse Effects should be co-created with affected communities and requires robust engagement. Proposed mitigation measures must match the type of impact the project has on affected communities to be considered appropriate. Environmental commitments to mitigate known and unanticipated environmental justice impacts are required to be documented and managed via WSDOT’s Commitment Tracking System (CTS).</p>
When? - Critical Schedule Considerations	<p>Outreach to minority, low-income or other equity populations such as populations with limited English proficiency should be started early and should continue throughout a project so that these populations can be involved and have meaningful opportunity to participate in the project, from development of alternatives through mitigation. Outreach should include local tribes. Project teams should consider language translation needs and targeted outreach needs early in project schedules. Consideration of businesses and community facilities that are important to these populations is also important.</p>

## Fish and Wildlife Habitat

**Table 4. Fish and Wildlife Habitat - Next Steps and Implementation Considerations**

Topic and Next Step	Environmental Resource Considerations - Fish and Wildlife Habitat
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• WSDOT Environmental Services Office</li> <li>• USFWS and NMFS</li> <li>• WDFW</li> <li>• Tribes</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements. Also refer to WSDOT Environmental Manual Chapter 436.</p>
Why? - NEPA and SEPA Considerations	<p>For all projects subject to NEPA and SEPA the following is required:</p> <ul style="list-style-type: none"> <li>• <b>ESA Review:</b> Required by the Endangered Species Act for all projects. The ESA review culminates in a consultation with NMFS, and USFWS.</li> <li>• <b>Bird Protection Plan:</b> Required by the Migratory Bird Treaty Act if a project has the potential to impact nesting birds.</li> <li>• <b>Tribal Coordination:</b> Required if the project is within tribal lands to discuss any regulations that may apply to the project.</li> <li>• <b>Wildlife Discipline Report:</b> Required under NEPA and SEPA, but the level of detail would be dependent on whether the project is a CE, EA, or EIS.</li> </ul>
Why? - Potential Permits and Other Approvals	<ul style="list-style-type: none"> <li>• <b>Hydraulic Project Approval (HPA):</b> Required for work that may use, divert, obstruct, or change the natural flow or bed of any of the salt or freshwaters of the state, including work below the Ordinary High Water Line, on water crossing structures, or near streams.</li> <li>• <b>ESA Section 7 Compliance:</b> Required for all projects with a federal nexus to ensure actions carried out, authorized, permitted, or funded do not jeopardize the continued existence of any threatened or endangered species. Analysis is required to ensure compliance with the ESA. Compliance may be in the form of a No Effect Letter or Assessment, Programmatic Biological Assessment, or Individual Biological Assessment.</li> <li>• <b>Essential Fish Habitat (EFH) Compliance:</b> Required by the Magnuson-Stevens Fishery Conservation and Management Act to document essential fish habitat and the managed species and associated species and proposed mitigation, and to receive concurrence with NMFS.</li> <li>• <b>Construction in State Waters Memorandum of Agreement:</b> Required for transportation projects under RCW 77.55 to ensure that fish passage at transportation projects is facilitated through RCW 77.57.</li> <li>• <b>Incidental Harassment Authorization:</b> Required by the Marine Mammal Protection Act for projects that generate underwater noise in marine waters.</li> <li>• <b>Migratory Bird Treaty Act Compliance:</b> Required by USFWS to protect all migratory bird species from unauthorized take.</li> <li>• <b>Bald Eagle Form:</b> Required if there is an active bald eagle nest within 330 feet of the project, to assess the project’s potential impacts to bald and golden eagles and to document compliance with the Eagle Act.</li> </ul>
Why? - Cumulative or Indirect Considerations	<p>Potential indirect and cumulative effects may include:</p> <ul style="list-style-type: none"> <li>• Indirect effect of reduced benthic habitat for primary prey species of salmonids and marine mammal.</li> <li>• Indirect effect of increased spread of invasive plant species or creation of bare soil areas in and around construction sites.</li> <li>• Cumulative impacts on habitat areas and fish and wildlife food sources from projects in the Final Study Recommendations in combination with other past, present, and future projects.</li> </ul>

Topic and Next Step	Environmental Resource Considerations - Fish and Wildlife Habitat
How? – Mitigation Strategies	Measures to avoid, minimize, or mitigate impacts to fish and wildlife habitat may include altering the project design, changing construction methods, incorporating construction timing restrictions, providing more water quality treatment for fish species, and protecting and enhancing existing habitat. Environmental commitments to mitigate known and unanticipated impacts to fish and wildlife habitat are required to be documented and managed via WSDOT’s Commitment Tracking System (CTS).
When? – Critical Schedule Considerations	ESA review and analysis of existing fish and wildlife habitat should be performed once the project’s preferred alternative has been identified. Early coordination with WSDOT ESA liaisons should occur prior to submitting ESA requests for concurrence or other approvals, and to determine whether informal or formal consultation would proceed.

## Fish Passage Barriers

Table 5. Fish Passage Barriers - Next Steps and Implementation Considerations

Topic and Next Step	Environmental Resource Considerations - Fish Passage Barriers
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• WSDOT Environmental Services Office</li> <li>• WDFW</li> <li>• USFWS</li> <li>• NMFS</li> <li>• Tribes</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements. Also refer to WSDOT Environmental Manual Chapter 436 and Chapter 300.03.</p>
Why? – NEPA and SEPA Considerations	<p>For all projects subject to NEPA and SEPA the following is required:</p> <ul style="list-style-type: none"> <li>• <b>Tribal Coordination:</b> Continuous and consistent coordination with tribes is required to confirm findings of surveys and site visits, and to share proposed design.</li> <li>• <b>Wetland and Stream Reconnaissance Survey:</b> Required to identify waters in the project area.</li> <li>• <b>Fish Passage and Barrier Inventory Determination:</b> Required to generate reports and determine details about existing fish passage sites within the project area. Existing sites and statuses are determined through site visits, WDFW’s Fish Passage Inventory, WSDOT’s Fish Passage Inventory Webmap, and Fish Passage Site Management Application.</li> <li>• <b>WSDOT Injunction Barrier Status:</b> Determined for any stream crossings owned by WSDOT WDFW does not consider a 100% passable crossing. All injunction barriers near the project footprint will be evaluated for correction.</li> </ul>
Why? – Potential Permits and Other Approvals	<ul style="list-style-type: none"> <li>• <b>Preliminary Hydraulic Design:</b> Required to assess each stream crossing and determine a basis of design for proposed fish passage structures.</li> <li>• <b>Concurrence Site Visit:</b> Required between WSDOT, applicable tribes, and WDFW to gain concurrence on the bankfull width measurements taken by Hydraulic Design Report authors for the Preliminary Hydraulic Design.</li> <li>• <b>Section 404 and Section 10 Nationwide Permit:</b> Required by USACE for projects that impact Waters of the US or Navigable Waters.</li> <li>• <b>Section 404 and Section 10 Individual Permit:</b> Required by USACE if the work cannot be permitted under a Nationwide Permit. Prepare a Section 404(b)(1) analysis during preliminary design as part of the permit application. This process can tier to the project NEPA document.</li> <li>• <b>Hydraulic Project Approval (HPA):</b> Required for work that may use, divert, obstruct, or change the natural flow or bed of any of the salt or freshwaters of the state, including work below the Ordinary High Water Line, on water crossing structures, or near streams.</li> <li>• <b>Fish Habitat Enhancement Project HPA:</b> Projects may qualify for this HPA if the proposed impact to waterbodies is exclusive to removing fish passage barriers.</li> <li>• <b>Tribal Approval:</b> Required for stream crossing designs and fish passage barrier correction proposal.</li> </ul> <p>Refer to the Fish and Wildlife Habitat and Water Quality and Stormwater sections for additional permits and approvals required for water crossings, including Section 401 Water Quality Certification and ESA Section 7 consultation/compliance.</p>

Topic and Next Step	Environmental Resource Considerations - Fish Passage Barriers
Why? - Cumulative or Indirect Considerations	<p>Potential indirect and cumulative impacts may include:</p> <ul style="list-style-type: none"> <li>• Impacts from future projects proposing work within the stream impacted.</li> <li>• Changing land use and overall increase in urbanization, resulting in potential impacts to runoff and riparian vegetation.</li> <li>• Potential future impacts related to climate change, such as increases in rate of precipitation and stream flow.</li> </ul>
How? - Mitigation Strategies	<p>Impacts to fish habitat shall be mitigated per the HPA mitigation sequence provided on the WSDOT Fish Environmental Guidance webpage. Pre-mitigation efforts may include designing to avoid the fish passage culvert or mitigating by repairing, rehabilitating, or restoring the affected environment by removing a fish barrier. Environmental commitments to mitigate known and unanticipated impacts to fish passage are required to be documented and managed via WSDOT's Commitment Tracking System (CTS).</p>
When? - Critical Schedule Considerations	<ul style="list-style-type: none"> <li>• Coordination meetings with WDFW and tribes should occur frequently throughout the planning and design phases of the project.</li> <li>• Fish passage barrier identification and determination, including WSDOT injunction barrier status, should be performed once the project's location and alignment have been identified.</li> <li>• Concurrence site visit with tribes and WDFW should occur prior to completing a Preliminary Hydraulic Design Report.</li> <li>• A HPA should be obtained during final design.</li> <li>• Tribal approval of the stream crossing design and fish passage barrier correction proposal should be obtained prior to final design.</li> </ul>

# Flood Hazards

**Table 6. Flood Hazards - Next Steps and Implementation Considerations**

Topic and Next Step	Environmental Resource Considerations - Flood Hazards
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• Federal Emergency Management Agency</li> <li>• FHWA</li> <li>• Ecology</li> <li>• WSDOT</li> <li>• Local jurisdictions, such as water and flood districts</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements. 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.</p>
Why? - NEPA and SEPA Considerations	<p>If a project encroaches on a regulatory floodplain, it must be analyzed to determine if a revision to the regulatory floodway is necessary. For projects that propose work within a Special Flood Hazard Area (SFHA), the following is required:</p> <ul style="list-style-type: none"> <li>• <b>Hydraulic and Hydrologic Analysis:</b> Required to determine whether a project would result in rise in the base flood elevation.</li> <li>• <b>Floodplain Discipline Report:</b> Required by WSDOT and fulfills the information required for all NEPA classifications.</li> <li>• <b>Additional Analysis:</b> Scour and climate change analyses may also be necessary to ensure that a project is resilient to changes that may occur over the design life of the project.</li> </ul>
Why? - Potential Permits and Other Approvals	<ul style="list-style-type: none"> <li>• <b>No-Rise Certification or Conditional Letter of Map Revision:</b> Required to document whether the hydraulic and hydrologic analysis resulted in a rise to the base flood elevation. If there is a rise in base flood elevation, a conditional letter of map revision is required.</li> <li>• <b>Floodplain Development Permit:</b> Required based on local agency’s floodplain and critical area ordinances. Typically required when project footprint is within mapped 100-year floodplain or floodway.</li> </ul> <p>Refer to the Water Quality and Stormwater and Wetlands sections for additional permits and approvals, including Section 401 Water Quality Certification and Section 404 of the Clean Water Act permit.</p>
Why? - Cumulative or Indirect Considerations	<p>Potential indirect or cumulative impacts may include:</p> <ul style="list-style-type: none"> <li>• Indirect effect of increased impervious surface from project developments.</li> <li>• Indirect effect of development within floodplain required for adjacent projects.</li> <li>• Cumulative impacts of flood hazards from projects in the Final Study Recommendations in combination with other past, present, and future projects.</li> </ul>
How? - Mitigation Strategies	<p>Refer to WSDOT Environmental Manual Chapter 432.08 for compensatory storage requirements set by local jurisdictions to mitigate impacts to regulatory floodplain and floodway. These requirements include excavation of floodplain storage areas to compensate for fill placed in floodplains, and stipulate elevation requirements for the location of the compensatory storage area.</p>
When? - Critical Schedule Considerations	<p>Floodplain evaluations should be performed once project designs and footprints are available. Prior to final design, a Conditional Letter of Map Revision (CLOMR) should be submitted to FEMA to ensure project design does not violate FEMA’s requirement of no rise within floodplains.</p>

## Geologic Hazards

Table 7. Geologic Hazards - Next Steps and Implementation Considerations

Topic and Next Step	Environmental Resource Considerations - Geologic Hazards
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• DNR</li> <li>• Local jurisdictions</li> </ul>
Why? - Regulatory Considerations	Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements.
Why? - NEPA and SEPA Considerations	<ul style="list-style-type: none"> <li>• <b>Geology and Soils Impact Analysis and Discipline Report:</b> Required to identify and document the general topographic and geologic setting, significant features and landforms, soil types and their properties, and known geologic hazards. The discipline report fulfills the information required for all NEPA classifications, and it would be “right-sized” to adequately address impacts at an appropriate level of detail.</li> </ul>
Why? - Potential Permits and Other Approvals	<ul style="list-style-type: none"> <li>• <b>Grading Permit:</b> Required based on local agency’s clearing and grading ordinances. Required in Pierce County and King Counties for any grading work in critical areas that are outside of WSDOT ROW. Also required in Pierce County for grading of 50 cubic yards or more and in King County for 100 cubic yards or creation of 2,000 square feet of new impervious surfaces outside of WSDOT ROW.</li> <li>• <b>Local Agency and Tribe Approval:</b> Additional approvals may be required for projects located outside of highway right-of-way on adjacent reservation land. In cases where WSDOT has an easement rather than ownership, the tribe may retain jurisdiction to issue permits and approvals.</li> </ul>
Why? - Cumulative or Indirect Considerations	<p>Potential indirect or cumulative impacts may include:</p> <ul style="list-style-type: none"> <li>• Erosion-caused damage from other projects that affect drainage and water quality in the environmental analysis area.</li> <li>• Indirect impacts beyond project footprints from ground improvement.</li> </ul>
How? - Mitigation Strategies	Project designs should be adjusted or designed to avoid or minimize impacting geologically hazardous areas. Refer to WSDOT Environmental Manual Chapter 420.08 for details on mitigation measures for unavoidable impacts, as well as the Geotechnical Design Manual M 46-03 for specific guidance on engineering solutions to address geologic hazards.
When? - Critical Schedule Considerations	Geologic hazard and soil evaluations should be performed once project designs and footprints are available. Prior to construction, grading permits should be acquired from local agencies for applicable work outside of WSDOT right of way.

# Hazardous Materials

**Table 8. Hazardous Materials - Next Steps and Implementation Considerations**

Topic and Next Step	Environmental Resource Considerations - Hazardous Materials
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• FHWA and WSDOT</li> <li>• Department of Ecology</li> <li>• U.S. EPA</li> <li>• Puget Sound Clean Air Agency</li> <li>• Local jurisdictions</li> <li>• Private landowners</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements. Hazardous materials are regulated by various state and federal regulations, including those listed below. Refer to WSDOT Environmental Manual Chapter 447 (WSDOT 2021c) for more information on statutes and regulations relating to hazardous materials. Information on local clean air agency regulations is available in WSDOT Environmental Manual Chapter 447.02(4).</p>
Why? - NEPA and SEPA Considerations	<ul style="list-style-type: none"> <li>• <b>Data Report and Risk Analysis:</b> An environmental database report (EDR) and risk analysis is required for any site listed on the National Priorities List (NPL) that is present within 1 mile, and any non-NPL site present within ½ mile of the project footprint.</li> <li>• <b>Hazardous Materials Discipline Report:</b> Required under NEPA and SEPA, but the level of detail would be dependent on whether the project is a CE, EA, or EIS.</li> <li>• <b>Phase I Environmental Site Assessment:</b> Required if the project proposes to acquire a site that is considered substantially contaminated and may pose a significant financial risk.</li> <li>• <b>Phase II Environmental Site Assessment:</b> Required if the Phase I Environmental Site Assessment indicates potential or recognized on-site contamination, or if WSDOT would acquire a property with potential or recognized on-site contamination.</li> <li>• <b>Remedial Actions:</b> Required if a Phase II assessment reveals the need for remedial action.</li> <li>• Other reports and evaluations include an Asbestos Good Faith Inspection Report and Sediment and Chemical Contamination Evaluation.</li> </ul>
Why? - Potential Permits and Other Approvals	<ul style="list-style-type: none"> <li>• <b>Dangerous Waste Treatment Storage Disposal Facility Permit:</b> Required if the project proposes to store, treat, or dispose of dangerous wastes in a designated facility.</li> <li>• <b>Asbestos Demolition/Renovation Notification Form:</b> A 10 working day advance notice is required to the Puget Sound Clean Air Agency prior to start of demolition or renovation.</li> <li>• <b>Well Construction and Operator’s License:</b> Required for all construction and decommissioning activities for water wells, monitoring wells, Geotech soil borings, environmental investigations wells, geothermal heat pump borings, and dewatering system.</li> <li>• <b>RCRA Identification:</b> Required if the project generates, transfers, recycles, treats, stores, or disposes of regulated amounts of dangerous waste.</li> </ul>
Why? - Cumulative or Indirect Considerations	<p>Potential indirect and cumulative effects may include:</p> <ul style="list-style-type: none"> <li>• Potential impacts related to other projects affected by hazardous materials or past contamination.</li> </ul>
How? - Mitigation Strategies	<p>Impacts are required to be addressed as part of the Storm Water Pollution Prevention Plan process which will result in development of a site-specific Temporary Erosion and Sediment Control Plan. Refer to WSDOT’s Standard Impacts &amp; Mitigation Measures for further details on how to address impacts to hazardous materials, including spills and impacts to underground storage tanks, stormwater, and groundwater. Environmental commitments to mitigate known and unanticipated impacts to hazardous materials is required to be documented and managed via WSDOT’s Commitment Tracking System (CTS).</p>



Topic and Next Step	Environmental Resource Considerations - Hazardous Materials
When? - Critical Schedule Considerations	A regulatory database search and risk analysis should be performed once project designs and footprints are available. Phase I and Phase II assessment generally take two months. Project delays may occur if a Phase II assessment reveals a need for remedial action. The timing for property acquisition can be delayed if remediation activities are required.

# Land Use

**Table 9. Land Use - Next Steps and Implementation Considerations**

Topic and Next Step	Environmental Resource Considerations - Land Use
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• FHWA and WSDOT</li> <li>• NRHP and NRCS</li> <li>• NPS</li> <li>• USFS</li> <li>• Regional planning agencies and local jurisdictions</li> </ul>
Why? - Regulatory Considerations	Refer to WSDOT Environmental Manual Chapter 455.02 for a comprehensive list of regulatory requirements related to land use including the Growth Management Act, Shoreline Management Act.
Why? - NEPA and SEPA Considerations	<ul style="list-style-type: none"> <li>• <b>Existing Land Use Identification:</b> Required to determine whether a project would impact the following land use types: national or state forests, trust lands, state waters, Section 4(f) properties, Section 6(f) or other grant funded properties, farmland, critical areas, and wild and scenic rivers, and to determine what local land uses may be impacted.</li> <li>• <b>Land Use Discipline Report:</b> Required to document existing conditions, land use impacts, and consistency with local and regional land use plans and goals.</li> </ul>
Why? - Potential Permits and Other Approvals	<ul style="list-style-type: none"> <li>• <b>Critical Area Permit:</b> Required by local agencies if the critical areas ordinance determines work will occur within critical areas.</li> <li>• <b>Aquatic Use Authorization:</b> Required by DNR for in-water or overwater work on state-owned aquatic lands.</li> <li>• <b>Special Use Permit:</b> May be required for work proposed outside of right of way and within non-WSDOT jurisdiction.</li> </ul>
Why? - Cumulative or Indirect Considerations	Potential indirect and cumulative impacts may include potential changes to local jurisdiction land use designations or development or redevelopment of lands by other projects.
How? - Mitigation Strategies	Refer to WSDOT Environmental Manual Chapter 455.08 for measures to avoid, minimize, or mitigate impacts to notable land use types, including using public lands first before using land defined as agricultural land of long-term commercial significance, and replacement with land of equal value, location, usefulness, and function as the impaired property. Environmental commitments to mitigate known and unanticipated impacts to land use are required to be documented and managed via WSDOT's Commitment Tracking System (CTS).
When? - Critical Schedule Considerations	When project alignments are available, existing land uses should be studied. When project footprints are available, impacts should be analyzed including compliance with local comprehensive plans.

# Noise

**Table 10. Traffic Noise - Next Steps and Implementation Considerations**

Topic and Next Step	Environmental Resource Considerations - Traffic Noise
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• FHWA or FTA</li> <li>• WSDOT</li> <li>• Local agencies</li> <li>• Private property owners and tenants</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements. WSDOT Environmental Manual Chapter 446.02 offers more information on statutes and regulations. Chapter 446.02(3) of the manual provides information on local regulations, including local noise ordinances related to nighttime construction.</p>
Why? - NEPA and SEPA Considerations	<p>If NEPA documentation has been prepared for a project, it can be used for SEPA documentation.</p> <ul style="list-style-type: none"> <li>• <b>Traffic Noise Analysis:</b> Required for WSDOT Type 1 or Type 2 projects (as defined in 23 CFR 772.5).</li> <li>• <b>Noise Analysis Report:</b> Required by WSDOT and fulfills the information required for all NEPA classifications, including noise occurrences during both construction and operations.</li> <li>• <b>Noise Screening Analysis:</b> May be developed in place of a traffic noise analysis and noise analysis report if the project is anticipated to have no noise impacts.</li> </ul> <p>A project that involves transit, passenger rail, or park and ride facilities would need to apply Federal Transit Administration criteria for noise and vibration impact assessments. This applies to both NEPA and SEPA documentation, although SEPA reporting may be in a simpler memorandum format.</p>
Why? - Potential Permits and Other Approvals	<p><b>Noise Variance:</b> Required if construction is anticipated to occur outside of local jurisdiction’s noise thresholds or timing restrictions.</p>
Why? - Cumulative or Indirect Considerations	<p>Potential indirect or cumulative impacts may include changing land use or increase in development that may happen near to or in support of potential projects, resulting in increases in construction and operational noise in the area.</p>
How? - Mitigation Strategies	<p>During NEPA, mitigation measures, including noise walls, will be identified to minimize impacts to sensitive receptors. The project team will meet with local agencies and communities to coordinate feasible and reasonable mitigation measures appropriately. Suggested strategies for mitigating traffic noise at nearby sensitive receivers include constructing noise barriers, reducing traffic speeds, coordinating with agencies to prevent noise sensitive development near highways, preserving existing buffer zones, and helping to support local jurisdictions in establishing routes for buses and trucks. If during the outreach process, communities indicate they do not want noise walls for various reasons, other mitigation is available. Through direct communication with the affected communities, noise impacts would be mitigated in a way that is satisfactory to most residents. Refer to WSDOT Environmental Manual Chapter 446.08 for further details on noise abatement options. Environmental commitments to mitigate known and unanticipated impacts to noise are required to be documented and managed via WSDOT’s Commitment Tracking System (CTS).</p>
When? - Critical Schedule Considerations	<p>Noise evaluations should be performed once:</p> <ul style="list-style-type: none"> <li>• The location and alignment have been identified for a project.</li> <li>• Existing conditions have been assessed and/or measured.</li> <li>• Sensitive noise receptors have been identified.</li> <li>• Existing and future traffic projections are available.</li> </ul> <p>Public outreach should be conducted in future project phases, so that partners may provide input on the proposed project design and mitigation.</p>

## Recreational Resources, including Potential Section 4(f) and Section 6(f) Resources

**Table 11. Recreational Resources and Potential Section 4(f) and Section 6(f) Resources - Next Steps and Implementation Considerations <sup>a</sup>**

Topic and Next Step	Environmental Resource Considerations <sup>a</sup> - Recreational Resources and Potential Section 4(f)
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• FHWA and WSDOT</li> <li>• NRHP</li> <li>• U.S. DOI</li> <li>• NPS</li> <li>• Local jurisdictions; Officials with Jurisdiction (OWJ)</li> <li>• Public and community</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements. Also refer to WSDOT Environmental Manual Chapter 457.</p>
Why? - NEPA and SEPA Considerations	<p>WSDOT policy requires Section 4(f) consideration in any NEPA document. For all projects with a federal nexus the following is required:</p> <ul style="list-style-type: none"> <li>• <b>Section 4(f) Site and Level of “Use” Identification:</b> Required to identify any Section 4(f) properties in or near the project and to determine the type of evaluation and documentation required.</li> <li>• <b>Letter of Concurrence:</b> Required by FHWA if identified Section 4(f) properties are determined to be exempt or have a <i>de minimis</i> impact.</li> <li>• <b>Public and Community Engagement:</b> The public must be informed of <i>de minimis</i> determinations and given an opportunity to comment on the decision.</li> <li>• <b>Programmatic Section 4(f) Evaluation:</b> Required by FHWA if the project impacts a Section 4(f) property and uses are considered minor.</li> <li>• <b>Individual Section 4(f) Evaluation:</b> Required by FHWA if the project impacts a Section 4(f) property and it does not qualify for a programmatic evaluation, exception, or <i>de minimis</i>.</li> </ul>
Why? - Potential Permits and Other Approvals	<ul style="list-style-type: none"> <li>• <b>Special Use Permit:</b> May be required by local jurisdictions to meet the conditions of a Section 4(f) temporary occupancy.</li> <li>• <b>Temporary Occupancy Approval:</b> Required per 23 CFR 774.13(d) as part of Section 4(f) concurrence for projects proposing work within Section 4(f) properties but are exempt from detailed Section 4(f) evaluations.</li> </ul>
Why? - Cumulative or Indirect Considerations	<p>Potential indirect or cumulative impacts may include:</p> <ul style="list-style-type: none"> <li>• Indirect effect of changed or reduced access to recreational and Section 4(f) properties.</li> <li>• Indirect effect of changes in natural environment of surrounding land uses.</li> <li>• Indirect effect of increases in noise and vibration in the surrounding land uses.</li> <li>• Cumulative impacts on Section 4(f) properties from projects in the Final Study Recommendations in combination with other past, present, and future projects.</li> </ul>

Topic and Next Step	Environmental Resource Considerations <sup>a</sup> - Recreational Resources and Potential Section 4(f)
How? - Mitigation Strategies	<p>Project designs should be adjusted or designed to avoid or minimize impacting Section 4(f) properties. If impacts are unavoidable, the project team must demonstrate why avoidance is not possible. NEPA/SEPA and regulatory permit commitments are required to be incorporated into project contract per WSDOT Environmental Manual Chapter 490, to mitigate adverse impacts to Section 4(f) and 6(f) properties. Refer to WSDOT Environmental Manual Chapter 457.08 for further guidance on how to document measures to avoid, minimize, or mitigate impacts or enhance impacted resources. Environmental commitments to mitigate known and unanticipated impacts to Section 4(f) and 6(f) properties are required to be documented and managed via WSDOT's Commitment Tracking System (CTS).</p>
When? - Critical Schedule Considerations	<ul style="list-style-type: none"> <li>• Section 4(f) documentation and approvals must be completed subsequent to developing Cultural Resources and Historic Bridges documentation and parks, recreation, and open space evaluation.</li> <li>• If applicable, Special Use Permits must be obtained by local jurisdictions prior to Temporary Occupancy Approval from FHWA.</li> </ul>

Notes:

<sup>a</sup> There were no Section 6(f) resources identified in the existing conditions (*Attachment B*).

## Visual Resources

**Table 12. Visual Resources - Next Steps and Implementation Considerations**

Topic and Next Step	Environmental Resource Considerations - Visual Resources
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• FHWA and WSDOT</li> <li>• USFS</li> <li>• NPS</li> <li>• Tribes</li> <li>• Local jurisdictions</li> <li>• General public including local residents and business owners, and interested community groups</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements. Also refer to WSDOT Environmental Manual Chapter 459 for more information on statutes and regulations.</p>
Why? - NEPA and SEPA Considerations	<p>For projects that have the potential to change the roadside character, the following is required:</p> <ul style="list-style-type: none"> <li>• <b>Area of Visual Effect:</b> Required to identify sensitive areas that may be impacted by changes to roadside character.</li> <li>• <b>Viewshed Analysis and On-Site Photography:</b> A qualitative analysis is required to develop findings in the Visual Impact Analysis and determine level of impact anticipated.</li> <li>• <b>Visual Impact Assessment (VIA):</b> Required by WSDOT and FHWA to identify and document the visual impacts resulting from roadway projects. Level of analysis varies dependent on the project classification (CE, EA, EIS).</li> </ul>
Why? - Potential Permits and Other Approvals	<p>None identified.</p>
Why? - Cumulative or Indirect Considerations	<p>Potential indirect or cumulative impacts may include:</p> <ul style="list-style-type: none"> <li>• Indirect effect of changes in visual environment from updates to local jurisdiction land use plans.</li> <li>• Cumulative impacts on visual quality from projects in the Final Study Recommendations in combination with other past, present, and future projects.</li> </ul>
How? - Mitigation Strategies	<p>Refer to WSDOT Environmental Manual Chapter 459.08 for details on mitigation measures to avoid or minimize visual impacts, including public art, good faith negotiations, and roadside restoration. Refer to the WSDOT Roadside Policy Manual M 3110 for specific guidance on restoration to address visual impacts as well as mitigation for planned visual impacts, maintenance impacts, or disturbance that may affect Resource Conservation Areas. Refer to Chapter 950 of the WSDOT Design Manual M 22-01 for guidance regarding public art and community-identified mitigation within WSDOT right of way. Environmental commitments to mitigate known and unanticipated impacts to visual impacts are required to be documented and managed via WSDOT’s Commitment Tracking System (CTS).</p>
When? - Critical Schedule Considerations	<p>The FHWA visual impact assessment scoping process provides a framework for establishing the appropriate level of study and documentation for NEPA projects. The public and affected tribes may help to inform the visual quality and important visual resources as well as the area of visual effect.</p> <p>Once project designs and footprints are available:</p> <ul style="list-style-type: none"> <li>• Develop VIA scoping questionnaire and identify the area of visual effect.</li> <li>• Perform viewshed analysis and take on-site photography.</li> <li>• Coordination with development of Section 4(f), Section 6(f), and Section 106 documentation, to ensure visual impacts resulting from other resource compliance are addressed.</li> </ul>

# Water Quality and Stormwater

**Table 13. Water Quality and Stormwater - Next Steps and Implementation Considerations**

Topic and Next Step	Environmental Resource Considerations - Water Quality and Stormwater
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• FHWA and WSDOT</li> <li>• DNR</li> <li>• EPA</li> <li>• Ecology</li> <li>• Local Jurisdictions</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements. Also refer to WSDOT Environmental Manual Chapter 430 and 433.</p>
Why? - NEPA and SEPA Considerations	<ul style="list-style-type: none"> <li>• <b>Stream Reconnaissance Survey:</b> Required for all projects to determine waters in the project area based on how those waters are used. Identification would include field assessment of surface waters.</li> <li>• <b>Receiving Waters Impact Analysis:</b> Required for all projects to determine impacts to waters in the project area. Analysis would include evaluation of impacts on surface water flows and water quality if projects are near surface water or cross surface water and calculation of new and existing impervious surfaces per guidance from WSDOT's Highway Runoff Manual.</li> <li>• <b>Surface Water Discipline Report:</b> Required under NEPA and SEPA, but the level of detail would be dependent on whether the project is a CE, EA, or EIS.</li> </ul>
Why? - Potential Permits and Other Approvals	<ul style="list-style-type: none"> <li>• <b>Stormwater Pollution Prevention Plan:</b> Required by WSDOT for all projects that disturb one acre or more. The SWPPP is made up of two plans, the Spill Prevention Control &amp; Countermeasures plan and the Temporary Erosion &amp; Sediment Control plan.</li> <li>• <b>Section 401 Water Quality Certification:</b> Required for projects that require a Federal permit or approval (Section 404 discharge permit, Section 10 structure permit, or Section 9 Bridge Permit) and discharge or have the potential to discharge pollutants into waters designated as Waters of the United States. The certification may be provided through application of a programmatic Nationwide Permit or Individual Permit. Dependent on project location, the certifying agency would be the Department of Ecology, Environmental Protection Agency, or local tribe.</li> <li>• <b>Section 402 Construction Stormwater General Permit:</b> Required if the project has the potential to discharge stormwater to surface waters and would either disturb one or more acres of soil or is part of a larger plan that would end up disturbing one or more acres of soil.</li> <li>• <b>Section 402 WSDOT Municipal Stormwater General Permit:</b> Required if the project is located within an area covered by a Phase I or Phase II Municipal Stormwater General Permit. A list of cities and counties covered by a Phase I or Phase II Municipal Stormwater General Permit can be found on Department of Ecology's website.</li> <li>• <b>Section 402 Administrative Order:</b> Required if the project results in the disturbance or potential discharge of existing site contamination.</li> <li>• <b>Aquatic Lands Use Authorization:</b> Required by DNR if the project proposes work on state-owned aquatic lands.</li> <li>• <b>Construction Stormwater Dewatering Permit:</b> Required if the project discharges wastewater into a local jurisdiction's sanitary sewers.</li> <li>• <b>Shoreline Permit:</b> Required if the project is in an area within 200 feet of a shoreline of statewide significance or listed under a local shoreline master plan or ordinance. Projects that qualify for a Fish Habitat Enhancement HPA do not require a shoreline permit or approval.</li> </ul>

Topic and Next Step	Environmental Resource Considerations - Water Quality and Stormwater
Why? - Cumulative or Indirect Considerations	<p>Potential indirect or cumulative impacts may include:</p> <ul style="list-style-type: none"> <li>• Indirect effect of increased vehicle emissions and pollutant-laden stormwater runoff associated with increased traffic.</li> <li>• Indirect effect of improved water quality and increased stormwater treatment around project areas.</li> <li>• Cumulative impacts on water quality and stormwater from projects in the Final Study Recommendations in combination with other past, present, and future projects.</li> <li>• Cumulative impacts on rate of precipitation and stream flow from climate-related changes.</li> </ul>
How? - Mitigation Strategies	<p>Guidance and resources for mitigation options can be found on the WSDOT Stormwater &amp; water quality webpage. Some measures include stormwater retrofit, treatment required by WSDOT's Highway Runoff Manual, special or newly researched BMPs, and assistance with watershed priorities set through watershed planning. Environmental commitments to mitigate known and unanticipated impacts to fish and wildlife habitat are required to be documented and managed via WSDOT's Commitment Tracking System (CTS). For future projects within aquifer recharge areas, sole source aquifers, or wellhead protection areas, specific measures should be implemented to prevent groundwater contamination.</p>
When? - Critical Schedule Considerations	<ul style="list-style-type: none"> <li>• Identification of receiving waters should be performed once the project's location and alignment have been identified.</li> <li>• When Ecology issues coverage under the Construction Stormwater General Permit, monthly discharge monitoring reports must be submitted to Ecology's WQWebPortal even if construction has not started or there have been no discharges. The permit should be obtained closer to the start of construction when a construction schedule has been finalized.</li> <li>• When the local jurisdiction issues a construction stormwater dewatering permit, monthly discharge monitoring reports must be submitted to the appropriate jurisdiction even if construction has not started or there have been no discharges. The permit should be obtained closer to the start of construction when a construction schedule has been finalized.</li> </ul>



# Wetlands

**Table 14. Wetlands - Next Steps and Implementation Considerations**

Topic and Next Step	Environmental Resource Considerations - Wetlands
Who? - Potential Agency and Partner Involvement	<ul style="list-style-type: none"> <li>• FHWA and WSDOT</li> <li>• USACE</li> <li>• EPA</li> <li>• Tribes</li> <li>• Local Jurisdictions</li> </ul>
Why? - Regulatory Considerations	<p>Refer to <i>Appendix C, Environmental Methods and Applicable Regulations of Attachment B, Existing and Future Baseline Conditions Report</i> for regulatory requirements. Also refer to WSDOT Environmental Manual Chapter 431.</p>
Why? - NEPA and SEPA Considerations	<ul style="list-style-type: none"> <li>• <b>Wetland, Stream, and Tidal Water Reconnaissance Survey:</b> Identify potential wetlands and other waters in the project vicinity. Information would be used to determine which agency has jurisdiction over the waters, permitting needs, and compensatory mitigation options in case impacts are unavoidable.</li> <li>• <b>Wetland and Stream Assessment Report:</b> Required for all projects to identify existing wetlands, streams, jurisdictional ditches, and tidal water within the project area and document findings from the reconnaissance survey.</li> <li>• <b>Wetland and Stream Mitigation Report:</b> Required if unavoidable impacts would occur to wetlands or other waters in the project area, to document planned project impacts to those waters and how they will be avoided or minimized.</li> </ul>
Why? - Potential Permits and Other Approvals	<p>Depending on the impact acreage and proposed activity, there are two levels of permitting under the Clean Water Act.</p> <ul style="list-style-type: none"> <li>• <b>Section 404 and Section 10 Nationwide Permit:</b> Required by USACE for projects that impact Waters of the United States or Navigable Waters.</li> <li>• <b>Section 404 and Section 10 Individual Permit:</b> Required by USACE if the work cannot be permitted under a Nationwide Permit. Prepare a Section 404(b)(1) analysis during preliminary design as part of the permit application. This process can tier to the project NEPA document.</li> <li>• <b>Administrative Order:</b> Required by Ecology for projects that propose work in non-federally regulated wetlands.</li> <li>• <b>Coastal Zone Management (CZM) Act Consistency Determination:</b> Required for all projects in King and Pierce County that require one of the federal licenses or permits listed for Washington State on the National Oceanic &amp; Atmospheric Administration’s State Federal Consistency list website. Consistency may be programmatically covered if a Nationwide Permit is obtained for the project.</li> </ul>
Why? - Cumulative or Indirect Considerations	<p>Potential indirect and cumulative impacts may include:</p> <ul style="list-style-type: none"> <li>• Indirect effect of increased vehicle emissions and pollutant-laden stormwater runoff associated with increased traffic.</li> <li>• Indirect effect of decreased wetland vegetation and increased urbanization from projects in the Final Study Recommendations in combination with other past, present, and future projects.</li> <li>• Cumulative impacts on wetland configurations, rate of precipitation, and stream flow from climate-related changes.</li> <li>• Changing land use and overall increase in urbanization, resulting in loss of wetland vegetation.</li> </ul>

Topic and Next Step	Environmental Resource Considerations - Wetlands
How? - Mitigation Strategies	<p>Refer to WSDOT Environmental Manual Chapter 455.08 for measures to avoid, minimize, or mitigate impacts to wetlands, including design techniques such as selective widening, widening to the median, and incorporating steeper slopes and retaining walls, and compensatory mitigation for any unavoidable impacts on wetlands. The amount of compensatory mitigation will be dependent upon the type and location of impacts. Future project teams should refer to the Wetland Mitigation in Washington State Part 1: Agency Policies and Guidance (Version 2) for compensatory ratio calculation tables (Ecology, USACE, and US EPA Region 10, 2021). If wetland mitigation credits are available, the Springbrook Creek Wetland and Habitat Bank or Upper Clear Creek Mitigation Bank may be used. Environmental commitments to mitigate known and unanticipated impacts to wetlands are required to be documented and managed via WSDOT’s Commitment Tracking System (CTS).</p>
When? - Critical Schedule Considerations	<ul style="list-style-type: none"> <li>• A reconnaissance survey and fieldwork should be performed once the project’s location and alignment have been identified.</li> <li>• Projects requiring permitting would need a jurisdictional delineation to support the pre-construction notification and may also require a pre-application meeting. These activities can be season-dependent and should be planned accordingly.</li> <li>• All identified wetlands would be included in a Wetland and Stream Assessment Reports, which is valid up to five years from the date of the field work. If the project is delayed, review field work and update the WSAR or prepare a report addendum.</li> </ul>