

# Chapter 447      **Hazardous Materials (HazMat) and Solid Waste**

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## **447.01 Introduction**

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

- Provide increased safety by mitigating potential dangers to WSDOT personnel, contract employees, the public and the environment from exposures to hazardous or regulated materials,
- Reduce the likelihood of project redesign, delay, or termination and costs increases.
- Reduce the possibility and costs of litigation against WSDOT during both design and construction.
- Minimize and manage agency cleanup risk and liability.

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

Visit the WSDOT [HazMat](#) webpage for additional information and procedural guidance on addressing HazMat issues.

## 447.02 Applicable statutes, regulations, executive orders, and agreements

### 447.02(1) *Laws and Regulations*

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

### 447.02(2) *Federal Laws and Regulations*

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

### 447.02(3) *State Regulations*

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

**447.02(4) Local Clean Air Agency Regulations**

- [Article 4 Asbestos Control Standards](#) Puget Sound Clean Air Agency
- [Rule 6.3 Asbestos](#) Olympic Region Clean Air Agency
- [Regulation I, Article IX, Section 9, Asbestos Control Standards](#) Spokane Clean Air Agency
- [476 Standards for Asbestos Control, Demolition and Renovation](#) Southwest Region Clean Air Agency
- [Article 3.07 Asbestos Control](#) Yakima County Clean Air Agency
- [Regulation 1, Article 8 Asbestos](#) Benton County Clean Air Agency
- [Section 570 – Asbestos Control Standards](#) Northwest Clean Air Agency
- Washington State Department of [Ecology \(Ecology\) Regional Offices \(NW, Central, and Eastern\)](#)

**447.02(5) WSDOT Executive Orders**

- WSDOT Environmental Policy Statement [E 1018.03](#) Environmental Policy Statement
- Secretary's Executive Order [E 1033.03](#) Employee Safety

**447.03 Considerations during project development****447.03(1) Planning**

There are no planning requirements for HazMat at this time.

**447.03(2) Scoping**

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

Region staff answers the questions in the ERS to determine if further investigations should be scoped into the project to identify potential HazMat issues at a site or within the project area. They also use the information to assess potential project impacts (including to the project budget and schedule), mitigations, and required permits or approvals.

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

Additional information regarding the ERS Hazmat documentation is located at the WSDOT [HazMat Investigations and Documentation](#) webpage.

### 447.03(3) Design

Cleanup costs for contaminated properties can be extraordinary and cleanup actions can take many years. For this reason, WSDOT seeks to minimize liability by identifying the nature and extent of contamination at properties prior to acquisition and construction. This process is commonly known as completing “due diligence.”

Region staff reviews the ERS information and determines if additional investigations are necessary. Types of further investigations will be discussed later in this chapter within both sections 447.03 and section 447.04 ‘Analysis and Documentation Requirements’ and may include Hazardous Materials Discipline Reports for NEPA/SEPA, Phase I and II Environmental Site Assessments, and Asbestos Good Faith Inspection reports.

If the region staff classify a project as a NEPA Categorical Exclusion, the information from the ERS is transferred to the Environmental Classification Summary (ECS) and becomes the hazardous materials NEPA documentation for the project ([Section 300.04](#)). Although both forms ask the same questions, the supporting information and level of detail required in an ECS is greater.

During the Design phase of a project WSDOT staff follows the Design Environmental Compliance Assurance Procedure (ECAP) as described in [Design Manual Section 225.05\(1\)](#). The Design ECAP includes steps for notifying WSDOT management and regulatory agencies.

Additional information regarding the ECS Hazmat documentation is located at the WSDOT [HazMat Investigations and Documentation](#) webpage.

### Hazardous Materials Discipline Reports for NEPA/SEPA

WSDOT conducts hazardous material investigations that meet regulatory requirements as early as possible in the project development process. It is essential that the extent and risk of liability be identified before property acquisition. WSDOT identifies potentially contaminated sites through research and environmental documentation completed during the NEPA/SEPA process to determine if a right-sized discipline report will be required. There are three levels of right-sized discipline reports based on project complexity:

- Comprehensive discipline report
- Standard discipline report
- Memorandum

### Phase I and II Environmental Site Assessments

WSDOT performs investigations called Environmental Site Assessments (ESAs) on known or suspected contaminated properties identified in the initial ERS review and/or the right-sized discipline report. The ESAs may be performed either independent of, or in conjunction with, the NEPA/SEPA process; however, ESAs are not necessary to satisfy NEPA/SEPA environmental documentation requirements. The Environmental Protection Agency (EPA) recognizes two American Society for Testing and Materials (ASTM) International Standards, which WSDOT uses to meet compliance when conducting ESAs:

- Phase I ESA (ASTM E 1527-05 / 1527-13)
- Phase II ESA (ASTM E 1903-11)

## Asbestos Good Faith Inspections

WSDOT performs pre-bid asbestos Good Faith Inspections (GFI) on all suspect materials found in buildings, bridges, culverts and other structures that will be disturbed during renovation or demolition activities associated with capital construction projects. The asbestos GFI must be performed by an accredited Asbestos Hazard Emergency Response Act (AHERA) Building Inspector. The AHERA Building Inspector must be a WSDOT employee or a consultant retained by WSDOT. The AHERA Building Inspector determines the level of inspection necessary to identify the presence or absence of asbestos containing materials (ACM) that could be disturbed by the work. The AHERA Building Inspector also must write a concise asbestos GFI report that summarizes their inspection and findings of the presence or absence of ACM.

WSDOT must provide the concise asbestos GFI report as part of the bid package to notify contractors of the presence or absence of ACM prior to bid opening, satisfying the Communications of Hazards requirement pursuant to [Chapter 296-62-07721 WAC](#). If a project bid package does not communicate the presence or absence of ACM prior to bid opening, WSDOT staff will initiate the Design ECAP.

## Planning for sediment management

Projects that occur in marine or freshwater environments, including ferry terminals and bridge crossings, may need to evaluate and characterize sediment for chemical contamination. WSDOT uses the Sediment Management Standards ([Chapter 173-204 WAC](#)), promulgated by Ecology, to sample and evaluate sediments that may be disturbed. The sediment regulations impose a number of specific requirements, including special sampling and laboratory analysis procedures that make early coordination critical to WSDOT project schedules.

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

### **447.03(4) Construction**

#### **Managing HazMat During Construction**

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

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

- Encountering unknown underground storage tanks (USTs)
- ACM not previously identified
- Lead based paint

- Encountering unknown contamination
- Responding to spills from construction activities
- Reporting spills caused by the traveling public

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

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

WSDOT must appropriately manage the material prior to reuse or disposal at a permitted disposal facility willing to accept the material. For more information about HazMat during construction, visit the [Hazardous Materials Investigations and Documentation](#) webpage.

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

The management of HazMat may include any or all of the activities listed below.

Visit the WSDOT [HazMat webpage](#) for information on each topic:

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

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

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

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<sup>1</sup>Ecology implemented an electronic submittal process for annual reports. For user guide information see [www.ecy.wa.gov/programs/hwtr/waste-report/index.html](http://www.ecy.wa.gov/programs/hwtr/waste-report/index.html)

## Encountering unknown underground storage tanks (USTs)

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

Ecology has the authority over all “regulated” USTs in Washington State pursuant to [Chapter 173-360 WAC](#). Some USTs are exempt in accordance with [WAC 173-360-110](#), but may be regulated by local agencies. WSDOT or the contractor must contact the local fire marshal, health department, and planning department to determine local requirements.

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

- [Pierce County Health Department Permit](#)
- [Pierce County Health Department Process](#)
- [King County Health Department](#)

A registered UST Decommissioner will know local regulations regarding tank removal.

If there is a confirmed release from a regulated UST, [Chapter 173-340 WAC](#) will also apply. In the case of a confirmed release, WSDOT must ensure that Ecology receives notification within 24 hours. A status report is then due to Ecology within 20 days.

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

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

## Encountering unknown contamination

When a contractor encounters unknown hazardous or regulated materials, usually identified by sight or smell, WSDOT policy is for the contractor to stop work in the immediate area and notify the WSDOT PE. The PE initiates the Construction ECAP and should coordinate with the region environmental office, a consultant, or ESO HazMat Program to determine whether WSDOT workers can safely continue working in the immediate area.

The PE follows notification procedures established in Construction ECAP to determine internal and external reporting requirements. The region environmental office, a consultant, or ESO HazMat Program can help to coordinate any required regulatory reporting. Per [WAC 173-340-300](#), WSDOT is required to report to Ecology hazardous substances that

may be a threat to human health or the environment based on best professional judgment. [WAC 173-340-300\(2\)\(b\)](#) does provide a non-exhaustive list of reportable events and some examples are presented below.

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

If project waste materials designate as dangerous waste, WSDOT assumes responsibility as the generator of the waste for reporting purposes. Per [Chapter 173-303 WAC](#), WSDOT must obtain a Resource Conservation and Recovery Act (RCRA) Environmental Protection Agency (EPA) Site Identification (ID) number from Ecology. WSDOT is required to track and count quantities of all Dangerous Waste generated and disposed. While the EPA Site ID number remains open in Ecology's system, the PE is required to submit an Annual Report<sup>2</sup> to Ecology due no later than March 1<sup>st</sup> of each year.

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

### **Responding to spills from construction activities**

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

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

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



If a spill occurs on a project, WSDOT staff follows the Construction ECAP. Visit the WSDOT [Spill Prevention Control and Countermeasures](#) webpage for additional guidance, resources, and training information. WSDOT has a [Spill Reporting Flow Chart](#) (pdf 42 kb) that contractors and staff can use as a quick reference for how to report spills.

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

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

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

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

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

- (1) an act of God;
- (2) an act of war;
- (3) an act or omission of a third party other than an employee or agent of the defendant, or than one whose act or omission occurs in connection with a contractual relationship, existing directly or indirectly, with the defendant (except where the sole contractual arrangement arises from a published tariff and acceptance for carriage by a common carrier by rail), if the defendant establishes by a preponderance of the evidence that (a)

he exercised due care with respect to the hazardous substance concerned, taking into consideration the characteristics of such hazardous substance, in light of all relevant facts and circumstances, and (b) he took precautions against foreseeable acts or omissions of any such third party and the consequences that could foreseeably result from such acts or omissions; or

(4) any combination of the foregoing paragraphs” (see also [RCW 70.105.040](#)).

In most cases spills are reported to Ecology through the Environmental Report Tracking System (ERTS). This information is sometime then relayed to either the WSDOT Incident Response Team (ICR) or Regional Maintenance Offices. The WSDOT Hazardous Materials Program occasionally receives notification letters of Third-Party Spills, or through a tracking system called GASB which identifies sites that have been listed on Ecology’s databases.

WSDOT can assume financial liability for a Third-Party spill if the spill is not reported, or a liable party (individual who caused the spill) was not identified, then under [RCW 70A.300.060](#), WSDOT as the owner of the property or facility will assume liability of any future cleanup of contamination left in place. Under CERCLA, persons may be held strictly liable for releases or threatened release of hazardous substances at properties they owned or operated at the time of release. This rule means that a potentially responsible party may be liable for contamination based solely on property ownership without regard to fault. Petroleum products are specifically excluded from the CERCLA “hazardous substances” in accordance with 42 U.S.C. 9601(14), however are still considered hazardous substances under MTCA.

### Reusing or disposing of project waste materials

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

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

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

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

The WSDOT [HazMat webpage](#) provides information about and disposal options for the types of waste listed below. Consult the region environmental office, a consultant, or ESO HazMat Program with project-specific questions.

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

### Using construction specifications and provisions

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

- [Standard Specifications](#) M 41-10, which are standard protocols that are required for all WSDOT projects.
- [General Special Provisions](#), which are provisions written to describe specific construction requirements and are available for use on multiple projects.
- [HazMat Special Provisions and Plans Sheets](#), which are project-specific amendments that describe the location of, and how to handle, HazMat issues requiring special attention.
- [Hazardous Materials Management Plans](#), which are project-specific supplements to a HazMat Special Provision and provide detailed instructions for managing materials.

For complex issues, the region environmental office, a consultant, or ESO HazMat Program are available to assist with writing or reviewing HazMat Project-Specific Special Provisions. Often these provisions define areas with differing types or depths of contaminated soil or water. The Project-Specific Special Provision describes how the Contractor will handle and manage the material. Information about how WSDOT will characterize the material for disposal is also often included.

Further information about how specifications and provisions address HazMat topics is available on the WSDOT [Investigations and Documentation](#) webpage.

### Maintenance and Operations

No Maintenance and Operations activities are being performed by the ESO HazMat Program at this time.

## 447.04 Analysis & documentation requirements

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

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

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

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

### 447.04(2) *Phase I Environmental Site Assessment (Phase I ESA)*

Although similar to a HazMat Discipline Report for NEPA/SEPA, a Phase I ESA as a standalone document does not fully satisfy NEPA requirements. The purpose of a Phase I ESA is to evaluate the environmental conditions of an individual's property as part of a real estate transaction and assess the likelihood of assuming liability from any contamination which may determine the property to be considered as a Recognized Environmental Condition REC3; whereas, NEPA documents a comprehensive study that details all potential significant impacts from various disciplines relating to the entire project footprint. WSDOT routinely uses the HazMat Discipline Report for NEPA/SEPA in the environmental document to identify potentially contaminated properties; WSDOT does not automatically complete Phase I ESAs for all individual sites. A Phase I ESA in full compliance with the ASTM standard should be conducted for properties that may be substantially contaminated and require WSDOT acquisition. If the proposed acquisition is considered substantially contaminated and may pose a significant financial risk, WSDOT must complete a Phase I ESA prior to acquisition to fulfill the requirements of 40 Code of Federal Regulations (CFR) Part 312, Standards and Practices in order to meet "All Appropriate Inquiry" (AAI) as defined by the USEPA and qualify

<sup>3</sup> A *recognized environmental condition (REC)* refers to the presence or likely presence of any hazardous substance or petroleum product on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term is not intended to include "de minimis" conditions that do not present a threat to human health and/or the environment and that would not be subject to an enforcement action if brought to the attention of appropriate governmental agencies.

for one of the defenses under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)—aka the Superfund law—to limit cleanup liability and potentially recover future cleanup costs. WSDOT also uses the information to assess potential impacts on project design and construction. In accordance with 40 CFR 312.21, an [Environmental Professional](#) must complete the Phase I ESA. Additional information regarding a Phase I ESA is available on the WSDOT [HazMat Investigations and Documentation](#) webpage.

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

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

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

- Interviews with past and present owners, operators, and occupants (see [40 CFR 312.23](#))
- Searches for recorded environmental cleanup liens (see [40 CFR 312.25](#))
- Reviews of federal, tribal, state, and local government records (see [40 CFR 312.26](#))
- Visual inspections of the facility and of adjoining properties (see [40 CFR 312.27](#))
- The declaration by an Environmental Professional (see [40 CFR 312.21\(d\)](#))

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

WSDOT also uses property appraisals performed by the WSDOT Real Estate Services Office (RESO) as described in the [Right of Way Manual M 26-01](#). [Right of Way Manual Chapter 4](#) instructs appraisers to document potential HazMat issues on parcels such as odd soil odors or colors, the presence of tanks or drums, and suspected asbestos containing materials. If observed, the manual provides directions on how to proceed with the appraisal.

If acquiring contaminated properties, WSDOT RESO staff follows the steps outlined in [Right of Way Manual Chapter 6](#) to identify and mitigate risk as much as possible. Actions may include, but are not limited to, valuing the property as clean and holding funds in escrow for cleanup, including an indemnification clause, or a creating a Prospective Purchaser Agreement. Once the purchase of a contaminated property is complete, the RESO is required to report the information to the Environmental Services Office (ESO).

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

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

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

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

WSDOT may identify or encounter contamination during geotechnical exploration drilling. As described in the [Geotechnical Design Manual](#) M 46-03, prior to any drilling activities crews complete a geotechnical field exploration and an environmental assessment<sup>5</sup>. The manual also provides procedures for planning, storing, and disposing of potentially contaminated material generated during drilling activities. Additional information regarding Geotechnical Soil Boring Procedures is available on the WSDOT [HazMat Investigations and Documentation](#) webpage.

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

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

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

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<sup>4</sup> 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.

<sup>5</sup> The Environmental Assessment, at a minimum, should address environmentally sensitive areas, potential cultural resources, and documented or suspect contamination.

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

#### **447.04(4) Asbestos Good Faith Inspection (GFI)**

The purpose of the pre-bid asbestos GFI is to determine the presence or absence of ACM in suspect materials found in buildings, bridges, culverts, and other structures that will be disturbed during renovation or demolition activities, and to sufficiently notify employees and contractors of asbestos hazards that may be present and could be disturbed by the work. The asbestos GFI is completed with the intent of complying with and providing an AHERA-level assessment in accordance with federal, state, and local asbestos laws and regulations. These statutes are generally focused on identifying airborne emissions of asbestos fibers. This information can be used to address public and worker health concerns about exposure to ACM during construction, renovation, demolition and general housekeeping activities.

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

An AHERA Building Inspector reviews available existing objective data to aid in the identification of suspect materials that may contain ACM. Existing data can include as-built information and corresponding design plans and specifications, and previously written asbestos GFI reports. After reviewing existing objective data, the AHERA Building Inspector determines the level of additional inspection necessary, which can include performing a site visit to visually inspect to identify and/or collect material samples for laboratory analysis in order to determine the presence or absence of ACM. The scope of the visual inspection and/or sampling should consider site specific conditions and/or project specifics (i.e., full demolition, renovation, or minor repair). An asbestos GFI is not required if WSDOT assumes the suspect materials to be disturbed are ACM, however, this information must be provided in the project bid package to ensure contractors are notified of the presence or absence of ACM prior to bid opening.

After completing the GFI, the AHERA Building Inspector will write a concise GFI report that summarizes their inspection and findings of the presence or absence of ACM. Once completed, the asbestos GFI report must be uploaded into the WSDOT ECM Portal for documentation and tracking. The ESO HazMat Program can provide assistance with uploading completed asbestos GFI reports into the WSDOT ECM Portal.

WSDOT staff and consultants that are accredited AHERA Building Inspectors are qualified to perform asbestos GFI work and write a concise asbestos GFI report summarizing their inspection and findings of the presence or absence of ACM. If region staff need additional assistance with conducting GFIs, preparing GFI reports, or reviewing GFI reports, please contact the ESO HazMat Program for assistance.

## 447.05 External involvement

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

## 447.06 Internal roles and responsibilities

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

## 447.07 Applicable permits and approvals

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

- Well installation and decommissioning associated with Geotech and Construction
- Asbestos abatement and demolition
- Waste disposal at an approved facility
- Dangerous waste / RCRA identification

More information on HazMat permits and approvals is available on the [HazMat](#) webpage.

For more information on the permitting process, see [Chapter 500](#).

## 447.08 Mitigation

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

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

The table detailing select mitigation measures is organized by Environmental (Direct, Indirect, Cumulative), Construction and Liability impacts and is available on the [HazMat](#) webpage. HazMat Discipline Report writers should select only the appropriate standard impacts and mitigation measures and tailor them for the project.



## 447.09 Abbreviations and acronyms

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

## 447.10 Glossary

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

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

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

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

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

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