Chapter 447 Hazardous materials (HazMat) and solid waste

447.01 Introduction

This chapter contains policies for dealing with known or unknown hazardous and regulated materials (HazMat) encountered on WSDOT right-of-way (ROW) during the planning, scoping, property acquisition, and construction stages of projects. WSDOT conducts hazardous materials investigations that meet regulatory requirements as early as possible in the project development process. WSDOT has a responsibility to consider HazMat issues that may impact a WSDOT project when encountered or improperly managed throughout the lifecycle of a project in order to:

- Provide increased safety by mitigating potential dangers to WSDOT personnel, contract employees, the public and the environment from exposures to hazardous or regulated materials.
- Reduce the likelihood of project redesign, delay, or termination and costs increases.
- Reduce the possibility and costs of litigation against WSDOT during both design and construction.
- Minimize and manage agency cleanup risk and liability.
- Identify possible contamination issues that will influence WSDOT's decision to avoid or minimize property acquisition by a project or appropriate pricing of existing contamination during the Real Estate Services Right of Way appraisal process.

WSDOT must abide by numerous federal, state, and local regulations that govern the handling, transporting and disposal of HazMat. WSDOT projects have the potential to encounter or generate solid waste, which may not designate as hazardous or dangerous waste.

Visit the WSDOT HazMat webpage for additional information and procedural guidance on addressing HazMat issues.

447.02 Applicable statutes, regulations, executive orders, and agreements

447.02(1) Laws and Regulations

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

447.02(2) Federal Laws and Regulations

- 15 USC 2601 Toxic Substances Control Act
- 42 USC 7401 et seq. Clean Air Act
- 40 CFR Parts 61 to 71 National Emission Standards for Hazardous Air Pollutants
- 40 CFR 763 Asbestos Hazard Emergency Response Act
- 29 CFR 1926.1101 Occupational Safety and Health Act Asbestos
- 40 CFR Part 112 Oil Pollution Prevention
- 40 CFR Part 312 All Appropriate Inquiries
- 29 USC 651 et seq. Occupational Safety and Health Act
- 33 USC 1251 et seq. Clean Water Act
- 42 USC 300f et seq. Safe Drinking Water Act
- 42 USC 4321 et seq. National Environmental Policy Act
- 42 USC 6901 et seq. Resource Conservation and Recovery Act
- 42 USC 9601 et seq. Comprehensive Environmental Response, Compensation, and Liability Act

447.02(3) State Regulations

- Chapter 173-160 WAC Minimum Standards for Construction and Maintenance of Wells
- Chapter 173-200 WAC Water Quality Standards for Groundwaters of the State of Washington
- Chapter 173-201A WAC Water Quality Standards for Surface Waters of the State of Washington
- Chapter 173-204 WAC Sediment Management Standards
- Chapter 173-303 WAC Dangerous Waste Regulations
- Chapter 173-340 WAC Model Toxics Control Act
- Chapter 173-350 WAC Solid Waste Handling Standards
- Chapter 173-360 WAC Underground Storage Tank Regulations
- Chapter 197-11 WAC State Environmental Policy Act
- Chapter 296-62 WAC General Occupational Health Standards
- Chapter 296-62-077 WAC Labor and Industries Asbestos Regulations
- Chapter 296-155 WAC Labor and Industries Safety Standards for Construction Work
- Chapter 296-843 WAC Hazardous Waste Operations

447.02(4) Local Clean Air Agency Asbestos Regulations

- Asbestos Puget Sound Clean Air Agency
- Asbestos Olympic Region Clean Air Agency
- Spokane Clean Air Agency

- 476 Standards for Asbestos Control, Demolition and Renovation Southwest Region Clean Air Agency
- Article 3.07 Asbestos Control Yakima County Clean Air Agency
- Regulation 1, Article 8 Asbestos Benton County Clean Air Agency
- Section 570 – Asbestos Control Standards Northwest Clean Air Agency

447.02(5) WA Clean Air Agencies

- Washington State Department of Ecology (Ecology) Regional Offices (NW, Central, and Eastern)

447.02(6) WSDOT Executive Orders

- WSDOT Environmental Policy Statement E 1018.03 *Environmental Policy Statement*
- Secretary's Executive Order E 1033.03 *Employee Safety*

447.03 Considerations during project development

447.03(1) Planning

Conduct a screening that will inform planners of documented contaminated sites in a general area. This will allow planners to consider other potential options that may be evaluated for a WSDOT facility.

Region planning staff connects with the Region or ESO Hazardous Materials Program to screen sites of documented contaminated sites in a general area. At a minimum, the Hazardous Materials Program will access and review Ecology's Facility Site webpage and share categories of hazardous material sites in a planning area.

447.03(2) Scoping

Region staff determines how to proceed with hazardous materials documentation based on the likelihood that a project will encounter contamination. This is a professional judgment made during project scoping when staff completes the Environmental Review Summary (ERS) in the Project Summary Database (Section 300.02).

Region staff answers the questions in the ERS to determine if further investigations should be scoped into the project to identify potential HazMat issues at a site or within the project area. They also use the information to assess potential project impacts (including to the project budget and schedule), mitigations, and required permits or approvals. Region staff are encouraged to work with HazMat staff within the Region or contact ESO Hazardous Materials Program on questions they may have.

Cleanup costs for contaminated properties can be extraordinary and the cleanup can take many years to complete. For this reason, WSDOT seeks to minimize or avoid cleanup sites.

WSDOT's Geotechnical Team will work with Headquarters/Region Environmental Team on potential properties that may require borings to determine soil types, groundwater depths, and to determine if contamination exists in the soil or groundwater. Many of these wells are temporary. Please see well decommissioning requirements for the removal of piezometers and the decommissioning of wells (see *Geotechnical Design Manual* Chapter 3).

Additional information regarding the ERS Hazmat documentation is located at the WSDOT HazMat webpage.

447.03(3) Design

The project design team initiates the need for hazmat and other environmental review with project specific information that will provide details to all Region environmental staff to complete an Environmental Review Summary (ERS). The Region staff analyzes the ERS information and determines if additional investigations are necessary.

Types of further investigations will be discussed later in this chapter within both Sections 447.03 and 447.04 'Analysis and Documentation Requirements' and may include Hazardous Materials Discipline Reports for NEPA/SEPA, Phase I (for real estate purchases) and Phase II Environmental Site Assessments, and Good Faith Inspection reports.

Hazardous Materials Discipline Reports for NEPA/SEPA

WSDOT conducts hazardous material investigations that meet regulatory requirements as early as possible in the project development process.

WSDOT identifies potentially contaminated sites through research and environmental documentation completed during the NEPA/SEPA process to determine if a right-sized discipline report will be required. There are three levels of right-sized discipline reports based on project complexity:

- Comprehensive discipline report
- Standard discipline report
- Technical Memorandum

If the region staff classify a project as a NEPA Categorical Exclusion, the information from the ERS is transferred to the Environmental Classification Summary (ECS) and becomes the hazardous materials NEPA documentation for the project (Section 400.09(1). Although both forms ask the same questions, the supporting information and level of detail required in an ECS is more as project design changes and details of any contamination within a project are known.

During the Design phase of a project WSDOT staff follows the Design Environmental Compliance Assurance Procedure (ECAP) for any suspected or known non-compliant event as described in *Design Manual* Section 225.05(1). The Design ECAP includes steps for notifying WSDOT management and regulatory agencies.

Additional information regarding the ECS Hazmat documentation is located at the WSDOT HazMat webpage.

Phase I and II Environmental Site Assessments

WSDOT performs investigations called Environmental Site Assessments (ESAs) on known or suspected contaminated properties identified in the initial ERS review and/or the right-sized discipline report. The ESAs may be performed either independent of, or in conjunction with, the NEPA/SEPA process; however, ESAs are not necessary to satisfy NEPA/SEPA environmental documentation requirements. The ESAs are required to be completed before any acquisitions of real property for a highway capital construction project as described in *Design Manual* Chapter 510 and *Right of Way Manual* Chapter 5 and Chapter 6. The extent and potential liability must be considered before acquisition as outlined in DM 510.01 The Environmental Protection Agency (EPA) recognizes two American Society for Testing and Materials (ASTM) International Standards, which WSDOT uses to meet compliance when conducting ESAs:

- Phase I ESA (ASTM E 1527-21, as updated)
- Phase II ESA (ASTM E 1903-19, as updated)

The project design team initiates the process by determining whether it is likely that the project will permanently or temporarily acquire either all or a portion of a parcel. Environmental **due diligence assessments** occur in different scales and levels of detail based on this determination:

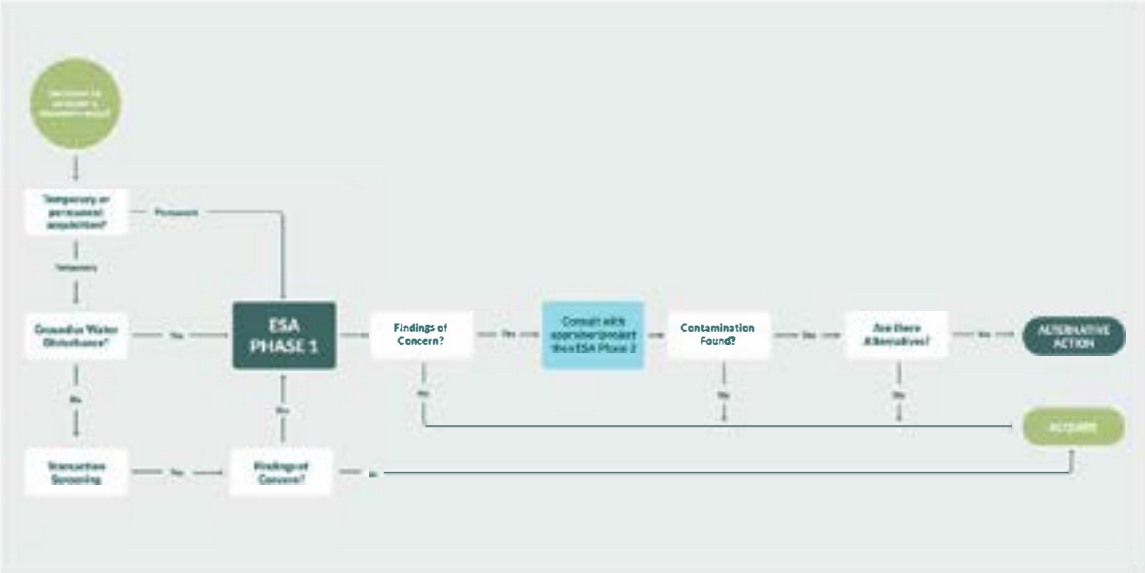
Transaction Screening: Lowest level of detail, used in the case of a temporary acquisition where there is no ground or water disturbance anticipated as a result of project related actions.

Phase I Environmental Site Assessments: Used in the case of a permanent acquisition or temporary acquisition where there is ground or water disturbance to determine whether there will be a finding of concern, or used if a Transaction Screening results in a finding of concern.

Phase II Environmental Site Assessments: Highest level of detail, used if a Phase I assessment results in a finding of concern.

The sequence and timing of these assessments are related to the type of acquisition and project activities envisioned, and state of progress in design.

Exhibit 447-1 Due Diligence Assessments



At a minimum, a project footprint or defined area needs to be established to estimate the scope of acquisitions that are involved. An evaluation may proceed at an earlier stage as part of a formal or otherwise well-reasoned risk analysis process. *Right of Way Manual* Chapter 6.

These types of further investigations will be discussed later in this chapter within both Sections 447.03 and Section 447.04 'Analysis and Documentation Requirements' and may include Hazardous Materials Discipline Reports for NEPA/SEPA, Phase I Environmental Site Assessments (for property purchases) and Phase II Environmental Site Assessments, and Good Faith Inspection reports.

If the region staff classify a project as a NEPA Categorical Exclusion, the information from the ERS is transferred to the Environmental Classification Summary (ECS) and can become the hazardous materials NEPA documentation for the project (Section 300.04). Although both forms ask the same questions, the supporting information and level of detail required in an ECS is more and may contain additional detailed reports as design changes and initial contamination identified within the project may have changed.

During the Design phase of a project WSDOT staff follows the Design Environmental Compliance Assurance Procedure (ECAP) as described in *Design Manual* Section 225.05(1). The Design ECAP includes steps for notifying WSDOT management and regulatory agencies in the event of a suspected or known non-compliant event.

Additional information regarding the ECS Hazmat documentation is located at the WSDOT HazMat webpage.

Good Faith Inspections

WSDOT performs pre-bid Good Faith Inspections (GFI) on all highway capital construction projects to determine whether the project will disturb asbestos containing materials (ACM). Depending on the project, the GFI may also identify additional materials (e.g., lead) present that would require special handling for disposal. The GFI must be performed by an accredited Asbestos Hazard Emergency Response Act (AHERA) Building Inspector. The AHERA Building Inspector must be a WSDOT employee, or a consultant retained by WSDOT. When a site visit and test sample collections will be performed, the AHERA Building Inspector determines the level of inspection necessary and only an accredited AHERA Building Inspector may collect test samples. The AHERA Building Inspector also must write a concise GFI report that summarizes the inspection and findings and provide disposal options for contractors to include in their bids.

WSDOT must provide the GFI report as part of the bid package prior to bid opening, as described in Plans Preparation Manual Section 700.01(10), satisfying the Communications of Hazards requirement pursuant to. If a project bid package does not contain the GFI report prior to bid opening, WSDOT staff will initiate the Design Environmental Compliance Assurance Procedure (Design ECAP).

Additional guidance to assist with implementing this GFI policy is located within the Preliminary Design tab on the WSDOT HazMat webpage.

Planning for sediment management

Projects that occur in marine or freshwater environments, including ferry terminals and bridge crossings, may need to evaluate and characterize sediment for chemical contamination.

WSDOT uses the Sediment Management Standards (Chapter 173-204 WAC), promulgated by Ecology, to sample and evaluate sediments that may be disturbed. The sediment regulations impose a number of specific requirements, including special sampling and laboratory analysis procedures that make early coordination critical to WSDOT project schedules.

If a project will involve dredging, WSDOT also follows the requirements of the Dredged Material Management Program (DMMP) administered by the US Army Corps of Engineers. The DMMP provides criteria for in-water disposal of dredged sediment. If the sediments are not suitable for open-water disposal, they will need to be disposed of at an appropriate upland disposal facility.

447.03(4) Construction

Managing HazMat During Construction

WSDOT contractors are responsible for the safe management and disposal of known or suspected HazMat when encountered at a site, as described by Contract Plan Sheets or the use of a Special Provision, WSDOT contractors should manage HazMat in a cost-effective manner in accordance with all federal, state, and local laws, regulations, and standards.

Even with advanced planning, WSDOT does not know the entire history of every site, and encounters of unknown hazardous or regulated materials that may occur. WSDOT remains prepared for unexpected situations during construction by having policies and procedures in place for the following:

- Encountering unknown underground storage tanks (USTs)
- Suspect ACM not previously identified
- Lead based paint
- Encountering unknown contamination
- Responding to spills /releases from construction activities
- Reporting spills caused by the traveling public

If the contract does not address unknown encounters, the PE works with the region environmental office, a consultant, or ESO HazMat Program and the contractor to coordinate the management of these materials. The WSDOT contractors are also responsible for managing all HazMat that is brought or generated on site during all construction activities.

These unexpected situations require rapid response actions to minimize impacts to the environment and the project work. WSDOT staff follows the Construction Environmental Compliance Assurance Procedure (ECAP) as described in *Construction Manual* M 41-01.

The Construction ECAP includes steps for notifying WSDOT management and regulatory agencies. The subsections below describe each situation and related reporting requirements in more detail.

WSDOT must appropriately manage the material prior to reuse or disposal at a permitted disposal facility willing to accept the material. For more information about HazMat during construction, visit the environment during construction webpage.

Only qualified WSDOT HazMat Specialists, Certified Industrial Hygienists, and qualified consultants and/or contract personnel are qualified to handle HazMat and collect samples. If a contractor hires or utilizes qualified consultants or personnel, the Project Engineer should include the WSDOT HazMat Program on all correspondence.

The management of HazMat may include any or all of the activities listed below. Visit the WSDOT hazmat and the environment during construction webpages for information on each topic:

- Identifying the type, concentration, and extent of the contamination
- Stockpiling and covering suspect or confirmed HazMat material.
- Containing suspect or confirmed hazmat liquid material
- Sampling and submitting samples for laboratory analysis
- Labeling containers and drums
- Characterizing the material for reuse, or disposal at a permitted disposal facility able to accept the material
- Submitting information to regulatory agencies

If project waste materials designate as dangerous waste, WSDOT assumes responsibility as the generator of the waste for reporting purposes. Per Chapter 173-303 WAC, WSDOT must obtain a Resource Conservation and Recovery Act (RCRA) Environmental Protection Agency (EPA) Site Identification (ID) number from Ecology. WSDOT is required to track and count quantities of all Dangerous Waste generated, transported, and disposed. While the EPA Site ID number remains open in Ecology's system, the PE is required to submit an Annual Report[1] to Ecology due no later than March 1st of each year. If the PE has questions on when to use the EPA ID number, please contact the HazMat Program.

Where possible, the PE should consider the opportunity to minimize WSDOT's future cleanup liability, cleanup areas where final construction might prevent or obstruct future cleanup, and perform cleanup to protect environmentally sensitive areas. Visit the HazMat webpage for more information about cleanup options.

Encountering unknown underground storage tanks (USTs)

Due to potential explosion hazards and the specific statues and regulations associated with UST decommissioning, USTs require special consideration when encountered at a WSDOT site. When a contractor encounters an unknown UST, WSDOT policy is for the contractor to stop work in the immediate area and notify the WSDOT Project Engineer (PE).

Ecology has the authority over all "regulated" USTs in Washington State pursuant to Chapter 173-360 WAC. Some USTs are exempt in accordance with WAC 173-360-0110, but may be regulated by local agencies. WSDOT or the contractor will need to contact the local fire marshal, health department, and planning department to determine local requirements.

Local health and fire departments may also require notification of UST site closures.

- Pierce County Health Department Permit
- Pierce County Health Department Process
- King County Health Department

A registered UST Decommissioner knows local regulations and requirements regarding tank removal.

If there is a confirmed release from a regulated UST, Chapter 173-340 WAC also applies. If there is a release from either regulated or exempt USTs, the WSDOT PE will initiate the Construction ECAP. In the case of a confirmed release from the regulated UST, WSDOT must also ensure that Ecology receives notification within 24 hours. A status report is then due to Ecology within 20 days.

A Washington State certified International Fire Code Institute (IFCI) UST Decommissioner must be used to remove regulated USTs. Additionally, a Washington State certified UST Site Assessor must be present during removal to sample and document UST closure activities. Thirty days prior to removing a regulated UST, a 30-Day Notice is due to Ecology. Please note that WSDOT can ask Ecology to waive this requirement if it will cause schedule delays. The ESO HazMat program and our on call consultants have certified UST Site Assessors to assist in UST removal.

[1] Ecology implemented an electronic submittal process for annual reports. For user guide information see https://ecology.wa.gov/regulations-permits/reporting-requirements/dangerous-waste-reporting-requirements

If there is no contamination discovered during a regulated UST removal, Ecology must receive a 2018 Closure and Site Assessment Notice, a Site Check/Site Assessment Checklist, and a Site Assessment Report within 30 days. If there is contamination from a regulated UST or an exempted UST identified as referenced in WAC 173-360A-0110 Ecology must receive a Site Characterization Report within 90 days. The reports should contain required information detailed in the 2003 Ecology document *Guidance for Site Checks and Site Assessments for Underground Storage Tanks*. For more information, see the Ecology UST webpage.

Encountering unknown contamination

When a contractor encounters unknown hazardous or regulated materials, usually identified by sight or smell, WSDOT policy is for the contractor to stop work in the immediate area and notify the WSDOT PE. The PE initiates the Construction ECAP and should coordinate with the region environmental office, a consultant, or ESO HazMat Program to determine whether the material is contaminated or not. The PE should also consult with the WSDOT Safety Office to confirm if workers can safely continue working in the immediate area.

The PE follows notification procedures established in Construction ECAP to determine internal and external reporting requirements. The region environmental office, a consultant, or ESO HazMat Program can help to coordinate any required regulatory reporting. Per WAC 173-340-300, WSDOT is required to report to Ecology hazardous substances that may be a threat to human health or the environment based on best professional judgment. WAC 173-340-300(2)(b) does provide a non-exhaustive list of reportable events and some examples are presented below.

- Contamination in a water supply well.
- Free product such as petroleum product or other organic liquids on the surface of the ground or in the groundwater.
- Any contaminated soil or unpermitted disposal of waste materials that would be classified as a hazardous waste under federal or state law.
- Any abandoned containers such as drums or tanks, above ground or buried, still containing more than trace residuals of hazardous substances.
- Sites where hazardous substances have leaked or been dumped on the ground.
- Leaking underground petroleum storage tanks not already reported under WAC 173-340-450.

If project waste materials designate as dangerous waste, WSDOT assumes responsibility as the generator of the waste for reporting purposes. Per Chapter 173-303 WAC, WSDOT must obtain a Resource Conservation and Recovery Act (RCRA) Environmental Protection Agency (EPA) Site Identification (ID) number from Ecology. WSDOT is required to track and count quantities of all Dangerous Waste generated and disposed. While the EPA Site ID number remains open in Ecology's system, the PE is required to submit an Annual Report[2] to Ecology due no later than March 1st of each year. Note that the EPA number does not apply for the generation, transport, and disposal of wastes that do not designate as dangerous waste.

WSDOT Regional Project Offices should provide copies of all Ecology letters related to contamination on WSDOT properties to ESO HazMat Program within 30 days of receipt. The ESO HazMat Program tracks the information and uses it for GASB 49 reporting.

[2] Ecology implemented an electronic submittal process for annual reports. For user guide information see www/ecy.wa.gov/programs/hwtr/waste-report/index.html

Responding to spills from construction activities

Spills caused by WSDOT contractors during project construction are the responsibility of the contractor to clean up, report, and dispose of properly. Ecology and Local Jurisdiction Health Departments require confirmation sampling to verify that the spill was adequately cleaned up and to avoid having the site location listed on Ecology's facility database. The Contractor should hire a qualified consultant at their expense to conduct the remedial cleanup activities, and the Regional Project Office may contact the ESO HazMat Program when a spill has occurred to oversee that the cleanup process was appropriately completed.

As a way to prevent and respond to spills on project sites, WSDOT requires contractors to prepare and implement a Spill Prevention Control and Countermeasures (SPCC) Plan for all projects. The SPCC Plan template can be found on the Stormwater and water quality webpage under tools and templates. The plan is a Type 2 Working Drawing and must address the required SPCC elements in their respective order as identified in *Standard Specifications* Section 1-07.15(1), including reporting requirements. The contractor may not begin any onsite construction activities until the Type 2 Working Drawing review and comment process in *Standard Specifications* Section 1-05.3 is completed. The SPCC Plan must remain on site at all times until the completion of the project. The SPCC Plan shall be considered a living document that is required to be updated to reflect current site conditions. For example, if the Contractor adds additional spill kits or moves the existing spill kits to another location of the project, this must be reflected in an updated SPCC Plan.

If a spill occurs on a project, WSDOT staff follows the Construction ECAP. Visit the WSDOT Spill Prevention Control and Countermeasures and Ecology webpages for additional guidance and resources.

Reporting spills caused by the traveling public (Third-Party)

WSDOT personnel or Contract personnel may be a witness to or have to respond to an inadvertent spill from a Third-Party accident. If a spill from the traveling public occurs within a WSDOT construction project or ROW, WSDOT personnel shall immediately notify Washington State Patrol (WSP) and Ecology to report the spill, and if possible, identify the responsible party. WSDOT must report a spill if they have knowledge of a spill that may threaten human health or the environment, or where sites have been leaked or been dumped on the ground pursuant to WAC 173-340-300(3)(b)(iv)(viii). If the spill is an immediate threat to human health or the environment (e.g., tank truck leaking into a water body), WSDOT personnel within their limits of expertise should take action to contain the spill until Ecology or the WSP arrive on the scene. Cleanup costs may be recovered at a later date if and when the responsible party is identified.

In accordance with the Revised Code of Washington (RCW) 70.136.030, the WSP is the "hazardous materials incident command agency" along state and interstate highway corridors and coordinates all activities at the scene of a spill. Should WSDOT enter into an emergency assistance agreement with the WSP, the agreement does not obligate WSDOT to assist as WSDOT would be considered exercising the "Good Samaritan" law in pursuant to RCW 70.136.050, and WSDOT would not be liable for any civil damages resulting from the manner in which it conducted the cleanup except for gross negligence or willful or wanton misconduct.

Ecology is not obligated to respond to every spill on WSDOT ROW. Upon receiving notification from the WSP Incident Commander, Ecology's Spill Response Team will determine if the release warrants a response. In accordance with RCW 90.56.020 and 90.56.350, Ecology is obligated to respond and cleanup spills of oil or other hazardous substances that discharged or will likely discharge into the Waters of the State. In addition, other factors may influence the lack of a response such as limited resources.

The cleanup of spills by the traveling public is regulated under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 9607(b), which states, "There shall be no liability under subsection (a) of this section for a person otherwise liable who can establish by a preponderance of the evidence that the release or threat of release of a hazardous substance and the damages resulting therefrom were caused solely by—

(1) an act of God;

(2) an act of war;

(3) an act or omission of a third party other than an employee or agent of the defendant, or than one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly, with the defendant (except where the sole contractual arrangement arises from a published tariff and acceptance for carriage by a common carrier by rail), if the defendant establishes by a preponderance of the evidence that (a) he exercised due care with respect to the hazardous substance concerned, taking into consideration the characteristics of such hazardous substance, in light of all relevant facts and circumstances, and (b) he took precautions against foreseeable acts or omissions of any such third party and the consequences that could foreseeably result from such acts or omissions; or

(4) any combination of the foregoing paragraphs" (see also RCW 70.105.040).

In most cases spills are reported to Ecology Spills Program through the Environmental Report Tracking System (ERTS). This information is sometime then relayed to either the WSDOT Incident Response Team (ICR), Regional Maintenance Offices, and/or ESO HazMat.

The WSDOT Hazardous Materials Program occasionally receives notification letters of Third-Party Spills, or through a tracking system called GASB which identifies sites that have been listed on Ecology's databases.

WSDOT can assume financial liability for a Third-Party spill if the spill is not reported, or a liable party (individual who caused the spill) was not identified, then under RCW 70A.300.060, WSDOT as the owner of the property or facility will assume liability of any future cleanup of contamination left in place. Spills that reach pervious soil and /or are not an immediate threat to human health and the environment and are not completely cleaned up under a third-party agreement to MTCA unrestrictive cleanup standards, can become the liability under WSDOT. The regulatory oversight of these cleanups are managed by Ecology's Toxic Cleanup Program.

Under CERCLA, persons may be held strictly liable for releases or threatened release of hazardous substances at properties they owned or operated at the time of release. This rule means that a potentially responsible party may be liable for contamination based solely on property ownership without regard to fault.

Petroleum products are specifically excluded from the CERCLA "hazardous substances" in accordance with 42 USC 9601(14), however are still considered hazardous substances under MTCA.

Reusing or disposing of project waste materials

WSDOT is ultimately responsible for the reuse and disposal of project waste materials. Disposal of materials can be costly and may impact project schedules. It is for these reasons that WSDOT coordinates the sampling and characterization of HazMat as described above. The decision to reuse or dispose of project waste materials is influenced by the following factors:

- Type and level of contamination (e.g., petroleum product vs. solvents)
- Future site use (e.g., residential vs. industrial, a parking lot or roadway)
- Site access and presence of environmentally sensitive areas
- Permit requirements and environmental commitments

WSDOT addresses the reuse and disposal of solid wastes during construction in *Standard Specifications* Sections 2-01.2, 2-02.3, and 2-03.3(7). If a contractor provides a disposal site, they are required by Section 2-03.3(7)C to provide the PE with the location of the disposal site and copies of required permits and approvals before they transport any waste off the project site. The Contractor shall provide the Engineer with a copy of the shipping manifest or bill of lading for each load indicating the quantity of material hauled to disposal and bearing the disposal site operator's confirmation for receipt of each load of material. The PE keeps a copy of the disposal documentation in the project file.

When HazMat is addressed by a project Special Provision, WSDOT includes a description of the materials and identifies the type of disposal facility that will accept the materials. As a common practice, WSDOT does not direct contractors where to take materials for disposal. It is required that contractors dispose of waste in accordance with all applicable federal, state, and local laws and regulations.

Consult the region environmental office, a consultant, or ESO HazMat Program with project-specific questions including disposal options of, but not limited to the following list:

- Solid Waste
- Dangerous Waste
- ACM
- Lead-Based Paint
- Treated Wood

Using construction specifications and provisions

When WSDOT staff follows the policies in this chapter and the procedures on the HazMat webpages, WSDOT can reasonably anticipate and address HazMat issues prior to the advertisement of a project. During construction, WSDOT may need to have a contractor handle and manage issues such as contaminated soil or water, USTs, ACM, cementitious material or wastes, lead based paint, potentially hazardous chemicals such as detergents, polymers, dust palliatives, concrete curing compounds, form release oils, or spills. WSDOT relays this information to contractors bidding on the work in four main ways:

- *Standard Specifications* M 41-10, which are standard protocols that are required for all WSDOT projects.
- *General Special Provisions*, which are provisions written to describe specific construction requirements and are available for use on multiple projects.

- *HazMat Special Provisions and Plans Sheets*, which are project-specific amendments that describe the location of, and how to handle, HazMat issues requiring special attention.
- *Hazardous Materials Management Plans*, which are project-specific supplements to a HazMat Special Provision and provide detailed instructions for managing materials.

For complex issues, the region environmental office, a consultant, or ESO HazMat Program are available to assist with writing or reviewing HazMat Project-Specific Special Provisions.

Often these provisions define areas with differing types or depths of contaminated soil or water. The Project-Specific Special Provision describes how the Contractor will handle and manage the material. Information about how WSDOT will characterize the material for disposal is also often included.

Further information about how specifications and provisions address HazMat topics is available on the WSDOT HazMat webpage.

Maintenance and Operations

The ESO HazMat Program provides technical sampling support to comply with the NPDES Bridge and Ferry Terminal Washing General Permit.

447.04 Analysis and documentation requirements

447.04(1) Right-sizing hazmat discipline report for NEPA/SEPA

A right-sized HazMat Discipline Report (Report) is prepared to satisfy project NEPA/SEPA requirements for environmental documentation. Region staff in coordination with the ESO HazMat Program determine the appropriate level of effort required when they complete the ERS. The purpose of the Report is to identify all potential hazards encountered during a project which may:

- Affect the environment or human health during construction
- Create significant construction impacts
- Incur cleanup risk and liability for WSDOT.

The right-sized Report must document significant unavoidable adverse impacts that WSDOT cannot reasonably mitigate. Whenever possible, include the Report directly in the NEPA/SEPA document. Factors such as project size and type of construction activities, past and current land use in an area, excavation depths and acquisition plans help WSDOT staff determine the best approach. WSDOT provides Right Size Guidance that describes three levels of Reports, as well as situations where no documentation may be required. Right-size is a common term used to describe the level of detail necessary to analyze a specific project given the setting and anticipated impacts. The level of detail must be sufficient to allow region staff to make informed decisions regarding the selection of alternatives and mitigation measures. Region staff should be able to use the Report to assess budget and schedule impacts and decide when to engage in early coordination with regulatory agencies. The documentation must provide site-specific recommendations for additional investigations needed prior to acquisition and construction. Right-sizing keeps documentation concise as required by NEPA/SEPA.

447.04(2) Transaction Screening and Phase I Environmental Site Assessment (Phase I ESA)

A Transaction Screening is the lowest level of analysis and documentation and includes walking in and around the parcel, documenting visible hazardous materials, USTs, above ground storage tanks, solid wastes, etc., interviewing homeowners or neighbors, and general document review.

A Phase I ESA as a standalone document does not fully satisfy NEPA requirements. The Phase 1 can be a standalone document, and addendum to, or a separate section in a Right sized hazmat discipline report.

The purpose of a Phase I ESA is to evaluate the environmental conditions of a property as part of a real estate transaction and assess the likelihood of assuming liability from Recognized Environmental Conditions REC[3]; whereas, NEPA documents a comprehensive study that details all potential significant impacts from various disciplines relating to the entire project footprint. WSDOT routinely uses the HazMat Discipline Report for NEPA/SEPA in the environmental document to identify potentially contaminated properties; WSDOT completes a Phase I ESA for individual sites as outlined in DM 510.01 WSDOT must complete a Phase I ESA prior to acquisition.

To fulfill the requirements of 40 Code of Federal Regulations (CFR) Part 312, Standards and Practices in order to meet "All Appropriate Inquiry" (AAI) as defined by the USEPA and qualify for one of the defenses under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)—aka the Superfund law—to limit cleanup liability and potentially recover future cleanup costs. WSDOT also uses the information to assess potential impacts on project design and construction. In accordance with 40 CFR 312.21, an Environmental Professional must complete the Phase I ESA. Additional information regarding a Phase I ESA is available on the WSDOT HazMat webpage.

Under current federal and state hazardous waste cleanup statutes, all former, current, and future property owners can be held individually liable for 100 percent of the cleanup cost for a contaminated property. This is referred to as "joint and several liability" and means that when WSDOT acquires contaminated property it may be held liable for any or all cleanup and restoration costs regardless of the "degree of guilt." WSDOT can also be held liable as a prior owner, thus, selling land does not protect the department from liability.

To claim protection from liability as an innocent landowner, contiguous property owner, or bona fide prospective purchaser; property owners, including state and local governments, must conduct an AAI within one year prior to purchasing or acquiring the property as referenced in 40 CFR 312.20(a) and pursuant to CERCLA section 101(35)(B), and must purchase without knowing, or having reason to know, of contamination on the property.

Notwithstanding paragraph (a) of the above section, in accordance with 40 CFR 312.20(b) the following components of the AAI must be conducted or updated within 180 days of and prior to the date of purchase or acquisition of the subject property:

- Interviews with past and present owners, operators, and occupants (see 40 CFR 312.23)
- Searches for recorded environmental cleanup liens (see 40 CFR 312.25)

[3] A recognized environmental condition (REC) as defined by ASTM E1527. *"the presence of hazardous substances or petroleum products in, on or at the subject property due to a release to the environment; the **likely** presence of hazardous substances or petroleum products in, on or at the subject property due to a release or likely release to the environment; or the presence of hazardous substances or petroleum products in, on or at the subject property under conditions that pose a material threat of a future release to the environment."*

- Reviews of federal, tribal, state, and local government records (see 40 CFR 312.26)
- Visual inspections of the facility and of adjoining properties (see 40 CFR 312.27)
- The declaration by an Environmental Professional (see 40 CFR 312.21(d))

If the inquiry and subsequent site investigation identifies actual soil and/or groundwater contamination, the purchaser may pursue a "private right of action" with past or current owners of the property. A private right of action is a legal claim authorized by MTCA (RCW 70A.305.080) under which a person may recover costs of remedial action from other persons liable under the Act provided that a cleanup is "substantially equivalent" to a cleanup performed or supervised by Ecology. If the source of contamination is on an adjacent property, the persons liable for the adjacent contamination could be responsible for costs associated with cleanup of a site and costs to repair damages to natural resources.

WSDOT also uses property appraisals performed by the WSDOT Real Estate Services Office (RESO) as described in the *Right of Way Manual* M 26-01. *Right of Way Manual* Chapter 4 instructs appraisers to document potential HazMat issues on parcels such as odd soil odors or colors, the presence of tanks or drums, and suspected asbestos containing materials. If observed, the manual provides directions on how to proceed with the appraisal. WSDOT typically uses the GFI for a building or structural appraisal but does not use the completed GFI for single family homes in the appraisal process.

If acquiring contaminated properties, WSDOT RES staff follows the steps outlined in *Right of Way Manual* Chapter 4 to identify and mitigate risk as much as possible. Actions may include, but are not limited to, writing an indemnification clause, or a creating a Prospective Purchaser Agreement. Once the purchase of a contaminated property is complete, the RESO is required to report the information to the Environmental Services Office (ESO).

ESO tracks contaminated properties that WSDOT owns, and their associated cleanup liability, and uses the information to report to the Washington State Office of Financial Management. This reporting is required by the Governmental Accounting Standards Board (GASB) Statement 49, *Accounting and Financial Reporting for Pollution Remediation Obligations*. When appropriate, WSDOT tracks remaining residual contamination in WSDOT right of way (regardless of liability) after a MTCA cleanup.[4]

447.04(3) Phase II Environmental Site Assessment (Phase II ESA)

A Phase II ESA is performed to investigate sites that may have contamination based on the findings of the HazMat Discipline Report for NEPA/SEPA, Phase I ESA, or suspect areas encountered and assessed during construction. The Phase II ESA is conducted to characterize the nature and extent of potentially contaminated media prior to acquisition and construction. WSDOT uses information obtained in previous reports, planned areas of construction, and acquisition plans when conducting the assessment. A Phase II ESA is limited in scope and will not always identify all the contamination on a site. Please see DM 510.01 for more information.

When site specific documentation exists in the Ecology files for the planned acquisition or construction areas a Phase II ESA may not be necessary. Additional information regarding a Phase II ESA is available on the WSDOT HazMat webpage.

[4] An Implementation Agreement (IA) was signed in 2015 between Ecology and WSDOT. WSDOT has agreed to update the *Right of Way Manual*, utility manuals and right of way plan sheets to identify residual contamination for select sites after a MTCA cleanup has taken place. Ecology submits the proposed IA sites to WSDOT for approval. The ESO HazMat Program and regional environmental managers will review the proposed IA site documentation to affirm, modify, or reject the proposal.

WSDOT may identify or encounter contamination during geotechnical exploration drilling.

As described in the *Geotechnical Design Manual* M 46-03, prior to any drilling activities crews complete a geotechnical field exploration and an environmental assessment[5]. The manual also provides procedures for planning, storing, and disposing of potentially contaminated material generated during drilling activities. Additional information regarding Geotechnical Soil Boring Procedures is available on the WSDOT HazMat webpage.

Identifying the extent of contamination through a Phase II ESA helps WSDOT:

- Select project alternatives and/or mitigation options.
- Prepare real estate transactions and assist in the appraisal process associated with contamination to determine fair market property value.
- Determine appropriate property management options.
- Identify construction impacts and associated costs for mitigation and/or disposal of material.
- Consider worker health and safety needs.

Selection of analytical methods and proper sample-handling techniques are critical to a successful Phase II ESA. Most laboratory methods are selected based on the specific objective of the Phase II ESA, although many are dictated by specific provisions of regulatory requirements. Laboratory analysis must be performed by an accredited analytical laboratory, pursuant to Chapter 173-50 WAC. Improper or incomplete sample or analysis collection may invalidate sampling results or make the results legally indefensible. Proper handling of samples is also crucial to obtaining usable and defensible data, which includes selecting of correct sample containers, properly storing and transporting, meeting holding time requirements, and following strict chain-of-custody protocols.

Per the ASTM standard, field sampling and report writing should be performed only by or under the direct guidance of an Environmental Professional, which may be a WSDOT employee or a consultant retained by WSDOT.

447.04(4) Good Faith Inspection (GFI)

The purpose of the pre-bid GFI is to determine whether the project will disturb ACM, and to satisfy the Communications of Hazards requirement pursuant to Chapter 296-62-07721 WAC.

The GFI is completed with the intent of complying with and providing an AHERA- level assessment in accordance with federal, state, and local asbestos laws and regulations. These statutes are generally focused on identifying airborne emissions of asbestos fibers. This information informs workers about potential exposures to ACM during construction and abatement work activities.

A GFI must be conducted pre-bid by an accredited AHERA Building Inspector prior to any renovation or demolition in accordance with 40 CFR, Part 763, Subpart E, Appendix C, and Chapter 296-62-07721 WAC. Local Clean Air Agencies may also have specific requirements and directives which must be met, in addition to Washington State Department of Labor & Industries (LNI) and other applicable asbestos regulations listed in Section 447.02. Pursuant to Chapter 296-62-07703 WAC, an “Accredited inspector” means any person meeting the accreditation requirements of the Federal Toxic Substance Control Act (TSCA). The AHERA Building Inspector must be a WSDOT employee, or a consultant retained by WSDOT.

[5] The Environmental Assessment, at a minimum, should address environmentally sensitive areas, potential cultural resources, and documented or suspect contamination

WSDOT must complete a GFI Compliance Form, located within the Preliminary Design tab on the WSDOT HazMat Program webpage, for each highway capital construction project. The completed form will indicate either ACM may be disturbed by the project and additional GFI analysis and documentation is necessary, or there is reasonable certainty that ACM will not be disturbed and no additional analysis and documentation beyond completing the form is necessary.

When ACM may be disturbed by the project, an AHERA Building Inspector typically reviews available existing objective data to aid in the identification of suspect materials that may contain ACM. Existing data can include but is not limited to as-built information and corresponding design plans and specifications, and previously written GFI reports.

After reviewing existing objective data, the AHERA Building Inspector determines the level of additional inspection necessary, which can include performing a site visit to visually inspect to identify and/or collect material samples for laboratory test analysis to determine the presence or absence of ACM. The scope of the visual inspection and/or sampling should consider site specific conditions and/or project specifics (i.e., full demolition, renovation, or minor repair). Depending on the project, the AHERA Building Inspector may collect test samples to identify the presence of additional materials (e.g., lead). Collection of these additional samples may be warranted to provide disposal options for the contractor that the contractor can include in their bid. After completing the additional GFI analysis and documentation, the AHERA Building Inspector will write a concise GFI report the summarizes their inspection and findings. The completed GFI Compliance Form and additional GFI report must together be provided in the project bid package, as described in *Plans Preparation Manual* Section 700.01(10), to ensure contractors are notified of the presence or absence of ACM prior to bid opening.

When WSDOT is reasonably certain that ACM will not be disturbed by the project and no additional GFI analysis and documentation is necessary, the completed GFI Compliance Form will serve as the GFI report and must be provided in the project bid package to ensure contractors are notified of the presence or absence of ACM prior to bid opening

Once completed, the GFI report (e.g., completed GFI Compliance Form and all additional GFI reports) must be uploaded into the WSDOT Enterprise Content Management (ECM) Portal for documentation and tracking. The ESO HazMat Program can assist projects with uploading completed asbestos GFI reports into the WSDOT ECM Portal.

WSDOT staff and consultants that are accredited AHERA Building Inspectors are qualified to perform all GFI work described in this chapter. If region staff need additional assistance with conducting GFIs, preparing GFI reports, or reviewing GFI reports, please contact the ESO HazMat Program for assistance. ESO HazMat Program contacts are located within the Contacts tab on the WSDOT HazMat Program webpage.

447.05 External engagement

When applicable, Local Clean Air Agencies and LNI are required to be notified prior to ACM abatement and demolition. Abatement of ACM must be performed by an accredited asbestos abatement contractor with a certified supervisor and certified workers. ACM waste generated during construction must be properly stored, transported and disposed of in a permitted landfill.

447.06 Internal roles and responsibilities

The region environmental offices, consultants retained by WSDOT, and the ESO HazMat Program supports WSDOT's capital construction program to effectively align with all phases of WSDOT project delivery and all delivery methods used by WSDOT to ensure actions and business practices comply with applicable federal, state and local hazardous and solid waste management laws & regulations.

447.07 Applicable permits and approval process

Below are the most common permits or approvals that may be required as part of a HazMat investigation:

- Well installation and decommissioning associated with Geotech and Construction
- Asbestos abatement and demolition
- Waste disposal at an approved facility
- Dangerous waste / RCRA identification
- EPA ID number to transport and dispose of dangerous waste

More information on HazMat permits and approvals is available on the HazMat webpage. For more information on the permitting process, see Chapter 500.

447.08 Mitigation

The impacts and mitigation measures address typical impacts that WSDOT may encounter on construction projects. The typical impacts apply to sites of concern identified in the HazMat Discipline Report for NEPA/SEPA. Sites of concern are rated based on relative risk to impact the project (low, moderate, or high) and the level of complexity to manage the site (straightforward or complicated). Standard impacts and mitigation measures typically apply to sites with low or moderate risk that are straightforward to manage.

Generally, sites ranked with low or moderate risk and straightforward complexity are situations that can be reasonably predicted based on experience and where mitigation measures can effectively control and/or minimize the impact based on best professional and engineering judgment. Mitigation measures are actions taken prior to and during construction to avoid or reduce the hazardous material impact. Mitigation measures prevent or reduce environmental impacts, minimize construction costs, and avoid or reduce WSDOT's future long-term cleanup costs associated with managing, remediation, and monitoring work.

The table detailing select mitigation measures is organized by Environmental (Direct, Indirect, Cumulative), Construction and Liability impacts and is available on the HazMat webpage.

HazMat Discipline Report writers should select only the appropriate standard impacts and mitigation measures and tailor them for the project.

447.09 Abbreviations and acronyms

ACM	Asbestos Containing Materials
AHERA	Asbestos Hazard Emergency Response Act
ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
ECAP	Environmental Compliance Assurance Procedure
Ecology	Washington State Department of Ecology
ECS	Environmental Classification Summary
ERS	Environmental Review Summary
ESA	Environmental Site Assessment
ESO	Environmental Services Office
GASB	Governmental Accounting Standards Board
HazMat	Hazardous and Regulated Materials
LNI	Washington State Department of Labor and Industries
MTCA	Model Toxics Control Act
NEPA	National Environmental Policy Act
PE	Project Engineer
RCRA	Resource Conservation and Recovery Act
SEPA	State Environmental Policy Act
SPCC	Spill Prevention Control and Countermeasures
USEPA	United States Environmental Protection Agency
USC	United States Code
UST	Underground Storage Tank
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation

447.10 Glossary

WSDOT uses the common term “Hazardous materials” to describe waste materials that require special handling and disposal. The term covers all types of contaminated or hazardous media including dangerous waste and regulated materials. The definitions below describe the different terms found in state and federal regulations.

Asbestos Containing Material – Any material containing more than 1% asbestos.

Dangerous Waste – Solid wastes designated in WAC 173-303-070 through WAC 173-303-100 as dangerous or extremely hazardous or mixed waste. Dangerous waste includes all federal hazardous waste, plus certain wastes exhibiting specific characteristics based on toxicity and persistence. The regulatory requirements for disposal of dangerous waste are more complex than the requirements for disposal of problem waste and place additional responsibility both on WSDOT as the generator and on the contractor for safe handling and disposal.

Hazardous Substance – Hazardous substance designated under CERCLA 40 CFR 116 that pose a threat to public health or the environment. Federal regulation of hazardous substances excludes petroleum, crude oil, natural gas, natural gas liquids or synthetic gas usable for fuel. State regulation of hazardous substances is more stringent and includes petroleum products, as addressed in WAC 173-340-200.

Hazardous Waste – Solid wastes designated in 40 CFR 261 and regulated as hazardous and/or mixed waste by the USEPA. Mixed waste includes both hazardous and radioactive components; waste that is solely radioactive is not regulated as hazardous waste. Hazardous waste includes specific listed waste that is generated from particular processes or activities or exhibits certain reactive, corrosive, toxic, or ignitable characteristics. Hazardous waste is also regulated by Ecology as dangerous waste and State-only dangerous waste.

Solid Waste – State regulation Chapter 173-350 WAC defines "solid waste," "waste materials," or "wastes" as all putrescible and nonputrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials. See WAC 173-350-021 to determine if a material is solid waste.