

# Memorandum

**To:** Hanna Lintukorpi, P.E., Randy Loveless, P.E., City of Everett Public Works  
**From:** Sabine Datum and Brett Beaulieu, Floyd|Snider  
**Date:** March 17, 2026  
**Project No:** COEv-DEVEL 2014  
**Re:** **2025 Annual Groundwater Monitoring Report—Everett Landfill/Tire Fire Site, Everett, Washington**

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This memorandum presents the 2025 sampling and analytical results of groundwater monitoring at the Everett Landfill/Tire Fire Site (Site), located in Everett, Washington (Figure 1). Sampling was performed in accordance with the Site Cleanup Action Plan (CAP), Compliance Monitoring and Contingency Plan (CMCP; Floyd|Snider 2001), and the Site Sampling and Analysis Plan (HWA 2015). Groundwater has been monitored at the Site since 2001. Historical groundwater data collected by HWA Geosciences, Inc. (HWA) prior to 2021 are appended to this memorandum as Attachment 4 (HWA 2020).

## BACKGROUND

The Site is approximately 70 acres and located east of Interstate 5 and along the western shore of the Snohomish River between 36<sup>th</sup> Street and 41<sup>st</sup> Street. The southern half of the Site has been redeveloped with two apartment complexes and associated parking areas. Riverfront Boulevard intersects the Site north to south. Nine groundwater monitoring wells screened within the deep aquifer (MW-11R, MW-21R, MW-29R, MW-30, MW-31, MW-36, MW-37, MW-38, and MW-39R)<sup>1</sup> are currently selected for compliance monitoring.

Per the CMCP, evaluation monitoring was performed for 3 years, between 2001 and 2004, to supplement existing information regarding baseline conditions at the Site. The CMCP then required that performance monitoring be conducted for at least 10 years (referred to as compliance monitoring in this report), in which seasonal and long-term changes in groundwater quality are monitored semiannually. Initial compliance monitoring was performed between 2005 and 2015. In addition, the CMCP requires compliance monitoring to be reset or be reinstated after the first significant pile installation activity and after additional pile installation in a zone identified for pile restrictions. The 10-year compliance monitoring period reset in October 2020 after the first pile installation that penetrated the aquitard occurred.

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<sup>1</sup> Deep aquifer wells are screened at depths from 18 to 28 feet to 32 to 40.5 feet below ground surface (bgs).

Groundwater in the shallow (leachate) aquifer<sup>2</sup> is collected in the leachate collection system and conveyed off-site for treatment. A small section of the shallow aquifer is present east of the leachate collection system (and west of the East Ditch; Figure 2). There is residual waste in a narrow strip of land between the leachate collection trench and the East Ditch; however, as documented in the 2001 CAP (Floyd|Snider 2001), groundwater from this narrow strip of land is collected in the leachate collection system and conveyed off-site, preventing groundwater discharge to surface water.

The shallow aquifer point of compliance is located on the strip of land between the East Ditch and the leachate collection trench. Shallow aquifer compliance criteria are based on hydraulic control through operation of the leachate collection system. Hydraulic control is demonstrated through monitoring of water levels to show that hydraulic gradients are toward the leachate collection system, which would indicate that no shallow aquifer discharge to surface water is occurring. No water quality monitoring of the shallow aquifer is required while operating the leachate collection trench.

Because the shallow aquifer is discharging to the leachate collection system for off-site treatment, groundwater quality compliance is monitored only in the deep aquifer, per the requirements of the CMCP. Groundwater in the deep aquifer discharges to the Snohomish River. The deep aquifer is a potential future source of drinking water. The points of compliance for the deep aquifer are MW-36, MW-37, MW-38, and MW-39R, the groundwater monitoring wells closest to the Snohomish River.

Contaminants of concern (COCs) and their site-specific cleanup levels (CULs) were initially presented in the CMCP. After completion of evaluation monitoring in 2004, the COCs were refined and limited to the following for compliance monitoring: metals (arsenic, iron, manganese, nickel, and zinc), chloride, and bis(2-ethylhexyl)phthalate (BEHP; HWA 2004).

For additional background details, refer to the CMCP (Floyd|Snider 2001) and the 2004 HWA Evaluation Monitoring Report (HWA 2004).

## **GROUNDWATER MONITORING EVENTS**

Floyd|Snider completed two groundwater monitoring events in 2025. The sampling locations are depicted on Figure 2. Groundwater monitoring was performed using low-flow purging and sampling techniques, per the Floyd|Snider Standard Guideline Low-Flow Groundwater Sampling (Attachment 1).

### **February 2025 Sampling Event**

On February 26 and 27, 2025, groundwater samples were collected from the following wells:

- Deep aquifer point of compliance wells MW-36, MW-37, MW-38, and MW-39R
- Deep aquifer monitoring wells MW-11R, MW-21R, MW-29R, MW-30, and MW-31

A field duplicate was collected from well MW-39R.

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<sup>2</sup> The shallow aquifer is present at depths less than 22 feet bgs.

Water level measurements from the top of casing were collected immediately prior to sampling at each well during the sampling event. Water level measurements were also collected from wells MW-22, MW-24, MW-25, MW-26, and MW-46.<sup>3</sup> Water level measurements and groundwater elevations are summarized in Table 1. During low-flow purging of the wells, field parameters (i.e., pH, temperature, dissolved oxygen, turbidity, oxidation–reduction potential [ORP], and specific conductance) were recorded every 3 to 5 minutes for up to 1 hour or until parameters stabilized prior to sampling. The recorded field parameters are reported in Table 2. Low-flow purging of the wells was maintained throughout the sampling process. Samples analyzed for dissolved metals were field filtered with a disposable 0.45-micrometer filter. After completion of sampling, groundwater samples were transported to the analytical laboratories and analyzed for the site-specific COCs (refer to Laboratory Analysis section).

During the February 2025 sampling event, the transducer and barometric logger<sup>4</sup> in MW-46 were removed from the well for data download. The pressure transducer measures water level and temperature continuously while the barologger measures barometric pressure to correct for barometric pressure effects on water level data. The transducer and barologger were reinstalled in MW-46 after downloading the data. Evaluation of transducer data related to hydraulic control of the shallow aquifer is discussed in the Hydraulic Gradient section.

### July 2025 Sampling Event

On July 2, 2025, groundwater samples were collected from the following wells:

- Deep aquifer point of compliance wells MW-36, MW-37, MW-38, and MW-39R
- Deep aquifer monitoring wells MW-11R, MW-21R, MW-29R, MW-30, and MW-31

A field duplicate sample was collected from MW-39R.

Depth to water measurements were collected immediately prior to sampling at each well. Water level measurements were also collected from wells MW-22, MW-24, MW-25, MW-26, and MW-46.<sup>5</sup> Water level measurements are summarized in Table 1. Low-flow purging of the wells was performed as described above.

During the July 2025 sampling event, the transducer and barometric logger in MW-46 were removed from the well for data download and reinstalled. Evaluation of transducer data related to hydraulic control of the shallow aquifer is discussed in the Hydraulic Gradient section.

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<sup>3</sup> MW-22, MW-24, MW-25, MW-26, and MW-46 are screened in the shallow aquifer and not sampled.

<sup>4</sup> The pressure transducer consists of Model Solinst 3001 Levellogger 5 and the barometric logger consists of Model Solinst Barologger 5.

<sup>5</sup> MW-22, MW-24, MW-25, MW-26, and MW-46 are screened in the shallow aquifer and not sampled.

## LABORATORY ANALYSIS

Groundwater samples collected in February and July 2025 were submitted to the City of Everett Environmental Laboratory for the following analyses:

- Dissolved metals (arsenic, iron, manganese, nickel, and zinc) by USEPA Method 200.8
- Dissolved chloride by Standard Method SM4500-CL-E

Groundwater samples were also submitted to OnSite Environmental in Redmond, Washington, for the following analysis:

- BEHP by USEPA Method 8270E

## ANALYTICAL RESULTS

Table 2 summarizes the groundwater analytical results from the 2022 through 2025 sampling events. The laboratory reports are included in Attachment 2. Floyd|Snider performed data validation for all analytical data with a U.S. Environmental Protection Agency (USEPA) Level 2A Data Quality Review. The analytical data were validated in accordance with the USEPA National Functional Guidelines for Organic Superfund Methods Data Review (USEPA 2020a) and/or USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA 2020b). All “J” flagged laboratory results between the method detection limit and reporting limit (RL) were qualified as “J” per project standardization rules. Data were determined to be of acceptable quality for use as reported by the laboratory. A data validation summary is included in Attachment 3. Historical groundwater analytical results from 2001 to 2020 (i.e., excerpts from previous HWA annual reports) are included as Attachment 4.

### Arsenic

Arsenic concentrations were detected in MW-21R, MW-30, MW-31, and MW-36 during the February sampling event. Arsenic was detected in all wells during the July sampling event. No CUL exceedances were detected. The greatest arsenic concentration in 2025 was detected in MW-30 with 7.00 micrograms per liter ( $\mu\text{g/L}$ ) in February. The site-specific CUL for arsenic is 25  $\mu\text{g/L}$ .

### Iron

Iron was detected in all wells during both sampling events. Detected concentrations ranged between 2,430  $\mu\text{g/L}$  in MW-11R in July and 47,000  $\mu\text{g/L}$  in MW-31 in February. The February and July 2025 iron concentrations in MW-31 exceeded the iron CUL of 23,687  $\mu\text{g/L}$ .

Iron concentrations in well MW-31 have exceeded the CUL since sampling began in 2001. Concentrations fluctuated from 2001 to 2013 between approximately 30,000 and 45,000  $\mu\text{g/L}$ , and then increased sharply to over 70,000  $\mu\text{g/L}$  between 2014 and 2015, as shown on the graph on Figure 3.

### **Manganese**

Manganese was detected in all wells during both sampling events but none of the concentrations exceeded the CUL of 4,040 µg/L. Concentrations ranged between 257 µg/L in MW-39R in July and 1,410 µg/L in MW-21R in July.

### **Nickel**

Nickel concentrations were detected in MW-31 and MW-36 during the February sampling event. Nickel was detected in all wells during the July sampling event, but no CUL exceedances were detected. Concentrations ranged between 0.16 µg/L in MW-11R and 2.70 µg/L in MW-31, which are less than the nickel CUL of 10 µg/L.

### **Zinc**

Zinc was detected in MW-30 with an estimated concentration of 2.80 µg/L during the July sampling event. This detection is lower than the zinc CUL of 76.6 µg/L.

### **Chloride**

Chloride concentrations were detected in all wells during both sampling events. Chloride in MW-37 was detected at a concentration of 935 milligrams per liter (mg/L) in February and at 1,040 mg/L in July. These concentrations exceed the CUL of 230 mg/L. Chloride concentrations in MW-37 have previously exceeded the CUL between 2005 and 2006 and at different times since 2016. Sampling was discontinued in this well between 2006 and 2015 due to the influence of saline water from the Snohomish River into groundwater. When sampling resumed in 2015, concentrations increased steadily between 2015 and 2017, decreased between 2017 and January 2019, and have fluctuated over a wide concentration range between January 2019 and July 2025. Chloride concentrations in MW-37 over time relative to the CUL are shown on the graph depicted on Figure 4.

As discussed in previous monitoring reports and as confirmed by HWA during a 2006 study (HWA 2006), the tidally influenced rise and fall of Snohomish River water levels results in mixing of surface water into groundwater, and the presence of a saltwater wedge in the river affects the salinity in shoreline monitoring well MW-37, which is the closest well to the Snohomish River. Groundwater near the river is greatly influenced by river elevations. Consistent with past years, westerly horizontal hydraulic gradients away from the river were observed between MW-31 and MW-37 during both the February and July 2025 monitoring events, as shown on Figures 5 and 6. As discussed in the following section, these hydraulic gradients are consistent with at least temporary recharge of groundwater by river surface water in this area.

HWA established a correlation between salinity and chloride concentrations in MW-37, determined by specific conductivity measurements as an indicator for salinity (refer to Figure 6 in Attachment 5). Specific conductivity measurements in MW-37 increased and decreased with

tidally influenced water levels, following the same pattern as groundwater levels, and specific conductivity in the river varied in conjunction with tides, indicating a saltwater wedge moving up and down with the tides (refer to Figures 8 and 9 in Attachment 5).

Salinity data collected from the Snohomish River near the Site indicate salinities between 5 and 18 parts per thousand (ppt; Hall et al. 2018), whereas the site-specific chloride CUL of 230 mg/L would correspond to approximately 0.42 ppt salinity,<sup>6</sup> assuming minimal contribution from ions other than chloride, which is consistent with specific conductance in Site groundwater. Even the greatest chloride concentrations of 1,890 mg/L measured in MW-37 in July 2023 corresponds to only approximately 3.41 ppt salinity, less than the salinities measured in the Snohomish River near the Site. This indicates that chloride in groundwater from the deep aquifer at MW-37 is unlikely to affect chloride concentrations in the river.

### **Bis(2-Ethylhexyl)Phthalate**

In February and July 2025, BEHP was not detected in any of the samples greater than the laboratory RL.

### **HYDRAULIC GRADIENT**

Hydraulic gradients in the deep aquifer have been monitored since 2001, per the requirements of the CMCP. Easterly flow toward the Snohomish River has been established and documented during the past monitoring years, with the exception of the area between MW-31 and MW-37, as discussed below. Based on groundwater levels measured in 2025 and resulting elevations, groundwater in the deep aquifer flows to the east toward the Snohomish River, with a hydraulic gradient of approximately 0.02 feet per foot (ft/ft). Groundwater elevations in February and July 2025 are shown on Figures 5 and 6, respectively.

Reverse (westerly) groundwater flow between MW-31 and MW-37 was observed in February 2025, with a hydraulic gradient of approximately 0.05 ft/ft, and July 2025, with a hydraulic gradient of approximately 0.03 ft/ft. These gradients may not be permanent and are also strongly affected by tidal fluctuations in nearshore groundwater elevations from variation in the Snohomish River stage elevation. The 2025 and previous sampling events have shown that seasonal groundwater elevations greatly fluctuate in the wells closest to the river. Tidal influences from the Snohomish River are responsible for these variations, as previously determined by HWA (refer to discussion about chloride in MW-37 above). Based on the United States Geological Survey (USGS) river gauge readings for the Snohomish River approximately 7 miles upstream of the Site at Snohomish, Washington,<sup>7</sup> in February 2025, daily tidal fluctuations accounted for up to 10 feet in river water level differences and in July 2025 for up to 12 feet in river water level differences. Seasonally, in 2025, lowest river levels fluctuated by about

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<sup>6</sup> Per the conversion, salinity (ppt) = 0.0018066 × chloride ion concentration (mg/L).

<sup>7</sup> According to the USGS, the Snohomish River gauge datum is 9.86 feet below National Geodetic Vertical Datum of 1929.

9 feet and high river levels fluctuated by approximately 5 feet. As a result, in addition to seasonal variations, the time of day at which water levels were measured in the wells explains the high variability in the water levels in the near shore wells.

Per the CMCP, hydraulic control of the shallow (leachate) aquifer is demonstrated through monitoring of water levels to show that hydraulic gradients are toward the leachate collection system. For this reason, groundwater levels at and near the Everett Landfill leachate collection system are monitored to evaluate hydraulic control of the shallow aquifer with review of the transducer data from well MW-46 (screened in the shallow aquifer) and level sensor data from wet well at Lift Station 21 (LS21). Water level and barometer readings collected hourly between July 16, 2024, and November 24, 2025, are presented on Figure 7. Data show that LS21 wet well water elevations generally ranged from -1.80 feet to 0.60 feet North American Vertical Datum of 1988 (NAVD 88) between July 16, 2024, and November 24, 2025. Occasional LS21 wet well elevations outside of this range were observed on September 4, 2024, April 3, 2025, July 16, 2025, August 12, 2025, and between October 6 and October 14, 2025. Except for the October 2025 elevations, these readings are associated with wet well maintenance activities or transducer connection interruptions. The data interruption that occurred between October 6 and October 14, 2025, was caused by a power outage at the lift station and subsequent maintenance activities lasting for several days, during which time the lift station pump was not operating. Groundwater elevations in MW-46 ranged from 5.92 to 13.23 feet NAVD 88 between July 2024 and November 2025. Based on the elevation data, groundwater elevations inside the wet well (excluding the two outliers less than -1.8 feet and more than 0.60 feet) were 3.22 to 15.02 feet lower than groundwater elevations in MW-46, which indicates that hydraulic control was maintained during the monitoring period. Transducer data for the remainder of 2025 will be reported and evaluated in the 2026 Groundwater Monitoring Report.

## SUMMARY

The 2025 groundwater analytical results are similar to results in previous monitoring years. Exceedances of the iron CUL were detected in MW-31 and exceedances of the chloride CUL were detected in MW-37. MW-37 is a point of compliance well, in which sampling was discontinued between 2006 and 2015 following the evaluation of the influence of saline water from the Snohomish River into groundwater. Chloride concentrations have been fluctuating in MW-37 since 2016, between 242 and 1,890  $\mu\text{g/L}$ , exceeding the CUL. The data suggest that chloride concentrations at MW-37 are affected by saline water from the Snohomish River, based on proximity to the river and observed westerly gradients during sampling events. This is supported by HWA's previous evaluation and the comparison of Snohomish River salinities with corresponding chloride concentrations. The chloride concentrations in groundwater at MW-37 are less than the Snohomish River chloride concentrations based on its range of salinities, and groundwater is therefore not expected to increase the chloride concentration in the river.

Per the CMCP, the 10-year performance monitoring period reset in October 2020 after the first pile installation that penetrated the aquitard occurred. Semiannual compliance monitoring of the nine selected wells is expected to continue until October 2030.

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## REFERENCES

- Floyd|Snider. 2001. *Cleanup Action Plan for the Everett Landfill/Tire Fire Site (Site) in Everett, Washington*. March.
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## LIST OF ATTACHMENTS

Table 1	2025 Groundwater Elevations
Table 2	Summary of 2022–2025 Groundwater Analytical Results
Figure 1	Site Vicinity Map
Figure 2	Groundwater Monitoring Well Locations
Figure 3	Iron Concentrations in MW-31
Figure 4	Chloride Concentrations in MW-37
Figure 5	Deep Aquifer Groundwater Elevations February 2025

Figure 6 Deep Aquifer Groundwater Elevations July 2025

Figure 7 LS21 vs. MW-46 Groundwater Elevations July 2024 through November 2025

Attachment 1 Floyd|Snider Standard Guidelines

Attachment 2 Analytical Laboratory Reports

Attachment 3 Data Validation Summaries

Attachment 4 Pre-2021 Historical Groundwater Monitoring Analytical Results and Groundwater Elevations

Attachment 5 Excerpts from December 2006 HWA MW-37 Chloride Investigation Everett Landfill



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Name: Sabine Datum

Date: 04/17/2026

## Tables

**Table 1  
2025 Groundwater Elevations**

Well ID	Depth of Well Screen (feet bgs) <sup>(1)</sup>	TOC Elevation (feet MSL)	TOC Elevation (feet NAVD 88)	February 2025 Sampling Event					July 2025 Sampling Event				
				Date of Water Level Measurement	Time of Water Level Measurement	Depth to Water (feet)	Groundwater Elevation (feet NAVD 88)	Snohomish River Level Gauge <sup>(2)</sup> Elevation at Time of Water Level Measurement (feet NAVD 88)	Date of Water Level Measurement	Time of Water Level Measurement	Depth to Water (feet)	Groundwater Elevation (feet NAVD 88)	Snohomish River Level Gauge <sup>(2)</sup> at Time of Water Level Measurement (feet NAVD 88)
MW-11R	30-40	18.761	14.311	2/27/2025	8:52	10.10	4.21	10.53	7/2/2025	13:58	13.42	0.89	4.81
MW-21R	30-40	43.81	39.36	2/27/2025	10:49	12.17	27.19	9.97	7/2/2025	15:16	12.52	26.84	3.83
MW-22	6-11 <sup>(4)</sup>	32.22	27.77	2/26/2025	10:53	3.90	23.87	12.52	7/2/2025	15:11	6.76	21.01	4.03
MW-24 <sup>(3)</sup>	5-10 <sup>(4)</sup>	14.012	9.562	2/26/2025	12:08	2.04	7.52	12.08	7/2/2025	13:21	4.30	5.26	5.36
MW-25 <sup>(3)</sup>	6-11 <sup>(4)</sup>	12.515	8.065	2/26/2025	12:00	0.31	7.76	11.97	7/2/2025	13:27	4.39	3.68	5.19
MW-26 <sup>(3)</sup>	4-9 <sup>(4)</sup>	12.183	7.733	2/26/2025	11:49	1.91	5.82	12.13	7/2/2025	13:56	2.08	5.65	4.81
MW-29R	39-49	12.452	8.002	2/26/2025	13:27	1.85	6.15	11.84	7/2/2025	13:57	4.67	3.33	4.81
MW-30	28-38	12.773	8.323	2/26/2025	13:27	4.34	3.98	11.84	7/2/2025	11:59	6.70	1.62	5.85
MW-31	18-28	14.031	9.581	2/27/2025	11:24	8.03	1.55	8.54	7/2/2025	12:26	8.21	1.37	5.73
MW-36	21.5-31.5	15.37	10.92	2/26/2025	10:47	2.16	8.76	12.52	7/2/2025	9:50	6.18	4.74	4.49
MW-37	27.5-37.5	18.73	14.28	2/26/2025	9:40	6.22	8.06	12.91	7/2/2025	9:57	9.19	5.09	4.73
MW-38	32-40.5	18.07	13.62	2/26/2025	12:13	6.10	7.52	12.00	7/2/2025	12:05	7.83	5.79	5.85
MW-39R	51-61	15.919	11.469	2/27/2025	10:04	6.69	4.78	9.60	7/2/2025	13:48	9.35	2.12	5.00
MW-46 <sup>(3)</sup>	7-22	26.619	22.169	2/26/2025	12:23	9.90	12.27	12.00	7/2/2025	14:45	17.37	4.80	4.23

Notes:

- Well not selected for performance monitoring.
- 1 Information obtained from historical boring logs.
- 2 Snohomish River Level Gauge at Snohomish, Washington, located approximately 7 miles upstream from the Site.
- 3 Screened in shallow aquifer.
- 4 Well screen depths are approximate based on total depth measurements.

Abbreviations:

- bgs Below ground surface
- MSL Mean sea level
- NAVD 88 North American Vertical Datum of 1988
- Site Everett Landfill/Tire Fire Site
- TOC Top of casing

**Table 2**  
**Summary of 2022–2025 Groundwater Analytical Results**

Location Name					MW-11R										MW-21R							
Sample Name					MW-11R-070225	MW-11R-022725	MW-11R-071624	MW-11R-022924	MW-11R-071823	MW-D11R-071823	MW-11R-022323	MW-11R-101822	MW-11R-021522	MW-21R-070225	MW-21R-022725	MW-21R-071724	MW-21R-022824	MW-21R-092623	MW-21R-022223	MW-21R-101922	MW-21R-021522	
Sample Date					7/2/2025	2/27/2025	7/16/2024	2/29/2024	7/18/2023	7/18/2023	2/23/2023	10/18/2022	2/15/2022	7/2/2025	2/27/2025	7/17/2024	2/28/2024	9/26/2023	2/22/2023	10/19/2022	2/15/2022	
Analyte	CAS No.	Analysis Method	CUL	Unit																		
<b>Dissolved Metals</b>																						
Arsenic	7440-38-2	EPA 200.8	25	µg/L	0.180 J	0.300 U	0.300 U	0.600 U	0.600 U	0.600 U	0.600 U	0.600 U	0.600 U	3.80	4.20	4.10	4.70	6.10	9.00	18.8	10.3	
Iron	7439-89-6	EPA 200.8	23,687	µg/L	2,430	2,620	2,970	2,770	3,690	3,710	3,260	4,140	2,780	8,940	9,870	9,780	9,330	11,900	13,000	13,200	11,200	
Manganese	7439-96-5	EPA 200.8	4,040	µg/L	680	659	720	627	660	665	685	727	625	1,410	1,400	1,370	1,320	1,550	1,730	2,180	1,680	
Nickel	7440-02-0	EPA 200.8	10	µg/L	0.25	1.00 U	1.00 U	2.00 U	0.600 U	0.600 U	0.600 U	0.600 U	0.600 U	0.43	1.00 U	1.00 U	2.00 U	0.600 U	0.600 U	0.600 U	0.600 U	
Zinc	7440-66-6	EPA 200.8	76.6	µg/L	2.00 U	3.00 U	3.00 U	6.00 U	6.00 U	6.00 U	10.0 U	10.0 U	10.0 U	2.00 U	3.00 U	3.00 U	6.00 U	6.00 U	10.0 U	10.0 U	10.0 U	
<b>Conventionals</b>																						
Chloride	16887-00-6	SM 4500-CL-E	230	mg/L	13.4	13.9	14.8	14.5	16.7	17.1	15.8	15.8	13.4	29.3	29.6	21.0	26.5	11.4	13.0	8.90	16.8	
<b>Semivolatile Organic Compounds</b>																						
Bis(2-ethylhexyl)phthalate	117-81-7	EPA 8270E	10	µg/L	1.00 U	0.99 U	0.96 U	0.99 U	0.95 U	0.94 U	1.0 U	0.95 U	1.0 U	0.97 U	0.98 U	0.99 U	0.95 U	1.0 U	1.0 U	0.95 U	1.1 U	
<b>Field Parameters</b>																						
Dissolved Oxygen	--	YSI METER	--	mg/L	0.62	0.24	0.39	0.4	0.21	--	2.49	0.21	1.24	0.62	1.12	1.12	0.61	0.25	2.61	1.01	1.24	
ORP	--	YSI METER	--	mV	-103.2	-87	-104	-74.7	-61.2	--	-53.3	-146.5	173.2	54.6	-47.3	-24.8	-30.1	-61.7	-15.1	-76	138.1	
pH	pH	YSI METER	--	pH	6.97	7.54	7.01	7	7.09	--	7.1	7.03	7.02	6.55	6.52	6.6	6.45	6.74	6.49	6.72	6.59	
Specific Conductance	--	YSI METER	--	µS/cm	875	415.1	814	578	813	--	700	855	643	494.4	251.6	566	419.1	523	432.5	601	429.3	
Temperature	--	YSI METER	--	°C	17.4	13.4	15.5	12.1	13.5	--	11.9	14.6	13.5	16.3	12.8	15.3	12.4	13.2	11.1	12.74	12.1	
Turbidity	--	TURBM	--	NTU	2.6	6.11	1.65	0.24	9.21	--	2.37	2.32	4.98	1.65	2.33	3.32	0.42	2.21	2.55	2.45	4.14	

Notes: Conventionals and dissolved metals results are rounded to three significant figures. SVOCs are rounded to two significant figures. Field parameters are presented to the decimal places provided on the field meters.  
 -- Not applicable/available or not analyzed.

**RED/BOLD** Analyte was detected at a concentration greater than the CUL.

- Abbreviations:
- °C Degrees Celsius
  - CAS Chemical Abstracts Service
  - CUL Cleanup level
  - µg/L Micrograms per liter
  - µS/cm Microsiemens per centimeter
  - mg/L Milligrams per liter
  - mV Millivolts
  - NTU Nephelometric turbidity unit
  - ORP Oxidation–reduction potential
  - SVOC Semivolatile organic compound

- Qualifiers:
- J Analyte was detected; concentration is an estimate.
  - U Analyte was not detected at the associated reporting limit.

**Table 2**  
**Summary of 2022–2025 Groundwater Analytical Results**

Location Name					MW-29R											
Sample Name					MW-29R-070225	MW-29R-022625	MW-29R-071724	MW-129R-071724	MW-29R-022924	MW-29R-071823	MW-29R-022323	MW-29R-022323	MW-29R-101922	MW-29R-021522	Dup-1-021522	
Sample Date					7/2/2025	2/26/2025	7/17/2024	7/17/2024	2/29/2024	7/18/2023	2/23/2023	2/23/2023	10/19/2022	2/15/2022	2/15/2022	
Analyte	CAS No.	Analysis Method	CUL	Unit												
<b>Dissolved Metals</b>																
Arsenic	7440-38-2	EPA 200.8	25	µg/L	0.210 J	0.300 U	0.300 U	0.300	0.600 U	0.600 U	0.600 U	0.600 U	0.600 U	0.600 U	0.600 U	
Iron	7439-89-6	EPA 200.8	23,687	µg/L	5,250	5,640	5,710	5,750	5,470	5,740	5,560	5,550	5,870	4,730	4,720	
Manganese	7439-96-5	EPA 200.8	4,040	µg/L	402	394	391	389	369	392	399	396	391	314	317	
Nickel	7440-02-0	EPA 200.8	10	µg/L	0.16 J	1.00 U	1.00 U	1.00 U	2.00 U	0.600 U	0.600 U	0.600 U	0.600 U	0.600 U	0.600 U	
Zinc	7440-66-6	EPA 200.8	76.6	µg/L	2.00 U	3.00 U	3.00 U	3.00 U	6.00 U	6.00 U	10.0 U	10.0 U	10.0 U	10.0 U	10.0 U	
<b>Conventionals</b>																
Chloride	16887-00-6	SM 4500-CL-E	230	mg/L	11.4	11.4	11.8	11.4	12.1	11.6	11.1	11.5	10.9	9.50	9.60	
<b>Semivolatile Organic Compounds</b>																
Bis(2-ethylhexyl)phthalate	117-81-7	EPA 8270E	10	µg/L	1.00 U	0.97 U	0.98 U	0.98 U	0.97 U	0.94 U	1.0 U	1.0 U	0.97 U	1.0 U	0.98 U	
<b>Field Parameters</b>																
Dissolved Oxygen	--	YSI METER	--	mg/L	0.33	1	0.23	--	0.3	0.25	2.69	--	0.15	1.16	--	
ORP	--	YSI METER	--	mV	-46.8	-42.5	-39.1	--	-40.1	-5.8	2.3	--	-108.6	154	--	
pH	pH	YSI METER	--	pH	6.37	6.38	6.43	--	6.34	6.64	6.44	--	6.42	6.37	--	
Specific Conductance	--	YSI METER	--	µS/cm	921	363.4	897	--	589	872	668	--	848	559	--	
Temperature	--	YSI METER	--	°C	16.1	11.6	16.7	--	11.3	15.1	10.7	--	13.9	11.6	--	
Turbidity	--	TURBM	--	NTU	2.74	2.13	1.39	--	0.22	1.14	1.91	--	1.15	3.25	--	

Notes:

Conventionals and dissolved metals results are rounded to three significant figures. SVOCs are rounded to two significant figures. Field parameters are presented to the decimal places provided on the field meters.

-- Not applicable/available or not analyzed.

**RED/BOLD** Analyte was detected at a concentration greater than the CUL.

Abbreviations:

- °C Degrees Celsius
- CAS Chemical Abstracts Service
- CUL Cleanup level
- µg/L Micrograms per liter
- µS/cm Microsiemens per centimeter
- mg/L Milligrams per liter
- mV Millivolts
- NTU Nephelometric turbidity unit
- ORP Oxidation–reduction potential
- SVOC Semivolatile organic compound

Qualifiers:

- J Analyte was detected; concentration is an estimate.
- U Analyte was not detected at the associated reporting limit.

**Table 2**  
**Summary of 2022–2025 Groundwater Analytical Results**

Location Name					MW-30									
Sample Name					MW-30-070225	MW-30-022625	MW-30-071724	MW-30-022924	MW-130-022924	MW-30-071923	MW-30-022323	MW-30-101922	MW-D30-101922	MW-30-021622
Sample Date					7/2/2025	2/26/2025	7/17/2024	2/29/2024	2/29/2024	7/19/2023	2/23/2023	10/19/2022	10/19/2022	2/16/2022
Analyte	CAS No.	Analysis Method	CUL	Unit										
<b>Dissolved Metals</b>														
Arsenic	7440-38-2	EPA 200.8	25	µg/L	6.00	7.00	6.90	6.10	6.40	6.00	7.60	6.90	6.80	6.60
Iron	7439-89-6	EPA 200.8	23,687	µg/L	11,700	13,700	12,800	11,800	11,800	11,400	12,200	11,600	11,700	11,000
Manganese	7439-96-5	EPA 200.8	4,040	µg/L	569	552	546	550	542	490	536	516	519	503
Nickel	7440-02-0	EPA 200.8	10	µg/L	0.17 J	1.00 U	1.00 U	2.00 U	2.00 U	0.600 U	0.600 U	0.600 U	0.600 U	0.600 U
Zinc	7440-66-6	EPA 200.8	76.6	µg/L	2.80 J	3.00 U	3.00 U	6.00 U	6.00 U	6.00 U	10.0 U	10.0 U	10.0 U	10.0 U
<b>Conventionals</b>														
Chloride	16887-00-6	SM 4500-CL-E	230	mg/L	16.8	16.1	16.1	17.3	17.1	16.9	16.9	17.0	16.9	16.7
<b>Semivolatile Organic Compounds</b>														
Bis(2-ethylhexyl)phthalate	117-81-7	EPA 8270E	10	µg/L	0.98 U	0.96 U	1.00 U	0.97 U	0.97 U	0.94 U	0.94 U	0.99 U	0.96 U	1.0 U
<b>Field Parameters</b>														
Dissolved Oxygen	--	YSI METER	--	mg/L	0.6	0.19	0.38	0.44	--	0.57	2.63	0.13	--	1.48
ORP	--	YSI METER	--	mV	-39.2	-50.6	-66.5	-59.3	--	-24.4	-19.1	-118.4	--	145
pH	pH	YSI METER	--	pH	6.33	6.9	6.52	6.55	--	6.65	6.62	6.63	--	6.52
Specific Conductance	--	YSI METER	--	µS/cm	564	282.1	505	448.8	--	511	434.9	550	--	443.1
Temperature	--	YSI METER	--	°C	15.1	12.3	15	11.5	--	14.7	11.8	13.3	--	11.9
Turbidity	--	TURBM	--	NTU	2.55	7.3	1.13	2.13	--	1.8	3.16	1.36	--	0.87

Notes:

Conventionals and dissolved metals results are rounded to three significant figures. SVOCs are rounded to two significant figures. Field parameters are presented to the decimal places provided on the field meters.

-- Not applicable/available or not analyzed.

**RED/BOLD** Analyte was detected at a concentration greater than the CUL.

Abbreviations:

- °C Degrees Celsius
- CAS Chemical Abstracts Service
- CUL Cleanup level
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- NTU Nephelometric turbidity unit
- ORP Oxidation–reduction potential
- SVOC Semivolatile organic compound

Qualifiers:

- J Analyte was detected; concentration is an estimate.
- U Analyte was not detected at the associated reporting limit.

**Table 2**  
**Summary of 2022–2025 Groundwater Analytical Results**

Location Name					MW-31								MW-36							
Sample Name					MW-31-070225	MW-31-022725	MW-31-071724	MW-31-022924	MW-31-071923	MW-31-022323	MW-31-101922	MW-31-021522	MW-36-070225	MW-36-022625	MW-36-071624	MW-36-022824	MW-36-092623	MW-36-022223	MW-36-101822	MW-36-021622
Sample Date					7/2/2025	2/27/2025	7/17/2024	2/29/2024	7/19/2023	2/23/2023	10/19/2022	2/15/2022	7/2/2025	2/26/2025	7/16/2024	2/28/2024	9/26/2023	2/22/2023	10/18/2022	2/16/2022
Analyte	CAS No.	Analysis Method	CUL	Unit																
<b>Dissolved Metals</b>																				
Arsenic	7440-38-2	EPA 200.8	25	µg/L	1.30	1.40	1.20	1.10 J	1.10	1.40 J	1.40 J	1.60 J	3.80	4.30	3.80	3.90	5.10	1.00 J	5.40	10.4
Iron	7439-89-6	EPA 200.8	23,687	µg/L	<b>43,700</b>	<b>47,000</b>	<b>44,200</b>	<b>42,100</b>	<b>47,700</b>	<b>35,700</b>	<b>39,500</b>	<b>39,300</b>	11,500	13,400	11,200	8,740	10,300	84.0	5,860	5,080
Manganese	7439-96-5	EPA 200.8	4,040	µg/L	1,320	1,310	1,290	1,240	1,230	1,270	1,220	1,240	579	573	462	422	546	8.90	326	453
Nickel	7440-02-0	EPA 200.8	10	µg/L	2.70	2.70 J	2.90 J	3.20 J	2.80	3.30	2.90	3.00	0.92	1.10 J	1.40 J	2.30 J	2.70	0.700 J	1.70 J	4.70
Zinc	7440-66-6	EPA 200.8	76.6	µg/L	2.00 U	3.00 U	3.00 U	6.00 U	6.00 U	10.0 U	10.0 U	10.0 U	2.00 U	3.00 U	3.00 U	6.00 U	6.00 U	10.0 U	10.0 U	10.0 U
<b>Conventionals</b>																				
Chloride	16887-00-6	SM 4500-CL-E	230	mg/L	150	151	148	155	155	151	150	140	19.3	20.5	24.4	25.6	31.4	3.50	22.8	30.3
<b>Semivolatile Organic Compounds</b>																				
Bis(2-ethylhexyl)phthalate	117-81-7	EPA 8270E	10	µg/L	0.96 U	0.99 U	0.98 U	0.96 U	1.0 U	1.0 U	0.95 U	0.99 U	1.0 U	1.0 U	1.0 U	1.0 U	0.97 U	0.97 U	0.95 U	1.1 U
<b>Field Parameters</b>																				
Dissolved Oxygen	--	YSI METER	--	mg/L	0.37	1.03	0.24	0.33	0.14	2.36	0.82	1.15	0.37	0.17	0.28	0.57	0.19	4.83	0.93	1.28
ORP	--	YSI METER	--	mV	106.9	66.1	-23.7	-60.8	-6.9	24.6	-17.6	162.2	40.8	-84.5	9.8	-47.7	-52.8	24.9	-36.7	135.2
pH	pH	YSI METER	--	pH	6.03	6.08	6.12	6.05	6.14	6.13	6.07	6.02	6.53	7.13	6.63	6.5	6.66	7.01	6.7	6.63
Specific Conductance	--	YSI METER	--	µS/cm	1,177	468	1,184	938	1,083	916	1,160	914	670	357.6	524	436.7	618	52.1	668	492.2
Temperature	--	YSI METER	--	°C	14.6	14.4	15.4	11.9	15.7	12.9	13.41	13	11.8	11.1	11.8	11	12.1	10.1	11.64	11.1
Turbidity	--	TURBM	--	NTU	0	8.78	4.31	8.58	4.46	5.48	1.43	4.44	1.25	8.73	43.4	3.35	0.9	8.61	8.51	5.96

Notes: Conventionals and dissolved metals results are rounded to three significant figures. SVOCs are rounded to two significant figures. Field parameters are presented to the decimal places provided on the field meters.  
 -- Not applicable/available or not analyzed.

**RED/BOLD** Analyte was detected at a concentration greater than the CUL.

Abbreviations:

- °C Degrees Celsius
- CAS Chemical Abstracts Service
- CUL Cleanup level
- µg/L Micrograms per liter
- µS/cm Microsiemens per centimeter
- mg/L Milligrams per liter
- mV Millivolts
- NTU Nephelometric turbidity unit
- ORP Oxidation–reduction potential
- SVOC Semivolatile organic compound

Qualifiers:

- J Analyte was detected; concentration is an estimate.
- U Analyte was not detected at the associated reporting limit.

**Table 2**  
**Summary of 2022–2025 Groundwater Analytical Results**

Location Name					MW-37								MW-38							
Sample Name					MW-37-070225	MW-37-022625	MW-37-071624	MW-37-032924	MW-37-071823	MW-37-022223	MW-37-101822	MW-37-021622	MW-38-070225	MW-38-022625	MW-38-071624	MW-38-022824	MW-38-071823	MW-38-022223	MW-38-101822	MW-38-021522
Sample Date					7/2/2025	2/26/2025	7/16/2024	3/29/2024	7/18/2023	2/22/2023	10/18/2022	2/16/2022	7/2/2025	2/26/2025	7/16/2024	2/28/2024	7/18/2023	2/22/2023	10/18/2022	2/15/2022
Analyte	CAS No.	Analysis Method	CUL	Unit																
<b>Dissolved Metals</b>																				
Arsenic	7440-38-2	EPA 200.8	25	µg/L	0.150 J	0.300 U	0.300 U	0.600 U	0.600 U	0.600 U	0.600 U	0.600 U	0.110 J	0.300 U	0.300 U	0.600 U	0.600 U	0.600 U	0.600 U	
Iron	7439-89-6	EPA 200.8	23,687	µg/L	16,700	23,300	21,900	17,600	12,600	11,300	<b>24,100</b>	15,200	2,910	2,520	2,160	3,240	2,640	4,030	2,840	
Manganese	7439-96-5	EPA 200.8	4,040	µg/L	1,040	1,000	673	1,540	1,850	1,620	814	1,440	309	292	294	275	265	305	278	
Nickel	7440-02-0	EPA 200.8	10	µg/L	0.32	1.00 U	1.00 U	2.00 U	0.600 U	0.600 U	0.600 U	0.600 U	0.38	1.00 U	1.00 U	2.00 U	0.600 U	0.600 U	0.600 U	
Zinc	7440-66-6	EPA 200.8	76.6	µg/L	2.00 U	3.00 U	3.00 U	6.00 U	6.00 U	10.0 U	10.0 U	10.0 U	2.00 U	3.00 U	3.00 U	6.00 U	6.00 U	10.0 U	10.0 U	
<b>Conventior</b>																				
Chloride	16887-00-6	SM 4500-CL-E	230	mg/L	<b>1,040</b>	<b>935</b>	<b>244</b>	<b>1,570</b>	<b>1,890</b>	<b>1,460</b>	<b>242</b>	<b>1,080</b>	13.3	11.0	11.6	13.3	16.4	15.9	10.6	
<b>Semivolatile Organic Compounds</b>																				
Bis(2-ethylhexyl)phthalate	117-81-7	EPA 8270E	10	µg/L	0.98 U	0.99 U	0.96 U	0.96 U	0.94 U	1.0 U	0.95 U	1.1 U	0.96 U	1.00 U	0.97 U	0.96 U	0.96 U	1.2	0.95 U	
<b>Field Parameters</b>																				
Dissolved Oxygen	--	YSI METER	--	mg/L	0.59	0.16	0.22	0.35	0.31	2.37	2.5	1.42	0.6	0.21	0.32	0.38	0.28	2.47	0.29	
ORP	--	YSI METER	--	mV	21.2	-69	-66.6	-89.9	-26	-24.8	-30.8	186.5	85.1	-24.4	16.4	-28.9	37.1	14	-106.5	
pH	pH	YSI METER	--	pH	6.5	6.65	6.42	6.52	6.75	6.39	6.32	6.4	6.73	6.99	6.53	6.45	6.82	6.45	6.68	
Specific Conductance	--	YSI METER	--	µS/cm	2,323	1,602	1,103	3,350	5,647	3,639	1,391	3,007	408.9	213.6	394.4	296.3	392.3	330.4	380	
Temperature	--	YSI METER	--	°C	11.9	11.1	11.9	11.1	12.1	10.7	11.7	11.3	11.9	11	11.6	10.7	11.5	10.4	11.8	
Turbidity	--	TURBM	--	NTU	1.19	5.64	0.55	5.35	1.32	21	0.95	1.05	1.46	4.91	7.03	0.16	1.45	2.38	4.03	

Notes: Conventiorals and dissolved metals results are rounded to three significant figures. SVOCs are rounded to two significant figures. Field parameters are presented to the decimal places provided on the field meters.  
 -- Not applicable/available or not analyzed.

**RED/BOLD** Analyte was detected at a concentration greater than the CUL.

Abbreviations:

- °C Degrees Celsius
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- NTU Nephelometric turbidity unit
- ORP Oxidation–reduction potential
- SVOC Semivolatile organic compound

Qualifiers:

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- U Analyte was not detected at the associated reporting limit.

**Table 2**  
**Summary of 2022–2025 Groundwater Analytical Results**

Location Name					MW-39R									
Sample Name					MW-39R-070225	MW-139R-070225	MW-39R-022725	MW-139R-022725	MW-39R-071724	MW-39R-022924	MW-39R-071823	MW-39R-022323	MW-39R-101922	MW-39R-021522
Sample Date					7/2/2025	7/2/2025	2/27/2025	2/27/2025	7/17/2024	2/29/2024	7/18/2023	2/23/2023	10/19/2022	2/15/2022
Analyte	CAS No.	Analysis Method	CUL	Unit										
<b>Dissolved Metals</b>														
Arsenic	7440-38-2	EPA 200.8	25	µg/L	0.110 J	0.110 J	0.300 U	0.300 U	0.300 U	0.600 U	0.600 U	0.600 U	0.600 U	0.600 U
Iron	7439-89-6	EPA 200.8	23,687	µg/L	4,610	4,560	5,140	4,710	310	4,710	4,990	4,620	4,620	4,230
Manganese	7439-96-5	EPA 200.8	4,040	µg/L	257	257	273	264	36.6	237	242	250	238	230
Nickel	7440-02-0	EPA 200.8	10	µg/L	0.18 J	0.14 J	1.00 U	1.00 U	1.10 J	2.00 U	0.600 U	0.600 U	0.600 U	0.600 U
Zinc	7440-66-6	EPA 200.8	76.6	µg/L	2.00 U	2.00 U	3.00 U	3.00 U	3.00 J	6.00 U	6.00 U	10.0 U	10.0 U	10.0 U
<b>Conventionals</b>														
Chloride	16887-00-6	SM 4500-CL-E	230	mg/L	6.70	6.60	6.90	6.70	3.10	7.00	7.80	6.90	7.30	7.50
<b>Semivolatile Organic Compounds</b>														
Bis(2-ethylhexyl)phthalate	117-81-7	EPA 8270E	10	µg/L	1.00 U	1.00 U	0.95 U	1.00 U	1.00 U	0.96 U	0.98 U	0.96 U	0.98 U	1.0 U
<b>Field Parameters</b>														
Dissolved Oxygen	--	YSI METER	--	mg/L	0.36	--	0.25	--	1.34	0.47	0.2	8.38	0.29	7.99
ORP	--	YSI METER	--	mV	72.6	--	-85.1	--	125.3	-86.2	-55.6	-55.8	-124.4	-108.1
pH	pH	YSI METER	--	pH	6.73	--	7.28	--	6.39	6.75	6.87	6.82	6.87	6.79
Specific Conductance	--	YSI METER	--	µS/cm	291.9	--	160.9	--	160.9	247.3	279.7	210.9	293.2	235.5
Temperature	--	YSI METER	--	°C	13.6	--	12.1	--	16.4	11.2	14.4	10.9	13.7	11.8
Turbidity	--	TURBM	--	NTU	0	--	4.92	--	0.82	1.18	2.96	2.1	1.34	1.22

Notes:

Conventionals and dissolved metals results are rounded to three significant figures. SVOCs are rounded to two significant figures. Field parameters are presented to the decimal places provided on the field meters.

-- Not applicable/available or not analyzed.

**RED/BOLD** Analyte was detected at a concentration greater than the CUL.

Abbreviations:

- °C Degrees Celsius
- CAS Chemical Abstracts Service
- CUL Cleanup level
- µg/L Micrograms per liter
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## Figures



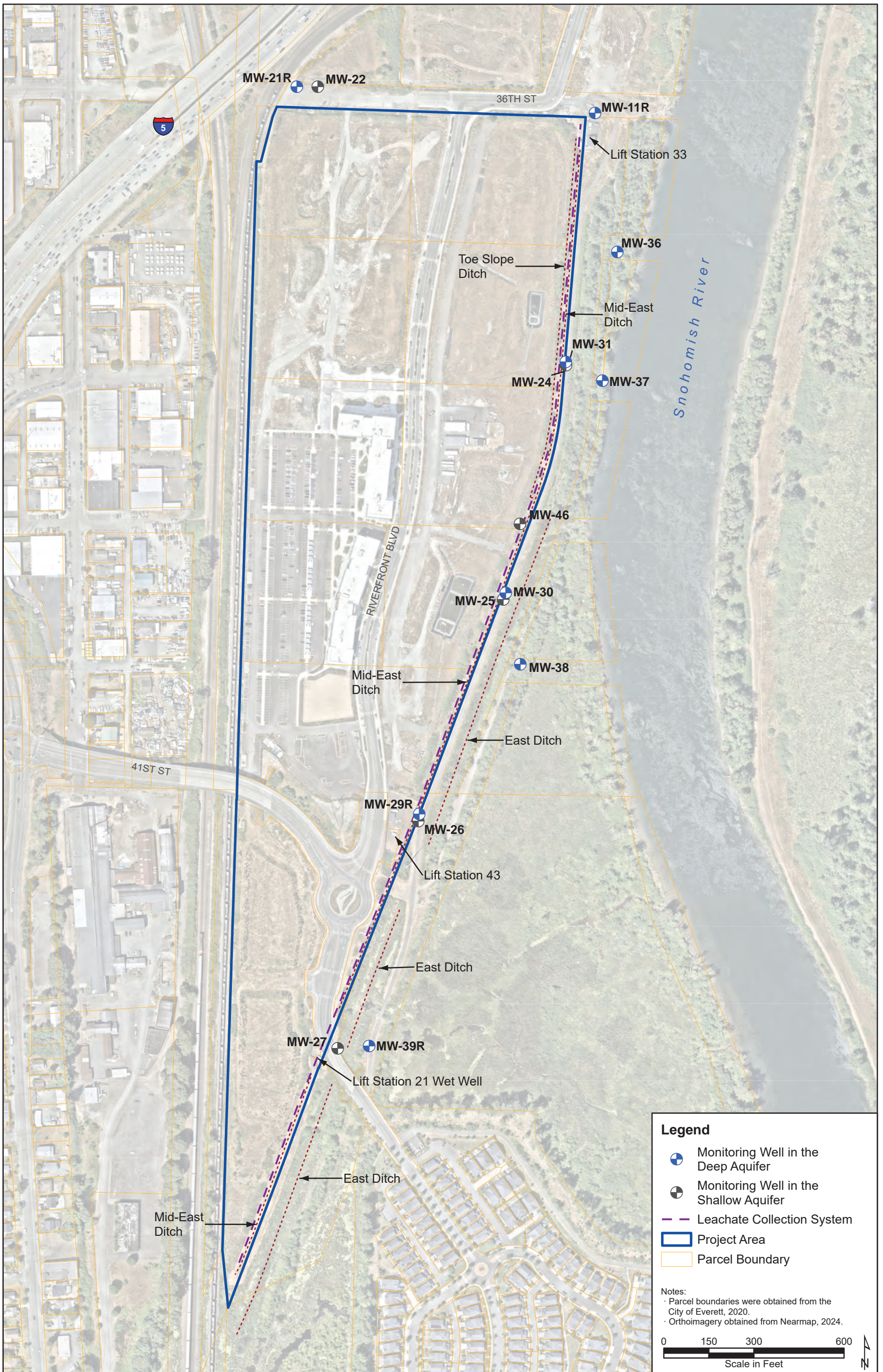
Note:  
 · Basemap tiles obtained from ESRI, accessed 2023.

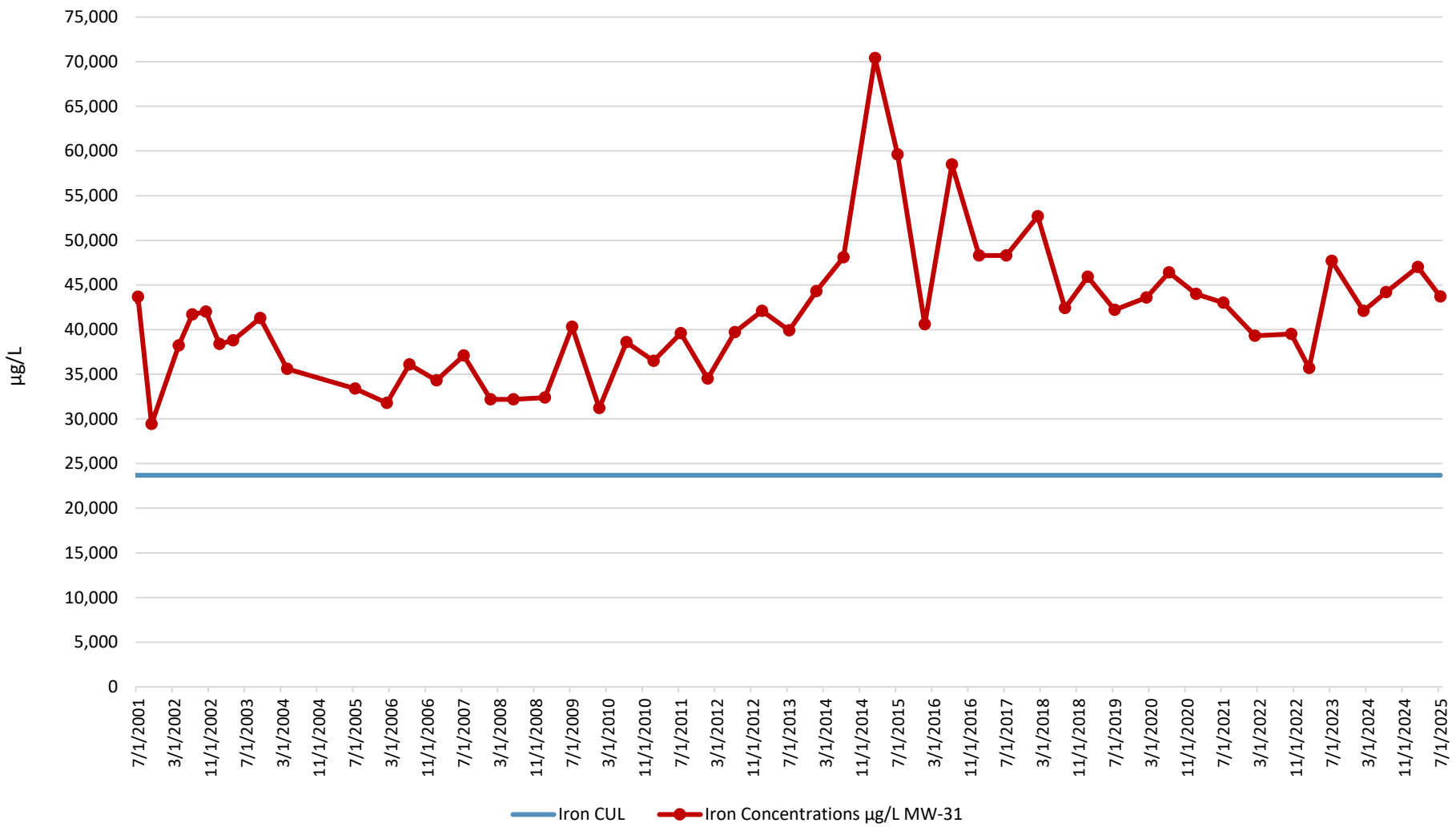


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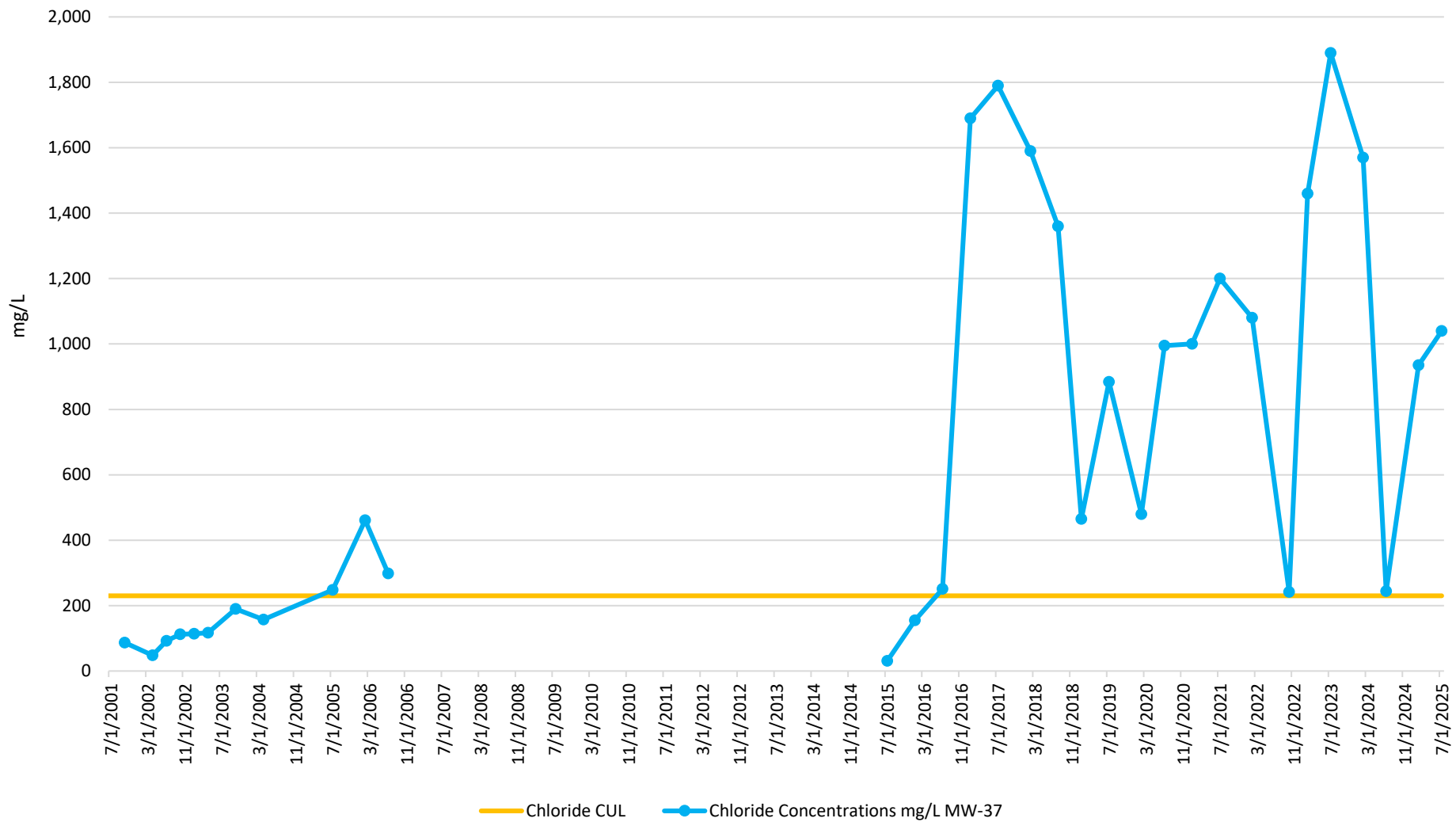
**2025 Annual Groundwater  
 Monitoring Report  
 Everett Landfill/Tire Fire Site  
 Everett, Washington**

Figure 1  
 Site Vicinity Map

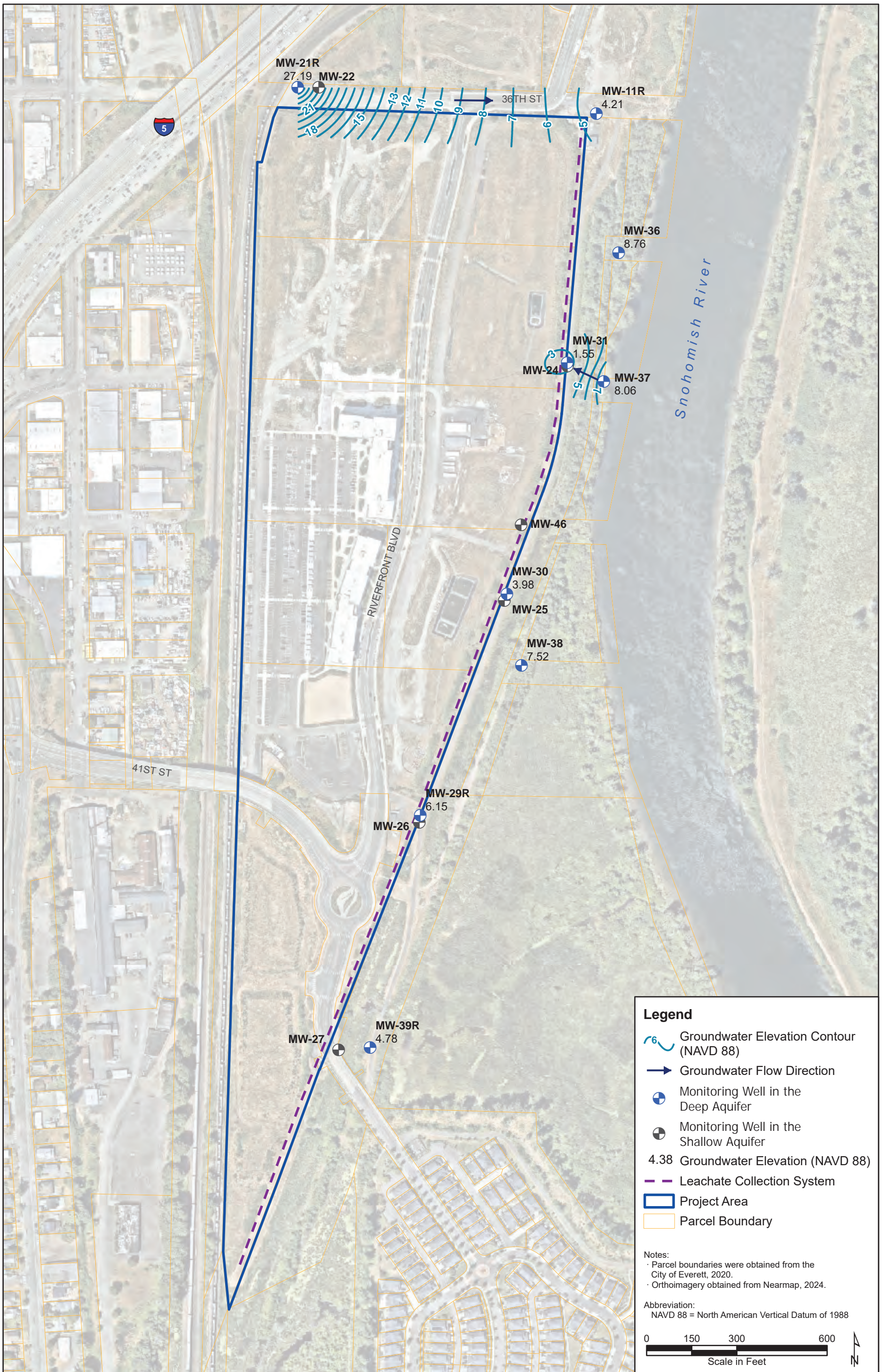




Abbreviations: CUL = Cleanup level, µg/L = Micrograms per liter



Abbreviations: CUL = Cleanup level, mg/L = Milligrams per liter



**Legend**

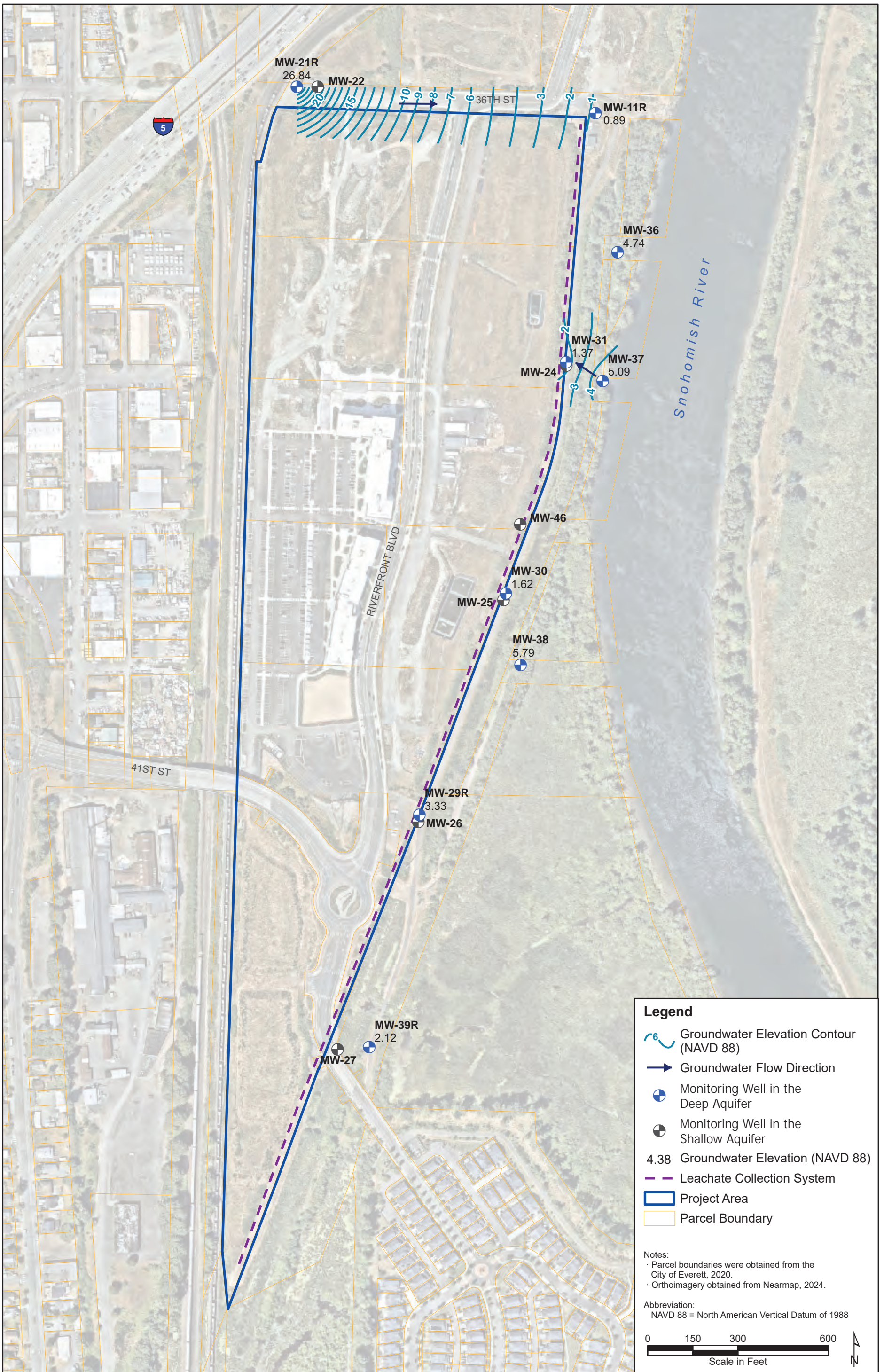
- Groundwater Elevation Contour (NAVD 88)
- Groundwater Flow Direction
- Monitoring Well in the Deep Aquifer
- Monitoring Well in the Shallow Aquifer
- 4.38 Groundwater Elevation (NAVD 88)
- Leachate Collection System
- Project Area
- Parcel Boundary

**Notes:**

- Parcel boundaries were obtained from the City of Everett, 2020.
- Orthoimagery obtained from Nearmap, 2024.

**Abbreviation:**  
NAVD 88 = North American Vertical Datum of 1988

0 150 300 600  
Scale in Feet



**Legend**

- Groundwater Elevation Contour (NAVD 88)
- Groundwater Flow Direction
- Monitoring Well in the Deep Aquifer
- Monitoring Well in the Shallow Aquifer
- 4.38 Groundwater Elevation (NAVD 88)
- Leachate Collection System
- Project Area
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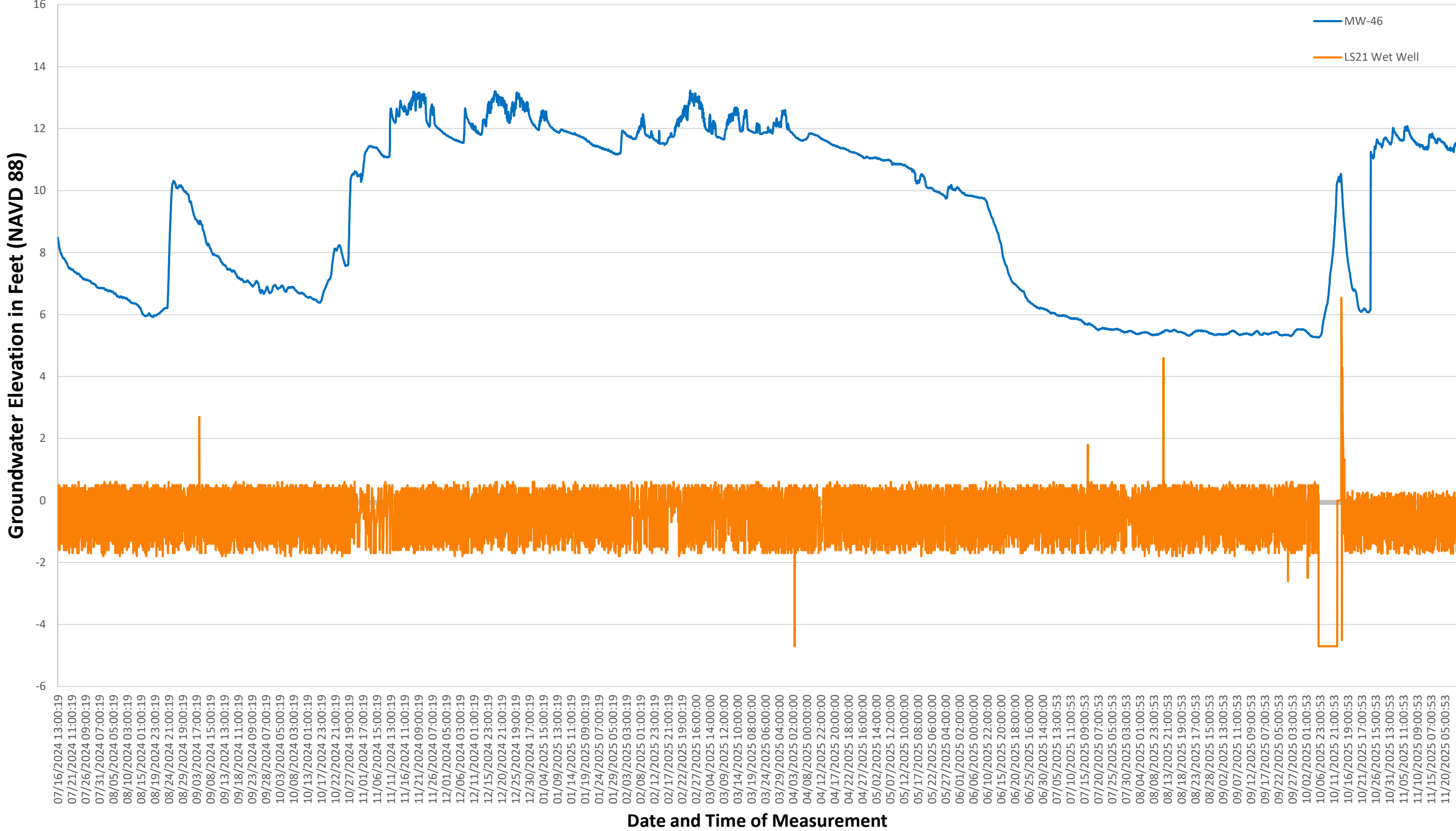
**Notes:**

- Parcel boundaries were obtained from the City of Everett, 2020.
- Orthoimagery obtained from Nearmap, 2024.

**Abbreviation:**  
NAVD 88 = North American Vertical Datum of 1988

0 150 300 600  
Scale in Feet

LS21 and MW-46 Elevation Comparison



Abbreviation: NAVD 88 = North American Vertical Datum of 1988



2025 Annual Groundwater Monitoring Report  
 Everett Landfill/Tire Fire Site  
 Everett, Washington

Figure 7  
 LS21 vs. MW-46 Groundwater Elevations  
 July 2024 through November 2025

**Attachment 1**  
**Floyd | Snider Standard Guidelines**

# F | S STANDARD GUIDELINE

## Low-Flow Groundwater Sample Collection

DATE/LAST UPDATE: December 2022

*These procedures should be considered standard guidelines and are intended to provide useful guidance when in the field but are not intended to be step-by-step procedures, as some steps may not be applicable to all projects.*

*All field staff should be sufficiently trained in the standard guidelines for the sampling method they intend to use and should review and understand these procedures prior to going into the field. It is the responsibility of the field staff to review the standard guidelines with the field manager or project manager and identify any deviations from these guidelines prior to field work. When possible, the project-specific Sampling and Analysis Plan should contain any expected deviations and should be referenced in conjunction with these standard guidelines.*

### 1.0 Scope and Purpose

This standard guideline provides details necessary for collecting representative groundwater samples from monitoring wells using low-flow methods. These guidelines are designed to meet or exceed guidelines set forth by the Washington State Department of Ecology (Ecology). Low-Flow sampling provides a method to minimize the volume of water that is purged and disposed from a monitoring well, and minimizes the impact that purging has on groundwater chemistry during sample collection.

### 2.0 Equipment and Supplies

#### Groundwater Sampling Equipment and Tools

- For wells with head less than 25 feet:
  - Peristaltic pump with fully charged internal battery or standalone battery and appropriate connectors
- For wells with head greater than 25 feet:
  - Bladder pump and controller, as well as an air cylinder, or air compressor (with extension cord if near an electrical outlet; with battery and appropriate connectors or generator if not near an outlet)

**OR**

- Low-flow submersible pump and controller (with extension cord if near an electrical outlet; with battery and appropriate connectors or generator if not near an outlet)
- Multi-parameter water quality meter
- Water level meter
- Polyethylene tubing, Teflon tubing, or similar (assume polyethylene unless otherwise specified in SAP) and tubing weights (for wells deeper than approximately 10 feet)
- Silicone tubing
- Filters (if field filtering)
- Tools for opening wells and drums (1/2-inch, 9/16-inch, 5/8 and 15/16-inch sockets ratchet, screwdriver, hammer/rubber mallet, bung wrench; any other necessary tools if non-standard monuments have been used)
- Well keys
- Tube cutters, razor blade, or scissors
- 5-gallon buckets, lids, and clamp
- Decontamination supplies: Alconox (or similar), distilled or deionized water, spray bottles, and paper towels
- Bailer or hand pump to drain well box if full of stormwater
- Trash bags

### Lab Equipment

- Sample jars/bottles
- Coolers
- Chain-of-Custody Forms
- Labels
- Ice
- Ziploc bags

### Paperwork

- Field notebook with site maps
- Table of well construction details and/or well logs, if available
- Sampling forms (enclosed)
- Purge water plan
- Rite-in-the-Rain pens, paper, and permanent markers

- Site-Specific Health and Safety Plan (HASP) and F|S Accident Prevention Plan (APP)
- List of emergency contacts for the Site or facility
- Safety Data Sheets (SDS) binder
- Sampling and Analysis Plan (SAP) and/or Quality Assurance Project Plan (QAPP) (including tables of analytes and bottle types)

### **Safety Equipment**

- PPE:
  - Waterproof boots (safety toed, depending on site)
  - Safety vest
  - Safety glasses
  - Rain gear
  - Nitrile gloves
  - Work gloves
- First Aid kit
- Emergency kit (fire extinguisher, road flares)
- Traffic barricades or cones

## **3.0 Standard Procedures**

Low-flow groundwater sampling consists of purging groundwater within the well casing at a rate equal to or less than the flow rate of representative groundwater from the surrounding aquifer into the well screen. The flow rate will depend on the hydraulic conductivity of the aquifer and the drawdown, with the goal of minimizing drawdown within the monitoring well. Field parameters are monitored during purging and groundwater samples are collected after field parameters have stabilized. Deviations from these procedures should be approved by the Project Manager and fully documented.

### **3.1 OFFICE PREPARATION**

First, meet with the PM to identify the key objectives of the groundwater sampling effort. This may include the order of wells to be sampled (e.g., if using non-dedicated equipment, wells may need to be sampled in order of least contaminated to most contaminated), whether any wells require redevelopment at least 24-hours prior to sampling, and/or key stabilization parameters (e.g., elevated turbidity may require purging beyond 30 minutes, even if the readings are within 10%).

Conduct a kick-off meeting with the sampling team to discuss site health and safety protocols, data quality objectives, and any site-specific special considerations or sampling procedures.

### 3.2 TAILGATE SAFETY MEETING

Conduct a tailgate safety meeting prior to beginning work at the site. Emergency evacuation procedures, rally points, and onsite communication protocols should be discussed at the first tailgate meeting and repeated if new personnel join the field team onsite.

The safety meeting should cover the hazards specific to groundwater sampling. Typical hazards include the following:

- Chemical hazards (refer to HASP for site chemical exposure hazards)
- Site hazards
  - Traffic hazards onsite (e.g., truck traffic, heavy machinery)
  - Biological hazards (e.g., spiders or wasps within well monuments)
- Physical hazards associated with lifting and carrying heavy equipment and repeated bending while sampling
- Cuts and abrasions associated with using blades and tools
- Electrical hazards (make sure all wires/cables are in good condition and connections to battery or outlet are secure)
- Heat stress and cold stress

Record the meeting attendees and topics discussed on the front page of the tailgate safety meeting form (included as an attachment to the HASP). All attendees should sign the form.

### 3.3 OTHER HEALTH AND SAFETY GUIDELINES

The following are additional health and safety guidelines that should be followed in the field. These guidelines are intended to supplement the guidelines and requirements identified in the HASP and are not intended to replace the HASP.

- Review and sign the HASP prior to going into the field.
- Conduct a tailgate safety meeting prior to beginning work at the site as discussed in Section 3.2
- When moving between monitoring wells or switching to different tasks (e.g., transitioning from sampling to cooler QC prior to lab pickup), assess any additional hazards that may be associated with the new location or task. Record additional hazards noted and corrective actions to address those hazards on the Daily Tailgate Safety Meeting and Debrief Form (included as an attachment to the HASP).
- Record near misses and incidents on the Near Miss and Incident Reporting Form (included as an attachment to the HASP) and conduct management/client notifications according to the protocols detailed in the HASP.

### 3.4 CALIBRATION OF WATER QUALITY METERS

All multi-parameter water quality meters to be used will be calibrated prior to each sampling event. Calibration procedures are outlined in each instrument's specific user manual.

### 3.5 MONITORING, MAINTENANCE, AND SECURITY

Prior to sampling, depth to water and total depth measurements will be collected and recorded for accessible monitoring wells onsite (or an appropriate subset for larger sites). Check for an existing measuring point (notch or visible mark on top of casing). If a measuring point is not observed, a measuring point should be established on the north side of the casing. The conditions of the well box and bolts will also be observed, and deficiencies will be recorded on the sampling forms or logbook (i.e., missing or stripped bolt). The following should also be recorded:

- Condition of the well box, lid, bolts, locks, and gripper cap, if deficiencies
- Condition of gasket if deficient and if water is present in the well box
- Note any obstructions or kinks in the well casing
- Note any equipment in the well casing, such as transducers, bailers, or tubing
- Condition of general area surrounding the well, such as subsidence, potholes, or if the well is submerged within a puddle.

Replace any missing or stripped bolts and redevelop wells if needed.

### 3.6 LOW-FLOW PURGING METHOD AND SAMPLING PROCEDURES

Groundwater samples will be collected using low-flow purging and sampling procedures consistent with Ecology guidelines and the U.S. Environmental Protection Agency (USEPA) standard operating procedures (USEPA 1996). The following describes the Low-Flow purging and sampling procedures for collecting groundwater samples using a peristaltic pump. If the water level is greater than approximately 20 to 25 feet below ground surface (bgs), Grundfos or Geotech submersible pumps or bladder pumps can be used since their pumping rates can be adjusted to low-flow levels. Submersible pumps are preferable to bladder pumps in situations where less than 5 feet of water column are present in the well casing.

- Place the peristaltic pump and water quality equipment near the wellhead. Slowly lower new poly tubing down into the well casing approximately to the middle of the well screen. When sampling wells with a bottom screen depth greater than approximately 10 feet, it is important to measure the length of tubing prior to placement as longer lengths of tubing are more likely to get caught or otherwise obstructed and feel like it has reached the well bottom; this issue can be mitigated by using decontaminated stainless steel tubing weights. If the depth of the well screen is not known, lower the appropriate length of tubing to the bottom of the well, making sure that the tubing has not been caught on the slotted well casing, and then raise the tubing 3 to 5 feet off the bottom of the casing (limit this distance to 2 feet for wells with total depth less than 10 feet). Document the estimated depth of the tubing

placement within the well. Connect the tubing to the peristaltic pump using new flex tubing and connect the discharge line to the flow-through cell of the water quality meter. The discharge line from the flow cell should be directed to a bucket to contain the purged water.

- If using a low-flow submersible pump, connect the pump head to dedicated or disposable tubing. If using a bladder pump, connect both the air intake and water discharge ports to decontaminated or disposable tubing, using the manufacturer's instructions to ensure a secure connection. Lower the pump with tubing into the well as described above and connect the water discharge tubing directly to the flow-through cell.
- Measure the depth to water to the nearest 0.01 foot with a decontaminated water level meter and record the information on a sampling form.
- Start pumping the well at a purge rate of 0.1 to 0.2 liters per minute and slowly increase the rate. Purge rate is adjusted using a speed control knob or arrows on peristaltic and low-flow submersible pumps. The purge rate for bladder pumps is controlled by the air compressor, which first pressurizes the pump chamber in order to compress the flexible bladder and force water through the discharge line, and then vents the chamber in order to allow the bladder to refill with water.
  - A good rule of thumb is to pressurize to 10 psi + 0.5 psi/foot of tubing depth and begin with 4 discharge/refill cycles per minute; using greater air pressure and accelerating the pump cycles will increase the purge rate.
- Check the water level. If the water level is dropping, lower the purge rate. Maintain a steady flow with no or minimal drawdown (less than 0.33 feet according to USEPA 2002). Maintaining a drawdown of less than 0.33 feet may not be feasible depending on hydrogeological conditions. If possible, measure the discharge rate of the pump with a graduated cylinder or use a stopwatch when filling sampling jars (500 milliliters [mL] polyethylene or glass ambers) to estimate the rate. When purging water through a flow cell, the maximum flow rate for accurate water quality readings is about 0.5 liters per minute (L/minute).
- The discharge tubing should be connected to the flow cell immediately upon initial water discharge, unless the discharge water is visibly turbid or flocculant is observed. Monitor and record water quality parameters every three to five minutes after one tubing volume (including the volume of water in the flow cell) has been purged.
  - One foot of ¼-inch interior diameter tubing holds about 10 mL of water, and flow-through cells typically hold less than 200 mL of water; one volume should be purged after about 5 minutes at a flow rate of 0.1 L/minute.
- Water-quality indicator parameters that will be monitored and recorded during purging include:
  - pH
  - Specific conductivity

- Dissolved oxygen
- Temperature
- Turbidity
- Oxidation reduction potential (ORP)
- Continue purging until temperature, pH, turbidity, and specific conductivity are approximately stable (when measurements are within 10 percent) for three consecutive readings, or 30 minutes have elapsed. Because these field parameters (especially dissolved oxygen and ORP) may not reach the stabilization criteria, collection of the groundwater sample will be based on the professional judgment of field personnel at the time of sampling. A minimum of 5 water quality readings should be collected prior to sampling.
- The water sample can be collected once the criteria above have been met.
- If drawdown in the well cannot be maintained at 0.33 feet or less, reduce the flow or turn off the pump for 15 minutes and allow for recovery. If the water quality parameters have stabilized, and if at least two tubing volumes and the flow cell volume have been purged, then sample collection can proceed when the water level has recovered, and the pump is turned back on. This should be noted on the sampling form.
- To collect the water sample, maintain the same pumping rate. After the well has been purged and the sample bottles have been labeled, the groundwater sample will be collected by directly filling the laboratory-provided bottles from the pump discharge line prior to passing through the flow cell. All sample containers should be filled with minimum disturbance by allowing the water to flow down the inside of the bottle or vial. When collecting a volatile organic compound (VOC) sample, fill to the top to form a meniscus over the mouth of the vial prior to placing the cap to eliminate air bubbles. Be careful not to overflow preserved bottles/pre-cleaned Volatile Organic Analyte (VOA) vials.
- If sampling for filtered metals, collect these samples last and fit an in-line filter at the end of the discharge line. Take note of the flow direction arrow on the filter prior to fitting, invert filter to eliminate air bubbles, and allow minimum of 0.5 to 1 liter of groundwater to pass through the filter prior to collecting the sample.
- Sample labels will clearly identify the project name, sampler's initials, sample location and unique sample ID, analysis to be performed, date, and time. After collection, place samples a cooler maintained at a temperature of approximately 4 to 6 degrees Celsius (°C) using ice (if required). Complete the chain-of-Custody forms. Upon transfer of the samples to the laboratory, the Chain-of-Custody Form will be signed by the persons transferring custody of the sample containers to document change in possession.
- When sample collection is complete at a designated location, remove and properly dispose of the non-dedicated tubing. In most cases, this waste is considered solid waste and can be disposed of as refuse. Close and lock the well.

## 4.0 Decontamination

All reusable equipment that comes into contact with groundwater should be decontaminated using the processes described in this section prior to moving to the next sampling location.

**Water Level Meter:** The water level indicator and tape will be decontaminated between sampling locations and at the end the day by spraying the entire length of tape that came in contact with groundwater with an Alconox (or similar)/clean water solution followed by a thorough rinse with distilled or deionized water.

**Water Quality Sensors and Flow-Through Cell:** Distilled water or deionized water will be used to rinse the water quality sensors and flow-through cell. No other decontamination procedures are recommended since they are sensitive equipment. After the sampling event, the water quality meters will be cleaned and maintained according to the specific manual.

**Submersible Pump (if applicable):** Decontaminating the pump requires running the pump in three progressively cleaner grades of water.

1. Fill a bucket with approximately 4 gallons of an Alconox (or similar)/clean water solution to sufficiently cover the pump. Place the pump and the length of the power cord (if applicable) that was in contact with water into the bucket and run the pump for approximately two minutes or until the volume of water in the bucket has been exhausted.
2. Fill a second bucket containing approximately 4 gallons of clean water to sufficiently cover the pump. Place the pump and cord into this bucket and run the pump for approximately two minutes or until the volume of water in the bucket has been exhausted.
3. Fill a third bucket with approximately 4 gallons of distilled or deionized water to sufficiently cover the pump. Place the pump and cord into this bucket and run the pump for approximately two minutes or until the volume of water in the bucket has been exhausted.

The soap/water solution may be reused; however, rinse water should be collected for disposal as described in Section 5.0 below. When done for the day, dry the exterior of the pump and cord with clean towels to the extent practical prior to storage.

**Bladder Pump:** Clean the inside and outside of the pump body with an Alconox (or similar)/clean water solution, followed by a thorough rinse with distilled or deionized water. The outside of the air supply line that came in contact with groundwater may also be cleaned with Alconox (or similar) solution and re-used; bladders and water discharge lines must be replaced after each sample is collected.

## 5.0 Investigation-Derived Waste (IDW)

Unless otherwise specified in the project work plan, water generated during groundwater sampling activities will be contained, transported, disposed of in accordance with applicable laws, and stored in a designated area until transported off-site for disposal. This includes purge water and decontamination waste water.

The approach to handling and disposal of these materials for a typical cleanup site is as follows.

For IDW that is containerized, such as purge water, 55-gallon drums (or other smaller sized drums) approved by the Washington State Department of Transportation will be used for temporary storage pending profiling and disposal. Each container holding IDW will be sealed and labeled as to its contents (e.g., “purge water”), the dates on which the wastes were placed in the container, the owner’s name and contact information for the field person who generated the waste, and the site name.

IDW containerized within drums will be characterized relative to applicable waste criteria using data from the sampling locations whenever possible. Material that is designated for off-site disposal will be transported to an off-site facility permitted to accept the waste. Manifests will be used, as appropriate for disposal. Refer to the FS Special Condition Standard Guideline for Investigation Derived Waste for additional information regarding proper profiling and disposal of wastewater generated by groundwater sampling.

Disposable sampling materials and incidental trash such as tubing, paper towels and gloves/other disposable used in sample processing will be placed in heavy-duty garbage bags or other appropriate containers and disposed of as trash in the municipal collection system unless otherwise specified in the SAP.

## 6.0 Field Documentation

Groundwater sampling activities will be documented in field sampling forms and/or field notebooks, and Chain-of-Custody Forms. Information recorded will, at a minimum, include personnel present (including subcontractors or client representatives), purpose of field event, weather conditions, sample collection date and times, sample analytes, depths to water, water quality parameters, well box/lid conditions, amount of purged water generated, and any deviations from the SAP. Photographs of damaged well casings or well boxes should be taken.

At the end of the day, complete and review the second page of the tailgate safety meeting form detailing additional hazards, corrective actions, near-misses or incidents. Any incidents that result in equipment damage or field staff injuries should be reported immediately to the PM.

## 7.0 Demobilization

Upon returning to the office, ensure that all equipment is properly cleaned and put away in the field room. Equipment with rechargeable batteries should be plugged in as appropriate. It is

preferable to dispose of trash on-site, but any trash left in the field vehicle should be disposed as regular trash at Two Union Square.

If rented equipment or sample coolers will be placed at the front desk for pickup, clearly label each item with the company picking it up, anticipated pickup time frame, and your contact information so front desk staff can contact you if there are any questions. Notify front desk staff if any items require a signature at pickup.

Within one week of returning from the field, the field lead for the event should review field notes, sampling forms and tailgate safety meeting forms with the PM. Following PM review and approval, field notes will be scanned and saved to the project folder. Hard copies should be filed. The PM will provide copies of near miss and incident reports to the Safety Program Manager.

**8.0 References**

U.S. Environmental Protection Agency (USEPA). 1996. Low-Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, Revision 2. Region 1. July 30, 1996.

\_\_\_\_\_. 2002. Groundwater Sampling Guidelines for Superfund and CAR Project Managers. Office of Solid Waste and Emergency Response. EPA 542.S-02-001. May 2002.

**Enclosures:** Groundwater or Surface Water Sample Collection Form

**Record of Revisions:**

Revisions	Date
Added health and safety information, reviewed EPA guidance, and added revisions table.	12/9/2022

# GROUNDWATER OR SURFACE WATER SAMPLE COLLECTION FORM

Project: \_\_\_\_\_ Date of Collection: \_\_\_\_\_

Task: \_\_\_\_\_ Field Personnel: \_\_\_\_\_

## Purge Data

Well ID: \_\_\_\_\_ Secure:  Yes  No Ecology Tag #: \_\_\_\_\_ Casing Type/Diameter/Screened Interval \_\_\_\_\_

Replacement Required:  Monument  Lid  Lock  Bolts: Missing (#) \_\_\_\_\_ Stripped (#) \_\_\_\_\_ Other Damage: \_\_\_\_\_

Depth Sounder decontaminated Prior to Placement in Well:  Yes  No One Casing Volume (gal): \_\_\_\_\_

Depth of water (from TOC): \_\_\_\_\_ Time: \_\_\_\_\_

Total Depth (from log or field measurement): \_\_\_\_\_

After 5 minutes of purging (from top of casing): \_\_\_\_\_

Begin purge (time): \_\_\_\_\_ End purge (time): \_\_\_\_\_

Volume purged: \_\_\_\_\_ Purge water disposal method \_\_\_\_\_

Volume of Schedule 40 PVC Pipe				
Diameter	O.D.	I.D.	Volume (Gal/Linear Ft.)	Weight of Water (Lbs/Lineal Ft.)
1 1/4"	1.660"	1.380"	0.08	0.64
2"	2.375"	2.067"	0.17	1.45
3"	3.500"	3.068"	0.38	3.2
4"	4.500"	4.026"	0.66	5.51
6"	6.625"	6.065"	1.5	12.5

Time	Depth to Water (ft)	Vol. Purged (_____)	pH (s.u.)	DO (mg/L)	Specific Conductivity (µs/cm)	Turbidity (NTU)	Temp (°C)	ORP (mV)	Comments
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

## Sampling Data

Sample No: \_\_\_\_\_ Location and Depth: \_\_\_\_\_

Date Collected (mo/dy/yr): \_\_\_\_\_ Time Collected: \_\_\_\_\_ Weather: \_\_\_\_\_

Type:  Ground Water  Surface Water Other: \_\_\_\_\_ Sample:  Filtered  Unfiltered Filter Type: \_\_\_\_\_

Sample Collected with:  Bailer  Pump Other: \_\_\_\_\_ Type:  Peristaltic  Bladder  Submersible Other: \_\_\_\_\_

Water Quality Instrument Data Collected with: Type:  YSI ProDSS  Turbidity Meter  Other: \_\_\_\_\_

Sample Decon Procedure: Sample collected with:  decontaminated all tubing;  disposable tubing  dedicated silicon and poly tubing;  dedicated tubing replaced

Sample Description (Color, Turbidity, Odor, Other): \_\_\_\_\_

## Sample Analyses

Analyte	Analysis Method	Sample Container	Quantity	Preservative	Notes

## QC samples

Duplicate Sample No: \_\_\_\_\_ Duplicate Time: \_\_\_\_\_ MS/MSD:  Yes  No

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Attachment 2**  
**Analytical Laboratory Reports**



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

March 5, 2025

Sabine Datum  
Floyd & Snider  
601 Union Street, Suite 600  
Seattle, WA 98101

Re: Analytical Data for Project COEV DEVEL  
Laboratory Reference No. 2502-380

Dear Sabine:

Enclosed are the analytical results and associated quality control data for samples submitted on February 28, 2025.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal stroke extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 5, 2025  
Samples Submitted: February 28, 2025  
Laboratory Reference: 2502-380  
Project: COEV DEVEL

### Case Narrative

Samples were collected on February 26 and 27, 2025 and received by the laboratory on February 28, 2025. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: March 5, 2025  
 Samples Submitted: February 28, 2025  
 Laboratory Reference: 2502-380  
 Project: COEV DEVEL

### SEMIVOLATILE ORGANICS EPA 8270E/SIM

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-11R-022725</b>					
Laboratory ID:	02-380-01					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.99	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	44	11 - 82				
Phenol-d6	34	10 - 85				
Nitrobenzene-d5	75	26 - 106				
2-Fluorobiphenyl	67	35 - 106				
2,4,6-Tribromophenol	67	32 - 134				
Terphenyl-d14	69	37 - 116				
<b>Client ID:</b>	<b>MW-21R-022725</b>					
Laboratory ID:	02-380-02					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.98	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	51	11 - 82				
Phenol-d6	38	10 - 85				
Nitrobenzene-d5	84	26 - 106				
2-Fluorobiphenyl	73	35 - 106				
2,4,6-Tribromophenol	76	32 - 134				
Terphenyl-d14	74	37 - 116				
<b>Client ID:</b>	<b>MW-29R-022625</b>					
Laboratory ID:	02-380-03					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.97	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	48	11 - 82				
Phenol-d6	37	10 - 85				
Nitrobenzene-d5	85	26 - 106				
2-Fluorobiphenyl	75	35 - 106				
2,4,6-Tribromophenol	81	32 - 134				
Terphenyl-d14	80	37 - 116				



Date of Report: March 5, 2025  
 Samples Submitted: February 28, 2025  
 Laboratory Reference: 2502-380  
 Project: COEV DEVEL

### SEMIVOLATILE ORGANICS EPA 8270E/SIM

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-30-022625</b>					
Laboratory ID:	02-380-04					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.96	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	40	11 - 82				
Phenol-d6	30	10 - 85				
Nitrobenzene-d5	67	26 - 106				
2-Fluorobiphenyl	59	35 - 106				
2,4,6-Tribromophenol	67	32 - 134				
Terphenyl-d14	67	37 - 116				
<b>Client ID:</b>	<b>MW-31-022725</b>					
Laboratory ID:	02-380-05					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.99	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	48	11 - 82				
Phenol-d6	37	10 - 85				
Nitrobenzene-d5	80	26 - 106				
2-Fluorobiphenyl	73	35 - 106				
2,4,6-Tribromophenol	75	32 - 134				
Terphenyl-d14	68	37 - 116				
<b>Client ID:</b>	<b>MW-36-022625</b>					
Laboratory ID:	02-380-06					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.99	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	49	11 - 82				
Phenol-d6	36	10 - 85				
Nitrobenzene-d5	82	26 - 106				
2-Fluorobiphenyl	70	35 - 106				
2,4,6-Tribromophenol	70	32 - 134				
Terphenyl-d14	70	37 - 116				



Date of Report: March 5, 2025  
 Samples Submitted: February 28, 2025  
 Laboratory Reference: 2502-380  
 Project: COEV DEVEL

### SEMIVOLATILE ORGANICS EPA 8270E/SIM

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-37-022625</b>					
Laboratory ID:	02-380-07					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.99	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	53	11 - 82				
Phenol-d6	40	10 - 85				
Nitrobenzene-d5	87	26 - 106				
2-Fluorobiphenyl	74	35 - 106				
2,4,6-Tribromophenol	77	32 - 134				
Terphenyl-d14	78	37 - 116				

<b>Client ID:</b>	<b>MW-38-022625</b>					
Laboratory ID:	02-380-08					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	1.0	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	49	11 - 82				
Phenol-d6	36	10 - 85				
Nitrobenzene-d5	78	26 - 106				
2-Fluorobiphenyl	68	35 - 106				
2,4,6-Tribromophenol	72	32 - 134				
Terphenyl-d14	73	37 - 116				

<b>Client ID:</b>	<b>MW-39R-022725</b>					
Laboratory ID:	02-380-09					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.95	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	43	11 - 82				
Phenol-d6	31	10 - 85				
Nitrobenzene-d5	72	26 - 106				
2-Fluorobiphenyl	60	35 - 106				
2,4,6-Tribromophenol	61	32 - 134				
Terphenyl-d14	61	37 - 116				



Date of Report: March 5, 2025  
 Samples Submitted: February 28, 2025  
 Laboratory Reference: 2502-380  
 Project: COEV DEVEL

### SEMIVOLATILE ORGANICS EPA 8270E/SIM

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-139R-022725</b>					
Laboratory ID:	02-380-10					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	1.0	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	51	11 - 82				
Phenol-d6	38	10 - 85				
Nitrobenzene-d5	81	26 - 106				
2-Fluorobiphenyl	69	35 - 106				
2,4,6-Tribromophenol	66	32 - 134				
Terphenyl-d14	69	37 - 116				

**Client ID: BOTTLEBLANK-022725**

Laboratory ID: 02-380-11

bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.96	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	41	11 - 82				
Phenol-d6	31	10 - 85				
Nitrobenzene-d5	68	26 - 106				
2-Fluorobiphenyl	58	35 - 106				
2,4,6-Tribromophenol	61	32 - 134				
Terphenyl-d14	61	37 - 116				



Date of Report: March 5, 2025  
 Samples Submitted: February 28, 2025  
 Laboratory Reference: 2502-380  
 Project: COEV DEVEL

**SEMIVOLATILE ORGANICS EPA 8270E/SIM  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0304W1					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	1.0	EPA 8270E	3-4-25	3-4-25	
<i>Surrogate:</i>						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	31	11 - 82				
Phenol-d6	25	10 - 85				
Nitrobenzene-d5	51	26 - 106				
2-Fluorobiphenyl	51	35 - 106				
2,4,6-Tribromophenol	71	32 - 134				
Terphenyl-d14	73	37 - 116				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
<b>SPIKE BLANKS</b>										
Laboratory ID:	SB0304W1									
	SB	SBD	SB	SBD	SB	SBD				
bis(2-Ethylhexyl)phthalate	<b>18.5</b>	<b>18.4</b>	20.0	20.0	93	92	54 - 132	1	21	
<i>Surrogate:</i>										
2-Fluorophenol					53	55	11 - 82			
Phenol-d6					41	42	10 - 85			
Nitrobenzene-d5					89	91	26 - 106			
2-Fluorobiphenyl					76	78	35 - 106			
2,4,6-Tribromophenol					76	76	32 - 134			
Terphenyl-d14					74	75	37 - 116			





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





# MVA Onsite Environmental Inc.

Analytical Laboratory Testing Services  
14648 NE 95th Street • Redmond, WA 98052  
Phone: (425) 883-3881 • www.onsite-env.com

## Chain of Custody

Laboratory Number: **02-380**

Company: **Floyd Snider**

Project Number:

Project Name: **COE Denver**

Project Manager: **Sabine Datum**

Sampled by: **MS + MM + JL**

Turnaround Request (in working days)  
(Check One)

- Same Day  1 Day
- 2 Days  3 Days
- Standard (7 Days)
- \_\_\_\_\_ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input type="checkbox"/> )	NWTPH-Gx	NWTPH-Dx (SG Clean-up <input type="checkbox"/> )	Volatiles 8260	Halogenated Volatiles 8260	EDB EPA 8011 (Waters Only)	Semivolatiles 8270/SIM (with low-level PAHs)	PAHs 8270/SIM (low-level)	PCBs 8082	Organochlorine Pesticides 8081	Organophosphorus Pesticides 8270/SIM	Chlorinated Acid Herbicides 8151	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664	% Moisture
1	MW-11R-022725	9:25	2/27/25	W	2								X										
2	MW-21R-022725	10:30	2/27/25	W	2								X										
3	MW-29R-022625	2/26/25	14:15	W	2								X										
4	MW-30-022625	2/26/25	14:10	W	2								X										
5	MW-31-022725	2/27/25	12:00	W	2								X										
6	MW-36-022625	2/26/25	11:20	W	2								X										
7	MW-37-022625		10:15	W	2								X										
8	MW-38-022625		12:40	W	2								X										
9	MW-39R-022725	2/27/25	10:40	W	2								X										
10	MW-13912-022725		11:00	W	2								X										

Relinquished	Signature	Company	Date	Time	Comments/Special Instructions
Received	<i>[Signature]</i>	Floyd Snider	2/27/25	14:00	*BETHD only
Relinquished	<i>[Signature]</i>	SPEEDY	2/28/25	10:50	email
Received	<i>[Signature]</i>	SPEEDY	2/28/25	12:48	labdata @ floydshnider.com
Relinquished	<i>[Signature]</i>	OSIE	2/28/25	12:48	Sabine Datum
Received					
Relinquished					
Reviewed/Date		Reviewed/Date			Data Package: Standard <input checked="" type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>
					Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input checked="" type="checkbox"/>

BETHD



# Sample/Cooler Receipt and Acceptance Checklist

Client: FLS  
 Client Project Name/Number: COEV DEVEL  
 OnSite Project Number: 02-380

Initiated by: MM  
 Date Initiated: 2/28/25

## 1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	<input checked="" type="radio"/> No	N/A	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	<input checked="" type="radio"/> N/A	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	<input checked="" type="radio"/> N/A	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	<input checked="" type="radio"/> Yes	No	N/A	1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	<input checked="" type="radio"/> Yes	No	N/A	Temperature: <u>3, 2</u>
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	<input checked="" type="radio"/> N/A		
1.7 How were the samples delivered?	Client	<input checked="" type="radio"/> Courier	<input type="radio"/> UPS/FedEx	<input type="radio"/> OSE Pickup
			<input type="radio"/> Other	

## 2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	<input checked="" type="radio"/> Yes	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	<input checked="" type="radio"/> Yes	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	<input checked="" type="radio"/> Yes	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	<input checked="" type="radio"/> Yes	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	<input checked="" type="radio"/> Yes	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	<input checked="" type="radio"/> No	1 2 3 4

## 3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	<input checked="" type="radio"/> No	1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	<input checked="" type="radio"/> No	1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	<input checked="" type="radio"/> Yes	No	1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	<input checked="" type="radio"/> N/A
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	<input checked="" type="radio"/> N/A
3.6 Is there sufficient sample submitted to perform requested analyses?	<input checked="" type="radio"/> Yes	No	1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	<input checked="" type="radio"/> No	1 2 3 4
3.8 Was method 5035A used?	Yes	No	<input checked="" type="radio"/> N/A
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		<input checked="" type="radio"/> N/A

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

**CITY OF EVERETT  
ENVIRONMENTAL LABORATORY**

PROJECT #

00068507

Client: FLOYD SNIDER  
Program: Everett Landfill  
Contact: MEGAN KING

Date Received: 02/27/25  
Data Release: SF  
Date Reported: 04/14/25

						BR24546	BR24547
						MW-11R-022725	MW-21R-022725
						02/27/25	02/27/25
Department	Analysis	Units	DL	Method	PQL		
METALS(D)	Dis. Arsenic	µg/L	0.3	200.8	1.2	<0.3	4.2
	Dis. Iron	µg/L	10	200.8	40	2630	9870
	Dis. Manganese	µg/L	0.3	200.8	1.2	659	1410
	Dis. Nickel	µg/L	1.0	200.8	4.0	<1.0	<1.0
	Dis. Zinc	µg/L	3	200.8	12	<3	<3
NUTRIENTS	Dis. Chloride	mg/L	0.4	SM4500-CL-E	1.6	13.9	
			0.8	SM4500-CL-E	3.2		29.6
						BR24548	BR24549
						MW-29R-022625	MW-30-022625
						02/27/25	02/27/25
Department	Analysis	Units	DL	Method	PQL		
METALS(D)	Dis. Arsenic	µg/L	0.3	200.8	1.2	<0.3	7.0
	Dis. Iron	µg/L	10	200.8	40	5640	13700
	Dis. Manganese	µg/L	0.3	200.8	1.2	394	552
	Dis. Nickel	µg/L	1.0	200.8	4.0	<1.0	<1.0
	Dis. Zinc	µg/L	3	200.8	12	<3	<3
NUTRIENTS	Dis. Chloride	mg/L	0.4	SM4500-CL-E	1.6	11.4	16.1
						BR24550	BR24551
						MW-31-022725	MW-36-022625
						02/27/25	02/27/25
Department	Analysis	Units	DL	Method	PQL		
METALS(D)	Dis. Arsenic	µg/L	0.3	200.8	1.2	1.4	4.3
	Dis. Iron	µg/L	10	200.8	40	47000	13400
	Dis. Manganese	µg/L	0.3	200.8	1.2	1310	573
	Dis. Nickel	µg/L	1.0	200.8	4.0	2.7 J	1.1 J
	Dis. Zinc	µg/L	3	200.8	12	<3	<3
NUTRIENTS	Dis. Chloride	mg/L	0.4	SM4500-CL-E	1.6		20.5
			4.0	SM4500-CL-E	16.0	151	
						BR24552	BR24553
						MW-37-022625	MW-38-022625
						02/27/25	02/27/25
Department	Analysis	Units	DL	Method	PQL		
METALS(D)	Dis. Arsenic	µg/L	0.3	200.8	1.2	<0.3	<0.3
	Dis. Iron	µg/L	10	200.8	40	23300	2520
	Dis. Manganese	µg/L	0.3	200.8	1.2	1000	292
	Dis. Nickel	µg/L	1.0	200.8	4.0	<1.0	<1.0
	Dis. Zinc	µg/L	3	200.8	12	<3	<3
NUTRIENTS	Dis. Chloride	mg/L	0.4	SM4500-CL-E	1.6		11.0
			20	SM4500-CL-E	80	935	

**DATA REPORTING QUALIFIERS**

DL = Detection Limit  
PQL = Practical Quantitation Limit ( = 4xDL)  
J = Analyte concentration less than PQL  
SA = See Attached  
ND = No Data  
TNTC = Too numerous to count

M = Matrix effect / interference  
P/A (used for Total Coliform results) P= Coliforms present, A = Coliforms absent  
Y/N (used for E. Coli Results) Y= E. Coli present, N=E. Coli absent  
E = Estimated Value. Count from plates not within ideal range.  
B = Method Blank contamination  
H = Analyzed past hold time  
\* Flagged value QC not within established control limits

Client:	FLOYD SNIDER	Date Received:	02/27/25
Program:	Everett Landfill	Data Release:	SF
Contact:	MEGAN KING	Date Reported:	04/14/25

Department	Analysis	Units	DL	Method	PQL	BR24554	BR24555
						MW-39R-022725	MW-139R-022725
						02/27/25	02/27/25
METALS(D)	Dis. Arsenic	µg/L	0.3	200.8	1.2	<0.3	<0.3
	Dis. Iron	µg/L	10	200.8	40	5140	4710
	Dis. Manganese	µg/L	0.3	200.8	1.2	273	264
	Dis. Nickel	µg/L	1.0	200.8	4.0	<1.0	<1.0
	Dis. Zinc	µg/L	3	200.8	12	<3	<3
NUTRIENTS	Dis. Chloride	mg/L	0.4	SM4500-CL-E	1.6	6.9	6.7

Department	Analysis	Units	DL	Method	PQL	BR24556
						BOTTLEBLANK-022725
						02/27/25
METALS(D)	Dis. Arsenic	µg/L	0.3	200.8	1.2	<0.3
	Dis. Iron	µg/L	10	200.8	40	<10
	Dis. Manganese	µg/L	0.3	200.8	1.2	<0.3
	Dis. Nickel	µg/L	1.0	200.8	4.0	<1.0
	Dis. Zinc	µg/L	3	200.8	12	<3
NUTRIENTS	Dis. Chloride	mg/L	0.4	SM4500-CL-E	1.6	<0.4

**DATA REPORTING QUALIFIERS**

DL = Detection Limit  
PQL = Practical Quantitation Limit (= 4xDL)  
J = Analyte concentration less than PQL  
SA = See Attached  
ND = No Data  
TNTC = Too numerous to count

M = Matrix effect / interference  
P/A (used for Total Coliform results) P= Coliforms present, A = Coliforms absent  
Y/N (used for E. Coli Results) Y= E. Coli present, N=E. Coli absent  
E = Estimated Value. Count from plates not within ideal range.  
B = Method Blank contamination  
H = Analyzed past hold time  
\* Flagged value QC not within established control limits

Batch # QA ID	61042 BR24546	Orig	LFM	LFM AMT	LFM % REC	LFD	LFD RPD	MB	LFB	LFB TV	LFM % REC	CAL CHK	CAL CK TV	CAL CK %	QCS	QCS TV	QCS % Rec
Dis. Arsenic		<0.3	52.4	50.0	104.4	52.2	0.4	<0.3	50.3	50.0	100.6	51.9	50.0	103.8	229	234	98.0
Dis. Iron		2630	8100	5000	109.5	8070	0.4	<10	5230	5000	104.7	5210	5000	104.1	3330	3220	103.4
Dis. Manganese		659	2690	2050	99.1	2710	0.7	<0.3	2010	2050	98.1	52.4	50.0	104.8	1650	1590	104.0
Dis. Nickel		<1.0	49.7	50.0	98.9	49.3	0.8	<1.0	50.7	50.0	101.5	52.0	50.0	103.9	863	868	99.4
Dis. Zinc		<3	50	50	100.0	50	0	<3	51	50	101.1	52	50	104.1	1170	1160	100.8

Batch # QA ID	61043 BR24553	Orig	LFM	LFM AMT	LFM % REC	LFD	LFD RPD
Dis. Arsenic		<0.3	51.2	50.0	102.2	51.6	0.8
Dis. Iron		2520	7780	5000	105.3	7910	1.7
Dis. Manganese		292	2340	2050	99.9	2360	0.9
Dis. Nickel		<1.0	48.8	50.0	96.9	49.1	0.6
Dis. Zinc		<3	50	50	100.0	50	0

Batch # QA ID	60840 BR24546	Orig	LFM	LFM AMT	LFM % REC	LFD	LFD RPD	MB	LFB	LFB TV	LFM % REC	CAL CHK	CAL CK TV	CAL CK %	QCS	QCS TV	QCS % Rec
Dis. Chloride		13.9	23.6	10.0	96.8	23.4	0.8	<0.4	10.0	10.0	100.0	4.9	5.0	98.0	14.7	14.4	102.2

Batch # QA ID	60841 BR24556	Orig	LFM	LFM AMT	LFM % REC	LFD	LFD RPD
Dis. Chloride		<0.4	10.1	10.0	100.2	10.3	1.6



CITY OF EVERETT  
 ENVIRONMENTAL LABORATORY  
 Mailing: 3200 CEDAR STREET: EVERETT WA 98201  
 Sample Dropoff: 4027 4th St SE, EVERETT WA 98201  
 Phone: (425)257-8230 Fax: (425)257-8228

1/2

PROJECT #

68507  
(Lab Use Only)

DRINKING WATER  
 ANALYSIS REQUEST  
 CHAIN OF CUSTODY

Date: 2/27/2025

Client: Floyd/Snyder / City of Everett Public Works  
 Program/Project: COEV DEVEL  
 Phone: 206 854 5203  
 E-Mail: labdata@floydsnyder.com  
 Sabine.datum@floydsnyder.com

Site/Address: Everett Fire Fire Works Site  
 Mailing / Billing Address: 601 Union Street #100 Seattle WA 98101

Sampler: MS + MM + JL  
 Requested By:

For Real Estate transaction?	For DOH Reporting?	Analyses Requested					
		Dissolved Chloride	Dissolved Metals				# of Containers

Sample Description:	LIMS ID # <small>(Lab Use Only)</small>	DOH ID# <small>(Lab Use Only)</small>	Sample Date	Sample Time	Dissolved Chloride	Dissolved Metals						# of Containers
MW-11R-022725	BR24546		2/27/25	9:25	X	X						2
MW-21R-022725	47		2/27/25	10:30	X	X						2
MW-29R-022625	48		2/26/25	14:15	X	X						2
MW-30-022625	49		2/26/25	14:10	X	X						2
MW-31-022725	50		2/27/25	12:00	X	X						2
MW-36-022625	51		2/26/25	11:20	X	X						2
MW-37-022625	52		2/26/25	10:15	X	X						2
MW-38-022625	53		2/26/25	12:40	X	X						2

Cooler? Y / N    Ice? Y / N    Sample Temp: 7.0 °C    Lab?

<b>Groups:</b> Snohomish County Short List*: <input type="checkbox"/> -As, Ba, Cd, Cr, Pb, Se, Ag, Na, Hg, Fl-, NO <sub>3</sub> * Primary IOC: <input type="checkbox"/> -As, Ba, Be, Cd, Cr, Cu, Pb, Se, Na, Ni, Sb, Tl, Hg, Fl-, NO <sub>2</sub> , NO <sub>3</sub> , Turbidity, Cyanide Secondary IOC: <input type="checkbox"/> -Ag, Fe, Mn, Zn, Color, Conductivity, TDS Complete IOC (Primary & Secondary) <input type="checkbox"/> Lead / Copper Rule <input type="checkbox"/>	<b>General:</b> Alkalinity <input type="checkbox"/> Conductivity <input type="checkbox"/> Fluoride <input type="checkbox"/> Nitrate (NO <sub>3</sub> )* <input type="checkbox"/> Nitrite (NO <sub>2</sub> )* <input type="checkbox"/> Turbidity <input type="checkbox"/> Total Dissolved Solids (TDS) <input type="checkbox"/> Total Organic Carbon (TOC) <input type="checkbox"/> Total Coliform/E. Coli <input type="checkbox"/>	<b>Metals (200.8):</b> Al <input type="checkbox"/> Pb <input type="checkbox"/> Sb <input type="checkbox"/> Mn <input checked="" type="checkbox"/> As <input checked="" type="checkbox"/> Mo <input type="checkbox"/> Ba <input type="checkbox"/> Ni <input checked="" type="checkbox"/> Be <input type="checkbox"/> K <input type="checkbox"/> B <input type="checkbox"/> Se <input type="checkbox"/> Cd <input type="checkbox"/> Ag <input type="checkbox"/> Cr <input type="checkbox"/> Tl <input type="checkbox"/> Co <input type="checkbox"/> Zn <input checked="" type="checkbox"/> Cu <input type="checkbox"/> Fe <input checked="" type="checkbox"/>	* Arsenic, Iron, Manganese, Nickel, Zinc.
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------

Relinquished\*: 1) Jake Lamb FIS    Received: 1) SWH-NT    Date: 2/27/25    Time: 1300  
 2)    2)    Date:    Time:

COMMENTS:

*Nitrate or Nitrite samples not accepted on Fridays without prior arrangements/scheduling.*  
 \*Because the City of Everett Environmental Laboratory is a public agency, data, test results, reports and other documents are public records and therefore subject to disclosure to third parties upon their request pursuant to RCW Chap. 42.17.



CITY OF EVERETT  
 ENVIRONMENTAL LABORATORY  
 Mailing: 3200 CEDAR STREET: EVERETT WA 98201  
 Sample Dropoff: 4027 4th St SE, EVERETT WA 98201  
 Phone: (425)257-8230 Fax: (425)257-8228

2/2

PROJECT #

68507  
 (Lab Use Only)

DRINKING WATER  
 ANALYSIS REQUEST  
 CHAIN OF CUSTODY

Date: 2/27/2025

Client: Floyd/Snyder/City of Everett Public Works  
 Mailing / Billing Address: 601 Union Street #600 Seattle WA 98101  
 Program/Project: COEV DEVEL Site/Address: Everett Tire Fire Site  
 Phone: 206 854 5203 Sampler: MM + MS + JL  
 E-Mail: labdata.sabine.datum@floydsnyder.com  
 Requested By:

For Real Estate transaction?		For DOH Reporting?		Analyses Requested											
Sample Description:	LIMS ID # (Lab Use Only)	DOH ID# (Lab Use Only)	Sample Date	Sample Time	Dissoived Chloride	Dissoived Metals									# of Containers
MW-39R-022725	BR24554		2/27/25	10:40	X	X									2
MW-139R-022725	55		2/27/25	11:00	X	X									2
BOTTLE BLANK-022725	56		2/27/25	11:45	X	X									

Cooler? Y / N Ice? Y / N Sample Temp: 7.0 °C Lab?

<b>Groups:</b> Snohomish County Short List* -As, Ba, Cd, Cr, Pb, Se, Ag, Na, Hg, Fl-, NO <sub>3</sub> *	<input type="checkbox"/>	<b>General:</b> Alkalinity Conductivity Fluoride Nitrate (NO <sub>3</sub> )* Nitrite (NO <sub>2</sub> )* Turbidity Total Dissolved Solids (TDS) Total Organic Carbon (TOC) Total Coliform/E. Coli	<input type="checkbox"/>	<b>Metals (200.8):</b> Al <input type="checkbox"/> Pb <input type="checkbox"/> Sb <input type="checkbox"/> Mn <input checked="" type="checkbox"/> As <input checked="" type="checkbox"/> Mo <input type="checkbox"/> Ba <input type="checkbox"/> Ni <input checked="" type="checkbox"/> Be <input type="checkbox"/> K <input type="checkbox"/> B <input type="checkbox"/> Se <input type="checkbox"/> Cd <input type="checkbox"/> Ag <input type="checkbox"/> Cr <input type="checkbox"/> Ti <input type="checkbox"/> Co <input type="checkbox"/> Zn <input checked="" type="checkbox"/> Cu <input type="checkbox"/> Fe <input checked="" type="checkbox"/>	★ AS, Fe, Mn, Ni, Zn
Primary IOC: -As, Ba, Be, Cd, Cr, Cu, Pb, Se, Na, Ni, Sb, Tl, Hg, Fl-, NO <sub>2</sub> , NO <sub>3</sub> , Turbidity, Cyanide	<input type="checkbox"/>				
Secondary IOC: -Ag, Fe, Mn, Zn, Color, Conductivity, TDS	<input type="checkbox"/>				
Complete IOC (Primary & Secondary)	<input type="checkbox"/>				
Lead / Copper Rule	<input type="checkbox"/>				

Relinquished\*: 1) Jake Lamb FIS 2) \_\_\_\_\_  
 Received: 1) [Signature] 2) [Signature]  
 Date: 2/27/25 Time: 1300

COMMENTS:

**Nitrate or Nitrite samples not accepted on Fridays without prior arrangements/scheduling.**  
 \*Because the City of Everett Environmental Laboratory is a public agency, data, test results, reports and other documents are public records and therefore subject to disclosure to third parties upon their request pursuant to RCW Chap. 42.17.



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

July 11, 2025

Sabine Datum  
Floyd & Snider  
601 Union Street, Suite 600  
Seattle, WA 98101

Re: Analytical Data for Project COEV DEVEL  
Laboratory Reference No. 2507-060

Dear Sabine:

Enclosed are the analytical results and associated quality control data for samples submitted on July 3, 2025.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a long horizontal flourish extending to the right.

David Baumeister  
Project Manager

Enclosures



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OnSite Environmental, Inc. 14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: July 11, 2025  
Samples Submitted: July 3, 2025  
Laboratory Reference: 2507-060  
Project: COEV DEVEL

### Case Narrative

Samples were collected on July 2, 2025 and received by the laboratory on July 3, 2025. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.



Date of Report: July 11, 2025  
 Samples Submitted: July 3, 2025  
 Laboratory Reference: 2507-060  
 Project: COEV DEVEL

### SEMIVOLATILE ORGANICS EPA 8270E

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-37-070225</b>					
Laboratory ID:	07-060-01					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.98	EPA 8270E	7-7-25	7-7-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	43	14 - 80				
Phenol-d6	33	10 - 75				
Nitrobenzene-d5	66	27 - 108				
2-Fluorobiphenyl	73	37 - 103				
2,4,6-Tribromophenol	97	35 - 123				
Terphenyl-d14	94	47 - 115				

<b>Client ID:</b>	<b>MW-38-070225</b>					
Laboratory ID:	07-060-02					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.96	EPA 8270E	7-7-25	7-8-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	39	14 - 80				
Phenol-d6	30	10 - 75				
Nitrobenzene-d5	64	27 - 108				
2-Fluorobiphenyl	71	37 - 103				
2,4,6-Tribromophenol	95	35 - 123				
Terphenyl-d14	93	47 - 115				

<b>Client ID:</b>	<b>MW-36-070225</b>					
Laboratory ID:	07-060-03					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.96	EPA 8270E	7-7-25	7-8-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	41	14 - 80				
Phenol-d6	32	10 - 75				
Nitrobenzene-d5	66	27 - 108				
2-Fluorobiphenyl	72	37 - 103				
2,4,6-Tribromophenol	98	35 - 123				
Terphenyl-d14	93	47 - 115				



Date of Report: July 11, 2025  
 Samples Submitted: July 3, 2025  
 Laboratory Reference: 2507-060  
 Project: COEV DEVEL

### SEMIVOLATILE ORGANICS EPA 8270E

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-31-070225</b>					
Laboratory ID:	07-060-04					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.96	EPA 8270E	7-7-25	7-8-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	44	14 - 80				
Phenol-d6	36	10 - 75				
Nitrobenzene-d5	71	27 - 108				
2-Fluorobiphenyl	78	37 - 103				
2,4,6-Tribromophenol	107	35 - 123				
Terphenyl-d14	82	47 - 115				

<b>Client ID:</b>	<b>MW-21R-070225</b>					
Laboratory ID:	07-060-05					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.97	EPA 8270E	7-7-25	7-8-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	38	14 - 80				
Phenol-d6	29	10 - 75				
Nitrobenzene-d5	56	27 - 108				
2-Fluorobiphenyl	61	37 - 103				
2,4,6-Tribromophenol	82	35 - 123				
Terphenyl-d14	72	47 - 115				

<b>Client ID:</b>	<b>MW-39R-070225</b>					
Laboratory ID:	07-060-06					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	1.0	EPA 8270E	7-7-25	7-8-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	41	14 - 80				
Phenol-d6	33	10 - 75				
Nitrobenzene-d5	62	27 - 108				
2-Fluorobiphenyl	67	37 - 103				
2,4,6-Tribromophenol	90	35 - 123				
Terphenyl-d14	85	47 - 115				



Date of Report: July 11, 2025  
 Samples Submitted: July 3, 2025  
 Laboratory Reference: 2507-060  
 Project: COEV DEVEL

### SEMIVOLATILE ORGANICS EPA 8270E

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-29R-070225</b>					
Laboratory ID:	07-060-07					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	1.0	EPA 8270E	7-7-25	7-8-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	47	14 - 80				
Phenol-d6	36	10 - 75				
Nitrobenzene-d5	67	27 - 108				
2-Fluorobiphenyl	75	37 - 103				
2,4,6-Tribromophenol	104	35 - 123				
Terphenyl-d14	90	47 - 115				

<b>Client ID:</b>	<b>MW-11R-070225</b>					
Laboratory ID:	07-060-08					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	1.0	EPA 8270E	7-7-25	7-8-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	54	14 - 80				
Phenol-d6	43	10 - 75				
Nitrobenzene-d5	80	27 - 108				
2-Fluorobiphenyl	85	37 - 103				
2,4,6-Tribromophenol	115	35 - 123				
Terphenyl-d14	100	47 - 115				

<b>Client ID:</b>	<b>MW-30-070225</b>					
Laboratory ID:	07-060-09					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.98	EPA 8270E	7-7-25	7-8-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	52	14 - 80				
Phenol-d6	42	10 - 75				
Nitrobenzene-d5	79	27 - 108				
2-Fluorobiphenyl	85	37 - 103				
2,4,6-Tribromophenol	109	35 - 123				
Terphenyl-d14	99	47 - 115				



Date of Report: July 11, 2025  
 Samples Submitted: July 3, 2025  
 Laboratory Reference: 2507-060  
 Project: COEV DEVEL

### SEMIVOLATILE ORGANICS EPA 8270E

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>Client ID:</b>	<b>MW-139R-070225</b>					
Laboratory ID:	07-060-10					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	1.0	EPA 8270E	7-7-25	7-8-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	47	14 - 80				
Phenol-d6	36	10 - 75				
Nitrobenzene-d5	71	27 - 108				
2-Fluorobiphenyl	78	37 - 103				
2,4,6-Tribromophenol	102	35 - 123				
Terphenyl-d14	94	47 - 115				

<b>Client ID:</b>	<b>Blank-070225</b>					
Laboratory ID:	07-060-11					
bis(2-Ethylhexyl)phthalate	<b>ND</b>	0.96	EPA 8270E	7-7-25	7-8-25	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorophenol	50	14 - 80				
Phenol-d6	38	10 - 75				
Nitrobenzene-d5	71	27 - 108				
2-Fluorobiphenyl	74	37 - 103				
2,4,6-Tribromophenol	97	35 - 123				
Terphenyl-d14	89	47 - 115				



Date of Report: July 11, 2025  
 Samples Submitted: July 3, 2025  
 Laboratory Reference: 2507-060  
 Project: COEV DEVEL

**SEMIVOLATILE ORGANICS EPA 8270E  
 QUALITY CONTROL**

Matrix: Water  
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
<b>METHOD BLANK</b>						
Laboratory ID:	MB0707W1					
bis(2-Ethylhexyl)phthalate	ND	1.0	EPA 8270E	7-7-25	7-7-25	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorophenol	46	14 - 80				
Phenol-d6	37	10 - 75				
Nitrobenzene-d5	68	27 - 108				
2-Fluorobiphenyl	68	37 - 103				
2,4,6-Tribromophenol	94	35 - 123				
Terphenyl-d14	93	47 - 115				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
<b>MATRIX SPIKES</b>								
Laboratory ID:	07-046-01							
	MS	MSD	MS	MSD	MS	MSD		
bis(2-Ethylhexyl)phthalate	16.0	15.7	19.1	19.0	ND	84	83	48 - 119    2    39
Surrogate:								
2-Fluorophenol					48	40	14 - 80	
Phenol-d6					35	32	10 - 75	
Nitrobenzene-d5					74	68	27 - 108	
2-Fluorobiphenyl					78	75	37 - 103	
2,4,6-Tribromophenol					89	88	35 - 123	
Terphenyl-d14					80	80	47 - 115	

**SPIKE BLANK**

Laboratory ID:	SB0707W1									
bis(2-Ethylhexyl)phthalate	15.7		20.0		79		54 - 123			
Surrogate:										
2-Fluorophenol					45		14 - 80			
Phenol-d6					35		10 - 75			
Nitrobenzene-d5					68		27 - 108			
2-Fluorobiphenyl					69		37 - 103			
2,4,6-Tribromophenol					84		35 - 123			
Terphenyl-d14					76		47 - 115			





### Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
  - B - The analyte indicated was also found in the blank sample.
  - C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
  - E - The value reported exceeds the quantitation range and is an estimate.
  - F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
  - H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
  - I - Compound recovery is outside of the control limits.
  - J - The value reported was below the practical quantitation limit. The value is an estimate.
  - K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
  - L - The RPD is outside of the control limits.
  - M - Hydrocarbons in the gasoline range are impacting the diesel range result.
  - M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
  - N - Hydrocarbons in the lube oil range are impacting the diesel range result.
  - N1 - Hydrocarbons in diesel range are impacting lube oil range results.
  - O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
  - P - The RPD of the detected concentrations between the two columns is greater than 40.
  - Q - Surrogate recovery is outside of the control limits.
  - S - Surrogate recovery data is not available due to the necessary dilution of the sample.
  - T - The sample chromatogram is not similar to a typical \_\_\_\_\_.
  - U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
  - U1 - The practical quantitation limit is elevated due to interferences present in the sample.
  - V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
  - W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
  - X - Sample extract treated with a mercury cleanup procedure.
  - X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
  - X2 - Sample extract treated with a silica gel cleanup procedure.
  - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
  - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
  - Z -
- ND - Not Detected at PQL  
 PQL - Practical Quantitation Limit  
 RPD - Relative Percent Difference





# MVA Onsite Environmental Inc.

Analytical Laboratory Testing Services  
14648 NE 95th Street • Redmond, WA 98052  
Phone: (425) 883-3881 • www.onsite-env.com

## Chain of Custody

Turnaround Request (in working days)

(Check One)

Same Day  1 Day

2 Days  3 Days

Standard (7 Days)

\_\_\_\_\_ (other)

Laboratory Number: **07-060**

ONLY

Company: Floyd Snider

Project Number:

Project Name: COE DEVEL

Project Manager: Sabine Dikson

Sampled By: John Lewis

Lab ID Sample Identification

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	MW-37-070225	7/16/25	1040	Water	2
2	MW-38-070225		1250		
3	MW-36-070225		1035		
4	MW-31-070225		1505		
5	MW-21R-070225		1625		
6	MW-39R-070225		1445		
7	MW-29R-070225		1445		
8	MW-11R-070225		1500		
9	MW-30-070225		1250		
10	MW-139R-070225		1450		

NWTPH-HCID	
NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input type="checkbox"/> )	
NWTPH-Gx	
NWTPH-Dx (SG Clean-up <input type="checkbox"/> )	
Volatiles 8260	
Halogenated Volatiles 8260	
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270/SIM (with low-level PAHs)	<input checked="" type="checkbox"/> BEHP
PAHs 8270/SIM (low-level)	
PCBs 8082	
Organochlorine Pesticides 8081	
Organophosphorus Pesticides 8270/SIM	
Chlorinated Acid Herbicides 8151	
Total RCRA Metals	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664	
% Moisture	

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Signature

Company

Date

Time

Comments/Special Instructions

*[Signature]*

Floyd Snider

7/16/25 1115

\* - BEHP OWN

*[Signature]*

FLPPTA

7/3/25 1316

OWN results to:

*[Signature]*

FLPPTA

7/3/25 1340

labdata@floydsnider.com

*[Signature]*

ORE

7/3/25 1340

Sabine, dntuma@floydsnider.com

Received

Data Package: Standard  Level III  Level IV

Reviewed/Date

Reviewed/Date

Chromatograms with final report  Electronic Data Deliverables (EDDs)



# Sample/Cooler Receipt and Acceptance Checklist

Client: FLS  
 Client Project Name/Number: CoEv Parcel  
 OnSite Project Number: 07-060

Initiated by: QMV  
 Date Initiated: 7/3/15

## 1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	<input checked="" type="radio"/> No	N/A	1	2	3	4
1.2 Were the custody seals intact?	Yes	No	<input checked="" type="radio"/> N/A	1	2	3	4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	<input checked="" type="radio"/> N/A	1	2	3	4
1.4 Were the samples delivered on ice or blue ice?	<input checked="" type="radio"/> Yes	No	N/A	1	2	3	4
1.5 Were samples received between 0-6 degrees Celsius?	<input checked="" type="radio"/> Yes	No	N/A	Temperature: <u>6.6</u>			
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	<input checked="" type="radio"/> N/A					
1.7 How were the samples delivered?	Client	<input checked="" type="radio"/> Courier	UPS/FedEx	OSE Pickup	Other		

## 2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	<input checked="" type="radio"/> Yes	No		1	2	3	4
2.2 Was the COC legible and written in permanent ink?	<input checked="" type="radio"/> Yes	No		1	2	3	4
2.3 Have samples been relinquished and accepted by each custodian?	<input checked="" type="radio"/> Yes	No		1	2	3	4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	<input checked="" type="radio"/> Yes	No		1	2	3	4
2.5 Were all of the samples listed on the COC submitted?	<input checked="" type="radio"/> Yes	No		1	2	3	4
2.6 Were any of the samples submitted omitted from the COC?	Yes	<input checked="" type="radio"/> No		1	2	3	4

## 3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	<input checked="" type="radio"/> No		1	2	3	4
3.2 Were any sample labels missing or illegible?	Yes	<input checked="" type="radio"/> No		1	2	3	4
3.3 Have the correct containers been used for each analysis requested?	<input checked="" type="radio"/> Yes	No		1	2	3	4
3.4 Have the samples been correctly preserved?	Yes	No	<input checked="" type="radio"/> N/A	1	2	3	4
3.5 Are volatile samples free from headspace and bubbles greater than 6mm?	Yes	No	<input checked="" type="radio"/> N/A	1	2	3	4
3.6 Is there sufficient sample submitted to perform requested analyses?	<input checked="" type="radio"/> Yes	No		1	2	3	4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	<input checked="" type="radio"/> No		1	2	3	4
3.8 Was method 5035A used?	Yes	No	<input checked="" type="radio"/> N/A	1	2	3	4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		<input checked="" type="radio"/> N/A	1	2	3	4

### Explain any discrepancies:

1 - Discuss issue in Case Narrative

3 - Client contacted to discuss problem

2 - Process Sample As-is

4 - Sample cannot be analyzed or client does not wish to proceed

**CITY OF EVERETT  
ENVIRONMENTAL LABORATORY**

PROJECT #

00069388

Client:	FLOYD SNIDER	Date Received:	07/03/25
Program:	Everett Landfill	Data Release:	SF
Contact:	MEGAN KING	Date Reported:	08/07/25

**BR53642 - MW-37-070225** Sample Date/Time: **07/03/25 10:40** Sampler: JL

METALS(D)	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Arsenic	200.8	<b>0.15</b>	<b>J</b>	0.07	0.25	µg/L	08/07/25 09:06	SF
Dis. Iron	200.8	<b>16700</b>		3.1	25	µg/L	08/07/25 09:06	SF
Dis. Manganese	200.8	<b>1040</b>		0.12	0.25	µg/L	08/07/25 09:06	SF
Dis. Nickel	200.8	<b>0.32</b>		0.06	0.25	µg/L	08/07/25 09:06	SF
Dis. Zinc	200.8	<b>&lt;2.0</b>	<b>U</b>	2.0	10.0	µg/L	08/07/25 09:06	SF

NUTRIENTS	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Chloride	SM4500-CL-E	<b>1040</b>		31.00	100.00	mg/L	07/15/25 14:32	TC

**CITY OF EVERETT  
ENVIRONMENTAL LABORATORY**

PROJECT #

00069388

Client:	FLOYD SNIDER	Date Received:	07/03/25
Program:	Everett Landfill	Data Release:	SF
Contact:	MEGAN KING	Date Reported:	08/07/25

**BR53643 - MW-36-070225** Sample Date/Time: **07/03/25 10:35** Sampler: JL

METALS(D)	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Arsenic	200.8	<b>3.8</b>		0.07	0.25	µg/L	08/07/25 09:06	SF
Dis. Iron	200.8	<b>11500</b>		3.1	25	µg/L	08/07/25 09:06	SF
Dis. Manganese	200.8	<b>579</b>		0.12	0.25	µg/L	08/07/25 09:06	SF
Dis. Nickel	200.8	<b>0.92</b>		0.06	0.25	µg/L	08/07/25 09:06	SF
Dis. Zinc	200.8	<b>&lt;2.0</b>	<b>U</b>	2.0	10.0	µg/L	08/07/25 09:06	SF

NUTRIENTS	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Chloride	SM4500-CL-E	<b>19.3</b>		0.31	1.00	mg/L	07/15/25 14:32	TC

**CITY OF EVERETT  
ENVIRONMENTAL LABORATORY**

PROJECT #

00069388

Client:	FLOYD SNIDER	Date Received:	07/03/25
Program:	Everett Landfill	Data Release:	SF
Contact:	MEGAN KING	Date Reported:	08/07/25

**BR53644 - MW-31-070225** Sample Date/Time: **07/03/25 13:05** Sampler: JL

METALS(D)	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Arsenic	200.8	<b>1.3</b>		0.07	0.25	µg/L	08/07/25 09:06	SF
Dis. Iron	200.8	<b>43700</b>		3.1	25	µg/L	08/07/25 09:06	SF
Dis. Manganese	200.8	<b>1320</b>		0.12	0.25	µg/L	08/07/25 09:06	SF
Dis. Nickel	200.8	<b>2.7</b>		0.06	0.25	µg/L	08/07/25 09:06	SF
Dis. Zinc	200.8	<b>&lt;2.0</b>	<b>U</b>	2.0	10.0	µg/L	08/07/25 09:06	SF

NUTRIENTS	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Chloride	SM4500-CL-E	<b>150</b>		3.10	10.00	mg/L	07/15/25 14:32	TC

**CITY OF EVERETT  
ENVIRONMENTAL LABORATORY**

PROJECT #

00069388

Client:	FLOYD SNIDER	Date Received:	07/03/25
Program:	Everett Landfill	Data Release:	SF
Contact:	MEGAN KING	Date Reported:	08/07/25

**BR53645 - MW-21R-070225** Sample Date/Time: **07/03/25 16:25** Sampler: JL

METALS(D)	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Arsenic	200.8	<b>3.8</b>		0.07	0.25	µg/L	08/07/25 09:06	SF
Dis. Iron	200.8	<b>8940</b>		3.1	25	µg/L	08/07/25 09:06	SF
Dis. Manganese	200.8	<b>1410</b>		0.12	0.25	µg/L	08/07/25 09:06	SF
Dis. Nickel	200.8	<b>0.43</b>		0.06	0.25	µg/L	08/07/25 09:06	SF
Dis. Zinc	200.8	<b>&lt;2.0</b>	<b>U</b>	2.0	10.0	µg/L	08/07/25 09:06	SF

NUTRIENTS	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Chloride	SM4500-CL-E	<b>29.3</b>		0.62	2.00	mg/L	07/15/25 14:32	TC

**CITY OF EVERETT  
ENVIRONMENTAL LABORATORY**

PROJECT #

00069388

Client:	FLOYD SNIDER	Date Received:	07/03/25
Program:	Everett Landfill	Data Release:	SF
Contact:	MEGAN KING	Date Reported:	08/07/25

**BR53646 - MW-39R-070225** Sample Date/Time: **07/03/25 14:45** Sampler: JL

METALS(D)	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Arsenic	200.8	<b>0.11</b>	<b>J</b>	0.07	0.25	µg/L	08/07/25 09:06	SF
Dis. Iron	200.8	<b>4610</b>		3.1	25	µg/L	08/07/25 09:06	SF
Dis. Manganese	200.8	<b>257</b>		0.12	0.25	µg/L	08/07/25 09:06	SF
Dis. Nickel	200.8	<b>0.18</b>	<b>J</b>	0.06	0.25	µg/L	08/07/25 09:06	SF
Dis. Zinc	200.8	<b>&lt;2.0</b>	<b>U</b>	2.0	10.0	µg/L	08/07/25 09:06	SF

NUTRIENTS	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Chloride	SM4500-CL-E	<b>6.7</b>		0.31	1.00	mg/L	07/15/25 14:33	TC

**CITY OF EVERETT  
ENVIRONMENTAL LABORATORY**

PROJECT #

00069388

Client:	FLOYD SNIDER	Date Received:	07/03/25
Program:	Everett Landfill	Data Release:	SF
Contact:	MEGAN KING	Date Reported:	08/07/25

**BR53647 - MW-29R-070225** Sample Date/Time: **07/03/25 14:45** Sampler: JL

METALS(D)	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Arsenic	200.8	<b>0.21</b>	<b>J</b>	0.07	0.25	µg/L	08/07/25 09:06	SF
Dis. Iron	200.8	<b>5250</b>		3.1	25	µg/L	08/07/25 09:06	SF
Dis. Manganese	200.8	<b>402</b>		0.12	0.25	µg/L	08/07/25 09:06	SF
Dis. Nickel	200.8	<b>0.16</b>	<b>J</b>	0.06	0.25	µg/L	08/07/25 09:06	SF
Dis. Zinc	200.8	<b>&lt;2.0</b>	<b>U</b>	2.0	10.0	µg/L	08/07/25 09:06	SF

NUTRIENTS	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Chloride	SM4500-CL-E	<b>11.4</b>		0.31	1.00	mg/L	07/15/25 14:33	TC

**CITY OF EVERETT  
ENVIRONMENTAL LABORATORY**

PROJECT #

00069388

Client:	FLOYD SNIDER	Date Received:	07/03/25
Program:	Everett Landfill	Data Release:	SF
Contact:	MEGAN KING	Date Reported:	08/07/25

**BR53648 - MW-11R-070225** Sample Date/Time: **07/03/25 15:00** Sampler: JL

METALS(D)	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Arsenic	200.8	<b>0.18</b>	<b>J</b>	0.07	0.25	µg/L	08/07/25 09:06	SF
Dis. Iron	200.8	<b>2430</b>		3.1	25	µg/L	08/07/25 09:06	SF
Dis. Manganese	200.8	<b>680</b>		0.12	0.25	µg/L	08/07/25 09:06	SF
Dis. Nickel	200.8	<b>0.25</b>		0.06	0.25	µg/L	08/07/25 09:06	SF
Dis. Zinc	200.8	<b>&lt;2.0</b>	<b>U</b>	2.0	10.0	µg/L	08/07/25 09:06	SF

NUTRIENTS	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Chloride	SM4500-CL-E	<b>13.4</b>		0.31	1.00	mg/L	07/15/25 14:33	TC

**CITY OF EVERETT  
ENVIRONMENTAL LABORATORY**

PROJECT #

00069388

Client:	FLOYD SNIDER	Date Received:	07/03/25
Program:	Everett Landfill	Data Release:	SF
Contact:	MEGAN KING	Date Reported:	08/07/25

**BR53649 - MW-38-070225** Sample Date/Time: **07/03/25 12:50** Sampler: JL

METALS(D)	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Arsenic	200.8	<b>0.11</b>	<b>J</b>	0.07	0.25	µg/L	08/07/25 09:06	SF
Dis. Iron	200.8	<b>2910</b>		3.1	25	µg/L	08/07/25 09:06	SF
Dis. Manganese	200.8	<b>309</b>		0.12	0.25	µg/L	08/07/25 09:06	SF
Dis. Nickel	200.8	<b>0.38</b>		0.06	0.25	µg/L	08/07/25 09:06	SF
Dis. Zinc	200.8	<b>&lt;2.0</b>	<b>U</b>	2.0	10.0	µg/L	08/07/25 09:06	SF

NUTRIENTS	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Chloride	SM4500-CL-E	<b>13.3</b>		0.31	1.00	mg/L	07/15/25 14:33	TC

**CITY OF EVERETT  
ENVIRONMENTAL LABORATORY**

PROJECT #

00069388

Client:	FLOYD SNIDER	Date Received:	07/03/25
Program:	Everett Landfill	Data Release:	SF
Contact:	MEGAN KING	Date Reported:	08/07/25

**BR53650 - MW-30-070225** Sample Date/Time: **07/03/25 12:50** Sampler: JL

METALS(D)	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Arsenic	200.8	<b>6.0</b>		0.07	0.25	µg/L	08/07/25 09:06	SF
Dis. Iron	200.8	<b>11700</b>		3.1	25	µg/L	08/07/25 09:06	SF
Dis. Manganese	200.8	<b>569</b>		0.12	0.25	µg/L	08/07/25 09:06	SF
Dis. Nickel	200.8	<b>0.17</b>	J	0.06	0.25	µg/L	08/07/25 09:06	SF
Dis. Zinc	200.8	<b>2.8</b>	J	2.0	10.0	µg/L	08/07/25 09:06	SF

NUTRIENTS	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Chloride	SM4500-CL-E	<b>16.8</b>		0.31	1.00	mg/L	07/15/25 14:33	TC

**CITY OF EVERETT  
ENVIRONMENTAL LABORATORY**

PROJECT #

00069388

Client:	FLOYD SNIDER	Date Received:	07/03/25
Program:	Everett Landfill	Data Release:	SF
Contact:	MEGAN KING	Date Reported:	08/07/25

**BR53651 - MW-139R-070225** Sample Date/Time: **07/03/25 14:50** Sampler: JL

METALS(D)	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Arsenic	200.8	<b>0.11</b>	<b>J</b>	0.07	0.25	µg/L	08/07/25 09:06	SF
Dis. Iron	200.8	<b>4560</b>		3.1	25	µg/L	08/07/25 09:06	SF
Dis. Manganese	200.8	<b>257</b>		0.12	0.25	µg/L	08/07/25 09:06	SF
Dis. Nickel	200.8	<b>0.14</b>	<b>J</b>	0.06	0.25	µg/L	08/07/25 09:06	SF
Dis. Zinc	200.8	<b>&lt;2.0</b>	<b>U</b>	2.0	10.0	µg/L	08/07/25 09:06	SF

NUTRIENTS	Method	Results	Qual	MDL	PQL	Units	Analysis Time	Analyst
Dis. Chloride	SM4500-CL-E	<b>6.6</b>		0.31	1.00	mg/L	07/15/25 14:33	TC

Batch # QA ID	62187 BR53643	Orig	LFM	LFM AMT	LFM % REC	LFD	LFD RPD	MB	LFB	LFB TV	LFB % REC	CAL CHK	CAL CK TV	CAL CK %	QCS	QCS TV	QCS % Rec
<b>Dis. Arsenic</b>		3.8	54.0	50.0	100.4	54.9	1.7	<0.1	48.6	50.0	97.2	52.5	50.0	105.0	232	234	99.0
<b>Dis. Iron</b>		11500	16400	5000	98.4	16400	0	<3	4920	5000	98.3	4810	5000	96.3	3290	3220	102.3
<b>Dis. Manganese</b>		579	2620	2050	99.6	2690	2.6	<0.1	2000	2050	97.4	52.7	50.0	105.4	1610	1590	101.1
<b>Dis. Nickel</b>		0.9	48.6	50.0	95.4	49.1	1.0	<0.1	48.7	50.0	97.3	52.4	50.0	104.9	879	868	101.3
<b>Dis. Zinc</b>		<2	50	50	97.5	50	0	<2	49	50	98.8	53	50	105.7	1170	1160	101.2
Batch # QA ID	62083 BR53642	Orig	LFM	LFM AMT	LFM % REC	LFD	LFD RPD	MB	LFB	LFB TV	LFB % REC	CAL CHK	CAL CK TV	CAL CK %	QCS	QCS TV	QCS % Rec
<b>Dis. Chloride</b>		1040	2030	1000	99.2	2040	0.5	<0.31	10.0	10.0	100.3	5.0	5.0	98.9	14.6	14.4	101.6

 Orig = Original  
 DUP = Duplicate

 LFM = Laboratory Fortified Matrix  
 LFD = Laboratory Fortified Matrix Duplicate

 MB = Method Blank  
 LFB = Laboratory Fortified Blank

 Cal Chk = Calibration Check  
 QCS = Quality Control Sample

**Attachment 3**  
**Data Validation Summaries**

# Data Validation Summary

**Prepared by:** Charlie Lentz

**Date:** November 12, 2025

**Project ID:** COEv-DEVEL-2014

**Sample Event(s):** February 2025 Groundwater Sampling

**Sample Delivery Group(s):** 2502-380, 68507

**Sample Media:** Groundwater

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A Compliance Screening (2A) data quality review was performed on semivolatile organic compounds, dissolved metals, and dissolved chloride data resulting from laboratory analysis. The data were reviewed using guidance and quality control (QC) criteria documented in the Ground Water Sampling and Analysis Plan (HWA 2015), Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (USEPA 1986), National Functional Guidelines for Organic Superfund Methods Data Review (USEPA 2020a), and the National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA 2020b).

A total of nine water samples, one field duplicate, and one bottle blank were submitted to OnSite Environmental Inc. in Redmond, Washington, for chemical analysis by EPA 8270E, and reported results under sample delivery group 2502-380. A total of nine water samples, one field duplicate, and one bottle blank were submitted to City of Everett Environmental Laboratory in Everett, Washington, for chemical analysis by EPA 200.8 and SM4500-CL-E, and reported results under sample delivery group 68507.

## DATA QUALITY REVIEW

Field and laboratory QC parameters for all samples met project criteria.

All “J” flagged laboratory results between the method detection limit and reporting limit were qualified as “J” per project standardization rules.

## DATA QUALITY SUMMARY

Based on the data quality review, all data are determined to be of acceptable quality for use as reported or qualified.

## REFERENCES

HWA GeoSciences, Inc. (HWA). 2015. *Everett Landfill/Tire Fire Site 2015 Ground Water Sampling and Analysis Plan*. Prepared for City of Everett. 22 May.

U.S. Environmental Protection Agency (USEPA). 1986. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*. U.S. Prepared by the Office of Solid Waste and Emergency Response. EPA-530/SW-846.

\_\_\_\_\_. 2020a. *National Functional Guidelines for Organic Superfund Methods Data Review*. Prepared by the Office of Superfund Remediation and Technology Innovation. EPA-540-R-20-005/OLEM 9240.0-51. November.

\_\_\_\_\_. 2020b. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Prepared by the Office of Superfund Remediation and Technology Innovation. EPA-542-R-20-006/OLEM 9240.1-66. November.

# Data Validation Summary

**Prepared by:** Chell Black

**Date:** November 12, 2025

**Project ID:** COEv-DEVEL-2014

**Sample Event(s):** July 2025 Groundwater Sampling

**Sample Delivery Group(s):** 2507-060 and 69388

**Sample Media:** Groundwater

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A Compliance Screening (USEPA 2A) data quality review was performed on semivolatile organic compounds, dissolved metals, and dissolved chloride data resulting from laboratory analysis. The data were reviewed using guidance and quality control (QC) criteria documented in the Ground Water Sampling and Analysis Plan (HWA 2015), Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (USEPA 1986), National Functional Guidelines for Organic Superfund Methods Data Review (USEPA 2020a), and the National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA 2020b).

A total of nine groundwater samples, one field duplicate, and one bottle blank were submitted to OnSite Environmental Inc. in Redmond, Washington, for chemical analysis by USEPA 8270E and reported results under sample delivery group (SDG) 2507-060. The samples were additionally submitted to the City of Everett Environmental Laboratory in Everett, Washington, for chemical analysis by USEPA 200.8 and Standard Method 4500-CL-E and reported results under SDG 69388.

## DATA QUALITY REVIEW

Field and laboratory QC parameters for all samples met project criteria.

All “J” flagged laboratory results between the method detection limit and reporting limit were qualified as “J” per project standardization rules.

## DATA QUALITY SUMMARY

Based on the data quality review, data are determined to be of acceptable quality for use as reported or qualified.

## REFERENCES

HWA GeoSciences, Inc. (HWA). 2015. *Everett Landfill/Tire Fire Site 2015 Ground Water Sampling and Analysis Plan*. Prepared for City of Everett. 22 May.

U.S. Environmental Protection Agency (USEPA). 1986. *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*. U.S. Prepared by the Office of Solid Waste and Emergency Response. EPA-530/SW-846.

\_\_\_\_\_. 2020a. *National Functional Guidelines for Organic Superfund Methods Data Review*. Prepared by the Office of Superfund Remediation and Technology Innovation. EPA-540-R-20-005/OLEM 9240.0-51. November.

\_\_\_\_\_. 2020b. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. Prepared by the Office of Superfund Remediation and Technology Innovation. EPA-542-R-20-006/OLEM 9240.1-66. November.

**Attachment 4**  
**Pre-2021 Historical Groundwater Monitoring Analytical Results**  
**and Groundwater Elevations**

**Table 1**  
**Performance Monitoring**  
**Ground Water Analytical Results**  
**Everett Landfill**

Sample Location	Chemical Name	Unit C.L. Date	Dissolved Metals					Conventional	SVOC
			Arsenic	Iron	Manganese	Nickel	Zinc	Chloride	bis (2-Ethylhexyl) phthalate
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	(ug/L)
			25	23687	4040	10	76.6	230	10
MW-11R	NET	7/9/2001	6 U	9223	1430	5 U	8 U	11.8	1 U
MW-11R		10/3/2001	6 U	7945	1553	2 U	8 U	18.0	1 U
MW-11R		1/18/2002	6 U	9439	1910	2 U	10.45	11.6	4 U
MW-11R		4/10/2002	6 U	8742	2025	4 U	8 U	13.8	4 U
MW-11R		7/11/2002	4 U	32	440	4 U	8 U	13.3	4 U
MW-11R		10/9/2002	4 U	12400	2210	4 U	8 U	19.8	4 U
MW-11R		1/13/2003	4 U	3970	97	4.6	8	40.3	1 U
MW-11R		4/23/2003	4 U	11000	1810	4 U	8 U	20.2	1 U
MW-11R		10/9/2003	4 U	12800	1860	4 U	8 U	38.4	2.8 B
MW-11R		4/6/2004	2 U	10200	1260	2 U	8 U	8.8	1 U
MW-11R		7/15/2005	2 U	12500	1260	2 U	8 U	8.0	10 U
MW-11R		2/1/2006	4 U	11800	1240	2 U	8 U	14.0	10 U
MW-11R		7/10/2006	4 U	13500	1700	2 U	8 U	13.0	2 U
MW-11R		1/10/2007	4 U	12400	1560	4 U	8 U	18.3	2 U
MW-11RD		1/10/2007	4 U	12700	1600	4 U	8 U	18.3	2 U
MW-11R		7/17/2007	4 U	11800	1600	4 U	8 U	15.6	2 U
MW-11R		1/24/2008	2 U	11500	1490	4 U	8 U	12.6	10 U
MW-11R		6/18/2008	1.4 U	12300	1410	0.5 U	5 U	11.5	2 U
MW-11RD		6/18/2008	1.4 U	12400	1420	0.5 U	5 U	11.4	2 U
MW-11R		1/21/2009	1.7 U	12200	1430	0.5 U	5 U	10.7	2 U
MW-11R		7/10/2009	1.2	14100	1410	1 U	10 U	14.5	2 U
MW-11R		1/29/2010	1.9	10800	1300	1 U	10 U	12.9	2 U
MW-11R		7/28/2010	0.6 U	9860	992	0.5 U	5 U	7.4	2 U
MW-11R		1/20/2011	1.4 J	11300	1250	1 U	10 U	10.8	2 U
MW-11R		7/19/2011	1 U	7960	716	1 U	10 U	8.8	2 U
MW-11RD		7/19/2011	1 U	7980	720	1 U	10 U	8.8	2 U
MW-11R		1/23/2012	NS	NS	NS	NS	NS	NS	NS
MW-11R		7/11/2012	2.3	7600	535	0.5 U	5 U	4.1	2 U
MW-11R		1/22/2013	1.5 J	3320	294	1 U	10 U	3.5	2 U
MW-11R		7/18/2013	0.6 J	5800	444	0.5 U	5 U	3.9	2.6
MW-11R		1/31/2014	0.8 J	6260	446	0.5 U	5 U	8.3	2 U
MW-11R		7/25/2014	0.6 J	5920	400	0.5 U	5 U	4.9	2 U
MW-11R		2/9/2015	1 U	5630	433	1 U	10 U	3.1	2 U
MW-11R		7/29/2015	1 U	5600	509	1 U	10 U	3.4	2 U
MW-11R		1/19/2016	1 U	159000	20700	2.3 J	10 U	2320	2 U
MW-11R		7/18/2016	1 U	5880	640	1 U	10 U	18.2	2 U
MW-11R		1/26/2017	1 U	8250	1060	1 U	10 U	14.3	2 U
MW-11R		7/19/2017	1 U	180	131	1 U	10 U	4.6	2 U
MW-11R		2/9/2018	1 U	4430	877	1 U	10 U	7.6	2 U
MW-11R		7/31/2018	1 U	780	768	1 U	10.3 U	7.6	2 U
MW-11R		1/15/2019	1 U	3330	737	1 U	10 U	10.7	2 U
MW-11R		7/10/2019	1 U	320	559	1 U	10 U	8.5	2 U
MW-11R		2/3/2020	1 U	2500	631	1 U	10 U	7.1	2 U
MW-11R		7/21/2020	1 U	5200	428	1 U	10 U	7.7	2 U
MW-21	NET	7/3/2001	6 U	15	234	5 U	8 U	18.1	1 U
MW-21		10/2/2001	6 U	25	147	7.8	8 U	19.7	1 U
MW-21		1/18/2002	6 U	49	199	9.06	8 U	20.0	4 U
MW-21		4/9/2002	6 U	37	222	8.82	8 U	18.2	4 U
MW-21		7/9/2002	4 U	17	166	7.6	8 U	21.1	4 U
MW-21		10/9/2002	4 U	15	241	8.2	8 U	16.3	4 U
MW-21		1/14/2003	4 U	22	205	8.3	8 U	19.7	1 U
MW-21		4/22/2003	4 U	25	159	8.4	8 U	20.2	1 U
MW-21		10/9/2003	4 U	17	245	9.1	8 U	16.0	1 U
MW-21		4/5/2004	2 U	36	293	9.9	8 U	17.9	1 U
MW-21		7/14/2005	2 U	22	189	8.6	8 U	18.0	10 U
MW-21		1/31/2006	4 U	49	132	7.9	9	18.0	10 U
MW-21R	NET	1/21/2009	22.3	2470	1210	2.3	8 U	13.7	2 U
MW-21R		7/9/2009	31	7950	1970	1 U	10 U	9.1	2 U
MW-21RD		7/9/2009	30.4	7910	1940	1 U	10 U	9.4	2 U
MW-21R		1/28/2010	16.9	7510	1410	1 U	10 U	12.6	2 U
MW-21R		7/28/2010	23.7	8580	1660	0.5 U	5 U	9.1	2 U
MW-21R		1/20/2011	24.2	11400	1720	1 U	10 U	10.0	2 U
MW-21R		7/19/2011	25	11700	1830	1 U	10 U	8.5	2 U
MW-21R		1/23/2012	24.6	11400	2080	1 U	10 U	8.4	2 U
MW-21R		7/18/2012	6.8	8820	1600	0.6 J	5 U	11.1	2 U
MW-21R		1/22/2013	1.0 J	290	50	1 U	10 U	10.4	2 U
MW-21R		7/18/2013	0.7 J	98	121	0.7 J	5 U	12.2	2 U
MW-21R		2/1/2014	20.6	10300	1860	0.5 U	5 U	7.4	2 U
MW-21R		7/25/2014	15.0	9220	1280	0.5 U	5 U	9.6	2 U
MW-21R		2/10/2015	21	13700	1720	1 U	10 U	10.2	2 U
MW-21RD		2/10/2015	24.2	14000	1730	1 U	10 U	10.5	16
MW-21R		7/30/2015	1.8 J	42 J	3 J	1 U	10 U	10.9	2 U
MW-21R		1/19/2016	15.1	13500	1330	1 U	10 U	16.2	2 U
MW-21R		7/18/2016	1.5 J	100 J	19.3	1 U	10 U	13.3	2 U
MW-21R		1/26/2017	14.8	13900	1760	1 U	10 U	16.3	2 U
MW-21R		7/19/2017	1.5 J	48 J	4.5	1 U	10 U	14.0	2 U
MW-21R		2/9/2018	15.7	12100	1670	1 U	10 U	18.9	2.1
MW-21RD		2/9/2018	17.3	13600	1770	1 U	10 U	18.6	2.2
MW-21R		7/31/2018	1.4 J	50 J	13.1	1 U	10.3 U	17.0	2 U
MW-21R		1/15/2019	1.0 J	1950	1440	1 U	10 U	16.0	2 U
MW-21R		7/10/2019	1 U	67 J	9	1 U	10 U	12.2	2 U
MW-21R		2/3/2020	9.6	10800	1780	1 U	10 U	9.6	2 U
MW-21R		7/21/2020	1 U	40 U	319	1 U	10 U	11.2	2 U
MW-28	NET	7/6/2001	8	7972	247	5 U	8 U	4.5	1 U
MW-28		10/5/2001	8	5414	161	2 U	8 U	4.8	1 U
MW-28		1/23/2002	8.52	9332	273	2 U	8 U	4.8	4 U
MW-28		4/15/2002	8.18	7644	239	4 U	8 U	4.7	4 U
MW-28		7/9/2002	13	8220	231	4 U	8 U	5.3	4 U
MW-28D		7/9/2002	12	8260	233	4 U	8 U	5.3	4 U
MW-28		10/14/2002	8	7490	217	4 U	8 U	5.1	4 U
MW-28		1/16/2003	8	9190	257	4 U	8 U	5.4	1 U
MW-28		4/24/2003	8	7350	239	4 U	8 U	5.0	1 U
MW-28		10/14/2003	8	8020	225	4 U	8 U	5.2	5.6
MW-28		4/12/2004	7	7450	248	2 U	8 U	4.9	1 U
MW-28		7/19/2005	8	8750	265	2 U	8 U	5.0	10 U
MW-28		2/3/2006	8	8950	244	2 U	8 U	5.0	10 U
MW-28		7/11/2006	8	6440	200	2 U	10	5.2	2 U
MW-28		1/10/2007	8	8960	250	4 U	8 U	5.3	2 U
MW-28		7/18/2007	7	6110	240	4 U	8 U	5.6	2 U
MW-28		1/29/2008	9	7300	230	4 U	8 U	5.2	10 U
MW-28D		1/29/2008	7	6420	220	4 U	8 U	5.1	10 U
MW-28		6/19/2008	10.2	9000	236	0.5 U	5 U	4.9	2 U

**Table 1**  
**Performance Monitoring**  
**Ground Water Analytical Results**  
**Everett Landfill**

Sample Location	Sample Type	Chemical Name Unit C.L. Date	Dissolved Metals					Conventional	SVOC
			Arsenic	Iron	Manganese	Nickel	Zinc	Chloride	bis (2-Ethylhexyl)
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	phthalate
			25	23687	4040	10	76.6	230	10
MW-29	NET	7/10/2001	6 U	3930	378	5 U	8 U	9.8	1 U
MW-29		10/3/2001	6 U	288	186	2 U	8 U	10.1	1 U
MW-29		1/24/2002	6 U	4472	376	2 U	8 U	10.1	4 U
MW-29		4/12/2002	6 U	4593	372	4 U	8 U	9.7	4 U
MW-29		7/10/2002	4 U	5240	361	4 U	8 U	10.4	4 U
MW-29		10/11/2002	4 U	4580	367	4 U	8 U	10.7	4 U
MW-29		1/17/2003	4 U	4480	346	4 U	8 U	11.3	1.1
MW-29		4/30/2003	4 U	4800	356	4 U	8 U	10.4	2
MW-29		10/13/2003	4 U	4670	373	4 U	8 U	10.4	1 U
MW-29		4/9/2004	2 U	5180	400	2 U	8 U	11.6	1 U
MW-29		7/18/2005	2 U	4310	394	2 U	8 U	10.0	10 U
MW-29		2/3/2006	5	4030	319	2 U	8 U	11.0	10 U
MW-29		7/1/2006	4 U	3320	360	2 U	8	10.4	2 U
MW-29		1/12/2007	4 U	4040	350	4 U	8 U	11.0	2 U
MW-29		7/18/2007	4 U	4270	380	4 U	8 U	11.4	2 U
MW-29		1/29/2008	2 U	4140	370	4 U	8 U	10.5	10 U
MW-29		6/18/2008	0.5 U	4650	352	0.5 U	5 U	10.7	2 U
MW-29		1/22/2009	0.5 U	7210	361	0.5 U	5 U	11.4	2 U
MW-29		7/10/2009	1 U	7010	380	1.3	10 U	10.7	2 U
MW-29		1/28/2010	1 U	4550	355	1 U	10 U	9.7	2 U
MW-29		7/30/2010	0.6 J	4270	326	0.5 U	5 U	9.1	2 U
MW-29		1/21/2011	1 U	5520	358	1 U	10 U	10.0	2 U
MW-29		7/18/2011	1 U	4420	341	1 U	10 U	9.3	2.4
MW-29		1/23/2012	NS	NS	NS	NS	NS	NS	NS
MW-29		7/18/2012	NS	NS	NS	NS	NS	NS	NS
MW-29		1/22/2013	NS	NS	NS	NS	NS	NS	NS
MW-29R		7/29/2015	2.6 J	1800	473	3.6 J	10 U	108	7.7
MW-29R		1/19/2016	1 U	9360	604	1 U	10 U	11.7	2 U
MW-29R		7/14/2016	1 U	7500	493	1 U	10 U	28.4	2 U
MW-29R		1/26/2017	1 U	10200	675	1 U	10 U	13.4	2 U
MW-29R		7/20/2017	1 U	9630	643	1 U	10 U	13.7	2 U
MW-29R		2/9/2018	1 U	9210	604	1 U	10 U	14.1	2 U
MW-29R		8/1/2018	1 U	6450	557	1 U	10.3 U	14.9	2 U
MW-29R		1/29/2019	1 U	160	500	1 U	10 U	15.8	2 U
MW-29R		7/10/2019	1 U	4110	527	1 U	10 U	13.3	2 U
MW-29R		2/3/2020	1 U	7790	424	1 U	10 U	11.4	2 U
MW-29RD		2/3/2020	1 U	7480	430	1 U	10 U	11.3	2 U
MW-29R		7/22/2020	1 U	2650	283	1 U	10 U	10.6	2 U
MW-30	NET	7/5/2001	8	4653	573.75	5 U	8 U	27.1	1 U
MW-30		10/3/2001	6 U	254	186	2 U	8 U	26.5	1 U
MW-30		1/25/2002	9.34	6578	548.08	2 U	8 U	23.7	4 U
MW-30		4/11/2002	11.14	6253	506.64	4 U	8 U	23.1	4 U
MW-30		7/10/2002	4 U	222	324	4 U	8 U	23.9	4 U
MW-30		10/10/2002	11	5810	484	4 U	8 U	19.4	4 U
MW-30		1/16/2003	11	6240	505	4 U	8 U	19.6	1 U
MW-30		4/29/2003	9	5850	500	4 U	8 U	19.7	1 U
MW-30		10/13/2003	10	5380	478	4 U	8 U	17.0	1 U
MW-30		4/8/2004	11	5160	495	2 U	8 U	18.4	1 U
MW-30		7/14/2005	9	5070	480	2 U	8 U	21.0	10 U
MW-30		2/3/2006	13	5290	460	2 U	8 U	20.0	10 U
MW-30		7/1/2006	4 U	4070	450	2 U	8 U	17.4	2 U
MW-30		1/12/2007	7	5780	490	4 U	8 U	16.8	2 U
MW-30		7/18/2007	5	3690	400	4 U	8 U	14.6	2 U
MW-30		1/29/2008	9	5240	480	4 U	8 U	13.2	10 U
MW-30		6/18/2008	0.7 U	47 J	116	0.5 U	5 U	16.8	2 U
MW-30		1/22/2009	5.6	4130	475	0.5 U	5 U	23.5	2 U
MW-30		7/10/2009	6.6	3630	346	1 U	10 U	12.9	2 U
MW-30		1/28/2010	7.2	4310	421	1 U	10 U	15.3	2 U
MW-30		7/30/2010	7	5250	406	0.5 U	5 U	15.7	2 U
MW-30		1/21/2011	8.5	5420	428	1 U	10 U	11.9	2 U
MW-30		7/18/2011	8.2	4940	417	1 U	10 U	12.3	2 U
MW-30		1/24/2012	7.2	5000	445	1 U	10 U	12.8	2 U
MW-30		7/18/2012	1.7 J	2340	691	0.5 U	5 U	13.5	2 U
MW-30D		7/18/2012	1.8 J	2380	688	0.5 U	5 U	13.0	2 U
MW-30		1/22/2013	6.7	4730	424	1 U	10 U	13.8	2 U
MW-30D		1/22/2013	6.8	4710	423	1 U	10 U	12.9	2 U
MW-30		7/18/2013	4.3	3530	386	0.5 U	5 U	14.7	2.4
MW-30D		7/18/2013	4.8	3820	394	0.5 U	5 U	14.9	2 U
MW-30		1/31/2014	8.2	6300	428	0.5 U	5 U	11.1	2 U
MW-30		7/28/2014	1.2 J	790	116	0.5 U	5 U	11.0	2 U
MW-30		2/9/2015	b	7110	447	1 U	10 U	10.7	2 U
MW-30		7/29/2015	1 U	320	25	1 U	10 U	9.8	2 U
MW-30		1/19/2016	4.3	6780	465	1 U	10 U	33.6	2 U
MW-30		7/14/2016	8	8320	559	1 U	10 U	14.2	2 U
MW-30		1/26/2017	8.6	7290	446	1 U	72	11.2	2 U
MW-30		7/20/2017	1 U	150 J	14.4	1 U	10 U	11.2	2 U
MW-30		2/9/2018	9	8830	509	1 U	10 U	11.1	2 U
MW-30		8/1/2018	7.6	8690	482	1 U	10.3 U	12.8	2 U
MW-30		1/15/2019	7.2	8490	495	1 U	10 U	13.1	2 U
MW-30		7/10/2019	1.8 J	1780	174	1 U	10 U	9.0	2 U
MW-30		2/3/2020	2.5 J	6420	428	1 U	10 U	11.3	2 U
MW-30		7/22/2020	1 U	970	84	1 U	10 U	10.3	2 U

**Table 1  
Performance Monitoring  
Ground Water Analytical Results  
Everett Landfill**

Sample Location	Sample Type	Chemical Name Unit C.L. Date	Dissolved Metals					Conventional	SVOC
			Arsenic (ug/L)	Iron (ug/L)	Manganese (ug/L)	Nickel (ug/L)	Zinc (ug/L)	Chloride (mg/L)	bis (2-Ethylhexyl) phthalate (ug/L)
			25	23687	4040	10	76.6	230	10
MW-31	NET	7/5/2001	6 U	43672	1261.8	5 U	8 U	149.8	1 U
MW-31		10/3/2001	6 U	29424	866.99	3.9	8 U	150.0	1 U
MW-31		1/22/2002	6 U	39542	1206.2	5.83	8 U	137.5	6
MW-31		4/10/2002	6 U	38227	1178	4 U	8 U	136.9	4 U
MW-31		7/1/2002	4 U	41700	1190	4 U	8 U	132.0	4 U
MW-31		10/10/2002	4 U	42000	1190	4.4	8 U	150.0	4 U
MW-31D		10/10/2002	4 U	41800	1180	4 U	8 U	151.0	4 U
MW-31		1/16/2003	4 U	38400	1150	4.5	8 U	13.5	1 U
MW-31		4/29/2003	4 U	38800	1130	4 U	8 U	131.0	320
MW-31		10/13/2003	4 U	41300	1230	4.4	8 U	147.0	1 U
MW-31		4/8/2004	3	35600	1220	4.7	8 U	120.0	1.5 B
MW-31		7/14/2005	2 U	33400	1150	3.9	8 U	127.0	10 U
MW-31		2/3/2006	4 U	31800	1150	2.9	8 U	130.0	10 U
MW-31		7/12/2006	4 U	36100	1160	3	8 U	132.0	2 U
MW-31		1/12/2007	4 U	34300	1170	4	16	134.0	2 U
MW-31		7/17/2007	4 U	37100	1180	7	8 U	149.0	2 U
MW-31		1/29/2008	2 U	32200	1160	4 U	8 U	138.0	10 U
MW-31		6/18/2008	1.8 U	39500	1160	3.2	5 U	132.0	2 U
MW-31		1/22/2009	1.5 U	32400	1080	3	5 U	149.7	2 U
MW-31		7/10/2009	1.3	40300	1170	3.2	10 U	148.0	2 U
MW-31		1/28/2010	1.3	31200	1130	3.2	10 U	147.0	2 U
MW-31		7/30/2010	1.4 J	38600	1150	3	5 U	143.0	2 U
MW-31D		7/30/2010	1.3 J	37600	1110	3.2	5 U	144.0	2 U
MW-31		1/21/2011	1.4 J	36500	1160	3 J	10 U	157.0	2 U
MW-31D		1/21/2011	1.4 J	36300	1160	3 J	10 U	161.0	2 U
MW-31		7/18/2011	1.5 J	39600	1210	3.9 J	10 U	132.0	2 U
MW-31		1/24/2012	1.4 J	34500	1190	3.4 J	10 U	143.0	2 U
MW-31		7/18/2012	1.5 J	39700	1150	3.2	5 U	138.0	2 U
MW-31		1/22/2013	1.6 J	42100	1210	3.5 J	10 U	134.0	2.7
MW-31		7/19/2013	1.5 J	39900	1180	3.1	7 J	149.0	3
MW-31		1/31/2014	1.5 J	44300	1220	3.3	5 U	139.0	2 U
MW-31		7/28/2014	1.6 J	48100	1170	3.3	5 U	150.0	2 U
MW-31		2/9/2015	2.5 J	70400	1180	3.8 J	10 U	144.0	2 U
MW-31		7/29/2015	2 J	59600	1220	3.1 J	10 U	148.0	2 U
MW-31D		7/29/2015	2 J	58800	1220	3.7 J	10 U	149.0	2 U
MW-31		1/19/2016	1.4 J	40400	1010	2.7 J	10 U	148.0	2 U
MW-31D		1/19/2016	1.5 J	40600	1010	2.6 J	10 U	148.0	2 U
MW-31		7/14/2016	1.9 J	58300	1250	3.6 J	10 U	36.8	2 U
MW-31D		7/14/2016	2 J	58500	1260	3.4 J	10 U	142.0	2 U
MW-31		1/26/2017	1.7 J	48300	1190	3.4 J	10 U	141.0	2 U
MW-31		7/20/2017	1.9 J	47500	1240	3.5 J	10 U	140.0	2 U
MW-31D		7/20/2017	1.9 J	48300	1250	3.5 J	10 U	130.0	2 U
MW-31		2/9/2018	2.3 J	52700	1260	3.6 J	10 U	137.0	2.8
MW-31		8/1/2018	1.5 J	42400	1170	3.1 J	10.3 U	133.0	2 U
MW-31		1/15/2019	1.9 J	45900	1140	3.3 J	10 U	133.0	2 U
MW-31		7/10/2019	1.6 J	42200	1210	3.1 J	10 U	136.0	2 U
MW-31		2/3/2020	1.6 J	43600	1190	2.8 J	10 U	136.0	2 U
MW-31		7/22/2020	1.7 J	46400	1250	3.1 J	10 U	144.0	2 U
MW-31D		7/22/2020	1.6 J	45200	1240	3.1 J	10 U	143.0	2 U
MW-33	BG	7/5/2001	6 U	14 U	54	5 U	8 U	20.4	1 U
MW-33		10/2/2001	NS	NS	NS	NS	NS	NS	NS
MW-33		1/17/2002	6 U	14 U	27	3.67	42.2	8.7	4 U
MW-33		4/9/2002	6 U	14 U	20	4.36	32.12	8.3	4 U
MW-33		7/8/2002	4 U	14 U	16	4 U	462.6	5.3	4 U
MW-33		10/8/2002	4 U	14 U	3	4 U	23	7.9	4 U
MW-33		1/21/2003	4 U	14 U	1	4 U	26	7.8	1.1
MW-33		4/22/2003	4 U	14 U	1 U	4 U	48	7.2	1 U
MW-33		10/7/2003	4 U	14 U	1 U	4 U	19	8.5	1 U
MW-33		4/5/2004	2 U	14 U	1 U	3	15	8.3	1 U
MW-33		7/18/2005	2 U	14 U	1 U	3	19	12.0	10 U
MW-33		1/31/2006	4 U	14 U	1 U	2.7	18	8.0	10 U
MW-33		7/10/2006	4 U	14 U	1 U	3	11	6.6	2 U
MW-33		1/12/2007	4 U	14 U	b	6	33	7.2	2 U
MW-33		7/20/2007	4 U	14 U	1	4 U	70	6.2	2 U
MW-33		1/30/2008	2 U	14 U	1 U	4 U	68	5.3	10 U
MW-33		6/19/2008	0.6 U	30 U	2 U	3.2 U	29	5.1	2 U
MW-35	BG	7/5/2001	6 U	14 U	109	5 U	8 U	46.3	1 U
MW-35		10/2/2001	6 U	14 U	19	2.3	48.85	47.1	1 U
MW-35		1/17/2002	6 U	14 U	6	2.97	8 U	43.1	4 U
MW-35		4/9/2002	6 U	47	2	4 U	8 U	42.5	4 U
MW-35		7/8/2002	4 U	14 U	1 U	4 U	8 U	42.5	4 U
MW-35		10/8/2002	4 U	14 U	1 U	4 U	8 U	43.8	4 U
MW-35		1/14/2003	4 U	14 U	1 U	4 U	8 U	48.6	1 U
MW-35		4/22/2003	4 U	14 U	1 U	4 U	8 U	44.2	1 U
MW-35		10/7/2003	4 U	25	1 U	4 U	8 U	45.0	1 U
MW-35		4/5/2004	2 U	14 U	1 U	2 U	8 U	45.0	1 U
MW-35		7/18/2005	2 U	14 U	1 U	2 U	8 U	44.0	10 U
MW-35		2/1/2006	4 U	14 U	1 U	2 U	8 U	42.0	10 U
MW-36	POC	7/6/2001	14.7	12552	728	5 U	8 U	69.3	1 U
MW-36		10/8/2001	9	12067	543	2 U	8 U	59.1	1 U
MW-36		1/22/2002	8.46	15896	648	2.85	8 U	41.6	4 U
MW-36		4/10/2002	6 U	24681	663	4 U	8 U	96.5	4 U
MW-36		7/1/2002	10	15300	670	4 U	8 U	44.5	4 U
MW-36		10/9/2002	9	16500	687	4 U	8 U	44.0	4 U
MW-36		1/15/2003	8	17300	705	4 U	8 U	40.4	1 U
MW-36		4/23/2003	6	14700	693	4 U	8 U	41.0	1 U
MW-36		10/9/2003	7	16400	728	4 U	8 U	36.8	2.9 B
MW-36		4/6/2004	9	17100	778	2 U	8 U	52.5	1 U
MW-36		7/15/2005	8	18000	852	2 U	8 U	38.9	10 U
MW-36		2/1/2006	4 U	255	26.1	2 U	43	2.2	10 U
MW-36		7/13/2006	14	18200	850	2	9	35.5	2 U
MW-36		1/12/2007	9	17600	850	4 U	8 U	29.1	2 U
MW-36		7/20/2007	9	18300	870	4 U	8 U	34.4	2 U
MW-36		1/25/2008	6	11600	890	4 U	26	28.3	10 U
MW-36		6/19/2008	5	15000	690	1.1 U	9 U	28.6	2 U
MW-36		1/22/2009	1.7 U	1000	390	2.7	29	8.8	2 U
MW-36D		1/22/2009	0.9 U	420	300	2.4	28	12.0	2 U
MW-36		7/9/2009	3.1	18100	742	1 U	10 U	29.8	2 U

**Table 1  
Performance Monitoring  
Ground Water Analytical Results  
Everett Landfill**

Sample Location	Chemical Name	Unit	Dissolved Metals					Conventional	SVOC
			Arsenic	Iron	Manganese	Nickel	Zinc	Chloride	bis (2-Ethylhexyl) phthalate
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	(ug/L)
		C.L.	25	23687	4040	10	76.6	230	10
MW-36		1/29/2010	3.8	6820	759	2.3	36	23.2	2 U
MW-36		7/29/2010	4.1	15800	685	0.9 J	5 U	40.3	2 U
MW-36		1/20/2011	4.5	16400	685	1 U	10 U	32.3	2 U
MW-36		7/19/2011	4.7	16100	698	1.1 J	10 U	32.6	2 U
MW-36		1/23/2012	5.6	16000	724	1 U	10 U	27.5	2 U
MW-36D		1/23/2012	5.6	16000	728	1 U	10 U	28.5	2 U
MW-36		7/18/2012	4.8	14800	677	0.8 J	5 U	29.4	2 U
MW-36		1/22/2013	4.4	14200	850	2.5 J	22 J	25.7	2 U
MW-36		7/18/2013	6.3	15800	745	0.9 J	6 J	26.0	2 U
MW-36		1/31/2014	5.6	14800	757	0.8 J	5 U	22.4	2 U
MW-36		7/25/2014	5.4	12300	650	0.9 J	5 U	33.0	2 U
MW-36		2/10/2015	6.6	18700	765	1 U	10 U	27.0	2 U
MW-36		7/29/2015	1 U	40 U	1 U	1 U	10 U	210.0	2 U
MW-36		1/22/2016	4.6	24900	1350	2.7 J	10 U	253.0	2 U
MW-36		7/14/2016	5.1	580	131	3.3 J	10 U	86.4	2 U
MW-36		2/1/2017	1 U	240	94.2	2.2 J	10 U	111	2 U, H
MW-36		7/20/2017	2.2 J	680	351	2 J	10 U	69.8	2 U
MW-36		2/9/2018	2.2 J	10500	640	1 U	10 U	131	2 U
MW-36		8/1/2018	1.4 J	3960	427	1.3 J	10.3 U	91.4	2 U
MW-36		1/29/2019	1.1 J	4740	277	1 U	10 U	81	2 U
MW-36		7/1/2019	3.6 J	7450	334	1 U	10 U	49.7	2 U
MW-36		2/4/2020	2.1 J	190	170	2.2 J	10 U	21.6	2 U
MW-36		7/23/2020	7.1	4350	378	2 J	10 U	35.7	2 U
MW-37	POC	7/6/2001	6 U	22907	700	5 U	8 U		1 U
MW-37		10/8/2001	6 U	20327	599	2 U	8 U	87.0	1 U
MW-37		1/22/2002	6 U	22525	678	2.87	8.1	92.3	4 U
MW-37		4/10/2002	9.4	16182	665	4 U	8 U	48.3	4 U
MW-37		7/1/2002	4 U	25400	688	4 U	8 U	92.3	4 U
MW-37		10/9/2002	4 U	25500	664	4 U	11	112.0	4 U
MW-37		1/15/2003	4 U	26800	694	4 U	8 U	114.0	1 U
MW-37		4/23/2003	4 U	23100	598	4 U	8 U	117.0	1 U
MW-37		10/8/2003	4 U	22700	651	4 U	8 U	190.0	1 U
MW-37		4/6/2004	3	25100	724	2 U	8 U	157.0	1 U
MW-37		7/15/2005	2 U	26500	807	2 U	8 U	248.0	10 U
MW-37		2/1/2006	4 U	29900	956	2 U	8 U	461.0	10 U
MW-37		7/13/2006	4 U	26500	840	2 U	61	257.0	2 U
MW-37D		7/13/2006	4 U	26800	840	2 U	8 U	298.0	2 U
MW-37		7/29/2015	1.2 J	2710	491	1.3 J	10 U	31.0	2 U
MW-37		1/22/2016	1 U	33300	894	1.4 J	23 J	155.0	2 U
MW-37		7/14/2016	1 U	28200	720	1 U	10 U	251.0	2 U
MW-37		2/1/2017	1 U	35100	1230	1 U	10 U	1690	2 U, H
MW-37D		2/1/2017	1 U	34400	1200	1 U	10 U	1680	2 U, H
MW-37		4/5/2017						840	
MW-37		7/20/2017	1 U	18900	830	1 U	10 U	1790	2 U
MW-37		2/9/2018	1 U	9180	494	1 U	10 U	1590	2.5
MW-37		8/2/2018	1 U	11100	509	1 U	10.3 U	1360	2 U
MW-37		1/29/2019	1 U	12800	419	1 U	10 U	465	2 U
MW-37		7/1/2019	1 U	20600	873	1 U	10 U	884	2 U
MW-37D		7/1/2019	1 U	20600	870	1 U	10 U	880	2 U
MW-37		2/4/2020	1 U	15100	733	1 U	10 U	480	2 U
MW-37		7/23/2020	1 U	17900	1350	1 U	10 U	995	2 U
MW-38	POC	7/6/2001	6 U	3022	384	5 U	8 U	17.1	1 U
MW-38		10/8/2001	6 U	4066	287	2 U	8 U	20.6	1 U
MW-38		1/23/2002	6 U	3653	272	2 U	8.3	15.4	4 U
MW-38		4/12/2002	6 U	3665	263	4 U	8 U	15.4	5.4
MW-38		7/1/2002	4 U	3480	262	4 U	8 U	19.4	4 U
MW-38		10/15/2002	4 U	2290	234	4 U	8 U	19.2	4 U
MW-38		1/15/2003	4 U	4200	284	4 U	8 U	20.9	1 U
MW-38		4/23/2003	4 U	1560	219	4 U	8 U	16.2	1 U
MW-38		10/8/2003	4 U	4070	296	4 U	8 U	23.8	1 U
MW-38		4/6/2004	2 U	3690	279	2 U	8 U	22.1	1 U
MW-38		7/15/2005	2 U	4850	331	2 U	8 U	27.0	10 U
MW-38		2/2/2006	4 U	4130	289	2 U	8 U	24.0	10 U
MW-38		7/10/2006	4 U	4230	290	2 U	8 U	24.4	2 U
MW-38		1/10/2007	4 U	4120	300	4 U	8 U	26.4	2 U
MW-38		7/20/2007	4 U	1680	260	4 U	8 U	22.5	2 U
MW-38		1/25/2008	2 U	2470	230	4 U	31	16.5	10 U
MW-38		6/19/2008	0.5 U	6240	325	0.5 U	5 U	39.2	2 U
MW-38		1/22/2009	0.5 U	420	39	1.2 U	600	8.9	2 U
MW-38		2/26/2009					36		
MW-38		7/9/2009	1 U	3220	259	1 U	52	22.4	2 U
MW-38		1/29/2010	1 U	3300	267	1 U	10 U	16.2	2 U
MW-38		7/29/2010	0.5 U	3480	253	0.5 U	5 U	17.1	2 U
MW-38		1/20/2011	1 U	3610	265	1 U	10 U	13.9	2 U
MW-38		7/18/2011	1 U	4020	272	1 U	10 U	22.4	2 U
MW-38		1/24/2012	1 U	4000	301	1 U	10 U	17.1	2 U
MW-38		7/18/2012	0.5 U	71 J	107	0.5 U	17 J	16.2	2 U
MW-38		1/22/2013	1 U	3530	287	1 U	10 U	12.8	2 U
MW-38		7/19/2013	0.5 U	4190	288	0.5 U	7 J	30.4	2.1
MW-38		2/6/2014	0.5 U	3420	264	0.5 U	5 U	12.8	2 U
MW-38		7/28/2014	0.5 U	550	136	0.5 U	7 J	15.0	2 U
MW-38		2/9/2015	1 U	2720	236	2 J	11 J	10.5	2 U
MW-38		7/29/2015	1 U	40 U	213	1 U	14 J	11.1	2 U
MW-38		1/22/2016	1 U	3400	275	1 U	10 U	9.1	2 U
MW-38		7/14/2016	1 U	5460	502	1 U	10 U	86.4	2 U
MW-38		2/1/2017	1 U	3490	306	1 U	10 U	17.0	2 H
MW-38		7/20/2017	1 U	3580	300	1 U	10 U	17.7	2 U
MW-38		2/9/2018	1 U	2810	295	1 U	10 U	11.0	2 U
MW-38		8/2/2018	1 U	1230	210	1 U	10.3 U	12.8	2 U
MW-38D		8/2/2018	1 U	970	202	1 U	10.3 U	12.9	2 U
MW-38		1/29/2019	1 U	2430	271	1 U	10 U	12.4	2 U
MW-38D		1/29/2019	1 U	2400	274	1 U	10 U	12.2	2 U
MW-38		7/1/2019	1 U	800	169	1 U	10 U	12.1	2 U
MW-38		2/5/2020	1 U	40 U	27.5	1 U	10 U	10.5	2 U
MW-38		7/23/2020	1 U	160	257	1 U	10 U	6.3	2 U

**Table 1**  
**Performance Monitoring**  
**Ground Water Analytical Results**  
**Everett Landfill**

Sample Location	Sample Type	Chemical Name Unit C.L. Date	Dissolved Metals					Conventional	SVOC
			Arsenic	Iron	Manganese	Nickel	Zinc	Chloride	bis (2-Ethylhexyl) phthalate
			(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(mg/L)	(ug/L)
			25	23687	4040	10	76.6	230	10
MW-39	POC	7/6/2001	6 U	<b>420</b>	<b>206</b>	5 U	30	<b>49.8</b>	1 U
MW-39		10/8/2001	6 U	<b>916</b>	<b>236</b>	2 U	8 U	<b>45.7</b>	1 U
MW-39		1/23/2002	6 U	<b>1365</b>	<b>398</b>	2 U	8 U	<b>7.9</b>	<b>6.5</b>
MW-39		4/12/2002	6 U	<b>1638</b>	<b>384</b>	4 U	8 U	<b>6.8</b>	<b>7.2</b>
MW-39		7/9/2002	<b>8</b>	<b>2520</b>	<b>430</b>	4 U	<b>12</b>	<b>6.2</b>	<b>4.8</b>
MW-39		10/15/2002	<b>4</b>	<b>2740</b>	<b>398</b>	4 U	8 U	<b>5.6</b>	4 U
MW-39		1/15/2003	4 U	<b>2870</b>	<b>353</b>	4 U	8 U	<b>6.5</b>	1 U
MW-39		4/24/2003	4 U	<b>2080</b>	<b>363</b>	4 U	8 U	<b>5.1</b>	<b>7.4</b>
MW-39		10/8/2003	4 U	<b>3690</b>	<b>366</b>	4 U	8 U	<b>5.6</b>	1 U
MW-39		4/6/2004	<b>4</b>	<b>3730</b>	<b>323</b>	2 U	8 U	<b>5.3</b>	1 U
MW-39		7/15/2005	2 U	<b>18.2</b>	<b>300</b>	2 U	<b>16</b>	<b>6.0</b>	10 U
MW-39		2/2/2006	<b>6</b>	<b>3780</b>	<b>269</b>	2 U	8 U	<b>5.0</b>	10 U
MW-39		7/10/2006	4 U	<b>990</b>	<b>220</b>	2 U	<b>17</b>	<b>4.3</b>	2 U
MW-39		1/10/2007	4 U	<b>6980</b>	<b>280</b>	4 U	8 U	<b>5.4</b>	2 U
MW-39		7/19/2007	4 U	<b>5310</b>	<b>270</b>	4 U	8 U	<b>5.7</b>	2 U
MW-39D		7/19/2007	4 U	<b>5490</b>	<b>280</b>	4 U	8 U	<b>5.9</b>	2 U
MW-39		1/24/2008	<b>3</b>	<b>5560</b>	<b>260</b>	4 U	8 U	<b>5.8</b>	10 U
MW-39		6/18/2008	b	<b>4320</b>	<b>282</b>	0.5 U	5 U	<b>5.3</b>	2 U
MW-39		1/22/2009	1.5 U	<b>1950</b>	<b>252</b>	0.5 U	9 U	<b>6.1</b>	2 U
MW-39		7/9/2009	<b>1.1</b>	<b>1960</b>	<b>154</b>	1 U	10 U	<b>5.9</b>	2 U
MW-39		1/29/2010	<b>2.1</b>	<b>4930</b>	<b>239</b>	1 U	10 U	<b>6.3</b>	2 U
MW-39D		1/29/2010	<b>2.2</b>	<b>5030</b>	<b>240</b>	1 U	10 U	<b>6.2</b>	2 U
MW-39		7/29/2010	1.5 J	<b>2990</b>	<b>224</b>	0.5 U	5 U	<b>6.1</b>	2 U
MW-39		1/20/2011	2.5 J	<b>5750</b>	<b>249</b>	1 U	10 U	<b>6.3</b>	2 U
MW-39		7/18/2011	1.6 J	<b>3210</b>	<b>212</b>	1 U	10 U	<b>5.6</b>	2 U
MW-39		1/24/2012	2.6 J	<b>6150</b>	<b>246</b>	1 U	10 U	<b>5.4</b>	2 U
MW-39		7/18/2012	<b>2.1</b>	<b>5430</b>	<b>234</b>	0.5 U	5 U	<b>5.9</b>	2 U
MW-39		1/22/2013	NS	NS	NS	NS	NS	NS	NS
MW-39R		7/29/2015	2 J	130 J	229	2 J	10 U	5.0	8.1
MW-39R		1/19/2016	2.4 J	<b>650</b>	<b>255</b>	2.1 J	30 J	<b>5.5</b>	2 U
MW-39R		7/15/2016	1 U	<b>4040</b>	<b>231</b>	1 U	10 U	<b>7.1</b>	2 U
MW-39R		1/26/2017	1 U	<b>4270</b>	<b>272</b>	1 U	10 U	<b>7.6</b>	2 U
MW-39R		7/20/2017	1 U	40 U	<b>10.1</b>	1.4 J	10 U	<b>1.4</b>	2 U
MW-39R		2/9/2018	1 U	<b>4460</b>	<b>249</b>	1 U	10 U	<b>7.9</b>	2 U
MW-39R		7/31/2018	1 U	<b>4600</b>	<b>239</b>	1 U	10.3 U	<b>7.6</b>	2 U
MW-39R		1/29/2019	1 U	40 U	<b>8.2</b>	1.0 J	10 U	<b>3.0</b>	2 U
MW-39R		7/10/2019	1 U	<b>2700</b>	<b>227</b>	1 U	10 U	<b>4.5</b>	2 U
MW-39R		2/3/2020	1 U	<b>190</b>	<b>170</b>	2.2 J	10 U	<b>21.6</b>	2 U
MW-39R		7/22/2020	1 U	40 U	<b>130</b>	1 U	10 U	<b>6.3</b>	2 U
MW-40		7/10/2006	4 U	<b>20100</b>	<b>450</b>	2 U	8 U		
MW-40		1/9/2007	4 U	<b>6060</b>	<b>940</b>	4 U	8 U	<b>225.0</b>	2 U
MW-40		7/19/2007	4 U	<b>4080</b>	<b>730</b>	4 U	8 U	<b>24.1</b>	2 U
MW-40		1/30/2008	2 U	<b>12200</b>	<b>1190</b>	4 U	8 U	<b>166.0</b>	10 U
MW-41		7/10/2006	4 U	<b>5360</b>	<b>970</b>	2 U	8 U		
MW-41		1/9/2007	4 U	<b>5780</b>	<b>1030</b>	4 U	8 U	<b>1610.0</b>	2 U
MW-41		7/19/2007	4 U	<b>4710</b>	<b>990</b>	4 U	8 U	<b>1880.0</b>	2 U
MW-41		1/30/2008	2 U	<b>1090</b>	<b>2710</b>	4 U	40 U	<b>6120.0</b>	10 U
MW-42		7/10/2006	<b>24</b>	<b>7290</b>	<b>430</b>	2 U	8 U	<b>8.4</b>	2 U
MW-42D		7/15/2006	<b>23</b>	<b>7280.0</b>	<b>420</b>	0 U	8 U	<b>4.0</b>	2 U
MW-42		1/9/2007	<b>22</b>	<b>7300.0</b>	<b>410</b>	4 U	8 U	<b>3.8</b>	2 U
MW-42		7/19/2007	<b>21</b>	<b>7040.0</b>	<b>390</b>	4 U	8 U	<b>4.5</b>	2 U
MW-42		1/30/2008	<b>22</b>	<b>7090.0</b>	<b>390</b>	4 U	8 U	<b>3.9</b>	10 U

NOTES:

- Bold** Analyte detected
- Highlighted** Analyte exceeds cleanup level
- NET = network well for Performance and Confirmational Monitoring
- BG = upgradient background well
- POC = deep aquifer point of compliance monitoring well
- C.L. = cleanup level
- ug/L = micrograms per liter
- mg/L = milligrams per liter
- U = not detected at reporting limit shown
- J = estimated concentration
- NS = Not sampled
- BKG = background (established after 3 year evaluation monitoring period)
- B = likely laboratory contamination, analyte detected in field blank
- D = duplicate sample collected
- H = Sample analyzed outside of holding time

**Table 2  
Ground Water Elevations  
Everett Landfill**

Well	Type	Date	Water Depth	Water Elevation	
MW-05	S, INT	7/2/2001	13.57	11.71	
MW-05		10/1/2001	12.44	12.84	
MW-05		1/16/2002	10.75	14.53	
MW-05		4/8/2002	10.97	14.31	
MW-05		7/3/2002	14.15	11.13	
MW-05		10/7/2002	14.63	10.65	
MW-05		1/16/2003	13.32	11.96	
MW-05		4/21/2003	10.97	14.31	
MW-05		10/6/2003	15.12	10.16	
MW-05		4/2/2004	14.17	11.11	
Decommissioned 1/05					
MW-08		INT	7/2/2001	19.42	7.59
MW-08	10/1/2001		22.43	4.58	
MW-08	1/16/2002		19.57	7.44	
MW-08	4/8/2002		19.74	7.27	
MW-08	7/3/2002		21.82	5.19	
MW-08	10/7/2002		22.99	4.02	
MW-08	1/16/2003		17.24	9.77	
MW-08	4/21/2003		20.50	6.51	
MW-08	10/6/2003		23.88	3.13	
MW-08	4/2/2004		21.45	5.56	
Decommissioned 1/05					
MW-11R	NET		1/16/2002	6.25	6.47
MW-11R		4/8/2002	6.60	6.12	
MW-11R		4/8/2002	6.60	6.12	
MW-11R		7/3/2002	8.68	4.04	
MW-11R		10/7/2002	10.56	2.16	
MW-11R		1/16/2003	3.12	9.60	
MW-11R		4/21/2003	5.77	6.95	
MW-11R		10/6/2003	3.61	9.11	
MW-11R		4/2/2004	8.62	4.10	
MW-11R		7/13/2005	8.10	4.62	
MW-11R		2/7/2006	4.34	8.38	
MW-11R		7/10/2006	7.84	4.88	
MW-11R		1/8/2007	2.89	9.83	
MW-11R		7/16/2007	11.76	0.96	
MW-11R		1/23/2008	4.48	8.24	
MW-11R		6/17/2008	9.45	3.27	
MW-11R		1/13/2009	5.53	7.19	
MW-11R		7/8/2009	NR	----	
MW-11R		1/26/2010	4.88	7.84	
MW-11R		7/28/2010	7.05	5.67	
MW-11R		1/21/2011	4.73	7.99	
MW-11R		7/15/2011	9.27	3.45	
MW-11R		1/23/2012	NR	----	
MW-11R		7/19/2012	14.65	0.42	
MW-11R		1/23/2013	11.52	2.68	
MW-11R		7/18/2013	11.00	3.20	
MW-11R		1/31/2014	9.08	3.20	
MW-11R		7/25/2014	16.82	-2.62	
MW-11R		7/28/2015	11.59	2.61	
MW-11R		1/19/2016	14.11	0.09	
MW-11R		7/18/2016	17.19	-2.99	
MW-11R		1/26/2017	12.05	2.15	
MW-11R	7/20/2017	16.11	-1.91		
MW-11R	2/9/2018	10.87	3.33		
MW-11R	7/31/2018	16.12	-1.92		
MW-11R	1/15/2019	9.17	5.03		
MW-11R	7/10/2019	15.62	-1.42		
MW-11R	2/3/2020	7.88	6.32		
MW-11R	7/21/2020	17.94	-3.74		

**Table 2  
Ground Water Elevations  
Everett Landfill**

Well	Type	Date	Water Depth	Water Elevation
MW-14	S, INT	7/2/2001	17.85	8.40
MW-14		10/1/2001	20.38	5.87
MW-14		1/16/2002	18.20	8.05
MW-14		4/8/2002	18.45	7.80
MW-14		7/3/2002	20.36	5.89
MW-14		10/7/2002	20.35	5.90
MW-14		1/16/2003	19.52	6.73
MW-14		4/21/2003	18.16	8.09
MW-14		10/6/2003	20.39	5.86
Decommissioned 1/05				
MW-17	S, INT	7/2/2001	11.32	13.89
MW-17		10/1/2001	2.91	22.30
MW-17		1/16/2002	NR	----
MW-17		4/8/2002	NR	----
MW-17		7/3/2002	NR	----
MW-17		10/7/2002	NR	----
MW-17		1/16/2003	NR	----
MW-17		4/21/2003	13.91	12.44
MW-17		10/6/2003	17.40	7.76
MW-17		4/2/2004	16.95	9.40
Decommissioned 1/05				
MW-21	NET	7/2/2001	17.19	25.33
MW-21		10/1/2001	17.23	24.96
MW-21		1/16/2002	16.51	25.68
MW-21		4/8/2002	16.39	25.80
MW-21		7/3/2002	16.72	25.47
MW-21		10/7/2002	17.19	25.00
MW-21		1/16/2003	17.10	25.09
MW-21		4/21/2003	16.93	25.26
MW-21		10/6/2003	17.78	24.41
MW-21		4/2/2004	17.52	24.67
MW-21		7/13/2005	17.79	24.40
MW-21		2/7/2006	17.00	25.19
Abandoned, 2006				
MW-21R	NET	1/13/2009	13.78	25.58
MW-21R		7/8/2009	14.26	25.10
MW-21R		1/26/2010	13.94	25.42
MW-21R		7/28/2010	13.06	26.30
MW-21R		1/21/2011	13.08	26.28
MW-21R		7/15/2011	12.66	26.70
MW-21R		1/23/2012	13.05	26.31
MW-21R		7/19/2012	12.55	26.81
MW-21R		1/23/2013	11.78	27.58
MW-21R		7/18/2013	12.19	27.17
MW-21R		2/1/2014	12.32	27.04
MW-21R		7/25/2014	12.36	27.00
MW-21R		2/10/2015	11.95	27.41
MW-21R		7/30/2015	12.61	26.75
MW-21R		1/19/2016	12.78	26.58
MW-21R		7/18/2016	12.72	26.64
MW-21R		1/26/2017	12.41	26.95
MW-21R		7/20/2017	12.92	26.44
MW-21R		2/9/2018	11.42	27.94
MW-21R		7/31/2018	11.91	27.45
MW-21R	1/15/2019	11.86	27.50	
MW-21R	7/10/2019	12.45	26.91	
MW-21R	2/3/2020	12.45	26.91	
MW-21R	7/21/2020	12.55	26.81	

**Table 2  
Ground Water Elevations  
Everett Landfill**

Well	Type	Date	Water Depth	Water Elevation
MW-22	S, NET	7/2/2001	10.98	16.79
MW-22		10/1/2001	10.93	16.84
MW-22		1/16/2002	11.04	16.73
MW-22		4/8/2002	10.94	16.83
MW-22		7/3/2002	11.01	16.76
MW-22		10/7/2002	11.05	16.72
MW-22		1/16/2003	10.99	16.78
MW-22		4/21/2003	10.94	16.83
MW-22		10/6/2003	11.01	16.76
MW-22		4/2/2004	10.95	16.82
MW-22		7/13/2005	10.99	16.78
MW-22		2/7/2006	10.87	16.90
MW-22		7/10/2006	10.84	16.93
MW-22		1/8/2007	10.79	16.98
MW-22		7/16/2007	8.43	19.34
MW-22		1/23/2008	10.68	17.09
MW-22		6/17/2008	10.78	16.99
MW-22		1/13/2009	10.63	17.14
MW-22		7/8/2009	NR	----
MW-22		1/26/2010	NR	----
MW-22		7/28/2010	NR	----
MW-22		1/21/2011	NR	----
MW-22		7/15/2011	10.50	17.27
MW-22		1/23/2012	13.13	14.64
MW-22		7/19/2012	NR	----
MW-22		1/23/2013	15.56	12.21
MW-22		7/18/2013	15.78	11.99
MW-22		2/1/2014	15.81	11.96
MW-22	7/28/2014	21.65	6.12	
MW-22	2/10/2015	15.43	12.34	
MW-23	S, INT	7/2/2001	19.44	12.05
MW-23		10/1/2001	19.70	11.79
MW-23		1/16/2002	18.71	12.78
MW-23		4/8/2002	18.69	12.80
MW-23		7/3/2002	19.58	11.91
MW-23		10/7/2002	19.74	11.75
MW-23		1/16/2003	18.90	12.59
MW-23		4/21/2003	18.42	13.07
MW-23		10/6/2003	19.72	11.77
MW-23		4/2/2004	18.93	12.56
Decommissioned 1/05				
MW-24	S, NET	7/2/2001	8.14	9.76
MW-24		10/1/2001	9.52	8.38
MW-24		1/16/2002	6.66	11.24
MW-24		4/8/2002	7.33	10.57
MW-24		7/3/2002	8.68	9.22
MW-24		10/7/2002	16.73	1.17
MW-24		1/16/2003	7.29	10.61
MW-24		4/21/2003	6.95	10.95
MW-24		10/6/2003	11.14	6.76
MW-24		4/2/2004	7.61	10.29
MW-24		7/13/2005	8.68	9.22
MW-24		2/7/2006	6.97	10.93
MW-24		7/10/2006	8.26	9.64
MW-24		1/8/2007	7.71	10.19
MW-24		7/16/2007	6.66	11.24
MW-24		1/23/2008	7.36	10.54
MW-24		6/17/2008	7.57	10.33
MW-24		1/13/2009	7.04	10.86
MW-24		7/8/2009	8.65	9.25
MW-24		1/26/2010	6.90	11.00
MW-24		7/28/2010	8.26	9.64
MW-24		1/21/2011	5.90	12.00
MW-24		7/15/2011	7.82	10.08
MW-24		1/24/2012	7.50	10.40
MW-24		7/19/2012	7.66	10.24
MW-24		1/23/2013	7.35	10.55
MW-24		7/18/2013	4.12	New TOC
MW-24		1/31/2014	2.58	New TOC
MW-24	7/28/2014	3.15	New TOC	
MW-24	2/9/2015	2.55	New TOC	
MW-24	7/22/2020	4.21	New TOC	

**Table 2  
Ground Water Elevations  
Everett Landfill**

Well	Type	Date	Water Depth	Water Elevation	
MW-25	S, NET	7/2/2001	8.46	7.92	
MW-25		10/1/2001	8.65	7.73	
MW-25		1/16/2002	6.76	9.62	
MW-25		4/8/2002	7.57	8.81	
MW-25		7/3/2002	8.22	8.16	
MW-25		10/7/2002	9.05	7.33	
MW-25		1/16/2003	6.98	9.40	
MW-25		4/21/2003	7.00	9.38	
MW-25		10/6/2003	9.17	7.21	
MW-25		4/2/2004	7.94	8.44	
MW-25		7/13/2005	8.19	8.19	
MW-25		2/7/2006	6.78	9.60	
MW-25		7/10/2006	8.13	8.25	
MW-25		1/8/2007	5.78	10.60	
MW-25		7/16/2007	7.02	9.36	
MW-25		1/23/2008	6.30	10.08	
MW-25		6/17/2008	6.66	9.72	
MW-25		1/13/2009	6.27	10.11	
MW-25		7/8/2009	8.06	8.32	
MW-25		1/26/2010	5.86	10.52	
MW-25		7/28/2010	7.99	8.39	
MW-25		1/21/2011	4.90	11.48	
MW-25		7/15/2011	7.54	8.84	
MW-25		1/24/2012	5.33	11.05	
MW-25		7/19/2012	6.90	9.48	
MW-25		1/23/2013	6.20	10.18	
MW-25		7/18/2013	3.70	NEW TOC	
MW-25		1/31/2014	1.32	NEW TOC	
MW-25	7/28/2014	3.54	NEW TOC		
MW-25	2/9/2015	2.02	NEW TOC		
MW-25	7/22/2020	4.12	NEW TOC		
MW-26	S, NET	7/2/2001	10.31	6.13	
MW-26		10/1/2001	10.20	6.24	
MW-26		1/16/2002	6.11	10.33	
MW-26		4/8/2002	6.35	10.09	
MW-26		7/3/2002	10.29	6.15	
MW-26		10/7/2002	10.43	6.01	
MW-26		1/16/2003	6.55	9.89	
MW-26		4/21/2003	6.42	10.02	
MW-26		10/6/2003	10.47	5.97	
MW-26		4/2/2004	9.81	6.63	
MW-26		7/13/2005	10.07	6.37	
MW-26		2/7/2006	9.27	7.17	
MW-26		7/10/2006	11.02	5.42	
MW-26		1/8/2007	7.94	8.50	
MW-26		7/16/2007	9.16	7.28	
MW-26		1/23/2008	9.60	6.84	
MW-26		6/17/2008	9.85	6.59	
MW-26		1/13/2009	8.43	8.01	
MW-26		7/8/2009	9.64	6.80	
MW-26		1/26/2010	8.85	7.59	
MW-26		7/28/2010	9.05	7.39	
MW-26		1/21/2011	4.10	12.34	
MW-26		7/15/2011	8.08	8.36	
MW-26		1/23/2012	5.52	10.92	
MW-26		1/23/2013	4.90	11.54	
MW-26		7/18/2013	4.17	NEW TOC	
MW-27		S, NET	7/2/2001	8.30	8.11
MW-27			10/1/2001	7.77	8.64
MW-27	1/17/2002		9.20	7.21	
MW-27	4/8/2002		6.62	9.79	
MW-27	7/3/2002		6.81	9.60	
MW-27	10/7/2002		6.00	10.41	
MW-27	1/16/2003		6.46	9.95	
MW-27	4/21/2003		6.75	9.66	
MW-27	10/6/2003		7.87	8.54	
MW-27	4/2/2004		5.49	10.92	
MW-27	7/13/2005		5.94	10.47	
MW-27	2/7/2006		6.90	9.51	
MW-27	7/10/2006		6.96	9.45	
MW-27	1/8/2007		6.09	10.32	
MW-27	7/16/2007		6.02	10.39	
MW-27	1/23/2008		6.84	9.57	
MW-27	6/17/2008		7.03	9.38	
MW-27		Decommissioned 11/08			

**Table 2  
Ground Water Elevations  
Everett Landfill**

Well	Type	Date	Water Depth	Water Elevation
MW-28	NET	7/2/2001	9.98	6.65
MW-28		10/1/2001	10.35	6.28
MW-28		1/17/2002	8.67	7.96
MW-28		4/8/2002	9.01	7.62
MW-28		7/3/2002	10.52	6.11
MW-28		10/7/2002	11.72	4.91
MW-28		1/16/2003	6.46	10.17
MW-28		4/21/2003	9.45	7.18
MW-28		10/6/2003	9.62	7.01
MW-28		4/2/2004	10.15	6.48
MW-28		7/13/2005	10.25	6.38
MW-28		2/7/2006	7.61	9.02
MW-28		7/10/2006	12.71	3.92
MW-28		1/8/2007	6.78	9.85
MW-28		7/16/2007	10.51	6.12
MW-28		1/23/2008	9.12	7.51
MW-28		6/17/2008	10.00	6.63
		Decommissioned 11/08		
MW-29	NET	7/2/2001	8.44	7.52
MW-29		10/1/2001	8.75	7.21
MW-29		1/16/2002	7.36	8.6
MW-29		4/8/2002	7.75	8.21
MW-29		7/3/2002	9.06	6.90
MW-29		10/7/2002	10.21	5.75
MW-29		1/16/2003	5.92	10.04
MW-29		4/21/2003	7.05	8.91
MW-29		10/6/2003	7.60	8.36
MW-29		4/2/2004	8.60	7.36
MW-29		7/13/2005	8.56	7.40
MW-29		2/7/2006	5.94	10.02
MW-29		7/10/2006	11.27	4.69
MW-29		1/8/2007	5.08	10.88
MW-29		7/16/2007	8.54	7.42
MW-29		1/23/2008	7.41	8.55
MW-29		6/17/2008	8.50	7.46
MW-29		1/13/2009	6.03	9.93
MW-29		7/8/2009	9.64	6.32
MW-29		1/26/2010	5.12	10.84
MW-29	7/28/2010	10.05	5.91	
MW-29	1/21/2011	3.84	12.12	
MW-29	7/15/2011	5.63	10.33	
MW-29	1/23/2012	NR	----	
		Well damaged		
MW-29R		7/28/2015	7.64	No TOC Survey
MW-29R		1/19/2016	11.50	No TOC Survey
MW-29R		7/14/2016	4.92	No TOC Survey
MW-29R		1/26/2017	3.18	No TOC Survey
MW-29R		7/20/2017	5.65	No TOC Survey
MW-29R		2/8/2018	1.92	No TOC Survey
MW-29R		8/1/2018	3.90	No TOC Survey
MW-29R		1/29/2019	3.61	No TOC Survey
MW-29R		7/10/2019	5.87	No TOC Survey
MW-29R		2/3/2020	3.06	No TOC Survey
MW-29R		7/22/2020	3.15	No TOC Survey
MW-30	NET	7/2/2001	7.95	7.95
MW-30		10/1/2001	13.29	2.61
MW-30		1/16/2002	9.06	6.84
MW-30		4/8/2002	9.09	6.81
MW-30		7/3/2002	11.70	4.20
MW-30		10/7/2002	12.87	3.03
MW-30		1/16/2003	5.92	9.98
MW-30		4/21/2003	11.07	4.83
MW-30		10/6/2003	6.08	9.82
MW-30		4/2/2004	11.38	4.52
MW-30		7/13/2005	11.51	4.39
MW-30		2/7/2006	7.25	8.65
MW-30		7/10/2006	15.37	0.53
MW-30		1/8/2007	6.37	9.53
MW-30		7/16/2007	13.18	2.72
MW-30		1/23/2008	7.21	8.69
MW-30		6/17/2008	13.11	2.79
MW-30		1/13/2009	8.40	7.50
MW-30		7/8/2009	NR	----
MW-30		1/26/2010	8.37	7.53
MW-30		7/28/2010	10.17	5.73
MW-30		1/21/2011	6.12	9.78
MW-30		7/15/2011	11.28	4.62
MW-30		1/24/2012	8.00	7.90
MW-30		7/19/2012	13.90	2.00
MW-30		1/23/2013	8.85	7.05
MW-30		7/18/2013	6.65	NEW TOC
MW-30		1/31/2014	5.22	NEW TOC
MW-30		7/28/2014	11.87	NEW TOC
MW-30		2/9/2015	4.66	NEW TOC

**Table 2  
Ground Water Elevations  
Everett Landfill**

Well	Type	Date	Water Depth	Water Elevation
MW-30		7/28/2015	13.31	NEW TOC
MW-30		1/19/2016	3.41	NEW TOC
MW-30		7/14/2016	6.79	NEW TOC
MW-30		1/26/2017	6.97	NEW TOC
MW-30		7/20/2017	7.24	NEW TOC
MW-30		2/8/2018	3.63	NEW TOC
MW-30		8/1/2018	5.37	NEW TOC
MW-30		2/8/2018	3.63	NEW TOC
MW-30		8/1/2018	5.37	NEW TOC
MW-30		1/15/2019	2.81	NEW TOC
MW-30		7/10/2019	8.33	NEW TOC
MW-30		2/3/2020	1.50	NEW TOC
MW-30		7/22/2020	8.90	NEW TOC
MW-31	NET	7/2/2001	11.45	6.96
MW-31		10/1/2001	15.77	2.64
MW-31		1/16/2002	12.32	6.09
MW-31		4/8/2002	12.36	6.05
MW-31		7/3/2002	15.00	3.41
MW-31		10/7/2002	16.61	1.80
MW-31		1/16/2003	8.61	9.80
MW-31		4/21/2003	13.16	5.25
MW-31		10/6/2003	9.08	9.33
MW-31		4/2/2004	14.63	3.78
MW-31		7/13/2005	14.20	4.21
MW-31		2/7/2006	10.20	8.21
MW-31		7/10/2006	18.57	-0.16
MW-31		1/8/2007	9.06	9.35
MW-31		7/16/2007	18.76	-0.35
MW-31		1/23/2008	12.58	5.83
MW-31		6/17/2008	16.24	2.17
MW-31		1/13/2009	11.34	7.07
MW-31		7/8/2009	18.93	-0.52
MW-31		1/26/2010	10.97	7.44
MW-31		7/28/2010	13.10	5.31
MW-31		1/21/2011	9.69	8.72
MW-31		7/15/2011	14.31	4.10
MW-31		1/24/2012	11.95	6.46
MW-31		7/19/2012	17.55	0.86
MW-31		1/23/2013	12.05	6.36
MW-31		7/18/2013	14.72	NEW TOC
MW-31		1/31/2014	9.35	NEW TOC
MW-31		7/28/2014	11.86	NEW TOC
MW-31		2/9/2015	7.38	NEW TOC
MW-31		7/28/2015	14.47	NEW TOC
MW-31		1/19/2016	5.29	NEW TOC
MW-31		7/14/2016	10.30	NEW TOC
MW-31		1/26/2017	8.31	NEW TOC
MW-31		7/20/2017	11.80	NEW TOC
MW-31		2/8/2018	5.80	NEW TOC
MW-31		8/1/2018	7.60	NEW TOC
MW-31		1/15/2019	3.96	NEW TOC
MW-31		7/10/2019	11.13	NEW TOC
MW-31		2/3/2020	2.94	NEW TOC
MW-31		7/22/2020	12.35	NEW TOC
MW-32	INT	7/2/2001	4.62	17.55
MW-32		10/1/2001	5.55	16.62
MW-32		1/17/2002	2.69	19.48
MW-32		4/8/2002	2.80	19.37
MW-32		7/3/2002	4.54	17.63
MW-32		10/7/2002	4.85	17.32
MW-32		1/16/2003	3.72	18.45
MW-32		4/21/2003	2.54	19.63
MW-32		10/6/2003	4.52	17.65
MW-32		4/2/2004	5.10	17.07
		Decommissioned 1/05		

**Table 2  
Ground Water Elevations  
Everett Landfill**

Well	Type	Date	Water Depth	Water Elevation
MW-33	BG	7/2/2001	48.54	25.76
MW-33		10/1/2001	NR	NR
MW-33		1/16/2002	48.34	25.96
MW-33		4/8/2002	48.16	26.14
MW-33		7/3/2002	48.43	25.87
MW-33		10/7/2002	NR	----
MW-33		1/17/2003	49.06	25.24
MW-33		4/21/2003	48.67	25.63
MW-33		10/6/2003	47.20	27.10
MW-33		4/2/2004	49.25	25.05
MW-33		7/13/2005	NR	----
MW-33		2/7/2006	NR	----
MW-33		7/10/2006	NR	----
MW-33		1/8/2007	NR	----
MW-33		7/16/2007	NR	----
MW-33		1/23/2008	47.97	26.33
MW-33		6/17/2008	NR	----
MW-33		1/13/2009	48.15	26.15
MW-33		7/8/2009	NR	----
MW-33		1/26/2010	48.37	25.93
MW-33		7/28/2010	48.02	26.28
MW-33		1/21/2011	NR	----
MW-33		7/15/2011	46.92	27.38
MW-33		1/23/2012	47.56	26.74
MW-33		7/19/2012	46.84	27.46
MW-33		1/23/2013	46.05	28.25
MW-33	7/18/2013	46.50	27.80	
MW-33	2/1/2014	NR	----	
MW-33	7/25/2014	46.60	27.70	
MW-33	2/10/2015	46.33	27.97	
MW-34	S, BG	7/2/2001	17.18	57.19
MW-34		10/1/2001	17.59	56.78
MW-34		1/16/2002	16.78	57.59
MW-34		4/8/2002	16.46	57.91
MW-34		7/3/2002	16.74	57.63
MW-34		10/7/2002	17.17	57.20
MW-34		1/16/2003	17.04	57.33
MW-34		4/21/2003	16.92	57.45
MW-34		10/6/2003	17.76	56.61
MW-34		4/2/2004	16.97	57.40
MW-34		7/13/2005	17.31	57.06
MW-34		2/7/2006	17.04	57.33
MW-34		7/10/2006	17.28	57.09
MW-34		1/8/2007	16.84	57.53
MW-34		7/16/2007	16.63	57.74
MW-34		1/23/2008	16.42	57.95
MW-34		6/17/2008	NR	----
MW-34		1/13/2009	16.50	57.87
MW-34		7/8/2009	NR	----
MW-34		1/26/2010	16.82	57.48
MW-34		7/28/2010	16.71	57.59
MW-34		1/21/2011	NR	----
MW-34		7/15/2011	16.15	58.15
MW-34		1/23/2012	16.61	57.69
MW-34		7/19/2012	16.24	58.06
MW-34		1/23/2013	15.85	58.45
MW-34	7/18/2013	16.15	58.15	
MW-34	2/1/2014	16.45	57.85	
MW-34	7/25/2014	16.60	57.70	
MW-34	2/10/2015	16.17	58.13	
MW-35	BG	7/2/2001	48.43	24.82
MW-35		10/1/2001	48.89	24.36
MW-35		1/16/2002	48.32	24.93
MW-35		4/8/2002	48.11	25.14
MW-35		7/3/2002	48.46	24.79
MW-35		10/7/2002	48.85	24.40
MW-35		1/16/2003	48.89	24.36
MW-35		4/21/2003	48.77	24.48
MW-35		10/6/2003	49.38	23.87
MW-35		4/2/2004	49.24	24.01
MW-35		7/13/2005	49.53	23.72
MW-35		2/7/2006	49.06	24.19
MW-35		7/10/2006	49.02	24.23
MW-35		Abandoned, 2006		

**Table 2  
Ground Water Elevations  
Everett Landfill**

Well	Type	Date	Water Depth	Water Elevation
MW-36	POC	7/2/2001	9.79	1.13
MW-36		10/1/2001	9.98	0.94
MW-36		1/16/2002	5.10	5.82
MW-36		4/8/2002	4.92	6.00
MW-36		7/3/2002	6.95	3.97
MW-36		10/7/2002	9.11	1.81
MW-36		1/16/2003	1.78	9.14
MW-36		4/21/2003	8.10	2.82
MW-36		10/6/2003	9.97	0.95
MW-36		4/2/2004	7.46	3.46
MW-36		7/13/2005	5.89	5.03
MW-36		2/7/2006	2.68	8.24
MW-36		7/10/2006	12.40	-1.48
MW-36		1/8/2007	1.07	9.85
MW-36		7/16/2007	6.82	4.10
MW-36		1/23/2008	3.53	7.39
MW-36		6/17/2008	7.98	2.94
MW-36		1/13/2009	3.34	7.58
MW-36		7/8/2009	11.44	-0.52
MW-36		1/26/2010	3.14	7.78
MW-36		7/28/2010	5.65	5.27
MW-36		1/21/2011	3.75	7.17
MW-36		7/15/2011	7.86	3.06
MW-36		1/23/2012	4.26	6.66
MW-36		7/19/2012	7.33	3.59
MW-36		1/23/2013	4.62	6.30
MW-36		7/18/2013	3.45	7.47
MW-36		1/31/2014	4.03	6.89
MW-36		7/28/2014	8.00	2.92
MW-36		2/10/2015	0.70	10.22
MW-36		7/29/2015	5.83	5.09
MW-36		1/22/2016	3.01	7.91
MW-36	7/14/2016	10.39	0.53	
MW-36	2/1/2017	4.71	6.21	
MW-36	7/20/2017	10.05	0.87	
MW-36	2/9/2018	3.40	7.52	
MW-36	8/1/2018	9.04	1.88	
MW-36	1/29/2019	1.70	9.22	
MW-36	7/10/2019	9.11	1.81	
MW-36	2/4/2020	1.94	8.98	
MW-36	7/23/2020	10.01	0.91	
MW-37	POC	7/2/2001	12.41	1.87
MW-37		10/1/2001	13.77	0.51
MW-37		1/16/2002	8.30	5.98
MW-37		4/8/2002	7.99	6.29
MW-37		7/3/2002	10.12	4.16
MW-37		10/7/2002	12.55	1.73
MW-37		1/16/2003	5.27	9.01
MW-37		4/21/2003	12.10	2.18
MW-37		10/6/2003	12.89	1.39
MW-37		4/2/2004	10.82	3.46
MW-37		7/13/2005	9.02	5.26
MW-37		2/7/2006	5.79	8.49
MW-37		7/10/2006	16.15	-1.87
MW-37		1/8/2007	4.50	9.78
MW-37		7/16/2007	10.32	3.96
MW-37		1/23/2008	5.90	8.38
MW-37		6/17/2008	12.38	1.90
MW-37		1/13/2009	5.55	8.73
MW-37		7/8/2009	15.27	-0.99
MW-37		1/26/2010	6.77	7.51
MW-37		7/28/2010	8.82	5.46
MW-37		1/21/2011	7.13	7.15
MW-37		7/15/2011	11.94	2.34
MW-37		1/23/2012	NR	---
MW-37		7/29/2015	2.56	11.72
MW-37		1/22/2016	6.08	8.20
MW-37		7/14/2016	14.05	0.23
MW-37		2/1/2017	10.38	3.90
MW-37		7/20/2017	13.13	1.15
MW-37		2/8/2018	7.25	7.03
MW-37		8/2/2018	11.55	2.73
MW-37		1/29/2019	4.50	9.78
MW-37	7/10/2019	11.52	2.76	
MW-37	2/4/2020	5.72	8.56	
MW-37	7/23/2020	10.44	3.84	

**Table 2  
Ground Water Elevations  
Everett Landfill**

Well	Type	Date	Water Depth	Water Elevation
MW-38	POC	7/2/2001	10.16	3.46
MW-38		10/1/2001	12.49	1.13
MW-38		1/16/2002	7.91	5.71
MW-38		4/8/2002	7.18	6.44
MW-38		7/3/2002	9.71	3.91
MW-38		10/7/2002	9.34	4.28
MW-38		1/16/2003	5.00	8.62
MW-38		4/21/2003	11.25	2.37
MW-38		10/6/2003	5.55	8.07
MW-38		4/2/2004	10.19	3.43
MW-38		7/13/2005	8.47	5.15
MW-38		2/7/2006	5.59	8.03
MW-38		7/10/2006	15.25	-1.63
MW-38		1/8/2007	4.17	9.45
MW-38		7/16/2007	9.12	4.50
MW-38		1/23/2008	6.75	6.87
MW-38		6/17/2008	12.82	0.80
MW-38		1/13/2009	8.06	5.56
MW-38		7/8/2009	14.34	-0.72
MW-38		1/26/2010	6.27	7.35
MW-38		7/28/2010	8.43	5.19
MW-38		1/21/2011	6.53	7.09
MW-38		7/15/2011	10.85	2.77
MW-38		1/24/2012	5.53	8.09
MW-38		7/19/2012	10.58	3.04
MW-38		1/23/2013	6.85	6.77
MW-38		7/18/2013	13.00	0.62
MW-38		1/31/2014	9.33	4.29
MW-38		7/28/2014	13.86	-0.24
MW-38		2/9/2015	2.82	10.80
MW-38		7/28/2015	13.26	0.36
MW-38		1/22/2016	5.78	7.84
MW-38		7/14/2016	12.23	1.39
MW-38		2/1/2017	11.13	2.49
MW-38		7/20/2017	13.02	0.60
MW-38		2/9/2018	5.99	7.63
MW-38		7/20/2017	13.02	0.60
MW-38		2/9/2018	5.99	7.63
MW-38		8/2/2018	12.06	1.56
MW-38		1/29/2019	5.30	8.32
MW-38		7/10/2019	8.33	5.29
MW-38		2/5/2020	5.33	8.29
MW-38		7/23/2020	12.75	0.87
MW-39	POC	7/2/2001	6.91	6.99
MW-39		10/1/2001	9.02	4.88
MW-39		1/16/2002	6.69	7.21
MW-39		4/8/2002	7.48	6.42
MW-39		7/3/2002	8.72	5.18
MW-39		10/7/2002	9.90	4.00
MW-39		1/16/2003	6.31	7.59
MW-39		4/21/2003	7.85	6.05
MW-39		10/6/2003	10.44	3.46
MW-39		4/2/2004	8.34	5.56
MW-39		7/13/2005	8.46	5.44
MW-39		2/7/2006	5.91	7.99
MW-39		7/10/2006	9.67	4.23
MW-39		1/8/2007	5.02	8.88
MW-39		7/16/2007	7.49	6.41
MW-39		1/23/2008	7.47	6.43
MW-39		6/17/2008	8.63	5.27
MW-39		1/13/2009	6.08	7.82
MW-39		7/8/2009	10.35	3.55
MW-39		1/26/2010	5.13	8.77
MW-39		7/28/2010	8.05	5.85
MW-39		1/21/2011	5.00	8.90
MW-39		7/15/2011	7.43	6.47
MW-39		1/24/2012	5.23	8.67
MW-39		7/19/2012	10.28	3.62
MW-39		1/23/2013	6.85	7.05
MW-39	7/18/2013	NR	--	
MW-39	1/31/2014	NR	--	
MW-39	7/25/2014	NR	--	
MW-39R		7/28/2015	12.68	No TOC Survey
MW-39R		1/19/2016	9.23	No TOC Survey
MW-39R		7/15/2016	11.79	No TOC Survey
MW-39R		2/1/2017	8.44	No TOC Survey
MW-39R		7/20/2017	12.41	No TOC Survey
MW-39R		2/8/2018	7.68	No TOC Survey
MW-39R		7/31/2018	10.60	No TOC Survey
MW-39R		1/29/2019	5.90	No TOC Survey
MW-39R		7/10/2019	10.28	No TOC Survey
MW-39R		2/3/2020	3.84	No TOC Survey
MW-39R		7/22/2020	7.53	No TOC Survey

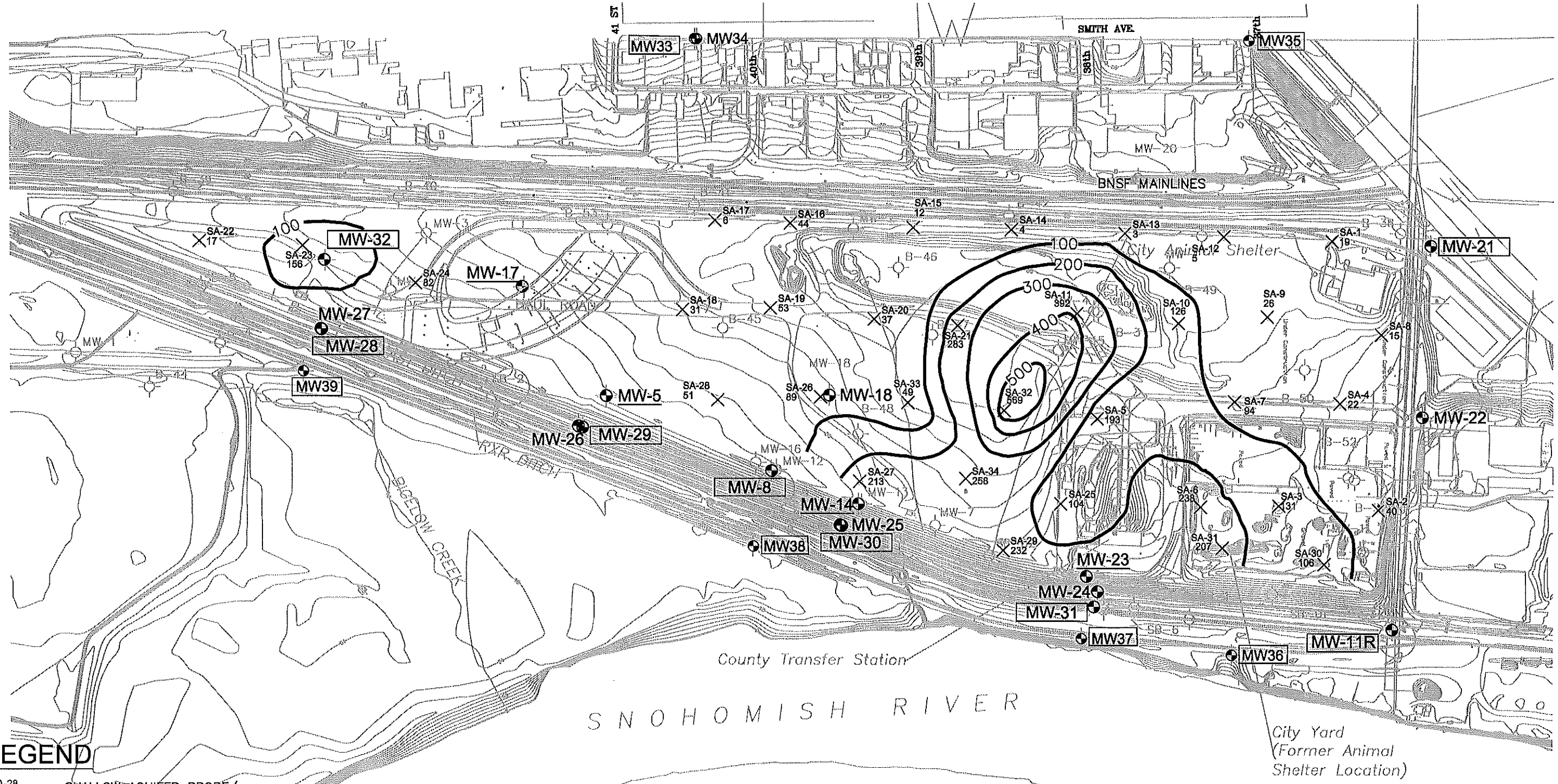
**Table 2  
Ground Water Elevations  
Everett Landfill**

Well	Type	Date	Water Depth	Water Elevation
MW-40	BGM	7/19/2005	14.86	-0.65
MW-40		2/7/2006	7.75	6.46
MW-40		7/10/2006	9.84	4.37
MW-40		1/8/2007	6.38	7.83
MW-40		7/16/2007	15.23	-1.02
MW-40		1/23/2008	8.01	6.20
Decommissioned 2/08				
MW-41	BGM	7/19/2005	16.40	-2.01
MW-41		2/7/2006	7.98	6.42
MW-41		7/10/2006	9.68	4.72
MW-41		1/8/2007	6.83	7.57
MW-41		7/16/2007	14.71	-0.32
MW-41		1/23/2008	14.71	-0.32
Decommissioned 2/08				
MW-42	BGM	7/19/2005	1.25	16.04
MW-42		2/7/2006	1.84	15.45
MW-42		7/10/2006	3.80	13.49
MW-42		1/8/2007	1.52	15.77
MW-42		7/16/2007	3.24	14.49
MW-42		1/23/2008	1.40	15.89
Decommissioned 2/08				


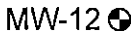
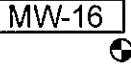
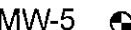
NOTES:

- NR = no reading, well decommissioned, damaged, or not located
- S = shallow well (all others are in deep aquifer)
- INT = Interior, well located in interior of site
- BG = Upgradient background well
- BGM = background metals well
- POC = deep aquifer point of compliance monitoring well

**Attachment 5**  
**Excerpts from December 2006**  
**HWA MW-37 Chloride Investigation Everett Landfill**

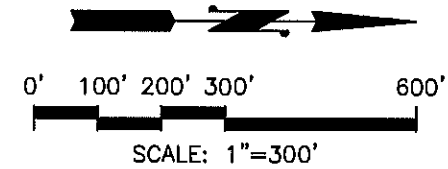


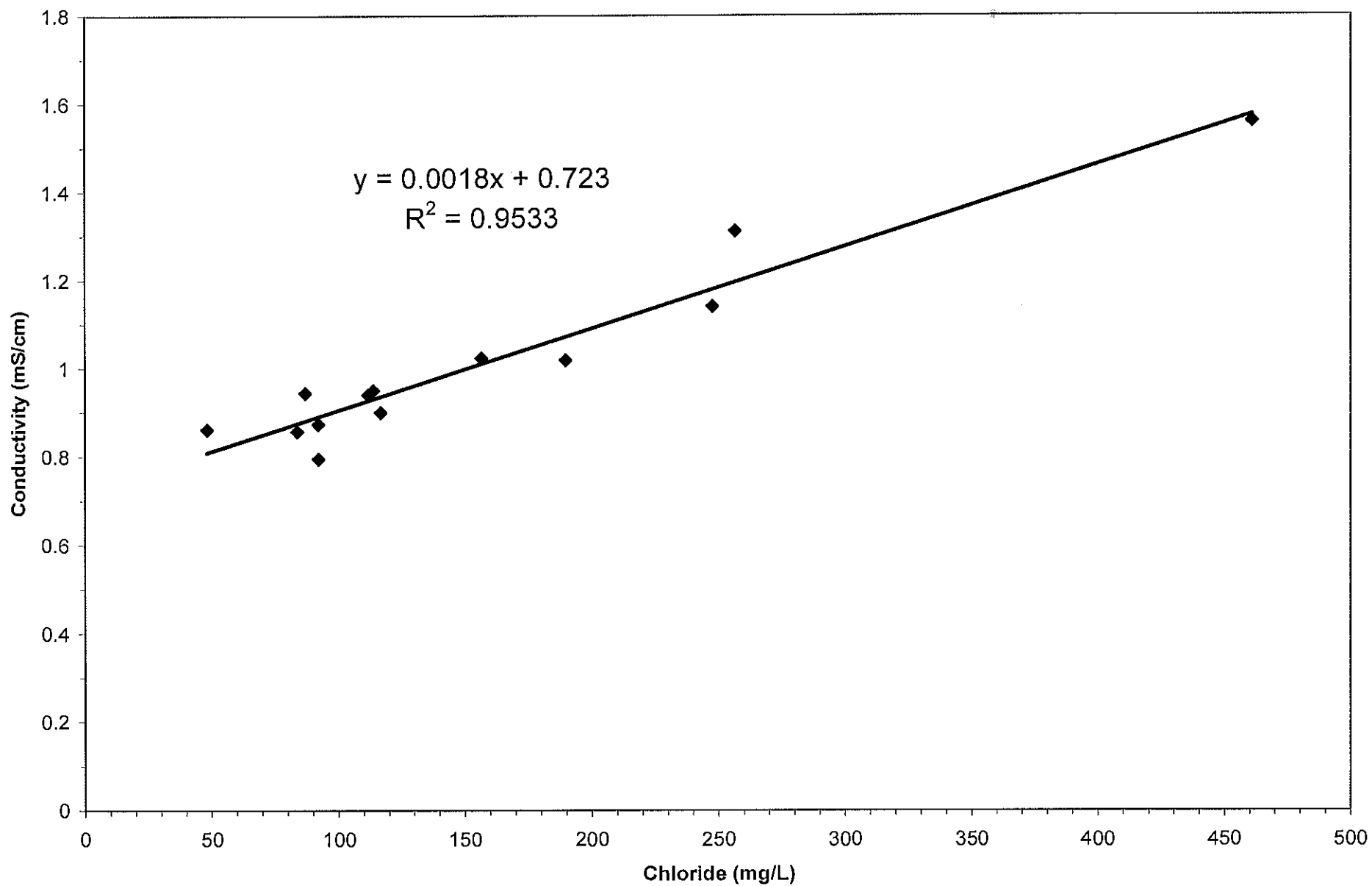
**LEGEND**

- 
 SHALLOW AQUIFER PROBE/  
TEMPORARY WELL
  
- 
 SHALLOW  
MONITORING WELLS FOR GROUND  
WATER QUALITY SAMPLING
  
- 
 DEEP  
MONITORING WELLS FOR GROUND  
WATER QUALITY SAMPLING
  
- 
 MONITORING WELLS FOR ABANDONMENT  
AFTER EVALUATION MONITORING

**INORGANICS KEY**

- |          |                    |
|----------|--------------------|
| Ni (48)  | NICKEL (48µg/L)    |
| Cl (392) | CHLORIDE (392µg/L) |
| Pb (18)  | LEAD (18µg/L)      |
| Zn (92)  | ZINC (92µg/L)      |





MW-37 CHLORIDE VS CONDUCTIVITY

EVERETT LANDFILL

EVERETT, WASHINGTON

FIGURE NO.

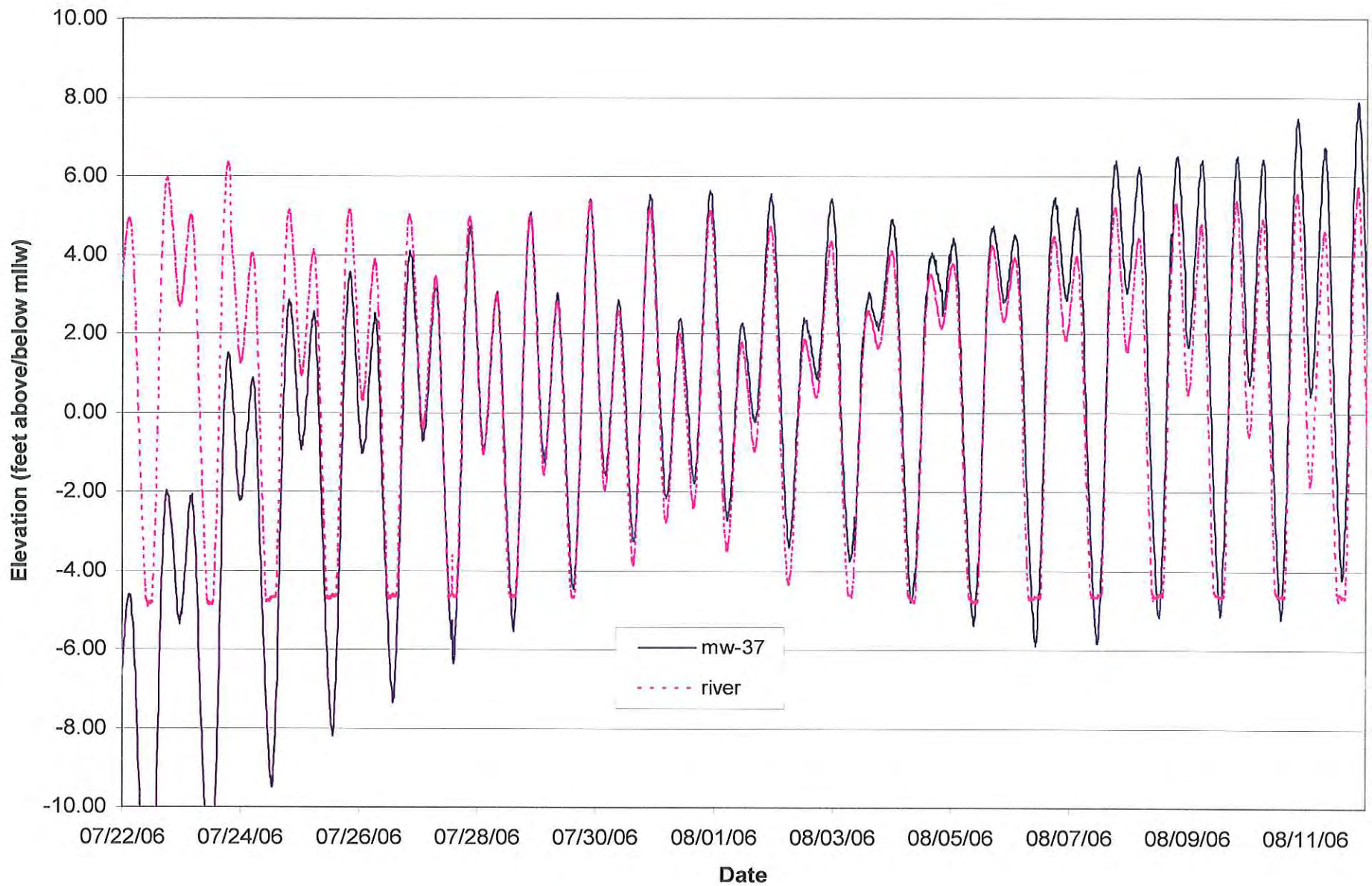
**6**

PROJECT NO.

98165



HWA GEOSCIENCES INC.



HWA GEOSCIENCES INC.

MW-37 GROUNDWATER VS RIVER ELEVATIONS

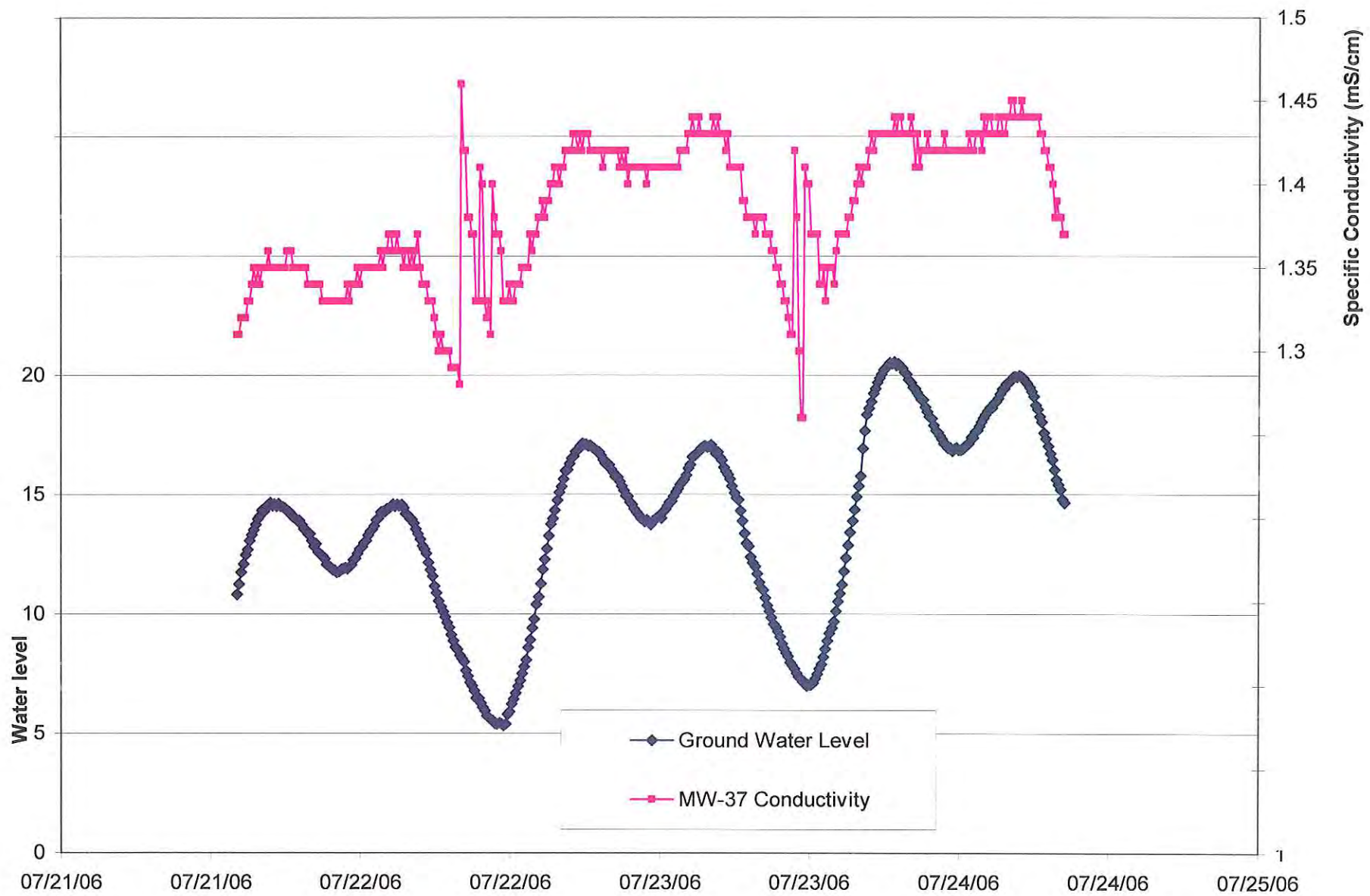
EVERETT LANDFILL  
EVERETT, WASHINGTON

FIGURE NO.

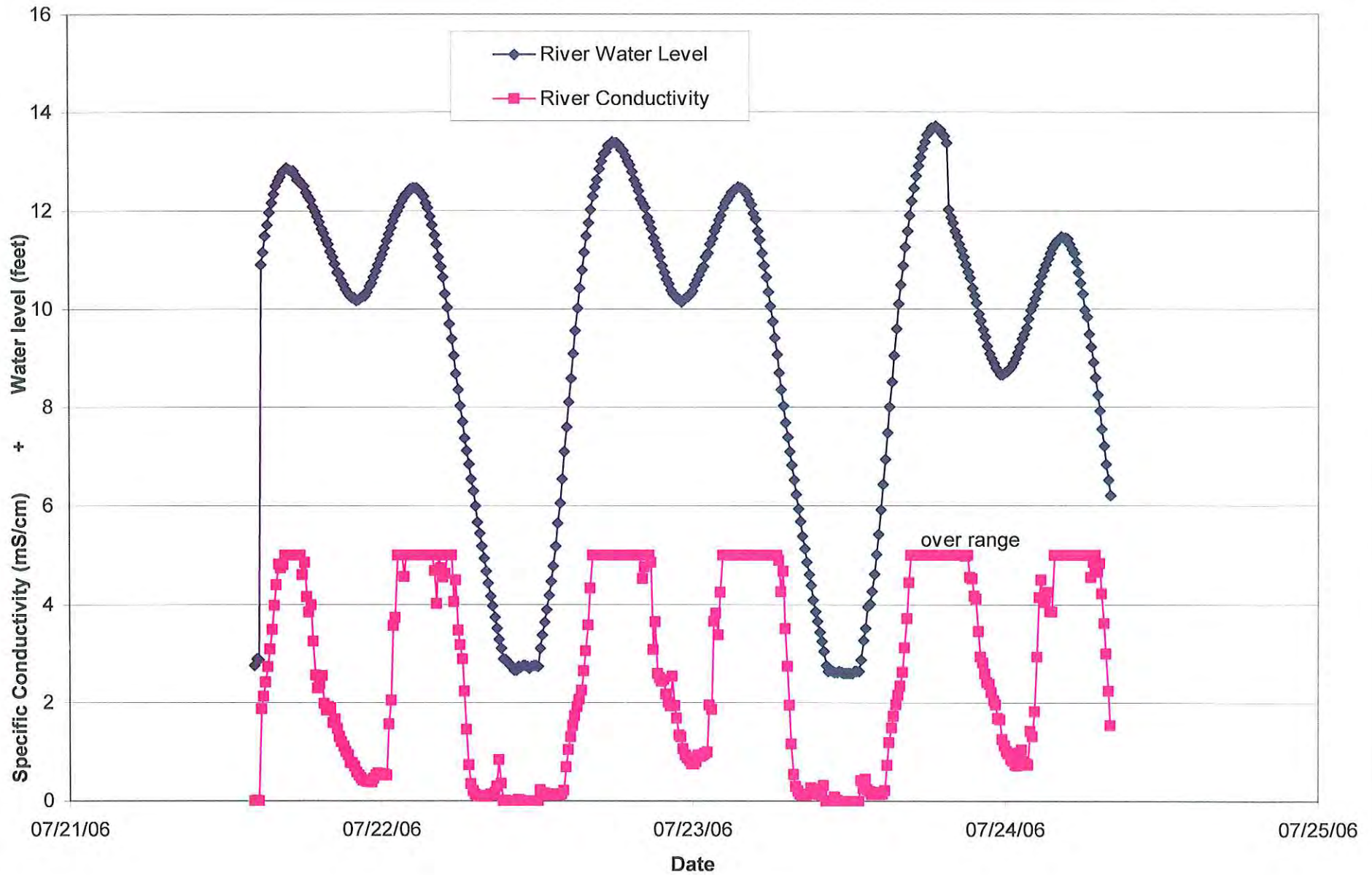
**7**

PROJECT NO.

98165



◆ Ground Water Level  
 ■ MW-37 Conductivity



HWA GEOSCIENCES INC.

RIVER WATER LEVEL VS CONDUCTIVITY

EVERETT LANDFILL  
EVERETT, WASHINGTON

FIGURE NO.

9

PROJECT NO.

98165