

## 4.10 Hazardous Materials

Hazardous materials require special handling and disposal. In Washington state, hazardous materials are regulated under several state and federal laws and categorized as hazardous waste, problem waste, petroleum products, dangerous waste, hazardous substances, or toxic substances. Encountering hazardous materials during construction could pose risks to human health and the environment or could create control or cleanup requirements for the project. This section considers the potential of the Center City Connector to encounter hazardous materials and to introduce new sources of hazardous materials contamination.

Information used to evaluate potential project impacts was obtained from databases maintained by the U.S. Environmental Protection Agency (EPA) and the Washington Department of Ecology (Ecology) to track sites with potential or confirmed hazardous material releases to the environment and facilities that manage hazardous materials as part of their operations.

The study area for the hazardous materials analysis is 1/8 mile<sup>1</sup> from either the center line of the proposed new tracks/access track or around the areas where OMF expansion would occur. Environmental database searches for sites within the study area were conducted in September and October 2014 (Environmental Data Resources, Inc. [EDR], 2014a, b, c).

The database searches identified sites within the study area that have a record of hazardous material, substance, or waste handling or that have the potential to be contaminated or have been contaminated in the past. A total of 75 sites were identified within the Center City Connector study area (see Table A-2 in Appendix D4.10).

Sites identified in the EDR search were prioritized based on potential risk levels to determine the need for avoidance, remediation, or mitigation, while considering associated costs and liability. The three risk levels are defined as follows:

### Applicable Regulations

- Comprehensive Environmental Response Compensation and Liability Act (42 U.S.C. 9601, et seq.)
- Superfund Amendment and Reauthorization Act
- Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901, et seq.)
- Clean Water Act (33 U.S.C. Section 1 251, et seq.)
- Toxics Substances Control Act (15 U.S.C. 2601-2629)
- Dangerous Waste Regulations (WAC 173-303)
- Model Toxics Control Act (WAC 173-340)
- Underground Storage Tanks (USTs) WAC 173-360

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<sup>1</sup> This study area was selected because, if contamination is present, being within 1/8 mile of a high-risk site could affect the project or the project could affect the site.

- **High Risk.** High-risk sites typically include contaminated sites that are located within or adjacent to the project construction limit and have not received a no-further action (NFA) determination from regulatory agencies such as Ecology. The high-risk level is assigned to contaminated sites that might create liability either from construction activities exposing hazardous materials or by acquiring all or a portion of the site and the liability for cleanup responsibilities.
- **Medium Risk.** Medium-risk sites are located within or adjacent to construction limits where there has been a past release, but where the sites have undergone remedial cleanup and have received an NFA determination from regulatory agencies such as Ecology.
- **Low Risk.** This risk level applies to sites where there has been no documented release to the environment and are not expected to be affected by the project. Low-risk sites where there has been a past release, and where the sites have undergone remedial cleanup and have received an NFA determination from regulatory agencies such as Ecology.

The hazardous material analysis in this EA focuses on high-risk sites because they have the greatest potential to expose hazardous materials during construction. High-risk sites in the study area are listed in Table 4.10-1 and shown on Figure 4.10-1. Detailed information can be found in Appendix D4.10.

### 4.10.1 Hazardous Materials Sites within the Study Area

There are 28 high-risk hazardous material sites in the study area (see Figure 4.10-1):

- 14 sites within 1/8 mile of the streetcar alignment
- 8 sites within 1/8 mile of the South Lake Union OMF expansion site
- 6 sites within 1/8 mile of the Chinatown-International District OMF expansion site

The only high-risk site located directly under the proposed area of construction activity is located at the Chinatown-International District OMF expansion site (Map ID A2/A8).

**Table 4.10-1 High-Risk Sites in the Study Area**

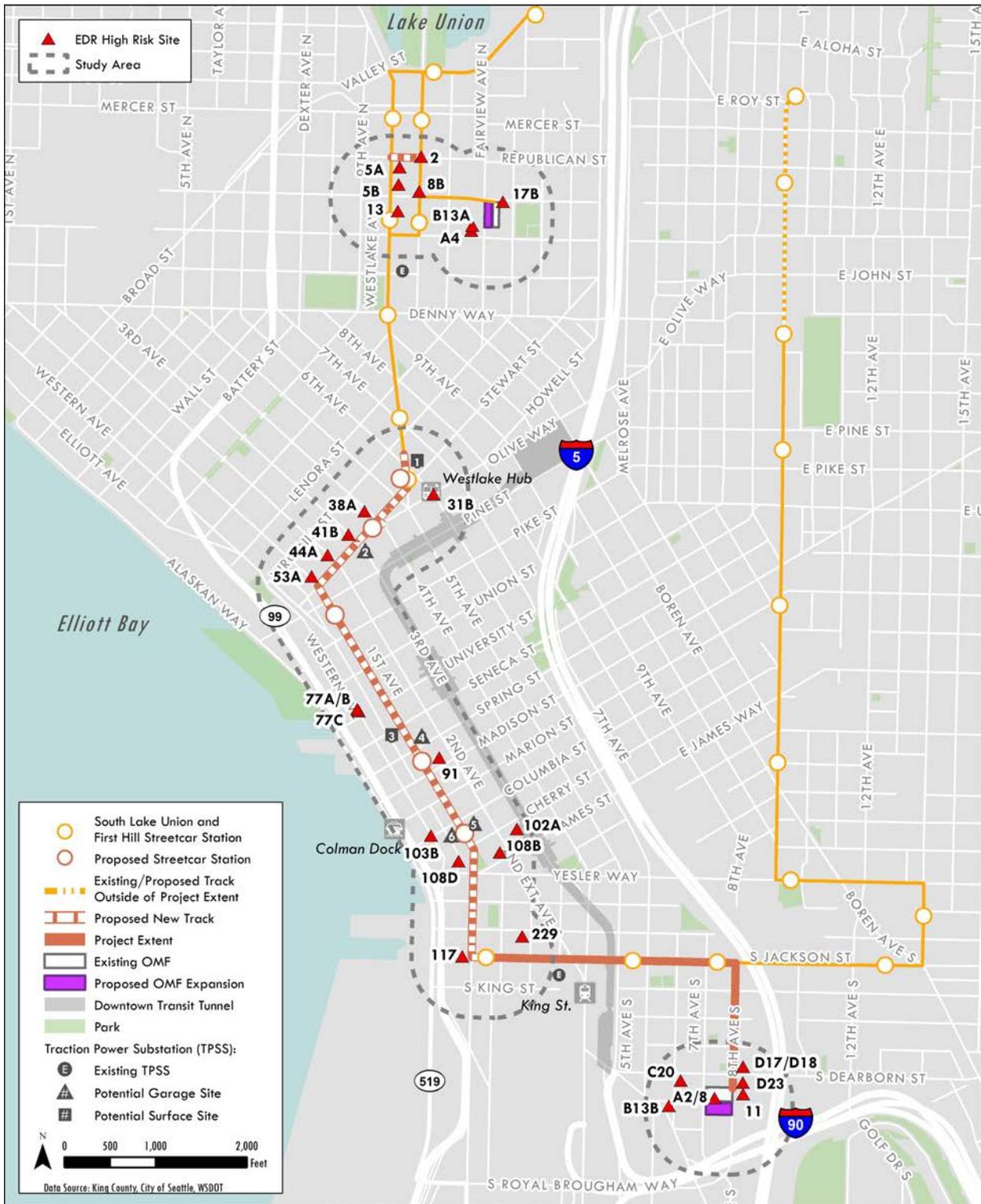
Map ID	Site Name and Address	Potential Impacts
<b>Streetcar Alignment</b>		
31B	Pacific Place Construction Sixth Ave and Olive Way	Petroleum products in soil.
38A	Fourth Ave and Virginia St 1920 Fourth Ave	Petroleum products in soil and groundwater.
41B	Barg French Cleaners 1929 Third Ave	Halogenated organics in soil and groundwater.
44A	Autopark USA Inc. 1915 Second Ave	Benzene, non-halogenated solvents, diesel, and gasoline in soil. Petroleum products are also suspected in groundwater.
53A	Saint Regis Hotel 116 Stewart St	Petroleum products in soil and groundwater.

Map ID	Site Name and Address	Potential Impacts
77A/B	Seattle Steam 1310 and 1319 Western Ave	Petroleum products in groundwater and polycyclic aromatic hydrocarbons (PAHs) and petroleum products in soil. Metals and polychlorinated biphenyl (PCBs) are also suspected in soil and groundwater, and PAHs are also suspected in groundwater.
77C	Union Substation/Seattle City Light 1312 Western Ave	Petroleum products in soil.
91	Alexis Hotel 1007 First Ave	Benzene, gasoline, and non-halogenated solvents in soil and groundwater. Lead and other metals are also confirmed in soil.
102A	Cherry Street Garage 213 Cherry St	Gasoline in soil, groundwater, and air.
103B	Commuter Centre Parking 801 Western Ave	Gasoline and other petroleum products in soil. (Seven USTs were removed in July 2011. Soil contamination, including gasoline and other petroleum products, remains above cleanup levels.)
108B	Butler Garage 114 James St	Benzene, non-halogenated solvents, and gasoline in soil and groundwater. (Two USTs were removed in 2000, and at least one tank remains in place for storage.)
108D	Seattle Steam Co 700 Post Ave	Petroleum products in soil and groundwater. Metals, PCBs, and PAHs are also suspected in soil and groundwater.
117	Old Seattle Parking Garage 74 S Jackson St	Gasoline confirmed in soil. Benzene and other petroleum products are also suspected in soil.
229	Seattle Fire Station 10 301 Second Ave S	Petroleum in soil.
<b>South Lake Union OMF Expansion Site and Access Track</b>		
2	Ivar's Commissary 500 Terry Ave N	Gasoline and other petroleum products confirmed in groundwater. Benzene, diesel, gasoline, and other petroleum products are confirmed in soil. Benzene and diesel are also suspected in groundwater.
5A	428 Westlake LLC 428 Westlake Ave N	Site has restricted land use and groundwater use and requires maintenance. In addition, all soil disturbance is prohibited at this site.
5B	Firestone Tire & Rubber Co 400 Westlake Ave N	Gasoline suspected in groundwater and soil.
8B	Lake Union III LLC 410 Terry Ave N/415 Boren Ave N/1015 Republican St	Diesel in soil.
13	Block 40 E & W Westlake & Terry Ave 320 Westlake Ave N	Petroleum products in soil.

Map ID	Site Name and Address	Potential Impacts
A4	Troy Laundry 311 Fairview Ave N	Specific contaminants of concern include trichlorethene, cis-1, 2- dichloroethene, vinyl chloride, gasoline, diesel, and oil-range petroleum hydrocarbons (Ecology, 2014). Groundwater at the site generally flows northwest (Touchstone SLU LLC, 2013), which puts this site downgradient from the South Lake Union OMF expansion site.
B13	The Seattle Times Co 307 Fairview Ave N	A site that undertook cleanup, where dangerous wastes were generated as part of the remediation in 2012.
17B	Mastercraft Metal Finishing Inc. 1175 Harrison St	Metals confirmed in soil. Metals are also suspected in surface water and air, and corrosive wastes are suspected in soil and surface water.
<b>Chinatown-International District OMF Expansion Site</b>		
A2/A8 <sup>a</sup>	<b>Charles Street Site West (Two Reports) 705 S Charles St</b>	<b>Benzene, lead, non-halogenated solvents, diesel, gasoline, and other petroleum products in soil and groundwater.</b>
11	Seattle City ESD 805 S Charles St	Benzene in soil.
B13	Triangle Property 901 Maynard Ave S	Gasoline in groundwater.
C20	Spic N Span Cleaners Corp, Inc. 652 Dearborn St	Halogenated organics, chlorinated solvents, and petroleum products in soil and groundwater.
D17/D18	Facility Maintenance Headquarters 802 S Dearborn St	Benzene, halogenated and non-halogenated organics, diesel, gasoline, and other petroleum products in soil and groundwater. Metal is also suspected in soil and groundwater. This site is also listed in the INST CONTROL database, and all groundwater uses are restricted at this site. (This site is also listed as the King County DOT Metro Transit Division with the same address. The King County DOT Metro Transit Division is listed in the ICR database as a site containing petroleum products in soil and groundwater.)
D23	Seattle City Fire Garage 815 S Dearborn St	Benzene, diesel, and gasoline confirmed in soil. Halogenated and non-halogenated organics and metals are also suspected in soil.

<sup>a</sup> Map ID A2/A8 is shaded gray in the table to indicate that it is a high-risk site located directly under the proposed area of construction activity.

Figure 4.10-1 Locations of High-Risk Sites



## 4.10.2 Impacts

### 4.10.2.1 No Build Alternative

Under the No Build Alternative, the project would not be implemented, there would be no impacts on hazardous material or contaminated sites, and there would be no releases or spills of hazardous substances. In addition, potential discovery, cleanup, or removal of new and existing hazardous material and contaminated sites would not occur under the No Build Alternative.

### 4.10.2.2 Locally Preferred Alternative

#### *Operational Impacts*

The proposed stations, trackway, OMF, and access and turnback tracks would be located within the existing public right-of-way or City of Seattle property. No new property would be acquired.

During track and streetcar maintenance, there would be an extremely low chance that a small amount of fuel or hydraulic fluid would spill. The likelihood of impacts (i.e., releases) from project operation and maintenance activities would be low. Because the streetcar would be powered by electricity, there are few risks of hazardous materials spilling as a result of vehicle operations along the route, and impacts from releases to the environment would be low because the amount of material spilled would be small. If a spill were to occur during operation, BMPs would be implemented.

Operation of the OMF would increase the likelihood of potential releases to the environment because hazardous materials such as fuels, adhesives, cleaners, epoxies, propane, grease, lubricants, paints, and solvents would be stored at the facility and used in the study area during maintenance activities. The risks of potential releases to the environment would be low, however, because the amounts of each of these materials located on the OMF site would be small, in most cases a few gallons each, and spill pollution prevention measures and other BMPs would be implemented during facility operation.

#### *Construction Impacts*

As shown on Figure 4.10-1, there are sites close to the LPA and the proposed OMF expansion sites that could be affected during construction. Compared to the No Build Alternative, the primary potential for construction impacts from the project would include:

- Release of hazardous materials into the environment through the disturbance and removal of contaminated soil and groundwater.
- Risk of construction-related hazardous materials such as fuels, oil, or uncured concrete entering soil, groundwater, or surface water as a result of spills.

Groundwater is not likely to be encountered during the construction of the proposed new trackway, turnback track, or access track because the anticipated depth of construction is less than 2 feet and up to 8 feet where utilities need to be relocated. This activity is shallower than the groundwater depth. The only exception is the installation of the OCS poles, which may need to be augered down up to 15 feet deep. However, the only area where groundwater is estimated to be at a depth of 12 feet is in Pioneer Square, where OCS poles would not be needed because this portion of the track would be wireless (Washington State Department of Natural Resources,

2014). Additionally, there are no high-risk hazardous sites underneath in this area; thus, contaminating groundwater or releasing contaminated groundwater is not likely.

The exception may be the Chinatown-International District OMF expansion site, where groundwater may be present at depths of 20 feet or greater (Washington State Department of Natural Resources, 2014).

At the Chinatown-International District OMF, new tracks and OCS would be constructed. Because OCS suspension poles are typically installed at 15-foot depths, a hazardous release into the groundwater would be avoided. As noted above in Table 4.10-1, the only high-risk site directly under the construction footprint is Map ID A2/A8 at the proposed Chinatown-International District OMF expansion site. SDOT is already implementing regulatory standards to manage this site and would continue to do so and contain the hazardous materials during construction to avoid adverse effects of releasing hazardous materials.

The likelihood of impacts from encountering existing contamination or hazardous materials containers depends upon the extent and characteristics of the contamination and hazardous materials. If construction disturbs one of the high-risk sites, a variety of impacts, both beneficial and adverse, would be possible during construction:

- Construction activities, such as grading, in the vicinity of these materials could release contaminants to soil, groundwater, and surface water.
- Contaminated materials might be uncovered, allowing more direct exposure to the public.
- Contamination might spread as a result of construction.
- If required, dewatering might generate large quantities of contaminated water that would need to be treated and disposed of.
- Contamination that otherwise would remain in place and potentially migrate might be discovered and addressed by the project.
- To accommodate project construction, contamination might be cleaned up earlier than otherwise would occur.
- Contamination might be prevented by removing potential existing sources, such as USTs and aboveground storage tanks, before they cause releases.

Under these circumstances, SDOT would implement the following BMPs, as applicable.

**Site Avoidance.** Through final design, SDOT would minimize impacts from known sites by avoiding contaminated sites, or portions of sites, as practical. By minimizing encounters with hazardous materials, the project would reduce exposure risk, as well as potential delays, construction costs, and liability associated with site acquisition and cleanup. Avoiding contaminated sites would also reduce the opportunity for beneficial impacts associated with cleanup. Avoidance would be implemented through the following strategies:

- Conducting additional studies and site surveys to confirm the presence or absence of contaminated environmental media at or near the high-risk sites. The nature and extent of contamination at high-risk sites with confirmed contamination also need to be evaluated prior to construction. For example, Map ID 5A in Table 4.10-1, located adjacent to the proposed South Lake Union OMF access tracks, indicates soil disturbance is prohibited because of existing contamination. If additional study confirms the presence of contaminated soil in the construction footprint, the area would be avoided or cleaned up prior to construction.

- Locating USTs and associated piping at sites within the construction footprint to avoid or remove prior to construction of the LPA.
- Using construction techniques that minimize disturbance or release of contaminated media.

**Cleanup Prior to Construction.** Cleanup efforts implemented before or during construction would reduce potential long-term impacts. As part of the project, SDOT would comply with hazardous materials regulatory requirements associated with project construction and operation. For example, the Chinatown-International District OMF expansion site is contaminated (Table 4.10-1, Map ID A2/A8). Prior to construction, SDOT would verify the extent of contamination at the site and minimize exposure to hazardous materials, where possible. In addition, SDOT would coordinate with the site cleanup manager and agencies to support compliance with site-specific cleanup and disposal requirements.

SDOT would also minimize potential impacts of accidental releases of hazardous material during construction, through the following strategies:

- Preparing a comprehensive contingency and hazardous substances management plan, a worker health and safety plan, a spill prevention control and countermeasures plan, and a stormwater pollution prevention plan.
- Managing and disposing of hazardous or contaminated materials in accordance with applicable requirements.
- Preparing a stormwater pollution plan to prevent pollution in stormwater runoff.

Mitigation measures to protect stormwater from contamination are found in Section 4.8, Stormwater and Water Quality.

### 4.10.3 Mitigation Measures

The most likely operational impact would be the release of hazardous materials into the environment from accidental spills at the OMF sites, and such potential impacts will be avoided or minimized by implementing BMPs, including spill prevention planning and emergency response procedures.

SDOT will continue to manage the hazardous material site currently located on the Chinatown-International District OMF site.

Construction impacts will be avoided or minimized by implementing BMPs (as listed above in Section 4.10.2.2, under the Site Avoidance and Clean-Up Prior to Construction subsections), and a spill prevention plan and emergency response procedures will be developed and implemented to guide the characterization, management, and disposal of contaminated materials, if encountered.

The contractor will develop a spill prevention plan that meets City standards to control spills on the site (Standard specifications A 1-07.15(1)8-01.3(2)C) and a waste management plan that follows City Standard Specification 1-07.3, Discoveries of Contaminated Materials, Dangerous Waste(s) and TSCA Waste(s), which includes procedures for identifying and characterizing unanticipated hazardous materials.