

Second Quarter 2022 Monitoring Report

LRI Landfill

Graham, Washington

Pierce County Recycling, Composting
& Disposal, LLC dba LRI
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Puyallup, Washington 98375



SCS ENGINEERS

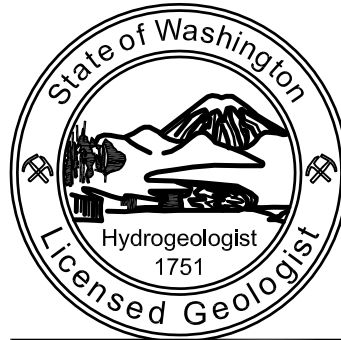
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2405 140th Avenue NE, Suite 107
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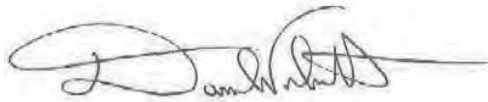
This document is the Second Quarter 2022 Monitoring Report for the LRI Landfill located in Graham, Washington. Activities this quarter included monitoring the volume and specific conductance of water pumped from the leak detection/collection system, quarterly groundwater monitoring, monthly landfill gas monitoring, and weekly surface water monitoring. This document was prepared by Dan Venchiarutti and Kevin Lakey of SCS Engineers and submitted 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
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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

Second quarter 2022 groundwater samples were collected on June 14 & 15, 2022. Nine monitoring well samples (MW-1A, MW-2A, MW-3, MW-4, MW-5A, MW-6, MW-7, MW-9, and MW-10), ten leak detection collection samples (LDCS-1, LDCS-2A, LDCS-2B, LDCS-3A, LDCS-4A, LDCS-4B, LDCS-5, LDCS-6, LDCS-7, and LDCS-8), and one leachate sample (Cell 8) were collected during this monitoring period. Water level elevations were measured on June 14 & 15, 2022. Field quality control samples consisted of one field blank and one duplicate sample collected at MW-5A. 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 shown on Figure 1.

A groundwater surface elevation map for the second quarter monitoring event is included as Figure 1 in Attachment A. 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 about 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, 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 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 conducted in 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 four plots are provided for each monitoring well:

- Plot 1 — ammonia, nitrate, chloride, total organic carbon (TOC)
- Plot 2 — alkalinity, sulfate, total dissolved solids (TDS)
- Plot 3 — calcium, magnesium, sodium, potassium
- Plot 4 — iron, manganese, zinc, arsenic

Time trend plots show that concentrations of metals and inorganic parameters remained generally consistent with previously observed values during the second quarter unless otherwise noted. The highest concentrations of chloride and nitrate in the uppermost aquifer continue to be observed in background well MW-10. In addition, an anomalously elevated TDS detection was reported in background well MW-10 during this monitoring event.

Reported detections of inorganic parameters and metals measured at downgradient monitoring wells during the second 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	**	**	**	0.010	0.0060	0.0072	0.0061
Iron, Dissolved	0.30	1.4	0.66	*	*	*	*	0.51
Manganese, Dissolved	0.05	0.22	0.27	0.40	0.22	0.17	0.21	0.26
Notes: Concentrations listed as mg/L = milligrams per liter ** = 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 Bold value exceeds the site specific prediction limit in addition to the WAC 173-200-040 GW 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 0.11 and 0.24 mg/L) were reported at downgradient wells MW-3, MW-4, MW-5A, MW-6 and MW-7. Similar low-level ammonia detections have been reported in the past; including at background well MW-10 during the Second Quarter 2018 monitoring event. Therefore, the low-level ammonia concentrations appear to be due to site-wide aquifer chemistry, which has also affected water quality within the LDCS.

As previously noted, the sample collected from upgradient monitoring well MW-10 displayed a highly elevated TDS concentration of 17,000 mg/L, which exceeded the WAC 173-200-040 criteria of 500 mg/L. Although Eurofins indicated no issues with the analysis, given the elevated concentration

compared to the relatively stable historic results (see time trend plots in Attachment G), this result is considered to be a laboratory artifact.

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 second quarter, the cation-anion balance evaluation exceeded the appropriate threshold for background monitoring well MW-10. All other monitoring well cation-anion balance evaluations were below the appropriate threshold.

Graphical plots of the current monitoring well water quality results are presented on trilinear (piper) diagrams in Attachment E. 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).

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

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 specific conductance (conductivity), total dissolved solids, alkalinity, sodium, potassium, and total organic carbon.

LDCS Maintenance. LRI staff attempted to recalibrate the conductivity probes at LDCS-1, LDCS-2A, LDCS-2B, LDCS-3, LDCS-6 and LDCS-7 on April 15, 2022. However, these attempts were unsuccessful. Subsequently, all of conductivity probes, except at LDCS-4A and LDCS-8, were properly recalibrated on May 11, 2022. No conductivity data is available at the locations mentioned above between April 15 and May 11, 2022.

The conductivity probes at LDCS-4A and LDCS-8 did not function during the second quarter. New probes were installed at these locations on August 11, 2022. No other significant maintenance activities occurred during the second 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 readings at LDCS-7 displayed an increase beginning on June 15, 2022. However, large rain events totaling 1.74 inches fell at the site between June 9 and June 11, 2022 and the groundwater level rose from 11.93 to 28.40 inches between June 8 and June 14, 2022. Given the timing of when the rain events and increases in liquid level and conductivity values occurred, it is interpreted that the rainfall events may have caused groundwater within the LDCS to come in

contact with the overlying soil liner, which in turn, caused the conductivity of the groundwater to rise. The conductivity levels at LDCS-7 decreased to levels more consistent with historic data beginning on June 22, 2022.

Conductivity data from the remaining LDCS sumps trended within typical historical ranges during the second quarter of 2022.

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 sample from LDCS-8 was collected as a grab sample from the dewatering pump discharge spigot.

LDCS-1 water quality results included a low-level detection of 1-4-dichlorobenzene at 0.95 µg/L. Similar low-level detections of 1-4-dichlorobenzene have been reported at this location in the past. Additionally, slightly elevated concentrations of dissolved iron (1.6 mg/L) and manganese (1.7 mg/L) were reported at this location during the second quarter. However, the primary leachate indicator parameters, acetone and 2-butanone, were not detected and secondary leachate indicator parameters, ammonia and chloride, remained low. Therefore, the detections reported above do not appear to be the result of leachate.

LDCS-2B water quality results included elevated concentrations of sulfate (150 mg/L), TOC (25 mg/L), and dissolved iron (30 mg/L) and manganese (2.3 mg/L). However, the primary and secondary leachate indicator parameters were not detected or remained low, respectively.

LDCS-3A water quality results included an elevated detection of primary leachate indicator parameter, acetone, at a concentration of 210 µg/L. Elevated concentrations of dissolved iron (3.5 mg/L) and manganese (3.7 mg/L) were also reported during this quarter. Additionally, results from LDCS-3A display a general slowly increasing trend of alkalinity and TDS (see the time trend plot in Attachment G). However, primary leachate indicator parameter, 2-butanone, was not detected and secondary indicator parameters, ammonia and chloride, remained low during the second quarter. Therefore, the elevated concentrations listed above do not appear to be the result of leachate.

LDCS-4A and LDCS-4B water quality results have displayed slowly increasing concentrations of chloride over time TDS (see the time trend plots in Attachment G). However, primary leachate indicator parameters have not been detected and the secondary indicator parameter ammonia has remained low. Therefore, slowly increasing chloride concentrations do not appear to be related to leachate.

LDCS-5 water quality results have displayed decreasing trends in concentrations of ammonia, chloride, iron, manganese, sodium, potassium, TDS, and TOC since the stormwater flap along the concrete channel and the geomembrane boot surrounding the three leachate riser pipes were replaced in September of 2020. Groundwater withdrawn from LDCS-5 continues to be directed to the leachate collection system, as it has been since May of 2016, and is not being discharged through the concrete channel.

The LDCS-7 and LDCS-8 water quality results include generally elevated concentrations of alkalinity, chloride, sulfate, TDS, TOC, and dissolved calcium, iron, magnesium, manganese and sodium. Since elevated concentrations of general chemistry parameters were detected at LDCS-7 and LDCS-8 prior to the placement of refuse in the cells, the reported detections appear to be due to background water quality. Additionally, no detections of primary leachate indicator parameters acetone and 2-butanone were reported in the samples collected during the second quarter.

Water quality results from the remaining LDCS locations were consistent with historical trends.

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

- Plot 1 — ammonia, nitrate, chloride, TOC
- Plot 2 — alkalinity, sulfate, TDS
- Plot 3 — calcium, magnesium, sodium, potassium
- Plot 4 — iron, manganese, zinc, arsenic

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 second quarter, construction stormwater treatment using Chitosan Sand Enhanced Filtration (CESF) was utilized each month during the second quarter.

Discharge Monitoring Reports (DMR's) were submitted to Ecology on a monthly (Construction Permit) and quarterly (Industrial Permit) basis. Copies of the second quarter 2022 DMR's are included in Attachment I. No surface water benchmarks or water quality effluent limits were exceeded this quarter.

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 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. 2022 Leachate Volume Data

Month	Leachate Trucked Offsite for Proper Disposal (gallons)	Monthly Rainfall (inches)
January	4,742,413	7.69
February	3,328,802	3.06
March	4,768,632	2.86
April	3,957,053	2.12
May	3,450,037	3.93

June	4,022,924	4.80
Totals	24,269,861	24.45
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 performance probes was conducted on April 8, May 20, and June 7 using a Landtec GEM2000 portable gas monitor. Methane measurements were less than the lower explosive limit (LEL) of five percent by volume at all performance probes during the second quarter (see Exhibit 3).

Exhibit 3. 2022 Landfill Gas Probe Monitoring Summary (Percent Methane)

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
January 13	0.0	5.9	0.0	0.0	0.0	2.7	7.2	0.0	0.0	0.0	0.0	0.0	0.0
February 24	0.0	0.8	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0
March 17	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
April 8	0.0	0.0	0.0	0.0	0.0	1.2	1.4	0.0	0.0	0.0	0.0	0.0	0.0
May 20	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
June 7	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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 .													

Indoor air was tested for the presence of methane on April 12. The office, maintenance building and scale house were tested with a portable flame ionization detector (MicroFID). No significant levels of methane were recorded.

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

LANDFILL GAS EXTRACTION WELL CONSTRUCTION

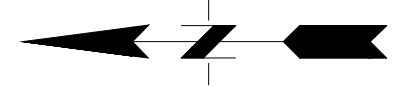
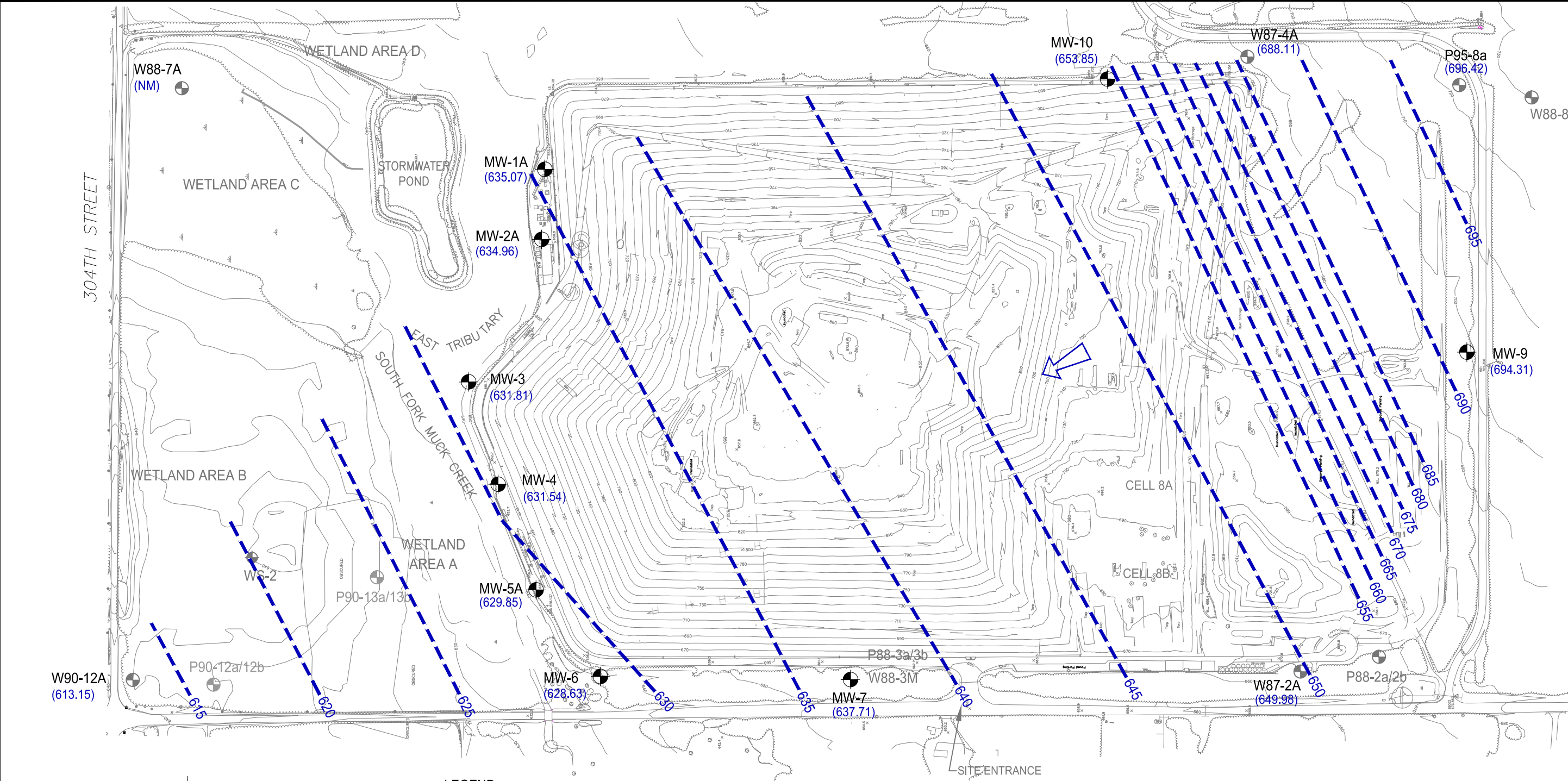
Fourteen (14) new landfill gas extraction wells were installed between June and July of 2022. A copy of the well installation report will be included with the third quarter monitoring report.

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
 - (649.98) GROUNDWATER ELEVATION (IN FEET ABOVE MSL)
 - INFERRED GROUNDWATER FLOW DIRECTION
 - (NM) NOT MEASURED



SCALE (ft)

Attachment B

Groundwater Data Summary Tables

**Table 1. Groundwater Level Elevations
June 2022
LRI Landfill, Pierce County, Washington**

Location	Well Casing Elevation (ft)	Depth to Water (ft)	Water Level Elevation (ft, NGVD29)
Wells			
W87-2A	664.01	14.03	649.98
W87-4A	693.29	5.18	688.11
W88-3M	658.11	12.08	646.03
W88-7A	632.51	NM*	--
W88-8M	721.05	38.10	682.95
W90-12A	640.84	27.69	613.15
MW-1A	652.57	17.50	635.07
MW-2A	651.93	16.97	634.96
MW-3	637.41	5.60	631.81
MW-4	652.37	20.83	631.54
MW-5A	655.55	25.70	629.85
MW-6	635.71	7.08	628.63
MW-7	656.03	18.32	637.71
MW-9	701.77	7.46	694.31
MW-10	678.37	24.52	653.85
Piezometers			
P13-14A	665.96	19.93	646.03
P88-2A	663.96	NM*	--
P88-2B	663.48	NM*	--
P88-3A	656.20	10.61	645.59
P88-3B	655.98	14.41	641.57
P95-8A	722.07	25.65	696.42
P90-12A	640.79	3.85	636.94
P90-12B	640.73	2.62	638.11
P90-13A	645.19	NM*	--
P90-13B	643.63	NM*	--
GP-1P	652.00	16.06	635.94
GP-2P	658.61	14.68	643.93
GP-3P	658.51	7.75	650.76
GP-4P	662.01	9.55	652.46
GP-9P	674.03	10.78	663.25
GP-16	689.51	18.70	670.81
South Creek			
SWSC-1	632.68	0.50	632.18
SWSC-2	629.98	5.86	624.12
Leak Detection System			
LDCS-1	657.26	26.05	631.21
LDCS-2A	659.24	29.20	630.04
LDCS-2B	661.70	27.97	633.73

Notes:

NM = not measured

-- = not applicable

All measurements taken on June 14 & 15, 2022

* = Water level wells W88-7A, P88-2A, P88-2B, P90-13A, and P90-13B cannot be located

Table 2. Field Parameters
Second Quarter 2022
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	304-061422-01	6/14/2022	DP	6.77	159	13.4
MW-2A	304-061422-03	6/14/2022	DP	7.07	234	12.9
MW-3	304-061422-05	6/14/2022	DP	7.06	421	10.5
MW-4	304-061422-10	6/14/2022	SP	7.62	349	14.1
MW-5A	304-061422-09	6/14/2022	DP	7.52	329	12.7
MW-6	304-061422-07	6/14/2022	DP	7.60	332	10.6
MW-7	304-061422-13	6/14/2022	DP	7.44	400	10.7
MW-9	304-061522-15	6/15/2022	DP	6.76	129	10.0
MW-10	304-061522-17	6/15/2022	DP	6.39	265	11.8
Leak Detection System						
LDCS-1	304-061422-08	6/14/2022	DB	6.20	436	22.5
LDCS-2A	304-061422-06	6/14/2022	DB	6.93	815	21.8
LDCS-2B	304-061422-04	6/14/2022	DB	6.82	771	19.7
LDCS-3A	304-061422-02	6/14/2022	DP	6.31	918	21.4
LDCS-4A	304-061522-18	6/15/2022	DP	6.37	813	20.8
LDCS-4B	304-061522-20	6/15/2022	DP	6.38	969	26.0
LDCS-5	304-061522-21	6/15/2022	DP	6.38	740	24.9
LDCS-6	304-061522-22	6/15/2022	DP	6.55	994	20.6
LDCS-7	304-061522-16	6/15/2022	DP	6.23	1,193	24.8
LDCS-8	304-061422-14	6/14/2022	GB	6.29	1,172	20.5
Leachate Collection System						
Leachate, Cell 8	304-061522-19	6/15/2022	GB	7.59	13,409	22.2

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
Second Quarter 2022
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	91	*	1.7	*	2.6	120	*	*
MW-2A	120	*	2.5	*	4.3	160	*	*
MW-3	200	0.11	3.2	*	23	250	1.4	*
MW-4	160	0.13	3.1	*	10	200	*	4.0
MW-5A	190	0.15	3.1	*	15	240	1.2	*
MW-6	170	0.11	4.7	*	6.0	200	1.1	*
MW-7	210	0.24	3.2	*	2.3	220	1.1	*
(BG) MW-9	69	*	1.6	*	1.8	190	*	*
(BG) MW-10	110	*	7.1	2.8	6.7	17000	*	*
Leak Detection System								
LDCS-1	200	0.11	4.4	*	5.5	240	4.2	—
LDCS-2A	410	0.15	7.5	*	32	500	3.7	—
LDCS-2B	320	0.56	12	*	150	440	25	—
LDCS-3A	430	0.16	6.1	*	67	540	3.8	—
LDCS-4A	330	0.19	28	*	41	440	6.5	—
LDCS-4B	350	0.17	45	*	76	550	4.7	—
LDCS-5	300	0.52	16	*	55	420	6.2	—
LDCS-6	390	0.28	19	*	84	120	4.9	—
LDCS-7	580	0.18	13	*	43	710	7.8	—
LDCS-8	570	*	17	*	54	670	7.3	—
Leachate Collection System								
Leachate, Cell 8	5000 B	870	1500	1.9	79	6500	1200	—

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
Second Quarter 2022
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	—	*	—	*	—	0.020	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	
MW-2A	—	*	—	*	—	0.012	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	
MW-3	—	*	—	*	—	0.017	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	
MW-4	—	*	—	0.010	—	0.020	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.029	
MW-5A	—	*	—	0.0060	—	0.016	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	
MW-6	—	*	—	0.0072	—	0.015	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	
MW-7	—	*	—	0.0061	—	0.018	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	
(BG) MW-9	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.014	—	*	
(BG) MW-10	—	*	—	*	—	0.014	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	0.013	
Leak Detection System																															
LDCS-1	*	—	0.0099	—	0.019	—	—	—	—	—	*	—	0.0012	—	*	—	*	—	*	—	—	—	—	—	—	—	—	*	—	*	—
LDCS-2A	*	—	*	—	0.020	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	—	*	—	*	—
LDCS-2B	*	—	0.090	—	0.054	—	—	—	—	—	*	—	0.0051	—	*	—	*	—	*	—	—	—	—	—	—	—	—	*	—	*	—
LDCS-3A	*	—	0.0094	—	0.026	—	—	—	—	—	*	—	0.0021	—	*	—	*	—	*	—	—	—	—	—	—	—	—	*	—	*	—
LDCS-4A	*	—	0.012	—	0.031	—	—	—	—	—	*	—	0.0020	—	*	—	*	—	*	—	—	—	—	—	—	—	—	*	—	*	—
LDCS-4B	*	—	0.0089	—	0.026	—	—	—	—	—	*	—	*	—	*	—	*	—	*	—	—	—	—	—	—	—	—	*	—	*	—
LDCS-5	*	—	*	—	0.041	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	*	—	*	—
LDCS-6	*	—	0.0097	—	0.031	—	*	—	*	—	*	—	0.0017	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
LDCS-7	*	—	0.011	—	0.039	—	*	—	*	—	*	—	0.0040	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
LDCS-8	*	—	*	—	0.042	—	*	—	*	—	*	—	0.0031	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*
Leachate Collection System																															
Leachate, Cell 8	—	*	—	0.19	—	0.69	—	*	—	*	—	0.24	—	0.022	—	0.035	—	0.024	—	0.18	—	*	—	*	—	*	—	0.14	—	0.39	

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)
Second Quarter 2022
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	13	1.4	8.2	0.22	3.0	9.4
MW-2A	18	0.66	10	0.27	2.6	13
MW-3	44	*	20	0.40	4.0	14
MW-4	30	*	18	0.22	5.1	11
MW-5A	27	0.11	11	0.17	5.1	45
MW-6	33	*	15	0.21	4.5	9.7
MW-7	33	0.51	23	0.26	6.3	16
(BG) MW-9	10	*	6.8	*	2.1	8.1
(BG) MW-10	27	*	12	*	2.2	14
Leak Detection System						
LDCS-1	38	1.6	16	1.7	4.5	16
LDCS-2A	90	0.16	36	0.63	8.1	26
LDCS-2B	77	30	31	2.3	5.8	16
LDCS-3A	110	3.5	44	3.7	5.7	21
LDCS-4A	56	4.6	37	2.4	4.3	18
LDCS-4B	76	0.75	29	1.3	4.2	21
LDCS-5	57	0.28	35	1.2	6.3	26
LDCS-6	87	0.32	49	1.9	4.9	24
LDCS-7	130	1.9	28	3.1	3.0	45
LDCS-8	120	*	77	1.9	4.9	38
Leachate Collection System**						
Leachate, Cell 8	360	5.5	150	3.4	460	1,400

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)
Second Quarter 2022
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	*	*	*	*	*	*	*	*	*
LDCS-2A	*	*	*	*	*	*	*	*	*	*
LDCS-2B	*	*	*	*	*	*	*	*	*	*
LDCS-3A	*	*	*	210	*	*	*	*	*	*
LDCS-4A	*	*	*	*	*	*	*	*	*	*
LDCS-4B	*	*	*	*	*	*	*	*	*	*
LDCS-5	*	*	*	*	*	*	*	*	*	*
LDCS-6	*	*	*	*	*	*	*	*	*	*
LDCS-7	*	*	*	*	*	*	*	*	*	*
LDCS-8	*	*	*	*	*	*	*	*	*	*
Leachate Collection System										
Leachate, Cell 8	*	9,300	160	11,000	5.3	5.3	21	41	22	200
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
Second Quarter 2022
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	13	8.2	3.0	9.4	33.6	0.65	0.67	0.07	0.41	1.80	26.5	36.0	37.5
MW-2A	18	10	2.6	13	43.6	0.90	0.82	0.06	0.57	2.35	26.6	38.3	35.1
MW-3	44	20	4.0	14	82	2.20	1.65	0.09	0.61	4.54	15.4	48.4	36.2
MW-4	30	18	5.1	11	64.1	1.50	1.48	0.12	0.48	3.57	16.6	41.9	41.5
MW-5A	27	11	5.1	45	88.1	1.35	0.91	0.12	1.96	4.33	47.9	31.1	20.9
MW-6	33	15	4.5	9.7	62.2	1.65	1.23	0.10	0.42	3.40	15.4	48.4	36.3
MW-7	33	23	6.3	16	78.3	1.65	1.89	0.14	0.70	4.38	19.1	37.6	43.2
MW-9	10	6.8	2.1	8.1	27	0.50	0.56	0.05	0.35	1.46	27.4	34.2	38.4
MW-10	27	12	2.2	14	55.2	1.35	0.99	0.05	0.61	2.99	22.0	45.0	33.0
LDCS-1	38	16	4.5	16	74.5	1.90	1.32	0.10	0.70	4.01	19.9	47.3	32.8
LDCS-2A	90	36	8.1	26	160.1	4.49	2.96	0.18	1.13	8.77	15.0	51.2	33.8
LDCS-2B	77	31	5.8	16	129.8	3.84	2.55	0.13	0.70	7.22	11.5	53.2	35.3
LDCS-3A	110	44	5.7	21	180.7	5.49	3.62	0.13	0.91	10.15	10.3	54.1	35.7
LDCS-4A	56	37	4.3	18	115.3	2.79	3.05	0.10	0.78	6.72	13.1	41.6	45.3
LDCS-4B	76	29	4.2	21	130.2	3.79	2.39	0.09	0.91	7.19	14.0	52.8	33.2
LDCS-5	57	35	6.3	26	124.3	2.84	2.88	0.14	1.13	7.00	18.2	40.6	41.2
LDCS-6	87	49	4.9	24	164.9	4.34	4.03	0.11	1.04	9.53	12.1	45.6	42.3
LDCS-7	130	28	3.0	45	206.0	6.49	2.30	0.07	1.96	10.82	18.7	60.0	21.3
LDCS-8	120	77	4.9	38	239.9	5.99	6.34	0.11	1.65	14.09	12.5	42.5	45.0
Leachate, Cell 8	360	150	460	1,400	2,370	17.96	12.35	10.39	60.90	101.60	70.2	17.7	12.2

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	109.2	1.7	0.50	2.6	114	1.79	0.05	0.008	0.05	1.90	2.5	94.2	2.8	3.70	2.7	10	O
MW-2A	144	2.5	0.50	4.3	151.3	2.36	0.07	0.008	0.09	2.53	2.8	93.4	3.5	4.87	3.8	10	O
MW-3	240	3.2	0.50	23	266.7	3.94	0.09	0.008	0.48	4.51	2.0	87.2	10.6	9.05	0.3	5	O
MW-4	192	3.1	0.50	10	205.6	3.15	0.09	0.008	0.21	3.45	2.5	91.2	6.0	7.02	1.7	5	O
MW-5A	228	3.1	0.50	15	246.6	3.74	0.09	0.008	0.31	4.15	2.1	90.2	7.5	8.47	2.1	5	O
MW-6	204	4.7	0.50	6.0	215.2	3.35	0.13	0.008	0.12	3.61	3.7	92.7	3.5	7.02	2.9	5	O
MW-7	252	3.2	0.50	2.3	258	4.13	0.09	0.008	0.05	4.28	2.1	96.6	1.1	8.66	1.1	5	O
MW-9	82.8	1.6	0.50	1.8	86.7	1.36	0.05	0.008	0.04	1.45	3.1	93.7	2.6	2.91	0.3	10	O
MW-10	132	7.1	2.8	6.7	148.6	2.16	0.20	0.045	0.14	2.55	7.9	84.9	5.5	5.54	8.0	5	Exceeds
LDCS-1	240	4.4	0.50	5.5	250.4	3.94	0.12	0.008	0.11	4.18	3.0	94.1	2.7	8.19	2.1	5	O
LDCS-2A	492	7.5	0.50	32	532	8.07	0.21	0.008	0.67	8.95	2.4	90.1	7.4	17.72	1.1	5	O
LDCS-2B	384	12	0.50	150	546.5	6.30	0.34	0.008	3.12	9.76	3.5	64.5	32.0	16.98	15.0	5	Exceeds
LDCS-3A	516	6.1	0.50	67	589.6	8.46	0.17	0.008	1.39	10.04	1.7	84.3	13.9	20.19	0.6	5	O
LDCS-4A	396	28	0.50	41	466	6.49	0.79	0.008	0.85	8.14	9.7	79.7	10.5	14.86	9.6	5	Exceeds
LDCS-4B	420	45	0.50	76	542	6.89	1.27	0.008	1.58	9.75	13.0	70.7	16.2	16.93	15.1	5	Exceeds
LDCS-5	360	16	0.50	55	432	5.90	0.45	0.008	1.14	7.51	6.0	78.6	15.2	14.51	3.5	5	O
LDCS-6	468	19	0.50	84	572	7.68	0.54	0.008	1.75	9.97	5.4	77.0	17.5	19.49	2.2	5	O
LDCS-7	696	13	0.50	43	753	11.41	0.37	0.008	0.89	12.68	2.9	90.0	7.1	23.50	7.9	5	Exceeds
LDCS-8	684	17	0.50	54	756	11.22	0.48	0.008	1.12	12.83	3.7	87.4	8.8	26.92	4.7	5	O
Leachate, Cell 8	6,000	1,500	1.90	79	7,581	98.40	42.30	0.031	1.64	142.37	29.7	69.1	1.2	243.97	16.7	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
Second Quarter 2022 Monitoring Report
LRI Landfill, Pierce County, Washington

Parameter	MRL	MW-5A	MW-5A (Duplicate)	RPD (%)
Volatile Organic Compounds (µg/L)				
No Detections	-	-	-	-
Inorganic Parameters (mg/L)				
Alkalinity, Total	10	190	190	0.0
Ammonia	0.1	0.15	0.18	18.2
Chloride	0.2	3.1	3.1	0.0
Sulfate	0.2	15	15	0.0
Total Dissolved Solids	10	240	240	0.0
Total Organic Carbon	1	1.2	1.1	8.7
Dissolved Metals (mg/L)				
Calcium	0.2	27	26	3.8
Iron	0.1	0.11	0.11	0.0
Magnesium	0.1	11	11	0.0
Manganese	0.005	0.17	0.17	0.0
Potassium	2.0	5.1	4.9	4.0
Sodium	1.0	45	44	2.2
Total Metals (mg/L)				
Arsenic	0.005	0.0060	0.0064	6.5
Barium	0.005	0.016	0.014	13.3

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

* = 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

June 29, 2022
File No. 04222001.02

Subject: **Second Quarter 2022 Groundwater Monitoring Event**
LRI Landfill, Pierce County, Washington

NOTES/SAMPLE DECODING:

Event Dates: June 14 & 15, 2022

Field Staff: Sam Graber & Ruben Martinez

- Dedicated pumps were used for purging and sampling MW-1A, MW-2A, MW-3, MW-5A, MW-6, MW-7, MW-9, MW-10, LDCS-3A, LDCS-4A, LDCS-4B, LDCS-5, LDCS-6, and LDCS-7.
- Disposable bailers were used to sample LDCS-1, LDCS-2A, LDCS-2B.
- The LDCS-8 sample was collected as a grab sample from the channel discharge spigot.
- A non-dedicated Sample Pro pump was used for purging and sampling well MW-4.
- A round of water level measurements was completed on June 14 & 15, 2022.
- 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.

Sample Number	Well Number
304-061422-01	MW-1A
304-061422-02	LDCS-3A
304-061422-03	MW-2A
304-061422-04	LDCS-2B
304-061422-05	MW-3
304-061422-06	LDCS-2A
304-061422-07	MW-6
304-061422-08	LDCS-1
304-061422-09	MW-5A
304-061422-10	MW-4
304-061422-11	MW-5A (Duplicate)
304-061422-12	Field Blank
304-061422-13	MW-7
304-061422-14	LDCS-8
304-061522-15	MW-9
304-061522-16	LDCS-7
304-061522-17	MW-10
304-061522-18	LDCS-4A
304-061522-19	Leachate, Cell 8
304-061522-20	LDCS-4B
304-061522-21	LDCS-5
304-061522-22	LDCS-6

[illegible]

Bellevue, WA 98005

(425) 746-4600

Project #:	04222001.02			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:	LDC5-3A			MP-20	Refill	11.5	One Well Volume	Other:		
Sample ID:	304-06 14 22-02			YSI	Discharge	3.5	(liters)	Flow		
Date:	6/14/22				Pressure	40	Total Volume Bailed	Setting:		
Weather:	Cloudy				Flow	250 mL/min	(liters)			
Filtered?	Y	N		Locked?	Y	N		Water in Protector?	Y	N
Sample Containers:	1000 ml Poly	500 ml Poly	250 ml Poly	Damage?	Y	N		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]

SAMPLER:

Printed Name

Signature _____

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04222001.02		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: MW-2A			MP-20	Refill	One Well Volume		Other:	
Sample ID: 304-06 14 22-03			YSI	Discharge	(liters)		Flow	
Date: 6/14/22			BOS	Pressure	Total Volume Bailed		Setting:	
Weather: cloudy			Total Depth	Flow	(liters)			
Filtered? ☒ N	Locked? ☒ Y	Water in Protector? ☒ Y	Damage? ☒ Y					
Sample Containers:		Notes / Observations (color, odor, anomalies, etc):						
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: B. Mantione
Printed Name

Signature _____

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #:	04222001.02			Sampling Method:	Dedicated	1.75" QED SamplePro	<u>Bail</u>	Peristaltic	Grab	Other
Site	LRI 304th			Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons		
Well ID:	LDC5-2B			MP-20	Refill	One Well Volume		Other:		
Sample ID:	304-06 14 22-04			<u>YSI</u>	Discharge	(liters)		Flow		
Date:	6/14/22			BOS	Pressure	Total Volume Bailed		Setting:		
Weather:	cloudy			Total Depth	Flow	(liters)				
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									
Notes / Observations (color, odor, anomalies, etc):										

[illegible]

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

Color - yellowish

Heavy amount of particulates - bacteria?

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

Groundwater Sampling Data Sheet

Project #:	04222001.02		Sampling Method :	Dedicated	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other	
Site	LRI 304th		DTW	Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons		
Well ID:	MW-3		TOS	MP-20	Refill	9	One Well Volume	Other :		
Sample ID:	304-06 14 22- OS		Intake	YSF	Discharge	6	(liters)	Flow		
Date:	6/14/22		BOS		Pressure	35	Total Volume Bailed	Setting :		
Weather:	cloudy	Total Depth		Flow	350 mL/min	(liters)				
Filtered?	☒ Y ☐ N	Locked?	☒ Y ☐ N	Water in Protector?	☒ Y ☐ N	Damaged?	☒ 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):										

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1110		10.56	416	25.0	7.27	48.7		
1115		10.58	418	1.31	6.78	46.5		
1118		10.56	419	1.06	6.87	30.4	0.40	
1121		10.58	420	0.93	6.98	14.3		
1124		10.54	421	0.88	7.02	3.0		
1127		10.53	421	0.85	7.04	-2.8		
1130		10.53	421	0.81	7.06	-11.5	0.73	

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

SAMPLER: R. Martinez
Printed Name

Signature  

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #:	04222001.02	 29.20	Sampling Method :	Dedicated	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other	
Site	LRI 304th		DTW	Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons		
Well ID:	LDC5-2A		TOS	MP-20	Refill		One Well Volume	Other :		
Sample ID:	304-06 14 22- 06		Intake	YSI	Discharge		(liters)	Flow		
Date:	6/ 14 /22		BOS		Pressure		Total Volume Bailed	Setting :		
Weather:	cloudy	Total Depth		Flow		(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]

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

Groundwater Sampling Data Sheet

Project #:	04222001.02	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:	MW-6		MP-20	Refill	9	One Well Volume	Other:		
Sample ID:	304-06 14 22- 07		YSI	Discharge	6	(liters)	Flow		
Date:	6/14/22			Pressure	25	Total Volume Bailed	Setting:		
Weather:	cloudy			Flow	350	(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								

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1210		11.00	328	15.00	7.71	58.4		
1215		10.56	333	1.38	6.69	-4.4		
1218		10.57	332	0.83	7.16	-8.5		
1221		10.59	331	0.70	7.46	-14.8		
1224		10.60	332	0.65	7.57	-22.4		
1227		10.60	332	0.64	7.59	-25.2		
1230	7.85	10.61	332	0.62	7.60	0.5 -27.0	0.53	

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

SAMPLER: R. Martinez
Printed Name

 M+N

Signature

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

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #:	04222001.02	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:	UDCS-1	MP-20	Refill	One Well Volume		Other:		
Sample ID:	304-06 14 22-08	YSI	Discharge	(liters)		Flow		
Date:	6/14/22		Pressure	Total Volume Bailed		Setting:		
Weather:	cloudy		Flow	(liters)				
Filtered?	Y ☒ N	Locked?	Y ☒ N	Water in Protector?	Y ☒ N	Damage?		
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:

Printed Name

Signature _____

SCS ENGINEERS

2405 140th ave NE #107

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04222001.02

Site: LRI 304th

Well ID: MW-5A

Sample ID: 304-06 14 22-09

Date: 6/14/22

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

Sampling Method: Dedicated

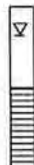
1.75" QED SamplePro

Bail

Peristaltic

Grab

Other



25.70

DTW

Meter:

CONTROL SETTINGS:

1 ft water = 0.62L

1L = 0.26 gallons

TOS

MP-20

Refill

One Well Volume

Other:

Intake

YSI

Discharge

(liters)

Flow

BOS

Pressure

Total Volume Bailed

Setting:

Total Depth

Flow

(liters)

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

Dup 304-061422-11

taken @ 1400

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1315		12.65	403	16.00	6.28	-31.5		
1320		12.58	403	2.85	6.66	-18.6	6.18	
1323		12.58	402	1.28	7.08	-27.1		
1325		12.59	398	0.75	7.50	-56.0	4.69	
1329		12.63	392	0.68	7.50	-65.7		
1332		12.62	392	0.66	7.50	-68.2		
1335	27.04	12.72	392	0.65	7.52	-72.3	4.28	

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 #:	04222001.02	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:	MW-4	MP-20	Refill	10	One Well Volume	Other:		
Sample ID:	304-06 14 22- 10	YSI	Discharge	5	(liters)	Flow		
Date:	6/14/22		Pressure	40	Total Volume Bailed	Setting:		
Weather:	cloudy		Flow	250 ml/min	(liters)			
Filtered?	Y (N)	Locked?	Y (N)	Water in Protector?	Y (N)	Damage?		
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:

Printed Name _____

Signature _____

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

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #:	04222001.02	Sampling Method :		Dedicated	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other
Site	LRI 304th		DTW	Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons	
Well ID:	Field Hawk		TOS	MP-20	Refill	One Well Volume	Other :		
Sample ID:	304-06 14 22- 12		Intake	YSI	Discharge	(liters)	Flow		
Date:	6/ 14 /22		BOS		Pressure	Total Volume Bailed	Setting :		
Weather:	Cloudy		Total Depth		Flow	(liters)			
Filtered?	☒ N	Locked?	Y ☐ N ☒ NA	Water in Protector?	Y ☐ N ☒ NA	Damage?	Y ☐ N ☒ NA		
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):

~~pump set at 70' below TDC~~
~~run out of tubing~~

Collected near MW-4

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

SAMPLER: Sam Gabe
Printed Name

Signature _____

Bellevue, WA 98005

(425) 746-4600

Project #:	04222001.02			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:	MW-7			MP-20	Refill	9	One Well Volume	Other :		
Sample ID:	304-06 14 22- 13			YSI	Discharge	6	(liters)	Flow		
Date:	6/ 14 /22			BOS	Pressure	30	Total Volume Bailed	Setting :		
Weather:	cloudy			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						
	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):										

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1520		10.82	382	16.00	6.01	42.0		
1525		10.74	376	13.00	5.98	38.7		
1528		10.70	400	1.70	7.09	-11.8	25.7	
1531		10.67	400	1.34	7.28	-36.4	20.9	
1534		10.68	400	1.17	7.37	-51.0	16.4	
1537		10.68	400	1.03	7.43	-62.9	8.22	
1540	22.47	10.69	400	0.97	7.44	-68.7	3.04	

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

SAMPLER: R. Martinez
Printed Name

Signature

Bellevue, WA 98005

(425) 746-4600

Project #:	04222001.02		Sampling Method:	Dedicated	1.75" QED SamplePro	Bail	Peristaltic	<u>Grab</u>	Other
Site	LRI 304th		DTW	Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons	
Well ID:	EDCS-8		TOS	MP-20	Refill		One Well Volume	Other:	
Sample ID:	304-06 14 22-14		Intake	<u>YSI</u>	Discharge		(liters)	Flow	
Date:	6/14/22		BOS		Pressure		Total Volume Bailed	Setting:	
Weather:	cloudy		Total Depth		Flow		(liters)		
Filtered?	<u>Y</u> N	Locked?	Y <u>N</u>	Water in Protector?	Y N <u>NA</u>	Damage?	Y N <u>NA</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]

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

Grab sample from spigot

* Lab filter dissolved metals *

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

SAMPLER: Sam Gruber
Printed Name

Signature

Bellevue, WA 98005

(425) 746-4600

Project #:	04222001.02		Sampling Method:	Dedicated	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other	
Site	LRI 304th		DTW	Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons		
Well ID:	MW-9		TOS	MP-20	Refill	9	One Well Volume	Other:		
Sample ID:	304-06 1S 22- 1S		Intake	YSI	Discharge	6	(liters)	Flow		
Date:	6/15/22		BOS		Pressure	45	Total Volume Bailed	Setting:		
Weather:	overcast	Total Depth		Flow	300 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/DQ ± 0.2 , SpC $\pm 10\%$, Temp $\pm 0.5^\circ\text{C}$, Turb. $\pm 10\%$ or ≤ 5

SAMPLER: R. Martinez
Printed Name

Signature

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04222001.02		Sampling Method: <u>Dedicated</u>		1.75" QED SamplePro	Bail	Peristaltic	Grab	Other
Site: LRI 304th		Meter: <u>CONTROL SETTINGS:</u>		1 ft water = 0.62L		1L = 0.26 gallons		
Well ID: <u>LDCS-7</u>		MP-20		Refill	One Well Volume		Other:	
Sample ID: <u>304-06 15 22- 16</u>		<u>(YSI)</u>		Discharge	(liters)		Flow	
Date: <u>6/15/22</u>		BOS		Pressure	Total Volume Bailed		Setting:	
Weather: <u>cloudy</u>		Total Depth		Flow	(liters)			
Filtered? ☒ 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):								

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q/Vol.
927		20.6	979	1.00	6.50	237.2	4.61	
932		22.7	988	0.54	6.72	123.9	6.04	
935		23.6	1008	0.71	6.21	-20.4	8.44	
938		24.0	1091	0.58	6.22	-19.5	6.21	
941		24.5	1193	0.43	6.22	-18.2	4.54	
944		24.6	1193	0.42	6.23	-19.1	4.20	
947		24.8	1193	0.42	6.23	-20.1	3.39	951

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 #:	04222001.02		Sampling Method:	Dedicated	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other	
Site	LRI 304th		DTW	Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons		
Well ID:	MW-10		TOS	MP-20	Refill	9	One Well Volume	Other:		
Sample ID:	304-06 15 22- 17		Intake	YSI	Discharge	6	(liters)	Flow		
Date:	6/ 15 /22		BOS		Pressure	40	Total Volume Bailed	Setting:		
Weather:	Cloudy	Total Depth		Flow	200 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):										

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q / Vol.
1000		12.74	259	4.17	6.25	32.3		
1005		12.22	266	2.83	5.88	29.3		
1008		11.82	271	2.45	6.08	34.1		
1011		11.73	270	2.26	6.31	23.3		
1014		11.81	267	1.94	6.36	6.4		
1017		11.87	264	1.86	6.37	-1.8		
1020	29.60	11.77	265	1.90	6.39	-6.5	47	1.47

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 #:	04222001.02	Sampling Method :		Dedicated	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other
Site	LRI 304th		DTW	Meter:	CONTROL SETTINGS:		1 ft water = 0.62L	1L = 0.26 gallons	
Well ID:	LDC5-4A		TOS	MP-20	Refill	12	One Well Volume		Other :
Sample ID:	304-06 15 22- 18		Intake	YSI	Discharge	3	(liters)		Flow
Date:	6/15/22		BOS		Pressure	40	Total Volume Bailed		Setting :
Weather:	cloudy		Total Depth		Flow	200 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: Sam Graber
Printed Name

Signature _____

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04222001.02		Sampling Method : ☒ Dedicated		1.75" QED SamplePro		☐ Bail		☐ Peristaltic		☒ Grab		☐ Other	
Site LRI 304th		☒ DTW		Meter: CONTROL SETTINGS:		1 ft water = 0.62L		1L = 0.26 gallons					
Well ID: Leachate cell 8		☒ TOS		MP-20		Refill		One Well Volume		Other :			
Sample ID: 304-06 15 22- 19		☒ Intake		YSI		Discharge		(liters)		Flow			
Date: 6/ 15 /22		☒ BOS				Pressure		Total Volume Bailed		Setting :			
Weather: Cloudy		☒ Total Depth				Flow		(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:

Printed Name

Signature

SCS ENGINEERS

2405 140th ave NE #107

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04222001.02	Sampling Method: <u>Dedicated</u>	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other
Site: LRI 304th	Meter: <u>CONTROL SETTINGS:</u>	1 ft water = 0.62L		1L = 0.26 gallons		
Well ID: <u>LDCS-4B</u>	MP-20	Refill: <u>11</u>	One Well Volume (liters)		Other: _____	
Sample ID: <u>304-06 15 22-20</u>	<u>YSI</u>	Discharge: <u>4</u>	Total Volume Bailed (liters)		Flow Setting: _____	
Date: <u>6/15/22</u>	BOS	Pressure: <u>40</u>				
Weather: <u>cloudy</u>	Total Depth	Flow: <u>200 mL/min</u>				

Filtered? ☒ 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		125 ml Poly
			1000 ml Amber

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	SpC panel Q Vol.
1130		Started pump						
1140		24.0	954	1.04	6.41	-4.8	4.74	
1145		25.6	968	0.48	6.38	-4.1	4.13	
1148		25.6	968	0.45	6.38	-6.6	4.14	955
1151		25.8	969	0.43	6.38	-8.9	4.12	
1154		25.9	969	0.42	6.38	-11.5	4.11	
1157		26.0	969	0.40	6.38	-13.8	4.17	
1200		26.0	969	0.40	6.38	-14.8	4.15	

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

Level at 20.0

10 minutes to get water

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

SAMPLER:

Printed Name

Sam Graber

Signature

[Signature]

SCS ENGINEERS

2405 140th ave NE #107

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04222001.02

Site: LRI 304th

Well ID: LDC5-5

Sample ID: 304-06 15 22-21

Date: 6/15/12

Weather: cloudy

Filtered? ☒ Y ☐ N

Sample Containers:

Locked? ☐ Y ☒ N

1000 ml Poly

500 ml HNO3 x2

125 ml NaOH

Water in Protector? ☒ Y ☐ N

500 ml Poly

500 ml H2SO4 x2

250 ml Poly

40 ml VOA x3 x6

Damage? ☒ Y ☐ N

125 ml Poly

1000 ml Amber

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

11

One Well Volume

(liters)

Other:

Discharge

4

Pressure

40

Total Volume Bailed

(liters)

Flow

Setting:

Flow

200 mL/min

DTW

TOS

Intake

BOS

Total Depth



DTW
TOS
Intake
BOS
Total Depth

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

level at 12.1. Water right away.

TIME	DTW	Temp.	Sp.Cond.	DO	pH	Eh	Turbidity	Q/Vol.
1237		13.8	806	5.61	7.09	70.9	22.21	826
1242		20.4	801	1.42	6.47	116.8	5.09	
1245		21.4	804	0.64	6.45	110.9	4.28	
1248		22.7	796	0.68	6.47	119.3	7.40	
1251		23.6	750	0.55	6.41	32.1	15.18	
1254		24.5	739	0.43	6.33	54.1	17.61	
1257		24.9	740	0.42	6.38	62.8	17.90	327

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

SAMPLER:

Printed Name

Sam Graber

Signature

[Signature]

SCS ENGINEERS

2405 140th ave NE #107

Bellevue, WA 98005

(425) 746-4600

Groundwater Sampling Data Sheet

Project #: 04222001.02	Sampling Method: <u>Dedicated</u>	1.75" QED SamplePro	Bail	Peristaltic	Grab	Other
Site: LRI 304th	Meter: <u>MP-20</u>	CONTROL SETTINGS:		1 ft water = 0.62L 1L = 0.26 gallons		
Well ID: <u>LDCS-6</u>	MP-20	Refill: <u>11</u>	One Well Volume (liters)		Other: _____	
Sample ID: <u>304-06 15 22-22</u>	<u>YSI</u>	Discharge: <u>4</u>	Total Volume Bailed (liters)		Flow Setting: _____	
Date: <u>6/15/22</u>	BOS	Pressure: <u>40</u>				
Weather: <u>cloudy</u>	Total Depth	Flow: <u>125 mL/min</u>				
Filtered? <u>Y</u> <u>N</u>	Locked? <u>Y</u> <u>N</u>	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	125 ml Poly		
	500 ml HNO3 x2	500 ml H2SO4 x2	40 ml VOA x3 x6	1000 ml Amber		
	125 ml NaOH					

TIME	DTW	Temp.	Sp. Cond.	DO	pH	Eh	Turbidity	Q/Vol.
1330		19.2	920	7.72	7.74	88.9	37.21	
1335		19.4	921	6.91	7.59	95.7	35.61	
1338		19.7	921	6.30	7.41	103.5	32.56	
1341		20.6	926	5.84	7.23	110.6	29.54	
1344		20.5	927	5.13	7.18	113.9	30.11	
1347		20.5	927	4.69	7.13	117.8	30.54	
<u>1350</u>		20.6	930	3.97	7.00	32.1	88.21	927
1353		20.7	945	3.10	6.79	-0.7	247.71	
1358		20.7	949	1.75	6.56	27.1	42.1	
1403		20.6	944	1.59	6.55	34.5	46.60	
1408		20.6	944	1.42	6.55	40.9 40.9	26.81	929

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

Level at 13.0. Water right away

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

SAMPLER: Sam Graber
Printed Name

Signature [Signature]

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Date	6/14/22					
Time	900					
Weather (sky or precip, temp)	cloudy					
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	1430	3.99	6.98	8.31		
Post Cal Reading	1413	4.00	7.00	8.50		
Discrepancy	No					
Calib. Successful?	Yes					
Calibration by	SEB					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental			YSI Pro DDS / HACH2000		
Calibration Location	LBS 3044					

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

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Date	6/14/22					
Time	0800					
Weather (sky or precip, temp)	cloudy					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1415	3.96	7.00	8.28		
Post Cal Reading	1413	4.00	7.00	8.5		
Discrepancy	no					
Calib. Successful?	yes					
Calibration by	RMB					
Instrument Type, ID	YSI Pro DDS / YSI 556 // Rental				YSI Pro DDS / HACH2000	
Calibration Location	LRI parking lot					

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

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Date	6/15/22					
Time	900					
Weather (sky or precip, temp)	cloudy					
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	1405	3.98	6.98	8.36		
Post Cal Reading	1413	4.00	7.00	8.50		
Discrepancy	No					
Calib. Successful?	Yes					
Calibration by	SEB					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental			YSI Pro DDS / HACH2000		
Calibration Location	LRI 3044					

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

GROUNDWATER SAMPLING INSTRUMENT CALIBRATION DOCUMENTATION FORM

	Conductivity	pH 4	pH 7	D.O.	Turbidity	Comments/Exceptions
Date	6/15/22					
Time	0800					
Weather (sky or precip, temp)	overcast					
Type of Calibration	Standard	Standard	Standard	Standard	Standard	
Standard Value	1413	4.01	7.00	100% or ~8.5	1000, 10, 0.2 800, 100, 20, <0.1	
Pre-Cal Reading	1414	4.05	7.00	8.61		
Post Cal Reading	1413	4.00	7.00	8.50		
Discrepancy	no					
Calib. Successful?	yes					
Calibration by	RMB					
Instrument Type, ID	YSI Pro DDS / YSI 556 / Rental				YSI Pro DDS / HACH2000	
Calibration Location	LRI MW 9					

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

LRI Landfill
Water Level Data

Date: June 14 & 15, 2022

Measured by: RM & SB

	Ground Elevation	PVC Elevation	Total Depth	Depth to Water	Water Level Elevation	Time	Comments
Wells							
W87-2A	662.5	664.01		14.03	664.01		
W88-3M	654.8	656.48		12.03	656.48		
W87-4a	691.9	693.29		5.13	693.29		
W88-7A	631.3	632.51		lost	632.51		
W88-8M	719.7	721.05		38.10	721.05		
W90-12A	638.6	640.84		27.69	640.84		
W95-14A	678.6	680.49		abandoned	680.49		
MW-1A	653.2	652.57	75.7	17.50	652.57		
MW-2A	652.2	651.93	67.2	16.97	651.93		
MW-3	635.7	637.41	70.4	5.60	637.41		
MW-4		652.37		20.83	652.37		
MW-5		654.40		abandoned	654.40		
MW-5A		655.55		25.70	655.55		
MW-6	633.4	635.71	52.4	7.03	635.71		
MW-7	654.7	656.03	58.0	13.32	656.03		
MW-9	699.1	701.77	76.8	7.46	701.77		
MW-10	671.5	674.17		24.52	674.17		
Piezometers							
P88-2a	633.0	663.96		lost			
P88-2b	633.0	663.48		lost			
P88-3a	655.1	656.20	27.4	10.61	656.20		
P88-3b	655.1	655.98	39.8	14.41	655.98		
P95-8a	721.2	722.07		25.65	722.07		
P90-12a	638.6	640.79		3.35			
P90-12b	638.6	640.73		2.62			
P90-13a	643.5	645.19		lost			
P90-13b	643.5	643.63		lost			
P13-14A				19.93			
GP-1P		652.00		16.06	652.00		
GP-2P		656.61		14.68	656.61		
GP-3P		658.51		7.75	658.51		
GP-4P		662.01		4.55	662.01		
GP-9P		674.03		10.73	674.03		
GP-10P		649.86			649.86		
GP-11P							
GP-12P							
GP-13P							
South Creek							
SWSC-1		Head Wall 632.79		0.50			
SWSC-2		629.95		5.86	629.95		
Leak Detection System							
LDCS-1		657.26		26.05	657.26		
LDCS-2A		659.24		29.20	659.24		
LDCS-2B		661.70		27.97	661.70		

P1 = 25.50

P3 = 4.05

P2 = 2.32

P21-2 = 19.64



Attachment D

Statistical Calculations

Groundwater Prediction Limits (mg/L)
Appendix I Parameters, Second Quarter 2022
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	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	0.016	0.010 L	0.010 L	0.010 L	0.014	0.010 L	0.010 L	0.010 L	0.016	0.010 L
Zinc	0.01	0.290	0.032	0.010 L	0.010 L	0.290	0.010	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.

Statistical Summary of Total Metals and Nitrate Groundwater Data
Appendix I Parameters, Second Quarter 2022
LRI Landfill, Pierce County, Washington

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.	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	0.01	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	0.02	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	0.01	L 0.005	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	0.005	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	0.01	L 0.005	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	0.005	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	0.01	L 0.005	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	0.005	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	0.01	L 0.005	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	0.005	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	0.01	L 0.005	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	0.005	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		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		0.0025		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		0.005		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	0.01	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	0.005	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	0.01	L 0.005	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	0.005	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	L 0.0005	0.01	L 0.005	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	0.005	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	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.005	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	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.005	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	0.014	0.014	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.005	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		0		0		0		
Minimum Concentration		0.001		0.0025		0.012			0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0025		0.0005		0.0025		0.005		0.25
Maximum Concentration		0.025		0.0025		0.018		0.0025		0.0025		0.0025		0.005		0.005		0.001		0.01		0.0025		0.005		0.0025		0.005		0.005		0.25	
Average Concentration	NC		NC			0.01413		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC	
Variance	NC		NC			3.3E-06		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC	
Standard Deviation	NC		NC			0.00181		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC	
Coefficient of Variation (%)	NC		NC			12.798		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC	
Standard Error	NC		NC			0.00064		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC	
MW-3	3/26/2014	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
	6/25/2014	0.002	L 0.001	0.005	L 0.0025	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	0.01	L 0.005	0.5	L 0.25
	9/17/2014	0.05	L 0.025	0.005	L 0.0025	0.01	0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	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			

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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.	Result	Conc.	
MW-4	3/24/2014	0.002	L 0.001	0.0074	0.0074	0.012	0.012	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	0.0086	0.0086	0.012	0.012	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	0.0099	0.0099	0.013	0.013	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	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	0.0076	0.0076	0.011	0.011	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
	3/24/2015	0.05	L 0.025	0.0079	0.0079	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
	6/9/2015	0.05	L 0.025	0.0094	0.0094	0.013	0.013	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.005	L 0.0025	0.01	L 0.005	0.5	L 0.25
	9/18/2015	0.05	L 0.025	0.0094	0.0094	0.017	0.017	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.005	L 0.0025	0.014	0.014	0.5	L 0.25
	12/15/2015	0.05	L 0.025	0.011	0.011	0.091	0.091	0.001	L 0.0005	0.001	L 0.0005	0.011	0.011	0.0039	0.0039	0.063	0.063	0.042	0.042	0.02	L 0.01	0.005	L 0.0025	0.005	L 0.0025	0.005	L 0.0025	0.014	0.014	0.29	0.29	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		8		8		0		0		1		1		1		1		0		0		0		0		1		2		0	
Minimum Concentration		0.001		0.0074		0.011		0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0005		0.0025		0.005		0.25			
Maximum Concentration		0.025		0.011		0.091		0.0025		0.0025		0.011		0.005		0.063		0.042		0.01		0.0025		0.005		0.0025		0.014		0.29		0.25	
Average Concentration		NC		0.0089		0.02275		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC	
Variance		NC		1.6E-06		0.00076		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC	
Standard Deviation		NC		0.00125		0.02763		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC	
Coefficient of Variation (%)		NC		14.0465		121.469		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC	
Standard Error		NC		0.00044		0.00977		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC		NC	
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	0.01	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	0.01	L 0.005	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	0.005	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	0.01	L 0.005	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	0.005	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	0.01	L 0.005	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	0.005	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	0.01	L 0.005	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	0.005	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	0.01	L 0.005	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	0.005	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		7		8		0		0		2		0		1		0		1		0		0		0		0		1		0	
Minimum Concentration		0.001		0.0025		0.014		0.0005		0.0005		0.001		0.0005		0.001		0.0005		0.001		0.0025		0.0005		0.0025		0.005		0.01		0.25	
Maximum Concentration		0.025		0.008		0.036		0.0025		0.0025		0.0051		0.005		0.0061		0.001		0.01		0.0025		0.005		0.0025		0.005		0.01		0.25	
Average Concentration		NC		0.00631		0.026		NC		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		NC	
Standard Deviation		NC		0.00175		0.00776		NC		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		NC	
Standard Error		NC		0.00062		0.00275		NC		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 0.000						

**Statistical Summary of Total Metals and Nitrate Groundwater Data
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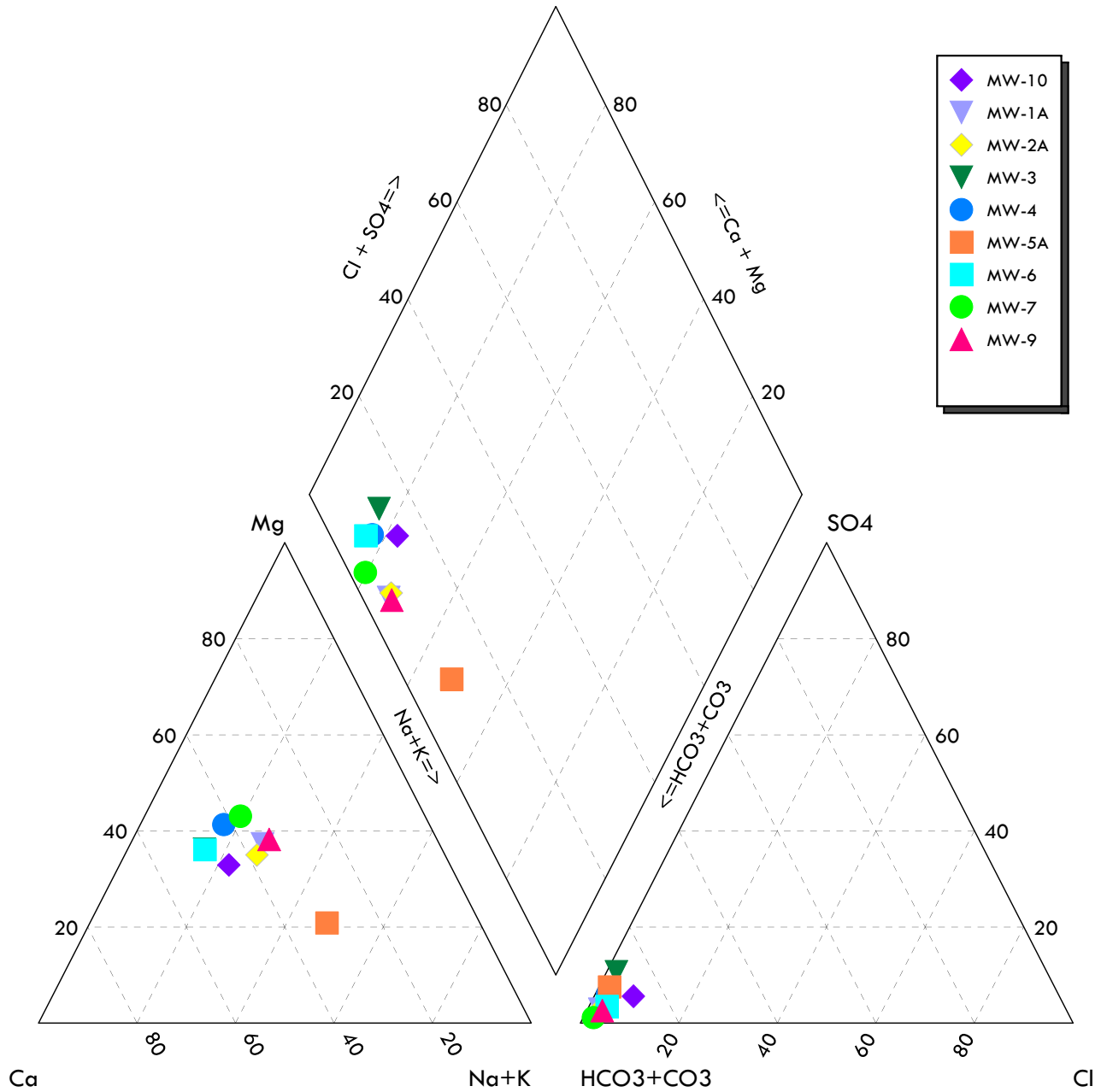
Location ID	Antimony (Sb)		Aseenic (As)		Barium (Ba)		Beryllium (Be)		Cadmium (Cd)		Chromium (Cr)		Cobalt (Co)		Copper (Cu)		Lead (Pb)		Nickel (Ni)		Selenium (Se)		Silver (Ag)		Thallium (Tl)		Vanadium (V)		Zinc (Zn)		Nitrate (NO ₃)		
Monitoring Date	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	Result	Conc.	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 0.005	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	0.014	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 0.005	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	0.013	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 0.005	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	0.014	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	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.014	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 0.005	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	0.014	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 0.005	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	0.014	0.014	0.028	0.028	0.5	L 0.25
	6/8/2016	0.05	L 0.025	0.005	L 0.0025	0.005	0.005	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.014	0.014	0.023	0.023	0.5	L 0.25
	9/16/2016	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 0.005	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	0.015	0.015	0.043	0.043	0.5	L 0.25
	12/6/2016	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 0.005	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	0.014	0.014	0.01	L 0.005	0.5	L 0.25
	3/29/2017	0.05	L 0.025	0.005	L 0.0025	0.0056	0.0056	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.014	0.014	0.01	L 0.005	0.5	L 0.25
	6/22/2017	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 0.005	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	0.014	0.014	0.01	L 0.005	0.5	L 0.25
	9/26/2017	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 0.005	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	0.012	0.012	0.01	L 0.005	0.5	L 0.25
	12/13/2017	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 0.005	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	0.013	0.013	0.01	L 0.005	0.5	L 0.25
	3/21/2018	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 0.005	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	0.016	0.016	0.01	L 0.005	0.5	L 0.25
	6/19/2018	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 0.005	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	0.013	0.013	0.01	L 0.005	0.5	L 0.25
	9/19/2018	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 0.005	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	0.013	0.013	0.01	L 0.005	0.5	L 0.25
	12/4/2018	0.05	L 0.025	0.005	L 0.0025	0.0051	0.0051	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.014	0.014	0.01	L 0.005	0.5	L 0.25
	3/11/2019	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 0.005	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	0.014	0.014	0.01	L 0.005	0.5	L 0.25
	6/19/2019	0.05	L 0.025	0.005	L 0.0025	0.0051	0.0051	0.001	L 0.0005	0.001	L 0.0005	0.005	L 0.0025	0.001	L 0.0005	0.01	L 0.005	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	0.013	0.013	0.01	L 0.005	0.5	L 0.25
	9/26/2019	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 0.005	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	0.014	0.014	0.01	L 0.005	0.5	L 0.25
	12/11/2019	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 0.005	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	0.016	0.016	0.01	L 0.005	0.5	L 0.25
	3/17/2020	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 0.005	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	0.015	0.015	0.01	L 0.005	0.5	L 0.25
	6/8/2020	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 0.005	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	0.014	0.014	0.01	L 0.005	0.5	L 0.25
	9/22/2020	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 0.005	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	0.016	0.016	0.01	L 0.005	0.5	L 0.25
	12/16/2020	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 0.005	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	0.014	0.014	0.01	L 0.005	0.5	L 0.25
	3/9/2021	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 0.005	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	0.015	0.015	0.01	L 0.005	0.5	L 0.25
	6/15/2021	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 0.005	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	0.014	0.014	0.01	L 0.005	0.5	L 0.25
	9/15/2021	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 0.005	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	0.015	0.015	0.01	L 0.005	0.5	L 0.25
	12/5/2021	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 0.005	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	0.015	0.015	0.01	L 0.005	0.5	L 0.25
	3/30/2022	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 0.005	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	0.015	0.015	0.01	L 0.005	0.5	L 0.25
	6/15/2022	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 0.005	0.002	L 0.001	0.02	L 0.01	0.005	L 0.0025	0.00									

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.

Attachment E

Trilinear Diagrams

Second Quarter 2022, Groundwater Monitoring Wells



DESCRIPTION: Piper Diagram - 2Q22 Groundwater

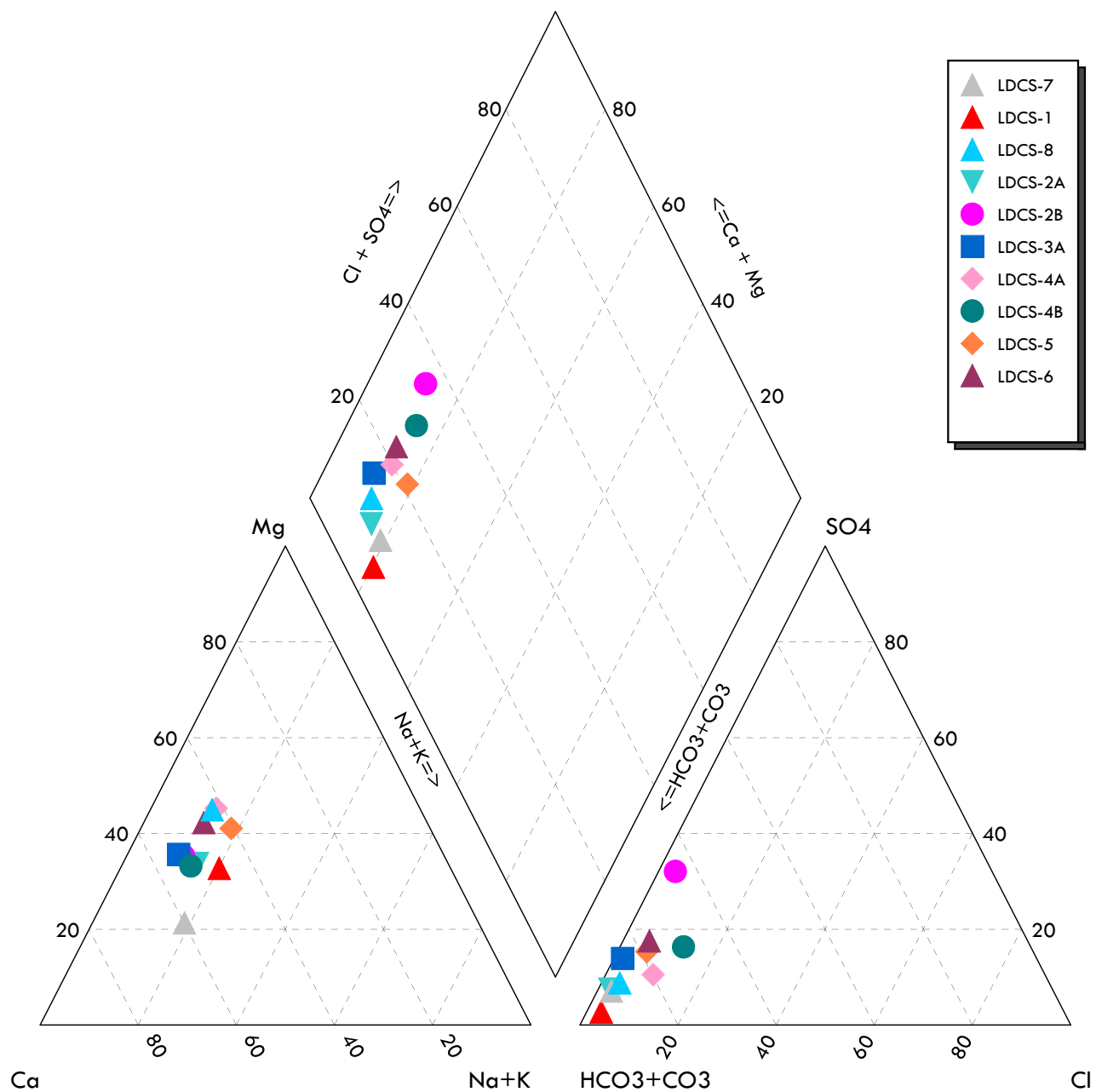
PROJECT: LRI Landfill

PROJECT NO: 04222001.02

CLIENT: LRI, Inc.

DATE: September 2022

Second Quarter 2022, Leak Detection Collection Recovery System



DESCRIPTION: Piper Diagram - 2Q22 LDCRS

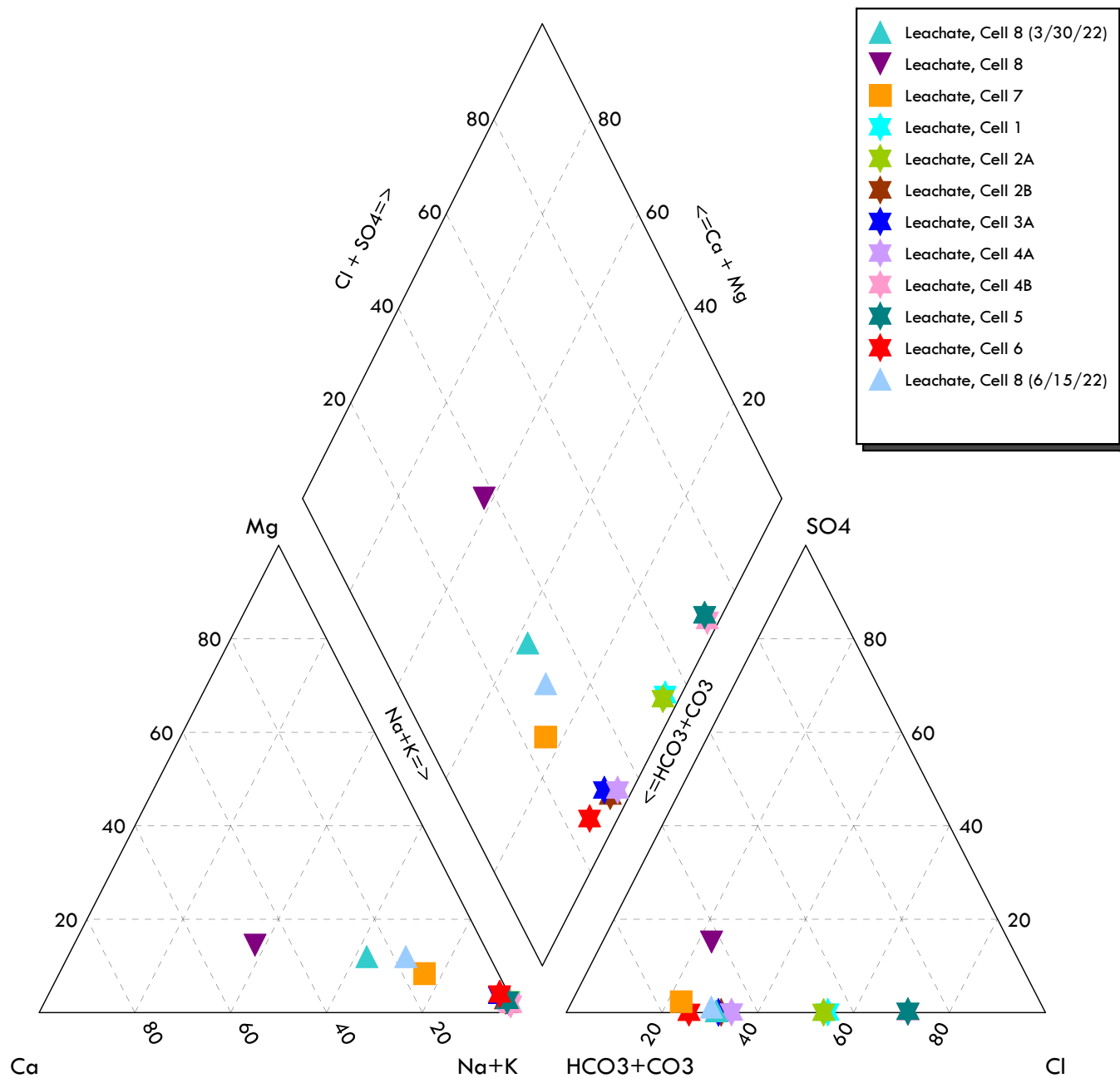
PROJECT: LRI Landfill

PROJECT NO: 04222001.02

CLIENT: LRI, Inc.

DATE: September 2022

Fourth Quarter 2021, Leachate



DESCRIPTION: Piper Diagram - 4Q21 Leachate

PROJECT: LRI Landfill

PROJECT NO: 04222001.02

CLIENT: LRI, Inc.

DATE: September 2022

Attachment F

Analytical Data Validation Report

SECOND QTR. 2022 DATA VALIDATION REPORT – LRI LANDFILL

Project Details

Project No.	04222001.02	Site Name	LRI 304 th Street LF
Data Validator	Ketan Shah	Data Level	Level 2
Date	9/12/22	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)
280-163433-1	None.	TestAmerica, Denver, CO
280-163434-1	None.	TestAmerica, Denver, CO
280-163493-1	The method requirement for no headspace was not met significant headspace in the sample container(s): "-19". Significant headspace is defined as a bubble greater than 6 mm in diameter.	TestAmerica, Denver, CO
280-163495-1	None.	TestAmerica, Denver, CO
280-163497-1	None.	TestAmerica, Denver, CO

Analytical Summary

Sample Group	Analyses					
	TDS/Alk/NO3	Metals	NH3/TOC	VOCs	Anions	TSS
280-163433-1	X	X ¹	X	X	X	-
280-163434-1	X	X ²	X	X	X	X
280-163493-1	X	X ³	X	X	X	-
280-163495-1	X	X ¹	X	X	X	-
280-163497-1	X	X ²	X	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.



Lab QA Samples	Results	Comments
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-TB	280-163433-1	None.	
QC-TB	280-163434-1	None.	
QC-TB	280-163493-1	None.	
QC-FB	280-163495-1	None.	
QC-TB	280-163497-1	None.	

Lab Quality Flags

Flag	Sample Groups	Comments
4	280-163433-1, 280-163493-1, 280-163495-1, 280-163497-1	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	280-163493-1	Compound was found in the blank and sample.
F1	280-163433-1, 280-163434-1, 280-163493-1, 280-163495-1, 280-163497-1	MS and/or MSD recovery exceeds control limits.
F2	280-163493-1, 280-163497-1	MS/MSD RPD exceeds control limits
F3	280-163493-1	Duplicate RPD exceeds the control limit
E	280-163433-1, 280-163493-1, 280-163495-1, 280-163497-1	Result exceeded calibration range.
J	280-163433-1, 280-163434-1, 280-163493-1, 280-163495-1, 280-163497-1	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*+	280-163433-1, 280-163434-1	LCS and/or LCSD is outside acceptance limits, high biased.
^+	280-163497-1	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
^6+	280-163433-1, 280-163434-1, 280-163493-1, 280-163495-1, 280-163497-1	Interference Check Standard (ICSA and/or ICSAB) is outside acceptance limits, high biased.

^3+	280-163493-1	Reporting Limit Check Standard is outside acceptance limits, high biased
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Duplicate Evaluation

Analyte	Units	MW-5A (304-061422-09)	MW-5A DUP (304-061422-11)	RPD (%)
Alkalinity, Total	mg/L	190	190	0.0
Ammonia	mg/L	0.15	0.18	18.2
Arsenic, Total	mg/L	0.006	0.0064	6.5
Barium, Total	mg/L	0.016	0.014	13.3
Calcium, Dissolved	mg/L	27	26	3.8
Chloride	mg/L	3.1	3.1	0.0
Iron, Dissolved	mg/L	0.11	0.11	0.0
Magnesium, Dissolved	mg/L	11	11	0.0
Manganese, Dissolved	mg/L	0.17	0.17	0.0
Potassium, Dissolved	mg/L	5.1	4.9	4.0
Sodium, Dissolved	mg/L	45	44	2.2
Sulfate	mg/L	15	15	0.0
Total Dissolved Solids	mg/L	240	240	0.0
Total Organic Carbon	mg/L	1.2	1.1	8.7

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

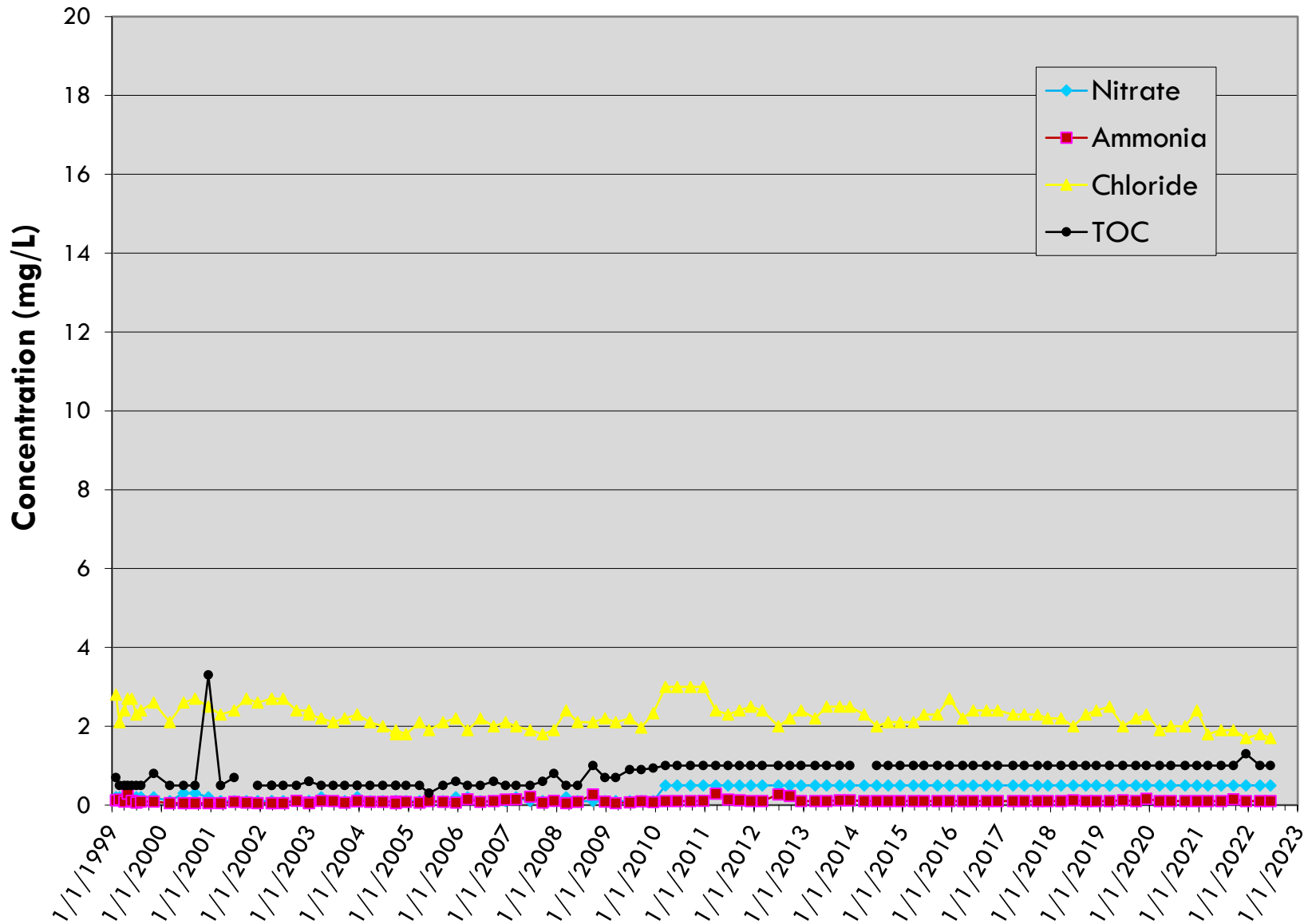
Lab qualifiers are noted. All data, as qualified, are acceptable for use.

Attachment G

Groundwater and LDCS Time Trend Plots

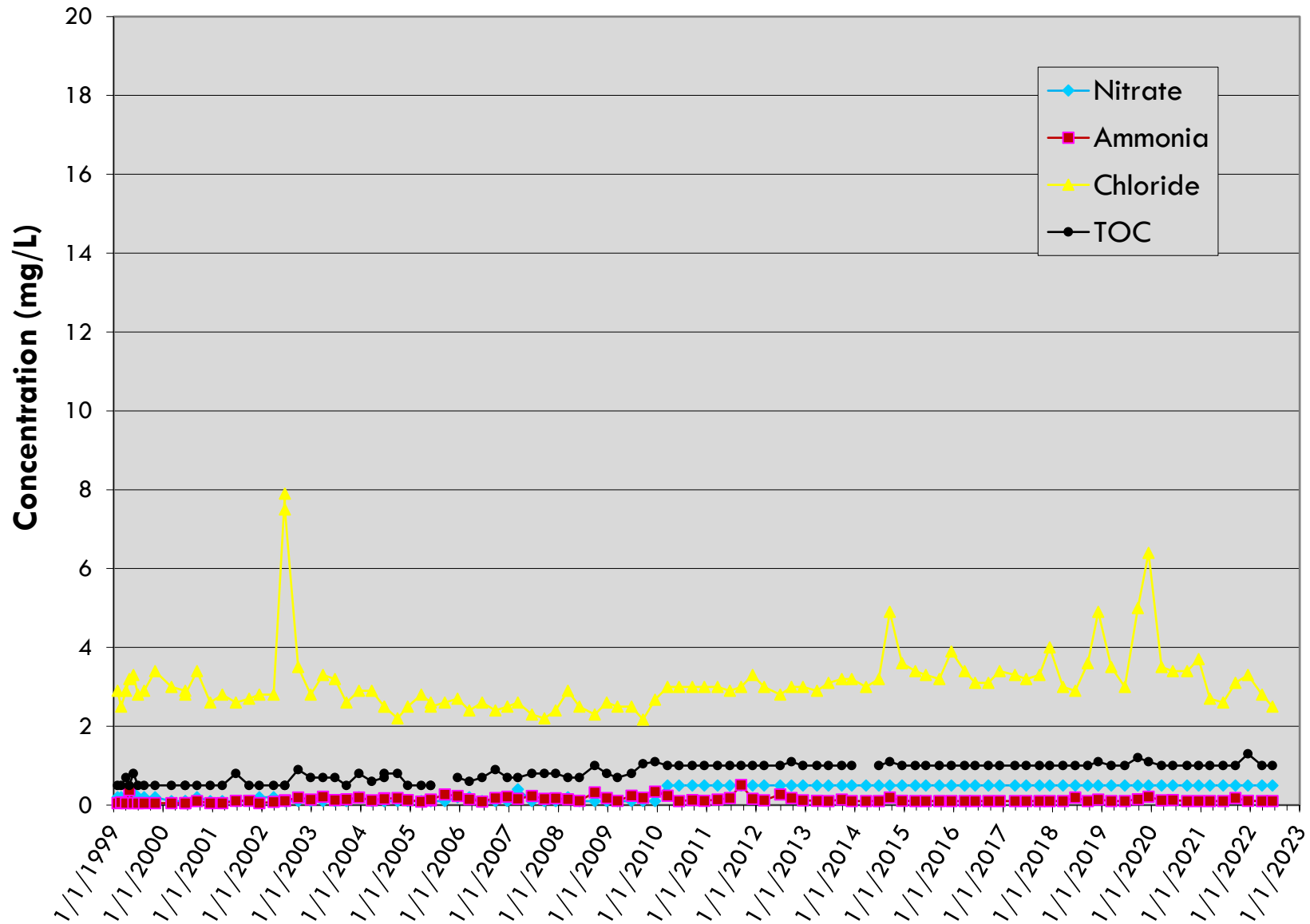
MW-1A

LRI Landfill, Pierce County, Washington



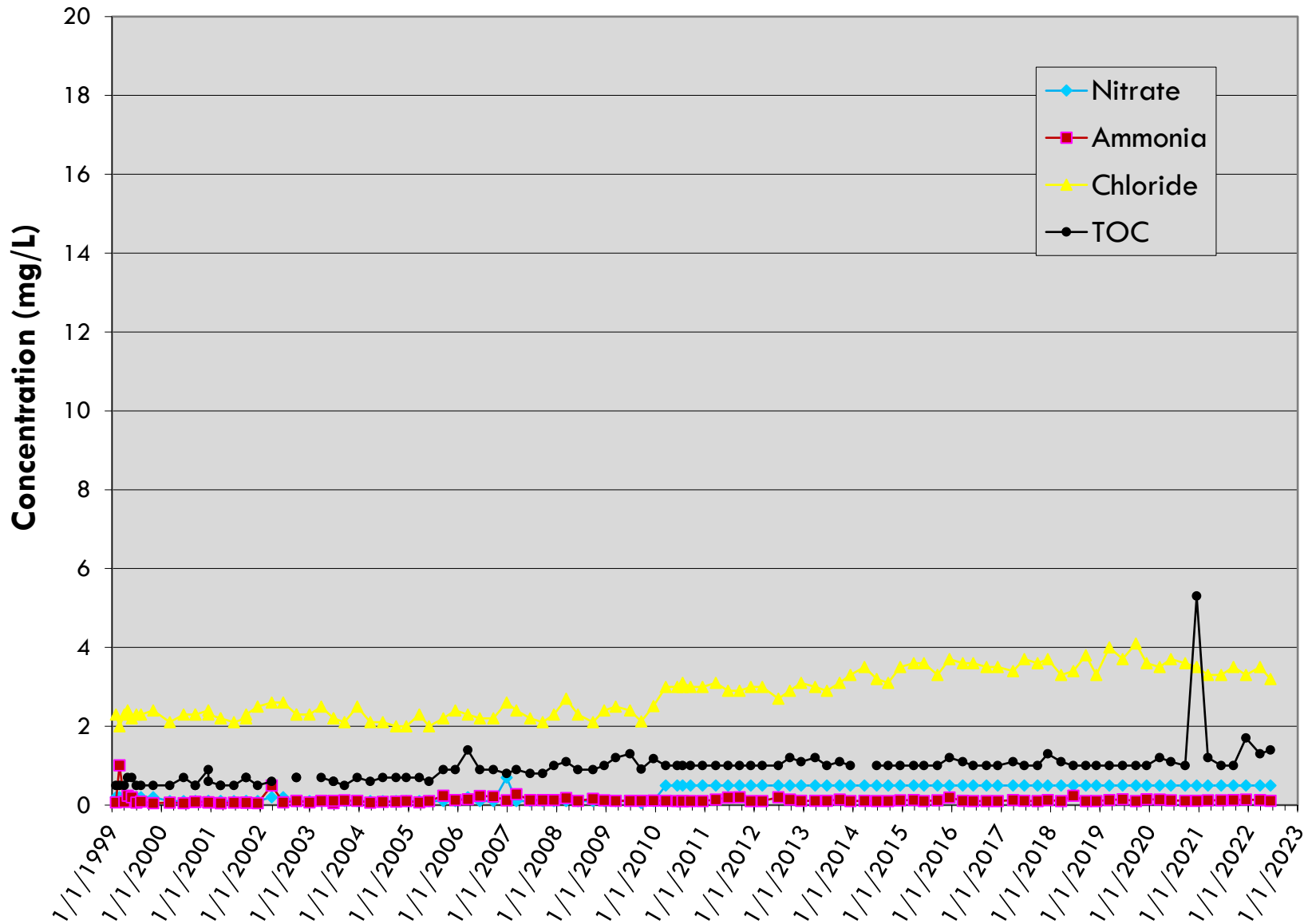
MW-2A

LRI Landfill, Pierce County, Washington



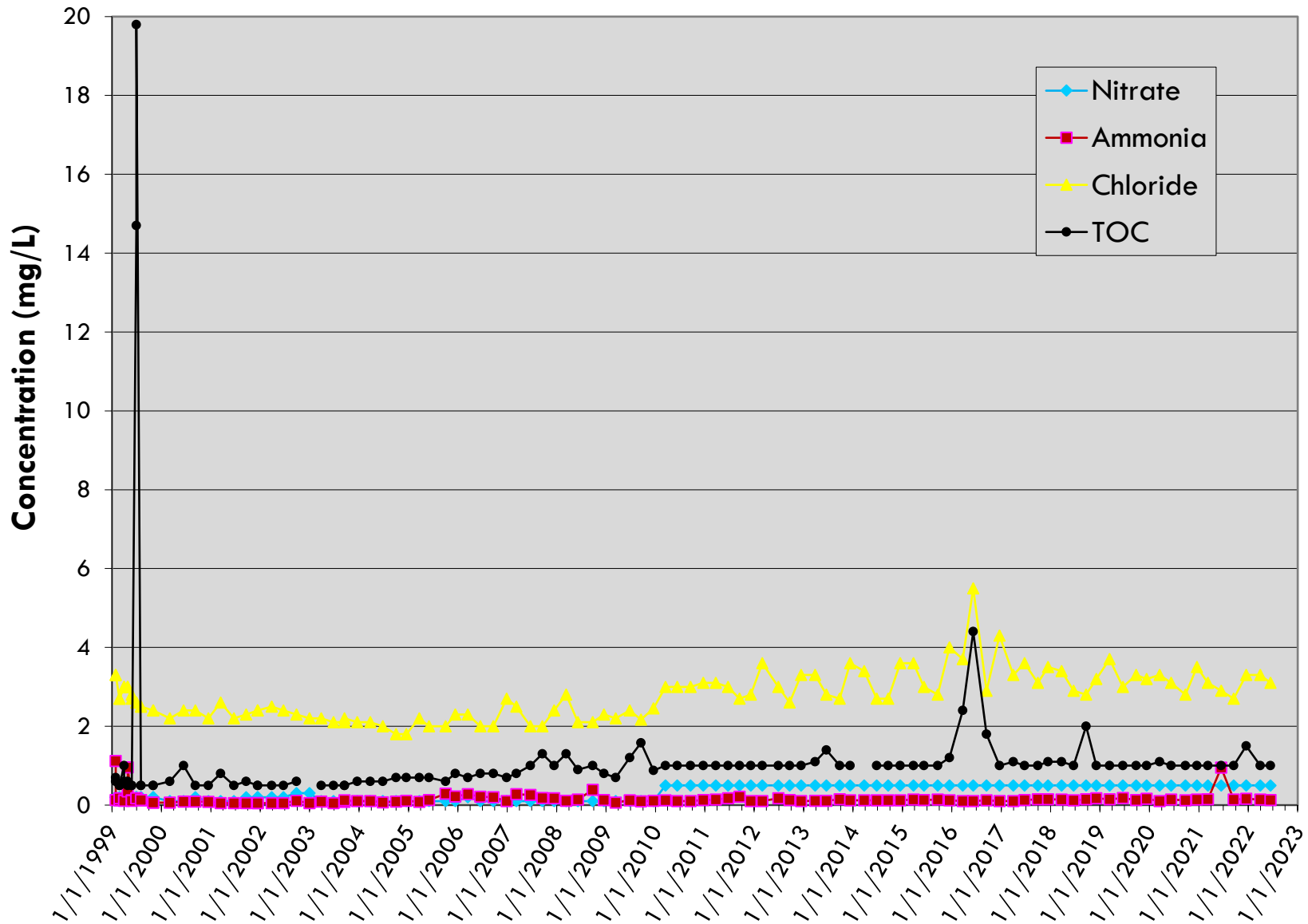
MW-3

LRI Landfill, Pierce County, Washington



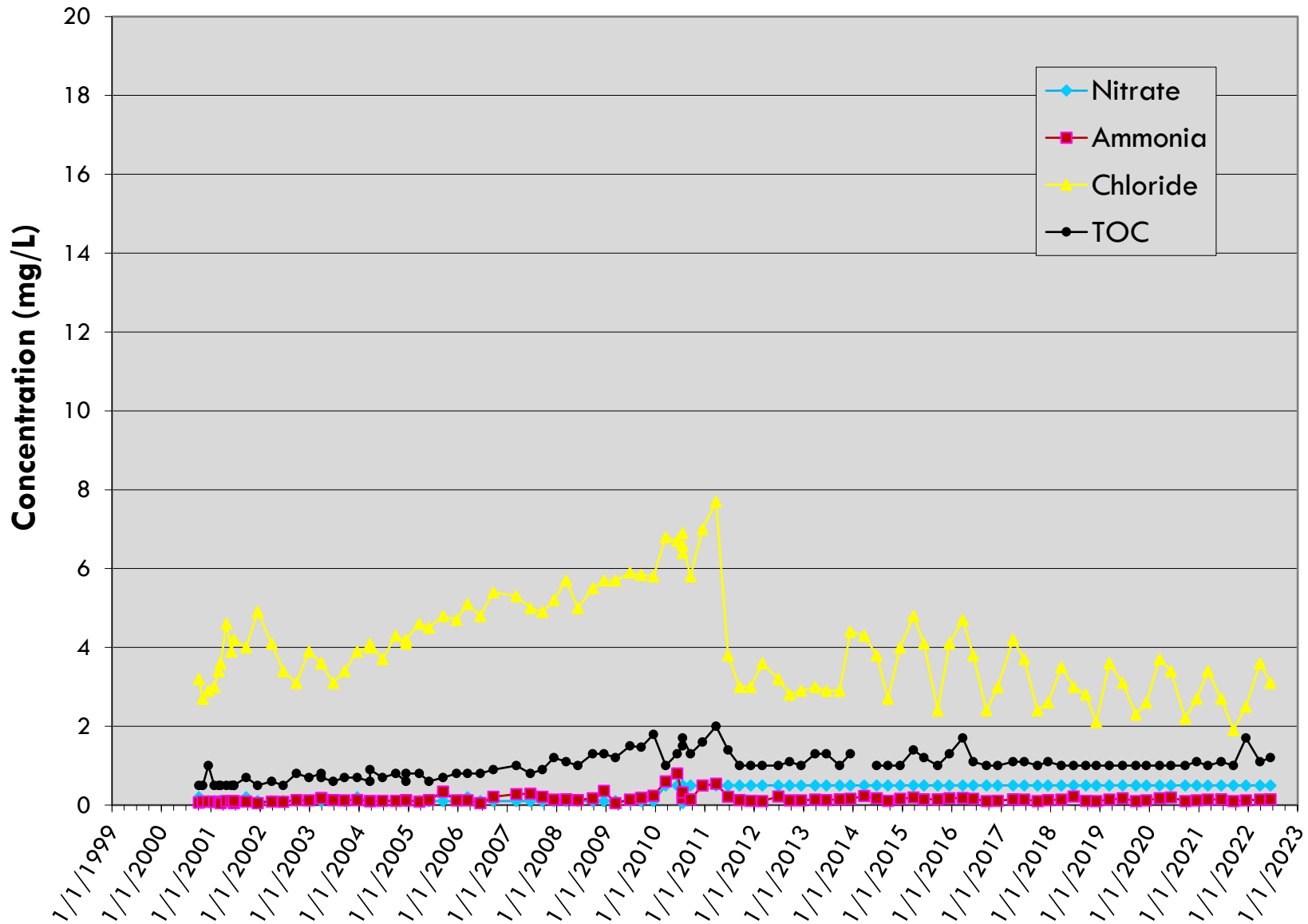
MW-4

LRI Landfill, Pierce County, Washington



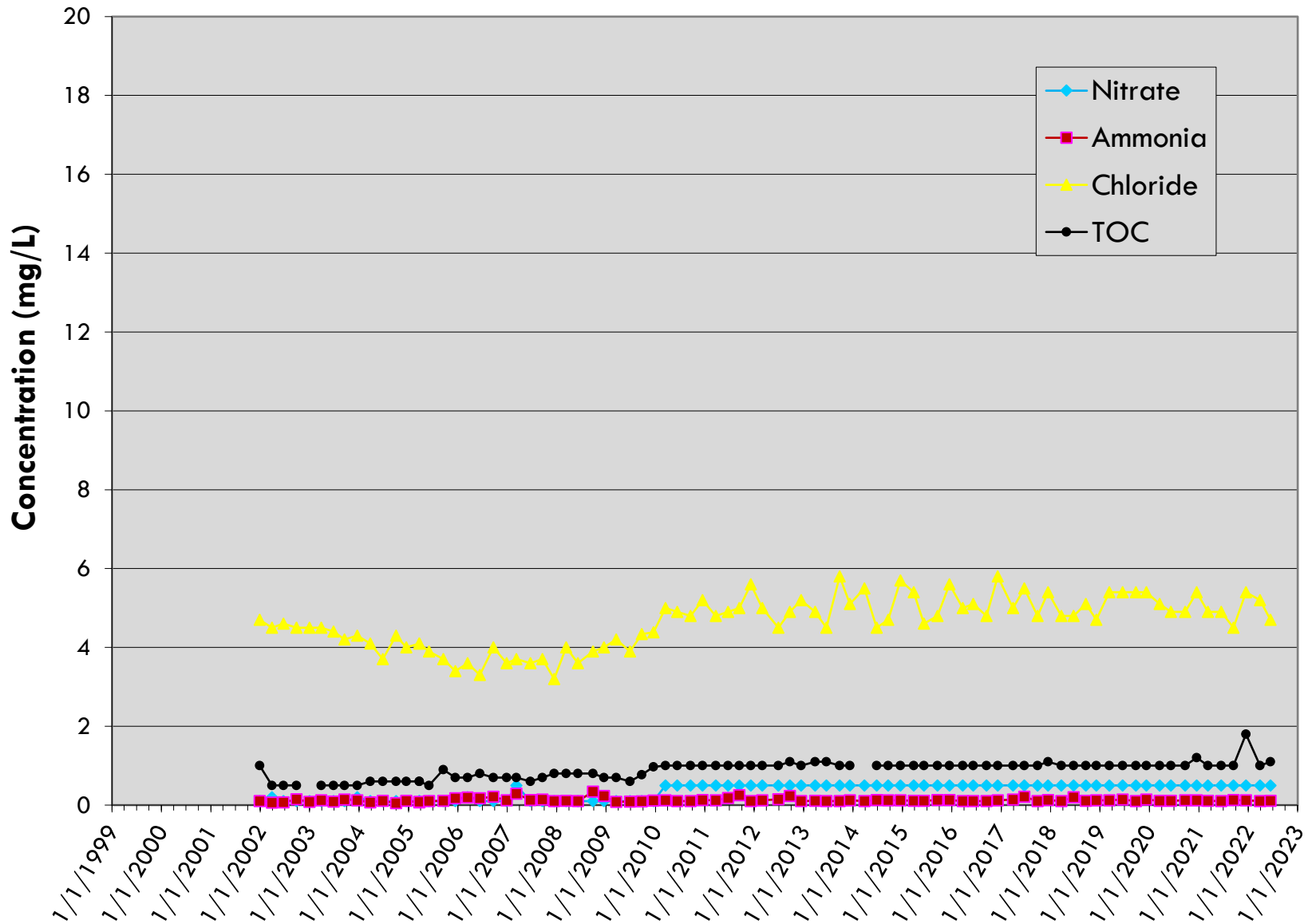
MW-5A

LRI Landfill, Pierce County, Washington



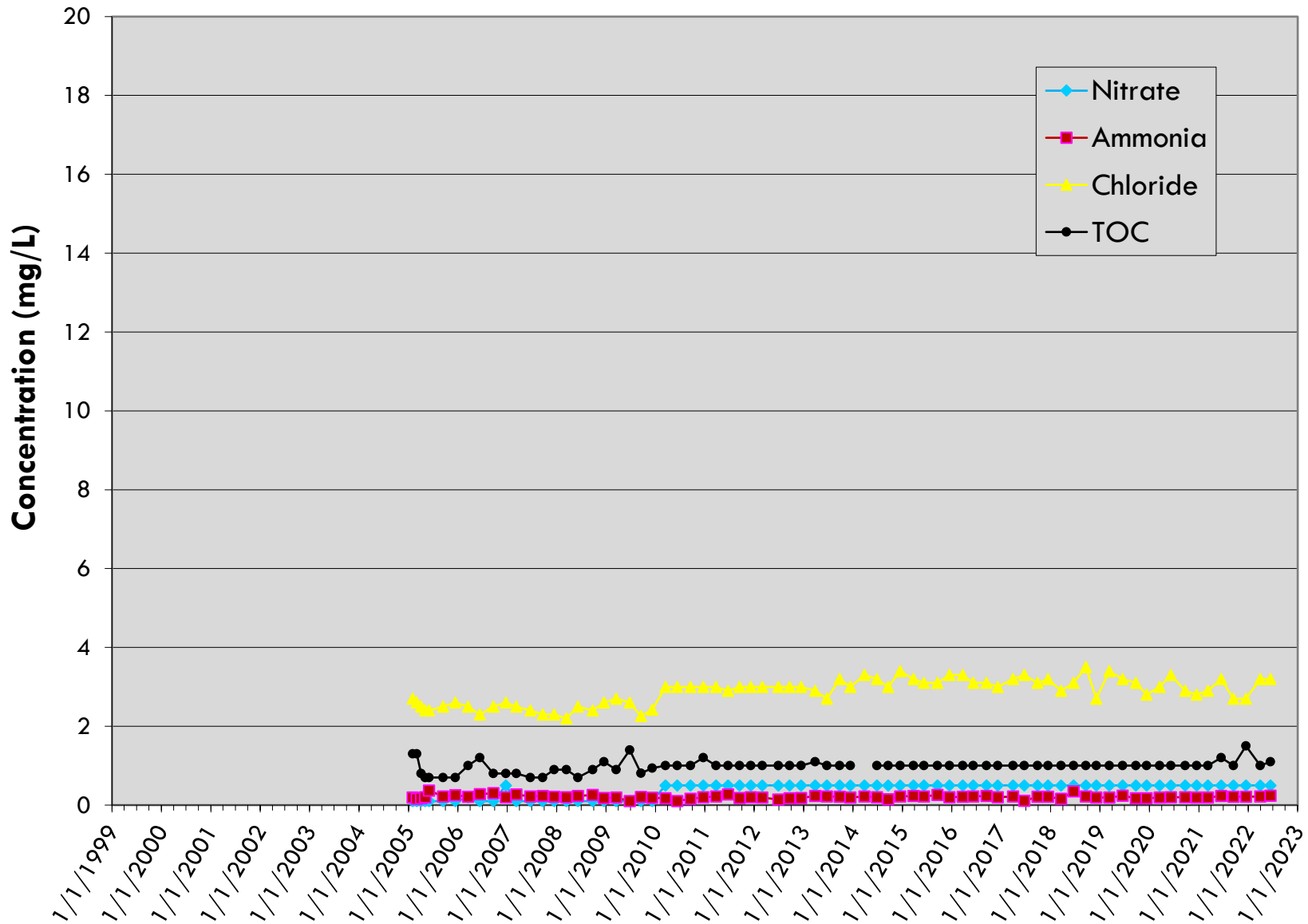
MW-6

LRI Landfill, Pierce County, Washington

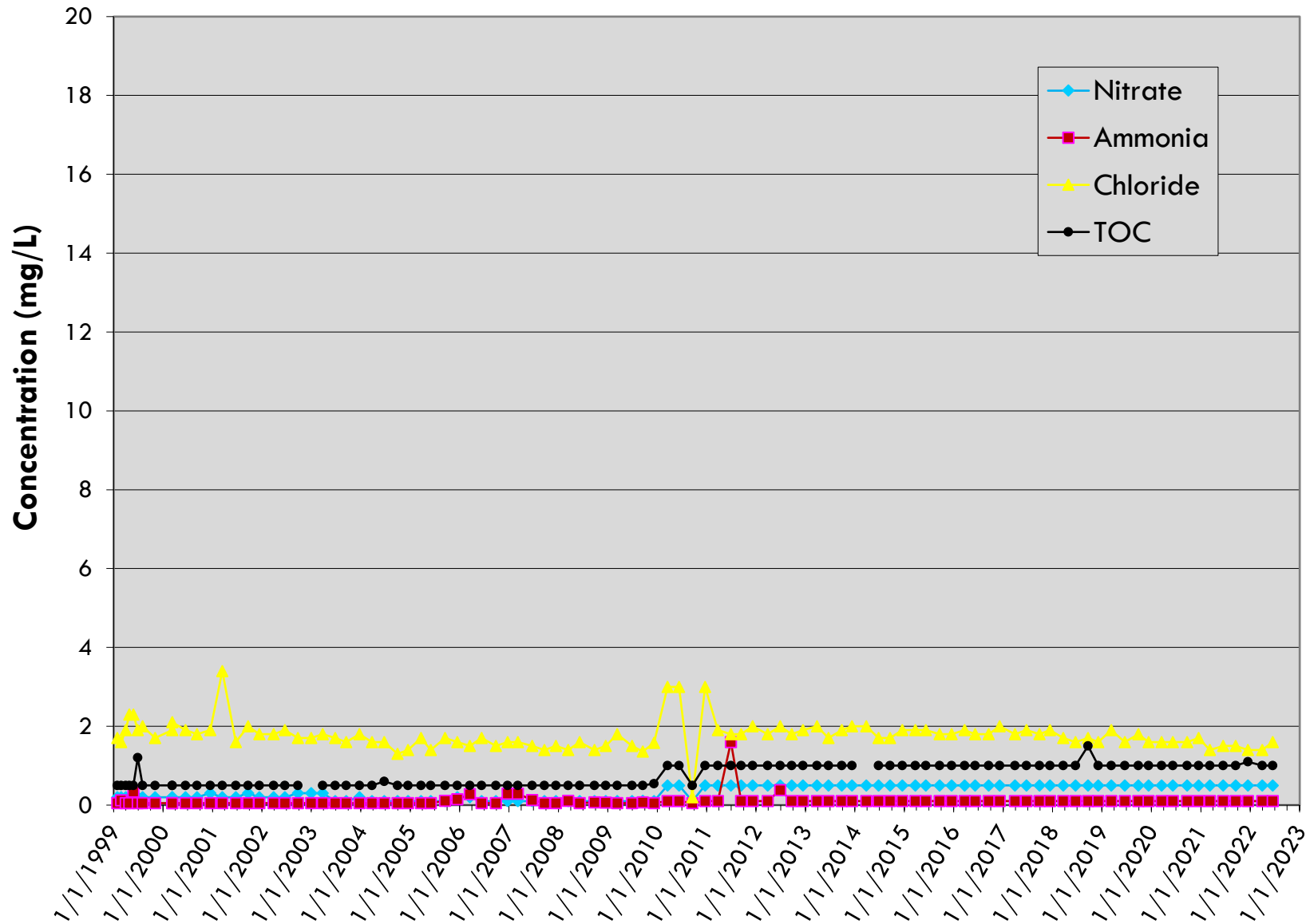


MW-7

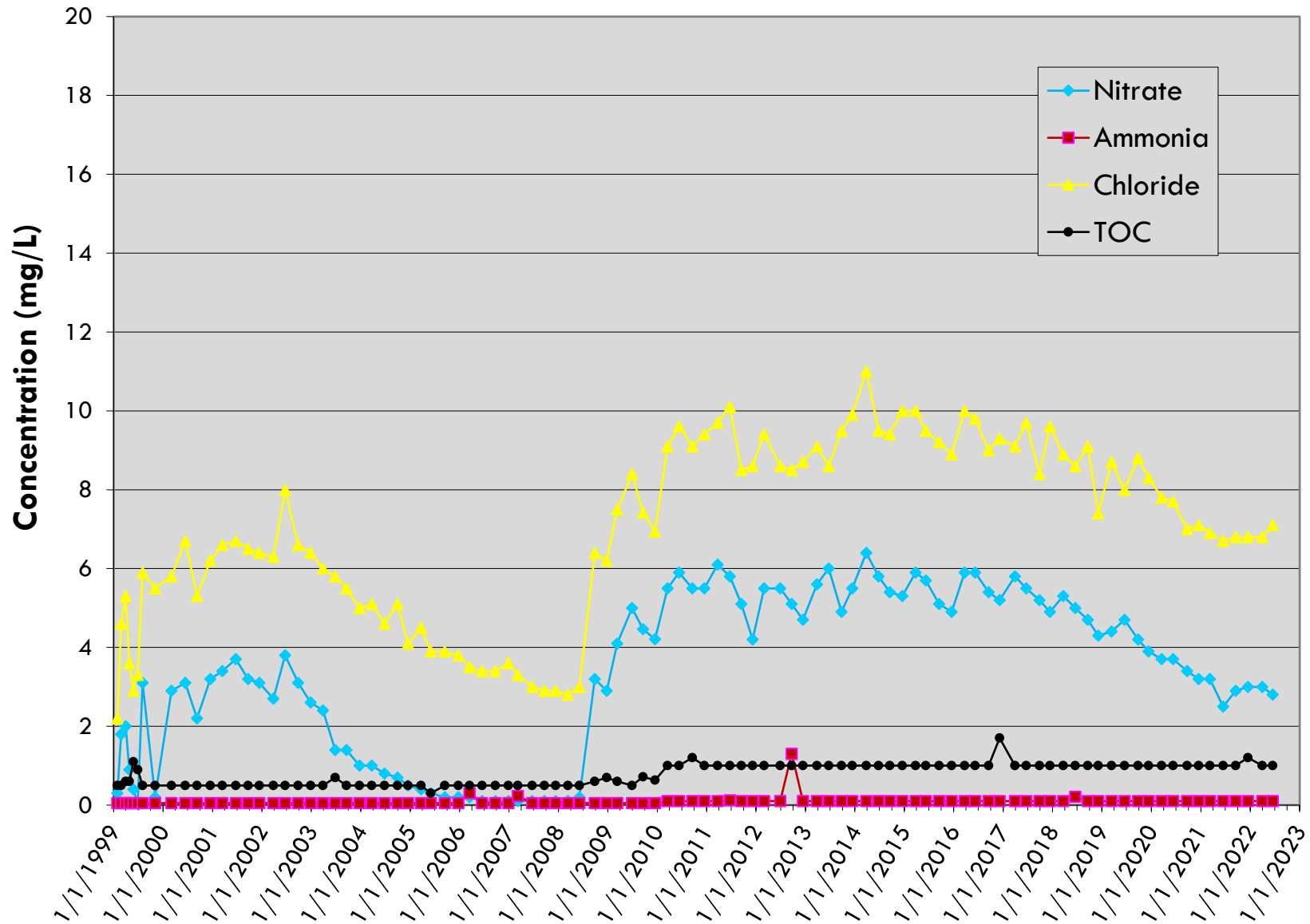
LRI Landfill, Pierce County, Washington



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

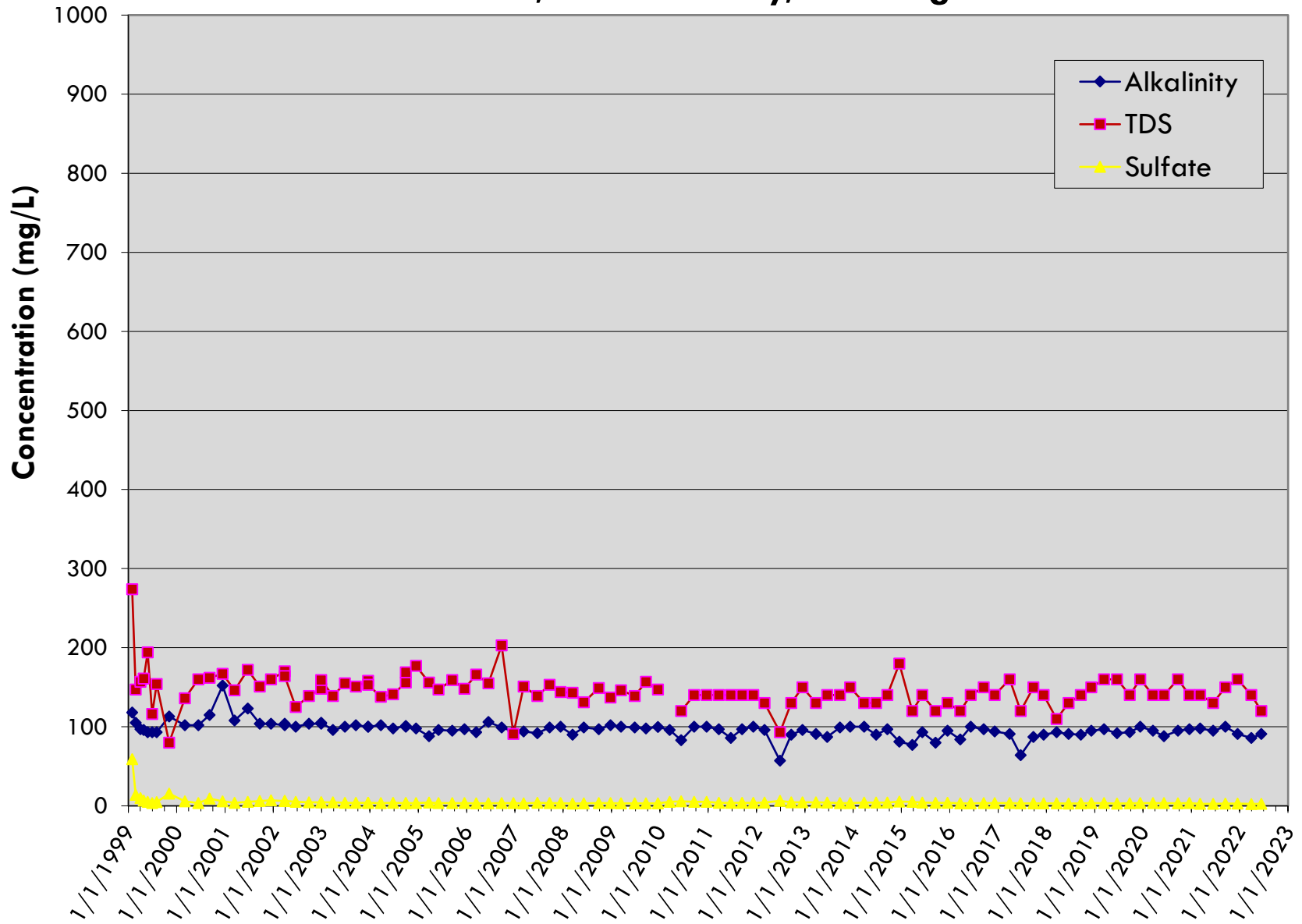


MW-10 (Background) LRI Landfill, Pierce County, Washington

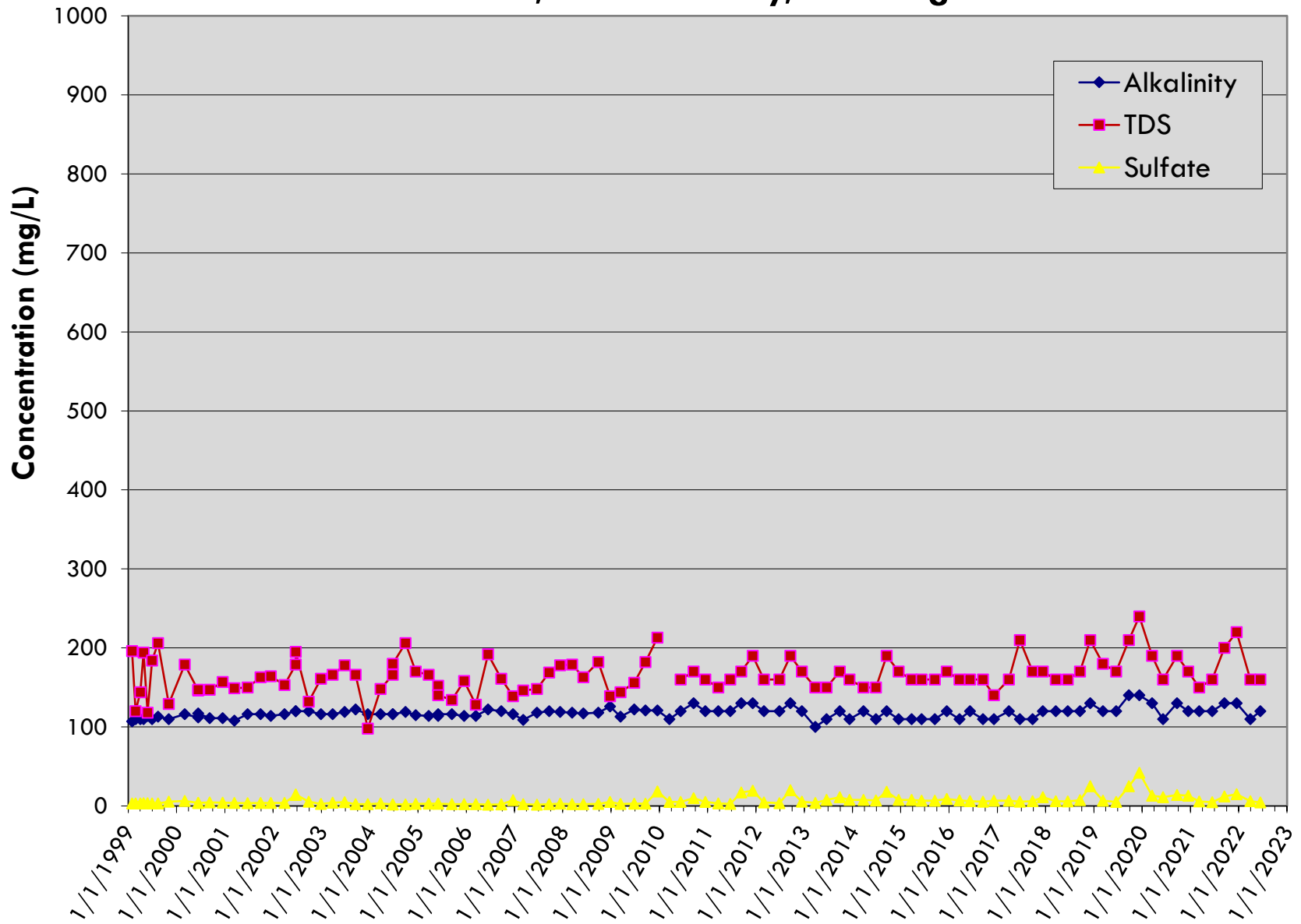


MW-1A

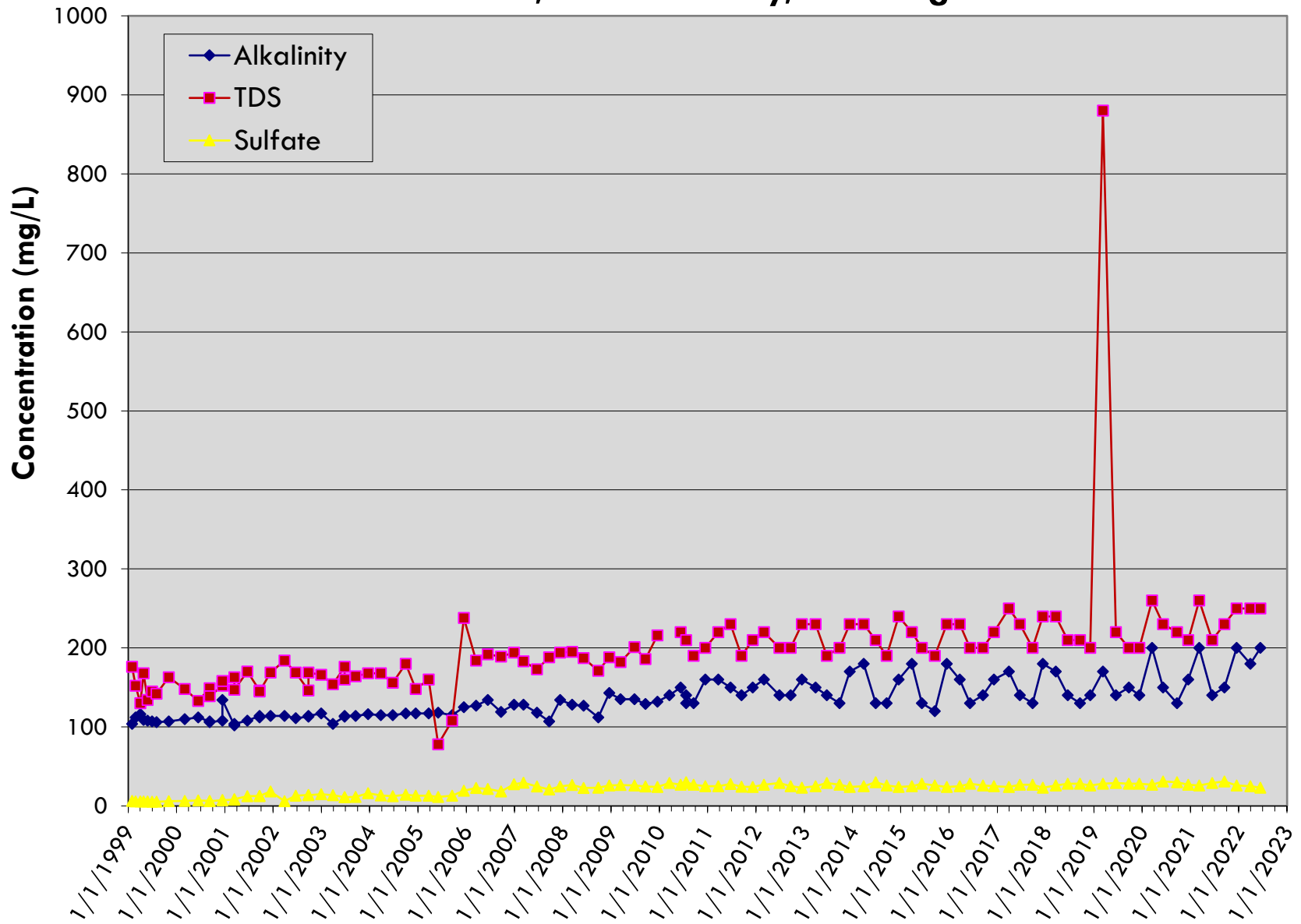
LRI Landfill, Pierce County, Washington



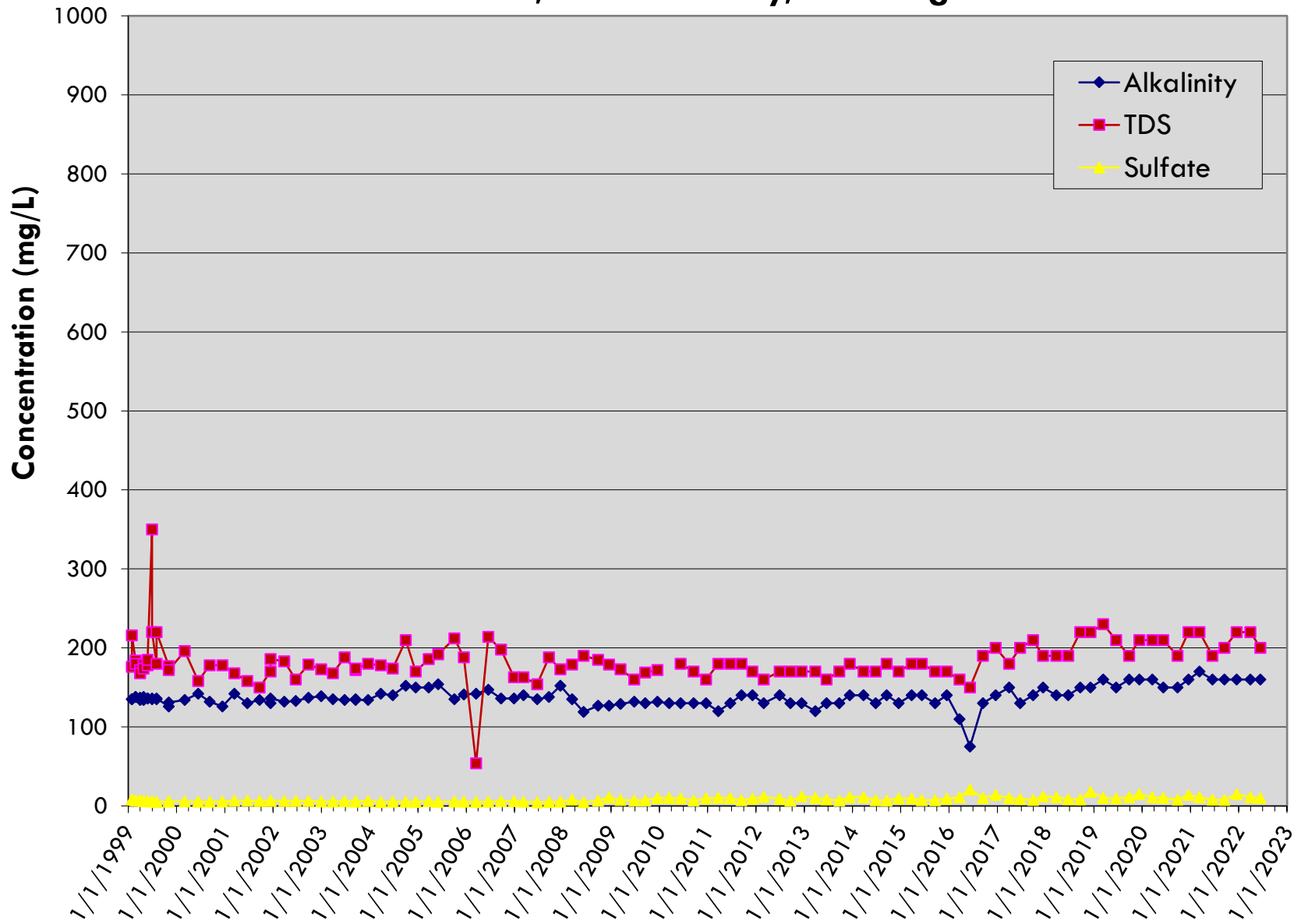
MW-2A
LRI Landfill, Pierce County, Washington



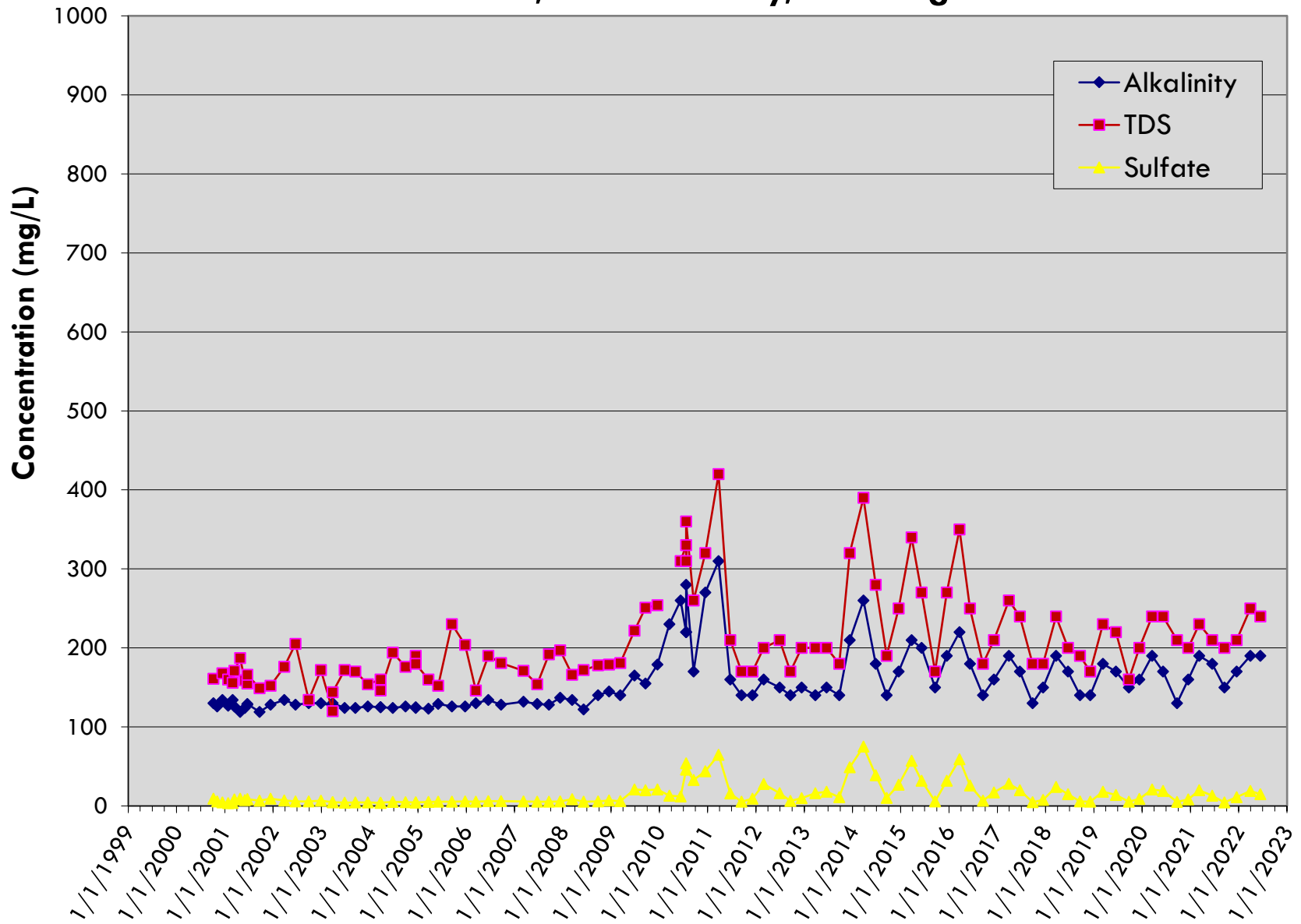
MW-3
LRI Landfill, Pierce County, Washington



MW-4
LRI Landfill, Pierce County, Washington

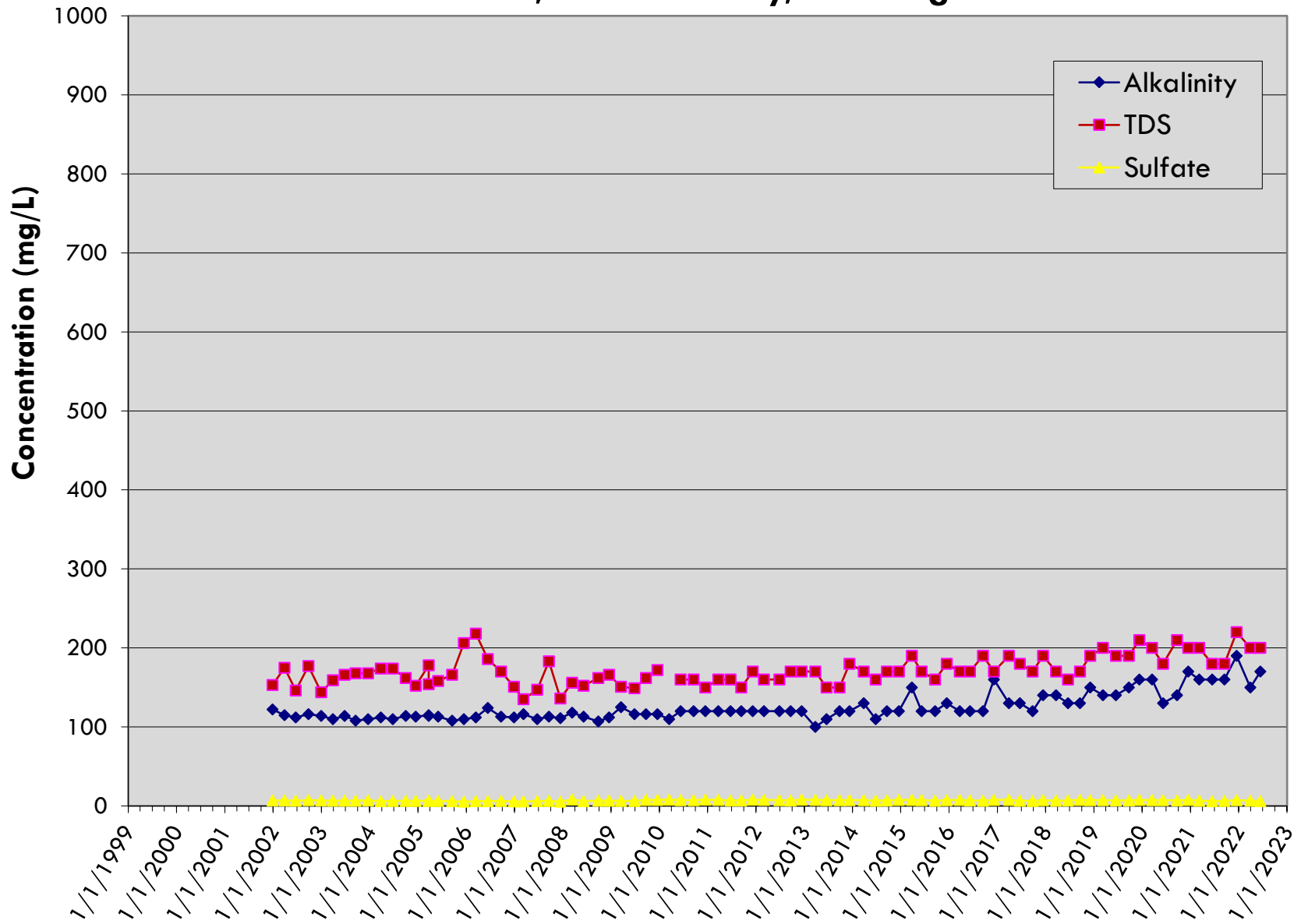


MW-5A
LRI Landfill, Pierce County, Washington

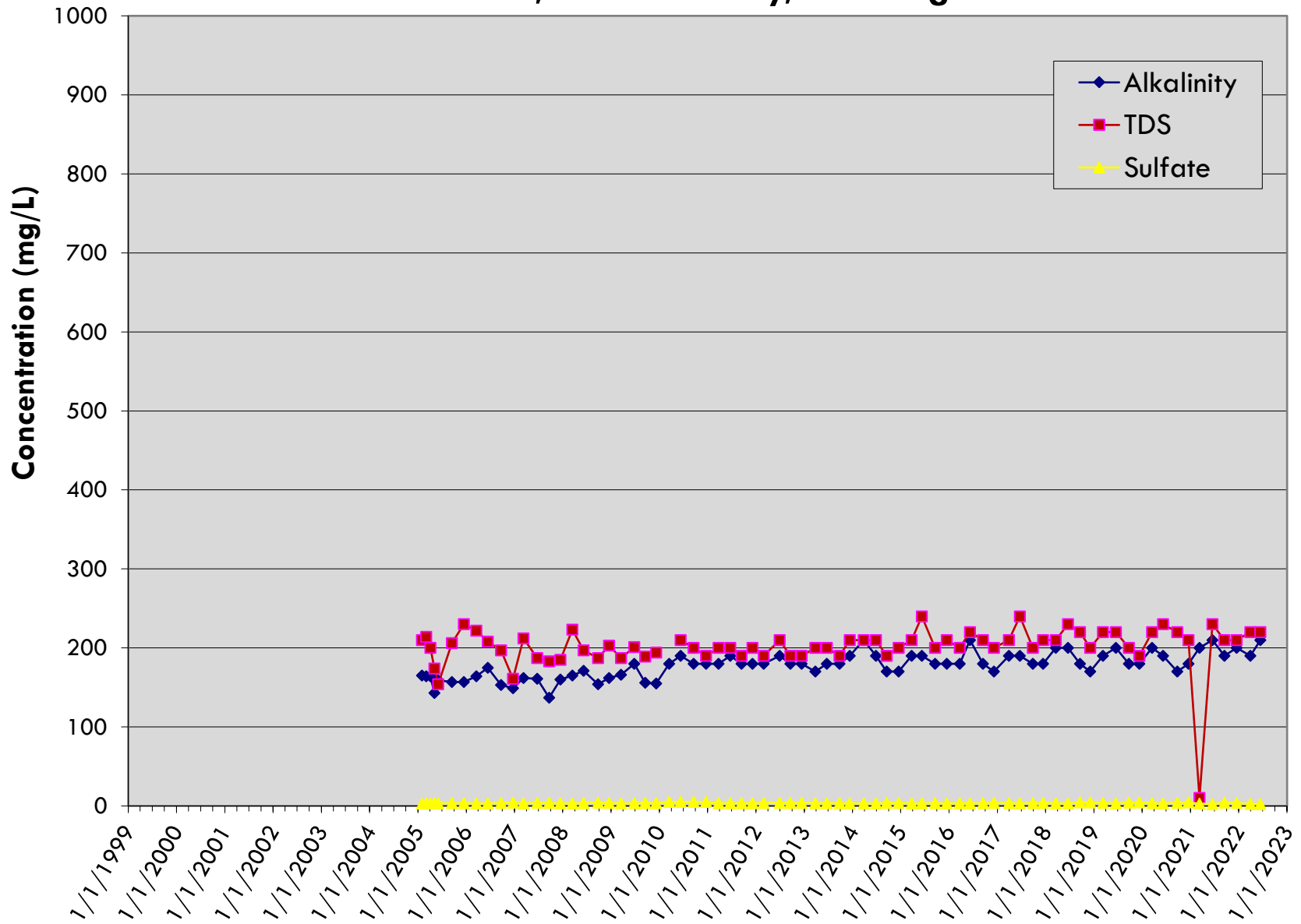


MW-6

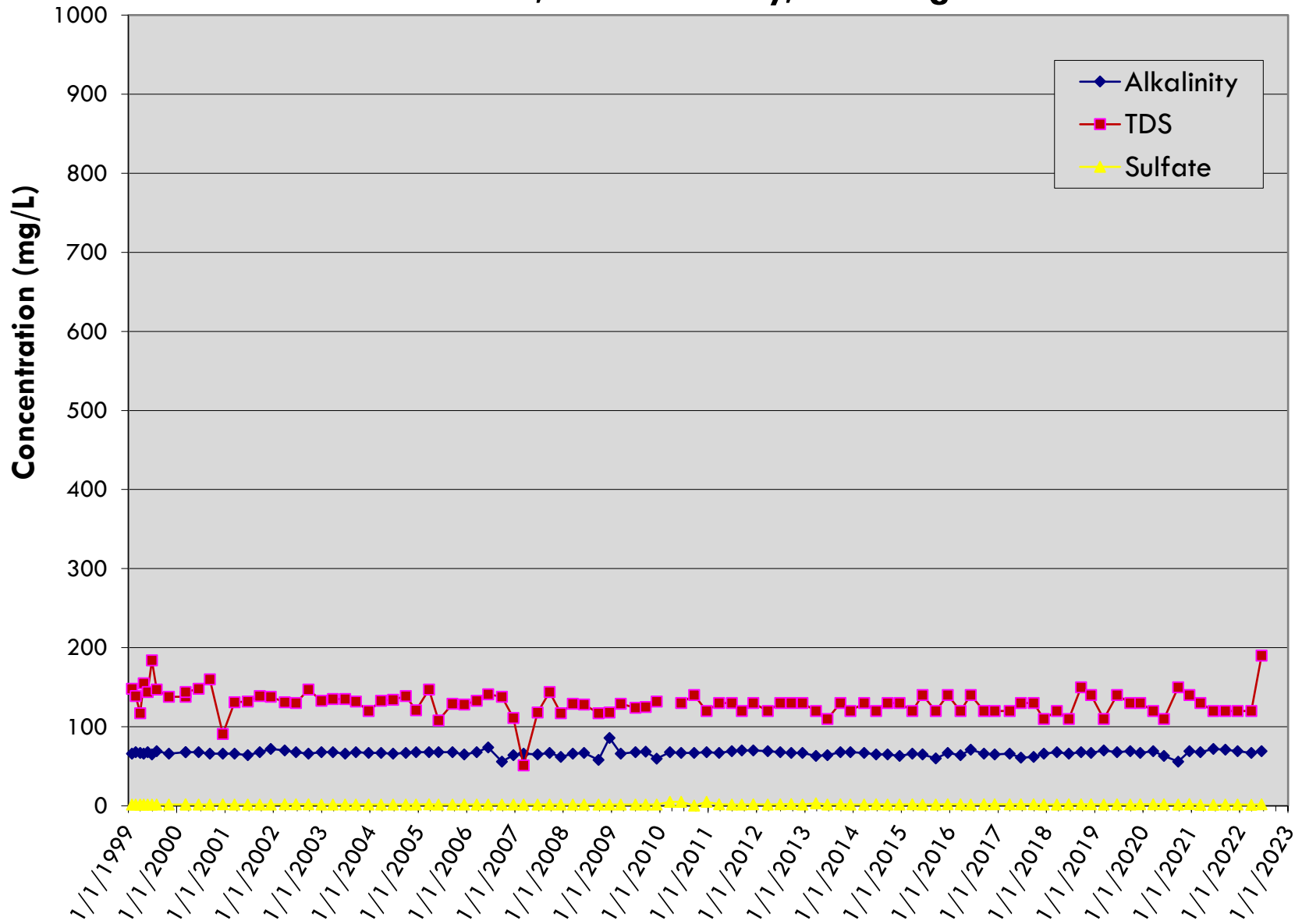
LRI Landfill, Pierce County, Washington



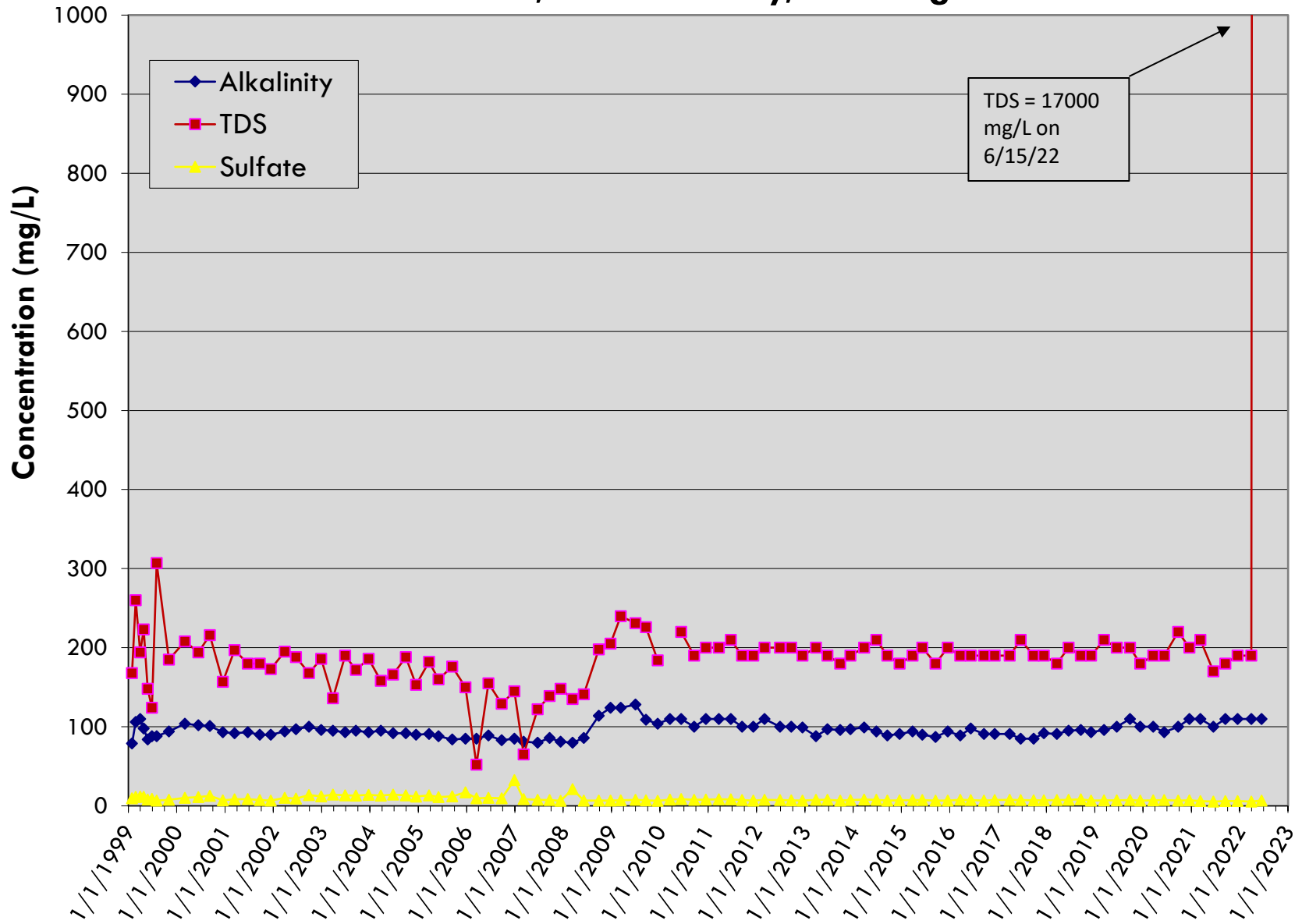
MW-7
LRI Landfill, Pierce County, Washington



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

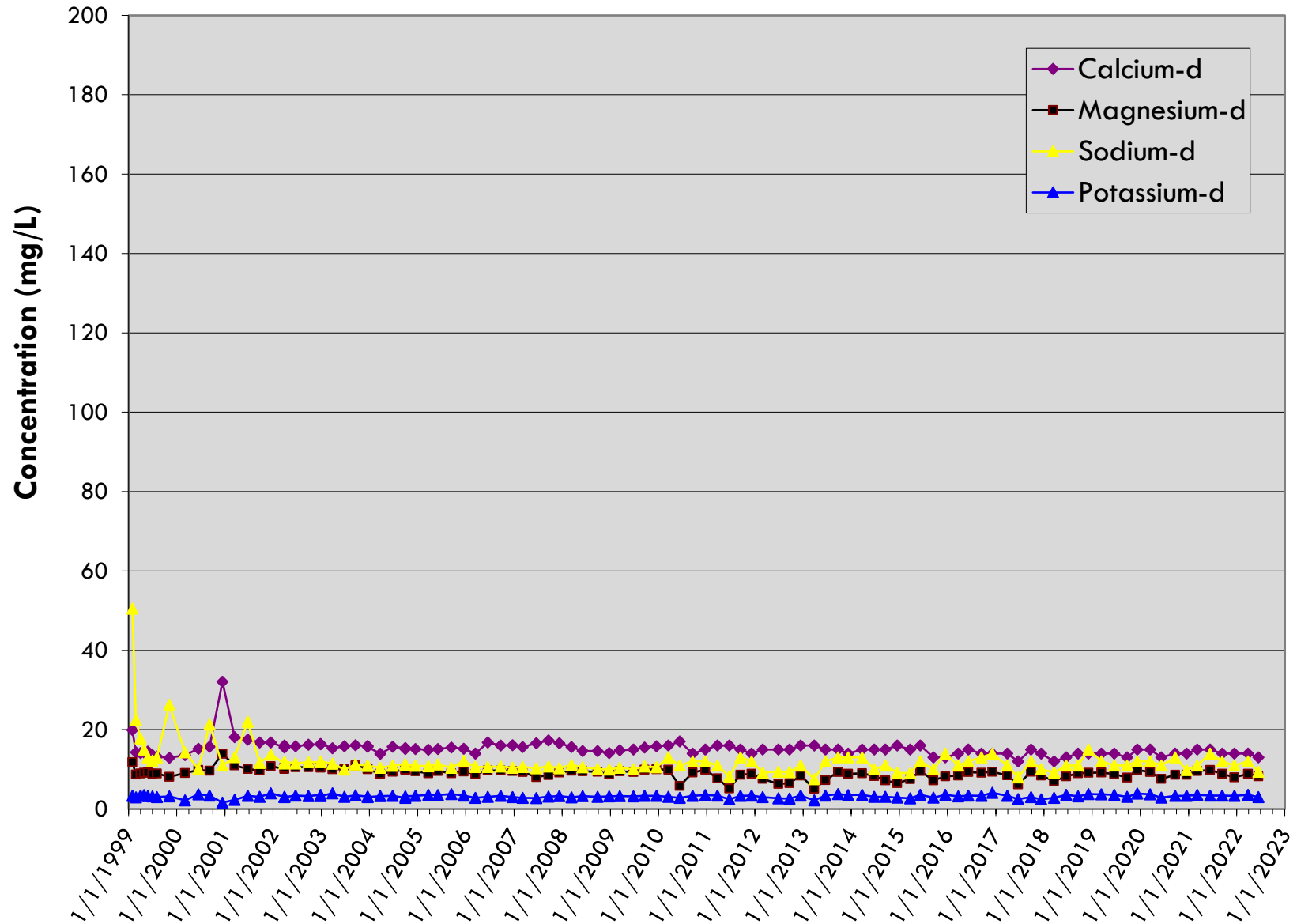


MW-10 (Background) LRI Landfill, Pierce County, Washington



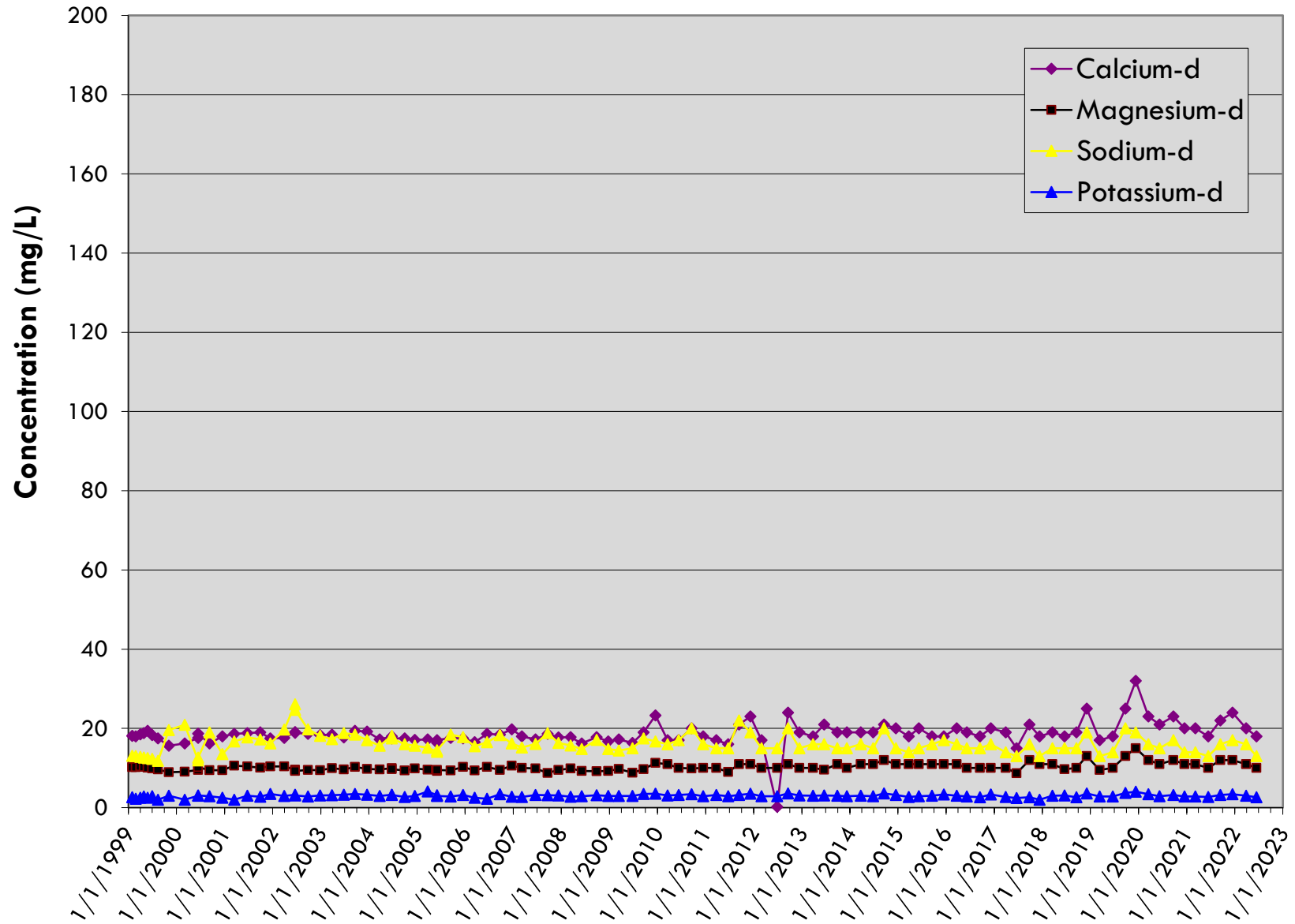
MW-1A

LRI Landfill, Pierce County, Washington

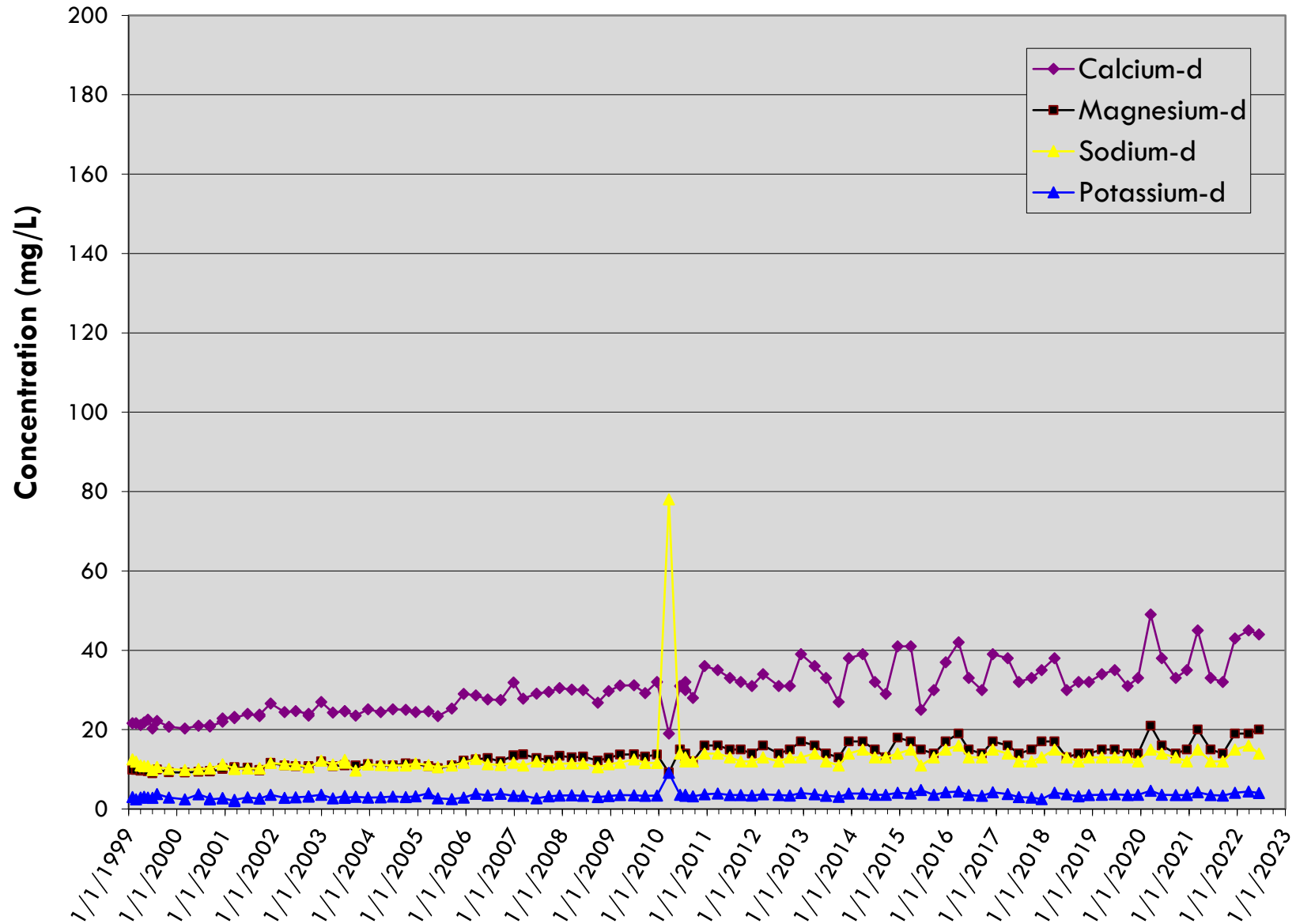


MW-2A

LRI Landfill, Pierce County, Washington

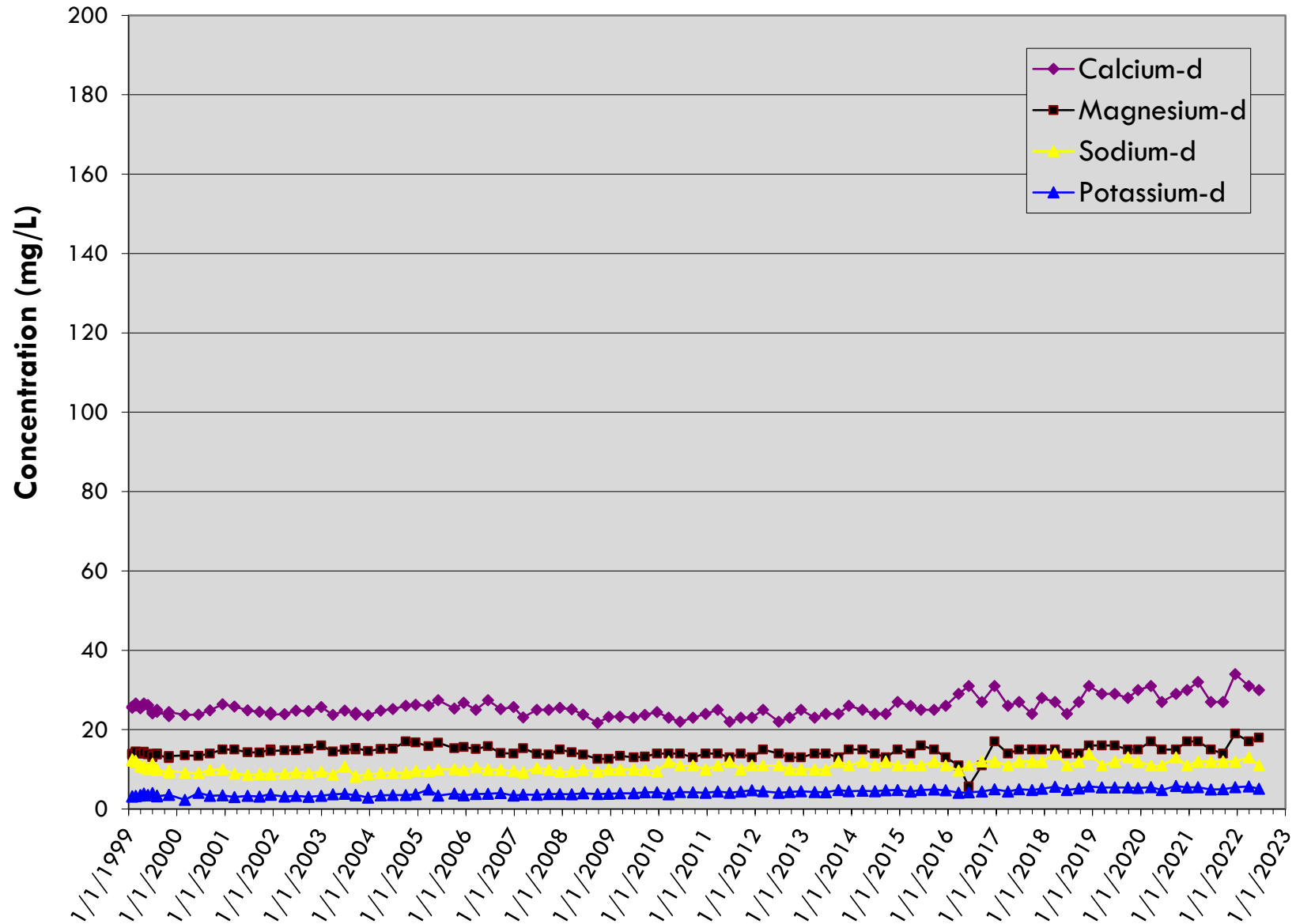


MW-3
LRI Landfill, Pierce County, Washington



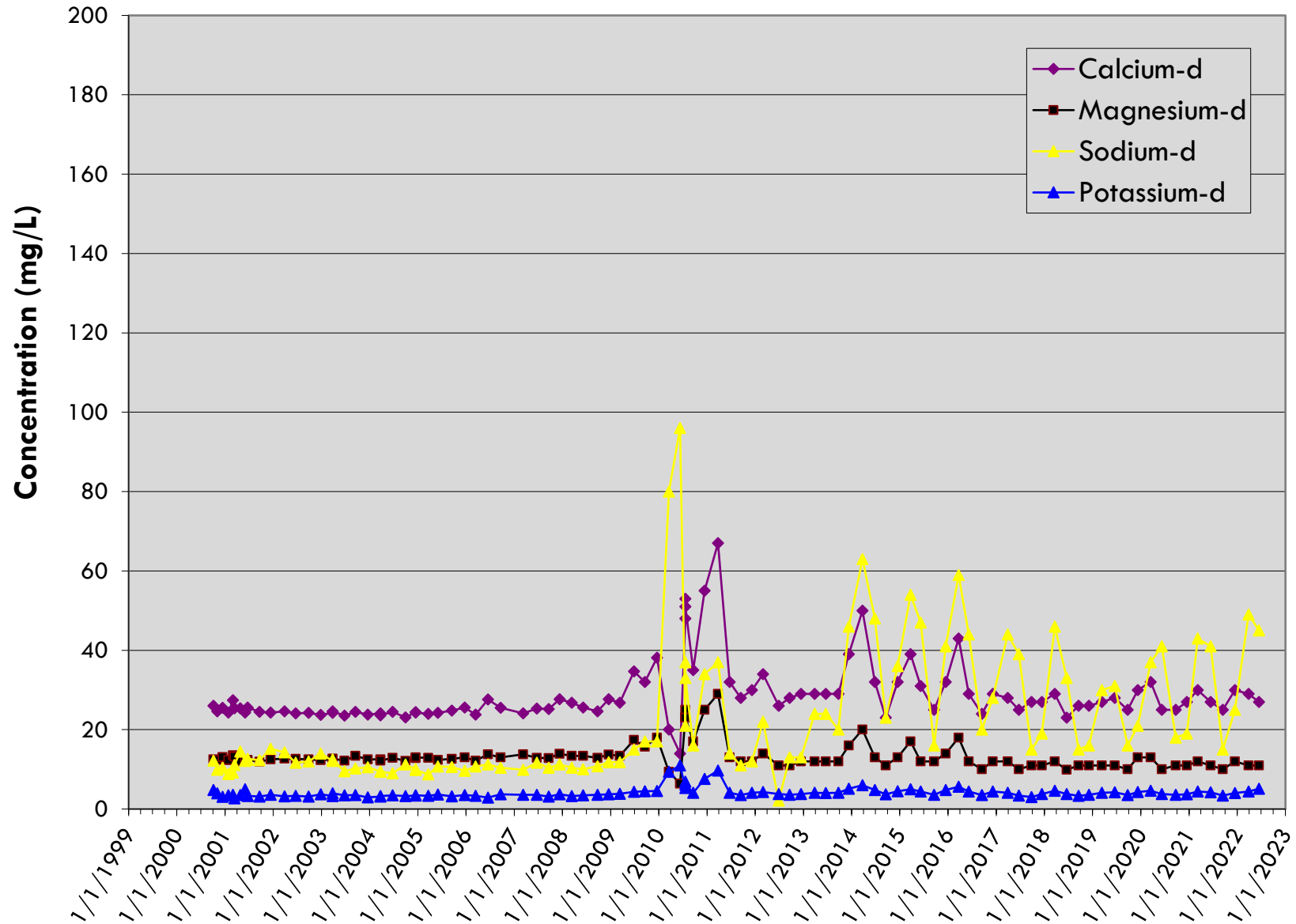
MW-4

LRI Landfill, Pierce County, Washington



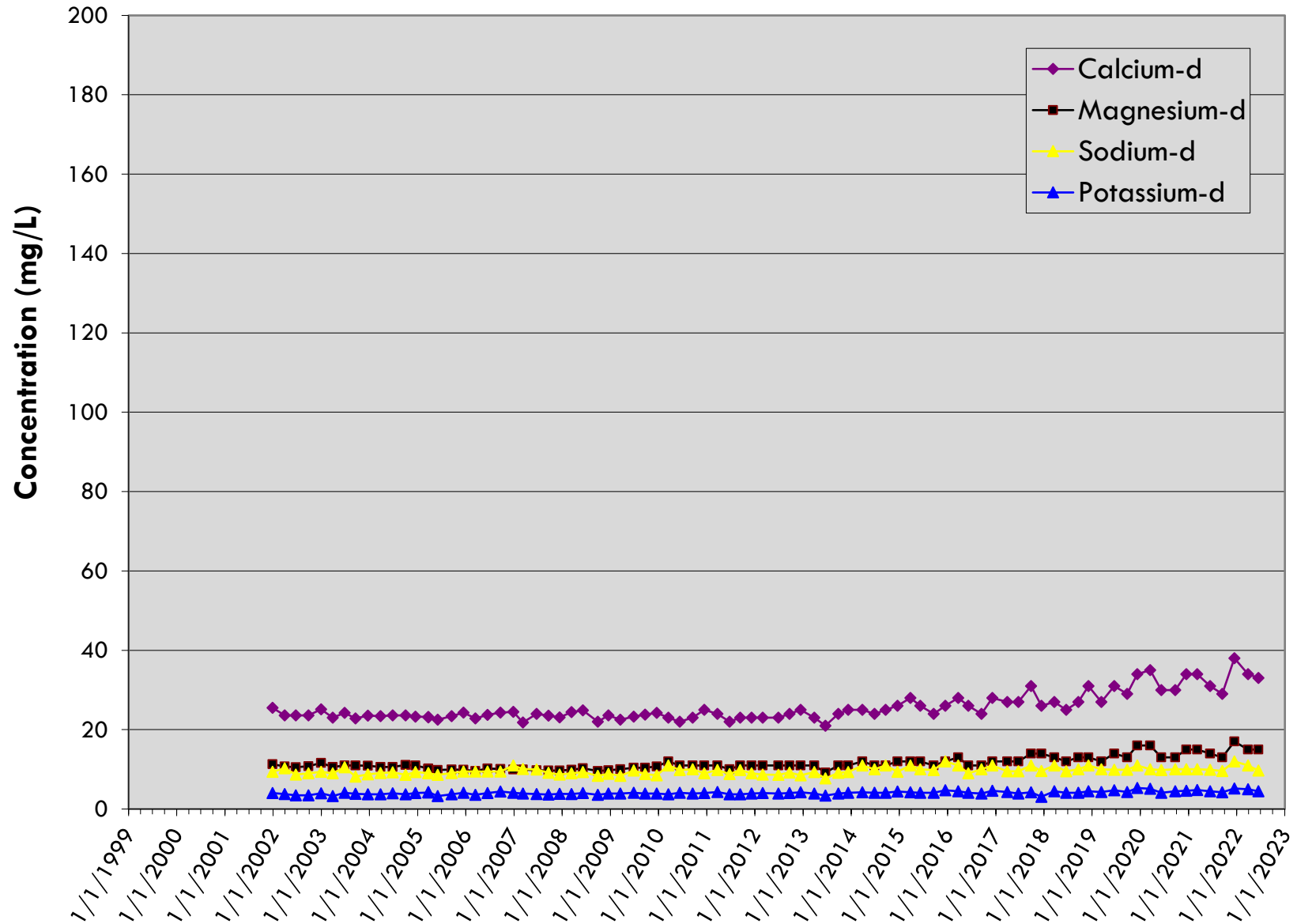
MW-5A

LRI Landfill, Pierce County, Washington

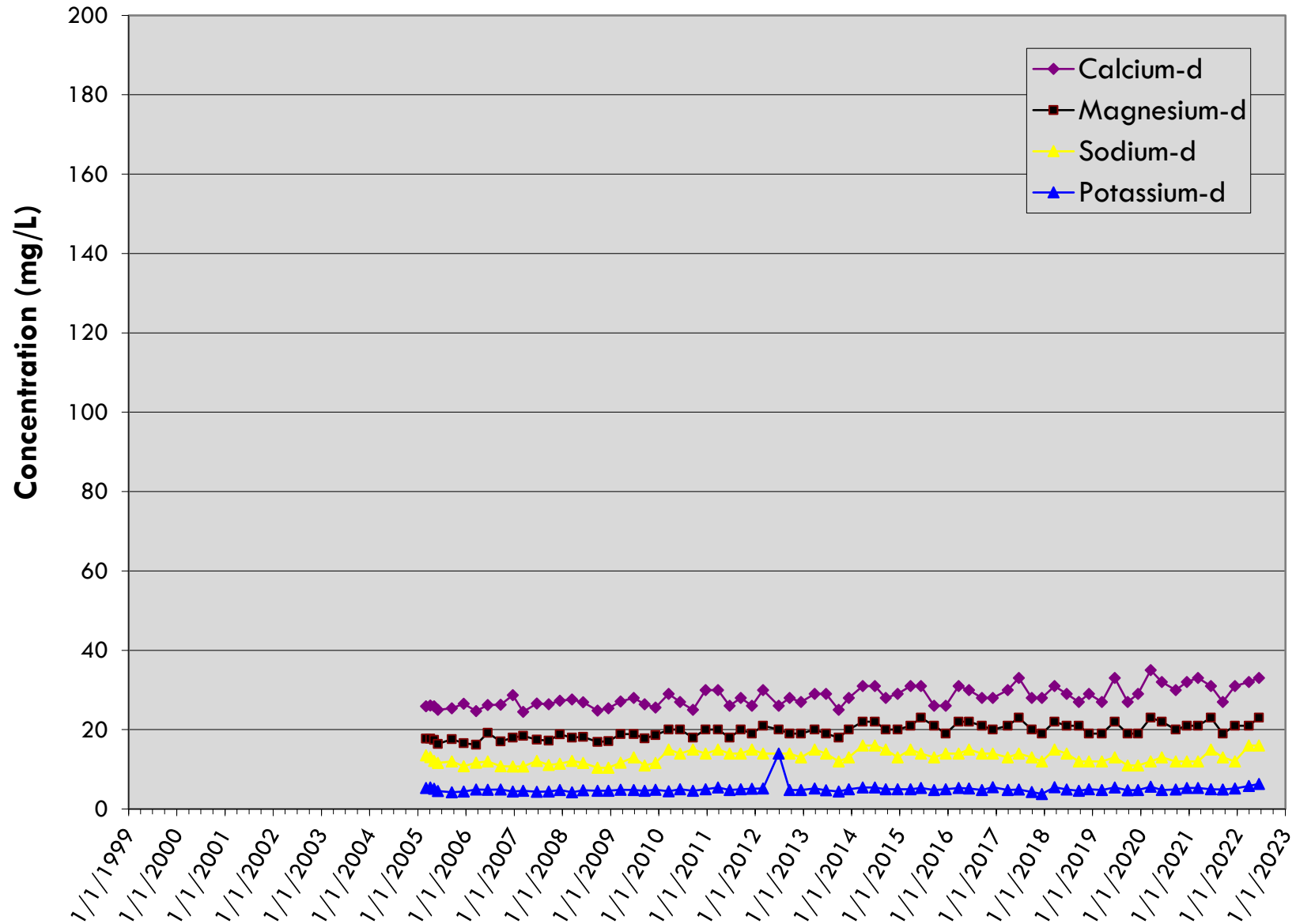


MW-6

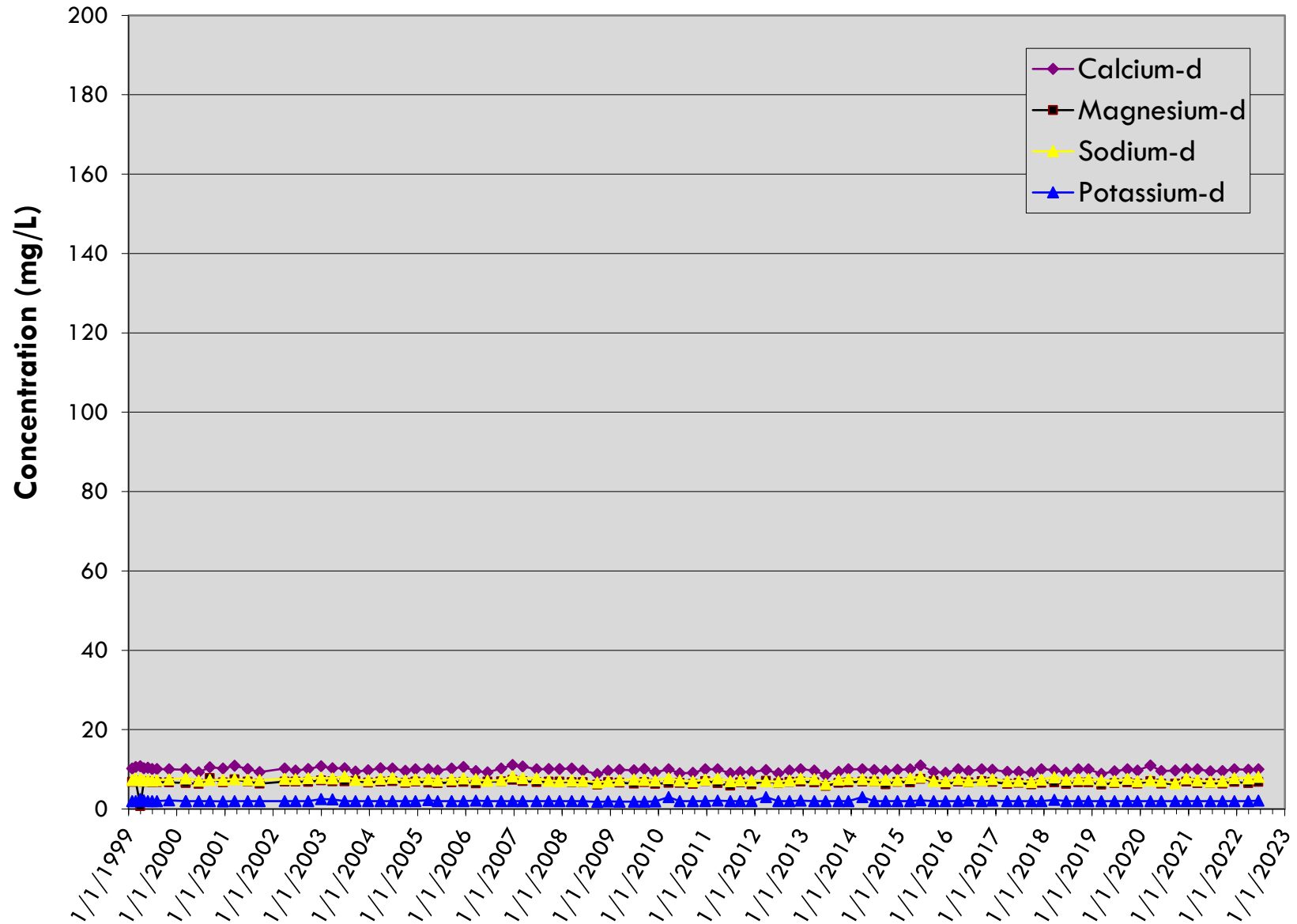
LRI Landfill, Pierce County, Washington



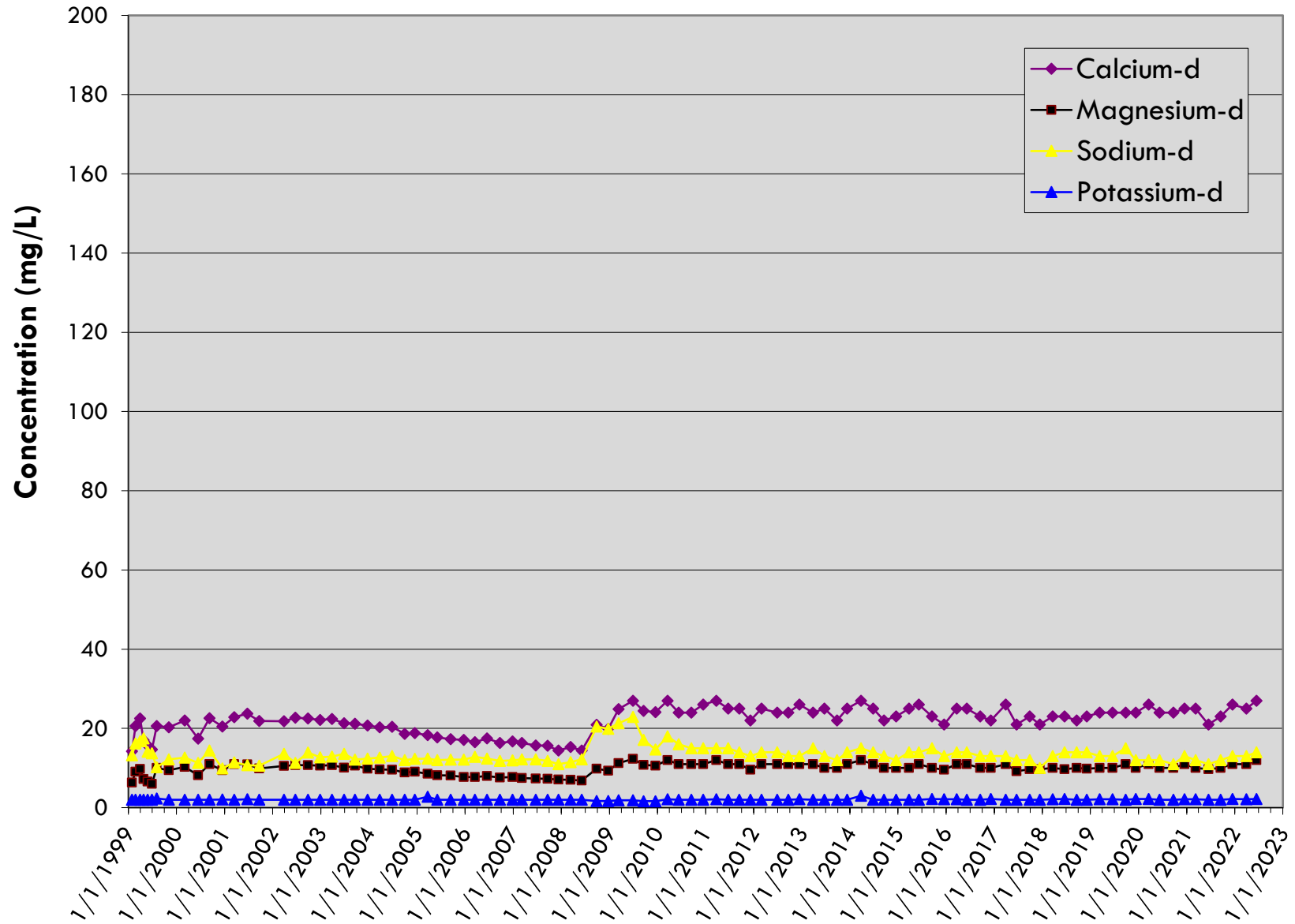
MW-7
LRI Landfill, Pierce County, Washington



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

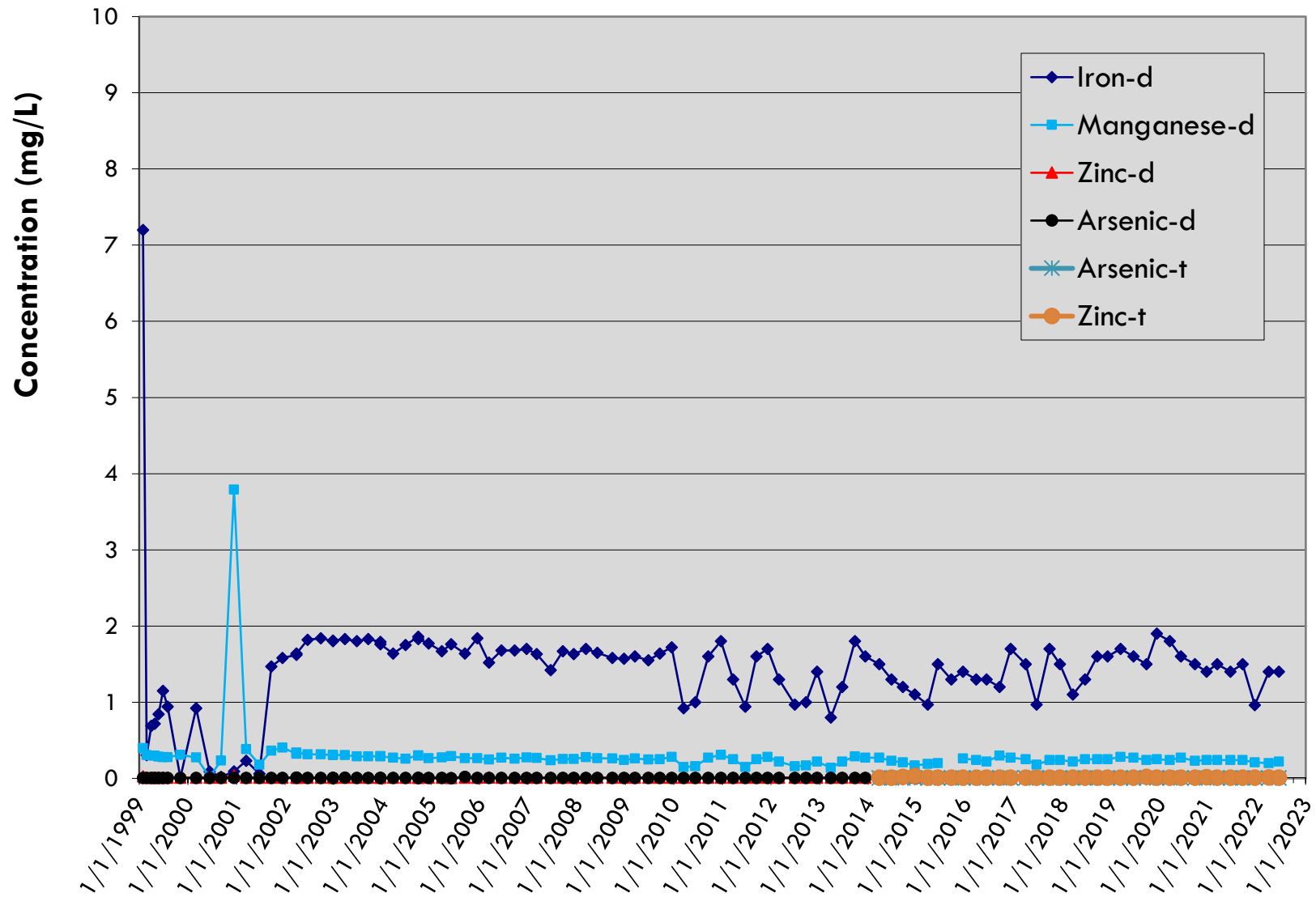


MW-10 (Background) LRI Landfill, Pierce County, Washington



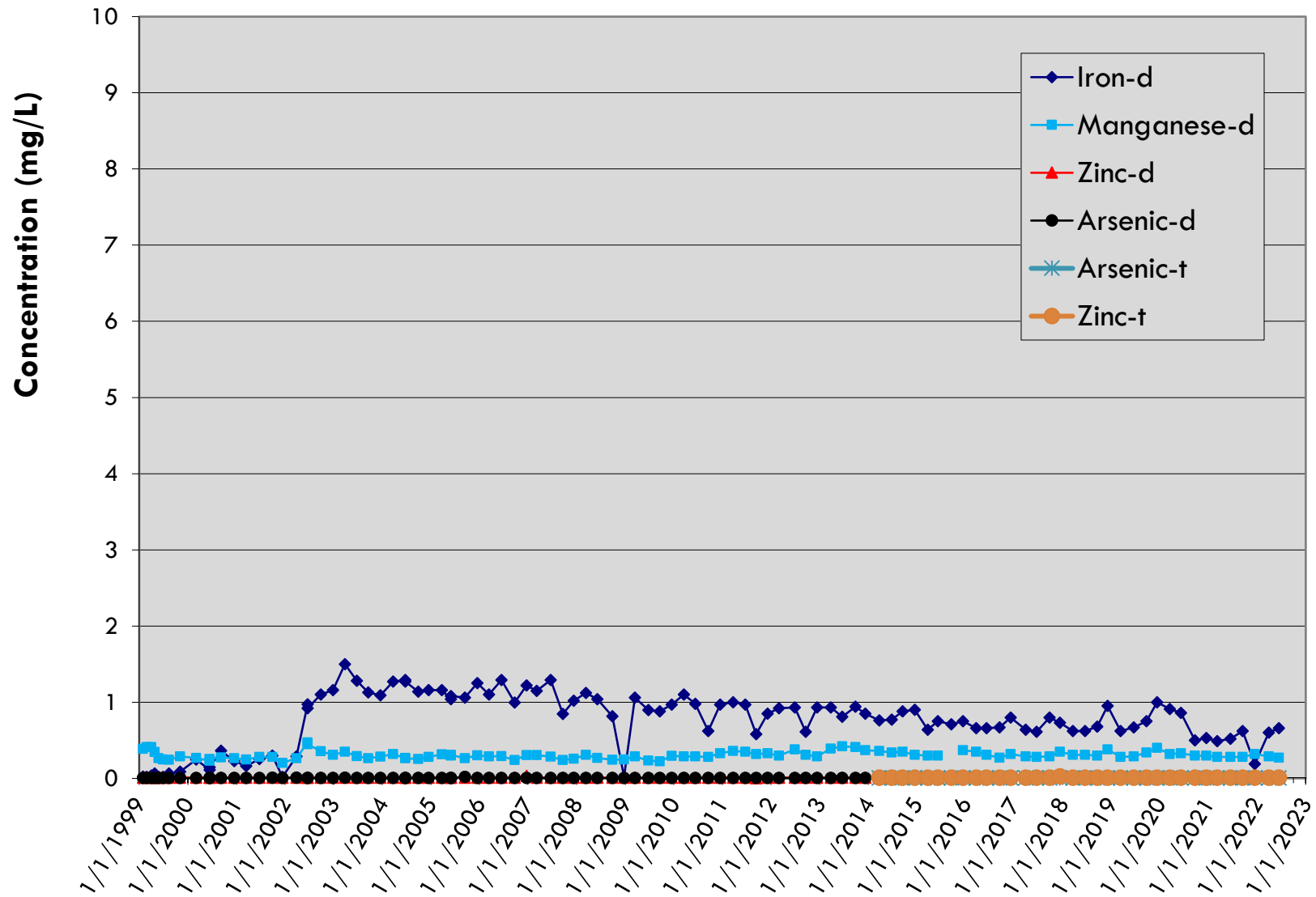
MW-1A

LRI Landfill, Pierce County, Washington



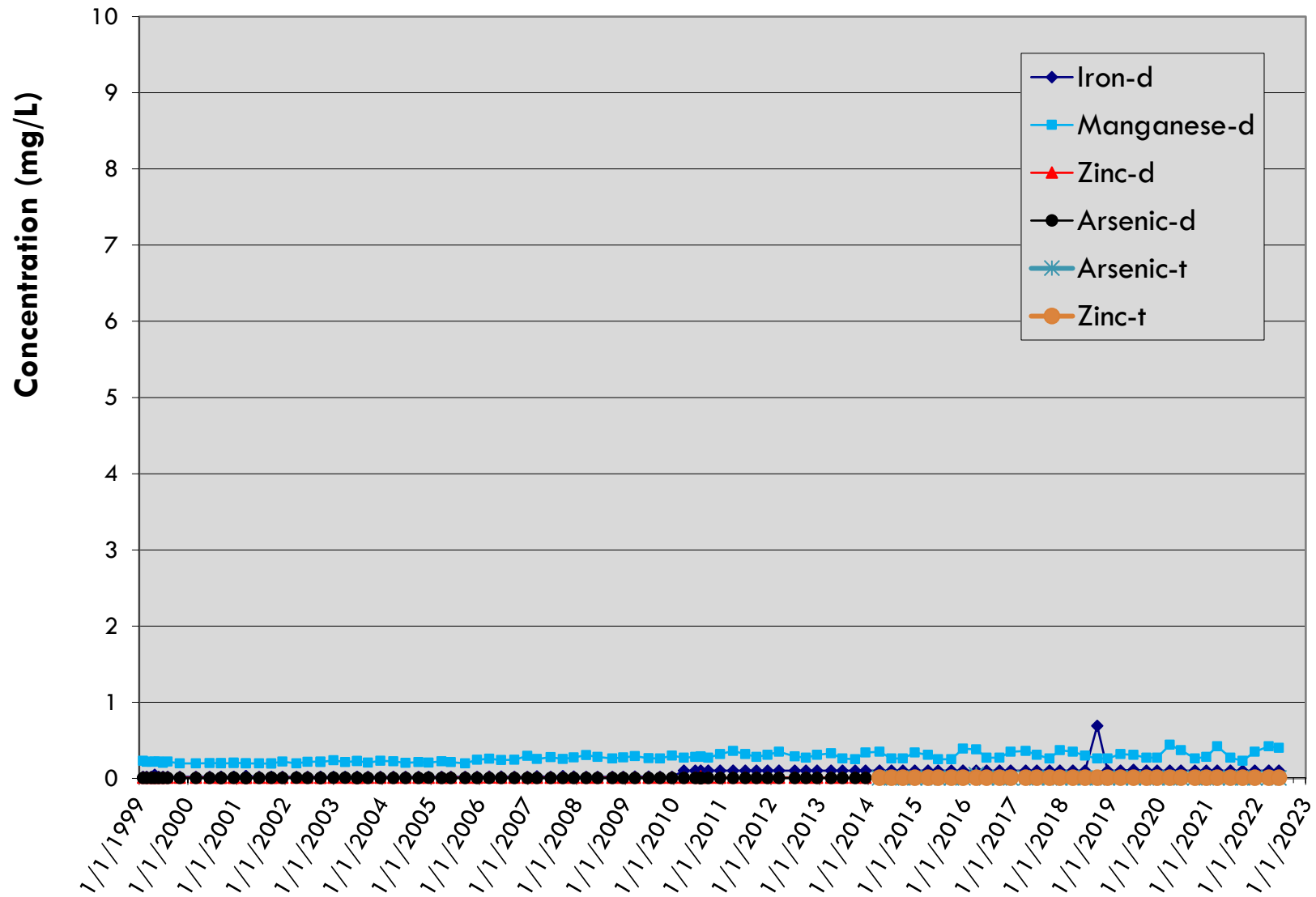
MW-2A

LRI Landfill, Pierce County, Washington

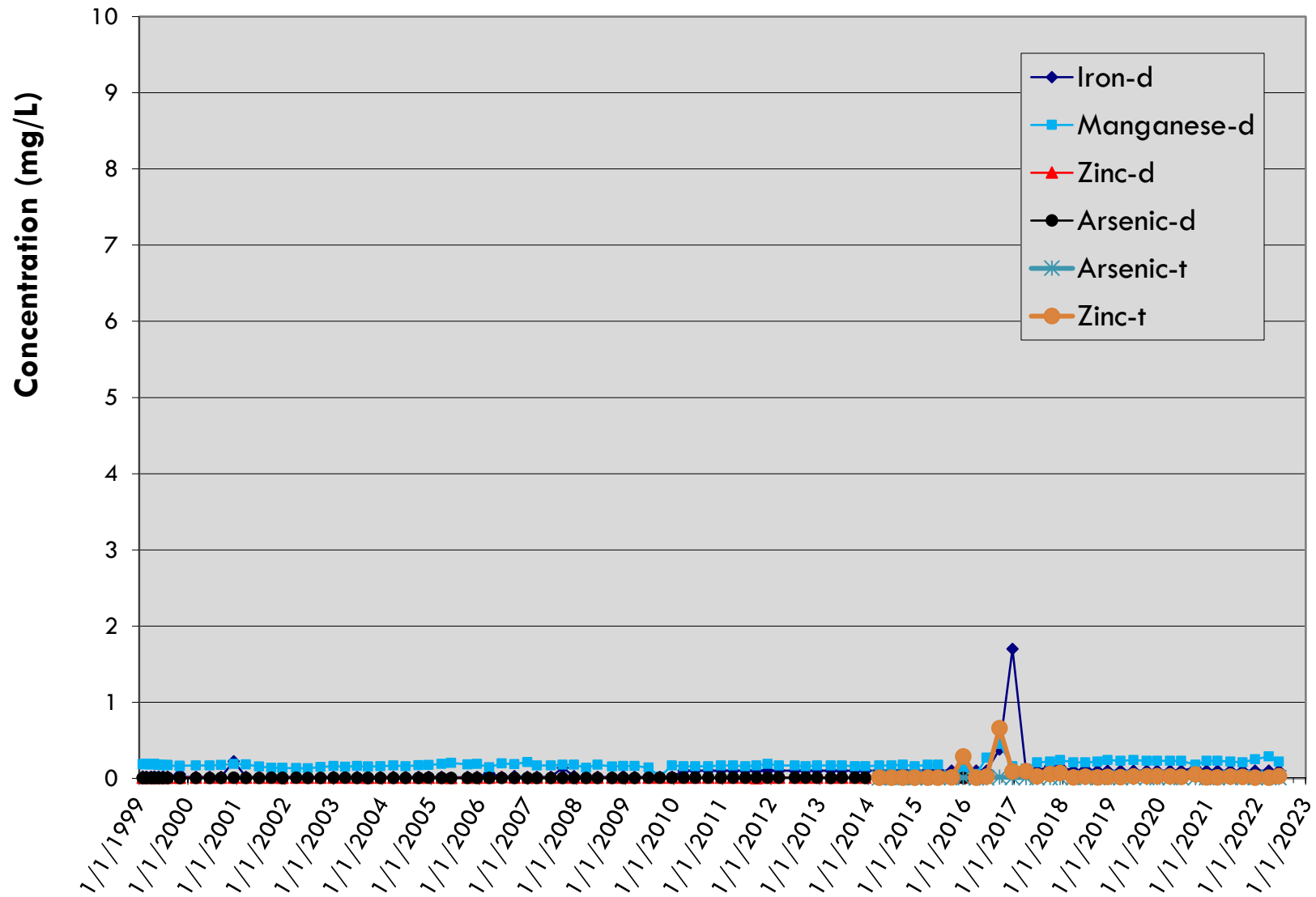


MW-3

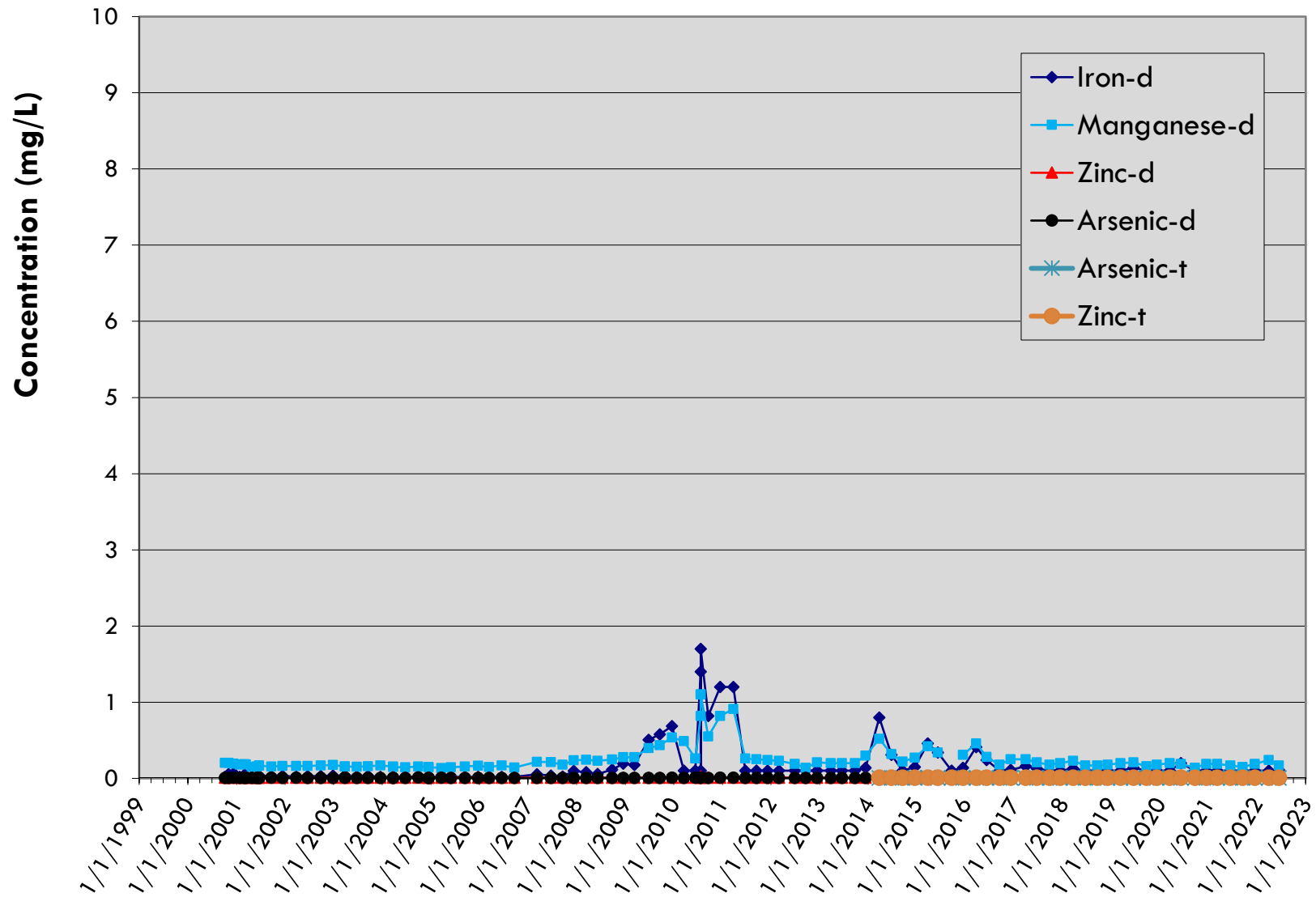
LRI Landfill, Pierce County, Washington



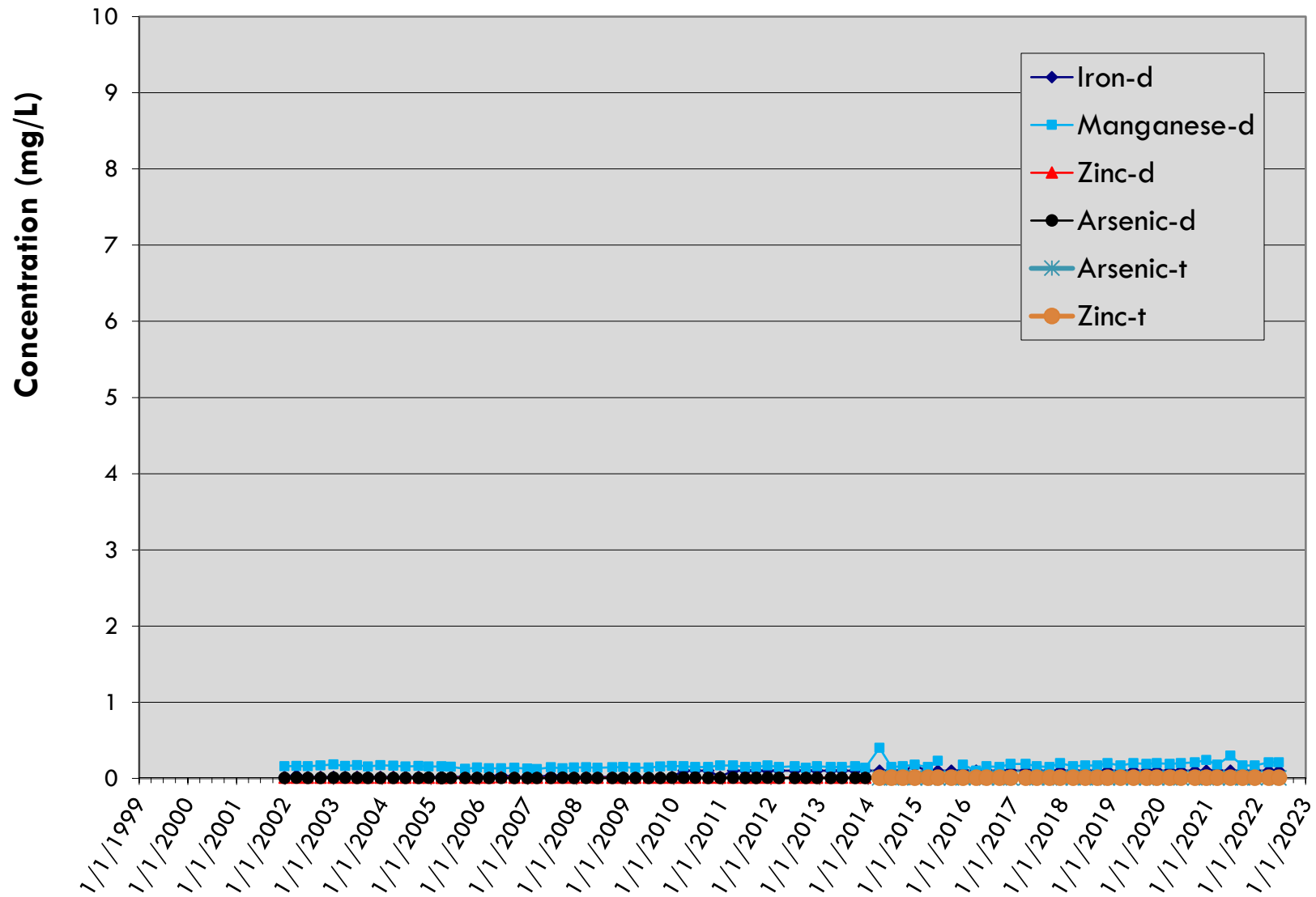
MW-4
LRI Landfill, Pierce County, Washington



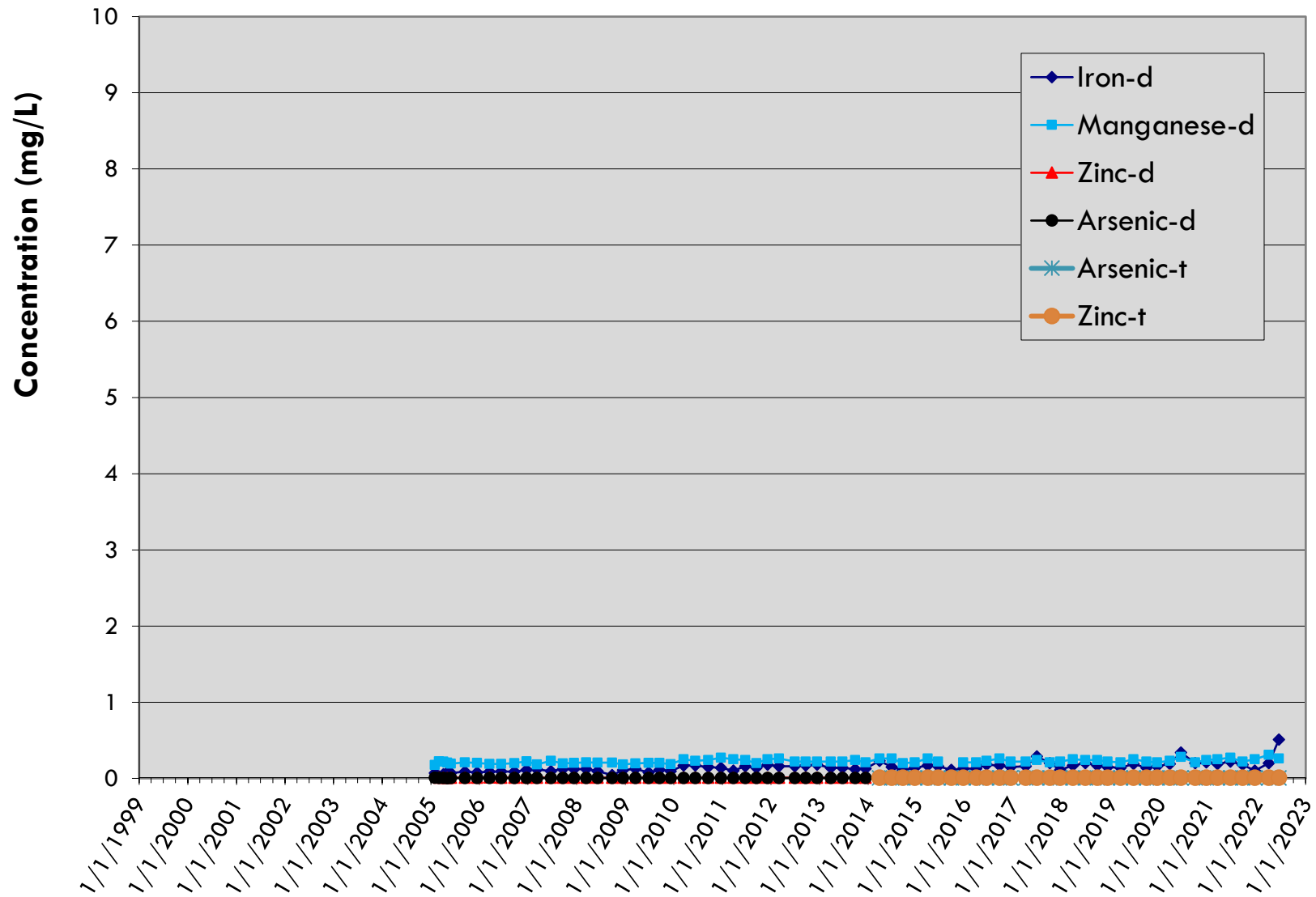
MW-5A
LRI Landfill, Pierce County, Washington



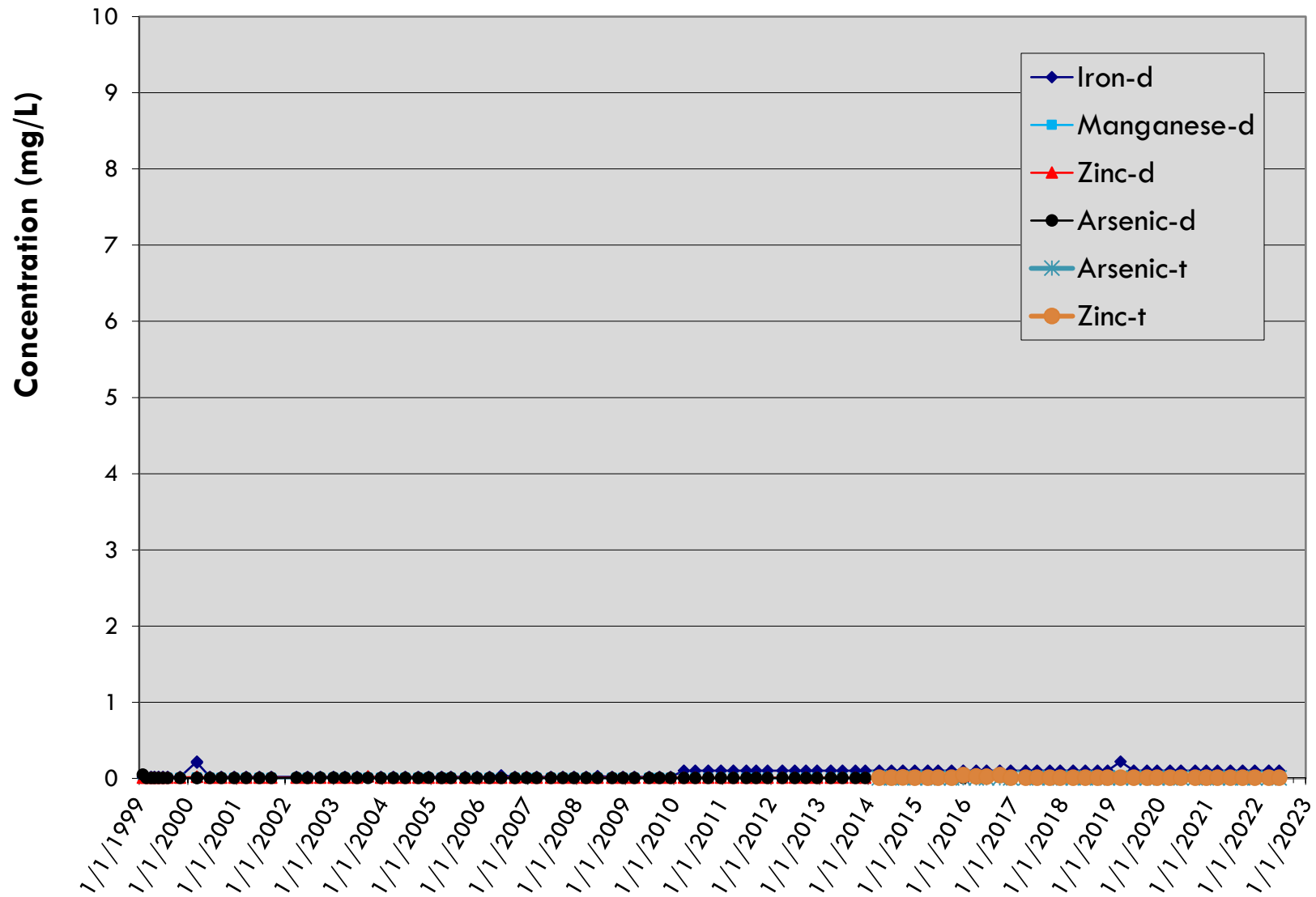
MW-6
LRI Landfill, Pierce County, Washington



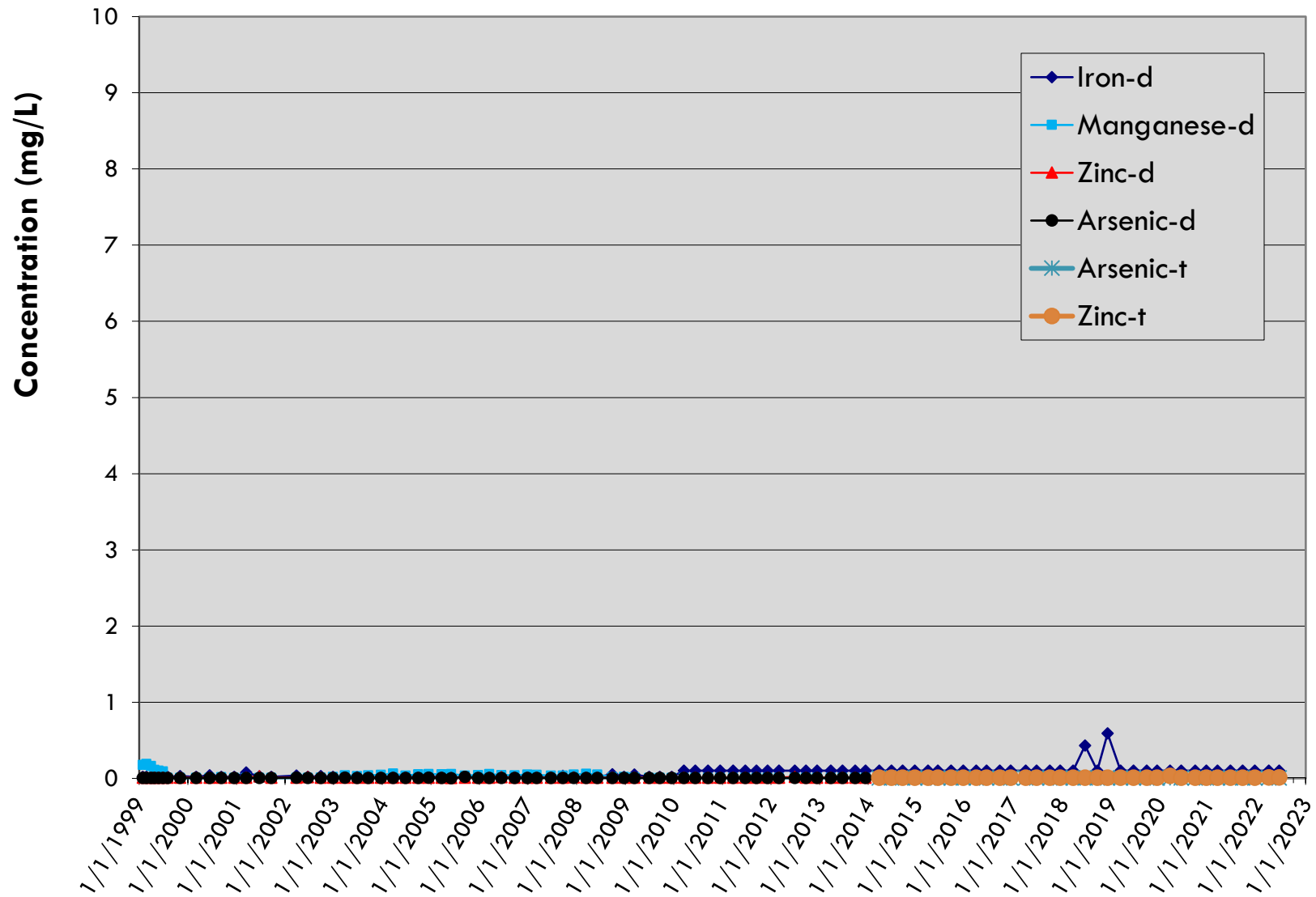
MW-7
LRI Landfill, Pierce County, Washington



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

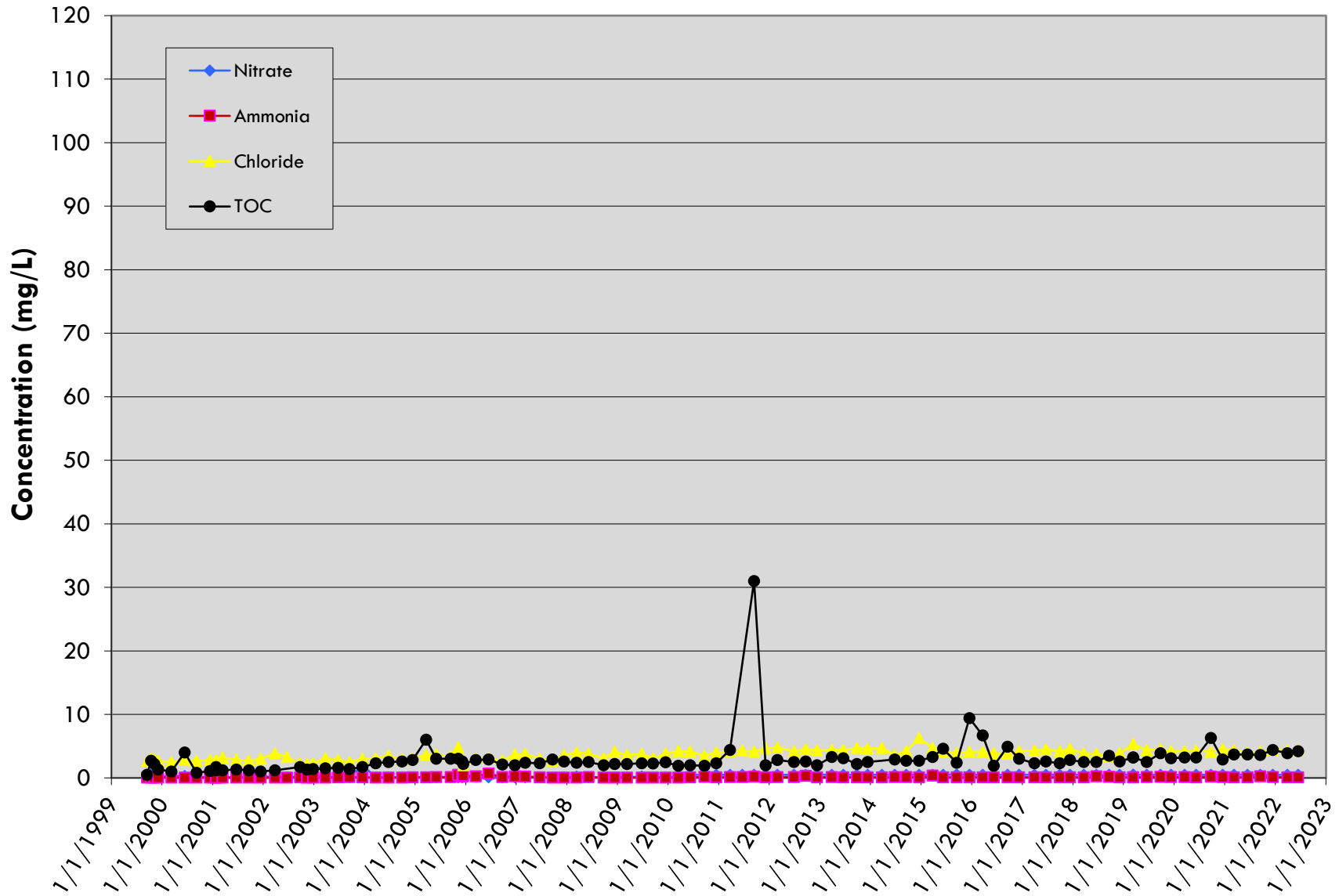


MW-10 (Background) LRI Landfill, Pierce County, Washington



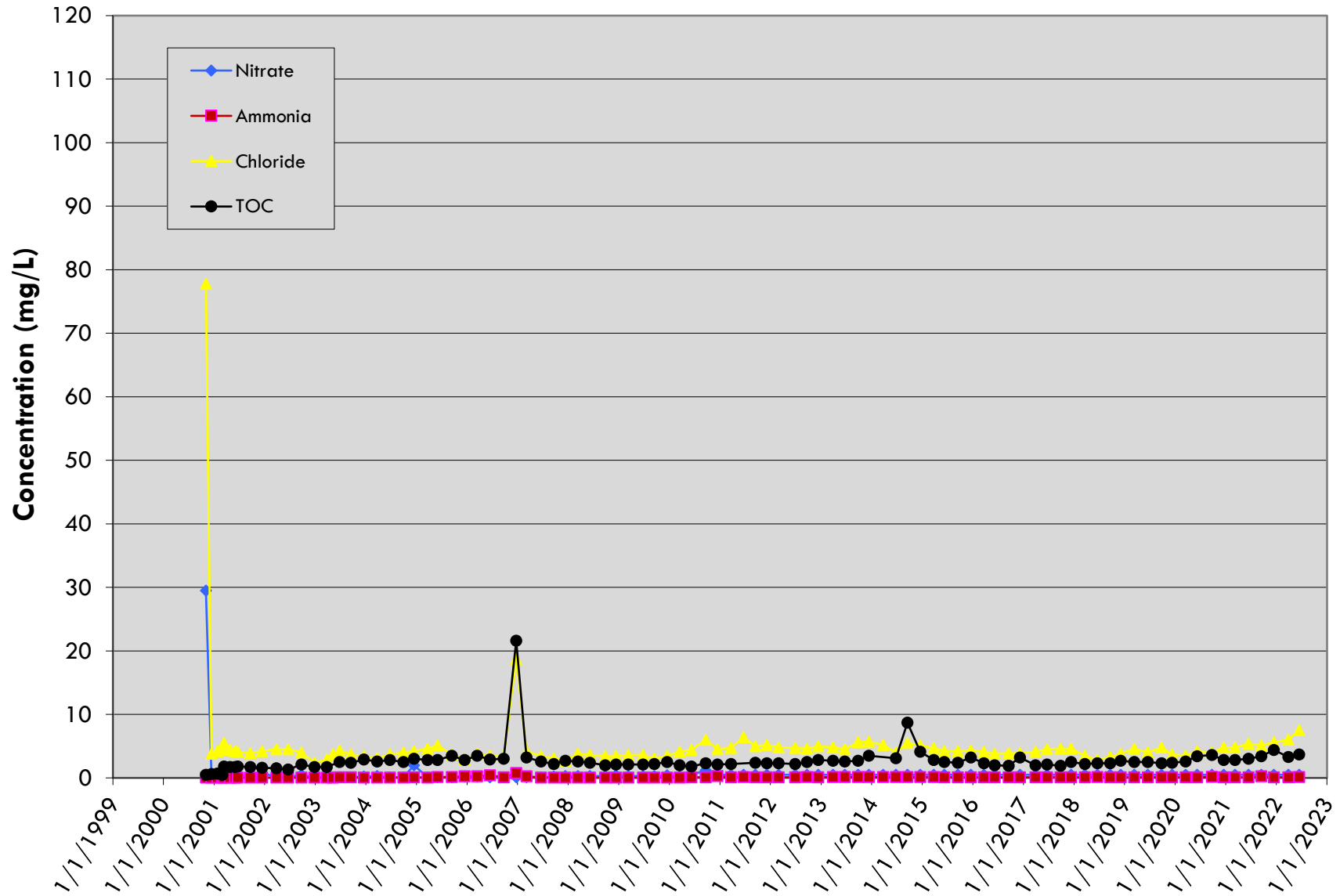
LDCS-1

LRI Landfill, Pierce County, Washington



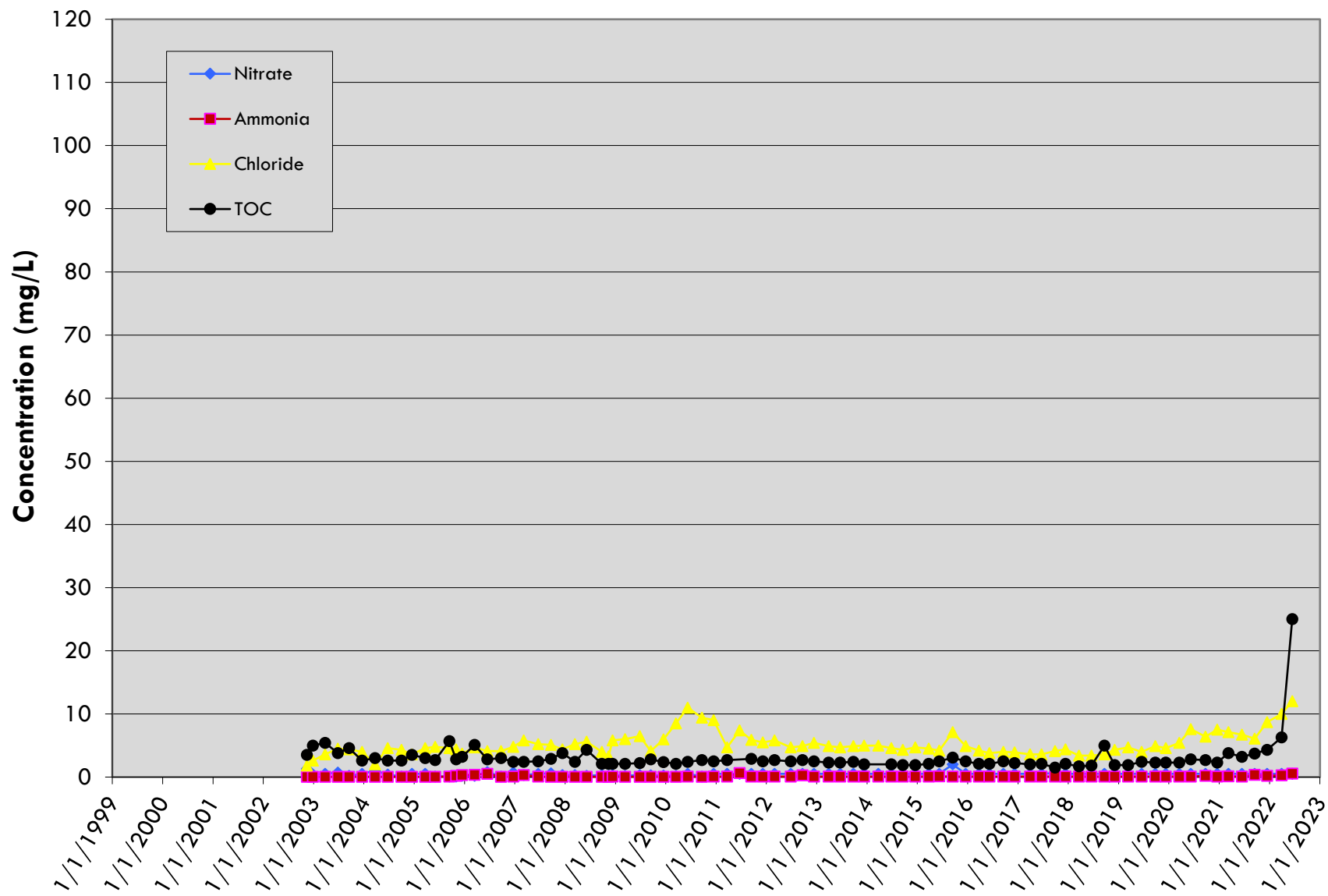
LDCS-2A

LRI Landfill, Pierce County, Washington



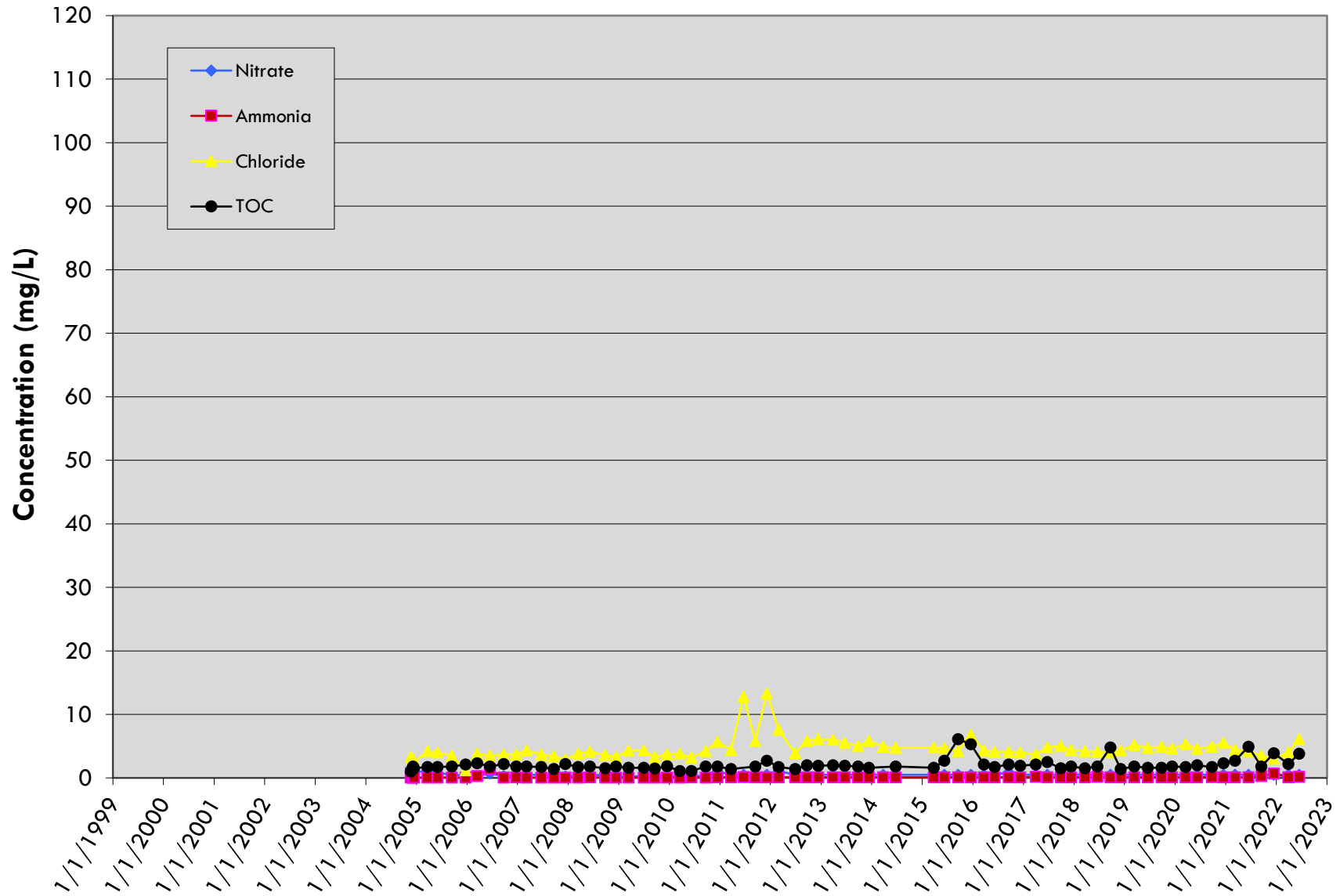
LDCS-2B

LRI Landfill, Pierce County, Washington



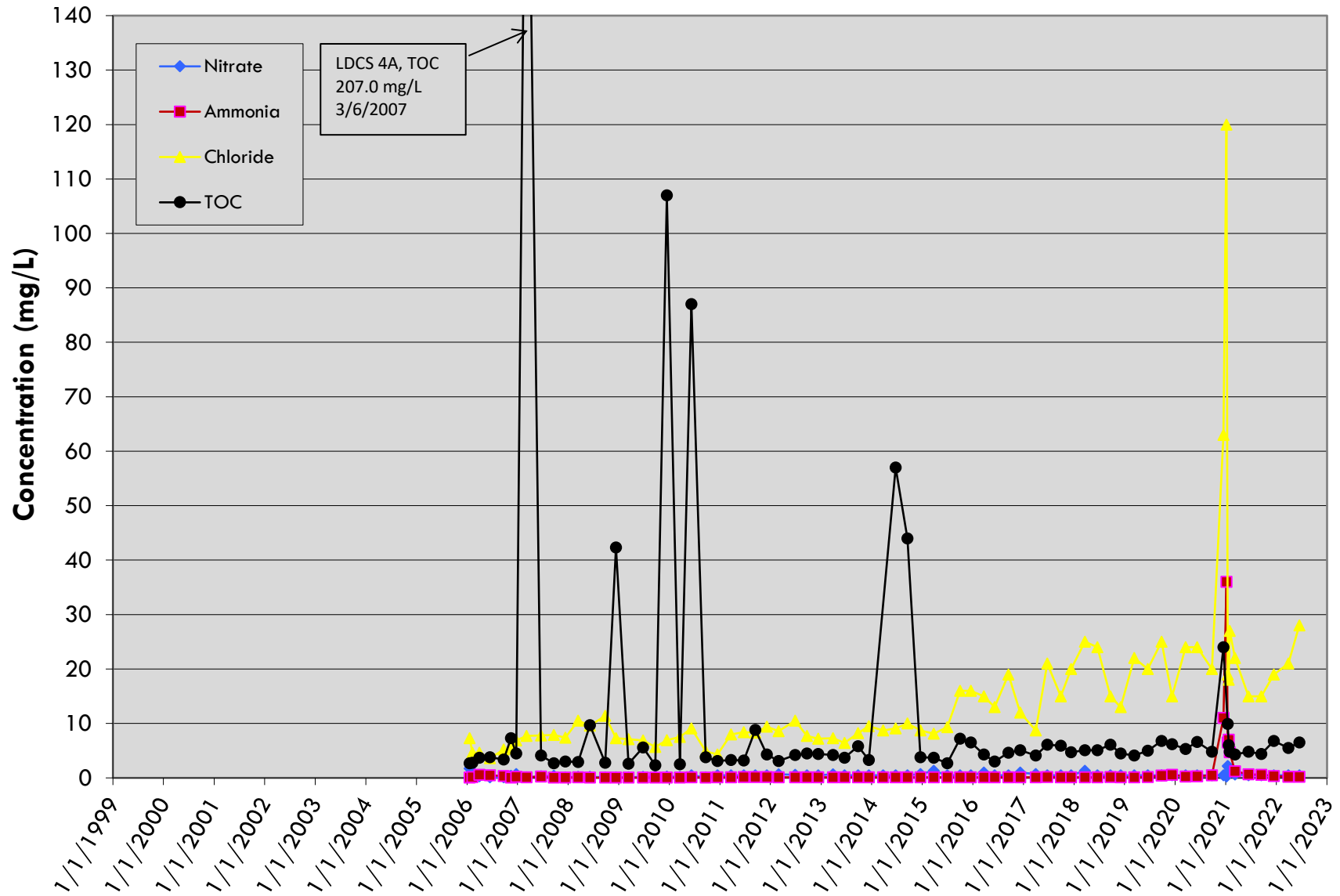
LDCS-3A

LRI Landfill, Pierce County, Washington



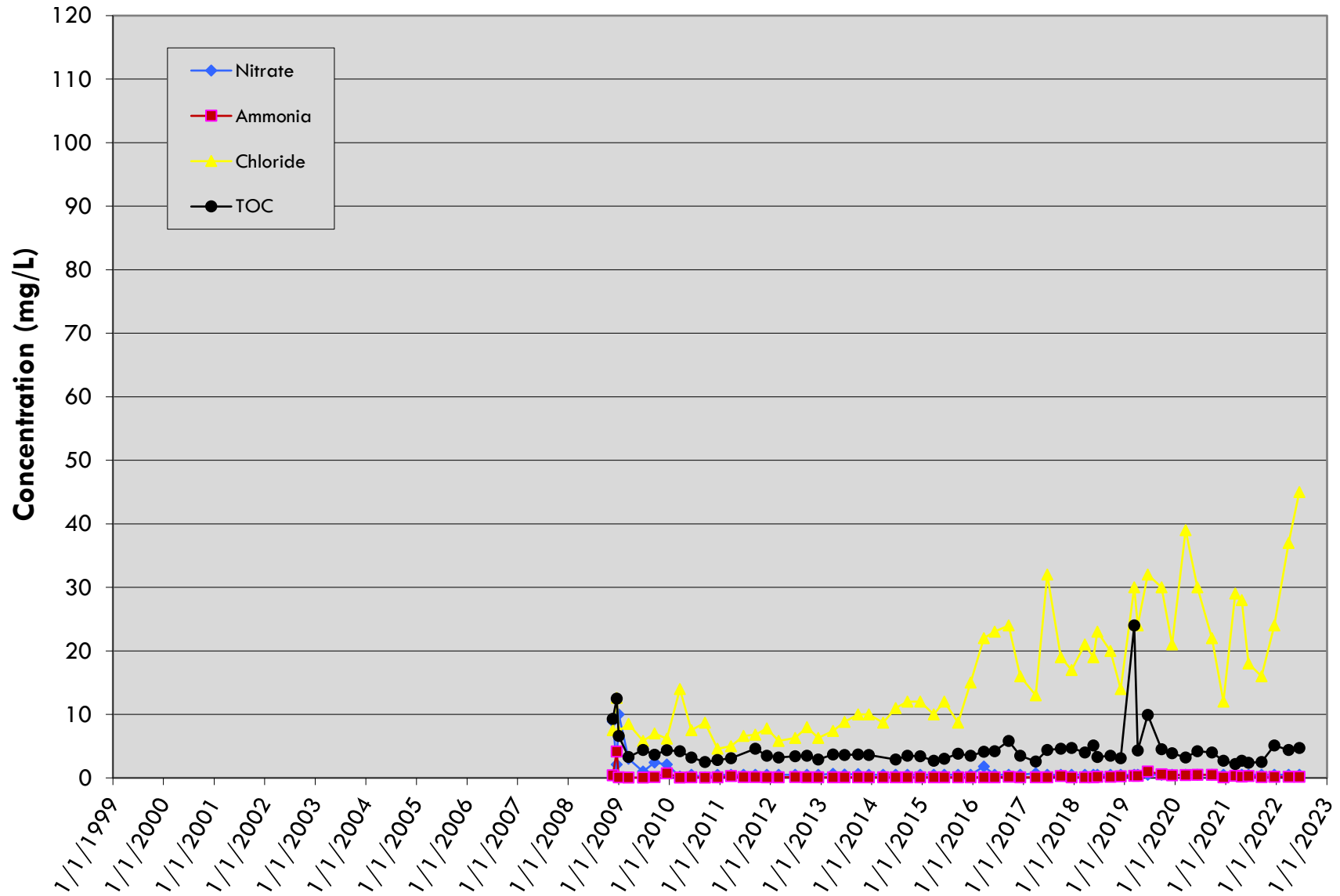
LDCS-4A

LRI Landfill, Pierce County, Washington



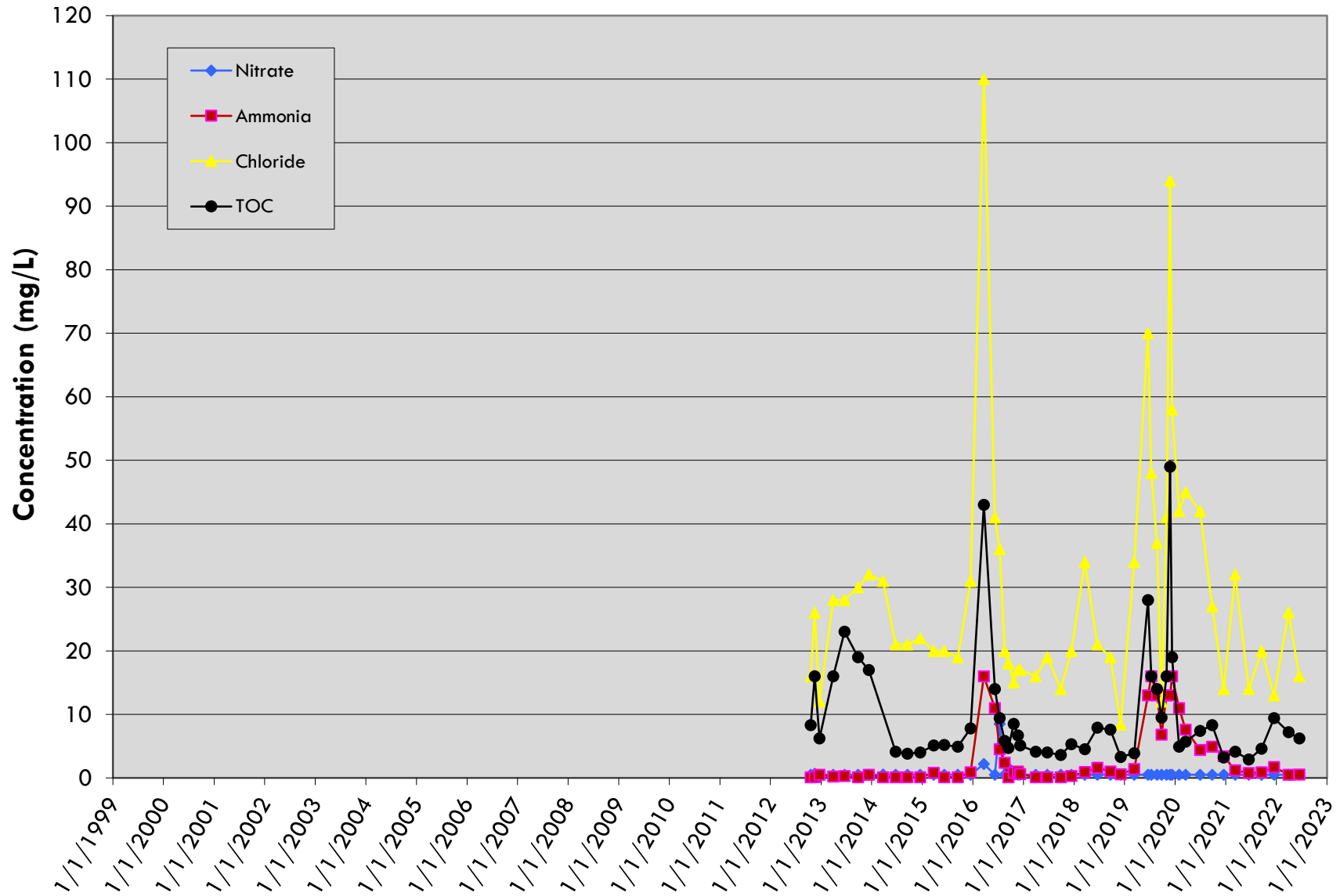
LDCS-4B

LRI Landfill, Pierce County, Washington



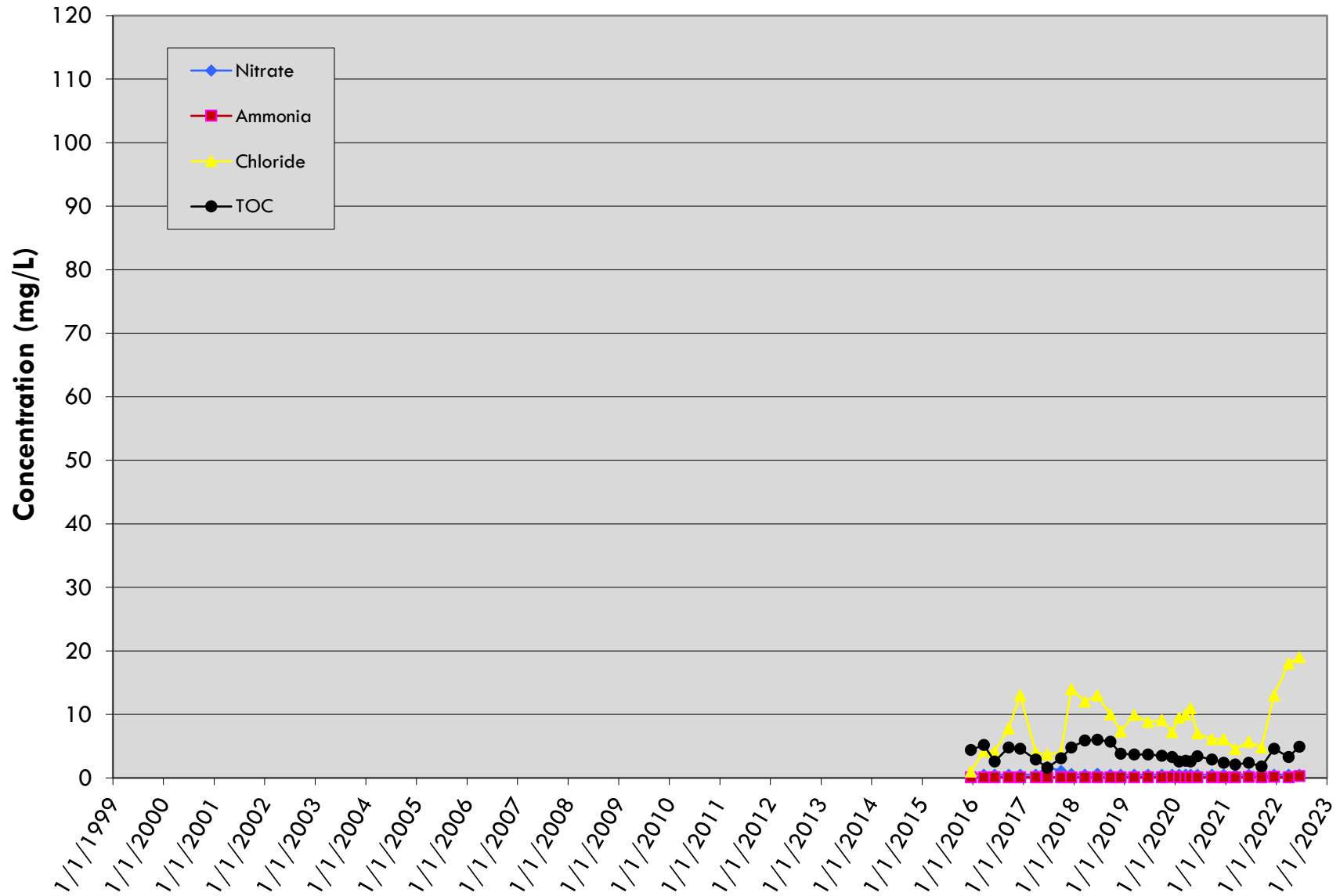
LDCS-5

LRI Landfill, Pierce County, Washington



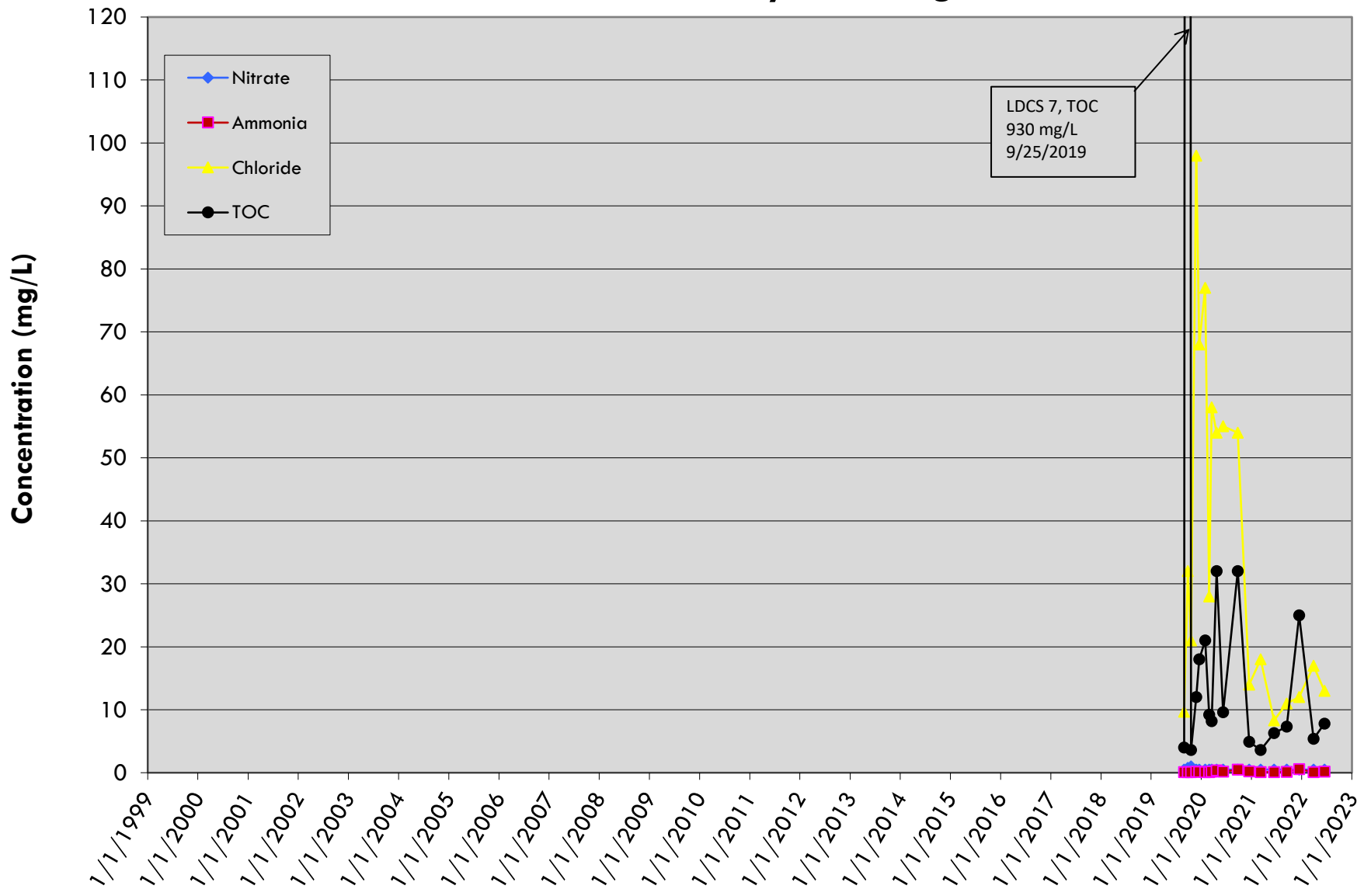
LDCS-6A

LRI Landfill, Pierce County, Washington



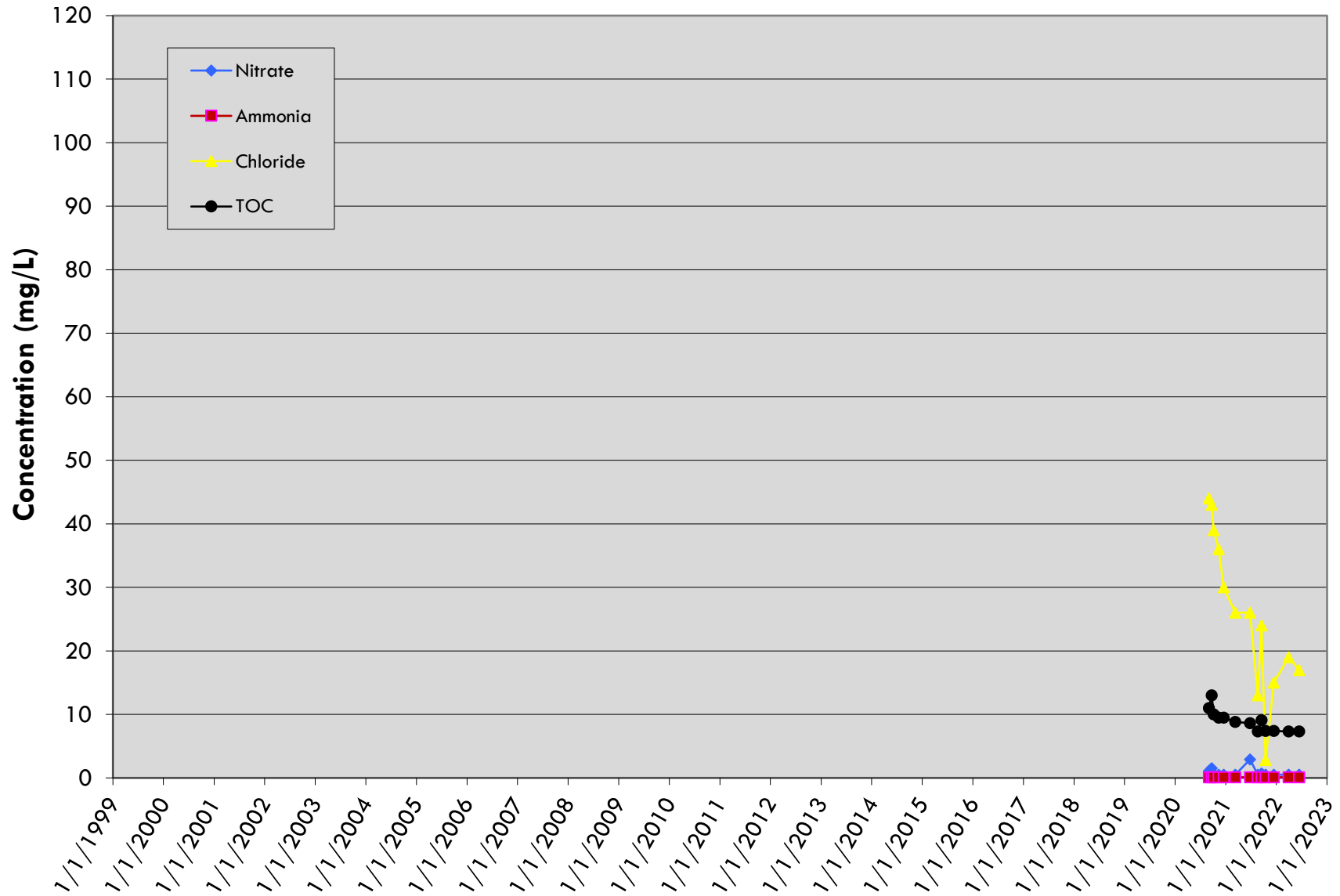
LDCS-7

LRI Landfill, Pierce County, Washington



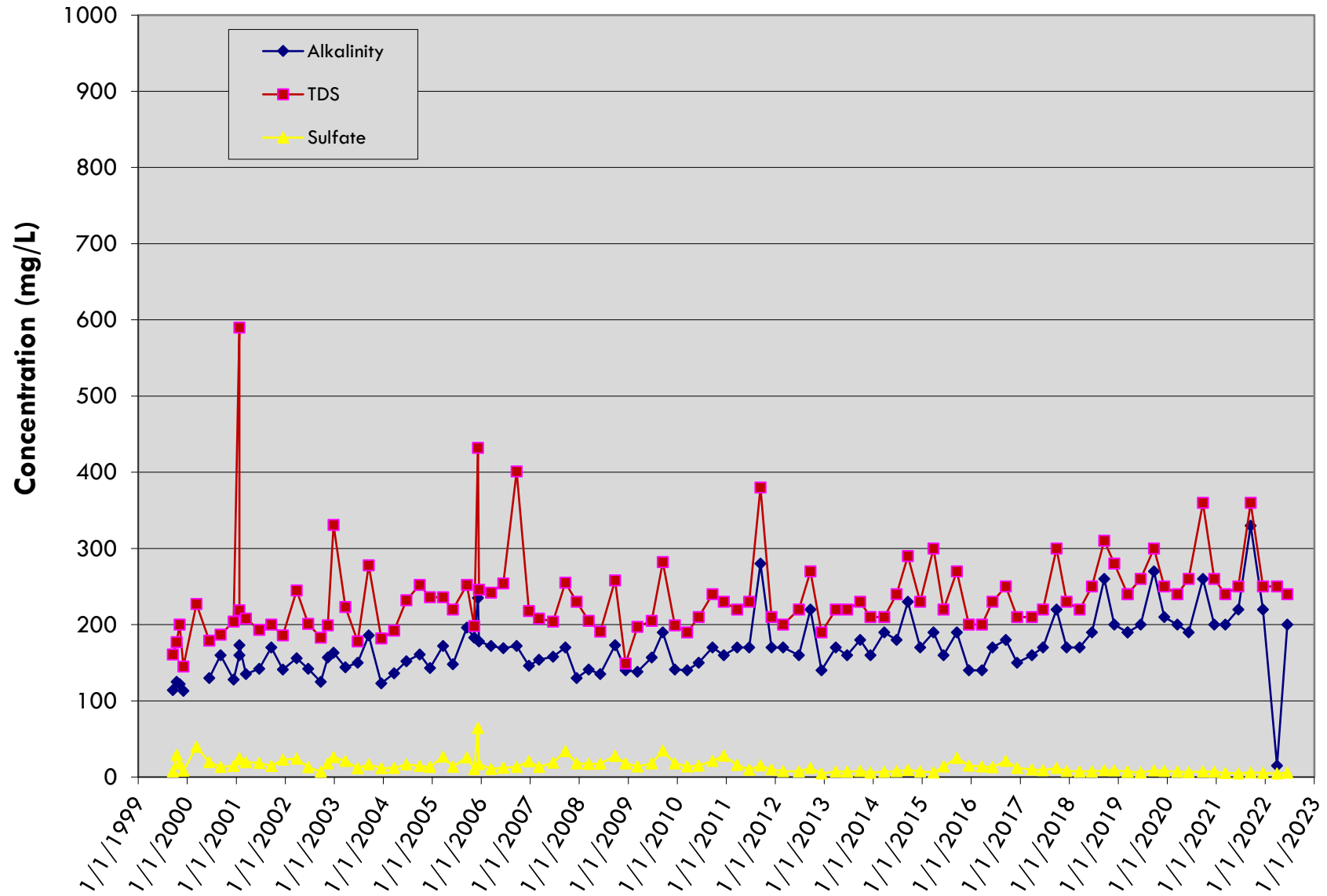
LDCS-8

LRI Landfill, Pierce County, Washington



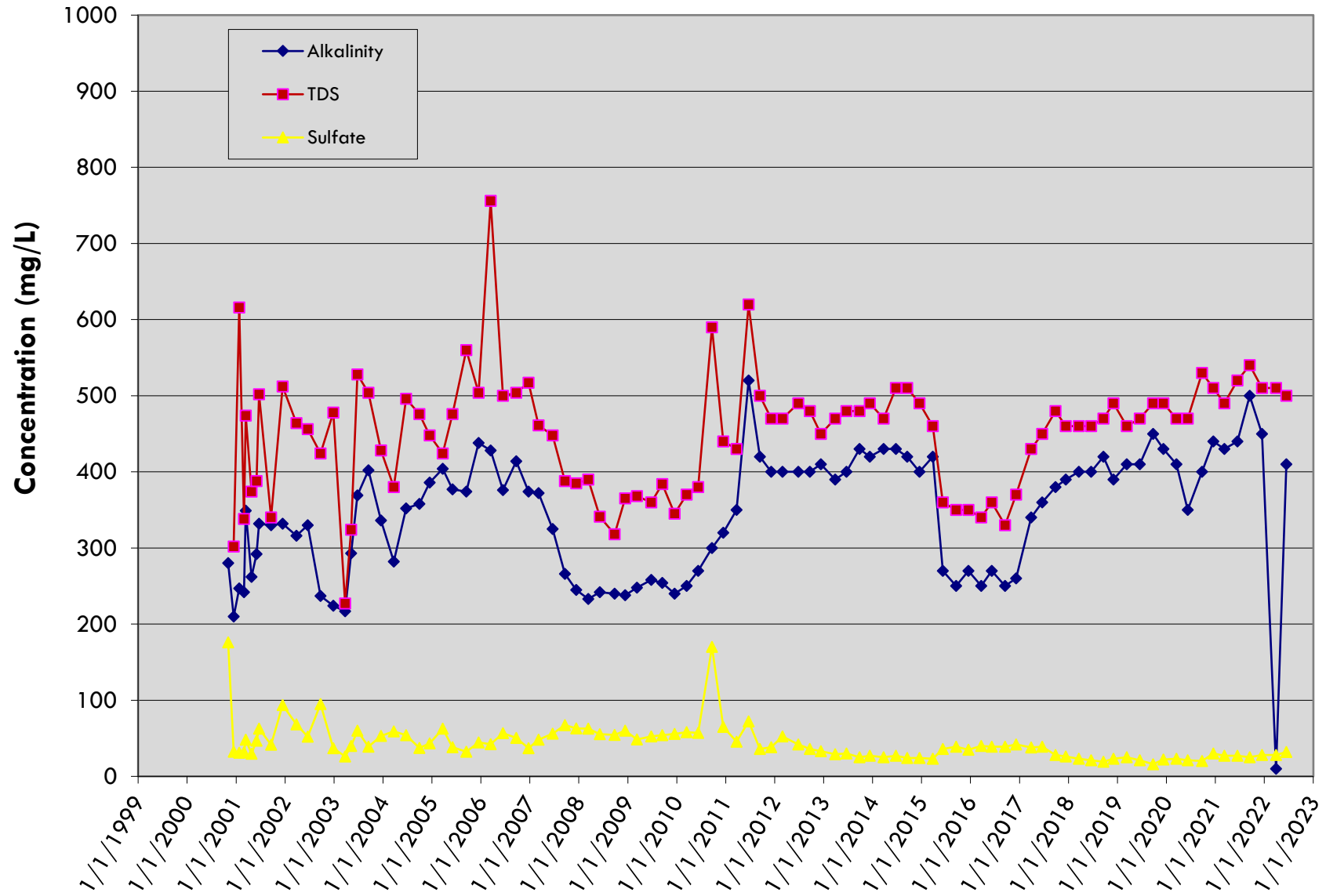
LDCS-1

LRI Landfill, Pierce County, Washington



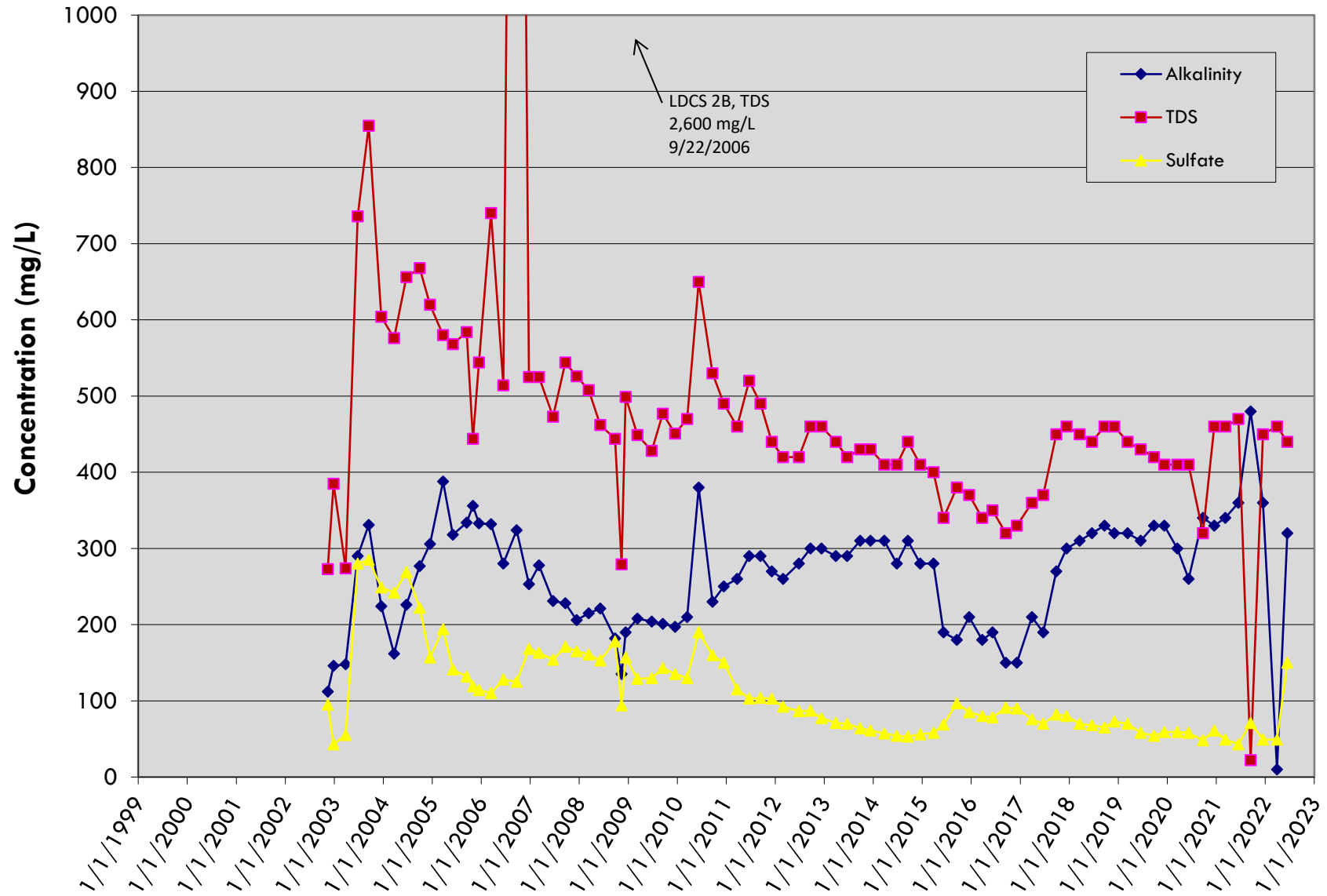
LDCS-2A

LRI Landfill, Pierce County, Washington



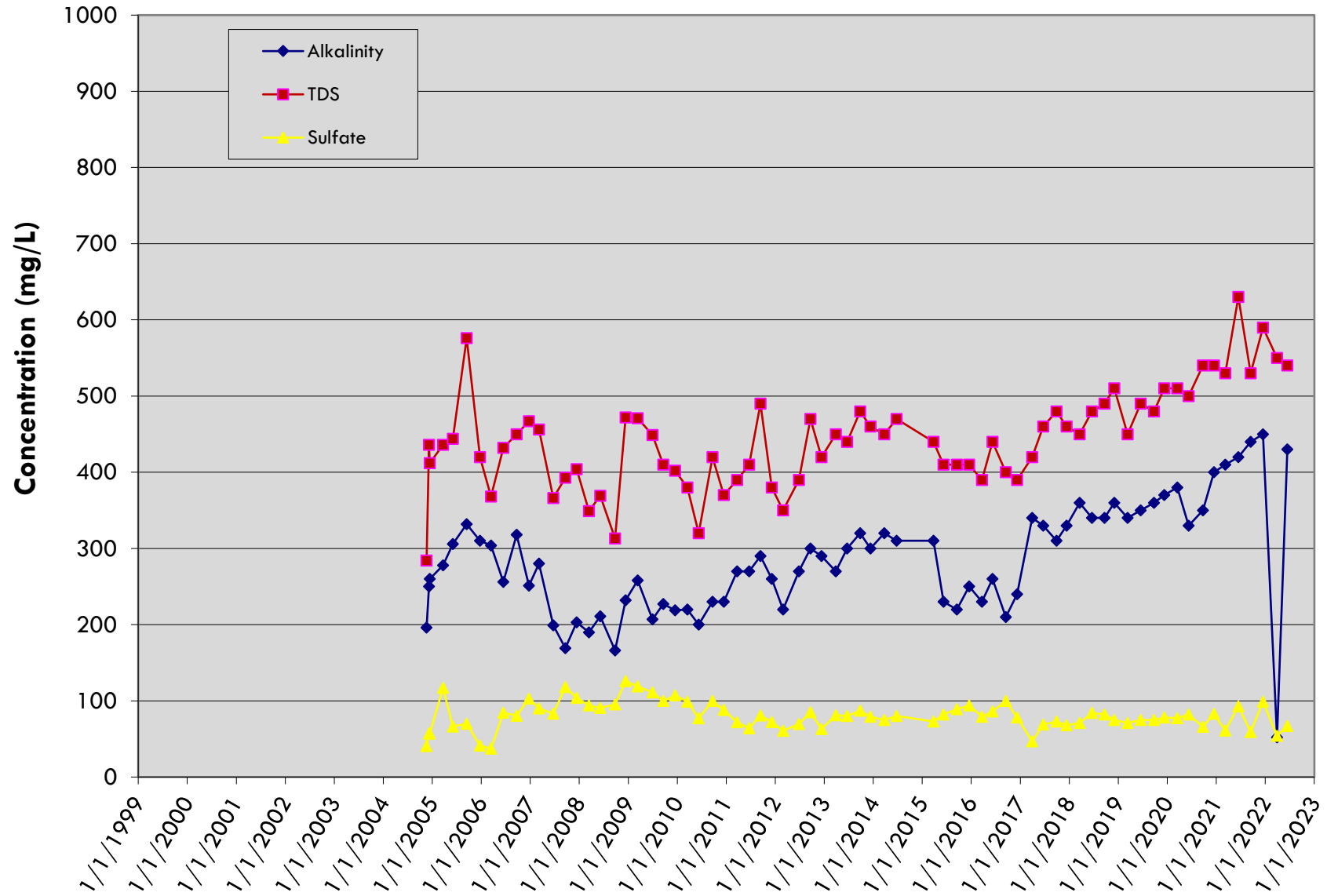
LDCS-2B

LRI Landfill, Pierce County, Washington



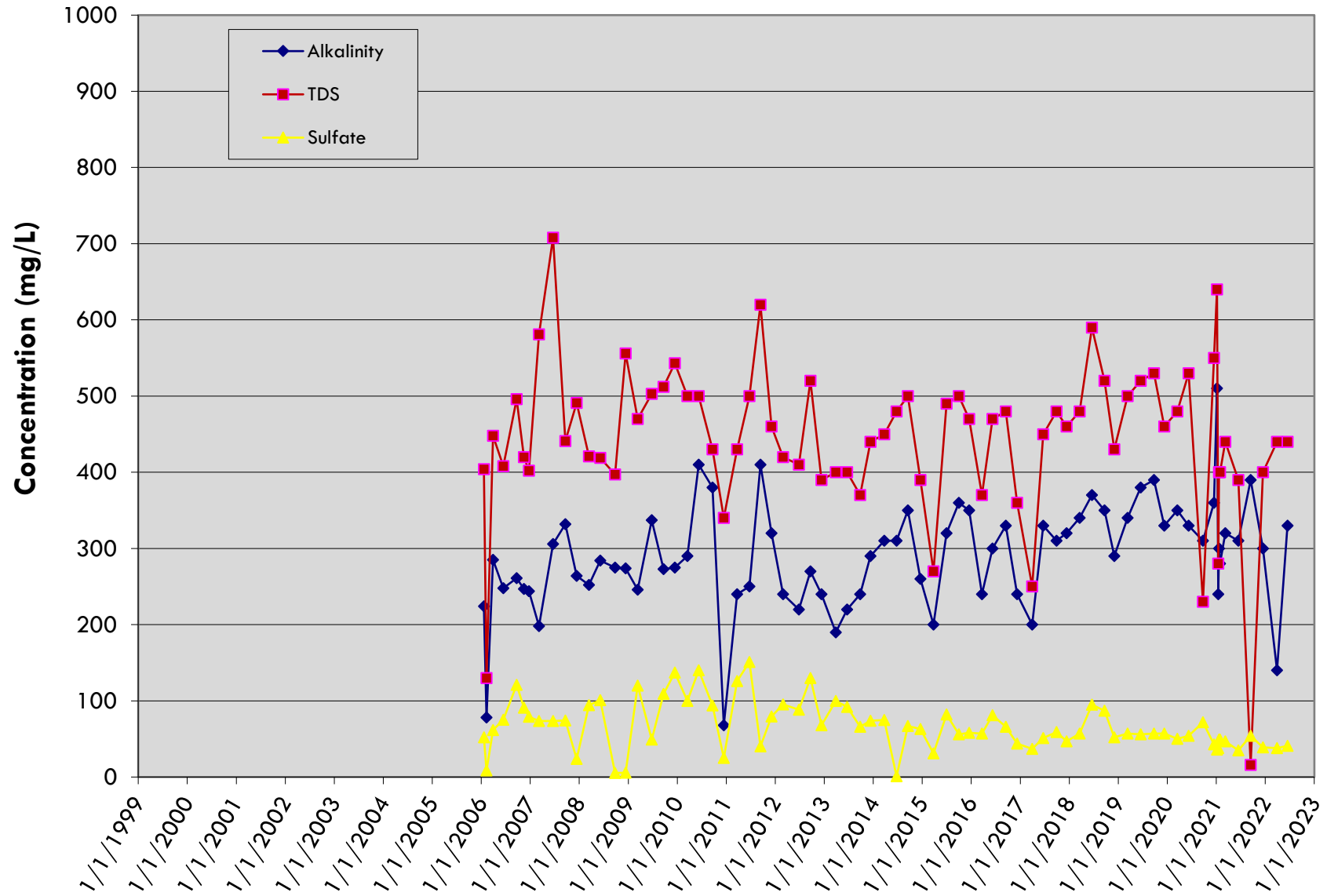
LDCS-3A

LRI Landfill, Pierce County, Washington



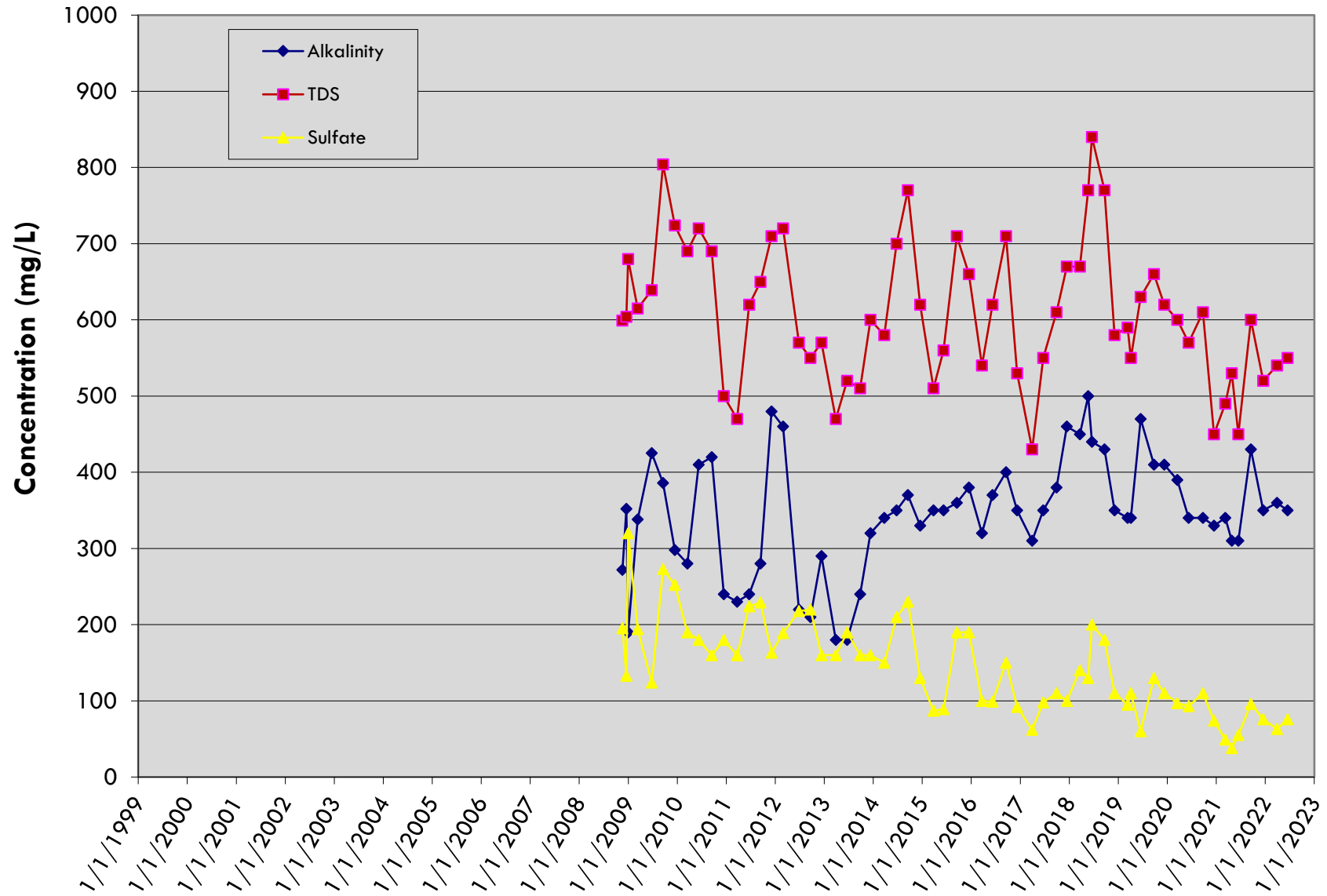
LDCS-4A

LRI Landfill, Pierce County, Washington



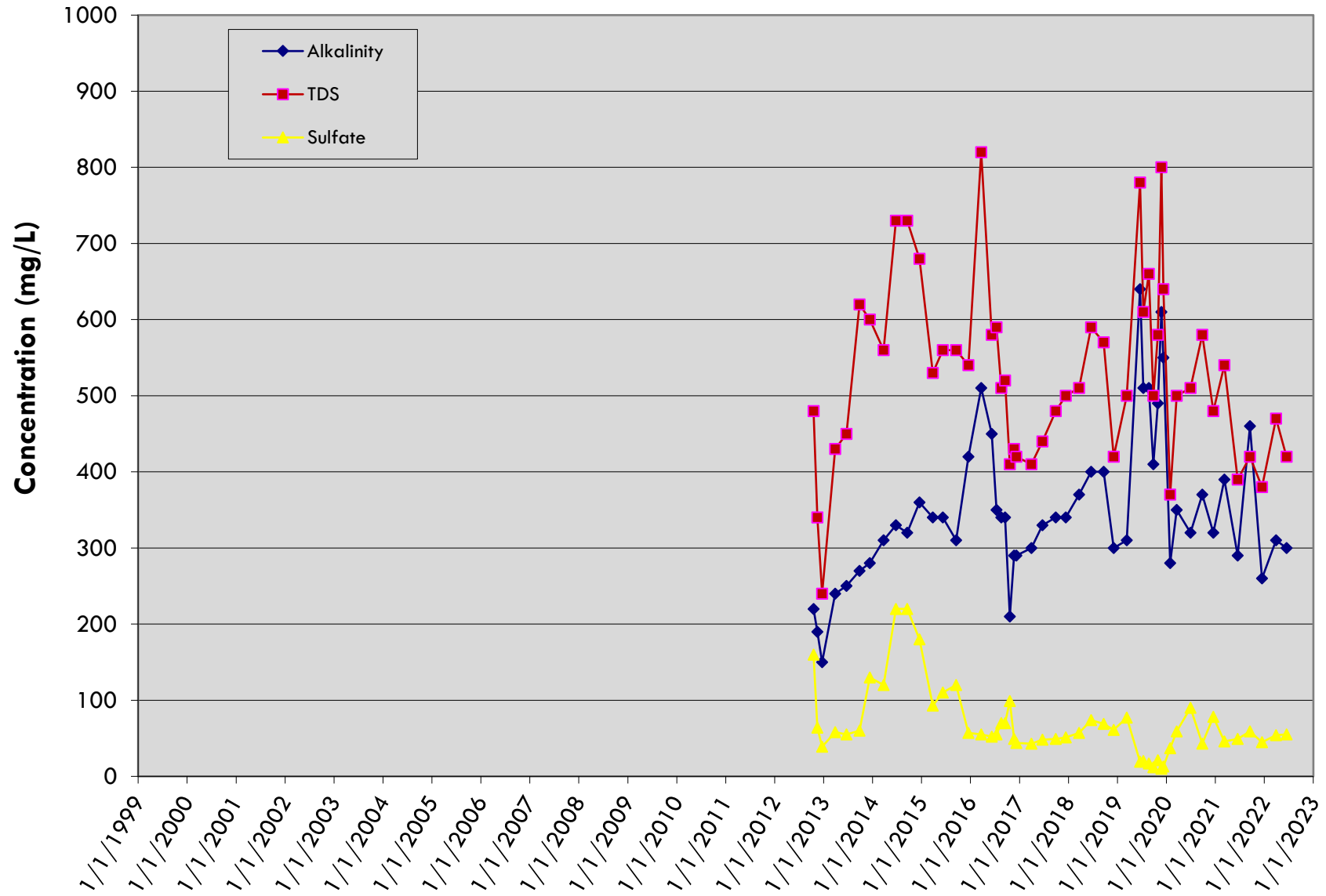
LDCS-4B

LRI Landfill, Pierce County, Washington



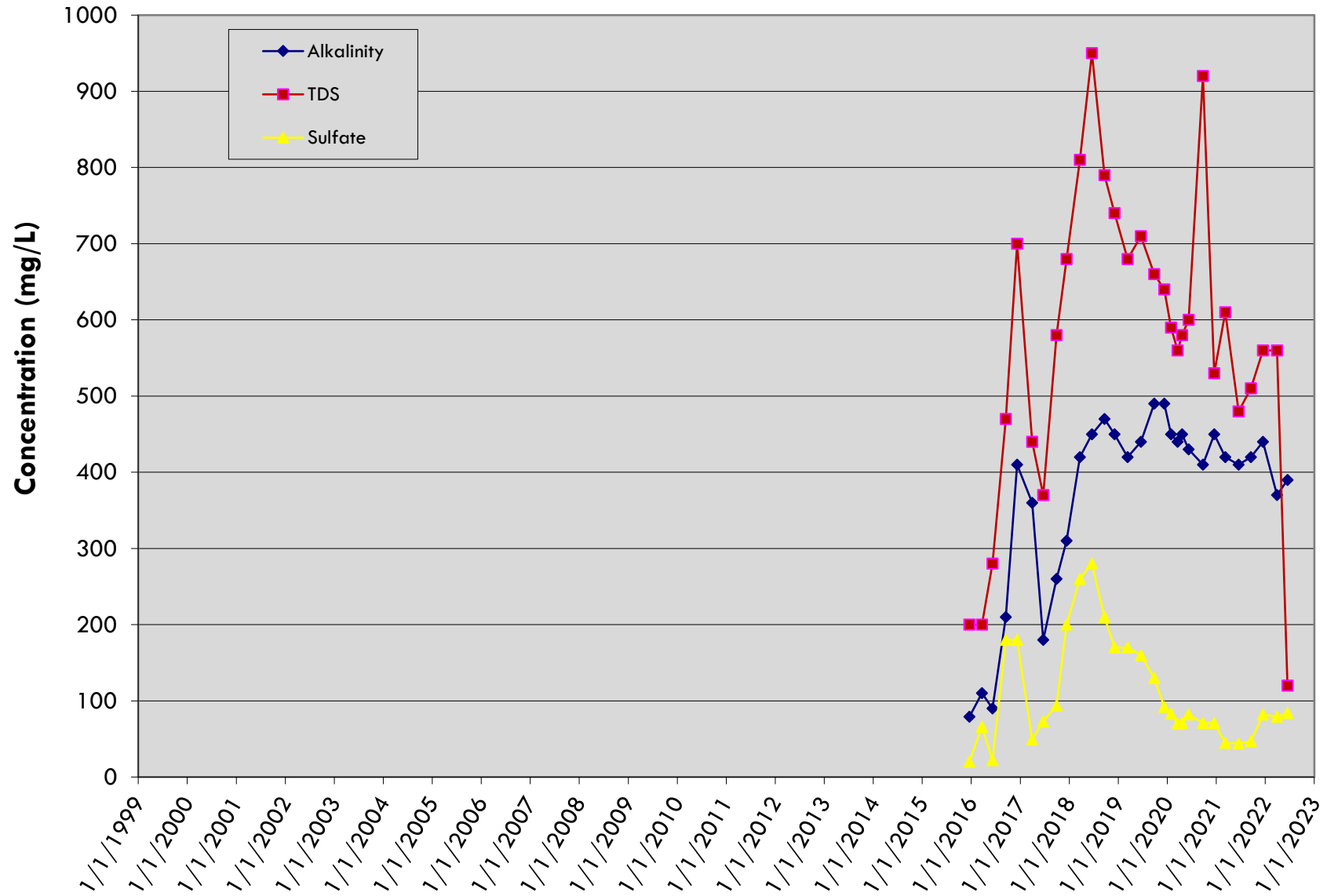
LDCS-5

LRI Landfill, Pierce County, Washington



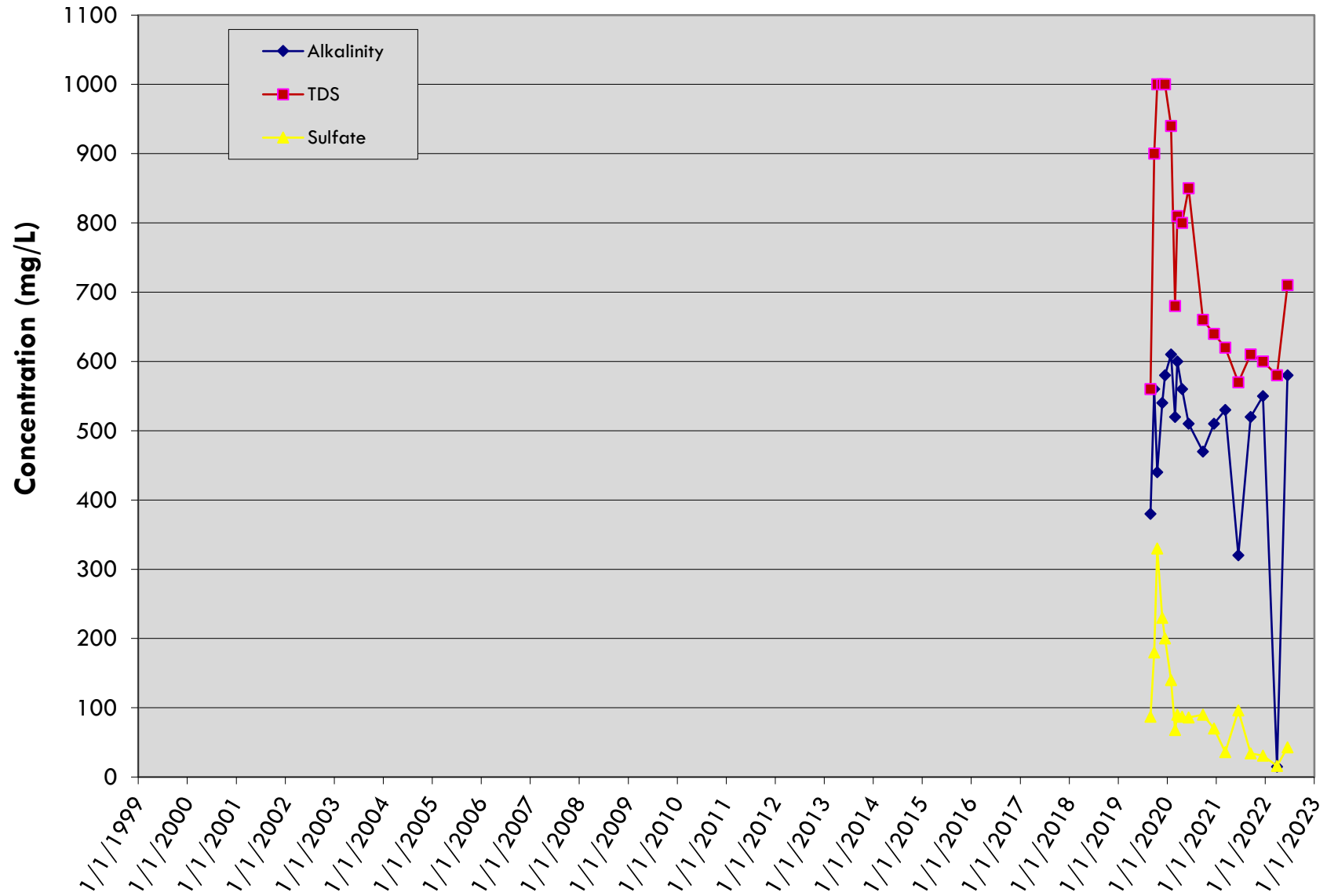
LDCS-6A

LRI Landfill, Pierce County, Washington



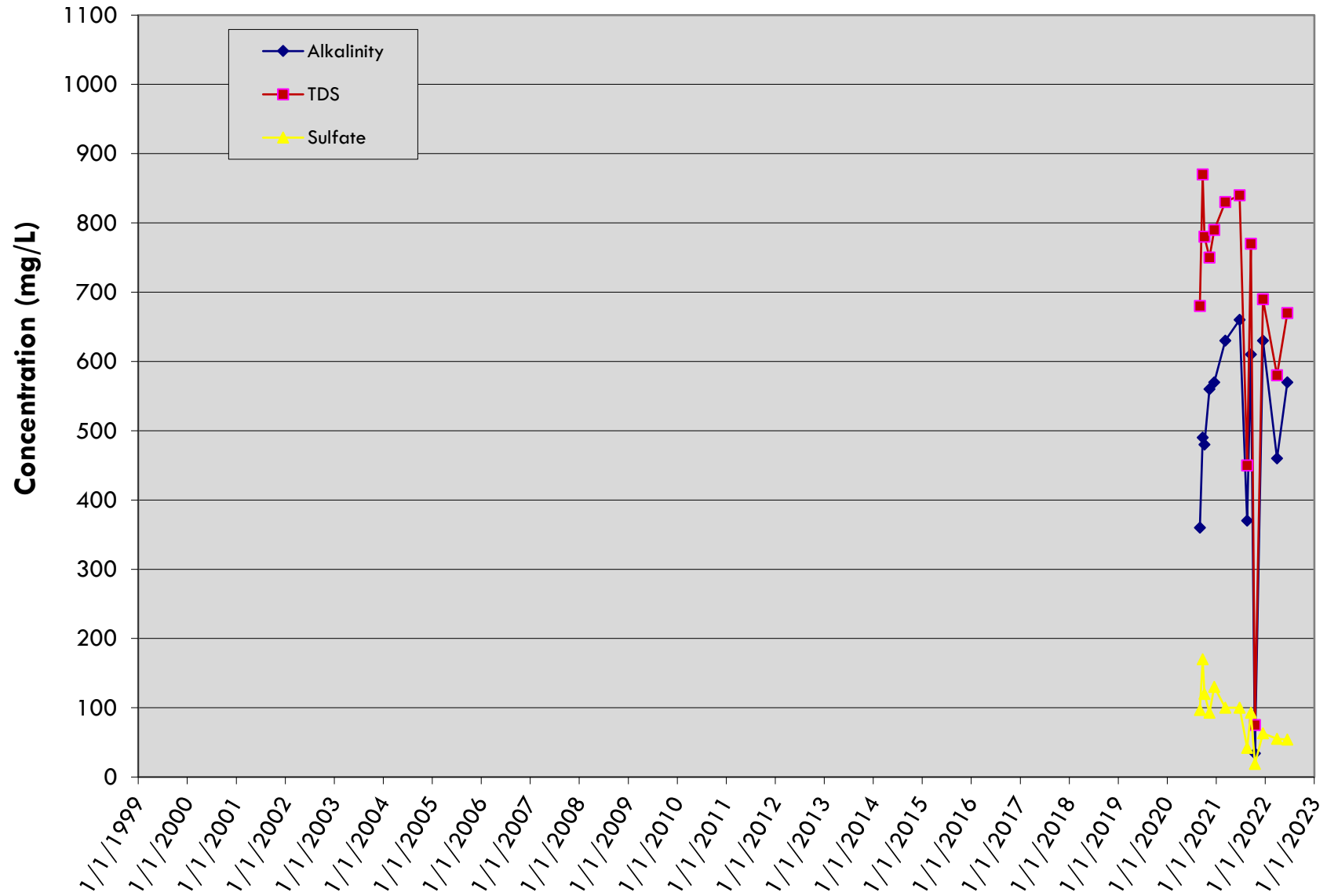
LDCS-7

LRI Landfill, Pierce County, Washington



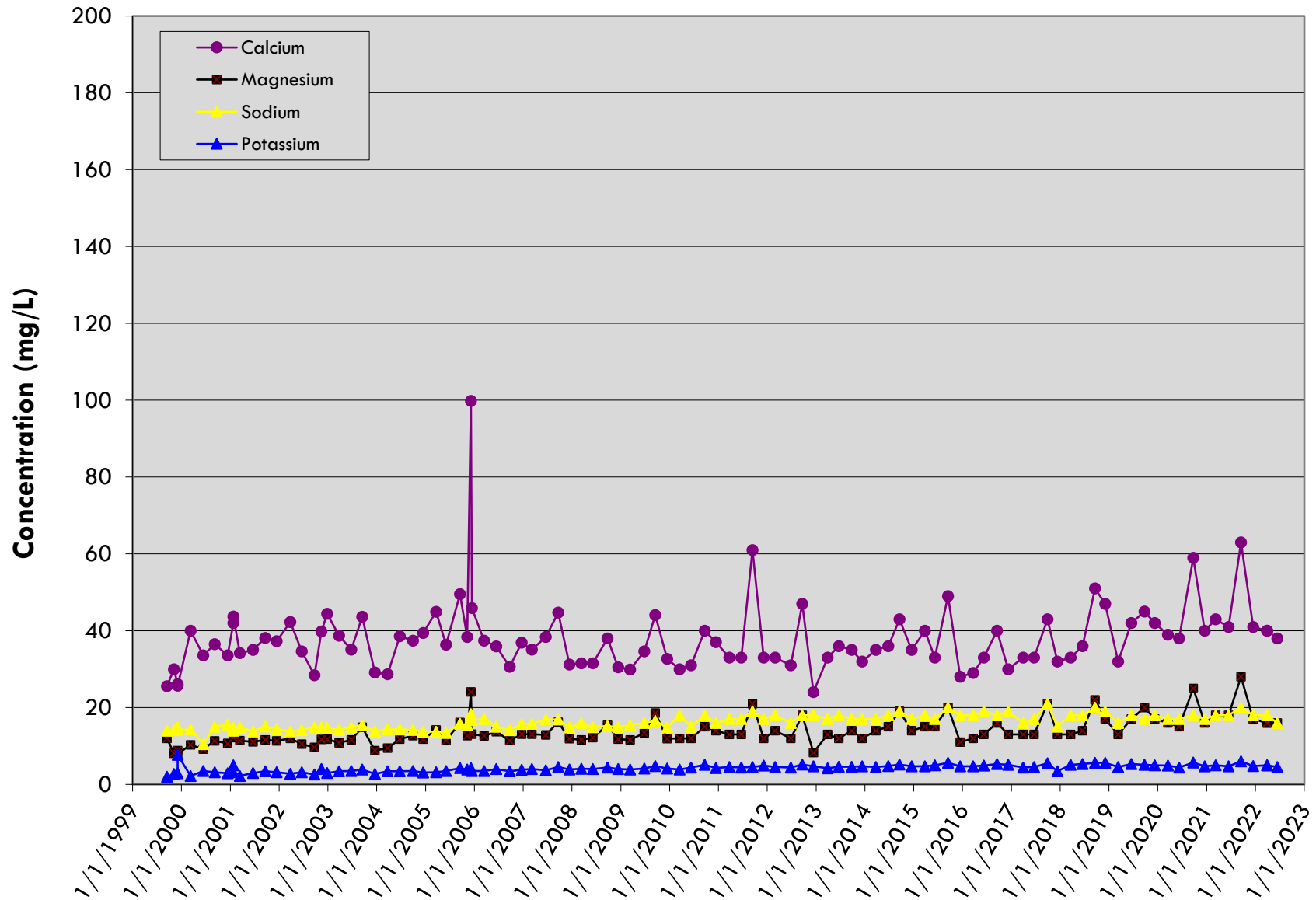
LDCS-8

LRI Landfill, Pierce County, Washington



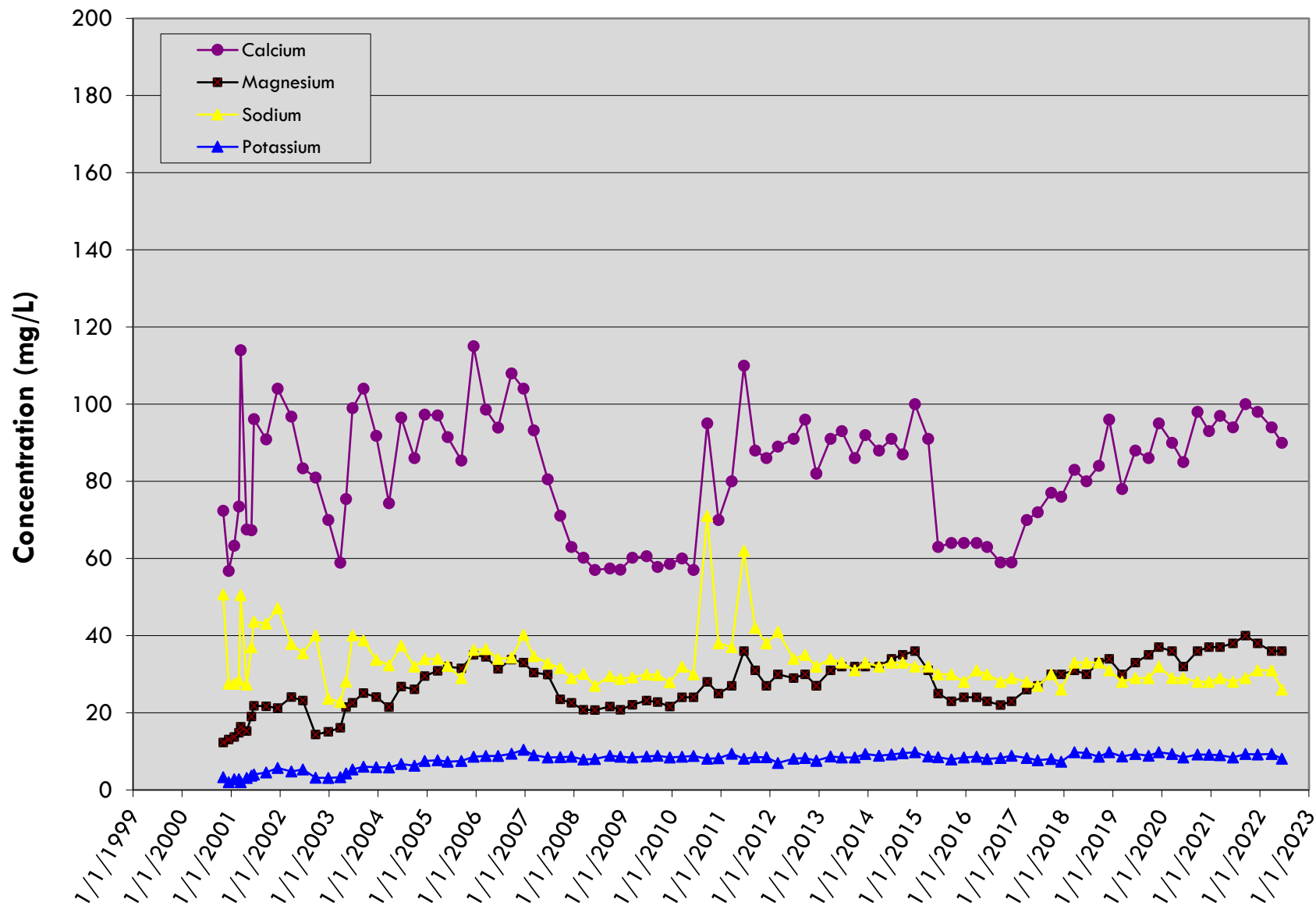
LDCS-1

LRI Landfill, Pierce County, Washington



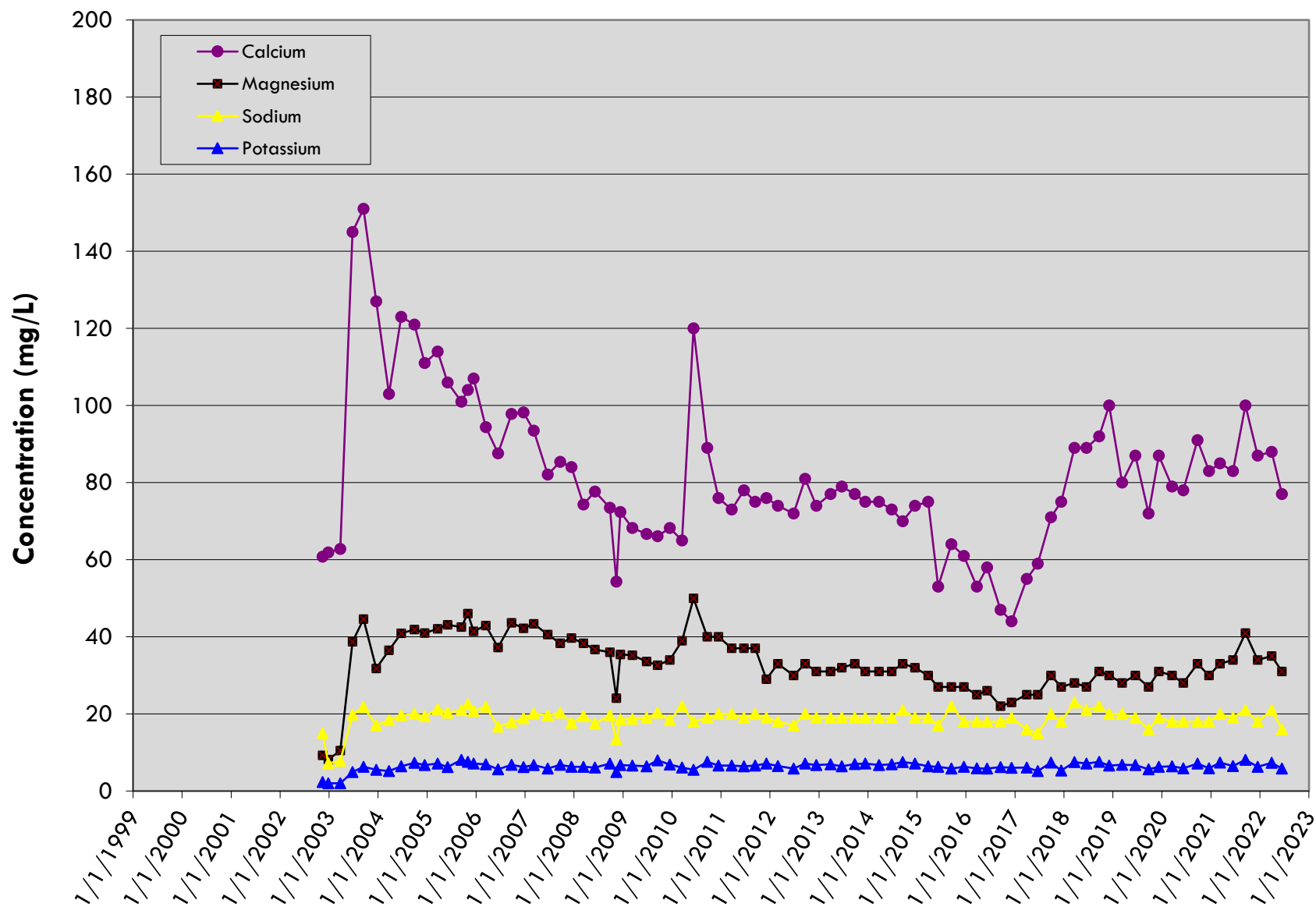
LDCS-2A

LRI Landfill, Pierce County, Washington



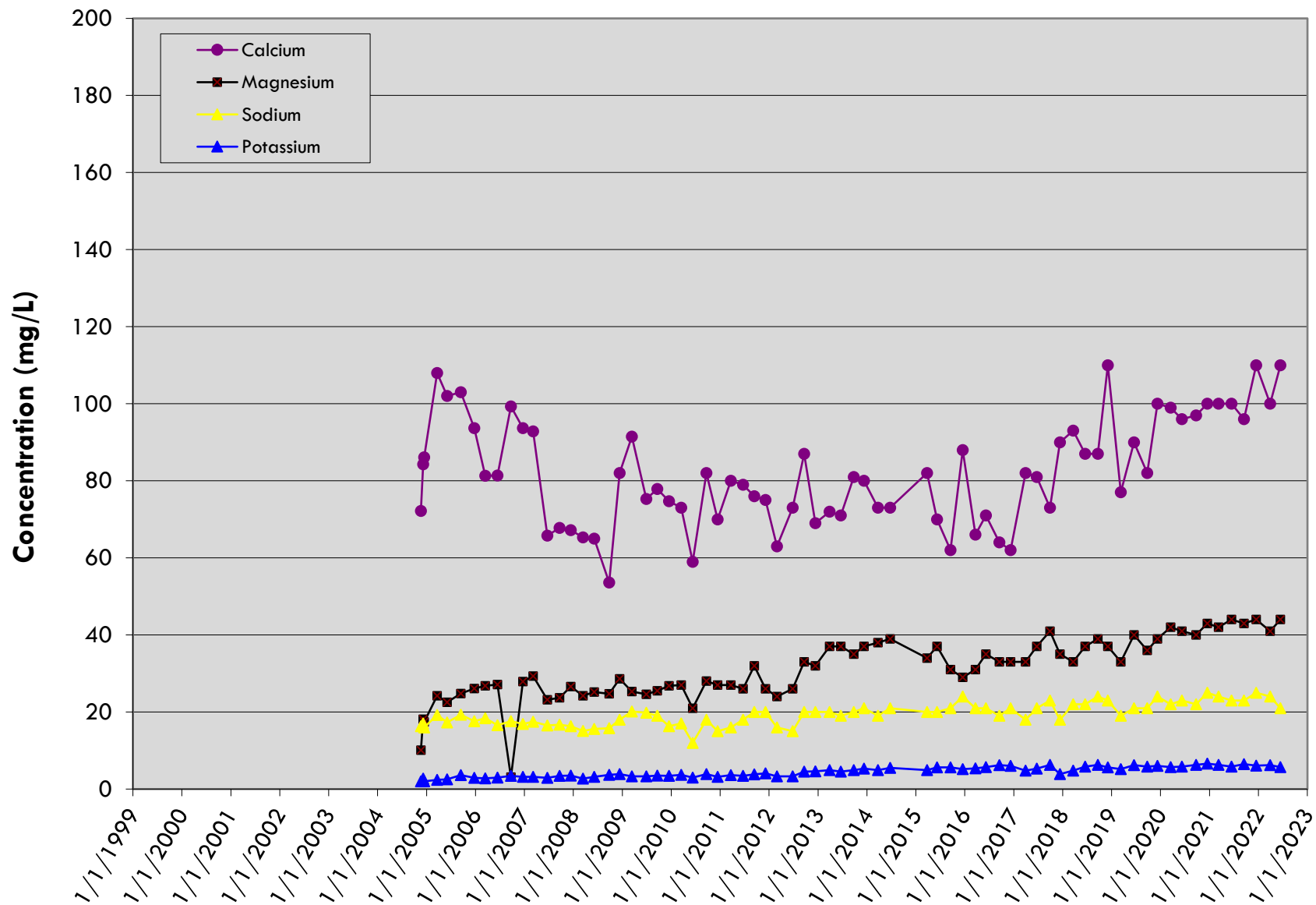
LDCS-2B

LRI Landfill, Pierce County, Washington



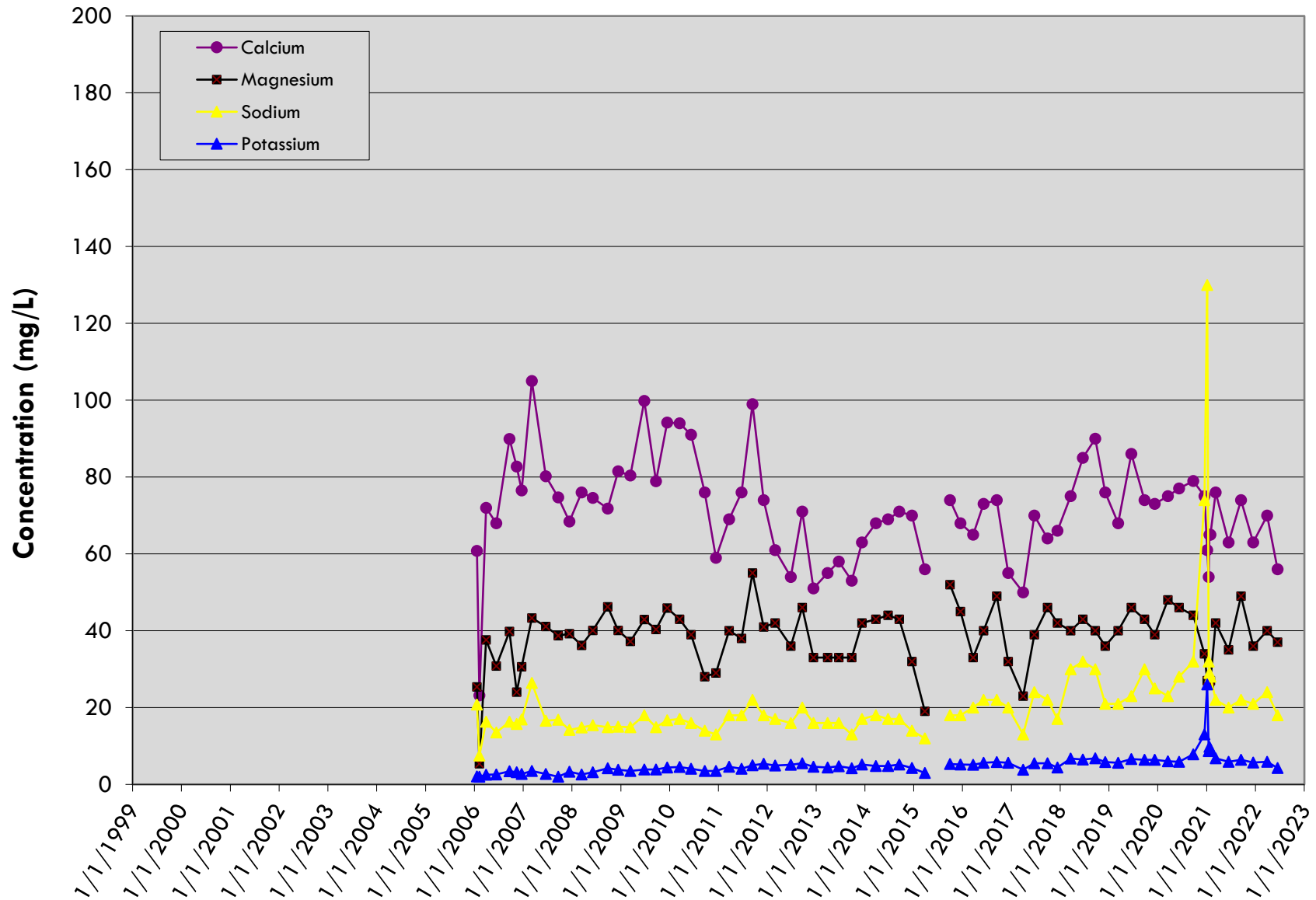
LDCS-3A

LRI Landfill, Pierce County, Washington



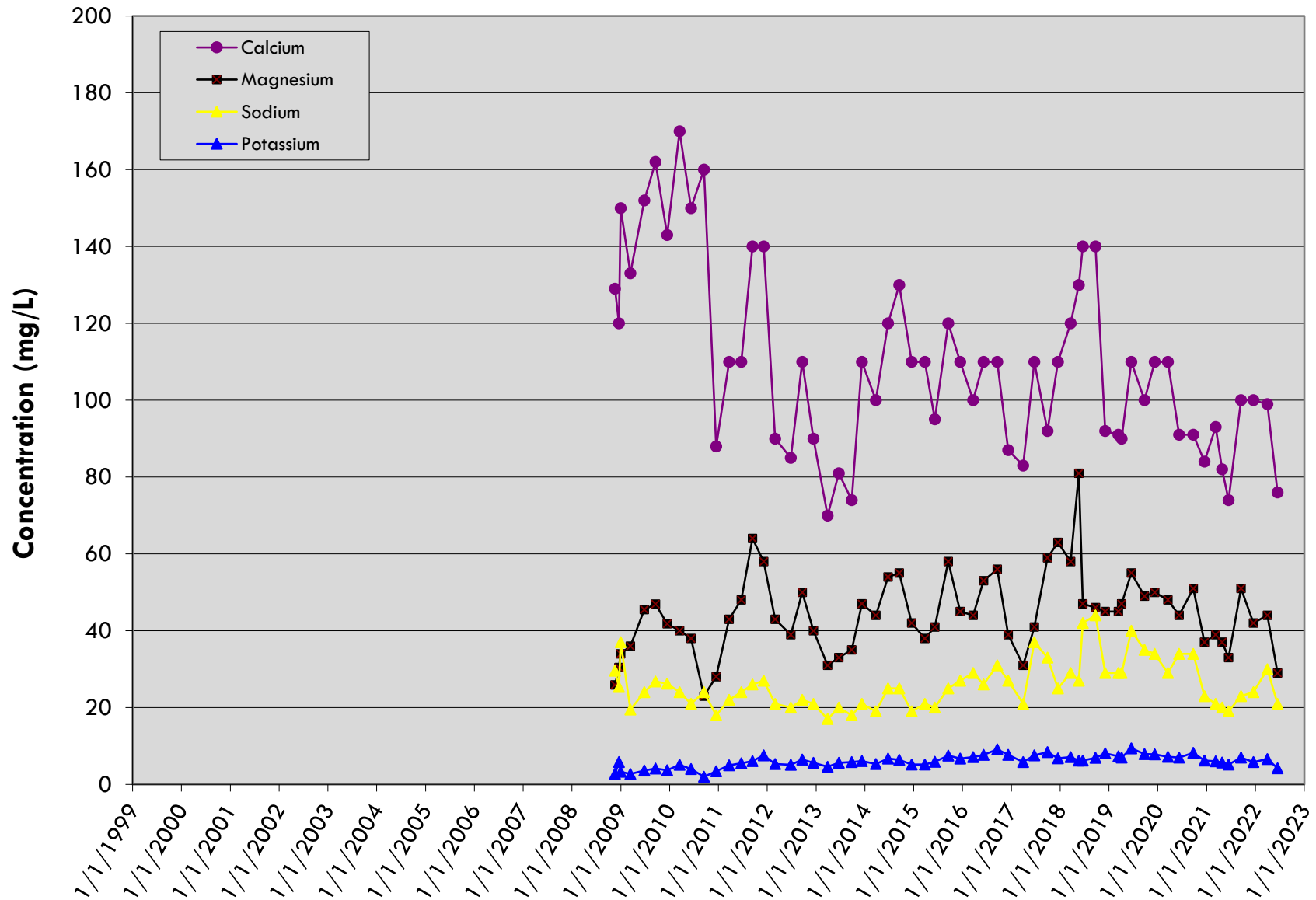
LDCS-4A

LRI Landfill, Pierce County, Washington



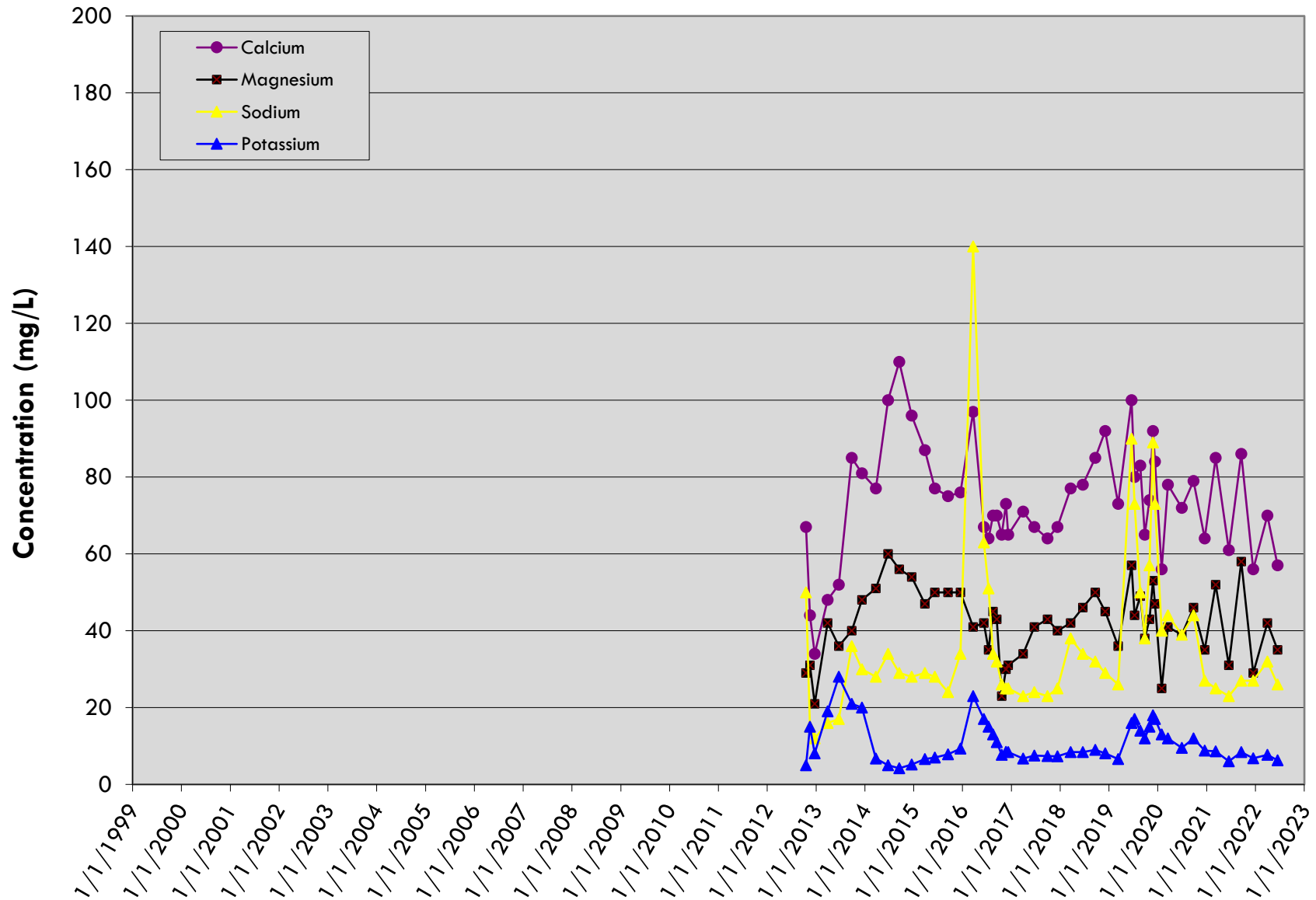
LDCS-4B

LRI Landfill, Pierce County, Washington



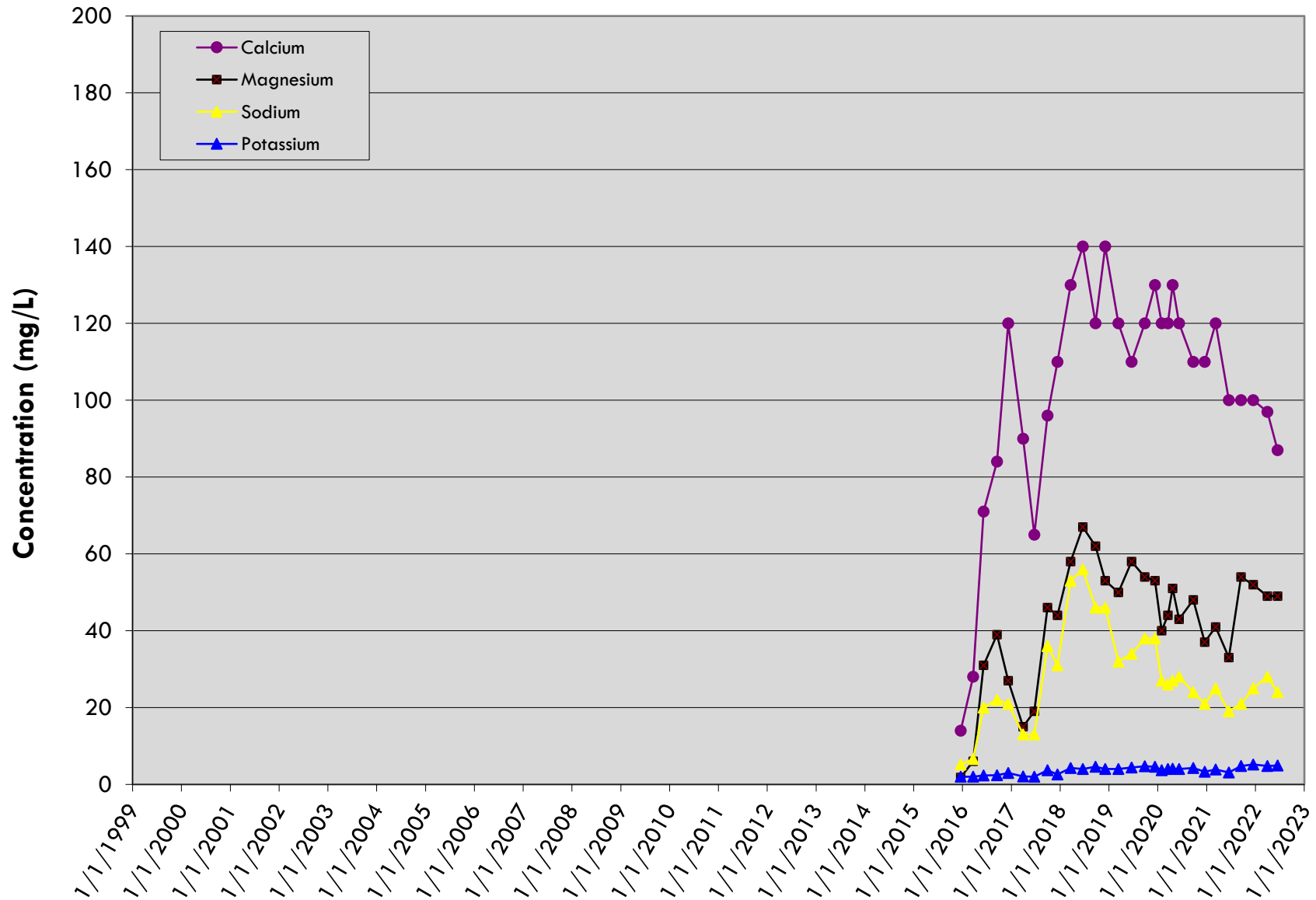
LDCS-5

LRI Landfill, Pierce County, Washington



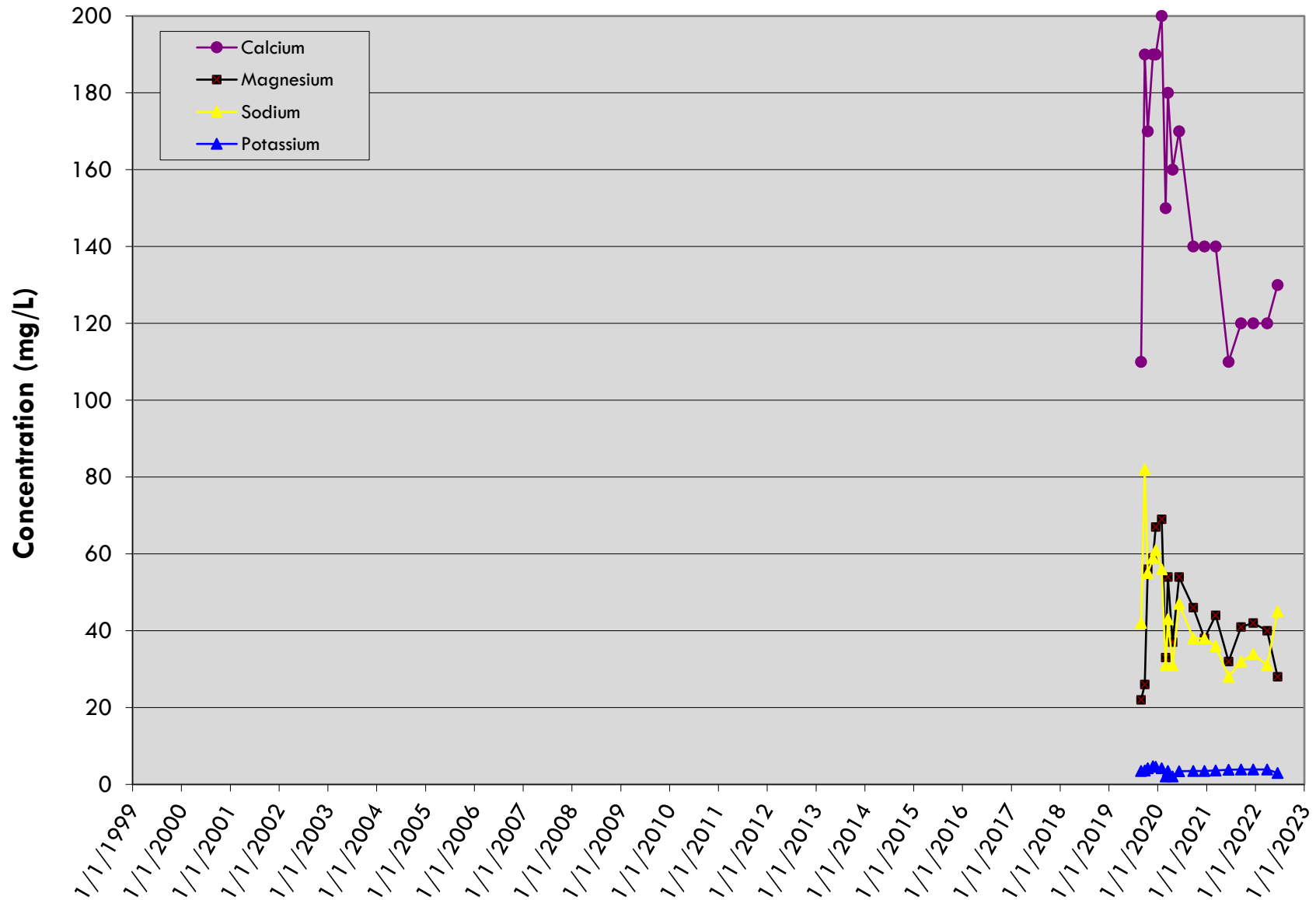
LDCS-6A

LRI Landfill, Pierce County, Washington



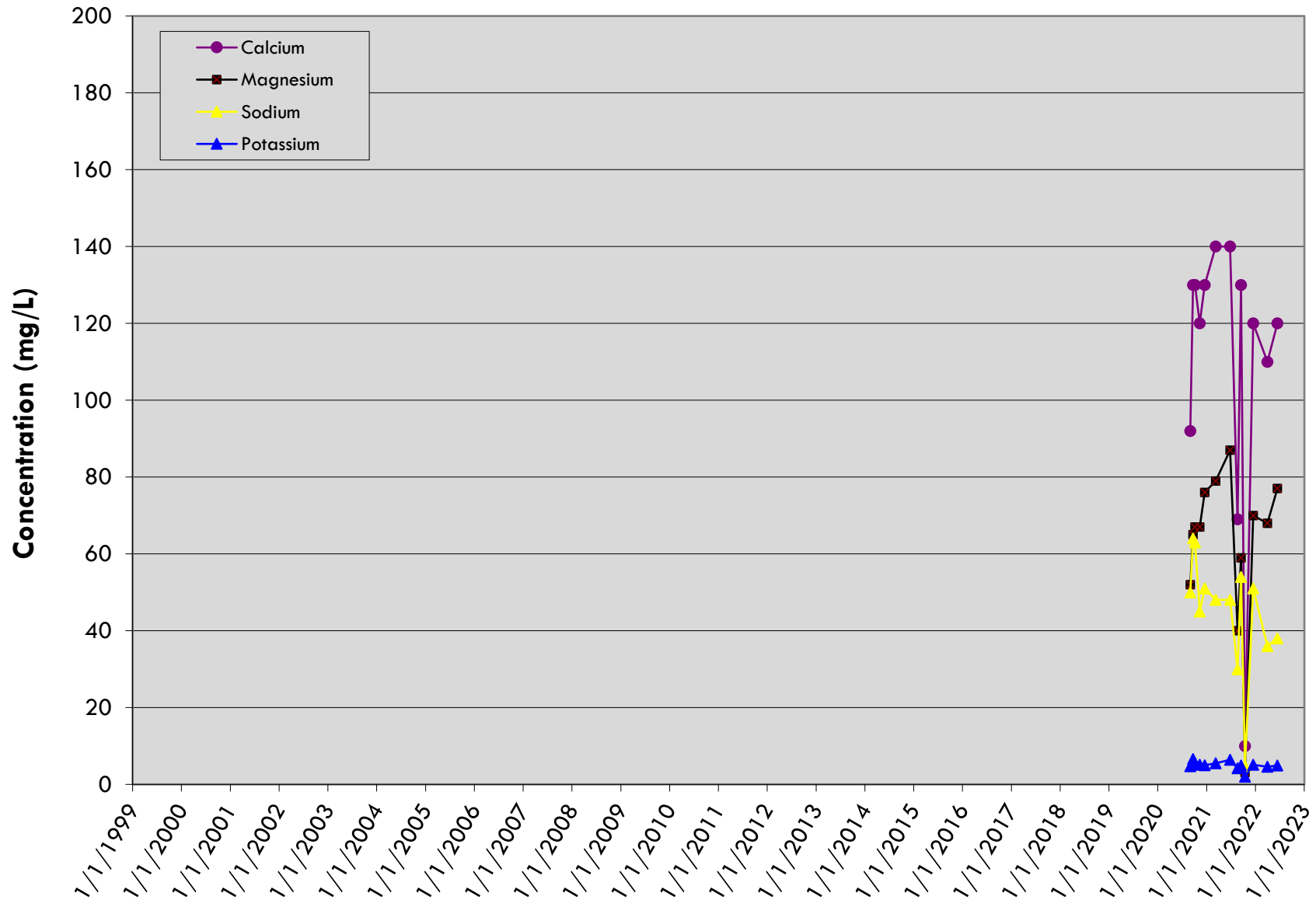
LDCS-7

LRI Landfill, Pierce County, Washington



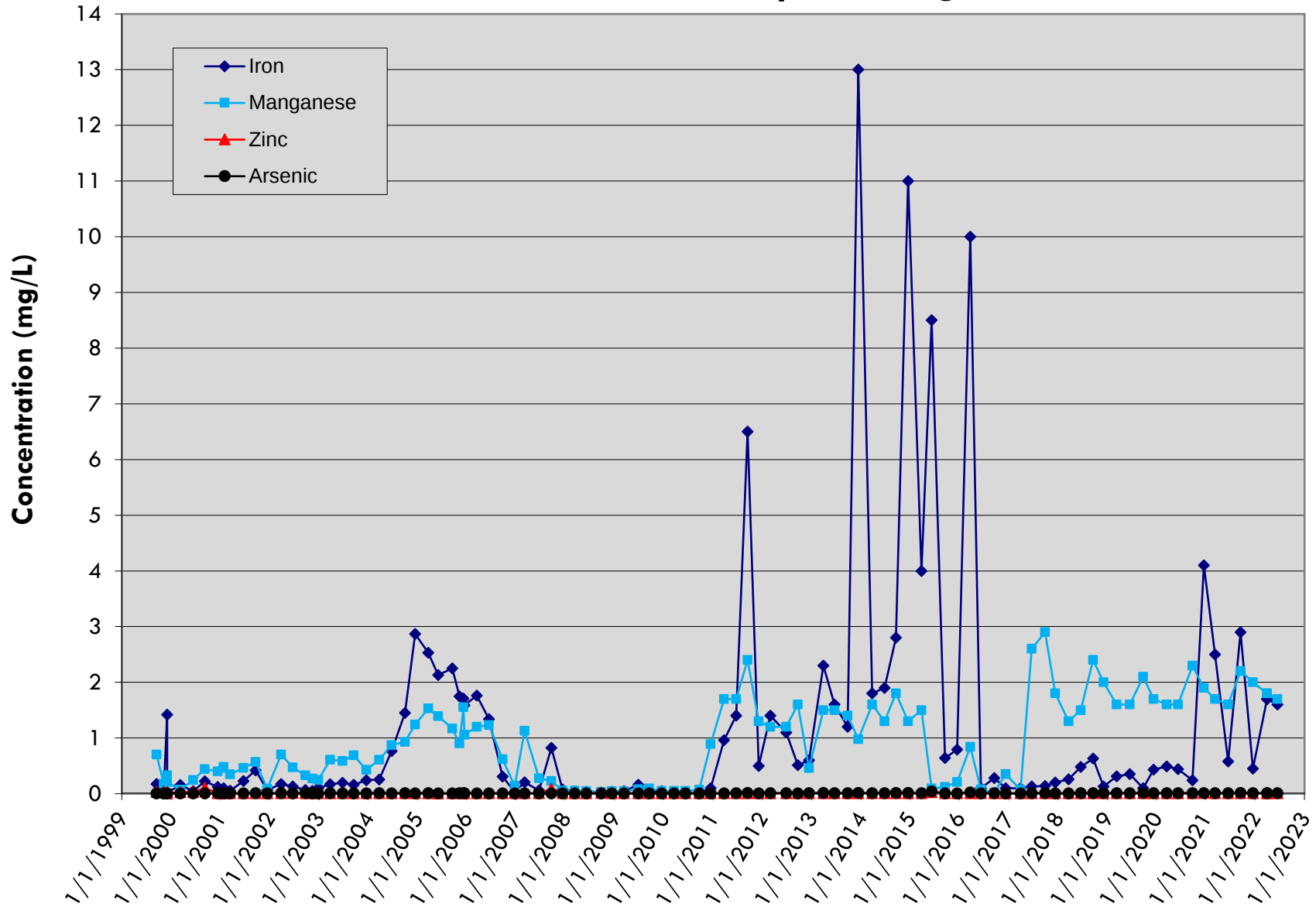
LDCS-8

LRI Landfill, Pierce County, Washington



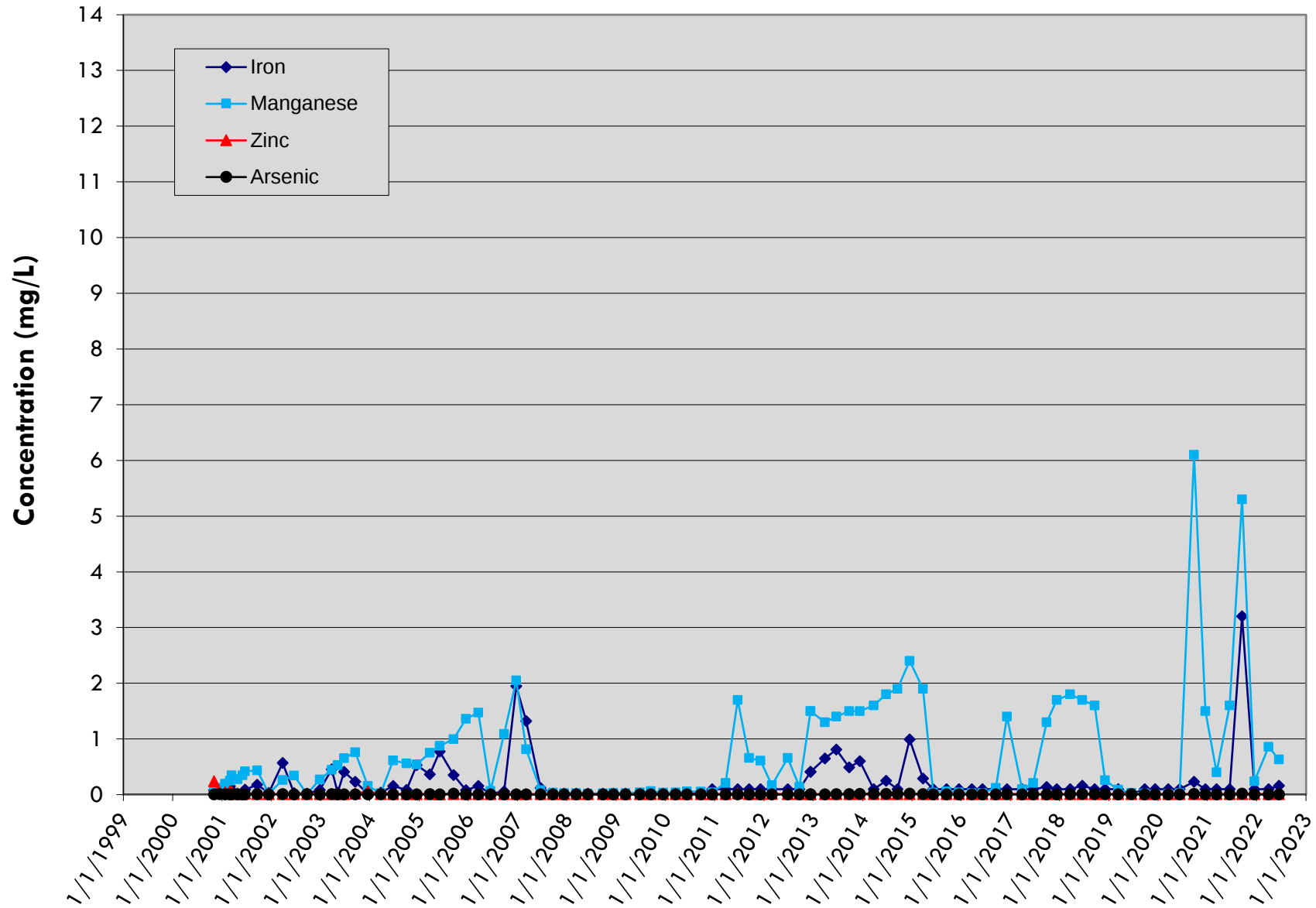
LDCS-1

LRI Landfill, Pierce County, Washington



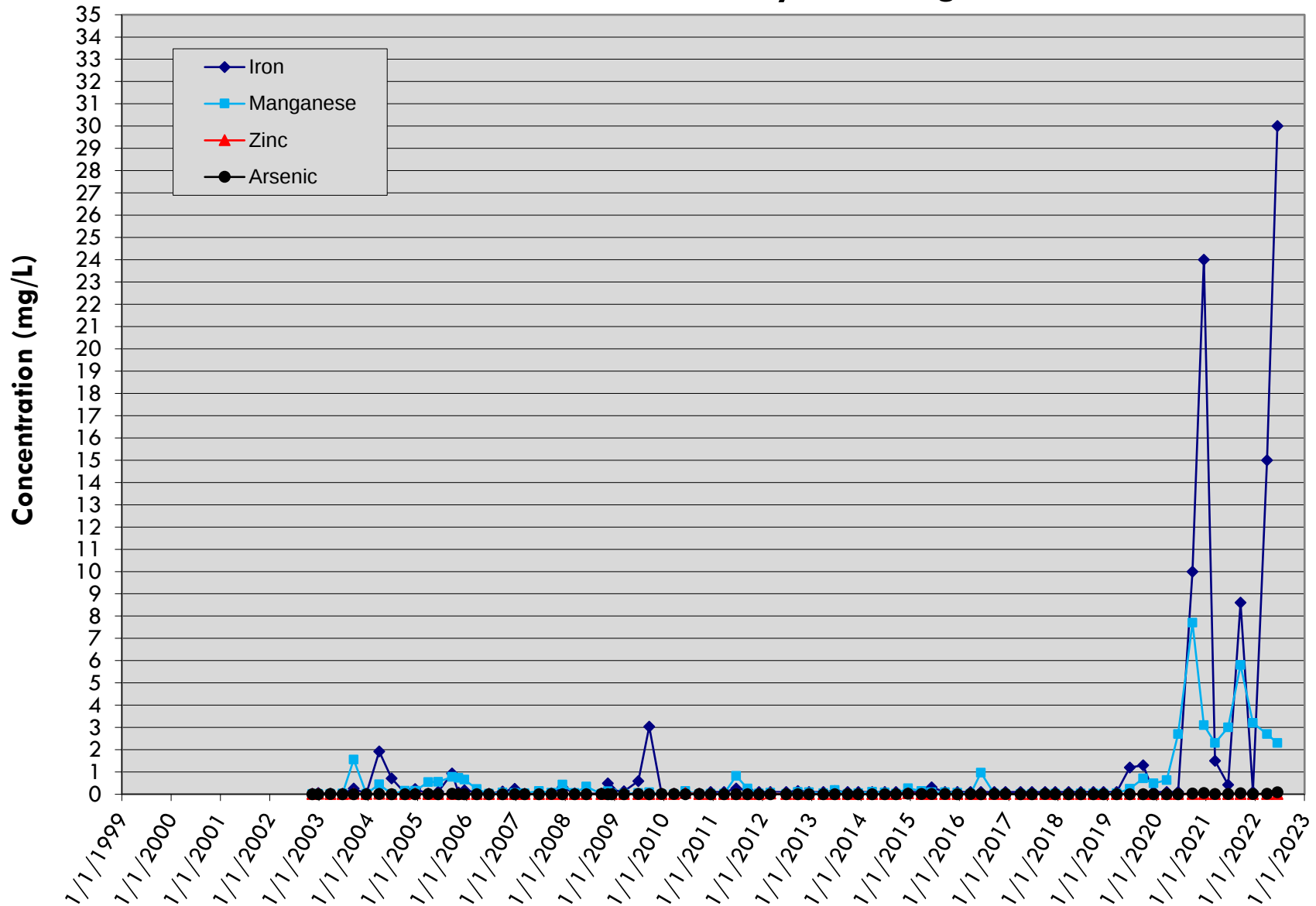
LDCS-2A

LRI Landfill, Pierce County, Washington



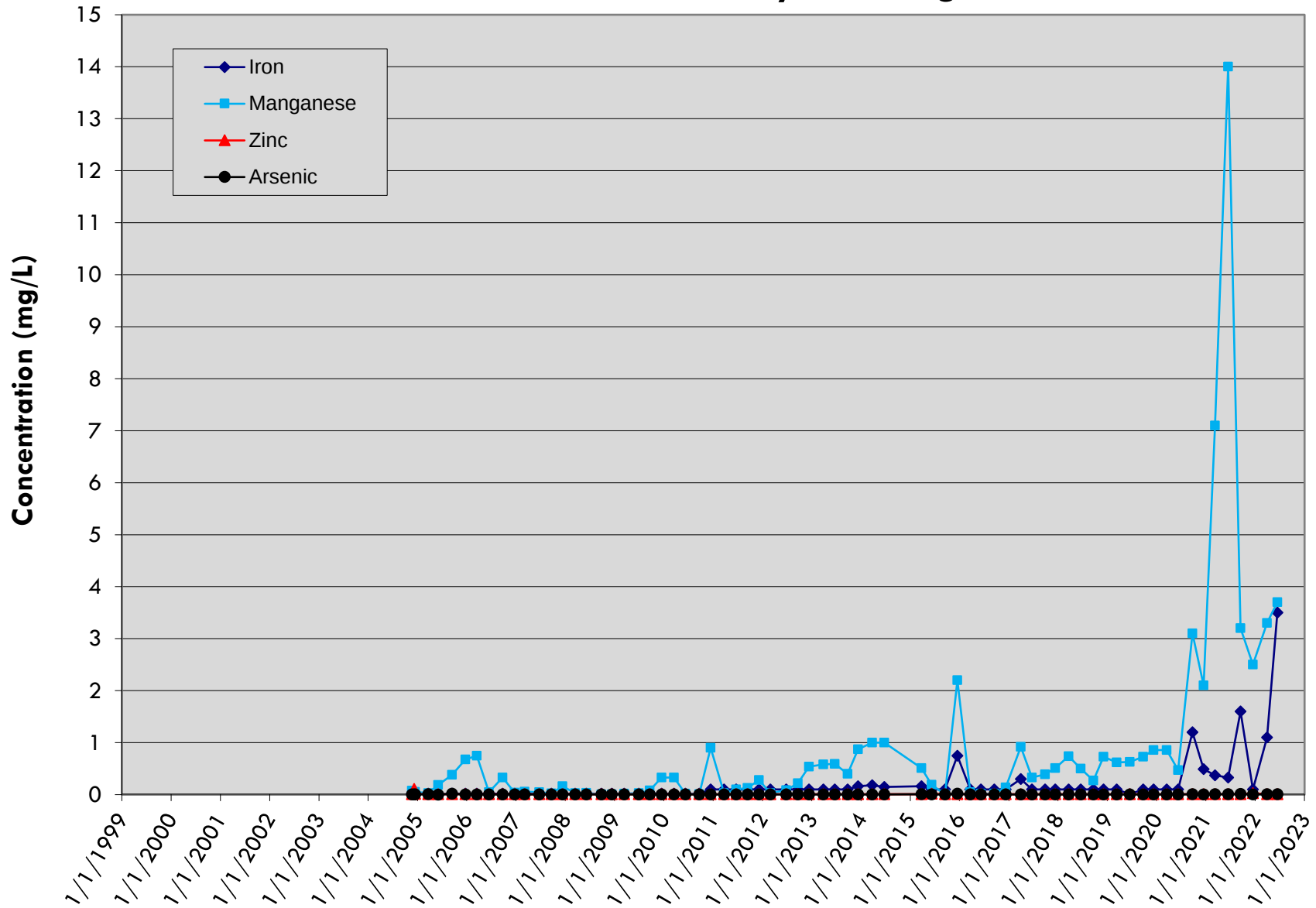
LDCS-2B

LRI Landfill, Pierce County, Washington



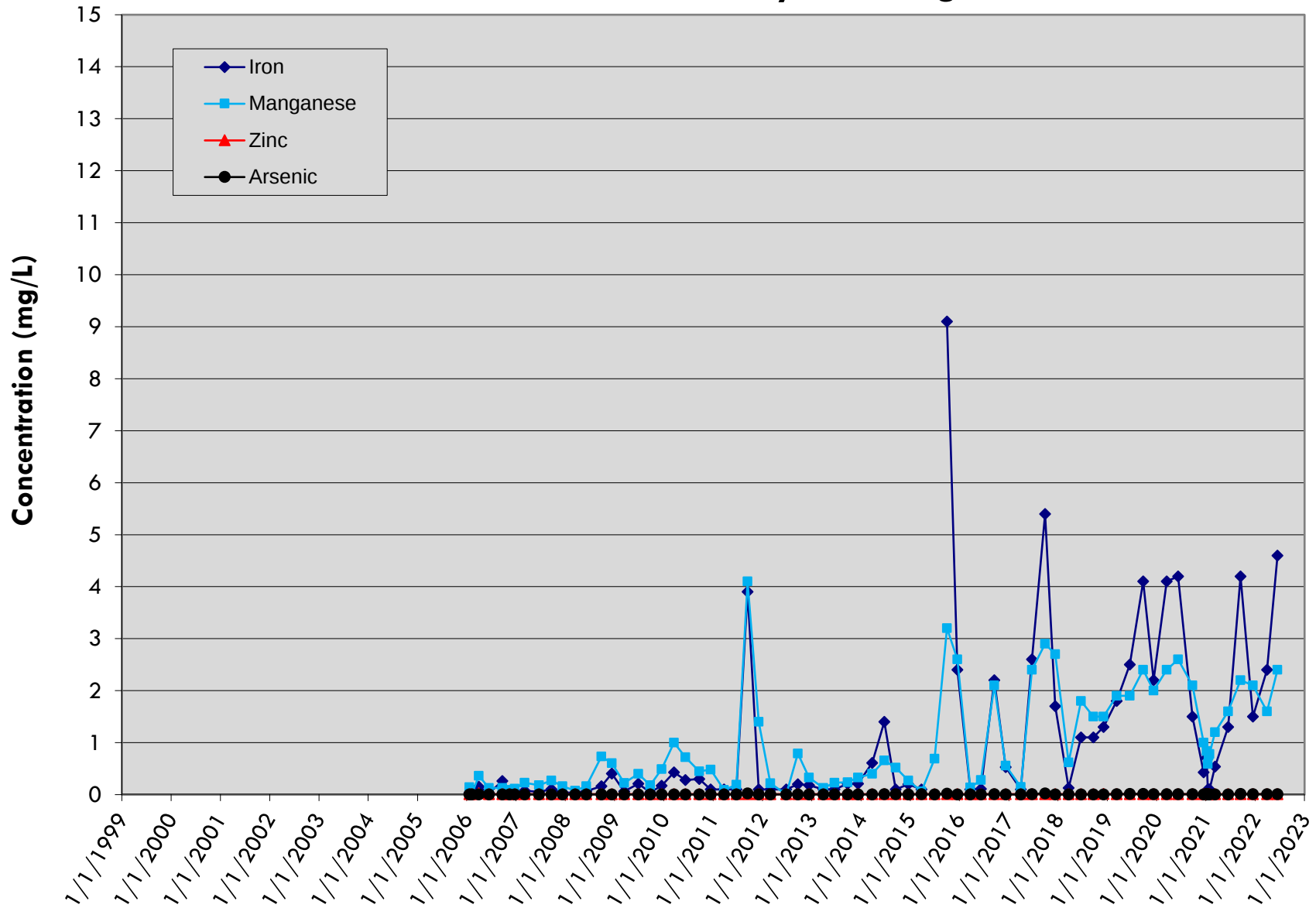
LDCS-3A

LRI Landfill, Pierce County, Washington



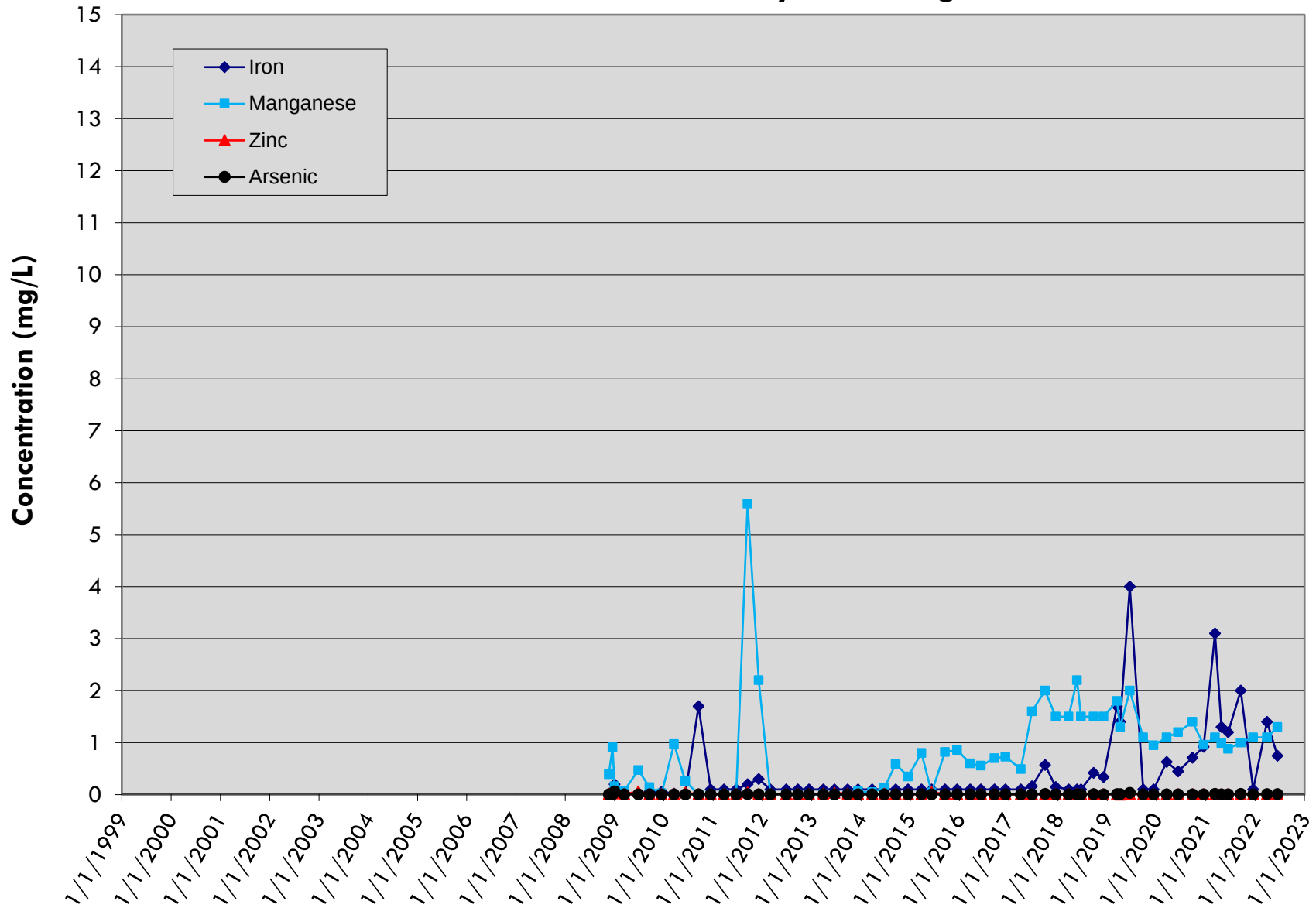
LDCS-4A

LRI Landfill, Pierce County, Washington



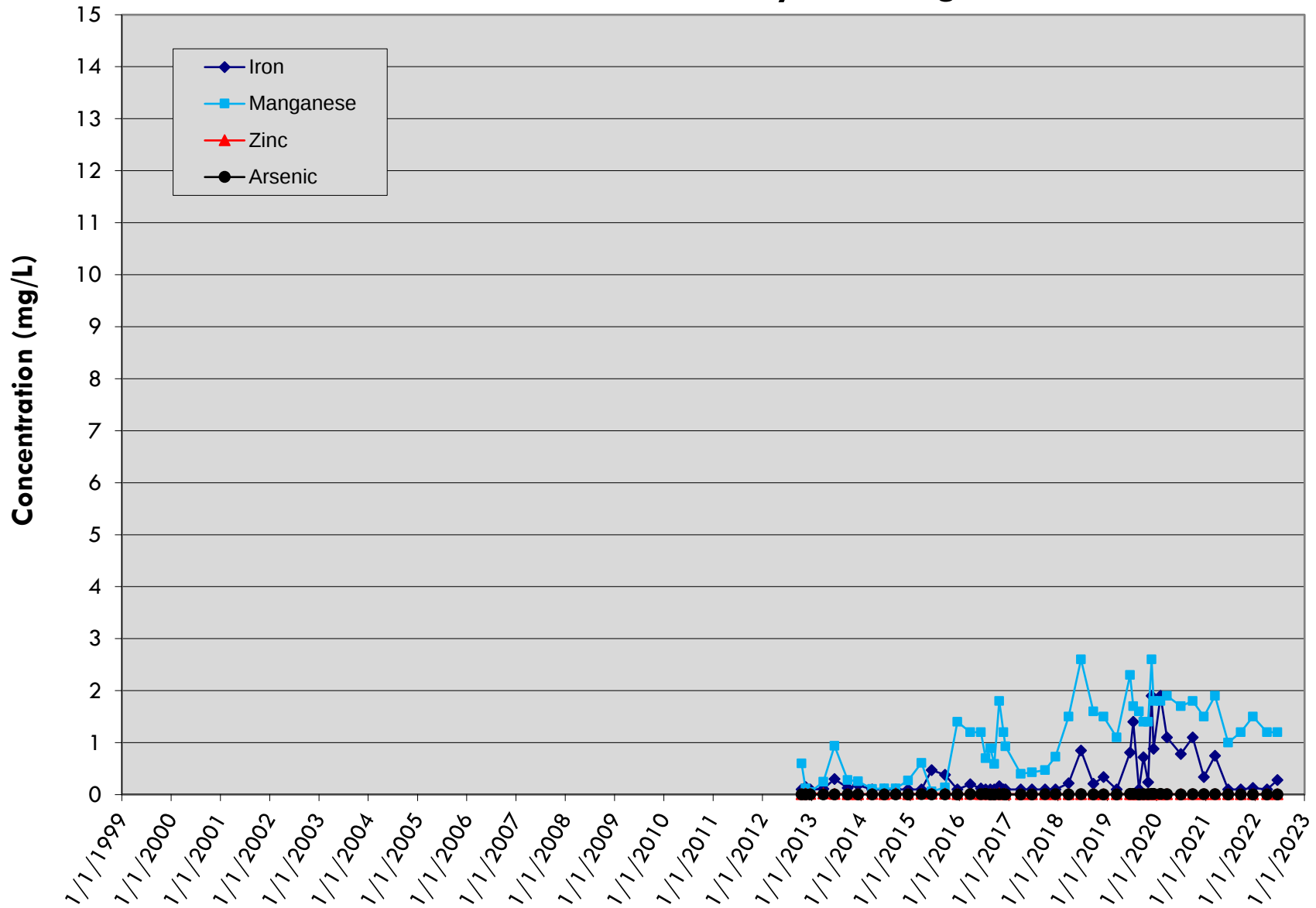
LDCS-4B

LRI Landfill, Pierce County, Washington



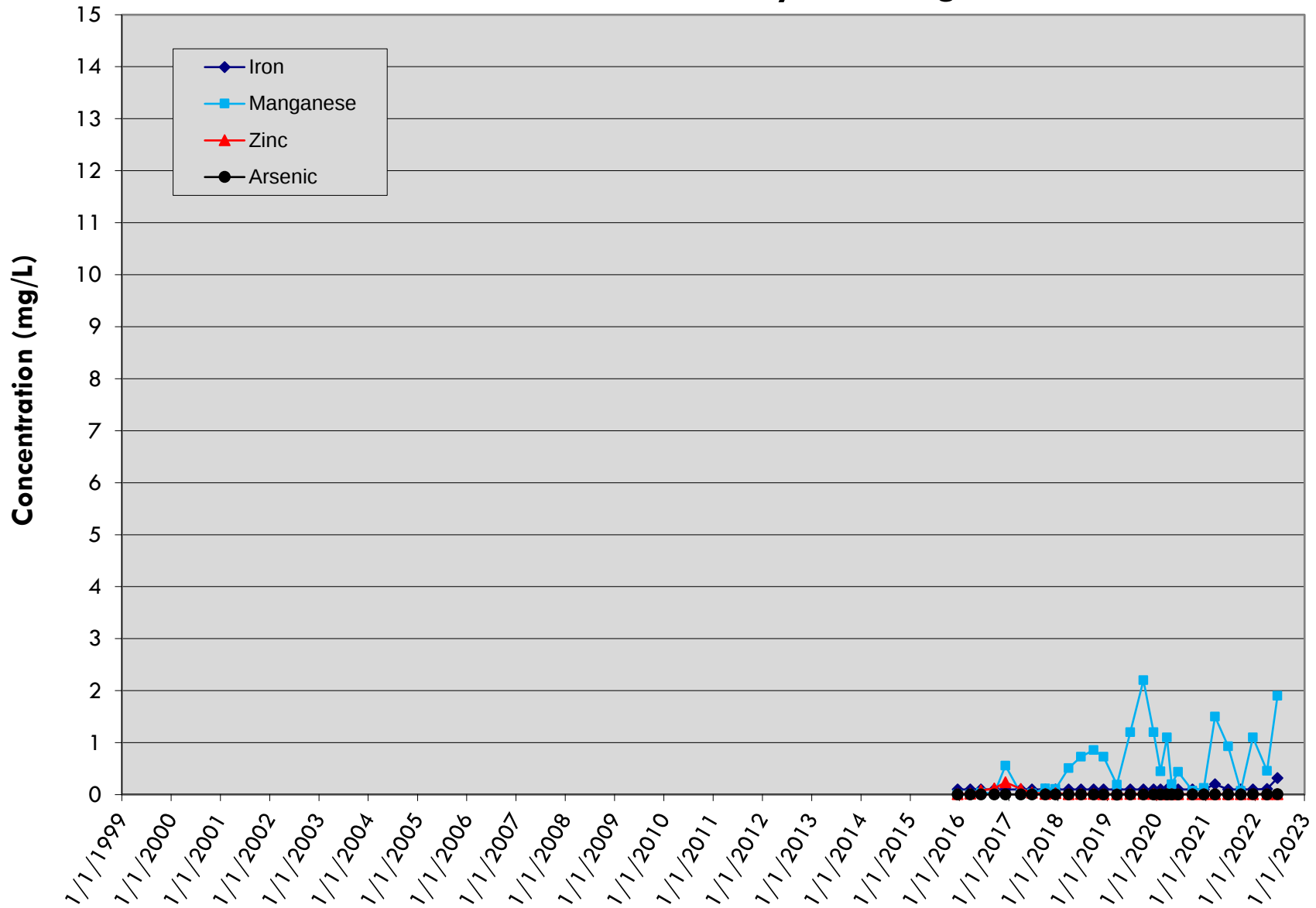
LDCS-5

LRI Landfill, Pierce County, Washington



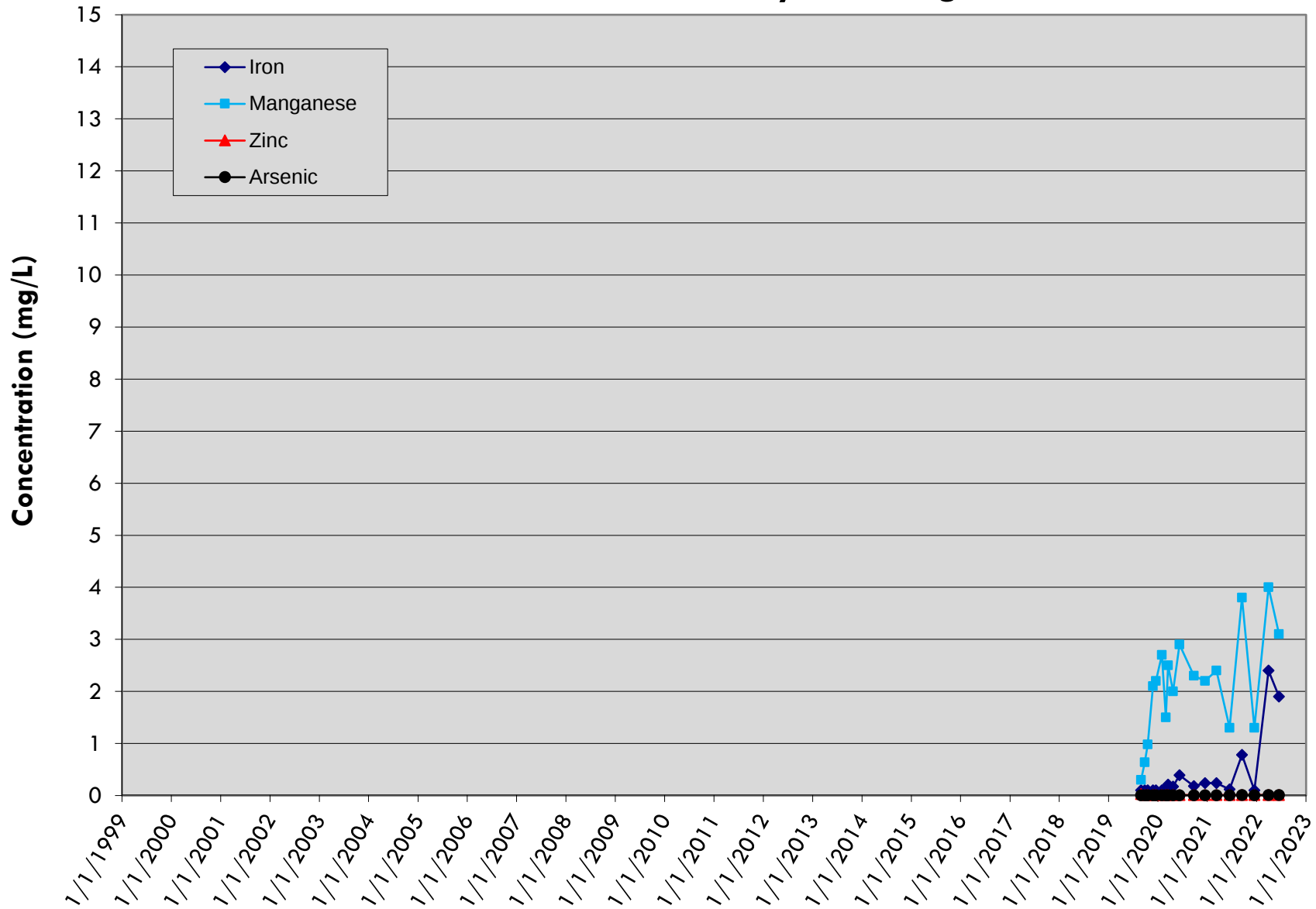
LDCS-6A

LRI Landfill, Pierce County, Washington



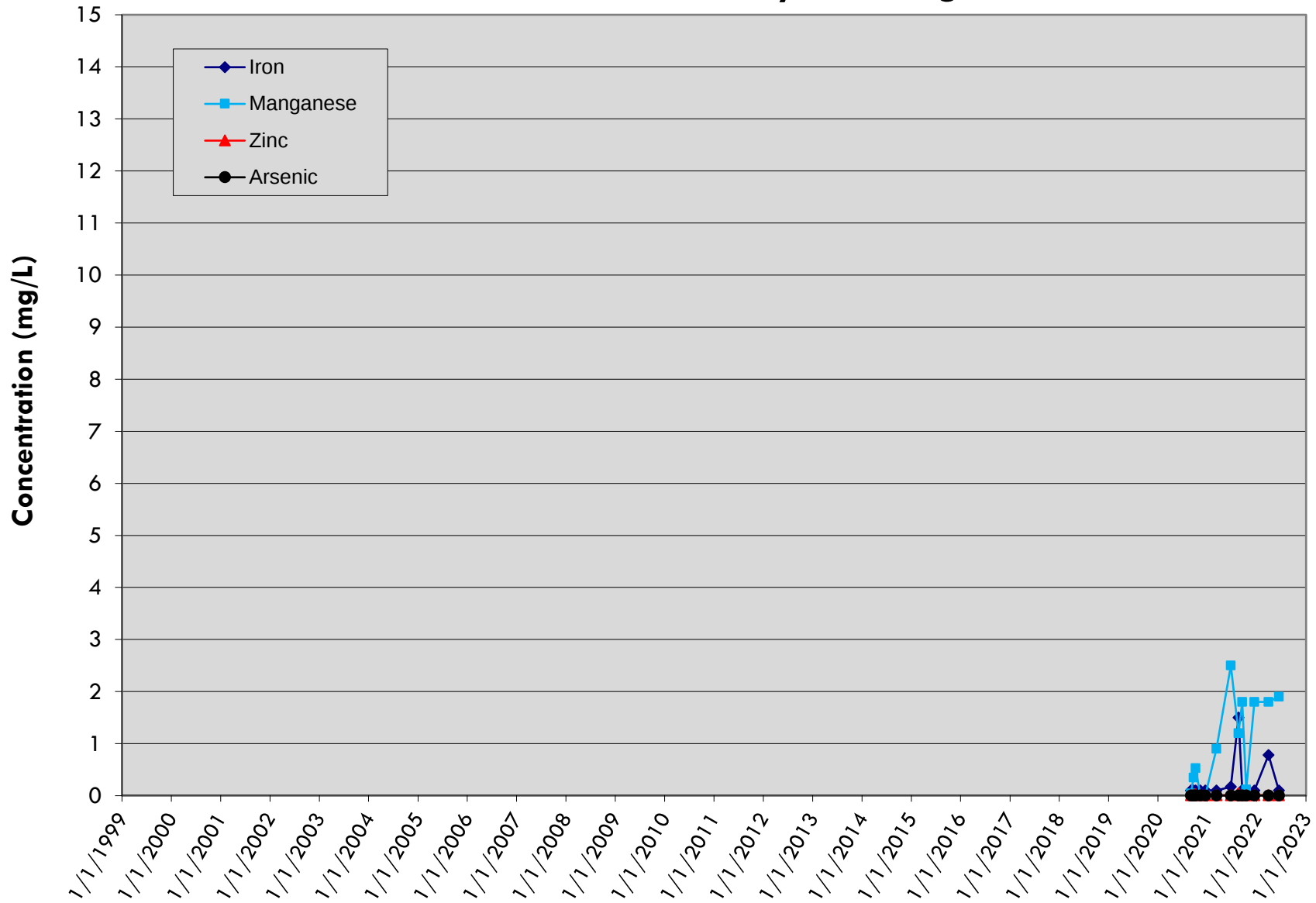
LDCS-7

LRI Landfill, Pierce County, Washington



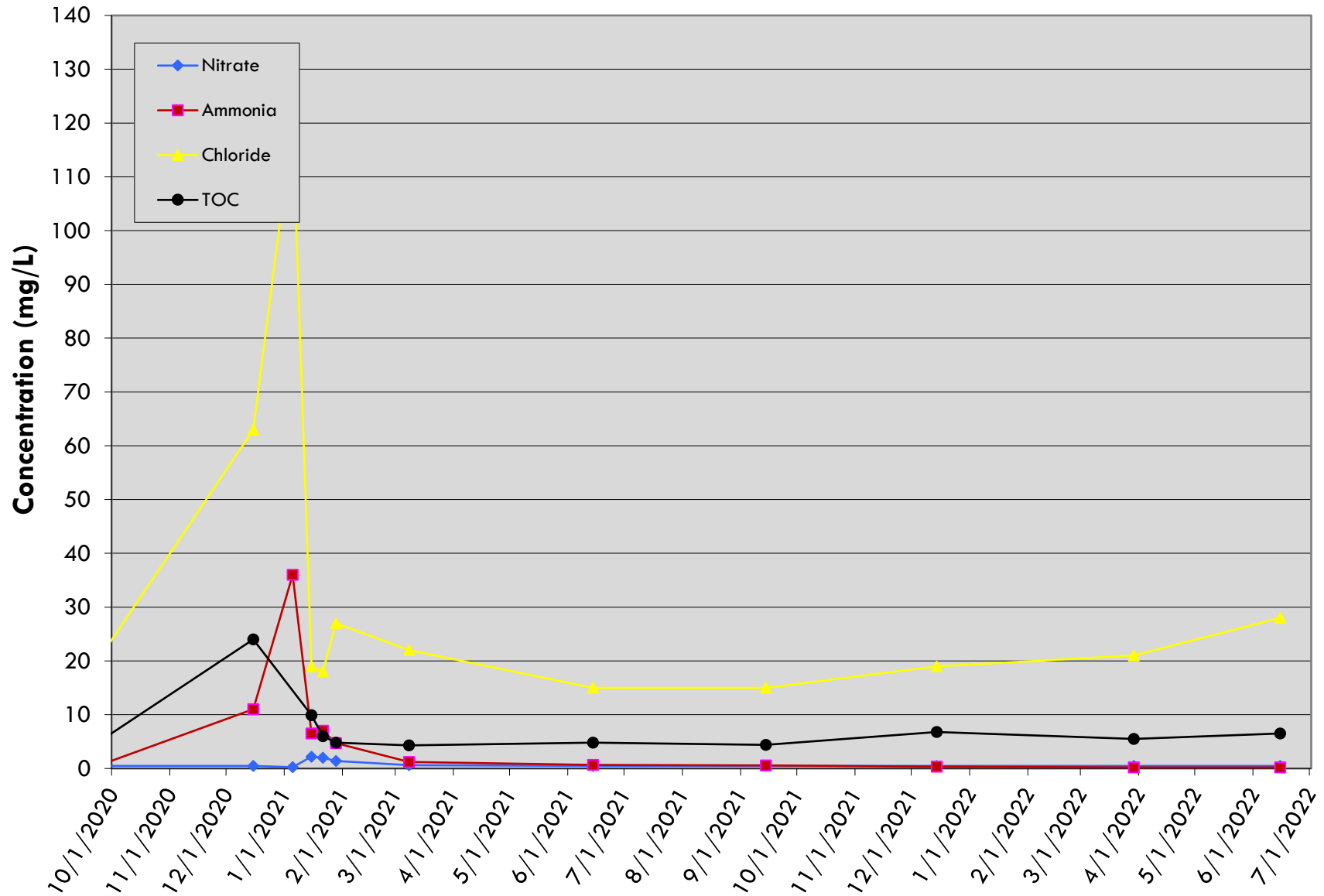
LDCS-8

LRI Landfill, Pierce County, Washington



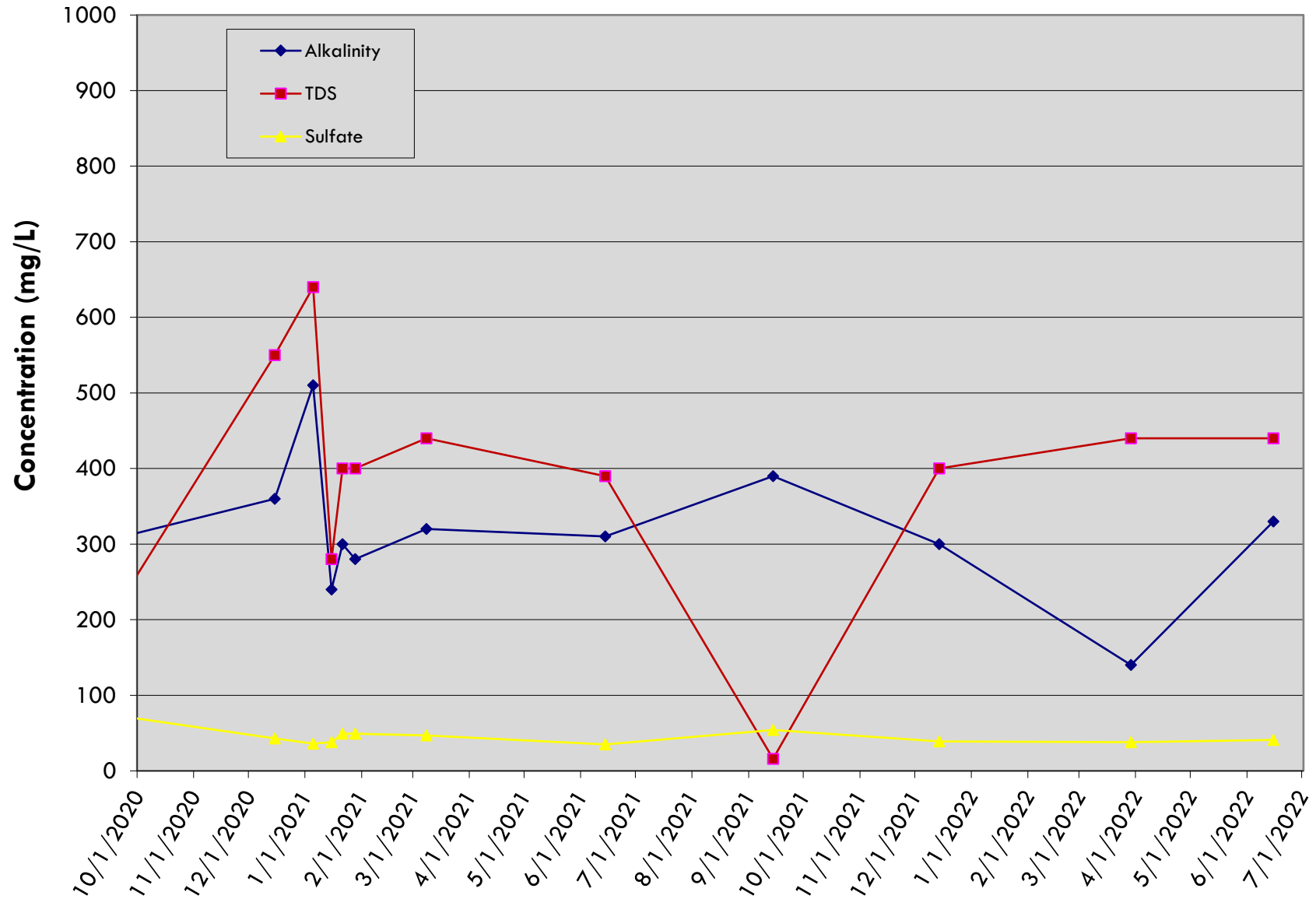
LDCS-4A

LRI Landfill, Pierce County, Washington



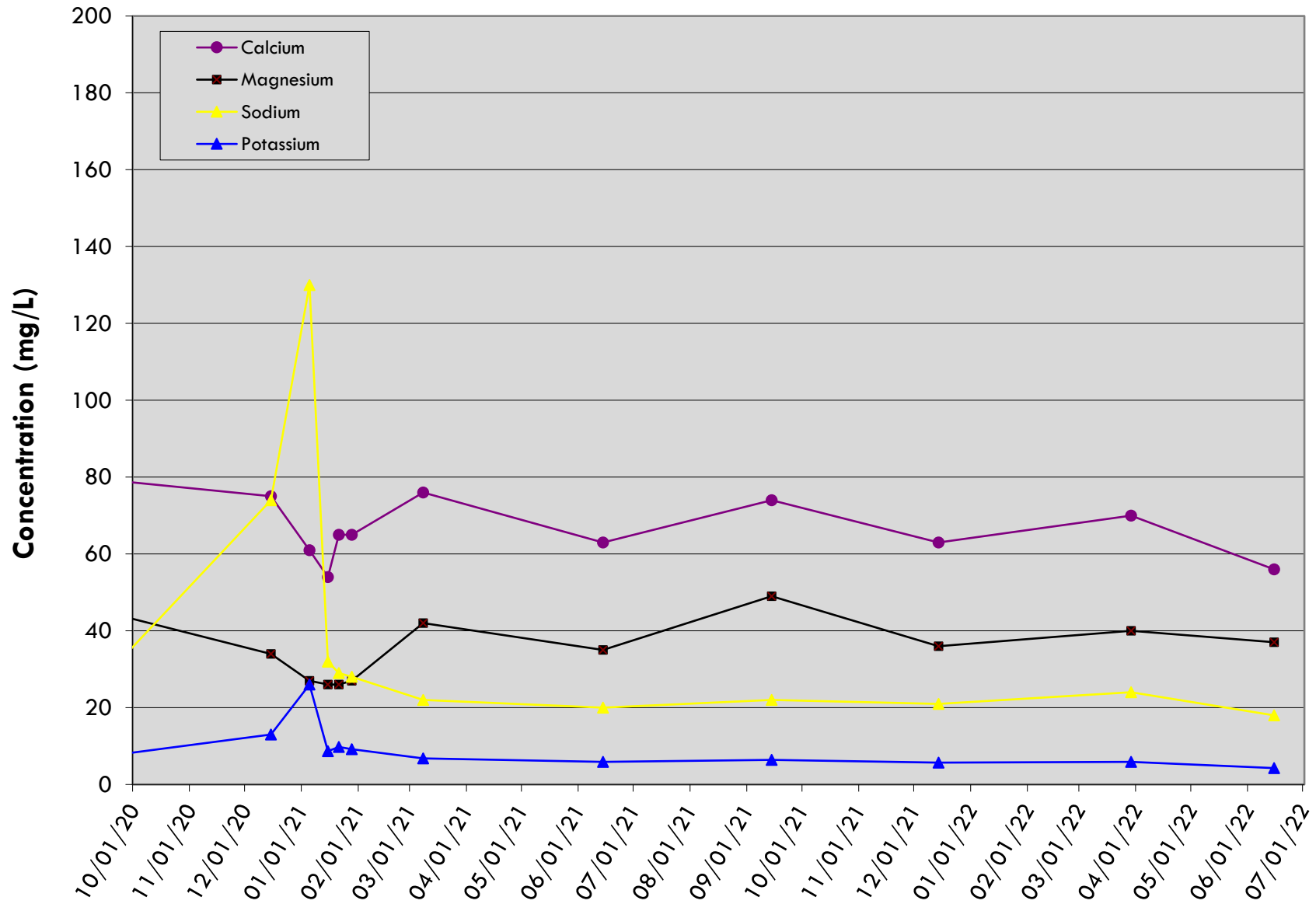
LDCS-4A

LRI Landfill, Pierce County, Washington



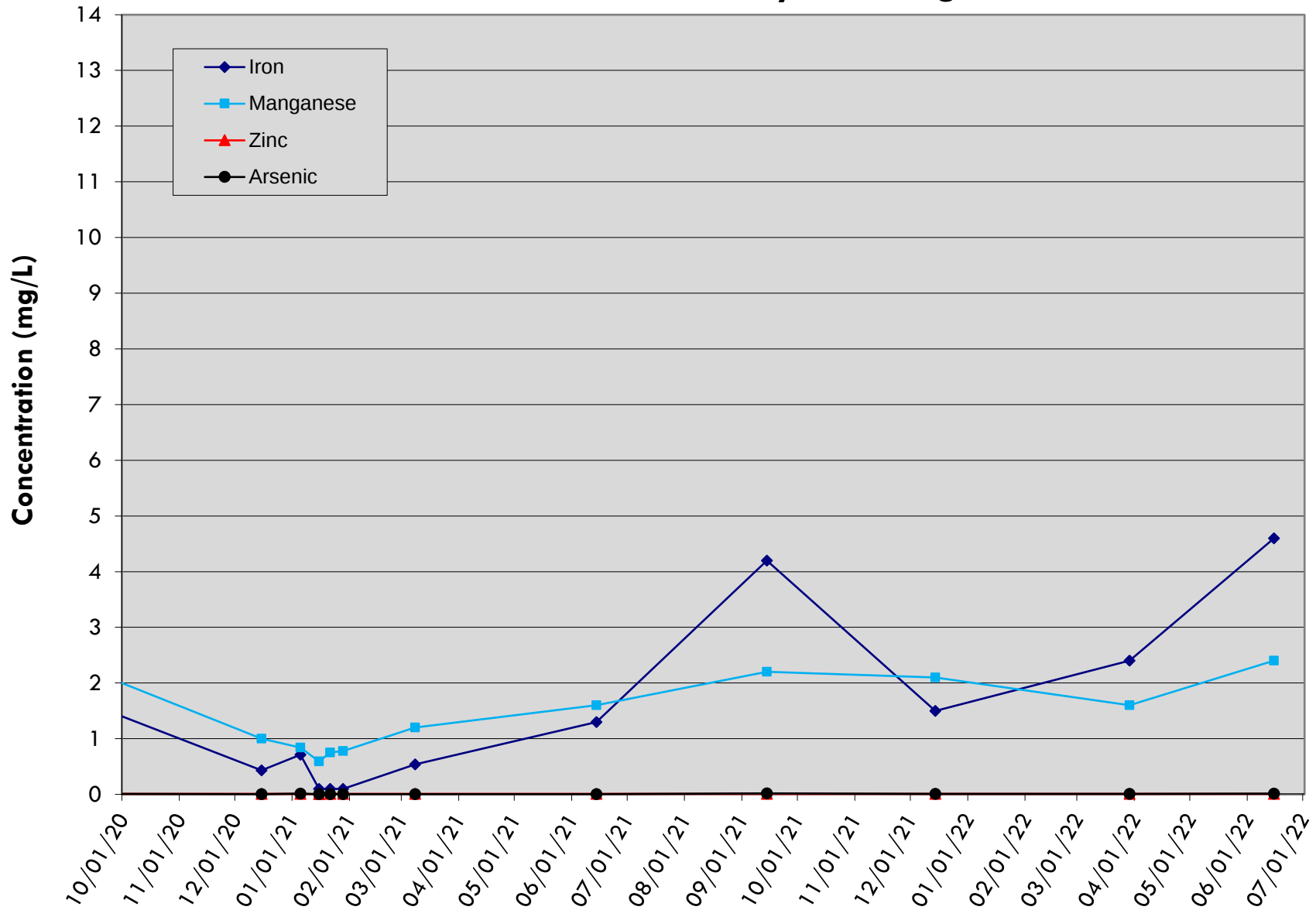
LDCS-4A

LRI Landfill, Pierce County, Washington



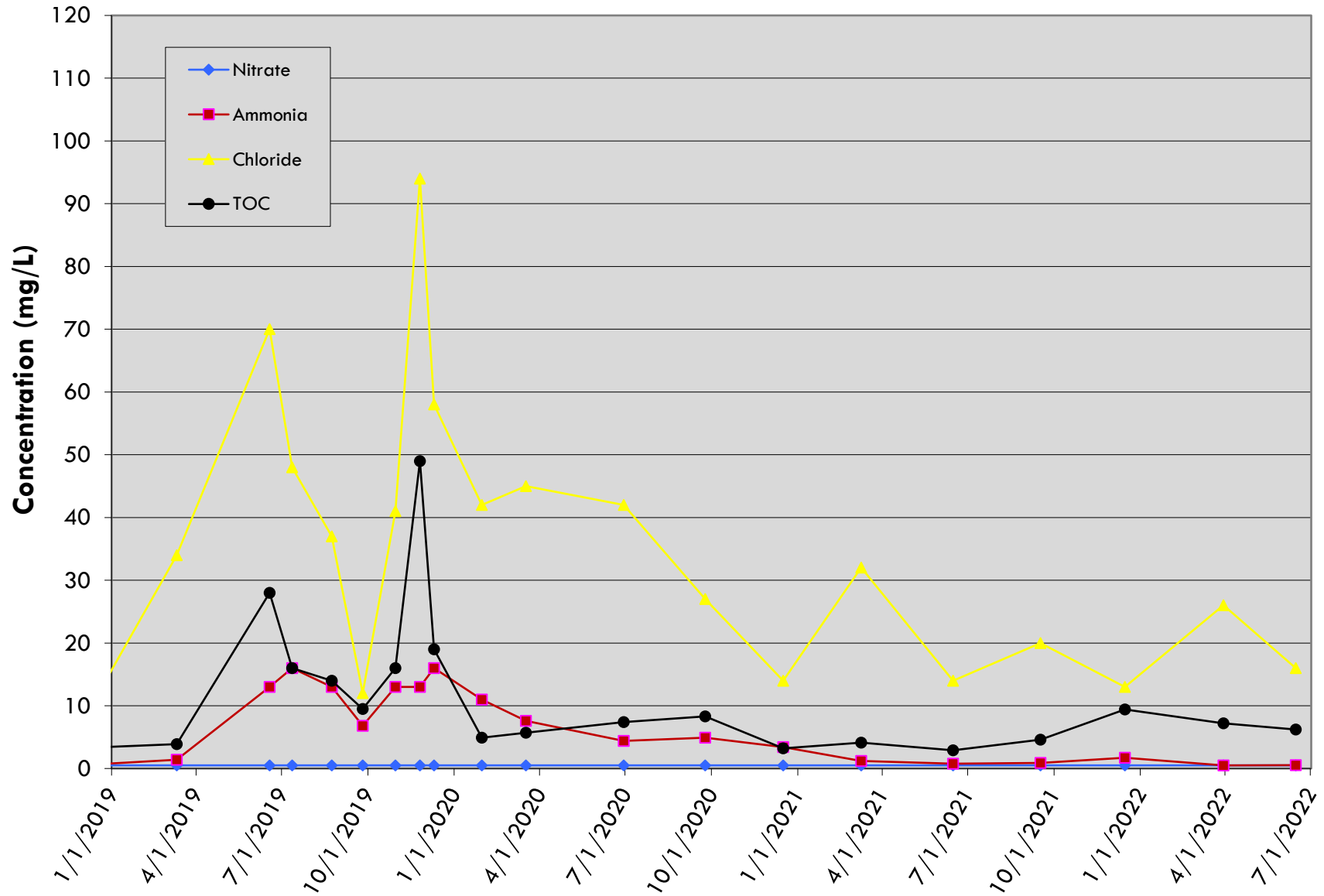
LDCS-4A

LRI Landfill, Pierce County, Washington



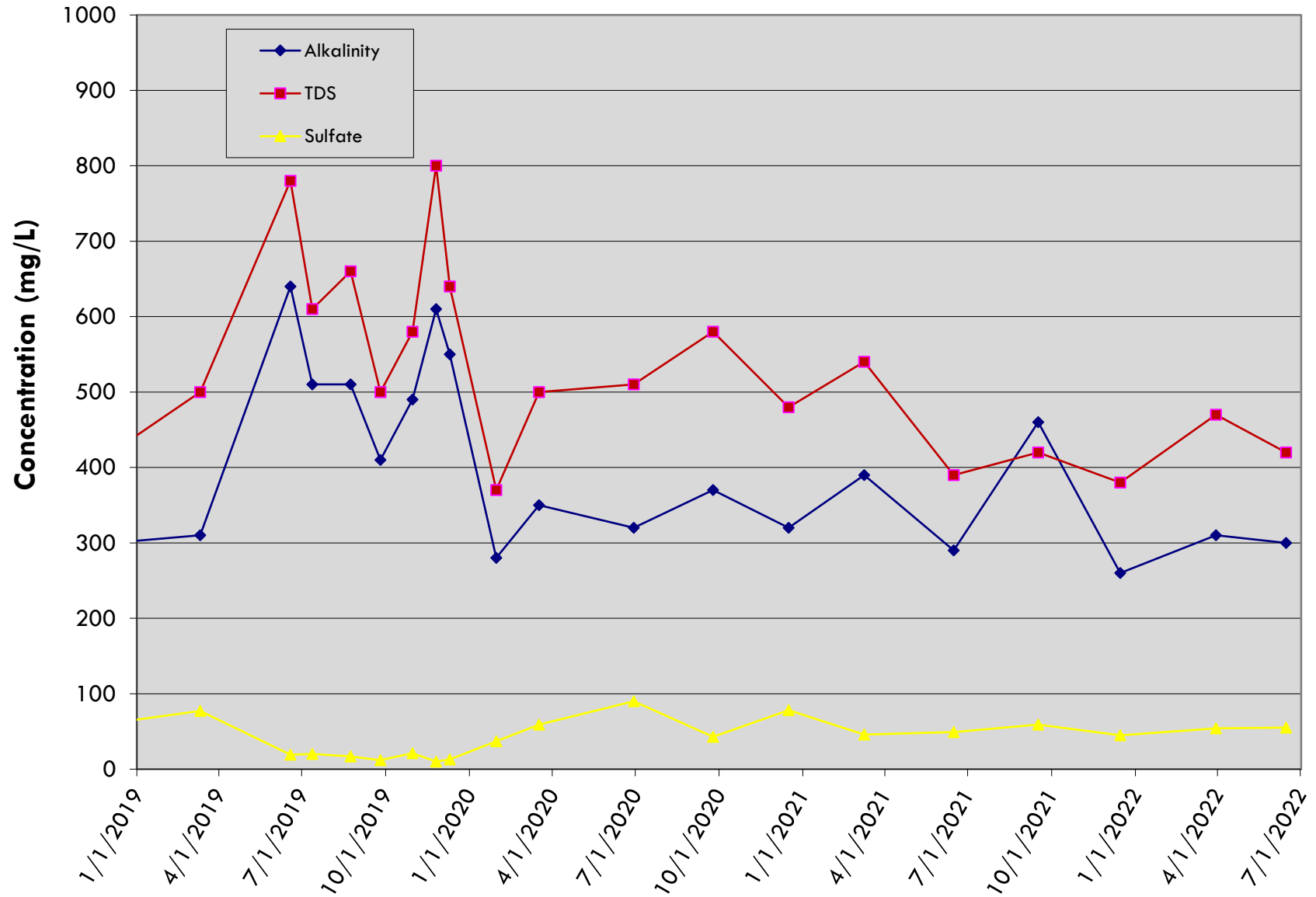
LDCS-5

LRI Landfill, Pierce County, Washington



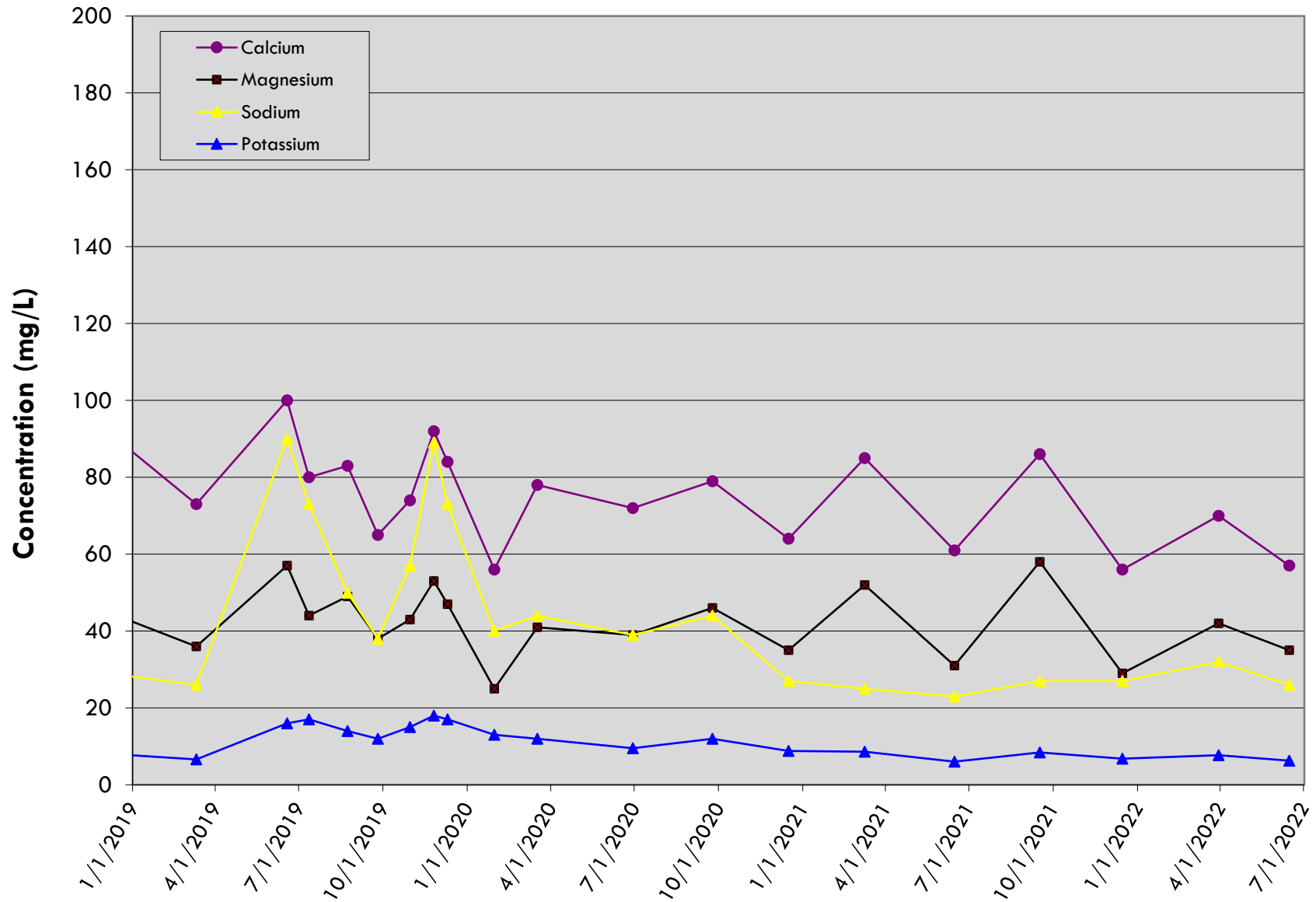
LDCS-5

LRI Landfill, Pierce County, Washington



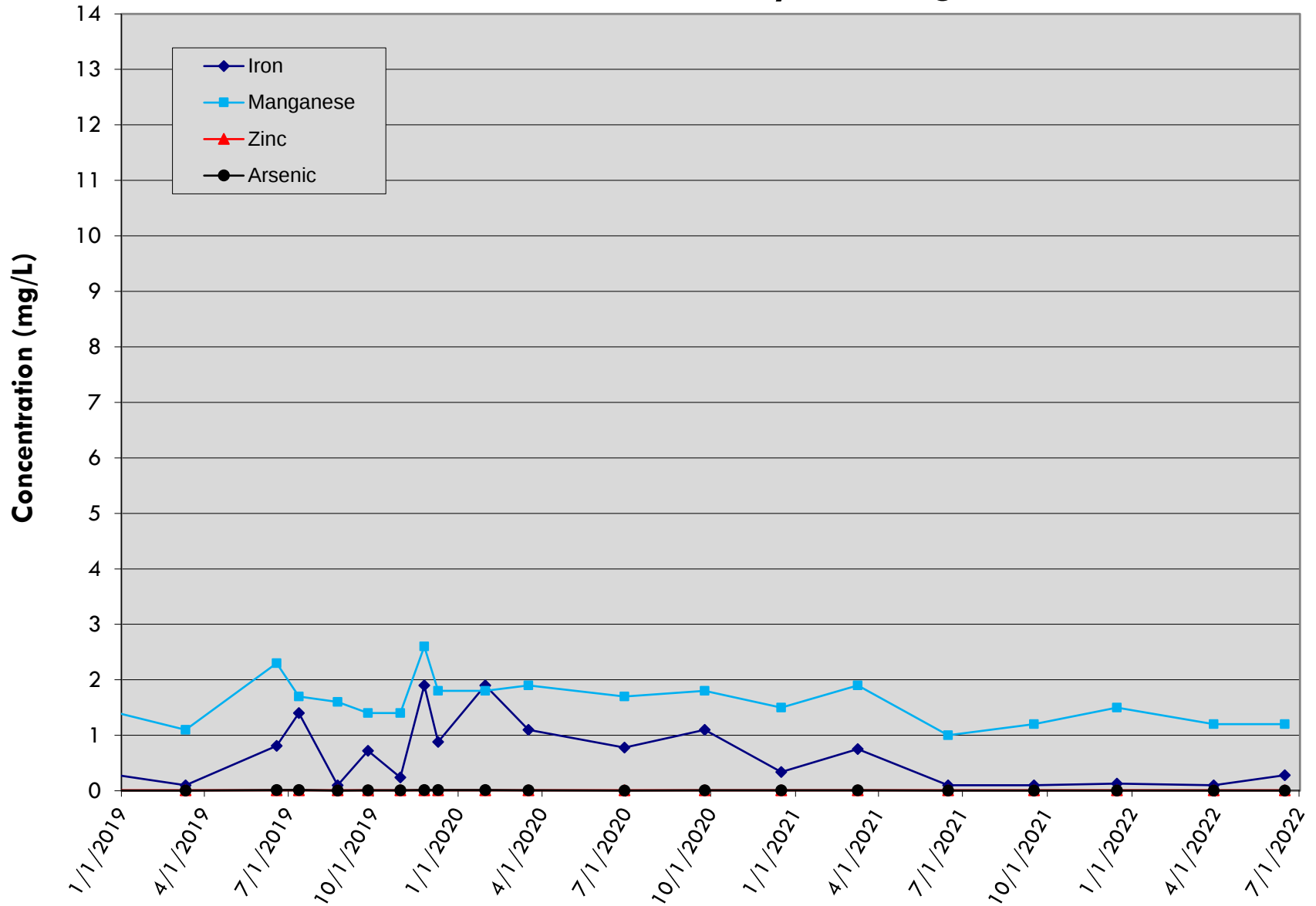
LDCS-5

LRI Landfill, Pierce County, Washington



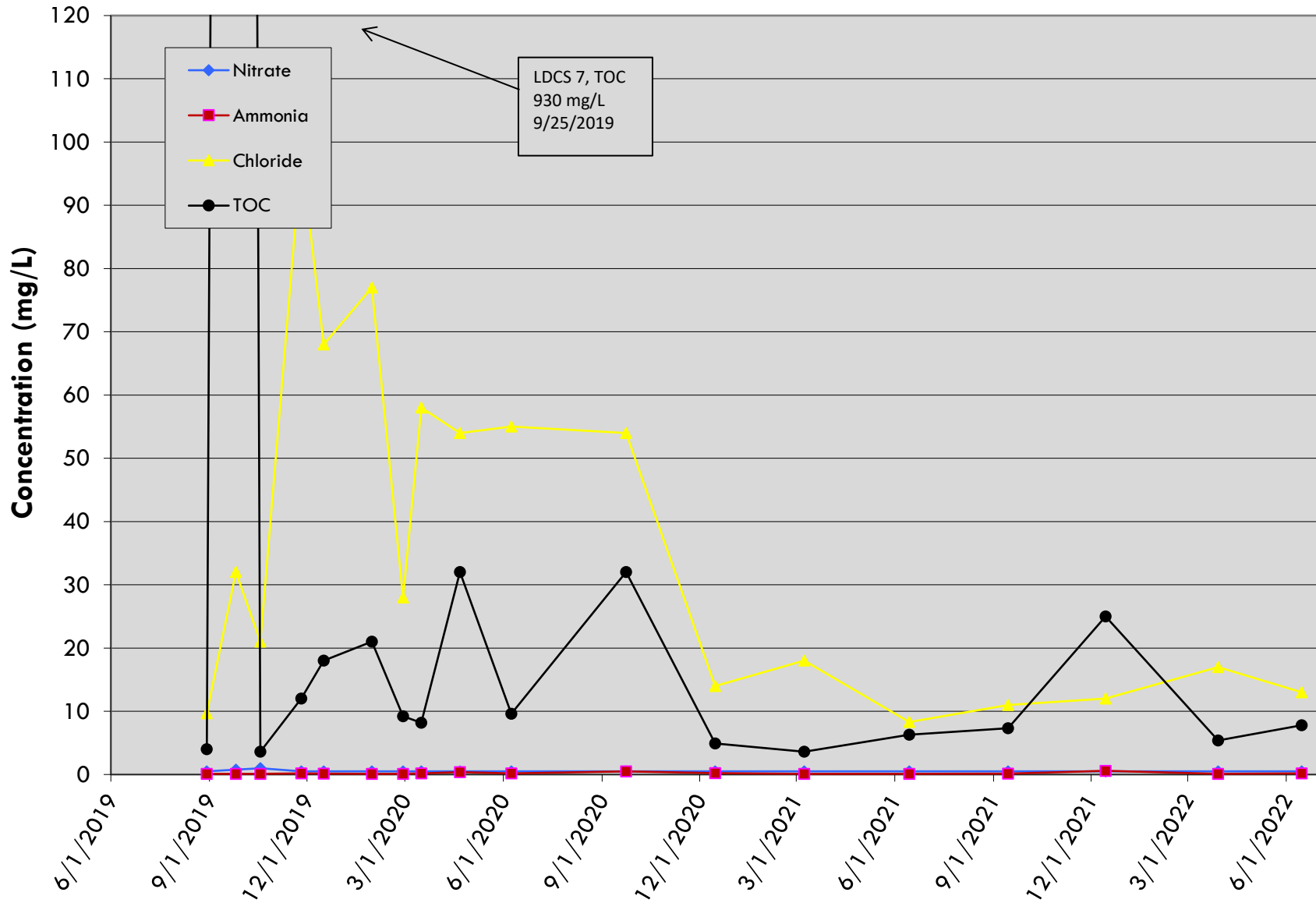
LDCS-5

LRI Landfill, Pierce County, Washington



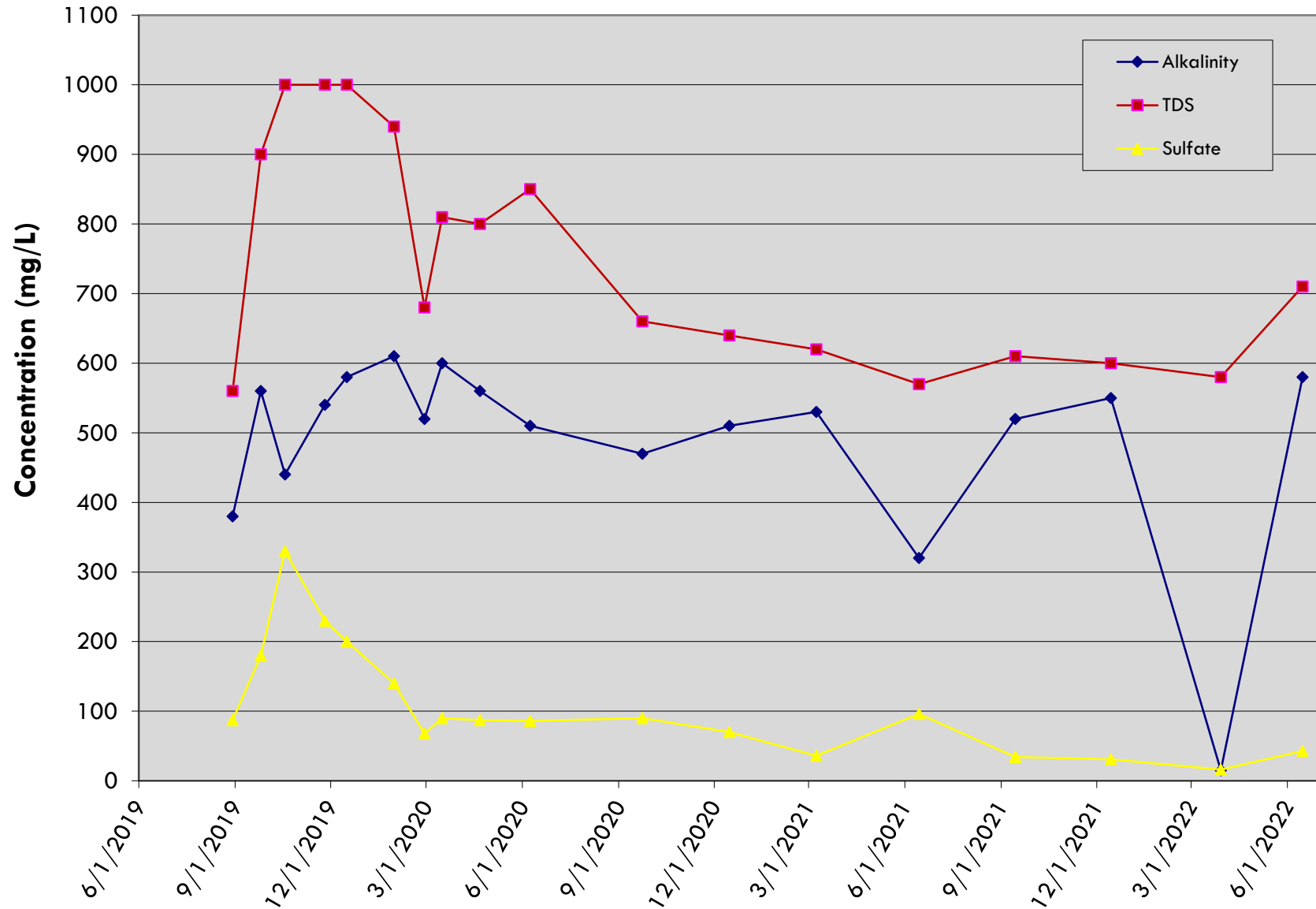
LDCS-7

LRI Landfill, Pierce County, Washington



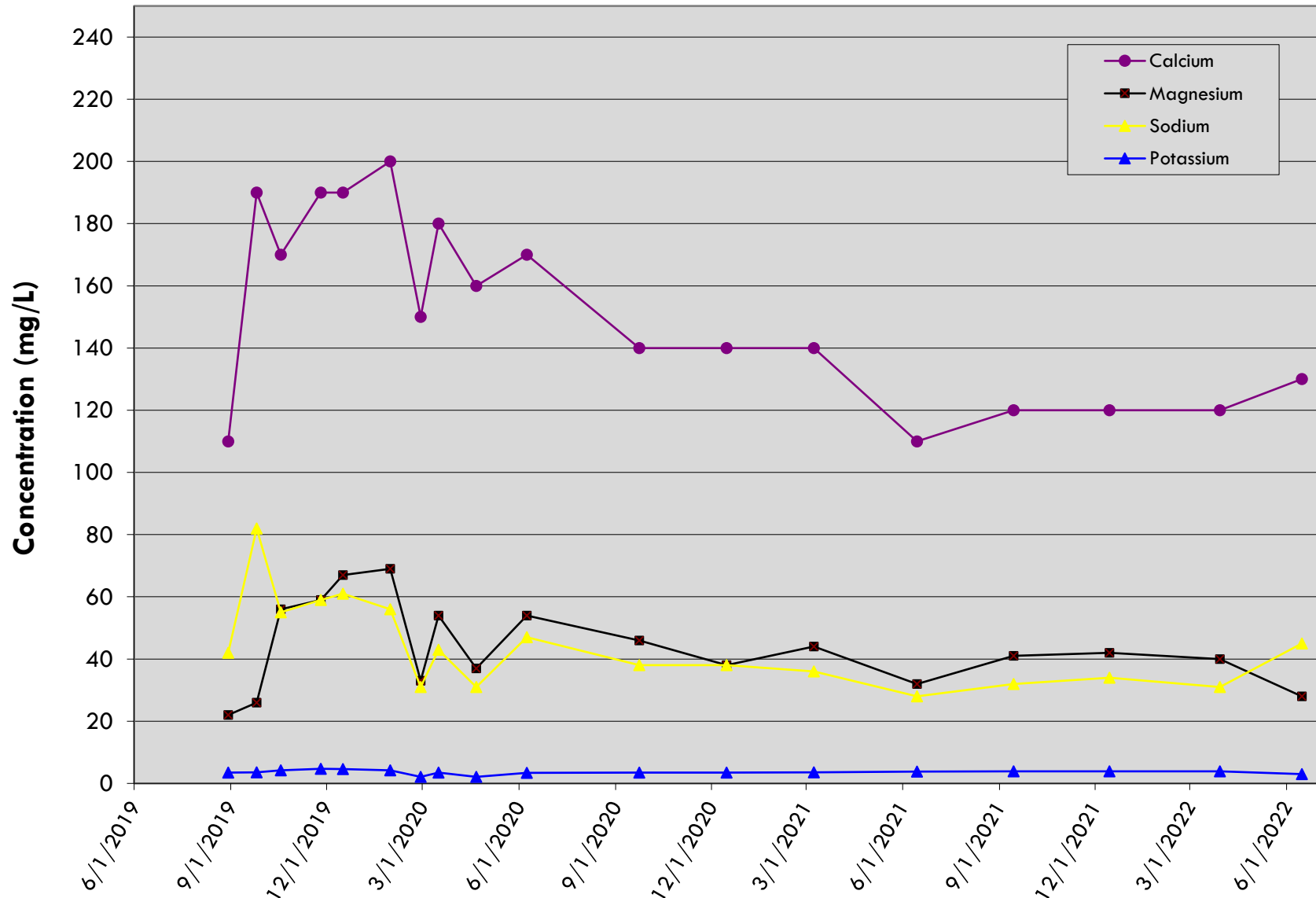
LDCS-7

LRI Landfill, Pierce County, Washington



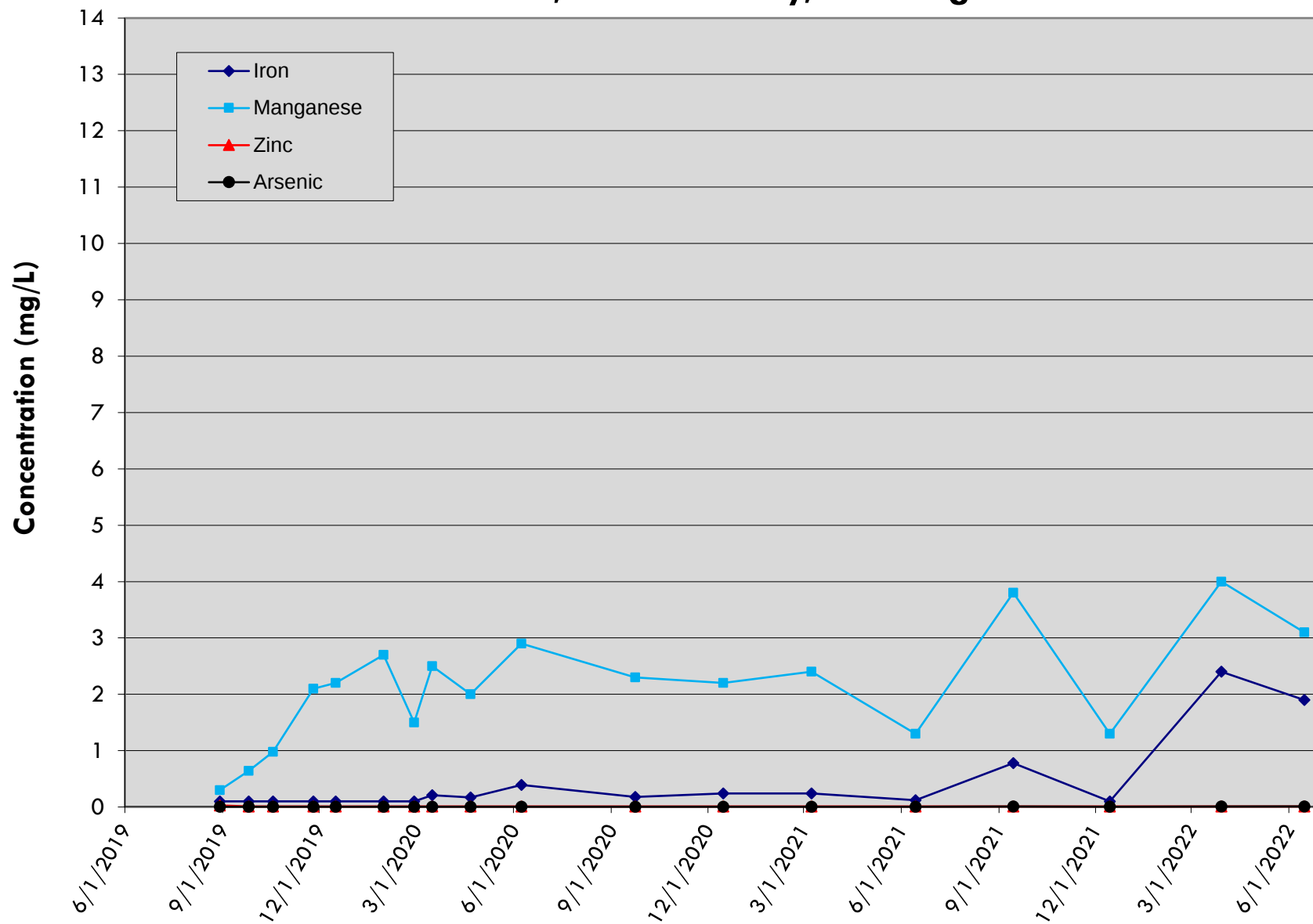
LDCS-7

LRI Landfill, Pierce County, Washington



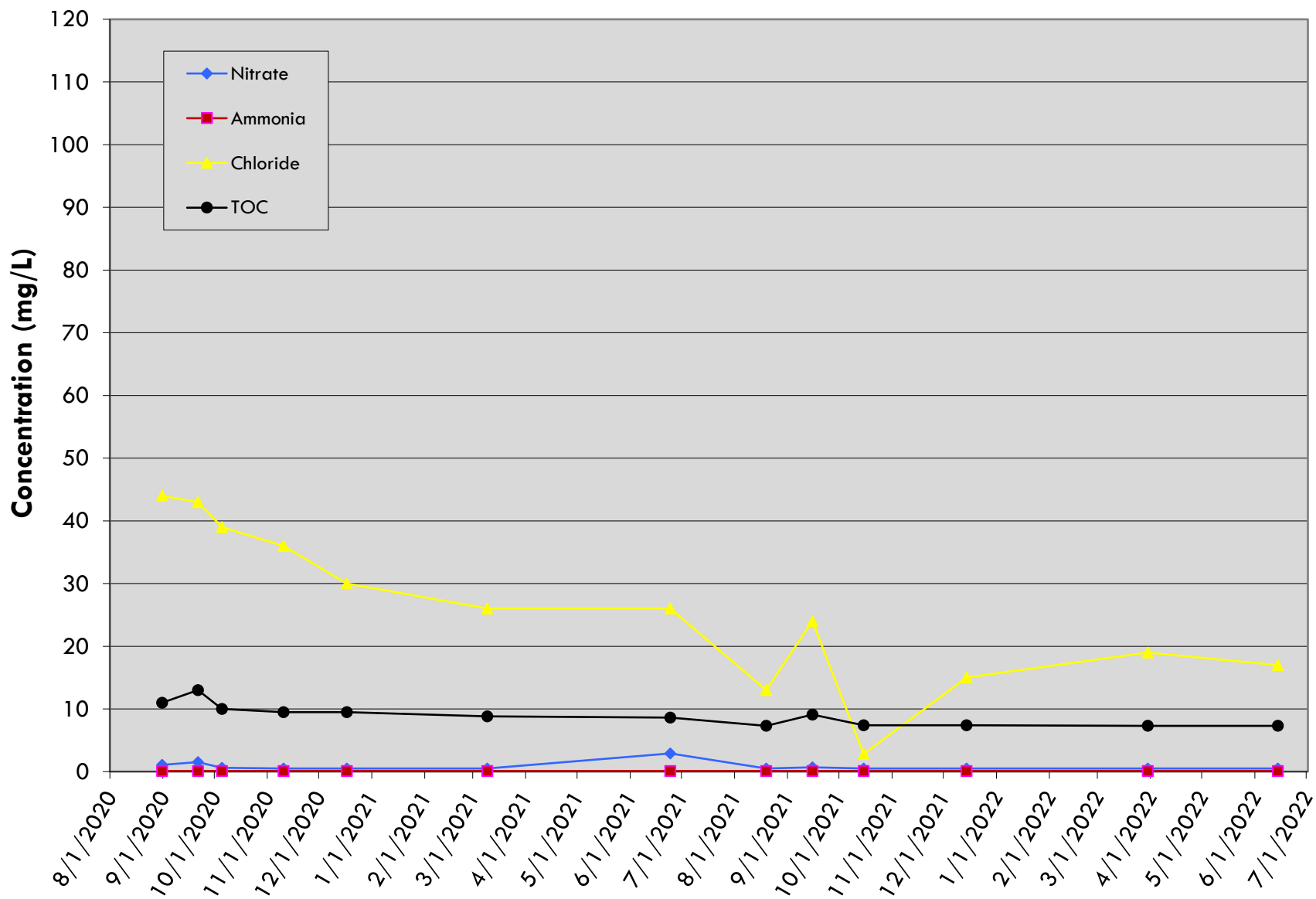
LDCS-7

LRI Landfill, Pierce County, Washington



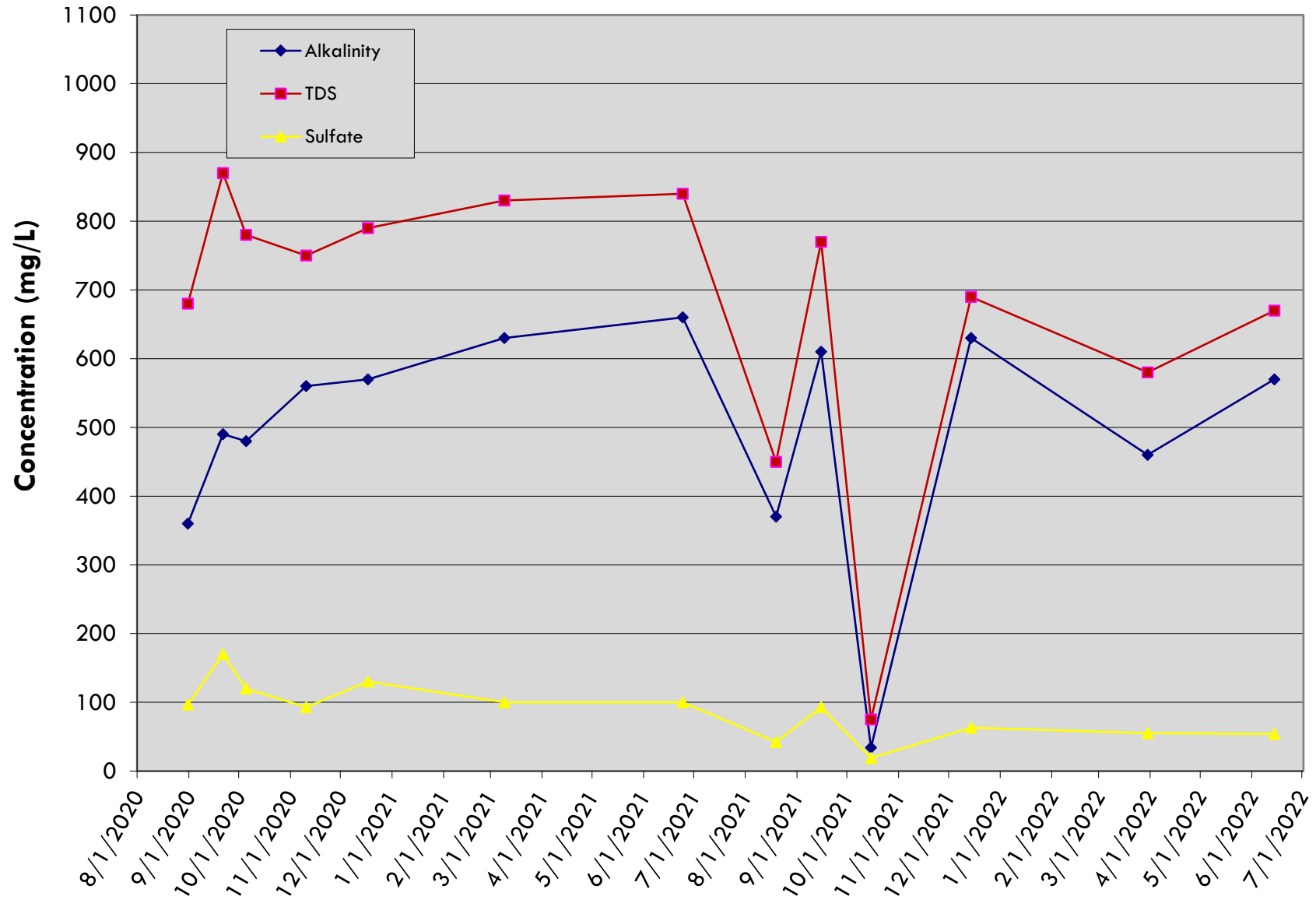
LDCS-8

LRI Landfill, Pierce County, Washington



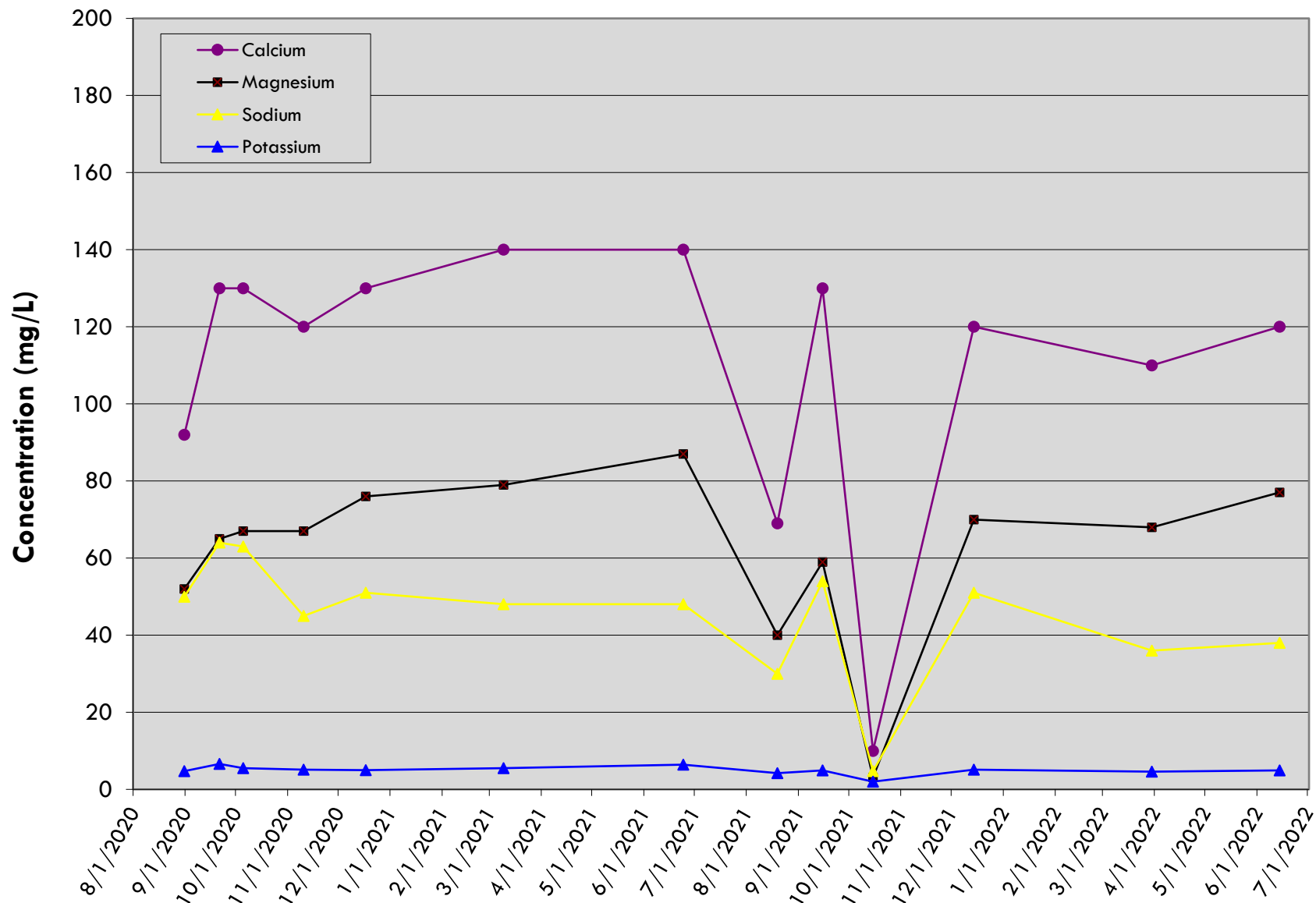
LDCS-8

LRI Landfill, Pierce County, Washington



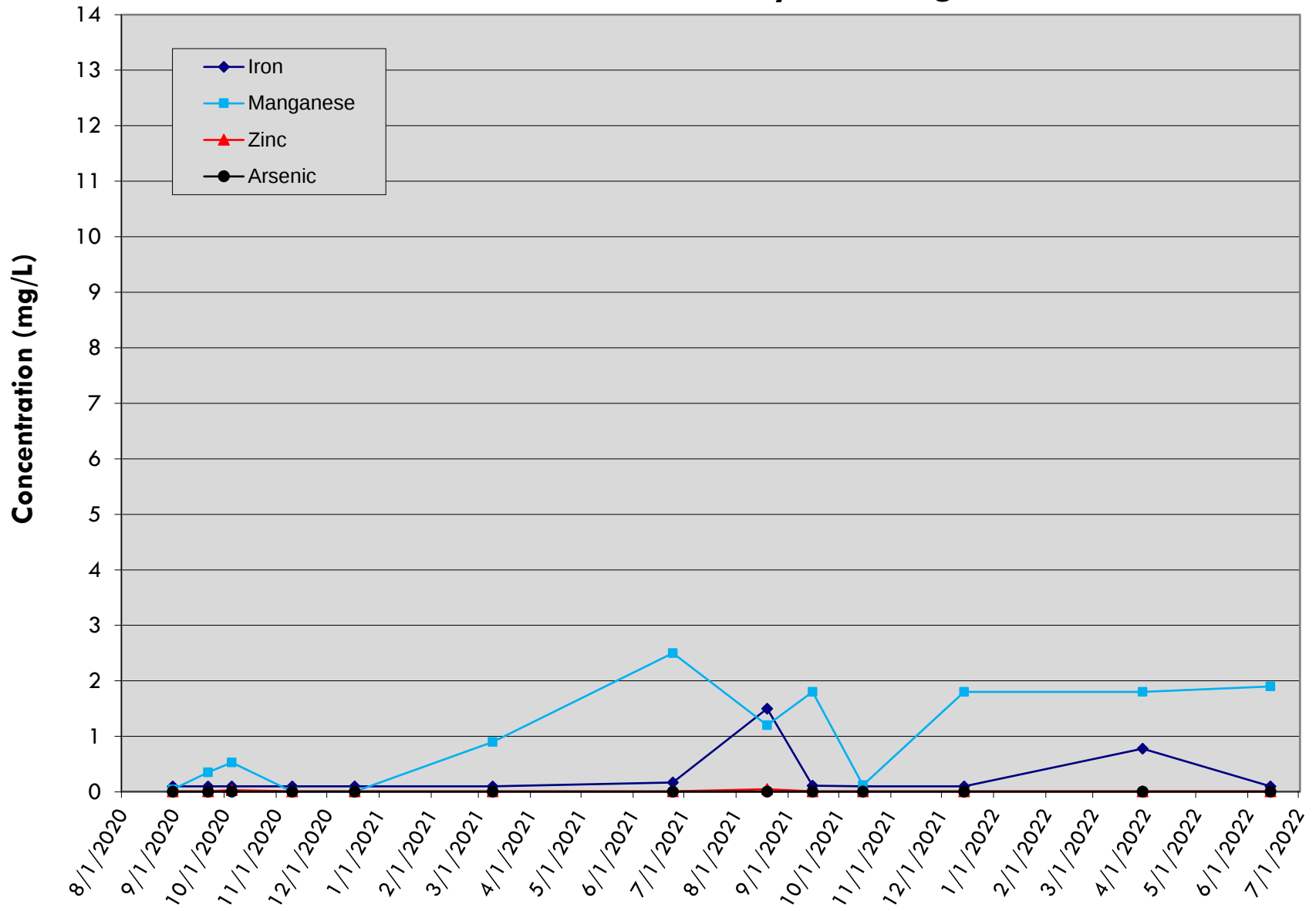
LDCS-8

LRI Landfill, Pierce County, Washington



LDCS-8

LRI Landfill, Pierce County, Washington





Attachment H

LDCS & Leachate Pumping Records and Conductivity Measurements

Summary of LDCS Volumes Pumped and Conductivity Data
Second Quarter 2022
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)*
4/1/2022	0.00	9,160	451	600	732	0	779	3,682	760	2,780	--	4,980	887	417	997	804	837	0	682	3,908	--
4/2/2022	0.05	8,280	451	700	728	0	787	1,329	756	2,890	--	4,862	913	356	999	796	843	0	707	3,904	--
4/3/2022	0.00	9,240	451	660	727	0	793	2,538	758	2,860	--	5,014	929	417	1,000	778	848	0	686	4,199	--
4/4/2022	0.51	9,880	309	800	502	2,464	545	567	516	4,590	--	8,878	935	2,037	912	637	845	6,730	682	4,662	--
4/5/2022	0.27	8,330	170	680	250	2,348	298	547	270	4,900	--	8,294	927	1,798	729	0	856	29,570	602	0	--
4/6/2022	0.01	8,860	349	700	532	383	610	558	558	3,830	--	6,522	932	978	795	0	856	0	607	0	--
4/7/2022	0.00	9,420	416	690	671	383	724	465	680	3,330	--	6,080	932	725	851	2,251	856	0	616	0	--
4/8/2022	0.06	9,050	441	730	708	416	768	558	723	3,400	--	5,638	934	661	885	936	856	0	653	0	--
4/9/2022	0.00	8,480	452	660	706	378	780	1,616	727	3,230	--	5,620	934	662	903	0	856	0	674	0	--
4/10/2022	0.27	10,170	457	660	730	414	783	1,809	740	3,530	--	5,284	933	660	914	0	856	0	680	0	--
4/11/2022	0.01	10,310	460	680	737	412	783	603	743	5,500	--	5,336	925	978	922	3,242	870	0	679	34,321	--
4/12/2022	0.02	9,110	462	770	703	407	782	553	721	4,190	--	6,110	912	978	907	1,149	845	3,449	712	4,876	--
4/13/2022	0.01	8,590	465	690	711	408	780	565	713	3,640	--	5,398	904	850	895	1,106	840	5,399	693	4,547	--
4/14/2022	0.02	4,050	466	300	726	191	778	245	719	1,500	--	2,366	906	363	898	395	831	1,560	699	1,820	--
4/15/2022	0.11	8,730	--	750	--	410	--	245	--	3,630	--	5,656	913	787	900	976	--	6,597	--	4,869	--
4/16/2022	0.00	9,460	--	690	--	412	--	361	--	3,570	--	5,470	921	726	900	900	--	0	--	4,211	--
4/17/2022	0.01	8,910	--	660	--	406	--	410	--	3,400	--	5,320	925	724	904	872	--	0	--	4,194	--
4/18/2022	0.02	10,250	--	770	--	442	--	600	--	4,490	--	5,758	931	600	913	858	--	9,006	--	4,668	--
4/19/2022	0.34	9,340	--	670	--	420	--	594	--	5,700	--	6,682	926	663	927	908	--	1,170	--	4,213	--
4/20/2022	0.01	9,330	--	720	--	842	--	570	--	4,580	--	6,524	915	663	933	653	--	6,213	--	4,503	--
4/21/2022	0.17	9,370	--	690	--	24	--	604	--	3,650	--	6,226	911	600	940	823	--	1,838	--	4,210	--
4/22/2022	0.09	8,970	--	710	--	1,659	--	593	--	5,642	--	5,642	899	725	946	845	--	4,650	--	4,206	--
4/23/2022	0.01	8,500	--	700	--	0	--	404	--	2,880	--	5,104	903	703	939	816	--	0	--	3,882	--
4/24/2022	0.00	9,270	--	740	--	0	--	628	--	2,860	--	4,978	909	597	938	802	--	0	--	4,345	--
4/25/2022	0.00	8,910	--	680	--	2,299	--	583	--	4,310	--	5,372	915	600	948	863	--	10,864	--	4,705	--
4/26/2022	0.08	8,570	--	660	--	827	--	372	--	3,850	--	5,776	904	785	950	930	--	0	--	4,817	--
4/27/2022	0.05	9,250	--	690	--	764	--	558	--	3,480	--	5,330	900	1,043	939	911	--	8,244	--	4,836	--
4/28/2022	0.00	9,300	--	660	--	821	--	581	--	3,240	--	5,630	900	1,041	903	896	--	0	--	4,512	--
4/29/2022	0.00	9,290	--	700	--	0	--	618	--	170	--	5,242	898	850	901	865	--	0	--	4,210	--
4/30/2022	0.38	9,830	--	660	--	0	--	428	--	0	--	6,112	900	2,258	868	835	--	0	--	5,509	--
5/1/2022	0.15	9,630	--	760	--	0	--	621	--	0	--	6,476	901	968	827	796	--	0	--	4,512	--
5/2/2022	0.10	9,370	--	670	--	0	--	610	--	0	--	6,360	914	1,098	860	516	--	0	--	5,172	--
5/3/2022	0.27	9,310	--	690	--	1,600	--	606	--	270	--	6,406	910	979	852	0	--	8,165	--	4,507	--
5/4/2022	0.00	9,440	--	770	--	832	--	427	--	4,180	--	6,052	913	774	867	2,007	--	4,266	--	4,828	--
5/5/2022	0.00	10,380	--	690	--	0	--	805	--	4,580	--	5,828	923	854	891	802	--	0	--	5,491	--
5/6/2022	0.45	9,500	--	750	--	0	--	578	--	5,590	--	7,498	915	2,891	864	824	--	0	--	5,506	--
5/7/2022	1.00	10,210	--	770	--	0	--	574	--	6,810	--	9,028	890	3,531	761	839	--	0	--	5,499	--
5/8/2022	0.10	9,470	--	680	--	0	--	595	--	7,460	--	8,206	878	1,243	752	805	--	17,417	--	5,491	--
5/9/2022	0.05	10,310	--	770	--	4,283	--	736	--	5,490	--	7,642	894	1,004	797	821	--	5,874	--	5,488	--
5/10/2022	0.00	8,890	--	800	--	847	--	442	--	4,630	--	6,972	902	960	817	848	--	40	--	5,373	--
5/11/2022	0.00	9,790	--	710	806	830	865	600	874	4,590	--	6,504	904	811	794	288	--	8,298	642	5,164	--
5/12/2022	0.05	9,480	469	720	852	831	806	765	909	5,220	--	6,418	908	685	790	0	921	0	632	5,485	--
5/13/2022	0.27	9,460	469	710	882	0	781	591	917	3,160	--	5,808	909	621	799	2,188	936	0	630	4,858	--
5/14/2022	0.00	9,540	446	810	896	0	780	426	920	2,900	--	5,376	919	558	809	805	936	0	631	5,171	--
5/15/2022	0.05	10,410	438	670	908	4,764	782	647	921	3,260	--	5,230	929	1,097	819	735	936	16,546	632	5,502	--
5/16/2022	0.60	9,510	435	760	913	816	543	614	919	4,030	--	5,850	937	1,145	770	732	916	803	635	4,850	--
5/17/2022	0.00	9,470	434	660	870	785	543	606	919	4,970	--	5,888	938	823	763	759	911	5,059	640	4,848	--
5/18/2022	0.07	9,550	434	750	870	798	695	588	922	5,630	--	6,296	940	770	779	818	913	3,362	641	5,321	--
5/19/2022	0.17	9,470	434	720	883	0	751	605	923	3,800	--	5,822	941	813	788	838	913	0	631	5,158	--
5/20/2022	0.00	9,860	434	660	874	0	775	606	925	3,020	--	5,084	945	687	790	812	913	0	643	4,776	--
5/21/2022	0.00	9,810	434	740	890	0	787	639	927	2,660	--	4,966	946	620	801	799	914	0	633	5,152	--
5/22/2022	0.00	9,430	434	680	916	3,298	795	481	928	2,380	--	4,494	947	555	820	802	916	16,857	645	5,148	--
5/23/2022	0.00	9,020	433	780	931	2,184	802	1,130	918	2,270	--	4,384	950	494	839	760	919	1,147	644	4,938	--
5/24/2022	0.00	9,890	434	700	955	0	809	158	901	2,240	--	4,180	951	431	863	763	925	0	649	5,237	--
5/25/2022	0.00	9,420	434	720	980	0	813	435	920	2,230	--	3,938	954	430	896	819	937	0	659	4,905	--
5/26/2022	0.00	9,500	434	660	993	2,369	818	628	927	2,240	--	4,566	957	431	928	823	958	9,517	703	4,905	--
5/27/2022	0.25	9,770	433	770	995	0	812	646	927	2,400	--	4,180	960	431	951	837	979	0	690	5,213	--
5/28/2022	0.00	9,450	432	660	983	0	762	605	923	2,890	--	4,548	960	495	961	845	991	0	716	4,893	--
5/29/2022	0.35	9,370	431	740	981	2,461	721	395	919	4,460	--	4,872	954	1,506	920	852	993	15,649	695	4,894	--
5/30/2022	0.00	9,260	430	660	932	784	736	622	921	3,720	--	5,096	942	948	822	886	990	2,876	712	4,251	--
5/31/2022	0.00	8,770	429	700	894	0	793	654	927	3,500	--	5,412	946	747	813	971	985	0	701	4,548	--

Summary of LDCS Volumes Pumped and Conductivity Data
Second Quarter 2022
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)*
6/1/2022	0.08	9,750	429	760	924	0	819	426	930	3,370	--	5,380	952	620	820	1,085	981	0	691	4,565	--
6/2/2022	0.00	9,400	428	690	968	0	383	672	929	3,290	--	9,472	961	616	832	1,269	978	0	693	4,859	--
6/3/2022	0.66	9,430	427	740	988	938	577	648	927	3,170	--	7,220	968	558	851	1,580	978	5,833	698	4,734	--
6/4/2022	0.80	10,060	426	660	996	0	743	430	923	3,420	--	5,710	972	976	861	1,851	980	0	701	4,876	--
6/5/2022	1.02	9,460	426	720	998	0	805	633	921	6,260	--	7,656	965	4,861	785	1,962	981	0	691	5,571	--
6/6/2022	0.00	9,330	426	670	962	3,747	449	636	922	5,640	--	7,416	951	1,080	738	1,486	979	15,531	661	4,568	--
6/7/2022	0.02	9,440	425	870	924	122	427	433	928	4,230	--	6,754	951	746	774	1,209	972	0	639	5,185	--
6/8/2022	0.03	9,840	424	740	946	556	677	0	948	3,660	--	7,032	950	649	805	1,119	959	2,227	636	3,910	--
6/9/2022	1.28	9,810	424	720	960	0	780	0	946	4,610	--	6,686	951	1,937	824	1,042	946	0	649	0	--
6/10/2022	0.37	10,350	423	660	974	1,436	806	0	936	7,140	--	11,908	947	2,106	751	999	938	0	645	12,973	--
6/11/2022	0.09	9,920	422	770	967	0	736	0	932	6,640	--	13,594	884	1,776	718	1,003	932	0	597	5,841	--
6/12/2022	0.00	10,220	421	750	982	0	700	0	932	4,020	--	12,212	787	883	728	915	927	0	552	5,364	--
6/13/2022	0.00	9,770	420	680	978	998	724	3,426	927	3,650	--	9,542	873	687	764	859	922	0	534	4,912	--
6/14/2022	0.00	9,480	420	760	930	651	787	775	920	4,070	--	9,222	918	560	785	836	918	0	611	5,075	--
6/15/2022	0.00	10,020	420	740	951	630	819	607	920	3,460	--	9,174	938	553	803	896	919	12,376	800	5,216	--
6/16/2022	0.02	10,410	418	440	951	0	819	628	928	3,040	--	8,344	950	496	828	813	918	0	876	5,145	--
6/17/2022	0.37	10,370	416	0	951	1,432	819	783	931	3,100	--	7,954	952	495	854	818	920	24,728	848	5,221	--
6/18/2022	0.00	9,420	416	0	977	0	819	600	930	2,880	--	7,656	953	433	881	813	923	0	809	4,589	--
6/19/2022	0.00	9,390	415	0	977	0	819	604	934	2,860	--	7,020	956	432	904	807	928	0	799	4,579	--
6/20/2022	0.00	9,340	414	0	847	1,235	819	618	940	2,910	--	6,680	960	431	923	827	932	14,113	751	4,590	--
6/21/2022	0.00	9,320	414	0	889	0	819	622	946	3,010	--	6,610	962	404	942	851	935	0	746	4,884	--
6/22/2022	0.00	9,350	412	0	961	0	819	637	948	3,220	--	6,788	964	368	960	859	938	6,684	719	4,707	--
6/23/2022	0.00	9,330	411	0	1,000	65	819	827	954	3,210	--	6,724	965	368	979	835	939	0	725	4,572	--
6/24/2022	0.00	9,290	411	0	959	554	818	611	900	3,240	--	6,610	959	366	995	792	941	6,700	741	4,560	--
6/25/2022	0.06	9,320	411	0	959	0	818	621	900	3,310	--	6,224	959	366	1,000	813	944	0	744	4,545	--
6/26/2022	0.00	9,340	411	0	959	0	818	440	900	3,470	--	6,362	969	365	1,000	879	949	0	723	4,237	--
6/27/2022	0.00	8,420	408	0	1,011	1,694	838	658	941	3,710	--	5,630	980	366	1,000	1,141	953	6,616	692	4,538	--
6/28/2022	0.00	5,920	408	0	1,011	0	838	405	941	2,240	--	4,174	982	184	1,000	743	958	0	657	2,431	--
6/29/2022	0.00	8,400	408	0	1,011	0	838	634	941	3,840	--	6,148	981	307	1,000	1,746	963	0	700	4,251	--
6/30/2022	0.00	8,320	407	0	968	1,471	847	610	898	3,960	--	6,746	983	367	1,000	2,173	972	12,213	698	4,237	--

All conductivity probes were recalibrated on 5/11/22 by site staff

No conductivity data available at LDCS-1, 2A, 2B, 3, 6 or 7 between April 15 and May 11, 2022

* = The conductivity probes at LDCS4A and LDCS-8 did not function properly during the second quarter

-- Readings not available

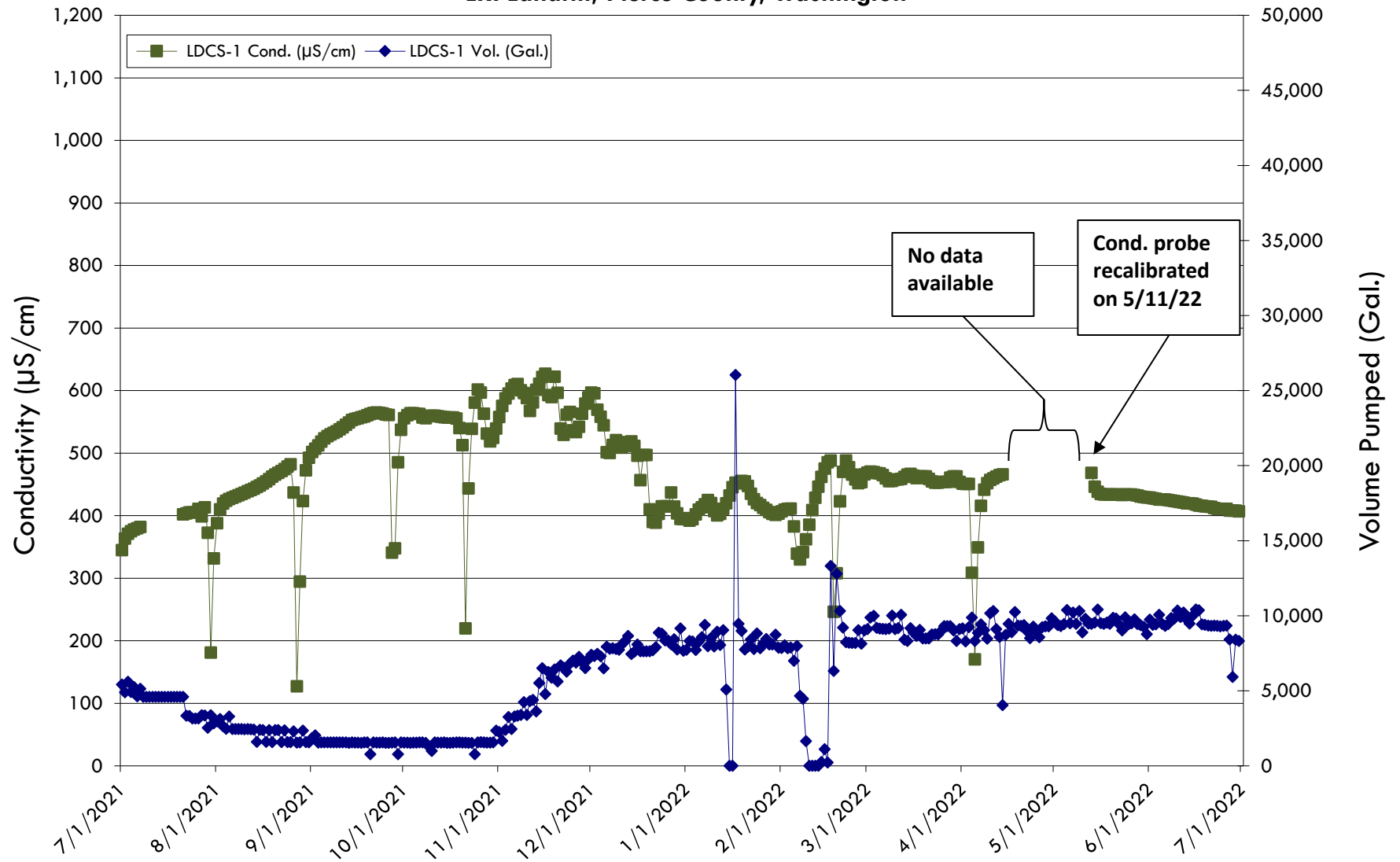
Summary of Leachate Volume and Depth Data
Second Quarter 2022
LRI Landfill, Pierce County, Washington

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.)
4/1/2022	13,003	12.0	13,906	13.4	11,955	13.7	10,524	15.6	2,745	18.8	3,249	13.4	7,725	18.7	32,583	35.6	6,627	14.3	33,455	71.9
4/2/2022	10,887	11.2	5,815	8.1	2,731	12.2	6,090	13.1	0	20.3	16	16.1	7,725	16.3	32,236	36.0	6,627	12.5	39,827	71.5
4/3/2022	978	13.1	0	9.5	1,041	17.1	5,056	19.4	1,160	20.8	1,652	18.7	7,725	18.7	6,786	37.8	6,627	14.2	9,373	71.6
4/4/2022	10,781	11.5	733	11.3	4,354	13.1	8,925	17.0	5,261	19.9	8,821	19.6	7,725	18.5	29,134	40.4	6,627	16.6	35,559	72.1
4/5/2022	12,957	10.6	9,500	9.4	3,756	10.9	11,186	14.4	10,827	18.2	14,766	19.7	12,139	16.5	50,543	41.6	13,776	15.1	40,596	72.3
4/6/2022	6,242	11.5	0	8.3	3,136	12.7	6,000	13.7	14,161	15.4	18,459	17.3	12,139	15.4	69,979	39.4	13,776	12.6	49,602	71.3
4/7/2022	8,221	10.8	0	9.4	3,591	9.9	7,393	10.3	13,566	13.8	20,068	13.2	12,139	14.9	69,146	35.9	13,776	11.5	52,481	69.7
4/8/2022	4,796	11.1	0	10.5	3,703	9.9	7,223	10.1	29,297	10.6	1,931	11.5	12,139	14.8	72,090	29.5	13,776	11.3	56,299	67.9
4/9/2022	2,844	11.2	8,123	8.7	2,289	11.2	4,628	11.0	11,082	10.6	12	14.0	12,139	15.9	23,027	25.1	13,776	12.0	19,758	66.4
4/10/2022	5,861	11.0	0	8.8	3,971	12.9	4,900	18.4	1,780	15.8	2,511	15.5	12,139	18.8	8,749	30.5	13,776	13.6	6,705	67.3
4/11/2022	0	12.0	0	11.1	0	17.5	11,336	16.3	0	17.9	16,608	15.6	12,139	16.2	46,811	32.6	13,776	17.5	51,754	67.7
4/12/2022	0	12.2	0	12.1	0	19.0	5,219	12.9	0	18.8	2,049	14.3	14,840	18.9	55,589	27.8	15	14.0	62,316	65.1
4/13/2022	0	13.0	0	14.1	0	19.4	10,747	14.8	19,053	14.6	2	16.8	32	17.1	72,978	20.1	34,191	12.9	85,877	59.9
4/14/2022	0	13.0	0	15.0	9,444	12.5	541	16.7	493	16.8	3,675	17.3	14,056	18.6	15,983	17.8	4	16.0	19,620	55.5
4/15/2022	0	13.0	0	16.6	9,444	11.9	9,042	15.5	12,098	16.0	14,118	14.5	12	16.0	30,117	11.2	12	13.1	62,413	44.3
4/16/2022	0	13.0	0	18.8	0	17.8	9,073	17.5	12,066	14.3	3,264	14.1	7,099	16.8	20,634	12.6	0	12.0	40,128	34.9
4/17/2022	0	13.5	0	20.2	0	18.6	0	24.2	0	17.6	0	16.2	7,099	21.6	0	19.4	0	14.4	0	35.8
4/18/2022	0	14.0	19,194	15.7	0	19.8	12,989	17.5	0	19.4	6,378	17.5	7,099	20.9	23,104	23.1	30,241	17.3	29,217	38.2
4/19/2022	26	14.0	973	9.5	10,448	13.7	7,288	14.9	5	20.0	9,531	17.2	15,144	15.9	34,553	24.0	136	14.6	43,632	34.6
4/20/2022	0	14.0	0	12.0	27	17.2	10,417	15.0	8,115	18.5	10,699	17.2	8,976	15.7	35,799	22.9	24,659	15.3	49,490	27.2
4/21/2022	10,279	11.5	0	13.3	5,300	13.6	5,608	12.4	7,264	18.4	8,877	16.9	7,948	15.8	31,124	22.7	9	18.3	32,903	16.7
4/22/2022	7,777	10.9	11,796	9.9	4,470	11.6	19,900	8.2	6,761	18.0	8,837	16.9	9,604	15.2	33,620	24.4	48	16.2	23,045	13.6
4/23/2022	5,048	11.2	0	8.6	3,515	11.3	9,079	1.2	6,333	17.4	7,380	16.8	6,037	16.0	27,824	24.2	10,275	12.9	20,938	14.7
4/24/2022	7,458	10.9	552	10.8	3,609	11.3	8,661	1.8	4,712	18.4	6,228	17.5	6,037	18.1	22,515	25.3	10,275	12.4	24,207	17.3
4/25/2022	0	12.3	0	12.3	0	16.4	2,084	5.2	0	19.7	16,877	16.6	6,037	16.2	70,221	22.5	10,275	15.8	36,740	13.8
4/26/2022	6,292	11.4	10,521	9.5	5,867	12.1	4,514	9.9	6,318	18.7	7,073	15.3	10,808	17.7	26,886	18.3	16,162	14.7	13,986	11.5
4/27/2022	5,683	10.9	0	8.1	3,575	11.1	5,373	11.5	10,144	17.4	11,008	15.3	4,760	16.5	42,688	18.4	19,513	12.4	24,328	14.1
4/28/2022	5,742	10.8	0	10.2	4,273	11.2	8,037	12.7	12,951	15.4	13,160	14.1	11,988	14.7	52,115	14.9	16,390	11.9	24,003	13.0
4/29/2022	4,965	10.8	7,710	8.9	3,513	10.9	4,554	11.5	11,721	14.9	4,548	14.0	7,467	15.0	32,387	11.4	10,664	11.9	19,537	13.0
4/30/2022	5,315	10.7	0	8.3	2,924	12.2	7,547	14.1	2,577	17.2	3,248	15.3	7,467	17.8	11,429	15.5	10,664	14.8	9,258	19.1
5/1/2022	5,533	10.7	0	10.3	3,967	12.7	4,987	15.1	1,826	18.7	2,350	17.0	0	20.6	8,501	21.3	0	15.9	6,666	27.3
5/2/2022	0	12.0	0	12.0	0	16.7	9,903	13.8	8,272	17.4	13,062	16.8	0	24.6	45,910	22.0	0	19.1	58,578	24.6
5/3/2022	0	12.0	0	13.1	0	18.2	7,682	10.4	13,148	15.1	14,081	15.3	136	29.3	54,782	18.6	15	22.0	30,048	13.0
5/4/2022	6,605	10.8	12,416	10.1	7,977	13.2	4,490	10.8	8,763	15.5	10,029	14.2	7,650	32.9	39,695	14.4	28,517	18.2	18,795	12.9
5/5/2022	4,003	11.0	0	8.6	3,433	11.4	9,236	12.8	16,805	14.4	11,433	13.5	7,650	36.2	37,940	10.8	15,969	12.7	29,218	14.7
5/6/2022	3,974	11.0	0	10.5	3,735	11.3	5,761	11.1	8,107	15.0	5,995	13.5	7,650	32.3	27,210	12.8	15,969	11.9	22,803	16.7
5/7/2022	2,348	11.3	4,510	10.5	2,667	12.7	5,818	13.9	6,299	16.0	3,158	14.3	7,650	26.3	23,134	19.8	15,969	16.0	17,072	27.5
5/8/2022	4,501	11.0	4,898	9.9	3,725	12.7	3,994	21.1	1,485	18.2	2,326	16.6	7,650	27.0	8,239	24.7	15,969	19.0	6,420	38.7
5/9/2022	0	12.0	0	8.8	3,590	11.5	7,920	17.6	0	19.0	0	18.0	16,140	19.7	49,425	23.8	24,997	15.6	56,662	40.3
5/10/2022	0	12.0	0	10.5	0	16.4	7,241	15.9	0	19.4	10,824	18.4	16,140	14.8	38,802	21.2	9,075	15.3	49,434	34.6
5/11/2022	0	12.6	0	12.6	0	18.4	7,414	14.7	0	20.0	11,053	17.8	4,448	16.4	39,827	18.3	2	16.3	50,661	27.9
5/12/2022	0	13.0	0	15.2	8,027	12.8	6,360	14.1	6,690	18.6	10,317	17.5	8,139	15.6	35,397	17.2	36	19.0	42,815	20.2
5/13/2022	0	13.0	0	15.9	0	16.0	6,393	14.6	3,915	18.5	5,925	17.4	8,139	17.7	20,768	17.7	14,044	17.5	25,968	17.6
5/14/2022	0	13.0	0	17.2	0	18.8	6,700	14.5	3,222	19.1	5,264	18.4	8,139	18.9	18,669	20.7	14,044	14.9	25,039	20.4
5/15/2022	0	13.2	0	18.8	0	19.4	7,045	15.9	1,528	20.0	2,553	20.1	8,139	20.0	9,070	25.8	14,044	15.9	12,192	28.5
5/16/2022	1	13.0	18,268	13.4	9,456	14.4	7,856	13.7	3,502	19.7	6,492	20.9	8,139	18.4	22,911	29.7	18,680	16.6	31,027	38.4
5/17/2022	0	13.5	168	9.1	103	16.8	6,181	12.7	122	21.0	11,260	20.9	8,324	21.3	43,812	27.1	3	17.7	54,490	35.8
5/18/2022	0	14.0	0	11.3	0	18.8	5,990	14.1	0	21.7	11,893	20.6	8,324	17.7	45,323	22.8	7	20.8	56,022	27.7
5/19/2022	0	14.0	0	12.8	0	19.0	6,421	14.7	5,434	20.3	9,669	20.5	7,877	15.8	35,225	19.6	14,371	17.3	39,724	18.5
5/20/2022	0	14.0	0	14.6	0	19.5	6,975	14.5	5,186	19.7	7,191	21.0	7,877	16.7	26,020	19.0	14,371	13.3	28,279	16.8
5/21/2022	0	14.0	0	16.4	0	20.0	6,752	14.0	3,143	20.1	5,052	22.2	7,877	17.8	17,732	20.4	14,371	12.2	23,480	19.1
5/22/2022	0	14.0	0	17.6	0	20.0	8,426	13.5	1,929	20.5	3,046	23.6	7,877	18.4	11,096	23.0	14,371	12.1	14,284	23.5
5/23/2022	12,092	11.2	18,662	12.3	21,906	9.5	16,092	7.6	4,711	20.1	9,749	24.1	7,877	16.2	33,937	23.6	7,861	12.0	44,603	22.8
5/24/2022	9,288	10.8	0	8.3	4,989	4.9	2,827	6.6	10,565	18.6	13,443	23.7	8,356	15.7	50,353	20.7	7,991	12.0	38,478	16.1
5/25/2022	7,548	10.8	3	10.4	4,032	10.4	4,685	11.0	8,954	17.7	10,820	23.0	8,356	15.9	42,092	16.1	7,991	11.9	25,467	13.0
5/26/2022	6,523	10.8	7,981	8.8	3,131	11.9	7,296	13.9	5,650	18.3	7,678	23.0	8,356	15.8	27,977	15.2	7,991	12.2	24,118	14.6
5/27/2022	5,250	10.8	0	7.9	3,777	12.3	6,524	13.4	5,602	18.9	8,070	23.4	7,067	15.6	29,993	14.5	14,687	12.8	26,626	15.5
5/28/2022	4,698	11.1	0	10.5	3,354	12.5	6,916	13.6	2,594	19.5	4,452	24.3	7,067	17.6	15,363	16.8	14,687	13.3	20,285	16.5
5/29/2022	6,970	10.5	7,875	9.2	3,919	12.3														

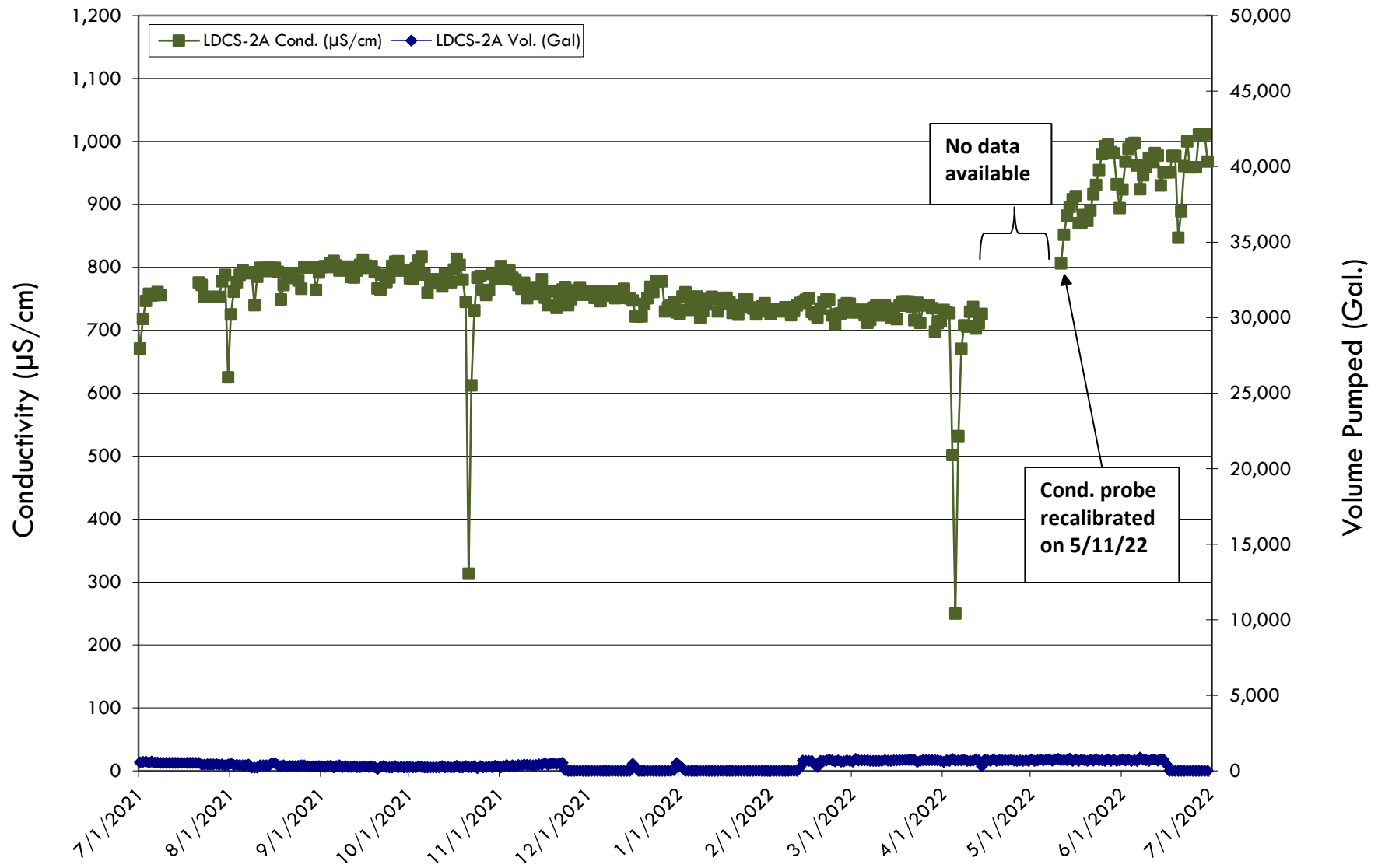
Summary of Leachate Volume and Depth Data
Second Quarter 2022
LRI Landfill, Pierce County, Washington

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.)
6/1/2022	0	13.0	0	12.6	0	19.0	4,260	13.2	0	21.0	12,898	27.5	8,404	17.7	49,892	42.6	18,237	21.2	42,699	18.0
6/2/2022	0	13.0	0	14.5	10,571	13.3	6,720	19.7	9,567	19.3	11,631	27.1	8,404	21.4	43,619	17.8	18,237	16.0	25,607	13.4
6/3/2022	6,362	11.4	12,764	10.6	2,148	12.4	6,480	16.6	980	20.4	8,248	26.9	10,571	18.9	31,651	17.2	7,587	15.1	23,128	16.1
6/4/2022	4,604	11.3	0	8.4	0	18.1	4,300	15.2	0	21.0	8,054	27.5	10,571	15.8	31,575	17.1	7,587	21.5	23,805	21.7
6/5/2022	4,164	11.0	0	10.0	0	19.0	6,330	16.0	0	21.2	3,290	28.6	10,571	18.7	12,745	24.5	7,587	35.5	9,607	51.9
6/6/2022	0	12.0	0	11.5	0	19.0	6,360	23.4	2	21.2	9,592	29.0	11,208	16.3	33,419	26.5	7,587	34.7	44,812	59.4
6/7/2022	0	12.9	0	13.8	13,898	13.2	4,330	17.0	3,676	21.0	8,264	29.5	16	20.3	27,255	26.0	24,431	33.1	38,430	58.4
6/8/2022	0	13.0	0	15.3	4,219	11.0	0	14.3	252	21.7	9,113	29.8	15,600	17.7	32,319	26.0	26,606	30.5	43,042	57.3
6/9/2022	0	13.3	0	17.2	13,650	14.7	0	13.2	3,550	21.4	8,512	30.2	7,359	20.5	29,267	26.9	25,238	31.1	39,072	58.8
6/10/2022	0	13.5	0	18.1	13,642	13.9	0	21.9	2,292	21.4	5,616	31.0	7,359	19.6	18,954	33.0	15,899	39.7	25,773	67.9
6/11/2022	0	14.0	0	20.4	9,783	14.0	0	30.9	2,683	21.4	5,898	32.4	7,359	18.4	19,974	36.5	15,899	41.3	27,290	69.4
6/12/2022	0	14.0	0	21.7	6,357	12.5	0	35.6	2,118	21.4	4,706	32.9	7,359	18.2	16,046	38.1	15,899	41.2	21,771	70.2
6/13/2022	7,537	11.6	16,759	16.0	6,022	12.1	34,260	29.1	2,229	21.6	6,647	33.3	5,788	16.1	21,805	66.9	19,158	40.6	30,334	70.5
6/14/2022	1,614	12.3	1,739	11.8	7,333	10.1	7,750	17.7	527	21.9	12,125	33.4	5,788	19.6	42,613	127.1	34,528	38.4	55,912	69.8
6/15/2022	0	13.4	0	13.5	6,020	10.8	6,070	20.3	0	22.0	15,492	33.2	6,872	18.7	53,711	43.7	30,883	36.6	69,511	68.2
6/16/2022	0	14.0	0	15.2	6,186	9.8	6,280	32.0	0	22.0	15,689	32.2	6,872	15.7	54,453	33.6	30,883	31.9	71,961	65.7
6/17/2022	0	14.0	0	16.7	6,323	9.8	7,830	18.9	1	22.0	13,747	31.3	6,872	19.0	47,053	28.8	30,883	27.2	63,191	62.6
6/18/2022	0	14.0	0	17.6	4,727	11.2	6,000	13.0	0	22.0	4,345	31.8	6,872	25.6	14,856	27.5	82,139	25.8	20,068	61.5
6/19/2022	0	14.0	0	19.2	5,380	11.6	6,040	13.8	0	22.0	9,870	32.3	14,816	30.0	33,694	27.1	10,023	21.3	45,394	60.7
6/20/2022	0	14.0	0	20.5	7,563	9.6	6,180	22.7	6,289	20.8	14,140	32.1	14,816	21.1	46,068	22.6	10,023	21.3	65,014	57.4
6/21/2022	12,243	11.2	22,927	13.8	4,323	10.6	6,220	16.8	615	22.3	10,732	32.4	16	17.7	36,748	12.9	10,023	16.9	49,145	51.3
6/22/2022	2,555	12.3	0	8.2	6,646	9.5	6,370	23.6	12	22.4	17,930	32.4	14,460	16.8	16,742	8.6	7,230	16.1	89,824	44.6
6/23/2022	0	13.5	0	10.3	5,447	8.2	8,270	16.2	7	22.4	15,842	30.7	6,703	19.3	41,212	12.0	7,230	18.7	67,604	25.5
6/24/2022	11,786	10.9	4,226	10.4	6,036	8.9	6,110	12.4	11,561	19.9	9,583	30.4	6,703	17.6	19,126	17.5	7,230	14.8	21,597	13.5
6/25/2022	2,978	11.7	0	11.0	2,771	14.3	6,210	15.5	1,180	20.5	1,259	31.8	6,703	18.2	2,494	11.7	7,230	13.1	5,856	19.3
6/26/2022	4,557	11.8	4,985	10.9	4,263	15.8	4,400	24.2	2,212	21.8	2,293	33.4	6,703	21.3	4,646	13.4	7,230	13.8	10,681	26.7
6/27/2022	1,504	12.5	3,578	9.0	6,288	10.1	6,580	17.2	782	22.6	12,811	34.1	6,667	17.2	28,155	10.6	9,867	12.3	61,273	21.9
6/28/2022	0	13.0	0	9.7	4,086	7.4	4,050	10.6	0	23.0	11,431	32.5	3,127	13.0	9,596	9.2	9,867	11.6	17,183	9.5
6/29/2022	0	13.2	6,568	8.2	4,303	7.2	6,340	10.7	19,542	19.4	27,294	30.6	4,490	12.8	18,607	8.9	9,867	11.6	28,236	9.6
6/30/2022	11,061	10.9	0	8.5	6,416	7.4	6,100	10.4	26,379	12.3	31,301	25.1	2,550	15.4	14,148	8.7	0	11.5	25,397	9.7

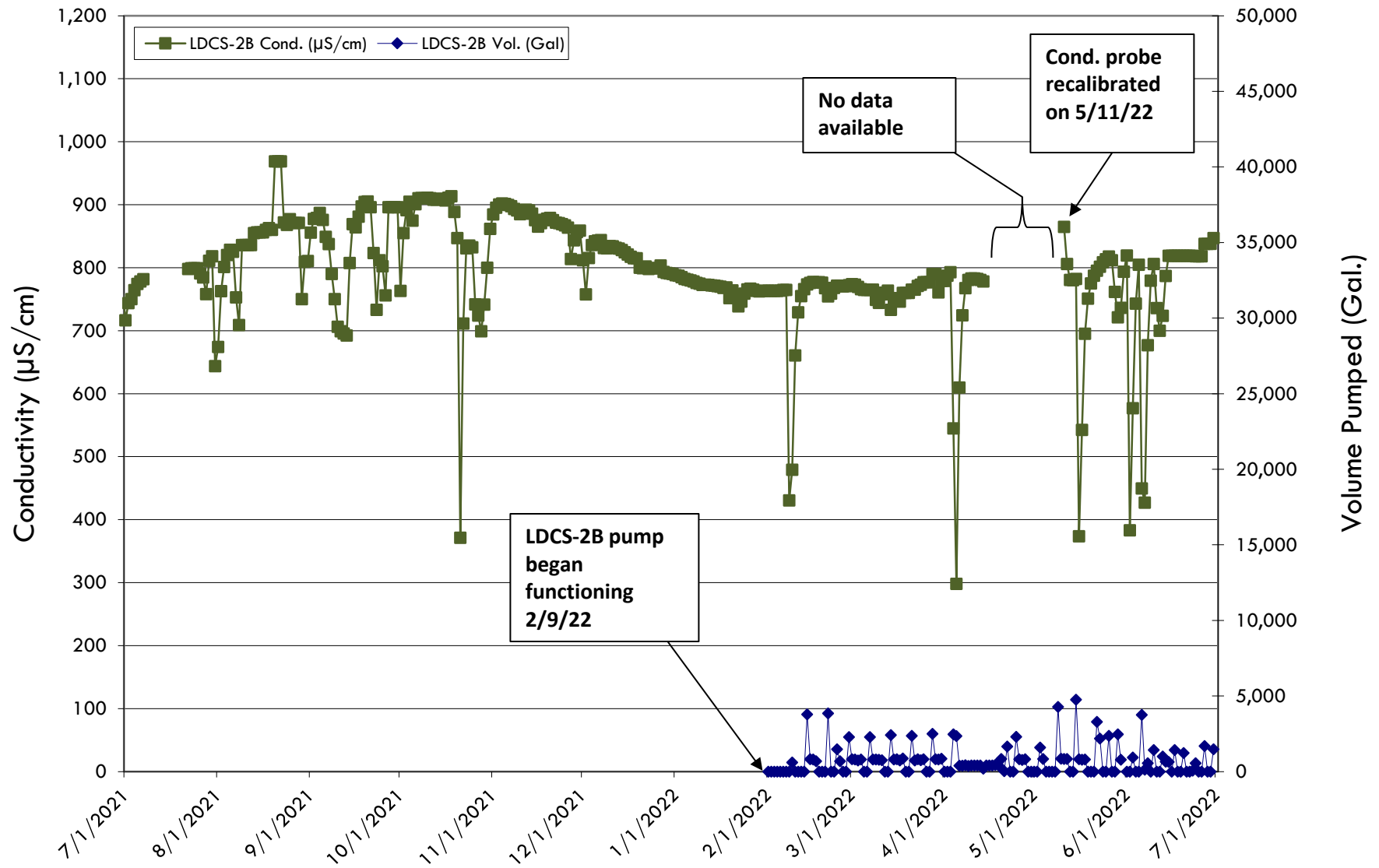
LDCS-1 (DailyTotals)
Conductivity vs Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



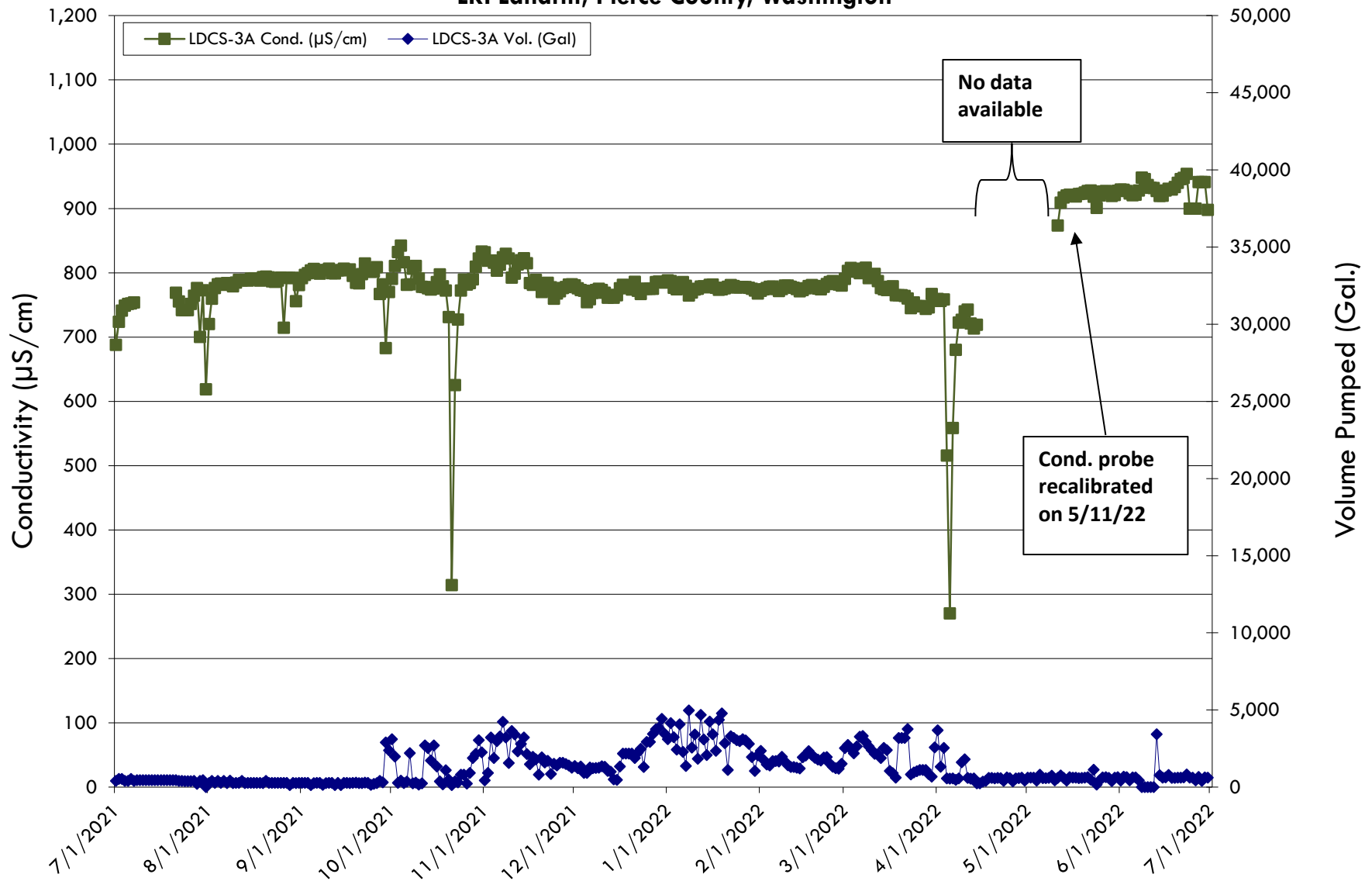
LDCS-2A (Daily Totals)
Conductivity vs Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



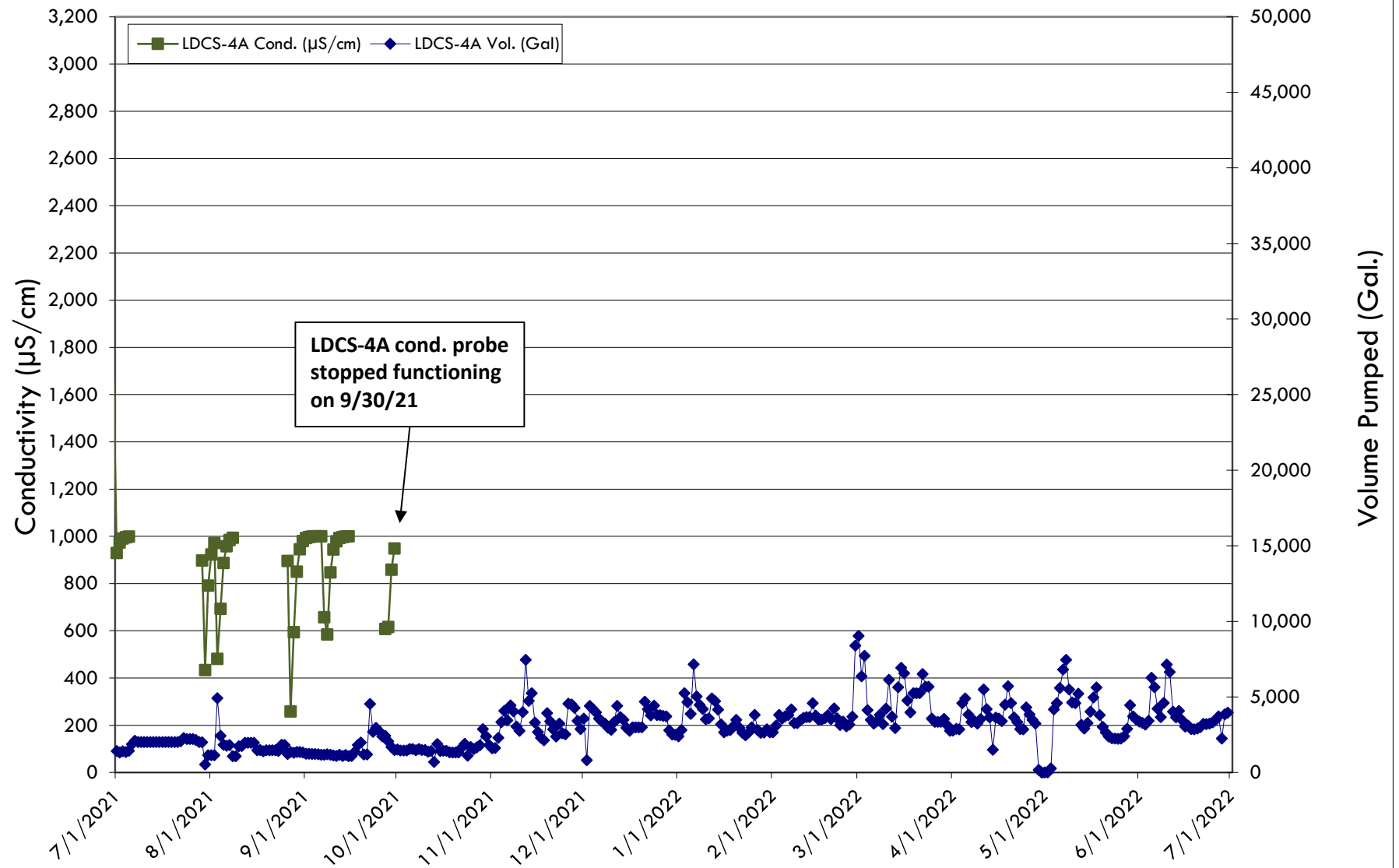
LDCS-2B (Daily Totals)
Conductivity vs Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



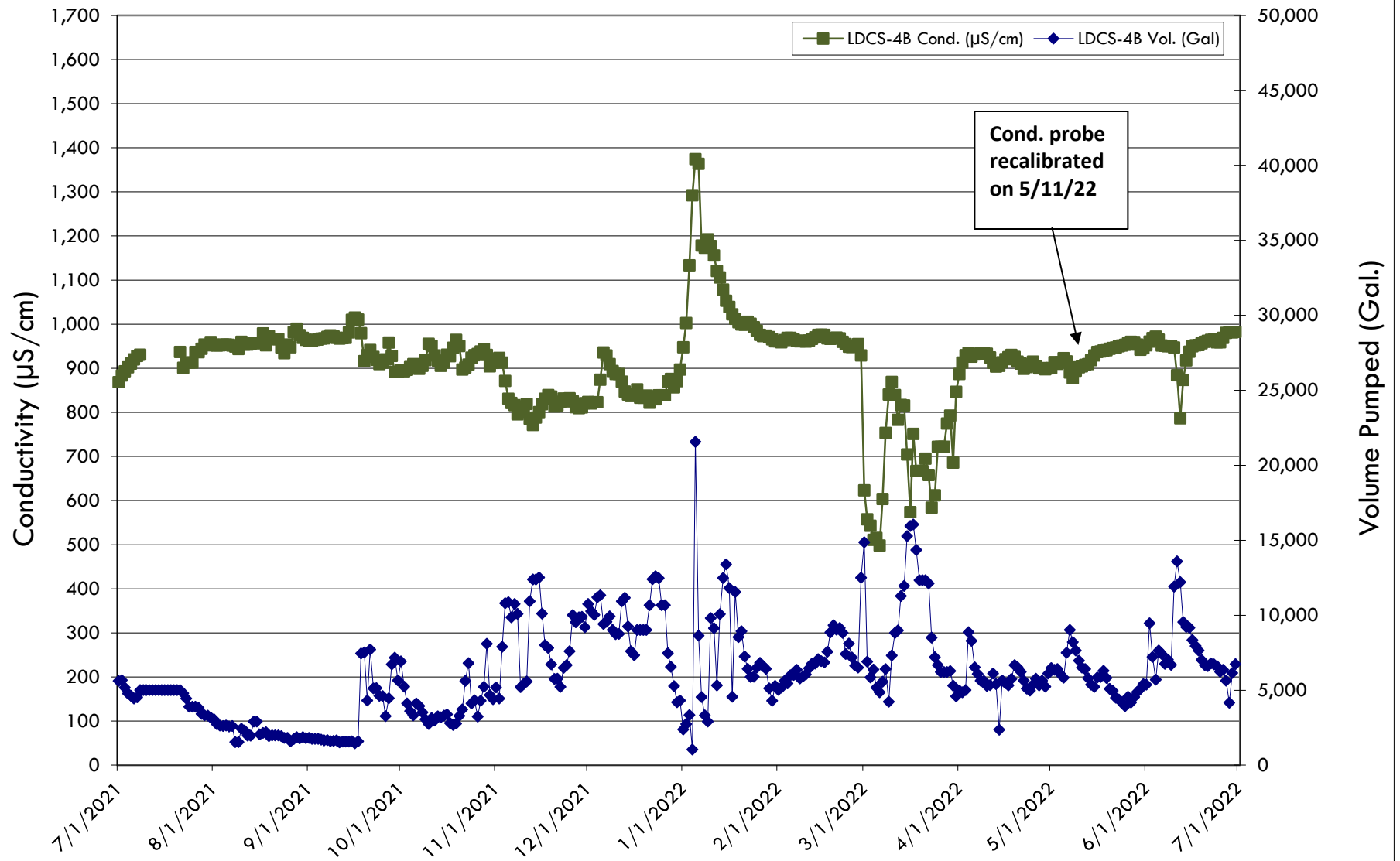
**LDCS-3A (Daily Totals)
Conductivity vs Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington**



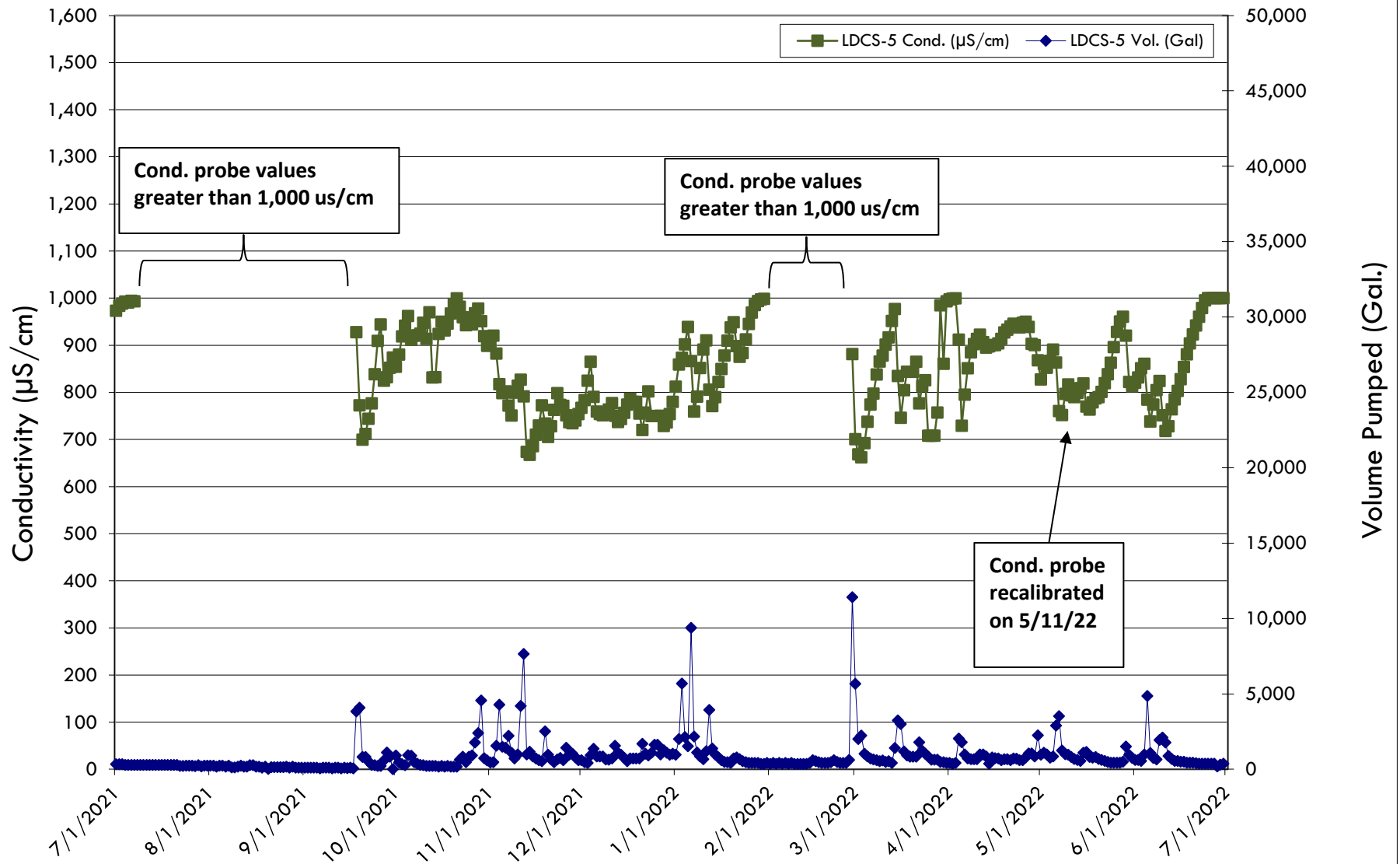
LDCS-4A (Daily Totals)
Conductivity vs Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



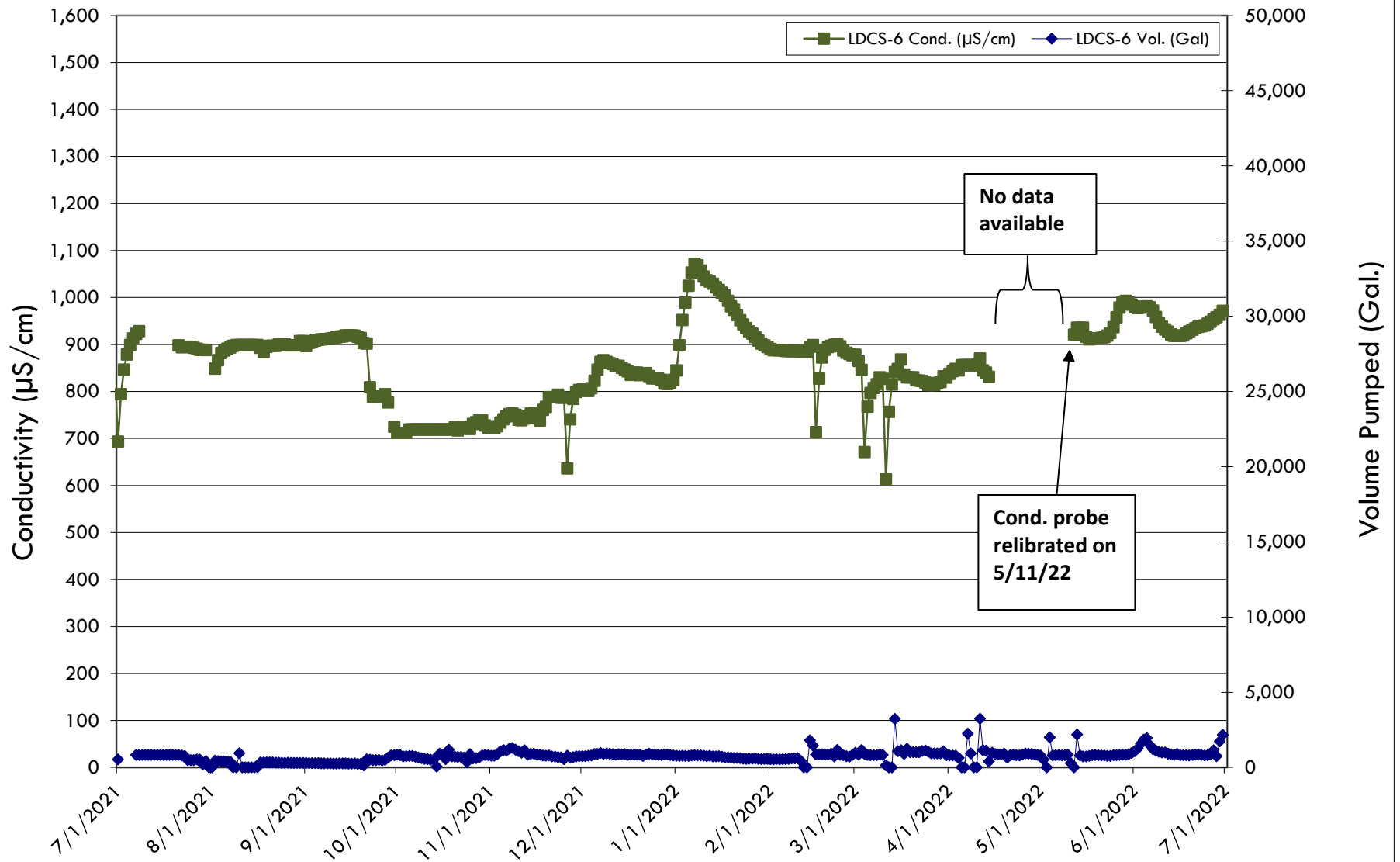
LDCS-4B (Daily Totals)
Conductivity vs Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



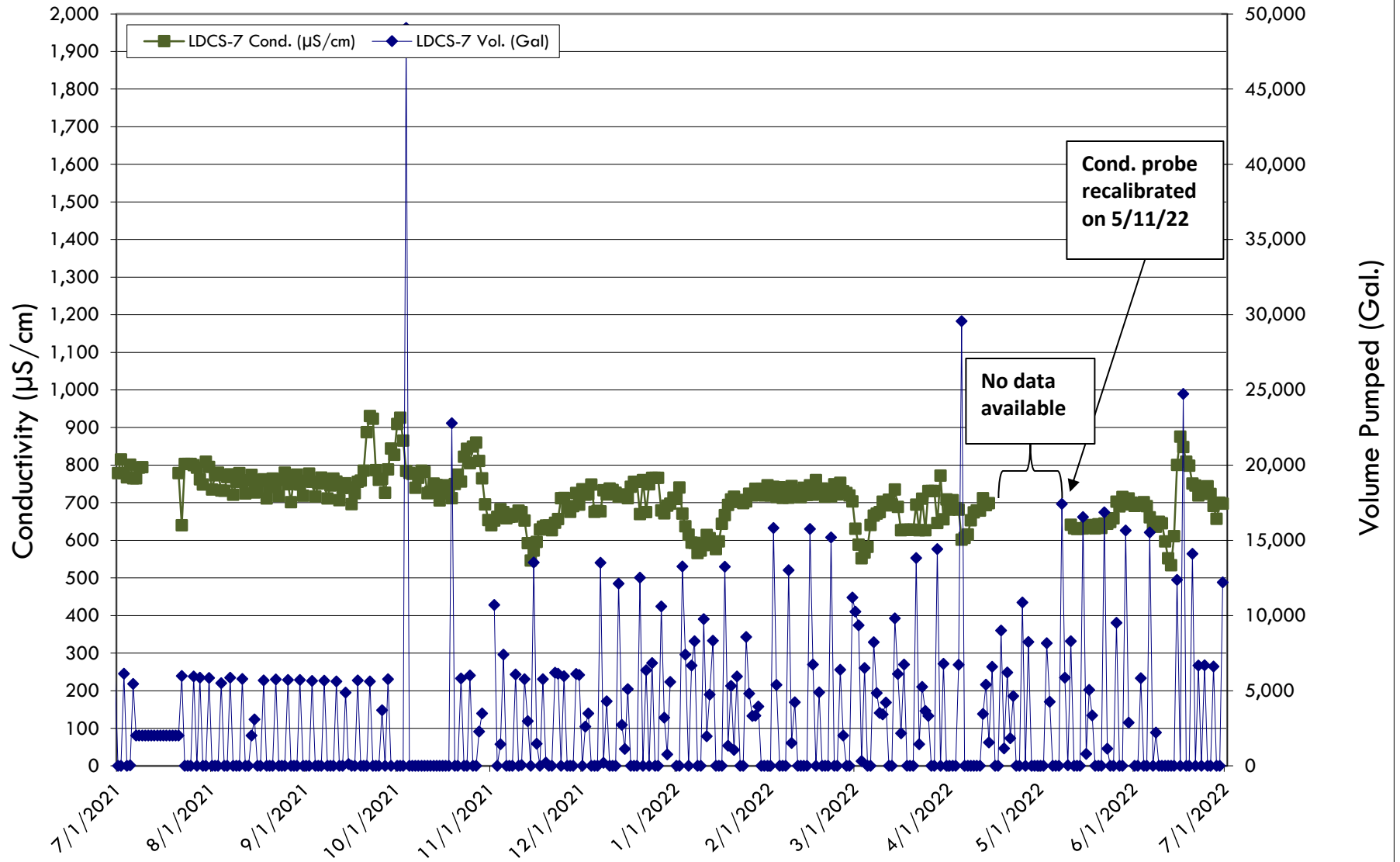
LDCS-5 (Daily Totals)
Conductivity vs Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



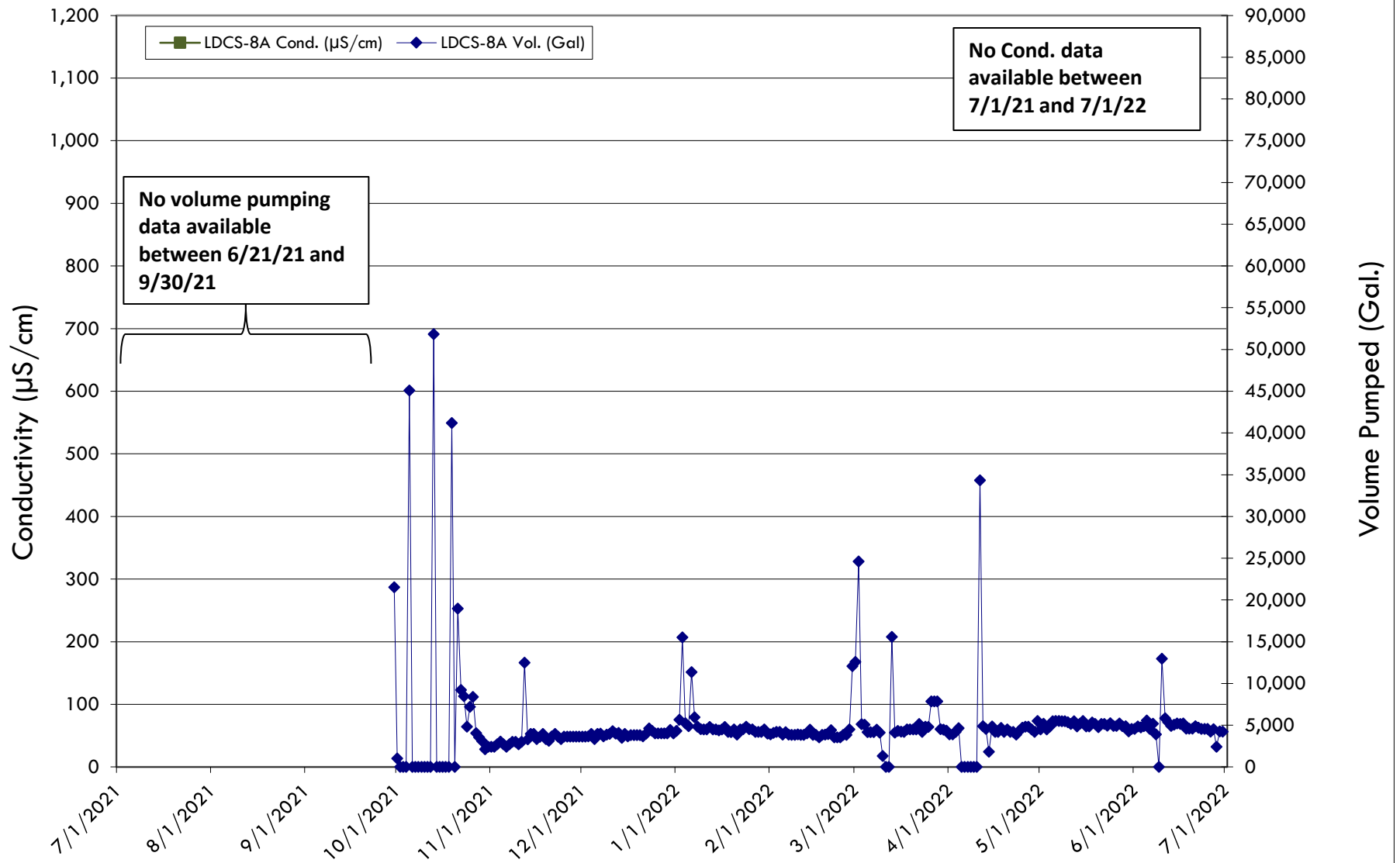
LDCS-6 (Daily Totals)
Conductivity vs Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



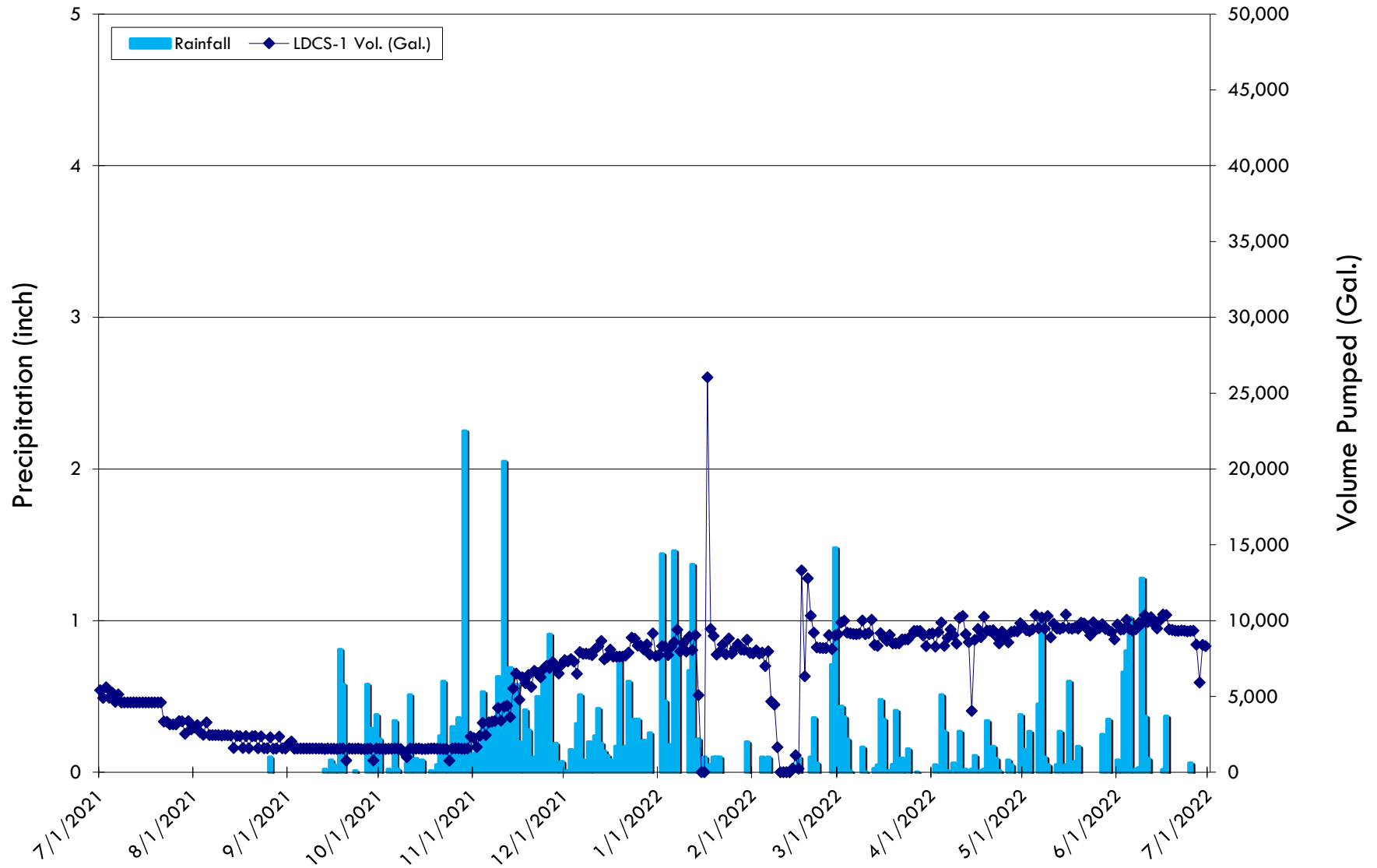
LDCS-7 (Daily Totals)
Conductivity vs Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



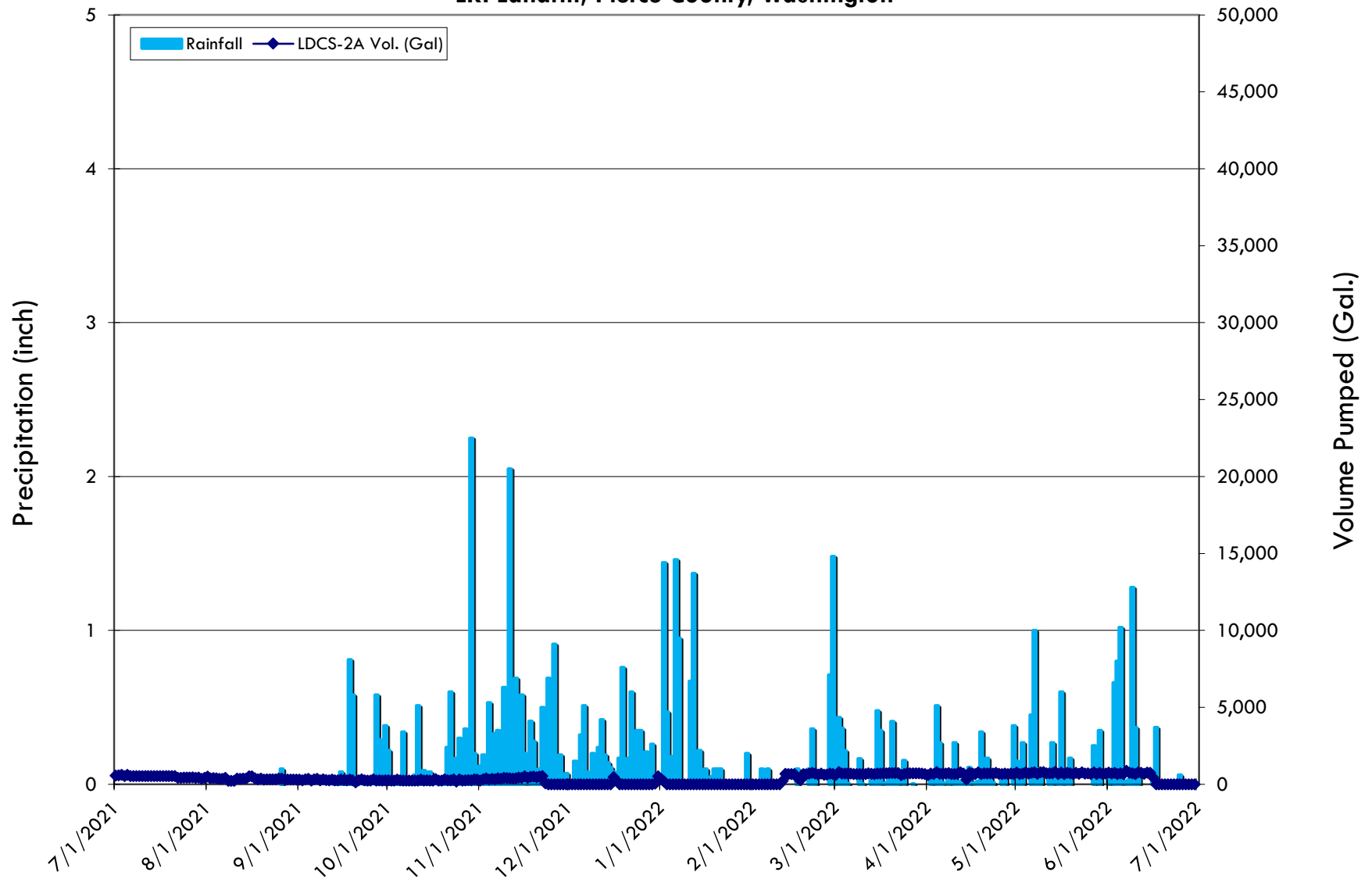
LDCS-8 (Daily Totals)
Conductivity vs Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



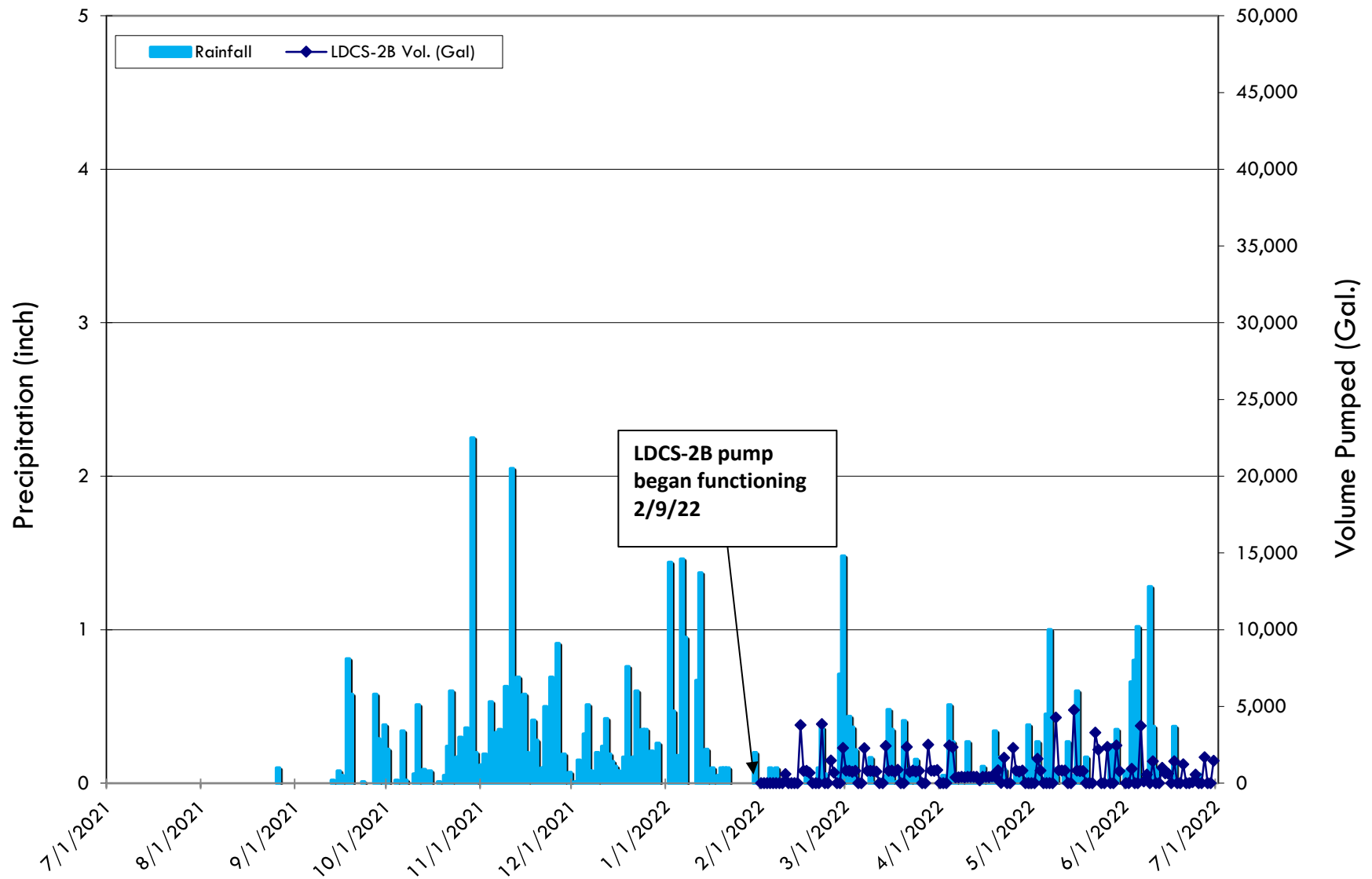
LDCS-1 (Daily Totals)
Volume Pumped vs Precipitation
Second Quarter 2022
LRI Landfill, Pierce County, Washington



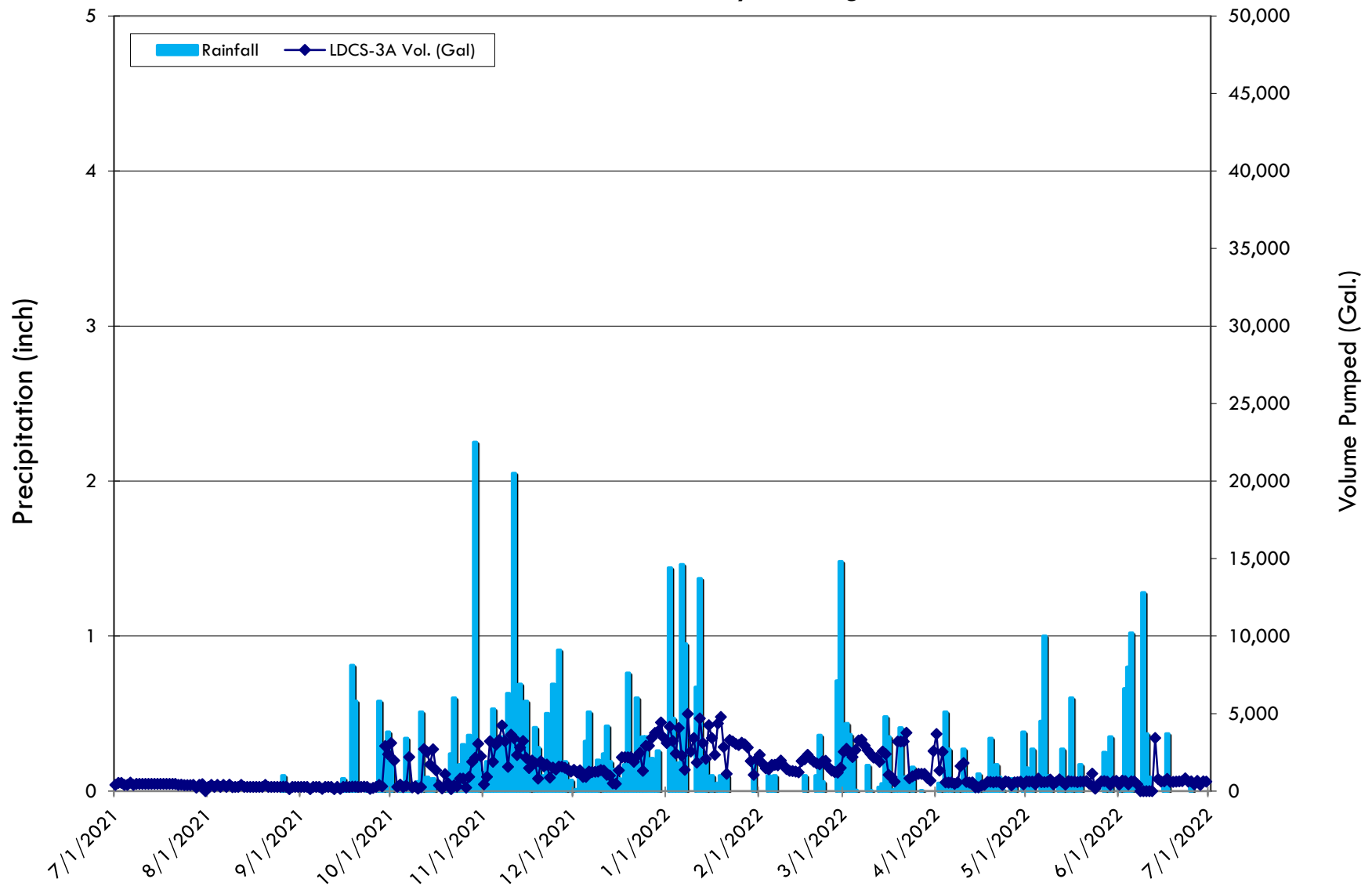
LDCS-2A (Daily Totals)
Volume Pumped vs Precipitation
Second Quarter 2022
LRI Landfill, Pierce County, Washington



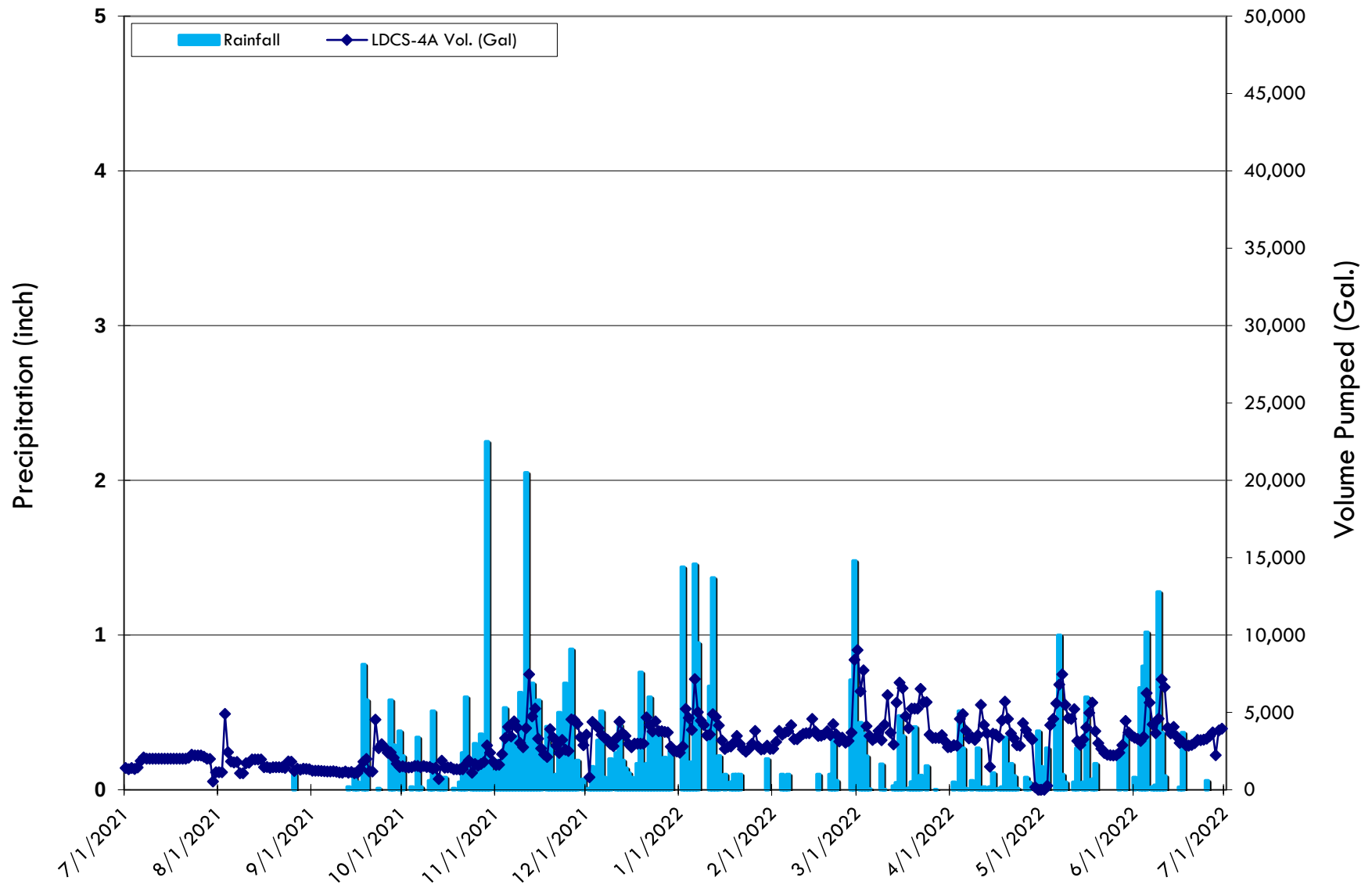
LDCS-2B (Daily Totals)
Volume Pumped vs Precipitation
Second Quarter 2022
LRI Landfill, Pierce County, Washington



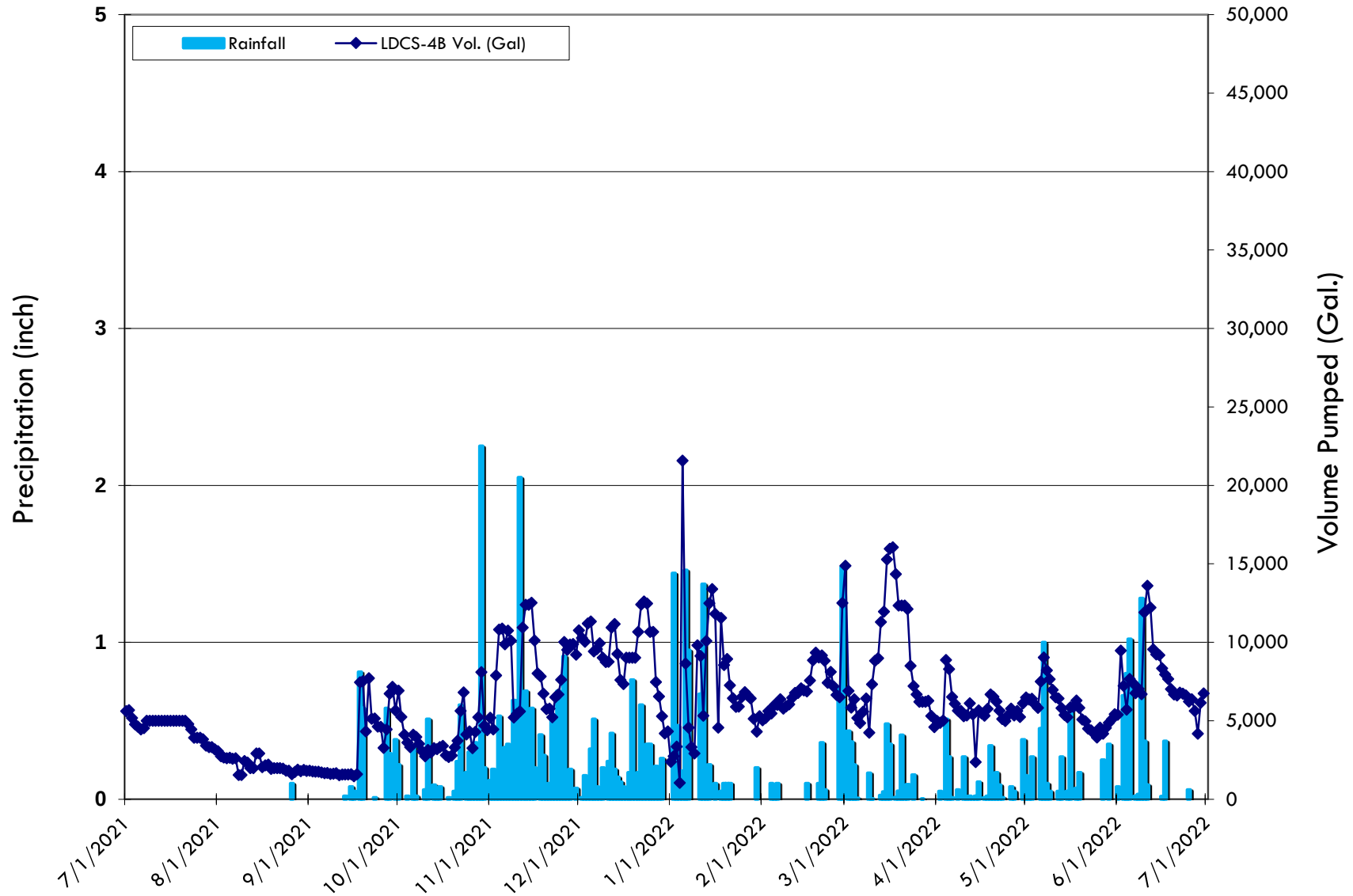
LDCS-3A (Daily Totals)
Volume Pumped vs Precipitation
Second Quarter 2022
LRI Landfill, Pierce County, Washington



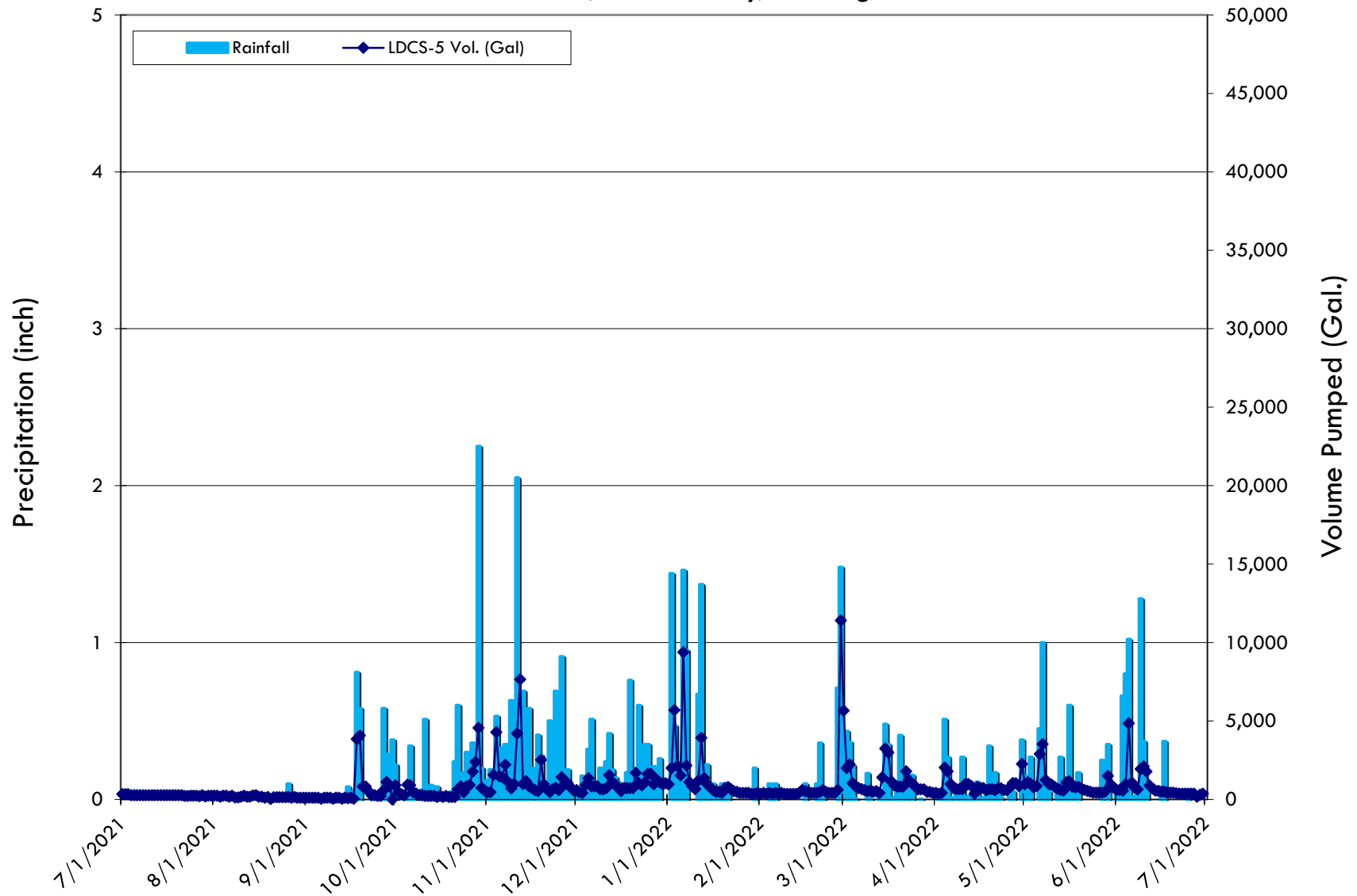
LDCS-4A (Daily Totals)
Volume Pumped vs Precipitation
Second Quarter 2022
LRI Landfill, Pierce County, Washington



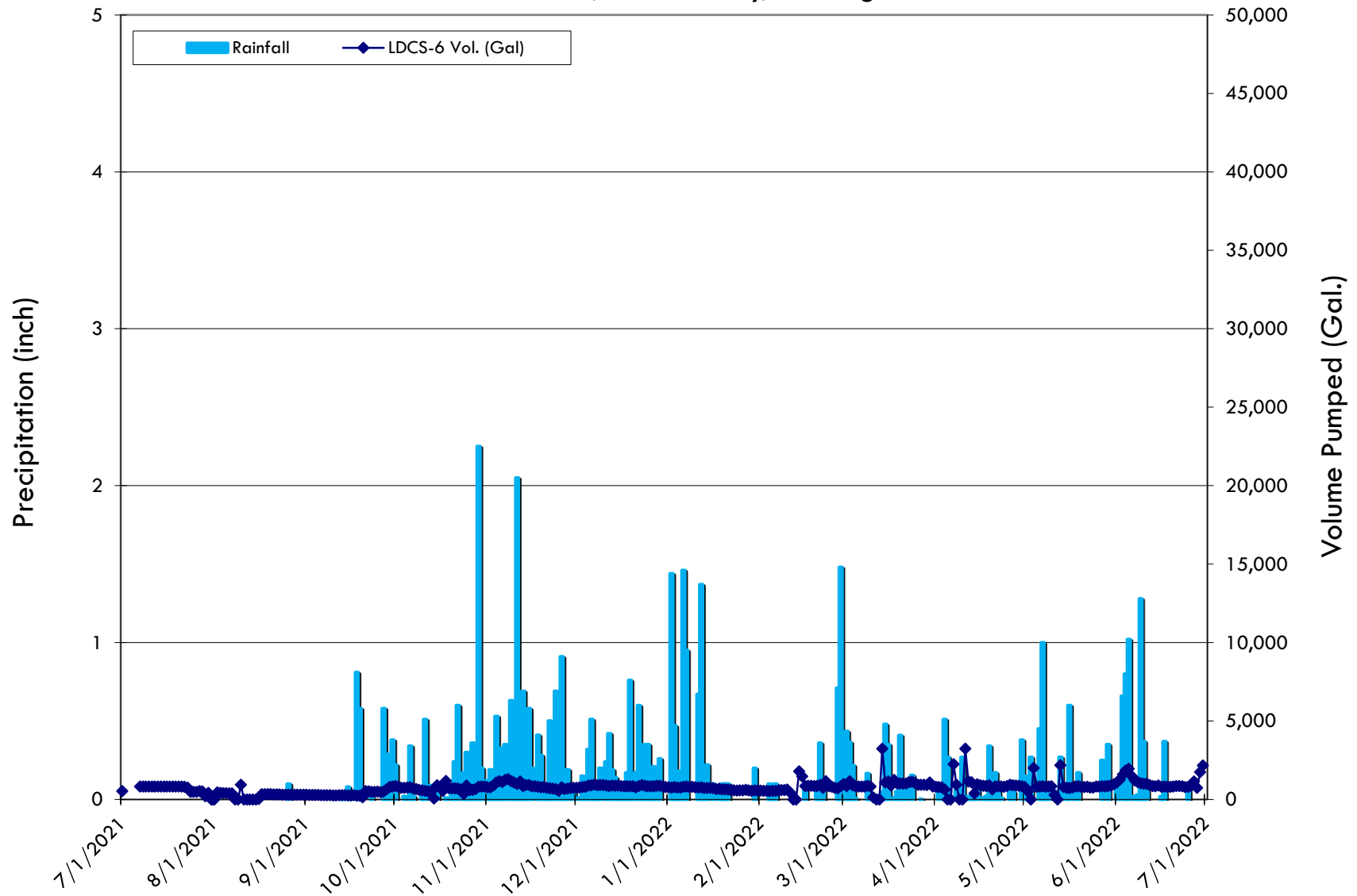
LDCS-4B (Daily Totals)
Volume Pumped vs Precipitation
Second Quarter 2022
LRI Landfill, Pierce County, Washington



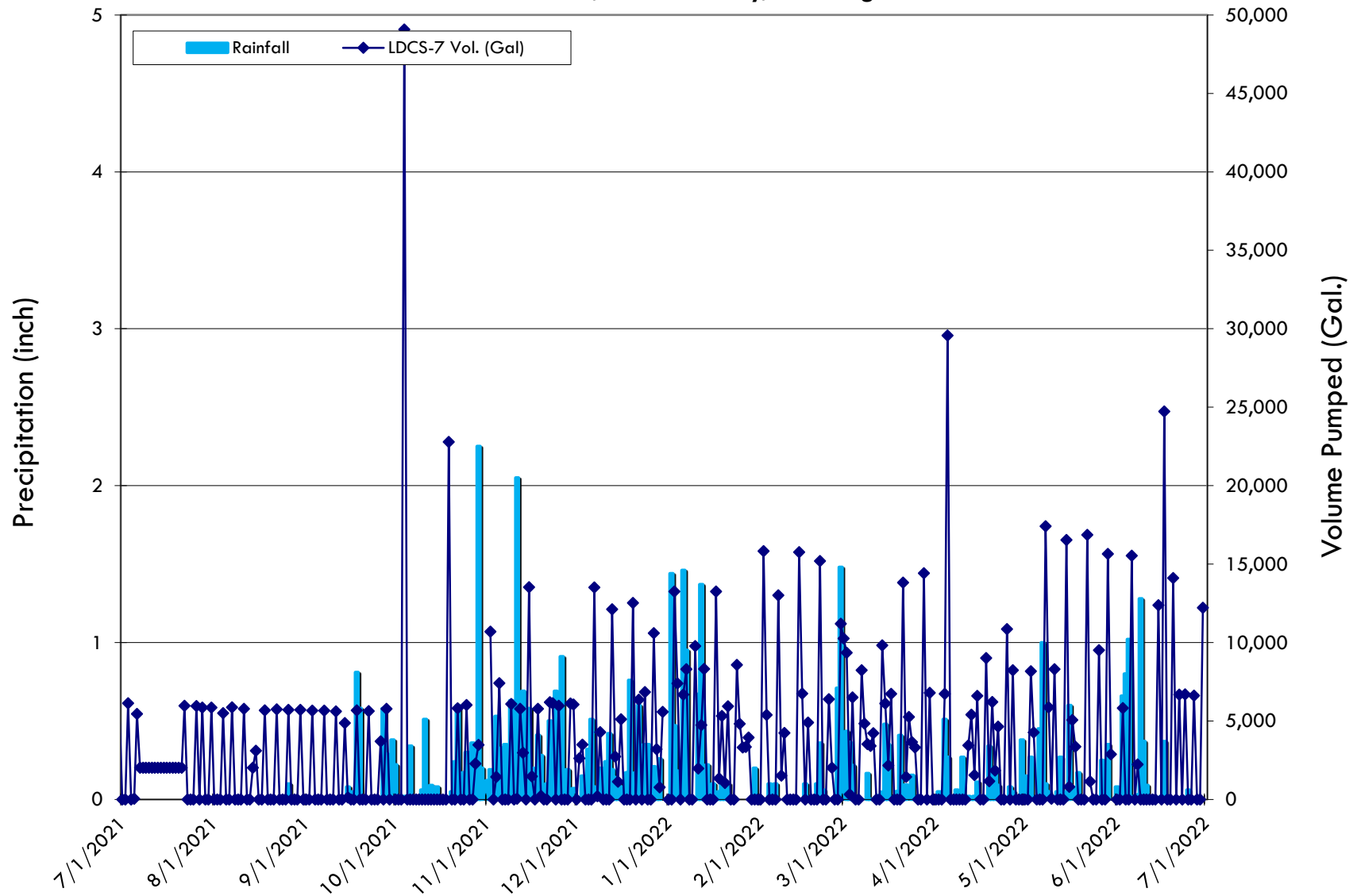
LDCS-5 (Daily Totals)
Volume Pumped vs Precipitation
Second Quarter 2022
LRI Landfill, Pierce County, Washington



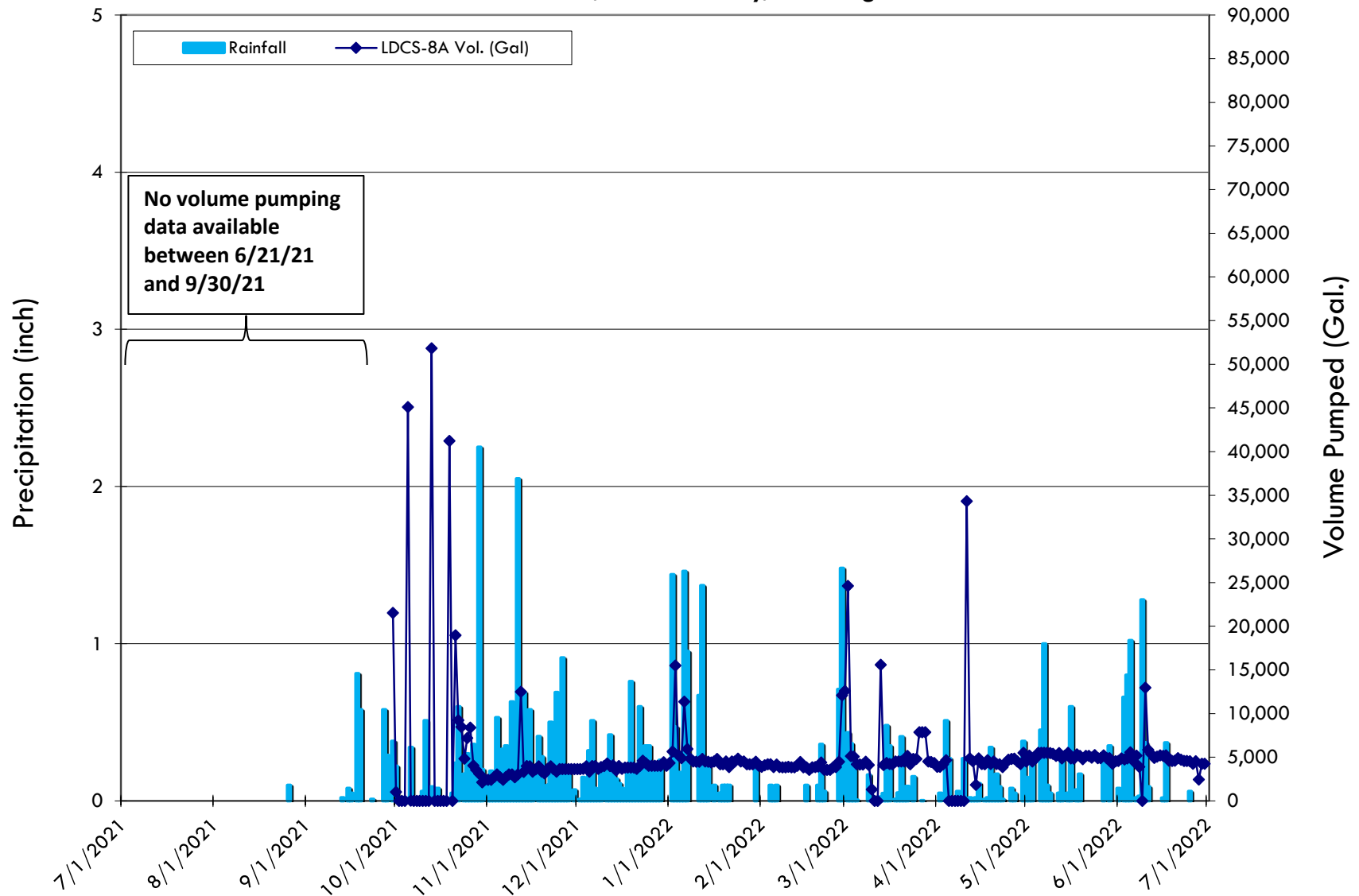
LDCS-6 (Daily Totals)
Volume Pumped vs Precipitation
Second Quarter 2022
LRI Landfill, Pierce County, Washington



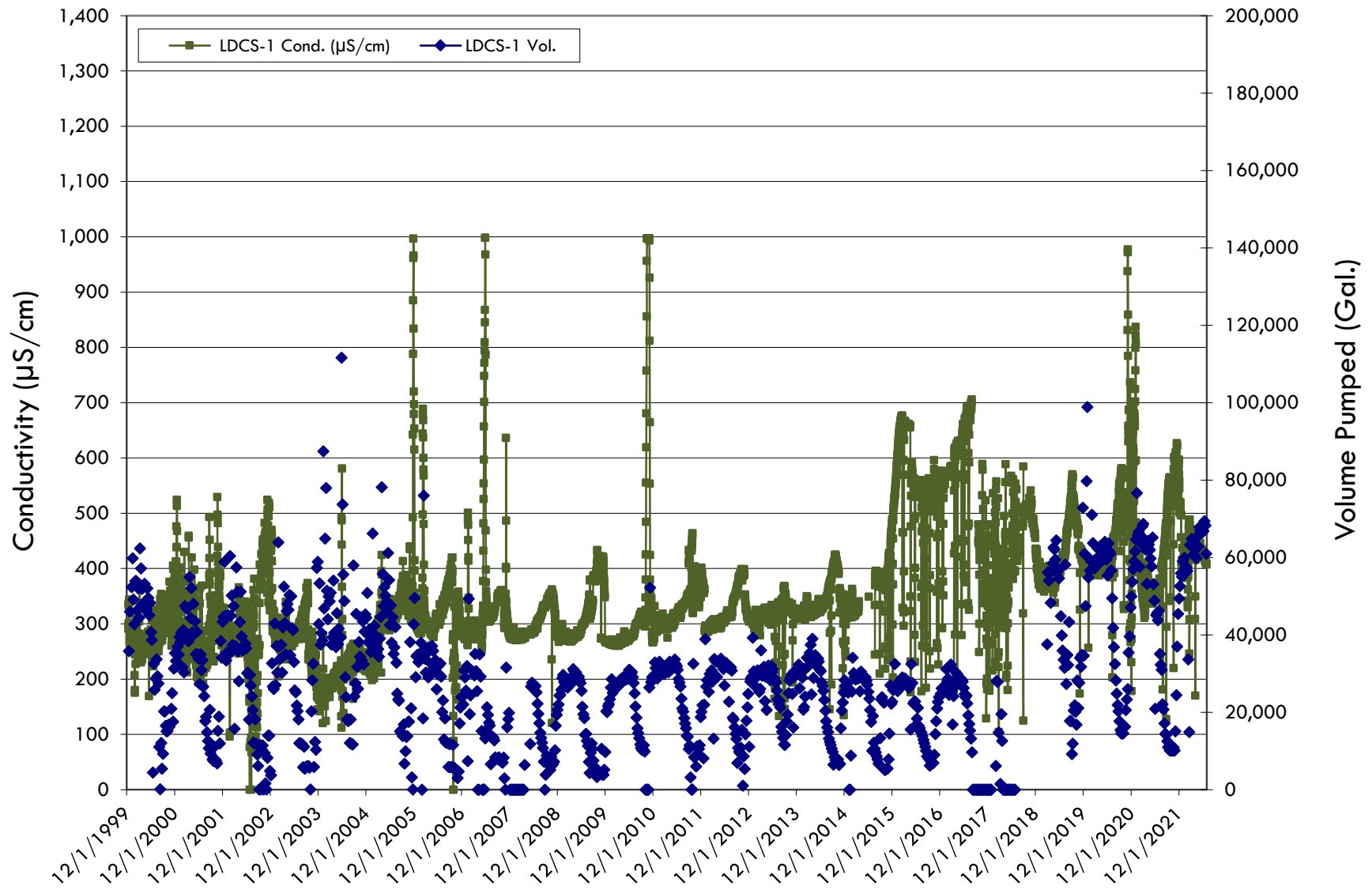
LDCS-7 (Daily Totals)
Volume Pumped vs Precipitation
Second Quarter 2022
LRI Landfill, Pierce County, Washington



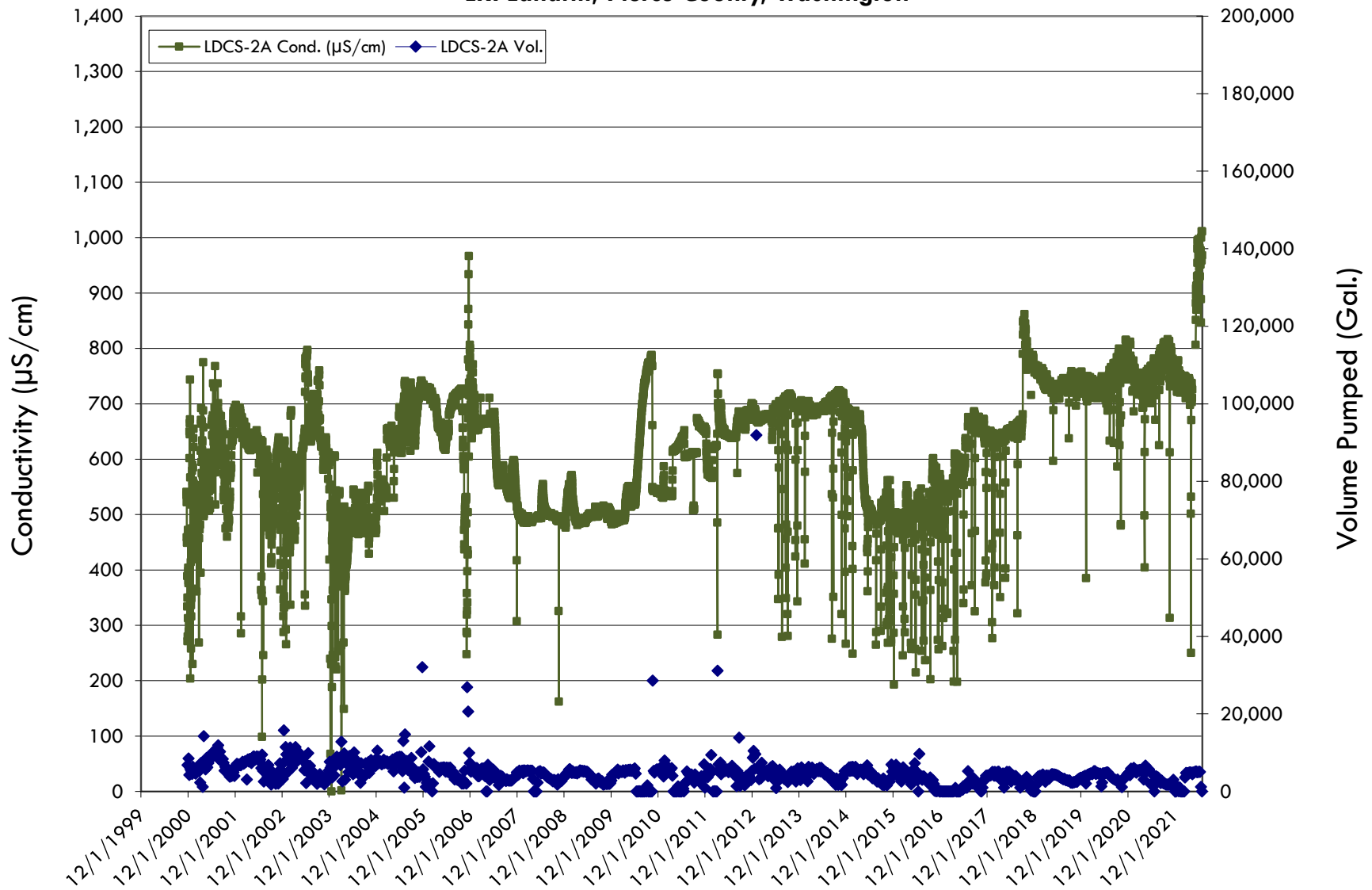
LDCS-8A (Daily Totals)
Volume Pumped vs Precipitation
Second Quarter 2022
LRI Landfill, Pierce County, Washington



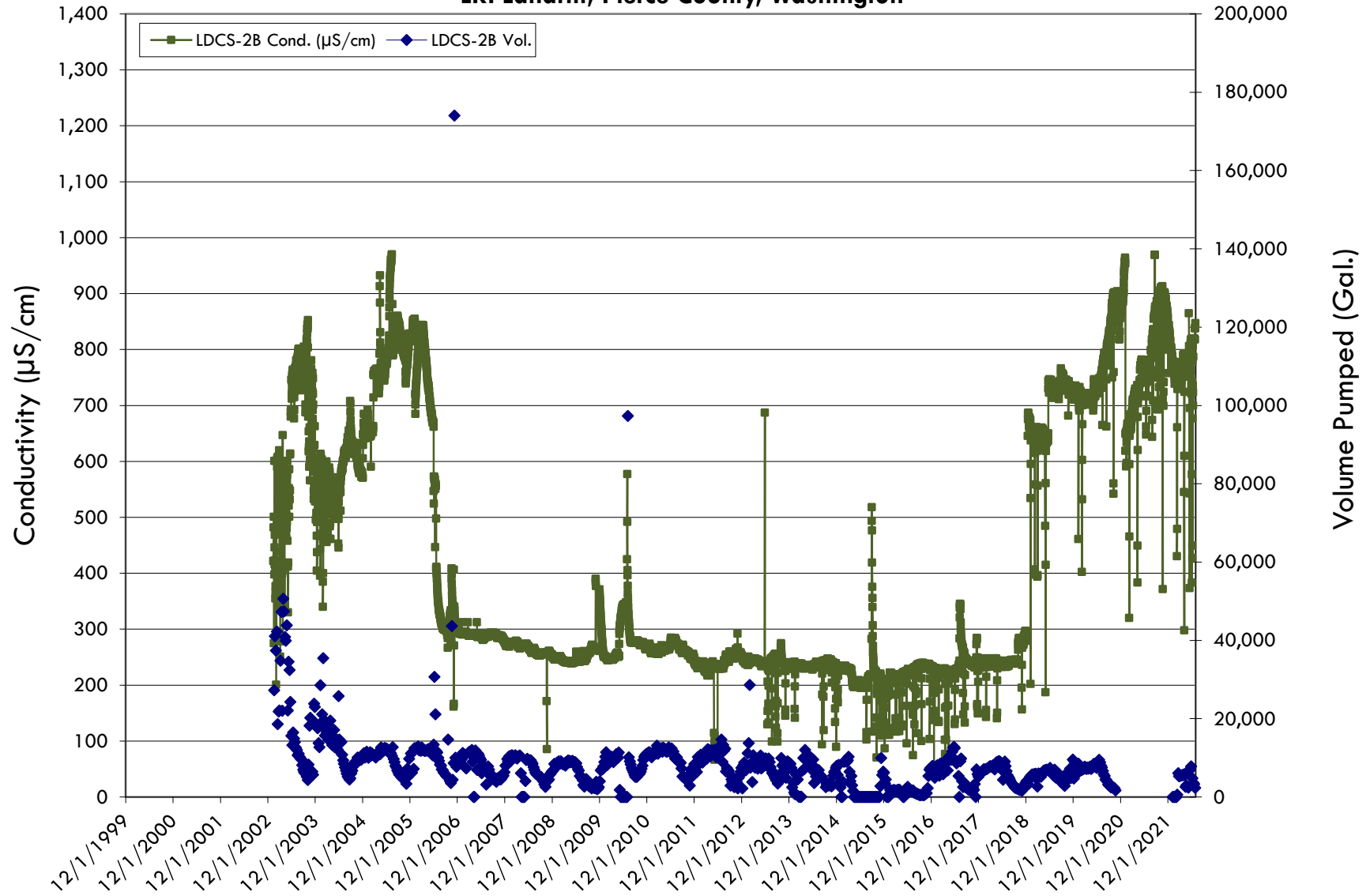
LDCS-1
Daily Conductivity vs Weekly Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



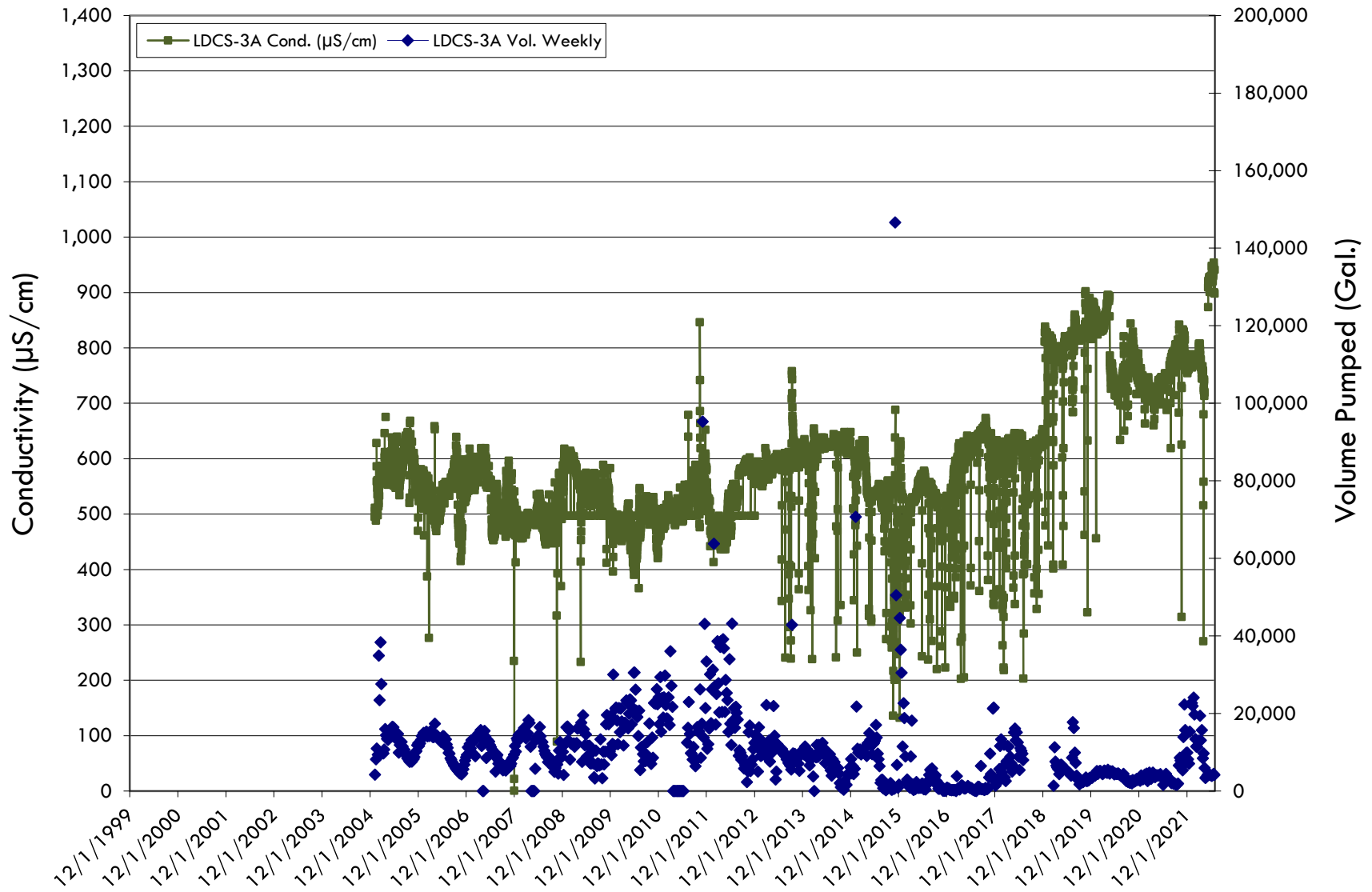
LDCS-2A
Daily Conductivity vs Weekly Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



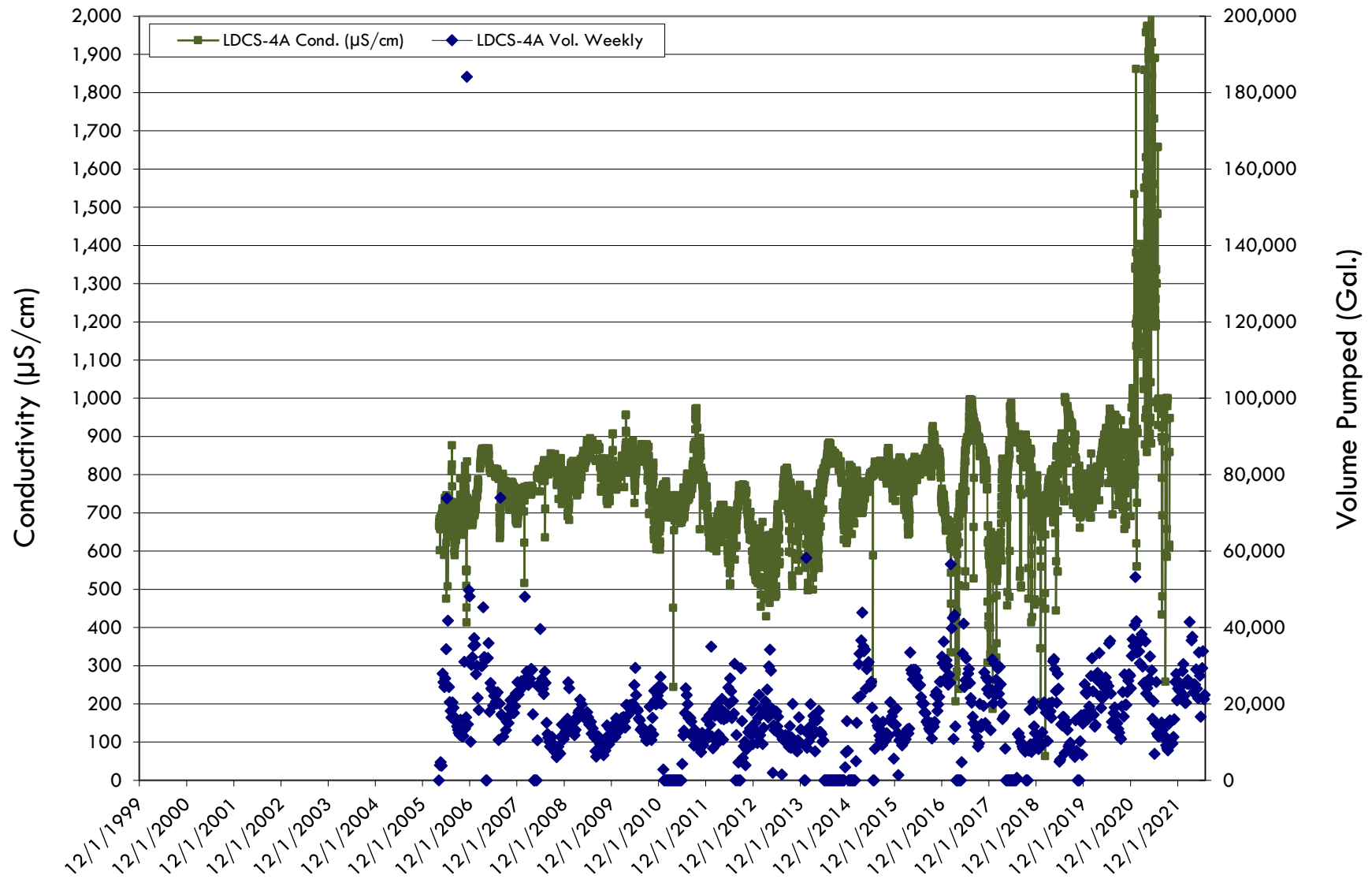
LDCS-2B
Daily Conductivity vs Weekly Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



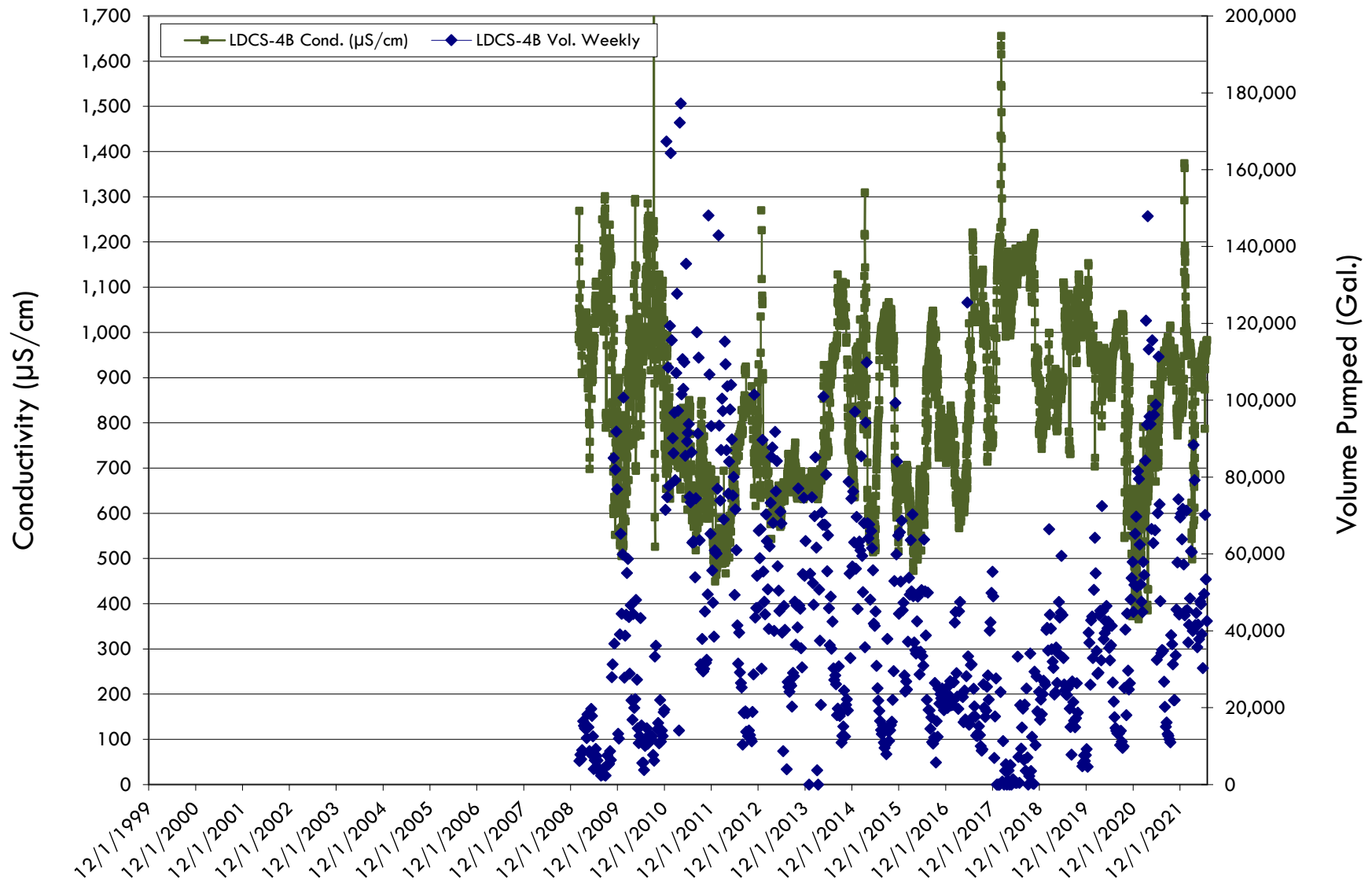
LDCS-3A
Daily Conductivity vs Weekly Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



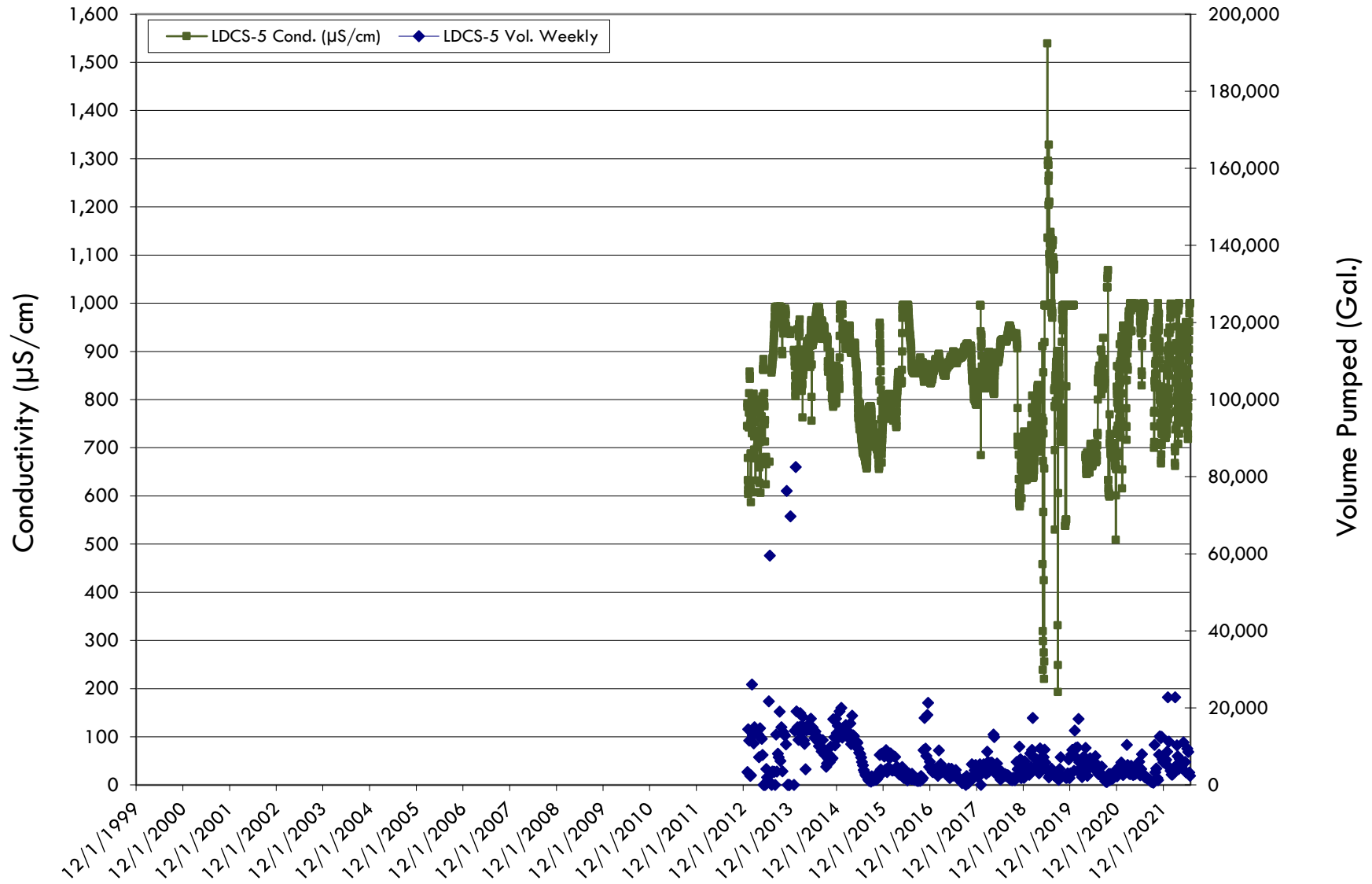
LDCS-4A
Daily Conductivity vs Weekly Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



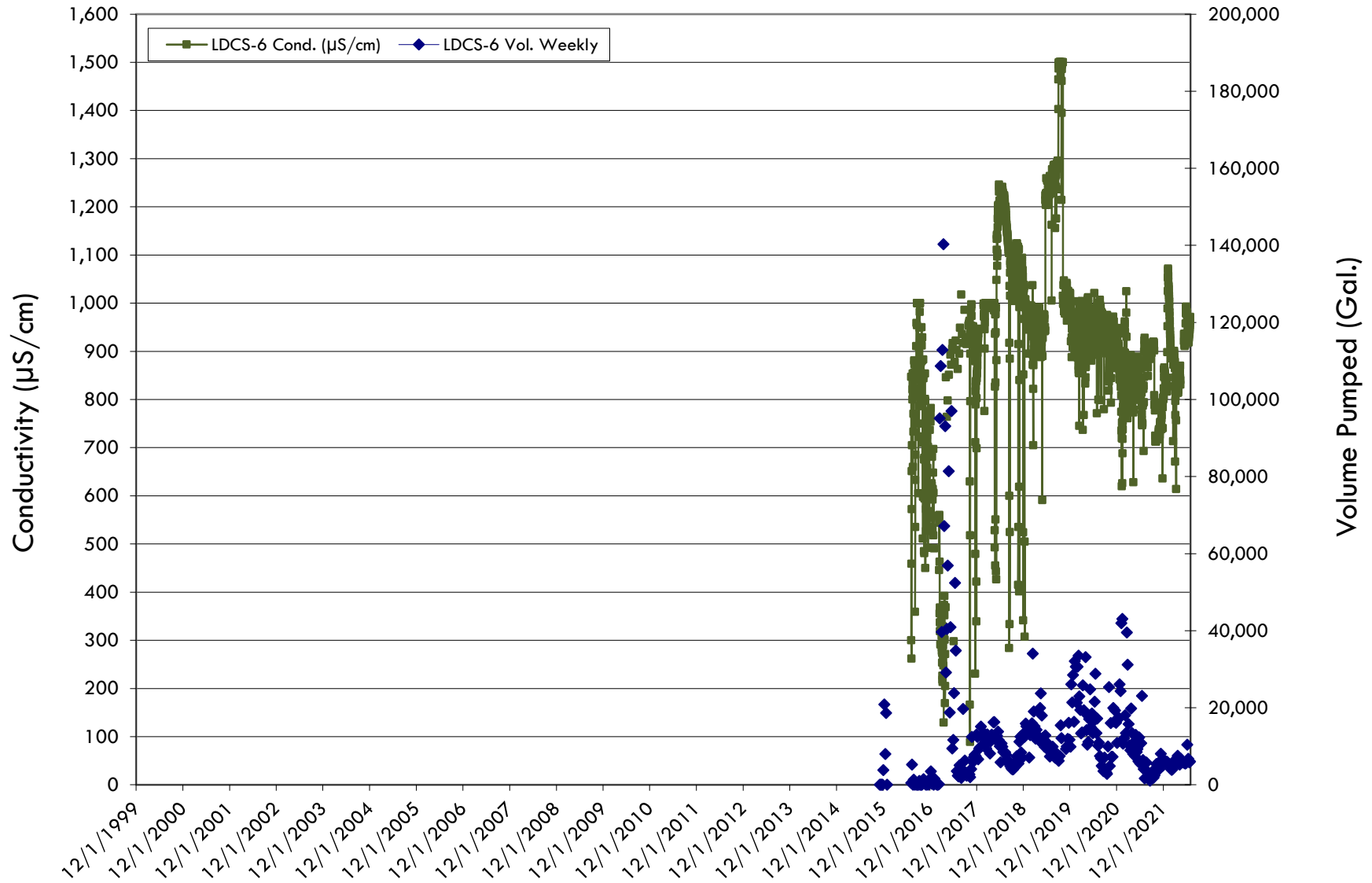
LDCS-4B
Daily Conductivity vs Weekly Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



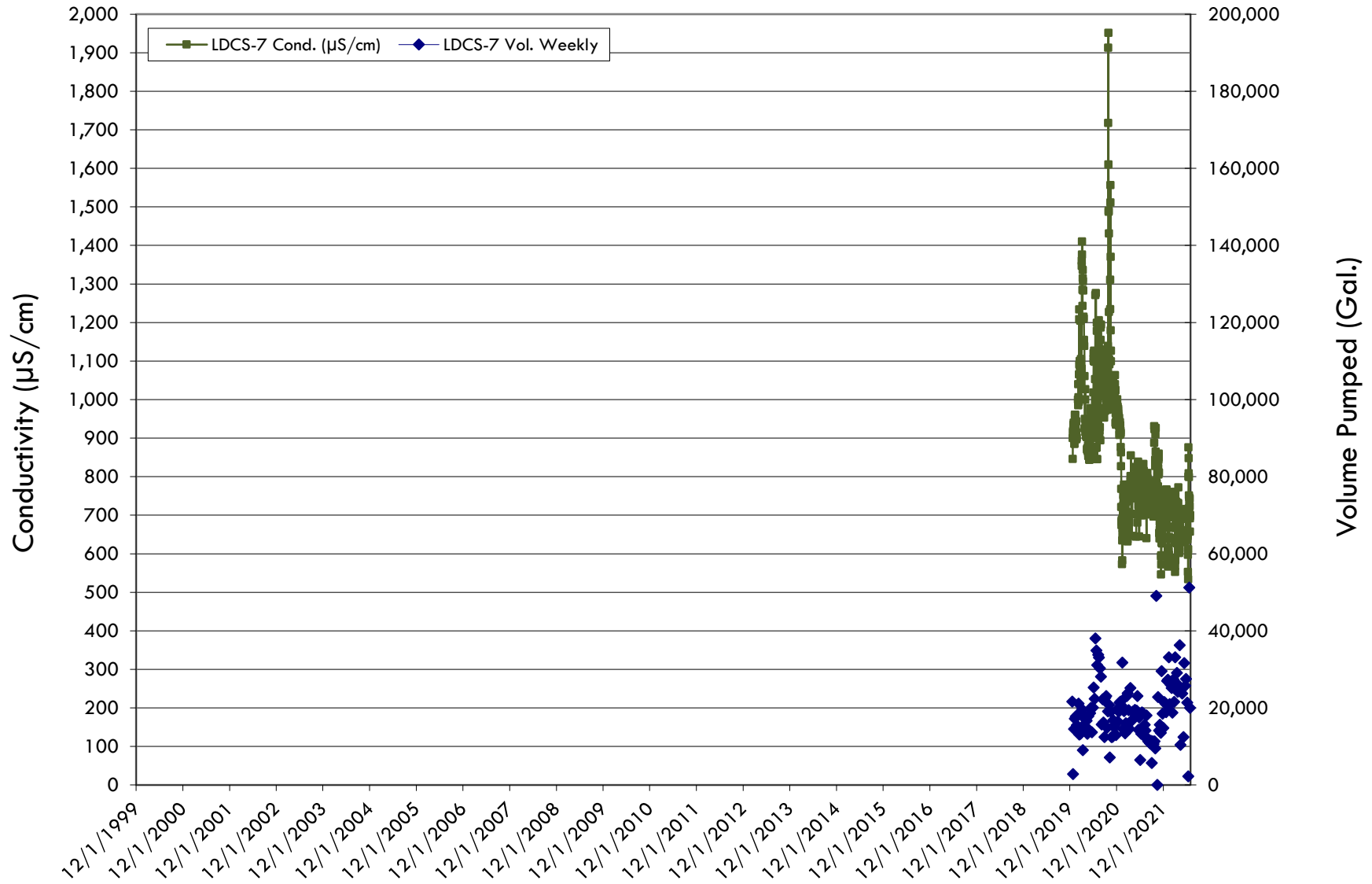
LDCS-5
Daily Conductivity vs Weekly Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



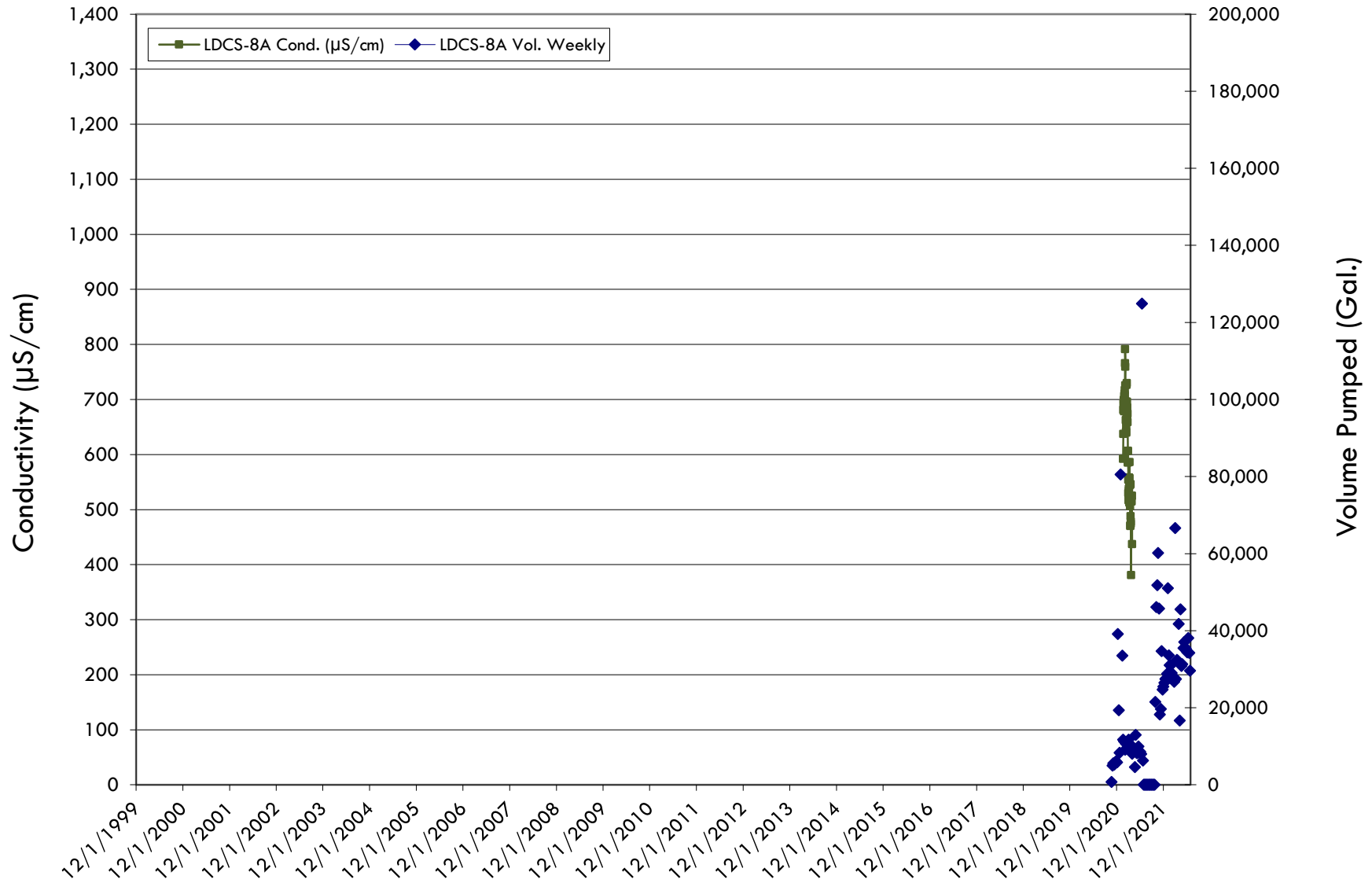
LDCS-6
Daily Conductivity vs Weekly Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



LDCS-7
Daily Conductivity vs Weekly Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington



LDCS-8A
Daily Conductivity vs Weekly Volume Pumped
Second Quarter 2022
LRI Landfill, Pierce County, Washington





Attachment I

Surface Water Monitoring Data



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody: NEWB 2

Monitoring Period: 04/01/2022 - 04/30/2022

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
		C8-1	C8-1	C8-2	C8-2
2-M	4/4/22	1.4	M		
2-T	4/5/22	5.2	M	10	M
3-M	4/11/22	2.0	M		
3-W	4/13/22			9	M
4-M	4/18/22	0.9	M		
4-T	4/19/22	0.3	M	11	M
5-M	4/25/22	0.2	M		
5-W	4/27/22			6	M
Minimum			M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		5.2	M	11	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: M - Monitoring Is Conditional/Not Req This MP

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		Check Dams
C8-2		Other
C8-2		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.

George Duvendack

Signature

5/12/2022 5:14:39 PM

Date



Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody: NEWB 2

Monitoring Period: 05/01/2022 - 05/31/2022

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	5/2/22	0.8	M				
1-Th	5/5/22	1.3	M	8.0	M	C	C
1-F	5/6/22	2.2	M				
1-Sa	5/7/22	3.6	M				
2-Su	5/8/22	4.3	M				
2-M	5/9/22	10.3	M				
2-T	5/10/22	8.0	M	10	M	C	C
2-W	5/11/22	5.5	M				
2-Th	5/12/22	6.1	M				
2-F	5/13/22	14.4	M				
3-M	5/16/22	7.7	M				
3-T	5/17/22	2.8	M				
3-W	5/18/22	2.7	M	14	M	C	C
3-Th	5/19/22	5.3	M				
4-T	5/24/22			C	C	C	C
4-W	5/25/22	8.9	M				
5-T	5/31/22			12	M	C	C
Minimum			M		M		C
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		14.4	M	14	M	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, M - Monitoring Is Conditional/Not Req This MP

Overall DMR Notes/Comment

Construction stormwater treatment was performed using chitosan Enhanced Sand Filtration (CESF) prior to discharge to C8-1. The averaged turbidity value is reported for each day that a discharge occurred.

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		Check Dams
C8-2		Other
C8-2		Silt Fence
C9-1		Other

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.

George Duvendack

6/15/2022 7:39:30 AM

Signature

Date

Permit Number: WAR002603

Permittee: LRI 304th Street Landfill

Facility County: Pierce

Receiving Waterbody: NEWB 2

Monitoring Period: 06/01/2022 - 06/30/2022

Outfall: 001 - South Creek

Version: 2

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	6/2/22	C	C	C	C	C	C
2-M	6/6/22	6.3	M				
2-T	6/7/22	10.6	M				
2-W	6/8/22	10.0	M	11	M	C	C
2-Th	6/9/22	7.8	M				
2-F	6/10/22	4.8	M				
2-Sa	6/11/22	3.7	M				
3-Su	6/12/22	9.7	M				
3-W	6/15/22			C	C	C	C
4-W	6/22/22	C	C	C	C	C	C
5-T	6/28/22	C	C	C	C	C	C
Minimum			M		M		C
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		10.6	M	11	M	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, M - Monitoring Is Conditional/Not Req This MP

Overall DMR Notes/Comment

Construction stormwater treatment was performed using Chitosan Enhanced Sand Filtration (CESF) prior to discharge to C8-1. The averaged turbidity value is reported for each day that a discharge occurred.

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		Check Dams
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.

George Duvendack

9/13/2022 8:45:26 AM

Signature

Date

Permit Number: WAR002557

Permittee: Pierce County Recycling - 304th Street L

Facility County: Pierce

Receiving Waterbody:

Monitoring Period: 04/01/2022 - 06/30/2022

Outfall: SWPO - Discharge from SW pond

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	Total BOD5 Total Milligrams/L (mg/L) Quarterly Grab	Solids (Residue) Total suspended (TSS) Milligrams/L (mg/L) Quarterly Grab	Ammonia Total Milligrams/L (mg/L) Quarterly Grab	Alpha-terpineol (3-Cyclohexene-1-methanol, alpha, alpha, trimethyl-) Micrograms/L (ug/L) Quarterly Grab	Benzoic Acid Micrograms/L (ug/L) Quarterly Grab	p-Cresol (4-methylphenol) Micrograms/L (ug/L) Quarterly Grab
		SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO	SWPO
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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
4-T	4/19/22	4.0	7.0	No	4.2	J 4.4	2.8	B 2.0	B 0.50	B 9.8	B 25	
7-Th	5/12/22	3.0	6.9	No								B 9.6
Minimum			6.9									
			BM: >= 5.0 (RO)									
Average		3.5			4.2	J 4.4						
		BM: <= 25			BM: <= 14	BM: <= 117						
Maximum			7									
			BM: <= 9.0 (RO)									
Month 1 Average							2.8	B 2.0	B 0.50	B 9.8	B 25	B 9.6
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 2 Average							2.8	B 2.0	B 0.50	B 9.8	B 25	B 9.6
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14
Month 3 Average							2.8	B 2.0	B 0.50	B 9.8	B 25	B 9.6
							<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14

Reporting Codes Used: B - Below Detection Limit/No Detection, J - Estimated Value/Below Quantitation Limit

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.

George Duvendack

8/12/2022 9:03:16 AM

Signature

Date

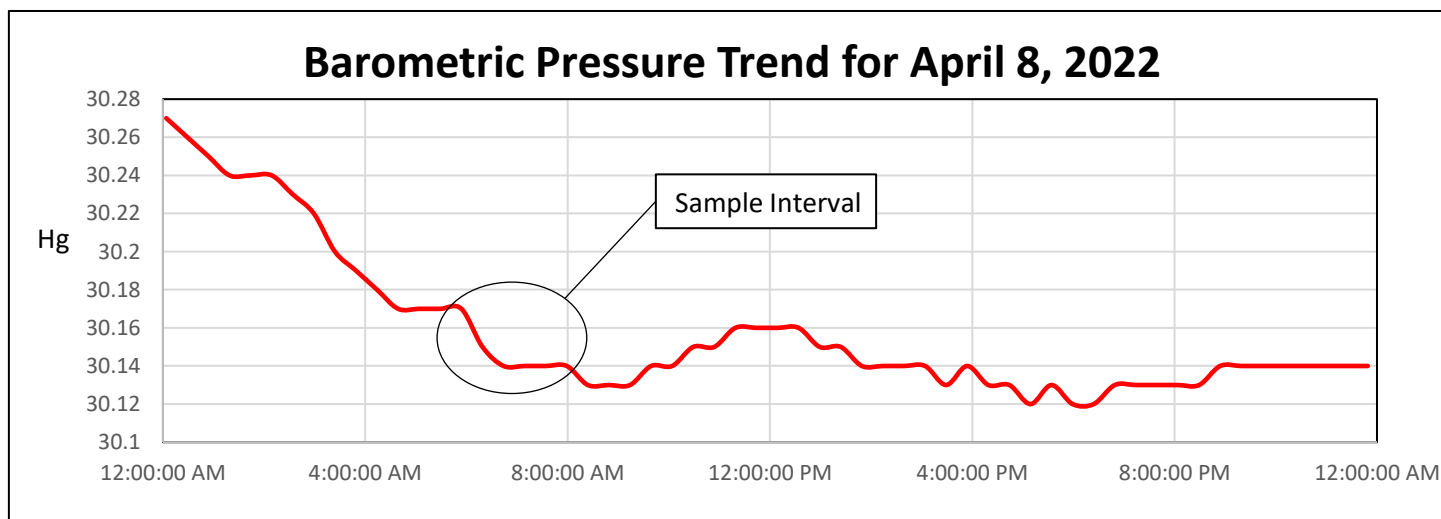
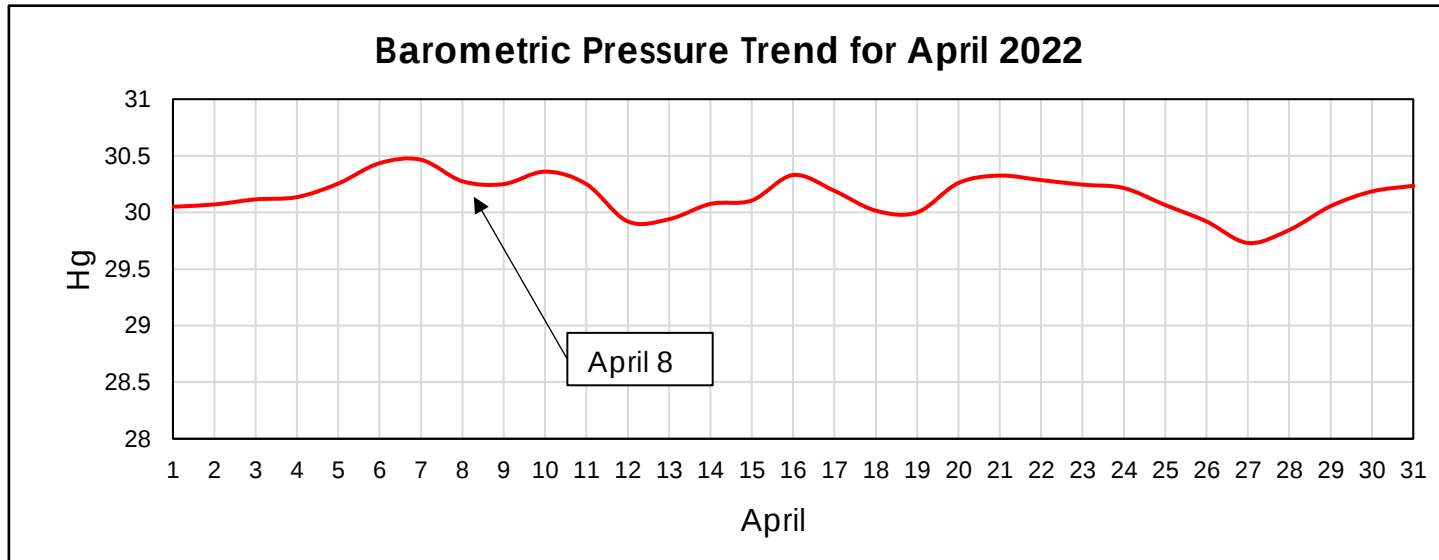
Attachment J
Landfill Gas Monitoring Data

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 (% 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	0.3	-				20.0		
(max)			0.06		5.0	5.0	20.3				90.0		
Perimeter Gas Probes													
GP-1	4/8/2022	6:40	0.04	--	0.0	0.3	21.2	78.5	16.0	0.0	0.0		
GP-2	4/8/2022	6:46	-1.01	--	0.0	0.1	21.2	78.7	15.1	0.0	0.0		
GP-3	4/8/2022	6:51	-0.01	--	0.0	0.1	21.3	78.6	7.6	2.7	53.8		
GP-4	4/8/2022	7:10	0.06	--	0.0	0.4	19.7	79.9	9.5	0.0	0.0		
GP-9	4/8/2022	7:15	0.05	--	0.0	0.2	21.0	78.8	10.7	0.0	0.0		
GP-10	4/8/2022	6:29	0.04	--	1.2	3.3	18.1	77.4					
GP-10P	4/8/2022	6:33	0.04	--	1.4	5.6	17.6	75.4				<i>Note 5</i>	
GP-11	4/8/2022	6:22	0.04	--	0.0	0.1	21.1	78.8					
GP-12	4/8/2022	6:13	0.02	--	0.0	0.1	21.0	78.9					
GP-13	4/8/2022	6:05	0.03	--	0.0	0.2	20.8	79.0					
GP-14	4/8/2022	7:45	0.06	--	0.0	0.1	21.0	78.9	18.9	3.6	72.8		
GP-15	4/8/2022	7:35	-0.05	--	0.0	0.2	20.9	78.9	12.6	0.0	0.0		
GP-16	4/8/2022	7:19	0.06	--	0.0	0.7	20.8	78.5	10.3	3.0	19.9		
						Beginning	Ending	Average	Starting Date:		4/8/2022		
						Weather:	Partly Cloudy	Mostly Cloudy	Cloudy	Starting Time:		6:05	
						Temperature, T (deg F):	46	47	46.5	Finishing Date:		4/8/2022	
						Wind Speed (mph):	14	16	15	Finishing Time:		7:45	
						Wind Direction:	202.5	202.5	202.5	Monitored by:		R. Martinez	
						Barometric Pressure, P (in Hg):	29.69	29.73	29.71	Instruments:		GEM 2000	
						24hr Baro.Trend (rising / falling / steady / unsteady)	Rising			Calibration Date:		4/8/2022	

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	4.	GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.
TOC	Top of Casing	5.	GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - April 2022

LRI 304th Landfill, Washington



Monthly Data Source: Wunderground.com (Puyallup)

Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL

Data Source:

Daily Data Source: Wunderground.com (Puyallup)

Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL

Data Source:

<https://www.wunderground.com/history/daily/us/wa/seatac/KSEA/date/2022-4-8>

LRI Landfill

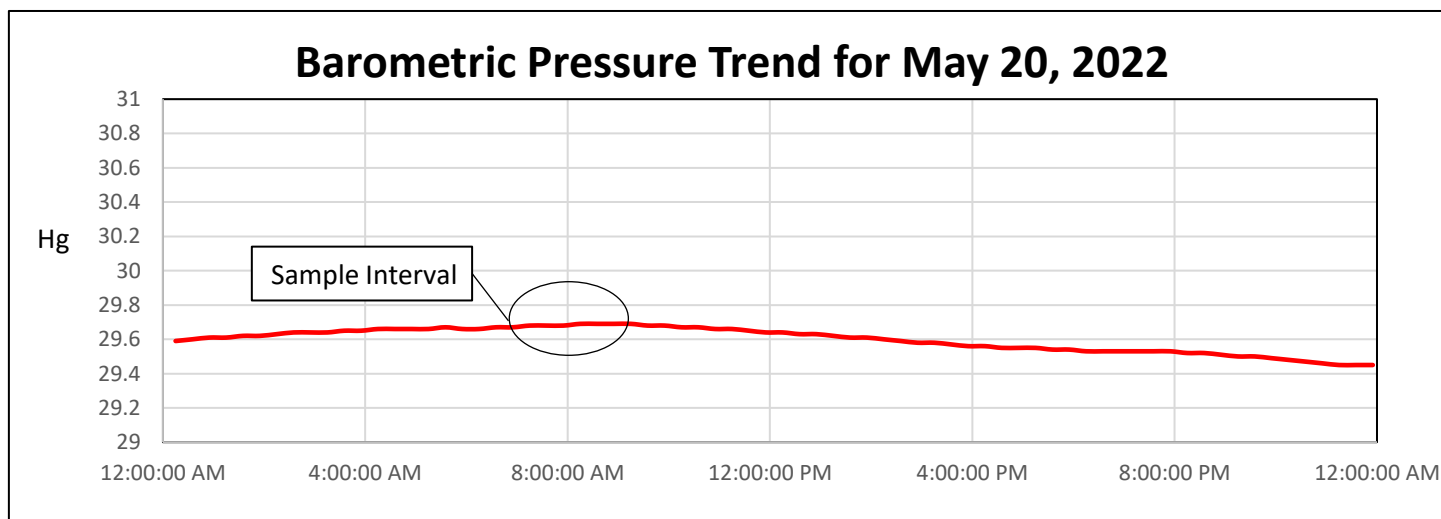
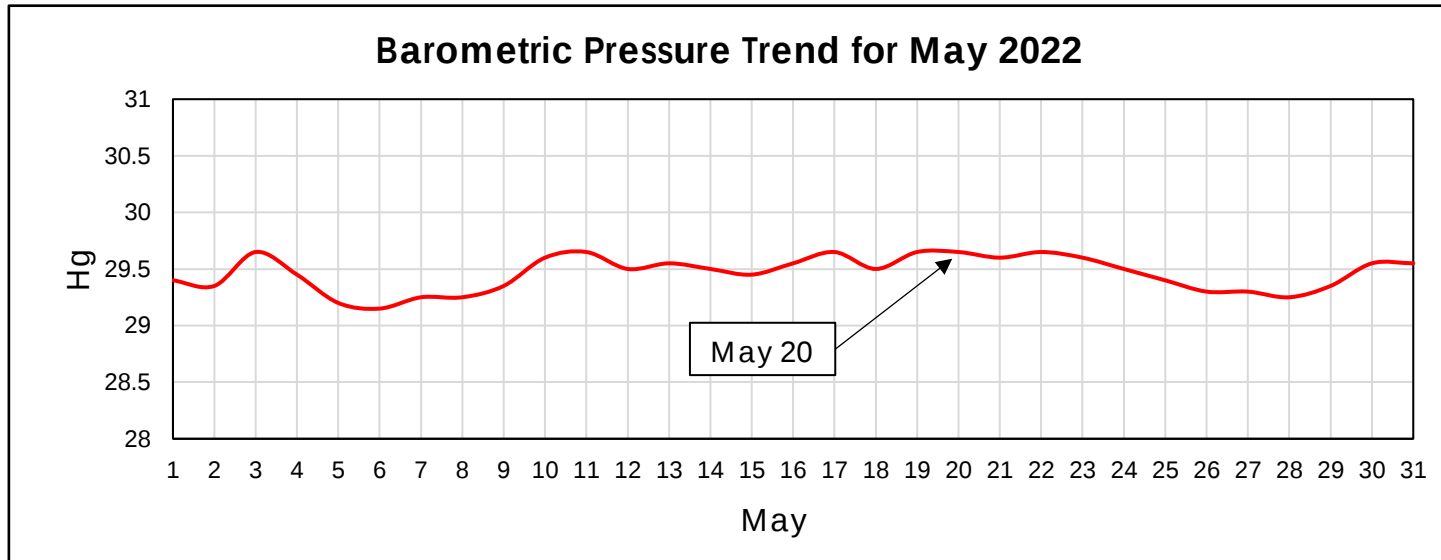
04222001.04

May-22

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	4.	GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring as GP-10.
TOC	Top of Casing	5	GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - May 2022

LRI 304th Landfill, Washington



Monthly Data Source: Wunderground.com (Puyallup)

Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL

Data Source:

<https://www.wunderground.com/history/monthly/us/wa/south-hill/KPLU/date/2022-5>

Daily Data Source: Wunderground.com (Puyallup)

Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL

Data Source:

<https://www.wunderground.com/history/daily/us/wa/south-hill/KPLU/date/2022-5-13>

SCS Engineers

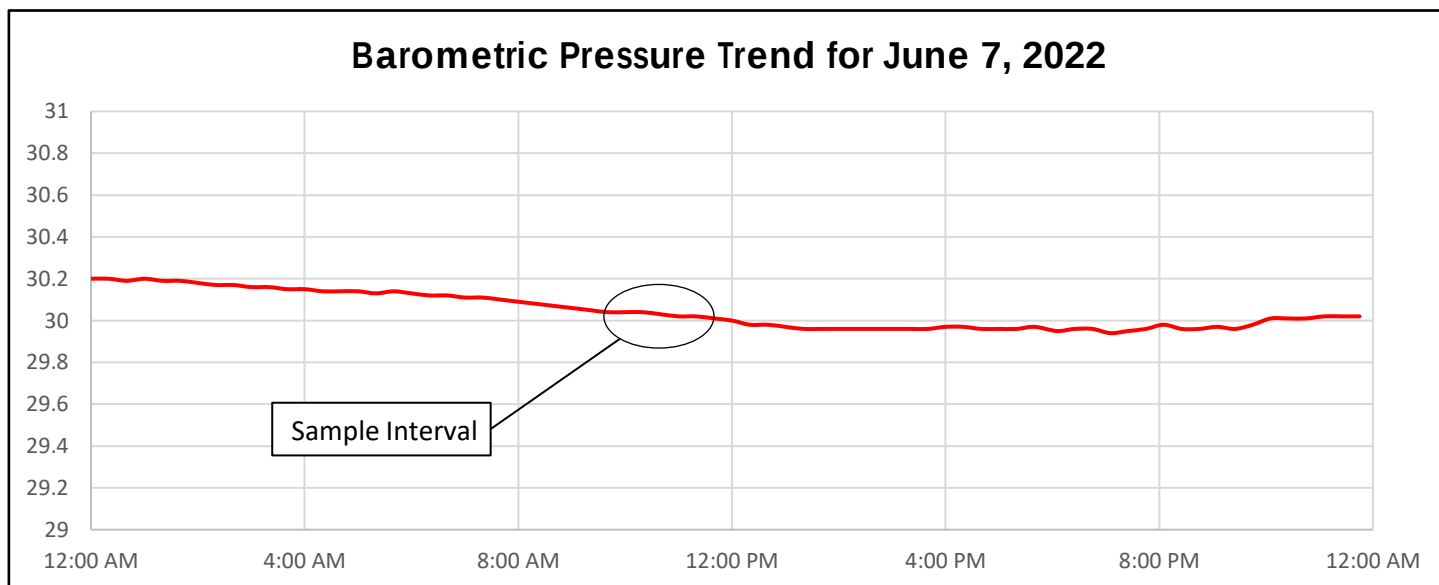
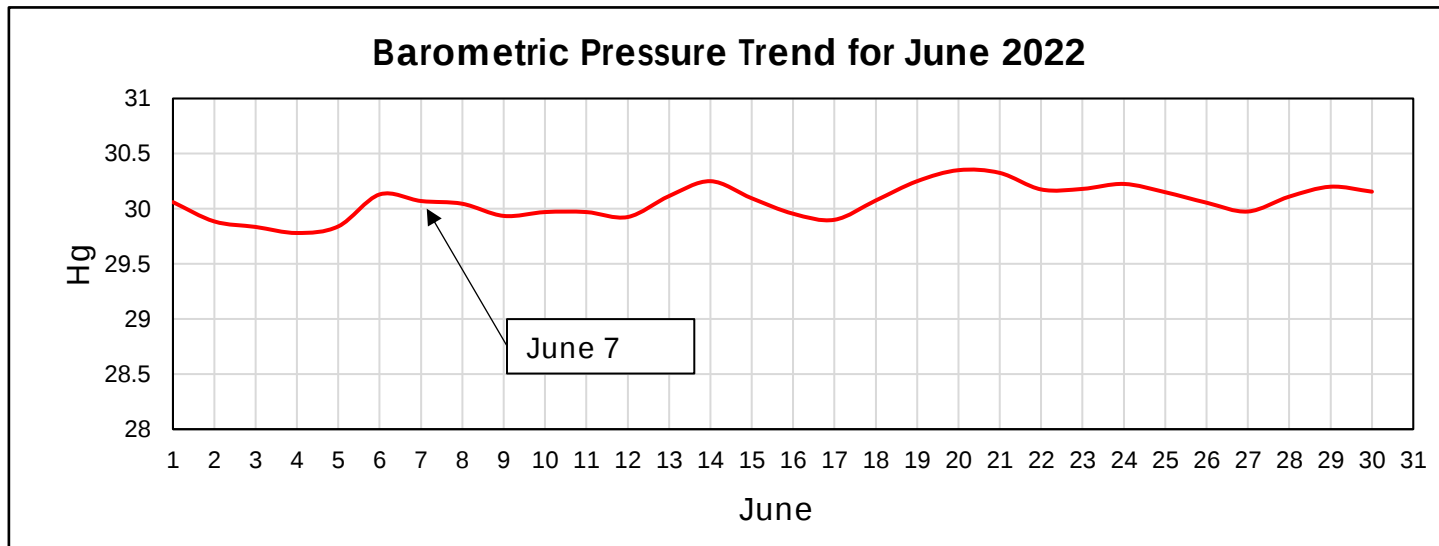
04222001.04

June-22

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	4.	GP-10P added in January 2018. Monitoring performed at water level piezometer installed in the same boring
TOC	Top of Casing		as GP-10.
		5	GP-10P connection repaired on October 23rd, 2020.

Barometric Pressure Trend - June 2022

LRI 304th Landfill, Washington



Monthly Data Source: Wunderground.com (Graham)

Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL

Data Source:

<https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2022-06-7/2022-06-7/monthly>

Daily Data Source: Wunderground.com (Graham)

Lat: 47.10 Long: 122.29 Elev: 535 ft-AMSL

Data Source:

<https://www.wunderground.com/dashboard/pws/KWAGRAHA52/table/2022-06-7/2022-06-7/daily>

LRI 304th Street Landfill

Landfill Gas Monitoring of On-site Buildings

Date: 4-12-22
Weather Conditions: overcast
Instrument: MicroFID
Measured By: Ruben Martinez

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.

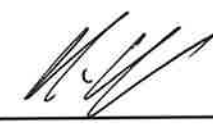
Checked boxes indicate that the survey revealed **no detectable methane**.

1.5
Throughout

☐
☒
☒

- Main Office - individual office spaces, storage areas and within open crawl-space area.
- Repair Shop - survey atmosphere conditions throughout (lower height levels).
- Pay/Scale Booth - interior of building.

10.1 ppm spike outside
north of Main Office



Signature