Chapter 600 Construction

600.01 Overview

WSDOT's P 1018 *Environmental Policy Statement* directs all employees to be familiar with and adhere to all environmental commitments, policies, and procedures applicable to their work. Further, WSDOT employees are expected to communicate compliance roles, responsibilities, environmental commitments, and expectations to contractors/consultants/Design-Builders (DB).

For Design-Bid-Build projects, a project should have a complete set of environmental documents, permits, and approvals after the design phase. In addition, a project will have a final set of plans, specifications, and estimates (PS&E). At this time, the project is publicly advertised and WSDOT accepts bids for completion of the work. The contract is then awarded. The contractor and WSDOT review and discuss environmental commitments at a preconstruction meeting (WSDOT *Construction Manual* M 41-01 Section SS 1-05.1). Construction, including work plan submittals, begins soon thereafter. As construction is completed, the contract is closed out and maintenance and operations phase begins.

Design-Build projects will also have a complete set of environmental documents, permits, and approvals prior to construction. In addition, a project will have a final set of plans, specifications, and estimates (PS&E). The bid and award process timeline is different in Design-Build projects and depends on which method of Design-Build is utilized. However, Design-Build projects have the same environmental commitments as a traditional Design-Bid-Build job. Please see the Design-Build SharePoint site or the WSDOT *Design-Build Manual* M 3126 for phasing and responsibilities during design and construction.

Because the contractor/Design-Builder is responsible for implementing a substantial number of environmental commitments that WSDOT made during project development, it is crucial to review all environmental documents, permits, and approvals to ensure contractor/Design-Builder relevant permit requirements make it into the contract (see Chapter 590).

Chapters 490 and 590 explain how environmental commitments are tracked and incorporated into contract documents. Consistent implementation of commitments is necessary to achieve accountability during construction that leads to good relationships with Tribes, resource agencies, and the public. The following sections of this chapter identify policies to ensure environmental compliance throughout construction. See WSDOT's Environmental during construction webpage for discipline-specific procedures on ensuring environmental compliance.

600.02 Roles and responsibilities

WSDOT builds trust and fosters positive relationships with the tribes, resource agencies, and the public by implementing the following roles and responsibilities during construction. Some of the tasks may be done by staff other than those identified below depending on how each Region/Mode/Megaprograms is structured.

600.02(1) WSDOT Region/Mode/Megaprograms Environmental Manager

- Ensure environmental staff are adequately trained to effectively support environmental compliance.
- Establish clear expectations for environmental staff.
- Foster good communication with resource agencies and the construction team.
- Communicate WSDOT-owned commitments, especially all from the environmental review, permitting, and consultation processes, to the Project Engineer (PE) to ensure they are fulfilled.
- Implement the Design and Construction Environmental Compliance Assurance Policy (ECAP) (the Design ECAP is located in the WSDOT *Design Manual* M 22-01 Section 225.05(1) and Construction ECAP is located in the WSDOT *Construction Manual* M 41-01 Section 1-07.5).
- Work closely with the PE to resolve issues as they arise.
- Ensure non-compliance events are documented in the Commitment Tracking System (CTS) web application (per the Revised Code of Washington (RCW 47.85.040(3)).
- Document and share lessons learned to prevent recurring issues (RCW 47.85.040(4)).

600.02(2) WSDOT Project Engineer

- Manage the contract in accordance with the WSDOT *Construction Manual* M 41-01.
- Ensure project office staff have the necessary training and equipment to ensure compliance with permit requirements.
- Discuss environmental topics at the preconstruction meeting and review the environmental contract provisions (RCW 47.01.300(8) and RCW 47.85.030(2)).
- Establish submittals, schedule, and compliance expectations for the contractor/Design-Builder and their subcontractors.
- Ensure the contractor's/Design-Builder's submitted plans (such as, but not limited to, the Temporary Erosion and Sediment Control (TESC) Plan, Spill Control and Countermeasures (SPCC) Plan, and Temporary Stream Diversion (TSD) Plan) meet WSDOT's technical and timing requirements before accepting them.
- Establish compliance expectations of the contractor/Design-Builder related to permit required discharge sampling, monthly data reporting, and Best Management Practices (BMPs) adaptive management.
- Implement ECAP. Stop work being performed by the contractor/Design-Builder that does not comply with environmental commitments and collaborate with the Region/ Mode/ Megaprograms Environmental Manager or designee (RCW 47.85.030(4)).
- Communicate with the Region/Mode/Megaprograms Environmental Manager or designee as needed.

- Consult with environmental staff and subject matter experts (SMEs) (i.e., HQ SMEs, Landscape Architects, and RMECs) about proposed design changes and change orders to ensure they are permitted.
- For fish passage and chronic environmental deficiencies (CED) projects, consult with Environmental Services Office's (ESO) Stream Restoration Program Manager to make sure proposed design changes comply with culvert injunction and fish passage standards and CED projects are consistent with Washington Department of Fish and Wildlife (WDFW) concurrence.

600.02(3) WSDOT Environmental Coordinator and/or Project Office Inspector

- Review all environmental commitments for the project.
- Determine water quality monitoring requirements for the project, if in-water work will occur, and develop a strategy or plan to ensure compliance.
- Ensure the project has been entered into the CTS web application and environmental commitments are tracked and managed.
- Coordinate with the PE to provide advance notifications to resource agencies to ensure compliance with environmental requirements.
- Attend the preconstruction meeting and participate in discussing environmental requirements.
- Ensure the contractor/Design-Builder follows the conditions of the nighttime noise variance.
- Review the contractor's/Design-Builder's environmental compliance plans (such as, but not limited to, TESC Plan, SPCC Plan, and TSD Plan) and forward any concerns to the PE.
- Ensure the contractor/Design-Builder creates and maintains a Site Log Book (see sections S4. and S5 of the Construction Stormwater General Permit) and maintains a tracking table of identified TESC compliance issues (*Standard Specifications* Section 8-01.3(1)B) to comply with the National Pollutant Discharge Elimination System (NPDES) Construction Stormwater General Permit (CSWGP).
- Ensure the contractor/Design-Builder installs high visibility fencing (HVF) to protect sensitive areas as a first order of work in accordance with the Plans and *Standard Specifications* Section 1-08.4.
- Ensure the contractor/Design-Builder installs and maintains all BMPs in accordance with their TESC Plan, the CSWGP, WSDOT's *Standard Plans* (Section I), *Standard Specifications* (Division 8 and Division 9), and that BMPs meet WSDOT's materials requirements (*Standard Specifications* Sections 1-06.1(1) and 9.14).
- Ensure the contractor's/Design-Builder's Erosion and Sediment Control (ESC) Lead submits erosion control inspection reports by the end of next working day following their inspection (*Standard Specifications* Section 8-01.3(1)B.
- Ensure the contractor/Design-Builder performs adequate adaptive management in accordance with the CSWGP and *Standard Specifications* Section 8-01.3(1).
- Conduct site visits to verify that the contractor's/Design-Builder's ESC Lead's inspections are adequate and to ensure issues are resolved.
- Review design modifications and change orders to ensure they comply with environmental requirements.

- Meet with resource agency staff when they visit the project site to document their concerns or recommendations.
- Notify the PE when the project is, or suspected to be, not in compliance with environmental commitments – initiate ECAP, as necessary.
- Ensure the contractor/Design-Builder samples site discharges as required per the CSWGP (see section S4.C) and Standard Specification Section 8-01.3(1)B, and performs compliance verification sampling, if necessary. Coordinators may request to receive automatic email notifications via Washington State Department of Ecology (Ecology) WQWebPortal whenever the contractor/Design-Builder submits data.
- Sample or verify sampling of water quality as required per in-water work related permits, and ensure results from any in-water work sampling are sent to the Ecology federal permit lead.
- If the project footprint increases, impacts to environmental resources change, or work means and methods are inconsistent with environmental requirements, permit modifications will likely be necessary; refer to Chapter 500 and the relevant discipline chapters' *Applicable permits & approval process* sections in this manual.
- For Design-Bid-Build projects, close out commitments within the CTS web application once they are fulfilled (close-out reports are the responsibility of the Design-Builder for Design-Build projects).
- For fish passage projects, contact ESO's Stream Restoration Program's Fish Passage Monitoring and Performance Coordinator (see the Contacts tab of the WSDOT Fish Environmental guidance page) for fish passage monitoring compliance inspection once in-water work is complete and prior to TSD removal, to ensure the project meets fish passage and culvert injunction standards.
- Perform final site walk-throughs with appropriate SMEs to ensure WSDOT contract and CSWGP termination requirements have been satisfied prior to project completion.

600.02(4) WSDOT Environmental Technical Experts (Region/Modes/ Megaprograms Headquarters)

- Verify environmentally sensitive areas in the field that need to be protected.
- Review plans as requested and provide comments to the PE and the environmental coordinator/project inspector.
- Review preliminary TESC Plans to ensure site-specific risks and mitigation measures to sufficiently identified manage risks have been incorporated in accordance with the WSDOT *Temporary Erosion and Sediment Control Manual* M 3109.
- Install fish exclusion BMPs, and relocate fish per the Fish exclusion protocols & standards (see the Tools, templates & links tab of the WSDOT Fish Environmental guidance page) and permit requirements.
- For Design-Build projects, verify that the Design-Builder's Directing Biologist has appropriate fish exclusion BMPs, and relocates fish per the Fish exclusion protocols & standards (see the Tools, templates & links tab of the WSDOT Fish Environmental guidance page) and permit requirements.
- Monitor for cultural and archaeological resources as required by project environmental commitments, and support the PE in managing discovery of unanticipated cultural resources.

- Monitor for identified protected fish, birds, and other species, and their habitats.
- Assess and support the PE in managing discovery of unknown suspect hazardous or regulated materials.
- Coordinate with ESO Stormwater & Water Quality Program in the event a NPDES permitting issue warrants escalation beyond the Ecology Region Permit Administrator (see the Contacts tab of the WSDOT Stormwater & water quality page).

600.02(5) Resource agencies

- Provide technical and regulatory guidance.
- Review project changes and issue new or modifications to permits or approvals if necessary.
- Conduct site visits during construction to verify compliance.
- Communicate concerns if compliance is not achieved and corrections are needed.

600.02(6) WSDOT Environmental Services Office (Headquarters)

- Assess and collaborate with Headquarters (HQ) Construction Office to update environmental *Standard Specifications*, *General Special Provisions*, and *Standard Plans*.
- Communicate regulatory changes and lessons learned to the Region/Mode/Megaprograms (RCW 47.85.040(4)).
- Support Region/Mode/Megaprograms by developing, maintaining, and communicating guidance, and coordinate with regulatory agencies as appropriate.
- Develop and maintain ECAP.
- Provide environmental compliance training.
- Track non-compliance events to look for trends and to identify and communicate lessons learned.
- Ensure the Region/Mode/Megaprograms record environmental non-compliance events in the CTS web application.
- Submit annual violation report (RCW 47.85.040(5)) to the Washington State Legislature and Ecology.
- Conduct fish passage monitoring as per federal culvert injunction monitoring guidelines.

600.03 Environmental commitments by discipline

Specific policies, practices, and requirements exist to protect the environment throughout the life of the project, including prior to, during and post construction. WSDOT and the contractor/Design-Builder must implement a variety of BMPs to protect the resources outlined in the following sections. The implementation of BMPs should be incorporated into applicable commitments, be part of the Environmental Compliance Notebook (see Section 600.04(1)), and closed out upon completion (see Section 600.06(1)). See WSDOT's Environmental during construction webpage for discipline-specific procedures on ensuring environmental compliance.

600.03(1) Geology and soils

WSDOT minimizes impacts to the environment by limiting vegetation and soil disturbance (Chapter 420). WSDOT provides clearing limits to the contractor/Design-Builder in the contract plans. *Standard Specifications* Section 1-08.4 requires the contractor/Design-Builder to install high visibility fence (HVF) to designate the clearing limits in the field. HVF must be installed as a first order of work. *Standard Specifications* Section 1-07.16(2) defines additional requirements for the contractor/Design-Builder to protect vegetation.

WSDOT restricts the amount of soil the contractor/Design-Builder can disturb within the clearing limits. Within the clearing limits, the contractor/Design-Builder is required to install BMPs to prevent disturbed soil from eroding. Refer to *Standard Specifications* Section 8-01.3 for contractor/Design-Builder requirements. WSDOT's expectations for controlling erosion are covered in the WSDOT Construction *Manual* Sections 8-01 and 9-14, and in the WSDOT Temporary Erosion and Sediment Control *Manual* M 3109.

Many areas of Washington are prone to geologic hazards. Two hazards that are frequently addressed along transportation corridors are landslide prone areas and areas that are subject to earthquake caused instability. Projects in these areas often require ground improvements to mitigate the risks caused by these geologic hazards. Typical ground improvement techniques that could cause impacts to adjacent water bodies include the following:

- Stone columns are a ground improvement technique that combines soil densification and partial replacement of unstable material with crushed rock. The operation includes injection of compressed air or water into the ground as a probe is vibrated to funnel aggregate to the end of the probe. The injection of air or water into the ground may cause surface turbidity at or near the injection location. Ecology expects WSDOT to implement BMPs to prevent impacts to water bodies when projects include stone column ground improvement work. Ecology also expects WSDOT to visually monitoradjacent water bodies for air percolation and perform water quality sampling if a sheen or turbidity is observed.
- Grout injection techniques and replacement of soil with grout such as compaction grouting, jet grouting, and deep soil mixing – These techniques consist of mixing cement grout with site soils typically below the ground water elevation. This injection technique may cause surface turbidity at or near the injection location. Ecology expects WSDOT to implement BMPs to prevent impacts to water bodies when projects include performing grout injection techniques.

Additional subsurface construction such as directional drilling for utilities and drilled columns for bridge abutments can impact adjacent water bodies when drilling muds escape from the bore/shaft and into the environment.

WSDOT has policies to address soil and other geotechnical issues in WSDOT *Geotechnical Design Manual* M 46-03, during construction for Design-Bid-Build and Design-Build projects.

Please see well decommissioning requirements for the removal of piezometers and the decommissioning of wells (see WSDOT *Geotechnical Design Manual* Chapter 3).

600.03(2) Air

WSDOT's policy is to use BMPs to reduce pollutants that impact air quality during construction. Local air pollution authorities are primarily concerned with fugitive dust, which is particulate matter suspended by wind or human activities. *Standard Specifications* Section 1-07.5(4) requires the contractor/Design-Builder to follow the rules of the local air pollution authority. A list of BMPs to prevent fugitive dust is available from the Associated General Contractors of Washington in the publication, *Guide to Handling Fugitive Dust From Construction Projects*. In the counties under the Puget Sound Clean Air Agency's jurisdiction (King, Kitsap, Pierce, and Snohomish), WSDOT projects must follow the *Memorandum of Agreement with Puget Sound Clean Air Agency – Fugitive Dust*.

WSDOT has a no idle policy that directs employees to turn off engines when their vehicles are not in motion.

Refer to Chapter 425 for additional guidance, including a list of standard BMPs.

600.03(3) Stormwater and water quality

Refer to Chapter 430 and WSDOT's Stormwater & water quality and Environmental during construction webpages for policy and procedures on ensuring compliance related to stormwater, water quality and groundwater.

600.03(4) Wetlands and other waters

WSDOT's Wetlands Protection and Preservation policy E 1102 directs employees to protect wetlands during construction. The contractor/Design-Builder is required to restore any HVF damaged or removed throughout the life of the project (see *Standard Specifications* Section 8-01.3(1)). Wetlands that are not permitted for impact must be protected by HVF (See Section 600.04(5)). Maintaining the fence will ensure that contractor/Design-Builder does not cause impacts to areas that have not been permitted.

Changes to the limits of work require re-evaluation of wetlands. If the impacts to wetlands change, the project permits and mitigation requirements may also need to change. These changes must be coordinated through the project environmental coordinator and provided to the wetland mitigation design team, so that WSDOT can apply for permit amendments.

The PE and Construction Inspectors should seek assistance from the Region/Mode/Megaprograms or HQ Wetland Biologist supporting the project as needed to evaluate wetland issues that arise during construction. The Environmental Coordinator should secure approval from resource agencies before deviating from mitigation plans and permits. If a deviation occurs before you receive approval, the PE should work with the Region/Mode/Megaprograms Environmental Coordinator to report the deviation to resource agencies.

Compacted soils can decrease the success of wetland compensatory mitigation sites by changing surface hydrology and increasing competition pressure on native plants. When constructing wetland compensatory mitigation sites, use the following measures to minimize soil compaction:

- Use low ground pressure equipment
- Restrict access points on the compensation site
- Limit paths or roadways within the site
- Rip or till compacted soils
- Use mats such as steel or plastic plates or hog fuel to reduce compaction caused by equipment

600.03(5) Fish, wildlife and vegetation

See Chapter 436 and WSDOT's Environmental during construction webpage for policy and procedures on ensuring compliance related to fish, wildlife and vegetation.

600.03(6) Noise

Noise generated during construction affects both people and wildlife. Chapter 446 states that WSDOT's policy is to comply with the local jurisdiction's noise ordinance. If night work is planned, the project may have a noise variance with specific conditions. WSDOT and the contractor/Design-Builder must follow all conditions pertaining to the noise variance.

Chapter 436 states that conditions that protect wildlife from noise originate from consultations for ESA, Marine Mammal Protection Act, Migratory Bird Treaty Act, and Gold and Bald Eagle Protection Act. The contract provisions will contain specific noise requirements that must be followed by the contractor/Design-Builder. These typically take the form of timing restrictions, use of noise attenuation BMPs and in-water work windows. In some cases, the trained biologists are required to be on site during pile driving in-water and acoustic specialists may be required to be on site for monitoring of underwater noise levels for a subset of piles driven.

600.03(7) Hazardous materials and solid waste

See Chapter 447 and WSDOT's Environmental during construction webpage for policy and procedures on ensuring compliance related to hazardous materials (HazMat) and solid waste management.

600.03(8) Transportation

WSDOT's policy is to protect pedestrians and the traveling public as they travel through construction projects. WSDOT *Construction Manual* Section SS 1-07.23(1) clarifies the responsibilities for the PE to oversee contractor/Design-Builder compliance for protecting pedestrians during construction and mitigation for any impacts. WSDOT must also ensure minimal disruption to existing modes of transportation. Refer to WSDOT *Construction Manual* Section SS 1-07.17 for policy related to railroad traffic. See Chapter 455 and WSDOT's Environmental during construction webpage for more information on land use and transportation.

600.03(9) Cultural resources

It is WSDOT policy to avoid impacts to archaeological and historic resources that may be encountered during construction (Chapter 456). *Standard Specifications* Section 1-07.16(4) provides an overview of compliance procedures and policies pertaining to historic and archaeological resources during construction, including the inadvertent discovery of human skeletal remains.

A project specific Inadvertent Discovery Plan (IDP) or Unanticipated Discovery Plan (UDP), developed by a Region/Mode/Megaprograms Cultural Resources Specialist, is required to address the unanticipated discovery and treatment of cultural resources that may be encountered during construction. Should archaeological materials or (suspected) human remains be discovered during project activities, refer to the IDP/UDP and notify the appropriate federal, state, and Tribal partners. The Contractor/Design-Builder must (1) notify the PE of any such finds, and (2) cease all work adjacent to the discovery in an area adequate to provide for the total security and protection of remains.

600.03(10) Public services and utilities

The WSDOT *Construction Manual* Section SS 1-07.23(1) describes how WSDOT ensures the contractor/Design-Builder 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/Design-Builder 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/Design-Builder 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. WSDOT *Construction Manual* Section SS 1-07.17 addresses responsibilities for both the PE and the contractor/Design-Builder to coordinate project work with utility companies when necessary. The WSDOT Utilities *Manual* M 22-87 explains that utility companies are required to obtain their own permits and are responsible for compliance when working within WSDOT Right of Way (See Chapter 458).

600.04 Preparation for construction

600.04(1) Prepare an Environmental Compliance Notebook for the project

The WSDOT *Construction Manual* Section 1-05.1 states that it is WSDOT policy to incorporate all environmental commitments into the contract. Compiling all the environmental requirements, reference materials, and contact information into one place is a useful tool for PEs and their staff. The project can prepare an Environmental Compliance Notebook (or Binder) in order to accomplish this task. WSDOT's *Construction Manual* Section 1-05.1 recommends that the PE use relevant information from the Environmental Compliance Notebook during the preconstruction meeting (See Section 600.04(2)) and throughout the project. The environmental coordinator should communicate with the Project Office to determine who is responsible for preparing and maintaining the Environmental Compliance Notebook. A list of commitments, or the commitment file, is an important component of the Environmental Compliance Notebook. See Chapter 490 for information on establishing a commitment file, and Chapter 590 for incorporating commitments into contracts. WSDOT staff must use CTS to generate and maintain a commitment file (including all environmental commitments that must be considered during the life of the project) for inclusion in the Environmental Compliance Notebook. Refer to the help menu within CTS for instructions on how to use CTS to manage commitments and generate a list of all commitments.

An Environmental Compliance Notebook includes, but is not limited to, the following information:

- Contacts (e.g., WSDOT Region/Mode/Megaprograms Environmental, Design and Construction Offices; contractor/Design-Builder; resource agencies; emergency spill reporting)
- Commitment file
- Environmental notification requirements

- Permits and approvals
- Site Inspection Forms (as required)
- Inspection forms/checklists
- UDP or IDP
- TESC Plan (Narrative and Plan Sheets)
- SPCC Plan
- Any other project-specific plans and associated necessary forms (e.g., TSD Plan, Wetland/Stream Mitigation Plan; Fish and Aquatic Species Exclusion Plan)
- Good Faith Inspection (GFI) mandatory form and report(s)
- A copy of the Design and Construction ECAPs

It is recommended that an electronic copy of the Environmental Compliance Notebook be saved to the project files and that a copy is always accessible at the project site.

For Design-Build projects, refer to the project-specific Request for Proposal (RFP) for submittal requirements and schedules (See WSDOT *Design-Build Manual* M 3126 Chapter 4 for more information).

600.04(2) Discuss environmental compliance at the preconstruction meeting

Standard Specifications Section 1-07.9(1) states that the contractor/Design-Builder has responsibility for compliance requirements associated with all parts of the Work necessary to complete the contract. WSDOT's *Construction Manual* Section 1-05 requires the PE to discuss the project with the contractor/Design-Builder and exchange a variety of information, including compliance expectations.

In most cases, the PE and contractor/Design-Builder discuss the project and exchange information at a preconstruction meeting. A preconstruction meeting occurs after contract award and prior to construction activities. RCW 47.85.030 requires WSDOT to conduct preconstruction meetings, as does the *Memorandum of Agreement concerning the Implementation of the Fish and Wildlife Hydraulic Code for Transportation Activities*. WSDOT uses this meeting to establish environmental expectations with the contractor/Design-Builder. An expectation will be that environmental commitments cannot be changed through innovative cost saving proposals or other similar contractor/Design-Builder suggested changes. Alternatively, for projects with complex environmental issues, it may be necessary to hold an additional environmental-specific preconstruction meeting.

Staff from the Region/Mode/Megaprograms Environmental Office should coordinate with the PE to determine if and how to support the PE at preconstruction meetings. Consider discussing the following topics at the preconstruction meeting:

- Locations and protection of environmentally sensitive areas
- Risky elements of the construction project
- Schedule for earth work and implementation of BMPs
- Inspections and documentation (e.g., GFI reports)
- Expected content and schedule of submittals from the contractor/Design-Builder, such as the TESC, SPCC, and TSD Plans
- Verification that credentials exist and are current for the environmental work, for example: CESCL certification and 40-hour HazMat certification

600.04(3) Take environmental training

Although the contractor/Design-Builder is responsible for compliance when delivering a project, RCW 47.85.040 instructs WSDOT to continue efforts to improve training and compliance. Specifically, WSDOT must provide training in environmental procedures and permit requirements for those responsible for project delivery. Note that some permits or approvals may have specific training requirements (e.g., the NPDES Municipal Stormwater Permit requires that all WSDOT staff responsible for designing and implementing TESC Plans take WSDOT's Construction Site Erosion & Sediment Control Training every 3 years). WSDOT staff can find instructor-led and online courses relevant to environmental compliance in the Washington State Learning Center course catalog in the environmental library. Any WSDOT staff or consultants who inspect construction projects are encouraged to complete the Environmental Compliance for Construction instructor-led or eLearning course. Staff may also contact the Region/Mode/Megaprograms Environmental Office or HQ Environmental Services Office for additional training opportunities.

600.04(4) Provide notifications and submittals to resource agencies

Environmental permits and approvals often require WSDOT to provide notifications or submittal to resource agencies prior to beginning or completing certain project activities. Failure to provide required notifications or submittal is a non-compliance event. The PE should work with staff and from the Region/Mode/Megaprograms Environmental Office to determine which and when activities require notifications and submittals for the project.

Examples of activities or situations that might trigger a notification and/or a submittal include:

- Geotechnical activities like pile driving and removal, and well installation and removal.
- Underground storage tank removal
- Demolitions
- Preconstruction meeting
- Request for Chemical Treatment
- In-water work
- Completion of project work
- Non-compliance with a permit condition or regulation
- Sampling that indicates an exceedance
- Stream restoration/reclamation
- Permitted work within wetlands
- Removal of contaminated soil
- Stream diversions
- Mining (including surface pits)
- Wetland or stream mitigations site construction, which requires Right of Way plan or Sundry Site plan submittal

600.04(5) Mark clearing limits and protect sensitive areas

All WSDOT projects have boundaries that must be marked to keep the contractor/Design-Builder from clearing land not permitted for impacts. WSDOT's *Construction Manual* Section SS 2-01.3(1) provides instructions on marking clearing limits. WSDOT's *Temporary Erosion and Sediment Control Manual* M 3109 and the *Standard Specifications* Section 1-08.4 requires these limits be marked prior to the start of clearing activities. Flagging, staking, and high visibility silt fence, for example, are some appropriate methods to define the project boundary. It is the responsibility of the Region/Mode/Megaprograms Environmental Office to compare the permit drawing to the contract plans and confirm the permitted area of impact is correctly shown in the plans with the HVF symbol.

WSDOT contracts require HVF to be installed as a first order of work. Use HVF to protect sensitive areas and their buffers where impacts are not permitted. The HVF shall be maintained throughout the life of the project. Sensitive areas include, but are not limited to:

- Wetlands and their buffers
- Surface water features and their buffers
- Mitigation areas
- Areas of vegetation to be preserved
- Archaeological and historical features
- Known Contaminated areas beyond clearing limits

600.05 Compliance during construction

600.05(1) Enforce the contract during construction

WSDOT's policy, as explained in Chapter 590, is to fully supplement contracts with environmental commitments. As a result, enforcing the contract is the best way to obtain compliance with a majority of WSDOT's commitments and avoid additional impacts.

The contract is defined in *Standard Specifications* Section 1-04.2 and includes: Addenda, Proposal Form, Special Provisions, Contract Plans, Amendments to the *Standard Specifications, Standard Specifications*, and *Standard Plans*. *Standard Specifications* Section 1-05 describes the authority of the engineer, assistant engineers, and inspectors, which is critical to enforcing the contract. Refer to the WSDOT *Construction Manual*, Section 1-05 for more information about the PE's authority, and Section 8-01 and 9-14 for contract enforcement expectations (specifically with regard to erosion control practices and materials requirements).

WSDOT employees must make sure the contractor's/Design-Builder's work complies with the environmental documents, permits, and contract requirements. Tracking commitments using CTS assists the project in overseeing environmental compliance during construction, especially if the commitments have been accurately tied to specific contract documents (see Chapter 590). When a project is (or suspected to be) not complying with a permit or environmental regulation, the PE must immediately order the contractor/Design-Builder to stop all con-compliant work, collaborate with the Environmental Manager or designee, and implement measures necessary to achieve compliance, including reporting to resource agencies with jurisdiction (RCW 47.85.030(4)). Refer to ECAP to learn more about how to recognize and rectify environmental non-compliance and ensure prompt notification to WSDOT management and resource agencies (Design ECAP is located in the WSDOT *Design Manual* Section 225.05(1) and Construction ECAP is located in the WSDOT *Construction Manual* Section 1-07.5).

600.05(2) Respond to project modifications

Project modifications (i.e., scope changes) may occur to accommodate additional work, save money, shorten project timelines, minimize impacts to traveling public, or for safety reasons. Impacts of the change must be evaluated to determine corresponding changes to the environmental requirements and process. Depending on the timing of changes, projects may need to reevaluate environmental impacts, entire National or State Environmental Policy Act (NEPA or SEPA) documents, Biological Assessment/Opinion, or might need new or amended permits and approvals. In these cases, WSDOT must allow extra time to obtain additional permits or approvals. Make sure to coordinate with the Region/Mode/Megaprograms Environmental Office when a project modification is proposed. Also, ensure that updated or new commitments are entered into CTS (see Chapter 490).

For Design-Build projects, refer to the project-specific RFP for more information on how to respond to project modifications (see WSDOT *Design-Build Manual* Chapter 4 for more information).

600.05(3) Respond to non-compliance

WSDOT employees are obligated to report non-compliance (RCW 47.85.030(3)(a) and RCW 47.85.040(4)). WSDOT's ECAP (as described in the WSDOT *Design Manual* Section 225.05(1) and the WSDOT *Construction Manual* Section 1-07.5), provides instructions on how to respond to a non-compliance event, including the requirement to record all non-compliance events into CTS.

600.06 Construction close out for environmental

Policies associated with construction close out are described below. See WSDOT's Environmental during construction webpage for discipline-specific procedures associated with construction close out.

600.06(1) Close commitments upon completion

WSDOT is committed to tracking commitments (RCW 47.85.040), which includes closing them upon completion. All commitments need to be closed out to ensure no future liability and appropriateness for final payment. For Design-Bid-Build projects, the environmental coordinator is typically responsible for closing out commitments once they are fulfilled. Most construction commitments are performed by the contractor, so achieving contract physical completion should be cause for closing out the commitment. However, it is recommended that projects close out commitments as appropriate throughout the life of the project to avoid more work at the time of project completion. The environmental coordinator confirms with the PE (or designee) that the work associated with each commitment is complete, and updates the commitment file to reflect the status as closed; if appropriate, how the commitment was fulfilled should also be documented.

For Design-Build projects, the Design-Builder must prepare an Environmental Commitment Close Out Report per the RFP (see WSDOT *Design-Build Manual* Chapter 4, as well as the instruction boxes within RFP Template, Section 2.8 Environmental, for more information).

Closing out commitments is a difficult task considering the volume of commitments. However, the use of CTS to track and manage commitments can easily close commitments using the "Commitment Status" feature; refer to the help menu within CTS for instructions on how to close out commitments within CTS.

600.06(2) Prepare Right of Way or Sundry Site plans and as-built reports for wetland and stream compensatory mitigation efforts

Environmental coordinators submit the Right of Way or Sundry Site plan as evidence of permanent compensatory mitigation site protection as required by the Corps 404 and Ecology 401 permits. See the permit conditions for the submittal due date for Right of Way/ Sundry Site plans.

Meet with the PE (or designee) to discuss Right of Way/Sundry Site submittal requirements for the compensation site. Transmit the Right of Way/Sundry Site plan update request to the Region Right of Way Office (Ferries and Megaprograms projects work with the Region or HQ Right of Way Office, depending on the project). The Right of Way engineer will develop a draft Right of Way/Sundry Site plan update including text that shows the permit number. The area to be protected in perpetuity must be labeled as "Mitigation Site" with the compensatory mitigation site name. Review the Right of Way/Sundry Site plan draft for accuracy and submit to the GeoMetrix Office. The GeoMetrix Office will prepare the Right of Way/Sundry Site map in accordance with the permit conditions.

Go to the Manage compensatory mitigation sites section on WSDOT's Environmental during construction webpage to find instruction on how to prepare as-built reports.

600.06(3) Initiate post-construction monitoring Wetland compensatory mitigation monitoring

If a wetland compensatory mitigation site was constructed for the project, WSDOT is obligated to monitor compensatory mitigation sites for up to ten years (or more if performance standards are not achieved at Year 10). As construction nears completion, the PE must submit information to the HQ Wetlands Program so monitoring can commence. The wetland monitoring group needs the as-built plans to begin monitoring.

Include the as-built plan when you submit the monitoring start-up form. Go to the Manage compensatory mitigation sites section on WSDOT's Environmental during construction webpage to find the monitoring start-up form and instructions.

Fish passage

ESO's Stream Restoration Program takes the lead on monitoring and storing information on WSDOT fish passage projects.

WSDOT evaluates all fish passage projects immediately upon completion of construction to ensure they conform to construction permits and design plans. Sites are also evaluated for their ability to pass fish using WDFW's barrier assessment methods.

In accordance with the U.S. v. WA Culvert Injunction, representatives from Tribal nations and state agencies subject to the injunction agreed upon and finalized the Monitoring

Implementation Guidelines in September 2015, which are the basis of WSDOT's Fish Passage Monitoring Plan.

The Monitoring Plan provides a protocol that can be broadly applied to ensure a consistent and efficient post-project monitoring process for all WSDOT fish passage projects, and satisfies all state and federal permit requirements. WSDOT's Fish Passage Monitoring Plan and Injunction Post-Project Monitoring Template are available for download from the "Fish Passage Program Delivery" tab of WSDOT's Fish Passage Database. Fish Passage monitoring

results are available for barriers corrected since 2013, through WSDOT's Fish Passage Database, and are available and accessible to all WSDOT staff. Monitoring reports can be generated through the database for each site monitored. Monitoring reports are also available publicly online through WSDOT's interactive Fish Passage Webmap; click on a corrected barrier and select "more info" under the site attributes (reports available for barriers corrected since 2013).

600.06(4) Coordinate long-term maintenance

WSDOT regularly makes project-level commitments that require long-term care (e.g. wetland mitigation sites, fish passage barrier corrections, stormwater treatment, and roadside). Ensure that the commitment file includes long-term commitments, and coordinate with WSDOT's Maintenance and Operations personnel. It is vital that Maintenance and Operations personnel receive a copy of and understand these long-term compliance expectations. WSDOT is required to maintain most of these sites in perpetuity. ESO Wetlands Program will coordinate management responsibilities and required actions with the maintenance division for sites requiring long-term management.

Transition from post construction wetland monitoring to maintenance is specifically described in Section 431.08(6). When using CTS to track commitments, ensure that long-term commitments are assigned to the maintenance phase of the project; refer to the help menu within CTS for instructions on how to assign project phase to a commitment and how to produce a report that specifically lists maintenance phase commitments.

600.07 Applicable statutes and regulations

- Transportation Project Delivery and Review – Chapter 47.85 RCW
- Water Pollution Control – Chapter 90.48 RCW
- Water Quality Standards for Surface Waters of the State of Washington – Chapter 173-201A WAC

600.08 Abbreviations and acronyms

BMPs	Best Management Practices
CED	Chronic Environmental Deficiencies
CESCL	Certified Erosion and Sediment Control Lead
CSWGP	Construction Stormwater General Permit
CTS	Commitment Tracking System
ECAP	Environmental Compliance Assurance Policy
Ecology	Washington State Department of Ecology
ESA	Endangered Species Act
ESO	Environmental Services Office
GFI	Good Faith Inspection
HVF	High Visibility Fence
IDP	Inadvertent Discovery Plan
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
PE	Project Engineer

PS&E	Plans, Specifications, and Estimates
RCW	Revised Code of Washington
RFP	Request for Proposal
SEPA	State Environmental Policy Act
SMEs	Subject Matter Experts
SPCC	Spill Prevention, Control and Countermeasures
TESC	Temporary Erosion and Sediment Control
TSD	Temporary Stream Diversion
UDP	Unanticipated Discovery Plan
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife

600.09 Glossary

These definitions provide context to achieve environmental compliance.

Commitment – An obligation that WSDOT makes within an environmental document or agreement for the project; or an expectation imposed upon WSDOT by another agency through a permit or approval for the project. Commitments can be either the agency's or the contractor's/Design-Builder's responsibility to implement.

Commitment File – This file serves as the repository for all final environmental documents leading to development of the contract.

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

Commitment Tracking System – The Commitment Tracking System (CTS) is a WSDOT web application that allows you to store commitments in a secure computer network server, plus manage the responsibility (WSDOT or contractor/Design-Builder) 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.