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Remarks and Instructions

This update continues our efforts to condense the manual and link to “how to” guidance on the web. Many of the chapters have been revised and reformatted to improve clarity and eliminate redundant information. Chapter 456, Cultural Resources; Chapter 447, Hazardous Materials; and Chapter 800, Property Management and Disposal, have been significantly revised. Chapter 300, Project Scoping and Programming, and Chapter 400, Environmental Review and Transportation Decision Making, have been updated to reflect MAP-21 legislation. Task specific guidance has been moved to the web and linked from the appropriate sections of the manual. We recommend use of the online version of this manual for easy access to these web pages.

The complete manual, revision packages, and individual chapters can be accessed at www.wsdot.wa.gov/publications/manuals/m31-11.htm.

For updating printed manuals, page numbers indicating portions of the manual that are to be removed and replaced are shown below.

Chapter	Remove Pages	Insert Pages
Title Page	i – ii	i – ii
Contents	vii – xvi	vii – xiv
Chapter 100 Purpose and Overview	100-1 – 100-2	100-1 – 100-2
Chapter 300 Project Scoping and Programming	300-1 – 300-12	300-1 – 300-10
Chapter 400 Environmental Review and Transportation Decision Making	400-9 – 400-10 400-23 – 400-24	400-9 – 400-10 400-23 – 400-24
Chapter 412 Indirect and Cumulative Impacts	412-1 – 412-10	412-1 – 412-10
Chapter 420 Earth (Geology and Soils)	420-1 – 420-6	420-1 – 420-2
Chapter 425 Air	425-1 – 425-22	425-1 – 425-10
Chapter 431 Wetlands	431-1 – 431-10	431-1 – 431-10
Chapter 436 Fish, Wildlife, and Vegetation	436-1 – 436-2 436-11 – 436-12	436-1 – 436-2 436-11 – 436-12
Chapter 440 Energy	440-1 – 440-6	440-1 – 440-4
Chapter 447 Hazardous Materials (HazMat) and Solid Waste	447-1 – 447-20	447-1 – 447-12
Chapter 450 Land Use	450-3 – 450-8	450-3 – 450-8
Chapter 456 Cultural Resources	456-1 – 456-50	456-1 – 456-20
Chapter 457 Section 4(f) Evaluation	457-7 – 457-8	457-7 – 457-8
Chapter 458 Social and Community Effects	458-1 – 458-16	458-1 – 458-16
Chapter 460 Transportation	460-3 – 460-8	460-3 – 460-8
Chapter 470 Public Services and Utilities	470-1 – 470-6	NA
Chapter 490 Tracking Environmental Commitments During Design	490-1 – 490-2	490-1 – 490-2

Chapter	Remove Pages	Insert Pages
Chapter 500 Environmental Permitting and PS&E	500-1 – 500-16	500-1 – 500-10
Chapter 510 Streamlining and Permitting Tips	510-1 – 510-20	NA
Chapter 600 Construction	600-1 – 600-2	600-1 – 600-6
Chapter 620 During Construction	620-1 – 620-8	620-1 – 620-8
Chapter 800 Property Management and Disposal	800-1 – 800-2	800-1 – 800-6
Chapter 810 Utilities Accommodation	810-1 – 810-4	NA
Chapter 820 Surplus Property Lease/Disposal & Limited Access Breaks	820-1 – 820-4	NA
Chapter 890 Implementing Environmental Commitments	890-1 – 890-2	NA
Appendix A Executive Orders	A-1 – A-2	A-1 – A-2
Appendix B Interagency Agreements	B-1 – B-2	B-1 – B-2
Index	1-18	I-1 – I-16

Please contact Vicki Steigner at 360-705-7493 or steignv@wsdot.wa.gov with comments, questions, or suggestions for improvement to the manual.

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Approved By Christina Martinez	Signature /s/
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**Washington State
Department of Transportation**

Environmental Procedures Manual

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Engineering and Regional Operations

Development Division, Environmental Services Office

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Contents

	<i>Page</i>
Foreword	iii
Feedback Form	v
Chapter 100 Purpose and Overview	100-1
Chapter 200 Transportation Planning	200-1
200.01 Introduction	200-1
200.02 General Overview of Transportation Planning in Washington	200-1
200.03 Environmental Considerations in Transportation Planning	200-3
200.04 Legal Requirements for Transportation Planning	200-4
200.05 Abbreviations and Acronyms	200-4
200.06 Glossary	200-4
Chapter 300 Project Scoping and Programming	300-1
300.01 Introduction and Overview	300-1
300.02 Project Scoping	300-2
300.03 Project Classification	300-2
300.04 NEPA Classifications	300-4
300.05 SEPA Classifications	300-7
300.06 Revision of Project Scope and Classification	300-7
300.07 Environmental Database Resources	300-8
300.08 Abbreviations and Acronyms	300-9
300.09 Glossary	300-9
Chapter 400 Environmental Review and Transportation Decision Making	400-1
400.01 Defining a Transportation Project for Environmental Review	400-1
400.02 Roles and Responsibilities	400-2
400.03 Identifying the Type of Environmental Document	400-7
400.04 NEPA/SEPA Procedures	400-8
400.05 Ensuring Environmental Document Quality	400-11
400.06 Using Existing Environmental Documents	400-12
400.07 Documenting an Environmental Impact Statement (EIS)	400-14
400.08 Documenting an Environmental Assessment (EA)	400-21
400.09 Documenting Categorical Exclusions/Exemptions (CE)	400-23
400.10 Environmental Document Legal Considerations	400-24
400.11 Applicable Statutes and Regulations	400-27
400.12 Abbreviations and Acronyms	400-28
400.13 Glossary	400-29

	Page
Chapter 412 Indirect and Cumulative Impacts	412-1
412.01 Introduction	412-1
412.02 Summary of Requirements	412-1
412.03 Type of Impacts Included in the Cumulative Impacts Analysis.	412-4
412.04 Analyzing Cumulative Impacts	412-5
412.05 Climate Change and Greenhouse Gases	412-6
412.06 Case Law and Cumulative Impacts Analysis.	412-7
412.07 Additional Resources of Indirect and Cumulative Effects.	412-8
412.08 Applicable Statutes and Regulations	412-8
412.09 Glossary	412-8
Chapter 420 Earth (Geology and Soils)	420-1
420.01 Summary of Requirements for Geology and Soils	420-1
420.02 Geology and Soils Technical Guidance	420-1
420.03 Applicable Statutes and Regulations	420-1
Chapter 425 Air	425-1
425.01 Air Quality Background.	425-1
425.02 Documentation and Modeling Requirements	425-2
425.03 Air Quality Permits and Approvals	425-6
425.04 Multi-Modal and Non-Road Air Quality Requirements	425-7
425.05 Air Quality Statutes, Regulations, and Guidance	425-7
425.06 Abbreviations and Acronyms.	425-8
425.07 Glossary	425-8
Chapter 430 Surface Water	430-1
430.01 Introduction	430-1
430.02 Summary of Requirements	430-1
430.03 Applicable Statutes and Regulations	430-2
430.04 Policy Guidance.	430-4
430.05 Interagency Agreements.	430-5
430.06 Technical Guidance	430-6
430.07 Permits and Approvals.	430-9
430.08 Non-Road Project Requirements	430-11
430.09 Abbreviations and Acronyms.	430-12
430.10 Glossary	430-13
Chapter 431 Wetlands	431-1
431.01 Wetlands and Other Waters	431-1
431.02 Assessing Wetlands and Other Waters.	431-2
431.03 Identifying Impacts to Wetlands and Other Waters	431-3
431.04 Mitigating for Impacts to Wetlands and Other Waters.	431-3
431.05 Policies, Regulations, and Agreements	431-6
431.06 Abbreviations and Acronyms.	431-7
431.07 Glossary	431-7

	Page
Chapter 432 Floodplains	432-1
432.01 Summary of Floodplain Requirements	432-1
432.02 Applicable Statutes and Regulations	432-1
432.03 Governor’s Directive on Acquisitions of Agricultural Resource Land	432-2
432.04 WDFW Memorandum of Agreement for Transportation Activities	432-4
432.05 Floodplain Discipline Report	432-4
432.06 FHWA Floodplain Technical Advisory	432-4
432.07 FHWA Federal Aid Policy Guide on Floodplains	432-5
432.08 Flood Emergency Procedures	432-6
432.09 Flood Control Assistance Account Program (FCAAP)	432-6
432.10 Floodplain Permits and Approvals	432-6
432.11 Non-Road Project Requirements	432-7
432.12 Floodplain Resources	432-7
432.13 Abbreviations and Acronyms	432-8
432.14 Glossary	432-8
Chapter 433 Groundwater	433-1
433.01 Summary of Requirements for Groundwater	433-1
433.02 Groundwater Policy Guidance	433-2
433.03 Groundwater Related Interagency Agreements	433-2
433.04 Groundwater Technical Guidance	433-3
433.05 Applicable Statutes and Regulations	433-3
433.06 Abbreviations and Acronyms	433-5
433.07 Glossary	433-5
Chapter 436 Fish, Wildlife, and Vegetation	436-1
436.01 Fish, Wildlife, and Vegetation Policies and Regulations	436-1
436.02 Addressing Fish, Wildlife, and Vegetation in the NEPA/SEPA Process	436-1
436.03 Working With Endangered and Threatened Species	436-2
436.04 Working on Public Lands	436-7
436.05 Protecting Birds	436-8
436.06 Considering Fisheries Resources	436-9
436.07 Protecting Marine Mammals	436-9
436.08 Habitat Considerations	436-10
436.09 Coordinating With Tribes on Fish, Wildlife, and Vegetation Resources	436-11
436.10 Mitigation and Other Policies	436-11
436.11 Abbreviations and Acronyms	436-12
436.12 Glossary	436-13
Chapter 440 Energy	440-1
440.01 Energy Background	440-1
440.02 Documentation and Modeling Requirements	440-2
440.03 Applicable Statutes, Regulations, and Guidance	440-3
440.04 Non-Road Project Requirements	440-3
440.05 Abbreviations and Acronyms	440-4
440.06 Glossary	440-4

	<i>Page</i>
Chapter 446 Noise	446-1
446.01 Traffic Noise Background	446-1
446.02 Traffic Noise Requirements	446-1
446.03 Noise Technical and Policy Guidance	446-2
446.04 Noise Permits and Approvals	446-4
446.05 Noise Considerations for Non-Highway Projects	446-4
446.06 Applicable Statutes and Regulations	446-5
446.07 Abbreviations and Acronyms	446-5
446.08 Glossary	446-6
Chapter 447 Hazardous Materials (HazMat) and Solid Waste	447-1
447.01 Considering HazMat During the Project Lifecycle	447-1
447.02 Determining Suitable HazMat Documentation From the ERS	447-2
447.03 Writing and Right-Sizing HazMat Discipline Reports	447-2
447.04 Identifying Potentially Contaminated Property	447-3
447.05 Managing Liability During Real Estate Acquisition	447-4
447.06 Planning for Sediment Management	447-5
447.07 Using Construction Specifications and Provisions	447-5
447.08 Identifying and Reporting HazMat During Construction	447-6
447.09 Managing HazMat During Construction	447-8
447.10 Reusing or Disposing of Project Waste Materials	447-9
447.11 Laws and Regulations	447-10
447.12 Abbreviations and Acronyms	447-11
447.13 Glossary	447-11
Chapter 450 Land Use	450-1
450.01 Requirements for Land Use Analysis	450-1
450.02 Direct and Indirect Land Use Effects	450-2
450.03 Coordination With Other Disciplines	450-3
450.04 Right Sizing the Land Use Analysis	450-3
450.05 Non-Road Project Requirements	450-4
450.06 Farmland	450-6
450.07 Recreational Land Conversions	450-7
450.08 Highways on National Forest Lands	450-11
450.09 Wild and Scenic Rivers	450-11
450.10 Procedures for Completing a Land Use Analysis	450-14
450.11 Legal Sufficiency and Documentation	450-15
450.12 Land Use Statutes and Regulations	450-15
450.13 Abbreviations and Acronyms	450-16
450.14 Glossary	450-16
Chapter 456 Cultural Resources	456-1
456.01 Cultural Resources Overview	456-1
456.02 Section 106 Review and Compliance: FHWA	456-3
456.03 Section 106 Review and Compliance: USFS	456-5
456.04 Section 106 Review and Compliance: COE	456-5
456.05 Section 106 Review and Compliance: Other Federal Agencies	456-5

	<i>Page</i>
456.06 Governor’s Executive Order 05-05 Review and Compliance	456-8
456.07 Bridge Compliance	456-8
456.08 Artifact Collection and Disposition (Curation)	456-11
456.09 Use of Museums and Information Centers as Potential Mitigation. . .	456-13
456.10 Additional Cultural Resource Regulatory Guidance	456-14
456.11 Acronyms and Abbreviations.	456-16
456.12 Glossary	456-16
Chapter 457 Section 4(f) Evaluation	457-1
457.01 Section 4(f) Requirements	457-1
457.02 Identifying a Section 4(f) Property	457-2
457.03 Individual Section 4(f) Compliance.	457-2
457.04 Cultural Resources May Be Protected Under Section 4(f)	457-7
457.05 Section 6(f) Conversion May Be Required	457-8
457.06 Section 4(f) Requirements May Differ for Other Federal Agencies . .	457-8
457.07 Procedures for Completing a Section 4(f) Analysis.	457-9
457.08 Section 4(f) and Related Statutes	457-9
457.09 Abbreviations and Acronyms.	457-9
457.10 Glossary	457-9
Chapter 458 Social and Community Effects	458-1
458.01 Social and Community Effects Analysis	458-1
458.02 Equity Effects – Environmental Justice.	458-5
458.03 Social and Community Effects	458-6
458.04 Economic Effects	458-7
458.05 Relocation Impacts.	458-8
458.06 Public Services and Utilities	458-9
458.07 Public Involvement Requirements – LEP	458-11
458.08 Coordination With Tribal Governments.	458-12
458.09 Completing a Social and Community Effects Analysis.	458-12
458.10 Non-Road Project Requirements	458-12
458.11 Links to Social Analysis Statutes and Regulations	458-13
458.12 Abbreviations and Acronyms.	458-13
458.13 Glossary	458-14
Chapter 459 Visual Impacts	459-1
459.01 Introduction	459-1
459.02 Applicable Statutes and Regulations	459-3
459.03 Policy Guidance	459-5
459.04 Interagency Agreements.	459-5
459.05 Technical Guidance	459-5
459.06 Permits and Approvals	459-7
459.07 Non-Road Project Requirements	459-7
Chapter 460 Transportation.	460-1
460.01 Requirements for Transportation Analysis.	460-1
460.02 Safety	460-2
460.03 Vehicular Traffic.	460-2

	<i>Page</i>
460.04 Transit	460-3
460.05 Bicycling and Walking	460-3
460.06 Parking	460-5
460.07 Waterborne Navigation	460-5
460.08 Airports	460-6
460.09 Railroads	460-6
460.10 Transportation Discipline Report Guidance	460-7
460.11 Transportation Related Statutes and Regulations	460-8
460.12 Abbreviations and Acronyms	460-9
460.13 Glossary	460-9
Chapter 490 Tracking Environmental Commitments During Design	490-1
490.01 Commitments Must Be Tracked	490-1
490.02 Identify Environmental Commitments During Environmental Review and Design	490-1
490.03 Perform a Constructability Review	490-2
490.04 Project Design Must Reflect Environmental Commitments	490-2
490.05 Procedures for Tracking Commitments During Design	490-2
490.06 Links to Related Statutes	490-3
490.07 Abbreviations and Acronyms	490-3
490.08 Glossary	490-3
Chapter 500 Environmental Permitting	500-1
500.01 Introduction	500-1
500.02 Permit Overview	500-1
500.03 Roles and Responsibilities	500-2
500.04 Identify the Required Permits Through Early Coordination	500-4
500.05 Seek Permit Streamlining Options and Provide Schedule Input	500-5
500.06 Submit a Complete Permit Application and Obtain Permits	500-6
500.07 Review and Manage Permits During PS&E	500-7
500.08 Manage Permits and Conditions During Construction	500-7
500.09 Permitting Procedures	500-8
500.10 Links to Permitting Resources	500-8
500.11 Abbreviations and Acronyms	500-8
500.12 Glossary	500-9
Chapter 530 Tribal Approvals	530-1
530.01 WSDOT Policy for Working With Tribes	530-1
530.02 Treaty Rights	530-1
530.03 Section 401 Water Quality Certification by Tribes	530-2
530.04 Section 106 Consultation	530-2
530.05 Archaeological Resources Protection Act Permit	530-3
530.06 Hydraulic Project Approval	530-3
530.07 Tribal Law	530-3
530.08 Permit Assistance	530-3

	<i>Page</i>
Chapter 590 Incorporating Environmental Commitments Into Contracts	590-1
590.01 WSDOT’s Contracts Must Reflect the Environmental Commitments	590-1
590.02 Procedures for Incorporating Commitments Into Contracts	590-1
590.03 Glossary	590-1
Exhibit 590-1 Commitment Tracking System “Assign Responsibility” Screen	590-3
Exhibit 590-2 Commitment Tracking System “Assign Responsibility Detail” Screen	590-4
Exhibit 590-3 Commitment Tracking System “Contract Document by Project” Report.	590-5
Chapter 600 Construction	600-1
600.01 Construction Overview	600-1
600.02 Roles and Responsibilities	600-2
600.03 Construction Compliance Expectations.	600-5
600.04 Procedures for Construction	600-5
600.05 Abbreviations and Acronyms.	600-5
600.06 Glossary	600-5
Chapter 610 Preparation for Construction	610-1
610.01 Prepare a Compliance Binder or Notebook for the Project	610-1
610.02 Discuss Environmental Compliance at the Pre-Construction Meeting	610-1
610.03 Verify Contractor and WSDOT Credentials	610-2
610.04 Provide Notifications and Submittals to Resource Agencies.	610-2
610.05 Mark Clearing Limits and Protect Sensitive Areas	610-3
610.06 Procedures for Construction	610-4
610.07 Abbreviations and Acronyms.	610-4
610.08 Glossary	610-4
Exhibit 610-1 Environmental Compliance Assurance Procedures Flowchart	610-5
Chapter 620 During Construction	620-1
620.01 Introduction	620-1
620.02 Air	620-1
620.03 Cultural and Historic	620-2
620.04 Earth (Geology and Soils)	620-2
620.05 Fish, Wildlife, and Vegetation	620-3
620.06 Hazardous Material (HazMat)	620-3
620.07 Noise	620-4
620.08 Public Services and Utilities	620-4
620.09 Transportation and Traffic	620-4
620.10 Water Quality	620-5
620.11 Wetlands and Other Waters	620-6
620.12 Enforce the Contract During Construction	620-6
620.13 Respond to Project Modifications	620-6
620.14 Respond to Noncompliance.	620-7
620.15 Procedures for Construction	620-7
620.16 Abbreviations and Acronyms.	620-7

	Page
620.17 Glossary	620-7
Exhibit 620-1 WSDOT Standard Specifications for Hazardous Materials During Construction	620-9
Exhibit 620-2 Construction Procedures for Discovery of Archaeological and Historical Objects	620-12
Chapter 630 Close Out of Environmental Commitments	630-1
630.01 Close Commitments as They Are Completed	630-1
630.02 Initiate Post Construction Wetland Mitigation Monitoring	630-1
630.03 Prepare As-Built Reports for Wetland and Stream Mitigation Efforts	630-1
630.04 Coordinate Long-Term Maintenance	630-1
630.05 Procedures for Close Out of Construction Commitments	630-2
630.06 Abbreviations and Acronyms	630-2
630.07 Glossary	630-2
Chapter 700 Maintenance and Operations	700-1
700.01 Environmental Requirements for Maintenance and Operations	700-1
700.02 WSDOT Maintenance and Operation Plans and Policies	700-2
700.03 Interagency Agreements for Maintenance Activities	700-3
700.04 Permits and Approvals	700-4
700.05 WSDOT Manuals	700-5
700.06 Abbreviations and Acronyms	700-5
Chapter 800 Property Management and Disposal	800-1
800.01 Overview	800-1
800.02 Environmental Commitments for Utilities Accommodation	800-1
800.03 Environmental Considerations in Surplus Real Property Disposal/Lease	800-2
800.04 Environmental Considerations in Disposal of Pit Sites	800-4
800.05 Environmental Considerations for Changes in Limited Access	800-5
800.06 Statutes and Regulations	800-5
800.07 Abbreviations and Acronyms	800-6
800.08 Glossary	800-6
Appendix A Executive Orders	A-1
Appendix B Interagency Agreements	B-1
Appendix C Project Delivery Memos	C-1
Index	I-1

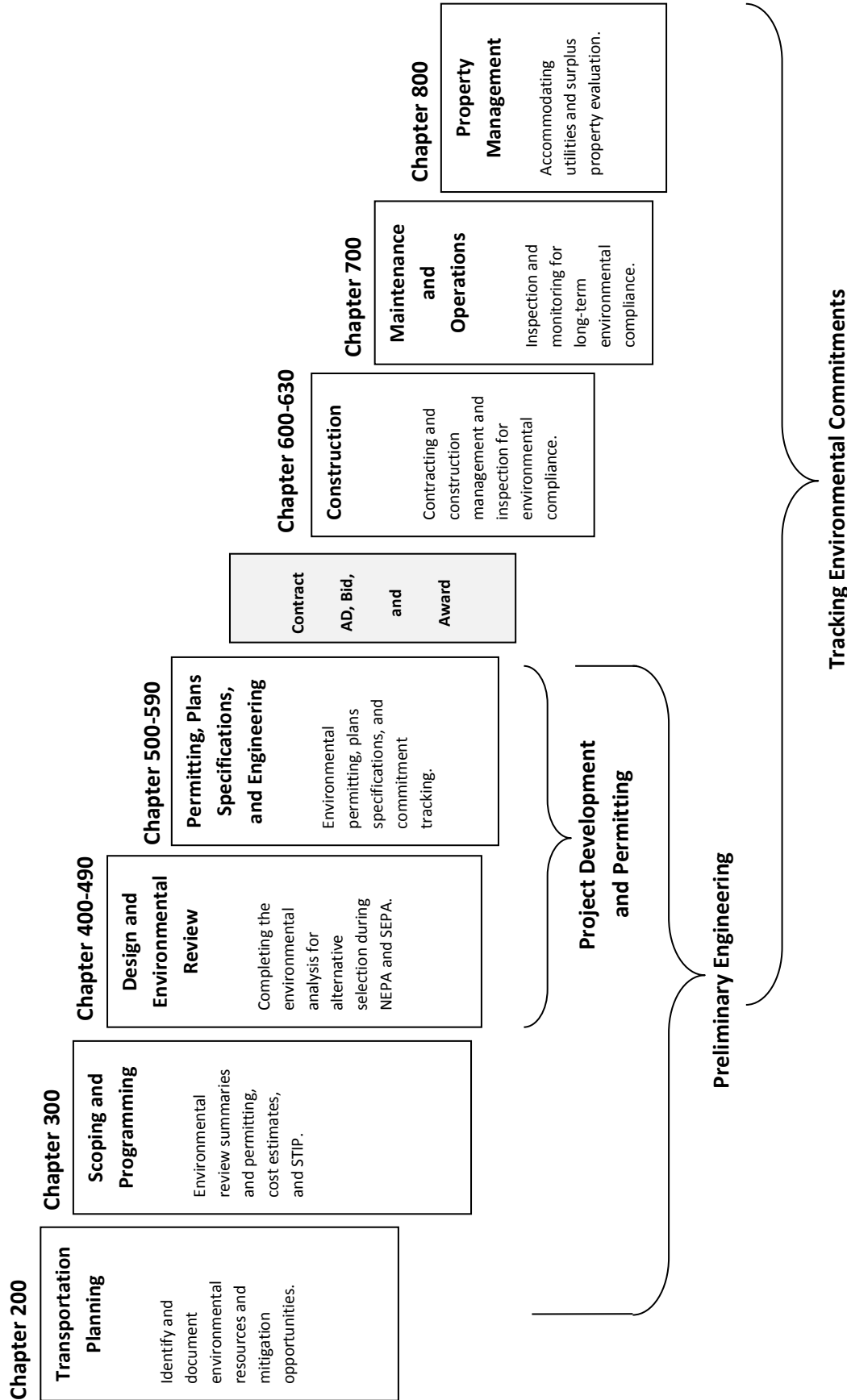
The Washington State Department of Transportation (WSDOT) *Environmental Procedures Manual* M 31-11 and the WSDOT [Environmental](#) web pages support WSDOT's Environmental Policy Statement and our Stewardship Agreement with FHWA. It also provides guidance for compliance with state and federal environmental laws and regulations for all phases of project delivery.

[Figure 100-1](#) identifies the major planning, engineering, and environmental activities associated with each phase of the project delivery. It shows where information can be found in this manual. Links to the WSDOT [Environment Site Index](#) web page are provided in the text as needed.

This manual and the supporting web pages 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 WSDOT [Local Agency Guidelines](#) M 36-63.

This manual and supporting WSDOT web pages 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](#).

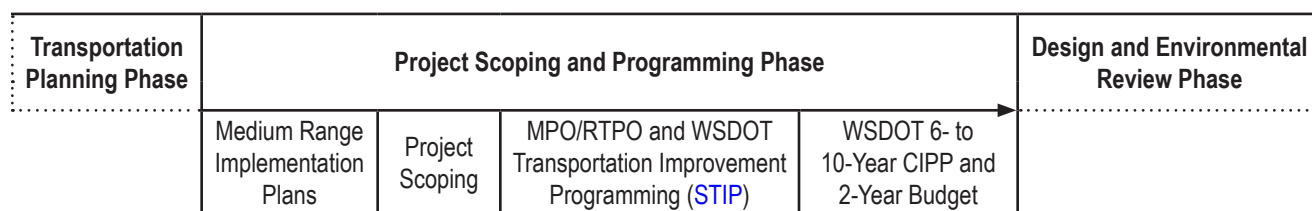


WSDOT Transportation Decision-Making Process and Environmental Procedures Manual Organization
Figure 100-1

300.01	Introduction and Overview
300.02	Project Scoping
300.03	Project Classification
300.04	NEPA Classifications
300.05	SEPA Classifications
300.06	Revision of Project Scope and Classification
300.07	Environmental Database Resources
300.08	Abbreviations and Acronyms
300.09	Glossary

300.01 Introduction and Overview

This chapter covers the Project Scoping and Programming phase of the Washington State Department of Transportation (WSDOT) Transportation Decision-Making Process as shown in Figure 300-1.



Project Scoping and Programming

Figure 300-1

During this phase, WSDOT develops a plan to address transportation facility deficiencies and creates a preliminary budget for consideration by the legislature. The process is required by state law ([RCW 47.05.010](#)) and is limited to solving safety, operational, and environmental deficiencies identified in WSDOT's modal plans.

Project scoping defines time and cost of work estimated for each proposed project. It is important that the permitting estimates be as realistic as possible and includes 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 costs and schedule developed during Project Scoping. 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. Projects that solve multiple deficiencies receive a higher priority for funding.

- The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) approve the Statewide Transportation Improvement Program (STIP). A project must be included in the [STIP](#) to be eligible for federal funding (Title 23 USC and the Federal Transit Act). For details on this process, see WSDOT's [Highways and Local Programs](#) website.
- The legislature considers and approves WSDOT's six- to ten-year Capital Improvement and Preservation Program (CIPP) and two-year budget. The approved plan and budget typically includes legislative modifications.

Figure 300-2 illustrates this process. For details, see [Transportation Planning Study Guidelines and Criteria](#) M 3033.

300.02 Project Scoping

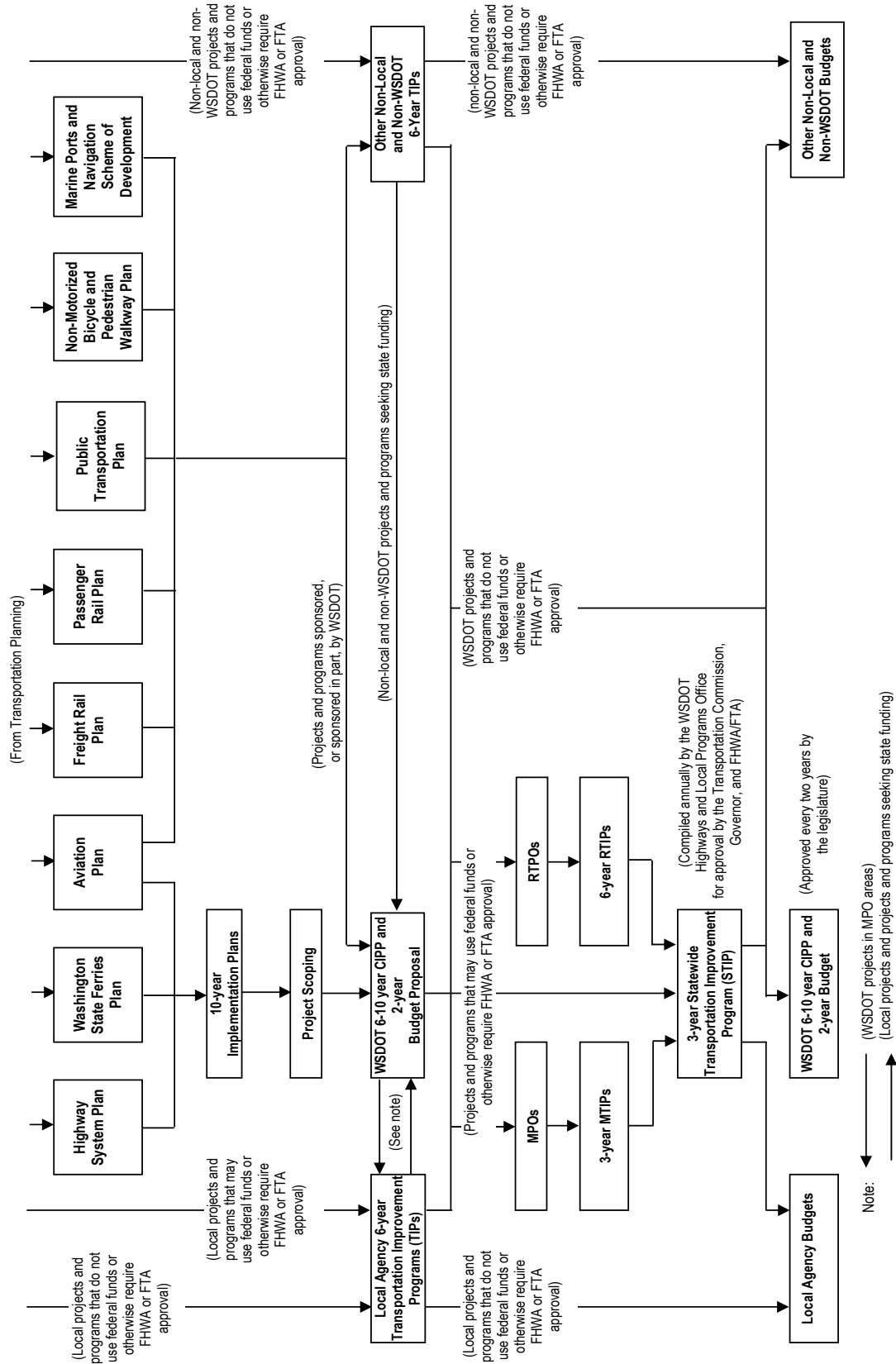
During project scoping, all major costs of the project are used to prepare a realistic schedule and cost estimate. This task is accomplished by completion of the Project Summary Form.

The Project Summary identifies the transportation needs that have generated the project, the purpose or goal of the work, and the recommended solution. It is prepared by WSDOT region staff using the WSDOT Project Summary Database (see [Design Manual](#) M 22-01 Chapter 300). The database consists of three forms completed by region staff:

- **Project Definition** – Identifies the project purpose and need, proposed solution, estimated cost, and a benefit/cost ratio. The cost includes the estimated cost for environmental review, permitting, and mitigation.
- **Design Decisions** – Documents the project content and design decisions made to prepare project scopes, estimates, and schedules.
- **Environmental Review Summary (ERS)** – Describes the potential environmental impacts, mitigation options, and necessary permits for the project. It establishes the initial environmental classification and documentation required for the project and identifies the key environmental elements that will be addressed through the NEPA/SEPA and permitting process. See the WSDOT [Environmental Permitting](#) web page for permitting tools and other resources. The ERS database includes fully integrated help screens that provide detailed guidance. Contact your Regional Environmental Office or Program Management Office to get set up to work in the database. For CE/DCE/PCE level projects, the information in the ERS is exported to the ECS/SEPA Checklist database and become the basis for environmental documentation. See [Section 300.04](#) Class II projects.

300.03 Project Classification

The project classification determines the level of environmental documentation required for a WSDOT project. It is based on the information contained in the Environmental Review Summary. 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.



Project Scoping and Programming
Figure 300-2

300.04 NEPA Classifications

Projects subject to NEPA fall into one of the three following classifications:

- **Class I Projects** require preparation of an Environmental Impact Statement (EIS) because the action is likely to have significant adverse environmental impacts.
 - **Class II Projects** are Categorical Exclusions (CE), Programmatic Categorical Exclusions (PCE), or Documented Categorical Exclusions (DCE). These actions are not likely to cause significant adverse environmental impacts and meet the definitions contained in [40 CFR 1508.4](#). Each federal agency has their own list of actions that qualify as CE/DCEs. The ECS/SEPA Checklist database provides environmental documentation for these types of actions. The database includes fully integrated help screens that provide detailed guidance. Contact your Regional Environmental Office or Program Management Office for access.
 - **Class III Projects** require preparation of an Environmental Assessment (EA) because the project's impact on the environment is not clearly understood.
1. **NEPA Class I Projects (EIS)** – Actions that 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, natural resources. See the WSDOT [Environmental Impact Statement Process](#) web page for details on EIS documents and general guidance on preparing an EIS. Projects that usually require an EIS, as defined in [23 CFR 771.115](#), are:
 - New controlled-access freeway.
 - 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).
 - 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 size and significance of the potential impacts determine the need for an EIS, not the size of the project.

2. **NEPA Class II Projects** – Actions that meet descriptions contained in NEPA rules ([40 CFR 1508.4](#)) and do not typically involve significant environmental impacts, unless specifically requested by other agencies or due to public controversy on environmental issues. These actions do not require an EIS or an EA, 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 any significant environmental impacts.

FHWA divides Class II projects into three subcategories: Categorical Exclusions (CE), Documented Categorical Exclusions (DCE), and Programmatic Categorical Exclusions (PCE). The subcategory determines the documentation and approval requirements.

- FHWA Categorical Exclusions (CE)** – Class II Projects that do not require documentation for FHWA concurrence. Known as the “c list,” these actions are generally minor actions that have little or no physical impacts. The complete list can be found in [23 CFR 771.117\(c\)](#). These actions normally do not require further approval or documentation by FHWA. Environmental documentation for CE projects is accomplished by completion of the Environmental Classification Summary (ECS) and approved by the Regional Environmental Manager.
- FHWA Documented Categorical Exclusions (DCE)** – Class II Projects requiring additional environmental documentation. Known as the “d” list,” these projects are described in [23 CFR 771.117\(d\)](#). FHWA approval must be obtained before the design file and environmental documentation can be approved.

Preliminary environmental studies and/or detailed analysis may be required for DCE projects to determine the exact nature of environmental and social impacts. If the study findings are consistent with the DCE classification, the ERS becomes the Environmental Classification Summary (ECS). The ECS is signed by the WSDOT Regional Environmental Manager and sent with the federal permits and/or documentation to FHWA for approval.

Examples of DCE projects for FHWA include but are not limited to:

- Modernization of a highway including resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes.
- Safety and operational improvements, including ramp metering.
- Bridge rehabilitation, reconstruction or replacement, including construction of grade separated railroad crossings.
- Fringe parking facilities.
- New truck weigh stations or rest areas.
- Disposal or joint use of right of way where the proposed use does not have significant adverse impacts.
- Change in access control.
- New bus storage and maintenance facilities.

- Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities.
 - Bus transfer facilities in a commercial area.
 - Industrial rail storage and maintenance facilities consistent with existing zoning. Noise generated by the facility may not significantly impact the surrounding community.
 - Acquisition of land for hardship or protective purposes.
- c. **FHWA Programmatic Categorical Exclusions (PCE)** – FHWA and WSDOT signed [Statewide Categorical Exclusion Programmatic Agreement](#) on March 7, 2013. The agreement provides a list of conditions under which WSDOT can certify to FHWA that a project is categorically excluded from NEPA. Technically this is not a delegation; FHWA retains legal responsibility for NEPA decisions under the programmatic agreement. However, the agreement does eliminate the need for these projects to be sent to FHWA for signature. See the Programmatic CE for specific conditions.

FTA divides Class II projects into two subcategories: Categorical Exclusions (CE) and Documented Categorical Exclusions (DCE). CEs listed in [23 CFR 771.118\(c\)](#) describes minor actions that have little or no physical impacts and have been designated as CEs by FTA. These actions do not require further approval or documentation by FTA. FTA has its own process and worksheets for documenting CEs.

Class II Projects requiring additional environmental documentation by FTA are described in [23 CFR 771.118\(d\)](#). FTA approval must be obtained before the environmental documentation can be approved for these projects.

FRA recognizes only one category of CE projects. They are described in the Federal Register ([78 FR 2713](#) (January 14, 2013)). The list of projects can be found in Section III on page 2718. FRA has their own process and worksheets for documenting CEs. Contact the Rail Division Environmental Compliance Manager for assistance.

3. **NEPA Class III Projects – Environmental Assessment (EA)** – An EA is prepared when the impact of a proposed project on the environment is not clearly understood. The EA determines the extent and level of environmental impact. An EA may support a NEPA Finding of No Significant Impact (FONSI) or indicate that an EIS is warranted.

An EA may satisfy the requirements for a SEPA DNS, but it does not include sufficient detail to satisfy the requirements of a SEPA EIS.

The content and complexity of an EA will vary depending on the project. See the WSDOT [Environmental Assessment Process](#) web page for details on EA documentation and procedure.

300.05 SEPA Classifications

While all agency actions technically require a SEPA determination, many of the operational and administrative tasks we undertake 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 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 Non-Significance (DNS) and Categorically Exempt (CE).

- **Determination of Significance (DS)** – Issued for actions that are likely to result in a significant adverse environmental impact. An Environmental Impact Statement (EIS) will be completed for these projects.
- **Determination of Non-Significance (DNS)** – Issued for actions that are not likely to have a significant adverse environmental impact. A SEPA checklist is required for these projects.
- **Categorically Exempt (CE)** – Determination is issued for actions that are unlikely to cause significant adverse environmental impacts. The types of projects that qualify as categorically exempt can be found in:
 - [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](#) – DOT's SEPA procedures including how WSDOT has interpreted the categorical exclusions listed in state SEPA rules.

NEPA CE (Class II) projects are not always categorically exempt under SEPA. If the project is not exempt under SEPA, WSDOT must consider environmental information for the project and prepare a threshold determination (DS, DNS, or mitigated DNS).

The NEPA EA may be adopted by WSDOT to satisfy the SEPA checklist requirement ([WAC 197-11-610](#)). An addendum may be required to assure all elements of the environment, as required by SEPA, are described. In this case, WSDOT is still required to issue the DNS for the project.

300.06 Revision of Project Scope and Classification

See Section 400.06 for details on project reevaluation and preparation of supplementary environmental documentation.

(1) NEPA Reclassification

FHWA must concur with the NEPA classification. A revised ECS must be processed for any major change in a project classification if the project involves federal funds. Minor changes may be handled informally, if FHWA concurs.

(2) SEPA Reclassification

A significant change in the scope of a state funded project usually requires revision of the ERS. This may include reassessment of the environmental classification. The Regional Environmental Office, in coordination with the Regional 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 Environmental Database Resources

(1) WSDOT's GIS Workbench

WSDOT's GIS Workbench is an internal data system available for use by WSDOT staff in preparing the "Environmental Considerations" 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.

WSDOT users can access these data sets through the WSDOT [GIS Workbench](#) web page.

The data provided to WSDOT staff through the GIS Workbench are sufficient for Project Summary's ERS form purposes, in most cases. Wetland data available from the GIS Workbench are not 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.

(2) Expansion of GIS Workbench

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

(3) **Citing a GIS Database**

The GIS Workbench itself should not be cited as a data source, or reference on paper or digitally. Data source or reference citation should be specific to the exact dataset viewed using the GIS Workbench. Proper form for citations referring to a digital database is evolving, but typically includes the name of the data system, the name of the agency that maintains/updates the database, and 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.

300.08 **Abbreviations and Acronyms**

CE	Categorical Exclusion (NEPA) or Categorical Exemption (SEPA)
CFR	Code of Federal Regulations
CIPP	Capital Improvement and Preservation Program
DCE	Documented Categorical Exclusion (NEPA)
DNS	Determination of Nonsignificance
DS	Determination of Significance
EA	Environmental Assessment
ECS	Environmental Classification Summary
EIS	Environmental Impact Statement
ERS	Environmental Review Summary
ESO	Environmental Services Office
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GIS	Geographic Information System
MAP-21	Moving Ahead for Progress in the 21st Century
MPO	Metropolitan Planning Organization
NEPA	National Environmental Policy Act
PCE	Programmatic Categorical Exclusion
PS&E	Plans, Specifications, and Estimates
RTPO	Regional Transportation Planning Organization
SEPA	State Environmental Policy Act
STIP	Statewide Transportation Improvement Program
TIP	Transportation Improvement Program

300.09 **Glossary**

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

Categorical Exclusion – A NEPA action that does not individually or cumulatively have a significant environmental effect. See [Section 300.04](#).

Categorical Exemption – A SEPA action that does not individually or cumulatively have a significant environmental effect. See [Section 300.05](#).

Compensatory Mitigation – Compensatory actions taken to mitigate for unavoidable impacts to natural resources. For example, mitigation can include establishment (creation), restoration (re-establishment and rehabilitation), enhancement, or, in exceptional circumstances, preservation of wetlands and/or other aquatic resources. Mitigation can be conducted in advance or concurrent to permitted impacts.

Early Mitigation – Any form of compensatory mitigation that is accepted by regulatory authorities as being established before a permitted impact occurs. This includes mitigation banks, in lieu fee programs, and advance mitigation.

Excess Mitigation – An area or amount of compensatory mitigation that is in excess of required mitigation for a project's impacts. Where identified for regulatory authorities, excess mitigation may be proposed to mitigate for future impacts.

Federal Nexus – A project has a federal nexus, and therefore environmental impacts must be evaluated under the NEPA, when there is a connection with the federal government. Federal connections include:

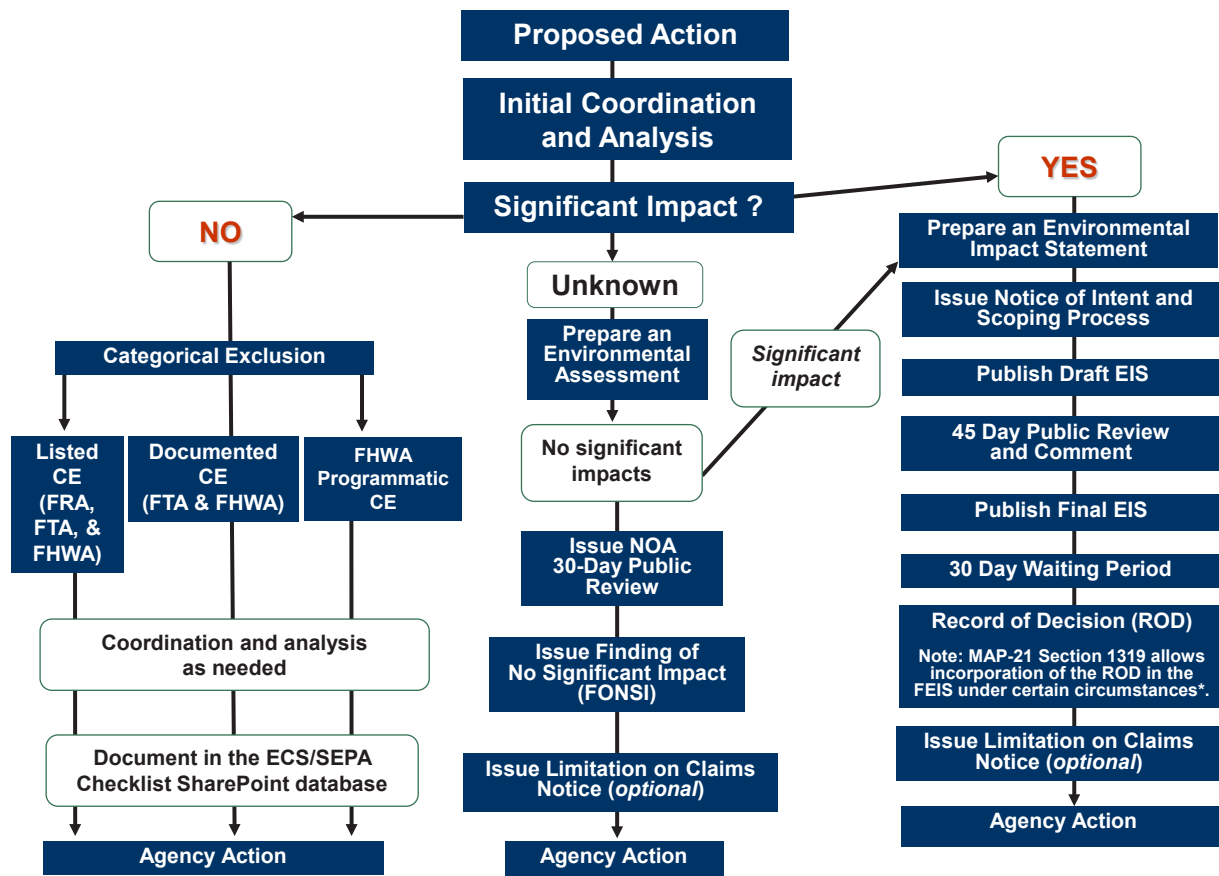
- Federal land within the project area.
- Federal money is used on the project.
- Federal permits or approvals are required.

In Lieu Fee – Funds paid to a governmental or nonprofit natural resources management entity that provides compensatory mitigation and sells mitigation credits. The obligation to provide compensatory mitigation is transferred from the permittee to the in lieu fee entity.

MAP-21 – The Transportation Authorization Bill passed on July 6, 2012. It guides the nation's surface transportation program, creates a streamlined, performance-based surface transportation program and builds on many of the highway, transit, bike and pedestrian programs established in 1991.

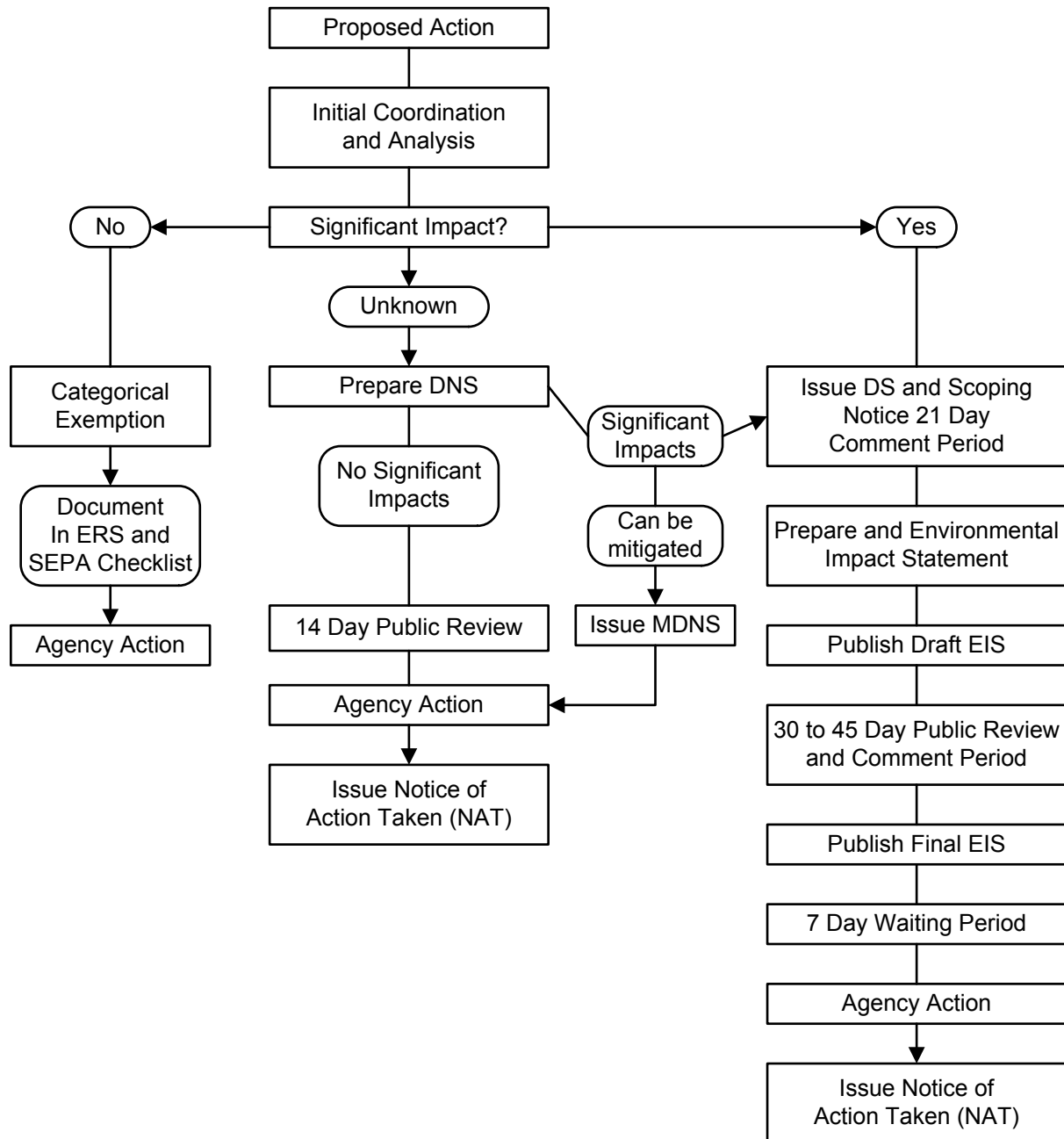
Mitigation Banking – A site that is restored, created, enhanced, or preserved for the purpose of providing compensatory mitigation in advance of authorized impacts to resources such as wetlands.

Project Scoping – A phase of the WSDOT Transportation Decision Making Process designed to ensure region staff incorporates all major costs of the project in funding estimates. Engineering and environmental factors must be included to generate a realistic schedule and cost estimate for the legislature's consideration. This work is accomplished in the Project Summary and identifies the key environmental elements that will be addressed through NEPA/SEPA and permitting.



*See [NEPA/SEPA Guidance](#) web page.

NEPA Environmental Review Process
Figure 400-2



SEPA Environmental Review Process
Figure 400-3

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 Documenting Categorical Exclusions/Exemptions (CE)

CEs are defined as projects that do not individually or cumulatively have a significant environmental effect (for descriptions and detailed explanation see Chapter 300.) Some projects are Categorical Excluded from the NEPA process or Categorical Exempt from the SEPA process. Some NEPA Categorical Exclusions require documentation. NEPA and SEPA identify that conditions might exist that would otherwise remove an excluded/exempted action from its exempt status.

Agency 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](#)).

As detailed below in [Section 400.09\(1\)](#), within WSDOT, authority to sign that a project meets the criteria/category of being a CE rests with the Region/Modal Environmental Manager, and the Local Program Environmental Engineer for H&LP projects. A CE is documented in the ECS database for highway projects. FTA and FRA use CE worksheets to document their decisions. Whereas FHWA has delegated some decisions regarding CEs to WSDOT (as explained below), FTA and FRA have not and must sign the CE as a NEPA document.

(1) NEPA CEs (Categorical Exclusions)

Categorical Exclusions can be a listed CE or a Documented CE (DCE). The type of CE and supporting documentation, if applicable, is identified in the ECS database. CEs defined in [23 CFR 771.117\(c\)](#) are considered “listed” CEs. These activities do not require a signature from FHWA. CEs defined in [23 CFR 771.117\(d\)](#) may cause impacts and require some additional documentation to verify that a CE is appropriate. Categories of excluded activities that require documentation are known as “d list” or Documented CEs (DCE). A DCE must be supported by subject specific analysis. The analysis should be “right sized” to reflect the level of environmental impact. This can usually be accomplished with a letter to the file, or very short summary of analysis to support the CE status.

Certain CEs have been determined by FHWA to be routine and, under specific conditions as spelled out in a programmatic agreement between FHWA and WSDOT, can be signed by WSDOT without prior review by FHWA. Every two years FHWA audits WSDOT’s use of the programmatic agreement in issuing CEs to ensure appropriate use of the interagency agreement. See [Appendix B](#) to view the FHWA/WSDOT NEPA Programmatic Categorical Exclusions (PCEs).

(2) **SEPA CEs (Categorical Exemptions)**

Although there is no requirement to document exemptions in SEPA, Categorical Exemptions can also be documented in the ECS database. 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 Mode Environmental Manager determines if a project is exempt from SEPA.

400.10 Environmental Document Legal Considerations

(1) **Statute of Limitations**

1. **Under NEPA – [23 CFR 771.139](#)** establishes a 180 day statute of limitations ([MAP-21 Section 1308](#) reduces the time period to 150 days) 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 by FHWA; and
- A statute of limitations notification was published in the Federal Register announcing the action; and
- The action is considered to be 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 request that FHWA publish a Statute of Limitations (SOL) notice in the Federal Register where doing so will expedite the resolution of issues affecting transportation projects. Typically, an SOL will be issued for all EISs, and many EAs. Project teams should issue an SOL anytime it identifies controversy that cannot be easily resolved. FHWA guidance on when to issue a statute of limitations to limit claims is provided in [Appendix E](#) of FHWA's 2006 SAFETEA-LU Environmental Review Process Guidance.

2. **Under SEPA a Notice of Action (NAT)** – Also referred to as a Notice of Action Taken, 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 Notice of Action.

WSDOT's policy is to publish a Notice of Action 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 Notice of Action is made by the project office. Normally the Environmental Manager of a region or mode will write and sign the Notice of Action.

[RCW 43.21C.080](#) describes the process for publishing the NAT. Guidance for preparing the NAT is provided on the WSDOT [NEPA/SEPA Guidance](#) web page.

412.01	Introduction
412.02	Summary of Requirements
412.03	Types of Impacts Included in the Cumulative Impacts Analysis
412.04	Analyzing Cumulative Impacts
412.05	Climate Change and Greenhouse Gases
412.06	Case Law and Cumulative Impacts Analysis
412.07	Additional Resources on Indirect and Cumulative Effects
412.08	Applicable Statutes and Regulations
412.09	Glossary

412.01 Introduction

This chapter deals with some of the most challenging sections of an environmental document, namely consideration of:

- Indirect (or secondary) impacts.
- Cumulative impacts.
- Climate change as a cumulative effect.

Part of the confusion around indirect and cumulative effects is due to the different definition of the type of actions considered in the National Environmental Policy Act (NEPA) and Endangered Species Act (ESA).

- NEPA requires consideration of the past, present and reasonably foreseeable future actions, regardless of the agency or person undertaking such actions ([40 CFR 1508.7](#)).
- ESA requires consideration of future state or private activities that are reasonably foreseeable, but excludes other federal activities ([50 CFR 402.02](#)).
- 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 Section 436.05).

This chapter provides guidance for addressing indirect and cumulative impacts to comply with the overarching NEPA analysis and complies with the [2008 Joint Guidance](#) issued by WSDOT, EPA, and FHWA.

412.02 Summary of Requirements

NEPA requires that any agency proposing a major federal action, which 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 USC 4332\(c\)](#)). WSDOT construction projects that are federally

funded or require federal approvals must comply with NEPA. SEPA also requires WSDOT, as the state lead agency, 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) (WAC 197-11-060(4)(d-e)).

There are three types or categories of effect (or impact) that must be considered during the NEPA process: direct, indirect, and cumulative (40 CFR 1508.25). Identifying direct effects, which are those effects caused directly by our activities, at the same time, and in the same place, is relatively simple and straightforward. Identifying and analyzing indirect effects, which are effects caused by transportation project activities, that occur later in time, at some distance from the project, and are in the chain of cause-and-effect relationships, can be more complex and generate more confusion. But as complex as indirect effects may be, the cumulative effects analysis generates the most complex and contested issues and is easily the most misunderstood. Table 412-1 provides a summary comparison of direct, indirect and cumulative effects.

Type of Effect	Direct	Indirect	Cumulative
Nature of effect	Typical/inevitable/predictable	Reasonably foreseeable/probable	Reasonably foreseeable/probable
Cause of effect	Project	Project's direct and indirect effects	Project's direct and indirect effects and 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

*Indirect could potentially occur before the project is built (i.e., speculators initiating land use actions in anticipation of project construction).

Source: *A Guidebook for Evaluating the Indirect Land Use and Growth Impacts of Highway Improvements*, Final Report SPR 327, Oregon DOT and FHWA, April 2001.

Summary of Direct, Indirect, and Cumulative Effects
Table 412-1

1. When are indirect impacts analyzed?

Indirect impacts often relate to changes in land use, such as addition of new impervious surface, filling of wetlands, or modification of habitat. Under the Growth Management Act, land use changes are the direct result of local planning decisions. FHWA and WSDOT do not control this process. However, indirect impacts associated with transportation projects may affect the rate and pattern of development. The potential effect of such indirect effects should be analyzed. For example, if WSDOT constructs a bypass route around a town, restaurants, gas stations and other forms of development may relocate to the bypass in order to get more business from intercity traffic, while development and economic vitality along the original route may decline.

In general, projects in a new location or projects in which there is a dramatic change in travel lanes (e.g., from two to six lanes with grade separations) are more likely to contribute to indirect impacts than projects in areas which are already developed, or involve a smaller increase in capacity.

To evaluate the potential for indirect impacts, you should evaluate the likelihood of development in the project area following project construction. 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. Are there plans/plats in the project area approved or currently under review? 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? Does the transportation element of the plan include the proposed transportation project? Would the transportation project support the local decisions contained within adopted plans? Do the city planners expect the project to support or encourage development?

Use your professional judgment and discussions with the city or county in the project area, as well as any other experts in the area to determine whether or not the proposed WSDOT project is consistent with the local plans. Determine if the project is likely to support changes in the type, rate, or timing of planned growth. Document your conclusion and describe the indirect effects associated with the proposed action.

The process for analyzing indirect effects is further described on the WSDOT [Cumulative Effects Analysis](#) web page.

2. When are cumulative impacts analyzed?

The CEQ regulations require that all federal agencies consider the cumulative effects of a proposed action. The level of the environmental study document being prepared will give you some idea about when and if the analysis should be prepared. In addition, 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 impact on the resource.**

- **Categorical Exclusion (CE/PCE/DCE): Generally Not Required** – These projects are by definition minor projects without significant environmental impacts, and as such should not require a cumulative impact analysis. There may be unusual circumstances requiring such an analysis, but this should be very rare.

- **Environmental Assessment (EA): Generally 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 decide whether or not an EIS is needed. You will need to conduct an initial environmental assessment. The degree to which resources may be impacted will determine the extent of the cumulative impact analysis needed. Where direct and indirect effects are found to be present, you will need to complete a cumulative impact analysis. When your project is large, complex, and in an environmentally sensitive area, the cumulative impact analysis should mirror what is done for an EIS.
- **Environmental Impact Statement (EIS): Required** – These are projects in which there are anticipated significant environmental impacts, and a cumulative impact analysis may assist decision makers in making decisions on project scope, design, and location. In general, the cumulative impact analysis should include substantial information about resources, past actions that have contributed to trends and reasonably foreseeable effects. See page 45 in CEQ guidance, *Considering Cumulative Effects Under the NEPA*.

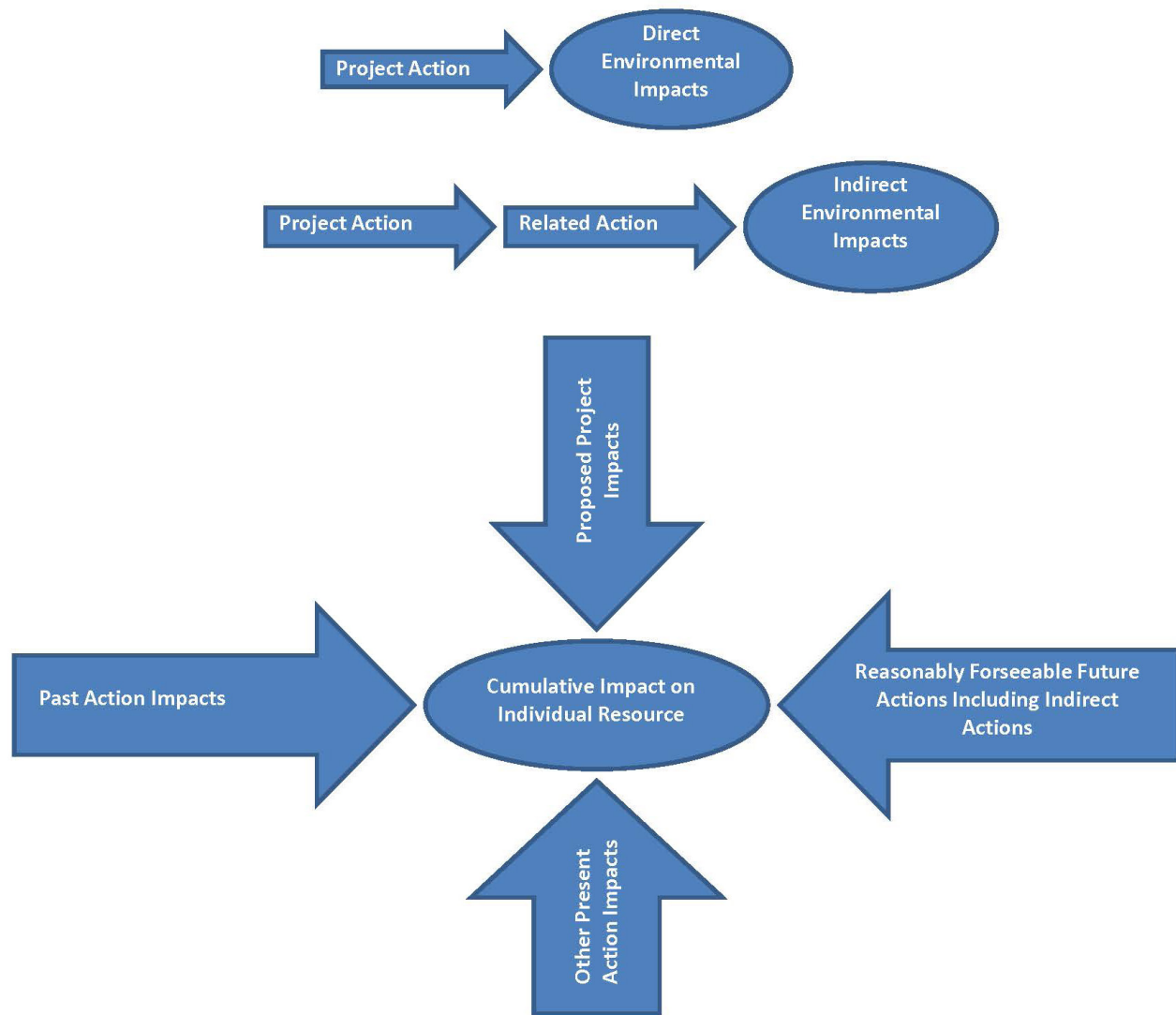
3. **Where should cumulative impacts be discussed in the environmental document?**

Cumulative impacts 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 impacts that are interrelated across disciplines.

412.03 Type of Impacts Included in the Cumulative Impacts Analysis

Cumulative impacts include direct and indirect impacts resulting from governmental and private actions. The relationships are illustrated in [Figure 412-1](#).

- **Direct impacts** are included in a cumulative impact analysis. This information should be gathered from the sections of the environmental document where the direct impacts of the project are discussed. Impacts may include impacts to wetlands, changes in land use (conversion to transportation use), effects on endangered species, as well as other relevant impacts.
- **Indirect impacts** are included in a cumulative impact analysis. Indirect impacts may include land development occurring after a project is constructed. This could be as a result of access to a previously undeveloped property or as a result of changes in traffic patterns that may change the pattern or rate of planned growth. Other examples of indirect impacts could include changes in wildlife populations due to direct effects on habitat, changes in use of a recreation development or park due to improved access or visibility, or reduced flooding severity downstream due to improved highway runoff flow control.



Source: Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process, FHWA, 2003

Relationship Between Direct, Indirect, and Cumulative Effects Figure 412-1

412.04 Analyzing Cumulative Impacts

WSDOT, EPA-Region 10, and FHWA-Washington Division have agreed that there is no single formula available for determining the appropriate scope and extent of a cumulative impact analysis based on input received during scoping. Ultimately, the practitioner must determine the methods and extent of the analysis based on the size and type of the project proposed, its location, potential to affect environmental resources, and the health of any potentially affected resource. However, we endorse the eight-step process described on the Joint Guidance and WSDOT [Cumulative Effects Analysis](#) web page.

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

Unlike direct impacts, quantifying cumulative impacts may be difficult, since a large part of the analysis requires projections about what may happen in a project area. Actions taken by governmental and private entities other than WSDOT need to be considered for a cumulative impact analysis. Partnering with other agencies will make it easier to identify additional information that might be needed.

For the analysis, use information from any environmental documents such as discipline reports, as well as other relevant information, such as local comprehensive plans, existing zoning, recent building permits, and interviews with local government. These may also be good sources for information on past actions.

412.05 Climate Change and Greenhouse Gases

Over the past five years, all of WSDOT's published NEPA Environmental Impact Statements and Environmental Assessments have disclosed project-level Green House Gases (GHG) emissions and described potential climate threats. Prior versions of our guidance combined the topics of GHG and climate impacts. Based on feedback from our project teams, the 2013 guidance is now separated.

1. **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 impact. The discussion should include efforts currently underway in Washington State to reduce GHG emissions and the effects of current projects on GHG emissions (see [Chapter 440, WSDOT Guidance – Project-Level Greenhouse Gas Evaluations under NEPA and SEPA](#) on the WSDOT [Energy](#) web page, or contact WSDOT's Air Quality, Acoustics, and Energy Program.
2. **Climate Change** – 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 scientifically-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](#) on the WSDOT [Adapting to Climate Change](#) web page, or contact WSDOT's Air Quality, Acoustics, and Energy Program.

412.06 Case Law and Cumulative Impacts Analysis

Case law provides some guidance on the standards that must be met with regard to cumulative impacts. NEPA analyses must include useful evaluation of the cumulative impacts of past, present, and future projects. In *Carmel-by-the-Sea v. U.S. Department of Transportation*, 123 F.3d 1142, 1160 (9th Cir.1997), the Ninth Circuit found that this means the environmental analysis must evaluate the combined effects of past, present and future projects in sufficient detail to be "useful to the decision maker in deciding whether, or how, to alter the program to lessen cumulative impacts." See also *Neighbors of Cuddy Mountain v. U.S. Forest Service*, 137 F.3d 1372, 1379-80 (9th Cir.1998) ("To 'consider' cumulative effects, some quantified or detailed information is required. . . . General statements about 'possible' effects and 'some risk' do not constitute a 'hard look' absent a justification regarding why more definitive information could not be provided.").

The Carmel-by-the-Sea court acknowledged that the EIS considered the impacts in the individual resource discussions and in a separate section, but noted that the analyses were "not lengthy, and taken either separately or together" they failed to satisfy NEPA, 123 F.3d at 1160. The critical component missing from the analysis was how the past and future projects interact with the present project to cumulatively impact the area resources.

A cumulative impacts analysis should identify the area in which the effects of the proposed project will be felt; the impacts that are expected in that area from the proposed project; other actions—past, present, and proposed, and reasonably foreseeable—that have or are expected to have impacts in the same area; the impacts or expected impacts from these other actions; and the overall impact that can be expected if the individual impacts are allowed to accumulate. *Grand Canyon Trust v. Federal Aviation Administration*, 290 F.3d 339 (D.C. Cir 2002); *Fritiofson v. Alexander*, 772 F.2d 1225 (5th Cir. 1985).

In *Fritiofson*, the court stated that "the CEQ regulations [indicate] that a meaningful cumulative-effects study must identify: (1) the area in which effects of the proposed project will 'be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions—past, proposed, and reasonably foreseeable—that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate. *Fritiofson v. Alexander*, 772 F.2d at 1245.

412.07 Additional Resources of Indirect and Cumulative Effects

An excellent reference for analyzing indirect effects is *NCHRP Report 466: Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects*. This 2002 reference handbook includes the results of research, guidance, and a framework to help estimate effects.

The most current information and additional resources can be found in the American Association State Highway and Transportation Officials *Practitioner's Handbook: Assessing Indirect Effects and Cumulative Impacts Under NEPA*.

See also:

- *A Guidebook for Evaluating the Indirect Land Use and Growth Impacts of Highway Improvements*, Final Report SPR 327, Oregon Department of Transportation and FHWA, April 2001 and [Appendices](#).
- [Executive Order 13274](#) (on Environmental Stewardship and Transportation Infrastructure Project Reviews) and Indirect and Cumulative Impacts Work Group, Draft Baseline Report, March 15, 2005.
- [Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process](#), FHWA Interim Guidance 2003.
- [Considering Cumulative Effects Under the National Environmental Policy Act](#), Council on Environmental Quality, 1997.

412.08 Applicable Statutes and Regulations

- National Environmental Policy Act (NEPA), [42 USC Section 4321](#).
- 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\(4\)](#).
- CEQ Rules – [40 CFR 1508](#)
- FHWA Rules – [23 CFR 771](#)

412.09 Glossary

Effect – See [Impact](#).

Context – “This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.” ([40 CFR 1508.27\(a\)](#))

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 ([40 CFR 1508.7](#)).

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](#)).

Direct Impact/Effect – Effect caused by the proposed action and occurring at the same time and place.

Impact – Synonymous with “Effect.” Includes ecological impacts (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health impacts, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes the effect will be beneficial.

Indirect Impacts/Effects (NEPA) – Effects which are caused by the action that are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced 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.

Intensity – This refers to the severity of a proposed action’s impact on the environment. CEQ NEPA Regulations ([40 CFR 1508.27\(b\)](#)) list several factors to consider. Context and intensity are considered together in determining the significance of an impact (the more sensitive the environmental context, the less intense an impact needs to be to have a potentially significant effect).

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.” 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 impacts 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.

[420.01 Summary of Requirements for Geology and Soils](#)

[420.02 Geology and Soils Technical Guidance](#)

[420.03 Applicable Statutes and Regulations](#)

420.01 Summary of Requirements for Geology and Soils

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 decisionmaking. The State Environmental Policy Act (SEPA) mandates a similar procedure for state and local actions.

This chapter and its associated weblinks include information and requirements for:

- Describing geologic and soil conditions (including hazard areas) in the vicinity of the project area.
- Identifying potential significant adverse impacts of project alternatives on these conditions.
- Identifying potential impacts of geology and soil conditions on project construction and operation.

Information and requirements for describing groundwater resources and identifying potential project impacts on these resources are presented in Chapter 433.

420.02 Geology and Soils Technical Guidance

Technical guidance for assessment of geologic and soils conditions and associated impacts at the Environmental Review (NEPA/SEPA) level is available on the Washington State Department of Transportation (WSDOT) [Geology and Soils](#) web page. This includes guidance for development of the Geology and Soils Discipline Report.

420.03 Applicable Statutes and Regulations

This section lists the primary statutes and regulations applicable to geology and soils issues.

(1) Federal

- **National Environmental Policy Act** – [40 CFR 1500-1508](#), [23 CFR 771](#), and [23 USC 139](#).

(2) State and Local

- **State Environmental Policy Act** – [RCW 43.21C](#), [WAC 197-11](#), and [WAC 468-12](#).
- **State Growth Management Act** – In 1990, the Washington State Legislature adopted the Growth Management Act (GMA) codified as [RCW 36.70A](#). This statute, combined with Article 11 of the Washington State Constitution, mandates that local jurisdictions adopt ordinances that classify, designate, and regulate land use in order to protect critical areas. Critical areas include geologically hazardous areas. These areas are regulated locally through critical/sensitive areas ordinances (see below).

Under the GMA, state agencies must comply with local comprehensive plans and development regulations adopted pursuant to the GMA as long as said compliance does not affect the state's authority to site essential public facilities. Likewise, local agencies should coordinate their transportation planning with WSDOT.

- **Local Critical Areas Ordinances** – These ordinances are intended to protect locally designated critical or sensitive areas, which may include geologically hazardous areas identified as being susceptible to erosion, mass wasting (land sliding), earthquake, or other geological events, which pose a threat to health and safety when incompatible development is sited in areas of significant hazard. Unless the local ordinances conflict with state law, WSDOT must be consistent with the requirements of local critical area ordinances. Local planning departments should be contacted to determine the location or descriptive criteria of geologically hazardous areas which may impact the project. See the WSDOT [Local Environmental Permits and Approvals](#) web page.
- **Other Local Ordinances** – Local ordinances also regulate building and clearing/grading. For non-highway projects outside the right of way, including development and operation of borrow pits, WSDOT must comply with these ordinances. See the WSDOT [Local Environmental Permits and Approvals](#) web page.

425.01	Air Quality Background
425.02	Documentation and Modeling Requirements
425.03	Air Quality Permits and Approvals
425.04	Multi-Modal and Non-Road Air Quality Requirements
425.05	Air Quality Statutes, Regulations, and Guidance
425.06	Abbreviations and Acronyms
425.07	Glossary

425.01 Air Quality Background

The Washington State Department of Transportation (WSDOT) evaluates the effect of projects on air emissions for the following pollutants:

- Carbon monoxide (CO)
- Course particulate matter (PM₁₀)
- Fine particulate matter (PM_{2.5})
- Mobile source air toxics (MSATs)
- Fugitive dust

Analysis for CO, PM₁₀, and PM_{2.5} is done at both the project and region level. Currently, MSATs and fugitive dust are only discussed or analyzed at the project level.

Generally, air quality analysis determines if air pollutant concentrations with our projects will exceed [National Ambient Air Quality Standards](#) (NAAQS) set by the U.S. Environmental Protection Agency (EPA) to protect human health and welfare. Concentrations can increase, as long as the result does not exceed the standard. Mitigation is evaluated for projects that do any of the following:

- Cause or contribute to any new violation of the NAAQS.
- Increase the frequency or severity of existing violation of air quality standards.
- Delay timely attainment of air quality standards.

There are no NAAQS for MSATs, so this analysis evaluates relative differences between project alternatives. Temporary construction emissions are not quantitatively analyzed for most projects. Instead, commitments for incorporating construction best management practices to reduce fugitive dust emissions are documented.

For guidance on greenhouse gas emissions, please see Chapter 440 and related guidance on the WSDOT [Energy](#) web page.

425.02 Documentation and Modeling Requirements

Air quality analysis is required for all (1) nonexempt projects within nonattainment or maintenance areas, (2) projects requiring an EIS, and (3) projects that meet the requirements for MSAT analysis.

For each alternative, studies should describe the affected environment, current conformity status, latest planning assumptions (same for project and region level), analysis methodology and results, potential operational and construction impacts, recommended mitigation, and the results of interagency coordination. The [Air Quality Analysis Checklist](#) lists all the required information for document approval by WSDOT.

As of December 20, 2012, the EPA MOVES emissions model, combined with either CAL3QHC/-R or AERMOD dispersion models, is required for all project-level analyses. The analysis must use the most current model versions available at the time the environmental document is finalized.

Reminder, per [40 CFR 93.104\(d\)](#), projects must be implemented (e.g., completion of environmental documents, acquisition of right of way) within three years of the project level conformity determination or a new conformity finding is required.

(1) **Exempt Projects**

Exempt projects 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 increase emissions locally, which is why they are exempt from regional but not project level conformity analysis.

The exempt list includes the category “hazard elimination program” for projects that are normally air quality neutral, like removing rock fallen 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 still required.

The 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.

(2) **Region-Level Analysis**

Region-level analysis is required by National and State Environmental Policy Acts (NEPA and SEPA, respectively) and Transportation Conformity Regulations, for all transportation projects that have a federal nexus or are regionally significant within CO and PM_(2.5, 10) nonattainment or maintenance areas. Regional conformity analysis is conducted by the MPO for their long-range plan and four-year transportation improvement program (TIP) (see Chapter 200). If design concept or scope changes in a way that could affect region-level emissions, the conformity determination must be updated.

Projects DO NOT conform if any of the following occur:

- Project not in a conforming program.
- Total project not included in the regional analysis and conforming TIP (may still demonstrate conformity through hotspot modeling).
- Project design and scope are significantly different from the conforming TIP.

When a project is within or affecting a nonattainment or maintenance area for CO or PM_(2.5, 10), the project sponsor should use one of the following statements to describe the relationship of the project to the air emissions inventory in the State Implementation Plan (SIP):

- The project is in an area where the SIP does not contain transportation control measures so conformity procedures in 23 CFR 770 do not apply to this project.
- The project is in an area with transportation control measures outlined in a SIP that was approved by EPA on date. FHWA determined that the transportation plan and the TIP conform to the SIP. Since the project is included in the TIP (project #), per 23 CFR 770, it also conforms to the SIP.
- When neither statement precisely fits the situation, they can be modified. Also, if the project itself is a SIP Transportation Control Measure (TCM), this should be highlighted to emphasize the project's air quality benefits.

For an EIS on projects not in a nonattainment or maintenance area, the project is exempt from regional conformity. However, the air quality study must still include a discussion on the relationship of the project to regional emissions for NEPA.

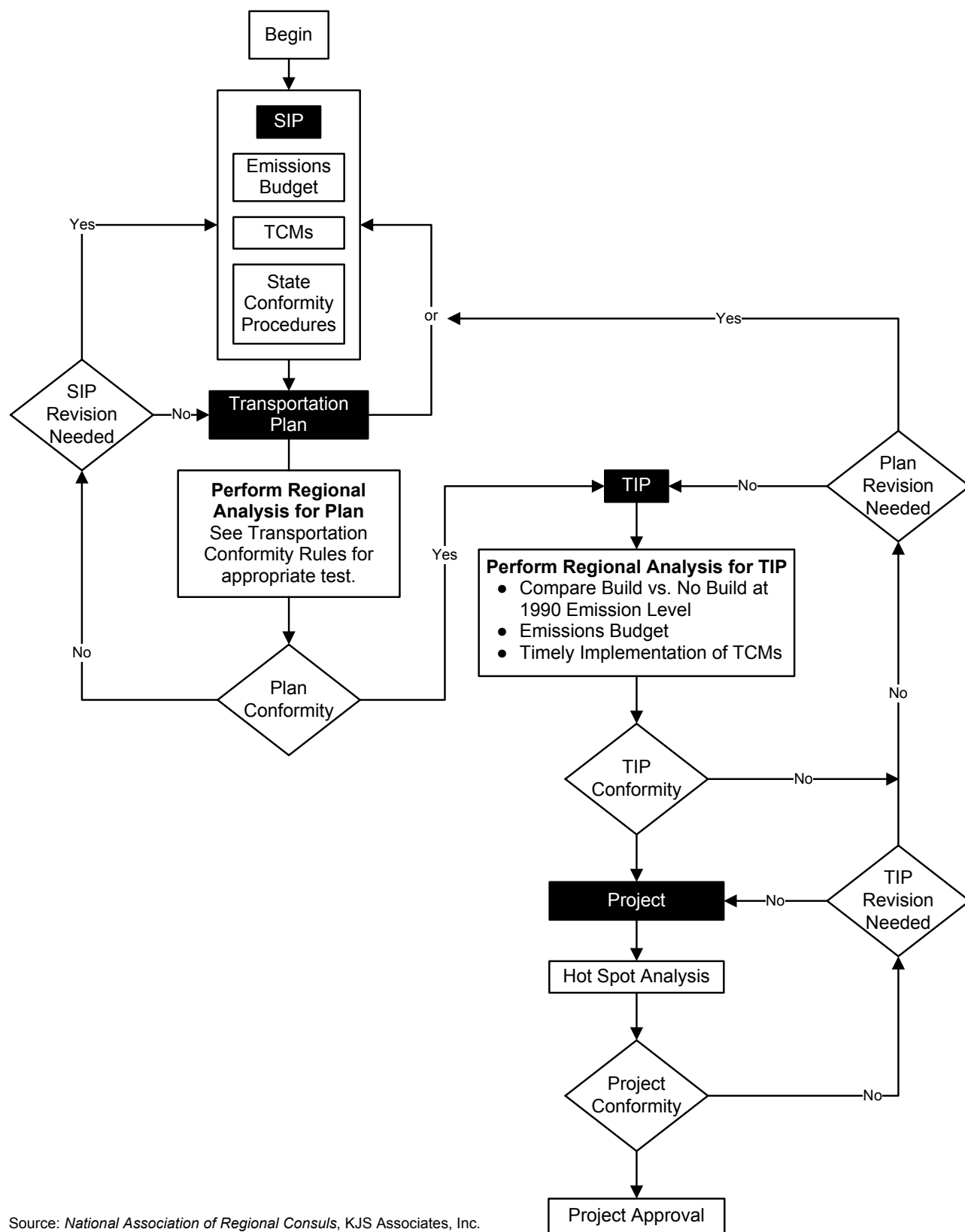
Projects that do not meet the above criteria are normally exempt from region-level analysis and documentation. See [WAC 173-420-120](#) for projects exempt from regional analysis.

(3) Project-Level Analysis

NEPA, SEPA, and [Transportation Conformity Regulations](#) require project-level quantitative, or “hotspot,” analysis for nonexempt projects within CO or PM_(2.5, 10) nonattainment or maintenance areas. Exempt projects are listed in [40 CFR 93.126](#) and [40 CFR 93.128](#).

For project-level analysis, all project alternatives must be analyzed for the existing year, estimated year of completion, and design year (end year of current transportation plan). Reporting should summarize methodologies and assumptions used, provide total pollutant concentrations (project contribution plus background) at receptors for each alternative, and compare results to applicable state and national standards. A table of the results is the preferred way to display this information.

[Figure 425-1](#) summarizes the air quality analysis process.



Conformity Process From Planning to Project-Level Analysis
Figure 425-1

Carbon Monoxide (CO) – *Transportation Conformity Regulations* require analysis of all intersections affected by the project within nonattainment or maintenance areas that are Level of Service (LOS) D, E, or F in the Existing or Design Year. “Affected intersections” have at least a 10 percent increase in volumes or a degradation of LOS to D or worse with the project. Choosing the top three intersections by volume and LOS is no longer an option.

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. If the preferred alternative would result in violations of either CO standard, reasonable mitigation measures should be developed through coordination with interagency consultation partners. The air quality analysis should discuss proposed mitigation measures and include documentation of the coordination.

Quantitative CO analysis may not be required where concentrations (project plus background) are known to be well below the one- and eight-hour NAAQS. This decision must be based on (1) analysis from similar projects, (2) general analyses for various classes of projects, or (3) approved “look-up” table evaluations or “categorical findings.” Where applicable, a brief statement on the basis for the decision is sufficient.

Particulate Matter (PM) – Quantitative $PM_{(2.5, 10)}$ analysis is required for projects of air quality concern (POAQC). POAQs add capacity or re-align roads with more than 125,000 AADT and 8 percent trucks, more than 10,000 truck AADT (8 percent of 125,000), or that contribute to substantial increases or concentrations of diesel exhaust emissions (such as bus terminals and transfer points, designated truck routes, and freight intermodal terminals).

PM_{10} area hotspot analysis must include both direct (exhaust, tire wear, and brake wear) and re-entrained road dust using EPA [AP-42 method](#), unless a local method is specified in the SIP. $PM_{2.5}$ analysis does not need to include re-entrained dust.

For nonexempt projects, the interagency consultation agencies must concur that a project is not of air quality concern. If a nonexempt project is not a POAQC nor listed in [40 CFR 93.123\(b\)\(1\)](#), but does meet applicable criteria in 40 CFR 93.109, then a $PM_{2.5}$ project-level conformity determination is required. However, these project types will not require a hotspot analysis. Instead, 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 without a hotspot analysis.

Mobile Source Air Toxics (MSATs) – WSDOT uses the same requirements as the current FHWA [interim guidance on MSATs](#) (2012) that bases the level of analysis on the type of project and project facility. Quantitative MSAT emissions analysis is required for projects on facilities with average annual daily traffic (AADT) greater than 140,000 vehicles or where there is potential for the project to substantially increase (10 percent) the number of diesel vehicles using a roadway. Qualitative MSAT evaluations may be required for projects on lower volume facilities.

Temporary Construction Emissions – For most projects, analysis of construction emissions includes a qualitative discussion of best management practices for reducing fugitive dust and a summary of any agreements between the project sponsor and local clean air agency. For some larger projects or those lasting more than five years at one location, a quantitative emissions analysis of construction activities may be recommended. Consult sextont@wsdot.wa.gov for more details.

For requirements on handling and disposing of asbestos, see Chapter 447.

Fugitive Dust – Particulate matter suspended in the air by wind or human activity. For projects involving earthwork, construction plans and specifications should be evaluated to identify possible dust producing activities and appropriate Best Management Practices (BMPs). BMPs are required for all WSDOT projects.

BMPs generally prevent or reduce fugitive dust emissions. The four most common methods are outlined in the [Guide to Handling Fugitive Dust From Construction Projects](#) by the Associated General Contractors (AGC) of Washington and are not mutually exclusive.

- 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 on windy days, 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.

425.03 Air Quality Permits and Approvals

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).

Specific permit requirements are listed on the WSDOT [Environmental Permitting](#) web page.

425.04 Multi-Modal and Non-Road Air Quality Requirements

Air quality analysis for rail projects, ferry routes, and air flights requires a different type of conformity analysis (general conformity). Requirements for roadways to/from ferry and aviation facilities are similar to highway projects. Consult sextont@wsdot.wa.gov for more details.

425.05 Air Quality Statutes, Regulations, and Guidance

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 425.03](#).

(1) Federal

- National Environmental Policy Act (NEPA) [42 USC 4321](#) and federal implementing regulations [23 CFR 771](#) (FHWA) and [40 CFR 1500.1-1500.8](#) (CEQ).
- Clean Air Act (CAA) [42 USC 7401-7431](#) et seq.
- [Clean Air Act 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.

(2) State

- State Environmental Policy Act (SEPA) and state implementing regulations [WAC 197-11](#) and [WAC 468-12](#).
- Clean Air Washington Act (CAWA) – [RCW 70.94](#).
- [WAC 173-420](#) state conformity regulations, including exempt projects in [WAC 173-420-110](#) and [WAC 173-420-120](#).
- [WAC 173-400-040](#) state fugitive dust regulations.
- *Guidebook for Conformity: Air Quality Analysis Assistance for Nonattainment Areas* (1995).

(3) Regional

- Memorandum of Agreement on [Fugitive Dust From Construction Projects](#) (1999) between WSDOT and the Puget Sound Clean Air Agency (PSCAA).

425.06 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
CMAQ	Congestion Mitigation and Air Quality Improvement Program
CO	Carbon Monoxide
EMIT	Easy Mobile Inventory Tool
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
LOS	Level of Service
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxic
MTIP	Metropolitan Transportation Improvement Program
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
ppm	Parts per million
RTIP	Regional Transportation Improvement Program
RTPO	Regional Transportation Planning Organization
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SEPA	State Environmental Policy Act (for Washington)
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
TCM	Transportation Control Measure
TIP	Transportation Improvement Program

425.07 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.

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

Exempt Projects – Listed in federal and state regulations ([40 CFR 93.126](#) and [WAC 173-420-110](#)), these are mostly projects outside nonattainment/maintenance areas 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.

Hot Spot Analysis – Estimate of future localized CO and PM_(10, 2.5) 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 on a scale smaller than the entire nonattainment or maintenance area (e.g., roadway intersections or transit terminal). See [40 CFR 93.101](#) and [40 CFR 93.116](#).

Maintenance Area (Air Quality) – Area previously in nonattainment now in compliance with NAAQS.

Metropolitan Transportation Improvement Program (MTIP) – A fiscally constrained prioritized listing/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) – Any one of six priority volatile gases or small particulate compounds coming from the tailpipe of a vehicle. The six compounds are (1) formaldehyde; (2) 1, 3 butadiene; (3) acrolein; (4) naphthalene; (5) benzene; and (6) diesel emissions.

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

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

Particulate Matter (PM₁₀ and PM_{2.5}) – Naturally occurring and artificial particles with a diameter of less than 10 microns or 2.5 microns, respectively. Sources of particulate matter include sea salt, pollen, smoke from forest fires and wood stoves, road dust, industrial emissions, and agricultural dust. These particles are small enough to be drawn deep into the respiratory system where they can contribute to infection and reduced resistance to disease.

Projects of Air Quality Concern (POAQC) – Add capacity or re-align roads with more than 125,000 AADT and 8 percent trucks, more than 10,000 truck AADT (8 percent of 125,000), or that contribute to substantial increases or concentrations of diesel exhaust emissions (such as bus terminals and transfer points, designated truck routes, and freight intermodal terminals).

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 themselves. Such projects are normally be 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) – Framework for complying with federal law ([40 CFR Part 51](#)) requiring that the state take action to quickly reduce air pollution in a nonattainment area and provide controls to keep the area clean for 20 years. WSDOT projects must conform to the SIP before the FHWA and the EPA can approve construction.

Transportation Improvement Program (TIP) – A staged, multiyear intermodal program of 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.

- 431.01 Wetlands and Other Waters
- 431.02 Assessing Wetlands and Other Waters
- 431.03 Identifying Impacts to Wetlands and Other Waters
- 431.04 Mitigating for Impacts to Wetlands and Other Waters
- 431.05 Policies, Regulations, and Agreements
- 431.06 Abbreviations and Acronyms
- 431.07 Glossary

431.01 Wetlands and Other Waters

This chapter presents policies and procedures to be followed when work is planned in or near wetlands or other waters of the state or of the U.S. It includes information on describing and assessing wetlands and other waters, determining impacts (adverse effects), mitigating for unavoidable impacts, and links to related information.

Washington State Department of Transportation (WSDOT) [Policy Statement P 2038.00](#), *Wetlands Protection and Preservation*, directs employees to protect and preserve wetlands, to ensure no net loss of wetlands 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 must avoid impacts to wetlands and other waters where practical; minimize impacts where it is not possible to avoid wetlands; provide compensatory mitigation for unavoidable impacts; and protect, preserve, and maintain wetlands under department stewardship.

WSDOT's environmental policy directs employees to protect and preserve state natural resources while providing for cost-effective delivery and operation of transportation systems.

- WSDOT [Policy Statement P 2038.00](#), *Wetlands Protection and Preservation*
- WSDOT [Secretary's Executive Order E 1018.01](#), *Environmental Policy Statement*

Transportation project activities that may impact wetlands include:

- Filling wetlands or other waters (aquatic resources).
- Draining wetlands.
- Altering natural drainage patterns.
- Increasing or decreasing water levels.
- Discharging sediment or toxicants in runoff.
- Mechanically removing wetland vegetation.
- Compacting wetland soils.
- Altering wetland or stream buffer areas.

431.02 Assessing Wetlands and Other Waters

WSDOT uses several methods to assess wetlands and aquatic resources depending on the complexity of the project and the stage in the project development process. All of the methods are intended to be conducted by a [qualified wetland biologist](#) because of the specialized knowledge and skills needed. Each method is described below in order of increasing complexity, cost, and time required to complete the work.

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

The GIS workbench provides general information at a small scale suitable for screening for environmental impacts when projects are in the early stages of planning and scoping. This office-based activity can be a stand-alone product or the first phase of an inventory or assessment.

Wetland Inventory – A wetland inventory is a reconnaissance-level analysis to confirm the presence or absence of wetlands based on a field visit by a wetland biologist. A Wetland Inventory Report describes wetlands in the project area based on a brief visit. The report may include a sketch map showing the limits of the study area and the approximate location, size and quality of the wetlands present. The inventory can be used to inform the preliminary design and provide an opportunity to avoid wetland impacts. If a Wetland Inventory Report concludes no wetlands are present in the project area, no further wetland work needs to be done, unless the project area changes.

Wetland and Stream Assessment – A wetland and stream assessment is a detailed field study of wetlands and other aquatic resources within the project area. An assessment may be conducted instead of a Wetland Inventory if detailed wetland information is needed during early stages of project development. If wetlands or other aquatic resources will be impacted by a transportation project, a Wetland and Stream Assessment Report is required for the Environmental Review process and the JARPA submittal.

A wetland and stream assessment includes delineating the boundaries of wetlands and other aquatic resources and locating the Ordinary High Water Line of streams and lakes. It includes classifying the wetlands using one or more national methods, using the Washington rating system to determine the quality, and using a functional assessment method to analyze the ecosystem functions and societal values the wetlands provide. A Wetland and Stream Assessment Report summarizes the field data and includes a surveyed map of the wetland and stream boundaries. This information is used to determine the impacts and required compensatory mitigation for each alternative and to show projects avoid impacts where possible.

Ditches that meet wetland criteria are included in the wetland and stream assessment. A Jurisdictional Ditch Memo is prepared by the wetland biologist to evaluate ditches for potential jurisdiction by the Corps or the Washington State Department of Ecology (Ecology).

The Corps considers wetland delineations valid for five years from the date of the field work. If the project is delayed, the field work and report may need to be updated before the JARPA is submitted.

- Additional information on how WSDOT conducts wetland inventories, wetland assessments, and evaluates ditches is available on the WSDOT [Wetland Delineation and Assessment](#) and [Wetland Procedures and Tasks](#) web pages.
- WSDOT guidance on ditches is available on the [Clean Water Act Ditch Guidance](#) web page and from the Corps [CWA Guidance](#) web page.

431.03 Identifying Impacts to Wetlands and Other Waters

Wetland impacts are identified by comparing the surveyed wetland boundaries to the project footprint for each alternative. A short description of wetland impacts may be included directly in the environmental review document. A separate discipline report may be written if the impacts are environmentally controversial or complex.

- A Wetland Discipline Report Checklist is available on the WSDOT [Discipline Report Guidance](#) web page.
- The WSDOT [Wetland Procedures and Tasks](#) web page provides additional information on writing wetland discipline reports.

431.04 Mitigating for Impacts to Wetlands and Other Waters

WSDOT's wetland protection and preservation policy is to mitigate for all adverse effects to wetlands in accordance with [Governor's Executive Order 90-04](#).

Mitigation emphasizes avoiding impacts as a preference, because avoidance has the greatest reliability and is the simplest and most effective way to preserve and protect wetlands. WSDOT uses the mitigation sequence outlined in state and federal executive orders and state and federal regulations to avoid, minimize and compensate for wetland impacts from transportation projects.

- WSDOT [Policy Statement P 2038.00](#), *Wetlands Protection and Preservation*
- Additional information is available on the WSDOT [Mitigation Sequence](#) web page.
- Federal Highways [Mitigation of Environment Impacts](#) web page summarizes parts of 40 CFR § 1500, 1508, and 23 CFR 771 that pertain to mitigation.

(1) Comparing Alternatives and Required Mitigation

Impacts are used to estimate the amount of mitigation required, based on the wetland boundary survey and the footprint of each project alternative. The estimates of required mitigation are compared to the available mitigation options.

(2) **Selecting a Compensatory Mitigation Option**

The 2008 Final Rule on Compensatory Mitigation for Losses of Aquatic Resources expresses a preference of using credit from mitigation banks and In-lieu Fee programs over creating permittee-responsible mitigation. Permittee-responsible mitigation is the most used option in Washington because of the limited availability of mitigation banks and in-lieu fee programs. WSDOT considers mitigation options in the following order to compensate for project impacts:

1. **Existing WSDOT Mitigation Value** – Using credit from previously completed compensatory mitigation is preferred because the value is developed before impacts to wetlands and waters occur. This reduces many of the risks and uncertainties of mitigation success. As a result, a smaller amount of developed mitigation area may be required to compensate for impacts than for undeveloped mitigation. Credit may be available from one or more of the following sources:
 - Advance mitigation sites at least two years old with credit available.
 - Nearby WSDOT mitigation sites constructed for other projects with excess credit. Excess mitigation is value from a WSDOT mitigation site that is not needed to compensate for the original project and can be used for other projects.
 - WSDOT certified wetland mitigation bank. WSDOT has three banks with credit available.
2. **Purchasing Third-Party Mitigation Credit** – Purchasing mitigation credit from banks and in-lieu fee programs is based on project impacts and the value that has been or will be generated. These options have the benefit of transferring all mitigation obligations to the program sponsor with a lump sum payment, and they have the potential to be larger and thus potentially more environmentally valuable than other forms of mitigation.
 - Third-party certified mitigation banks. This option is beneficial because the compensation is provided before project impacts.
 - In-Lieu Fee Programs. The sponsor collects fees and develops, monitors and maintains compensatory mitigation within a defined service area.
3. **Developing New WSDOT Mitigation** – WSDOT is responsible for all aspects of compensatory mitigation in these options, including planning, permitting, implementation, performance, monitoring and long-term stewardship of the mitigation site.
 - Advance mitigation planned and constructed before project impacts. This option provides more value per unit area than concurrent mitigation, and may be cost-effective when there are several programmed projects in proximity.
 - Constructing a new mitigation site concurrently with the project. This option has the benefits of WSDOT's expertise in implementation and management and may provide compensation close to the impact.

The selected mitigation option may be included in the environmental review document if the concept is easy to explain. More complex mitigation concepts may need to be outlined in a NEPA/SEPA Mitigation Memorandum or Conceptual Mitigation Plan prepared by a wetland biologist.

State and federal regulatory agencies evaluate the mitigation concept to determine if it adequately compensates for the projected project impacts. A commitment to the mitigation option must be made during the NEPA process, leaving sufficient time to develop an appropriate mitigation plan and design for the JARPA.

Additional information is available on WSDOT's [Mitigation Options](#), [Mitigation Bank](#), [In-Lieu Fee](#), and [Advance Mitigation](#) web pages.

(3) Developing Detailed Mitigation Plans

A Draft Wetland Mitigation Plan prepared by a wetland biologist documents design decisions to avoid and minimize wetland impacts, describes the project and the remaining unavoidable impacts, and the approach for providing compensatory mitigation. Additional work necessary to develop the mitigation plan varies depending on the mitigation option chosen:

1. **Mitigation Bank and In-Lieu Fee Programs** – A mitigation bank credit use plan or an in-lieu fee program use plan must be submitted with the JARPA when these options are selected.
2. **Advance Mitigation or Excess Mitigation Credit** – A brief explanation of how the mitigation credit compensates for project impacts and a credit ledger for the donor site is sufficient for using advance or excess credit at existing WSDOT mitigation sites.
3. **Permittee-Responsible Mitigation** – The Draft Mitigation Plan includes all the information needed to plan appropriate mitigation including 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. The mitigation plan should identify how the mitigation value will be developed and tracked for new sites that include advance mitigation.

WSDOT can only use “agricultural lands of long-term commercial significance” for mitigation when there are no other options. Washington law directs WSDOT to consider public and private lands before using agricultural lands. Every effort must be made to avoid any net loss of commercial agricultural lands ([RCW 47.01.305](#)).

A Wetland and Stream Assessment Report is required for permittee-responsible mitigation sites to document existing wetlands and other aquatic resources. The mitigation design team uses the baseline wetland conditions to determine the area available for the various types of compensatory mitigation, e.g., restoration, establishment, enhancement, and preservation.

- Additional information is available on the WSDOT [Permittee-Responsible Mitigation](#) web page.
- WSDOT provides guidance on how to identify agricultural lands that must be protected and how to comply with [RCW 47.01.305](#).

(4) *Joint Aquatic Resources Permit Application (JARPA) Submittals*

The JARPA can be submitted when further design refinements are not likely to change the wetland impacts. Wetland reports supporting the JARPA may include one or more Wetland and Stream Assessment Reports, and a Draft Wetland and Stream Mitigation Plan. In some cases, a Jurisdictional Ditch Memo may also be included.

431.05 Policies, Regulations, and Agreements

There are many policies, regulations, and agreements that protect wetlands. The purpose of this section is to identify wetland policies, regulations, agreements, and guidance that pertain to the environmental review phase.

(1) *Policies*

- WSDOT [Policy Statement P 2038.00](#), *Wetlands Protection and Preservation*
- [Eco-Logical: An Ecosystem Approach to Developing Infrastructure Projects](#)

(2) *Federal Statutes and Regulations*

- [National Environmental Policy Act](#)
- Clean Water Act ([Section 404](#)) ([Section 401](#))
- [Coastal Zone Management Act](#)
- [Presidential Executive Order 11990](#), *Protection of Wetlands*
- Rivers and Harbors Act of 1899 ([Section 9](#)) ([Section 10](#))
- [Final Rule on Compensatory Mitigation for Losses of Aquatic Resources \(2008\)](#)
- [Presidential Wetland Policy 1993](#)

(3) *State Statutes and Regulations*

- [State Environmental Policy Act \(SEPA\)](#)
- [Governor's Executive Order EO 89-10](#), *Protection of Wetlands*
- [Governor's Executive Order EO 90-04](#), *Protection of Wetlands*
- [RCW 90.48](#), *Water Pollution Control*
- [Shoreline Management Act](#)
- [Wetland Mitigation Banking](#)

(4) **Local Requirements**

Growth Management Act ([RCW 36.70A](#) and [RCW 36.70B](#)). Local governments are required to use [Best Available Science for Wetlands](#) when reviewing and revising their policies and regulations on wetlands.

Critical Areas Ordinances includes local requirements providing adequate mitigation for impacts to wetlands.

- The WSDOT [Wetland Regulations](#) web page contains additional information.

431.06 **Abbreviations and Acronyms**

CE	Categorical Exemption, Categorical Exclusion
Corps	U.S. Army Corps of Engineers
DCE	Documented Categorical Exemption, Documented, Categorical Exclusion
EA	Environmental Assessment
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
EO	Executive Order
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
JARPA	Joint Aquatic Resources Permit Application
NEPA	National Environmental Policy Act
RCW	Revised Code of Washington
SEPA	State Environmental Policy Act

431.07 **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.

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 ([33 CFR § 332.2](#)) – An upland, wetland, or riparian area that protects or enhances wetlands or aquatic resource functions from disturbances associated with adjacent land uses.

Compensatory Mitigation ([33 CFR § 332.2](#)) – 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.

Concurrent Mitigation – Compensatory mitigation established at the same time as project impacts. This is a form of permittee-responsible mitigation.

Enhancement (33 CFR § 332.2) – 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 (33 CFR § 332.2) – Converting an upland area to a wetland or other aquatic resource. Establishment results in a gain in wetland area and functions.

Federal Nexus – A connection between a project and the federal government that triggers the requirement to evaluate environmental impacts under NEPA. Federal connections include:

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

Impact (33 CFR § 332.2) – 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 (33 CFR § 332.2) – A program administered by a governmental or nonprofit natural resources management entity that provides compensatory mitigation and sells mitigation credits. The obligation to provide compensatory mitigation is transferred from the permittee to the in-lieu fee entity.

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 (33 CFR § 332.2) – 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.

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

Permittee-Responsible Mitigation (33 CFR § 332.2) – Compensatory mitigation for which the permittee retains full responsibility.

Preservation (33 CFR § 332.2) – 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.

Re-establishment (33 CFR § 332.2) – Changing a site with the goal of returning natural or historic functions to a former wetland. Activities may include removing fill material, plugging ditches, or breaking drain tiles. Re-establishment results in a gain in wetland area and functions.

Rehabilitation (33 CFR § 332.2) – Changing a site with the goal of repairing natural or historic functions of a degraded wetland. Activities may involve breaching a dike to reconnect wetlands to a floodplain or return tidal influence to a wetland. Rehabilitation results in a gain in wetland function but does not result in a gain in wetland area.

Restoration (33 CFR § 332.2) – Changing a site so natural or historic functions are returned to a former or degraded wetland. For the purpose of tracking net gains in wetland area, restoration is divided into Re-establishment and Rehabilitation.

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 Inventory Report – 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.

- 436.01 Fish, Wildlife, and Vegetation Policies and Regulations
- 436.02 Addressing Fish, Wildlife, and Vegetation in the NEPA/SEPA Process
- 436.03 Working With Threatened and Endangered Species
- 436.04 Working on Public Lands
- 436.05 Protecting Birds
- 436.06 Considering Fisheries Resources
- 436.07 Protecting Marine Mammals
- 436.08 Habitat Considerations on Projects
- 436.09 Coordinating With Tribes on Fish, Wildlife, and Vegetation Resources
- 436.10 Mitigation and Other Policies
- 436.11 Abbreviations and Acronyms
- 436.12 Glossary

436.01 Fish, Wildlife, and Vegetation Policies and Regulations

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 impacts 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 impacts 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.

While the main focus of this chapter is to summarize regulations associated with fish, wildlife, and vegetation resources, this chapter also provides guidance on how to address these regulations for common types of projects.

436.02 Addressing Fish, Wildlife, and Vegetation in the NEPA/SEPA Process

The National Environmental Policy Act (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](#) (CEQ). WSDOT's policy is to follow all guidance and direction provided by the federal lead agency on NEPA related documents. Fish, Wildlife, and Vegetation

[discipline reports templates and checklists](#) are available, which detail document requirements for WSDOT projects. For additional details on NEPA procedures, see Chapters 400 and 412.

436.03 Working With Endangered and Threatened Species

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.
- **Section 6** of the ESA focuses on cooperation with the states and authorizes USFWS and NMFS to provide financial assistance to States that have entered into cooperative agreements supporting the conservation of endangered and threatened species.
- **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.
- **Section 8** of the ESA outlines procedures for international cooperation.
- **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.” An exception to the “take” prohibition applies to endangered plants on non-federal lands, unless the taking is “in knowing violation of any law or regulation of any state or in the course of any violation of a state criminal trespass law” (1538(a)(2)(B)). Protection from commercial trade and the effects of federal actions do apply for plants. The NMFS evaluates each threatened species under its jurisdiction on a species by species basis to determine whether or not the “take” prohibition will apply. 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.

The GMA also requires counties and cities that meet certain population and growth rate criteria to adopt planning policies and comprehensive plans. WDFW makes recommendations for comprehensive plan contents related to fish and wildlife habitat and critical area regulations, but local jurisdictions develop the final plans and regulations. The result is inconsistencies in regulations among jurisdictions. Unless the local laws conflict with state law, WSDOT must be consistent with local critical areas regulations. Local planning departments should be contacted to determine requirements that could affect a project. See Section 450.02 for details on the GMA.

436.09 Coordinating With Tribes on Fish, Wildlife, and Vegetation Resources

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.

436.10 Mitigation and Other Policies

Many WSDOT policies are in development or apply to fish, wildlife, and vegetation resources in obscure ways. This section covers some of the nonstandard regulations that may apply to projects.

Non-Road Project Requirements – Ferry, rail, airport, or nonmotorized 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 with regard to fish, wildlife, and vegetation resources.

WSF must follow strict guidelines in order to work in near shore environments (see [Section 436.06](#)). These guidelines include avoidance of eelgrass and forage fish spawning habitat, restrictions on construction materials, and specific 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).

436.11 Abbreviations and Acronyms

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
LTAA	Likely to adversely affect
MBTA	Migratory Bird Treaty Act
MMPA	Marine Mammal Protection Act
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSA	Magnuson-Stevens Act
NE	No Effect
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NOAA	National Oceanic and Atmospheric Administration
NLTAA	Not likely to adversely affect
NWFP	Northwest Forest Plan
NMFS	National Marine Fisheries Service
NWP	Nationwide Permit (U.S. Army Corps of Engineers)
PBA	Programmatic Biological Assessment
PFMC	Pacific Fishery Management Council
RPA	Reasonable and Prudent Alternative
RPM	Reasonable and Prudent Measures
RRMP	Regional Road Maintenance Program
Service(s)	United States Fish and Wildlife Service and/or National Marine Fisheries Service
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WDFW	Washington State Department of Fish and Wildlife
WDNR	Washington State Department of Natural Resources
WNHP	Washington Natural Heritage Program

- 440.01 Energy Background
- 440.02 Documentation and Modeling Requirements
- 440.03 Applicable Statutes, Regulations, and Guidance
- 440.04 Non-Road Project Requirements
- 440.05 Abbreviations and Acronyms
- 440.06 Glossary

440.01 Energy Background

On large-scale projects with potentially substantial energy impacts and/or emissions of greenhouse gasses, usually those which require Environmental Impact Statements (EIS), the Washington State Department of Transportation (WSDOT) analyzes the major direct and/or indirect effects of each project alternative on the energy needs for construction and facility operations and the potential for conservation measures. In some cases, facility operations may include new buildings, such as transit terminals, when constructed as part of the project.

For transportation projects, the major greenhouse gas is carbon dioxide (CO₂) from the combustion of fossil fuels. WSDOT requires a greenhouse gas (GHG) analysis as part of an energy analysis for EISs. For non-EIS level documentation, the potential for impacts, the level of public interest, and the type of data available must all be considered to determine whether a qualitative or quantitative GHG analysis is prepared. The framework for this decision is outlined in the *WSDOT Guidance – Project-Level Greenhouse Gas Evaluations under NEPA and SEPA* that is required for use on all projects where WSDOT is the lead or co-lead agency. Consult sextont@wsdot.wa.gov to determine the appropriate level of effort.

Energy analysis is not typically required for non-EIS level documentation because energy consumption is typically not a key decision-making criterion unless reduction of energy consumption or minimization is a project goal, such as in mass transit or commuter travel enhancement projects. 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 a collateral benefit.

If your project does not require an energy analysis, GHG analysis should be provided in the context of “cumulative effects.” More information on energy is available on the WSDOT [Energy](#) web page.

440.02 Documentation and Modeling Requirements

For an EIS, a quantitative GHG analysis is recommended and should be included in the energy analysis. The GHG and energy calculations can be prepared separately then combined in the final energy analysis. When analyzing GHG emissions for an energy analysis, consult sextont@wsdot.wa.gov. The [Energy Checklist](#) describes the specific information required when an energy analysis is required. A summary of these requirements follows.

(1) **Affected Environment**

Describe existing energy consumption from facility operations, where applicable.

(2) **Energy Consumption**

Operations – Compare the energy used on the project for the existing condition and build and no-build alternatives in the design year. Energy should be described in terms of British Thermal Units (BTU) or quantities of fuel.

- Energy consumed by vehicles operating on the facility; including effects of project on traffic flow, vehicle miles traveled (VMT), induced growth, and identification of pay-back period, where applicable.
- Effect of energy consumed on the facility on regional energy production and consumption.
- Energy needed to maintain the facility, where applicable.
- Project's consistency with the state and/or regional energy plan, where applicable.

Construction – Describe the temporary effects of fuel consumption for construction of the project here and provide this information to the environmental manager for inclusion in the Construction Activity Impacts section of the EIS. The description should include the following:

- Effect of the project on local fuel availability during construction.
- Amount and source of materials and energy needed for project construction, to the extent known.
- Clarify whether additional energy sources need to be developed to support construction.

Overall – Describe overall energy costs or savings by alternative, including the combined energy from project construction and operations for all project alternatives.

(3) **Greenhouse Gas Emissions**

The process for evaluating GHG emissions associated with an individual transportation project is outlined in [Guidance for Project-Level Climate Change Evaluations](#). The guidance outlines the required format for both qualitative and quantitative analysis for operational, construction, embodied, and lifecycle emissions.

Current guidance separates the discussion of climate change and adaptation from the evaluation of GHG emissions on the project. See the WSDOT [Adapting to a Changing Climate](#) web page.

(4) Conservation Measures and Mitigation

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

440.03 Applicable Statutes, Regulations, and Guidance

(1) Federal

- National Environmental Policy Act (NEPA) [42 USC 4321](#) and Federal implementing regulations [23 CFR 771](#) (FHWA) and [40 CFR 1500.1-1500.8](#) (CEQ).
- President's [Executive Order 13423](#), *Strengthening Federal Environmental, Energy, and Transportation Management*.
- FHWA [Technical Advisory T 6640.8A](#) for NEPA documents.
- U.S. Department of Transportation Guidance on Fuel Consumption and Air Pollution, including [USDOT Order 5610.1C](#), *Energy Requirements for Transportation Systems*, and *Procedure for Estimating Highway User Costs, Fuel Consumption, and Air Pollution*.

(2) State

- State Environmental Policy Act (SEPA) and state implementing regulations [WAC 197-11](#) and [WAC 468-12](#).
- [Chapter 39.35D RCW](#) requires that new “major facility projects” achieve the Leadership in Energy and Environmental Design (LEED) silver building rating standard.
- [WSDOT Guidance – Project-Level Greenhouse Gas Evaluations under NEPA and SEPA](#).

440.04 Non-Road Project Requirements

The requirements to address energy requirements for non-road projects are assumed to be the same as for road projects.

440.05 Abbreviations and Acronyms

BTU	British thermal unit
CO ₂	carbon dioxide
EIS	environmental impact statement
GHG	greenhouse gases
LOS	level-of-service
NEPA	National Environmental Policy Act
SEPA	State Environmental Policy Act
VMT	vehicle miles traveled

440.06 Glossary

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.

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

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

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.

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.

Chapter 447 Hazardous Materials (HazMat) and Solid Waste

447.01	Considering HazMat During the Project Lifecycle
447.02	Determining Suitable HazMat Documentation From the ERS
447.03	Writing and Right-Sizing HazMat Discipline Reports
447.04	Identifying Potentially Contaminated Property
447.05	Managing Liability During Real Estate Acquisition
447.06	Planning for Sediment Management
447.07	Using Construction Specifications and Provisions
447.08	Identifying and Reporting HazMat During Construction
447.09	Managing HazMat During Construction
447.10	Reusing or Disposing of Project Waste Materials
447.11	Laws and Regulations
447.12	Abbreviations and Acronyms
447.13	Glossary

447.01 Considering HazMat During the Project Lifecycle

Hazardous materials (HazMat) will impact a Washington State Department of Transportation (WSDOT) project when encountered. WSDOT has a responsibility to consider HazMat issues early on and throughout the lifecycle of a project in order to:

- Protect public health and safety by ensuring that construction does not spread or contribute to existing contamination.
- Manage HazMat issues in a cost-effective manner to avoid or minimize construction impacts.
- Avoid or manage agency cleanup liability.

WSDOT must abide by numerous federal, state, and local regulations that govern HazMat. The regulations are stringent and take different time frames to comply with. These regulations are found at the end of this chapter.

WSDOT projects may also encounter or generate solid waste, which is not hazardous or dangerous. Laws and regulations also govern the handling and disposal of solid waste.

The rest of this chapter describes HazMat specific topics that WSDOT region staff considers for projects. Construction related topics such as identifying, managing, and disposing of HazMat are included in this chapter. Please visit the WSDOT [HazMat](#) web page for additional information and guidance.

447.02 Determining Suitable HazMat Documentation From the ERS

Region staff often 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). The ERS asks the following:

1. Discuss any known or potentially contaminated sites within or near the project area.
2. Describe any contamination the project is likely to encounter. If known, how will the project specifically impact these sites?
3. Identify any additional investigations or documentation that would be needed.

Region staff uses the answers to these questions to determine if further investigations will help identify potential HazMat issues at a site or within a corridor. They also use the information to assess potential project impacts (including to the project budget and schedule), mitigations, and required permits or approvals. Types of further investigations will be discussed later in this chapter and include Hazardous Materials Discipline Reports and Phase I and II Environmental Site Assessments.

If during the NEPA/SEPA process a region classifies a project as a Documented Categorical Exclusion, then the ERS is renamed the Environmental Classification Summary (ECS) and becomes the hazardous materials documentation for the project (Section 300.04). Although both forms ask the same questions, the information and level of detail required in an ECS is greater because the ECS is a final decision document for Federal Highway Administration signature.

WSDOT HazMat specialists are available to assist with questions about the ERS/ECS.

447.03 Writing and Right-Sizing HazMat Discipline Reports

A [Hazardous Materials Discipline Report](#) is an environmental document prepared to satisfy project NEPA/SEPA requirements. Region staff decide whether a HazMat Discipline Report is necessary for a project when they complete the ERS. The purpose of a HazMat Discipline Report is to identify potentially contaminated sites that may:

- Affect the environment during construction.
- Create significant construction impacts.
- Incur cleanup liability for WSDOT.

A HazMat Discipline Report must document significant unavoidable adverse impacts that WSDOT cannot reasonably mitigate for.

Right-size is a common term used to discuss how detailed to make a HazMat Discipline Report. The level of detail in a report 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 report must provide site-specific recommendations for additional investigations needed prior to acquisition and construction. Right-sizing keeps reports short and concise.

[Guidance](#) documents for writing and right-sizing HazMat Discipline Reports are available online. Region staff can contact a WSDOT HazMat Specialist for more assistance.

447.04 Identifying Potentially Contaminated Property

Ecology has authority over contaminated properties through the Model Toxics Control Act (MTCA) Cleanup Regulations found in [Chapter 173-340 WAC](#). MTCA holds that any past or present relationship with a contaminated site may result in liability for cleanup. Thus, Ecology can find WSDOT responsible for cleanup of hazardous materials whether the original source is from WSDOT activities, from a tenant, or inherited when WSDOT purchases property.

Cleanup costs for contaminated properties can be extraordinary and cleanup actions can take many years. For this reason, WSDOT seeks to reduce 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.”

As discussed, one way WSDOT identifies potentially contaminated sites is through research and environmental documentation in the form of an ECS or HazMat Discipline Report (see [Sections 447.02](#) and [447.03](#), respectively) completed during the NEPA/SEPA process. Second, WSDOT conducts investigations called Environmental Site Assessments (ESAs). These investigations are performed either independent of, or in conjunction with, the NEPA/SEPA process. They meet the standard of the industry for identifying potentially contaminated property.

WSDOT uses the two ESAs listed below and their associated standards developed by the American Society for Testing and Materials (ASTM). WSDOT staff has access to ASTM standards through an internal web page without a fee.

- Phase I ESA (ASTM E 1527-05)
- Phase II ESA (ASTM E 1903-11)

(1) **Phase I Environmental Site Assessment (Phase I ESA)**

A [Phase I ESA](#) is a detailed inquiry into a parcel of land that WSDOT typically conducts for property acquisitions. The purpose is to complete “[All Appropriate Inquiry](#),” as defined by the USEPA, in order to qualify for several liability protections. WSDOT also uses the information to assess potential impacts on project design and construction.

WSDOT conducts a Phase I ESA independently of or in support of a discipline report. Since WSDOT routinely uses HazMat Discipline Reports to identify potentially contaminated sites, WSDOT does not automatically complete Phase I ESAs for all individual sites. WSDOT staff should consult a HazMat Specialist to see if a specific property warrants a Phase I ESA.

WSDOT follows the ASTM standard for a Phase I ESA to the extent practical. Depending on project needs, WSDOT may decide to omit some portions of the Phase I ESA and thereby produce what WSDOT terms a Limited Phase I ESA Report. Such a report must meet the minimum requirements outlined on the WSDOT [HazMat Guidance](#) web page. The Limited Phase I ESA Report must document what information was not included in the scope of work section at the beginning of the report.

(2) Phase II Environmental Site Assessment (Phase II ESA)

A [Phase II ESA](#) is a limited field investigation that WSDOT conducts when the Phase I ESA or discipline report documents that there is a potential hazardous materials risk that is not predictable. The purpose of a Phase II ESA is to characterize the nature and extent of potentially contaminated media prior to 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.

Oftentimes a Phase II ESA is not necessary when site specific documentation exists in the Ecology files for the planned acquisition or construction areas. Region staff should consult with a WSDOT HazMat Specialist prior to deciding to conduct a Phase II ESA. Additional information regarding a Phase II ESA is available on the WSDOT [HazMat Guidance](#) web page.

Finally, WSDOT may identify or encounter contamination during geotechnical exploration drilling. As described in the WSDOT [Geotechnical Design Manual](#) M 46-03, prior to drilling activities crews complete a geotechnical field exploration plan and an environmental assessment. The manual also provides procedures for planning, storing, and disposing of potentially contaminated material generated during drilling activities.

447.05 Managing Liability During Real Estate Acquisition

The previous sections discuss measures that WSDOT takes to limit potential cleanup liability through the use of NEPA/SEPA supporting documents and Environmental Site Assessments, which satisfy requirements for All Appropriate Inquiry. WSDOT also uses property appraisals performed by the WSDOT Real Estate Services Office as described in the WSDOT [Right of Way Manual](#) M 26-01. Chapter 4 of the manual instructs appraisers to document potential HazMat issues on parcels such as odd soil odors or colors, tanks or drums, and suspected asbestos containing materials. If observed, the manual provides directions on how to proceed with the appraisal.

WSDOT avoids acquiring contaminated property when possible. When WSDOT must acquire contaminated property, Real Estate staff follow the steps outlined in WSDOT [Right of Way Manual](#) M 26-01 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 Real Estate Services Office is required to report the information to the Environmental Services Office (ESO).

ESO tracks contaminated properties that WSDOT owns 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](#).

447.06 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. If a project will involve dredging, WSDOT also follows the requirements of the [Dredged Material Management Program](#), administered by the U.S. Army Corps of Engineers. The sediment regulations impose a number of unique requirements, including special sampling and laboratory analysis procedures that make early coordination critical to WSDOT project schedules. HazMat Specialists are available to answer questions related to sediment management.

447.07 Using Construction Specifications and Provisions

When WSDOT staff follow the policies in this chapter and the procedures on the HazMat web pages, WSDOT can reasonably anticipate 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, underground storage tanks, asbestos containing materials, or spills. WSDOT relays this information to contractors bidding on the work in four main ways:

- [Standard Specifications](#), 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 supplement a HazMat Special Provision and provide detailed instructions for managing materials.

HazMat Specialists assist region staff to determine which contracting language to use and may assist with writing the specific language. Further information about how specifications and provisions address HazMat topics is available on the WSDOT [Investigations and Services](#) web page.

447.08 Identifying and Reporting HazMat During Construction

WSDOT identifies areas with known HazMat issues or underground storage tanks (USTs) in the Special Provisions and on Contract Plan Sheets. In these situations, the contractor follows the steps outlined in the Special Provisions for managing and disposing of materials.

Even with advanced planning, it is not possible for WSDOT to know the entire history of every site and unanticipated encounters of HazMat can occur. WSDOT remains prepared for unexpected situations during construction by having policies and procedures in place for the following:

- Encountering unknown USTs.
- Finding releases of unknown HazMat.
- Responding to spills from construction activities.
- Reporting spills caused by the traveling public.

These unexpected situations require rapid response actions to minimize impacts to the environment and the project work. WSDOT staff follows the Environmental Compliance Assurance Procedure (ECAP) as described in WSDOT [Construction Manual](#) M 41-01, Section 1-2.2K(1). The ECAP includes steps for notifying WSDOT management and regulatory agencies. The subsections below describe each situation and related reporting requirements in more detail.

Once WSDOT identifies HazMat, WSDOT must manage and remove it from the project site. [Sections 447.09](#) and [447.10](#) address these topics. For more information about HazMat during construction, please visit the WSDOT [Investigations and Services](#) web page.

(1) Encountering Unknown Underground Storage Tanks (USTs)

Due to potential explosion hazards, USTs require special consideration when encountered at a WSDOT site. Usually unknown USTs that a contractor encounters are home heating oil or farm fuel USTs that are not registered with Ecology. 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 [ECAP](#).

Ecology has the authority for the UST regulations. The main regulation that covers USTs is [Chapter 173-360 WAC](#). If there is a confirmed release from a UST, [WAC 173-340-450](#) 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 certified contractor is required to remove a UST and a certified Site Assessor must be present during removal to sample and document UST closure activities. Thirty days prior to removing a regulated UST, a [Notice of Intent](#) is due to Ecology. WSDOT can ask Ecology to waive this requirement if it will cause schedule delays. Local permits may also be required. WSDOT or the contractor must contact the local fire marshal, health department, and planning department to determine local requirements.

If there is no contamination discovered during a 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 UST, 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](#) web page.

(2) Finding Releases of Unknown HazMat

When a contractor finds a release of HazMat, 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 [ECAP](#) as appropriate. The PE should also coordinate with ESO and the WSDOT Safety Office to assess the health and safety situation at the site to determine whether WSDOT workers can safely continue working.

WSDOT HazMat Specialists will 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. WSDOT regional offices are required to provide copies of all Ecology letters related to contamination on WSDOT property to ESO within 30 days of receipt. ESO tracks the information and uses it for GASB reporting as discussed in [Section 447.05](#).

(3) 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. 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 must address the ten elements identified in [Standard Specifications](#) Section 1-07.15(1), including reporting requirements. The contractor may not begin any onsite construction activities until the contractor submits and WSDOT accepts the SPCC Plan. If a spill occurs on a project, WSDOT staff follows ECAP. Visit the WSDOT [Spill Prevention Control and Countermeasures](#) web page for additional guidance, resources, and training information.

(4) Reporting Spills Caused by the Traveling Public

Neither WSDOT nor WSDOT contractors are responsible to clean up spills that result from the traveling public, also referred to as a “3rd party” such as a trucking company. *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 9607(b)* regulates the responsibility for these cleanups. WSDOT staff must immediately notify the Washington State Patrol and Ecology to identify the responsible party. If the spill is an immediate threat to human health or the environment (e.g., tank truck leaking into a water body of the state), WSDOT staff should take reasonable actions to contain the spill until Ecology or the Washington State Patrol arrive on the scene. Reasonable actions will depend upon the expertise of the WSDOT staff at the scene and the materials that are available to them. WSDOT may recover cleanup costs at a later date if and when the state identifies a responsible party.

447.09 Managing HazMat During Construction

WSDOT contractors are responsible for the management of HazMat when encountered at a site, as described by the Special Provisions. If the contract does not address HazMat, the PE works with a WSDOT HazMat Specialist and the contractor to coordinate the management of these materials. Typical HazMat encountered on construction sites includes contaminated soil, sediment, and water; USTs; asbestos containing materials (ACM); and lead-based paint. Working with HazMat requires special training and knowledge. WSDOT policy is that only WSDOT HazMat Specialists or consulting environmental professionals who have the required training and experience are qualified to handle HazMat and collect samples.

The management of HazMat may include any or all of the activities listed below. Visit the WSDOT [HazMat](#) web page for information on each topic.

- Identifying the type, concentration, and extent of the contamination.
- Stockpiling HazMat or otherwise containing liquids.
- Sampling and submitting samples for laboratory analysis.
- Labeling containers and drums.
- Characterizing the material for disposal or reuse.
- Submitting information to regulatory agencies.

The contractor is responsible to manage HazMat in a cost-effective manner in accordance with all federal, state, and local laws and regulations.

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) Site ID number from Ecology. WSDOT is required to track and count quantities of all Dangerous Waste generated and disposed. While the RCRA Site ID number remains open in Ecology’s system, the PE is required to submit an Annual Report to Ecology due no later than March of each year.

Besides managing and disposing of HazMat generated from an active construction project, the immediate cleanup of contaminated soil or water is not typically required. The PE decides the level of cleanup that is feasible based on the construction schedule and budget, as well as other factors, such as apparent extent of contamination and the intended future use of the site. Where possible, the PE should consider the opportunity to minimize WSDOT's future cleanup liability, to cleanup areas where final construction might prevent or obstruct future cleanup, and to perform cleanup to protect environmentally sensitive areas. Visit the WSDOT [HazMat Program](#) web page for more information about cleanup options.

447.10 Reusing or Disposing of Project Waste Materials

WSDOT is ultimately responsible for the reuse and disposal of project waste materials including soils. 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 critical areas.
- Permit requirements and environmental commitments.

WSDOT addresses the reuse and disposal of solid wastes during construction in [Standard Specifications](#) Section 2-01.2, Section 2-02.3, and Section 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 PE keeps a copy of the disposal documentation in the project file.

When HazMat is included in 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 federal, state, and local regulations.

The WSDOT [HazMat](#) web page provides information about and disposal options for the types of waste listed below. Please consult a WSDOT HazMat Specialist with project-specific questions.

- Solid Waste
- Problem Waste
- Dangerous Waste
- Asbestos Containing Materials
- Lead-Based Paint
- Creosote Treated Wood

447.11 Laws and Regulations

Numerous federal, state, and local regulations govern HazMat issues and related topics. Below is a list of the most common federal and state regulations that apply to WSDOT projects.

(1) **Federal Laws and Regulations**

- All Appropriate Inquiries, [40 CFR Part 312](#)
- Clean Water Act, [33 USC 1251 et seq.](#)
- Comprehensive Environmental Response, Compensation, and Liability Act, [42 USC 9601 et seq.](#)
- National Emission Standards for Hazardous Air Pollutants, [40 CFR Parts 61 to 71](#)
- National Environmental Policy Act, [42 USC 4321 et seq.](#)
- Oil Pollution Prevention, [40 CFR Part 112](#)
- Occupational Safety and Health Act, [29 USC 651 et seq.](#)
- Resource Conservation and Recovery Act, [42 USC 6901 et seq.](#)
- Safe Drinking Water Act, [42 USC 300f et seq.](#)
- Toxic Substances Control Act, [15 USC 2601](#)

(2) **State Regulations**

- Dangerous Waste Regulations, [Chapter 173-303 WAC](#)
- General Occupational Health Standards, [Chapter 296-62 WAC](#)
- Hazardous Waste Operations, [Chapter 296-843 WAC](#)
- Minimum Standards for Construction and Maintenance of Wells, [Chapter 173-160 WAC](#)
- Model Toxics Control Act, [Chapter 173-340 WAC](#)
- Safety Standards for Construction Work, [Chapter 296-155 WAC](#)
- Sediment Management Standards, [Chapter 173-204 WAC](#)
- Solid Waste Handling Standards, [Chapter 173-350 WAC](#)
- State Environmental Policy Act, [Chapter 197-11 WAC](#)
- Underground Storage Tank Regulations, [Chapter 173-360 WAC](#)
- Water Quality Standards for Groundwaters of the State of Washington, [Chapter 173-200 WAC](#)
- Water Quality Standards for Surface Waters of the State of Washington, [Chapter 173-201A WAC](#)

447.12 Abbreviations and Acronyms

ACM	Asbestos Containing Materials
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 Materials
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

447.13 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, hazardous waste, problem waste, hazardous substances, and petroleum products. The definitions below describe the different terms found in state and federal regulations.

Dangerous Waste – Solid wastes designated in [WAC 173-303-070 through 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 in [42 USC 9601\(14\)](#) and [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.

Problem Waste – Pursuant to [Chapter 173-304 WAC](#), problem wastes are defined as soil, sediment, sludge, and liquids (groundwater, surface water, decontamination water, etc.) that are removed during the cleanup of a remedial action site, or other cleanup efforts and actions, that contain hazardous substances but are not designated as dangerous waste pursuant to [Chapter 173-303 WAC](#). Examples of the type of waste streams that may be disposed of under this definition include:

- Contaminated soil, sludge, groundwater, surface water, and construction demolition debris containing any combination of the following compounds: petroleum hydrocarbons, volatile and semivolatile organic compounds, polycyclic aromatic hydrocarbons, polychlorinated biphenyls, heavy metals, herbicides, and pesticides.
- Contaminated dredge spoils (sediments) resulting from the dredging of surface waters of the state where contaminants are present in the dredge spoils at concentrations not suitable for open water disposal and the dredge spoils are not dangerous wastes and are not regulated by Section 404 of the Clean Water Act.
- Asbestos containing material.

Solid Waste – State regulation [Chapter 173-350 WAC](#) define solid waste 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, problem wastes as defined below, and recyclable materials. Federal regulations define solid waste as any garbage, refuse, or sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility, and other discarded material including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from community activities. Solid waste includes hazardous and problem wastes.

Effect Considerations	Direct Effects	Indirect Effects
Nature of Effect	Typical/Inevitable/Predictable	Reasonably foreseeable/Probable
Cause of Effect	Caused by the project	Linked to project/influenced by project
Timing of Effect	Immediate project construction and implementation	At some future time after direct effects
Location of Effect	At the project location	Within boundaries of the systems affected by the project

Source: TRB Report 403, adapted from the table on page 58.

Direct and Indirect Effects
Table 450-1

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, or significantly reduce travel time are unlikely to change land use.

Projects that require an EA/EIS and have the potential to significantly affect Land Use should include a discussion of actions that were taken to avoid, minimize or mitigate direct land use impacts in the environmental document (EA/EIS). Potential or recommended mitigation measures for indirect impacts should also be described. Mitigation measures, such as more restrictive zoning, are unlikely to be under WSDOT control. The discussion should include the party responsible for such mitigation and the likelihood of implementation of such measures.

450.03 Coordination With Other Disciplines

If your project is an EA/EIS, the land use analysis should be done as early as possible in the NEPA process. Changes in land use can substantially affect the function of the transportation network. Therefore, the transportation and land use analysis should be conducted simultaneously.

The results of the land use analysis also informs the noise, air, social, economic, visual, floodplain, and the indirect and cumulative effects analysis. Coordination with the authors of these discipline analyses is important to eliminate rework and improve internal consistency of the environmental document.

450.04 Right Sizing the Land Use Analysis

Projects that require an EA/EIS must include a discussion of land use impacts. However, the level of effort should be commensurate with the complexity and scope of the project. The results of the analysis may be described directly in the environmental document for most projects. A separate land use discipline report may be needed for complex and/or controversial projects, such as projects:

- With substantial direct effects (positive or negative) on land use 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.

The rationale for determining that a Land Use Discipline Report is not needed for an EA/EIS level project should be formally documented in the project file. Formal documentation could be a letter to file. Briefly describe the methodology and process used to reach this conclusion and list the participants in the discussion.

450.05 Non-Road Project Requirements

Federal agencies maintain their own unique NEPA procedures in [CFR](#). Each agency may have different documentation and procedural requirements for complying with NEPA. If your project has a federal nexus with more than one federal agency, it is critically important to meet with the federal lead agencies and determine how to proceed. In some cases the federal agencies may agree to co-lead the NEPA process. In others, one agency may serve as lead and the other as a cooperating agency. This decision needs to be made very early in the process to ensure timely approval of your environmental document. The exact requirement will vary depending on the nature of the project, federal permits and approvals required, and individual circumstances. Common examples of projects that require coordination with more than one federal agency are:

- An FHWA funded project that crosses federally owned or managed lands. See Section 450.08.
- A project that receives Federal Highway Administration and Federal Transit Administration funding.
- Any highway project involving Federal Rail Administration or Federal Aviation Administration.
- An FHWA funded project that requires an Army Corps of Engineers Individual permit.

(1) **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, harbor areas are “forever reserved for landings, wharves, streets, and other conveniences of navigation and commerce.”

The Washington State Department of Natural Resources 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. Washington State Ferries takes proactive steps to minimize land use and navigational conflicts by working with the US Coast Guard, the Department of Natural Resources, local Port Authorities, Tribes, and local jurisdictions.

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 Federal Transit Administration funds, and/or the facilities may have received FTA funding in the past, Ferry's projects may also be subject to Federal Transit Administration requirements. FTA procedures are described on their [website](#) and in the policy document: [Environmental Impact and Related Procedures \(23 CFR 771\)](#) Effective April 23, 2009.

(2) Rail Facilities

The 1995 MOU between WSDOT, Federal Railroad Administration and FHWA established agency roles and responsibilities to ensure compliance with NEPA for the Washington State Rail Passenger Program. Freight rail projects are covered by the Surface Transportation Board procedures for implementing environmental law set forth in [49 CFR 1105](#). Surface Transportation Board regulations require that rail projects be consistent with existing land use plans and applicable coastal zone management plans.

Depending on the project, the federal lead agency may be the Federal Highway Administration, Federal Railroad Administration, or the Surface Transportation Board.

(3) Aviation Facilities

Land use compatibility is a critical issue for airports to ensure safe and efficient use of airspace. The Federal Aviation Administration (FAA) provides guidance on how land use compatibility should be addressed in airport planning and NEPA documents (Federal Aviation Administration Orders [1050.1E](#) and [5050.4B](#)). The guidance addresses:

- The affect of airports on adjacent land use and appropriate environmental documentation of proposed airport actions.
- The affect of land use on airport operations, including recommended zoning and development restriction adjacent to airports for consideration by local government.

- The kinds of information on existing and planned land use that should be provided in an environmental document for highway projects within 3.2 miles of an airport, including “significance thresholds” for various land use related topics.

WSDOT Aviation has developed the Airport Land Use Compatibility guidebook that presents this information in a clear, user friendly manner. Links to the guidebook and other useful technical documents can be found on the WSDOT [Aviation System Planning](#) web page.

450.06 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. WSDOT complies with this requirement by submitting the appropriate forms to the Natural Resources Conservation Service (NRCS). The procedures for complying with FPPA requirements can be found on the WSDOT [Land Use](#) web page.

NRCS recognizes three categories of farmland based on their soil types:

- Prime Farmland.
- Unique Farmland.
- Farmland of statewide or local importance.

Because the rating is based on soil type, timber land, vacant land, open space, and land within a city’s designed Urban Growth Area, which has never been farmed, may be designated as prime farmland. Therefore, the WSDOT project office should complete and submit the form to NRCS for all projects. The NRCS will perform a Land Evaluation and Site Assessment and return a Farmland Conversion Impact Rating (FCIR) score for each alternative described on the form. A score of 160 or greater is considered to be a substantial impact.

If the project is a CE/PCE/DCE, record the score in the Resource Lands Section of the ERS/ECS and include a brief (one or two sentence) description of why the project will lead to unavoidable impacts to farmland. If an EA/EIS is required, summarize the results of early consultation with the NRCS and appropriate state and local agricultural agencies where farmlands are directly or indirectly impacted by any alternative. Include a copy of the FCIR form and a map showing the location of all farmlands in the project area, the type, and location of impact by alternative. The EA/EIS should discuss alternatives to avoid farmland impacts for any alternative with a score of 160 or greater. If avoidance is not possible, measures to minimize or reduce impacts should be evaluated and included in the proposed action.

(1) Farmland and Mitigation Sites

[RCW 47.01.305](#) directs WSDOT to use public lands 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.

In an August 2007 letter, Governor Gregoire directed WSDOT to notify the Governor's Chief of Staff when WSDOT is seriously considering using eminent domain for acquiring agricultural resource land pursuant to the Growth Management Act ([RCW 36.70A.170\(a\)](#)) for wetland mitigation purposes. WSDOT's policy is to comply with these directives by avoiding the use of designated agricultural resource lands for mitigation sites whenever possible. If no other suitable sites are available, WSDOT will work with local jurisdictions to avoid conflict with policies and regulations protecting agricultural lands. WSDOT Real Estate Services Office tracks conversions of agricultural resource lands to transportation purposes for WSDOT projects. The WSDOT Director of Environmental Services will ensure that WSDOT provides written notice to the Governor's Office at least two weeks prior to filing any formal action to condemn or purchase designated agricultural resource lands for environmental mitigation purposes as follows:

- For condemnation of designated agricultural lands for wetland mitigation sites, a mandatory notice will be sent to the Governor's Chief of Staff. (This requirement does not apply to local agency projects.)
- For condemnations of designated agricultural lands for other environmental mitigation purposes, a courtesy notice will be sent to the Governor's Office staff. (This requirement does not apply to local agency projects.)

(2) State Conservation Commission Memorandum of Understandings

This MOU between the Washington State Conservation Commission and WSDOT (September, 1982) aims to enhance cooperation to preserve agricultural and forest lands. It requires coordination between WSDOT and appropriate Washington State Conservation Commission and Conservation District personnel to assure that roadway projects minimize agricultural land conversions. A copy of the MOU is available in [Appendix B](#).

450.07 Recreational Land Conversions

Projects that impact recreational lands require special consideration. Chapter 457 describes USDOT specific requirements (i.e., Section 4(f) of the Department of Transportation Act of 1966) for considering impacts to recreation and resource lands. 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.

(1) Section 6(f) Reviews

The Land and Water Conservation Fund (1965) 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. Section 6(f) of the act prohibits the conversion of property acquired or developed with these grants to a nonrecreational purpose without the approval of the Department of Interior's National Park Service (NPS). In Washington State the [Recreation and Conservation Office \(RCO\)](#) oversees many grant programs including the Land and Water Conservation Fund and represents the interests of the National Parks Service to ensure compliance with federal requirements.

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 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](#) Section 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. Coordination with RCO is required 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.

456.01	Cultural Resources Overview
456.02	Section 106 Review and Compliance: FHWA
456.03	Section 106 Review and Compliance: USFS
456.04	Section 106 Review and Compliance: COE
456.05	Section 106 Review and Compliance: Other Federal Agencies
456.06	Governor's Executive Order 05-05 Review and Compliance
456.07	Bridge Compliance
456.08	Artifact Collection and Disposition (Curation)
456.09	Use of Museums and Information Centers as Potential Mitigation
456.10	Additional Cultural Resources Regulatory Guidance
456.11	Acronyms and Abbreviations
456.12	Glossary

456.01 Cultural Resources Overview

It is federal and Washington State policy to avoid, minimize, or mitigate adverse impacts to historical, archaeological, and cultural resources. It is Washington State Department of Transportation (WSDOT) policy to avoid adverse effects to such resources in planning, constructing, operating, or maintaining the state's transportation system, or to minimize and mitigate such effects if it is not practical to avoid them.

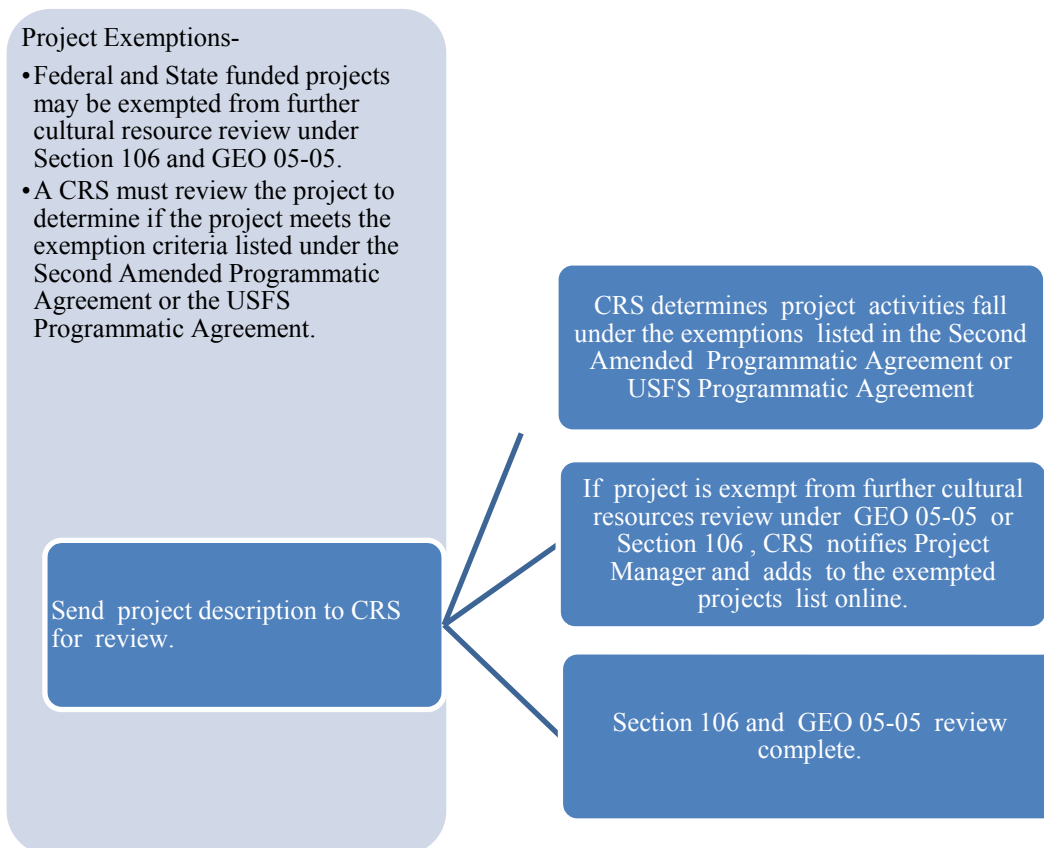
Cultural resources may include but are not limited to buried and surface archaeological sites and materials; historic structures such as buildings, highways, roads, bridges, culverts, or guardrails 50 or more years old; and sites such as certain natural landscape features considered important or special by native Americans or community groups, such as waterfalls, rock formations, mountains, or ridges. Archaeological sites and materials can be prehistoric or historic with respect to the age of the resources.

Many WSDOT projects and activities may impact cultural resources and are therefore subject to state and federal regulations. There are multiple federal and state laws that regulate cultural resources and how they are treated. These regulations apply to all WSDOT activities, modes and divisions, not just highways.

Compliance requirements for cultural resources follow different regulatory and compliance paths based on project funding, permitting, and/or project location, but all follow the same general process:

- a. Contact the region Cultural Resources Specialist (CRS) early in the project planning stages. If the region or division does not have a CRS, contact the Cultural Resources Program in the Headquarters Environmental Services Office.

- b. Provide the CRS information on project location, land ownership, funding, scope of work, and any required permits, and he/she will assist in determining which compliance path and regulations apply.
- c. Once the CRS conducts the initial project review, he/she will work with project staff to document that compliance has been completed or to establish the regulatory path and develop a schedule to complete cultural resources compliance.
- d. Regardless of which compliance path the project follows, the CRS will initiate consultation with the state Department of Archaeology and Historic Preservation (DAHP), unless the project is exempted from further compliance review under the terms of the Second Amended Programmatic Agreement or the USFS Programmatic Agreement. [Figure 456-1](#) illustrates this process.
 1. Only a WSDOT CRS can exempt a project under the terms of the Second Amended Programmatic Agreement.
 2. Undertakings on federal or Indian/tribal lands cannot be exempted per provisions of the Second Amended Programmatic Agreement.
 3. Undertakings on national forests can be exempted per provisions of the USFS Programmatic Agreement.



Exempting Projects From Further Section 106 or Governor's Executive Order 05-05 Review
Figure 456-1

- e. Consultation with DAHP and other stakeholders will continue until the project is determined not to have adverse effects to cultural resources, or agreements are made to avoid, minimize, or mitigate any adverse effects.

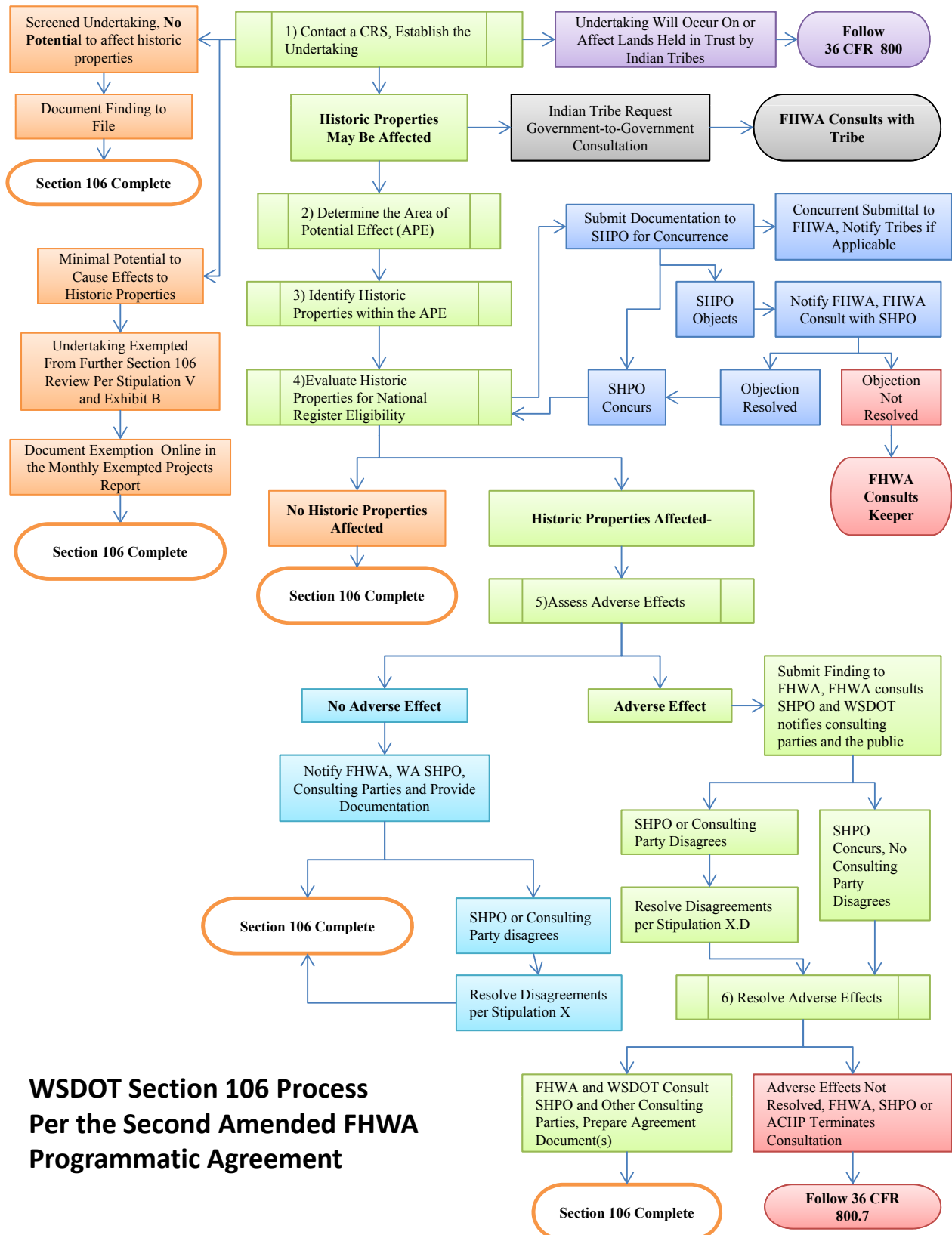
456.02 Section 106 Review and Compliance: FHWA

Projects that use federal funds, or require permits from federal agencies, or take place on federal (including Indian/tribal) land, will go through the Section 106 compliance process of the National Historic Preservation Act (NHPA, implemented by [36 CFR 800](#), see below). The majority of WSDOT projects are subject to Section 106 requirements, either due to funding (e.g., federal aid projects) or permits (e.g., Corps of Engineers permits). For projects that undergo Section 106 review, be aware that:

- a. Documentation of compliance with the National Environmental Policy Act (NEPA) may also be required. Note that projects that are categorical exclusions under NEPA are **not** exempt from NHPA and still must comply with Section 106.
- b. If the federal nexus involves a federal transportation agency, then [Section 4\(f\)](#) of the Transportation Act applies in addition to Section 106 of the NHPA (see Chapter 457).
- c. Projects that are FHWA funded or permitted use the Section 106 alternative procedures presented in the [Second Amended Programmatic Agreement](#), signed in 2012. The Second Amended Programmatic Agreement supersedes and replaces earlier Programmatic Agreements of 1997 and 2002.
- d. Federal highway aid projects on national forest lands follow the Section 106 review process outlined in the [USFS Programmatic Agreement](#) with WSDOT, SHPO, ACHP, and FHWA, signed in 2012.
- e. Compliance and consultation activities, which WSDOT conducts for federal aid projects, are done so on behalf of FHWA, and pursuant to these two programmatic agreements.

The first step is to contact the assigned CRS as early in the project planning stages as possible, and he/she will determine whether or not the project can be exempted from further review under the Second Amended Programmatic Agreement.

If the activity cannot be exempted per the stipulations of the Second Amended Programmatic Agreement, the CRS will work with the project office to determine the Area of Potential Effects (APE) and identify which parties must be consulted with for the project. If the project has FHWA funding or permits, the Second Amended Programmatic Agreement will be followed ([Figure 456-2](#)). If the project occurs on a national forest, the USFS Programmatic Agreement will be followed. If the project requires a Corp of Engineers permit (i.e., §10 or 404) and does not have FHWA funding, the Seattle District Corps of Engineers Memorandum for Record will be followed.



Section 106 Process Per the Second Amended FHWA Programmatic Agreement
Figure 456-2

456.03 Section 106 Review and Compliance: USFS

Projects taking place on national forest lands fall under the Section 106 review process, even if they are state funded only. If the project has FHWA funding, the process detailed in the USFS Programmatic Agreement is followed (see [Figure 456-3](#)). If the project is state funded, the CRS must work with the project team to provide the USFS Forest Archaeologist with project information to allow the USFS to initiate their Section 106 process. In the case of state funded projects on national forests, the USFS is responsible for Section 106 compliance and does not delegate this responsibility to WSDOT. This is true for maintenance activities as well, unless the region has negotiated an individual maintenance agreement with the national forest. Appropriate time must be built into project schedules to allow for the USFS Section 106 process. Check with the designated WSDOT CRS to get an estimate of how much time is required, depending on project scope and the national forest where the project is located.

In either case, compliance for WSDOT begins with the project team informing their designated CRS about the project scope and schedule, and working with the CRS to inform the USFS Forest Archaeologist about the project.

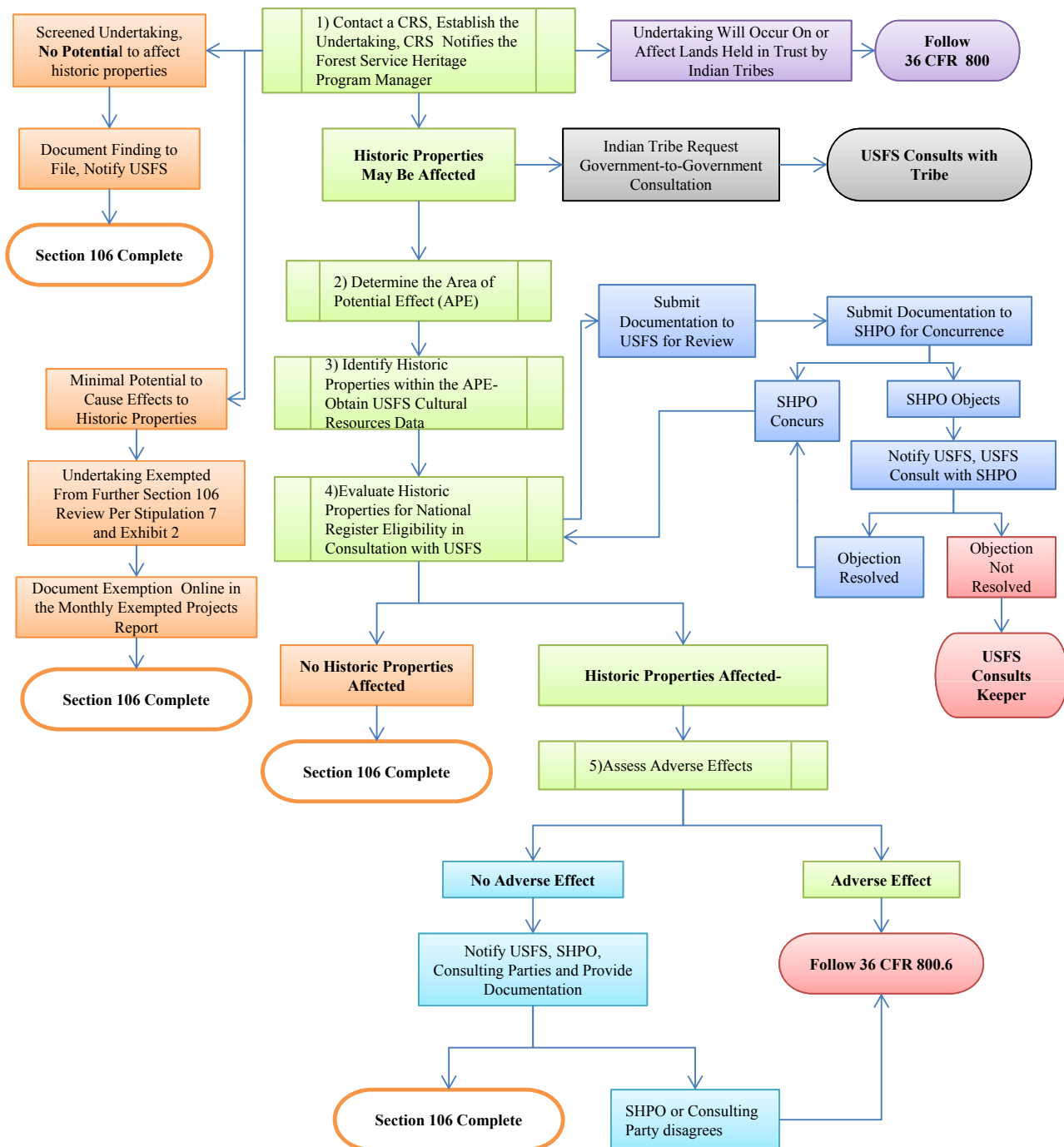
456.04 Section 106 Review and Compliance: COE

WSDOT and the Seattle District COE utilize a Memorandum for Record signed in 2008 which outlines the process for complying with Section 106 for transportation projects with a COE nexus. This process applies to projects where the COE is the only federal lead agency for Section 106. If other federal agencies are involved (typically, agencies of the U.S. DOT-FHWA, FRA and FTA), the COE typically defers lead agency status to the other federal agency and accepts their Section 106 process. If the other federal agency is FHWA, the MFR designates lead agency status to FHWA.

The MFR requires that a WSDOT CRS review all projects with a COE nexus to determine if the project has the potential to impact cultural resources. If the WSDOT CRS determines that the project is of a scope that will not impact cultural resources, the CRS will document that determination for the record. If the CRS determines the project has the potential to impact cultural resources, the CRS will work with the project team to implement Section 106 compliance per the terms of the MFR.

456.05 Section 106 Review and Compliance: Other Federal Agencies

If a federal agency other than FHWA, USFS, or the COE is involved in funding or permitting the project, that agency's Section 106 process will have to be followed. If FTA, FRA, BLM, or another federal agency is participating in project funding or approval in addition to FHWA, FHWA will need to coordinate with the other federal agency or agencies to see if they will accept FHWA as the Lead Federal Agency per Section 106 and agree to follow FHWA's process.

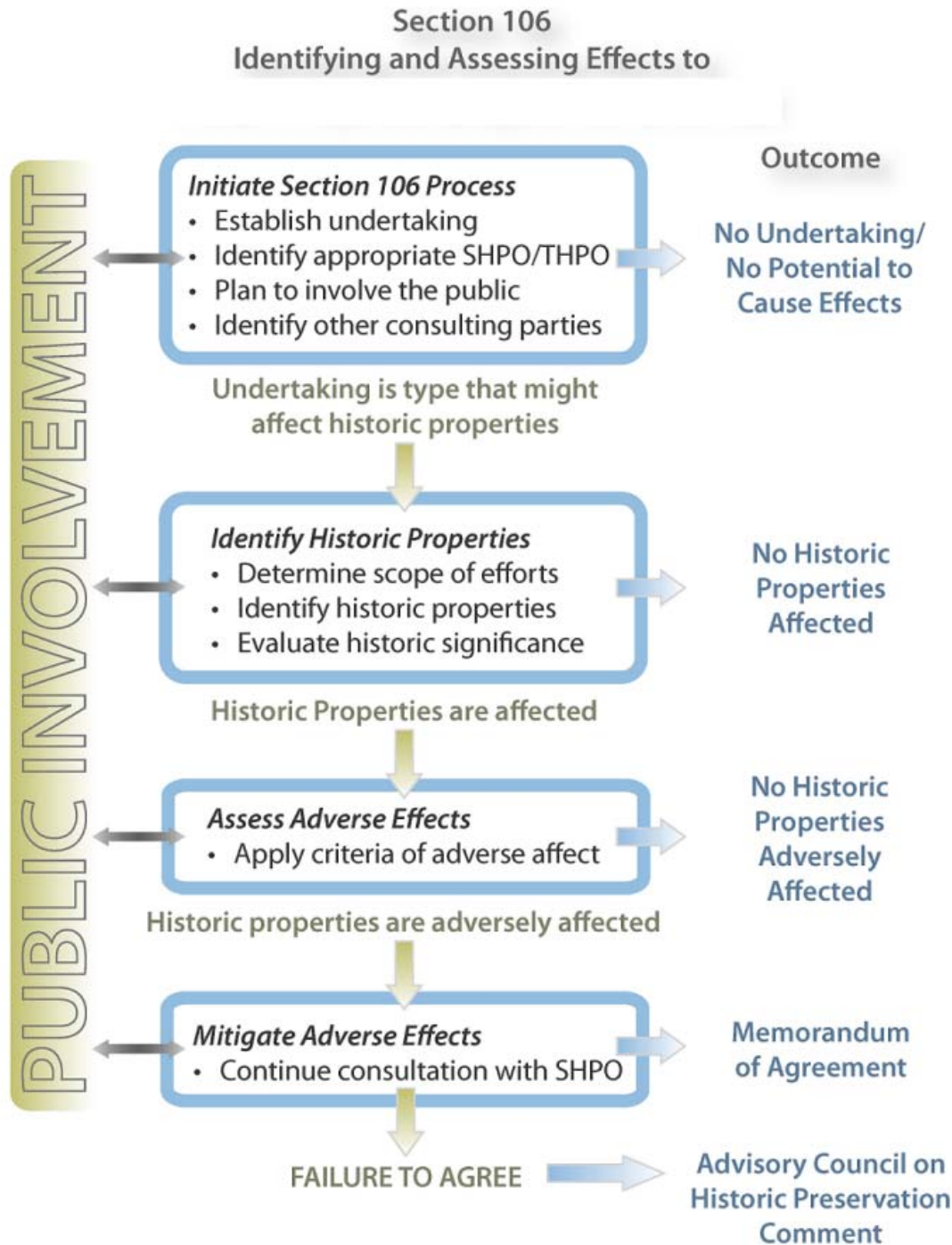


WSDOT Section 106 Process Per the USFS Programmatic Agreement

** FHWA shall act as lead federal agency for purpose of compliance with Section 106 of the National Historic Preservation Act (NHPA) for Federal-aid highway program funded projects on USFS land in Washington State.

Section 106 Process Per the USFS Programmatic Agreement
Figure 456-3

Figure 456-4 illustrates the Section 106 process most federal agencies follow. Section 106 is a federal responsibility, and while federal agencies can delegate some of the tasks required to complete Section 106 to WSDOT, the federal agency remains responsible for Section 106 compliance. Project teams need to be aware that different federal agencies have different schedules and processes for complying with Section 106, and these may have schedule impacts for project planning.



Section 106 Process
Figure 456-4

456.06 Governor's Executive Order 05-05 Review and Compliance

State funded projects go through the Governor's [Executive Order 05-05](#) process and are subject to the requirements of SEPA and state archaeological statutes ([RCW 27.34](#), [RCW 27.44](#), and [RCW 27.53](#)) and their implementing regulations ([WAC 25-48](#)).

The first step is to contact the assigned CRS as early in the project planning stages as possible, and he/she will determine whether or not the project can be exempted from further review under the terms originally developed for the Second Amended Programmatic Agreement but which can be applied to state funded projects with DAHP approval. If the activity cannot be exempted, the CRS will work with the project office to determine the Area of Potential Effects (APE) and to prepare consultation letters with DAHP and interested tribes.

Consultation with DAHP and other stakeholders will continue until the project is determined not to have adverse effects to cultural resources, or agreements are made to avoid, minimize, or mitigate any adverse effects.

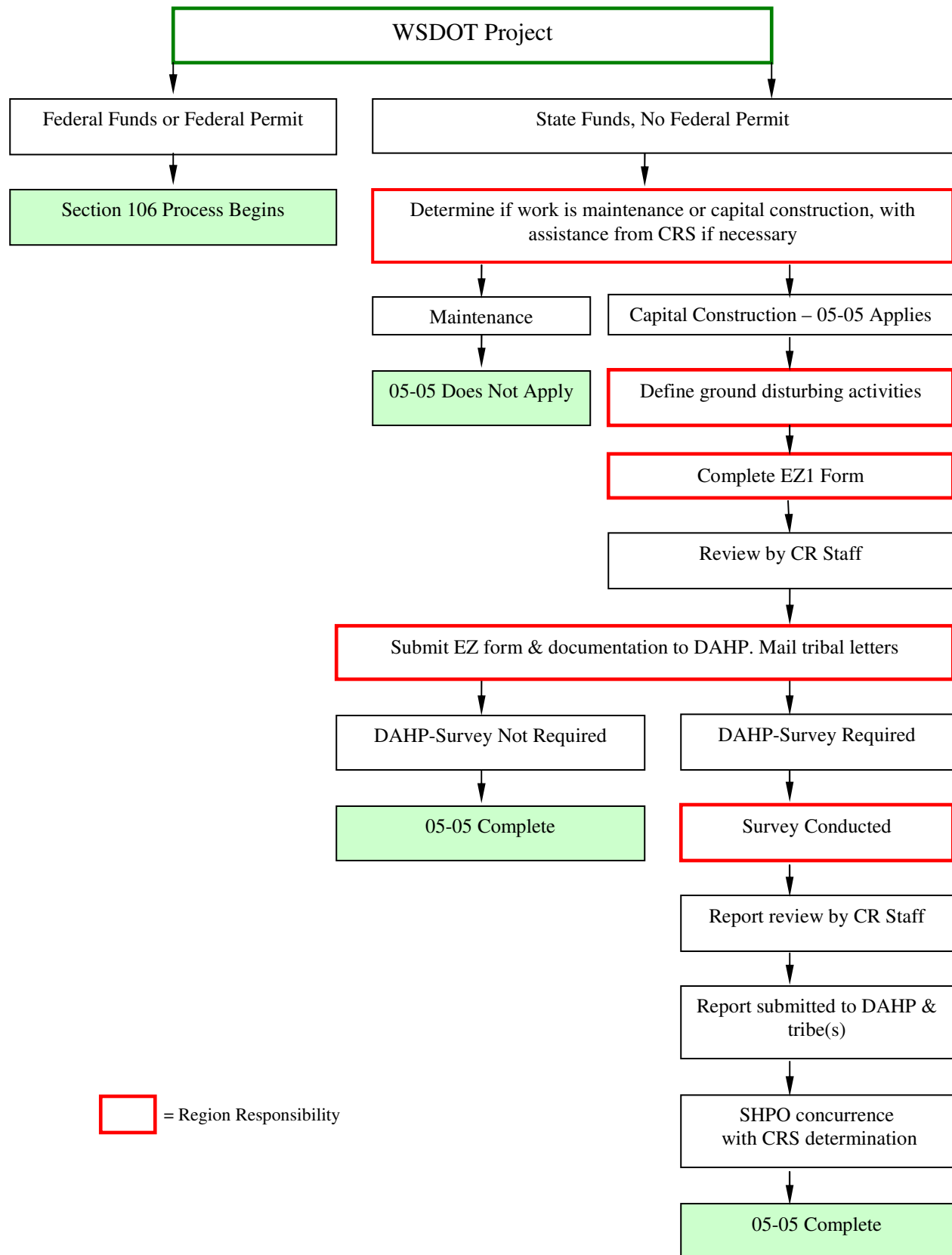
The most current information on cultural resources policy and compliance is available from the designated regional or modal CRS or the WSDOT Cultural Resources Program in the Environmental Services Office. [Figure 456-5](#) illustrates the process.

456.07 Bridge Compliance

Bridges built through 1970 have been evaluated for potential NRHP eligibility. Some of those bridges have been listed in or determined eligible for listing in the NRHP; others have been nominated to or recommended eligible for, but have not been listed in, the NRHP. Those bridges appear on the [NRHP Washington State Historic Highway Bridges](#) table.

The table linked above is not static. Changes to the table are made frequently, reflecting additions of bridges determined NRHP eligible per compliance with Section 106 of the NHPA or [Executive Order 05-05](#), and deletions of bridges lost to demolition. Bridges previously evaluated occasionally warrant re-evaluation, due to changes in contexts or length of time since the last evaluation. For these reasons, contact a CRS for guidance before proceeding with undertakings affecting bridges 40 years or older.

Undertakings presumed to have minimal potential to affect historic bridges can be exempted per the Second Amended Programmatic Agreement. Those exemptions are also available for undertakings lacking a federal nexus but subject to GEO 05-05 compliance. Contact a CRS to obtain an official project exemption.



Governor's Executive Order 05-05 Process
Figure 456-5

Undertakings involving Interstate bridges are usually exempted from Section 106 review unless the bridge is identified on FHWA's [List of Nationally and Exceptionally Significance Features of the Federal Interstate System](#).

Common types of bridges built after 1945 are exempt from Section 106 and Section 4(f) review unless they appear on the table Common Bridges in Washington Excluded from ACHP's Program Comment for Common Post-1945 Concrete and Steel Bridges Exemption. Common bridge types, as defined by the Program Comment include:

- a. **Reinforced Concrete Slab Bridges**
 - 1. Reinforced concrete cast-in-place slabs.
 - 2. Reinforced concrete pre-cast slabs.
 - 3. Pre-stressed concrete slabs.
- b. **Reinforced Concrete Beam and Girder Bridges**
 - 1. Reinforced concrete tee beams.
 - 2. Reinforced concrete channel beams.
 - 3. Pre-stressed concrete I-beams and bulb tees.
 - 4. Pre-stressed concrete box beams.
- c. **Steel Multi-Beam or Multi-Girder Bridges**
 - 1. Steel-rolled multi-beams.
 - 2. Steel fabricated (built up) girders.
- d. **Culverts and Reinforced Concrete Boxes**
 - 1. Reinforced concrete boxes.
 - 2. Concrete box culverts.
 - 3. Concrete pipe culverts.
 - 4. Steel pipe culverts.

Undertakings with potential to adversely affect historic bridges obligate WSDOT to develop, in consultation with SHPO/THPO and consulting parties, alternatives that could avoid, minimize or mitigate adverse effects ([36 CFR 800.6\(a\)](#)). These alternatives may include preservation in-place, re-purposing the bridge under different ownership, and relocating the bridge to where it could be preserved. Contact a CRS for guidance in developing alternatives and determining appropriate consulting parties before proceeding with undertakings that could adversely affect a historic bridge.

456.08 Artifact Collection and Disposition (Curation)

An archaeological collection is defined as all artifacts, field notes, maps, photographs and other records generated or recovered during an archaeological investigation. Federal regulations establish standards for the preparation and curation of archaeological collections from federal lands, and WSDOT has policy requirements for the curation of artifacts and records recovered during investigations undertaken in compliance with either Section 106 of NHPA or the Washington State Archaeological Resources and Sites Act ([RCW 27.53](#)).

(1) ***Factors in Determining a Curation Facility***

In Washington State, there are two factors considered in determining where archaeological collections will be curated: (1) land ownership, as under federal and state law recovered artifacts legally belong to the owner of the property at the time of excavation; and (2) 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).

(2) ***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 an agency or consultant office. It is the responsibility of the WSDOT Project Engineer with assistance from the CRS to ensure that archaeological collections are curated at a facility that meets the standards of [36 CFR 79](#) at the conclusion of the project. WSDOT is responsible for including language regarding curation in contracts with cultural resource consultants.

- a. **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.

- b. **Collections From Federal Land** – When artifacts are recovered from federal land the collection is the property and responsibility of that federal agency responsible for managing the land. 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.
- c. **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.
- d. **Disposition of Collections From Private Property** – When WSDOT will conduct an archaeological investigation on private property, the WSDOT CRS must discuss the issue of archaeological collections and their disposition with the landowner in advance of the fieldwork. This includes temporary easements on private property.

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 property owners express a desire to have artifacts returned to them, 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.

If possible, the artifacts should not be returned until all consultation is completed, the required 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.

*As of July 2012, the only programmatic agreement WSDOT has entered into with a land owning federal agency is the U.S. Forest Service.

- e. **Disposition of Collections Collected Under an MOA or PA** – For large or complex projects, WSDOT will typically enter into an 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.

(3) 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.

- a. **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.

- b. **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.
- c. **Payment of Curation Fees** – Curation fees are considered part of the project compliance or mitigation cost and must be included in project budgets.

456.09 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.

(1) Exhibits/Displays

WSDOT may prepare 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; although decisions on whether to exhibit or display are made by the repository.

(2) 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 if this type of measure is identified in the consultation process as an appropriate or necessary component of mitigation. The time that a stand-alone facility is needed will be determined through consultation for each project.

456.10 Additional Cultural Resource Regulatory Guidance

The general policy is to avoid impacts from transportation projects on cultural resources. If impacts cannot be avoided, the policy is to minimize or mitigate the effects of such impacts to cultural resources. Specific guidance depends on the regulatory path the project must follow and the scope of work of the project, and is available from the WSDOT Cultural Resources Program or the region CRS.

(1) Federal

- **National Historic Preservation Act, Section 106** – The Section 106 process is codified in [36 CFR 800](#).
- **National Environmental Policy Act** – The National Environmental Policy Act (NEPA), 42 USC Section 4321, requires that all major actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations including impacts on historic and cultural resources are given due weight in decision-making. Federal implementing regulations are at [23 CFR 771](#) (FHWA) and [40 CFR 1500-1508](#) (CEQ). For details on NEPA procedures, see [Chapter 400](#).
- **Department of Transportation Act, Section 4(f)** – Protection of certain public lands and National Register eligible or listed historic properties was originally mandated in Section 4(f) of the 1966 Department of Transportation Act. This section was later codified without substantive changes as 49 USC 303. However, it is still referred to as Section 4(f) in the FHWA/FTA regulations dealing with Section 4(f) properties, including Parks, Recreation Areas,

Areas, Wildlife and Waterfowl Refuges, and Historic Sites ([23 CFR 771](#) and [774](#)). For further details, see Chapter 457 and Chapter 459.

- **Archaeological Resources Protection Act** – The Archaeological Resources Protection Act of 1979 (ARPA) ([43 CFR 7.6-7.11](#)) applies to archaeological resources on tribal lands and lands under federal jurisdiction. WSDOT must apply for and obtain an [ARPA permit](#) when such resources could be impacted by a project.
- **Curation of Federally Owned and Administered Archaeological Collections** – The U.S. Department of the Interior has set minimum standards for the curation of federally owned archaeological collections in [36 CFR 79](#), and these standards are followed by Washington State for collections from public lands. Artifacts recovered from private lands remain in private ownership until or unless agreement is made with the owner(s) for public curation.
- **Section 106 exemption regarding Effects to the Interstate Highway System** – This exemption effectively excludes the majority of the 46,700-mile Interstate System from consideration as a historic property under Section 106 of the National Historic Preservation Act (NHPA). In addition the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU, Public Law 109-59, Aug. 10, 2005) includes a provision (Section 6007) that exempts the bulk of the Interstate Highway System from consideration as a historic resources under Section 4(f) of the Department of Transportation Act. With these two exemptions in place, federal agencies are no longer required to consider the vast majority of the Interstate Highway System as historic property under Section 106 and Section 4(f) requirements. Excluded from these respective exemptions are elements of the Interstate System that are exceptional in some way or meet a national level of significance under the criteria for the National Register of Historic Places. The [Final List of Nationally and Exceptionally Significant Features of the Federal Interstate Highway System](#) identifies those elements that are not covered by the exemptions discussed above and will therefore continue to be subject to consideration under the Section 106 and Section 4(f) processes
- **Related Federal Statutes** – Additional federal statutes relating to historic, cultural, and archaeological resources:
 - [American Indian Religious Freedom Act](#) (1978)
 - [Antiquities Act of 1906](#)
 - [Archaeological and Historic Preservation Act](#) (1974)
 - [Native American Graves Protection and Repatriation Act](#) (1990)

(2) State

- **Archaeological Sites and Resources** ([RCW 27.53](#)) – Protects archaeological resources, making disturbance of known archaeological sites without a permit obtained from DAHP a misdemeanor. Information on Archaeological

Excavation and Removal Permits may be obtained from the WSDOT [State Environmental Permits and Approvals](#) web page.

- **State Environmental Policy Act** – 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 on historic and cultural resources are given due weight in decision-making. State implementing regulations are in [WAC 197-11](#) and [WAC 468-12](#) (WSDOT). For details on SEPA procedures, see Chapter 400.
- **Governor’s Executive Order 05-05** – [Executive Order 05-05](#), *Archaeological and Cultural Resources*.
- **Abandoned and Historic Cemeteries Act** ([RCW 68.60](#)) – Protects graves and historic cemeteries, making disturbance of such sites, without a permit, a Class C felony.
- **Indian Graves and Records Act** ([RCW 27.44](#)) – Protects Indian graves, cairns, and visual records such as rock art, making disturbance of such sites without a permit a Class C felony.
- **Archaeology and Historic Preservation – Legislative Declaration** ([RCW 27.34.200](#)) – The legislature declares it to be the public policy and in the public interest of the state to designate, preserve, protect, enhance, and perpetuate those structures, sites, districts, buildings, and objects which reflect outstanding elements of the state’s historic, archaeological, architectural, or cultural heritage, for the inspiration and enrichment of the citizens of the state.

456.11 Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation (federal)
BLM	Bureau of Land Management, U.S. Department of the Interior
Corps or COE	U.S. 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

456.12 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.

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.

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, or 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, 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 Effects and No Adverse Effect.

Determination of Eligibility – 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 a number of 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)).

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.

457.04 Cultural Resources May Be Protected Under Section 4(f)

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 minimize harm. Section 106 requires consideration of the project effects on cultural resources.
- Section 4(f) applies only to agencies of the DOT. 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 not eligible for protection under Section 4(f).

457.05 Section 6(f) Conversion May Be Required

Section 4(f) properties purchased or improved with money from the Land and Water Conservation Fund (LWCF) require additional work. Coordination with the appropriate federal agency will be required. Section 6(f) of the LWCF Act prohibits the conversion of such properties to non-recreation uses without approval by the National Park Service (NPS) or their state designee. Therefore, a Section 6(f) analysis is an integral part of the Section 4(f) evaluation if the project must use land purchased or improved from the LWCF.

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 4(f) applies only to programs and policies undertaken by the DOT. Section 6(f) applies to programs and policies of any federal agency.
- Section 4(f) allows more flexible mitigation opportunities. Section 6(f) requires that impacted resources be replaced with lands of equal value, location and usefulness.
- Section 6(f) can apply on fully state funded projects where no federal nexus exists.

More detailed guidance for Section 6(f) conversions may be found in Chapter 450.

457.06 Section 4(f) Requirements May Differ for Other Federal Agencies

Section 4(f) is a federal requirement and must be considered in any NEPA document involving any USDOT agency (FHWA, FTA, FRA, and FAA).

Different federal agencies have different documentation and procedural requirements for NEPA. If your project has a federal nexus with more than one federal agency, it is critically important to meet with your lead agencies and determine how to proceed. In some cases the federal agencies may agree to co-lead the project. In others, one agency may serve as lead and the other as a cooperating agency. The exact requirement will vary depending on the nature of the project and individual circumstances. This decision must be made early in the process to ensure approval of your environmental document. Common examples of projects that require coordination with more than one federal agency are:

- An FHWA funded project that crosses National Forest Lands.
- A project that receives both FHWA and FTA funding.
- Any highway project involving FRA and FAA.

458.01	Social and Community Effects Analysis
458.02	Equity Effects – Environmental Justice
458.03	Social and Community Effects
458.04	Economic Effects
458.05	Relocation Impacts
458.06	Public Services and Utilities
458.07	Public Involvement Requirements – LEP
458.08	Coordination With Tribal Governments
458.09	Completing a Social and Community Effects Analysis
458.10	Non-Road Project Requirements
458.11	Links to Social Analysis Statutes and Regulations
458.12	Abbreviations and Acronyms
458.13	Glossary

458.01 Social and Community Effects Analysis

The Social and Community Effects analysis examines how the proposed transportation improvement affects the people who live, work and play in the vicinity of the project. The analysis includes economic and demographic considerations. Section 109(h) of the Federal Aid Highway Act requires an assessment of the “social, economic, and environmental impacts” under NEPA. The state SEPA policy, identified the need for agencies to consider how best to “foster and promote the general welfare, ... and fulfill the social, economic, and other requirements of present and future generations” when taking actions.

Nondiscrimination requirements of: Title VI of the Civil Rights Act; Americans with Disabilities Act (ADA); and, the Age Discrimination Act require Washington State Department of Transportation (WSDOT) to protect the civil rights of all people affected by our projects by making a concerted effort to engage minority, low income and Limited English Proficient (LEP) populations in the project development process. To retain federal funding we must:

- Assure that project impacts do not discriminate against protected populations.
- Ensure that we have made every effort to provide benefits, services, and access equally to all groups.
- Minimize the hardship of displacement.
- Provide equal access to information and equal opportunity for participation in the decision making process regardless of race, color, sex, income, disability, age, or national origin.
- Provide opportunities for persons with limited English proficiency to participate.
- Submit an annual report assuring compliance with Title VI by documenting inclusive public involvement.

WSDOT's policy is to follow the guidance provided in FHWA's [Technical Advisory T 6640.8A](#). The Social and Community Effects analysis described in this manual summarizes that 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.

Public involvement is a critical element of the Social and Community Effects analysis. It is used to scope the social analysis, evaluate the effect of alternatives on the community, and develop mitigation. See [Section 458.06](#) for a detailed discussion. In 2010 the Obama Administration renewed the federal government's commitment to Environmental Justice through an MOU confirming commitments set forth in the 1994 Executive Order ([EO 12898](#)). The 2010 MOU requires an increased focus on public involvement and emphasizes the promotion of healthy neighborhoods with environmentally sustainable transportation options. U.S. DOT's strategy for implementing the 2010 MOU confirms the agency's commitment to Environmental Justice (EJ) and stresses public participation in the decision making process.

CEs, PCEs, and some DCEs require a review for equity impacts (Environmental Justice) but do not require a social or economic analysis 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.

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. Estimate anticipated effects and use [Figure 458-1](#) to determine the appropriate level of environmental documentation for your project.

Answer the questions below to determine how to “right size” your analysis.

1. Does the primary work activity meet one or more of the criteria for projects unlikely to affect social, economic, or Environmental Justice resources?
☐ Yes: **No further analysis needed**; document in ECS question 7a of the Environmental Considerations tab.
☐ No: Go to Step 2.
2. Are there protected populations within the project study area?
 - For DCE projects: See [TSK 458-b](#): Collecting Demographic Data.
 - For EA/EIS projects: See [TSK 458-a](#) and [458-b](#).☐ Yes: **EJ analysis required**. Go to Step 3.
☐ No: **No further analysis needed**. Attach census data and school demographic data to ECS or other environmental document.
3. Are there substantial right of way requirements?
☐ Yes: Acquisitions affect > 10% of the parcels, require whole parcels, require relocations, or are concentrated in a single neighborhood. Go to Steps 4 and 5.
☐ No: Acquisitions affect < 10% of the parcels, are sliver takes and distributed evenly throughout the project area. **No further analysis needed**. Document limited nature of right of way acquisitions in letter to file.
4. Does the proposed project require any residential relocations?
☐ Yes: Do residential relocations affect > 25 homes or > 10% of the population within the study area? **Social Analysis required**. If EJ population is present, determine if the social impacts are “disproportionately high and adverse.” Go to Step 5.
☐ No: Go to Step 5.
5. Does the proposed project require any business relocations?
☐ Yes: Go to Step 6.
☐ No: **No Economic analysis required**. Document limited nature of relocation in a letter to file.
6. Do business relocations adversely affect major employers in the study area?
☐ Yes: Economic effects are likely if the project substantially changes access, travel time, or travel patterns; or adversely impacts > 10% of the permanent jobs in the study area (interview local agency planners to determine percentage). Economic analysis is required. If an EJ population is present, determine if the economic effects are “disproportionately high and adverse. Go to Step 7.
☐ No: **No Economic analysis required**. Document limited nature of economic analysis in a letter to file.

Social and Community Effects Decision Matrix
Figure 458-1

7. Does the proposed project result in short-term adverse effects to:

- a. Noise or vibration impacts to sensitive receptors within the study area? ☐ Yes, ☐ No
- b. Air quality impacts? ☐ Yes, ☐ No
- c. Changes in access to/from residences or businesses? ☐ Yes, ☐ No
- d. Will the project require a detour? ☐ Yes, ☐ No
- e. Create utility cuts due to utility relocations? ☐ Yes, ☐ No
- f. Reduce community cohesion or access to public services? ☐ Yes, ☐ No
- g. Have greater than de minimus Impact Section 4(f) properties? ☐ Yes, ☐ No

If you answered “Yes” to any of questions 7a-g, discuss the short-term social effect of the environmental impacts in the Social analysis. If an EJ population is present, determine if the short-term effects will be “disproportionate, high and adverse.”

If you answered “No” to all questions 7 a-g, document the limited nature of the impacts in the appropriate section of the environmental document.

8. Does the proposed project result in long-term (permanent) adverse environmental effects to:

- a. Noise or vibration to sensitive receptors in the study area? ☐ Yes, ☐ No
- b. Air quality impacts? ☐ Yes, ☐ No
- c. Changes in access to/from residences or businesses? ☐ Yes, ☐ No
- d. Reduce community cohesion or access to public services? ☐ Yes, ☐ No
- e. Have greater than de minimus Impact Section 4(f) properties? ☐ Yes, ☐ No

If you answered “Yes” to any of the questions in 8a-e, discuss the long-term Social effects of the environmental impacts in the Social analysis. If an EJ population is present, determine if the long-term effects will be “disproportionate, high and adverse.”

If you answered “No” to all of questions 8a-e, document the limited nature of the impacts in the appropriate section of the environmental document.

9. If you answered “no” to question 1 and “yes” to questions 4, 6, 7, and 8, substantial documentation may be needed to support your conclusions consider writing a Social and Community Effects Discipline report. If, in addition, you also answered “yes” to question 2, the discipline report must include an EJ analysis and determine if there are “disproportionately high and adverse effects.”

Social and Community Effects Decision Matrix
Figure 458-1 (continued)

Potential impacts identified in various studies should be discussed in the social analysis. Once you have determined the level of documentation required, conduct the Social and Community Effects analysis concurrently with, or slightly after, the following discipline studies:

- Air
- Noise
- Transportation
- Public Services
- Utilities
- Cultural Resources
- Section 4(f)
- Hazardous Materials
- Visual Impacts

458.02 Equity Effects – Environmental Justice

Equity effects, known as Environmental Justice (EJ), address the distribution of the physical, social, and economic impacts of the project. Protection of the community's civil rights and the fair distribution of a project's burdens and benefits lie at the heart of the issue. WSDOT is required by State and Federal law (see [Section 458.10](#)) to consider equity effects. The analysis should include an examination of the equity effects for each alternative, including the No-build.

Conduct an EJ analysis if the demographic analysis shows the presence of a protected social group within the study area. The USDOT Order defines a minority as:

- **Black** – Anyone of the black racial groups of Africa.
- **Hispanic** – Anyone with Spanish cultural origin regardless of race.
- **Asian and Pacific Islander** – Anyone from the Far East, Southeast Asia, Pacific Islands, or the Indian sub-continent and native Hawaiians.
- **American Indian or Alaskan Native** – Anyone of the original peoples of North America who maintains cultural identification through tribal affiliation or community recognition.
- **Minorities** (Black, Hispanic, Asian, Pacific Islander, American Indian, or Alaskan Native).
- **Low-Income** (households below the federally designated poverty level as defined the U.S. Health and Human Services).

When any member of a protected group is likely to be impacted, the environmental document should contain the following information broken down by race, color, and national origin. Also, the environmental document should detail:

- The percent of the population that is transit dependent.
- The percent of the population over 65.
- The percent of the population with disabilities.
- The percent of the population with Limited English Proficiency (LEP).

Environmental documents 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 impacts. [Analysis procedures are described on the WSDOT Social and Community Effects and Environmental Justice web pages.](#) The analysis compares the adverse impacts 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 nonprotected populations.
- More adverse environmental impacts occur 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.
- The project benefits do not effect protected populations to the same degree as other populations.
- The 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.

458.03 Social and Community Effects

This element evaluates the transportation project's impact on the ability of the community to function as a whole. It describes both positive and negative effects. As detailed in the previous section, 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 and traffic safety, and changes in overall public safety.
- Impacts to human health from traffic noise, air pollution and vibration.
- 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.

Procedures for conducting the analysis can be found on the WSDOT [Social and Community Effects](#) web page.

458.04 Economic Effects

An economic analysis is required if the transportation project is likely to have a substantial adverse effect on a large segment of the economy, or cause the loss of more than ten percent of the permanent jobs within the study area. Projects with substantial right of way needs that displace homes or businesses and change travel patterns, travel times, parking, land use, and access control will require analysis.

If an economic analysis is required, the analysis must consider:

- 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).
- Compatibility of the project with adopted comprehensive plans and coordination with local officials and business leaders.

WSDOT policy supports economic vitality as a key focus area in the 2011–2017 Strategic Plan. A transportation project that sustains favorable economic investment does not trigger a need for an economic analysis. However, if economic development is listed as a primary goal in the project purpose and need, a robust and detailed economic analysis will be required. Such an analysis must include the following elements in addition to those listed for the basic analysis.

- 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 economic analysis can be either qualitative or quantitative depending on the scope and complexity of the project. The analysis will require data from local comprehensive plans and the Transportation, Land Use and Visual analysis done for your project. The economic analysis also requires meaningful outreach to members of the affected business community. Professional judgment is required when estimating the severity of economic impact caused by the transportation project in light of larger economic trends.

Procedures for conducting an economic analysis can be found on the WSDOT [Social and Community Effects](#) web page.

458.05 Relocation Impacts

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 Policies Act of 1970 as amended. The legal requirements and relocation process are described in *Right of Way Manual* M 26-01 Chapter 12.

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 can 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 likely to receive displaced families.
- 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.
- 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 name and location of ethnic niche business that may be impacted by the project. The relocation information should be summarized in sufficient detail to adequately explain the relocation situation, anticipated problems, and proposed solutions (see [Relocation Checklist](#)). 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 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 relocates 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. Record the process used and how participants helped develop options to minimize adverse effects in the environmental document.

458.06 Public Services and Utilities

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 often impact public services and utilities by increasing the demand outside the capability of service providers, or by disrupting service. In many 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. Under SEPA, impacts to public services and utilities are considered as part of the analysis of a project's effect on the built environment. 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. WSDOT *Utilities Manual* M 22-87 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.

458.07 Public Involvement Requirements – LEP

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, including identification of EJ issues and LEP populations.
- Identify key issues for analysis to support scope and budget decisions.
- Explain WSDOT 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.
- Comply with WSDOT [Executive Order E 1028](#) *Context Sensitive Solutions*.

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 citizens, regardless of color, race, gender, age, income, disability, or national origin.

WSDOT Policy [E 1028](#) *Context Sensitive Solutions* requires engagement with affected communities to ensure that transportation objectives are described and discussed. Reciprocal communication is encouraged and community concerns should be addressed during planning and design of the project.

(1) **Limited English Proficiency – LEP**

The [Public Involvement Plan](#) for transportation projects should meet the needs of all of the populations affected by the 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. Detailed guidance for how to write a public involvement plan is available from the WSDOT Communications Office, and is available to WSDOT employees.

WSDOT requires that printed materials be provided if the demographic analysis shows that five percent of the population, or 1,000 individuals within the study area, speak a language other than English. 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.
- Make every effort to provide services in a timely manner when a need has been identified.

- 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.
- Provide translation or interpreter services upon request.

I 458.08 Coordination With Tribal Governments

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. In compliance with this requirement, WSDOT policy is to use the tribe's consultation area maps to evaluate a projects potential effect on natural resources. The maps are available on the WSDOT [Environmental GIS Workbench](#).

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.

I 458.09 Completing a Social and Community Effects Analysis

The following WSDOT web pages contain tasks, procedures, checklists, resources, and examples to support the policy guidance in this chapter.

- For Social, Economic, and EJ Analysis – [Social and Community Effects](#)
- For LEP – [Limited English Proficiency](#)

Additional guidance may be found at FHWA [Technical Advisory T 6640.8A](#), *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (October 30, 1987).

I 458.10 Non-Road Project Requirements

Federal agencies maintain their own unique NEPA procedures in CFR. As such each agency may have different documentation and procedural requirements for complying with NEPA. If your project has a federal nexus with more than one federal agency, it is critically important to meet with the federal lead agencies and determine how to proceed. In some cases the federal agencies may agree to co-lead the NEPA process. In others, one agency may serve as lead and the other as a cooperating agency. This decision needs to be made very early in the process to ensure timely approval of your environmental document. The exact requirements will vary depending on the nature of the project, federal permits and approvals required, and individual circumstances. Common examples of projects that require coordination with more than one federal agency are:

- An FHWA funded project that crosses National Forest Lands.
- A project that receives FHWA and FTA funding.

- Any highway project involving FRA or FAA.
- An FHWA funded project that requires an Army Corps of Engineers individual permit.

458.11 Links to Social Analysis Statutes and Regulations

- National Environmental Policy Act (NEPA), [42 USC 4321](#) and Federal implementing regulations [23 CFR 771](#) (FHWA) and [40 CFR 1500-1508](#) (CEQ).
- 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](#).
- [Title VI of the Civil Rights Act of 1964](#) as amended in 1987.
- [Section 504](#) of the Rehabilitation Act of 1973.
- [Uniform Relocation Assistance and Real Property Acquisition Policies Act](#) of 1970 (as amended). See [49 CFR 24](#) for USDOT implementing regulations.
- [Title II of the Americans with Disabilities Act](#) (ADA) of 1990.
- [The Age Discrimination Act of 1975](#).
- Environmental Justice Presidential Executive [Order 12898](#).
- Limited English Proficiency Presidential Executive [Order 13166](#).
- 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](#).
- [RCW 8.26](#) *Relocation assistance — real property acquisition policy* and [WAC 468-100](#) *Uniform relocation assistance and real property acquisition*.
- [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 Executive Order E 1028](#) *Context Sensitive Solutions*.

458.12 Abbreviations and Acronyms

Abbreviations and acronyms used in this chapter are listed below.

ADA	Americans with Disabilities Act
CSS	Context Sensitive Solutions
CFR	Code of Federal Regulations
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

| 458.13 Glossary

These definitions provide context for the Social, Economic and Environmental Justice process. 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.

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.

Context Sensitive Solutions (CSS) – A collaborative, interdisciplinary approach to develop a transportation facility that fits its physical surroundings and is responsive to the community's scenic, aesthetic, social, economic, historic, and environmental values and resources, while maintaining safety and mobility.

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. You need to consider cultural differences as one factor of your analysis.

Environmental Justice – Environmental justice seeks to lessen unequal distributions of environmental burdens (pollution, industrial facilities, crime, etc.), equalize benefits and balance access to nutritious food, clean air and water, parks, recreation, health care, education, transportation, safe jobs, etc., in a variety of situations. Self determination and participation in decision making are key pieces of environmental justice. [Presidential Executive Order 12898](#) and USDOT and FHWA implementing orders set the standards for environmental justice for transportation projects.

Environmental justice means minority and low income populations do not suffer disproportionately high and adverse human health or environmental effects from agency programs, policies, and activities.

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 given household size.

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.

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.

Social Effects – Any effect to the social environment including: relocation, environmental justice, community cohesion, community relations, and economic effects.

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 WSDOT [Utilities Manual](#) M 22-87 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.

- Effect of new or revised access points on travel patterns and traffic flow.
- Effect of increased or decreased SOV and HOV volumes.
- Opportunities for Transportation System Management/Transportation Demand Management (TSM/TDM). This includes options such as vanpools/carpools, ramp metering and associated queuing impacts.
- Potential changes in surface street conditions or travel patterns that would affect entering or exiting traffic (of particular concern for Interstate and other limited access facility projects).
- The effect of traffic detours or diversions during construction.
- Potential mitigation for significant adverse effects for both short-term construction impacts and long-term operational impacts.

Refer to the WSDOT [Design Manual](#) M 22-01 for design options and constraints when developing alternatives and mitigation for significant impacts to the transportation system. See particularly sections on sight distance, roadside safety, traffic barriers, impact attenuation systems, construction work zone traffic control strategies, and safety rest areas.

460.04 Transit

Highway projects have the potential to benefit and impact transit operations by changing traffic flow and travel patterns. Projects may affect travel time, relocate or remove transit stops, or change pedestrian access to transit stops by adding median barriers or relocating of cross walks. The environmental document should discuss:

- Potential benefits and opportunities for greater integration of transit in the corridor. Potential construction impacts, particularly detours and temporary route closures.
- How changes in traffic patterns affect transit operations.
- Proposed mitigation for both construction impacts and operational impacts

The environmental document should include a discussion of potential impacts of the transit improvement on the transportation system. Areas of concern include the effect on existing transit operations (area and frequency of service, travel time, and patronage), changes in traffic distribution, local circulation patterns, and parking. For more information on assessing environmental impacts for transit projects refer to the [FTA Transportation Impacts](#) web page.

460.05 Bicycling and Walking

The [USDOT Policy Statement on Integrating Bicycling and Walking into Transportation Infrastructure](#) requires that walking and bicycling be considered as equals with other modes of transportation, ensuring that transportation choices exist for people of all ages and abilities. In urban areas, bicycle and pedestrian ways must be established in new construction and reconstruction projects unless one or more of the following conditions are met:

- Bicyclists and pedestrians are prohibited by law from using the roadway. In this instance a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.
- The cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as costs exceeding 20 percent of the larger transportation project budget.
- Where low population levels.

FHWA [Technical Advisory T 6640.8A](#) (October 1987) requires that the environmental document discuss current and anticipated use of the bicycle and pedestrian facility, potential impacts, and measures to avoid or reduce adverse impacts. This requirement 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 nonmotorized transportation traffic, the proposed project needs to provide a reasonable alternative route or demonstrate that such a route exists ([23 USC 109\(m\)](#)).

Where 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.
1. **Safe Routes to Schools** – In 2011, the Washington Legislature funded a grant program for Safe Routes to Schools and Safe Routes to Transit. Proposed projects within one mile of a school may impact the Safe Routes to Schools and need to coordinate with the school. Schools are required to identify walking routes, provide a map, and describe identified hazards. Maps of routes are available on the WSDOT [Safe Routes to Schools](#) web page. Efforts to avoid, minimize, or mitigate adverse impacts and coordinate with school officials should be discussed in the environmental document.
 2. **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.

460.06 Parking

Parking issues may include elimination or changes to public or private parking adjacent to the highway right of way, and interim impacts such as construction parking, staging, and access. Local jurisdictions, especially those under GMA mandates, take the issue of parking seriously. Consult with local jurisdictions early during project development. The transportation chapter should identify potential impacts and mitigation. The discussion should include:

- Identification of the location and number of parking spaces that would be eliminated, added, or relocated. The discussion should address both permanent and temporary (construction) changes.
- Potential sites for relocation of parking. The number of parking spaces that would be provided in the new location and anticipated timing of the construction. The potential effect of relocating parking on local businesses and/or low income or minority populations should be discussed in Chapter 458.
- Potential relocation or reconfigurations of parking spaces or access to parking lots necessary to address safety concerns.

If a relocation or reconfiguration of parking is necessary to address safety concerns, the accident history and supporting traffic analysis should be included in the environmental document.

460.07 Waterborne Navigation

Road projects typically have little impact on waterborne navigation. However, river crossings may affect shipping routes or access to port facilities. Section 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 permit must also show evidence of coordination with the U.S. Coast Guard in accordance with the FHWA/U.S. Coast Guard MOA. 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 trail connections may be important factors.

The environmental document must evaluate the effect of proposed ferry operations on the adjacent street system for vehicular traffic, pedestrian flow and bicycle access.

460.08 Airports

Any proposed highway construction or alteration in the vicinity of a public or military airport will require early coordination with WSDOT's [Aviation Planning Division](#). Potential issues include height hazards, smoke, glare, electronic signals, runway protection zones, wildlife hazards and approved landscape/vegetation near the designated clear zones and access. Local topography and the level of air traffic control provided may also require evaluation of air port terminal procedures and single engine operative obstacle surfaces. The WSDOT Aviation Division can assist with the [obstruction evaluation](#) and compliance with FAA regulations.

Federal statutes require that reconstruction or relocation of any federally funded highway located within a 3.8 mile radius of an airport facility must be coordinated with FAA 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). See the WSDOT [Environmental Permitting](#) web page for FAA public notice requirements.

Review of the WSDOT [Aviation 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 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 to parking, transit, vehicle congestion, travel time, and traffic patterns.

460.09 Railroads

When FHWA is the sole lead federal agency the [Design Manual](#) Chapter 1350 establishes policies and procedures for coordinating highway and rail projects. It also includes requirements for conducting a safety analyses 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 the 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. For more information on assessing environmental impacts refer to [FRA Procedures for Considering Environmental Impacts](#). To determine if the project qualifies as a CE see FRA's [Categorical Exclusion Worksheet](#) guidance.

460.10 Transportation Discipline Report Guidance

The potential transportation impact for most projects can be adequately addressed in the main body of the environmental document. A separate transportation discipline report will only be needed for the most complex and controversial projects as shown in [Table 460-1](#).

In all cases, the level of documentation should be “right sized” to reflect the complexity of the project, the scale of potential *transportation* impacts, and the level of controversy of the project. If modeling is used in the analysis, basic assumptions and a description of the methods used to calibrate and verify the model should be included in the project file, or the appendix of the environmental document.

A copy of the Transportation Discipline Report Checklist can be found on the WSDOT [Discipline Report](#) web page. Useful transportation data may be obtained from the WSDOT GIS Workbench, and the WSDOT [Statewide Travel and Collision Data](#) web page.

Project Classification	Project Characteristics	Recommended Type of Environmental Documentation
- CE/DCE - Safety Projects	- No controversy. - No construction closures. - No operational transportation impacts and minor construction impacts.** - Very limited number of alternatives.	- ERS/ECS - SEPA Checklist.*
- DCE - EA - EIS	- Low to moderate level of controversy. - Impacts to transportation system/modes minor and can be mitigated.*** - Moderate number of alternatives. - Moderate amount of supporting documentation required.	- SEPA Checklist. - Write to Environmental Document. - Calculations, assumptions, and supporting documentation in appendix of environmental document or letter to file.
EIS	- High level of controversy focused on mode choice or alternative selection. - Adverse impacts to transportation system/modes cannot be mitigated. - Wide variety of alternatives with significantly different travel patterns or travel sheds. - Large amount of supporting documentation required.	- Write to Environmental Document. Include supporting documentation in appendix. - Consider writing a Transportation Discipline Report if supporting documentation is extensive and the explanation of assumptions and calculations very technical (e.g., numerous travel demand model runs).

*See Department of Ecology’s [SEPA Guide for Project Applicants](#): Guidance for Part B gives direction on how to fill out the SEPA checklist.

**See definition in [Chapter 300](#).

***Includes both temporary construction impacts and permanent operational impacts. Criteria for determining severity of construction impacts can be found in [Design Manual](#) Chapter 1010. Attach a copy of the Traffic Management Plan to the ECS form if the project has significant construction impacts to traffic.

Documentation Decision Matrix
Table 460-1

460.11 Transportation Related Statutes and Regulations

(1) Federal

- **National Environmental Policy Act (NEPA)** – [PL 91 190](#), as amended. Federal implementing regulations are at [40 CFR 1500-1508](#) (CEQ) and [23 CFR 771](#) (FHWA). SAFETEA-LU (2005) amended the way FHWA implements NEPA. Changes are codified in [23 USC 139](#). [23 CFR 652](#) specifically requires that federally aided projects include an analysis of any impacts on bicycle and pedestrian traffic.
- **USDOT Bicycle and Pedestrian Policy Statement** – Based on the following [CFR Title 23](#) Highways, [Title 42](#) The Public Health and Welfare, [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** – [14 CFR Part 77](#) (January 1975), [23 USC 318](#), and [23 CFR 620 Subpart A](#)
- **FRA Regulations** – [64 Fed. Reg. 28545](#) (May 26, 1999)
- **FTA Regulations** – [40 CFR 1500-1508](#)

(2) State

- **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](#) (WSDOT)
- **Transportation Facilities and Services of Statewide Significance** – [RCW 47.06.140](#)
- **Vehicular Traffic** – Essential Public Facilities – (GMA) [RCW 36.70A](#)
- **WDNR Easements** – [RCW 47.12](#) grants WSDOT authority to obtain an easement from DNR highway, ferry, rail and other state transportation projects.

(3) Local

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 from the [MRSC](#) website.

490.01	Commitments Must Be Tracked
490.02	Identify Environmental Commitments During Environmental Review and Design
490.03	Perform a Constructability Review
490.04	Project Design Must Reflect Environmental Commitments
490.05	Procedures for Tracking Commitments During Design
490.06	Links to Related Statutes
490.07	Abbreviations and Acronyms
490.08	Glossary

490.01 Commitments Must Be Tracked

The Washington State Department of Transportation (WSDOT) *Environmental Policy Statement E 1018* commits project teams to track all environmental commitments. The WSDOT Commitment Tracking System (CTS) is built specifically for this purpose. WSDOT is expected to clearly communicate all project commitments to the contractor, construction project office staff, and supporting design offices as stated in the [2004 Compliance Implementing Agreement](#) with Washington State Department of Ecology.

[Title 23, Part 771.109](#) of the Code of Federal Regulations requires the Federal Highways 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 commitments early in design increases the chance for compliance. The [2004 Compliance Implementing Agreement](#) requires WSDOT to identify all project commitments resulting from:

- Planning activities.
- Federal review process via the National Environmental Policy Act (NEPA).
- Washington State review process via the State Environmental Policy Act (SEPA).
- Design efforts.
- Permit acquisition.

It is WSDOT policy ([Design Manual M 22-01 Section 225.05](#)) that a project commitment file be established as soon as NEPA/SEPA documents are completed. This file serves as the repository for all final environmental commitments leading to development of the contract.

WSDOT has a database for tracking project level environmental commitments. Project teams should ensure that all commitments as established in environmental documents, permits, and agreements are entered into and tracked using the WSDOT Commitment Tracking System (CTS). The *CTS User's Manual* contains specific instructions on how to track commitments and is available online.

- Refer to [Procedure 490-a](#) to establish a commitment file.
- Refer to [Procedure 490-b](#) to identify commitments.
- Refer to [Procedure 490-c](#) to learn how commitments are entered into CTS

490.03 Perform a Constructability Review

The WSDOT *Master Deliverables List* (MDL) is a comprehensive list of project deliverables organized by project phases. Section [PE.PD.75](#) of the MDL requires that constructability reviews be performed during design. WSDOT staff should ensure that commitments from NEPA/SEPA documents, Endangered Species Act documents, and permits are constructible.

490.04 Project Design Must Reflect Environmental Commitments

WSDOT requires all aspects of the project design to reflect the commitments from the environmental review process and permits. [Design Manual](#) M 22-01 Section 220.10 requires that commitments are entered into the Commitment Tracking System (CTS) as soon as they are identified. Alternatively, select key stages of project delivery to enter project commitments into the CTS; perhaps after the NEPA/SEPA documents are complete and again after permitting prior to final PS&E. WSDOT staff can use the CTS to generate a report of project design phase commitments. This tool is helpful to ensure that staff considers the environmental commitments when developing final project designs.

- Refer to [Procedure 490-d](#) to verify commitments are incorporated into the final project design.
- Refer to [Procedure 490-e](#) to close out the status of commitments incorporated into design.

490.05 Procedures for Tracking Commitments During Design

The following procedures found on the [WSDOT Tracking Commitments](#) web page explain how to:

- Establish a commitment file.
- Identify environmental commitments.
- Enter commitments into CTS.
- Verify commitments are incorporated into final project design.
- Close out design commitments using the commitment status feature.

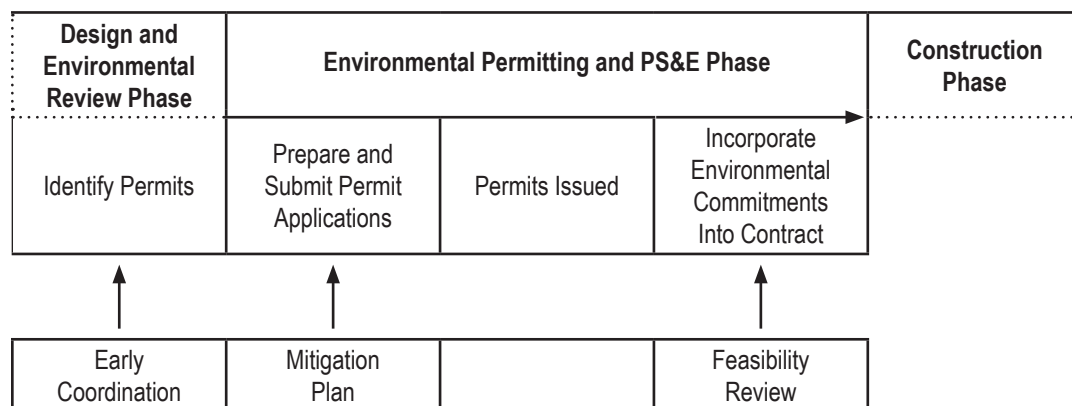
500.01	Introduction
500.02	Permit Overview
500.03	Roles and Responsibilities
500.04	Identify the Required Permits Through Early Coordination
500.05	Seek Permit Streamlining Options and Provide Schedule Input
500.06	Submit a Complete Permit Application and Obtain Permits
500.07	Review and Manage Permits During PS&E
500.08	Manage Permits and Conditions During Construction
500.09	Permitting Procedures
500.10	Links to Permitting Resources
500.11	Abbreviations and Acronyms
500.12	Glossary

500.01 Introduction

The Washington State Department of Transportation (WSDOT) obtains the necessary federal, state, and local environmental permits when building and maintaining our highways. It is through this process we ensure our work will have minimal impacts to the environment and, when needed, provide direction on what needs to be done to offset those impacts.

500.02 Permit Overview

[Secretary's Executive Order E 1018](#) requires WSDOT employees to comply with environmental laws and to protect our state's natural and cultural resources. Obtaining environmental permits is one way we comply with these laws.



Environmental Permitting and PS&E Phase

Figure 500-1

The permit process begins during project scoping (Section 300.02) when the Environmental Review Summary (ERS) is completed. Environmental coordinators must identify which permits would be required based on the preliminary design and the regulatory requirements. Visit the WSDOT [Environmental Permitting](#) web page for a list of permits and approvals typically required for WSDOT projects.

WSDOT must conduct studies and gather information during the environmental review phase (Chapter 400) to satisfy resource agency requirements.

WSDOT often discusses permit requirements through early coordination with the resource agencies. The extent of the coordination should be proportionate to the level of impact a project will have on the environment. Project teams can avoid or reduce the number of environmental permits needed by designing the project to avoid and minimize impacts to the environment.

Resource agencies issue most permits during the final design phase. 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.

Effective communication between the environmental staff, the design team, and the regulatory agencies is crucial to efficiently permit a project. The roles and responsibilities section below provides general guidance for the major groups involved in the permitting process. Be sure to follow region/mode processes for permitting projects, if applicable.

500.03 Roles and Responsibilities

(1) Regulatory 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).
- Review applications and issue permits.
- Provide technical and regulatory guidance.
- Conduct site visits during construction to verify compliance with permits.

(2) Environmental Manager/Assistant Manager

- Track environmental scope, schedule, and budget.
- Oversee environmental staff.
- Help resolve environmental conflicts as they arise.
- Ensure compliance with federal, state, local, and tribal environmental requirements.
- Foster good relationships with the regulatory agencies.

- Review draft permit applications to ensure they are complete.
- Notify regulatory agencies when required by the permits.
- Record annual usage of general permits and report this annually to the Environmental Services Office (ESO).

(3) Project Environmental Coordinator

- Understand the project(s) they are being asked to permit.
- Determine which permits a project may require.
- Fill out the permitting section of the Environmental Review Summary (ERS) and Environmental Classification Summary (ECS).
- Coordinate with environmental technical experts to determine a project's impact and ensure completion of permit supporting documentation (i.e., wetland delineation, mitigation plan).
- Coordinate early with regulatory agencies to verify permit requirements.
- Work with the design team on schedule and budget.
- Gather information and fill out permit applications.
- Ensure consistency between project designs, environmental documentation, and the permit application.
- Submit a complete and accurate permit application to the agencies.
- Determine if design changes affect permitting requirements.
- Track and assign permit conditions to ensure fulfillment.
- Ensure environmental requirements are reflected in the construction contract.

(4) WSDOT Environmental Technical Experts (Headquarters, Regions, and Modes)

- Identify project impacts on sensitive areas such as wetlands, streams, floodplains, cultural resources, and fish and wildlife habitat.
- Document the impacts in technical reports or memos.
- Develop mitigation options when resource impacts are unavoidable.
- Help environmental coordinators answer technical permitting questions.
- Provide assistance during construction as the need arises.

(5) Design Team

- Provide project definition during scoping phase.
- Provide project design information to help the environmental coordinator determine permitting requirements.
- Design the project to avoid and minimize impacts to environmental resources.
- Communicate design changes to environmental staff.

- Provide information for a complete permit application and drawings.
- Review the permit application to ensure consistency with designs.
- Incorporate environmental commitments into the construction contract.
- Ensure plan sheets show sensitive areas.

(6) ESO Permit Compliance Branch

- Communicate permitting policy and process changes to regions and modes.
- Create interagency agreements with regulatory agencies.
- Develop and maintain permitting guidance.
- Negotiate general permits and report annual usage to the regulatory agencies.
- Review bills from the legislature to determine their potential impact on WSDOT.
- Organize statewide coordinator roundtable meetings to discuss regulatory updates and lessons learned.

(7) Regional Maintenance Environmental Coordinator (RMEC)*

- 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 to maintenance staff.
- Track usage of general permits.

*RMECs have similar permitting responsibilities as environmental coordinators listed above.

500.04 Identify the Required Permits Through Early Coordination

To successfully identify the permits required for a project, the environmental coordinator must have a good understanding of the funded project scope. The WSDOT Project Summary Database contains a Project Definition, Design Decisions, and an Environmental Review Summary, prepared during the scoping process (Chapter 300). WSDOT uses the ERS form to identify the potential environmental impacts, mitigation options, and permits needed for a project. An Environmental Coordinator shall work closely with the design team to determine if the funded project scope has changed since the ERS form was signed.

Second, the environmental coordinator uses information generated during the Environmental Review Phase (Chapter 400) to verify the permits required for a project. The 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 Hydraulic Project Approval (HPA) permit (see [WAC 220-110-030](#)).

A list of permit triggers, statutory authorities, and guidance for each of the federal, state, and local permits and approvals can be found on the WSDOT [Environmental Permitting](#) web page. A procedure for how to [identify the permits](#) need for a project is also available on the web page. The ORA [Environmental Permit Handbook](#) provides additional in-depth information about environmental permits and approvals.

Regulatory agency staff and [WSDOT's liaisons](#) are another great resource for permitting questions. Environmental coordinators are encouraged to coordinate early with these staff to discuss project details and to identify information the regulators need in order to process the application. The extent of early coordination should be proportionate to the level of environmental risk a project presents.

WSDOT's liaison program facilitates Early Project Coordination (EPC) meetings. An EPC Meeting is a chance for WSDOT to present a project to the permitting liaisons and to get early technical and regulatory feedback from each resource agency before design is solidified and permit applications are developed. EPC meeting guidance and expectations are available on the WSDOT [Multi-Agency Permitting](#) web page.

500.05 Seek Permit Streamlining Options and Provide Schedule Input

Having a clear understanding of permitting timelines will help WSDOT avoid project delays and surprises. WSDOT environmental staff should coordinate closely with project schedulers to ensure the project schedule accurately reflects amount of time it will take to obtain environmental permits and approvals.

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 U.S. Army Corps of Engineers (Corps). A procedure titled, [Seek Avoidance and Minimization Opportunities](#), has been developed to provide additional guidance.

State policies and directives require WSDOT to first avoid and then minimize wetland impacts. Visit the WSDOT [Mitigation Sequencing](#) web page for additional information.

Environmental coordinators can also check the WSDOT [General Permits](#) web page to see if the project activities are covered by existing programmatic permits.

Once an 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. This will allow the project team to determine the critical path. The schedule should show environmental permits being obtained at least one month before the project goes to advertisement for bids. This will allow the project team enough time to incorporate environmental commitments into contracts (see Chapter 590).

500.06 Submit a Complete Permit Application and Obtain Permits

WSDOT uses the [Joint Aquatic Resource Permit Application](#) (JARPA) to obtain the major environmental permits from federal, state, and local regulatory agencies. JARPA is a single permit application for development activities in or along aquatic environments. Multiple regulatory agencies joined together to create one application that people can use to apply for more than one permit at a time. A JARPA submittal is comprised of three main parts:

- A completed JARPA form.
- JARPA drawings.
- Supporting documents.

WSDOT can reduce permitting delays by submitting a complete JAPRA package to the regulatory agencies on their first attempt. To improve our chances, WSDOT worked with the Corps Seattle District, Ecology, and the Washington Department of Fish and Wildlife (WDFW) to develop [Complete Permit Application and JARPA Drawing Guidance](#). This guidance identifies the information WSDOT is required to provide in order for the agencies to determine our application is complete. The drawing guidance lists the information that needs to be included in the JARPA drawings and formatting requirements.

Project teams should perform internal reviews to [ensure quality and consistency](#) before submitting permit application materials to the regulatory agencies. Permit applicants are encouraged to use the [JARPA Drawing Reviewer's Form](#) to improve their chances of submitting a complete application the first time around.

Once the agencies notify you that your JARPA submittal is complete, a “regulatory review clock” starts for some of the regulatory 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. The ORA [Environmental Permit Handbook](#) and [Permit Process Schematics](#) provide information regarding how long it takes agencies to issue certain permits.

500.07 Review and Manage Permits During PS&E

Once a permit is obtained, it should be reviewed immediately by WSDOT to ensure its requirements can be implemented. 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 constructible, the permit decision may need to be appealed. Appeal times vary depending on the agency issuing the permit. The [Complete Permit Application Guidance](#) lists appeal time frames and provides guidance for each of the major aquatic permits.

WSDOT's construction contracts must reflect the environmental commitments for which the contractor is responsible (see Chapter 590). Procedures for incorporating commitments into contracts can be found on the WSDOT [Tracking Commitments](#) web page.

500.08 Manage Permits and Conditions During Construction

As the owner and permit holder, WSDOT is ultimately responsible for ensuring compliance with environmental permits and approvals during construction (see Chapter 600). WSDOT's [Secretary's Executive Order E 1018 Environmental Policy Statement](#) states that all employees need to understand and uphold the environmental policies associated with their work responsibilities.

WSDOT employees take a role in ensuring that the contractor's work is compliant with the environmental permits by monitoring for compliance during construction and enforcing the contract. Procedures for ensuring compliance are available on the WSDOT [Construction Compliance](#) web page.

There are times before or during construction when the scope of a project changes or a request from the contractor may not be covered by the environmental permits or approvals. Examples include:

- Added work (i.e., variable messaging signs).
- Change orders such as a Cost Reduction Incentive Proposals (CRIPs).
- Changed site conditions (i.e., water levels higher than anticipated).
- Project delays (i.e., extending in-water work or a permit expiration date).
- Unexpected discoveries (i.e., cultural resources or contamination).
- Contractor requests (i.e., staging, withdrawing water from a stream, disposal).

These are all legitimate reasons, but the impacts of the change must be evaluated to determine whether WSDOT needs to obtain permit modification or reevaluate impacts to comply with NEPA/SEPA, ESA, Section 106 of the National Historic Preservation Act, etc. Make sure to notify region Environmental staff immediately when a project modification is proposed. Environmental staff should contact the regulatory agencies to describe the change so they can determine if a permit modification is necessary. If the change requires a permit modification, it must be secured before the contractor is allowed to do the work.

500.09 Permitting Procedures

The following [procedures](#) explain how to:

- Identify permits.
- Seek avoidance and minimization opportunities.
- Develop a complete permit application.
- Review permit conditions for feasibility.

500.10 Links to Permitting Resources

- [WSDOT Environmental Permitting](#)
- [WSDOT Federal Environmental Permit and Approvals](#)
- [WSDOT State Permits and Approvals](#)
- [WSDOT Local Permits and Approvals](#)
- [Tribal Permits](#)
- [WSDOT Multi-Agency Permitting Team](#)
- [JARPA](#)
- [ORA Environmental Permit Handbook](#)

500.11 Abbreviations and Acronyms

Corps	U.S. Army Corps of Engineers
CRIP	Cost Reduction Incentive Proposals
ECS	Environmental Classification Summary
EPC	Early Project Coordination
ERS	Environmental Review Summary
ESO	Environmental Services Office
FERC	Federal Energy Regulatory Commission
HPA	Hydraulic Permit Approval
JARPA	Joint Aquatic Resource Permit Application
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NWP	Nationwide Permit (U.S. Army Corps of Engineers)
PS&E	Plans, Specifications, & Estimates
RMEC	Regional Maintenance Environmental Coordinator

500.12 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.

Permit – A document required by law and issued by a regulatory agency or tribe that authorizes a specific type of activity under certain conditions.

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.

JARPA – JARPA is a single permit application for development activities in or among aquatic environments. Multiple regulatory agencies (federal, state, and local) created one application that people can use to apply for more than one permit at a time. However, some local agencies may require separate permit applications.

Nationwide Permit – A type of General Permit issued by the U.S. Army Corps of Engineers under Section 404 and/or Section 10.

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 and ferry terminal washing/cleaning, culvert maintenance, or use of insecticides for mosquito control.

Individual Permit – A permit issued to WSDOT by a regulatory agency for a particular activity or project that is not covered by a General Permit; usually needed for more complex or extensive projects.

Army Corps Permits – The U.S. Army Corps of Engineers issues two major permits: the Clean Water Act Section 404 permit for discharge of dredge and fill material into waters of the U.S., and the Rivers and Harbors Act Section 10 permit for work in navigable waters. They are commonly referenced together because similar procedures apply to both and they are often issued as a combined permit. WSDOT usually can obtain coverage under a Nationwide Permit, issued for common activities having minimal impact, but occasionally must obtain an Individual Permit for a project having significant impacts.

Section 401 Water Quality Certification – Applicants receiving a Section 404 Permit from the U.S. Army Corps of Engineers, a Coast Guard permit or a license from the Federal Energy Regulatory Commission (FERC), are required to obtain a Section 401 Water Quality Certification from the Department of Ecology (Ecology). Issuance of a certification means that Ecology anticipates that the applicant's project will comply with state water quality standards and other requirements of state law.

Section 402 or NPDES Permits – Section 402 of the Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants into surface water. USEPA delegated authority to Ecology to administer the program in Washington and does so in conjunction with the State Waste Discharge General Permit program. NPDES permits typically place limits on the quantity and concentration of pollutants that may be discharged. To ensure compliance with these pollutant concentration limits, permits require treatment or impose other operational conditions. In most cases, permits are issued for five years. Following is a list of NPDES permits that WSDOT obtains from Ecology for our projects and activities:

1. [NPDES Municipal Stormwater Permit](#)
2. [NPDES Construction Stormwater Permit](#) (general and individual)
3. [NPDES Waste Discharge Permit](#) (for bridge and ferry terminal washing)
4. [NPDES Sand and Gravel General Permit](#)

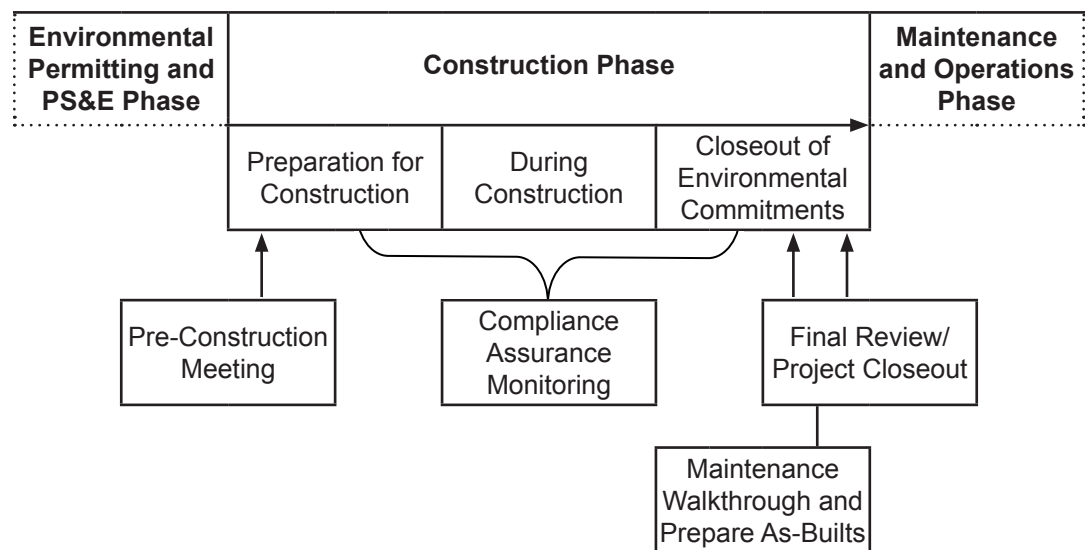
- 600.01 Construction Overview
- 600.02 Roles and Responsibilities
- 600.03 Construction Compliance Expectations
- 600.04 Procedures for Construction
- 600.05 Abbreviations and Acronyms
- 600.06 Glossary

600.01 Construction Overview

After the design phase, a project should have a complete set of environmental documentation, permits, and approvals, in addition to a final set of plans, specifications, and estimates (see Chapters 400 and 500). At this time, the project is publicly advertised and the Washington State Department of Transportation (WSDOT) accepts bids for completion of the work. The contract is awarded and construction begins soon after. [Figure 600-1](#) illustrates the relationship between the preceding and succeeding phases in relation to construction.

Because the contractor is responsible for implementing a substantial amount of environmental commitments WSDOT made during project development, it is crucial to review all environmental documents and permits to ensure contractor relevant permit requirements make it into the contract (see Chapter 590). The WSDOT Project Engineer is responsible for managing the contract and all commitments that are the responsibility of WSDOT.

Chapters 610, 620, and 630 lead to the implementation of commitments during construction. Consistent implementation of commitments is necessary to achieve accountability during construction that leads to good relationships with the public, agencies, and Indian tribes.



Construction Phase
Figure 600-1

600.02 Roles and Responsibilities

WSDOT builds trust and fosters positive relationships with the regulatory agencies, tribes, 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 or mode is structured.

(1) **WSDOT Region Environmental Manager (REM)**

- Make sure environmental staff are trained to ensure compliance.
- Establish clear expectations for environmental staff.
- Ensure staff and project offices have the necessary equipment to sample water quality and to ensure compliance with permit requirements.
- Ensure all discharge data and notes about permit required follow-up actions are being entered into the Construction Water Quality Monitoring (CWQM) system in a timely manner.
- Foster good communication with regulatory agencies and the construction team.
- Implement the Environmental Compliance Assurance Procedure (ECAP).
- Work closely with the project engineer to resolve issues as they arise.
- Ensure violations are documented in the Commitment Tracking System (CTS).
- Document and share lessons learned to prevent recurring issues.

(2) **WSDOT Construction Project Engineer (PE)**

- Discuss environmental topics at the preconstruction meeting and review the environmental contract provisions.
- Establish compliance expectations for the contractor and their subcontractors.
- Stop the contractor when their work violates the contract provisions or environmental requirements and notify the REM and construction engineer.
- Ensure the contractor's Spill Prevention, Control, and Countermeasures (SPCC) Plan meets WSDOT's requirements before accepting it.
- Establish compliance expectations of environmental inspectors related to permit required discharge sampling, monthly data reporting, and BMP adaptive management.
- Communicate with the REM as needed.
- Check with environmental staff about proposed design changes and change orders to make sure it is permitted.
- Implement ECAP when it is triggered.

(3) WSDOT Environmental Coordinator and/or Project Office Inspector

- Review all environmental commitments for the project.
- Determine water quality sampling requirements for the project and develop a strategy or plan to ensure compliance.
- Make sure the project exists within CTS.
- Make sure the project exists within the CWQM system if the project has a National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit (CSWGP).
- Provide advance notifications to regulatory agencies to ensure compliance with environmental requirements.
- Attend the preconstruction meeting and participate in discussing environmental requirements.
- Review the contractor's SPCC Plan and forward any concerns to the PE.
- Create a Site Log Book to comply with the NPDES CSWGP and update it as needed.
- 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 best management practices for erosion and stormwater control as required per the Temporary Erosion and Sediment Control Plan.
- 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 regulatory 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.
- Sample site discharges as required per the CSWGP and report all data in the CWQM system by the last day of each month. When benchmark or trigger values are exceeded, always include notes in CWQM about how the CSWGP required follow-up actions, such as BMP adaptive management, were achieved.

- Sample water quality as required per in water work related permits and make sure any in water work samples are sent to the Ecology federal permit lead.
- Request permit modifications if the project footprint increases, impacts to environmental resources change, or work means and methods may violate environmental requirements.

(4) WSDOT Environmental Technical Experts (Regions, Modes, and Headquarters)

- Verify environmentally sensitive areas in the field that need to be protected.
- Review SPCC Plans and provide comments to the PE.
- Review temporary stream diversion plans prepared by the contractor.
- Install fish exclusion best management practices and remove fish from isolated areas prior to work.
- Monitor noise during nighttime work.
- Monitor for cultural and archaeological resources.
- Monitor for marine mammals.

(5) Regulatory Agencies

- Provide technical and regulatory guidance.
- Review project changes and issue permit modifications if necessary.
- Conduct site visits during construction to verify compliance with permits.
- Issue written or verbal corrections if compliance is not achieved.

(6) WSDOT Environmental Services Office (Headquarters)

- Update environmental Standard Specifications, General Special Provisions, and Standard Plans.
- Track noncompliance events to look for trends and to identify lessons learned.
- Ensure the regions record violations in CTS.
- Provide quality control for discharge data and required notation entered by project staff in CWQM prior to electronically submitting the data to Ecology each month per the CSWGP.
- Communicate regulatory changes and lessons learned to the regions.
- Develop and maintain environmental compliance construction procedures.
- Provide environmental compliance training.

600.03 Construction Compliance Expectations

[Secretary's Executive Order E 1018](#) *Environmental Policy Statement* states that all employees need to understand and uphold the environmental policies associated with their work responsibilities. WSDOT employees take a role in ensuring that the contractor's work is compliant 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 chapters.

600.04 Procedures for Construction

The following chapters identify policy to ensure environmental compliance during construction. Chapter 610 focuses on preparing for construction. This includes all activities leading up to the contractor physically disturbing soil on the project. Chapter 620 summarizes specific environmental requirements during construction for each element of the environment (i.e., earth, air, noise, water). Chapter 630 explains policy for tracking environmental commitments during construction.

600.05 Abbreviations and Acronyms

CESCL	Certified Erosion and Sediment Control Lead
NEPA	National Environmental Policy Act
SEPA	State Environmental Policy Act
TESC	Temporary Erosion and Sediment Control

600.06 Glossary

These definitions provided context to achieving environmental compliance for Chapters 600, 610, 620, and 630. 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 contractor's responsibility to implement.

Commitment Status – The status of commitments (opened, closed, cancelled, etc.) in the WSDOT Commitment Tracking System.

Commitment Tracking System – The Commitment Tracking System is a database 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.

[Highway Runoff Manual M 31-16](#) – The WSDOT manual for designing and implementing stormwater management.

620.01	Introduction
620.02	Air
620.03	Cultural and Historic
620.04	Earth (Geology and Soils)
620.05	Fish, Wildlife, and Vegetation
620.06	Hazardous Materials (HazMat)
620.07	Noise
620.08	Public Services and Utilities
620.09	Transportation and Traffic
620.10	Water Quality
620.11	Wetlands and Other Waters
620.12	Enforce the Contract During Construction
620.13	Respond to Project Modifications
620.14	Respond to Noncompliance
620.15	Procedures for Construction
620.16	Abbreviations and Acronyms
620.17	Glossary

620.01 Introduction

Specific policies exist to protect the environment during construction. The Washington State Department of Transportation (WSDOT) and the contractor must implement a variety of best management practices (BMPs) to protect the following resources.

620.02 Air

WSDOT's policy is to implement 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*.

WSDOT may include special provisions in their contracts requiring BMPs to minimize emissions (carbon monoxide and nitrogen oxides) from construction equipment. Refer to Chapter 425 for additional guidance. WSDOT has a [no idle policy](#) that directs employees to turn off engines when their vehicles are not in motion.

620.03 Cultural and Historic

Construction Manual Section 1-1.9 explains the need to protect archaeological and historical objects during construction. *Standard Specifications* Section 1-07.16(4) provides instructions to the contractor if these resources are encountered unexpectedly.

WSDOT has a different policy if human remains are encountered. Refer to *Standard Specifications* 1-07.16(4)A.

All WSDOT projects that disturb ground must have an Unanticipated Discovery Plan. This plan describes how WSDOT will respond if archaeological or human remains are discovered. A template for the [Unanticipated Discovery Plan](#) is available on the web. Contact one of the [Regional Cultural Resource Specialists](#) to complete the template.

620.04 Earth (Geology and Soils)

WSDOT minimizes impacts to the environment by limiting vegetation and soil disturbance. WSDOT provides clearing limits to the contractor in the contract plans. *Standard Specifications* Section 1-08.4 requires the contractor to install high visibility construction fence to designate the clearing limits in the field. High visibility fence 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 8-0 and 8-01 and *Highway Runoff Manual* Chapter 6.

WSDOT has special design requirements for earthquake and landslide-prone hazard areas. Projects in these areas often require ground improvements to strengthen the soil. 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. This activity can cause impacts to adjacent water bodies up to 200 feet away. The Washington State Department of 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 turbidity is observed.

620.05 Fish, Wildlife, and Vegetation

WSDOT makes it a priority to protect fish, wildlife, and vegetation during construction. Policies associated with protecting fish, wildlife, and vegetation are described in Chapter 436.

WSDOT includes provisions in their contracts from permits and Endangered Species Act consultations for the contractor to implement. WSDOT also has responsibilities during construction to ensure fish and wildlife is protected. WSDOT's roles and responsibilities should be included in the environmental compliance binder or notebook as described in Section 610.01.

Here are some common things that WSDOT and the contractor do to ensure fish, wildlife, and vegetation are protected during construction:

- Restrict when the contractor can perform work (i.e., timing restrictions or work windows).
- Isolate the work from fish and their habitat.
- Perform [fish exclusion and removal](#) prior to in-water work.
- Monitor pile driving activities to avoid driving piles when sensitive species are present.
- Install BMPs to reduce noise and vibration during pile driving activities.
- Remove birds or nests and install bird exclusion netting on structures.
- Install BMPs to protect water quality.
- Require the contractor to prepare a spill prevention plan.
- Set clearing limits to protect vegetation and sensitive areas.
- Replant disturbed areas.

620.06 Hazardous Materials (HazMat)

Please see Chapter 447 for information about hazardous materials (HazMat) throughout the WSDOT project lifecycle. Construction related topics found in Chapter 447 include:

- Identifying and reporting HazMat during construction.
 - Encountering unknown underground storage tanks.
 - Finding releases of unknown HazMat.
 - Responding to spills from construction activities.
 - Reporting spills caused by the traveling public.
- Managing HazMat during construction.
- Reusing or disposing of project waste materials.

Visit the WSDOT [Hazardous Materials and Solid Waste Program](#) web page for additional information about WSDOT procedures for HazMat issues.

620.07 Noise

Noise generated during construction affects both people and wildlife. 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.

Conditions that protect wildlife from noise originate from consultations for the Endangered Species Act, 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.

620.08 Public Services and Utilities

Construction Manual Sections 1-2.3(B) and 1-2.3C 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 1-2.2E addresses responsibilities for both the Project Engineer 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.

620.09 Transportation and Traffic

It is WSDOT's policy to protect pedestrian and the traveling public as they travel through construction projects. *Construction Manual* Section 1-2.2I(5) clarifies the responsibilities for the Project Engineer to accommodate and protect pedestrians during construction. WSDOT must also ensure minimal disruption to existing modes of transportation. Refer to *Construction Manual* Section 1-2.2F for policy related to railroad traffic.

620.10 Water Quality

WSDOT is committed to protecting water bodies during projects that involve in-water work or that discharge stormwater runoff. State law ([RCW 90.48](#)) prevents discharges, for example, of turbid water, construction material, garbage, or chemicals to surface waters of the state. Failure to prevent such discharges causes WSDOT to violate the law, leading to possible action from regulatory agencies.

Projects with in-water work must comply with the water quality standards established in [WAC 173-201A](#). Projects that disturb more than an acre of soil and discharge stormwater to surface waters must adhere to the Washington State Department of Ecology's National Pollutant Discharge Elimination System (NPDES) [Construction Stormwater General Permit](#). This permit contains water quality benchmarks that differ from the standards established in [WAC 173-201A](#).

Water quality monitoring from stormwater discharges must be conducted in accordance with [Highway Runoff Manual](#) Section 6-4. This manual also provides guidance on best management practices to meet both water quality standards and benchmarks.

Water quality monitoring data collected during in-water work (projects having a 401 Water Quality Certification) must be directly submitted to Washington Department of Ecology by the WSDOT Project Engineer Office. Monitoring data for projects with an NPDES permit must be entered into WSDOT's [Construction Water Quality Monitoring Database](#). Refer to [Highway Runoff Manual](#) Section 6-7 for further instructions.

The 2004 Compliance Implementing Agreement requires that WSDOT assign, or make available, an environmental inspector for each project. The inspector must be trained in compliance with conditions for both the 401 Water Quality Certification and the NPDES Construction Stormwater General Permit. This includes, but is not limited to, erosion control planning and preparation of a water quality monitoring plan.

General contract requirements for applying and enforcing water quality standards and benchmarks are available in [Standard Specifications](#) Sections 1-07.5(3), 1-07.15, and 8-01 as well as [Construction Manual](#) Section 2-3.4.

WSDOT is committed to protecting ground water during construction. Instructions for managing ground water are provided to the contractor in [Standard Specifications](#) Section 8-01.3(1)C. Some WSDOT projects are constructed within locally designated wellhead protection areas. WSDOT includes special provisions in contracts to reduce the risk that construction activities contaminate soil or ground water in these areas.

- Refer to [Task 620-a](#) to sample construction stormwater runoff.
- Refer to [Task 620-b](#) to sample water quality for during in-water-work.
- Refer to [Task 620-c](#) to enter water quality monitoring data into the Construction Water Quality Monitoring Database.

620.11 Wetlands and Other Waters

WSDOT Policy [P 2038 Wetlands Protection and Preservation](#) 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 High Visibility Fencing (see Section 610.05). 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 reevaluation 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.

620.12 Enforce the Contract During Construction

It is WSDOT policy to (see Project Delivery Memo #09-01 as explained in Chapter 590) fully supplement contracts with environmental commitments. As a result, the best way to obtain compliance with a majority of WSDOT's commitments is to enforce the contract.

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 Specifications](#) 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 1-2.8 for more information about the Project Engineer's authority.

Remember [Secretary's Executive Order E 1018 Environmental Policy Statement](#) states that all employees need to understand and uphold the environmental policies associated with their work responsibilities. WSDOT employees must make sure the contractor's work is compliant with the environmental documents and permits.

620.13 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 or reevaluate impacts to comply with 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 Environmental Office when a project modification is proposed. Also, ensure that updated or new commitments are entered into the Commitment Tracking System (see Chapter 490).

620.14 Respond to Noncompliance

WSDOT employees are obligated to report noncompliance, whether it is a result of the contractor or WSDOT. The [Environmental Compliance Assurance Procedure](#), as described in the *Construction Manual* M 41-01, provides instructions on how to respond to a noncompliance event.

- Refer to [Procedure 620-a](#) to initiate the Environmental Compliance Assurance Procedure.

620.15 Procedures for Construction

The [procedures available for construction](#) on the WSDOT internet include:

- Sample water quality benchmarks.
- Sample water for in-water work.
- Enter water quality monitoring data into the Construction Water Quality Monitoring Database.
- Initiate the Environmental Compliance Assurance Procedure.

620.16 Abbreviations and Acronyms

See Section 600.04 for a list of abbreviations and acronyms.

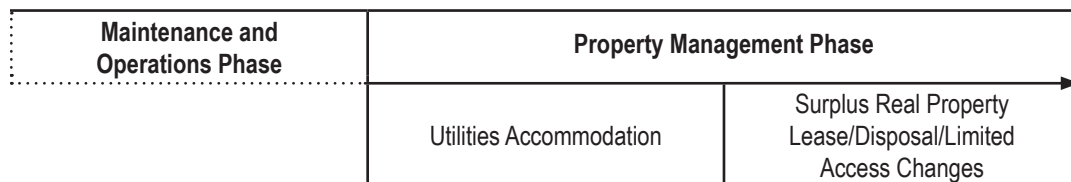
620.17 Glossary

See Section 600.05 for the glossary.

800.01	Overview
800.02	Environmental Commitments for Utilities Accommodation
800.03	Environmental Considerations in Surplus Real Property Disposal/Lease
800.04	Environmental Considerations for Limited Access Changes
800.05	Environmental Considerations in Disposal of Pit Sites
800.06	Statutes and Regulations
800.07	Abbreviations and Acronyms
800.08	Glossary

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 Figure 800-1.



Property Management Phase
Figure 800-1

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 WSDOT *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 utility industry and complies with state law and the American Association of State Highway and Transportation Officials (AASHTO) guidelines.

Potential impacts to utilities must be disclosed during the environmental documentation phase of a project. 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 of this manual and WSDOT *Utilities Manual* M 22-87 Section 600.09(4) for guidance.

WSDOT *Design Manual* M 22-01 Chapter 510 describes the region's responsibility to ascertain ownership of all utilities and arrange for necessary adjustment of utilities, including relocation, if necessary. Provisions for relocation or adjustment are included in the PS&E plans, when such items are part of normal construction and:

- When WSDOT is obligated for moving expenses as detailed in the utility franchise, permit, or agreement.
- When the utility requests that relocation be performed by WSDOT and WSDOT accepts that responsibility.

Adjustment or relocation of the utility may require WSDOT to purchase substitute right of way or easements for eventual transfer to the utility. Such right of way or easements must be shown on the Right of Way (ROW) plans with the same engineering detail as for highway right of way. See WSDOT *Plans Preparation Manual* M 22-31 Division 1 and WSDOT *Construction Manual* M 41.01 Chapters 8 and 10 for guidance and requirements.

WSDOT *Utilities Manual* M 22-87 describes general practices, policies, and procedures with respect to agreements, easement, permits, and franchises between WSDOT and other entities using the state highway right of way. It includes detailed procedures and examples for preparing PS&E agreements and construction agreements. It also includes information on approval authority, utility property rights, authorization to proceed, inspection, records, and checklists for utility contracts.

For help with utility easements on WSDOT right of way, contact WSDOT Headquarters Real Estate Services (RES) at 360-705-7237.

800.03 Environmental Considerations in Surplus Real Property Disposal/Lease

WSDOT may determine that a 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 WSDOT *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 recommends lease or disposal of the property, the region RES office submits the lease/disposal package to HQ RES.

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 surplus property being considered for lease or disposal is located on an interstate highway.
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 non-interstate leases or disposals sold at or above fair market value.

Property is not appropriate for lease or disposal if:

- It is suitable for 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.

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 ([DOT Form 220-015 EF](#)). 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 STELLENT file.
- Completion of the STELLENT environmental checklist.
- Completion of an H&LP or state ECS. If this option is chosen, the Region/Modal Environmental Office must attach a copy of the ECS to the STELLENT surplus 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 STELLENT surplus 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 ([DOT Form 350-023 EF](#)).
- 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/or 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 (Chapter 450), transportation (Chapter 460), 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 ([DOT Form 220-015 EF](#)) and follow the procedure described in WSDOT *Design Manual* M-22.01 Chapter 530.

See WSDOT *Design Manual* Chapter 520 for a general description of the types of access control on state highways, their purpose, and uses. See WSDOT *Design Manual* Chapter 530 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
- [Chapter 47.44 RCW](#), *Franchises on State Highways*
- [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
- [Scenic Classification of Highways](#) MOU with the Washington Utility Coordination Council

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
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 WSDOT [Utilities Manual](#) M 22-87 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](#) M 22-01 Chapter 520 for a policy guidance, implementing regulations, a description of the types of access control, their uses and benefits.

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
13423	Strengthening Federal Environmental, Energy, and Transportation Management

Other Presidential Executive Orders can be found at the [National Archives](#) website. |

Governor's Executive Orders

80-01	Farmland Preservation
81-18	Review of Federal Environmental Documents
89-10	Protection of Wetlands
90-04	Protection of Wetlands
93-07	Affirming commitment to diversity and equity in service delivery and in the communities of the state
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
05-05	Archaeological and Cultural Resources
06-02	Regulatory Improvement
09-05	Washington's Leadership on Climate Change

Other Washington State Governor's Executive Orders can be found at the [Executive Orders Archive](#) web page.

Governors Directives

[Governor's Directive on Acquisition of Agricultural Resource Lands](#)

WSDOT Executive Orders

E 1010	Certification of Documents by Licensed Professionals
E 1018	Environmental Policy Statement
E 1025	Tribal Consultation
E 1028	Context Sensitive Solutions
E 1031	Protections and Connections for High Quality Natural Habitats
E 1032	Project Management
E 1042	Project Management and Reporting

WSDOT Policy Statements

P 2038	Wetlands Protection and Preservation
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Over the years, the Washington State Department of Transportation (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, please contact the WSDOT Environmental Services Office at 360-705-7483.

WSDOT's current agreements with other agencies on various environmental matters 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
Ecology	Compliance With State Surface Water Quality Standards
CTUIR, FHWA	Coordination and Consultation on State Transportation Activities
Ecology	Coordination and Cooperation on Environmental Issues Under Ecology Jurisdiction
DOH	Drinking Water Well Protection (Sanitary Control Areas)
WSCC	Farmland and Forest Preservation
FHWA	Federal-Aid Highway Program Stewardship and Oversight
PSCAA	Fugitive Dust
USFS	Highways Over National Forest Lands
ACHP, FHWA, SHPOs	Historic Properties (Nationwide)
ACHP, FHWA, WSHPO	Historic Properties (Second Amended Programmatic Agreement Implementing Section 106)
ACHP, FHWA, WSHPO, USFS	Historic Properties (Programmatic Agreement to Implement Section 106 With USFS)
WDFW	Hydraulic Project Approvals Including Fish Passage and Chronic Environmental Deficiencies
FHWA	NEPA Programmatic Categorical Exclusions (PCE)
FHWA, FTA, Sound Transit	Noise Methodology and Criteria
WUCC	Scenic Classification of Highways
FHWA, USEPA	Sole Source Aquifers
WDNR	Utilities on Bridges Over Aquatic Lands
ACOE, Ecology, FHWA, NMFS, USEPA, USFWS, WDFW	Wetland Compensation Bank Program

A**Abbreviations and acronyms**

- close out of environmental commitments, 630-2
- construction, 600-5
- during construction, 620-7
- environmental review and transportation decision making, 400-28
- floodplains, 432-8
- groundwater, 433-5
- land use, 450-16
- maintenance and operations, 700-5
- noise, 446-5
- preparation for construction, 610-4
- section 4(f) evaluation, 457-9
- social and community effects, 458-13
- surface water, 430-12
- tracking environmental commitments during design, 490-3
- transportation, 460-9
- transportation planning, 200-4
- wildlife, fish, and vegetation, 436-12

Agreements. *See* interagency agreements**Air, 425-1**

- abbreviations and acronyms, 425-8
- air quality background, 425-1
- air quality permits and approvals, 425-6
- air quality statutes, regulations, and guidance, 425-7
- documentation and modeling requirements, 425-2
- during construction, 620-1
- glossary, 425-8
- multi-modal and non-road air quality requirements, 425-7

Airports

- transportation, 460-6

Applicable statutes and regulations

- environmental review and transportation decision making, 400-27
- floodplains, 432-1
- groundwater, 433-3
- noise, 446-5
- surface water, 430-2
- visual impacts, 459-3

Archaeological resources protection act permit

- tribal approvals, 530-3

B

Bicycling and walking

transportation, 460-3

C

Close commitments as they are completed

close out of environmental commitments, 630-1

Close out of environmental commitments, 630-1

abbreviations and acronyms, 630-2

close commitments as they are completed, 630-1

coordinate long-term maintenance, 630-1

glossary, 630-2

initiate post construction wetland mitigation monitoring, 630-1

prepare as-built reports for wetland and stream mitigation efforts, 630-1

procedures for close out of construction commitments, 630-2

Commitments must be tracked

tracking environmental commitments during design, 490-1

Completing a social and community effects analysis

social and community effects, 458-12

Considerations for nonhighway projects

noise, 446-4

Considering fisheries resources

fish, wildlife, and vegetation, 436-9

Construction, 600-1

abbreviations and acronyms, 600-5

construction compliance expectations, 600-5

construction overview, 600-1

during, 620-1

abbreviations and acronyms, 620-7

air, 620-1

cultural and historic, 620-2

earth (geology and soils), 620-2

enforce the contract during construction, 620-6

fish, wildlife, and vegetation, 620-3

glossary, 620-7

hazardous material, 620-3

introduction, 620-1

noise, 620-4

procedures for construction, 620-7

public services and utilities, 620-4

respond to noncompliance, 620-7

respond to project modifications, 620-6

transportation and traffic, 620-4

water quality, 620-5

wetlands and other waters, 620-6

- glossary, 600-5
- procedures for construction, 600-5
- roles and responsibilities, 600-2

Contracts

- incorporating environmental commitments into contracts, 590-1

Coordinate

- long-term maintenance
 - close out of environmental commitments, 630-1
- other disciplines
 - land use, 450-3
- tribal governments
 - fish, wildlife, and vegetation, 436-11
 - social and community effects, 458-12

Cultural and historic

- during construction, 620-2

Cultural resources, 456-1

- acronyms and abbreviations, 456-17
- additional cultural resources regulatory guidance, 456-15
- artifact collection and disposition (curation), 456-12
- bridge compliance, 456-9
- cultural resources overview, 456-1
- glossary, 456-17
- Governor's Executive Order 05-05 review and compliance, 456-9
- section 106 review and compliance: COE, 456-6
- section 106 review and compliance: FHWA, 456-3
- section 106 review and compliance: other federal agencies, 456-6
- section 106 review and compliance: USFS, 456-6
- use of museums and information centers as potential mitigation, 456-14

Cultural resources may be protected under section 4(f)

- section 4(f) evaluation, 457-7

D**Defining a transportation project for environmental review**

- environmental review and transportation decision making, 400-1

Direct and indirect land use effects

- land use, 450-2

Discipline report

- floodplain, 432-4

Discuss environmental compliance at the pre-construction meeting

- preparation for construction, 610-1

Documenting

- categorical exclusions/exemptions
 - environmental review and transportation decision making, 400-23
- environmental assessment
 - environmental review and transportation decision making, 400-21

E**Earth (geology and soils), 420-1**

- applicable statutes and regulations, 420-1
- during construction, 620-2
- geology and soils technical guidance, 420-1
- summary of requirements for geology and soils, 420-1

Economic effects

- social and community effects, 458-7

Endangered and threatened species

- fish, wildlife, and vegetation, 436-1

Energy, 440-1

- abbreviations and acronyms, 440-4
- documentation and modeling requirements, 440-2
- energy background, 440-1
- glossary, 440-4
- non-road project requirements, 440-3
- permits and approvals, 440-3

Enforce the contract during construction

- during construction, 620-6

Ensuring environmental document quality

- environmental review and transportation decision making, 400-11

Environmental

- considerations in transportation planning
 - transportation planning, 200-3
- document legal considerations
 - environmental review and transportation decision making, 400-24
- requirements
 - maintenance and operations, 700-1
- review and transportation decision making, 400-1
 - abbreviations and acronym, 400-28
 - applicable statutes and regulations, 400-27
 - defining a transportation project for environmental review, 400-1
 - documenting an environmental assessment, 400-21
 - documenting an environmental impact statement, 400-14
 - documenting categorical exclusions/exemptions, 400-23
 - ensuring environmental document quality, 400-11
 - environmental document legal considerations, 400-24
 - glossary, 400-29
 - identifying the type of environmental document, 400-7
 - NEPA/SEPA procedures, 400-8
 - roles and responsibilities, 400-2
 - using existing environmental documents, 400-12

Environmental permitting, 500-1

- abbreviations and acronyms, 500-8
- glossary, 500-9
- identify the required permits through early coordination, 500-4

- introduction, 500-1
- links to permitting resources, 500-8
- manage permits and conditions during construction, 500-7
- permit overview, 500-1
- permitting procedures, 500-8
- review and manage permits during PS&E, 500-7
- roles and responsibilities, 500-2
- seek permit streamlining options and provide schedule input, 500-5
- submit a complete permit application and obtain permits, 500-6

Equity effects environmental justice

- social and community effects, 458-5

F**Farmland**

- land use, 450-6

FHWA

- federal aid policy guide on floodplains
 - floodplains, 432-5
- floodplain technical advisory
 - floodplains, 432-4

Fish. *See* fish, wildlife, and vegetation**Fish, wildlife, and vegetation, 436-1**

- abbreviations and acronyms, 436-12
- addressing fish, wildlife, and vegetation in the NEPA/SEPA process, 436-1
- considering fisheries resources, 436-9
- coordinating with tribes on fish, wildlife, and vegetation resources, 436-11
- during construction, 620-3
- glossary, 436-13
- habitat considerations, 436-10
- policies and regulations, 436-1
- protecting birds, 436-8
- protecting marine mammals, 436-9
- working on public lands, 436-7
- working with endangered and threatened species, 436-2

Flood

- control assistance account program (FCAAP)
 - floodplains, 432-6
- emergency procedures
 - floodplains, 432-6

Floodplain(s), 432-1

- abbreviations and acronyms, 432-8
- applicable statutes and regulations, 432-1
- discipline report, 432-4
- FHWA federal aid policy guide on floodplains, 432-5
- FHWA floodplain technical advisory, 432-4
- flood control assistance account program (FCAAP), 432-6

- flood emergency procedures, 432-6
- floodplain discipline report, 432-4
- floodplain permits and approvals, 432-6
- floodplain resources, 432-7
- glossary, 432-8
- governor's directive on acquisitions of agricultural resource land, 432-2
- nonroad project requirements, 432-7
- permits and approvals, 432-6
- summary of floodplain requirements, 432-1
- WDFW memorandum of agreement for transportation activities, 432-4

G

General overview of transportation planning in washington

- transportation planning, 200-1

Glossary

- close out of environmental commitments, 630-2
- commitment, 600-5
- commitment status, 600-5
- commitment tracking system, 600-5
- construction, 600-5
- during construction, 620-7
- environmental review and transportation decision making, 400-29
- floodplain, 432-8
- groundwater, 433-5
- incorporating environmental commitments into contracts, 590-1
- land use, 450-16
- noise, 446-6
- preparation for construction, 610-4
- section 4(f) evaluation, 457-9
- social and community effects, 458-14
- surface water, 430-13
- tracking environmental commitments during design, 490-3
- transportation, 460-9
- transportation planning, 200-4
- visual impacts, 459-2
- wildlife, fish, and vegetation, 436-13

Groundwater, 433-1

- abbreviations and acronyms, 433-5
- applicable statutes and regulations, 433-3
- glossary, 433-5
- groundwater policy guidance, 433-2
- groundwater related interagency agreements, 433-2
- groundwater technical guidance, 433-3
- summary of requirements for groundwater, 433-1

H

Habitat considerations

fish, wildlife, and vegetation, 436-10

Hazardous material(s)

during construction, 620-3

Hazardous materials and solid waste, 447-1

abbreviations and acronyms, 447-11

considering HazMat during the project lifecycle, 447-1

determining suitable HazMat documentation from the ERS, 447-2

glossary, 447-11

identifying and reporting HazMat during construction, 447-6

identifying potentially contaminated property, 447-3

laws and regulations, 447-10

managing HazMat during construction, 447-8

managing liability during real estate acquisition, 447-4

planning for sediment management, 447-5

reusing or disposing of project waste materials, 447-9

using construction specifications and provisions, 447-5

writing and right-sizing HazMat discipline reports, 447-2

Highways on national forest lands

land use, 450-11

Hydraulic project approval

tribal approvals, 530-3

I

Identifying

environmental commitments during environmental review and design

tracking environmental commitments during design, 490-1

section 4(f) property

section 4(f) evaluation, 457-2

type of environmental document

environmental review and transportation decision making, 400-7

Incorporating environmental commitments into contracts, 590-1

glossary, 590-1

procedures for incorporating commitments into contracts, 590-1

WSDOT's contracts must reflect the environmental commitments, 590-1

Indirect and cumulative impacts, 412-1

additional resources of indirect and cumulative effects, 412-8

analyzing cumulative impacts, 412-5

applicable statutes and regulations, 412-8

case law and cumulative impacts analysis, 412-7

climate change and greenhouse gases, 412-6

glossary, 412-8

introduction, 412-1

summary of requirements, 412-1

type of impacts included in the cumulative impacts analysis, 412-4

Individual Section 4(f) compliance

Section 4(f) evaluation, 457-2

Initiate post construction wetland mitigation monitoring

close out of environmental commitments, 630-1

Interagency agreements, B-1

groundwater, 433-2

maintenance activities

 maintenance and operations, 700-3

surface water, 430-5

visual impacts, 459-5

L

Land use, 450-1

abbreviations and acronyms, 450-16

coordination with other disciplines, 450-3

direct and indirect land use effects, 450-2

farmland, 450-6

glossary, 450-16

highways on national forest lands, 450-11

legal sufficiency and documentation, 450-15

nonroad project requirements, 450-4

procedures for completing a land use analysis, 450-14

recreational land conversions, 450-7

requirements for land use analysis, 450-1

right sizing the land use analysis, 450-3

statutes and regulations, 450-15

wild and scenic rivers, 450-11

Legal

requirements for transportation planning

 transportation planning, 200-4

sufficiency and documentation

 land use, 450-15

Links to social analysis statutes and regulations

social and community effects, 458-13

M

Maintenance and operations, 700-1

abbreviations and acronyms, 700-5

environmental requirements for maintenance and operations, 700-1

interagency agreements for maintenance activities, 700-3

permits and approvals, 700-4

plans and policies, 700-2

WSDOT maintenance and operation plans and policies, 700-2

WSDOT manuals, 700-5

Mark clearing limits and protect sensitive areas

preparation for construction, 610-3

N

NEPA/SEPA

procedures

environmental review and transportation decision making, 400-8

process

fish, wildlife, and vegetation, 436-1

Noise, 446-1

abbreviations and acronyms, 446-5

applicable statutes and regulations, 446-5

considerations for nonhighway projects, 446-4

during construction, 620-4

glossary of noise terminology, 446-6

permits and approvals, 446-4

technical and policy guidance, 446-2

traffic noise background, 446-1

traffic noise requirements, 446-1

Nonroad project requirements

floodplains, 432-7

land use, 450-4

social and community effects, 458-12

surface water, 430-11

visual impacts, 459-7

Notifications and submittals to resource agencies

preparation for construction, 610-2

P

Parking

transportation, 460-5

Perform a constructability review

tracking environmental commitments during design, 490-2

Permits and approvals

assistance

tribal approvals, 530-3

Floodplain, 432-6

maintenance and operations, 700-4

noise, 446-4

surface water, 430-9

visual impacts, 459-7

Policies, regulations, guidance, requirements, and agreements

Executive orders, A-1

fish, wildlife, and vegetation, 436-1

governor's directive

acquisitions of agricultural resource land, 432-2

floodplain, 432-2

groundwater, 433-1, 433-2

land use analysis, 450-1

noise, 446-2

- Section 4(f) evaluation, 457-1
- surface water, 430-1, 430-4
- transportation analysis, 460-1
- visual impacts, 459-5
- working with tribes
 - tribal approvals, 530-1

Preparation for construction, 610-1

- abbreviations and acronyms, 610-4
- discuss environmental compliance at the pre-construction meeting, 610-1
- glossary, 610-4
- mark clearing limits and protect sensitive areas, 610-3
- prepare a compliance binder or notebook for the project, 610-1
- procedures for construction, 610-4
- provide notifications and submittals to resource agencies, 610-2
- verify contractor and WSDOT credentials, 610-2

Prepare a compliance binder or notebook for the project

- preparation for construction, 610-1

Prepare as-built reports for wetland and stream mitigation efforts

- close out of environmental commitments, 630-1

Procedures

- close out of construction commitments
 - close out of environmental commitments, 630-2
- completing a land use analysis
 - land use, 450-14
- completing a Section 4(f) analysis
 - Section 4(f) evaluation, 457-9
- construction, 600-5
- during construction, 620-7
- incorporating commitments into contracts
 - incorporating environmental commitments into contracts, 590-1
- preparation for construction, 610-4
- tracking commitments during design
 - tracking environmental commitments during design, 490-2

Project

- delivery memos, C-1
- design must reflect environmental commitments
 - tracking environmental commitments during design, 490-2

Project scoping and programming, 300-1

- abbreviations and acronyms, 300-9
- environmental database resources, 300-8
- glossary, 300-9
- introduction and overview, 300-1
- NEPA classifications, 300-4
- project classification, 300-2
- project scoping, 300-2
- revision of project scope and classification, 300-7
- SEPA classifications, 300-7

Property management and disposal, 800-1

- abbreviations and acronyms, 800-6
- environmental commitments for utilities accommodation, 800-1
- environmental considerations for changes in limited access, 800-5
- environmental considerations in disposal of pit sites, 800-4
- environmental considerations in surplus real property disposal/lease, 800-2
- glossary, 800-6
- overview, 800-1
- statutes and regulations, 800-5

Protecting

- birds, 436-8
- fish, wildlife, and vegetation, 436-8
- marine mammals, 436-9

Public involvement requirements - LEP

- social and community effects, 458-11

Public services and utilities

- during construction, 620-4

Purpose and overview, 100-1**R****Railroads**

- transportation, 460-6

Recreational land conversions

- land use, 450-7

Related statutes and regulations

- transportation, 460-8

Relocation impacts

- social and community effects, 458-8

Respond

- noncompliance
 - during construction, 620-7
- project modifications
 - during construction, 620-6

Right sizing the land use analysis

- land use, 450-3

Roles and responsibilities

- environmental review and transportation decision making, 400-2

S**Safety**

- transportation, 460-2

Section 4(f)

- Cultural resources may be protected, 457-7
- evaluation, 457-1
 - abbreviations and acronyms, 457-9
 - cultural resources may be protected under Section 4(f), 457-7
 - glossary, 457-9

- identifying a Section 4(f) property, 457-2
 - Individual Section 4(f) compliance, 457-2
 - links to Section 4(f) and related statutes, 457-9
 - procedures for completing a Section 4(f) analysis, 457-9
 - requirements, 457-1
 - requirements may differ for other federal agencies, 457-8
 - Section 6(f) conversion may be required, 457-8
 - requirements may differ for other federal agencies
 - evaluation, 457-8
 - Section 6(f) conversion may be required**
 - Section 4(f) evaluation, 457-8
 - Section 106**
 - consultation
 - tribal approvals, 530-2
 - Section 401 water quality certification by tribes**
 - tribal approvals, 530-2
 - Social and community effects, 458-1**
 - abbreviations and acronyms, 458-13
 - analysis, 458-1
 - completing a social and community effects analysis, 458-12
 - coordination with tribal governments, 458-12
 - economic effects, 458-7
 - equity effects - environmental justice, 458-5
 - glossary of social analysis terminology, 458-14
 - links to social analysis statutes and regulations, 458-13
 - nonroad project requirements, 458-12
 - public involvement requirements - LEP, 458-11
 - relocation impacts, 458-8
 - social and community effects, 458-6
 - social and community effects analysis, 458-1
 - Summary of floodplain requirements**
 - floodplains, 432-1
 - Summary of Requirements for Geology and Soils, 420-1**
- ## T
- Technical guidance**
 - groundwater, 433-3
 - noise, 446-2
 - surface water, 430-6
 - visual impacts, 459-5
 - Tracking environmental commitments during design, 490-1**
 - abbreviations and acronyms, 490-3
 - commitments must be tracked, 490-1
 - glossary, 490-3
 - identify environmental commitments during environmental review and design, 490-1
 - links to related statutes, 490-3

- perform a constructability review, 490-2
- procedures for tracking commitments during design, 490-2
- project design must reflect environmental commitments, 490-2

Traffic

- during construction, 620-4
- noise background, 446-1
- noise requirements, 446-1

Transit

- transportation, 460-3

Transportation, 460-1

- abbreviations and acronyms, 460-9
- airports, 460-6
- bicycling and walking, 460-3
- discipline report guidance, 460-7
- during construction, 620-4
- glossary, 460-9
- parking, 460-5
- planning, 200-1
 - abbreviations and acronyms, 200-4
 - environmental considerations in transportation planning, 200-3
 - general overview of transportation planning in Washington, 200-1
 - glossary, 200-4
 - legal requirements for transportation planning, 200-4
- railroads, 460-6
- related statutes and regulations, 460-8
- requirements for Transportation Analysis, 460-1
- safety, 460-2
- transit, 460-3
- vehicular traffic, 460-2
- waterborne navigation, 460-5

Tribal

- approvals, 530-1
 - archaeological resources protection act permit, 530-3
 - hydraulic project approval, 530-3
 - permit assistance, 530-3
 - section 106 consultation, 530-2
 - section 401 water quality certification by tribes, 530-2
 - treaty rights, 530-1
 - tribal law, 530-3
 - WSDOT policy for working with tribes, 530-1
- law
 - tribal approvals, 530-3
- treaty rights
 - tribal approvals, 530-1

U

Using existing environmental documents

environmental review and transportation decision making, 400-12

V

Vegetation. *See* fish, wildlife, and vegetation

Vehicular traffic

transportation, 460-2

Verify contractor and WSDOT credentials

preparation for construction, 610-2

Visual impacts, 459-1

applicable statutes and regulations, 459-3

interagency agreements, 459-5

introduction, 459-1

non-road project requirements, 459-7

permits and approval, 459-7

policy guidance, 459-5

technical guidance, 459-5

W

Water

quality

during construction, 620-5

surface, 430-1

abbreviations and acronyms, 430-12

applicable statutes and regulations, 430-2

glossary, 430-13

interagency agreements, 430-5

introduction, 430-1

nonroad project requirements, 430-11

permits and approvals, 430-9

policy guidance, 430-4

summary of requirements, 430-1

technical guidance, 430-6

Waterborne navigation

transportation, 460-5

WDFW memorandum of agreement for transportation activities

floodplains, 432-4

Wetlands, 431-1

abbreviations and acronyms, 431-7

assessing wetlands and other waters, 431-2

glossary, 431-7

identifying impacts to wetlands and other waters, 431-3

mitigating for impacts to wetlands and other waters, 431-3

policies, regulations, and agreements, 431-6

wetlands and other waters, 431-1

Wetlands and other waters

during construction, 620-6

Wild and scenic rivers

land use, 450-11

Wildlife. *See* fish, wildlife, and vegetation

Working on public lands

fish, wildlife, and vegetation, 436-7

Working with endangered and threatened species, 436-2

fish, wildlife, and vegetation, 436-2

