

Third Quarter 2024 Monitoring Report

LRI Landfill Graham, Washington

Pierce County Recycling, Composting
& Disposal, LLC dba LRI
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SCS ENGINEERS

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This document presents the Third Quarter 2024 Monitoring Report for the LRI Landfill located in Graham, Washington. Activities this quarter included monitoring the volume and specific conductance of water pumped from the leak detection/collection system, quarterly groundwater monitoring, monthly landfill gas monitoring, and weekly surface water monitoring. This document was prepared by Jovany Estrada and Travis Berndahl of SCS Engineers and reviewed by Greg Helland of SCS Engineers for submittal to Mr. Keith Johnston of the Tacoma-Pierce County Health Department (TPCHD).



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Attachments: Attachment A: Groundwater Flow Map
Attachment B: Groundwater Data Summary Tables
Attachment C: Field Sampling Documentation
Attachment D: Statistical Calculations
Attachment E: Trilinear Diagrams
Attachment F: Analytical Data Validation Report
Attachment G: Groundwater and LDCS Time Trend Plots
Attachment H: LDCS & Leachate Pumping Records and Conductivity Measurements
Attachment I: Surface Water Data
Attachment J: Landfill Gas Data

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GROUNDWATER MONITORING

Third quarter 2024 groundwater samples were collected from the LRI Landfill monitoring network on September 24-27, 2024. Nine monitoring wells (MW-1A, MW-2A, MW-3, MW-4, MW-5A, MW-6, MW-7, MW-9, and MW-10), eleven leak detection collection locations (LDCS-1, LDCS-2A, LDCS-2B, LDCS-3A, LDCS-4A, LDCS-4B, LDCS-5, LDCS-6, LDCS-7, LDCS-8, and LDCS-9A), and three leachate ports (Cell 7, Cell 8, and Cell 9) were sampled this quarter. Water level elevations were measured at each of the monitoring wells during this quarter. Field quality control samples consisted of one field blank and one duplicate sample collected at MW-7. Sampling procedures followed the LRI Landfill Groundwater Monitoring Plan (GWMP), dated March 10, 2014.

Groundwater samples were collected using low-flow purging and sampling techniques with dedicated pumps at all monitoring wells except MW-4, where a non-dedicated QED Sample Pro pump was deployed. Samples for laboratory analyses were submitted to Eurofins Scientific of Denver, Colorado for the parameters listed in Appendix I and II of WAC 173-351-990. Groundwater sampling locations are illustrated in Figure 1.

A groundwater surface elevation map for the third quarter monitoring event is included as Figure 1. The average groundwater gradients and flow directions calculated for the quarter remain similar to those previously reported at the facility, with a flow rate of approximately 45 feet per year towards the northwest for horizontal groundwater movement within the uppermost aquifer (assuming a horizontal hydraulic conductivity of 1×10^{-3} centimeters per second and an effective porosity of 30 percent).

Field measurements and analytical results for groundwater, the leak detection/collection system (LDCS), leachate, and quality control samples are summarized on the following tables presented in Attachment B: Groundwater Level Elevations, Field Parameters, Inorganic Parameters, Appendix I Metals, Appendix II Metals, Volatile Organic Compounds, Cation-Anion Balance, and Duplicate Sample Results.

Copies of the Field Sampling Data Sheets are included in Attachment C. Statistical calculations are provided in Attachment D. Trilinear (Piper) plots of groundwater and LDCS sample results are included in Attachment E. Data validation results are summarized in Attachment F.

Groundwater results were reviewed and validated (see attached Data Validation Report). Field measurements and analytical data were uploaded into the Washington State Department of Ecology (Ecology) Environmental Information Management (EIM) System. Laboratory reports were provided to the Tacoma-Pierce County Health Department (TPCHD) and the Washington Department of Ecology (Ecology) under separate cover.

A nonparametric inter-well prediction limit approach was used to evaluate the water quality results for the Appendix I parameters listed in WAC 173-351-990 (15 total metals and nitrate). Prediction limits were generated using background data for nitrate and eight rounds of quarterly sampling completed during 2014 and 2015 for fifteen (15) total metals. Using this procedure, the highest concentration of each parameter in the data set was selected as the prediction limit for that parameter. In addition, the prediction limit data set includes ongoing water quality results from background (upgradient) wells MW-9 and MW-10. Appendix I total metal and nitrate concentrations measured at the downgradient monitoring wells were less than or equal to prediction limit values at all of the monitoring wells this quarter.

Groundwater time-trend plots for inorganic parameters and metals are included in Attachment G. The following plots are provided for each monitoring well:

- Plot 1 — alkalinity, ammonia, nitrate, chloride, total dissolved solids (TDS), total organic carbon (TOC) and sulfate.
- Plot 2 — arsenic, calcium, iron, magnesium, manganese, sodium, potassium and zinc.

Time trend plots show that concentrations of metals and inorganic parameters remained generally consistent with previously observed values during the third quarter unless otherwise noted. The highest concentrations of chloride and nitrate in the uppermost aquifer continue to be observed in background well MW-10.

Reported detections of inorganic parameters and metals measured at downgradient monitoring wells during the third quarter were less than or equal to the groundwater quality criteria listed in WAC 173-200-040, with the exceptions shown in Exhibit 1.

Exhibit 1. Groundwater Results Greater Than WAC 173-200-040 Criteria

Parameter	Groundwater Quality Criteria	MW-1A	MW-2A	MW-3	MW-4	MW-5A	MW-6	MW-7
Arsenic, Total	0.00005	**	**	**	0.011	**	0.0071	0.0051
Iron, Dissolved	0.30	*	0.70	*	*	*	*	*
Manganese, Dissolved	0.05	*	0.31	0.22	0.16	0.17	0.21	0.21
Notes: Concentrations listed as mg/L = milligrams per liter. Dissolved Iron and Manganese concentrations are compared to WAC 173-200-040 GW Quality Criteria for informational purposes only as the Sampling Analysis Plan only requires dissolved analyses for these metals. ** = Not detected above the method reporting limit (MRL), but MRL exceeded WAC 173-200-040 GW Quality Criteria. * = Reported value was less than WAC 173-200-040 Groundwater Quality Criteria.								

The results summarized in Exhibit 1 are typical of previous results (see time-trend plots in Attachment G), are interpreted to be within natural background variation, and in the case of total arsenic, are less than or equal to the background level used to establish the prediction limit (prediction limits are not applicable for dissolved iron or manganese). The method reporting limit (MRL) for arsenic is 0.005 milligrams per liter (mg/L), which is greater than the WAC 173-200-040 criteria of 0.00005 mg/L. Therefore, arsenic results reported as non-detect are considered to be greater than the WAC 173-200-040 criterion.

Low-level detections of ammonia (ranging between 0.10 and 0.28 mg/L) were reported at downgradient wells MW-1A, MW-2A, MW-3, MW-4, MW-5A, MW-6, and MW-7. These ammonia detections appear to be consistent with historic well data.

The cation-anion balance evaluates the difference in the sum of cations and anions (in milliequivalents per liter [meq/L]) within a water sample to determine if it is electroneutral (balanced cation and anion charges). Consistent with WAC 173-350-430(5), a threshold of ten percent difference is used if the total cation-anion sum is less than 5.0 meq/L, and a threshold of five percent difference is used if the total cation-anion sum is greater than or equal to 5.0 meq/L. During the third quarter, the cation-anion balance evaluation in MW-2A, MW-5A and MW-10 exceeded the appropriate threshold (see Table 7 in Attachment B).

Graphical plots of the current monitoring well water quality results are presented on trilinear (piper) diagrams in Attachment E. These plots continue to demonstrate the inherent water quality differences between groundwater from the monitoring wells, shallow groundwater from the LDCS, and leachate (collected annually in December).

No VOCs were reported in samples collected from the monitoring wells during the third quarter 2024.

LEAK DETECTION/COLLECTION SYSTEM (LDCS) MONITORING

A leak detection/collection system (LDCS) is present directly beneath the composite liner of each landfill cell to provide for early leak detection and to collect leachate in the event a leachate leak develops in the composite liner or leachate force main. The system consists of a high permeability gravel blanket that is underlain and overlain by geosynthetic fabrics. The system also dewateres groundwater that is present within the glacial till. Leachate leaks are indicated by the presence acetone and 2-butanone (primary leachate indicator parameters) and increases in concentrations of ammonia and chloride (secondary leachate indicator parameters), as well as increases in specific conductance (conductivity), total dissolved solids, alkalinity, sodium, potassium, and total organic carbon.

LDCS Maintenance. No significant maintenance activities occurred this quarter.

LDCS Daily Monitoring. Daily monitoring of the LDCS sumps for volume of water pumped, liquid level, and specific conductance (conductivity) was performed by using a programmable logic controller (PLC) and through direct measurements by LRI site personnel. Rainfall data were recorded manually using an on-site rain gauge. The combined field and PLC data, as well as time series plots of the data, are included in Attachment H.

Conductivity data from the fully functioning LDCS sumps trended within typical historical ranges during the third quarter of 2024. However, conductivity probes for LDCS sumps 7, 8, and 9 malfunctioned, therefore, no data was collected during this quarter.

LDCS Quarterly Monitoring. Samples were collected using disposable bailers at LDCS-1, LDCS-2A, and LDCS-2B, and with dedicated QED Sleeper Pumps at LDCS-3A, LDCS-4A, LDCS-4B, LDCS-5, LDCS-6, and LDCS-7. The samples obtained from LDCS-8 and LDCS-9 were collected as a grab samples from a dewatering pump discharge spigot.

LDCS-1 water quality results included a low-level detection of 1,4-dichlorobenzene at 0.95 µg/L and acetone at 24 µg/L. Concentrations of secondary leachate indicator parameters ammonia and chloride were low (reported at 0.34 and 5.1 mg/L, respectively). Therefore, the 1,4-dichlorobenzene and acetone detection does not appear to be the result of leachate.

LDCS-2A water quality results included a low-level detection of 1,4-dichlorobenzene at 0.5 µg/L. Primary leachate indicator, acetone, was also detected at a concentration of 14 µg/L. However, concentrations of secondary leachate indicator parameters, ammonia (0.53 mg/L) and chloride (10 mg/L), remained low. Therefore, this 1,4-dichlorobenzene detection does not appear to be the result of leachate.

LDCS-2B water quality results include a low-level detection of carbon disulfide at 0.64 µg/L. Primary leachate indicator parameter, acetone, was also detected at 38 µg/L. Secondary leachate indicator parameters, ammonia and chloride, were detected at low-level concentrations of 4.5 mg/L and 34

mg/L, respectively. Therefore, these isolated acetone and carbon disulfide detections do not appear to be a result of leachate.

LDCS-7 and LDCS-8 water quality results both included low-level detections of benzene at 1.7 µg/L and 0.52 µg/L, respectively. However, primary leachate indicator parameters acetone and 2-butanone were not detected in either sample. Additionally, secondary leachate indicator parameters, ammonia and chloride, remained low or non-detect; the concentrations of ammonia and chloride were reported at 0.22 mg/L and 5.7 mg/l, respectively, for LDCS- 7. Chloride was detected at 20 mg/L for LDCS-8. Ammonia was not detected this quarter for LDCS-8. As a result, these sporadic benzene detections do not appear to be the result of leachate.

Water quality results for LDCS-3, LDCS-4A, LDCS-4B, LDCS-5, LDCS-6 and LDCS-9 did not show any significant detections.

LDCS time trend plots for inorganic parameters and dissolved metals are included in Attachment G. The following plots are provided for each leak detection sump:

- Plot 1 — alkalinity, ammonia, chloride, nitrate, sulfate, TDS and TOC.
- Plot 2 — arsenic, calcium, iron, magnesium, manganese, sodium, potassium and zinc.

Graphical plots of the LDCS water quality results are presented on trilinear (piper) diagrams in Attachment D. These plots demonstrate the inherent water quality differences between groundwater from the monitoring wells, shallow groundwater from the LDCS, and leachate (collected annually in December).

SURFACE WATER MONITORING

Surface water monitoring was performed per the requirements of NPDES Construction Stormwater General Permit (CSWGP) WAR 002603C and NPDES Industrial Stormwater General Permit (ISGP) WAR 002557. During the third quarter of 2024, construction and industrial stormwater treatment with Chitosan Sand Enhanced Filtration (CESF) was utilized each month.

Discharge Monitoring Reports (DMR's) were submitted to Ecology on a monthly (Construction Permit) and quarterly (Industrial Permit) basis. Copies of the third quarter 2024 DMR's are included in Attachment I. There were no stormwater discharges in the third quarter of 2024.

LEACHATE MONITORING

Leachate volumes were monitored using the automated PLC system and through direct measurements by LRI site personnel. A summary of daily volumes pumped and leachate sump level data is provided in Attachment H.

Collected leachate was truck-hauled to the pretreatment facility at the Hidden Valley Landfill where it was subsequently discharged to the Pierce County sewer system in accordance with Pierce County Utilities Department Industrial Discharge Permit Number PC03096, and to the City of Tacoma and City of Salem Wastewater Treatment Plants for proper disposal. A summary of year-to-date leachate volume data based on volumes truck-hauled off site is provided on Exhibit 2.

Exhibit 2. 2024 Leachate Volume Data

Month	Leachate Trucked Offsite for Proper Disposal (gallons)	Monthly Rainfall (inches)
January	5,191,007	6.87
February	4,863,281	2.87
March	3,127,021	1.78
April	2,727,925	2.66
May	3,348,614	2.45
June	3,348,614	2.46
July	2,409,565	0.00
August	2,346,576	1.23
September	2,419,593	0.70
Totals	29,782,196	21.02
Notes: Leachate was trucked off-site for proper disposal. Leachate volumes were determined by trucking records kept on a daily basis.		

LANDFILL GAS MONITORING

Monthly monitoring of the landfill gas probes was performed on July 16th, August 9th, and September 20th using a Landtec GEM2000 portable gas monitor. Monitoring results for performance probes installed adjacent to the landfill within the perimeter berm are included in Exhibit 3.

Exhibit 3. Q3 2024 Landfill Gas Probe Monitoring Summary (Percent Methane) Performance Probes

Monitoring Date	GP-1	GP-2	GP-3	GP-4	GP-9	GP-10	GP-10P	GP-11	GP-12	GP-13	GP-14	GP-15	GP-16
July 16	0.9	0.0	0.0	0.0	0.0	1.5	26.9	0.0	22.7	0.0	0.0	0.0	0.0
August 9	0.3	0.0	0.0	0.0	0.0	0.1	7.0	0.0	12.5	0.0	0.0	0.0	0.0
September 20	3.1	0.0	0.0	0.0	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes: All values are reported as percent methane by volume.
Methane measurements at or above the lower explosive limit of 5.0% by volume are shown in **bold**.

Monitoring results for five probes that were installed in September 2022 in native soils closer to the property boundary of the facility are included in Exhibit 4. Methane measurements were less than the lower explosive limit (LEL) of five percent by volume at each of these probes.

**Exhibit 4. Q3 2024 Landfill Gas Probe Monitoring Summary (Percent Methane)
Native Soils Probes**

Monitoring Date	GP-17	GP-18	GP-19	GP-20	GP-21
July 16	0.0	0.0	0.0	0.0	0.0
August 9	0.0	0.0	0.0	0.0	0.0
September 20	0.0	0.0	0.0	0.0	0.0

Notes: All values are reported as percent methane by volume.

Indoor air was tested for the presence of methane on August 9th, 2024. The office, maintenance building, scale house, workshop and energy plant building were monitored with a portable flame ionization detector (MicroFID). Methane was detected at the main office and repair shop at 3.4 ppm to 4.8 ppm, respectively. Detections of methane below 1 ppm were also reported at the scale house, workshop and energy plant. These results are below the regulatory threshold for methane in site structures.

Field records for gas probe and indoor air monitoring are included in Attachment J.

Exhibit 5. Q3 2024 Barhole Survey Monitoring

GP-01A Barhole Survey				
Distance (feet from origin)	Methane (% CH4)	Carbon Dioxide (% CO2)	Oxygen (% O2)	Balance Gasses (%)
0	0.0	0.1	20.7	79.2
50	0.0	0.3	20.7	79.0
100	0.0	0.1	20.8	79.1
150	0.0	0.1	20.8	79.1
-50	0.0	0.1	20.8	79.1
-100	0.0	0.1	20.8	79.1
-150	0.0	0.1	20.8	79.1

Notes: Readings were taken within native soils approximately 10-feet of the perimeter roadway berm
(+) represents readings taken North of the original location
(-) represents readings taken South of the original location

GP-10 Barhole Survey				
Distance (feet from origin)	Methane (% CH4)	Carbon Dioxide (% CO2)	Oxygen (% O2)	Balance Gasses (%)
0	0.0	0.1	20.7	79.2
50	0.0	0.1	20.5	79.4
100	0.0	0.1	20.5	79.4
150	0.0	0.1	20.5	79.4
-50	0.0	0.1	20.8	79.1
-100	0.0	0.1	20.8	79.1
-150	0.0	0.0	20.8	79.2

Notes: Readings were taken within native soils approximately 10-feet of the perimeter roadway berm
 (+) represents readings taken North of the original location
 (-) represents readings taken South of the original location

A barhole survey was conducted on August 14, 2024 for gas probes GP-01A and GP-10 on the north side of the landfill. Readings were taken just from the perimeter roadway berm in native soils, starting with a point (0) perpendicular to the probe location, and moving north or east (+XX) and south or west (-XX) in 50-foot increments when possible. There were no methane detections above natural background levels (0.1 %) detected at any location within the native soils, so a further analysis was not performed.

A map of the approximate locations for the barhole surveys is included in Attachment J.

LANDFILL GAS EXTRACTION WELL CONSTRUCTION

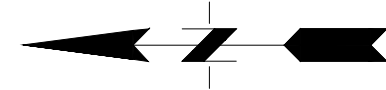
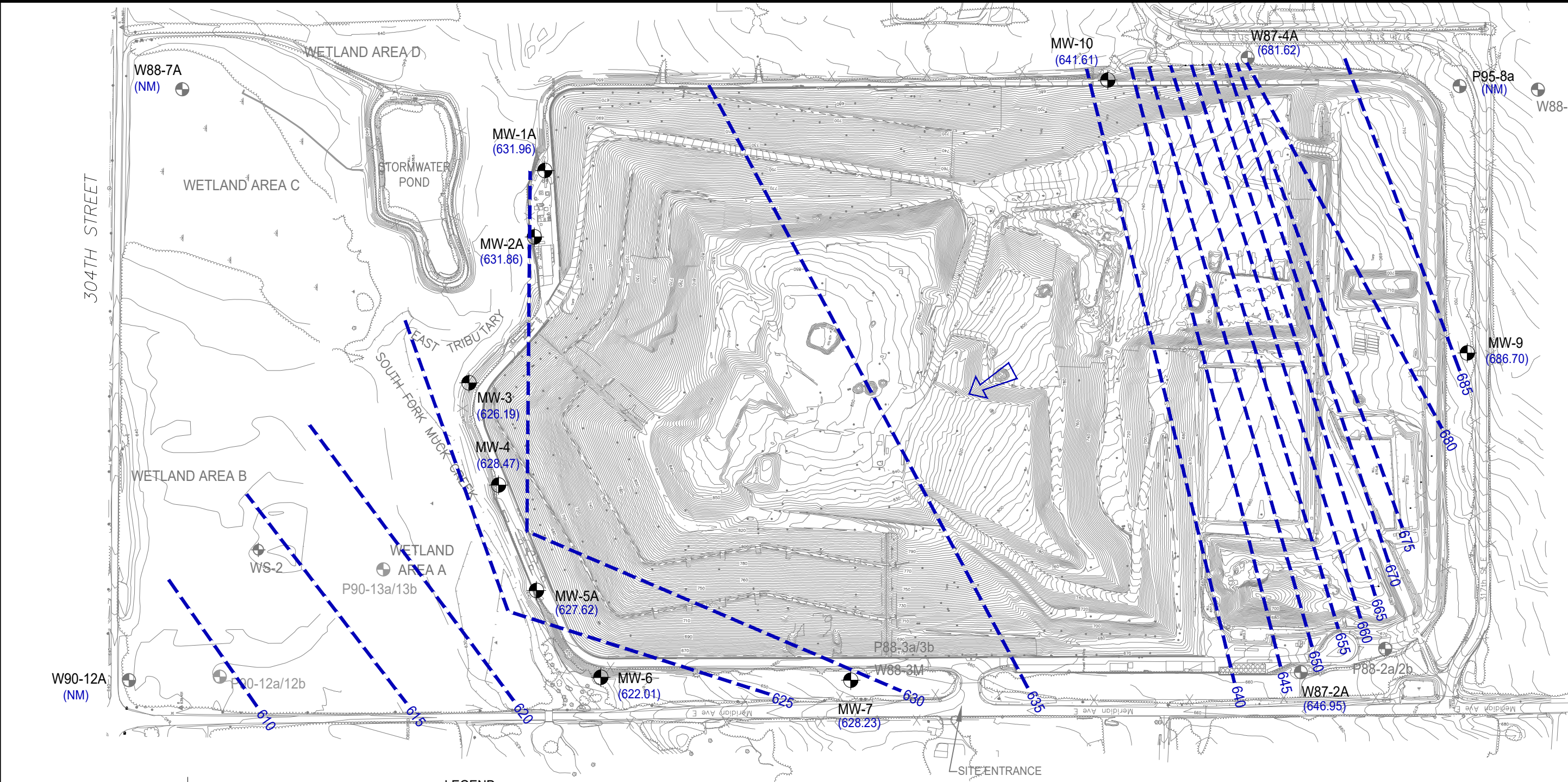
No new landfill gas extraction wells were installed and connected to the GCCS at the landfill during the third quarter of 2024.

GROUNDWATER MONITORING WELL CONSTRUCTION AND MAINTENANCE

No well construction or significant well maintenance activities were performed this quarter.

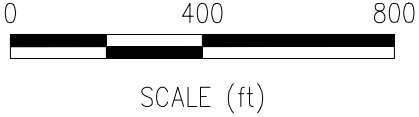
Attachment A

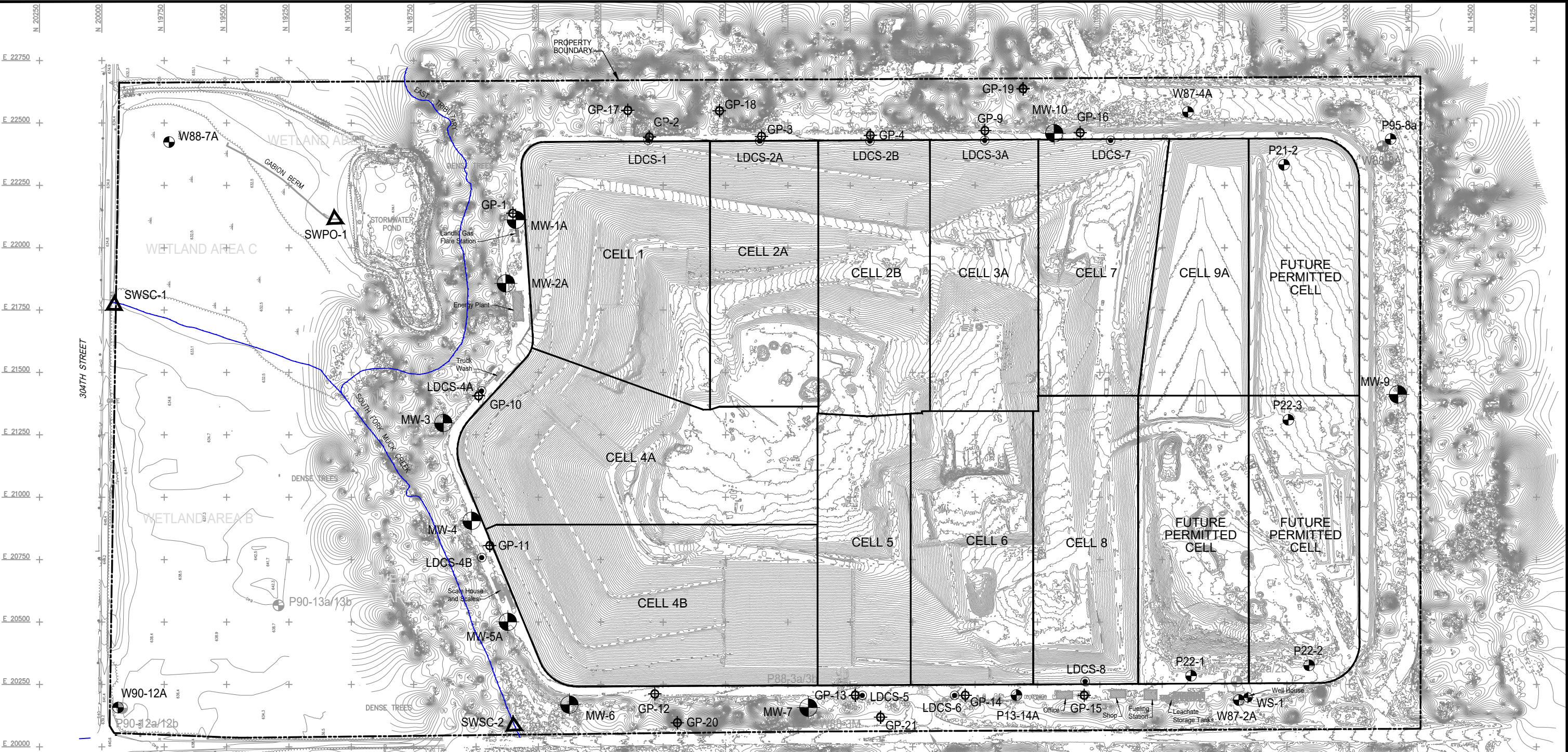
Groundwater Flow Map



NOTES:
VERTICAL DATUM - BASED ON
PIERCE COUNTY BENCH NO. 112-28,
ELEVATION 660.29 NGVD29

- LEGEND:
- MW-1A MONITORING WELL
 - W87-2A CHARACTERIZATION WELL/ PIEZOMETER
 - (646.95) GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
 - INFERRED GROUNDWATER FLOW DIRECTION
 - (NM) NOT MEASURED





LEGEND:

- MW-1 MONITORING WELL
- WS-1 WATER SUPPLY WELL
- W87-2A CHARACTERIZATION WELL/ PIEZOMETER
- LDCS-1 LEAK DETECTION/COLLECTION SUMP
- NEWB-2 SURFACE WATER MONITORING LOCATION
- GP-1 GAS PROBE

NOTES:

- TOPOGRAPHIC BASE MAP PREPARED BY LRI, USING PHOTOGRAMMETRIC SURVEY METHODS, DATE OF PHOTOGRAPH SEPTEMBER 2, 2022.
- SOME EDGES OF LANDFILL IS BASED ON TOPOGRAPHIC BASE MAP PREPARED BY COOPER AERIAL SURVEYS CO., USING PHOTOGRAMMETRIC SURVEY METHODS, DATE OF PHOTOGRAPH MAY 09, 2017.
- VERTICAL DATUM – BASED ON PIERCE COUNTY BENCH NO. 112-18, ELEVATION 660.29 NGVD29.

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PROJECT NO.	04224001.02	DES BY	TAB
SCALE	AS SHOWN	CHK BY	GH
CAD FILE	FIGURE 2	APP BY	GH

SITE MAP
LRI LANDFILL
30919 MERIDIAN STREET EAST
GRAHAM, WASHINGTON

DATE
June 2024
FIGURE
2

Attachment B

Groundwater Data Summary Tables

**Table 1. Groundwater Level Elevations
September 24-27, 2024
LRI Landfill, Pierce County, Washington**

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	15.55	648.46
W87-4A	693.29	10.28	683.01
MW-1A	652.57	21.20	631.37
MW-2A	651.93	20.34	631.59
MW-3	637.41	9.51	627.90
MW-4	652.37	23.90	628.47
MW-5A	655.55	26.78	628.77
MW-6	635.71	11.39	624.32
MW-7	656.03	26.47	629.56
MW-9	701.77	12.40	689.37
MW-10	678.37	29.89	648.48
Piezometers			
GP-1P	652.00	13.70	638.30
GP-2P	658.61	14.99	643.62
GP-3P	658.51	9.30	649.21
GP-4P	662.01	10.58	651.43
GP-9P	674.03	12.51	661.52
GP-14P		13.09	--
GP-15P		15.87	--
GP-16P	689.51	19.90	669.61
GP-17P		7.20	--
P21-2		21.11	--
P22-1		26.97	--
P22-2		4.86	--
P22-3		11.13	--
South Creek			
SWSC-1	632.68	3.40	629.28
SWSC-2	629.98	4.92	625.06
Leak Detection System			
LDCS-1	657.26	29.09	628.17
LDCS-2A	659.24	29.38	629.86
LDCS-2B	661.70	28.20	633.50

Notes:

NM = not measured

-- = not applicable

All measurements taken on March 19 & 20, 2024

Table 2. Field Parameters
Third Quarter 2024
LRI Landfill, Pierce County, Washington

Location	Sample Number	Sample Date	Sampling Method	pH	Conductivity	Temperature
Units				(SU)	(µS/cm)	(°C)
WAC 173-200 Criteria				6.5-8.5	700 ^b	—
Monitoring Wells						
MW-1A	304-092524-01	9/25/2024	DP	7.04	176	16.6
MW-2A	304-092524-02	9/25/2024	DP	7.22	356	14.0
MW-3	304-092624-03	9/26/2024	DP	7.01	383	12.5
MW-4	304-092624-04	9/26/2024	SP	7.34	311	14.5
MW-5A	304-092524-05	9/25/2024	DP	7.49	315	13.3
MW-6	304-092624-06	9/26/2024	DP	7.54	352	11.5
MW-7	304-092624-07	9/26/2024	DP	7.52	375	11.6
MW-9	304-092524-09	9/25/2024	DP	6.73	270	12.7
MW-10	304-092524-10	9/25/2024	DP	8.36	8.1	21.1
Leak Detection System						
LDCS-1	304-092424-12	9/24/2024	DB	7.00	867	31.3
LDCS-2A	304-092424-13	9/24/2024	DB	6.82	1662	25.2
LDCS-2B	304-092424-14	9/24/2024	DB	6.25	1288	21.1
LDCS-3A	304-092424-15	9/24/2024	DP	6.35	1744	25.1
LDCS-4A	304-092424-16	9/24/2024	DP	6.67	1387	22.9
LDCS-4B	304-092424-17	9/24/2024	DP	6.33	855	26.3
LDCS-5	304-092524-18	9/25/2024	DP	6.50	1,070	26.6
LDCS-6	304-092524-19	9/25/2024	DP	6.65	1,015	23.7
LDCS-7	304-092424-20	9/24/2024	DP	6.41	1,034	28.3
LDCS-8	304-092524-22	9/25/2024	GB	6.48	823	19.6
LDCS-9	304-092524-23	9/25/2024	GB	7.87	21,713	33.3
Leachate Collection System						
Leachate, Cell 7	304-092624-23	9/26/2024	GB	7.71	16,430	32.5
Leachate, Cell 8	304-092624-24	9/26/2024	GB	9.01	7,281	20.7

Notes:

Groundwater (monitoring well) concentrations greater than the WAC 173-200 criteria are shown in **bold**

b = Secondary Drinking Water Standard

°C = degrees celcius

DB = disposable bailer

DP = dedicated pump

GB = grab sample

SP = submersible pump

SU = standard units

µS/cm = microsiemens per centimeter

Table 3. Inorganic Parameters
Third Quarter 2024
LRI Landfill, Pierce County, Washington

Parameter	Alkalinity, Total	Ammonia	Chloride	Nitrate	Sulfate	Total Dissolved Solids	Total Organic Carbon	Total Suspended Solids
MRL	10	0.10	0.20	0.50	0.20	10	1.0	4.0
WAC 173-200 Criteria	—	—	250	10	250	500	—	—
Prediction Limit	—	—	—	6.4	—	—	—	—
Monitoring Wells								
MW-1A	65	0.19	1.1	*	21	120	1.5	*
MW-2A	140	0.28	4.5	*	34	240	1.8	*
MW-3	140	0.1	4.2	*	36	240	2.7	*
MW-4	65	0.19	3.1	*	6.6	240	2.8	*
MW-5A	130	0.11	2.2	*	4	170	1.6	*
MW-6	170	0.13	5.5	*	7.7	250	3	*
MW-7	180	0.17	3.4	*	4.2	220	2.6	*
(BG) MW-9	63	*	1.6	*	1.7	130	1.1	*
(BG) MW-10	110	*	7	2.5	6.3	190	1.5	*
Leak Detection System								
LDCS-1	330	0.34	5.1	*	5	380	26	-
LDCS-2A	450	0.53	10	*	23	530	23	-
LDCS-2B	490	4.5	34	*	38	670	140	-
LDCS-3A	420	0.23	4.8	*	56	530	3	-
LDCS-4A	400	0.29	21	*	210	790	4.6	-
LDCS-4B	450	*	34	*	280	960	6.9	-
LDCS-5	360	0.31	24	*	61	510	11	-
LDCS-6	420	0.18	31	*	130	680	4.7	-
LDCS-7	370	0.22	5.7	*	11	460	45	-
LDCS-8	520	*	20	*	55	600	6.7	-
LDCS-9	390	*	5.7	*	41	490	2.6	-

Notes:

All sample units are milligrams per liter (mg/L)

Groundwater (monitoring well) concentrations greater than prediction limits or WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = Sample result was not reported at or above the MRL

— = Not applicable or not performed

BG = Background

B = compound was detected in the method blank and the sample

**Table 4. WAC 173-351 Appendix I Metals
Third Quarter 2024
LRI Landfill, Pierce County, Washington**

Parameter	Antimony-D	Antimony-T	Arsenic-D	Arsenic-T	Barium-D	Barium-T	Beryllium-D	Beryllium-T	Cadmium-D	Cadmium-T	Chromium-D	Chromium-T	Cobalt-D	Cobalt-T	Copper-D	Copper-T	Lead-D	Lead-T	Nickel-D	Nickel-T	Selenium-D	Selenium-T	Silver-D	Silver-T	Thallium-D	Thallium-T	Vanadium-D	Vanadium-T	Zinc-D	Zinc-T	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
MRL	0.05	0.05	0.005	0.005	0.005	0.005	0.001	0.001	0.001	0.001	0.005	0.005	0.001	0.001	0.01	0.01	0.002	0.002	0.02	0.02	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.01	0.01	
WAC 173-200 Criteria	—	—	—	0.00005	—	1.0	—	—	—	0.01	—	0.05	—	—	—	1.0	—	0.05	—	—	0.01	—	0.05	—	—	—	—	—	—	5.0	
Prediction Limit	—	0.05	—	0.011	—	0.091	—	0.005	—	0.005	—	0.011	—	0.01	—	0.063	—	0.042	—	0.020	—	0.005	—	0.01	—	0.005	—	0.016	—	0.290	
Monitoring Wells																															
MW-1A	—	*	—	*	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	*
MW-2A	—	*	—	*	—	0.018	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	*
MW-3	—	*	—	*	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	*
MW-4	—	*	—	0.011	—	0.017	—	*	—	*	—	*	—	*	—	0.011	—	*	—	*	—	*	—	*	—	*	—	*	—	*	0.04
MW-5A	—	*	—	*	—	0.011	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	*
MW-6	—	*	—	0.0071	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	*
MW-7	—	*	—	0.0051	—	0.013	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	*
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.016	—	*	*
(BG) MW-10	—	*	—	*	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.02	*
Leak Detection System																															
LDCS-1	*	—	0.21	—	0.13	—	—	—	—	—	0.0073	—	0.0023	—	*	—	*	—	0.048	—	—	—	—	—	—	—	0.038	—	0.1	—	
LDCS-2A	*	—	0.19	—	0.18	—	—	—	—	—	0.033	—	0.041	—	0.24	—	0.012	—	0.17	—	—	—	—	—	—	—	0.076	—	0.36	—	
LDCS-2B	*	—	9.6	—	2.6	—	—	—	—	—	0.042	—	0.092	—	2.9	—	0.093	—	—	—	—	—	—	—	—	—	0.62	—	0.84	—	
LDCS-3A	*	—	0.02	—	0.022	—	—	—	—	—	*	—	0.003	—	*	—	*	—	—	—	—	—	—	—	—	*	—	*	—	—	
LDCS-4A	*	—	0.013	—	0.044	—	—	—	—	—	*	—	0.0022	—	*	—	*	—	*	—	—	—	—	—	—	*	—	*	—	—	
LDCS-4B	*	—	*	—	0.046	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	*	—	*	—	—	
LDCS-5	*	—	0.0063	—	0.046	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	—	—	—	*	—	*	—	*	—	—	
LDCS-6	*	—	0.005	—	0.052	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	—	—	—	*	—	*	—	*	—	—	
LDCS-7	*	—	0.014	—	0.029	—	*	—	*	—	*	—	0.0026	—	*	—	*	—	*	—	—	—	—	*	—	*	—	*	—	—	
LDCS-8	*	—	0.01	—	0.048	—	*	—	*	—	*	—	0.0015	—	*	—	*	—	*	—	—	—	—	*	—	*	—	*	—	—	
LDCS-9	*	—	*	—	0.039	—	*	—	*	—	*	—	0.0017	—	*	—	*	—	*	—	—	—	—	*	—	*	—	*	—	—	

Notes:
 All sample units are milligrams per liter (mg/L)
 WAC 173-200-040 Table 1 Groundwater Quality Criteria are for total metals
 Groundwater (monitoring well) concentrations greater than prediction limits or WAC 173-200 criteria are shown in **bold**
 Parameter concentrations for monitoring wells are total (T) metals
 Parameter concentrations for LDCS sumps are dissolved (D) metals
 Parameter concentrations for leachate samples are total (T) metals
 Analyses performed by Eurofins TestAmerica of Denver, Colorado
 Method Reporting Limit (MRL) is typical and may be elevated for some samples
 * = sample result was not reported at or above the MRL
 — = not applicable or not performed
 BG = Background

Table 5. WAC 173-351 Appendix II Metals (Dissolved)
Third Quarter 2024
LRI Landfill, Pierce County, Washington

Parameter	Calcium	Iron	Magnesium	Manganese	Potassium	Sodium
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
MRL	0.20	0.10	0.10	0.005	2.0	1.0
WAC 173-200 Criteria	—	0.30	—	0.050	—	—
Monitoring Wells						
MW-1A	23	*	6.1	0.16	3.10	8
MW-2A	36	0.7	16	0.31	5	20
MW-3	37	*	16	0.22	3.9	14
MW-4	29	*	6.1	0.16	5.9	7.9
MW-5A	31	*	13	0.17	4.1	14
MW-6	38	*	17	0.21	5.1	11
MW-7	30	0.25	21	0.21	5.9	13
(BG) MW-9	11	*	7.5	*	2.1	7.9
(BG) MW-10	26	*	12	*	2.3	13
Leak Detection System						
LDCS-1	70	120	31	6.8	6.6	20
LDCS-2A	110	60	40	14	9.9	28
LDCS-2B	180	1900	46	9.9	8.4	19
LDCS-3A	96	3.1	44	3.8	6.9	22
LDCS-4A	140	1.6	55	2.9	7.3	39
LDCS-4B	170	0.18	61	1.4	7.2	50
LDCS-5	84	0.43	51	1.4	8.4	32
LDCS-6	98	0.18	85	1.9	7.9	25
LDCS-7	79	1.1	32	3.6	4.8	24
LDCS-8	88	2.7	87	1.9	6.6	24
LDCS-9	99	*	39	0.86	5.8	38

Notes:

All sample units are milligrams per liter (mg/L)

WAC 173-200-040 Table 1 Groundwater Quality Criteria are for total metals

Groundwater (monitoring well) concentrations greater than WAC 173-200 criteria are shown in **bold**

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

** = Reported concentrations for leachate are total metals

— = not applicable or not performed

BG = Background

Table 6. Volatile Organic Compounds (µg/L)
Third Quarter 2024
LRI Landfill, Pierce County, Washington

Parameter	1,4-Dichlorobenzene	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Carbon disulfide	Ethylbenzene	m-Xylene & p-Xylene	o-Xylene	Toluene
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
MRL	0.50	6.0	5.0	10.0	0.50	0.63	1.0	0.50	0.50	0.50
WAC 173-200 Criteria	4.0	—	—	—	1.0	—	—	—	—	—
Monitoring Wells										
MW-1	*	*	*	*	*	*	*	*	*	*
MW-2	*	*	*	*	*	*	*	*	*	*
MW-3	*	*	*	*	*	*	*	*	*	*
MW-4	*	*	*	*	*	*	*	*	*	*
MW-5	*	*	*	*	*	*	*	*	*	*
MW-6	*	*	*	*	*	*	*	*	*	*
MW-7	*	*	*	*	*	*	*	*	*	*
(BG) MW-9	*	*	*	*	*	*	*	*	*	*
(BG) MW-10	*	*	*	*	*	*	*	*	*	*
Leak Detection System										
LDCS-1	0.95	*	*	24	*	*	*	*	*	*
LDCS-2A	0.5	*	*	14	*	*	*	*	*	*
LDCS-2B	*	*	*	38	*	0.64	*	*	*	*
LDCS-3A	*	*	*	*	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	1.7	*	*	*	*	*
LDCS-8	*	*	*	*	0.52	*	*	*	*	*
LDCS-9	*	*	*	*	*	*	*	*	*	*
Quality Control Samples										
Field Blank	*	*	*	*	*	*	*	*	*	*

Notes:

All sample units are micrograms per liter (µg/L)

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Groundwater (monitoring well) concentrations greater than WAC 173-200 criteria are shown in **bold**

Method Reporting Limit (MRL) is typical and may be elevated for some samples

* = sample result was not reported at or above the MRL

— = not applicable or not performed

BG = Background

**Table 7. Cation-Anion Balance
Third Quarter 2024
LRI Landfill, Pierce County, Washington**

Cations	mg/L					meq/L					% of Total		
	Ca	Mg	K	Na	Total	Ca	Mg	K	Na	Total	Na+K	Ca	Mg
MW-1A	23	6.1	3.1	7.9	40.1	1.15	0.50	0.07	0.34	2.06	20.0	55.6	24.3
MW-2A	36	16	5	20	77.0	1.80	1.32	0.11	0.87	4.10	24.0	43.9	32.1
MW-3	37	16	3.9	14	70.9	1.85	1.32	0.09	0.61	3.86	18.1	47.8	34.1
MW-4	29	14	5.9	14	62.9	1.45	1.15	0.13	0.61	3.34	22.2	43.3	34.5
MW-5A	31	13	4.1	14	62.1	1.55	1.07	0.09	0.61	3.32	21.1	46.6	32.2
MW-6	38	17	5.1	11	71.1	1.90	1.40	0.12	0.48	3.89	15.3	48.8	36.0
MW-7	30	21	5.9	13	69.9	1.50	1.73	0.13	0.57	3.92	17.8	38.1	44.0
MW-9	11	7.5	2.1	7.9	28.5	0.55	0.62	0.05	0.34	1.56	25.1	35.2	39.6
MW-10	26	12	2.3	13	53.3	1.30	0.99	0.05	0.57	2.90	21.3	44.7	34.0
LDCS-1	70	31	6.6	20	127.6	3.49	2.55	0.15	0.87	7.06	14.4	49.5	36.1
LDCS-2A	110	40	9.9	28	187.9	5.49	3.29	0.22	1.22	10.22	14.1	53.7	32.2
LDCS-2B	180	46	8.4	19	253.4	8.98	3.79	0.19	0.83	13.78	7.4	65.2	27.5
LDCS-3A	96	44	6.9	22	168.9	4.79	3.62	0.16	0.96	9.52	11.7	50.3	38.0
LDCS-4A	140	55	7.3	39	241.3	6.99	4.53	0.16	1.70	13.37	13.9	52.2	33.8
LDCS-4B	170	61	7.2	50	288.2	8.48	5.02	0.16	2.18	15.84	14.8	53.6	31.7
LDCS-5	79	32	4.8	24	139.8	3.94	2.63	0.11	1.04	7.73	14.9	51.0	34.1
LDCS-6	84	51	8.4	32	175.4	4.19	4.20	0.19	1.39	9.97	15.9	42.0	42.1
LDCS-7	98	85	7.9	25	215.9	4.89	7.00	0.18	1.09	13.15	9.6	37.2	53.2
LDCS-8	88	87	6.6	24	205.6	4.39	7.16	0.15	1.04	12.74	9.4	34.5	56.2
LDCS-9	99	39	5.8	38	181.8	4.94	3.21	0.13	1.65	9.93	18.0	49.7	32.3

Anions	mg/L					meq/L					% of Total			Total Ions (meq/L)	Cation - Anion Balance	Applicable Ratio (%)	Ratio Exceedance
	Alk	Cl	NO ₃	SO ₄	Total	Alk	Cl	NO ₃	SO ₄	Total	Cl	Alk	SO ₄				
MW-1A	78	1.1	0.0	21.0	100.1	1.28	0.03	0.000	0.44	1.75	1.8	73.2	25.0	3.81	8.3	10	O
MW-2A	168	4.5	0.0	34	206.5	2.76	0.13	0.000	0.71	3.59	3.5	76.8	19.7	7.69	6.6	5	Exceeds
MW-3	168	4.2	0.0	36	208.2	2.76	0.12	0.000	0.75	3.62	3.3	76.1	20.7	7.48	3.2	5	O
MW-4	180	3.1	0.0	6.6	189.7	2.95	0.09	0.000	0.14	3.18	2.8	92.9	4.3	6.52	2.5	5	O
MW-5A	156	2.2	0.0	4	162.2	2.56	0.06	0.000	0.08	2.70	2.3	94.6	3.1	6.02	10.2	5	Exceeds
MW-6	204	5.5	0.0	7.7	217.2	3.35	0.16	0.000	0.16	3.66	4.2	91.4	4.4	7.55	3.0	5	O
MW-7	216	3.4	0.0	4.2	223.6	3.54	0.10	0.000	0.09	3.73	2.6	95.1	2.3	7.65	2.6	5	O
MW-9	75.6	1.6	0.0	1.7	78.9	1.24	0.05	0.000	0.04	1.32	3.4	93.9	2.7	2.88	8.2	10	O
MW-10	132	7	2.5	6.3	147.8	2.16	0.20	0.040	0.13	2.53	7.8	85.4	5.2	5.44	6.8	5	Exceeds
LDCS-1	396	5.1	0.0	5	406.1	6.49	0.14	0.000	0.10	6.74	2.1	96.3	1.5	13.81	2.3	5	O
LDCS-2A	540	10	0.0	23	573	8.86	0.28	0.000	0.48	9.62	2.9	92.1	5.0	19.84	3.1	5	O
LDCS-2B	588	34	0.0	38	660	9.64	0.96	0.000	0.79	11.39	8.4	84.6	6.9	25.18	9.5	5	Exceeds
LDCS-3A	504	4.8	0.0	56	564.8	8.27	0.14	0.000	1.16	9.57	1.4	86.4	12.2	19.09	0.2	5	O
LDCS-4A	480	21	0.0	210	711	7.87	0.59	0.000	4.37	12.83	4.6	61.3	34.0	26.21	2.1	5	O
LDCS-4B	540	34	0.0	280	854	8.86	0.96	0.000	5.82	15.64	6.1	56.6	37.2	31.48	0.6	5	O
LDCS-5	432	5.7	0.0	11	449	7.08	0.16	0.000	0.23	7.47	2.2	94.8	3.1	15.20	1.7	5	O
LDCS-6	504	24	0.0	61	589	8.27	0.68	0.000	1.27	10.21	6.6	80.9	12.4	20.18	1.2	5	O
LDCS-7	444	31	0.0	130	605	7.28	0.87	0.000	2.70	10.86	8.0	67.1	24.9	24.01	9.5	5	Exceeds
LDCS-8	624	20	0.0	55	699	10.23	0.56	0.000	1.14	11.94	4.7	85.7	9.6	24.69	3.3	5	O
LDCS-9	468	5.7	0.0	41	515	7.68	0.16	0.000	0.85	8.69	1.8	88.3	9.8	18.62	6.7	5	Exceeds

Notes:

mg/L = milligrams per liter

meq/L = milliequivalents per liter

Total alkalinity concentration, reported as calcium carbonate (CaCO₃), is converted to the bicarbonate (HCO₃⁻) ion by multiplying by a factor of 1.2

Cation / anion balance equation is the equivalent percent difference in cations minus anions divided by the sum of cations and anions [(cations-anions)/(anions+cations)*100].

The MRL was used for analytes that were non-detect

A 10% difference threshold is used if the total cation-anion sums are < 5.0 meq/liter

A 5% difference threshold is used if the total cation-anion sums are > or = to 5.0 meq/liter

Table 8. Duplicate Sample Results
Third Quarter 2024 Monitoring Report
LRI Landfill, Pierce County, Washington

Parameter	MRL	MW-7	MW-7 (Duplicate)	RPD (%)
Volatile Organic Compounds (µg/L)				
No Detections	-	-	-	-
Inorganic Parameters (mg/L)				
Alkalinity, Total	10	180	170	5.7
Ammonia	0.1	0.17	0.18	5.7
Chloride	0.2	3.4	3.2	6.1
Sulfate	0.2	4.2	4.2	0.0
Total Dissolved Solids	10	220	220	0.0
Total Organic Carbon	1	2.6	2.9	10.9
Dissolved Metals (mg/L)				
Calcium	0.2	30	31	3.3
Iron	0.1	0.25	0.22	12.8
Magnesium	0.1	21	21	0.0
Manganese	0.005	0.21	0.21	0.0
Potassium	2.0	5.9	5.9	0.0
Sodium	1.0	13	13	0.0
Total Metals (mg/L)				
Arsenic	0.005	0.0051	0.005 U	2.0
Barium	0.005	0.013	0.014	7.4

Notes:

Analyses performed by Eurofins TestAmerica of Denver, Colorado

Parameters not listed were not present at concentrations exceeding the Method Reporting Limit (MRL)

RPD = relative percent difference

µg/L = micrograms per liter

mg/L = milligrams per liter

U= parameter was not detected in sample

* = sample result was not reported at or above the MRL

The MRL was used to calculate the RPD for analytes where one sample was non-detect

Attachment C

Field Sampling Documentation

September 30, 2024
File No. 04224001.02

Subject: **Third Quarter 2024 Groundwater Monitoring Event**
LRI Landfill, Pierce County, Washington

NOTES/SAMPLE DECODING:

Event Dates: September 24-27, 2024

Field Staff: Jovany Estrada & Lauren Murray

- This event served as a quarterly monitoring event.
- Dedicated pumps were used for purging and sampling wells MW-1A, MW-2A, MW-3, MW-5A, MW-6, MW-7, MW-9, MW-10, and leak detection/collection system points LDCS-3A, LDCS-4B, LDCS-5, LDCS-6, and LDCS-7.
- Disposable bailers were used to sample leak detection/collection system points LDCS-1, LDCS-2A, LDCS-2B.
- The sample from LDCS-4A, LDCS-8 and LDCS-9 was collected from the channel discharge spigot.
- A non-dedicated Sample Pro pump was used for purging and sampling monitoring point MW-4.
- Leachate was sampled from Cell 7, Cell 8 and Cell 9.
- A round of water level measurements was completed concurrent with monitoring.
- Multiparameter field meters were calibrated daily, prior to sampling.
- Source water for the field blank was lab-grade deionized water (VOC-free) provided by TestAmerica in Tacoma, Washington.
- Leachate port lock code: 911

Sample Number	Well Number
304-092524-01	MW-1A
304-092524-02	MW-2A
304-092624-03	MW-3
304-092624-04	MW-4
304-092524-05	MW-5A
304-092624-06	MW-6
304-092624-07	MW-7
304-092524-09	MW-7 DUPLICATE
304-092524-10	MW-9
304-092624-11	MW-10

304-092424-12	FIELD BLANK
304-092424-13	LDCS-1
304-092424-14	LDCS-2A
304-092424-15	LDCS-2B
304-092424-16	LDCS-3
304-092424-17	LDCS-4A
304-092524-18	LDCS-4B
304-092524-19	LDCS-5
304-092424-20	LDCS-6
304-092524-22	LDCS-7
304-092524-23	LDCS-8
304-092624-23	LDCS-9
304-092624-24	Leachate, Cell 7
304-092624-25	Leachate, Cell 8
304-092524-01	Leachate, Cell 9

SCS ENGINEERS

2405 140th ave NE #107

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04224001.02

Site: LRI 304th

Well ID: MIN-1A

Sample ID: 304-092524-01

Date: 9/25/24

Weather: Rainy

Filtered? ☒ Y ☐ N

Sample Containers:

1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly
500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber
125 ml NaOH			

Locked? Y ☐ N ☒

Water in Protector? Y ☐ N ☒

Damage? Y ☐ N ☒

Sampling Method: Dedicated

1.75" QED SamplePro

Bail

Peristaltic

Grab

Other

Meter: MP-20

YSI

CONTROL SETTINGS:

1 ft water = 0.62L

1L = 0.26 gallons

Refill 9

Discharge 6

Pressure 40 → 50

Flow ~100 mL/min

One Well Volume (liters)

Other:

Flow Setting:

Total Volume Bailed (liters)

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1307		18.4	1	8.46	6.81	-95.5	20.72	
1312		17.0	175	2.45	6.75	-58.4	3.06	
1315		16.8	176	1.83	6.76	-61.2	3.36	
1318		16.9	176	1.62	6.78	-64.9	2.90	
1321		16.8	176	1.45	6.80	-69.7	2.99	
1324		16.7	176	1.34	6.82	-76.5	3.21	
1327		16.5	176	1.24	6.84	-87.4	4.09	

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2, SpC ± 10%, Temp ± 0.5°C, Turb. ± 10% or ≤ 5

SAMPLER:

Lauren Murray
Printed Name

Signature

Lauren Murray

Bellevue, WA 98005

(425) 746-4600

Project #:	04224001.02	Sampling Method:	Dedicated	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other
Site:	LA 304th	Meter:	CONTROL SETTINGS:	1 ft water = 0.62L	1L = 0.26 gallons			
Well ID:	MIN-21A	MP-20	Refill	9	One Well Volume	Other:		
Sample ID:	304-092524-02	YSI	Discharge	6	(liters)	Flow		
Date:	9/25/24	BOS	Pressure	30	Total Volume Bailed	Setting:		
Weather:	Raining, 65°F	Total Depth	Flow	400 ml/min	(liters)			
Filtered? ☒ Y ☐ N	Locked? ☐ Y ☒ N	Water in Protector? ☐ Y ☐ N	Damage? ☐ Y ☐ N					
Sample Containers:	1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly	Notes / Observations (color, odor, anomalies, etc):			
	500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber				
	125 ml NaOH							

[illegible]

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER:

Lauren Murray
Printed Name

Signature _____

Signature Barbara Murray

Bellevue, WA 98005

Groundwater Sampling Data Sheet

Notes / Observations (color, odor, anomalies, etc):

SAMPLER:

Jovani Estrada
Printed Name


Signature

Bellevue, WA 98005

(425) 746-4600

Project #:	Site:		23.90	DTW	Sampling Method:	Dedicated	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other
Well ID:	Sample ID:	Date:	Weather:	TOS	Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons		
				Intake	MP-20	Refill	9	One Well Volume (liters)	Other :		
				BOS	YSI	Discharge	6	Total Volume Bailed (liters)	Flow Setting :		
				Total Depth		Pressure	50				
						Flow	250 ml/min				

Filtered? (Y) N	Locked? Y (N)	Water in Protector? Y (N)	Damage? Y (N)
Sample Containers:	1000 ml Poly	500 ml Poly	250 ml Poly
	500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6
	125 ml NaOH		1000 ml Amber

Notes / Observations (color, odor, anomalies, etc):

[illegible]

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER:

Jovan Estrada
Printed Name

Signature

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04224001.02		Sampling Method: Dedicated		1.75" QED SamplePro		Bail	Peristaltic	Grab	Other
Site: LRI 304th		26.78 DTW		Meter: CONTROL SETTINGS:		1 ft water = 0.62L		1L = 0.26 gallons	
Well ID: MW-5A		TOS		MP-20		Refill		One Well Volume	
Sample ID: 304-092524-05		Intake		YSI		Discharge		(liters)	
Date: 9/25/24		BOS				Pressure		Flow	
Weather: Raining		Total Depth				Flow		Setting:	
Filtered? Y N		Locked? Y N		Water in Protector? Y N		Damage? Y N			
Sample Containers:		1000 ml Poly		500 ml Poly		250 ml Poly		125 ml Poly	
		500 ml HNO3 x2		500 ml H2SO4 x2		40 ml VOA x3 x6		1000 ml Amber	
		125 ml NaOH							
Notes / Observations (color, odor, anomalies, etc):									

[illegible]

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER:

Printed Name

Signature

Bellevue, WA 98005

(425) 746-4600

Project #: 04224001.02

Site LRI 304th

Well ID: MW-6

Sample ID: 304-092624-06

Date: 9/26/24

Weather: partly cloudy

Filtered? ☒ Y ☐ N

Locked? (Y) N

Water in Protector? Y(N)

Damage? Y N

Sample Containers:

1000 ml Poly

500 ml Poly

250 ml Poly

125 ml Poly

500 ml HNO3 x2

500 ml H₂SO₄ x2

40 ml VOA

1000 ml Amber

125 ml NaOH

[illegible]

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER:

Jovany Estrada

Printed Name _____


Signature

Bellevue, WA 98005

(425) 746-4600

Signature

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04224001-07		Sampling Method: <u>Dedicated</u>		1.75" QED SamplePro	Bail	Peristaltic	Grab	Other
Site: <u>LP1 304th</u>			DTW	Meter: <u>CONTROL SETTINGS:</u>	1 ft water = 0.62L	1L = 0.26 gallons		
Well ID: <u>MW-9</u>			TOS	MP-20	Refill <u>9</u>	One Well Volume	Other:	
Sample ID: <u>304-092524-09</u>			Intake	<u>YSI</u>	Discharge <u>6</u>	(liters)	Flow	
Date: <u>9/25/24</u>			BOS		Pressure <u>45</u>	Total Volume Bailed	Setting:	
Weather: <u>Rainy</u>			Total Depth		Flow <u>400 ml/min</u>	(liters)		
Filtered? <u>(Y)</u> N	Locked? <u>(Y)</u> N	Water in Protector? Y <u>(N)</u>	Damage? Y <u>(N)</u>	Notes / Observations (color, odor, anomalies, etc):				
Sample Containers:	1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly				
	500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber				
	125 ml NaOH							

[illegible]

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER: Jovany Estrada
Printed Name


Signature

**2405 140th ave NE #107
Bellevue, WA 98005**

Groundwater Sampling Data Sheet

[illegible]

SAMPLER:

Signature _____

Signature

Bellevue, WA 98005

Groundwater Sampling Data Sheet

Notes / Observations (color, odor, anomalies, etc):

ASK lab to filter

Signature _____

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(425) 746-4600

Groundwater Sampling Data Sheet

Project #: <u>04224601-02</u>		Sampling Method:		Dedicated	1.75" QED SamplePro	<u>Bail</u>	Peristaltic	Grab	Other
Site: <u>LRI 304th</u>		<u>28.12</u> DTW	Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons		
Well ID: <u>LDGS-2B</u>		TOS	Meter:			Refill	One Well Volume	Other:	
Sample ID: <u>304-092424-14</u>		Intake	<u>MP-20</u>	Discharge	(liters)	Flow			
Date: <u>9/24/24</u>		BOS	<u>YSI</u>	Pressure	Total Volume Bailed	Setting:			
Weather: <u>Clear</u>		Total Depth		Flow	(liters)				

Filtered? <u>Y</u> N	Locked? <u>Y</u> N	Water in Protector? <u>Y</u> <u>N</u>	Damage? <u>Y</u> <u>N</u>
Sample Containers:	1000 ml Poly	500 ml Poly	250 ml Poly
	500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6
	125 ml NaOH		125 ml Amber

Notes / Observations (color, odor, anomalies, etc):

[illegible]

Notes / Observations (color, odor, anomalies, etc):

risk lab to filter

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER:

Jovany Estrada
Printed Name


Signature

Bellevue, WA 98005

Groundwater Sampling Data Sheet


Signature

Bellevue, WA 98005

Groundwater Sampling Data Sheet

Project #:	04221001-02		Sampling Method:	Dedicated	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other		
Site:	LRI 304H		Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons				
Well ID:	LDCS - 4A		MP-20	Refill	12	One Well Volume	Other:				
Sample ID:	304-092424-16		YSI	Discharge	3	(liters)	Flow				
Date:	9/24/24		BOS	Pressure	60	Total Volume Bailed	Setting:				
Weather:	Clear		Total Depth	Flow	150 mL/min	(liters)					
Filtered?	Y	N	Locked?	Y	N	Water in Protector?	Y	N	Damage?	Y	N
Sample Containers:	1000 ml Poly		500 ml Poly		250 ml Poly		125 ml Poly				
	500 ml HNO3 x2		500 ml H2SO4 x2		40 ml VOA x3 x6		1000 ml Amber				
	125 ml NaOH										
Notes / Observations (color, odor, anomalies, etc):											

[illegible]

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER: Jovany Estrada
Printed Name

Signature

Bellevue, WA 98005

(425) 746-4600

Project #: 04224001.02

Site CR1 304th

Well ID: UDCS-4B

Sample ID: 304-092424-17

Date: 9/24/24

Weather: Clear

Filtered? (Y)N

Locked? (Y) N

Water in Protector? Y N

Damage? Y N

Sample Containers:

1000 ml Poly

500 ml Poly

250 ml Poly

125 ml Poly

500 ml HNO3 x2

500 ml H₂SO₄ x2

40 ml VOA

x3	x6	1000 ml Amber
----	----	---------------

125 ml NaOH

[illegible]

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER:

Printed Name _____

Signature

Bellevue, WA 98005

(425) 746-4600

Project #: 04224001-02

Site LP 304th

Well ID: LDCS-5

Sample ID: 304-092524-18

Date: 9/25/24

Weather: Cloudy

Filtered? ☒ Y ☐ N

Locked? (Y) N

Water in Protector? Y N

Damage? Y N

Sample Containers:

1000 ml Poly

500 ml Poly

250 ml Poly

125 ml Poly

500 ml HNO3 x2

500 ml H₂SO₄ x2

40 ml VOA

x3	x6	1000 ml Amber
----	----	---------------

125 ml NaOH

[illegible]

Notes / Observations (color, odor, anomalies, etc):

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER:

Printed Name _____

Signature _____

Bellevue, WA 98005

(425) 746-4600

Project #: <u>04224001-02</u>		Sampling Method:		Dedicated	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other
Site: <u>LR 304th</u>			DTW	Meter:	<u>CONTROL SETTINGS:</u>		1 ft water = 0.62L	1L = 0.26 gallons	
Well ID: <u>LDCS-6</u>			TOS	MP-20	Refill	<u>12</u>	One Well Volume	Other:	
Sample ID: <u>304-092524-19</u>			Intake	YSI	Discharge	<u>3</u>	(liters)	Flow	
Date: <u>9/25/24</u>			BOS		Pressure	<u>40</u>	Total Volume Bailed	Setting:	
Weather: <u>Rainy</u>			Total Depth		Flow		(liters)		
Filtered? <u>(Y) N</u>	Locked? <u>Y (N)</u>	Water in Protector? <u>Y (N)</u>	Damage? <u>Y (N)</u>						
Sample Containers:	1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly	Notes / Observations (color, odor, anomalies, etc):				
	500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber					
	125 ml NaOH								

[illegible]

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER:

Jovany Estraela
Printed Name

je
Signature

**2405 140th ave NE #107
Bellevue, WA 98005**

Groundwater Sampling Data Sheet

[illegible]

SAMPLER: Jovany Estrada
Printed Name

Signature _____

Bellevue, WA 98005

(425) 746-4600

Project #: 04224001.02

Site LP1 304th

Well ID: LDCS-8

Sample ID: 304-092524-22

Date: 9/25/24

Weather: Rainy

Filtered? Y N

Locked? Y N

Water in Protector? ~~Y~~ N

Damage? ~~Y~~ N

Sample Containers:

1000 ml Poly

500 ml Poly

250 ml Poly

125 ml Poly

500 ml HNO3 x2

500 ml H₂SO₄ x2

40 ml VOA

1000 ml Amber

125 ml NaOH

[illegible]

SAMPLER:

Jovany Estrada

Printed Name _____


Signature

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #:	04224001.02			Sampling Method:	Dedicated	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other
Site:	LRI 304th			Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons		
Well ID:	LDCS-9			MP-20	Refill		One Well Volume (liters)	Other:		
Sample ID:	304-092524-23			YSI	Discharge		Total Volume Bailed (liters)	Flow Setting:		
Date:	9/25/24				Pressure					
Weather:	Rainy				Flow					
Filtered?	Y	N		Locked?	Y	N		Water in Protector?	Y	N
Sample Containers:	1000 ml Poly	500 ml Poly	250 ml Poly	125 ml Poly				Damage?		
	500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber						
	125 ml NaOH									
							Notes / Observations (color, odor, anomalies, etc):			

[illegible]

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER: Jovany Estrada
Printed Name

Signature _____

Bellevue, WA 98005

(425) 746-4600

Project #: 04224001.02

Site LRI 304th

Well ID: Leachate, Cell 7

Sample ID: 304-092624-23

Date: 9/26/24

Weather: Clear

Filtered? _ Y ☒

Locked? ☐ Y ☒ N

Water in Protector? ~~Y~~ N

Damage? ~~Y~~ N

Sample Containers:

1000 ml Poly

500 ml Poly

250 ml Poly

125 ml Poly

500 ml HNO3 x2

500 ml H₂SO₄ x2

40 ml VOA

x3 x6

1000 ml Amber

125 ml NaOH

[illegible]

Stabilization Parameters: pH/DO ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER:

Jovany Estrada

Printed Name _____

20

Signature

Signature _____

Bellevue, WA 98005

Groundwater Sampling Data Sheet

Notes / Observations (color, odor, anomalies, etc):

Signature _____

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

Date	9/24/24					
Time	0900					
Weather (sky or precip, temp)	Clear					
Parameter	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.00	7.00	100% or ~8.5	1000, 10, 0.2 100, 20, <0.1	800,
Pre-Cal Reading	1641	4.16	6.97	8.52		
Post Cal Reading	1413	4.00	7.00	8.50		
Discrepancy	No					
Calib. Successful?	Yes					
Calibration by	T. Estrada					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental			YSI Pro DDS / HACH2000		
Calibration Location	UDCS - 7					

* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

Date	9/25/24					
Time	0917					
Weather (sky or precip, temp)	partly cloudy					
Parameter	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.00	7.00	100% or ~8.5	1000, 10, 0.2 100, 20, <0.1	800,
Pre-Cal Reading	1429	3.91	7.08	8.50		
Post Cal Reading	1413	4.00	7.00	8.50		
Discrepancy	No					
Calib. Successful?	yes					
Calibration by	J. Estrella					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental			YSI Pro DDS / HACH2000		
Calibration Location	MW-10					

* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

Date	9/26/24					
Time	1357					
Weather (sky or precip, temp)	Clear					
Parameter	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.00	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1406	4.02	7.02	8.33		
Post Cal Reading	1413	4.00	7.00	8.50		
Discrepancy	No					
Calib. Successful?	Yes					
Calibration by	L Murray					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental				YSI Pro DDS / HACH2000	
Calibration Location	Leachette Cell 7					

* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

Date	9/26/24					
Time	0953					
Weather (sky or precip, temp)	partly cloudy					
Parameter	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.00	7.00	100% or ~8.5	1000, 10, 0.2 100, 20, <0.1	800,
Pre-Cal Reading	1415	4.08	6.99	9.28		
Post Cal Reading	1413	4.00	7.00	8.50		
Discrepancy	No					
Calib. Successful?	yes					
Calibration by	Jovan Estrada					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental			YSI Pro DDS / HACH2000		
Calibration Location	MW-4					

* If Direct Reading is Unavailable, Assume pressure = 760 mm - 2.5 (altitude in ft/100)

Ver: 01/16/2019



Attachment D

Statistical Calculations

Statistical Summary of Total Metals and Nitrate Groundwater Data
Appendix I Parameters, Third Quarter 2024

Location ID	Antimony (Sb)			Arsenic (As)			Barium (Ba)			Beryllium (Be)			Cadmium (Cd)			Chromium (Cr)			Cobalt (Co)			Copper (Cu)			Lead (Pb)			Nickel (Ni)			Selenium (Se)			Silver (Ag)			Thallium (Tl)			Vanadium (V)			Zinc (Zn)			Nitrate (NO ₃)		
Monitoring Date	Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.							
MW-1																																																
3/24/2014	0.002	L	0.001	0.005	L	0.0025	0.022		0.022	0.001	L	0.0005	0.005	L	0.0025	0.002	L	0.001	0.01	L	0.005	0.002	L	0.001	0.001	L	0.0005	0.002	L	0.001	0.005	L	0.0025	0.01	L	0.005	0.001	L	0.0005	0.01	L	0.005	0.01	L	0.005	0.5	L	0.25
6/24/2014	0.002	L	0.001	0.005	L	0.0025	0.02		0.02	0.001	L	0.0005	0.005	L	0.0025	0.002	L	0.001	0.01	L	0.005	0.002	L	0.001	0.001	L	0.0005	0.002	L	0.001	0.005	L	0.0025	0.01	L	0.005	0.001	L	0.0005	0.01	L	0.005	0.01	L	0.005	0.5	L	0.25
9/17/2014	0.05	L	0.025	0.005	L	0.0025	0.024		0.024	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.01	L	0.005	0.001	L	0.005	0.002	L	0.001	0.002	L	0.001	0.005	L	0.0025	0.01	L	0.005	0.005	L	0.0025	0.01	L	0.005	0.02		0.02	0.5	L	0.25
12/16/2014	0.05	L	0.025	0.005	L	0.0025	0.03		0.03	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.001	L	0.0005	0.01	L	0.005	0.002	L	0.001	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.032		0.032	0.5	L	0.25
3/23/2015	0.05	L	0.025	0.005	L	0.0025	0.02		0.02	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.001	L	0.0005	0.01	L	0.005	0.002	L	0.001	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.01	L	0.005	0.5	L	0.25
6/8/2015	0.05	L	0.025	0.005	L	0.0025	0.022		0.022	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.001	L	0.0005	0.01	L	0.005	0.002	L	0.001	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.01	L	0.005	0.5	L	0.25
9/16/2015	0.05	L	0.025	0.005	L	0.0025	0.021		0.021	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.001	L	0.0005	0.01	L	0.005	0.002	L	0.001	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.01	L	0.005	0.5	L	0.25
12/14/2015	0.05	L	0.025	0.005	L	0.0025	0.024		0.024	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.001	L	0.0005	0.01	L	0.005	0.002	L	0.001	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.01	L	0.005	0.5	L	0.25
Number Analyzed	8			8			8			8			8			8			8			8			8			8			8			8			8			8			8			8		
Number Detected	0			0			8			0			0			0			0			0			0			0			0			0			0			2			0					
Minimum Concentration			0.001			0.0025			0.02			0.0005			0.0005			0.001			0.0005			0.001			0.0005			0.001			0.0025			0.0025			0.0005			0.005			0.25			
Maximum Concentration			0.025			0.0025			0.03			0.0025			0.0025			0.0025			0.005			0.005			0.001			0.001			0.0025			0.005			0.0025			0.032			0.25			
Average Concentration			NC			NC			0.02288			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC
Variance			NC			NC			1.1E-05			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC
Standard Deviation			NC			NC			0.0033			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC
Coefficient of Variation (%)			NC			NC			14.2974			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC
Standard Error			NC			NC			0.00116			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC
MW-2																																																
3/24/2014	0.002	L	0.001	0.005	L	0.0025	0.014		0.014	0.001	L	0.0005	0.005	L	0.0025	0.002	L	0.001	0.01	L	0.005	0.002	L	0.001	0.001	L	0.0005	0.002	L	0.001	0.005	L	0.0025	0.01	L	0.005	0.001	L	0.0005	0.01	L	0.005	0.01	L	0.005	0.5	L	0.25
6/26/2014	0.002	L	0.001	0.005	L	0.0025	0.015		0.015	0.001	L	0.0005	0.005	L	0.0025	0.002	L	0.001	0.01	L	0.005	0.002	L	0.001	0.001	L	0.0005	0.002	L	0.001	0.005	L	0.0025	0.01	L	0.005	0.001	L	0.0005	0.01	L	0.005	0.01	L	0.005	0.5	L	0.25
9/16/2014	0.05	L	0.025	0.005	L	0.0025	0.018		0.018	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.01	L	0.005	0.001	L	0.005	0.002	L	0.001	0.002	L	0.001	0.005	L	0.0025	0.01	L	0.005	0.005	L	0.0025	0.005	L	0.0025	0.01	L	0.005	0.5	L	0.25
12/16/2014	0.05	L	0.025	0.005	L	0.0025	0.014		0.014	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.001	L	0.0005	0.01	L	0.005	0.002	L	0.001	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.005	L	0.0025	0.01	L	0.005	0.5	L	0.25
3/23/2015	0.05	L	0.025	0.005	L	0.0025	0.012		0.012	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001</																													

Statistical Summary of Total Metals and Nitrate Groundwater Data
Appendix I Parameters, Third Quarter 2024

Location ID	Antimony (Sb)			Arsenic (As)			Barium (Ba)			Beryllium (Be)			Cadmium (Cd)			Chromium (Cr)			Cobalt (Co)			Copper (Cu)			Lead (Pb)			Nickel (Ni)			Selenium (Se)			Silver (Ag)			Thallium (Tl)			Vanadium (V)			Zinc (Zn)			Nitrate (NO ₃)		
Monitoring Date	Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.							
MW-5																																																
3/24/2014	0.002	L 0.001		0.0072	0.0072		0.032	0.032		0.001	L 0.0005		0.005	L 0.0025		0.002	L 0.001		0.01	L 0.005		0.002	L 0.001		0.001	L 0.0005		0.002	L 0.001		0.005	L 0.0025		0.01	L 0.005		0.001	L 0.0005		0.01	L 0.005		0.01	L 0.005		0.5	L 0.25	
6/25/2014	0.002	L 0.001		0.0067	0.0067		0.033	0.033		0.001	L 0.0005		0.005	L 0.0025		0.0036	0.0036		0.01	L 0.005		0.0061	0.0061		0.001	L 0.0005		0.0043	0.0043		0.005	L 0.0025		0.01	L 0.005		0.001	L 0.0005		0.01	L 0.005		0.01	L 0.005		0.5	L 0.25	
9/16/2014	0.05	L 0.025		0.0059	0.0059		0.036	0.036		0.005	L 0.0025		0.005	L 0.0025		0.0051	0.0051		0.01	L 0.005		0.01	L 0.005		0.002	L 0.001		0.02	L 0.01		0.005	L 0.0025		0.01	L 0.005		0.005	L 0.0025		0.01	L 0.005		0.01	L 0.005		0.5	L 0.25	
12/16/2014	0.05	L 0.025		0.0055	0.0055		0.022	0.022		0.001	L 0.0005		0.001	L 0.0005		0.005	L 0.0025		0.001	L 0.0005		0.002	L 0.001		0.002	L 0.001		0.02	L 0.01		0.005	L 0.0025		0.005	L 0.0025		0.005	L 0.0025		0.01	L 0.005		0.5	L 0.25				
3/23/2015	0.05	L 0.025		0.008	0.008		0.03	0.03		0.001	L 0.0005		0.001	L 0.0005		0.005	L 0.0025		0.001	L 0.0005		0.002	L 0.001		0.002	L 0.001		0.02	L 0.01		0.005	L 0.0025		0.005	L 0.0025		0.005	L 0.0025		0.01	L 0.005		0.5	L 0.25				
6/8/2015	0.05	L 0.025		0.0075	0.0075		0.02	0.02		0.001	L 0.0005		0.001	L 0.0005		0.005	L 0.0025		0.001	L 0.0005		0.002	L 0.001		0.002	L 0.001		0.02	L 0.01		0.005	L 0.0025		0.005	L 0.0025		0.005	L 0.0025		0.01	L 0.005		0.5	L 0.25				
9/18/2015	0.05	L 0.025		0.005	L 0.0025		0.014	0.014		0.001	L 0.0005		0.001	L 0.0005		0.005	L 0.0025		0.001	L 0.0005		0.002	L 0.001		0.002	L 0.001		0.02	L 0.01		0.005	L 0.0025		0.005	L 0.0025		0.005	L 0.0025		0.01	L 0.005		0.5	L 0.25				
12/14/2015	0.05	L 0.025		0.0072	0.0072		0.021	0.021		0.001	L 0.0005		0.001	L 0.0005		0.005	L 0.0025		0.001	L 0.0005		0.002	L 0.001		0.002	L 0.001		0.02	L 0.01		0.005	L 0.0025		0.005	L 0.0025		0.005	L 0.0025		0.01	L 0.005		0.5	L 0.25				
Number Analyzed	8			8			8			8			8			8			8			8			8			8			8			8			8			8			8					
Number Detected	0			7			8			0			0			2			0			1			0			1			0			0			0			1			0					
Minimum Concentration		0.001			0.0025			0.014			0.0005			0.0005			0.0005			0.0005			0.001			0.0005			0.001			0.0025			0.0025			0.005			0.005			0.25				
Maximum Concentration		0.025			0.008			0.036			0.0025			0.0025			0.0025			0.005			0.0061			0.001			0.01			0.0025			0.005			0.0025			0.01			0.25				
Average Concentration		NC			0.00631			0.026			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC				
Variance		NC			3E-06			6E-05			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC				
Standard Deviation		NC			0.00175			0.00776			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC				
Coefficient of Variation (%)		NC			27.6653			29.863			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC				
Standard Error		NC			0.00062			0.00275			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC			NC				
MW-6																																																
3/26/2014	0.002	L 0.001		0.0075	0.0075		0.014	0.014		0.001	L 0.0005		0.005	L 0.0025		0.002	L 0.001		0.01	L 0.005		0.002	L 0.001		0.001	L 0.0005		0.002	L 0.001		0.005	L 0.0025		0.01	L 0.005		0.001	L 0.0005		0.01	L 0.005		0.5	L 0.25				
6/25/2014	0.002	L 0.001		0.0065	0.0065		0.011	0.011		0.001	L 0.0005		0.005	L 0.0025		0.002	L 0.001		0.01	L 0.005		0.002	L 0.001		0.001	L 0.0005		0.002	L 0.001		0.005	L 0.0025		0.01	L 0.005		0.001	L 0.0005		0.01	L 0.005		0.5	L 0.25				
9/18/2014	0.002	L 0.001		0.0078	0.0078		0.01	0.01		0.001	L 0.0005		0.005	L 0.0025		0.002	L 0.001		0.01	L 0.005		0.002	L 0.001		0.001	L 0.0005		0.002	L 0.001		0.005	L 0.0025		0.01	L 0.005		0.001	L 0.0005		0.01	L 0.005		0.5	L 0.25				
12/17/2014	0.05	L 0.025		0.0068	0.0068		0.012	0.012		0.001	L 0.0005		0.001	L 0.0005		0.005	L 0.0025		0.001	L 0.0005		0.002	L 0.001		0.001	L 0.0005		0.02	L 0.01		0.005	L 0.0025		0.005	L 0.0025		0.005	L 0.0025		0.01	L 0.005		0.5	L 0.25				
3/26/2015	0.05	L 0.025		0.0068	0.0068		0.01	0.01		0.001	L 0.0005		0.001	L 0.0005		0.005	L 0.0025		0.001	L 0.0005		0.002	L 0.001		0.001	L 0.0005		0.02	L 0.01		0.005	L 0.0025		0.005	L 0.0025		0.005	L 0.0025		0.01	L 0.005		0.5	L 0.25				
6/8/2015	0.05	L 0.025		0.0075	0.0075		0.01	0.01		0.001	L 0.0005		0.001	L 0.0005		0.005	L 0.0025		0.001	L 0.0005		0.002	L 0.001		0.001	L 0.0005		0.02	L 0.01		0.005	L 0.0025		0.005	L 0.0025		0.005	L 0.0025		0.01	L 0.005		0.5	L 0.25				
9/17/2015	0.05	L 0.025		0.0069	0.0069		0.011	0.011		0.001	L 0.0005		0.001	L 0.0005		0.005	L 0.0025		0.001	L 0.0005		0.002	L 0.001		0.001	L 0.0005		0.02	L 0.01		0.005	L 0.0025		0.005	L 0.0025		0.005	L 0.0025		0.01	L 0.005		0.5	L 0.25				
12/14/2015	0.05	L 0.025		0.0074	0.0074		0.011	0.011		0.001	L 0.0005		0.001	L 0.0005		0.005	L 0.0025		0.001	L 0.0005		0.002	L 0.001		0.001	L 0.0005		0.02	L 0.01		0.005	L 0.0025		0.005	L 0.0025		0.005	L 0.0025		0.01	L 0.005		0.5	L 0.25				
Number Analyzed	8			8		</																																										

Statistical Summary of Total Metals and Nitrate Groundwater Data Appendix I Parameters, Third Quarter 2024

Location ID	Antimony (Sb)				Arsenic (As)				Barium (Ba)				Beryllium (Be)				Cadmium (Cd)				Chromium (Cr)				Cobalt (Co)				Copper (Cu)				Lead (Pb)				Nickel (Ni)				Selenium (Se)				Silver (Ag)				Thallium (Tl)				Vanadium (V)				Zinc (Zn)				Nitrate (NO ₃)			
Monitoring Date	Result		Conc.		Result		Conc.		Result		Conc.		Result		Conc.		Result		Conc.		Result		Conc.		Result		Conc.		Result		Conc.		Result		Conc.		Result		Conc.		Result		Conc.		Result		Conc.																	
MW-9	3/25/2014	0.002	L	0.001	0.005	L	0.0025	0.0047	0.0047	0.001	L	0.0005	0.005	L	0.0025	0.002	L	0.001	0.01	L	0.005	0.002	L	0.001	0.001	L	0.0005	0.002	L	0.001	0.005	L	0.0025	0.01	L	0.005	0.001	L	0.0005	0.016	0.016	0.01	0.01	0.5	L	0.25																		
	6/24/2014	0.002	L	0.001	0.005	L	0.0025	0.0045	0.0045	0.001	L	0.0005	0.005	L	0.0025	0.002	L	0.001	0.01	L	0.005	0.002	L	0.001	0.001	L	0.0005	0.002	L	0.001	0.005	L	0.0025	0.01	L	0.005	0.001	L	0.0005	0.016	0.016	0.01	L	0.005	0.5	L	0.25																	
	9/18/2014	0.002	L	0.001	0.005	L	0.0025	0.0057	0.0057	0.001	L	0.0005	0.005	L	0.0025	0.002	L	0.001	0.01	L	0.005	0.002	L	0.001	0.001	L	0.0005	0.002	L	0.001	0.005	L	0.0025	0.01	L	0.005	0.001	L	0.0005	0.014	0.014	0.014	0.014	0.5	L	0.25																		
	12/17/2014	0.05	L	0.025	0.005	L	0.0025	0.005	L	0.0025	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.01	L	0.0005	0.01	L	0.0005	0.02	L	0.01	0.005	L	0.0025	0.005	L	0.0025	0.014	0.014	0.01	L	0.005	0.5	L	0.25																			
	3/24/2015	0.05	L	0.025	0.005	L	0.0025	0.005	L	0.0025	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.01	L	0.0005	0.01	L	0.0005	0.02	L	0.01	0.005	L	0.0025	0.005	L	0.0025	0.013	0.013	0.01	L	0.005	0.5	L	0.25																			
	6/9/2015	0.05	L	0.025	0.005	L	0.0025	0.005	L	0.0025	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.01	L	0.0005	0.01	L	0.0005	0.02	L	0.01	0.005	L	0.0025	0.005	L	0.0025	0.014	0.014	0.01	L	0.005	0.5	L	0.25																			
	9/18/2015	0.05	L	0.025	0.005	L	0.0025	0.005	0.005	0.001	L	0.0005	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.01	L	0.0005	0.02	L	0.01	0.005	L	0.0025	0.005	L	0.0025	0.014	0.014	0.01	L	0.005	0.5	L	0.25																				
	12/16/2015	0.05	L	0.025	0.005	L	0.0025	0.005	L	0.0025	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.01	L	0.0005	0.01	L	0.0005	0.02	L	0.01	0.005	L	0.0025	0.005	L	0.0025	0.014	0.014	0.042	0.042	0.5	L	0.25																				
	3/22/2016	0.05	L	0.025	0.005	L	0.0025	0.005	L	0.0025	0.001	L	0.0005	0.001	L	0.0005	0.005	L	0.0025	0.001	L	0.0005	0.01	L	0.0005	0.01	L	0.0005	0.02	L	0.01	0.005	L	0.0025	0.005	L	0.0025	0.014	0.014	0.028	0.028	0.5	L	0.25																				
	6/8/2016	0.05	L	0.025	0.005	L</																																																										

Statistical Summary of Total Metals and Nitrate Groundwater Data Appendix I Parameters, Third Quarter 2024

Location ID	Antimony (Sb)			Arsenic (As)			Barium (Ba)			Beryllium (Be)			Cadmium (Cd)			Chromium (Cr)			Cobalt (Co)			Copper (Cu)			Lead (Pb)			Nickel (Ni)			Selenium (Se)			Silver (Ag)			Thallium (Tl)			Vanadium (V)			Zinc (Zn)			Nitrate (NO ₃)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
Monitoring Date	Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.		Result	Conc.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
MW-10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</

Notes: Metals results are for total metals.
mg/L = milligrams per liter.
L = not reported at or above the MRL (Method Reporting Limit).
One-half the MRL value used for statistical calculations when concentrations not reported at or above the MRL.
NC = not calculated due to insufficient number of reported detections.

Groundwater Prediction Limits (mg/L)
Appendix I Parameters, Third Quarter 2024
LRI Landfill, Pierce County, Washington

	MRL (typical)	Prediction Limit	MW-1/ MW-1A	MW-2/ MW-2A	MW-3	MW-4	MW-5/ MW-5A	MW-6	MW-7	MW-9	MW-10
Antimony	0.050	0.050 L	0.050 L	0.050 L	0.050 L	0.050 L	0.050 L	0.050 L	0.050 L	0.050 L	0.050 L
Arsenic	0.005	0.011	0.005 L	0.005 L	0.005 L	0.011	0.008	0.008	0.006	0.005 L	0.005 L
Barium	0.005	0.091	0.030	0.018	0.015	0.091	0.036	0.014	0.016	0.0057	0.016
Beryllium	0.005	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.001 L	0.005 L	0.001 L	0.005 L
Cadmium	0.005	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L
Chromium	0.005	0.011	0.005 L	0.005 L	0.005 L	0.011	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L
Cobalt	0.010	0.010 L	0.010 L	0.010 L	0.010 L	0.004	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L
Copper	0.010	0.063	0.010 L	0.010 L	0.010 L	0.063	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L
Lead	0.002	0.042	0.002 L	0.002 L	0.002 L	0.042	0.002 L	0.002 L	0.002 L	0.002 L	0.002 L
Nickel	0.020	0.020 L	0.020 L	0.020 L	0.020 L	0.020 L	0.020 L	0.020 L	0.020 L	0.020 L	0.020 L
Selenium	0.005	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L
Silver	0.010	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L	0.010 L
Thallium	0.005	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L	0.005 L
Vanadium	0.010	0.014	0.010 L	0.010 L	0.010 L	0.014	0.010 L	0.010 L	0.010 L	0.0073	0.010 L
Zinc	0.01	0.290	0.032	0.010 L	0.010 L	0.290	0.010 L	0.010 L	0.010 L	0.043	0.034
Nitrate as Nitrogen	0.50	6.40	0.500 L	0.500 L	0.500 L	0.500 L	0.500 L	0.500 L	0.500 L	0.500 L	6.40

Notes:

Prediction Limits are shown in bold.

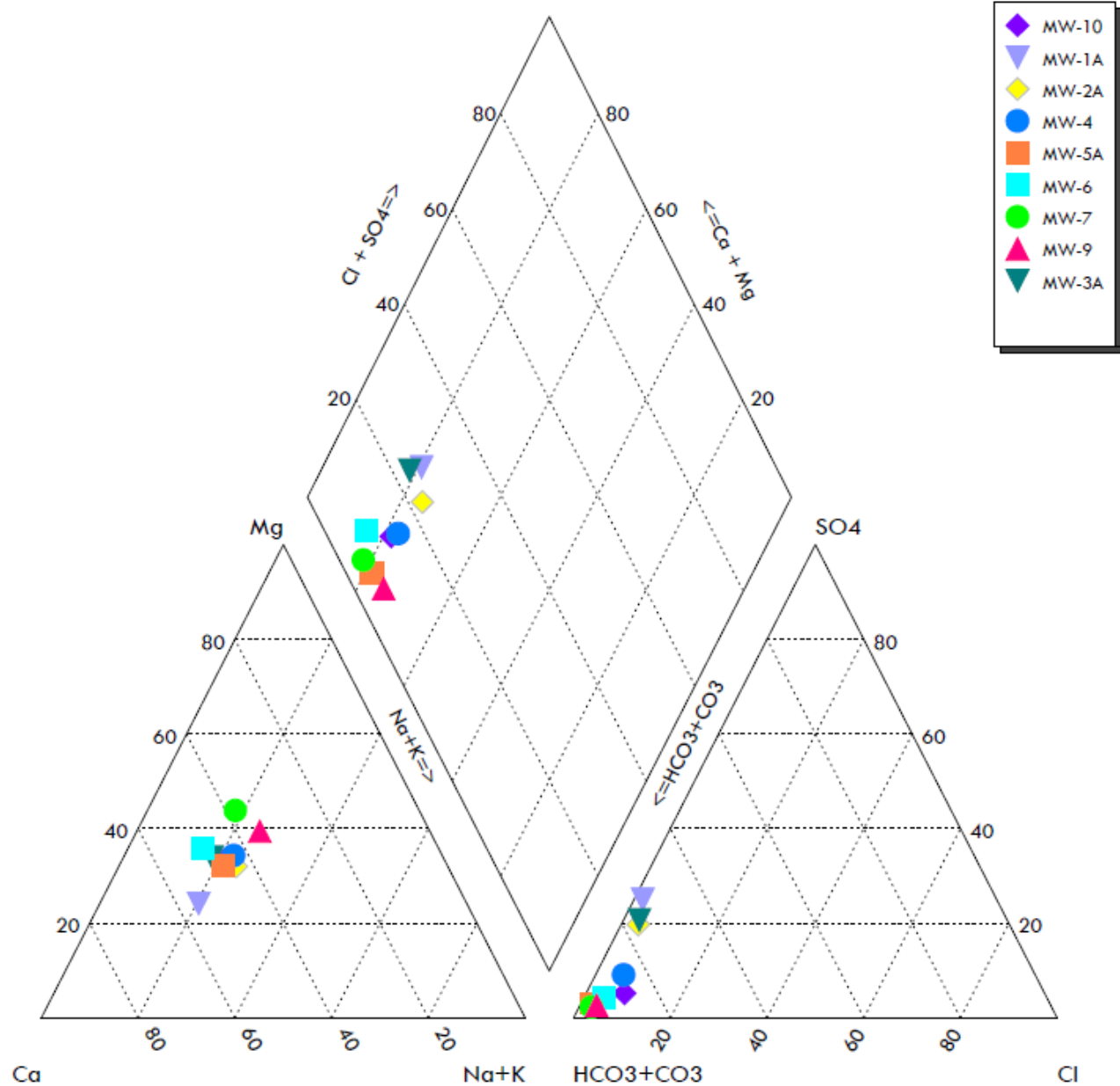
Prediction Limits for metals are for total metals.

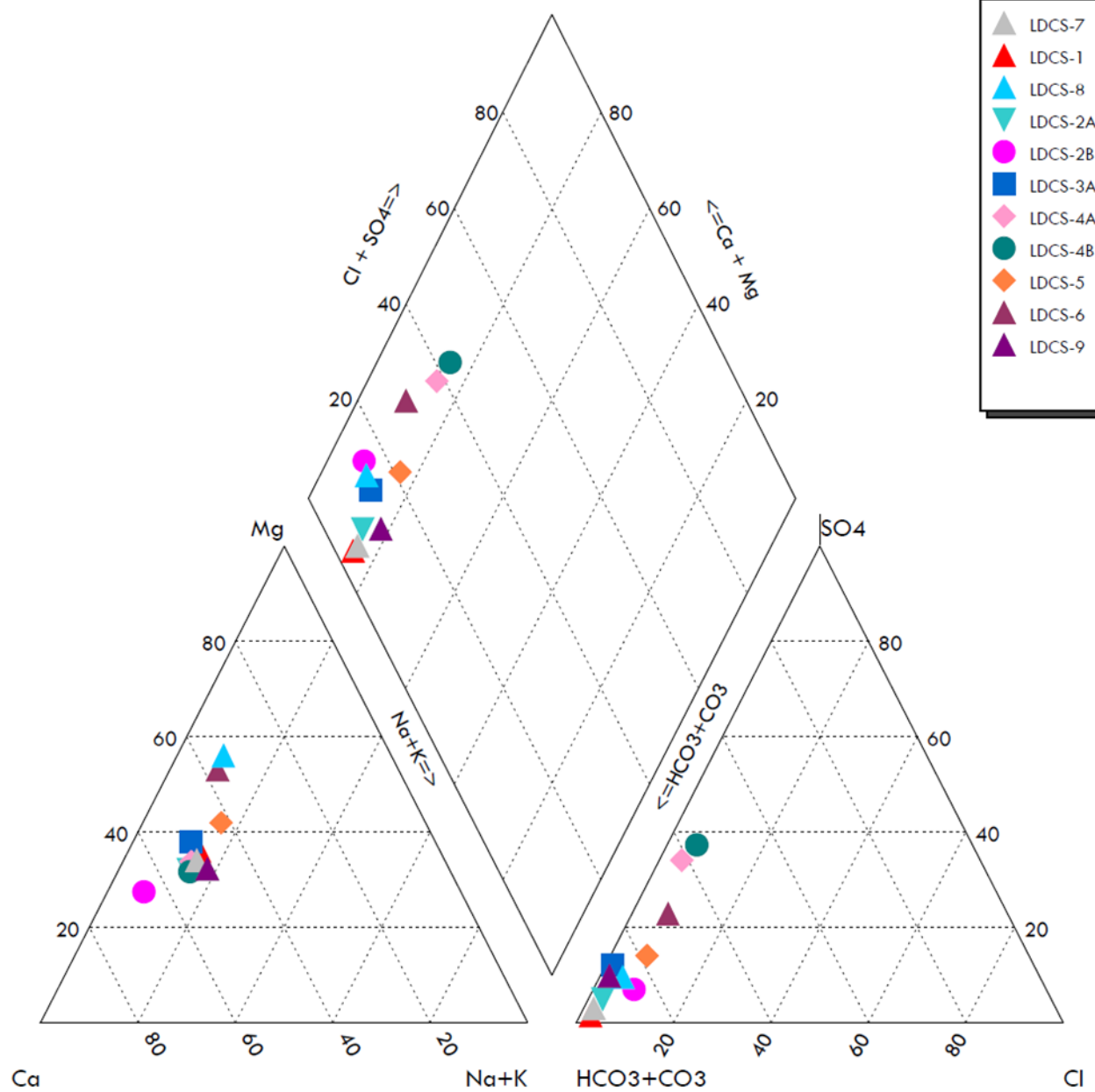
L = not reported at or above the MRL (Method Reporting Limit).

mg/L = milligrams per liter.

Attachment E

Trilinear Diagrams





LRI Landfill

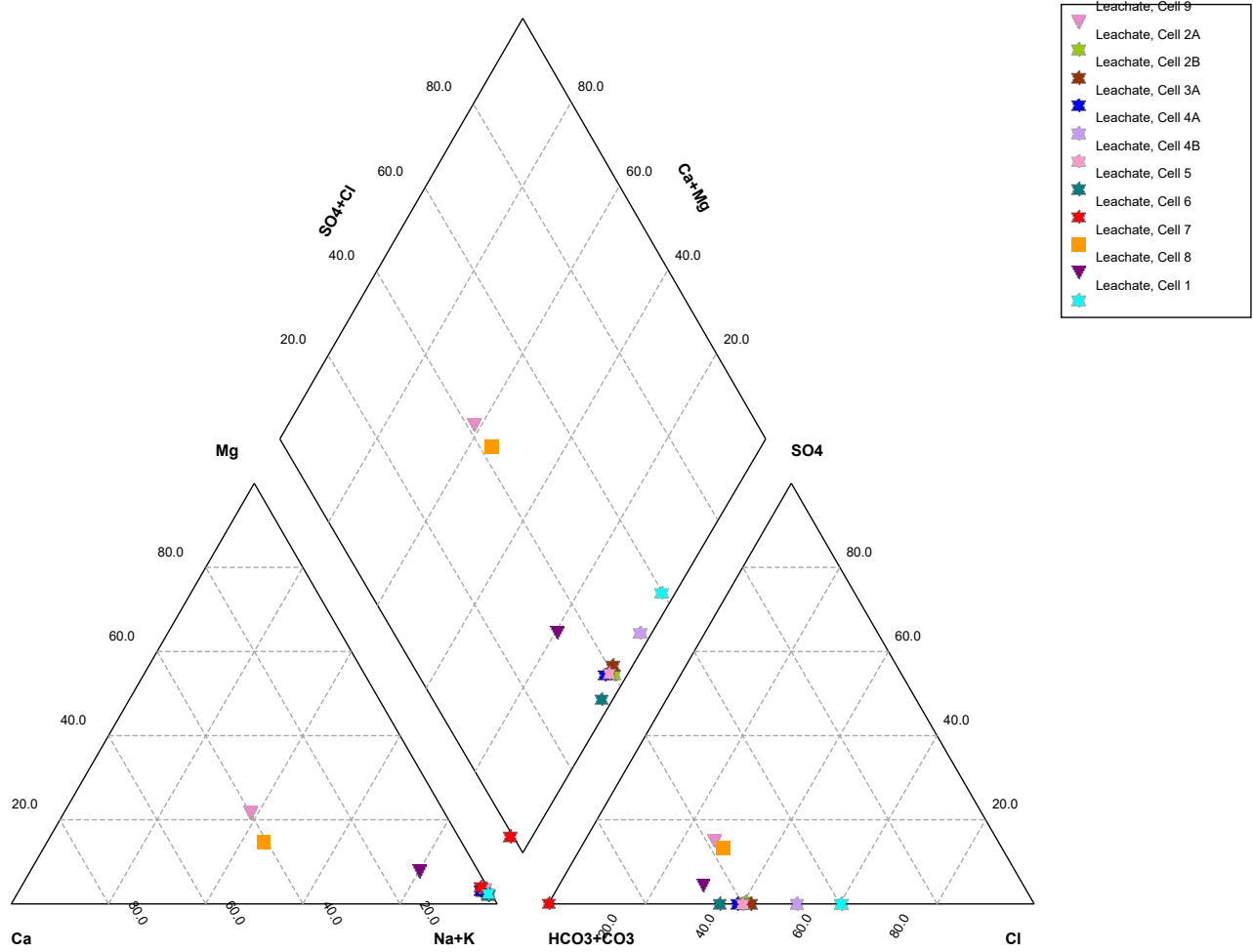
Piper Diagram – 24Q3

LRI Inc.

04224001.02

December 10, 2024

Fourth Quarter 2023, Leachate



LRI Landfill

Piper Diagram – 24Q1

LRI Inc.

04224001.02

December 10, 2024

Attachment F

Analytical Data Validation Report

THIRD QTR. 2024 DATA VALIDATION REPORT – LRI LANDFILL

Project Details

Project No.	04224001.02	Site Name	LRI 304 th Street LF
Data Validator	Jovany Estrada	Data Level	Level 2
Date	11/18/2024	DV Tier	Tier 1
QA Document	LRI Landfill Groundwater Monitoring Plan, March 10, 2014		

Sample Login Summary

Sample Group	Sample Login Comments	Analytical Lab (Primary)
280-197105-1	No Comment.	Eurofins TestAmerica, Denver
280-197159-1	No Comment.	Eurofins TestAmerica, Denver
280-197164-1	No Comment.	Eurofins TestAmerica, Denver
280-197291-1	No Comment.	Eurofins TestAmerica, Denver
280-197292-1	Due to a FedEx shipping delay, the following samples were received at the laboratory outside the required temperature criteria due to all the ice melting: 304-092624-08 (280-197292-1), 304-092624-06 (280-197292-2), 304-092624-04 (280-197292-3), 304-092624-03 (280-197292-4), 304-092624-07 (280-197292-5), 304-092624-11 (280-197292-6) and Trip Blank (280-197292-7). A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC). The sample was logged per the information on the container labels.	Eurofins TestAmerica, Denver

Analytical Summary

Sample Group	Analyses					
	TDS/Alk/NO3	Metals	NH3/TOC	VOCs	Anions	TSS
280-197105-1	X	X	X ²	X	X	-
280-197159-1	X	X	X ²	X	X	X
280-197164-1	X	X	X ²	X	X	-
280-197291-1	X	X	X ²	X	X	X
280-197292-1	X	X	X ²	X	X	X

Notes:

1. Dissolved metals analysis performed (field filtered)
2. Dissolved and Total metals analysis performed
3. Total Metals analysis performed



Laboratory Quality Assurance Samples

Lab QA Samples	Results	Comments
Method Blank	Acceptable.	See case narratives
LCS/LCSD	Acceptable.	See case narratives.
MS/MSD	Acceptable	See case narratives.
Metals	Acceptable.	See case narratives.
Duplicates	Acceptable.	See case narratives.
Organics	Acceptable.	See case narratives.
General Chemistry	Acceptable.	See case narratives.
General Comments	Acceptable.	See case narratives.

Field Quality Assurance Samples

Field QA Samples	Sample Group	Analytes	Notes
QC-FB	280-197292-1	None.	

Lab Quality Flags

Flag	Sample Groups	Comments
4	280-197105-1, 280-197159-1	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable. MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	280-197105-1, 280-197-159-1, 280-197164-1, 280-197291-1, 280-197292-1	MS and/or MSD recovery exceeds control limits.
F2	280-197105-1, 280-197164-1, 280-197291-1, 280-197292-1	MS/MSD RPD exceeds control limits
H	280-197291-1, 280-197292-1	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	280-197105-1, 280-197-159-1, 280-197164-1, 280-197291-1, 280-197292-1	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Λ+	280-197159-1	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
* ₋	280-197105-1	LCS and/or LCSD is outside acceptance limits, low biased.
* ₊	280-197105-1	LCS and/or LCSD is outside acceptance limits, high biased.

Duplicate Evaluation

Analyte	Units	MW-7 (304-092624-07)	MW-7 DUP (304-092624-08)	RPD (%)
Alkalinity, Total	mg/L	180	170	5.71
Ammonia	mg/L	0.17	0.18	5.71
Arsenic, Total	mg/L	0.0051	0.005 U	1.98
Barium, Total	mg/L	0.013	0.014	7.41
Calcium, Dissolved	mg/L	30	31	3.28
Chloride	mg/L	3.4	3.2	6.06
Iron, Dissolved	mg/L	0.25	0.22	12.77
Magnesium, Dissolved	mg/L	21	21	0
Manganese, Dissolved	mg/L	0.21	0.21	0
Potassium, Dissolved	mg/L	5.9	5.9	0
Sodium, Dissolved	mg/L	13	13	0
Sulfate	mg/L	4.2	4.2	0
Total Dissolved Solids	mg/L	220	220	0
Total Organic Carbon	mg/L	2.6	2.9	10.91

U = Non-detection. Reporting limit (RL) used for calculation of RPD when necessary.

Additional Data Flags

Flag	Description
U	Not detected above the method reporting limit.

Qualified Data and Usability

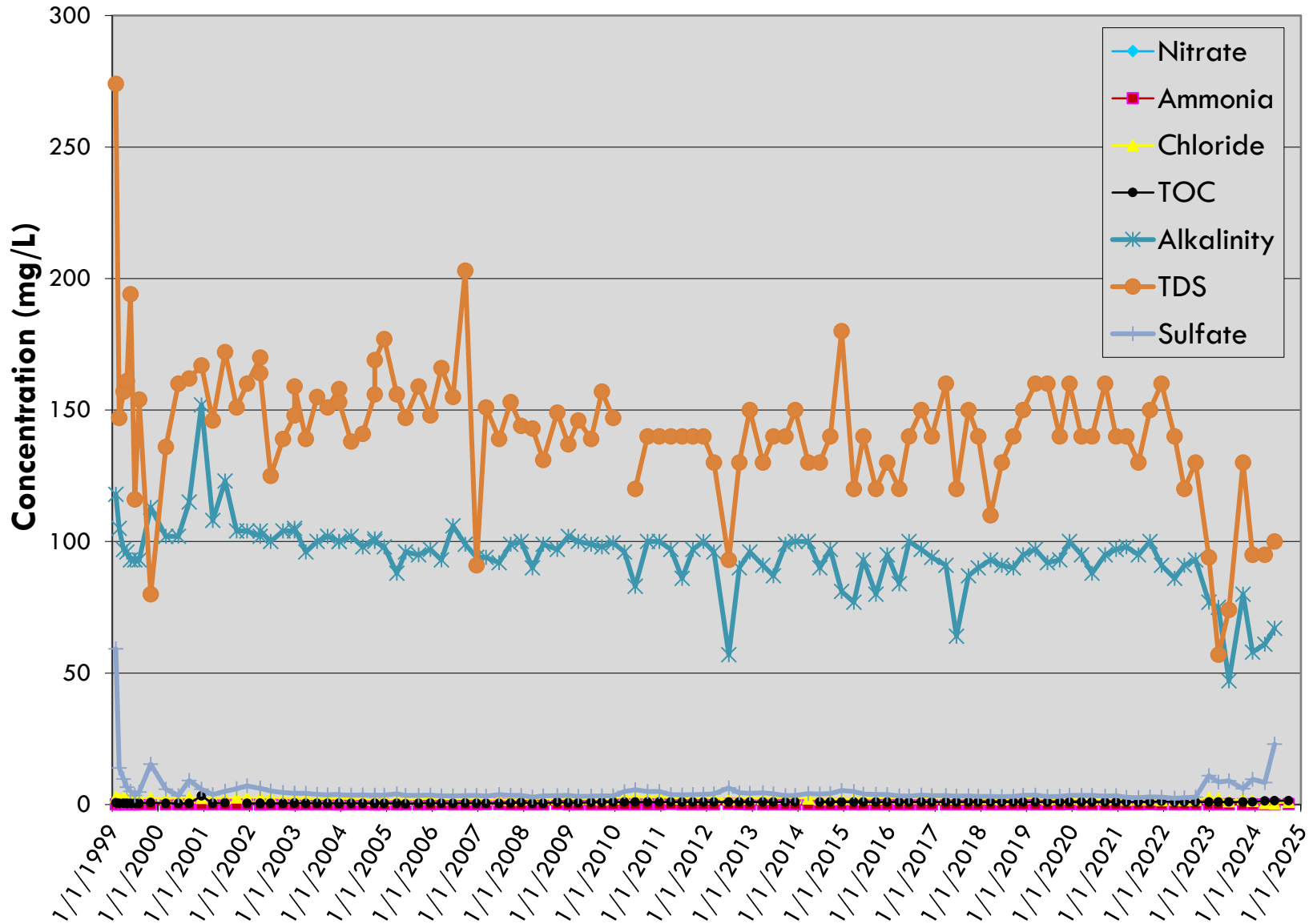
Lab qualifiers are noted. All data, as qualified, are acceptable for use.

Attachment G

Groundwater and LDCS Time Trend Plots

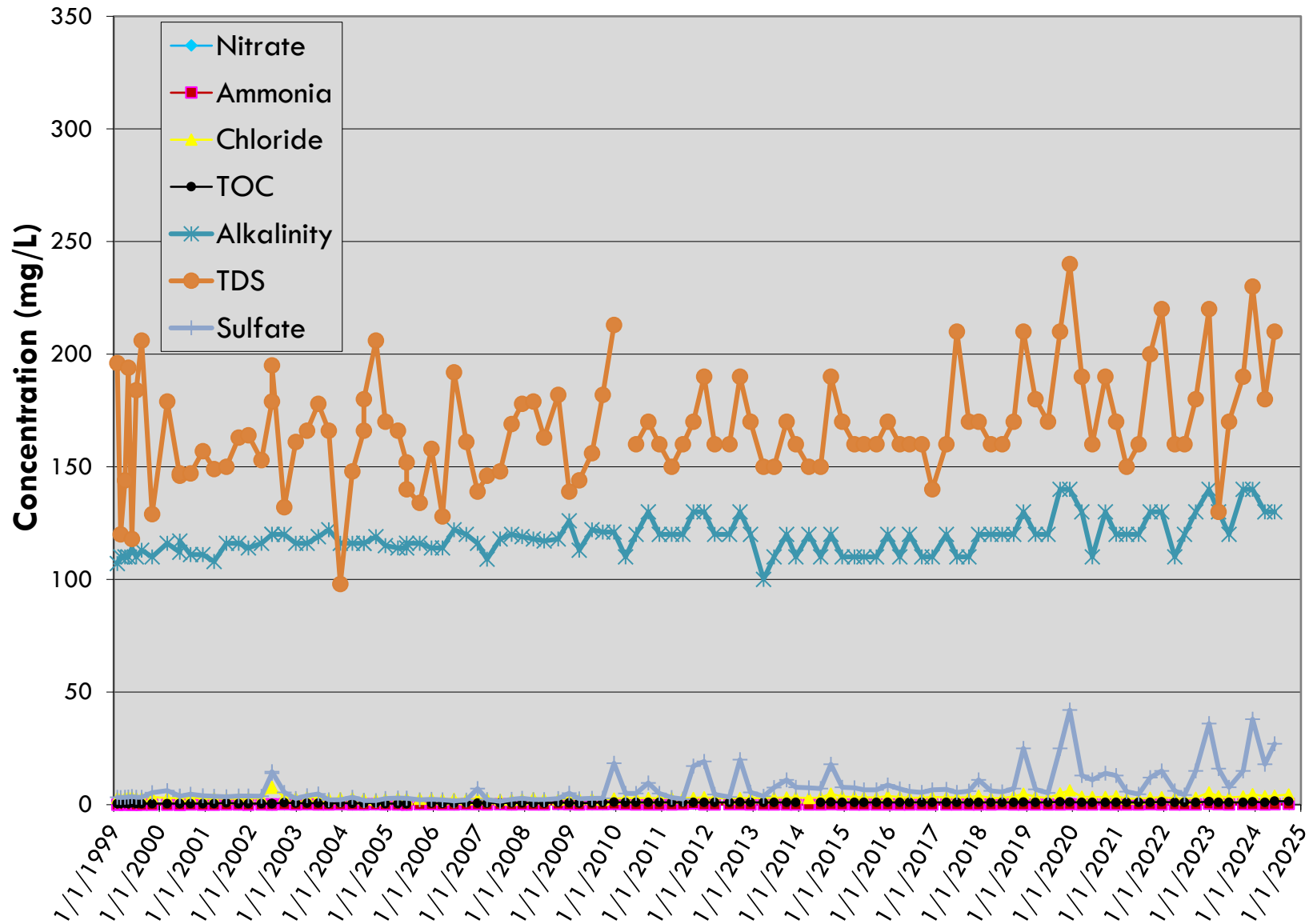
MW-1A

LRI Landfill, Pierce County, Washington



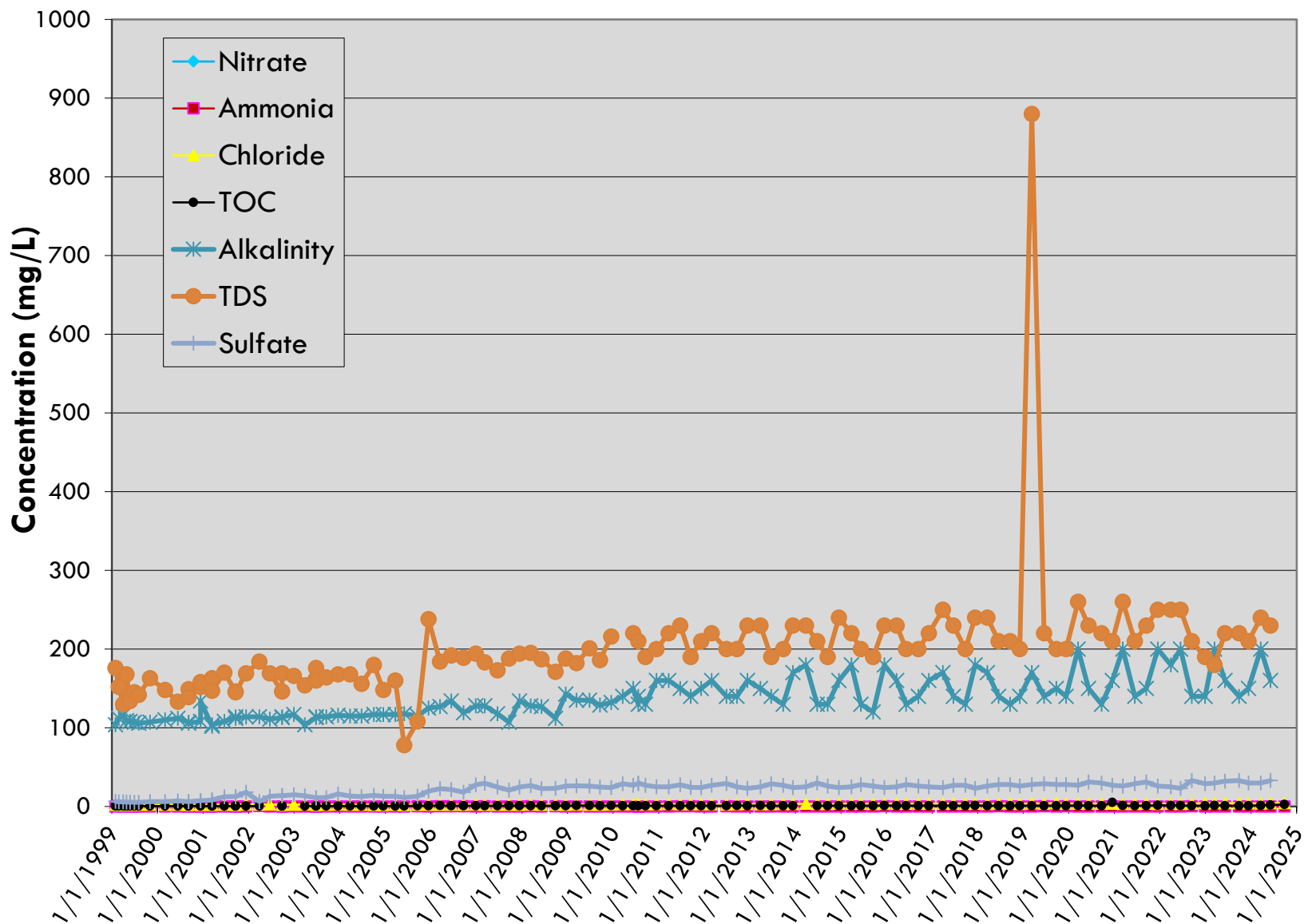
MW-2A

LRI Landfill, Pierce County, Washington



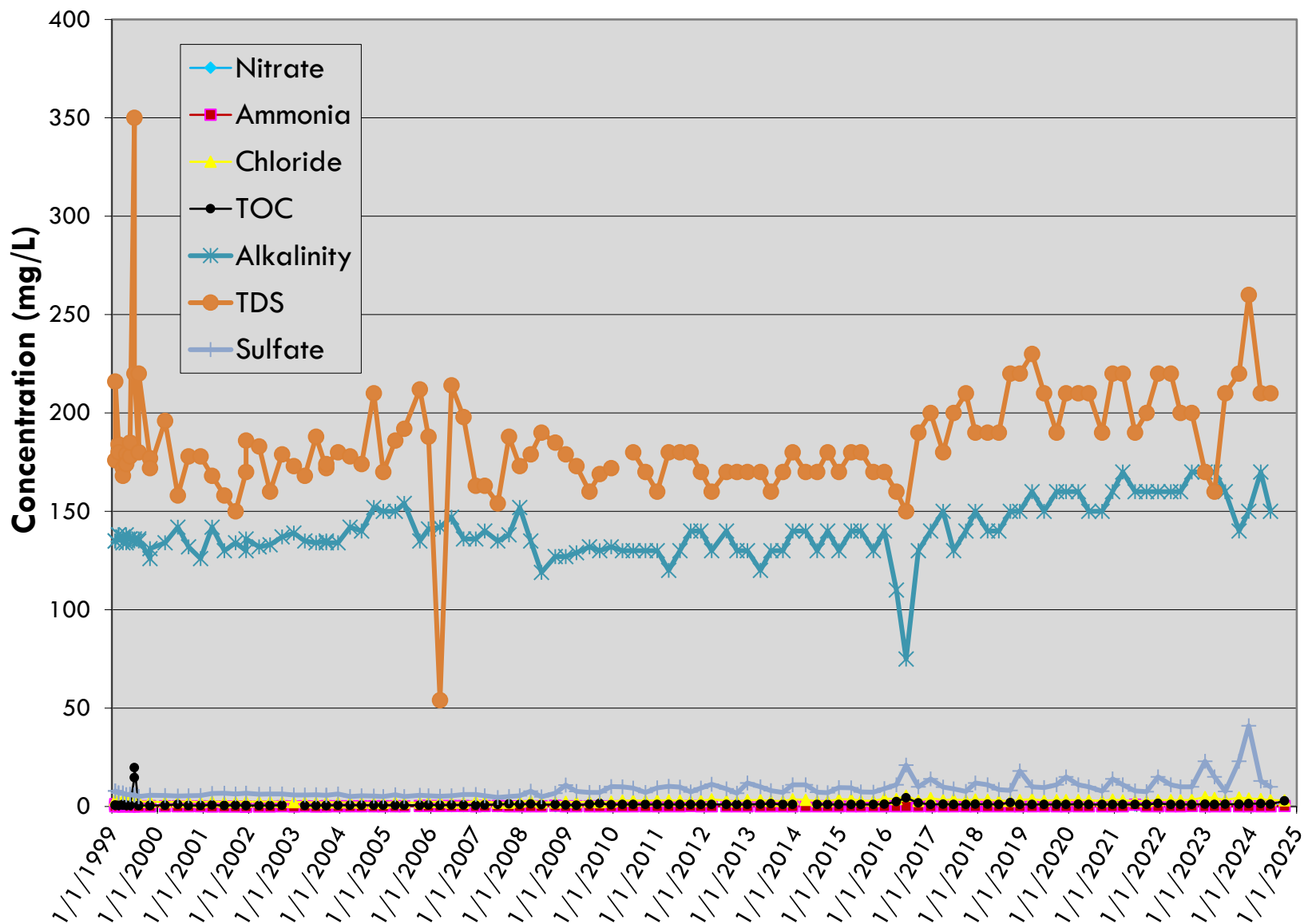
MW-3

LRI Landfill, Pierce County, Washington



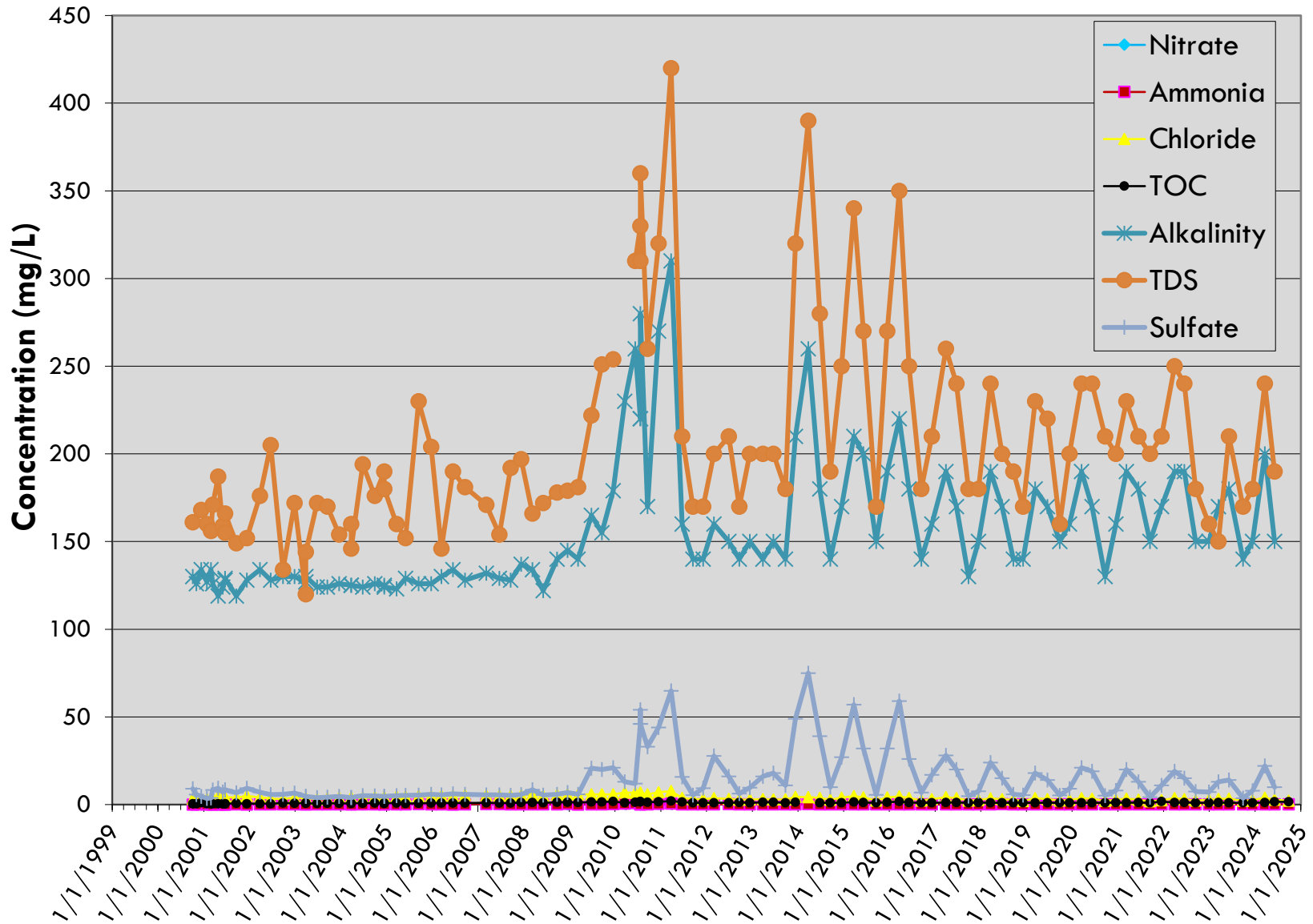
MW-4

LRI Landfill, Pierce County, Washington



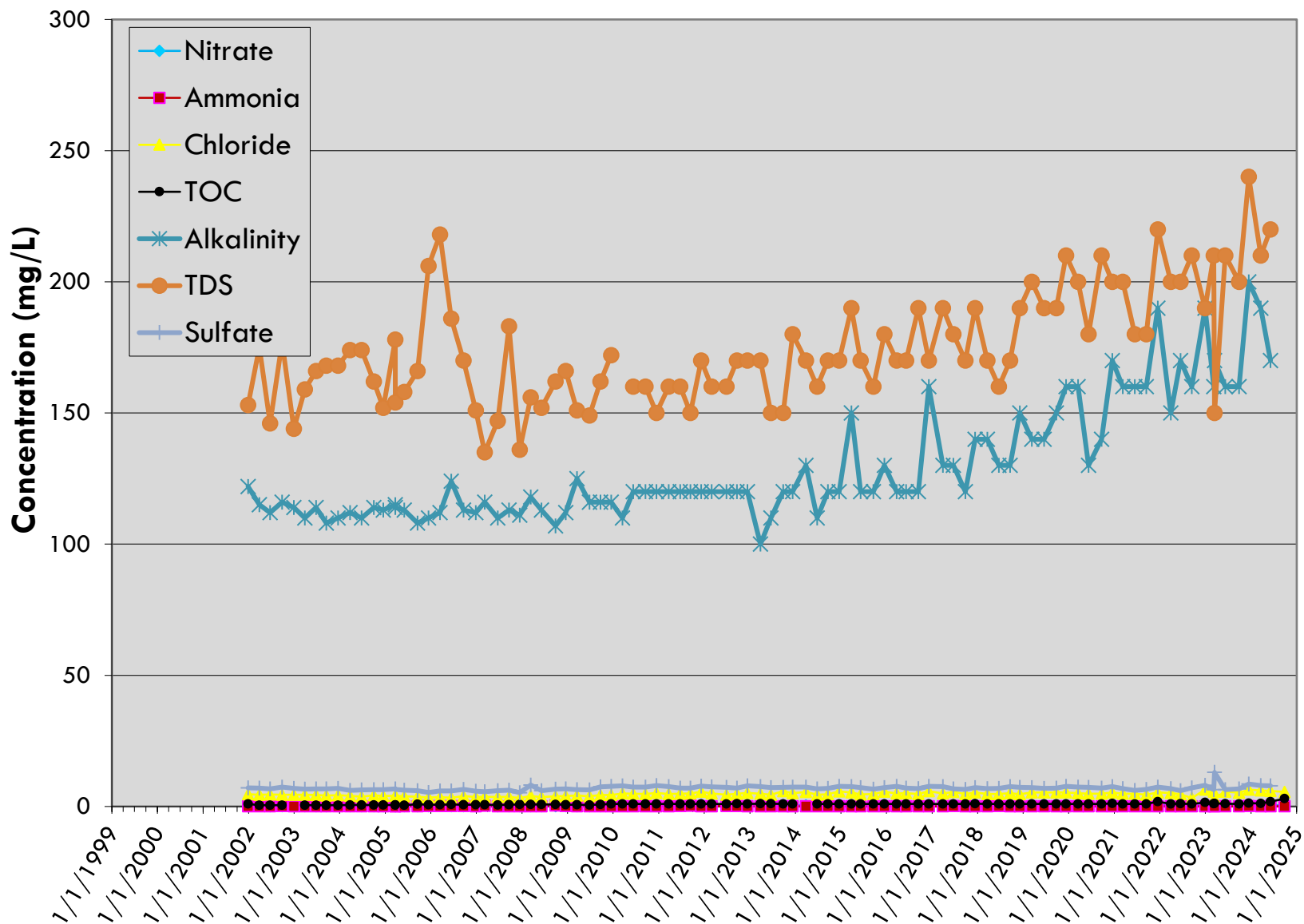
MW-5A

LRI Landfill, Pierce County, Washington



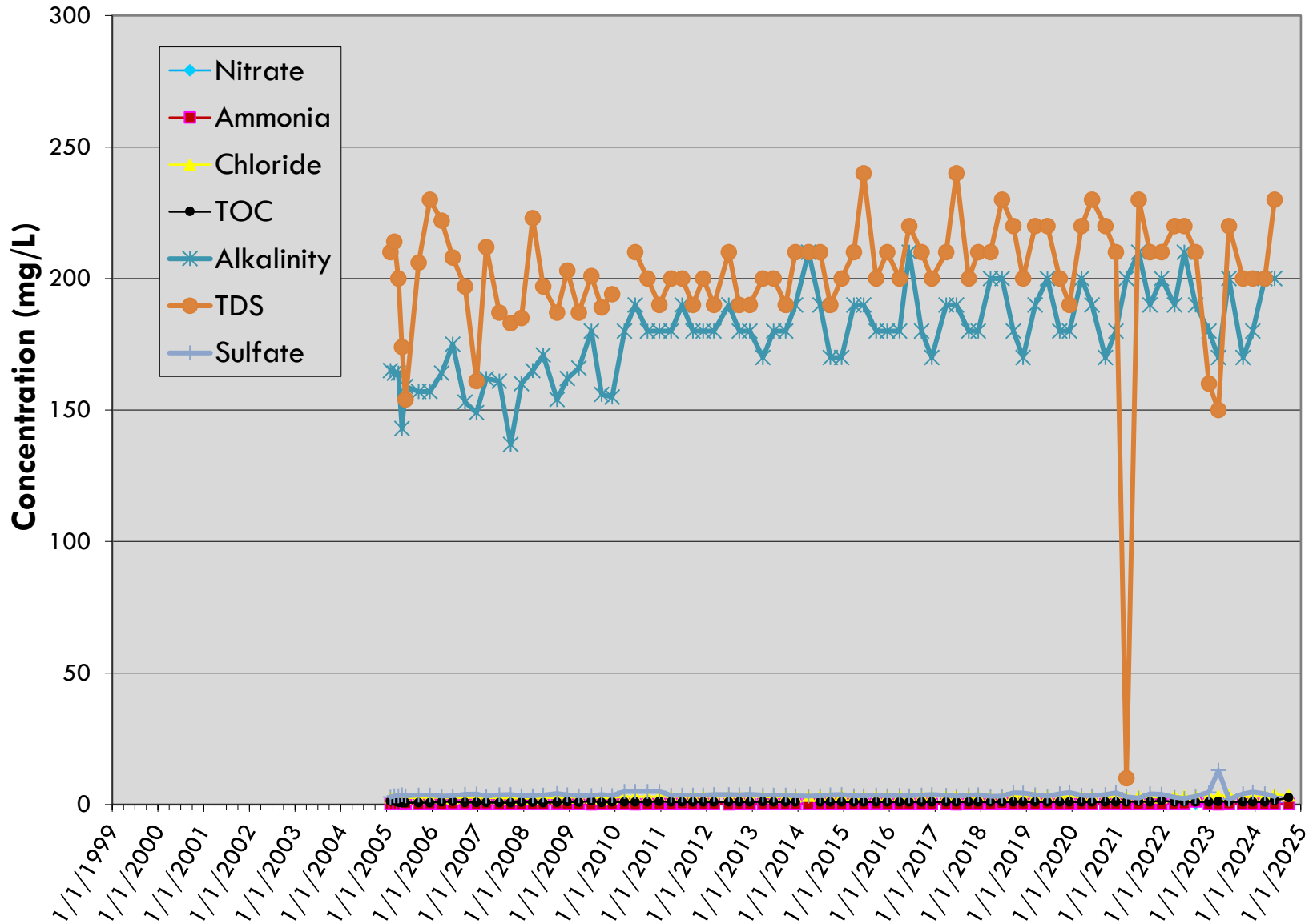
MW-6

LRI Landfill, Pierce County, Washington

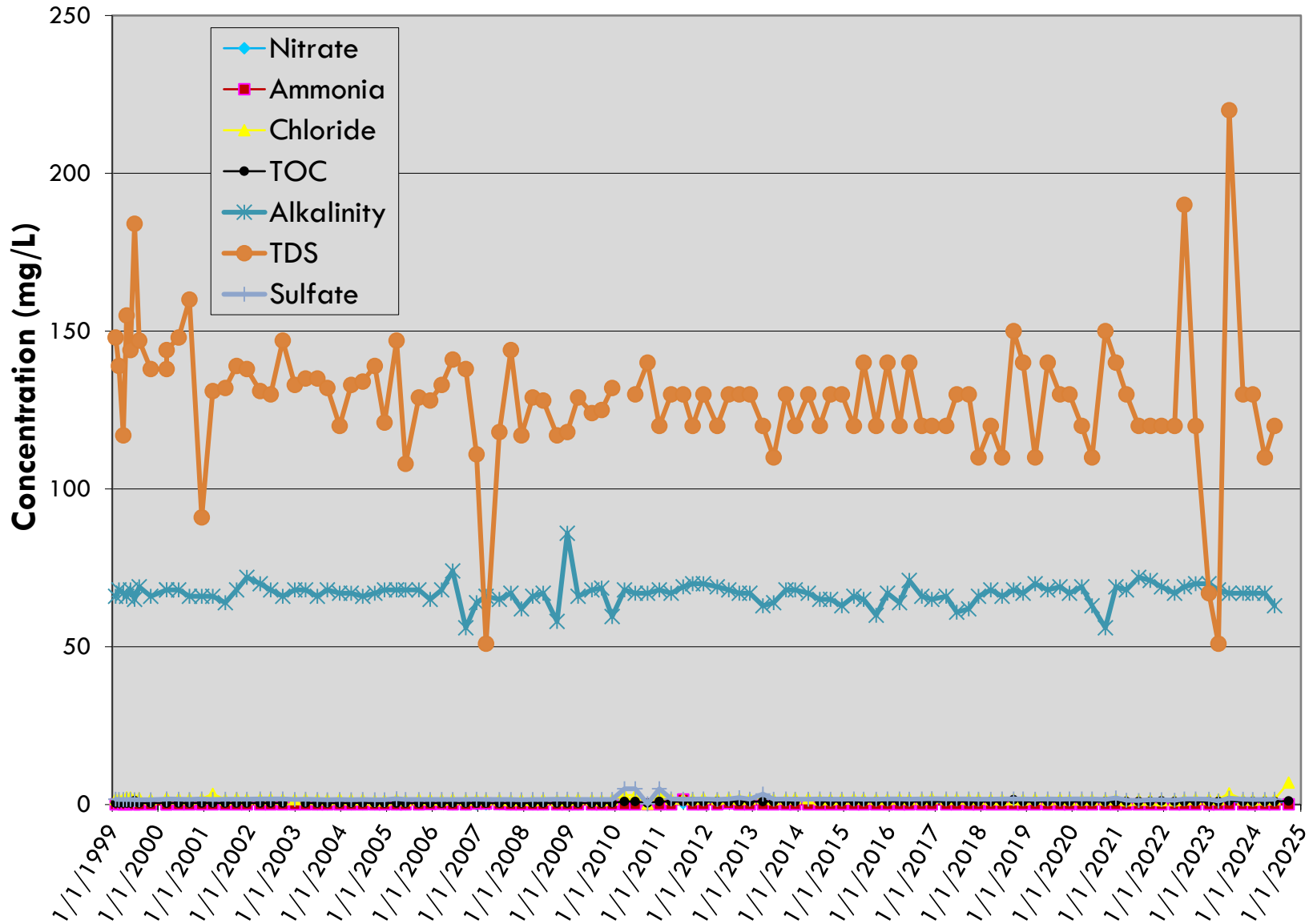


MW-7

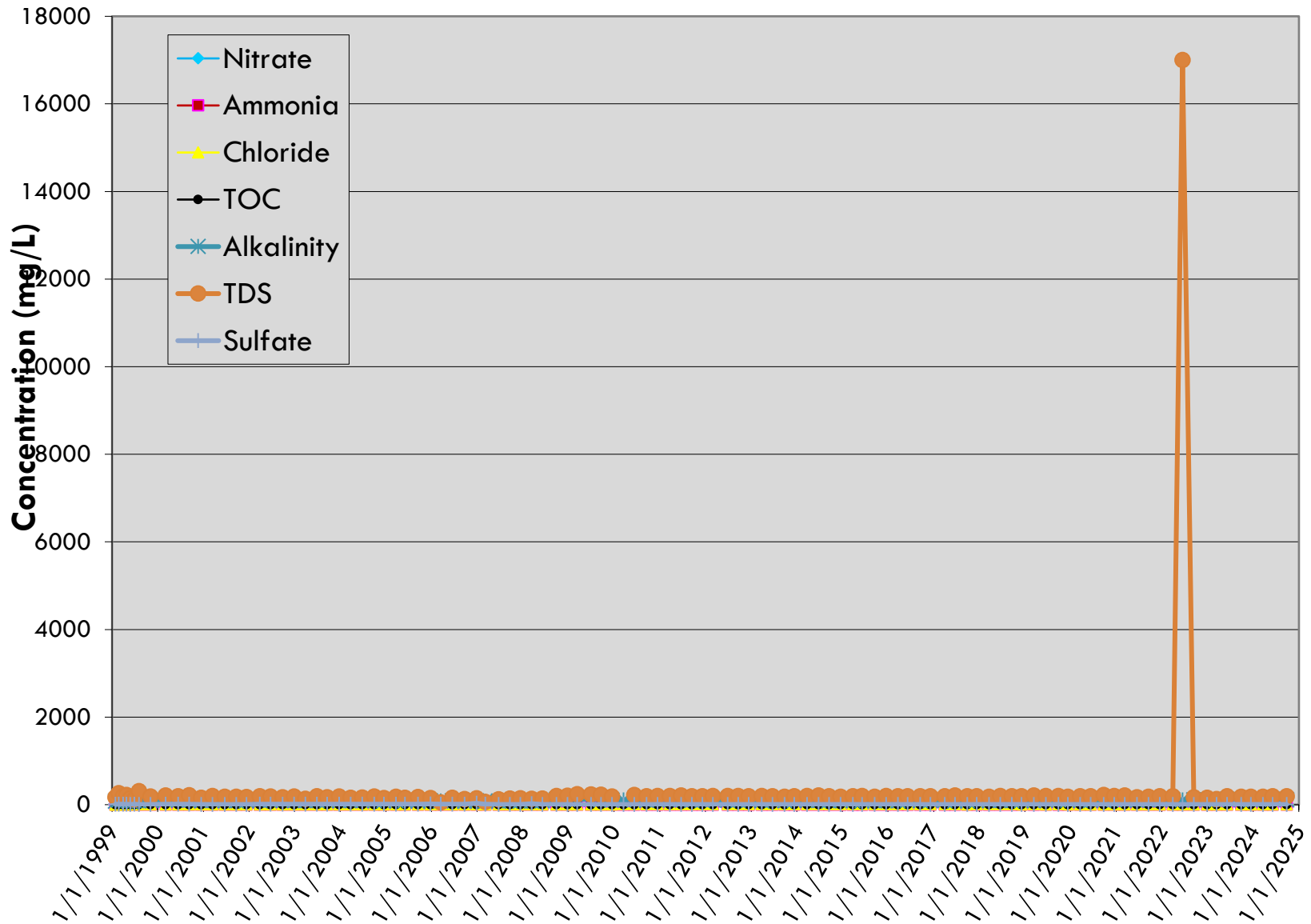
LRI Landfill, Pierce County, Washington



MW-9 (Background) LRI Landfill, Pierce County, Washington

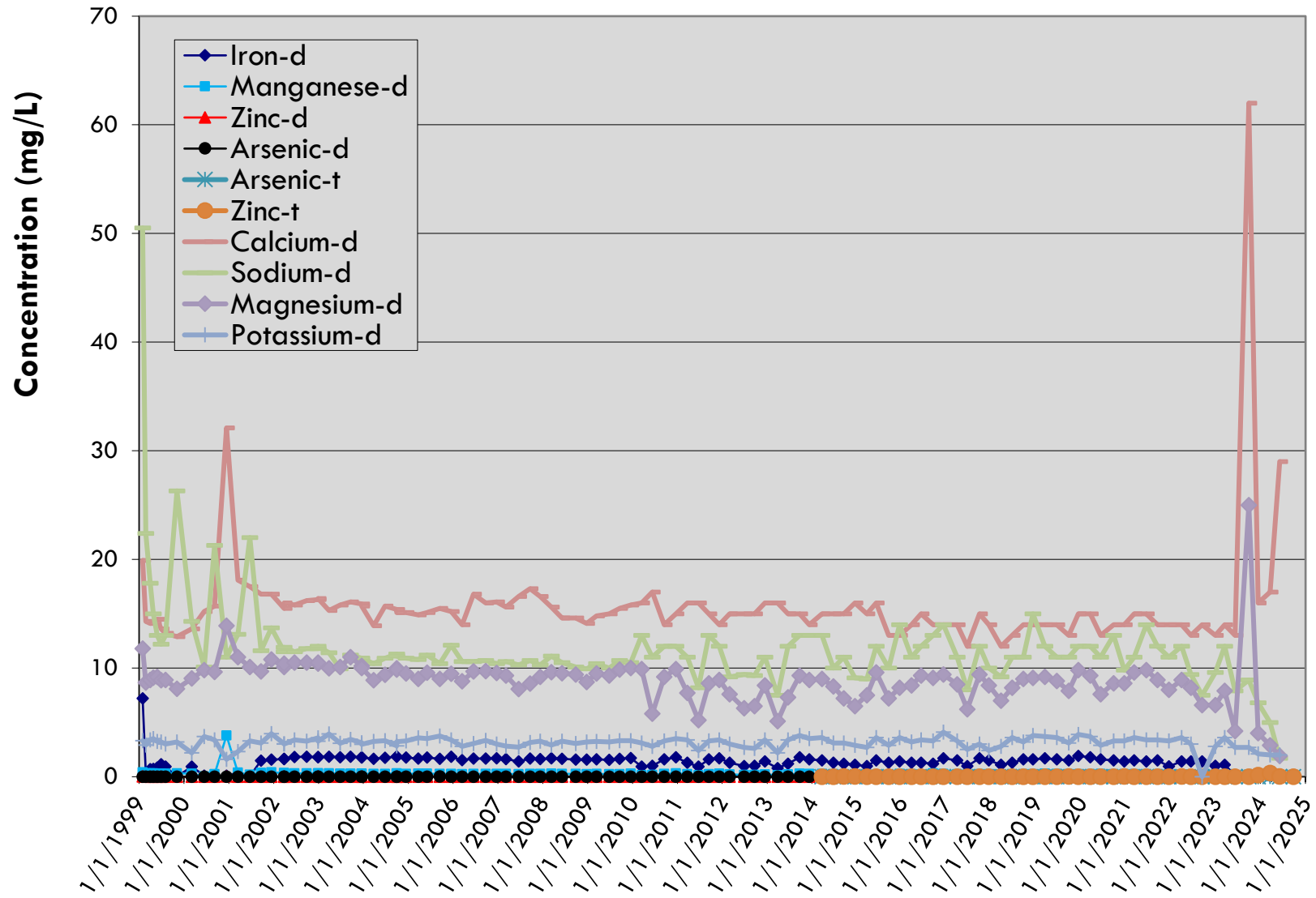


MW-10 (Background) LRI Landfill, Pierce County, Washington



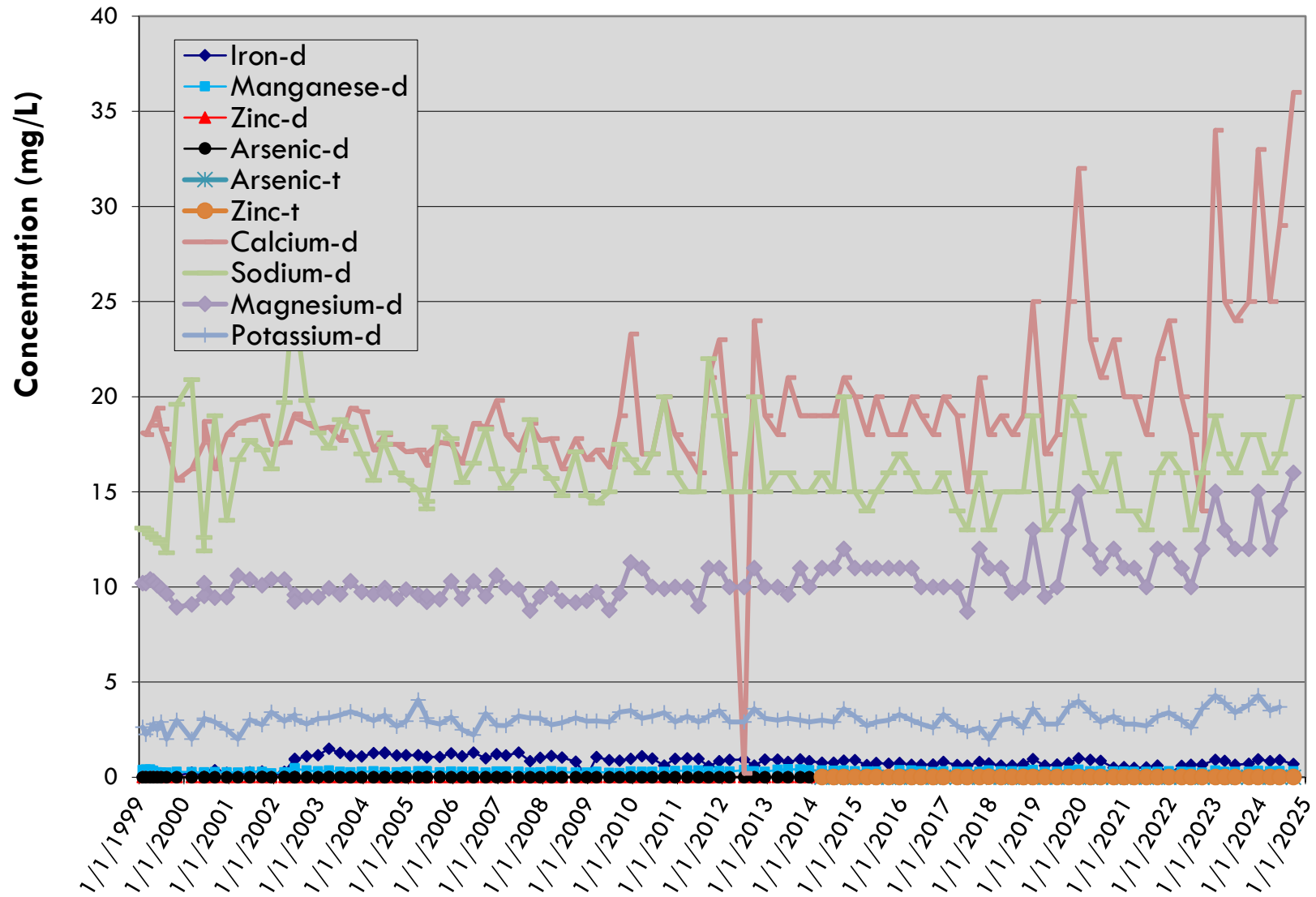
MW-1A

LRI Landfill, Pierce County, Washington



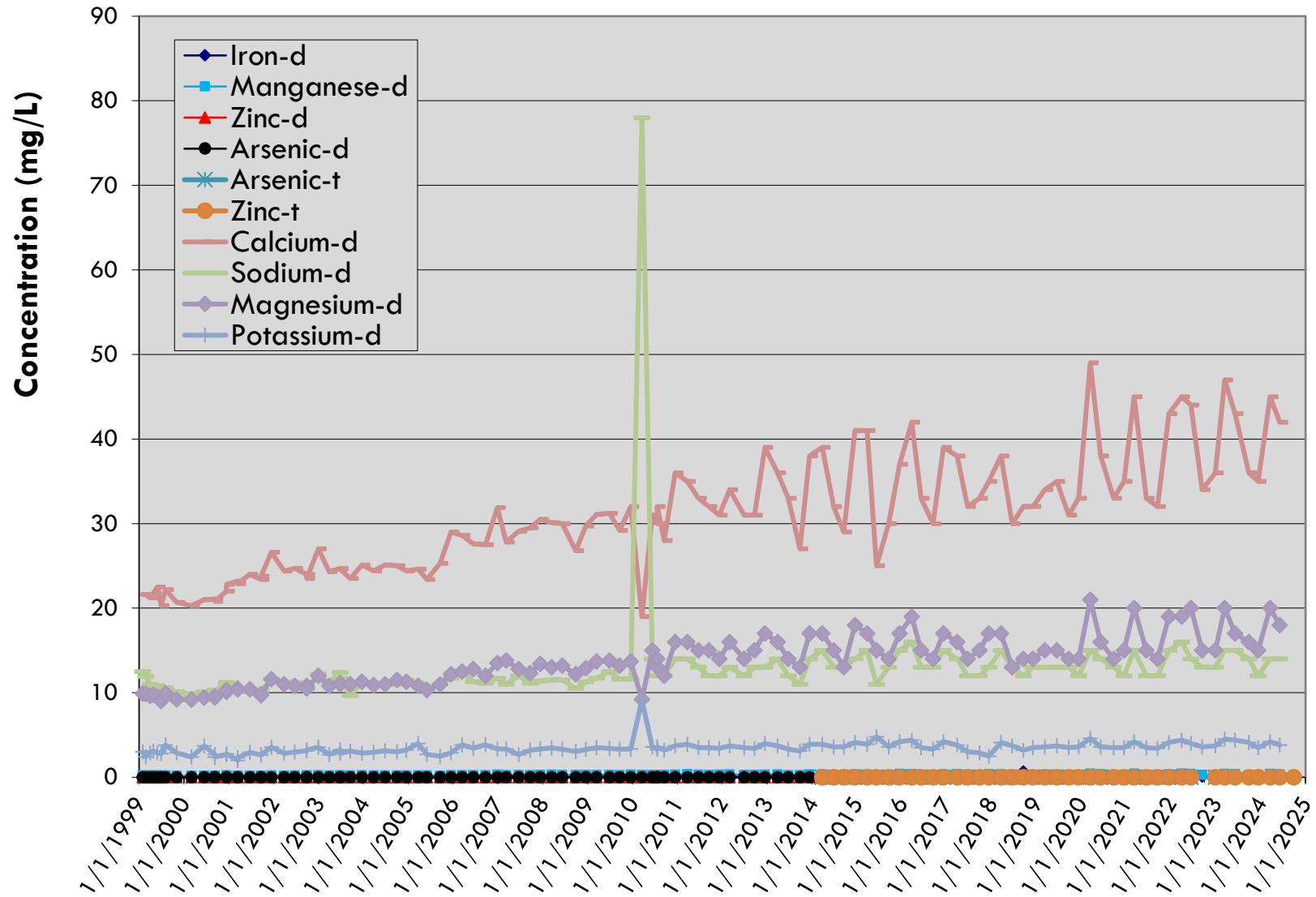
MW-2A

LRI Landfill, Pierce County, Washington



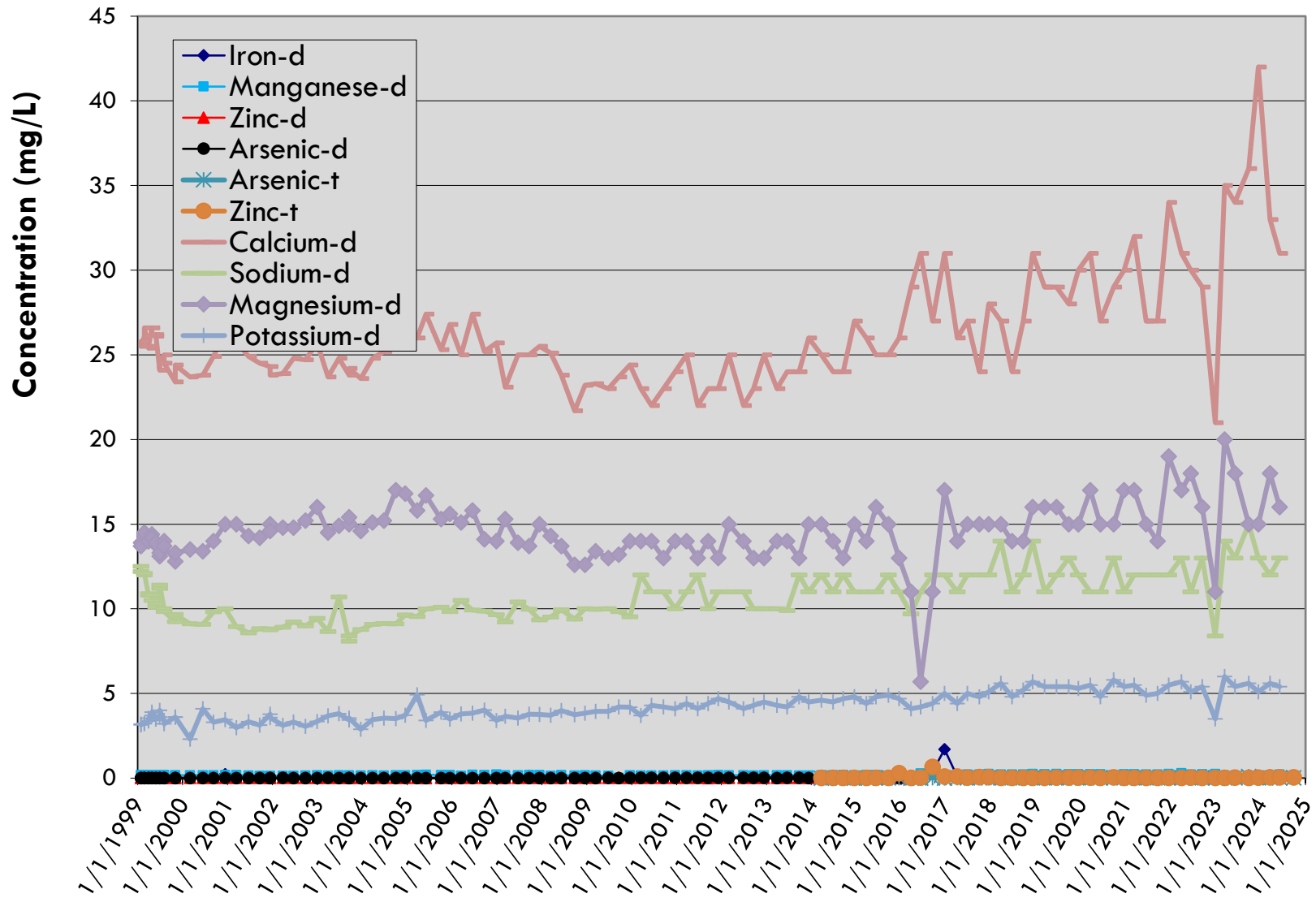
MW-3

LRI Landfill, Pierce County, Washington

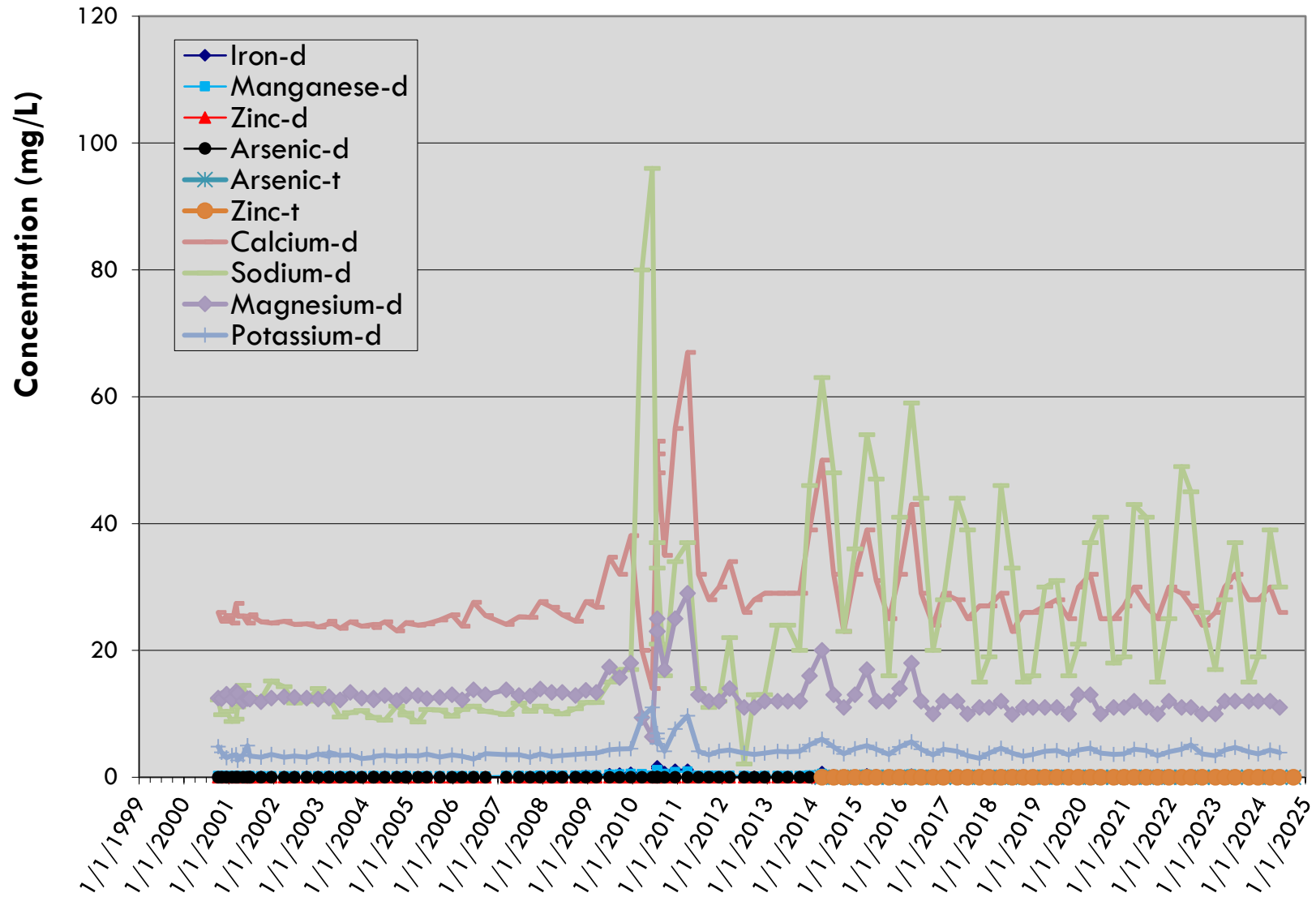


MW-4

LRI Landfill, Pierce County, Washington

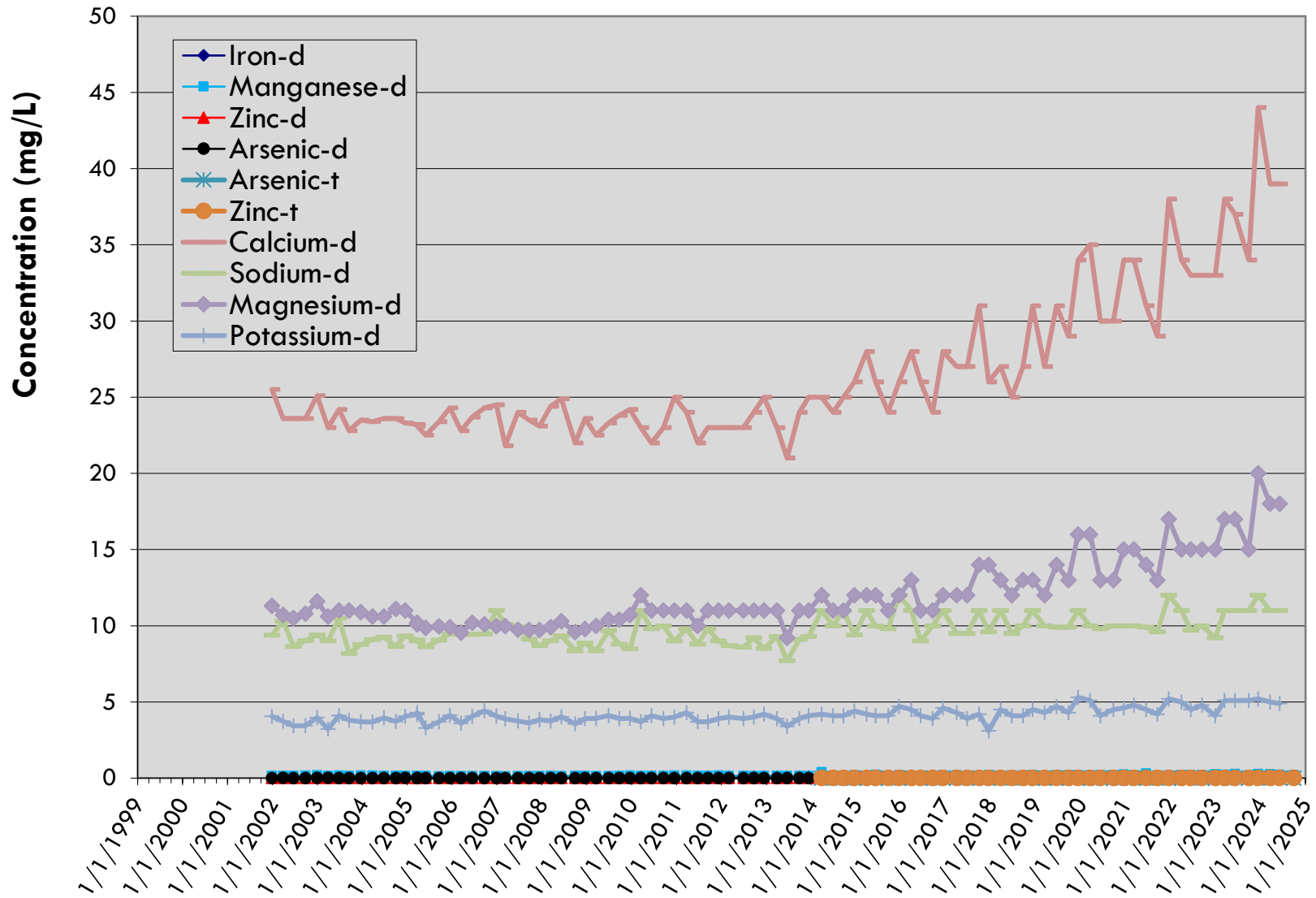


MW-5A
LRI Landfill, Pierce County, Washington



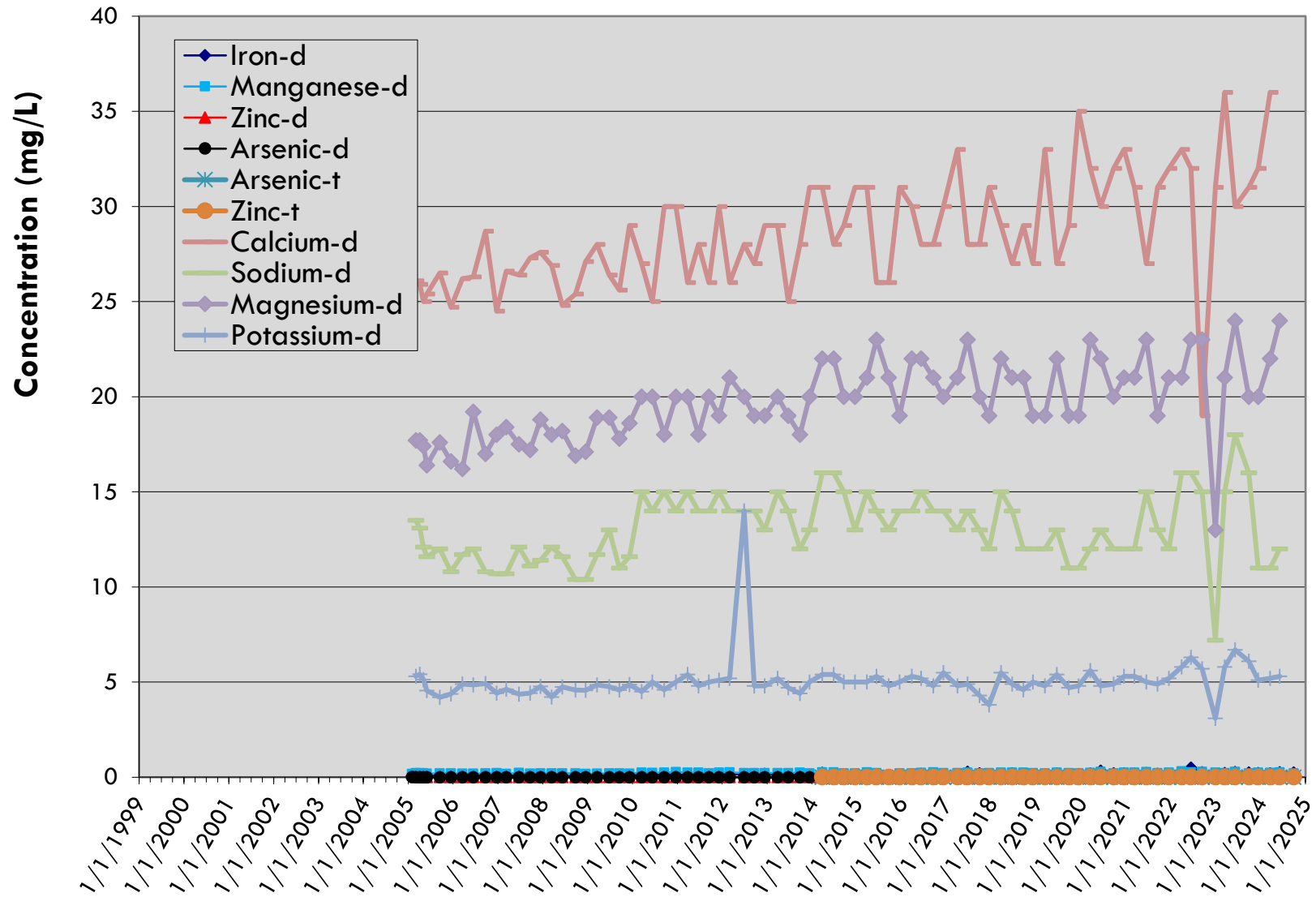
MW-6

LRI Landfill, Pierce County, Washington

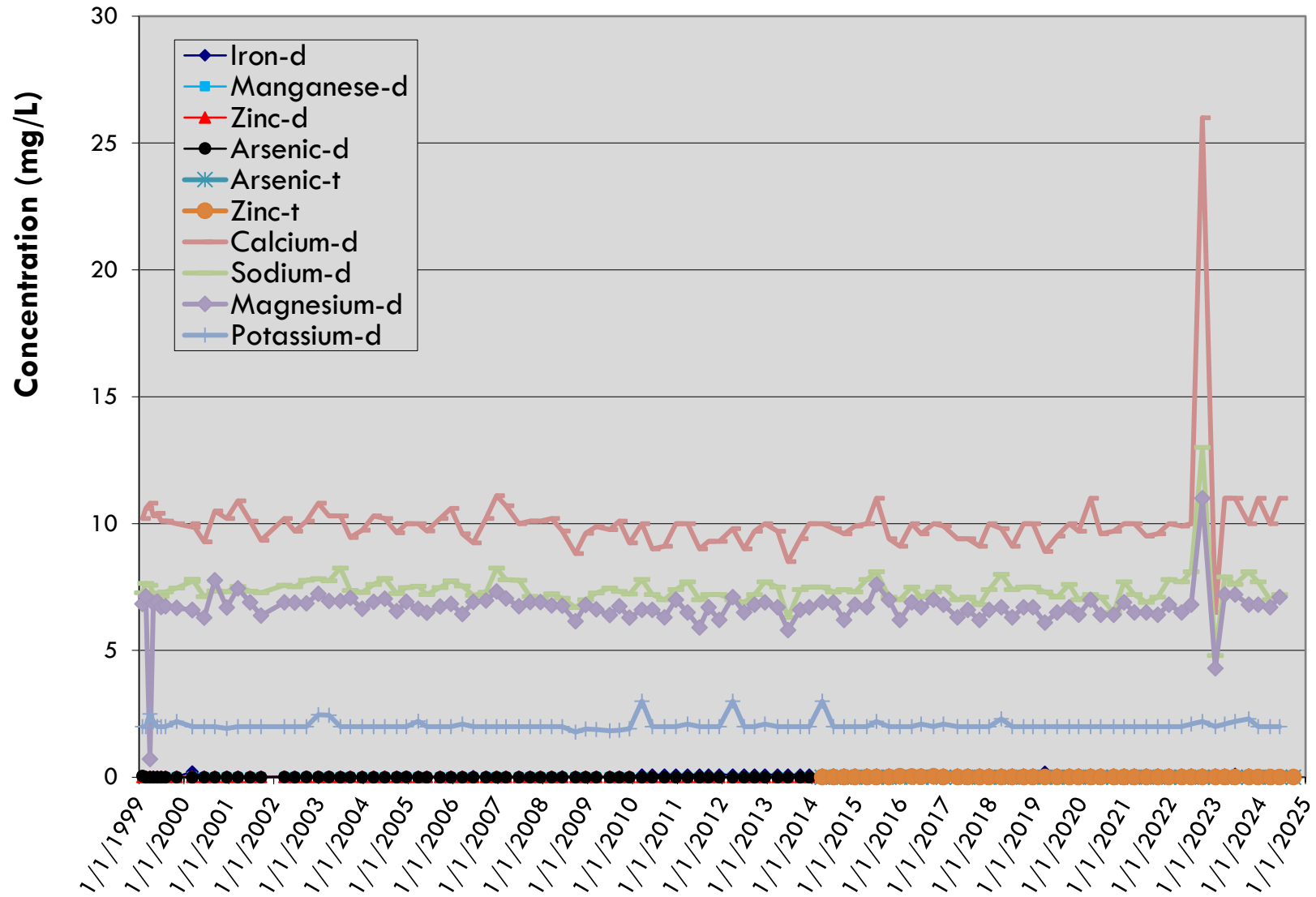


MW-7

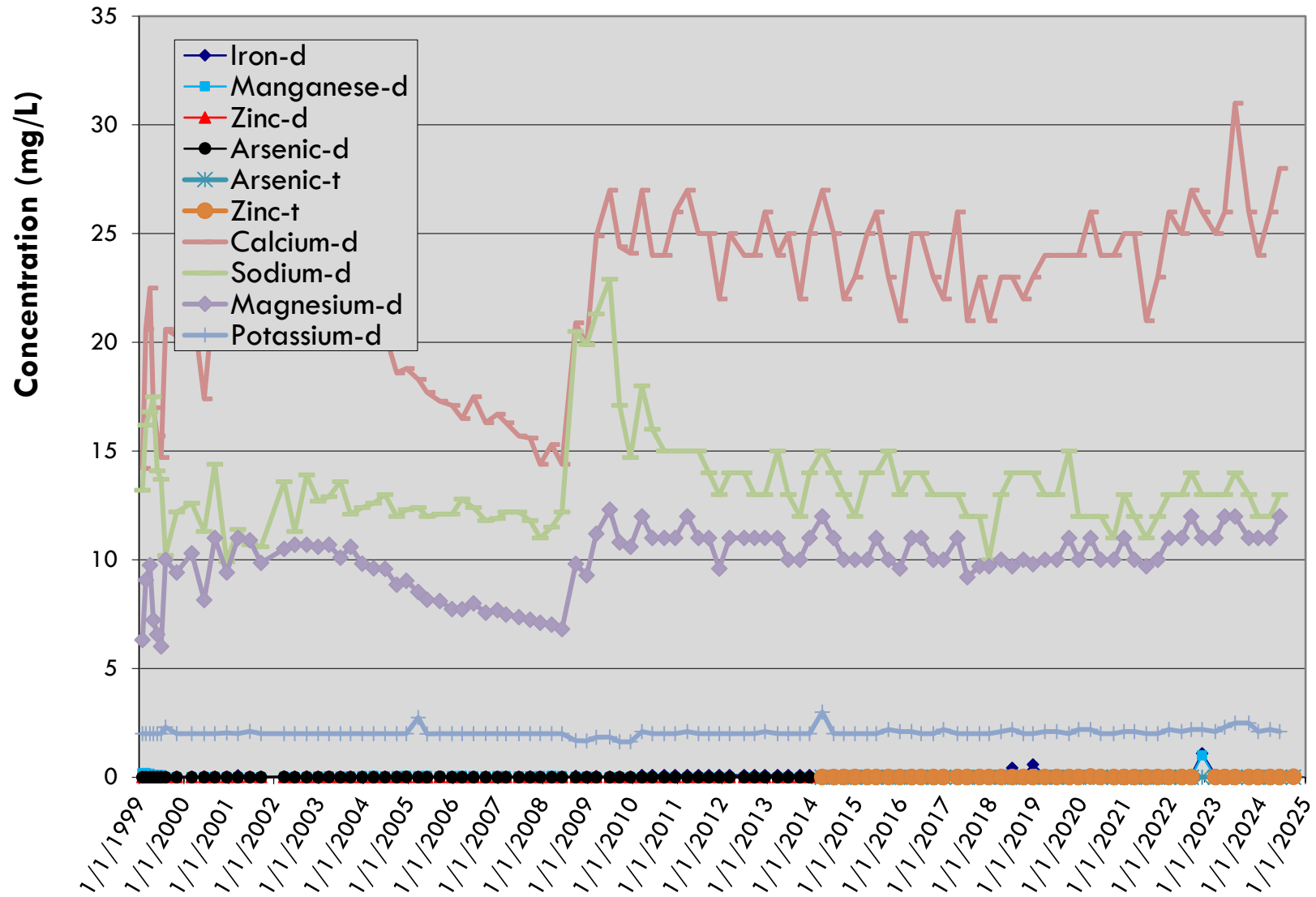
LRI Landfill, Pierce County, Washington



MW-9 (Background) LRI Landfill, Pierce County, Washington

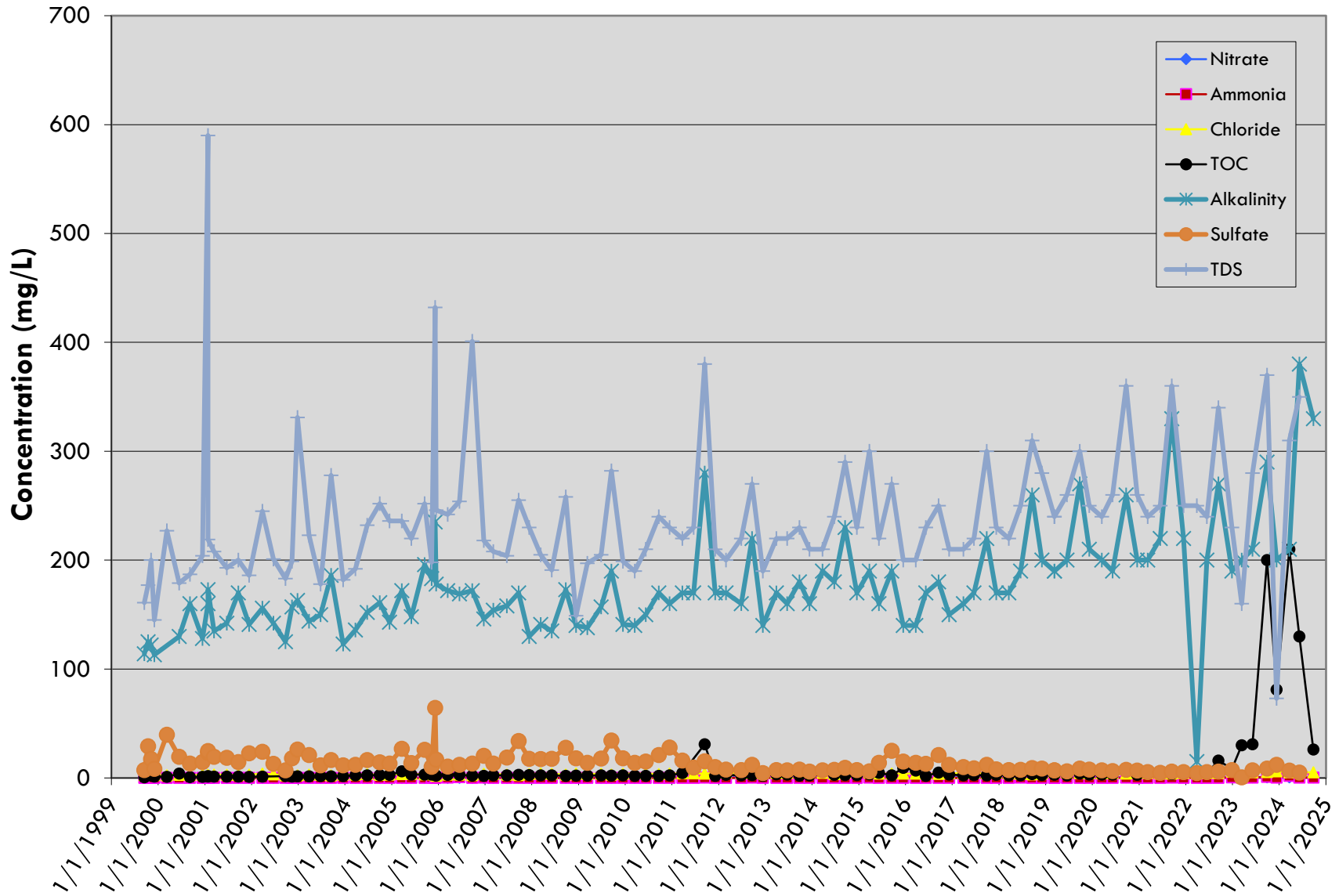


MW-10 (Background) LRI Landfill, Pierce County, Washington



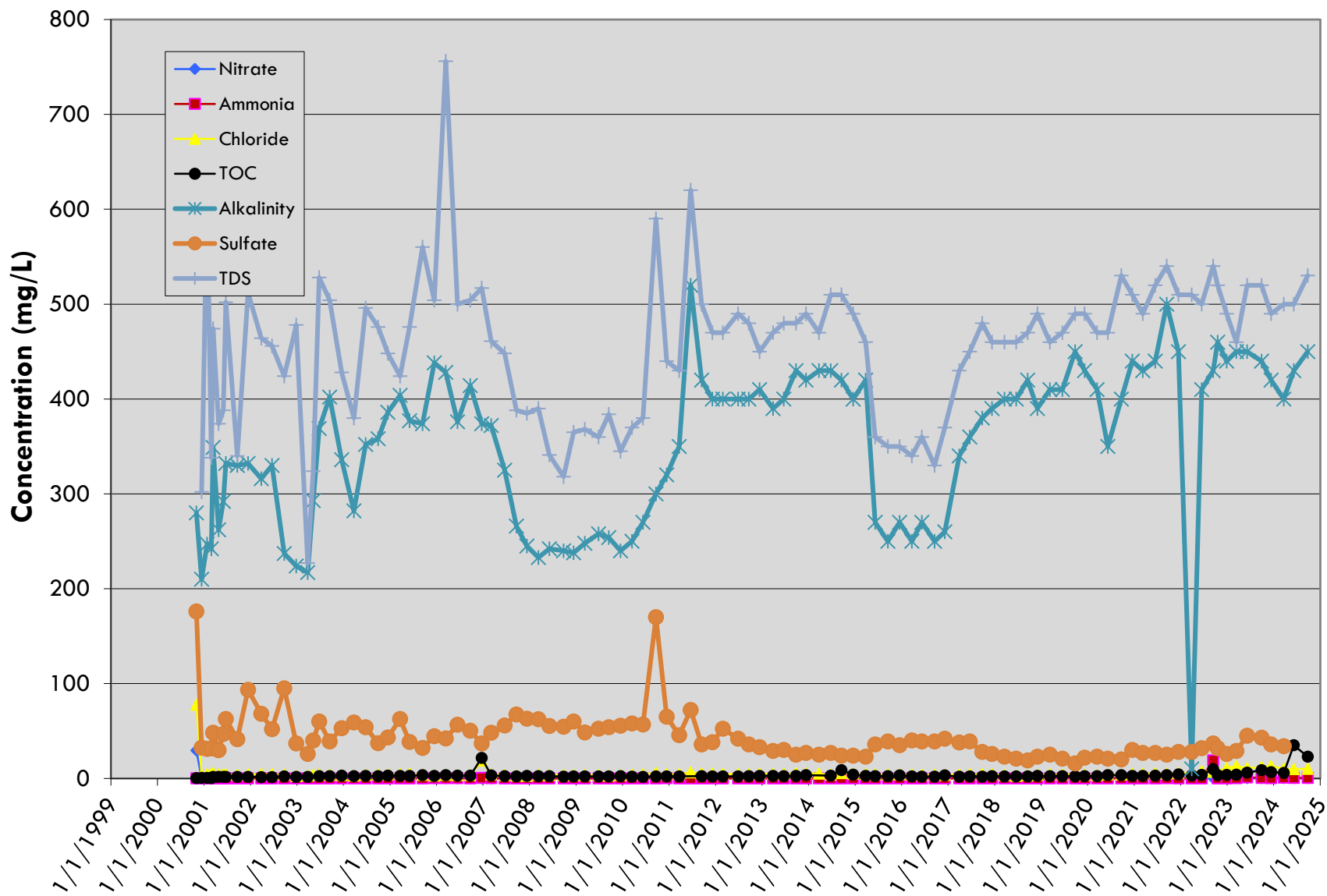
LDCS-1

LRI Landfill, Pierce County, Washington



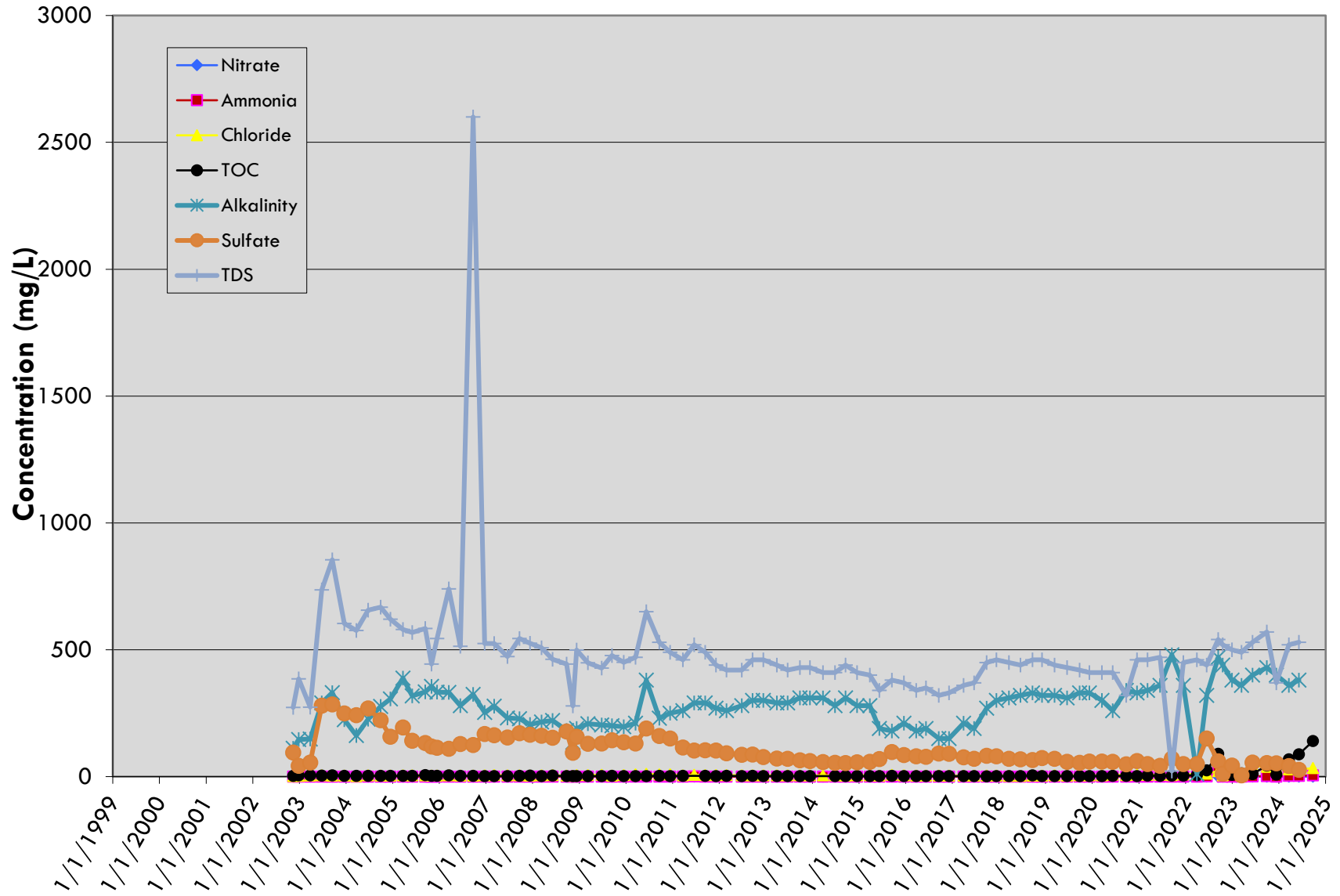
LDCS-2A

LRI Landfill, Pierce County, Washington



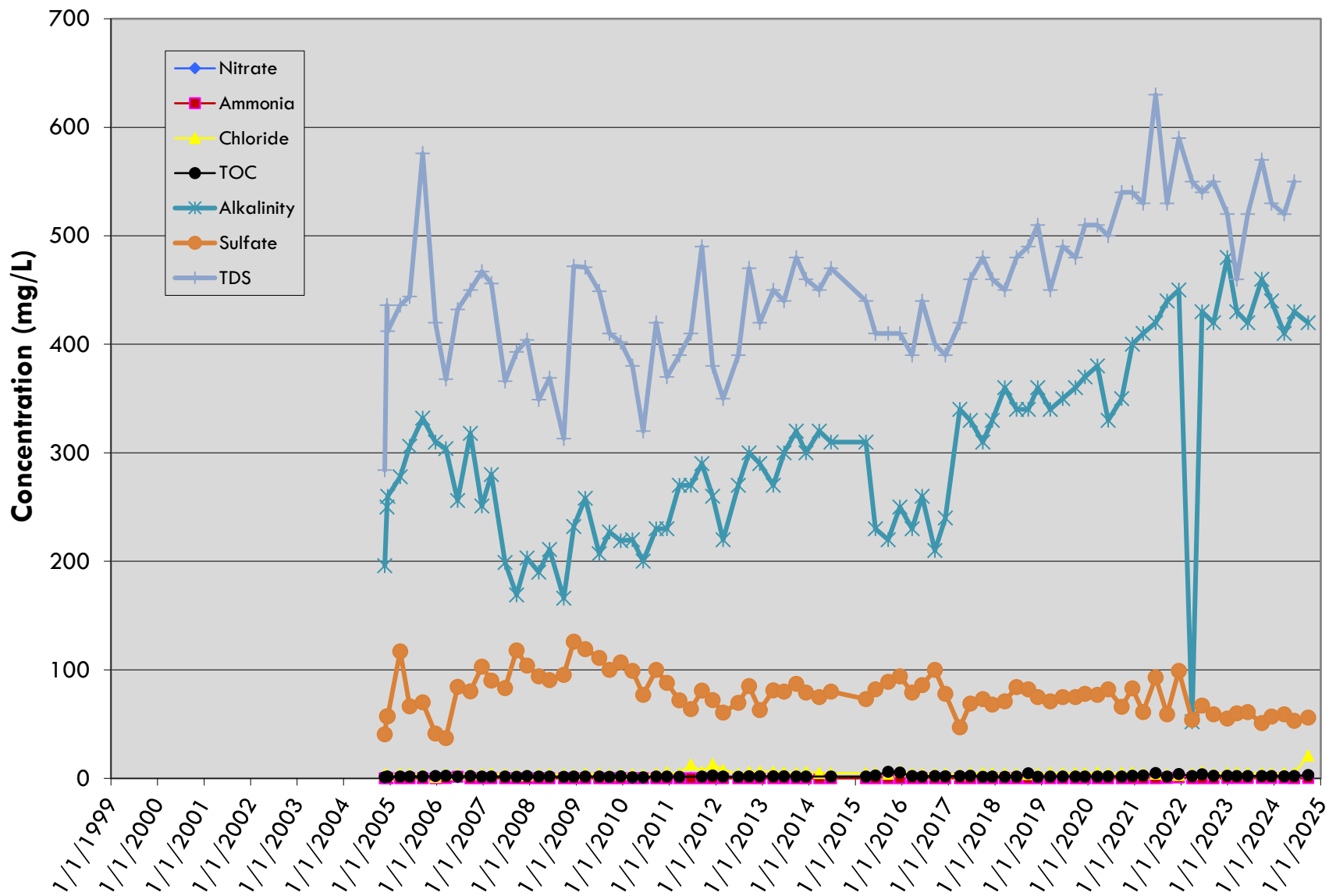
LDCS-2B

LRI Landfill, Pierce County, Washington



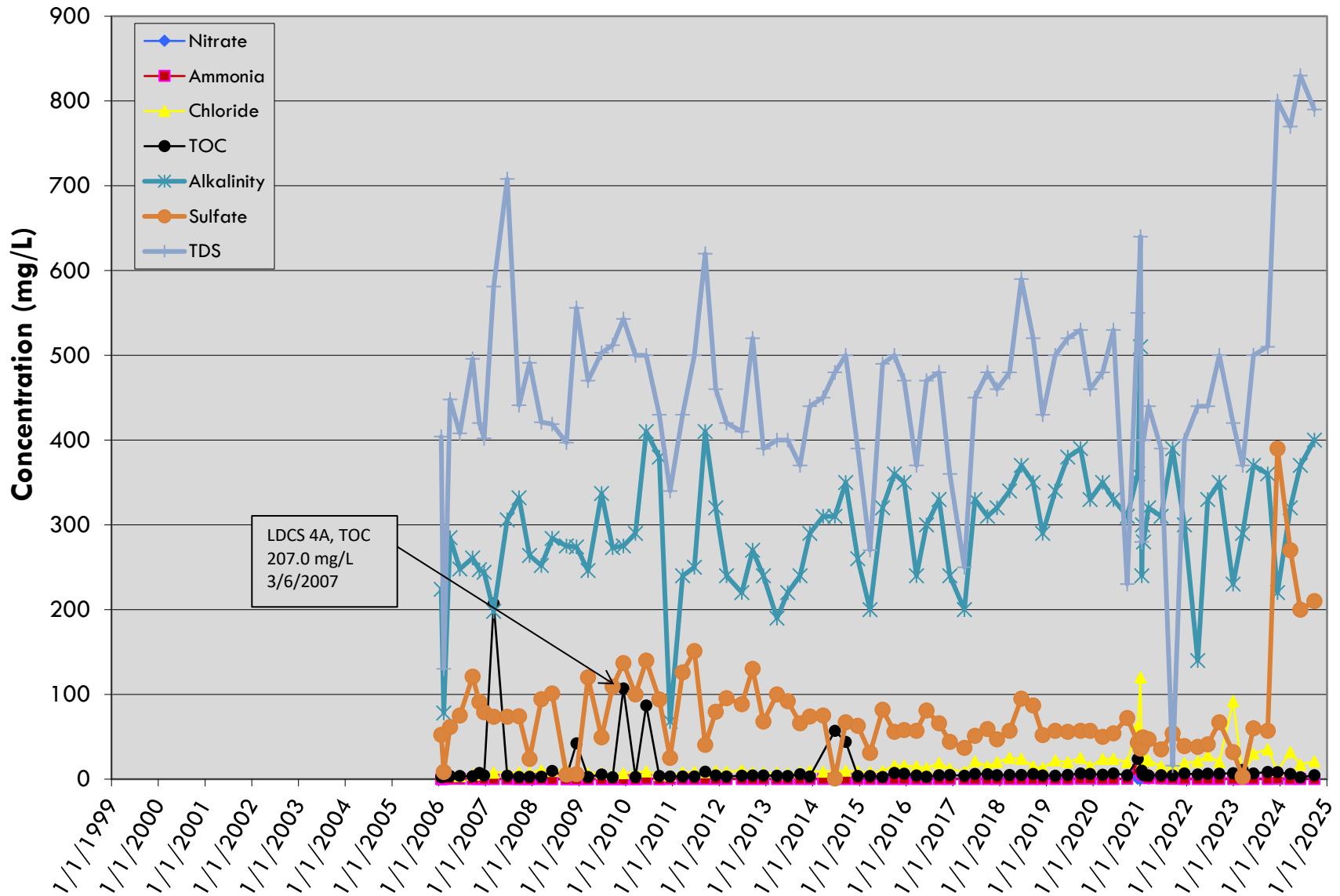
LDCS-3A

LRI Landfill, Pierce County, Washington



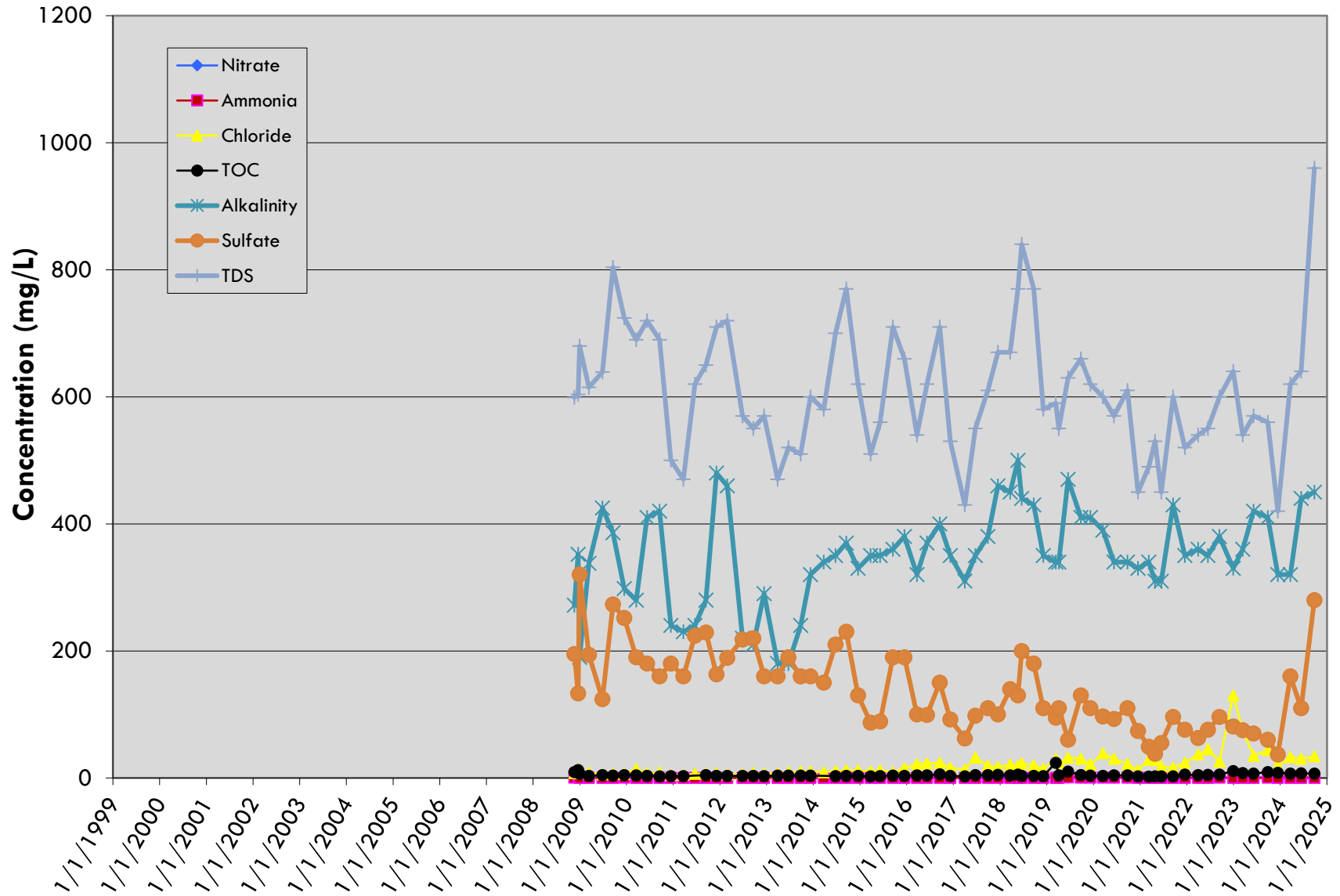
LDCS-4A

LRI Landfill, Pierce County, Washington



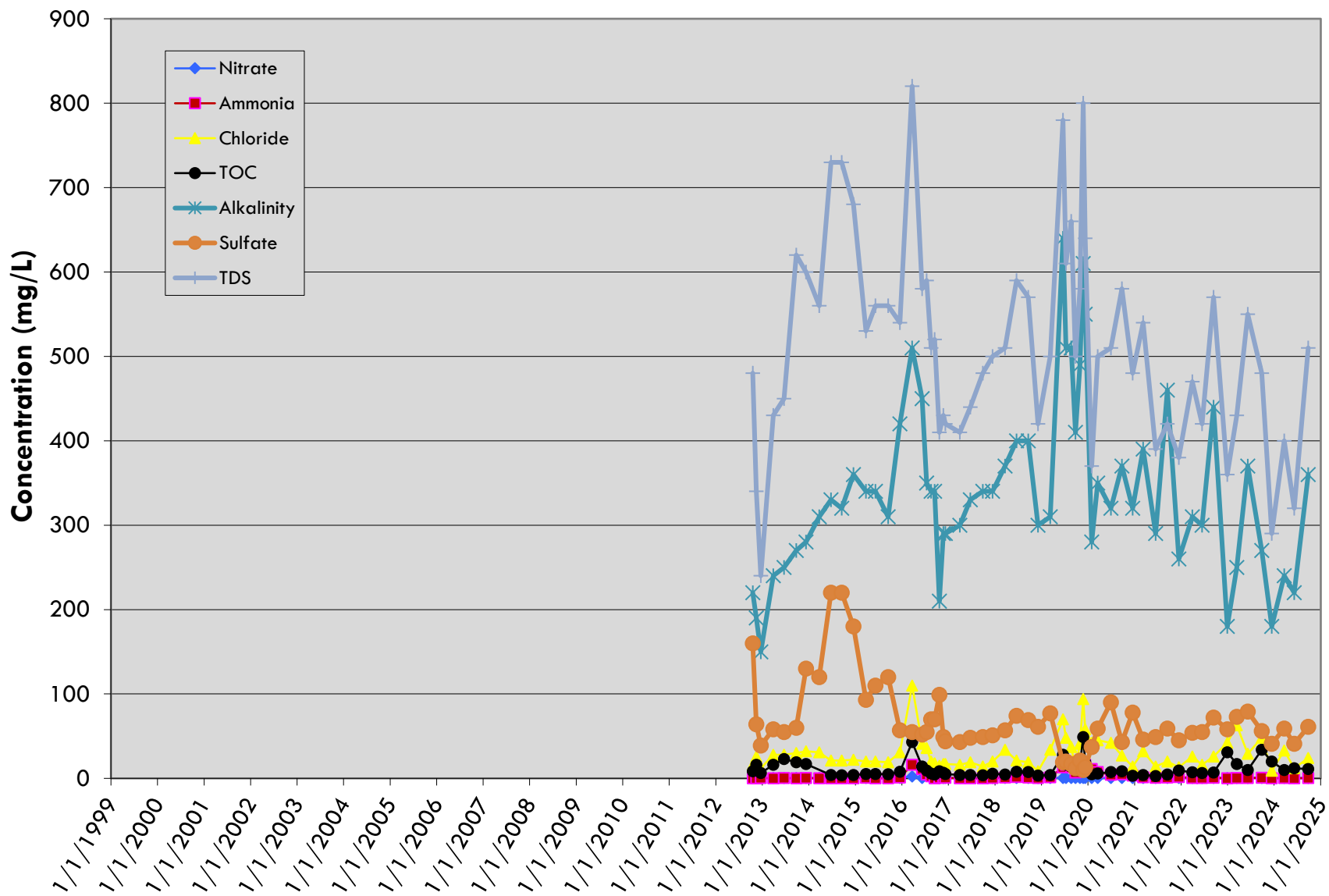
LDCS-4B

LRI Landfill, Pierce County, Washington



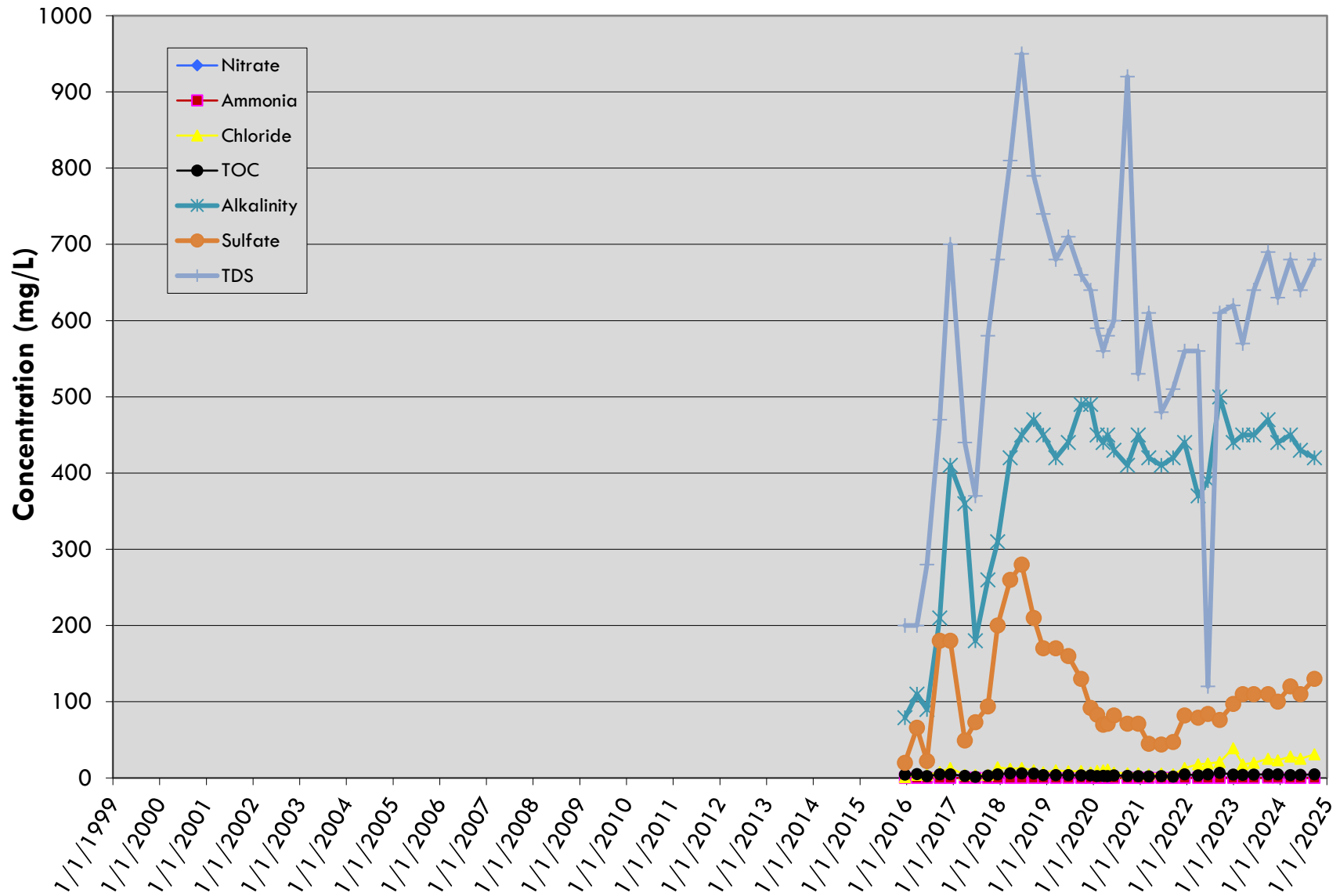
LDCS-5

LRI Landfill, Pierce County, Washington



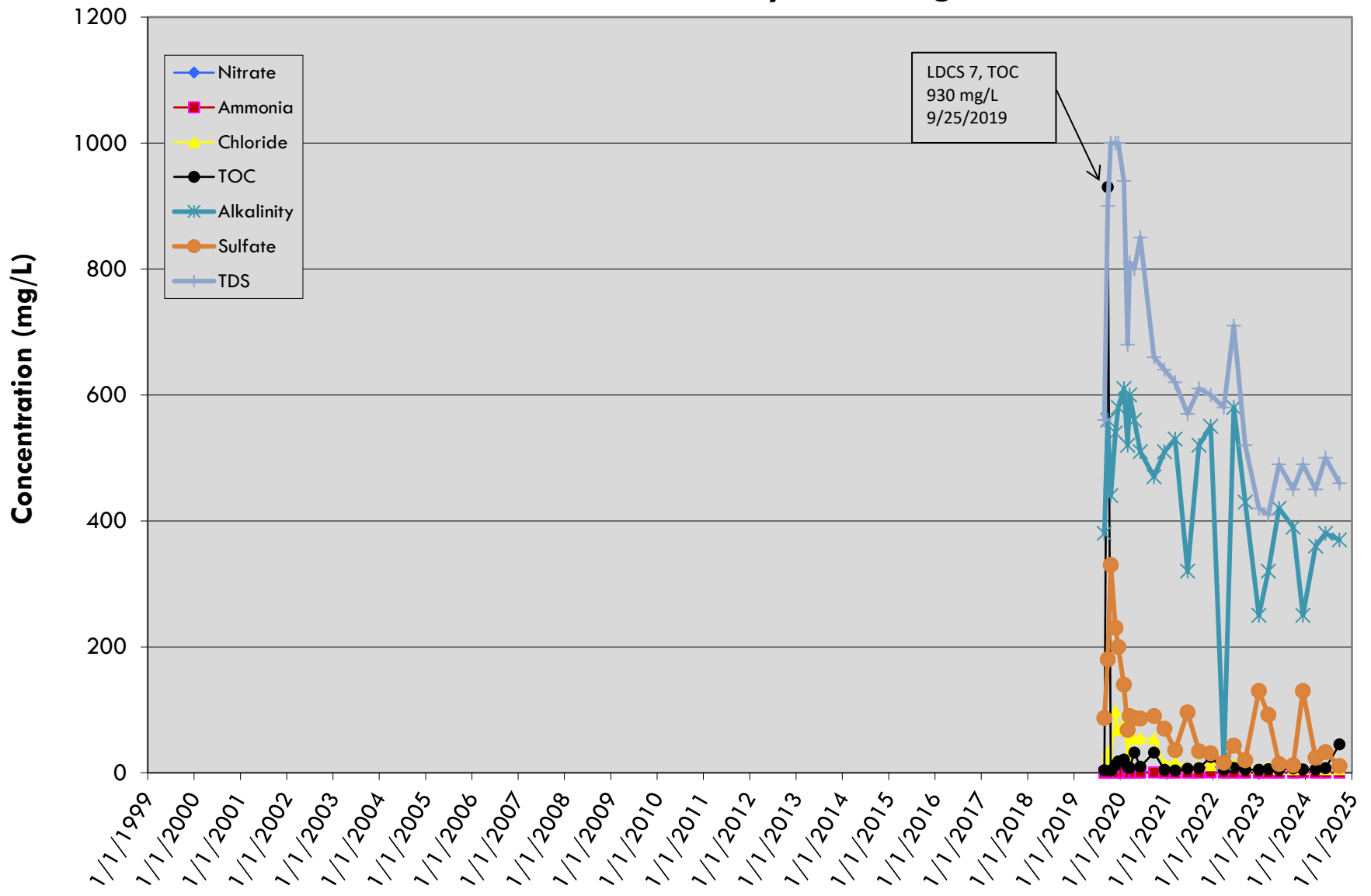
LDCS-6A

LRI Landfill, Pierce County, Washington



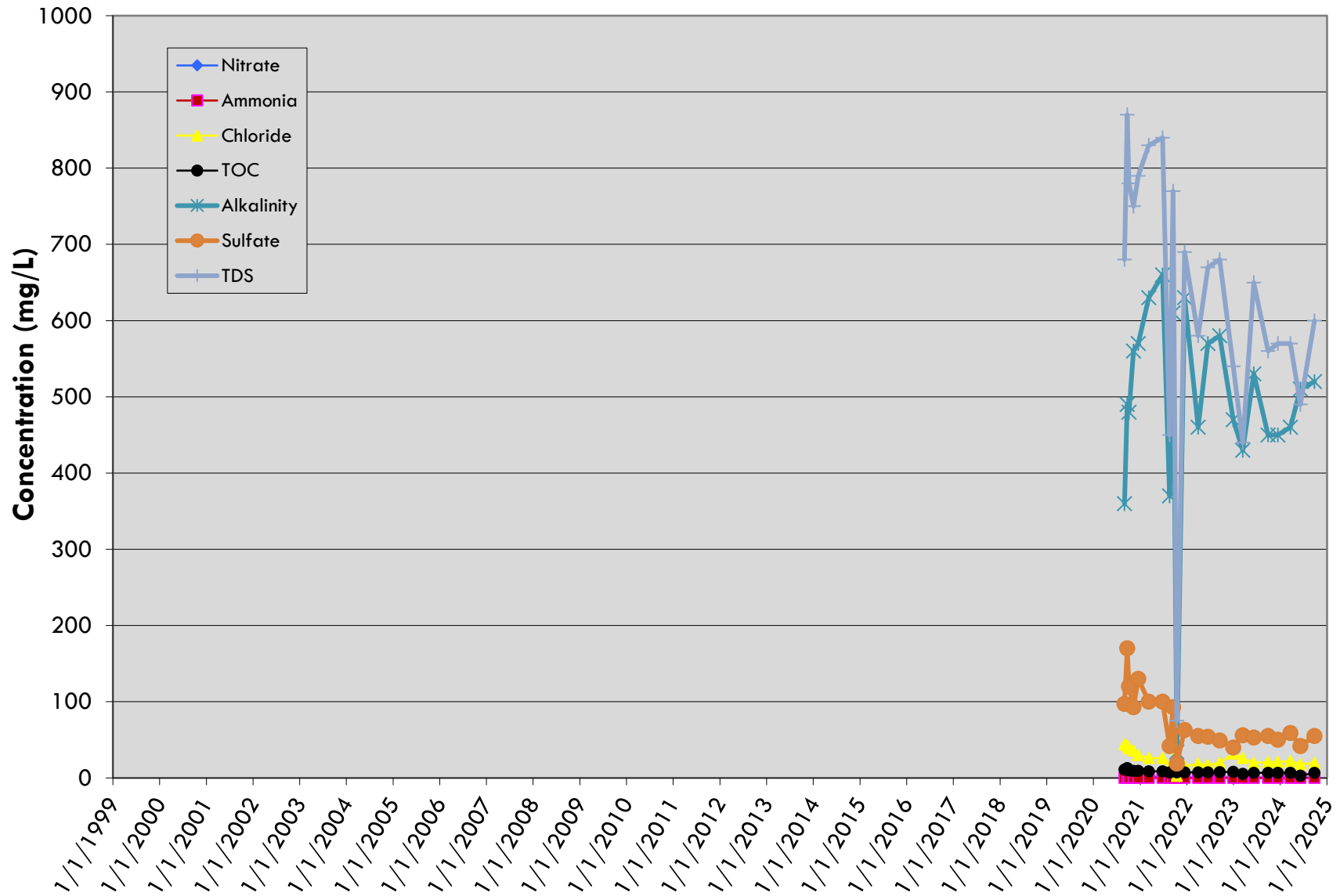
LDCS-7

LRI Landfill, Pierce County, Washington



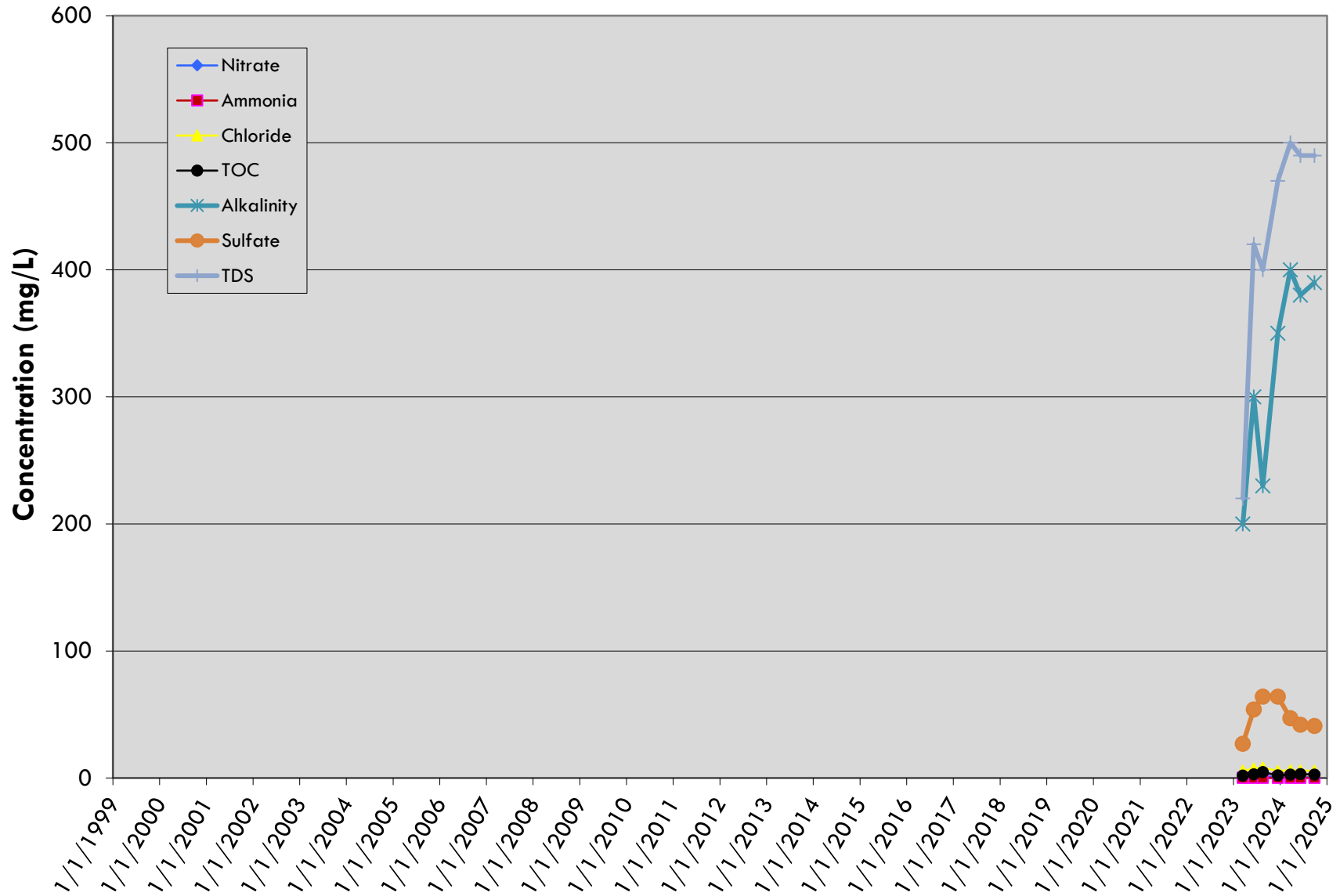
LDCS-8

LRI Landfill, Pierce County, Washington



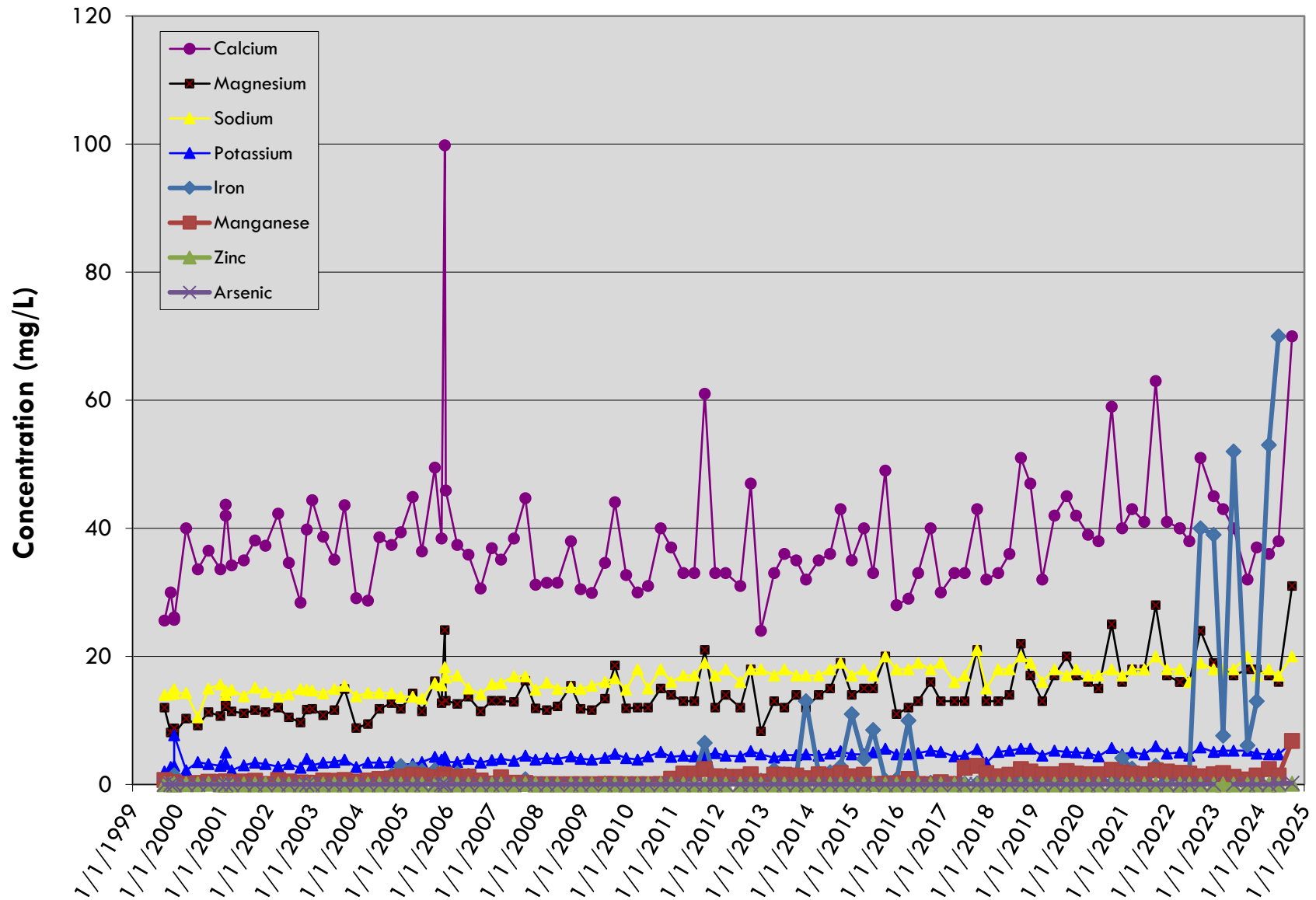
LDCS-9

LRI Landfill, Pierce County, Washington



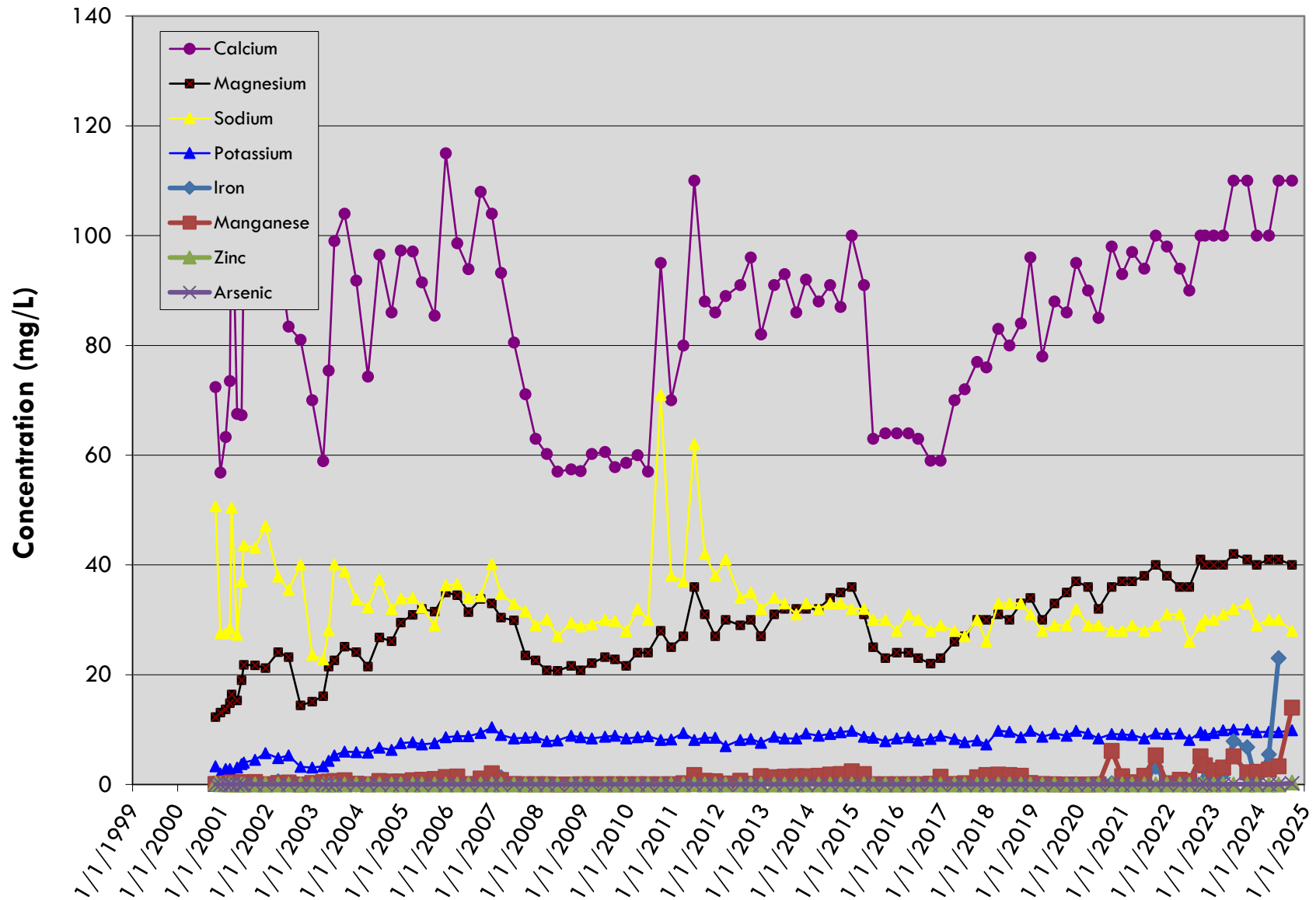
LDCS-1

LRI Landfill, Pierce County, Washington



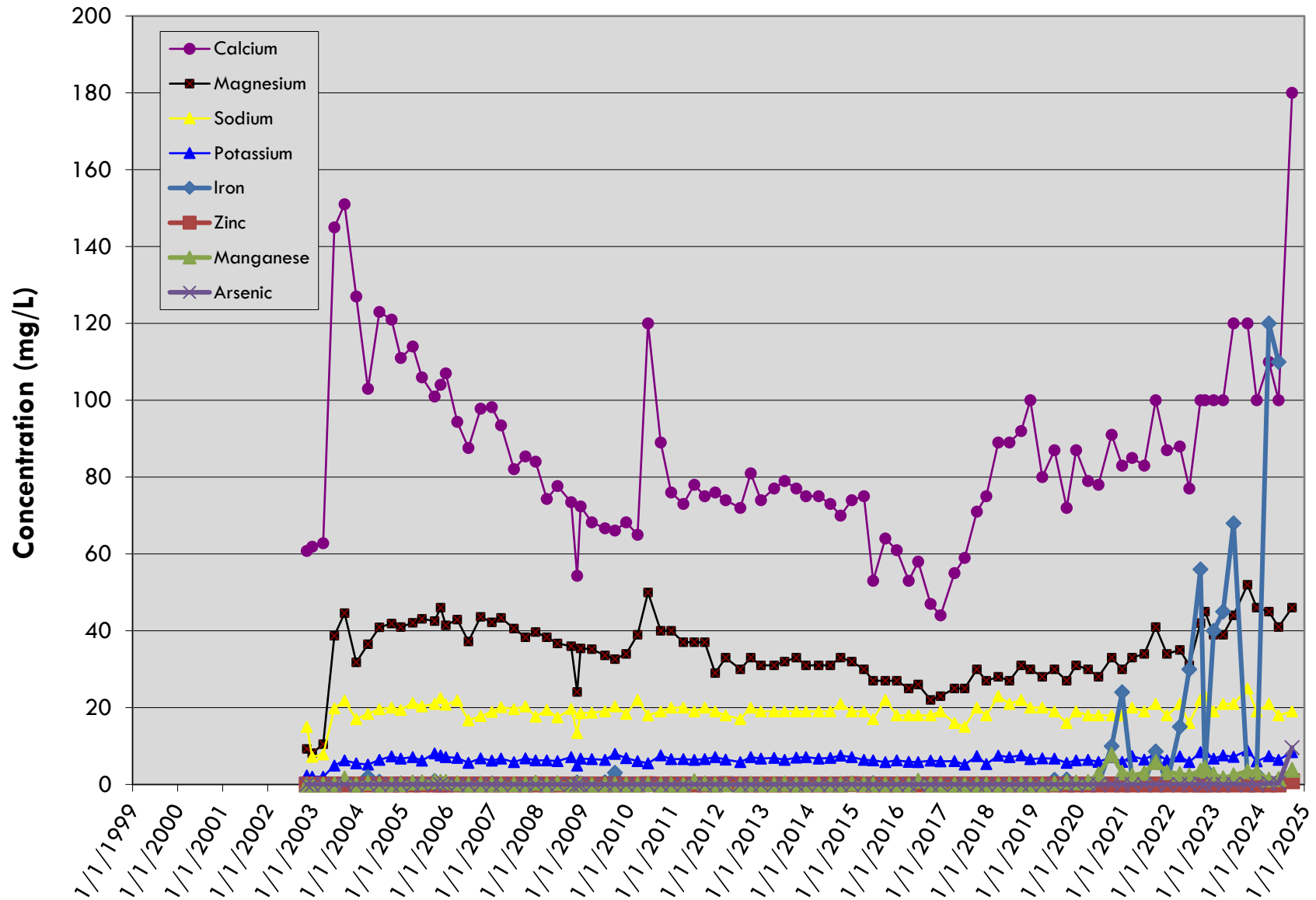
LDCS-2A

LRI Landfill, Pierce County, Washington



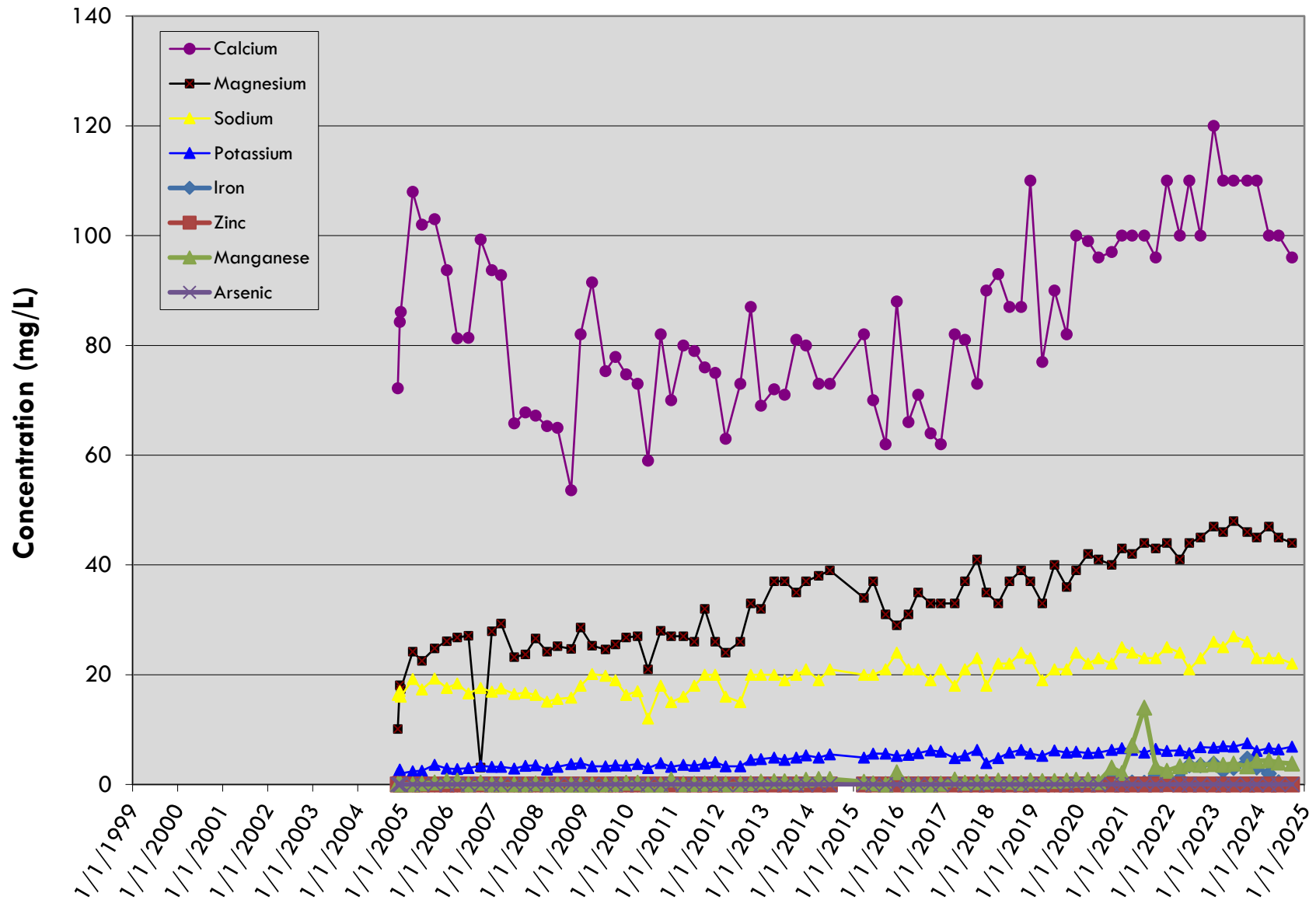
LDCS-2B

LRI Landfill, Pierce County, Washington



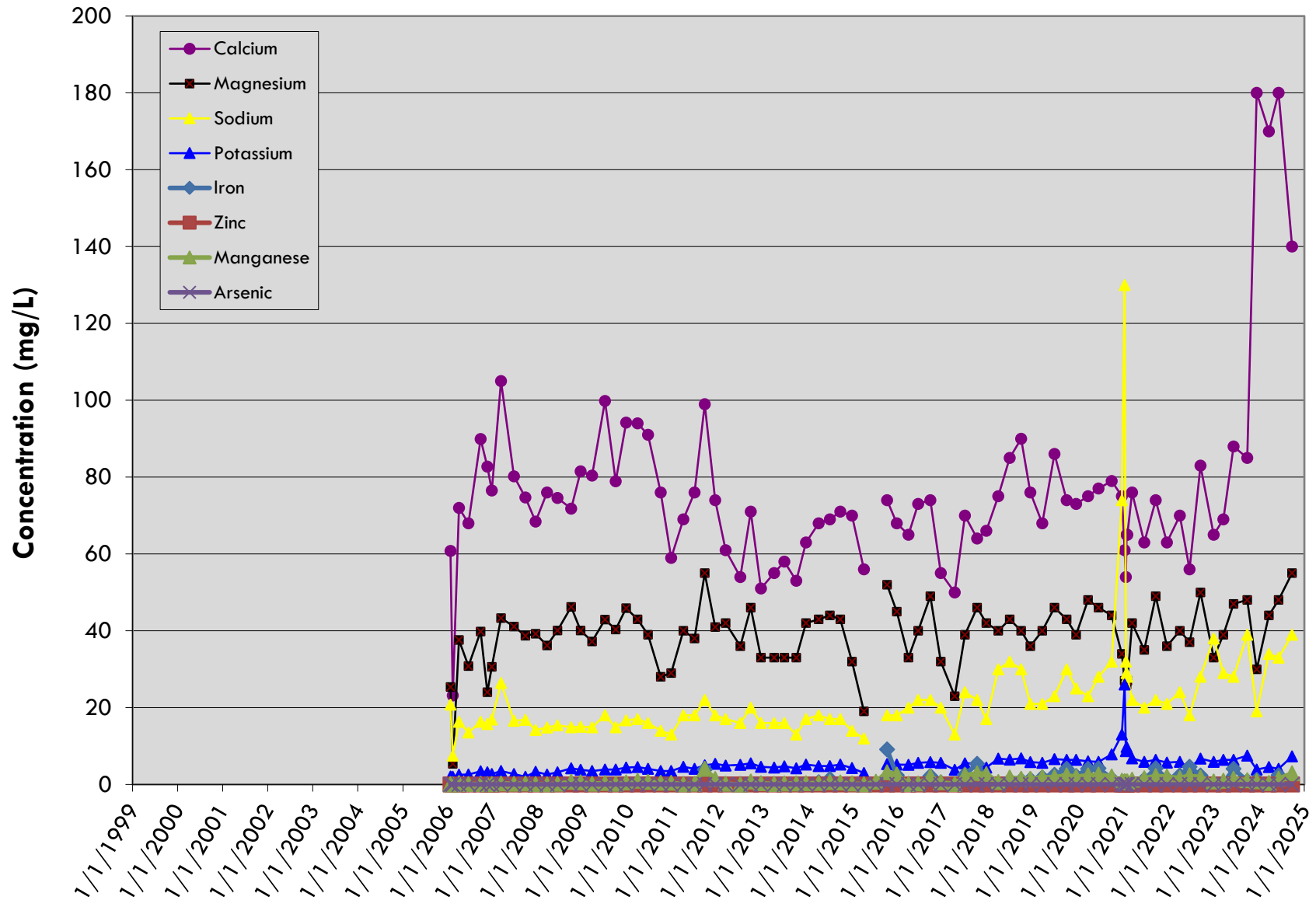
LDCS-3A

LRI Landfill, Pierce County, Washington



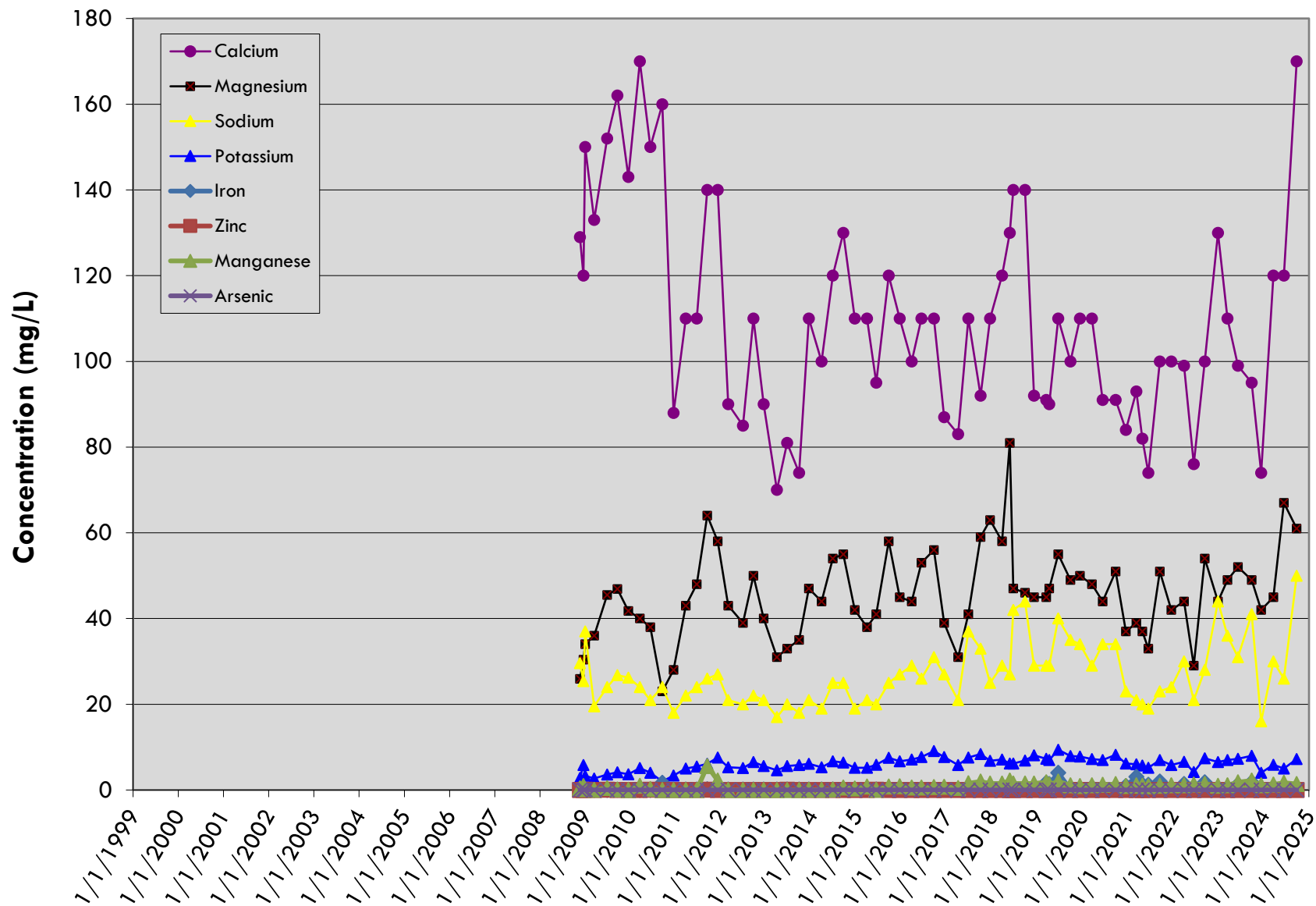
LDCS-4A

LRI Landfill, Pierce County, Washington



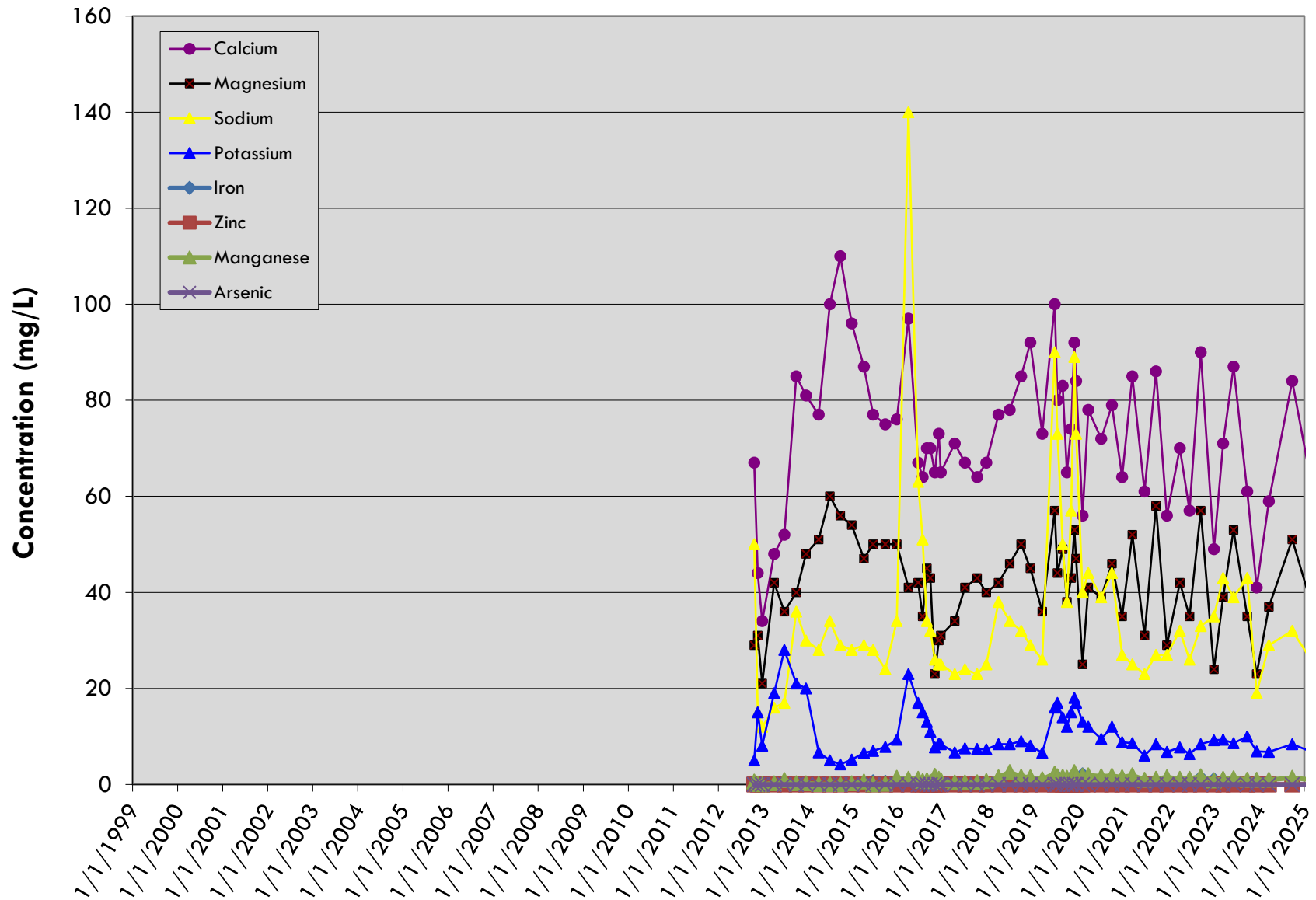
LDCS-4B

LRI Landfill, Pierce County, Washington



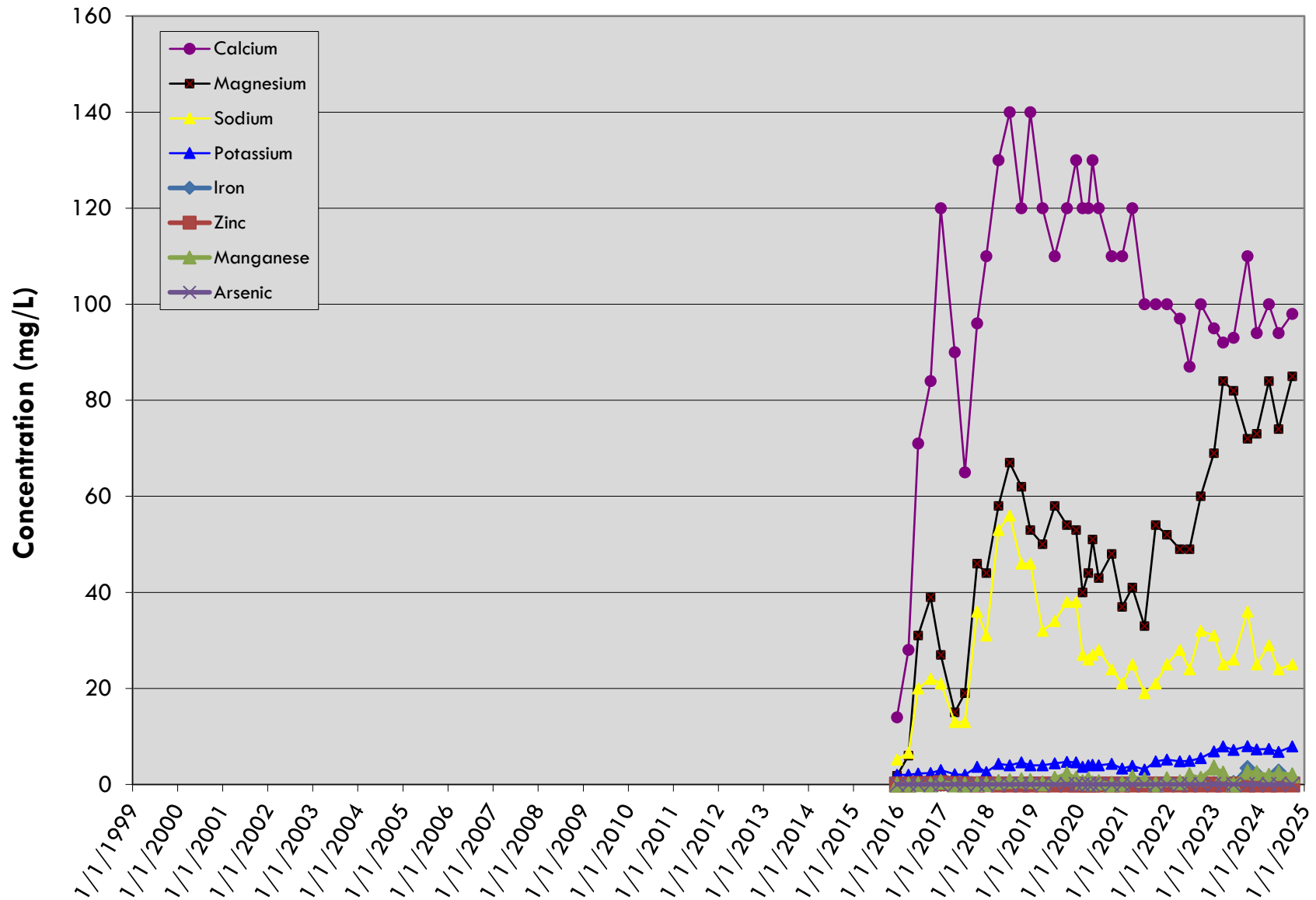
LDCS-5

LRI Landfill, Pierce County, Washington



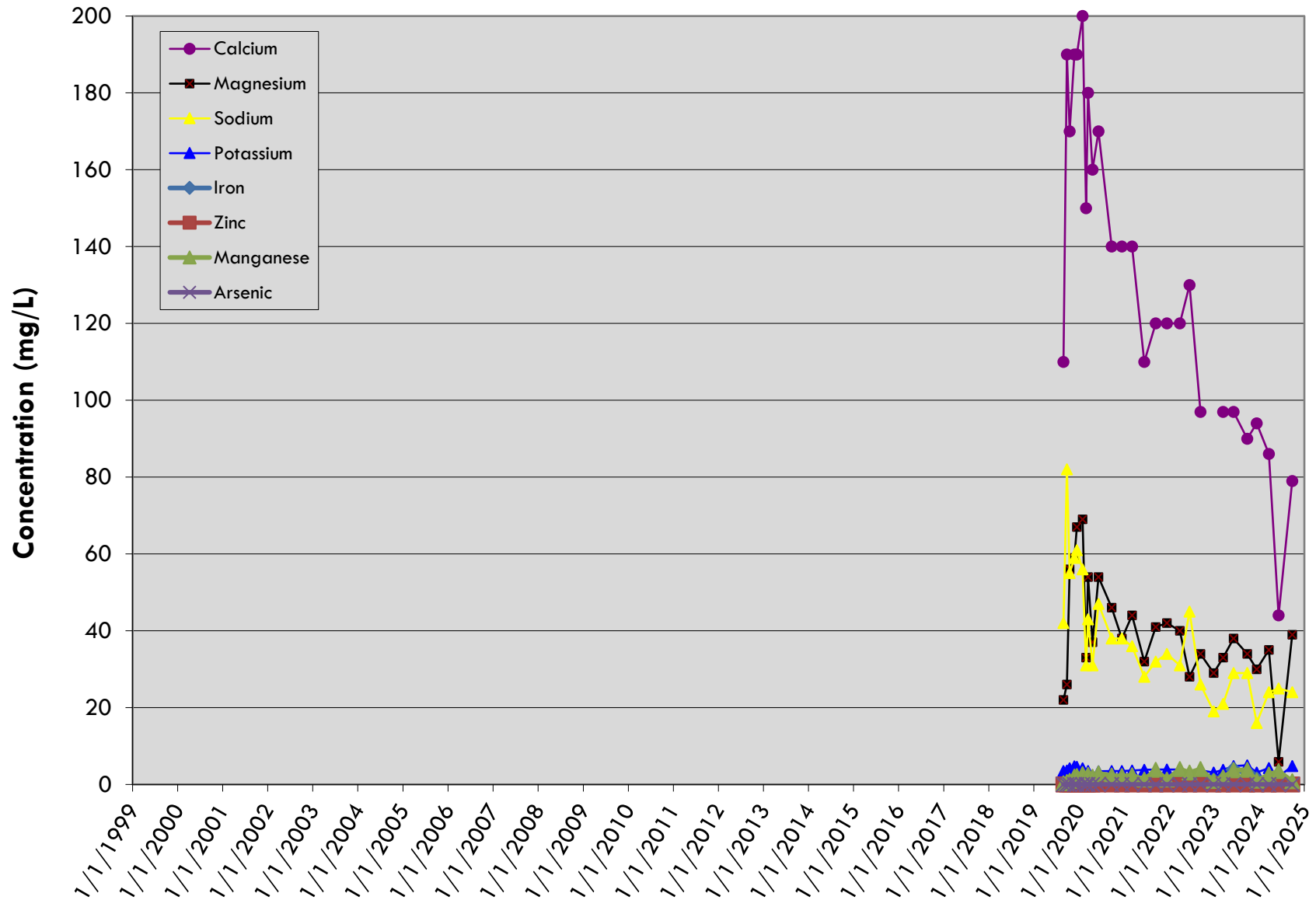
LDCS-6A

LRI Landfill, Pierce County, Washington



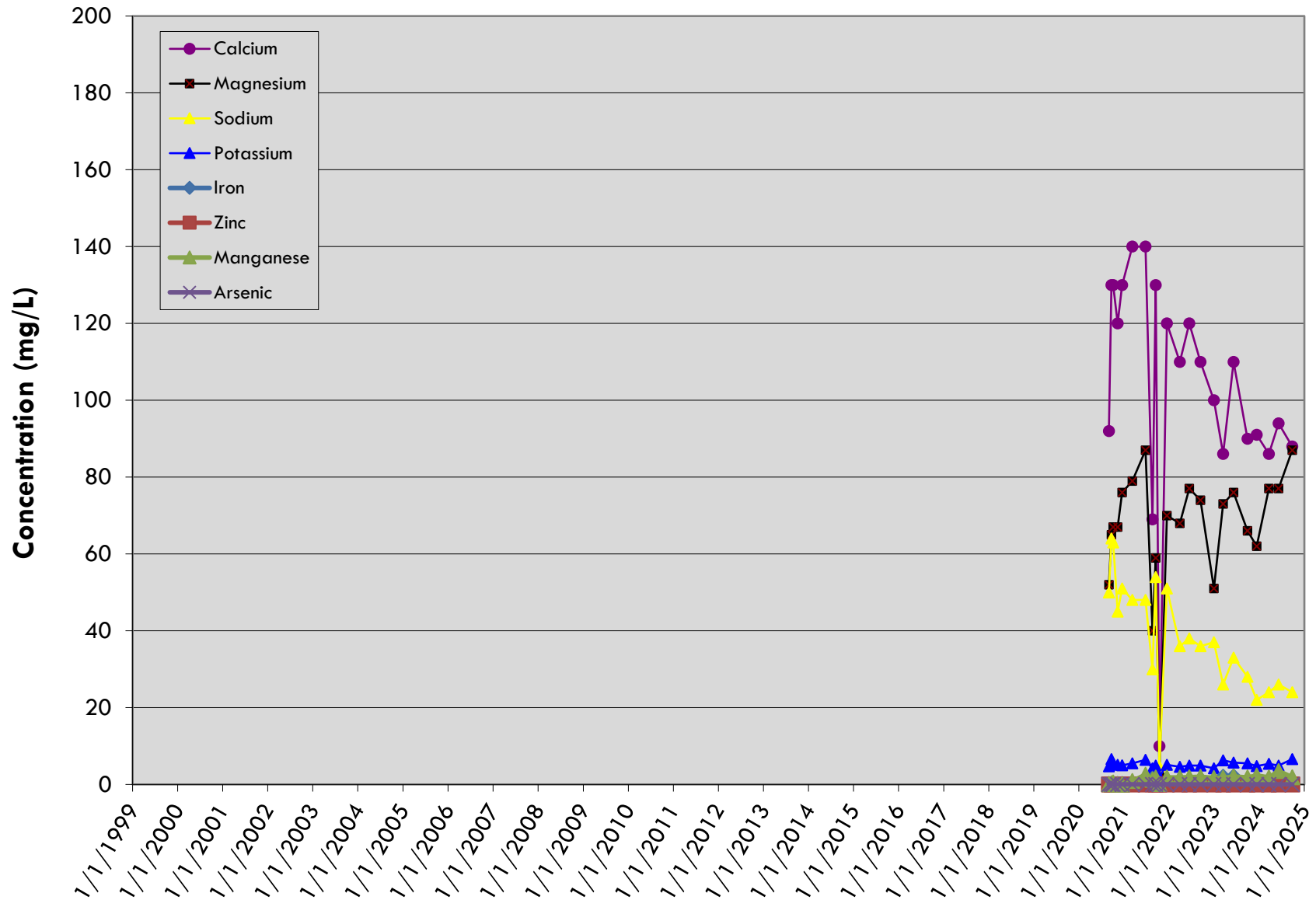
LDCS-7

LRI Landfill, Pierce County, Washington



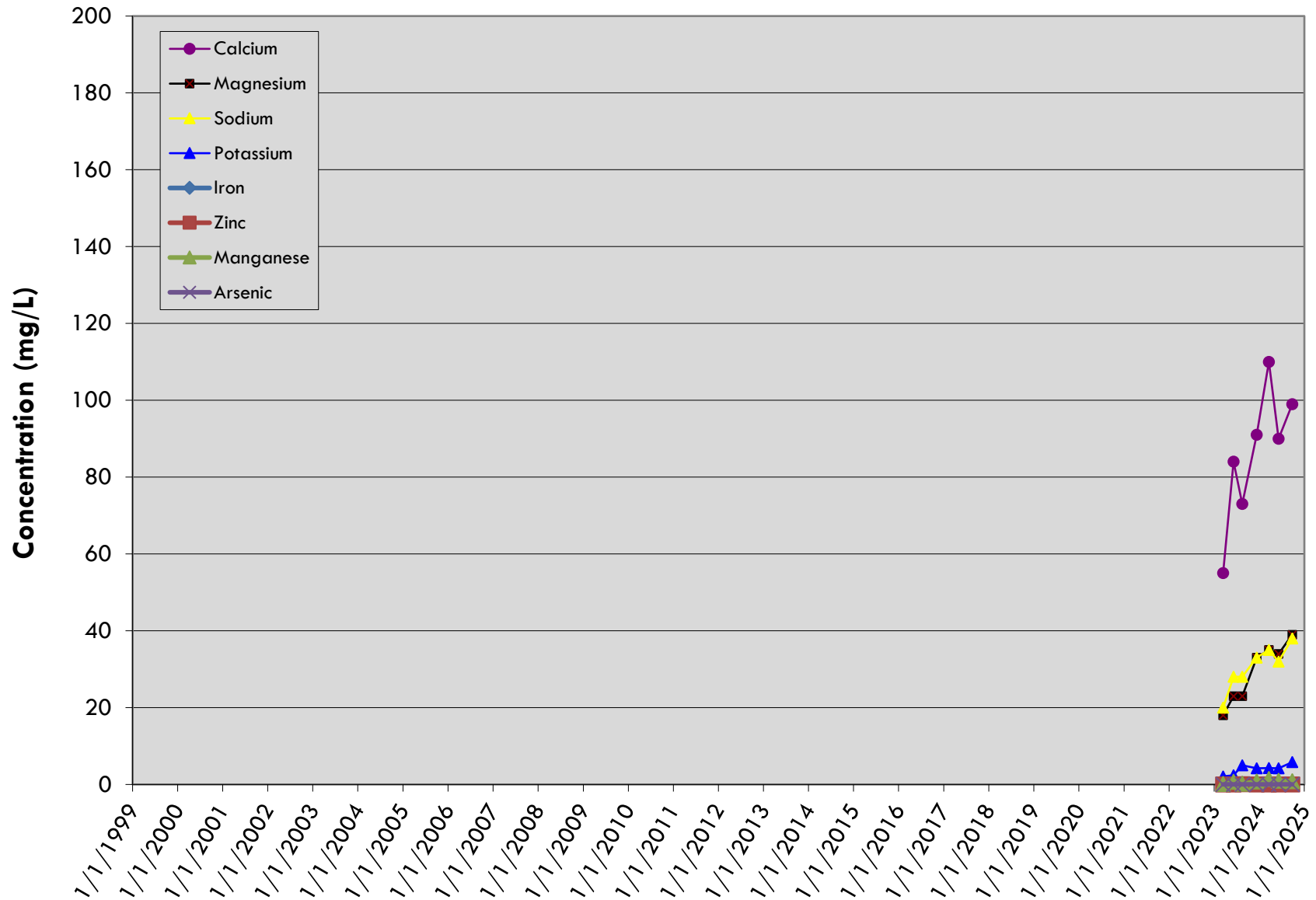
LDCS-8

LRI Landfill, Pierce County, Washington



LDCS-9

LRI Landfill, Pierce County, Washington





Attachment H

LDCS & Leachate Pumping Records and Conductivity Measurements

Summary of LDCS Volumes Pumped and Conductivity Data
Third Quarter 2024
LRI Landfill, Pierce County, Washington

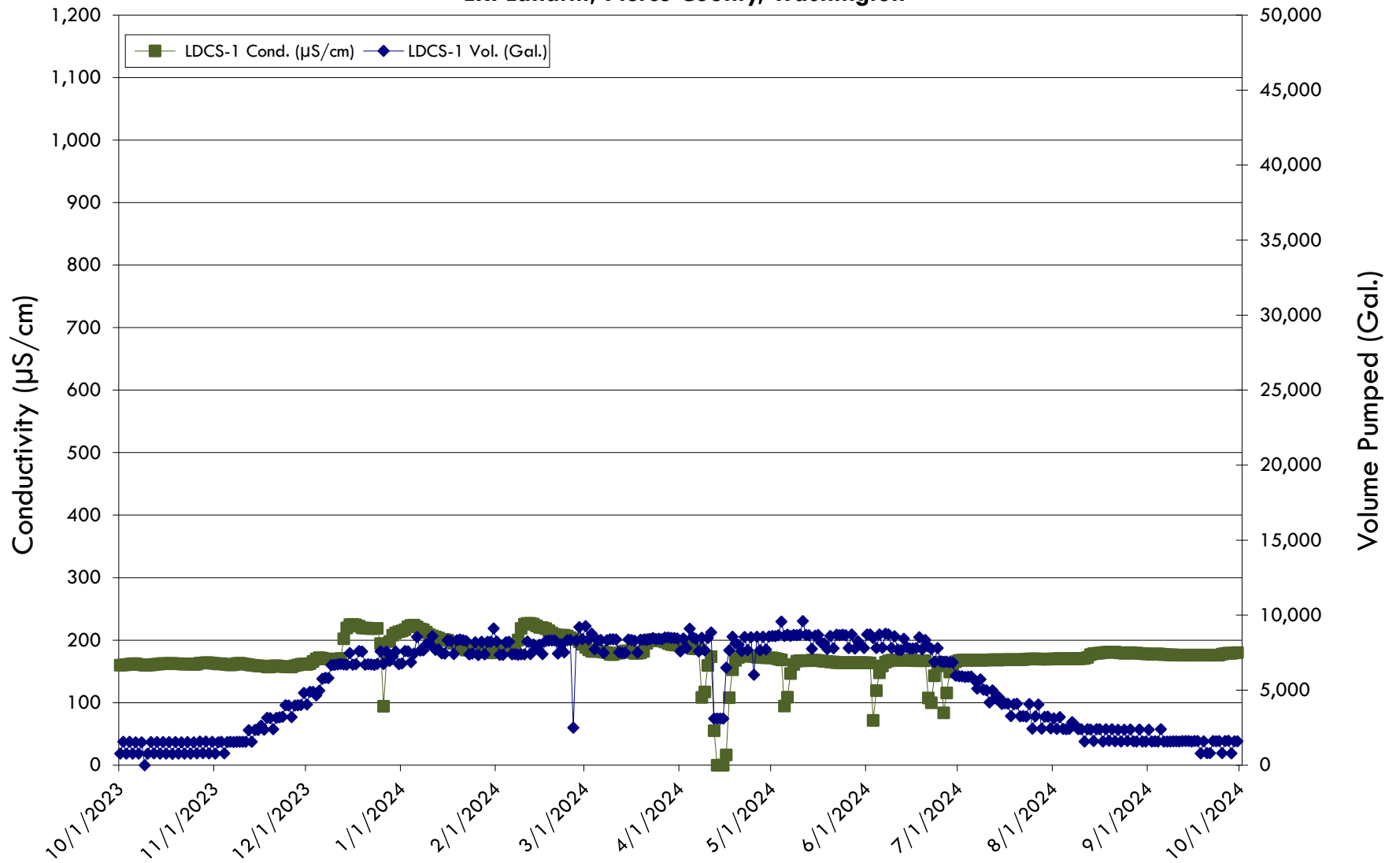
Date	Rainfall	LDCS-1 Vol. (Gal.)	LDCS-1 Cond. (µS/cm)	LDCS-2A Vol. (Gal.)	LDCS-2A Cond. (µS/cm)	LDCS-2B Vol. (Gal.)	LDCS-2B Cond. (µS/cm)	LDCS-3A Vol. (Gal.)	LDCS-3A Cond. (µS/cm)	LDCS-4A Vol. (Gal.)	LDCS-4A Cond. (µS/cm)*	LDCS-4B Vol. (Gal.)	LDCS-4B Cond. (µS/cm)	LDCS-5 Vol. (Gal.)	LDCS-5 Cond. (µS/cm)	LDCS-6 Vol. (Gal.)	LDCS-6 Cond. (µS/cm)	LDCS-7 Vol. (Gal.)	LDCS-7 Cond. (µS/cm)	LDCS-8 Vol. (Gal.)	LDCS-8 Cond. (µS/cm)*	LDCS-9 Vol. (Gal.)	LDCS-9 Cond. (µS/cm)*	
7/2/2024	0.00	5,930	167	11,090	861	0	726	4,160	925	8,980	1033.8	154	1,212	500	832	0	1,074	0	-	0	-	-	-	-
7/3/2024	0.00	5,920	168	11,120	853	3,882	712	4,160	926	9,030	834	132	1,221	437	834	0	1,070	0	-	0	-	-	-	-
7/4/2024	0.00	5,870	168	11,100	839	3,974	752	4,170	923	9,070	916	128	1,230	436	838	0	1,074	0	-	0	-	-	-	-
7/5/2024	0.00	5,890	168	9,970	846	4,006	695	4,170	923	9,140	847	128	1,241	436	843	0	1,070	0	-	0	-	-	-	-
7/6/2024	0.00	5,910	168	11,040	866	3,998	677	4,170	924	9,230	930.7	120	1,252	499	848	0	1,070	0	-	0	-	-	-	-
7/7/2024	0.00	5,690	168	11,060	886	0	785	4,180	928	9,190	0	142	1,264	501	854	0	0	0	-	0	-	-	-	-
7/8/2024	0.00	5,110	168	9,970	894	0	791	4,180	932	6,050	0	154	1,275	500	862	0	0	0	-	0	-	-	-	-
7/9/2024	0.00	5,720	168	11,060	897	11,512	876	4,180	933	3,620	852	162	1,308	564	864	0	1,119	0	-	0	-	-	-	-
7/10/2024	0.00	5,040	168	9,960	908	4,370	915	4,170	933	3,290	808	152	1,338	563	865	0	1,113	15,846	0	0	-	-	-	-
7/11/2024	0.00	4,980	168	9,980	909	2,918	922	4,180	934	3,150	865	146	1,354	691	866	0	1,113	9,057	0	0	-	-	-	-
7/12/2024	0.00	4,170	168	11,230	869	4,767	841	4,160	929	3,050	0	138	1,364	629	868	0	1,140	0	-	0	-	-	-	-
7/13/2024	0.00	4,980	169	9,950	860	3,441	834	3,560	929	3,010	437.9	120	1,370	628	873	0	1,135	0	-	0	-	-	-	-
7/14/2024	0.00	4,450	169	9,880	872	0	870	4,170	931	2,990	0	122	1,377	625	879	0	0	0	-	0	-	-	-	-
7/15/2024	0.00	4,550	168	9,900	886	0	873	3,570	934	2,950	0	130	1,383	627	884	0	0	0	-	0	-	-	-	-
7/16/2024	0.00	4,080	169	9,970	882	10,085	900	3,570	936	2,980	737	86	1,386	691	888	0	1,151	5,013	0	0	-	-	-	-
7/17/2024	0.00	4,120	169	8,890	874	3,757	908	4,170	935	2,990	660	76	1,389	626	894	0	1,164	0	-	0	-	-	-	-
7/18/2024	0.00	4,090	169	9,920	880	3,718	882	3,570	937	2,970	695	66	1,394	623	903	0	1,154	4,325	0	0	-	-	-	-
7/19/2024	0.00	3,270	169	8,730	872	3,951	814	3,570	937	2,800	1383	84	1,397	561	907	0	1,158	660	-	0	-	-	-	-
7/20/2024	0.00	4,060	169	9,830	858	3,447	820	3,570	938	2,790	620	108	1,399	623	909	0	1,167	0	-	0	-	-	-	-
7/21/2024	0.00	4,100	169	8,740	854	0	840	3,560	937	2,810	0	100	1,402	623	911	0	0	0	-	0	-	-	-	-
7/22/2024	0.00	3,260	169	9,780	870	0	831	3,560	938	2,770	0	92	1,404	563	916	0	0	0	-	0	-	-	-	-
7/23/2024	0.00	3,270	169	8,670	869	11,879	820	2,970	939	2,710	482	76	1,404	621	919	0	1,137	5,764	-	0	-	-	-	-
7/24/2024	0.00	3,230	170	8,690	858	4,139	861	3,570	937	2,470	413	84	1,402	559	922	0	1,133	0	-	0	-	-	-	-
7/25/2024	0.00	4,070	170	8,720	860	3,868	819	2,960	937	2,750	428	84	1,403	623	927	0	0	0	-	0	-	-	-	-
7/26/2024	0.00	2,430	170	9,560	867	4,152	816	3,570	939	2,630	426.3	84	1,404	686	930	0	1,125	4,293	-	0	-	-	-	-
7/27/2024	0.00	3,250	170	8,550	861	3,858	820	2,970	936	2,660	456	84	1,405	751	931	0	1,129	571	-	0	-	-	-	-
7/28/2024	0.00	4,050	170	7,560	876	0	807	3,570	937	2,620	0	82	1,407	751	936	0	0	0	-	0	-	-	-	-
7/29/2024	0.00	2,430	170	8,660	884	0	715	3,560	940	2,610	0	78	1,409	750	941	0	0	0	-	0	-	-	-	-
7/30/2024	0.17	3,220	169	8,610	884	11,998	761	2,970	942	2,650	407.7	78	1,410	944	945	0	1,115	2,925	-	0	-	-	-	-
7/31/2024	0.01	3,240	170	8,620	893	4,406	874	2,970	944	3,100	351.4	92	1,410	1,214	945	0	1,113	2,739	-	0	-	-	-	-
8/1/2024	0.00	2,450	170	7,610	892	4,996	901	2,960	944	2,890	309	100	1,414	813	940	0	1,108	0	-	0	-	-	-	-
8/2/2024	0.00	3,120	170	8,720	897	0	804	2,980	943	2,780	0	98	1,417	682	939	0	0	0	-	0	-	-	-	-
8/3/2024	0.00	2,410	170	7,590	900	0	786	2,980	946	2,610	193.9	108	1,421	680	940	0	1,107	0	-	0	-	-	-	-
8/4/2024	0.00	3,200	171	8,570	893	0	872	2,960	941	2,740	0	90	1,424	619	941	0	0	0	-	0	-	-	-	-
8/5/2024	0.00	2,420	170	7,520	898	0	850	2,970	939	2,610	0	90	1,425	617	944	0	0	0	-	0	-	-	-	-
8/6/2024	0.00	2,390	170	7,480	900	0	777	2,970	943	2,580	83.3	76	1,425	661	948	0	1,098	1,865	-	0	-	-	-	-
8/7/2024	0.00	2,420	170	8,650	882	2,173	801	2,370	945	2,440	379	70	1,425	553	948	0	1,103	3,718	-	0	-	-	-	-
8/8/2024	0.00	2,860	171	7,500	861	27	800	2,970	944	2,560	423.8	74	1,426	616	948	0	1,102	1,245	-	0	-	-	-	-
8/9/2024	0.00	2,660	171	7,450	872	244	718	2,970	945	2,600	226.1	78	1,430	678	950	0	1,173	0	-	0	-	-	-	-
8/10/2024	0.00	2,400	170	7,460	887	653	777	2,970	951	2,590	393.3	74	1,433	553	951	0	1,172	0	-	0	-	-	-	-
8/11/2024	0.00	2,400	170	7,500	889	0	758	2,370	954	2,570	0	72	1,436	550	954	0	0	0	-	0	-	-	-	-
8/12/2024	0.00	1,580	171	7,480	878	0	728	2,970	953	2,430	0	64	1,437	550	958	0	0	0	-	0	-	-	-	-
8/13/2024	0.00	2,390	173	7,520	879	0	680	2,370	951	2,420	418.6	54	1,438	488	961	0	1,150	4,772	-	0	-	-	-	-
8/14/2024	0.00	2,380	177	7,500	893	0	652	2,520	953	2,400	395.7	52	1,440	487	964	0	1,144	0	-	0	-	-	-	-
8/15/2024	0.00	1,600	178	7,440	903	263	642	2,370	953	2,270	406	54	1,442	501	965	0	0	0	-	0	-	-	-	-
8/16/2024	0.00	2,390	179	6,360	912	550	639	2,370	955	2,370	403.6	50	1,444	487	967	0	1,134	4,754	-	0	-	-	-	-
8/17/2024	0.00	2,400	179	7,550	924	172	637	2,370	956	2,260	189.7	46	1,446	486	968	0	1,133	0	-	0	-	-	-	-
8/18/2024	0.42	1,570	180	7,500	932	0	637	2,980	956	2,290	0	42	1,447	488	971	0	0	0	-	0	-	-	-	-
8/19/2024	0.01	2,390	181	6,460	919	0	637	2,370	958	2,320	0	52	1,450	547	973	0	0	0	-	0	-	-	-	-
8/20/2024	0.00	1,620	181	7,530	884	691	636	2,370	961	2,260	249.7	46	1,455	486	970	0	1,119	4,669	-	0	-	-	-	-
8/21/2024	0.28	2,400	181	6,430	868	1,506	636	2,960	965	2,600	287.6	48	1,452	485	970	0	1,164	0	-	0	-	-	-	-
8/22/2024	0.00	1,590	181	6,470	872	209	636	2,380	971	2,730	260.7	52	1,450	486	968	0	1,133	0	-	0	-	-	-	-
8/23/2024	0.07	2,360	180	7,570	891	596	636	2,950	978	2,660	98.7	48	1,451	423	967	0	1,119	0	-	0	-	-	-	-
8/24/2024	0.29	1,580	180	6,470	903	10	697	2,380	976	3,370	4.58	44	1,457	485	966	0	1,115	4,689	-	0	-	-	-	-
8/25/2024	0.11	2,360	179	6,420	907	775	879	2,970	968	4,280	192	48	1,452	999	957	0	1,114	0	-	0	-	-	-	-
8/26/2024	0.00	1,600	180	6,440	884	0	941	3,560	969	3,470	0	60	1,455	675	913	0	0	0	-	0	-	-	-	-
8/27/2024	0.00	2,380	180	5,410	869	93	846	2,970	976	3,110	210	78	1,464	486	903	0	1,101	0	-	0	-	-	-	-
8/28/2024	0.05	1,590	179	6,490	888	0	726	2,970	982	2,960	0	68	1,464	424	912	0	0	0	-	0	-	-	-	-
8/29/2024	0.00	1,580	179	6,500	887	1,206	754	3,560	981	2,910	130.5	60	1,470	424	9									

Summary of LDCS Volumes Pumped and Conductivity Data
Third Quarter 2024
LRI Landfill, Pierce County, Washington

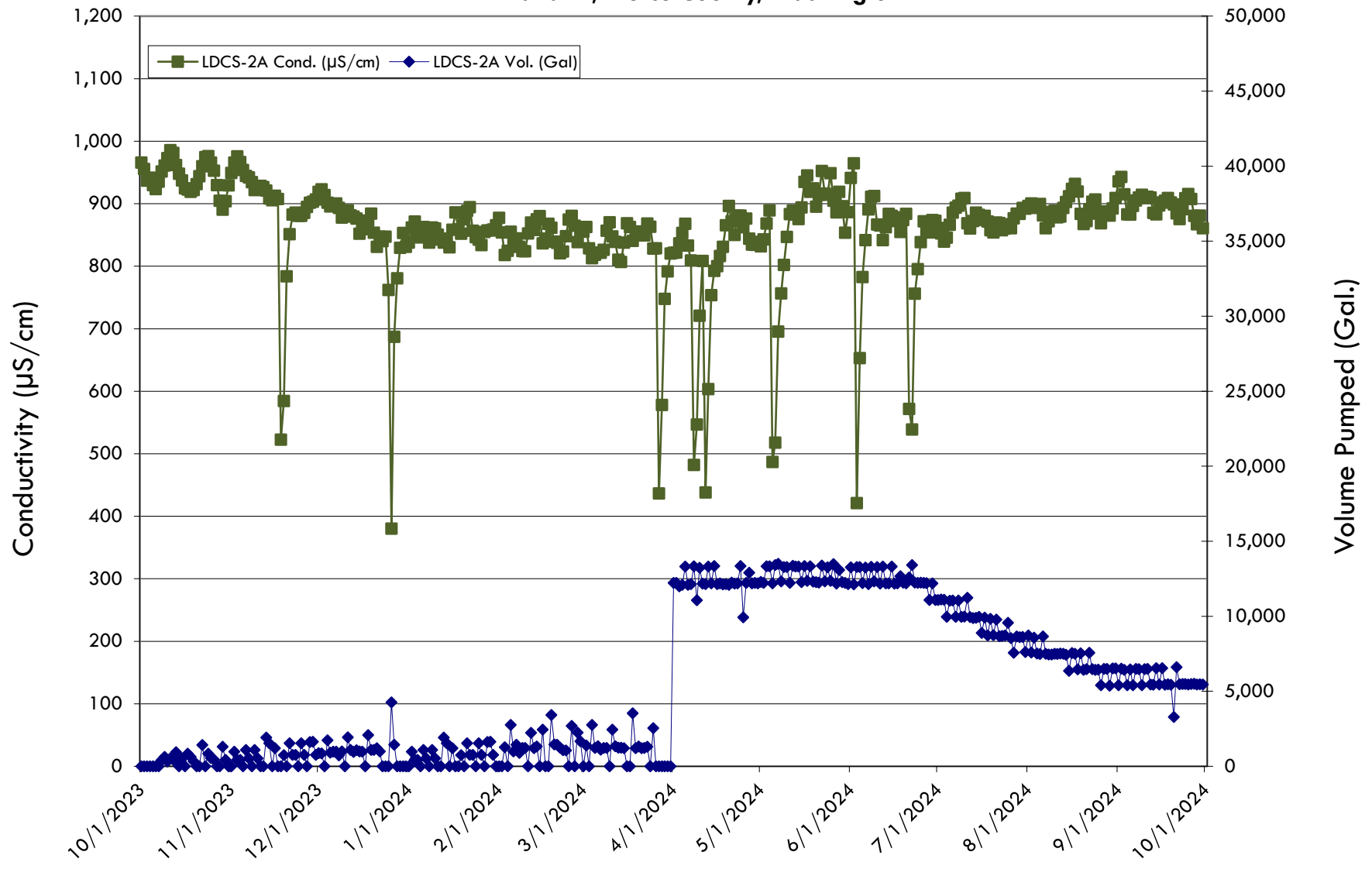
Date	Rainfall	LDCS-1 Vol. (Gal.)	LDCS-1 Cond. (µS/cm)	LDCS-2A Vol. (Gal)	LDCS-2A Cond. (µS/cm)	LDCS-2B Vol. (Gal)	LDCS-2B Cond. (µS/cm)	LDCS-3A Vol. (Gal)	LDCS-3A Cond. (µS/cm)	LDCS-4A Vol. (Gal)	LDCS-4A Cond. (µS/cm)*	LDCS-4B Vol. (Gal)	LDCS-4B Cond. (µS/cm)	LDCS-5 Vol. (Gal)	LDCS-5 Cond. (µS/cm)	LDCS-6 Vol. (Gal)	LDCS-6 Cond. (µS/cm)	LDCS-7 Vol. (Gal)	LDCS-7 Cond. (µS/cm)	LDCS-8 Vol. (Gal)	LDCS-8 Cond. (µS/cm)*	LDCS-9 Vol. (Gal)	LDCS-9 Cond. (µS/cm)*
8/31/2024	0.00	1,570	178	6,520	909	0	729	2,370	983	2,540	0	60	1,472	300	929	0	0	0	-	1,068	-	-	-
9/1/2024	0.00	2,360	178	5,400	936	393	725	2,380	982	2,530	80.3	58	1,474	301	933	0	1,097	4,679	-	1,071	-	-	-
9/2/2024	0.00	1,580	177	6,510	943	1,466	702	2,380	980	2,380	97.6	50	1,473	240	940	0	1,097	0	-	806	-	-	-
9/3/2024	0.00	1,590	178	6,420	915	54	663	2,370	976	2,350	94.1	52	1,477	300	949	0	1,093	0	-	1,072	-	-	-
9/4/2024	0.00	1,580	178	5,400	883	197	774	1,770	972	2,280	130.1	54	1,478	240	961	0	1,092	4,654	-	1,072	-	-	-
9/5/2024	0.00	2,390	178	6,460	883	289	711	2,370	971	2,290	170.9	60	1,479	240	973	0	1,089	0	-	798	-	-	-
9/6/2024	0.00	1,580	177	5,410	897	0	702	2,370	971	2,260	0	58	1,480	179	984	0	0	0	-	1,071	-	-	-
9/7/2024	0.00	1,580	177	6,500	905	0	788	2,360	971	2,280	0	52	1,479	238	994	0	0	0	-	1,068	-	-	-
9/8/2024	0.00	1,580	177	6,480	910	295	727	1,780	970	2,210	92.1	46	1,476	179	998	0	1,089	4,663	-	805	-	-	-
9/9/2024	0.00	1,590	176	5,400	914	1,000	670	2,370	968	2,070	83.8	40	1,479	179	999	0	1,085	0	-	1,076	-	-	-
9/10/2024	0.04	1,590	176	6,480	909	527	726	2,360	966	2,190	153	34	1,477	238	1,000	0	1,088	0	-	807	-	-	-
9/11/2024	0.35	1,580	176	6,490	911	352	765	2,370	965	2,400	173	28	1,478	179	1,000	0	1,087	0	-	1,073	-	-	-
9/12/2024	0.04	1,610	176	5,450	910	0	683	2,970	965	2,770	81	32	1,476	299	1,000	0	1,082	0	-	1,348	-	-	-
9/13/2024	0.04	1,600	176	5,430	885	0	654	3,570	969	2,780	0	34	1,479	299	992	0	0	0	-	1,080	-	-	-
9/14/2024	0.01	1,600	176	6,550	883	0	643	2,970	974	2,810	0	32	1,479	299	971	0	0	0	-	1,077	-	-	-
9/15/2024	0.00	1,570	176	5,460	897	1,543	753	3,560	978	2,960	84.8	28	1,485	300	954	0	1,082	0	-	1,081	-	-	-
9/16/2024	0.00	1,600	176	6,540	902	16	779	2,370	979	2,670	86	32	1,492	299	942	0	1,083	0	-	1,076	-	-	-
9/17/2024	0.00	1,610	176	5,440	905	230	853	2,970	982	2,520	161	30	1,492	259	938	0	1,086	4,652	-	1,074	-	-	-
9/18/2024	0.00	790	176	5,470	909	256	927	2,380	982	2,410	139	30	1,496	240	944	0	1,080	0	-	1,077	-	-	-
9/19/2024	0.00	1,590	176	5,440	902	441	809	2,370	979	2,250	89	32	1,503	299	953	0	1,086	0	-	803	-	-	-
9/20/2024	0.00	810	176	3,290	899	0	708	590	978	1,050	0	10	1,501	60	961	0	0	0	-	541	-	-	-
9/21/2024	0.00	800	176	6,610	885	0	786	2,370	976	2,210	0	34	1,494	369	970	0	0	0	-	807	-	-	-
9/22/2024	0.00	1,610	176	5,470	875	878	862	1,770	974	2,200	192.6	32	1,487	180	977	0	1,080	5,700	-	1,071	-	-	-
9/23/2024	0.00	1,590	176	5,480	891	1,283	748	1,780	975	2,090	90.9	24	1,493	240	987	0	1,082	0	-	804	-	-	-
9/24/2024	0.00	1,600	176	5,490	909	16	721	2,370	971	2,210	200	26	1,501	179	995	0	1,082	0	-	1,072	-	-	-
9/25/2024	0.21	800	178	5,460	915	918	701	1,780	966	2,100	92.8	22	1,503	179	998	0	1,078	0	-	766	-	-	-
9/26/2024	0.01	1,600	178	5,480	907	14	724	2,380	960	2,400	136.6	20	1,497	239	999	0	1,081	1,886	-	1,072	-	-	-
9/27/2024	0.00	1,630	179	5,500	881	0	686	2,370	958	2,280	0	20	1,490	179	1,000	0	0	0	-	803	-	-	-
9/28/2024	0.00	790	179	5,450	867	0	795	2,370	962	2,260	0	18	1,483	239	1,000	0	0	0	-	1,072	-	-	-
9/29/2024	0.00	1,590	179	5,470	881	427	856	1,790	968	2,090	91.4	18	1,486	178	1,000	0	1,080	2,712	-	801	-	-	-

Notes:
 --- = Data not available due to equipment malfunction or meter out of range

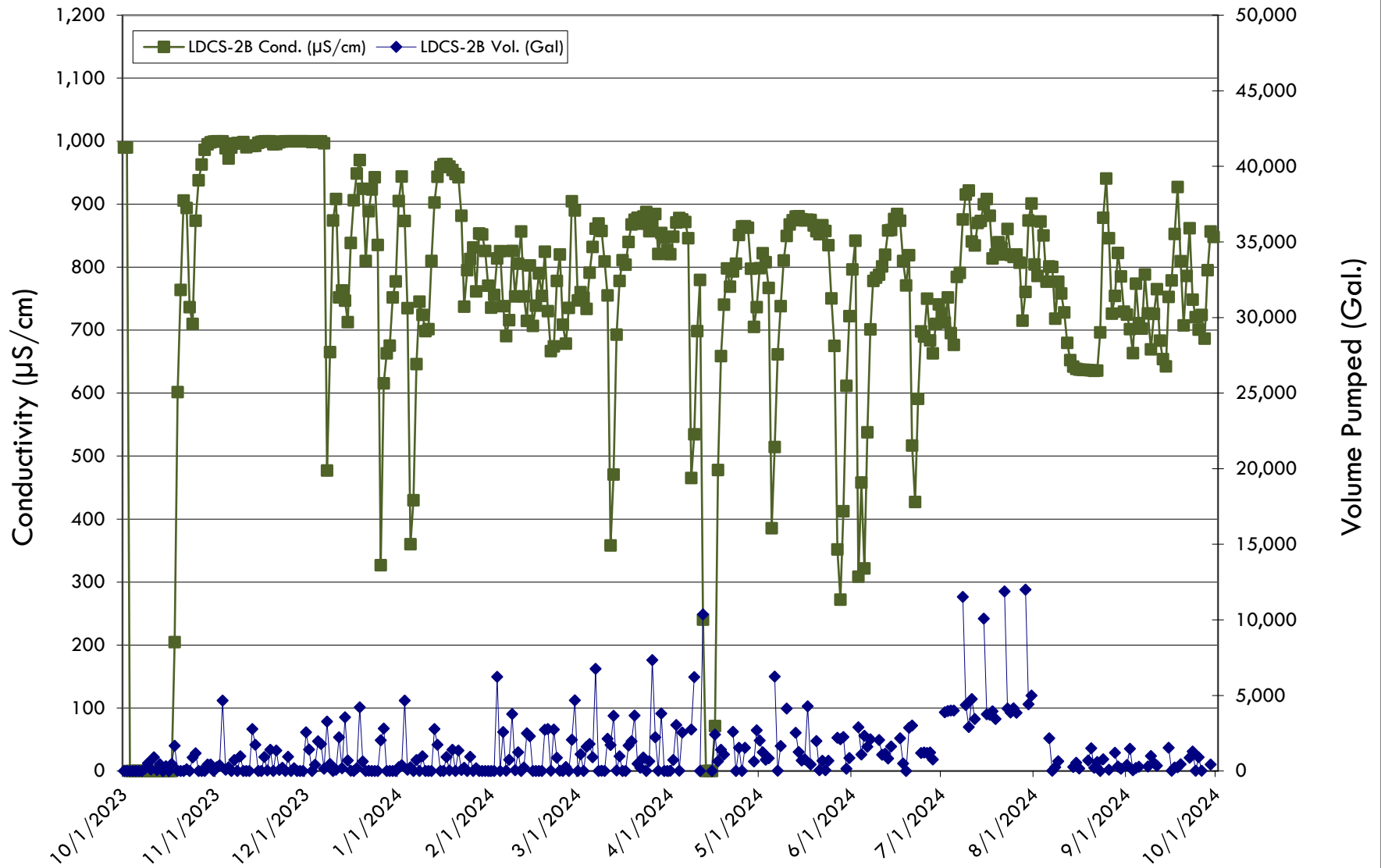
LDCS-1 (DailyTotals)
Conductivity vs Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



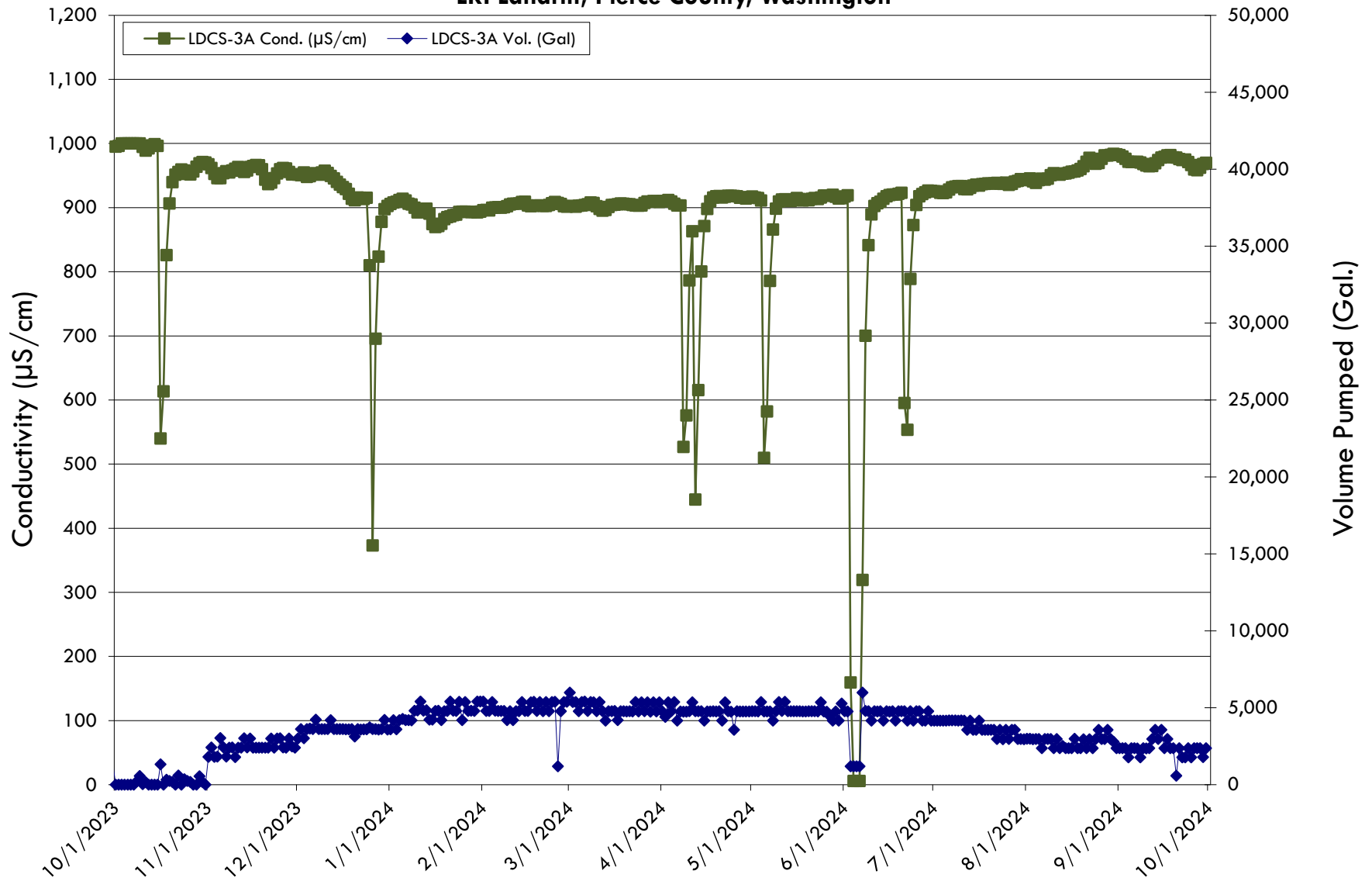
LDCS-2A (Daily Totals)
Conductivity vs Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



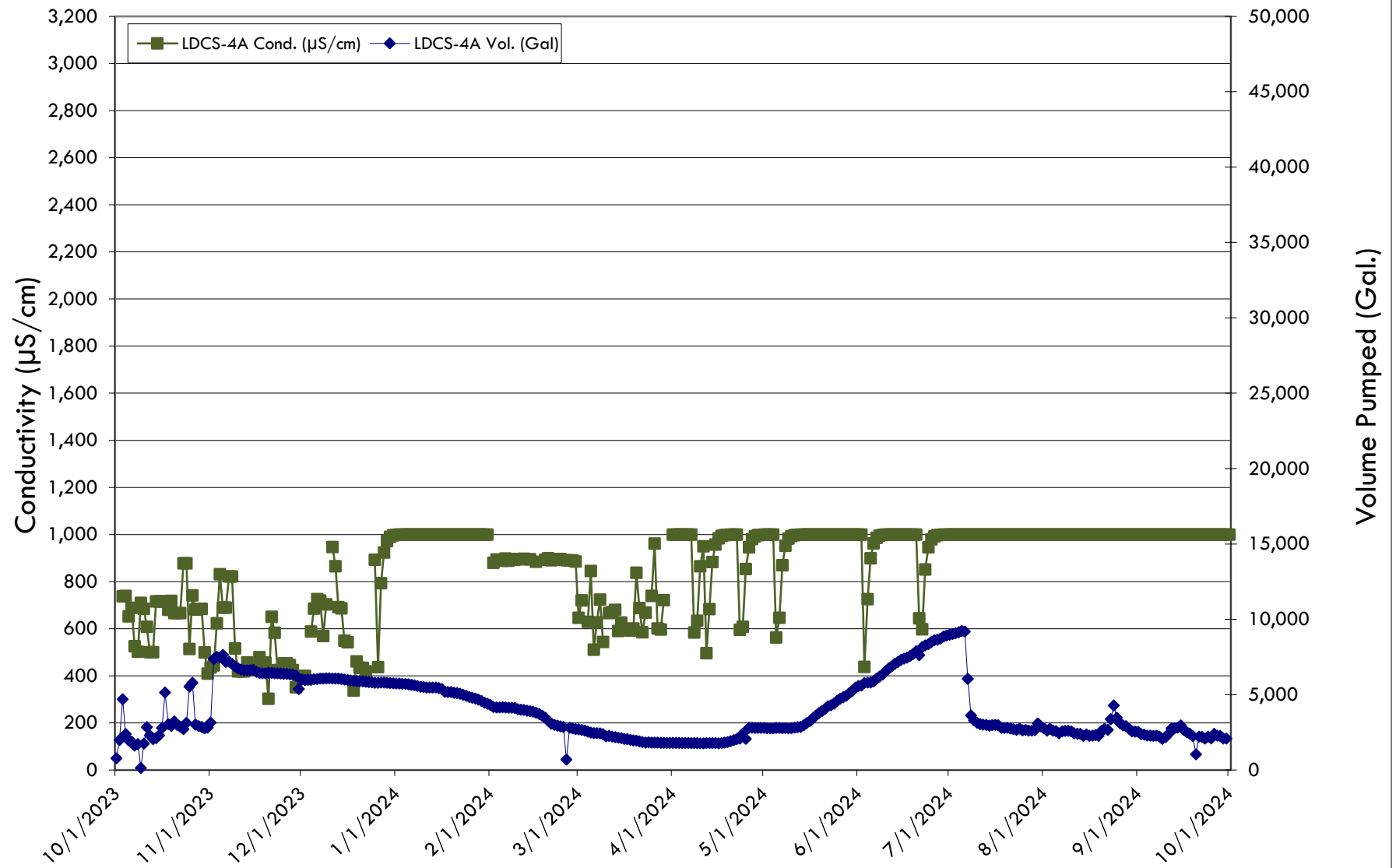
LDCS-2B (Daily Totals)
Conductivity vs Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



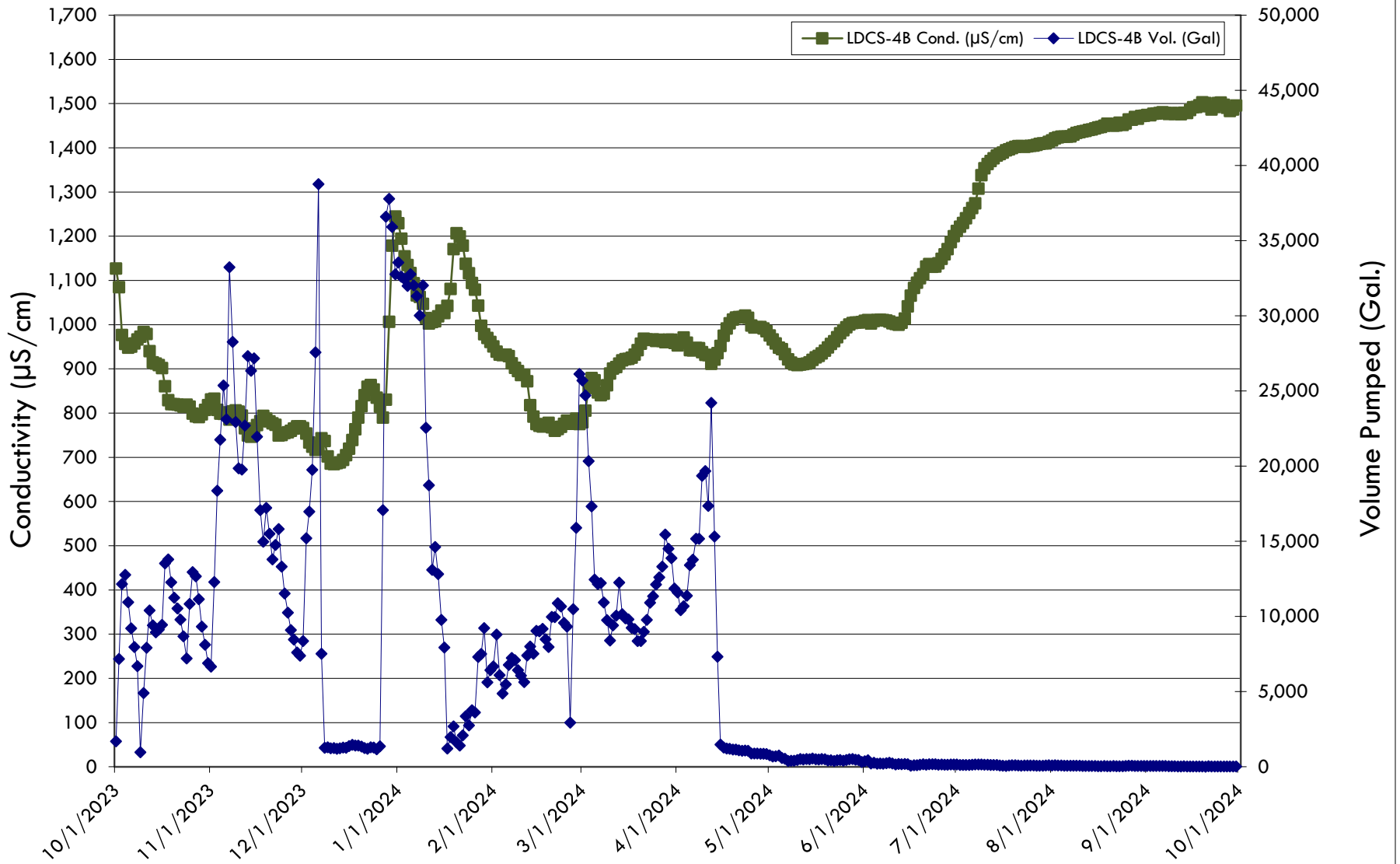
LDCS-3A (Daily Totals)
Conductivity vs Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



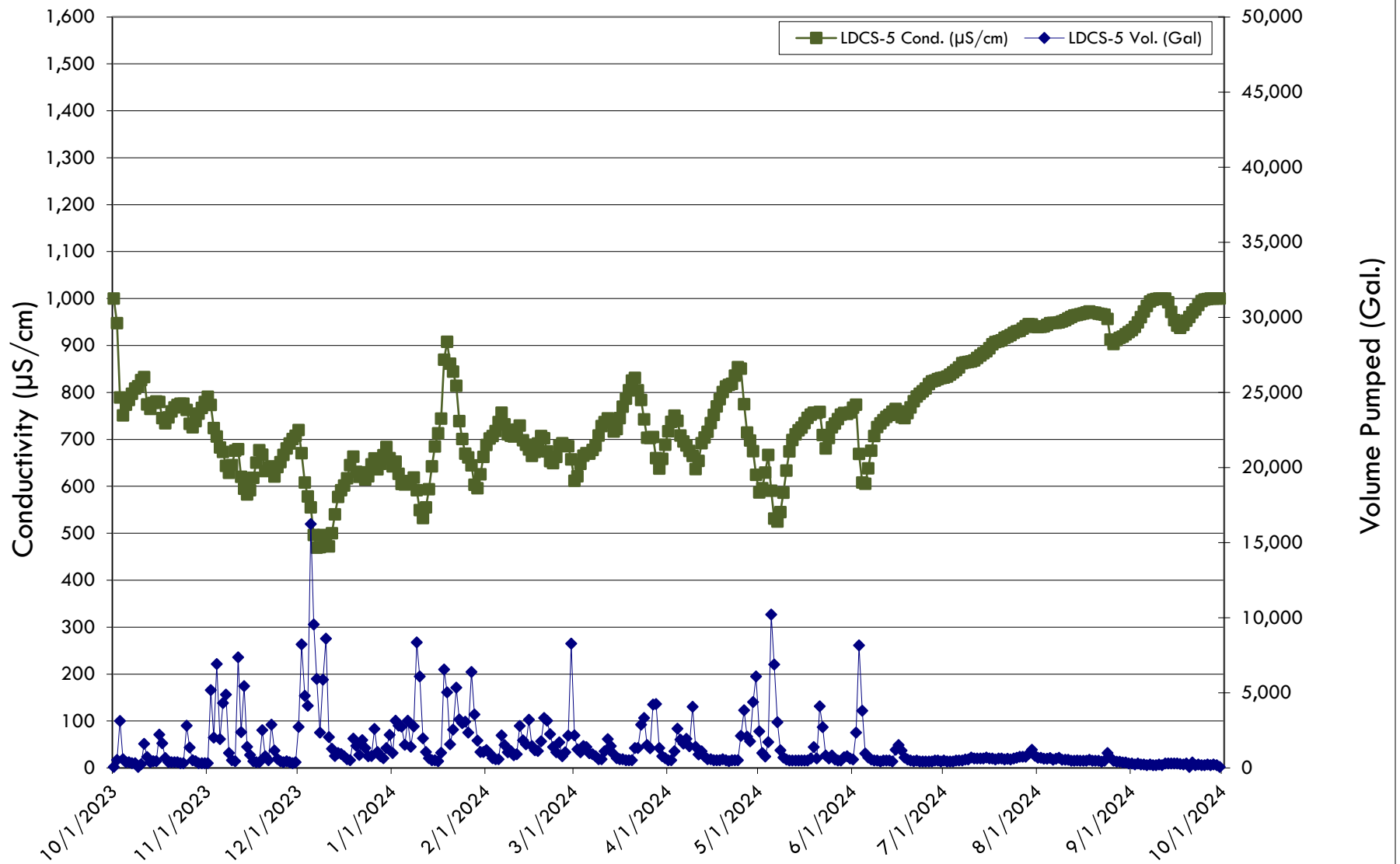
LDCS-4A (Daily Totals)
Conductivity vs Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



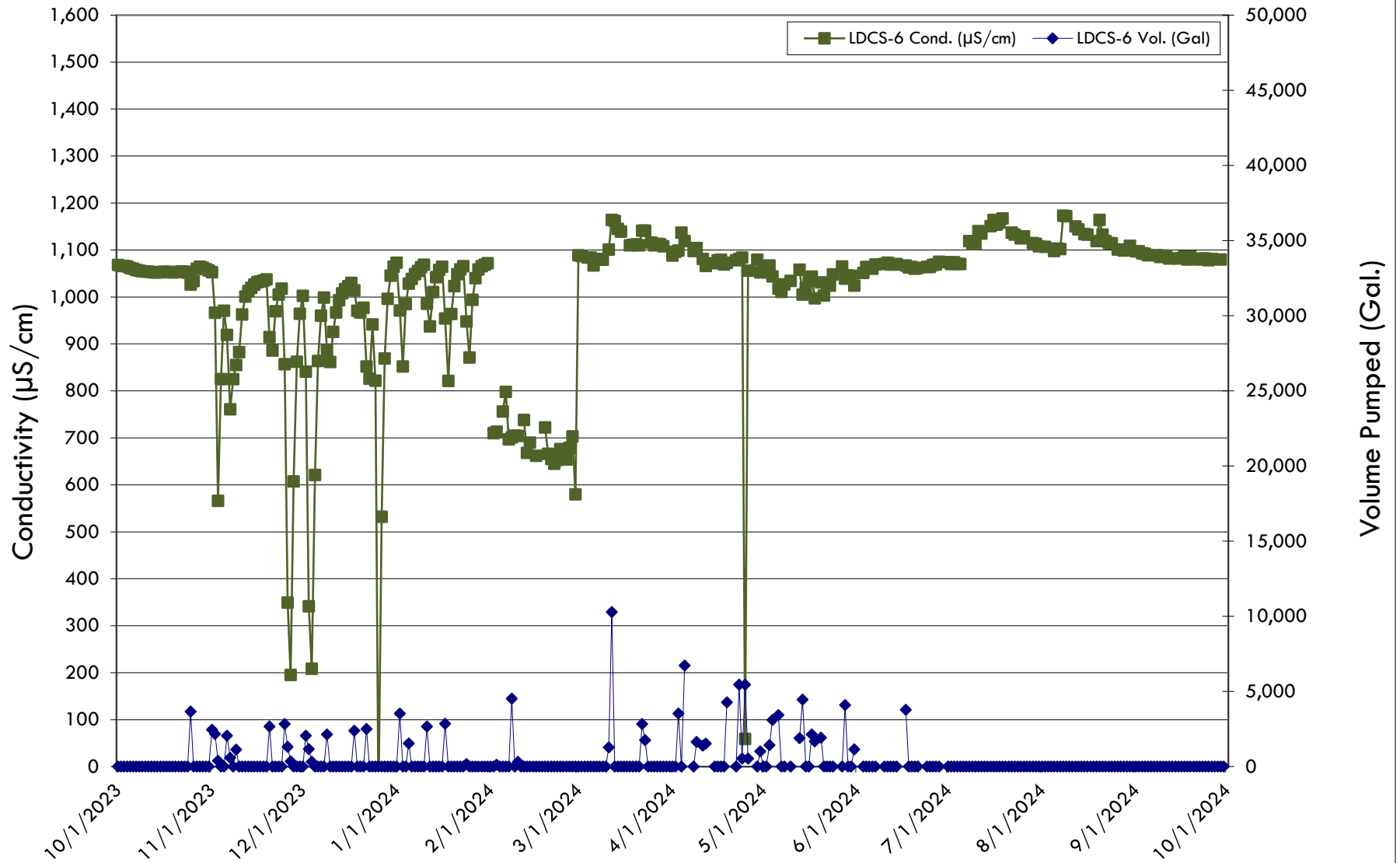
LDCS-4B (Daily Totals)
Conductivity vs Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



LDCS-5 (Daily Totals)
Conductivity vs Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington

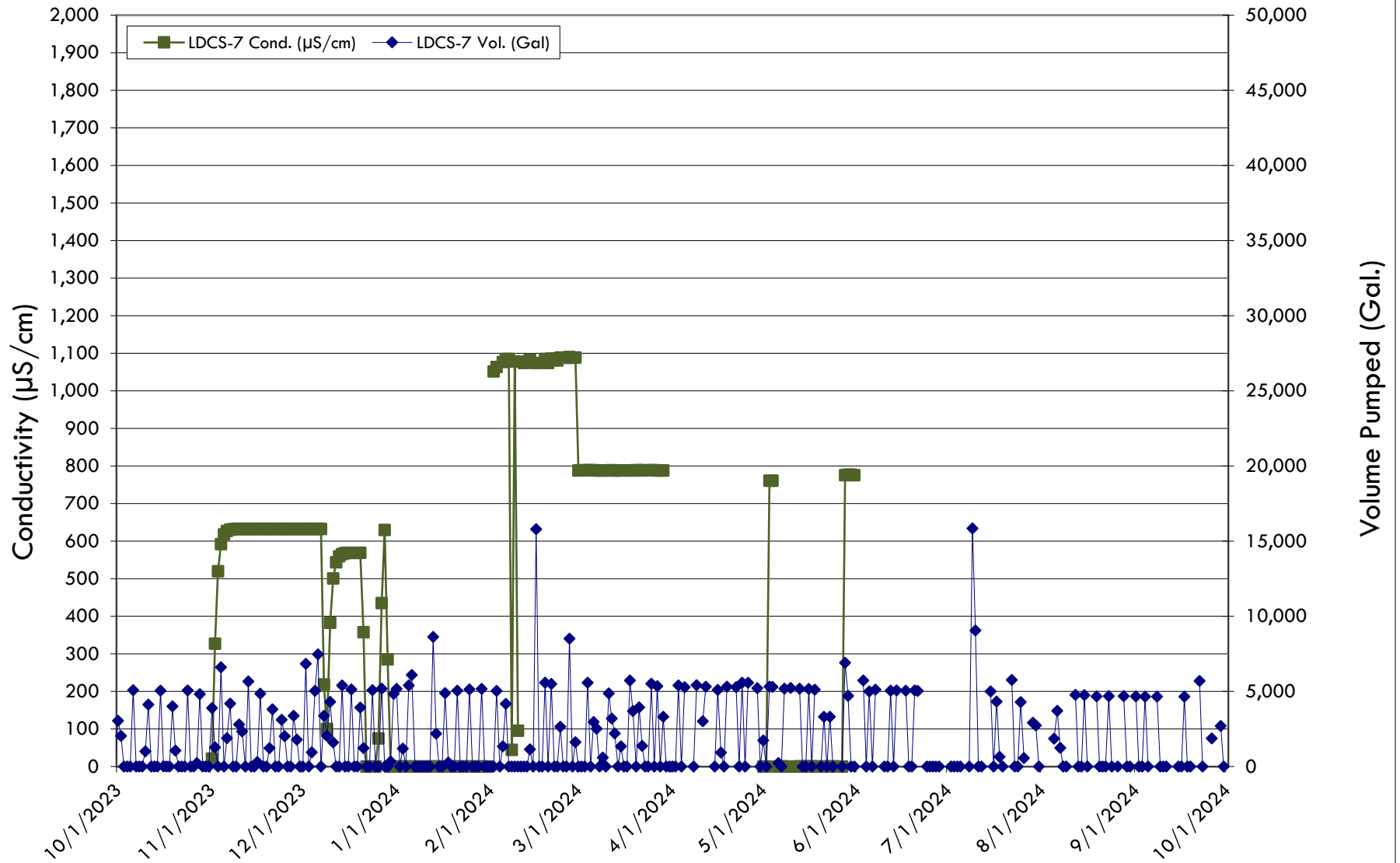


LDCS-6 (Daily Totals)
Conductivity vs Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



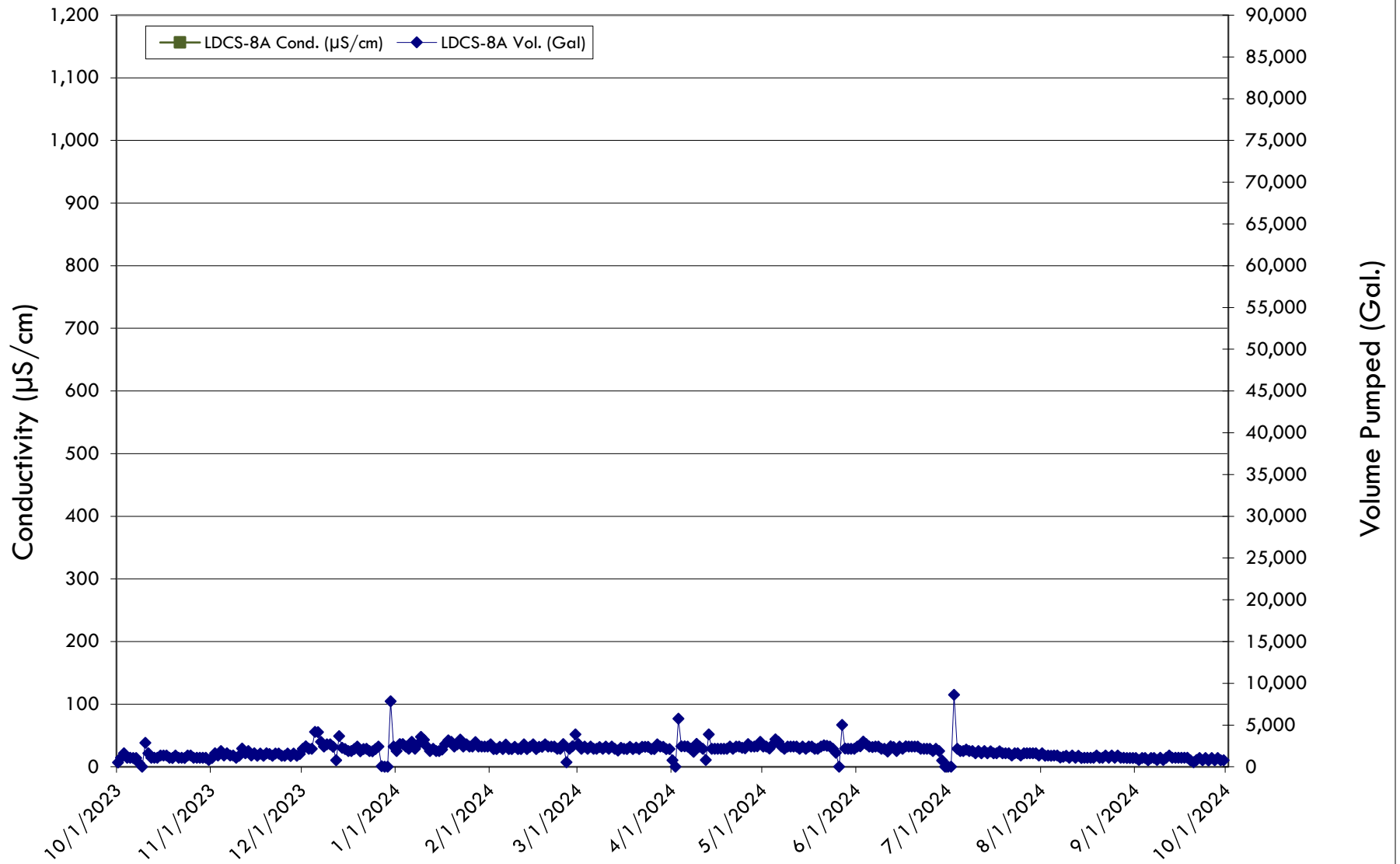
LDCS-7 (Daily Totals)
Conductivity vs Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington

*Conductivity Probe malfunction May 2023 through November 2023



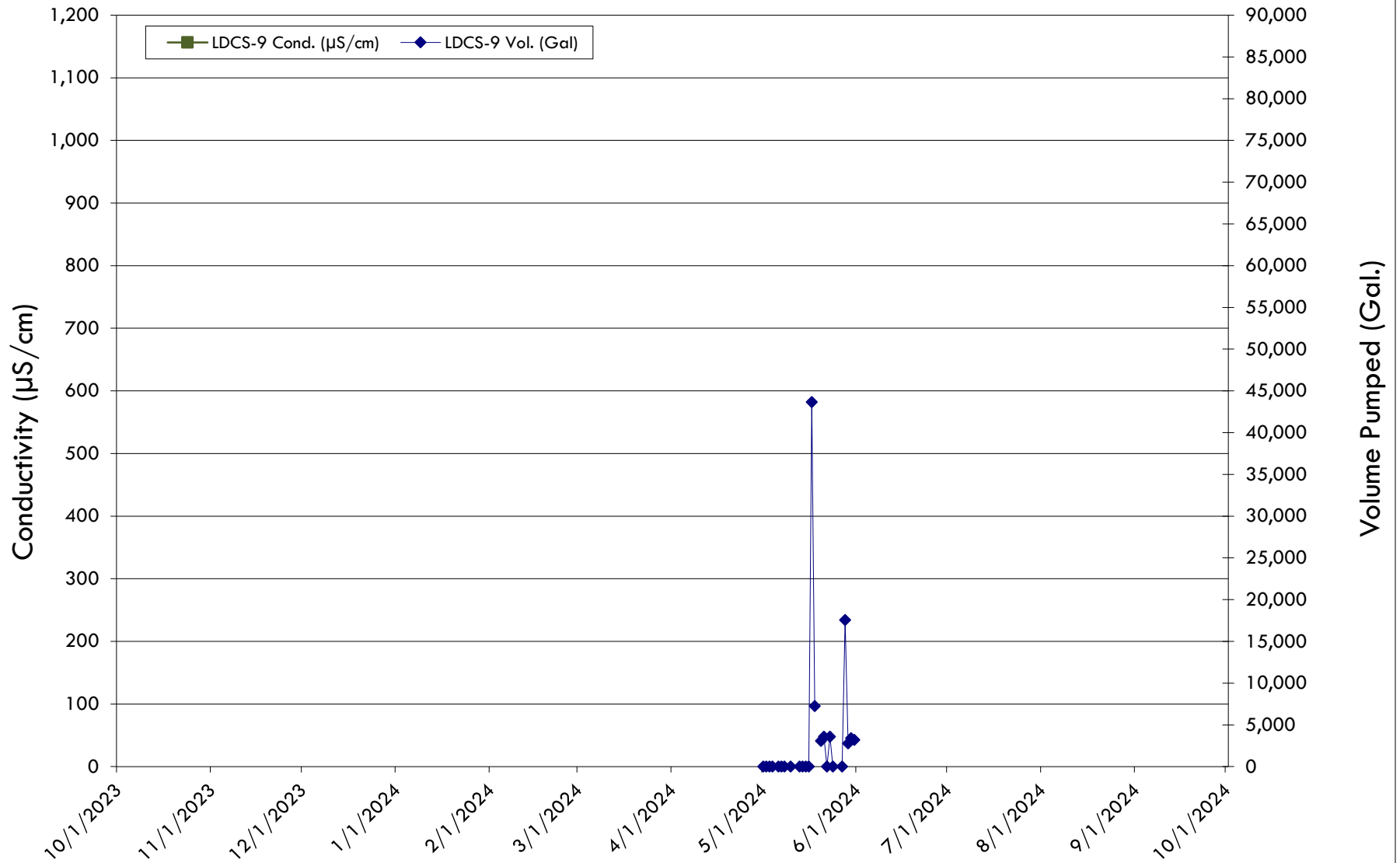
LDCS-8 (Daily Totals)
Conductivity vs Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington

*Conductivity Probe malfunction June 2023 through December 2024

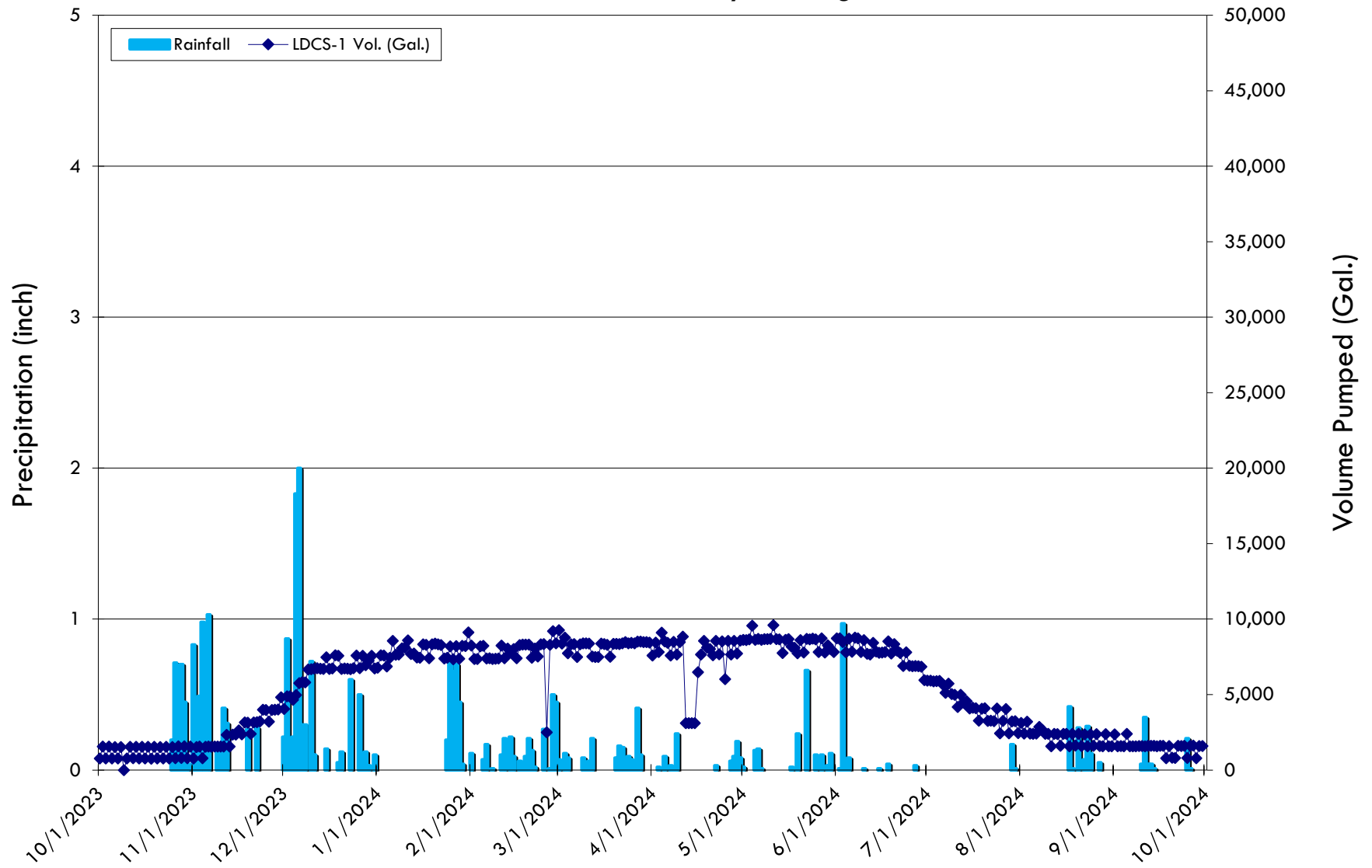


LDCS-9 (Daily Totals)
Conductivity vs Volume Pumped
Second Quarter 2024
LRI Landfill, Pierce County, Washington

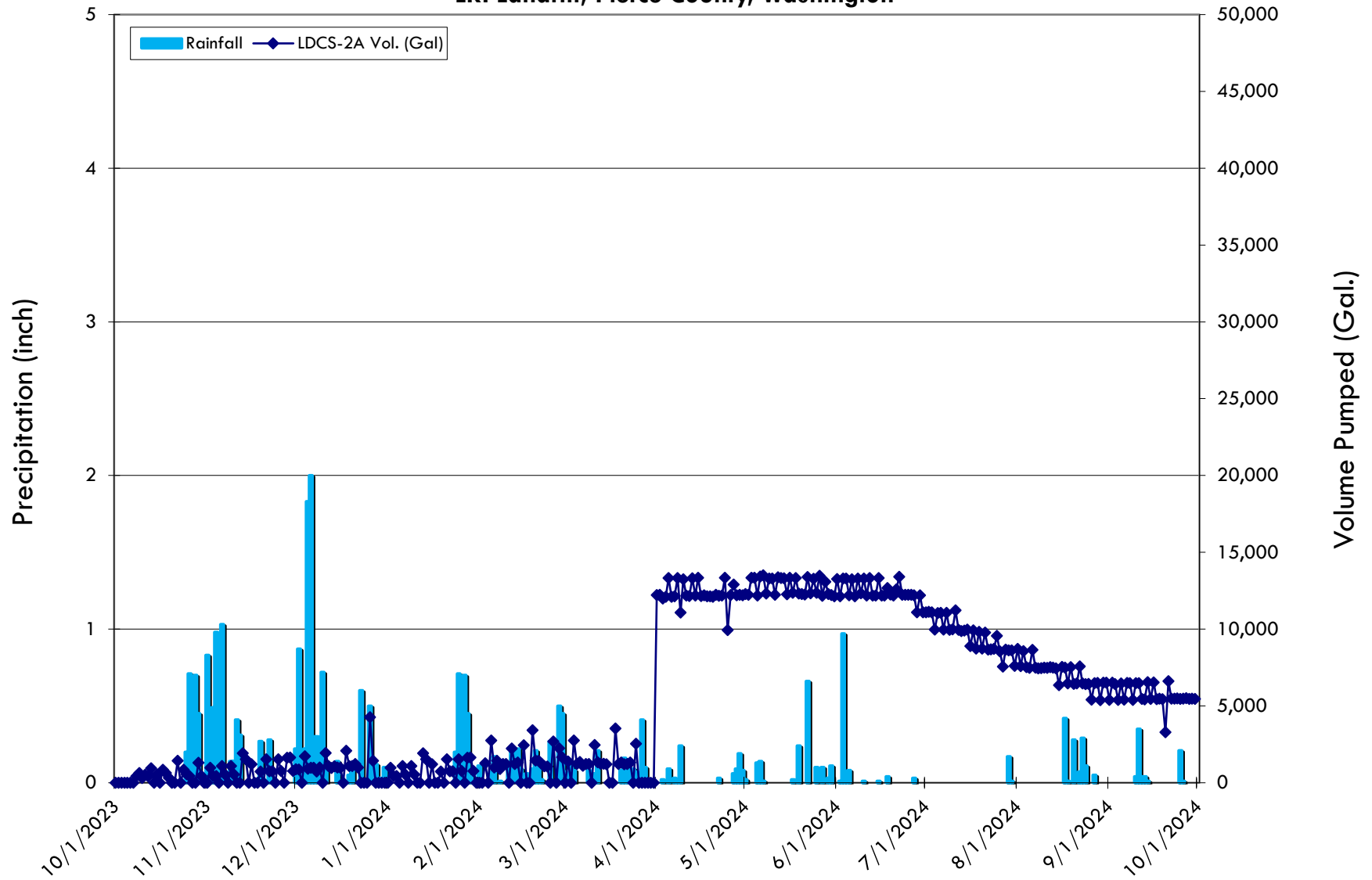
*Conductivity Probe and pump
malfunction August 2023 through
March 2024



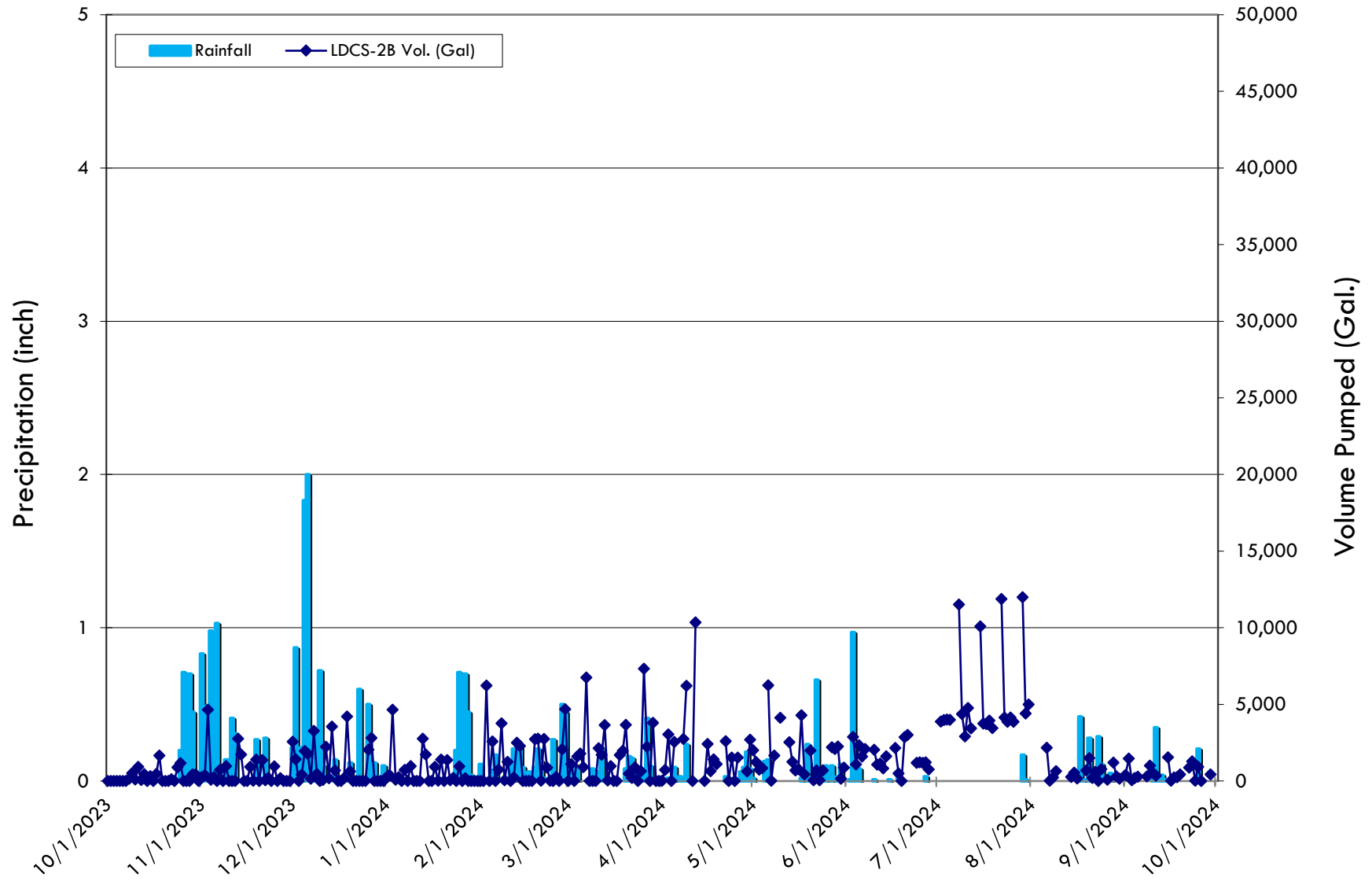
LDCS-1 (Daily Totals)
Volume Pumped vs Precipitation
Third Quarter 2024
LRI Landfill, Pierce County, Washington



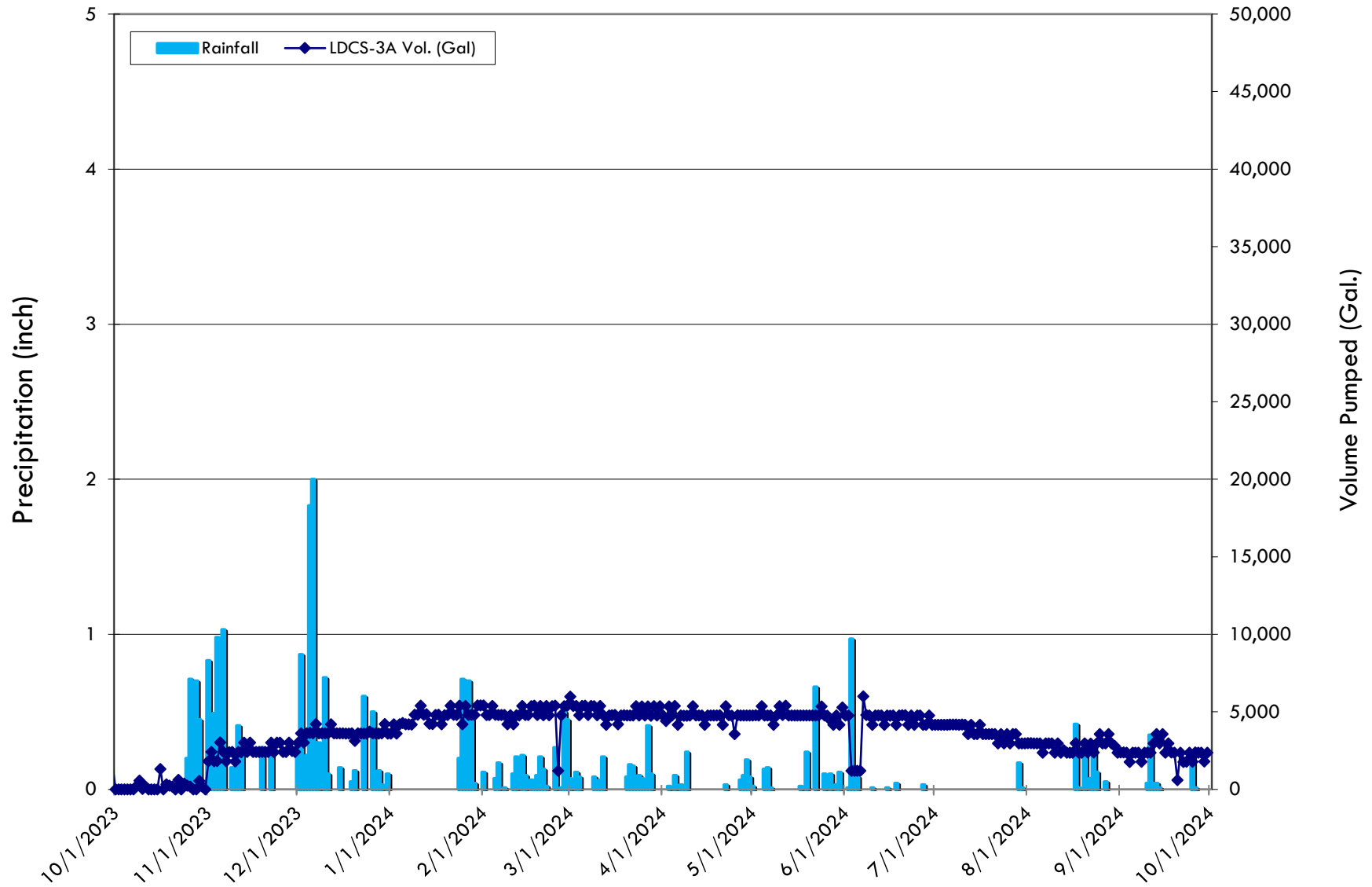
LDCS-2A (Daily Totals)
Volume Pumped vs Precipitation
Third Quarter 2024
LRI Landfill, Pierce County, Washington



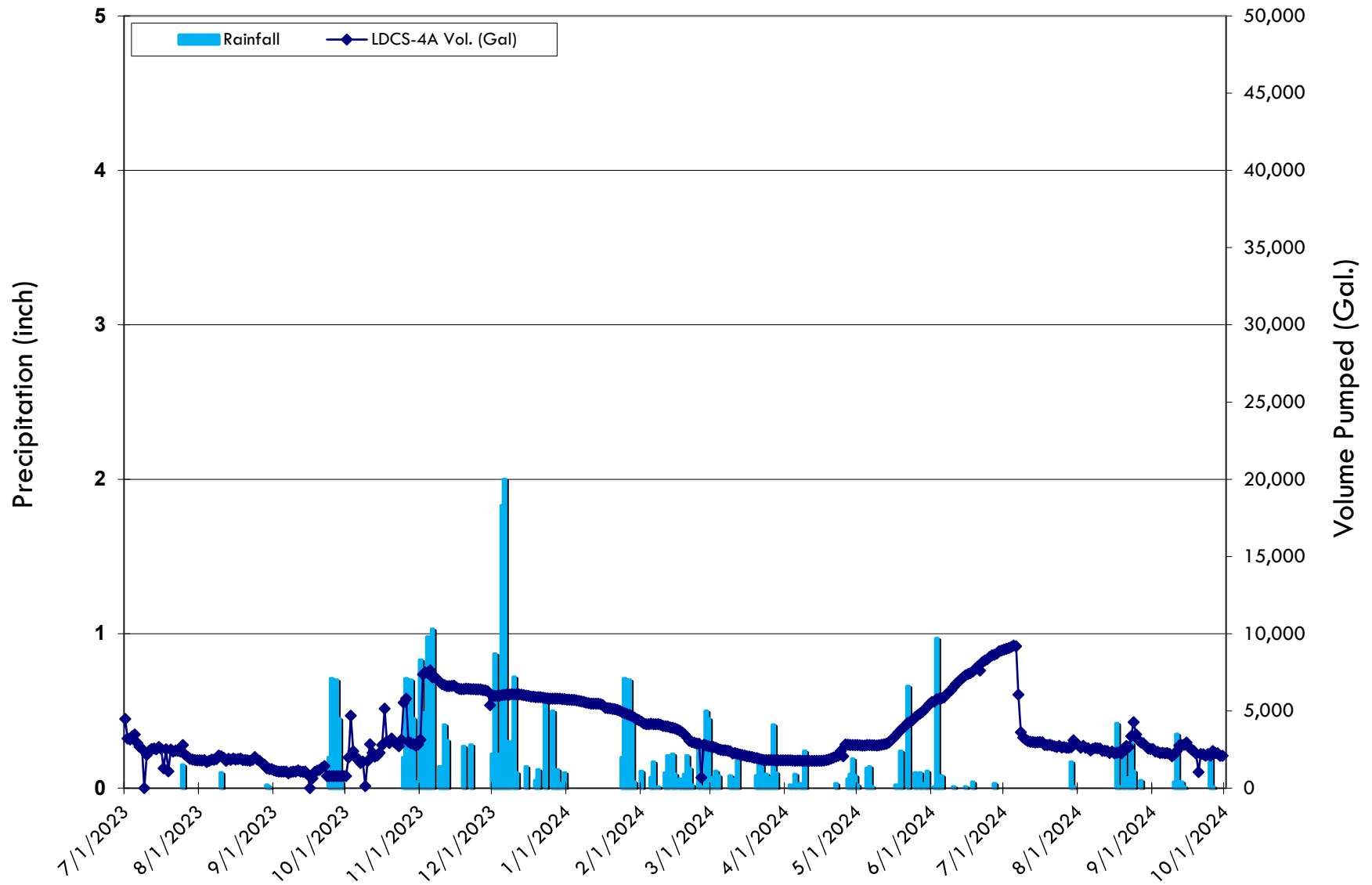
LDCS-2B (Daily Totals)
Volume Pumped vs Precipitation
Third Quarter 2024
LRI Landfill, Pierce County, Washington



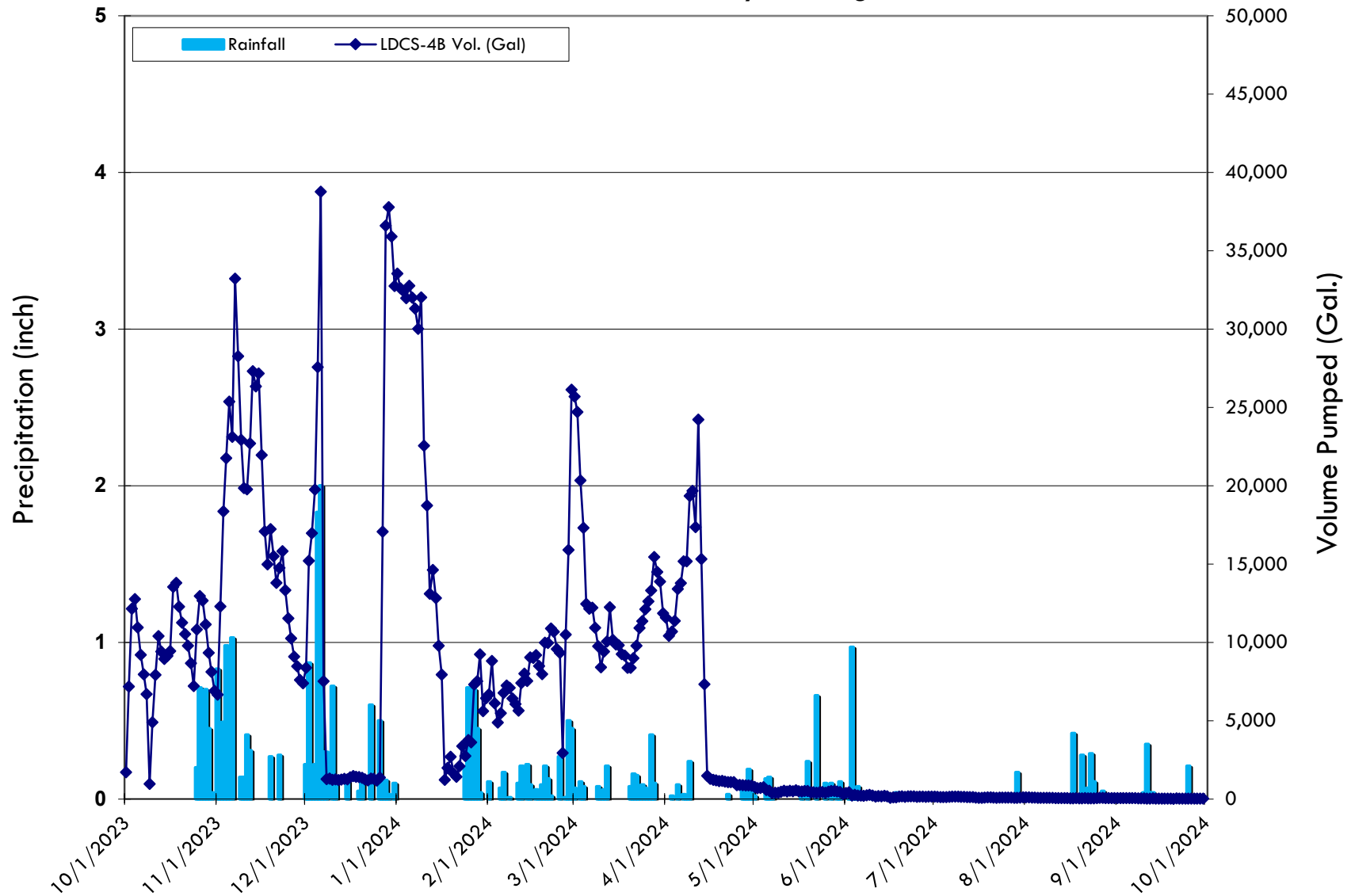
LDCS-3A (Daily Totals)
Volume Pumped vs Precipitation
Third Quarter 2024
LRI Landfill, Pierce County, Washington



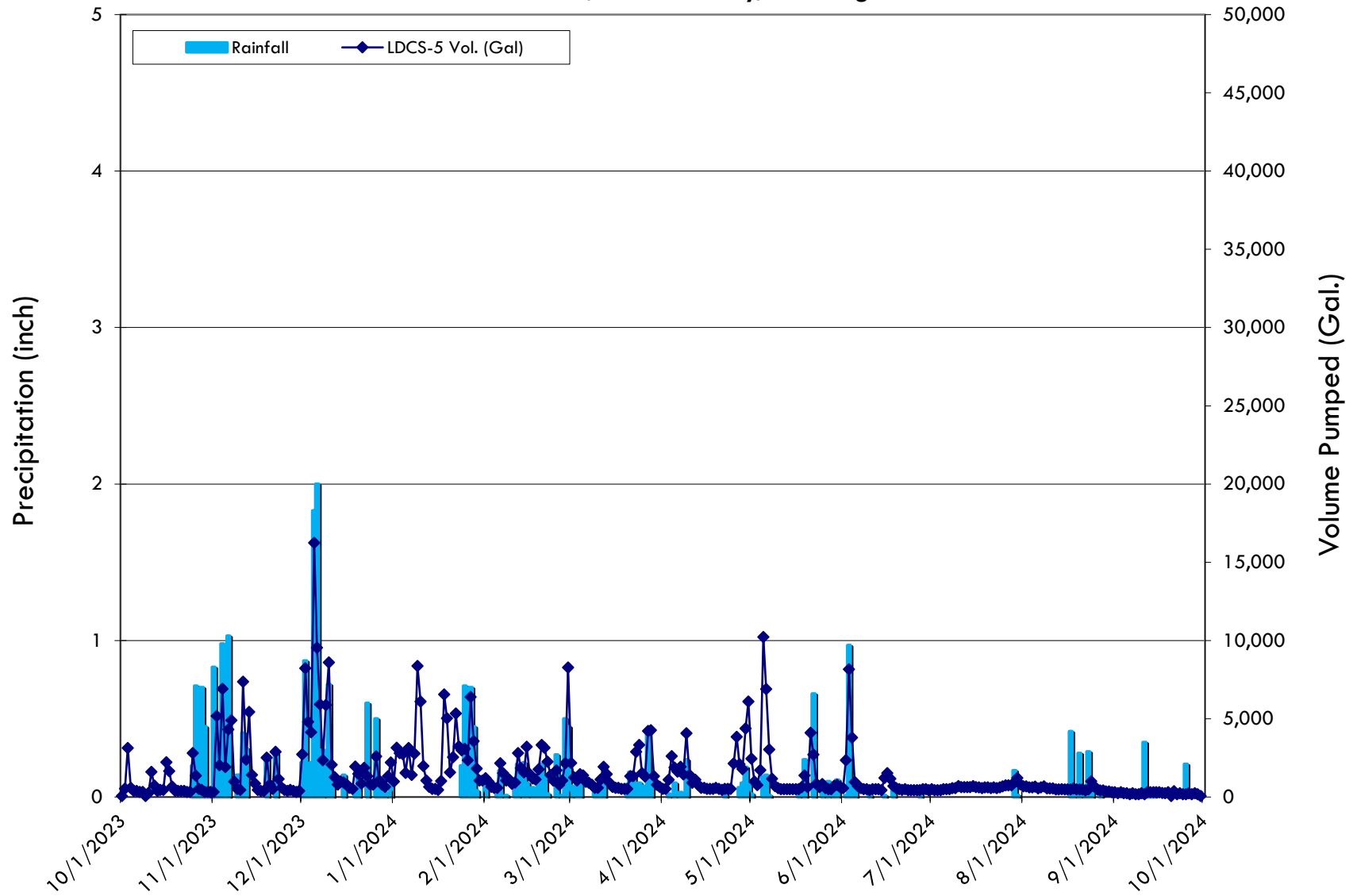
LDCS-4A (Daily Totals)
Volume Pumped vs Precipitation
Third Quarter 2024
LRI Landfill, Pierce County, Washington



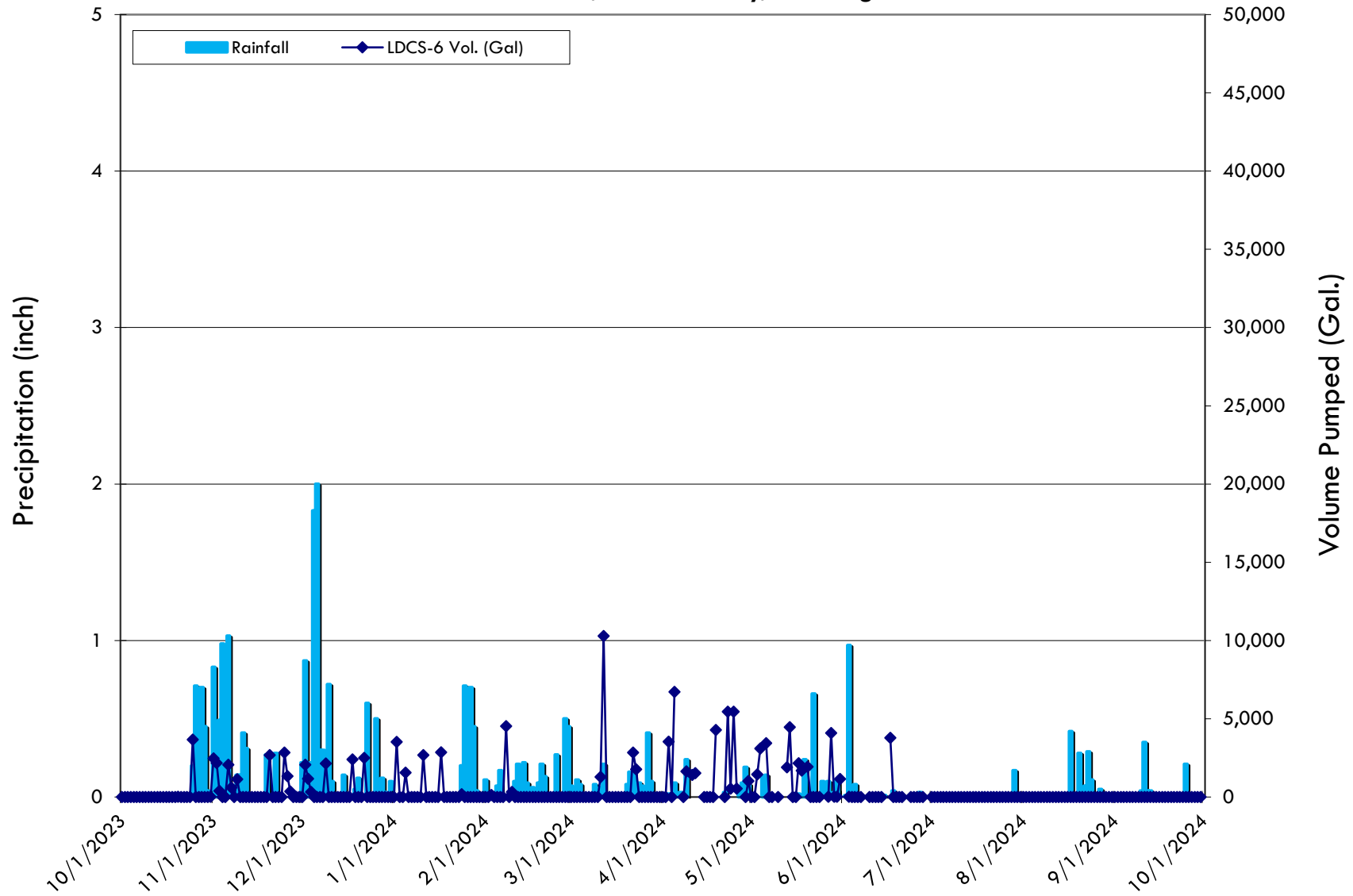
LDCS-4B (Daily Totals)
Volume Pumped vs Precipitation
Third Quarter 2024
LRI Landfill, Pierce County, Washington



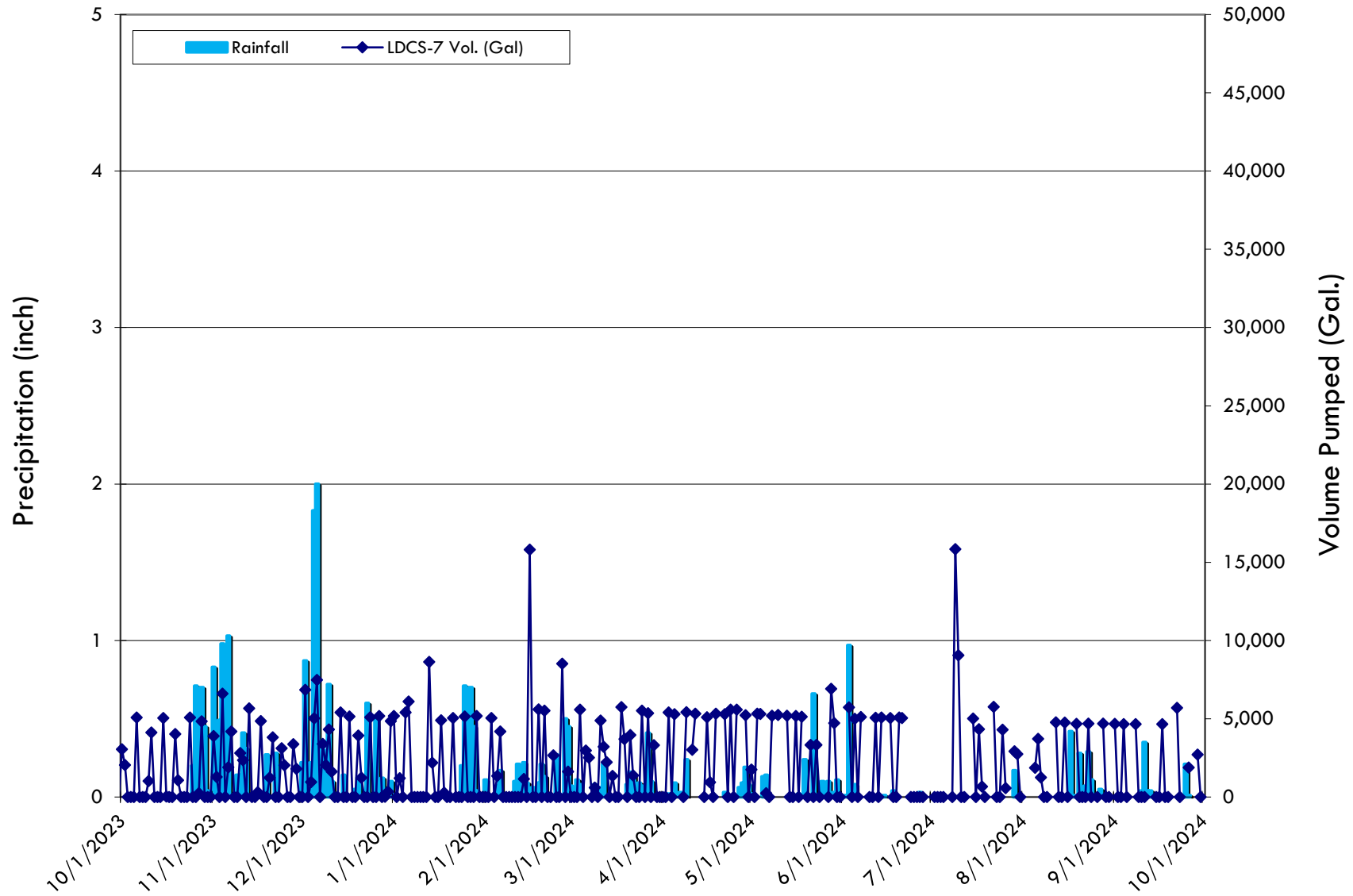
LDCS-5 (Daily Totals)
Volume Pumped vs Precipitation
Third Quarter 2024
LRI Landfill, Pierce County, Washington



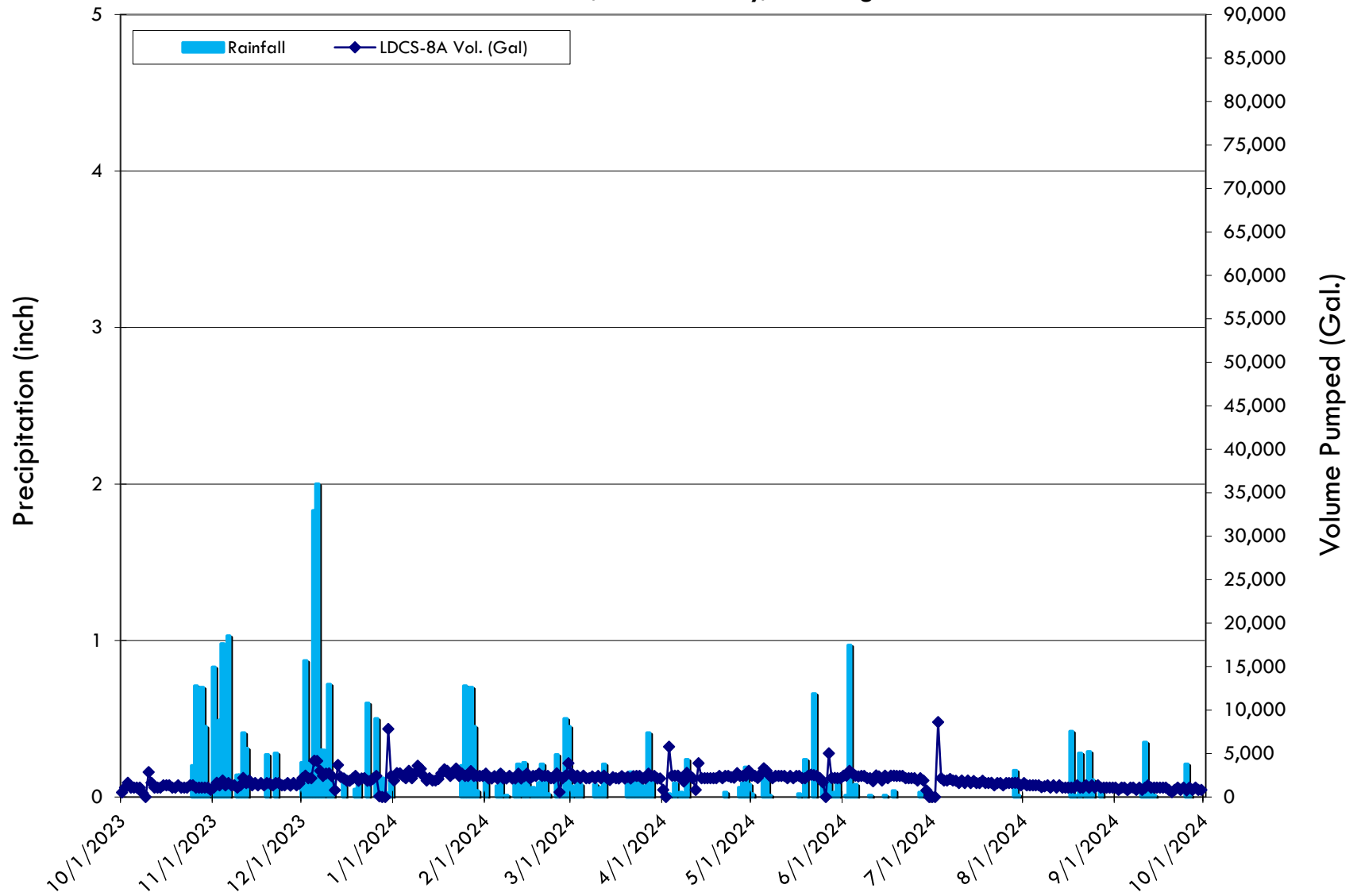
LDCS-6 (Daily Totals)
Volume Pumped vs Precipitation
Third Quarter 2024
LRI Landfill, Pierce County, Washington



LDCS-7 (Daily Totals)
Volume Pumped vs Precipitation
Third Quarter 2024
LRI Landfill, Pierce County, Washington

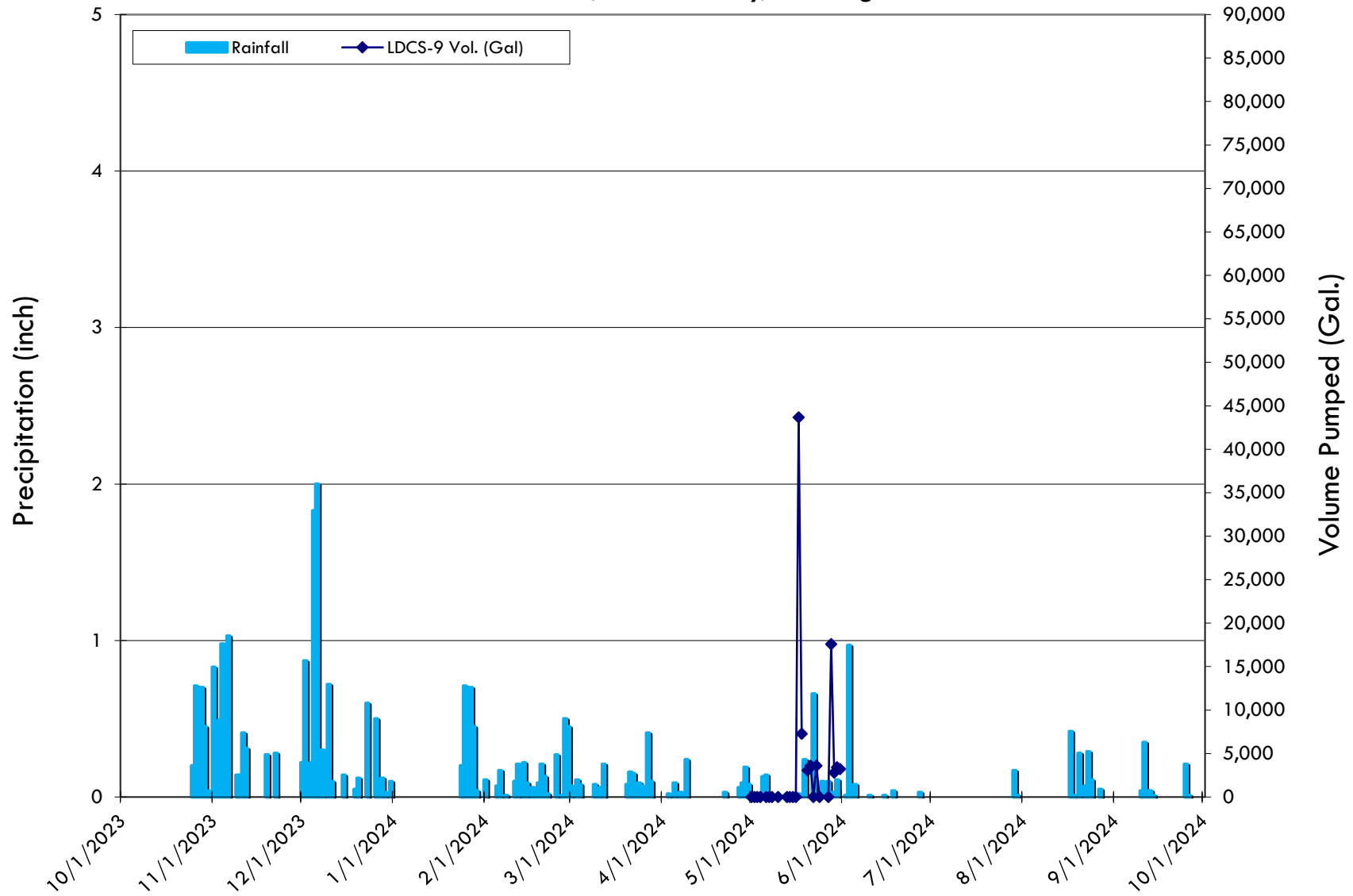


LDCS-8A (Daily Totals)
Volume Pumped vs Precipitation
Third Quarter 2024
LRI Landfill, Pierce County, Washington

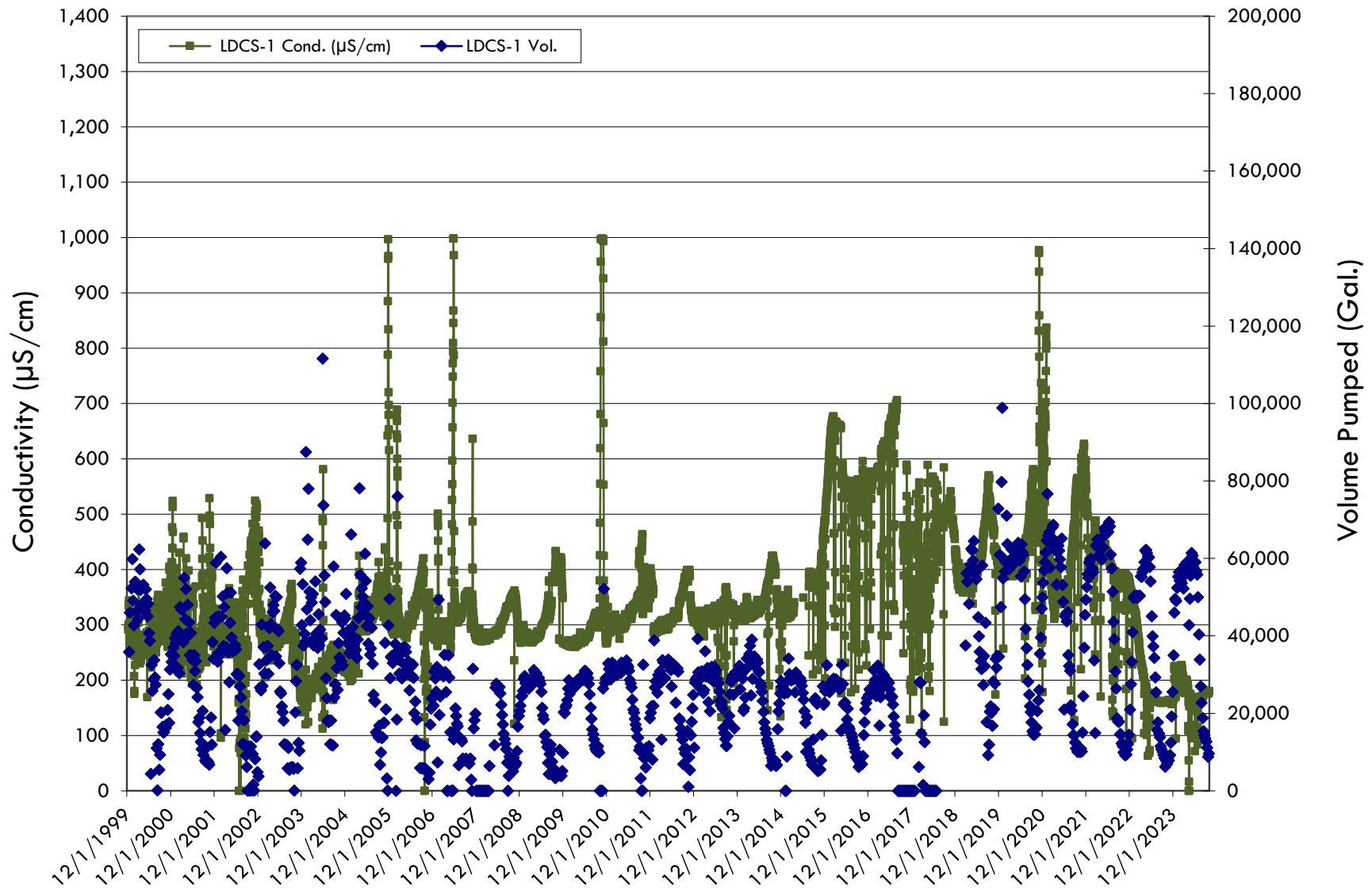


**LDCS-9 (Daily Totals)
Volume Pumped vs Precipitation
Third Quarter 2024
LRI Landfill, Pierce County, Washington**

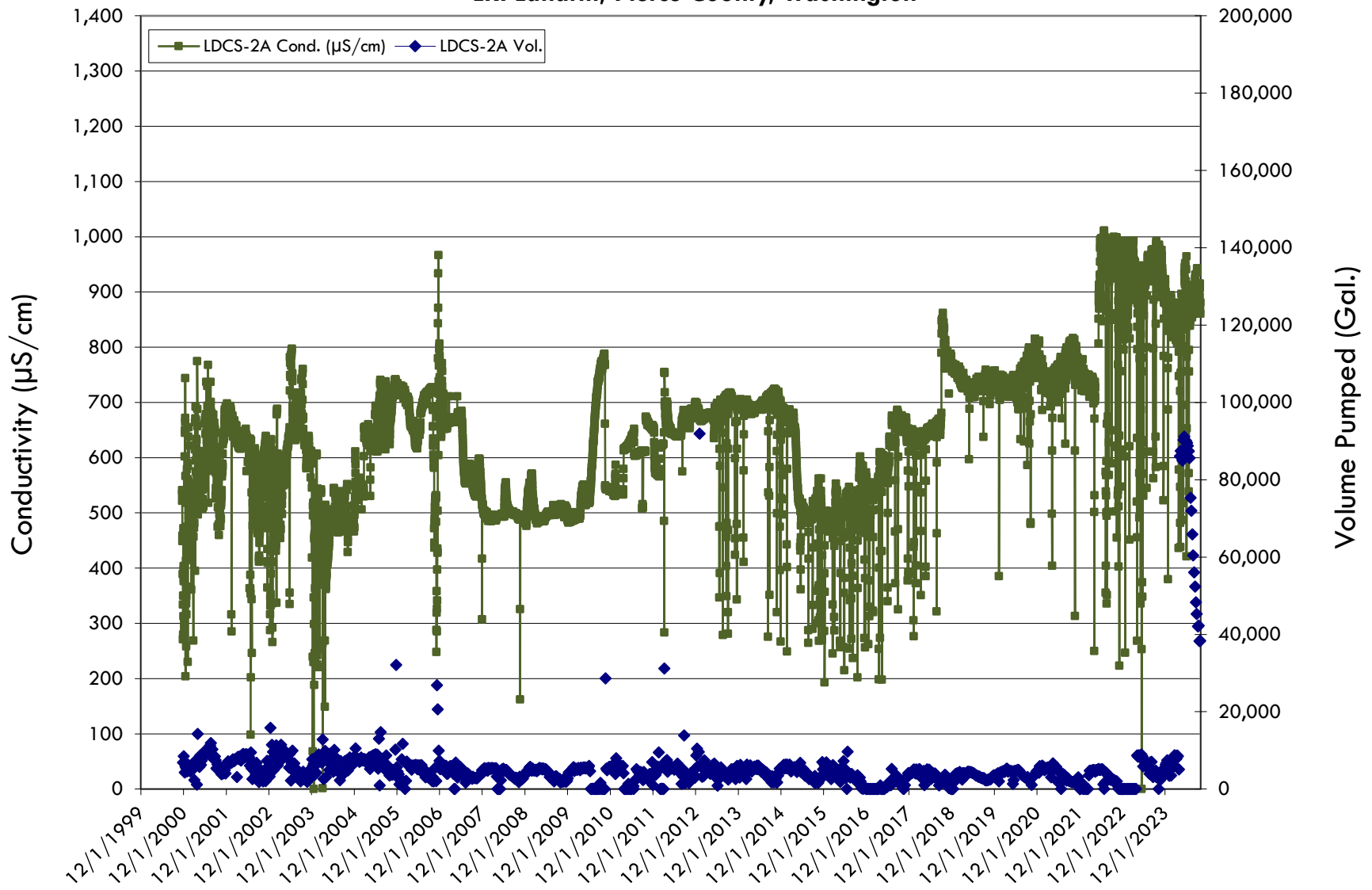
Probe malfunction from August 2023 through May 2024 and the month of June 2024



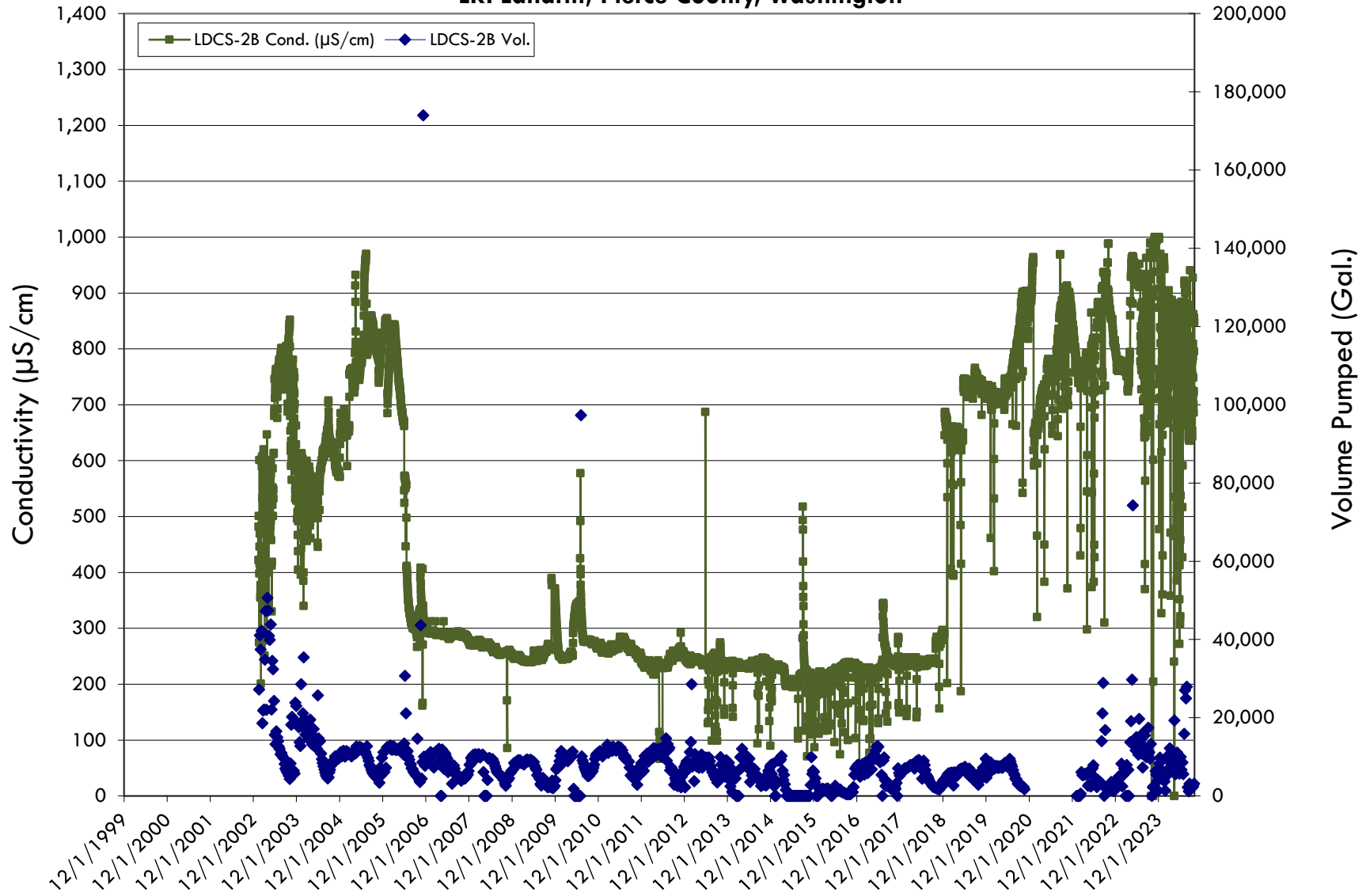
LDCS-1
Daily Conductivity vs Weekly Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



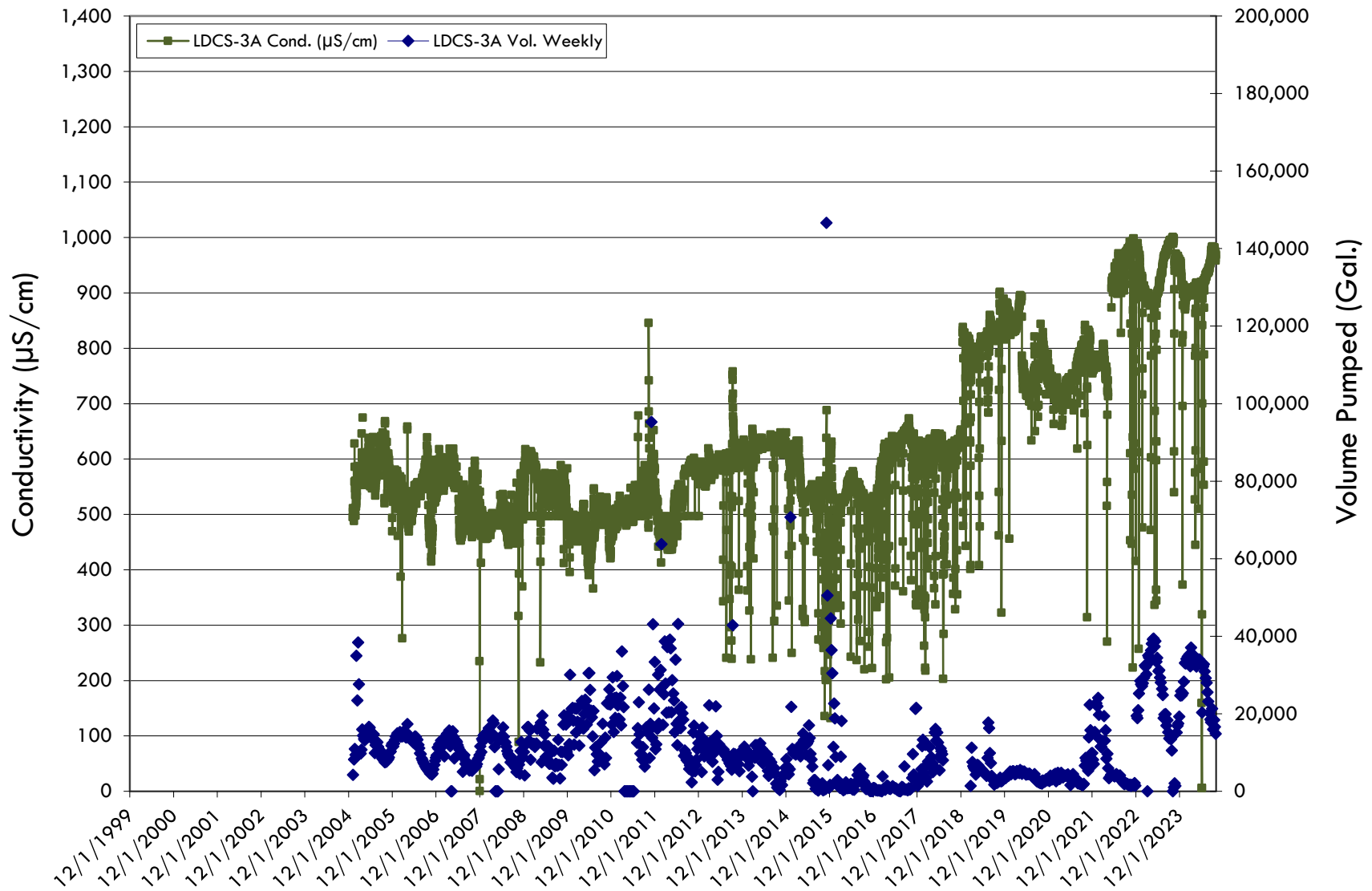
LDCS-2A
Daily Conductivity vs Weekly Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



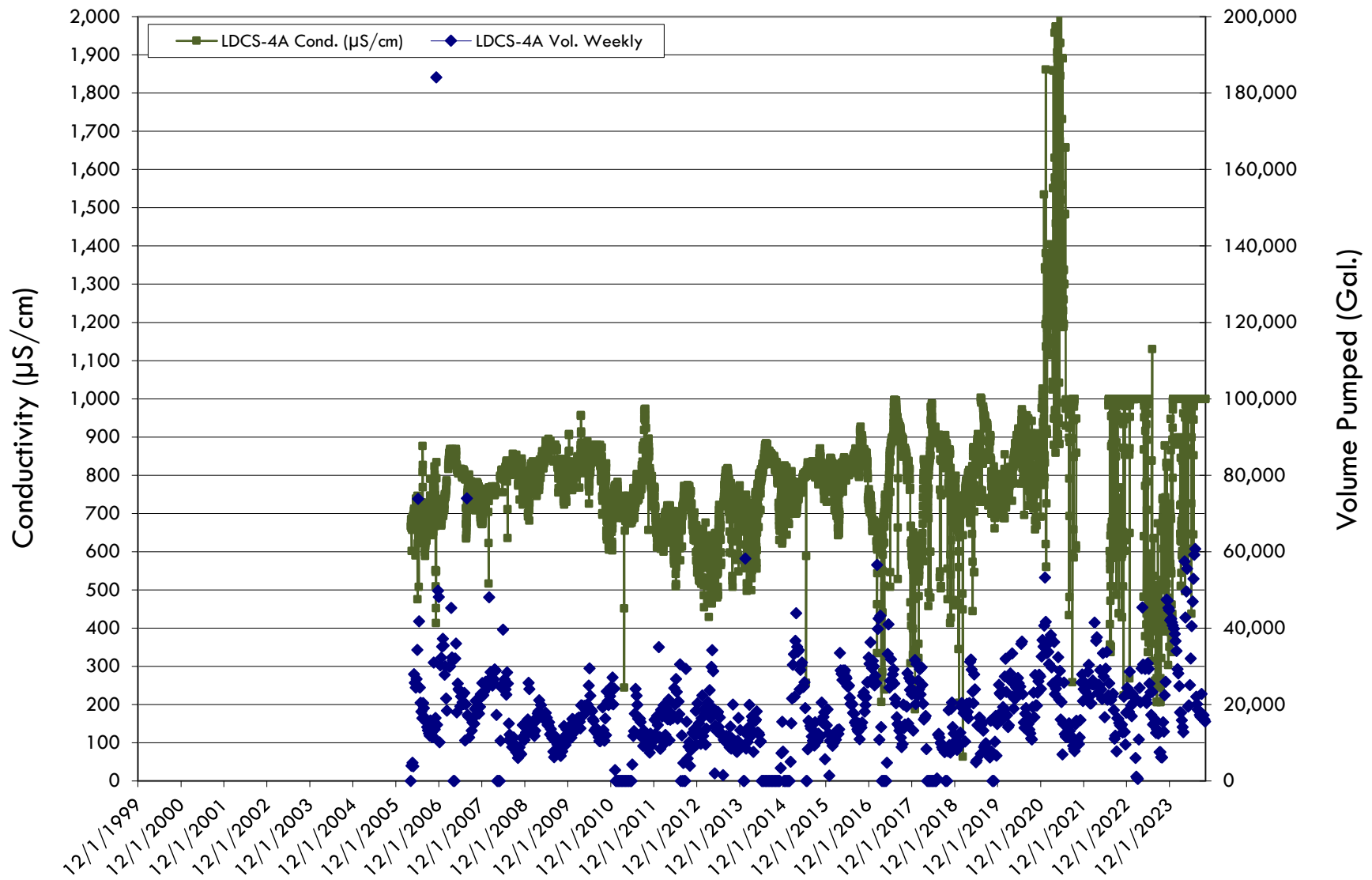
LDCS-2B
Daily Conductivity vs Weekly Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



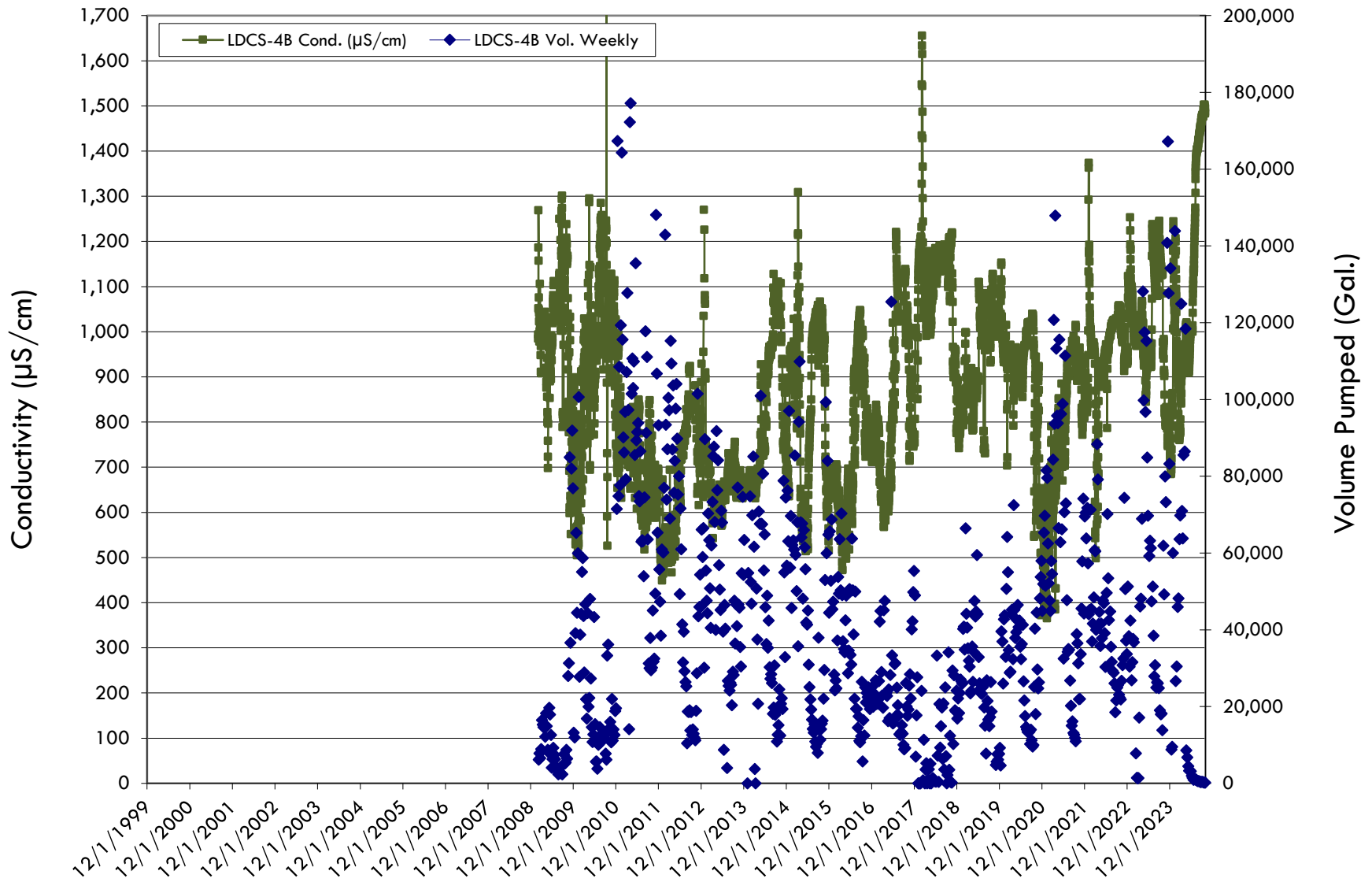
LDCS-3A
Daily Conductivity vs Weekly Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



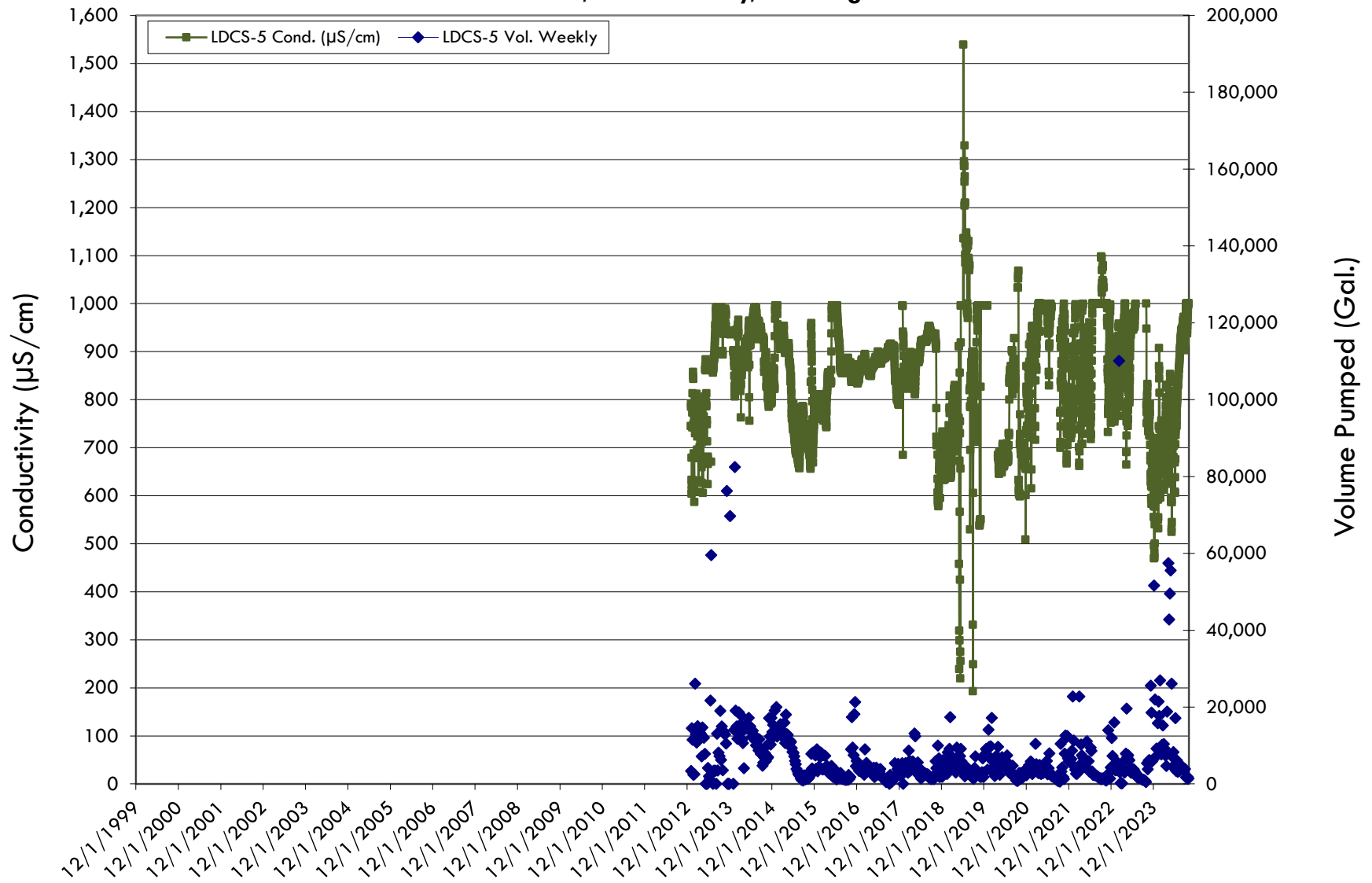
LDCS-4A
Daily Conductivity vs Weekly Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



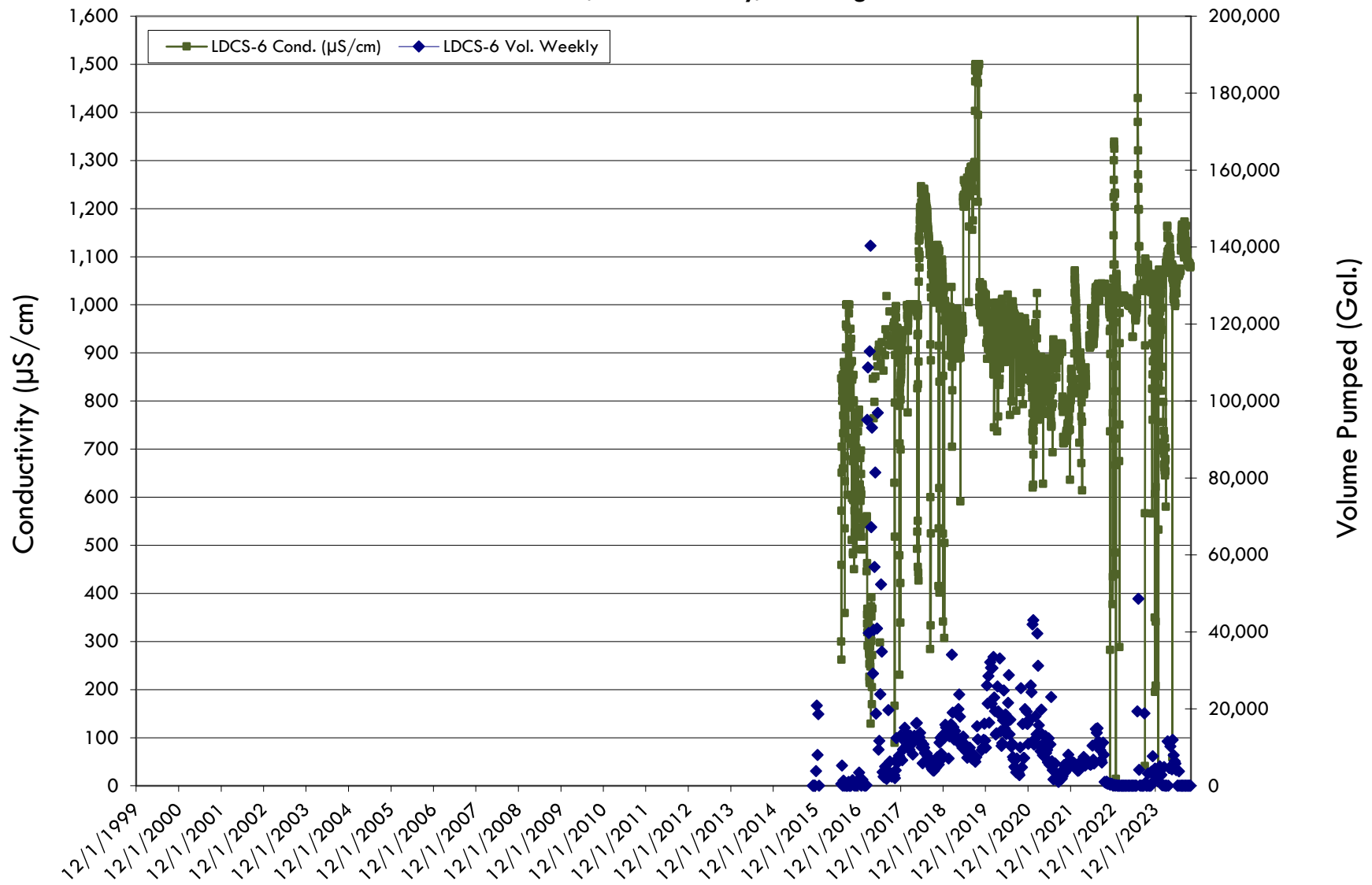
LDCS-4B
Daily Conductivity vs Weekly Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



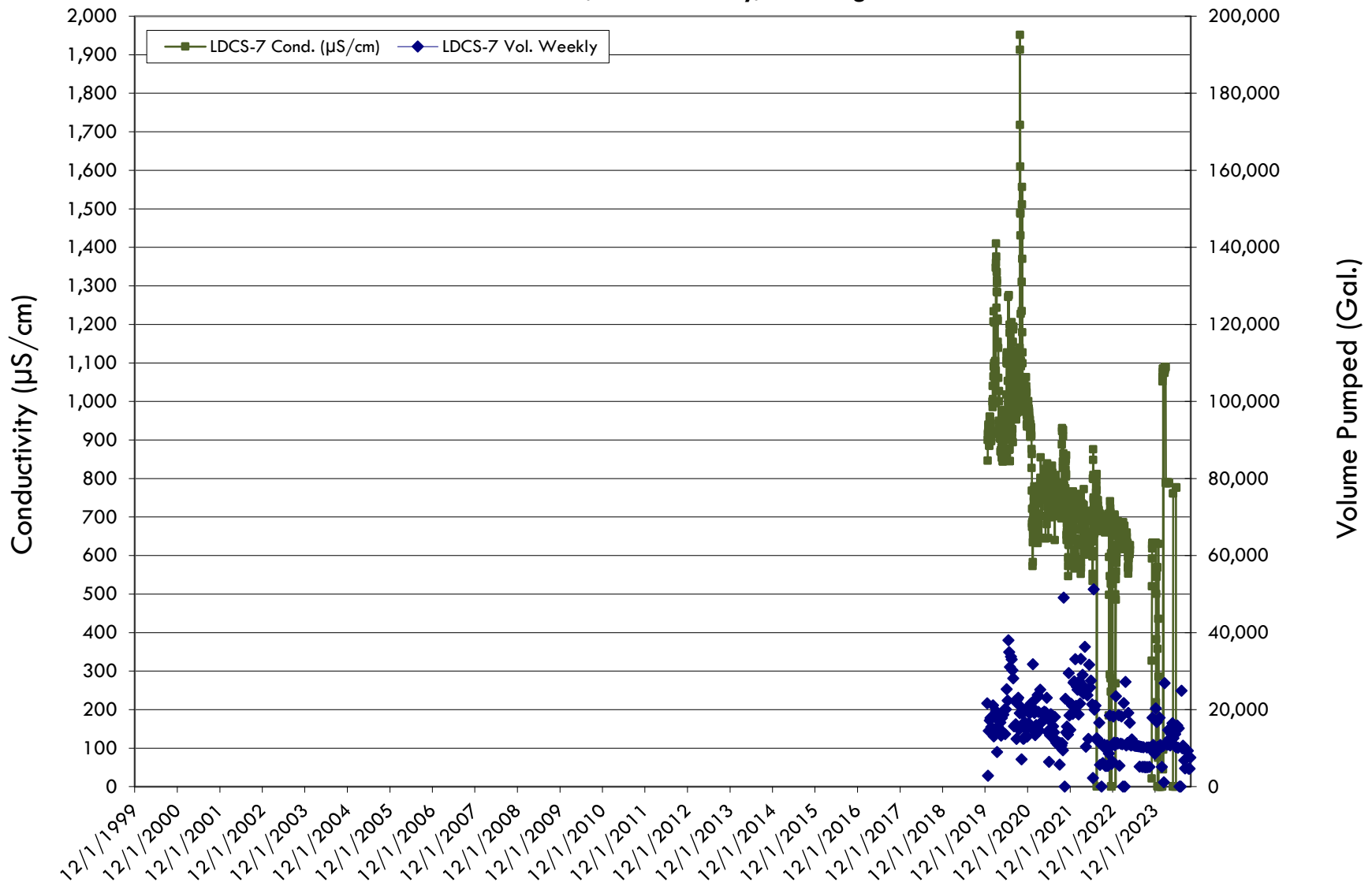
LDCS-5
Daily Conductivity vs Weekly Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



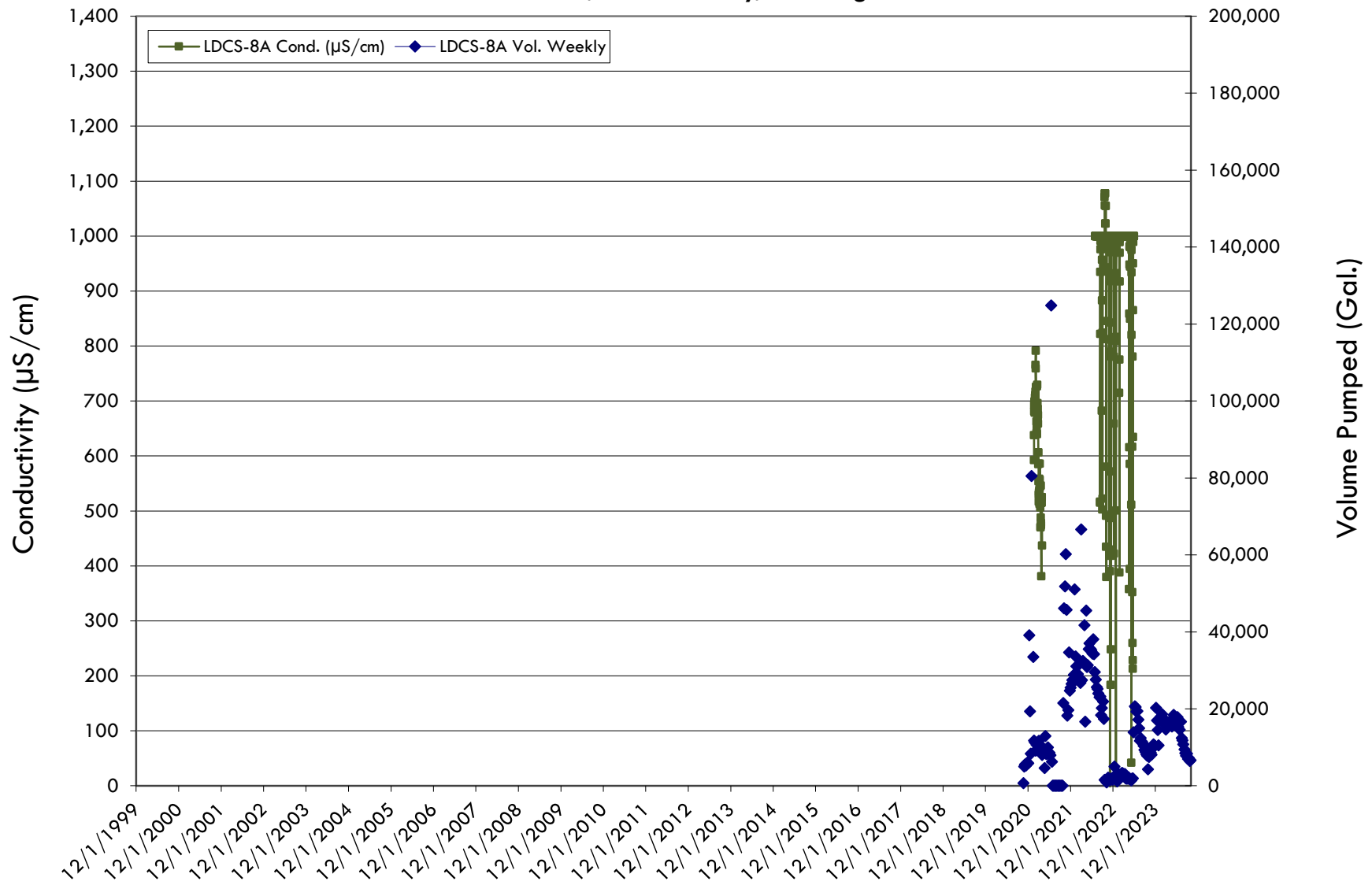
LDCS-6
Daily Conductivity vs Weekly Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



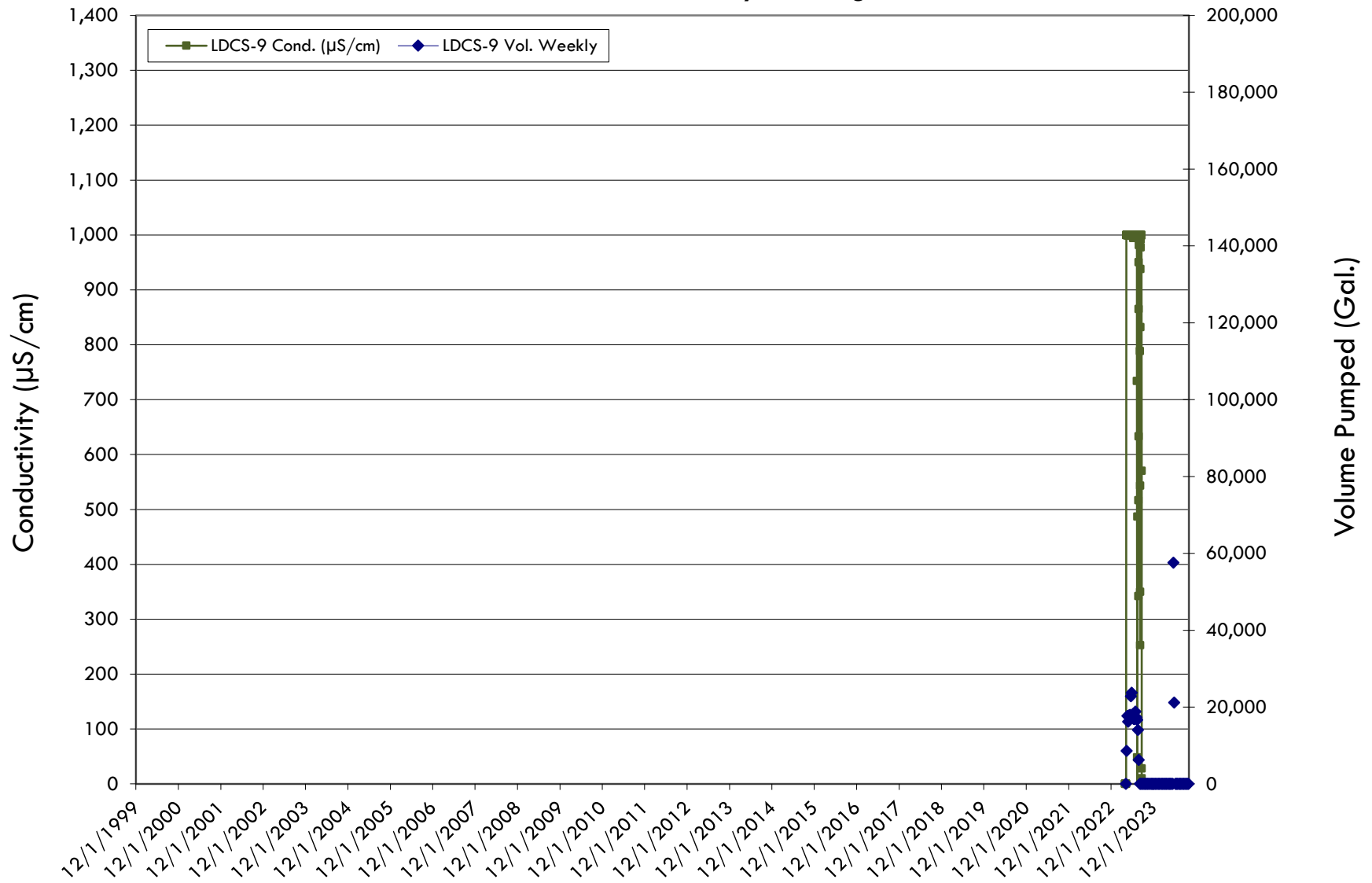
LDCS-7
Daily Conductivity vs Weekly Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



LDCS-8A
Daily Conductivity vs Weekly Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



LDCS-9
Daily Conductivity vs Weekly Volume Pumped
Third Quarter 2024
LRI Landfill, Pierce County, Washington



Summary of Leachate Volume and Depth Data
Third Quarter 2024
LRI Landfill, Pierce County, Washington

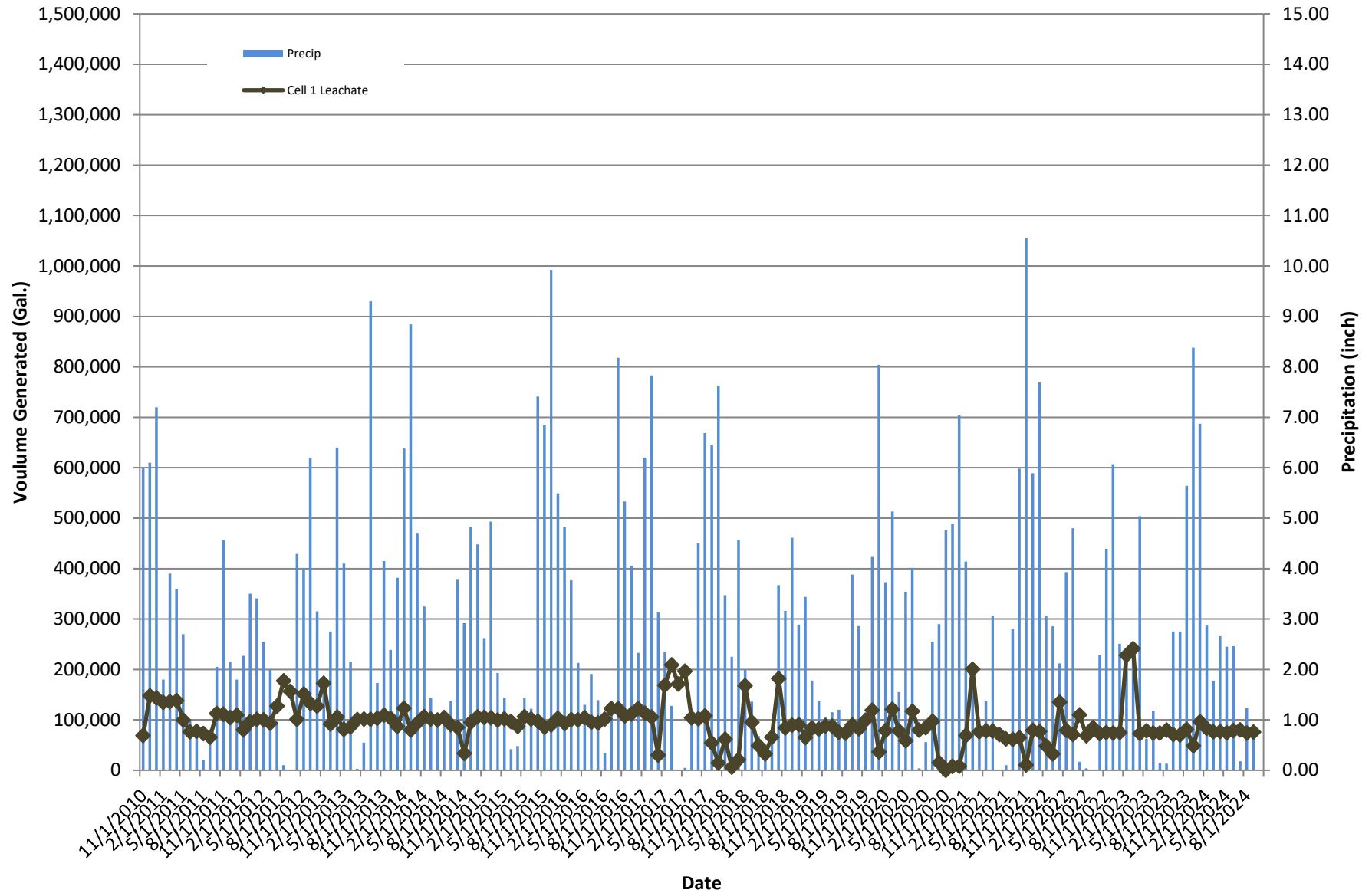
Date	Cell 1 Leachate Volume (GPD)	Cell 1 Leachate Level (in.)	Cell 2A Leachate Volume (GPD)	Cell 2A Leachate Level (in.)	Cell 2B Leachate Volume (GPD)	Cell 2B Leachate Level (in.)	Cell 3A Leachate Volume (GPD)	Cell 3A Leachate Level (in.)	Cell 4A Leachate Volume (GPD)	Cell 4A Leachate Level (in.)	Cell 4B Leachate Volume (GPD)	Cell 4B Leachate Level (in.)	Cell 5 Leachate Volume (GPD)	Cell 5 Leachate Level (in.)	Cell 6 Leachate Volume (GPD)	Cell 6 Leachate Level (in.)	Cell 7 Leachate Volume (GPD)	Cell 7 Leachate Level (in.)	Cell 8A Leachate Volume (GPD)	Cell 8A Leachate Level (in.)	Cell 9A Leachate Volume (GPD)	Cell 9A Leachate Level (in.)
7/1/2024	1,691	11.2	0	9.4	3,975	9.2	9,830	14.4	7,066	9.1	5,821	10.3	3,108	10.7	0	20.9	0	14.8	15,419	16.0	0	26.4
7/2/2024	2,885	11.1	4,742	7.7	4,041	9.3	13,100	13.7	6,786	9.3	7,782	10.1	3,061	10.7	36,384	20.8	0	13.2	25,949	19.0	0	11.4
7/3/2024	1,673	11.3	0	7.8	4,088	9.3	10,007	12.8	6,622	9.3	6,682	10.2	3,104	10.6	35,943	16.6	0	15.4	18,280	15.8	0	8.9
7/4/2024	3,053	11.0	3,076	7.3	3,863	9.2	8,775	13.8	7,007	9.0	6,762	10.3	3,048	10.7	36,804	17.9	0	14.1	25,898	19.3	0	14.3
7/5/2024	3,404	11.0	0	7.6	3,885	9.3	7,379	15.9	8,056	9.1	6,172	10.2	3,233	10.6	39,037	15.0	0	10.7	18,348	15.8	0	14.8
7/6/2024	3,375	11.0	0	8.9	3,881	9.3	9,828	18.5	27,998	8.1	8,155	10.1	3,421	10.5	0	0.0	0	0.0	26,495	19.4	0	0.0
7/7/2024	3,298	11.1	0	9.7	3,750	9.3	10,388	18.7	20,924	8.0	7,240	10.1	3,568	10.5	0	0.0	0	0.0	18,135	15.8	0	0.0
7/8/2024	4,290	10.9	7,160	8.6	3,625	9.0	10,666	18.6	7,277	9.0	6,997	10.4	3,680	10.5	102,889	16.9	0	11.2	25,766	19.3	0	18.8
7/9/2024	1,883	11.1	0	6.9	3,743	9.3	12,752	19.0	7,111	9.0	6,013	10.3	3,827	10.3	34,465	21.4	0	15.9	15,082	16.0	0	15.5
7/10/2024	1,627	12.0	0	8.1	3,447	9.9	9,470	16.3	6,743	8.9	8,068	10.4	3,613	9.6	38,355	20.6	0	137.0	25,848	18.7	0	11.6
7/11/2024	3,334	11.1	0	9.3	3,707	9.3	4,620	14.5	6,967	9.0	7,668	10.2	3,402	10.4	46,344	16.4	0	14.0	13,478	16.2	0	7.3
7/12/2024	3,370	11.0	0	10.0	3,864	9.2	4,982	14.8	6,641	9.1	5,587	10.3	3,389	10.4	37,316	22.1	0	15.6	25,267	18.5	0	0.0
7/13/2024	3,258	11.2	0	11.0	3,627	9.3	5,809	16.0	6,612	9.1	6,655	10.3	3,498	10.3	0	0.0	0	0.0	12,925	16.3	0	0.0
7/14/2024	1,767	11.1	0	12.0	3,463	9.3	5,279	15.8	7,191	9.1	8,317	10.1	3,434	10.3	0	0.0	0	0.0	25,094	18.2	0	0.0
7/15/2024	3,352	11.0	0	13.0	3,798	9.3	3,794	14.9	6,657	9.1	7,114	10.2	3,360	10.4	100,380	22.5	0	13.2	11,307	16.4	0	16.6
7/16/2024	3,456	11.0	0	13.6	3,809	9.3	3,811	16.8	7,295	9.2	6,957	10.2	3,450	10.4	38,647	20.2	0	15.0	25,553	18.4	0	13.9
7/17/2024	1,713	11.1	0	14.4	3,712	9.3	3,854	16.7	7,012	9.0	7,209	10.2	3,454	10.3	31,906	22.8	0	13.6	14,585	16.2	0	14.2
7/18/2024	3,205	11.2	0	15.0	3,692	9.3	3,819	14.6	6,649	9.2	6,811	10.2	3,342	10.4	14,402	24.5	0	15.6	26,008	18.5	0	14.5
7/19/2024	1,598	11.1	0	15.6	3,704	9.3	3,695	13.7	20,401	8.9	6,652	10.2	3,235	10.5	15,881	22.3	0	13.7	13,714	16.3	0	14.0
7/20/2024	3,233	11.1	0	16.4	3,974	9.3	3,509	14.6	6,210	9.1	6,330	10.1	3,668	10.2	0	0.0	0	0.0	20,295	18.2	0	0.0
7/21/2024	1,648	11.2	0	17.0	4,189	9.3	3,635	15.3	7,708	9.0	6,495	10.2	3,910	10.1	0	0.0	0	0.0	13,022	16.5	0	0.0
7/22/2024	1,601	11.3	0	17.9	3,964	9.3	3,695	14.6	6,616	8.5	7,134	10.1	3,874	10.2	53,604	15.0	0	14.7	23,172	18.1	0	16.0
7/23/2024	3,265	11.0	0	18.9	4,010	9.3	3,634	14.2	6,932	9.1	6,182	10.1	4,784	9.8	8,813	15.0	0	10.6	13,314	16.4	0	8.7
7/24/2024	1,618	11.4	0	20.5	3,850	9.3	3,659	15.2	6,719	9.2	8,151	10.0	3,341	10.3	17,664	14.9	0	14.5	20,328	18.6	0	16.1
7/25/2024	3,259	11.0	0	21.7	3,996	9.3	3,643	13.7	7,035	9.1	5,485	9.9	3,073	10.4	13,743	15.0	0	9.4	14,036	16.4	0	16.8
7/26/2024	3,272	10.9	0	24.2	4,011	9.3	3,625	16.1	7,023	9.1	8,430	10.0	3,145	10.3	10,962	15.0	0	14.4	21,024	18.4	0	23.9
7/27/2024	3,406	10.9	0	25.4	3,923	9.3	3,825	18.5	6,995	9.1	7,132	10.0	3,343	10.2	0	0.0	0	0.0	13,931	16.5	0	0.0
7/28/2024	1,767	11.0	0	26.3	4,014	9.3	3,539	17.8	21,128	8.6	7,388	10.1	3,315	10.3	0	0.0	0	0.0	21,032	18.0	0	0.0
7/29/2024	2,174	11.1	22,104	15.3	4,232	9.2	3,852	17.2	6,988	8.6	7,103	9.8	3,219	10.3	42,762	15.0	0	13.1	15,481	16.3	0	29.6
7/30/2024	2,968	11.2	0	8.1	4,053	9.3	3,849	15.4	6,734	9.2	7,255	10.1	3,227	10.3	17,470	15.0	0	15.9	25,362	19.0	0	28.8
7/31/2024	1,621	11.2	0	9.5	3,860	9.3	3,874	14.8	20,606	8.0	6,608	10.0	3,153	10.3	12,859	15.0	0	15.7	14,235	16.5	0	22.5
8/1/2024	3,257	11.0	6,189	7.9	3,703	9.3	3,952	15.0	6,967	9.6	7,267	10.0	3,172	10.3	0	0.0	0	0.0	20,771	17.9	0	0.0
8/2/2024	1,513	11.5	0	7.6	3,742	9.3	3,852	14.2	13,827	8.3	6,837	10.1	3,095	10.3	0	15.0	0	14.4	11,900	16.7	0	15.5
8/3/2024	3,202	10.9	0	8.9	3,827	9.3	3,844	14.9	6,953	9.1	7,562	10.0	3,119	10.3	0	0.0	0	0.0	20,359	17.8	0	0.0
8/4/2024	3,527	11.0	0	10.0	3,810	9.3	3,926	16.6	6,909	9.2	7,584	10.1	3,266	10.2	0	0.0	0	0.0	12,178	16.7	0	0.0
8/5/2024	2,695	11.0	6,209	8.1	3,893	9.3	3,891	15.7	6,807	9.2	6,457	10.0	3,179	10.3	41,972	15.5	0	14.4	22,679	17.7	0	7.1
8/6/2024	1,535	11.1	2,121	6.6	3,891	9.3	3,780	13.6	12,270	9.2	7,412	9.8	3,069	10.3	0	22.0	0	14.0	9,887	16.8	0	18.4
8/7/2024	3,204	11.0	2,379	6.3	3,797	9.3	3,701	13.8	20,672	8.6	6,363	10.0	3,099	10.3	2,890	24.5	0	14.8	24,284	17.6	0	14.7
8/8/2024	3,373	11.0	0	7.2	3,832	9.3	3,776	16.2	6,616	9.0	7,115	10.1	3,202	10.3	30,694	17.1	0	12.3	11,480	16.6	0	9.2
8/9/2024	1,756	11.0	0	8.1	3,808	9.3	3,840	16.4	13,863	8.2	7,092	9.9	3,194	10.3	0	24.0	0	14.5	24,528	18.1	0	14.2
8/10/2024	1,563	11.6	0	9.1	3,797	9.3	3,833	15.3	6,920	9.1	6,613	9.9	3,190	10.3	0	0.0	0	0.0	13,286	16.5	0	0.0
8/11/2024	3,381	10.8	0	10.3	3,952	9.3	3,757	14.5	6,937	9.1	7,446	10.1	3,143	10.3	0	0.0	0	0.0	23,903	18.0	0	0.0
8/12/2024	3,315	11.1	3,905	11.2	3,826	9.3	3,743	15.1	13,811	9.1	6,856	9.9	3,192	10.2	49,539	19.5	0	15.6	11,552	16.7	0	17.3
8/13/2024	1,686	11.1	3,574	6.9	4,075	9.3	3,640	14.3	7,260	9.2	6,562	9.9	3,102	10.3	2,978	22.0	0	14.6	21,982	17.9	0	7.7
8/14/2024	2,174	11.3	0	8.0	3,834	17.4	3,556	12.0	12,065	8.1	6,321	10.0	2,738	10.6	0	0.0	0	13.4	11,543	16.8	0	0.0
8/15/2024	3,155	10.9	0	8.8	4,152	9.3	3,728	12.9	7,320	8.9	7,566	9.9	3,221	10.5	56,897	-1.8	0	14.8	24,410	17.8	0	13.5
8/16/2024	3,024	10.9	0	9.6	4,108	9.3	3,623	15.3	14,395	9.3	6,993	9.9	3,205	10.5	80	-2.2	0	9.8	12,876	16.6	0	5.2
8/17/2024	2,958	10.8	8,155	6.4	4,149	9.2	3,702	17.8	6,391	9.3	7,394	9.8	3,352	10.4	0	0.0	0	0.0	27,769	18.3	0	0.0
8/18/2024	1,784	11.2	0	5.9	4,103	9.2	3,836	15.4	7,657	9.0	6,762	9.9	3,283	10.4	0	0.0	0	0.0	22,018	16.2	0	0.0
8/19/2024	1,695	11.0	6,791	4.5	2,447	20.4	3,890	13.7	13,395	8.2	7,030	9.9	3,148	10.5	12,413	10.2	0	15.0	24,369	17.8	0	33.9
8/20/2024	3,165	11.3	0	3.9	4,477	49.2	3,834	13.2	9,135	9.7	7,319	9.7	3,190	10.4	159	14.3	0	9.7	24,818	15.8	0	16.3
8/21/2024	1,703	11.2	0	6.0	1,702	33.2	4,150	14.1	11,021	8.3	6,889	9.8	3,046	10.4	0	18.5	0	15.3	24,944	18.1	0	3.0
8/22/2024	3,340	10.9	0	6.1	6,275	34.0	4,014	16.5	6,902	9.0	6,300	9.6	3,288	10.4	0	21.5	0	13.1	14,174	16.5	0	4.2
8/23/2024	1,668	11.3	914	6.5	4,859	9.3	4,125	17.5	7,494	8.9	7,419	9.6	3,475	10.3	56,256	17.0	0	15.7	33,458	20.6	0	21.9
8/24/2024	1,509	11.0	0	7.0	4,500	9.2	4,300	13.8	18,515	8.2	6,924	9.6	3,318	10.4	20,713	13.2	0	14.5	35,003	15.2	0	16.5
8/25/2024	1,546	11.5	0	7.9	4,098	9.2	4,101	10.7	6,892	9.6												

Summary of Leachate Volume and Depth Data
Third Quarter 2024
LRI Landfill, Pierce County, Washington

Date	Cell 1 Leachate Volume (GPD)	Cell 1 Leachate Level (in.)	Cell 2A Leachate Volume (GPD)	Cell 2A Leachate Level (in.)	Cell 2B Leachate Volume (GPD)	Cell 2B Leachate Level (in.)	Cell 3A Leachate Volume (GPD)	Cell 3A Leachate Level (in.)	Cell 4A Leachate Volume (GPD)	Cell 4A Leachate Level (in.)	Cell 4B Leachate Volume (GPD)	Cell 4B Leachate Level (in.)	Cell 5 Leachate Volume (GPD)	Cell 5 Leachate Level (in.)	Cell 6 Leachate Volume (GPD)	Cell 6 Leachate Level (in.)	Cell 7 Leachate Volume (GPD)	Cell 7 Leachate Level (in.)	Cell 8A Leachate Volume (GPD)	Cell 8A Leachate Level (in.)	Cell 9A Leachate Volume (GPD)	Cell 9A Leachate Level (in.)
9/1/2024	1,565	11.3	0	3.8	0	80.6	4,023	17.5	7,165	8.6	7,606	9.8	3,323	10.3	0	0.0	0	0.0	12,311	16.6	0	0.0
9/2/2024	1,490	11.4	0	5.0	7,259	59.1	3,842	16.0	6,919	9.1	6,927	9.5	3,254	10.3	62,137	13.3	0	14.7	23,656	17.8	0	6.7
9/3/2024	3,139	11.0	0	6.1	4,261	9.4	3,834	13.3	18,154	9.0	7,108	9.6	3,061	10.4	0	15.4	0	15.7	10,920	16.7	0	22.9
9/4/2024	2,822	11.0	7,578	3.7	4,008	9.4	4,790	13.4	13,716	8.8	6,517	9.7	2,912	10.5	47	17.9	0	9.2	24,057	17.7	0	26.2
9/5/2024	2,925	10.8	2	2.8	3,718	9.4	3,555	14.3	6,695	9.2	6,506	9.8	3,120	10.3	0	20.8	0	14.6	15,683	16.6	0	14.4
9/6/2024	1,680	11.3	120	3.5	3,679	9.2	3,417	15.9	13,818	8.4	6,693	9.9	3,164	10.4	46,933	13.1	0	15.9	25,424	18.4	0	19.8
9/7/2024	3,495	10.9	13	4.7	3,800	9.2	3,769	17.4	12,769	8.7	7,592	9.7	3,246	10.3	0	0.0	0	0.0	14,782	16.3	0	0.0
9/8/2024	1,620	11.2	2	5.7	3,877	9.2	3,898	17.0	12,502	9.0	7,437	9.5	3,270	10.3	0	0.0	0	0.0	24,087	18.2	0	0.0
9/9/2024	3,203	11.0	1	6.8	3,844	9.3	3,815	15.3	7,448	8.7	7,064	9.5	3,138	10.3	8,184	21.0	0	13.6	12,353	16.5	0	3.6
9/10/2024	3,182	11.2	1	7.7	3,852	9.3	3,751	16.2	13,723	9.1	7,081	9.6	3,241	10.3	48,237	13.5	0	13.7	23,756	18.2	0	3.9
9/11/2024	1,678	10.9	1	8.0	3,906	9.3	3,852	18.3	14,125	8.4	7,062	9.5	3,401	10.2	0	16.4	0	11.9	68,337	21.4	0	32.2
9/12/2024	1,695	11.2	1	8.4	3,923	9.3	4,034	14.1	7,316	9.1	6,537	9.4	3,191	10.3	0	21.2	0	15.3	30,733	20.0	0	28.0
9/13/2024	3,689	11.0	5,738	6.6	3,993	9.3	4,670	12.2	13,158	8.5	6,808	9.5	3,152	10.3	0	11.8	0	1,403.0	13,611	16.5	0	13.1
9/14/2024	1,479	11.2	0	6.5	4,037	9.3	3,804	13.6	10,831	9.6	7,444	9.4	3,249	10.3	0	0.0	0	0.0	30,176	20.0	0	0.0
9/15/2024	3,377	10.9	2,463	8.3	4,069	9.3	4,013	13.2	8,221	9.0	6,430	9.5	3,105	10.3	0	0.0	0	0.0	17,964	16.3	0	0.0
9/16/2024	2,680	11.0	8,429	3.9	3,912	9.3	4,111	13.7	13,324	8.0	7,536	9.5	3,258	10.2	42,552	12.5	0	14.7	24,144	17.7	0	29.6
9/17/2024	4,153	10.0	1,727	3.4	4,160	9.4	3,970	14.2	14,205	7.8	6,625	9.4	3,163	10.4	0	16.8	0	10.9	12,426	16.6	0	3.9
9/18/2024	1,639	11.2	8	1.6	3,996	9.3	3,998	13.4	8,164	9.6	6,926	9.4	3,284	10.2	0	20.2	0	13.8	23,998	17.5	0	9.4
9/19/2024	3,150	11.0	3,021	2.6	3,939	9.2	3,821	14.1	11,113	8.9	6,854	9.4	3,064	10.3	40,057	11.8	0	11.2	10,778	16.7	0	13.0
9/20/2024	0	11.8	6	1.0	1,708	9.6	1,610	13.3	2,368	8.2	2,763	9.2	1,435	11.2	14,312	11.8	0	15.9	10,435	17.3	0	4.3
9/21/2024	3,706	11.2	2,622	1.4	5,283	12.6	3,326	12.4	9,161	8.5	9,664	9.5	4,696	10.5	0	0.0	0	0.0	17,002	17.0	0	0.0
9/22/2024	1,679	11.3	1,672	3.2	4,154	9.3	11,808	9.9	6,921	9.1	7,631	9.4	3,200	10.4	0	0.0	0	0.0	23,581	17.3	0	0.0
9/23/2024	3,528	10.9	14	1.6	4,074	9.3	5,720	12.8	19,077	8.9	7,121	9.4	3,139	10.5	33,404	16.0	0	15.2	9,988	16.7	0	7.6
9/24/2024	5,406	10.8	8	3.4	4,177	9.3	4,323	18.6	13,762	8.1	7,012	9.5	6,146	13.3	14,462	14.3	0	10.9	24,326	17.4	0	8.3
9/25/2024	1,757	11.1	27	4.1	4,330	9.2	4,611	19.3	7,682	9.1	6,655	9.5	11,875	12.4	15,115	14.3	0	0.0	25,112	16.3	0	0.0
9/26/2024	1,636	11.1	5,582	4.4	4,266	9.3	5,765	14.7	14,043	8.4	8,161	9.4	10,278	10.4	17,381	13.9	0	15.2	25,325	20.1	0	13.4
9/27/2024	3,240	11.2	733	2.0	4,122	9.2	5,365	12.5	7,143	9.1	6,894	9.4	7,808	10.4	25,748	10.6	0	13.0	11,966	15.7	0	7.9
9/28/2024	1,707	11.2	1,870	5.7	4,276	9.3	4,806	15.2	13,585	8.9	6,553	9.4	3,245	10.4	0	0.0	0	0.0	23,945	18.8	0	0.0
9/29/2024	1,597	11.4	2,365	4.5	4,086	9.2	4,535	11.3	13,608	8.7	6,213	9.3	3,116	10.5	0	0.0	0	0.0	11,606	16.6	0	0.0
9/30/2024	3,032	10.9	1,774	7.9	4,155	9.2	3,583	10.7	14,065	8.8	6,240	9.4	2,934	10.5	22,624	15.8	0	15.2	23,457	17.7	0	10.2

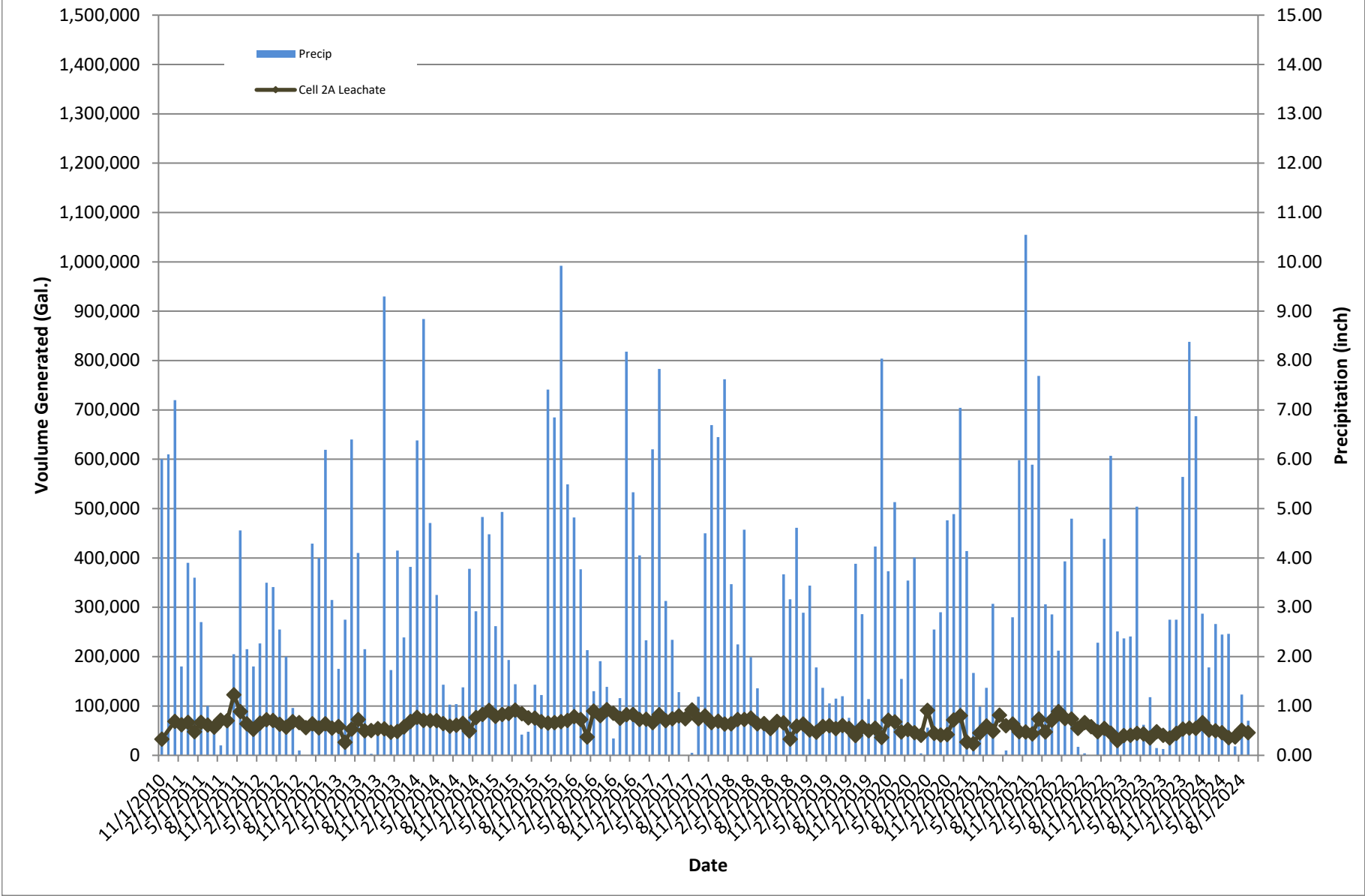
Cell 1 Monthly Leachate Generation vs Precipitation

LRI Landfill, Pierce County, WA



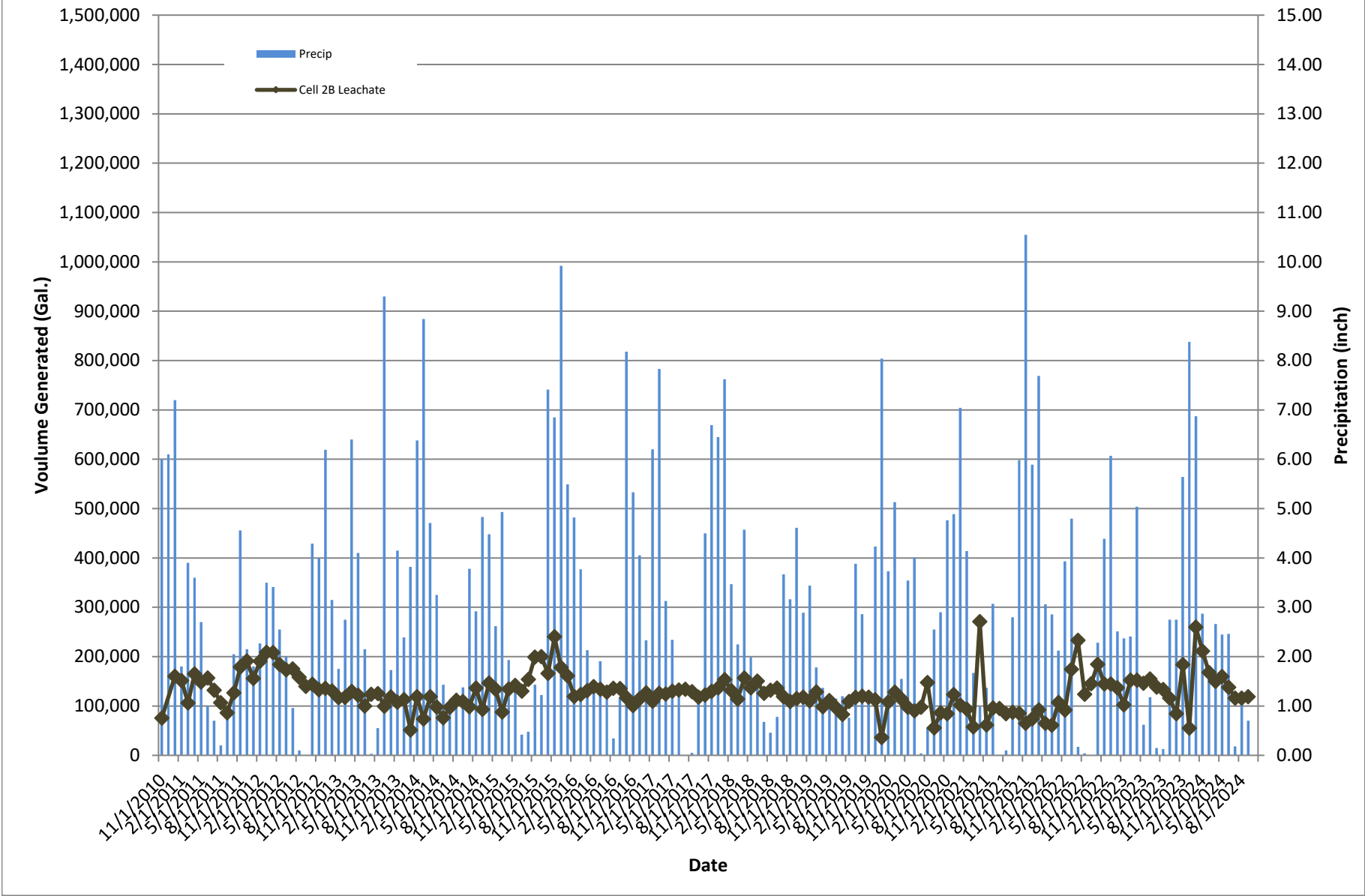
Cell 2A Monthly Leachate Generation vs Precipitation

LRI Landfill, Pierce County, WA



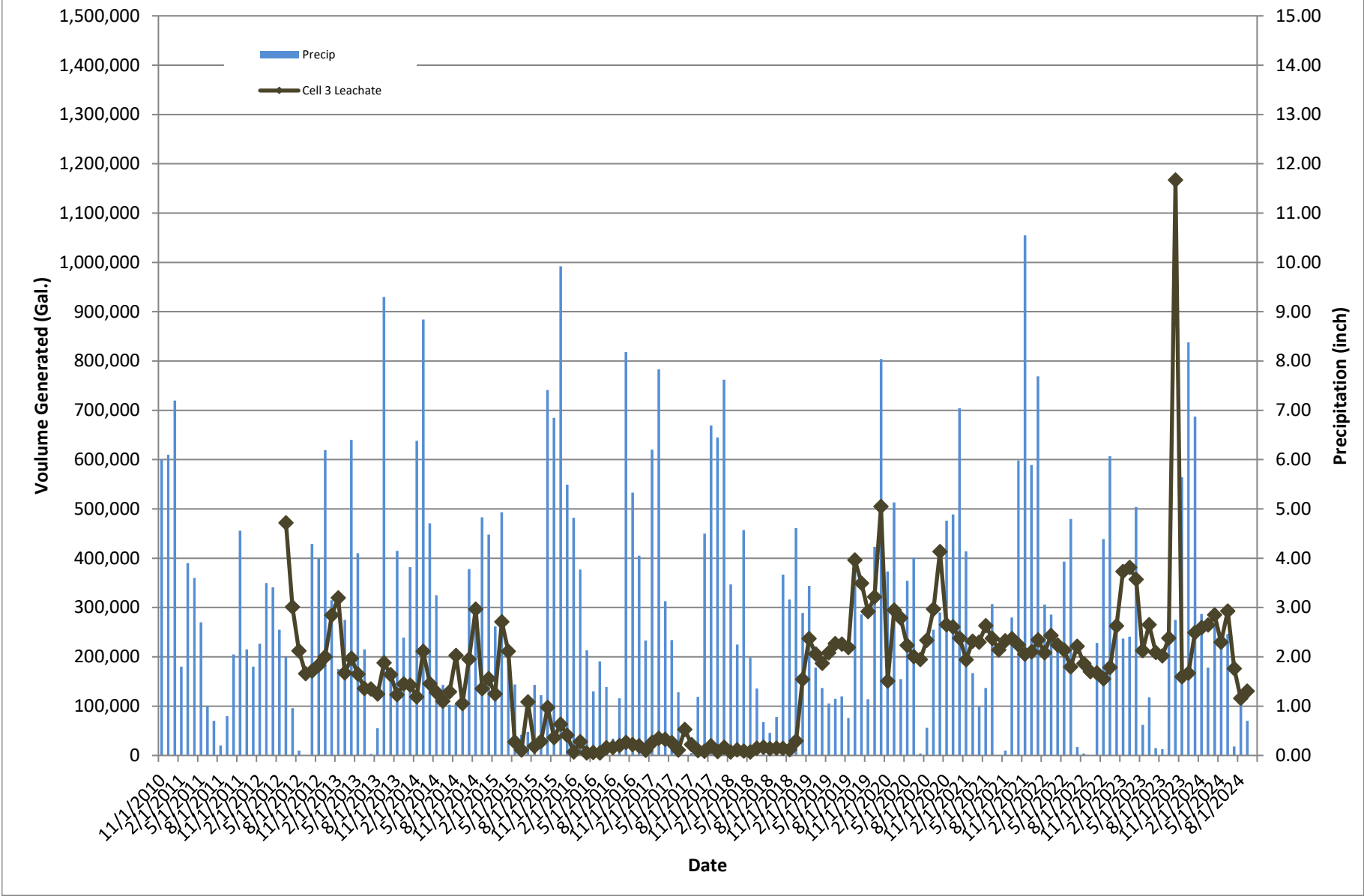
Cell 2B Monthly Leachate Generation vs Precipitation

LRI Landfill, Pierce County, WA



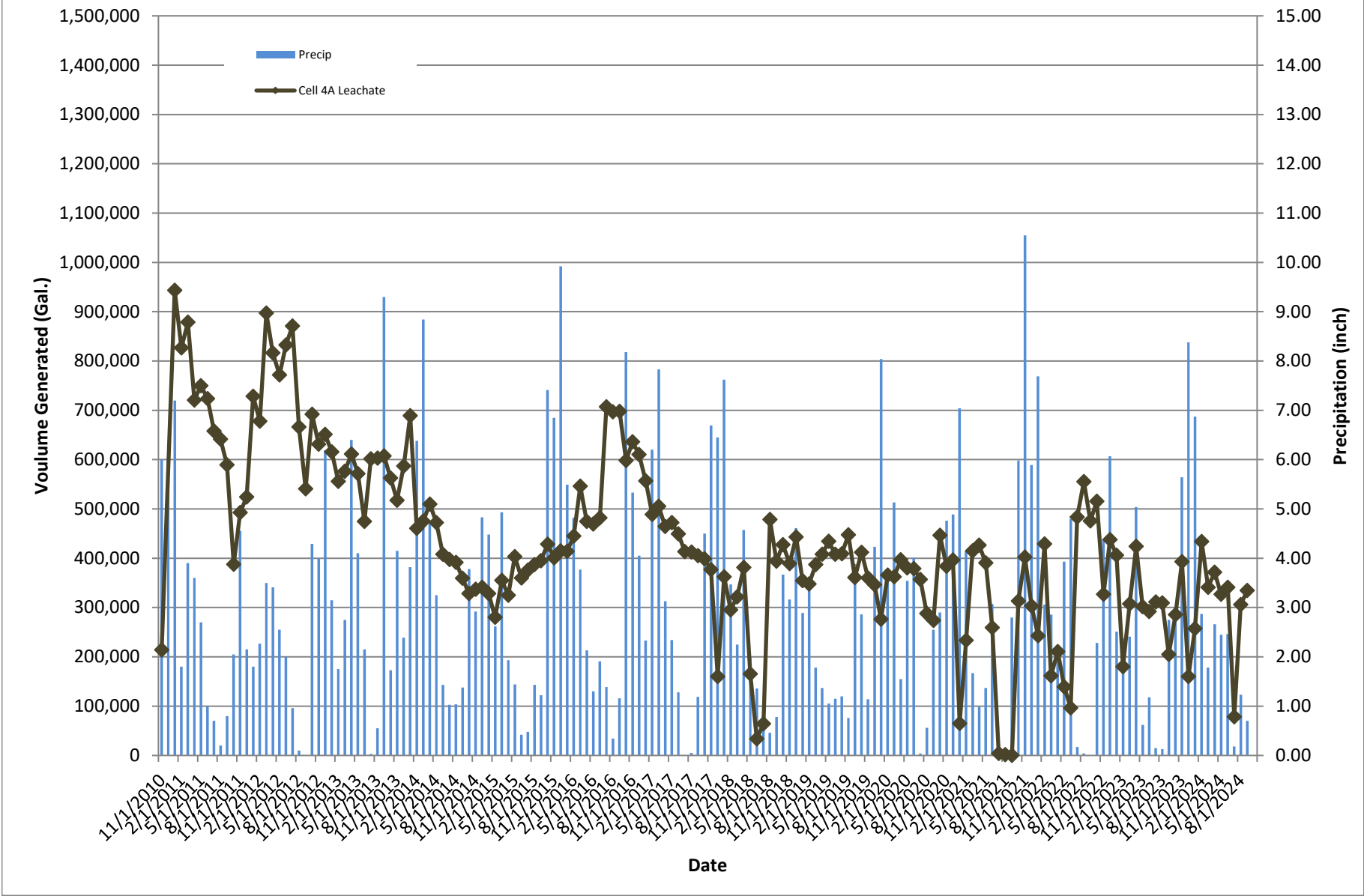
Cell 3A Monthly Leachate Generation vs Precipitation

LRI Landfill, Pierce County, WA



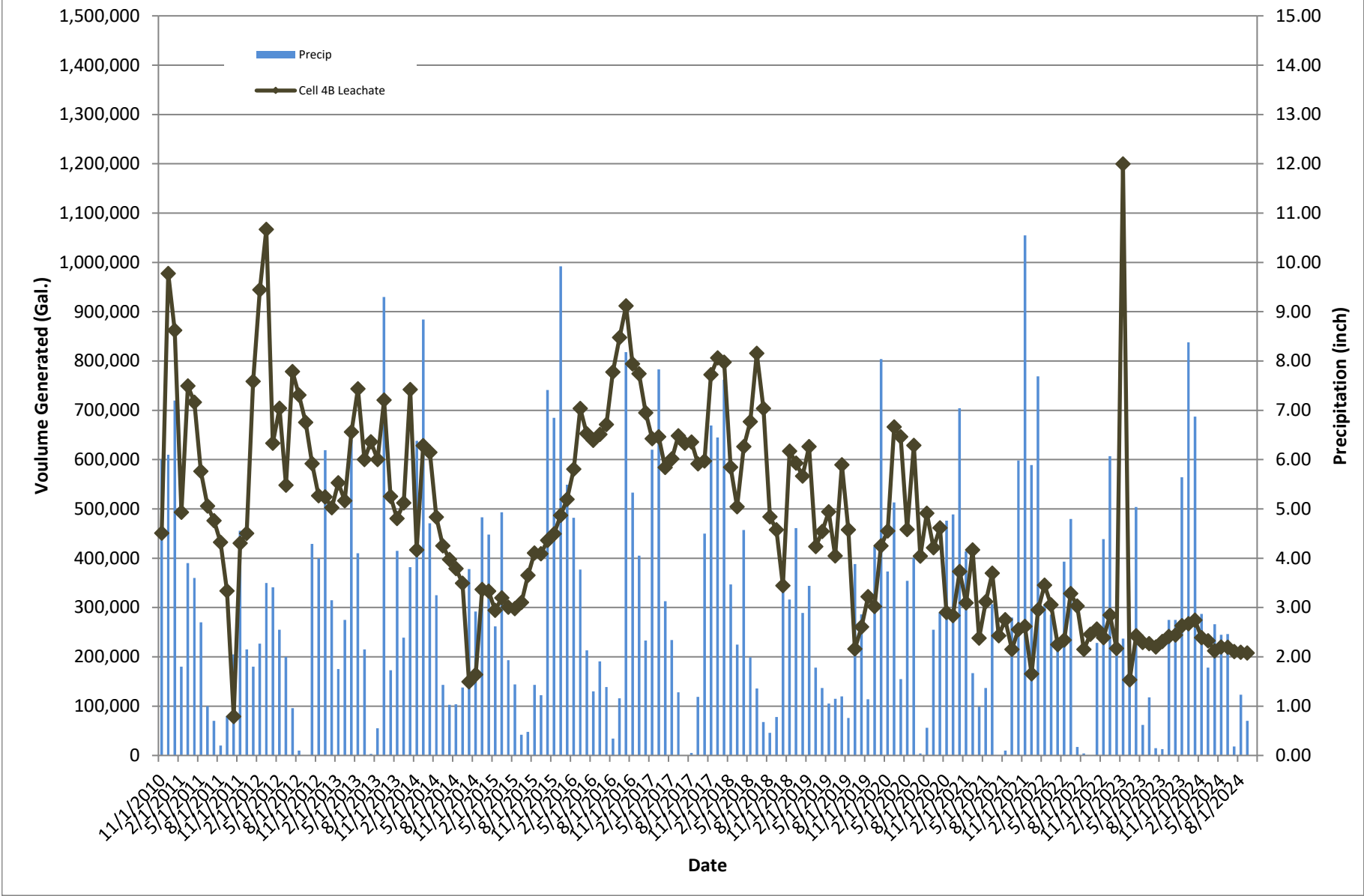
Cell 4A Monthly Leachate Generation vs Precipitation

LRI Landfill, Pierce County, WA



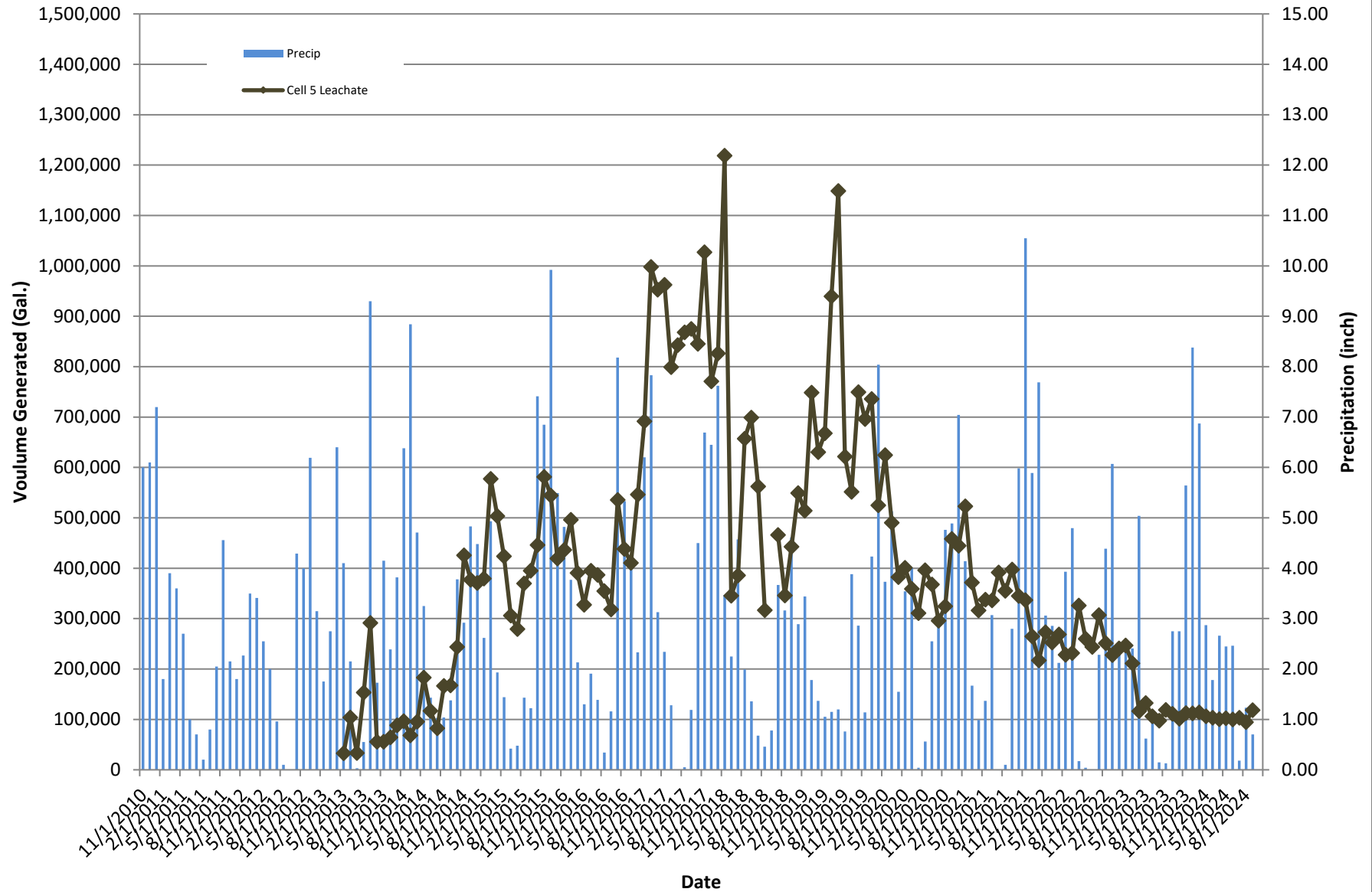
Cell 4B Monthly Leachate Generation vs Precipitation

LRI Landfill, Pierce County, WA



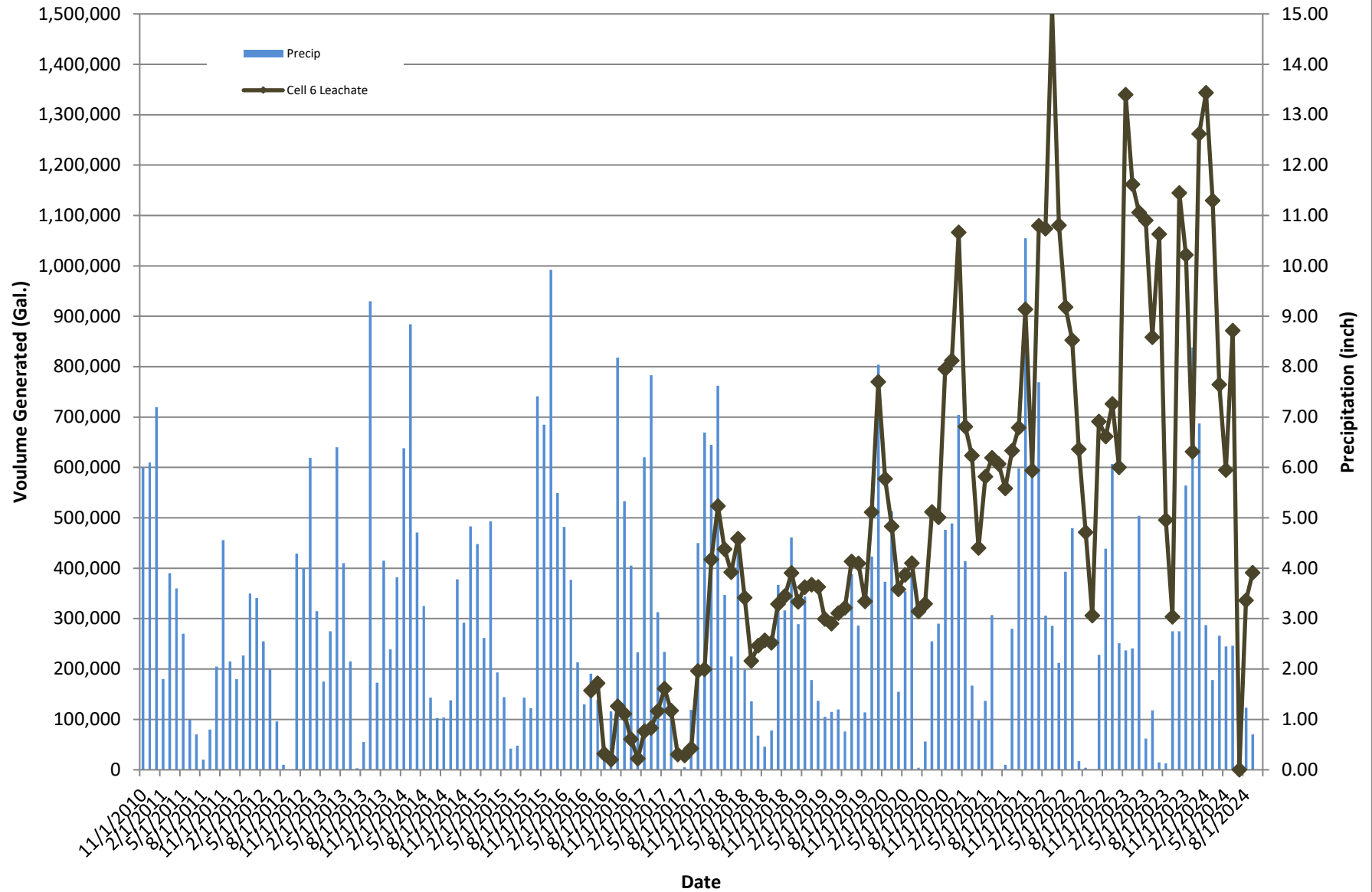
Cell 5 Monthly Leachate Generation vs Precipitation

LRI Landfill, Pierce County, WA



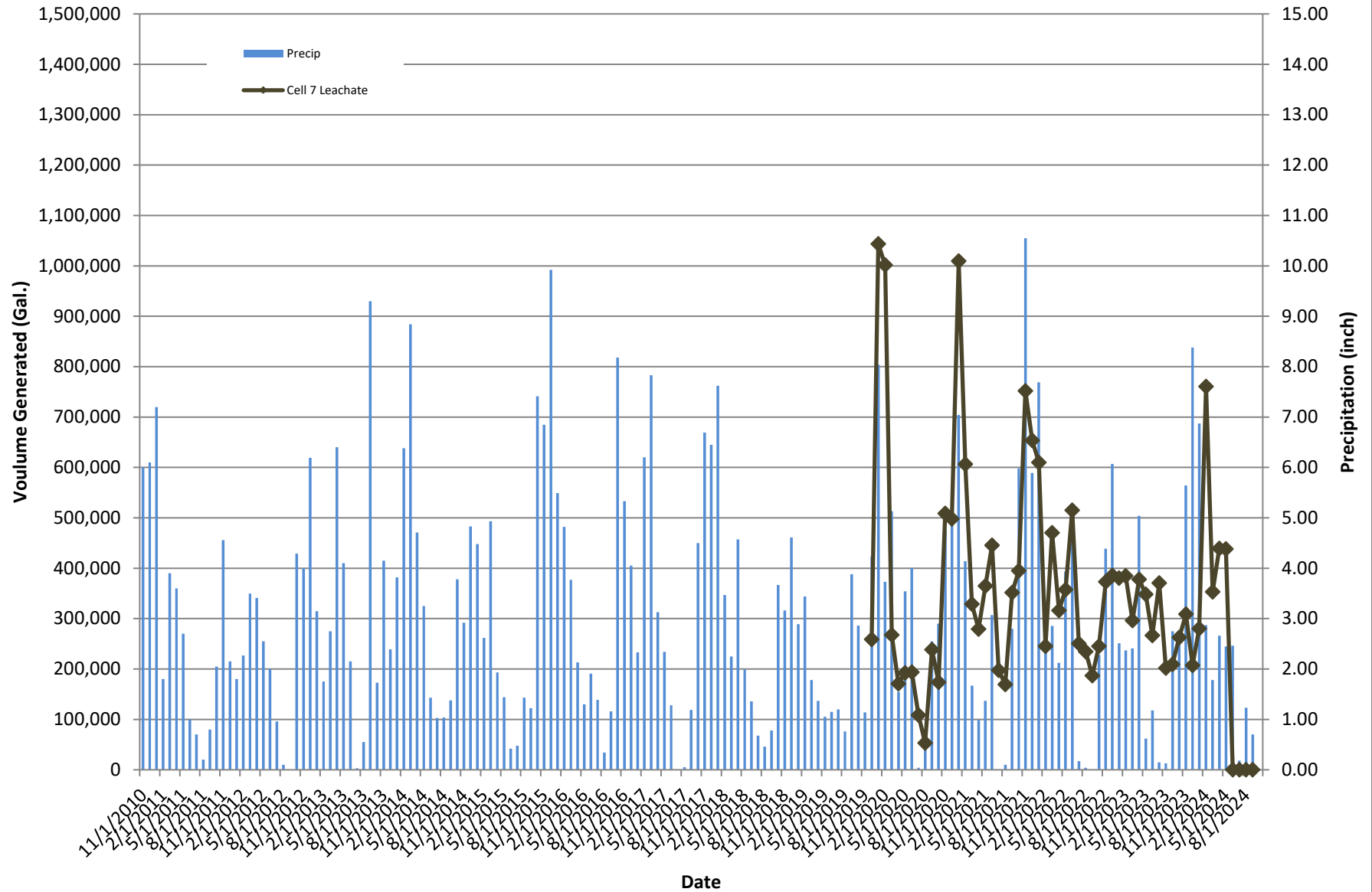
Cell 6 Monthly Leachate Generation vs Precipitation

LRI Landfill, Pierce County, WA



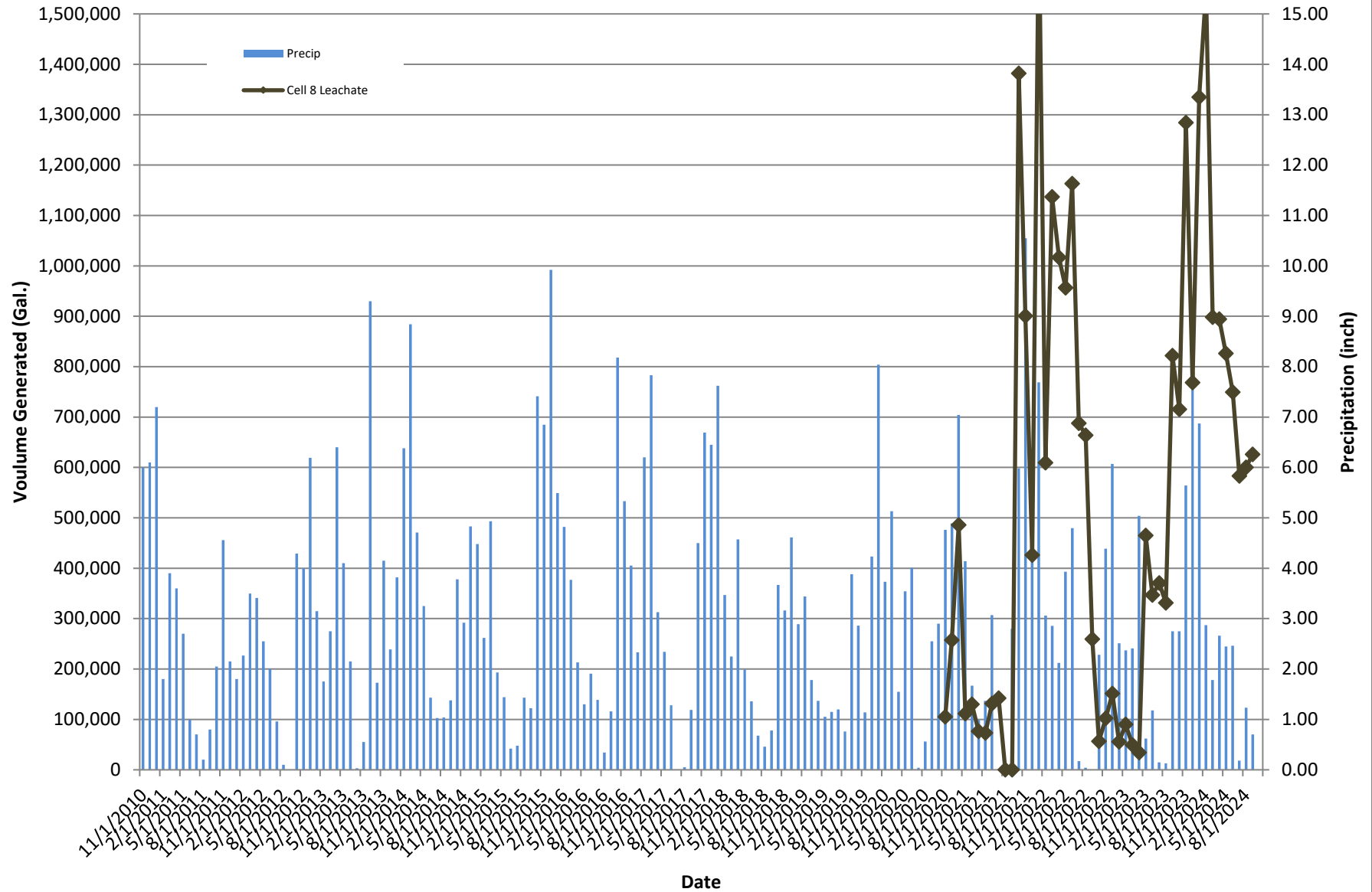
Cell 7 Monthly Leachate Generation vs Precipitation

LRI Landfill, Pierce County, WA



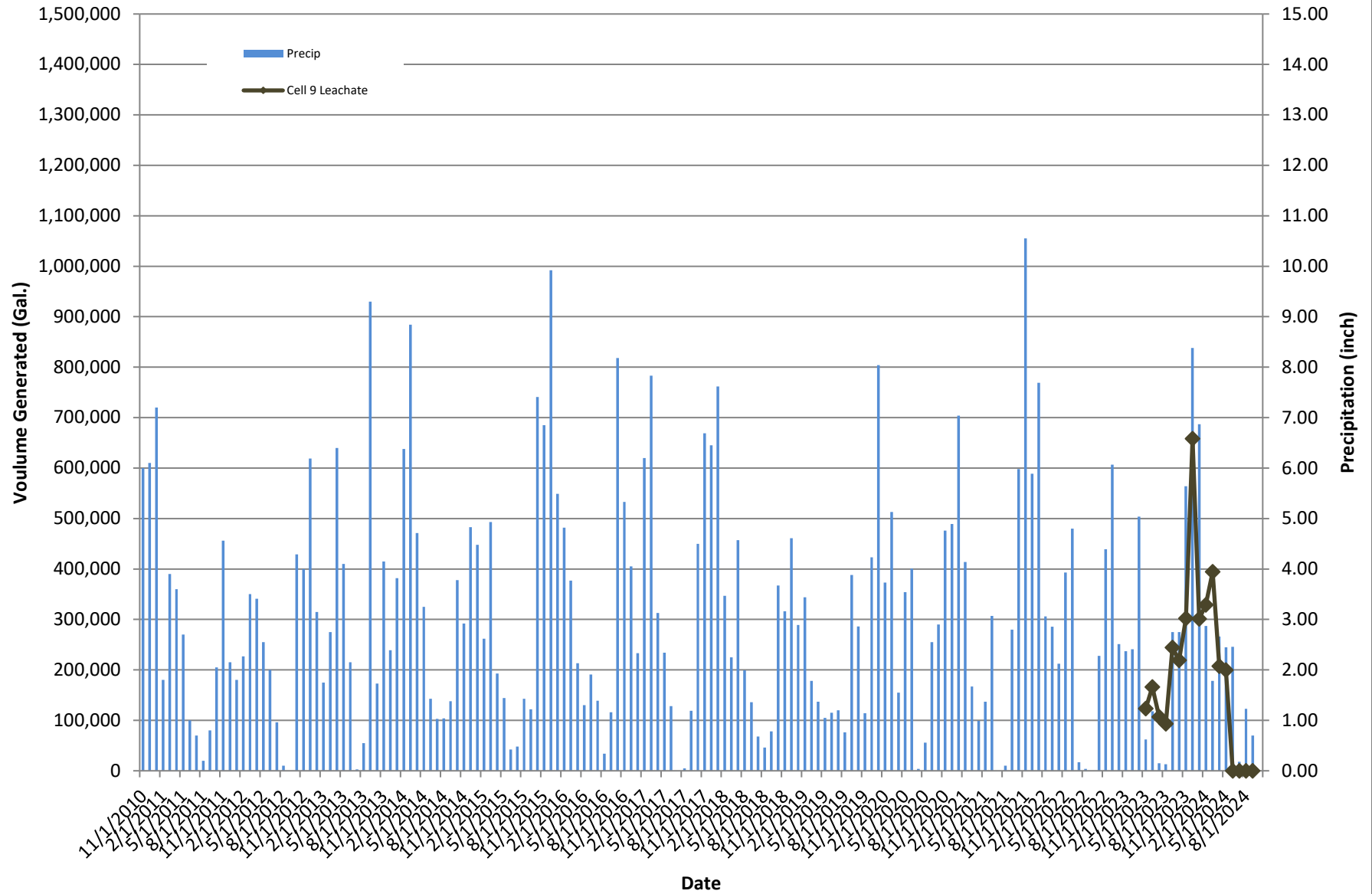
Cell 8 Monthly Leachate Generation vs Precipitation

LRI Landfill, Pierce County, WA



Cell 9 Monthly Leachate Generation vs Precipitation

LRI Landfill, Pierce County, WA





Attachment I

Surface Water Monitoring Data



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody: South Creek

Monitoring Period: 07/01/2024 - 07/31/2024

Outfall: 001 - South Creek

Version: 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
1-M	7/1/24	C	C	C	C	C	C
2-Su	7/7/24	C	C	C	C	C	C
3-Su	7/14/24	C	C	C	C	C	C
4-Su	7/21/24	C	C	C	C	C	C
5-Su	7/28/24	C	C	C	C	C	C
Minimum			C		C		C
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		C	C	C	C	C	C
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Other
C9-1		Silt Fence

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Kevin Green

Signature

8/5/2024 12:15:25 PM

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody: South Creek

Monitoring Period: 08/01/2024 - 08/31/2024

Outfall: 001 - South Creek

Version: 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
1-Th	8/1/24	C	C	C	C	C	C
2-Su	8/4/24	C	C	C	C	C	C
3-Su	8/11/24	C	C	C	C	C	C
4-Su	8/18/24	C	C	C	C	C	C
5-Su	8/25/24	C	C	C	C	C	C
Minimum							
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum							
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

Outfall: 001 - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C8-1	All Parameters		C	
C8-2	All Parameters		C	
C9-1	All Parameters		C	

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-1		Temporary Sediment Pond
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Other
C9-1		Silt Fence

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Kevin Green

Signature

9/9/2024 12:25:07 PM

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody: South Creek

Monitoring Period: 09/01/2024 - 09/30/2024

Outfall: 001 - South Creek

Version: 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C8-1	C8-1	C8-2	C8-2	C9-1	C9-1
1-F	9/6/24	C	C	C	C	C	C
2-F	9/13/24	C	C	C	C	C	C
3-F	9/20/24	C	C	C	C	C	C
4-F	9/27/24	C	C	C	C	C	C
Minimum							
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum							
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

Outfall: 001 - South Creek

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C8-1	All Parameters		C	
C8-2	All Parameters		C	
C9-1	All Parameters		C	

BMPs

Monitoring Point	Week	BMP
C8-1		Check Dams
C8-1		Construction Stormwater Chemical Treatment
C8-1		Other
C8-1		Silt Fence
C8-2		Other
C8-2		Silt Fence
C9-1		Check Dams
C9-1		Other
C9-1		Silt Fence

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Kevin Green

Signature

10/2/2024 5:18:15 PM

Date



Permit Number: WAR125268

Permittee: PURDY TRANSFER STATION

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 07/01/2024 - 09/30/2024

Outfall: 0001 - 0001 Purdy Creek

Version: 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	pH Standard Units Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper Total Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab	E. coli #/100ml Quarterly Grab	Fecal Coliform #/100ml Quarterly Grab
		SWP1	SWP1	SWP1	SWP1	SWP1	SWP1	SWP1
Limit Set		ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	ISGP Western WA - 2020 Permit	303d Waterbodie s 2020 ISGP	303d Waterbodie s 2020 ISGP
Minimum			BM: >= 5.0 (RO)					
Average								
	BM: <= 25			BM: <= 14	BM: <= 117			
Maximum			BM: <= 9.0 (RO)					

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Kevin Green

Signature

10/2/2024 5:18:20 PM

Date

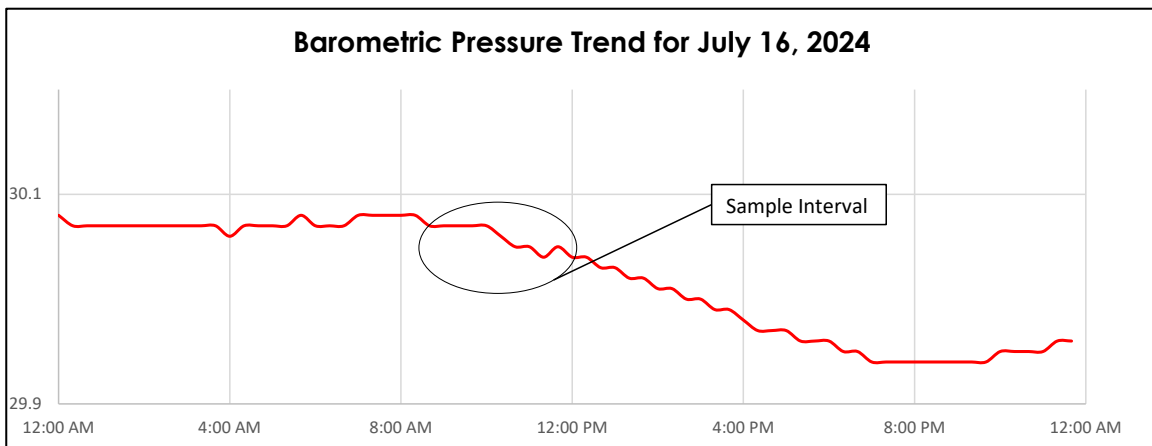
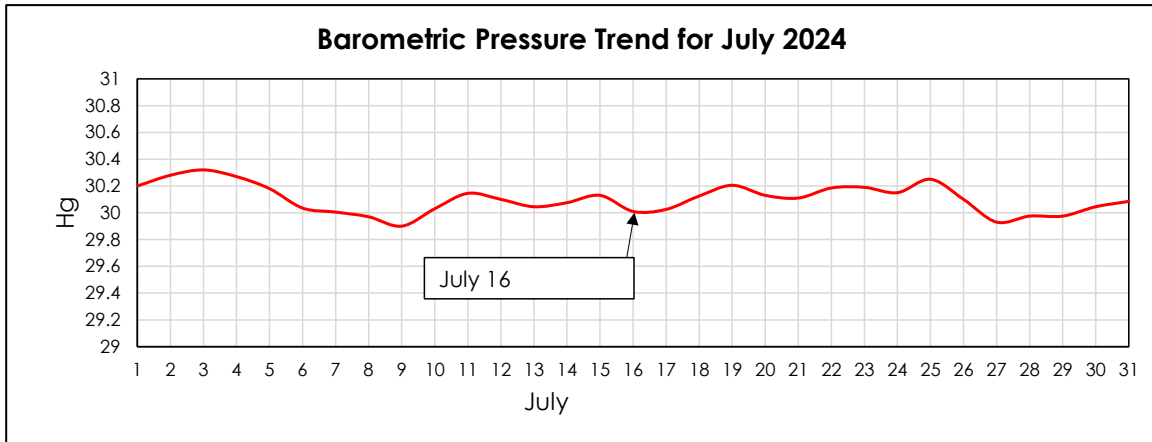


Attachment J

Landfill Gas Monitoring Data

Barometric Pressure Trend - July 2024

LRI Landfill, Pierce County, Washington



Monthly Data Source: Wunderground.com (South Hill, WA)

Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL

Data Source:

<https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2024-07-16/2024-07-16/monthly>

Daily Data Source: Wunderground.com (South Hill, WA)

Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL

Data Source:

<https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2024-07-16/2024-07-16/daily>

LRI Landfill

04224001.04

July-24

Location Refer <i>Design.</i>	Date	Time	P _(well) (in W.C.)	Gas Composition - <i>Note 1</i>					Depth to Water <i>Note 2</i> (ft-TOC)	Exposed Portion of Perforations - <i>Note 3</i>		Comments
				CH ₄ Spike	CH ₄	CO ₂	O ₂	Balance (N ₂ & H ₂ O)		(ft)	(%)	
				(% by vol.)	(% by vol.)	(% by vol.)	(% by vol.)	(% by vol.)				
Normal Operating Range:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.52	-	5.0	5.0	20.3				90.0	

Perimeter Gas Probes

GP-1A	7/16/2024	8:55	0.52	38.3	0.9	2.3	20.9	75.9	12.9	0.0	0.0	
GP-2	7/16/2024	9:08	0.01	--	0.0	15.6	0.0	84.4	16.4	0.0	0.0	
GP-3	7/16/2024	9:19	-0.07	--	0.0	0.6	20.5	78.9	10.0	0.0	0.0	
GP-4	7/16/2024	9:24	0.01	--	0.0	9.0	9.2	81.8	12.5	0.0	0.0	
GP-9	7/16/2024	9:28	0.02	--	0.0	8.9	5.4	85.7	13.5	0.0	0.0	
GP-10	7/16/2024	9:50	0.07	4.3	1.5	22.5	2.7	73.3		0.0	0.0	
GP-10P	7/16/2024	9:47	0.01	17.4	26.9	31.5	0.0	41.6		0.0	0.0	
GP-11	7/16/2024	8:47	0.05	--	0.0	28.9	0.3	70.8		0.0	0.0	
GP-12	7/16/2024	8:40	0.08	--	22.7	55.4	0.2	21.7		0.0	0.0	
GP-13	7/16/2024	8:08	-0.01	--	0.0	22.1	3.3	74.6		0.0	0.0	
GP-14	7/16/2024	7:53	-0.01	--	0.0	0.4	21.5	78.1	14.9	0.0	0.0	
GP-15	7/16/2024	7:46	0.22	--	0.0	6.1	12.8	81.1	17.7	0.0	0.0	
GP-16	7/16/2024	9:34	0.01	--	0.0	1.1	21.0	77.9	20.5	0.0	0.0	
GP-17	7/16/2024	9:03	0.0	--	0.0	0.2	21.6	78.2	8.9	0.0	0.0	
GP-18	7/16/2024	9:14	0.0	--	0.0	0.4	21.1	78.5	6.8	0.0	0.0	
GP-19	7/16/2024	10:06	0.0	--	0.0	0.5	21.3	78.2	10.1	0.0	0.0	
GP-20	7/16/2024	8:26	0.0	--	0.0	0.8	15.6	83.6	9.1	0.0	0.0	
GP-21	7/16/2024	8:16	0.0	--	0.0	0.7	20.8	78.5	14.0	0.0	0.0	

General Data:

	Beginning	Ending	Average		
				Starting Date:	7/16/2024
Weather:	Sunny	Sunny	Sunny	Starting Time:	7:46
Temperature, T (deg F):	62	69	65.5	Finishing Date:	7/16/2024
Wind Speed (mph):	5	10	7.5	Finishing Time:	10:06
Wind Direction:	292.5	315	303.75	Monitored by:	TWH
Barometric Pressure, P (in Hg):	29.62	29.61	29.62	Instruments:	Elkins Envision
24hr Baro.Trend (rising / falling / steady / unsteady)	Falling			Calibration Date:	7/16/2024

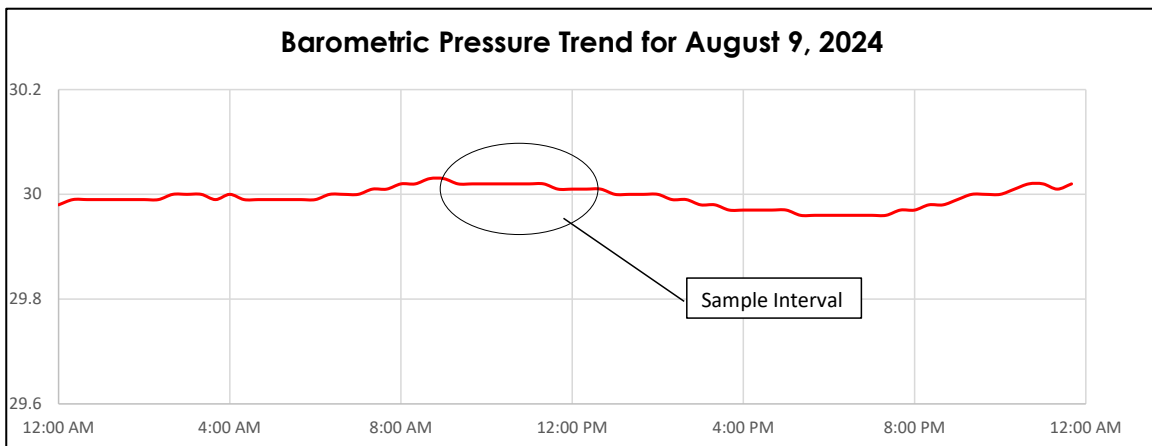
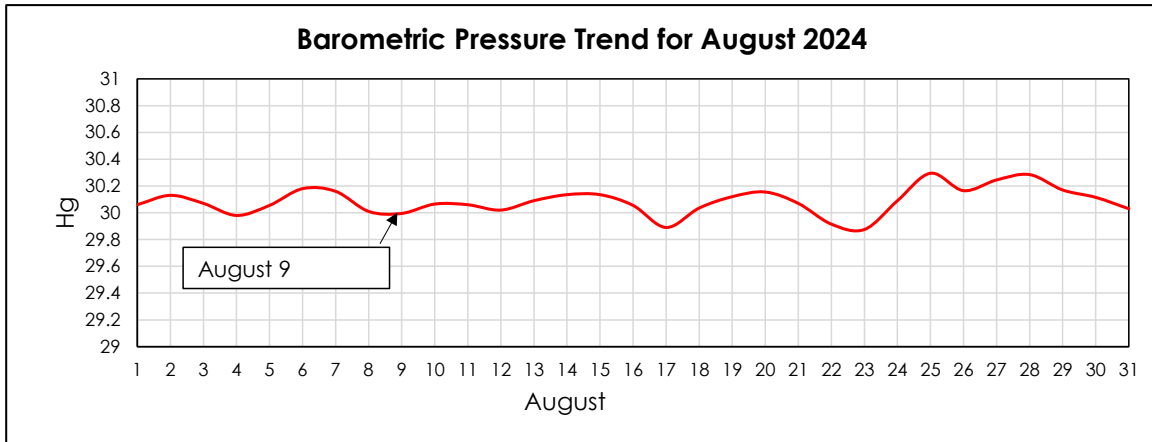
Headings:

Notes:

P _(well)	Relative Pressure	1.	Measurement for spike concentrations of CH ₄ and CO ₂ are recorded as a comment if observed during sampling.
CH ₄	Methane		
CO ₂	Carbon Dioxide	2.	Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
O ₂	Oxygen		
H ₂ O	Water Vapor	3.	Exposed Perforation = perforated pipe section not submerged by liquid.
N ₂	Nitrogen		
TOC	Top of Casing		

Barometric Pressure Trend - August 2024

LRI Landfill, Pierce County, Washington



Monthly Data Source: Wunderground.com (South Hill, WA)

Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL

Data Source:

<https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2024-08-09/2024-08-09/monthly>

Daily Data Source: Wunderground.com (South Hill, WA)

Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL

Data Source:

<https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2024-08-09/2024-08-09/daily>

LRI Landfill

04224001.04

August-24

Location Refer <i>Design.</i>	Date	Time	P (well) (in W.C.)	Gas Composition - <i>Note 1</i>					Depth to Water <i>Note 2</i> (ft-TOC)	Exposed Portion of Perforations - <i>Note 3</i>		Comments
				CH ₄ Spike	CH ₄	CO ₂	O ₂	Balance (N ₂ & H ₂ O)		(ft)	(%)	
				(% by vol.)	(% by vol.)	(% by vol.)	(% by vol.)	(% by vol.)				
Normal Operating Range:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.53	-	5.0	5.0	20.3				90.0	

GP-1A	8/9/2024	8:00	0.01	38.3	0.3	1.6	21.2	0.0	12.8	0.0	0.0
GP-2	8/9/2024	8:00	0.06	--	0.0	14.0	0.1	0.0	14.4	0.0	0.0
GP-3	8/9/2024	8:00	0.02	--	0.0	4.0	17.3	0.0	12.2	0.0	0.0
GP-4	8/9/2024	8:00	0.01	--	0.0	6.5	13.5	0.0	14.1	0.0	0.0
GP-9	8/9/2024	8:00	0.02	--	0.0	8.7	6.6	0.0	14.6	0.0	0.0
GP-10	8/9/2024	8:00	0.08	4.3	0.1	3.3	17.3	0.0		0.0	0.0
GP-10P	8/9/2024	8:00	-0.05	17.4	7.0	12.9	9.7	0.0		0.0	0.0
GP-11	8/9/2024	8:00	0.02	--	0.0	12.5	8.9	0.0		0.0	0.0
GP-12	8/9/2024	8:00	0.53	--	12.5	19.0	0.0	0.0		0.0	0.0
GP-13	8/9/2024	8:00	-0.01	--	0.0	1.2	18.9	0.0		0.0	0.0
GP-14	8/9/2024	8:00	-0.01	--	0.0	1.5	18.4	0.0	16.8	0.0	0.0
GP-15	8/9/2024	8:00	-0.04	--	0.0	2.7	18.5	0.0	18.4	0.0	0.0
GP-16	8/9/2024	8:00	0.01	--	0.0	0.6	21.3	0.0	21.4	0.0	0.0
GP-17	8/9/2024	8:00	0.0	--	0.0	0.6	21.6	0.0	10.9	0.0	0.0
GP-18	8/9/2024	8:00	0.0	--	0.0	0.3	21.6	0.0	8.2	0.0	0.0
GP-19	8/9/2024	8:00	0.0	--	0.0	0.4	20.5	0.0	12.2	0.0	0.0
GP-20	8/9/2024	8:00	0.0	--	0.0	0.4	19.7	0.0	11.0	0.0	0.0
GP-21	8/9/2024	8:00	0.0	--	0.0	0.9	20.1	0.0	8.4	0.0	0.0

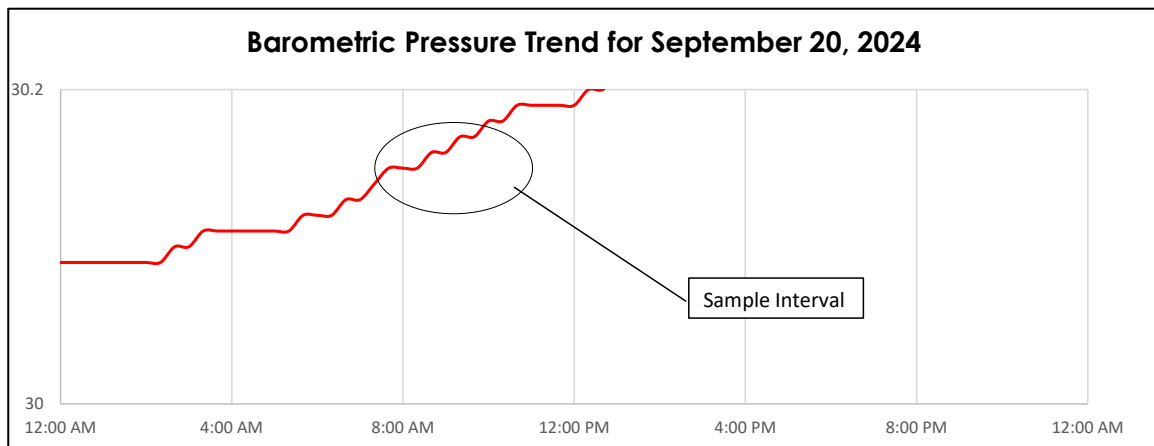
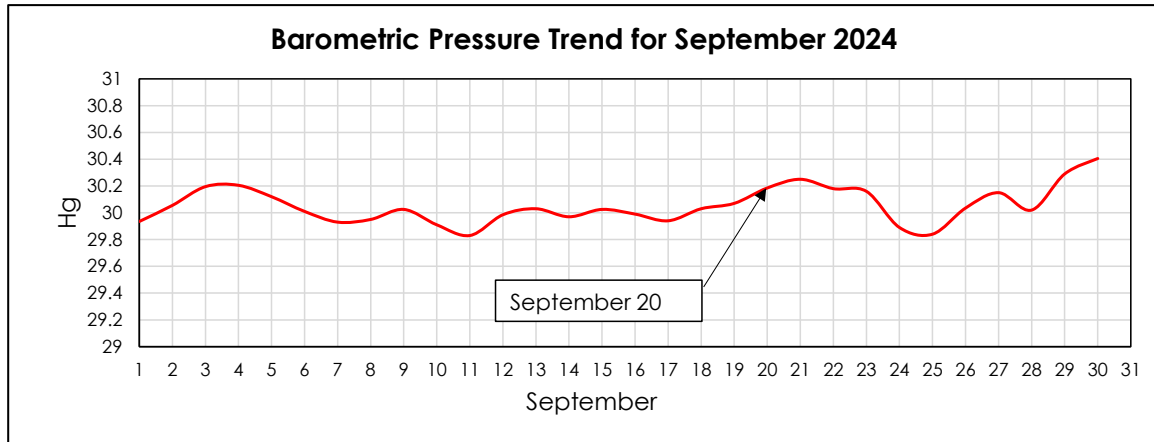
	Beginning	Ending	Average		
				Starting Date:	8/9/2024
Weather:	Sunny	Sunny	Sunny	Starting Time:	8:00
Temperature, T (deg F):	62	69	65.5	Finishing Date:	8/9/2024
Wind Speed (mph):	5	10	7.5	Finishing Time:	8:00
Wind Direction:	292.5	315	303.75	Monitored by:	TWH/LM
Barometric Pressure, P (in Hg):	29.62	29.61	29.62	Instruments:	Elkins Envision
24hr Baro.Trend (rising / falling / steady / unsteady)	Falling			Calibration Date:	8/9/2024

Notes:

P _(well)	Relative Pressure	1.	Measurement for spike concentrations of CH ₄ and CO ₂ are recorded as a comment if observed during sampling.
CH ₄	Methane		
CO ₂	Carbon Dioxide	2.	Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
O ₂	Oxygen		
H ₂ O	Water Vapor	3.	Exposed Perforation = perforated pipe section not submerged by liquid.
N ₂	Nitrogen		
TOC	Top of Casing		

Barometric Pressure Trend - September 2024

LRI Landfill, Pierce County, Washington



Monthly Data Source: Wunderground.com (South Hill, WA)

Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL

Data Source:

<https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2024-09-20/2024-09-20/monthly>

Daily Data Source: Wunderground.com (South Hill, WA)

Lat: 46.98 Long: 122.34 Elev: 692 ft-AMSL

Data Source:

<https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2024-09-20/2024-09-20/daily>

Location Refer Design.	Date	Time	P _(well) (in W.C.)	Gas Composition - Note 1					Depth to Water Note 2 (ft-TOC)	Exposed Portion of Perforations - Note 3		Comments
				CH ₄ Spike (% by vol.)	CH ₄ (% by vol.)	CO ₂ (% by vol.)	O ₂ (% by vol.)	Balance (N ₂ & H ₂ O) (% by vol.)		(ft)	(%)	

Normal Operating Range:												
(min)			-	-	0.3	-	-				20.0	
(max)			0.03	-	5.0	5.0	20.3				90.0	

Perimeter Gas Probes												
GP-1A	9/20/2024	12:10	-0.41	38.3	3.1	14.4	17.5	65.0		0.0	0.0	
GP-2	9/20/2024	10:33	0.03	--	0.0	17.3	0.1	82.6	17.9	0.0	0.0	
GP-3	9/20/2024	11:02	0.01	--	0.0	5.5	17.5	77.0	12.6	0.0	0.0	
GP-4	9/20/2024	11:20	0.01	--	0.0	8.6	15.3	76.1	14.5	0.0	0.0	
GP-9	9/20/2024	11:27	0.00	--	0.0	9.6	7.4	83.0	14.3	0.0	0.0	
GP-10	9/20/2024	10:11	-0.02	4.3	8.1	30.3	0.0	61.6		0.0	0.0	
GP-10P	9/20/2024	12:35	0.01	17.4	0.0	10.6	11.7	77.7		0.0	0.0	
GP-11	9/20/2024	12:47	-0.02	--	0.0	27.3	2.1	70.6		0.0	0.0	
GP-12	9/20/2024	12:57	-0.02	--	0.0	1.4	21.0	77.6		0.0	0.0	
GP-13	9/20/2024	13:09	0.01	--	0.0	28.8	1.2	70.0		0.0	0.0	
GP-14	9/20/2024	8:34	-0.02	--	0.0	16.6	3.8	79.6	17.7	0.0	0.0	
GP-15	9/20/2024	8:22	-1.01	--	0.0	1.1	21.2	77.7	20.6	0.0	0.0	
GP-16	9/20/2024	11:39	0.01	--	0.0	0.2	21.4	78.4	0.0	0.0	0.0	
GP-17	9/20/2024	10:52	0.0	--	0.0	0.3	21.6	78.1	14.2	0.0	0.0	
GP-18	9/20/2024	11:09	0.0	--	0.0	0.2	21.5	78.3	9.0	0.0	0.0	
GP-19	9/20/2024	13:30	0.0	--	0.0	0.5	20.2	79.3	13.4	0.0	0.0	
GP-20	9/20/2024	9:10	0.0	--	0.0	0.3	20.8	78.9	12.1	0.0	0.0	
GP-21	9/20/2024	8:58	0.0	--	0.0	0.7	20.9	78.4	0.0	0.0	0.0	

General Data:												
				Beginning			Ending		Average		Starting Date:	
Weather:				Sunny			Sunny		Sunny		9/20/2024	
Temperature, T (deg F):				62			69		65.5		Starting Time:	
Wind Speed (mph):				5			10		7.5		9/20/2024	
Wind Direction:				292.5			315		303.75		Finishing Time:	
Barometric Pressure, P (in Hg):				29.62			29.61		29.62		13:30	
24hr Baro.Trend (rising / falling / steady / unsteady)							Falling				Monitored by:	
											LM	
											Instruments:	
											Elkins Envision	
											Calibration Date:	
											9/20/2024	

Headings:		Notes:	
P _(well)	Relative Pressure	1.	Measurement for spike concentrations of CH ₄ and CO ₂ are recorded as a comment if observed during sampling.
CH ₄	Methane		
CO ₂	Carbon Dioxide	2.	Water level measurements made where gas probe monitoring port allows for measurement, or where there is an adjacent measurement piezometer.
O ₂	Oxygen		
H ₂ O	Water Vapor	3.	Exposed Perforation = perforated pipe section not submerged by liquid.
N ₂	Nitrogen		
TOC	Top of Casing		

LRI 304th Street Landfill
Landfill Gas Monitoring of On-site Buildings

Project Number: 04224001.04

Date: 8/9/24
Weather Conditions: Sunny, a little overcast
Instrument: MicroFID
Measured By: TWH/LM

The atmosphere inside buildings at the landfill were monitored for possible intrusion of methane gas. Per WAC 173-351, concentrations of methane in on-site structures must not exceed 25% of the lower explosive limit (LEL). If off-site gas migration is suspected, concentrations of methane in off-site structures must not exceed 100 ppm methane.

The areas monitored included:

- The general overall work area
- Floor drains
- Underground conduit protrusions
- Closed areas where landfill gas could collect, such as under cupboards and inside closets

The gas detection instrument must be calibrated using calibration gas containing methane equal to 50 % LEL. Calibration must be performed before and after the survey is completed.

Checked boxes indicate that the survey revealed **no detectable methane**.

- ☐ Main Office - individual office spaces, storage areas and within open crawl-space area. -3.4 Ryan's office
- ☐ Repair Shop - survey atmosphere conditions throughout (lower height levels). 4.8 - near entrance
- ☐ Pay/Scale Booth - interior of building. 6.0 - first desk next to door
- ☐ Work Shop - interior of shed adjacent to stormwater ponds. 2 - Storage rack
- ☐ Energy Plant - occupied spaces of building adjacent to blower flare station. 7 - back office under floor


Signature