

# Cleanup Options Report

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Bellingham School District Bus Garage  
Agreement No. TCPIPG-2123-BSD-00032

*Prepared for:*

**Bellingham School District**

Bellingham, Washington

October 18, 2024

Project No. M0837.02.005

*Prepared by:*

Maul Foster & Alongi, Inc.

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# Cleanup Options Report

## Bellingham School District Bus Garage Agreement No. TCPIPG-2123-BSD-00032

*The material and data in this report were prepared  
under the supervision and direction of the undersigned.*

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# Contents

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Abbreviations.....	v
<b>1 Introduction.....</b>	<b>1</b>
1.1 Regulatory Framework .....	1
1.2 Purpose .....	1
<b>2 Background.....</b>	<b>1</b>
2.1 Property Description .....	2
2.2 Property History.....	2
2.3 Regulatory History and Previous Investigations.....	2
2.4 Focused Environmental Investigation .....	2
2.5 Geology and Hydrogeology .....	3
<b>3 Conceptual Site Model and Cleanup Levels .....</b>	<b>3</b>
3.1 Potential Sources and Release Mechanisms .....	4
3.2 Contaminants and Media.....	4
3.3 Fate and Transport Processes .....	5
3.4 Potential Receptors .....	5
3.5 Potential Exposure Scenarios .....	5
3.6 Cleanup Standards and Risk Screening.....	6
3.6.1 Soil Cleanup Levels .....	6
3.6.2 Groundwater Cleanup Levels.....	6
3.6.3 Risk Screening .....	6
<b>4 Potential Cleanup Options .....</b>	<b>7</b>
4.1 Cleanup Action Areas .....	7
4.2 Cleanup Technologies .....	7
4.3 Potential Cleanup Options .....	7
4.3.1 Option 1—Institutional Controls .....	8
4.3.2 Option 2—Limited Excavation, Capping, and Institutional Controls.....	8
4.3.3 Option 3—Complete Excavation and Offsite Disposal .....	8
<b>5 Preliminary Evaluation of Cleanup Options .....</b>	<b>9</b>
5.1 Model Toxics Control Act Requirements .....	9
<b>6 Conclusions.....</b>	<b>10</b>

References .....	11
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## Limitations

## Figures

### Following the Report

- 1-1 Property Location
- 2-1 Property Features
- 2-2 Previous Boring Locations
- 4-1 Cleanup Action Areas

## Tables

### Following the Report

- 2-1 Summary of Soil Analytical Results
- 2-2 Summary of Groundwater Analytical Results
- 4-1 Option 1: Institutional Controls
- 4-2 Option 2: Limited Excavation, Capping, and Institutional Controls
- 4-3 Option 3: Complete Excavation and Offsite Disposal

## Appendixes

### Appendix

- Terrestrial Ecological Evaluation

# Abbreviations

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AOIs	areas of concern
bgs	below ground surface
COIs	chemicals of interest
CSM	conceptual site model
CUL	cleanup level
District	Bellingham School District
Ecology	Washington State Department of Ecology
FEI	focused environmental investigation
MFA	Maul Foster & Alongi, Inc.
mg/kg	milligrams per kilogram
MTCA	Model Toxics Control Act
PAH	polycyclic aromatic hydrocarbon
the Property	1801 James Street, Bellingham, Washington
TEE	terrestrial ecological evaluation
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code

# 1 Introduction

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On behalf of the Bellingham School District (the District), Maul Foster & Alongi, Inc. (MFA) has prepared this cleanup options report for the bus garage property located at 1801 James Street in Bellingham, Washington (the Property) (see Figure 1-1). Due to historical underground storage tank (UST) usage on the Property, it is listed in the Washington State Department of Ecology (Ecology) cleanup database (facility site ID 57487227; cleanup site ID 9775).

This report identifies and evaluates potential cleanup options based on site-specific conditions, technical feasibility and cost, and regulatory requirements. For over 70 years, the District has operated a bus storage and maintenance facility on the Property, situated adjacent to Whatcom Creek. The District is evaluating improvements to the Property to remediate environmental impacts and enable future redevelopment.

## 1.1 Regulatory Framework

The District received an Integrated Planning Grant (Agreement No. TCPIPG-2123-BSD-00032) from Ecology to support environmental investigation and redevelopment planning activities at the Property. This report incorporates components of Washington Administrative Code (WAC) 173-340-351 for feasibility studies. Cleanup options outlined in this report are based on information provided in the focused environmental investigation (FEI) work plan (MFA 2023) and FEI report (MFA 2024).

## 1.2 Purpose

The purpose of this report is to identify and evaluate cleanup options. The specific objectives are as follows:

- Summarize information from data collected during the FEI.
- Identify feasible cleanup technologies to address contamination at the Property.
- Assemble feasible cleanup technologies into a range of potential cleanup options.
- Conduct a preliminary evaluation of the cleanup options against regulatory criteria.
- Identify the cleanup option that is most likely to be selected for implementation.

# 2 Background

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This section describes the physical location and characteristics of the Property, including geology and hydrogeology, and summarizes historical operations on the Property.

## 2.1 Property Description

The Property is located in township 38 north, section 30, range 3 east of the Willamette Meridian. The Property comprises one 3.58-acre Whatcom County tax parcel (parcel number 3803305153150000) (Figure 2-1). The Property is relatively level, sloping slightly to the north, toward Whatcom Creek. The surfacing of the western portion of the Property is gravel, while the eastern portion of the Property is largely covered by asphalt and concrete.

The physical address for the Property is 1801 James Street in Bellingham, Washington. The Property is bordered by Meador Avenue to the south, Whatcom Creek to the north and west, and James Street to the east. According to a City of Bellingham zoning map, the Property is zoned as industrial (City of Bellingham 2023).

The Property is currently used by the District for bus storage, bus maintenance, and transportation operations. The Property includes three structures: an office building, an open-air bus garage, and a maintenance building. A bus wash area is present along Meador Avenue. The maintenance building has three in-ground hydraulic lifts. It was renovated in 2020; renovations included upgrading the oil-water separator system and improving existing connections to the sanitary sewer system.

## 2.2 Property History

According to historical aerial photographs, assessor documents, and interviews, the Property was developed by 1968 with the initial construction of the maintenance building. Prior to development, the Property was heavily vegetated. Some areas of the Property were cleared of vegetation by 1955. The bus garage building was constructed between 1976 and 1981 at the center of the Property. The western portion of the Property was developed with temporary structures/vehicle staging by 1972 with the office building constructed later in 1997. The Property has been used for bus storage and maintenance activities since its development (MFA 2023).

## 2.3 Regulatory History and Previous Investigations

According to Ecology's UST database, two steel USTs were formerly located on the Property: one 1,100-gallon diesel UST and one 6,000-gallon diesel UST (Ecology 2023). The two USTs were decommissioned on the Property in the 1990s, and Ecology issued a No Further Action opinion based on the results of the confirmation soil sampling (Ecology 2012). Groundwater was not assessed during the two UST removal actions.

## 2.4 Focused Environmental Investigation

MFA conducted an FEI at the Property in October 2023, including soil and reconnaissance groundwater sample collection from ten temporary borings, B01 through B10, advanced to a maximum depth of 25 feet below ground surface (bgs) (see Figure 2-2). Borings were placed at the Property to assess five areas of interest (AOIs) based on historical operations, including the bus parking area (AOI 1), bus wash area (AOI 2), oil-water separator (AOI 3), in-ground hydraulic lifts (AOI 4), and former USTs (AOI 5). Soil samples were analyzed for a combination of analytes, including diesel- and oil-range organics, volatile organic compounds (VOCs), metals (cadmium, copper, lead,

zinc, and mercury), and polycyclic aromatic hydrocarbons (PAHs). Groundwater samples were analyzed for diesel- and oil-range organics and VOCs.

Localized exceedances of lead, heavy oils, and carcinogenic PAH toxic equivalent quotient were detected in shallow soil in the bus parking area, far from the maintenance building, oil-water separator, and former fueling operations above Model Toxics Control Act (MTCA) Method A cleanup levels (CULs) (see Table 2-1). No detections of chemicals in groundwater exceeded screening criteria at the Property (see Table 2-2).

Results of the FEI indicate current operations (bus storage and maintenance) at the Property do not appear to be contributing to soil or groundwater impacts.

## 2.5 Geology and Hydrogeology

According to the Geologic Map of the Bellingham quadrangle, the Property and vicinity are underlain by Quaternary glaciomarine drift from the Everson Interstate (Lapen 2000). The glaciomarine deposits typically consist of moderately to poorly sorted, moderately to unsorted diamicton with lenses and discontinuous beds of moderately to well-sorted gravel, sand, silt, and clay (Lapen 2000).

Soils encountered during the FEI generally consisted of a 2- to 10-foot-thick layer of gravelly sand with silt, underlain by silty sand, then a 5- to 10-foot-thick silt layer, underlain by water-bearing sand. Sand was encountered between approximately 15 and 20 feet bgs. Peat was encountered in B02, B03, B06, and B08 (see Figure 2-2).

During drilling, groundwater was encountered in all six temporary wells after the 20- to 25-foot push. Groundwater was present below a confining silt layer, and, once punctured, groundwater levels rose in the wells between 11 to 18 feet bgs. Due to the limited number of temporary wells and general unreliability of groundwater elevation measurements from reconnaissance borings, a potentiometric surface map was not prepared. However, inferred groundwater flow direction is toward the north and northeast, toward Whatcom Creek (Figure 2-1).

# 3 Conceptual Site Model and Cleanup Levels

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A conceptual site model (CSM) describes potential chemical sources, release mechanisms, environmental transport processes, exposure routes, and receptors. The primary purpose of the CSM is to describe pathways by which human and ecological receptors could be exposed to site-related chemicals. A complete exposure pathway consists of four necessary elements: (1) a source and mechanism of chemical release to the environment, (2) an environmental transport medium for a released chemical, (3) a point of potential contact with the impacted medium (referred to as the exposure point), and (4) an exposure route (e.g., soil ingestion) at the exposure point. However, an incomplete exposure pathway does not guarantee that the exposure pathway will remain incomplete.



In the FEI report, a preliminary CSM for the Property was prepared, in which information regarding existing and reasonably likely future land uses was summarized and used to describe release mechanisms, pathways, and potential human and ecological exposures (MFA 2024).

In this report, MFA updated the preliminary CSM to incorporate data collected during the FEI. The CSM is subject to additional updates pending additional data collection and/or changes in site conditions.

### 3.1 Potential Sources and Release Mechanisms

Based on documented historical uses and information obtained from interviews and property visits, the following historical and/or current operations/uses were considered for their potential to contribute to soil and/or groundwater contamination at the Property:

- Long-term storage of buses in gravel area
- Operation of bus wash area
- Operation of oil-water separator system
- Operation of in-ground hydraulic lifts
- Operation of former USTs

Based on the results of the FEI, the primary source and release mechanisms appear to be:

- Operation of the bus wash area
- Use of impacted fill material during site development

### 3.2 Contaminants and Media

The Property has been utilized for bus storage and maintenance activities since the late 1960s. Long-term vehicle parking and brake pads can release concentrations of petroleum hydrocarbons and metals to shallow soil (Ecology 2016). PAHs are often found in fuel and exhaust emissions of vehicles (Marr et.al 1999). Vehicle maintenance activities and former fuel storage operations can release petroleum hydrocarbons and VOCs (Ecology 2010).

During drilling, groundwater was generally encountered below a confining silt layer; therefore, transport of surface or near surface releases of contaminants to groundwater is unlikely. There is public concern associated with the long-term operation of the in-ground hydraulic lifts and bus wash areas impacting the adjacent Whatcom Creek. Therefore, shallow groundwater was assessed for the presence of heavy oil-range petroleum hydrocarbons and VOCs.

During the FEI, MFA detected elevated concentrations of lead, heavy oils, and benzene in localized areas of shallow soil. Groundwater detections included heavy oils and vinyl chloride. Results are presented in Tables 2-1 and 2-2, and described in the FEI report (MFA 2024). Additionally, numerous data gaps were identified from the FEI, as described in Section 3.6.

Fate and transport processes related to these exceedances and data gaps are further discussed in the next section.

### 3.3 Fate and Transport Processes

The primary mechanisms likely to influence the fate and transport of chemicals at the Property include natural biodegradation of organic chemicals, sorption to soil, volatilization into indoor air, and transformation under changing chemical conditions. The relative importance of these processes varies, depending on the chemical and physical properties of the released contaminant. The properties of soil and the dynamics of groundwater flow also affect contaminant fate and transport.

The Property contains gravel areas and partially intact asphalt and concrete surfaces. It is possible that releases of contaminants to permeable surfaces may sorb to shallow soil. Chemicals in shallow soil may volatilize and impact indoor air quality; however, limited VOCs were detected in the vicinity of existing buildings on the Property.

Volatilization of chemicals to outdoor air would likely dissipate and not cause significant impacts to air quality. Leaching of surface soil impacts would be limited by the fine-grained subsurface material (e.g., silts) beneath the Property. Additionally, groundwater was generally encountered below a confining silt layer; therefore, transport of surface releases to groundwater is unlikely. Due to the limited migration of chemicals to groundwater, impacts to surface water in Whatcom Creek from groundwater discharge are unlikely. Surface contaminant migration via overland flow is not likely, as surface water infiltrates in gravel areas present across the Property.

### 3.4 Potential Receptors

The following receptors were considered for potential current or future exposure to chemicals present on the Property:

- Construction workers
- Occupational workers
- Ecological (terrestrial and aquatic plants, wildlife, and biota).

MFA conducted a terrestrial ecological evaluation (TEE) to assess the risk to ecological receptors on the Property. Based on TEE evaluation presented in the Appendix, it was concluded that no adverse effects to plant, soil biota, or wildlife receptors are expected at the Property.

Based on the results of the FEI and TEE, the following receptors may be exposed to chemicals present on the Property:

- Construction workers
- Occupational workers

### 3.5 Potential Exposure Scenarios

MFA assessed numerous potential current or future exposure pathways at the Property, presented on Figure 3-1. The following are primary exposure pathways:

- Incidental ingestion of surface or subsurface soil
- Incidental contact with surface or subsurface soil

- Inhalation of fugitive dust generated from surface and/or subsurface soil
- Inhalation of air vapors emanating from soil

Drinking water at the Property is provided by the City of Bellingham; however, it is assumed that groundwater is potentially potable unless otherwise determined, consistent with MTCA. Groundwater was generally encountered below a confining silt layer, preventing leaching; additionally, the results of the data collected in the FEI (summarized in the next section) indicate that exposure to chemicals via drinking water would be insignificant.

Fishing is not an anticipated exposure scenario, as recreational fishing along Whatcom Creek is only legal below Dupont Street (see WAC 220-312-040 (306)(a)).

## 3.6 Cleanup Standards and Risk Screening

Soil and groundwater screening results are summarized in Tables 2-1 and 2-2.

### 3.6.1 Soil Cleanup Levels

For human health screening, soil results were screened against MTCA Method A CULs for unrestricted land use. For certain constituents, MTCA Method A CULs are not available, and data were screened to Method B direct contact CULs and soil protective of groundwater to surface water (vadose zone, fresh water) screening criteria. Method B CULs may be used at any site. As discussed in Section 3.4 and the Appendix, the Property qualifies for an exclusion from the TEE.

### 3.6.2 Groundwater Cleanup Levels

Generally, groundwater was screened to MTCA Method A CULs. For certain constituents, MTCA Method A CULs are not available and Method B CULs were applied.

### 3.6.3 Risk Screening

During the FEI, MFA identified localized areas of lead and heavy oils detections above their respective MTCA Method A CULs in shallow soil in the bus parking area. The exceedances were located far from the maintenance building, oil-water separator, and former fueling operations. Additionally, benzene was detected above its MTCA Method A CUL in soil at B07, near the bus wash.

No detections of chemicals of interest (COIs) in groundwater exceeded screening criteria at the Property.

The following data gaps identified from the FEI are discussed below:

- Isolated low-level detections of solvents in soil and groundwater were identified in the inferred upgradient portion of the Property, indicating a potential off-property source.
  - While this is a data gap, the low levels of solvents detected during the FEI are well below their respective cleanup levels, do not appear to pose a threat to human health.
  - Additional groundwater data may be collected in supplemental investigations.
- Benzene detections in soil at B07 (near the bus wash) and at B10 (near the former USTs), potentially indicate the presence of gasoline-range organics in soil, as benzene is a common gasoline fuel additive.

- Gasoline-range organics will be analyzed in supplemental data investigations.
- Copper and zinc exceedances of soil protective of groundwater to surface water (vadose zone, fresh water) screening criteria indicate that this pathway should be further assessed.
- As described in Section 7.1 of the FEI report, due to limitations in this model, these exceedances are not necessarily indicative of impacts to surface water (MFA 2024).

## 4 Potential Cleanup Options

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While MFA has identified data gaps from the FEI, the results of the investigation provide a general sense of environmental conditions at the Property, which can be used to evaluate cleanup needs. This section identifies feasible cleanup technologies and assembles those technologies into potential options for addressing contamination in defined cleanup action areas.

### 4.1 Cleanup Action Areas

Cleanup action areas consist of three areas in the bus parking and bus wash portions of the Property. These areas, shown in Figure 4-1, were delineated based on soil data collected during the FEI. The North Cleanup Action Area is an approximately 11,100 square foot area around B01, where soil impacts were observed in the northern portion of the bus parking area. The West Cleanup Action Area is an approximately 2,300 square foot area around B04, where soil impacts were identified to the west of the office. The East Cleanup Action Area is an approximately 4,000 square foot area around B07, where soil impacts were identified near the bus wash.

### 4.2 Cleanup Technologies

Cleanup technologies considered for addressing contaminants in the soil include the following:

- Institutional controls
- Capping
- Excavation and offsite disposal

### 4.3 Potential Cleanup Options

Cleanup technologies were incorporated into a range of cleanup options. The objectives of the cleanup options include:

- Removing sources of COIs from the Property
- Eliminating exposure pathways

All cleanup options assume that contaminated soil impacts do not extend off-property. If contamination extends off-property, cleanup costs will be higher.

Options 2 and 3 assume that supplemental environmental investigation is required to delineate the extent of environmental impacts. The cost of this additional sampling work is included in the cost estimates for these cleanup options. The probable costs associated with these options may be different based on the results of the supplemental environmental investigation.

### 4.3.1 Option 1—Institutional Controls

Option 1 addresses the potential exposure of site occupants to contaminated soil through institutional controls, and includes the following actions:

- Institutional Controls—Concentrations of COIs above applicable CULs will remain in soil on the Property. Institutional controls will be implemented to establish administrative protections to document environmental conditions and prevent exposure. Institutional controls will include an environmental covenant preventing the disturbance of soil on the Property.

Cost—The estimated probable cost for Option 1 is \$30,000 (-30/+50%). Details are presented in Table 4-1.

### 4.3.2 Option 2—Limited Excavation, Capping, and Institutional Controls

Option 2 uses a combination of selective excavation, engineering, and institutional controls to prevent exposure to contaminated soil. Option 2 includes the following actions:

- Supplemental Environmental Investigation—Conduct additional sampling around shallow exceedances to further characterize the horizontal extent of soil impacts and inform excavation areas.
- Limited Excavation and Capping—Excavation of shallow soil (up to ~3 feet bgs and 160 bank cubic yards) to remove the highest exceedances (see limited cleanup action areas on Figure 4-1). Remedial excavations will be lined with demarcation fabric before being backfilled with clean material, which will act as a permeable cap for deeper exceedances.
- Institutional Controls—Some concentrations of COIs above applicable CULs will remain in soil on the Property. Institutional controls will be implemented to establish administrative protections to document site conditions and prevent exposure. Institutional controls will include an environmental covenant preventing the disturbance of soil on the Property and a site management plan outlining procedures for conducting cap inspections and repairs.

All excavated soil will be disposed of offsite at an appropriate landfill. It is assumed that all excavated material will be disposed of as nonhazardous waste. Dewatering within the excavation is not anticipated.

Cost—The estimated probable cost for Option 2 is \$250,700 (-30/+50%). Details are presented in Table 4-2.

### 4.3.3 Option 3—Complete Excavation and Offsite Disposal

Option 3 addresses the potential exposure of site occupants to contaminated soil by complete source removal and includes the following actions:

- Supplemental Environmental Investigation— Conduct additional sampling to further characterize the extent of soil impacts and inform excavation areas. A targeted excavation extent may be confirmed by field samples without additional characterization.

- Excavation and Offsite Disposal—Excavate extent of soil impacts in the north, west, and east cleanup action areas, as follows (see cleanup action areas on Figure 4-1):
  - North Cleanup Action Area: Approximately 4,110 cubic yards of material, with a maximum depth of 10 feet bgs.
  - West Cleanup Action Area: Approximately 260 cubic yards of material, with a maximum depth of 3 feet bgs.
  - East Cleanup Action Area: Approximately 740 cubic yards of material, with a maximum depth of 5 feet bgs.

All excavated soil will be disposed of offsite at an appropriate landfill. It is assumed that all excavated material will be disposed of as nonhazardous waste. Dewatering within the excavations is not anticipated. The excavation will be backfilled with clean imported material.

Cost—The estimated probable cost for Option 3 is \$1,363,000 (-30/+50%). Details are presented in Table 4-3.

## 5 Preliminary Evaluation of Cleanup Options

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### 5.1 Model Toxics Control Act Requirements

Criteria used to evaluate cleanup options are defined in the MTCA regulation (WAC 173-340-360). These criteria are as follows:

- Threshold requirements:
  - Protect human health and the environment
  - Comply with cleanup standards (WAC 173-340-700 through 173-340-760)
  - Comply with applicable state and federal laws (WAC 173-340-710)
  - Provide for compliance monitoring (WAC 173-340-410 and 173-340-720 through 173-340-760)
- Other requirements:
  - Use permanent solutions to the maximum extent practicable
  - Provide for a reasonable restoration timeframe
  - Consider public concerns (WAC 173-340-600)

Regarding the threshold requirements, all cleanup options:

- Protect human health and the environment
- Are expected to comply with the preliminary CULs presented in Tables 2-1 and 2-2

- Include compliance monitoring
- Would be designed to comply with applicable state and federal laws

With regard to other requirements:

- Option 3 is the most permanent solution to the maximum extent practicable. It possesses long-term effectiveness with an implementable timeline
- Option 2 is a moderately permanent solution to the maximum extent practicable
- All cleanup options have a reasonable restoration timeframe. Each option has the following estimate timeframes to meet the preliminary CULs presented in Tables 2-1 and 2-2: Option 1, 1 year; Option 2, 3 years; Option 3, 2 years.
- The approximate overall cleanup costs are as follows: Option 1—\$30,000; Option 2—\$250,700; Option 3—\$1,363,000.
- All cleanup options would consider public concerns. Public concerns are collected and addressed during the regulatory cleanup process through opportunities to review and comment on cleanup documents.

## 6 Conclusions

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Based on the preliminary evaluation of cleanup options and MFA's understanding of the District's plans for the Property, Option 2 would likely be selected for implementation. Option 2 is protective of human and ecological receptors, moderately permanent, and cost-effective. Additionally, MFA understands that the Property may be redeveloped in the future. Components of redevelopment, such as hardscaping and/or buildings, may act as additional caps for remaining contamination left in place following the limited excavation.

MFA acknowledges that the data collected in the FEI was limited, and supplemental environmental investigation would help inform the extent of contamination and refine associated cleanup costs.



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# Limitations

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Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

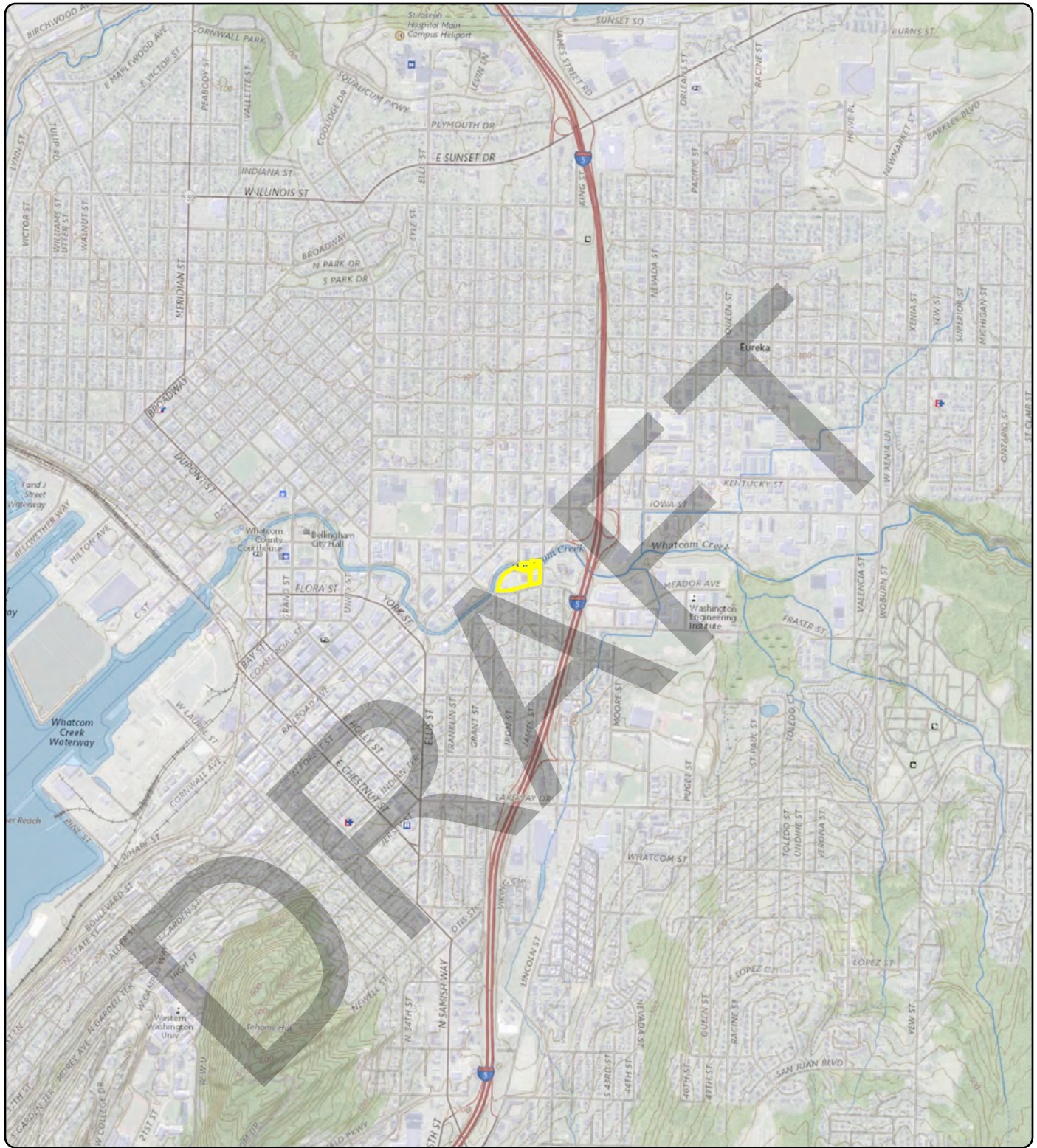
# Figures

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DRAFT



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**Notes**  
U.S. Geological Survey 7.5-minute topographic quadrangle (2020): Bellingham North.  
Township 38 north, range 3 east, section 30.

**Data Source**  
Property boundary obtained from Whatcom County.

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**Legend**

 Property Boundary

**Figure 1-1**  
**Property Location**

Bellingham School District Bus Garage  
Bellingham, Washington

0 1,000 2,000  
Feet





Path: X:\0837\_02\_BellinghamSchoolDistrict\Proj\W0837\_02\_005\_001.dgn  
Print Date: 9/13/2023  
Engineer: B. Foster  
Produced By: cfbkby  
Project: W0837\_02\_005

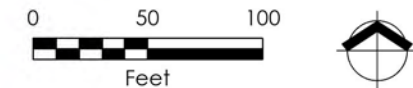


**Figure 2-1**  
**Property Features**  
Bellingham School District  
Bus Garage  
Bellingham, Washington

**Legend**

- Tax lot
- Property Boundary
- Former USTs
- Gravel Area
- Hydraulic Lifts
- Bus Wash Area
- Oil-Water Separator System
- Electric Line
- Sewer Line
- Storm Line
- Water Line

**Note**  
All features are approximate.  
UST = underground storage tank.



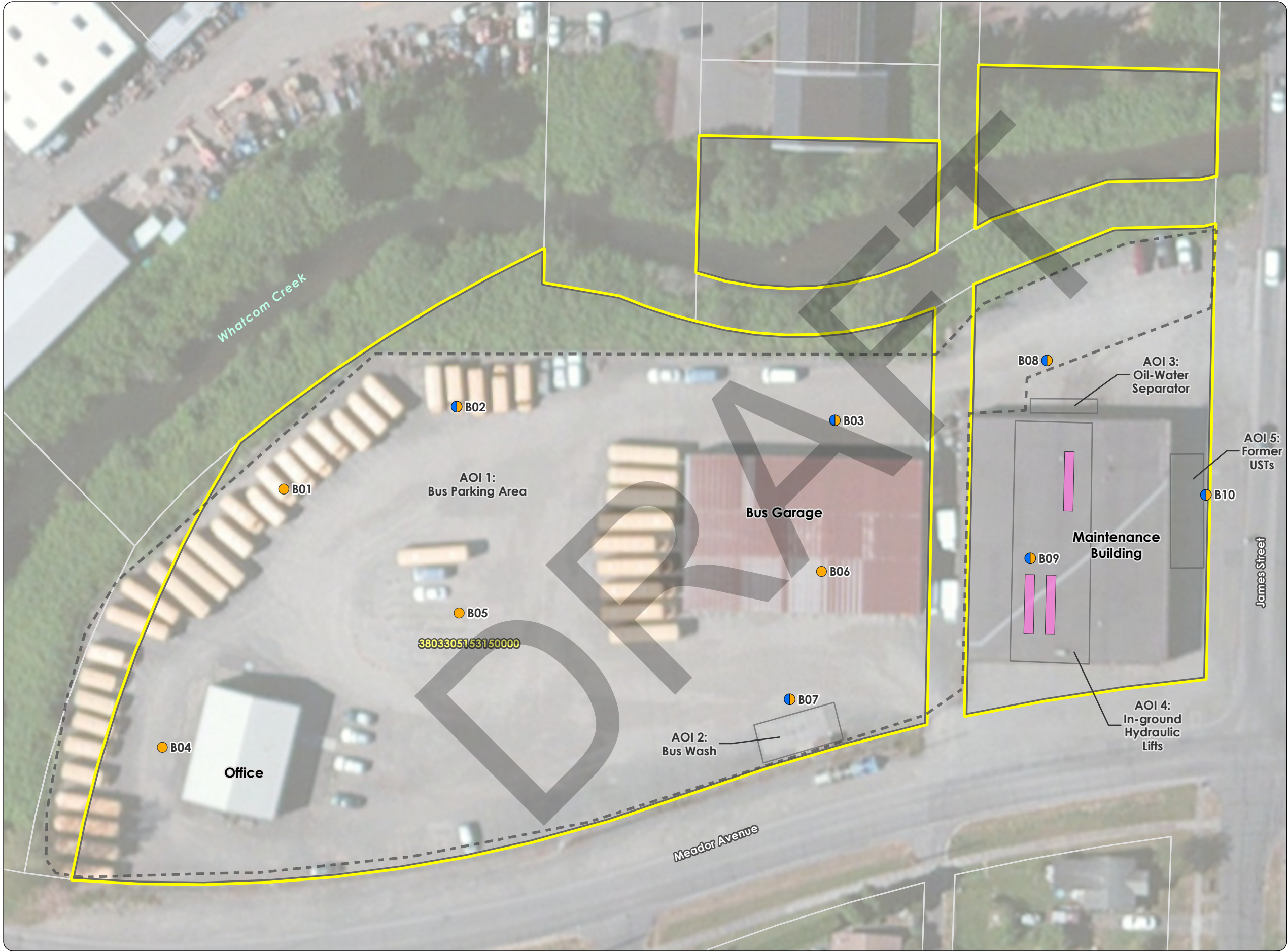
**Data Sources**  
Aerial photograph obtained from Esri;  
tax lot data obtained from Whatcom County;  
utilities obtained from Port of Bellingham.

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Path: X:\0837\02 Bellingham School District\Pro\M0837\_02\_005\_001\_001D.aprx Fig 3-1 Sampling Locations  
Print Date: 12/7/2023  
Reviewed By: abixby  
Produced By: sturner  
Project: M0837\02\_005



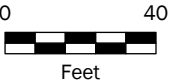
**Figure 2-2**  
**Sampling Locations**

Bellingham School District  
Bus Garage  
Bellingham, WA

**Legend**

- Soil
- Soil and Groundwater
- Gravel Area
- In-ground Hydraulic Lift
- AOI
- Property Boundary
- Tax lot

**Notes**  
All features are approximate.  
AOI = area of interest.  
UST = underground storage tank.

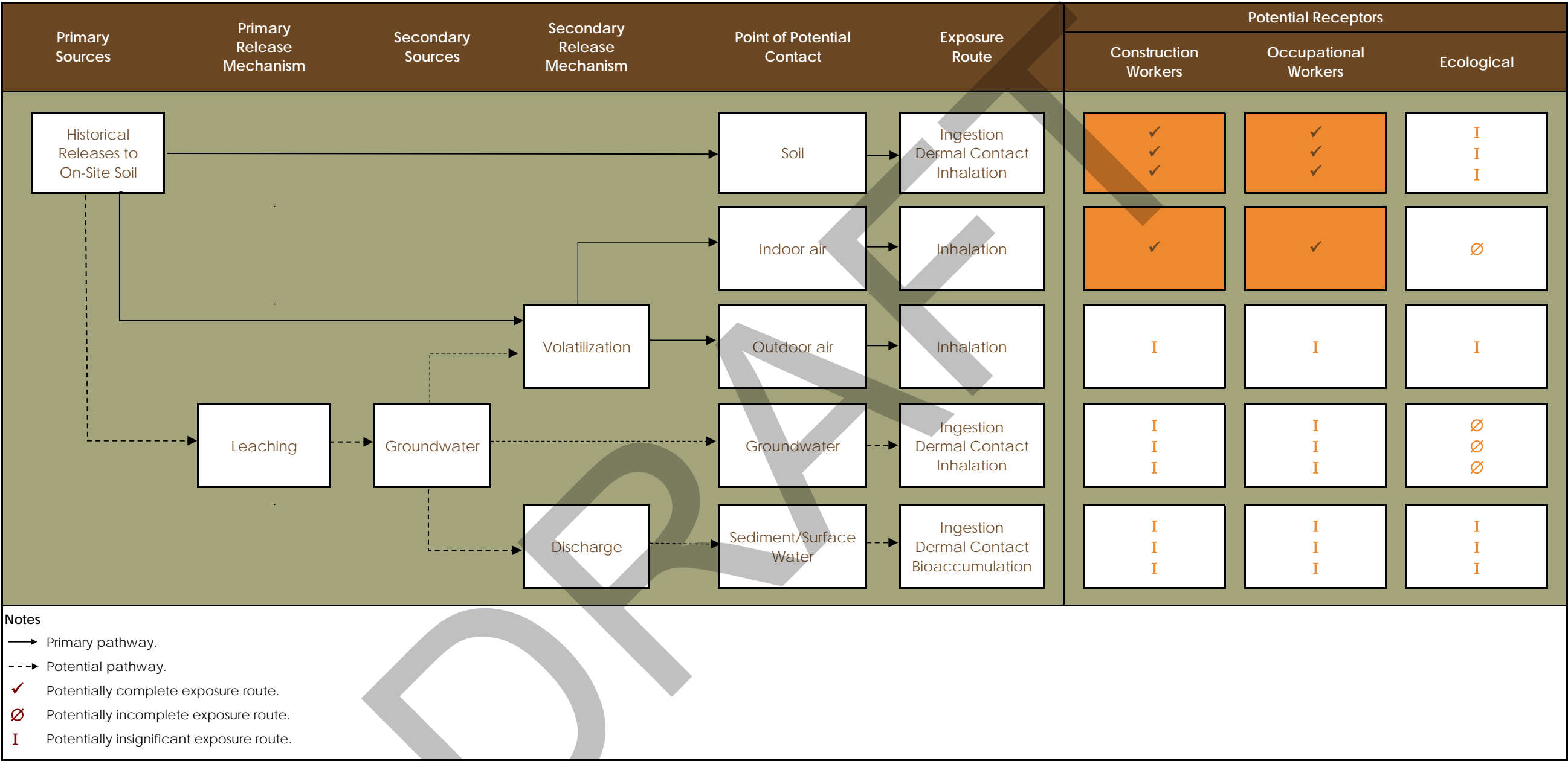


**Data Sources**  
Aerial photograph obtained Esri; tax lot data obtained from Whatcom County. Utilities obtained from Port of Bellingham.

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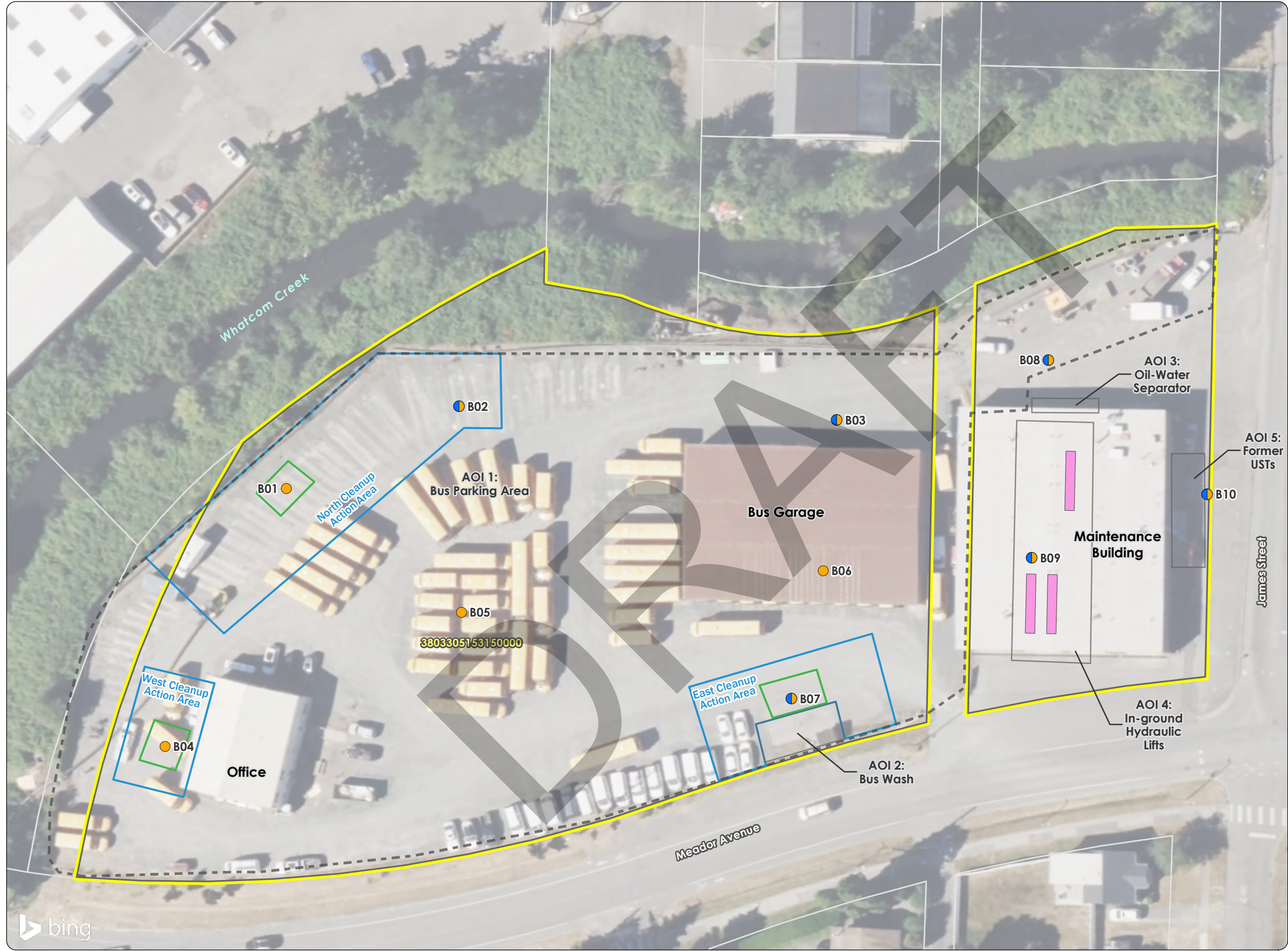
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Figure 5-1  
Preliminary Conceptual Site Model  
Focused Environmental Investigation  
Bellingham School District Bus Garage





Path: \\s083702-BellinghamSchoolDistrict\Pro\M0837\_02\_005\_002.aprx [Fig 4-1 Cleanup Action Areas]  
Print Date: 10/23/2024  
Reviewed By: abibby  
Produced By: sturner  
Project: M083702.005



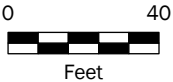
**Figure 4-1**  
**Cleanup Action Areas**

Bellingham School District  
Bus Garage  
Bellingham, WA

**Legend**

- Soil Sample
- Soil and Groundwater Sample
- Gravel Area
- In-ground Hydraulic Lift
- AOI
- Cleanup Action Area
- Limited Cleanup Action Area
- Property Boundary
- Tax lot

**Notes**  
All features are approximate.  
AOI = area of interest.  
UST = underground storage tank.



**Data Sources**  
Aerial photograph obtained Esri; tax lot data obtained from Whatcom County. Utilities obtained from Port of Bellingham.

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## Tables

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Table 2-1  
Summary of Soil Analytical Results  
Cleanup Options Report  
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use <sup>(a)(1)</sup>	MTCA Method B <sup>(a)(b)(1)</sup>	MTCA, Soil, Protective of Groundwater to Surface Water <sup>(1)</sup>	Background Metals Concentrations <sup>(2)</sup>	B01		B02	B03	B04		B05
Sample Name:					B01-S-1.5	B01-S-6.5	B02-S-3.0	B03-S-2.5	B04-S-1.0	B04-S-7.0	B05-S-1.7
Collection Date:					10/12/2023	10/12/2023	10/11/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):					1.5	6.5	3.0	2.5	1.0	7.0	1.7
TPH (mg/kg)											
Diesel-range hydrocarbons	2,000	NV	NV	NV	240	--	390	50 U	410	50 U	56
Motor-oil-range hydrocarbons	2,000	NV	NV	NV	1,600	--	250 U	1,200	2,000	250 U	430
Diesel+Oil <sup>(c)</sup>	2,000	NV	NV	NV	1,800	--	520	1,200	2,400	250 U	490
Total Metals (mg/kg)											
Cadmium	2	NA	NA	1	1.64	--	1 U	1 U	1 U	--	1 U
Copper	NV	3,200	4.9	36	36.6	--	51.9	40.3	17.2	--	19.4
Lead	250	NV	NA	24	3,000	491	55.3	173	76.3	--	80.3
Mercury	2	NV	NA	0.07	0.11	--	0.22	0.11	0.11	--	0.1 U
Zinc	NV	24,000	120	85	97.8	--	146	73.0	41.3	--	37.8
VOCs (mg/kg)											
1,1,1,2-Tetrachloroethane	NV	38	NV	NV	--	--	--	--	--	--	--
1,1,1-Trichloroethane	2	NA	NA	NV	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	NV	5	0.00056	NV	--	--	--	--	--	--	--
1,1,2-Trichloroethane	NV	18	0.0019	NV	--	--	--	--	--	--	--
1,1-Dichloroethane	NV	180	NV	NV	--	--	--	--	--	--	--
1,1-Dichloroethene	NV	4,000	2	NV	--	--	--	--	--	--	--
1,1-Dichloropropene	NV	NV	NV	NV	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	NV	64	NV	NV	--	--	--	--	--	--	--
1,2,3-Trichloropropane	NV	0.0063	NV	NV	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	NV	34	0.0013	NV	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	NV	800	NV	NV	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	NV	0.23	NV	NV	--	--	--	--	--	--	--
1,2-Dibromoethane	0.005	NA	NA	NV	--	--	--	--	--	--	--
1,2-Dichlorobenzene	NV	7,200	8.2	NV	--	--	--	--	--	--	--
1,2-Dichloroethane	NV	11	0.043	NV	--	--	--	--	--	--	--
1,2-Dichloropropane	NV	27	0.0036	NV	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	NV	800	NV	NV	--	--	--	--	--	--	--
1,3-Dichlorobenzene	NV	NV	0.023	NV	--	--	--	--	--	--	--
1,3-Dichloropropane	NV	1,600	NV	NV	--	--	--	--	--	--	--
1,4-Dichlorobenzene	NV	190	3.3	NV	--	--	--	--	--	--	--
2,2-Dichloropropane	NV	NV	NV	NV	--	--	--	--	--	--	--
2-Butanone	NV	48,000	NV	NV	--	--	--	--	--	--	--
2-Chlorotoluene	NV	1,600	NV	NV	--	--	--	--	--	--	--

Table 2-1  
Summary of Soil Analytical Results  
Cleanup Options Report  
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use <sup>(a)(1)</sup>	MTCA Method B <sup>(a)(b)(1)</sup>	MTCA, Soil, Protective of Groundwater to Surface Water <sup>(1)</sup>	Background Metals Concentrations <sup>(2)</sup>	B01		B02	B03	B04		B05
Sample Name:					B01-S-1.5	B01-S-6.5	B02-S-3.0	B03-S-2.5	B04-S-1.0	B04-S-7.0	B05-S-1.7
Collection Date:					10/12/2023	10/12/2023	10/11/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			Vadose at 13°C, Freshwater	Puget Sound	1.5	6.5	3.0	2.5	1.0	7.0	1.7
2-Hexanone	NV	400	NV	NV	--	--	--	--	--	--	--
4-Chlorotoluene	NV	1,600	NV	NV	--	--	--	--	--	--	--
VOCs (mg/kg) cont.											
4-Isopropyltoluene	NV	NV	NV	NV	--	--	--	--	--	--	--
4-Methyl-2-pentanone	NV	6,400	NV	NV	--	--	--	--	--	--	--
Acetone	NV	72,000	NV	NV	--	--	--	--	--	--	--
Benzene	0.03	NA	NA	NV	--	--	--	--	--	--	--
Bromobenzene	NV	640	NV	NV	--	--	--	--	--	--	--
Bromodichloromethane	NV	16	0.0034	NV	--	--	--	--	--	--	--
Bromoform	NV	130	0.03	NV	--	--	--	--	--	--	--
Bromomethane	NV	110	0.45	NV	--	--	--	--	--	--	--
Carbon tetrachloride	NV	14	0.0016	NV	--	--	--	--	--	--	--
Chlorobenzene	NV	1,600	0.86	NV	--	--	--	--	--	--	--
Chloroethane	NV	NV	NV	NV	--	--	--	--	--	--	--
Chloroform	NV	32	0.31	NV	--	--	--	--	--	--	--
Chloromethane	NV	NV	NV	NV	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	NV	160	NV	NV	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	NV	NV	NV	NV	--	--	--	--	--	--	--
Dibromochloromethane	NV	12	0.0028	NV	--	--	--	--	--	--	--
Dibromomethane	NV	800	NV	NV	--	--	--	--	--	--	--
Dichlorodifluoromethane (Freon 12)	NV	16,000	NV	NV	--	--	--	--	--	--	--
Ethylbenzene	6	NA	NA	NV	--	--	--	--	--	--	--
Hexachlorobutadiene	NV	13	0.00021	NV	--	--	--	--	--	--	--
Isopropylbenzene	NV	8,000	NV	NV	--	--	--	--	--	--	--
m,p-Xylene	NV	NV	NV	NV	--	--	--	--	--	--	--
Methyl tert-butyl ether	0.1	NA	NA	NV	--	--	--	--	--	--	--
Methylene chloride	0.02	NA	NA	NV	--	--	--	--	--	--	--
Naphthalene	5	NA	NA	NV	--	--	--	--	--	--	--
n-Hexane	NV	4,800	NV	NV	--	--	--	--	--	--	--
n-Propylbenzene	NV	8,000	NV	NV	--	--	--	--	--	--	--
o-Xylene	NV	16,000	NV	NV	--	--	--	--	--	--	--
sec-Butylbenzene	NV	8,000	NV	NV	--	--	--	--	--	--	--
Styrene	NV	16,000	NV	NV	--	--	--	--	--	--	--
tert-Butylbenzene	NV	8,000	NV	NV	--	--	--	--	--	--	--

Table 2-1  
Summary of Soil Analytical Results  
Cleanup Options Report  
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use <sup>(a)(1)</sup>	MTCA Method B <sup>(a)(b)(1)</sup>	MTCA, Soil, Protective of Groundwater to Surface Water <sup>(1)</sup>	Background Metals Concentrations <sup>(2)</sup>	B01		B02	B03	B04		B05
Sample Name:					B01-S-1.5	B01-S-6.5	B02-S-3.0	B03-S-2.5	B04-S-1.0	B04-S-7.0	B05-S-1.7
Collection Date:					10/12/2023	10/12/2023	10/11/2023	10/12/2023	10/12/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			Vadose at 13°C, Freshwater	Puget Sound	1.5	6.5	3.0	2.5	1.0	7.0	1.7
Tetrachloroethene	0.05	NA	NA	NV	--	--	--	--	--	--	--
Toluene	7	NA	NA	NV	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	NV	1,600	0.52	NV	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	NV	NV	NV	NV	--	--	--	--	--	--	--
VOCs (mg/kg) cont.											
Trichloroethene	0.03	NA	NA	NV	--	--	--	--	--	--	--
Trichlorofluoromethane (Freon 11)	NV	24,000	NV	NV	--	--	--	--	--	--	--
Vinyl chloride	NV	0.67	0.00012	NV	--	--	--	--	--	--	--
Xylenes, total <sup>(d)</sup>	9	NA	NA	NV	--	--	--	--	--	--	--
PAHs (mg/kg)											
1-Methylnaphthalene	NV	34	NV	NV	--	--	--	--	2.1	0.01 U	--
2-Methylnaphthalene	NV	320	NV	NV	--	--	--	--	0.1	0.01 U	--
Acenaphthene	NV	4,800	3.1	NV	--	--	--	--	0.1 U	0.01 U	--
Acenaphthylene	NV	NV	NV	NV	--	--	--	--	0.1 U	0.01 U	--
Anthracene	NV	24,000	47	NV	--	--	--	--	0.1 U	0.01 U	--
Benzo(a)anthracene	NV	NV	NV	NV	--	--	--	--	0.026 J	0.01 U	--
Benzo(a)pyrene	0.19 <sup>(e)(3)</sup>	NA	NA	NV	--	--	--	--	0.075 J	0.01 U	--
Benzo(b)fluoranthene	NV	NV	NV	NV	--	--	--	--	0.10 J	0.01 U	--
Benzo(ghi)perylene	NV	NV	NV	NV	--	--	--	--	0.13 J	0.01 U	--
Benzo(k)fluoranthene	NV	NV	NV	NV	--	--	--	--	0.1 UJ	0.01 U	--
Chrysene	NV	NV	NV	NV	--	--	--	--	0.21	0.01 U	--
Dibenzo(a,h)anthracene	NV	NV	NV	NV	--	--	--	--	0.057 J	0.01 U	--
Fluoranthene	NV	3,200	5.9	NV	--	--	--	--	0.057 J	0.01 U	--
Fluorene	NV	3,200	1.6	NV	--	--	--	--	0.21	0.01 U	--
Indeno(1,2,3-cd)pyrene	NV	NV	NV	NV	--	--	--	--	0.033 J	0.01 U	--
Naphthalene	5	NA	NA	NV	--	--	--	--	0.1 U	0.01 U	--
Phenanthrene	NV	NV	NV	NV	--	--	--	--	0.15	0.01 U	--
Pyrene	NV	2,400	11	NV	--	--	--	--	0.25	0.01 U	--
Naphthalenes, total <sup>(f)</sup>	5	NA	NA	NV	--	--	--	--	2.3	0.01 U	--
cPAH TEQ <sup>(g)(4)</sup>	0.19 <sup>(e)(3)</sup>	NA	NA	NV	--	--	--	--	0.10 J	0.01 U	--

Table 2-1  
Summary of Soil Analytical Results  
Cleanup Options Report  
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use <sup>(a)(1)</sup>	MTCA Method B <sup>(a)(b)(1)</sup>	MTCA, Soil, Protective of Groundwater to Surface Water <sup>(1)</sup>	Background Metals Concentrations <sup>(2)</sup>	B06	B07		B08	B09	B10		
Sample Name:					B06-S-1.0	B07-S-2.0	B07-S-6.0	B08-S-3.0	B09-S-3.0	B10-S-2.5	BDUP-S-2.5	
Collection Date:						10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):					Vadose at 13°C, Freshwater	Puget Sound	1.0	2.0	6.0	3.0	3.0	2.5
TPH (mg/kg)												
Diesel-range hydrocarbons	2,000	NV	NV	NV	50 U	50 U	--	50 U	50 U	50 U	50 U	
Motor-oil-range hydrocarbons	2,000	NV	NV	NV	280	250 U	--	250 U	250 U	440	250 U	
Diesel+Oil <sup>(c)</sup>	2,000	NV	NV	NV	310	250 U	--	250 U	250 U	470	250 U	
Total Metals (mg/kg)												
Cadmium	2	NA	NA	1	1 U	1.62	--	1 U	1 U	--	--	
Copper	NV	3,200	4.9	36	21.6	60.8	--	26.5	26.7	--	--	
Lead	250	NV	NA	24	11.3	377	8.17	71.4	9.67	--	--	
Mercury	2	NV	NA	0.07	0.1 U	0.26	--	0.1 U	0.1 U	--	--	
Zinc	NV	24,000	120	85	57.4	616	--	58.4	48.5 J	--	--	
VOCs (mg/kg)												
1,1,1,2-Tetrachloroethane	NV	38	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
1,1,1-Trichloroethane	2	NA	NA	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U	
1,1,2,2-Tetrachloroethane	NV	5	0.00056	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
1,1,2-Trichloroethane	NV	18	0.0019	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
1,1-Dichloroethane	NV	180	NV	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U	
1,1-Dichloroethene	NV	4,000	2	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U	
1,1-Dichloropropene	NV	NV	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
1,2,3-Trichlorobenzene	NV	64	NV	NV	--	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	
1,2,3-Trichloropropane	NV	0.0063	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
1,2,4-Trichlorobenzene	NV	34	0.0013	NV	--	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U	
1,2,4-Trimethylbenzene	NV	800	NV	NV	--	0.13	--	0.05 U	0.05 U	0.05 U	0.05 U	
1,2-Dibromo-3-chloropropane	NV	0.23	NV	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U	
1,2-Dibromoethane	0.005	NA	NA	NV	--	0.005 U	--	0.005 U	0.005 U	0.005 U	0.005 U	
1,2-Dichlorobenzene	NV	7,200	8.2	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
1,2-Dichloroethane	NV	11	0.043	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U	
1,2-Dichloropropane	NV	27	0.0036	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
1,3,5-Trimethylbenzene	NV	800	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
1,3-Dichlorobenzene	NV	NV	0.023	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
1,3-Dichloropropane	NV	1,600	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
1,4-Dichlorobenzene	NV	190	3.3	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
2,2-Dichloropropane	NV	NV	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	
2-Butanone	NV	48,000	NV	NV	--	1 U	--	1 U	1 U	1 U	1 U	
2-Chlorotoluene	NV	1,600	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	

Table 2-1  
Summary of Soil Analytical Results  
Cleanup Options Report  
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use <sup>(a)(1)</sup>	MTCA Method B <sup>(a)(b)(1)</sup>	MTCA, Soil, Protective of Groundwater to Surface Water <sup>(1)</sup>	Background Metals Concentrations <sup>(2)</sup>	B06	B07		B08	B09	B10	
Sample Name:					B06-S-1.0	B07-S-2.0	B07-S-6.0	B08-S-3.0	B09-S-3.0	B10-S-2.5	BDUP-S-2.5
Collection Date:					10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			Vadose at 13°C, Freshwater	Puget Sound	1.0	2.0	6.0	3.0	3.0	2.5	2.5
2-Hexanone	NV	400	NV	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U
4-Chlorotoluene	NV	1,600	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
VOCs (mg/kg) cont.											
4-Isopropyltoluene	NV	NV	NV	NV	--	0.055	--	0.05 U	0.05 U	0.05 U	0.05 U
4-Methyl-2-pentanone	NV	6,400	NV	NV	--	1 U	--	1 U	1 U	1 U	1 U
Acetone	NV	72,000	NV	NV	--	5 UJ	--	5 UJ	5 UJ	5 UJ	5 UJ
Benzene	0.03	NA	NA	NV	--	0.044	--	0.001 U	0.001 U	0.001 U	0.0019
Bromobenzene	NV	640	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane	NV	16	0.0034	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Bromoform	NV	130	0.03	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Bromomethane	NV	110	0.45	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	NV	14	0.0016	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Chlorobenzene	NV	1,600	0.86	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Chloroethane	NV	NV	NV	NV	--	0.1 U	--	0.1 U	0.1 U	0.1 U	0.1 U
Chloroform	NV	32	0.31	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Chloromethane	NV	NV	NV	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,2-Dichloroethene	NV	160	NV	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
cis-1,3-Dichloropropene	NV	NV	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Dibromochloromethane	NV	12	0.0028	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Dibromomethane	NV	800	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Dichlorodifluoromethane (Freon 12)	NV	16,000	NV	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	6	NA	NA	NV	--	0.20	--	0.0045	0.001 U	0.0017	0.0037
Hexachlorobutadiene	NV	13	0.00021	NV	--	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene	NV	8,000	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
m,p-Xylene	NV	NV	NV	NV	--	0.47	--	0.019	0.002 U	0.0061 J	0.022 J
Methyl tert-butyl ether	0.1	NA	NA	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
Methylene chloride	0.02	NA	NA	NV	--	0.2 U	--	0.2 U	0.2 U	0.2 U	0.2 U
Naphthalene	5	NA	NA	NV	--	0.24	--	0.014	0.01 U	0.01 U	0.013
n-Hexane	NV	4,800	NV	NV	--	0.25 U	--	0.25 U	0.25 U	0.25 U	0.25 U
n-Propylbenzene	NV	8,000	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
o-Xylene	NV	16,000	NV	NV	--	0.20	--	0.0083	0.001 U	0.0027 J	0.014 J
sec-Butylbenzene	NV	8,000	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
Styrene	NV	16,000	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
tert-Butylbenzene	NV	8,000	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U

Table 2-1  
Summary of Soil Analytical Results  
Cleanup Options Report  
Bellingham School District Bus Garage

Location:	MTCA Method A, Unrestricted Land Use <sup>(a)(1)</sup>	MTCA Method B <sup>(a)(b)(1)</sup>	MTCA, Soil, Protective of Groundwater to Surface Water <sup>(1)</sup>	Background Metals Concentrations <sup>(2)</sup>	B06	B07		B08	B09	B10	
Sample Name:					B06-S-1.0	B07-S-2.0	B07-S-6.0	B08-S-3.0	B09-S-3.0	B10-S-2.5	BDUP-S-2.5
Collection Date:					10/12/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			Vadose at 13°C, Freshwater	Puget Sound	1.0	2.0	6.0	3.0	3.0	2.5	2.5
Tetrachloroethene	0.05	NA	NA	NV	--	0.002 U	--	0.002 U	0.002 U	0.0026	0.0028
Toluene	7	NA	NA	NV	--	0.94	--	0.0075	0.001 U	0.0088	0.0084
trans-1,2-Dichloroethene	NV	1,600	0.52	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
trans-1,3-Dichloropropene	NV	NV	NV	NV	--	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U
VOCs (mg/kg) cont.											
Trichloroethene	0.03	NA	NA	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
Trichlorofluoromethane (Freon 11)	NV	24,000	NV	NV	--	0.5 U	--	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	NV	0.67	0.00012	NV	--	0.002 U	--	0.002 U	0.002 U	0.002 U	0.002 U
Xylenes, total <sup>(d)</sup>	9	NA	NA	NV	--	0.67	--	0.027	0.002 U	0.0088 J	0.036 J
PAHs (mg/kg)											
1-Methylnaphthalene	NV	34	NV	NV	--	0.05 U	0.01 U	0.026	0.05 U	--	--
2-Methylnaphthalene	NV	320	NV	NV	--	0.05 U	0.01 U	0.032	0.05 U	--	--
Acenaphthene	NV	4,800	3.1	NV	--	0.05 U	0.01 U	0.019	0.05 U	--	--
Acenaphthylene	NV	NV	NV	NV	--	0.05 U	0.01 U	0.025	0.05 U	--	--
Anthracene	NV	24,000	47	NV	--	0.05 U	0.01 U	0.01 U	0.05 U	--	--
Benzo(a)anthracene	NV	NV	NV	NV	--	0.28	0.01 U	0.014	0.05 U	--	--
Benzo(a)pyrene	0.19 <sup>(e)(3)</sup>	NA	NA	NV	--	0.47	0.01 U	0.020 J	0.05 U	--	--
Benzo(b)fluoranthene	NV	NV	NV	NV	--	0.42	0.01 U	0.041 J	0.05 U	--	--
Benzo(ghi)perylene	NV	NV	NV	NV	--	0.082	0.01 U	0.011 J	0.05 U	--	--
Benzo(k)fluoranthene	NV	NV	NV	NV	--	0.16	0.01 U	0.015 J	0.05 U	--	--
Chrysene	NV	NV	NV	NV	--	0.33	0.01 U	0.021	0.05 U	--	--
Dibenzo(a,h)anthracene	NV	NV	NV	NV	--	0.05 U	0.01 U	0.01 UJ	0.05 U	--	--
Fluoranthene	NV	3,200	5.9	NV	--	0.26	0.01 U	0.041	0.05 U	--	--
Fluorene	NV	3,200	1.6	NV	--	0.05 U	0.01 U	0.014	0.05 U	--	--
Indeno(1,2,3-cd)pyrene	NV	NV	NV	NV	--	0.099	0.01 U	0.01 UJ	0.05 U	--	--
Naphthalene	5	NA	NA	NV	--	0.073	0.01 U	0.047	0.05 U	--	--
Phenanthrene	NV	NV	NV	NV	--	0.11	0.01 U	0.035	0.05 U	--	--
Pyrene	NV	2,400	11	NV	--	0.46	0.01 U	0.046	0.05 U	--	--
Naphthalenes, total <sup>(f)</sup>	5	NA	NA	NV	--	0.12	0.01 U	0.11	0.05 U	--	--
cPAH TEQ <sup>(g)(4)</sup>	0.19 <sup>(e)(3)</sup>	NA	NA	NV	--	0.57	0.01 U	0.028 J	0.05 U	--	--

Table 2-1  
Summary of Soil Analytical Results  
Cleanup Options Report  
Bellingham School District Bus Garage



<b>Notes</b>
Background metals concentrations for Puget Sound are shown for reference.
Shading/bolding (key below) indicates values that exceed screening criteria; non-detects (U and UJ) and detections below background metals concentrations were not compared with screening criteria.
MTCA Method A, Unrestricted Land Use
MTCA, Soil, Protective of Groundwater to Surface Water, Vadose at 13°C, Freshwater
-- = not analyzed.
°C = degrees Celsius.
cPAH = carcinogenic polycyclic aromatic hydrocarbon.
ft bgs = feet below ground surface.
J = result is estimated.
mg/kg = milligrams per kilogram.
MTCA = Model Toxics Control Act.
NA = not applicable.
NV = no value.
PAH = polycyclic aromatic hydrocarbon.
TPH = total petroleum hydrocarbons.
U = result is non-detect at the method reporting limit.
UJ = result is non-detect with an estimated method reporting limit.
VOC = volatile organic compound.
<sup>(a)</sup> When MTCA Method A value is available, value is not screened to MTCA Method B. When MTCA Method A value is not available, value is screened against the lower of MTCA Method B cancer and noncancer values as well as MTCA Protective of Groundwater to Surface Water values (where available).
<sup>(b)</sup> Lower of cancer and noncancer values are shown.
<sup>(c)</sup> Diesel+Oil is the sum of diesel- and motor-oil-range hydrocarbons. When results are non-detect, half the reporting limit is used. When both results are non-detect, the highest reporting limit is shown.
<sup>(d)</sup> Total xylenes is the sum of m,p-xylene and o-xylene. When both results are non-detect, the highest reporting limit is shown.
<sup>(e)</sup> MTCA Method A value for benzo(a)pyrene and cPAH TEQ is not applicable. Screening level shown is the MTCA B value.
<sup>(f)</sup> Total naphthalenes is the sum of 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. When results are non-detect, half the reporting limit is used. When all results are non-detect, the highest reporting limit is shown.
<sup>(g)</sup> One-half the reporting limit is used for non-detect results in the cPAH TEQ calculation. When all cPAHs are non-detect, the highest reporting limit is used.
<b>References</b>
<sup>(1)</sup> Ecology. 2023. <i>Cleanup Levels and Risk Calculation (CLARC) table</i> . Washington State Department of Ecology, Toxics Cleanup Program. August.
<sup>(2)</sup> Ecology. 1994. <i>Natural Background Soil Metals Concentrations in Washington State</i> . Publication 94-115. Washington State Department of Ecology. October.
<sup>(3)</sup> Ecology. 2021. <i>Polycyclic Aromatic Hydrocarbons and Benzo[a]pyrene: Changes to MTCA Default Cleanup Levels for 2017</i> . Supporting material for Cleanup Levels and Risk Calculation (CLARC). Washington State Department of Ecology, Toxics Cleanup Program. July.
<sup>(4)</sup> Ecology. 2015. <i>Implementation Memorandum #10: Evaluating the Human Health Toxicity of Carcinogenic PAHs (cPAHs) Using Toxicity Equivalency Factors (TEFs)</i> . Publication No. 15-09-049. Washington State Department of Ecology, Toxics Cleanup Program. April 20.



Table 2-2  
Summary of Groundwater Analytical Results  
Cleanup Options Report  
Bellingham School District Bus Garage



Location:	MTCA Method A <sup>(a)(1)</sup>	MTCA Method B <sup>(a)(b)(1)</sup>	B02	B03	B07	B08	B09	B10	
Sample Name:			B02-GW-22.5	B03-GW-21.5	B07-GW-18.0	B08-GW-22.5	B09-GW-21.0	B10-GW-15.0	BDUP-GW-15.0
Collection Date:			10/11/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			22.5	21.5	18.0	22.5	21.0	15.0	15.0
TPH (ug/L)									
Diesel-range hydrocarbons	500	NV	50 U	50 U	50 U	64	170	210	200
Motor-oil-range hydrocarbons	500	NV	250 U	250 U	250 U	300 U	300 U	250 U	250 U
Diesel+Oil <sup>(c)</sup>	500	NV	250 U	250 U	250 U	210	320	340	330
VOCs (ug/L)									
1,1,1,2-Tetrachloroethane	NV	1.7	--	--	--	--	1 U	--	--
1,1,1-Trichloroethane	200	NA	--	--	--	--	1 U	--	--
1,1,2,2-Tetrachloroethane	NV	0.22	--	--	--	--	0.2 U	--	--
1,1,2-Trichloroethane	NV	0.77	--	--	--	--	0.5 U	--	--
1,1-Dichloroethane	NV	7.7	--	--	--	--	1 U	--	--
1,1-Dichloroethene	NV	400	--	--	--	--	1 U	--	--
1,1-Dichloropropene	NV	NV	--	--	--	--	1 U	--	--
1,2,3-Trichlorobenzene	NV	6.4	--	--	--	--	1 U	--	--
1,2,3-Trichloropropane	NV	0.00038	--	--	--	--	1 U	--	--
1,2,4-Trichlorobenzene	NV	1.5	--	--	--	--	1 U	--	--
1,2,4-Trimethylbenzene	NV	80	--	--	--	--	1 U	--	--
1,2-Dibromo-3-chloropropane	NV	0.014	--	--	--	--	10 U	--	--
1,2-Dibromoethane	0.01	NA	--	--	--	--	0.01 U	--	--
1,2-Dichlorobenzene	NV	720	--	--	--	--	1 U	--	--
1,2-Dichloroethane	5	NA	--	--	--	--	0.2 U	--	--
1,2-Dichloropropane	NV	1.2	--	--	--	--	1 U	--	--
1,3,5-Trimethylbenzene	NV	80	--	--	--	--	1 U	--	--
1,3-Dichlorobenzene	NV	NV	--	--	--	--	1 U	--	--
1,3-Dichloropropane	NV	160	--	--	--	--	1 U	--	--
1,4-Dichlorobenzene	NV	8.1	--	--	--	--	1 U	--	--
2,2-Dichloropropane	NV	NV	--	--	--	--	1 U	--	--
2-Butanone	NV	4,800	--	--	--	--	20 U	--	--
2-Chlorotoluene	NV	160	--	--	--	--	1 U	--	--
2-Hexanone	NV	40	--	--	--	--	10 U	--	--
4-Chlorotoluene	NV	160	--	--	--	--	1 U	--	--
4-Isopropyltoluene	NV	NV	--	--	--	--	1 U	--	--
4-Methyl-2-pentanone	NV	640	--	--	--	--	10 U	--	--
Acetone	NV	7,200	--	--	--	--	50 UJ	--	--
Benzene	5	NA	--	--	--	--	0.35 U	--	--
Bromobenzene	NV	64	--	--	--	--	1 U	--	--
Bromodichloromethane	NV	0.71	--	--	--	--	0.5 U	--	--



Table 2-2  
Summary of Groundwater Analytical Results  
Cleanup Options Report  
Bellingham School District Bus Garage




Location:	MTCA Method A <sup>(a)</sup> (1)	MTCA Method B <sup>(a)</sup> (b)(1)	B02	B03	B07	B08	B09	B10	
Sample Name:			B02-GW-22.5	B03-GW-21.5	B07-GW-18.0	B08-GW-22.5	B09-GW-21.0	B10-GW-15.0	BDUP-GW-15.0
Collection Date:			10/11/2023	10/12/2023	10/12/2023	10/11/2023	10/11/2023	10/12/2023	10/12/2023
Collection Depth (ft bgs):			22.5	21.5	18.0	22.5	21.0	15.0	15.0
Bromoform	NV	5.5	--	--	--	--	5 U	--	--
Bromomethane	NV	11	--	--	--	--	5 U	--	--
VOCs (ug/L) cont.									
Carbon tetrachloride	NV	0.63	--	--	--	--	0.5 U	--	--
Chlorobenzene	NV	160	--	--	--	--	1 U	--	--
Chloroethane	NV	NV	--	--	--	--	1 U	--	--
Chloroform	NV	1.4	--	--	--	--	1 U	--	--
Chloromethane	NV	NV	--	--	--	--	10 U	--	--
cis-1,2-Dichloroethene	NV	16	--	--	--	--	1 U	--	--
cis-1,3-Dichloropropene	NV	NV	--	--	--	--	0.4 U	--	--
Dibromochloromethane	NV	0.52	--	--	--	--	0.5 U	--	--
Dibromomethane	NV	80	--	--	--	--	1 U	--	--
Dichlorodifluoromethane (Freon 12)	NV	1,600	--	--	--	--	1 U	--	--
Ethylbenzene	700	NA	--	--	--	--	1 U	--	--
Hexachlorobutadiene	NV	0.56	--	--	--	--	0.5 U	--	--
Isopropylbenzene	NV	800	--	--	--	--	1 U	--	--
m,p-Xylene	NV	NV	--	--	--	--	2 U	--	--
Methyl tert-butyl ether	20	NA	--	--	--	--	1 U	--	--
Methylene chloride	5	NA	--	--	--	--	5 U	--	--
Naphthalene	160	NA	--	--	--	--	1 U	--	--
n-Hexane	NV	480	--	--	--	--	5 U	--	--
n-Propylbenzene	NV	800	--	--	--	--	1 U	--	--
o-Xylene	NV	1,600	--	--	--	--	1 U	--	--
sec-Butylbenzene	NV	800	--	--	--	--	1 U	--	--
Styrene	NV	1,600	--	--	--	--	1 U	--	--
tert-Butylbenzene	NV	800	--	--	--	--	1 U	--	--
Tetrachloroethene	5	NA	--	--	--	--	1 U	--	--
Toluene	1,000	NA	--	--	--	--	1 U	--	--
trans-1,2-Dichloroethene	NV	160	--	--	--	--	1 U	--	--
trans-1,3-Dichloropropene	NV	NV	--	--	--	--	0.4 U	--	--
Trichloroethene	5	NA	--	--	--	--	0.5 U	--	--
Trichlorofluoromethane (Freon 11)	NV	2,400	--	--	--	--	1 U	--	--
Vinyl chloride	0.2	NA	--	--	--	--	0.023	--	--
Xylenes, total <sup>(d)</sup>	1,000	NA	--	--	--	--	2 U	--	--

Table 4-2  
Summary of Groundwater Analytical Results  
Cleanup Options Report  
Bellingham School District Bus Garage



<p><b>Notes</b></p> <p>Detected results were compared with screening criteria. No exceedances were identified.</p> <p>-- = not analyzed.</p> <p>ft bgs = feet below ground surface.</p> <p>MTCA = Model Toxics Control Act.</p> <p>NA = not applicable.</p> <p>NV = no value.</p> <p>TPH = total petroleum hydrocarbons.</p> <p>U = result is non-detect at the method reporting limit.</p> <p>ug/L = micrograms per liter.</p> <p>UJ = result is non-detect with an estimated method reporting limit.</p> <p>VOC = volatile organic compound.</p> <p><sup>(a)</sup>When MTCA Method A value is available, value is not screened to MTCA Method B. When MTCA Method A value is not available, value is screened against the lower of MTCA Method B cancer and noncancer values.</p> <p><sup>(b)</sup>Lower of cancer and noncancer values are shown.</p> <p><sup>(c)</sup>Diesel+Oil is the sum of diesel- and motor-oil-range hydrocarbons. When results are non-detect, half the reporting limit is used. When both results are non-detect, the highest reporting limit is shown.</p> <p><sup>(d)</sup>Total xylenes is the sum of m,p-xylene and o-xylene. When both results are non-detect, the highest reporting limit is shown.</p> <p><b>Reference</b></p> <p><sup>(1)</sup>Ecology. 2023. <i>Cleanup Levels and Risk Calculation (CLARC) table</i>. Washington State Department of Ecology, Toxics Cleanup Program. August.</p>
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Table 4-1  
Option 1—Institutional Controls  
Cleanup Options Report  
Bellingham School District Bus Garage

ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST		 <div>MAUL FOSTER ALONGI</div> <div>1329 N State Street, Suite 301 Bellingham, WA 98225 360-594-6262 (p) 360-594-6270 (f) www.maulfooster.com</div>
Project:	BSD Bus Garage	
Client:	Bellingham School District	
Project No./Task:	M0837.02.005	
Prepared By:	I. Isigwe	
Checked By:	J. Elliott	
Date:	10/18/2024	
Revision No.:	0	
Cost Estimate Summary—Feasibility Level		
Schedule A—	Administrative Costs	\$ 10,000
Schedule B—	Monitoring and Periodic Costs	\$ 15,000
Schedule C—	Contingency	\$ 5,000
		<b>Total: \$ 30,000</b>
<b>Assumptions:</b> <div>1. Administrative costs include the preparation of an environmental covenant.</div> <div>2. Monitoring costs include erosion inspections.</div> <div>3. Contingency is 20 percent of the cost estimate.</div>		

**Table 4-2**  
**Option 2—Limited Excavation, Capping, and Institutional Controls**  
**Cleanup Options Report**  
**Bellingham School District Bus Garage**



ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST		 <b>MAUL FOSTER ALONGI</b>  1329 N State Street, Suite 301 Bellingham, WA 98225 360-594-6262 (p) 360-594-6270 (f) www.maulfooster.com
Project:	BSD Bus Garage	
Client:	Bellingham School District	
Project No./Task:	M0837.02.005	
Prepared By:	I. Isigwe	
Checked By:	J. Elliott	
Date:	10/18/2024	
Revision No.:	0	
Cost Estimate Summary—Feasibility Level		
<b>Schedule A—</b>	Mobilization and Site Preparation	\$ 14,140
<b>Schedule B—</b>	Hotspot Excavation and Capping	\$ 34,950
<b>Schedule C—</b>	Supplemental Environmental Investigation	\$ 50,000
<b>Schedule D—</b>	Permitting	\$ 6,890
<b>Schedule E—</b>	Administrative Costs	\$ 46,880
<b>Schedule F—</b>	Monitoring and Periodic Costs	\$ 64,340
<b>Schedule G—</b>	Contingency	\$ 33,500
		<b>Total: \$250,700</b>
<b>Assumptions:</b> <ol style="list-style-type: none"> <li>Excavated soils will be characterized as non-hazardous waste for offsite disposal.</li> <li>Excavations will be lined with demarcation fabric, then backfilled with clean soil and finished with gravel surfacing.</li> <li>Administrative costs include project management and the preparation of a completion report and an environmental covenant.</li> <li>Monitoring costs include cap inspections.</li> <li>Contingency is 20 percent of the cost estimate.</li> </ol>		

Table 4-3  
**Option 3—Complete Excavation and Offsite Disposal**  
**Cleanup Options Report**  
**Bellingham School District Bus Garage**

ENGINEER'S PRELIMINARY OPINION OF PROBABLE COST		 <b>MAUL FOSTER ALONGI</b>  1329 N State Street, Suite 301 Bellingham, WA 98225 360-594-6262 (p) 360-594-6270 (f) www.maulfoster.com
Project:	BSD Bus Garage	
Client:	Bellingham School District	
Project No./Task	M0837.02.005	
Prepared By:	I. Isigwe	
Checked By:	J. Elliott	
Date:	10/18/2024	
Revision No.:	0	
Cost Estimate Summary—Feasibility Level		
<b>Schedule A—</b>	Mobilization and Site Preparation	\$ 60,060
<b>Schedule B—</b>	Excavation, Landfill Disposal, and Restoration	\$ 1,111,690
<b>Schedule C—</b>	Supplemental Environmental Investigation	\$ 50,000
<b>Schedule D—</b>	Design and Permitting	\$ 51,901
<b>Schedule E—</b>	Administrative Costs	\$ 15,000
<b>Schedule F—</b>	Contingency	\$ 74,144
<b>Total (Rounded to the Nearest Thousand):</b>		<b>\$1,363,000</b>
<b>Assumptions:</b> <ol style="list-style-type: none"> <li>Excavated soils will be characterized as non-hazardous waste for offsite disposal.</li> <li>Excavations will be lined with demarcation fabric, then backfilled with clean soil and finished with gravel surfacing.</li> <li>Administrative costs include project management and the preparation of a completion report.</li> <li>Contingency is 20 percent of the cost estimate.</li> </ol>		

# Appendix

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## Terrestrial Ecological Evaluation

DRAFT



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# Voluntary Cleanup Program

## Washington State Department of Ecology Toxics Cleanup Program

### TERRESTRIAL ECOLOGICAL EVALUATION FORM

Under the Model Toxics Control Act (MTCA), a terrestrial ecological evaluation is necessary if hazardous substances are released into the soils at a Site. In the event of such a release, you must take one of the following three actions as part of your investigation and cleanup of the Site:

1. Document an exclusion from further evaluation using the criteria in WAC 173-340-7491.
2. Conduct a simplified evaluation as set forth in WAC 173-340-7492.
3. Conduct a site-specific evaluation as set forth in WAC 173-340-7493.

When requesting a written opinion under the Voluntary Cleanup Program (VCP), you must complete this form and submit it to the Department of Ecology (Ecology). The form documents the type and results of your evaluation.

***Completion of this form is not sufficient to document your evaluation. You still need to document your analysis and the basis for your conclusion in your cleanup plan or report.***

If you have questions about how to conduct a terrestrial ecological evaluation, please contact the Ecology site manager assigned to your Site. For additional guidance, please refer to <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Terrestrial-ecological-evaluation>.

#### Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are documenting an evaluation.

Facility/Site Name: Bellingham School District Bus Garage

Facility/Site Address: 1801 James Street, Bellingham, Washington

Facility/Site No: 57487227

VCP Project No.:

#### Step 2: IDENTIFY EVALUATOR

Please identify below the person who conducted the evaluation and their contact information.

Name: Phil Wiescher, PhD

Title: Principal Environmental Scientist

Organization: Maul Foster & Alongi, Inc.

Mailing address: 1329 N State Street, Suite 301

City: Bellingham

State: WA

Zip code: 98225

Phone: (360) 594-6267

Fax:

E-mail: pwiescher@maulfoster.com

### Step 3: DOCUMENT EVALUATION TYPE AND RESULTS

#### A. Exclusion from further evaluation.

##### 1. Does the Site qualify for an exclusion from further evaluation?

- ☒ Yes    *If you answered "YES," then answer **Question 2**.*
- ☐ No or Unknown    *If you answered "NO" or "UNKNOWN," then skip to **Step 3B** of this form.*

##### 2. What is the basis for the exclusion? Check all that apply. Then skip to **Step 4** of this form.

Point of Compliance: WAC 173-340-7491(1)(a)

- ☐ All soil contamination is, or will be,\* at least 15 feet below the surface.
- ☐ All soil contamination is, or will be,\* at least 6 feet below the surface (or alternative depth if approved by Ecology), and institutional controls are used to manage remaining contamination.

Barriers to Exposure: WAC 173-340-7491(1)(b)

- ☐ All contaminated soil, is or will be,\* covered by physical barriers (such as buildings or paved roads) that prevent exposure to plants and wildlife, and institutional controls are used to manage remaining contamination.

Undeveloped Land: WAC 173-340-7491(1)(c)

- ☐ There is less than 0.25 acres of contiguous<sup>#</sup> undeveloped<sup>±</sup> land on or within 500 feet of any area of the Site and any of the following chemicals is present: chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, or pentachlorobenzene.
- ☒ For sites not containing any of the chemicals mentioned above, there is less than 1.5 acres of contiguous<sup>#</sup> undeveloped<sup>±</sup> land on or within 500 feet of any area of the Site.

Background Concentrations: WAC 173-340-7491(1)(d)

- ☐ Concentrations of hazardous substances in soil do not exceed natural background levels as described in WAC 173-340-200 and 173-340-709.

\* An exclusion based on future land use must have a completion date for future development that is acceptable to Ecology.

± "Undeveloped land" is land that is not covered by building, roads, paved areas, or other barriers that would prevent wildlife from feeding on plants, earthworms, insects, or other food in or on the soil.

# "Contiguous" undeveloped land is an area of undeveloped land that is not divided into smaller areas of highways, extensive paving, or similar structures that are likely to reduce the potential use of the overall area by wildlife.



## B. Simplified evaluation.

### 1. Does the Site qualify for a simplified evaluation?

- ☐ Yes    *If you answered "YES," then answer **Question 2** below.*
- ☐ No or Unknown    *If you answered "NO" or "UNKNOWN," then skip to **Step 3C** of this form.*

### 2. Did you conduct a simplified evaluation?

- ☐ Yes    *If you answered "YES," then answer **Question 3** below.*
- ☐ No    *If you answered "NO," then skip to **Step 3C** of this form.*

### 3. Was further evaluation necessary?

- ☐ Yes    *If you answered "YES," then answer **Question 4** below.*
- ☐ No    *If you answered "NO," then answer **Question 5** below.*

### 4. If further evaluation was necessary, what did you do?

- ☐ Used the concentrations listed in Table 749-2 as cleanup levels. *If so, then skip to **Step 4** of this form.*
- ☐ Conducted a site-specific evaluation. *If so, then skip to **Step 3C** of this form.*

### 5. If no further evaluation was necessary, what was the reason? Check all that apply. Then skip to **Step 4** of this form.

#### Exposure Analysis: WAC 173-340-7492(2)(a)

- ☐ Area of soil contamination at the Site is not more than 350 square feet.
- ☐ Current or planned land use makes wildlife exposure unlikely. Used Table 749-1.

#### Pathway Analysis: WAC 173-340-7492(2)(b)

- ☐ No potential exposure pathways from soil contamination to ecological receptors.

#### Contaminant Analysis: WAC 173-340-7492(2)(c)

- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations that exceed the values listed in Table 749-2.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations that exceed the values listed in Table 749-2, and institutional controls are used to manage remaining contamination.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 15 feet at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays.
- ☐ No contaminant listed in Table 749-2 is, or will be, present in the upper 6 feet (or alternative depth if approved by Ecology) at concentrations likely to be toxic or have the potential to bioaccumulate as determined using Ecology-approved bioassays, and institutional controls are used to manage remaining contamination.

**C. Site-specific evaluation.** A site-specific evaluation process consists of two parts: (1) formulating the problem, and (2) selecting the methods for addressing the identified problem. Both steps require consultation with and approval by Ecology. See WAC 173-340-7493(1)(c).

**1. Was there a problem?** See WAC 173-340-7493(2).

- ☐ Yes    *If you answered “YES,” then answer **Question 2** below.*
- ☐ No    *If you answered “NO,” then identify the reason here and then skip to **Question 5** below:*
- ☐ No issues were identified during the problem formulation step.
- ☐ While issues were identified, those issues were addressed by the cleanup actions for protecting human health.

**2. What did you do to resolve the problem?** See WAC 173-340-7493(3).

- ☐ Used the concentrations listed in Table 749-3 as cleanup levels. *If so, then skip to **Question 5** below.*
- ☐ Used one or more of the methods listed in WAC 173-340-7493(3) to evaluate and address the identified problem. *If so, then answer **Questions 3 and 4** below.*

**3. If you conducted further site-specific evaluations, what methods did you use?**  
*Check all that apply. See WAC 173-340-7493(3).*

- ☐ Literature surveys.
- ☐ Soil bioassays.
- ☐ Wildlife exposure model.
- ☐ Biomarkers.
- ☐ Site-specific field studies.
- ☐ Weight of evidence.
- ☐ Other methods approved by Ecology. If so, please specify:

**4. What was the result of those evaluations?**

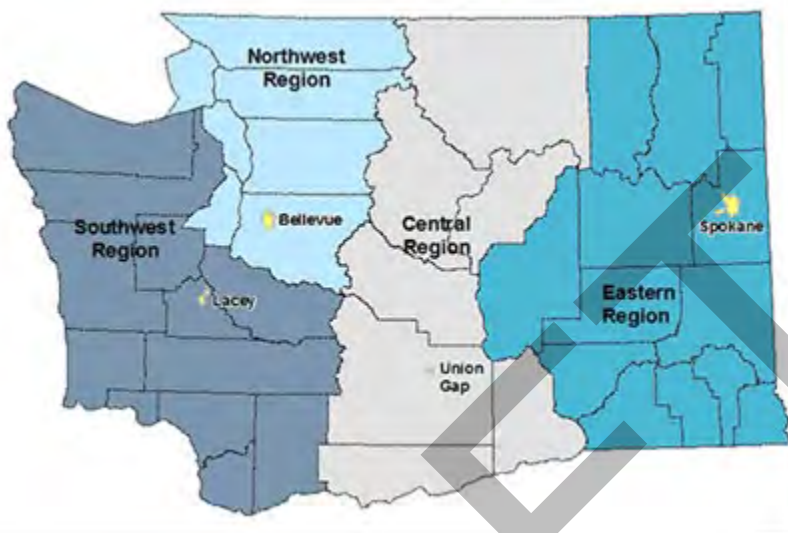
- ☐ Confirmed there was no problem.
- ☐ Confirmed there was a problem and established site-specific cleanup levels.

**5. Have you already obtained Ecology’s approval of both your problem formulation and problem resolution steps?**

- ☐ Yes    If so, please identify the Ecology staff who approved those steps:
- ☐ No

## Step 4: SUBMITTAL

Please mail your completed form to the Ecology site manager assigned to your Site. If a site manager has not yet been assigned, please mail your completed form to the Ecology regional office for the County in which your Site is located.



<b>Northwest Region:</b> Attn: VCP Coordinator 3190 160 <sup>th</sup> Ave. SE Bellevue, WA 98008-5452	<b>Central Region:</b> Attn: VCP Coordinator 1250 West Alder St. Union Gap, WA 98903-0009
<b>Southwest Region:</b> Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	<b>Eastern Region:</b> Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. People with hearing loss can call 711 for Washington Relay Service. People with a speech disability can call 877-833-6341.





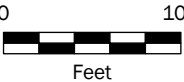
# Figure Terrestrial Ecological Evaluation Radius Map

Bellingham School District  
Bus Garage  
Bellingham, WA

## Legend

- Property Boundary<sup>a</sup>
- Undeveloped Contiguous Land (1.4 Acres)
- 500 Ft Property Boundary Buffer
- Tax Lot

**Note**  
<sup>a</sup> The Property boundary shown on this figure excludes two areas on the north side of Whatcom Creek, where no known historical operations took place.



**Data Sources**  
Aerial photograph obtained from the US Department of Agriculture; tax lot data obtained from Whatcom County.



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