

# SITE HAZARD ASSESSMENT

## Worksheet 1

### Summary Score Sheet

#### SITE INFORMATION:

Chevron 209335  
1225 North 45th Street  
Seattle, King County, WA 98103

Cleanup Site ID: 6537  
Facility/Site ID: 70996824

Section:	18	Latitude:	47.66120
Township:	25	Longitude:	-122.34290
Range:	04E	Tax/Parcel ID:	7821200275 and 7821200255

*Site scored/ranked for the Hazardous Sites List Publication: February 2018*

#### SITE DESCRIPTION:

The Chevron 209335 site (Site) is a former service station located in Seattle, King County, Washington. The 0.68-acre property is located approximately 3,800 feet from Green Lake, and zoned for neighborhood commercial (NC2P) use.

The property is south of North 45th Street, between Midvale Avenue North and Stone Way North. Across North 45th Street to the north is an apartment building. Across Stone Way North to the east is an office building. South of the property are a retail store and residences. Across Midvale Avenue North to the west is a residence.

The Site is currently operated as a mixed-use retail/residential building by Stone Way Apts c/o Bellwether Housing.

A gasoline service station operated on the property from 1935 to 1969. The original station included two 1,000-gallon and one 550-gallon underground storage tanks (USTs), contents unknown. In 1956, the station was remodeled to include one 3,000-gallon, one 2,000-gallon, and one 550-gallon UST, contents unknown. Between 1969 and 2006, the property sat vacant. The building currently occupying the property was constructed in 2006.

#### SITE BACKGROUND:

A summary of prior operations/tenants at the subject property is presented below.

<u>From</u>	<u>To</u>	<u>Operator/Tenant</u>	<u>Activity</u>
1935	1954		Service station
1954	1978	Standard Oil Co. / Chevron USA	Service station until 1969 and then vacant
1978	2005	Seattle Housing Authority	Vacant
2005	2017	Housing Resources Group	Vacant until 2006 and then mixed-use retail/residential

#### SITE CONTAMINATION:

In 2015 the Chevron 209335 site was reported to Washington State Department of Ecology (Ecology) and placed on the Confirmed and Suspected Contaminated Sites List (CSCSL).

Spills and leaks during operation of the service station are the likely causes of petroleum contamination observed in soil and groundwater, though no specific releases are known. Total petroleum hydrocarbons (TPH) in the gasoline range (TPH-G) and in the diesel range (TPH-D), benzene, toluene, ethylbenzene, xylenes, and lead have been detected at concentrations above Method A in groundwater (Table 1).

Light non-aqueous phase liquid (LNAPL) has been observed in multiple wells on the property, most recently in

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MW-7. LNAPL thickness in MW-7 has ranged up to 1.26 feet (November 2010). During an LNAPL recovery test conducted in September 2010, the initial product thickness in MW-7 was 0.56 foot; 1.5 gallons of LNAPL mixed with water was bailed from the well; and after three hours the product thickness was 0.38 foot. When LNAPL is present in a monitoring well, no groundwater sample was collected from that well. In the case of MW-7, LNAPL was present in 18 out of 23 sampling attempts between July 2009 and April 2016.

SAIC's 2005 cleanup action plan assumed that soils were contaminated from 15 to 45 feet below ground surface. However, none of the reports available in Ecology's file provides soil data.

#### REMEDIATION ACTIVITIES:

At this point, none of the historical USTs remain on the property. However, site records do not provide information about the decommissioning and removal of the tanks, with the exception of the removal of an undocumented 1,000-gallon UST in 2001.

On March 18, 2013, 100 gallons of a 4-5 percent surfactant solution were gravity fed into MW-7. The surfactant was non-ionic, water-based, low in toxicity, and biodegradable in both aerobic and anaerobic conditions. On March 19-21, 2013, an inertial pump was used to extract 327 gallons of the surfactant and emulsified LNAPL from MW-7. The extraction volume was much higher than the injection volume due to high well yield. The concentrations of petroleum analytes detected in MW-7 following the surfactant injection are summarized in Table 2 but are not necessarily considered representative of normal conditions in MW-7.

#### CURRENT SITE CONDITIONS:

The surface of the property is covered by a building and paved walkways, with small landscaped planting strips. Surrounding properties are similarly covered or are closely spaced residences with small yards.

Woodland Park is 1,350 feet north. The 200-acre park features a zoo, a rose garden, and picnic facilities. Meridian Playground is 2,250 feet northeast. The 7-acre playground features a soccer field, play structures, and picnic facilities. Wallingford Playground is 1,200 feet southeast. The 4.5-acre playfield features a soccer field, tennis courts, and play structures.

Ecology's Confirmed and Suspected Contaminated Sites List includes 11 sites within a half mile of the property. The closest are Chevron 92558 (CSID 6227), 200 feet east; Stone Way II Apartments (CSID 11753), 550 feet south; and Sound Transit NE 45th St (CSID 12019), 550 feet west.

There are no records of wells used for drinking water supply within two miles of the property. Three wells that appear to be for residences are listed for irrigation use. Based on the typical sizes of yards in the area, it was assumed that each of these wells irrigates 0.1 acres.

The approximate depth to groundwater is 34 to 38.5 feet below ground surface, with groundwater flowing to the south to southeast. Subsurface soils are sand, silty sand, and gravelly sand.

#### SPECIAL CONSIDERATIONS:

Checked boxes indicate routes applicable for Washington Ranking Method (WARM) scoring

**Surface Water**

No observed release

**Air**

Volatile chemicals present in soil and groundwater

**Groundwater**

Volatile chemicals present in groundwater

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**ROUTE SCORES:**

Surface Water/ Human Health:

Surface Water/ Environment:

Air/ Human Health: 48.4

Air/ Environment: 1.9

Groundwater/ Human Health: 40.5

**Overall Rank: 1**

**REFERENCES:**

- 1 Leidos. 2016. First Semi-annual 2016 Groundwater Monitoring and Sampling Report, Former Standard Oil Service Station, Chevron Site No. 209335. July 13.
  - 2 SAIC. 2005. Cleanup Action Plan, Former Chevron Service Station #209335. April 6.
  - 3 SAIC. 2005. Remedial Action Work Plan, Former Chevron Service Station 209335. May 26.
  - 4 SAIC. 2013. Interim Remedial Action Report: Surfactant-Enhanced Recovery Status Update, Former Chevron Service Station No. 209335. June 21.
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**SITE HAZARD ASSESSMENT**  
**Worksheet 2**  
**Route Documentation**

Cleanup Site ID: 6537

Chevron 209335

Facility/Site ID: 70996824

**1. SURFACE WATER ROUTE**

**List those substances to be considered for scoring:**

Not evaluated

**Explain the basis for choice of substances to be used in scoring:**

**List those management units to be considered for scoring:**

**Explain basis for choice of unit to be used in scoring:**

**2. AIR ROUTE**

**List those substances to be considered for scoring:**

TPH-G (benzene), toluene, ethylbenzene, and xylenes

**Explain the basis for choice of substances to be used in scoring:**

Observed in groundwater

**List those management units to be considered for scoring:**

Groundwater

**Explain basis for choice of unit to be used in scoring:**

Exceedances of Method A

**3. GROUNDWATER ROUTE**

**List those substances to be considered for scoring:**

TPH-D (naphthalene), TPH-G (benzene), toluene, ethylbenzene, xylenes, and lead

**Explain the basis for choice of substances to be used in scoring:**

Observed in groundwater

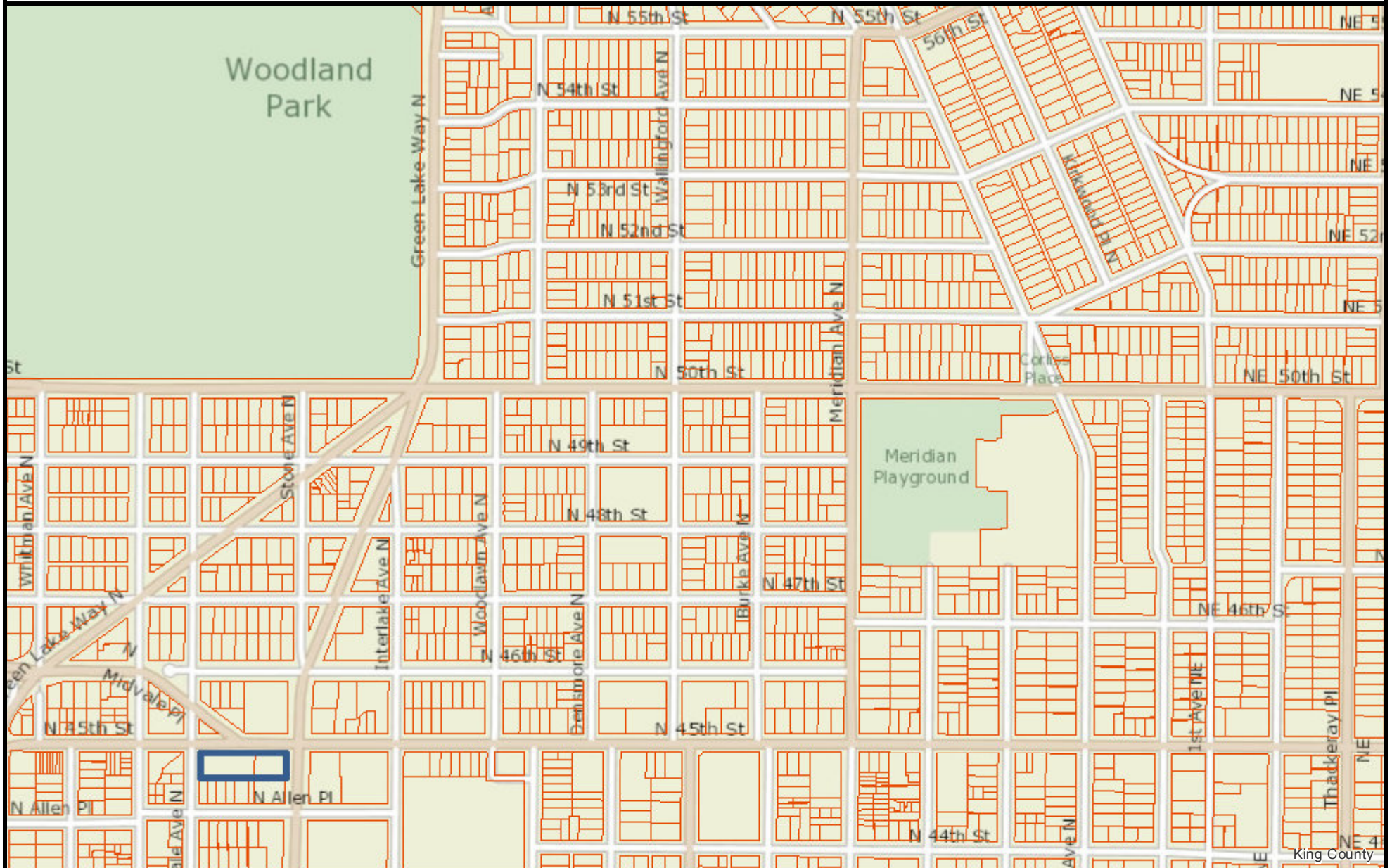
**List those management units to be considered for scoring:**

Groundwater

**Explain basis for choice of unit to be used in scoring:**

Exceedances of Method A

# Figure 1. Chevron 209335 Location Map



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Date: 10/6/2017

Notes:



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## Figure 2. Chevron 209335 Vicinity Map

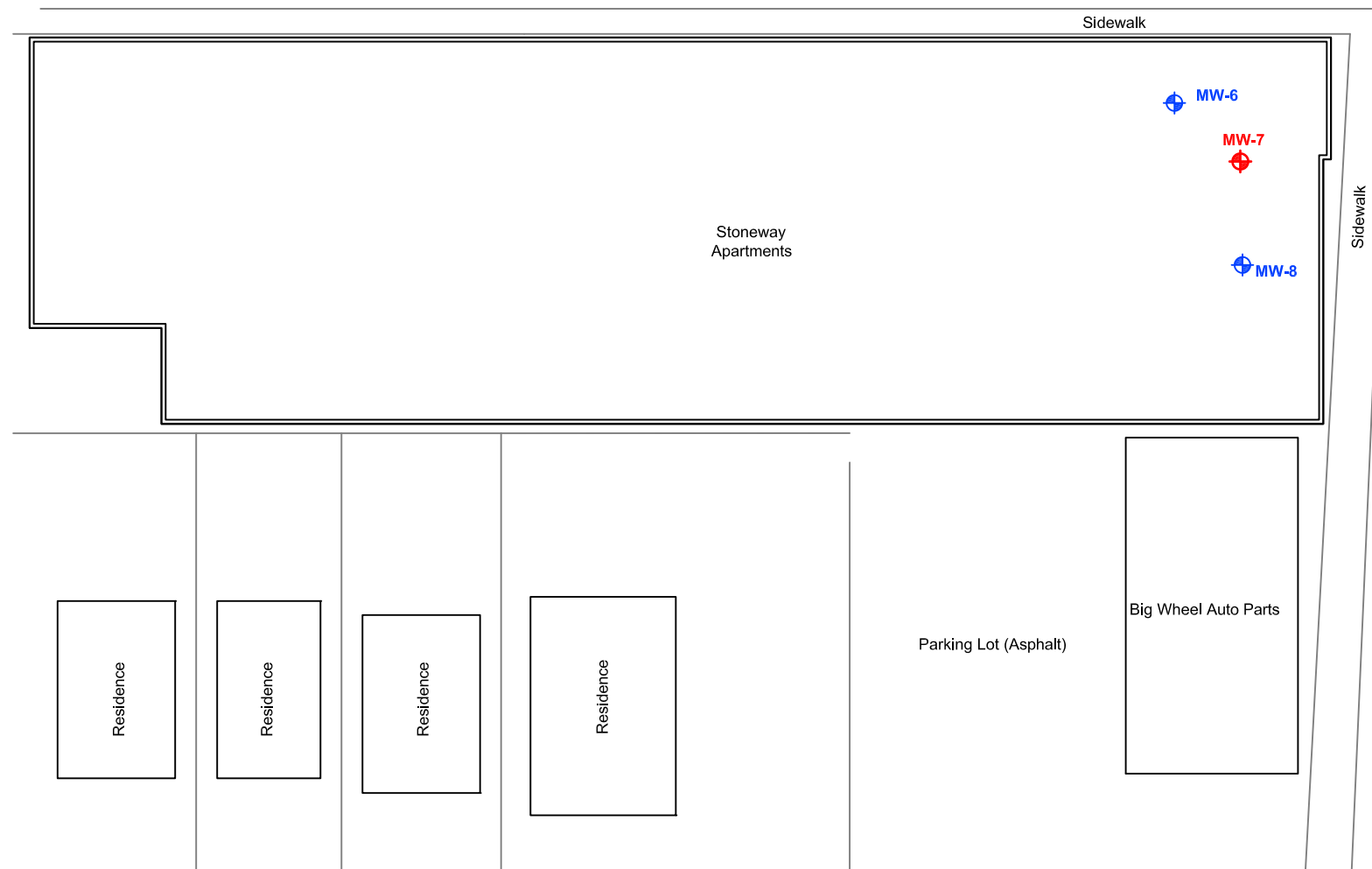


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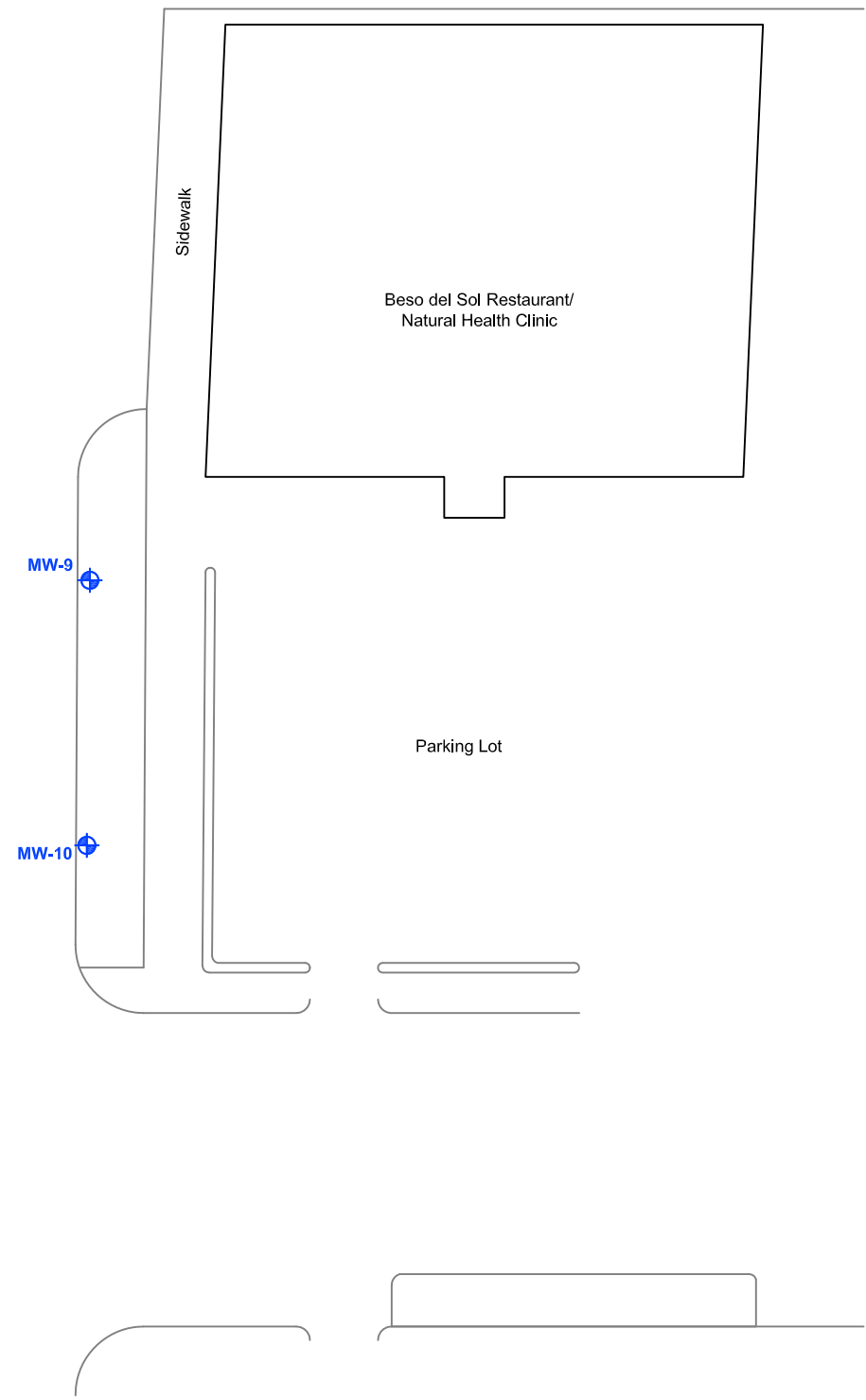
Date: 10/6/2017

Notes:

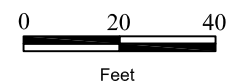
NORTH 45TH STREET






STONE WAY NORTH



NORTH ALLEN PLACE



Legend

-  Surfactant Injection/Extraction Monitoring Well Location
-  Groundwater Monitoring Well
-  Historical Groundwater Flow Direction



Former Chevron Service Station No. 209335  
 1225 North 45th Street  
 Seattle, Washington

**FIGURE 2**  
 Surfactant Injection/Extraction  
 Monitoring Well Location

**Table 1. Maximum Groundwater Concentrations in MW-7,  
Chevron Station 209335**

<b>Analyte</b>	<b>Maximum Concentration (µg/L)</b>	<b>Date</b>	<b>Method A (µg/L)</b>
TPH-D	200,000	March 2015	500
TPH-G	150,000	June 2011	800
Benzene	45	June 2011	5
Toluene	4,800	June 2011	1,000
Ethylbenzene	2,600	June 2011	700
Total xylenes	18,000	June 2011	1,000
Total lead	310	June 2011	15

**Table 2. Groundwater Concentrations in MW-7 Following Surfactant Injection in March 2013,  
Chevron Station 209335**

<b>Analyte</b>	<b>Concentration (µg/L)</b>	<b>Method A (µg/L)</b>
TPH-D	5,200	500
TPH-G	99,000	800
Benzene	12	5
Toluene	1,600	1,000
Ethylbenzene	1,700	700
Total xylenes	17,000	1,000