Attachment F

Annual Summary of Groundwater Monitoring Results

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CHECKLIST FOR GROUNDWATER REPORTING
Municipal Solid Waste Landfills
WAC 173-351-415

Include a signed, completed copy of this checklist with each quarterly and annual report.

Quarterly groundwater reports shall be submitted to the jurisdictional health department and Ecology within 60 days of receipt of analytical data. Annual groundwater reports shall be submitted to the jurisdictional health department and Ecology by April 1 of each year.

1st ✓ 2nd ✓ 3rd ✓ 4th ✓ YEAR 2021	Reference (section, subsection)	Included in this report	Location – page # or appendix #
***Quarterly Groundwater Reports**: 173-351-415 (2) plus the referenced section*			
Statistical calculations and summaries			
Descriptive statistics	420, (1)	☑	
Statistical tests	420, (2)	☑	
Notification of statistical increase (if applicable)	420, (4)	☑	
Notification of concentrations above Chapter 173-200 WAC criteria (if any)	430, (4)	☑	
Static water level readings	415, (2)	☑	
Potentiometric surface elevation maps depicting flow direction	415, (2)	☑	
Flow rate – calculated	415, (2)	☑	
Cation-anion balances	430, (5a)	☑	
Explanation of greater than 5% (or 10%) difference if needed	430, (5a)	☑	
Trilinear diagrams	430, (5b)	☑	
Leachate analyses (if sampled and tested)	415, (2)	☑	
Data entered into EIM database (date entered:)	415, (3)	☑	
Complete copy of the lab report with chain of custody record.		☑	
***Annual Groundwater Reports**: 173-351-415 (1)* **YEAR**			
Summary of statistical results and trends	415, (1)	☑	Part 2
Summary of groundwater flow rate and direction for the year	415, (1)	☑	Part 4
Copy of all potentiometric maps for the year	415, (1)	☑	Part 4
Summary geochemical evaluation	415, (1)	☑	Part 1
For Quarterly and Annual Reports			
Stamped by a licensed professional	RCW 18.220	☑	

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1/31/2022
Date

Cedar Hills Regional Landfill
Landfill

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CERTIFICATION

Annual Report Groundwater Evaluation Report Certification

I certify in accordance with the requirements of WAC 173-351-400(c) (3), that the contents of Attachment F – Groundwater Evaluation of this document were prepared under my direction or supervision under a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Where applicable, some specific and related hydrogeologic portions have been duly certified by the responsible groundwater scientist. Based on my inquiry of the person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

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TABLE OF CONTENTS

Page

PART 1 GROUNDWATER DATA EVALUATION

1.0 INTRODUCTION 1

2.0 GEOLOGY AND HYDROGEOLOGY 2
- 2.1 Local Perched Water Bearing Zones 3
- 2.2 Regional Aquifer 3

3.0 DATA COLLECTION AND EVALUATION 5
- 3.1 Data Quality Assurance/Quality Control Program 5
- 3.2 Groundwater Elevation and Flow 6
- 3.3 Evaluation of Groundwater Data 6
- 3.4 Groundwater Quality Standards 9
- 3.5 Lower Limit of Quantitation 9

4.0 GROUNDWATER QUALITY EVALUATION 10
- 4.1 Regional Aquifer Groundwater Elevation and Flow 10
- 4.2 Regional Aquifer Water Quality 11
- 4.3 Perched Groundwater 23

5.0 SUMMARY AND CONCLUSIONS 27
- 5.1 Regional Aquifer 27
- 5.2 Perched Zones 29

6.0 REFERENCES 30

PART 2 TABLES

Table 2-1 Summary of Cedar Hills Regional Landfill Site Groundwater Monitoring Wells
Table 3-1 Water Quality Standards for Groundwaters of the State of Washington
Table 4-1a Groundwater Quality Standard Exceedances Regional Aquifer
Table 4-1b Groundwater Quality Standard Exceedances Perched Zones
Table 4-2a Statistical Summary of Upgradient and Crossgradient Groundwater Quality
Table 4-2b Statistical Summary of Downgradient Groundwater Quality
Table 4-2c Statistical Summary of Perched Zones Quality Groundwater Quality
Table 4-3a Regional Aquifer Upgradient Groundwater Trend Test Results
Table 4-3b Regional Aquifer Downgradient Groundwater Trend Test Results
Table 4-3c Perched Zones Groundwater Trend Test Results
Table 4-4a Regional Aquifer Groundwater Prediction Limit Values and Results
Table 4-4b Perched Zones Groundwater Prediction Limit Values and Results

PART 3 FIGURES

Figure 2-1 Site Location
Figure 2-2a Groundwater Monitoring Network
Figure 2-2b Stormwater Monitoring Network
Figure 2-2c Leachate Monitoring Network
Figure 2-3 Regional Cross Section N-S
Figure 2-4 Regional Cross Section NW-SE
Figure 2-5 Regional Cross Section Location Map
Figure 4-1 Regional Aquifer Flow Paths
Figure 4-2 Regional Aquifer Monitoring Well Locations and Capture Zones

PART 4 POTENTIOMETRIC GROUNDWATER SURFACE MAPS AND GROUNDWATER VELOCITY CALCULATIONS

PART 5 TIME-CONCENTRATION PLOTS. MONITORING WELL HYDROGRAPHS

PART 6 TRILINEAR DIAGRAMS AND ION BALANCE CALCULATIONS

PART 7 FIELD AND ANALYTICAL DATA FOR 2021

CEDAR HILLS REGIONAL LANDFILL
2021 ANNUAL REPORT

ATTACHMENT F PART 1
GROUNDWATER DATA EVALUATION

1.0 INTRODUCTION

This Cedar Hills Regional Landfill (CHRLF) 2021 Groundwater Data Evaluation report evaluates groundwater monitoring data collected during the past calendar year and summarizes significant findings supported by analysis of the data. This report evaluates water quality in the regional aquifer, which is the first continuously saturated zone beneath the landfill and provides the earliest path for detection monitoring. Water quality in the perched water-bearing zones at CHRLF is also evaluated.

Section 2 of this report contains a brief description of the geologic and hydrogeologic conditions at CHRLF. For a complete discussion of site conditions, the development of the hydrogeological model and monitoring network, see the *Cedar Hills Regional Landfill Sitewide Hydrogeologic Report*, March 2004. Additional findings from subsequent investigations can be found in *Cedar Hills Regional Landfill Site Wide Hydrogeologic Report Addendum,* December 2013.

Groundwater monitoring has been conducted at the CHRLF since 1983. Environmental monitoring at the site is carried out in accordance with the *Environmental Monitoring Sampling and Analysis Plan for Cedar Hills Regional Landfill (2013)* (SAP), which was approved and implemented in 2016. Modifications to the monitoring well network and sampling frequency are reflected in this report.

Each year, a large quantity of data is generated for the site as a result of the monitoring program. Section 3 discusses the methods used to evaluate and analyze this groundwater data, while Section 4 presents the results of these evaluations. Conclusions based on the analyses results are included in Section 5.

The groundwater monitoring program and this annual data evaluation are in accordance with the King County Board of Health Solid Waste Regulations (Title 10, Rules and Regulations No. 03-06) and "Criteria for Municipal Solid Waste Landfills" (Chapter 173-351 WAC).

2.0 GEOLOGY AND HYDROGEOLOGY

A conceptual site model of the regional and site geology and hydrogeology for CHRLF has been developed for the purpose of understanding and analyzing water quality data, and groundwater occurrence and flow beneath and adjacent to the site. Figure 2-1 displays the location of CHRLF in a regional context and Figure 2-2a shows groundwater monitoring locations. Figures 2-3 and 2-4 provide cross sectional views of the major hydrogeologic features of the landfill site. Regional cross section location map that shows where these cross sections are taken is provided in Figure 2-5.

A detailed discussion of site geology and hydrogeology is beyond the scope of this report, but may be found in the *Cedar Hills Regional Landfill Site Wide Hydrogeologic Report*, March 2004, the *Phase I Investigations Groundwater Monitoring Well System Enhancements Technical Memorandum*, October 2007, and the *Cedar Hills Regional Landfill Site Wide Hydrogeological Report Addendum*, December 2013. Geologic evaluations of the CHRLF site have identified a complex history of sediments deposited by rivers, lakes, and glaciers over volcanic and sedimentary bedrock. Sediments beneath the site consist of generally fine-grained sands and silts, in some areas part of a prehistoric lake deposit. In the northern portion, the sediments are continuous with coarse sands and gravels, suggesting removal by erosion of the finer sediments and replacement by river channel deposits. These sediments are overlain by a thick blanket of sands and gravels deposited during Vashon era glacial advance. The advance outwash is capped by a complex group of deposits overridden by or deposited from the glacial ice (till, contact deposits and recessional outwash).

Groundwater occurs both as a regional aquifer and in perched zones. The regional aquifer flows through advance outwash and deeper deposits and is separated from the base of waste placement areas by more than 200 feet of unsaturated sands and gravels. Perched groundwater occurs in onsite till, ice-contact deposits and recessional outwash. No laterally or vertically extensive perched zones have been identified; therefore, the regional aquifer beneath the landfill is the earliest target hydraulic pathway for groundwater contaminant detection. The regional aquifer potentiometric surface lies at approximately 350 feet MSL at the south property line and at approximately 285 feet MSL at the north east.

The regional aquifer beneath CHRLF is entirely recharged by precipitation. A dominant local recharge area is located immediately south of the landfill within the Queen City Farm (QCF) property, centered north of the Main Gravel Pit Lake. In general, groundwater flow in the regional aquifer is radial from the recharge area. Beneath the landfill, regional flow is to the north in the south and central portions of the landfill site. Flow direction in the northern part of the site turns northeasterly as recharge from the McDonald Creek drainage comes into effect. Flow then converges into a high transmissivity channel and likely discharges to Issaquah Creek. There is no significant seasonal variation in horizontal groundwater flow paths; horizontal gradients are influenced by infiltrating precipitation in the recharge area. Vertical hydraulic gradients in the southern area are demonstrated by head differences in adjacent wells screened at different depths. Flow determinations and a Regional Aquifer Potentiometric Surface Map are prepared quarterly by a licensed Hydrogeologist.

2.1 Local Perched Water Bearing Zones

A number of local water bearing zones have been identified in the Vashon-aged units around the Cedar Hills site. Table 2-1 lists onsite wells and gives construction dates and locational information. The perched zones are divided into three groups for discussion and presentation purposes. The North and West perched zones are monitored by five wells and include areas along the west and north buffers and infrastructure north of landfilled areas. The East Main Hill perched zone (EPZ) extends along the eastern edge of the landfill adjacent to unlined areas. The South Solid Waste Area (SSWA) perched zone has seven well completions encompassing the non-contiguous SSWA perched zone and extending into CHRLF's south buffer area, abutting QCF. Though water levels are obtained from multiple wells in each zone, lateral or vertical continuity between wells in a zone cannot be assumed.

Waste from the SSWA was removed in 2015 and placed in Area 7. The perched zone near the former SSWA is monitored for both water level and water quality by well MW-101; and for water levels only by MW-25, MW-41S, MW-41D, MW-45, MW-79 (currently damaged), and MW-105. Monitoring wells MW-96 and MW-97 were decommissioned in April 2015 in preparation of Area 8 construction. MW-79, used for depth to groundwater measurement only, was damaged by road maintenance equipment in 2015 and will be repaired by a licensed driller. Hydrogeological conditions are presented in the Technical Memorandum *Results of Groundwater Sampling and Fate and Transport Analysis South Solid Waste Area Perched Zone Assessment,* April 2010.

Monitoring of the EPZ and SSWA occurs at monitoring wells MW-30A, MW-47, MW-50, MW-62, MW-102, MW-103, MW-107, MW-108, MW-101, MW-109, MW-110, MW-111 and MW-112 and piezometer EB-6 for both water levels and water quality; and, by wells MW-28, MW-29, MW-45, MW-48, MW-55, MW-63, MW-79, MW-98, and MW-104.for water levels only. MW-101 Extraction well EW-25 (decommissioned 2nd quarter of 2018, as described in the *Cedar Hills Regional Landfill – EPZ Extraction Well Decommissioning Technical Memorandum*) provided monitoring of the EPZ historically.

The EPZ is currently undergoing an independent clean up action led by SWD. Recent investigation findings for this zone are presented in the *Draft East Perched Zones Remedial Investigation and Feasibility Study*, December 2016. In 2018, six (6) additional replacement monitoring wells were installed in the EPZ (MW-107 to MW-112) as described in the *Cedar Hills Regional Landfill - EPZ Phase I Interim Actions - Infrastructure Upgrades Technical Memorandum*, August 2018. These wells will be incorporated into the monitoring program and the SAP updated accordingly.

2.2 Regional Aquifer

The following is a description of the regional groundwater monitoring network, and how monitoring is used determine water quality and groundwater flow within the aquifer.

2.2.1 Regional Groundwater Monitoring Network

The regional aquifer, contained within the pre-Vashon stratigraphic units, has been identified as the shallowest laterally extensive water bearing zone encountered beneath the landfill, and is therefore the earliest target hydraulic pathway for groundwater contaminant detection. A monitoring network is in

place consisting of forty-six (46) monitoring and one (1) production well where water level measurements are obtained. Thirty-one (31) of the regional monitoring wells were also sampled and analyzed for water quality on either a quarterly or semi-annual basis in 2021, depending on designation in the SAP.

Three (3) regional aquifer monitoring wells, MW-70, MW-77 and MW-78 were decommissioned in April 2015 in preparation for Area 8 construction. Three new monitoring wells, MW-113, MW-114 and MW-115 were installed in 2021 to replace them. Monitoring wells MW-69, and MW-79 were damaged, so no samples have been collected since the first quarter of 2021 similar to 2020.

Table 2-1 lists all wells, construction dates and locational information for onsite wells.

2.2.2 Regional Groundwater Flow

The *Cedar Hills Regional Landfill Regional Aquifer Technical Memorandum*, March 2011, is a follow up to the *Groundwater Monitoring Well System Enhancements Phase I Investigation*, October 2007, and provides an extensive groundwater flow path analysis of horizontal and vertical gradients. It delineates detection zones for regional wells and recommends refinements to the groundwater monitoring network. An addendum to the site-wide hydrogeological report has been prepared that incorporates findings and recommendations of the recent investigations.

The piezometric surface contour maps (Part 4) indicate a north and northeasterly flow direction in the regional aquifer. Interpolation and contouring methodology were developed for the *Technical Memorandum Phase I Investigations Groundwater Monitoring Well System Enhancements*, October 2007. Quarterly monitoring of groundwater elevations has shown very little seasonal or annual variability in regional groundwater flow and velocity. For 2021, the average horizontal groundwater flow velocities for the regional aquifer have been calculated to range from 0.008 to 0.009 ft/day in the south landfill area, from 2.03 to 2.29 ft/day in the central area, and from 1.65 to 2.03 ft/day in the north area.

3.0 DATA COLLECTION AND EVALUATION

Environmental samples are collected and analyzed in accordance with the SAP, and the *Quality Assurance Project Plan for Environmental Monitoring at King County Solid Waste Facilities* (QAPP) (1999). These documents contain procedures to ensure that environmental data meet desired objectives for quality, consistency and documentation.

Groundwater quality is evaluated by comparison of analysis results to regulatory standards, geochemical analysis and statistical evaluation. Following is a brief description of each. King County Solid Waste Division (SWD) monitors groundwater in accordance with Chapter 173-351 WAC.

Data collected includes field parameters and analytical laboratory results. These data are evaluated by a variety of graphical and statistical methods. The groundwater evaluation presented herein describes onsite groundwater elevations, flow direction and velocity.

Groundwater chemical data are evaluated to determine if chemical concentrations have changed over time or differ between well locations. Groundwater evaluation serves to determine evidence of impacts to groundwater quality by surface activities.

3.1 Data Quality Assurance/Quality Control Program

A rigorous Quality Assurance/Quality Control (QA/QC) program has been developed and implemented by SWD to ensure the quality of data produced by the CHRLF groundwater monitoring program. Measures are employed programmatically as part of a continuous effort to meet pre-defined Data Quality Objectives (DQOs), as detailed in the QAPP. This includes measures such as routine calibration and verification of field monitoring equipment, field and trip blanks, field duplicates and split samples for inter-laboratory comparison, triple-rinse equipment decontamination, and thorough review of analytical laboratory data.

Field data collection QA/QC is ensured by adherence to standardized procedures of instrument calibration and sampling methodologies as outlined in the SAP. Analytical laboratory data are reviewed by SWD staff with the initial responsibility for the correctness and completeness of the data. The reviewer evaluates the quality of the work based on guidelines established in the QAPP to ensure that:

- Appropriate procedures have been followed.
- Laboratory deliverables are correct and complete.
- Analyses are completed within holding times.
- QC sample and laboratory blank results are within appropriate QC limits.
- Documentation is complete.

Data qualifiers may be assigned to the data based on the QA/QC review. The qualified data will then be made available for data evaluation and interpretation. A compilation of water quality data for groundwater, surface water and leachate are presented in Part 7.

3.2 Groundwater Elevation and Flow

Groundwater potentiometric surface maps and flow velocity calculations are presented in Part 4. Hydrographs of water levels and precipitation over time are presented in Part 5. Wells are grouped by detection zones as described in *Regional Landfill Regional Aquifer Technical Memorandum* and by groundwater elevation on the hydrographs.

Flow determinations are calculated quarterly by a Licensed Hydrogeologist and following the model presented in the Hydrogeologic Report and subsequent investigation.

3.3 Evaluation of Groundwater Data

The outcome of the sampling, analysis and data review processes are data that meet DQOs, indicating that the data are suitable for use in evaluating groundwater quality. Statistical and graphical methods are then applied to answer questions of comparison and form a basis for decision making activities pertaining to CHRLF. The following subsections are a description of these methods.

3.3.1 Descriptive Statistics

Descriptive statistics are calculated and tabulated to provide a summary of data set distributional parameters. These include the number of analyses, number of detections, minimum, maximum, mean, standard deviation and median. Although both means and medians are reported in the summary tables, medians are used in the text because they tend to be a more reliable measure of central tendency in the case of non-normal distributions, particularly when there are outliers, which is commonly the case with environmental data.

Statistical calculations are performed on two subsets of the analytical data for each well. The first subset consists of data for the entire period of record, exclusive of the two most recent two years of data (long-term data set), and the second subset only consists of the most recent two years of data (short-term data set). Generally, the short-term data subset is considered to be the most representative of current conditions, due to both the timeliness of the data and continuing improvements in the quality of the data. Utilizing two years of most recent data for short term statistical analysis has the advantage of representing the current groundwater condition but at the same time, less data produce less reliable statistics to those semi-annual wells where only four data points have been sampled in two years.

3.3.2 Trends

Testing for trends is one of the primary means of evaluating water quality data over time. The statistical test used to analyze CHRLF groundwater field and analytical data is the Mann-Kendall test for trend. This test is well suited for environmental data (Gibbons 1994) as it is a non-parametric test for linear trend that makes no distributional assumptions and is therefore valid for both normally and non-normally (non-parametrically) distributed data. This statistical method is also relatively robust, allowing for missing values, outliers, and/or non-detects (reported as ½ the detection limit).

The Mann-Kendall test performs a relative pair-wise comparison (determination if the later value is greater [+1] or less [-1]) for all of the data points in a given data set, determining if the majority of the comparisons between the earlier and later data points are positive (indicative of an increasing trend), negative (indicative of a decreasing trend), or about equal (indicative of no apparent trend). The Mann-Kendall statistic (S) is a critical value that defines if a majority of the pair-wise comparisons are indicative of either an increasing or decreasing trend.

The test yields a probability (p value) that a temporal trend is due to chance. Low p-values indicate a low probability of a trend existing solely due to chance, therefore there is significant evidence that a trend exists. For CHRLF groundwater monitoring, this p-value is set at 0.05 (i.e. p-values of less than 0.05 indicate statistical significance).

For CHRLF, this test is conducted on two data sets from each well: a short term data set consisting of the most recent two years of data and, a long term data set consisting of up to 50 results prior to the short term data set. This test has been applied to data sets for parameters of value for evaluating water quality or that are indicative of impacts from anthropogenic sources. Naturally occurring trace level constituents with low detection frequencies are not trend tested.

To yield meaningful results, trend results must be interpreted carefully in cases where frequency of detection is low or in cases where reporting limits have changed, or analytical resolution has changed over the period of record. Trend test are conducted on an annual basis and results are tabulated in the Statistical Trend Summary Tables (Table 4-3a, Table 4-3b, and Table 4-3c). Statistically significant decreasing trends are denoted by “D” while the corresponding cell in the table is filled with green, and statistically significant increasing trends by “I” with red cell color. Absence of a trend and non-significant trends are indicated in the table as “--”.

3.3.3 Prediction Limits

The Prediction Limit used in this evaluation is an intrawell statistical test that compares an analytical result to a computed upper limit value (UPL). The UPL is derived from past analytical results from the same well, considered to be representative background data. The prediction limit concept is useful for evaluating parameters with high detection frequencies to detect water quality changes in discrete time intervals. A test can be done on a sample or sequence of samples (quarterly or semi-annual samples collected in a year) to determine divergence from the underlying population.

The data set is tested for normality by application of the Shapiro-Wilk Test for Normality. If the data set fails the test for normality, several transformations of the data are tested. When normal or transformed normal data sets are determined, a parametric prediction limit is calculated and future results compared to this value. When all transformations fail the test for normality, a non-parametric method is applied and future results are compared to this limit.

In the event that a foreground concentration exceeds the UPL in the detection monitoring program, a retesting plan is implemented to confirm that the detection was not a false positive. A 1-of-3 retesting plan will be used for any exceedances of the intrawell UPLs at the CHRLF per the SAP. This retesting plan provides adequate statistical power and minimizes Type II errors (false negatives), while providing retesting that accommodates lab turnaround time, data review, and scheduling. Under the

1-of-3 retesting plan, the first retest sample will be collected as soon as practical following the initial UPL exceedance. The second retest sample will be collected during the subsequent quarterly sampling event. This retest plan applies to wells sampled quarterly and semiannually.

If the initial groundwater observation is in-bounds, the test is complete and no resamples need to be collected. When the first value exceeds the background prediction limit up to two additional samples may have to be collected to complete the test. If either resample is below the UPL, the test is complete and detection monitoring resumes.

For the test to be valid, all of these sample measurements need to be statistically independent. This generally requires that sufficient time elapses before resample collection so that the assumption of statistical independence or lack of autocorrelation is reasonable.

Intrawell UPLs are recalculated each year with the incorporation of the previous year's data into the dataset. The updated UPLs are used to define the range of expected values for future samples. This test is performed on a quarterly basis, Prediction Limit Exceedances of Chapter 173-351 WAC Appendix I constituents are presented in Table 4-4.

3.3.4 Time-Concentration Plots

Time plots are generated for parameters with high detection frequencies and relevance to groundwater quality evaluation. The plots contain data from multiple wells, grouped by detection zone and flow gradient location. The intent is to give the viewer a visual synopsis of relevant and extensive interrelated data, rather than a graphical compilation of analytical results. All non-detections (ND) are displayed on graphs as one-half the limit of detection as a measure to represent the inherent uncertainty of a ND value. All plots within a grouping are at the same scale to include the entire range of values measured and to provide a consistent context from plot to plot. Plots are prepared for two timescales, one for the past five years (2017-2021) and the second for the period 2001-2021 to capture longer term variations. Since water quality data are typically collected quarterly, the plots are useful for showing temporal changes due to seasonality as well as long-term increasing or decreasing trends and a visual comparison of relative concentration magnitudes for wells in similar spatial and gradient location. Time-Concentration plots for selected parameters are included in Part 5.

3.3.5 Trilinear Diagrams

Geochemical data are presented on trilinear diagrams. Major cations and anions are plotted on individual triangles as percentages of total milliequivalents per liter (meq/L). These diagrams illustrate differences in major ion chemistry between groundwater samples and can be used to categorize water composition into identifiable groups known as hydrochemical facies. Used here, hydrochemical facies refers to distinct chemical compositions of groundwater solute concentrations contained in an aquifer. In general, a groundwater will have a dominant cation or cation pair and a dominant anion or anion pair. For CHRLF, the four dominant possibilities are: calcium/magnesium or sodium/potassium for cations, and chloride/sulfate or bicarbonate for anions. These facies reflect distinct compositions of cation and anion concentrations such that the value of the diagram lies in the ability to recognize relationships that exist among individual samples. Trilinear Diagrams are included with ionic balance calculations in Part 6.

3.4 Groundwater Quality Standards

Water quality monitoring results are compared to Washington State Groundwater Quality Criteria, Chapter 173-200 WAC (Table 3-1). Changes to Criteria for Municipal Solid Waste Landfills Chapter 173-351 WAC effective December 9, 2012 added total metals analysis along with dissolved metals analysis for eight sampling periods in order to establish background data sets for total metals. All evaluations will use only the total metals fraction for Criteria evaluations. Both total and dissolved metals factions have been analyzed since the second quarter of 2013 and initial background data sets for total metals have been developed. Standards are compared to actual analytical values, not mean or median values. All exceedances are determined by the standards that were in effect at the time of the sampling and are summarized in Tables 4-1a and 4-1b. These tables include primary standard exceedances, those where concentrations are greater than the criteria for analytes having health consequences; and exceedances of secondary criteria, non-mandatory guidelines regarding aesthetic (taste, odor, or color) or cosmetic (tooth or skin discoloration) effects.

3.5 Lower Limit of Quantitation

Changes made in accordance with federal regulations for the guidance of analytical testing methodologies covered by SW-846 (Test Methods for Evaluating Solid Waste) were implemented in 2017 by the contract laboratory. One specific effect of these changes was to replace the MDL methodology with the LLOQ methodology as the basis for determining the lowest quantitative value of an analyte that can be reported. This affected all methods covered within SW-846.

The LLOQ is a performance based methodology that tests known standards repeatedly to create a calibration curve for a specific method. Commonly, the lowest concentration of the (linear) calibration curve is set as the LLOQ. However, in some cases the LLOQ may be greater than the baseline curve concentration due to lab specific factors such as instrument sensitivity and method analytical uncertainty.

During the second quarter of 2017, the transition to using the LLOQ methodology resulted in revised reporting limits for multiple analytes. Quantitation limits for all trace metals (i.e. non-major cationic species metals), and a subset of the Appendix I VOCs regularly analyzed for were lowered versus past analyses MDLs, while other VOCs had higher limits or remained unchanged. As a result of these changes, trace metals and VOCs in various wells previously reported as non-detects are now reported as detections. This does not invalidate past analytical data reported at the MDL as non-detects, but confirms that some analytes can be present below detection limits due to instrumentation and/or analytical methodology limitations. On-going efforts will focus on continually assessing and evaluating whether newly detected analytes are due to a confirmed presence in the native sample, or result from either field sampling, or laboratory contamination.

Due to the change to LLOQ methodology, it may be necessary to re-establish background data sets for any parameters with modified reporting limits in order to maintain statistical integrity and support hypothesis testing conclusions. Transition to new background data sets will occur when sufficient data has been acquired based on minimum statistical requirements.

4.0 GROUNDWATER QUALITY EVALUATION

This section contains an overall description of water quality and an examination of contamination issues supported by the data. Water quality, both upgradient and downgradient, is notable for its variability spatially and over time. This variability is expected based on the history of activities and flow regime in place beneath the landfill. Wells comprising the monitoring network serve to provide background characterization and downgradient performance monitoring.

The objective of the monitoring program is to obtain representative ground water samples from the hydrostratigraphic units that have been identified as the earlier target hydraulic pathways. The monitoring network consists of an appropriate number of wells installed at specified locations and depths to meet this objective. Monitoring provides data capable of providing early warning detection of any groundwater contamination and facilitates decision making that insures protection of human health and the environment.

Per the *Cedar Hills Regional Landfill Site Wide Hydrogeologic Report*, March 2004, and the *Cedar Hills Regional Landfill Site Wide Hydrogeological Report Addendum*, December 2013, the perched zones have been identified to be neither laterally nor vertically extensive, and are not representative of regional aquifer background characterization nor site-wide detection of waste placement areas. Therefore, the regional aquifer beneath the landfill is considered the earliest target hydraulic pathway for groundwater contaminant detection.

4.1 Regional Aquifer Groundwater Elevation and Flow

The primary recharge area for the regional aquifer is immediately across the south property line of CHRLF. Groundwater flow is radial from this center such that the flow across the south property line is oriented S to N. As flow moves northward under the landfill property footprint, it remains predominantly to the north. As the groundwater approaches the north third of the landfill property, recharge from the McDonald Creek drainage affects flow patterns and flow direction changes to the NE where flow lines converge and the gradient increases. This convergent effect influences regional flow in such a way that concentrates flow into a relatively narrow corridor roughly between wells MW-66 and MW-67 (see Figure 4-1).

For the purposes of this review, wells are grouped according to gradient and position in the flow regime relative to waste placement and other infrastructure. Upgradient conditions are characterized by south upgradient wells, located along the southern property border; northwest upgradient wells, influenced by the McDonald Creek drainage; and, northeast upgradient wells, monitoring flow paths that appear to originate east of the landfill site and discharge to the convergent flow feeding the Issaquah Creek drainage.

Wells monitoring flows originating outside the landfill footprint and bypassing all landfill facilities are termed crossgradient. There are wells sampled on both the east and west of the landfill where these conditions exist.

Flows downgradient of waste cells are monitored by two wells on the west side and six wells located in the convergent flow corridor. Additional flows are monitored by wells placed downgradient of north end facilities (conveyances or pump stations) but not of waste cells.

Table 2-1 lists well construction details and well uses, while Figure 4-2 shows well locations.

Response to seasonal rainfall is greatest at the southern wells nearest local recharge and expresses little apparent time delay. Wells along the south property line can exhibit seasonal elevation changes in excess of eight feet and are highest in the spring, immediately following the wettest months of the water year. Seasonal lows generally occur in the fall, at the end of the driest portion of the water year. For example, MW-76, MW-82 and MW-94, wells close to the recharge location and screened at the water table have seasonal changes of five to seven feet on average.

Wells placed further from recharge sources experience much less fluctuation with all downgradient water table wells having an average inter-seasonal range of one foot or less.

Hydrographs of groundwater elevations versus time appear in Part 5. Seasonal changes in groundwater elevation are plotted along with cumulative annual precipitation. All regional well elevations are plotted along with October – September (Water Year) annual rainfall totals and top of screen elevations. Apparent on this plot are the correlation of seasonal recharge with depth to the water table and proximity to the recharge area. Also apparent are longer, multi-year effects of rainfall total and groundwater elevation. Recent years have experienced higher than average annual rainfall and water levels in regional wells have reached the highest static water levels since the late 1990s. The 2015 water year had the lowest rainfall since 2008, while the 2017 water year rebounded with the highest rainfall total since 1997. Rainfall in 2021 decreased relative to both 2020 and 2019, while remaining higher than the low in 2015. Seasonal high-water levels generally follow the same pattern as rainfall totals.

4.2 Regional Aquifer Water Quality

This section discusses the regional aquifer groundwater quality for CHRLF, as relates to any observed impacts to the aquifer with regards to both flow regime and water quality. Appropriate analytical techniques, per WAC 173-351 are employed and discussed herein.

To note, consistent with the flow paths described above the regional aquifer groundwater quality displays varying spatial and temporal trends. Also contributing to data variability are land use patterns and analytical variability and sensitivity. Together, these conditions make the establishment of a single benchmark “background water quality data set” unworkable. To account for the lack of a true background data set, several analytical techniques are utilized when assessing the regional aquifer, which are outlined in the following discussion.

One monitoring well, MW-87, was sampled late in the second quarter of 2021, due to a failed pump. The pump failed at the initial sampling attempt in April and was replaced in June. The well was sampled promptly after the new pump was installed. The well was next sampled in July for the regular third quarter sampling. This led to the two sampling events being to close in time to be considered completely independent. Both samples were collected per the CHRLF SAP and the results are valid.

4.2.1 Groundwater Influenced by Upgradient Conditions

Groundwater quality, especially in wells nearest the south recharge zone, is profoundly affected by conditions and activities that have occurred over the past fifty years on the adjoining 320-acre QCF property. In general chronological order these activities included: a pig farming operation that brought municipal solid waste (MSW) in for use as feed; a business that disposed of hazardous waste in excavated pits; a general aviation airport; a solvent reprocessing and recovery operation; a gravel mine with excavation extending down to a level near the water table of the regional aquifer (Gravel Pit Lake); and an operating composting facility. The QCF property is listed on the National Priorities List for contaminated sites under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or Superfund) and has undergone site remediation efforts that included extensive excavation, stabilization and barrier wall construction. Groundwater quality in south upgradient CHRLF wells is impacted by chlorinated volatile organic compounds (CVOCs) still migrating from the QCF site. Presence of these contaminants and their migration is well documented in the *Fifth Five-Year Review Queen City Farms King County, Washington*, 2018 and the *Expanded Hydrogeology Assessment Queen City Farms King County, Washington*, 2010.

Constituents associated with QCF releases are tetrachloroethene (PCE), trichloroethene (TCE), *cis* 1,2-dichloroethene (1,2-DCE), and vinyl chloride (VC).

Recent activities include ongoing composting operations, filling and grading of mined out sand and gravel deposits, clearing and grading for compost storage pads, and stockpiling of compost covering multiple acres. Rising concentrations of several parameters first became apparent in 2011 in south upgradient wells MW-76, MW-83 and MW-94. Concentration rises have been relatively sudden, steep and coincidental with the recent stockpiling activities.

As flow continues into areas beneath the landfill footprint, changes are discernible as groundwater encounters and equilibrates to different oxidation-reduction (redox) conditions, soil gas and groundwater interface conditions, and solvent/solute interactions. Attenuation processes also act to continue to degrade and disperse CVOCs from the QCF releases.

4.2.2 Landfill Gas Influence on Groundwater Conditions

Important consideration in wells screened at the water table located in flow paths under the footprint and immediately downgradient of waste cells is the influence of landfill gas (LFG) in the unsaturated strata. The presence of LFG significantly raises the partial pressure of carbon dioxide (CO_2) in the unsaturated zone and alters conditions that lead to measurable differences in water quality. Among these are redox sensitive constituents (iron, manganese, arsenic and nitrogen species), carbonate system equilibria (alkalinity and buffering capacity), and dissolution/precipitation processes in which most metal cations participate.

Groundwater influenced by LFG is characterized by increased alkalinity as CO_2 dissolves creating carbonic acid (H_2CO_3). This effect then causes mineral cations to dissolve into the aqueous environment, with calcium and magnesium being the primary cations solubilized. The process also increases levels of specific conductance, total dissolved solids (TDS), total alkalinity and other

dissolved trace metals (arsenic, barium, vanadium, etc.). Carbonic acid then further deprotonates and stabilizes as bicarbonate ion (HCO_3^-) due to the natural pH of the regional soils.

Presence of LFG in the unsaturated deposits beneath the landfill and above the regional aquifer water table has been identified by LFG migration monitoring probes. Efforts to intercept and remove LFG in native soils are ongoing (see *Cedar Hills Regional Landfill West Side Landfill Gas Recovery Well Installation and Influence Testing Report*, December 2013). Viewing the series of time/concentration plots for alkalinity demonstrates this process (see Part 5). Groundwater samples collected at upgradient wells south, northwest and northeast all have alkalinity values generally less than 150 mg/L $CaCO_3$ excluding groundwater sample results collected at MW-83 for which alkalinity value is higher. As flow reaches interior, vertical and downgradient wells values between 150 and 250 mg/L are more common, along with similar increases in calcium, magnesium, barium, conductance and TDS.

Following flow further through the site, conditions change as the apparent presence and effects of LFG beyond the landfill footprint diminish and the kinetics of the system change, and conditions revert to alkalinities below 100 mg/L. This effect is likely due to carbonate precipitation and concentrations of other similarly mobilized analytes reverting to upgradient conditions.

4.2.3 Water Quality Indicator Parameters

Time/concentration plots (Part 5) are also included for additional regularly detected water quality indicator parameters. These include pH, ammonia, chloride, sulfate, nitrate, iron, manganese, potassium, sodium, and arsenic. Iron, manganese, arsenic, sulfate, ammonia, and nitrate are sensitive to redox conditions and may be mobilized into or depleted from groundwater flow depending on local conditions. Native soils can serve as a source material for iron, manganese, arsenic and sulfate.

Chloride, potassium, and sodium do not readily participate in redox, sorption or biological processes and therefore are conservative along a flow path. Elevated concentrations can be indicative of an external input to the system. Nitrate is also conservative, although to lesser extent than chloride, potassium and sodium, as it can be transformed and participate in biological process, depending on redox conditions.

As with the changes along the flow paths described for alkalinity and associated parameters, a similar analysis for chloride can be made. Most regional wells in all flow regimes have chloride concentrations generally below 10 mg/L. Exceptions to these levels are rising concentrations in south upgradient wells MW-76, MW-83, MW-56 and MW-94, where increases have been relatively sudden, steep and coincidental with recent land use alterations and site activities offsite. Notably higher chloride concentrations also occur in the flow paths aligned along the downgradient wells MW-74R, MW-75, MW-85, MW-87 and MW-89 in the north landfill area. Concentrations of chloride in the wells remain below the Washington State Groundwater Quality Standard (WAC 173-200) of 250 mg/L; the highest chloride concentrations in the collected groundwater samples are below 100 mg/L. These observations are consistent with a chloride source from onsite, possibly overlying infrastructure.

Flows further downgradient onsite have concentrations generally below 10 mg/L, reflecting regional aquifer flow mixing and dispersion processes.

4.2.4 Water Quality Exceedances

Water quality exceedances are tabulated in Table 4-1a. Data are compared to Washington State Ground Water Criteria (GWC) (WAC 173-200-040), and to the Federal Drinking Water Standard. The secondary standards provide a measure of the aesthetic condition (taste, odor and color) and do not present a risk to human health.

Analytes exceeding primary standards in the regional aquifer are arsenic, iron, manganese and trichloroethene (TCE).

4.2.4.1 Total Arsenic Exceedances

Arsenic occurs naturally in native soils and can be mobilized in groundwater by depressed redox and affected by pH conditions and ions available to form complexes or adsorption sites. Total arsenic was detected in 32 regional wells in 2021. Most detections of arsenic are inherently exceedances of the state GWC (0.00005 mg/L), as the detection limit for arsenic equals the GWC criteria.

As has occurred in previous years, MW-68 had exceeded Federal Drinking Water Standard of 0.01 mg/L for dissolved arsenic concentration once in the fourth quarter and for total arsenic concentration for the first quarter of 2021. The Prediction Limit for arsenic for MW-68 had been set to 0.326 mg/L per the SAP defined methodology, which is higher than the Federal Drinking Water Standard. This is due to continuing elevated detection concentrations in MW-68. MW-87 also exceeded the Federal Drinking Water Standard for arsenic one time in 2021. Concentrations of total arsenic greater than the background Puget Sound Basin Groundwater level of 0.008 mg/L (*Natural Background Groundwater Arsenic Concentrations in Washington State Ecology Publication No. 14-09-044)* also occurred in the same wells MW-68 and MW-87.

Wells with high total arsenic concentrations (relative to other wells) also tend to have high total iron concentrations, total suspended solids, field turbidity measurements, high total to dissolved ratios for arsenic and iron. These correlations indicate the presence of iron-arsenic complexes present in these wells as particulate matter and may not be representative of aquifer conditions. Based on the recent sampling and hydrogeochemical evaluation of the data, six (6) groundwater wells were selected and re-developed in 2020: MW-67, MW-80, MW-85, MW-84, MW-86, and MW-89. The total depths of the wells range from 231 feet below ground surface (bgs) to 292 feet bgs. Redevelopment was performed by a Washington State licensed drilling company, under the supervision of a qualified hydrogeologist. A report on the well redevelopment was provided in 2021 to PHSKC and Ecology. Redevelopment of these wells to clear fines and restore aquifer conditions was necessary to ensure monitoring results are representative of aquifer water quality. Post-redevelopment groundwater chemical analyses had been documented in the 2021 first quarter report.

4.2.4.2 CVOCs Exceedances

In 2021, TCE exceeded criteria in both semi-annual samples from two upgradient wells (MW-76, MW-82) and the two new regional upgradient wells (MW-114 and MW-115) while TCE exceeds primary standards at MW-114 and MW-76 in 2021. Vinyl chloride exceeds in one upgradient wells (MW-65). TCE was also consistently detected in wells MW-83 and MW-94 at concentrations below the GWC and Federal criteria.

There were no exceedances for *cis*-1,2-dichloroethene (*cis*-1-2-DCE); however, it was regularly detected in wells MW-24, MW-56, MW-59 and MW-76.

Tetrachloroethene (PCE) was regularly detected in MW-76 at levels below the GWC.

All CVOCs detected in 2021 in south upgradient wells are known to be compounds disposed of at QCF, or degradation products of those compounds.

4.2.4.3 Secondary Standard Exceedances

GWC secondary standards exceeded in 2021 include dissolved iron, total iron, dissolved manganese, and total manganese. Iron and manganese, like arsenic, are naturally occurring and mobilization is controlled by similar processes: redox, pH and sorption. Natural groundwater in the region tends to be slightly acidic, and can be influenced by surface activities and proximity to recharge by rainfall. Rainfall in equilibrium with the atmosphere has a pH of ~5.5. The occurrence and concentrations of iron and manganese can vary greatly over short distances. Maximum iron and manganese concentrations between individual upgradient wells vary over three orders of magnitude inferring changing redox conditions vertically and horizontally in the regional aquifer.

Iron or manganese exceedances above the secondary criteria occur in all zones of the regional aquifer. GWC secondary standards for iron and manganese are set at levels equivalent to the Federal Drinking Water Standards, primarily to address taste and odor issues for groundwater used as a drinking water source.

4.2.5 Trends

This section discusses the results of trend testing analysis for the Regional Aquifer (Upgradient and Downgradient). Trend test results are tabulated in Table 4-3a and 4-3b. In the following discussion of trends for Appendix I analytes, if a trend is not specifically called out, it can be assumed that no trend was detected.

By regulation, a finding of statistical significance is determined for analytes listed in Appendix I of Chapter 173-351 WAC. The discussion below describes trend testing results for Appendix I parameters. The trend test is conducted for two time periods: short term which includes the most recent two years of data; and, long term which covers the 50 previous data points. Generally, the short-term data subset is considered to be the most representative of current conditions yet we acknowledge that utilizing two years of most recent data for short term trend analysis is less reliable

for the semi-annual wells where only four data points have been sampled in two years. The long-term test covers data generated from mid-2004 onwards; hence, wells with a longer period of monitoring have truncated data sets.

4.2.5.1 Nitrate

Nitrate trends are described below by monitoring well grouping. Nitrate trends exhibit as wide a variation within groupings as between groupings.

Upgradient and Crossgradient Wells:

Along the south property line, monitoring wells MW-24, 65 and 82 exhibited long term decreasing trends while MW-83 exhibited a long term increasing trend.

For northwest flow path monitoring wells, MW-21, 64, 73 and 84 exhibited long term decreasing trends, while MW-66 exhibited a long term increasing trend.

Downgradient:

Increasing long term trends for nitrate were calculated for MW-74R and 88. Long term trend decreases were calculated for multiple wells, including MW-67, 68, 75 85, 89 and 100.

4.2.5.2 Appendix I Metals

Historically, the dissolved fraction has been used to evaluate trends. Regulatory changes have mandated the analysis of the total metals fraction. Adequate background data sets had previously been developed to assess long and short term trends for total metals. However, due to the change to the LLOQ methodology the second quarter of 2017, reporting limits for most metals decreased significantly. This resulted in higher detection frequencies and the necessity to re-establish background data sets as data are acquired in order to maintain statistical integrity and support hypothesis testing conclusions. Appendix I total metals trend testing data are presented in Table 4-3a and Table 4-3b.

Total Arsenic

Upgradient and Cross Gradient:

Upgradient and cross gradient monitoring wells MW-56, 76, 82, 83, 84, and 94 exhibited long term decreasing trends for total arsenic, while MW-24, 65, 66, 73 and 81 exhibited an increasing trend. Also, cross gradient well MW- 95 exhibited a long term increasing trend.

Downgradient:

For downgradient wells, MW-67, 85, 86 and 100 exhibited long term increasing trends for total arsenic, while MW-72, 80 and 87 exhibited long term decreasing trends. Also, trend calculations for MW-85 showed a short term decreasing trend. Also, short term trend calculations for MW-68 showed an increasing trend.

Total Barium

Barium is detected in nearly all wells as it behaves in the geological environment similarly to calcium. Detections of dissolved barium further may be indicative of a LFG impact on native soils.

Upgradient and Cross Gradient:

Along the south property line, all monitoring well MW-59, 83 and 64 exhibited long term increasing trends.

For northwest flow path monitoring wells, MW-21, 81 and 84 exhibited long term increasing trends for total barium, while MW-66 exhibited a long term decreasing trend.

For northeast flow path cross gradient monitoring wells, MW-93 exhibited a long term decreasing trend for total barium while MW-95 showed a long term increasing trend.

Downgradient:

For downgradient wells, MW-67, 72, 74R, 75, 85, 86, and 89 exhibited long term increasing trends for total barium, while MW-68 exhibited a long term decreasing trend. Also, short term trend calculations for MW-75 and 85 showed increasing trends.

Total Chromium

Upgradient and Cross Gradient:

Along the south property line, monitoring wells MW-56, 59, 64, 76, 82, 83 and 94 exhibited long term decreasing trends for total chromium.

For northeast flow path monitoring wells, MW-66 and MW-73 exhibited long term decreasing trends for total chromium.

Downgradient:

For downgradient wells, MW-68, 72, 74R, 80, 86, 87, 88 and 100 exhibited long term and MW-80 exhibited short term decreasing trends for total chromium.

Total Cobalt

Upgradient and Cross Gradient:

Along the south property line, monitoring well MW-56, 83 and 94 exhibited long term decreasing trends, while MW-94 exhibited a short term decreasing trend as well for total cobalt.

Cross gradient well MW-93 exhibited a long term decreasing trend and a short term increasing trend. Also, MW-95 exhibited a short term decreasing trend for total cobalt.

Downgradient:

For downgradient wells, MW-67, 68, 87, and 100 exhibited long term decreasing trends for total cobalt.

Total Copper

Upgradient and Cross Gradient:

Along the south property line, monitoring well MW-83 exhibited a long term increasing trend for total copper. MW-56, 59, 73, 81 and 82 exhibited a long term decreasing trend for total copper

Downgradient:

For downgradient wells, MW-68, 72, 74R, 87and 100 exhibited long term decreasing trends for total copper.

Total Lead

Upgradient and Cross Gradient:

Along the south property line, monitoring well MW-56 and 59 exhibited long term decreasing trends for total lead.

Downgradient:

For downgradient wells, MW-72, 87 and 100 exhibited long term decreasing trends for total lead.

Total Nickel

Upgradient and Cross Gradient:

Along the south property line, monitoring wells MW-56, 59, 65, 76, 82, 83 and 94 exhibited long term decreasing trends while MW-94 exhibited a short term decreasing trend for total nickel.

Upgradient and cross gradient wells MW-21, 66, 73, 81, 84 and 93 exhibited long term decreasing trends while MW- 95 exhibited a short term decreasing trend for total nickel. Also, short term trend calculations for MW-84 showed an increasing trend, although this monitoring well exhibited a long term decreasing trend for total nickel. Monitoring wells, MW-21, 76, 82, and 95 showed short term decreasing trends for total nickel as well.

Downgradient:

For downgradient wells, MW-67, 68, 72, 74R, 80, 85, 86, 87, 89 and 100 exhibited long term decreasing trends for total nickel while MW-74R showed a short term decreasing trend.

Total Selenium

Upgradient and Cross Gradient:

For northwest flow path monitoring wells, MW-66, 81 and 84 exhibited long term increasing trends.

Downgradient:

For downgradient wells, MW-74R and 88 exhibited long term increasing trends for total selenium.

Total Vanadium

Upgradient and Cross Gradient:

Along the south property line, monitoring well MW-56, and 76 exhibited short term decreasing trends and MW-82, 94, 73 and 81 exhibited short term increasing trends for total vanadium.

For northwest flow path monitoring wells, MW-66 and 84 exhibited long term decreasing trends. For northeast flow path monitoring wells, MW-81 exhibited a long term increasing trend for total vanadium.

For cross gradient well MW-93 exhibited a long term increasing trend. Short term trend analysis for MW-95 exhibited a decreasing trend.

Downgradient:

For downgradient wells, MW-68, 72, 74R, 80, 85 and 87 exhibited long term decreasing trends while MW-68 and 87 showed short term increasing trends.

Total Zinc

Detection of zinc occurs in regional wells at a relatively low frequency (approximately 10% of all samples).

Upgradient and Cross Gradient:

Along the south property line, monitoring well MW-56, 65, 82, 73, 83 and 94 exhibited long term decreasing trends for total zinc. Also, short term trend calculations for MW-59 showed a decreasing trend.

For northwest flow path monitoring wells, MW-66 exhibited a long term decreasing trend for total zinc. MW-81 and 84 exhibited long term decreasing trends for total zinc.

For northeast flow path monitoring wells, MW-93 exhibited a long term decreasing trend for total zinc.

Downgradient:

For downgradient wells, MW-67, 68, 74R, 75, 80, 85, 86, 87 and 88 exhibited long term decreasing trends for total zinc. Also, short term trend calculations for MW-72 showed decreasing trends.

4.2.5.3 Appendix I Volatile Organic Compounds

All trends for wells volatile organic compounds in the regional aquifer at CHRLF are in wells along the south property line and impacted by compounds migrating from the QCF site.

***cis*-1,2-Dichloroethene**

Along the south property line, monitoring well MW- 59 exhibited a long term increasing trend for *cis*-1,2-Dichloroethene. Alternatively, long term trend calculations for MW-76 showed a decreasing trend.

Tetrachloroethene

Along the south property line, monitoring well MW-76 exhibited a long term decreasing trend for PCE.

Trichloroethene

Along the south property line, monitoring wells MW-76, 82 and 94 exhibited long term decreasing trends for TCE.

Vinyl Chloride

Along the south property line, monitoring well MW-65 exhibited a long term decreasing trend for vinyl chloride.

4.2.5.3 Appendix II Water Quality Indicators

Data sets from regional wells are also tested for trends using Appendix II water quality indicators. This includes specific conductance, total dissolved solids (TDS), dissolved cationic species (i.e. calcium, magnesium, potassium, and sodium), and dissolved anionic species (i.e. bicarbonate, chloride and sulfate) that have a sufficient amount of detections to give meaningful results.

Appendix II parameter trend test results indicate variable water quality over time in all wells regardless of placement in the flow net (see Figure 4-1, and Table 4-2a and 4-2b). The character of these flows is representative of groundwater as it flows toward CHRLF and provides a reference to determine changes that may take place along the many flow paths between an upgradient well and further downgradient wells.

Section 4.2.2 discussed measurable differences attributable to conditions existing on the landfill site. Evidence of LFG/groundwater interaction is apparent in trend analysis of these parameters. There is a strong indication of LFG influence on wells MW-56, MW-59, MW-64, MW-76, MW-80, MW-81, MW-82, MW-83, MW-85, MW-93, MW-94, and MW-95 by trends in associated parameters alkalinity, specific conductance, TDS, calcium, magnesium and potassium. Barium also frequently tracks with calcium and magnesium due to chemical similarities (Group IIA in the Periodic Table of the Elements). These wells are in flow paths downgradient form overlying facilities or unlined waste areas. Indication of LFG influence is also supported by data presented in the Statistical Summary for these wells and analytes (Tables 4-2a and 4-2b), and by the time/concentration plots (Part 5), graphically presenting relative concentrations over time.

Additionally, as a part of King County's response to LFG migration (discussed in Section 8.2 of the Annual Report), LFG has been extracted from the unsaturated zone above the regional aquifer water table along the west side of the landfill since early 2012. These extraction wells capture LFG at a low but steady rate in a zone where interaction with groundwater occurs near the flow paths and capture zones for west side downgradient wells MW-69 and MW-72.

4.2.6 Prediction Limits

In this section, results from prediction limit testing are discussed and presented for 2021. By regulation, prediction limits are to be calculated annually and compared to analytes listed in Appendix I of Chapter 173-351 WAC. While trend testing detects a significant change in relative concentration over time by defining a direction and probability, prediction limit results provide a way of determining if future measurements are inconsistent with an established background.

Table 4-4a lists wells and parameters that have been evaluated for intrawell prediction limit exceedances in the retesting strategy for 2021, along with the sample date, analytical result, and the calculated prediction limit value based previous years data. Initial results greater than the UPL are indicated by red bold font, while subsequent results indicating passing the 1 of 3 retesting protocol appear in the black font used for results that did not exceed the UPL. Intrawell testing is used to address the lack of a true background data set for comparison at CHRLF.

Prediction limit exceedances in regional wells remaining in the retesting protocol at the end of 2021 include the following:

- Total arsenic: MW-93, MW-88.
- Total barium: MW-84, MW-75, MW-85.
- Total copper: MW-86,
- Total vanadium: MW-88.

Prediction limit exceedances for arsenic in 2021 were reported for MW-93. Although these prediction limit exceedances are all below Primary Federal Drinking Water Maximum Contaminant Levels (MCLs) and background Puget Sound Basin Groundwater level of 0.008 mg/L (Natural Background Groundwater Arsenic Concentrations in Washington State Ecology Publication No. 14-09-044). The Solid Waste Division is in the process of updating the permit for Background Threshold Value (BTV) calculation for the Cedar Hills and vicinity areas. The program was agreed to with PHSKC and Ecology. The new BTV will set a more representative background value to compare arsenic, iron, and manganese concentrations in the Cedar Hills region.

As previously discussed in section 4.2.4.1, total arsenic fractions are typically correlated with suspended solids. In the wells remaining in the retesting protocol with elevated concentrations of total arsenic (relative to other wells), in addition to elevated suspended solids, the ratios of total to dissolved arsenic and total to dissolved iron are high. This presents evidence that arsenic and iron are bound in an insoluble complex that is sampled and solubilized by the analytical method, and therefore

may not be representative of aquifer conditions. Further analysis indicates vanadium follows this trend; however, barium seems to be more moderate in correlation with iron and suspended solids. Well redevelopment is necessary to mitigate this effect and restore aquifer conditions within the monitoring well.

Upgradient prediction limit exceedances (MW-75, 84, 85 and 88) confirm that there is unstable water quality in the regional aquifer flowing to the landfill. The prediction limit statistical test assumes a static, unchanging background dataset to compute expected future values. When this assumption does not hold, as is the case here, it increases the likelihood that exceedances of the computed limit will be found, even when these exceedances are not related to activities attributable to CHRLF.

In the case where upgradient water quality is unstable, intrawell prediction limits are highly useful as a tool to determine changing upgradient conditions with quantifiable certainty for individual monitoring wells.

4.3 Perched Groundwater

Per the *Cedar Hills Regional Landfill Site Wide Hydrogeologic Report*, March 2004, and the *Cedar Hills Regional Landfill Site Wide Hydrogeological Report Addendum*, December 2013, perched groundwater occurs in onsite glacial till, ice-contact deposits and recessional outwash. No laterally or vertically extensive perched zones have been identified. For purposes of presentation and discussion, perched zones are divided into three groups; North and West Perched Zones; East Perched Zone (EPZ); and, South Solid Waste Area Perched Zone (SSWA).

Impacts to the EPZ and SSWA perched zones by historical site activities have been recognized over the years. Several investigations have been undertaken to clarify interactions between engineered facilities, surface water and perched groundwater, and to further define perched zone extent.

Available data indicate that all onsite perched zones are separated from the regional aquifer by unsaturated deposits ranging from 100 to 300 feet. No laterally or vertically extensive perched zones have been identified, leaving the regional aquifer beneath the landfill as the earliest target hydraulic pathway for groundwater contaminant detection. For this reason, the regional aquifer, rather than any perched groundwater, is the target hydraulic pathway for detection monitoring.

Sampling and analysis of groundwater in the perched zones allows changes in water quality from site activities to be assessed. Table 2-1 lists perched wells, construction dates, locational, and monitoring information.

4.3.1 Groundwater Elevation and Flow

Groundwater elevation and seasonal precipitation response plots are located in Part 5. Flow direction and velocity are not determined due to the discontinuous nature of perched zones. Current understanding of groundwater occurrence and flow are presented in the *East Main Hill Perched Zones Technical Memorandum*, published in 2010 for the east perched zones and in *Results of Groundwater*

Sampling and Fate and Transport Analysis South Solid Waste Area Perched Zone Assessment, April 2010, for the SSWA perched zones.

4.3.2 Water Quality Exceedances

Perched zones water quality exceedances for 2021 appear in Table 4-1b. Water quality exceedances in perched wells are consistent with previous year's data.

The frequency, variety and concentration of VOCs in the EPZ and SSWA perched zone wells have declined over time. Primary standards have been exceeded by seven (7) VOCs at some point during the monitoring history of the perched zone wells. Presently, PCE, TCE, 1,1-DCA and VC remain above standards in the EPZ.

Iron and manganese, like arsenic, are naturally occurring and are mobilized by similar processes; redox, pH and sorption. Iron and manganese exceedances occur in both perched zones with known impacts, and upgradient, non-impacted perched wells.

4.3.2.1 EPZ Exceedances

For the EPZ, the following wells exceeded either primary drinking or secondary GWC standards in 2021:

- Total arsenic: MW-30A, 47, 50, 62, 102, **103**, 107, 108**, 109**, 110, 111, 112, EB6
- 1,1-dichloroethane: MW-30A
- Benzene: MW-109
- Chromium: MW-109
- Manganese: MW-47, 102, 103, 107, 109, 110, 112
- Sodium: MW-108, 109, 110, 112
- Total Dissolved solid (TDS): MW-47, 109, 112
- Vinyl chloride: MW-47, 107, 109, 110
- pH: MW-30A, 47, 62, 102, 107, 110, 111, EB6
- Dissolved iron: MW-47, 68, 107, 109, 110
- Dissolved manganese: MW-47, 50, 62, 102, 103, 107, 108, 109, 111 and EB6.

EPZ wells were analyzed for Appendix III analytes in 2021 per WAC 173-351-440 and the CHRLF SAP. No exceedances of Appendix III analytes occurred for EPZ wells in 2021.

4.3.2.2 SSWA Exceedances

In the SSWA perched zone in 2021, total arsenic and vinyl chloride exceeded the GWC in all samples from MW-101. Dissolved iron and manganese also exceeded the secondary standards in all samples from MW-101.

Secondary standards were exceeded only for pH in a sample collected from MW-101 in the 4th quarter of 2021.

SSWA wells were analyzed for Appendix III analytes in 2021 per WAC 173-351-440 and the CHRLF SAP. No exceedances of Appendix III analytes occurred for SSWA wells in 2021.

As previously discussed, arsenic occurs naturally in native soils and can be mobilized in groundwater by depressed redox and affected by pH conditions and ions available to form complexes or adsorption sites. The physical and spatial properties of the perched zones enhance the likelihood of exposure to one or more of these mechanisms. Although arsenic can be found in leachate, the probability of leachate as a source of arsenic in groundwater samples is unlikely considering processes such as dilution and sorption that would reduce the contribution from leachate. It is likely that arsenic detected in site wells is mobilized from native soils by redox or pH changes which can be brought about by landfill associated processes.

4.3.2.3 MW-105

MW-105 was sampled in 2016 per the SAP to establish baseline characterization for leachate aeration pond leak detection. This well will continue to be monitored for field specific conductance as a performance measure for leak detection. In 2021, the conductivity at MW-105 were field measured at 206.6, 151.3, 191.8 and 216.3 μmhos/cm in the first, second, third and fourth quarters correspondingly.

4.3.3 Perched Zone Trends

Trends are determined for analytes listed in Appendix I of Chapter 173-351 WAC. Test results are tabulated in the Statistical Summary of Perched Groundwater Quality Table 4-3c.

4.3.3.1 EPZ Trends

East perched zone well MW-30A exhibited short term increasing trends for VOC Trichloroethene, while short term decreasing trend for water quality parameters Nitrate. Nitrate showed long term increase in MW-30 while long term decreasing trend for VOC including 1,2-Dichloroethane, Trichloroethene, and cis 1,2-Dichloroethene and. MW-30 showed long term decreasing trend for App I parameters including barium, chromium, cobalt, copper, lead, nickel, manganese, magnesium, potassium and total barium, and zinc; and decreasing trend for App II parameters such as conductivity, alkalinity, ammonia, chloride, sulfate, and dissolved manganese, dissolved calcium and dissolved potassium while long term increasing trend for App II parameters such as Ph and Nitrate.

MW-47 exhibited short term decreasing trend for VOCs such as 1,1-Dichloroethane, 1,2-Dichloropropane; long term increasing trend for VOCs such and 1,2-Dichloroethane, 1,2-Dichloropropane and Vinyl Chloride and water quality parameter arsenic. However, MW-47 exhibited long term decreasing trend for App I parameters such as total chromium, total cobalt, total copper, total lead, total nickel, total zinc and total vanadium and App II parameters such as pH, ammonia, chloride and sulfate but long term increasing trend for total dissolved solids, dissolved iron, calcium, manganese, magnesium and sodium.

Again, MW-47 exhibited short term increasing trend for chloride and sulfate and decreasing trend for conductivity, total dissolved solids and alkalinity.

MW-62 exhibited long term decreasing trends for VOCs, including 1,2-Dichloroethane, *cis*-1,2-DCE, and TCE. Other long term decreasing trends calculated included specific conductance, chloride, nitrate, sulfate, and arsenic, barium, iron, calcium, magnesium, manganese, potassium and total chromium, cobalt, copper and nickel.

Specific conductance showed decreasing trends in MW-30, MW-47 and MW-62.

Parameters associated with the presence of LFG, including alkalinity, dissolved iron, calcium, and magnesium showed decreases in MW-30A and MW-62, while generally increasing in long term for MW-47.

4.3.3.2 SSWA Trends

For the SSWA perched zone, water quality is currently monitored by MW-101. Several other SSWA perched zone wells have been sampled occasionally during on-going investigation efforts but have not produced sufficient data for trend testing.

In 2021, MW-101 continued to exhibit long term declining trends for VOCs such as 1,2-Dichloropropane and vinyl chloride as well as declining trends for total chromium, cobalt, copper, dissolved solids, lead, nickel, selenium, total vanadium an d total zinc.

MW-101 exhibited a long term increasing trend for *cis*-1,2-DCE.

For VOCs, MW-101 exhibited long term increasing trends for 1,2-Dichloroethane .

Short term decreasing trend has been observed in MW-101 for total copper.

4.3.4 Prediction Limits

Perched zone data were tested for intrawell prediction limit exceedances for Appendix I analytes where adequate data are available and appear in Table 4-4b. For the EPZ, total antimony exceeded the UPL in MW-47 in the 1st quarter of 2021.

For the SSWA, total antimony exceeded the UPL in MW-101 for the 1st quarter of 2021.

5.0 SUMMARY AND CONCLUSIONS

5.1 Regional Aquifer

At CHRLF, the regional aquifer is the first continuously saturated zone beneath the landfill and serves as the earliest path for detection monitoring for flow paths traversing the landfill footprint. Groundwater flowing onto the CHRLF site is highly variable both spatially and temporally.

Groundwater data are evaluated according to gradient and position of the well in the flow regime relative to waste placement and other infrastructure. Upgradient conditions are characterized by south upgradient wells, located along the southern property border, northwest upgradient wells, influenced by the McDonald Creek drainage, and northeast upgradient wells monitoring the flow paths that appear to originate east of the landfill site and discharge to the convergent flow feeding the Issaquah Creek drainage. Wells monitoring flows originating outside the landfill footprint and bypassing all landfill facilities are termed crossgradient. There are wells sampled east and west of the landfill where these conditions exist. Flows downgradient of waste cells are monitored by two wells on the west side and six wells located in the convergent flow corridor. Additional flows are monitored by wells placed downgradient of north end facilities (conveyances or pump stations) but not of waste cells.

Recharge of the regional aquifer beneath CHRLF is predominately by rainfall. Primary recharge areas are the McDonald Creek Drainage to the northwest and Gravel Pit Lake centered on the QCF property to the south of the landfill. QCF has been the site of many activities including solid and hazardous waste disposal, solvent reprocessing and recovery, gravel mining, and a composting operation. Recent activities have included extensive regrading, expanded compost storage onsite and refilled mined areas. The property is on the National Priorities List for hazardous waste sites and has gone through remediation efforts including excavation, stabilization and barrier wall construction. These past activities and current conditions affect and define upgradient groundwater quality for CHRLF. Groundwater flow from the recharge area is radial and is monitored by extensive networks of wells at both QCF and CHRLF.

Regional Aquifer analysis results for upgradient, downgradient and cross gradient wells for 2021 are generally consistent with past results. Several upgradient wells continue to show elevated concentrations of several parameters indicating changing water quality upgradient of CHRLF. Upgradient water quality to CHRLF exhibits wide spatial and temporal variation. Contamination of the regional groundwater by CVOCs on the QCF site is well documented, as is migration across the property line and under CHRLF. The CVOCs TCE, PCE and *cis*-1,2-dichloroethene are detected regularly in several upgradient wells. TCE is present in four upgradient wells, exceeding primary drinking water standards only in two wells (MW-76 and MW-114). Vinyl chloride was detected in one upgradient well MW-65 in 2021 and is likely a degradation byproduct. Overall, primary groundwater criteria were exceeded in some upgradient wells for TCE and total arsenic. Some wells also exceeded secondary standards for pH, dissolved iron and manganese.

Rising concentrations of several water quality indicator parameters in south upgradient wells adjacent to QCF first became apparent in 2011. Concentration rises have been relatively sudden, steep and coincidental with recent regrading and stockpiling on the site.

As flow moves northward under the property footprint, it remains predominantly to the north. Once reaching the north third of the landfill property, recharge from the McDonald Creek drainage comes into effect and flow direction changes to the NE where flow lines converge and the gradient increases, heading towards the Issaquah Creek drainage basin. This convergent effect influences regional flow in such a way that concentrates flow into a relatively narrow corridor.

Water quality changes are discernible as groundwater encounters and equilibrates to different oxidation-reduction conditions, soil gas/groundwater interface conditions, and solvent/solute interactions. Flow paths under the footprint and immediately downgradient of waste cells are influenced by LFG in the unsaturated strata.

Flow paths aligned along MW-66, MW-74R, MW-75, and MW-85 in the north landfill area have chloride concentrations elevated relative to other regional wells consistent with an input from onsite, overlying infrastructure in the north end. Concentrations of chloride in the wells remain below the Washington State Groundwater Quality Standard (WAC 173-200).

A small crescent of wells in the northeast corner of the CHRLF property monitors regional aquifer flow along preferential flow paths downgradient to MSW placement. Landfill activities and/or facilities may have raised chloride concentrations in wells MW-66, MW-74R, MW-75, and MW-85. Concentrations have stabilized in MW-74R below peak levels of 2009. Levels in wells further along the high transmissivity flow path downgradient remain at near background levels.

Downgradient groundwater quality has been compared to groundwater criteria and has exceeded primary standards for total arsenic and secondary standards for pH, dissolved iron and manganese in 2021. The CVOCs PCE, TCA, *cis*-1,2-DCE, and VC are undetected in downgradient wells. These data indicate that CHRLF is acting as an attenuation zone for upgradient QCF impacts, allowing a reduction in the concentration of VOCs, iron, and manganese.

Groundwater analysis indicates the effects of interaction with carbon dioxide from LFG migration. This influence is detectable in regional aquifer wells screened near the water table in predominately the central portion of the landfill site. Effects noted are increased alkalinity, calcium, and magnesium relative to deeper screened wells. Other redox sensitive chemical species can be mobilized as well, including arsenic, iron, and manganese.

Additional findings related to regional aquifer flow analysis and monitoring well detection zones can be found in the *Cedar Hills Regional Landfill Regional Aquifer Technical Memorandum*, March 2011.

A *Site Wide Hydrogeologic Report Addendum for Cedar Hills Regional Landfill* was prepared in 2013; an updated sampling and analysis plan (*Environmental Monitoring Sampling and Analysis Plan for Cedar Hills Regional Landfill)* was implemented in 2016.

5.2 Perched Zones

Perched groundwater occurs in onsite till, ice-contact deposits and recessional outwash. No laterally or vertically extensive perched zones have been identified at CHRLF. Recharge of perched groundwater is by precipitation with possible hydraulic continuity to surface streams.

It is recognized that perched zones are separated from the regional aquifer, are not laterally or vertically extensive and that the regional aquifer beneath the landfill is the earliest target hydraulic pathway for groundwater contaminant detection.

Impacts from historical landfilling methods have previously been recognized in several perched zone wells. Site improvements and engineered facilities have moderated some impacts to water quality as evidenced by the long term declines for many contaminant concentrations in these wells. The influence of LFG on groundwater quality continues in east side perched groundwater.

Historical investigations that pertain to perched zone conditions have been completed. The Technical Memoranda *Results of Groundwater Sampling and Fate and Transport Analysis South Solid Waste Area Perched Zone Assessment*, April 2010, and the *East Main Hill Perched Zones*, October 2010, evaluate occurrence and conditions in the Main Hill and South Solid Waste Area perched zones. These memoranda included an evaluation of the gas-to-groundwater pathway for contaminant migration and further define extent and flow paths of groundwater in the East Main Hill perched zone, and in the South Solid Waste Area perched zone, including confirmation of the local extent and the fate and transport of vinyl chloride.

SWD has prepared a *Draft Remedial Investigation and Feasibility Study* (RI/FS) as part of an Independent Remedial Action under WAC 173-340 Model Toxics Control Act (MTCA). This work completed EPZ characterization, filled data gaps, and proposed remedies. Continuing interim actions are outlined in the *Cedar Hills Regional Landfill – EPZ Phase 1 Interim Actions – Infrastructure Upgrades Technical Memorandum*, August 2018. Reports covering the interim action are available on the Ecology website at https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=7027.

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PART 2

Tables

Table 2-1	**Summary of Cedar Hills Regional Landfill Site Groundwater Monitoring Wells**
Table 3-1	**Water Quality Standards for Groundwaters of the State of Washington**
Table 4-1a	**Groundwater Quality Standard Exceedances Regional Aquifer Groundwater**
Table 4-1b	**Quality Standard Exceedances Perched Zones**
Table 4-2a	**Statistical Summary of Regional Aquifer Upgradient and Crossgradient**
Table 4-2b	**Groundwater Data**
Table 4-2c	**Statistical Summary of Regional Aquifer Downgradient Groundwater Data**
Table 4-3a	**Statistical Summary of Perched Zones Groundwater Data**
Table 4-3b	**Regional Aquifer Upgradient Groundwater Trend Test Results**
Table 4-3c	**Regional Aquifer Downgradient Groundwater Trend Test Results**
Table 4-4a	**Perched Zones Groundwater Trend Test Results**
Table 4-4b	**Regional Aquifer Groundwater Prediction Limit Values and Results**
	Perched Zones Groundwater Prediction Limit Values and Results

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TABLE 2-1
CEDAR HILLS REGIONAL LANDFILL GROUNDWATER MONITORING WELLS

Well Name	General Condition				Recommendations				
	Well Diameter (inches)	Well Depth (feet)	Installation Date	Water Table or Deep Zone	Well Monitoring Classification	Comments on Well Use	Static Water Level Monitoring Frequency	Water Quality Monitoring Frequency	Rationale
MW-21 (Upgradient)	6	163	5/17/83	Deep	Detection	Background	Quarterly	Semi-annual	Monitors background conditions of deep aquifer.
MW-22P (Downgradient)	2	284	5/25/83	Deep	Detection	WL only	Quarterly	None	Not effectively located for facilities or background monitoring.
MW-24 (Upgradient)	6	192	6/2/83	Deep	Detection	Background	Quarterly	Semi-annual	Twice-annual monitoring of QCF impacts in deep upgradient well. Monitor SWLs to define deeper Regional Aquifer flow paths.
MW 43 (Downgradient)	5	325	30/4/85	Deep	Detection	WL only	Quarterly	None	
MW-54 (Upgradient)	2	351	9/26/86	Deep	Detection	WL only	Quarterly	None	Not effectively located for facilities monitoring as it lies up gradient of the CHRLF facilities. Upgradient water quality monitored in other wells.
MW-56 (Upgradient)	2	166	10/12/88	Deep	Detection	Background	Quarterly	Semi-annual	Twice-annual monitoring of QCF impacts in upgradient well. Low groundwater velocities indicate slow movement of QCF contaminants through this area.
MW-57 (Upgradient)	2	144	8/22/88	Deep	Detection	WL only	Quarterly	None	Monitoring redundant with MW-59. Strong downward vertical gradients indicate impacts at MW-57 would also be detected at MW-59.
MW-58A (Upgradient)	2	219	9/26/88	Deep	Detection	WL only	Quarterly	None	Monitoring redundant with MW-56. Strong downward vertical gradients indicate impacts at MW-58A would also be detected at MW-56.
MW-59 (Upgradient)	2	180.5	8/16/88	Deep	Detection	Background	Quarterly	Quarterly	Quarterly monitoring of QCF impacts in upgradient well.
MW-60 (Upgradient)	2.5	240	9/13/91	Water Table	Detection	WL only	Quarterly	None	Upgradient flow from QCF in shallow Regional Aquifer characterized by MW-65 and MW-76. Downgradient area monitored by MW-100.
MW-64 (Upgradient)	2.5	274	3/22/93	Water Table	Detection		Quarterly	Semi-annual	Adjacent to SE Pit. Conversion from quarterly to semiannual sampling does not have significant effect on intrawell statistics.
MW-65 (Upgradient)	2.5	234	3/29/93	Deep	Detection	Background	Quarterly	Semi-annual	Twice-annual monitoring of QCF impacts in upgradient well. Monitor SWLs to define deeper Regional Aquifer flow paths.
MW-66 (Upgradient)	2.5	248	4/5/93	Water Table	Detection		Quarterly	Quarterly	Monitor north end leachate detention facilities.
MW-67 (Downgradient)	2.5	230	4/28/93	Water Table	Detection		Quarterly	Semi-annual	Monitors potential EPZ contaminants infiltrating into Regional Aquifer.
MW-68 (Cross-Gradient/ Downgradient)	2.5	353	4/15/93	Water Table	Detection		Quarterly	Quarterly	Well is completed adjacent to unlined Main Hill where downward flow from Main Hill and impacted EPZ would be captured. Monitors Main Hill gas effected area.
MW-69 (Downgradient)	2.5	371	4/23/93	Water Table	Detection	WL only	Quarterly	Quarterly	West side flow converges in this area and well is upgradient of key downgradient wells.
MW-72 (Downgradient)	2.5	376	8/7/98	Water Table	Detection		Quarterly	Quarterly	Key water quality monitoring well for southwest landfill area.
MW-73 (Upgradient)	4	206	9/3/99	Water Table	Detection	Background	Quarterly	Semi-annual	Background water quality monitoring for northwest facility area. Downgradient flow paths from well largely by-pass facility so provides only general indication of background conditions.
MW-74R (Downgradient)	4	249	11/1/00	Water Table	Detection		Quarterly	Quarterly	Detection zone monitors north end facilities. Quarterly monitoring recommended due to elevated chloride.
MW-75 (Downgradient)	4	269	9/24/99	Deep	Detection		Quarterly	Quarterly	Key downgradient monitoring well.

TABLE 2.1
CEDAR HILLS REGIONAL LANDFILL GROUNDWATER MONITORING WELLS

Well Name	General Condition				Recommendations				
	Well Diameter (inches)	Well Depth (feet)	Installation Date	Water Table or Deep Zone	Well Monitoring Classification	Comments on Well Use	Static Water Level Monitoring Frequency	Water Quality Monitoring Frequency	Rationale
MW-76 (Upgradient)	4	148	10/25/99	Water Table	Detection	Background	Quarterly	Semi-annual	Monitor QCF impacts effecting upgradient water quality in shallow portion of Regional Aquifer. Low groundwater velocities (0.014 ft/day) indicate slow movement of QCF contaminants through this area. Travel distance for
MW-80 (Downgradient)	4	259	2/27/01	Water Table	Detection		Quarterly	Quarterly	Key downgradient monitoring well for monitoring impacts from unlined Main Hill and EPZ.
MW-81 (Upgradient)	4	192	10/3/02	Water Table	Detection		Quarterly	Quarterly	Monitors GW quality from off-site area east of facility. Retain as monitoring point for potential LFG impacts to GW. Key well for defining potentiometric divide on east side.
MW-82 (Upgradient)	4	133	11/2/00	Water Table	Detection	Background	Quarterly	Semi-annual	Twice-annual monitoring of QCF impacts in shallow Regional upgradient well. Low groundwater velocities indicate slow movement of QCF contaminants through this area.
MW-83 (Upgradient)	4	154	10/27/00	Water Table	Detection	Background	Quarterly	Quarterly	Quarterly monitoring of QCF impacts in shallow Regional upgradient well.
MW-84 (Upgradient)	4	246	10/20/00	Water Table	Detection	Background	Quarterly	Quarterly	Monitor background conditions in shallow regional aquifer
MW-85 (Downgradient)	4	257	12/1/00	Water Table	Detection		Quarterly	Quarterly	Key downgradient monitoring well with large detection zone underlying waste placement areas. Located in area of convergent GW flow and near center of high transmissivity channel.
MW-86 (Downgradient)	4	259	12/12/00	Water Table	Detection		Quarterly	Semi-annual	Provides monitoring of north end facilities. Conversion from quarterly to semiannual sampling does not have significant effect on intrawell statistics.
MW-87 (Downgradient)	4	261	11/21/00	Water Table	Detection		Quarterly	Quarterly	Key downgradient monitoring well.
MW-88 (Downgradient)	4	239	9/13/01	Water Table	Detection		Quarterly	Semi-annual	Provides limited monitoring of north end facilities. Conversion from quarterly to semiannual sampling does not have significant effect on intrawell statistics.
MW-89 (Downgradient)	4	291	11/12/01	Deep	Detection		Quarterly	Semi-annual	Provides limited monitoring of north end facilities in deep Regional Aquifer. Continue monitoring in place of MW-43.
MW-90 (Downgradient)	4	274	8/14/02	Deep	Assessment		Quarterly	Contingent	Water quality monitoring redundant with MW-89. Reserve as contingency well in event assessment monitoring is triggered in MW-88,89 or 85.
MW-91 (Downgradient)	6	289	10/26/01	Deep	Detection	WL only	Quarterly	None	Large diameter well used for testing. Redundant with well MW-75.
MW-93 (Cross Gradient)	4	320	6/24/02	Water Table	Detection		Quarterly	Quarterly	Well monitors the Main Hill gas affected area.
MW-94 (Upgradient)	4	145	7/2/02	Water Table	Detection	Background	Quarterly	Quarterly	Quarterly monitoring of QCF impacts in shallow Regional upgradient well.
MW-95 (Cross Gradient)	4	263	7/22/02	Water Table	Detection		Quarterly	Semi-annual	Monitor off-site water quality at southwest end of facility. Downgradient flow paths poorly defined and may by-pass facility.
MW-99 (Upgradient)	4	279	8/30/02	Deep	Assessment		Quarterly	Contingent	Monitors easterly upgradient water quality from offsite. Reserve as contingency well in event assessment monitoring is triggered in MW-81.
MW-100 (Downgradient)	4	300	8/26/02	Water Table	Detection		Quarterly	Semi-annual	Well useful for flowpath and geochemical modeling. Assists in tracking QCF contaminant migration through facility.
MW-106 (Cross gradient)	4	203	2/19/09	Water Table	Detection	WL only	Quarterly	None	Defines east side flow paths.
MW-113 (Upgradient)	4	220	4/03/20	Water Table	Detection		Quarterly	Quarterly	New monitoring well as of 2nd quarter 2020
MW-114 (Upgradient)	4	150	4/10/20	Water Table	Detection	Background	Quarterly	Quarterly	New monitoring well as of 2nd quarter 2020
MW-115 (Upgradient)	4	145	4/14/20	Water Table	Detection	Background	Quarterly	Quarterly	New monitoring well as of 2nd quarter 2020
NPW1	8	382	8/221990	Deep	Non-Potable	WL only	Quarterly	None	Well provides non potable water to the fire supression tank on-site
NPW3	6	376	6/51990	Deep	Non-Potable	WL only	Quarterly	None	Well provides non potable water to the fire supression tank on-site

TABLE 2.1
CEDAR HILLS REGIONAL LANDFILL GROUNDWATER MONITORING WELLS

Well Name	General Condition				Recommendations				
	Well Diameter (inches)	Well Depth (feet)	Installation Date	Water Table or Deep Zone	Well Monitoring Classification	Comments on Well Use	Static Water Level Monitoring Frequency	Water Quality Monitoring Frequency	Rationale
East Main Hill Perched Zones									
EB-5	2	60	5/06/90	EPZ	Assessment	WL only	Quarterly	None	Monitor water levels to evaluate affect of extraction system shut down.
EB-5S	2	20	6/06/90	EPZ	Assessment	WL only	Quarterly	None	Monitor water levels to evaluate affect of extraction system shut down.
EB-6	2	30	11/28/90	EPZ	Assessment		Quarterly	Quarterly	Monitor water levels to evaluate affect of extraction system shut down. Well has limited water yield limiting ability to collect samples.
EW-25	6	36	6/10/92	EPZ	Assessment		Quarterly	Quarterly	Key EPZ compliance well. Temporary monitoring point sampled with passive diffusion sampler. Decommissioned 2nd quarter of 2018.
MW 25	3	43	3/6/83	EPZ	Assessment	WL only	Quarterly	None	
MW 27A	2	80	3/10/85	EPZ	Assessment	WL only	Quarterly	None	
MW 28	3	39	21/6/83	EPZ	Assessment	WL only	Quarterly	None	
MW 29	3	60	23/6/83	EPZ	Assessment	WL only	Quarterly	None	
MW-30A	3	35	6/09/89	EPZ	Assessment		Quarterly	Quarterly	Monitor attenuating VOCs.
MW-41S	3	51	12/7/83	EPZ	Assessment	WL only	Quarterly	None	
MW-41D	3	51	12/7/83	EPZ	Assessment	WL only	Quarterly		
MW 45	2	64	5/17/1985	EPZ	Assessment	WL only	Quarterly	None	
MW-47	2	44	5/31/85	EPZ	Assessment		Quarterly	Quarterly	Key EPZ compliance well.
MW 48	2	63	24/5/85	EPZ	Assessment	WL only	Quarterly	None	
MW-50	2	40	6/03/85	EPZ	Assessment		Quarterly	Quarterly	
MW 55	2	67	10/02/86	EPZ	Assessment	WL only	Quarterly	None	
MW-62	2	54	1/02/90	EPZ	Assessment		Quarterly	Quarterly	Monitor attenuating VOCs.
MW-63	2	17	12/02/90	EPZ	Assessment	WL only	Quarterly	None	Monitor water levels to evaluate affect of extraction system shut down.
MW 79	2	56	11/05/99	EPZ	Assessment	WL only	Quarterly		THIS WELL IS BROKEN; needs to be fixed. No statics are taken since it is still broken.
MW 98	2	23	3/09/01	EPZ	Assessment	WL only	Quarterly	None	
MW-102	2	50	1/27/09	EPZ	Assessment		Quarterly	Quarterly	EPZ monitoring well.
MW-103	2	35	1/28/09	EPZ	Assessment		Quarterly	Quarterly	EPZ monitoring well.
MW-104	2	32	1/29/09	EPZ	Assessment		Quarterly	Quarterly	EPZ monitoring well.
MW-107	2	39	6/07/18	EPZ	Assessment		Quarterly	Quarterly	EPZ monitoring well.
MW-108	2	17	6/08/18	EPZ	Assessment		Quarterly	Quarterly	EPZ monitoring well.
MW-109	2	13	6/09/18	EPZ	Assessment		Quarterly	Quarterly	EPZ monitoring well.
MW-110	2	19	6/11/18	EPZ	Assessment		Quarterly	Quarterly	EPZ monitoring well.
MW-111	2	14	6/11/18	EPZ	Assessment		Quarterly	Quarterly	EPZ monitoring well.
MW-112	2	17	6/11/18	EPZ	Assessment		Quarterly	Quarterly	EPZ monitoring well.
South Solid Waste Area Perched Zone									
MW-101	2	54	6/2/06	SSWA	Assessment		Quarterly	Quarterly	Key SSWA perched zone compliance well
MW 105	2	30	1/30/09	EPZ	Assessment	Conductance only	Quarterly	Quarterly	Well located near leachate lagoons; FE measures conductance every quarter on this well as a check of the leachate lagoons

Notes: (1) The following wells were decommissioned: MW-70, MW-77, MW-78, MW-96, MW-97, and EW-25 as of 2019.

(2) Shallow wells are wells completed in the Regional Aquifer with the top screen slot within 10 ft of the water table. Deep wells are completed in the Regional Aquifer with the top screen slot greater than 10 ft below the water table.

(3) Water quality monitoring shading relates to Figure 2.

Abbreviations:

WL = Water Level

NA = Not Applicable

ection Zone EPZ = East Perched Zone

olid Waste Area QCF = Queen City Farms

Table 3-1

Water Quality Standards for Groundwaters of the State of Washington

	Analyte	CAS No.	Ground Water Quality Criteria Criterion*	
I.	PRIMARY AND SECONDARY CONTAMINANTS AND RADIONUCLIDES			
	A. Primary Contaminants			
	Barium	7440-39-3	1	mg/L
	Cadmium	7440-43-9	0.005	mg/L
	Chromium	7440-47-3	0.05	mg/L
	Lead	7439-92-1	0.015	mg/L
	Mercury	7439-97-6	0.002	mg/L
	Selenium	7782-49-2	0.01	mg/L
	Silver	7440-22-4	0.05	mg/L
	Fluoride	16984-48-8	4	mg/L
	Nitrate	14797-55-8	10	mg/L
	Endrin	72-20-8	0.2	ug/L
	Methoxychlor	72-43-5	40	ug/L
	1,1,1-Trichloroethane	71-55-6	200	ug/L
	2,4-D	94-75-7	70	ug/L
	2,4,5-TP	93-72-1	100	ug/L
	Total Coliforms		1/100	mL
	B. Secondary Standards			
	Copper	7440-50-8	1	mg/L
	Iron	7439-89-6	0.3	mg/L
	Manganese	7439-96-5	0.05	mg/L
	Zinc	7440-66-6	5	mg/L
	Chloride	16887-00-6	250	mg/L
	Sulfate	14808-79-8	250	mg/L
	Total Dissolved Solids		500	mg/L
	Foaming Agents		0.5	mg/L
	pH	12408-02-5	6.5-8.5	units
	Corrosivity		non-corrosive	
	Color		15	units
	Odor-Threshold		3	units
	C. Radionuclides and Radioactivity			
	Gross Alpha particle activity		15	pCi/L
	Gross Beta particle activity		50	pCi/L
	Tritium	10028-17-8	20,000	pCi/L
	Strontium	7440-24-6	8	pCi/L
	Radium 226 & Radium 228		5	pCi/L
	Radium 226	13982-63-3	3	pCi/L
II.	CARCINOGENS			
	1,1-Dichloroethane	75-34-3	1	ug/L
	1,2-Dichloroethane	107-06-2	0.5	ug/L
	1,2-Dichloropropane	78-87-5	0.6	ug/L
	1,2-Dimethylhydrazine	540-73-8	60	ug/L
	1,2-Diphenylhydrazine	122-66-7	0.09	ug/L
	1,3-Dichloropropene tot.	542-75-6	0.2	ug/L
	1,4-Dichlorobenzene	106-46-7	4	ug/L
	1,4-Dioxane	123-91-1	7	ug/L
	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	0.0000006	ug/L
	2,4,6-Trichlorophenol	88-06-2	4	ug/L
	2,4-Dinitrotoluene	121-14-2	0.1	ug/L
	2,4-Toluenediamine	95-80-7	0.002	ug/L
	2,6-Dinitrotoluene	606-20-2	0.1	ug/L
	2-Methoxy-5-nitroanaline	99-59-2	2	ug/L
	2-Methylaniline	95-53-4	0.2	ug/L
	2-Methylaniline hydrochloride	636-21-5	0.5	ug/L
	3,3'-Dichlorobenzidine	91-94-1	0.2	ug/L
	3,3'-Dimethoxybenzidine	119-90-4	6	ug/L
	3,3-Dimethylbenzidine	119-93-7	0.007	ug/L
	4,4'-Methylene bis(N,N'-dimethyl) aniline	101-61-1	2	ug/L
	4-Chloro-2-methyl analine	95-69-2	0.1	ug/L
	4-Chloro-2-methyl analine hydrochloride	3165-93-3	0.2	ug/L
	Acrylamide	79-06-1	0.02	ug/L
	Acrylonitrile	107-13-1	0.07	ug/L
	Aldrin	309-00-2	0.005	ug/L
	Aniline	62-53-3	14	ug/L
	Aramite	140-57-8	3	ug/L
	Arsenic	7440-38-2	0.00005	mg/L
	Azobenzene	103-33-3	0.7	ug/L
	Benzene	71-43-2	1	ug/L

Table 3-1 *(continued)*

Water Quality Standards for Groundwaters of the State of Washington

Analyte	CAS No.	Ground Water Quality Criteria Criterion*	
Benzidine	92-87-5	0.0004	ug/L
Benzo(a)pyrene	50-32-8	0.008	ug/L
Benzotrichloride	98-07-7	0.007	ug/L
Benzyl chloride	100-44-7	0.5	ug/L
Bis(2-ethylhexyl)phthalate	117-81-7	6	ug/L
Bis(chloroethyl)ether	111-44-4	0.07	ug/L
Bis(chloromethyl)ether	542-88-1	0.0004	ug/L
Bromodichloromethane	75-27-4	0.3	ug/L
Bromoform	75-25-2	5	ug/L
Carbazole	86-74-8	5	ug/L
Carbon Tetrachloride	56-23-5	0.3	ug/L
Chlordane	5103-71-9	0.06	ug/L
Chlorodibromomethane	124-48-1	0.5	ug/L
Chloroform	67-66-3	7	ug/L
Chlorthalonil	1897-45-6	30	ug/L
DDT (includes DDE and DDD)	50-29-3, 72-55-9, 72-54-8	0.3	ug/L
Diallate	2303-16-4	1	ug/L
Dichlorovos	62-73-7	0.3	ug/L
Dieldrin	60-57-1	0.005	ug/L
Direct Black 38	1937-37-7	0.009	ug/L
Direct Blue 6	2602-46-2	0.009	ug/L
Direct Brown 95	16071-86-6	0.009	ug/L
Epichlorohydrin	106-89-8	8	ug/L
Ethyl acrylate	140-88-5	2	ug/L
Ethylene dibromide	106-93-4	0.001	ug/L
Ethylene thiourea	96-45-7	2	ug/L
Folpet	133-07-3	20	ug/L
Furazolidone	67-45-8	0.02	ug/L
Furium	531-82-8	0.002	ug/L
Furmecyclox	60568-05-0	3	ug/L
Heptachlor	76-44-8	0.02	ug/L
Heptachlor epoxide	1024-57-3	0.009	ug/L
Hexachlorobenzene	118-74-1	0.05	ug/L
Hexachlorocyclohexane (alpha)	319-84-6	0.001	ug/L
Hexachlorocyclohexane (technical)	608-73-1	0.05	ug/L
Hexachlorodibenzo-p-dioxin, mix	34465-46-8	0.00001	ug/L
Hydrazine/hydrazine sufate	302-01-2/10034-93-2	0.03	ug/L
Lindane	58-89-9	0.06	ug/L
Methylene Chloride	75-09-2	5	ug/L
Mirex	2385-85-5	0.05	ug/L
Nitrofurazone	59-87-0	0.06	ug/L
N-Nitrosodiethanolamine	1116-54-7	0.03	ug/L
N-Nitrosodiethylamine	55-18-5	0.0005	ug/L
N-Nitrosodimethylamine	62-75-9	0.002	ug/L
N-Nitroso-di-n-butylamine	924-16-3	0.02	ug/L
N-Nitroso-di-n-propylamine	621-64-7	0.01	ug/L
N-Nitrosodiphenylamine	86-30-6	17	ug/L
N-Nitroso-N-methylethylylamine	10595-95-6	0.004	ug/L
N-Nitrosopyrrolidine	930-55-2	0.04	ug/L
o-Chloronitrobenzene	88-73-3	3	ug/L
o-Phenylenediamine	95-54-5	0.005	ug/L
o-Toluidine	95-53-4	0.2	ug/L
p,a,a,a-Tetrachlorotoluene	5216-25-1	0.004	ug/L
PAHs [Benzo(a)pyrene]		0.01	ug/L
PBBs	59536-65-1	0.01	ug/L
PCBs c	27323-18-8	0.01	ug/L
p-Chloronitrobenzene	100-00-5	5	ug/L
Propylene oxide	75-56-9]	0.01	ug/L
Tetrachloroethylene	127-18-4	0.8	ug/L
Toxaphene c	8001-35-2	0.08	ug/L
Trichloroethylene (TCE)	79-01-6	3	ug/L
Trimethyl phosphate	512-56-1	2	ug/L
Vinyl chloride	75-01-4	0.02	ug/L

NOTES: pCi/L=picocuries per liter
mg/L=milligrams per liter
ug/L=micrograms per liter
*Ground Water Quality Criteria=173-200 WAC Water Quality Standards for Ground Waters of the State of Washington

TABLE 4-1a
CEDAR HILLS REGIONAL LANDFILL
REGIONAL AQUIFER GROUNDWATER QUALITY STANDARD
EXCEEDANCES (Data collected from January 1, 2021 to March 31, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
Upgradient and Crossgradient Wells					
pH (Field)	pH Units	MW-94	1/7/2021	W94-210107-	6.3
		MW-115	1/11/2021	W115210111-	6.41
Arsenic, Total	mg/L	MW-113	1/11/2021	W113210111-	0.000554
		MW-114	1/11/2021	W114210111-	0.000328
		MW-115	1/11/2021	W115210111-	0.0002
		MW-59	1/11/2021	W59-210111-	0.000432
		MW-66	1/5/2021	W66-210105-	0.000715
		MW-68	1/11/2021	W68-210111-	0.0359
		MW-81	1/5/2021	W81-210105-	0.000552
		MW-83	1/7/2021	W83-210107-	0.000391
		MW-84	2/1/2021	W84-210201-	0.000341
		MW-93	1/6/2021	W93-210106-	0.00153
		MW-94	1/7/2021	W94-210107-	0.000131
Iron, Dissolved	mg/L	MW-113	1/11/2021	W113210111-	1.27
		MW-59	1/11/2021	W59-210111-	4.67
		MW-68	1/11/2021	W68-210111-	0.51
Manganese, Dissolved	mg/L	MW-113	1/11/2021	W113210111-	0.454
		MW-59	1/11/2021	W59-210111-	0.128
		MW-68	1/11/2021	W68-210111-	0.293
		MW-93	1/6/2021	W93-210106-	0.15
Trichloroethene	ug/L	MW-114	1/11/2021	W114210111-	9.77
		MW-115	1/11/2021	W115210111-	5.18
Downgradient Wells					
Arsenic, Total	mg/L	MW-72	1/5/2021	W72-210105-	0.000129
		MW-74R	1/6/2021	W74R210106-	0.00108
		MW-75	1/6/2021	W75-210106-	0.000447
		MW-80	1/11/2021	W80-210111-	0.00284
		MW-85	1/6/2021	W85-210106-	0.000737
		MW-87	1/15/2021	W87-210115-	0.000938
Iron, Dissolved	mg/L	MW-72	1/5/2021	W72-210105-	2.74
		MW-75	1/6/2021	W75-210106-	2.56
		MW-80	1/11/2021	W80-210111-	2.03
		MW-87	1/15/2021	W87-210115-	4.74
Manganese, Dissolved	mg/L	MW-72	1/5/2021	W72-210105-	0.373
		MW-75	1/6/2021	W75-210106-	0.23
		MW-80	1/11/2021	W80-210111-	0.35
		MW-87	1/15/2021	W87-210115-	0.561

See Data Qualifier List for Qualifier Information.

Exceedance Criteria: WAC 173-200-040 - Water Quality Standards for Groundwaters of the State of Washington

Table 4-1a
CEDAR HILLS REGIONAL LANDFILL:
REGIONAL AQUIFER GROUNDWATER QUALITY STANDARD EXCEEDANCES
(Data Collected from April 01, 2021 to June 31, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
Upgradient and Crossgradient Wells					
pH (Field)	pH Units	MW-115	4/13/2021	W115210413-	6.48
		MW-73	4/2/2021	W73-210402-	6.49
		MW-76	4/13/2021	W76-210413-	6.2
		MW-94	4/13/2021	W94-210413-	6.37
Arsenic, Total	mg/L	MW-113	4/12/2021	W113210412-	0.000531
		MW-114	4/12/2021	W114210412-	0.000278
		MW-115	4/13/2021	W115210413-	0.00019
		MW-21	4/2/2021	W21-210402-	0.000966
		MW-24	4/12/2021	W24-210412-	0.000551
		MW-56	4/5/2021	W56-210405-	0.0000735
		MW-59	4/13/2021	W59-210413-	0.00044
		MW-64	4/5/2021	W64-210405-	0.000859
		MW-65	4/13/2021	W65-210413-	0.000811
		MW-66	4/2/2021	W66-210402-	0.00068
		MW-68	4/15/2021	W68-210415-	0.0426
		MW-73	4/2/2021	W73-210402-	0.00151
		MW-76	4/13/2021	W76-210413-	0.000223
		MW-81	4/5/2021	W81-210405-	0.000496
		MW-82	4/12/2021	W82-210412-	0.000248
		MW-83	4/13/2021	W83-210413-	0.000291
		MW-84	4/5/2021	W84-210405-	0.000301
		MW-93	4/5/2021	W93-210405-	0.00138
		MW-94	4/13/2021	W94-210413-	0.000113
Iron, Dissolved	mg/L	MW-113	4/12/2021	W113210412-	1.17
		MW-21	4/2/2021	W21-210402-	1.93
		MW-24	4/12/2021	W24-210412-	3.13
		MW-59	4/13/2021	W59-210413-	4.47
		MW-65	4/13/2021	W65-210413-	3.31
		MW-68	4/15/2021	W68-210415-	0.551
Manganese, Dissolved	mg/L	MW-113	4/12/2021	W113210412-	0.405
		MW-21	4/2/2021	W21-210402-	0.126
		MW-24	4/12/2021	W24-210412-	0.103
		MW-56	4/5/2021	W56-210405-	0.123
		MW-59	4/13/2021	W59-210413-	0.121
		MW-64	4/5/2021	W64-210405-	0.0667
		MW-65	4/13/2021	W65-210413-	0.152
		MW-68	4/15/2021	W68-210415-	0.3
		MW-83	4/13/2021	W83-210413-	0.197
		MW-93	4/5/2021	W93-210405-	0.201
		MW-95	4/6/2021	W95-210406-	0.172
Trichloroethene	µg/L	MW-115	4/13/2021	W115210413-	4.35
		MW-82	4/12/2021	W82-210412-	4.11
		MW-83	4/13/2021	W83-210413-	
		MW-114	4/12/2021	W114210412-	11.5
		MW-76	4/13/2021	W76-210413-	6.01
Vinyl Chloride	µg/L	MW-65	4/13/2021	W65-210413-	0.022

Table 4-1a (*Continued*)
CEDAR HILLS REGIONAL LANDFILL:
REGIONAL AQUIFER GROUNDWATER QUALITY STANDARD EXCEEDANCES
(Data Collected from April 01, 2021 to June 31, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
Downgradient Wells					
pH (Field)	pH Units	MW-87	6/11/2021	W87-210611-	6.38
Arsenic, Total	mg/L	MW-100	4/12/2021	W100210412-	0.00283
		MW-67	6/30/2021	W67-210630-	0.000694
		MW-72	4/6/2021	W72-210406-	0.000131
		MW-74R	4/9/2021	W74R210409-	0.000408
		MW-75	4/9/2021	W75-210409-	0.000426
		MW-80	4/15/2021	W80-210415-	0.0031
		MW-85	4/6/2021	W85-210406-	0.000704
		MW-86	4/6/2021	W86-210406-	0.00082
		MW-88	4/12/2021	W88-210412-	0.000991
		MW-89	4/12/2021	W89-210412-	0.00114
		MW-87	6/11/2021	W87-210611-	0.0207
		MW-95	4/6/2021	W95-210406-	0.000993
Iron, Dissolved	mg/L	MW-100	4/12/2021	W100210412-	0.57
		MW-67	6/30/2021	W67-210630-	0.336
		MW-72	4/6/2021	W72-210406-	2.66
		MW-75	4/9/2021	W75-210409-	2.67
		MW-80	4/15/2021	W80-210415-	2.16
		MW-86	4/6/2021	W86-210406-	0.964
		MW-87	6/11/2021	W87-210611-	4.77
		MW-89	4/12/2021	W89-210412-	1.24
Manganese, Dissolved	mg/L	MW-100	4/12/2021	W100210412-	0.107
		MW-67	6/30/2021	W67-210630-	0.204
		MW-72	4/6/2021	W72-210406-	0.364
		MW-75	4/9/2021	W75-210409-	0.227
		MW-80	4/15/2021	W80-210415-	0.347
		MW-87	6/11/2021	W87-210611-	0.539
		MW-89	4/12/2021	W89-210412-	0.312
See Data Qualifier List for Qualifier Information.					

Exceedance Criteria: WAC 173-200-040 - Water Quality Standards for Groundwaters of the State of Washington

Table 4-1a
CEDAR HILLS REGIONAL LANDFILL:
REGIONAL AQUIFER GROUNDWATER QUALITY STANDARD EXCEEDANCES
(Data Collected from July 01, 2021 to September 30, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
Upgradient and Crossgradient Wells					
pH (Field)	pH Units	MW-115	7/12/2021	W115210712-	6.45
		MW-83	7/12/2021	W83-210712-	6.41
		MW-94	7/12/2021	W94-210712-	6.35
Arsenic, Total	mg/L	MW-113	7/12/2021	W113210712-	0.000545
		MW-114	7/12/2021	W114210712-	0.000274
		MW-115	7/12/2021	W115210712-	0.000214
		MW-59	7/12/2021	W59-210712-	0.000436
		MW-66	7/7/2021	W66-210707-	0.000673
		MW-68	7/13/2021	W68-210713-	0.0312
		MW-81	7/8/2021	W81-210708-	0.000527
		MW-83	7/12/2021	W83-210712-	0.00034
		MW-84	7/7/2021	W84-210707-	0.000335
		MW-93	7/8/2021	W93-210708-	0.00143
		MW-94	7/12/2021	W94-210712-	0.00013
Iron, Dissolved	mg/L	MW-113	7/12/2021	W113210712-	1.21
		MW-59	7/12/2021	W59-210712-	4.6
		MW-68	7/13/2021	W68-210713-	0.505
Manganese, Dissolved	mg/L	MW-113	7/12/2021	W113210712-	0.404
		MW-59	7/12/2021	W59-210712-	0.118
		MW-68	7/13/2021	W68-210713-	0.277
		MW-93	7/8/2021	W93-210708-	0.163
Trichlorothene	µg/L	MW-114	7/12/2021	W114210712-	10.5
		MW-115	7/12/2021	W115210712-	5.08

Table 4-1a (*continued*)
CEDAR HILLS REGIONAL LANDFILL:
REGIONAL AQUIFER GROUNDWATER QUALITY STANDARD EXCEEDANCES
(Data Collected from July 01, 2021 to September 30, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
Downgradient Wells					
Arsenic, Total	mg/L	MW-72	7/8/2021	W72-210708-	0.000161
		MW-74R	7/9/2021	W74R210709-	0.000421
		MW-75	7/9/2021	W75-210709-	0.000453
		MW-80	7/13/2021	W80-210713-	0.00294
		MW-85	7/9/2021	W85-210709-	0.00071
		MW-87	7/8/2021	W87-210708-	0.0137
Iron, Dissolved	mg/L	MW-72	7/8/2021	W72-210708-	2.68
		MW-75	7/9/2021	W75-210709-	2.99
		MW-80	7/13/2021	W80-210713-	2.14
		MW-87	7/8/2021	W87-210708-	4.8
Manganese, Dissolved	mg/L	MW-72	7/8/2021	W72-210708-	0.364
		MW-75	7/9/2021	W75-210709-	0.257
		MW-80	7/13/2021	W80-210713-	0.339
		MW-87	7/8/2021	W87-210708-	0.515
See Data Qualifier List for Qualifier Information.					

Exceedance Criteria: WAC 173-200-040 - Water Quality Standards for Groundwaters of the State of Washington

Table 4-1a
CEDAR HILLS REGIONAL LANDFILL:
REGIONAL AQUIFER GROUNDWATER QUALITY STANDARD 4th QTR EXCEEDANCES
(Data Collected from October 01, 2021 to December 31, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
Upgradient and Crossgradient Wells					
pH (Field)	pH Units	MW-76	10/13/2021	W76-211013-	6.19
		MW-83	10/14/2021	W83-211014-	6.49
Arsenic, Total	mg/L	MW-113	10/13/2021	W113211013-	0.000556
		MW-114	10/12/2021	W114211012-	0.000284
		MW-115	10/13/2021	W115211013-	0.000237
		MW-21	10/5/2021	W21-211005-	0.001120
		MW-24	10/12/2021	W24-211012-	0.000558
		MW-56	10/5/2021	W56-211005-	0.000079
		MW-59	10/13/2021	W59-211013-	0.000468
		MW-64	10/11/2021	W64-211011-	0.001740
		MW-65	10/14/2021	W65-211014-	0.000720
		MW-66	10/11/2021	W66-211011-	0.000718
		MW-68	10/19/2021	W68-211019-	0.048600
		MW-73	10/11/2021	W73-211011-	0.000786
		MW-76	10/13/2021	W76-211013-	0.000228
		MW-81	10/6/2021	W81-211006-	0.000574
		MW-82	10/12/2021	W82-211012-	0.000280
		MW-83	10/14/2021	W83-211014-	0.000395
		MW-84	10/6/2021	W84-211006-	0.000348
		MW-93	10/11/2021	W93-211011-	0.001520
		MW-94	10/14/2021	W94-211014-	0.000143
		MW-95	10/12/2021	W95-211012-	0.001050
Iron, Dissolved	mg/L	MW-113	10/13/2021	W113211013-	1.46
		MW-21	10/5/2021	W21-211005-	2.44
		MW-24	10/12/2021	W24-211012-	3.57
		MW-59	10/13/2021	W59-211013-	5.18
		MW-65	10/14/2021	W65-211014-	3.19
		MW-68	10/19/2021	W68-211019-	0.47
Manganese, Dissolved	mg/L	MW-113	10/13/2021	W113211013-	0.463
		MW-21	10/5/2021	W21-211005-	0.094
		MW-24	10/12/2021	W24-211012-	0.114
		MW-56	10/5/2021	W56-211005-	0.210
		MW-59	10/13/2021	W59-211013-	0.142
		MW-64	10/11/2021	W64-211011-	0.132
		MW-65	10/14/2021	W65-211014-	0.146
		MW-68	10/19/2021	W68-211019-	0.277
		MW-93	10/11/2021	W93-211011-	0.140
		MW-95	10/12/2021	W95-211012-	0.174
Trichloroethene	µg/L	MW-76	10/13/2021	W76-211013-	7.26
		MW-82	10/12/2021	W82-211012-	4.10
		MW-114	10/12/2021	W114211012-	9.75
		MW-115	10/13/2021	W115211013-	4.65

Table 4-1a *(continued)*
CEDAR HILLS REGIONAL LANDFILL:
REGIONAL AQUIFER GROUNDWATER QUALITY STANDARD 4th QTR EXCEEDANCES
(Data Collected from October 01, 2021 to December 31, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
Downgradient Wells					
Arsenic, Total	mg/L	MW-100	10/14/2021	W100211014-	0.00147
		MW-67	10/22/2021	W67-211022-	0.00501
		MW-72	10/12/2021	W72-211012-	0.00012
		MW-74R	10/12/2021	W74R211012-	0.00042
		MW-75	10/12/2021	W75-211012-	0.00046
		MW-80	10/20/2021	W80-211020-	0.00320
		MW-85	10/6/2021	W85-211006-	0.00076
		MW-86	10/6/2021	W86-211006-	0.00087
		MW-87	10/13/2021	W87-211013-	0.00327
		MW-88	10/13/2021	W88-211013-	0.00112
		MW-89	10/13/2021	W89-211013-	0.00171
Iron, Dissolved	mg/L	MW-100	10/14/2021	W100211014-	0.65
		MW-67	10/22/2021	W67-211022-	0.46
		MW-72	10/12/2021	W72-211012-	2.66
		MW-75	10/12/2021	W75-211012-	2.70
		MW-80	10/20/2021	W80-211020-	2.17
		MW-86	10/6/2021	W86-211006-	0.89
		MW-87	10/13/2021	W87-211013-	4.81
		MW-89	10/13/2021	W89-211013-	1.36
Manganese, Dissolved	mg/L	MW-100	10/14/2021	W100211014-	0.115
		MW-67	10/22/2021	W67-211022-	0.258
		MW-72	10/12/2021	W72-211012-	0.353
		MW-75	10/12/2021	W75-211012-	0.251
		MW-80	10/20/2021	W80-211020-	0.346
		MW-87	10/13/2021	W87-211013-	0.499
		MW-89	10/13/2021	W89-211013-	0.349

See Data Qualifier List for Qualifier Information.
Exceedance Criteria: WAC 173-200-040 - Water Quality Standards for Groundwaters of the State of Washington

TABLE 4-1b
CEDAR HILLS REGIONAL LANDFILL
PERCHED ZONES GROUNDWATER QUALITY STANDARD
EXCEEDANCES (Data Collected from January 1, 2021 through March 31, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
East Perched Zone Wells					
pH (Field)	pH Units	MW-102	1/21/2021	W102210121-	6.48
		MW-107	1/21/2021	W107210121-	5.51
		MW-30A	1/20/2021	W30A210120-	6.24
		MW-62	1/25/2021	W62-210125-	6.07
1,1-Dichloroethane	µg/L	MW-30A	1/20/2021	W30A210120-	1.41
Arsenic, Total	mg/L	MW-102	1/21/2021	W102210121-	0.000233
		MW-103	1/12/2021	W103210112-	0.00679
		MW-107	1/21/2021	W107210121-	0.00591
		MW-108	1/21/2021	W108210121-	0.0015
		MW-109	1/20/2021	W109210120-	0.0318
		MW-110	1/20/2021	W110210120-	0.00288
		MW-111	1/15/2021	W111210115-	0.000575
		MW-30A	1/20/2021	W30A210120-	0.000506
		MW-47	1/20/2021	W47-210120-	0.00264
		MW-50	1/12/2021	W50-210112-	0.00464
		MW-62	1/25/2021	W62-210125-	0.000197
Benzene	ug/L	MW-109	1/20/2021	W109210120-	1.69 JT
Iron, Dissolved	mg/L	MW-107	1/21/2021	W107210121-	3.43
		MW-109	1/20/2021	W109210120-	10.4
		MW-47	1/20/2021	W47-210120-	3.03
Manganese, Dissolved	mg/L	MW-107	1/21/2021	W107210121-	2.19
		MW-109	1/20/2021	W109210120-	2.01
		MW-110	1/20/2021	W110210120-	0.952
		MW-47	1/20/2021	W47-210120-	2
Vinyl Chloride	µg/L	MW-107	1/21/2021	W107210121-	0.675 D
		MW-109	1/20/2021	W109210120-	0.321 D
		MW-110	1/20/2021	W110210120-	0.0316 D
		MW-47	1/20/2021	W47-210120-	4.86 D
South Solid Waste Area Perched Wells					
Arsenic, Total	mg/L	MW-101	1/25/2021	W101210125-	0.0113
Iron, Dissolved	mg/L	MW-101	1/25/2021	W101210125-	0.634
Manganese, Dissolved	mg/L	MW-101	1/25/2021	W101210125-	1.19
Vinyl Chloride	µg/L	MW-101	1/25/2021	W101210125-	0.334 D

See Data Qualifier List for Qualifier Information.

Exceedance Criteria: WAC 173-200-040 - Water Quality Standards for Groundwaters of the State of Washington

TABLE 4-1b
CEDAR HILLS REGIONAL LANDFILL
PERCHED ZONES GROUNDWATER QUALITY STANDARD EXCEEDANCES
(Data Collected from April 01 2021 to June 30, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
East Perched Zone Wells					
pH (Field)	pH Units	MW-107	4/20/2021	W107210420-	5.5
		MW-110	4/20/2021	W110210420-	6.23
		MW-111	4/15/2021	W111210415-	5.63
		MW-30A	4/19/2021	W30A210419-	6.13
		MW-62	4/20/2021	W62-210420-	6.22
		MW-EB6	4/14/2021	WEB6210414-	6.1
1,1-Dichloroethane	µg/L	MW-30A	4/19/2021	W30A210419-	1.82
Arsenic, Total	mg/L	MW-102	4/20/2021	W102210420-	0.000298
		MW-103	4/16/2021	W103210416-	0.0075
		MW-107	4/20/2021	W107210420-	0.00618
		MW-108	4/15/2021	W108210415-	0.00149
		MW-109	4/15/2021	W109210415-	0.038
		MW-110	4/20/2021	W110210420-	0.00163
		MW-111	4/15/2021	W111210415-	0.000701
		MW-112	4/14/2021	W112210414-	0.00282
		MW-30A	4/19/2021	W30A210419-	0.00059
		MW-47	4/19/2021	W47-210419-	0.00363
		MW-62	4/20/2021	W62-210420-	0.000179
		MW-EB6	4/14/2021	WEB6210414-	0.00184
Iron, Dissolved	mg/L	MW-107	4/20/2021	W107210420-	4.15
		MW-109	4/15/2021	W109210415-	12.8
		MW-47	4/19/2021	W47-210419-	3.53
Manganese, Dissolved	mg/L	MW-107	4/20/2021	W107210420-	2.98
		MW-109	4/15/2021	W109210415-	2.07 D
		MW-110	4/20/2021	W110210420-	2.85
		MW-112	4/14/2021	W112210414-	0.0713
		MW-47	4/19/2021	W47-210419-	2.02
Sodium	mg/l	MW-108	4/15/2021	W108210415-	33
		MW-109	4/15/2021	W109210415-	1160 D
		MW-110	4/20/2021	W110210420-	39.1
Vinyl Chloride	µg/L	MW-107	4/20/2021	W107210420-	0.341
		MW-109	4/15/2021	W109210415-	0.0912
		MW-110	4/20/2021	W110210420-	0.113
		MW-47	4/19/2021	W47-210419-	3.56
Benzene		MW-109	4/15/2021	W109210415-	1.19
Chromium		MW-109	4/15/2021	W109210415-	0.167
SPEC COND, FIELD		MW-109	4/15/2021	W109210415-	3727
		MW-47	4/19/2021	W47-210419-	851.7
South Solid Waste Area Perched Wells					
pH (Field)	pH Units	None			
Arsenic, Total	mg/L	MW-101	4/19/2021	W101210419-	0.00502

TABLE 4-1b (*continued*)
CEDAR HILLS REGIONAL LANDFILL
PERCHED ZONES GROUNDWATER QUALITY STANDARD EXCEEDANCES
(Data Collected from April 01 2021 to June 30, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
Iron, Dissolved	mg/L	MW-101	4/19/2021	W101210419-	0.391
Manganese, Dissolved	mg/L	MW-101	4/19/2021	W101210419-	1.08
Vinyl Chloride	µg/L	MW-101	4/19/2021	W101210419-	0.252

See Data Qualifier List for Qualifier Information.
Exceedance Criteria: WAC 173-200-040 - Water Quality Standards for Groundwaters of the State of Washington

TABLE 4-1b
CEDAR HILLS REGIONAL LANDFILL
PERCHED ZONES GROUNDWATER QUALITY STANDARD EXCEEDANCES
(Data Collected from July 01 2021 to September 30, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
East Perched Zone Wells					
pH (Field)	pH Units	MW-102	7/16/2021	W102210716-	6.46
		MW-107	7/16/2021	W107210716-	5.65
		MW-110	7/15/2021	W110210715-	6.07
		MW-111	7/15/2021	W111210715-	5.98
		MW-30A	7/20/2021	W30A210720-	6.19
		MW-47	7/19/2021	W47-210719-	6.49
		MW-EB6	7/13/2021	WEB6210713-	6.16
1,1-Dichloroethane	µg/L	MW-30A	7/20/2021	W30A210720-	2.53
Arsenic, Total	mg/L	MW-102	7/16/2021	W102210716-	0.000492
		MW-107	7/16/2021	W107210716-	0.00363
		MW-109	7/15/2021	W109210715-	0.0239
		MW-110	7/15/2021	W110210715-	0.00209
		MW-111	7/15/2021	W111210715-	0.00152
		MW-30A	7/20/2021	W30A210720-	0.000541
		MW-47	7/19/2021	W47-210719-	0.0028
		MW-EB6	7/13/2021	WEB6210713-	0.0011
Iron, Dissolved	mg/L	MW-107	7/16/2021	W107210716-	3.67
		MW-109	7/15/2021	W109210715-	7.6
		MW-47	7/19/2021	W47-210719-	3.73
Manganese, Dissolved	mg/L	MW-107	7/16/2021	W107210716-	3.67
		MW-109	7/15/2021	W109210715-	1.53
		MW-110	7/15/2021	W110210715-	3.43
		MW-47	7/19/2021	W47-210719-	1.23
Sodium	mg/l	MW-109	7/15/2021	W109210715-	303 D
		MW-110	7/15/2021	W110210715-	31.2
Vinyl Chloride	µg/L	MW-107	7/16/2021	W107210716-	0.465
		MW-110	7/15/2021	W110210715-	0.251
		MW-47	7/19/2021	W47-210719-	2.57
Benzene		MW-109	7/15/2021	W109210715-	1.35
SPEC COND, FIELD		MW-109	7/15/2021	W109210715-	809.4
		MW-47	7/19/2021	W47-210719-	854.5
South Solid Waste Area Perched Wells					
Arsenic, Total	mg/L	MW-101	7/28/2021	W101210728-	0.00452
Iron, Dissolved	mg/L	MW-101	7/28/2021	W101210728-	0.378
Manganese, Dissolved	mg/L	MW-101	7/28/2021	W101210728-	0.899
Vinyl Chloride	µg/L	MW-101	7/28/2021	W101210728-	0.176

See Data Qualifier List for Qualifier Information.

Exceedance Criteria: WAC 173-200-040 - Water Quality Standards for Groundwaters of the State of Washington

TABLE 4-1b
CEDAR HILLS REGIONAL LANDFILL
PERCHED ZONES GROUNDWATER QUALITY STANDARD 4th QTR EXCEEDANCES
(Data Collected from October 01, 2021 to December 31, 2021)

Parameter	Units	Well ID	Sample Date	Sample ID	Sample Value
East Perched Zone Wells					
pH (Field)	pH Units	MW-107	10/20/2021	W107211020-	5.29
		MW-110	10/21/2021	W110211021-	6.37
		MW-30A	10/18/2021	W30A211018-	6.29
1,1-Dichloroethane	µg/L	MW-30A	10/18/2021	W30A211018-	1.72
Arsenic, Total	mg/L	MW-30A	10/18/2021	W30A211018-	0.000535
		MW-47	10/18/2021	W47-211018-	0.000529
		MW-103	10/20/2021	W103211020-	0.0109
		MW-107	10/20/2021	W107211020-	0.00315
		MW-110	10/21/2021	W110211021-	0.00251
Iron, Dissolved	mg/L	MW-107	10/20/2021	W107211020-	1.77
Manganese, Dissolved	mg/L	MW-47	10/18/2021	W47-211018-	1.04
		MW-107	10/20/2021	W107211020-	2.76
		MW-110	10/21/2021	W110211021-	3.15
Sodium	mg/l	MW-110	10/21/2021	W110211021-	20.8
Vinyl Chloride	µg/L	MW-47	10/18/2021	W47-211018-	1.46
		MW-107	10/20/2021	W107211020-	0.627
		MW-110	10/21/2021	W110211021-	0.15
SPEC COND, FIELD	µS	MW-47	10/18/2021	W47-211018-	886
South Solid Waste Area Perched Wells					
pH (Field)	pH Units	MW-101	10/18/2021	W101211018-	6.22
Arsenic, Total	mg/L	MW-101	10/18/2021	W101211018-	0.011
Iron, Dissolved	mg/L	MW-101	10/18/2021	W101211018-	0.657
Manganese, Dissolved	mg/L	MW-101	10/18/2021	W101211018-	0.963
Vinyl Chloride	µg/L	MW-101	10/18/2021	W101211018-	0.267

See Data Qualifier List for Qualifier Information.

Exceedance Criteria: WAC 173-200-040 - Water Quality Standards for Groundwaters of the State of Washington

Table 4-2a
Statistical Summary of Regional Aquifer - Upgradient and Crossgradient Wells
Groundwater Data

Well Location	MW-56 Long	MW-56 Short	MW-59 Long	MW-59 Short	MW-76 Long	MW-76 Short	MW-82 Long	MW-82 Short	MW-83 Long	MW-83 Short	MW-94 Long	MW-94 Short	MW-24 Long	MW-24 Short	MW-65 Long	MW-65 Short
	Upgradient and Crossgradient Wells															
pH, (Field) Standard Units																
No. of Analyses	73	4	81	8	72	4	70	4	81	8	72	8	73	4	74	4
No. of Detections	73	4	81	8	72	4	70	4	81	8	72	8	73	4	74	4
Maximum	7.58	6.99	7.62	7.04	6.81	6.43	7.69	6.84	7.61	6.76	7.49	6.64	7.28	7.22	7.59	7.65
Minimum	6.6	6.55	6.33	6.62	5.91	6.19	6.54	6.7	6.54	6.34	6.29	6.17	6.49	6.9	6.51	6.63
Mean	7.0	6.7	7.0	6.8	6.5	6.3	6.9	6.8	7.0	6.6	7.0	6.4	7.0	7.0	7.0	6.9
Standard Deviation	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	0.1	0.3	0.2	0.2	0.1	0.2	0.5
Median	7.03	6.615	7.01	6.76	6.525	6.31	6.89	6.795	6.98	6.555	6.97	6.365	7.05	6.98	7	6.72
Specific Conductance, (Field) uS/cm																
No. of Analyses	73	4	81	8	72	4	70	4	81	8	72	8	73	4	74	4
No. of Detections	73	4	81	8	72	4	70	4	81	8	72	8	73	4	74	4
Maximum	355.3	254.8	217.7	248.3	255	367	322.2	303.3	683	689.8	355.3	397.4	215	185	175	145.1
Minimum	110	204.7	136.9	22.7	115	264.7	150	266.7	100	546.2	115	313.1	110	166.4	100	121.2
Mean	149.0	233.4	173.4	192.0	165.8	296.1	210.1	284.8	274.7	608.0	201.0	338.9	178.6	172.7	142.9	136.0
Standard Deviation	32.6	22.0	16.3	70.5	35.9	47.6	47.1	15.0	163.1	49.6	72.8	25.3	18.7	8.6	11.6	10.3
Median	145	237.1	170	212.55	160	276.4	195	284.6	175	604	155	333.85	180	169.75	144.8	138.8
Total Dissolved Solids, mg/L																
No. of Analyses	73	4	81	8	73	4	70	4	78	8	72	8	73	4	74	4
No. of Detections	73	4	81	8	73	4	70	4	78	8	72	8	73	4	74	4
Maximum	137	154	140	164	194	191	210	200	449	444	220	247	200	120	170	97
Minimum	56	137	27	116	60	167	97	189	42	371	33	187	83	105	31	84
Mean	95.5	146.3	107.3	138.9	113.2	180.0	146.3	194.8	181.0	399.8	136.6	223.3	114.7	111.8	91.7	91.4
Standard Deviation	17.0	8.5	15.8	15.0	29.0	9.9	31.0	5.6	105.2	23.2	47.3	18.9	16.8	6.4	16.1	5.9
Median	95	147	110	137	102	181	140	195	129.5	396	128.5	224	112	111	92.25	92.3
Alkalinity, total (CaCO3), mg/L																
No. of Analyses	73	4	81	8	73	4	70	4	79	8	72	8	73	4	74	4
No. of Detections	73	4	81	8	73	4	70	4	79	8	72	8	73	4	74	4
Maximum	78.3	88.2	78	81.9	73.1	91	133	126	204	240	150	137	110	68.4	76	53.3
Minimum	44.2	68.2	54	68.3	38	85	38	117	49.9	181	44	104	3	65.5	48	50.3
Mean	55.0	81.4	65.4	72.7	52.4	87.7	91.5	120.8	98.1	210.1	74.9	124.4	70.7	67.3	53.0	51.6
Standard Deviation	5.8	9.0	4.4	4.4	9.7	2.5	20.4	4.1	46.8	17.1	26.4	10.7	12.1	1.3	3.5	1.5
Median	54	84.6	64.9	72.55	50	87.45	82	120	67.6	212	63	123.5	69.2	67.55	52.8	51.4
Ammonia as N, mg/L																
No. of Analyses	73	4	81	8	73	4	70	4	79	8	72	8	73	4	74	4
No. of Detections	15	1	23	8	5	1	4	2	15	8	12	3	58	4	25	4
Maximum	0.16	0.0027	0.03	0.0104	0.19	0.0074	0.13	0.0058	0.3	0.0226	0.9	0.0046	0.44	0.0387	0.07	0.0056
Minimum	ND	ND	ND	0.0057	ND	ND	ND	ND	ND	0.002	ND	ND	ND	0.0307	ND	0.0034
Mean	0.013	ID	0.009	0.007	0.011	ID	0.012	ID	0.015	0.007	0.024	0.002	0.043	0.035	0.013	0.005
Standard Deviation	0.020	ID	0.006	0.002	0.023	ID	0.021	ID	0.039	0.007	0.106	0.001	0.055	0.004	0.012	0.001
Median	0.005	ID	0.005	0.00625	0.005	ID	0.005	ID	0.005	0.0045	0.005	0.001	0.0376	0.0352	0.01	0.005
Chloride, mg/L																
No. of Analyses	73	4	81	8	73	4	70	4	79	8	72	8	73	4	74	4
No. of Detections	73	4	81	8	73	4	70	4	79	8	72	8	73	4	73	4
Maximum	18.6	23.9	10.6	13.3	18.5	24.9	12.2	12.6	81	71.9	32.3	27.8	7.8	6.46	5.04	6.45
Minimum	2	17.9	2.9	9.69	2	21.3	4	10.6	3	56.5	3	21.4	3	4.86	ND	4.65
Mean	5.0	20.8	4.2	11.6	7.7	23.0	6.9	11.4	20.6	64.4	11.5	25.2	3.9	5.7	3.8	5.5
Standard Deviation	3.8	2.5	1.5	1.1	4.7	1.5	2.1	0.9	22.4	5.8	8.6	2.3	0.8	0.7	0.6	0.8
Median	3.95	20.65	4.01	11.65	5	22.95	6.31	11.25	5.3	65.25	4.75	25.8	3.9	5.78	4	5.51

Table 4-2a
Statistical Summary of Regional Aquifer - Upgradient and Crossgradient Wells
Groundwater Data

Well Location	MW-64 Long	MW-64 Short	MW-93 Long	MW-93 Short	MW-95 Long	MW-95 Short	MW-21 Long	MW-21 Short	MW-66 Long	MW-66 Short	MW-73 Long	MW-73 Short	MW-84 Long	MW-84 Short	MW-81 Long	MW-81 Short
	Upgradient and Crossgradient Wells															
pH, (Field) Standard Units																
No. of Analyses	72	4	71	8	66	4	73	4	83	8	73	4	80	7	81	8
No. of Detections	72	4	71	8	66	4	73	4	83	8	73	4	80	7	81	8
Maximum	7.76	7.07	7.55	7.22	7.62	7.26	7.93	8.04	7.47	7.17	7.45	6.72	7.64	7.37	7.71	7.53
Minimum	6.39	6.68	6.65	6.78	6.72	7.12	6.63	7.38	6.18	6.66	5.99	6.41	6.14	6.65	6.45	6.71
Mean	7.1	6.8	7.2	7.0	7.4	7.2	7.4	7.6	7.1	6.8	6.9	6.6	6.9	6.9	7.2	7.0
Standard Deviation	0.2	0.2	0.2	0.1	0.2	0.1	0.3	0.3	0.2	0.2	0.3	0.1	0.2	0.3	0.2	0.3
Median	7.11	6.75	7.22	7.05	7.415	7.15	7.38	7.5	7.1	6.765	6.96	6.575	6.965	6.76	7.22	7.07
Specific Conductance, (Field) uS/cm																
No. of Analyses	72	4	71	8	66	4	73	4	83	8	73	4	80	7	81	8
No. of Detections	72	4	71	8	66	4	73	4	83	8	73	4	80	7	81	8
Maximum	340	225.4	365	352.9	230.9	229.7	145.4	145.5	280	229.3	170	131.9	211	214	168.1	183.9
Minimum	120	174.4	190	263.1	110	207.4	85	133.4	150	183.8	98	125.3	100	189.3	95	147.9
Mean	196.1	196.4	286.3	313.5	196.6	215.1	116.6	139.1	210.6	202.2	140.6	127.5	146.1	199.4	124.9	161.3
Standard Deviation	42.1	21.2	49.3	27.7	21.2	10.1	12.0	5.0	32.0	14.1	16.8	3.0	20.6	9.5	18.0	11.5
Median	185	192.85	294.1	320.25	195	211.7	115	138.75	217.5	201.25	143	126.3	140	196.5	120	159.9
Total Dissolved Solids, mg/L																
No. of Analyses	72	4	72	8	65	4	73	4	80	8	73	4	80	7	81	8
No. of Detections	71	4	72	8	65	4	73	4	80	8	73	4	79	7	80	8
Maximum	224	166	650	223	150	147	140	100	181	139	1100	106	130	141	140	124
Minimum	ND	123	130	201	107	135	47	87.3	47	123	61	94	ND	120	ND	101
Mean	123.9	138.5	205.9	211.3	130.7	141.3	75.1	94.8	133.9	131.8	111.5	100.8	94.1	129.3	89.5	113.3
Standard Deviation	34.6	19.1	68.2	7.4	10.4	6.7	13.6	5.5	28.4	5.7	118.1	5.3	18.6	6.9	16.2	8.0
Median	125.5	132.5	202.5	211.5	130	141.5	74.7	96	135.5	133	99.3	101.65	95.3	128	90	114
Alkalinity, total (CaCO3), mg/L																
No. of Analyses	72	4	72	8	65	4	73	4	81	8	73	4	80	7	81	8
No. of Detections	72	4	72	8	65	4	73	4	81	8	73	4	80	7	81	8
Maximum	111	102	125	124	100	91.7	60.7	61.9	122	86.4	78	51.3	80.9	83.6	66	58.6
Minimum	49.7	83.6	64	118	77.3	87.6	38	59.9	70	80.6	32.8	50.3	30	75.1	4	54.6
Mean	81.7	93.5	105.3	120.5	87.4	89.9	49.8	60.9	95.5	83.7	56.4	50.9	60.0	79.8	48.2	56.5
Standard Deviation	13.5	7.6	13.8	2.3	5.2	1.7	4.8	1.1	16.3	2.2	8.7	0.4	6.9	2.9	6.2	1.6
Median	81.6	94.15	103	120	86.8	90.15	50	60.95	96	83.45	55.6	51.05	60	80.7	48	56
Ammonia as N, mg/L																
No. of Analyses	72	4	72	8	65	4	73	4	81	8	73	4	80	7	81	8
No. of Detections	65	4	62	8	42	4	17	4	7	0	5	0	6	2	3	0
Maximum	0.12	0.0318	0.21	0.063	0.2	0.0269	0.18	0.0553	0.21	ND	0.18	ND	0.13	0.0888	0.04	ND
Minimum	ND	0.0214	ND	0.0493	ND	0.0235	ND	0.027	ND	ND	ND	ND	ND	ND	ND	ND
Mean	0.043	0.027	0.050	0.053	0.025	0.025	0.013	0.041	0.014	ID	0.012	ID	0.009	ID	0.008	ID
Standard Deviation	0.025	0.004	0.025	0.005	0.029	0.002	0.022	0.012	0.030	ID	0.022	ID	0.015	ID	0.007	ID
Median	0.0381	0.02695	0.05305	0.05215	0.0224	0.0248	0.005	0.0409	0.005	ID	0.005	ID	0.005	ID	0.005	ID
Chloride, mg/L																
No. of Analyses	72	4	72	8	65	4	73	4	81	8	73	4	80	7	81	8
No. of Detections	72	4	72	8	65	4	72	4	80	8	72	4	79	7	80	8
Maximum	6	2.88	8	2.95	8.03	7.8	7.63	2.43	13	4.33	4.59	2.4	5.74	5.41	5.59	5.36
Minimum	2	2.7	1.6	2.56	3.8	6.13	ND	2.22	ND	4.06	ND	2.18	ND	3.82	ND	4.93
Mean	3.2	2.8	3.0	2.8	4.9	6.8	2.9	2.3	7.5	4.2	2.8	2.3	3.5	4.4	3.1	5.1
Standard Deviation	0.7	0.1	0.7	0.1	0.8	0.8	0.7	0.1	2.0	0.1	0.7	0.1	0.6	0.6	1.2	0.1
Median	3.23	2.775	2.945	2.745	5	6.58	2.81	2.285	7.64	4.225	2.9	2.24	3.485	4.11	2.78	5.12

Table 4-2a
Statistical Summary of Regional Aquifer - Upgradient and Crossgradient Wells
Groundwater Data

Well Location	MW-56 Long	MW-56 Short	MW-59 Long	MW-59 Short	MW-76 Long	MW-76 Short	MW-82 Long	MW-82 Short	MW-83 Long	MW-83 Short	MW-94 Long	MW-94 Short	MW-24 Long	MW-24 Short	MW-65 Long	MW-65 Short
	Upgradient and Crossgradient Wells															
Nitrate as N, mg/L																
No. of Analyses	73	4	81	8	73	4	70	4	79	8	72	8	73	4	74	4
No. of Detections	51	3	25	2	73	4	70	4	78	8	71	8	17	1	13	1
Maximum	2.78	1.01	0.98	0.017	6	1.16	1.5	1.09	4.18	4.09	2.72	0.916	1	0.01	0.09	0.01
Minimum	ND	ND	ND	ND	0.303	0.209	0.443	0.821	ND	0.5	ND	0.189	ND	ND	ND	ND
Mean	0.334	0.357	0.036	ID	1.347	0.617	0.868	0.936	1.007	1.665	1.114	0.544	0.048	ID	0.016	ID
Standard Deviation	0.500	0.468	0.114	ID	0.724	0.471	0.214	0.127	0.917	1.106	0.514	0.226	0.152	ID	0.015	ID
Median	0.16	0.2065	0.017	ID	1.3	0.5495	0.8775	0.917	0.7	1.535	1	0.585	0.005	ID	0.0115	ID
Sulfate, mg/L																
No. of Analyses	73	4	81	8	72	4	70	4	79	8	72	8	73	4	74	4
No. of Detections	73	4	81	8	71	4	70	4	79	8	72	8	73	4	73	4
Maximum	24	9.31	23	16.9	33.3	15.2	18.5	15.5	62.9	12.7	20	9.01	39	13.4	20	8.88
Minimum	6.1	7.88	14	14.6	ND	13.3	12	13.4	5.84	10.1	1.85	6.65	10.5	10.2	ND	8.49
Mean	15.8	8.6	17.5	15.6	18.0	14.5	15.1	14.8	13.5	11.3	10.5	7.7	17.4	12.1	14.9	8.7
Standard Deviation	3.4	0.6	1.9	0.8	4.5	0.9	1.9	1.0	6.8	0.9	4.3	0.8	3.5	1.6	2.7	0.2
Median	16	8.6	17.4	15.65	18	14.7	15	15.1	12	11.35	9.965	7.635	17	12.35	15.8	8.74
Dissolved Iron, mg/L																
No. of Analyses	73	4	81	8	73	4	70	4	80	8	72	8	73	4	74	4
No. of Detections	69	4	81	8	37	0	37	2	36	0	34	2	73	4	74	4
Maximum	4.7	0.0324	5.3	5.18	8.8	ND	0.18	0.035	0.13	ND	0.27	0.0292	4.9	3.57	8.4	3.36
Minimum	ND	0.0107	2.85	4.14	ND	ND	ND	ND	ND	ND	ND	ND	1.7	3.05	2.76	2.87
Mean	0.310	0.021	4.184	4.564	0.150	ID	0.037	ID	0.028	ID	0.028	ID	3.744	3.315	4.010	3.183
Standard Deviation	0.568	0.011	0.424	0.301	1.027	ID	0.044	ID	0.032	ID	0.039	ID	0.606	0.263	0.682	0.220
Median	0.2	0.02045	4.19	4.555	0.0072	ID	0.0127	ID	0.005	ID	0.005	ID	3.75	3.32	3.99	3.25
Dissolved Manganese, mg/L																
No. of Analyses	73	4	81	8	73	4	70	4	80	8	72	8	73	4	73	4
No. of Detections	73	4	81	8	7	0	6	2	44	8	17	7	73	4	73	4
Maximum	0.344	0.221	0.136	0.142	0.067	ND	0.002	0.000754	0.101	0.197	0.0345	0.00293	0.27	0.114	0.25	0.191
Minimum	0.0501	0.0905	0.0913	0.118	ND	ND	ND	ND	ND	0.00558	ND	ND	0.0914	0.0978	0.137	0.131
Mean	0.175	0.161	0.109	0.129	0.001	ID	0.001	ID	0.006	0.058	0.001	0.001	0.173	0.106	0.200	0.155
Standard Deviation	0.078	0.064	0.010	0.008	0.008	ID	0.000	ID	0.015	0.068	0.004	0.001	0.058	0.007	0.024	0.026
Median	0.18	0.1665	0.11	0.127	0.0005	ID	0.0005	ID	0.001	0.0321	0.0005	0.0001675	0.167	0.106	0.2	0.149
Dissolved Calcium, mg/L																
No. of Analyses	73	4	81	8	73	4	70	4	80	8	72	8	73	4	74	4
No. of Detections	73	4	81	8	73	4	70	4	80	8	72	8	73	4	74	4
Maximum	21.2	26	17.5	20.5	23.5	27.1	30.5	30.3	72	76.8	40.4	39.7	19	15	13	12.2
Minimum	11	22.9	12	17.3	8.8	24.2	11	25.5	11	62.5	11	31.3	11	14	9.2	11.4
Mean	14.3	24.8	14.3	18.4	15.2	25.9	20.2	28.4	29.1	68.6	20.2	35.7	14.8	14.7	11.6	11.8
Standard Deviation	1.9	1.5	1.4	1.0	3.9	1.2	4.8	2.1	17.4	5.0	7.6	2.7	1.9	0.5	0.9	0.4
Median	14	25.2	14	18.3	14	26.2	19	28.8	18	68.35	16	35.9	14.8	14.9	11.75	11.8
Dissolved Magnesium, mg/L																
No. of Analyses	73	4	81	8	73	4	70	4	80	8	72	8	73	4	74	4
No. of Detections	73	4	81	8	73	4	70	4	80	8	72	8	73	4	74	4
Maximum	11.7	13.8	11	13.1	11.1	12.6	18.5	17.5	29.8	32.1	15.5	17.8	15	9.65	8.03	7.41
Minimum	4.57	9.84	7.17	10.7	4	11.2	7.4	15.6	4.4	27.5	4.6	14.2	7.1	9.33	5.3	6.78
Mean	6.8	12.1	8.6	11.4	6.8	11.9	11.6	16.8	12.1	29.4	8.8	16.0	9.4	9.4	6.7	7.0
Standard Deviation	1.4	1.9	0.9	0.8	1.8	0.6	2.9	0.8	7.5	1.4	3.5	1.2	1.2	0.1	0.5	0.3
Median	6.7	12.4	8.5	11.3	6.26	11.95	10.95	17.1	7.75	29.4	6.95	16	9.32	9.405	6.75	6.88

Table 4-2a
Statistical Summary of Regional Aquifer - Upgradient and Crossgradient Wells
Groundwater Data

Well Location	MW-64 Long	MW-64 Short	MW-93 Long	MW-93 Short	MW-95 Long	MW-95 Short	MW-21 Long	MW-21 Short	MW-66 Long	MW-66 Short	MW-73 Long	MW-73 Short	MW-84 Long	MW-84 Short	MW-81 Long	MW-81 Short
	Upgradient and Crossgradient Wells															
Nitrate as N, mg/L																
No. of Analyses	72	4	72	8	65	4	73	4	81	8	73	4	80	7	81	8
No. of Detections	28	1	36	7	3	0	9	0	81	8	73	4	80	7	80	8
Maximum	2	0.013	1.2	0.031	0.06	ND	1.9	ND	0.765	0.499	2.1	1.2	1.4	0.191	1.8	1.68
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	0.23	0.352	0.246	1.13	0.09	0.123	ND	1.29
Mean	0.047	ID	0.047	0.018	0.014	ID	0.050	ID	0.470	0.433	1.161	1.158	0.383	0.158	1.502	1.529
Standard Deviation	0.234	ID	0.145	0.008	0.012	ID	0.224	ID	0.154	0.057	0.504	0.031	0.228	0.029	0.295	0.114
Median	0.02	ID	0.017	0.0185	0.005	ID	0.005	ID	0.437	0.449	1.1	1.15	0.4085	0.149	1.56	1.56
Sulfate, mg/L																
No. of Analyses	72	4	71	8	65	4	73	4	81	8	73	4	80	7	81	8
No. of Detections	72	4	71	8	65	4	73	4	81	8	72	4	80	7	79	8
Maximum	76.2	18.2	101	42.6	28	15.9	8	7.69	16.1	14.1	24	7.8	18	17.3	11.3	11.2
Minimum	7	10.6	1.1	38.4	14	15.2	2	5.99	2.2	12.8	ND	7.43	10	15.3	ND	9.86
Mean	21.6	13.3	50.2	40.1	17.3	15.6	6.0	6.6	11.5	13.5	11.5	7.6	12.7	16.0	8.0	10.7
Standard Deviation	13.8	3.5	21.8	1.7	2.6	0.3	1.0	0.7	2.8	0.4	3.8	0.2	1.4	0.7	1.6	0.5
Median	15.8	12.2	46	39.7	16.5	15.6	6	6.355	11.6	13.6	10	7.545	12.7	15.9	8	10.85
Dissolved Iron, mg/L																
No. of Analyses	72	4	73	8	65	4	73	4	81	8	72	4	81	7	81	8
No. of Detections	72	3	26	0	30	0	73	4	37	0	36	0	36	0	35	0
Maximum	1.3	0.0625	0.25	ND	0.19	ND	3.7	2.44	1.7	ND	0.12	ND	0.48	ND	0.98	ND
Minimum	0.0264	ND	ND	ND	ND	ND	1.63	1.73	ND	ND	ND	ND	ND	ND	ND	ND
Mean	0.427	0.034	0.037	ID	0.041	ID	2.177	2.018	0.052	ID	0.027	ID	0.027	ID	0.030	ID
Standard Deviation	0.343	0.026	0.048	ID	0.047	ID	0.355	0.301	0.195	ID	0.028	ID	0.057	ID	0.109	ID
Median	0.4185	0.03335	0.005	ID	0.005	ID	2.1	1.95	0.005	ID	0.0065	ID	0.005	ID	0.005	ID
Dissolved Manganese, mg/L																
No. of Analyses	72	4	73	8	65	4	73	4	81	8	72	4	81	7	81	8
No. of Detections	72	4	72	8	65	4	73	4	8	0	9	2	70	7	6	2
Maximum	0.847	0.132	0.369	0.201	0.24	0.174	0.105	0.126	0.006	ND	0.008	0.000405	0.037	0.0718	0.25	0.000304
Minimum	0.027	0.0271	ND	0.14	0.051	0.161	0.044	0.0942	ND	ND	ND	ND	ND	0.000733	ND	ND
Mean	0.113	0.066	0.236	0.171	0.145	0.169	0.075	0.110	0.001	ID	0.001	ID	0.003	0.012	0.004	ID
Standard Deviation	0.134	0.047	0.051	0.022	0.036	0.006	0.012	0.013	0.001	ID	0.001	ID	0.005	0.026	0.028	ID
Median	0.069	0.0534	0.24	0.1725	0.14	0.17	0.0748	0.11	0.0005	ID	0.0005	ID	0.002	0.00236	0.0005	ID
Dissolved Calcium, mg/L																
No. of Analyses	72	4	73	8	65	4	73	4	81	8	72	4	81	7	81	8
No. of Detections	72	4	72	8	65	4	73	4	81	8	72	4	81	7	81	8
Maximum	26.9	19.9	39.6	33	23	23	14	12.8	23	17.2	18	12.6	17	17.6	14.3	14.8
Minimum	9.5	16.2	ND	31.2	10	22	6.8	12	9.7	15.2	10.4	11.8	8.4	15.3	0.026	13.9
Mean	17.0	18.0	28.9	32.2	19.6	22.4	9.4	12.5	17.2	16.4	13.4	12.2	11.3	16.5	10.8	14.4
Standard Deviation	3.4	1.7	6.4	0.6	1.8	0.5	1.2	0.4	3.2	0.6	1.7	0.4	1.7	0.9	1.9	0.3
Median	17.05	17.85	30.5	31.95	19.8	22.2	9.4	12.6	18	16.6	13	12.15	11	16.8	11	14.4
Dissolved Magnesium, mg/L																
No. of Analyses	72	4	73	8	65	4	73	4	81	8	72	4	81	7	81	8
No. of Detections	72	4	72	8	65	4	73	4	81	8	72	4	81	7	80	8
Maximum	21.5	15	20.4	17.3	12	12.2	7.6	6.97	18.8	13.5	9	6.49	12.6	13.1	7.65	8.23
Minimum	5.1	11.7	ND	16.4	6.8	11.5	4	6.7	7.1	12.1	2.95	5.93	6.4	11.1	ND	7.51
Mean	11.1	13.1	14.9	16.9	10.2	11.9	5.4	6.9	13.4	12.9	6.4	6.2	8.6	12.4	5.8	7.9
Standard Deviation	3.5	1.4	3.5	0.3	0.9	0.3	0.7	0.1	2.6	0.4	1.2	0.2	1.3	0.7	1.0	0.2
Median	11	12.75	16	16.9	10.1	11.85	5.4	6.92	13.5	12.9	6.42	6.105	8.3	12.6	5.7	7.955

Table 4-2a
Statistical Summary of Regional Aquifer - Upgradient and Crossgradient Wells
Groundwater Data

Well Location	MW-56 Long	MW-56 Short	MW-59 Long	MW-59 Short	MW-76 Long	MW-76 Short	MW-82 Long	MW-82 Short	MW-83 Long	MW-83 Short	MW-94 Long	MW-94 Short	MW-24 Long	MW-24 Short	MW-65 Long	MW-65 Short
	Upgradient and Crossgradient Wells															
Dissolved Potassium, mg/L																
No. of Analyses	72	4	80	8	72	4	69	4	79	8	71	8	72	4	73	4
No. of Detections	72	4	80	8	72	4	69	4	79	8	71	8	72	4	73	4
Maximum	1.31	1.34	1.2	1.3	1.52	1.65	1.97	1.91	3.87	4.03	2.53	2.77	1.4	1.04	1.1	0.96
Minimum	0.791	1.11	0.87	1.11	0.89	1.38	1.2	1.57	1.3	3.28	1.1	2.34	0.73	0.937	0.78	0.824
Mean	1.10	1.23	1.04	1.19	1.17	1.55	1.55	1.77	2.18	3.64	1.75	2.53	0.91	0.98	0.91	0.91
Standard Deviation	0.12	0.10	0.07	0.06	0.16	0.13	0.21	0.16	0.69	0.29	0.39	0.15	0.09	0.04	0.06	0.06
Median	1.1	1.225	1.025	1.185	1.15	1.575	1.5	1.795	1.84	3.57	1.65	2.55	0.908	0.974	0.9	0.9315
Dissolved Sodium, mg/L																
No. of Analyses	73	4	81	8	73	4	70	4	80	8	72	8	73	4	74	4
No. of Detections	73	4	81	8	73	4	70	4	80	8	72	8	73	4	74	4
Maximum	6.6	6.96	6.6	6.93	10.5	12.4	8.59	8.54	16	15.7	12.6	9.47	7	5.89	5.9	5.43
Minimum	4	6.25	4.73	6.29	5.72	11.3	4.9	7.66	4.5	12.2	4.3	7.93	4.78	5.68	4.55	5.29
Mean	4.90	6.59	5.57	6.56	7.72	11.90	6.32	8.12	7.37	14.45	6.22	8.76	5.68	5.79	5.13	5.34
Standard Deviation	0.50	0.36	0.42	0.20	0.96	0.47	0.95	0.37	2.96	1.37	1.58	0.51	0.45	0.09	0.28	0.06
Median	4.86	6.575	5.52	6.555	7.45	11.95	6.11	8.145	6	15	5.665	8.745	5.6	5.79	5.135	5.31
Total Arsenic, mg/L																
No. of Analyses	19	4	27	8	19	4	19	4	28	8	27	8	19	4	19	4
No. of Detections	9	4	12	8	6	4	7	4	12	8	11	8	6	4	8	4
Maximum	0.0025	0.00253	0.001	0.000468	0.0005	0.000228	0.0005	0.00028	0.0005	0.000396	0.0005	0.000143	0.00063	0.000613	0.00256	0.00111
Minimum	ND	0.0000735	ND	0.000417	ND	0.000215	ND	0.000248	ND	0.000291	ND	0.000113	ND	0.000493	ND	0.00072
Mean	0.00067	0.00069	0.00050	0.00044	0.00040	0.00022	0.00041	0.00027	0.00045	0.00036	0.00036	0.00013	0.00053	0.00055	0.00093	0.00086
Standard Deviation	0.00080	0.00123	0.00011	0.00002	0.00015	0.00001	0.00013	0.00002	0.00007	0.00004	0.00017	0.00001	0.00004	0.00005	0.00067	0.00017
Median	0.0005	8.005E-05	0.0005	0.000436	0.0005	0.000219	0.0005	0.000272	0.0005	0.0003775	0.0005	0.0001305	0.0005	0.0005545	0.0005	0.0007975
Total Barium, mg/L																
No. of Analyses	19	4	27	8	19	4	19	4	28	8	27	8	19	4	19	4
No. of Detections	19	4	27	8	19	4	18	4	28	8	27	8	19	4	19	4
Maximum	0.0478	0.0448	0.00548	0.00459	0.00434	0.00476	0.00376	0.00201	0.0109	0.0116	0.00542	0.00272	0.00205	0.00211	0.00844	0.00658
Minimum	0.00323	0.00548	0.00318	0.00387	0.0031	0.00446	ND	0.00136	0.00369	0.00705	0.00168	0.00197	0.00172	0.00205	0.0062	0.00606
Mean	0.0090	0.0154	0.0038	0.0042	0.0037	0.0046	0.0016	0.0016	0.0073	0.0098	0.0025	0.0023	0.0019	0.0021	0.0071	0.0062
Standard Deviation	0.0137	0.0196	0.0005	0.0002	0.0003	0.0001	0.0006	0.0003	0.0020	0.0017	0.0007	0.0003	0.0001	0.0000	0.0006	0.0002
Median	0.00395	0.005635	0.00376	0.004195	0.00364	0.004635	0.0015	0.001595	0.00703	0.010215	0.00246	0.00231	0.00191	0.00208	0.00701	0.00612
Total Cobalt, mg/L																
No. of Analyses	19	4	27	8	19	4	19	4	28	8	27	8	19	4	19	4
No. of Detections	8	4	1	0	2	4	0	1	12	8	11	8	0	0	2	0
Maximum	0.00389	0.00611	0.0015	ND	0.0015	0.0000981	ND	0.0000719	0.0015	0.000332	0.0015	0.000148	ND	ND	0.0015	ND
Minimum	ND	0.0000796	ND	ND	ND	0.0000608	ND	ND	ND	0.0000995	ND	0.0000896	ND	ND	ND	ND
Mean	0.00131	0.00161	ID	ID	ID	0.00007	ID	ID	0.00097	0.00024	0.00094	0.00011	ID	ID	ID	ID
Standard Deviation	0.00106	0.00300	ID	ID	ID	0.00002	ID	ID	0.00063	0.00009	0.00069	0.00002	ID	ID	ID	ID
Median	0.0015	0.0001285	ID	ID	ID	0.0000687	ID	ID	0.0015	0.000264	0.0015	0.0001035	ID	ID	ID	ID
Total Copper, mg/L																
No. of Analyses	19	4	27	8	19	4	19	4	28	8	27	8	19	4	19	4
No. of Detections	7	3	6	0	6	4	5	4	15	8	12	8	0	1	1	1
Maximum	0.0154	0.0177	0.00102	ND	0.00146	0.00202	0.001	0.000419	0.0079	0.00438	0.0051	0.00128	ND	0.000606	0.001	0.000219
Minimum	ND	ND	ND	ND	ND	0.00135	ND	0.000256	ND	0.00209	ND	0.00101	ND	ND	ND	ND
Mean	0.00254	0.00459	0.00075	ID	0.00098	0.00161	0.00071	0.00031	0.00276	0.00335	0.00122	0.00117	ID	ID	ID	ID
Standard Deviation	0.00471	0.00874	0.00036	ID	0.00018	0.00032	0.00040	0.00007	0.00216	0.00085	0.00082	0.00008	ID	ID	ID	ID
Median	0.001	0.000272	0.001	ID	0.001	0.001525	0.001	0.0002905	0.0021	0.003535	0.001	0.00118	ID	ID	ID	ID

Table 4-2a
Statistical Summary of Regional Aquifer - Upgradient and Crossgradient Wells
Groundwater Data

Well Location	MW-64 Long	MW-64 Short	MW-93 Long	MW-93 Short	MW-95 Long	MW-95 Short	MW-21 Long	MW-21 Short	MW-66 Long	MW-66 Short	MW-73 Long	MW-73 Short	MW-84 Long	MW-84 Short	MW-81 Long	MW-81 Short
	Upgradient and Crossgradient Wells															
Dissolved Potassium, mg/L																
No. of Analyses	71	4	72	8	64	4	72	4	79	8	71	4	80	7	80	8
No. of Detections	71	4	71	8	64	4	72	4	79	8	71	4	80	7	79	8
Maximum	1.89	1.74	1.9	1.61	1.4	1.32	1.4	1.13	1.48	1.16	1.1	0.815	1.3	1.27	1.1	0.899
Minimum	0.89	1.39	ND	1.5	0.91	1.12	0.8	1.09	0.74	1.08	0.655	0.798	0.82	1.16	ND	0.784
Mean	1.36	1.54	1.42	1.57	1.17	1.22	0.98	1.11	1.13	1.13	0.82	0.81	1.00	1.19	0.73	0.86
Standard Deviation	0.25	0.15	0.24	0.04	0.09	0.08	0.09	0.02	0.14	0.03	0.09	0.01	0.10	0.04	0.10	0.04
Median	1.37	1.52	1.47	1.58	1.175	1.225	0.96	1.105	1.15	1.14	0.81	0.807	0.984	1.18	0.731	0.866
Dissolved Sodium, mg/L																
No. of Analyses	72	4	73	8	65	4	73	4	81	8	72	4	81	7	81	8
No. of Detections	72	4	72	8	65	4	73	4	81	8	72	4	81	7	81	8
Maximum	8.65	8.11	10.2	10.1	7.8	6.56	7.2	6.12	9.12	7.72	7.1	6.05	7.35	7.65	7.5	6.97
Minimum	4.8	7.17	ND	9.33	4.8	6.1	4.4	5.84	4.5	7.05	2.4	5.69	4.6	6.77	1.2	6.47
Mean	6.40	7.49	8.31	9.70	6.01	6.32	5.13	6.03	7.22	7.31	5.56	5.84	5.79	7.23	5.62	6.72
Standard Deviation	0.85	0.42	1.46	0.23	0.55	0.19	0.48	0.13	0.84	0.22	0.92	0.17	0.58	0.30	0.74	0.16
Median	6.465	7.33	8.74	9.675	5.94	6.31	5	6.075	7.33	7.275	5.64	5.805	5.77	7.21	5.6	6.73
Total Arsenic, mg/L																
No. of Analyses	19	4	27	8	19	4	18	4	27	8	19	4	28	7	27	8
No. of Detections	19	4	27	8	10	4	14	4	11	8	6	4	12	7	11	8
Maximum	0.01	0.00209	0.00136	0.00153	0.00111	0.00106	0.00111	0.00112	0.000718	0.000725	0.00151	0.00151	0.0005	0.000348	0.000625	0.000574
Minimum	0.00118	0.000859	0.00113	0.00133	ND	0.000993	ND	0.00088	ND	0.000655	ND	0.000711	ND	0.000301	ND	0.000496
Mean	0.00292	0.00149	0.00129	0.00143	0.00080	0.00103	0.00090	0.00096	0.00057	0.00069	0.00059	0.00094	0.00043	0.00033	0.00052	0.00053
Standard Deviation	0.00257	0.00054	0.00006	0.00007	0.00029	0.00003	0.00023	0.00011	0.00008	0.00003	0.00024	0.00038	0.00008	0.00002	0.00003	0.00002
Median	0.00174	0.001505	0.00129	0.001435	0.001	0.001035	0.000999	0.0009295	0.0005	0.000689	0.0005	0.000761	0.0005	0.000332	0.0005	0.000528
Total Barium, mg/L																
No. of Analyses	19	4	27	8	19	4	18	4	27	8	19	4	28	7	27	8
No. of Detections	19	4	27	8	19	4	18	4	27	8	19	4	28	7	27	8
Maximum	0.0299	0.0222	0.00942	0.0108	0.00473	0.00452	0.00516	0.00536	0.00649	0.00452	0.0225	0.0225	0.00503	0.00564	0.00487	0.00347
Minimum	0.00711	0.00772	0.0076	0.00739	0.00365	0.00407	0.00298	0.005	0.00406	0.00389	0.00245	0.0031	0.00325	0.00471	0.00256	0.003
Mean	0.0126	0.0148	0.0083	0.0084	0.0040	0.0043	0.0041	0.0052	0.0052	0.0041	0.0041	0.0083	0.0039	0.0050	0.0029	0.0033
Standard Deviation	0.0060	0.0068	0.0005	0.0011	0.0003	0.0002	0.0006	0.0002	0.0006	0.0002	0.0045	0.0095	0.0006	0.0003	0.0005	0.0002
Median	0.0108	0.0147	0.00818	0.008125	0.00402	0.004295	0.004315	0.005125	0.00518	0.00408	0.00291	0.003775	0.00367	0.00493	0.00282	0.003325
Total Cobalt, mg/L																
No. of Analyses	19	4	27	8	19	4	18	4	27	8	19	4	28	7	27	8
No. of Detections	7	4	11	8	6	4	0	0	0	0	1	2	1	3	1	0
Maximum	0.00385	0.00266	0.0015	0.000167	0.0015	0.0000703	ND	ND	ND	ND	0.0015	0.000893	0.0015	0.000147	0.0015	ND
Minimum	ND	0.000295	ND	0.0000856	ND	0.0000674	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	0.00178	0.00154	0.00093	0.00011	0.00106	0.00007	ID	ID	ID	ID	ID	ID	ID	0.00005	ID	ID
Standard Deviation	0.00092	0.00110	0.00070	0.00003	0.00067	0.00000	ID	ID	ID	ID	ID	ID	ID	0.00004	ID	ID
Median	0.0015	0.0016	0.0015	0.000103	0.0015	6.845E-05	ID	ID	ID	ID	ID	ID	ID	0.000025	ID	ID
Total Copper, mg/L																
No. of Analyses	19	4	27	8	19	4	18	4	27	8	19	4	28	7	27	8
No. of Detections	6	3	2	6	0	0	0	0	1	1	9	4	0	3	4	1
Maximum	0.00512	0.000972	0.001	0.001	ND	ND	ND	ND	0.001	0.00466	0.00363	0.00303	ND	0.000675	0.001	0.000228
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000286	ND	ND	ND	ND
Mean	0.00116	0.00058	ID	0.00041	ID	ID	ID	ID	ID	ID	0.00134	0.00108	ID	0.00026	0.00068	ID
Standard Deviation	0.00102	0.00045	ID	0.00031	ID	ID	ID	ID	ID	ID	0.00105	0.00131	ID	0.00023	0.00041	ID
Median	0.001	0.000628	ID	0.0003295	ID	ID	ID	ID	ID	ID	0.001	0.000493	ID	0.0001	0.001	ID

Table 4-2a
Statistical Summary of Regional Aquifer - Upgradient and Crossgradient Wells
Groundwater Data

Well Location	MW-56 Long	MW-56 Short	MW-59 Long	MW-59 Short	MW-76 Long	MW-76 Short	MW-82 Long	MW-82 Short	MW-83 Long	MW-83 Short	MW-94 Long	MW-94 Short	MW-24 Long	MW-24 Short	MW-65 Long	MW-65 Short
	Upgradient and Crossgradient Wells															
Total Vanadium, mg/L																
No. of Analyses	19	4	27	8	19	4	19	4	28	8	27	8	19	4	19	4
No. of Detections	7	4	1	2	6	4	7	4	12	8	11	8	0	1	0	0
Maximum	0.0178	0.0181	0.001	0.000116	0.001	0.000724	0.00134	0.00148	0.00115	0.000995	0.00139	0.00139	ND	0.000124	ND	ND
Minimum	ND	0.000189	ND	ND	ND	0.000599	ND	0.00123	ND	0.000754	ND	0.000962	ND	ND	ND	ND
Mean	0.0024287	0.0046938	ID	ID	0.0008655	0.0006375	0.0011179	0.0013925	0.0009599	0.0008853	0.0010619	0.001219	ID	ID	ID	ID
Standard Deviation	0.0051383	0.0089376	ID	ID	0.0002035	5.819E-05	0.0001588	0.0001112	9.803E-05	9.711E-05	0.0001314	0.0001337	ID	ID	ID	ID
Median	0.001	0.000243	ID	ID	0.001	0.0006135	0.001	0.00143	0.001	0.000901	0.001	0.00124	ID	ID	ID	ID
Benzene, ug/L																
No. of Analyses	73	4	81	8	74	4	69	4	79	8	72	8	73	4	74	4
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Total Vanadium, mg/L																
No. of Analyses	19	4	27	8	19	4	19	4	28	8	27	8	19	4	19	4
No. of Detections	7	4	1	2	6	4	7	4	12	8	11	8	0	1	0	0
Maximum	0.0178	0.0181	0.001	0.000116	0.001	0.000724	0.00134	0.00148	0.00115	0.000995	0.00139	0.00139	ND	0.000124	ND	ND
Minimum	ND	0.000189	ND	ND	ND	0.000599	ND	0.00123	ND	0.000754	ND	0.000962	ND	ND	ND	ND
Mean	0.0024	0.0047	ID	ID	0.0009	0.0006	0.0011	0.0014	0.0010	0.0009	0.0011	0.0012	ID	ID	ID	ID
Standard Deviation	0.0051	0.0089	ID	ID	0.0002	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	ID	ID	ID	ID
Median	0.001	0.000243	ID	ID	0.001	0.0006135	0.001	0.00143	0.001	0.000901	0.001	0.00124	ID	ID	ID	ID
Benzene, ug/L																
No. of Analyses	73	4	81	8	74	4	69	4	79	8	72	8	73	4	74	4
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Dichlorodifluoromethane, ug/L																
No. of Analyses	73	4	81	8	73	4	68	4	78	8	71	8	73	4	74	4
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
1,1-Dichloroethane, ug/L																
No. of Analyses	73	4	81	8	74	4	69	4	79	8	72	8	73	4	74	4
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
1,2-Dichloroethane, ug/L																
No. of Analyses	73	4	81	8	74	4	69	4	79	8	72	8	73	4	74	4
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID

Table 4-2a
Statistical Summary of Regional Aquifer - Upgradient and Crossgradient Wells
Groundwater Data

Well Location	MW-64 Long	MW-64 Short	MW-93 Long	MW-93 Short	MW-95 Long	MW-95 Short	MW-21 Long	MW-21 Short	MW-66 Long	MW-66 Short	MW-73 Long	MW-73 Short	MW-84 Long	MW-84 Short	MW-81 Long	MW-81 Short
	Upgradient and Crossgradient Wells															
Total Vanadium, mg/L																
No. of Analyses	19	4	27	8	19	4	18	4	27	8	19	4	28	7	27	8
No. of Detections	6	4	14	8	5	4	0	2	11	8	6	4	12	7	12	8
Maximum	0.00606	0.000924	0.00231	0.00265	0.001	0.000413	ND	0.0000828	0.001	0.000839	0.00315	0.00413	0.001	0.00066	0.00253	0.00185
Minimum	ND	0.00023	ND	0.00208	ND	0.000263	ND	ND	ND	0.000668	ND	0.0013	ND	0.000463	ND	0.00158
Mean	0.0011837	0.00060	0.00159	0.00228	0.00078	0.00033	ID	ID	0.00088	0.00075	0.00115	0.00208	0.00078	0.00057	0.00134	0.00170
Standard Deviation	0.001215	0.00032	0.00059	0.00020	0.00034	0.00007	ID	ID	0.00015	0.00005	0.00049	0.00137	0.00026	0.00008	0.00042	0.00008
Median	0.001	0.0006265	0.0019	0.002195	0.001	0.000331	ID	ID	0.001	0.00076	0.001	0.001445	0.001	0.000596	0.001	0.001685
Benzene, ug/L																
No. of Analyses	72	4	72	8	66	4	73	4	82	8	73	4	80	7	81	8
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Total Vanadium, mg/L																
No. of Analyses	19	4	27	8	19	4	18	4	27	8	19	4	28	7	27	8
No. of Detections	6	4	14	8	5	4	0	2	11	8	6	4	12	7	12	8
Maximum	0.00606	0.000924	0.00231	0.00265	0.001	0.000413	ND	0.0000828	0.001	0.000839	0.00315	0.00413	0.001	0.00066	0.00253	0.00185
Minimum	ND	0.00023	ND	0.00208	ND	0.000263	ND	ND	ND	0.000668	ND	0.0013	ND	0.000463	ND	0.00158
Mean	0.0012	0.0006	0.0016	0.0023	0.0008	0.0003	ID	ID	0.0009	0.0008	0.0012	0.0021	0.0008	0.0006	0.0013	0.0017
Standard Deviation	0.0012	0.0003	0.0006	0.0002	0.0003	0.0001	ID	ID	0.0002	0.0001	0.0005	0.0014	0.0003	0.0001	0.0004	0.0001
Median	0.001	0.0006265	0.0019	0.002195	0.001	0.000331	ID	ID	0.001	0.00076	0.001	0.001445	0.001	0.000596	0.001	0.001685
Benzene, ug/L																
No. of Analyses	72	4	72	8	66	4	73	4	82	8	73	4	80	7	81	8
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Dichlorodifluoromethane, ug/L																
No. of Analyses	72	4	71	8	66	4	73	4	82	8	72	4	80	7	80	8
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
1,1-Dichloroethane, ug/L																
No. of Analyses	72	4	72	8	66	4	73	4	82	8	73	4	80	7	81	8
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
1,2-Dichloroethane, ug/L																
No. of Analyses	72	4	72	8	66	4	73	4	82	8	73	4	80	7	81	8
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID

Table 4-2b
Statistical Summary of Regional Aquifer - Downgradient Wells
Groundwater Data

Well Location	MW-100 Long	MW-100 Short	MW-68 Long	MW-68 Short	MW-67 Long	MW-67 Short	MW-69 Long	MW-69 Short	MW-72 Long	MW-72 Short	MW-80 Long	MW-80 Short	MW-74R Long	MW-74R Short	MW-75 Long	MW-75 Short	MW-87 Long	MW-87 Short	MW-85 Long	MW-85 Short	MW-86 Long	MW-86 Short	MW-88 Long	MW-88 Short	MW-89 Long	MW-89 Short
	Downgradient Wells																									
pH, (Field) Standard Units																										
No. of Analyses	66	4	75	8	75	4	79	8	43	8	194	8	196	8	191	8	79	8	70	4	71	4	71	4	67	4
No. of Detections	66	4	75	8	75	4	79	8	43	8	194	8	196	8	191	8	79	8	70	4	71	4	71	4	67	4
Maximum	7.13	6.91	7.45	7	7.71	7.06	7.64	6.98	7.65	7.81	7.52	6.9	7.74	6.99	7.21	6.83	7.35	6.97	7.69	6.9	7.67	6.95	7.67	7.21	7.67	7.23
Minimum	6.59	6.62	6.59	6.63	6.49	6.51	6.51	6.67	6.53	6.83	6.55	6.6	6.57	6.67	5.43	6.38	6.61	6.42	6.59	6.3	6.5	6.82	6.99	7.02	7	6.99
Mean	6.9	6.8	7.1	6.8	7.1	6.8	7.1	6.8	7.1	7.0	7.0	6.8	7.0	6.8	6.9	6.7	7.1	6.8	6.9	6.7	7.2	6.9	7.3	7.1	7.3	7.1
Standard Deviation	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.3	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1
Median	6.9	6.8	7.1	6.8	7.1	6.8	7.2	6.9	7.1	6.9	7.0	6.8	7.0	6.8	6.9	6.7	7.1	6.8	6.9	6.9	7.2	6.9	7.3	7.1	7.3	7.1
Specific Conductance, (Field) uS/cm																										
No. of Analyses	66	4	75	8	75	4	79	8	43	8	194	8	196	8	191	8	79	8	70	4	71	4	71	4	67	4
No. of Detections	66	4	75	8	75	4	79	8	43	8	194	8	196	8	191	8	79	8	70	4	71	4	71	4	67	4
Maximum	360	302.4	340	296.3	386.7	408.8	374.5	377.3	318.9	336.4	1250	619	384.1	429.6	548	593	368.3	411.8	220	196	135	127.3	246.1	259.3	220	246.1
Minimum	170	246.7	180	224.9	165	309.2	220	312.1	210	258	260	428.3	170	322.4	2.5	493.3	165	340.3	130	183.1	100	115.5	140	227.9	140	211.4
Mean	279.0	271.9	270.6	265.8	245.8	358.0	279.5	339.4	267.6	295.9	376.2	512.4	261.0	368.4	367.6	528.1	236.5	364.9	169.1	187.6	112.8	120.2	176.8	238.7	173.7	229.0
Standard Deviation	38.3	26.1	34.5	24.7	57.6	41.8	43.3	23.9	40.0	26.9	94.8	62.2	37.7	34.2	63.8	32.9	57.9	23.3	18.1	6.0	8.5	5.6	19.6	14.1	14.9	14.5
Median	282.5	269.3	275.0	268.4	225.0	357.1	260.0	336.8	270.0	295.5	367.5	504.8	250.0	364.3	350.0	525.0	210.0	361.4	170.0	185.6	110.0	119.1	170.0	233.8	170.0	229.2
Total Dissolved Solids, mg/L																										
No. of Analyses	66	4	74	8	73	4	80	8	43	8	82	8	83	8	81	8	78	8	70	4	70	4	70	4	66	4
No. of Detections	66	4	74	8	73	4	80	8	43	8	82	8	83	8	81	8	78	8	70	4	70	4	70	4	66	4
Maximum	250	180	310	185	248	245	249	228	313	219	358	371	260	285	402	441	220	275	150	146	96	96.7	150	167	150	146
Minimum	124	153	110	156	87	223	88	199	143	191	140	280	90	235	160	359	100	217	58	126	40	82	65	151	65	135
Mean	174.4	164.5	175.6	170.1	167.1	235.5	183.7	215.1	186.7	199.9	252.5	326.8	184.3	256.0	280.3	381.6	158.1	239.0	109.4	135.8	78.2	90.7	116.0	160.5	114.5	140.8
Standard Deviation	23.0	12.1	28.4	12.0	39.4	9.7	28.6	9.0	26.4	9.2	55.6	31.4	33.0	15.0	58.8	28.2	36.5	16.9	12.4	10.7	10.5	6.2	16.1	7.9	15.2	5.6
Median	170.0	162.5	173.0	168.5	160.0	237.0	181.0	216.0	189.0	198.0	250.0	334.5	184.0	254.0	263.0	370.5	149.0	235.0	110.0	135.5	80.0	92.0	120.0	162.0	120.0	141.0
Alkalinity, total (CaCO3), mg/L																										
No. of Analyses	66	4	75	8	73	4	80	8	43	8	82	8	83	8	82	8	78	8	70	4	70	4	70	4	66	4
No. of Detections	66	4	75	8	73	4	80	8	43	8	82	8	83	8	82	8	78	8	70	4	70	4	70	4	66	4
Maximum	160	128	160	127	164	169	136	131	115	124	235	226	115	118	157	120	138	155	82	74	58	53.9	85.6	88.1	82	85.6
Minimum	94.6	118	46	121	75	162	26	124	73.6	111	97	196	74	109	47	107	65	137	50	69.8	46.8	50.8	67	86.4	67	73
Mean	131.4	121.8	133.7	123.0	102.6	165.0	114.7	127.3	96.5	118.6	166.4	213.1	95.1	112.1	92.0	113.0	93.7	146.3	66.8	71.5	51.7	52.2	73.8	87.2	73.5	78.8
Standard Deviation	11.0	4.3	19.0	2.1	26.5	3.6	12.5	2.6	13.2	4.9	45.3	11.5	8.5	3.4	10.6	5.3	18.0	7.5	4.5	2.0	2.2	1.7	4.0	0.7	3.8	5.3
Median	131.5	120.5	131.0	123.0	94.0	164.5	115.0	127.0	95.9	119.0	161.5	215.5	96.0	110.5	90.6	113.0	88.4	143.0	67.0	71.2	52.0	52.1	73.2	87.1	73.0	78.3
Ammonia as N, mg/L																										
No. of Analyses	66	4	75	8	73	4	80	8	43	8	82	8	83	8	82	8	78	8	70	4	70	4	70	4	66	4
No. of Detections	17	4	53	8	11	4	50	8	26	8	11	1	28	8	50	8	6	0	6	1	4	0	50	4	46	4
Maximum	0.09	0.011	0.17	0.0182	0.13	0.012	0.12	0.0188	0.0206	0.0126	0.53	0.0042	0.128	0.0112	0.16	0.0703	0.18	ND	0.13	0.0021	0.11	ND	0.12	0.0209	0.12	0.018
Minimum	ND	0.0076	ND	0.0158	ND	0.0066	ND	0.0145	ND	0.0091	ND	ND	ND	0.0081	ND	0.0171	ND	ND	ND	ND	ND	ND	ND	0.0183	ND	0.0171
Mean	0.015	0.009	0.019	0.017	0.012	0.009	0.016	0.017	0.010	0.010	0.020	ID	0.013	0.009	0.017	0.027	0.011	ID	0.011	ID	0.009	ID	0.021	0.020	0.021	0.018
Standard Deviation	0.019	0.001	0.019	0.001	0.018	0.002	0.013	0.001	0.004	0.001	0.064	ID	0.016	0.001	0.018	0.018	0.023	ID	0.017	ID	0.014	ID	0.016	0.001	0.017	0.000
Median	0.010	0.009	0.017	0.018	0.005	0.008	0.015	0.017	0.011	0.010	0.005	ID	0.009	0.009	0.015	0.018	0.005	ID	0.005	ID	0.005	ID	0.019	0.020	0.019	0.018
Chloride, mg/L																										
No. of Analyses	66	4	75	8	73	4	80	8	43	8	81	8	83	8	82	8	78	8	70	4	70	4	70	4	66	4
No. of Detections	66	4	75	8	73	4	80	8	43	8	80	8	83	8	82	8	78	8	70	4	68	4	70	4	66	4
Maximum	5.9	3.03	4	3.13	6	5.22	8.01	8.02	6.72	4.86	35	27.6	12	12.9	13.9	18.5	11.2	11.4	7.6	4.42	3.6	1.93	13	12.8	9.18	13
Minimum	2.36	2.63	2	2.8	3.49	4.85	2.7	6.8	4.11	1.85	ND	21.4	2	11	2	14.3	4	9.76	3.1	4.25	ND	1.73	2	11.2	2	8.64
Mean	3.1	2.8	2.9	3.0	4.5	5.0	4.4	7.3	5.1	4.2	24.0	24.8	7.7	11.8	5.2	15.9	7.0	10.5	4.8	4.3	2.2	1.8	3.9	12.1	3.4	11.4
Standard Deviation	0.6	0.2	0.3	0.1	0.4	0.2	1.1	0.4	0.5	1.0	6.2	2.5	2.1	0.7	3.4	1.7	2.1	0.5	0.8	0.1	0.5	0.1	2.5	0.8	1.7	1.9
Median	3.0	2.8	2.9	3.0	4.6	5.0	4.0	7.2	5.1	4.5	25.0	25.4	8.0	11.6	4.2	15.4	6.3	10.4	4.7	4.3	2.2	1.8	3.3	12.2	3.2	12.0
Nitrate as N, mg/L																										
No. of Analyses	65	4	75	8	73	4	80	8	43	8	83	8	83	8	83	8	77	8	69	4	70	4	70	4	66	4
No. of Detections	6	0	8	0	73	4	19	0	9	0	65	8	12	0	24	1	77	8	61	2	69	4	10	0	10	0
Maximum	0.26	ND	0.7	ND	3.4	0.0812	1	ND	0.028	ND	1.4	0.43	2	ND	0.24	0.011	1.63	0.117	2.5	0.013	1.7	0.856	0.16	ND	0.16	ND
Minimum	ND	ND	ND	ND	0.087	0.055	ND	ND	ND	ND	ND	0.239	ND	ND	ND	ND	0.03	0.0918	ND	ND	ND	0.758	ND	ND	ND	ND
Mean	0.025	ID	0.023	ID	0.686	0.068	0.029	ID	0.008	ID	0.364	0.320	0.038	ID	0.019	ID	0.148	0.101	0.192	ID	0.464	0.803	0.016	ID	0.017	ID
Standard Deviation	0.050	ID	0.082	ID	0.458	0.012	0.112	ID	0.006	ID	0.362	0.069	0.219	ID	0.029	ID	0.173	0.008	0.313	ID	0.209	0.040	0.023	ID	0.023	ID
Median	0.005	ID	0.005	ID	0.648	0.069	0.005	ID	0.005	ID	0.307	0.309	0.005	ID	0.011	ID	0.123	0.100	0.095	ID	0.485	0.799	0.005	ID	0.005	ID

Table 4-2b
Statistical Summary of Regional Aquifer - Downgradient Wells
Groundwater Data

Well Location	MW-100 Long	MW-100 Short	MW-68 Long	MW-68 Short	MW-67 Long	MW-67 Short	MW-69 Long	MW-69 Short	MW-72 Long	MW-72 Short	MW-80 Long	MW-80 Short	MW-74R Long	MW-74R Short	MW-75 Long	MW-75 Short	MW-87 Long	MW-87 Short	MW-85 Long	MW-85 Short	MW-86 Long	MW-86 Short	MW-88 Long	MW-88 Short	MW-89 Long	MW-89 Short
	Downgradient Wells																									
Sulfate, mg/L																										
No. of Analyses	65	4	75	8	72	4	79	8	43	8	81	8	82	8	81	8	77	8	70	4	70	4	70	4	66	4
No. of Detections	65	4	75	8	72	4	79	8	43	8	81	8	82	8	81	8	77	8	70	4	68	4	70	4	66	4
Maximum	110	17.2	26	15.4	40.9	29	72	41.1	46.1	35.4	34.8	38.3	61.9	64.6	164	145	42.8	34.7	30	21.2	8	7.01	21	22.5	21	17.6
Minimum	14	14.7	9.7	14.4	17.1	24.6	18	32.9	31.6	14	5	32.3	16	59.8	72	131	16	31.1	10	20	ND	5.94	12.8	17.7	14.1	12.8
Mean	24.8	16.0	16.0	14.9	29.7	26.4	34.8	36.5	39.6	29.5	25.7	34.9	44.3	63.1	112.1	135.1	29.0	33.2	18.0	20.6	6.4	6.4	16.3	19.8	16.4	15.8
Standard Deviation	14.0	1.2	2.4	0.4	6.3	1.9	12.7	2.7	4.2	6.7	4.1	2.5	7.8	2.0	23.8	5.9	6.8	1.4	2.2	0.5	1.1	0.5	1.3	2.2	1.3	2.1
Median	20.3	16.1	16.0	14.9	30.0	25.9	34.0	36.0	40.8	30.1	25.0	34.3	43.4	64.3	108.0	132.5	30.0	33.6	18.0	20.6	6.6	6.4	16.2	19.5	16.1	16.4
Dissolved Iron, mg/L																										
No. of Analyses	66	4	75	8	74	4	80	8	43	8	82	8	83	8	83	8	80	8	70	4	70	4	70	4	66	4
No. of Detections	66	4	75	8	74	4	80	8	43	8	54	0	83	8	82	8	34	0	70	4	34	0	70	4	66	4
Maximum	3.6	0.764	3.2	0.639	8.5	0.785	3.03	3.08	2.36	2.36	2.81	ND	3.8	2.99	4.93	4.94	0.22	ND	2	0.964	0.16	ND	1.69	1.36	1.69	1.06
Minimum	0.65	0.57	0.179	0.47	0.02	0.213	0.617	2.55	0.886	2.03	ND	ND	1.1	2.5	ND	4.62	ND	ND	0.019	0.717	ND	ND	0.423	1.22	0.423	0.958
Mean	1.97	0.69	1.44	0.55	0.23	0.45	2.20	2.73	1.70	2.19	0.84	ID	1.77	2.65	3.17	4.79	0.03	ID	0.42	0.83	0.02	ID	0.77	1.27	0.76	1.00
Standard Deviation	0.806	0.092	0.818	0.055	0.977	0.246	0.372	0.156	0.343	0.093	0.985	ID	0.397	0.161	0.800	0.108	0.041	ID	0.253	0.118	0.029	ID	0.153	0.062	0.146	0.043
Median	2.020	0.704	1.200	0.544	0.097	0.400	2.200	2.700	1.630	2.175	0.083	ID	1.770	2.615	2.990	4.785	0.005	ID	0.348	0.814	0.005	ID	0.748	1.250	0.729	0.993
Dissolved Manganese, mg/L																										
No. of Analyses	66	4	74	8	74	4	80	8	43	8	82	8	83	8	83	8	80	8	70	4	70	4	70	4	66	4
No. of Detections	66	4	74	8	72	4	80	8	43	8	56	0	83	8	82	8	4	2	70	4	17	0	70	4	66	4
Maximum	0.257	0.14	0.39	0.313	0.278	0.382	0.386	0.378	0.345	0.35	0.176	ND	0.226	0.257	0.588	0.561	0.0015	0.000341	0.25	0.0192	0.01	ND	0.4	0.349	0.4	0.277
Minimum	0.097	0.107	0.17	0.277	ND	0.204	0.212	0.338	0.184	0.329	ND	ND	0.065	0.214	ND	0.485	ND	ND	0.0015	0.0116	ND	ND	0.181	0.249	0.181	0.211
Mean	0.172	0.124	0.271	0.292	0.074	0.306	0.293	0.364	0.276	0.343	0.058	ID	0.133	0.231	0.361	0.530	0.000	ID	0.018	0.015	0.001	ID	0.285	0.298	0.287	0.249
Standard Deviation	0.041	0.015	0.048	0.013	0.068	0.089	0.044	0.013	0.042	0.007	0.062	ID	0.031	0.016	0.098	0.027	0.000	ID	0.029	0.004	0.001	ID	0.054	0.043	0.054	0.028
Median	0.165	0.124	0.277	0.292	0.054	0.319	0.280	0.365	0.273	0.345	0.013	ID	0.128	0.229	0.330	0.541	0.001	ID	0.015	0.015	0.001	ID	0.282	0.296	0.290	0.255
Dissolved Calcium, mg/L																										
No. of Analyses	66	4	75	8	74	4	80	8	43	8	82	8	83	8	83	8	80	8	70	4	70	4	70	4	66	4
No. of Detections	66	4	75	8	74	4	80	8	43	8	82	8	83	8	83	8	80	8	70	4	70	4	70	4	66	4
Maximum	38	27.2	43	27.3	37.8	39.2	34.8	34.2	31.3	32.4	50.5	50	31.8	34.9	47.4	50.1	35	36.8	21	16.5	21	9.93	18.5	20.5	18	18.5
Minimum	22	23.3	18	25.9	15	36.9	20.1	31.6	18.1	30.6	19	43.6	11	31.2	4.38	45.9	13	34.1	11	15.7	7.4	9.35	10	19	10	14.8
Mean	27.4	25.5	27.4	26.7	24.2	38.5	26.4	32.5	26.9	31.4	34.9	46.9	22.0	32.6	33.7	48.0	22.5	35.5	13.9	16.1	8.9	9.6	13.3	19.5	13.1	16.7
Standard Deviation	3.5	1.6	4.2	0.5	6.4	1.1	3.7	0.9	3.2	0.7	8.9	2.2	4.9	1.2	7.5	1.2	5.7	1.0	1.5	0.3	1.6	0.3	1.4	0.7	1.1	1.5
Median	26.0	25.7	27.4	26.7	23.0	39.0	25.0	32.2	27.3	31.4	34.2	46.8	22.0	32.6	32.0	47.9	21.0	35.5	13.9	16.2	8.7	9.5	13.0	19.3	13.0	16.7
Dissolved Magnesium, mg/L																										
No. of Analyses	66	4	75	8	74	4	80	8	43	8	82	8	83	8	83	8	80	8	70	4	70	4	70	4	66	4
No. of Detections	66	4	75	8	74	4	80	8	43	8	82	8	83	8	83	8	80	8	70	4	70	4	70	4	66	4
Maximum	21	16	22	16.7	21.9	22.3	20.3	20.5	16.3	18.1	38.5	38.5	22.9	24.9	31.9	34	21	23.7	12	11.6	11	7.61	13.3	15	10.9	13.3
Minimum	12	13.6	10	14.3	8.9	20.9	12.5	19.3	9.5	15.6	15	33.8	8.5	22.3	0.919	31.5	9	21.3	7.19	10.9	4.9	6.97	7	13.8	7	10.9
Mean	15.5	15.1	15.0	14.8	14.1	21.5	15.8	20.0	13.8	16.4	25.9	35.6	16.4	23.6	22.7	32.9	13.7	22.4	9.4	11.3	6.4	7.2	9.2	14.2	9.0	12.1
Standard Deviation	1.9	1.1	2.0	0.8	4.0	0.6	2.3	0.4	1.7	0.8	7.1	1.5	3.5	0.8	5.4	0.9	3.4	1.0	1.0	0.3	0.8	0.3	1.2	0.6	0.9	1.0
Median	15.1	15.5	15.1	14.7	13.0	21.4	15.4	19.9	14.0	16.3	25.1	35.6	16.4	23.6	22.0	32.9	13.0	22.4	9.4	11.4	6.4	7.1	9.1	14.0	9.0	12.1
Dissolved Potassium, mg/L																										
No. of Analyses	65	4	74	8	72	4	79	8	43	8	81	8	82	8	82	8	79	8	69	4	69	4	69	4	65	4
No. of Detections	65	4	74	8	72	4	79	8	43	8	81	8	82	8	81	8	79	8	69	4	69	4	69	4	65	4
Maximum	2.18	1.8	2.2	1.75	1.89	1.93	2.09	2.05	1.7	1.78	2.5	2.29	2.3	2.07	2.51	2.59	2.3	1.8	1.6	1.29	1.2	0.872	1.72	1.77	1.72	1.71
Minimum	1.37	1.46	1.2	1.54	0.77	1.79	1.4	1.78	1.33	1.58	1.4	2.01	0.81	1.75	ND	2.32	1.1	1.67	0.94	1.26	0.66	0.777	1.2	1.57	1.2	1.52
Mean	1.7	1.7	1.6	1.7	1.4	1.8	1.7	2.0	1.6	1.7	1.9	2.2	1.7	2.0	2.0	2.5	1.4	1.7	1.2	1.3	0.8	0.8	1.4	1.7	1.4	1.6
Standard Deviation	0.19	0.16	0.14	0.07	0.23	0.07	0.15	0.09	0.10	0.07	0.22	0.08	0.21	0.11	0.31	0.09	0.20	0.04	0.11	0.02	0.08	0.04	0.11	0.09	0.10	0.08
Median	1.78	1.75	1.62	1.67	1.40	1.80	1.70	2.00	1.58	1.69	1.91	2.18	1.67	2.04	2.00	2.51	1.37	1.74	1.16	1.28	0.84	0.84	1.43	1.70	1.42	1.62
Dissolved Sodium, mg/L																										
No. of Analyses	66	4	75	8	74	4	80	8	43	8	82	8	83	8	83	8	80	8	70	4	70	4	70	4	66	4
No. of Detections	66	4	75	8	74	4	80	8	43	8	82	8	83	8	83	8	80	8	70	4	70	4	70	4	66	4
Maximum	11	9.01	10	10.2	9.9	10.1	8.78	8.74	8.06	9.09	13.7	13.2	46	9.74	10.9	11.5	14	10.6	7.4	7.57	6.3	6.04	10	10.8	9.8	10
Minimum	7.48	7.75	6	8.42	5.9	9.15	6.08	8.29	5.74	7.66	7.7	12.2	5.3	8.67	4.44	11	5.5	9.74	5.16	7.12	4.3	5.71	6.3	8.84	6.3	9.65
Mean	8.8	8.6	8.2	9.0	7.8	9.7	7.2	8.5	7.2	8.1	10.5	12.6	10.1	9.3	9.0	11.1	7.8	10.1	6.3	7.3	5.4	5.9	8.1	9.8	8.0	9.8
Standard Deviation	0.68	0.58	0.71	0.53	1.00	0.42	0.66	0.16	0.64	0.46	1.72	0.41	7.01	0.31	1.17	0.16	1.39	0.28	0.50	0.21	0.38	0.16	0.92	0.95	0.84	0.16
Median	8.82	8.83	8.20	8.84	7.70	9.80	7.11	8.50	7.11	8.08	10.05	12.50	8.10	9.30	8.90	11.10	7.60	10.00	6.30	7.18	5.42	5.97	8.20	9.68	8.18	9.83

Table 4-2b
Statistical Summary of Regional Aquifer - Downgradient Wells
Groundwater Data

Well Location	MW-100 Long	MW-100 Short	MW-68 Long	MW-68 Short	MW-67 Long	MW-67 Short	MW-69 Long	MW-69 Short	MW-72 Long	MW-72 Short	MW-80 Long	MW-80 Short	MW-74R Long	MW-74R Short	MW-75 Long	MW-75 Short	MW-87 Long	MW-87 Short	MW-85 Long	MW-85 Short	MW-86 Long	MW-86 Short	MW-88 Long	MW-88 Short	MW-89 Long	MW-89 Short
	Downgradient Wells																									
Total Arsenic, mg/L																										
No. of Analyses	19	4	29	8	20	4	25	8	27	8	26	8	26	8	26	8	27	8	19	4	19	4	19	4	15	4
No. of Detections	18	4	29	8	8	4	10	8	27	8	11	8	11	8	26	8	11	8	19	4	12	4	19	4	15	4
Maximum	0.0183	0.0165	0.27	0.0486	0.00833	0.0101	0.0005	0.000161	0.0392	0.00381	0.00145	0.00108	0.000603	0.0005	0.0256	0.0207	0.000741	0.000756	0.0194	0.012	0.00104	0.00112	0.0266	0.00268	0.0266	0.00638
Minimum	ND	0.00134	0.0118	0.0209	ND	0.000694	ND	0.000116	0.00358	0.00284	ND	0.000383	ND	0.000419	0.000598	0.000686	ND	0.000689	0.00104	0.00082	ND	0.000991	0.00201	0.00114	0.00201	0.00254
Mean	0.00385	0.00554	0.06501	0.03489	0.00168	0.00492	0.00034	0.00013	0.00742	0.00337	0.00056	0.00053	0.00050	0.00045	0.00723	0.00527	0.00059	0.00071	0.00446	0.00514	0.00082	0.00103	0.00696	0.00198	0.00774	0.00406
Standard Deviation	0.00380	0.00734	0.06280	0.00817	0.00245	0.00391	0.00019	0.00002	0.00761	0.00039	0.00023	0.00025	0.00004	0.00002	0.00692	0.00764	0.00011	0.00002	0.00502	0.00538	0.00025	0.00006	0.00700	0.00069	0.00771	0.00164
Median	0.00275	0.00215	0.04510	0.03375	0.00050	0.00444	0.00050	0.00013	0.00494	0.00343	0.00050	0.00041	0.00050	0.00045	0.00519	0.00118	0.00050	0.00070	0.00217	0.00386	0.00098	0.00100	0.00368	0.00206	0.00368	0.00366
Total Barium, mg/L																										
No. of Analyses	19	4	29	8	20	4	25	8	27	8	26	8	26	8	26	8	27	8	19	4	19	4	19	4	15	4
No. of Detections	19	4	29	8	20	4	25	8	27	8	26	8	26	8	26	8	27	8	19	4	19	4	19	4	15	4
Maximum	0.0121	0.0108	0.0197	0.0118	0.0264	0.0298	0.0163	0.0151	0.023	0.0156	0.0171	0.014	0.0131	0.014	0.0369	0.0382	0.00684	0.00761	0.0088	0.00729	0.00237	0.00221	0.0256	0.00958	0.0256	0.0101
Minimum	0.00663	0.00566	0.0106	0.0104	0.00953	0.0144	0.0102	0.0126	0.0128	0.0135	0.0109	0.0116	0.0102	0.0117	0.0212	0.0235	0.00482	0.00643	0.0034	0.00561	0.00204	0.00212	0.00647	0.00837	0.00647	0.00787
Mean	0.008	0.007	0.013	0.011	0.013	0.021	0.012	0.014	0.015	0.014	0.013	0.013	0.011	0.013	0.027	0.029	0.006	0.007	0.005	0.006	0.002	0.002	0.010	0.009	0.010	0.009
Standard Deviation	0.0013	0.0024	0.0022	0.0005	0.0049	0.0064	0.0016	0.0008	0.0022	0.0009	0.0014	0.0008	0.0009	0.0007	0.0044	0.0048	0.0006	0.0004	0.0014	0.0007	0.0001	0.0000	0.0050	0.0005	0.0056	0.0010
Median	0.0073	0.0063	0.0123	0.0110	0.0115	0.0201	0.0118	0.0134	0.0141	0.0140	0.0123	0.0126	0.0114	0.0132	0.0261	0.0283	0.0062	0.0071	0.0048	0.0060	0.0022	0.0022	0.0078	0.0092	0.0076	0.0088
Total Cobalt, mg/L																										
No. of Analyses	19	4	29	8	20	4	25	8	27	8	26	8	26	8	26	8	27	8	19	4	19	4	19	4	15	4
No. of Detections	6	4	13	8	7	4	1	0	0	0	0	0	0	0	11	8	0	0	4	2	0	0	0	0	1	0
Maximum	0.0015	0.000571	0.0015	0.000227	0.0015	0.00135	0.0015	ND	ND	ND	ND	ND	ND	ND	0.0015	0.000189	ND	ND	0.0015	0.000187	ND	ND	ND	ND	ND	ND
Minimum	ND	0.0002	ND	0.000194	ND	0.000214	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000129	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	0.0012	0.0003	0.0009	0.0002	0.0012	0.0007	ID	ID	ID	ID	ID	ID	ID	ID	0.0009	0.0002	ID	ID	0.0011	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	0.00052	0.00018	0.00064	0.00001	0.00051	0.00049	ID	ID	ID	ID	ID	ID	ID	ID	0.00069	0.00002	ID	ID	0.00065	ID	ID	ID	ID	ID	ID	ID
Median	0.00150	0.00023	0.00150	0.00021	0.00150	0.00054	ID	ID	ID	ID	ID	ID	ID	ID	0.00150	0.00017	ID	ID	0.00150	ID	ID	ID	ID	ID	ID	ID
Total Copper, mg/L																										
No. of Analyses	19	4	29	8	20	4	25	8	27	8	26	8	26	8	26	8	27	8	19	4	19	4	19	4	15	4
No. of Detections	6	2	19	8	6	4	10	4	2	1	10	7	1	0	5	6	2	2	1	2	0	0	1	4	1	0
Maximum	0.00226	0.00131	0.00737	0.00182	0.00115	0.00099	0.00331	0.00035	0.001	0.000422	0.001	0.000354	0.001	ND	0.00347	0.00213	0.001	0.000552	0.001	0.00434	ND	ND	0.001	0.000892	ND	ND
Minimum	ND	ND	ND	0.000293	ND	0.000349	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000248	ND	ND
Mean	0.0009	ID	0.0017	0.0010	0.0009	0.0006	0.0008	0.0002	ID	ID	0.0007	0.0003	ID	ID	0.0008	0.0008	ID	ID	ID	ID	ID	ID	ID	0.0005	ID	ID
Standard Deviation	0.00046	ID	0.00167	0.00044	0.00031	0.00028	0.00066	0.00009	ID	ID	0.00037	0.00008	ID	ID	0.00068	0.00070	ID	ID	ID	ID	ID	ID	ID	0.00028	ID	ID
Median	0.00100	ID	0.00100	0.00095	0.00100	0.00058	0.00100	0.00015	ID	ID	0.00100	0.00027	ID	ID	0.00100	0.00066	ID	ID	ID	ID	ID	ID	ID	0.00041	ID	ID
Total Vanadium, mg/L																										
No. of Analyses	19	4	29	8	20	4	25	8	27	8	26	8	26	8	26	8	27	8	19	4	19	4	19	4	15	4
No. of Detections	4	3	18	8	7	4	6	4	3	2	11	8	1	5	19	8	11	8	5	3	19	4	6	4	0	0
Maximum	0.001	0.000535	0.0037	0.00105	0.00357	0.00366	0.001	0.0001	0.001	0.0000849	0.00112	0.00105	0.001	0.000181	0.00468	0.00464	0.00105	0.00107	0.00336	0.000645	0.00285	0.00298	0.00135	0.000253	ND	ND
Minimum	ND	ND	ND	0.000344	ND	0.00056	ND	ND	ND	ND	ND	0.00059	ND	ND	ND	8.36E-05	ND	0.000898	ND	ND	0.0024	0.0026	ND	9.75E-05	ND	ND
Mean	0.000723	0.000188	0.001165	0.000679	0.001234	0.001953	0.000608	6.72E-05	0.000623	ID	0.000881	0.000712	ID	0.0001	0.0016	0.0012	0.0010	0.0010	0.0010	0.0003	0.0027	0.0028	0.0008	0.0001	ID	ID
Standard Deviation	0.00042	0.000232	0.000995	0.000201	0.000845	0.001319	0.000456	3.18E-05	0.000465	ID	0.000176	0.00015	ID	5.07E-05	0.001303	0.001759	4.78E-05	0.00008	0.00063	0.00027	0.00010	0.00016	0.00041	0.00007	ID	ID
Median	0.001	9.06E-05	0.001	0.000658	0.001	0.001795	0.001	6.48E-05	0.001	ID	0.001	0.000677	ID	8.66E-05	0.001	0.000243	0.001	0.00098	0.00100	0.00029	0.00270	0.00280	0.00100	0.00011	ID	ID
Benzene, ug/L																										
No. of Analyses	66	4	74	8	74	4	80	8	43	8	193	8	196	8	190	8	79	8	70	4	71	4	71	4	15	4
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000211
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.000094
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	0.0001
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	0.00005
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	0.00015
Total Vanadium, mg/L																										
No. of Analyses	19	4	29	8	20	4	25	8	27	8	26	8	26	8	26	8	27	8	19	4	19	4	19	4	15	4
No. of Detections	4	3	18	8	7	4	6	4	3	2	11	8	1	5	19	8	11	8	5	3	19	4	6	4	8	4
Maximum	0.001	0.000535	0.0037	0.00105	0.00357	0.00366	0.001	0.0001	0.001	0.0000849	0.00112	0.00105	0.001	0.000181	0.00468	0.00464	0.00105	0.00107	0.00336	0.000645	0.00285	0.00298	0.00135	0.000253	0.0303	0.00226
Minimum	ND	ND	ND	0.000344	ND	0.00056	ND	ND	ND	ND	ND	0.00059	ND	ND	ND	8.36E-05	ND	0.000898	ND	ND	0.0024	0.0026	ND	9.75E-05	ND	0.00157
Mean	0.0007	0.0002	0.0012	0.0007	0.0012	0.0020	0.0006	0.0001	0.0006	ID	0.0009	0.0007	ID	0.0001	0.0016	0.0012	0.0010	0.0010	0.0010	0.0003	0.0027	0.0028	0.0008	0.0001	0.0079	0.0019
Standard Deviation	0.0004	0.0002	0.0010	0.0002	0.0008	0.0013	0.0005	0.0000	0.0005	ID	0.0002	0.0002	ID	0.0001	0.0013	0.0018	0.0000	0.0001	0.0006	0.0003	0.0001	0.0002	0.0004	0.0001	0.0080	0.0003
Median	0.0010	0.0001	0.0010	0.0007	0.0010	0.0018	0.0010	0.0001	0.0010	ID	0.0010	0.0007	ID	0.0001	0.0010	0.0002	0.0010	0.0010	0.0010	0.0003	0.0027	0.0028	0.0010	0.0001	0.0052	0.0019

Table 4-2b
Statistical Summary of Regional Aquifer - Downgradient Wells
Groundwater Data

Well Location	MW-100 Long	MW-100 Short	MW-68 Long	MW-68 Short	MW-67 Long	MW-67 Short	MW-69 Long	MW-69 Short	MW-72 Long	MW-72 Short	MW-80 Long	MW-80 Short	MW-74R Long	MW-74R Short	MW-75 Long	MW-75 Short	MW-87 Long	MW-87 Short	MW-85 Long	MW-85 Short	MW-86 Long	MW-86 Short	MW-88 Long	MW-88 Short	MW-89 Long	MW-89 Short
	Downgradient Wells																									
Benzene, ug/L																										
No. of Analyses	66	4	74	8	74	4	80	8	43	8	193	8	196	8	190	8	79	8	70	4	71	4	71	4	67	4
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Dichlorodifluoromethane, ug/L																										
No. of Analyses	66	4	74	8	74	4	80	8	43	8	193	8	196	8	190	8	79	8	70	4	70	4	70	4	67	4
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
1,1-Dichloroethane, ug/L																										
No. of Analyses	66	4	74	8	74	4	80	8	43	8	193	8	196	8	190	8	79	8	70	4	71	4	71	4	67	4
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
1,2-Dichloroethane, ug/L																										
No. of Analyses	66	4	74	8	74	4	80	8	43	8	193	8	196	8	190	8	79	8	70	4	71	4	71	4	67	4
No. of Detections	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Maximum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID
cis 1,2-Dichloroethene, ug/L																										

Table 4-2c
Statistical Summary of Perched Zones Wells
Groundwater Data

Well Location	MW-30A Long	MW-30A Short	MW-47 Long	MW-47 Short	MW-62 Long	MW-62 Short	MW-101 Long	MW-101 Short
				Perched Wells				
pH, (Field) Standard Units								
No. of Analyses	85	8	88	10	53	5	48	9
No. of Detections	85	8	88	10	53	5	48	9
Maximum	6.84	7.81	7.19	6.93	7.33	7.03	8.89	7.09
Minimum	6.03	6.13	6.31	6.49	6.04	6.07	6.46	6.22
Mean	6.4	6.5	6.9	6.7	6.7	6.4	7.0	6.8
Standard Deviation	0.2	0.5	0.2	0.1	0.3	0.4	0.3	0.3
Median	6.42	6.395	6.915	6.665	6.67	6.22	6.965	6.85
Specific Conductance, (Field) uS/cm								
No. of Analyses	85	8	88	10	53	5	48	9
No. of Detections	85	8	88	10	53	5	48	9
Maximum	370	274.9	1195	1067	320	159.9	827	510.3
Minimum	200	200.3	2.1	841.6	114.4	139.8	250	378.4
Mean	281.6	233.6	794.0	936.3	211.1	151.1	560.2	446.1
Standard Deviation	43.4	24.2	189.0	79.0	42.9	8.4	119.0	42.1
Median	275	228.75	770	937.2	210	150.3	552.8	457.6
Total Dissolved Solids, mg/L								
No. of Analyses	83	8	86	8	54	5	48	8
No. of Detections	83	8	86	8	54	5	48	8
Maximum	300	202	1500	673	220	175	490	329
Minimum	170	159	120	568	95	113	62.7	261
Mean	212.6	185.1	608.6	609.5	147.3	128.4	376.9	301.6
Standard Deviation	22.7	12.7	144.2	38.9	25.8	26.2	81.8	24.8
Median	211	186	620	601.5	145	117	385.5	306.5
Alkalinity, total (CaCO3), mg/L								
No. of Analyses	83	8	86	8	54	5	48	8
No. of Detections	83	8	86	8	54	5	48	8
Maximum	200	110	716	591	110	61.3	520	276
Minimum	59.7	71.8	410	507	38.6	43.3	122	232
Mean	138.7	81.7	590.5	545.3	69.7	52.0	348.1	256.4
Standard Deviation	39.2	13.2	76.8	35.3	16.1	8.0	81.5	19.3
Median	150	76.8	611.5	531	69.9	52.2	323	263
Ammonia as N, mg/L								
No. of Analyses	83	8	86	8	54	5	48	8
No. of Detections	8	1	80	8	2	1	37	8
Maximum	0.09	0.003	0.156	0.0692	0.025	0.0052	0.11	0.0161
Minimum	ND	ND	ND	0.0298	ND	ND	ND	0.0047
Mean	0.011	ID	0.067	0.043	ID	ID	0.017	0.011
Standard Deviation	0.016	ID	0.031	0.014	ID	ID	0.015	0.005
Median	0.005	ID	0.0667	0.0371	ID	ID	0.015	0.01325
Chloride, mg/L								
No. of Analyses	83	8	86	8	54	5	48	8
No. of Detections	83	8	86	8	54	5	48	8
Maximum	6.1	4.9	15	9.01	14.4	4.63	8.9	2.67
Minimum	0.8	0.908	3.8	5.09	2.9	3.72	2.34	2.13
Mean	1.7	1.7	7.7	6.5	5.9	4.2	4.4	2.5
Standard Deviation	1.0	1.4	1.9	1.7	2.7	0.4	2.0	0.2
Median	1.29	1.015	7.655	5.565	5.01	4.52	3.605	2.52
Nitrate as N, mg/L								
No. of Analyses	83	8	86	8	54	5	48	8
No. of Detections	83	8	12	1	54	5	14	5
Maximum	17	12.5	1.1	0.016	7.7	2.75	0.062	0.0591
Minimum	0.081	4.32	ND	ND	2.11	2.1	ND	ND
Mean	4.342	8.365	0.027	ID	4.261	2.380	0.015	0.021
Standard Deviation	4.522	2.794	0.119	ID	1.446	0.295	0.015	0.019
Median	2.7	7.43	0.005	ID	3.745	2.29	0.005	0.0135
Sulfate, mg/L								
No. of Analyses	83	8	86	8	54	5	48	8
No. of Detections	83	8	86	8	54	5	48	8
Maximum	37	11.5	8.5	12.5	36	11.6	20.9	4.11
Minimum	5.64	6.08	1.6	6.31	9.73	9.86	3.27	3.01
Mean	15.0	7.7	6.3	8.6	19.9	10.7	5.4	3.6
Standard Deviation	7.7	1.8	1.0	2.5	5.8	0.8	2.7	0.4
Median	13	7.2	6.21	7.3	19.35	10.3	4.89	3.785

Table 4-2c
Statistical Summary of Perched Zones Wells
Groundwater Data

Well Location	MW-30A Long	MW-30A Short	MW-47 Long	MW-47 Short	MW-62 Long	MW-62 Short	MW-101 Long	MW-101 Short
				Perched Wells				
Dissolved Iron, mg/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	41	0	87	8	31	1	48	8
Maximum	7.1	ND	4.77	4.13	0.31	0.0384	3.5	0.894
Minimum	ND	ND	0.031	0.0286	ND	ND	0.0269	0.0765
Mean	0.14	ID	1.13	2.36	0.04	ID	0.84	0.51
Standard Deviation	0.77	ID	1.28	1.66	0.06	ID	0.72	0.28
Median	0.005	ID	0.57	3.065	0.0125	ID	0.7	0.5125
Dissolved Manganese, mg/L								
No. of Analyses	84	8	86	8	54	5	48	8
No. of Detections	15	5	86	8	11	5	48	8
Maximum	1.7	0.000204	4.71	2.23	0.0103	0.00124	2	1.19
Minimum	ND	ND	0.54	1.01	ND	0.000617	0.154	0.577
Mean	0.0209	0.0001	1.6859	1.5250	0.0008	0.0010	1.2398	0.9861
Standard Deviation	0.1854	0.0001	0.7706	0.4825	0.0015	0.0003	0.4101	0.1911
Median	0.0005	0.0001275	1.66	1.335	0.0005	0.00101	1.28	1.015
Dissolved Calcium, mg/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	84	8	87	8	54	5	48	8
Maximum	53	24.6	160	124	32	17.5	98	53.9
Minimum	16.7	16.9	63	112	12.7	13.6	23.7	44.6
Mean	27.2	20.4	115.7	118.5	19.7	15.5	61.3	49.8
Standard Deviation	6.4	2.3	21.9	4.1	4.1	1.5	12.3	3.0
Median	26.4	20	120	118.5	19.05	15.2	59.95	50.1
Dissolved Magnesium, mg/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	84	8	87	8	54	5	48	8
Maximum	26	14.3	79.5	64.3	11	4.69	50	31.7
Minimum	8.32	8.92	31	55.2	3.23	3.26	15.3	25
Mean	15.4	11.4	55.8	58.1	6.6	4.0	35.7	29.3
Standard Deviation	3.4	1.6	10.7	3.0	1.9	0.5	6.6	2.2
Median	15.05	11.25	56.6	57.45	6.375	4.1	36.15	29.9
Dissolved Potassium, mg/L								
No. of Analyses	83	8	86	8	53	5	48	8
No. of Detections	83	8	86	8	53	5	48	8
Maximum	38	1.53	6.16	5.51	1.5	0.895	3.7	2.86
Minimum	1.3	1.27	3.13	4.42	0.729	0.75	1.92	2.49
Mean	2.07	1.39	4.80	4.89	1.04	0.82	2.85	2.65
Standard Deviation	4.00	0.08	0.55	0.41	0.16	0.05	0.34	0.11
Median	1.6	1.395	4.795	4.85	1.03	0.817	2.81	2.655
Dissolved Sodium, mg/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	84	8	87	8	54	5	48	8
Maximum	110	14.9	21	19.6	20	12.5	25	18.5
Minimum	10.5	11	13	16.6	9.22	10.2	9.05	16
Mean	15.1	13.1	17.1	18.2	14.2	11.4	16.4	16.6
Standard Deviation	10.6	1.3	2.0	0.9	1.8	0.8	2.2	0.8
Median	13.95	13.05	17	18.25	14.05	11.5	16.55	16.4
Total Arsenic, mg/L								
No. of Analyses	30	8	32	8	21	5	27	8
No. of Detections	11	8	20	8	8	5	27	8
Maximum	0.000862	0.00059	0.0113	0.00363	0.000589	0.000216	0.0135	0.0115
Minimum	ND	0.000495	ND	0.000529	ND	0.000151	0.00198	0.00236
Mean	0.0005	0.0005	0.0023	0.0022	0.0004	0.0002	0.0077	0.0078
Standard Deviation	0.0001	0.0000	0.0027	0.0012	0.0001	0.0000	0.0041	0.0038
Median	0.0005	0.0005225	0.00133	0.002705	0.0005	0.000179	0.00749	0.008455
Total Barium, mg/L								
No. of Analyses	30	8	32	8	21	5	27	8
No. of Detections	30	8	32	8	21	5	27	8
Maximum	0.00774	0.00533	0.0458	0.0394	0.0038	0.00264	0.0359	0.0227
Minimum	0.00359	0.00363	0.0361	0.0312	0.00144	0.00227	0.0148	0.0161
Mean	0.0048	0.0042	0.0404	0.0354	0.0023	0.0024	0.0229	0.0191
Standard Deviation	0.0009	0.0005	0.0025	0.0030	0.0005	0.0002	0.0051	0.0018
Median	0.00471	0.00413	0.0399	0.0349	0.00226	0.00235	0.0224	0.01915

Table 4-2c
Statistical Summary of Perched Zones Wells
Groundwater Data

Well Location	MW-30A Long	MW-30A Short	MW-47 Long	MW-47 Short	MW-62 Long	MW-62 Short	MW-101 Long	MW-101 Short
	Perched Wells							
Total Cobalt, mg/L								
No. of Analyses	30	8	32	8	21	5	27	8
No. of Detections	6	4	11	8	7	5	11	8
Maximum	0.0015	0.000108	0.0015	0.000612	0.0015	0.000114	0.0015	0.000349
Minimum	ND	ND	ND	0.0003	ND	0.000063	ND	0.000195
Mean	0.00097	0.0001	0.0011	0.0004	0.0010	0.0001	0.0010	0.0003
Standard Deviation	0.00070	0.0000	0.0005	0.0001	0.0007	0.0000	0.0006	0.0000
Median	0.0015	0.0000396	0.0015	0.000353	0.0015	8.84E-05	0.0015	0.000267
Total Copper, mg/L								
No. of Analyses	30	8	32	8	21	5	27	8
No. of Detections	12	8	6	2	8	5	9	5
Maximum	0.0103	0.00073	0.0105	0.00166	0.00198	0.00173	0.00416	0.000846
Minimum	ND	0.000357	ND	ND	ND	0.000299	ND	ND
Mean	0.0012	0.0005	0.0012	ID	0.0009	0.0008	0.0009	0.0003
Standard Deviation	0.0018	0.0001	0.0019	ID	0.0003	0.0006	0.0007	0.0003
Median	0.001	0.000415	0.001	ID	0.001	0.0006	0.001	0.000282
Total Vanadium, mg/L								
No. of Analyses	30	8	32	8	21	5	27	8
No. of Detections	22	8	11	8	8	5	12	8
Maximum	0.00331	0.00259	0.00307	0.00317	0.00212	0.000768	0.00387	0.000687
Minimum	ND	0.00202	ND	0.000178	ND	0.000663	ND	0.00026
Mean	0.0019	0.0023	0.0009	0.0008	0.0012	0.0007	0.0009	0.0004
Standard Deviation	0.0006	0.0002	0.0007	0.0011	0.0004	0.0000	0.0007	0.0001
Median	0.00209	0.002275	0.001	0.000241	0.001	0.000704	0.001	0.000314
Benzene, ug/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	0	0	2	0	0	0	0	0
Maximum	ND	ND	0.36	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID
Total Vanadium, mg/L								
No. of Analyses	30	8	32	8	21	5	27	8
No. of Detections	22	8	11	8	8	5	12	8
Maximum	0.00331	0.00259	0.00307	0.00317	0.00212	0.000768	0.00387	0.000687
Minimum	ND	0.00202	ND	0.000178	ND	0.000663	ND	0.00026
Mean	0.0019	0.0023	0.0009	0.0008	0.0012	0.0007	0.0009	0.0004
Standard Deviation	0.0006	0.0002	0.0007	0.0011	0.0004	0.0000	0.0007	0.0001
Median	0.00209	0.002275	0.001	0.000241	0.001	0.000704	0.001	0.000314
Benzene, ug/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	0	0	2	0	0	0	0	0
Maximum	ND	ND	0.36	ND	ND	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID
Dichlorodifluoromethane, ug/L								
No. of Analyses	84	8	86	8	54	5	48	8
No. of Detections	11	0	80	8	0	0	0	0
Maximum	0.67	ND	32	7.85	ND	ND	ND	ND
Minimum	ND	ND	ND	0.64	ND	ND	ND	ND
Mean	0.1	ID	5.8	3.7	ID	ID	ID	ID
Standard Deviation	0.1	ID	6.4	2.4	ID	ID	ID	ID
Median	0.1	ID	4.145	3.625	ID	ID	ID	ID
1,1-Dichloroethane, ug/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	83	8	82	8	53	4	11	4
Maximum	13	2.53	2.1	0.659	13	0.582	0.21	0.161
Minimum	ND	1.41	ND	0.403	ND	ND	ND	ND
Mean	4.61	1.75	0.55	0.56	2.64	0.33	0.11	0.09
Standard Deviation	3.27	0.34	0.25	0.08	2.54	0.20	0.03	0.05
Median	3.32	1.715	0.53	0.579	1.635	0.381	0.1	0.0835

Table 4-2c
Statistical Summary of Perched Zones Wells
Groundwater Data

Well Location	MW-30A Long	MW-30A Short	MW-47 Long	MW-47 Short	MW-62 Long	MW-62 Short	MW-101 Long	MW-101 Short
	Perched Wells							
1,2-Dichloroethane, ug/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	13	0	10	1	0	0	11	4
Maximum	0.52	ND	0.441	0.114	ND	ND	0.233	0.165
Minimum	ND	ND	ND	ND	ND	ND	ND	ND
Mean	0.14	ID	0.11	ID	ID	ID	0.12	0.10
Standard Deviation	0.11	ID	0.04	ID	ID	ID	0.04	0.05
Median	0.1	ID	0.1	ID	ID	ID	0.1	0.0915
cis 1,2-Dichloroethene, ug/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	84	8	83	8	54	4	15	8
Maximum	20	3.74	11	2.68	14	1.41	0.277	0.228
Minimum	1.41	1.53	ND	0.974	0.504	ND	ND	0.104
Mean	7.61	2.32	1.44	1.61	4.46	0.83	0.14	0.16
Standard Deviation	5.45	0.76	1.40	0.55	2.93	0.51	0.05	0.05
Median	5.305	2.02	1.01	1.44	3.7	0.856	0.1	0.1625
Tetrachloroethene, ug/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	6	8	0	0	0	0	0	0
Maximum	0.5	0.158	ND	ND	ND	ND	ND	ND
Minimum	ND	0.106	ND	ND	ND	ND	ND	ND
Mean	0.103417	0.12	ID	ID	ID	ID	ID	ID
Standard Deviation	0.045339	0.02	ID	ID	ID	ID	ID	ID
Median	0.1	0.1185	ID	ID	ID	ID	ID	ID
Toluene, ug/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	0	0	0	0	1	0	0	0
Maximum	ND	ND	ND	ND	0.518	ND	ND	ND
Minimum	ND	ND	ND	ND	ND	ND	ND	ND
Mean	ID	ID	ID	ID	ID	ID	ID	ID
Standard Deviation	ID	ID	ID	ID	ID	ID	ID	ID
Median	ID	ID	ID	ID	ID	ID	ID	ID
Trichloroethene, ug/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	84	8	1	0	16	1	0	0
Maximum	2.2	1.01	0.23	ND	0.47	0.103	ND	ND
Minimum	0.558	0.829	ND	ND	ND	ND	ND	ND
Mean	1.24	0.87	ID	ID	0.14	ID	ID	ID
Standard Deviation	0.33	0.06	ID	ID	0.08	ID	ID	ID
Median	1.2	0.842	ID	ID	0.1	ID	ID	ID
Vinyl Chloride, ug/L								
No. of Analyses	84	8	87	8	54	5	48	8
No. of Detections	11	2	87	8	2	0	47	8
Maximum	0.38	0.0123	12	7.06	0.23	ND	0.9	0.334
Minimum	ND	ND	1.4	1.46	ND	ND	ND	0.067
Mean	0.02	ID	5.25	4.19	ID	ID	0.44	0.23
Standard Deviation	0.05	ID	1.85	1.76	ID	ID	0.20	0.10
Median	0.01	ID	5.2	4.18	ID	ID	0.422	0.2595

Table 4-3a
Summary of Regional Aquifer Data Trend Tests
Appendix I Analytes

Parameter	Well Location and Trend	MW-24 Long	MW-24 Short	MW-56 Long	MW-56 Short	MW-59 Long	MW-59 Short	MW-65 Long	MW-65 Short	MW-76 Long	MW-76 Short	MW-82 Long	MW-82 Short	MW-83 Long	MW-83 Short	MW-94 Long	MW-94 Short	MW-64 Long	MW-64 Short	MW-21 Long	MW-21 Short	MW-66 Long	MW-66 Short	MW-73 Long	MW-73 Short	MW-84 Long	MW-84 Short	MW-81 Long	MW-81 Short	MW-93 Long	MW-93 Short	MW-95 Long	MW-95 Short
		Upgradient and Crossgradient																															
Total Arsenic, mg/L	Trend	I	--	D	--	--	--	I	--	D	--	D	--	D	--	D	--	--	--	--	--	I	--	I	--	D	--	I	--	--	--	I	--
Total Barium, mg/L	Trend	--	--	--	--	I	--	--	--	--	--	--	--	I	--	--	--	I	--	I	--	D	--	--	--	I	--	I	--	D	--	I	--
Total Antimony, mg/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Berryllium, mg/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Cadmium, mg/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Chromium, mg/L	Trend	--	--	D	--	D	--	--	--	D	--	D	--	D	--	D	--	D	--	--	--	D	--	D	--	--	--	--	--	--	--	--	--
Total Cobalt, mg/L	Trend	--	--	D	--	--	--	--	--	--	--	--	--	D	--	D	--	--	--	--	--	--	--	--	--	--	--	--	--	D	--	D	--
Total Copper, mg/L	Trend	--	--	D	--	D	--	--	--	--	--	D	--	I	--	--	--	--	--	--	--	--	--	D	--	--	--	D	--	--	--	--	--
Total Lead, mg/L	Trend	--	--	D	--	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Nickel, mg/L	Trend	--	--	D	--	D	--	D	--	D	--	D	--	--	--	D	--	--	--	D	--	D	--	D	--	D	--	D	--	D	--	D	--
Total Selenium, mg/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	I	--	--	--	I	--	I	--	--	--	--	--
Total Silver, mg/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Thallium, mg/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Vanadium, mg/L	Trend	--	--	D	--	--	--	--	--	D	--	I	--	--	--	I	--	--	--	--	--	D	--	I	--	D	--	I	--	I	--	D	--
Total Zinc, mg/L	Trend	--	--	D	--	--	D	D	--	--	--	D	--	D	--	D	--	--	--	--	--	D	--	D	--	D	--	D	--	D	--	--	--
Nitrate as N, mg/L	Trend	D	--	--	--	--	--	D	--	--	--	D	--	I	--	--	--	D	--	D	--	I	--	D	--	D	--	--	--	--	--	--	--
rodifluoromethane, ug/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, ug/L	Trend	--	--	--	--	I	--	--	--	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene, ug/L	Trend	--	--	--	--	--	--	--	--	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene, ug/L	Trend	--	--	--	--	--	--	--	--	D	--	D	--	--	--	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride, ug/L	Trend	--	--	--	--	--	--	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

D	Decreasing Trend
I	Increasing Trend
--	No Trend

Table 4-3a
Summary of Regional Aquifer Data Trend Tests
Appendix II Analytes

Parameter	Well Location and Trend Length	MW-24 Long	MW-24 Short	MW-56 Long	MW-56 Short	MW-59 Long	MW-59 Short	MW-65 Long	MW-65 Short	MW-76 Long	MW-76 Short	MW-82 Long	MW-82 Short	MW-83 Long	MW-83 Short	MW-94 Long	MW-94 Short	MW-64 Long	MW-64 Short	MW-21 Long	MW-21 Short	MW-66 Long	MW-66 Short	MW-73 Long	MW-73 Short	MW-84 Long	MW-84 Short	MW-81 Long	MW-81 Short	MW-93 Long	MW-93 Short	MW-95 Long	MW-95 Short
		Upgradient and Crossgradient																															
pH, (Field) Standard Units	Trend	--	--	--	--	--	--	--	--	--	--	--	--	D	--	D	--	D	--	--	--	--	--	--	--	--	--	--	--	D	--	--	--
Specific Conductance, (Field) uS/cm	Trend	D	--	I	--	I	--	--	--	I	--	I	--	I	--	I	--	I	--	I	--	--	--	D	--	I	--	I	--	I	--	I	--
Total Dissolved Solids, mg/L	Trend	D	--	I	--	I	--	--	--	I	--	I	--	I	--	I	--	I	--	I	--	--	--	--	--	I	--	I	--	--	--	I	--
Alkalinity, total (CaCO3), mg/L	Trend	D	--	I	--	I	I	I	--	I	--	I	--	I	I	I	I	I	--	I	--	D	--	D	--	I	--	I	--	I	--	I	--
Ammonia as N, mg/L	Trend	--	--	D	--	D	--	D	--	--	--	--	--	D	--	D	--	D	--	D	--	--	--	--	--	D	--	--	--	--	--	I	--
Chloride, mg/L	Trend	I	--	I	--	I	I	--	--	I	--	I	--	I	--	I	I	D	--	D	--	D	--	D	--	--	--	I	--	--	--	I	--
Nitrate as N, mg/L	Trend	D	--	--	--	--	--	D	--	--	--	D	--	I	--	--	--	D	--	D	--	I	--	D	--	D	--	--	--	--	--	--	--
Sulfate, mg/L	Trend	D	--	--	--	--	--	--	--	--	--	--	--	D	--	--	D	--	--	--	--	I	--	D	--	--	--	--	I	D	D	I	--
Dissolved Iron, mg/L	Trend	D	--	D	--	--	--	--	--	D	--	D	--	D	--	D	--	D	--	D	--	D	--	D	--	D	--	D	--	D	--	D	--
Dissolved Manganese, mg/L	Trend	D	--	--	--	I	--	D	--	D	--	D	--	--	--	D	--	I	--	--	--	D	--	D	--	D	D	--	--	D	--	I	--
Dissolved Calcium, mg/L	Trend	D	--	I	--	I	--	--	--	I	--	I	--	I	--	I	I	I	--	I	--	D	--	D	--	I	--	I	--	I	--	I	--
Dissolved Magnesium, mg/L	Trend	D	--	I	--	I	--	I	--	I	--	I	--	I	--	I	I	I	--	I	--	D	--	D	--	I	--	I	I	I	--	I	--
Dissolved Potassium, mg/L	Trend	--	--	--	--	I	--	--	--	I	--	I	--	I	--	I	--	I	--	I	--	D	--	--	--	I	--	I	--	I	--	I	--
Dissolved Sodium, mg/L	Trend	D	--	I	--	I	--	--	--	I	--	I	--	I	--	I	I	I	--	I	--	--	--	--	--	I	--	I	--	I	--	--	--

D	Decreasing Trend
I	Increasing Trend
--	No Trend

Table 4-3b
Summary of Regional Aquifer Data Trend Tests
Appendix I Analytes

Parameter	Well Location and Trend	MW-100 Long	MW-100 Short	MW-68 Long	MW-68 Short	MW-67 Long	MW-67 Short	MW-72 Long	MW-72 Short	MW-74R Long	MW-74R Short	MW-75 Long	MW-75 Short	MW-80 Long	MW-80 Short	MW-87 Long	MW-87 Short	MW-85 Long	MW-85 Short	MW-86 Long	MW-86 Short	MW-88 Long	MW-88 Short	MW-89 Long	MW-89 Short
		Downgradient																							
Total Arsenic, mg/L	Trend	I	--	--	I	I	--	D	--	--	--	--	--	D	--	D	--	I	--	I	--	--	--	--	--
Total Barium, mg/L	Trend	--	--	D	--	I	--	I	--	I	--	I	I	--	--	--	--	I	I	I	--	--	--	I	--
Total Antimony, mg/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Berryllium, mg/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Cadmium, mg/L	Trend	--	--	--	--	D	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Chromium, mg/L	Trend	D	--	D	--	--	--	D	--	D	--	--	--	D	--	D	--	--	--	D	--	D	--	--	--
Total Cobalt, mg/L	Trend	D	--	D	--	D	--	--	--	--	--	--	--	--	--	D	--	--	--	D	--	--	--	--	--
Total Copper, mg/L	Trend	D	--	D	--	--	--	D	--	D	--	--	--	--	--	D	--	--	--	--	--	--	--	--	--
Total Lead, mg/L	Trend	D	--	--	--	--	--	D	--	--	--	--	--	--	--	D	--	--	--	--	--	--	--	--	--
Total Nickel, mg/L	Trend	D	--	D	--	D	--	D	--	D	--	--	--	D	--	D	--	D	--	D	--	D	--	D	--
Total Selenium, mg/L	Trend	--	--	--	--	--	--	--	--	I	--	--	--	--	--	--	--	D	--	D	--	I	--	--	--
Total Silver, mg/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Thallium, mg/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Vanadium, mg/L	Trend	D	--	D	I	--	--	D	--	D	--	--	--	D	--	D	I	D	--	--	--	--	--	D	--
Total Zinc, mg/L	Trend	--	--	D	--	D	--	D	--	D	--	D	--	D	--	D	--	D	--	D	--	D	--	--	--
Nitrate as N, mg/L	Trend	D	--	D	--	D	--	--	--	I	--	D	--	--	--	--	--	D	--	--	--	I	--	D	--
rodifluoromethane, ug/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene, ug/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene, ug/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene, ug/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride, ug/L	Trend	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

D	Decreasing Trend
I	Increasing Trend
--	No Trend

Table 4-3b
Summary of Regional Aquifer Data
Trend Tests Appendix II Analytes

Parameter	Well Location and Trend	MW-100 Long	MW-100 Short	MW-68 Long	MW-68 Short	MW-67 Long	MW-67 Short	MW-72 Long	MW-72 Short	MW-74R Long	MW-74R Short	MW-75 Long	MW-75 Short	MW-80 Long	MW-80 Short	MW-87 Long	MW-87 Short	MW-85 Long	MW-85 Short	MW-86 Long	MW-86 Short	MW-88 Long	MW-88 Short	MW-89 Long	MW-89 Short
		Downgradient																							
pH, (Field) Standard Units	Trend	--	--	D	--	D	--	D	--	D	--	--	--	D	--	D	D	--	--	--	--	--	--	--	--
nductance, (Field) uS/cm	Trend	--	--	--	--	I	--	I	--	I	--	I	--	I	--	I	--	I	--	--	--	I	--	I	--
tal Dissolved Solids, mg/L	Trend	--	--	D	--	I	--	I	--	I	--	I	--	I	--	I	--	I	--	I	--	I	--	I	--
inity, total (CaCO3), mg/L	Trend	I	--	D	--	I	--	I	--	I	--	I	--	I	I	I	I	I	I	D	--	--	--	--	--
Ammonia as N, mg/L	Trend	D	--	I	--	D	--	--	--	D	--	--	--	I	--	I	--	D	--	--	--	--	--	--	--
Chloride, mg/L	Trend	--	--	--	--	I	--	I	I	D	--	I	I	--	--	I	I	I	--	I	--	--	--	I	--
Nitrate as N, mg/L	Trend	D	--	D	--	D	--	--	--	I	--	D	--	--	--	--	--	D	--	--	--	I	--	D	--
Sulfate, mg/L	Trend	D	--	D	--	I	--	I	D	I	--	I	--	D	--	I	--	I	--	--	--	I	--	--	--
Dissolved Iron, mg/L	Trend	D	--	D	D	I	--	I	--	D	--	I	--	I	--	I	--	D	--	--	--	D	--	I	--
solved Manganese, mg/L	Trend	I	--	I	D	I	--	I	--	D	--	I	--	I	--	I	--	D	--	--	--	D	--	D	--
Dissolved Calcium, mg/L	Trend	--	--	D	--	I	--	I	D	I	--	I	--	I	--	I	--	I	I	--	--	--	--	--	--
solved Magnesium, mg/L	Trend	--	--	D	--	I	--	I	--	I	--	I	--	I	--	I	--	I	I	--	--	I	--	I	--
issolved Potassium, mg/L	Trend	--	--	I	--	I	--	I	--	I	--	I	--	I	--	I	--	I	--	--	--	I	--	I	--
Dissolved Sodium, mg/L	Trend	--	--	I	--	I	--	I	--	I	--	I	--	I	--	I	--	I	--	--	--	I	--	--	--

D	Decreasing Trend
I	Increasing Trend
--	No Trend

Table 4-3c
Summary of Perched Zones Data Trend Tests Appendix I
Analytes

Parameter	Well Location and Trend Length Type	MW-30A Long	MW-30A Short	MW-47 Long	MW-47 Short	MW-62 Long	MW-62 Short	MW-101 Long	MW-101 Short
		East Perched Zone						SSWA	
Total Arsenic, mg/L	Trend	--	--	I	--	D	--	--	--
Total Barium, mg/L	Trend	D	--	--	--	D	--	--	--
Total Antimony, mg/L	Trend	--	--	--	--	--	--	--	--
Total Berryllium, mg/L	Trend	--	--	--	--	--	--	--	--
Total Cadmium, mg/L	Trend	--	--	--	--	--	--	--	--
Total Chromium, mg/L	Trend	D	--	D	--	D	--	D	--
Total Cobalt, mg/L	Trend	D	--	D	--	D	--	D	--
Total Copper, mg/L	Trend	D	--	D	--	D	--	D	D
Total Lead, mg/L	Trend	D	--	D	--	--	--	D	--
Total Nickel, mg/L	Trend	D	--	D	--	D	--	D	--
Total Selenium, mg/L	Trend	--	--	--	--	--	--	--	--
Total Silver, mg/L	Trend	--	--	--	--	--	--	--	--
Total Thallium, mg/L	Trend	--	--	--	--	--	--	--	--
Total Vanadium, mg/L	Trend	--	--	D	--	--	--	D	--
Total Zinc, mg/L	Trend	D	--	D	--	--	--	D	--
Nitrate as N, mg/L	Trend	I	D	--	--	D	--	--	--
1,1-Dichloroethane, ug/L	Trend	--	--	--	D	--	--	--	--
1,2-Dichloroethane, ug/L	Trend	D	--	I	--	D	--	I	--
Dichlorodifluoromethane, ug/L	Trend	--	--	--	--	--	--	--	--
cis 1,2-Dichloroethene, ug/L	Trend	D	--	--	--	D	--	--	--
1,2-Dichloropropane, ug/L	Trend	--	--	I	D	--	--	D	--
Tetrachloroethene, ug/L	Trend	--	--	--	--	--	--	--	--
Trichloroethene, ug/L	Trend	D	I	--	--	D	--	--	--
Vinyl Chloride, ug/L	Trend	--	--	I	--	--	--	D	--

D	Decreasing Trend
I	Increasing Trend
--	No Trend

Table 4-3c
Summary of Perched Zones Data Trend Tests Appendix II
Analytes

Parameter	Well Location and Trend Length Type	MW-30A Long	MW-30A Short	MW-47 Long	MW-47 Short	MW-62 Long	MW-62 Short	MW-101 Long	MW-101 Short
		East Perched Zone						SSWA	
pH, (Field) Standard Units	Trend	I	--	D	--	--	--	--	--
Specific Conductance, (Field) uS/cm	Trend	D	--	--	D	D	--	D	--
Total Dissolved Solids, mg/L	Trend	--	--	I	D	D	--	D	--
Alkalinity, total (CaCO3), mg/L	Trend	D	I	--	D	--	--	D	--
Ammonia as N, mg/L	Trend	D	--	D	--	--	--	--	--
Chloride, mg/L	Trend	D	--	D	I	D	--	D	--
Nitrate as N, mg/L	Trend	I	D	--	--	D	--	--	--
Sulfate, mg/L	Trend	D	I	D	I	D	--	D	--
Dissolved Iron, mg/L	Trend	--	--	I	--	D	--	--	--
Dissolved Manganese, mg/L	Trend	D	--	I	--	D	--	D	--
Dissolved Calcium, mg/L	Trend	D	--	I	--	D	--	D	--
Dissolved Magnesium, mg/L	Trend	D	--	I	--	D	--	D	--
Dissolved Potassium, mg/L	Trend	D	--	--	--	D	--	D	--
Dissolved Sodium, mg/L	Trend	--	D	I	--	D	--	--	--

D	Decreasing Trend
I	Increasing Trend
--	No Trend

TABLE 4-4a
CEDAR HILLS REGIONAL LANDFILL REGIONAL AQUIFER QUARTERLY MONITORING WELLS

(Data Collected from January 1, 2021 to March 31, 2021)

Parameter		Total Antimony	Total Arsenic	Total Barium	Total Beryllium	Total Cadmium	Total Chromium	Total Cobalt	Total Copper	Total Lead	Total Nickel	Total Selenium	Total Silver	Total Thallium	Total Vanadium	Total Zinc	Nitrate as N	*cis*-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Well	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	ug/L	*ug/L*	ug/L	ug/L
Upgradient and Crossgradient Wells																					
MW-59	Limit	0.001	0.001	0.0055	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.00748	0.29	1.37	0.2	0.45	0.02
	Result	< 0.0003	0.000432	0.00419	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	< 0.0001	< 0.00005	< 0.00004	< 0.0001	0.000075	0.000752	< 0.01	**1.43**	< 0.1	< 0.1	< 0.1
MW-66	Limit	0.001	0.001	0.0065	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.002	0.004	0.861	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000715	0.00402	< 0.0001	< 0.00005	< 0.0002	< 0.00005	**0.00466**	< 0.0001	0.000321	0.000974	< 0.00005	< 0.0001	0.000808	0.00129	0.352	0.1 U	< 0.1	< 0.1	< 0.1
MW-81	Limit	0.001	0.001	0.0049	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.00253	0.00895	1.731459782	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000552	0.00336	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	0.000122	0.000871	< 0.00006	< 0.0001	0.00177	< 0.0005	1.29	0.1 U	< 0.1	< 0.1	< 0.1
MW-83	Limit	0.001	0.001	0.0115	0.001	0.002	0.005	0.003	0.00601	0.001	0.01	0.001	0.003	0.001	0.002	0.004	4.68	0.2	0.2	2.87	0.02
	Result	< 0.0003	0.000391	**0.0116**	< 0.0001	< 0.00005	0.00048	0.000302	0.00401	< 0.0001	0.00258	< 0.00005	< 0.00007	< 0.0001	0.000995	0.00108	2.03	0.1 U	< 0.1	2.24	< 0.1
MW-84	Limit	0.001	0.001	0.0044	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.680	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000341	**0.00564**	< 0.0001	< 0.00005	< 0.0002	< 0.00005	0.000435	< 0.0001	0.000582	0.000729	< 0.00008	< 0.0001	0.000648	**0.0196**	0.187	0.1 U	< 0.1	< 0.1	0.01 DU
MW-93	Limit	0.001	0.001430965	0.0095	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.00231	0.0112	0.18	0.2	0.2	0.2	0.02
	Result	< 0.0003	**0.00153**	0.00851	< 0.0001	9.82E-05	0.000352	0.000141	0.00053	< 0.0001	0.00033	< 0.0005	< 0.00004	< 0.0001	**0.00247**	0.00595	0.014 T	< 0.1	< 0.1	< 0.1	< 0.01
MW-94	Limit	0.001	0.001	0.0054	0.001	0.002	0.005	0.003	0.0051	0.001	0.01	0.001	0.003	0.001	0.002	0.004	2.72	0.2	0.2	3.81	0.02
	Result	< 0.0003	0.000131	0.00248	< 0.0001	< 0.00005	< 0.0002	0.000148	0.00119	< 0.0001	0.000651	< 0.00005	< 0.00009	< 0.0001	0.00122	< 0.0005	0.189	0.1 U	< 0.1	2.7	< 0.1
Downgradient Wells																					
MW-68	Limit	0.001	0.326	0.0197	0.001	0.002	0.005	0.0015	0.0116	0.001	0.005	0.001	0.003	0.001	0.0037	0.004	0.05	0.2	1	0.2	0.02
	Result	< 0.0003	0.0359	0.0105	< 0.0001	< 0.0005	< 0.0002	0.000212	0.000902	< 0.0001	0.00044	< 0.0005	< 0.0004	< 0.0001	0.000698	< 0.0005	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-69*	Limit	0.001	0.004	0.0142	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.0112	0.076	0.2	0.2	0.2	0.02
	Result	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-72	Limit	0.001	0.001	0.0162	0.001	0.002	0.005	0.003	0.00331	0.00104	0.01	0.001	0.003	0.001	0.002	0.02583	0.068	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000129	0.0151	< 0.0001	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0001	0.000171	< 0.0005	< 0.0004	< 0.0001	0.0001	0.000926	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-74R	Limit	0.001	0.001	0.0160	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.002	0.004	0.487	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.00108	0.012	< 0.0001	< 0.0005	0.000225	< 0.0005	0.000354	< 0.0001	0.00093	0.000619	< 0.0004	< 0.0001	0.00105	0.000609	0.323	< 0.1	< 0.1	< 0.1	< 0.01
MW-75	Limit	0.001	0.001	0.0139	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.05	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000447	0.0132	< 0.0001	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0001	< 0.0001	< 0.0005	< 0.0004	< 0.0001	0.000126	< 0.0005	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-80	Limit	0.001	0.039	0.0230	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.0117	0.028	0.2	1	0.2	0.02
	Result	< 0.0003	0.00284	0.0135	< 0.0001	< 0.0005	< 0.0002	< 0.0005	0.000422	< 0.0001	0.00011	< 0.0005	< 0.0004	< 0.0001	< 0.0007	0.00217	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-85	Limit	0.001	0.001	0.0076	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00136	0.003	0.001	0.002	0.004	1.630	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000737	0.00731	< 0.0001	< 0.0005	< 0.0002	< 0.0005	< 0.0002	< 0.0001	0.000219	0.000893	< 0.0004	< 0.0001	0.00107	0.000549	0.0918	< 0.1	< 0.1	< 0.1	< 0.01
MW-87	Limit	0.001	0.026	0.0383	0.001	0.002	0.005	0.003	0.00347	0.001	0.01	0.001	0.003	0.001	0.005	0.00892	0.0803	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000938	0.0284	< 0.0001	< 0.0005	< 0.0002	0.000176	0.0006	< 0.0001	0.000363	< 0.0005	< 0.0004	< 0.0001	0.000177	0.00184	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01

NOTE:
Results greater than Limit Value in **RED Bold**
* MW-69 - No sample collected; well was damaged.

TABLE 4-4a
INTRAWELL PREDICTION LIMIT VALUES AND RESULTS.
CEDAR HILLS REGIONAL LANDFILL REGIONAL AQUIFER QUARTERLY AND SEMI-ANNUAL MONITORING WELLS
(Data Collected from March 01, 2021 - June 30, 2021)

Parameter		Total Antimony	Total Arsenic	Total Barium	Total Beryllium	Total Cadmium	Total Chromium	Total Cobalt	Total Copper	Total Lead	Total Nickel	Total Selenium	Total Silver	Total Thallium	Total Vanadium	Total Zinc	Nitrate as N	*cis*-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Well	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	ug/L	*ug/L*	ug/L	ug/L
Upgradient and Crossgradient Wells																					
MW-21	Limit	0.001	0.00116412	0.005586	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	1.9	0.2	0.2	0.2	0.02
		< 0.0003	0.000966	0.00524	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	0.000138	< 0.0005	< 0.00004	< 0.0001	0.0000828	< 0.0005	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-24	Limit	0.001	0.001	0.002163	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.32	0.39	0.2	0.2	0.0276
	Result	< 0.0003	0.000551	0.00205	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	0.000103	< 0.0005	< 0.00004	< 0.0001	< 0.000075	< 0.0005	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-56	Limit	0.001	0.00253	0.0478	0.001	0.002	0.00755	0.00611	0.0177	0.0033	0.01	0.001	0.00694	0.001	0.0181	0.0235	2.78	1.91274361	0.2	0.2	0.02
	Result	< 0.0003	0.0000735	0.00575	< 0.0001	< 0.00005	< 0.0002	0.000113	0.000211	< 0.0001	0.000902	< 0.0005	< 0.00004	< 0.0001	0.000189	0.000987	0.381	1.19	< 0.1	< 0.1	< 0.01
MW-59	Limit	0.001	0.001	0.0051	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.00748	0.05	1.41	0.2	0.2	0.02
	Result	< 0.0003	0.00044	0.00409	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	0.00011	< 0.0005	< 0.00004	< 0.0001	< 0.000075	0.000633	< 0.02	1.20	< 0.1	< 0.1	< 0.01
MW-64	Limit	0.001	0.01	0.033512	0.001	0.002	0.005	0.00385	0.00512	0.001	0.0155	0.001	0.003	0.001	0.00606	0.0385	0.121	0.2	0.2	0.2	0.5
	Result	< 0.0003	0.000859	0.00772	< 0.0001	< 0.00005	< 0.0002	0.000295	< 0.0002	< 0.0001	0.000947	< 0.0005	< 0.00004	< 0.0001	0.00023	< 0.0005	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-65	Limit	0.001	0.00256	0.008505	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.055	0.2	0.2	0.2	0.127612
	Result	< 0.0003	0.000811	0.0061	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	0.000124	< 0.0005	< 0.00004	< 0.0001	< 0.000075	< 0.0005	< 0.02	< 0.1	< 0.1	< 0.1	0.02
MW-66	Limit	0.001	0.001	0.006771	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.002	0.004	0.9097323	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.00068	0.00413	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	0.000145	0.00094	< 0.00004	< 0.0001	0.000839	< 0.0005	0.464	< 0.1	< 0.1	< 0.1	< 0.01
MW-73	Limit	0.001	0.00151	0.0225	0.001	0.002	0.005	0.003	0.00363	0.00237	0.01	0.0016	0.003	0.001	0.00315	0.0066	2.01	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.00151	**0.0225**	0.000204	< 0.00005	0.00207	0.000893	0.00303	**0.00519**	0.00227	**0.00111**	0.0000422	< 0.0001	**0.00413**	**0.00785**	**1.16**	< 0.1	< 0.1	< 0.1	< 0.01
MW-76	Limit	0.001	0.001	0.004787	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	6	2.41988446	0.65206	14.73937	0.02
	Result	< 0.0003	0.000223	0.00458	< 0.0001	< 0.00005	0.00104	0.0000981	**0.00202**	< 0.0001	0.000583	< 0.0005	< 0.00004	< 0.0001	0.000609	< 0.0005	0.861	0.24	0.337	6.01	< 0.01
MW-81	Limit	0.001	0.001	0.00487	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.00253	0.00895	1.7376423	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000496	0.00303	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	0.000115	0.000823	< 0.00004	< 0.0001	0.00158	< 0.0005	1.59	< 0.1	< 0.1	< 0.1	< 0.01
MW-82	Limit	0.001	0.001	0.00376	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	1.3945065	0.2	0.2	8.588677	0.02
	Result	< 0.0003	0.000248	0.00136	< 0.0001	< 0.00005	0.000956	< 0.00005	0.000256	< 0.0001	0.00239	< 0.0005	< 0.00004	< 0.0001	0.00123	0.00056	1.09	< 0.1	< 0.1	4.11	< 0.01
MW-83	Limit	0.001	0.001	0.012368	0.001	0.002	0.0628	0.003	0.00771	0.001	0.01	0.001	0.003	0.001	0.002	0.004	4.9666306	0.2	0.2	2.818088	0.02
	Result	< 0.0003	0.000291	0.00766	< 0.0001	< 0.00005	< 0.0002	0.0000995	0.00214	< 0.0001	0.00213	< 0.0005	< 0.00004	< 0.0001	0.000754	0.000626	0.5	< 0.1	< 0.1	1.48	< 0.01
MW-84	Limit	0.001	0.001	0.00503	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.662	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000301	0.00488	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	0.000325	0.000673	< 0.00004	< 0.0001	0.000505	0.00124	0.136	< 0.1	< 0.1	< 0.1	< 0.01
MW-93	Limit	0.001	0.00146091	0.0108	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.00265	0.0112	0.0549	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.00138	0.00762	< 0.0001	< 0.00005	< 0.0002	0.000093	0.000263	< 0.0001	0.000277	< 0.0005	< 0.00004	< 0.0001	0.00213	0.00404	0.022	< 0.1	< 0.1	< 0.1	< 0.01
MW-94	Limit	0.001	0.001	0.00542	0.001	0.002	0.005	0.003	0.0051	0.001	0.01	0.001	0.003	0.001	0.002	0.004	2.5608257	0.2	0.2	3.544744	0.02
	Result	< 0.0003	0.000113	0.00223	< 0.0001	< 0.00005	< 0.0002	0.000102	0.00128	< 0.0001	0.000666	< 0.0005	< 0.00004	< 0.0001	0.00112	< 0.0005	0.916	< 0.1	< 0.1	1.97	< 0.01
MW-95	Limit	0.001	0.00111	0.004749	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.05	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000993	0.00415	< 0.0001	< 0.00005	< 0.0002	0.0000674	< 0.0002	< 0.0001	0.00017	< 0.0005	< 0.00004	< 0.0001	0.000288	< 0.0005	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01

NOTE:
Results greater than Limit Value in **Bold Red**

TABLE 4-4a
INTRAWELL PREDICTION LIMIT VALUES AND RESULTS.
CEDAR HILLS REGIONAL LANDFILL REGIONAL AQUIFER QUARTERLY AND SEMI-ANNUAL MONITORING WELLS
(Data Collected from March 01, 2021 - June 30, 2021)

Parameter		Total Antimony	Total Arsenic	Total Barium	Total Beryllium	Total Cadmium	Total Chromium	Total Cobalt	Total Copper	Total Lead	Total Nickel	Total Selenium	Total Silver	Total Thallium	Total Vanadium	Total Zinc	Nitrate as N	cis-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Downgradient																					
MW-67	Limit	0.001	0.0101	0.0298	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.00366	0.004	0.82	0.2	0.2	0.2	0.02
		< 0.0003	0.000694	0.0144	< 0.0001	< 0.00005	0.000453	0.000214	0.000349	0.000114	0.000662	< 0.0005	< 0.00004	< 0.000075	0.00056	0.00165	0.0812	< 0.1	< 0.1	< 0.1	< 0.01
MW-68	Limit	0.001	0.32578304	0.0197	0.001	0.002	0.005	0.0015	0.0115999	0.001	0.005	0.001	0.003	0.001	0.0037	0.004	0.05	0.2	1	0.2	0.02
		< 0.0003	0.0426	0.0107	< 0.0001	< 0.00005	< 0.0002	0.000204	0.00119	< 0.0001	0.0004	< 0.0005	< 0.00004	< 0.0001	0.000819	0.000654	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-69*	Limit	0.001	0.00386	0.014174	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.0112	0.076	0.2	0.2	0.2	0.02
	Result	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-72	Limit	0.001	0.001	0.01619	0.001	0.002	0.005	0.003	0.00331	0.00104	0.01	0.001	0.003	0.001	0.002	0.02583313	0.068	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000131	0.0126	< 0.0001	< 0.00005	< 0.0002	< 0.00005	0.000227	< 0.0001	0.000116	< 0.0005	< 0.00004	< 0.0001	< 0.000075	0.000808	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-74	Limit	0.001	0.00145	0.015948	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.002	0.004	0.487	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000408	0.0122	< 0.0001	< 0.00005	< 0.0002	< 0.00005	0.000229	< 0.0001	0.000822	0.000625	< 0.00004	< 0.0001	0.000605	< 0.0005	0.278	< 0.1	< 0.1	< 0.1	< 0.01
MW-75	Limit	0.001	0.001	0.013927	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.05	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000426	0.013	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	< 0.0001	< 0.0005	< 0.00004	< 0.0001	< 0.000075	< 0.0005	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-80	Limit	0.001	0.0392	0.023	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.0117	0.028	0.2	1	0.2	0.02
	Result	< 0.0003	0.0031	0.0137	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	< 0.0001	< 0.0005	< 0.00004	< 0.0001	0.0000849	0.00213	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-85	Limit	0.001	0.001	0.0076	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00136104	0.003	0.001	0.002	0.004	1.63	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000704	0.00672	< 0.0001	< 0.00005	< 0.0002	< 0.00005	< 0.0002	< 0.0001	0.000212	0.000847	< 0.00004	< 0.0001	0.000932	0.000704	0.1	< 0.1	< 0.1	< 0.1	< 0.01
MW-86	Limit	0.001	0.0194	0.008754	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.0017	0.003	0.001	0.00336	0.004	570	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.00082	0.00561	< 0.0001	< 0.00005	< 0.0002	< 0.00005	**0.00308**	< 0.0001	< 0.0001	< 0.0005	< 0.00004	< 0.0001	< 0.000075	**0.00404**	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-87	Limit	0.001	0.0256	0.038341	0.001	0.002	0.005	0.003	0.00347	0.001	0.01	0.001	0.003	0.001	0.00468	0.00892	0.0803	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.0207	0.0382	0.000147	0.0000684	0.000772	0.000182	0.00132	0.00037	0.000326	0.000701	< 0.00004	< 0.000075	0.00464	0.00244	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-88	Limit	0.001	0.00104969	0.002435	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002950352	0.004	1.7	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000991	0.00217	< 0.0001	< 0.00005	0.000575	< 0.00005	< 0.0002	< 0.0001	0.000106	0.000532	< 0.00004	< 0.0001	0.0026	< 0.0005	0.803	< 0.1	< 0.1	< 0.1	< 0.01
MW-89	Limit	0.001	0.0266	0.0256	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.04062975	0.095	0.2	0.2	0.2	0.04
	Result	< 0.0003	0.00114	0.00837	< 0.0001	< 0.00005	< 0.0002	< 0.00005	0.000344	< 0.0001	0.00011	< 0.0005	< 0.00004	< 0.0001	0.000114	0.0146	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01
MW-100	Limit	0.001	0.02044138	0.0121	0.001	0.002	0.005	0.003	0.00226	0.001	0.01	0.001	0.003	0.001	0.002	0.00922	300	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.00283	0.00617	< 0.0001	< 0.00005	< 0.0002	0.000216	0.000233	< 0.0001	0.000403	< 0.0005	< 0.00004	< 0.0001	0.0000893	0.0013	< 0.01	< 0.1	< 0.1	< 0.1	< 0.01

NOTE:
Results greater than Limit Value in **Bold Red**
* MW-69 No sample collected; well was damaged.

TABLE 4-4a
INTRAWELL PREDICTION LIMIT VALUES AND RESULTS.
CEDAR HILLS REGIONAL LANDFILL REGIONAL AQUIFER QUARTERLY AND SEMI-ANNUAL MONITORING WELLS
(Data Collected from July 01, 2021 - September 30, 2021)

Well	Parameter / Units	Total Antimony mg/L	Total Arsenic mg/L	Total Barium mg/L	Total Beryllium mg/L	Total Cadmium mg/L	Total Chromium mg/L	Total Cobalt mg/L	Total Copper mg/L	Total Lead mg/L	Total Nickel mg/L	Total Selenium mg/L	Total Silver mg/L	Total Thallium mg/L	Total Vanadium mg/L	Total Zinc mg/L	Nitrate as N mg/L	*cis*-1,2-Dichloroethene ug/L	Tetrachloroethene *ug/L*	Trichloroethene ug/L	Vinyl Chloride ug/L
Upgradient and Crossgradient Wells																					
MW-59	Limit	0.001	0.001	0.0051	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.00748	0.05	1.41	0.2	0.2	0.02
	Result	< 0.0003	0.000436	0.00421	< 0.0001	< 0.000005	0.000219	< 0.000005	< 0.0002	< 0.0001	0.000132	< 0.0005	< 0.000004	< 0.0000075	< 0.000075	0.000751	0.017 T	1.17	< 0.1	< 0.1	< 0.1
MW-66	Limit	0.001	0.001	0.0068	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.002	0.004	0.910	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000673	0.00425	< 0.0001	< 0.000005	0.000269	< 0.000005	< 0.0002	< 0.0001	0.000253	0.000907	< 0.000004	< 0.0000075	0.000761	0.000913	0.499	< 0.1	< 0.1	< 0.1	< 0.1
MW-81	Limit	0.001	0.001	0.0049	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.00253	0.00895	1.7376423	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000527	0.00331	< 0.0001	< 0.000005	< 0.0002	< 0.000005	< 0.0002	< 0.0001	0.000176	0.00091	< 0.000004	< 0.0000075	0.0017	< 0.0005	1.56	< 0.1	< 0.1	< 0.1	< 0.1
MW-83	Limit	0.001	0.001	0.0124	0.001	0.002	0.0628	0.003	0.00771	0.001	0.01	0.001	0.003	0.001	0.002	0.004	4.97	0.2	0.2	2.82	0.02
	Result	< 0.0003	0.00034	0.00983	< 0.0001	< 0.000005	0.000261	0.000248	0.00335	< 0.0001	0.00182	< 0.0005	< 0.000004	< 0.0000075	0.000815	0.000521	1.56	< 0.1	< 0.1	2.19	< 0.1
MW-84	Limit	0.001	0.001	0.0050	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.662	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.000335	0.00499	< 0.0001	< 0.000005	< 0.0002	< 0.000005	< 0.0002	< 0.0001	0.000517	0.00068	< 0.000004	< 0.0000075	0.00066	0.00224	0.133	< 0.1	< 0.1	< 0.1	< 0.1
MW-93	Limit	0.001	0.00146091	0.0108	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.00265	0.0112	0.0549	0.2	0.2	0.2	0.02
	Result	< 0.0003	0.00143	0.00789	< 0.0001	< 0.000005	< 0.0002	0.0000856	0.000247	< 0.0001	0.000263	< 0.0005	< 0.000004	< 0.0000075	0.00222	0.00285	0.015	< 0.1	< 0.1	< 0.1	< 0.1
MW-94	Limit	0.001	0.001	0.0054	0.001	0.002	0.005	0.003	0.0051	0.001	0.01	0.001	0.003	0.001	0.002	0.004	2.56	0.2	0.2	3.54	0.02
	Result	< 0.0003	0.00013	0.00239	< 0.0001	< 0.000005	0.000213	0.000102	0.00117	< 0.0001	0.000558	< 0.0005	< 0.000004	< 0.0000075	0.00126	< 0.0005	0.666	< 0.1	< 0.1	2.45	< 0.1

NOTE:
Results greater than Limit Value in **Bold Red**

TABLE 4-4a
INTRAWELL PREDICTION LIMIT VALUES AND RESULTS.
CEDAR HILLS REGIONAL LANDFILL REGIONAL AQUIFER QUARTERLY AND SEMI-ANNUAL MONITORING WELLS
(Data Collected from July 01, 2021 - September 30, 2021)

Parameter		Total Antimony	Total Arsenic	Total Barium	Total Beryllium	Total Cadmium	Total Chromium	Total Cobalt	Total Copper	Total Lead	Total Nickel	Total Selenium	Total Silver	Total Thallium	Total Vanadium	Total Zinc	Nitrate as N	*cis*-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Downgradient																					
MW-68	Limit	0.001	0.326	0.0197	0.001	0.002	0.005	0.0015	0.0115999	0.001	0.005	0.001	0.003	0.001	0.0037	0.004	0.05	0.2	1	0.2	0.02
	Result	< 0003	0.0312	0.0104	< 0001	< 000005	< 0.0002	0.000212	0.000965	< 0.0001	0.000422	< 0.0005	< 000004	< 0000075	0.000647	< 0.0005	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1
MW-69*	Limit	0.001	0.004	0.0142	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.0112	0.076	0.2	0.2	0.2	0.02
	Result	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-72	Limit	0.001	0.001	0.0162	0.001	0.002	0.005	0.003	0.00331	0.00104	0.01	0.001	0.003	0.001	0.002	0.02583313	0.068	0.2	0.2	0.2	0.02
	Result	< 0003	0.000161	0.0142	< 0001	< 000005	< 0.0002	< 0.000005	< 0.0002	0.000427	0.000147	< 0.0005	< 000004	< 0000076	< 00000984	0.00111	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1
MW-74R	Limit	0.001	0.001	0.0159	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.002	0.004	0.487	0.2	0.2	0.2	0.02
	Result	< 0003	0.000421	0.014	< 0001	< 000005	0.000207	< 0.000005	0.000218	< 0.0001	0.000896	0.000639	< 000004	< 0000077	0.000707	< 0.0005	0.295	< 0.1	< 0.1	< 0.1	< 0.1
MW-75	Limit	0.001	0.001	0.0139	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.05	0.2	0.2	0.2	0.02
	Result	< 0003	0.000453	0.0133	< 0001	< 000005	< 0.0002	< 0.000005	< 0.0002	< 0.0001	< 0.0001	< 0.0005	< 000004	< 0000078	< 00000843	< 0.0005	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1
MW-80	Limit	0.001	0.039	0.0230	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.0117	0.028	0.2	1	0.2	0.02
	Result	< 0003	0.00294	0.0135	< 0001	< 000005	< 0.0002	< 0.000005	< 0.0002	< 0.0001	< 0.0001	< 0.0005	< 000004	< 0000079	< 0.0000075	0.000821	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1
MW-85	Limit	0.001	0.001	0.0076	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00136104	0.003	0.001	0.002	0.004	1.630	0.2	0.2	0.2	0.02
	Result	< 0003	0.00071	0.00747	< 0001	< 000005	< 0.0002	< 0.000005	0.000552	< 0.0001	0.000223	0.000903	< 000004	< 0000080	0.00106	0.000524	0.1	< 0.1	< 0.1	< 0.1	< 0.1
MW-87	Limit	0.001	0.026	0.0383	0.001	0.002	0.005	0.003	0.00347	0.001	0.01	0.001	0.003	0.001	0.005	0.00892	0.0803	0.2	0.2	0.2	0.02
	Result	< 0003	0.0137	0.0348	< 0001	< 000005	0.000621	0.000189	0.000957	0.000265	0.000335	< 0.0005	< 000004	< 0000081	0.00327	0.0017	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1

NOTE:
Results greater than Limit Value in **Bold Red**
* MW-69 No sample collected; well was damaged.

TABLE 4-4a
INTRAWELL PREDICTION LIMIT VALUES AND RESULTS.
CEDAR HILLS REGIONAL LANDFILL REGIONAL AQUIFER QUARTERLY AND SEMI-ANNUAL MONITORING WELLS
(Data Collected from October 01, 2021 to December 31, 2021)

Well	Parameter / Units	Total Antimony mg/L	Total Arsenic mg/L	Total Barium mg/L	Total Beryllium mg/L	Total Cadmium mg/L	Total Chromium mg/L	Total Cobalt mg/L	Total Copper mg/L	Total Lead mg/L	Total Nickel mg/L	Total Selenium mg/L	Total Silver mg/L	Total Thallium mg/L	Total Vanadium mg/L	Total Zinc mg/L	Nitrate as N mg/L	cis- 1,2-Dichloroethene ug/L	Tetrachloroethene ug/L	Trichloroethene ug/L	Vinyl Chloride ug/L
Upgradient and Crossgradient Wells																					
MW-21	Limit	0.001	0.00116412	0.005586	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	1.9	0.2	0.2	0.2	0.02
	Result	0.0003	0.00112	0.00536	0.0001	0.00005	0.0002	0.00005	0.0002	0.0001	0.000169	0.0005	0.00004	0.000075	0.000075	0.0005	0.01	0.10	0.1	0.1	0.01
MW-24	Limit	0.001	0.001	0.002163	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.32	0.39	0.2	0.2	0.0276
	Result	0.0003	0.000581	0.00213	0.0001	0.00005	0.0002	0.00005	0.0002	0.0001	0.000166	0.0005	0.00004	0.000075	0.000124	0.0005	0.01	0.10	0.1	0.1	0.02
MW-56	Limit	0.001	0.00253	0.0478	0.001	0.002	0.00755	0.00611	0.0177	0.0033	0.01	0.001	0.00694	0.001	0.0181	0.0235	2.78	1.9127436	0.2	0.2	0.02
	Result	0.0003	0.0000794	0.00548	0.0001	0.00005	0.0002	0.000144	0.000333	0.0001	0.00187	0.0005	0.00004	0.000075	0.0002	0.00127	0.032	1.46	0.1	0.1	0.01
MW-59	Limit	0.001	0.001	0.005116	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.00748	0.05	1.41	0.2	0.2	0.02
	Result	0.0003	0.000468	0.00464	0.0001	0.00005	0.0002	0.00005	0.0002	0.0001	0.000159	0.0005	0.00004	0.000075	0.0000864	0.000701	0.01	1.27	0.1	0.1	0.01
MW-64	Limit	0.001	0.01	0.033512	0.001	0.002	0.005	0.00385	0.00512	0.001	0.0155	0.001	0.003	0.001	0.00606	0.0385	0.121	0.2	0.2	0.2	0.5
	Result	0.0003	0.00174	0.0106	0.0001	0.0000846	0.0002	0.000124	0.000297	0.0001	0.00233	0.0005	0.00004	0.000075	0.000455	0.000755	0.01	0.10	0.1	0.1	0.01
MW-65	Limit	0.001	0.00256	0.008505	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.055	0.2	0.2	0.2	0.127612
	Result	0.0003	0.00072	0.00606	0.0001	0.00005	0.0002	0.00005	0.000204	0.0001	0.000364	0.0005	0.00004	0.000075	0.000075	0.00106	0.01	0.10	0.1	0.1	0.02
MW-66	Limit	0.001	0.001	0.006771	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.002	0.004	0.910	0.2	0.2	0.2	0.02
	Result	0.0003	0.000718	0.00399	0.0001	0.00005	0.0002	0.00005	0.0002	0.0001	0.000224	0.000992	0.00004	0.000075	0.000796	0.0005	0.455	0.10	0.1	0.1	0.01
MW-73	Limit	0.001	0.00151	0.0225	0.001	0.002	0.005	0.003	0.00363	0.00237	0.01	0.0016	0.003	0.001	0.00315	0.0066	2.01	0.2	0.2	0.2	0.02
	Result	0.0003	0.000786	0.00441	0.0001	0.00005	0.00062	0.000132	0.000408	0.000422	0.000735	0.000506	0.00004	0.000075	0.00147	0.000848	1.2	0.10	0.1	0.1	0.01
MW-76	Limit	0.001	0.001	0.004787	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	6	2.420	0.652	14.74	0.02
	Result	0.0003	0.000234	0.00476	0.0001	0.00005	0.000327	0.00005	0.00141	0.0001	0.000556	0.0005	0.00004	0.000075	0.000724	0.0019	1.16	0.14	0.408	7.26	0.01
MW-81	Limit	0.001	0.001	0.00487	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.00253	0.00895	1.738	0.2	0.2	0.2	0.02
	Result	0.0003	0.000574	0.00334	0.0001	0.00005	0.0002	0.00005	0.0002	0.0001	0.000168	0.000868	0.00004	0.000075	0.00173	0.000563	1.53	0.10	0.1	0.1	0.01
MW-82	Limit	0.001	0.001	0.00376	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	1.395	0.2	0.2	8.588677	0.02
	Result	0.0003	0.00028	0.00156	0.0001	0.00005	0.00133	0.00005	0.000298	0.0001	0.0028	0.0005	0.00004	0.000075	0.00148	0.000507	0.843	0.10	0.1	4.1	0.01
MW-83	Limit	0.001	0.001	0.012368	0.001	0.002	0.0628	0.003	0.00771	0.001	0.01	0.001	0.003	0.001	0.002	0.004	4.967	0.2	0.2	2.818088	0.02
	Result	0.0003	0.0004	0.0116	0.0001	0.00005	0.000348	0.000284	0.00372	0.0001	0.00218	0.0005	0.00004	0.000075	0.000981	0.000507	1.71	0.1	0.1	2	0.01
MW-84	Limit	0.001	0.001	0.00503	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.662	0.2	0.2	0.2	0.02
	Result	0.0003	0.000348	**0.00513**	0.0001	0.00005	0.0002	0.0000527	0.000292	0.0001	0.000817	0.000714	0.00004	0.000075	0.000632	0.0036	0.185	0.10	0.1	0.1	0.01
MW-93	Limit	0.001	0.00146091	0.0108	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.00265	0.0112	0.055	0.2	0.2	0.2	0.02
	Result	0.0003	**0.00152**	0.00842	0.0001	0.00005	0.0002	0.0000587	0.000396	0.0001	0.000409	0.0005	0.00004	0.000075	0.00238	0.00462	0.022	0.1	0.1	0.1	0.01
MW-94	Limit	0.001	0.001	0.00542	0.001	0.002	0.005	0.003	0.0051	0.001	0.01	0.001	0.003	0.001	0.002	0.004	2.561	0.2	0.2	3.544744	0.02
	Result	0.0003	0.000143	0.00268	0.0001	0.00005	0.0002	0.000109	0.00125	0.0001	0.000635	0.0005	0.00004	0.000075	0.00139	0.0005	0.596	0.1	0.1	2.2	0.01
MW-95	Limit	0.001	0.00111	0.004749	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.05	0.2	0.2	0.2	0.02
	Result	0.0003	0.00105	0.00463	0.0001	0.00005	0.0002	0.000071	0.0002	0.0001	0.000244	0.0005	0.00004	0.000075	0.000413	0.0005	0.01	0.10	0.1	0.1	0.01

NOTE:
Results greater than Limit Value in **Bold Red**

TABLE 4-4a
INTRAWELL PREDICTION LIMIT VALUES AND RESULTS.
CEDAR HILLS REGIONAL LANDFILL REGIONAL AQUIFER QUARTERLY AND SEMI-ANNUAL MONITORING WELLS
(Data Collected from October 01, 2021 to December 31, 2021)

Parameter		Total Antimony	Total Arsenic	Total Barium	Total Beryllium	Total Cadmium	Total Chromium	Total Cobalt	Total Copper	Total Lead	Total Nickel	Total Selenium	Total Silver	Total Thallium	Total Vanadium	Total Zinc	Nitrate as N	cis- 1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride
Downgradient																					
MW-67	Limit	0.001	0.0101	0.0298	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.00366	0.004	0.82	0.2	0.2	0.2	0.02
	Result	0.0003	0.00501	0.0205	0.0001	0.00005	0.000264	0.000434	0.000659	0.000129	0.000749	0.0005	0.00004	0.000075	0.00219	0.00216	0.0627	0.10	0.1	0.1	0.01
MW-68	Limit	0.001	0.32578304	0.0197	0.001	0.002	0.005	0.0015	0.0115999	0.001	0.005	0.001	0.003	0.001	0.0037	0.004	0.05	0.2	1	0.2	0.02
	Result	0.0003	0.0486	0.0118	0.0001	0.00005	0.0002	0.000224	0.00182	0.0001	0.000511	0.0005	0.00004	0.000075	0.00105	0.0005	0.01	0.10	0.1	0.1	0.01
MW-69*	Limit	0.001	0.00386	0.014174	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.0112	0.076	0.2	0.2	0.2	0.02
	Result	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-72	Limit	0.001	0.001	0.01619	0.001	0.002	0.005	0.003	0.00331	0.00104	0.01	0.001	0.003	0.001	0.002	0.02583313	0.068	0.2	0.2	0.2	0.02
	Result	0.0003	0.000116	0.0129	0.0001	0.00005	0.0002	0.00005	0.00035	0.0001	0.000202	0.0005	0.00004	0.000075	0.000106	0.00114	0.01	0.10	0.1	0.1	0.01
MW-74R	Limit	0.001	0.00145	0.015948	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00104	0.003	0.001	0.002	0.004	0.487	0.2	0.2	0.2	0.02
	Result	0.0003	0.000424	0.0127	0.0001	0.00005	0.0002	0.00005	0.000284	0.0001	0.00105	0.000619	0.00004	0.000075	0.00071	0.0005	0.43	0.10	0.1	0.1	0.01
MW-75	Limit	0.001	0.001	0.013927	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.004	0.05	0.2	0.2	0.2	0.02
	Result	0.0003	0.000463	**0.0141**	0.0001	0.00005	0.0002	0.00005	0.0002	0.0001	0.0001	0.0005	0.00004	0.000075	0.0000888	0.001	0.01	0.10	0.1	0.1	0.01
MW-80	Limit	0.001	0.0392	0.023	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.0117	0.028	0.2	1	0.2	0.02
	Result	0.0003	0.00315	0.0156	0.0001	0.00005	0.0002	0.00005	0.0002	0.0001	0.000111	0.0005	0.00004	0.000075	0.0000804	0.000609	0.01	0.10	0.1	0.1	0.01
MW-85	Limit	0.001	0.001	0.0076	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.00136104	0.003	0.001	0.002	0.004	1.63	0.2	0.2	0.2	0.02
	Result	0.0003	0.00076	**0.00761**	0.0001	0.00005	0.0002	0.00005	0.000331	0.0001	0.000477	0.000901	0.00004	0.000075	0.00103	0.00106	0.117	0.10	0.1	0.1	0.01
MW-86	Limit	0.001	0.0194	0.008754	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.0017	0.003	0.001	0.00336	0.004	570	0.2	0.2	0.2	0.02
	Result	0.0003	0.000873	0.00587	0.0001	0.00005	0.0002	0.00005	**0.00434**	0.0001	0.000155	0.0005	0.00004	0.000075	0.000153	0.00117	0.01	0.10	0.1	0.1	0.01
MW-87	Limit	0.001	0.0256	0.038341	0.001	0.002	0.005	0.003	0.00347	0.001	0.01	0.001	0.003	0.001	0.00468	0.00892	0.0803	0.2	0.2	0.2	0.02
	Result	0.0003	0.00327	0.0282	0.0001	0.00005	0.0002	0.000171	0.000238	0.0001	0.000258	0.0005	0.00004	0.000075	0.000765	0.000908	0.011	0.10	0.1	0.1	0.01
MW-88	Limit	0.001	0.00104969	0.002435	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.00295035	0.004	1.7	0.2	0.2	0.2	0.02
	Result	0.0003	**0.00112**	0.00216	0.0001	0.00005	0.000673	0.00005	0.0002	0.0001	0.000158	0.000561	0.00004	0.000075	**0.00303**	0.0005	0.856	0.10	0.1	0.1	0.01
MW-89	Limit	0.001	0.0266	0.0256	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.002	0.04062975	0.095	0.2	0.2	0.2	0.04
	Result	0.0003	0.00171	0.00932	0.0001	0.00005	0.0002	0.00005	0.000892	0.0001	0.00014	0.0005	0.00004	0.000075	0.000253	0.0124	0.01	0.10	0.1	0.1	0.01
MW-100	Limit	0.001	0.02044138	0.0121	0.001	0.002	0.005	0.003	0.00226	0.001	0.01	0.001	0.003	0.001	0.002	0.00922	300	0.2	0.2	0.2	0.02
	Result	0.0003	0.00147	0.00552	0.0001	0.00005	0.0002	0.0002	0.0002	0.0001	0.000534	0.0005	0.00004	0.000075	0.000151	0.000709	0.01	0.10	0.1	0.1	0.01

NOTE:
Results greater than Limit Value in **Bold Red**
* MW-69 No sample collected; well was damaged.

TABLE 4-4b
CEDAR HILLS REGIONAL LANDFILL PERCHED ZONES MONITORING WELLS
SMMARY OF WAC 173-351 APPENDIX I INTRAWELL PREDICTION LIMIT VALES
(Data Collected from January 1, 2021 - March 31, 2021)

Well	Parameter / nits	Total Antimony mg/L	Total Arsenic mg/L	Total Barium mg/L	Total Beryllium mg/L	Total Cadmium mg/L	Total Chromium mg/L	Total Cobalt mg/L	Total Copper mg/L	Total Lead mg/L	Total Nickel mg/L	Total Selenium mg/L	Total Silver mg/L	Total Thallium mg/L	Total Vanadium mg/L	Total Zinc mg/L	Nitrate as N mg/L	1,1-Dichloroethane ug/L	1,1-Dichloroethene ug/L	1,2-Dichloroethane ug/L	*cis*-1,2-Dichloroethene ug/L	*trans*-1,2-Dichloroethene *ug/L*	Trichloroethene ug/L	Vinyl Chloride ug/L
East Perched Zone Wells																								
MW-30A	Limit	0.001	0.001	0.00774	0.001	0.002	0.005	0.003	0.0103	0.001	0.01	0.001	0.003	0.001	0.00331	0.0188	17	4.24	2	0.2	8.6694783	0.2	1.4738988	0.0251
	Result	0.0005	< 0.0003	0.0037	< 0.0001	< 0.0005	0.0006	< 0.0005	0.0004	< 0.0001	0.0006	< 0.0005	< 0.0004	< 0.0001	0.0021	0.0011	7.0900	1.4100	< 0.0001	< 0.1	1.5300	< 0.1	0.8530	0.01 DU
MW-47	Limit	0.001	0.0113	0.0461776	0.001	0.002	0.005	0.003	0.0105	0.00143	0.01	0.001	0.003	0.001	0.00317	0.168	0.024	0.9934568	2	0.441	6.2592961	0.408	0.23	8.3215464
	Result	**0.0026**	< 0.0003	0.0333	< 0.0001	< 0.0005	< 0.0002	0.0004	< 0.0002	< 0.0001	0.0018	< 0.0005	< 0.0004	< 0.0001	0.0002	0.0005	0.016 T	0.6590	< 0.0001	< 0.1	2.6800	< 0.1	< 0.1	4.86 D
MW-62	Limit	0.001	0.001	0.0035161	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.00212	0.004	7.4273256	10.197126	0.2	0.2	10.303083	0.2	0.47	0.02
	Result	0.0002	< 0.0003	0.0024	< 0.0001	< 0.0005	0.0002	0.0001	0.0003	< 0.0001	0.0005	< 0.0005	< 0.0004	< 0.0001	0.0007	0.0014	2.1000	0.4000	< 0.0001	< 0.1	1.1400	< 0.1	< 0.1	0.01 DU
South Solid Waste Area Wells																								
MW-101	Limit	0.001	0.0135	0.0344092	0.001	0.002	0.005	0.003	0.00416	0.00109	0.01	0.001	0.003	0.001	0.00387	0.00729	0.062	0.21	0.2	0.233	0.277	0.2	0.2	0.8742709
	Result	**0.0113**	< 0.0003	0.0193	< 0.0001	< 0.0005	0.0003	0.0002	0.0003	< 0.0001	0.0032	< 0.0005	< 0.0004	< 0.0001	0.0004	0.0008	0.03 T	0.117 JT	< 0.0001	< 0.1	0.148 JT	< 0.1	< 0.1	0.334 D

NOTE:

Results greater than Limit Value in **RED Bold**

TABLE 4-4b
INTRAWELL PREDICTION LIMIT VALUES AND RESULTS
CEDAR HILLS REGIONAL LANDFILL PERCHED ZONES MONITORING WELLS
(Data Collected from March 01, 2021 - June 30, 2021)

Well	Parameter / Units	Total Antimony mg/L	Total Arsenic mg/L	Total Barium mg/L	Total Beryllium mg/L	Total Cadmium mg/L	Total Chromium mg/L	Total Cobalt mg/L	Total Copper mg/L	Total Lead mg/L	Total Nickel mg/L	Total Selenium mg/L	Total Silver mg/L	Total Thallium mg/L	Total Vanadium mg/L	Total Zinc mg/L	Nitrate as N mg/L	1,1-Dichloroethane ug/L	1,1-Dichloroethene ug/L	1,2-Dichloroethane ug/L	*cis*-1,2-Dichloroethene *ug/L*	*trans*-1,2-Dichloroethene ug/L	Trichloroethene ug/L	Vinyl Chloride ug/L
East Perched Zone Wells																								
MW-30A	Limit	0.001	0.001	0.0077	0.001	0.002	0.005	0.003	0.0103	0.001	0.01	0.001	0.003	0.001	0.00331	0.0188	17	4.24	2.00	0.20	8.67	0.20	1.47	0.03
	Result	< 0.0003	0.0006	0.0040	< 0.0001	< 0.00005	0.0010	0.000108	0.000633	< 0.0001	0.000925	< 0.0005	< 0.00004	< 0.0001	0.00259	0.000880	7.77	1.82	< 0.1	< 0.1	2.02	< 0.1	0.85	< 0.01
MW-47	Limit	0.001	0.0113	0.0462	0.001	0.002	0.005	0.003	0.0105	0.00143	0.01	0.001	0.003	0.001	0.00317	0.168	0.024	0.99	2.00	0.44	6.26	0.41	0.23	8.32
	Result	< 0.0003	0.0036	0.0312	< 0.0001	< 0.00005	< 0.0002	0.000347	< 0.0002	< 0.0001	0.0018	< 0.0005	< 0.00004	< 0.0001	0.000255	< 0.0005	< 0.01	0.58	< 0.1	0.11	2.15	< 0.1	< 0.1	3.56
MW-62*	Limit	0.001	0.001	0.0035	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.00212	0.004	7.4273256	10.20	0.20	0.20	10.30	0.20	0.47	0.02
	Result	< 0.0003	0.000179	0.00264	< 0.0001	< 0.00005	0.000669	0.000114	0.00103	0.000203	0.00101	< 0.0005	< 0.00004	< 0.0001	0.000768	0.00333	2.13	0.381	< 0.1	< 0.1	0.856	< 0.1	< 0.1	< 0.01
South Solid Waste Area Wells																								
MW-101	Limit	0.001	0.014	0.0344	0.001	0.002	0.005	0.003	0.00416	0.00109	0.01	0.001	0.003	0.001	0.0039	0.00729	0.062	0.21	0.20	0.23	0.28	0.20	0.20	0.87
	Result	< 0.0003	0.00502	0.0190	< 0.0001	< 0.00005	< 0.0002	0.000236	< 0.0002	< 0.0001	0.00303	< 0.0005	< 0.00004	< 0.0001	0.000291	< 0.0005	< 0.01	0.13	< 0.1	0.15	0.18	< 0.1	< 0.1	0.25

NOTE: MW-62 was not sampled due to DTW below pump.

Results greater than Limit Value in **RED Bold**

TABLE 4-4b
INTRAWELL PREDICTION LIMIT VALUES AND RESULTS
CEDAR HILLS REGIONAL LANDFILL PERCHED ZONES MONITORING WELLS
(Data Collected from July 01, 2021 - September 30, 2021)

Well	Parameter / Units	Total Antimony mg/L	Total Arsenic mg/L	Total Barium mg/L	Total Beryllium mg/L	Total Cadmium mg/L	Total Chromium mg/L	Total Cobalt mg/L	Total Copper mg/L	Total Lead mg/L	Total Nickel mg/L	Total Selenium mg/L	Total Silver mg/L	Total Thallium mg/L	Total Vanadium mg/L	Total Zinc mg/L	Nitrate as N mg/L	1,1-Dichloroethane ug/L	1,1-Dichloroethene ug/L	1,2-Dichloroethane ug/L	*cis*-1,2-Dichloroethene *ug/L*	*trans*-1,2-Dichloroethene ug/L	Trichloroethene ug/L	Vinyl Chloride ug/L
East Perched Zone Wells																								
MW-30A	Limit	0.001	0.001	0.0077	0.001	0.002	0.005	0.003	0.0103	0.001	0.01	0.001	0.003	0.001	0.00331	0.0188	17	4.24	2.00	0.20	8.67	0.20	1.47	0.03
	Result	< 0.0003	0.0005	0.0045	< 0.0001	< 0.00005	0.0009	0.0000542	0.000388	< 0.0001	0.000884	< 0.0005	< 0.00004	< 0.000075	0.00239	0.000705	6.69	2.53	< 0.1	< 0.1	2.69	< 0.1	0.94	< 0.01
MW-47	Limit	0.001	0.0113	0.0462	0.001	0.002	0.005	0.003	0.0105	0.00143	0.01	0.001	0.003	0.001	0.00317	0.168	0.024	0.99	2.00	0.44	6.26	0.41	0.23	8.32
	Result	< 0.0003	0.0028	0.035	< 0.0001	< 0.00005	0.000344	0.000312	< 0.0002	< 0.0001	0.00178	< 0.0005	< 0.00004	< 0.000075	0.00019	< 0.0005	< 0.01	0.59	< 0.1	< 0.1	1.41	< 0.1	< 0.1	2.57
MW-62*	Limit	0.001	0.001	0.0035	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.00212	0.004	7.4273256	10.20	0.20	0.20	10.30	0.20	0.47	0.02
	Result	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
South Solid Waste Area Wells																								
MW-101	Limit	0.001	0.014	0.0344	0.001	0.002	0.005	0.003	0.00416	0.00109	0.01	0.001	0.003	0.001	0.0039	0.00729	0.062	0.21	0.20	0.23	0.28	0.20	0.20	0.87
	Result	< 0.0003	0.00452	0.0193	< 0.0001	< 0.00005	0.000203	0.000257	< 0.0002	< 0.0001	0.00348 D	< 0.0005	< 0.00004	< 0.000075	0.000286	0.000705	< 0.01	< 0.1	< 0.1	0.165 JT	0.196 JT	< 0.1	< 0.1	0.18

NOTE: MW-62 was not sampled due to DTW below pump.

Results greater than Limit Value in **RED Bold**

TABLE 4-4b
INTRAWELL PREDICTION LIMIT VALUES AND RESULTS
CEDAR HILLS REGIONAL LANDFILL PERCHED ZONES MONITORING WELLS
(Data Collected from October 01, 2021 - December 31, 2021)

Well	Parameter / Units	Total Antimony mg/L	Total Arsenic mg/L	Total Barium mg/L	Total Beryllium mg/L	Total Cadmium mg/L	Total Chromium mg/L	Total Cobalt mg/L	Total Copper mg/L	Total Lead mg/L	Total Nickel mg/L	Total Selenium mg/L	Total Silver mg/L	Total Thallium mg/L	Total Vanadium mg/L	Total Zinc mg/L	Nitrate as N mg/L	1,1-Dichloroethane ug/L	1,1-Dichloroethene ug/L	1,2-Dichloroethane ug/L	*cis*-1,2-Dichloroethene ug/L	*trans*-1,2-Dichloroethene ug/L	Trichloroethene ug/L	Vinyl Chloride ug/L
East Perched Zone Wells																								
MW-30A	Limit	0.001	0.001	0.0077	0.001	0.002	0.005	0.003	0.0103	0.001	0.01	0.001	0.003	0.001	0.00331	0.0188	17	4.24	2.00	0.20	8.67	0.20	1.47	0.03
	Result	0.0003	0.0005	0.0053	0.0001	0.00005	0.0010	0.0000964	0.000730	0.000113	0.00125	0.0005	0.00004	0.000075	0.00241	0.001210	4.32	1.72	0.10	0.10	3.74	0.10	0.83	0.01
MW-47	Limit	0.001	0.0113	0.0462	0.001	0.002	0.005	0.003	0.0105	0.00143	0.01	0.001	0.003	0.001	0.00317	0.168	0.024	0.99	2.00	0.44	6.26	0.41	0.23	8.32
	Result	0.0003	0.0005	0.033	0.0001	0.00005	0.000366	0.000359	0.000431	0.000111	0.00167	0.0005	0.00004	0.000075	0.00167	0.000626	0.01	0.40	0.10	0.10	0.97	0.10	0.10	1.46
MW-62*	Limit	0.001	0.001	0.0035	0.001	0.002	0.005	0.003	0.002	0.001	0.01	0.001	0.003	0.001	0.00212	0.004	7.4273256	10.20	0.20	0.20	10.30	0.20	0.47	0.02
	Result																							
South Solid Waste Area Wells																								
MW-101	Limit	0.001	0.014	0.0344	0.001	0.002	0.005	0.003	0.00416	0.00109	0.01	0.001	0.003	0.001	0.0039	0.00729	0.062	0.21	0.20	0.23	0.28	0.20	0.20	0.87
	Result	0.0003	0.011	0.0183	0.0001	0.00005	0.00066	0.000291	0.0002	0.0001	0.00367	0.0005	0.00004	0.000075	0.000434	0.000623	0.0591	0.16	0.10	0.15	0.23	0.10	0.10	0.27

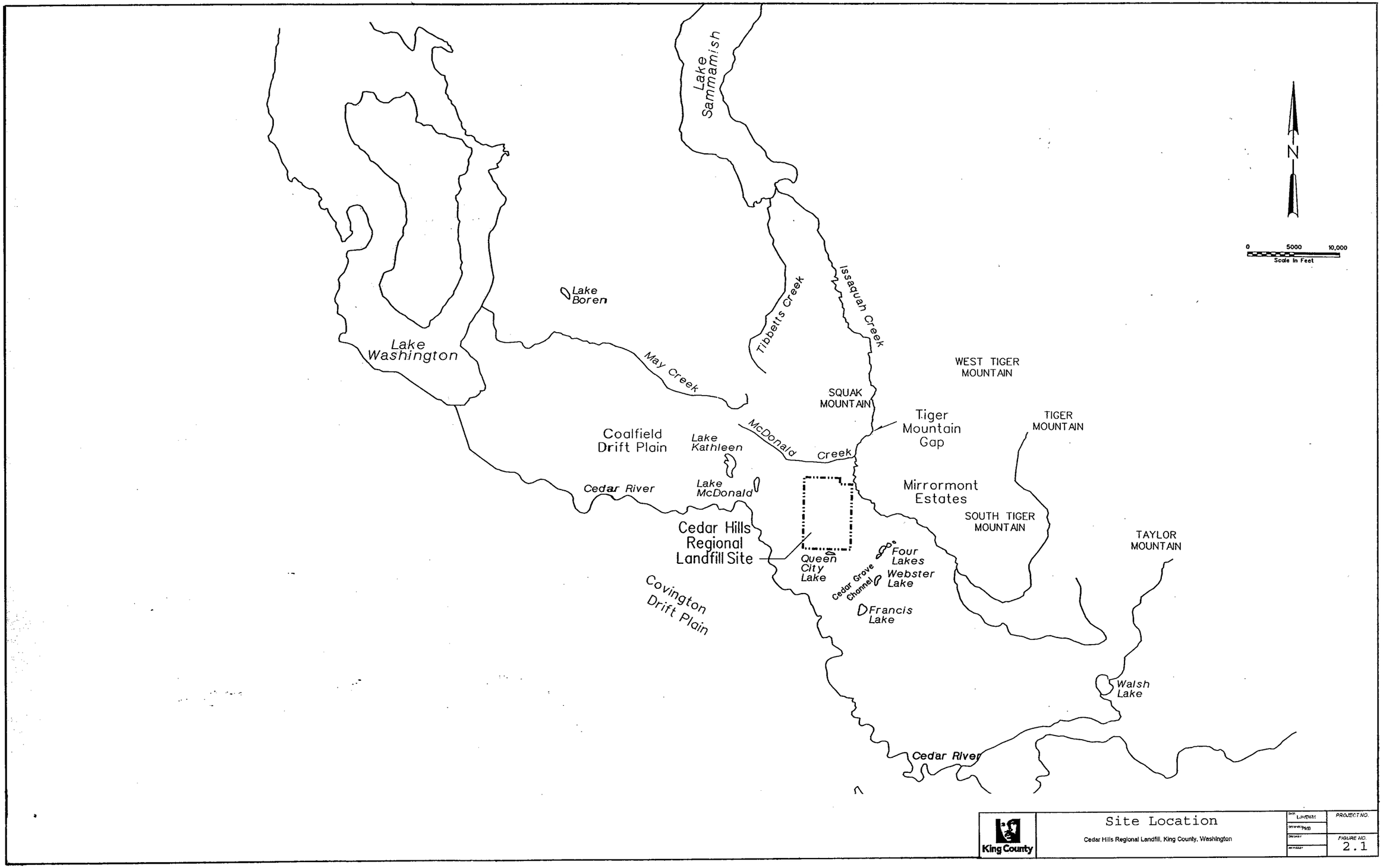
NOTE: MW-62 was not sampled due to DTW below pump.

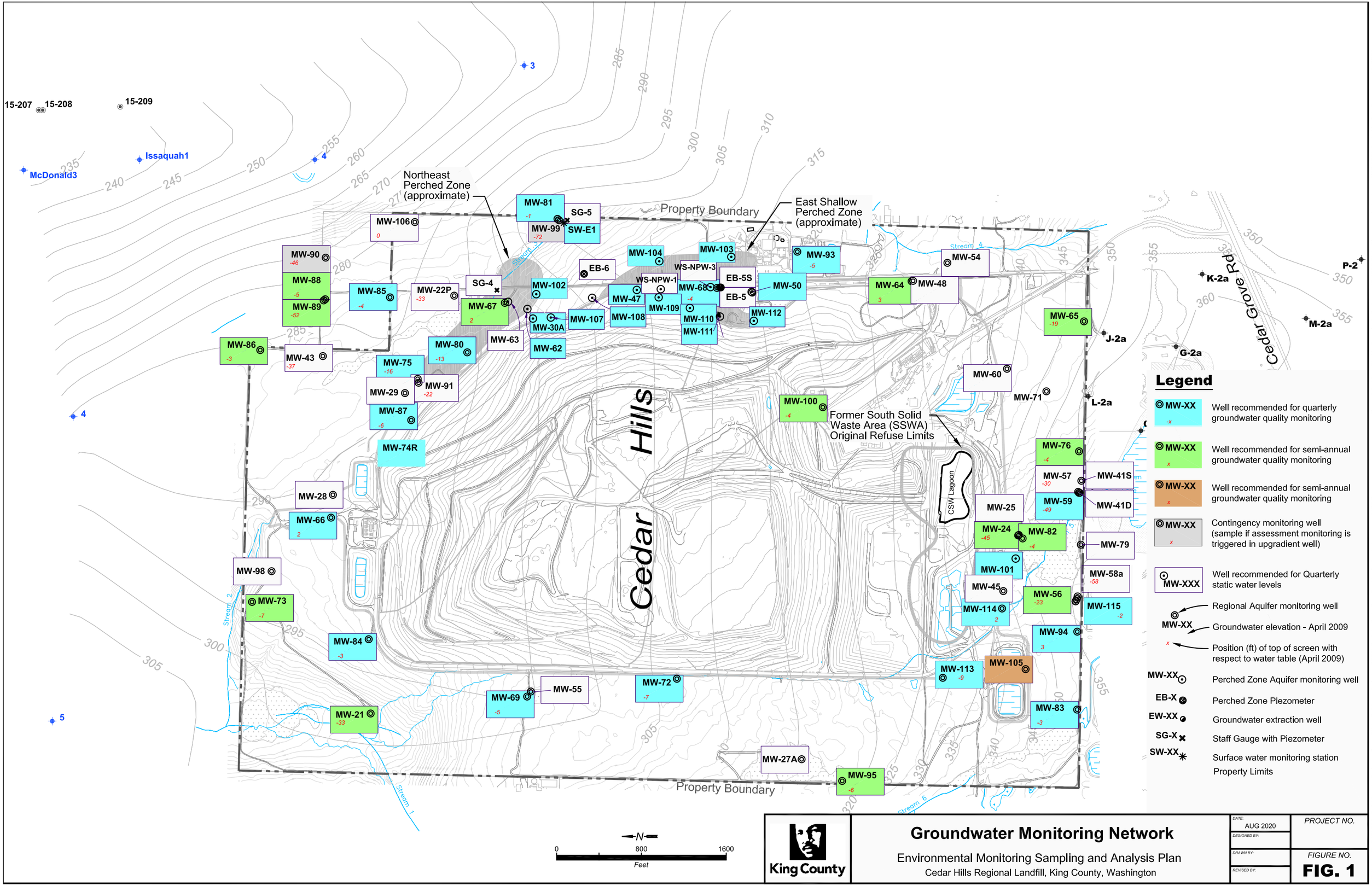
Results greater than Limit Value in **RED Bold**

PART 3

Figures

Figure 2-1	**Site Location**
Figure 2-2a	**Groundwater Monitoring Network**
Figure 2-2b	**Surface Water and Stormwater Monitoring Network**
Figure 2-2c	**Leachate Monitoring Network**
Figure 2-3	**Regional Cross-section N-S**
Figure 2-4	**Regional Cross-section NW-SE**
Figure 2-5	**Regional Cross Section Location Map**
Figure 4-1	**Regional Aquifer Flow Paths**
Figure 4-2	**Regional Aquifer Monitoring Well Locations and Capture Zones**


Lake Sammamish
N
0 5000 10,000
Scale in Feet
Lake Boren
Lake Washington
May Creek
Tibbetts Creek
Issaquah Creek
WEST TIGER MOUNTAIN
SQUAK MOUNTAIN
Tiger Mountain Gap
TIGER MOUNTAIN
Coalfield Drift Plain
Lake Kathleen
McDonald Creek
Cedar River
Lake McDonald
Mirrormont Estates
SOUTH TIGER MOUNTAIN
TAYLOR MOUNTAIN
Cedar Hills Regional Landfill Site
Queen City Lake
Four Lakes
Cedar Grove Channel
Webster Lake
Francis Lake
Covington Drift Plain
Walsh Lake
Cedar River
King County
Site Location
Cedar Hills Regional Landfill, King County, Washington
PROJECT NO.
FIGURE NO.
2.1



Legend

- MW-XX -x — Well recommended for quarterly groundwater quality monitoring
- MW-XX x — Well recommended for semi-annual groundwater quality monitoring
- MW-XX x — Well recommended for semi-annual groundwater quality monitoring
- MW-XX x — Contingency monitoring well (sample if assessment monitoring is triggered in upgradient well)
- MW-XXX — Well recommended for Quarterly static water levels
- MW-XX — Regional Aquifer monitoring well
- MW-XX — Groundwater elevation - April 2009
- x — Position (ft) of top of screen with respect to water table (April 2009)
- MW-XX — Perched Zone Aquifer monitoring well
- EB-X — Perched Zone Piezometer
- EW-XX — Groundwater extraction well
- SG-X — Staff Gauge with Piezometer
- SW-XX — Surface water monitoring station
- Property Limits

King County

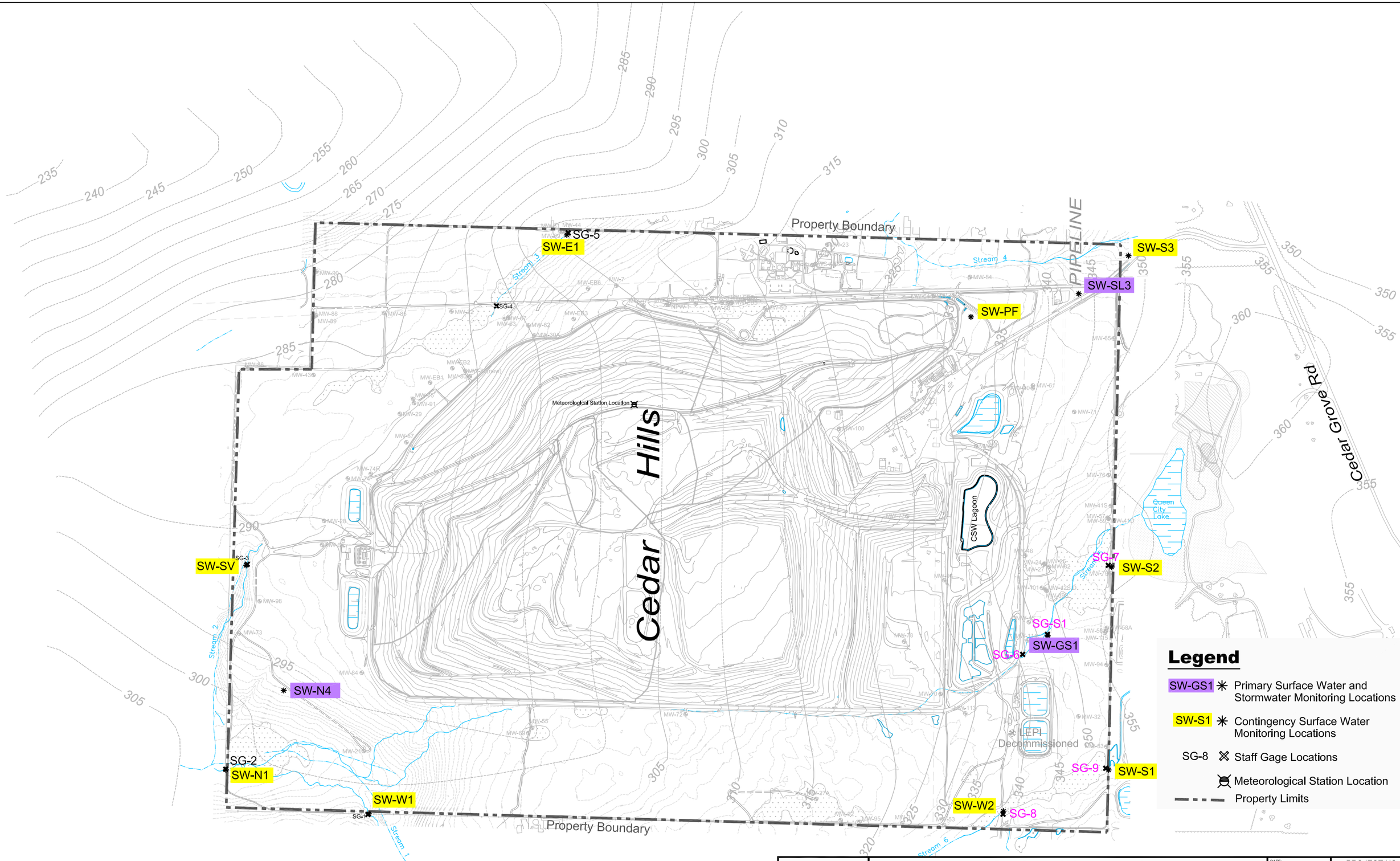
Groundwater Monitoring Network

Environmental Monitoring Sampling and Analysis Plan

Cedar Hills Regional Landfill, King County, Washington

DATE: AUG 2020
DESIGNED BY:
DRAWN BY:
REVISED BY:
PROJECT NO.
FIGURE NO. **FIG. 1**

CAD Path: S:\CAD\CEDARHILL\CH Monitoring well and GP for CLEE quarterly Aug 2020\Fig 7.1 - Fig 1 Fig 1 GW Monitoring Network Aug 2020 2 change background map.dwg Figure 7.1 (11 x 17) || Coordinate System: NAD 1983 State Plane Washington North FIPS 4601 Feet || Date Saved: Jan 14, 2021 4:13pm User: uedag



Legend

- SW-GS1 ✳ Primary Surface Water and Stormwater Monitoring Locations
- SW-S1 ✳ Contingency Surface Water Monitoring Locations
- SG-8 ✳ Staff Gage Locations
- Meteorological Station Location
- Property Limits

King County

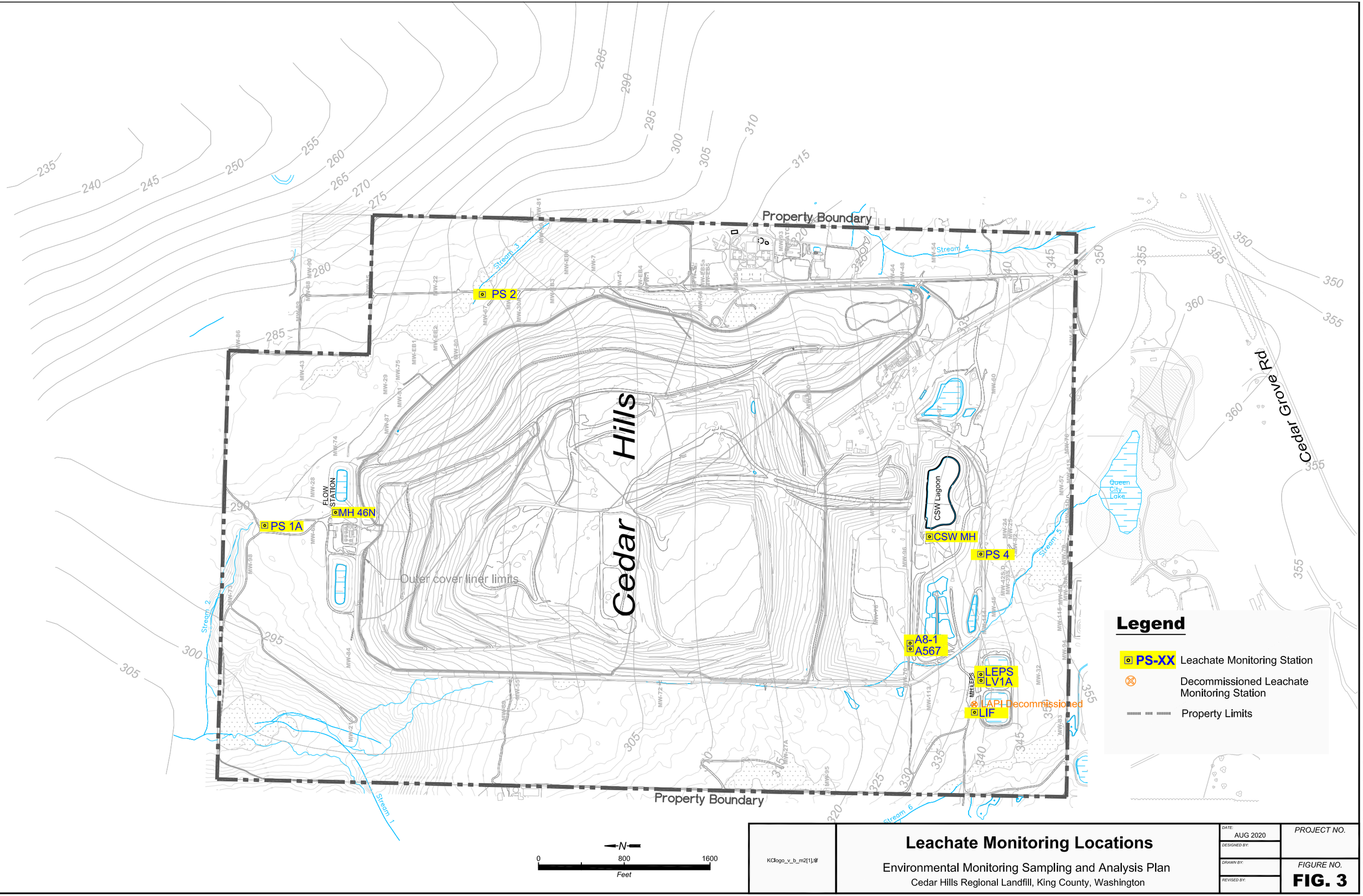
Surface Water and Storm Monitoring Network

Environmental Monitoring Sampling and Analysis Plan

Cedar Hills Regional Landfill, King County, Washington

DATE: AUG 2020	PROJECT NO.
DESIGNED BY:	
DRAWN BY:	FIGURE NO.
REVISED BY:	FIG. 2

CAD Path: S:\CAD\CEDARHIL\CH Monitoring well and GP for CLEE quarterly Aug 2020\Fig 2\Fig 2 Surface water and stormwater monitoring network.dwg Figure 7.1 (11 x 17) || Coordinate System: NAD 1983 State Plane Washington North FIPS 4601 Feet || Date Saved: Jan 14, 2021 9:16am || User:



KClogo_v_b_m2[1].tif

Leachate Monitoring Locations

Environmental Monitoring Sampling and Analysis Plan

Cedar Hills Regional Landfill, King County, Washington

DATE: AUG 2020

DESIGNED BY:

DRAWN BY:

REVISED BY:

PROJECT NO.

FIGURE NO.

FIG. 3

CAD Path: S:\CAD\CEDARHILL\CH Monitoring well and GP for CLEE quarterly Aug 2020\Fig 3\Fig 3 Leachate map rev 12-21-20.dwg Figure 7.1 (11 x 17) || Coordinate System: NAD 1983 State Plane Washington North FIPS 4601 Feet || Date Saved: Jan 14, 2021 4:21pm || User: uedag

North

South

ELEVATION (FEET, NGVD 29)

Refuse

Unit B

Unit C

Unit D

Unit E

Unit F

Bend in Section

16-9 (Offset 260' SE)

16-10 (GWOS-4) (Offset 10' SW)

MW-86 (Offset 260' SW)

MW-43

MW-75 (Offset 260' SW)

MW-91 (Offset 260' NE)
Intersection - Cross section R2-R2'

MW-87 (Offset 120' SE)

A5B-10 (Offset 510' W)

A6BH-5 (Offset 40' W)

MW-100 (Offset 410' W)

A6BH-4 (Offset 20' W)

MW-77 (Offset 370' E)

GP-54 (Offset 330' W)

MW-76

Queen City Lake

B(3) (Offset 100' W) (QCF)

F(2) (Offset 170' W) (QCF)

15-100 (Offset 510' E)

McDonald Creek

MW-67

840
760
680
600
520
440
360
280
200
120

0
800
1600
2400
3200
4000
4800
5600
6200
7000
7800
8600
9200
10000
10800
11600

Stratigraphic Units from Site Wide Report (2004)

Unit B	Vashon Recessional Outwash
Unit C	Vashon Till and Ice contact deposits, typically silty gravels
Unit D	Alluvial gravels, typically silty gravels with interbedded clean sands and gravels (Stratified Drift)
Unit E	Lacustrine and low energy fluvial deposits, predominantly sand and silty-sand w/ silt lenses
Unit F	Fluvial sands and silts with incised gravel channels

Legend

Well screen or open interval and water level April 2009. Open symbol from ATD or well log. Water table shown for wells screened within 10 feet of water table surface.

Approximate geologic unt contact (from site wide report, 2004)

Hydrostratigraphic unit within Regional Aquifer

Less permeable silts, silty sands, silty gravels, clays

More permeable sands, gravel, and sand and gravel mixtures

REPORTED SOIL DESCRIPTIONS

(Soil descriptions not shown above Unit E except for off-site wells)

Cl	= Clay	Pt	= Peat	occ	= occasional
Si	= Silt	Org	= Organic	sc	= scattered
Sa	= Sand	Pum	= Pumice	tr	= trace
Gr	= Gravel	Volc	= Volcanic	w/	= with
Co	= Cobbles	Wd	= Wood	li	= little
Bo	= Boulders			s	= some
Dr	= Dropstone	cem	= cemented	+	= and
Hp	= Hardpan	int	= interbeds	abd	= abundant
Till	= Glacial Till	lam	= laminations	f	= fine
Ts	= Topsoil	lay	= layers	m	= medium
		len	= lenses	c	= coarse
		ox	= oxidized	wb	= water bearing

Scale:
1" = 80' Vertical
1" = 800' Horizontal

0 800 1600
Feet

King County

Regional Cross Section North – South

Cedar Hills Regional Landfill, King County, Washington

DATE	May 2009
DESIGNED BY	LJH/EWM
DRAWN BY	PMB
REVISED BY	EWM (March 2010)
PROJECT NO.	040122
FIGURE NO.	2.3

Q:\Cedar Hills\2009-05 Regional Zone Profiles\040122-R1_32.dwg

Cedar Hills Regional Landfill
Annual Report
Attachment F

Northwest

Southeast

ELEVATION (FEET, NGVD 29)

760
680
600
520
440
360
280
200
120

0 800 1600 2400 3200 4000 4800 5600 6400 7200 8000 8800 9600 10400 11200 12000

McDonald Creek

Stream 2

MW-73
MW-98 (Offset 110' SW)
P-2 (Offset 200' SW)
MW-66 (Offset 80' NE)
MW-28 (Offset 40' SW)
MW-74R (Offset 30' NE)
MW-87 (Offset 90' NE)
Intersection - Cross section R1-R1'
MW-91 (Offset 120' SW)
MW-75 (Offset 110' SW)
MW-80 (Offset 100' NE)
MW-22P (Offset 340' SW)
MW-67 (Offset 80' NE)
MW-81 (Offset 40' SW)
MW-99 (Offset 10' SW)
Intersection - Cross section R3-R3'
22-100 (GWOS-1) (Offset 490' E)

Unit B
Unit C
Unit D
Unit E
Unit F

dry

Hp,Bo cem
Hp,Ba,Gr
cem Hp

Legend

Well screen or open interval and water level April 2009. Open symbol from ATD or well log. Water table shown for wells screened within 10 feet of water table surface.

Approximate geologic unit contact (from site wide report, 2004)

Hydrostratigraphic unit within Regional Aquifer

Less permeable silts, silty sands, silty gravels, clays

More permeable sands, gravel, and sand and gravel mixtures

Stratigraphic Units from Site Wide Report (2004)

Unit B Vashon Recessional Outwash

Unit C Vashon Till and Ice contact deposits, typically silty gravels

Unit D Alluvial gravels, typically silty gravels with interbedded clean sands and gravels (Stratified Drift)

Unit E Lacustrine and low energy fluvial deposits, predominantly sand and silty-sand w/ silt lenses

Unit F Fluvial sands and silts with incised gravel channels

REPORTED SOIL DESCRIPTIONS

(Soil descriptions not shown above Unit E except for off-site wells)

Cl = Clay, Si = Silt, Sa = Sand, Gr = Gravel, Co = Cobbles, Bo = Boulders, Dr = Dropstone, Hp = Hardpan, Till = Glacial Till, To = Topsoil, Pt = Peat, Org = Organic, Pum = Pumice, Volc = Volcanic, Wd = Wood

occ = occasional, sc = scattered, tr = trace, w/ = with, li = little, s = some, + = and, abd = abundant, f = fine, m = medium, c = coarse

cem = cemented, int = interbeds, lam = laminations, lay = layers, len = lenses, ox = oxidized, wb = water bearing

Scale:
1" = 80' Vertical
1" = 800' Horizontal

0 800 1600
Feet

King County

Regional Cross Section Northwest – Southeast

Cedar Hills Regional Landfill, King County, Washington

DATE: May 2009	PROJECT NO. 040122
DESIGNED BY: LJH/EWM	
DRAWN BY: PMB	FIGURE NO. 2.4
REVISED BY: EWM (March 2010)	

Q:\Cedar Hills\2009-05 Regional Zone Profiles\040122-R2_33.dwg

Cedar Hills Regional Landfill
Annual Report
Attachment F

Excerpted From: *Cedar Hills Regional Aquifer Regional Aquifer Technical Memorandum* 2011

R1
R2
R2'
R3
R3'
R1'
Issaquah
Hills Center
Picnic Area
ROAD
Stream 2
Stream 3
Stream 4
Stream 5
Stream 6
15-100
16-9
16-10 (GWOS-4)
22-5
22-3
22-100 (GWOS-1)
22-2 (GWOS-2)
22-1
27-100 (GWOS-3, Well #1)
27-101 (GWOS-3, Well #2)
MW-106
MW-EE
MW-81
MW-99
MW-44
MW-H
MW-90
MW-88
MW-89
MW-85
MW-22P
MW-67
MW-86
MW-43
MW-80
MW-75
MW-91
MW-87
MW-74R
MW-74
MW-66
MW-73
MW-84
MW-21
MW-69
MW-72
MW-93
ATC-1
NPW-1
NPW-2
NPW-3
MW-68
MW-54
MW-65
MW-61
MW-60
MW-71
MW-100
MW-77
MW-78
MW-70
MW-94
MW-83
MW-75
MW-57
MW-59
MW-24
MW-82
MW-58A
MW-56
HC-3
A(2)
HC-7A
D(2)
D(2a)
D(3)
V(2a)
Queen City Lake
QUEEN CITY FARMS
CEDAR GROVE RD.
CEDAR GROVE COMPOST
STONEWAY SAND AND GRAVEL
4-TEK SITE
Vertical Barrier Wall (approximate)
IRM Area Remedial Unit (approximate)
Aquifer 1 Remedial Unit (approximate)
Buried Drum Area Remedial Unit (approximate)
4-Tek Soil Excavation (approximate)
Landfill Cover Boundary (Typical)
MW-1
MW-2
MW-3
MW-4
MW-5
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-92
MW-95
MW-53
MW-27
MW-27A
P3
P5
P6
P8
Q(2)
T(2a)
T(3a)
T(2)
K(2a)
K(2)
M(2)
M(3)
M(2a)
J(2)
J(2a)
G(2a)
G(2)
G(3)
I(2)
I(2a)
I(3a)
I(3)
L(2)
L(2a)
HC-2
C(2)
C(2a)
B(1)
B(2)
B(3)
Y-1
Z-1
E(1)
E(1a)
E(2)
E(2a)
F(2)
F(2a)
U(3a)
U(2)
S(2)
S(2a)
R(2)
R(2a)
N
0
800
1600
Feet

Legend

R1 R1'	Regional Aquifer Cross Section
	Well on Cross Section
MW-73	Regional Aquifer Monitoring Well
A55H-4	Soil Boring
MW-55	Perched Zone Monitoring Well
A(2)	Queen City Farms/4-TEK Monitoring Well
22-2 (GWOS-2)	Water Supply Well
GP-54	Gas Probe
A55H-4	Soil Boring
MW-27	Decommissioned Perched Zone Monitoring Well
MW-EE	Decommissioned Regional Aquifer Monitoring Well
SG-3	Staff Gauge
SW-SV	Surface Water Supply Location

King County

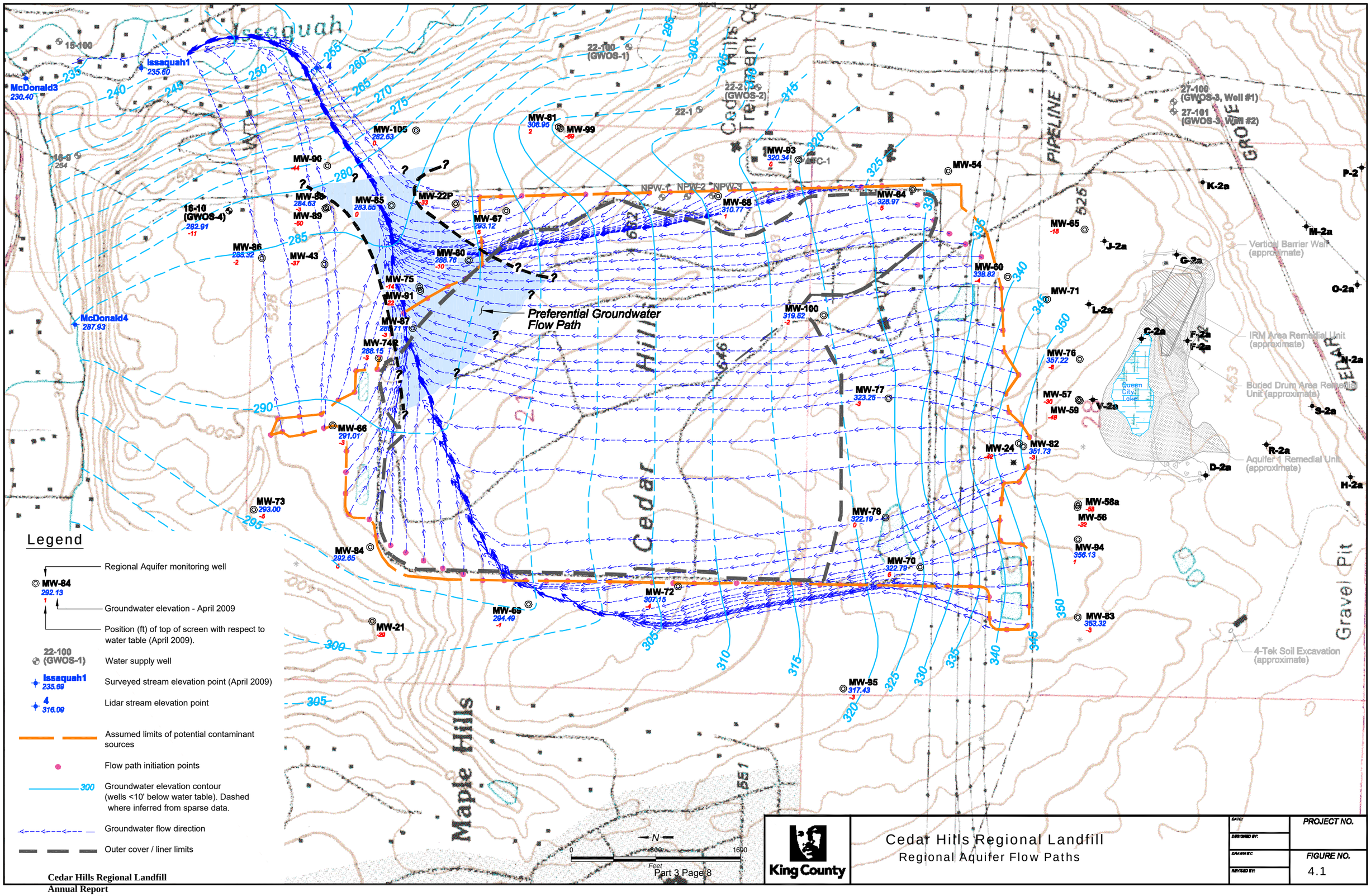
Regional Cross Section Location Map

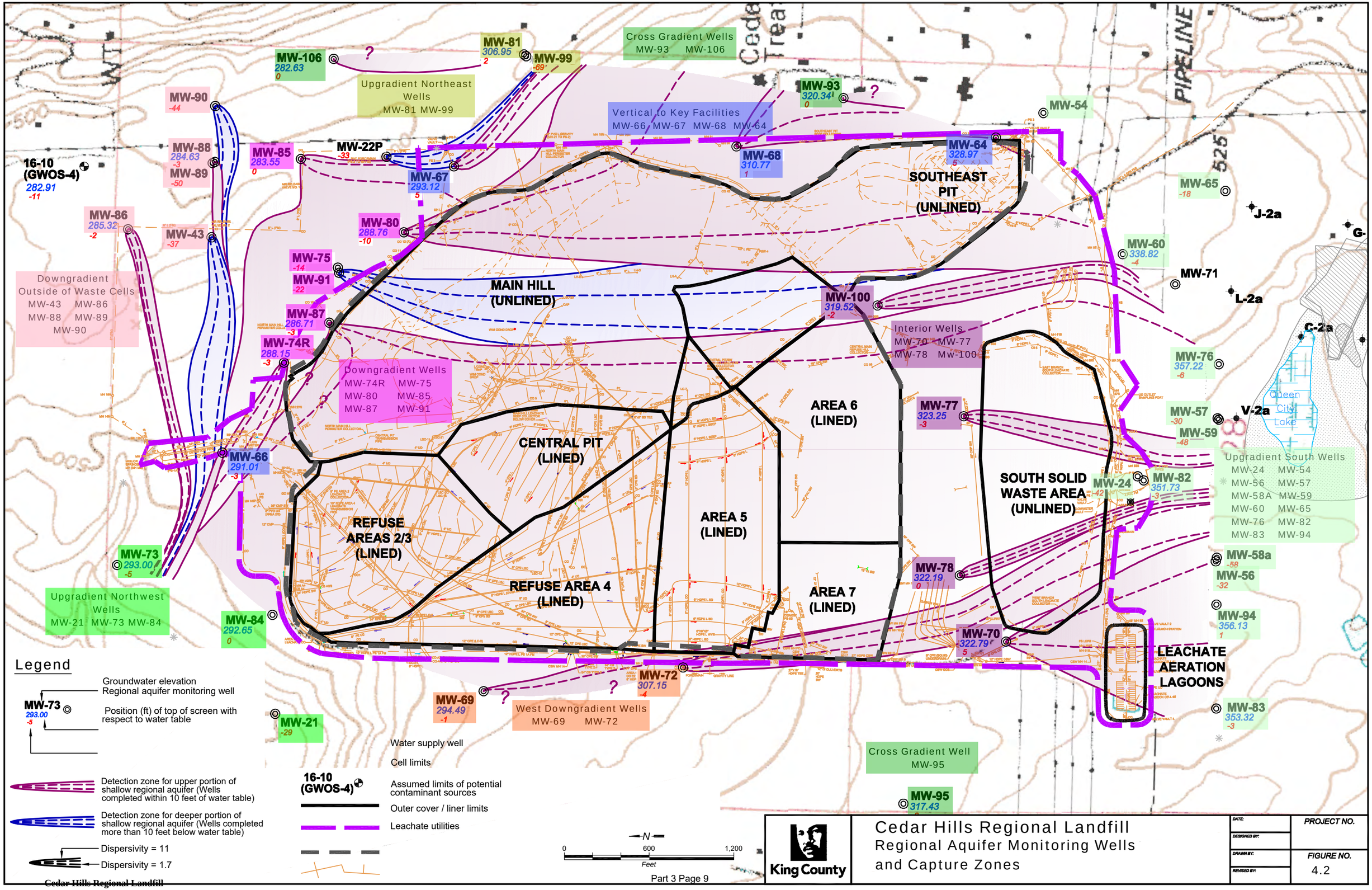
Regional Aquifer Technical Memorandom

Cedar Hills Regional Landfill, King County, Washington

DATE: May 2009	PROJECT NO. 040122
DESIGNED BY: LJH/EWM	
DRAWN BY: PMB	FIGURE NO. 2.5
REVISED BY: EWM (June 2010)	

Q:\Cedar Hills\2009-05 Regional Zone Profiles\040122-02.dwg


Issaquah
Cedar Hills Treatment Center
PIPELINE
GROUP
Cedar
Maple Hills
Gravel Pit
Preferential Groundwater Flow Path
Vertical Barrier Wall (approximate)
IRM Area Remedial Unit (approximate)
Buried Drum Area Remedial Unit (approximate)
Aquifer 1 Remedial Unit (approximate)
4-Tek Soil Excavation (approximate)
Queen City Lake
15-100
Issaquah1 235.60
McDonald3 230.40
McDonald4 287.93
15-9 264
15-10 (GWOS-4) 282.91 -11
22-100 (GWOS-1)
22-2 (GWOS-2)
22-1
27-100 (GWOS-3, Well #1)
27-101 (GWOS-3, Well #2)
MW-81 306.95 2
MW-99 -69
MW-105 282.63 0
MW-90 -44
MW-88 284.63 -3
MW-85 283.85 0
MW-89 -50
MW-86 285.32 -2
MW-43 -37
MW-22P -33
MW-67 293.12 6
MW-80 288.76 -10
MW-75 -14
MW-91 -22
MW-87 285.71 -3
MW-74R 288.15 1 -3
MW-66 291.01 -3
MW-73 293.00 -5
MW-84 292.65 0
MW-21 -29
MW-68 294.49 -1
MW-72 307.15 -4
MW-93 320.34 0
SC-1
NPW-1 NPW-2 NPW-3
MW-54
MW-64 328.97 5
MW-65 -18
MW-68 310.77 1
MW-60 336.82 -4
MW-71
MW-100 319.82 -2
MW-77 323.25 -3
MW-76 357.22 -8
MW-57 -30
MW-59 -48
MW-24 -42
MW-82 351.73 -3
MW-78 322.19 0
MW-70 322.79 5
MW-95 317.43 -3
MW-58a -58
MW-56 -32
MW-94 356.13 1
MW-83 353.32 -3
K-2a
P-2
M-2a
G-2a
O-2a
J-2a
L-2a
C-2a
F-2a
N-2a
V-2a
S-2a
R-2a
D-2a
H-2a
Legend
Regional Aquifer monitoring well
MW-84 292.13 1
Groundwater elevation - April 2009
Position (ft) of top of screen with respect to water table (April 2009).
22-100 (GWOS-1) Water supply well
Issaquah1 235.69 Surveyed stream elevation point (April 2009)
4 316.09 Lidar stream elevation point
Assumed limits of potential contaminant sources
Flow path initiation points
300 Groundwater elevation contour (wells <10' below water table). Dashed where inferred from sparse data.
Groundwater flow direction
Outer cover / liner limits
N
0 800 1600
Feet
King County
Cedar Hills Regional Landfill
Regional Aquifer Flow Paths
DATE:
DESIGNED BY:
DRAWN BY:
REVISED BY:
PROJECT NO.
FIGURE NO.
4.1


Cross Gradient Wells
MW-93 MW-106
Upgradient Northeast Wells
MW-81 MW-99
Vertical to Key Facilities
MW-66 MW-67 MW-68 MW-64
Downgradient Outside of Waste Cells
MW-43 MW-86
MW-88 MW-89
MW-90
Downgradient Wells
MW-74R MW-75
MW-80 MW-85
MW-87 MW-91
Interior Wells
MW-70 MW-77
MW-78 Mw-100
Upgradient Northwest Wells
MW-21 MW-73 MW-84
West Downgradient Wells
MW-69 MW-72
Cross Gradient Well
MW-95
Upgradient South Wells
MW-24 MW-54
MW-56 MW-57
MW-58A MW-59
MW-60 MW-65
MW-76 MW-82
MW-83 MW-94
MW-106 282.63 0
MW-81 306.95 2
MW-99 -69
MW-93 320.34 0
MW-54
MW-90 -44
MW-88 284.63 -3
MW-89 -50
MW-85 283.55 0
MW-22P -33
MW-67 293.12 5
MW-68 310.77 1
MW-64 328.97 5
16-10 (GWOS-4) 282.91 -11
MW-86 285.32 -2
MW-43 -37
MW-80 288.76 -10
MW-65 -18
J-2a
G-
MW-60 338.82 -4
MW-71
L-2a
MW-75 -14
MW-91 -22
MW-87 286.71 -3
MW-74R 288.15 -3
MW-100 319.52 -2
C-2a
MW-76 357.22 -6
MW-57 -30
V-2a
MW-59 -48
Queen City Lake
MW-66 291.01 -3
MW-77 323.25 -3
MW-24 -42
MW-82 351.73 -3
MW-73 293.00 -5
MW-84 292.65 0
MW-78 322.19 0
MW-58a -58
MW-56 -32
MW-94 356.13 1
MW-70 322.79 5
MW-72 307.15 -4
MW-69 294.49 -1
MW-21 -29
MW-83 353.32 -3
MW-95 317.43
MAIN HILL (UNLINED)
SOUTHEAST PIT (UNLINED)
CENTRAL PIT (LINED)
AREA 6 (LINED)
AREA 5 (LINED)
AREA 7 (LINED)
REFUSE AREAS 2/3 (LINED)
REFUSE AREA 4 (LINED)
SOUTH SOLID WASTE AREA (UNLINED)
LEACHATE AERATION LAGOONS
PIPELINE
525
Legend
Groundwater elevation
Regional aquifer monitoring well
Position (ft) of top of screen with respect to water table
Detection zone for upper portion of shallow regional aquifer (Wells completed within 10 feet of water table)
Detection zone for deeper portion of shallow regional aquifer (Wells completed more than 10 feet below water table)
Dispersivity = 11
Dispersivity = 1.7
Water supply well
Cell limits
Assumed limits of potential contaminant sources
Outer cover / liner limits
Leachate utilities
N
0
600
1,200
Feet
King County
Cedar Hills Regional Landfill
Regional Aquifer Monitoring Wells and Capture Zones
DATE:
DESIGNED BY:
DRAWN BY:
REVISED BY:
PROJECT NO.
FIGURE NO.
4.2

PART 4

Potentiometric Groundwater Surface Maps and Groundwater Velocity Calculations

Regional Aquifer

First Quarter 2021

Potentiometric Surface Maps and Aquifer Flow Calculations

King County

Water and Land Resources Division
Department of Natural Resources and Parks
King Street Center
201 South Jackson Street, Suite 5600
Seattle, WA 98104-3855
206-477-4800 Fax 206-296-0192
TTY Relay: 711

TECHNICAL MEMORANDUM

May 12, 2021

TO: Subrina Tahsin, Engineer II, Facility Engineering and Science Section, Solid Waste Division, Department of Natural Resources and Parks (DNRP)

FM: Sevin Bilir, Environmental Scientist IV, Science and Technical Support Section, Water and Land Resources Division, DNRP

RE: Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations
First Quarter 2021 Results
Cedar Hills Regional Landfill, King County, Washington
Project No. 1126980 – Task 25.106

The King County Water and Land Resources Division (WLRD) submits this memorandum report on groundwater conditions during the first quarter of 2021 for the regional aquifer beneath the Cedar Hills Regional Landfill (Landfill), in accordance with the *Proposal for Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations* (WLRD, 2021). King County Solid Waste Division (SWD) personnel measured regional aquifer groundwater levels at the Landfill on January 4, 2021. These measurements were received by WLRD on March 1 through April 16, 2021 and were used to:

1. Evaluate the potentiometric groundwater surface elevation for the regional aquifer;
2. Determine the groundwater flow direction and horizontal gradient for the regional aquifer; and
3. Calculate the groundwater velocity of the regional aquifer.

When comparing results from this report to that of the fourth quarter of 2020, there have been no significant changes in the interpreted regional aquifer groundwater conditions.

Groundwater Elevation Data

The SWD measured regional aquifer groundwater level measurements at 43 monitoring wells during the first quarter of 2021. These wells are completed in the regional aquifer as referred to in *Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill* (Aspect, 2010) and in *Area 8 Development, Monitoring Well Replacement Report* (HDR, 2021).

Table A-1 lists the groundwater monitoring well identifications, locations, construction details, measured depth to groundwater levels, and calculated groundwater elevations for monitoring wells screened in the regional aquifer. A total of 25 wells had measured water levels within ten feet of the top of the screened interval and were used for mapping potentiometric surface contours.

Figure A-1 shows calculated groundwater elevations at well locations and interpreted groundwater potentiometric surface contours for the regional aquifer based on measurements taken on January 4, 2021.

Direction of Groundwater Flow

Interpreted groundwater flow directions in the regional aquifer, based on measurements taken on January 4, 2021, are shown in Figure A-1. Calculated groundwater elevations during the first quarter of 2021 indicate that groundwater in the regional aquifer generally flows to the:

- northeast and north-northeast in the *northern portion* of the Landfill,
- north and north-northwest beneath the *central portion* of the Landfill, and
- north beneath the *southern portion* of the Landfill with minor components of flow to the northwest and north-northeast.

Table A-2 lists the flow direction for each portion of the regional aquifer beneath the Landfill based on measurements taken on January 4, 2021 and mapping of groundwater elevation contours.

Groundwater Parameters

Table A-2 presents a summary of the groundwater parameters. Mean horizontal hydraulic conductivity and effective porosity values were based on the ranges referred to in *Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill* (Aspect, 2010). The mean horizontal hydraulic conductivity for the regional aquifer beneath the Landfill is 60 feet per day (ft/d) in the northern and central portions and 0.18 ft/d in the southern portion of the regional aquifer beneath the Landfill (Aspect 2010). Average effective porosities are 24 and 26 percent, respectively, for the same areas (Aspect 2010).

The hydraulic gradient is greatest under the southern portion of the Landfill (0.011 ft/ft) and slightly lower under the rest of the Landfill based on measurements made during the first quarter of 2021.

Average horizontal groundwater velocities for the regional aquifer beneath the Landfill, are based on spatial differences in aquifer parameters, hydraulic gradients, and calculations using the following formula:

where:

$$v = \frac{1}{n_{eff}} K \frac{\Delta H}{\Delta L}$$

v = Groundwater velocity [L/t]
n_{eff} = Effective porosity [dimensionless]
K = Hydraulic conductivity [L/t]
$\frac{\Delta H}{\Delta L}$ = Hydraulic gradient [L/L]

The mean horizontal groundwater velocities for the regional aquifer beneath the Landfill, are lowest under the southern portion of the Landfill (0.008 ft/d) and much greater under the rest of the Landfill (up to 2.08 ft/d under the central portion).

References

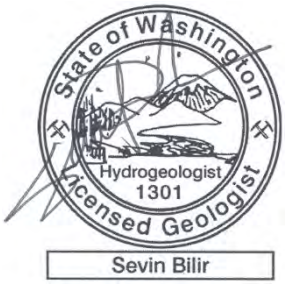
Aspect Consulting, LLC. (Aspect). 2010. Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill. Unpublished work. April 30.

HDR Engineering, Inc. (HDR). 2021. Area 8 Development, Monitoring Well Replacement Report. Prepared in association with Udaloy Environmental Consulting (UEC). Cedar Hills Regional Landfill. Contract No. E00284E12. July.

King County Water and Land Resources Division (WLRD). 2021. Proposal for 2021 Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations; King County Closed Landfills (Cedar Falls, Enumclaw, Hobart and Vashon Island) and Cedar Hills Regional Landfill. April 15.

Thank you for the opportunity to provide hydrogeologic services to SWD. If you have any questions, please feel free to contact me at 206-477-4646 or sevin.bilir@kingcounty.gov.

Sincerely,



Sevin Bilir, WA LHG
Environmental Scientist IV

King County Water and Land Resources Division

Enclosures:

Table A-1:	Well Details and Groundwater Elevations – First Quarter 2021
Table A-2:	Groundwater Parameters – First Quarter 2021
Figure A-1:	Groundwater Potentiometric Surface Map – First Quarter 2021 – Regional Aquifer

Table A-1: Well Details and Groundwater Elevations – First Quarter 2021

Cedar Hills Regional Landfill
King County, Washington

							January 4, 2021	
	Well Identification	Easting[2] (ft)	Northing[2] (ft)	Top of Casing Elevation (ft MSL[3])	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Measured Depth to Water[1] (ft)	Groundwater Elevations (ft MSL)
Wells with water levels within 10 ft of the top of screen	MW-60	1701154.47	167873.20	567.15	334.81	325.81	229.00	338.15
	MW-64	1701980.27	168772.19	596.55	334.03	320.23	266.03	330.52
	MW-66	1699750.19	174250.32	531.28	294.39	280.59	238.52	292.76
	MW-67	1701776.69	172610.65	516.43	297.80	284.00	220.13	296.30
	MW-68	1701917.32	170609.35	647.07	311.29	292.29	331.50	315.57
	MW-72	1698229.92	170987.71	671.87	303.63	294.03	360.64	311.23
	MW-73	1698954.95	174995.59	485.70	288.11	278.81	191.12	294.58
	MW-74R	1700386.85	173813.79	531.26	289.90	280.40	239.80	291.46
	MW-76	1700376.23	167193.13	491.71	351.06	341.56	137.68	354.03
	MW-81	1702568.87	172113.99	493.66	309.19	300.19	183.53	310.13
	MW-82	1699553.72	167725.31	474.85	348.88	339.38	125.90	348.95
	MW-83	1697939.89	167212.27	496.81	350.19	340.69	145.64	351.17
	MW-84	1698602.89	173894.54	530.80	292.46	282.96	235.95	294.85
	MW-85	1701828.95	173694.52	531.76	282.56	273.06	245.74	286.02
	MW-86	1701331.25	174917.90	536.04	283.43	274.63	249.56	286.48
	MW-87	1700670.27	173493.76	537.31	283.68	274.38	247.91	289.40
	MW-88	1701807.87	174303.06	513.68	281.52	272.22	227.22	286.46
	MW-93	1702259.35	169851.24	632.15	319.87	310.07	308.28	323.87
	MW-94	1698674.21	167210.22	495.51	357.22	348.52	144.03	351.48
	MW-95	1697265.32	169426.92	571.54	314.60	305.90	251.13	320.41
	MW-100	1700791.72	169610.46	620.32	319.06	309.06	297.77	322.55
	MW-106	1702536.99	173461.69	475.47	280.04	270.04	190.25	285.22
	MW-113	1698238.80	168478.70	531.09	334.79	325.09	188.80	342.29
	MW-114	1698892.70	167919.80	490.45	353.65	344.05	141.29	349.16
	MW-115	1698960.70	167225.80	484.87	352.87	343.27	132.96	351.91
Wells with water levels greater than 10 ft above the top of screen	MW-21	1697901.86	173876.38	420.66	263.22	255.22	124.88	295.78
	MW-22	1701844.34	173088.17	517.09	236.02	231.22	231.92	285.17
	MW-24	1699582.39	167767.76	475.99	286.76	281.76	145.54	330.45
	MW-43	1701274.23	174327.14	547.06	245.63	235.63	263.18	283.88
	MW-54	1702154.28	168435.53	580.43	250.25	228.25	273.73	306.70
	MW-56	1698980.77	167214.82	480.33	323.15	313.15	128.70	351.63
	MW-57	1699993.32	167201.99	456.64	326.65	311.65	105.59	351.05
	MW-58A	1699006.59	167207.16	479.27	270.05	260.05	147.67	331.60
	MW-59	1699983.91	167193.44	457.13	285.08	275.08	124.45	332.68
	MW-65	1701602.10	167146.55	545.83	317.71	308.91	209.69	336.14
	MW-75	1701059.70	173432.42	532.40	271.10	261.00	245.27	287.13
	MW-80	1701309.78	172964.99	530.41	279.17	269.67	238.57	291.84
	MW-89	1701799.57	174319.44	512.82	229.20	219.90	231.84	280.98
	MW-90	1702203.13	174300.67	502.22	235.16	226.16	221.31	280.91
	MW-91	1701023.09	173423.94	532.02	260.81	240.71	246.50	285.52
	MW-99	1702556.06	172098.73	493.64	221.77	212.77	200.02	293.62
	WS-NPW-1	1701906.96	171138.99	646.33	282.80	267.90	332.14	314.19
	WS-NPW-3	1701922.88	170663.28	645.81	285.00	273.90	330.46	315.35
Other	MW-69[4]	1698061.86	172400.20	653.69	293.57	279.97	NM	NA

Notes:

1. Water level measurements made by SWD personnel.
2. Reference datum for northing and easting coordinates is the North American Datum of 1927 (NAD 27).
3. Elevations reported in feet (ft) above mean sea level (MSL) based on the National Geodetic Vertical Datum of 1929 (NGVD 29).
4. MW-69 due to be repaired in mid-year 2021.

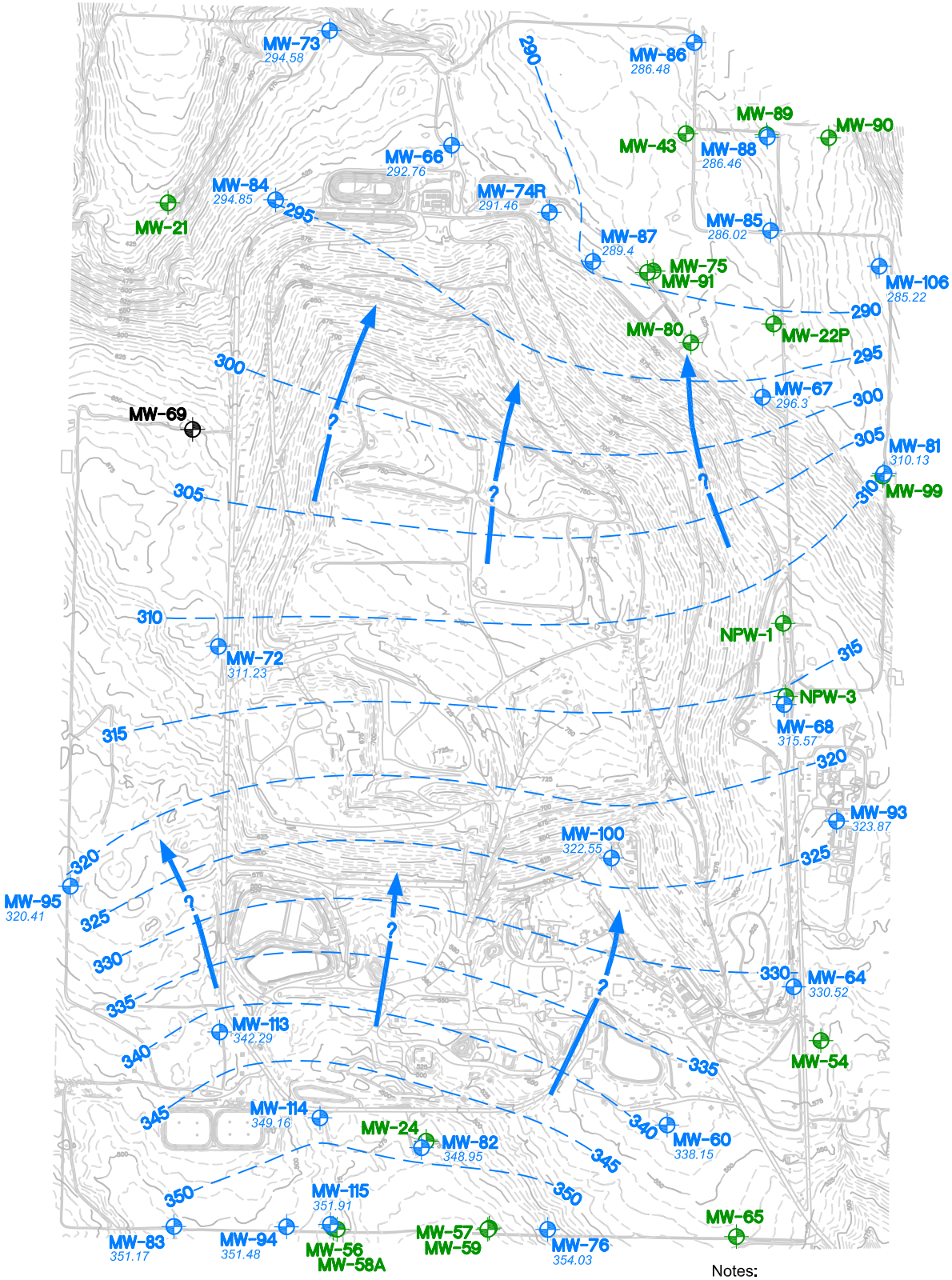
NM Not measured due to damaged well. Cannot access water level.
NA Not Applicable

Table A-2: Groundwater Parameters – First Quarter 2021
Cedar Hills Regional Landfill
King County, Washington

Regional Aquifer Zone Beneath the Landfill	Horizontal Hydraulic Conductivity[1,3] (K) Range	(cm/s)	(ft/d)	Horizontal Hydraulic Gradient[2] (DH/DL) (ft/ft)	Effective Porosity[1] (n_{eff})	Horizontal Groundwater Velocity (v) (ft/d)	General Groundwater Flow Direction
Northern	Minimum	2.10E-03	6	0.007	24%	0.19	NNE, NE
	Maximum	4.20E-02	120			3.71	
	Mean	2.10E-02	60			1.85	
Central	Minimum	2.10E-03	6	0.008	24%	0.21	N, NNW
	Maximum	4.20E-02	120			4.15	
	Mean	2.10E-02	60			2.08	
Southern	Minimum	6.40E-06	0.018	0.011	26%	0.001	NW, N, NNE
	Maximum	6.40E-04	1.8			0.075	
	Mean	6.40E-05	0.18			0.008	

Notes:
1. Horizontal hydraulic conductivity values and effective porosity values from Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill (Aspect, 2010).
2. Hydraulic gradients measured from the potentiometric surface map shown on Figure A-1.
3. Mean hydraulic conductivity values are the geometric mean of the high and low values.

NNE north-northeast; NNW north-northwest; NE, northeast; NW northwest; N, north.



Legend

- **MW-X** XXX.XX — Well completed in Regional Aquifer with water levels within the screen or within 10 feet of the top of screen.
- **MW-X** — Wells completed in Regional Aquifer with water levels more than 10 feet above the top of screen.
- **MW-X** — Wells completed in Regional Aquifer - Data not used or no measurement this quarter.
- 300 — Regional Aquifer Groundwater Elevation Contour *(feet MSL)*.
- ? — Inferred Horizontal Groundwater Flow Path

0 1000 2000 *Feet*

Contour Interval 5 Feet

N

Notes:

1. Groundwater measurements made on January 4, 2021.
2. Only wells completed in the Regional Aquifer with well screen tops within 10 feet of the water table were used for contouring.

King County

Groundwater Potentiometric Surface Map
First Quarter 2021 - Regional Aquifer
Cedar Hills Regional Landfill
King County, Washington

DATE: April 2021	PROJECT NO. 1126980
DESIGNED BY: SB	
DRAWN BY: KK	FIGURE NO. A-1
REVISED BY: SB	

CH_1Q2021.dwg

Second Quarter 2021

Potentiometric Surface Maps and Aquifer Flow Calculations

King County

Water and Land Resources Division

Department of Natural Resources and Parks
King Street Center
201 South Jackson Street, Suite 5600
Seattle, WA 98104-3855

206-477-4800 Fax 206-296-0192
TTY Relay: 711

TECHNICAL MEMORANDUM

August 16, 2021

TO: Subrina Tahsin, Engineer II, Facility Engineering and Science Section, Solid Waste Division, Department of Natural Resources and Parks (DNRP)

FM: Sevin Bilir, Environmental Scientist IV, Science and Technical Support Section, Water and Land Resources Division, DNRP

RE: Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations
Second Quarter 2021 Results
Cedar Hills Regional Landfill, King County, Washington
Project No. 1126980 – Task 25.106

The King County Water and Land Resources Division (WLRD) submits this memorandum report on groundwater conditions during the second quarter of 2021 for the regional aquifer beneath the Cedar Hills Regional Landfill (Landfill), in accordance with the *Proposal for Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations* (WLRD, 2021). King County Solid Waste Division (SWD) personnel measured regional aquifer groundwater levels at the Landfill on April 1, 2021. These measurements were received by WLRD on May 28, 2021, and were used to:

1. Evaluate the potentiometric groundwater surface elevation for the regional aquifer;
2. Determine the groundwater flow direction and horizontal gradient for the regional aquifer; and
3. Calculate the groundwater velocity of the regional aquifer.

When comparing results from this report to that of the first quarter of 2021, there have been no significant changes in the interpreted regional aquifer groundwater conditions.

Groundwater Elevation Data

The SWD measured regional aquifer groundwater level measurements at 43 monitoring wells during the second quarter of 2021. These wells are completed in the regional aquifer as referred to in *Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill* (Aspect, 2010) and in *Area 8 Development, Monitoring Well Replacement Report* (HDR, 2021).

Table A-1 lists the groundwater monitoring well identifications, locations, construction details, measured depth to groundwater levels, and calculated groundwater elevations for monitoring wells screened in the regional aquifer. A total of 25 wells had measured water levels within ten feet of the top of the screened interval and were used for mapping potentiometric surface contours.

Figure A-1 shows calculated groundwater elevations at well locations and interpreted groundwater potentiometric surface contours for the regional aquifer based on measurements taken on April 1, 2021.

Direction of Groundwater Flow

Interpreted groundwater flow directions in the regional aquifer, based on measurements taken on April 1, 2021, are shown in Figure A-1. Calculated groundwater elevations during the second quarter of 2021 indicate that groundwater in the regional aquifer generally flows to the north with minor components of flow of the following:

- north-northwest and north-northeast to northeast in the *northern portion* of the Landfill,
- north-northwest beneath the *central portion* of the Landfill, and
- northwest and north-northeast beneath the *southern portion* of the Landfill.

Table A-2 lists the flow direction for each portion of the regional aquifer beneath the Landfill based on measurements taken on April 1, 2021 and mapping of groundwater elevation contours.

Groundwater Parameters

Table A-2 presents a summary of the groundwater parameters. Mean horizontal hydraulic conductivity and effective porosity values were based on the ranges referred to in *Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill* (Aspect, 2010). The mean horizontal hydraulic conductivity for the regional aquifer beneath the Landfill is 60 feet per day (ft/d) in the northern and central portions and 0.18 ft/d in the southern portion of the regional aquifer beneath the Landfill (Aspect 2010). Average effective porosities are 24 and 26 percent, respectively, for the same areas (Aspect 2010).

The hydraulic gradient is greatest under the southern portion of the Landfill (0.012 ft/ft) and slightly lower under the rest of the Landfill based on measurements made during the second quarter of 2021.

Average horizontal groundwater velocities for the regional aquifer beneath the Landfill, are based on spatial differences in aquifer parameters, hydraulic gradients, and calculations using the following formula:

where:

$$v = \frac{1}{n_{eff}} K \frac{\Delta H}{\Delta L}$$

v = Groundwater velocity [L/t]
n_{eff} = Effective porosity [dimensionless]
K = Hydraulic conductivity [L/t]
$\frac{\Delta H}{\Delta L}$ = Hydraulic gradient [L/L]

The mean horizontal groundwater velocities for the regional aquifer beneath the Landfill, are lowest under the southern portion of the Landfill (0.008 ft/d) and much greater under the rest of the Landfill (up to 1.65 ft/d under the central portion).

References

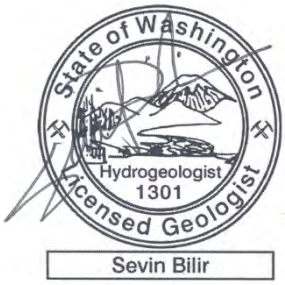
Aspect Consulting, LLC. (Aspect). 2010. Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill. Unpublished work. April 30.

HDR Engineering, Inc. (HDR). 2021. Area 8 Development, Monitoring Well Replacement Report. Prepared in association with Udaloy Environmental Consulting (UEC). Cedar Hills Regional Landfill. Contract No. E00284E12. July.

King County Water and Land Resources Division (WLRD). 2021. Proposal for 2021 Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations; King County Closed Landfills (Cedar Falls, Enumclaw, Hobart, and Vashon Island) and Cedar Hills Regional Landfill. April 15.

Thank you for the opportunity to provide hydrogeologic services to SWD. If you have any questions, please feel free to contact me at 206-477-4646 or sevin.bilir@kingcounty.gov.

Sincerely,



Sevin Bilir, WA LHG
Environmental Scientist IV
King County Water and Land Resources Division

Enclosures:

Table A-1:	Well Details and Groundwater Elevations –Second Quarter 2021
Table A-2:	Groundwater Parameters – Second Quarter 2021
Figure A-1:	Groundwater Potentiometric Surface Map – Second Quarter 2021 – Regional Aquifer

Table A-1: Well Details and Groundwater Elevations – Second Quarter 2021

Cedar Hills Regional Landfill
King County, Washington

							April 1, 2021	
	Well Identification	Easting[2] (ft)	Northing[2] (ft)	Top of Casing Elevation (ft MSL[3])	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Measured Depth to Water[1] (ft)	Groundwater Elevations (ft MSL)
Wells with water levels within 10 ft of the top of screen	MW-60	1701154.47	167873.20	567.15	334.81	325.81	224.35	342.80
	MW-64	1701980.27	168772.19	596.55	334.03	320.23	265.69	330.86
	MW-66	1699750.19	174250.32	531.28	294.39	280.59	237.93	293.35
	MW-67	1701776.69	172610.65	516.43	297.80	284.00	219.90	296.53
	MW-68	1701917.32	170609.35	647.07	311.29	292.29	332.07	315.00
	MW-72	1698229.92	170987.71	671.87	303.63	294.03	360.85	311.02
	MW-73	1698954.95	174995.59	485.70	288.11	278.81	190.58	295.12
	MW-74R	1700386.85	173813.79	531.26	289.90	280.40	239.50	291.76
	MW-76	1700376.23	167193.13	491.71	351.06	341.56	134.04	357.67
	MW-81	1702568.87	172113.99	493.66	309.19	300.19	183.79	309.87
	MW-82	1699553.72	167725.31	474.85	348.88	339.38	121.48	353.37
	MW-83	1697939.89	167212.27	496.81	350.19	340.69	143.87	352.94
	MW-84	1698602.89	173894.54	530.80	292.46	282.96	235.73	295.07
	MW-85	1701828.95	173694.52	531.76	282.56	273.06	244.81	286.95
	MW-86	1701331.25	174917.90	536.04	283.43	274.63	248.82	287.22
	MW-87	1700670.27	173493.76	537.31	283.68	274.38	247.50	289.81
	MW-88	1701807.87	174303.06	513.68	281.52	272.22	226.40	287.28
	MW-93	1702259.35	169851.24	632.15	319.87	310.07	308.38	323.77
	MW-94	1698674.21	167210.22	495.51	357.22	348.52	141.91	353.60
	MW-95	1697265.32	169426.92	571.54	314.60	305.90	251.25	320.29
	MW-100	1700791.72	169610.46	620.32	319.06	309.06	297.51	322.81
	MW-106	1702536.99	173461.69	475.47	280.04	270.04	189.39	286.08
	MW-113	1698238.80	168478.70	531.09	334.79	325.09	188.61	342.48
	MW-114	1698892.70	167919.80	490.45	353.65	344.05	138.94	351.51
	MW-115	1698960.70	167225.80	484.87	352.87	343.27	128.87	356.00
Wells with water levels greater than 10 ft above the top of screen	MW-21	1697901.86	173876.38	420.66	263.22	255.22	124.71	295.95
	MW-24	1699582.39	167767.76	475.99	286.76	281.76	144.51	331.48
	MW-22	1701844.34	173088.17	517.09	236.02	231.22	231.40	285.69
	MW-43	1701274.23	174327.14	547.06	245.63	235.63	262.50	284.56
	MW-54	1702154.28	168435.53	580.43	250.25	228.25	278.21	302.22
	MW-56	1698980.77	167214.82	480.33	323.15	313.15	124.78	355.55
	MW-57	1699993.32	167201.99	456.64	326.65	311.65	100.91	355.73
	MW-58A	1699006.59	167207.16	479.27	270.05	260.05	148.53	330.74
	MW-59	1699983.91	167193.44	457.13	285.08	275.08	122.91	334.22
	MW-65	1701602.10	167146.55	545.83	317.71	308.91	208.37	337.46
	MW-75	1701059.70	173432.42	532.40	271.10	261.00	244.63	287.77
	MW-80	1701309.78	172964.99	530.41	279.17	269.67	238.27	292.14
	MW-89	1701799.57	174319.44	512.82	229.20	219.90	231.07	281.75
	MW-90	1702203.13	174300.67	502.22	235.16	226.16	220.25	281.97
	MW-91	1701023.09	173423.94	532.02	260.81	240.71	245.90	286.12
	MW-99	1702556.06	172098.73	493.64	221.77	212.77	199.87	293.77
	WS-NPW-1	1701906.96	171138.99	646.33	282.80	267.90	332.76	313.57
	WS-NPW-3	1701922.88	170663.28	645.81	285.00	273.90	331.11	314.70
Other	MW-69[4]	1698061.86	172400.20	653.69	293.57	279.97	NM	NA

Notes:

1. Water level measurements made by SWD personnel.
2. Reference datum for northing and easting coordinates is the North American Datum of 1927 (NAD 27).
3. Elevations reported in feet (ft) above mean sea level (MSL) based on the National Geodetic Vertical Datum of 1929 (NGVD 29).
4. MW-69 due to be repaired in mid-year 2021.

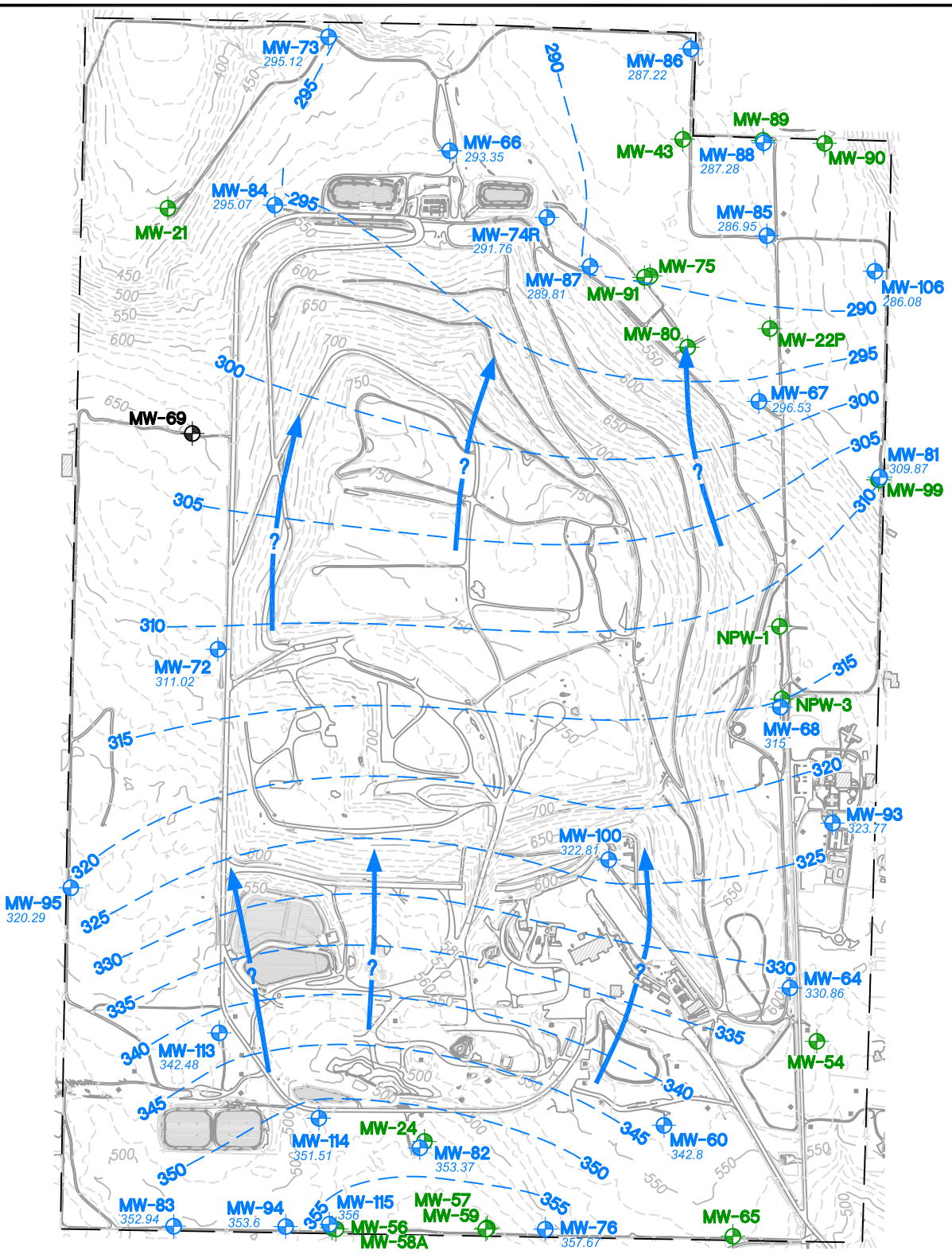
NM Not measured due to damaged well. Cannot access water level.
NA Not Applicable

Table A-2: Groundwater Parameters – Second Quarter 2021
Cedar Hills Regional Landfill
King County, Washington

Regional Aquifer Zone Beneath the Landfill	Second Quarter 2021 - April 1, 2021						
	Horizontal Hydraulic Conductivity[1,3] (*K*)			Horizontal Hydraulic Gradient[2] (DH/DL)	Effective Porosity[1] (n_{eff})	Horizontal Groundwater Velocity (*v*)	General Groundwater Flow Direction
	Range	(cm/s)	(ft/d)	(ft/ft)		(ft/d)	
Northern	Minimum	2.10E-03	6	0.007	24%	0.17	NNW, N, NNE, NE
	Maximum	4.20E-02	120			3.30	
	Mean	2.10E-02	60			1.65	
Central	Minimum	2.10E-03	6	0.008	24%	0.20	N, NNW
	Maximum	4.20E-02	120			4.06	
	Mean	2.10E-02	60			2.03	
Southern	Minimum	6.40E-06	0.018	0.012	26%	0.001	NW, N, NNE
	Maximum	6.40E-04	1.8			0.085	
	Mean	6.40E-05	0.18			0.008	

Notes:
1. Horizontal hydraulic conductivity values and effective porosity values from Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill (Aspect, 2010).
2. Hydraulic gradients calculated using the potentiometric surface map shown on Figure A-1.
3. Mean hydraulic conductivity values are the geometric mean of the high and low values.

NNE north-northeast; NNW north-northwest; NE, northeast; NW northwest; N, north.



Legend

MW-X XXX.XX — Well completed in Regional Aquifer with water levels within the screen or within 10 feet of the top of screen. *Elevation (feet mean sea level (MSL))*

MW-X — Wells completed in Regional Aquifer with water levels more than 10 feet above the top of screen. *Elevation (feet MSL)*

MW-X — Wells completed in Regional Aquifer - Data not used or no measurement this quarter.

300 — Regional Aquifer Groundwater Elevation Contour *(feet MSL)*.

? — Inferred Horizontal Groundwater Flow Path

Pond

Road

Ditch

Fence

King County Landfill Property

Building

N

0 1000 2000 Feet

Contour Interval 10 Feet

Notes:

1. Groundwater measurements made on April 1, 2021.
2. Only wells completed in the Regional Aquifer with well screen tops within 10 feet of the water table were used for contouring.

Locations surveyed on North American Datum of 1927 (NAD 27).

Elevations reported in feet above mean sea level based on the National Geodetic Vertical Datum of 1929 (NGVD 29).

Basemap Layer Data: King County Solid Waste Division

King County

Groundwater Potentiometric Surface Map
Second Quarter 2021 - Regional Aquifer
Cedar Hills Regional Landfill
King County, Washington

DATE: July 2021	PROJECT NO. 1126980
DESIGNED BY: SB	
DRAWN BY: KK	FIGURE NO. A-1
REVISED BY: SB	

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Third Quarter 2021

Potentiometric Surface Maps and Aquifer Flow Calculations

King County

Water and Land Resources Division

Department of Natural Resources and Parks

King Street Center
201 South Jackson Street, Suite 5600
Seattle, WA 98104-3855

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TTY Relay: 711

TECHNICAL MEMORANDUM

November 17, 2021

TO: Subrina Tahsin, Engineer II, Facility Engineering and Science Section, Solid Waste Division, Department of Natural Resources and Parks (DNRP)

FM: Sevin Bilir, Environmental Scientist IV, Science and Technical Support Section, Water and Land Resources Division, DNRP

RE: Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations
Third Quarter 2021 Results
Cedar Hills Regional Landfill, King County, Washington
Project No. 1126980 – Task 25.106

The King County Water and Land Resources Division (WLRD) submits this memorandum report on groundwater conditions during the third quarter of 2021 for the regional aquifer beneath the Cedar Hills Regional Landfill (Landfill), in accordance with the *Proposal for Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations* (WLRD, 2021). King County Solid Waste Division (SWD) personnel measured regional aquifer groundwater levels at the Landfill on July 6, 2021. These measurements were received by WLRD on November 16, 2021, and were used to:

1. Evaluate the potentiometric groundwater surface elevation for the regional aquifer;
2. Determine the groundwater flow direction and horizontal gradient for the regional aquifer; and
3. Calculate the groundwater velocity of the regional aquifer.

There are no significant changes in the interpreted groundwater conditions for the regional aquifer in this quarter, when compared to the report submitted for the second quarter of 2021.

Groundwater Elevation Data

The SWD measured regional aquifer groundwater level measurements at 43 monitoring wells during the third quarter of 2021. These wells are completed in the regional aquifer as referred to in *Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill* (Aspect, 2010) and in *Area 8 Development, Monitoring Well Replacement Report* (HDR, 2021).

Table A-1 lists the groundwater monitoring well identifications, locations, construction details, measured depth to groundwater levels, and calculated groundwater elevations for monitoring wells screened in the regional aquifer. A total of 25 wells had measured water levels within ten feet of the top of the screened interval and were used for mapping potentiometric surface contours. Measured water levels in these wells are on average 0.9 ft lower than those measured in the second quarter of 2021.

Figure A-1 shows calculated groundwater elevations at well locations and interpreted groundwater potentiometric surface contours for the regional aquifer based on measurements taken on July 6, 2021.

Direction of Groundwater Flow

Interpreted groundwater flow directions in the regional aquifer, based on measurements taken on July 6, 2021, are shown in Figure A-1. Calculated groundwater elevations during the third quarter of 2021 indicate that groundwater in the regional aquifer generally flows to the north with minor components of flow of the following:

- north-northwest and north-northeast to northeast in the *northern portion* of the Landfill,
- north-northwest beneath the *central portion* of the Landfill, and
- northwest and north-northeast beneath the *southern portion* of the Landfill.

Table A-2 lists the flow direction for each portion of the regional aquifer beneath the Landfill based on measurements taken on July 6, 2021 and mapping of groundwater elevation contours. Flow directions for the regional aquifer in the third quarter of 2021 are similar to those for the second quarter of 2021.

Groundwater Parameters

Table A-2 presents a summary of the groundwater parameters. Mean horizontal hydraulic conductivity and effective porosity values were based on the ranges referred to in *Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill* (Aspect, 2010). The mean horizontal hydraulic conductivity for the regional aquifer beneath the Landfill is 60 feet per day (ft/d) in the northern and central portions and 0.18 ft/d in the southern portion of the regional aquifer

beneath the Landfill (Aspect, 2010). Average effective porosities are 24 and 26 percent, respectively, for the same areas (Aspect, 2010).

Gradients

The hydraulic gradient for the regional aquifer was determined using potentiometric surface maps (Figure A-1). Table A-2 lists the gradients of regional aquifer for the northern, central and southern portions beneath the Landfill.

The hydraulic calculated gradient is greatest under the southern portion of the Landfill (0.012 ft/ft) and slightly lower under the rest of the Landfill based on measurements made during the third quarter of 2021. The gradients calculated for the regional aquifer in the third quarter of 2021 are within the range of gradients calculated during the second quarter of 2021.

Groundwater Velocities

Average horizontal groundwater velocities for the regional aquifer beneath the Landfill, are based on spatial differences in aquifer parameters, hydraulic gradients, and calculations using the following formula:

where:

$$v = \frac{1}{n_{eff}} K \frac{\Delta H}{\Delta L}$$

v = Groundwater velocity [L/t]

n_{eff} = Effective porosity [dimensionless]

K = Hydraulic conductivity [L/t]

$\frac{\Delta H}{\Delta L}$ = Hydraulic gradient [L/L]

Table A-2 summarizes the groundwater parameters used to calculate a groundwater velocity for the regional aquifer in the northern, central and southern portions beneath the Landfill. The mean horizontal groundwater velocities for the regional aquifer beneath the Landfill, are lowest under the southern portion of the Landfill (0.009 ft/d) and much greater under the rest of the Landfill (up to 1.79 ft/d under the central portion). The velocities calculated for the regional aquifer in the third quarter of 2021 are within the range of groundwater velocities calculated during the second quarter of 2021.

References

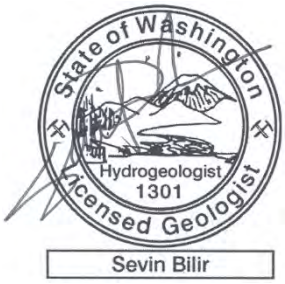
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HDR Engineering, Inc. (HDR). 2021. Area 8 Development, Monitoring Well Replacement Report. Prepared in association with Udaloy Environmental Consulting (UEC). Cedar Hills Regional Landfill. Contract No. E00284E12. July.

King County Water and Land Resources Division (WLRD). 2021. Proposal for 2021 Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations; King County Closed Landfills (Cedar Falls, Enumclaw, Hobart, and Vashon Island) and Cedar Hills Regional Landfill. April 15.

Thank you for the opportunity to provide hydrogeologic services to SWD. If you have any questions, please feel free to contact me at 206-477-4646 or sevin.bilir@kingcounty.gov.

Sincerely,



Sevin Bilir, WA LHG
Environmental Scientist IV
King County Water and Land Resources Division

Enclosures:

Table A-1:	Well Details and Groundwater Elevations –Third Quarter 2021
Table A-2:	Groundwater Parameters – Third Quarter 2021
Figure A-1:	Groundwater Potentiometric Surface Map – Third Quarter 2021 – Regional Aquifer

Table A-1: Well Details and Groundwater Elevations – Third Quarter 2021

Cedar Hills Regional Landfill
King County, Washington

							July 6, 2021	
	Well Identification	Easting[1] (ft)	Northing[1] (ft)	Top of Casing Elevation[2] (ft MSL[2])	Top of Screen Elevation[2] (ft)	Bottom of Screen Elevation[2] (ft)	Measured Depth to Water[3] (ft)	Groundwater Elevations[2] (ft MSL)
Wells with water levels within 10 ft of the top of screen	MW-60	1701154.47	167873.20	567.15	334.81	325.81	227.23	339.92
	MW-64	1701980.27	168772.19	596.55	334.03	320.23	265.85	330.70
	MW-66	1699750.19	174250.32	531.28	294.39	280.59	238.76	292.52
	MW-67	1701776.69	172610.65	516.43	297.80	284.00	220.57	295.86
	MW-68	1701917.32	170609.35	647.07	311.29	292.29	332.42	314.65
	MW-72	1698229.92	170987.71	671.87	303.63	294.03	361.28	310.59
	MW-73	1698954.95	174995.59	485.70	288.11	278.81	191.33	294.37
	MW-74R	1700386.85	173813.79	531.26	289.90	280.40	239.90	291.36
	MW-76	1700376.23	167193.13	491.71	351.06	341.56	138.39	353.32
	MW-81	1702568.87	172113.99	493.66	309.19	300.19	184.13	309.53
	MW-82	1699553.72	167725.31	474.85	348.88	339.38	123.53	351.32
	MW-83	1697939.89	167212.27	496.81	350.19	340.69	144.56	352.25
	MW-84	1698602.89	173894.54	530.80	292.46	282.96	236.03	294.77
	MW-85	1701828.95	173694.52	531.76	282.56	273.06	245.97	285.79
	MW-86	1701331.25	174917.90	536.04	283.43	274.63	248.58	287.46
	MW-87	1700670.27	173493.76	537.31	283.68	274.38	248.02	289.29
	MW-88	1701807.87	174303.06	513.68	281.52	272.22	227.13	286.55
	MW-93	1702259.35	169851.24	632.15	319.87	310.07	308.65	323.50
	MW-94	1698674.21	167210.22	495.51	357.22	348.52	142.44	353.07
	MW-95	1697265.32	169426.92	571.54	314.60	305.90	251.55	319.99
	MW-100	1700791.72	169610.46	620.32	319.06	309.06	297.99	322.33
	MW-106	1702536.99	173461.69	475.47	280.04	270.04	190.22	285.25
	MW-113	1698238.80	168478.70	531.09	334.79	325.09	188.42	342.67
	MW-114	1698892.70	167919.80	490.45	353.65	344.05	139.37	351.08
	MW-115	1698960.70	167225.80	484.87	352.87	343.27	131.34	353.53
Wells with water levels greater than 10 ft above the top of screen	MW-21	1697901.86	173876.38	420.66	263.22	255.22	125.21	295.45
	MW-22	1701844.34	173088.17	517.09	236.02	231.22	232.41	284.68
	MW-24	1699582.39	167767.76	475.99	286.76	281.76	145.75	330.24
	MW-43	1701274.23	174327.14	547.06	245.63	235.63	263.21	283.85
	MW-54	1702154.28	168435.53	580.43	250.25	228.25	278.68	301.75
	MW-56	1698980.77	167214.82	480.33	323.15	313.15	127.31	353.02
	MW-57	1699993.32	167201.99	456.64	326.65	311.65	103.55	353.09
	MW-58A	1699006.59	167207.16	479.27	270.05	260.05	149.75	329.52
	MW-59	1699983.91	167193.44	457.13	285.08	275.08	124.53	332.60
	MW-65	1701602.10	167146.55	545.83	317.71	308.91	209.94	335.89
	MW-75	1701059.70	173432.42	532.40	271.10	261.00	245.43	286.97
	MW-80	1701309.78	172964.99	530.41	279.17	269.67	238.85	291.56
	MW-89	1701799.57	174319.44	512.82	229.20	219.90	232.16	280.66
	MW-90	1702203.13	174300.67	502.22	235.16	226.16	221.70	280.52
	MW-91	1701023.09	173423.94	532.02	260.81	240.71	246.71	285.31
	MW-99	1702556.06	172098.73	493.64	221.77	212.77	200.50	293.14
	WS-NPW-1	1701906.96	171138.99	646.33	282.80	267.90	333.22	313.11
	WS-NPW-3	1701922.88	170663.28	645.81	285.00	273.90	331.53	314.28
Other	MW-69[4]	1698061.86	172400.20	653.69	293.57	279.97	NM	NA

Notes:

1. Water level measurements made by SWD personnel.
2. Reference datum for northing and easting coordinates is the North American Datum of 1927 (NAD 27).
3. Elevations reported in feet (ft) above mean sea level (MSL) based on the National Geodetic Vertical Datum of 1929 (NGVD 29).
4. MW-69 due to be repaired in near future.

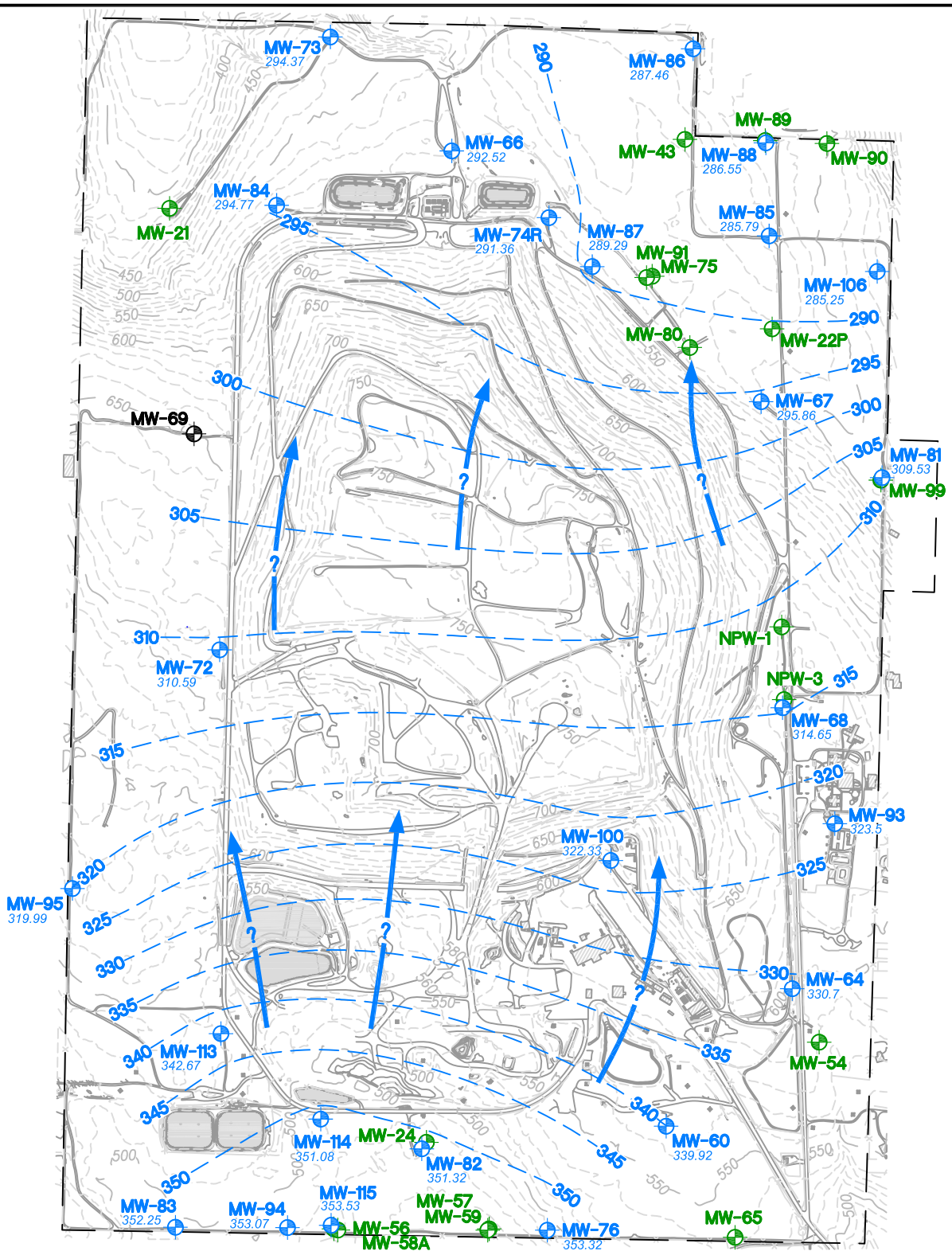
NM Not measured due to damaged well. Cannot access water level.
NA Not Applicable

Table A-2: Groundwater Parameters – Third Quarter 2021
Cedar Hills Regional Landfill
King County, Washington

	Third Quarter 2021 - July 6, 2021						
	Horizontal Hydraulic Conductivity[1,3] (*K*)			Horizontal Hydraulic Gradient[2] (DH/DL)	Effective Porosity[1] (n_{eff})	Horizontal Groundwater Velocity (*v*)	General Groundwater Flow Direction
Regional Aquifer Zone Beneath the Landfill	Range	(cm/s)	(ft/d)	(ft/ft)		(ft/d)	
Northern	Minimum	2.10E-03	6	0.007	24%	0.18	NNW, N, NNE, NE
	Maximum	4.20E-02	120			3.58	
	Mean	2.10E-02	60			1.79	
Central	Minimum	2.10E-03	6	0.008	24%	0.21	N, NNW
	Maximum	4.20E-02	120			4.12	
	Mean	2.10E-02	60			2.06	
Southern	Minimum	6.40E-06	0.018	0.013	26%	0.001	NW, N, NNE
	Maximum	6.40E-04	1.8			0.087	
	Mean	6.40E-05	0.18			0.009	

1. Horizontal hydraulic conductivity values and effective porosity values from Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill (Aspect, 2010).
2. Hydraulic gradients calculated using the potentiometric surface map shown on Figure A-1.
3. Mean hydraulic conductivity values are the geometric mean of the high and low values.

NNE north-northeast; NNW north-northwest; NE, northeast; NW northwest; N, north.



Legend

- **MW-X** XXX.XX — Well completed in Regional Aquifer with water levels within the screen or within 10 feet of the top of screen. *Elevation (feet mean sea level (MSL))*
- **MW-X** — Wells completed in Regional Aquifer with water levels more than 10 feet above the top of screen. *Elevation (feet MSL)*
- **MW-X** — Wells completed in Regional Aquifer - Data not used or no measurement this quarter.
- 300 — Regional Aquifer Groundwater Elevation Contour *(feet MSL)*.
- ? — Inferred Horizontal Groundwater Flow Path
- Pond
- Road
- Ditch
- Fence
- King County Landfill Property
- Building

N

0 1000 2000 Feet

Contour Interval 10 Feet

Notes:

1. Groundwater measurements made on July 6, 2021.
2. Only wells completed in the Regional Aquifer with well screen tops within 10 feet of the water table were used for contouring.

Locations surveyed on North American Datum of 1927 (NAD 27).

Elevations reported in feet above mean sea level based on the National Geodetic Vertical Datum of 1929 (NGVD 29).

Basemap Layer Data: King County Solid Waste Division

King County

Groundwater Potentiometric Surface Map
Third Quarter 2021 - Regional Aquifer
Cedar Hills Regional Landfill
King County, Washington

DATE: November 2021	PROJECT NO. 1126980
DESIGNED BY: SB	
DRAWN BY: KK	FIGURE NO. A-1
REVISED BY: SB	

CH_3Q2021.dwg

Fourth Quarter 2021

Potentiometric Surface Maps and Aquifer Flow Calculations

King County

Water and Land Resources Division

Department of Natural Resources and Parks
King Street Center
201 South Jackson Street, Suite 5600
Seattle, WA 98104-3855

206-477-4800 Fax 206-296-0192
TTY Relay: 711

TECHNICAL MEMORANDUM

January 18, 2022

TO: Subrina Tahsin, Engineer II, Facility Engineering and Science Section, Solid Waste Division, Department of Natural Resources and Parks (DNRP)

FM: Sevin Bilir, Environmental Scientist IV, Science and Technical Support Section, Water and Land Resources Division, DNRP

RE: Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations
Fourth Quarter 2021 Results
Cedar Hills Regional Landfill, King County, Washington
Project No. 1126980 – Task 25.106

The King County Water and Land Resources Division (WLRD) submits this memorandum report on groundwater conditions during the fourth quarter of 2021 for the regional aquifer beneath the Cedar Hills Regional Landfill (Landfill), in accordance with the *Proposal for Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations* (WLRD, 2021). King County Solid Waste Division (SWD) personnel measured regional aquifer groundwater levels at the Landfill on October 4, 2021. These measurements were received by WLRD on December 7, 2021, and were used to:

1. Evaluate the potentiometric groundwater surface elevation for the regional aquifer;
2. Determine the groundwater flow direction and horizontal gradient for the regional aquifer; and
3. Calculate the groundwater velocity of the regional aquifer.

There are no significant changes in the interpreted groundwater conditions for the regional aquifer in this quarter, when compared to the report submitted for the third quarter of 2021.

Groundwater Elevation Data

The SWD measured regional aquifer groundwater level measurements at 43 monitoring wells during the fourth quarter of 2021. These wells are completed in the regional aquifer as referred to in *Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill* (Aspect, 2010) and in *Area 8 Development, Monitoring Well Replacement Report* (HDR, 2021).

Table A-1 lists the groundwater monitoring well identifications, locations, construction details, measured depth to groundwater levels, and calculated groundwater elevations for monitoring wells screened in the regional aquifer. A total of 25 wells had measured water levels within ten feet of the top of the screened interval and were used for mapping potentiometric surface contours. Measured water levels in these wells are on average 0.75 ft lower than those measured in the third quarter of 2021.

Figure A-1 shows calculated groundwater elevations at well locations and interpreted groundwater potentiometric surface contours for the regional aquifer based on measurements taken on October 4, 2021.

Direction of Groundwater Flow

Interpreted groundwater flow directions in the regional aquifer, based on measurements taken on October 4, 2021, are shown in Figure A-1. Calculated groundwater elevations during the fourth quarter of 2021 indicate that groundwater in the regional aquifer generally flows to the north with minor components of flow of the following:

- north-northwest and north-northeast to northeast in the *northern portion* of the Landfill,
- north-northwest beneath the *central portion* of the Landfill, and
- northwest and north-northeast beneath the *southern portion* of the Landfill.

Table A-2 lists the flow direction for each portion of the regional aquifer beneath the Landfill based on measurements taken on October 4, 2021 and mapping of groundwater elevation contours. Flow directions for the regional aquifer in the fourth quarter of 2021 are similar to those for the third quarter of 2021.

Groundwater Parameters

Table A-2 presents a summary of the groundwater parameters. Mean horizontal hydraulic conductivity and effective porosity values were based on the ranges referred to in *Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill* (Aspect, 2010). The mean horizontal hydraulic conductivity for the regional aquifer beneath the Landfill is 60 feet per day (ft/d) in the northern and central portions and 0.18 ft/d in the southern portion of the regional aquifer

beneath the Landfill (Aspect, 2010). Average effective porosities are 24 and 26 percent, respectively, for the same areas (Aspect, 2010).

Gradients

The hydraulic gradient for the regional aquifer was determined using potentiometric surface maps (Figure A-1). Table A-2 lists the gradients of regional aquifer for the northern, central and southern portions beneath the Landfill.

The hydraulic calculated gradient is greatest under the southern portion of the Landfill (0.013 ft/ft) and slightly lower under the rest of the Landfill based on measurements made during the fourth quarter of 2021. The gradients calculated for the regional aquifer in the fourth quarter of 2021 are within the range of gradients calculated during the third quarter of 2021.

Groundwater Velocities

Average horizontal groundwater velocities for the regional aquifer beneath the Landfill, are based on spatial differences in aquifer parameters, hydraulic gradients, and calculations using the following formula:

where:

$$v = \frac{1}{n_{eff}} K \frac{\Delta H}{\Delta L}$$

v = Groundwater velocity [L/t]

n_{eff} = Effective porosity [dimensionless]

K = Hydraulic conductivity [L/t]

$\frac{\Delta H}{\Delta L}$ = Hydraulic gradient [L/L]

Table A-2 summarizes the groundwater parameters used to calculate a groundwater velocity for the regional aquifer in the northern, central and southern portions beneath the Landfill. The mean horizontal groundwater velocities for the regional aquifer beneath the Landfill, are lowest under the southern portion of the Landfill (0.009 ft/d) and much greater under the rest of the Landfill (up to 2.29 ft/d under the central portion). The velocities calculated for the regional aquifer in the fourth quarter of 2021 are within the range of groundwater velocities calculated during the third quarter of 2021.

References

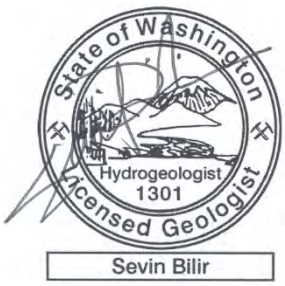
Aspect Consulting, LLC. (Aspect). 2010. Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill. Unpublished work. April 30.

HDR Engineering, Inc. (HDR). 2021. Area 8 Development, Monitoring Well Replacement Report. Prepared in association with Udaloy Environmental Consulting (UEC). Cedar Hills Regional Landfill. Contract No. E00284E12. July.

King County Water and Land Resources Division (WLRD). 2021. Proposal for 2021 Potentiometric Groundwater Surface Maps & Groundwater Velocity Calculations; King County Closed Landfills (Cedar Falls, Enumclaw, Hobart, and Vashon Island) and Cedar Hills Regional Landfill. April 15.

Thank you for the opportunity to provide hydrogeologic services to SWD. If you have any questions, please feel free to contact me at 206-477-4646 or sevin.bilir@kingcounty.gov.

Sincerely,



Sevin Bilir, WA LHG
Environmental Scientist IV
King County Water and Land Resources Division

Enclosures:

Table A-1:	Well Details and Groundwater Elevations – Fourth Quarter 2021
Table A-2:	Groundwater Parameters – Regional Aquifer – Fourth Quarter 2021
Figure A-1:	Groundwater Potentiometric Surface Map – Fourth Quarter 2021 – Regional Aquifer

Table A-1: Well Details and Groundwater Elevations – Fourth Quarter 2021

Cedar Hills Regional Landfill
King County, Washington

							October 4, 2021	
	Well Identification	Easting[1]	Northing[1]	Top of Casing Elevation[2]	Top of Screen Elevation[2]	Bottom of Screen Elevation[2]	Measured Depth to Water[3]	Groundwater Elevations[2]
		ft	ft	ft MSL	ft MSL	ft MSL	ft	ft MSL
Wells with water levels within 10 ft of the top of screen	MW-60	1701154.47	167873.20	567.15	334.81	325.81	229.01	338.14
	MW-64	1701980.27	168772.19	596.55	334.03	320.23	266.12	330.43
	MW-66	1699750.19	174250.32	531.28	294.39	280.59	239.21	292.07
	MW-67	1701776.69	172610.65	516.43	297.80	284.00	220.45	295.98
	MW-68	1701917.32	170609.35	647.07	311.29	292.29	332.24	314.83
	MW-72	1698229.92	170987.71	671.87	303.63	294.03	361.16	310.71
	MW-73	1698954.95	174995.59	485.70	288.11	278.81	192.03	293.67
	MW-74R	1700386.85	173813.79	531.26	289.90	280.40	240.08	291.18
	MW-76	1700376.23	167193.13	491.71	351.06	341.56	141.98	349.73
	MW-81	1702568.87	172113.99	493.66	309.19	300.19	184.04	309.62
	MW-82	1699553.72	167725.31	474.85	348.88	339.38	125.90	348.95
	MW-83	1697939.89	167212.27	496.81	350.19	340.69	145.53	351.28
	MW-84	1698602.89	173894.54	530.80	292.46	282.96	236.65	294.15
	MW-85	1701828.95	173694.52	531.76	282.56	273.06	246.25	285.51
	MW-86	1701331.25	174917.90	536.04	283.43	274.63	249.98	286.06
	MW-87	1700670.27	173493.76	537.31	283.68	274.38	248.28	289.03
	MW-88	1701807.87	174303.06	513.68	281.52	272.22	227.40	286.28
	MW-93	1702259.35	169851.24	632.15	319.87	310.07	308.74	323.41
	MW-94	1698674.21	167210.22	495.51	357.22	348.52	144.18	351.33
	MW-95	1697265.32	169426.92	571.54	314.60	305.90	251.57	319.97
	MW-100	1700791.72	169610.46	620.32	319.06	309.06	298.16	322.16
	MW-106	1702536.99	173461.69	475.47	280.04	270.04	190.70	284.77
	MW-113	1698238.80	168478.70	531.09	334.79	325.09	188.81	342.28
	MW-114	1698892.70	167919.80	490.45	353.65	344.05	140.68	349.77
	MW-115	1698960.70	167225.80	484.87	352.87	343.27	133.33	351.54
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	MW-22	1701844.34	173088.17	517.09	236.02	231.22	234.62	282.47
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	MW-54	1702154.28	168435.53	580.43	250.25	228.25	284.26	296.17
	MW-56	1698980.77	167214.82	480.33	323.15	313.15	129.38	350.95
	MW-57	1699993.32	167201.99	456.64	326.65	311.65	106.24	350.40
	MW-58A	1699006.59	167207.16	479.27	270.05	260.05	155.70	323.57
	MW-59	1699983.91	167193.44	457.13	285.08	275.08	125.81	331.32
	MW-65	1701602.10	167146.55	545.83	317.71	308.91	210.98	334.85
	MW-75	1701059.70	173432.42	532.40	271.10	261.00	245.78	286.62
	MW-80	1701309.78	172964.99	530.41	279.17	269.67	238.98	291.43
	MW-89	1701799.57	174319.44	512.82	229.20	219.90	232.50	280.32
	MW-90	1702203.13	174300.67	502.22	235.16	226.16	222.08	280.14
	MW-91	1701023.09	173423.94	532.02	260.81	240.71	247.05	284.97
	MW-99	1702556.06	172098.73	493.64	221.77	212.77	200.78	292.86
	WS-NPW-1	1701906.96	171138.99	646.33	282.80	267.90	332.98	313.35
	WS-NPW-3	1701922.88	170663.28	645.81	285.00	273.90	331.25	314.56
Other	MW-69[4]	1698061.86	172400.20	653.69	293.57	279.97	NM	NA

Notes:

1. Water level measurements made by SWD personnel.
2. Reference datum for northing and easting coordinates is the North American Datum of 1927 (NAD 27).
3. Elevations reported in feet (ft) above mean sea level (MSL) based on the National Geodetic Vertical Datum of 1929 (NGVD 29).
4. MW-69 due to be repaired in near future.

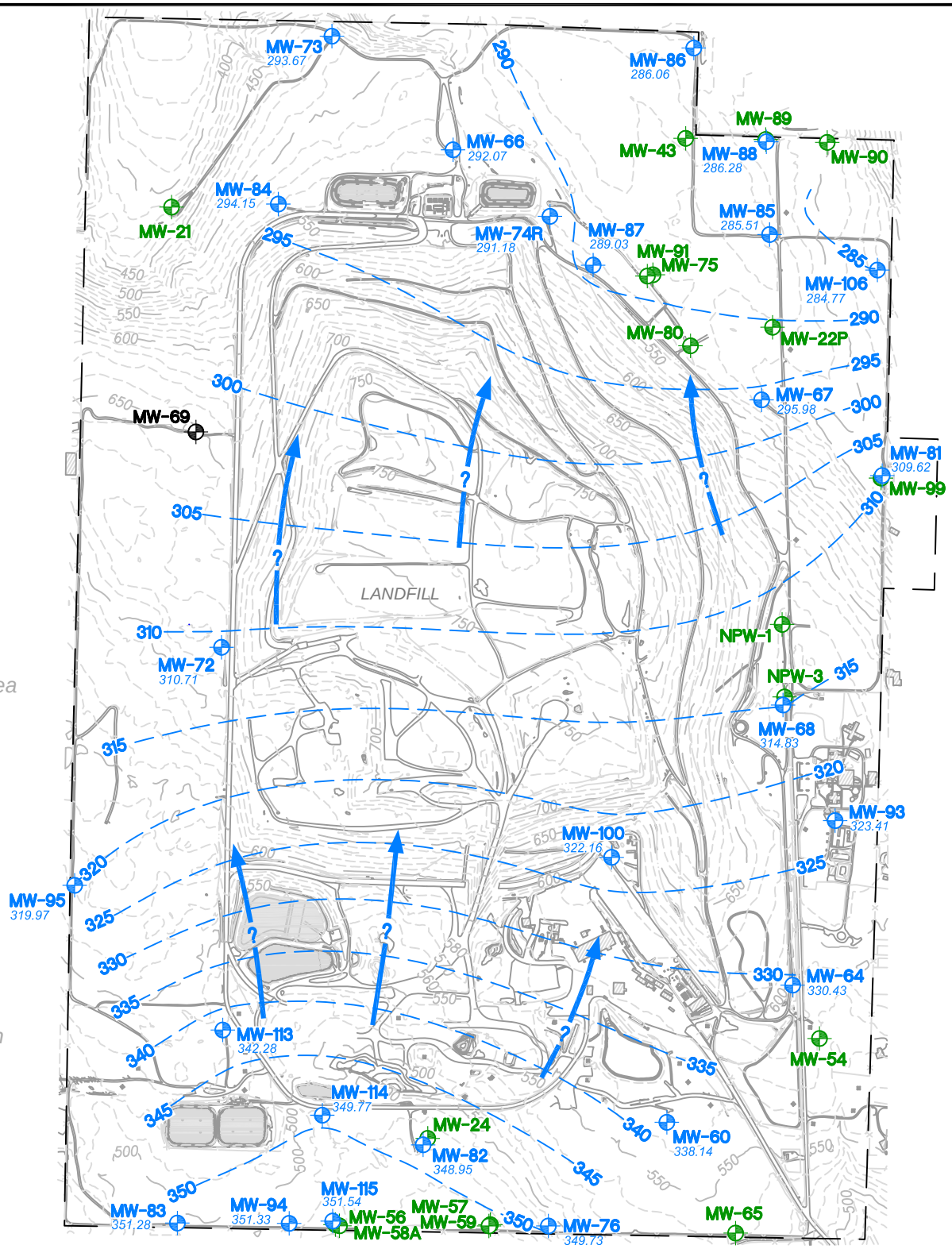
NM Not measured due to damaged well. Cannot access water level.
NA Not Applicable

Table A-2: Groundwater Parameters – Regional Aquifer
Fourth Quarter 2021
Cedar Hills Regional Landfill
King County, Washington

					Fourth Quarter 2021 - October 4, 2021		
Regional Aquifer Zone Beneath the Landfill	Horizontal Hydraulic Conductivity[1,2] (K)			Effective Porosity[1] (n_{eff})	Horizontal Hydraulic Gradient[3] (DH/DL)	Horizontal Groundwater Velocity (v)	General Groundwater Flow Direction
	Range	cm/s	ft/d		ft/ft	ft/d	
Northern	Minimum	2.10E-03	6	24%	0.008	0.20	NNW, N, NNE, NE
	Maximum	4.20E-02	120			4.06	
	Mean	2.10E-02	60			2.03	
Central	Minimum	2.10E-03	6	24%	0.009	0.23	N, NNW
	Maximum	4.20E-02	120			4.57	
	Mean	2.10E-02	60			2.29	
Southern	Minimum	6.40E-06	0.018	26%	0.013	0.001	NW, N, NNE
	Maximum	6.40E-04	1.8			0.088	
	Mean	6.40E-05	0.18			0.009	

Notes:
1. Horizontal hydraulic conductivity values and effective porosity values from Potentiometric Groundwater Surface Mapping and Groundwater Velocity Calculation – Cedar Hills Landfill (Aspect, 2010).
2. Hydraulic gradients calculated using the potentiometric surface map shown on Figure A-1.
3. Mean hydraulic conductivity values are the geometric mean of the high and low values.

NNE north-northeast; NNW north-northwest; NE, northeast; NW northwest; N, north



Legend

- **MW-X** XXX.XX — Well completed in Regional Aquifer with water levels within the screen or within 10 feet of the top of screen. *Elevation (feet mean sea level (MSL))*
- **MW-X** — Wells completed in Regional Aquifer with water levels more than 10 feet above the top of screen. *Elevation (feet MSL)*
- **MW-X** — Wells completed in Regional Aquifer - Data not used or no measurement this quarter.
- 300 — Regional Aquifer Groundwater Elevation Contour *(feet MSL)*.
- ? — Inferred Horizontal Groundwater Flow Path
- Pond
- Road
- Ditch
- Fence
- King County Landfill Property
- Building

N

0 1000 2000 Feet

Contour Interval 10 Feet

Notes:

1. Groundwater measurements made on October 4, 2021.
2. Only wells completed in the Regional Aquifer with well screen tops within 10 feet of the water table were used for contouring.

Locations surveyed on North American Datum of 1927 (NAD 27).

Elevations reported in feet above mean sea level based on the National Geodetic Vertical Datum of 1929 (NGVD 29).

Basemap Layer Data: King County Solid Waste Division

King County

Groundwater Potentiometric Surface Map
Fourth Quarter 2021 - Regional Aquifer
Cedar Hills Regional Landfill
King County, Washington

DATE: December 2021	PROJECT NO. 1126980
DESIGNED BY: SB	
DRAWN BY: KK	FIGURE NO. A-1
REVISED BY: SB	

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PART 5

Time-Concentration Plots
Monitoring Well Hydrographs

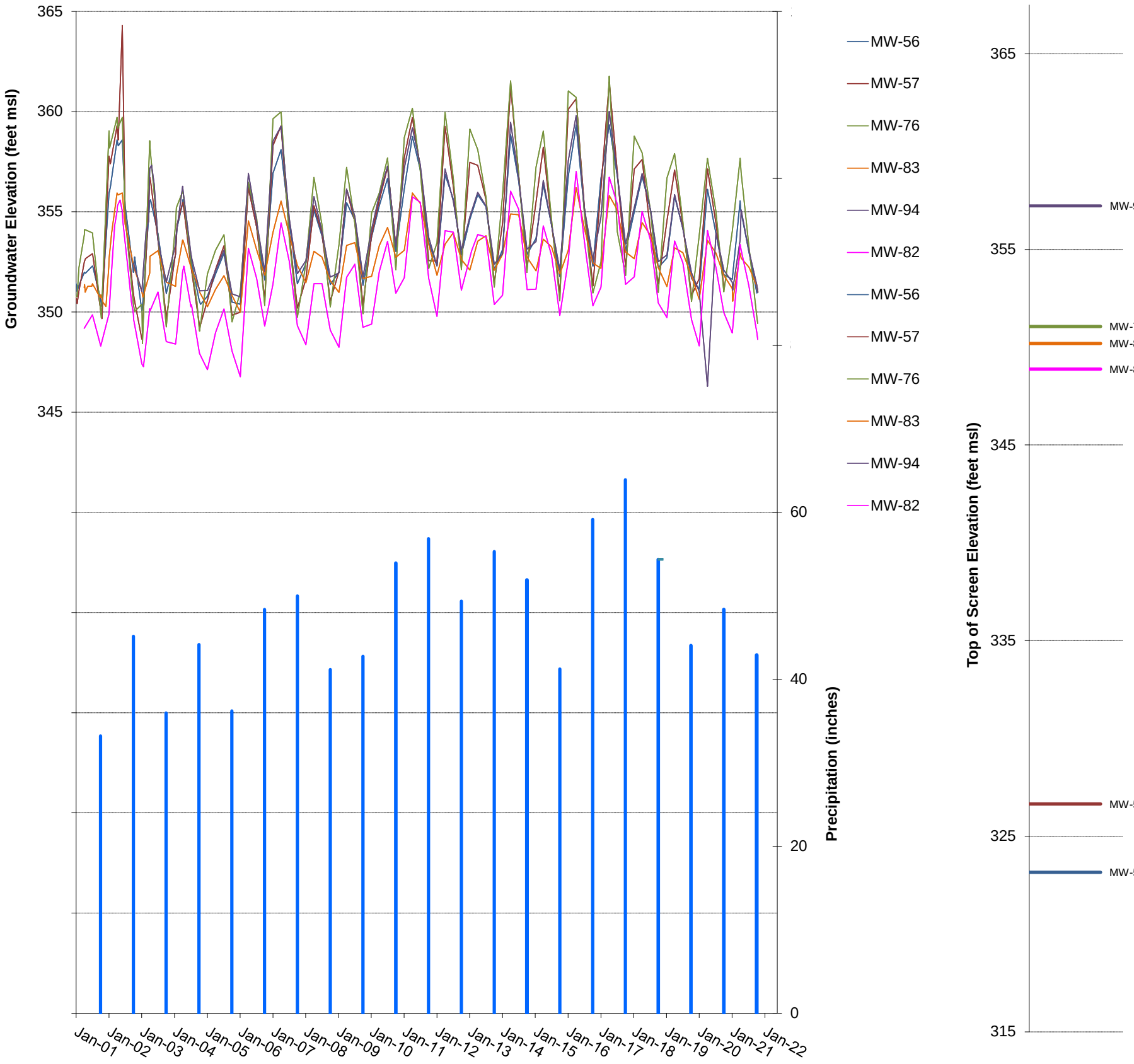
Regional Aquifer
- **Long Term**
- **Short Term**

North and West Perched Wells

East Main Hill Perched Zone

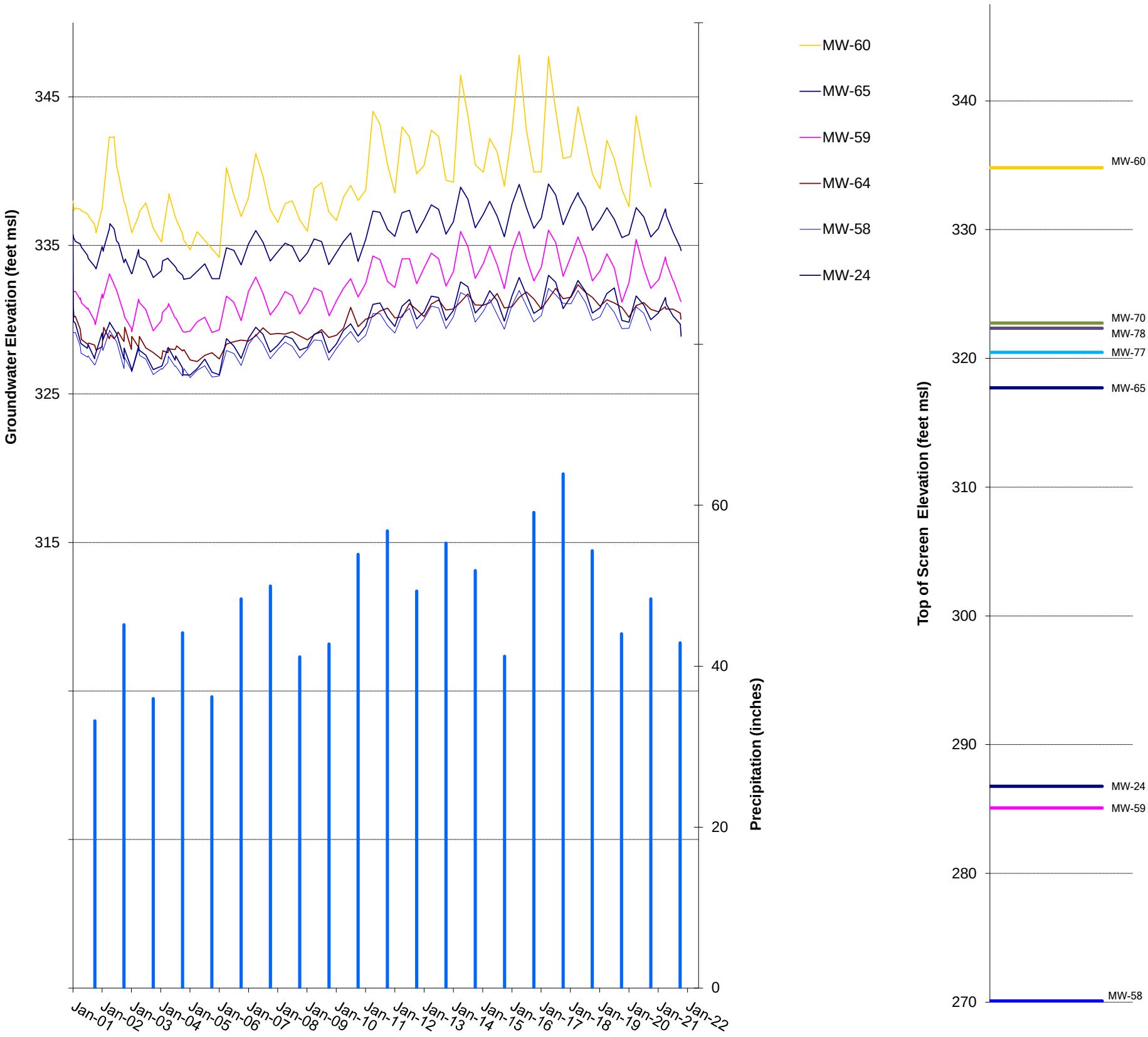
South Solid Waste Area Perched Wells
- **Long Term**
- **Short Term**

REGIONAL AQUIFER GROUNDWATER ELEVATIONS
POTENTIOMETRIC SURFACE 345-365 FT. MSL



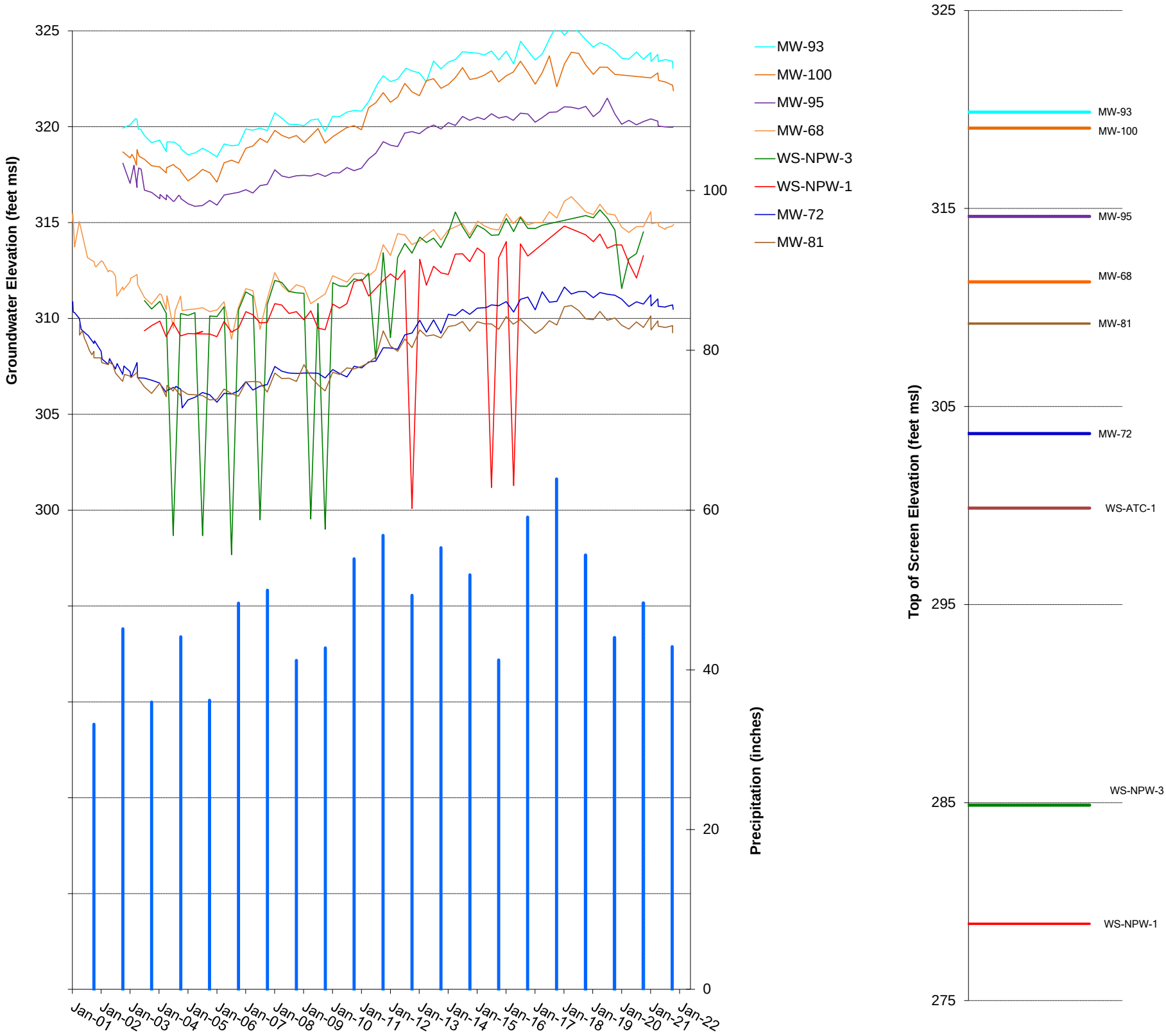
REGIONAL AQUIFER GROUNDWATER ELEVATIONS

POTENTIOMETRIC SURFACE 320-345 FT. MSL



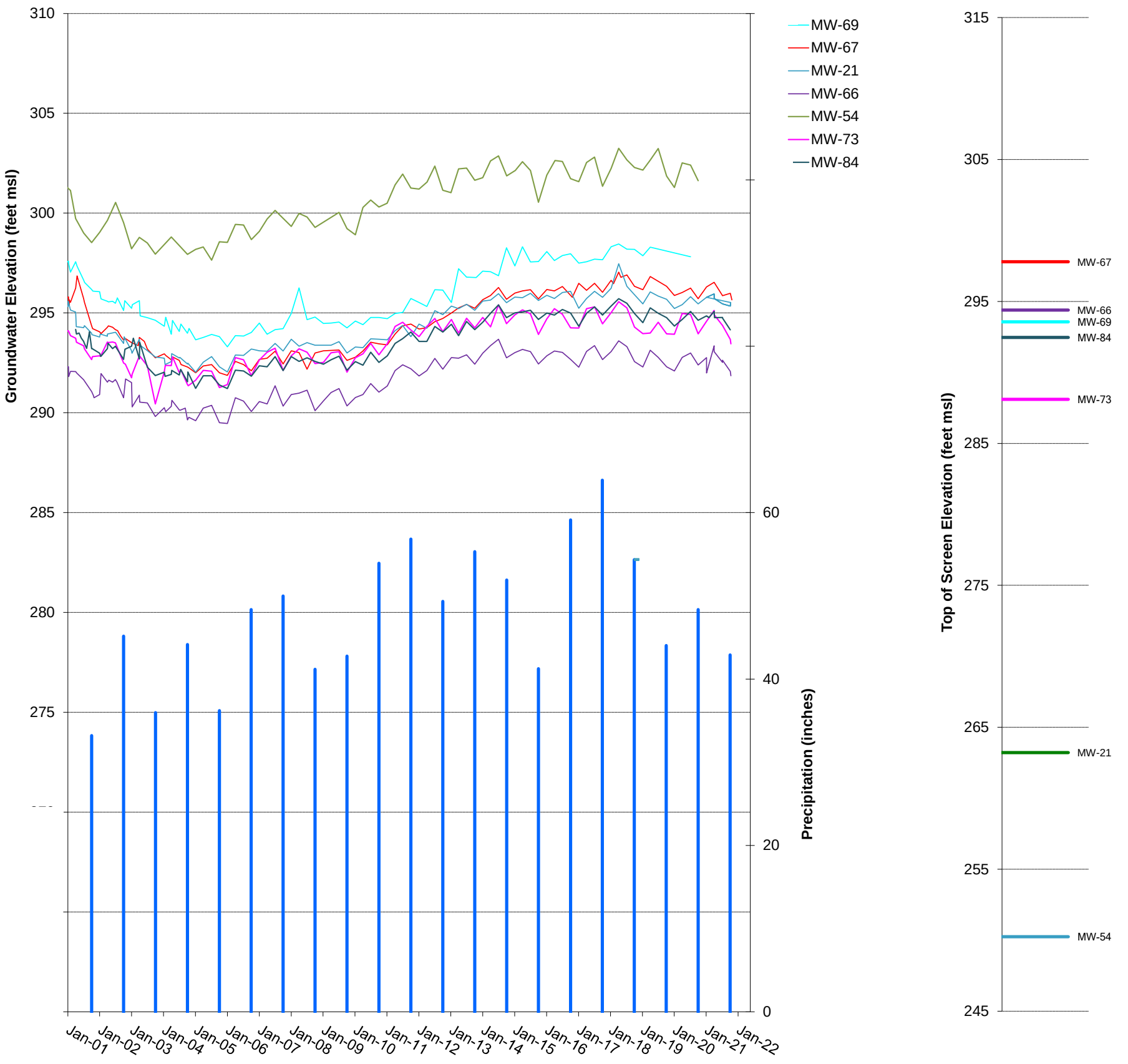
REGIONAL AQUIFER GROUNDWATER ELEVATIONS

POTENTIOMETRIC SURFACE 305-325 FT. MSL



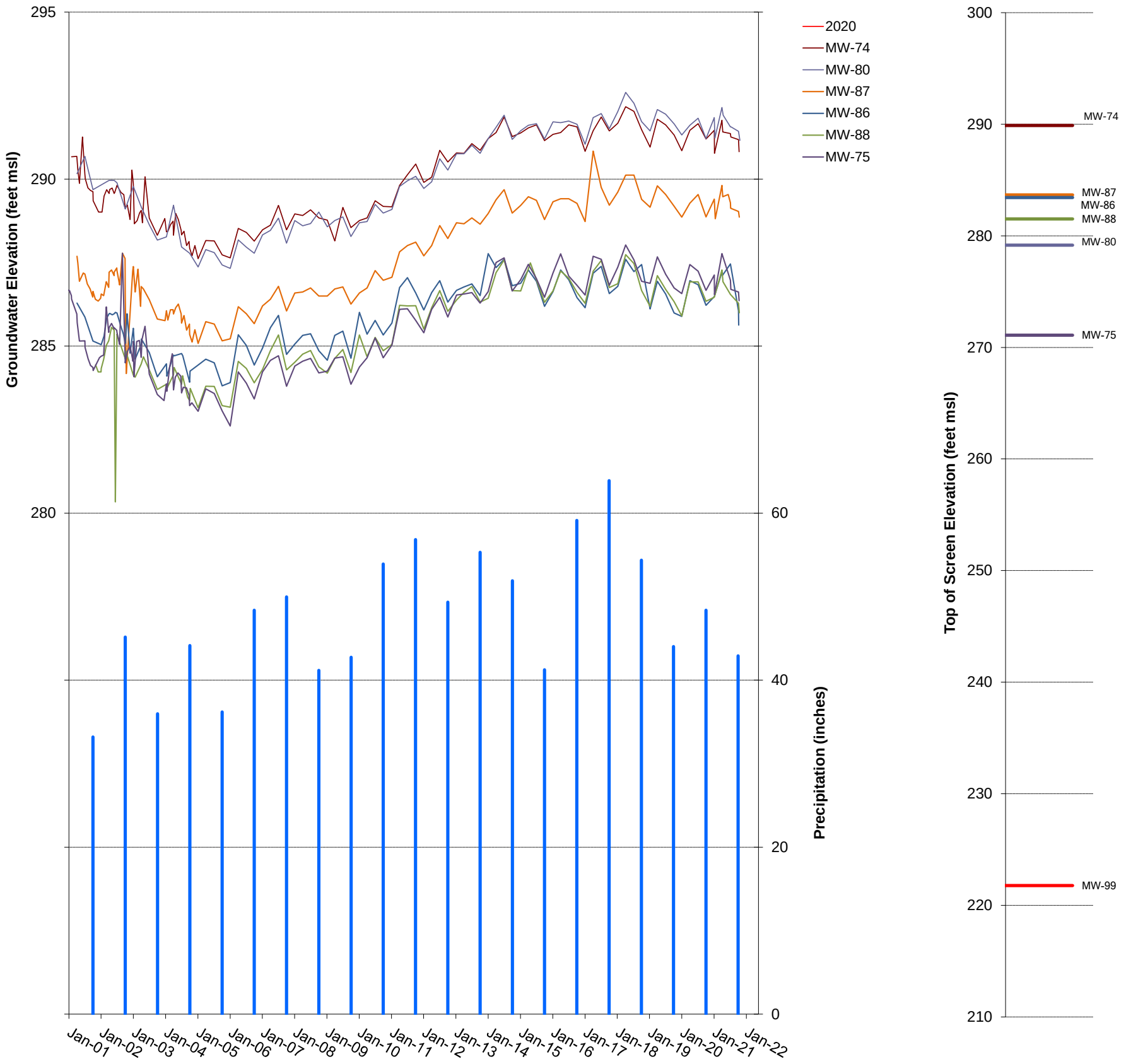
REGIONAL AQUIFER GROUNDWATER ELEVATIONS

POTENTIOMETRIC SURFACE 290-305 FT. MSL



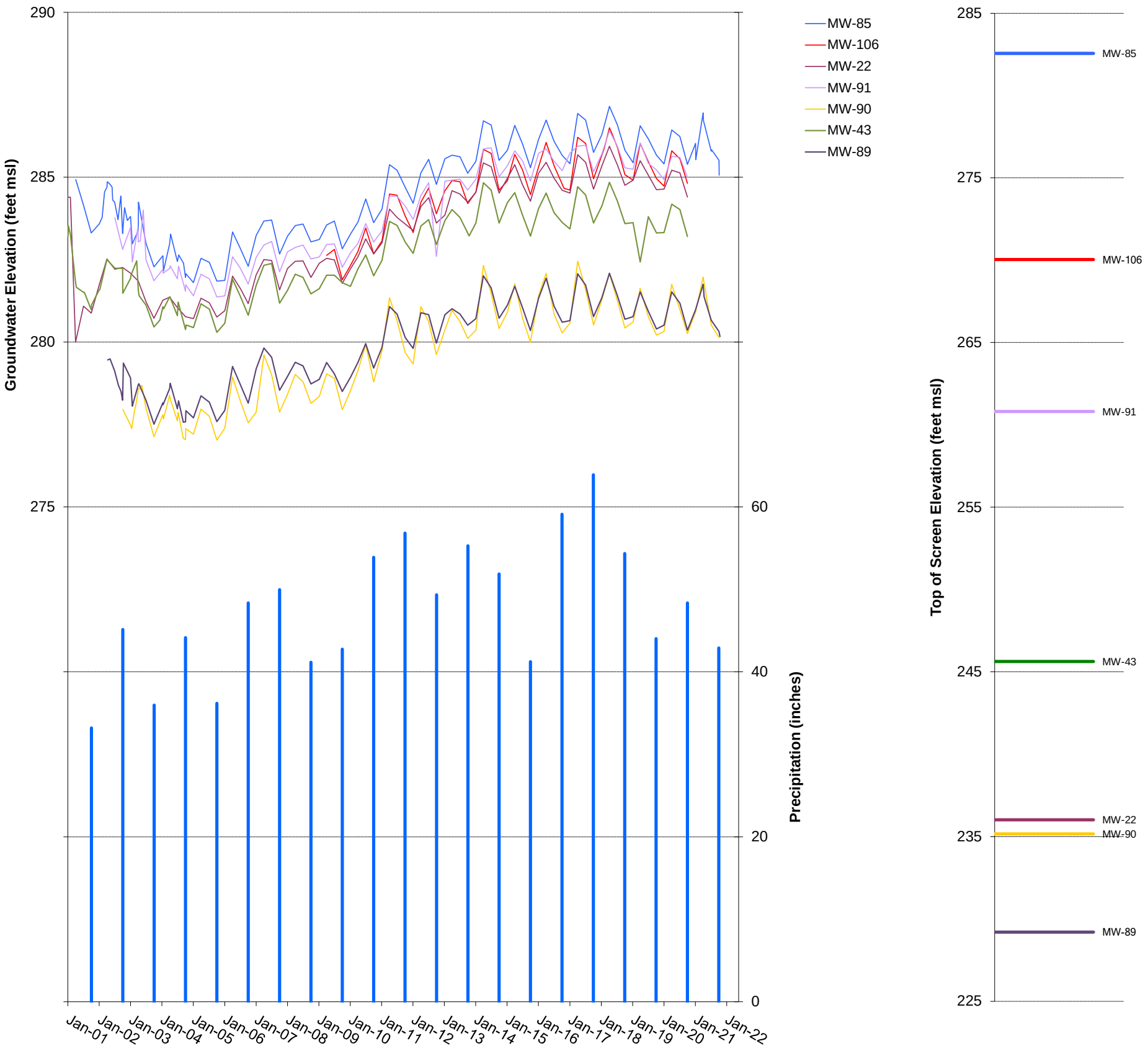
REGIONAL AQUIFER GROUNDWATER ELEVATIONS

POTENTIOMETRIC SURFACE 285-295 FT. MSL

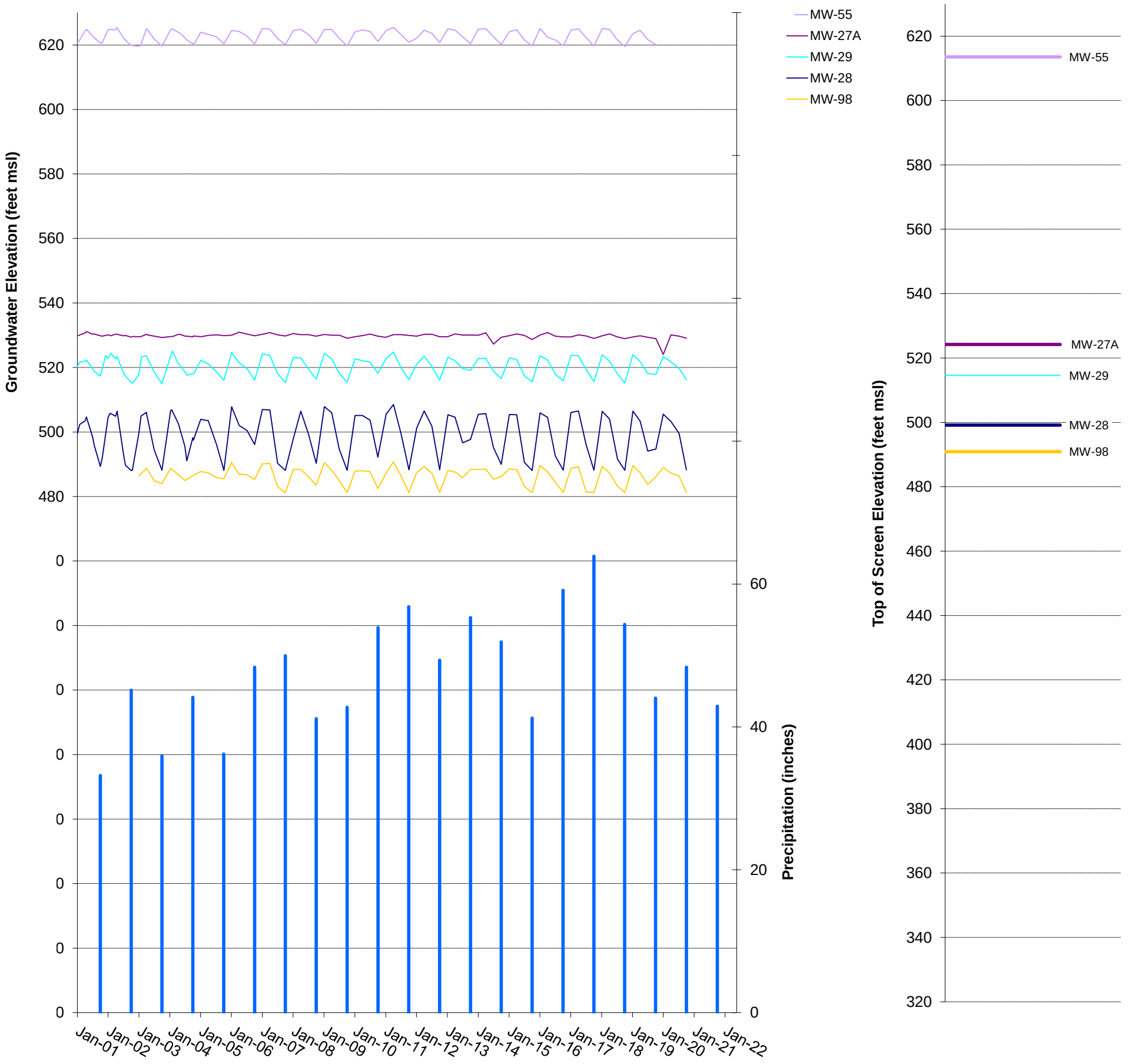


REGIONAL AQUIFER GROUNDWATER ELEVATIONS

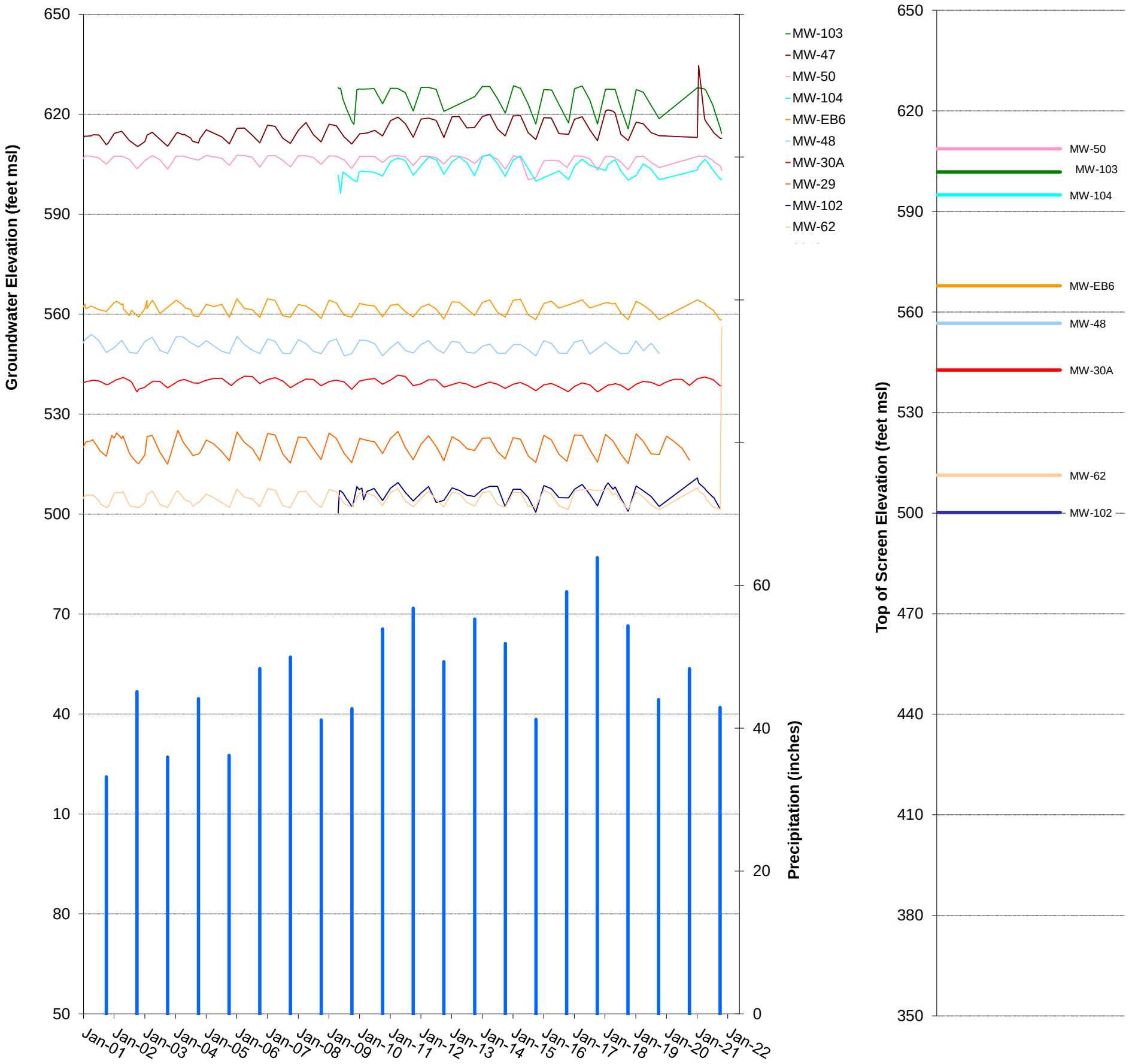
POTENTIOMETRIC SURFACE 275-285 FT. MSL



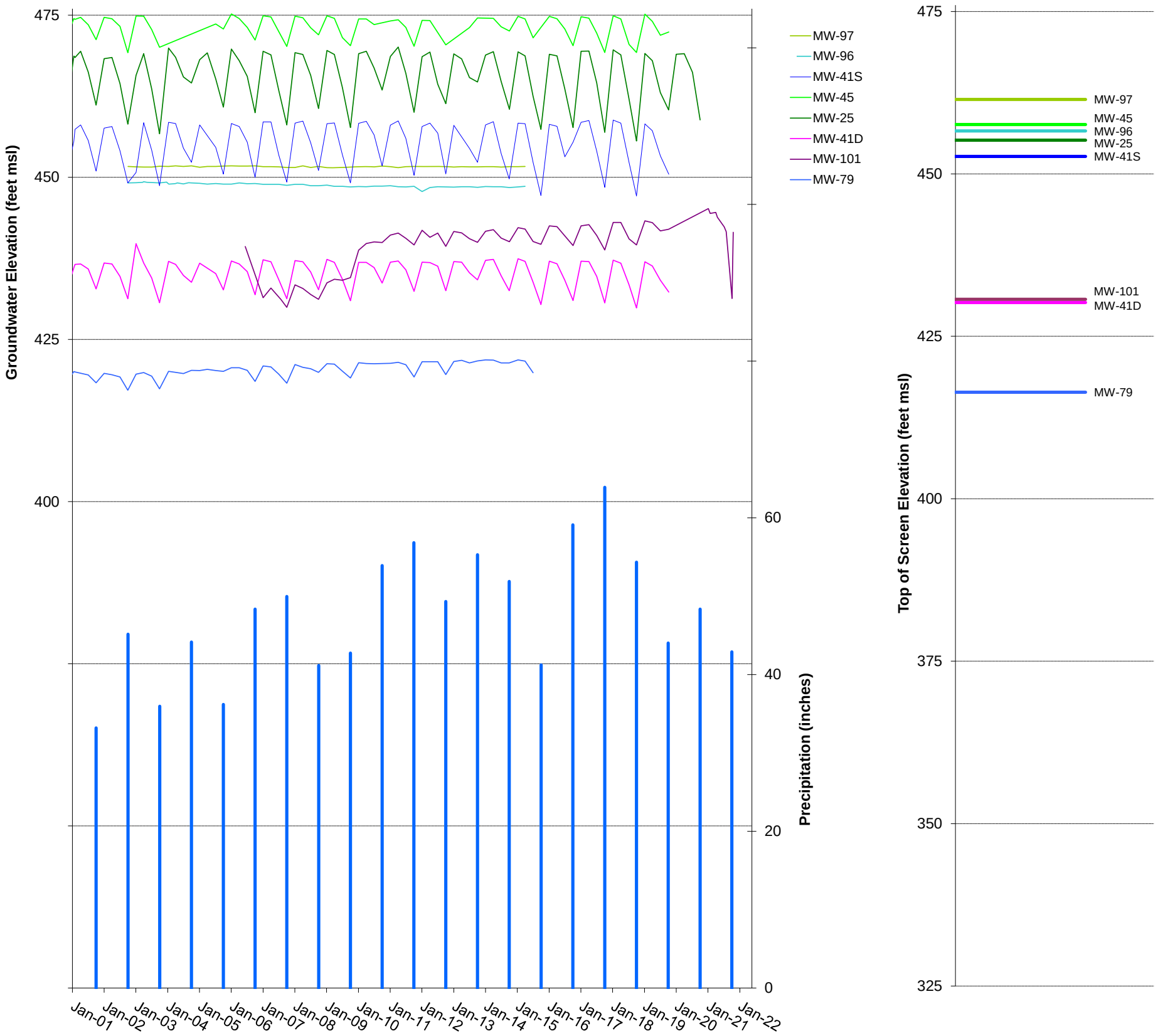
PERCHED ZONES GROUNDWATER ELEVATIONS
NORTH AND WEST WELLS

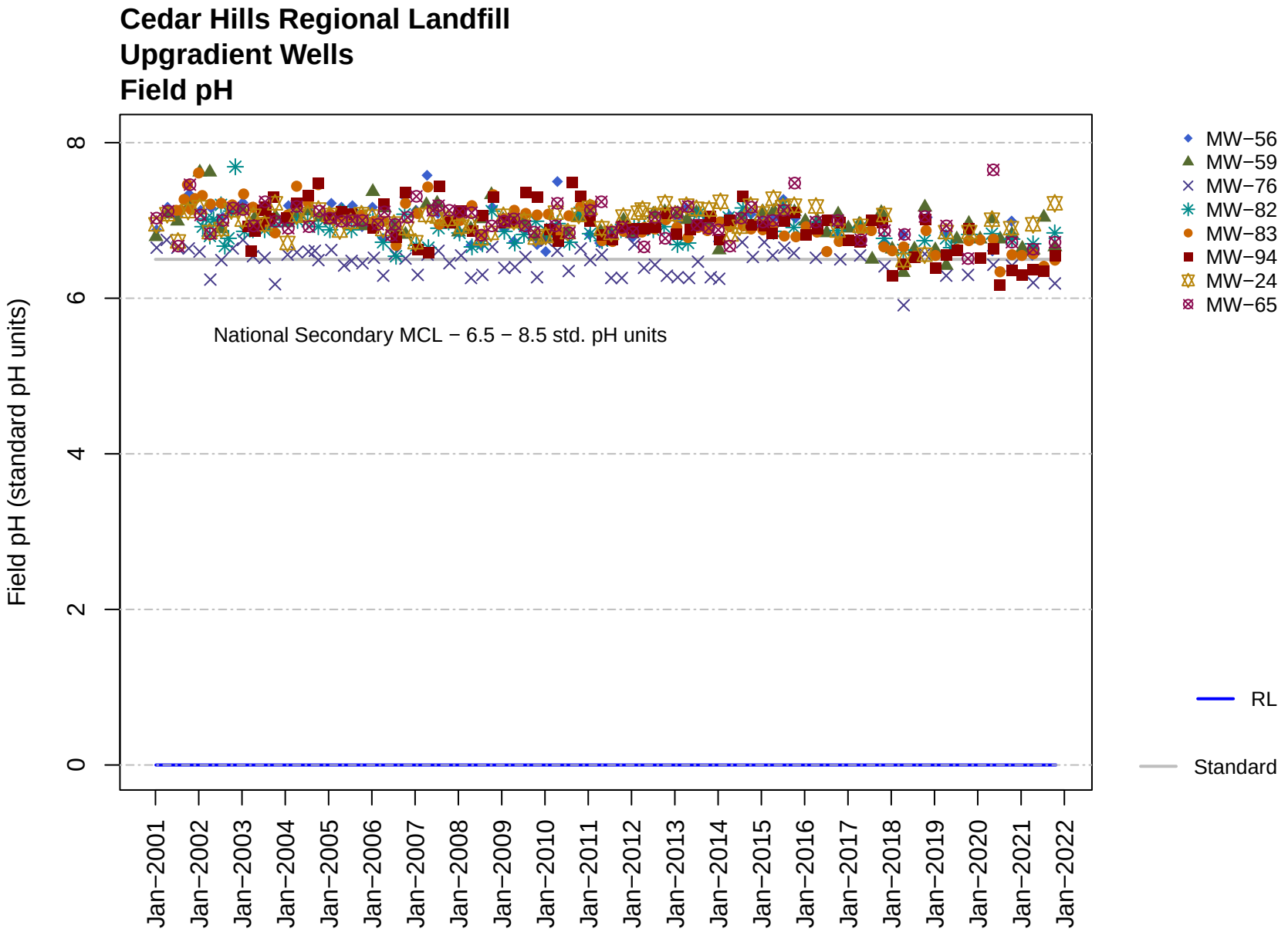


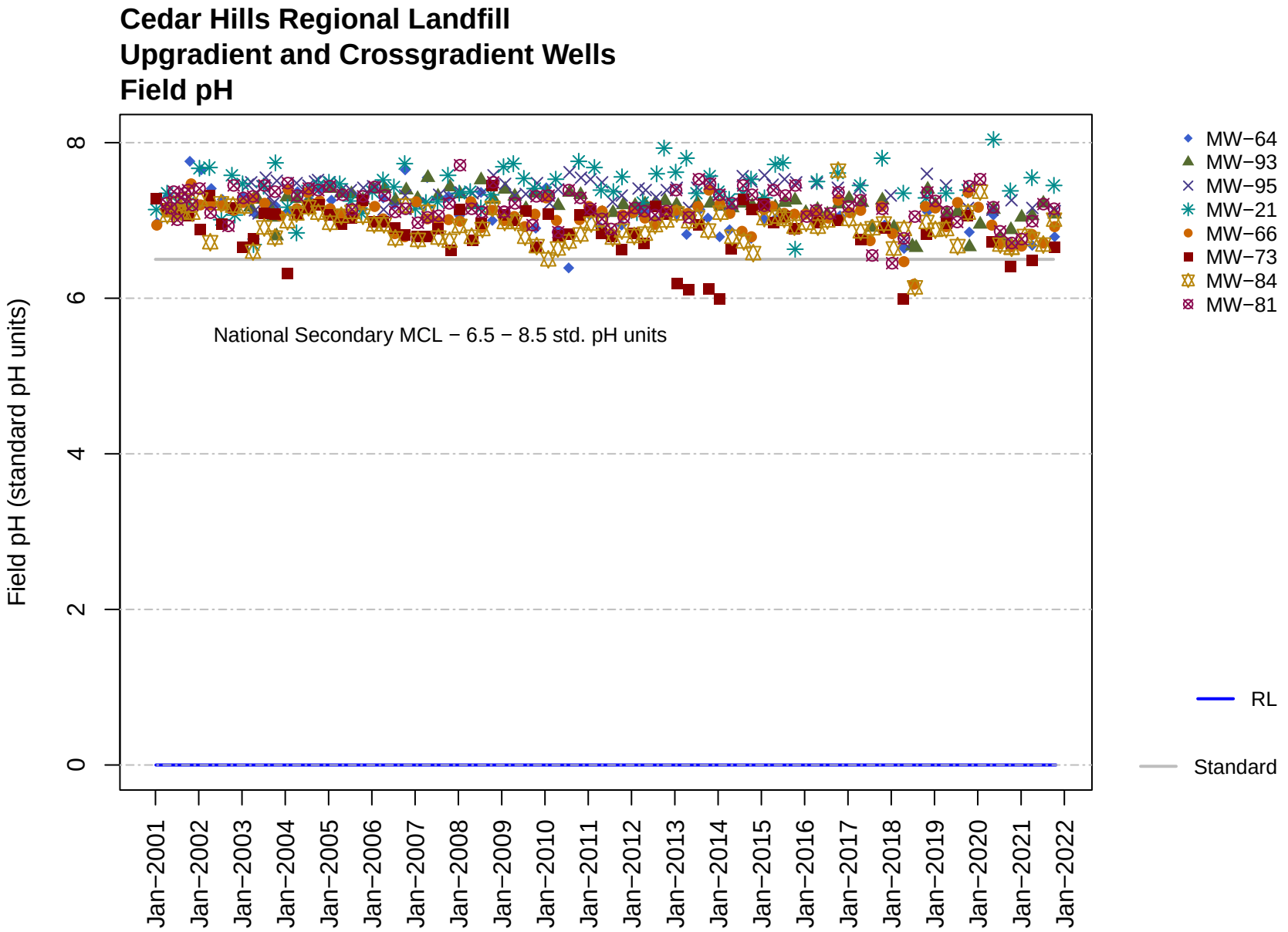
PERCHED ZONES GROUNDWATER ELEVATIONS
EAST MAIN HILL

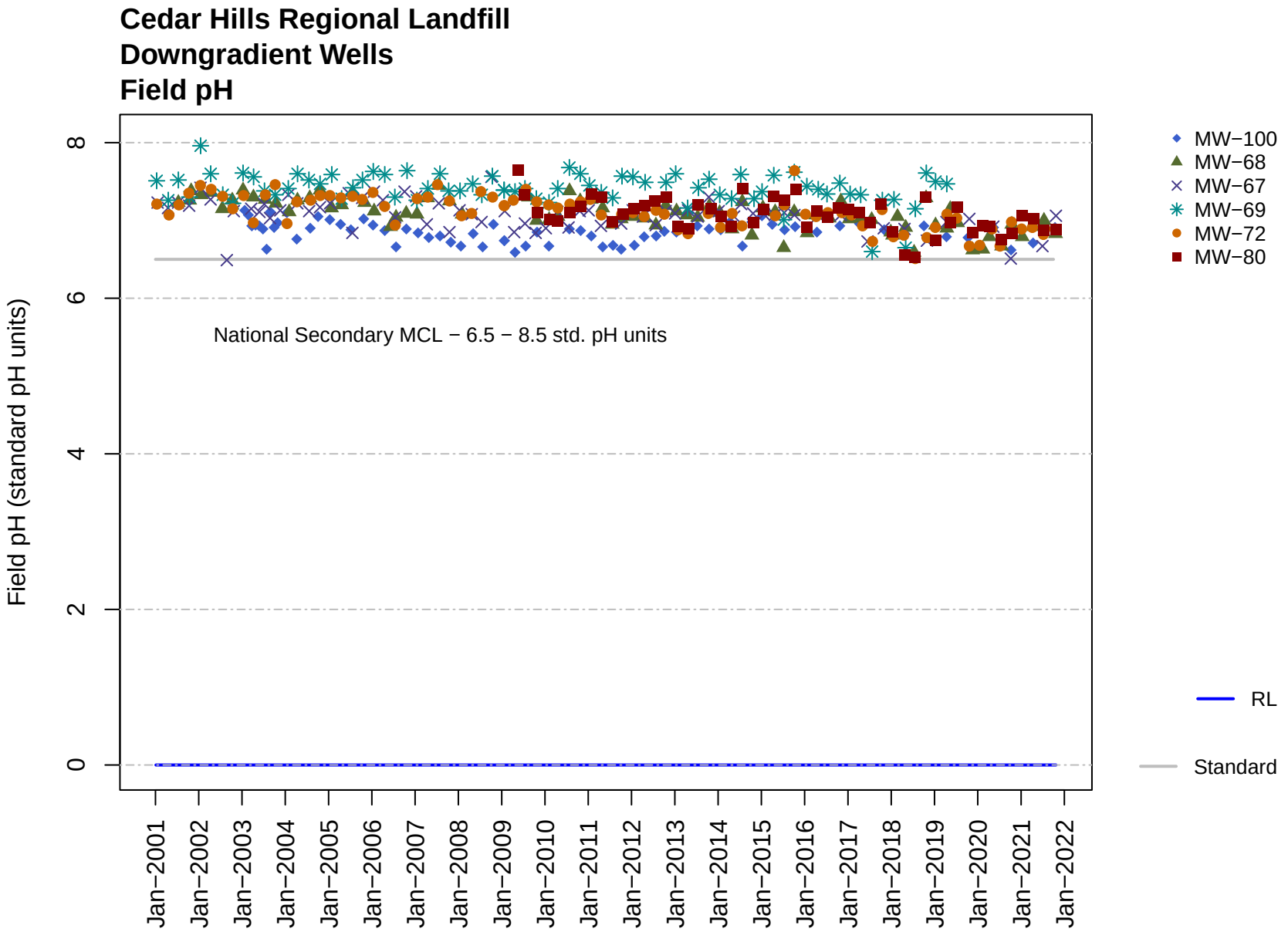


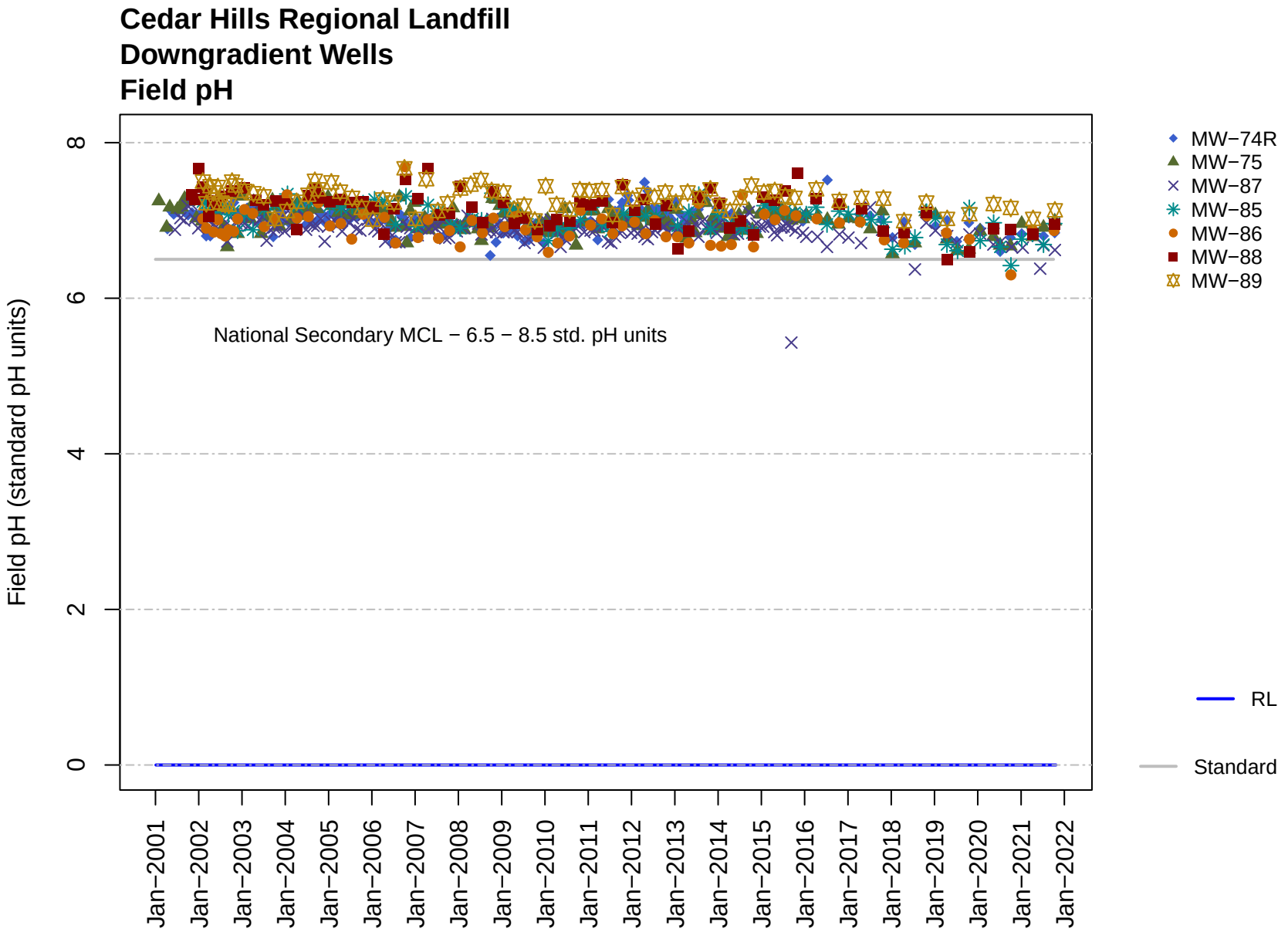
PERCHED ZONES GROUNDWATER ELEVATIONS
SOUTH SOLID WASTE AREA

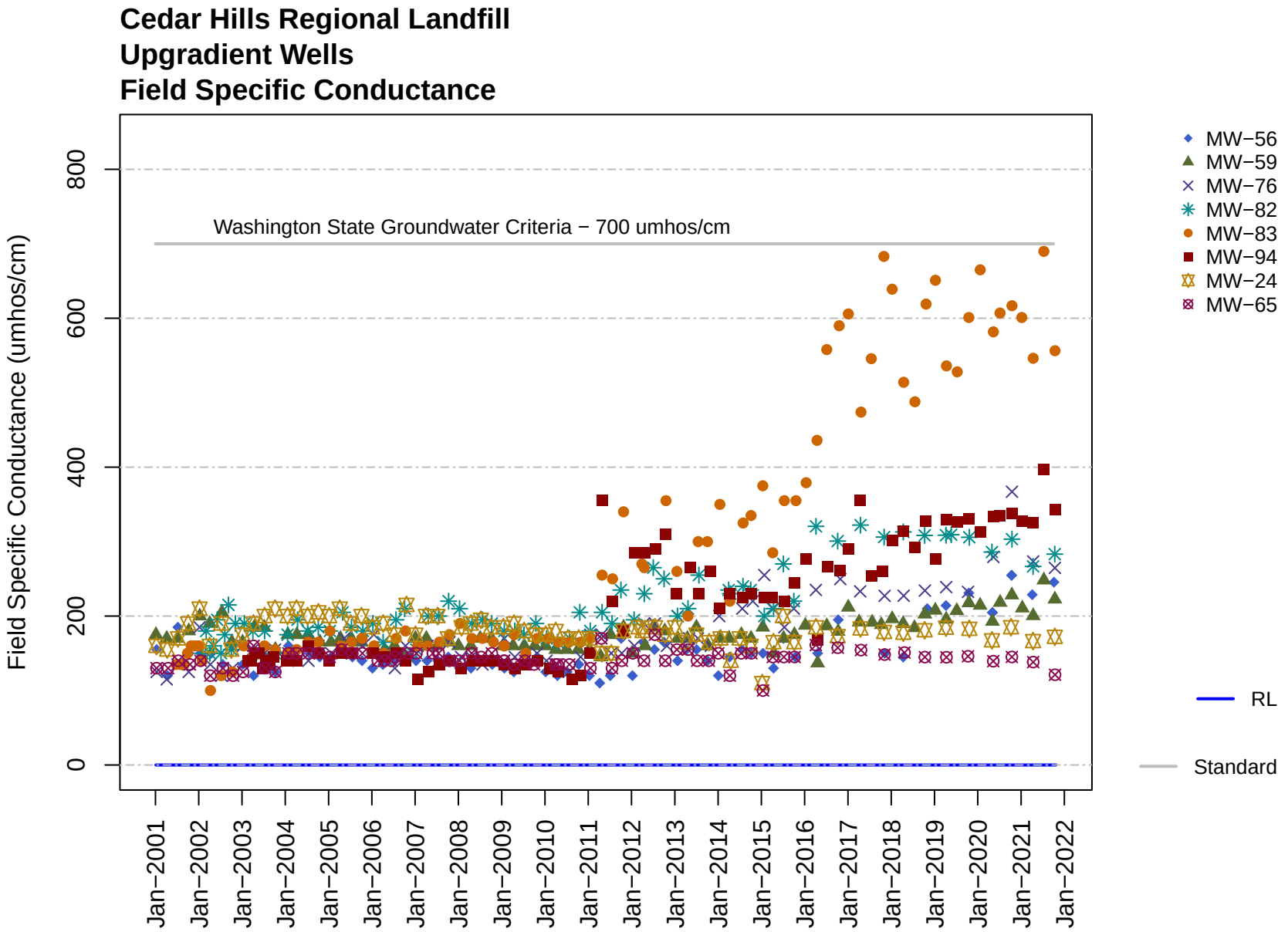


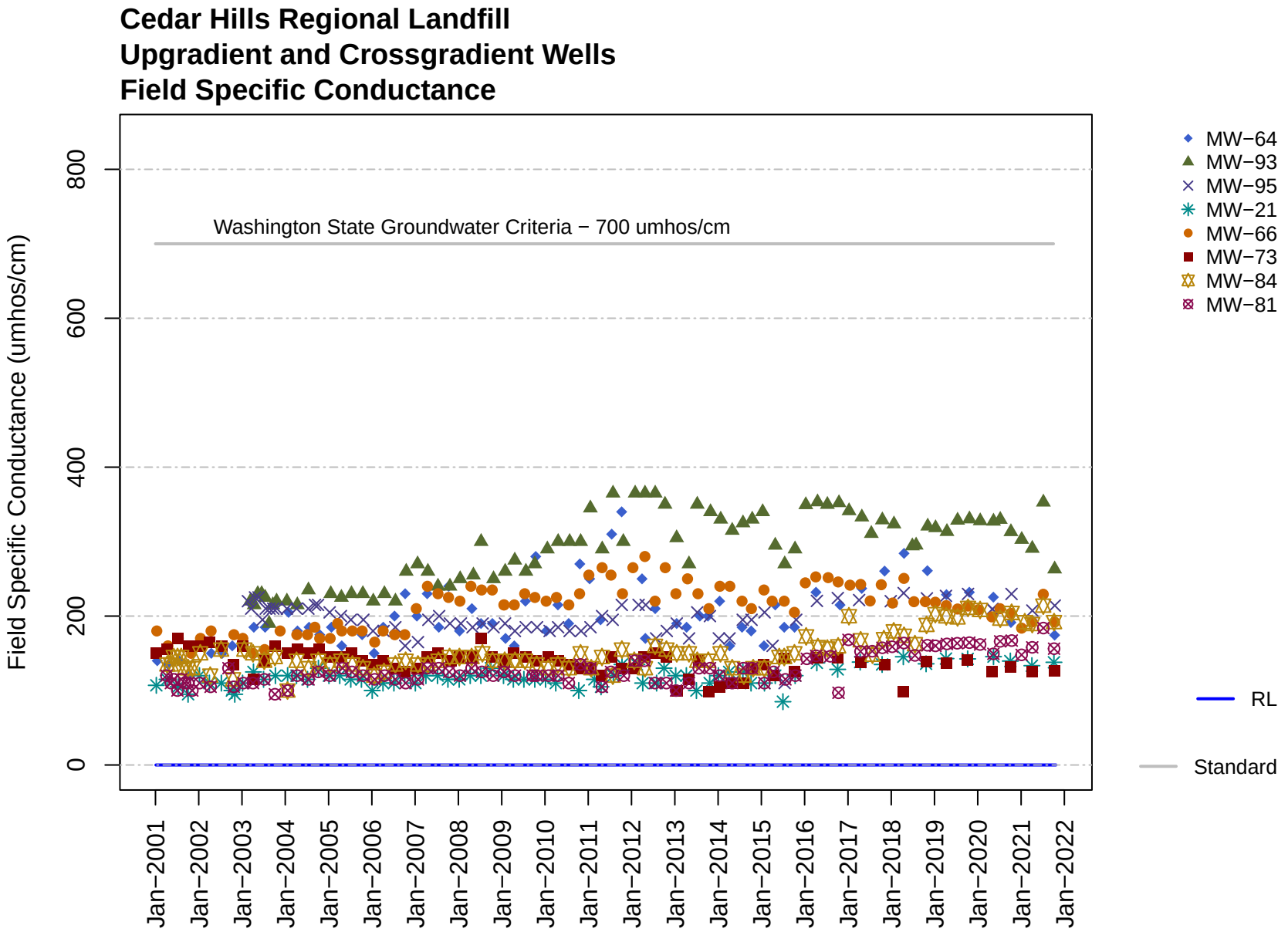

Cedar Hills Regional Landfill
Upgradient Wells
Field pH
Field pH (standard pH units)
0
2
4
6
8
National Secondary MCL − 6.5 − 8.5 std. pH units
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

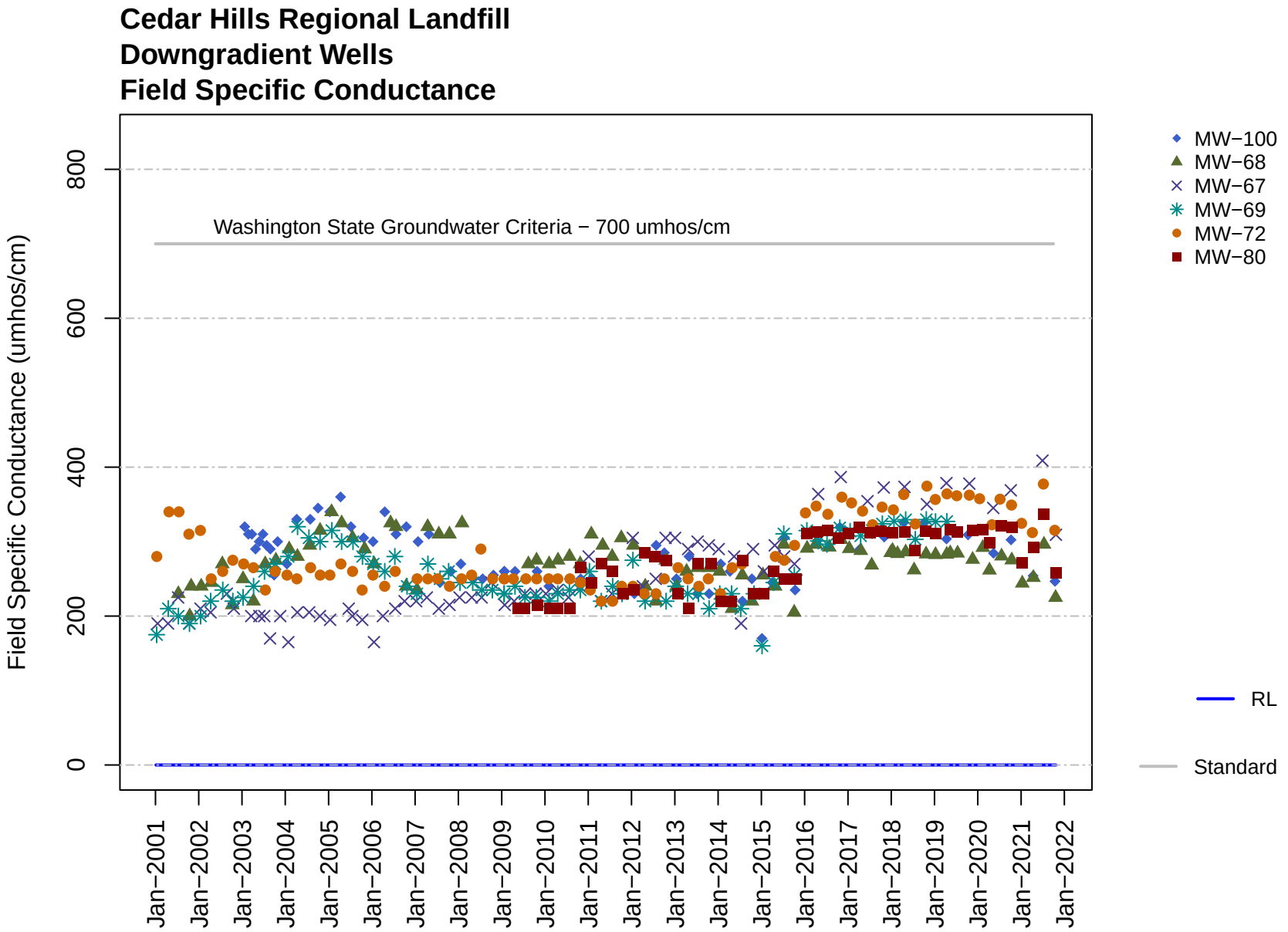

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Field pH
Field pH (standard pH units)
0
2
4
6
8
National Secondary MCL − 6.5 − 8.5 std. pH units
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022

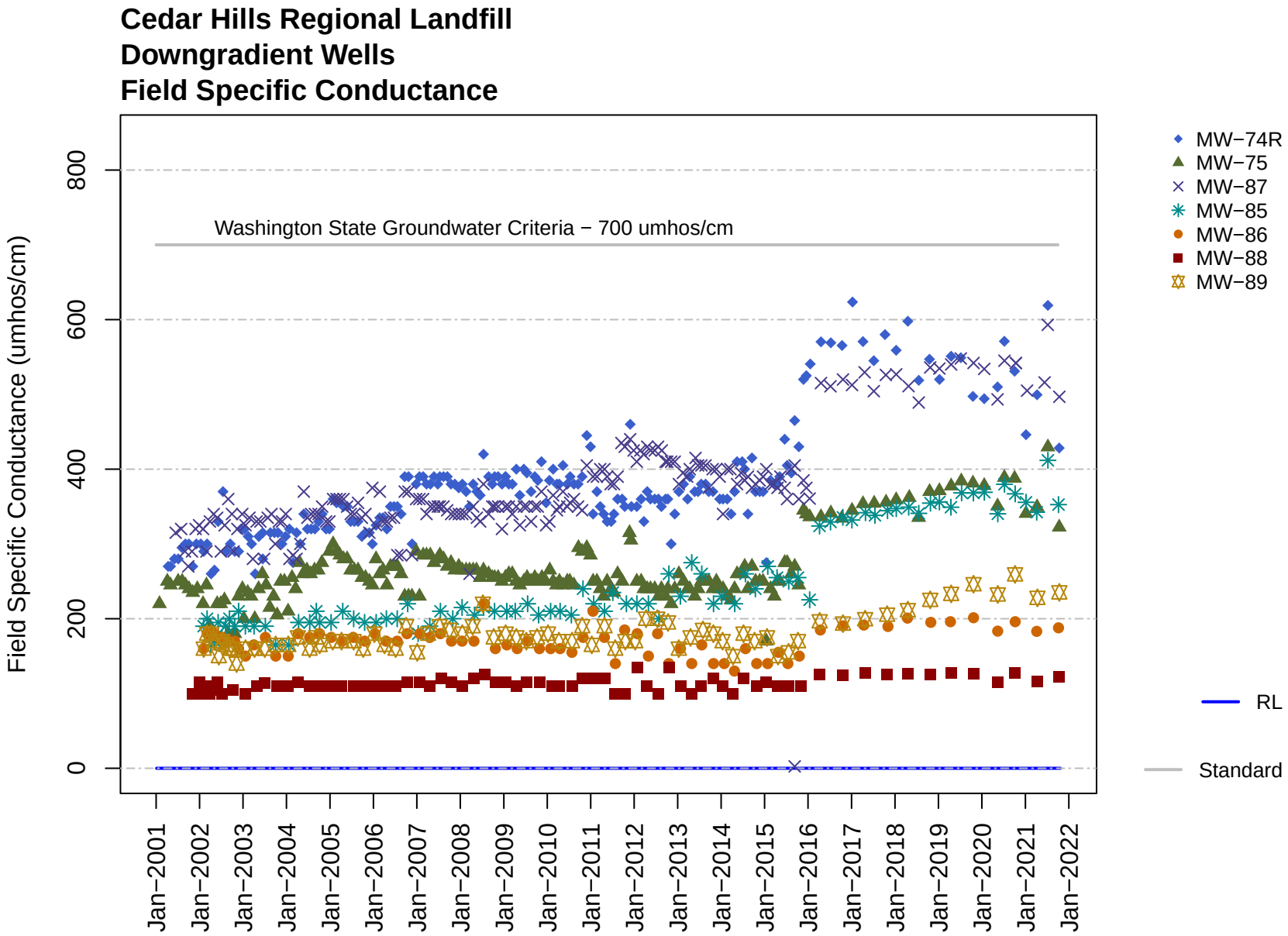

Cedar Hills Regional Landfill
Downgradient Wells
Field pH
Field pH (standard pH units)
0
2
4
6
8
National Secondary MCL − 6.5 − 8.5 std. pH units
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

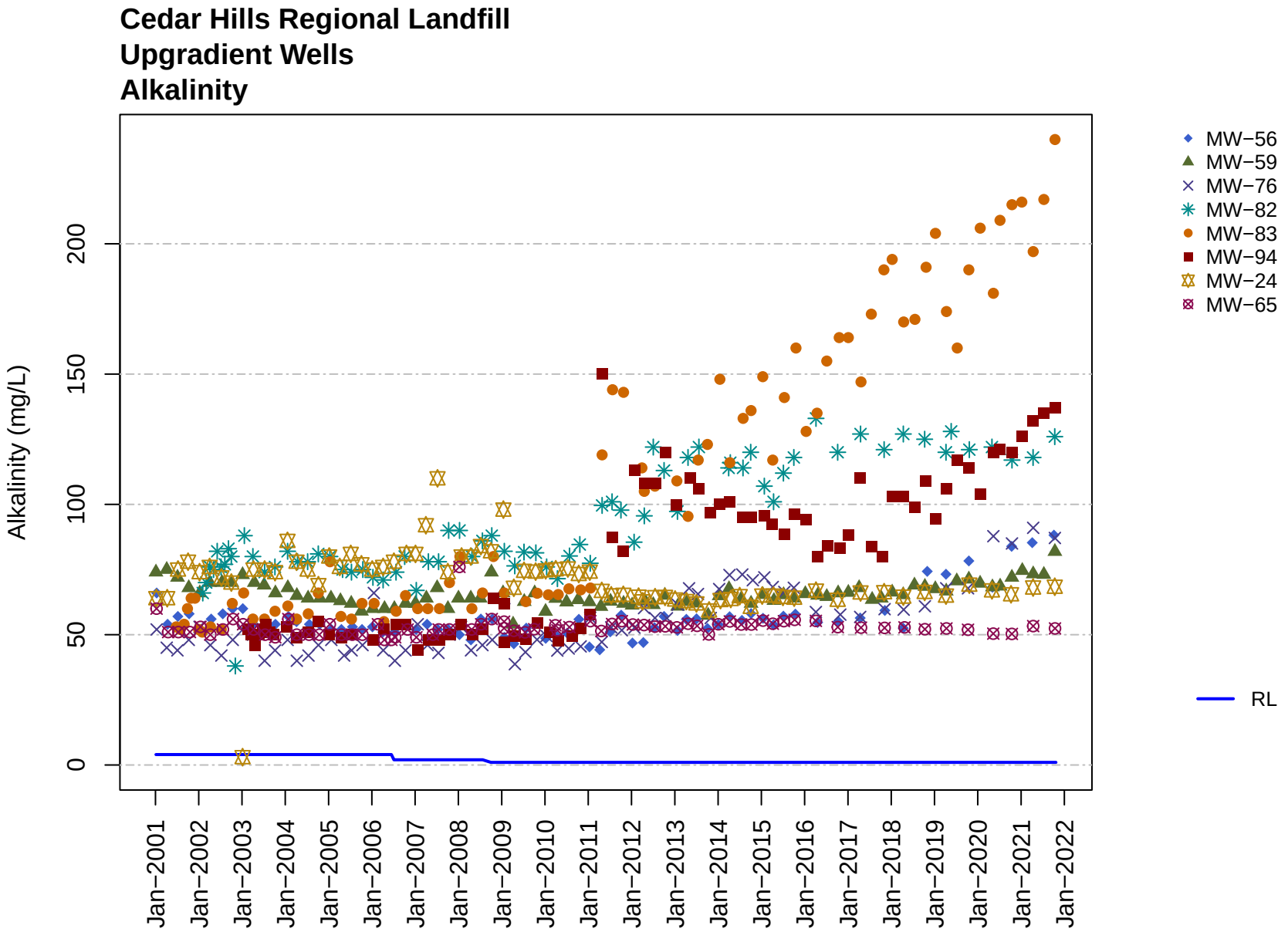

Cedar Hills Regional Landfill
Downgradient Wells
Field pH
Field pH (standard pH units)
0
2
4
6
8
National Secondary MCL − 6.5 − 8.5 std. pH units
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

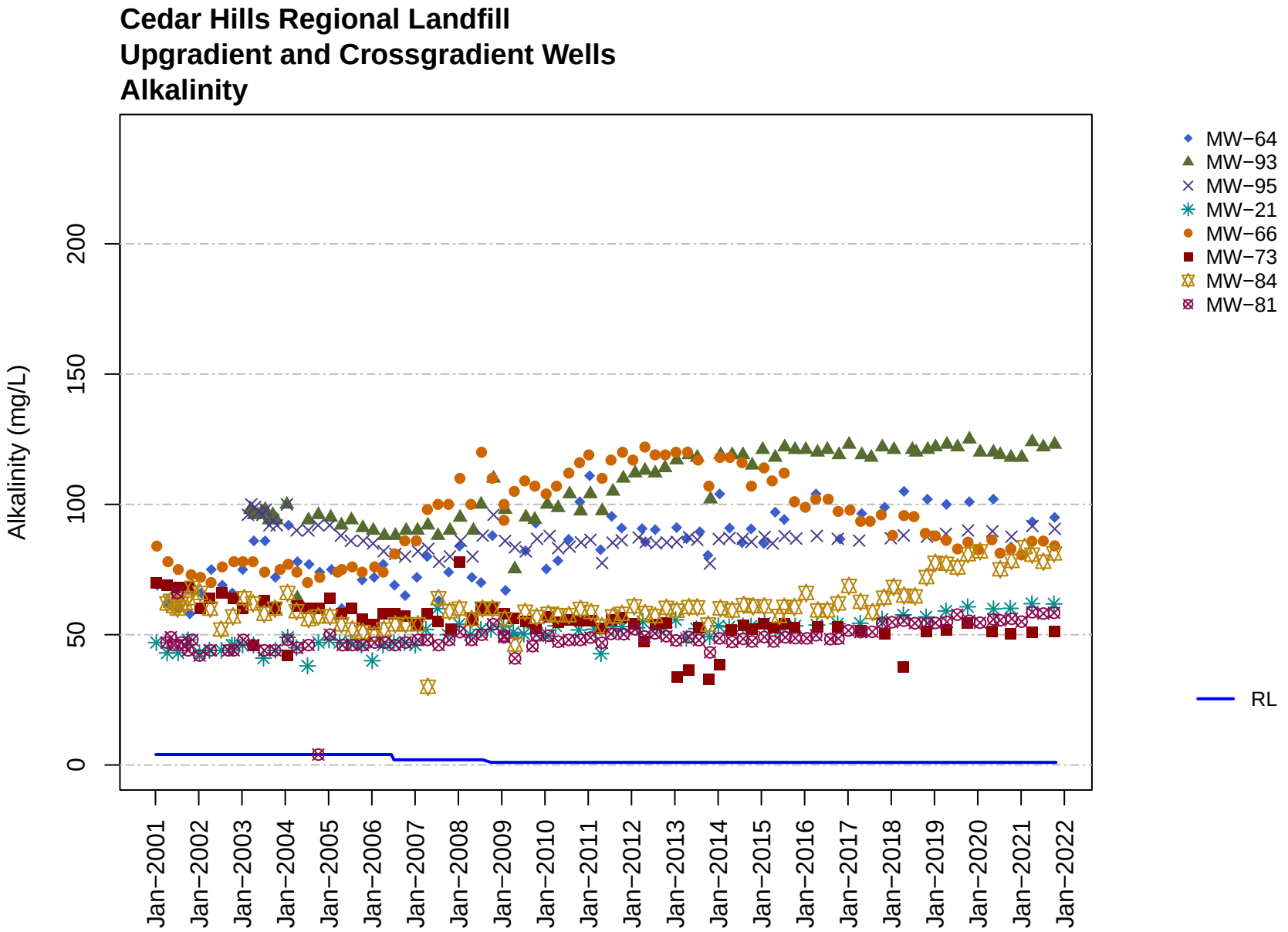

Cedar Hills Regional Landfill
Upgradient Wells
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
Washington State Groundwater Criteria − 700 umhos/cm
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

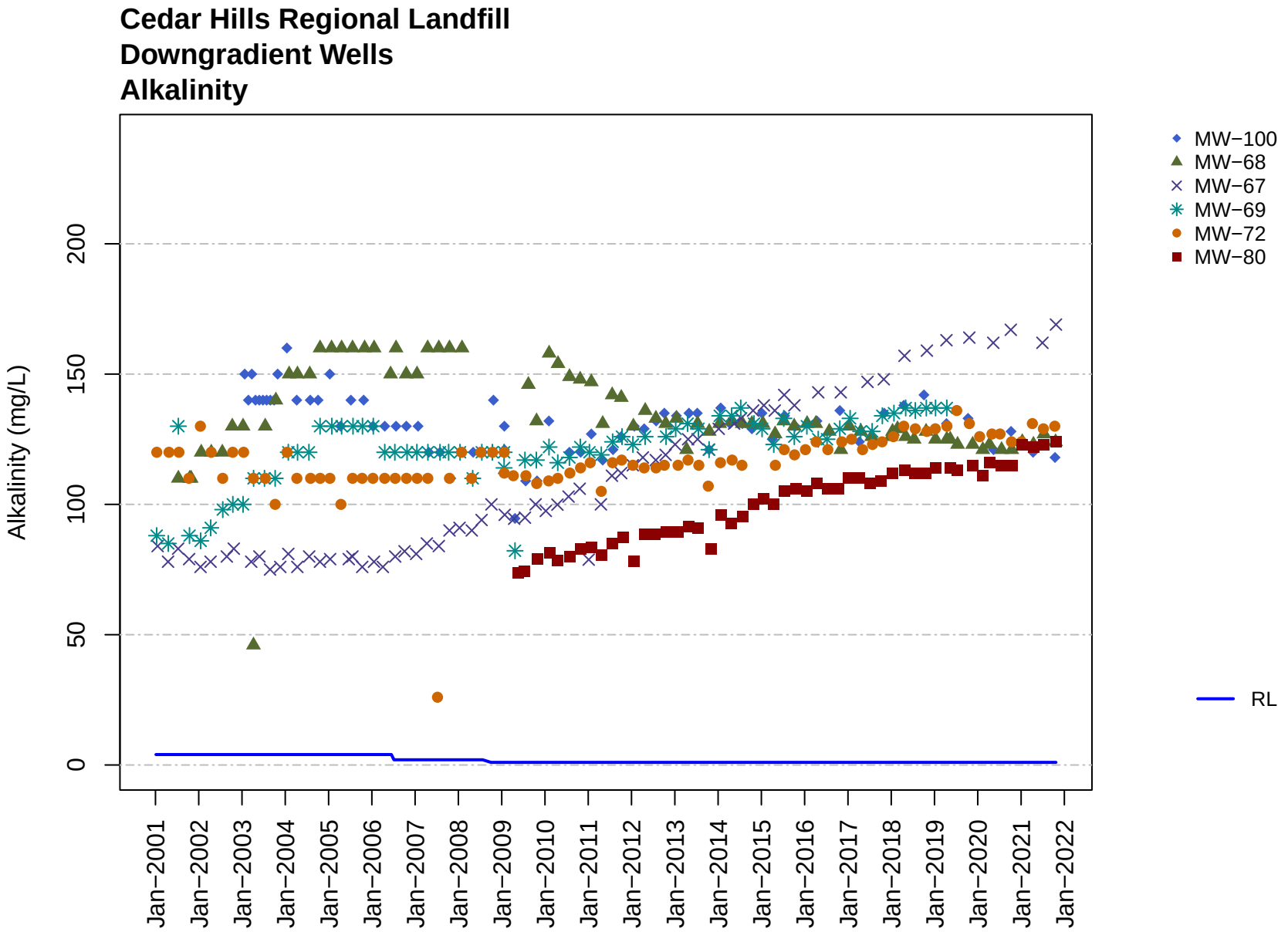

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
Washington State Groundwater Criteria − 700 umhos/cm
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

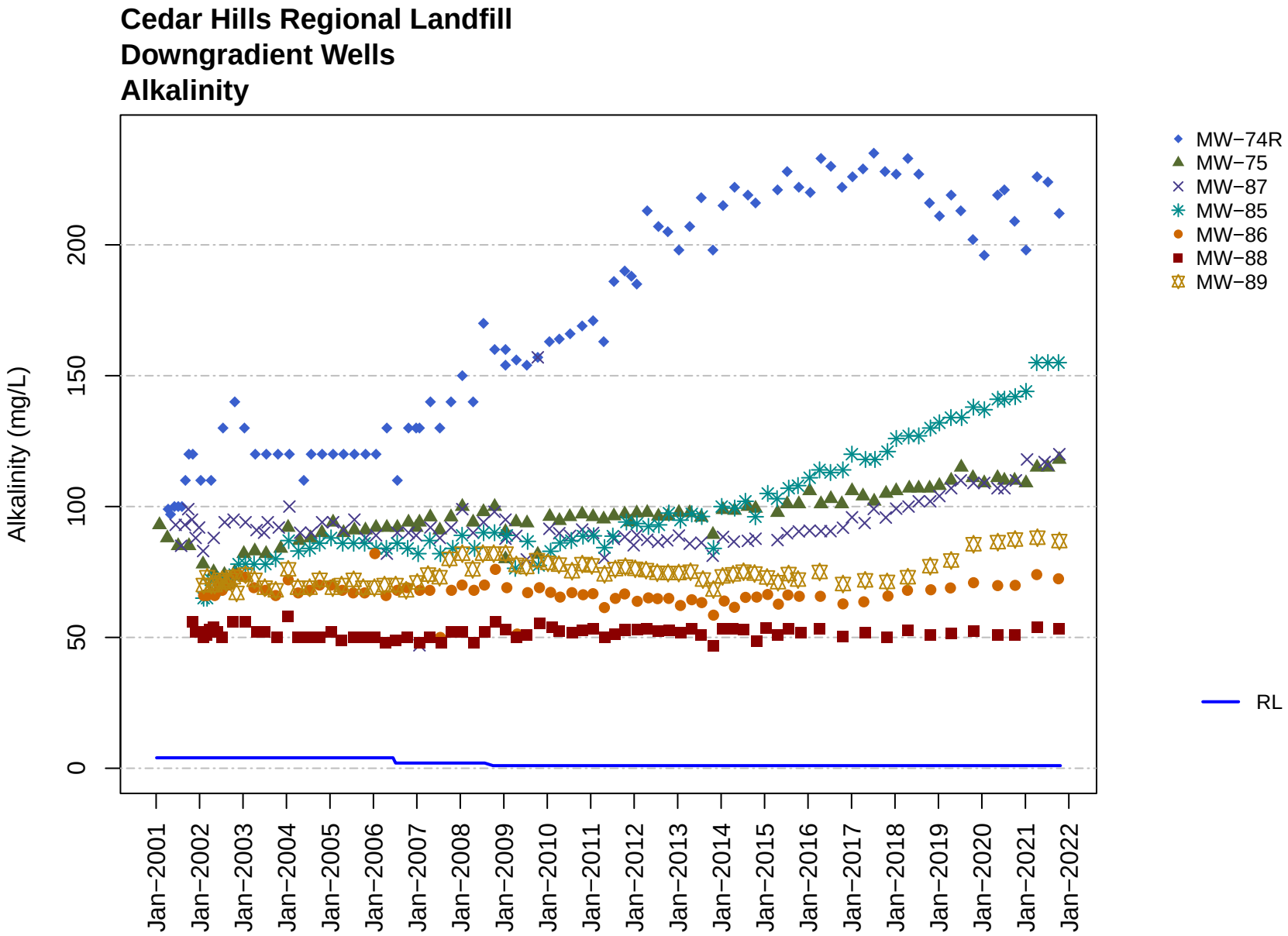

Cedar Hills Regional Landfill
Downgradient Wells
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
Washington State Groundwater Criteria − 700 umhos/cm
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

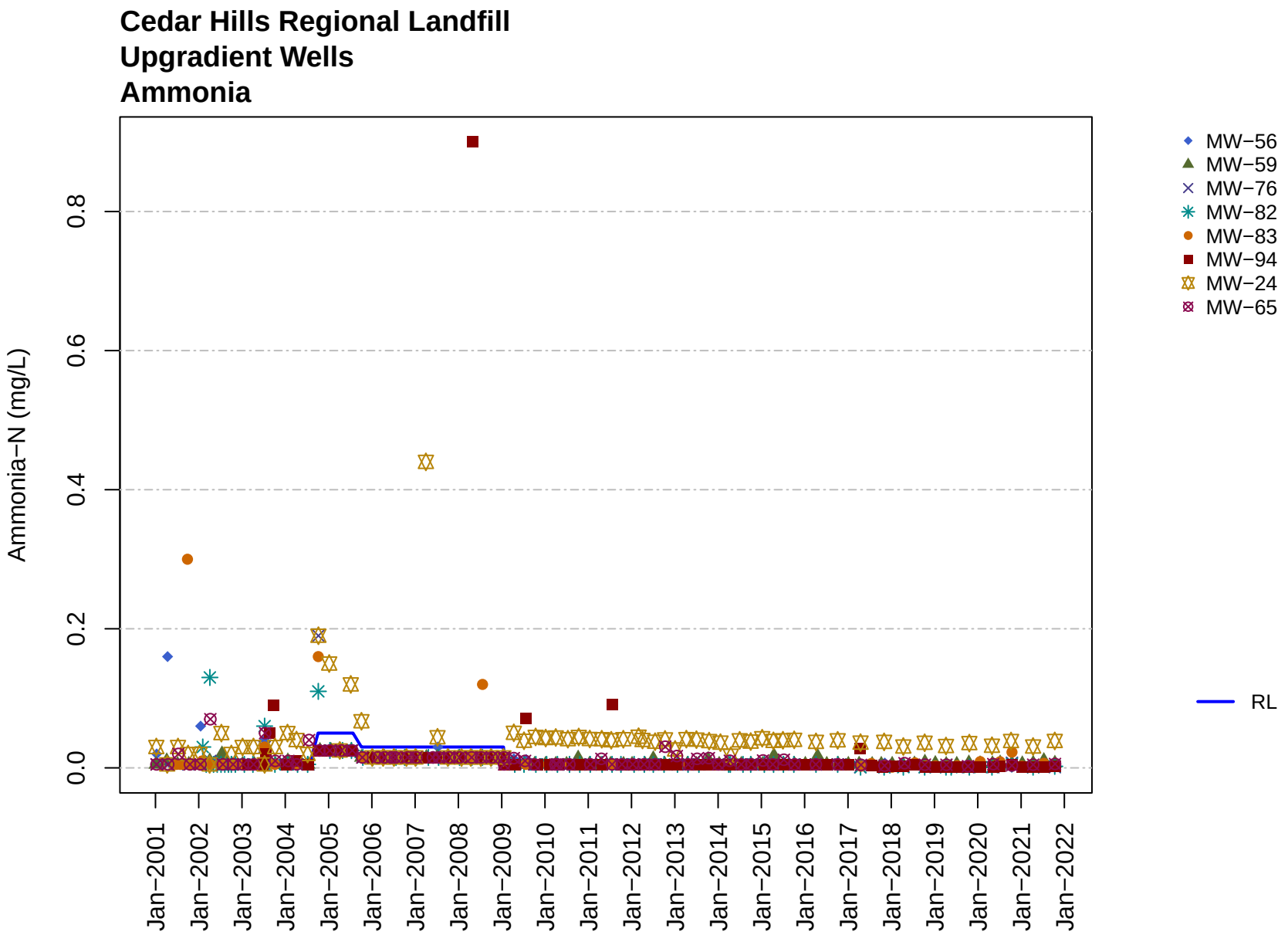

Cedar Hills Regional Landfill
Downgradient Wells
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
Washington State Groundwater Criteria − 700 umhos/cm
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

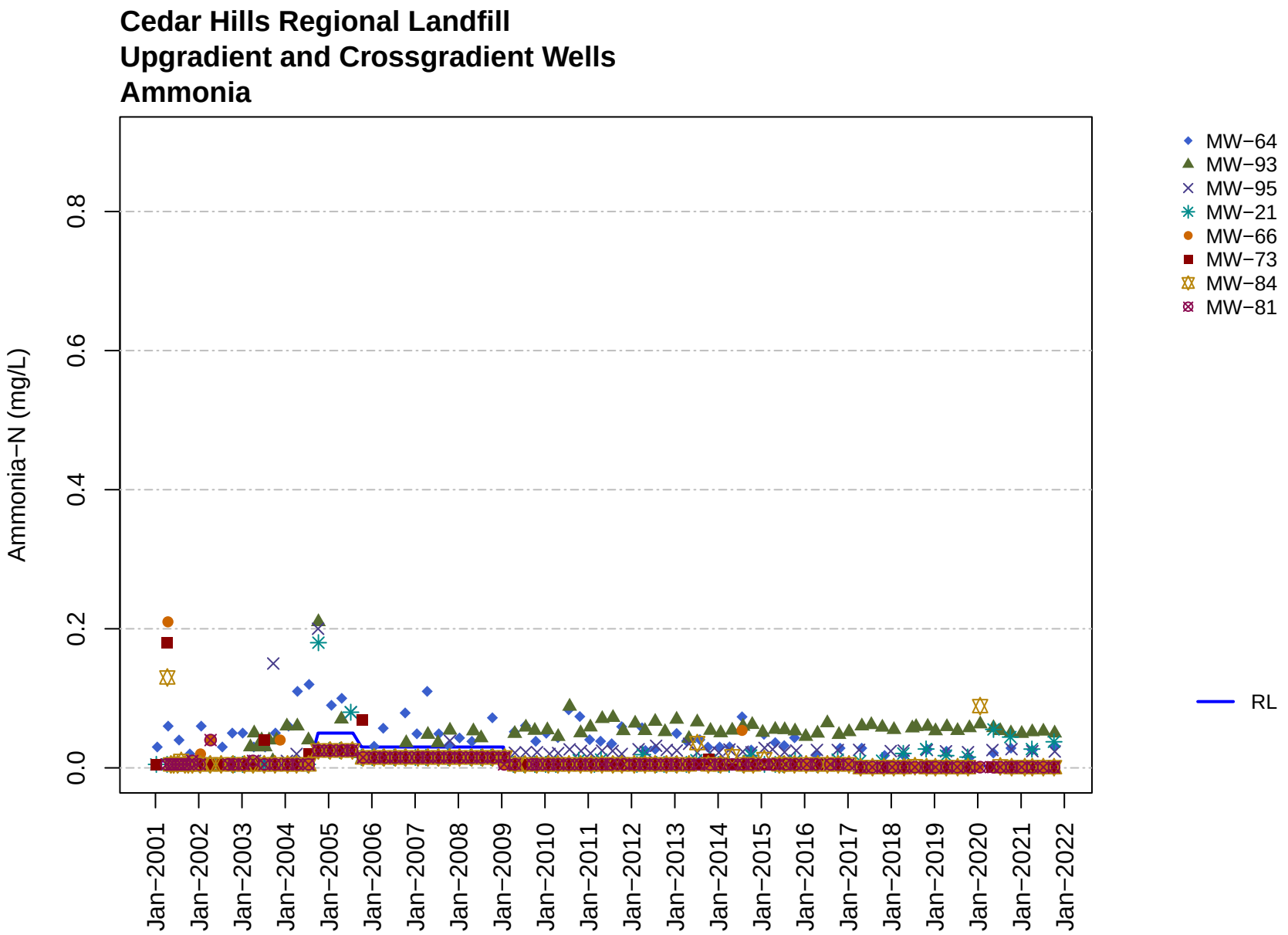

Cedar Hills Regional Landfill
Upgradient Wells
Alkalinity
Alkalinity (mg/L)
0
50
100
150
200
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

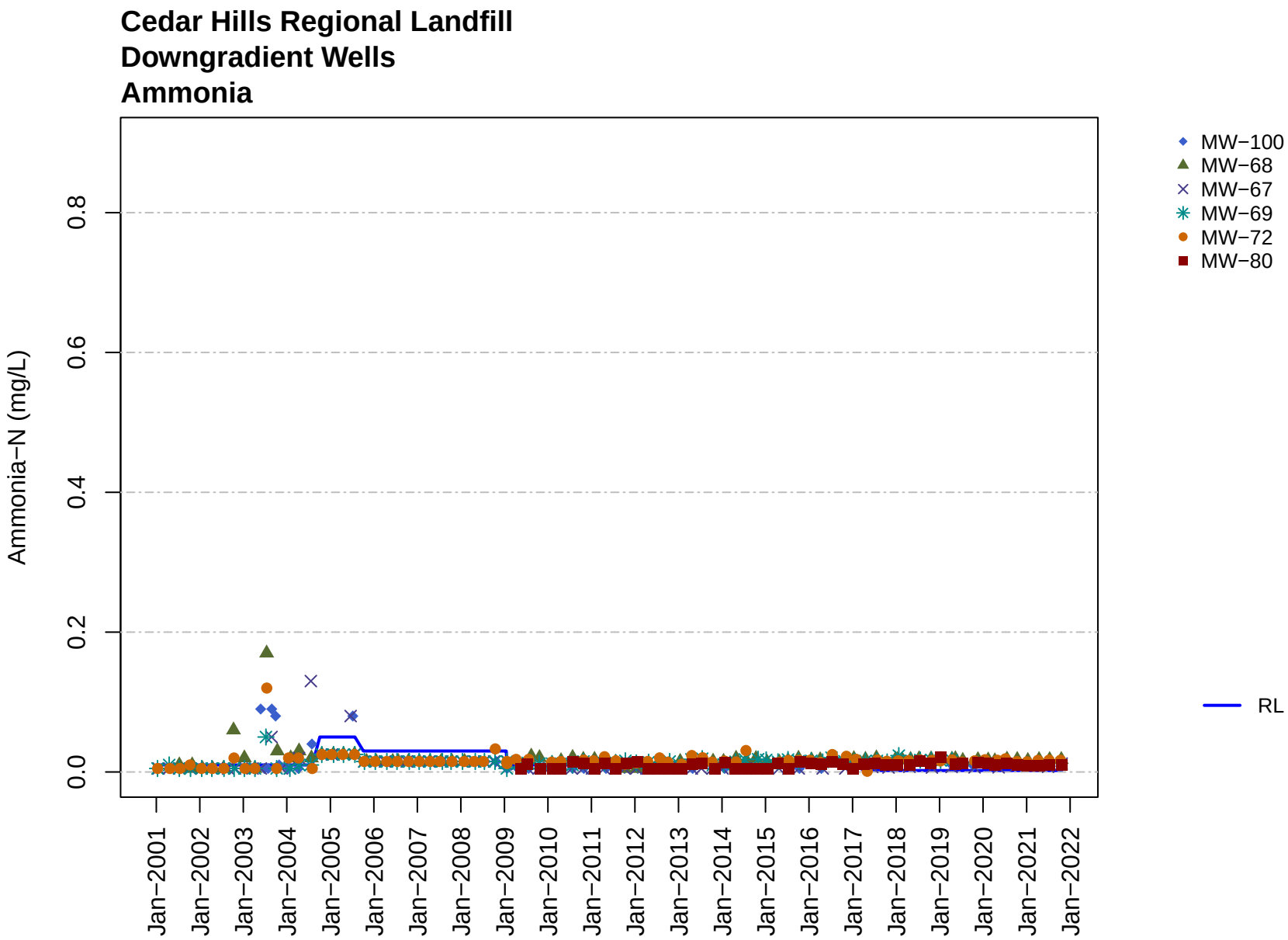

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Alkalinity
Alkalinity (mg/L)
0
50
100
150
200
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

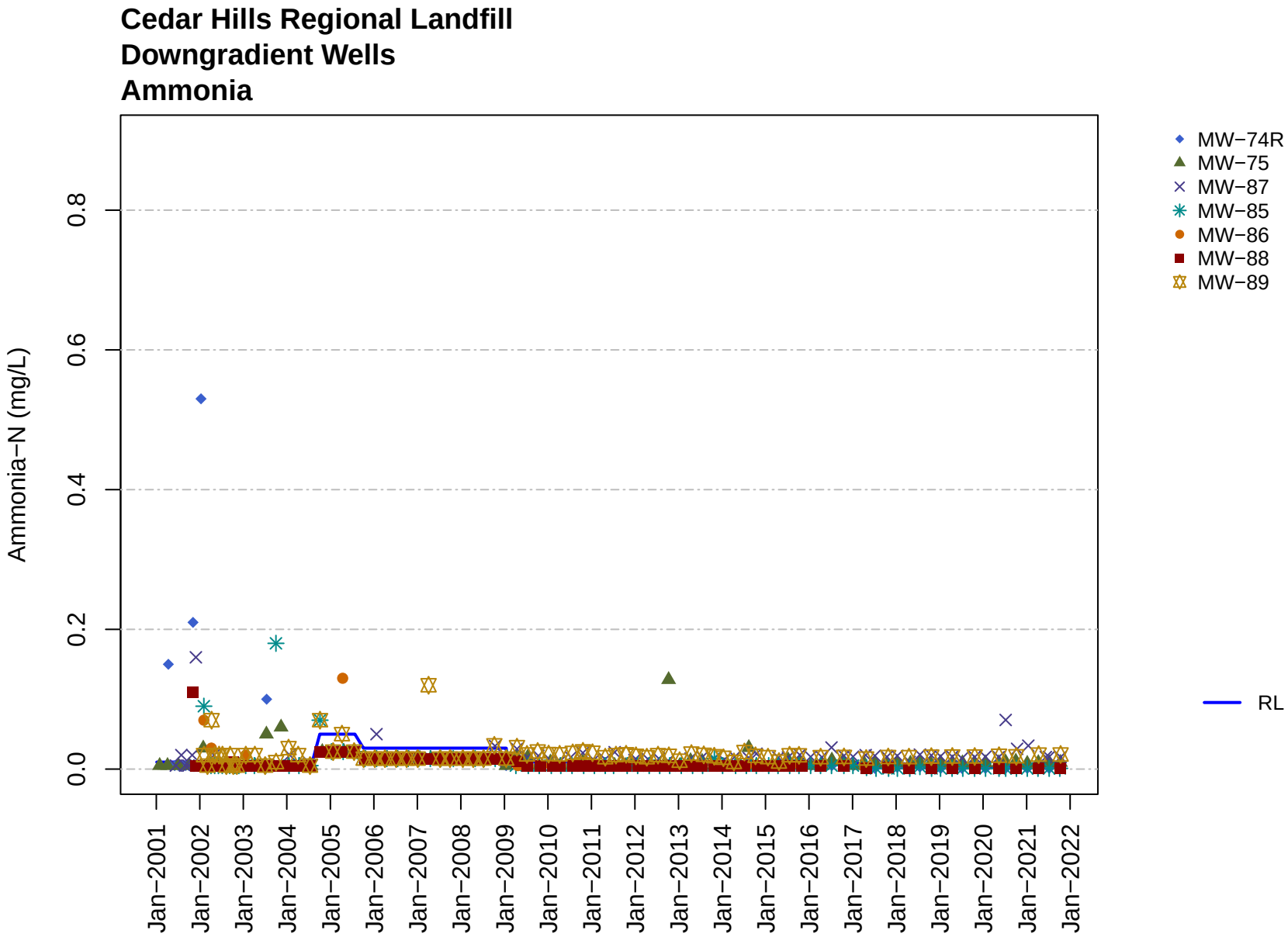

Cedar Hills Regional Landfill
Downgradient Wells
Alkalinity
Alkalinity (mg/L)
0
50
100
150
200
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

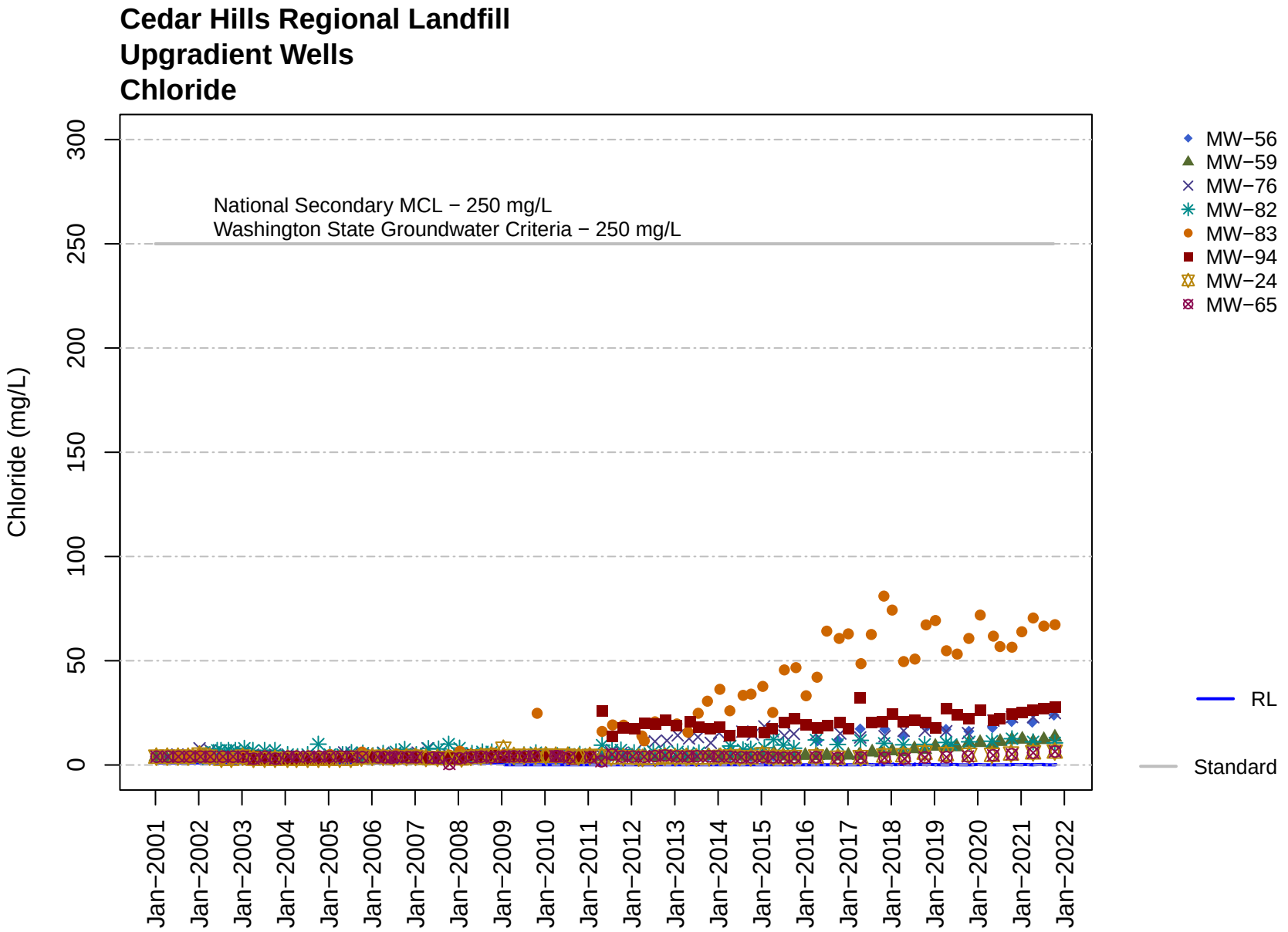

Cedar Hills Regional Landfill
Downgradient Wells
Alkalinity
Alkalinity (mg/L)
0
50
100
150
200
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

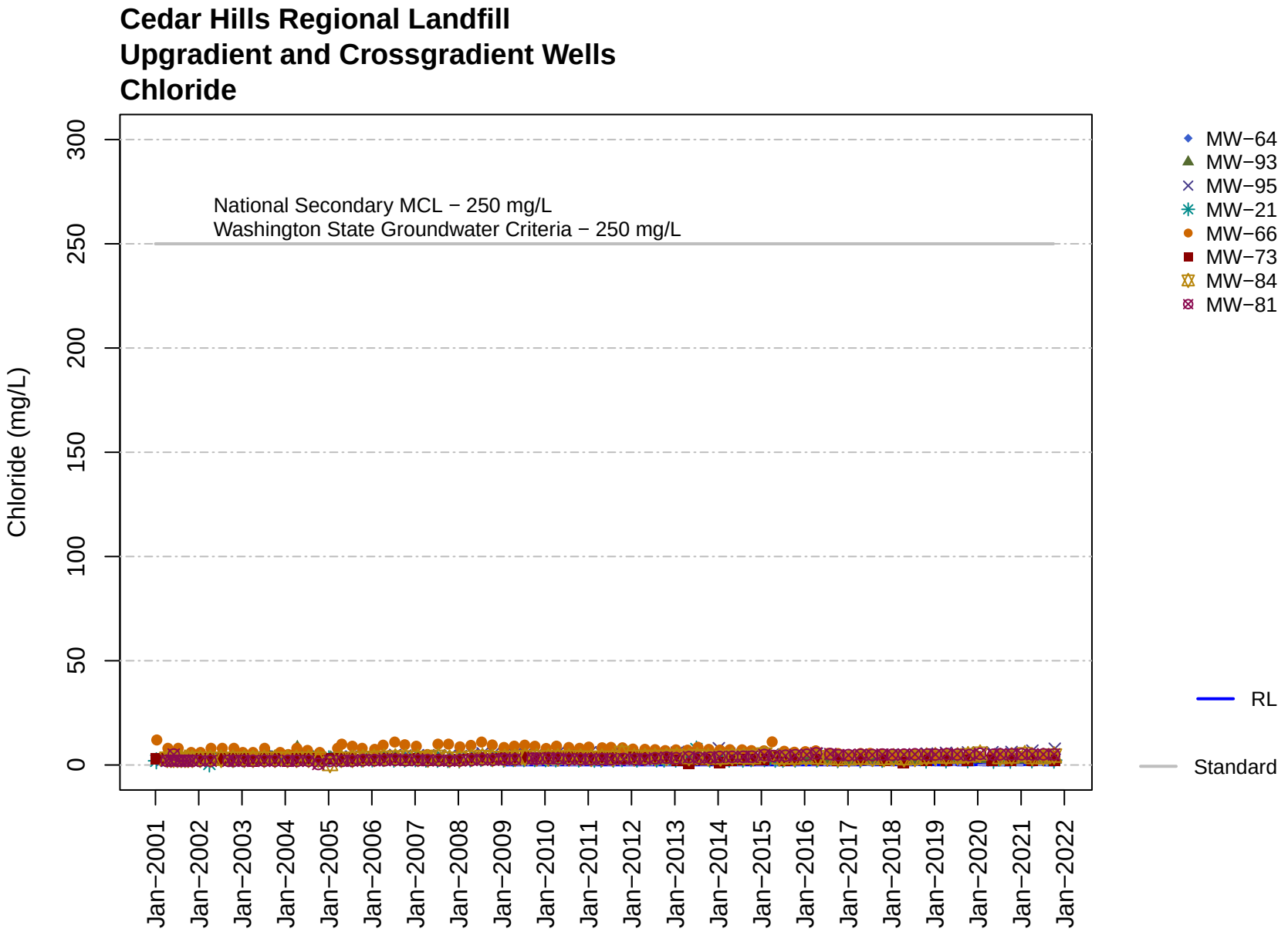

Cedar Hills Regional Landfill
Upgradient Wells
Ammonia
Ammonia−N (mg/L)
0.0
0.2
0.4
0.6
0.8
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

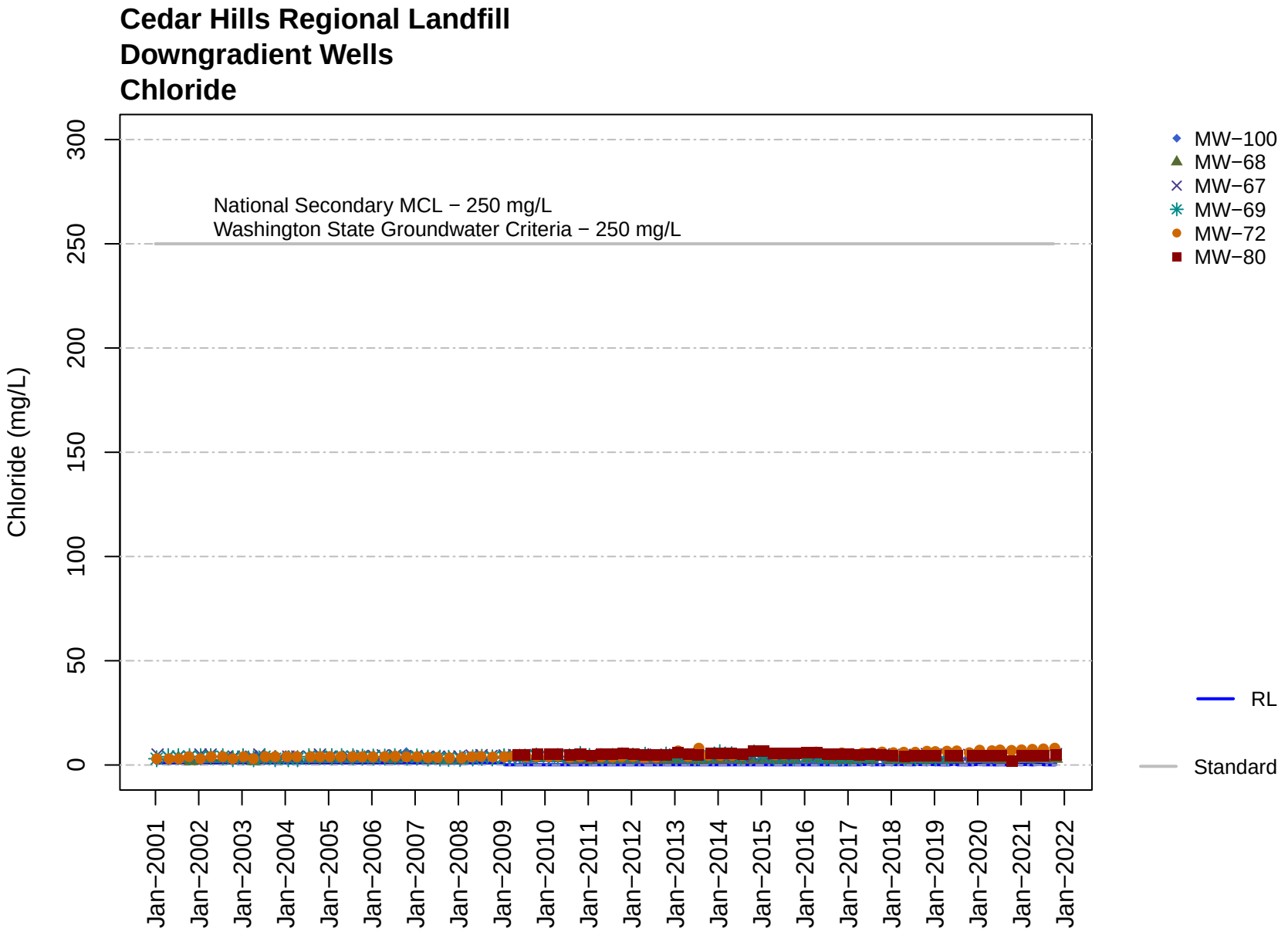

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Ammonia
Ammonia−N (mg/L)
0.0
0.2
0.4
0.6
0.8
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

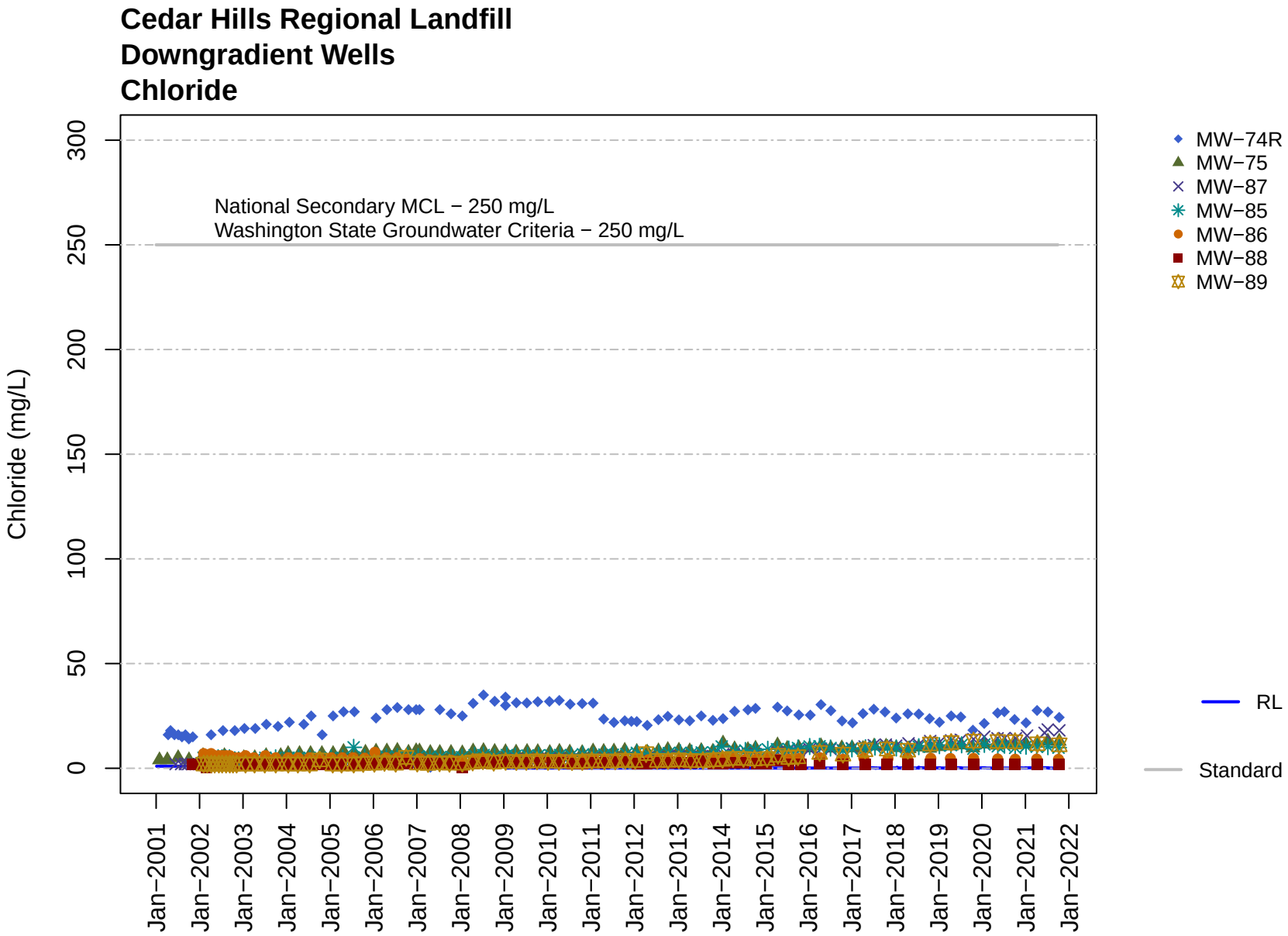

Cedar Hills Regional Landfill
Downgradient Wells
Ammonia
Ammonia−N (mg/L)
0.0
0.2
0.4
0.6
0.8
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

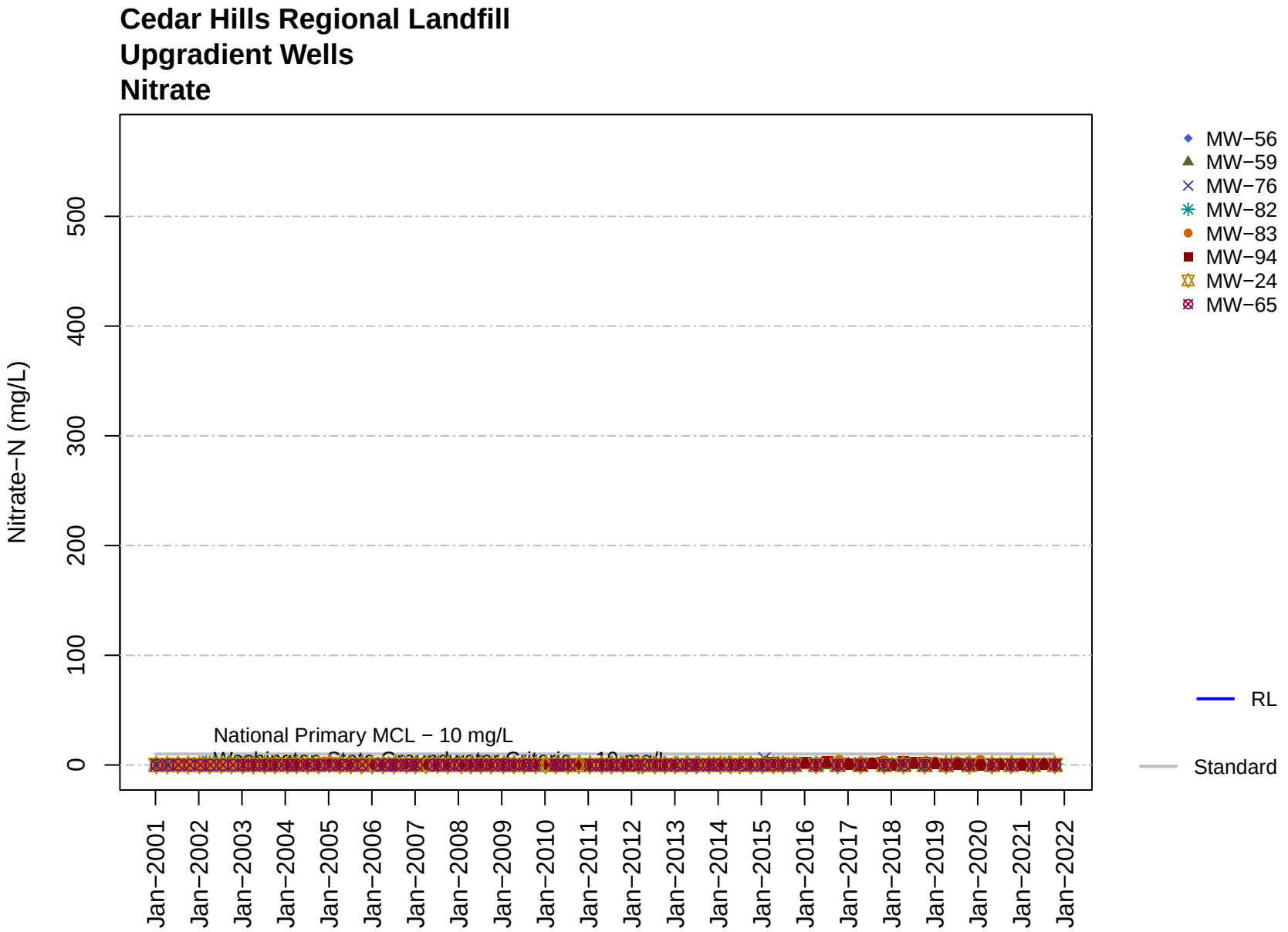

Cedar Hills Regional Landfill
Downgradient Wells
Ammonia
Ammonia−N (mg/L)
0.0
0.2
0.4
0.6
0.8
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

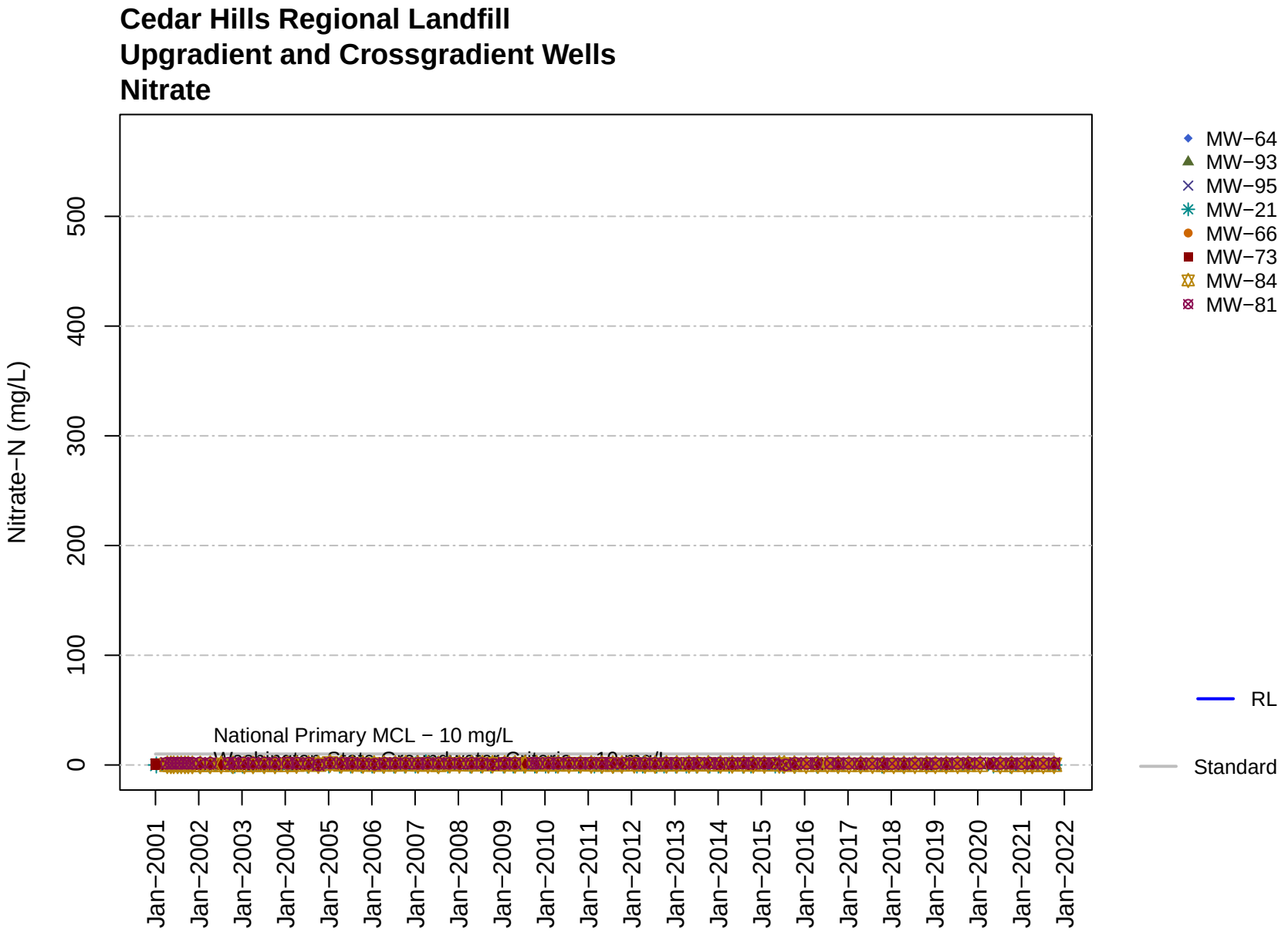

Cedar Hills Regional Landfill
Upgradient Wells
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

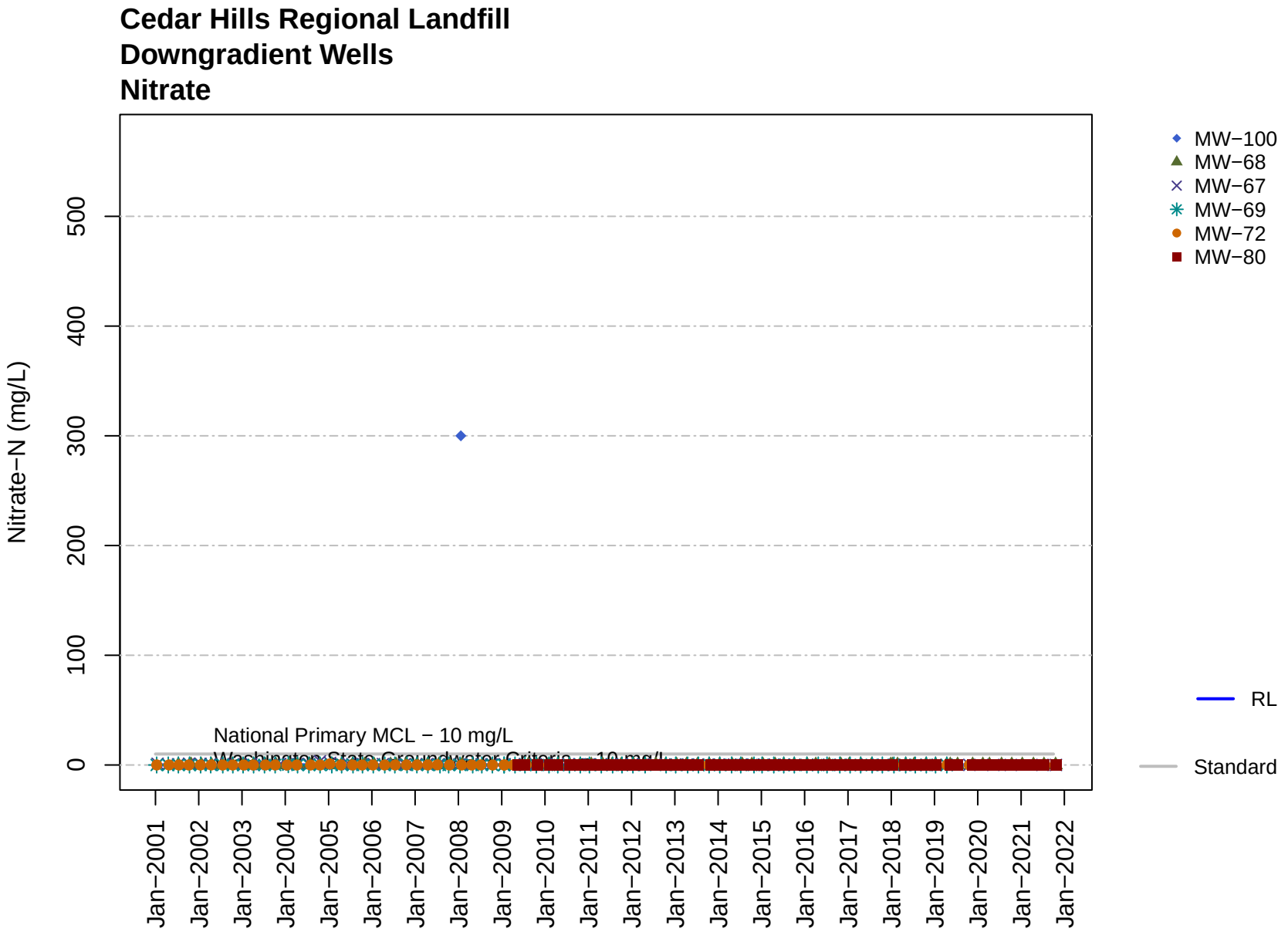

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

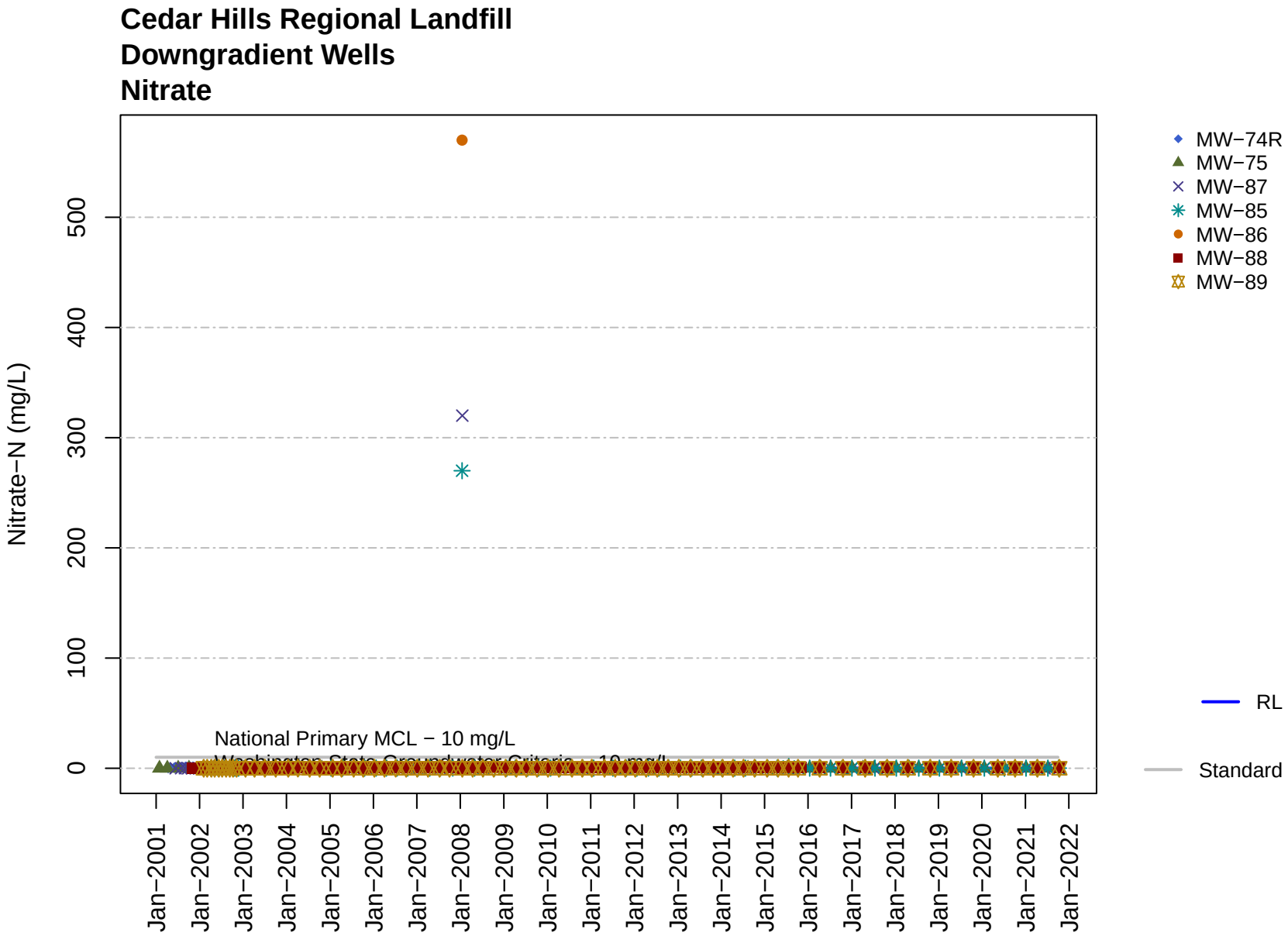

Cedar Hills Regional Landfill
Downgradient Wells
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

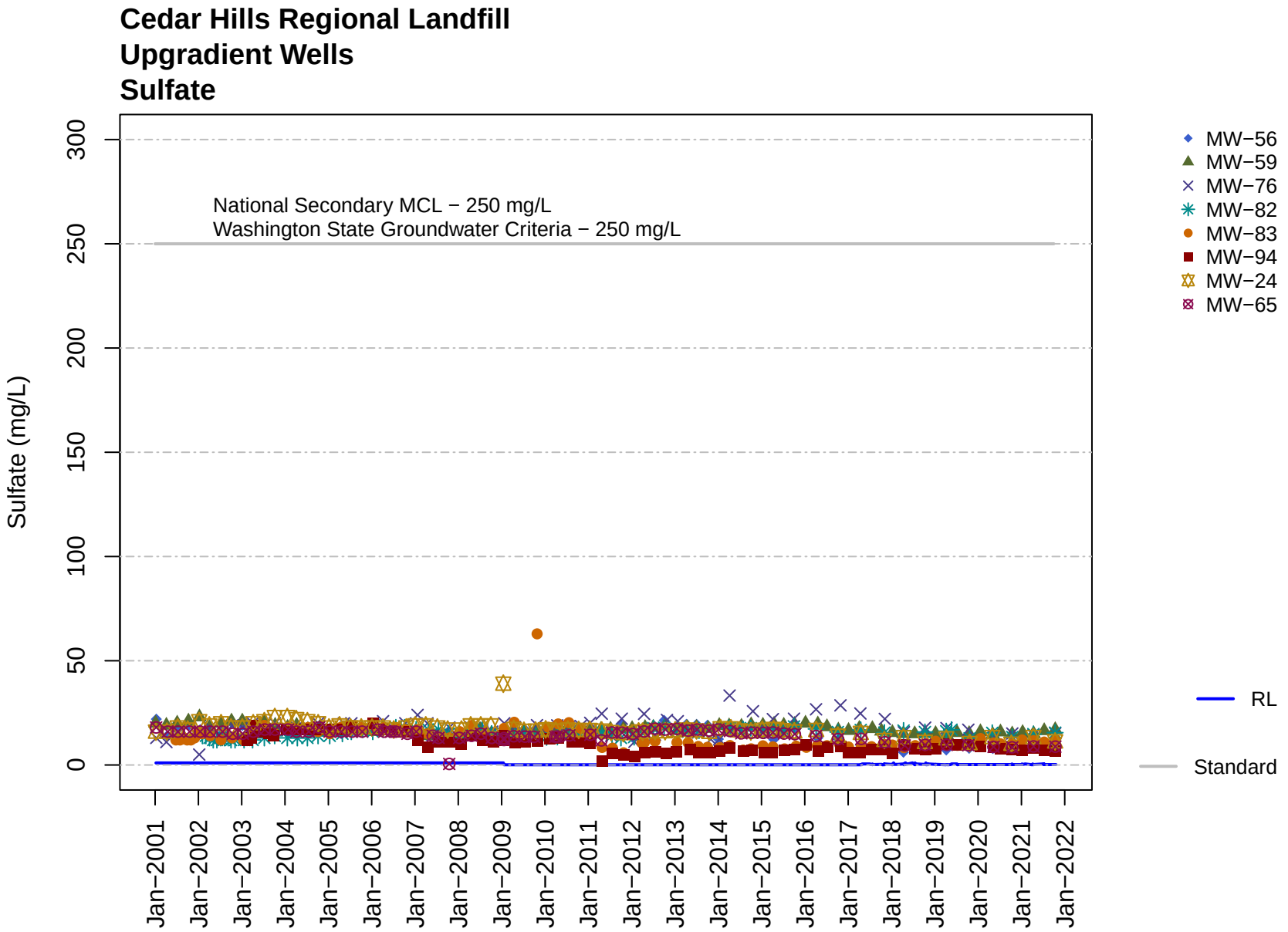

Cedar Hills Regional Landfill
Downgradient Wells
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

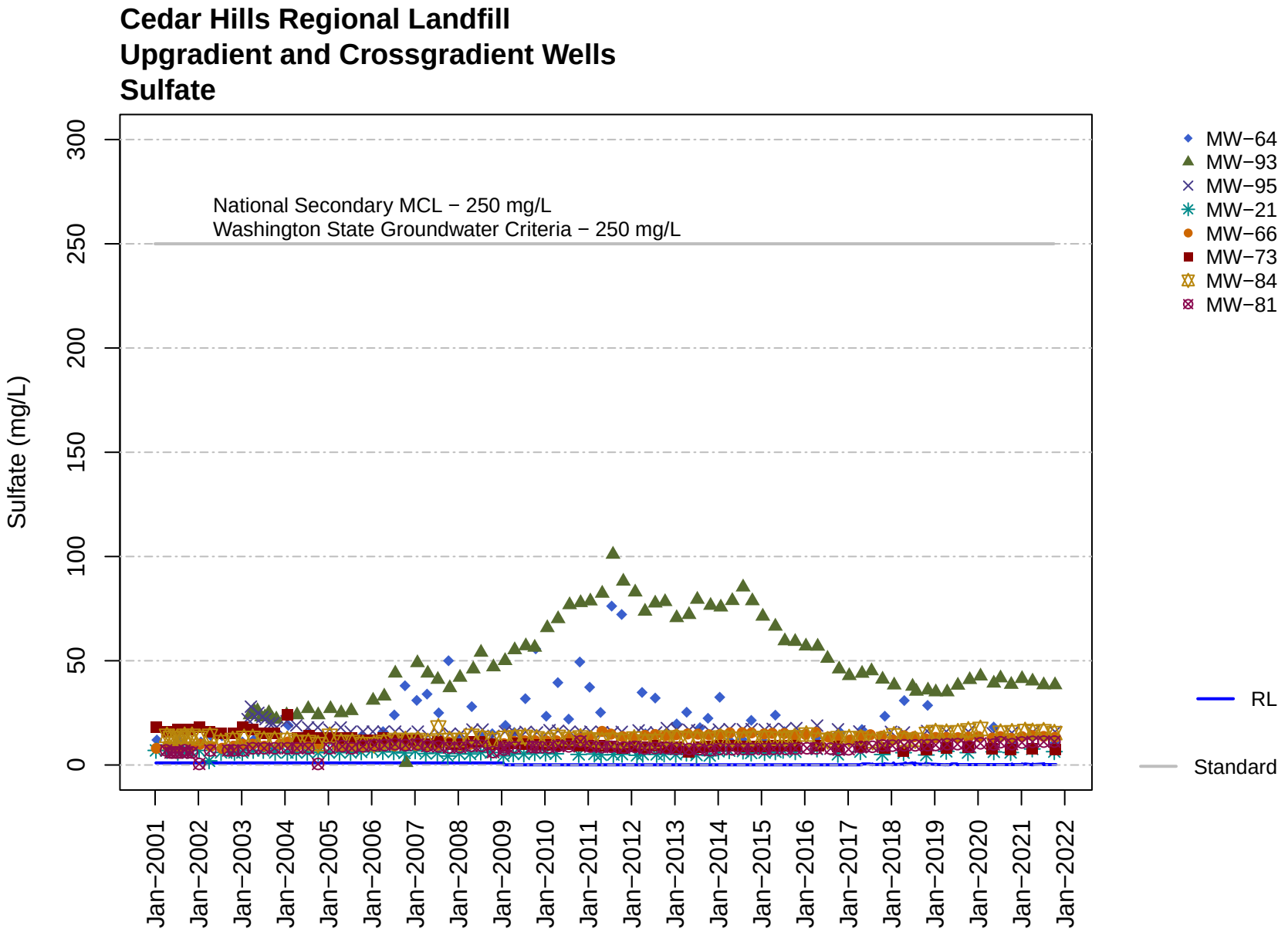

Cedar Hills Regional Landfill
Upgradient Wells
Nitrate
Nitrate−N (mg/L)
0
100
200
300
400
500
National Primary MCL − 10 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

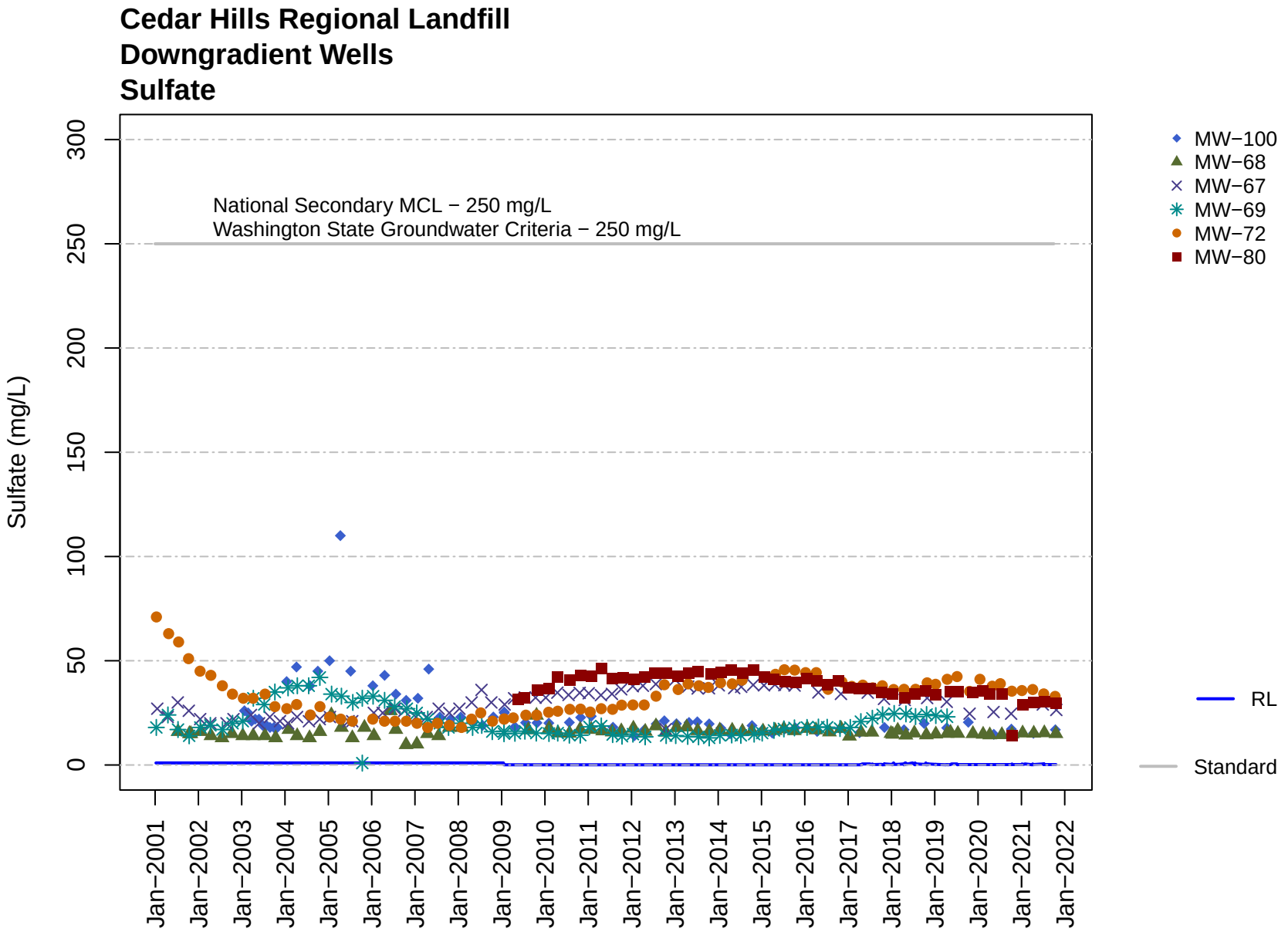

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Nitrate
Nitrate−N (mg/L)
0
100
200
300
400
500
National Primary MCL − 10 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

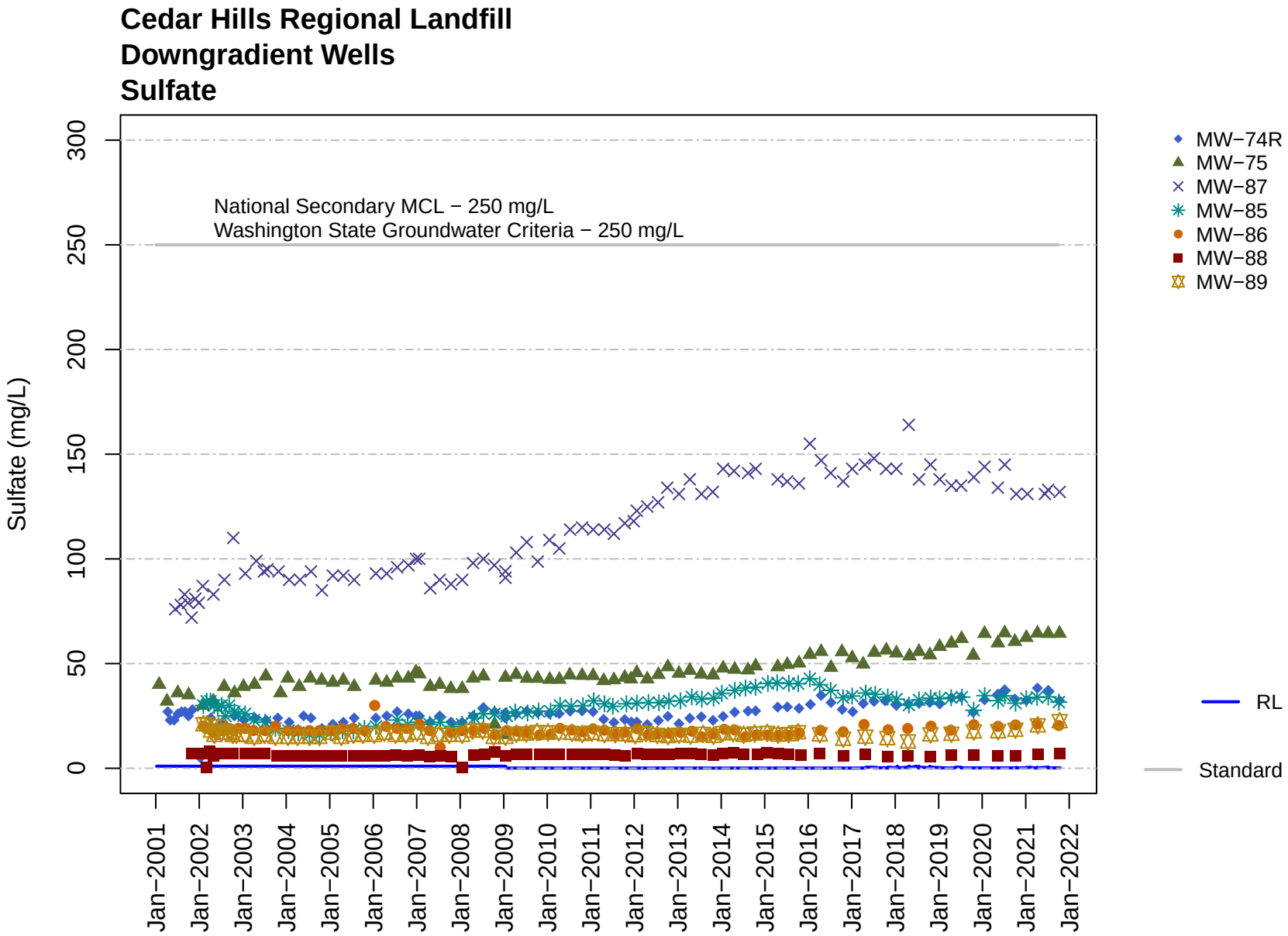

Cedar Hills Regional Landfill
Downgradient Wells
Nitrate
Nitrate−N (mg/L)
0
100
200
300
400
500
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
National Primary MCL − 10 mg/L
Washington State Groundwater Criteria − 10 mg/L
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

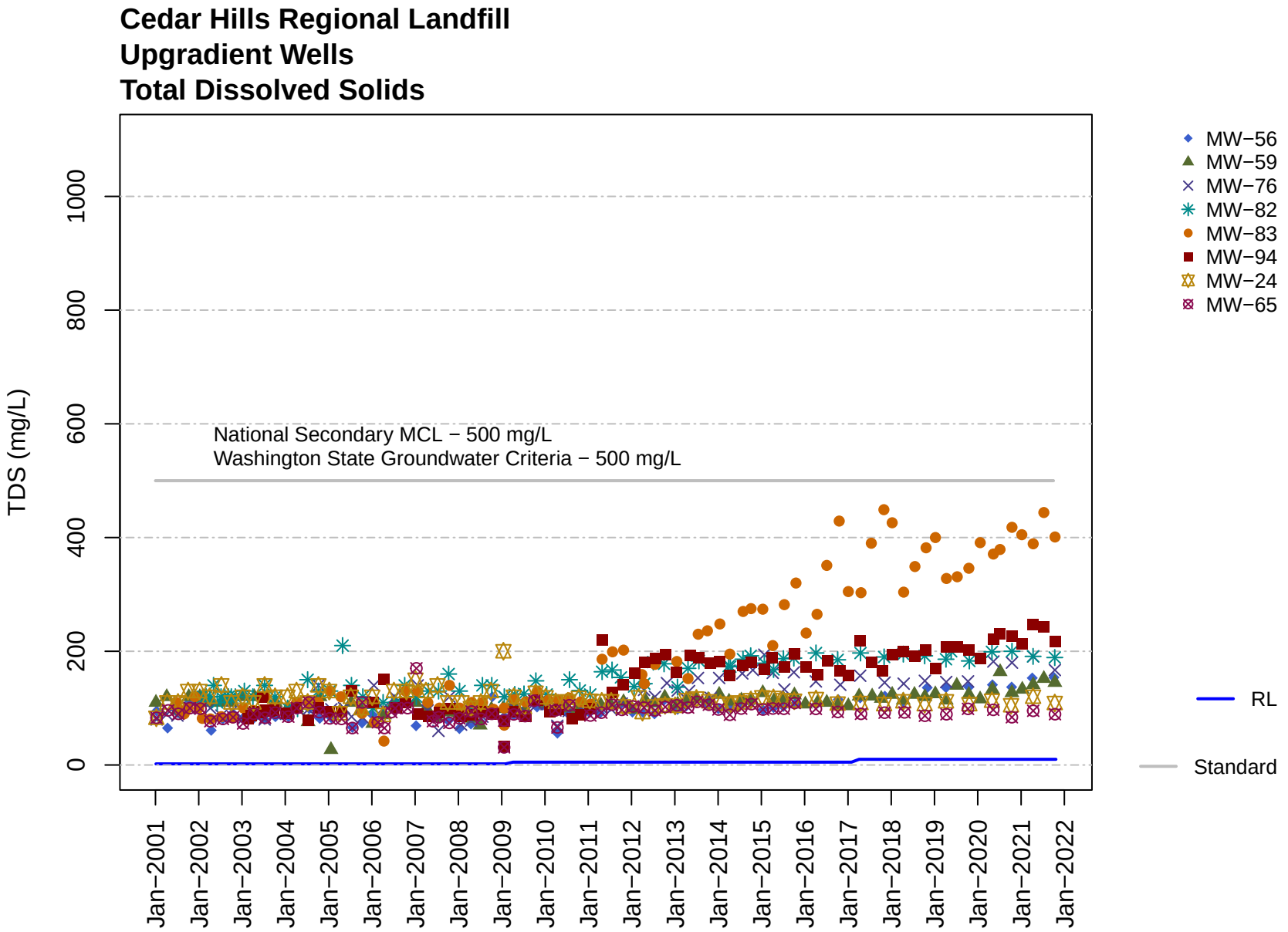

Cedar Hills Regional Landfill
Downgradient Wells
Nitrate
Nitrate−N (mg/L)
0
100
200
300
400
500
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
National Primary MCL − 10 mg/L
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

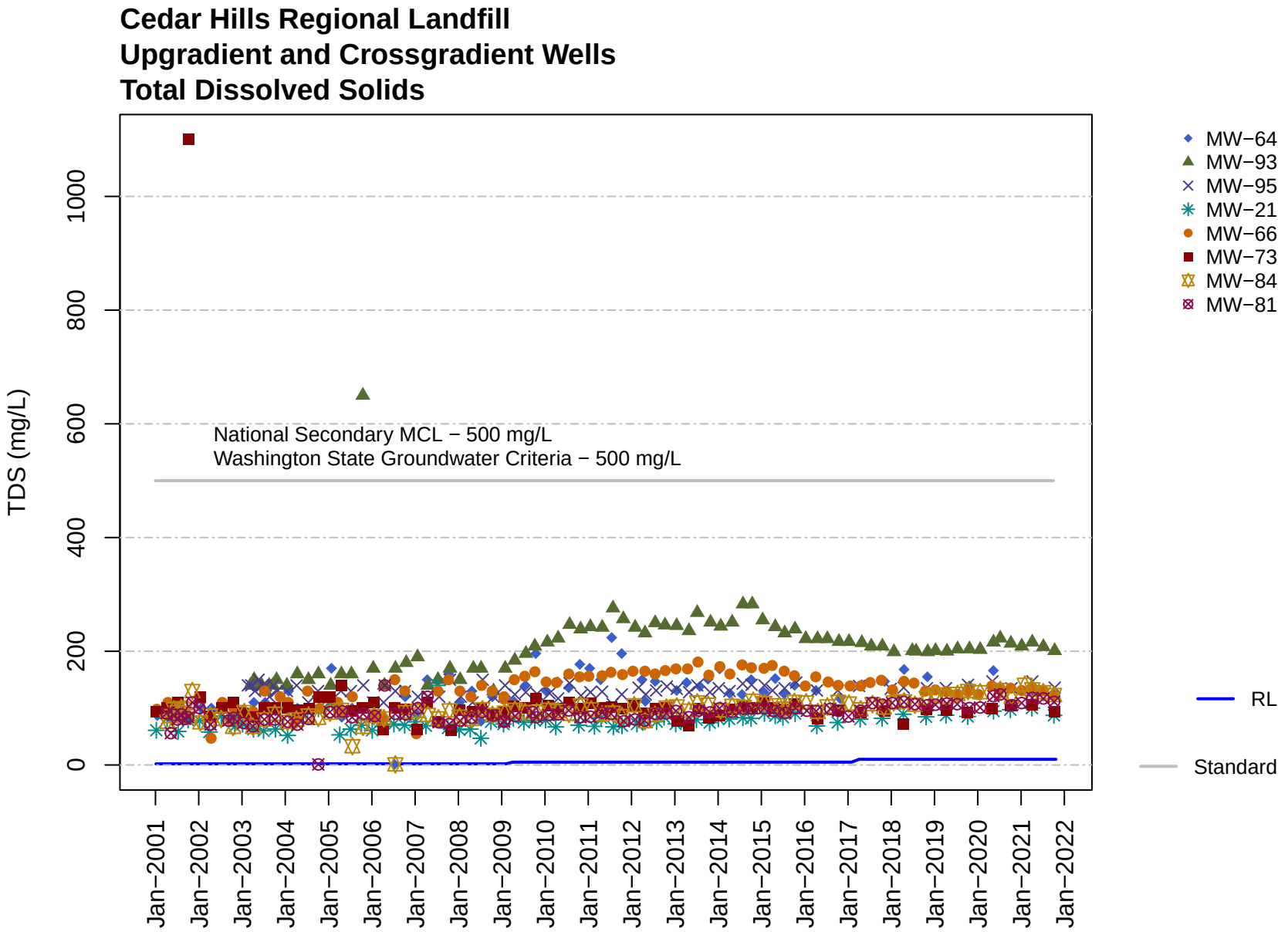

Cedar Hills Regional Landfill
Upgradient Wells
Sulfate
Sulfate (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

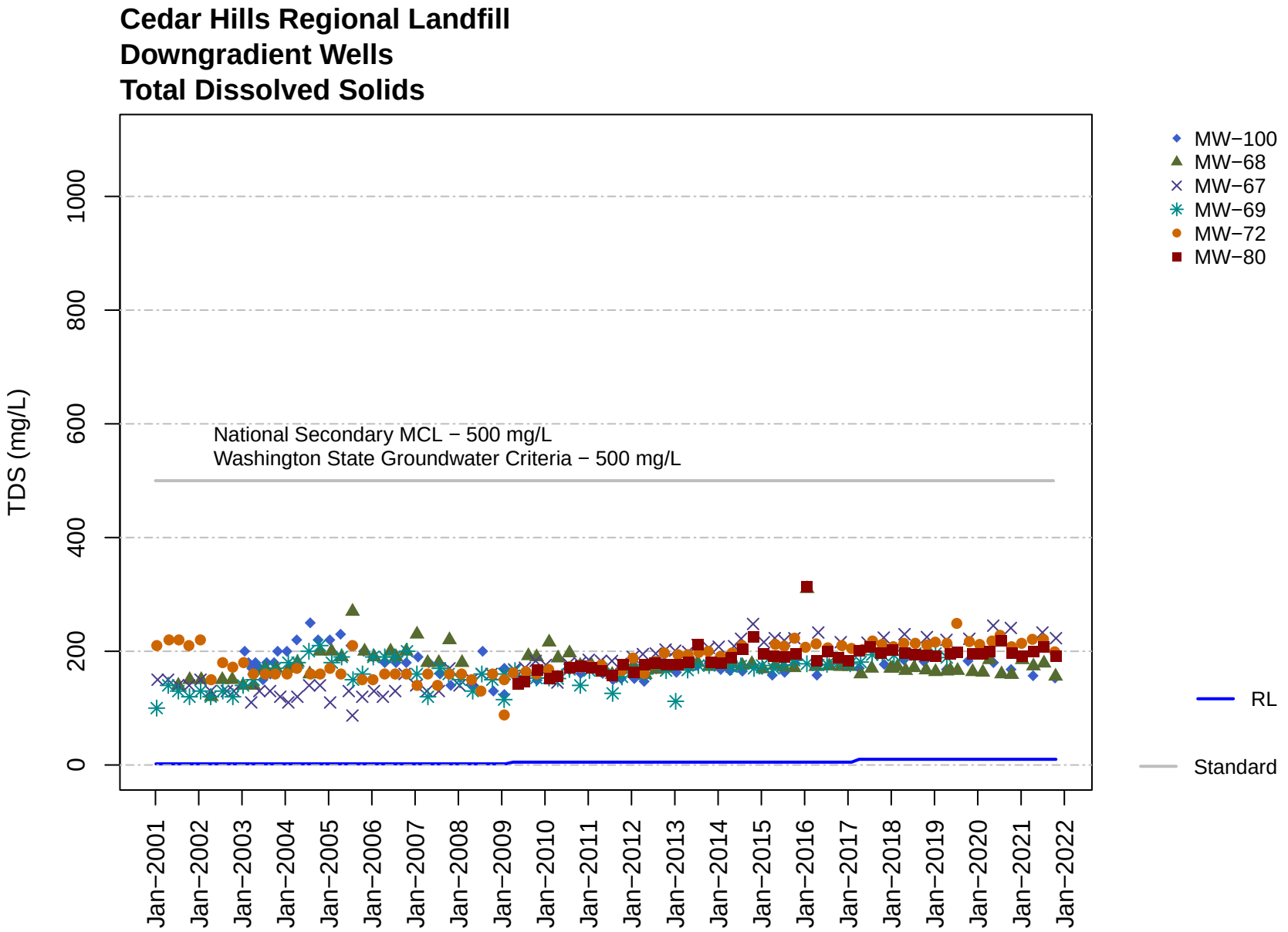

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Sulfate
Sulfate (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

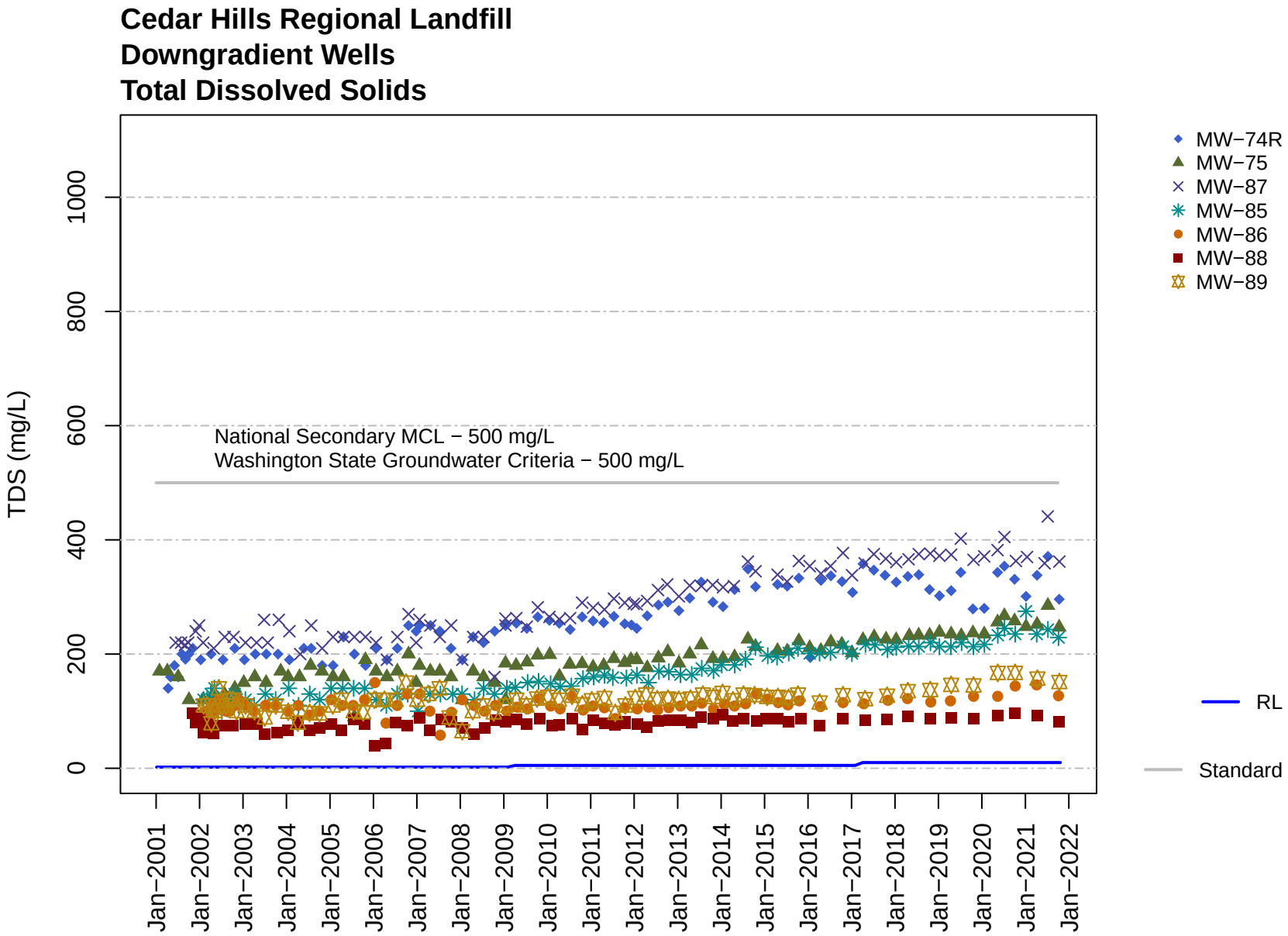

Cedar Hills Regional Landfill
Downgradient Wells
Sulfate
Sulfate (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

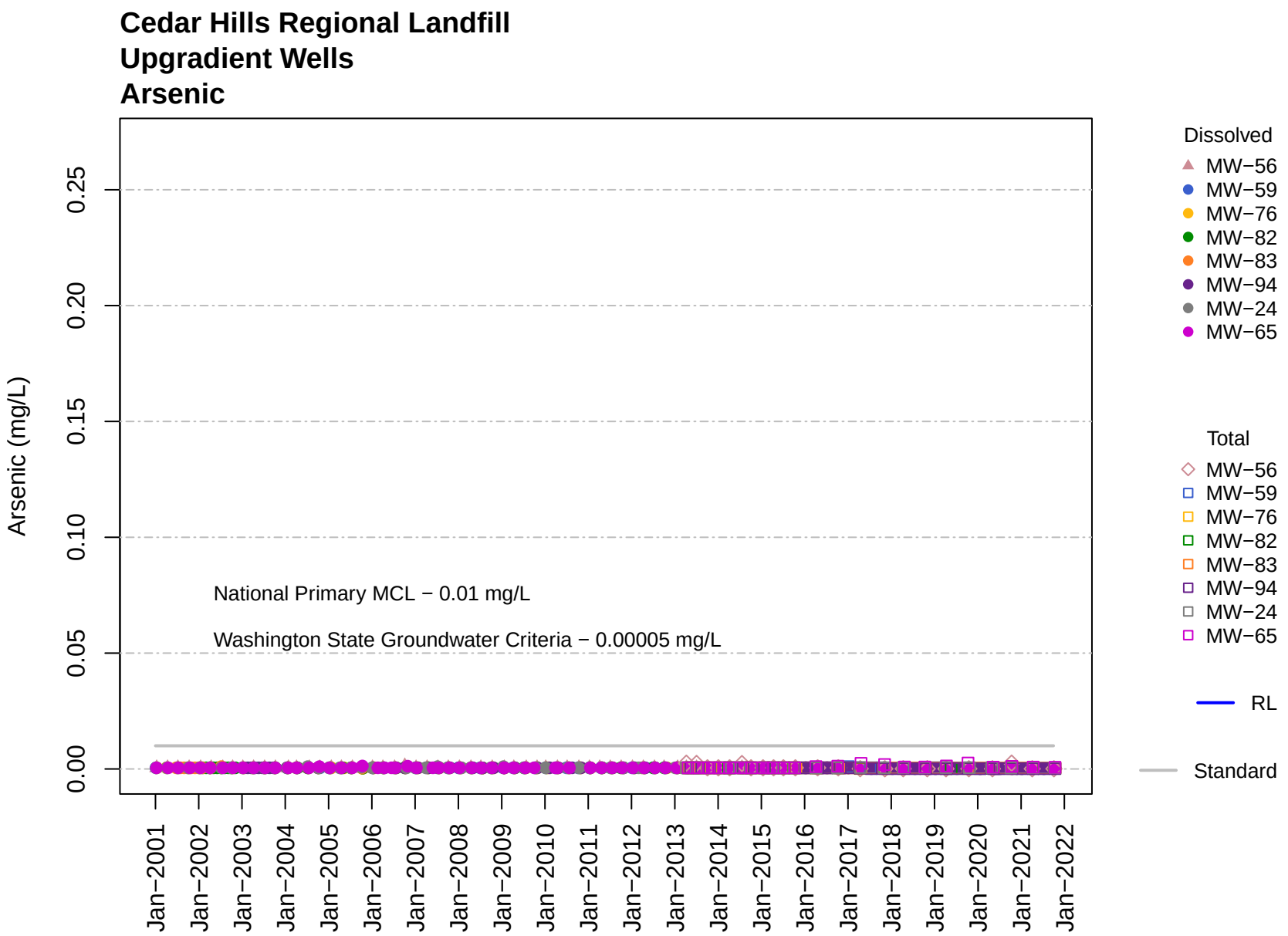

Cedar Hills Regional Landfill
Downgradient Wells
Sulfate
Sulfate (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

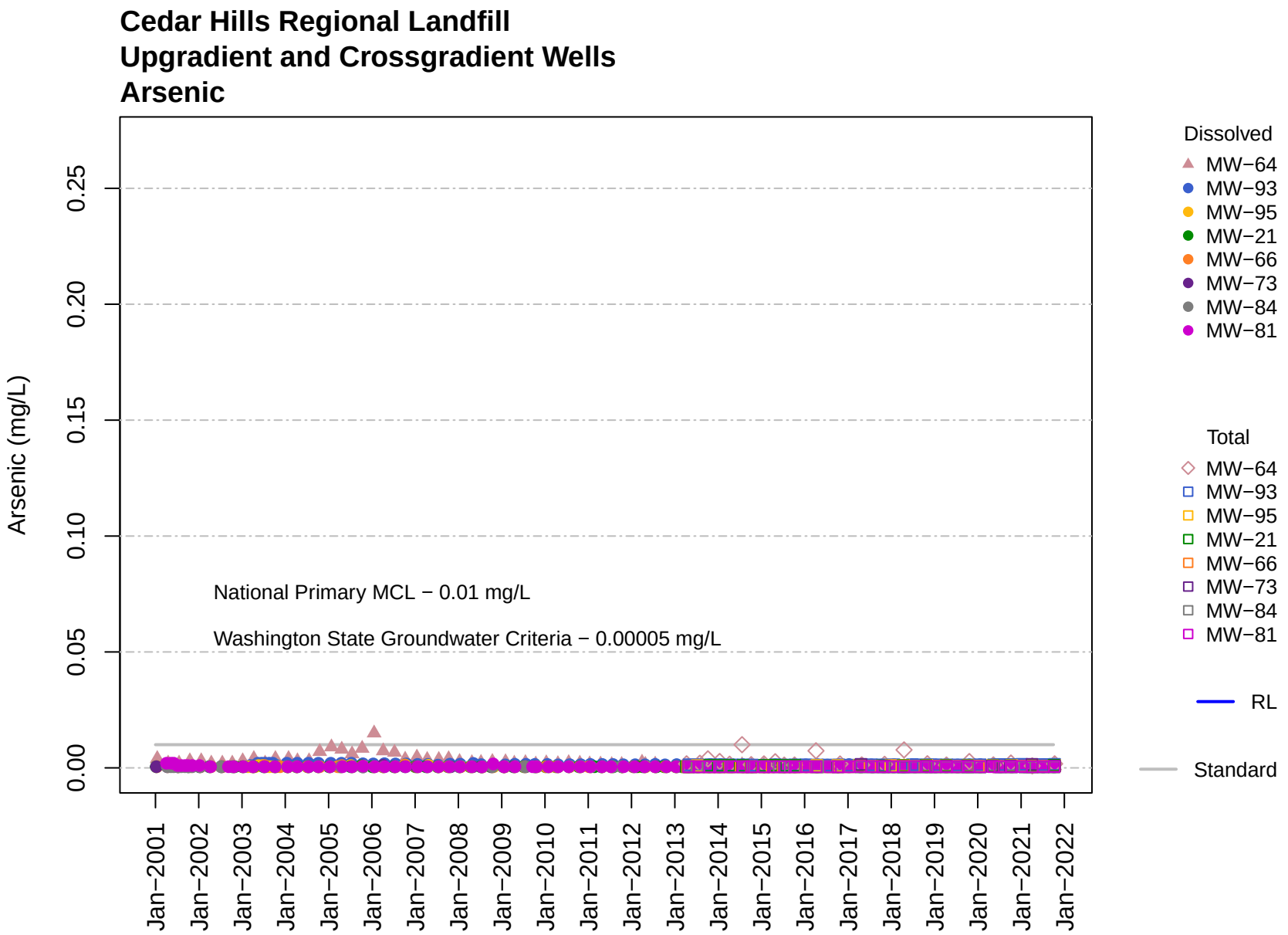

Cedar Hills Regional Landfill
Upgradient Wells
Total Dissolved Solids
TDS (mg/L)
0
200
400
600
800
1000
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

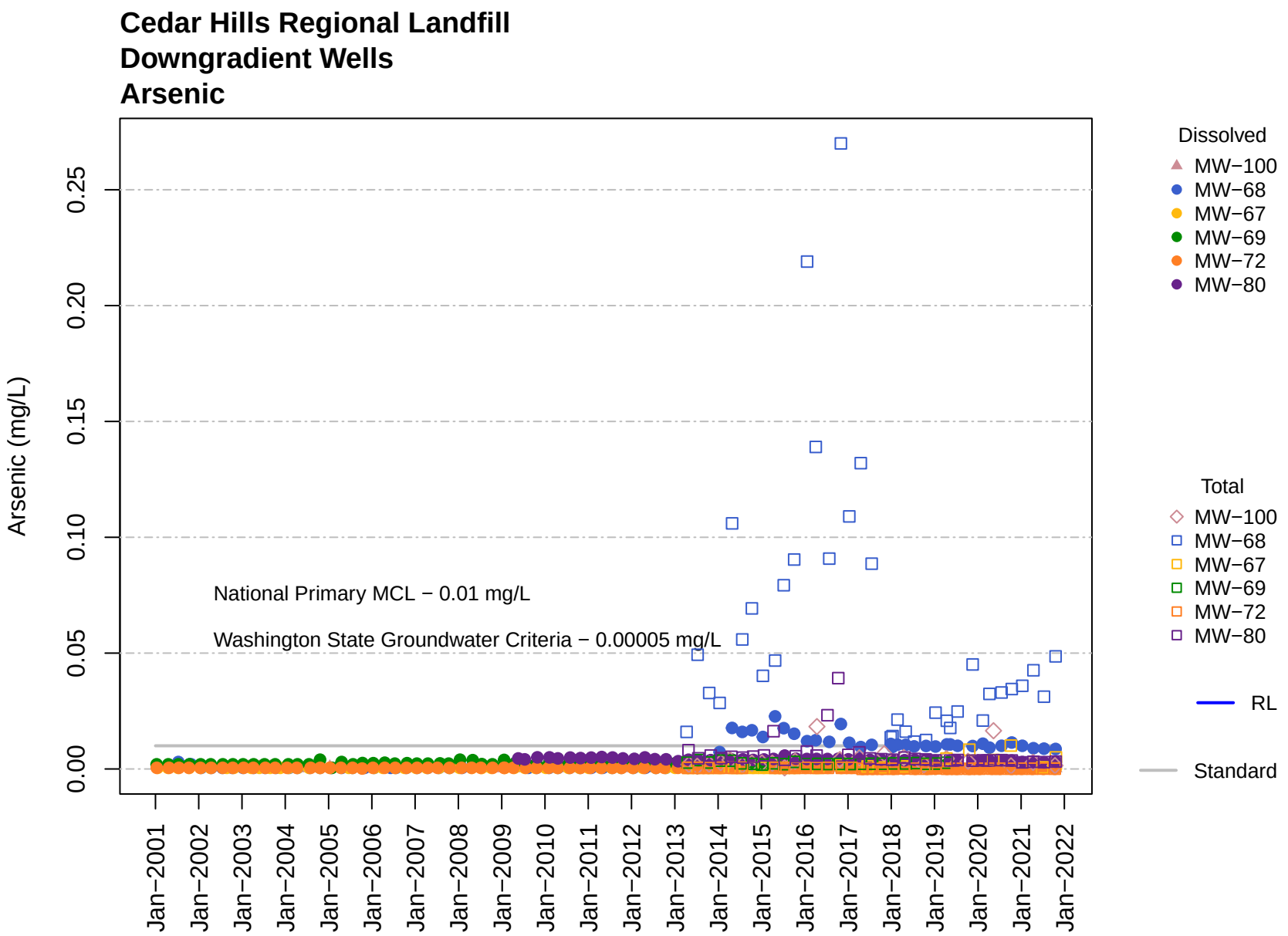

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Total Dissolved Solids
TDS (mg/L)
0
200
400
600
800
1000
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

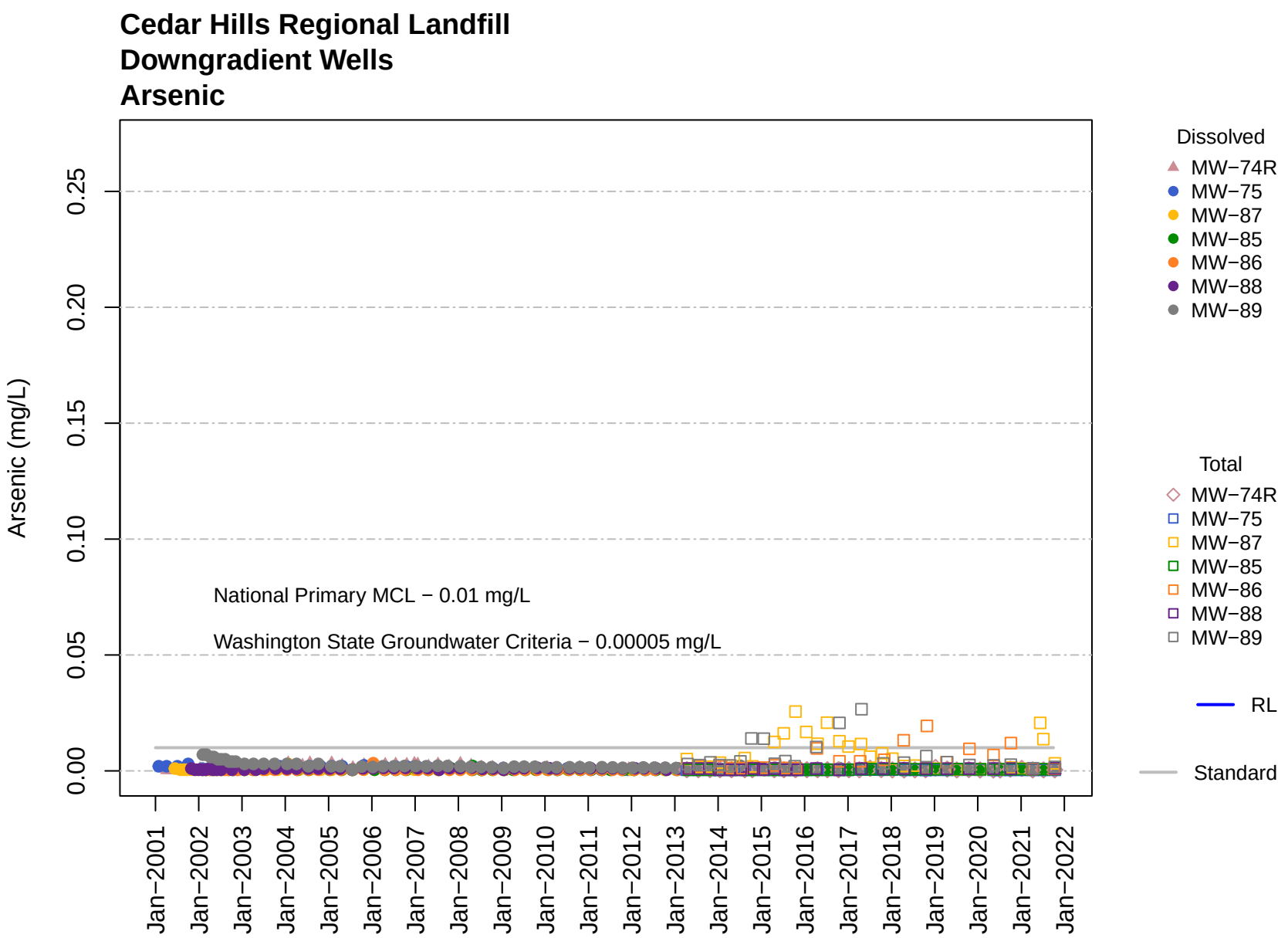

Cedar Hills Regional Landfill
Downgradient Wells
Total Dissolved Solids
TDS (mg/L)
0
200
400
600
800
1000
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

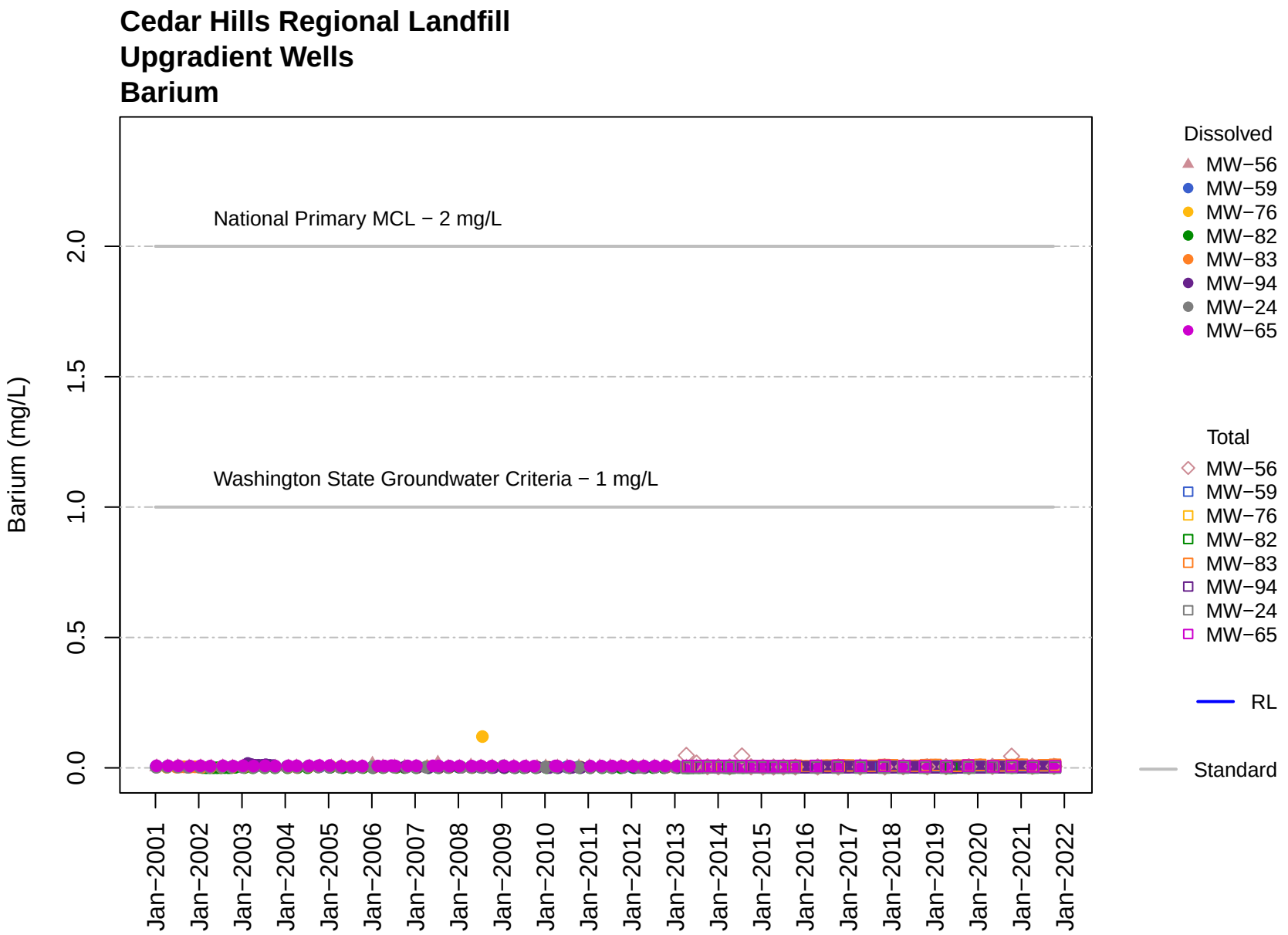

Cedar Hills Regional Landfill
Downgradient Wells
Total Dissolved Solids
TDS (mg/L)
0
200
400
600
800
1000
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

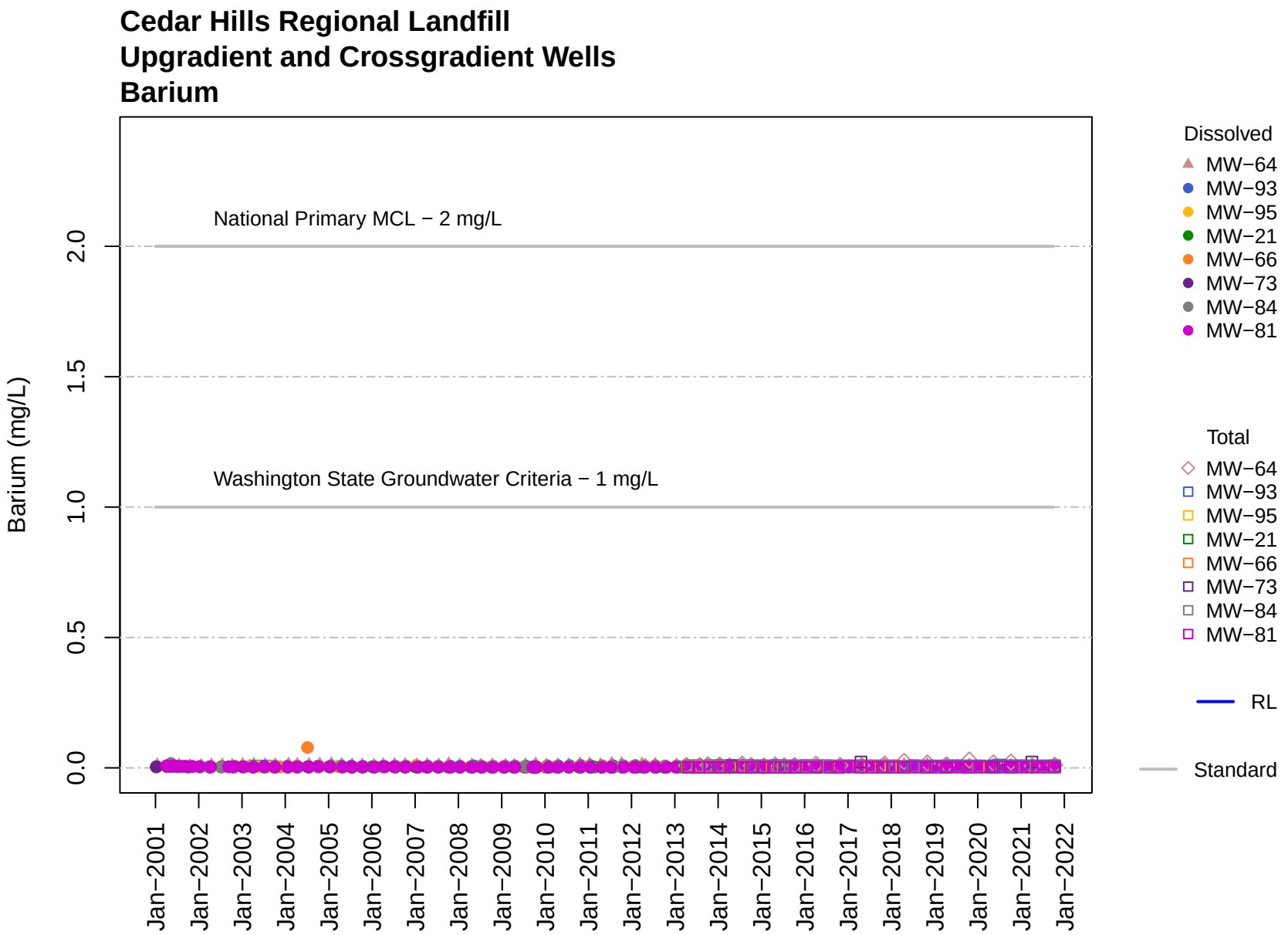

Cedar Hills Regional Landfill
Upgradient Wells
Arsenic
Arsenic (mg/L)
0.00
0.05
0.10
0.15
0.20
0.25
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

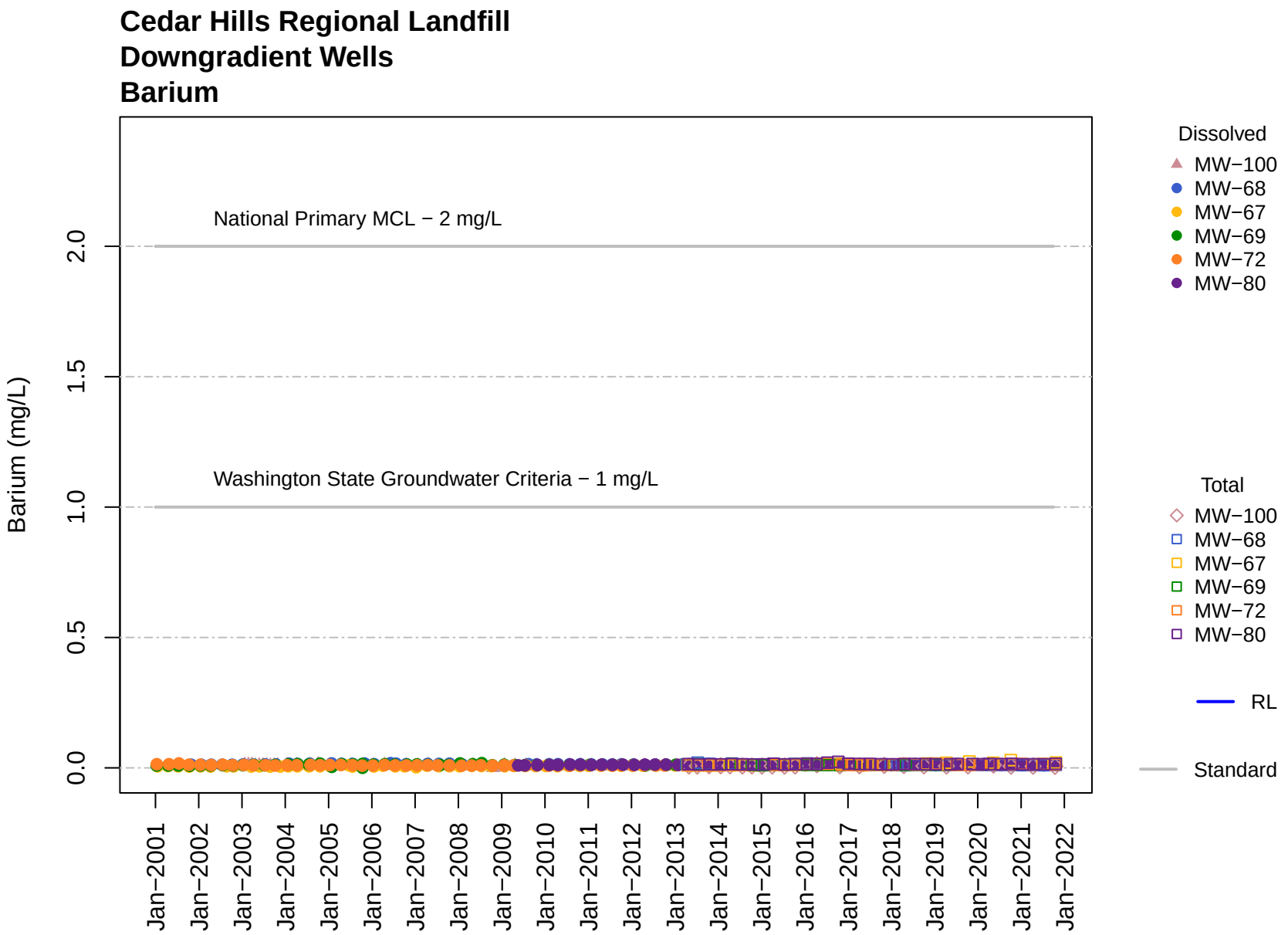

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Arsenic
Arsenic (mg/L)
0.00
0.05
0.10
0.15
0.20
0.25
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

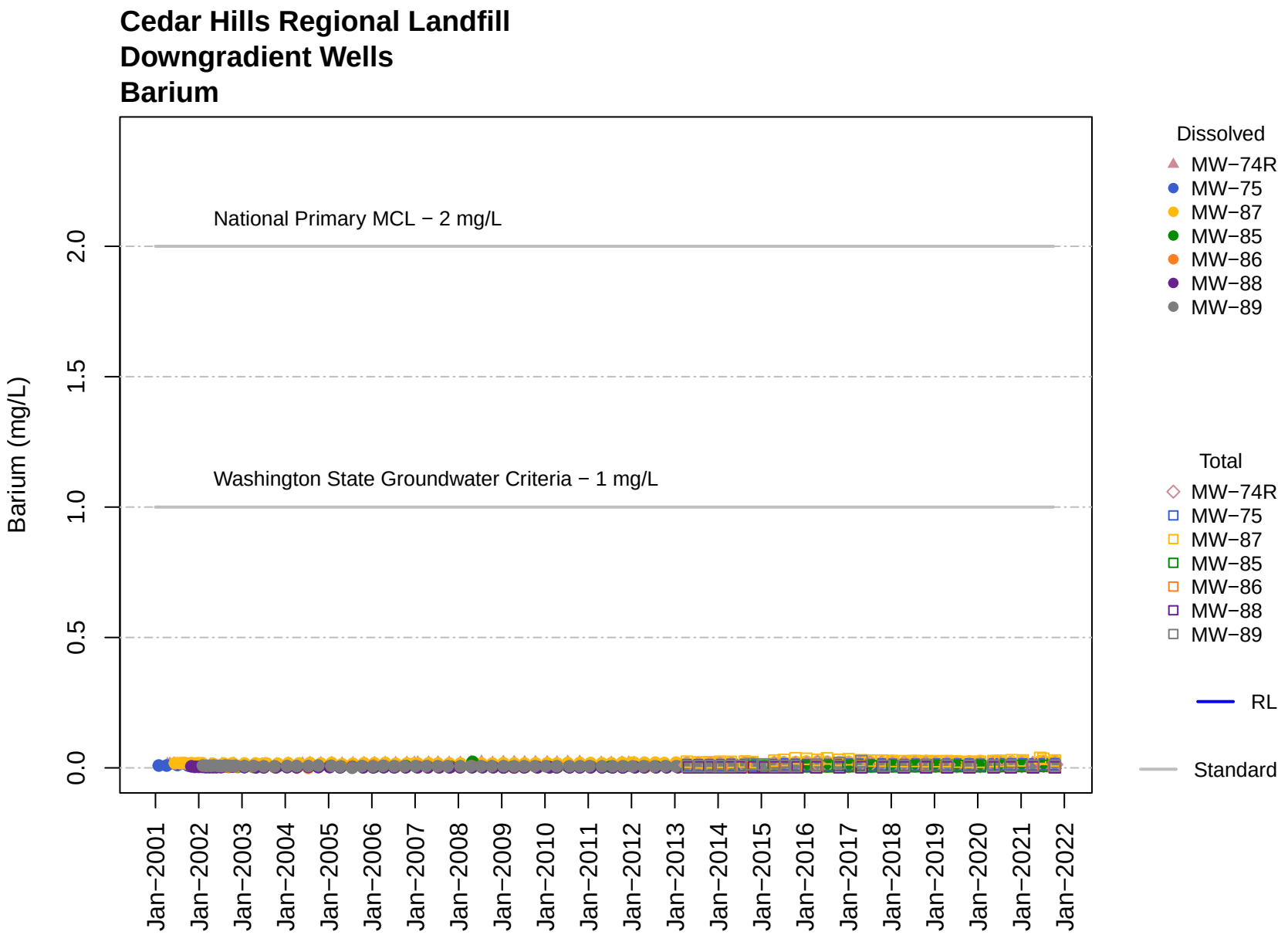

Cedar Hills Regional Landfill
Downgradient Wells
Arsenic
Arsenic (mg/L)
0.00
0.05
0.10
0.15
0.20
0.25
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

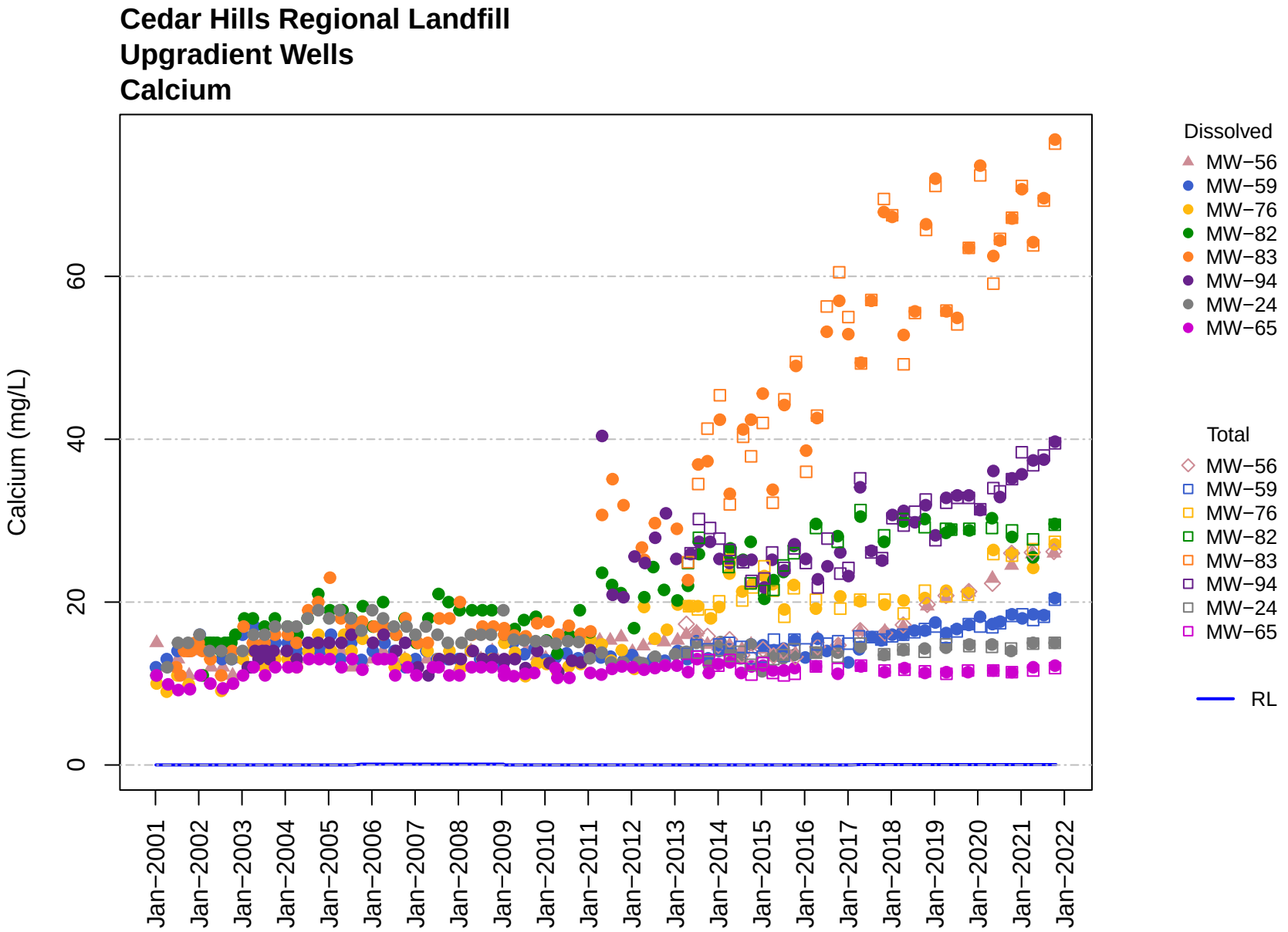

Cedar Hills Regional Landfill
Downgradient Wells
Arsenic
Arsenic (mg/L)
0.00
0.05
0.10
0.15
0.20
0.25
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

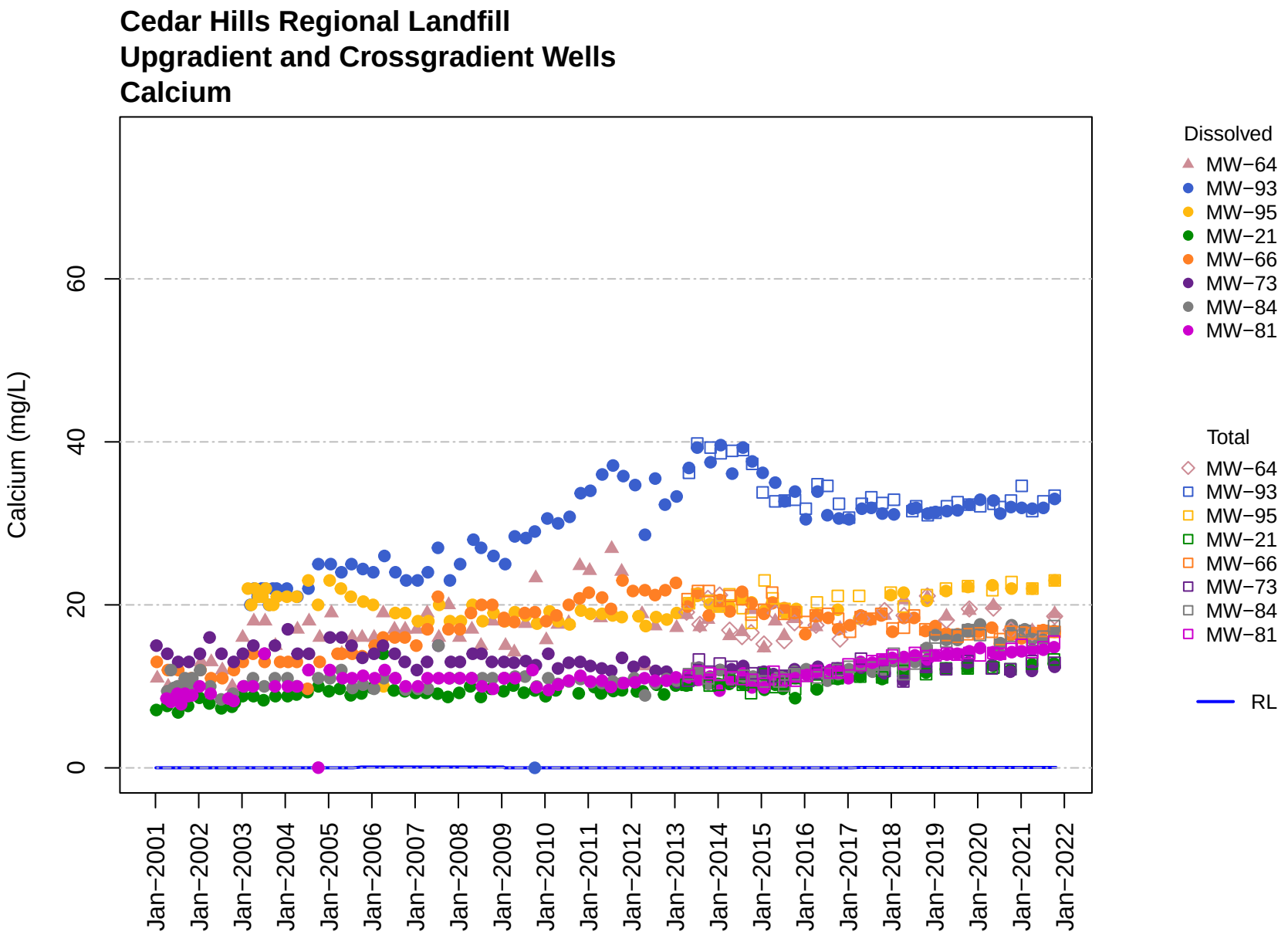

Cedar Hills Regional Landfill
Upgradient Wells
Barium
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

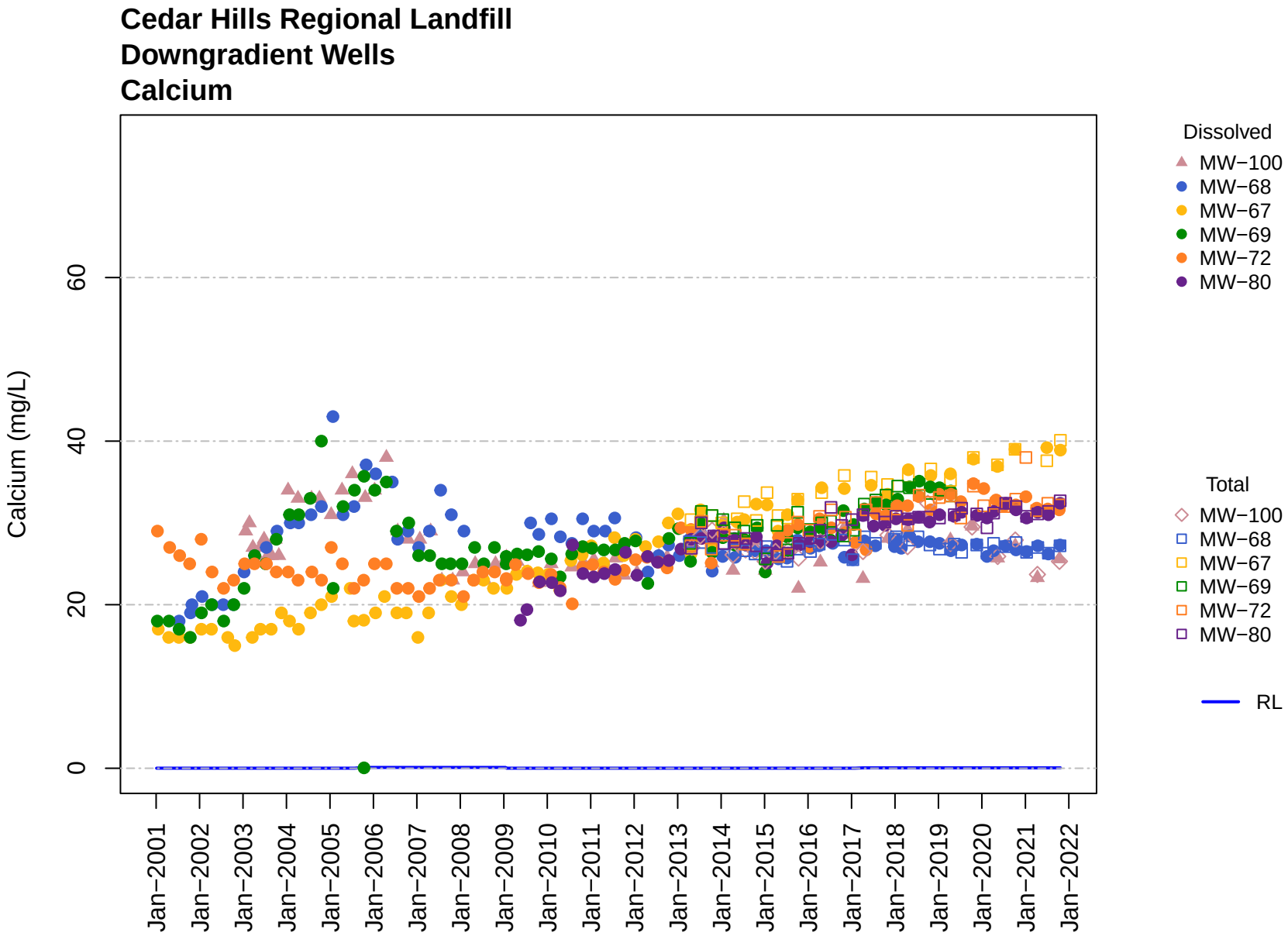

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Barium
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

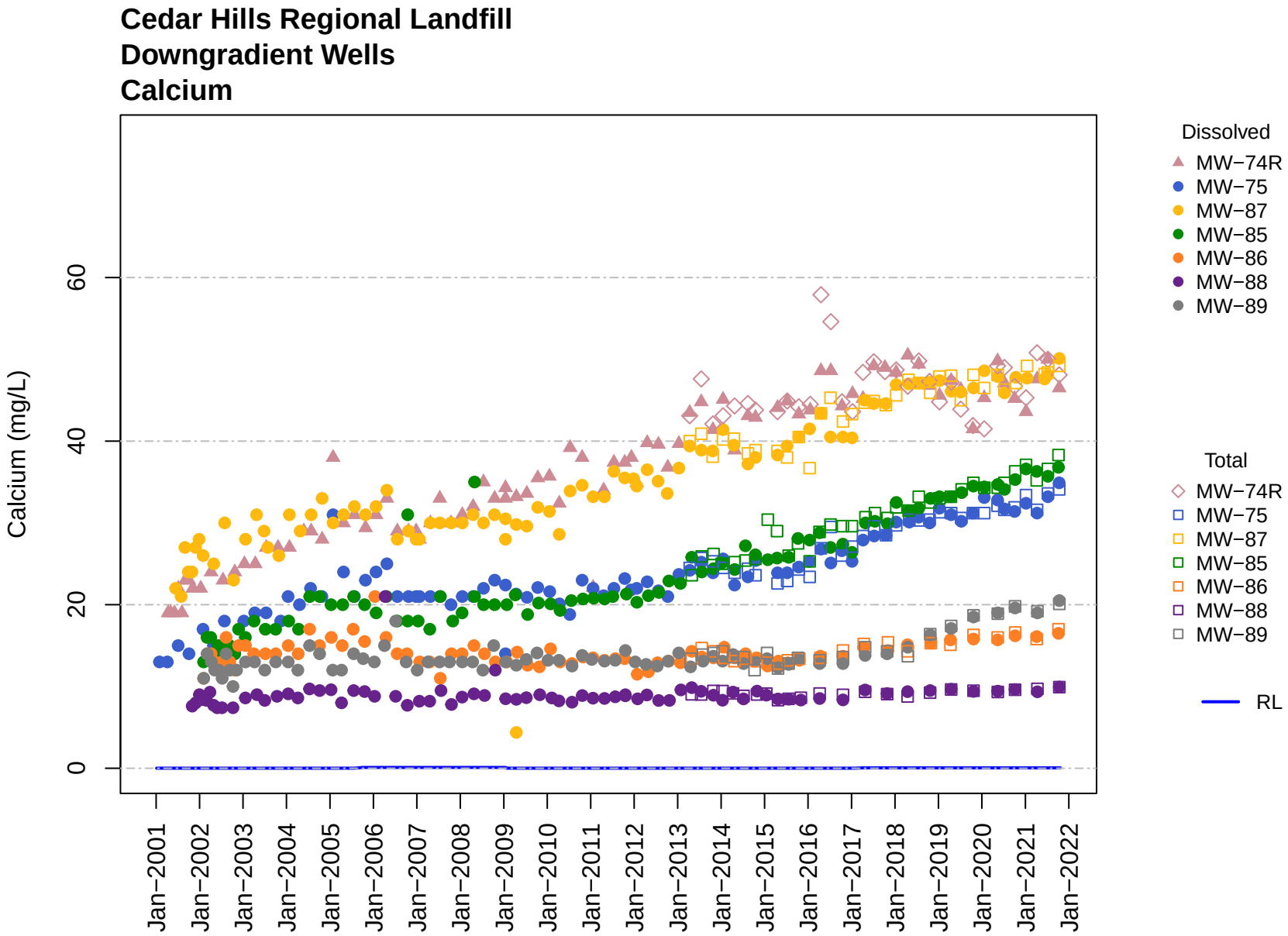

Cedar Hills Regional Landfill
Downgradient Wells
Barium
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

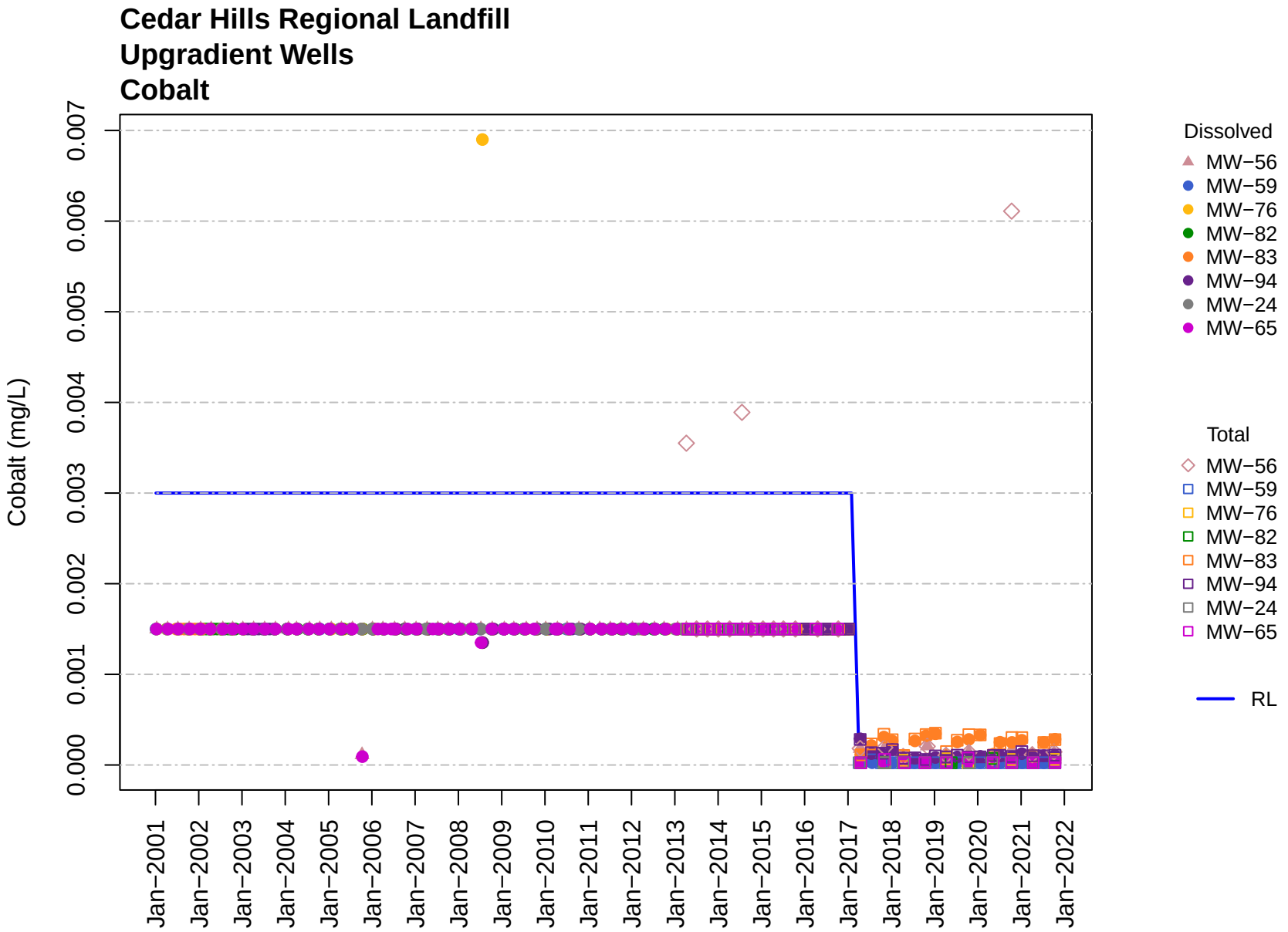

Cedar Hills Regional Landfill
Downgradient Wells
Barium
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

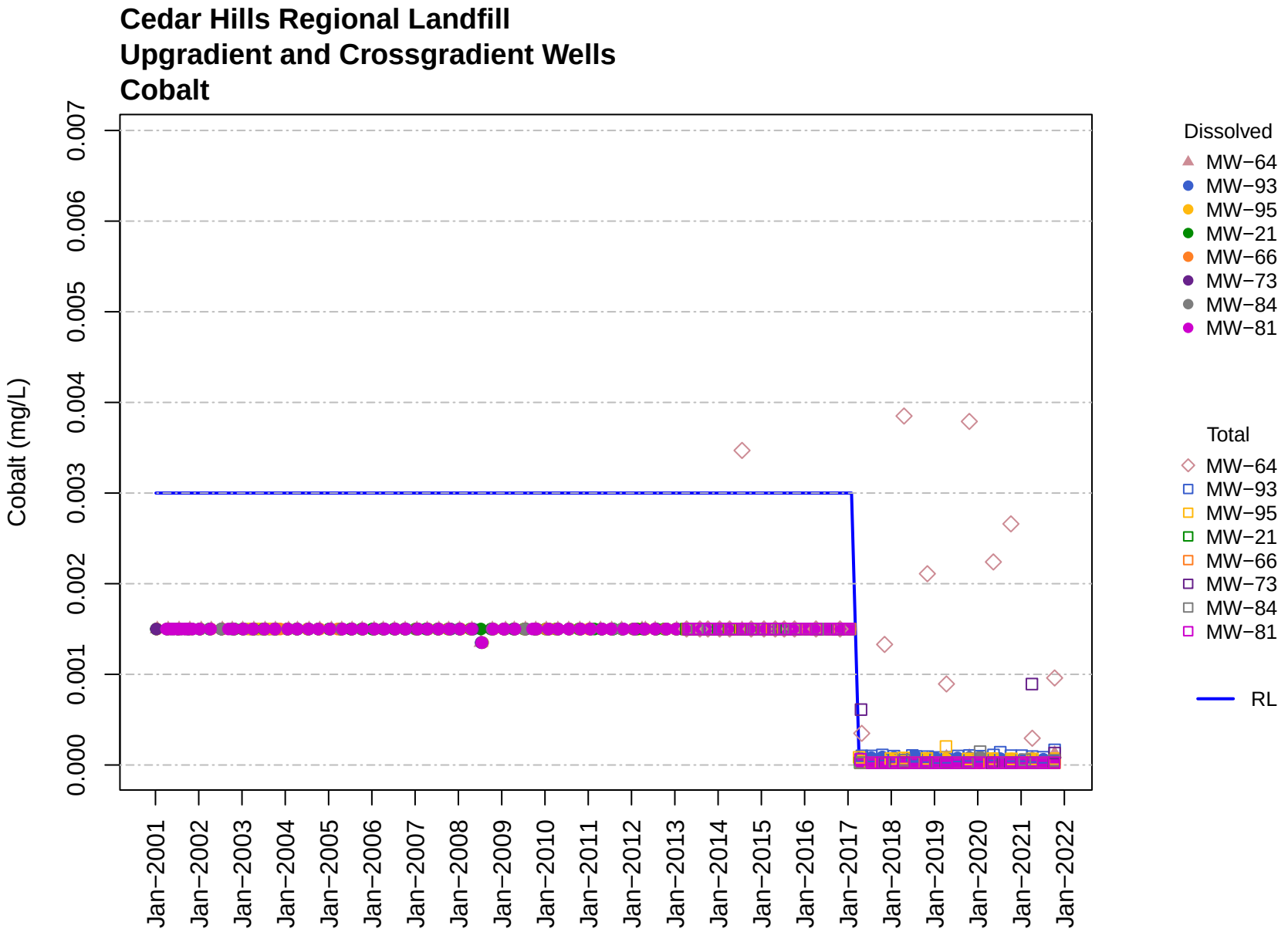

Cedar Hills Regional Landfill
Upgradient Wells
Calcium
Calcium (mg/L)
0
20
40
60
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

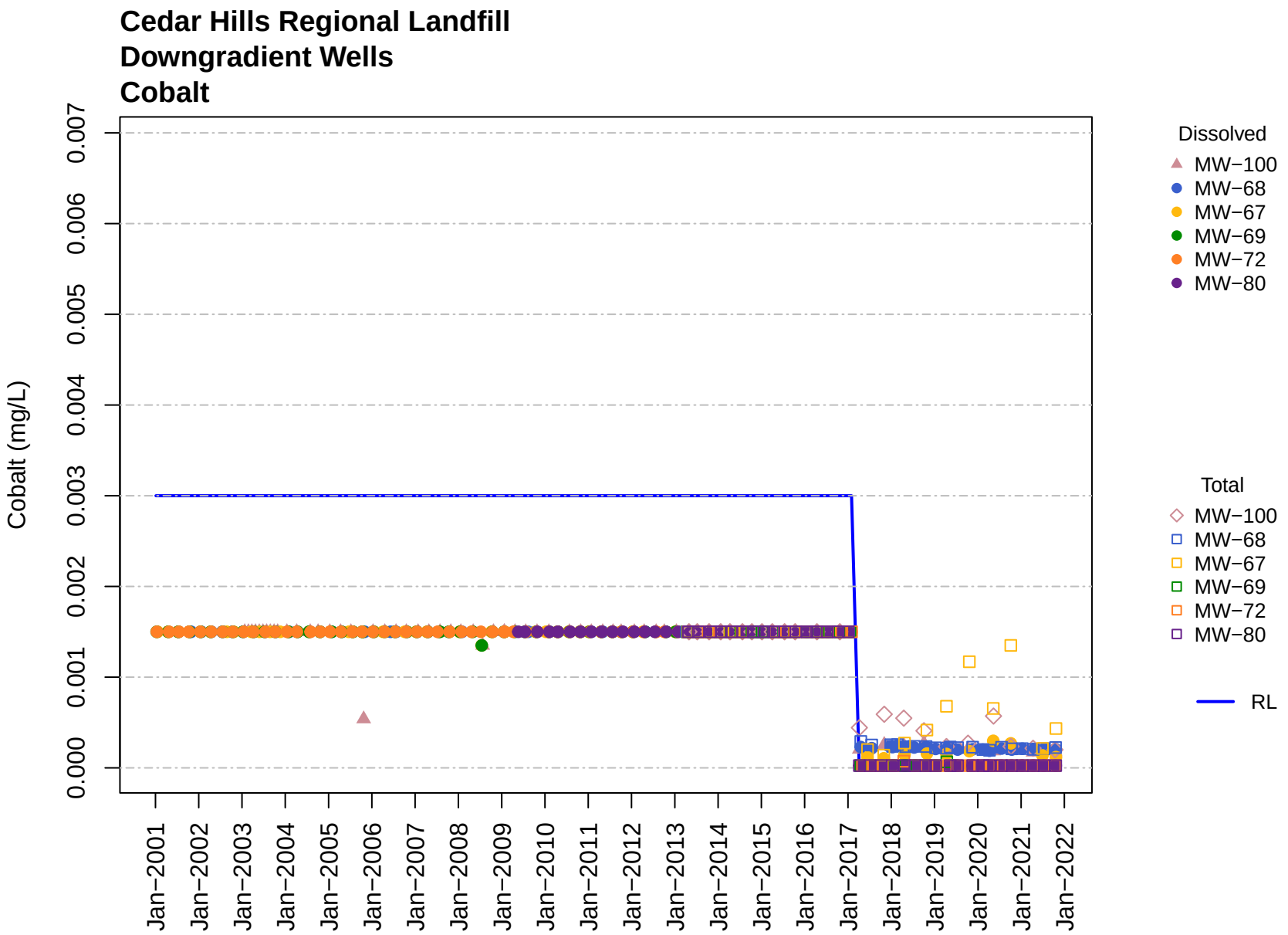

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Calcium
Calcium (mg/L)
0
20
40
60
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

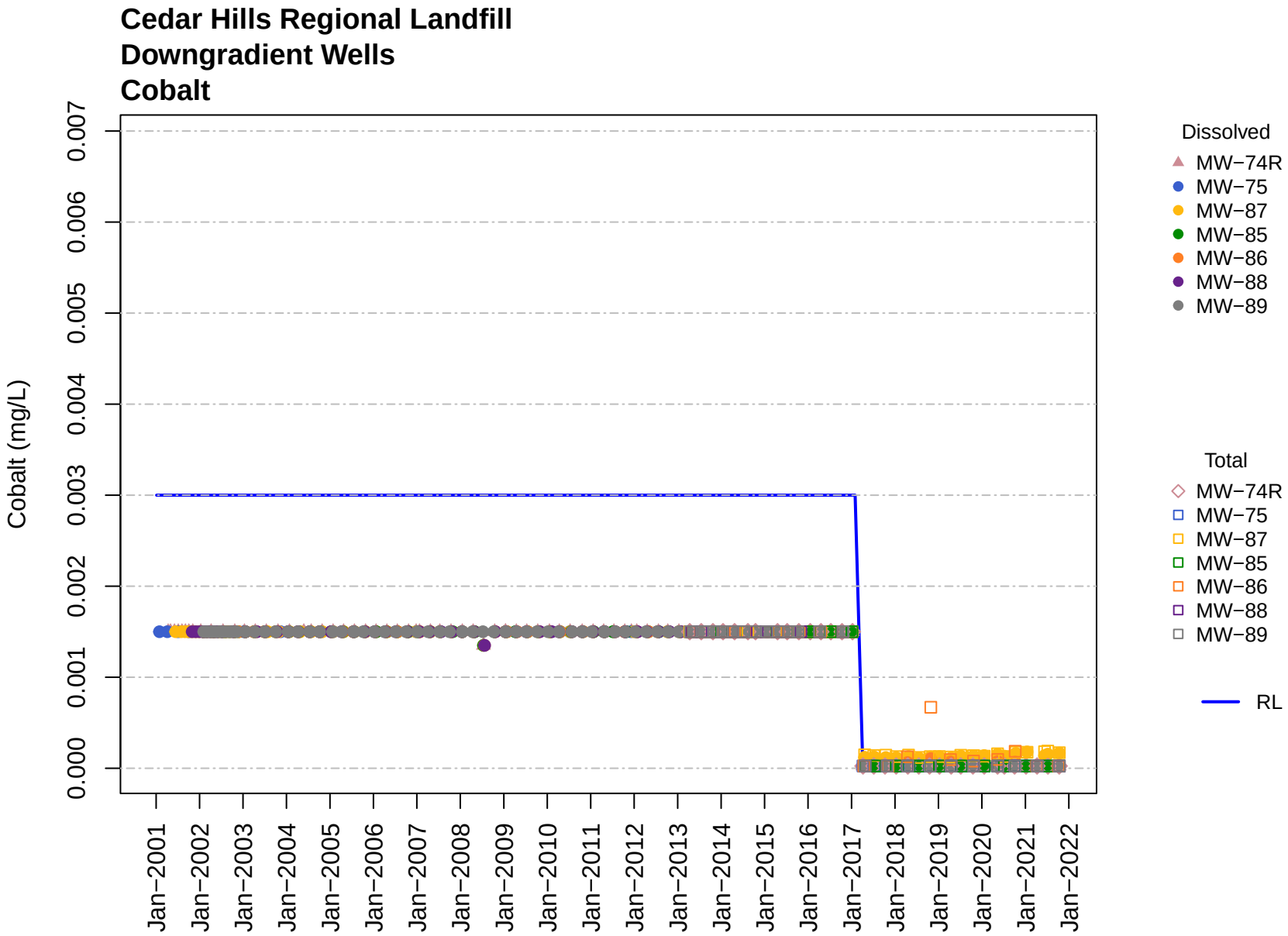

Cedar Hills Regional Landfill
Downgradient Wells
Calcium
Calcium (mg/L)
0
20
40
60
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

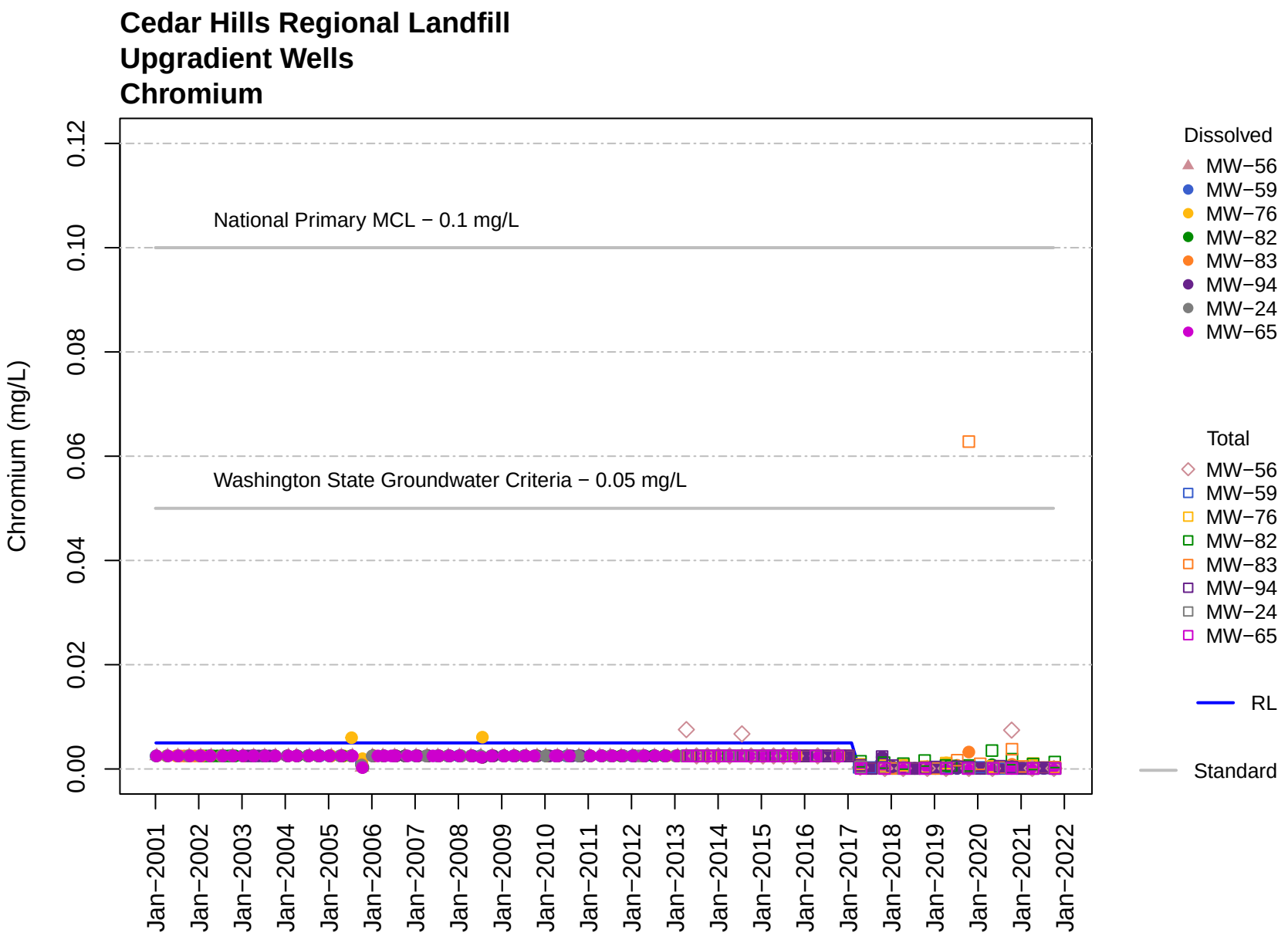

Cedar Hills Regional Landfill
Downgradient Wells
Calcium
Calcium (mg/L)
0
20
40
60
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

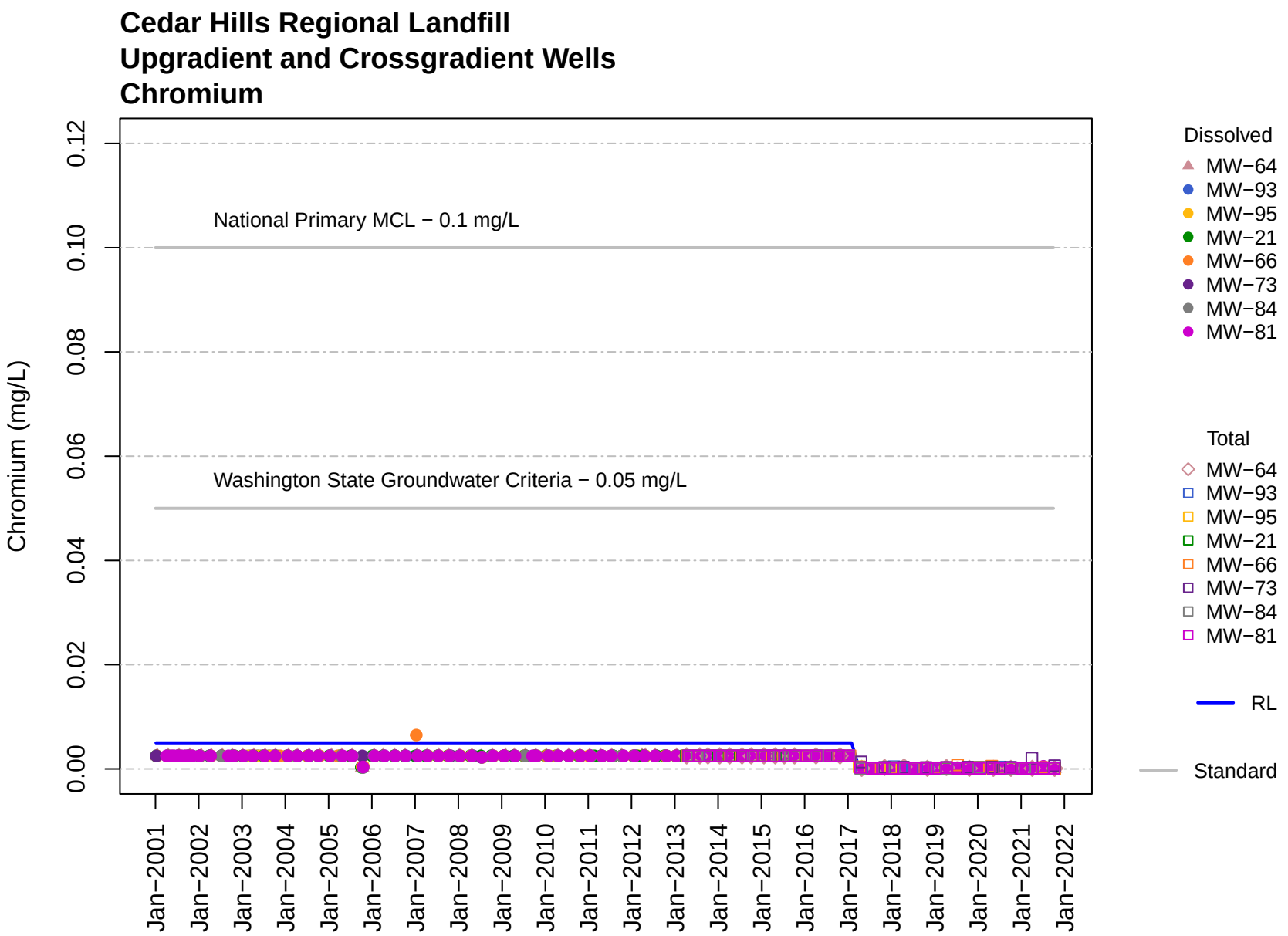

Cedar Hills Regional Landfill
Upgradient Wells
Cobalt
Cobalt (mg/L)
0.000
0.001
0.002
0.003
0.004
0.005
0.006
0.007
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

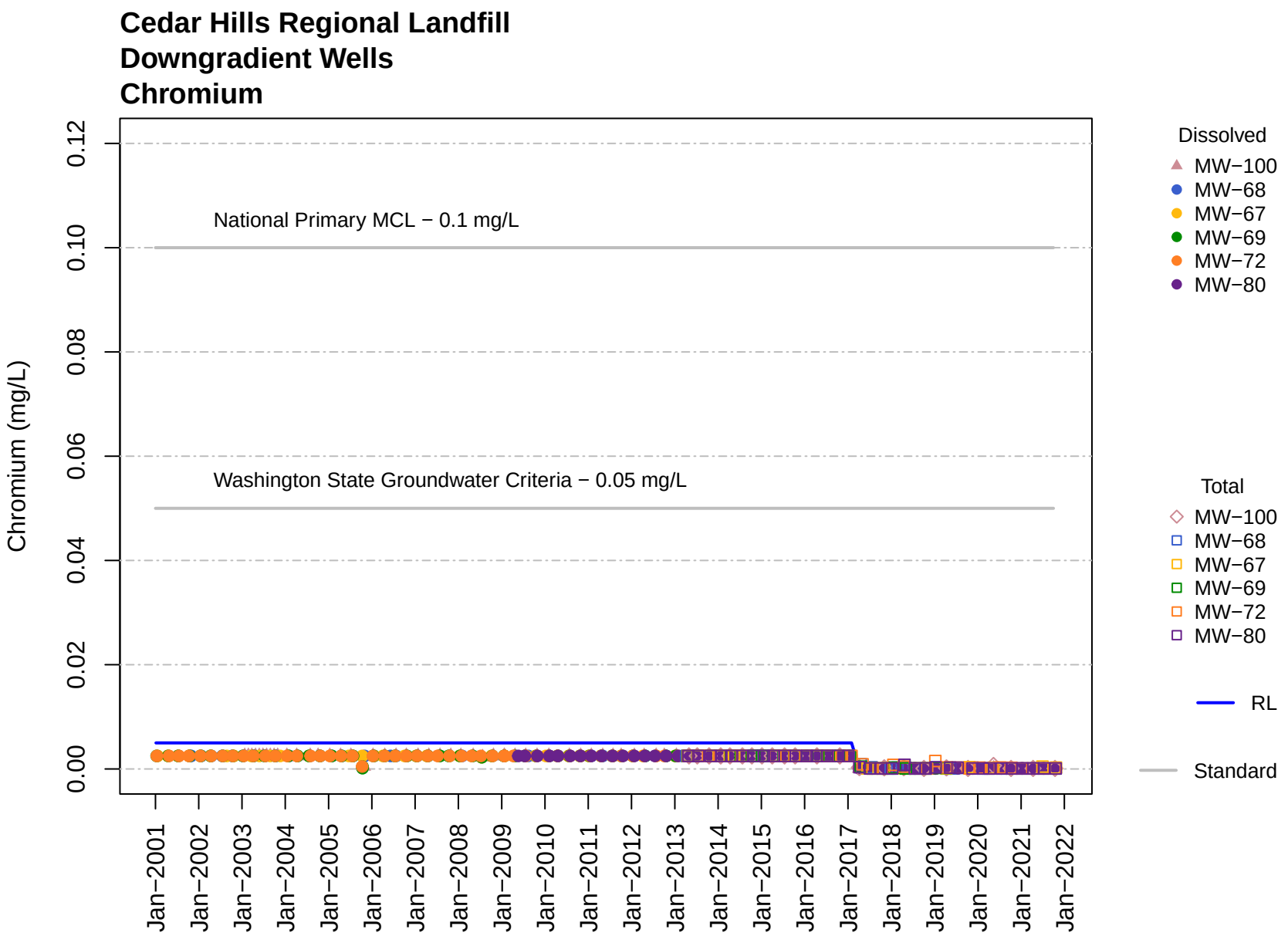

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Cobalt
Cobalt (mg/L)
0.000
0.001
0.002
0.003
0.004
0.005
0.006
0.007
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

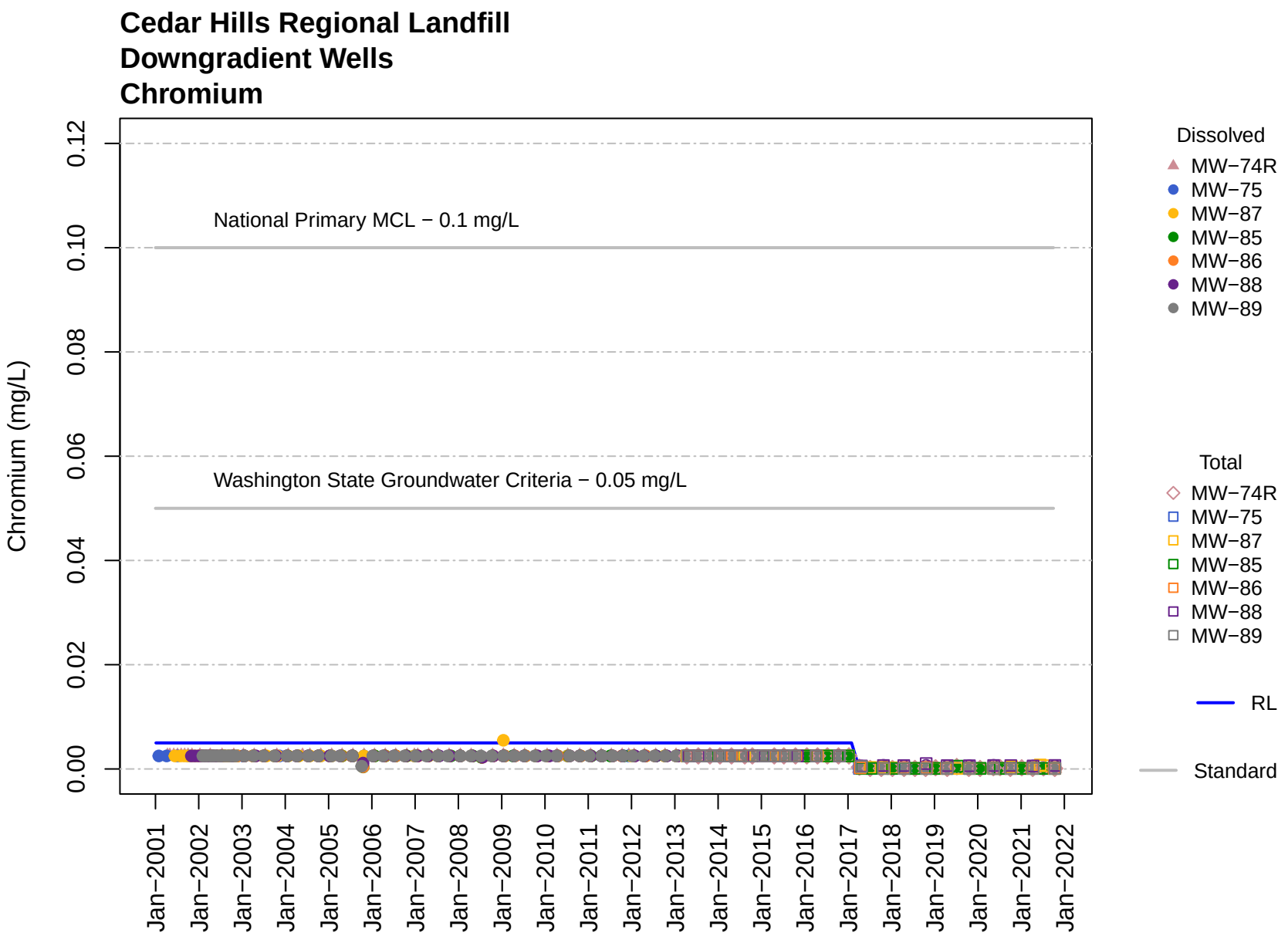

Cedar Hills Regional Landfill
Downgradient Wells
Cobalt
Cobalt (mg/L)
0.000
0.001
0.002
0.003
0.004
0.005
0.006
0.007
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

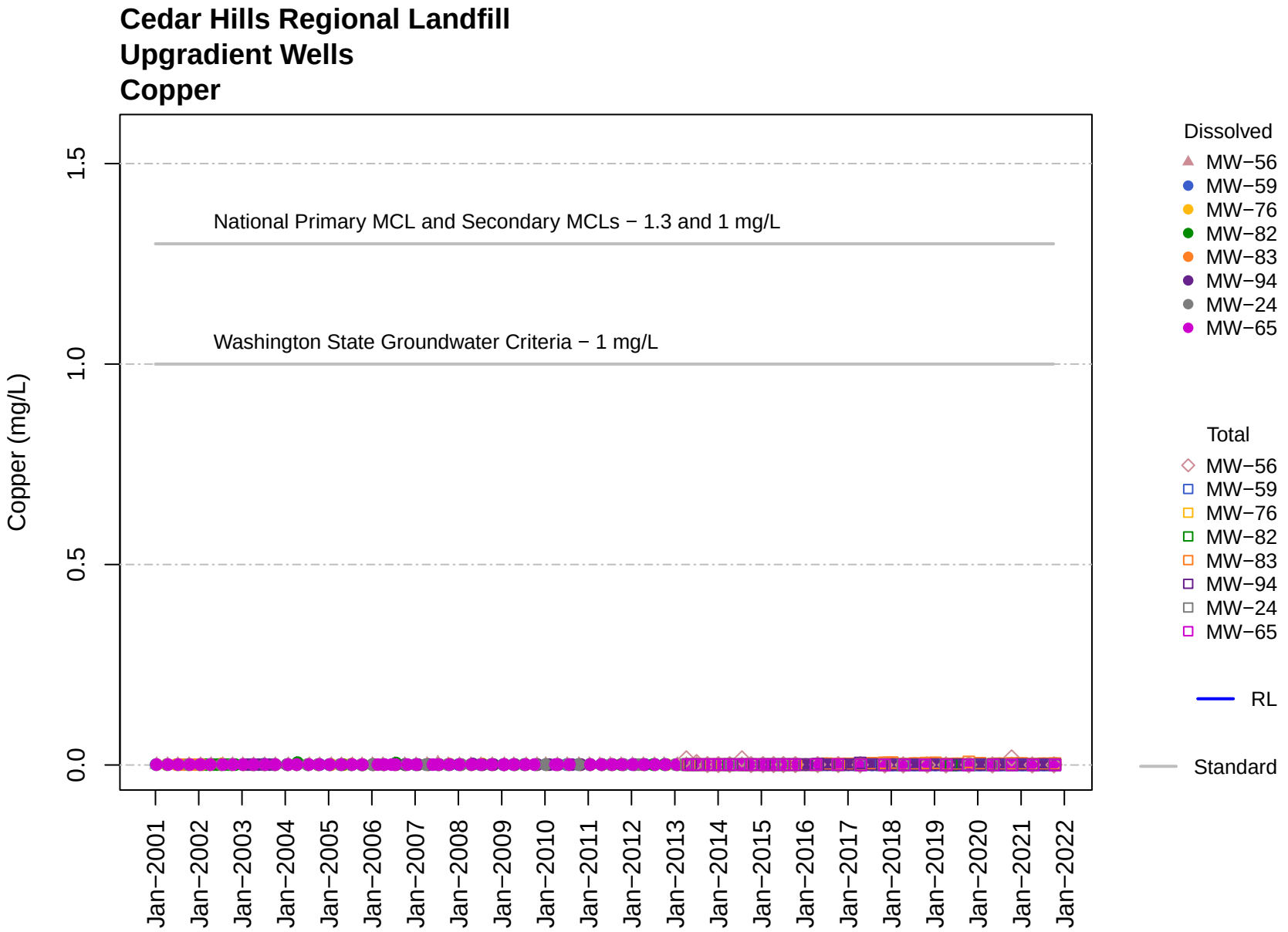

Cedar Hills Regional Landfill
Downgradient Wells
Cobalt
Cobalt (mg/L)
0.000
0.001
0.002
0.003
0.004
0.005
0.006
0.007
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

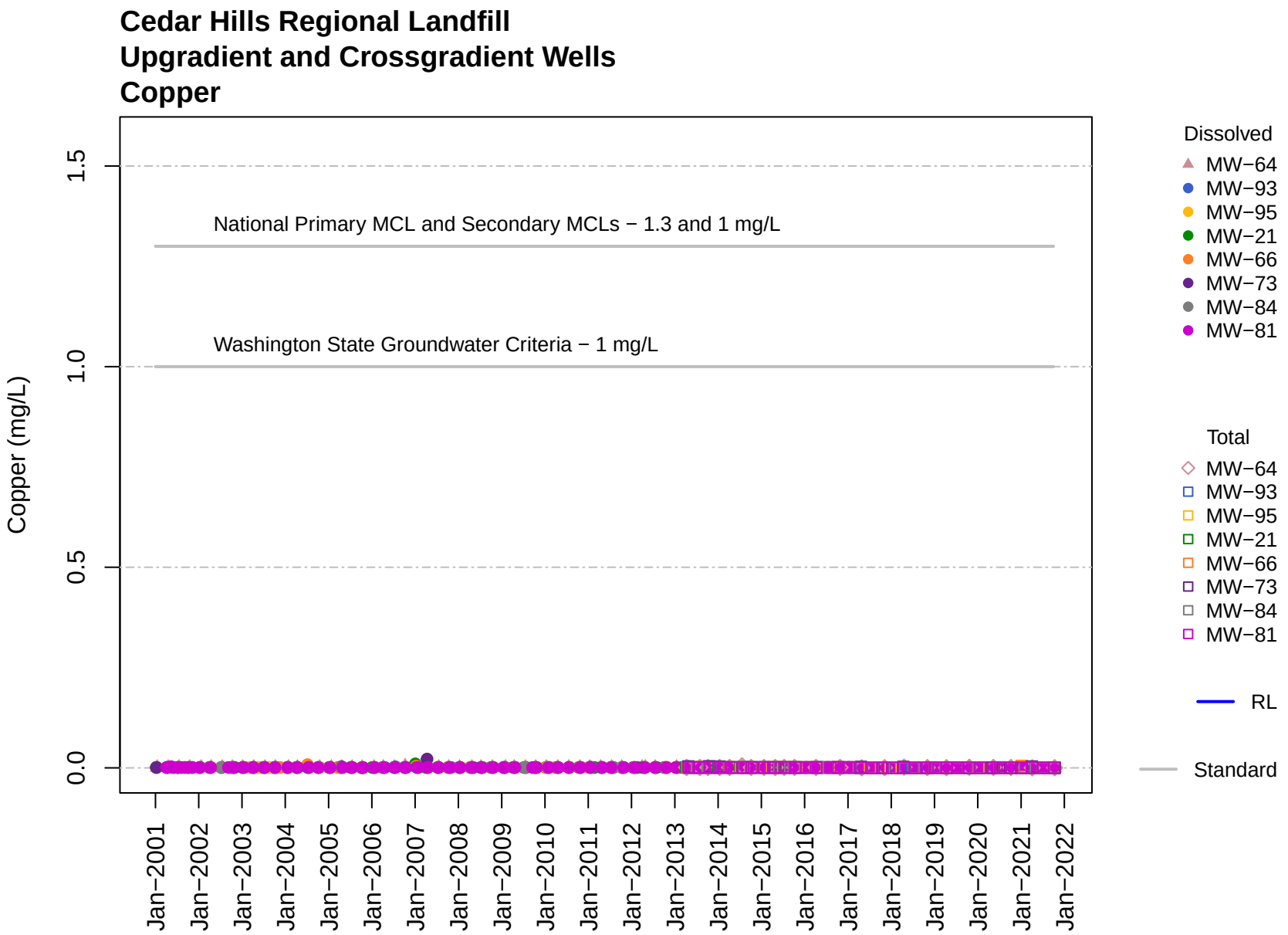

Cedar Hills Regional Landfill
Upgradient Wells
Chromium
Chromium (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.05 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

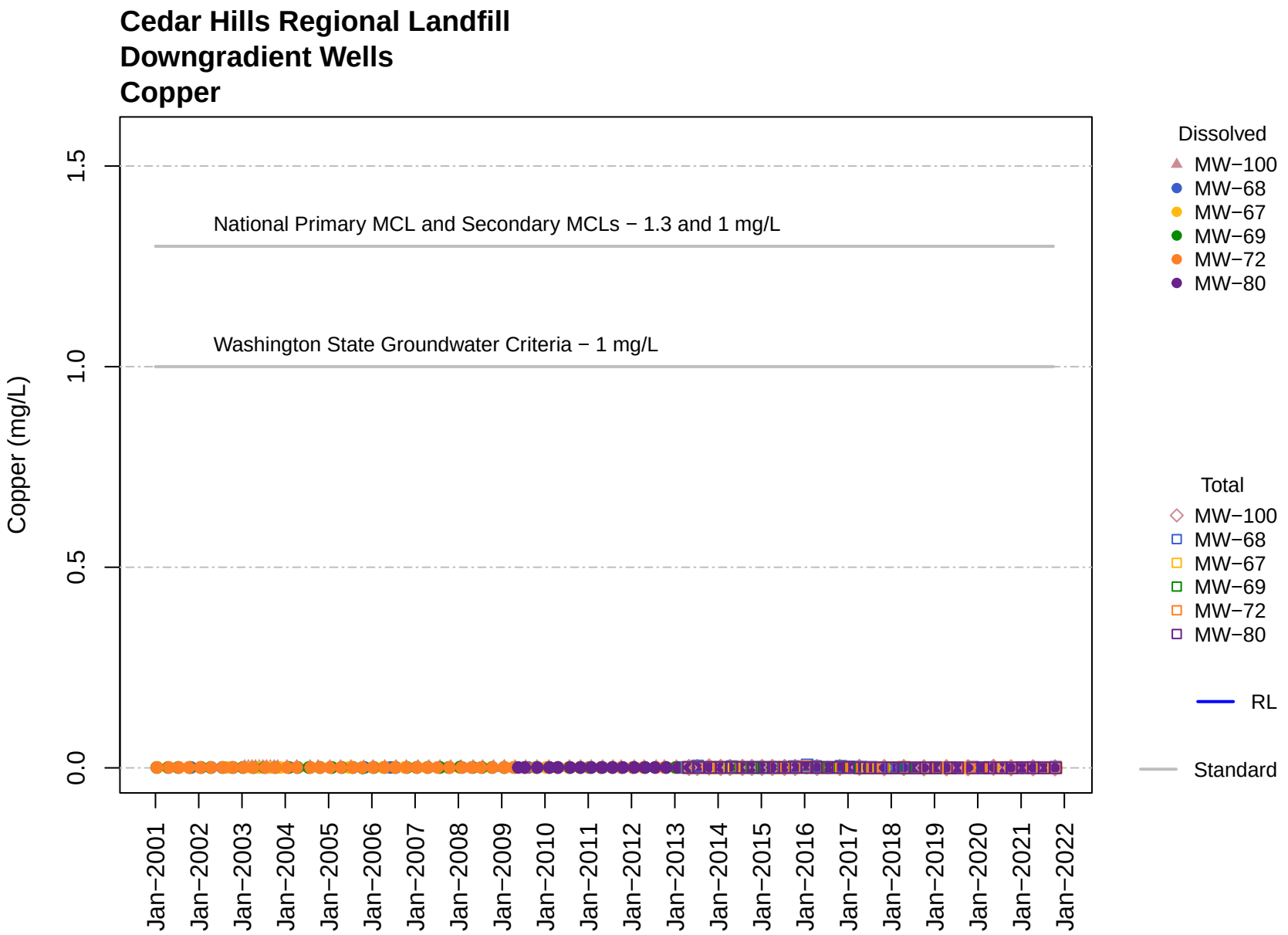

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Chromium
Chromium (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.05 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

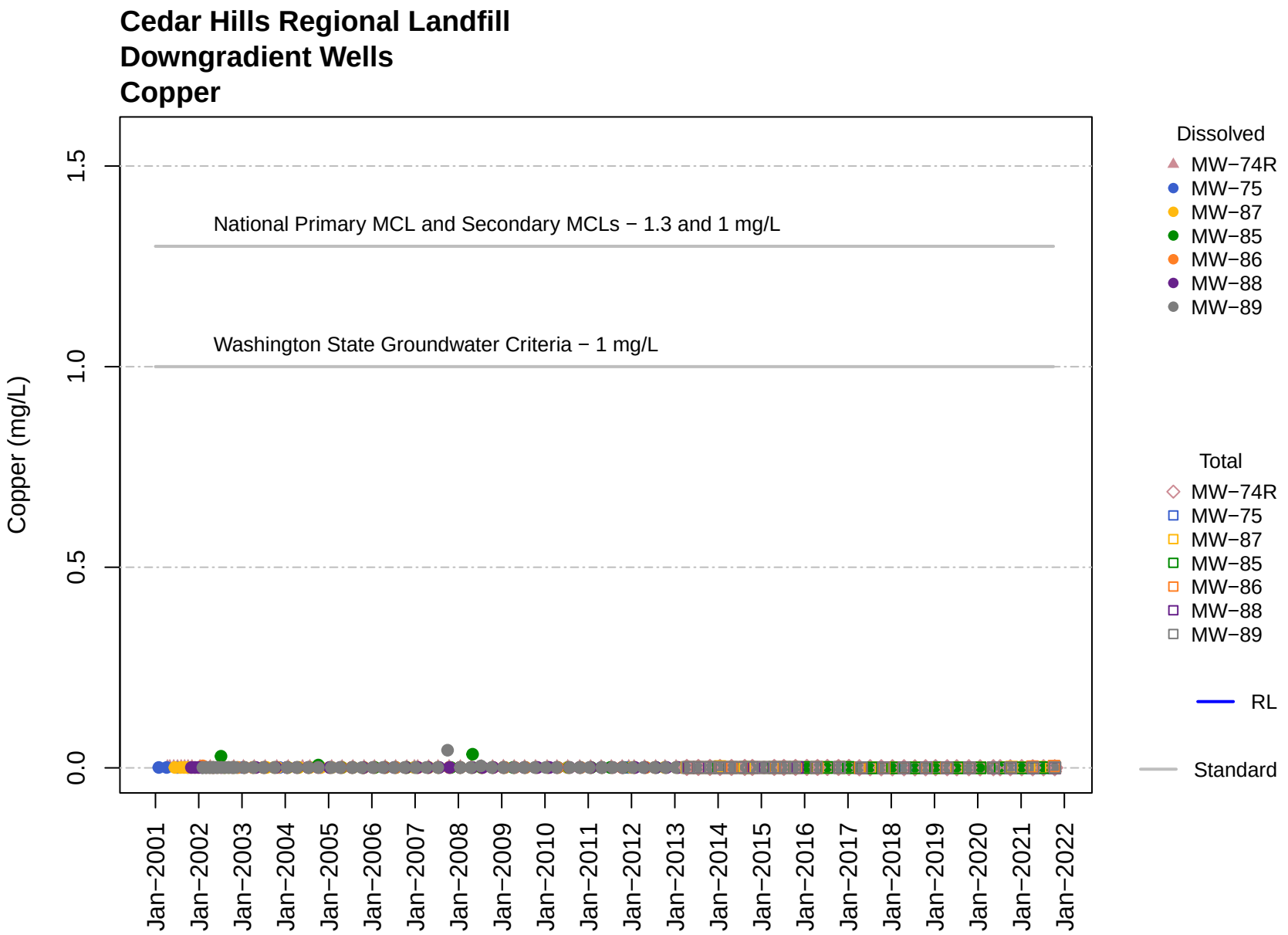

Cedar Hills Regional Landfill
Downgradient Wells
Chromium
Chromium (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.05 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

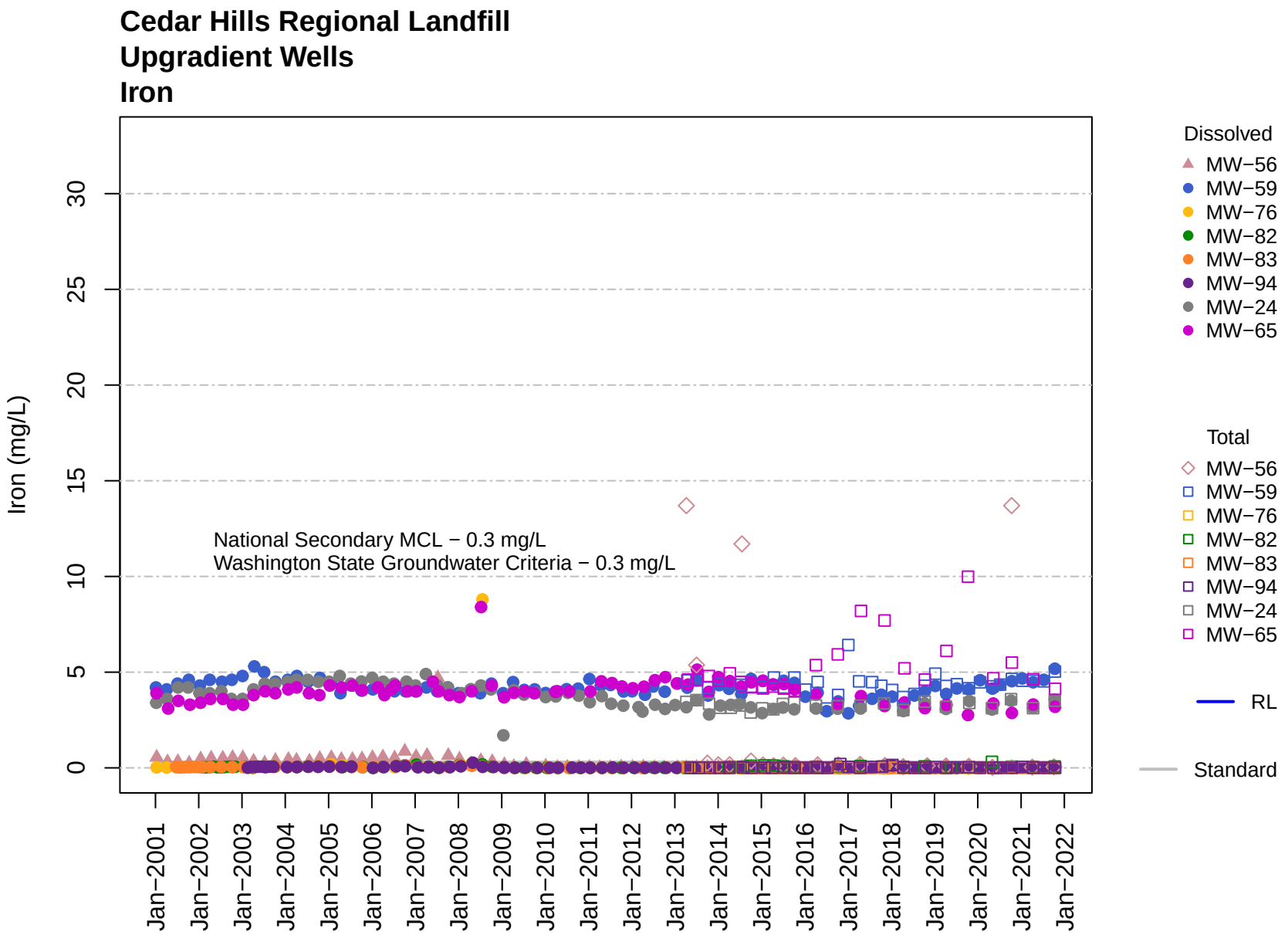

Cedar Hills Regional Landfill
Downgradient Wells
Chromium
Chromium (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.05 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

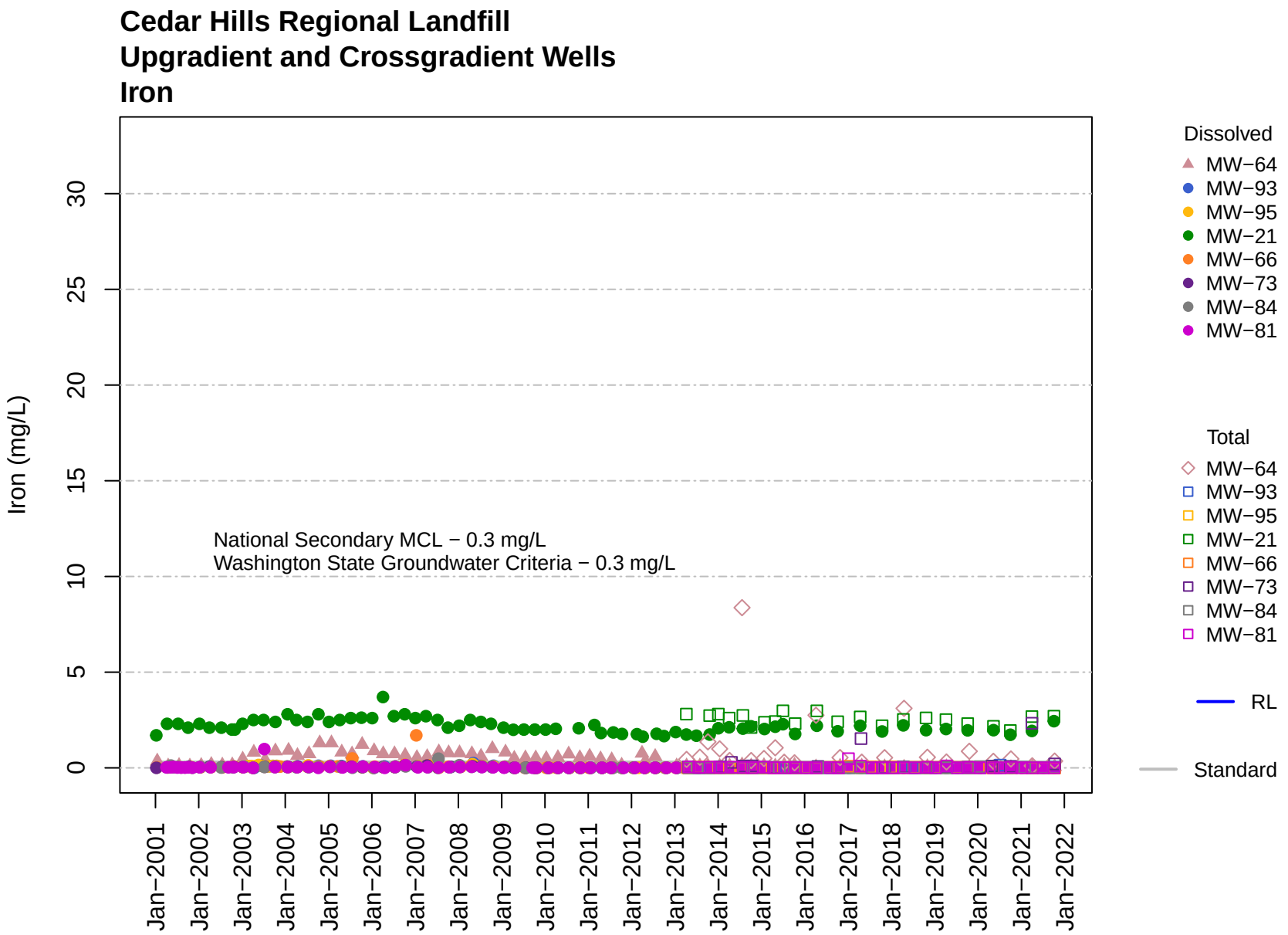

Cedar Hills Regional Landfill
Upgradient Wells
Copper
Copper (mg/L)
0.0
0.5
1.0
1.5
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

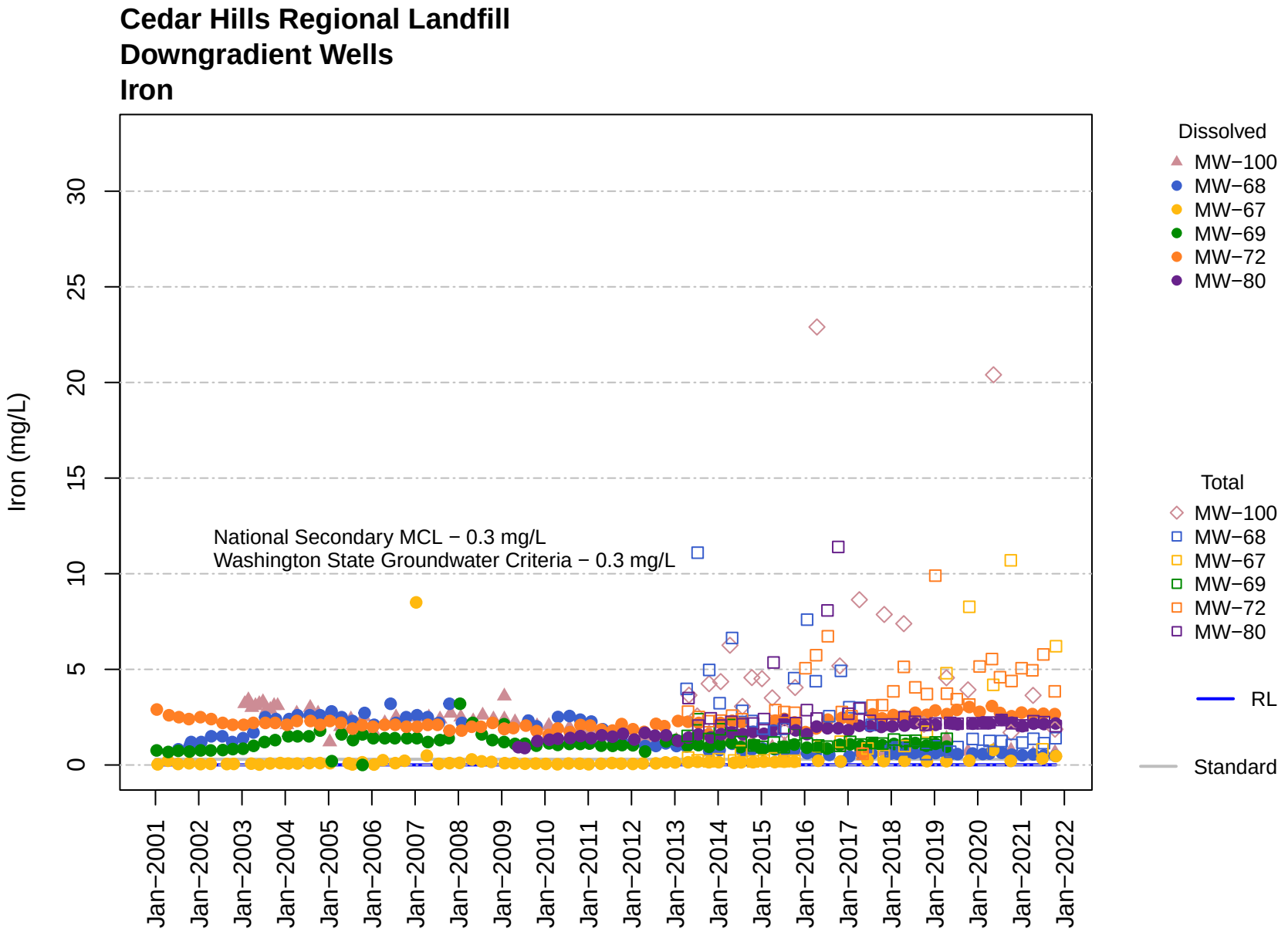

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Copper
Copper (mg/L)
0.0
0.5
1.0
1.5
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

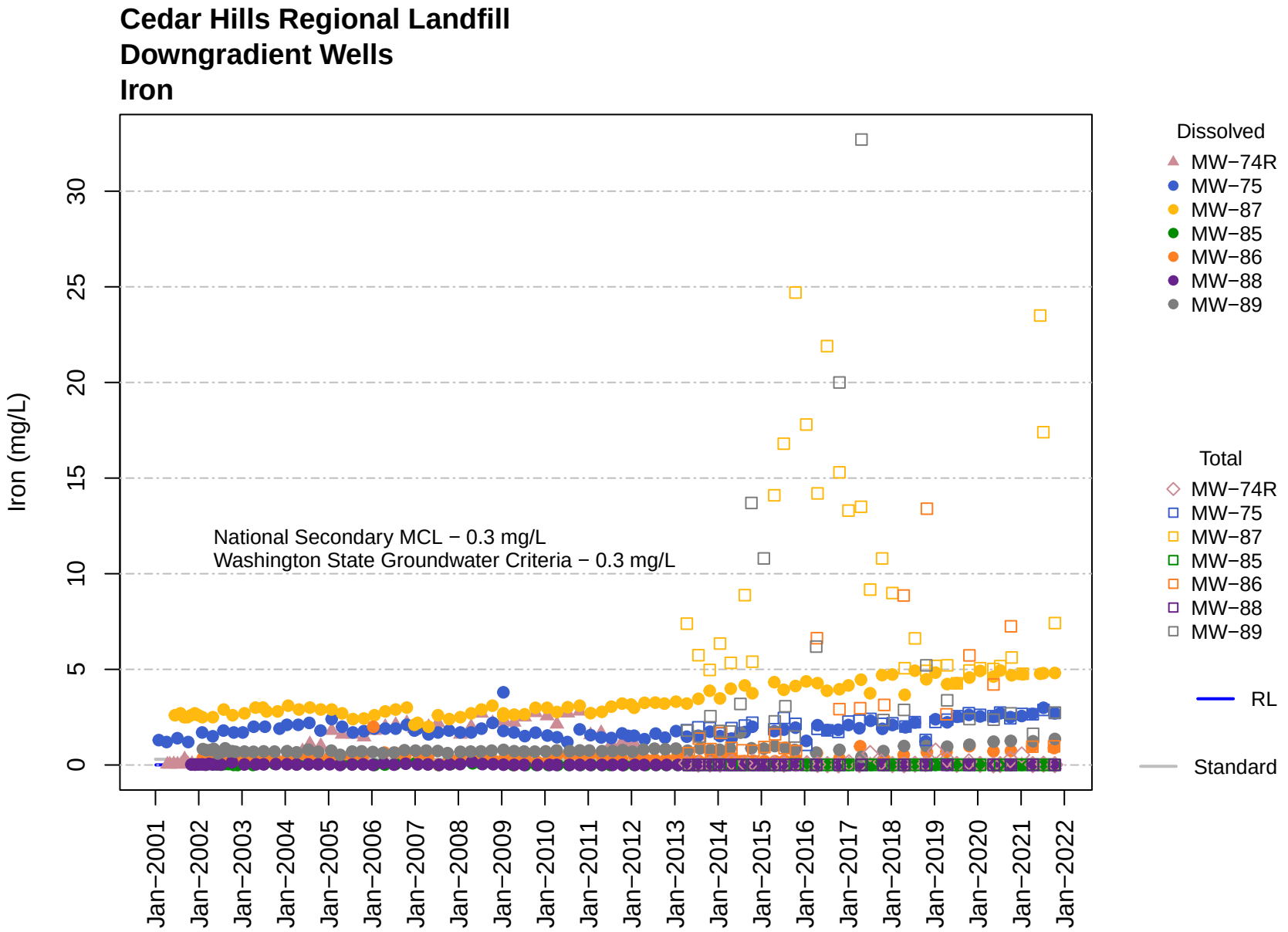

Cedar Hills Regional Landfill
Downgradient Wells
Copper
Copper (mg/L)
1.5
1.0
0.5
0.0
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

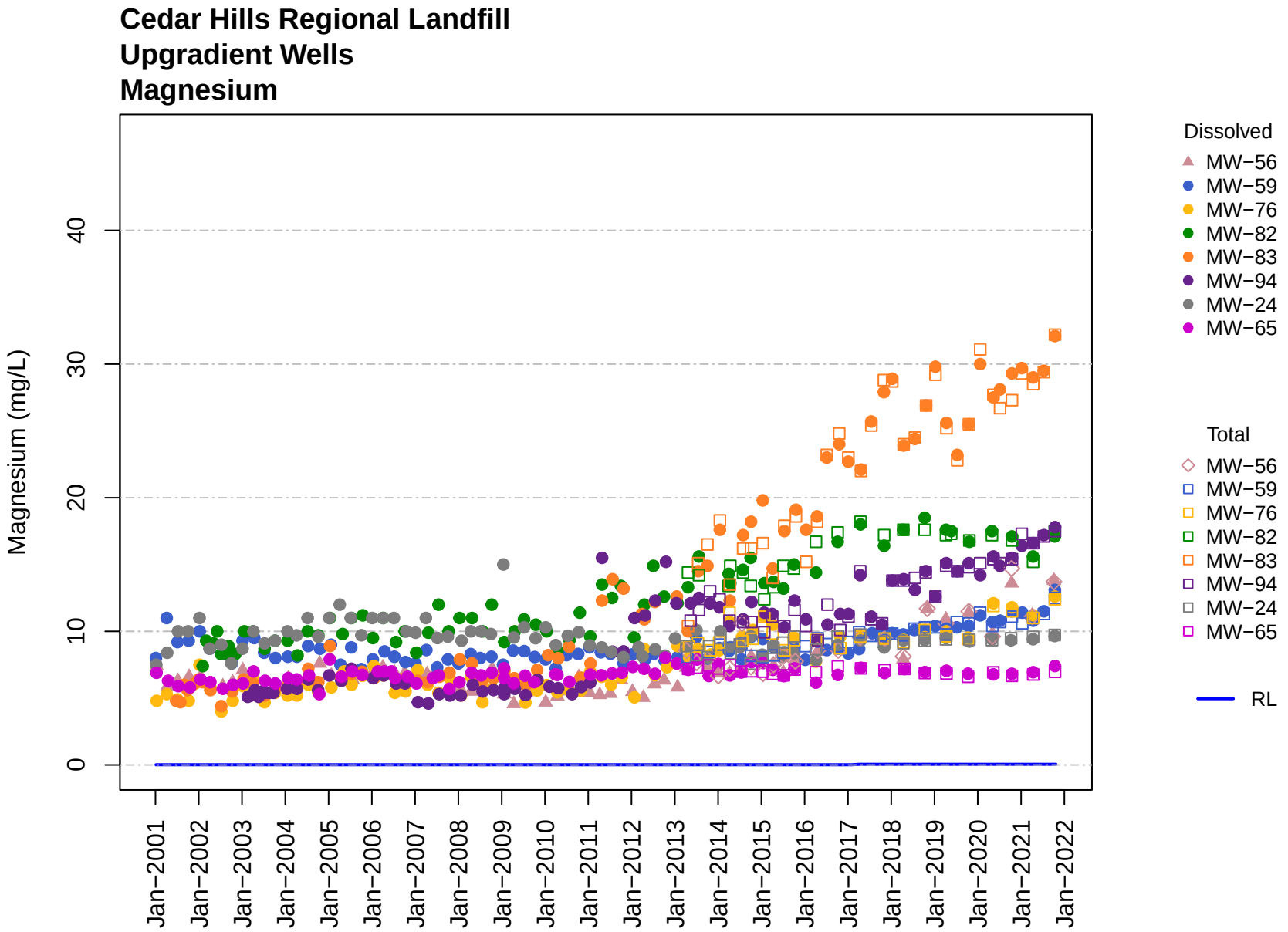

Cedar Hills Regional Landfill
Downgradient Wells
Copper
Copper (mg/L)
1.5
1.0
0.5
0.0
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

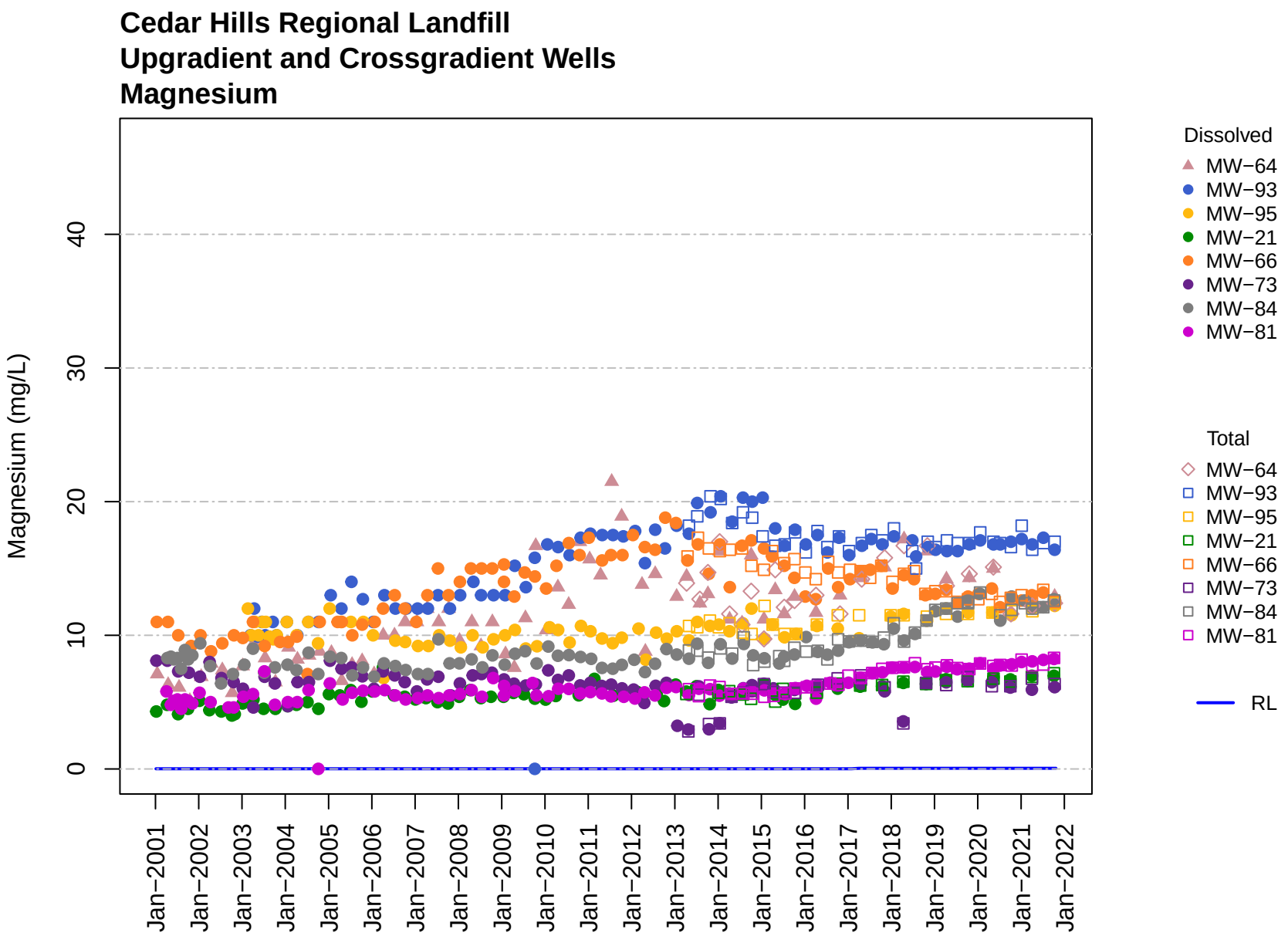

Cedar Hills Regional Landfill
Upgradient Wells
Iron
Iron (mg/L)
0
5
10
15
20
25
30
National Secondary MCL − 0.3 mg/L
Washington State Groundwater Criteria − 0.3 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

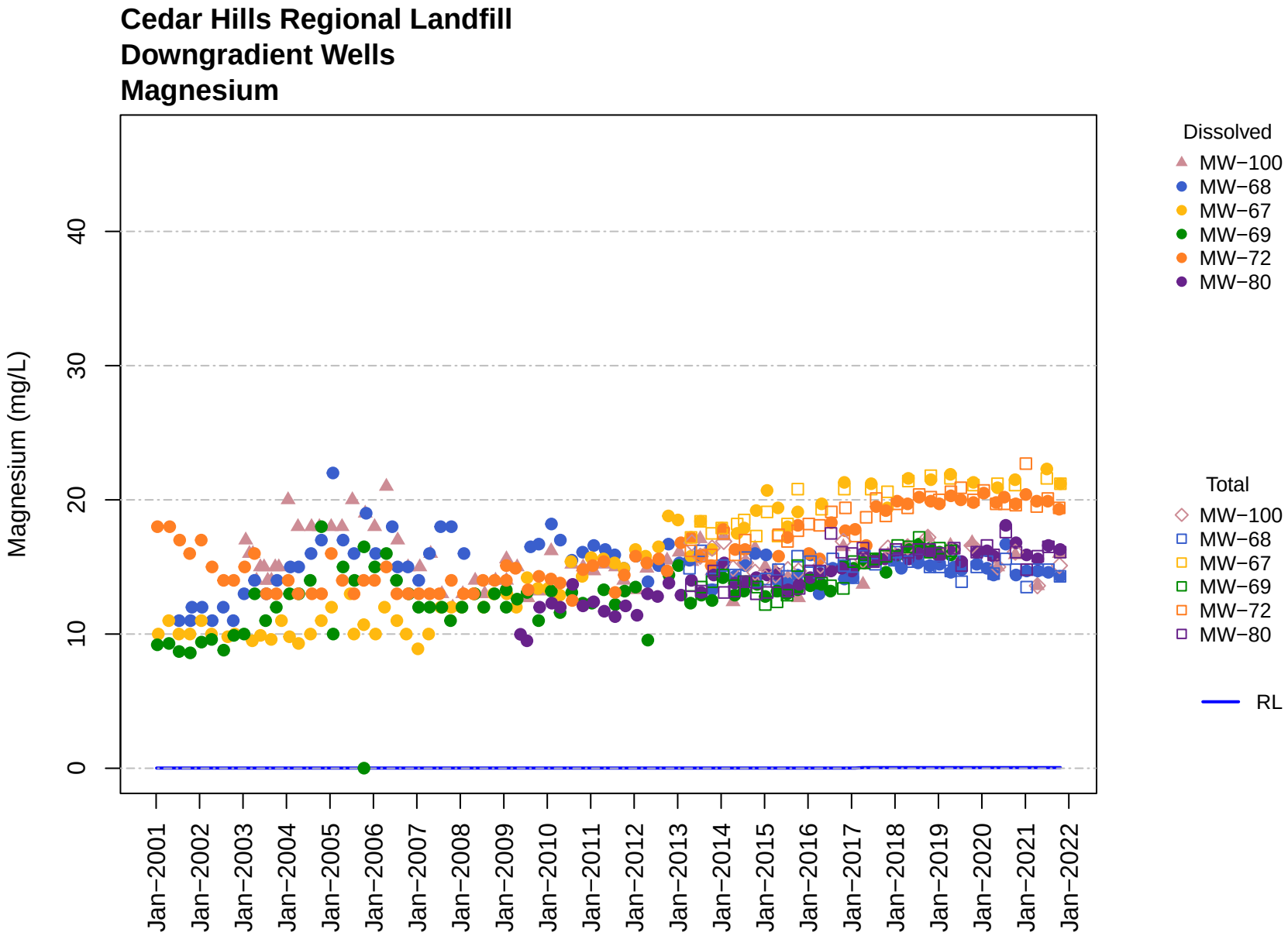

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Iron
Iron (mg/L)
0
5
10
15
20
25
30
National Secondary MCL − 0.3 mg/L
Washington State Groundwater Criteria − 0.3 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

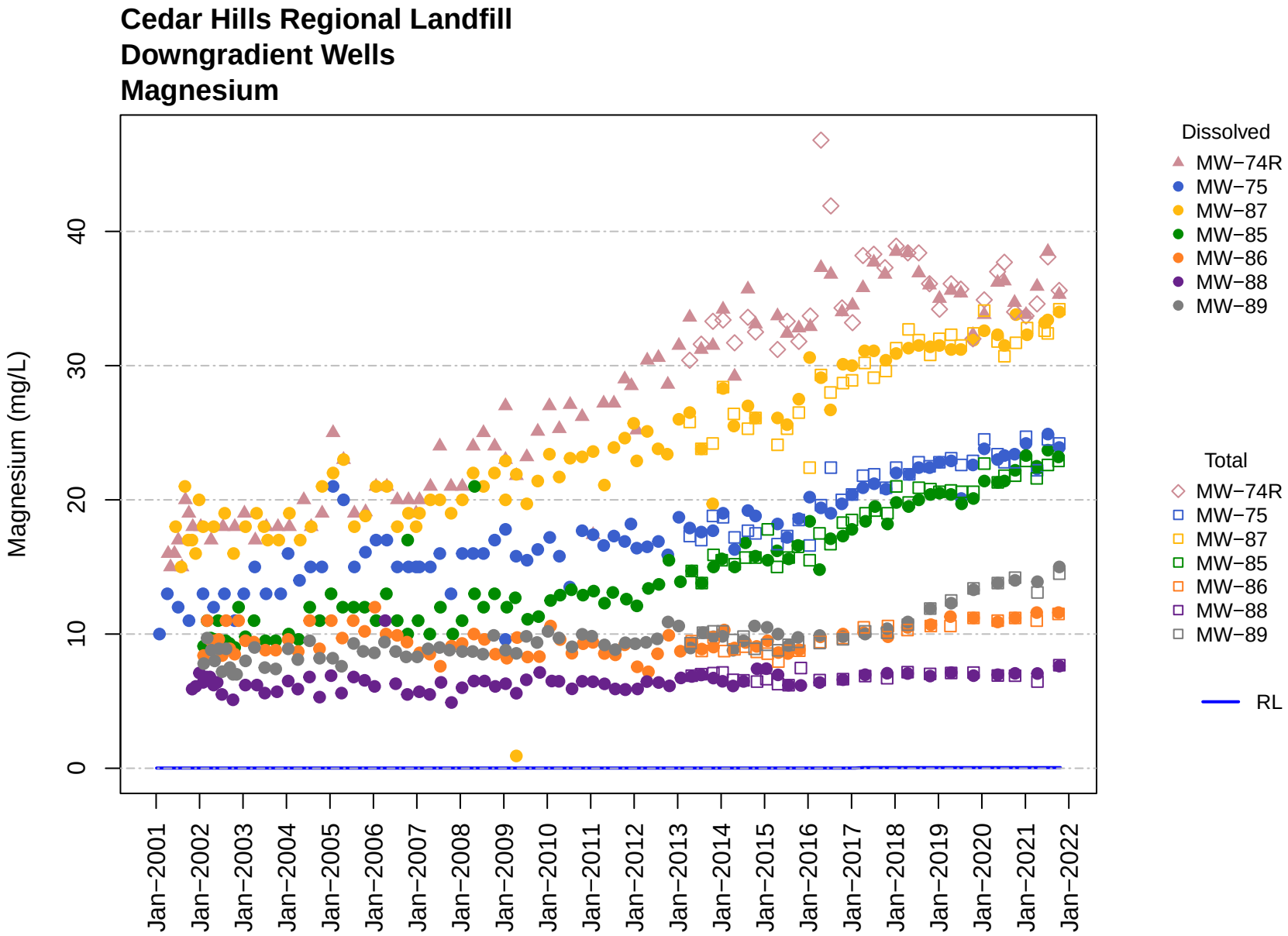

Cedar Hills Regional Landfill
Downgradient Wells
Iron
Iron (mg/L)
0
5
10
15
20
25
30
National Secondary MCL − 0.3 mg/L
Washington State Groundwater Criteria − 0.3 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

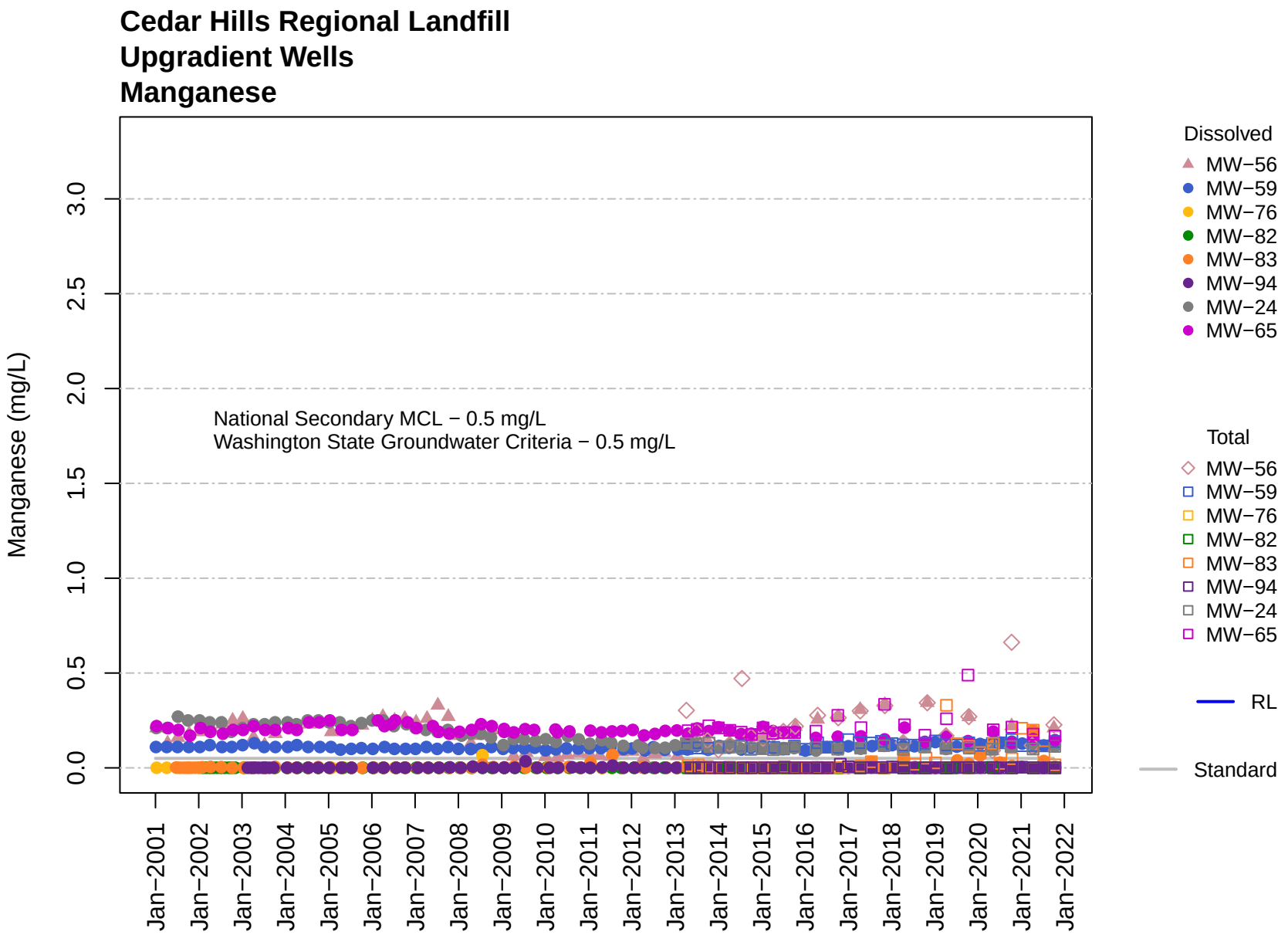

Cedar Hills Regional Landfill
Downgradient Wells
Iron
Iron (mg/L)
0
5
10
15
20
25
30
National Secondary MCL − 0.3 mg/L
Washington State Groundwater Criteria − 0.3 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

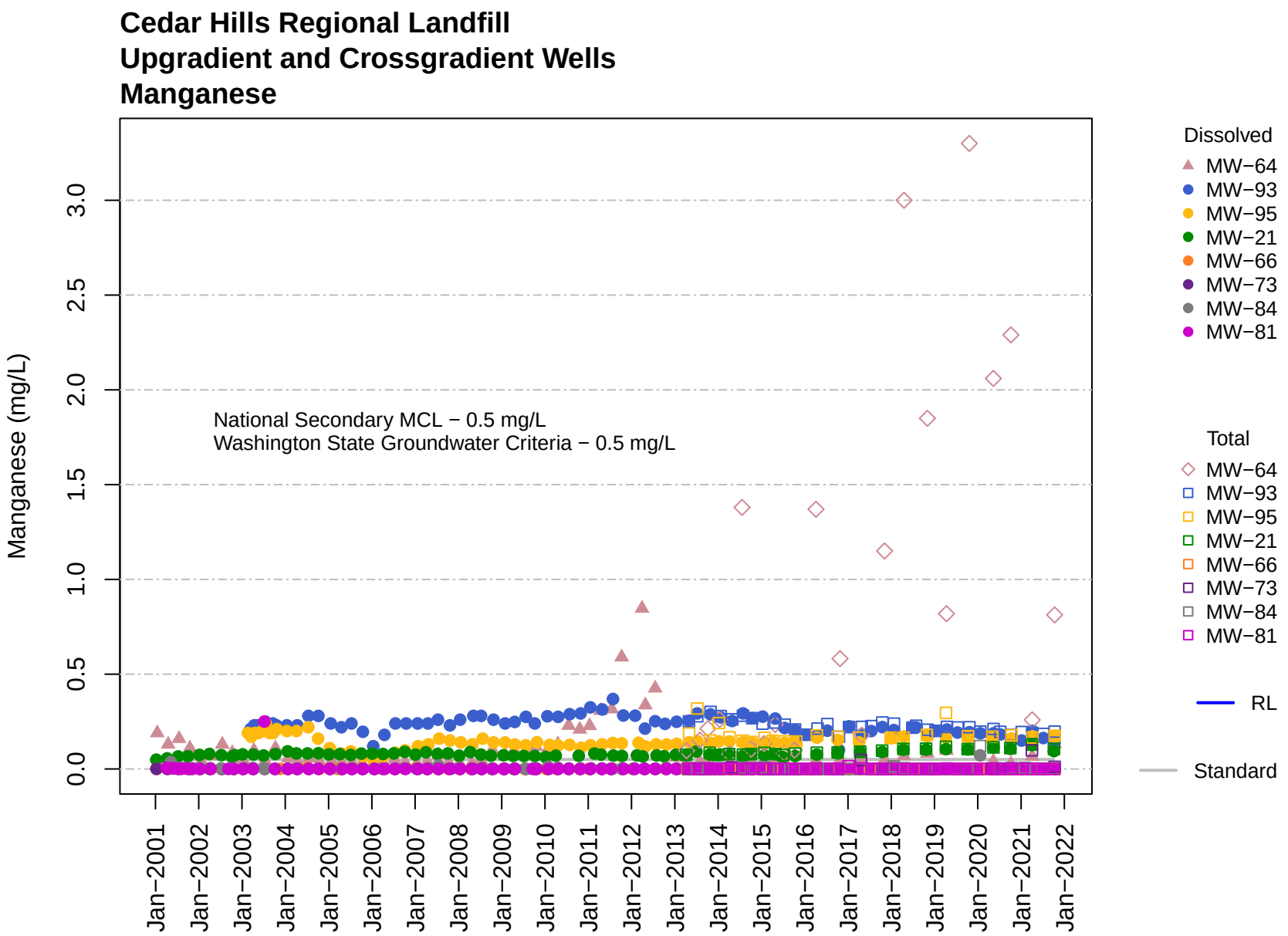

Cedar Hills Regional Landfill
Upgradient Wells
Magnesium
Magnesium (mg/L)
0
10
20
30
40
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

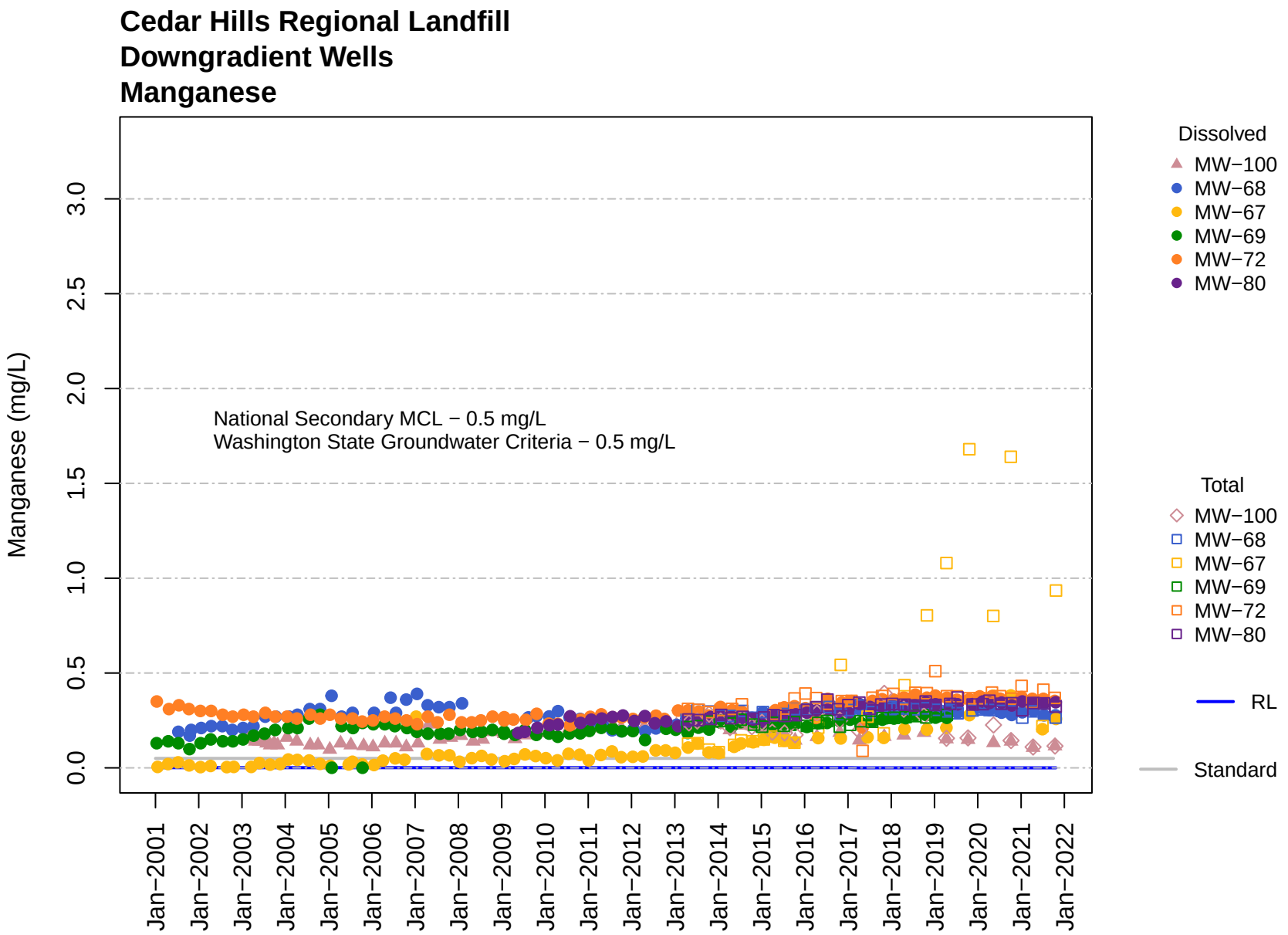

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Magnesium
Magnesium (mg/L)
0
10
20
30
40
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

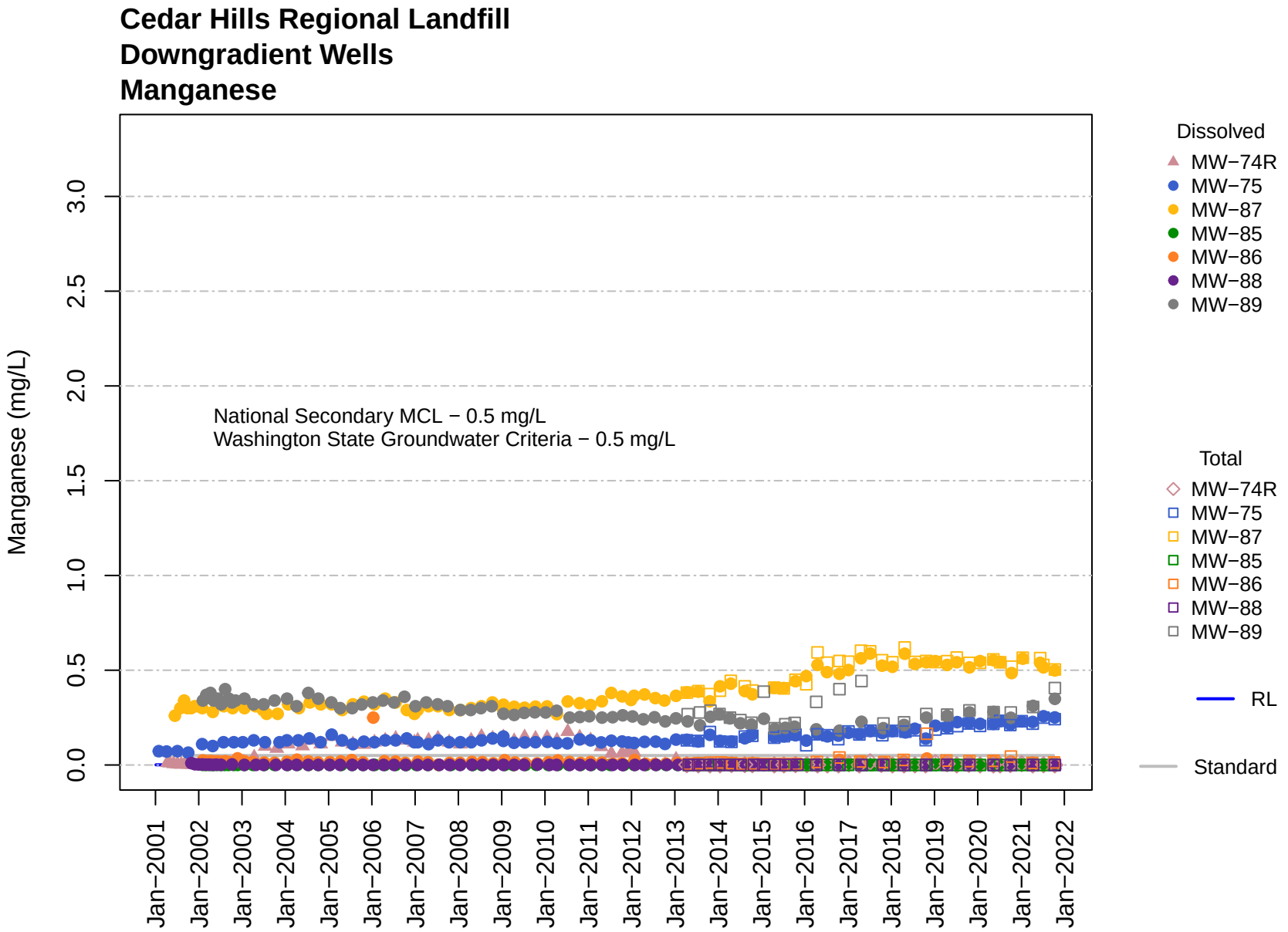

Cedar Hills Regional Landfill
Downgradient Wells
Magnesium
Magnesium (mg/L)
0
10
20
30
40
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

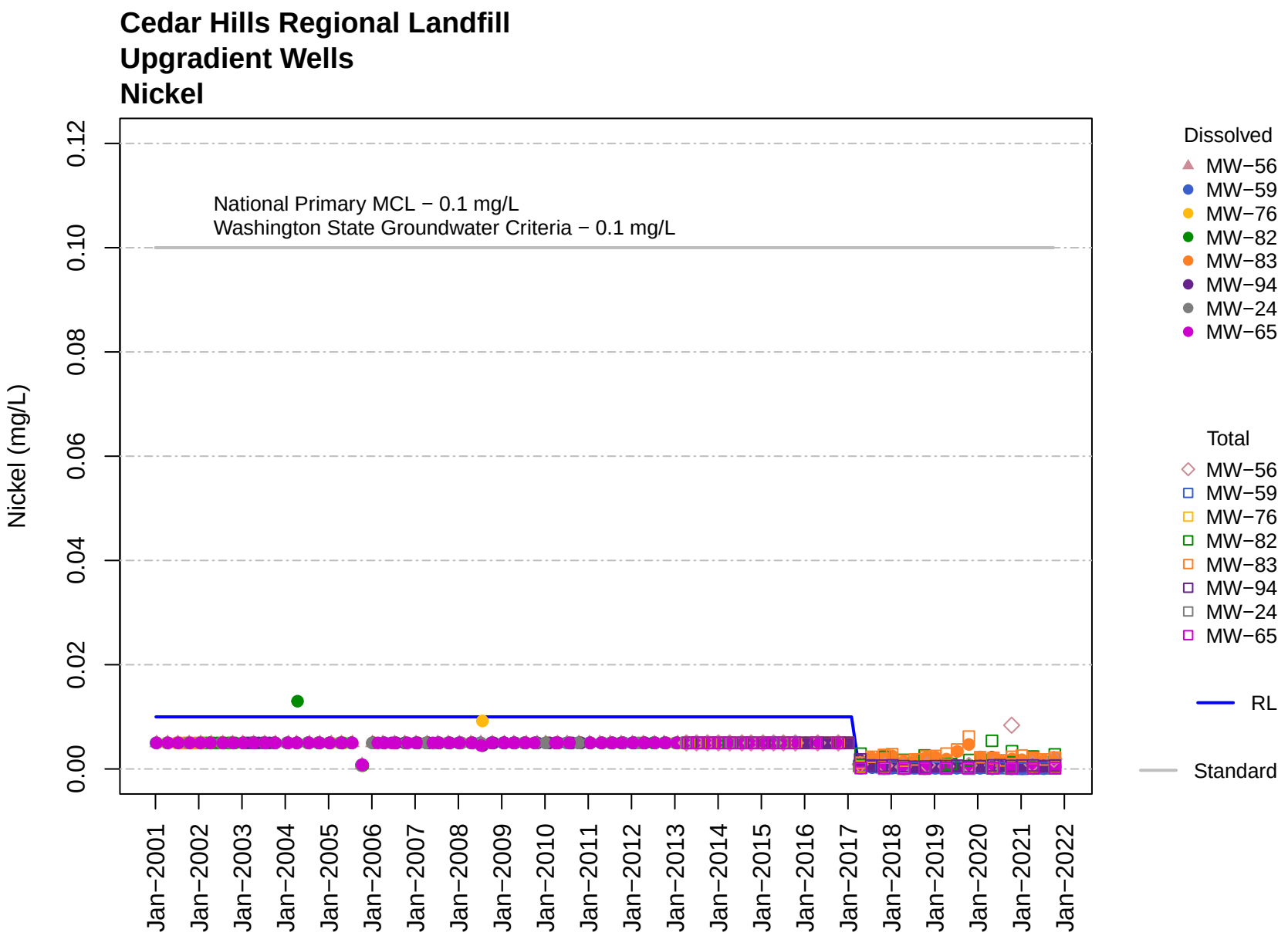

Cedar Hills Regional Landfill
Downgradient Wells
Magnesium
Magnesium (mg/L)
0
10
20
30
40
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

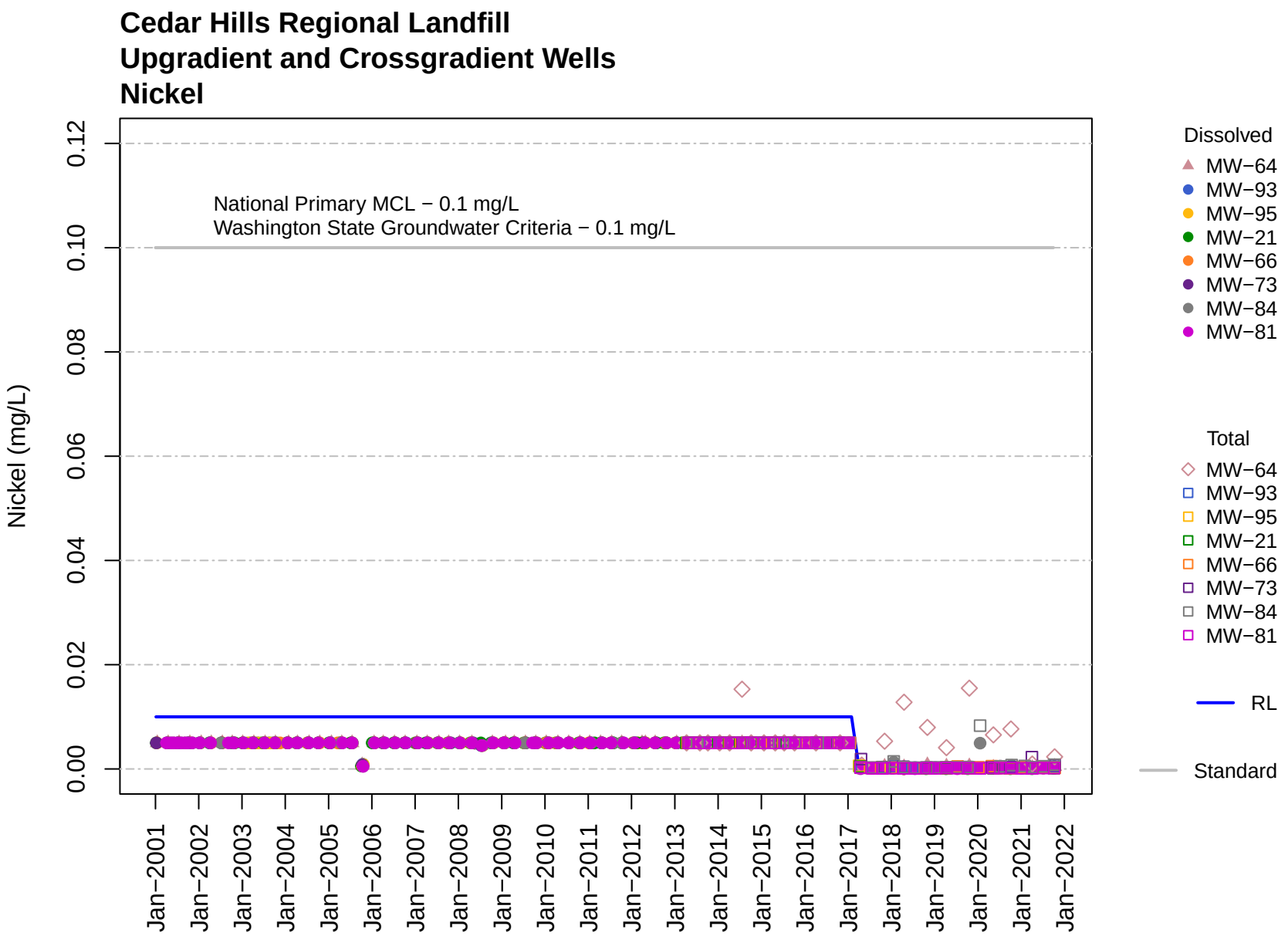

Cedar Hills Regional Landfill
Upgradient Wells
Manganese
Manganese (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

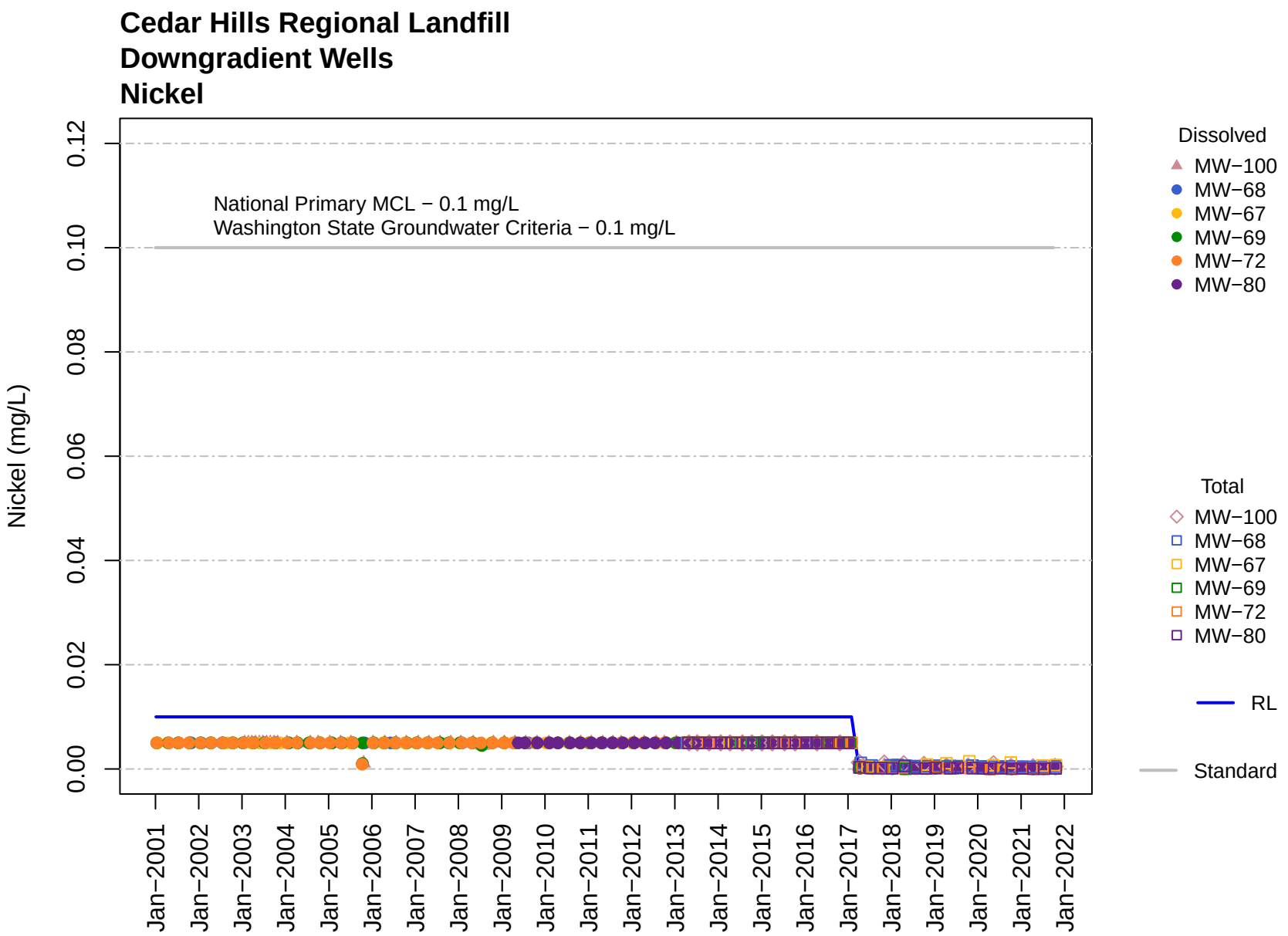

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Manganese
Manganese (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

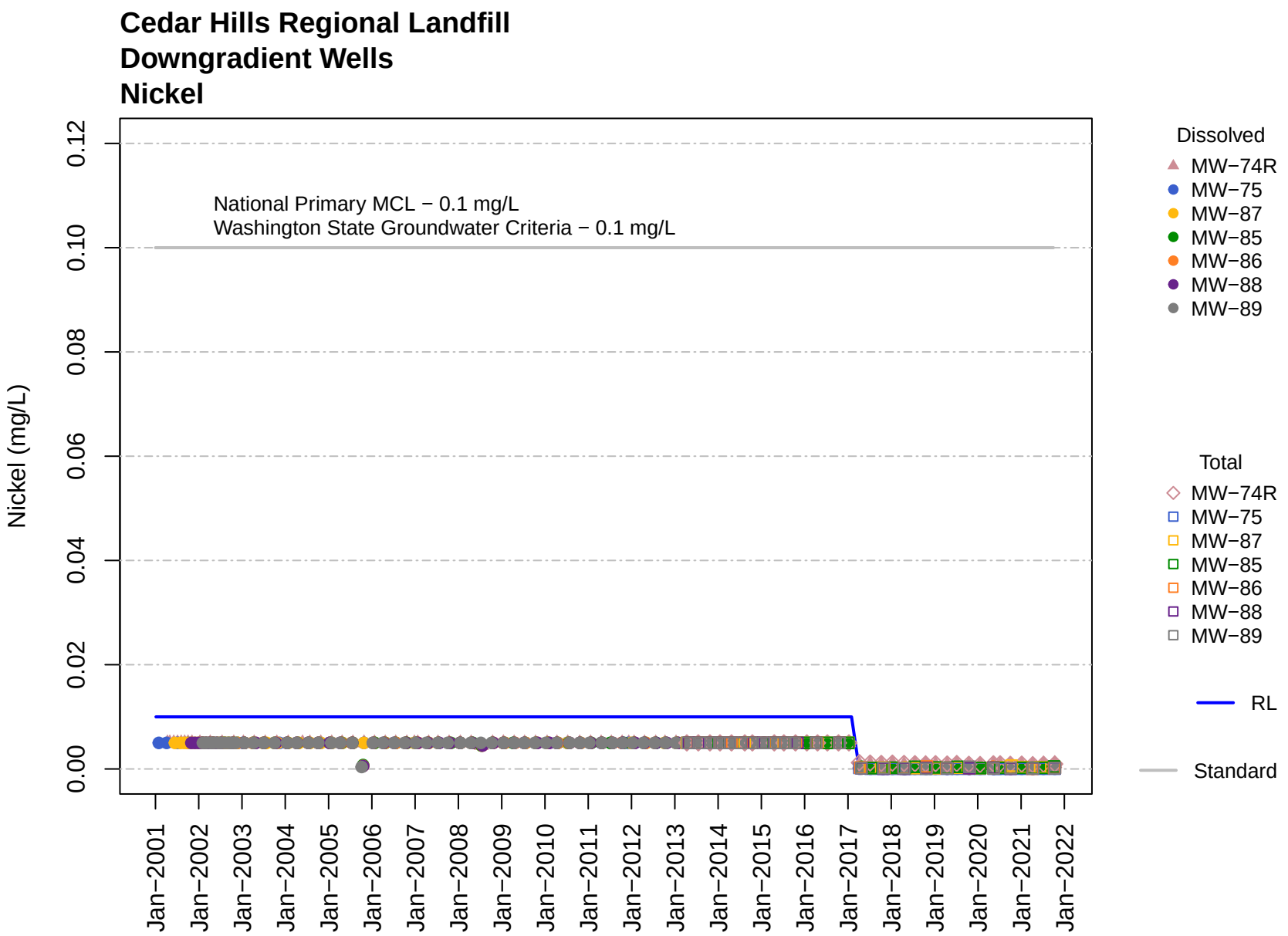

Cedar Hills Regional Landfill
Downgradient Wells
Manganese
Manganese (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

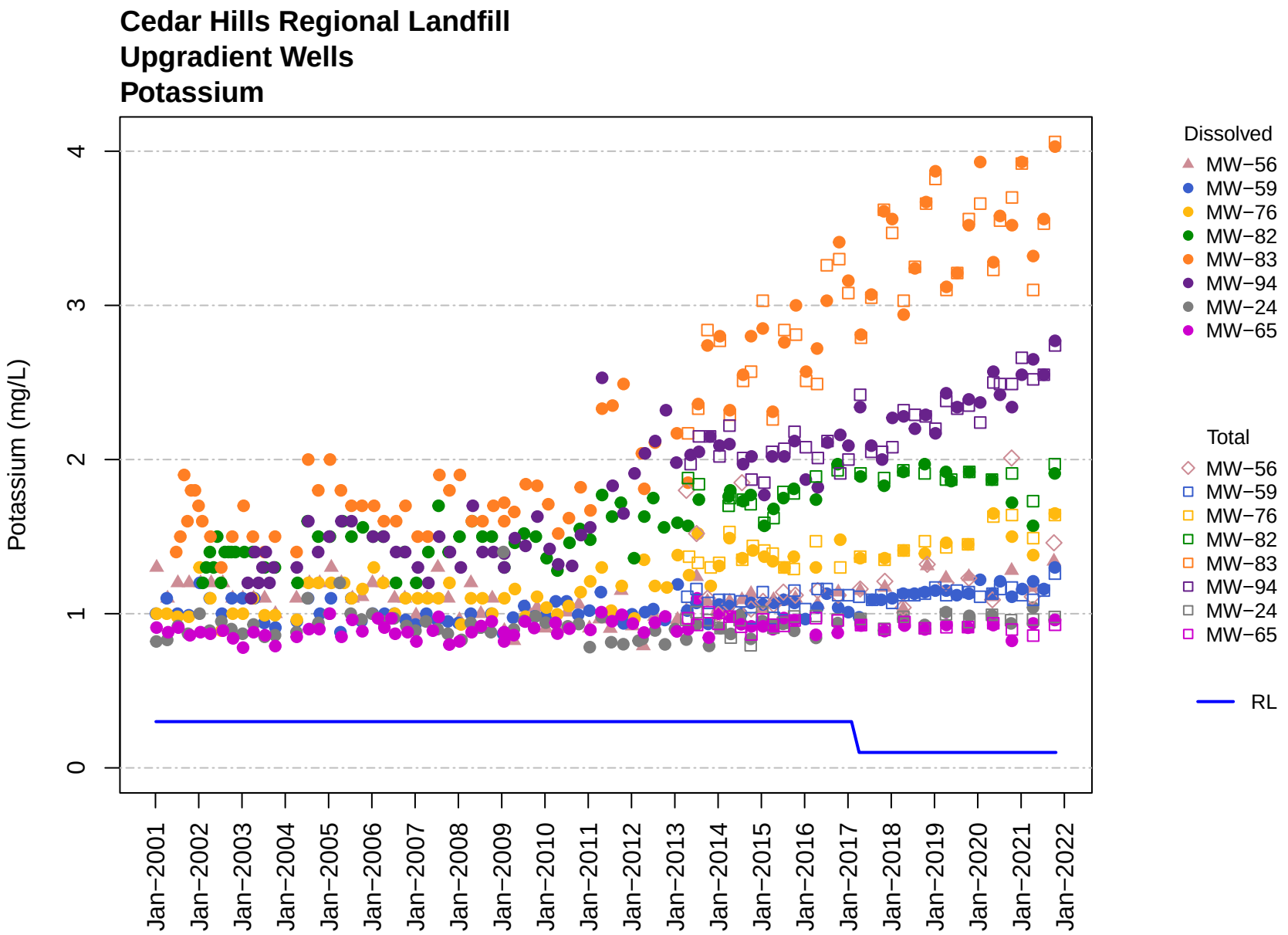

Cedar Hills Regional Landfill
Downgradient Wells
Manganese
Manganese (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

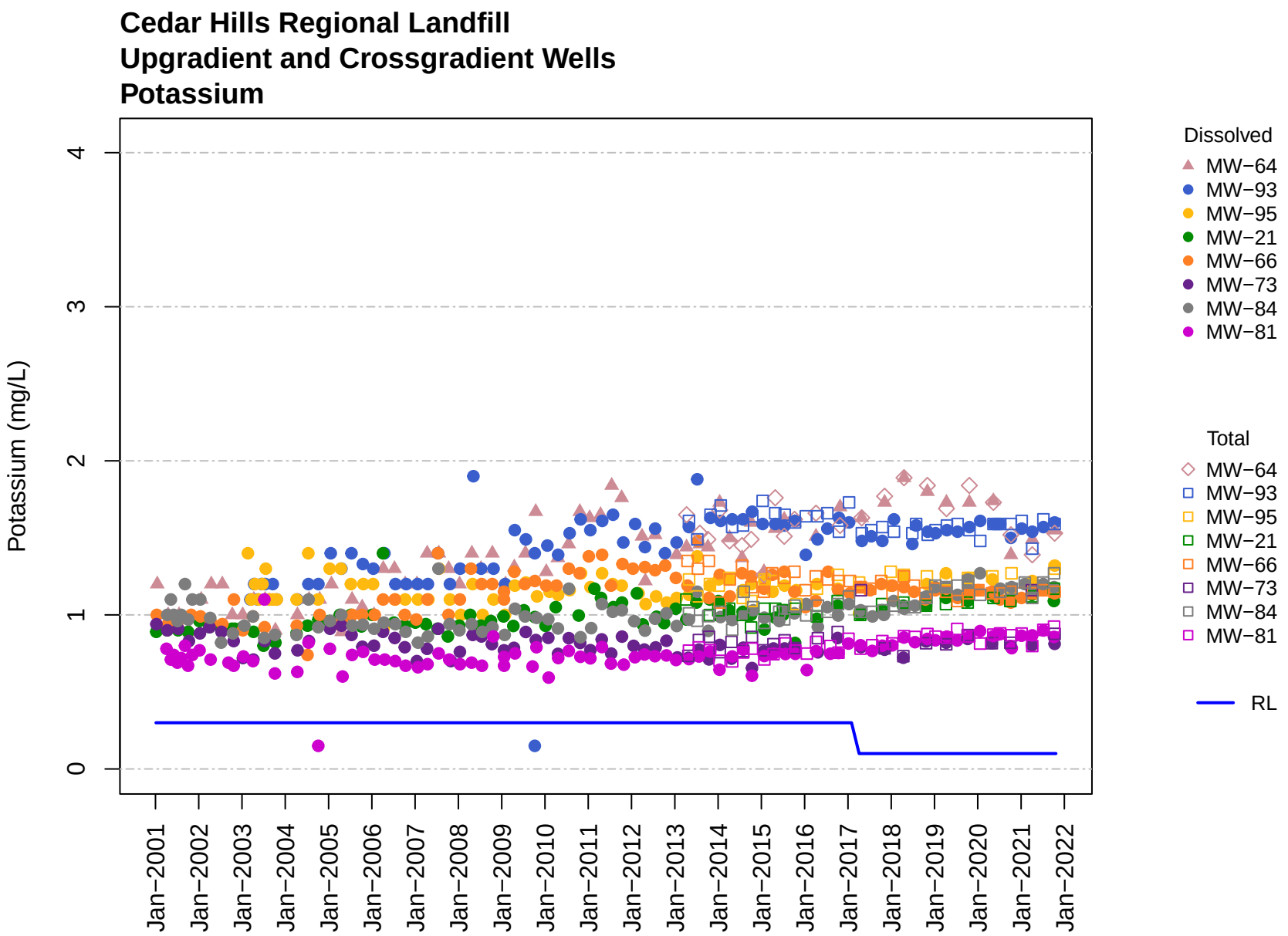

Cedar Hills Regional Landfill
Upgradient Wells
Nickel
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.1 mg/L
Nickel (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

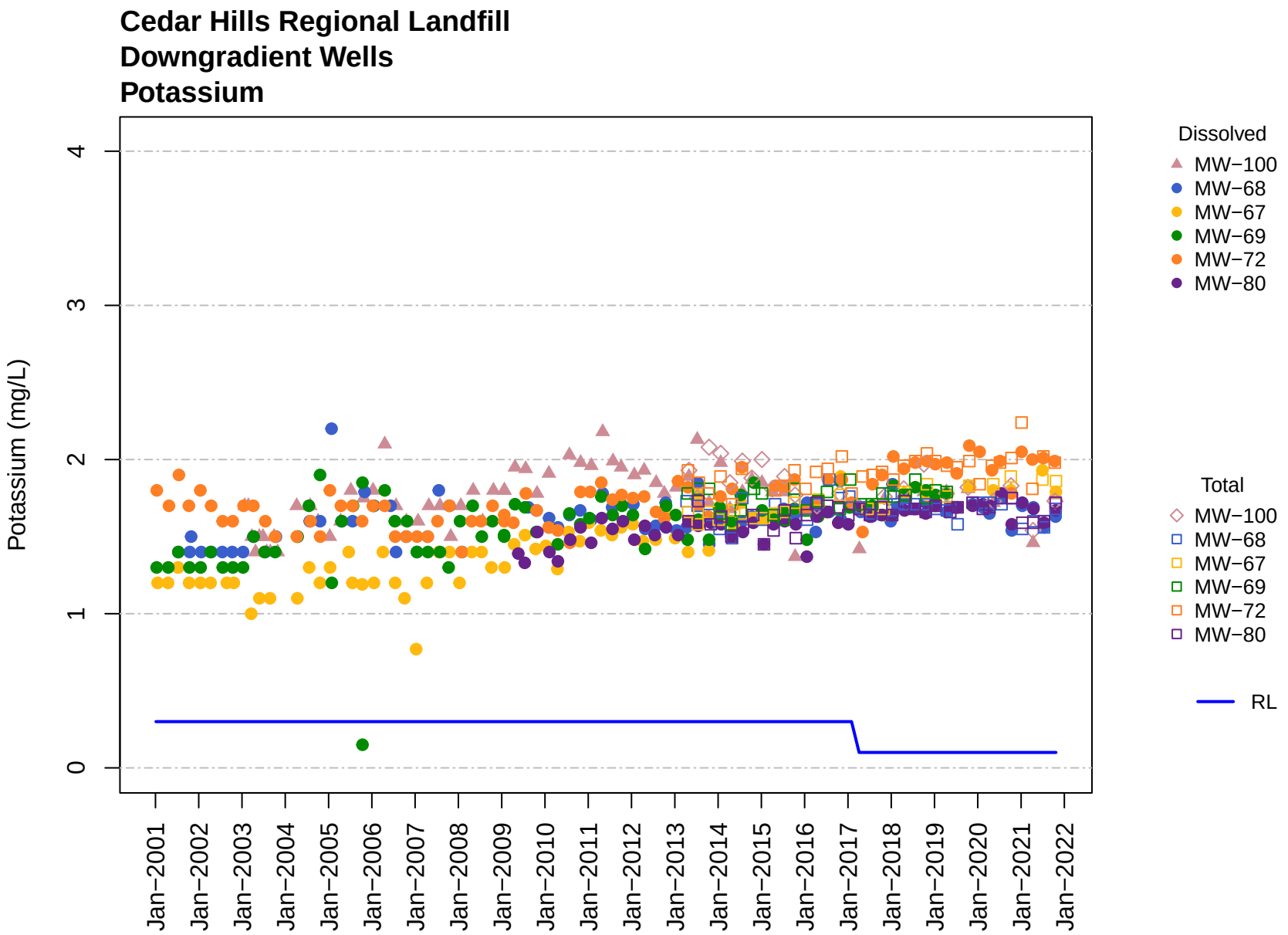

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Nickel
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.1 mg/L
Nickel (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

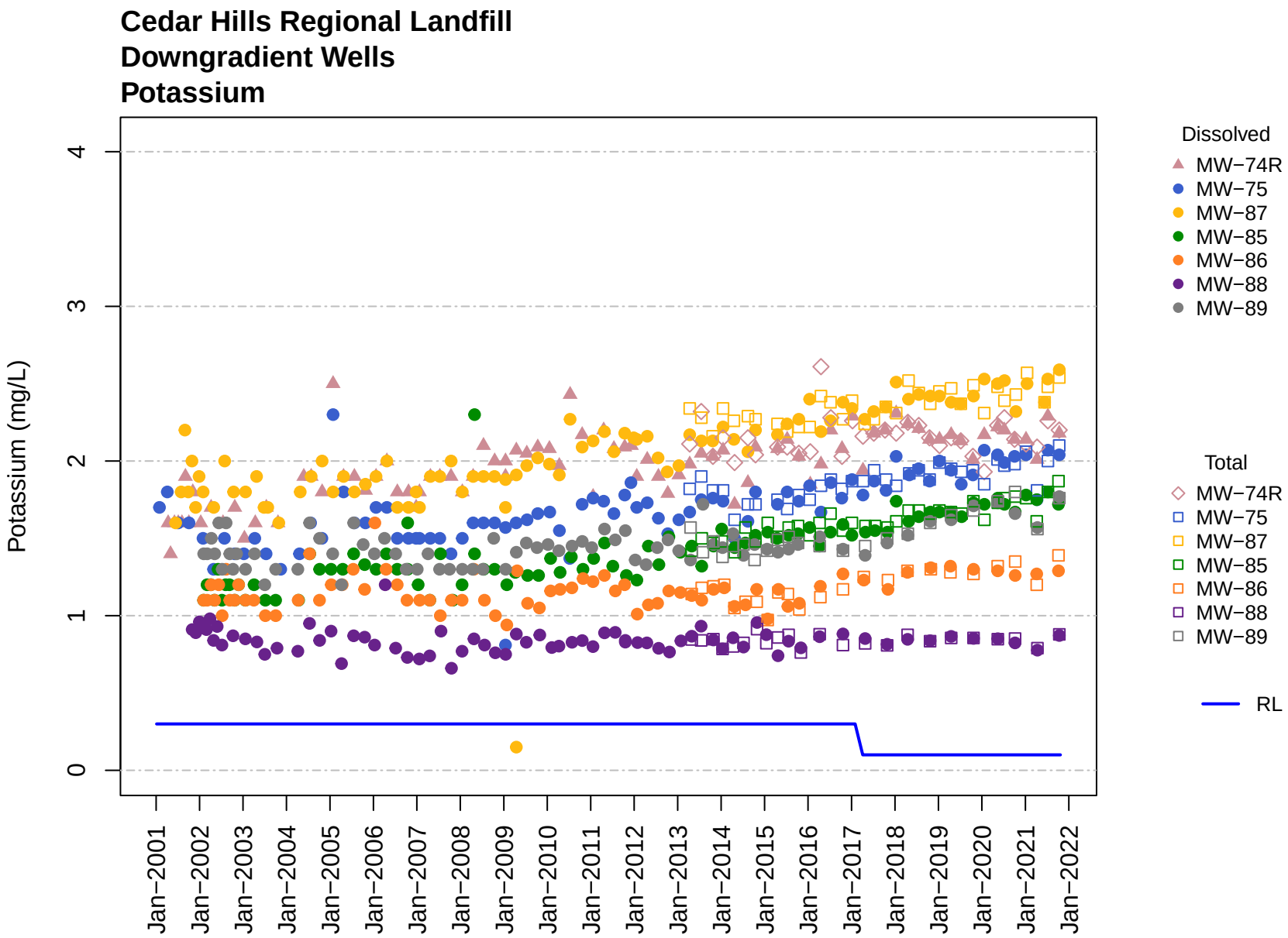

Cedar Hills Regional Landfill
Downgradient Wells
Nickel
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.1 mg/L
Nickel (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

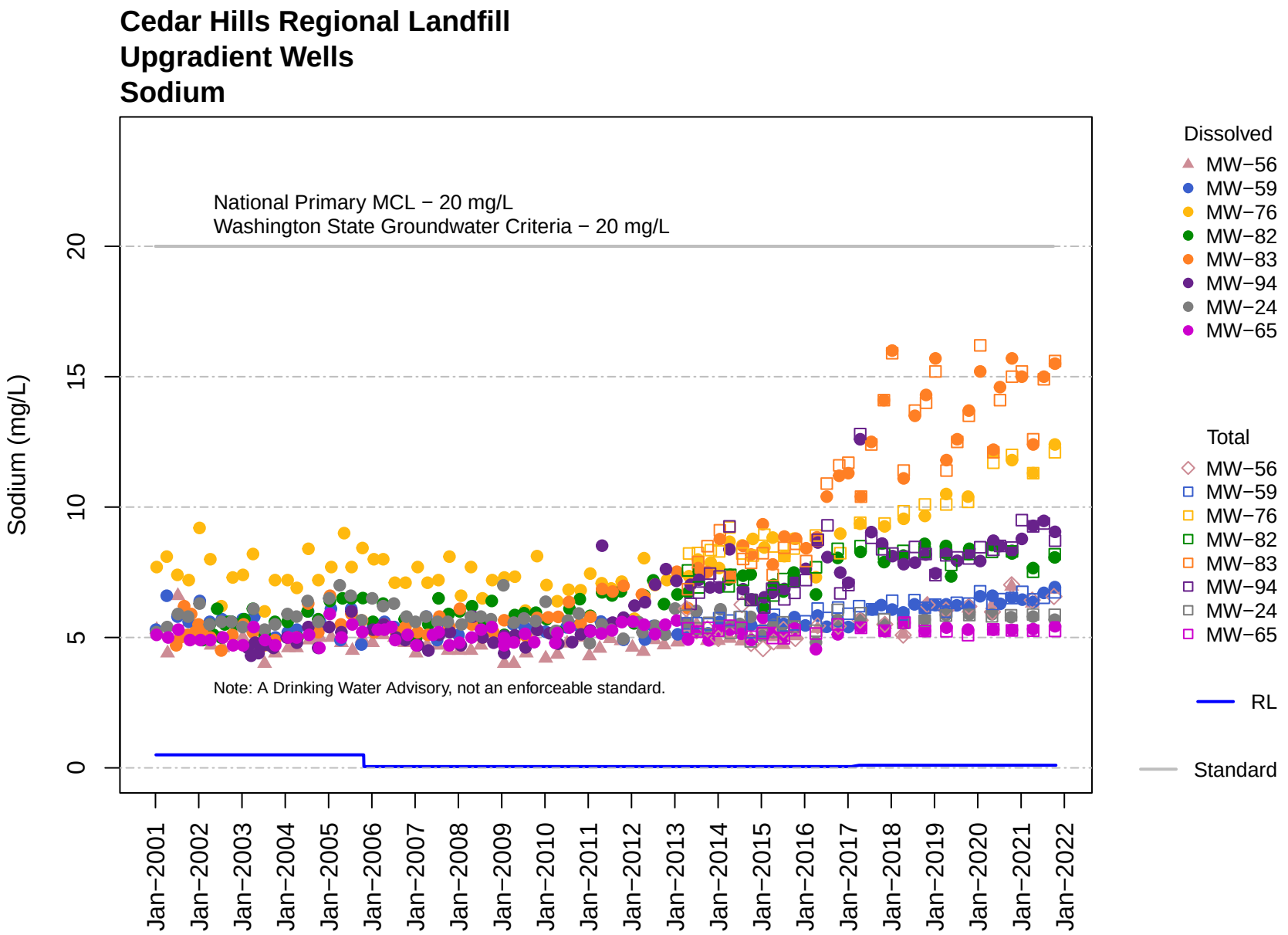

Cedar Hills Regional Landfill
Downgradient Wells
Nickel
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.1 mg/L
Nickel (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

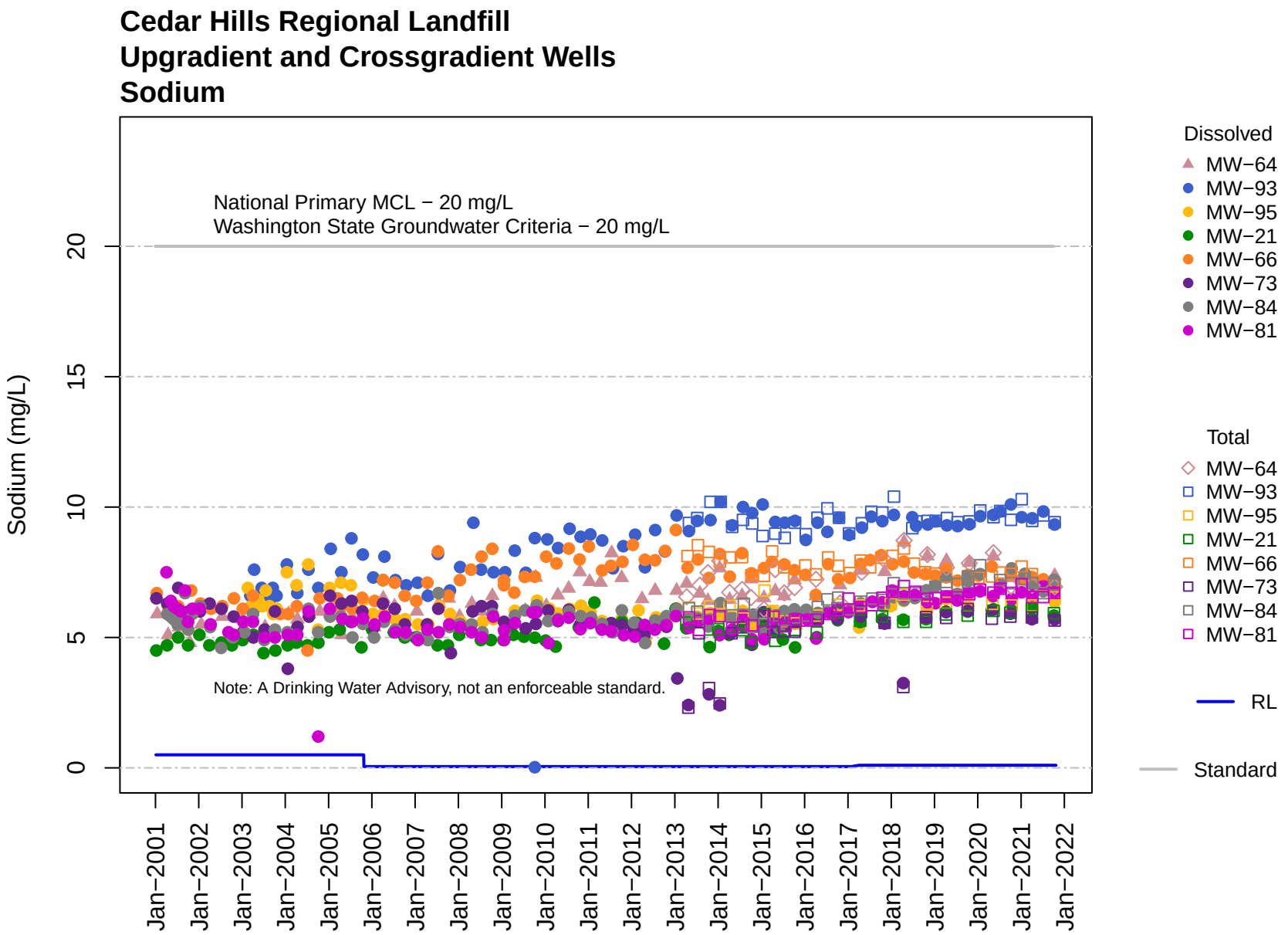

Cedar Hills Regional Landfill
Upgradient Wells
Potassium
Potassium (mg/L)
0
1
2
3
4
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

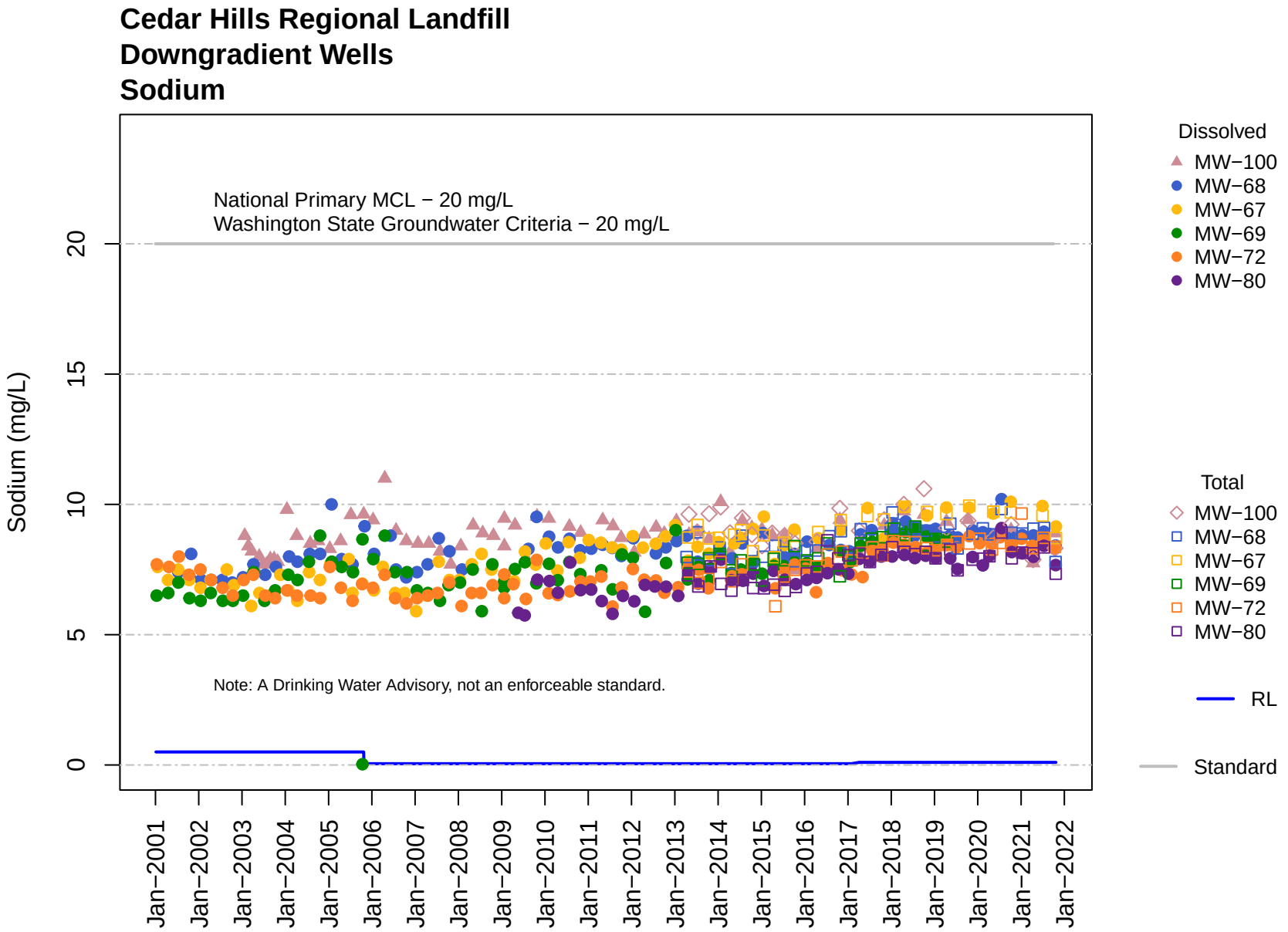

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Potassium
Potassium (mg/L)
0
1
2
3
4
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

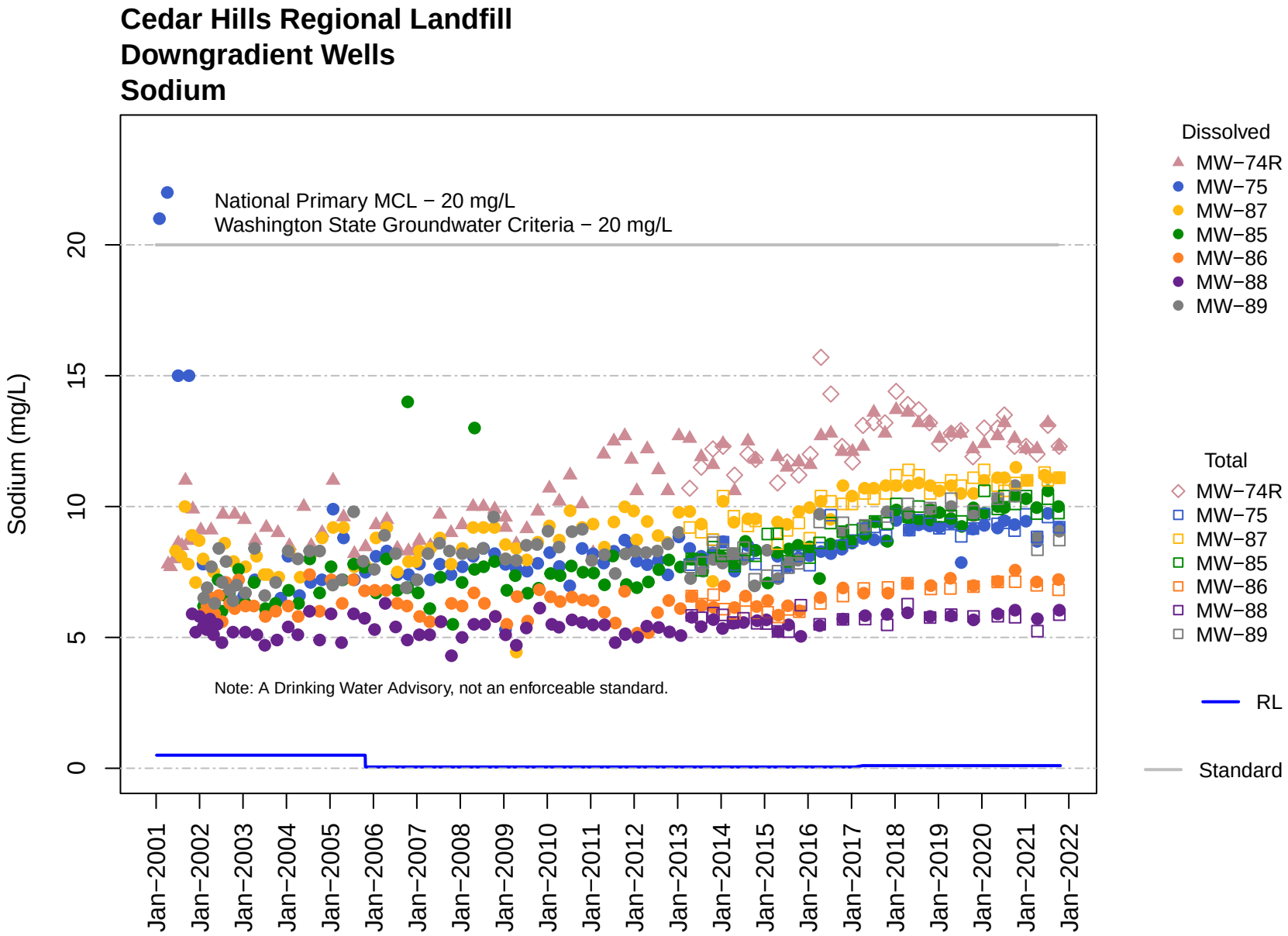

Cedar Hills Regional Landfill
Downgradient Wells
Potassium
Potassium (mg/L)
0
1
2
3
4
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

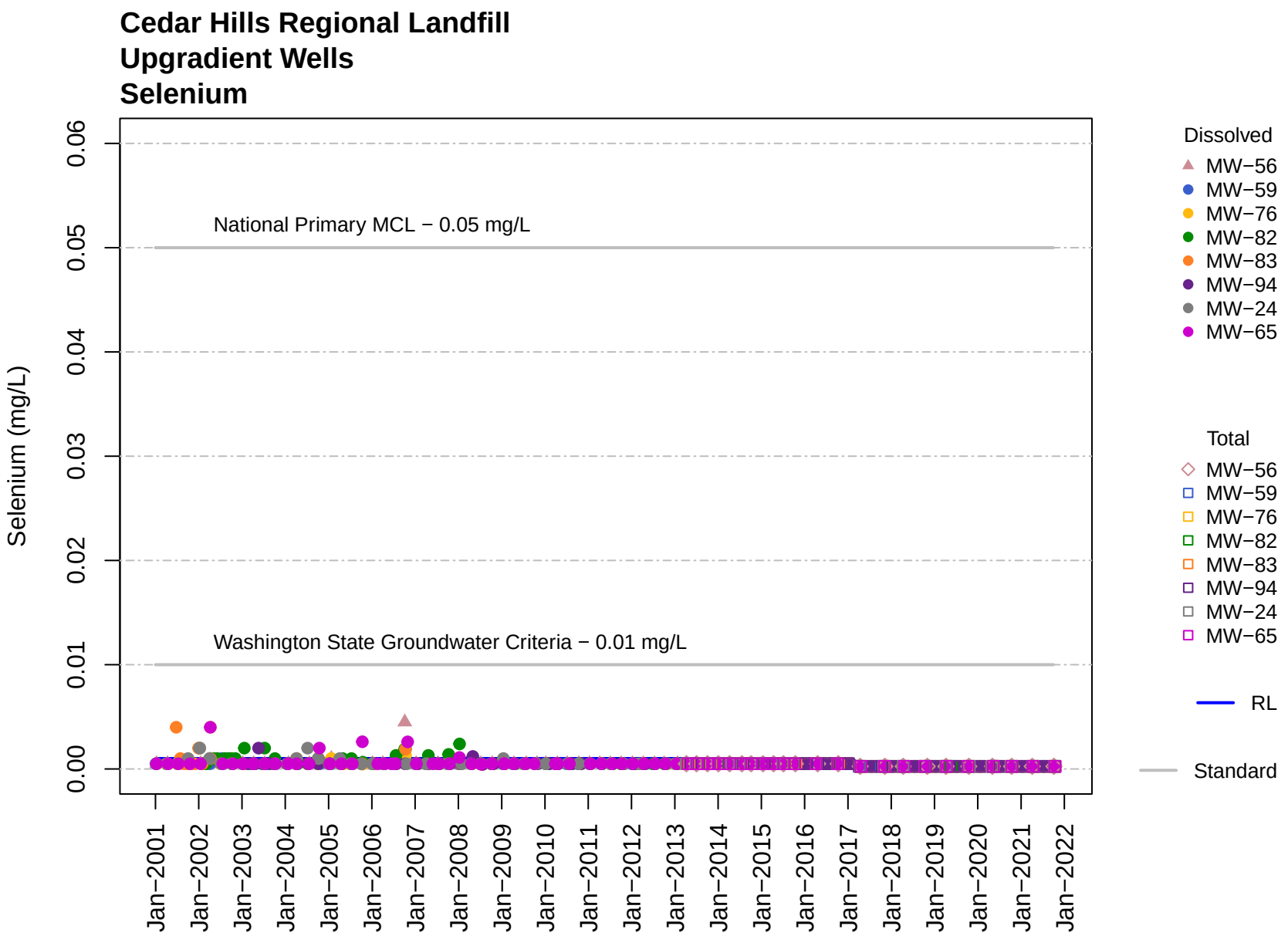

Cedar Hills Regional Landfill
Downgradient Wells
Potassium
Potassium (mg/L)
0
1
2
3
4
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

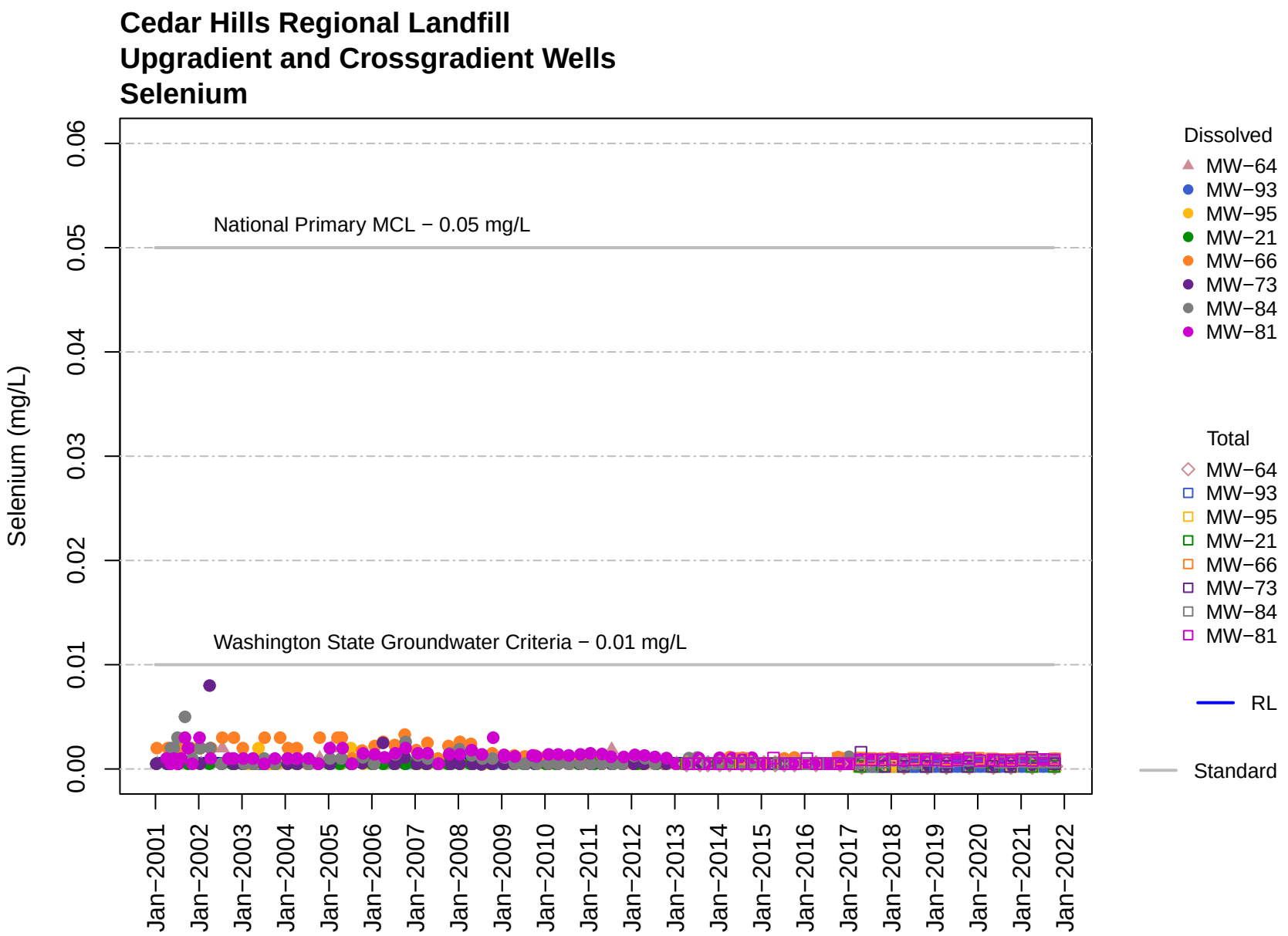

Cedar Hills Regional Landfill
Upgradient Wells
Sodium
National Primary MCL − 20 mg/L
Washington State Groundwater Criteria − 20 mg/L
Note: A Drinking Water Advisory, not an enforceable standard.
Sodium (mg/L)
0
5
10
15
20
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

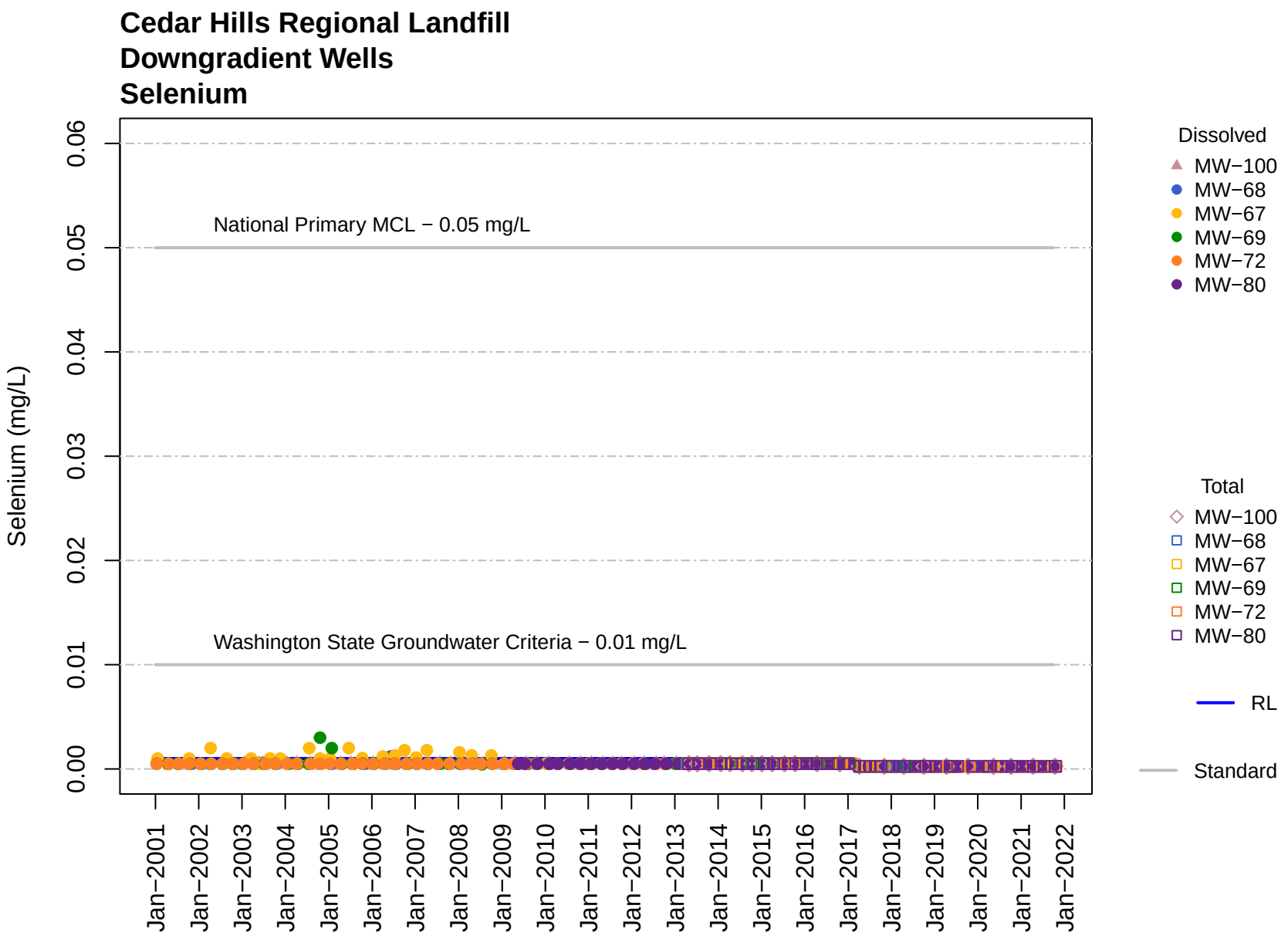

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Sodium
National Primary MCL − 20 mg/L
Washington State Groundwater Criteria − 20 mg/L
Note: A Drinking Water Advisory, not an enforceable standard.
Sodium (mg/L)
0
5
10
15
20
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

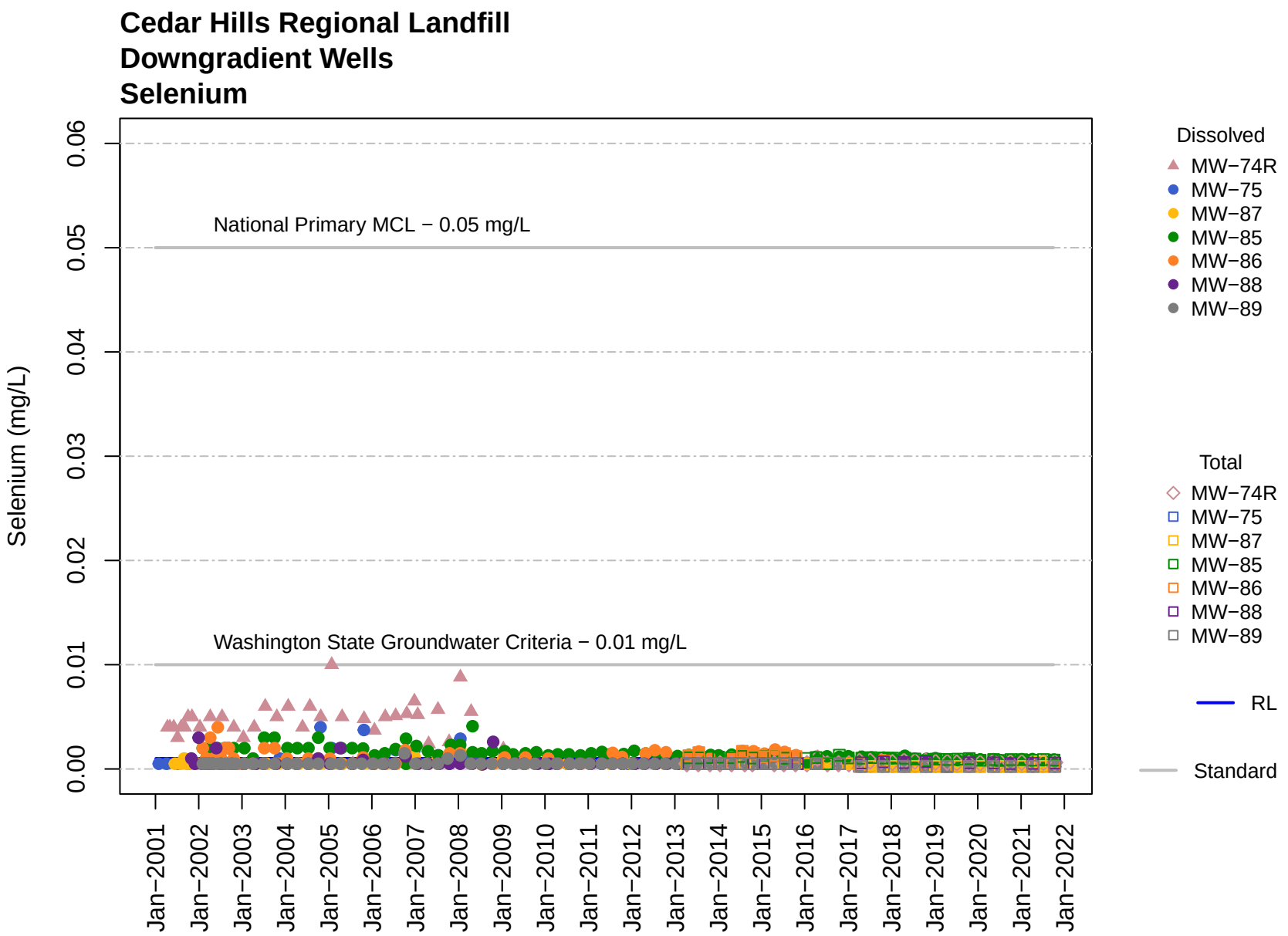

Cedar Hills Regional Landfill
Downgradient Wells
Sodium
National Primary MCL − 20 mg/L
Washington State Groundwater Criteria − 20 mg/L
Note: A Drinking Water Advisory, not an enforceable standard.
Sodium (mg/L)
0
5
10
15
20
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

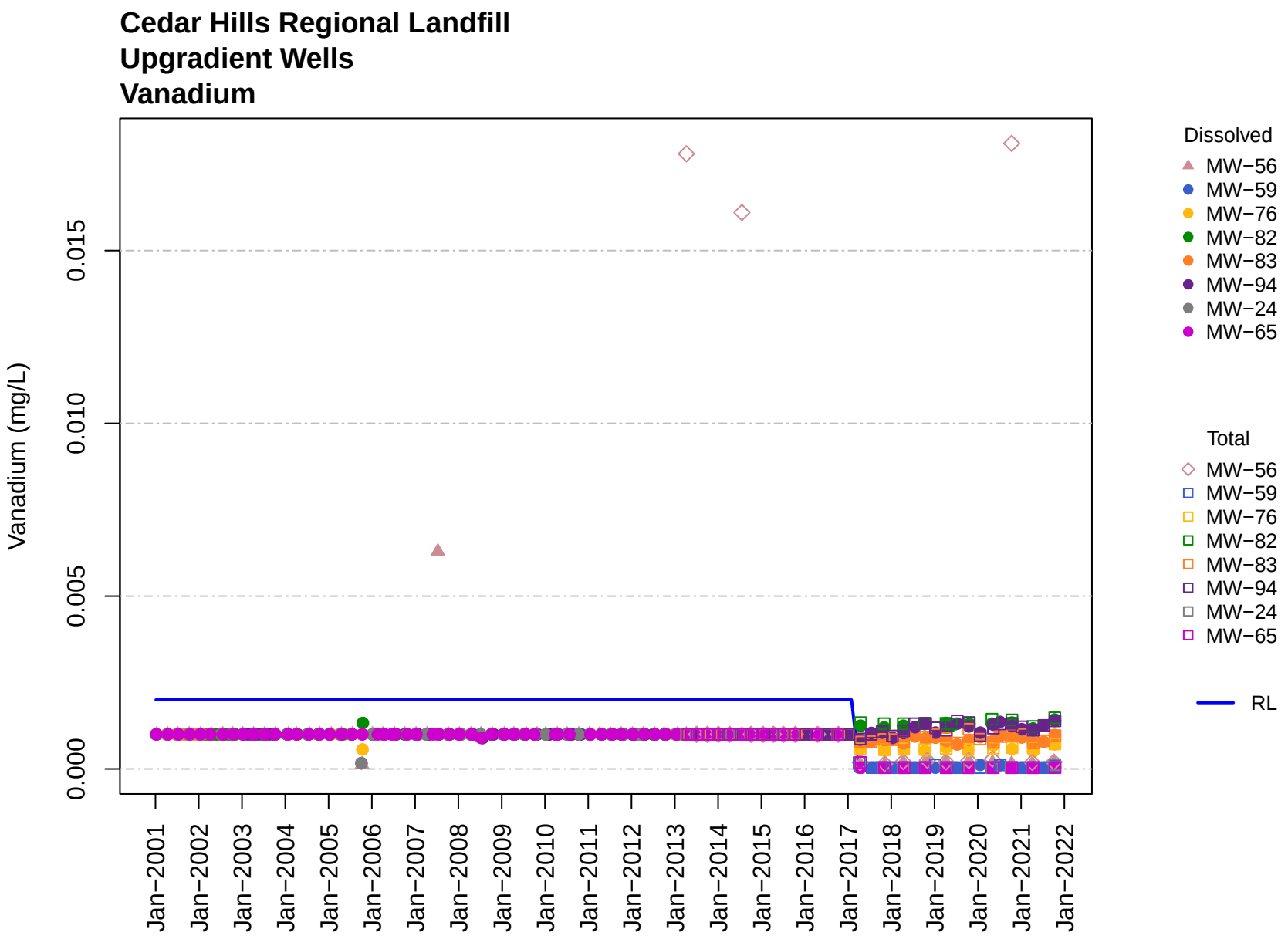

Cedar Hills Regional Landfill
Downgradient Wells
Sodium
National Primary MCL − 20 mg/L
Washington State Groundwater Criteria − 20 mg/L
Note: A Drinking Water Advisory, not an enforceable standard.
Sodium (mg/L)
0
5
10
15
20
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

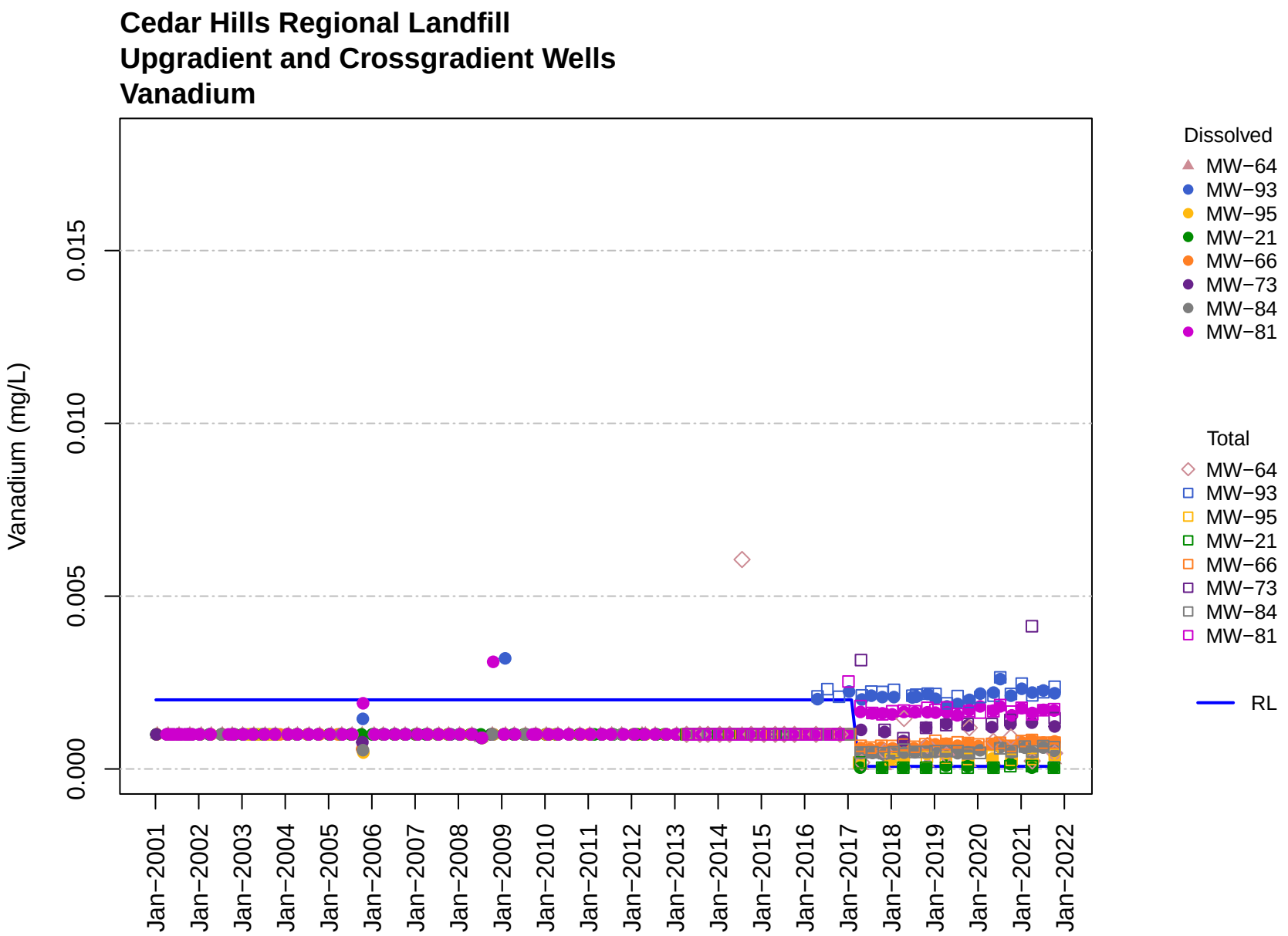

Cedar Hills Regional Landfill
Upgradient Wells
Selenium
Selenium (mg/L)
0.00
0.01
0.02
0.03
0.04
0.05
0.06
National Primary MCL − 0.05 mg/L
Washington State Groundwater Criteria − 0.01 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

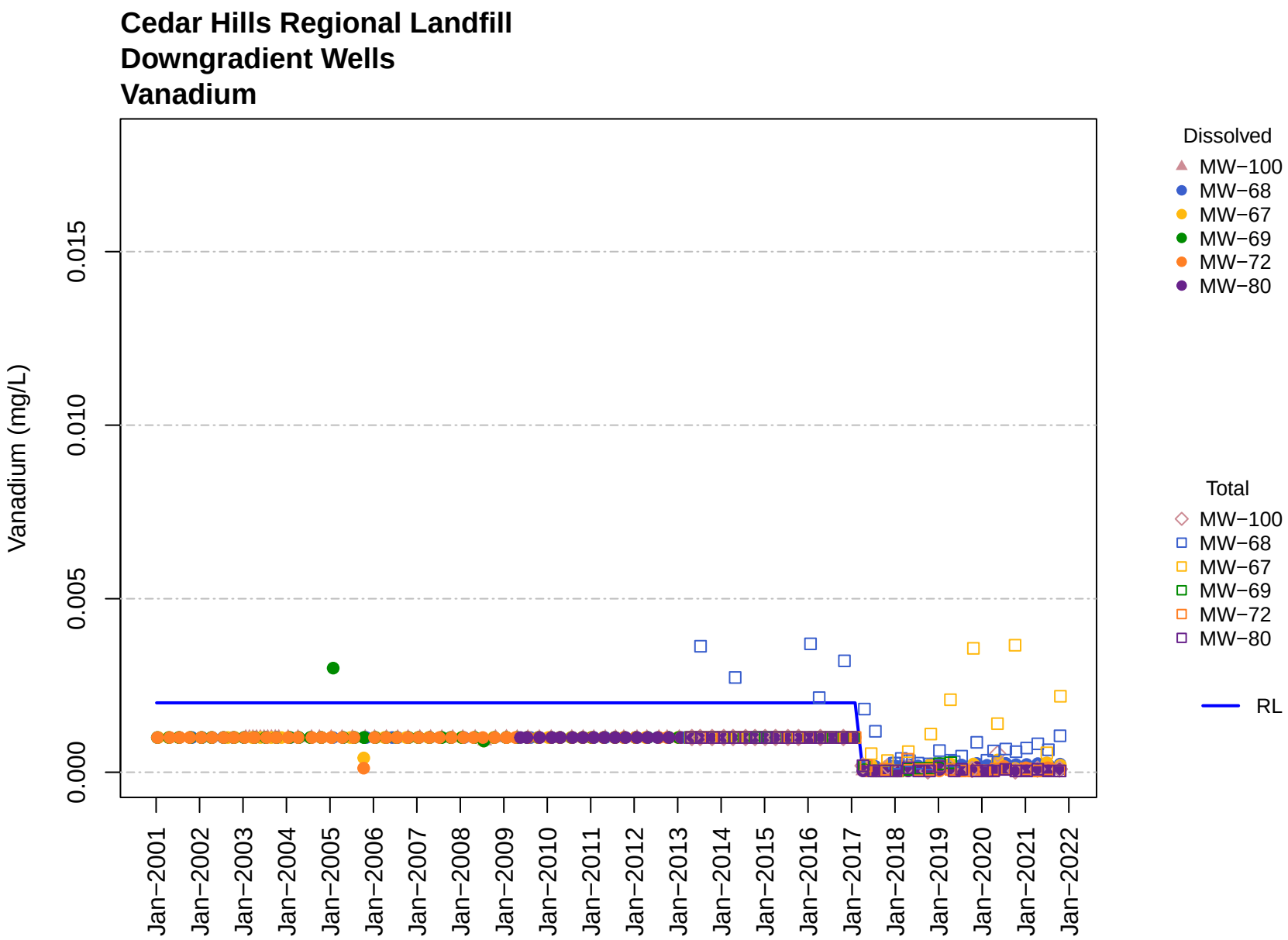

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Selenium
Selenium (mg/L)
0.00
0.01
0.02
0.03
0.04
0.05
0.06
National Primary MCL − 0.05 mg/L
Washington State Groundwater Criteria − 0.01 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

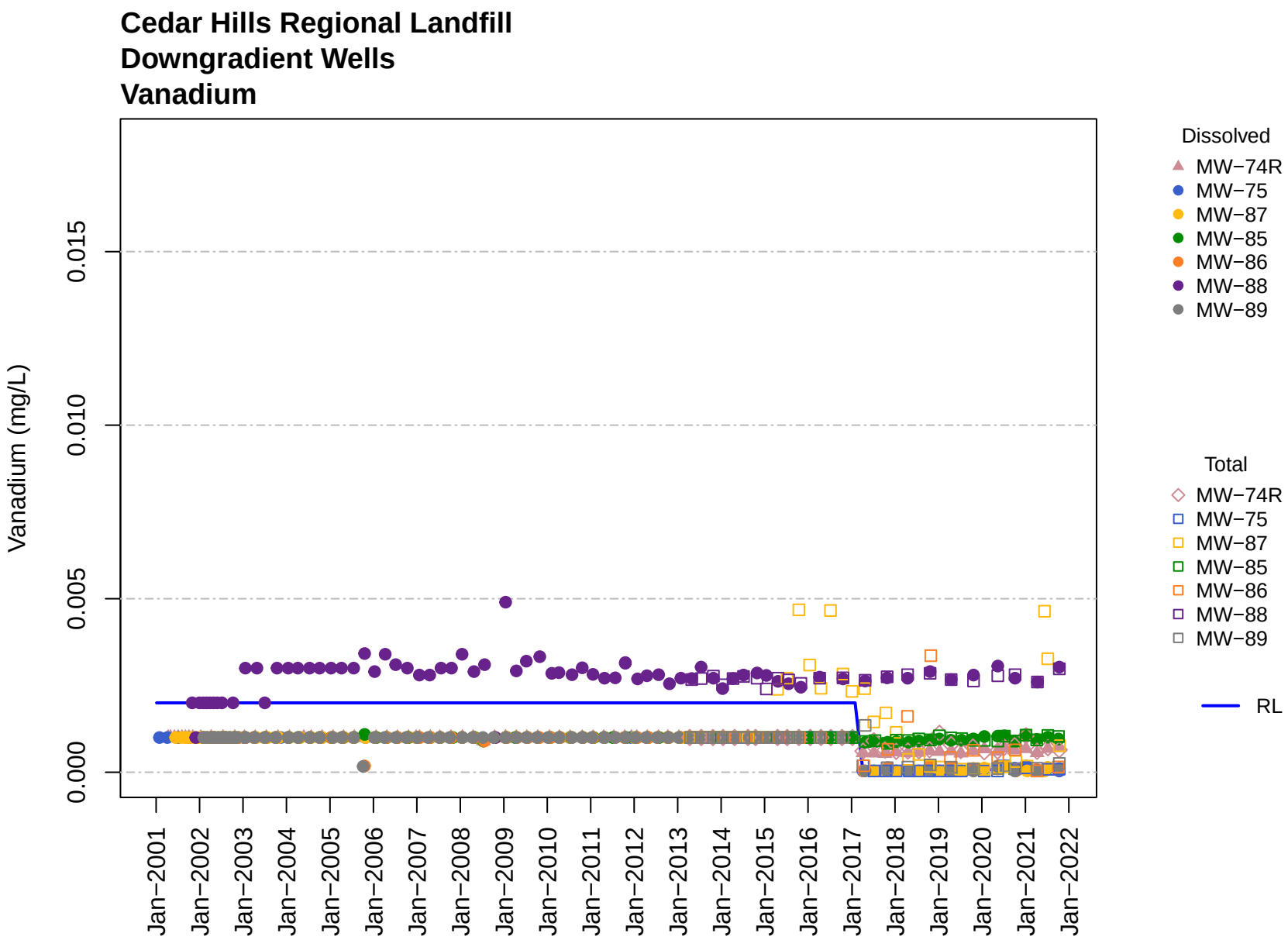

Cedar Hills Regional Landfill
Downgradient Wells
Selenium
Selenium (mg/L)
0.00
0.01
0.02
0.03
0.04
0.05
0.06
National Primary MCL − 0.05 mg/L
Washington State Groundwater Criteria − 0.01 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard


Cedar Hills Regional Landfill
Downgradient Wells
Selenium
Selenium (mg/L)
0.00
0.01
0.02
0.03
0.04
0.05
0.06
National Primary MCL − 0.05 mg/L
Washington State Groundwater Criteria − 0.01 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

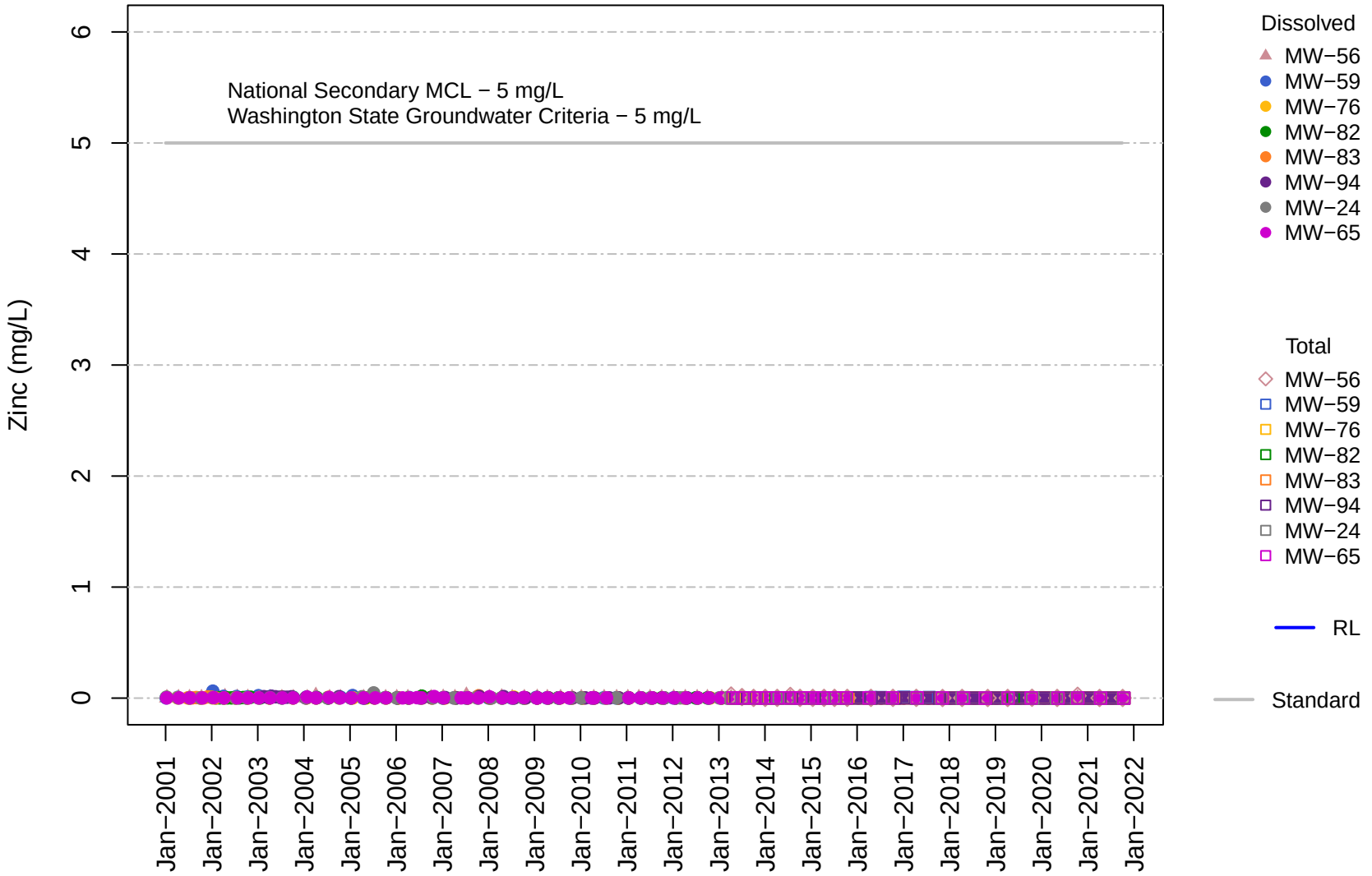

Cedar Hills Regional Landfill
Upgradient Wells
Vanadium
Vanadium (mg/L)
0.000
0.005
0.010
0.015
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL


Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Vanadium
Vanadium (mg/L)
0.000
0.005
0.010
0.015
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

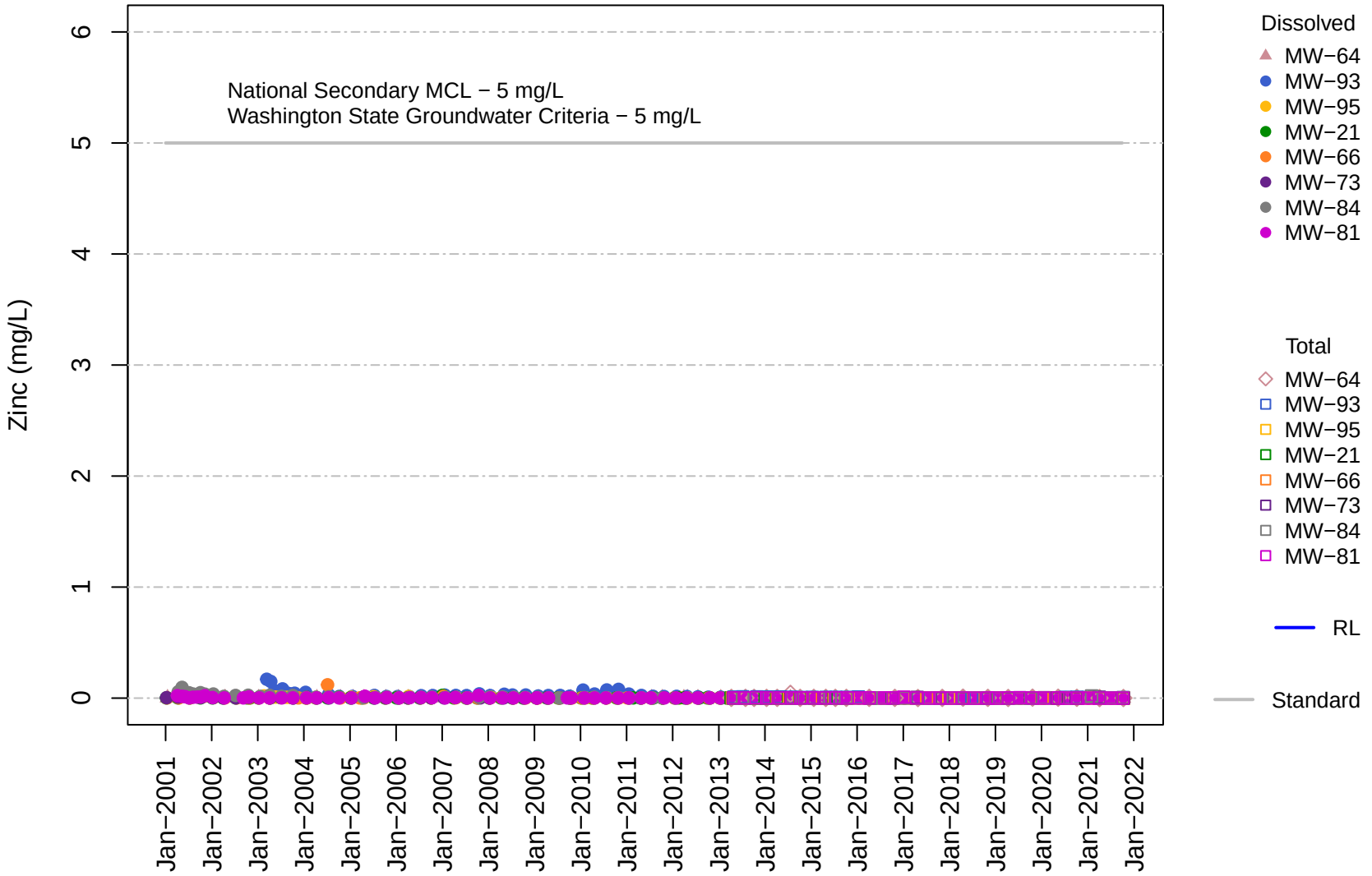

Cedar Hills Regional Landfill
Downgradient Wells
Vanadium
Vanadium (mg/L)
0.000
0.005
0.010
0.015
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL


Cedar Hills Regional Landfill
Downgradient Wells
Vanadium
Vanadium (mg/L)
0.000
0.005
0.010
0.015
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

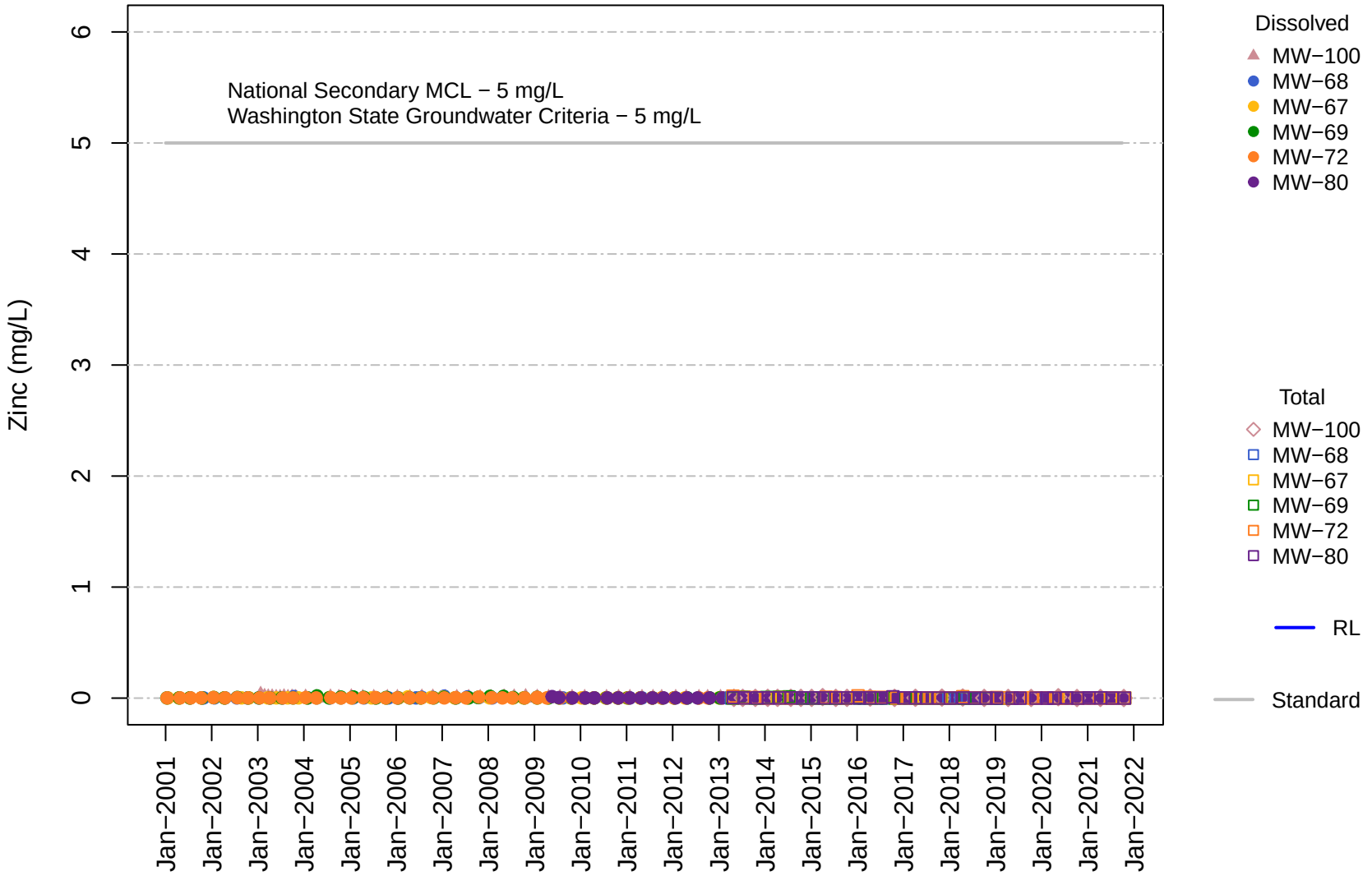
Cedar Hills Regional Landfill
Upgradient Wells
Zinc

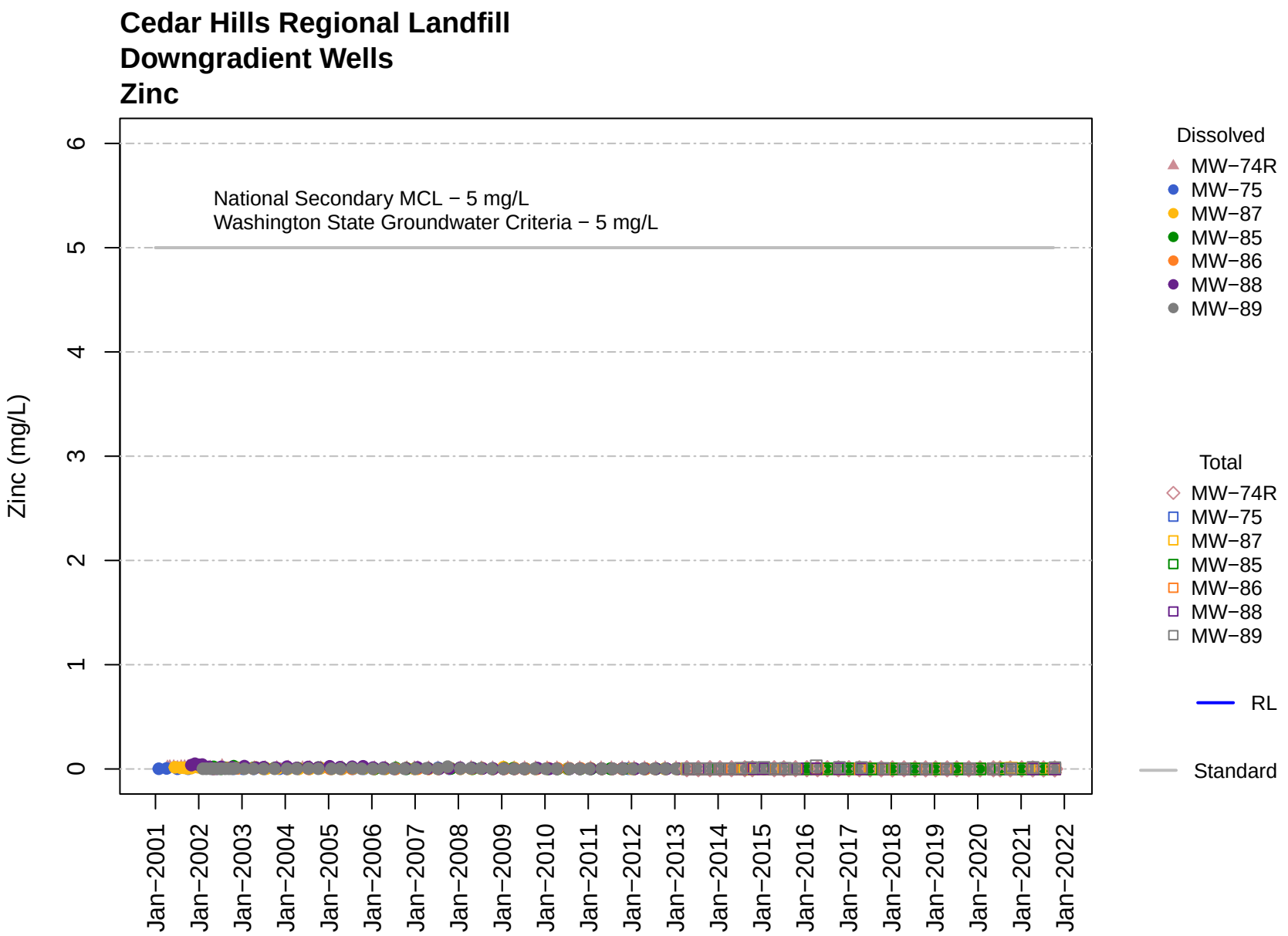


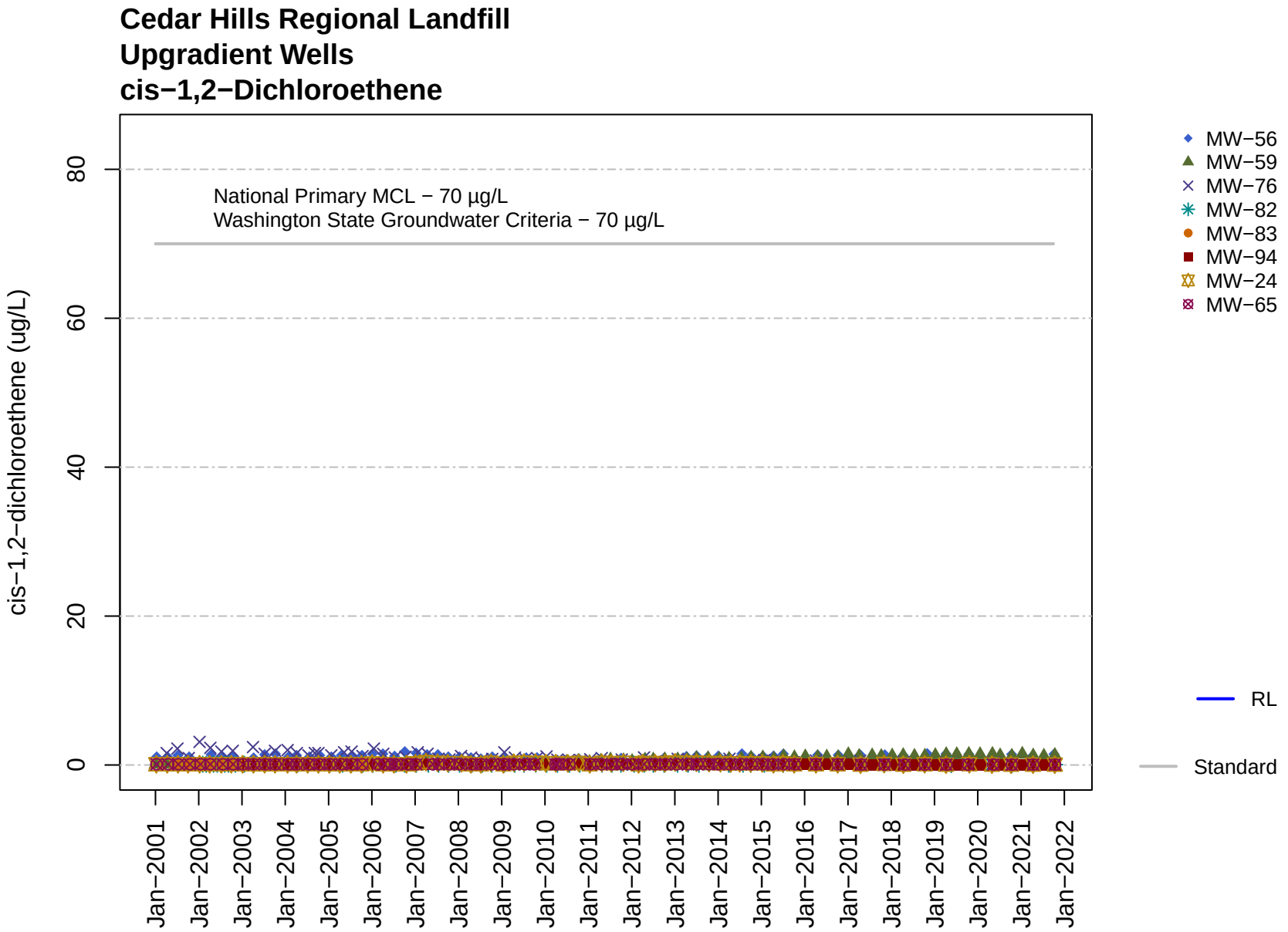
Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Zinc

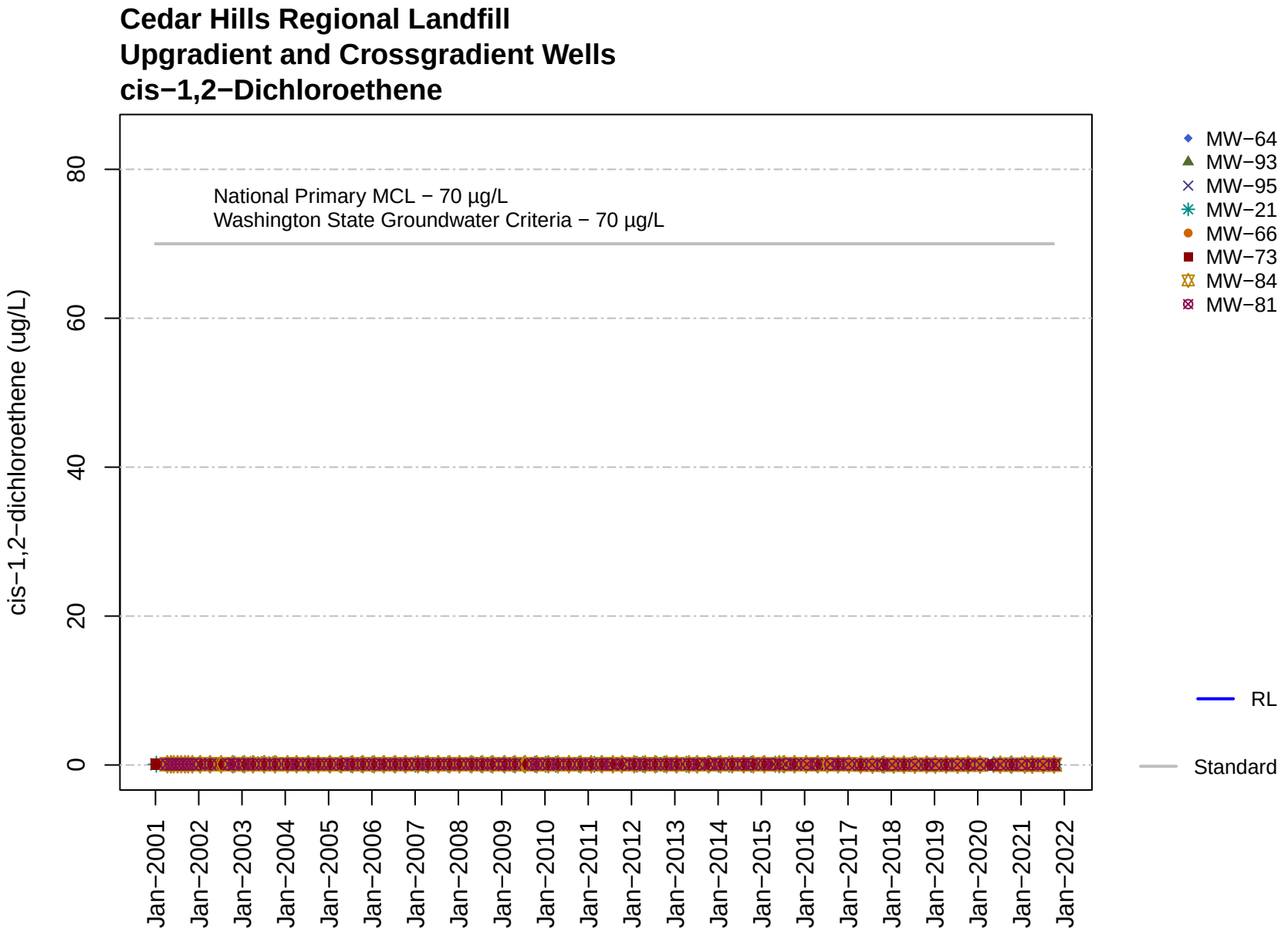


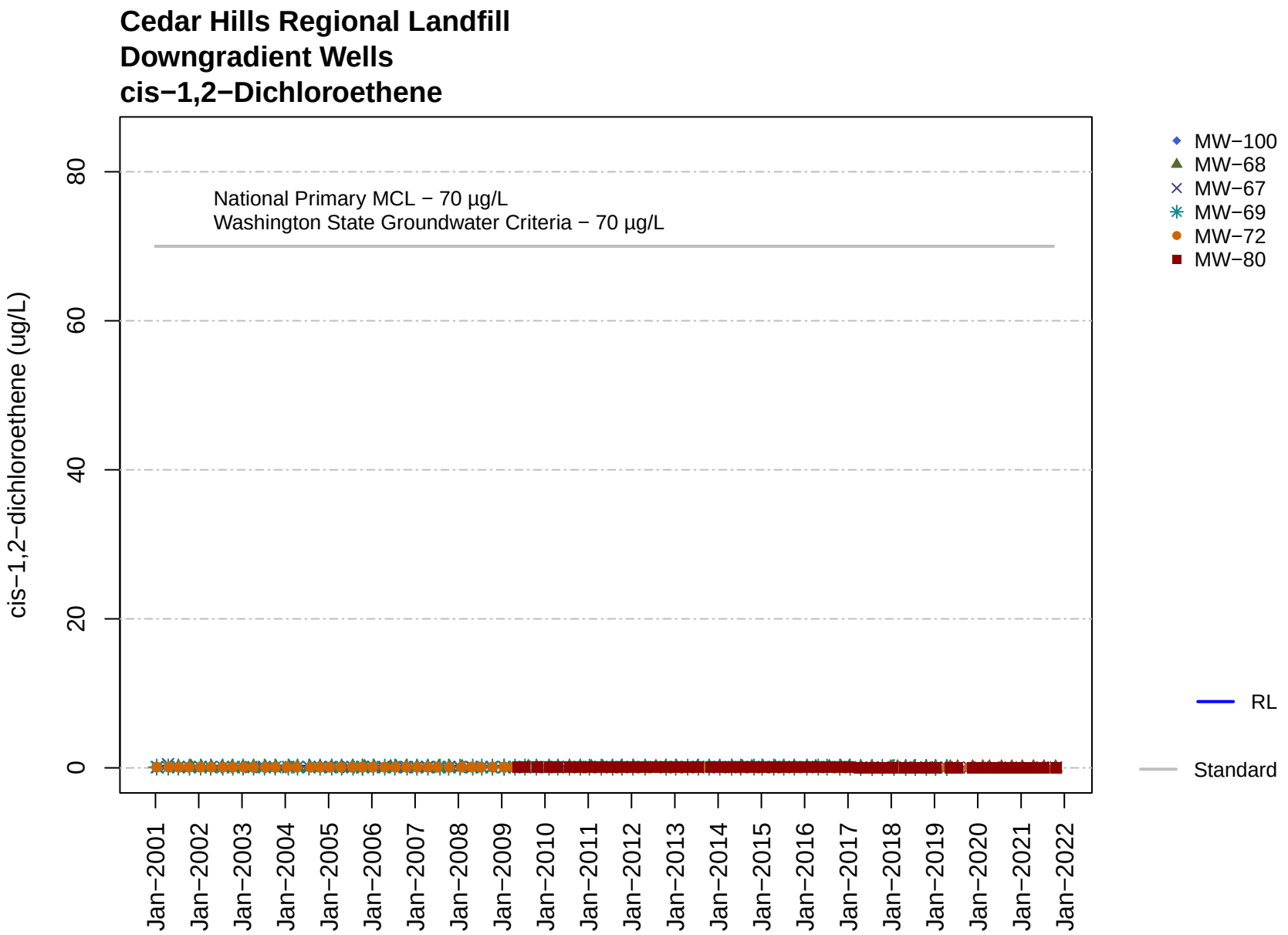
Cedar Hills Regional Landfill
Downgradient Wells
Zinc

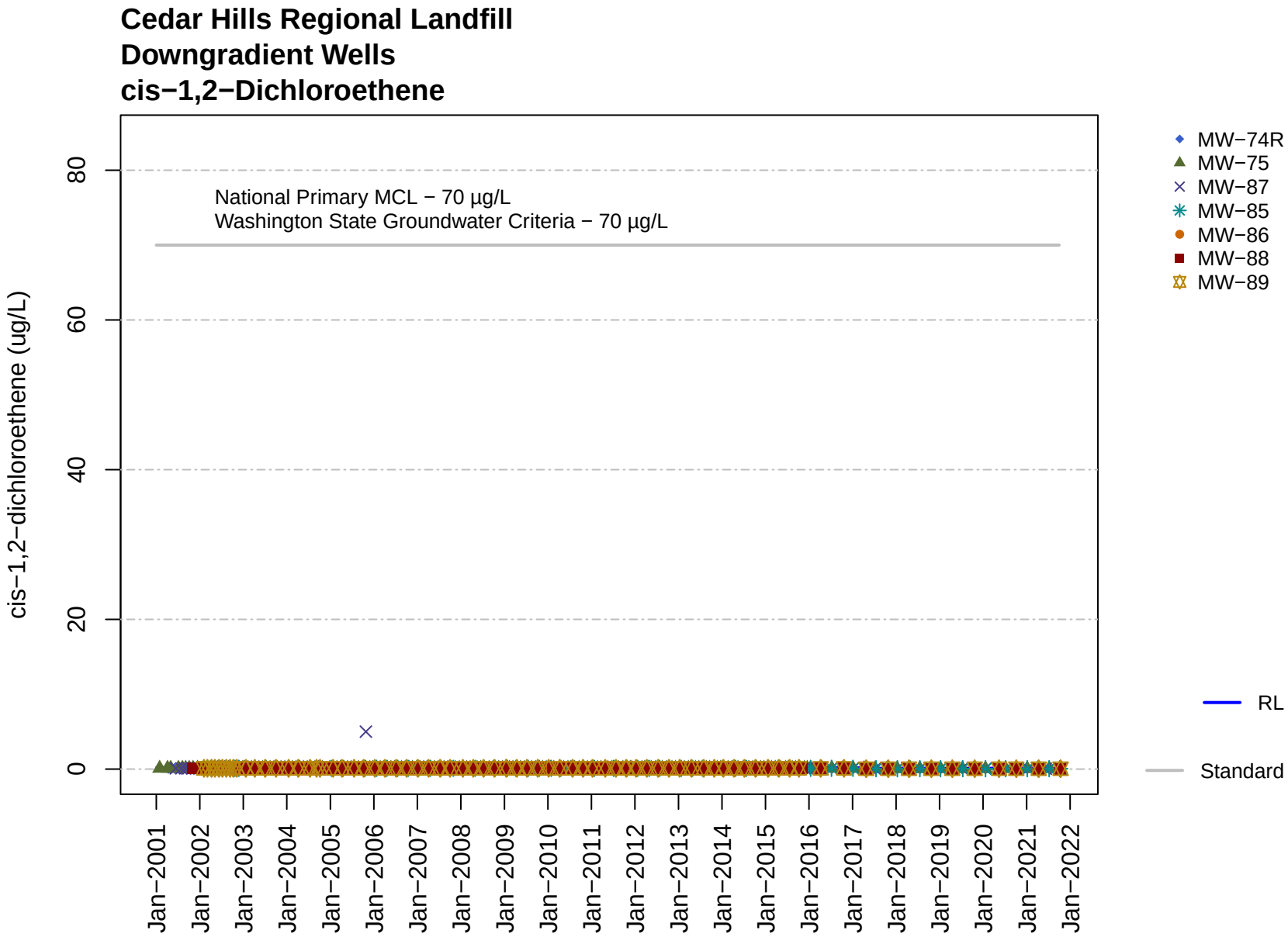


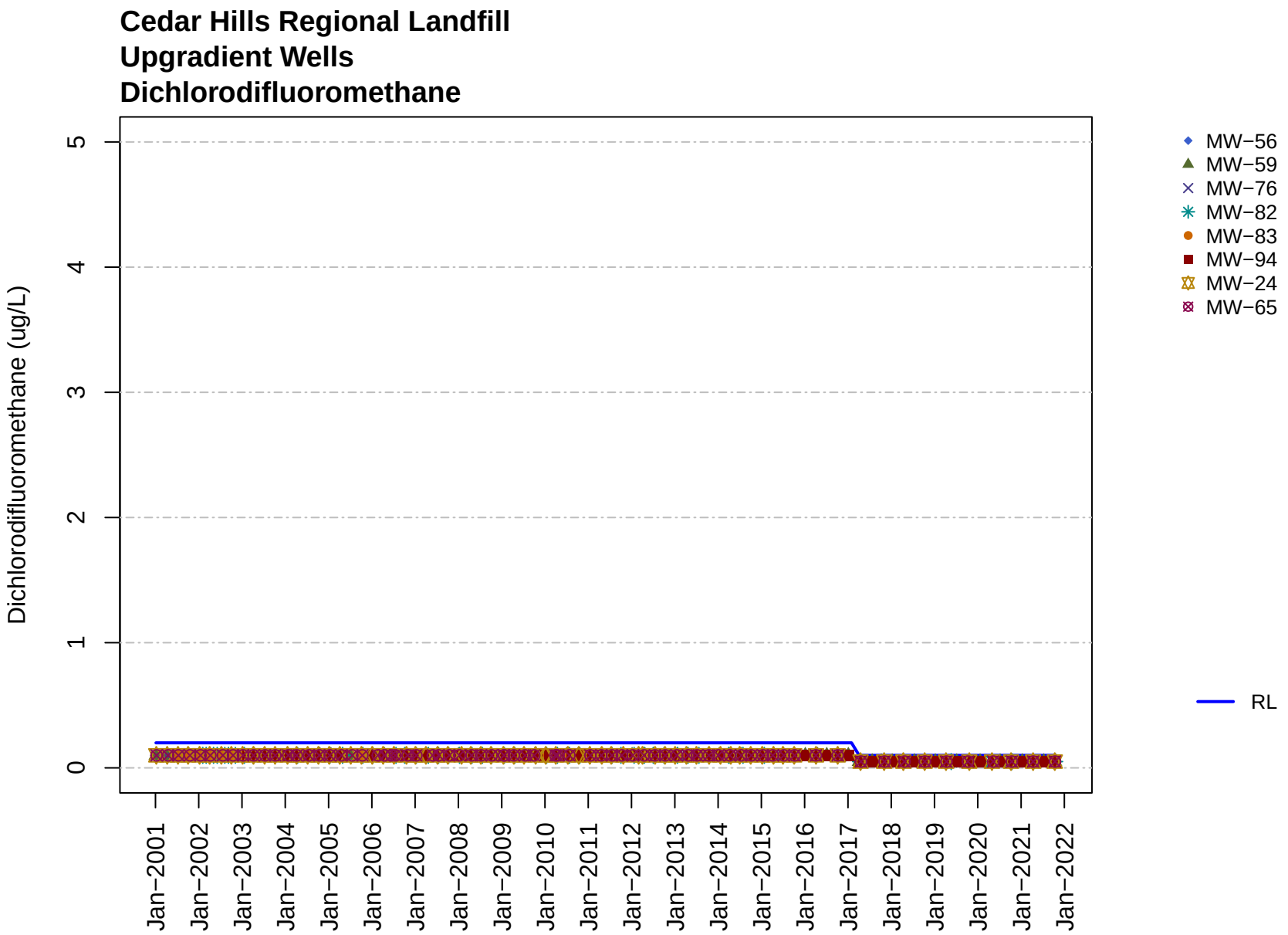

Cedar Hills Regional Landfill
Downgradient Wells
Zinc
National Secondary MCL − 5 mg/L
Washington State Groundwater Criteria − 5 mg/L
Zinc (mg/L)
0
1
2
3
4
5
6
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

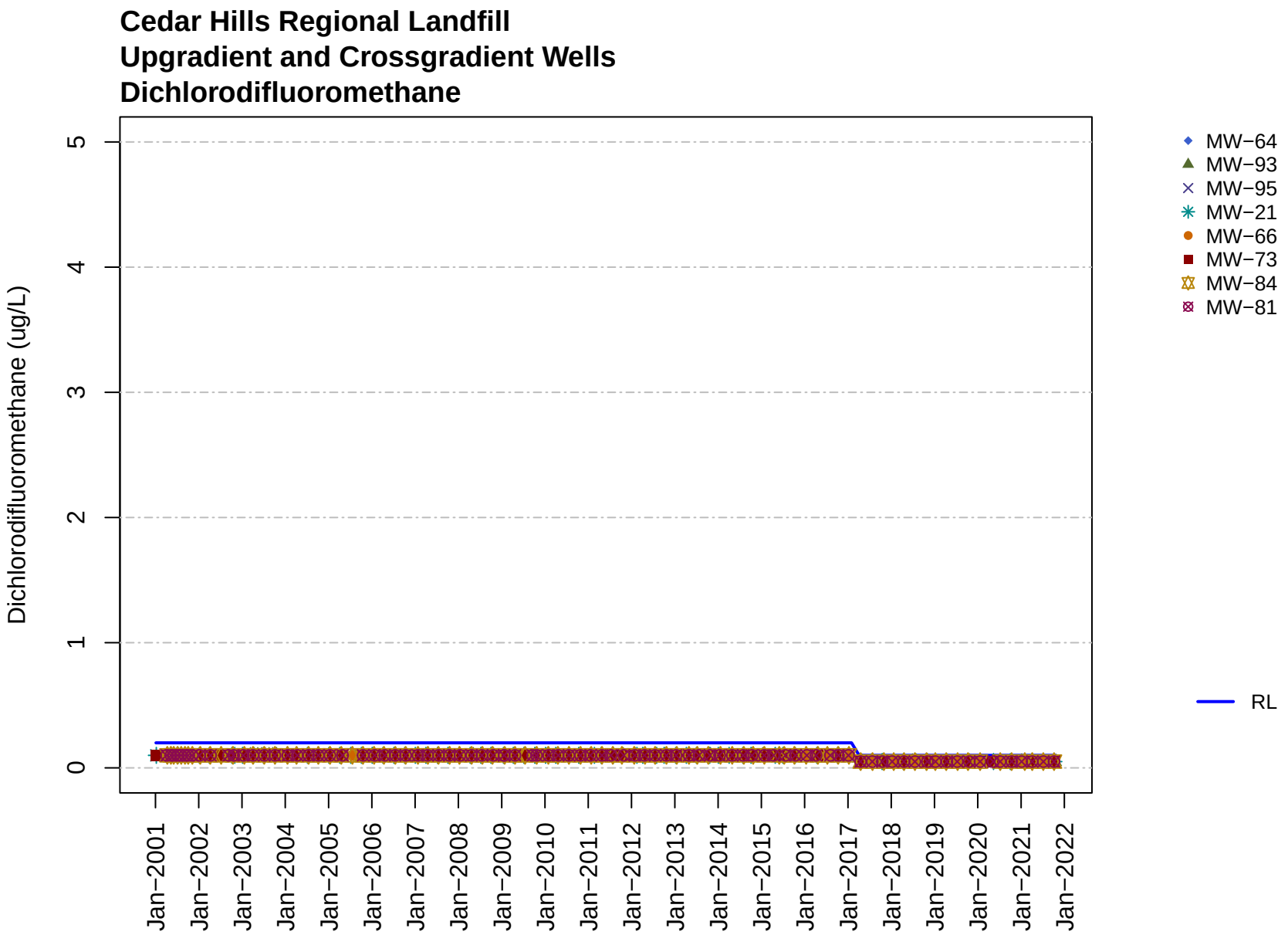

Cedar Hills Regional Landfill
Upgradient Wells
cis−1,2−Dichloroethene
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

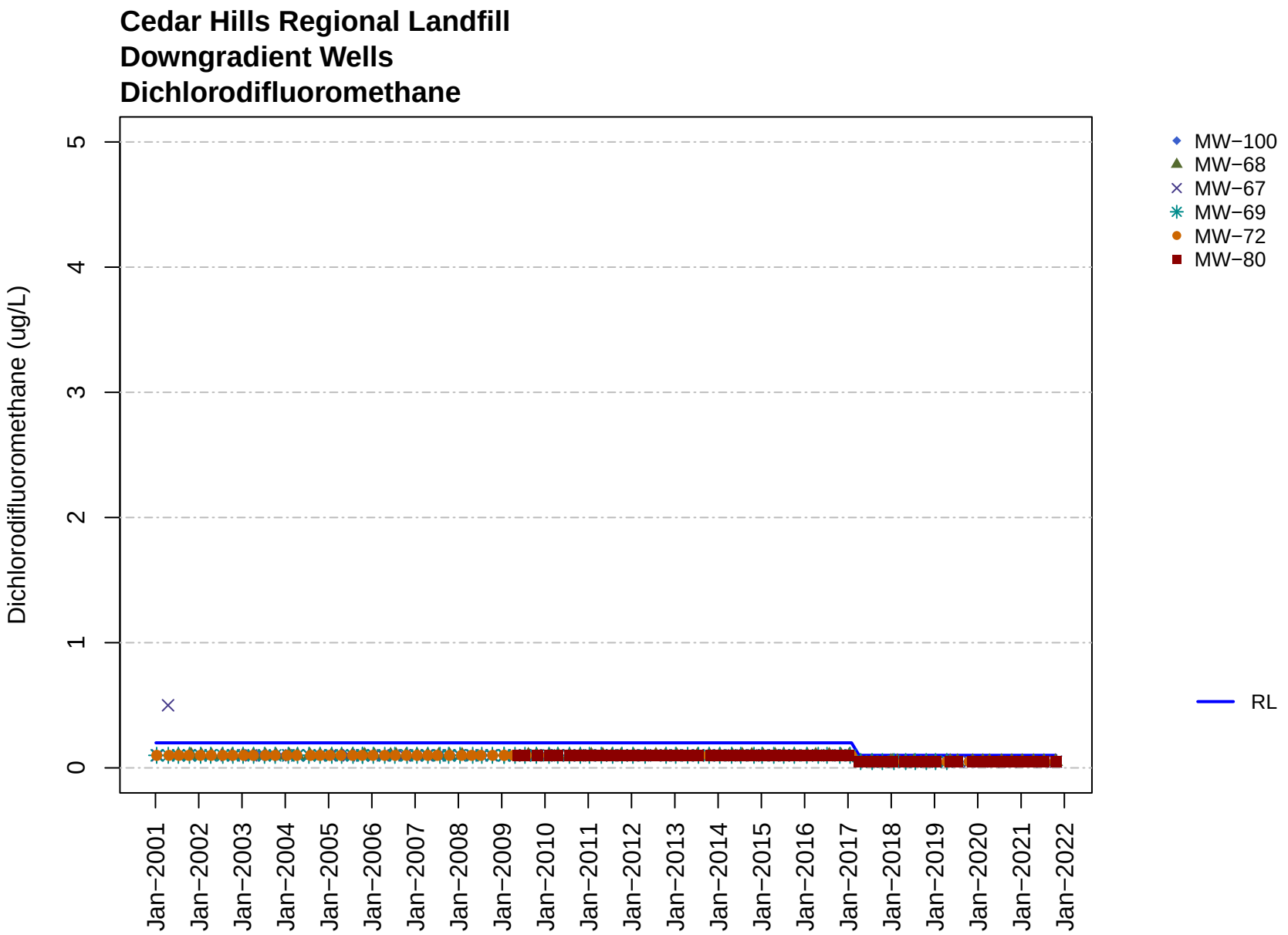

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
cis−1,2−Dichloroethene
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

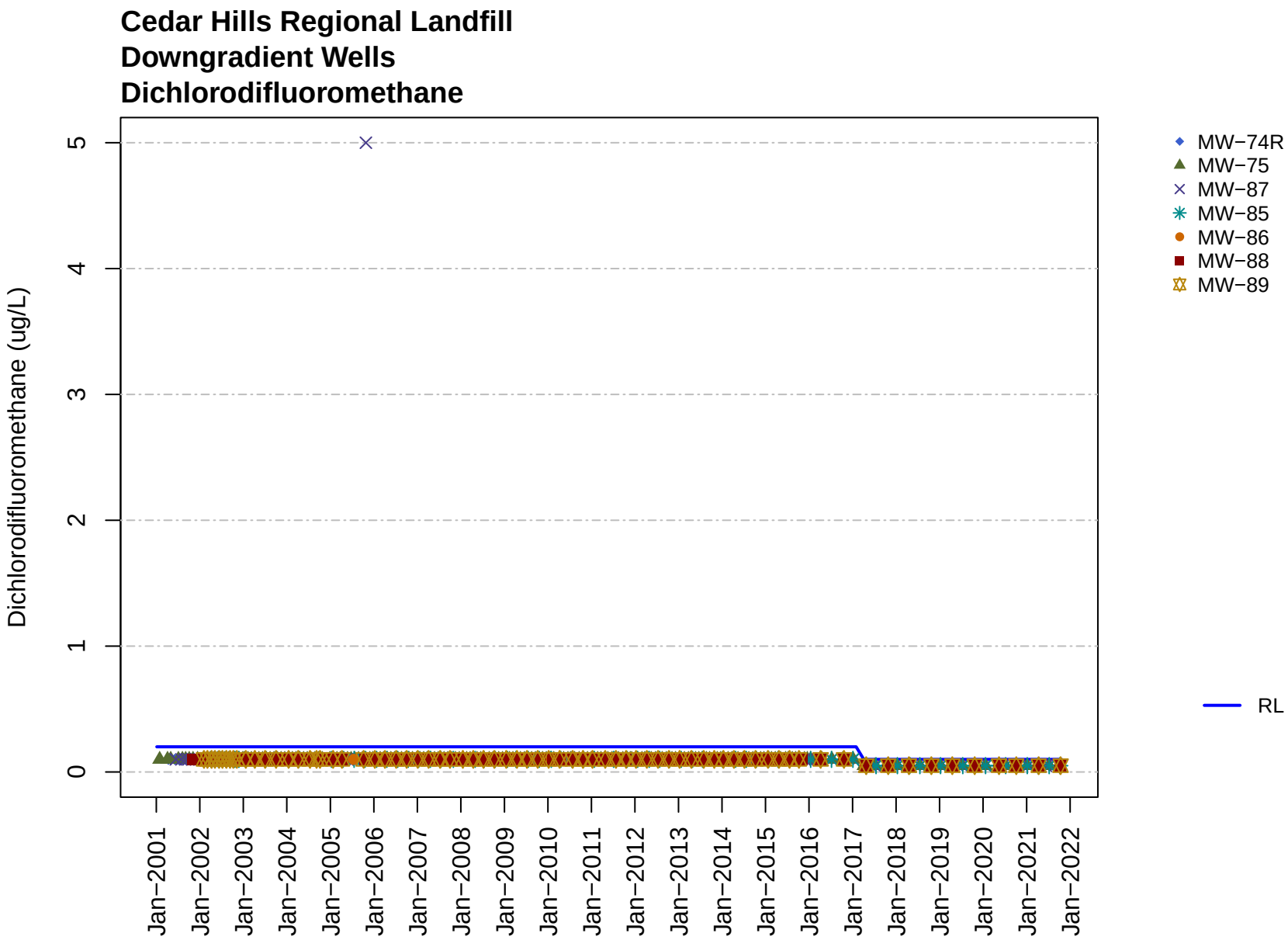

Cedar Hills Regional Landfill
Downgradient Wells
cis−1,2−Dichloroethene
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

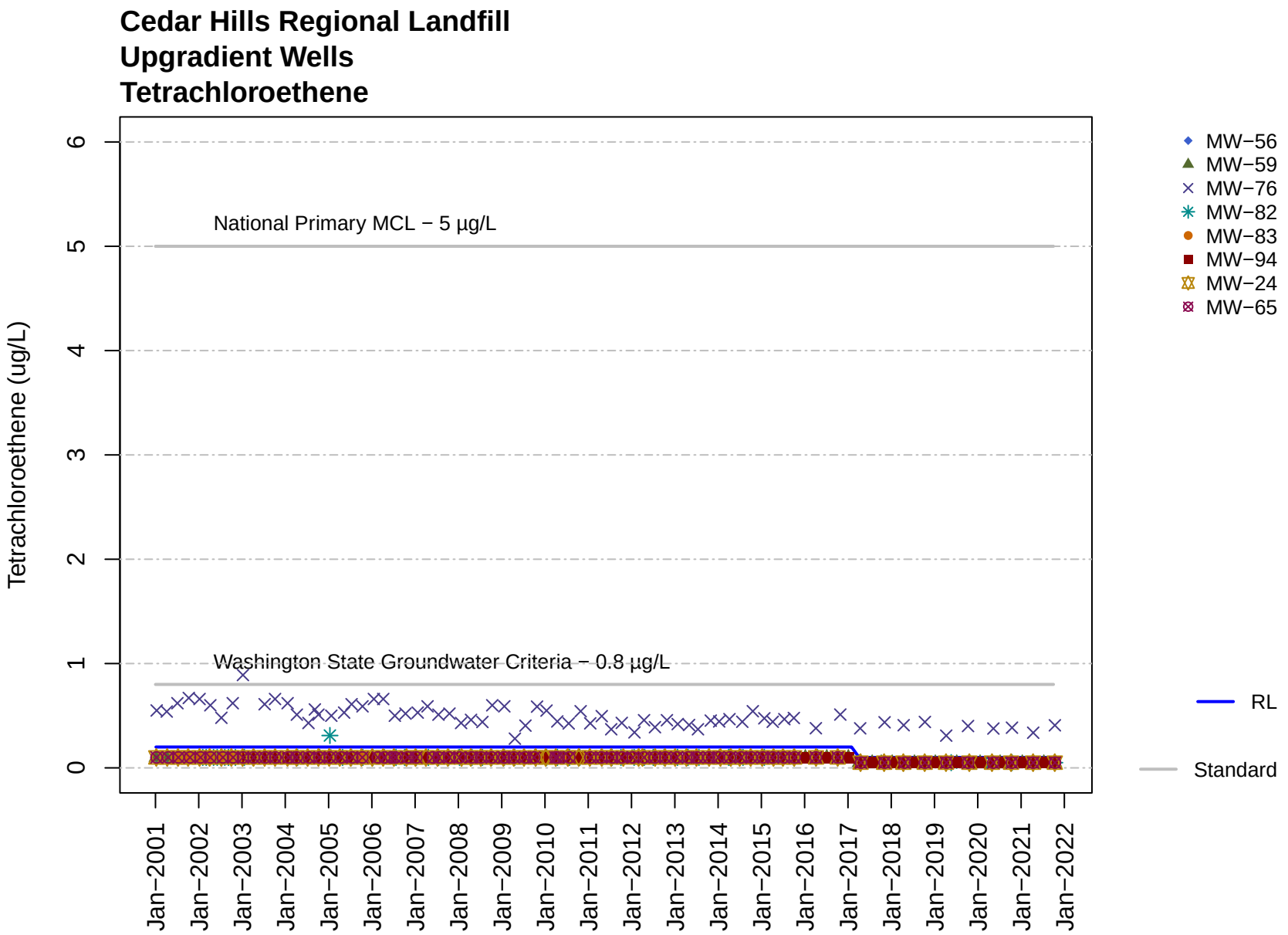

Cedar Hills Regional Landfill
Downgradient Wells
cis−1,2−Dichloroethene
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

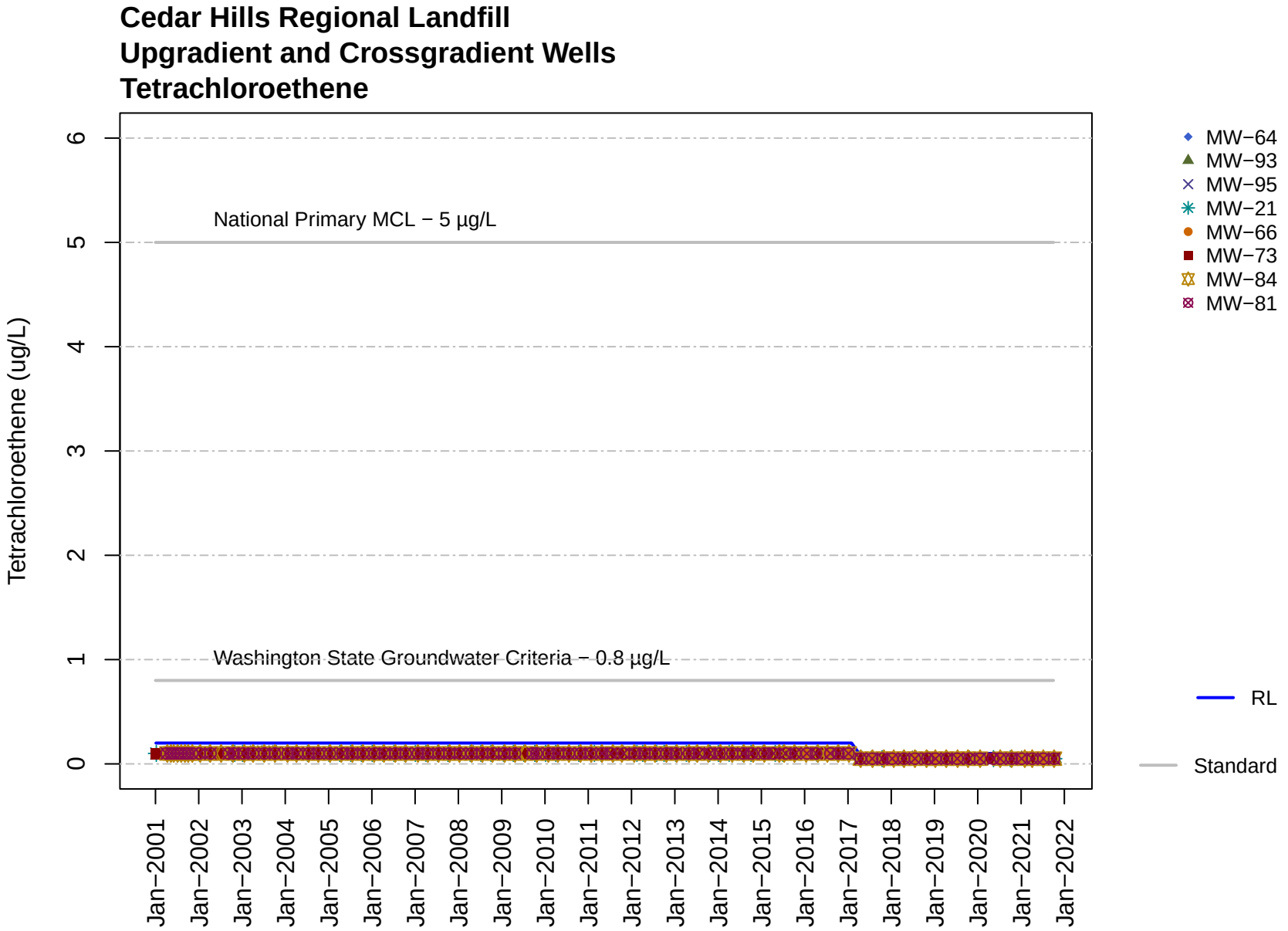

Cedar Hills Regional Landfill
Upgradient Wells
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0
1
2
3
4
5
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

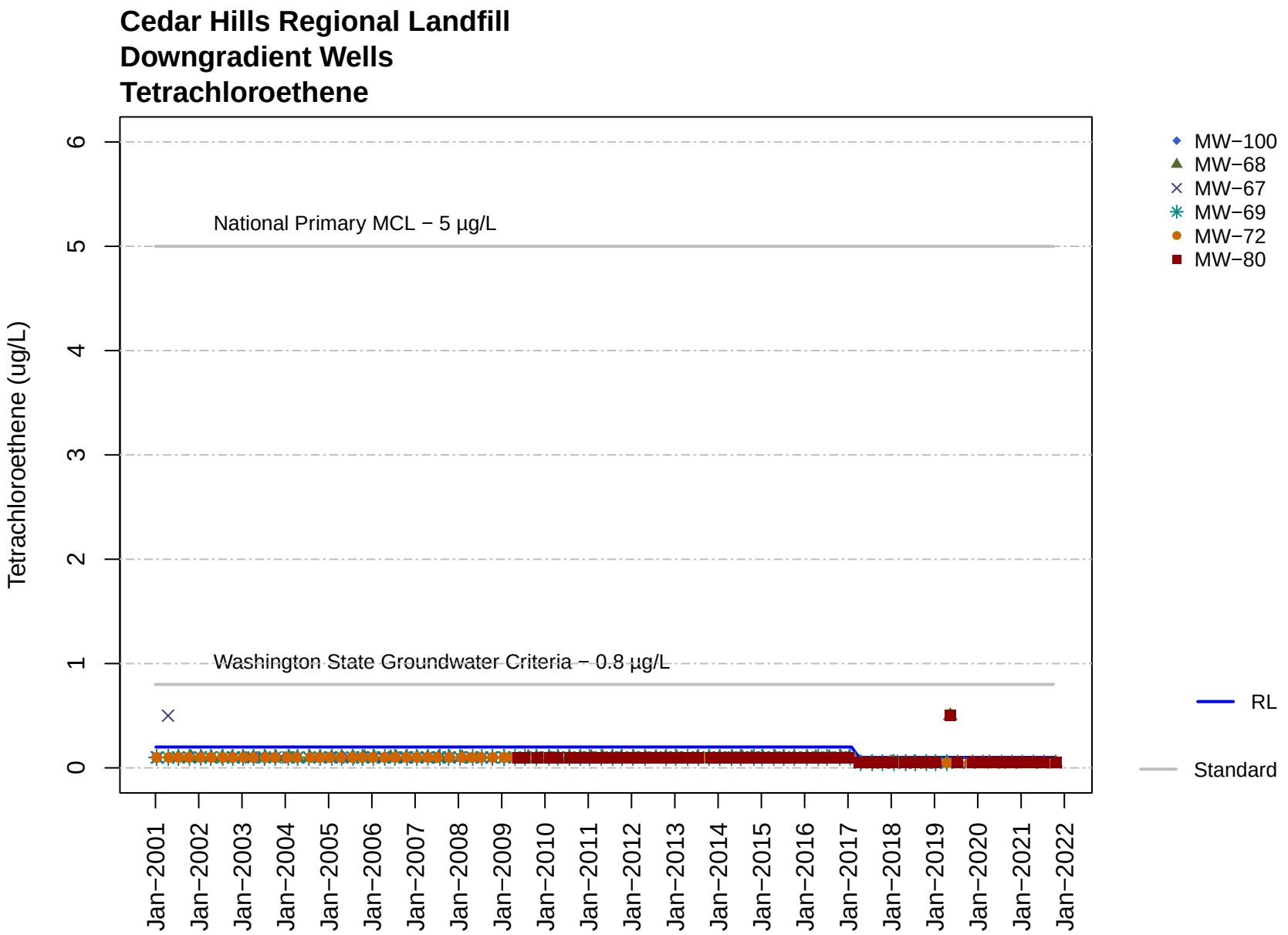

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0
1
2
3
4
5
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

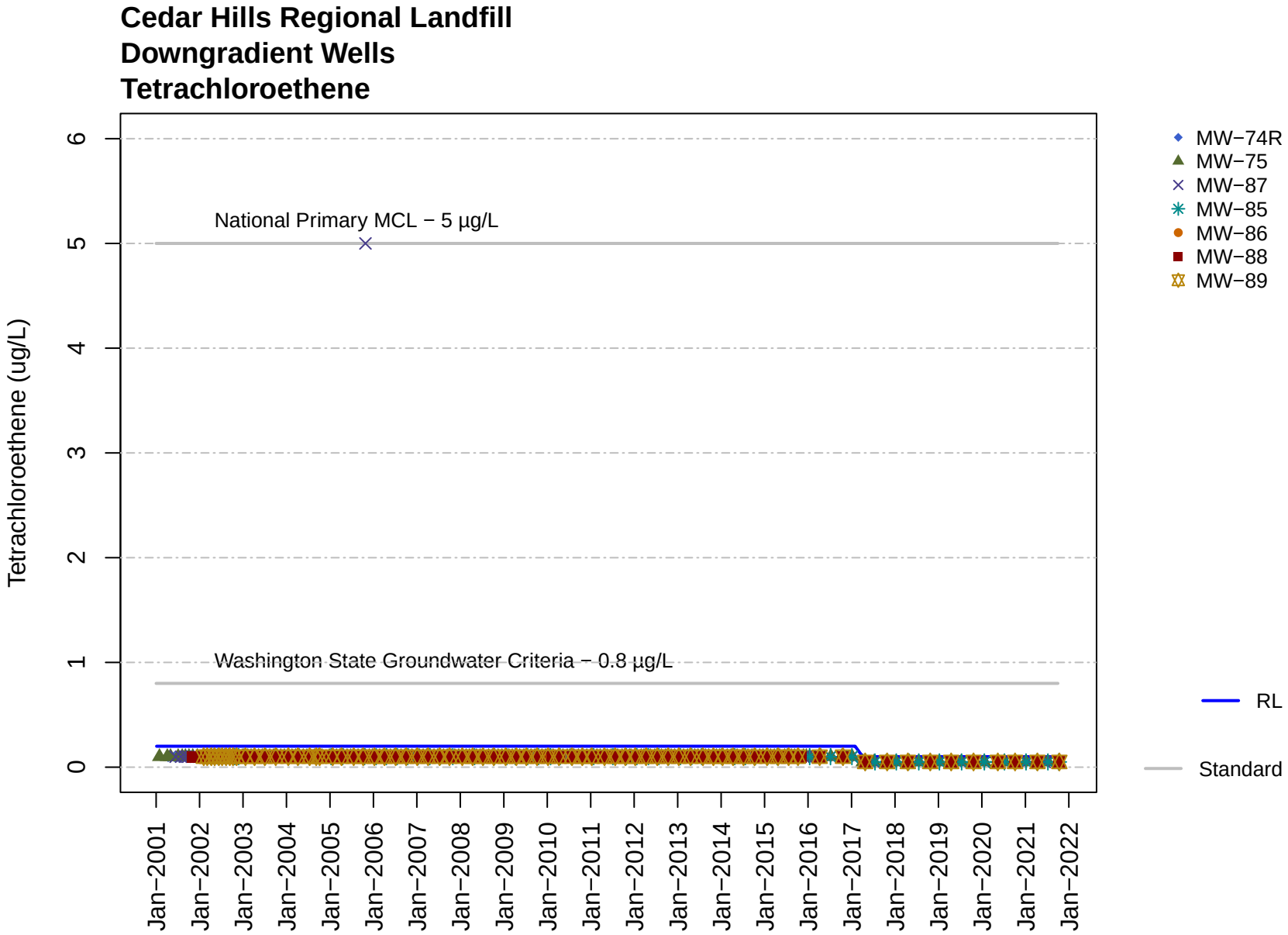

Cedar Hills Regional Landfill
Downgradient Wells
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0
1
2
3
4
5
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

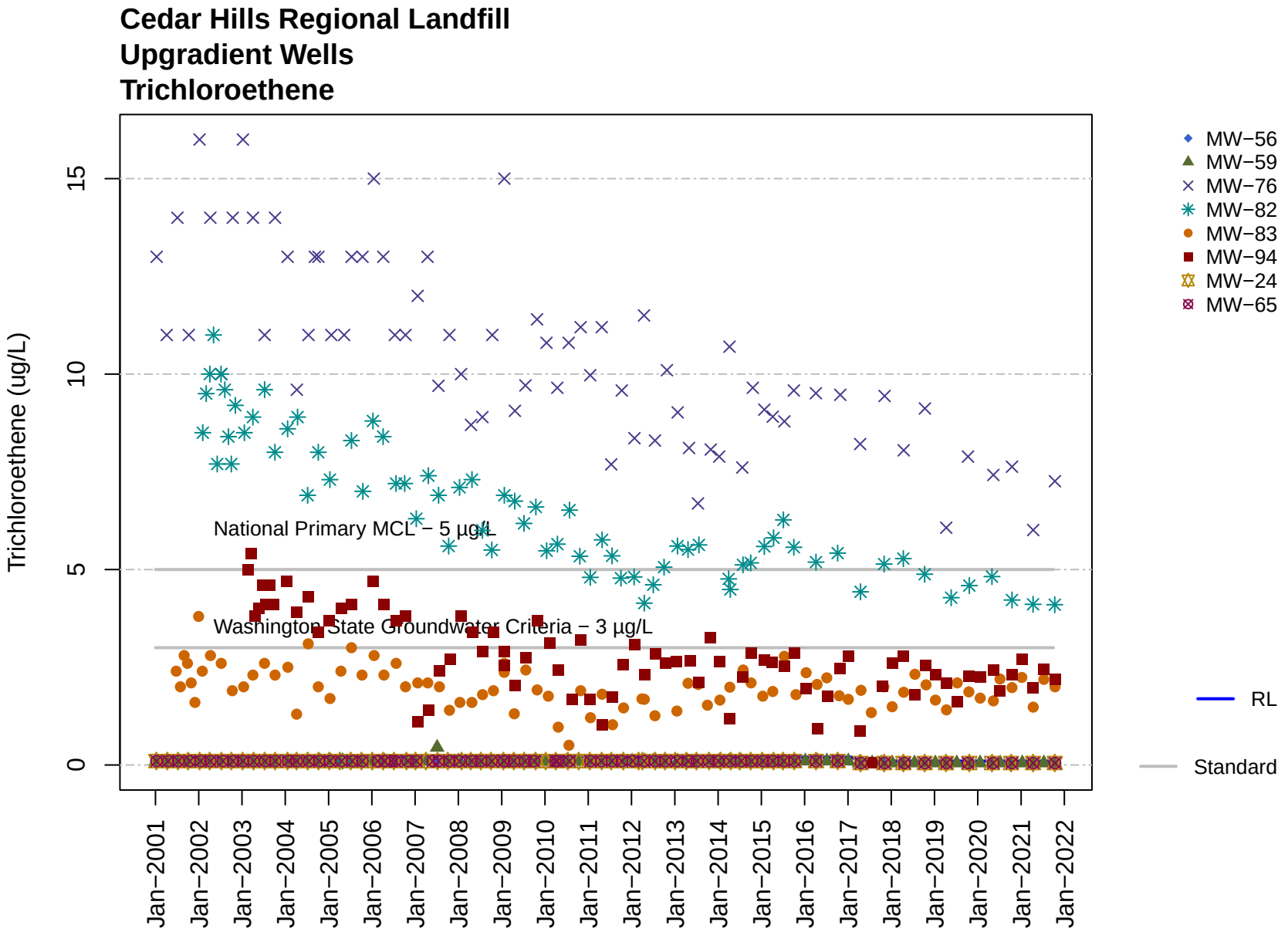

Cedar Hills Regional Landfill
Downgradient Wells
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0
1
2
3
4
5
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

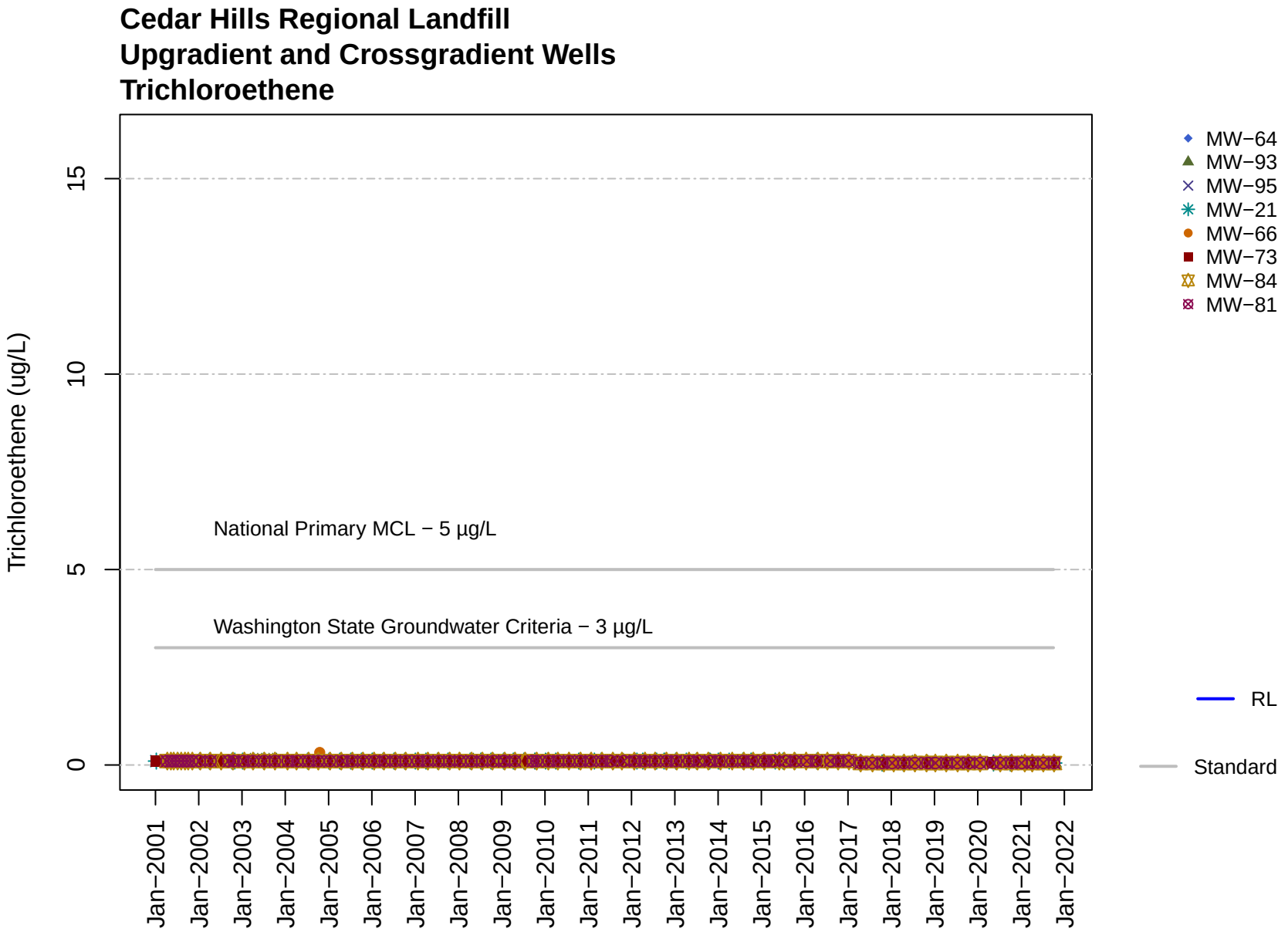

Cedar Hills Regional Landfill
Upgradient Wells
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

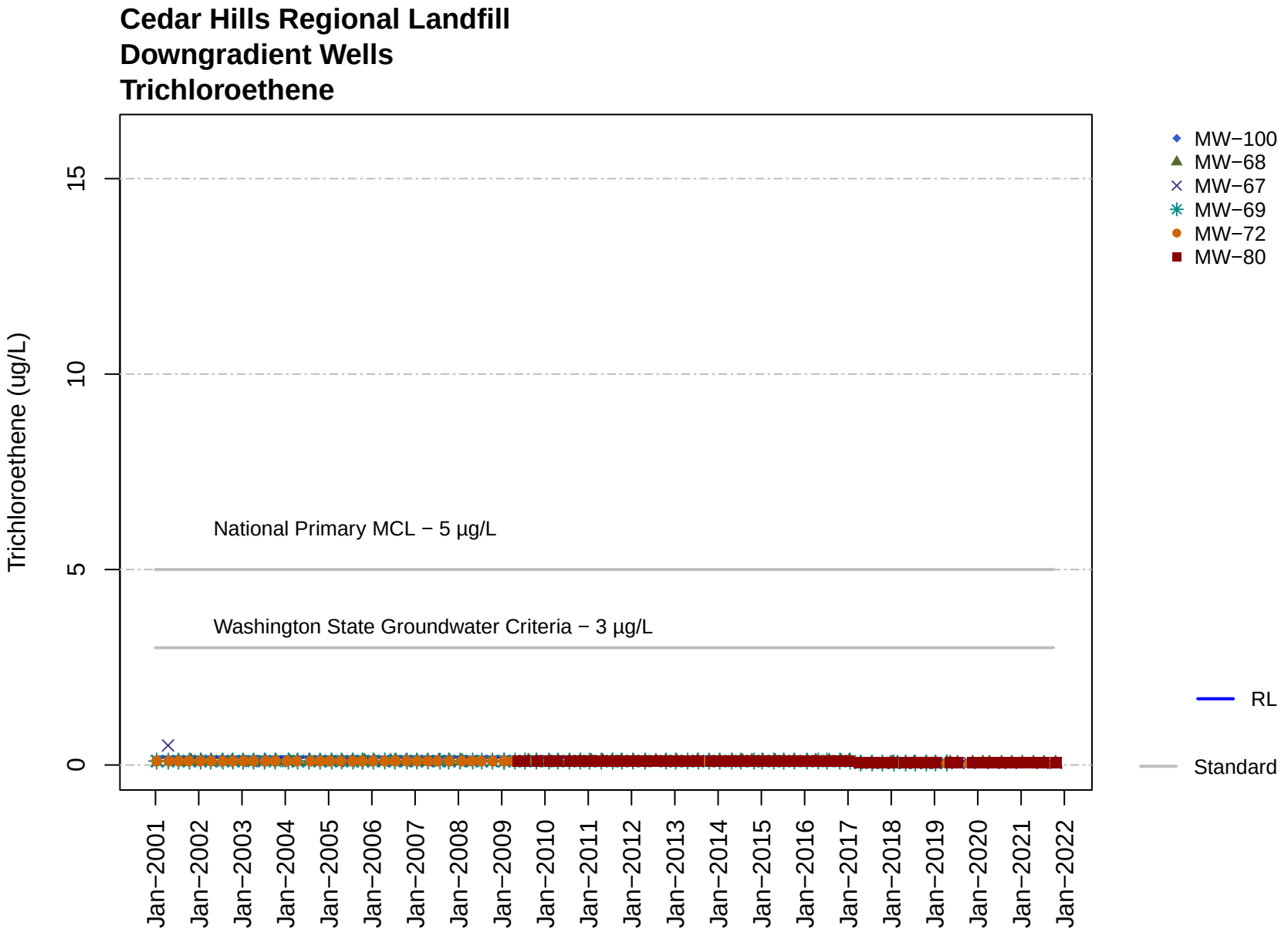

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

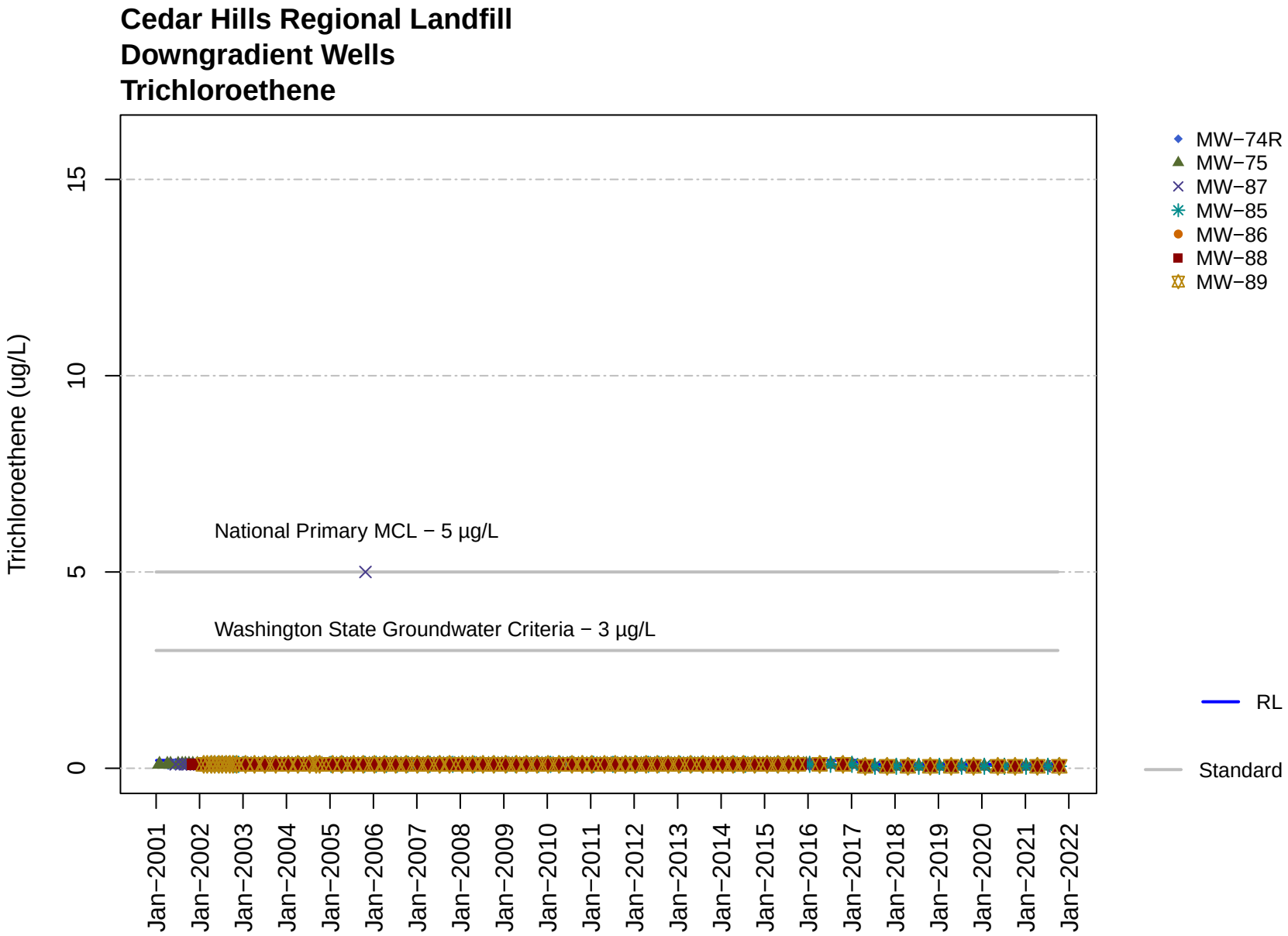

Cedar Hills Regional Landfill
Downgradient Wells
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

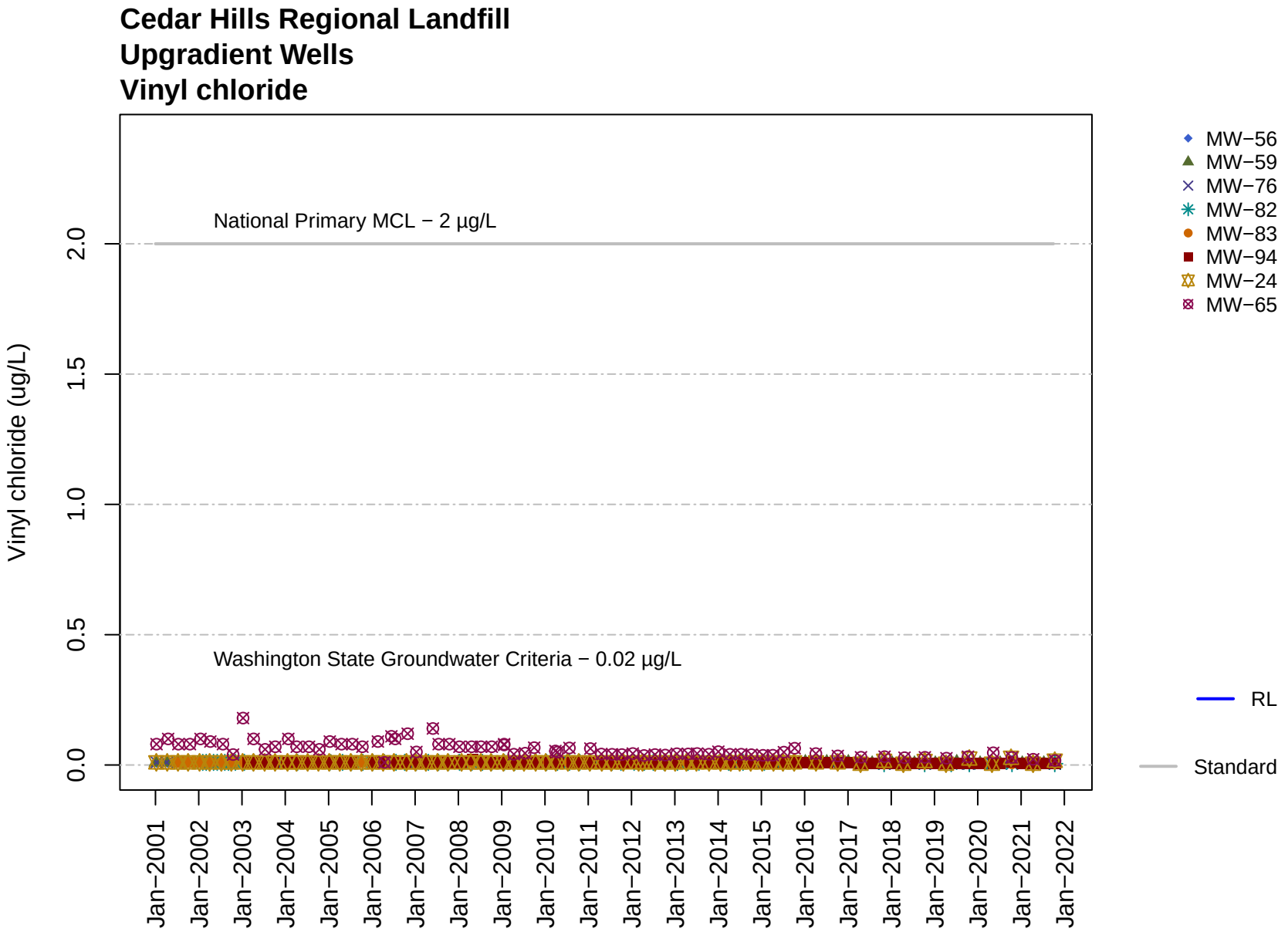

Cedar Hills Regional Landfill
Downgradient Wells
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

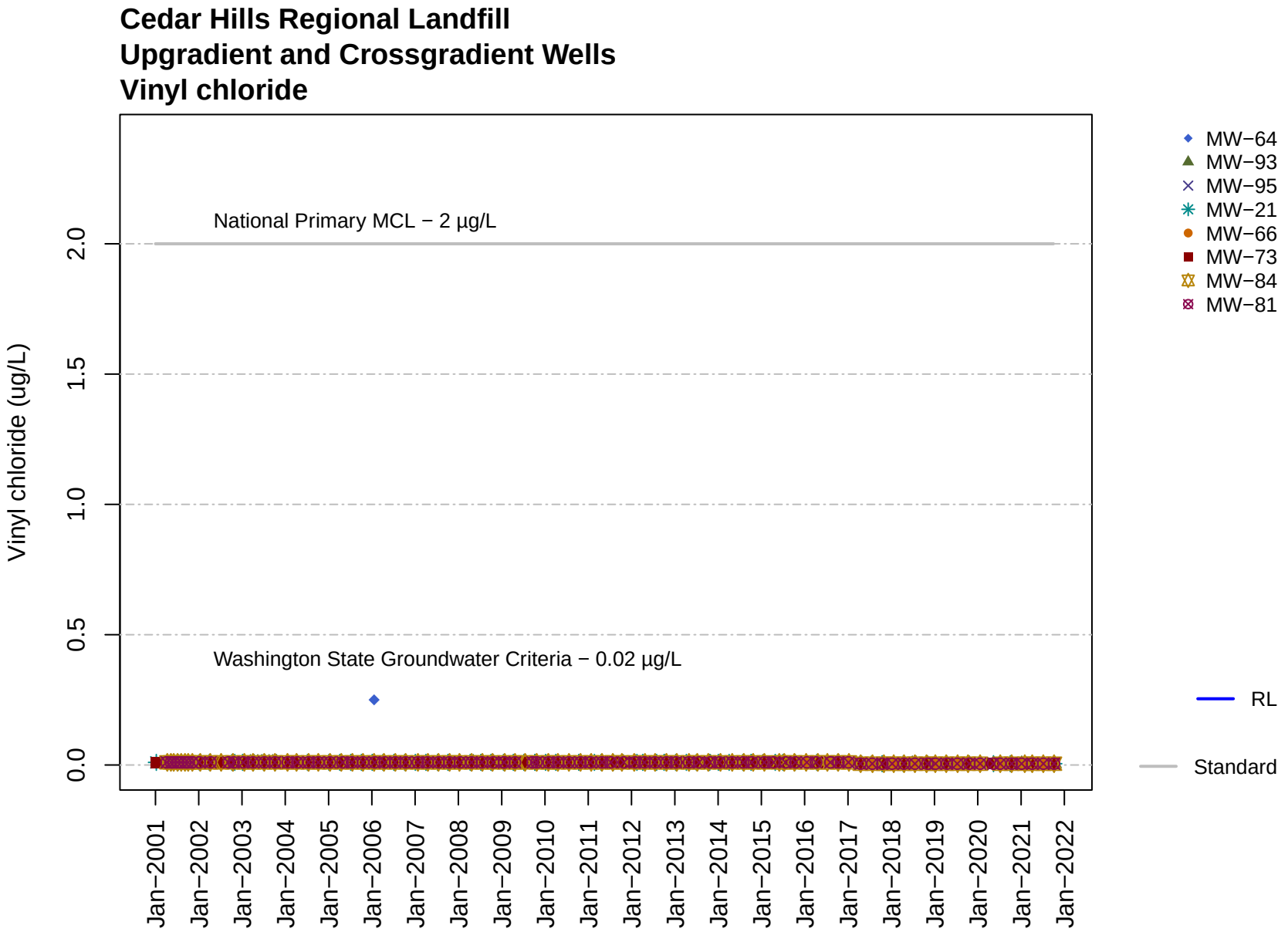

Cedar Hills Regional Landfill
Upgradient Wells
Trichloroethene
Trichloroethene (ug/L)
0
5
10
15
National Primary MCL – 5 µg/L
Washington State Groundwater Criteria – 3 µg/L
Jan–2001
Jan–2002
Jan–2003
Jan–2004
Jan–2005
Jan–2006
Jan–2007
Jan–2008
Jan–2009
Jan–2010
Jan–2011
Jan–2012
Jan–2013
Jan–2014
Jan–2015
Jan–2016
Jan–2017
Jan–2018
Jan–2019
Jan–2020
Jan–2021
Jan–2022
MW–56
MW–59
MW–76
MW–82
MW–83
MW–94
MW–24
MW–65
RL
Standard

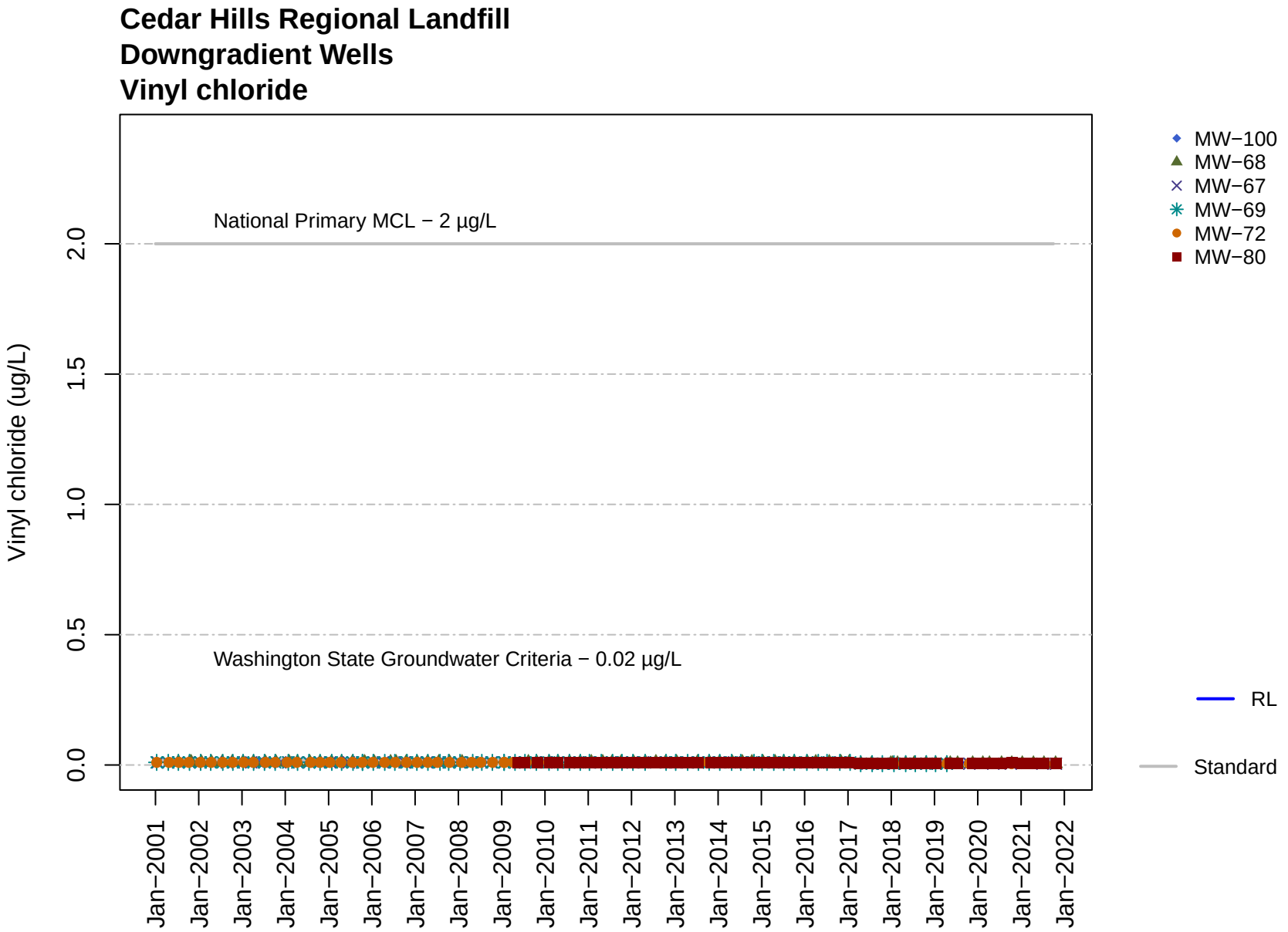

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Trichloroethene
Trichloroethene (ug/L)
0
5
10
15
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 3 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

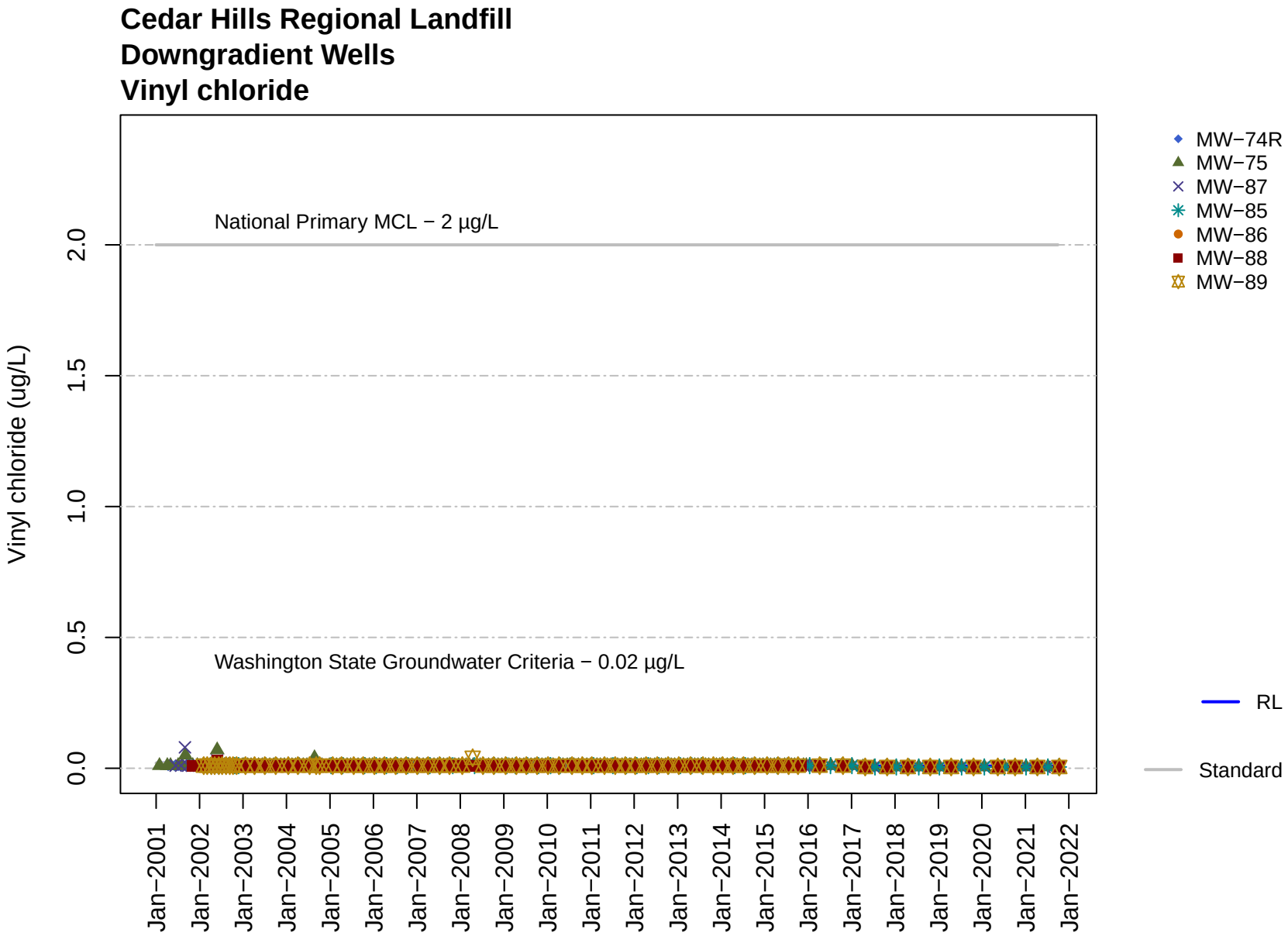

Cedar Hills Regional Landfill
Downgradient Wells
Trichloroethene
Trichloroethene (ug/L)
0
5
10
15
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 3 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

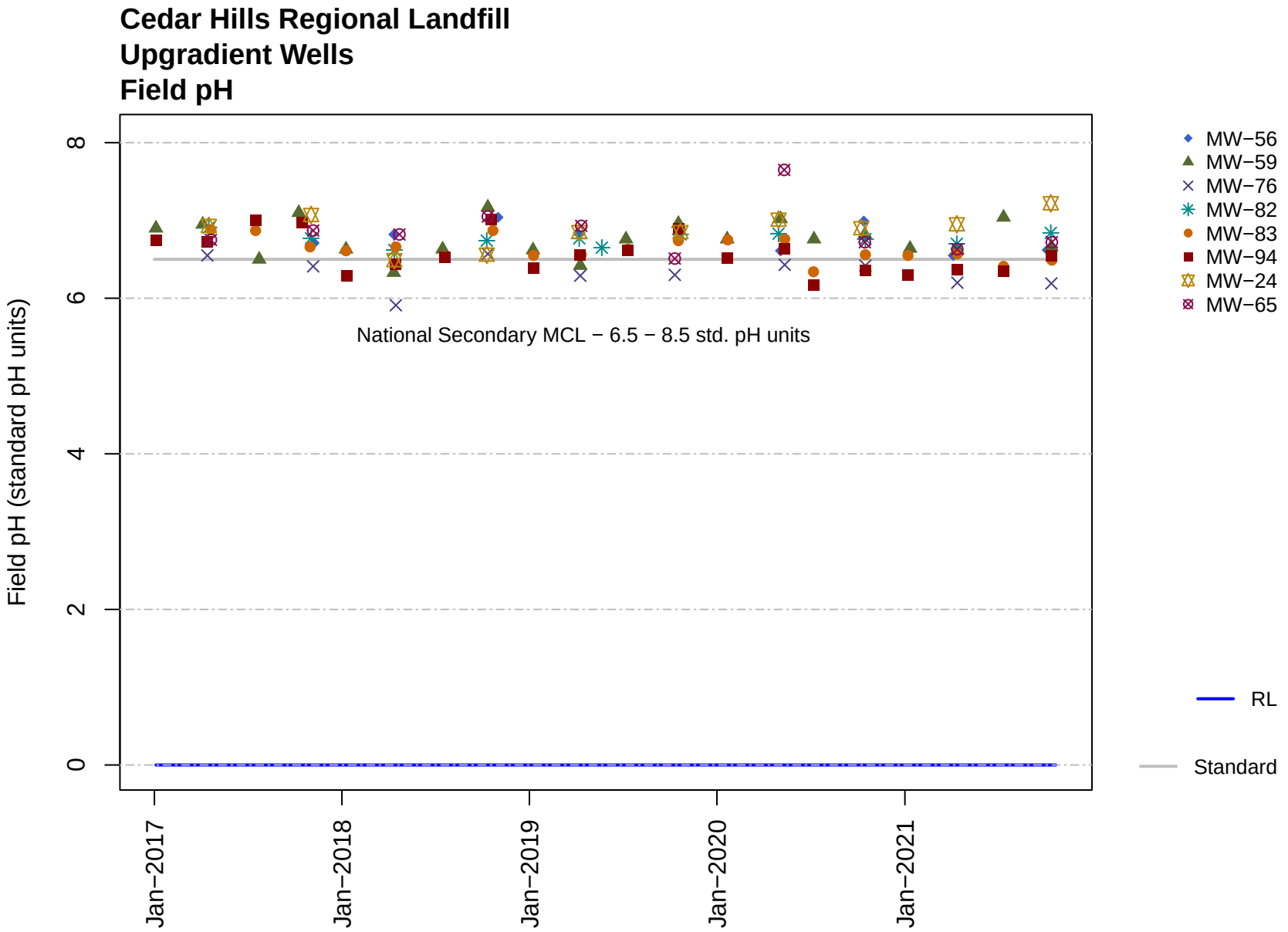

Cedar Hills Regional Landfill
Downgradient Wells
Trichloroethene
Trichloroethene (ug/L)
0
5
10
15
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 3 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

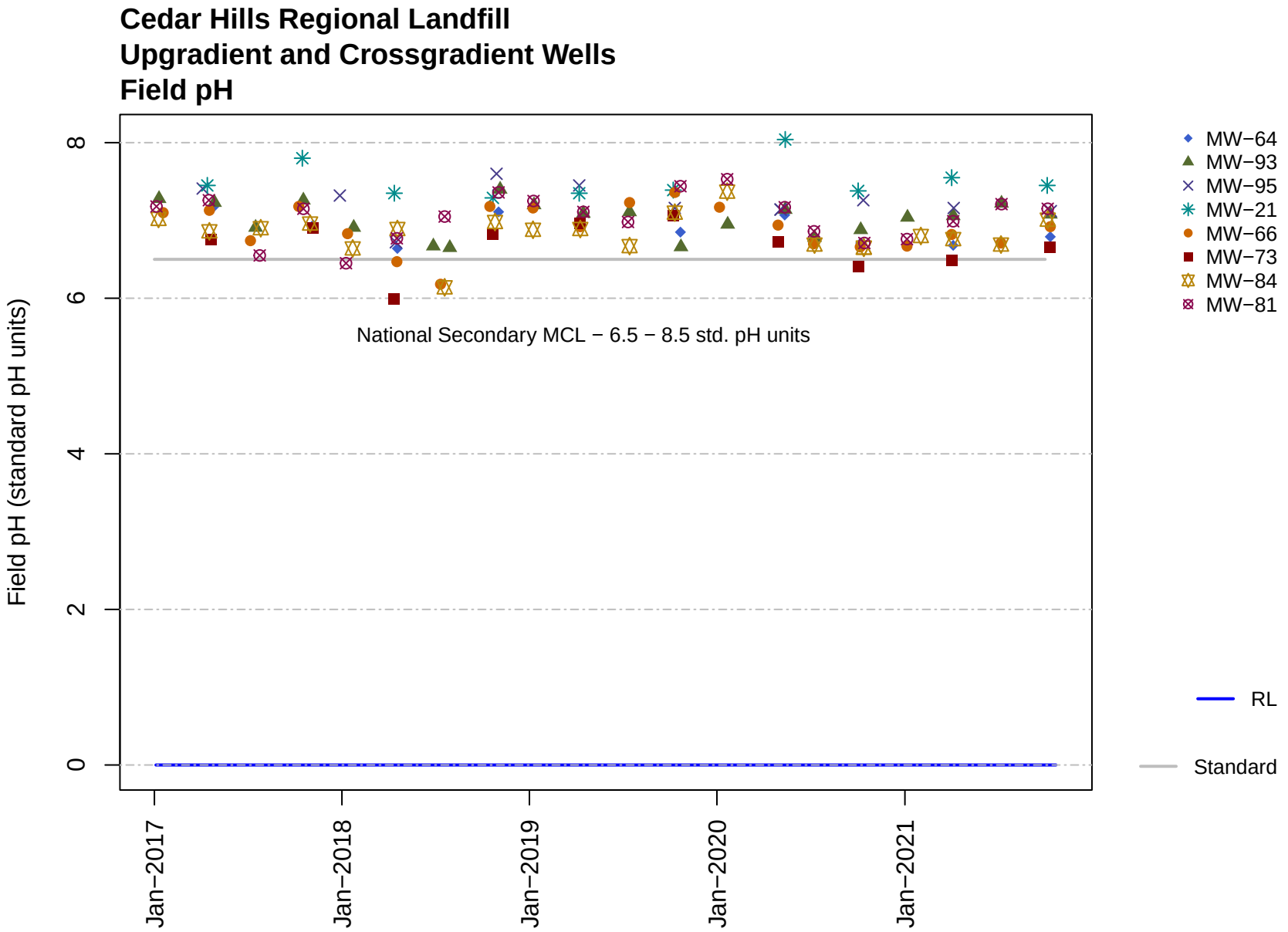

Cedar Hills Regional Landfill
Upgradient Wells
Vinyl chloride
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Vinyl chloride (ug/L)
0.0
0.5
1.0
1.5
2.0
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

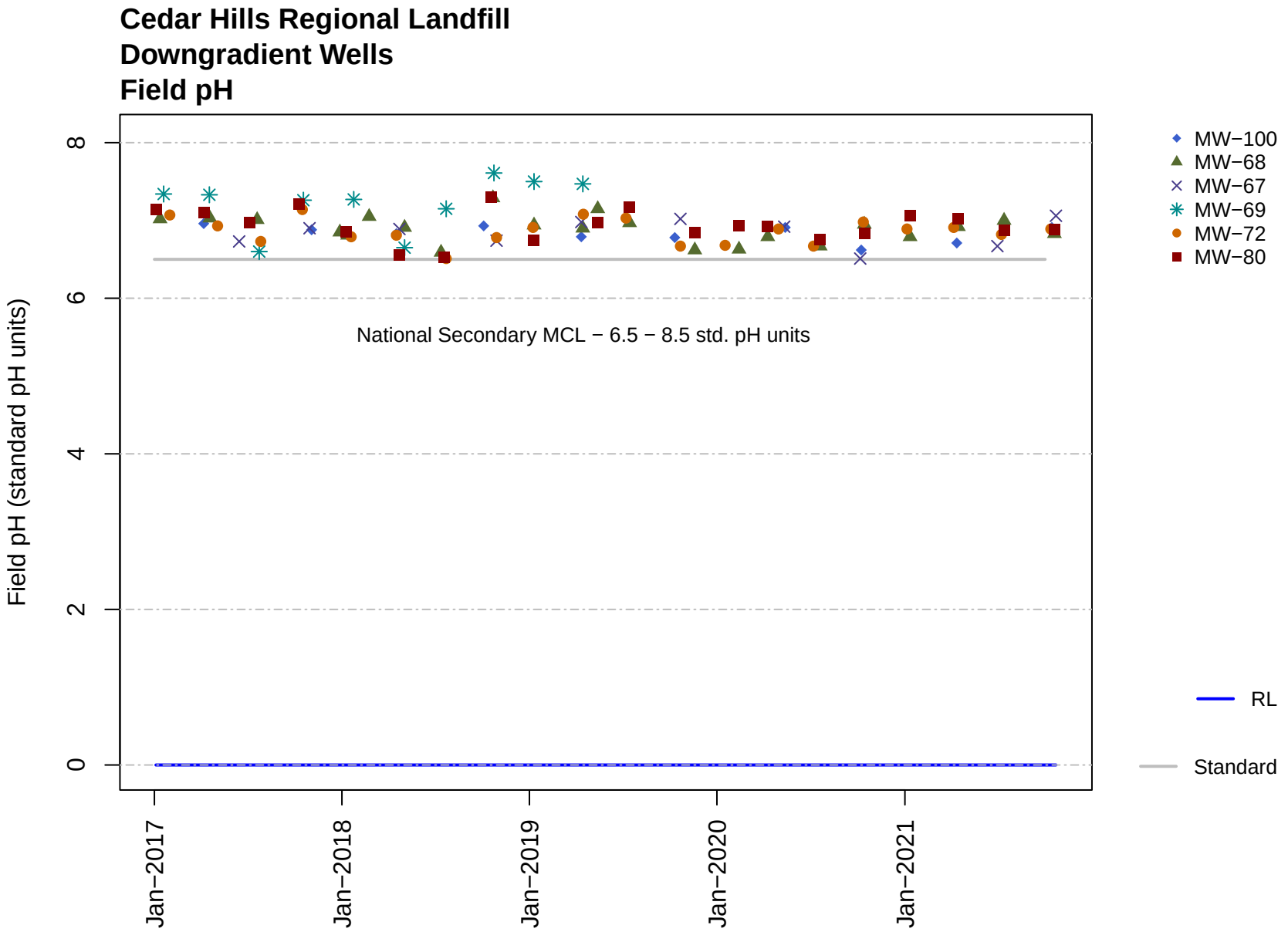

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Vinyl chloride
Vinyl chloride (ug/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

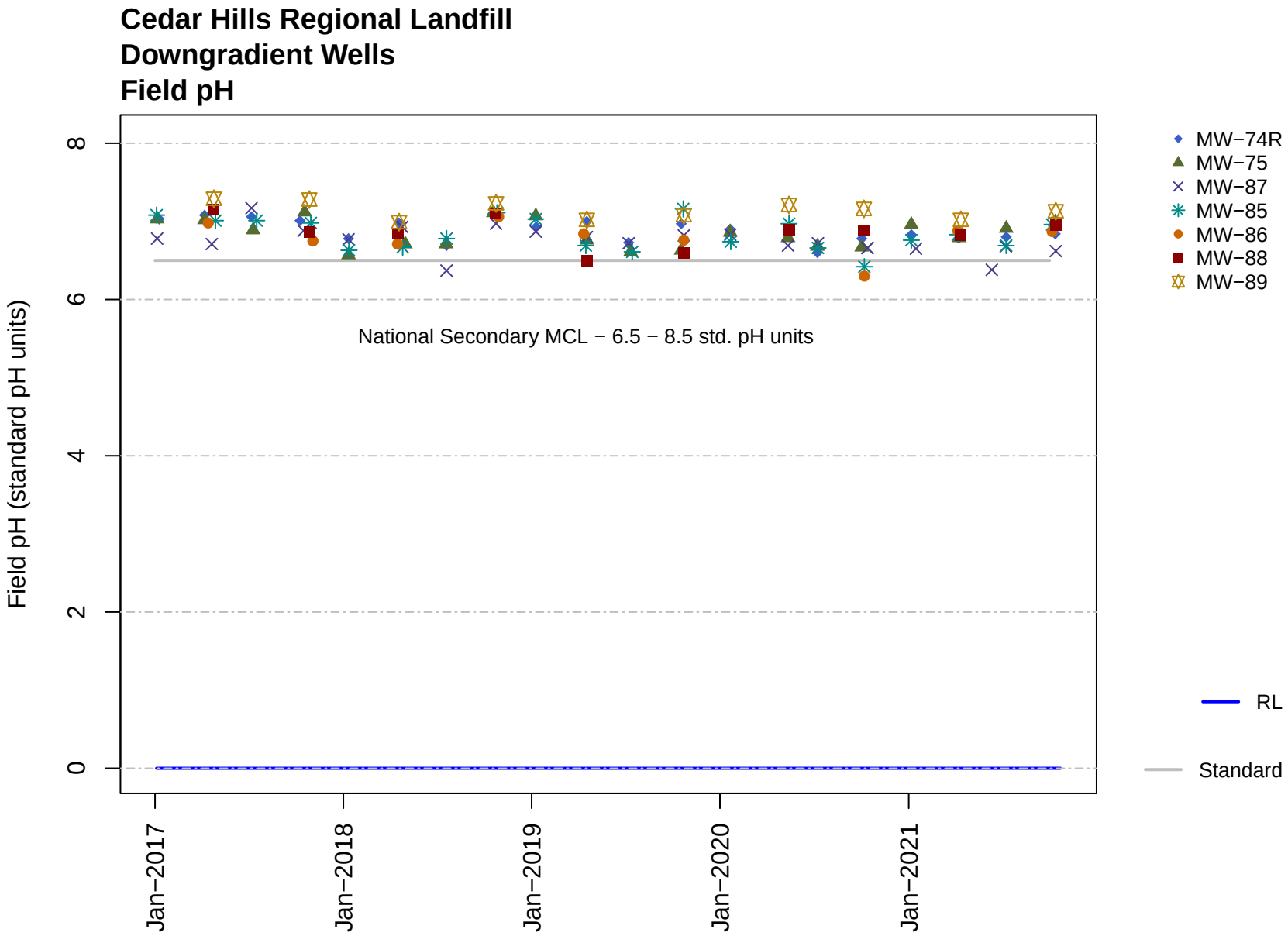

Cedar Hills Regional Landfill
Downgradient Wells
Vinyl chloride
Vinyl chloride (ug/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

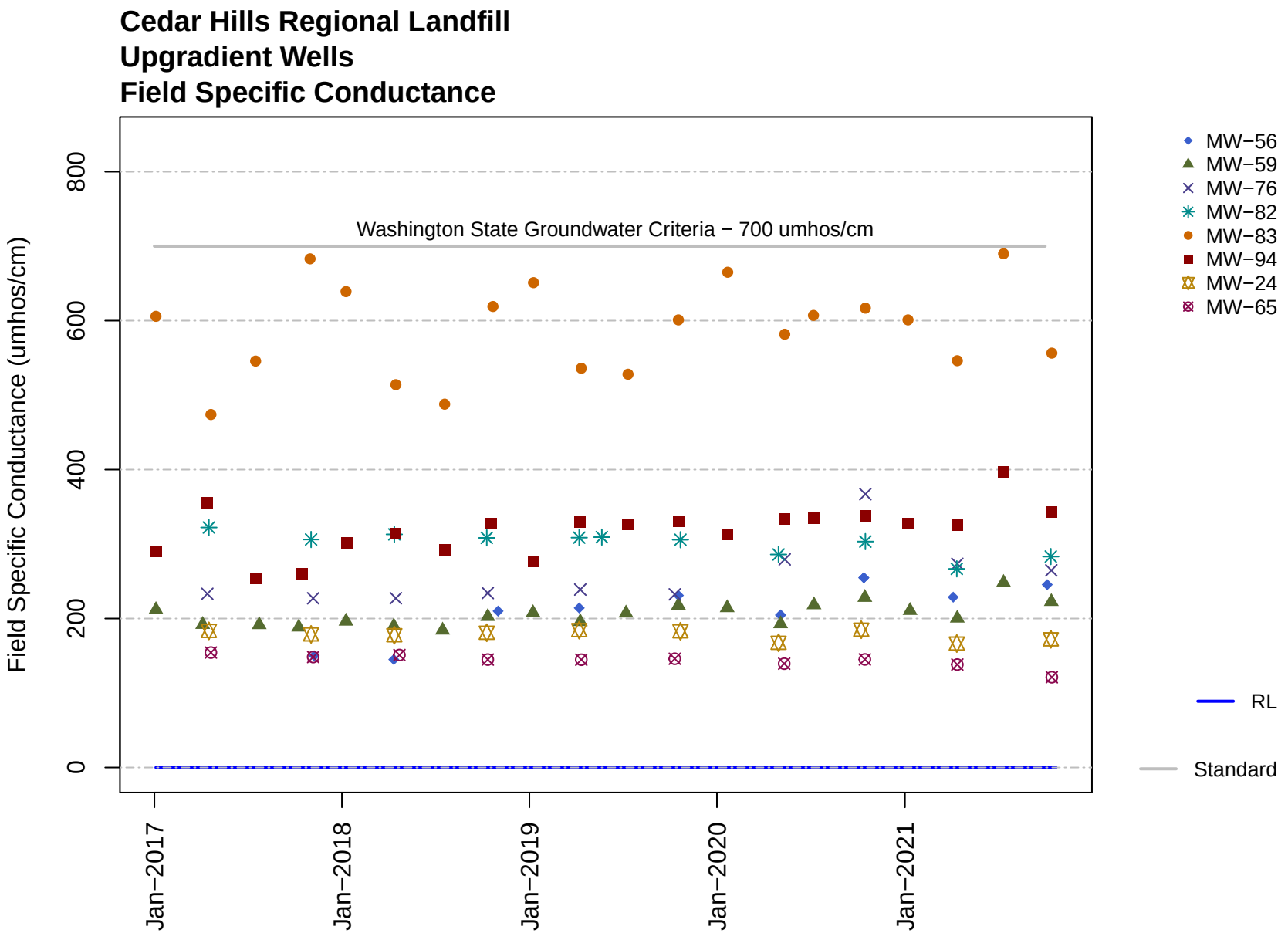

Cedar Hills Regional Landfill
Downgradient Wells
Vinyl chloride
Vinyl chloride (ug/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

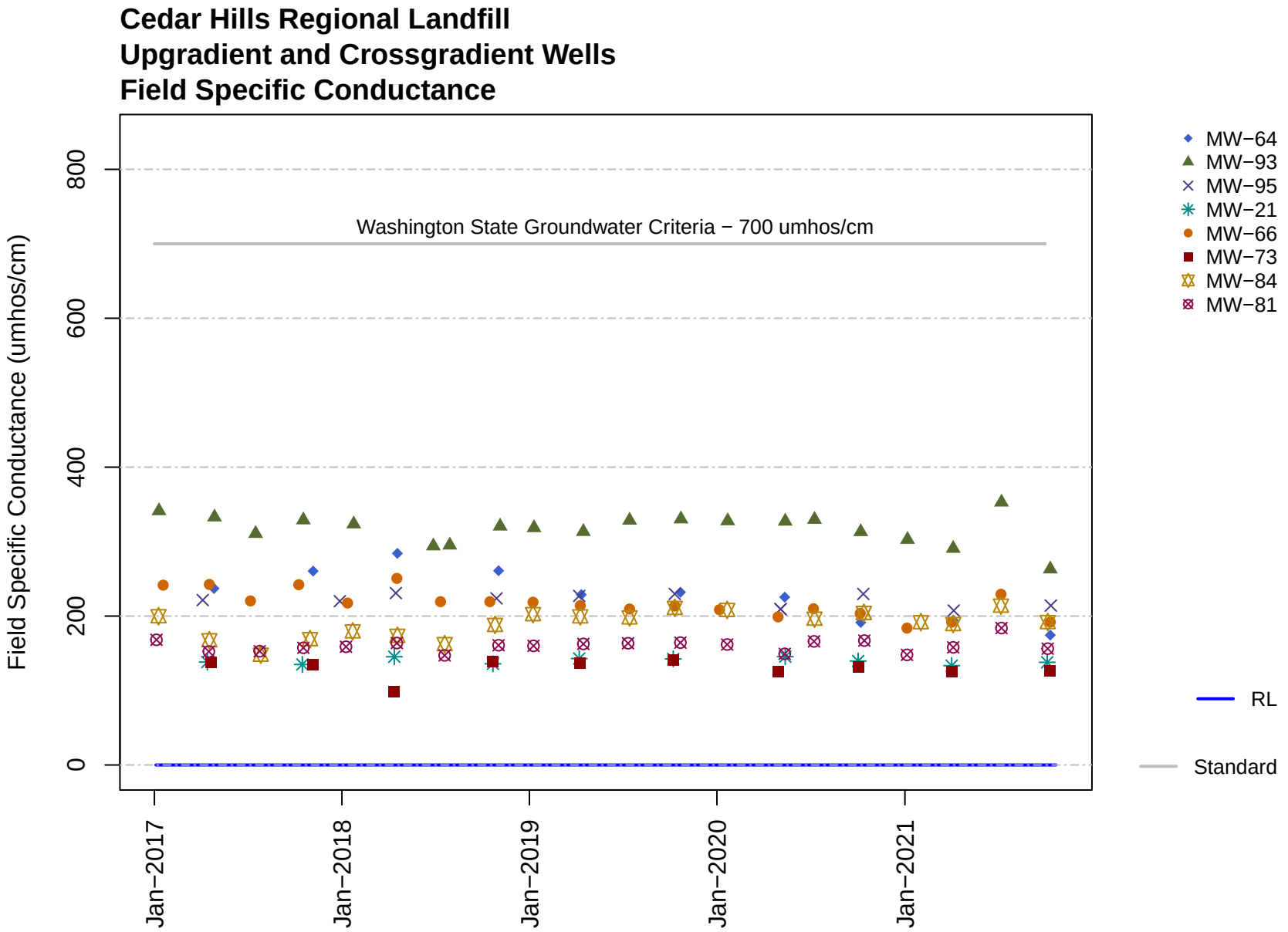

Cedar Hills Regional Landfill
Upgradient Wells
Field pH
Field pH (standard pH units)
0
2
4
6
8
National Secondary MCL − 6.5 − 8.5 std. pH units
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

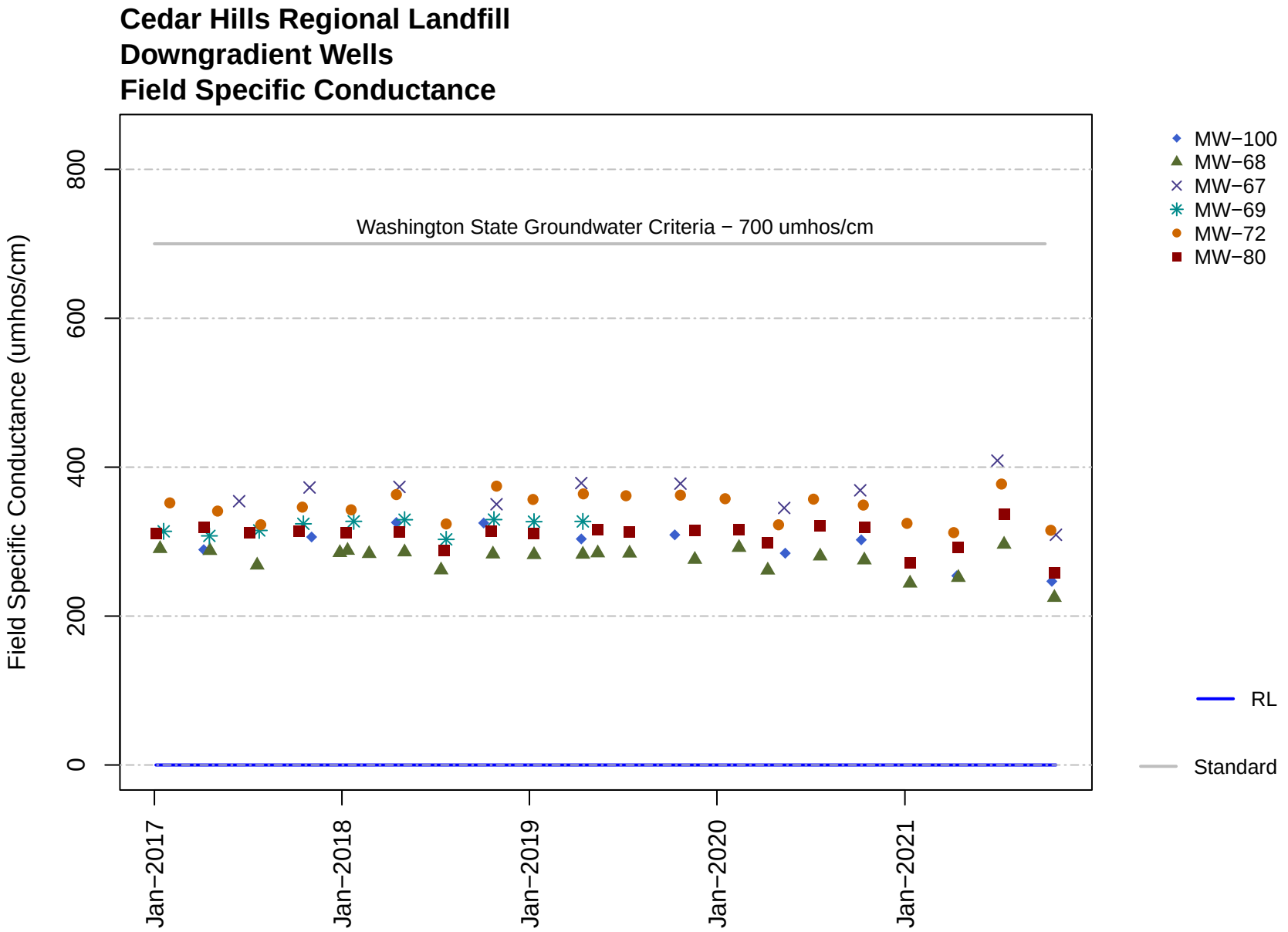

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Field pH
Field pH (standard pH units)
0
2
4
6
8
National Secondary MCL − 6.5 − 8.5 std. pH units
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

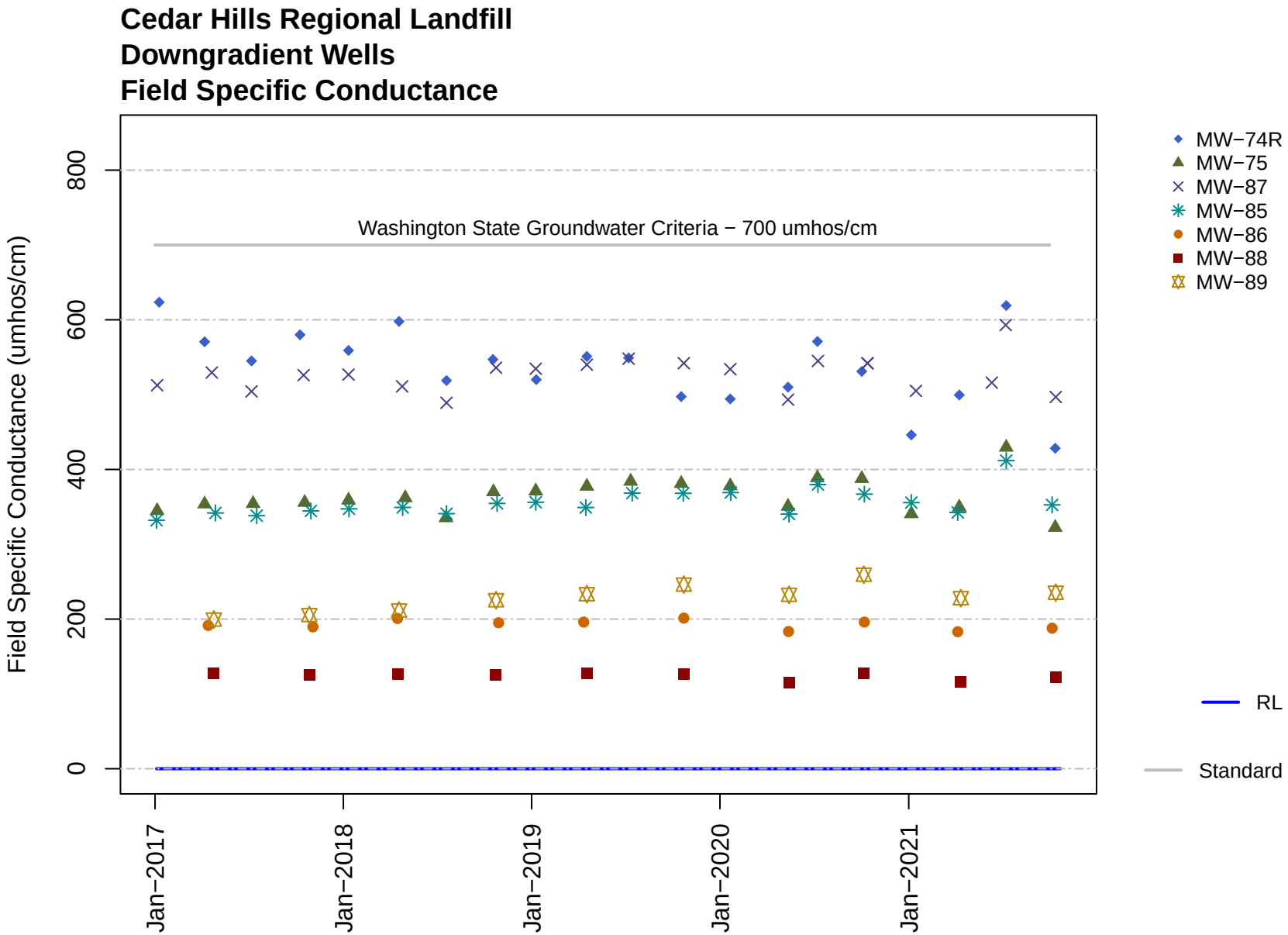

Cedar Hills Regional Landfill
Downgradient Wells
Field pH
Field pH (standard pH units)
0
2
4
6
8
National Secondary MCL − 6.5 − 8.5 std. pH units
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

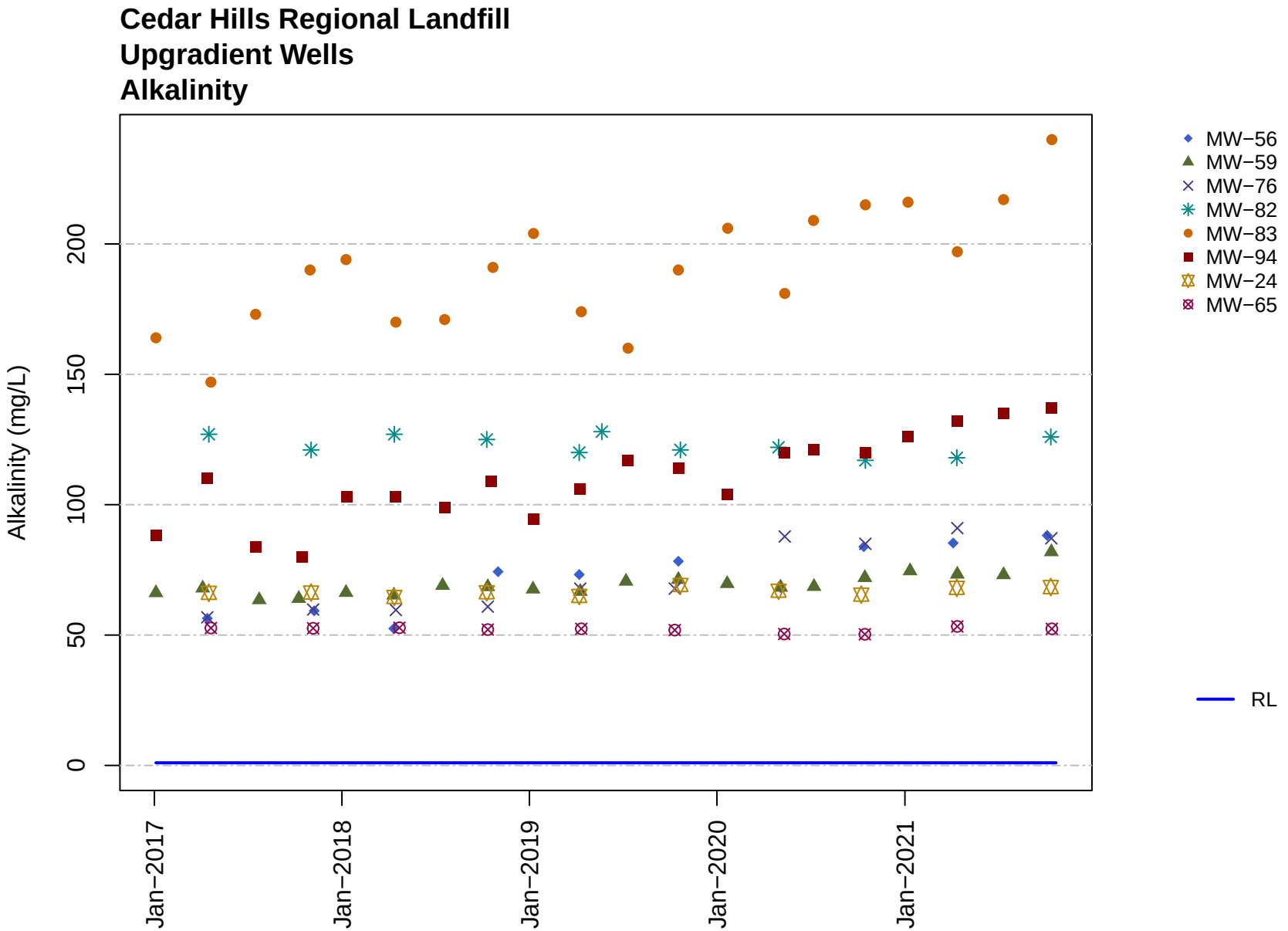

Cedar Hills Regional Landfill
Downgradient Wells
Field pH
Field pH (standard pH units)
0
2
4
6
8
National Secondary MCL − 6.5 − 8.5 std. pH units
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

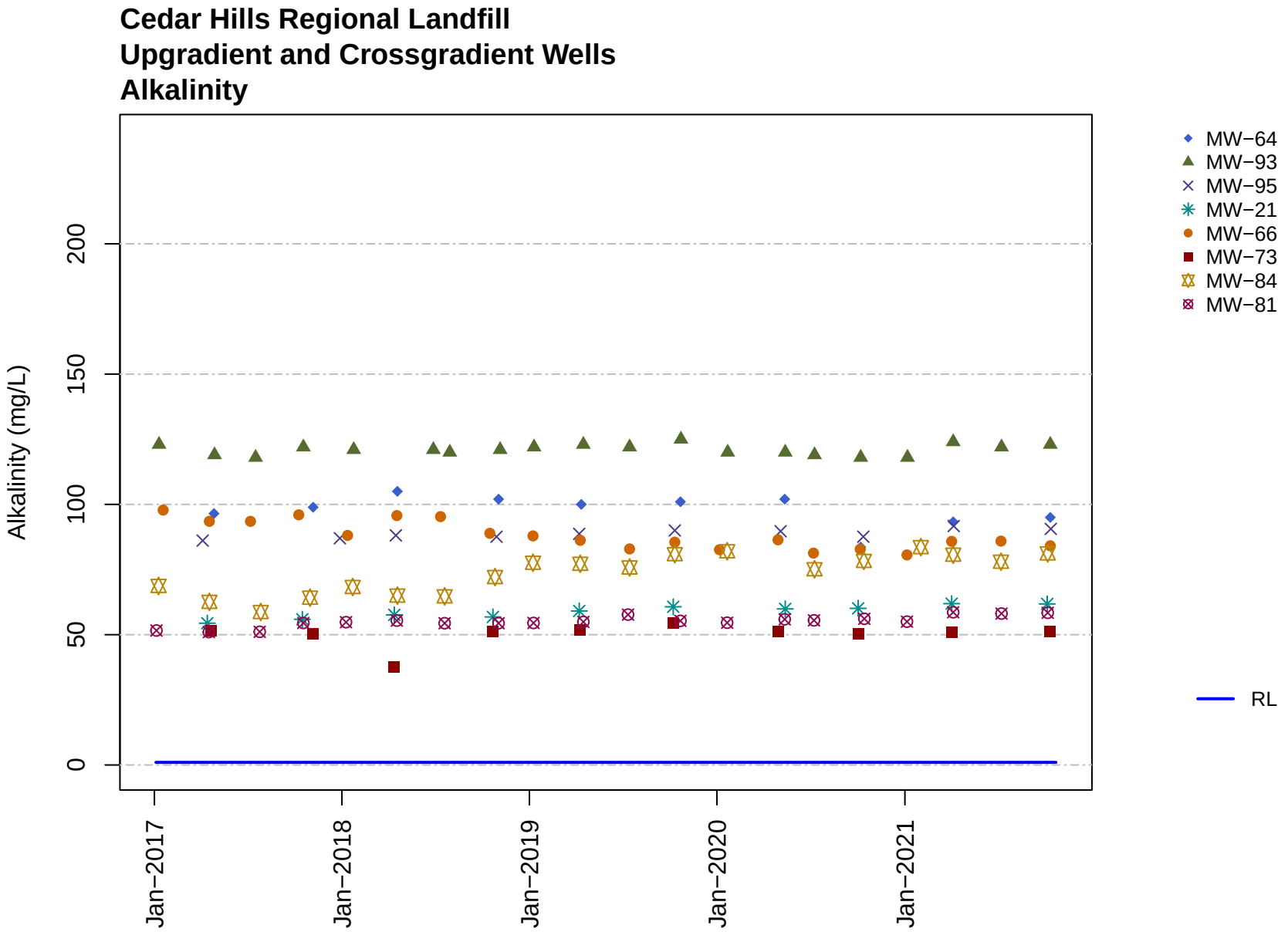

Cedar Hills Regional Landfill
Upgradient Wells
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
Washington State Groundwater Criteria − 700 umhos/cm
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

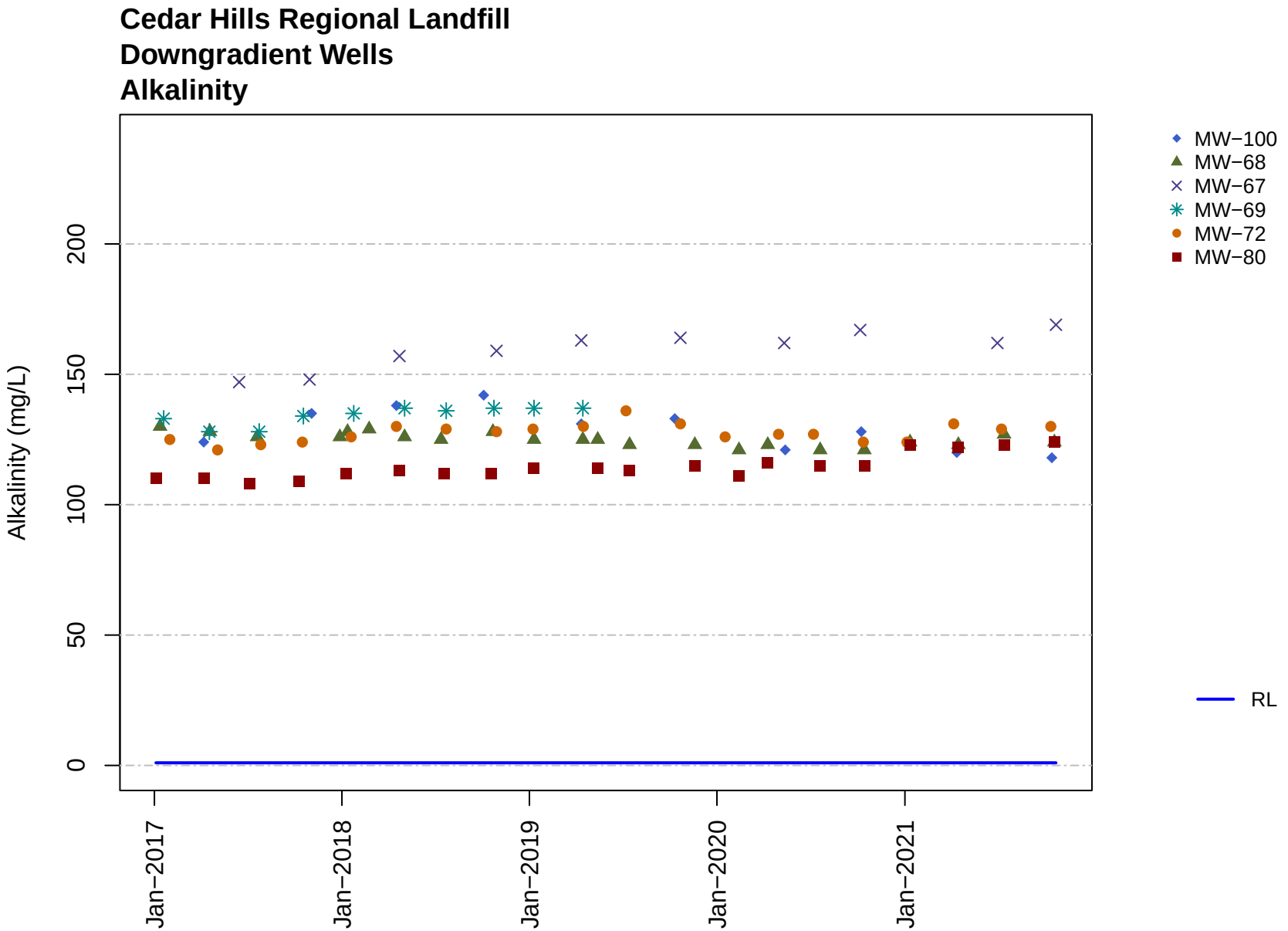

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
Washington State Groundwater Criteria − 700 umhos/cm
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

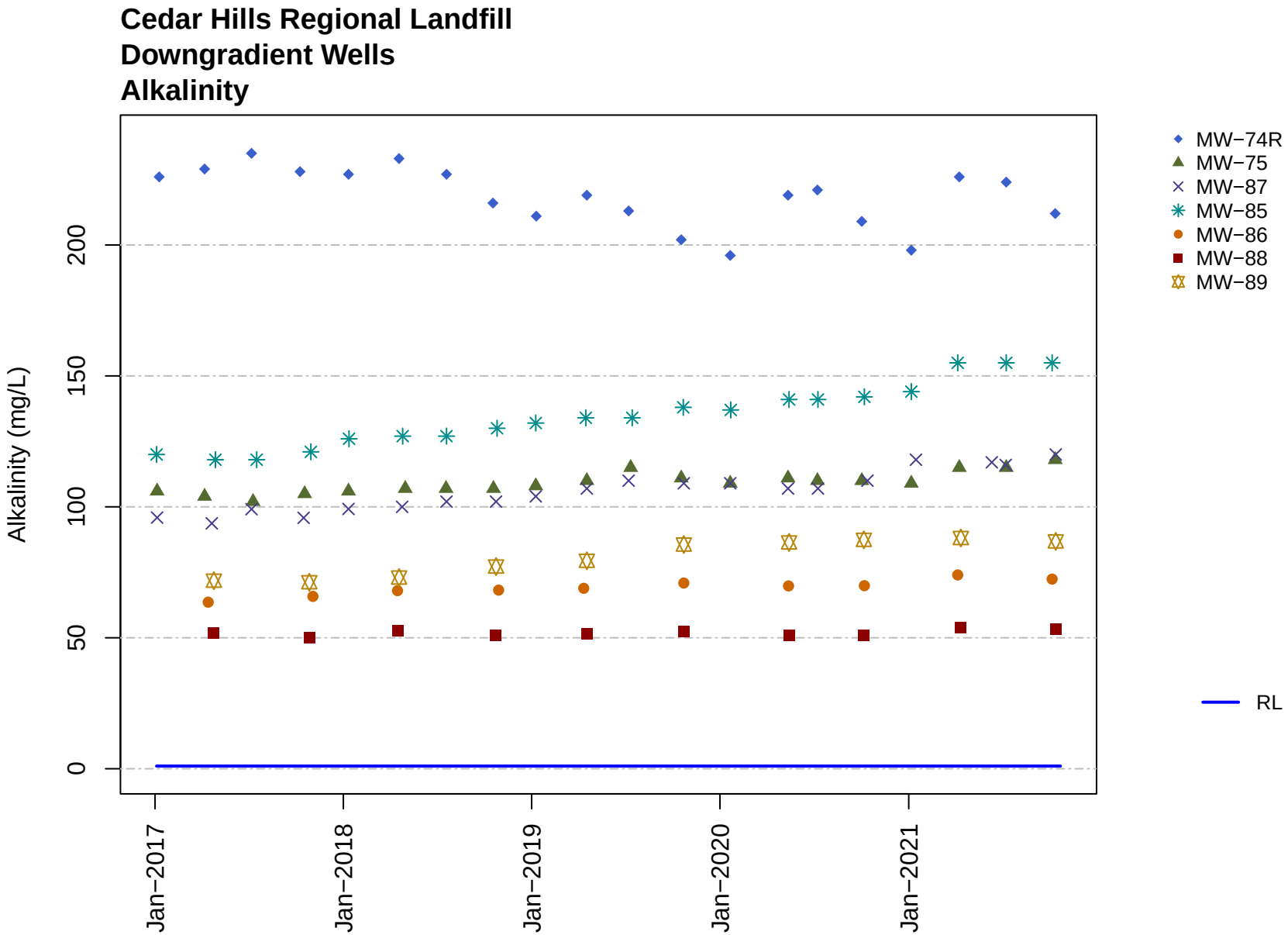

Cedar Hills Regional Landfill
Downgradient Wells
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
Washington State Groundwater Criteria − 700 umhos/cm
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

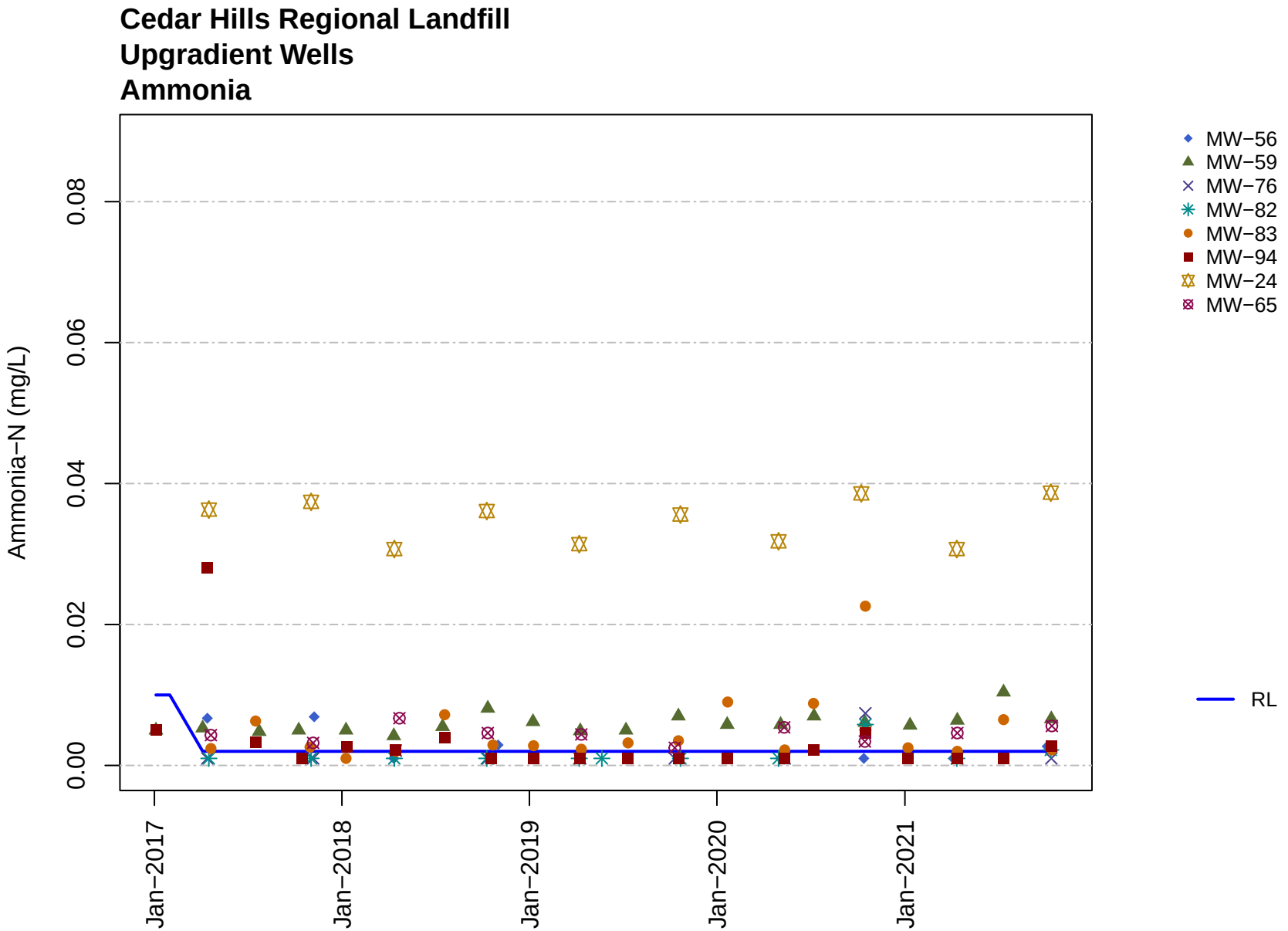

Cedar Hills Regional Landfill
Downgradient Wells
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
Washington State Groundwater Criteria − 700 umhos/cm
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

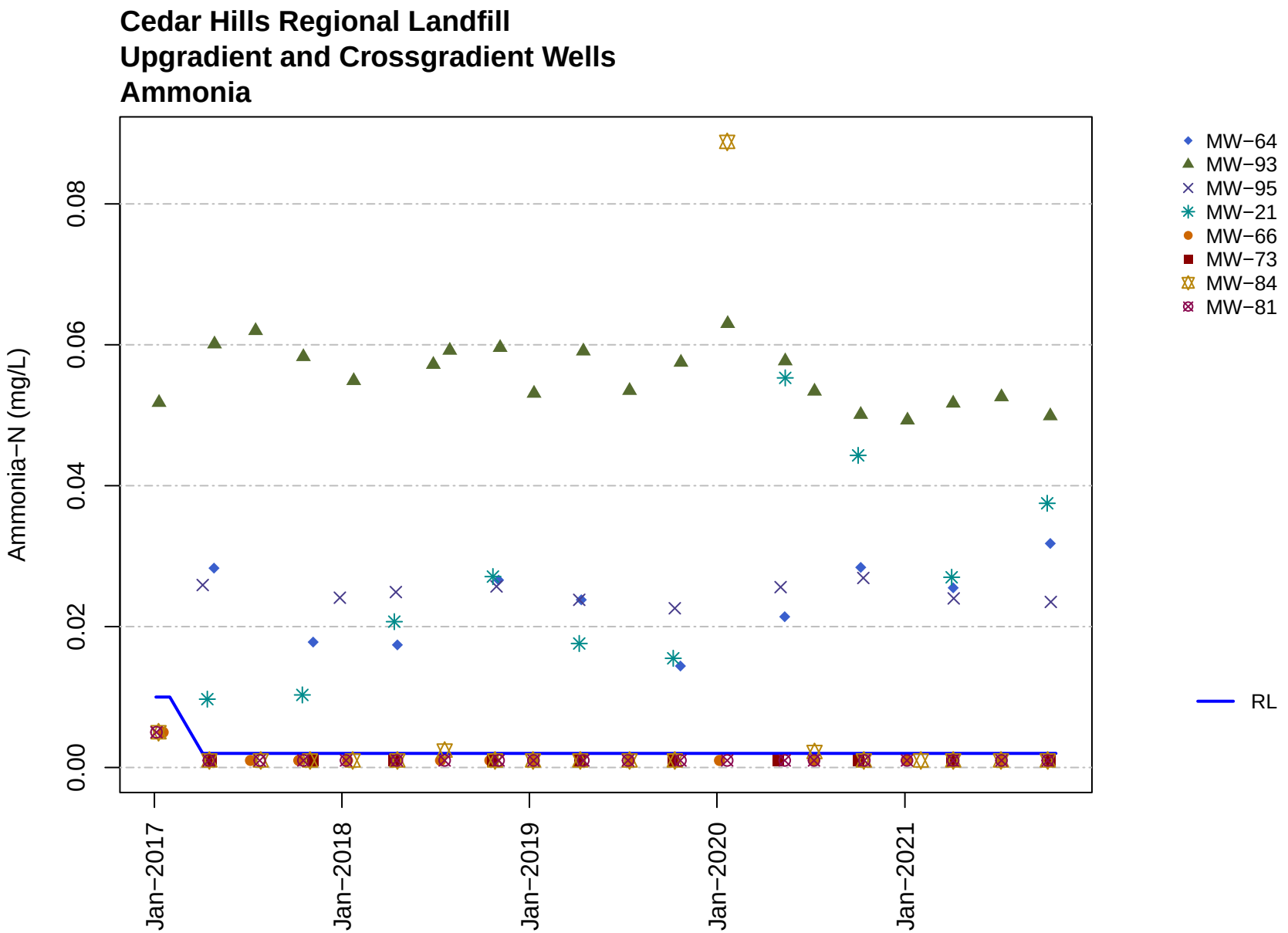

Cedar Hills Regional Landfill
Upgradient Wells
Alkalinity
Alkalinity (mg/L)
0
50
100
150
200
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

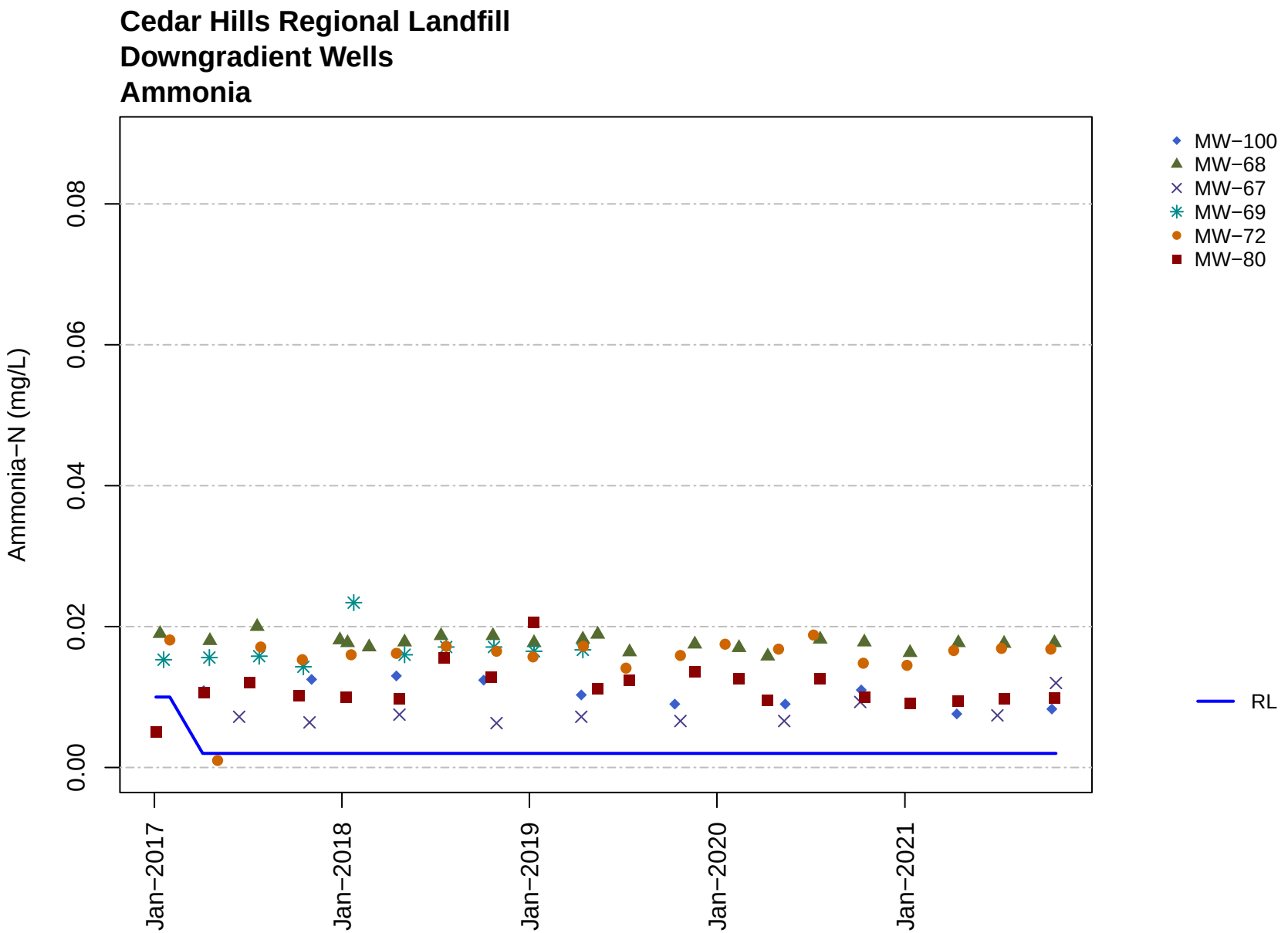

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Alkalinity
Alkalinity (mg/L)
0
50
100
150
200
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

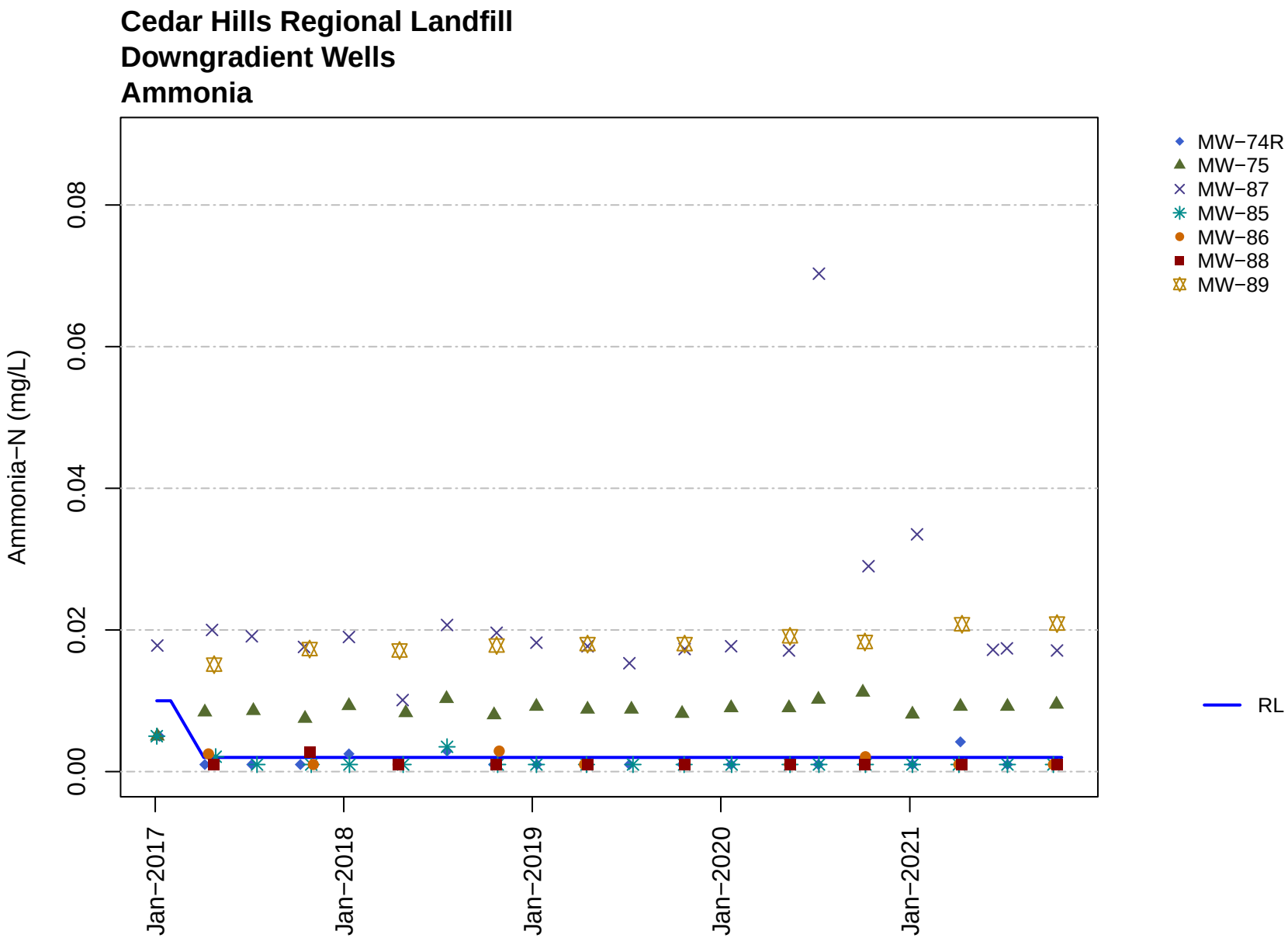

Cedar Hills Regional Landfill
Downgradient Wells
Alkalinity
Alkalinity (mg/L)
0
50
100
150
200
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

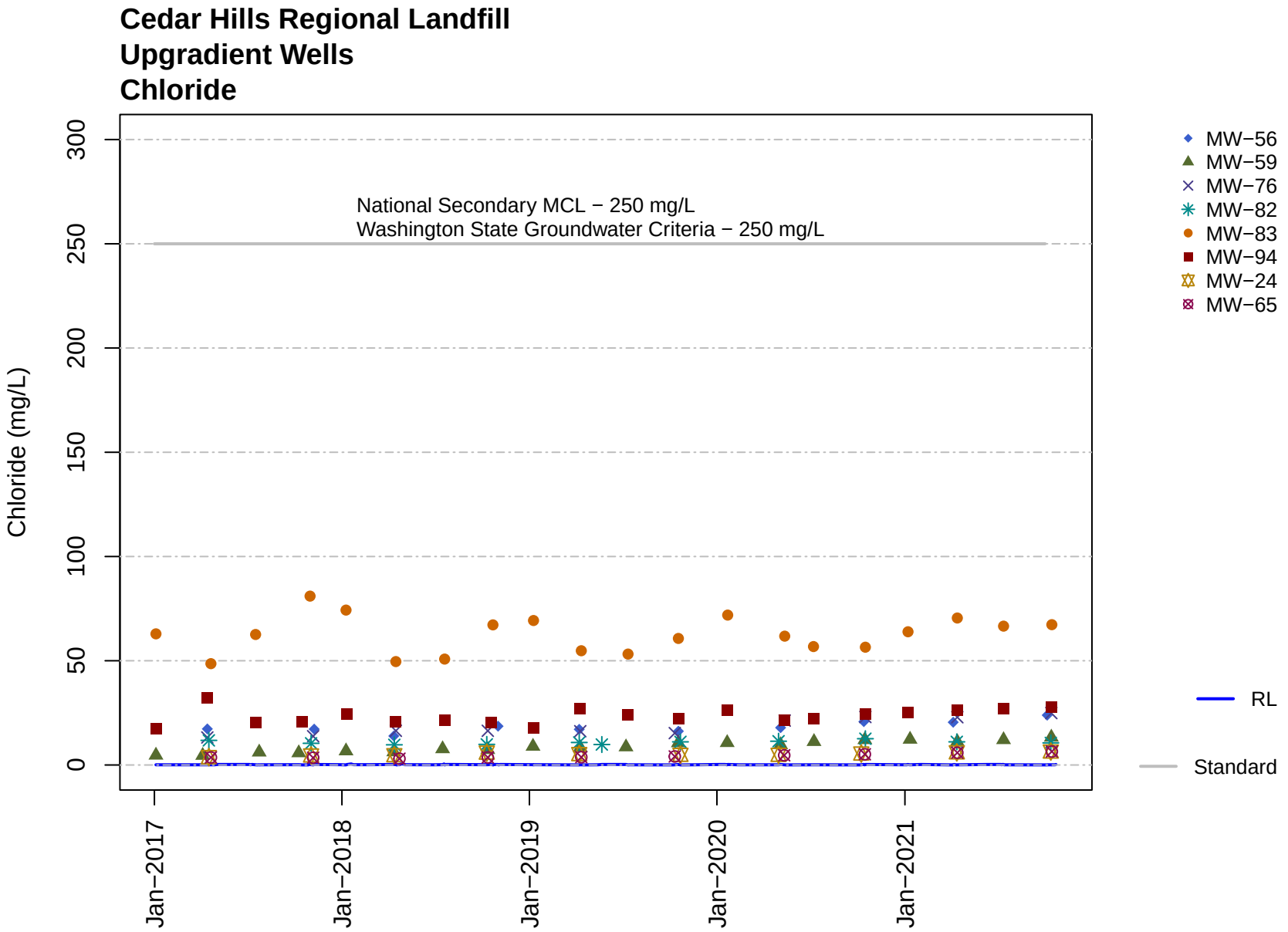

Cedar Hills Regional Landfill
Downgradient Wells
Alkalinity
Alkalinity (mg/L)
0
50
100
150
200
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

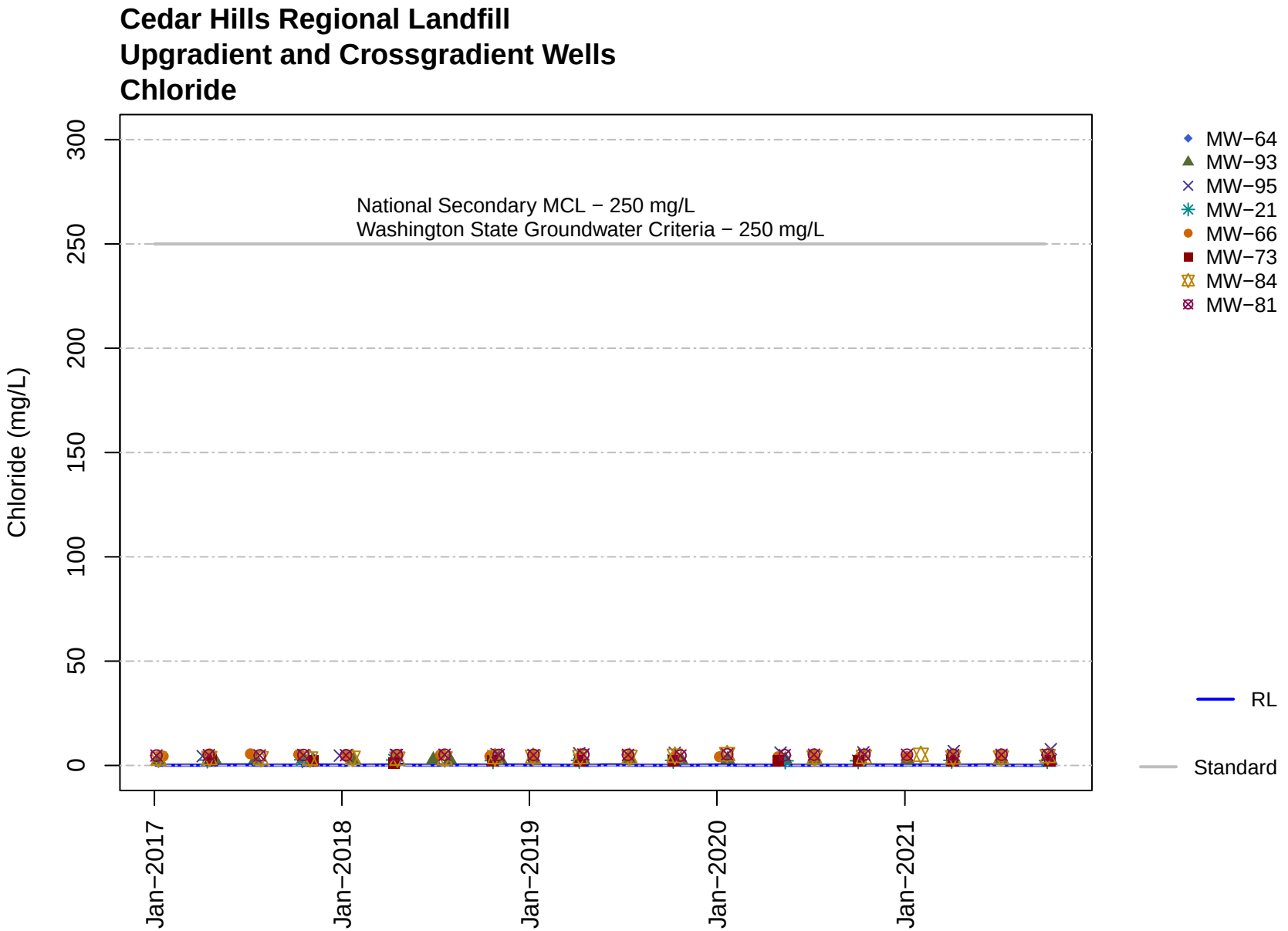

Cedar Hills Regional Landfill
Upgradient Wells
Ammonia
Ammonia−N (mg/L)
0.00
0.02
0.04
0.06
0.08
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

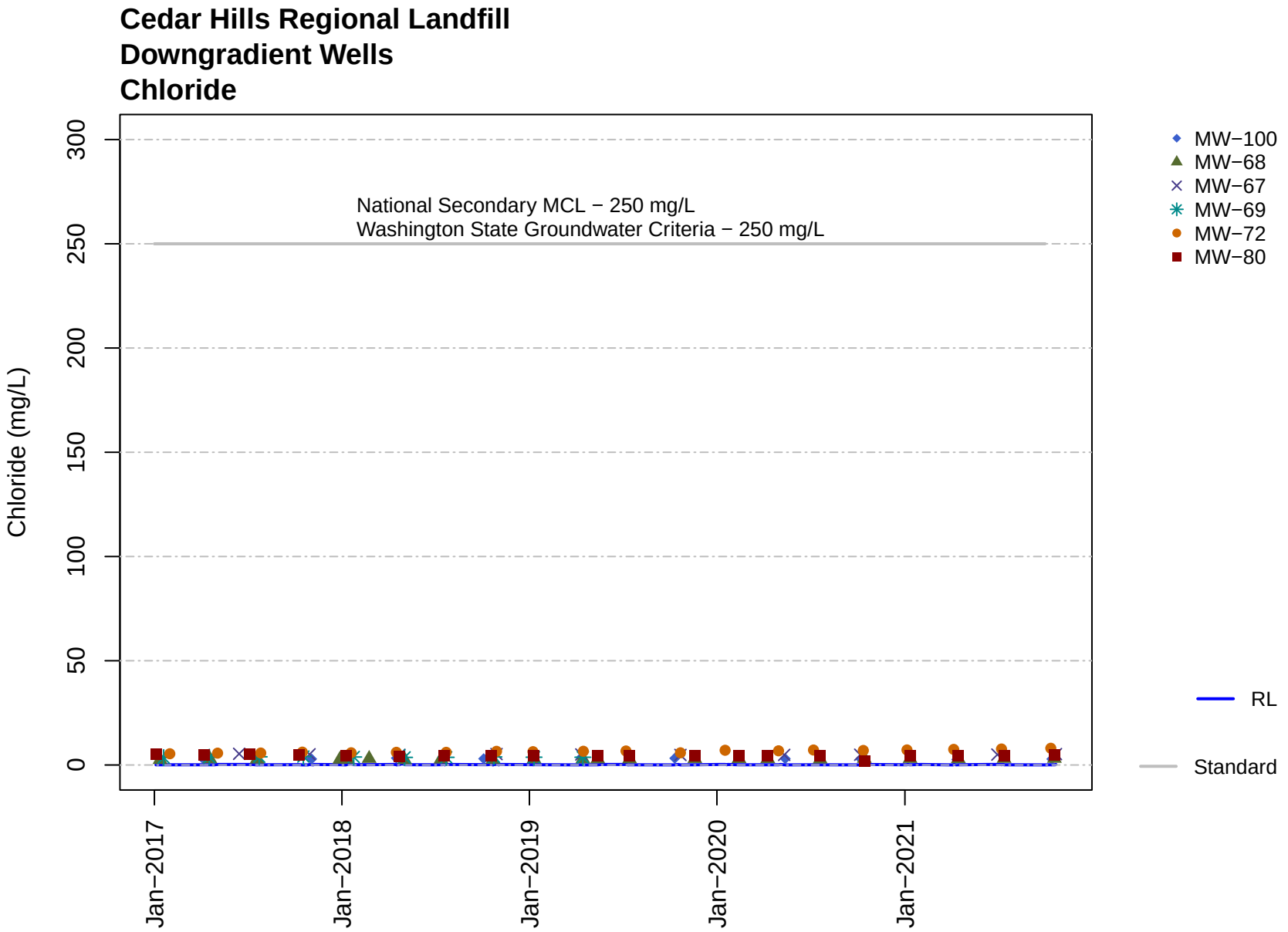

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Ammonia
Ammonia−N (mg/L)
0.00
0.02
0.04
0.06
0.08
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

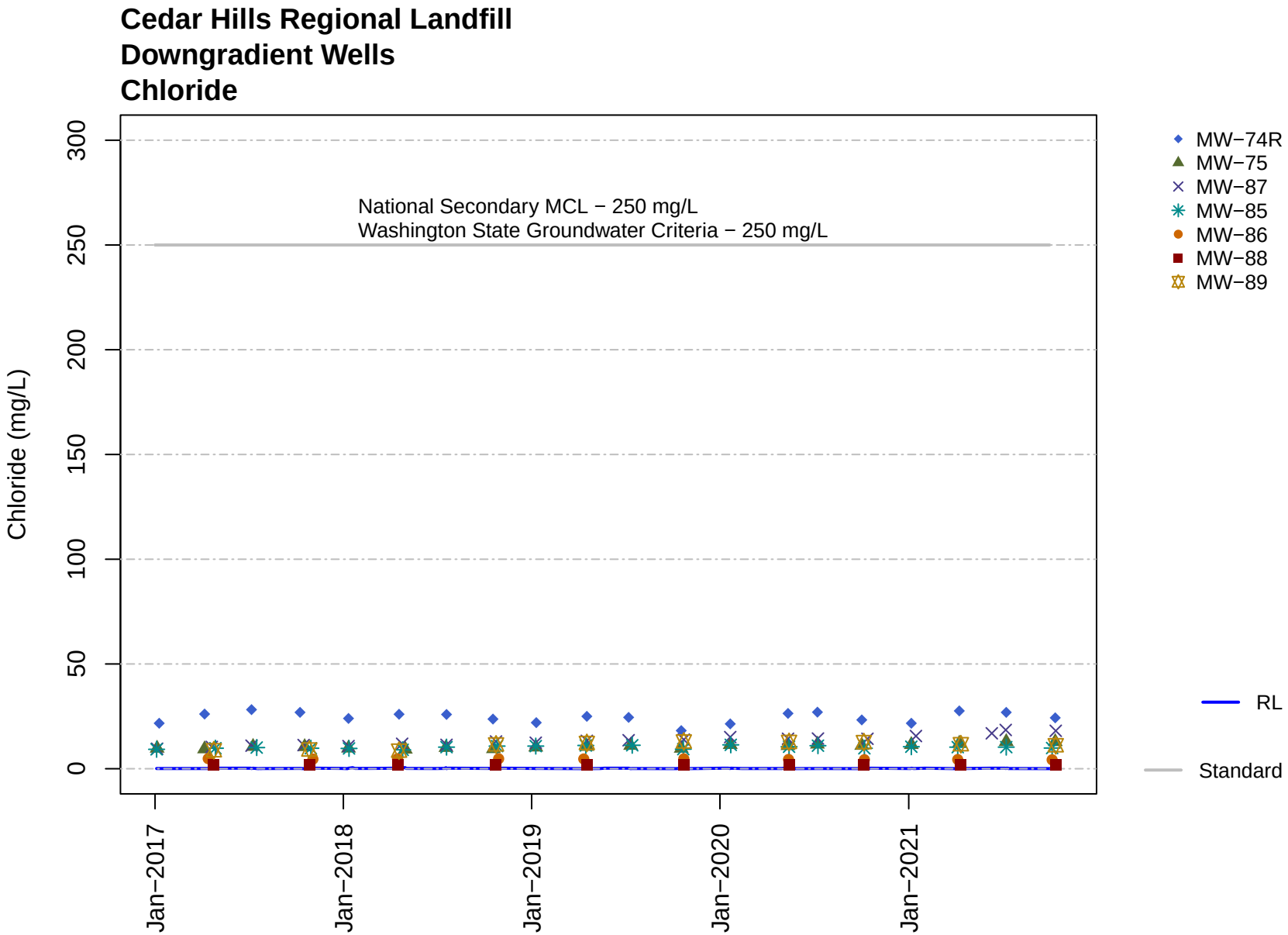

Cedar Hills Regional Landfill
Downgradient Wells
Ammonia
Ammonia−N (mg/L)
0.00
0.02
0.04
0.06
0.08
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

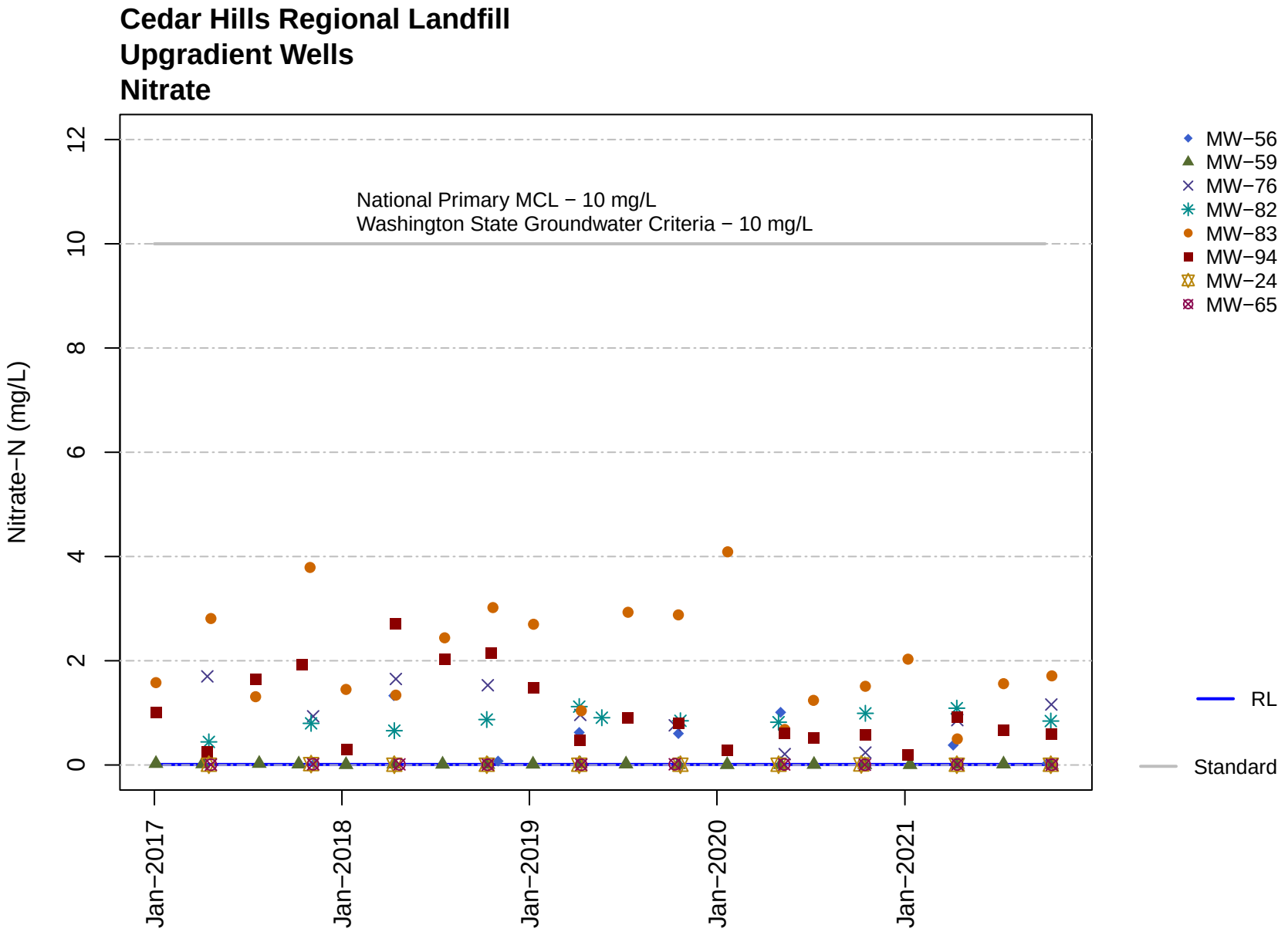

Cedar Hills Regional Landfill
Downgradient Wells
Ammonia
Ammonia−N (mg/L)
0.00
0.02
0.04
0.06
0.08
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

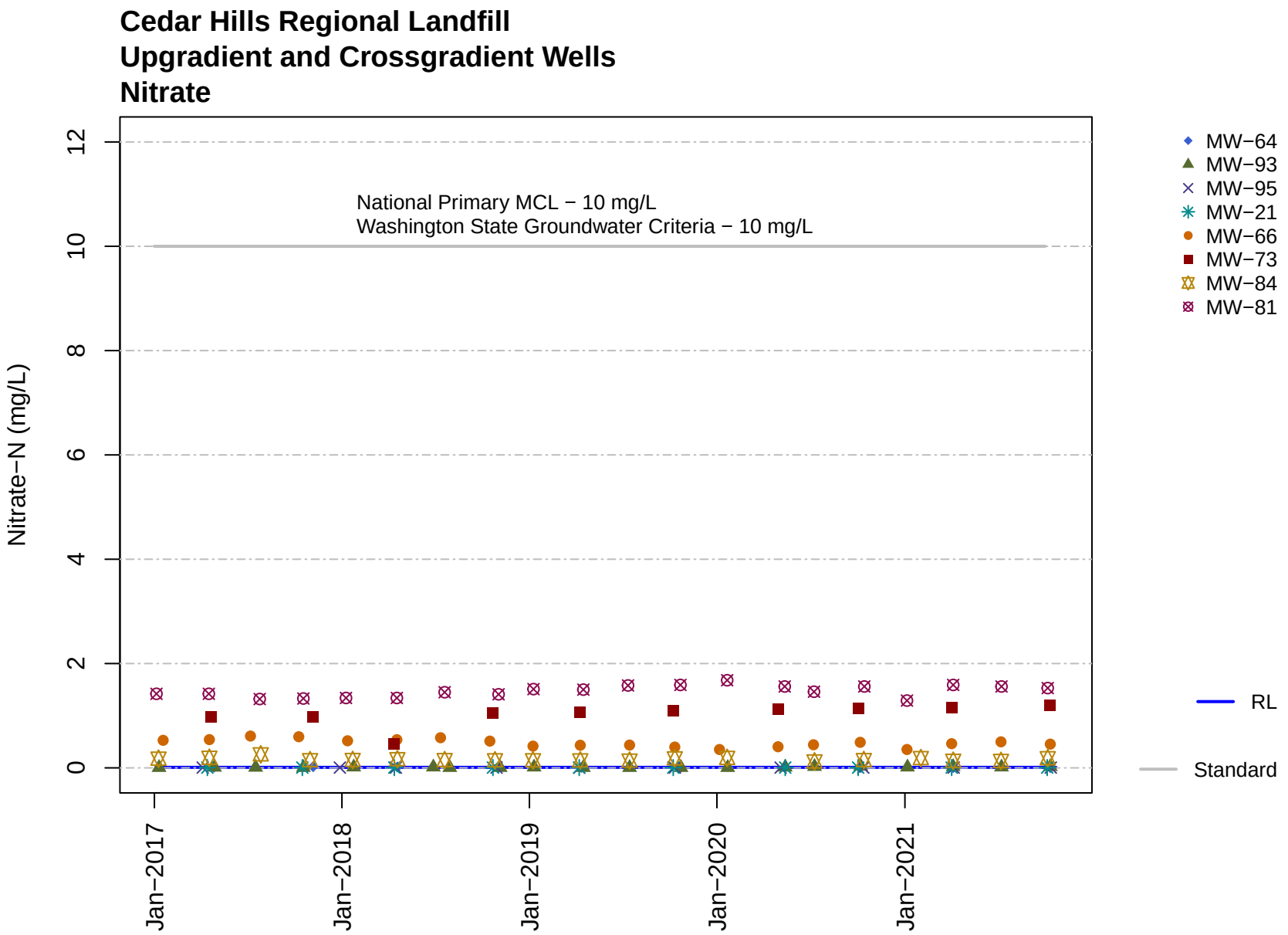

Cedar Hills Regional Landfill
Upgradient Wells
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

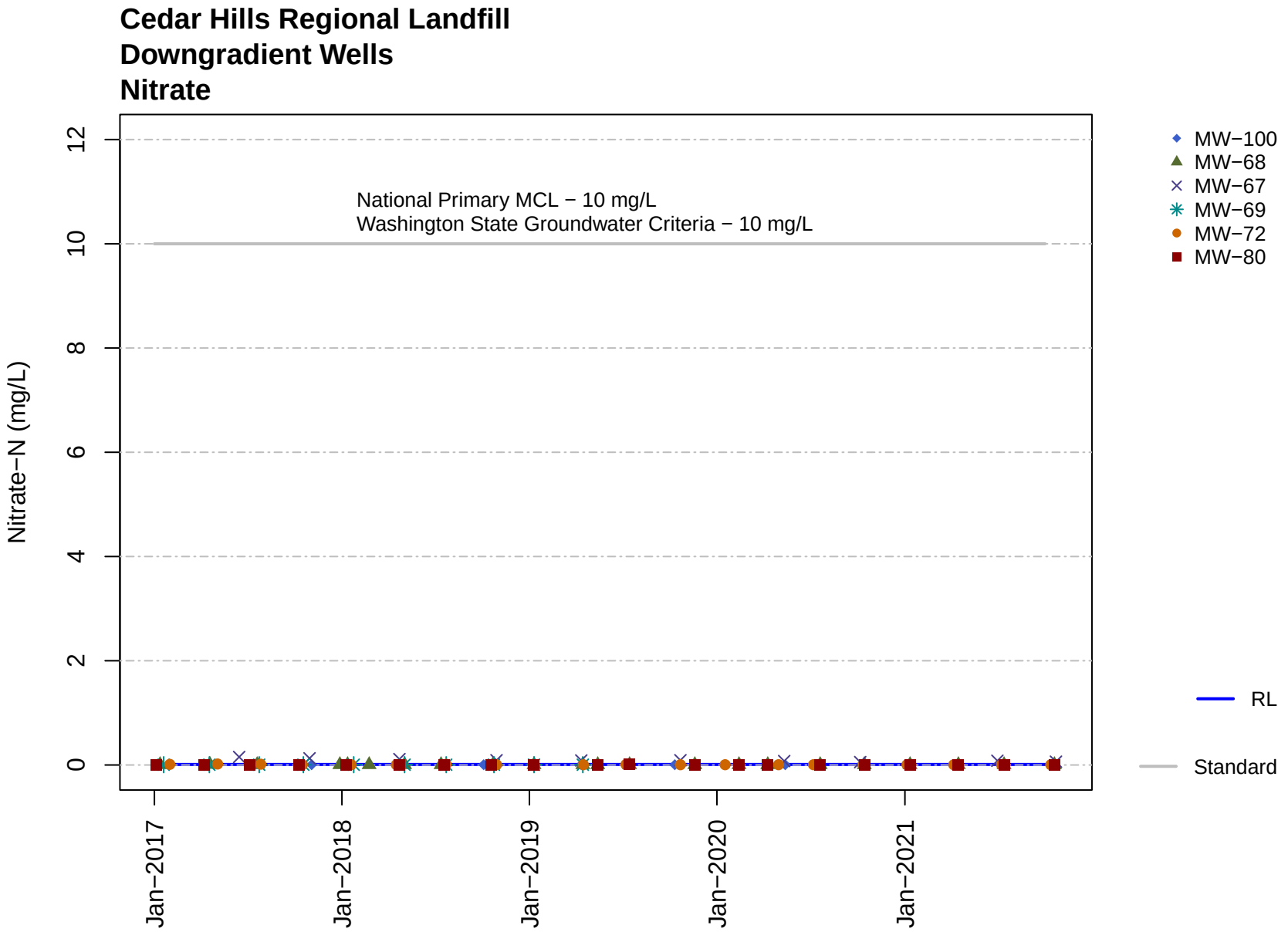

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

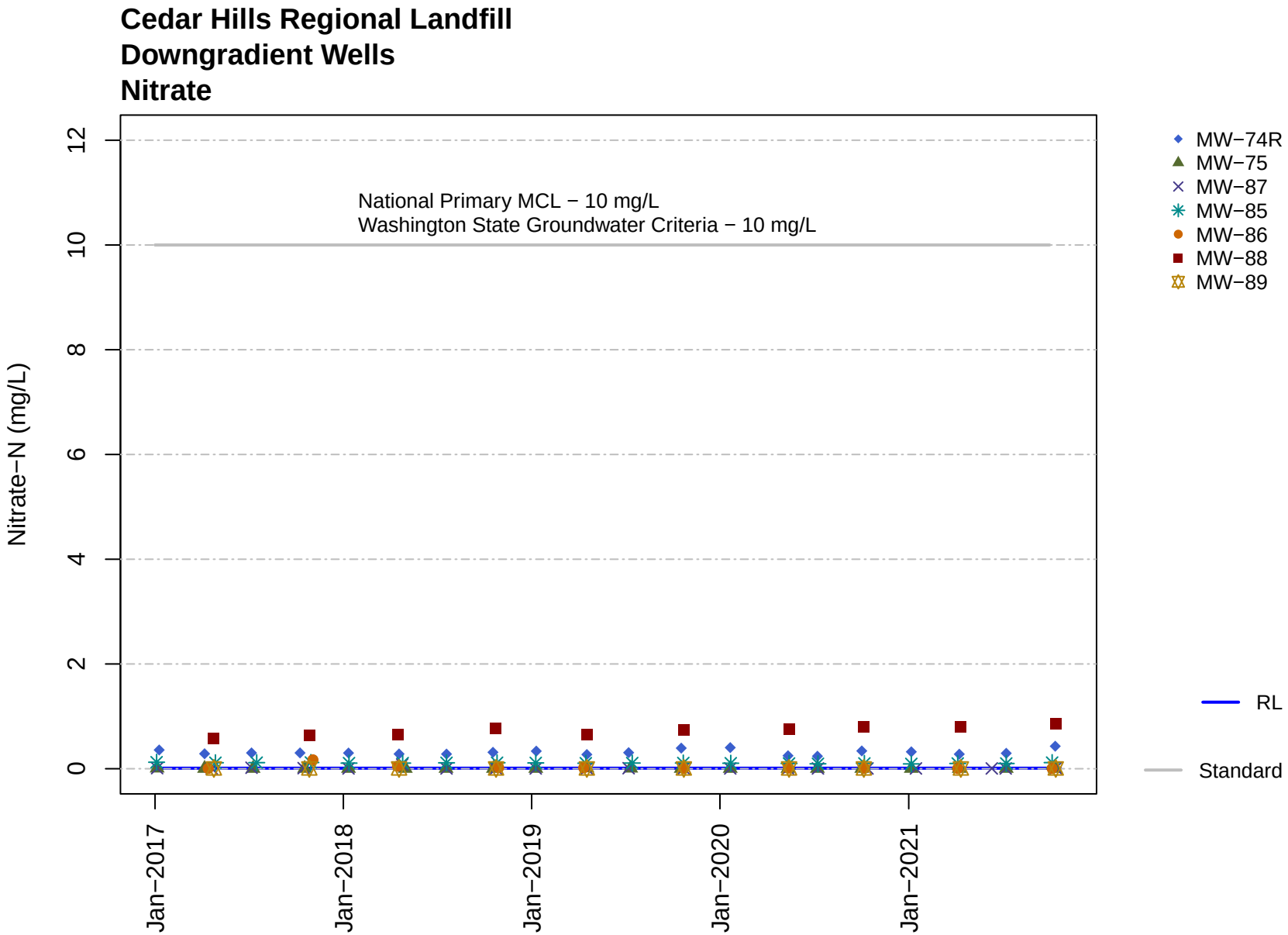

Cedar Hills Regional Landfill
Downgradient Wells
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

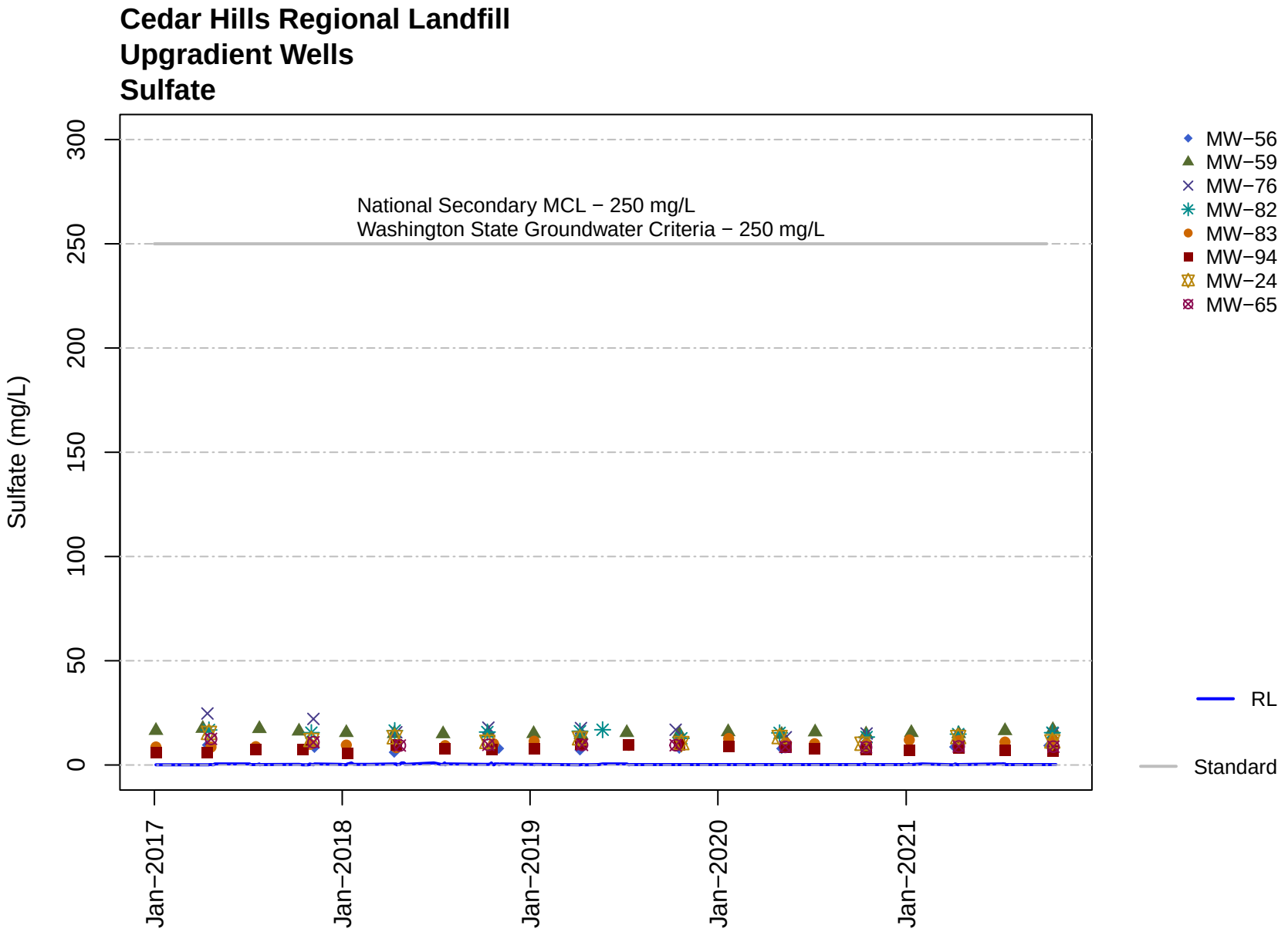

Cedar Hills Regional Landfill
Downgradient Wells
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

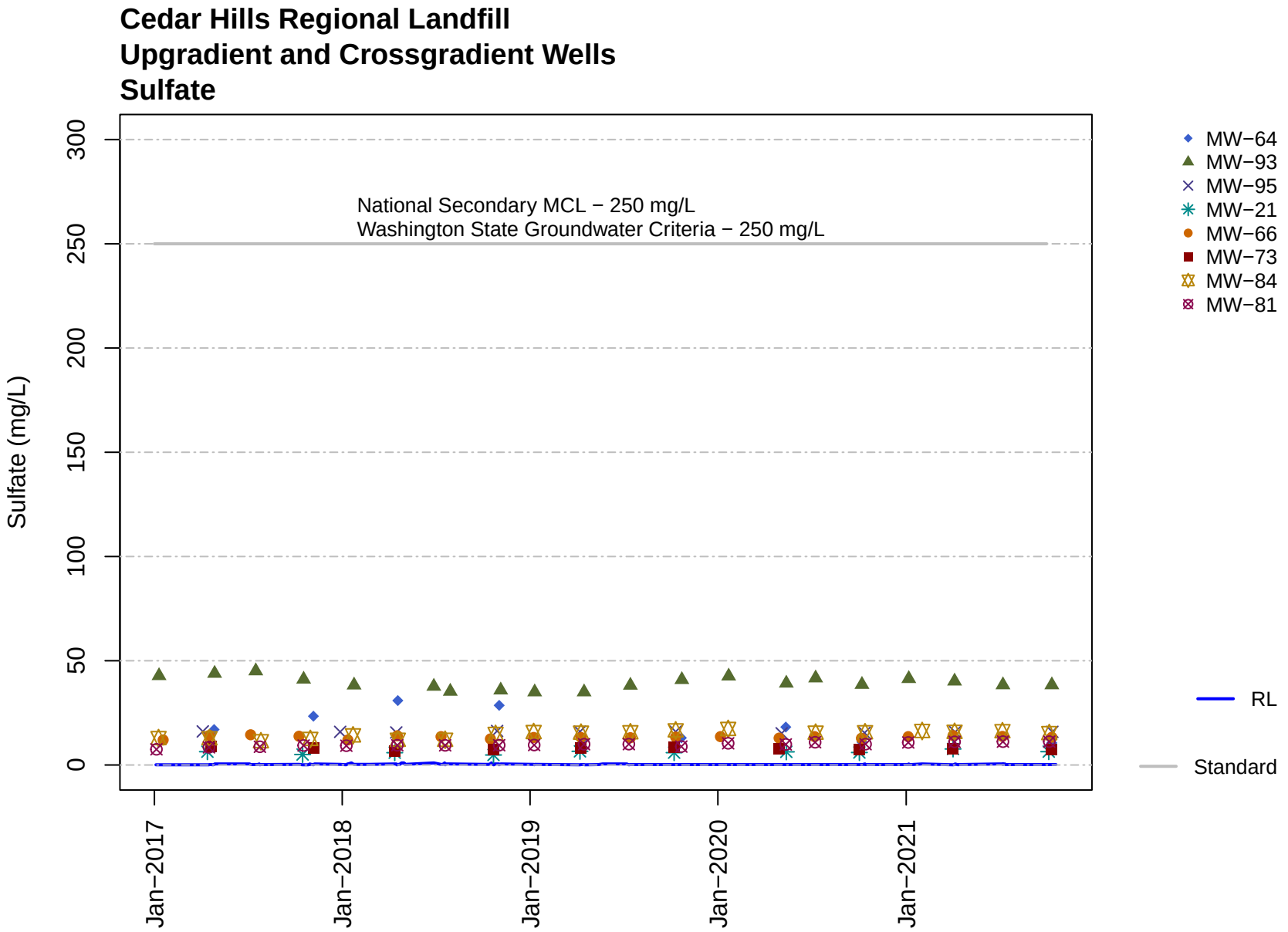

Cedar Hills Regional Landfill
Upgradient Wells
Nitrate
National Primary MCL − 10 mg/L
Washington State Groundwater Criteria − 10 mg/L
Nitrate−N (mg/L)
0
2
4
6
8
10
12
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

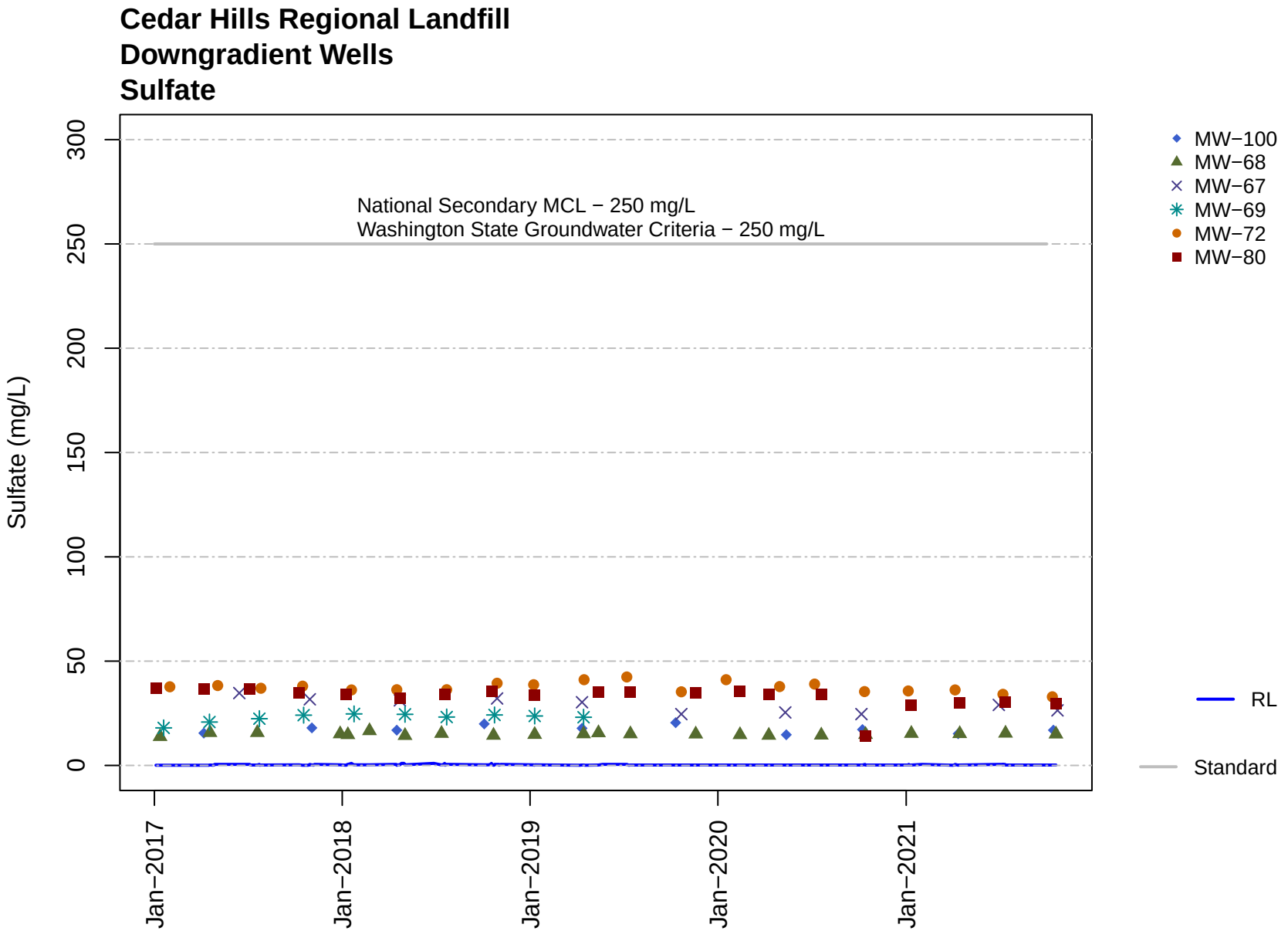

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Nitrate
National Primary MCL − 10 mg/L
Washington State Groundwater Criteria − 10 mg/L
Nitrate−N (mg/L)
0
2
4
6
8
10
12
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

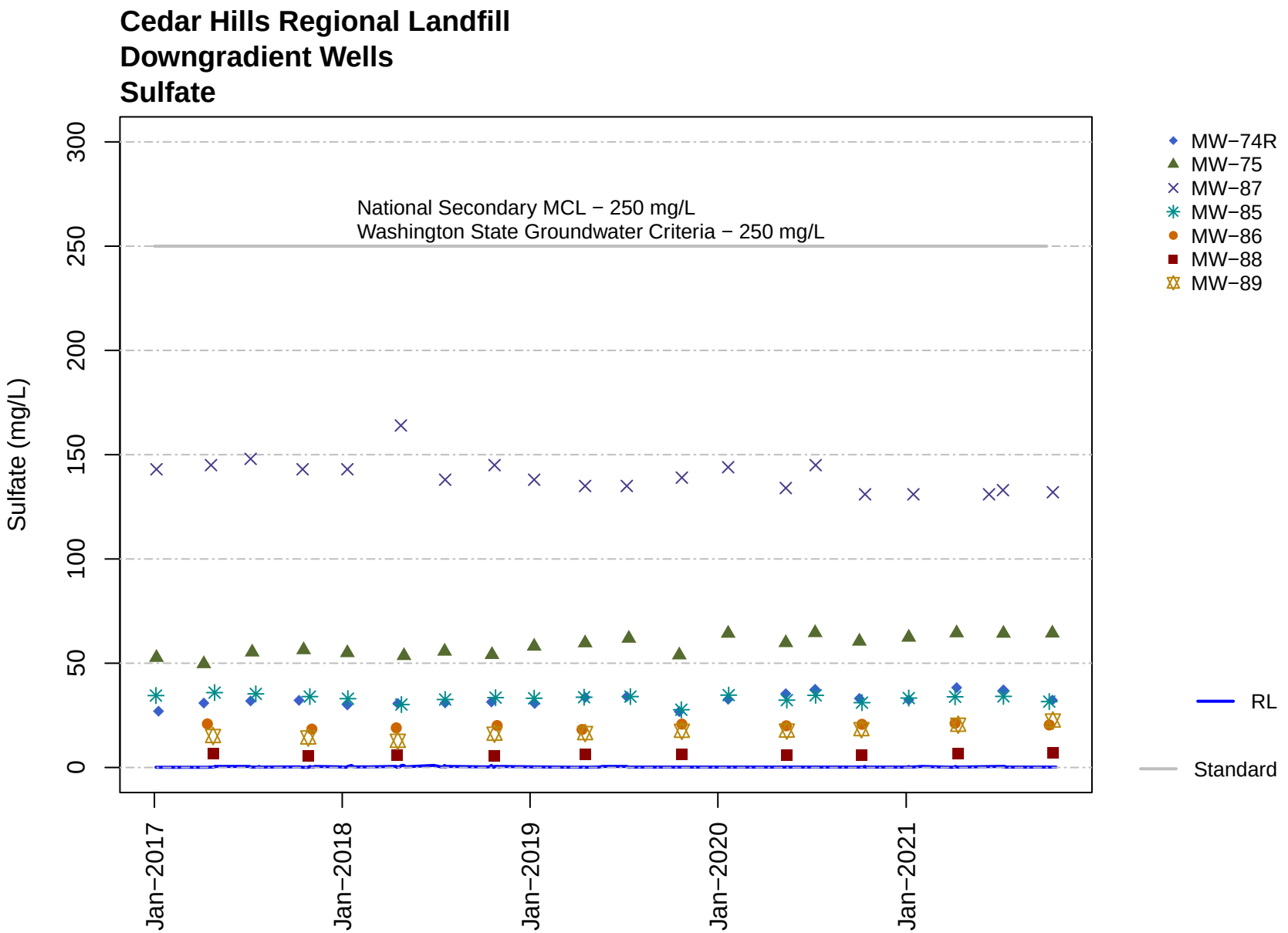

Cedar Hills Regional Landfill
Downgradient Wells
Nitrate
Nitrate−N (mg/L)
0
2
4
6
8
10
12
National Primary MCL − 10 mg/L
Washington State Groundwater Criteria − 10 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

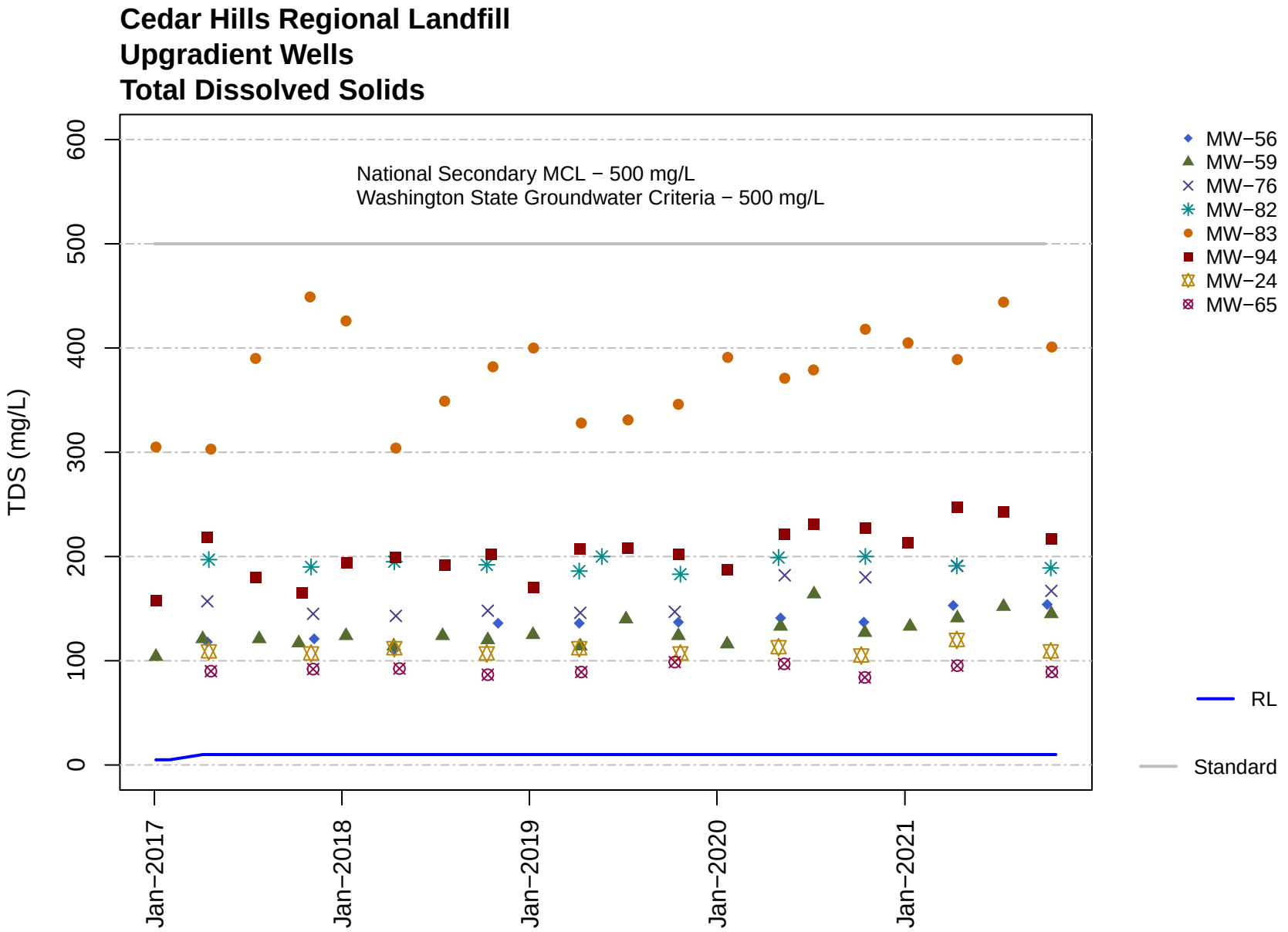

Cedar Hills Regional Landfill
Downgradient Wells
Nitrate
National Primary MCL − 10 mg/L
Washington State Groundwater Criteria − 10 mg/L
Nitrate−N (mg/L)
0
2
4
6
8
10
12
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

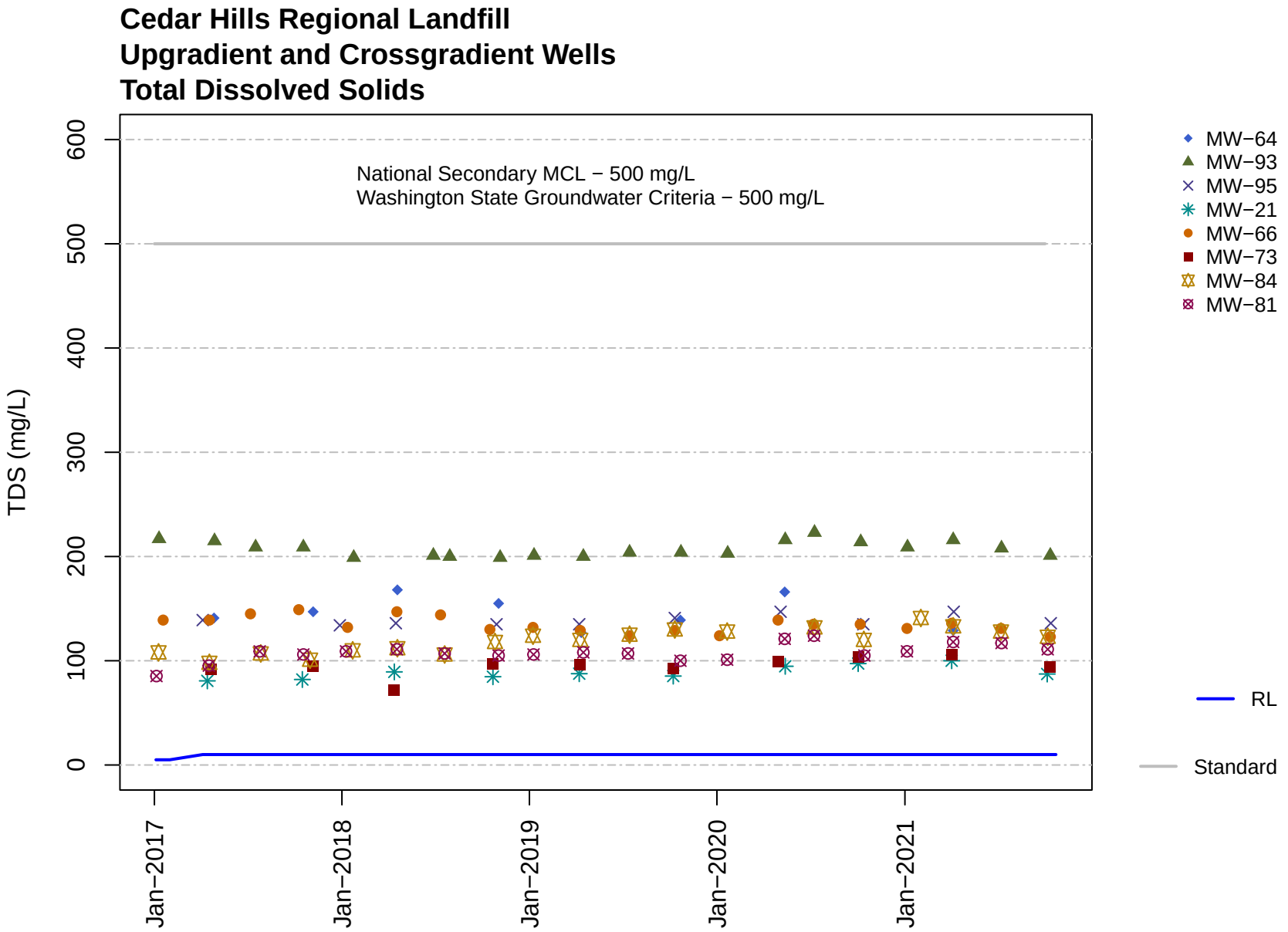

Cedar Hills Regional Landfill
Upgradient Wells
Sulfate
Sulfate (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

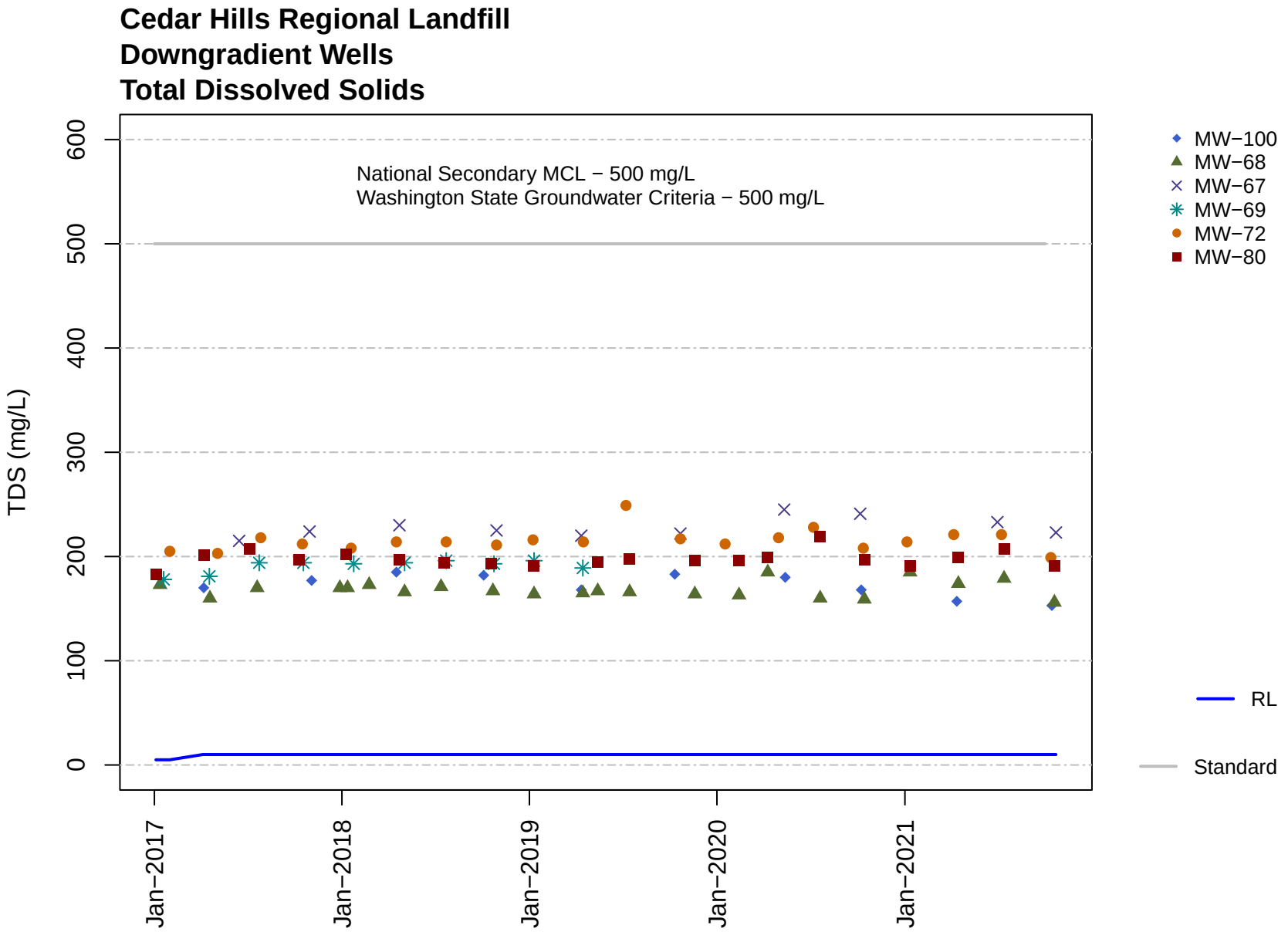

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Sulfate
Sulfate (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

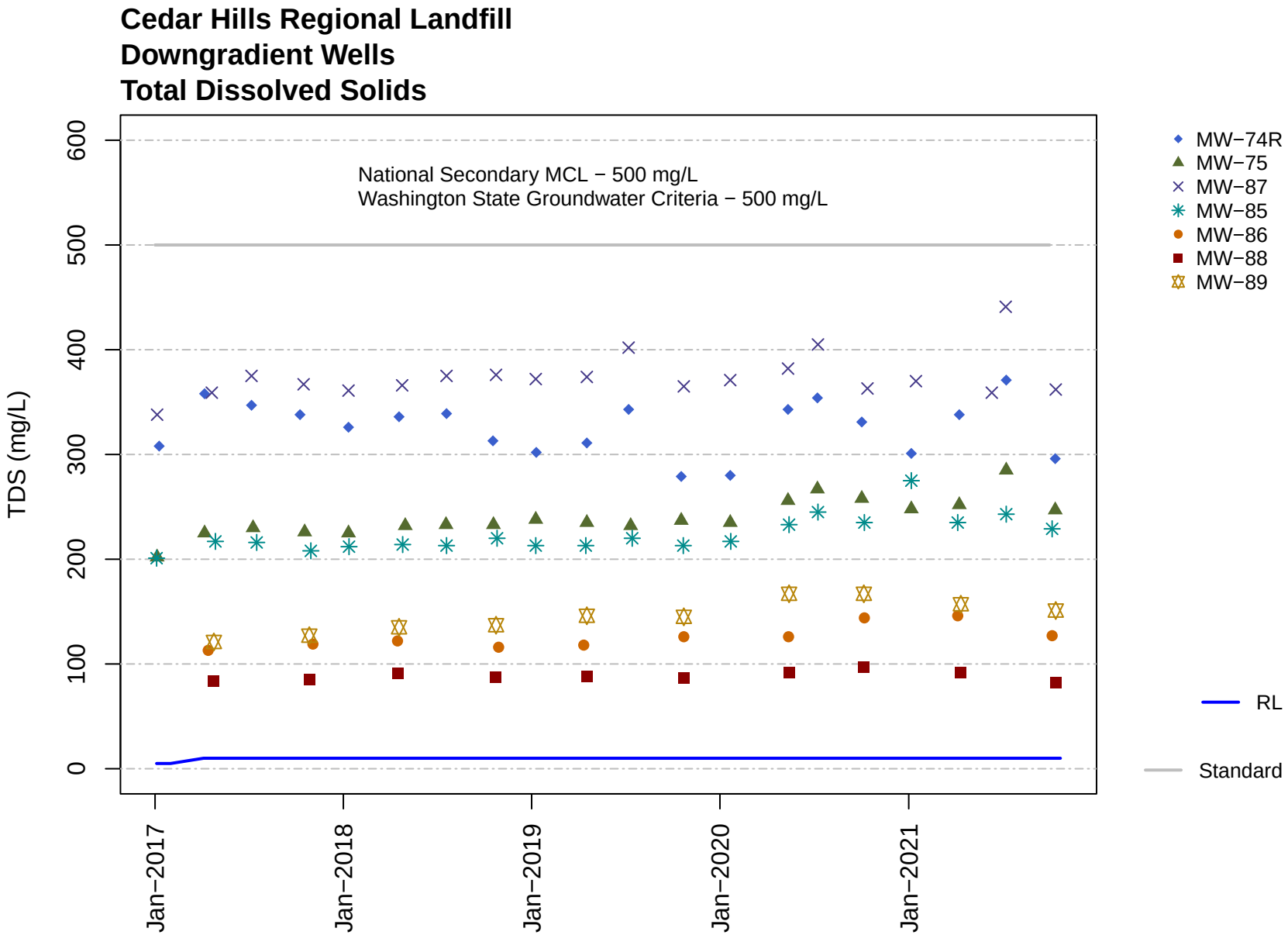

Cedar Hills Regional Landfill
Downgradient Wells
Sulfate
Sulfate (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

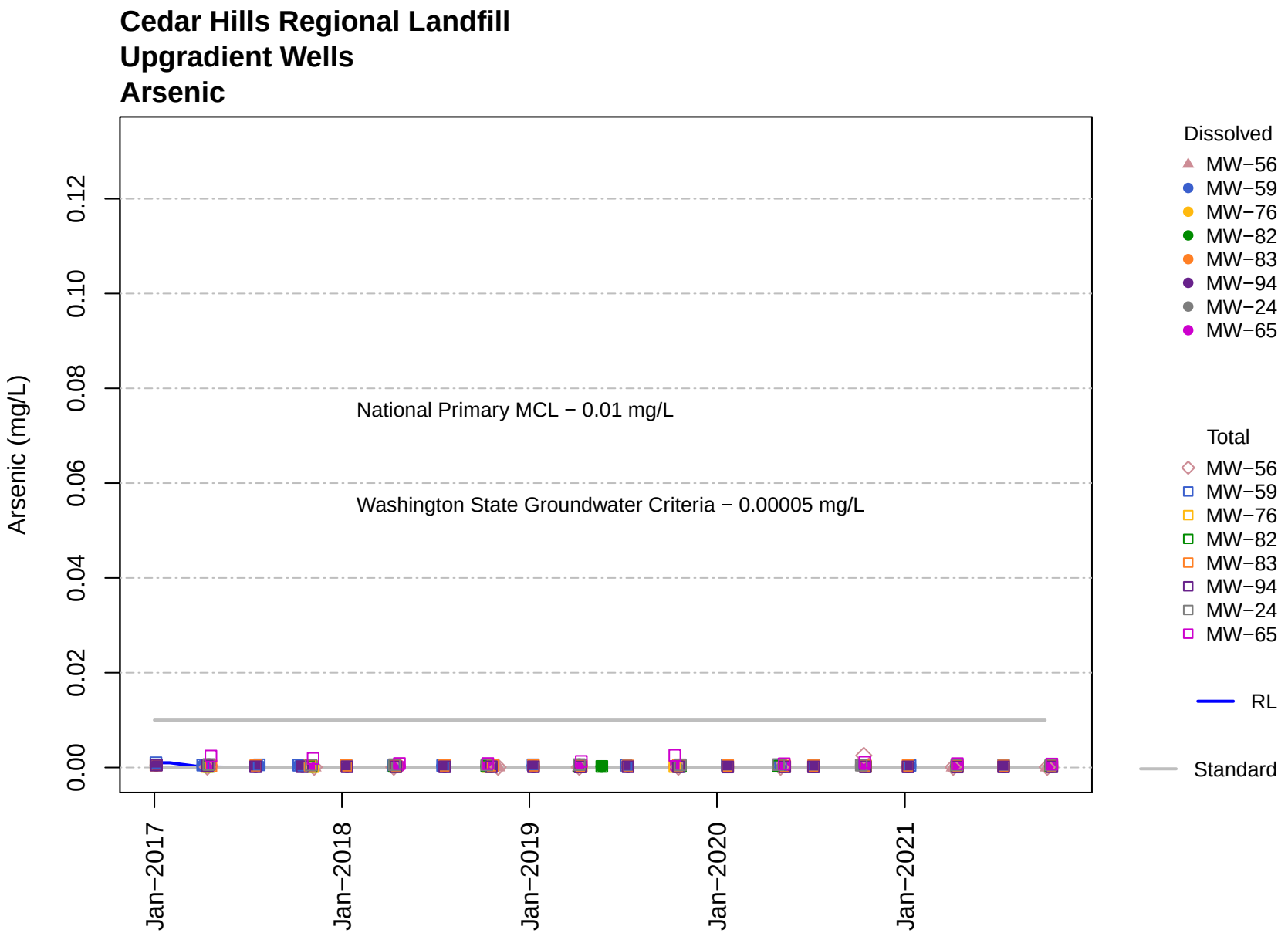

Cedar Hills Regional Landfill
Downgradient Wells
Sulfate
Sulfate (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

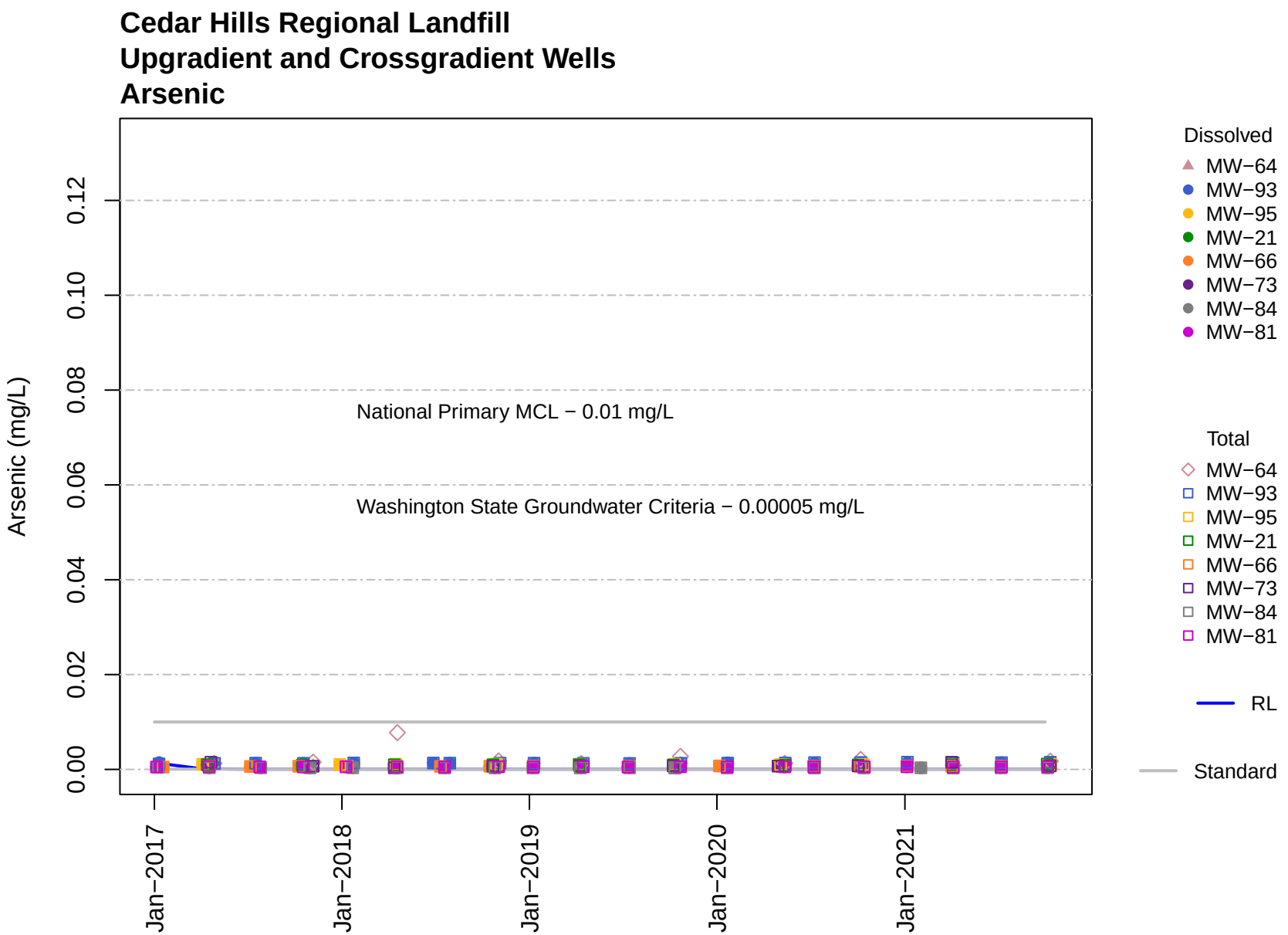

Cedar Hills Regional Landfill
Upgradient Wells
Total Dissolved Solids
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
TDS (mg/L)
0
100
200
300
400
500
600
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

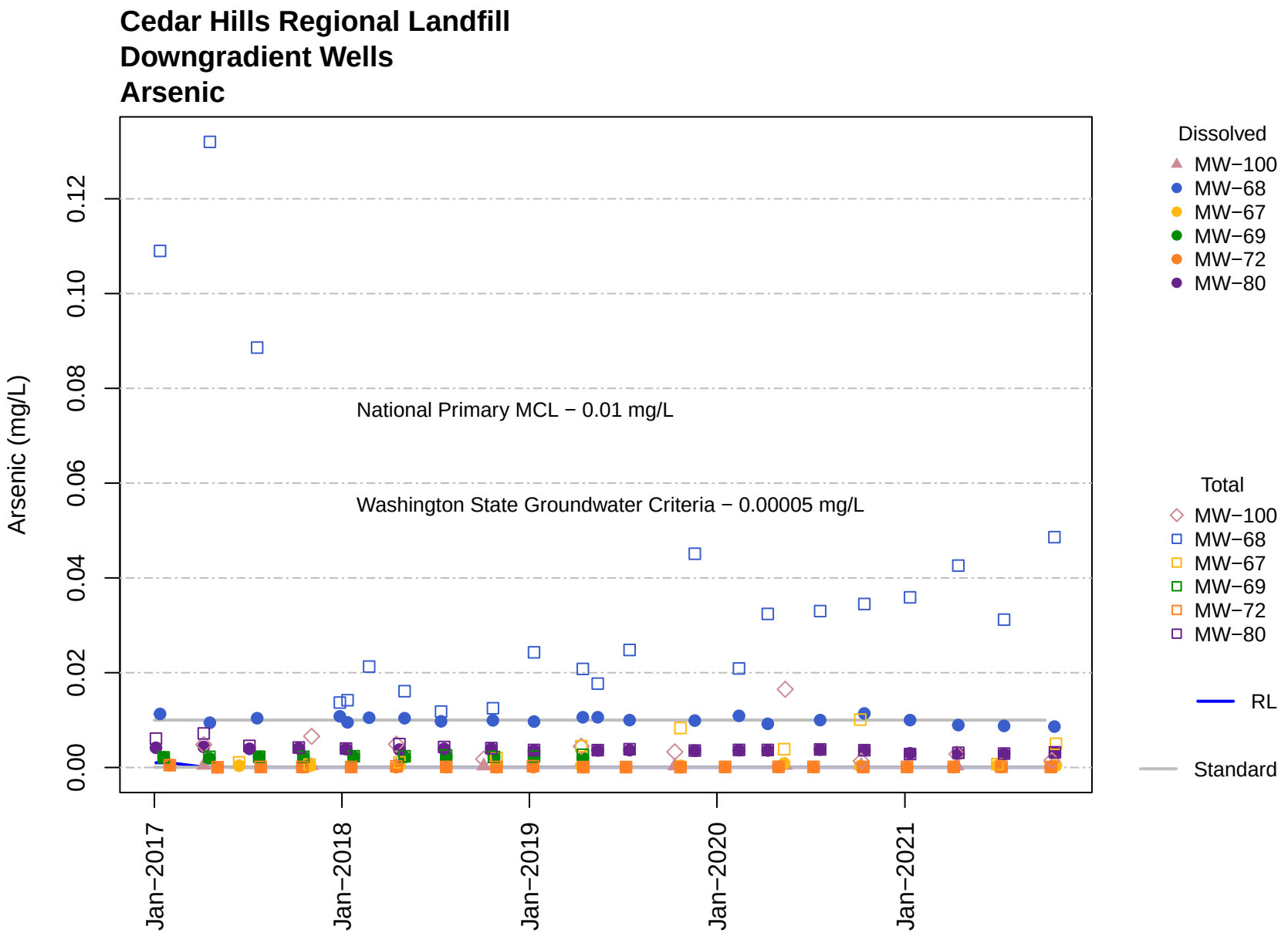

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Total Dissolved Solids
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
TDS (mg/L)
0
100
200
300
400
500
600
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

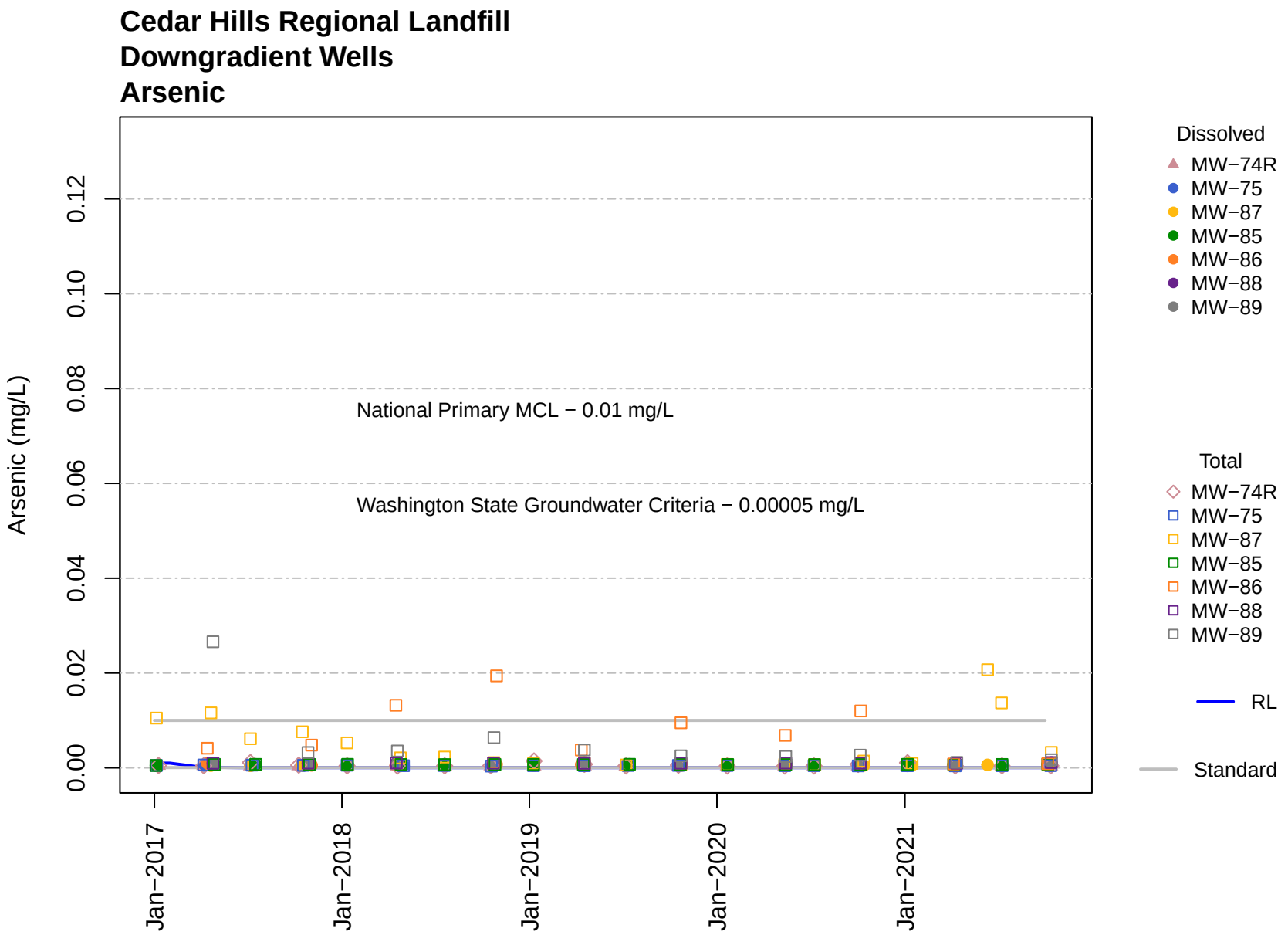

Cedar Hills Regional Landfill
Downgradient Wells
Total Dissolved Solids
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
TDS (mg/L)
0
100
200
300
400
500
600
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

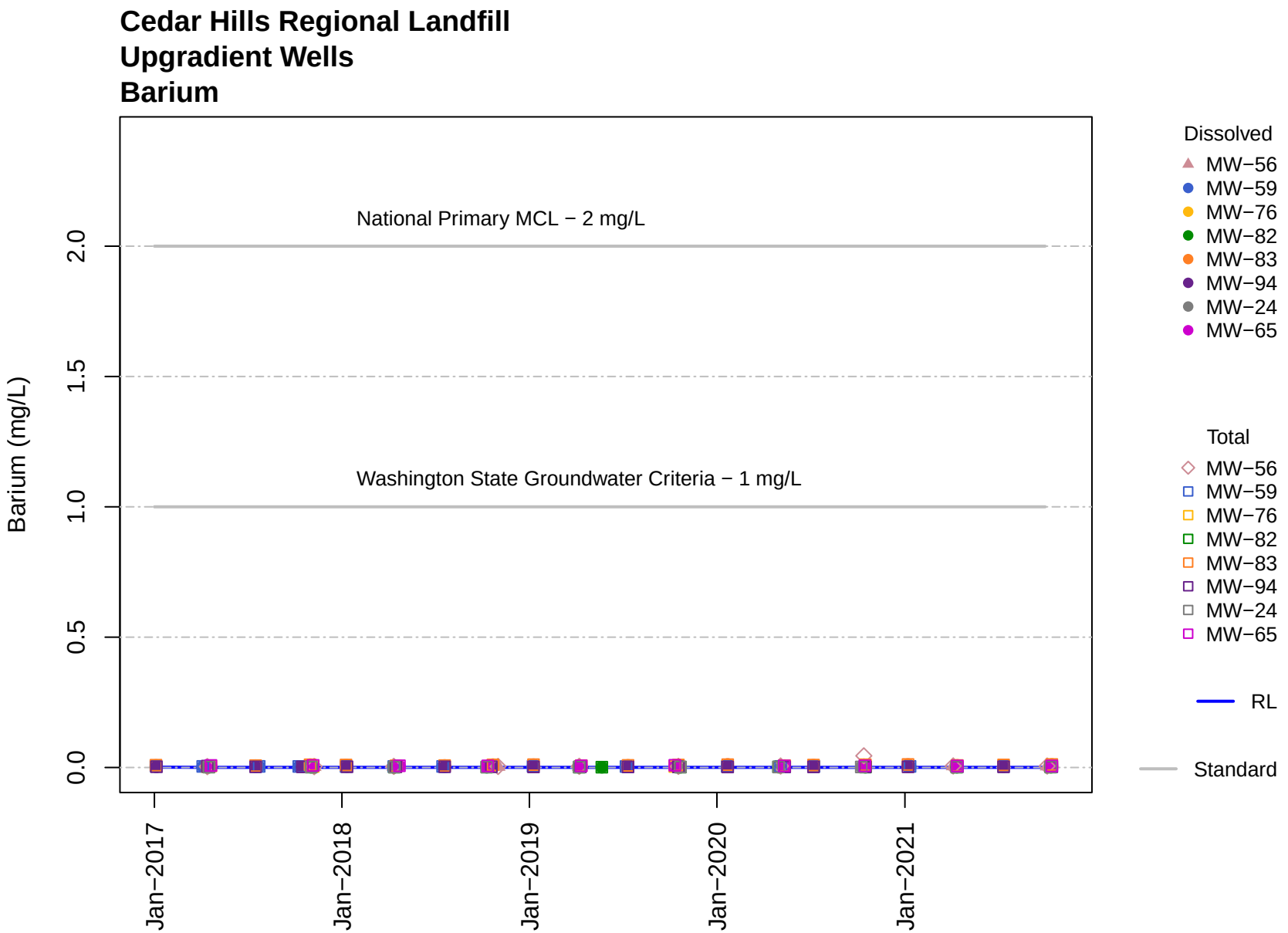

Cedar Hills Regional Landfill
Downgradient Wells
Total Dissolved Solids
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
TDS (mg/L)
0
100
200
300
400
500
600
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

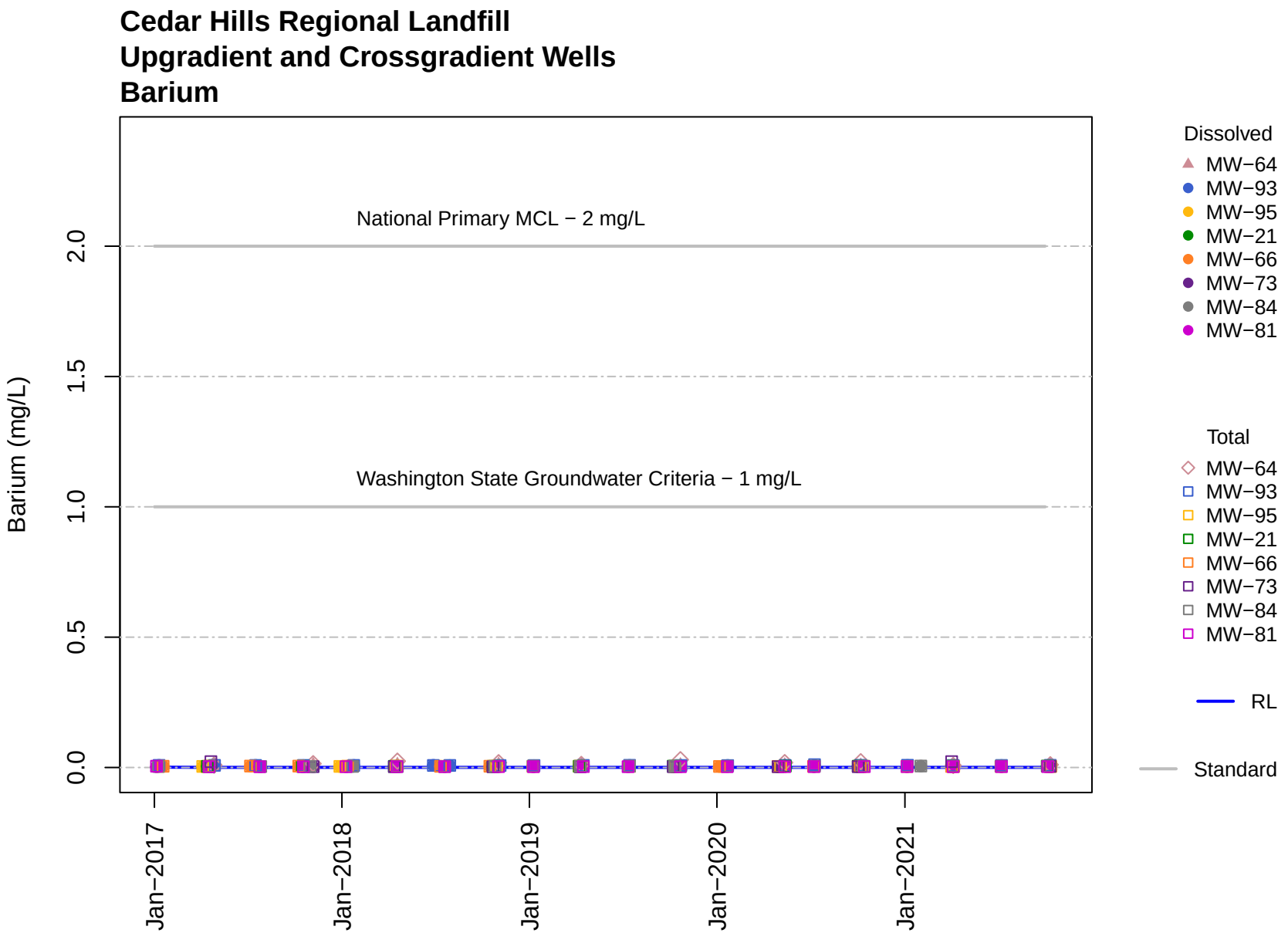

Cedar Hills Regional Landfill
Upgradient Wells
Arsenic
Arsenic (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

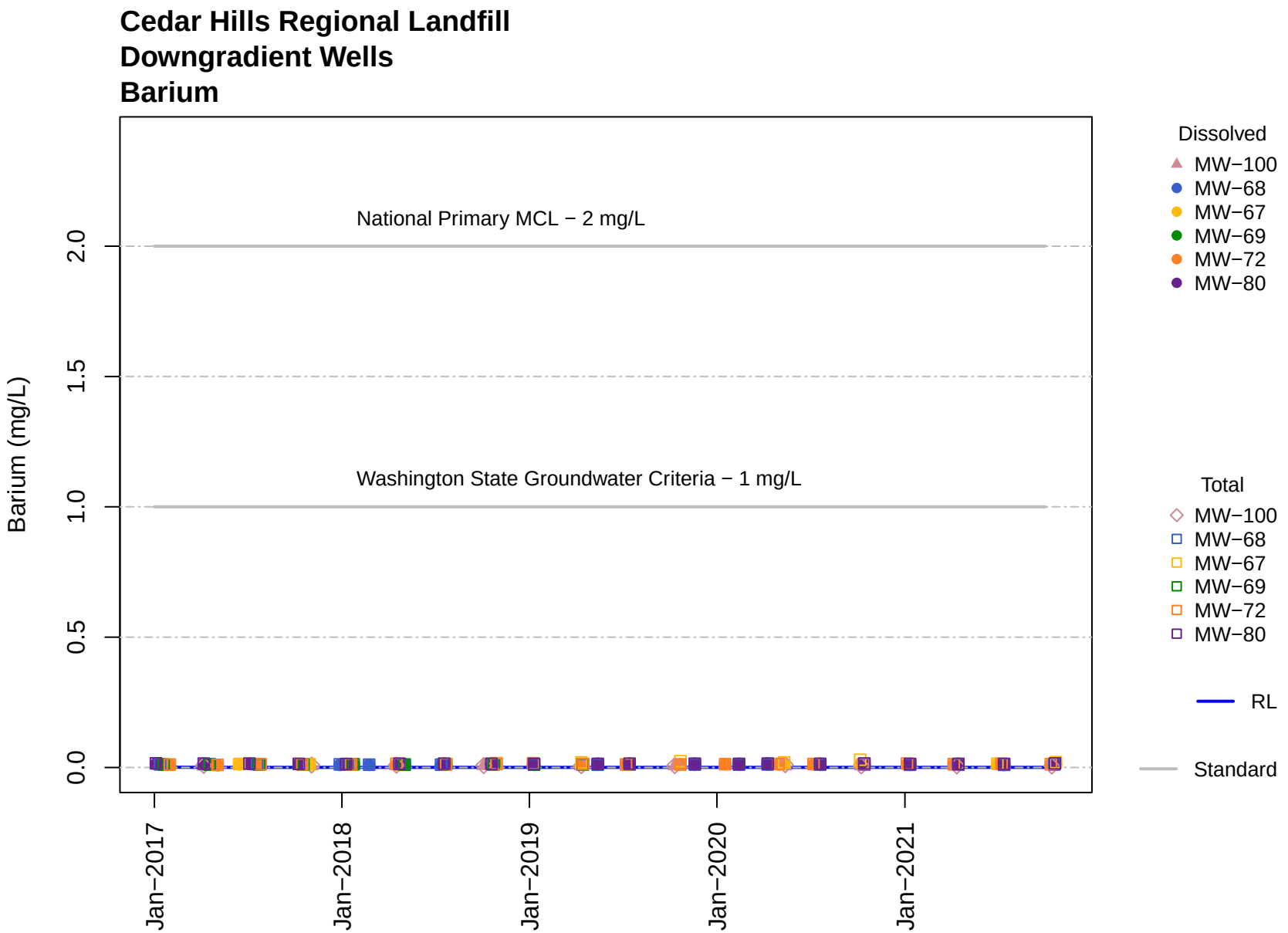

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Arsenic
Arsenic (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

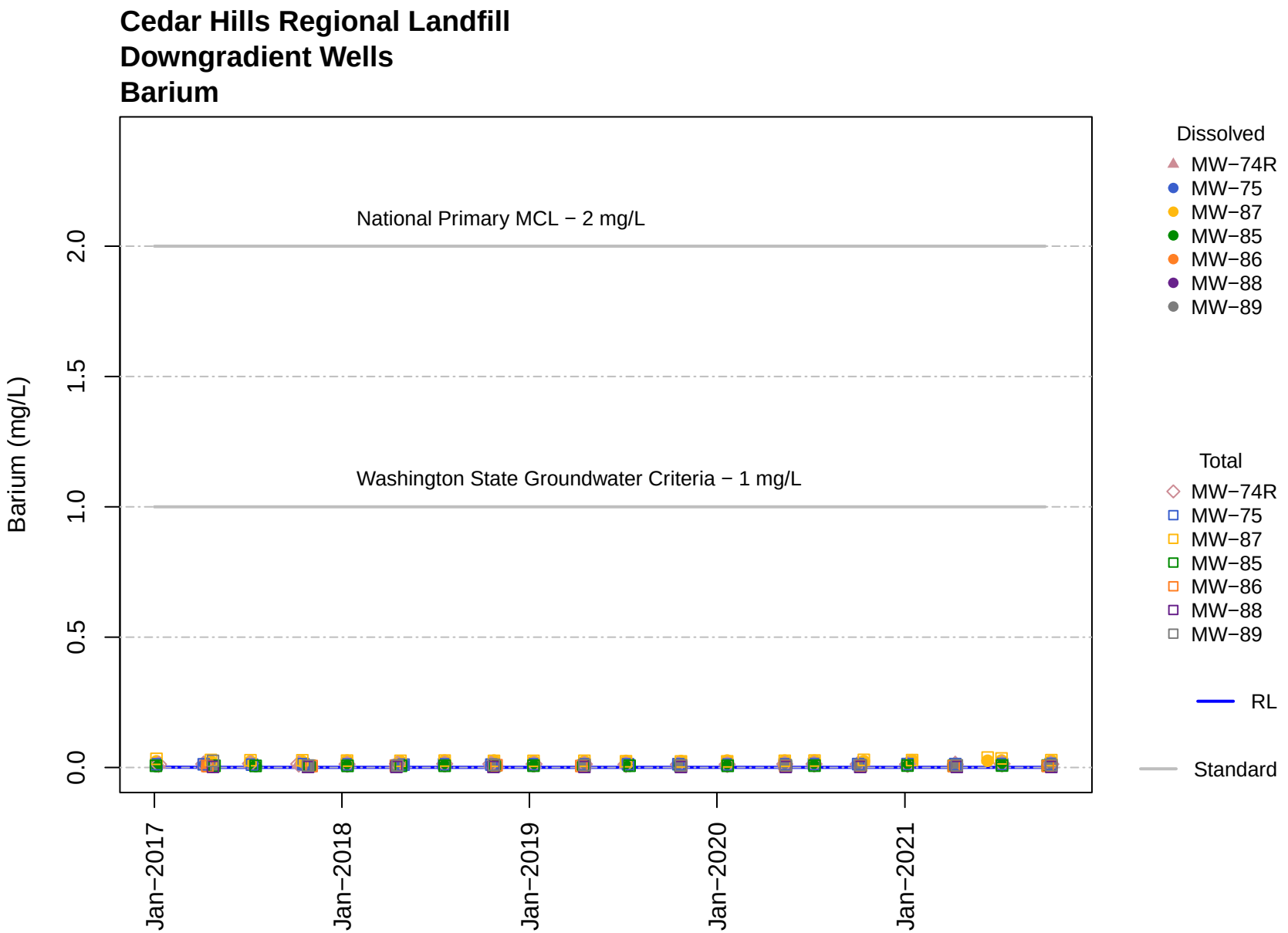

Cedar Hills Regional Landfill
Downgradient Wells
Arsenic
Arsenic (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

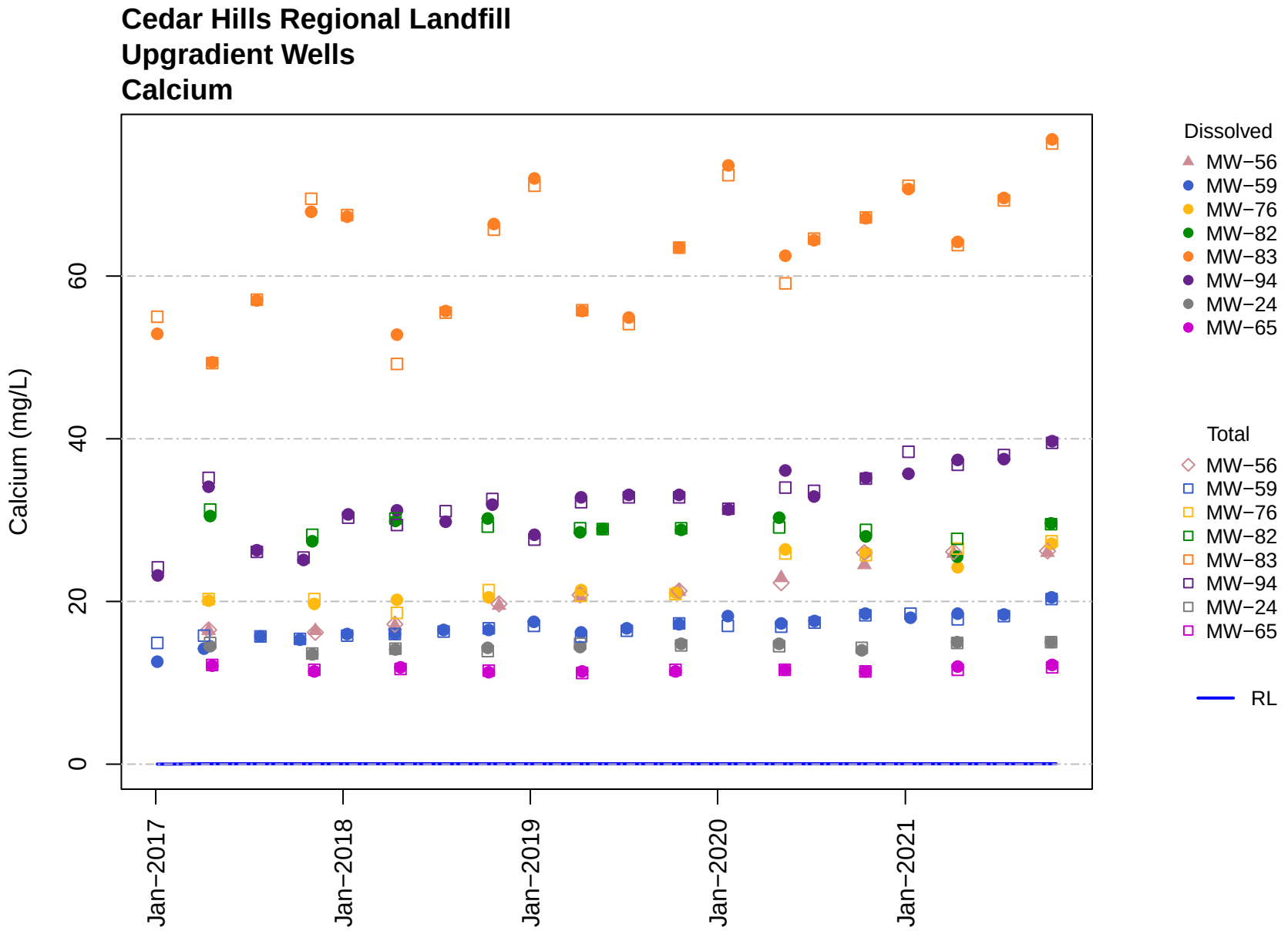

Cedar Hills Regional Landfill
Downgradient Wells
Arsenic
Arsenic (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

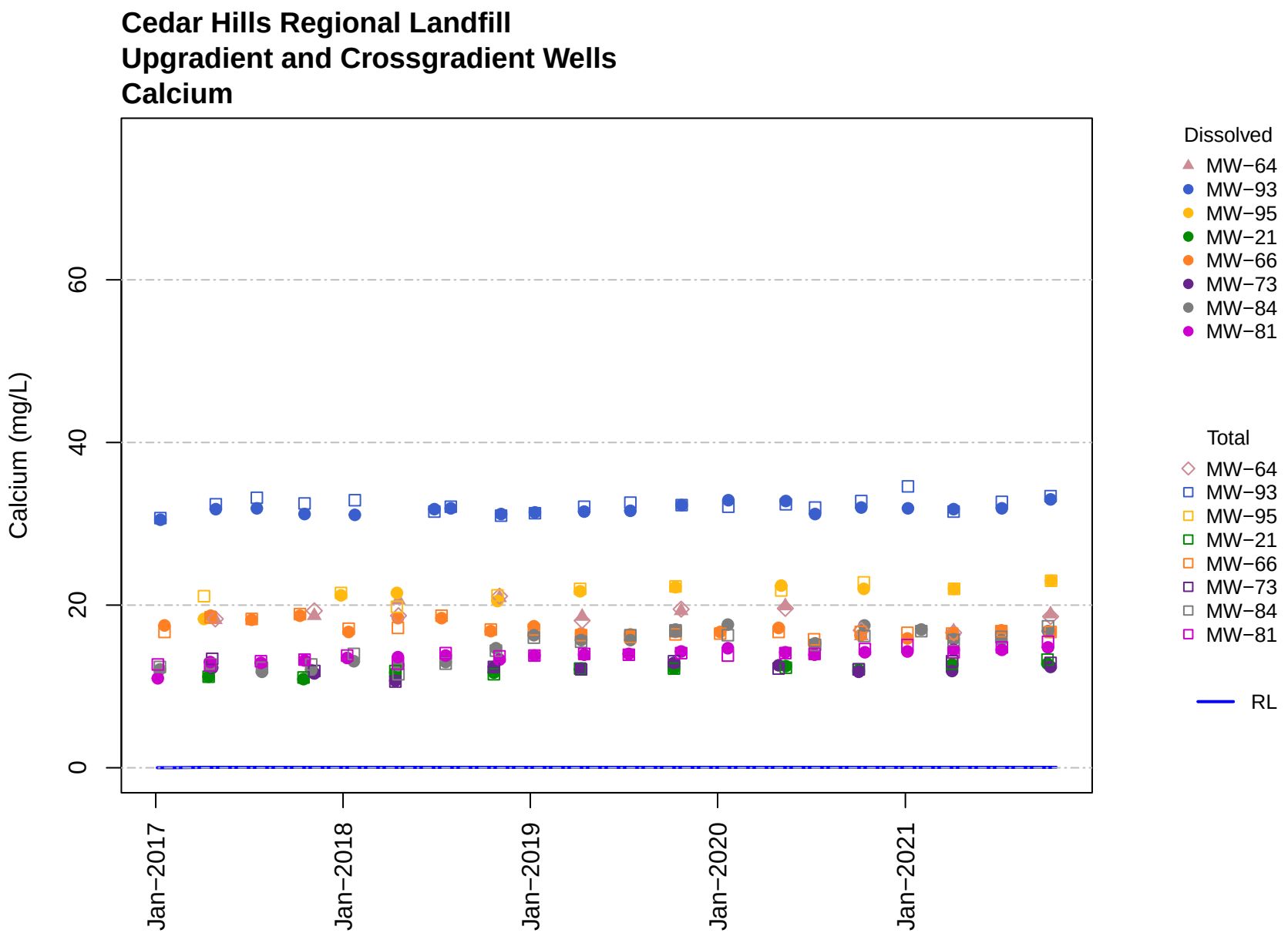

Cedar Hills Regional Landfill
Upgradient Wells
Barium
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

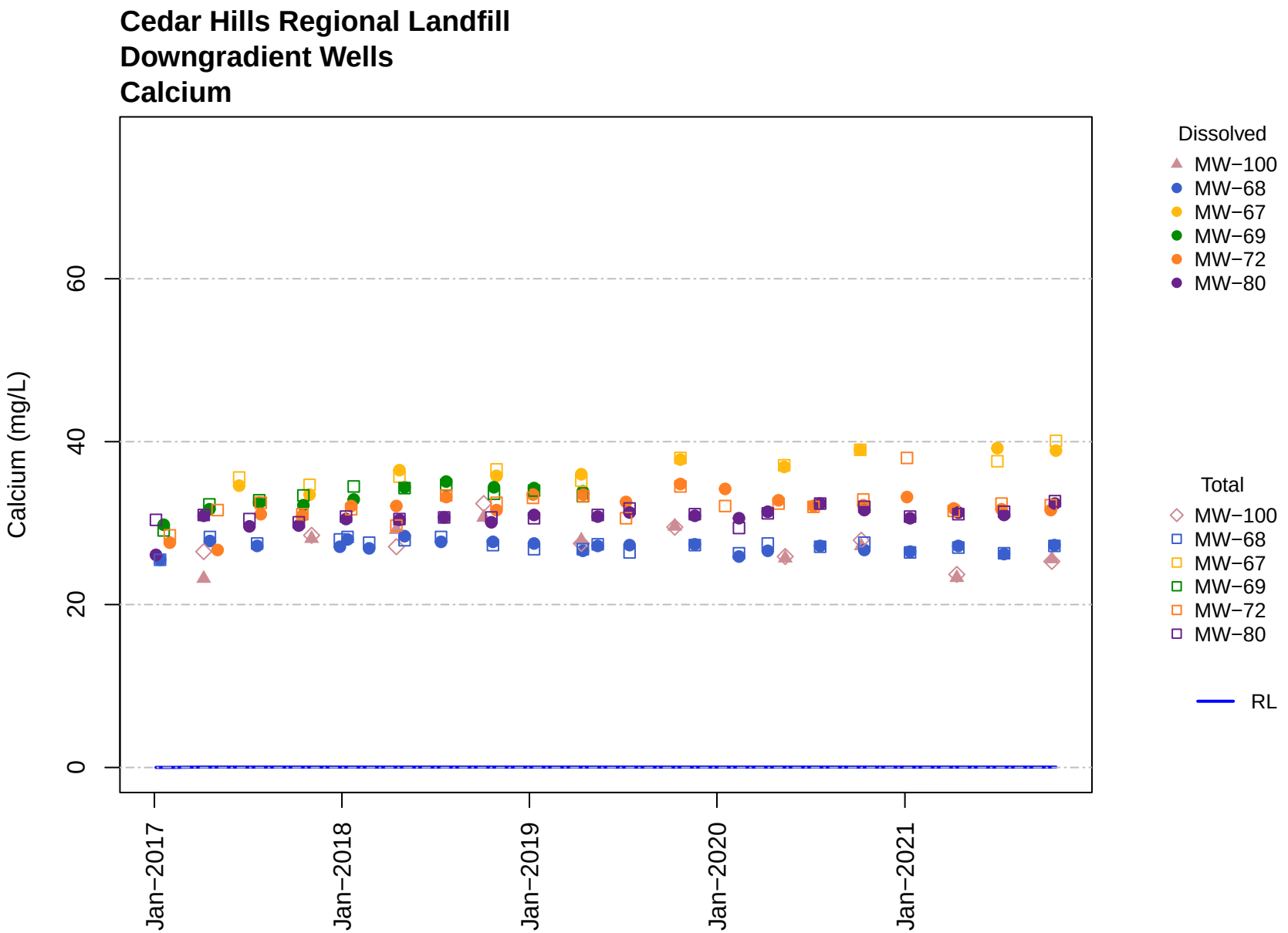

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Barium
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

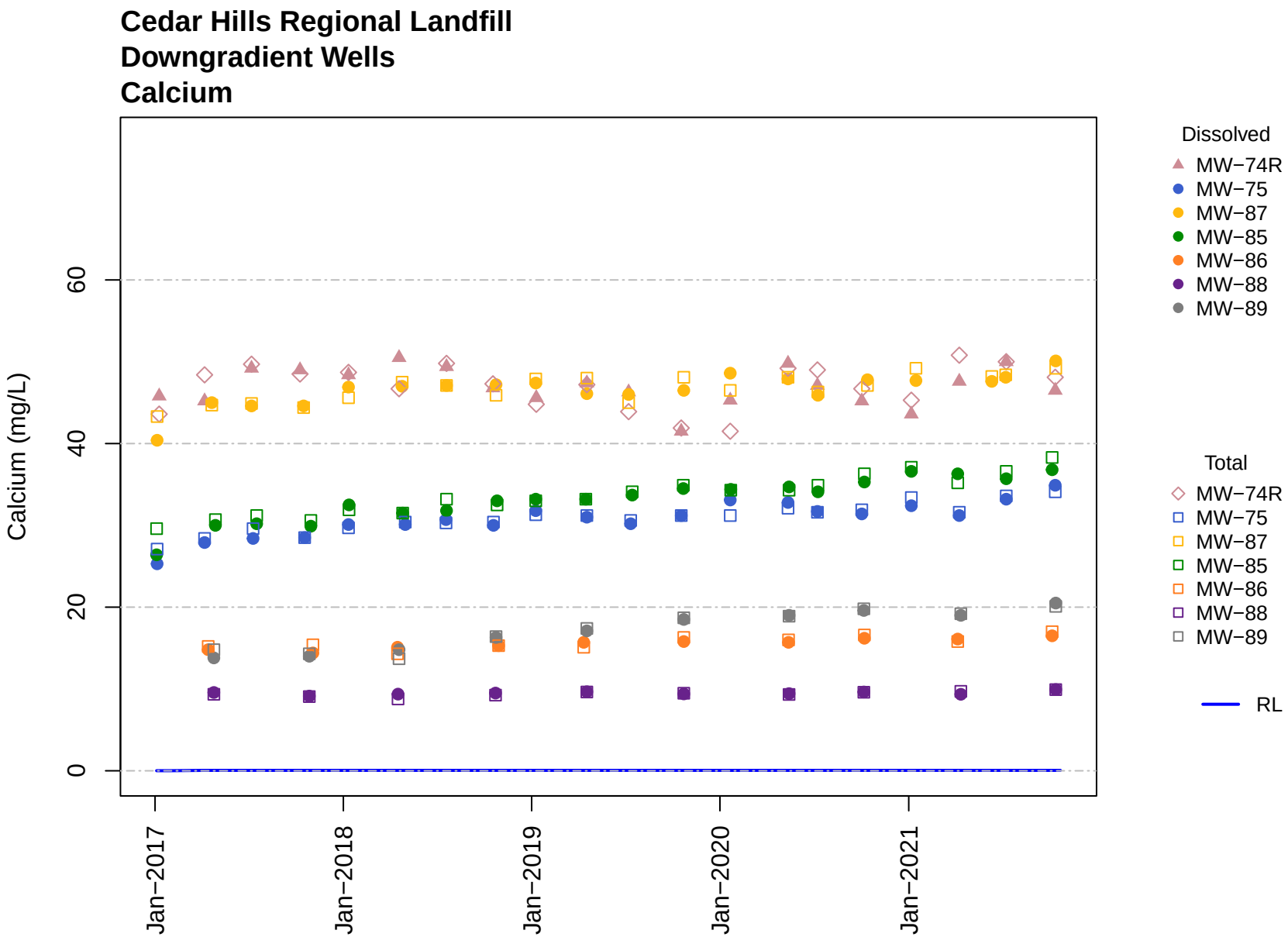

Cedar Hills Regional Landfill
Downgradient Wells
Barium
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

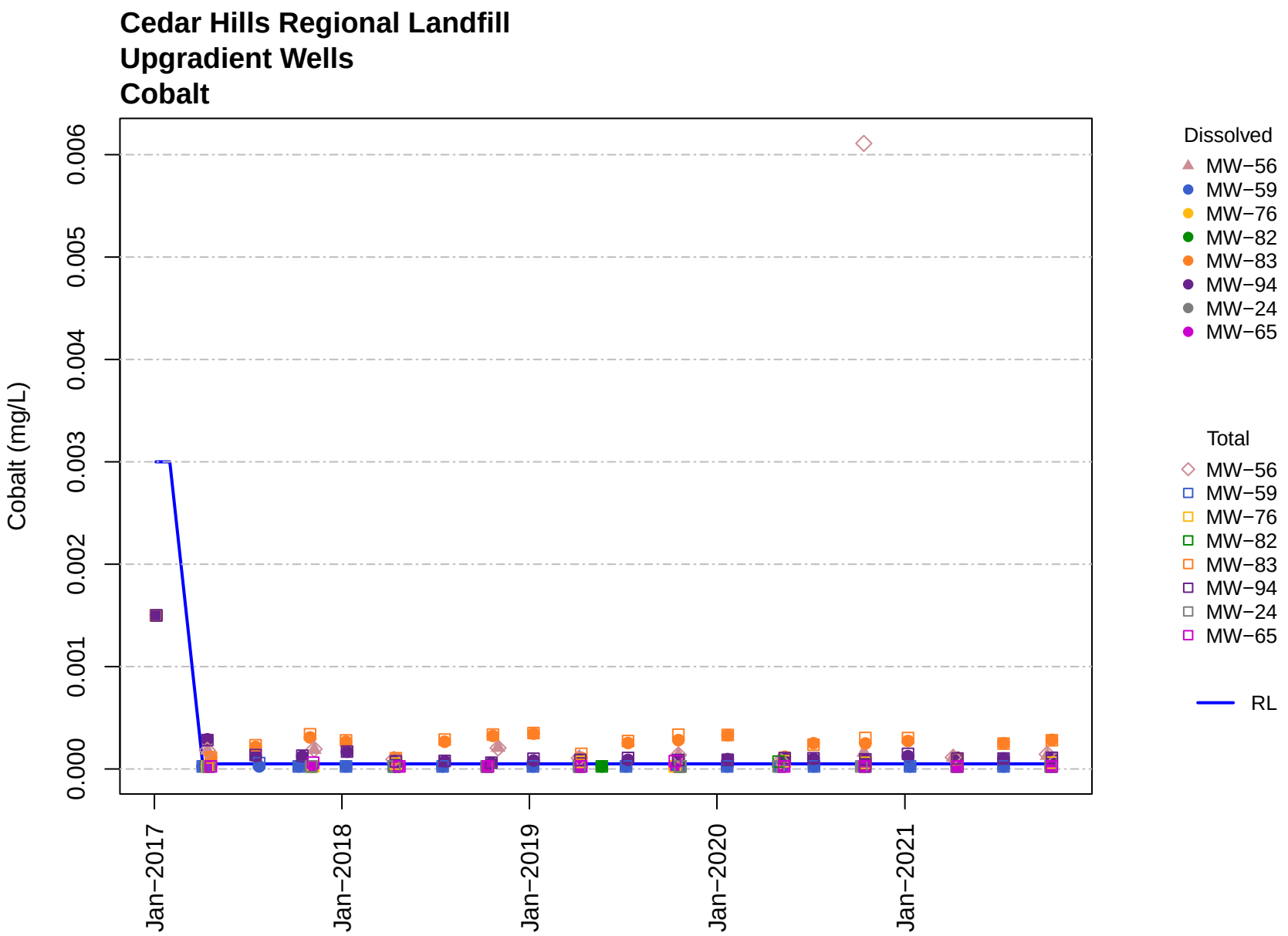

Cedar Hills Regional Landfill
Downgradient Wells
Barium
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

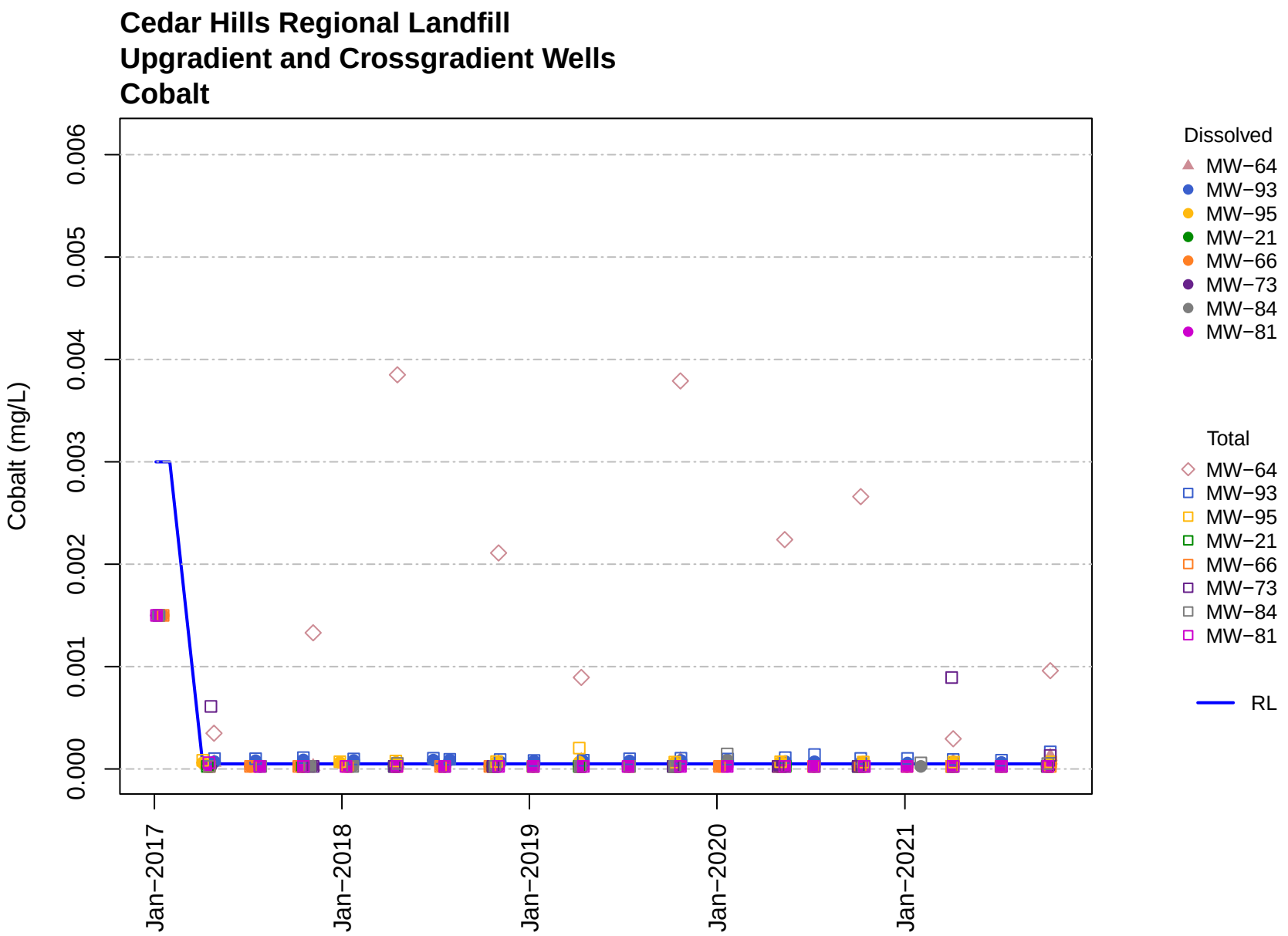

Cedar Hills Regional Landfill
Upgradient Wells
Calcium
Calcium (mg/L)
0
20
40
60
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

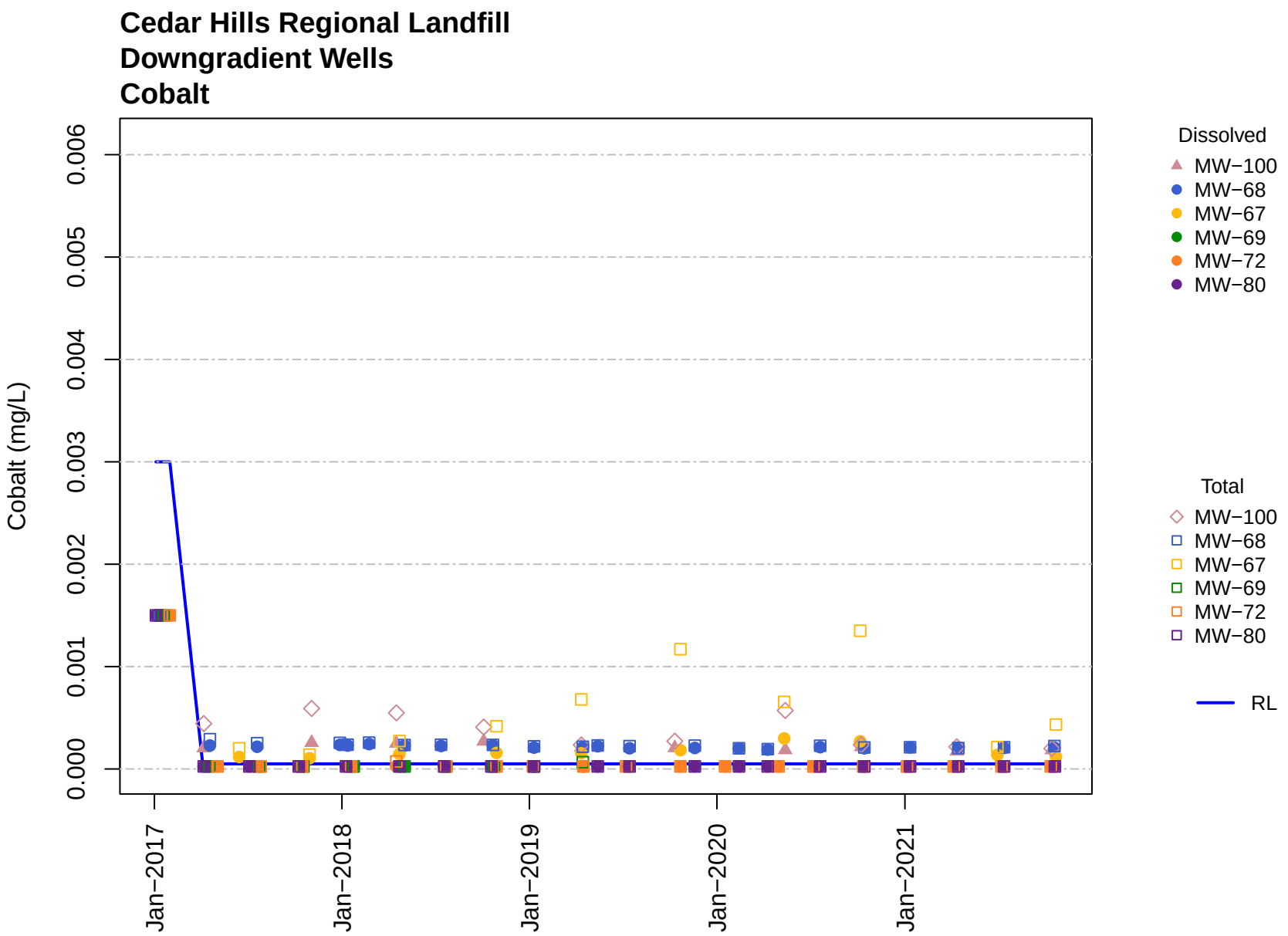

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Calcium
Calcium (mg/L)
0
20
40
60
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

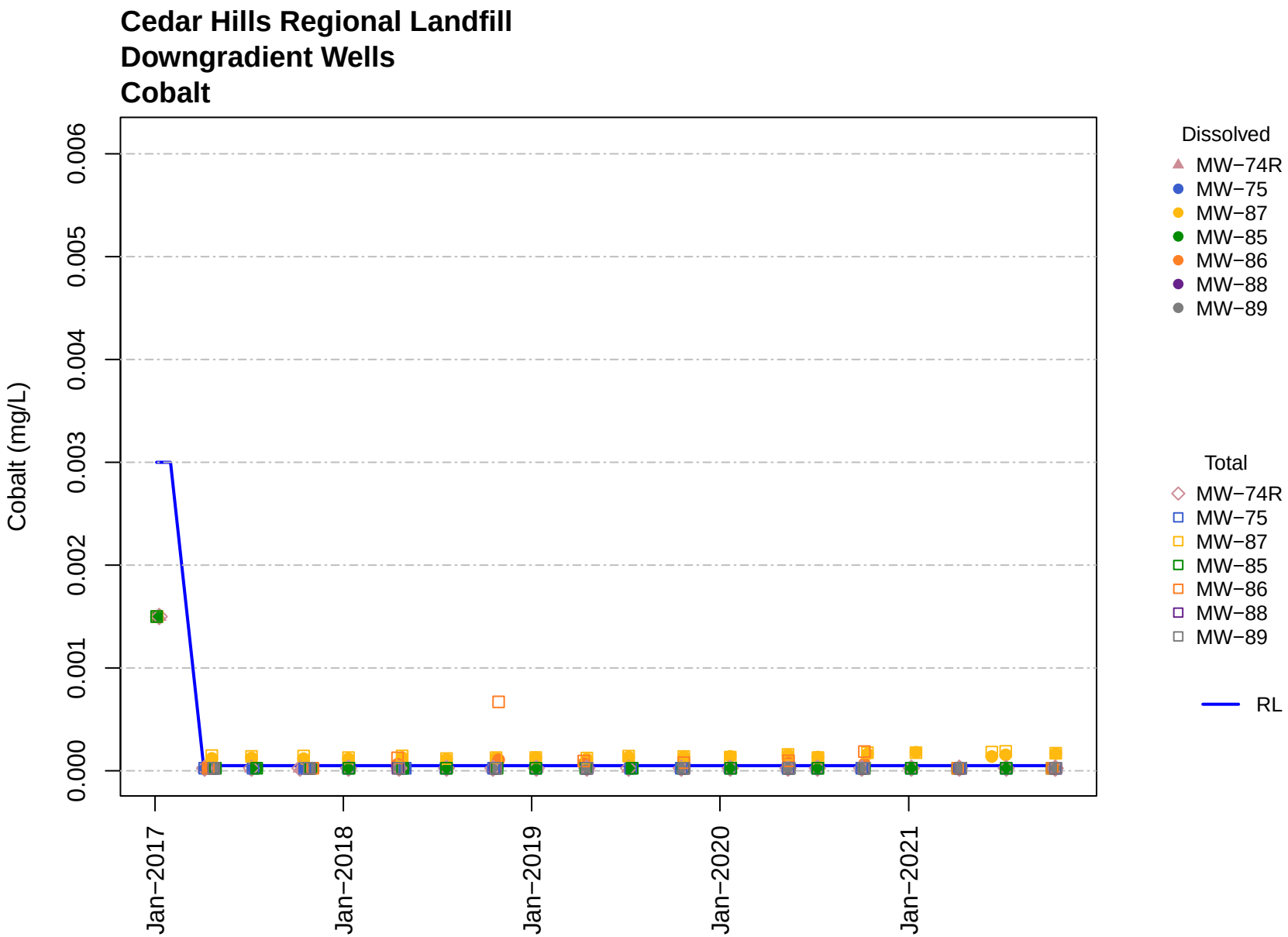

Cedar Hills Regional Landfill
Downgradient Wells
Calcium
Calcium (mg/L)
0
20
40
60
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

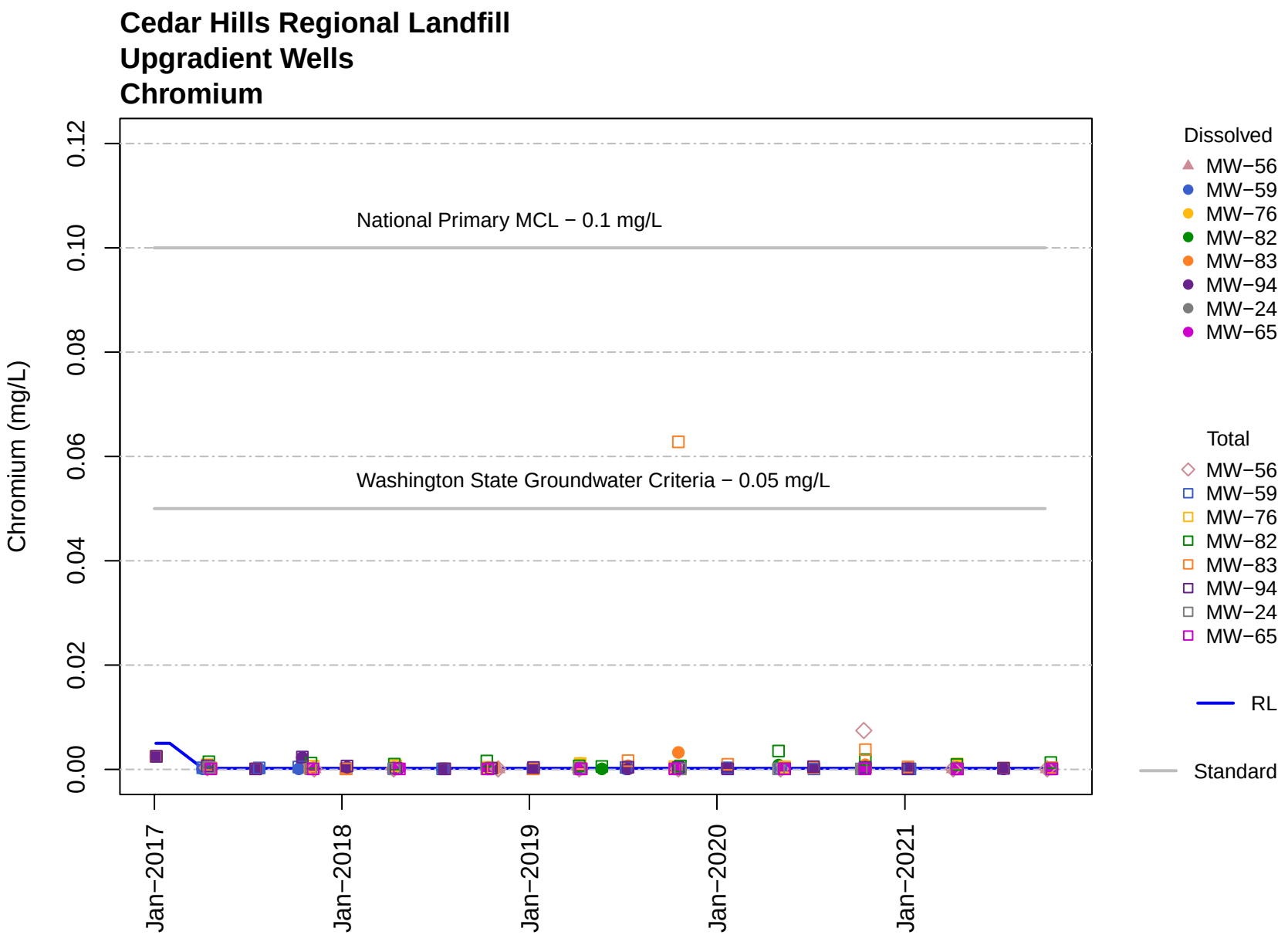

Cedar Hills Regional Landfill
Downgradient Wells
Calcium
Calcium (mg/L)
0
20
40
60
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

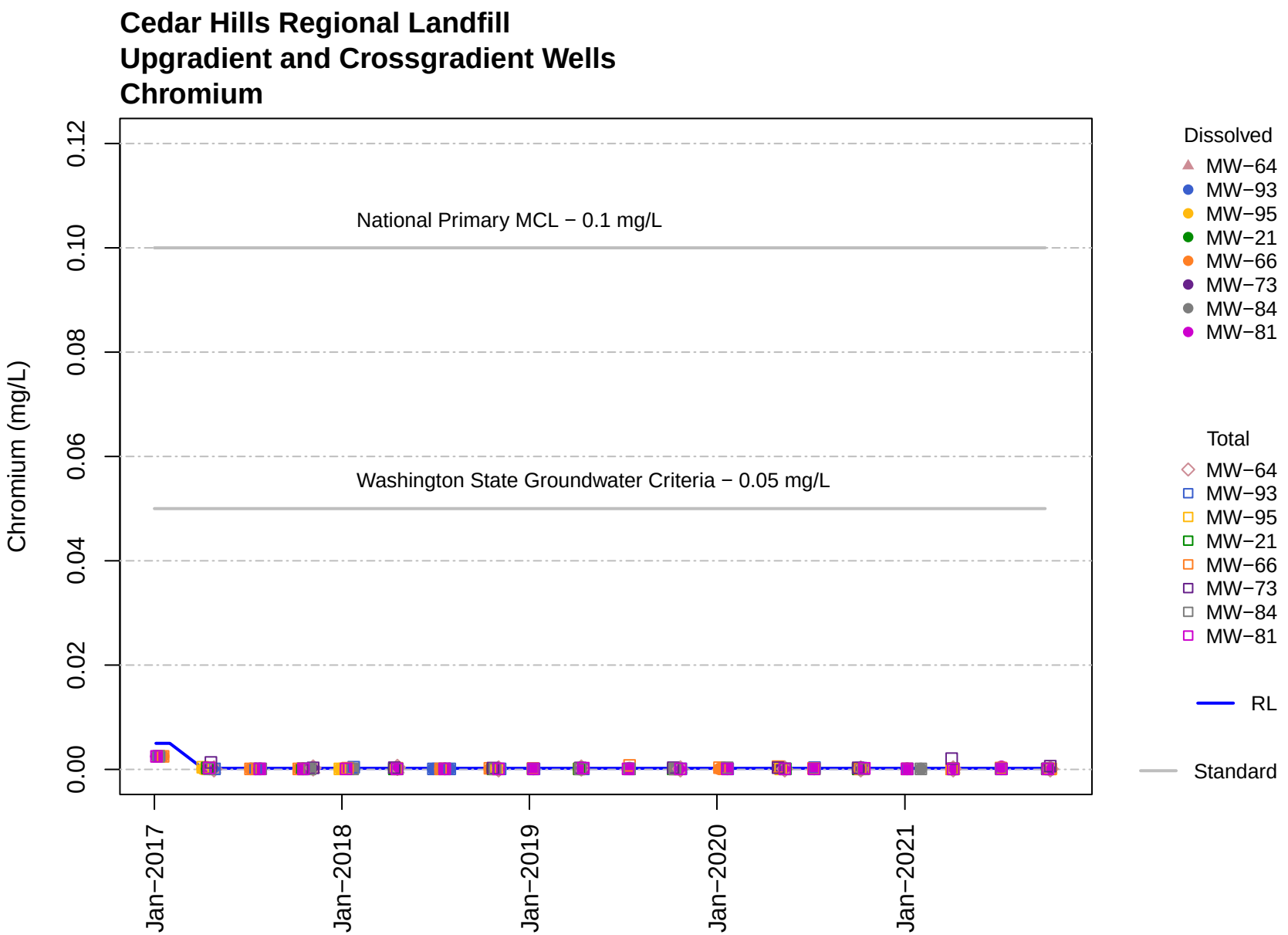

Cedar Hills Regional Landfill
Upgradient Wells
Cobalt
Cobalt (mg/L)
0.000
0.001
0.002
0.003
0.004
0.005
0.006
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

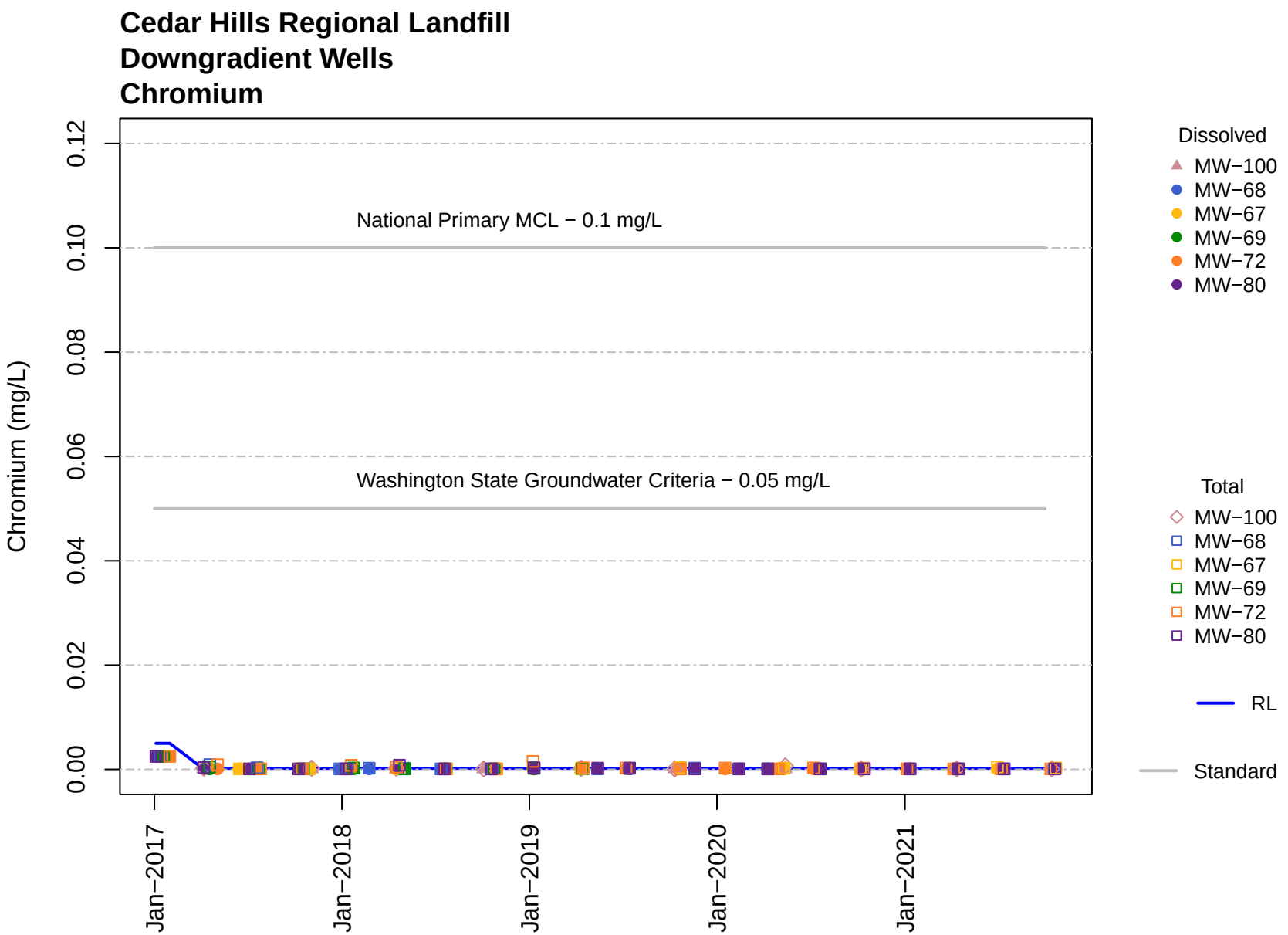

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Cobalt
Cobalt (mg/L)
0.000
0.001
0.002
0.003
0.004
0.005
0.006
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

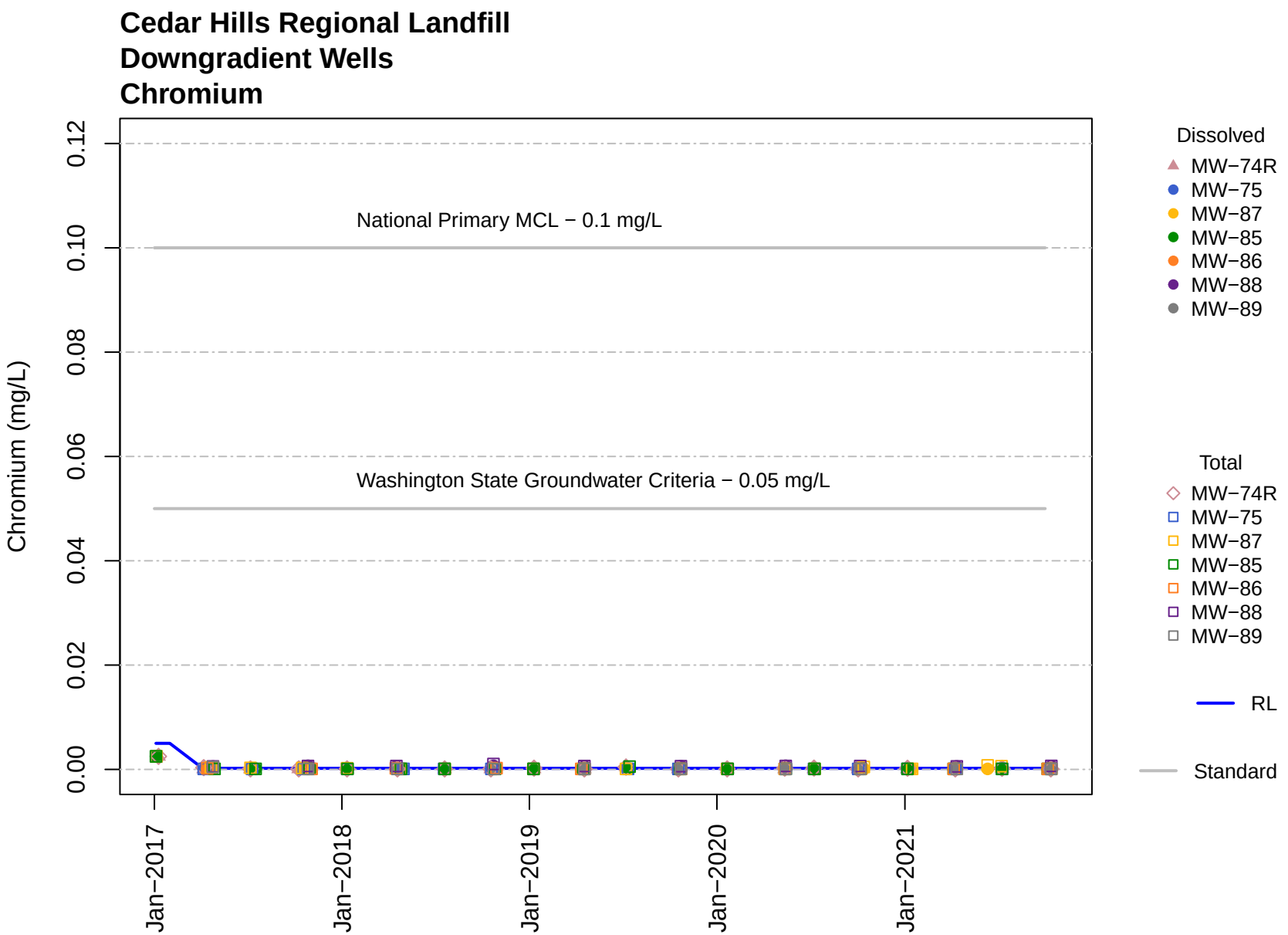

Cedar Hills Regional Landfill
Downgradient Wells
Cobalt
Cobalt (mg/L)
0.000
0.001
0.002
0.003
0.004
0.005
0.006
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

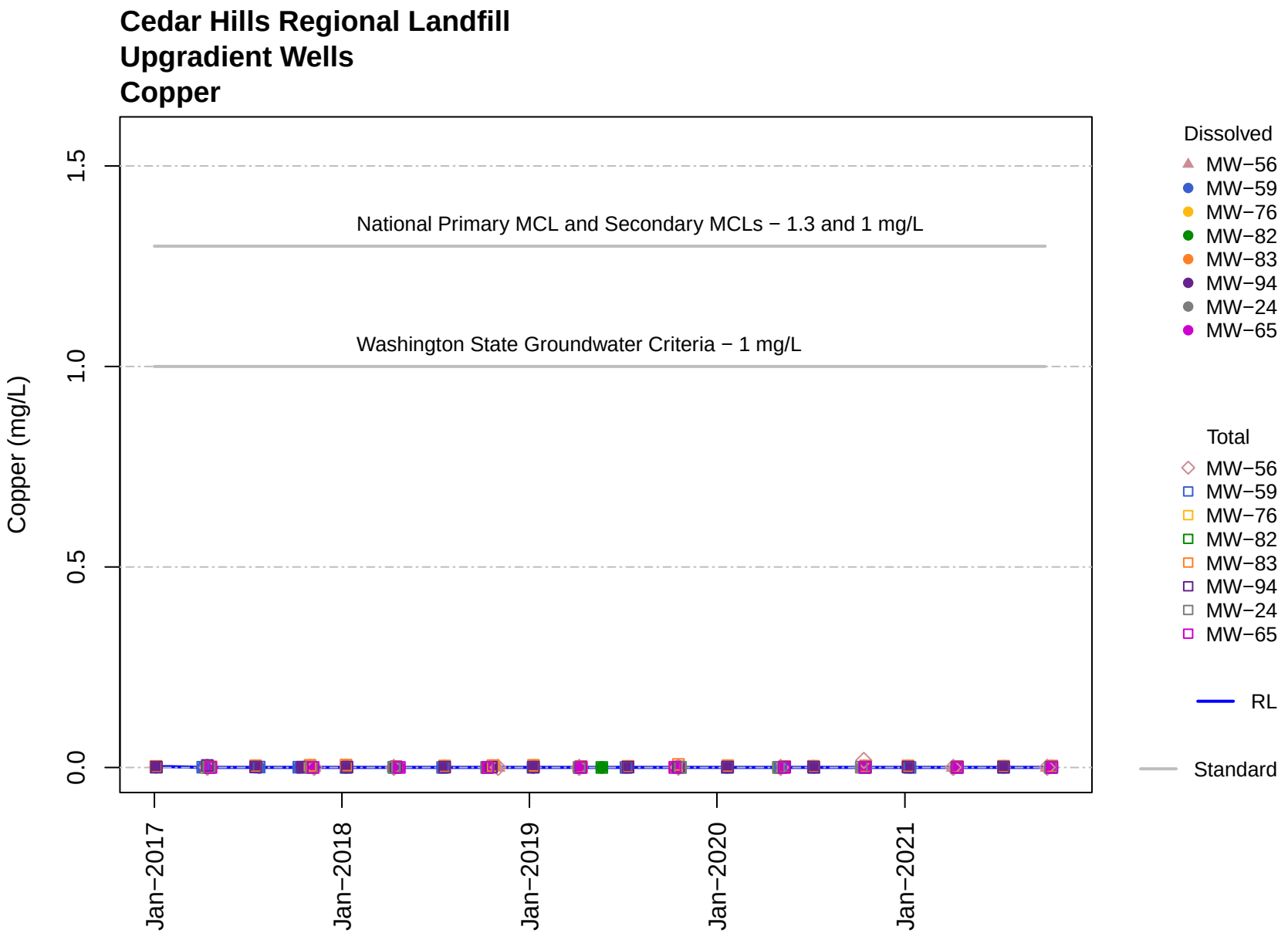

Cedar Hills Regional Landfill
Downgradient Wells
Cobalt
Cobalt (mg/L)
0.000
0.001
0.002
0.003
0.004
0.005
0.006
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

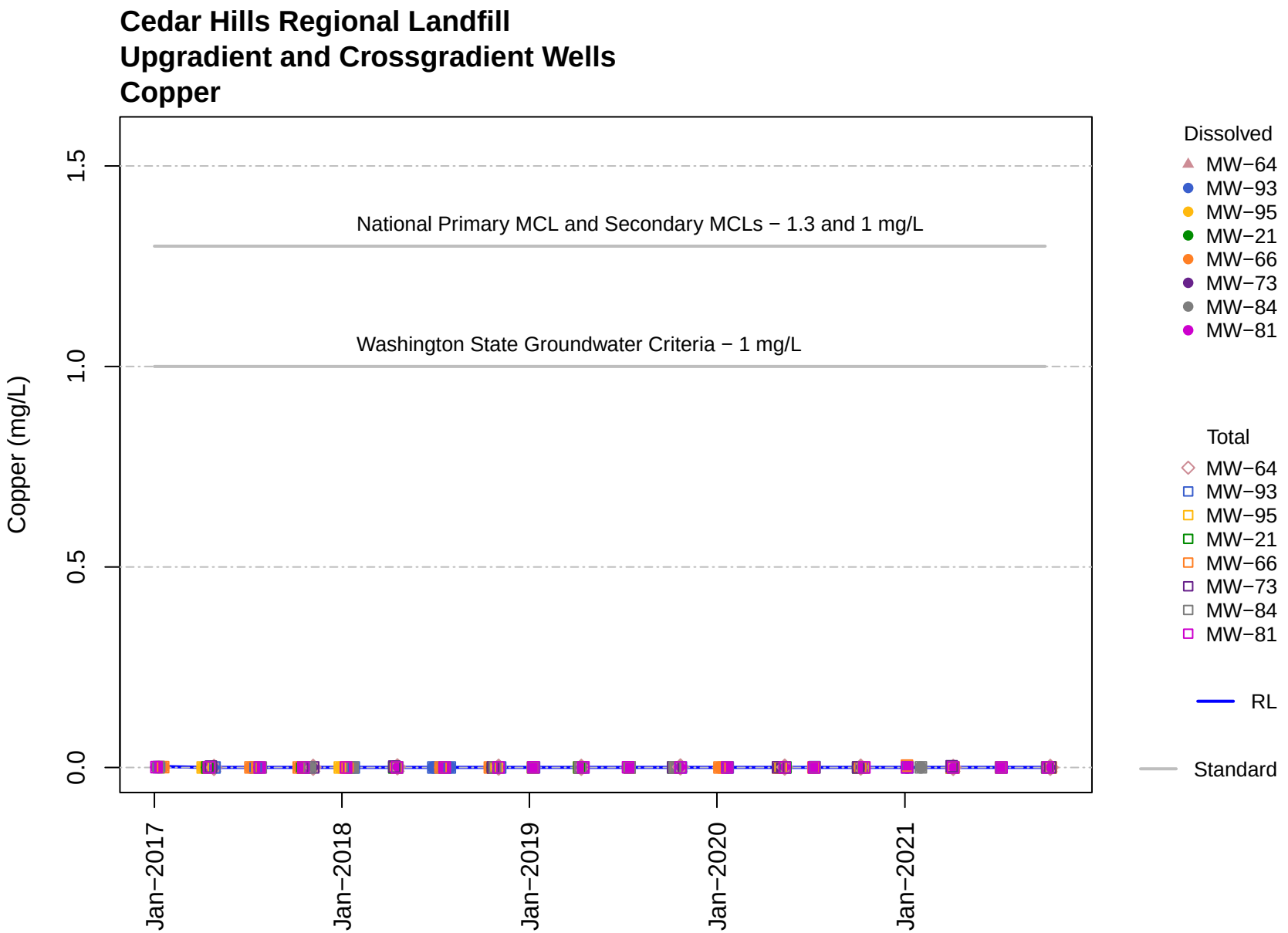

Cedar Hills Regional Landfill
Upgradient Wells
Chromium
Chromium (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.05 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

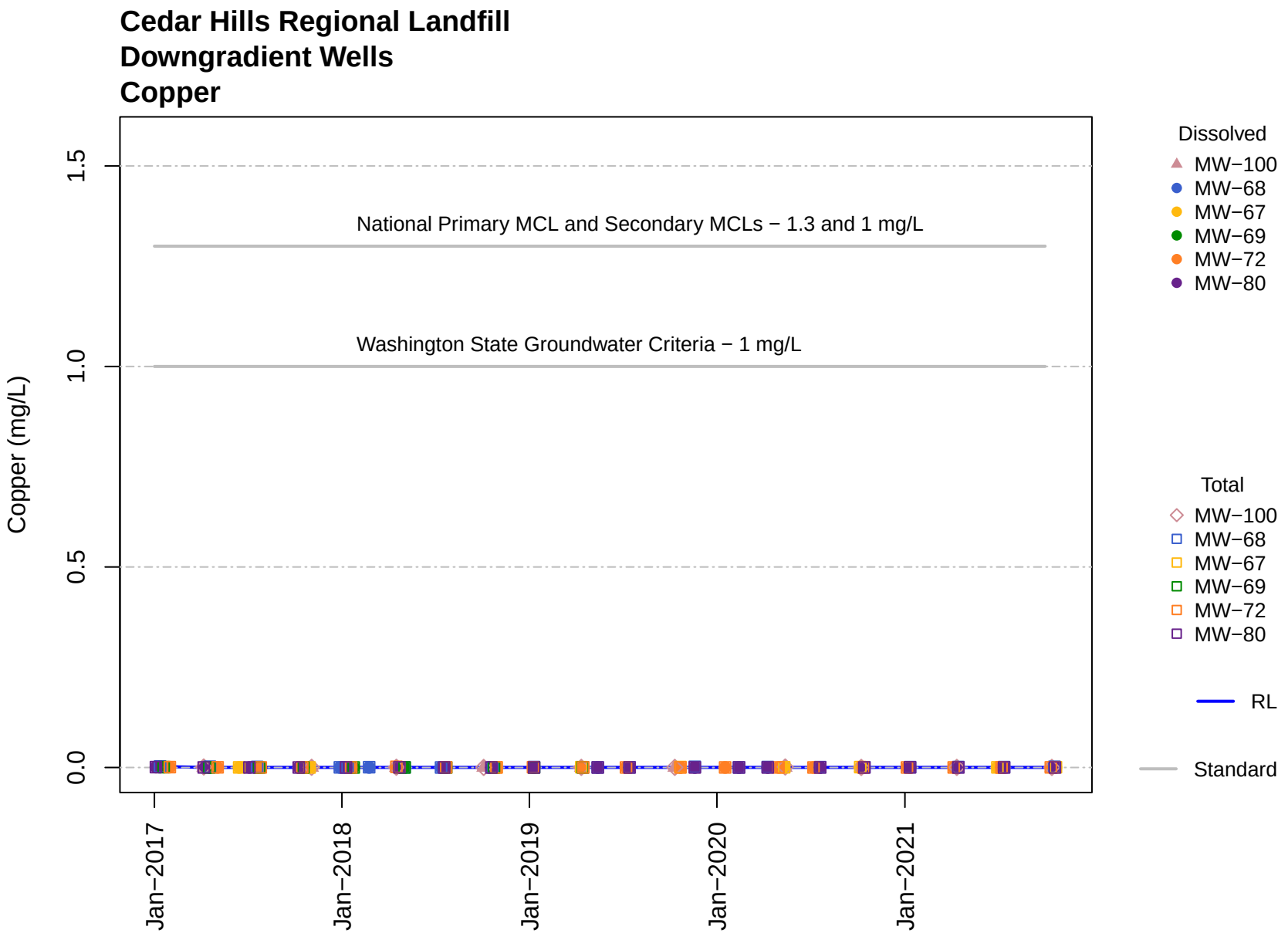

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Chromium
Chromium (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.05 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

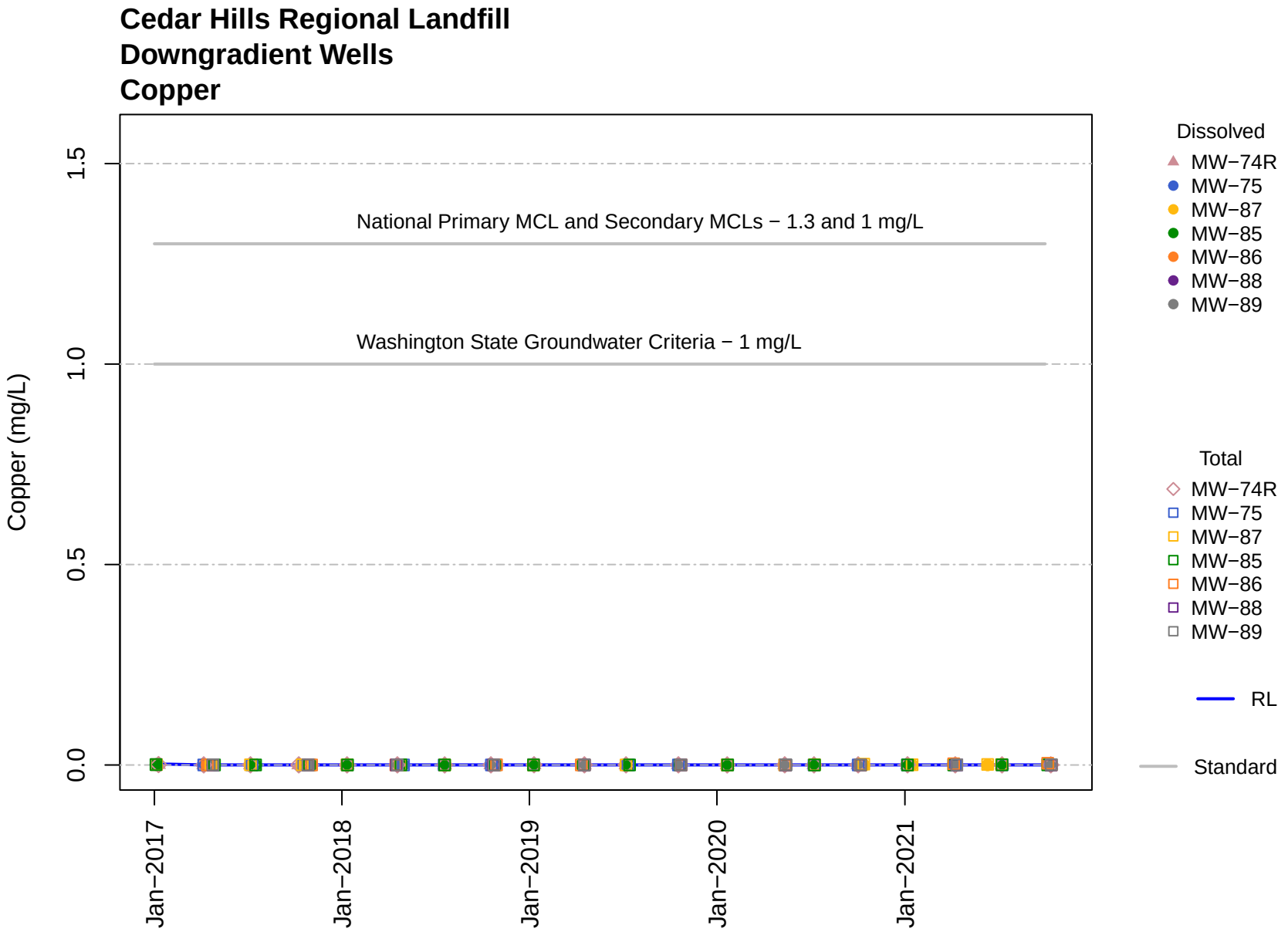

Cedar Hills Regional Landfill
Downgradient Wells
Chromium
Chromium (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.05 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

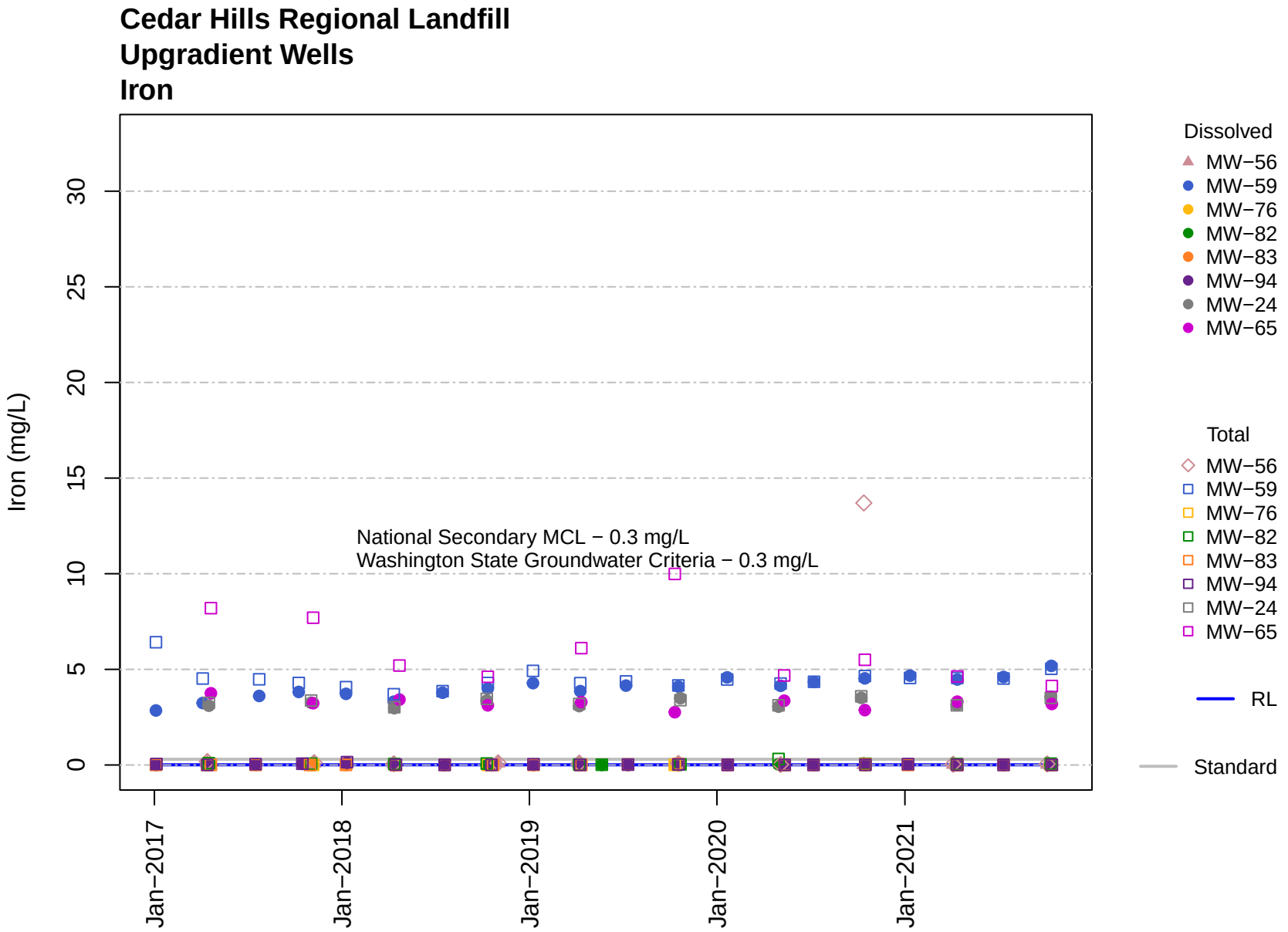

Cedar Hills Regional Landfill
Downgradient Wells
Chromium
Chromium (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.05 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

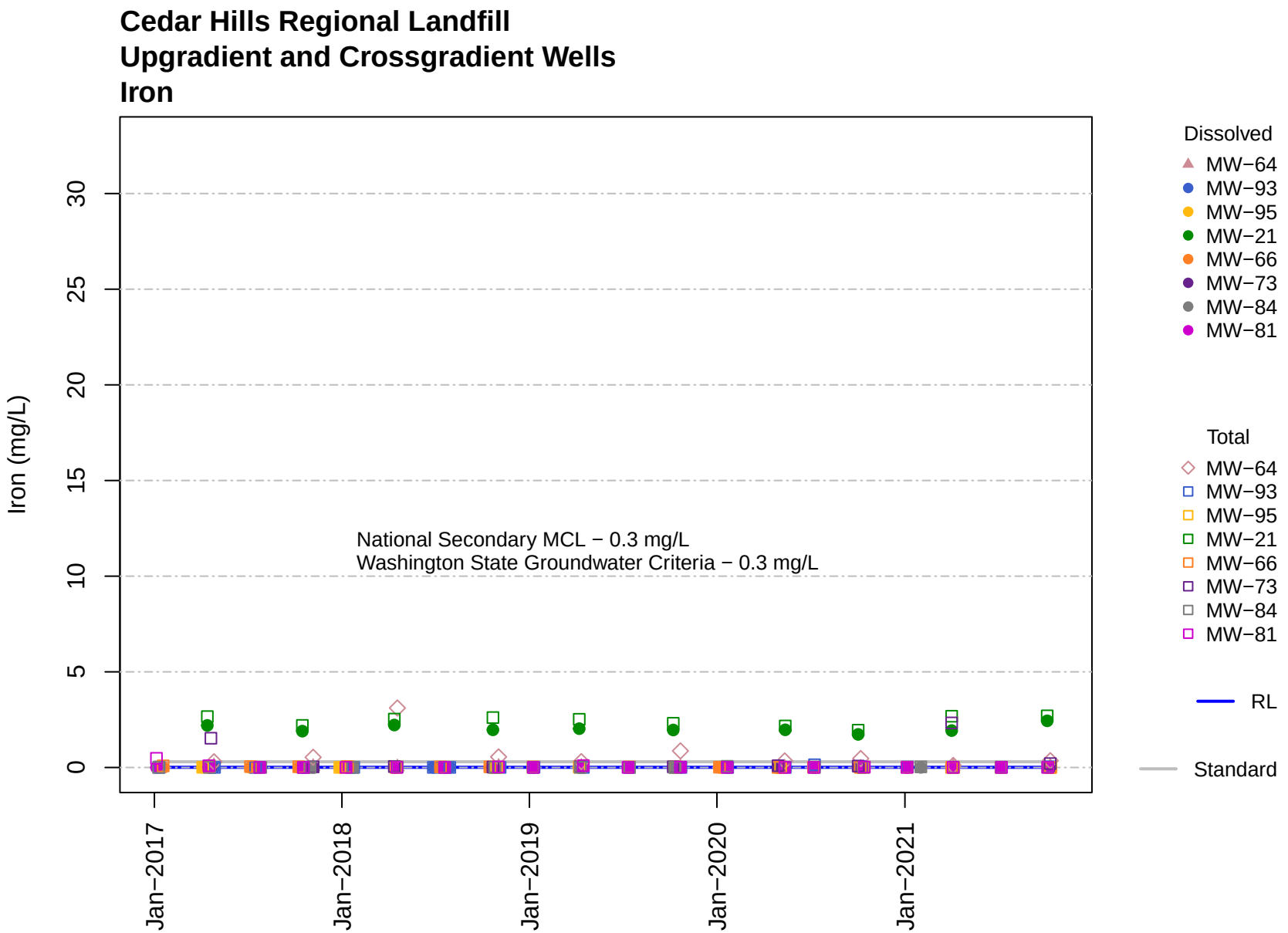

Cedar Hills Regional Landfill
Upgradient Wells
Copper
Copper (mg/L)
0.0
0.5
1.0
1.5
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

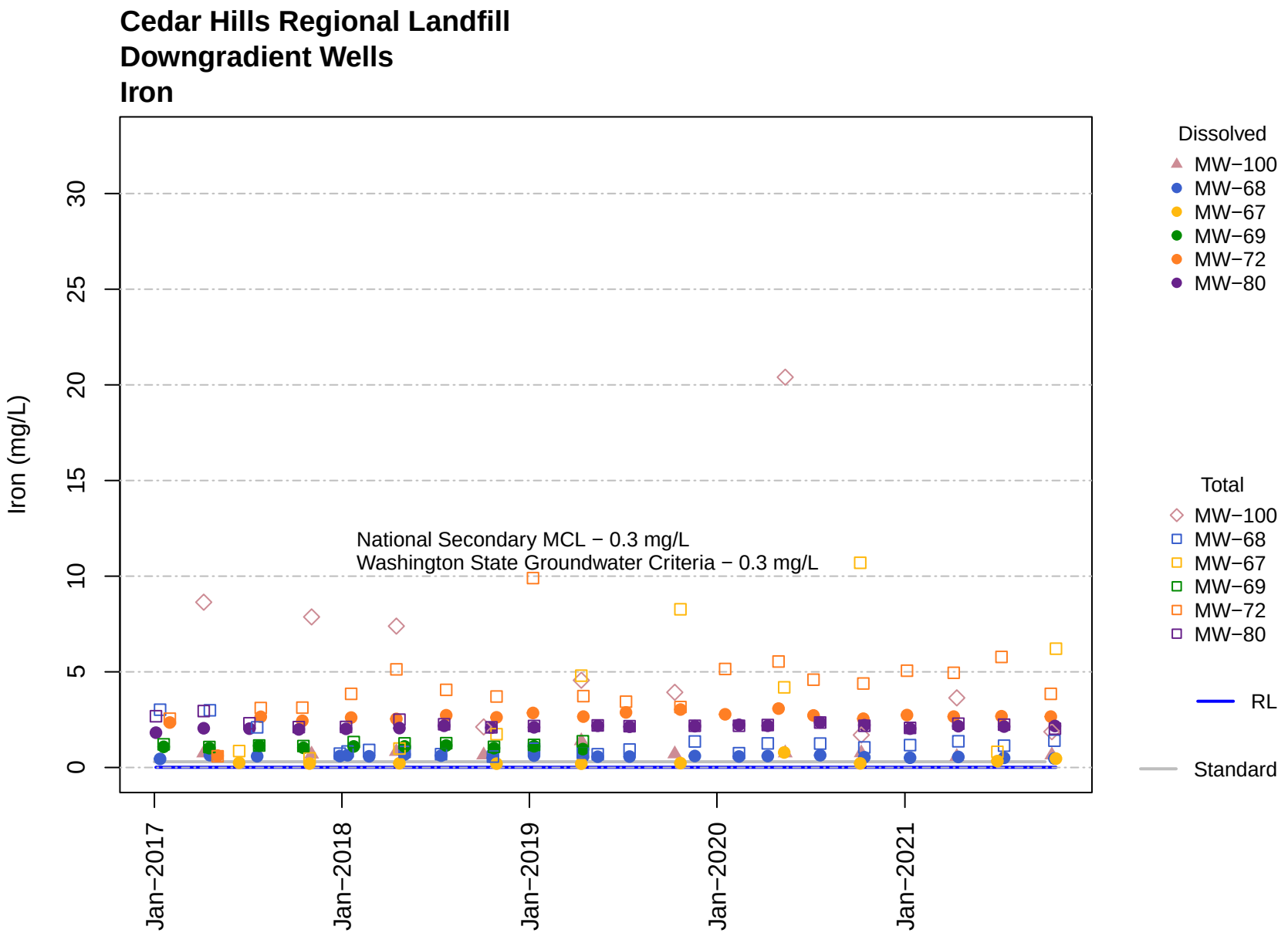

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Copper
Copper (mg/L)
0.0
0.5
1.0
1.5
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

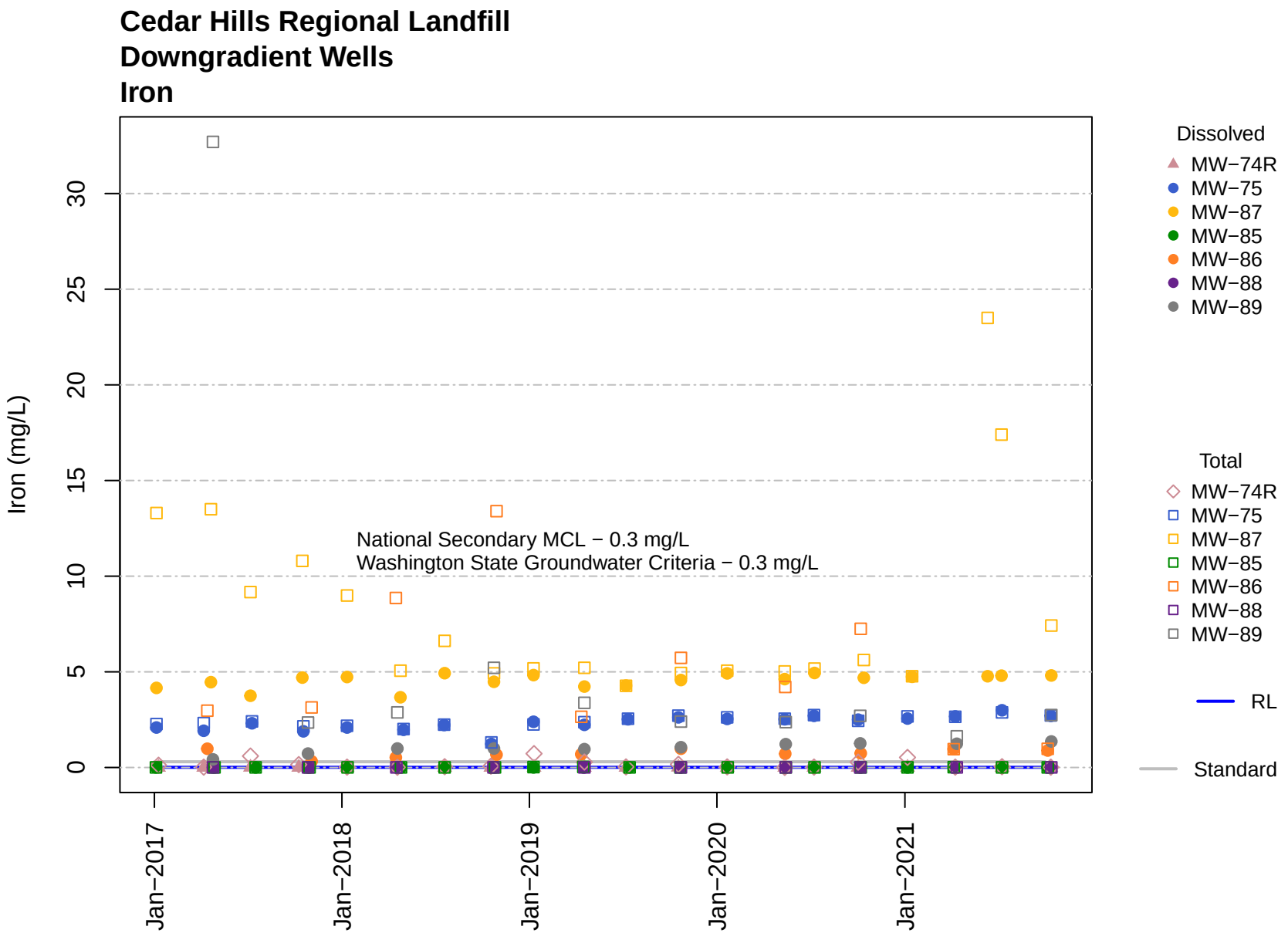

Cedar Hills Regional Landfill
Downgradient Wells
Copper
Copper (mg/L)
0.0
0.5
1.0
1.5
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

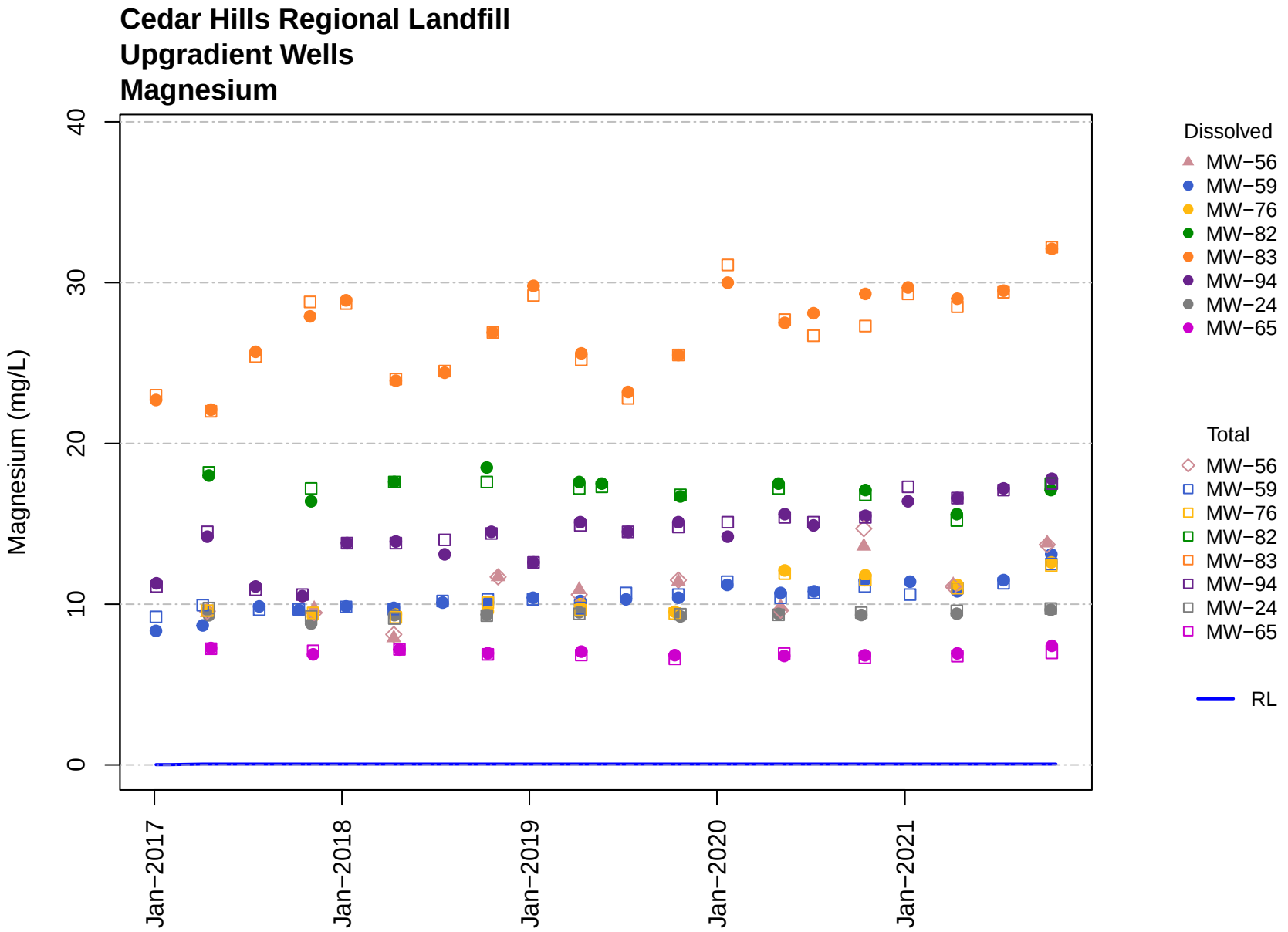

Cedar Hills Regional Landfill
Downgradient Wells
Copper
Copper (mg/L)
0.0
0.5
1.0
1.5
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

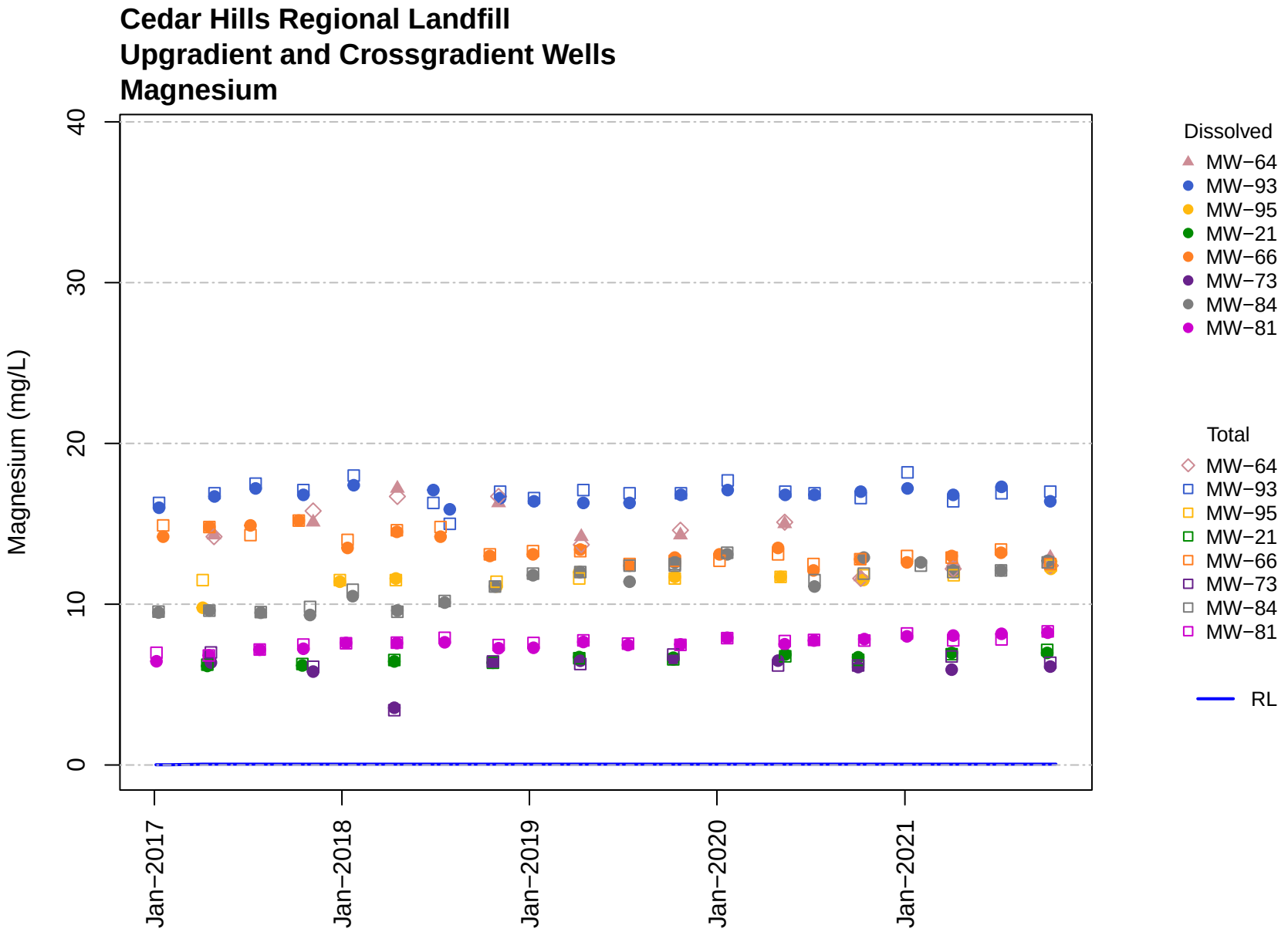

Cedar Hills Regional Landfill
Upgradient Wells
Iron
Iron (mg/L)
0
5
10
15
20
25
30
National Secondary MCL − 0.3 mg/L
Washington State Groundwater Criteria − 0.3 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

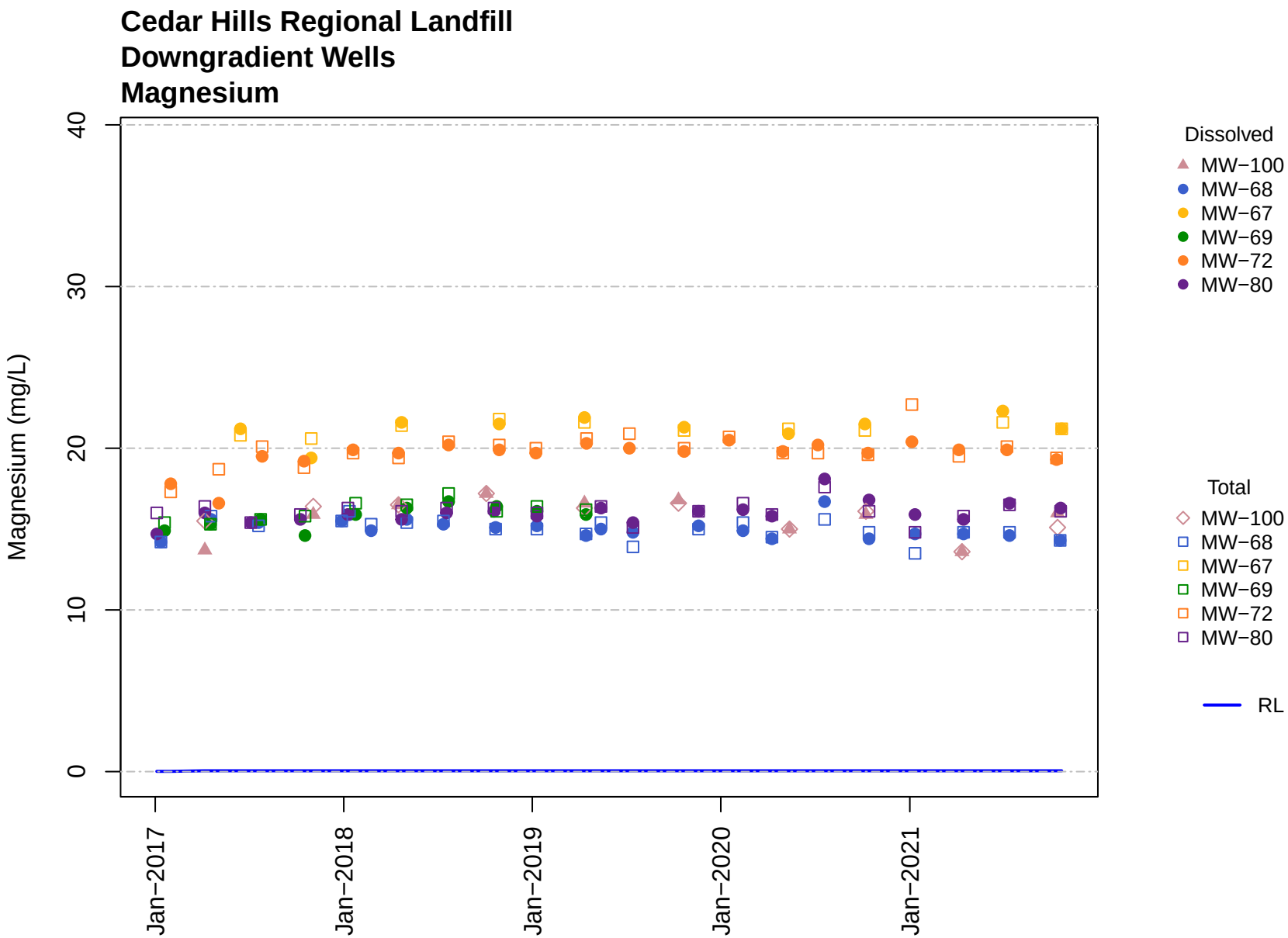

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Iron
Iron (mg/L)
0
5
10
15
20
25
30
National Secondary MCL − 0.3 mg/L
Washington State Groundwater Criteria − 0.3 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

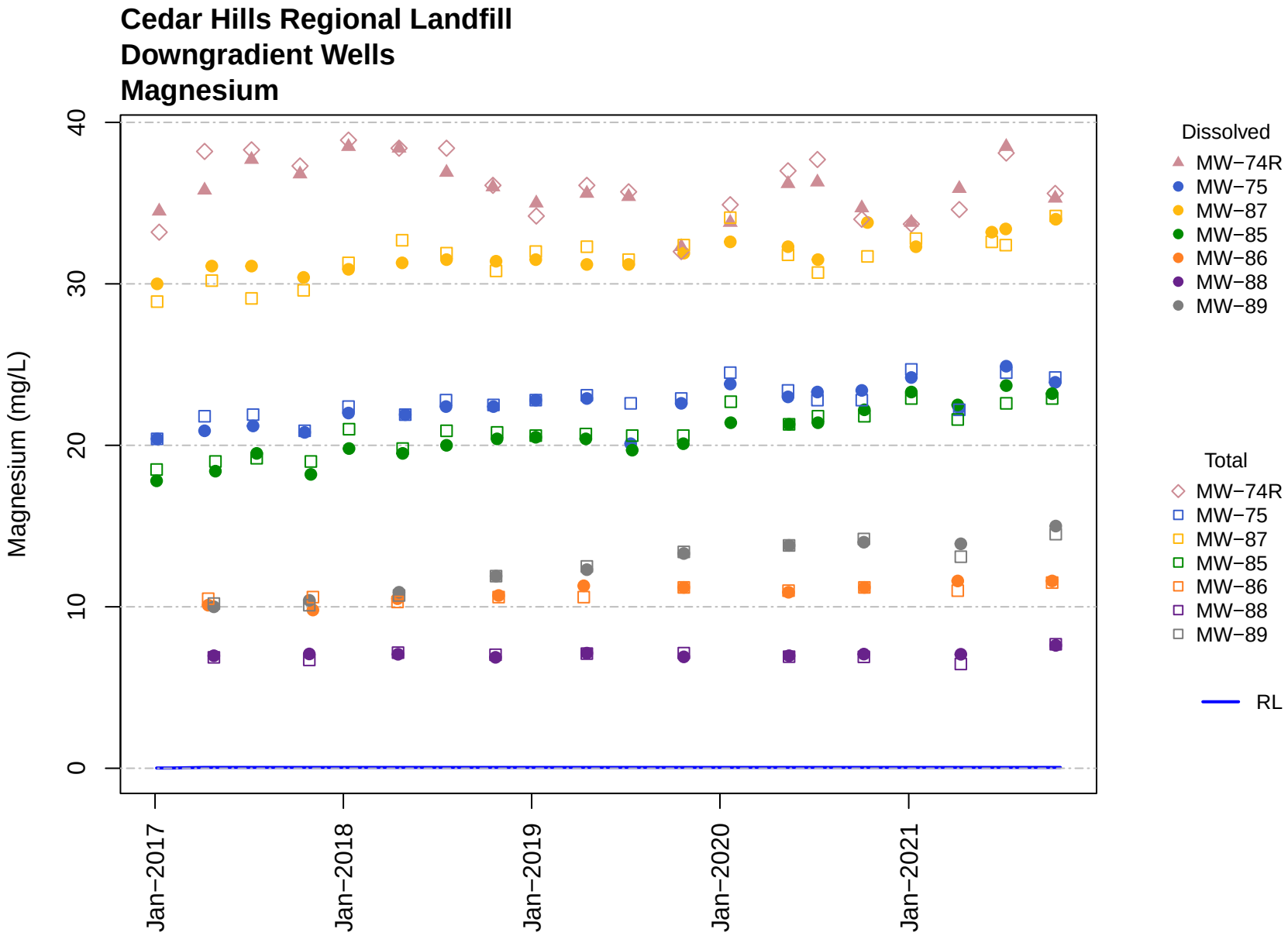

Cedar Hills Regional Landfill
Downgradient Wells
Iron
Iron (mg/L)
0
5
10
15
20
25
30
National Secondary MCL − 0.3 mg/L
Washington State Groundwater Criteria − 0.3 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

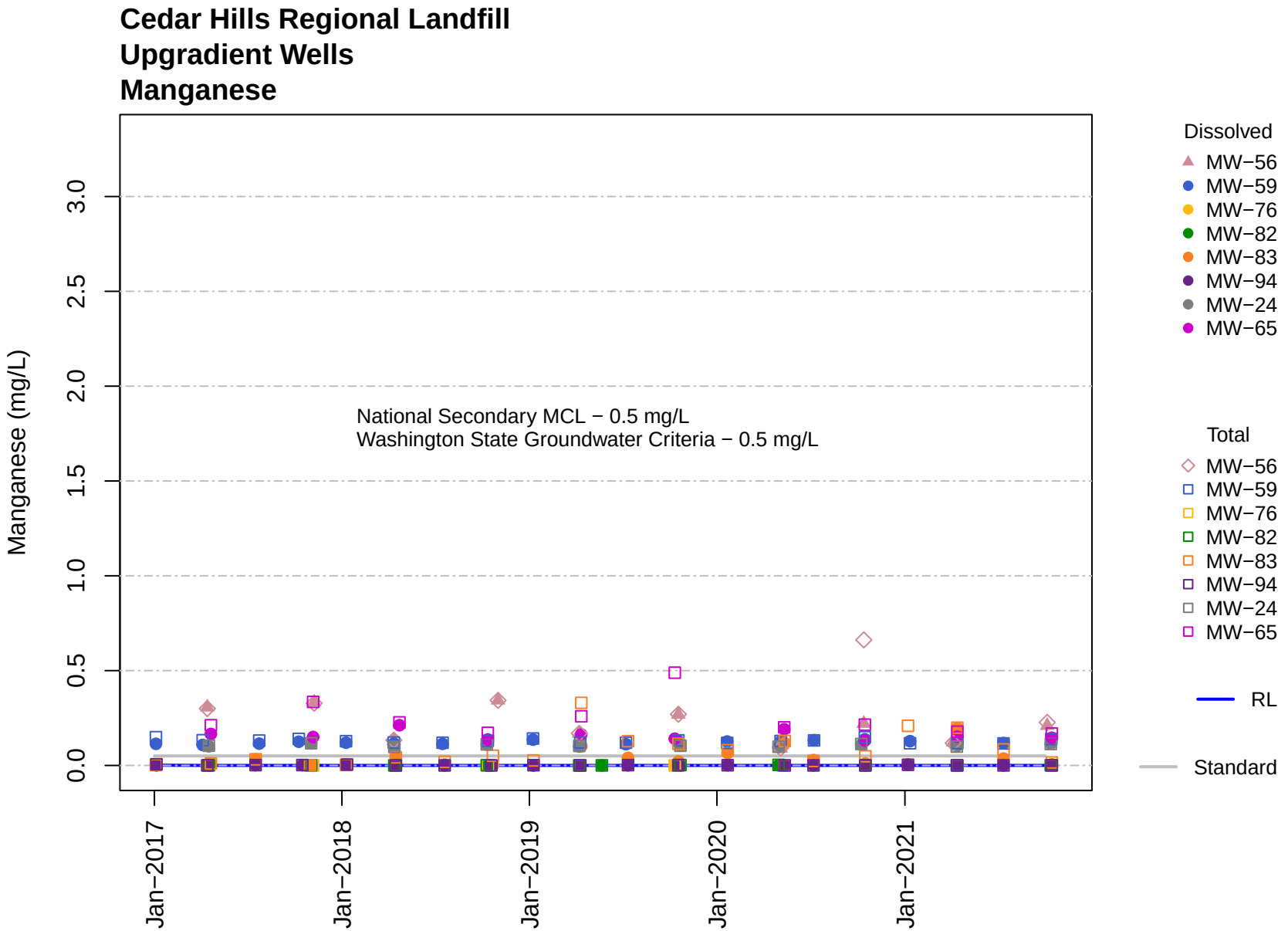

Cedar Hills Regional Landfill
Downgradient Wells
Iron
Iron (mg/L)
0
5
10
15
20
25
30
National Secondary MCL − 0.3 mg/L
Washington State Groundwater Criteria − 0.3 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

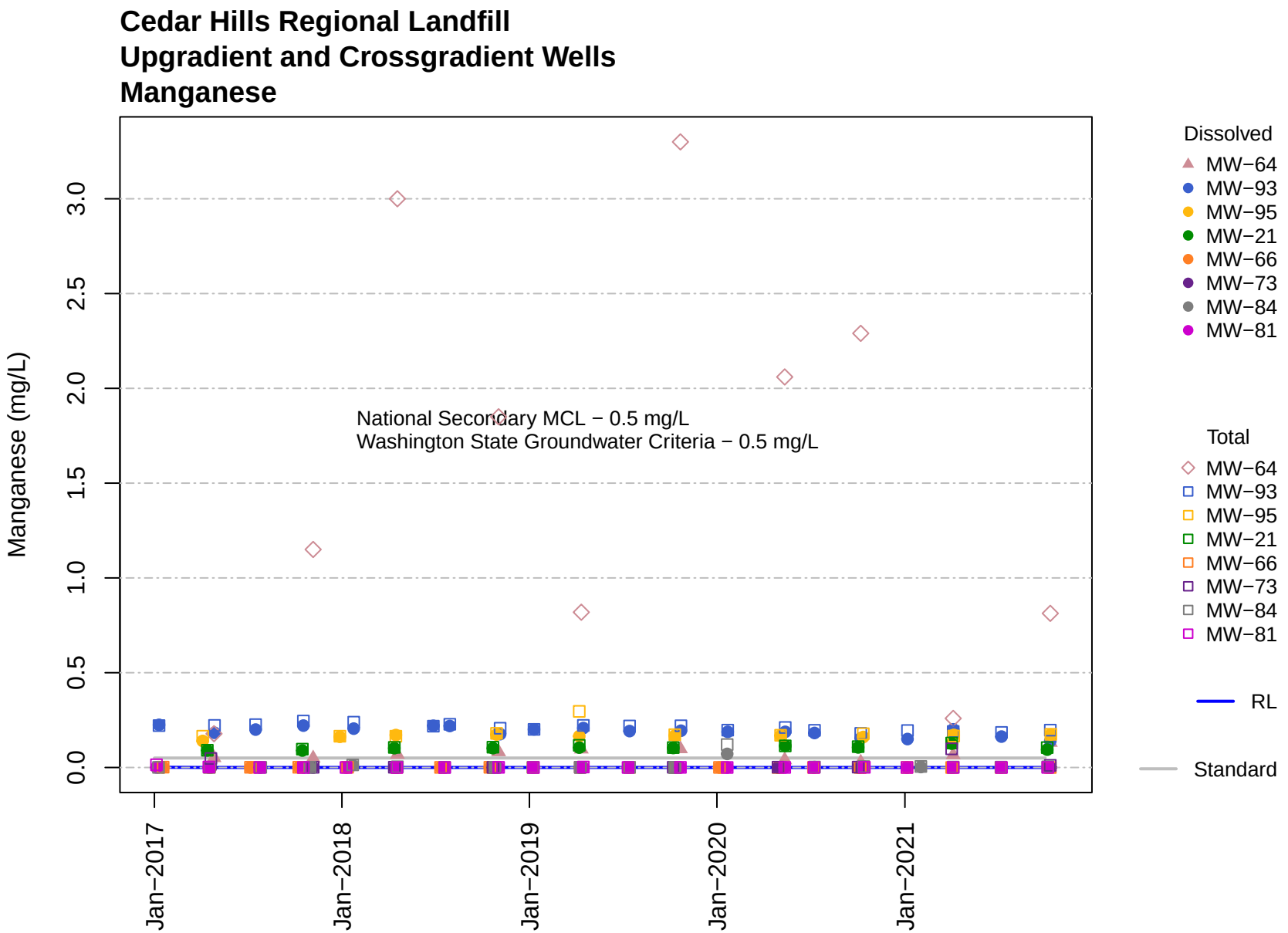

Cedar Hills Regional Landfill
Upgradient Wells
Magnesium
Magnesium (mg/L)
0
10
20
30
40
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

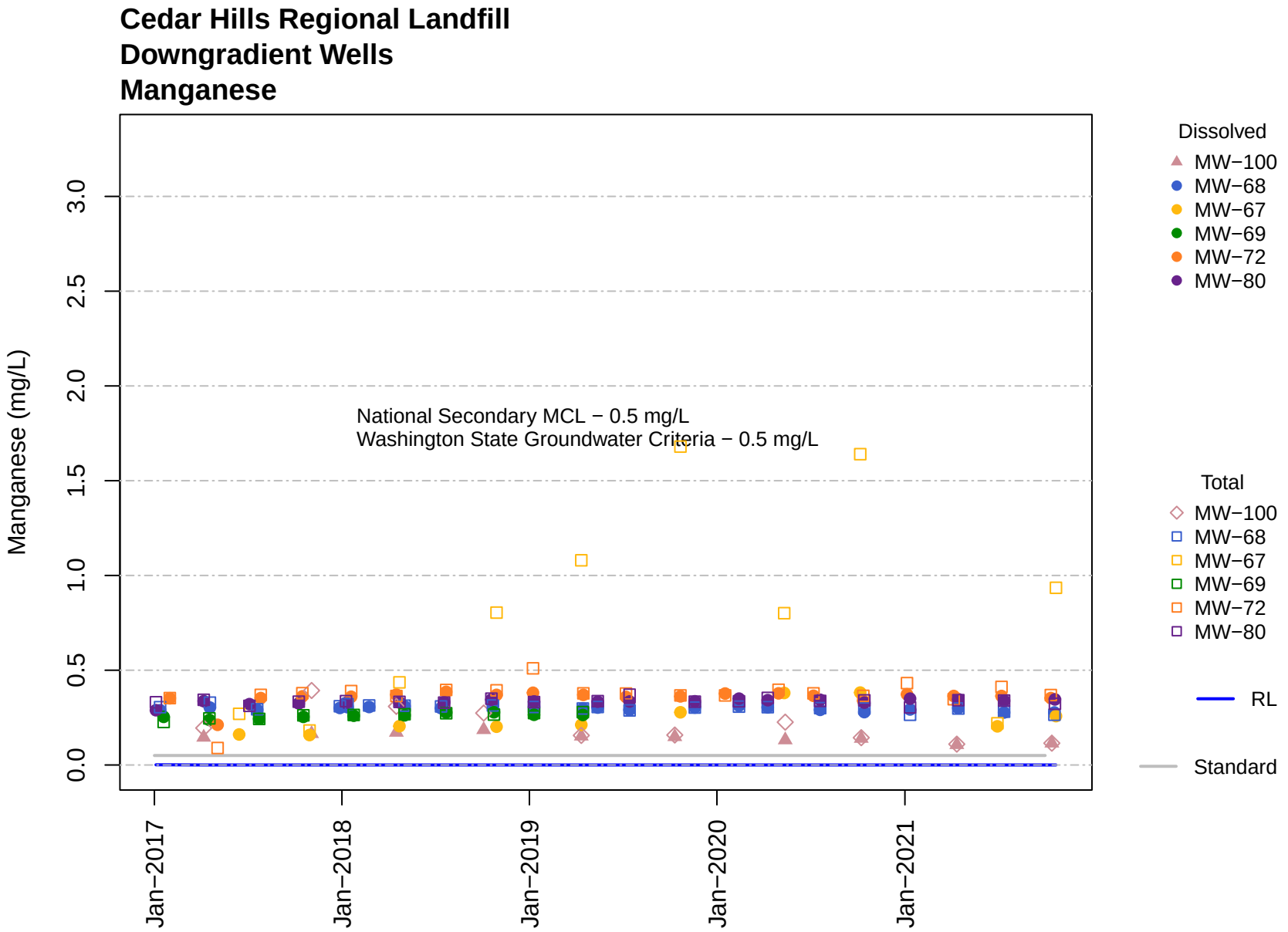

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Magnesium
Magnesium (mg/L)
0
10
20
30
40
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

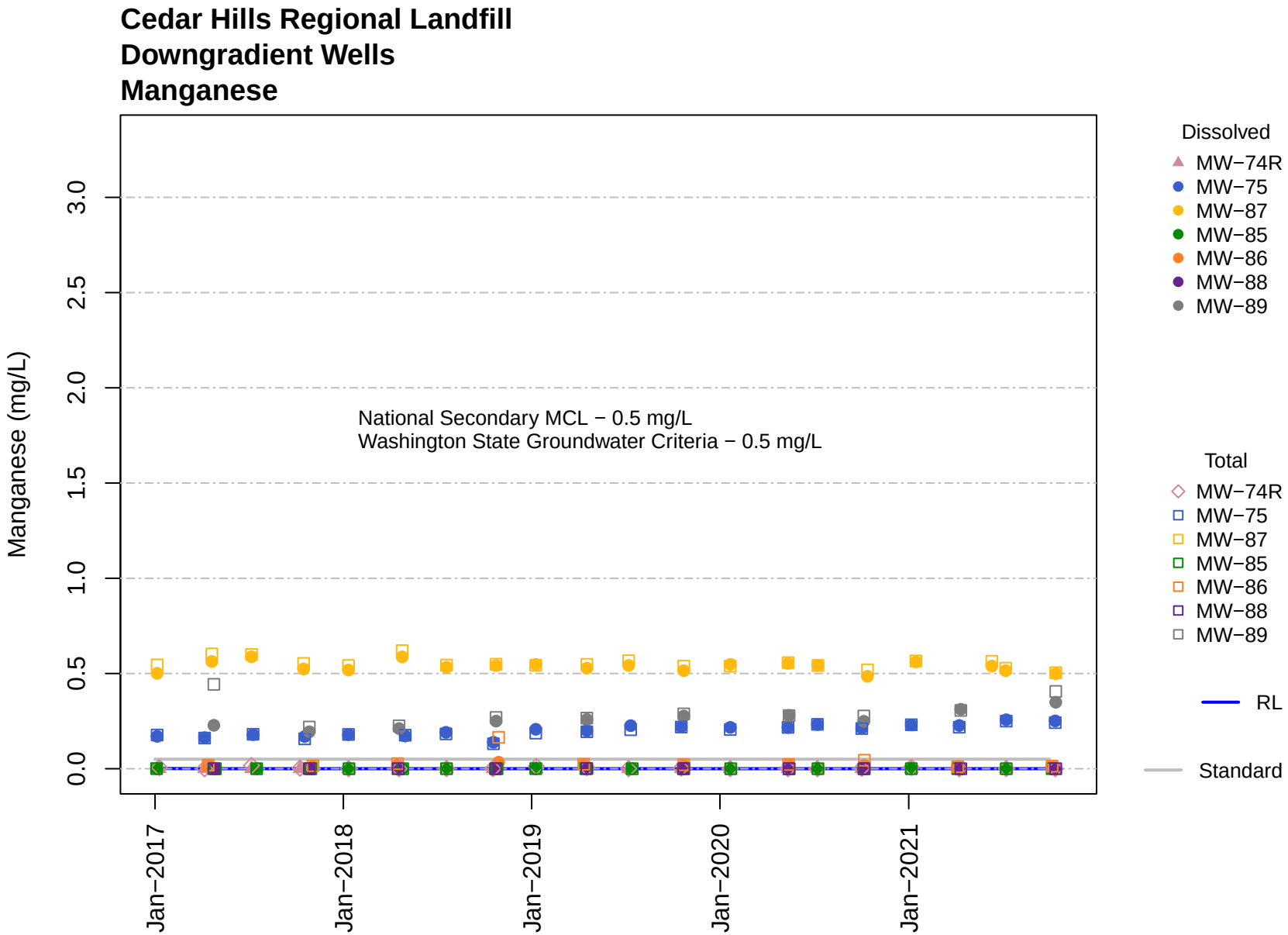

Cedar Hills Regional Landfill
Downgradient Wells
Magnesium
Magnesium (mg/L)
0
10
20
30
40
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

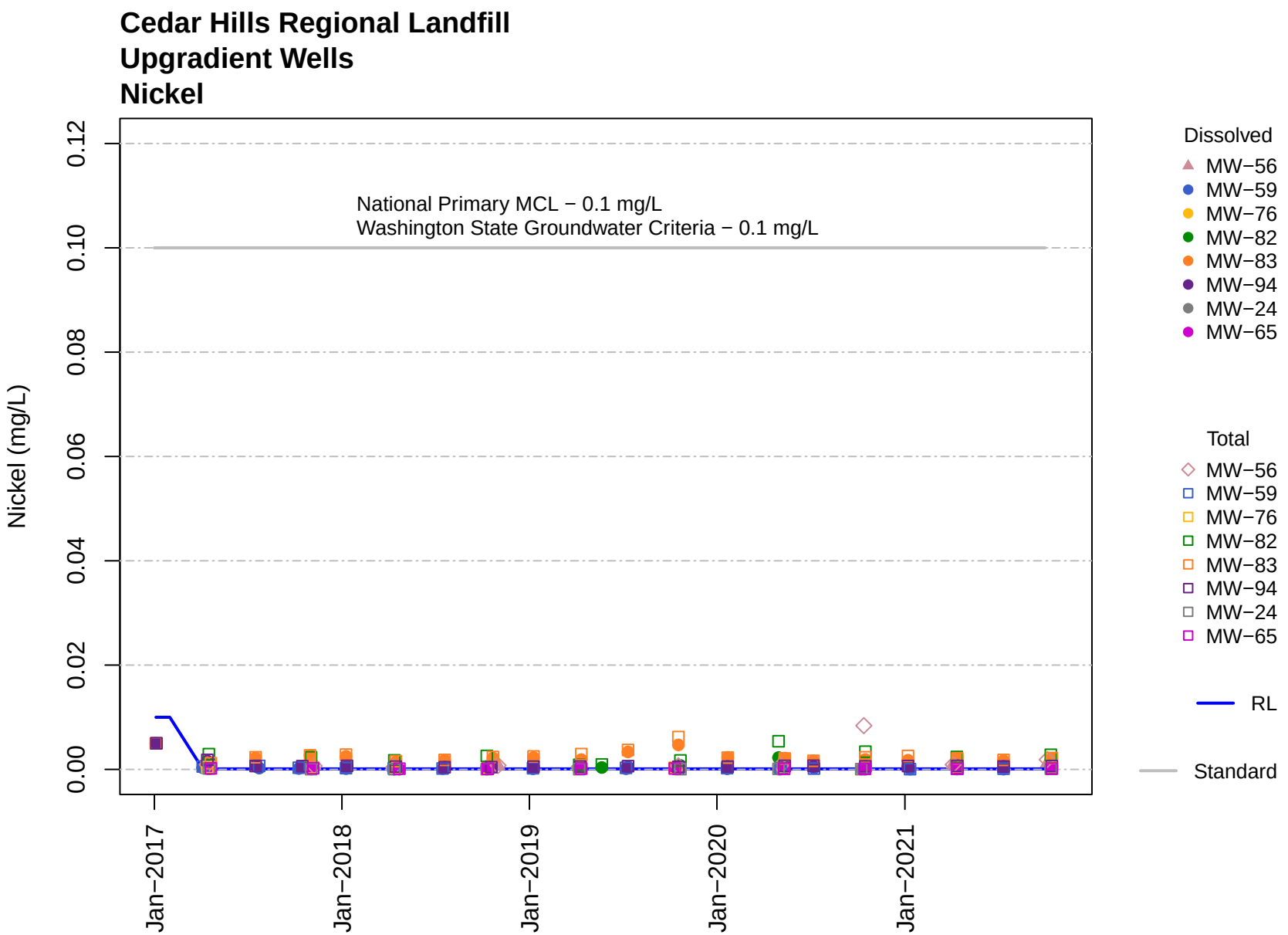

Cedar Hills Regional Landfill
Downgradient Wells
Magnesium
Magnesium (mg/L)
0
10
20
30
40
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL


Cedar Hills Regional Landfill
Upgradient Wells
Manganese
Manganese (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

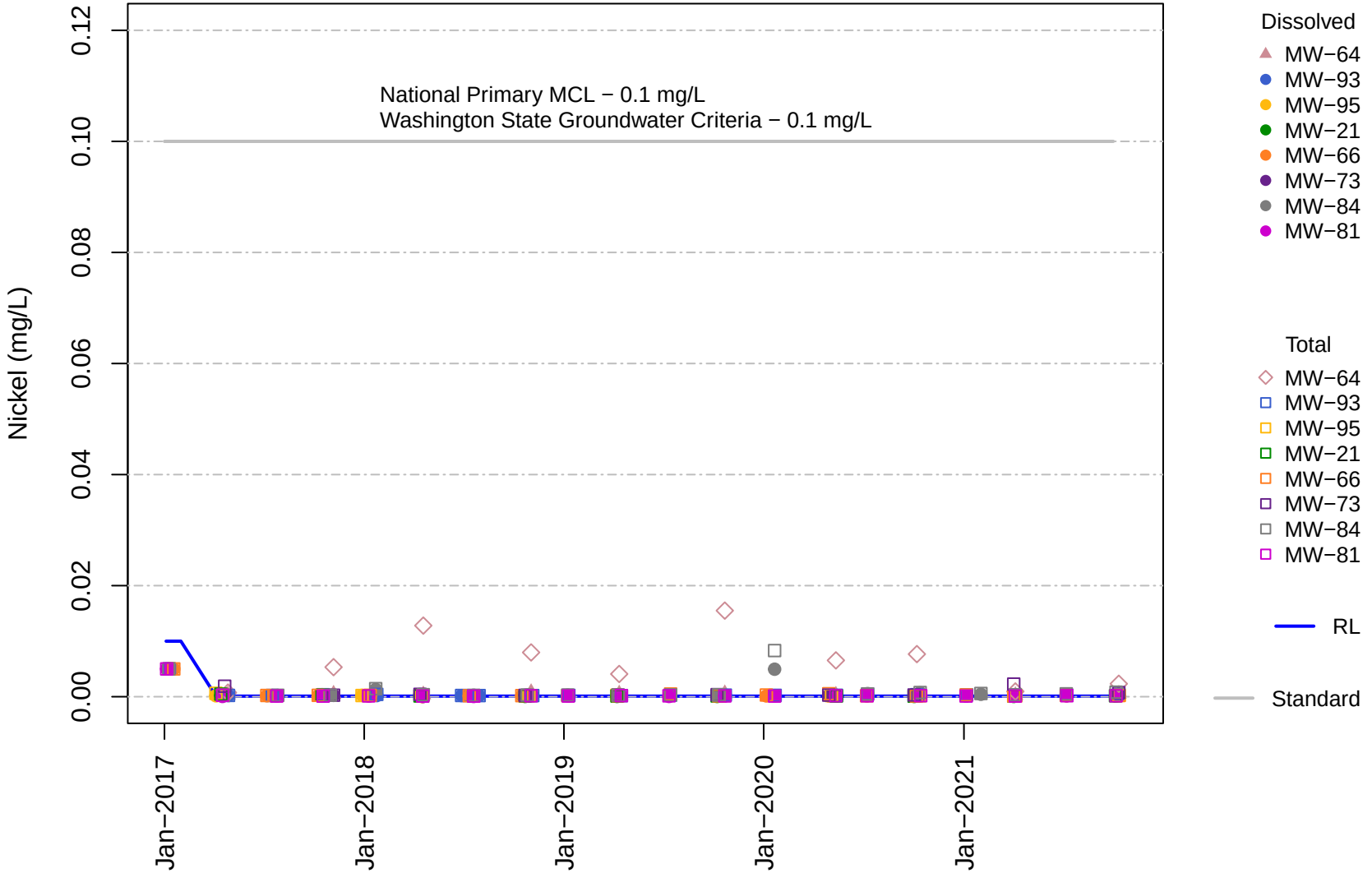

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Manganese
Manganese (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

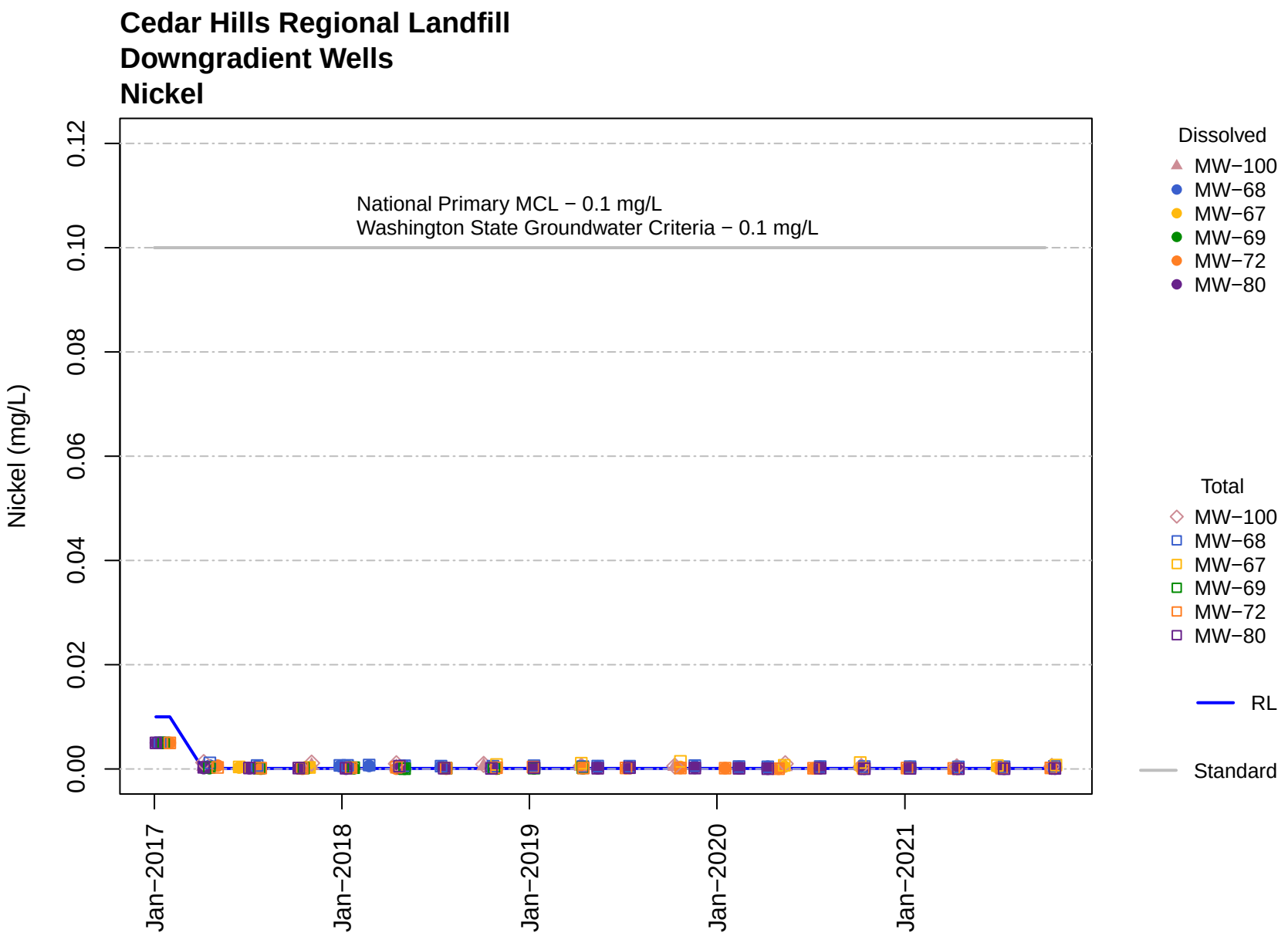

Cedar Hills Regional Landfill
Downgradient Wells
Manganese
Manganese (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

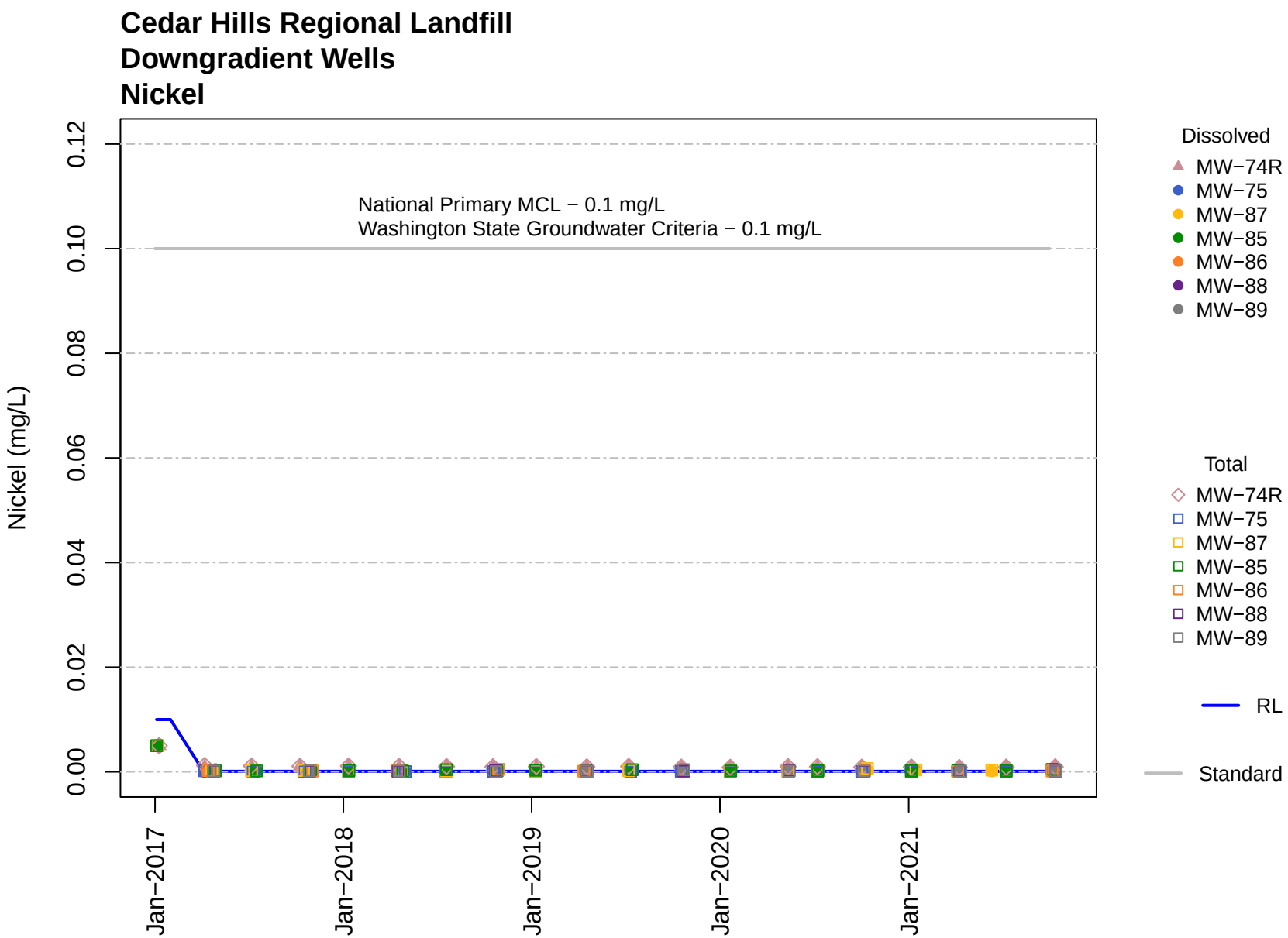

Cedar Hills Regional Landfill
Downgradient Wells
Manganese
Manganese (mg/L)
0.0
0.5
1.0
1.5
2.0
2.5
3.0
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

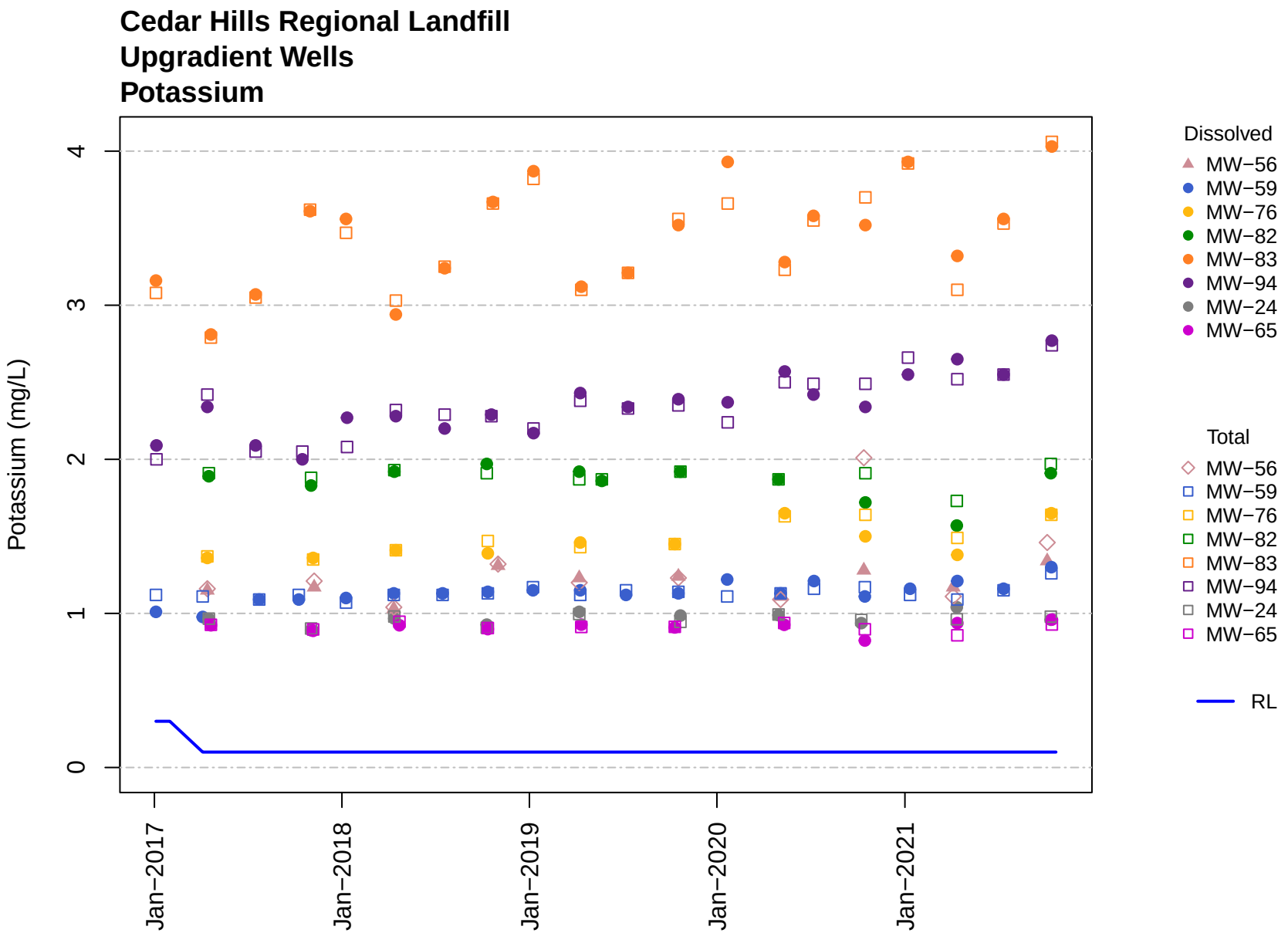

Cedar Hills Regional Landfill
Upgradient Wells
Nickel
Nickel (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

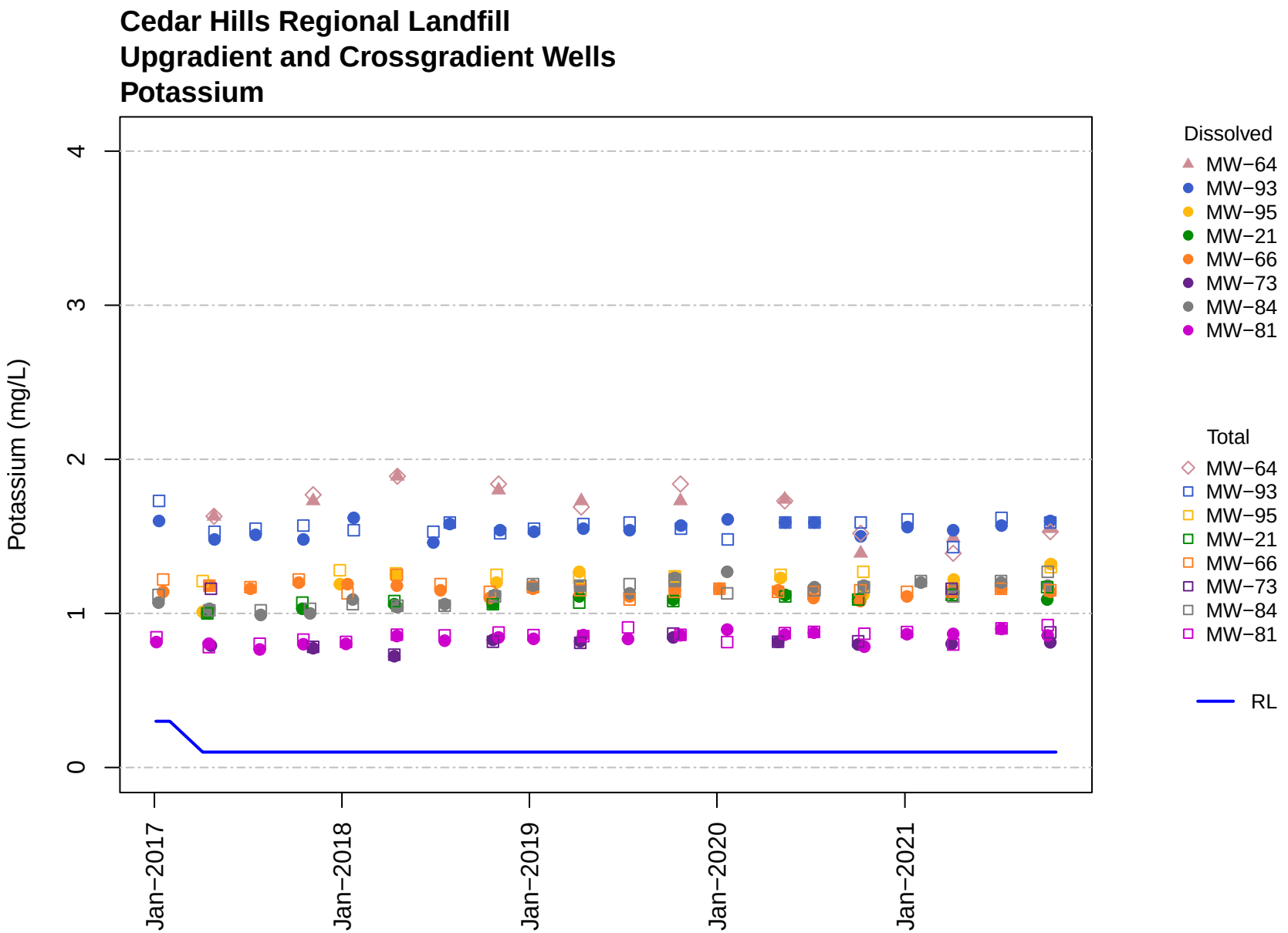
Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Nickel

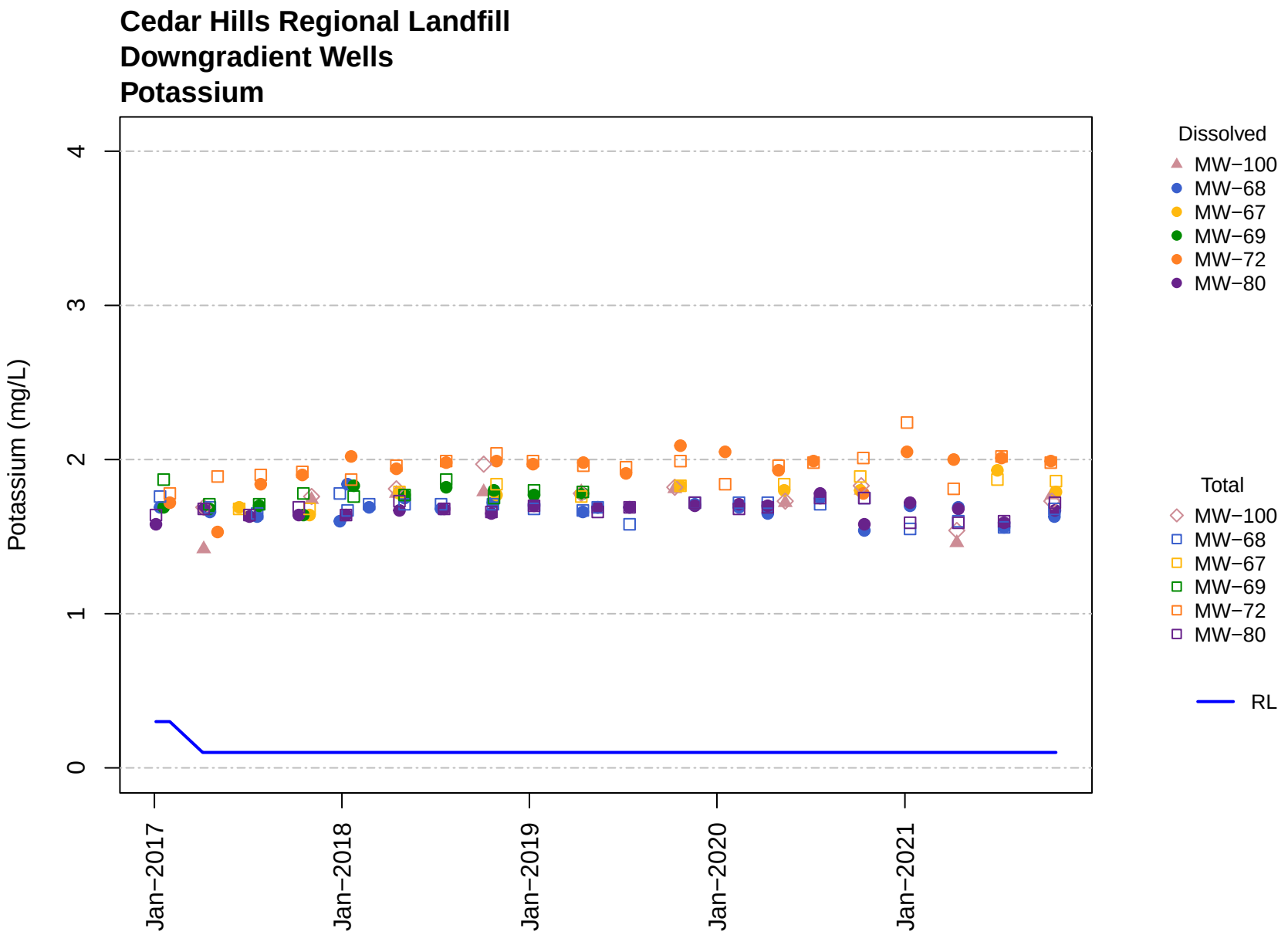


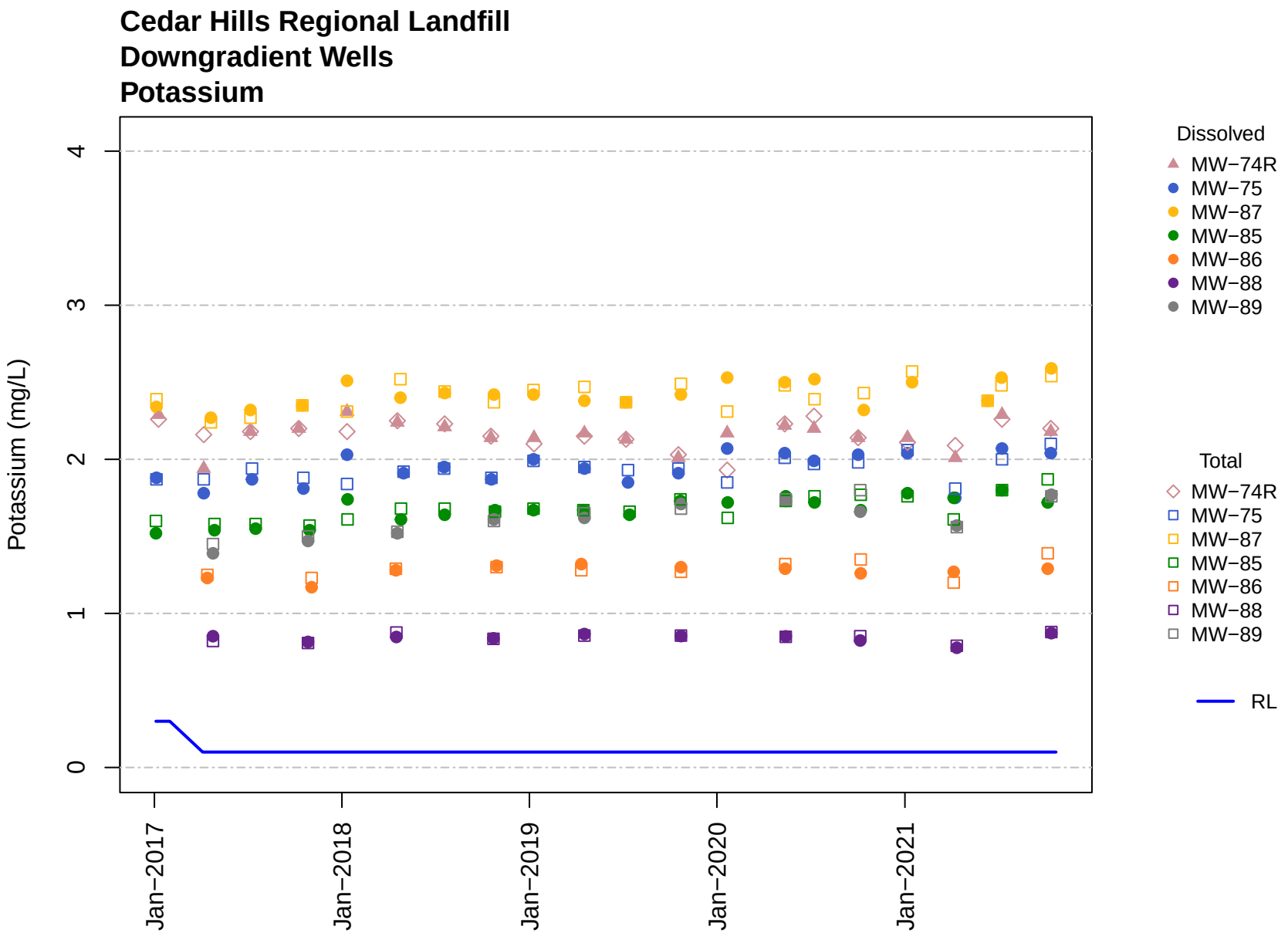

Cedar Hills Regional Landfill
Downgradient Wells
Nickel
Nickel (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard


Cedar Hills Regional Landfill
Downgradient Wells
Nickel
Nickel (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
National Primary MCL − 0.1 mg/L
Washington State Groundwater Criteria − 0.1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

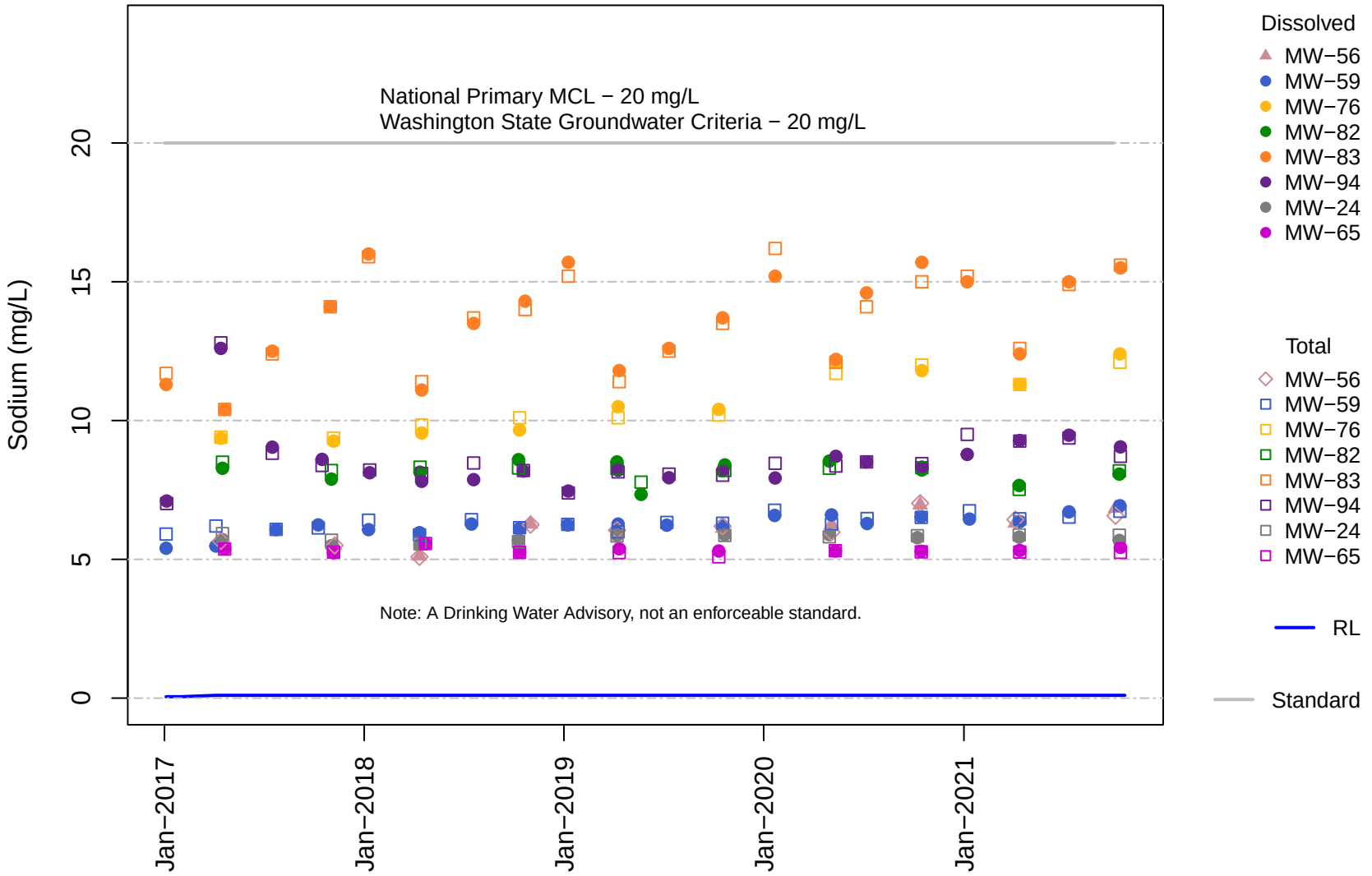

Cedar Hills Regional Landfill
Upgradient Wells
Potassium
Potassium (mg/L)
0
1
2
3
4
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

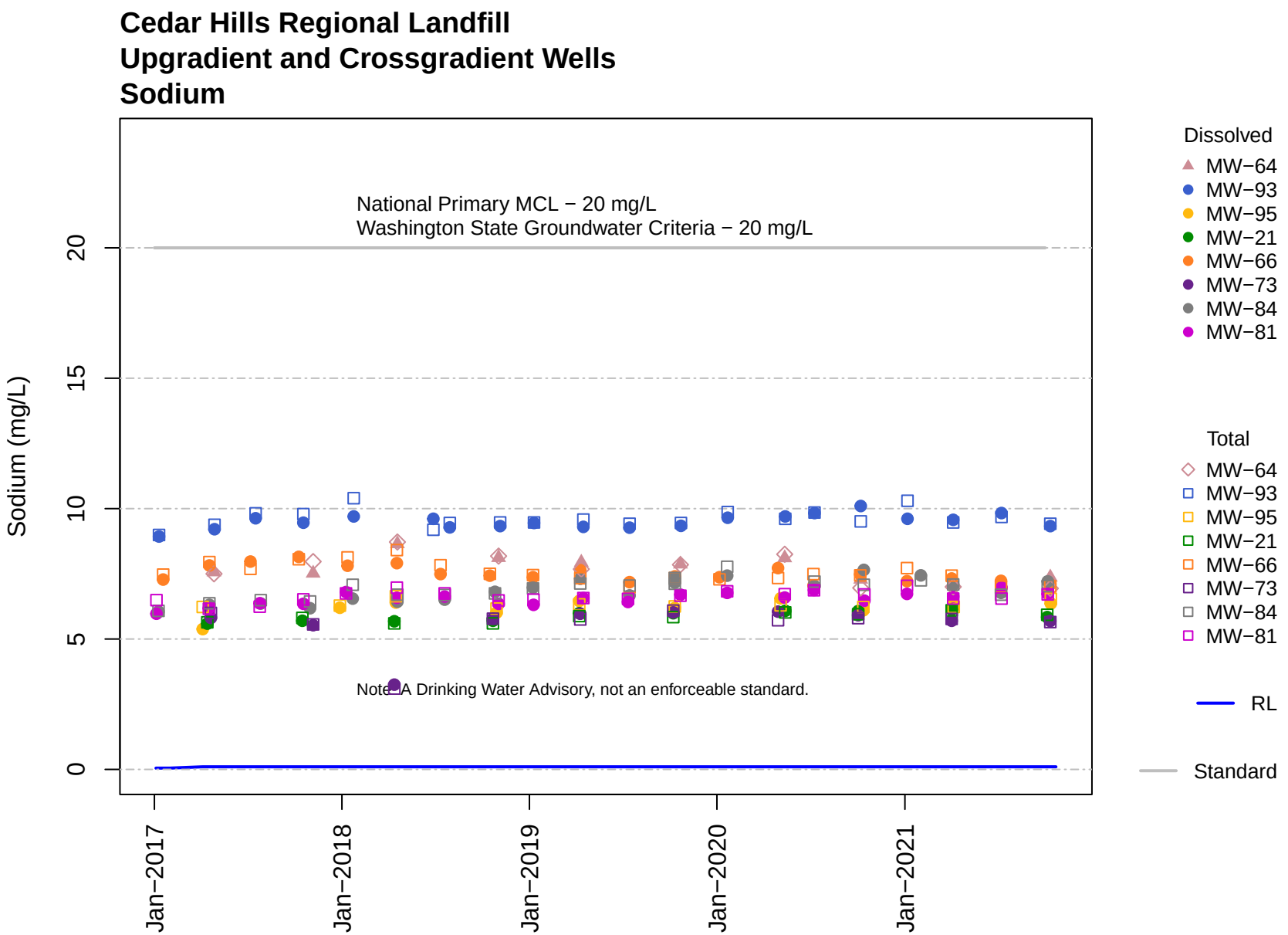

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Potassium
Potassium (mg/L)
0
1
2
3
4
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

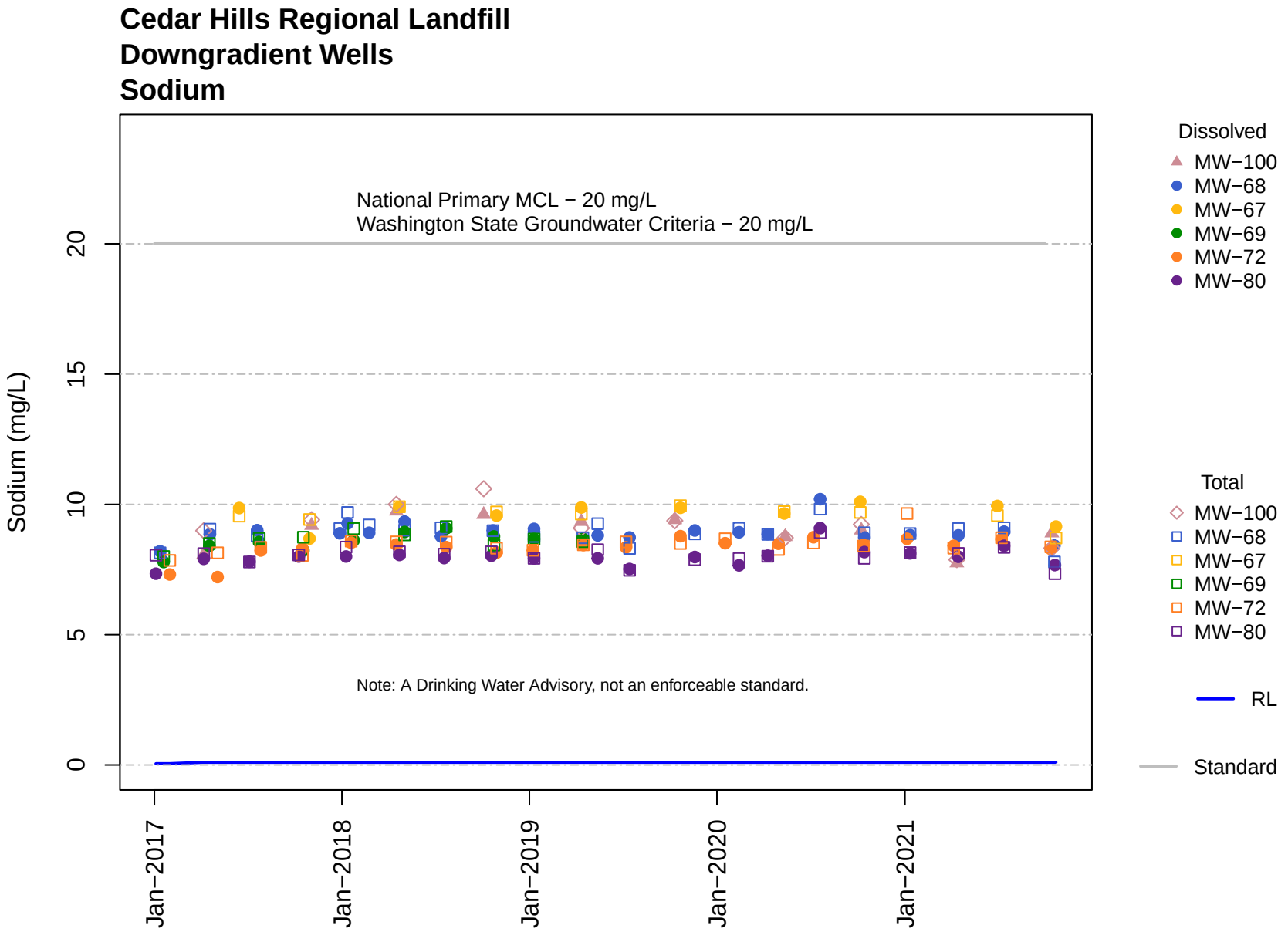

Cedar Hills Regional Landfill
Downgradient Wells
Potassium
Potassium (mg/L)
0
1
2
3
4
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL


Cedar Hills Regional Landfill
Downgradient Wells
Potassium
Potassium (mg/L)
0
1
2
3
4
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

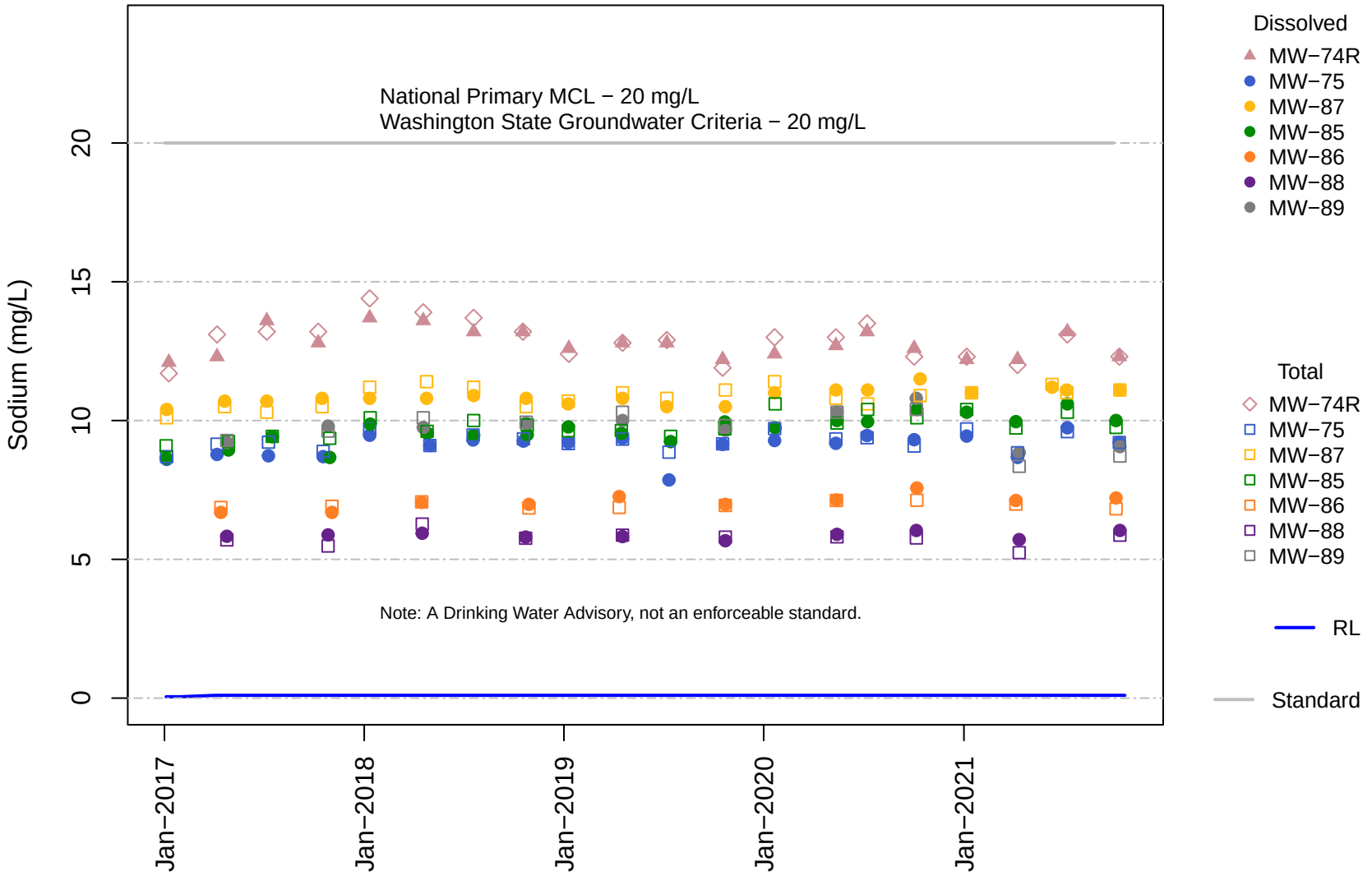
Cedar Hills Regional Landfill
Upgradient Wells
Sodium

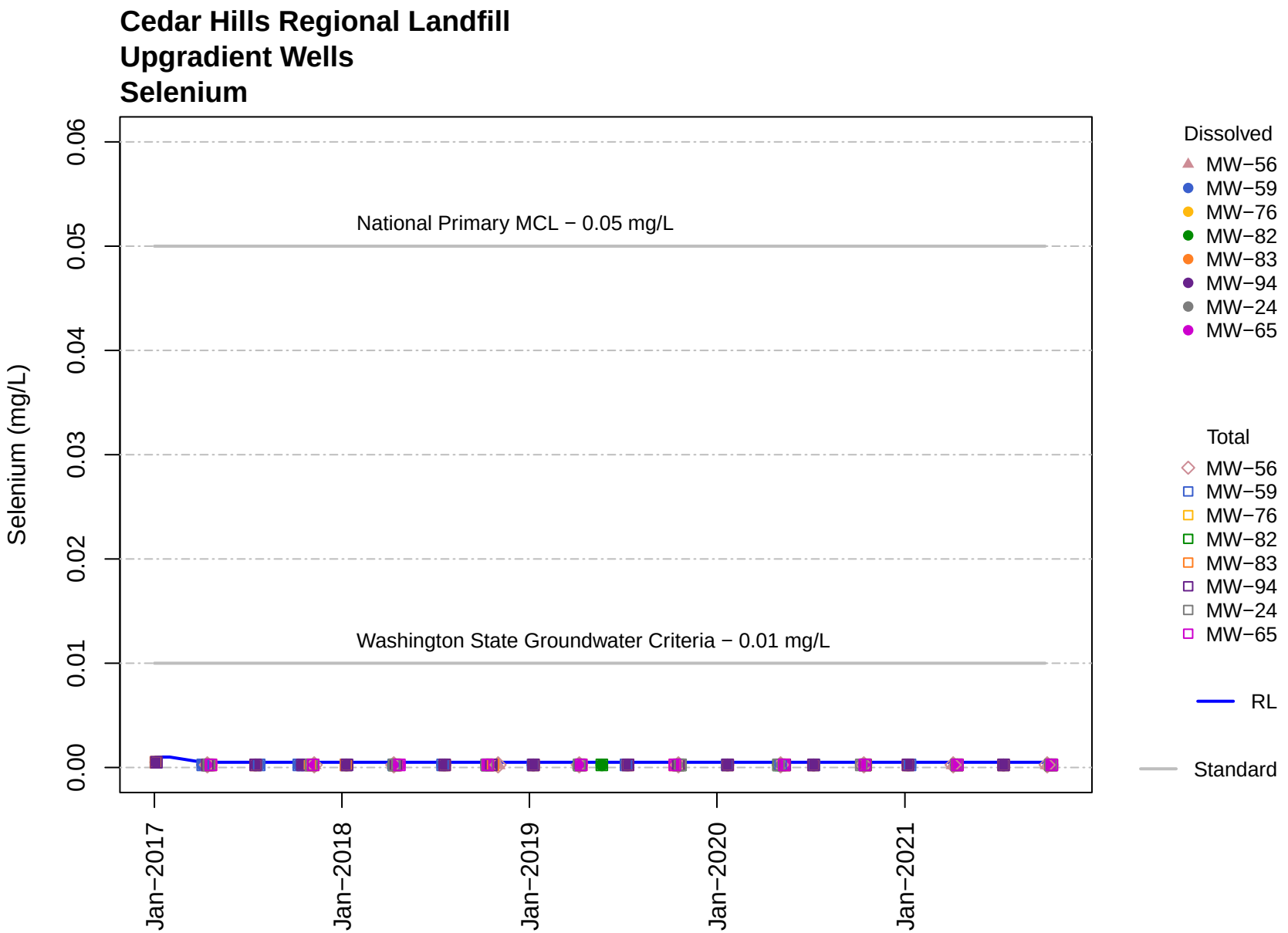


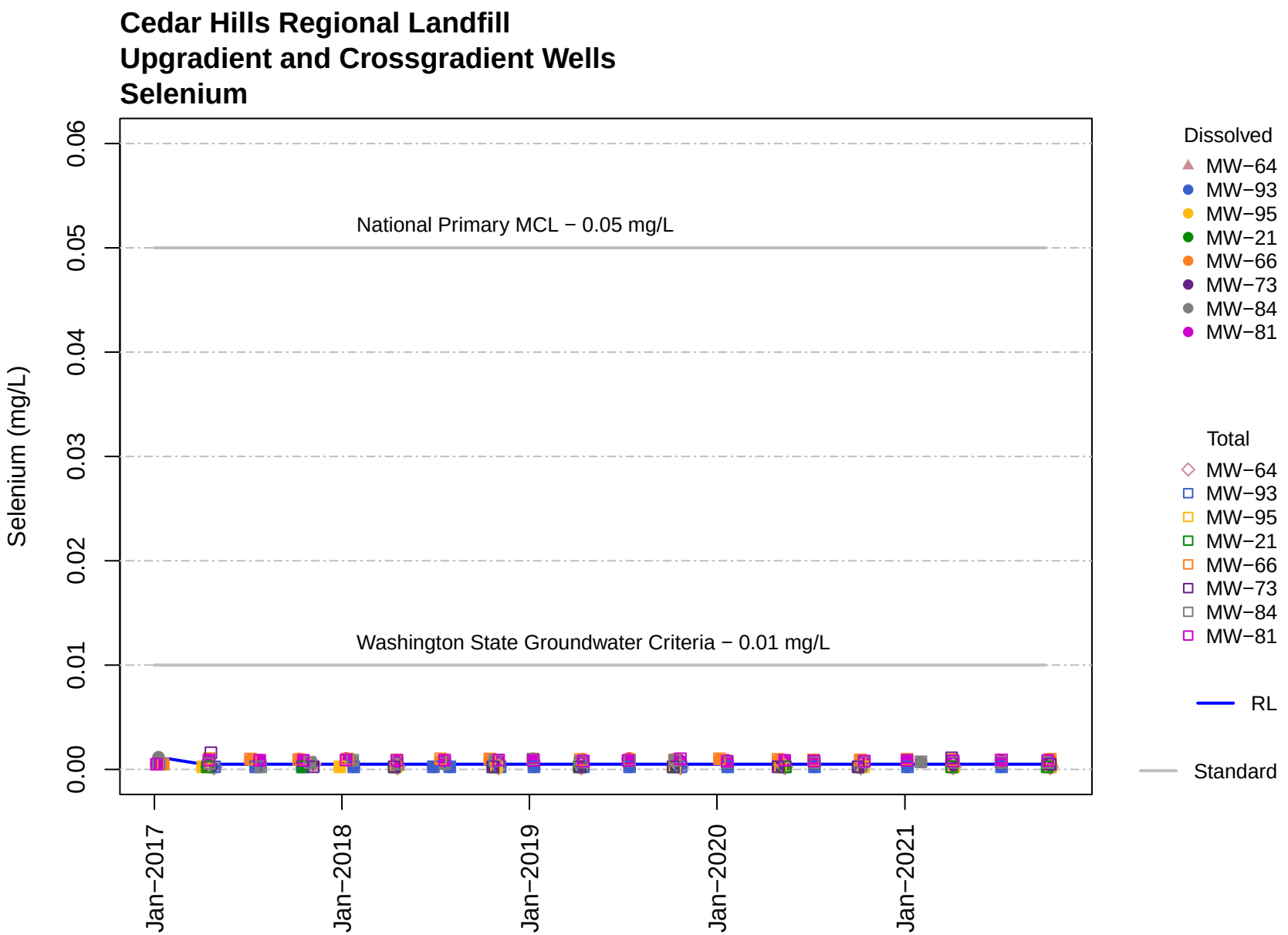

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Sodium
National Primary MCL − 20 mg/L
Washington State Groundwater Criteria − 20 mg/L
Note: A Drinking Water Advisory, not an enforceable standard.
Sodium (mg/L)
0
5
10
15
20
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

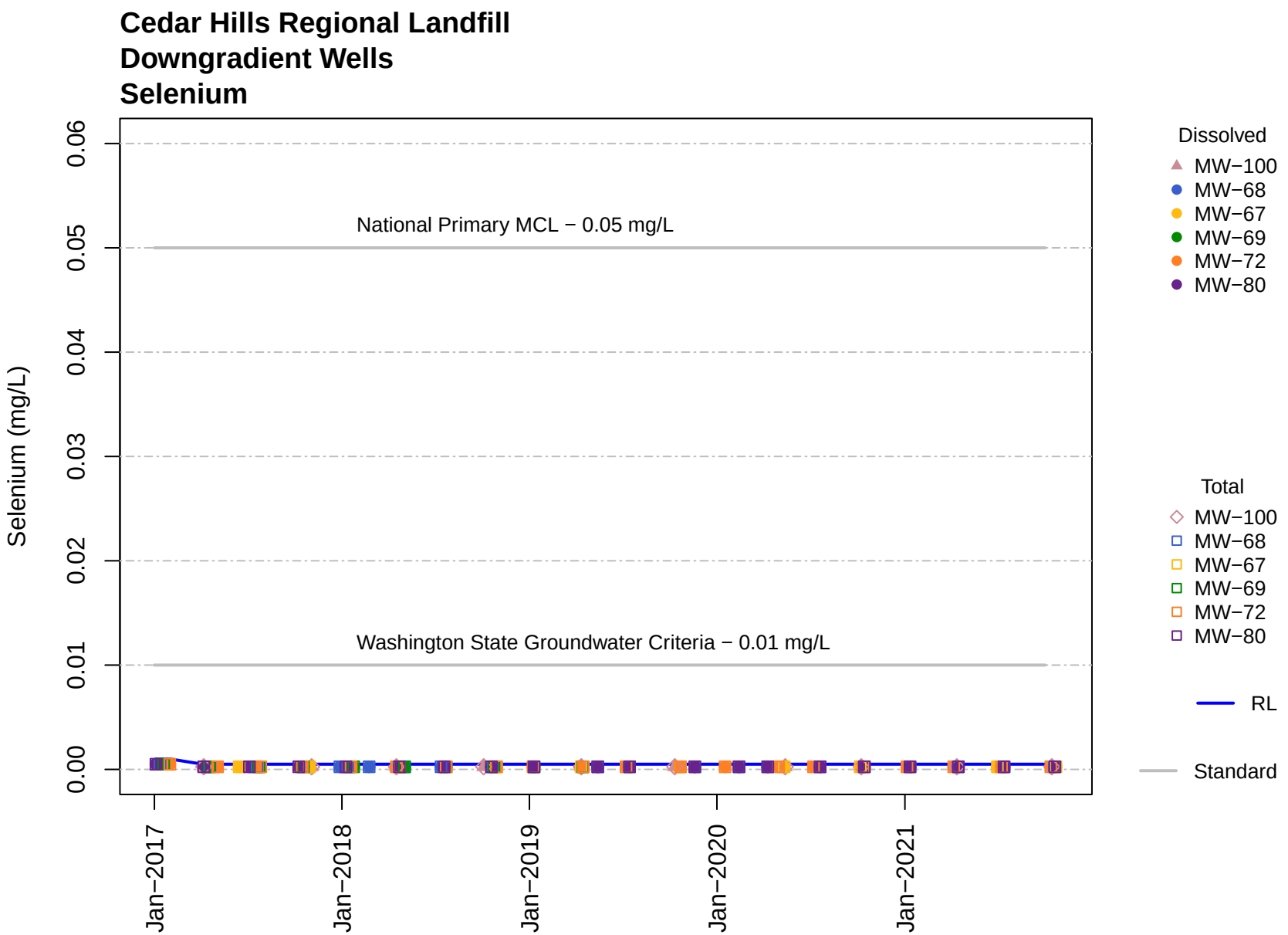

Cedar Hills Regional Landfill
Downgradient Wells
Sodium
National Primary MCL − 20 mg/L
Washington State Groundwater Criteria − 20 mg/L
Note: A Drinking Water Advisory, not an enforceable standard.
Sodium (mg/L)
0
5
10
15
20
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

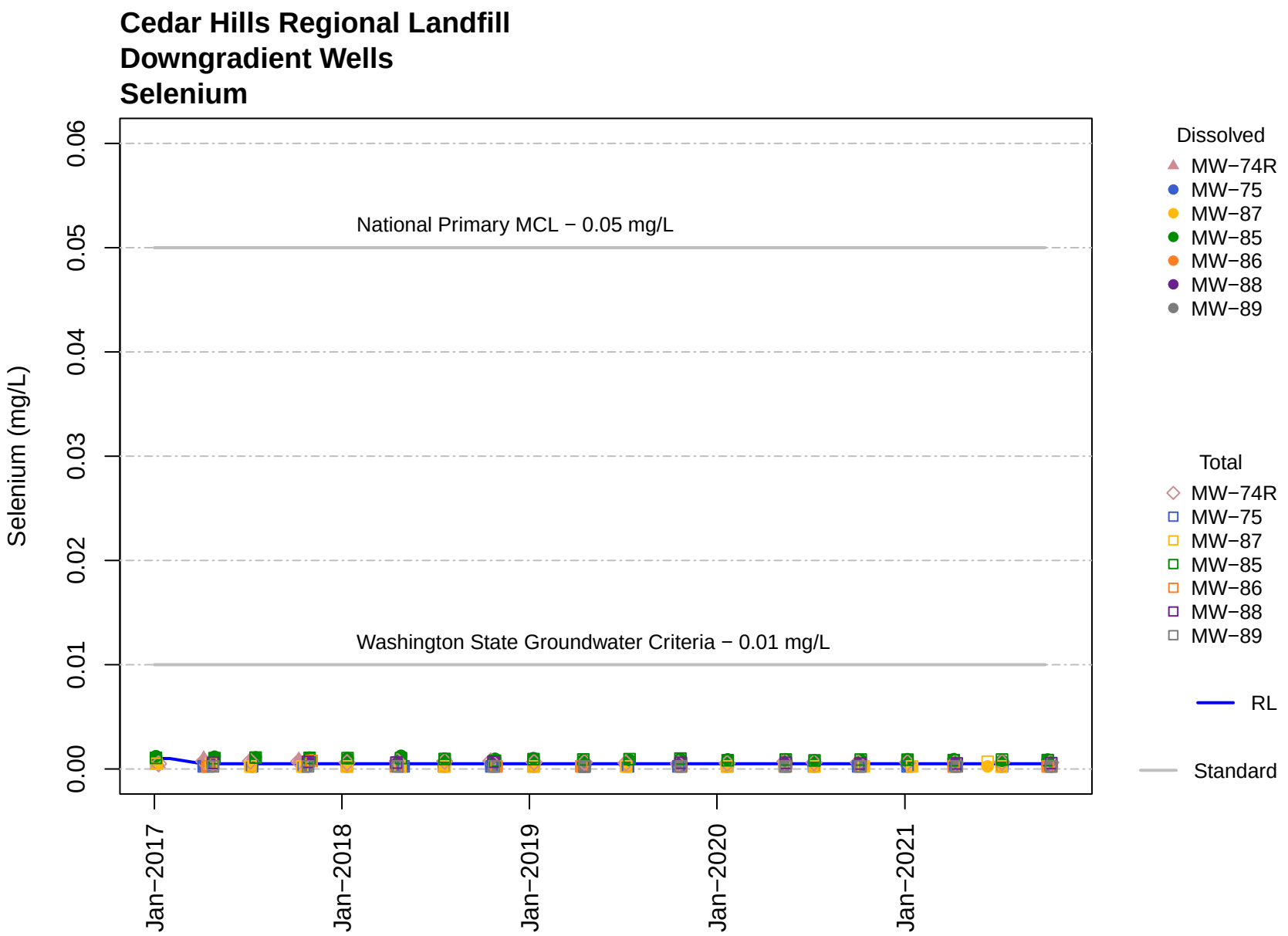
Cedar Hills Regional Landfill
Downgradient Wells
Sodium

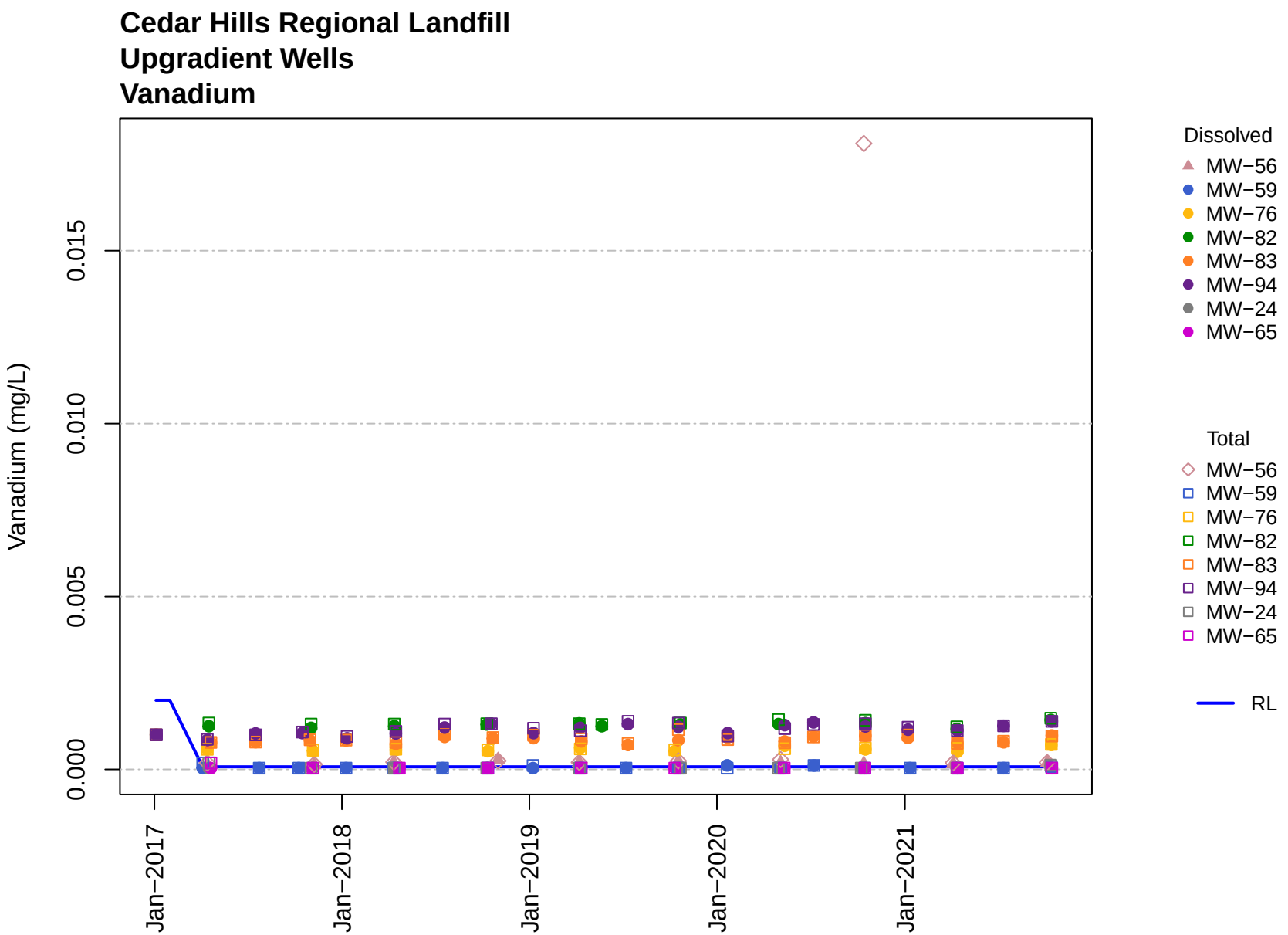


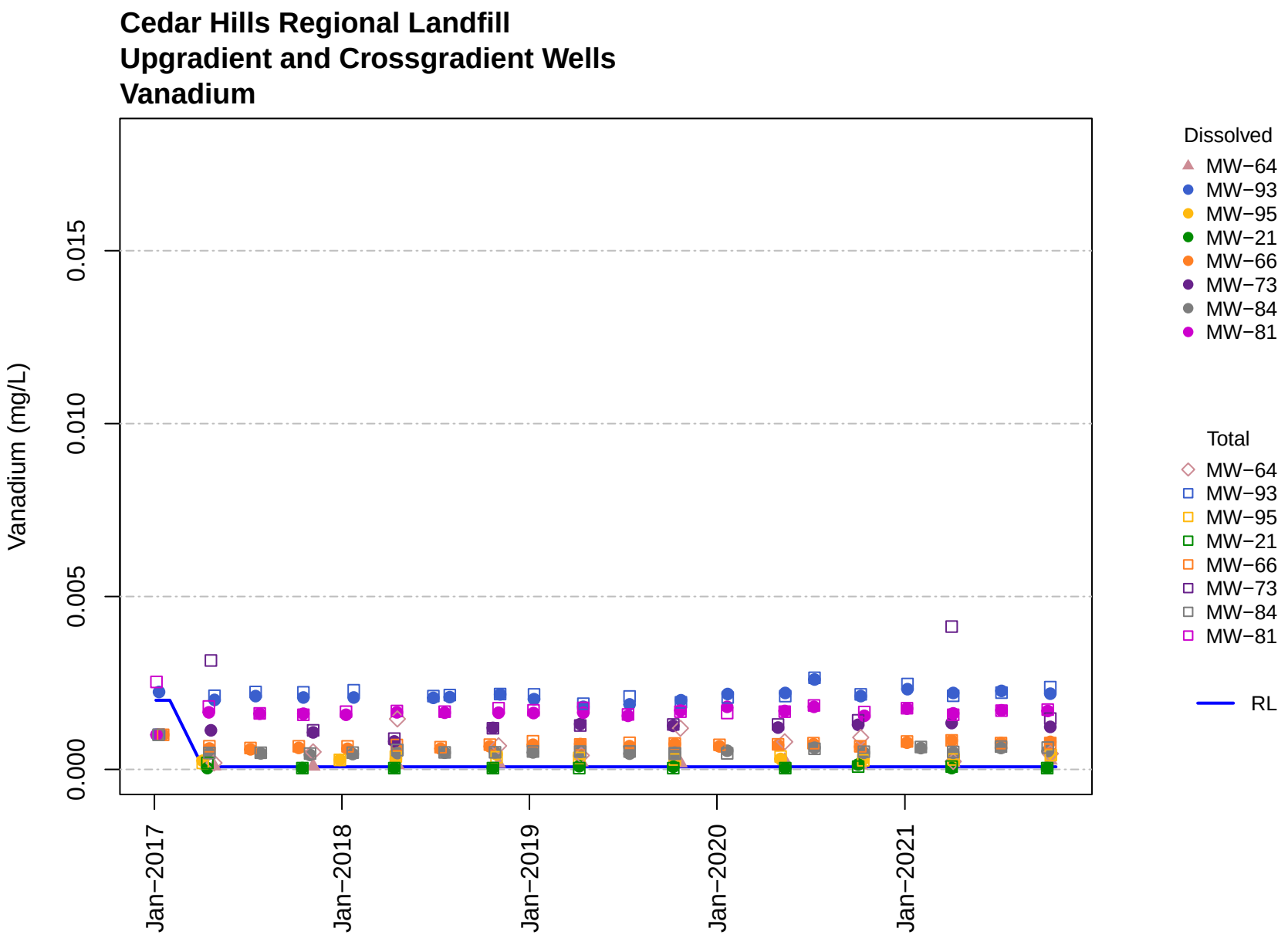

Cedar Hills Regional Landfill
Upgradient Wells
Selenium
Selenium (mg/L)
0.00
0.01
0.02
0.03
0.04
0.05
0.06
National Primary MCL − 0.05 mg/L
Washington State Groundwater Criteria − 0.01 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

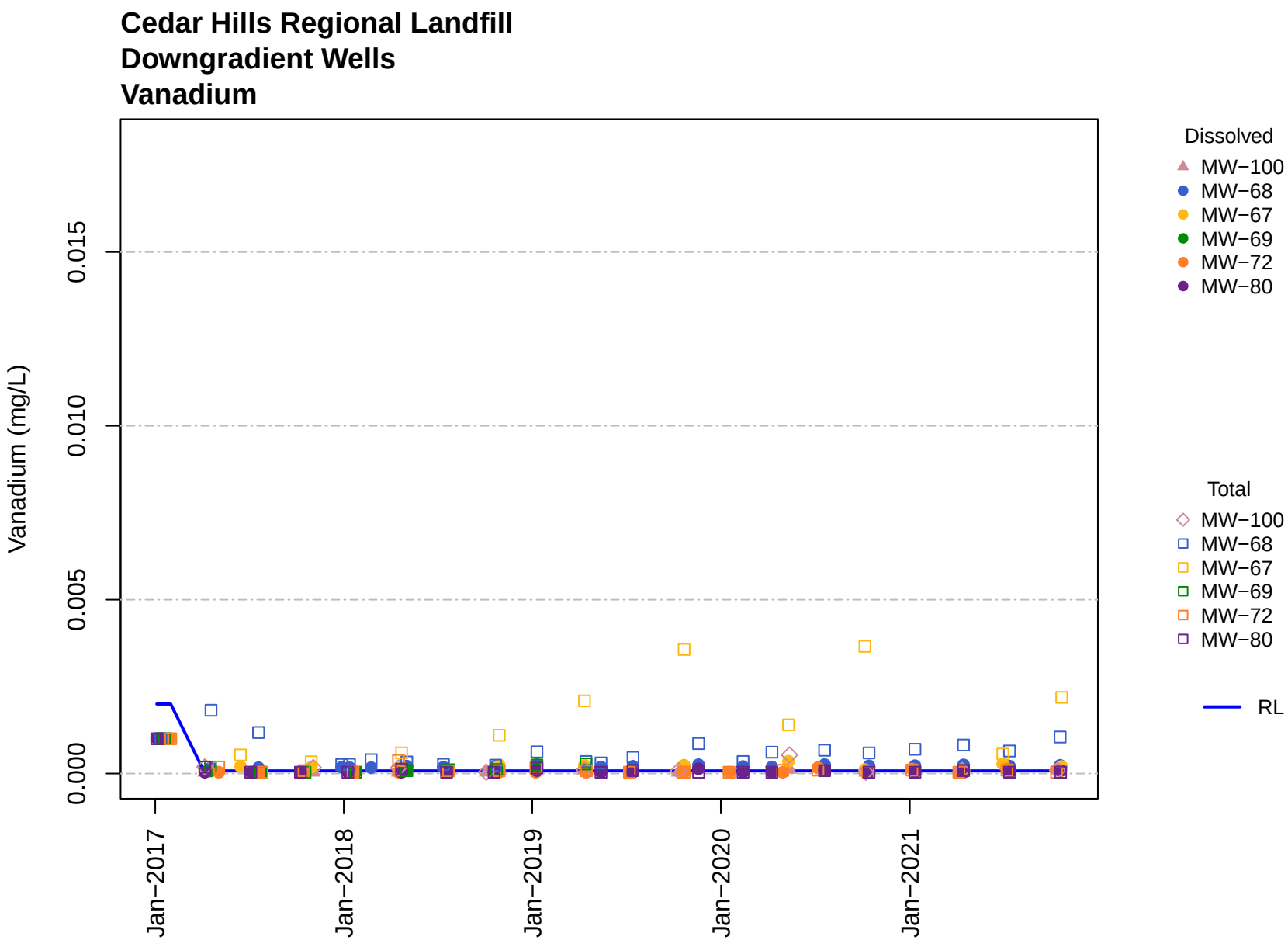

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Selenium
Selenium (mg/L)
0.00
0.01
0.02
0.03
0.04
0.05
0.06
National Primary MCL − 0.05 mg/L
Washington State Groundwater Criteria − 0.01 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

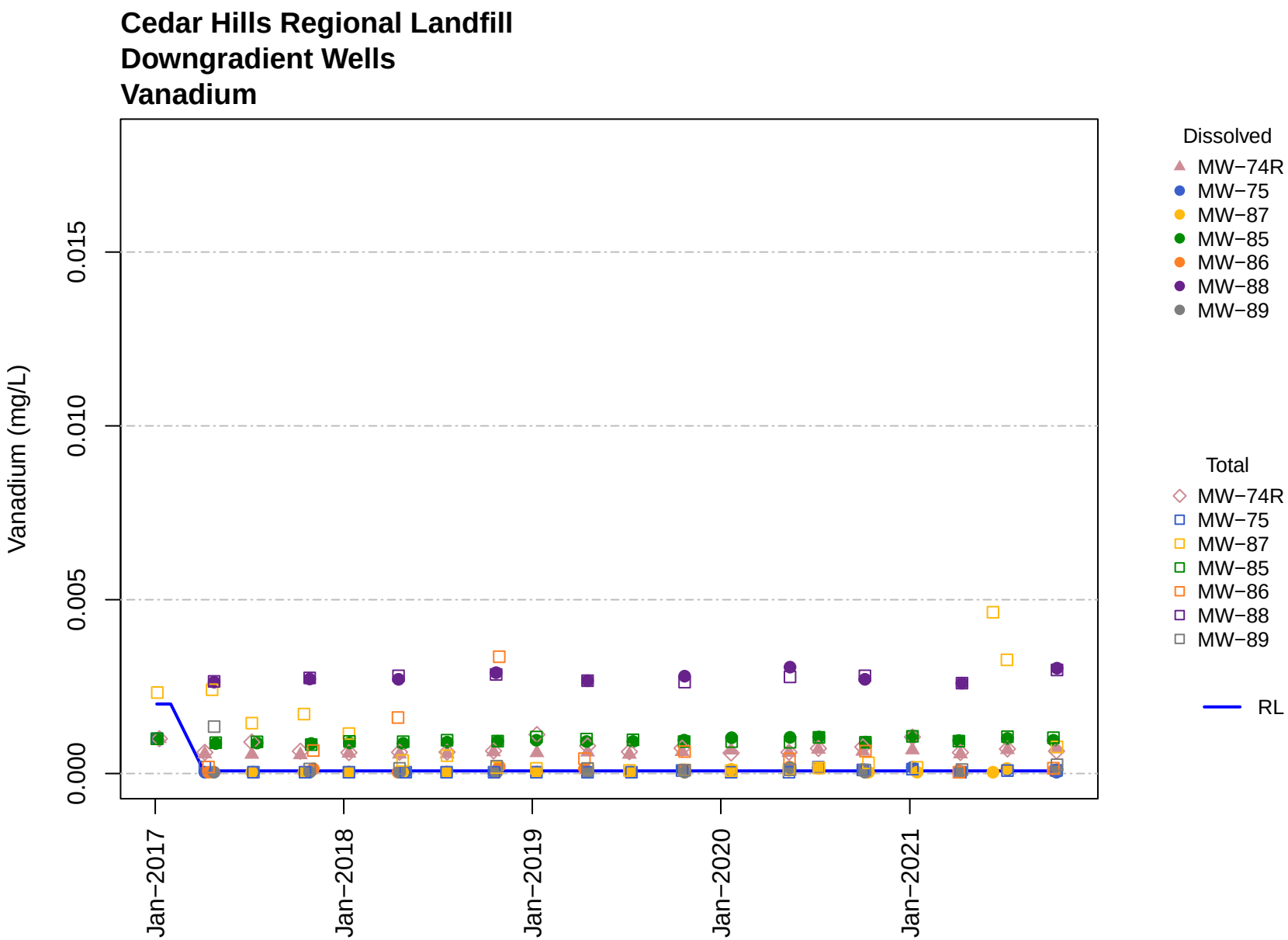

Cedar Hills Regional Landfill
Downgradient Wells
Selenium
Selenium (mg/L)
0.00
0.01
0.02
0.03
0.04
0.05
0.06
National Primary MCL − 0.05 mg/L
Washington State Groundwater Criteria − 0.01 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard


Cedar Hills Regional Landfill
Downgradient Wells
Selenium
Selenium (mg/L)
0.00
0.01
0.02
0.03
0.04
0.05
0.06
National Primary MCL − 0.05 mg/L
Washington State Groundwater Criteria − 0.01 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

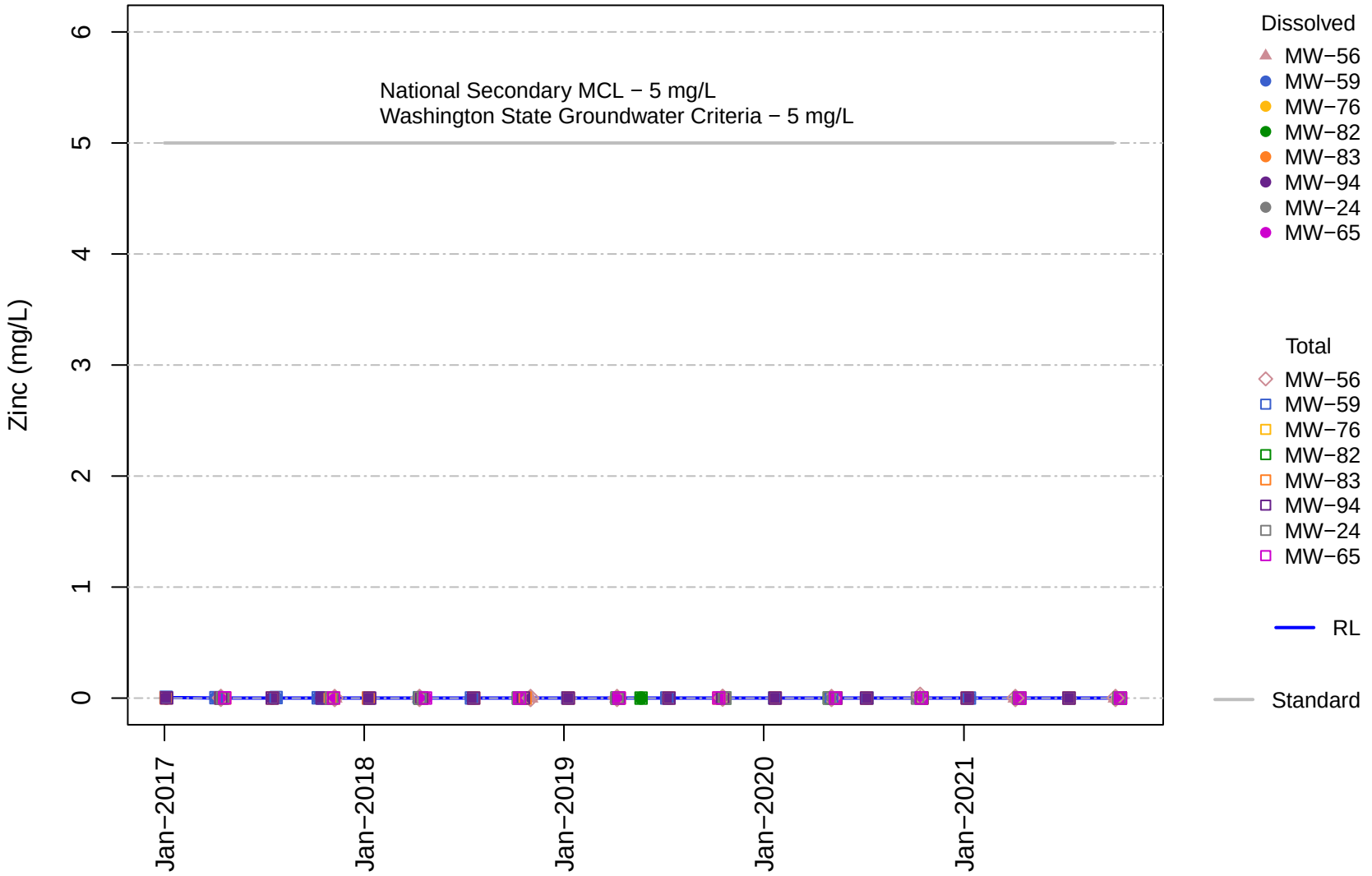

Cedar Hills Regional Landfill
Upgradient Wells
Vanadium
Vanadium (mg/L)
0.000
0.005
0.010
0.015
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
Total
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL


Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Vanadium
Vanadium (mg/L)
0.000
0.005
0.010
0.015
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
Total
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

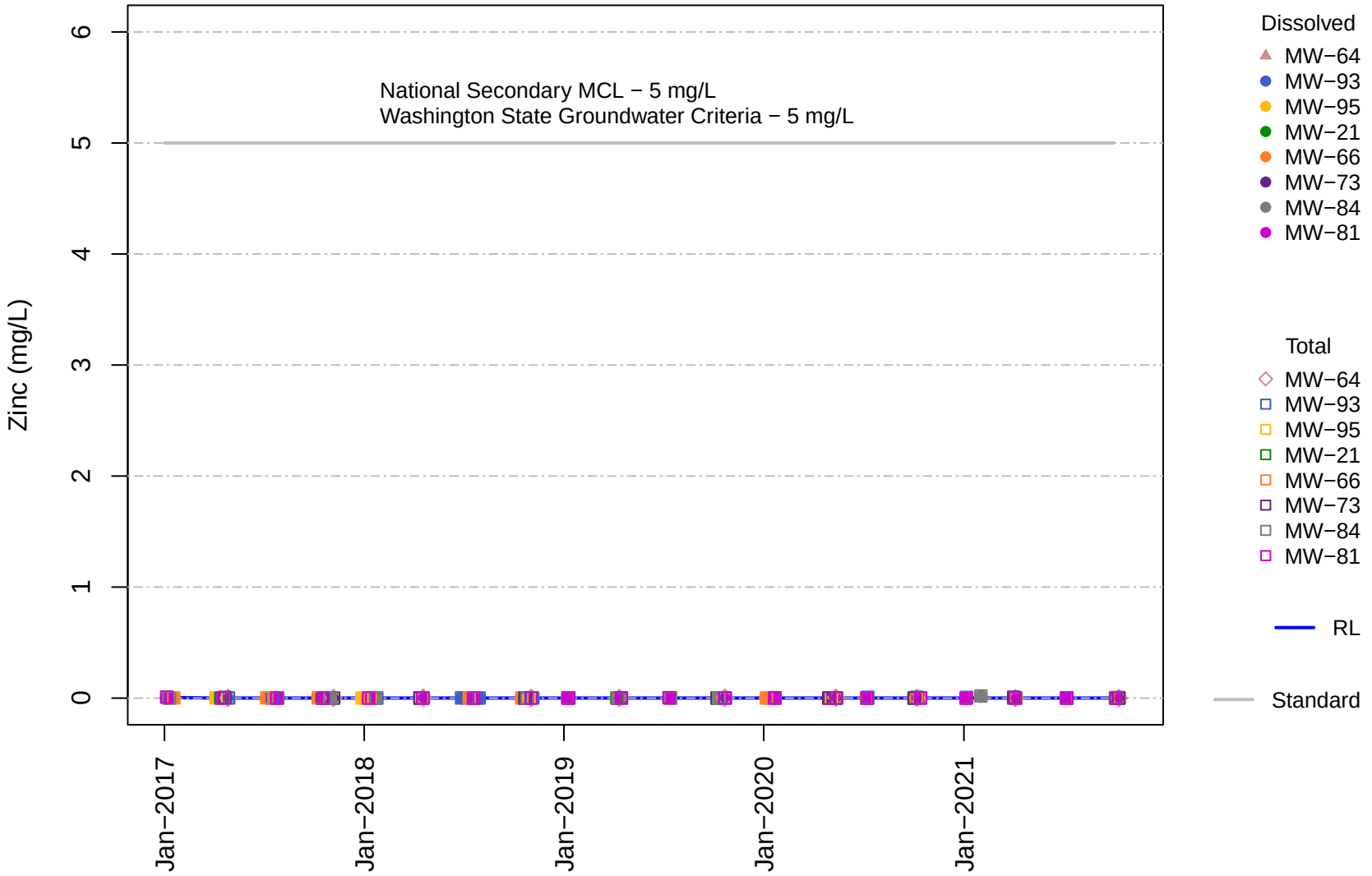

Cedar Hills Regional Landfill
Downgradient Wells
Vanadium
Vanadium (mg/L)
0.000
0.005
0.010
0.015
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

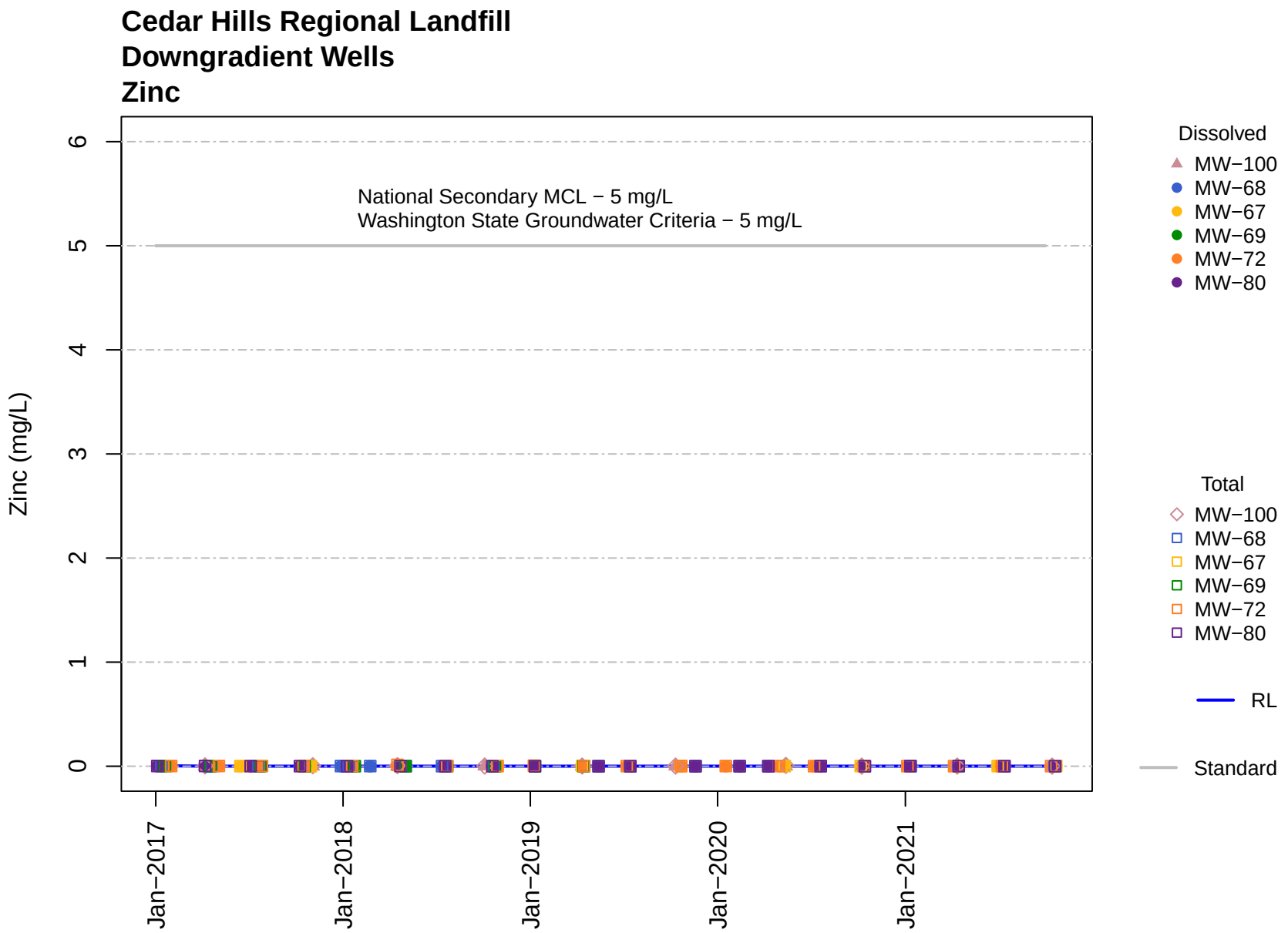

Cedar Hills Regional Landfill
Downgradient Wells
Vanadium
Vanadium (mg/L)
0.000
0.005
0.010
0.015
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

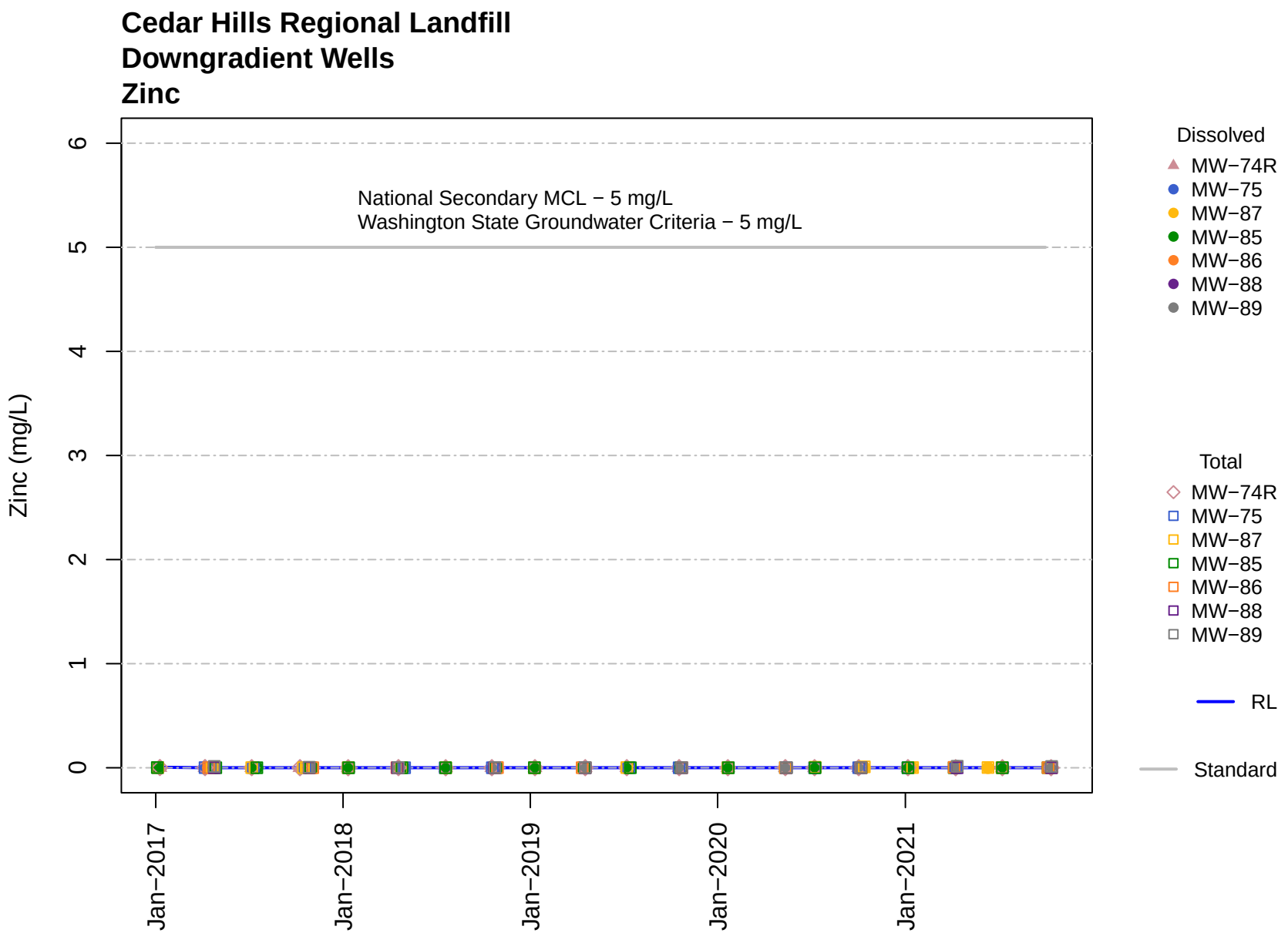
Cedar Hills Regional Landfill
Upgradient Wells
Zinc

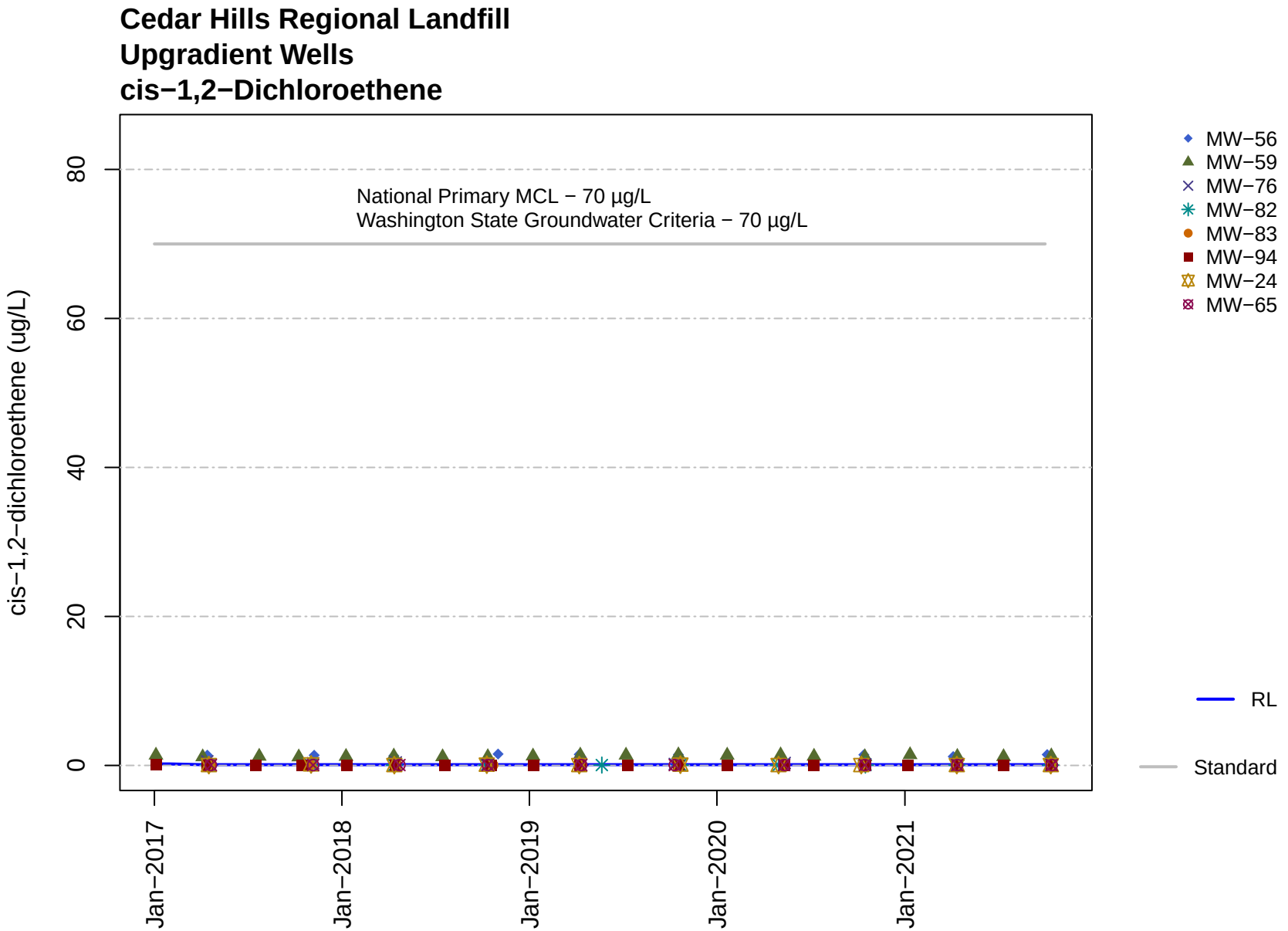


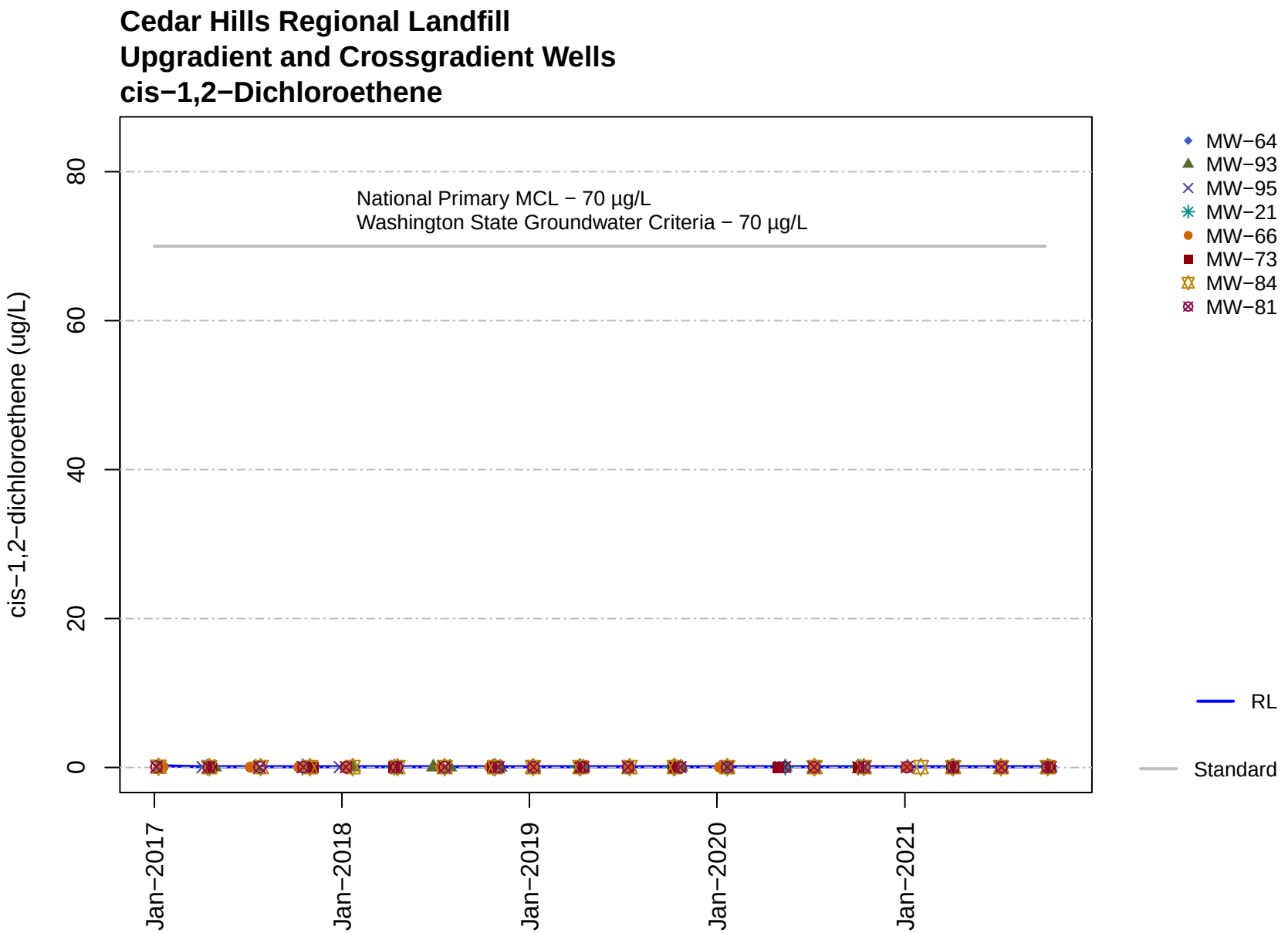
Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Zinc

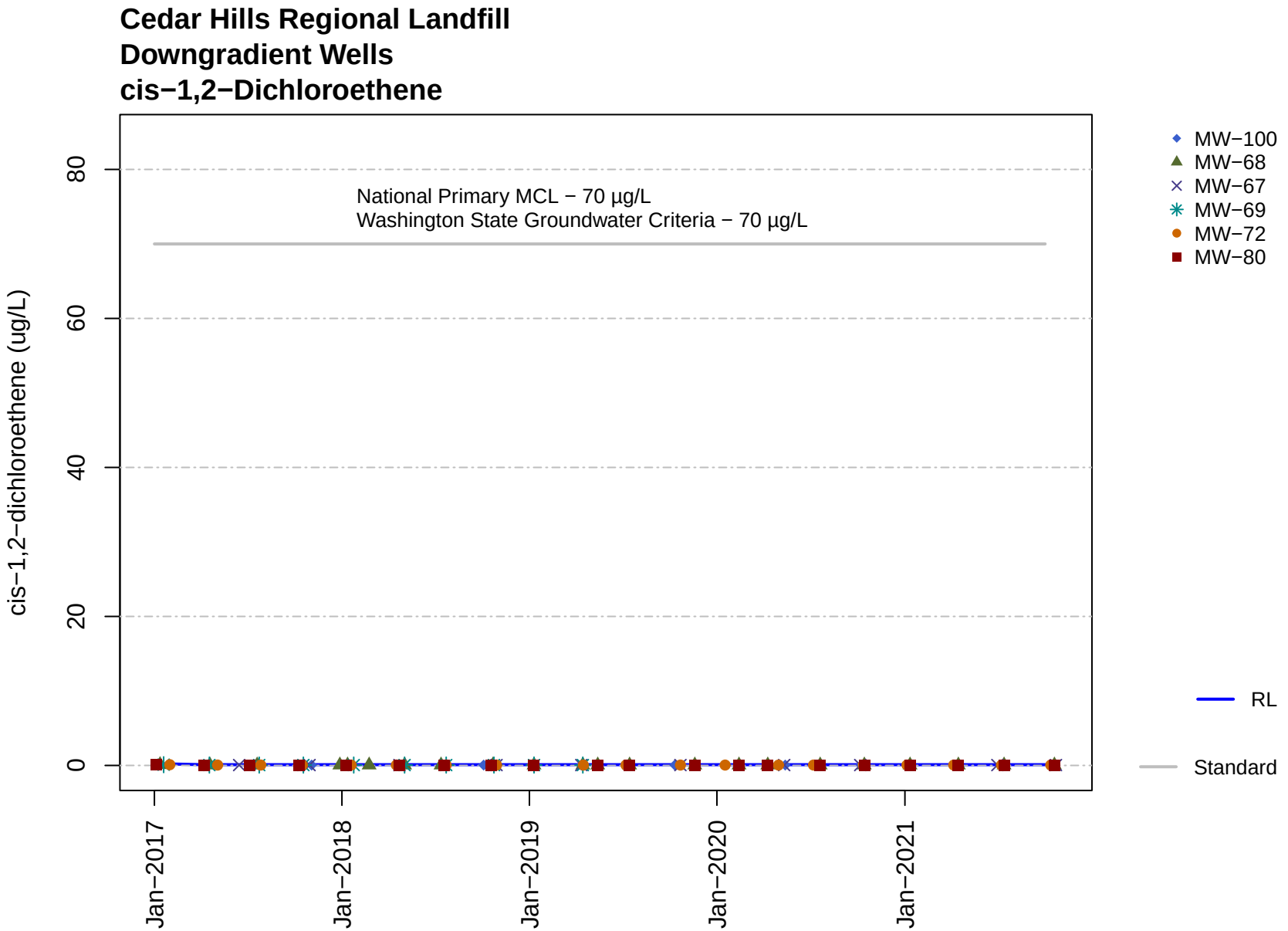


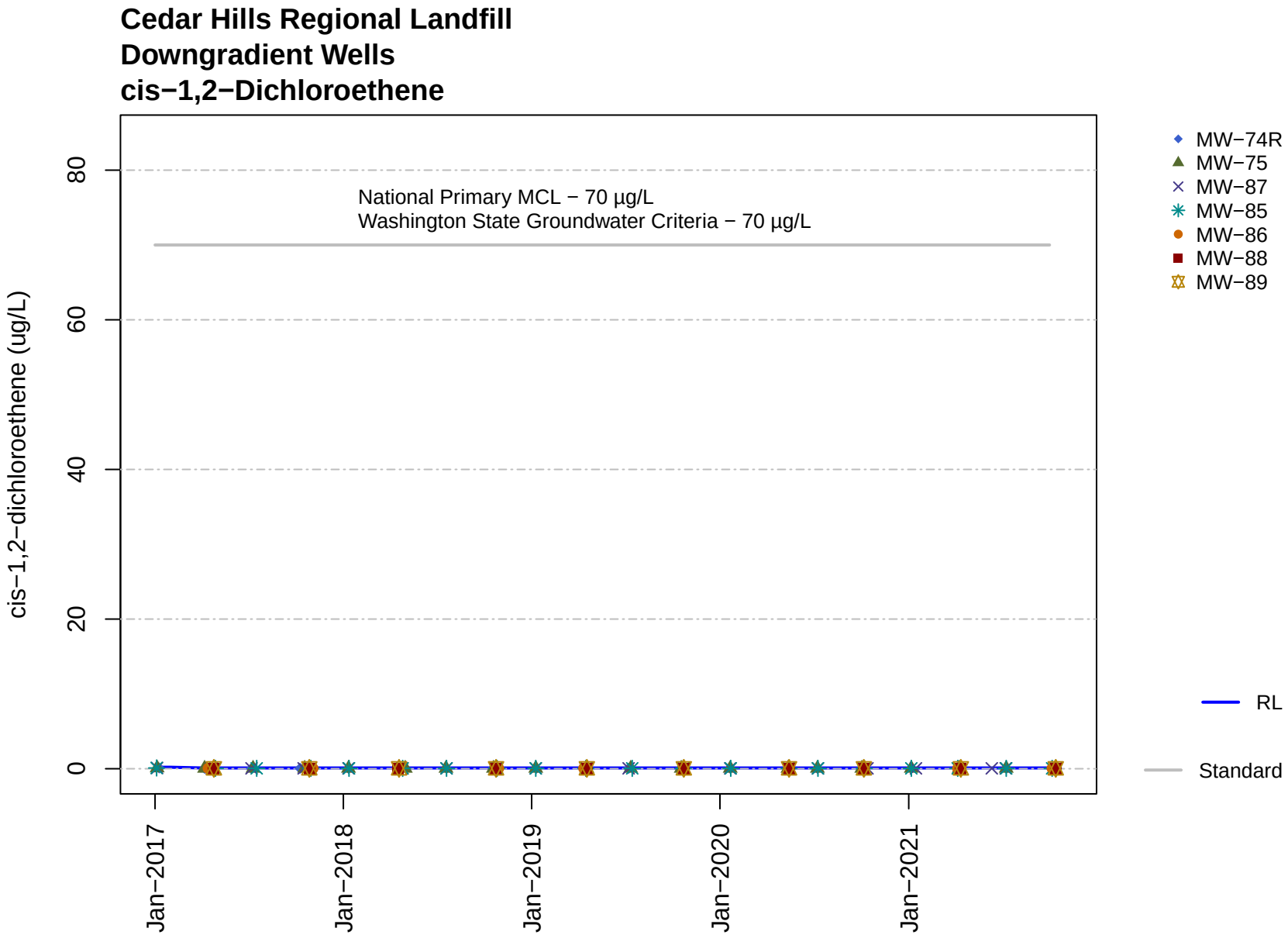

Cedar Hills Regional Landfill
Downgradient Wells
Zinc
Zinc (mg/L)
0
1
2
3
4
5
6
National Secondary MCL − 5 mg/L
Washington State Groundwater Criteria − 5 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
Total
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

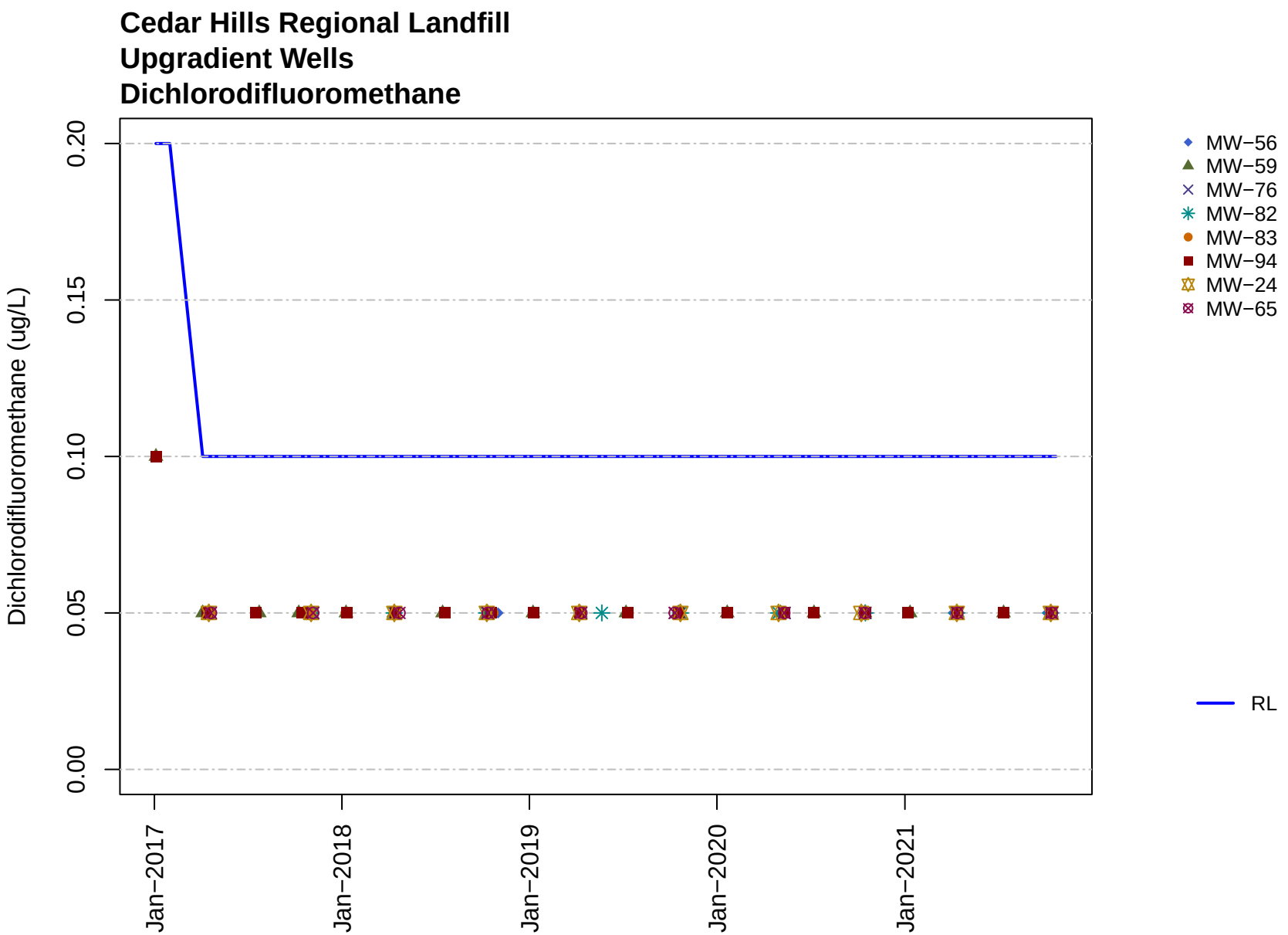

Cedar Hills Regional Landfill
Downgradient Wells
Zinc
Zinc (mg/L)
0
1
2
3
4
5
6
National Secondary MCL − 5 mg/L
Washington State Groundwater Criteria − 5 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
Total
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

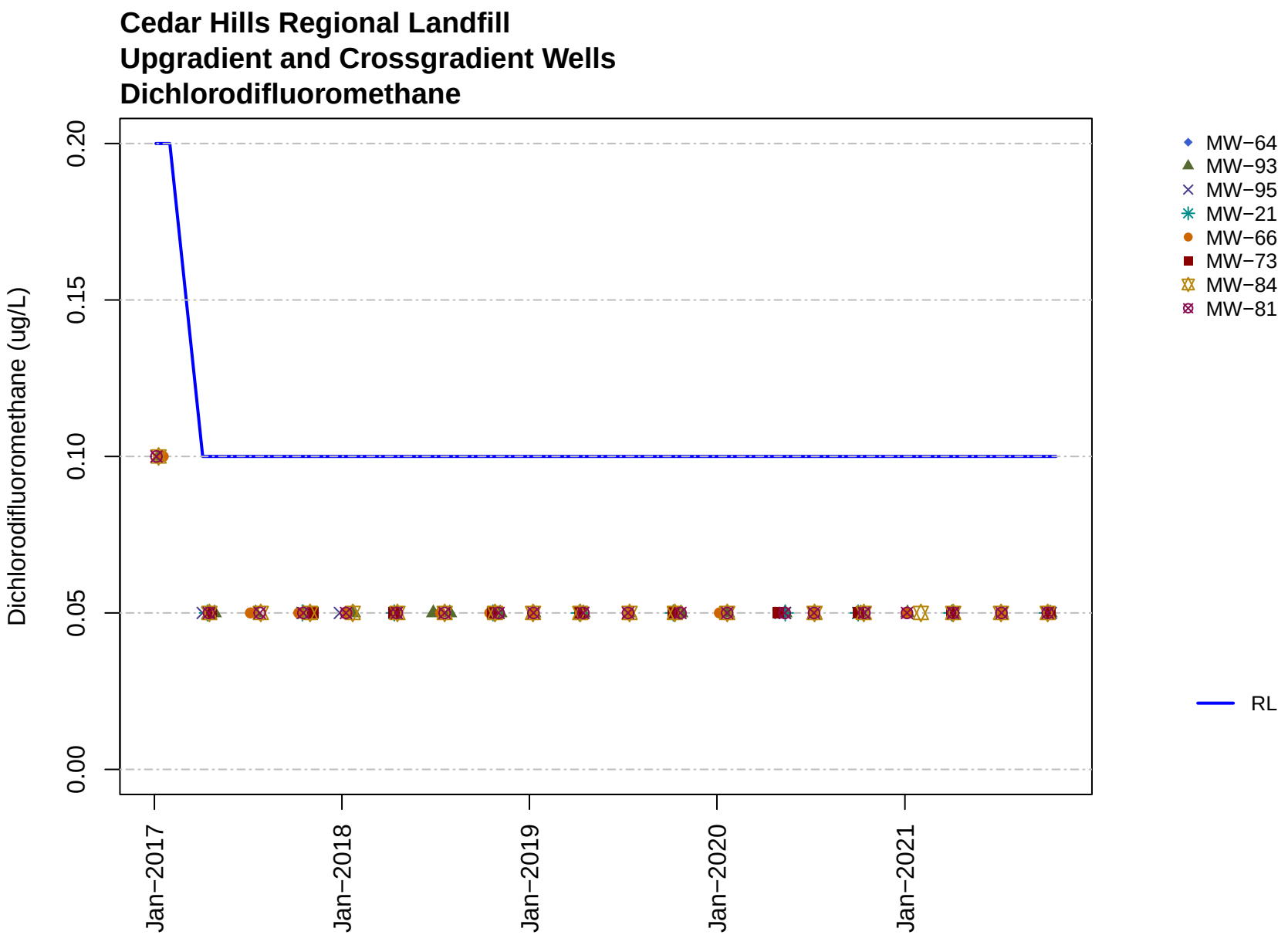

Cedar Hills Regional Landfill
Upgradient Wells
cis−1,2−Dichloroethene
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

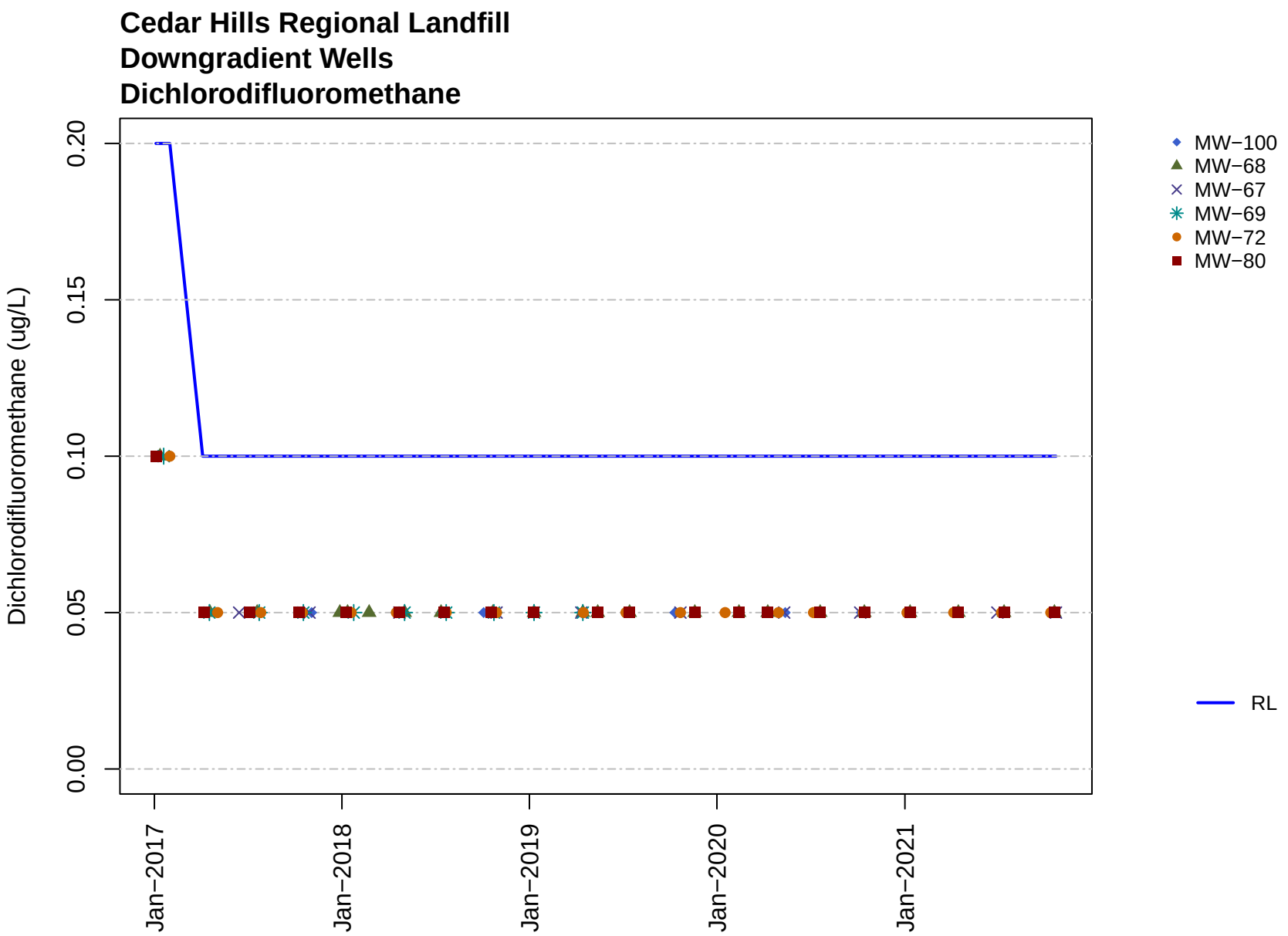

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
cis−1,2−Dichloroethene
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

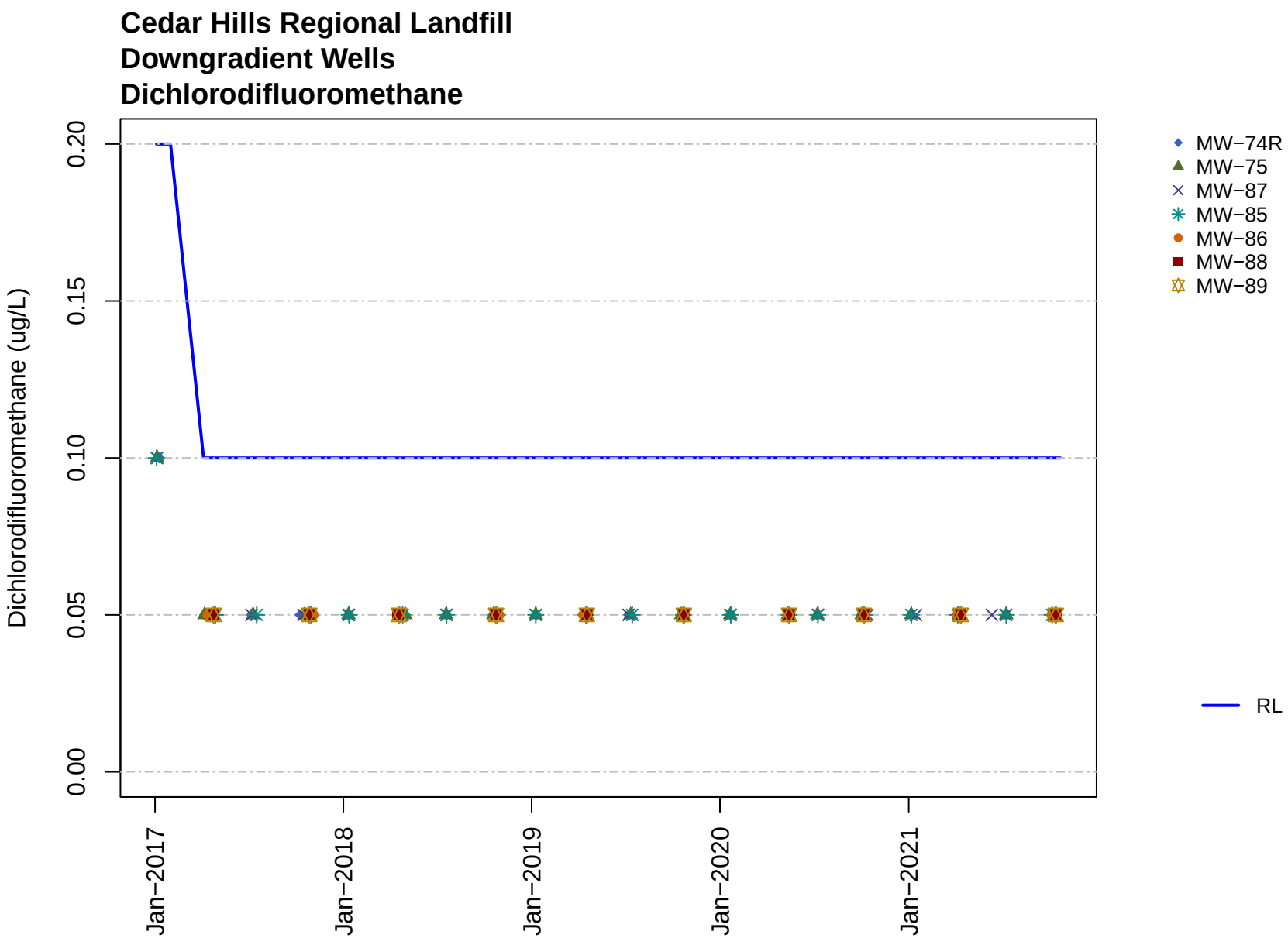

Cedar Hills Regional Landfill
Downgradient Wells
cis−1,2−Dichloroethene
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

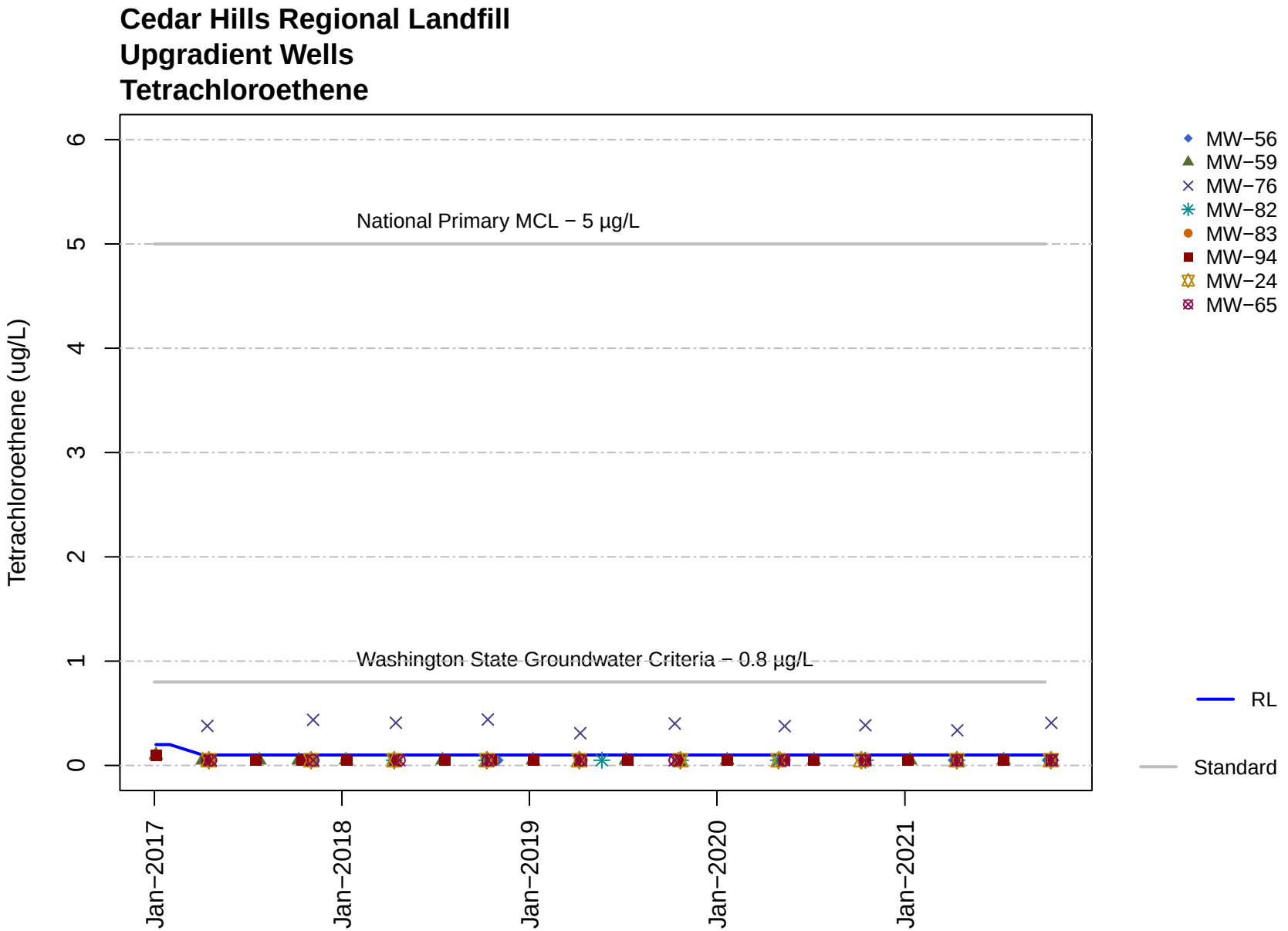

Cedar Hills Regional Landfill
Downgradient Wells
cis−1,2−Dichloroethene
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

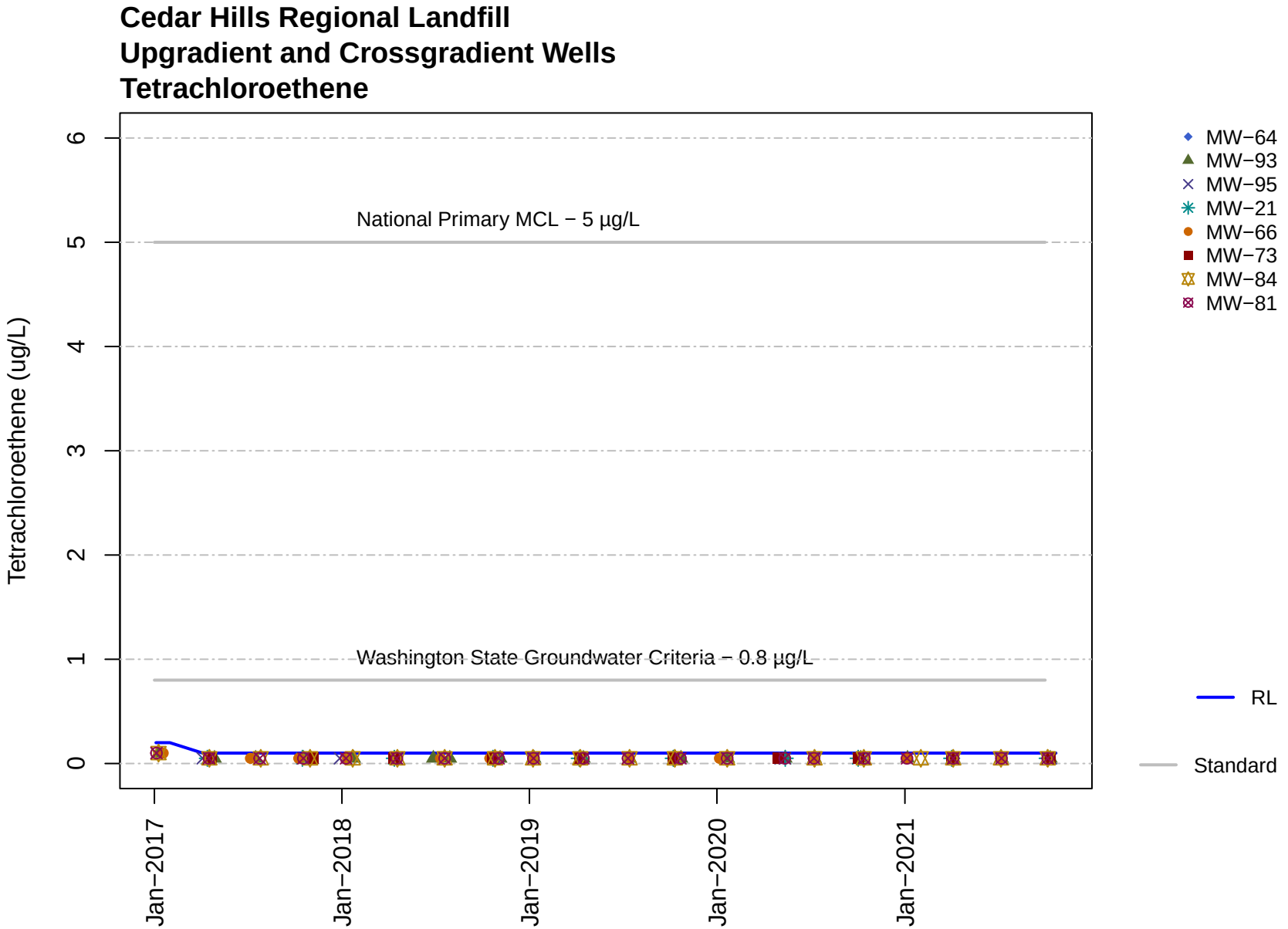

Cedar Hills Regional Landfill
Upgradient Wells
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0.00
0.05
0.10
0.15
0.20
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL

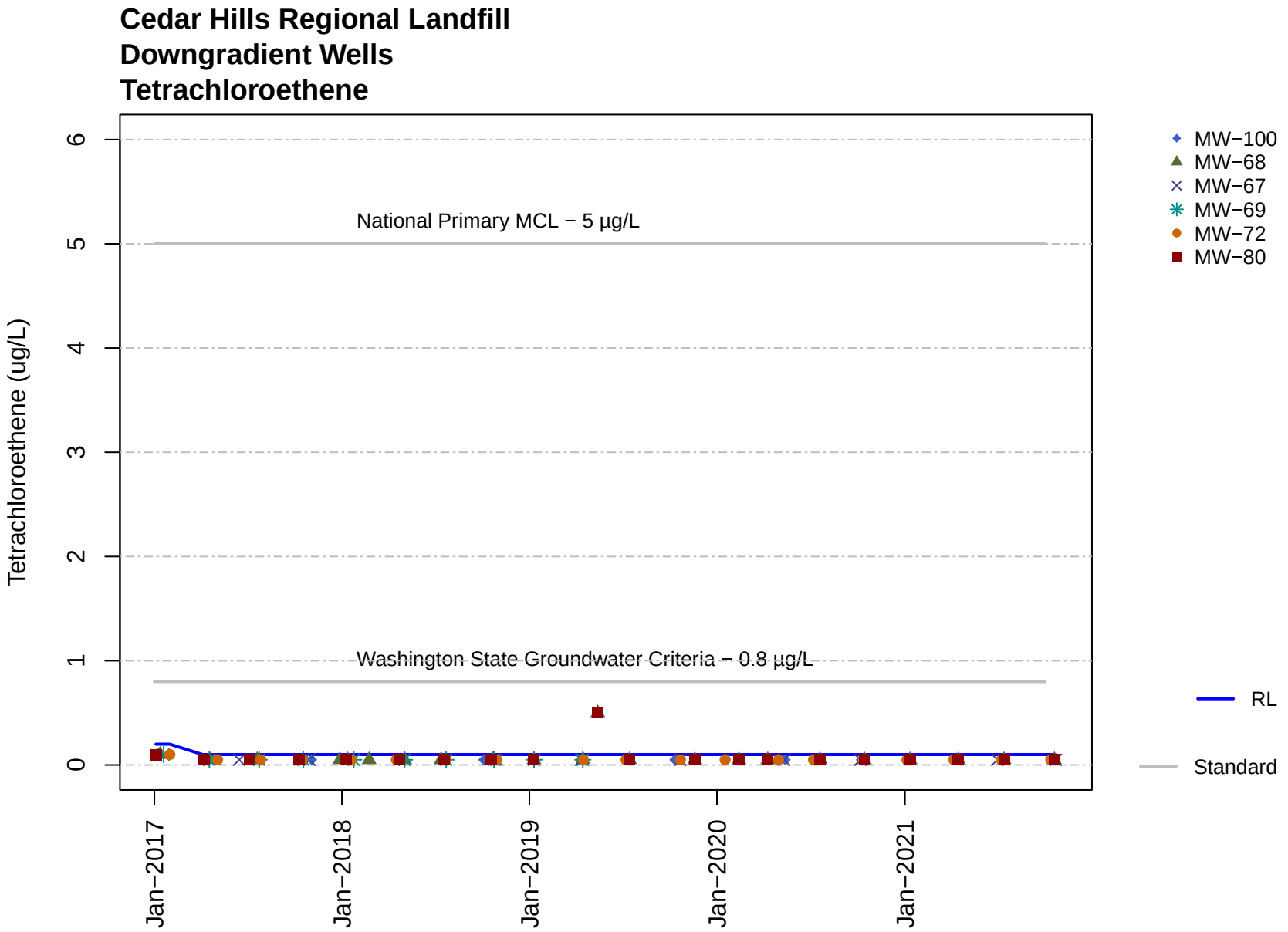

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0.00
0.05
0.10
0.15
0.20
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL

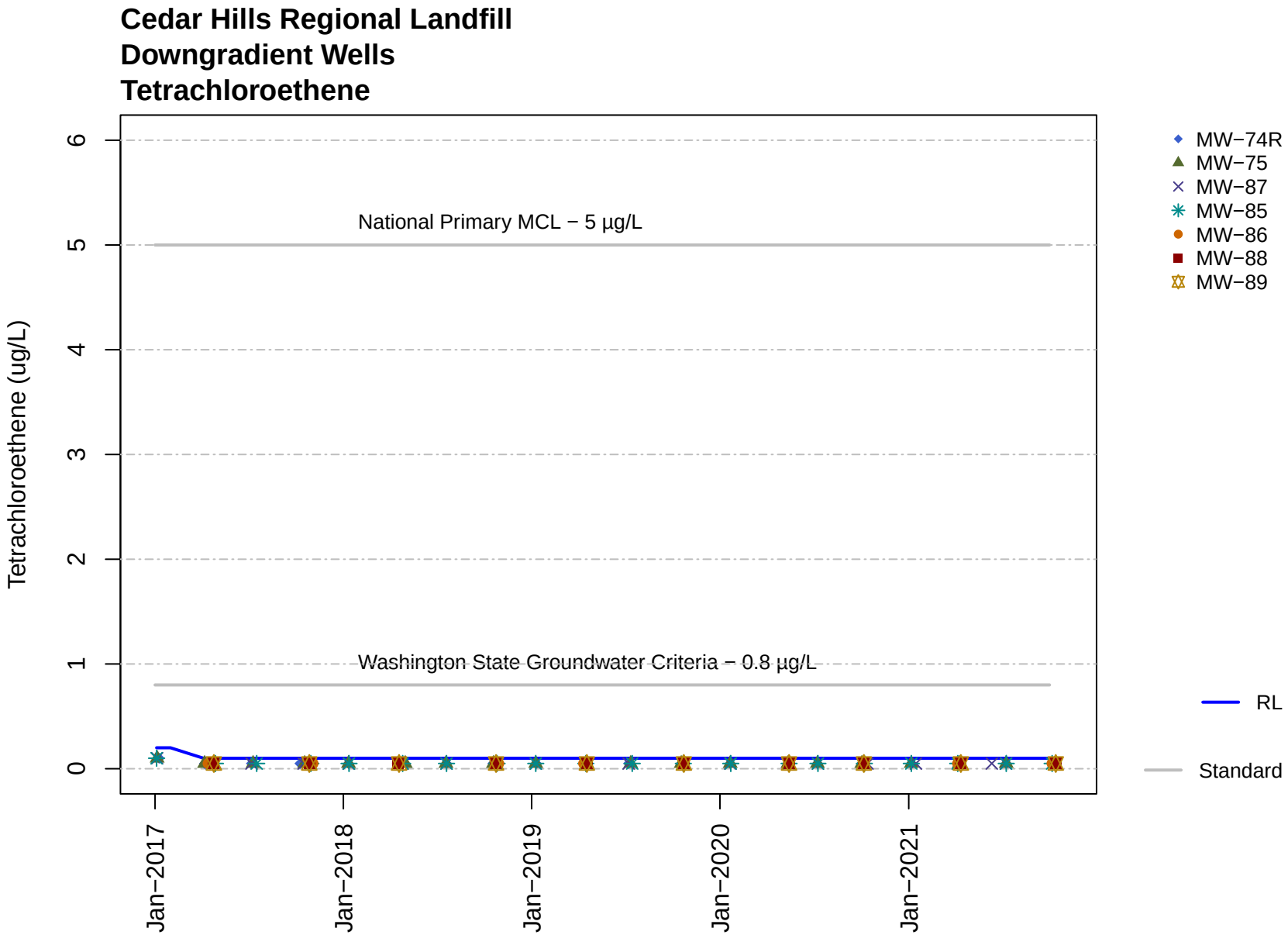

Cedar Hills Regional Landfill
Downgradient Wells
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0.00
0.05
0.10
0.15
0.20
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL

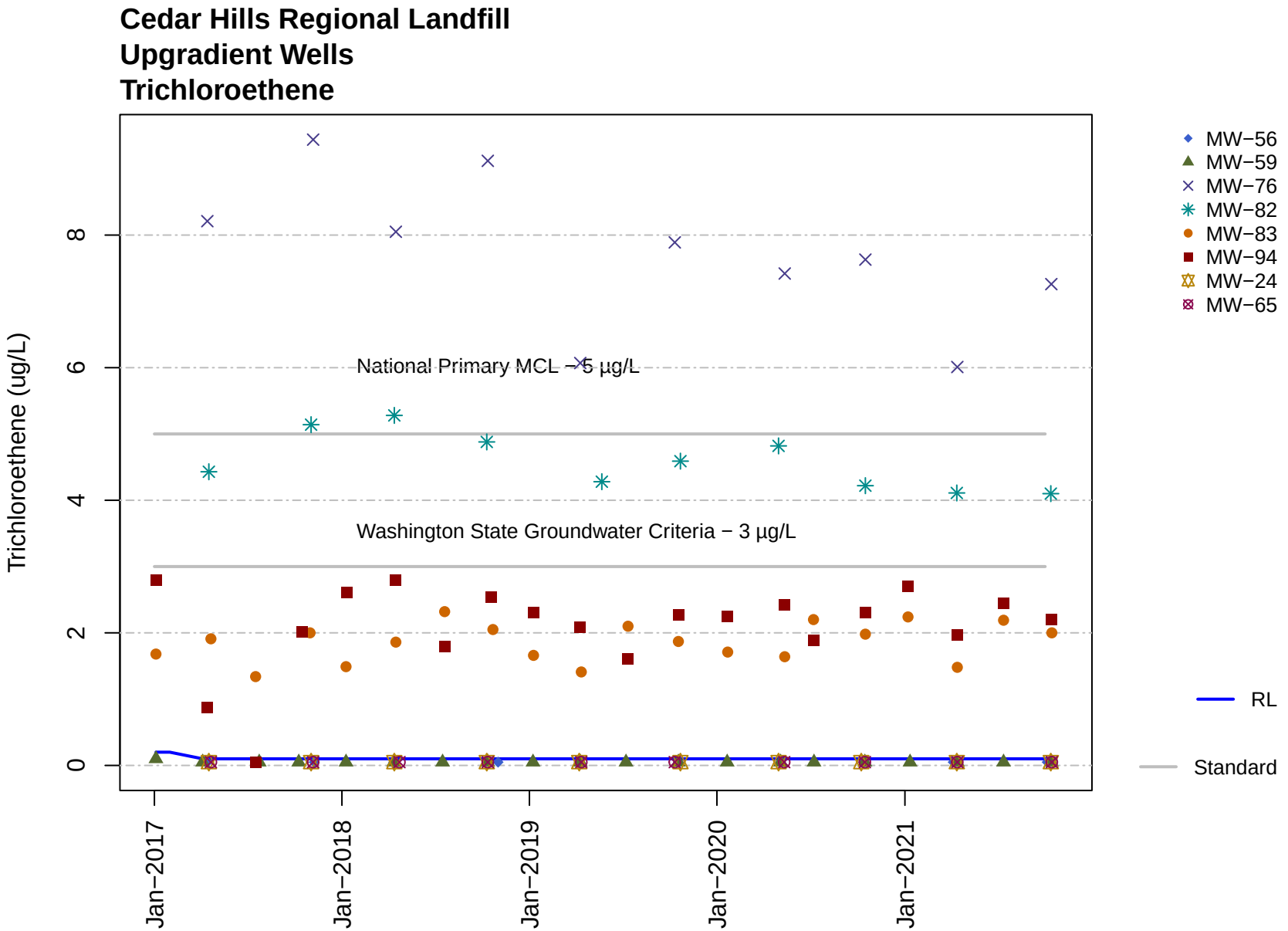

Cedar Hills Regional Landfill
Downgradient Wells
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0.00
0.05
0.10
0.15
0.20
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL

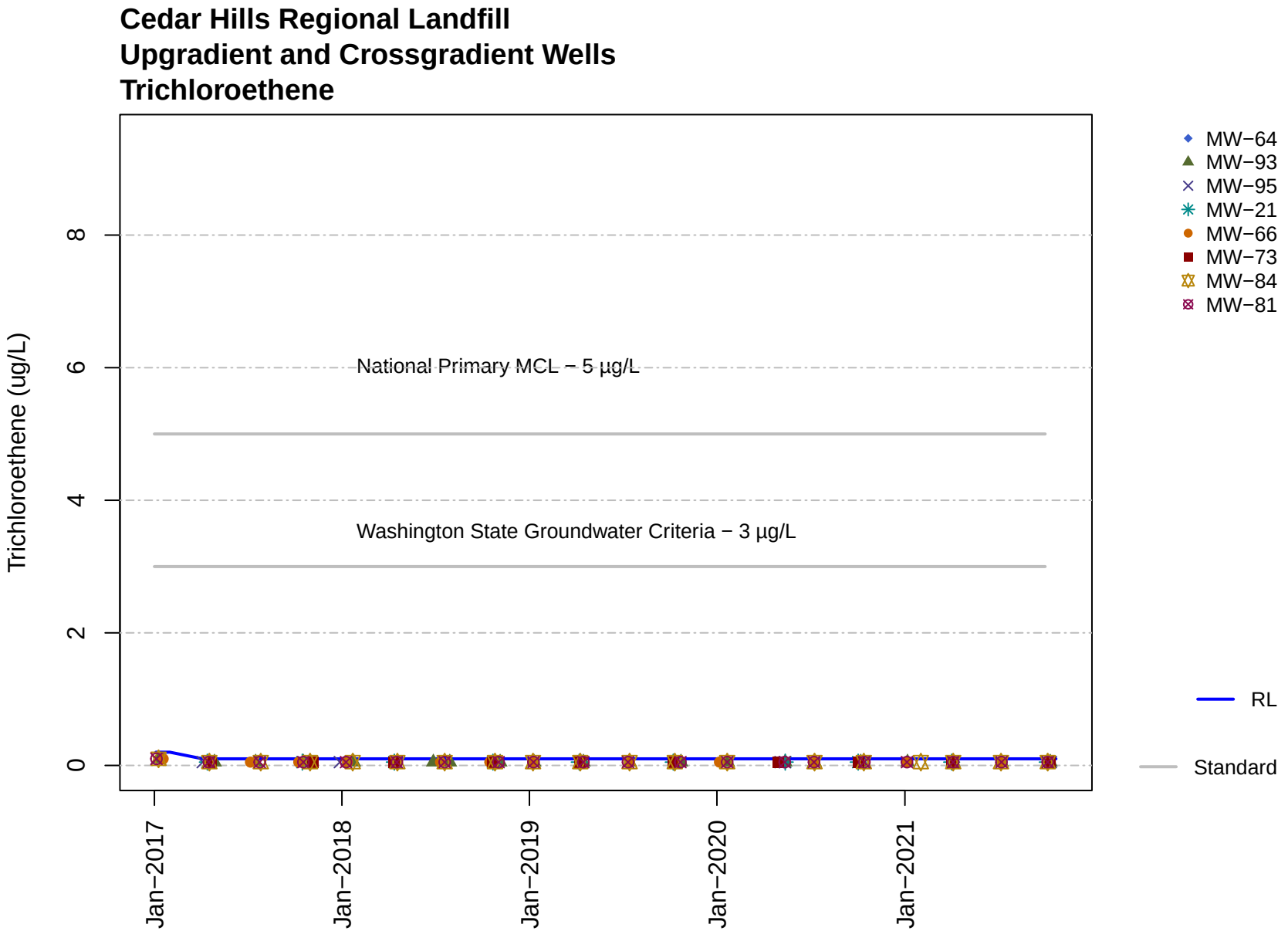

Cedar Hills Regional Landfill
Upgradient Wells
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

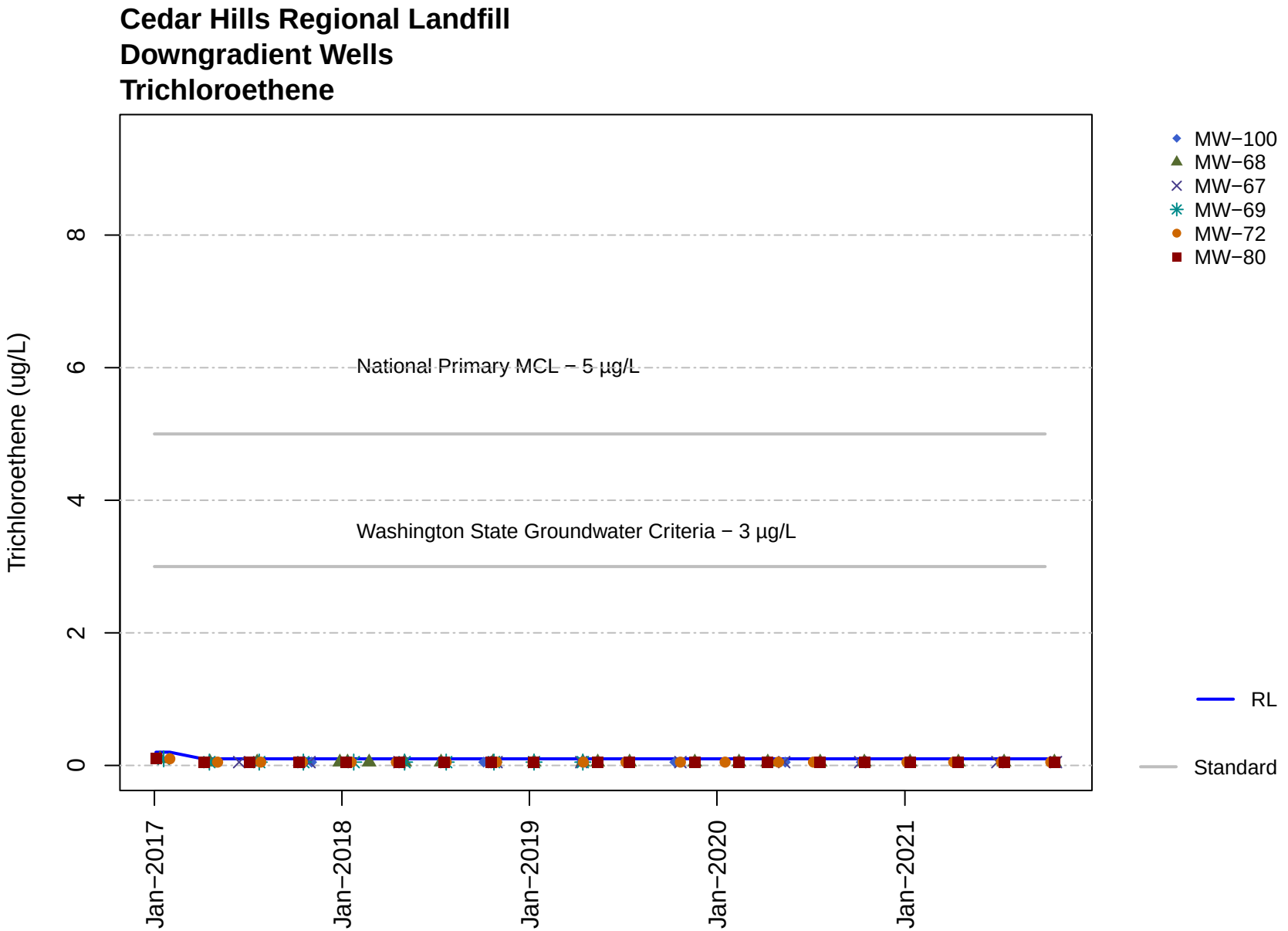

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

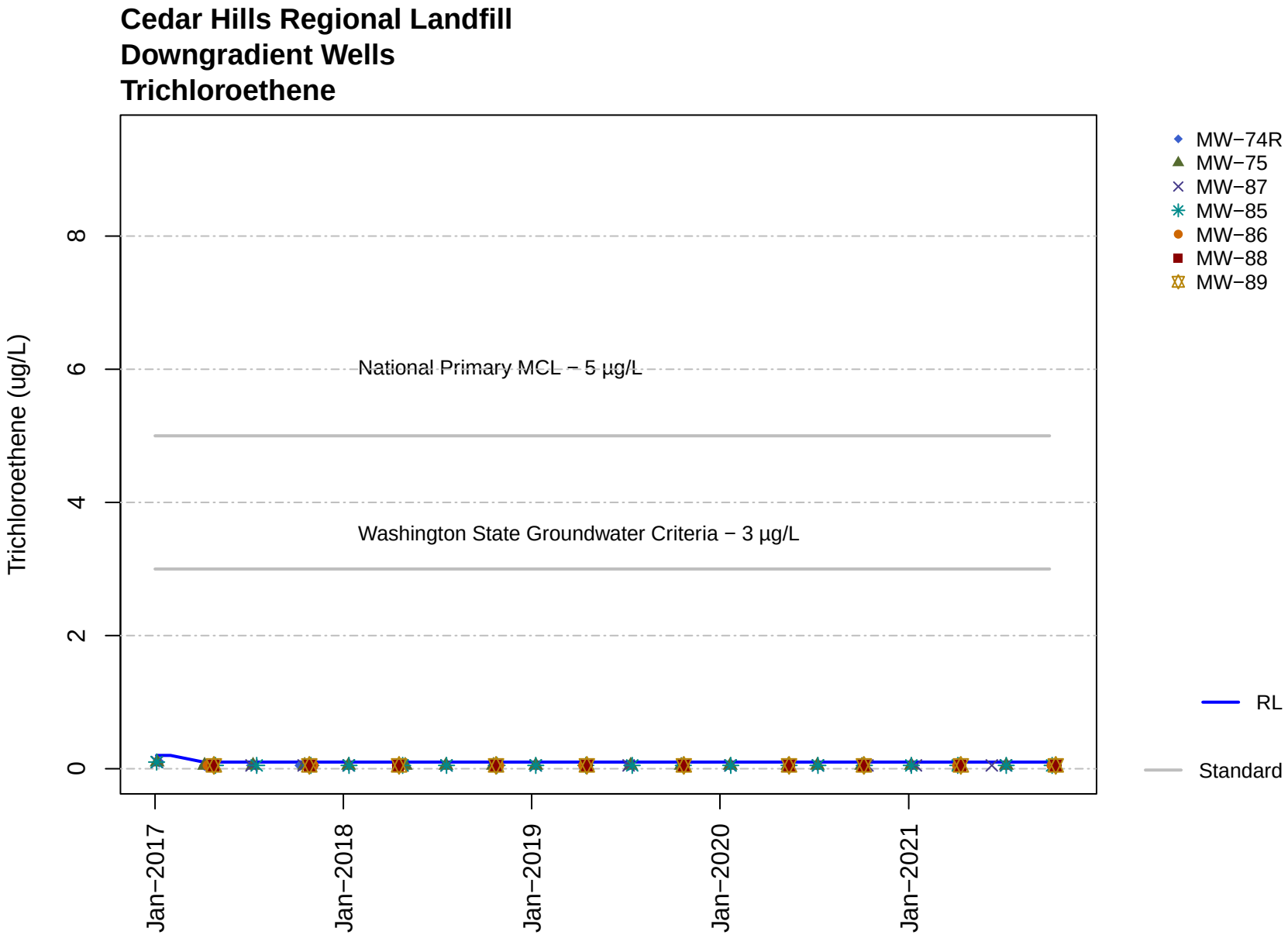

Cedar Hills Regional Landfill
Downgradient Wells
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

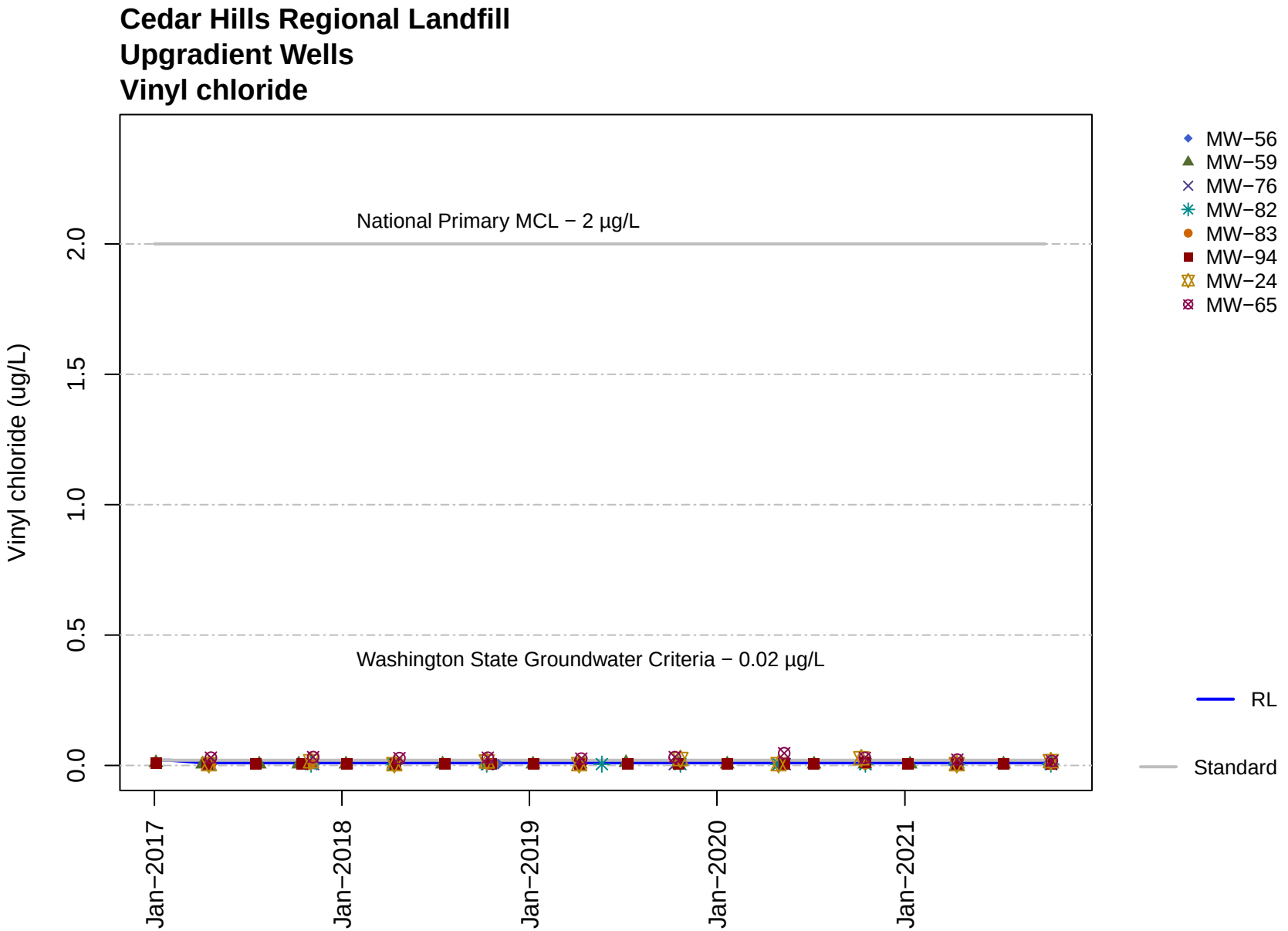

Cedar Hills Regional Landfill
Downgradient Wells
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

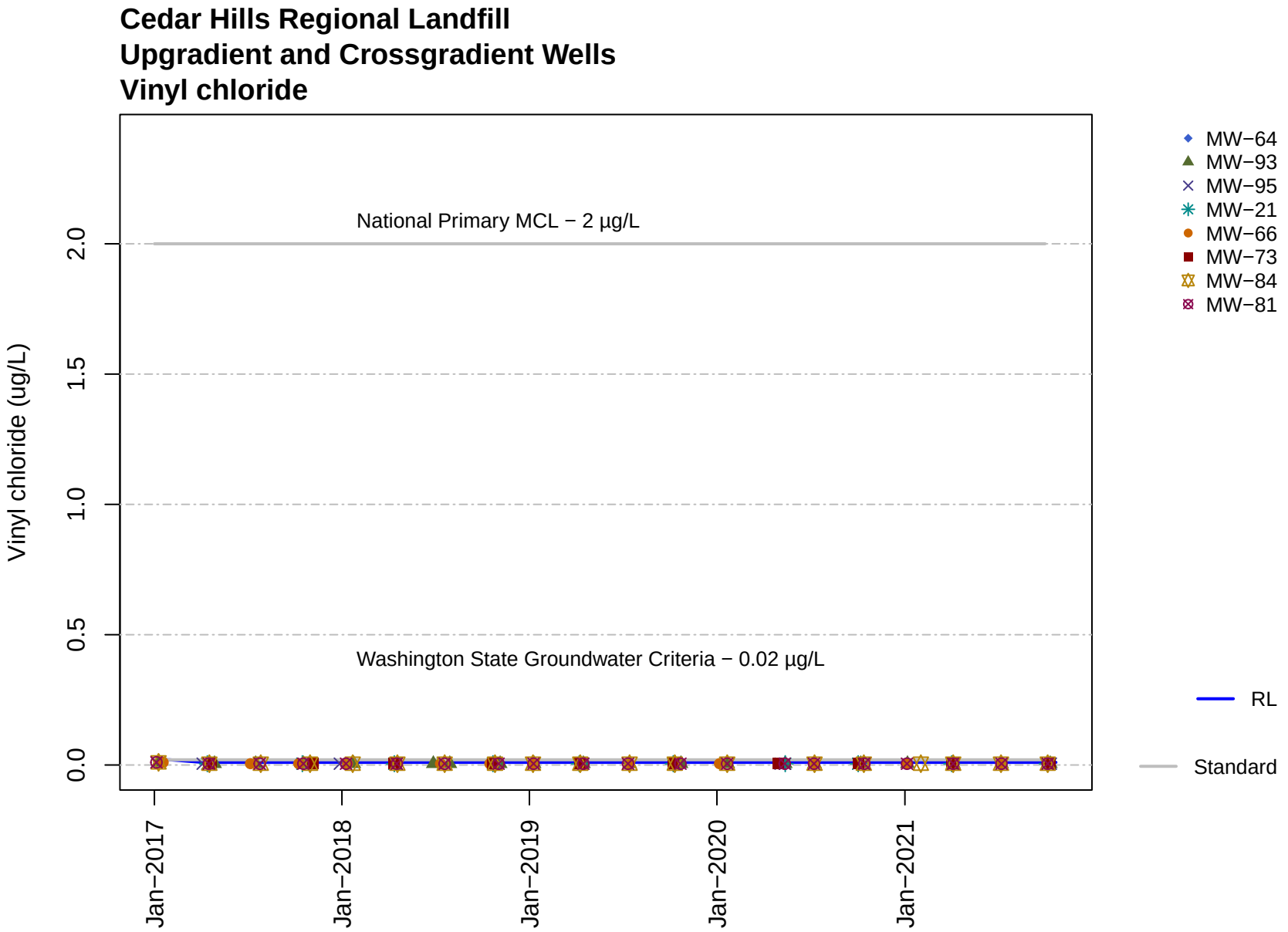

Cedar Hills Regional Landfill
Upgradient Wells
Trichloroethene
Trichloroethene (ug/L)
0
2
4
6
8
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 3 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

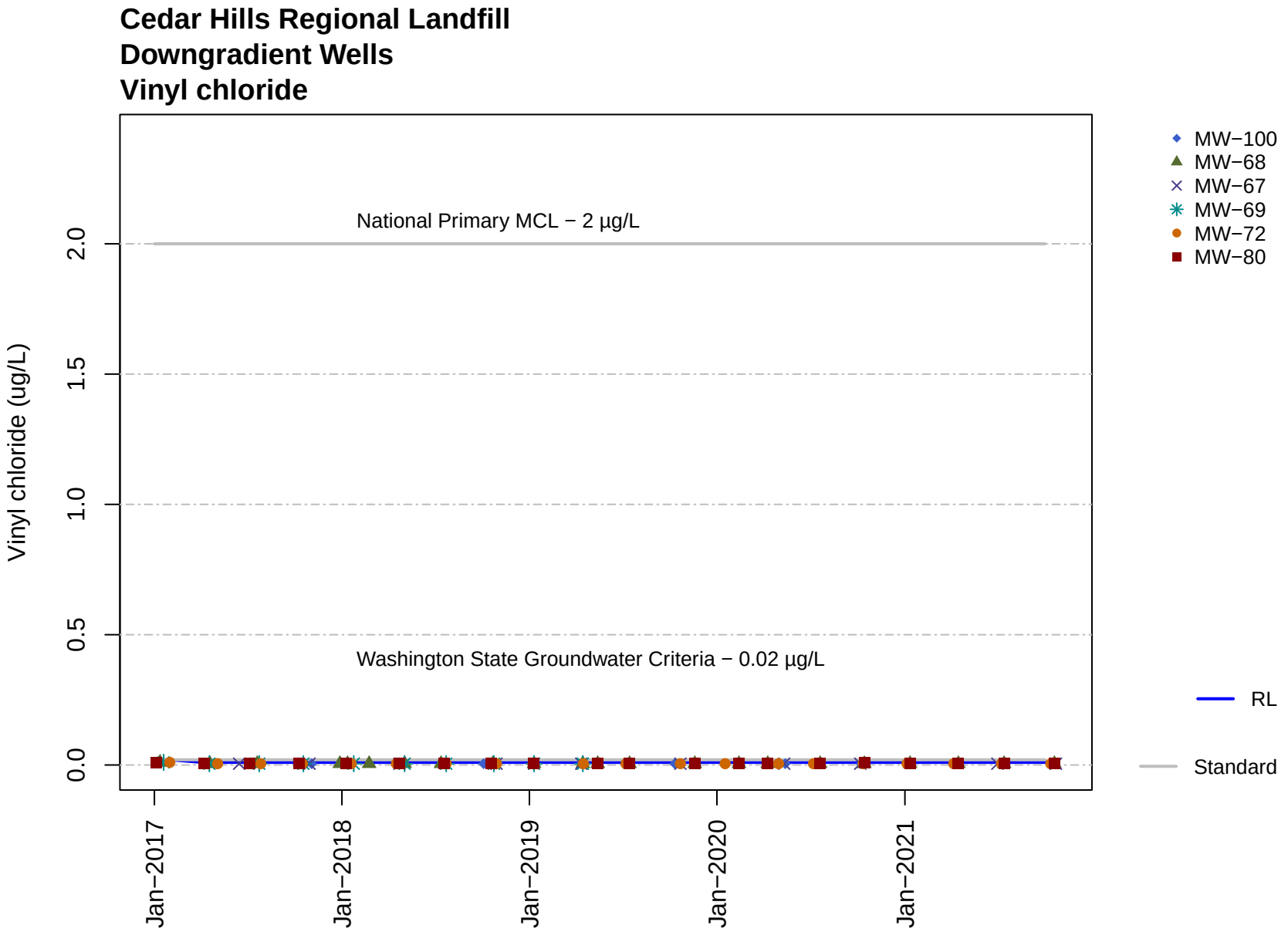

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Trichloroethene
Trichloroethene (ug/L)
0
2
4
6
8
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 3 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

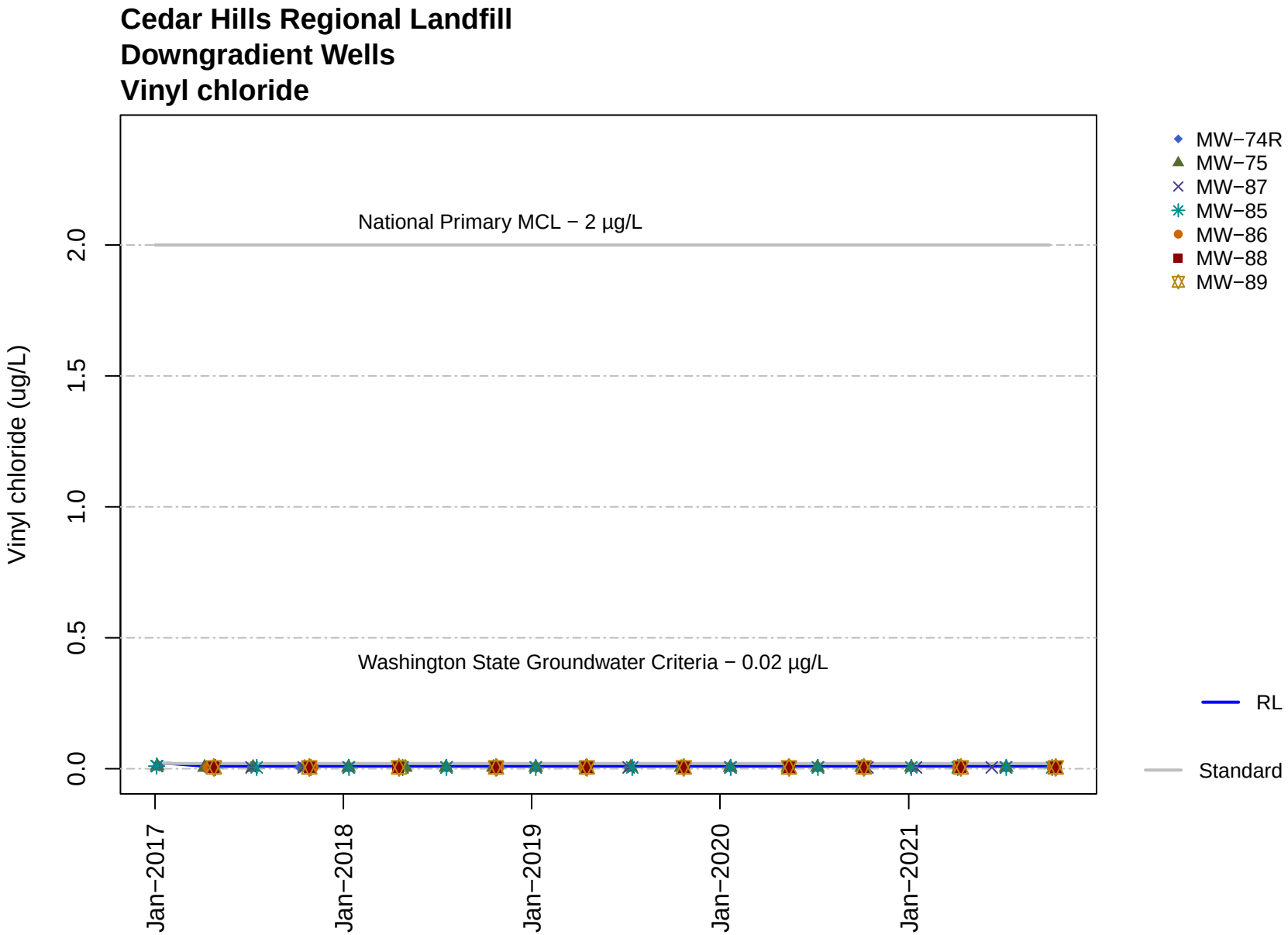

Cedar Hills Regional Landfill
Downgradient Wells
Trichloroethene
Trichloroethene (ug/L)
0
2
4
6
8
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 3 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

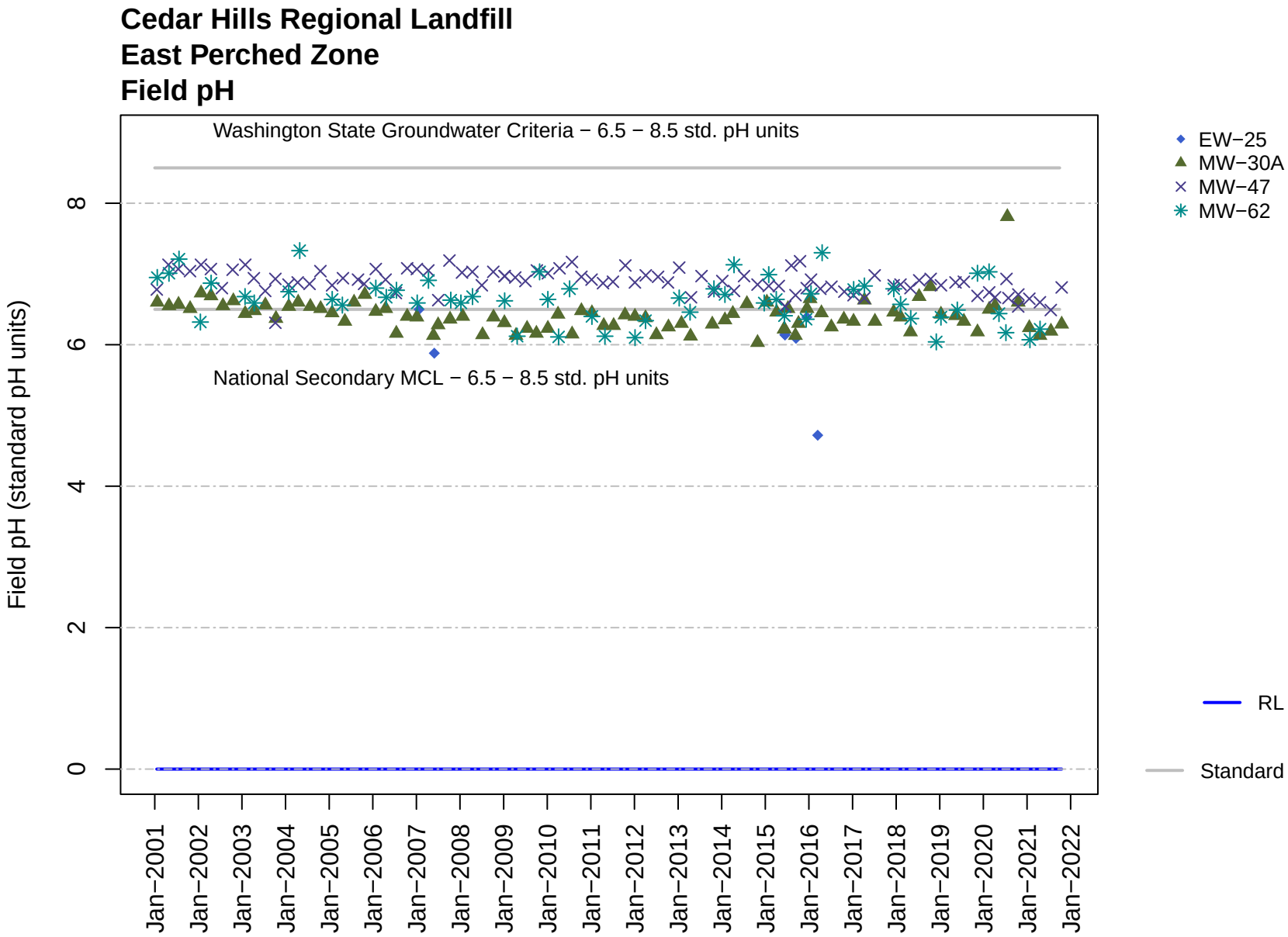

Cedar Hills Regional Landfill
Downgradient Wells
Trichloroethene
Trichloroethene (ug/L)
0
2
4
6
8
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 3 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

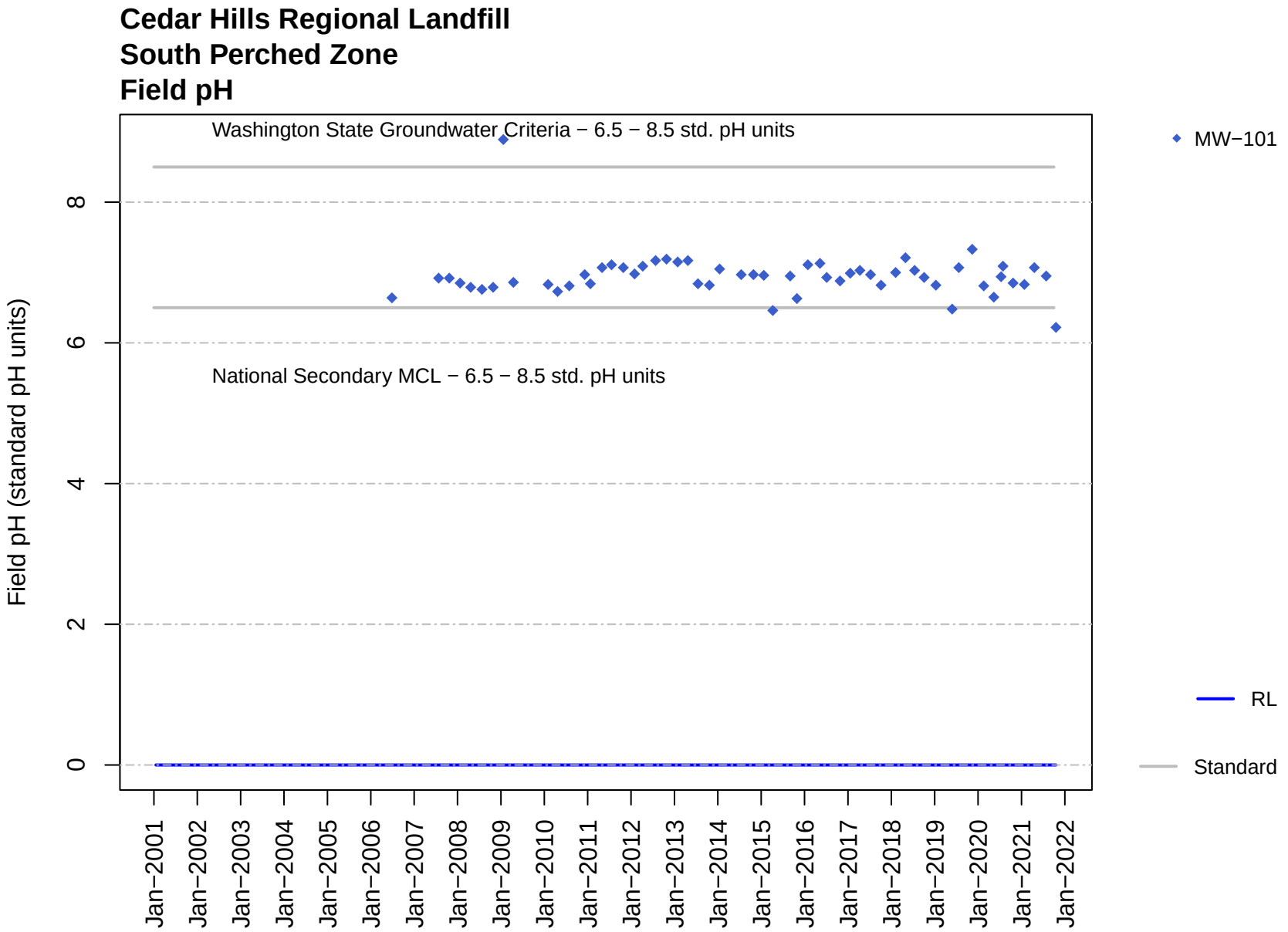

Cedar Hills Regional Landfill
Upgradient Wells
Vinyl chloride
Vinyl chloride (ug/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−56
MW−59
MW−76
MW−82
MW−83
MW−94
MW−24
MW−65
RL
Standard

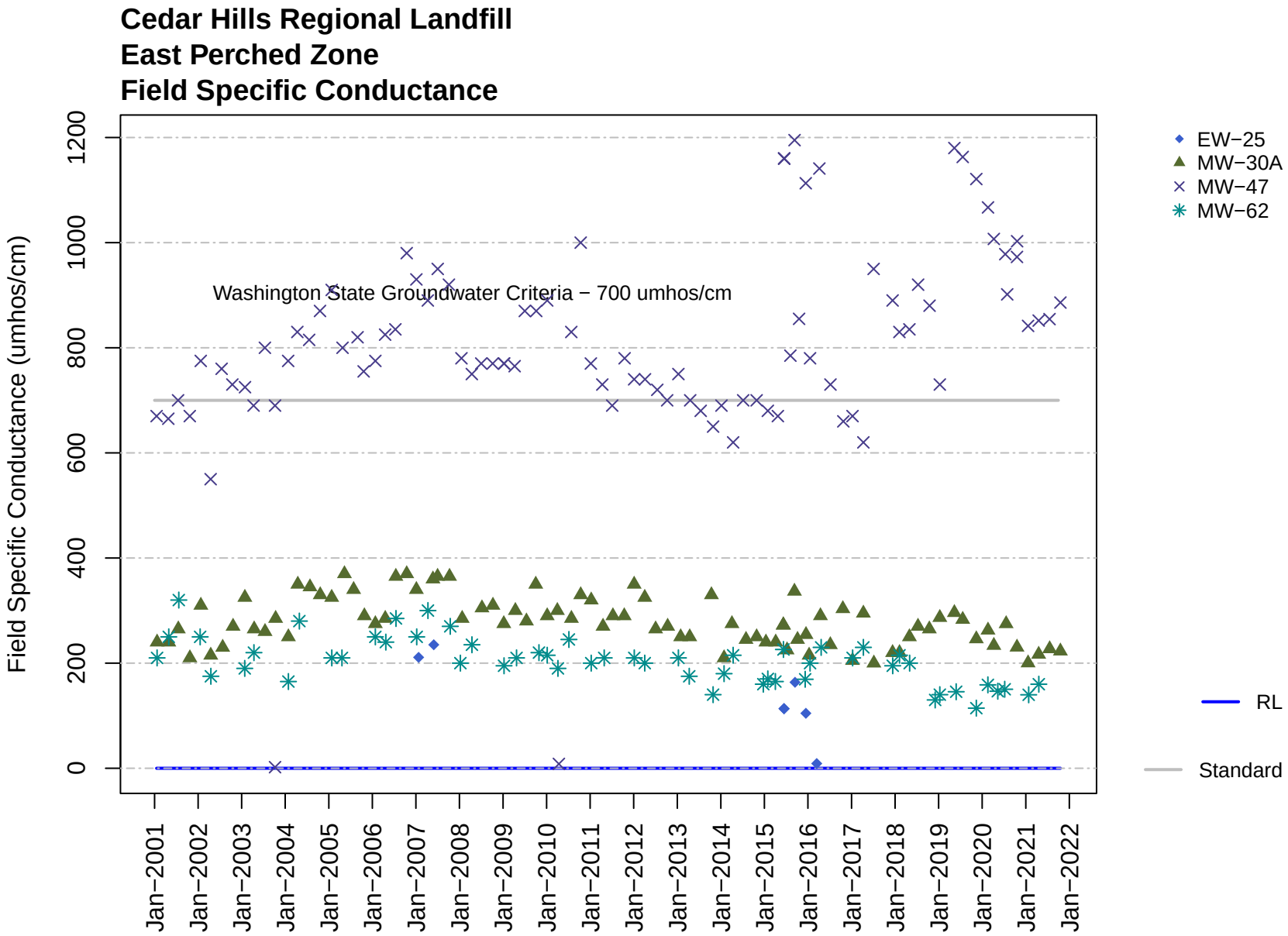

Cedar Hills Regional Landfill
Upgradient and Crossgradient Wells
Vinyl chloride
Vinyl chloride (ug/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−64
MW−93
MW−95
MW−21
MW−66
MW−73
MW−84
MW−81
RL
Standard

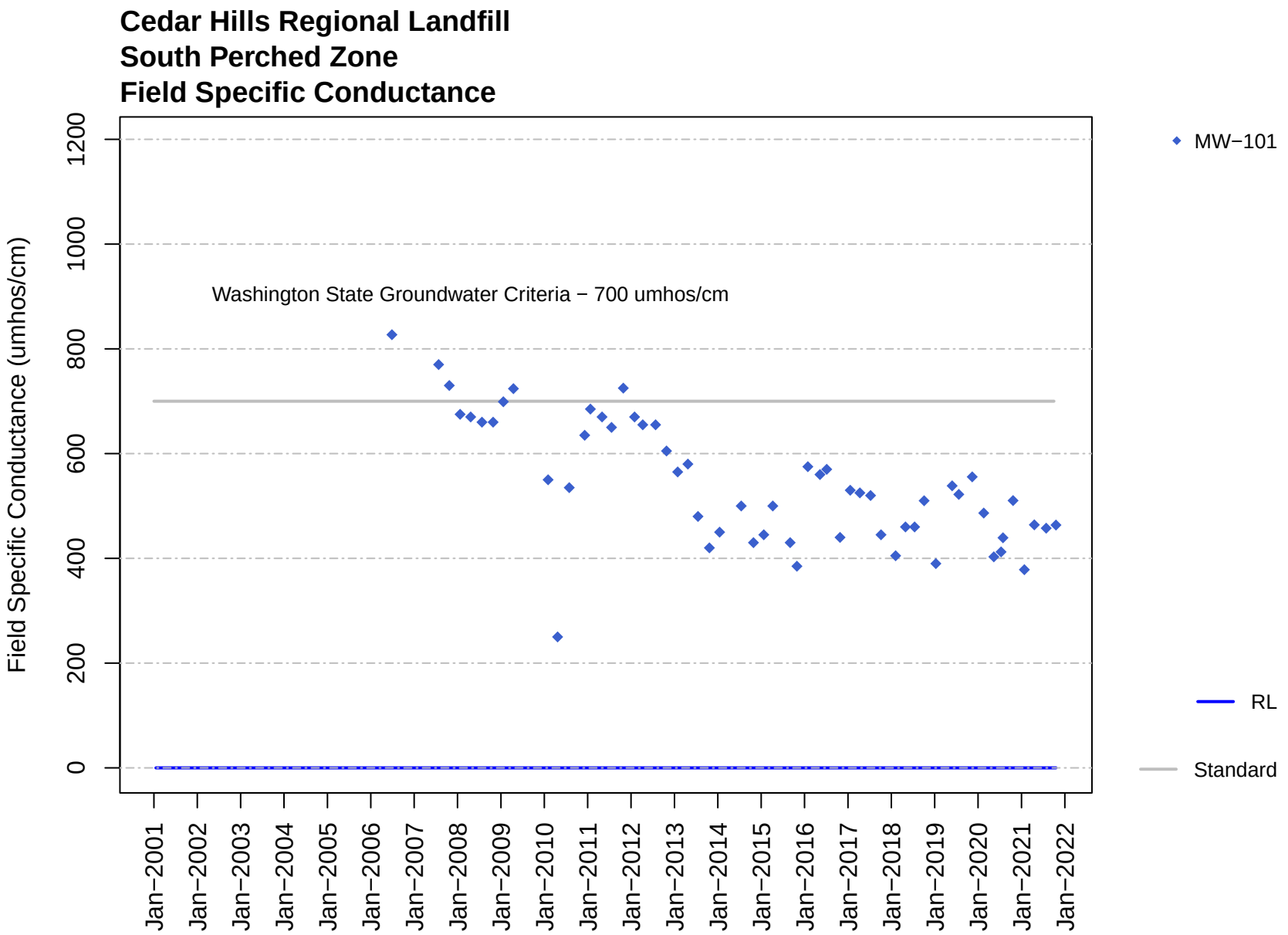

Cedar Hills Regional Landfill
Downgradient Wells
Vinyl chloride
Vinyl chloride (ug/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−100
MW−68
MW−67
MW−69
MW−72
MW−80
RL
Standard

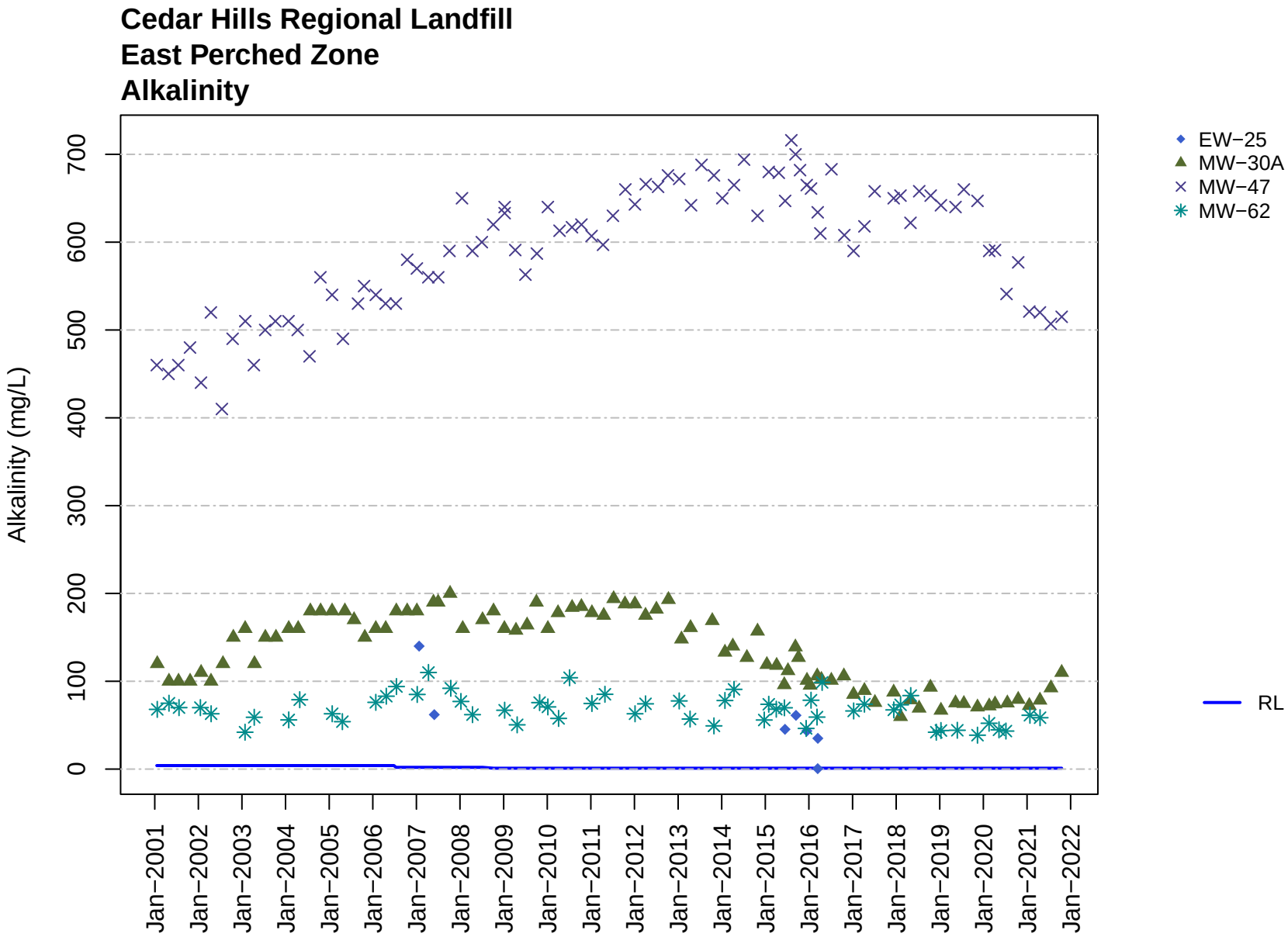

Cedar Hills Regional Landfill
Downgradient Wells
Vinyl chloride
Vinyl chloride (ug/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−74R
MW−75
MW−87
MW−85
MW−86
MW−88
MW−89
RL
Standard

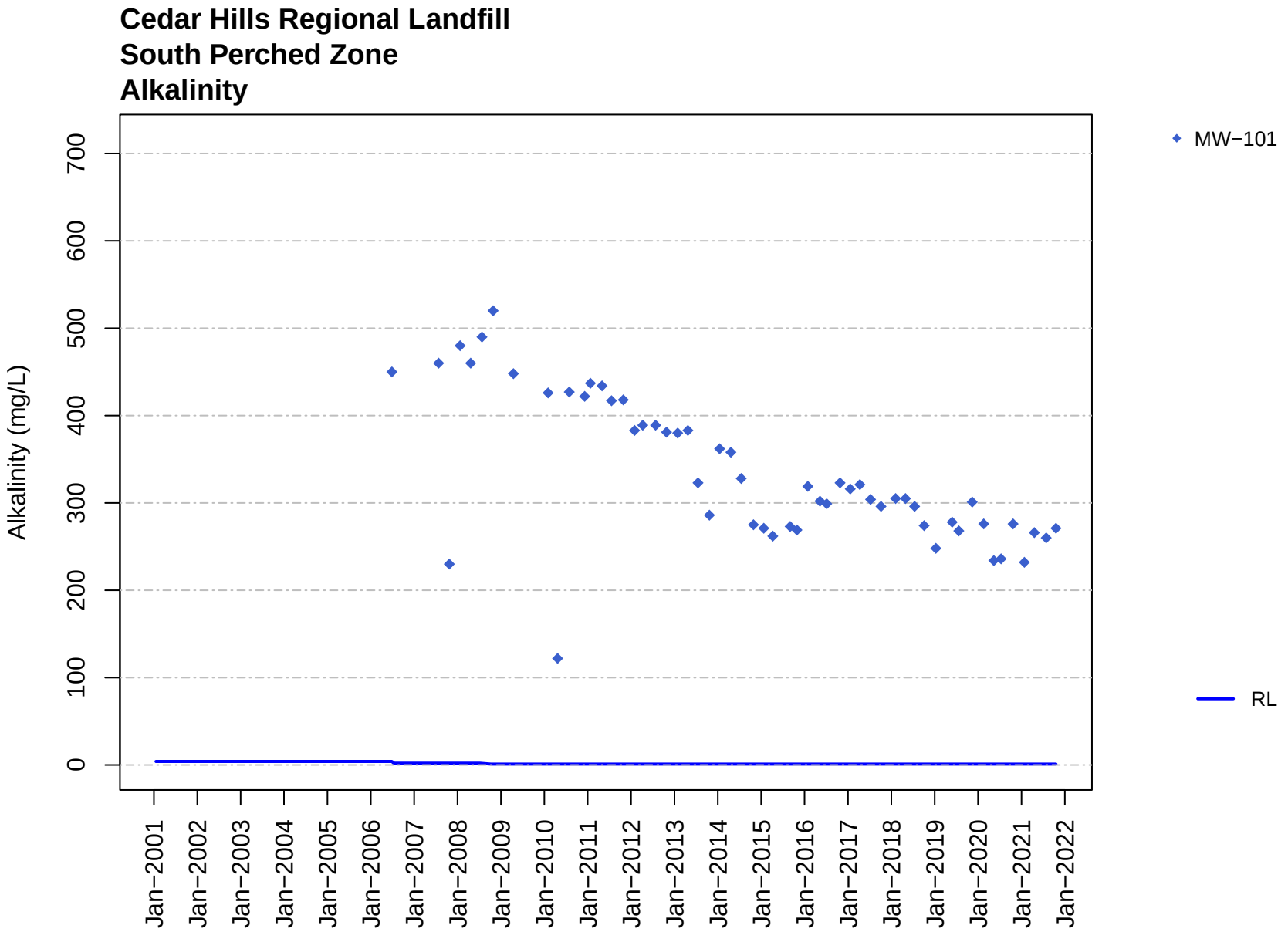

Cedar Hills Regional Landfill
East Perched Zone
Field pH
Washington State Groundwater Criteria − 6.5 − 8.5 std. pH units
National Secondary MCL − 6.5 − 8.5 std. pH units
Field pH (standard pH units)
0
2
4
6
8
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL
Standard

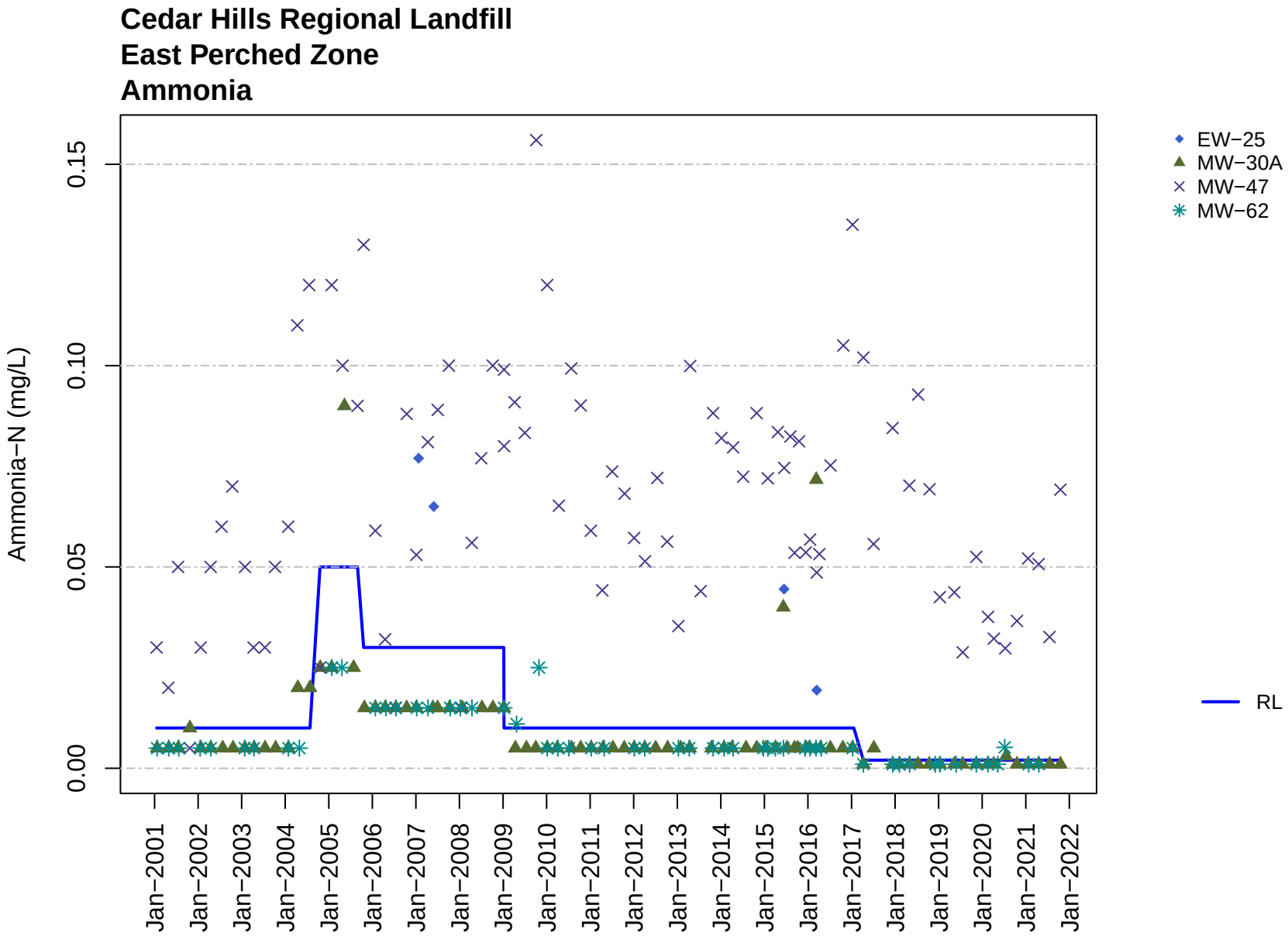

Cedar Hills Regional Landfill
South Perched Zone
Field pH
Washington State Groundwater Criteria − 6.5 − 8.5 std. pH units
National Secondary MCL − 6.5 − 8.5 std. pH units
Field pH (standard pH units)
0
2
4
6
8
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL
Standard

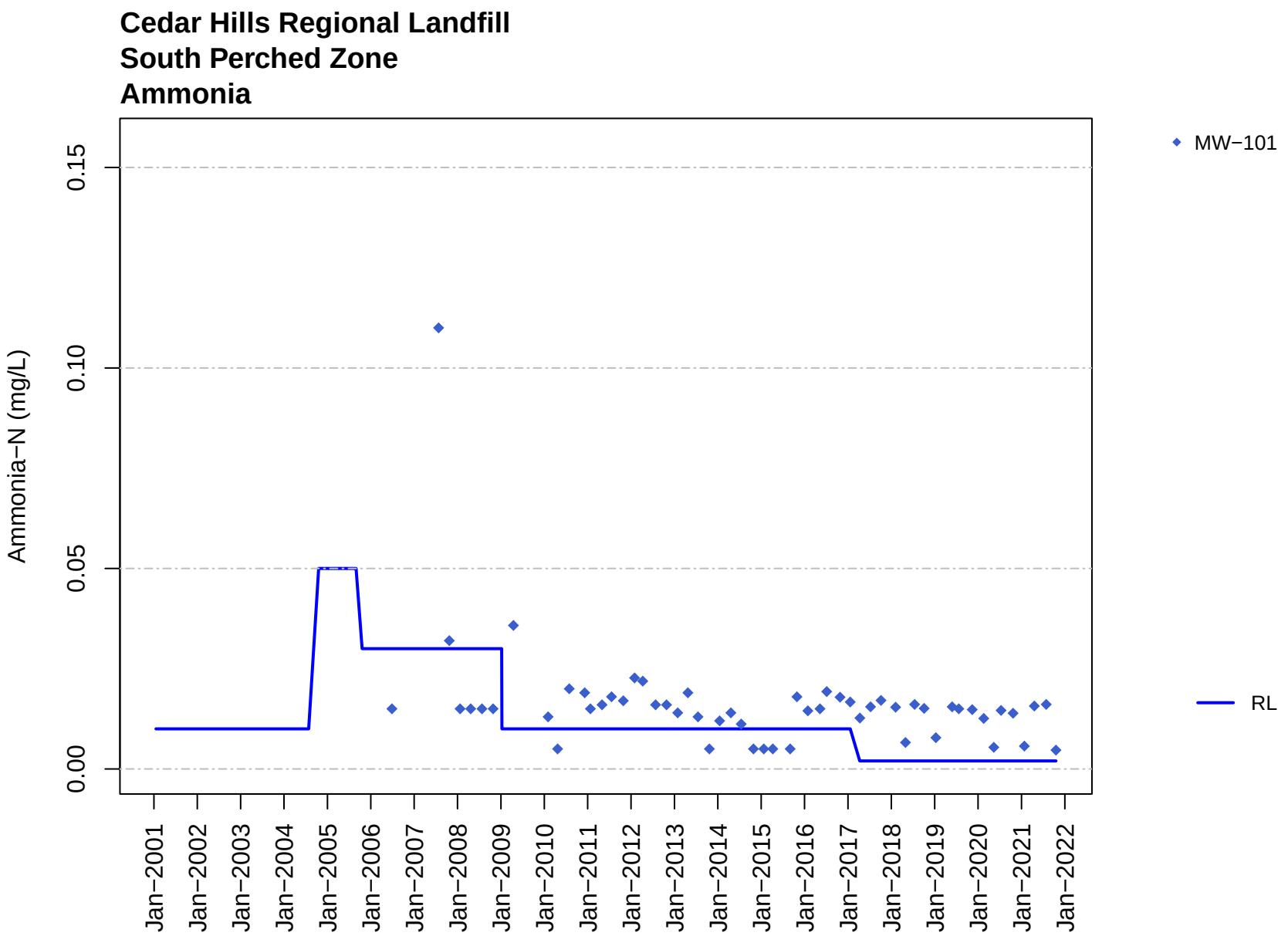

Cedar Hills Regional Landfill
East Perched Zone
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
1000
1200
Washington State Groundwater Criteria − 700 umhos/cm
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL
Standard

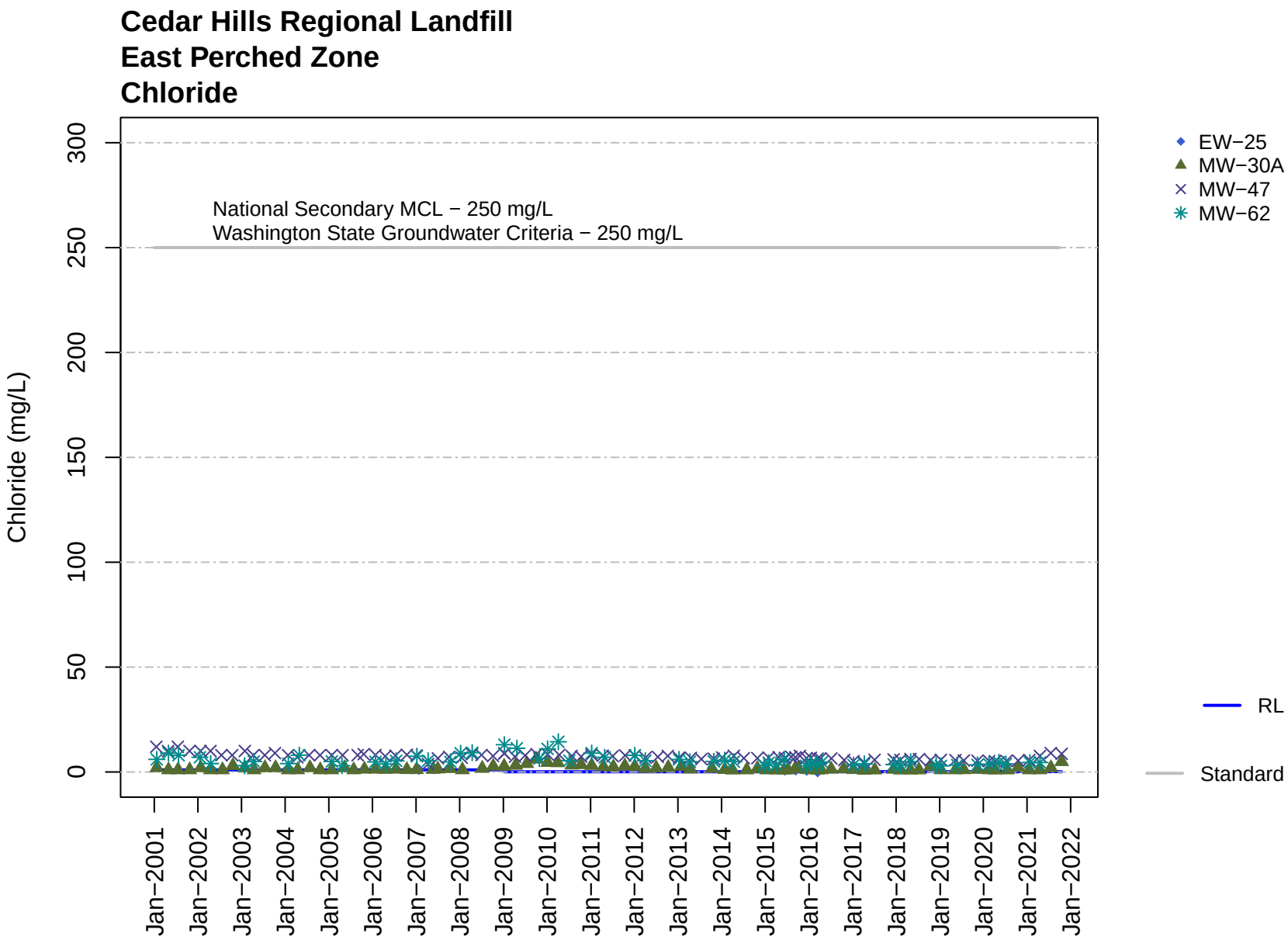

Cedar Hills Regional Landfill
South Perched Zone
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
1000
1200
Washington State Groundwater Criteria − 700 umhos/cm
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL
Standard

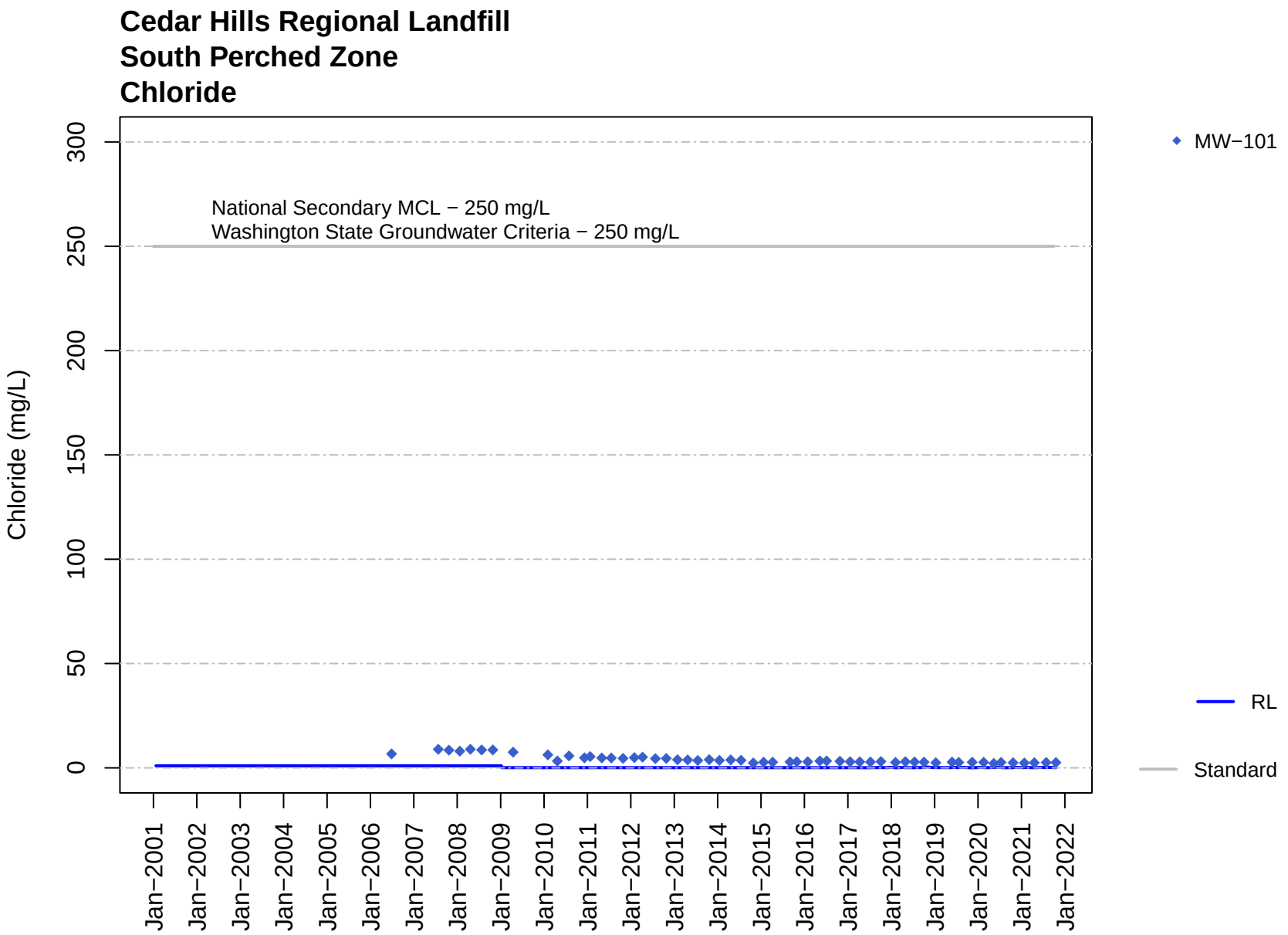

Cedar Hills Regional Landfill
East Perched Zone
Alkalinity
Alkalinity (mg/L)
0
100
200
300
400
500
600
700
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL

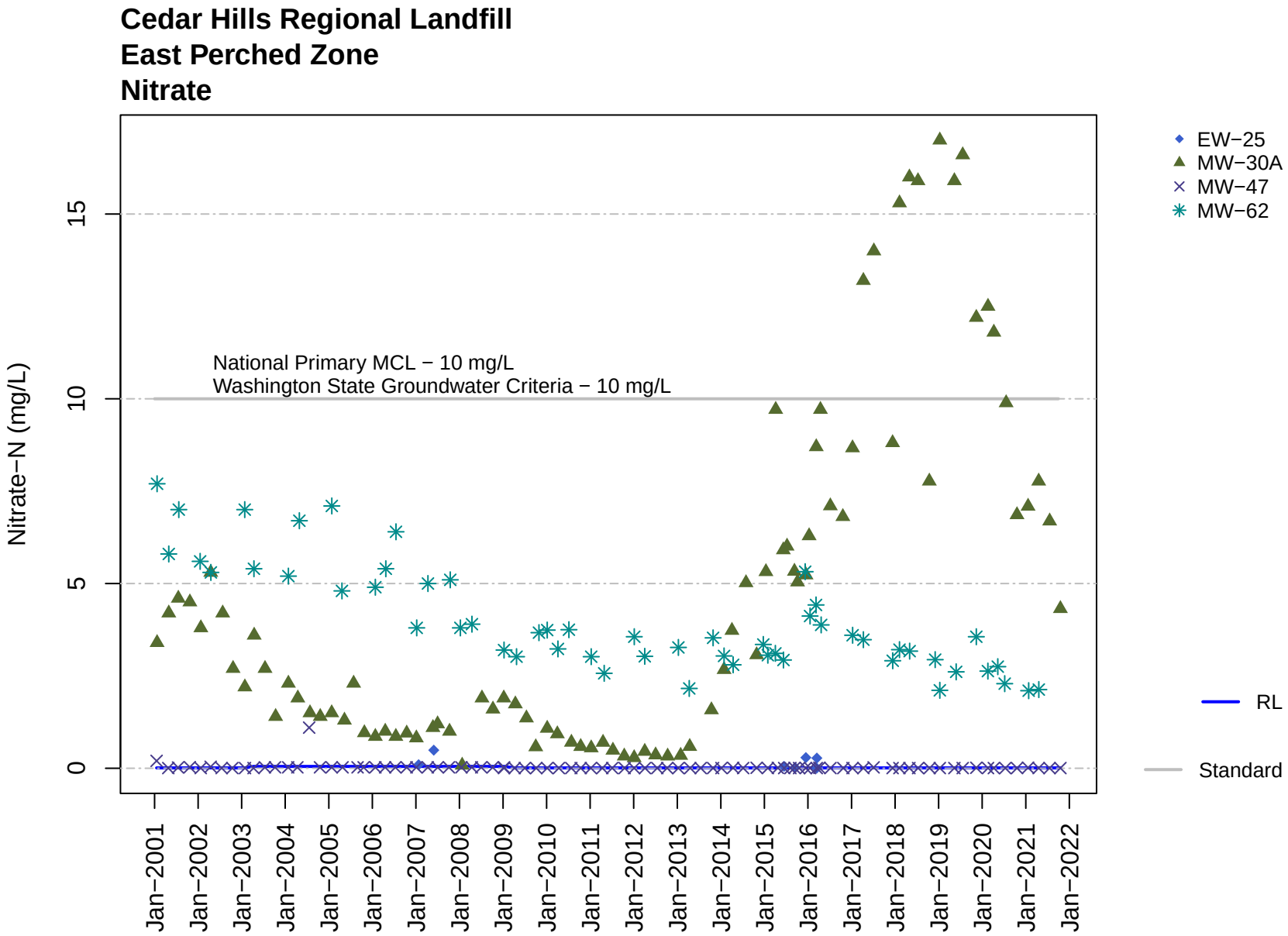

Cedar Hills Regional Landfill
South Perched Zone
Alkalinity
Alkalinity (mg/L)
0
100
200
300
400
500
600
700
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL

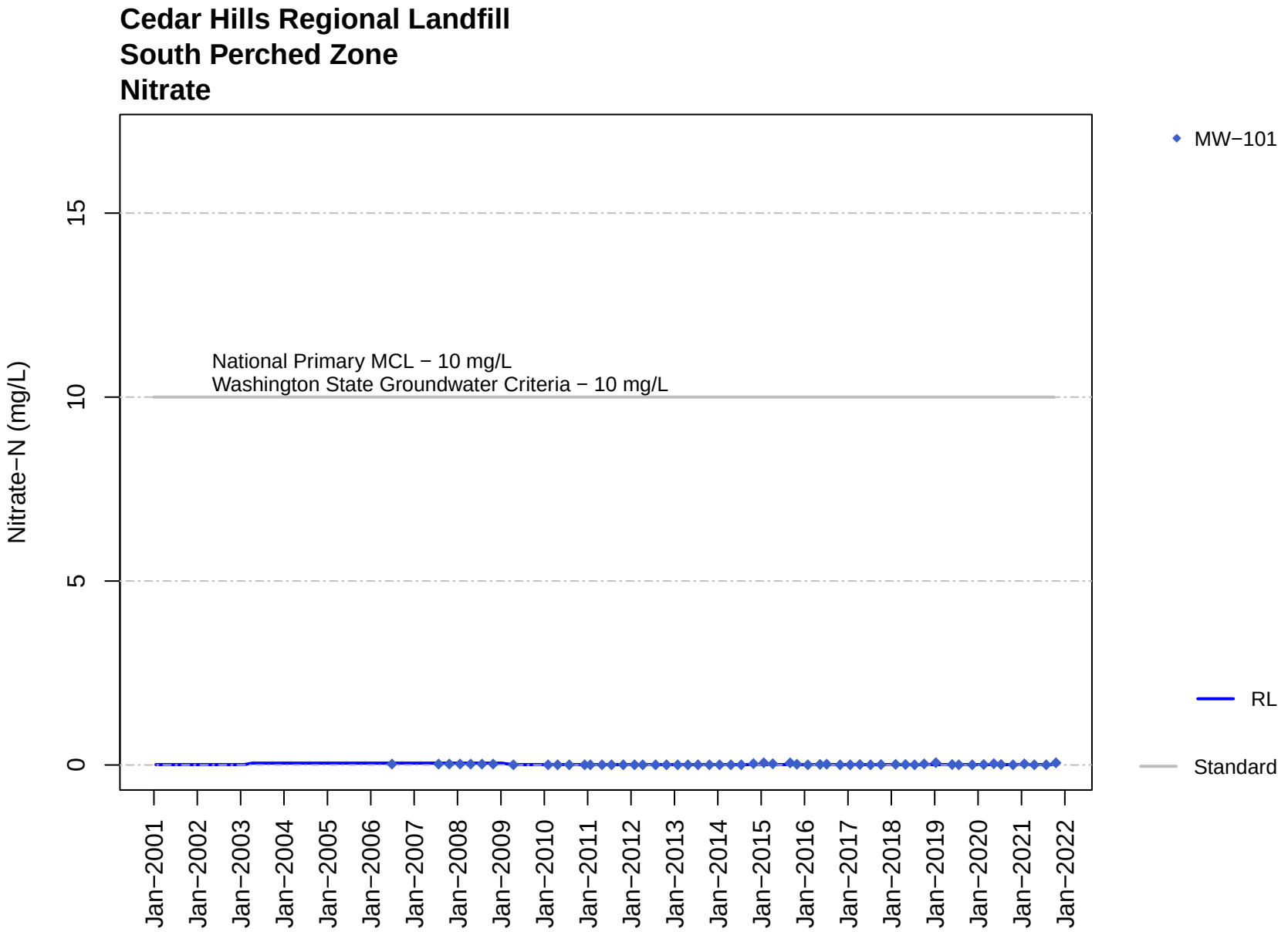

Cedar Hills Regional Landfill
East Perched Zone
Ammonia
Ammonia−N (mg/L)
0.00
0.05
0.10
0.15
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL

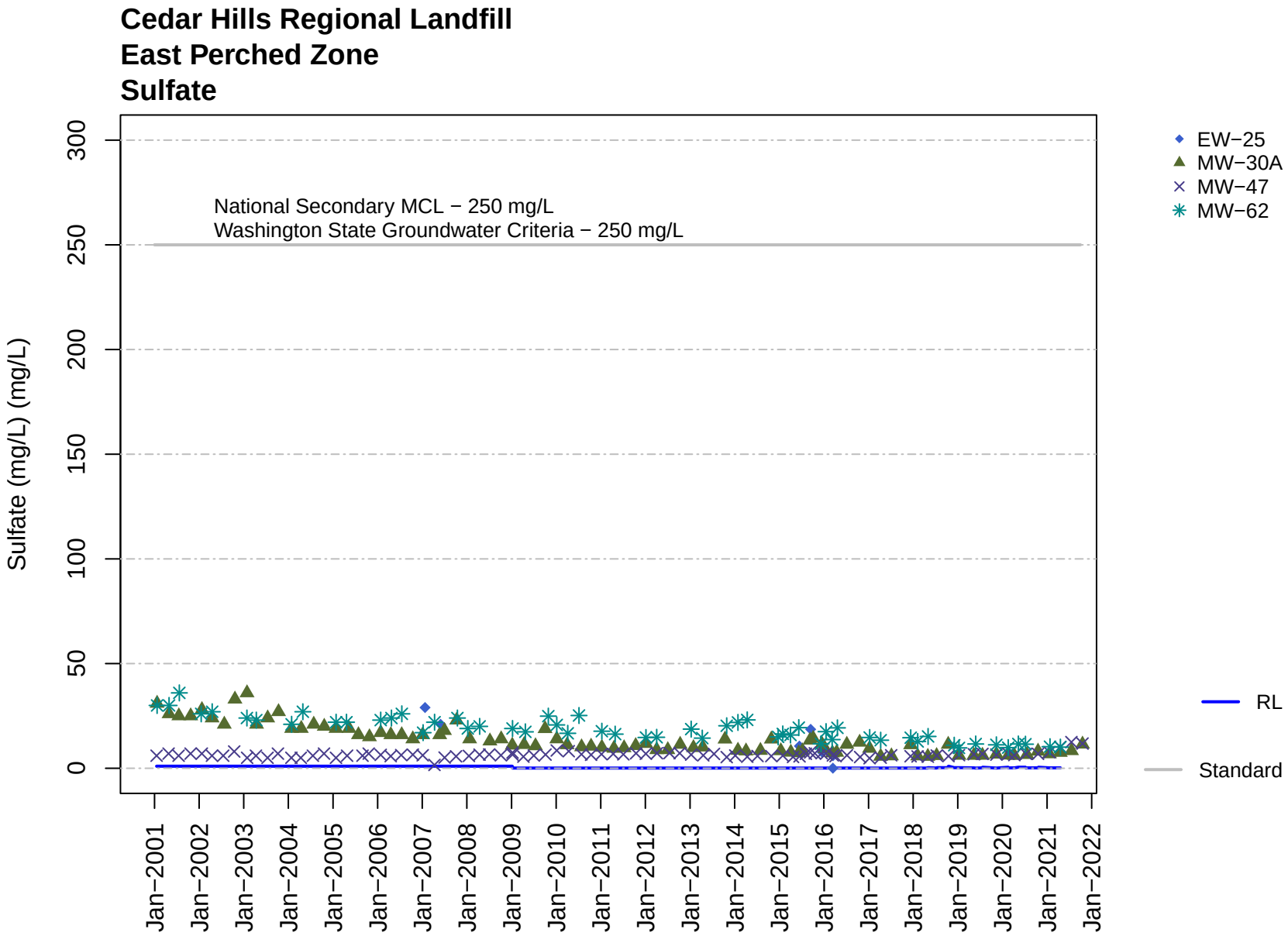

Cedar Hills Regional Landfill
South Perched Zone
Ammonia
Ammonia−N (mg/L)
0.00
0.05
0.10
0.15
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL

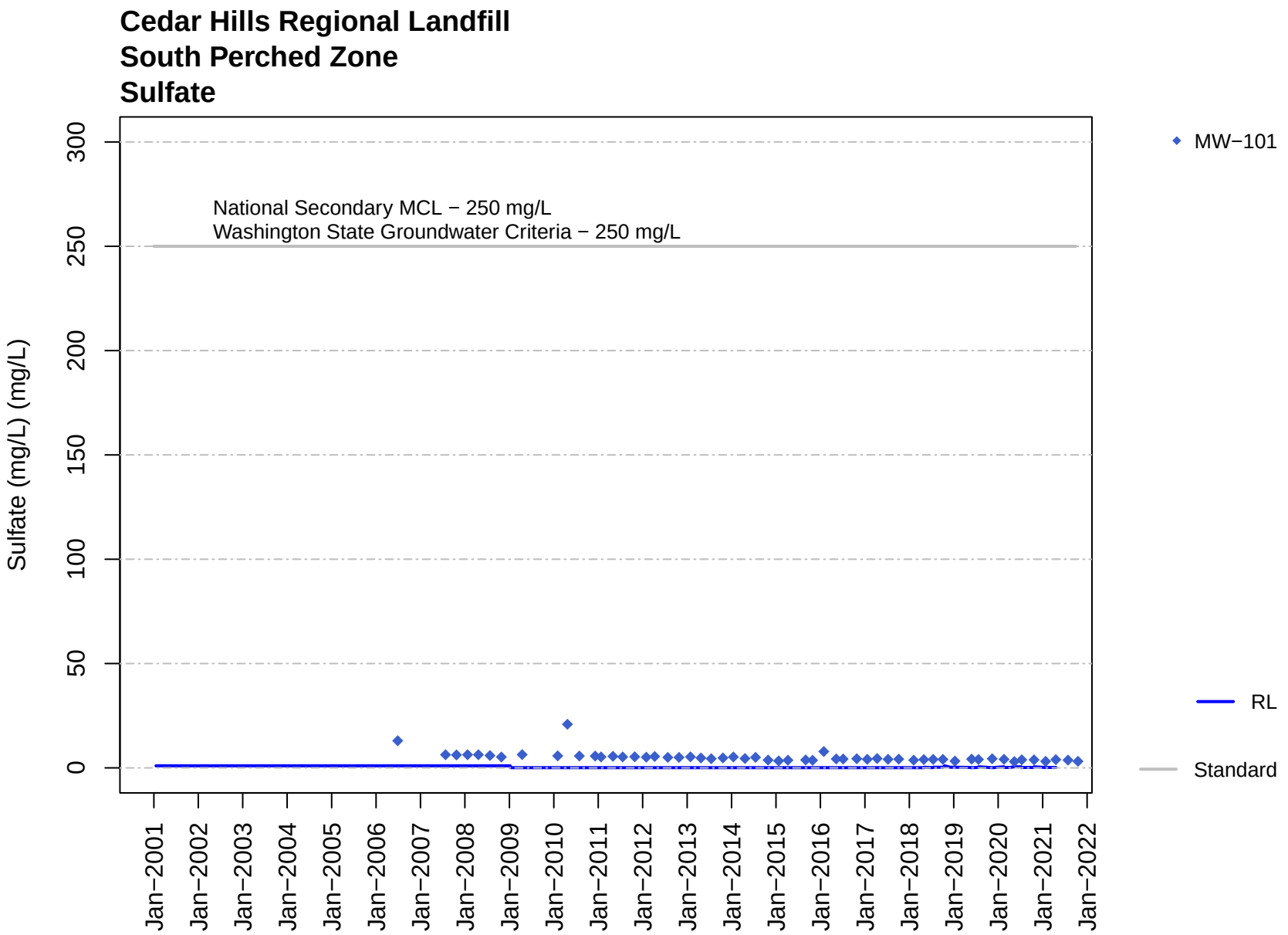

Cedar Hills Regional Landfill
East Perched Zone
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL
Standard

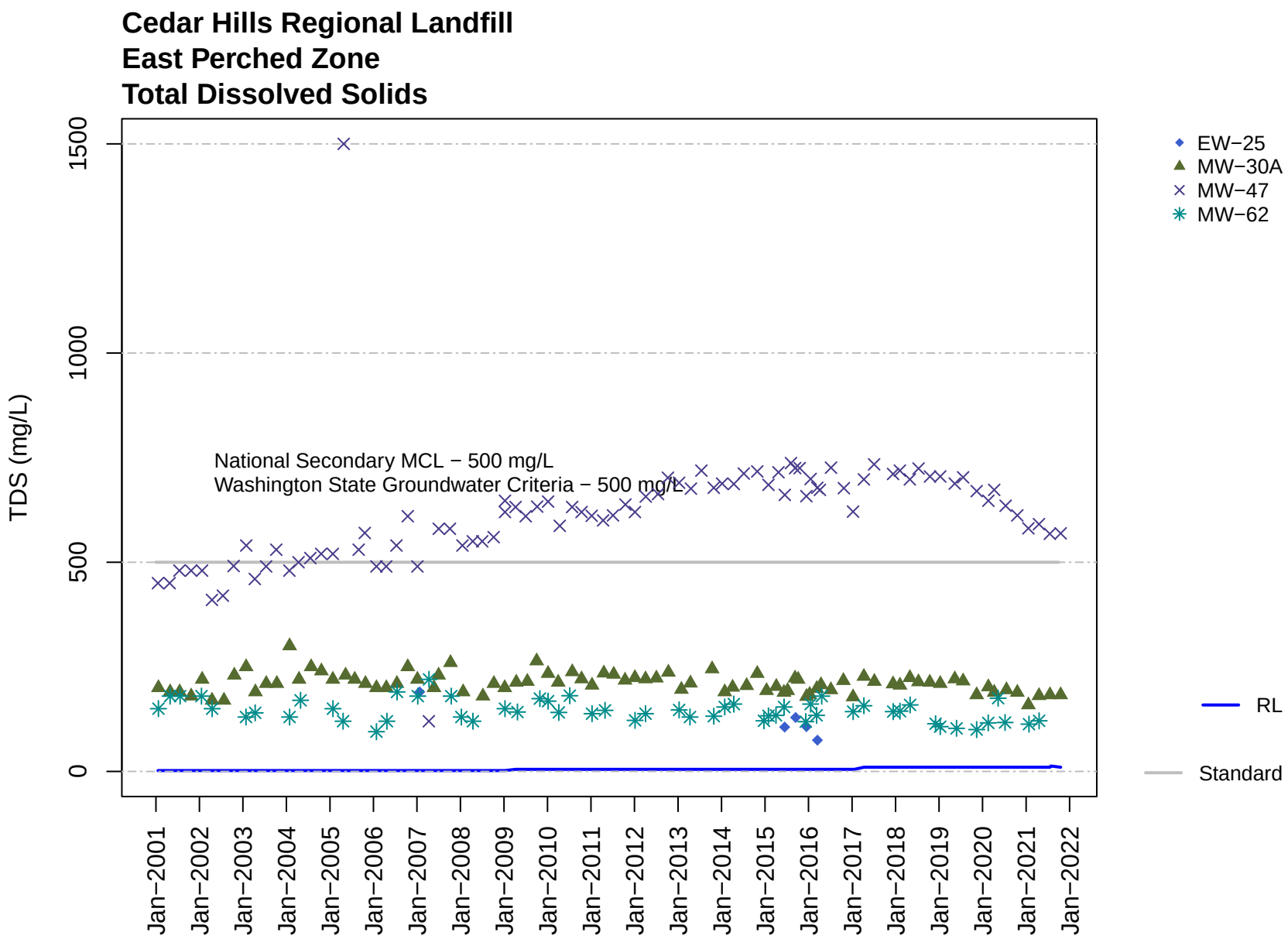

Cedar Hills Regional Landfill
South Perched Zone
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL
Standard

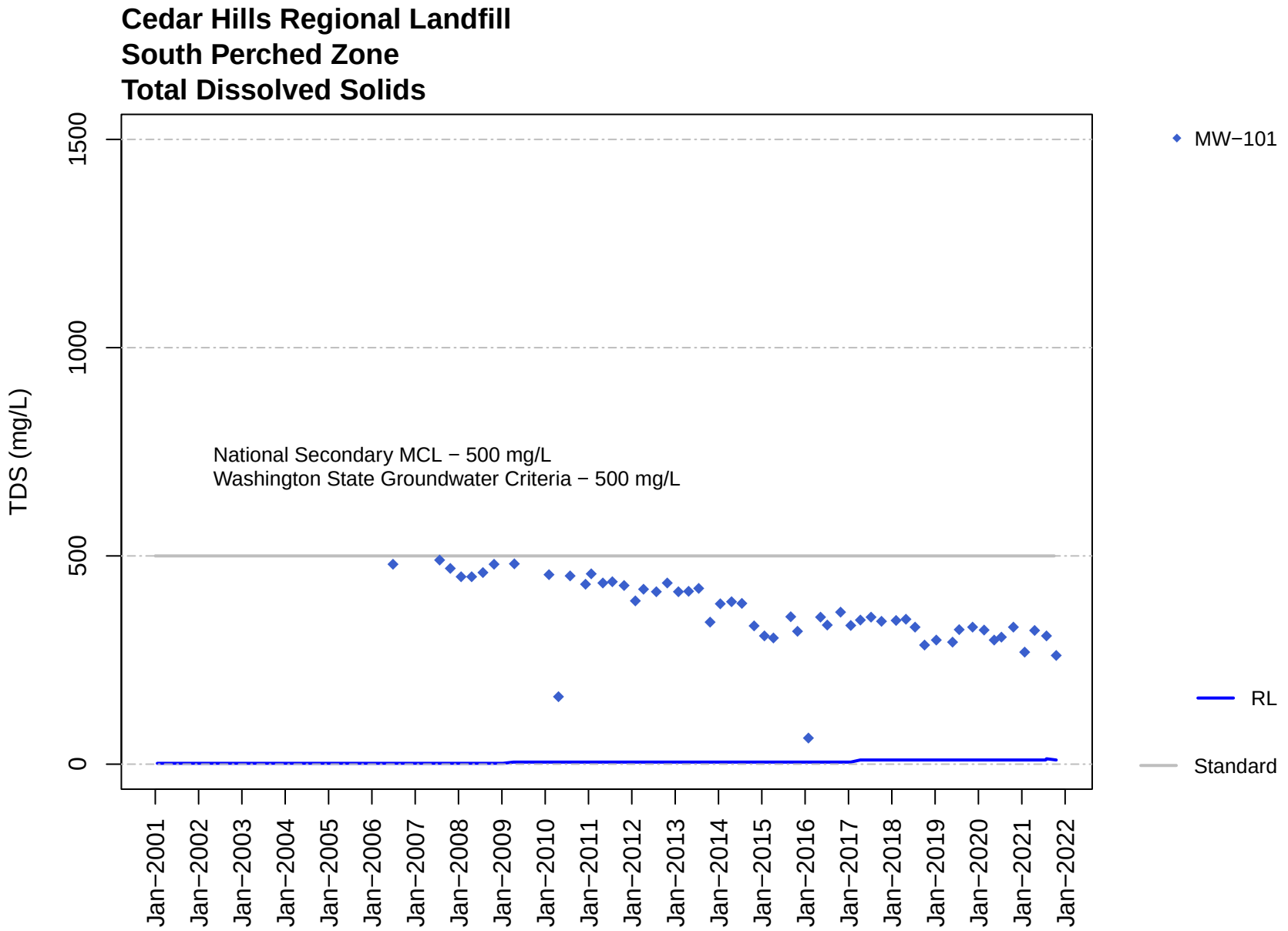

Cedar Hills Regional Landfill
East Perched Zone
Nitrate
Nitrate−N (mg/L)
0
5
10
15
National Primary MCL − 10 mg/L
Washington State Groundwater Criteria − 10 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL
Standard

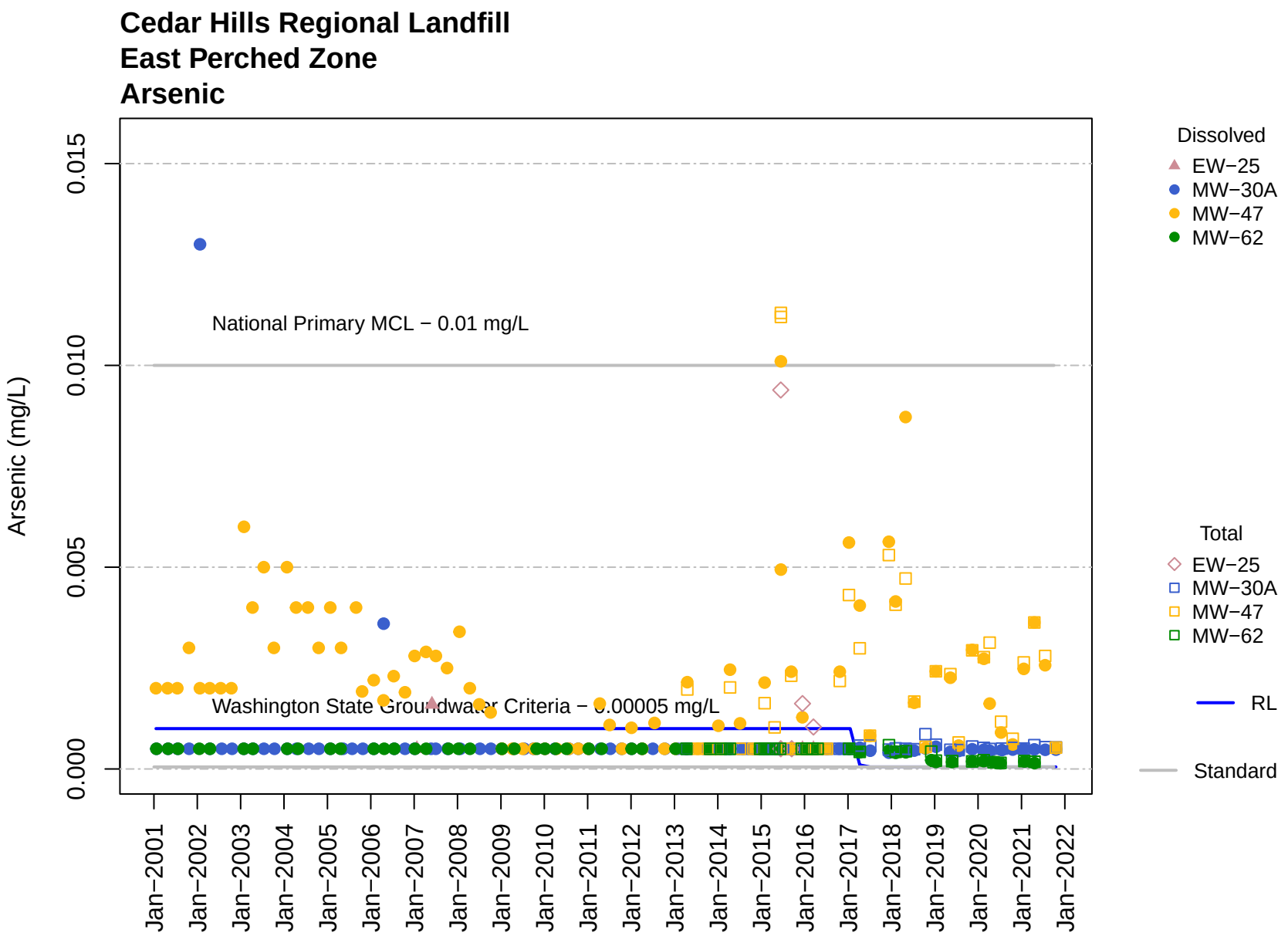

Cedar Hills Regional Landfill
South Perched Zone
Nitrate
Nitrate−N (mg/L)
0
5
10
15
National Primary MCL − 10 mg/L
Washington State Groundwater Criteria − 10 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
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Jan−2019
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Jan−2021
Jan−2022
MW−101
RL
Standard

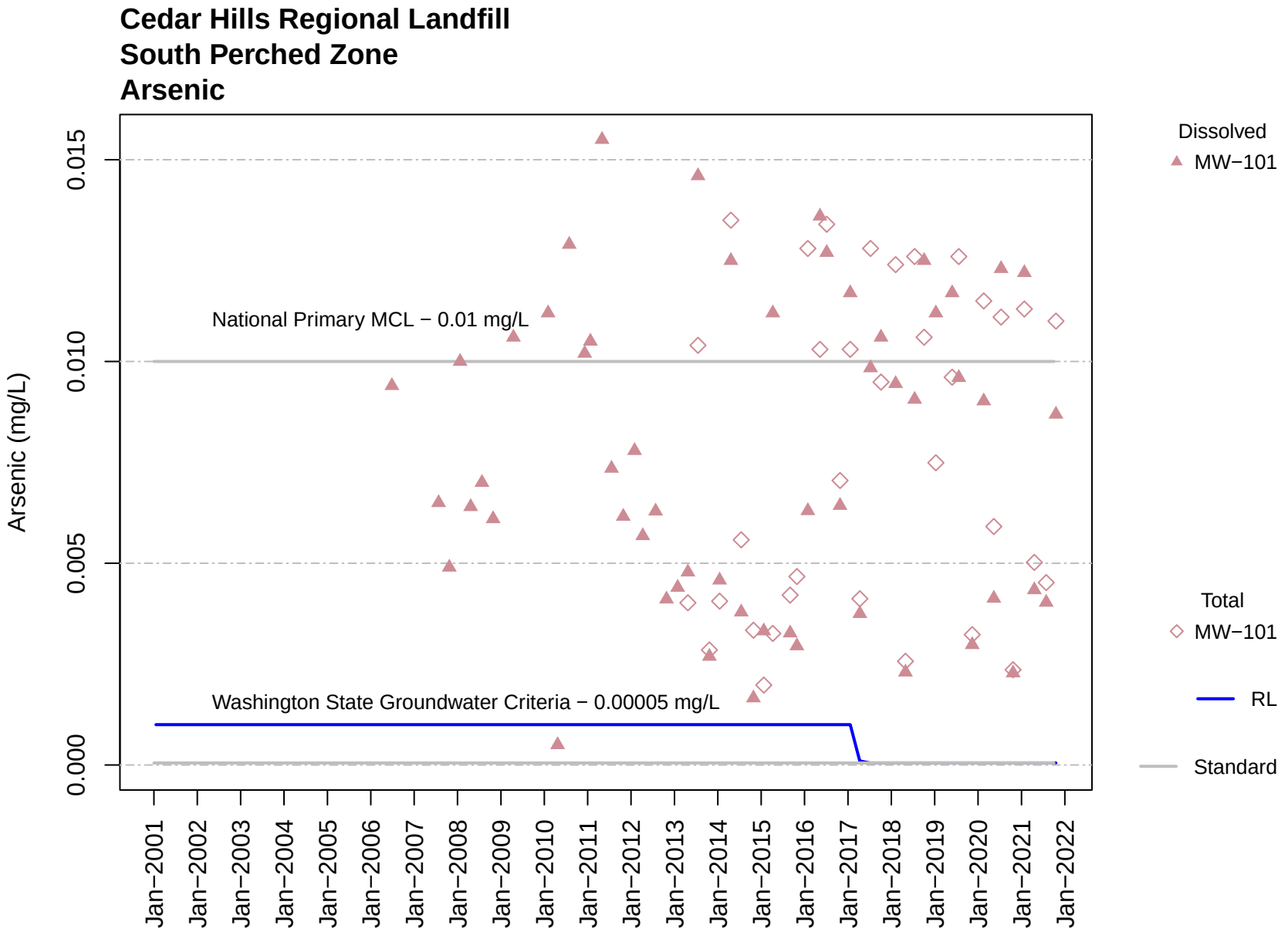

Cedar Hills Regional Landfill
East Perched Zone
Sulfate
Sulfate (mg/L) (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL
Standard

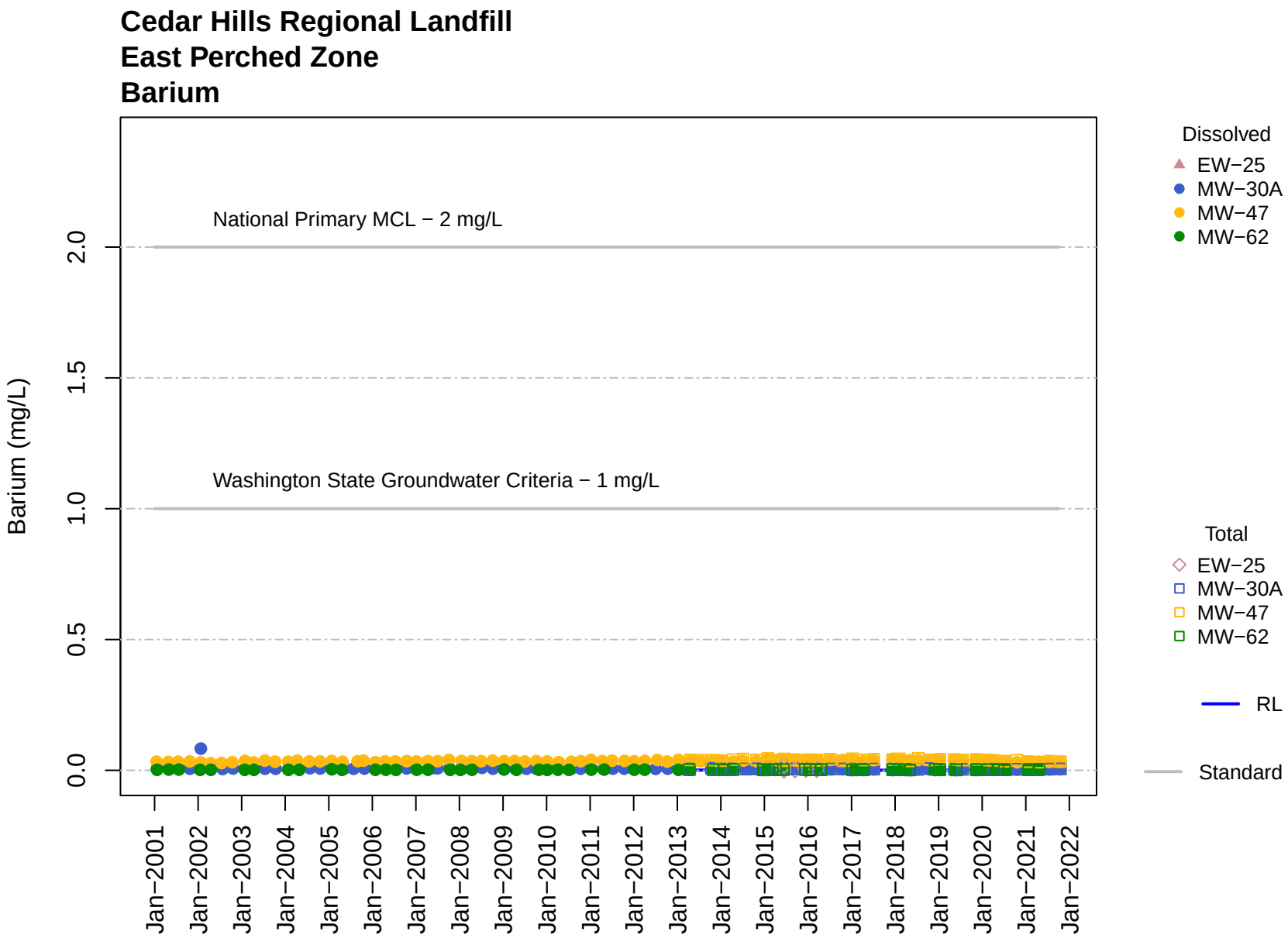

Cedar Hills Regional Landfill
South Perched Zone
Sulfate
Sulfate (mg/L) (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL
Standard

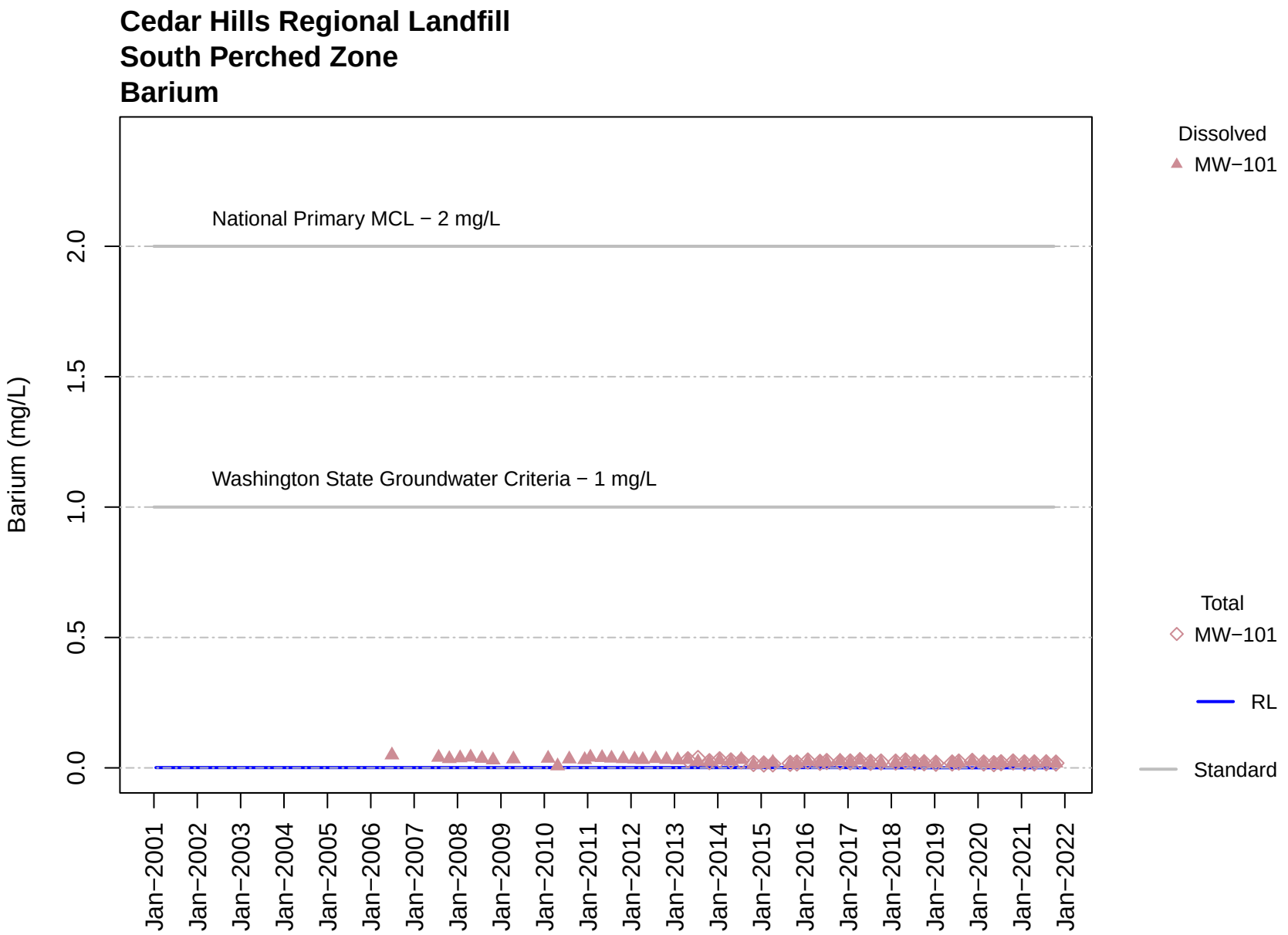

Cedar Hills Regional Landfill
East Perched Zone
Total Dissolved Solids
TDS (mg/L)
0
500
1000
1500
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL
Standard

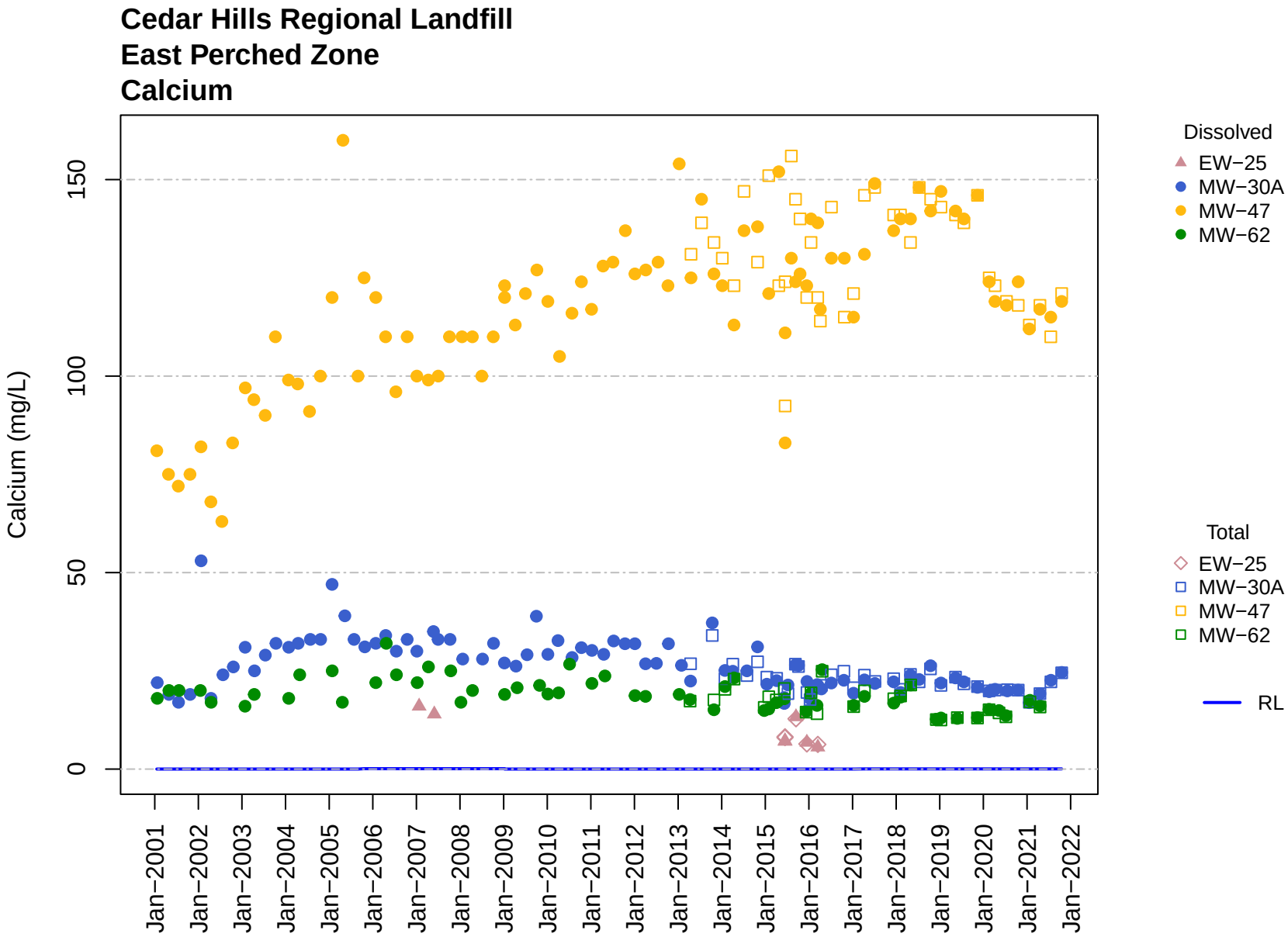

Cedar Hills Regional Landfill
South Perched Zone
Total Dissolved Solids
TDS (mg/L)
1500
1000
500
0
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL
Standard

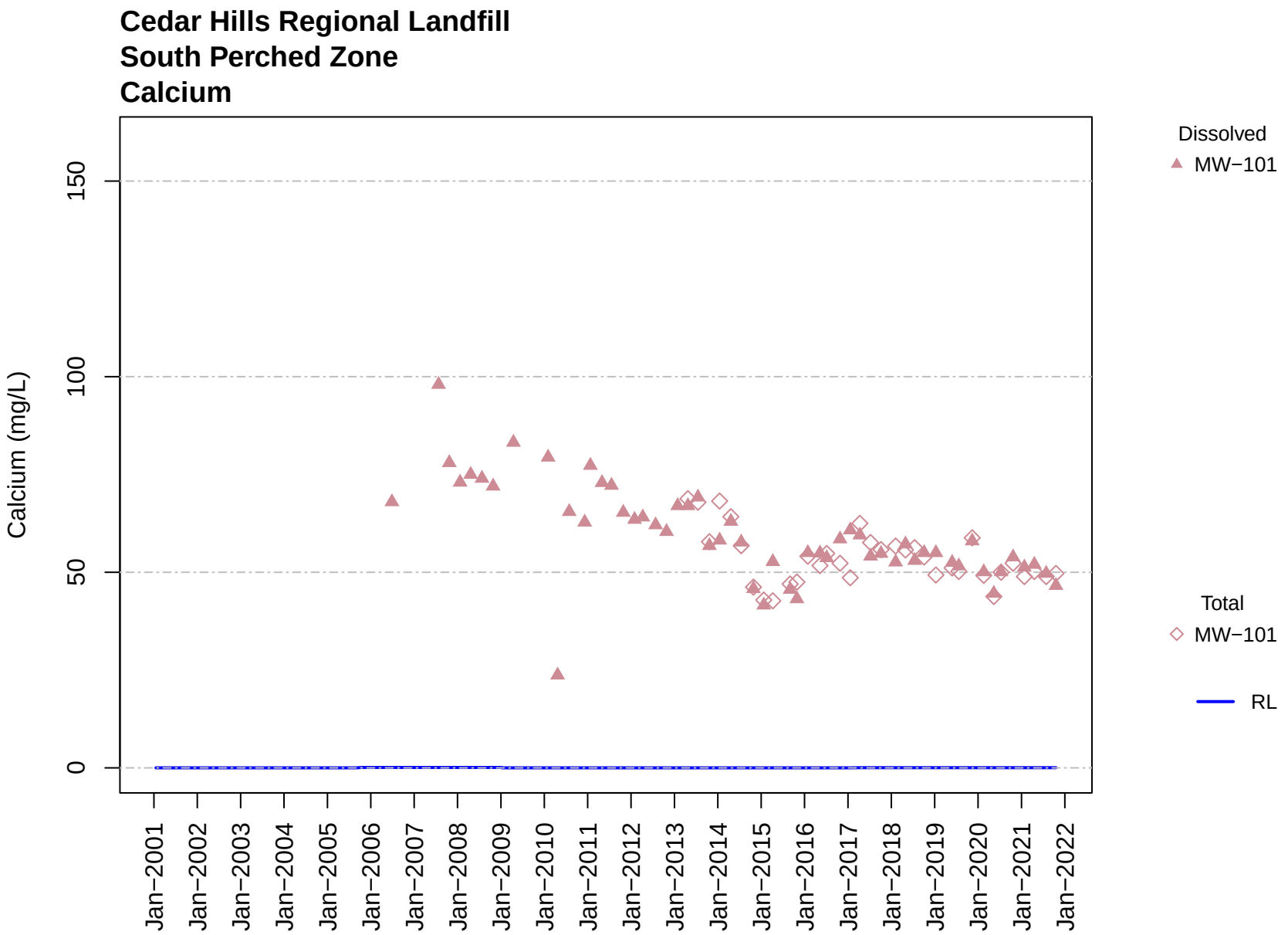

Cedar Hills Regional Landfill
East Perched Zone
Arsenic
Arsenic (mg/L)
0.000
0.005
0.010
0.015
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL
Standard

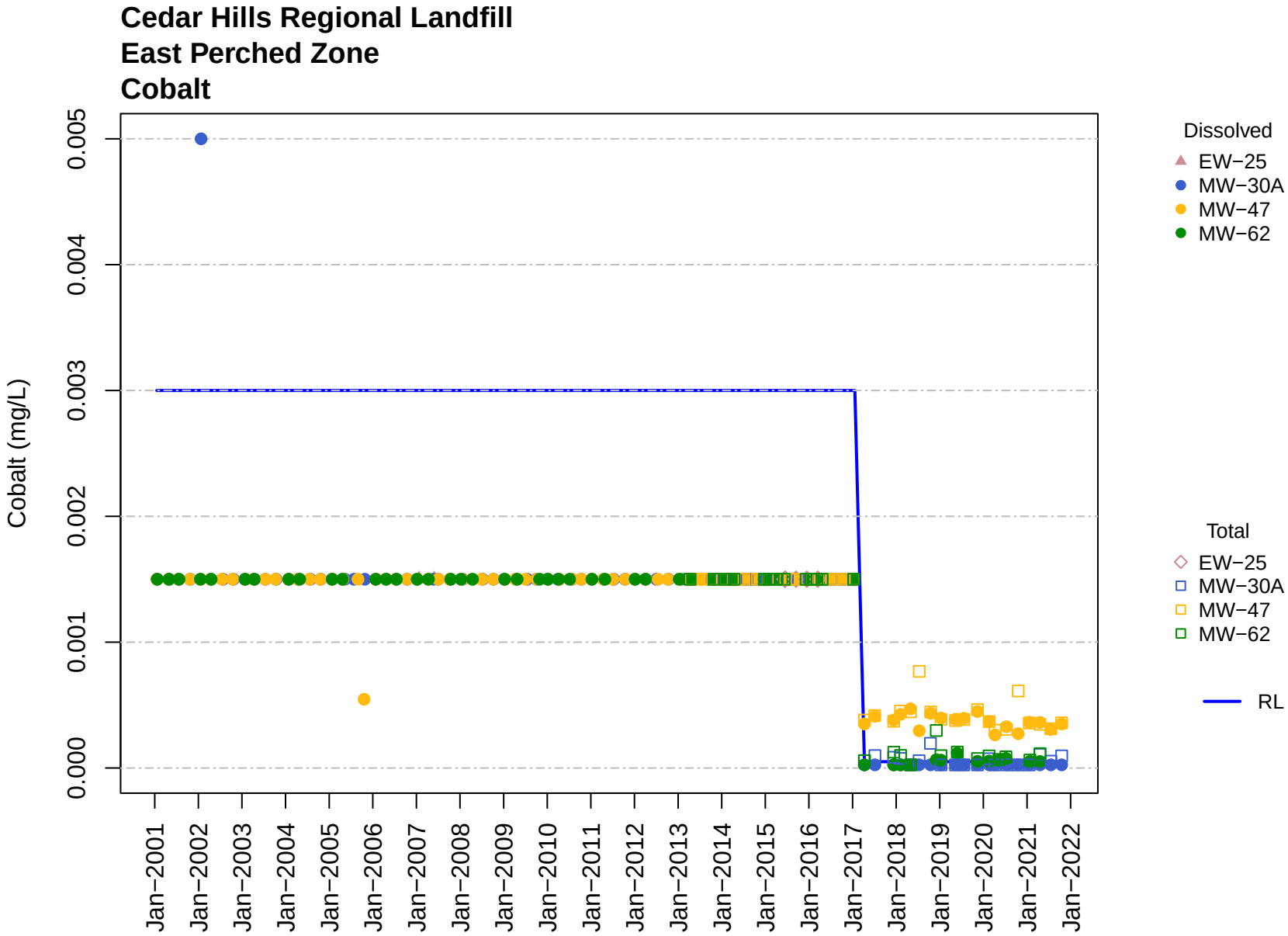

Cedar Hills Regional Landfill
South Perched Zone
Arsenic
Arsenic (mg/L)
0.000
0.005
0.010
0.015
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−101
Total
MW−101
RL
Standard

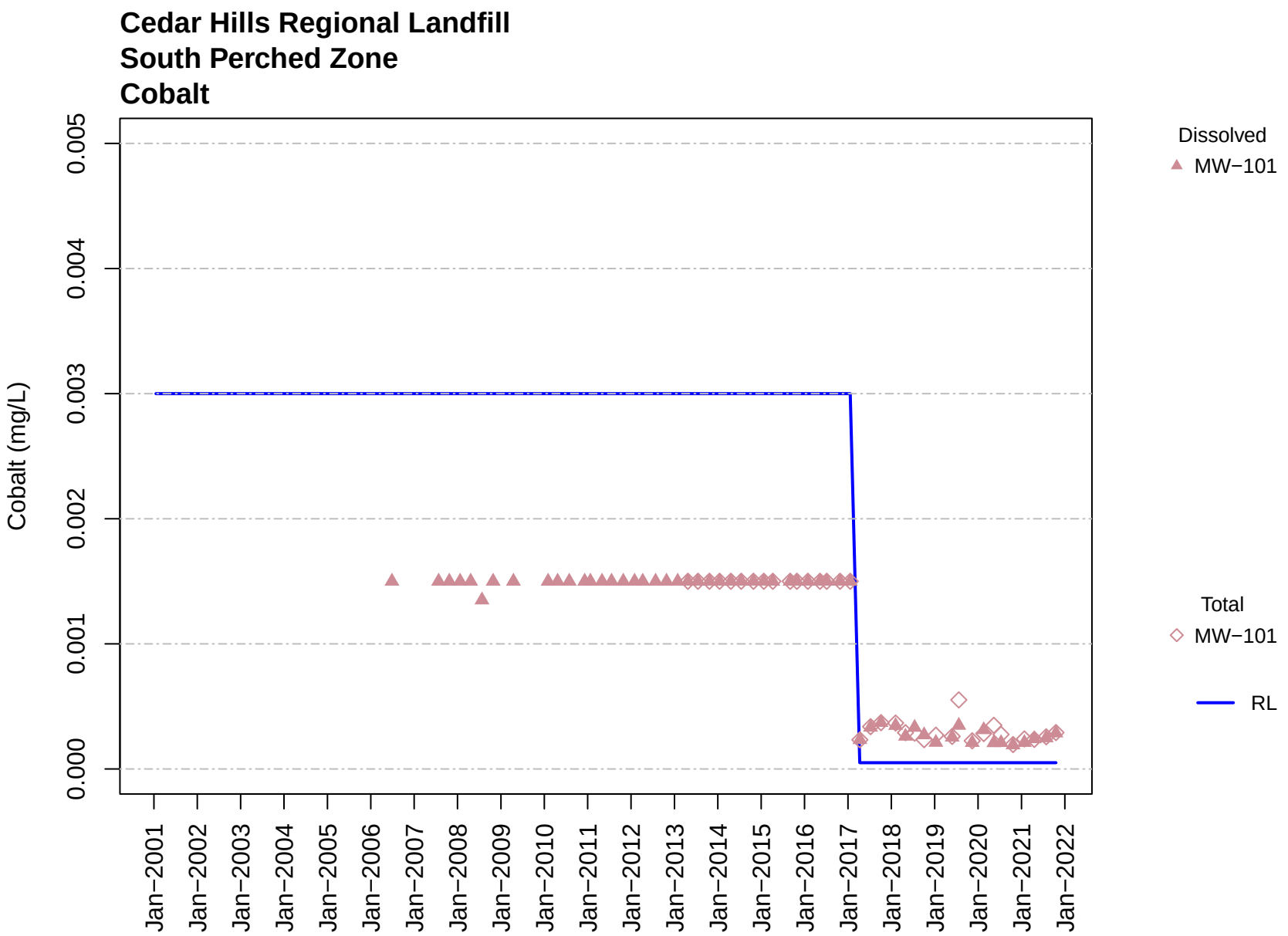

Cedar Hills Regional Landfill
East Perched Zone
Barium
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL
Standard

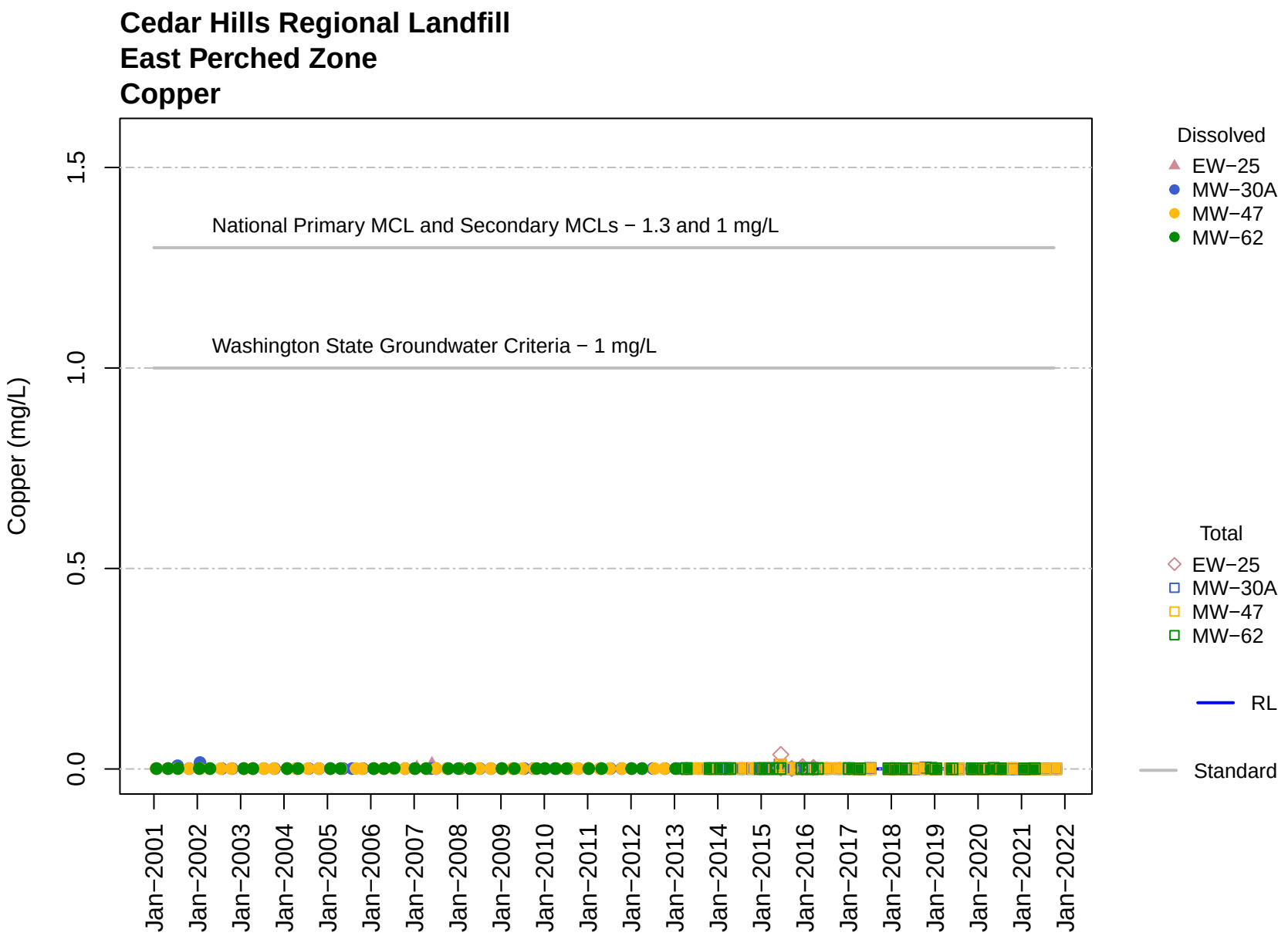

Cedar Hills Regional Landfill
South Perched Zone
Barium
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−101
Total
MW−101
RL
Standard

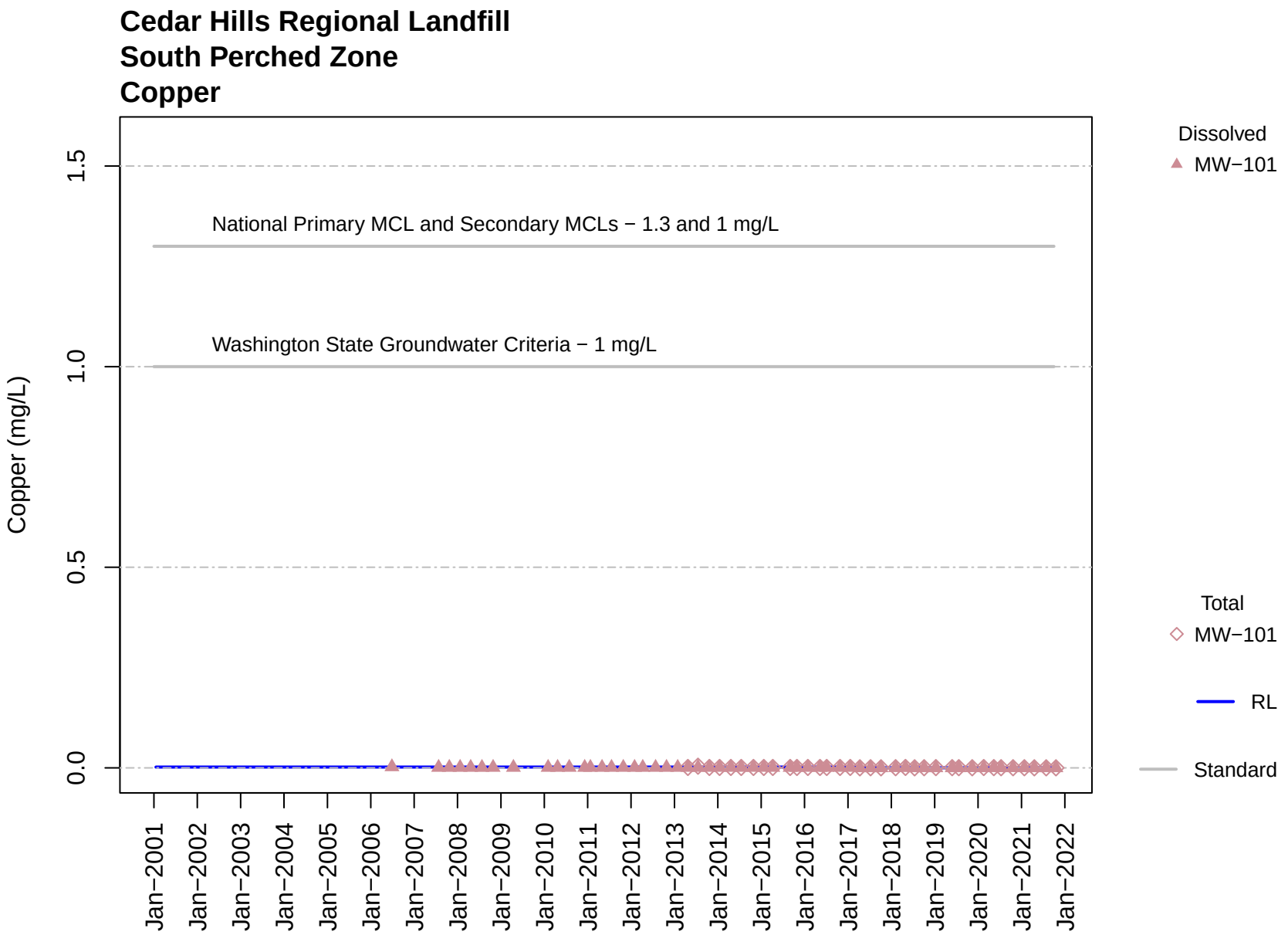

Cedar Hills Regional Landfill
East Perched Zone
Calcium
Calcium (mg/L)
0
50
100
150
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL

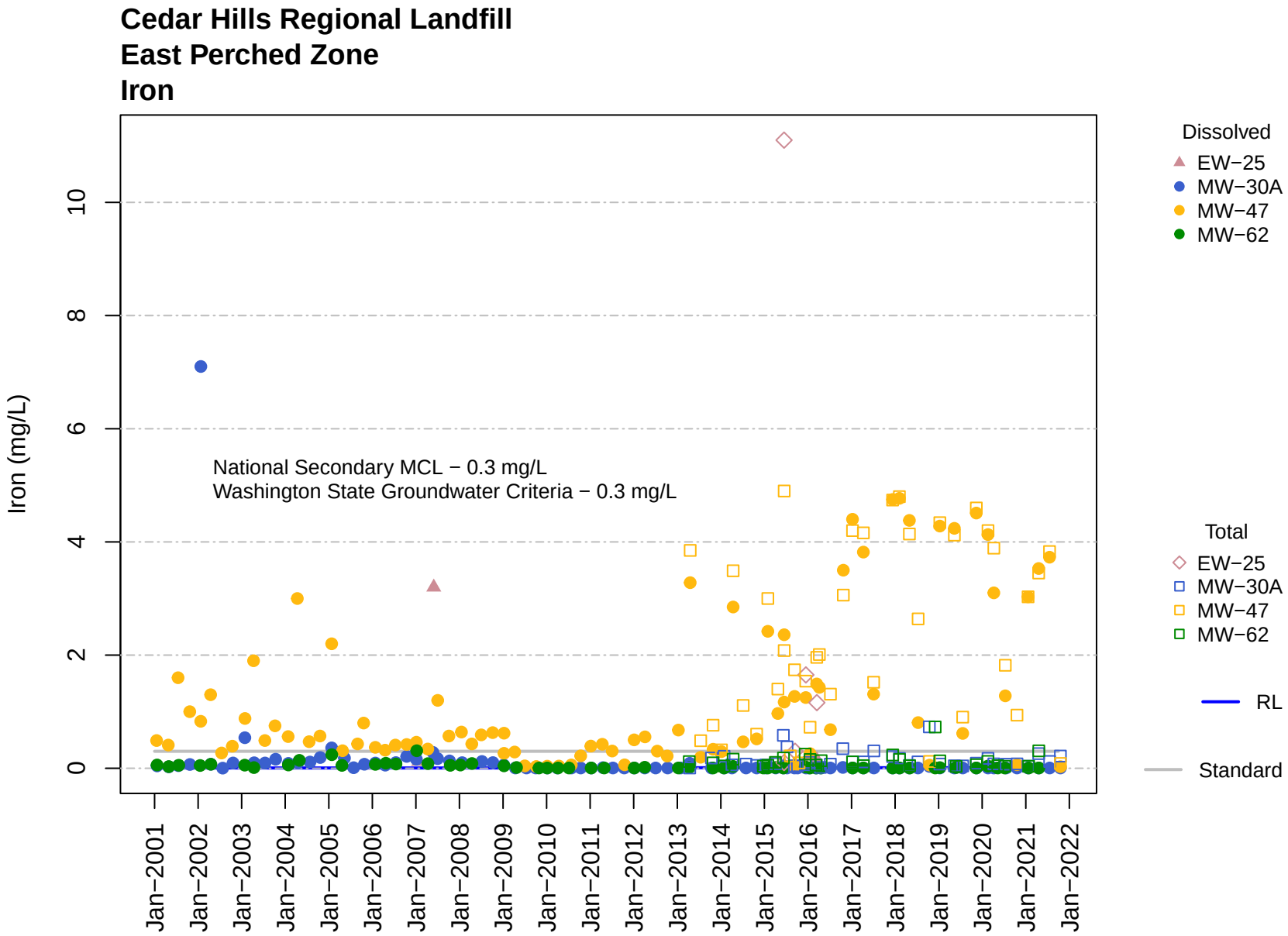

Cedar Hills Regional Landfill
South Perched Zone
Calcium
Calcium (mg/L)
0
50
100
150
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−101
Total
MW−101
RL

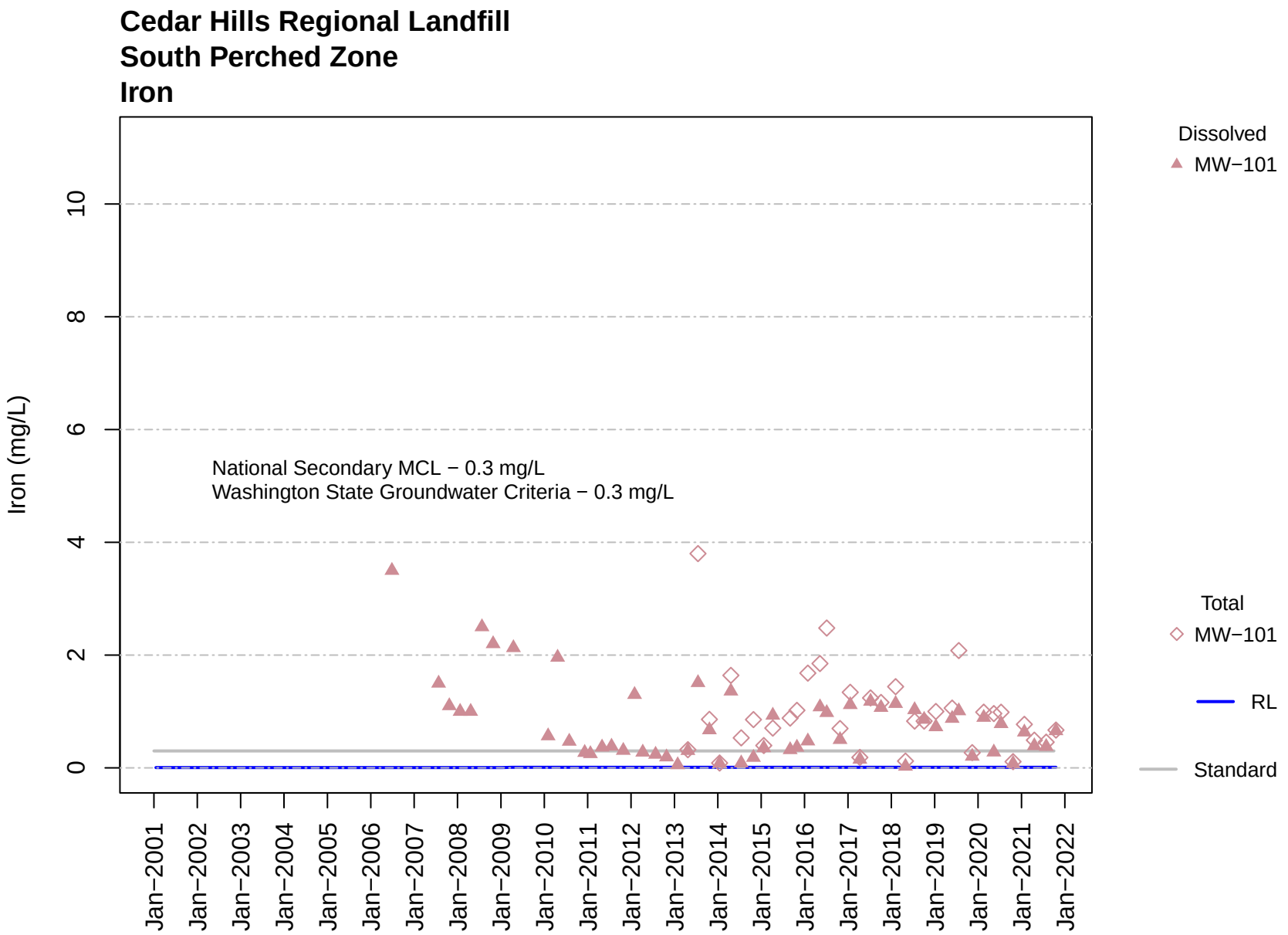

Cedar Hills Regional Landfill
East Perched Zone
Cobalt
Cobalt (mg/L)
0.000
0.001
0.002
0.003
0.004
0.005
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL


Cedar Hills Regional Landfill
South Perched Zone
Cobalt
Cobalt (mg/L)
0.000
0.001
0.002
0.003
0.004
0.005
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−101
Total
MW−101
RL

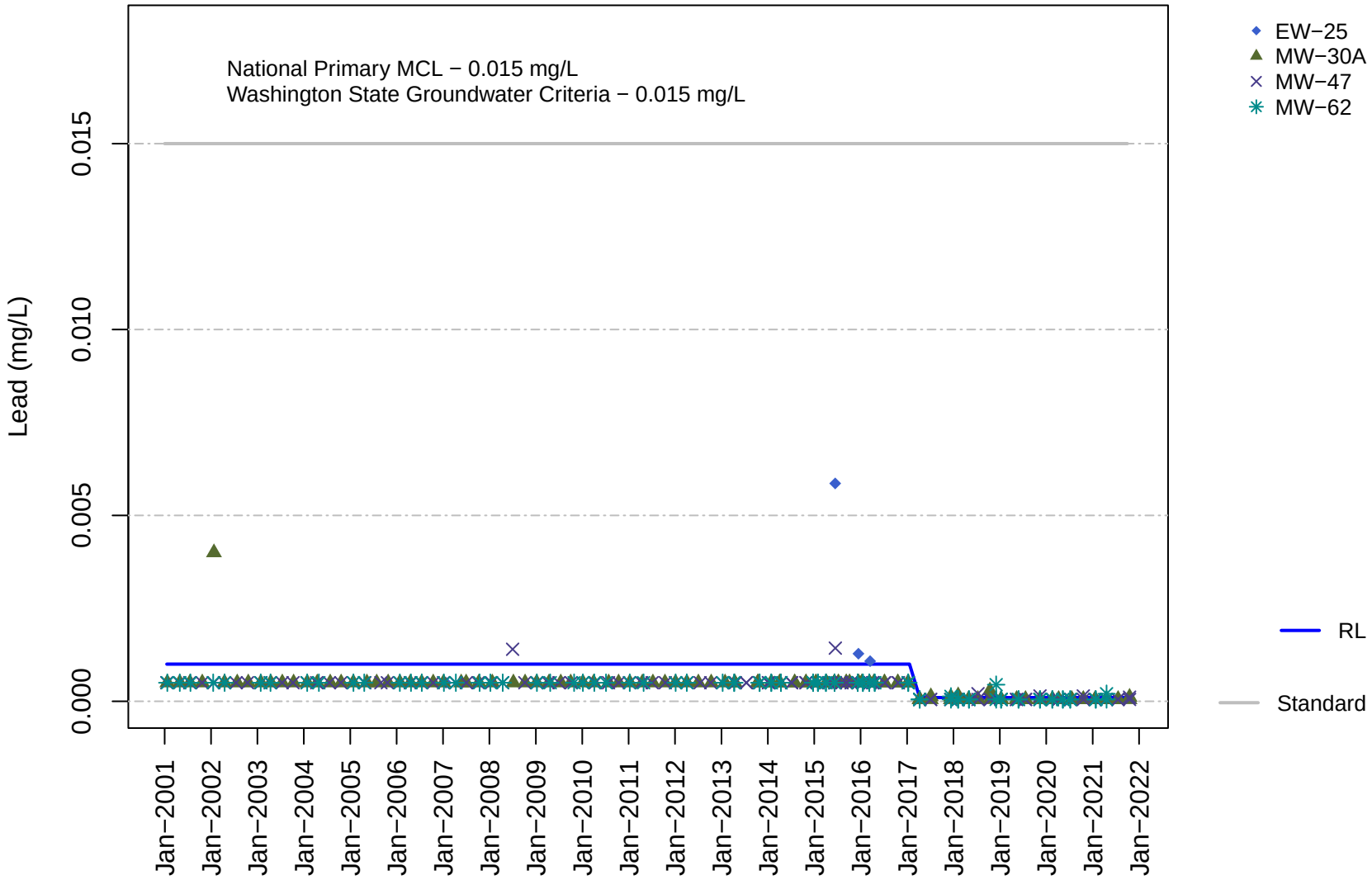

Cedar Hills Regional Landfill
East Perched Zone
Copper
Copper (mg/L)
0.0
0.5
1.0
1.5
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL
Standard


Cedar Hills Regional Landfill
South Perched Zone
Copper
Copper (mg/L)
1.5
1.0
0.5
0.0
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−101
Total
MW−101
RL
Standard

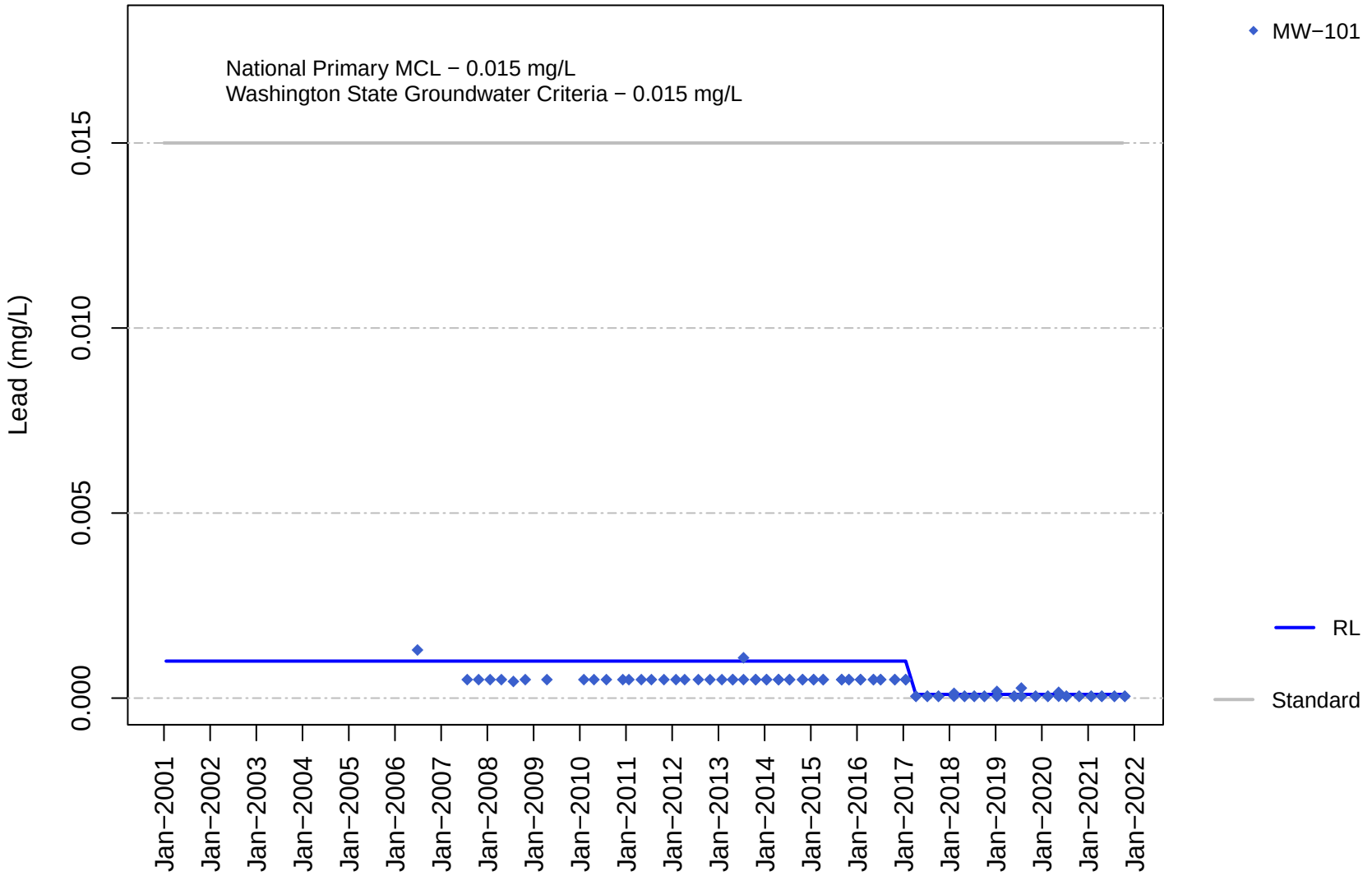

Cedar Hills Regional Landfill
East Perched Zone
Iron
Iron (mg/L)
0
2
4
6
8
10
National Secondary MCL − 0.3 mg/L
Washington State Groundwater Criteria − 0.3 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL
Standard

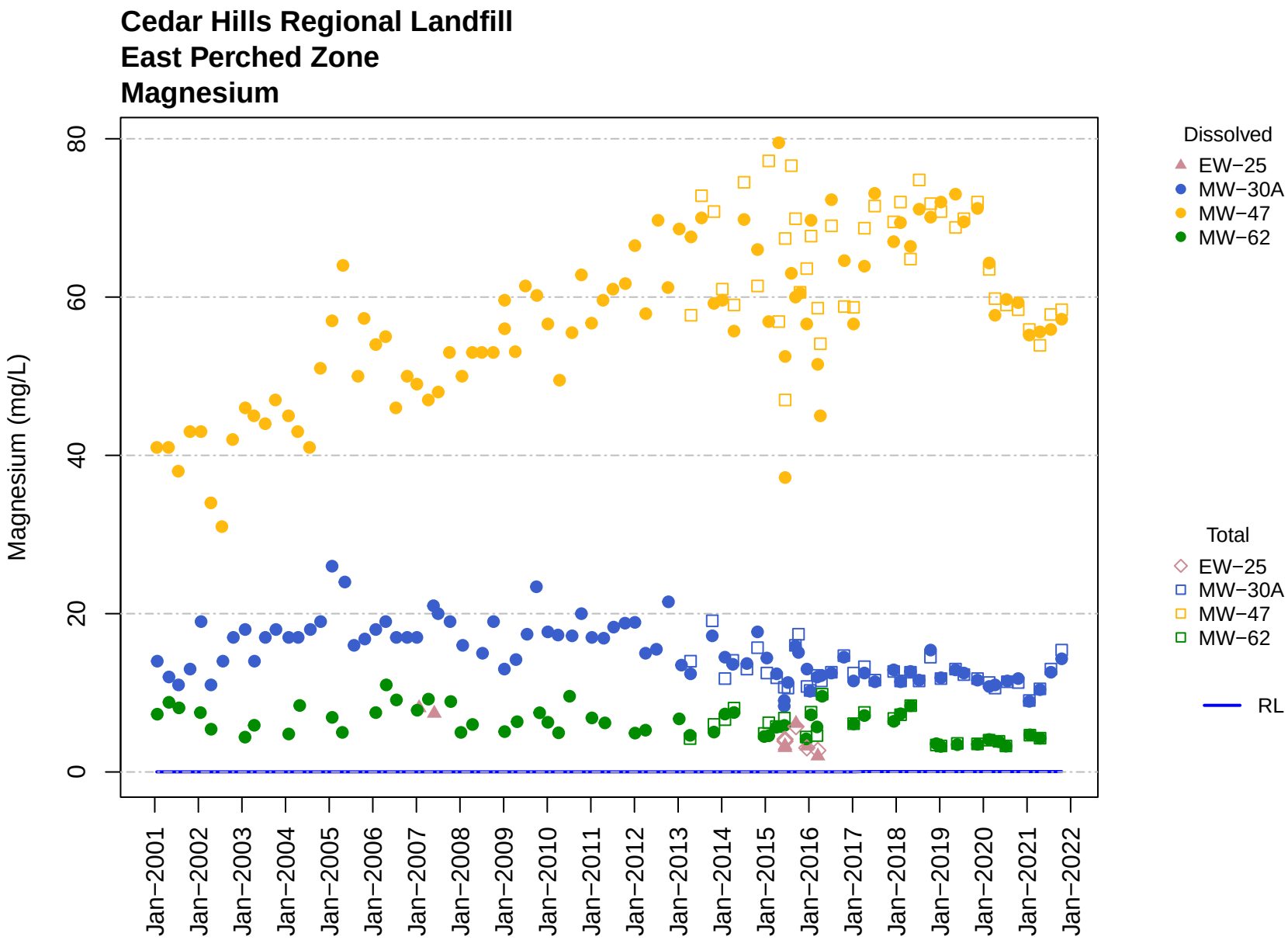

Cedar Hills Regional Landfill
South Perched Zone
Iron
Iron (mg/L)
0
2
4
6
8
10
National Secondary MCL − 0.3 mg/L
Washington State Groundwater Criteria − 0.3 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−101
Total
MW−101
RL
Standard

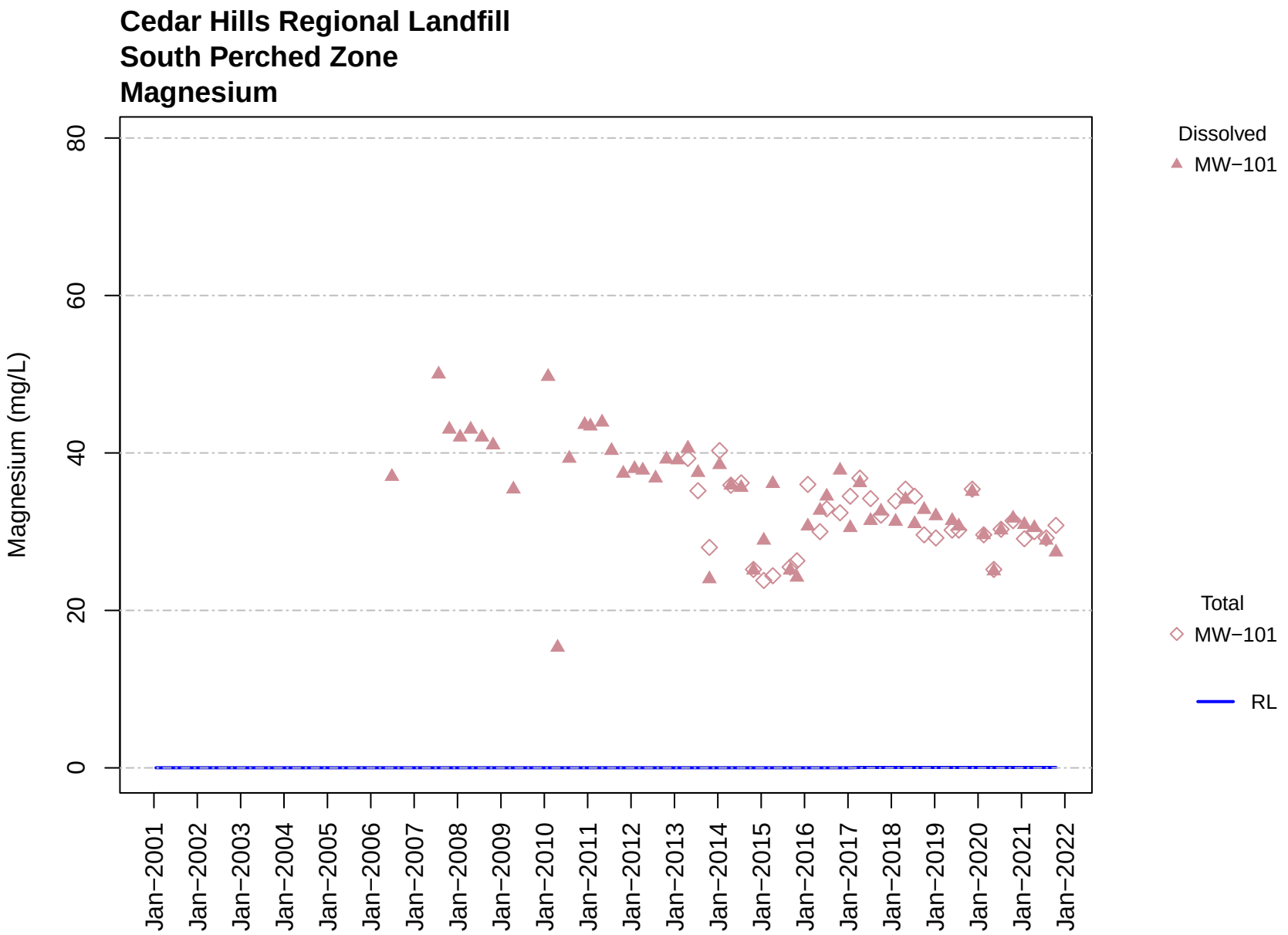
Cedar Hills Regional Landfill
East Perched Zone
Lead

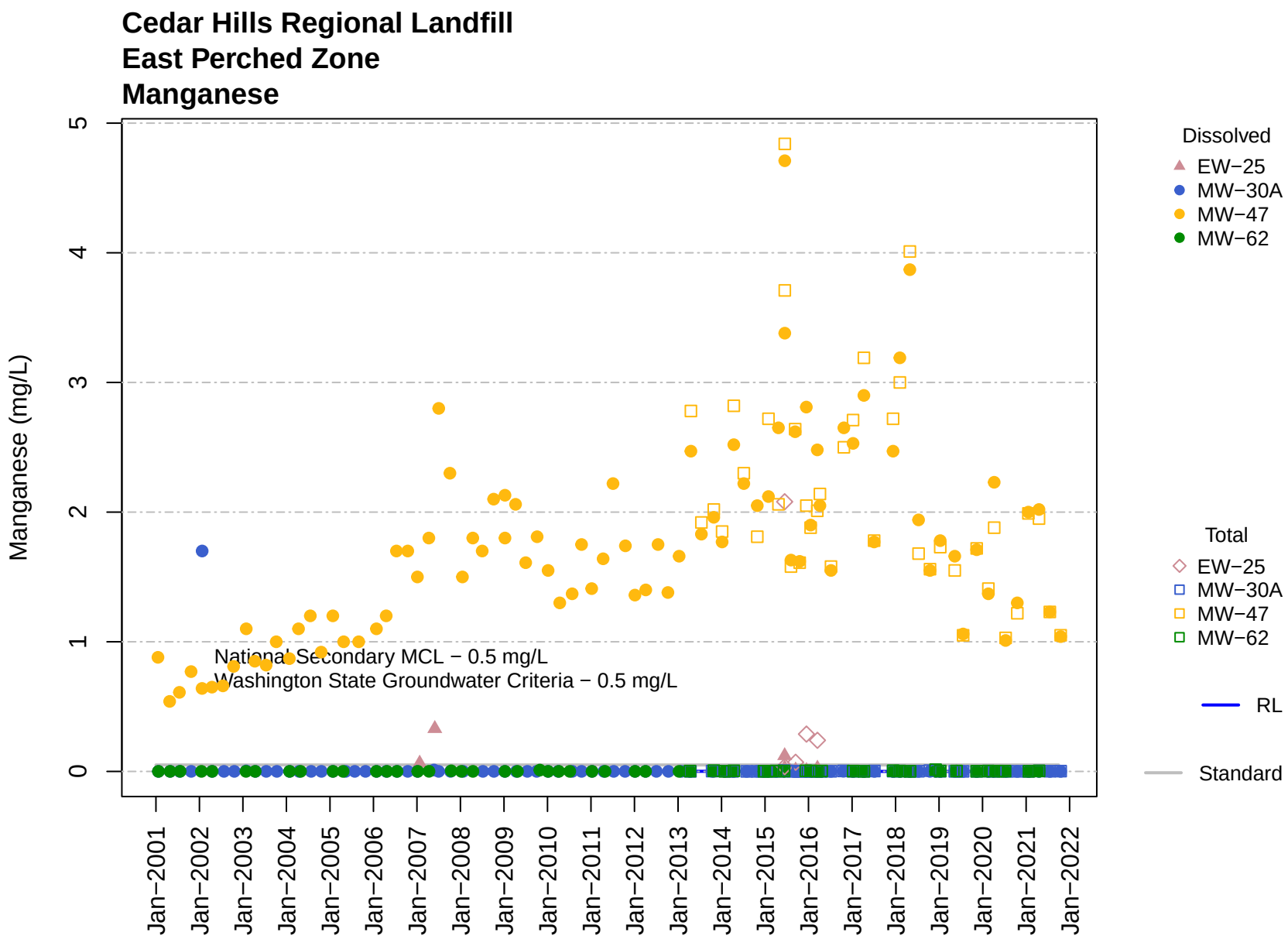


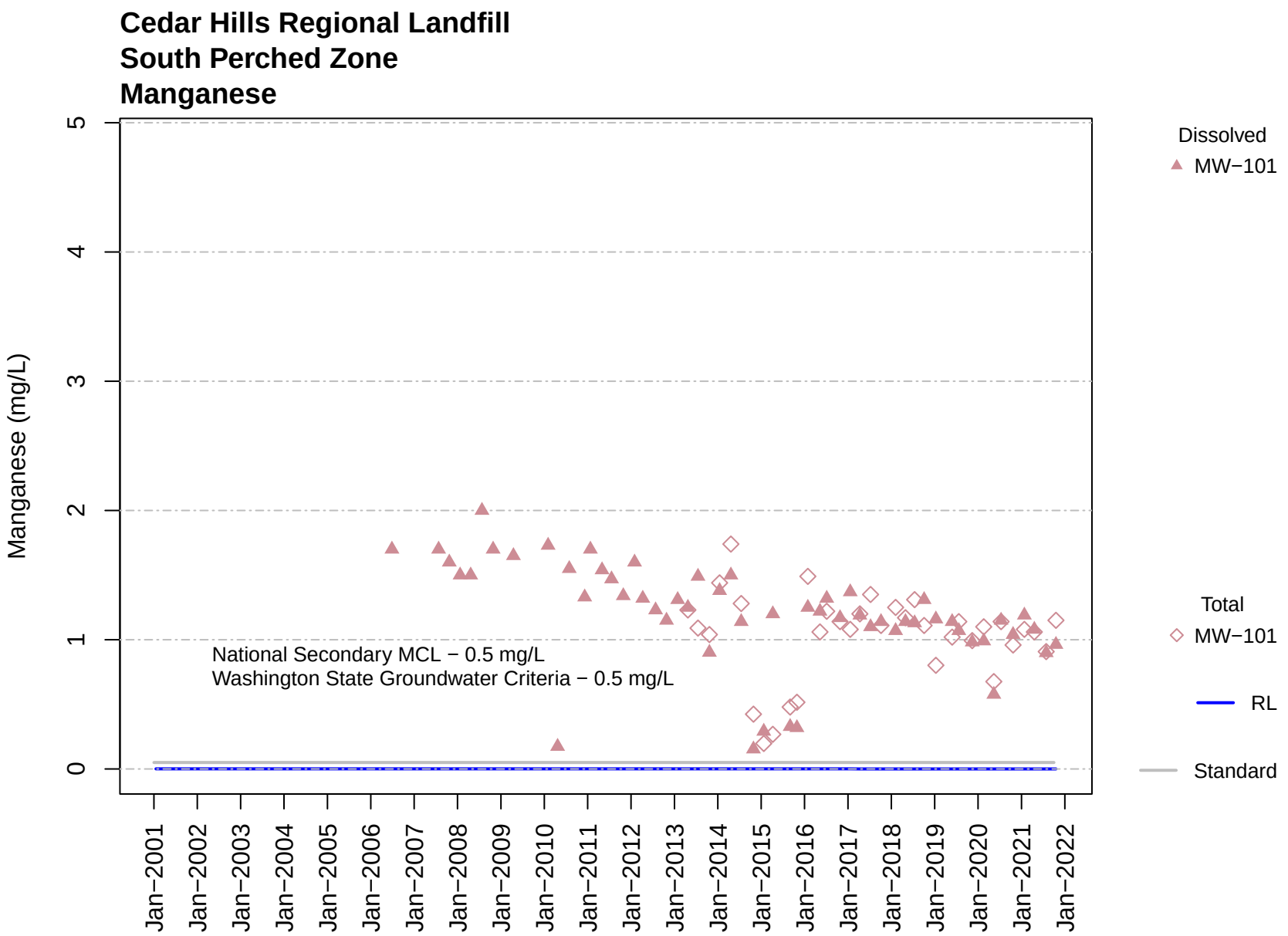
Cedar Hills Regional Landfill
South Perched Zone
Lead

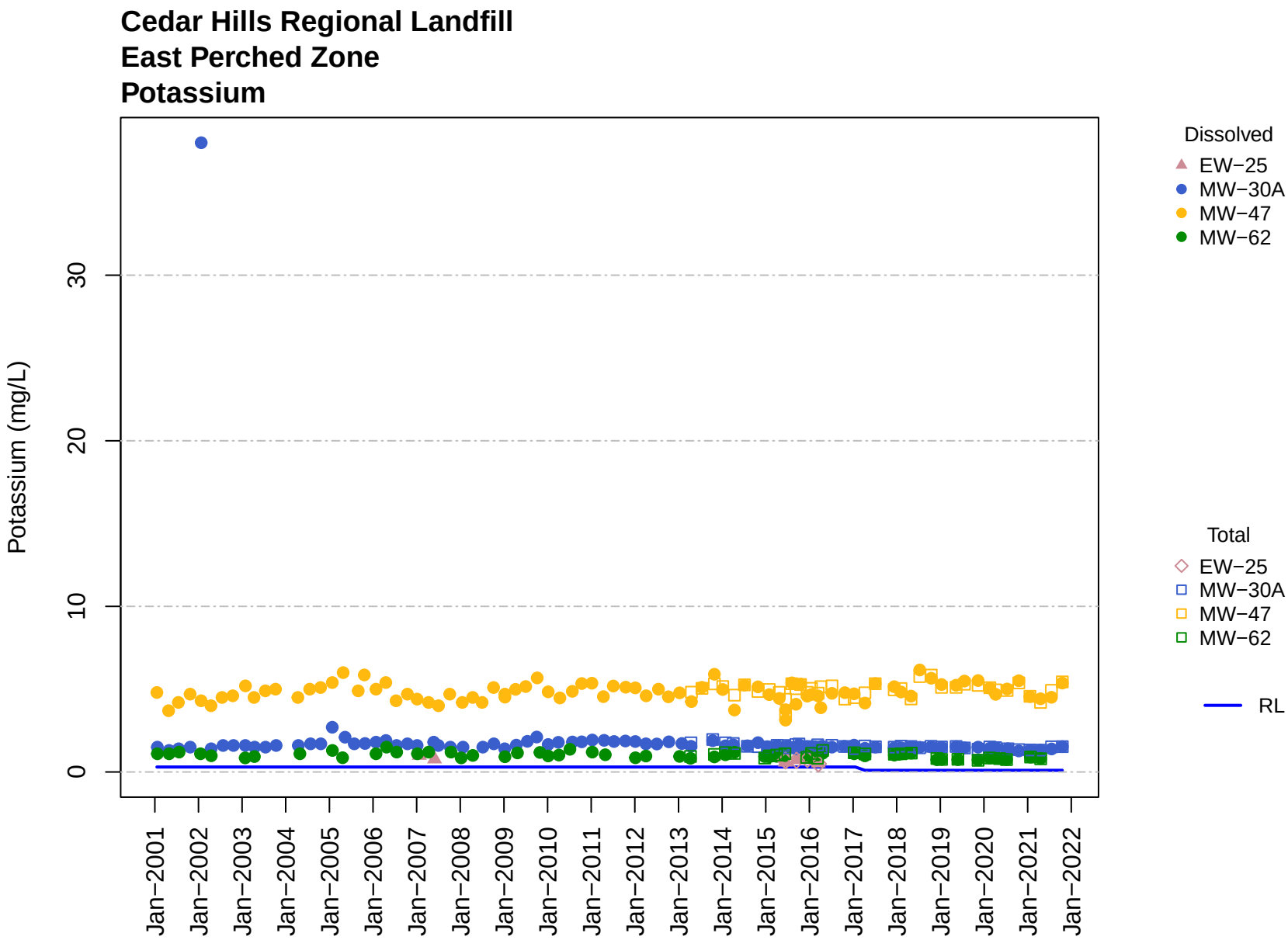


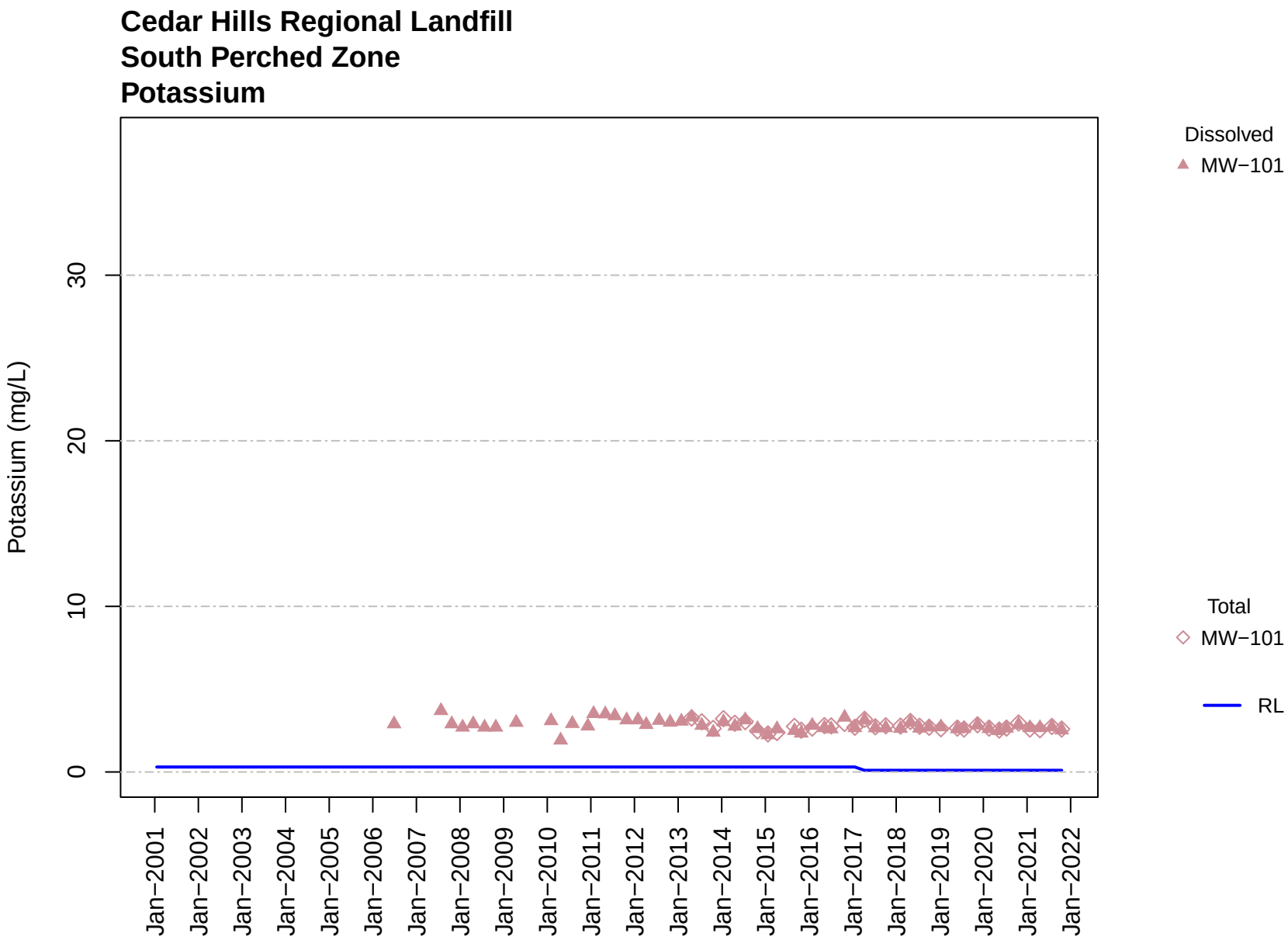

Cedar Hills Regional Landfill
East Perched Zone
Magnesium
Magnesium (mg/L)
0
20
40
60
80
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL

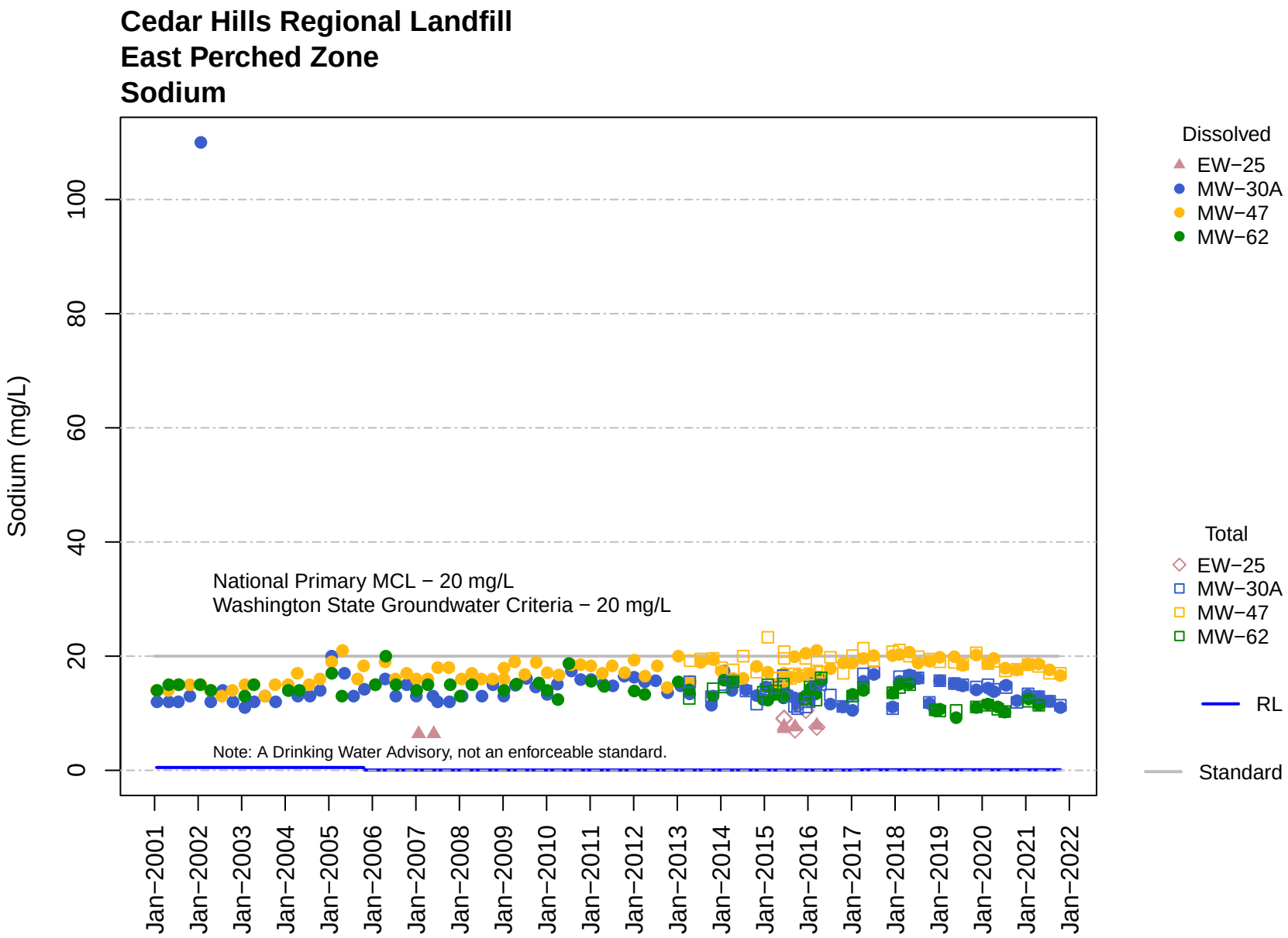

Cedar Hills Regional Landfill
South Perched Zone
Magnesium
Magnesium (mg/L)
0
20
40
60
80
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−101
Total
MW−101
RL

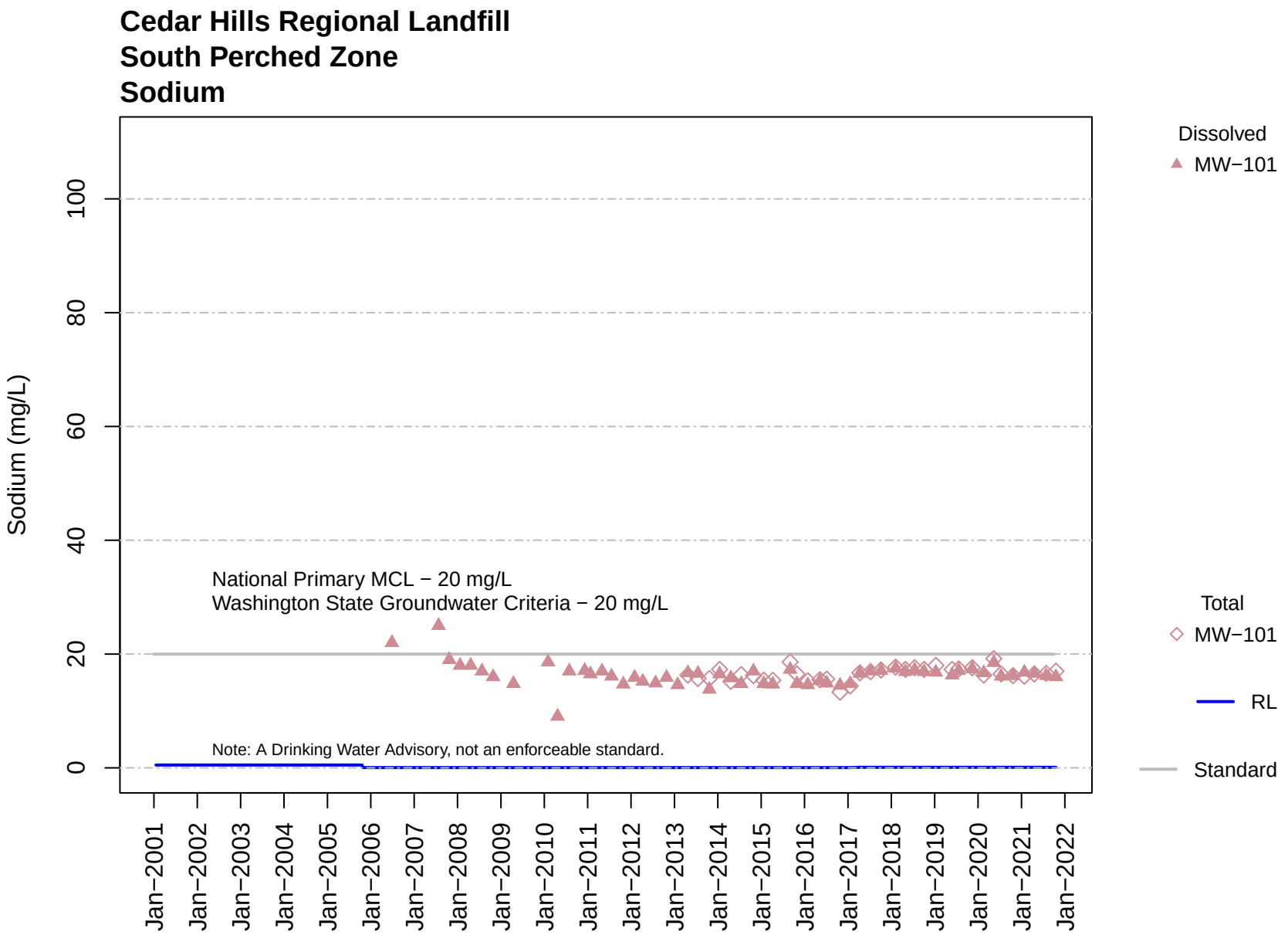

Cedar Hills Regional Landfill
East Perched Zone
Manganese
Manganese (mg/L)
0
1
2
3
4
5
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL
Standard

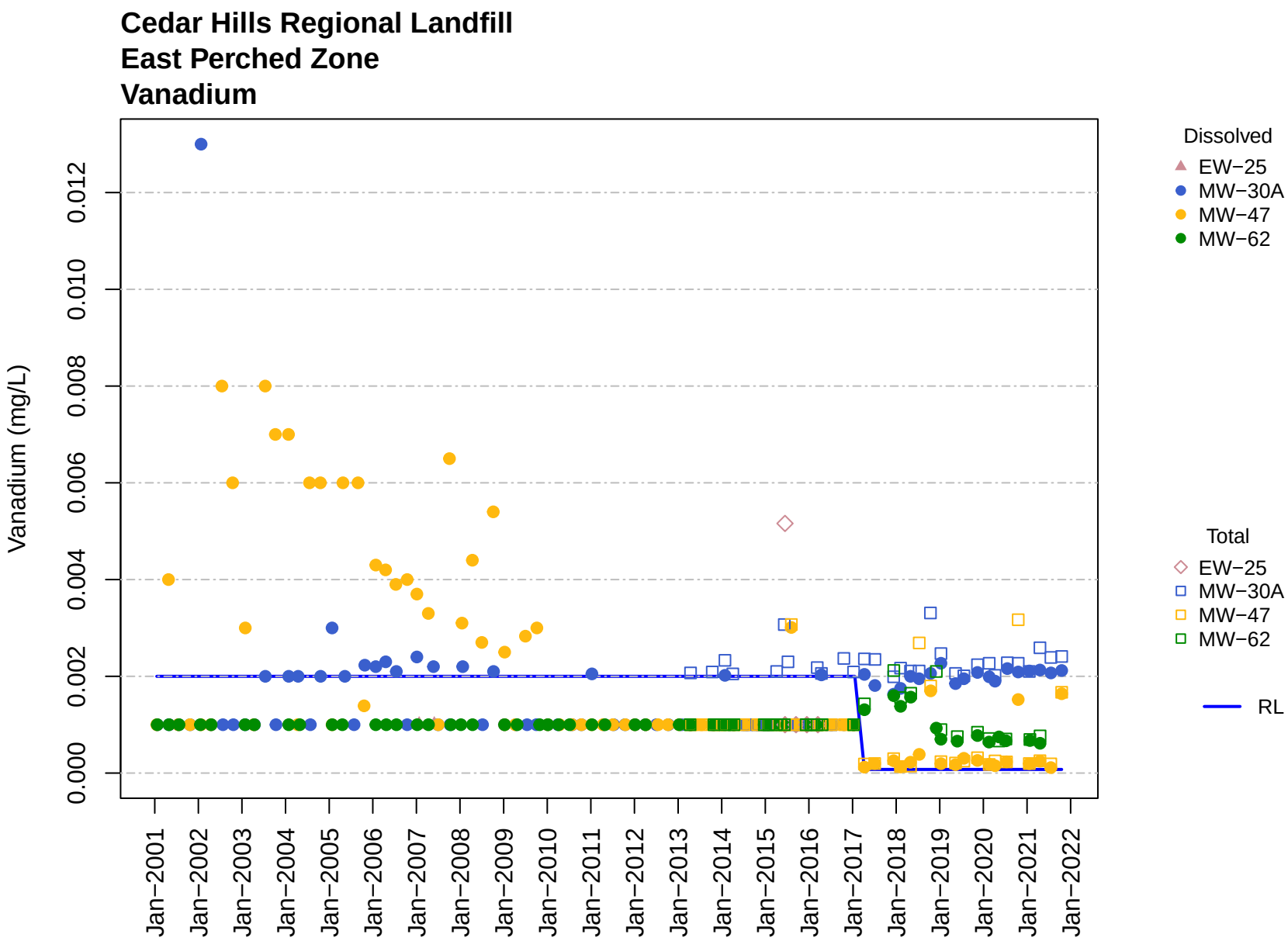

Cedar Hills Regional Landfill
South Perched Zone
Manganese
Manganese (mg/L)
0
1
2
3
4
5
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Dissolved
MW−101
Total
MW−101
RL
Standard

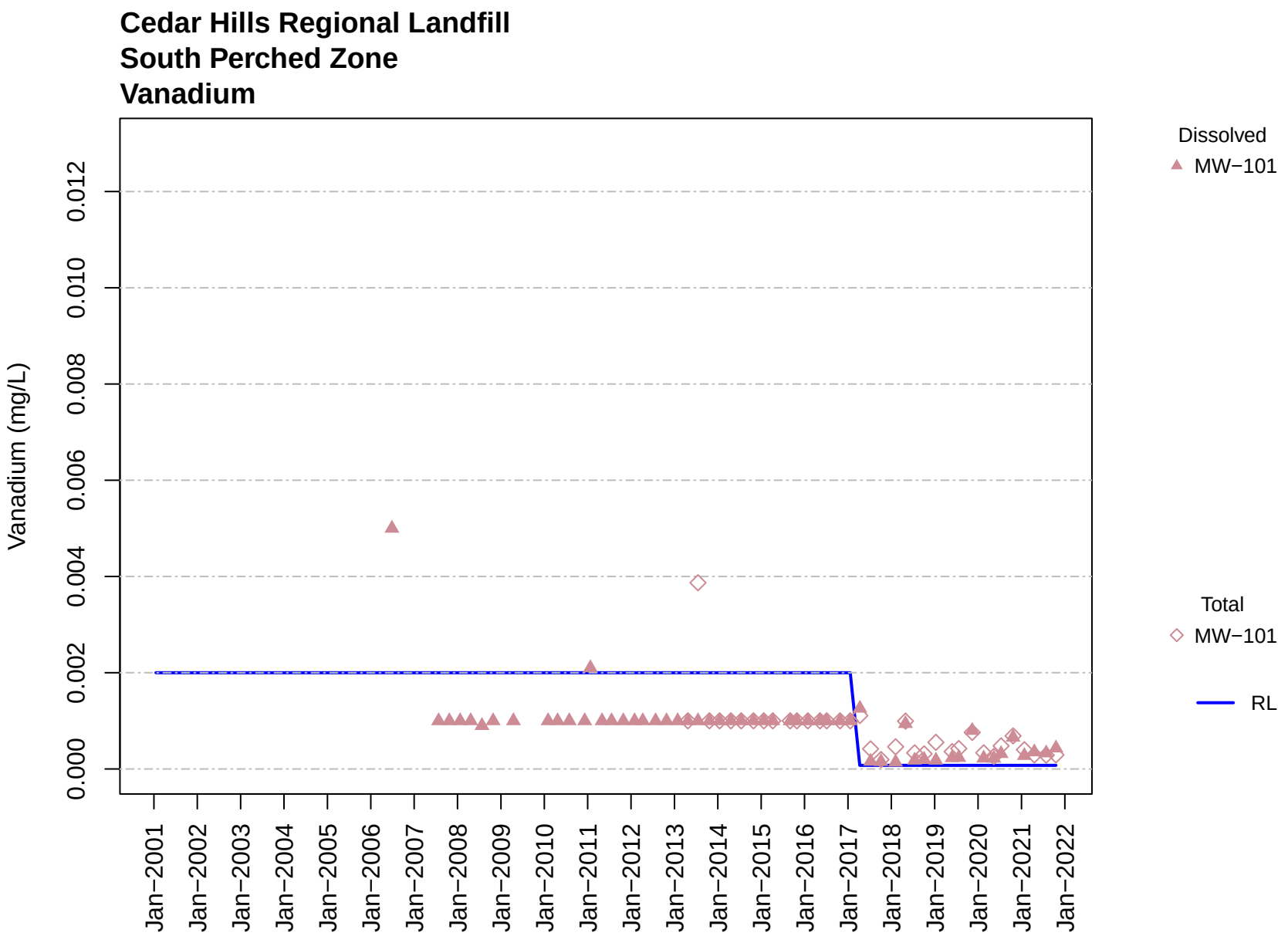

Cedar Hills Regional Landfill
East Perched Zone
Potassium
Potassium (mg/L)
0
10
20
30
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL


Cedar Hills Regional Landfill
South Perched Zone
Potassium
Potassium (mg/L)
0
10
20
30
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−101
Total
MW−101
RL

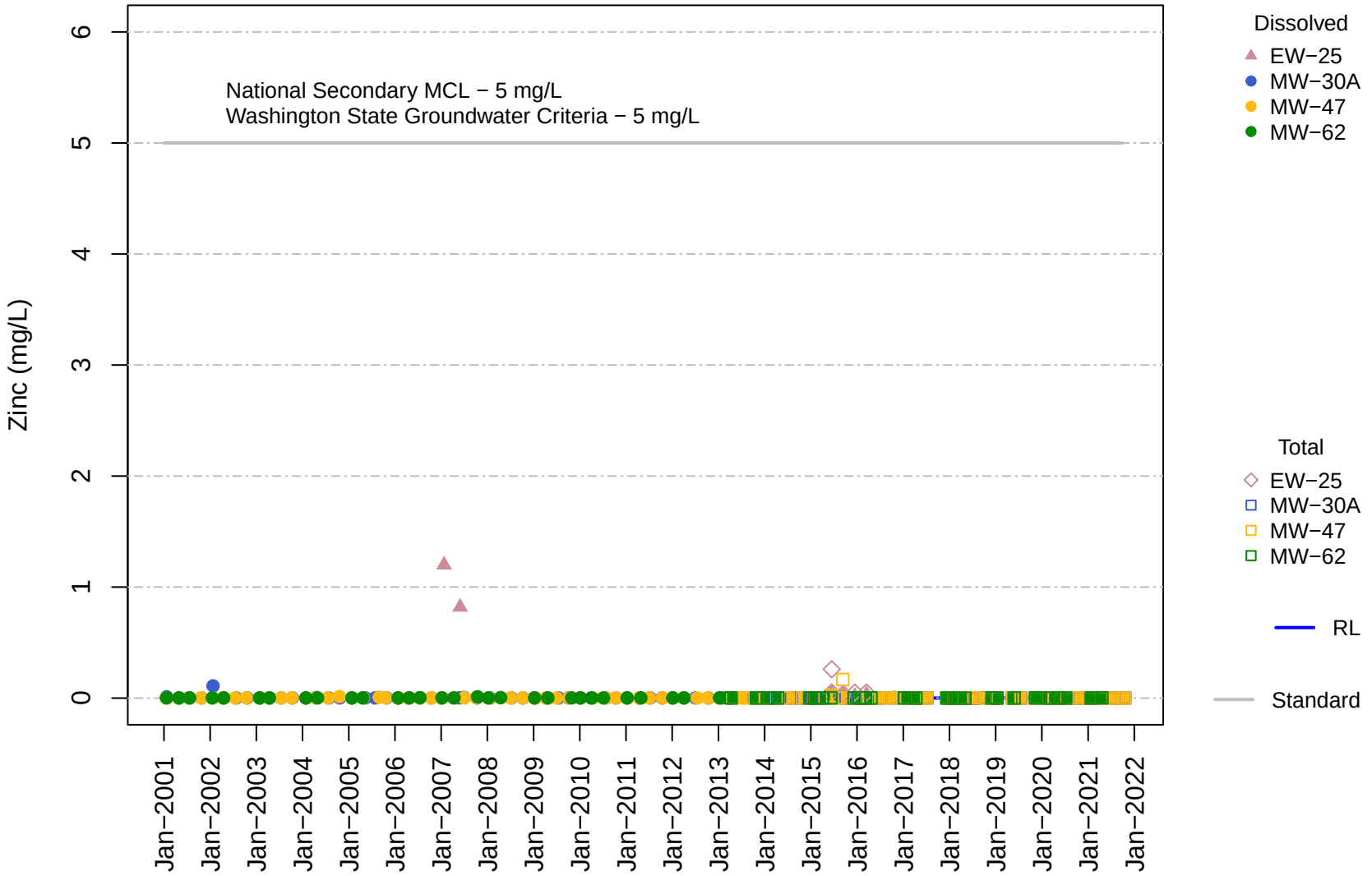

Cedar Hills Regional Landfill
East Perched Zone
Sodium
Sodium (mg/L)
0
20
40
60
80
100
National Primary MCL − 20 mg/L
Washington State Groundwater Criteria − 20 mg/L
Note: A Drinking Water Advisory, not an enforceable standard.
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL
Standard

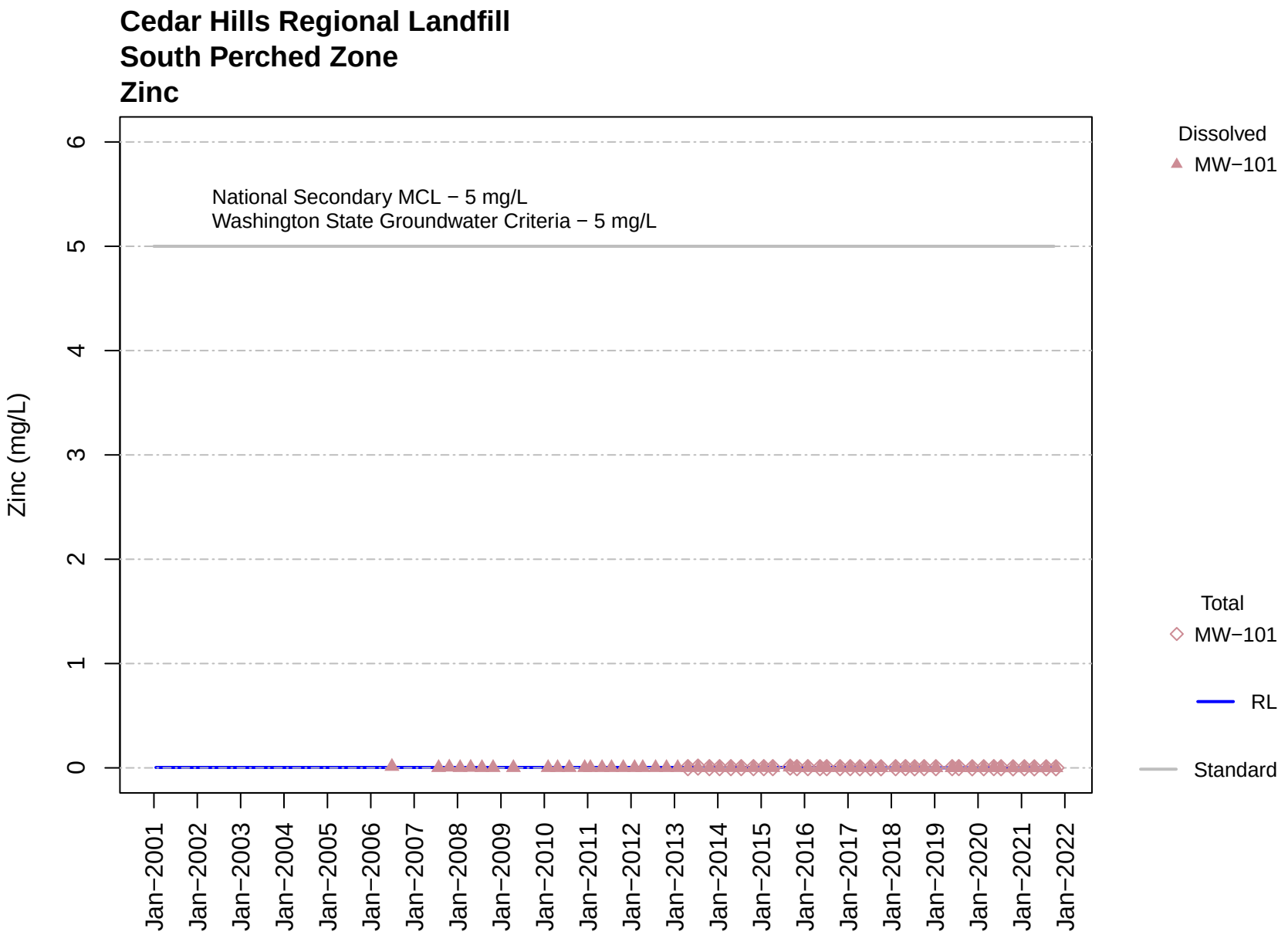

Cedar Hills Regional Landfill
South Perched Zone
Sodium
Sodium (mg/L)
0
20
40
60
80
100
National Primary MCL − 20 mg/L
Washington State Groundwater Criteria − 20 mg/L
Note: A Drinking Water Advisory, not an enforceable standard.
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−101
Total
MW−101
RL
Standard

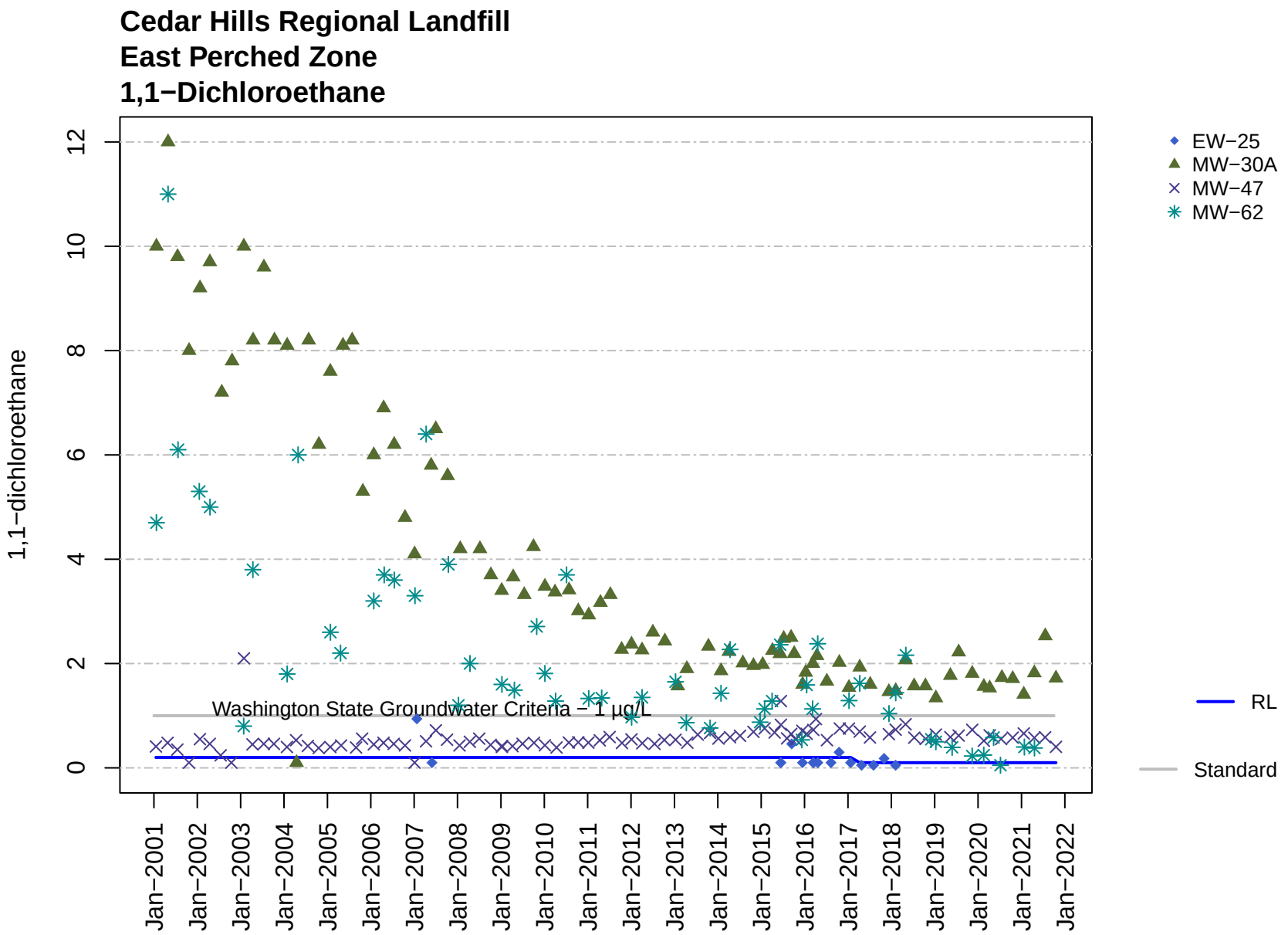

Cedar Hills Regional Landfill
East Perched Zone
Vanadium
Vanadium (mg/L)
0.000
0.002
0.004
0.006
0.008
0.010
0.012
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL

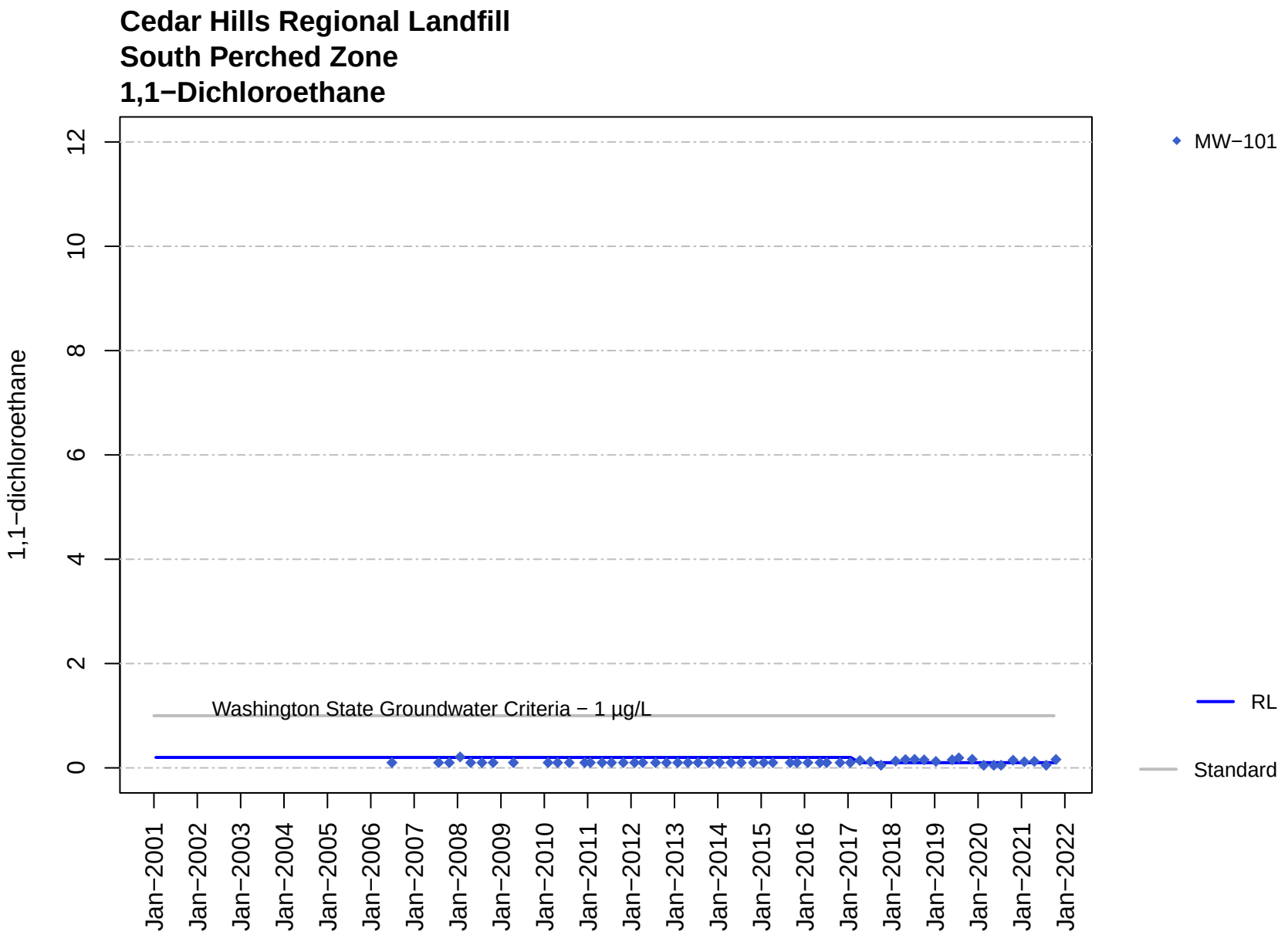

Cedar Hills Regional Landfill
South Perched Zone
Vanadium
Vanadium (mg/L)
0.000
0.002
0.004
0.006
0.008
0.010
0.012
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−101
Total
MW−101
RL

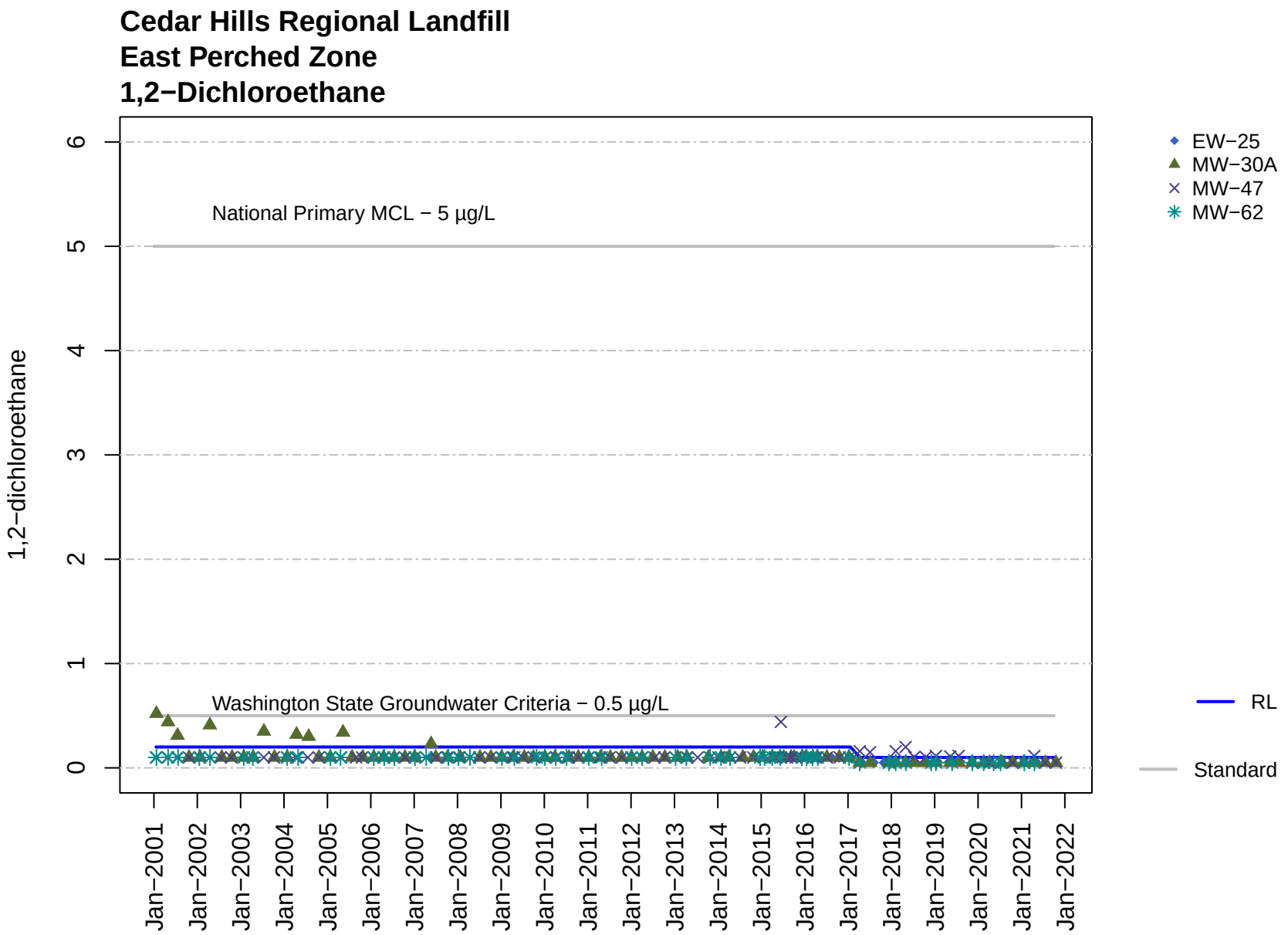
Cedar Hills Regional Landfill
East Perched Zone
Zinc

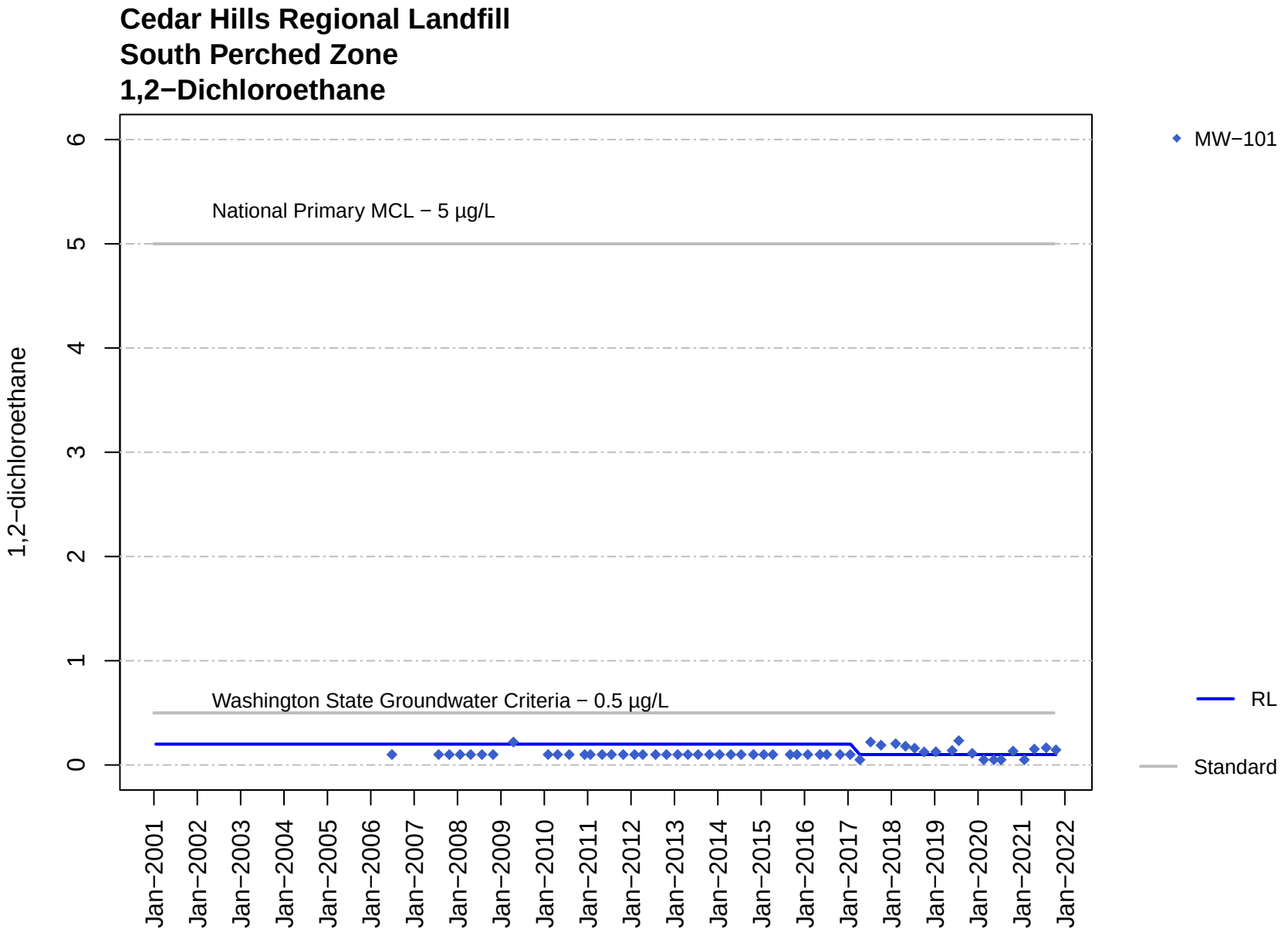


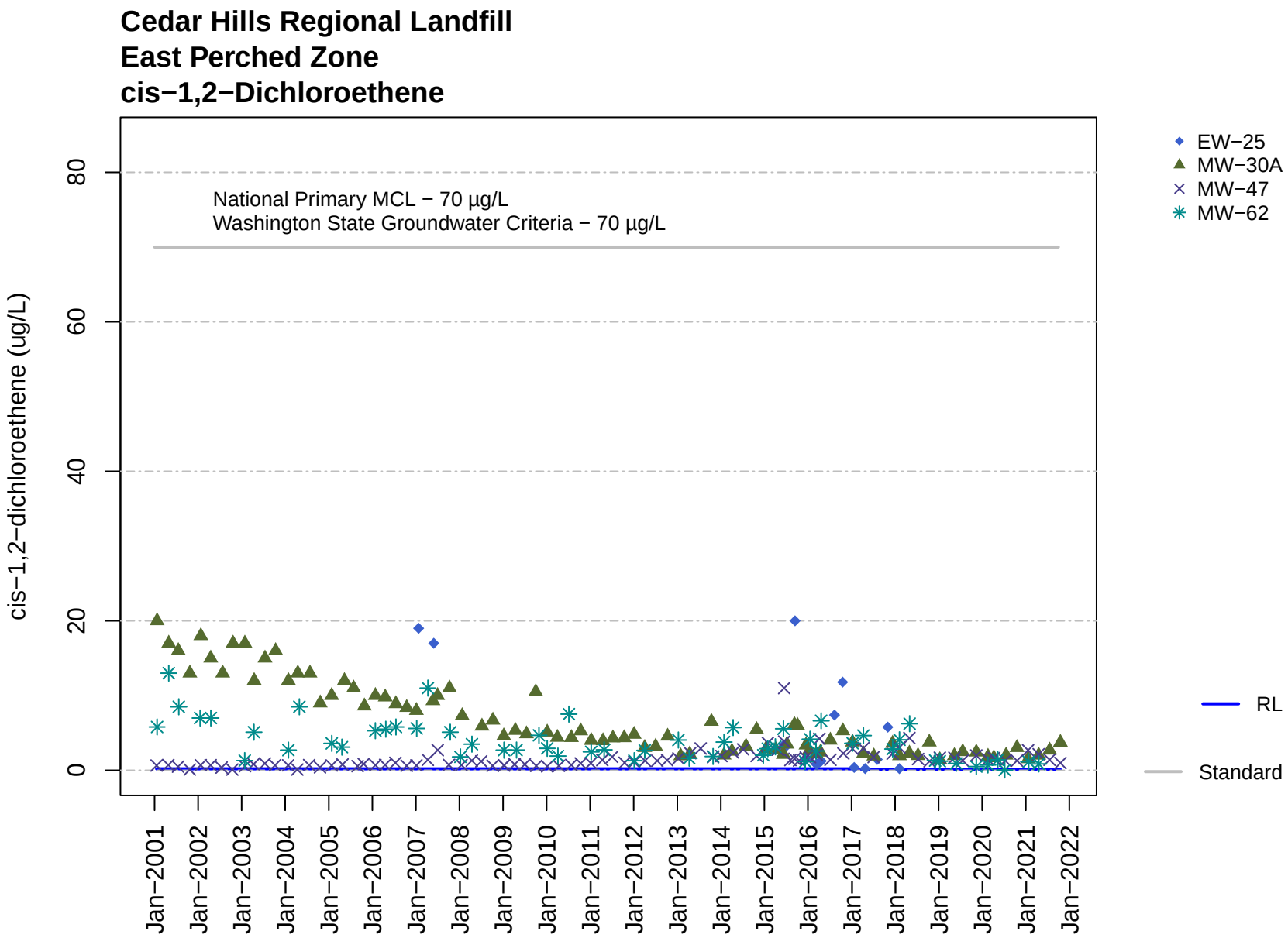

Cedar Hills Regional Landfill
South Perched Zone
Zinc
Zinc (mg/L)
0
1
2
3
4
5
6
National Secondary MCL − 5 mg/L
Washington State Groundwater Criteria − 5 mg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Dissolved
MW−101
Total
MW−101
RL
Standard

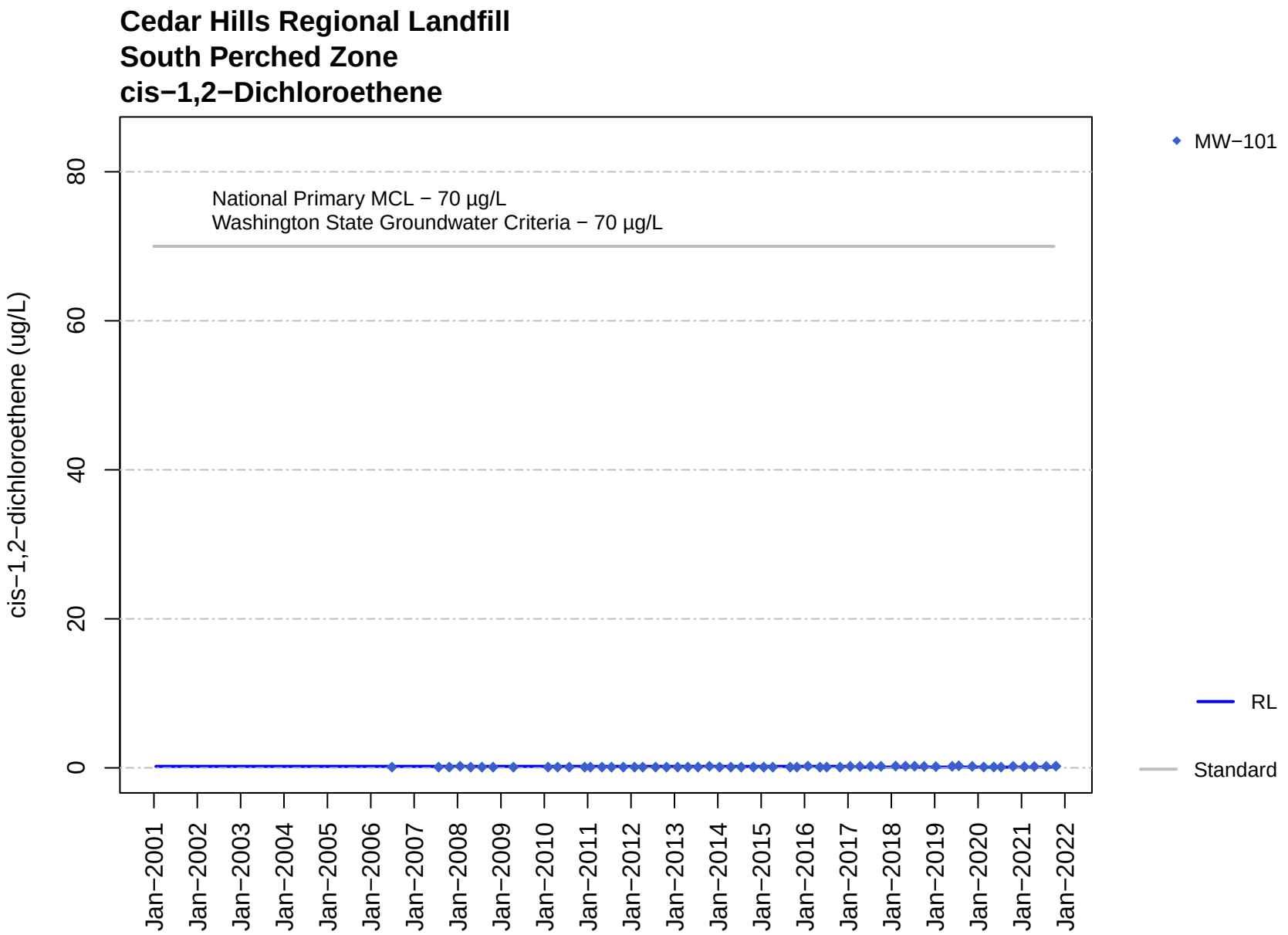

Cedar Hills Regional Landfill
East Perched Zone
1,1−Dichloroethane
1,1−dichloroethane
0
2
4
6
8
10
12
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Washington State Groundwater Criteria − 1 µg/L
EW−25
MW−30A
MW−47
MW−62
RL
Standard

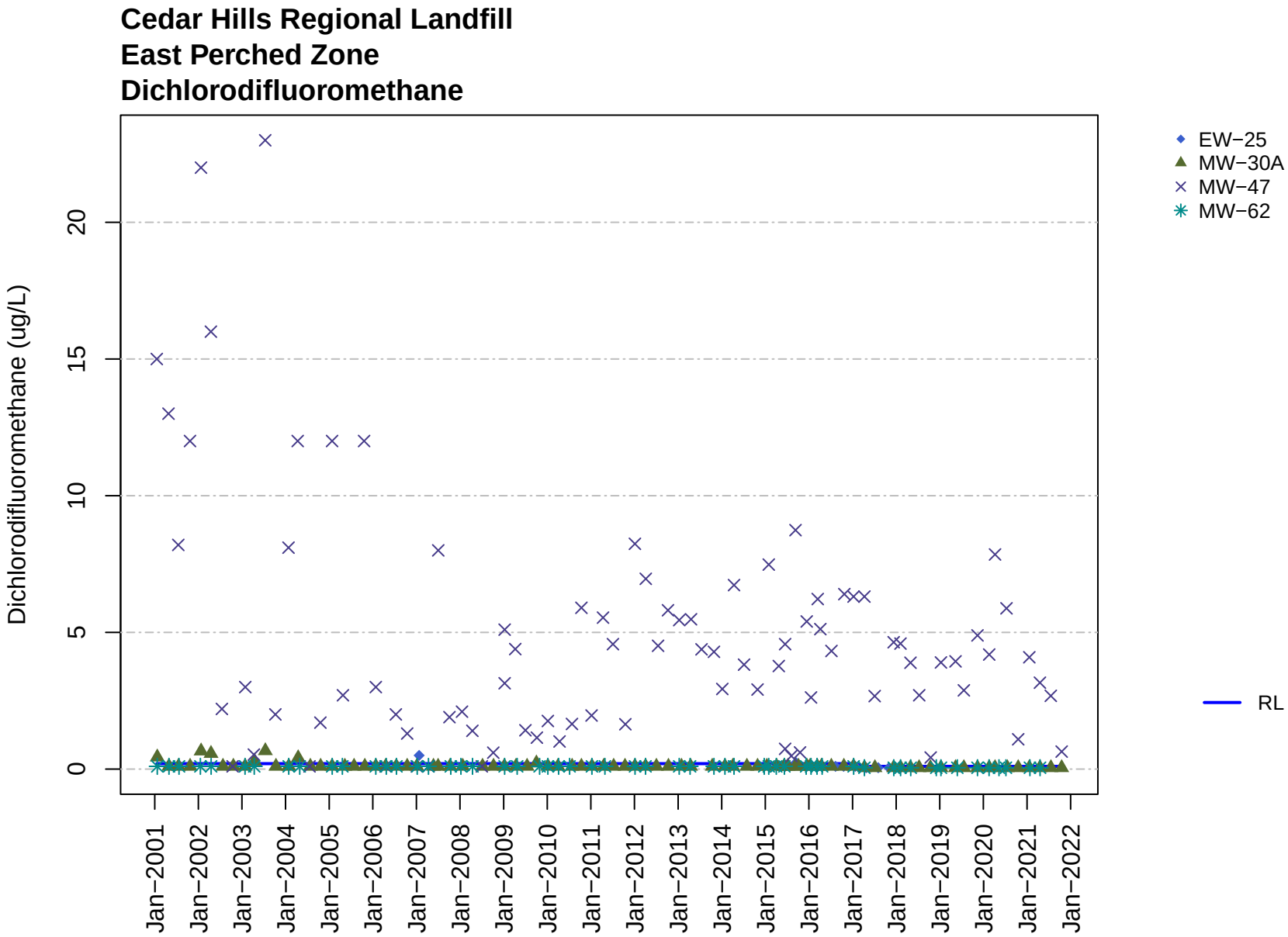

Cedar Hills Regional Landfill
South Perched Zone
1,1−Dichloroethane
1,1−dichloroethane
0
2
4
6
8
10
12
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
Washington State Groundwater Criteria − 1 µg/L
MW−101
RL
Standard

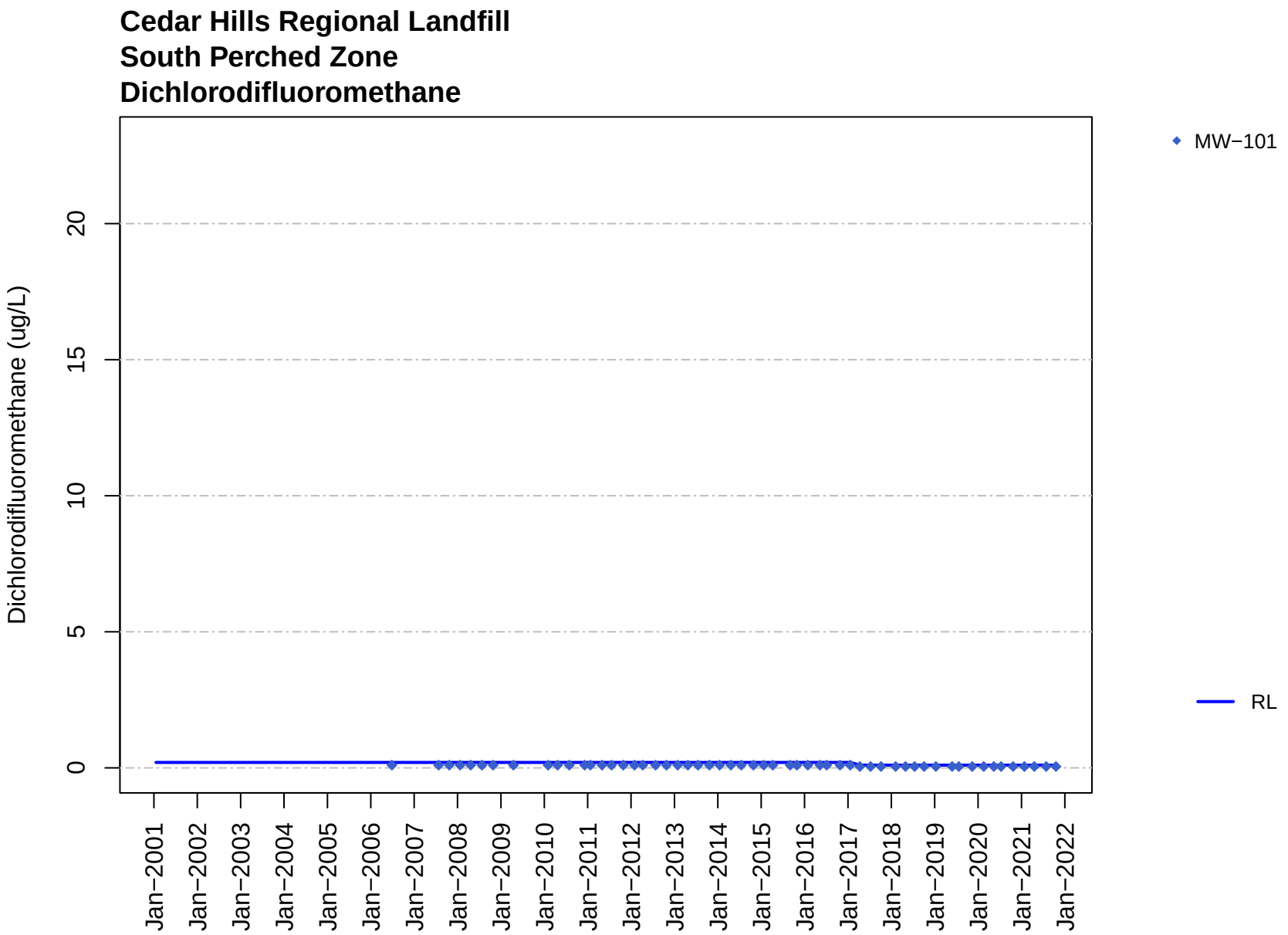

Cedar Hills Regional Landfill
East Perched Zone
1,2−Dichloroethane
1,2−dichloroethane
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.5 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL
Standard

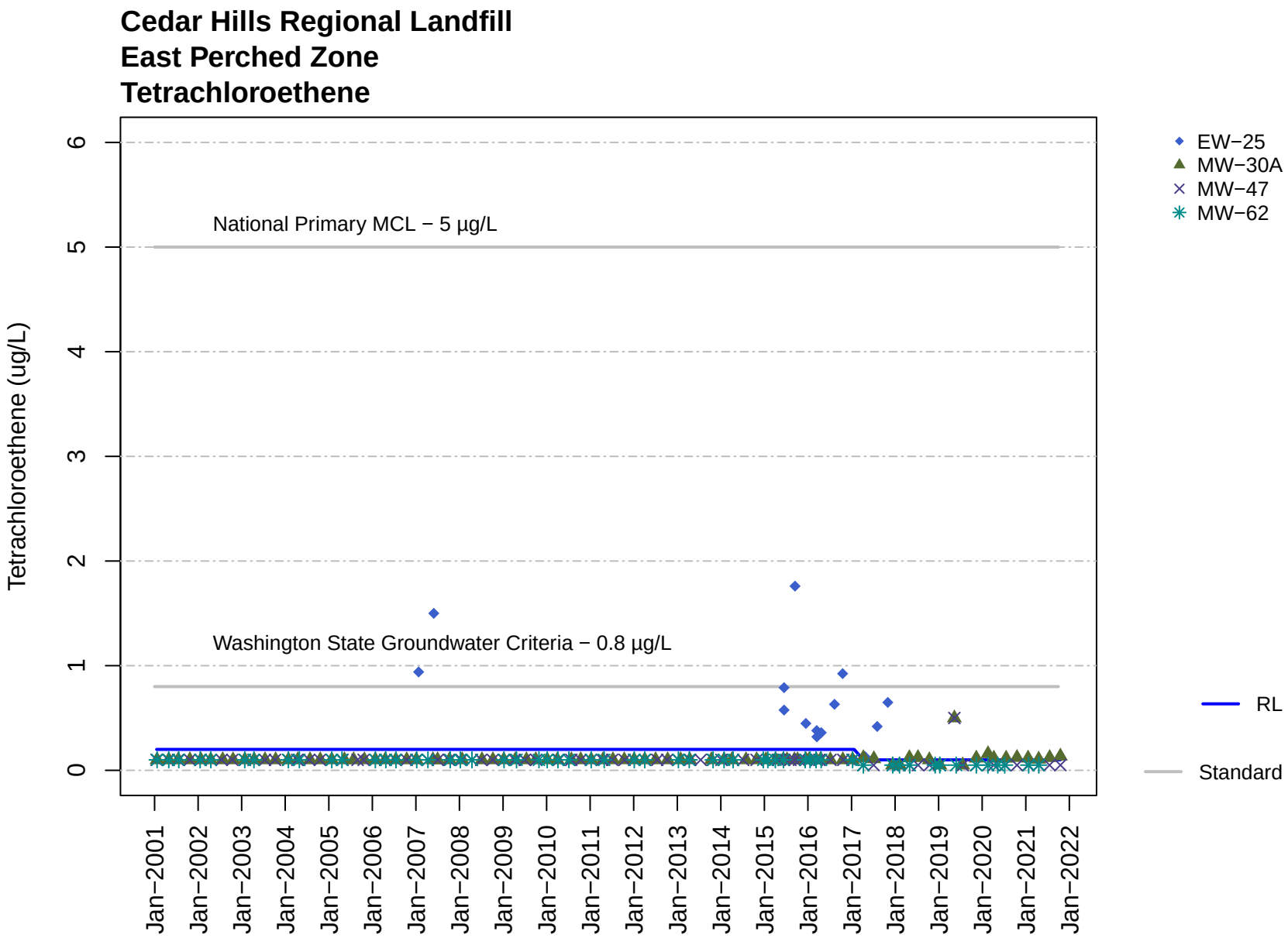

Cedar Hills Regional Landfill
South Perched Zone
1,2−Dichloroethane
1,2−dichloroethane
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.5 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL
Standard

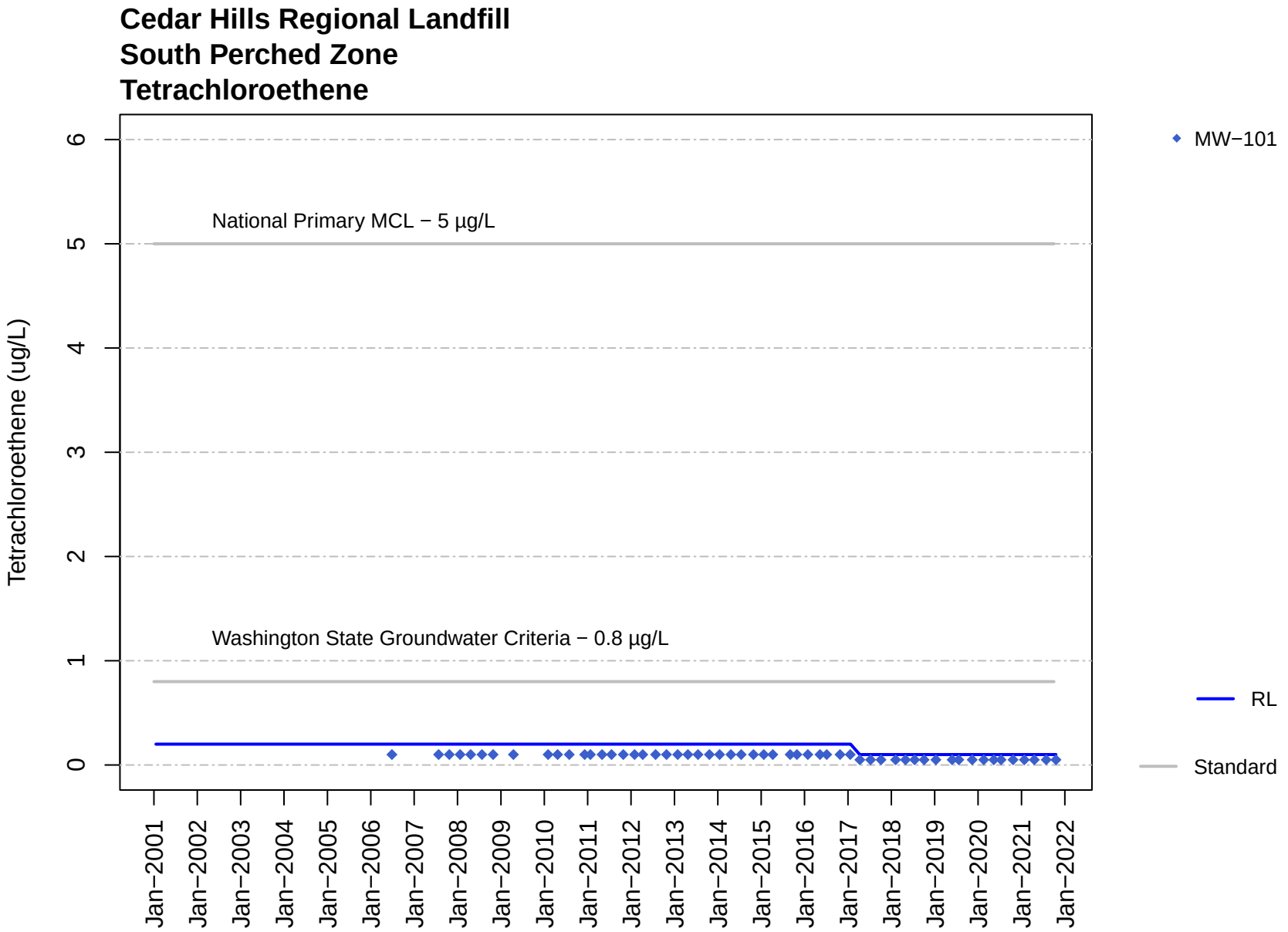

Cedar Hills Regional Landfill
East Perched Zone
cis−1,2−Dichloroethene
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL
Standard

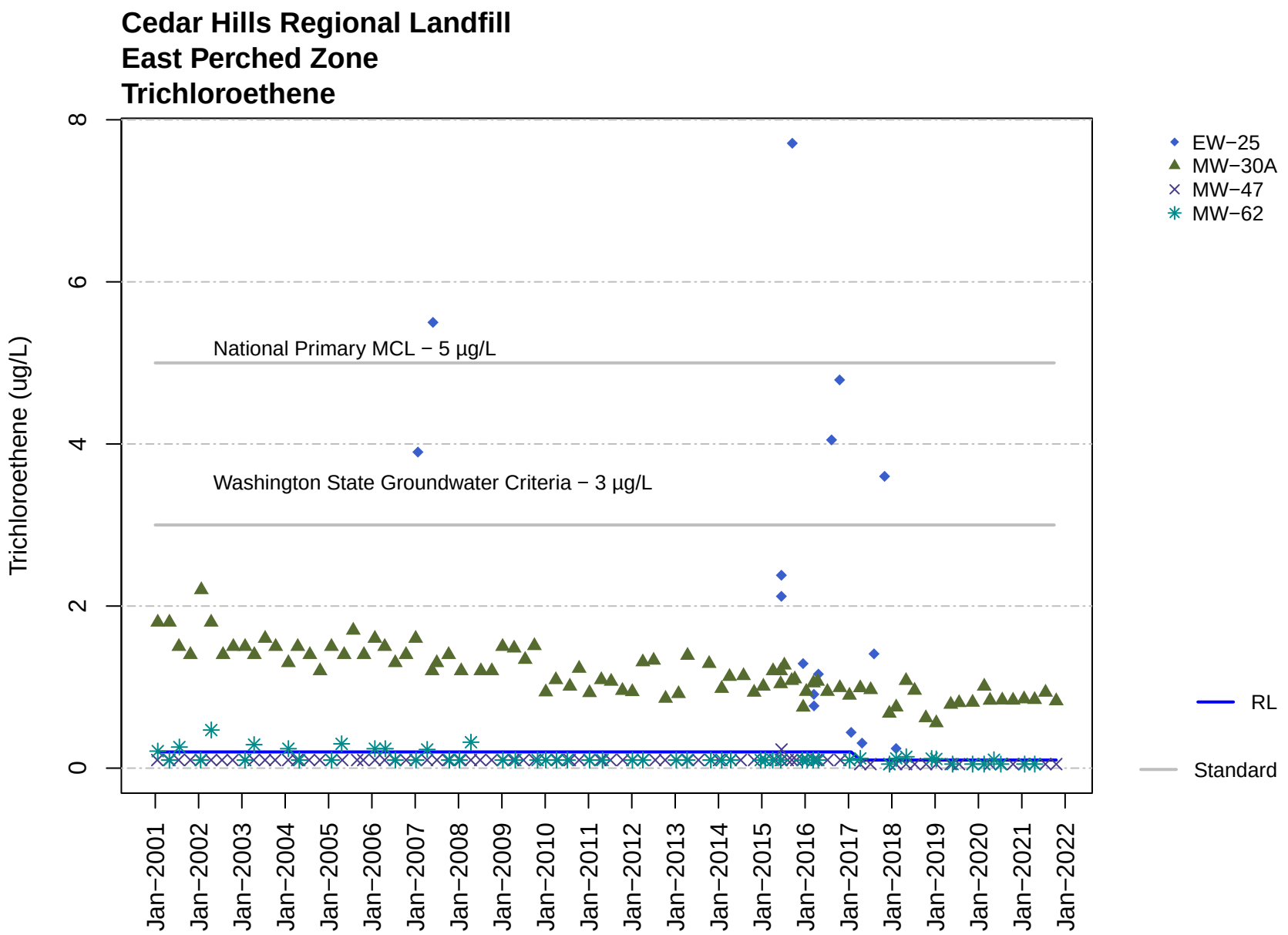

Cedar Hills Regional Landfill
South Perched Zone
cis−1,2−Dichloroethene
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL
Standard

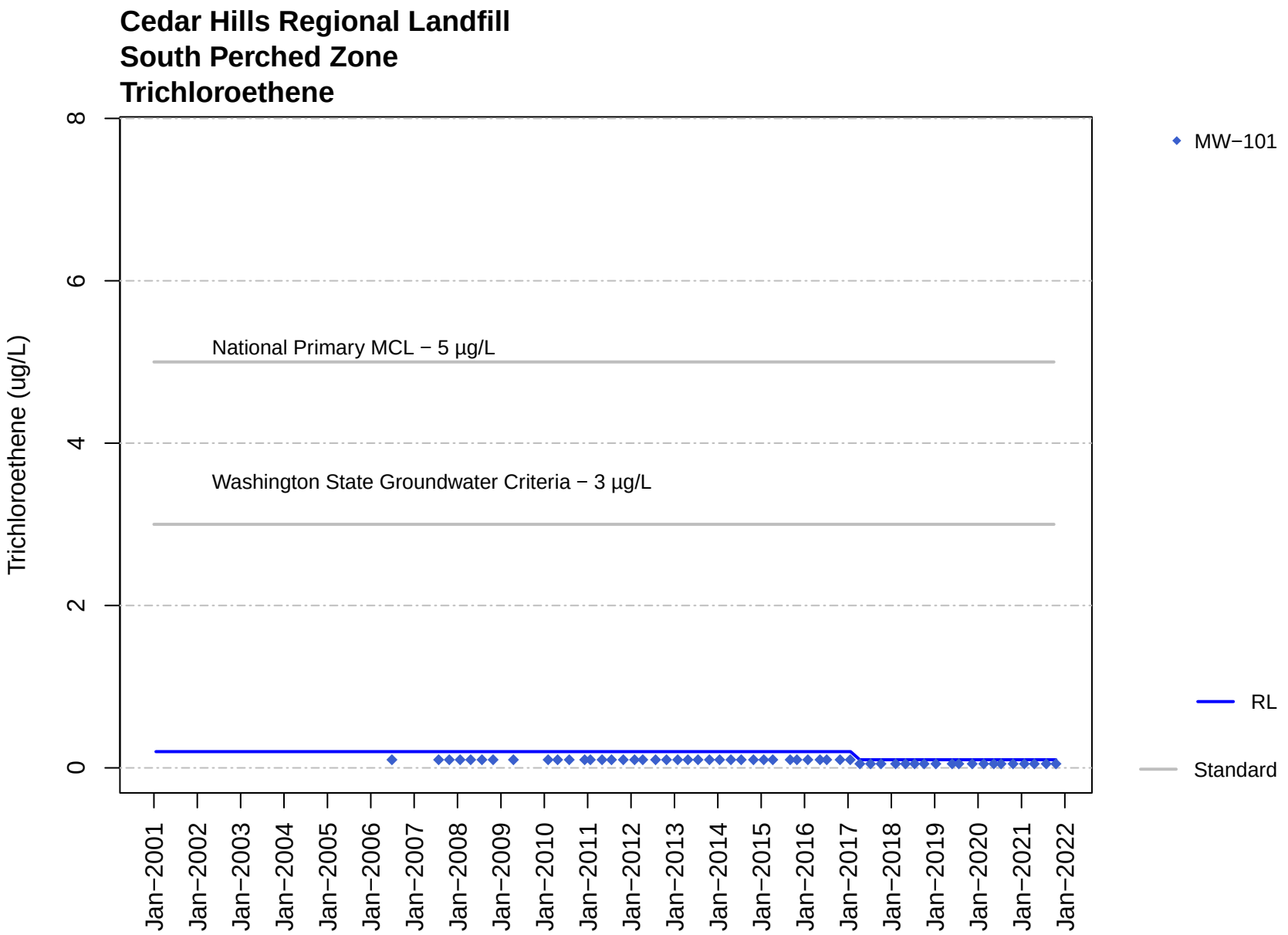

Cedar Hills Regional Landfill
East Perched Zone
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0
5
10
15
20
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL

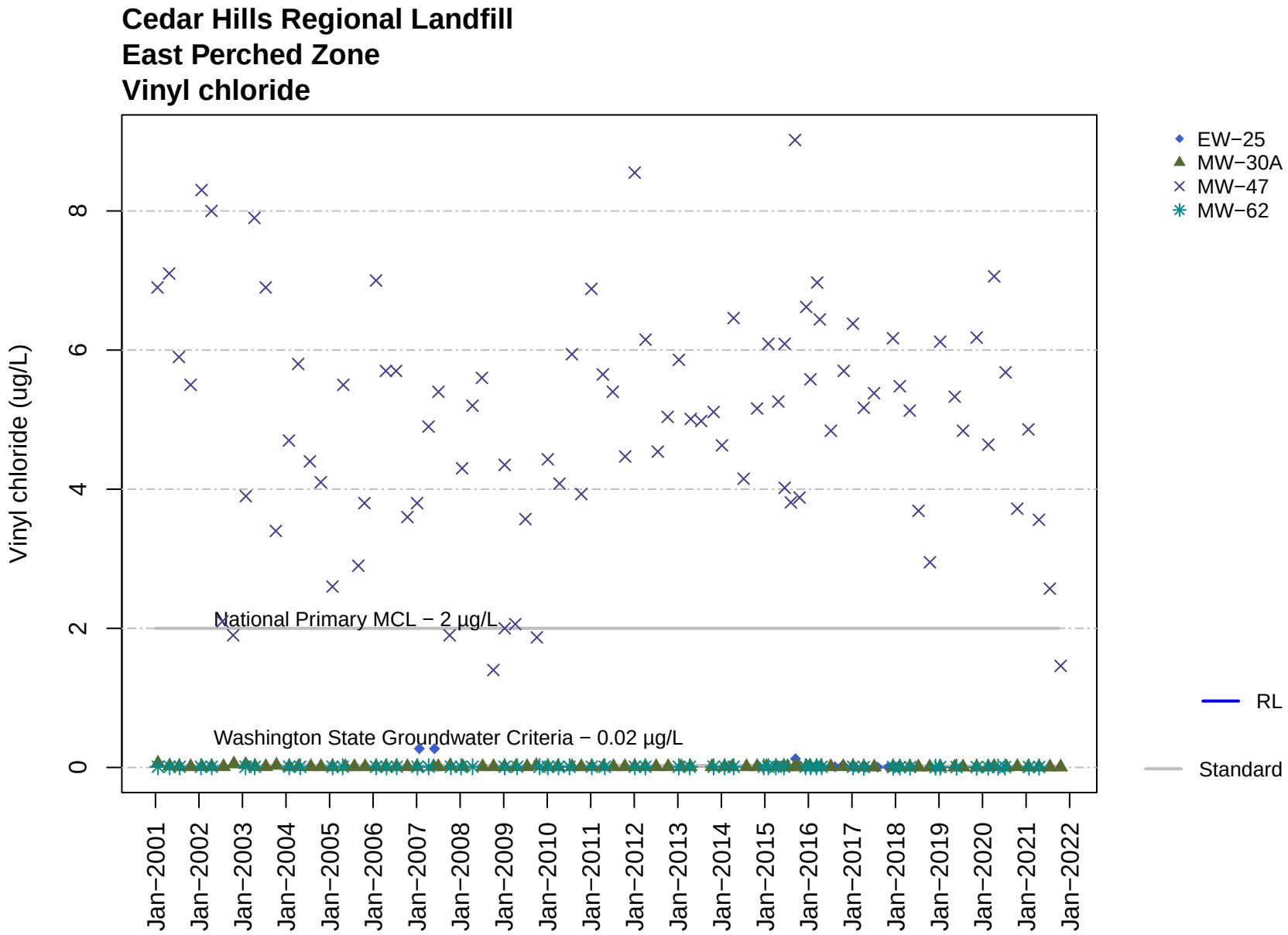

Cedar Hills Regional Landfill
South Perched Zone
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0
5
10
15
20
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL

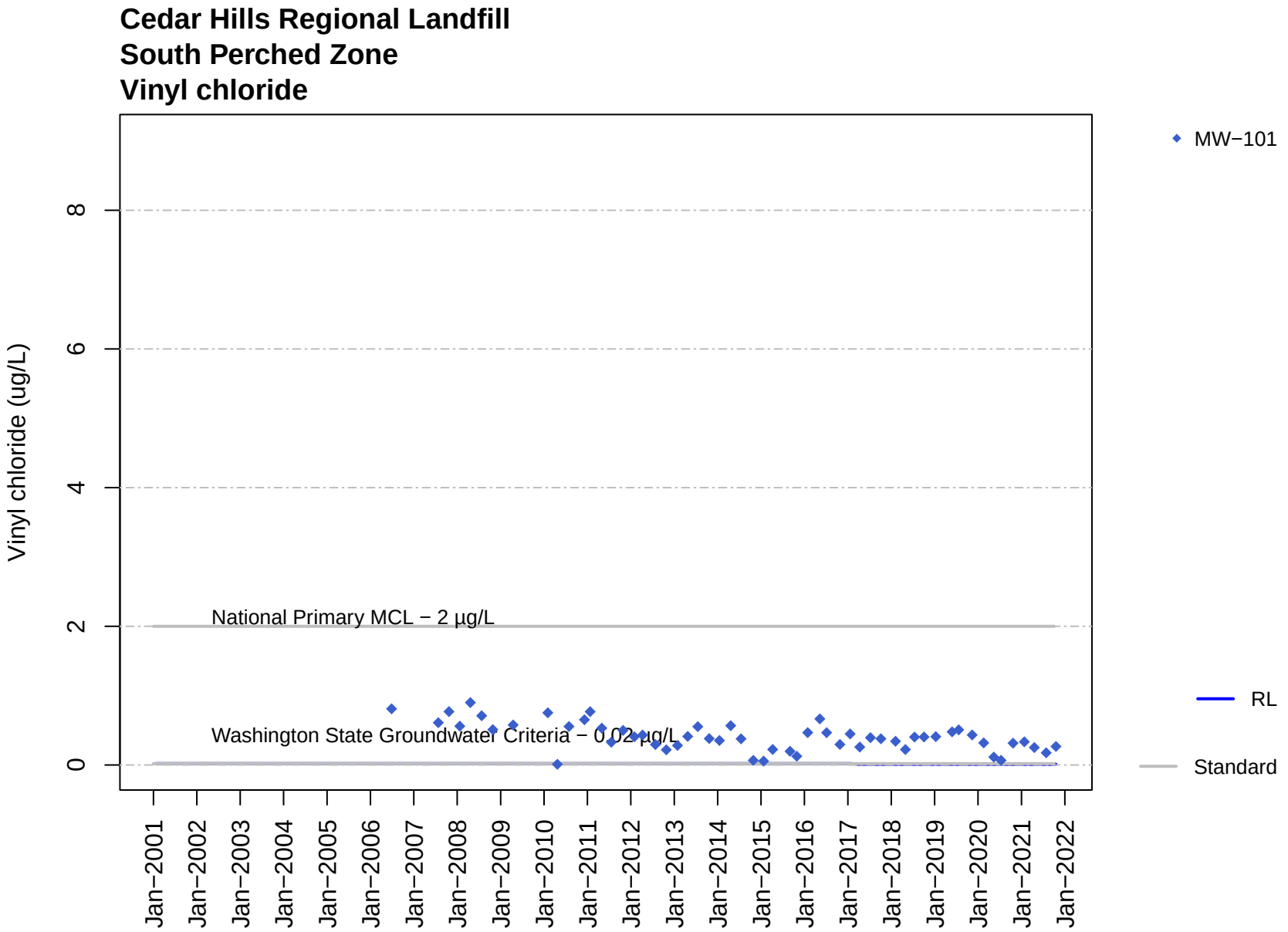

Cedar Hills Regional Landfill
East Perched Zone
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL
Standard

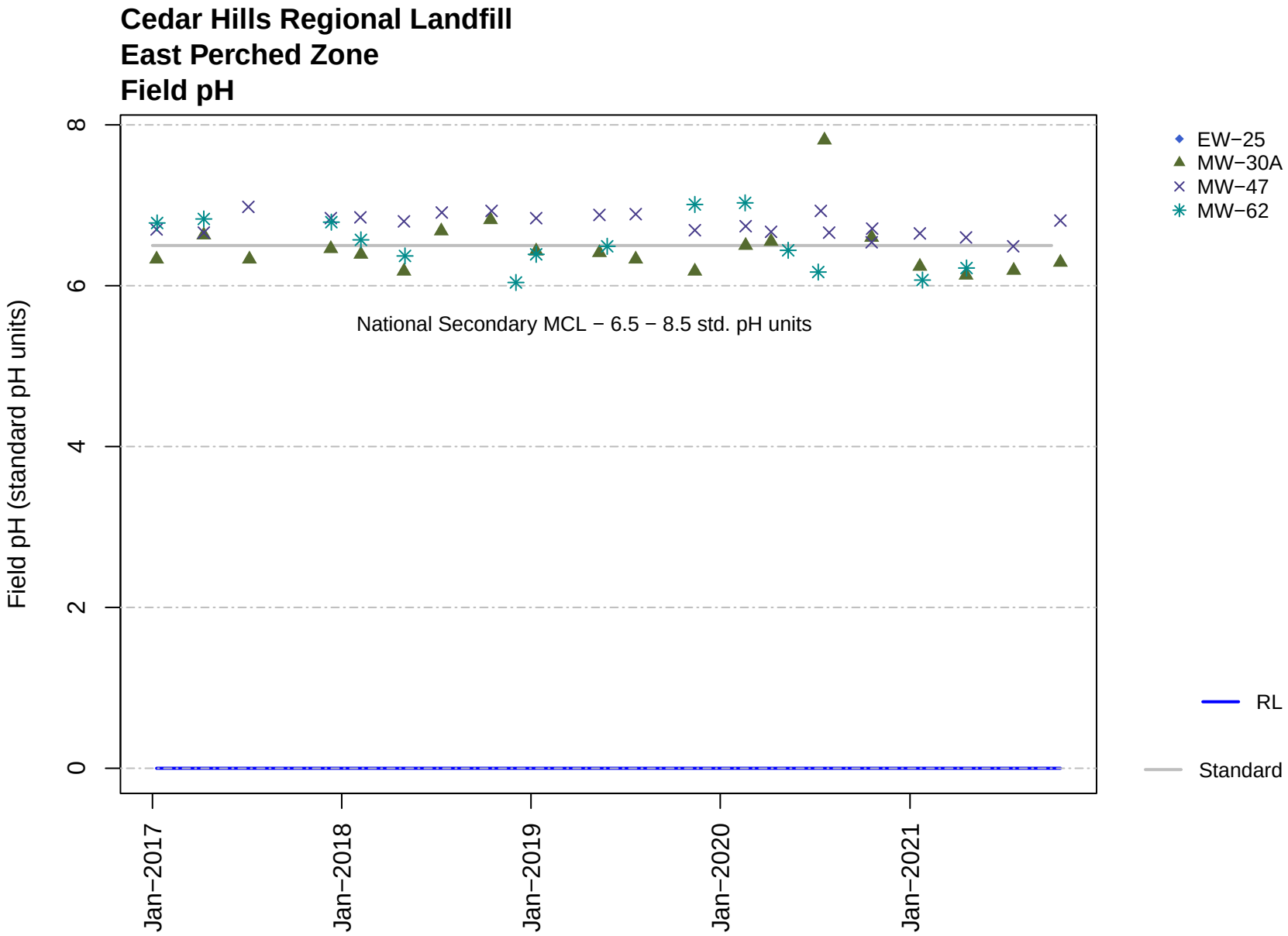

Cedar Hills Regional Landfill
South Perched Zone
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL
Standard

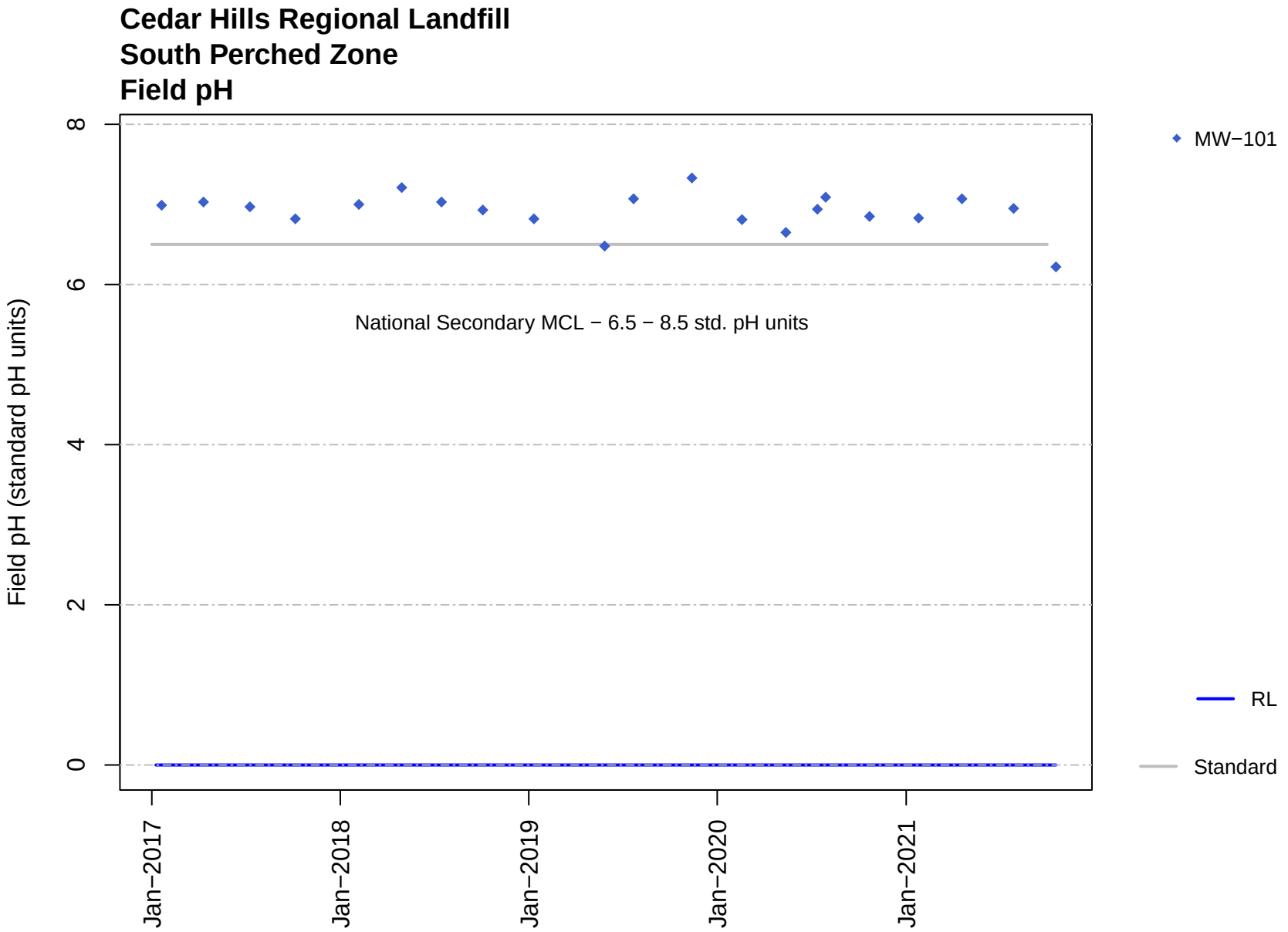

Cedar Hills Regional Landfill
East Perched Zone
Trichloroethene
Trichloroethene (ug/L)
0
2
4
6
8
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 3 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL
Standard

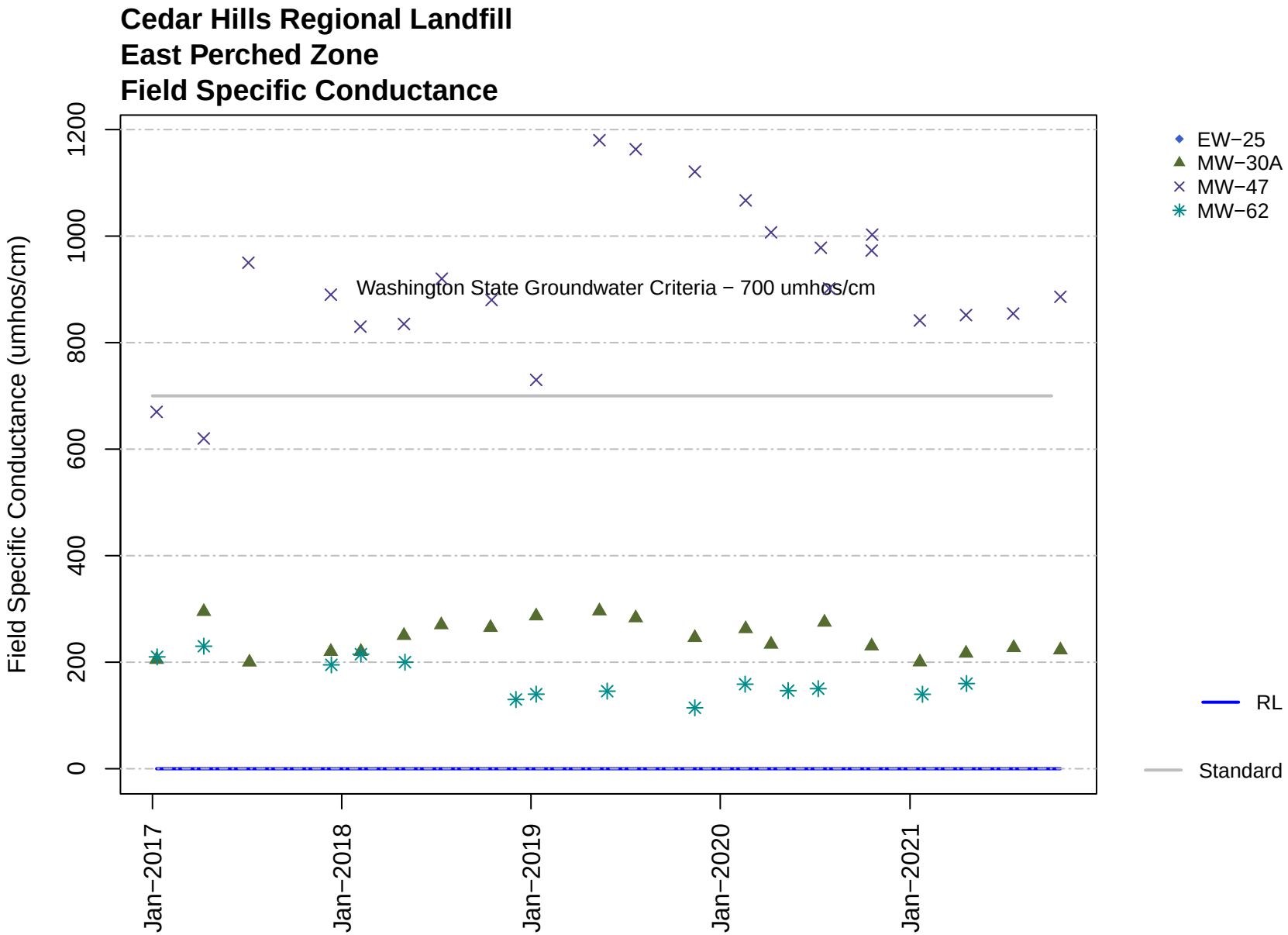

Cedar Hills Regional Landfill
South Perched Zone
Trichloroethene
Trichloroethene (ug/L)
0
2
4
6
8
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 3 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL
Standard

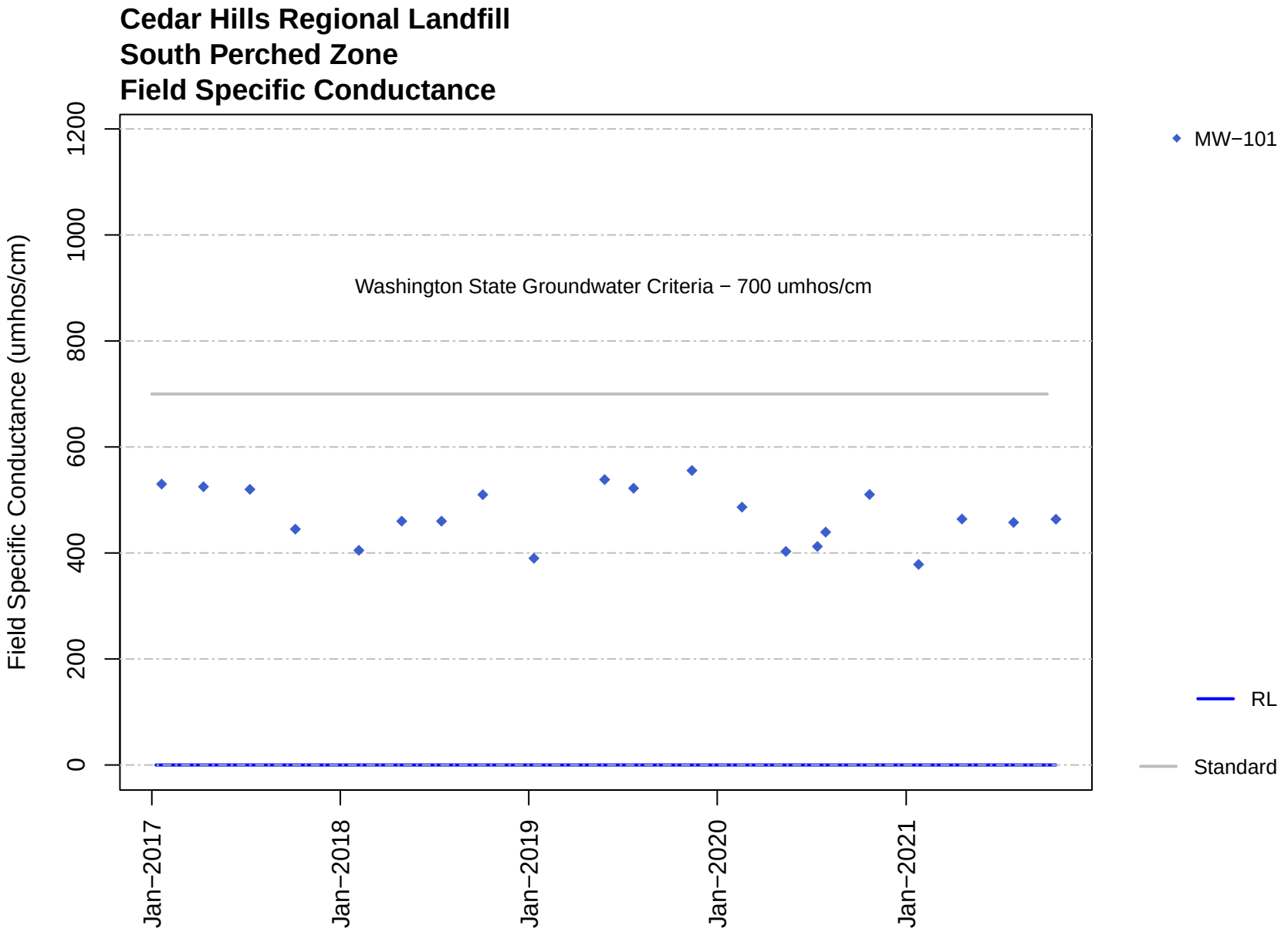

Cedar Hills Regional Landfill
East Perched Zone
Vinyl chloride
Vinyl chloride (ug/L)
0
2
4
6
8
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
EW−25
MW−30A
MW−47
MW−62
RL
Standard

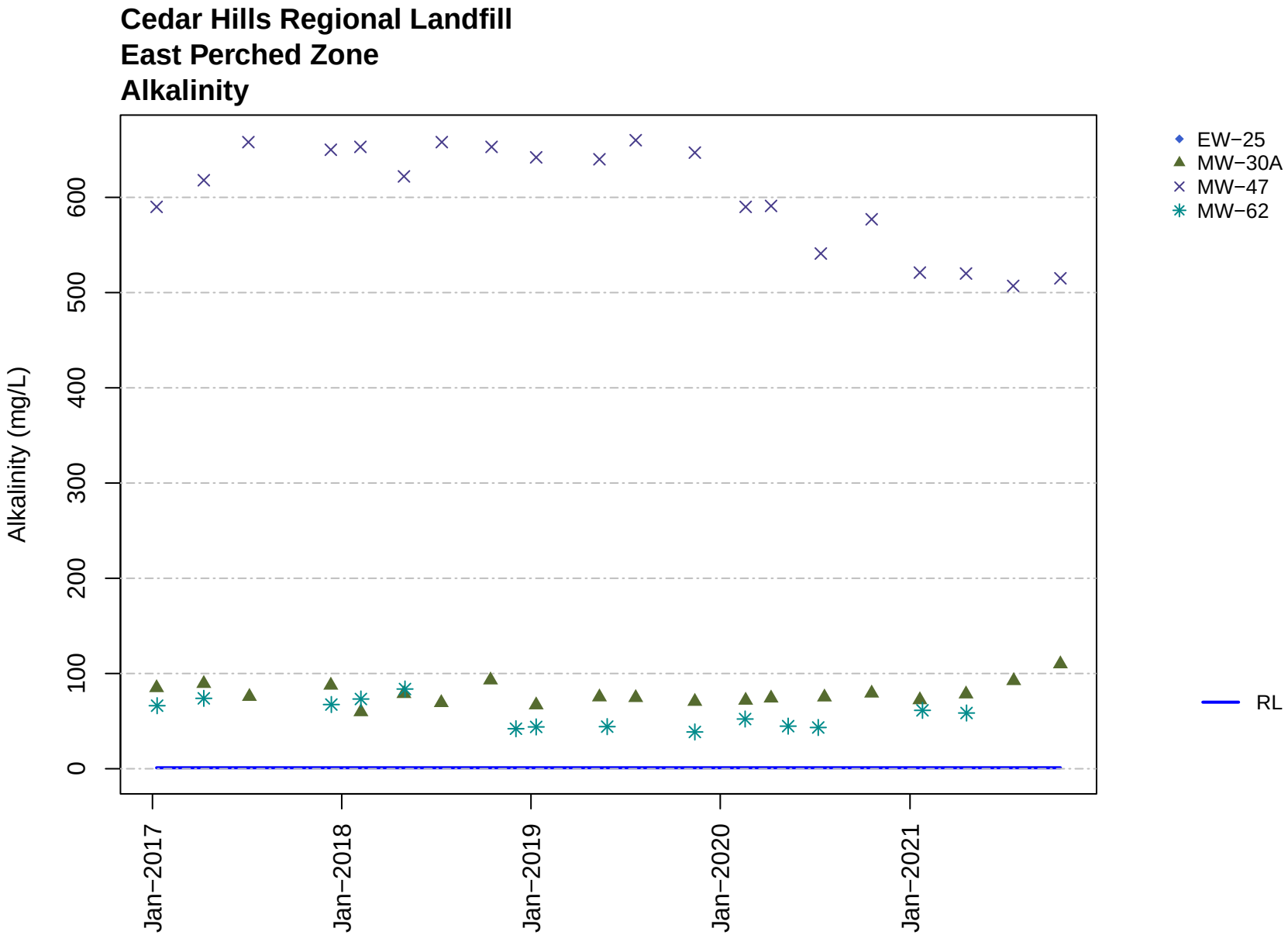

Cedar Hills Regional Landfill
South Perched Zone
Vinyl chloride
Vinyl chloride (ug/L)
0
2
4
6
8
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Jan−2001
Jan−2002
Jan−2003
Jan−2004
Jan−2005
Jan−2006
Jan−2007
Jan−2008
Jan−2009
Jan−2010
Jan−2011
Jan−2012
Jan−2013
Jan−2014
Jan−2015
Jan−2016
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Jan−2022
MW−101
RL
Standard

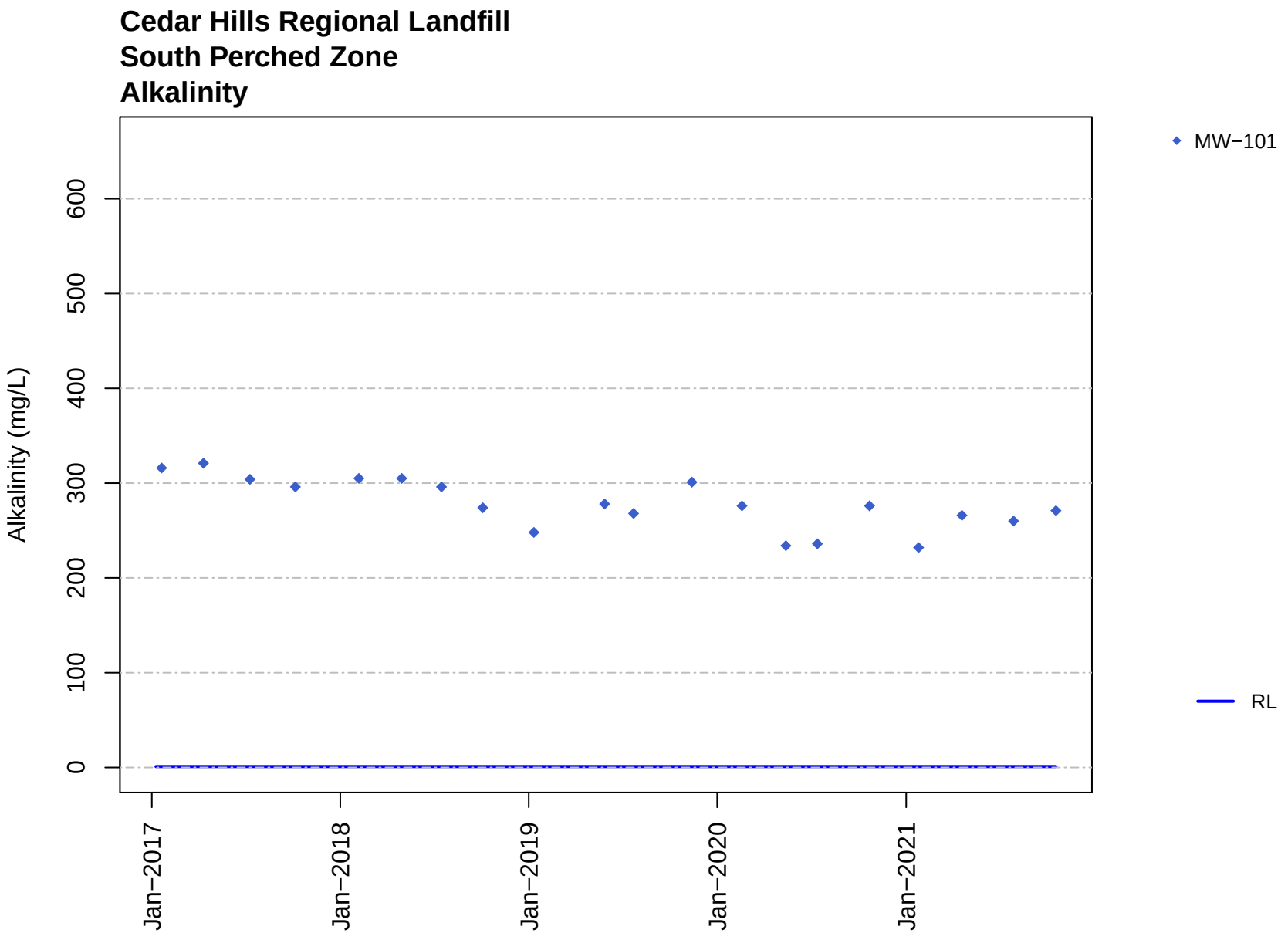

Cedar Hills Regional Landfill
East Perched Zone
Field pH
Field pH (standard pH units)
0
2
4
6
8
National Secondary MCL − 6.5 − 8.5 std. pH units
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard

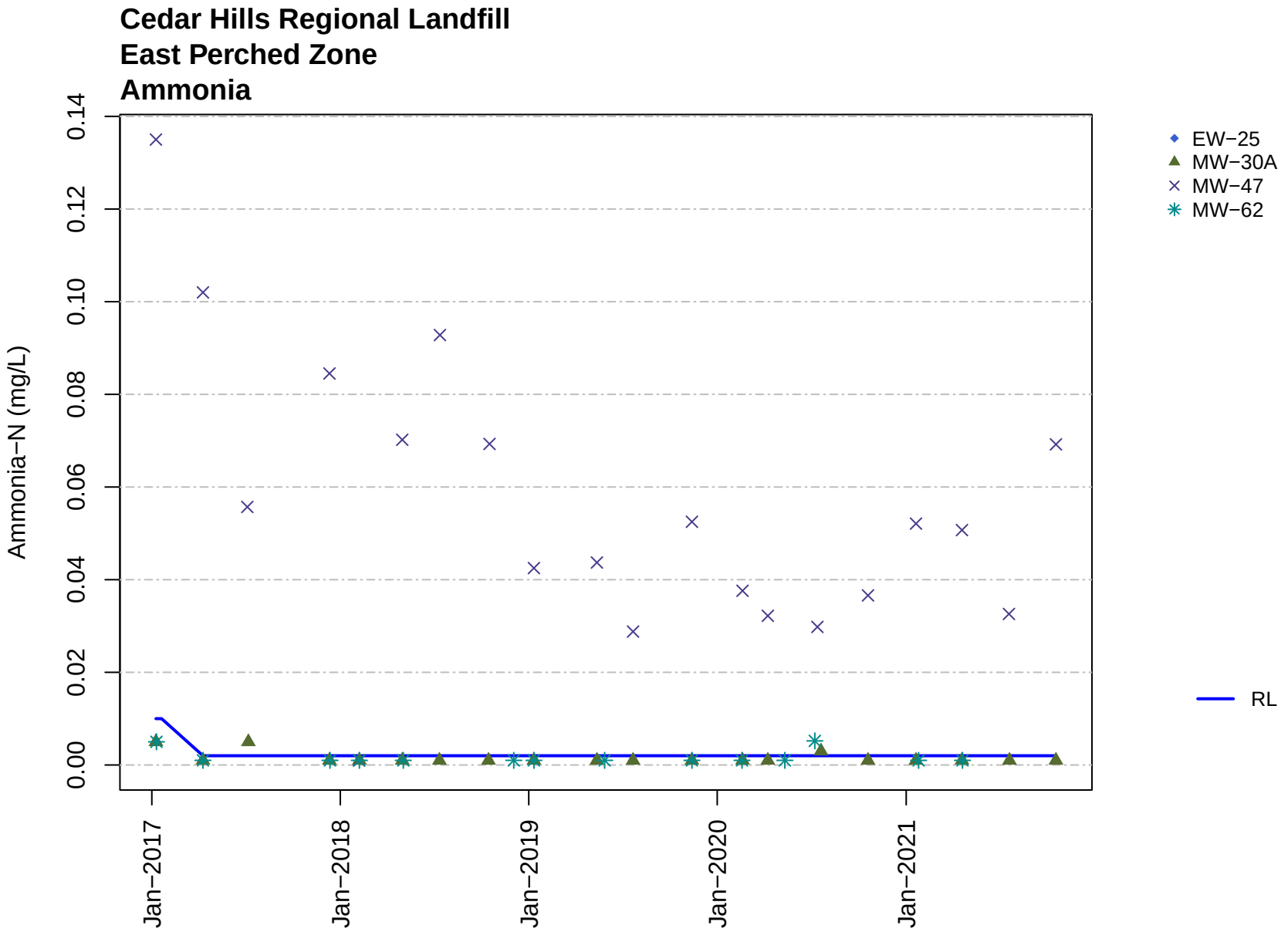

Cedar Hills Regional Landfill
South Perched Zone
Field pH
Field pH (standard pH units)
0
2
4
6
8
National Secondary MCL − 6.5 − 8.5 std. pH units
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard

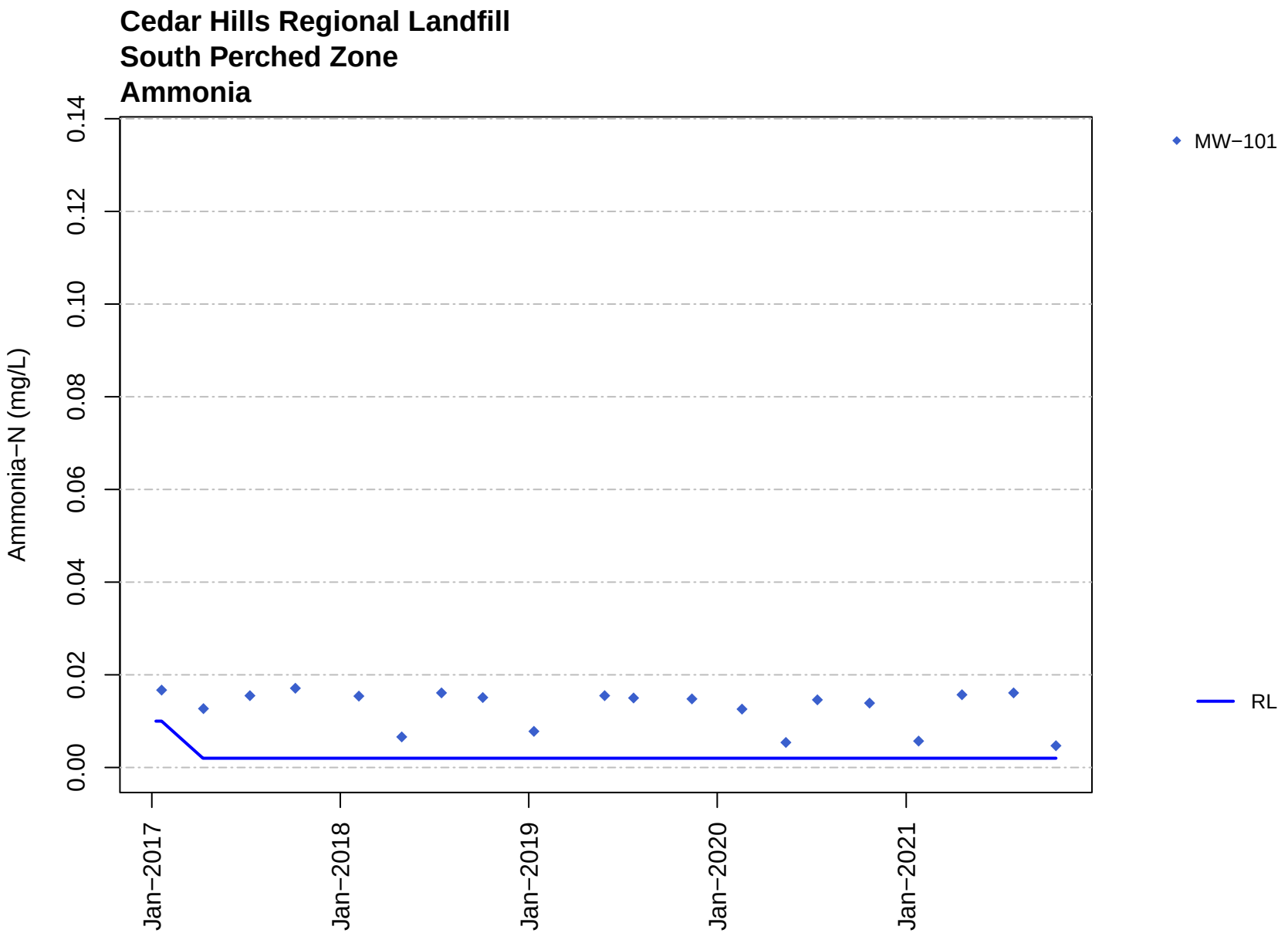

Cedar Hills Regional Landfill
East Perched Zone
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
1000
1200
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Washington State Groundwater Criteria − 700 umhos/cm
EW−25
MW−30A
MW−47
MW−62
RL
Standard

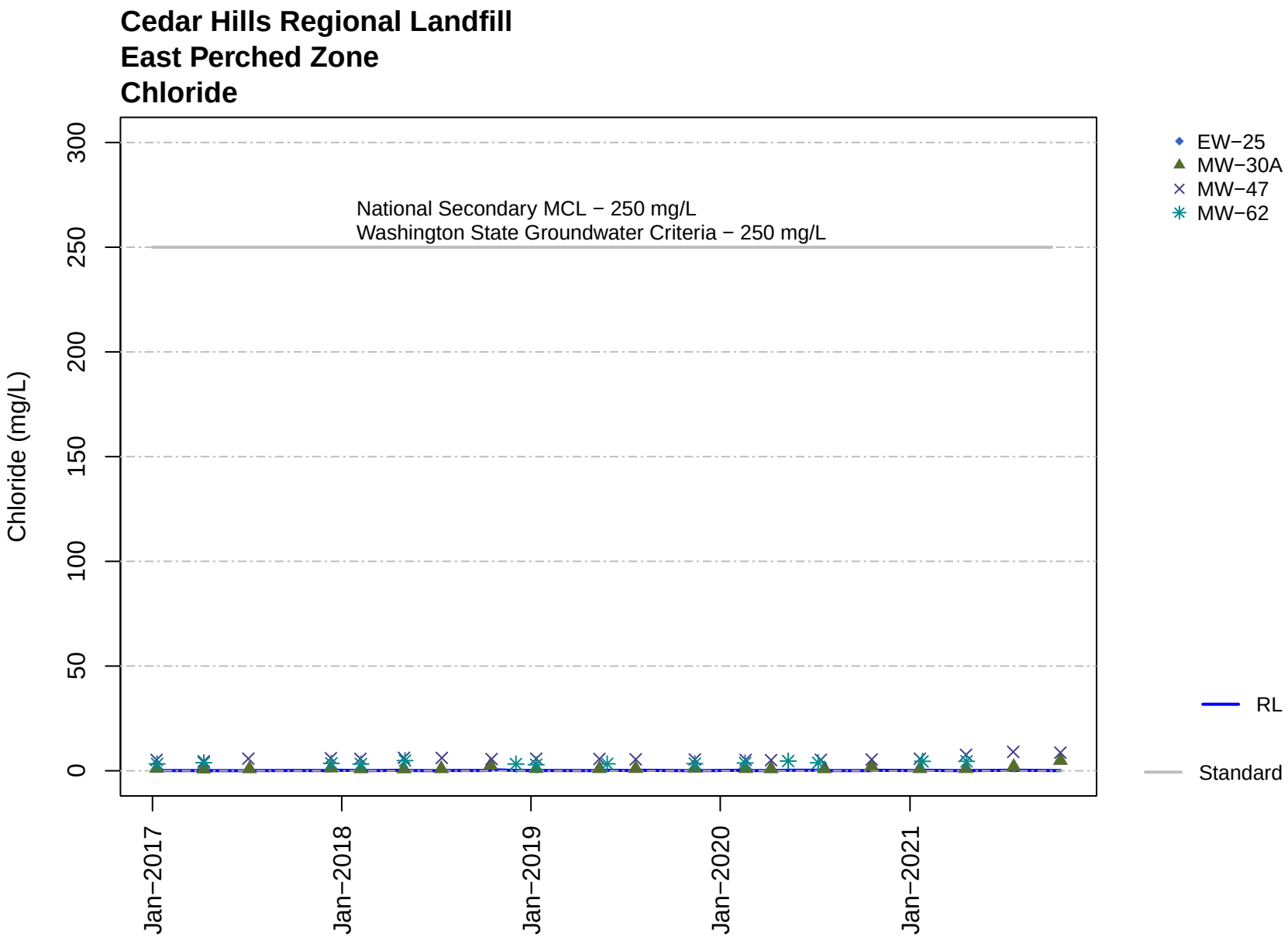

Cedar Hills Regional Landfill
South Perched Zone
Field Specific Conductance
Field Specific Conductance (umhos/cm)
0
200
400
600
800
1000
1200
Washington State Groundwater Criteria − 700 umhos/cm
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard

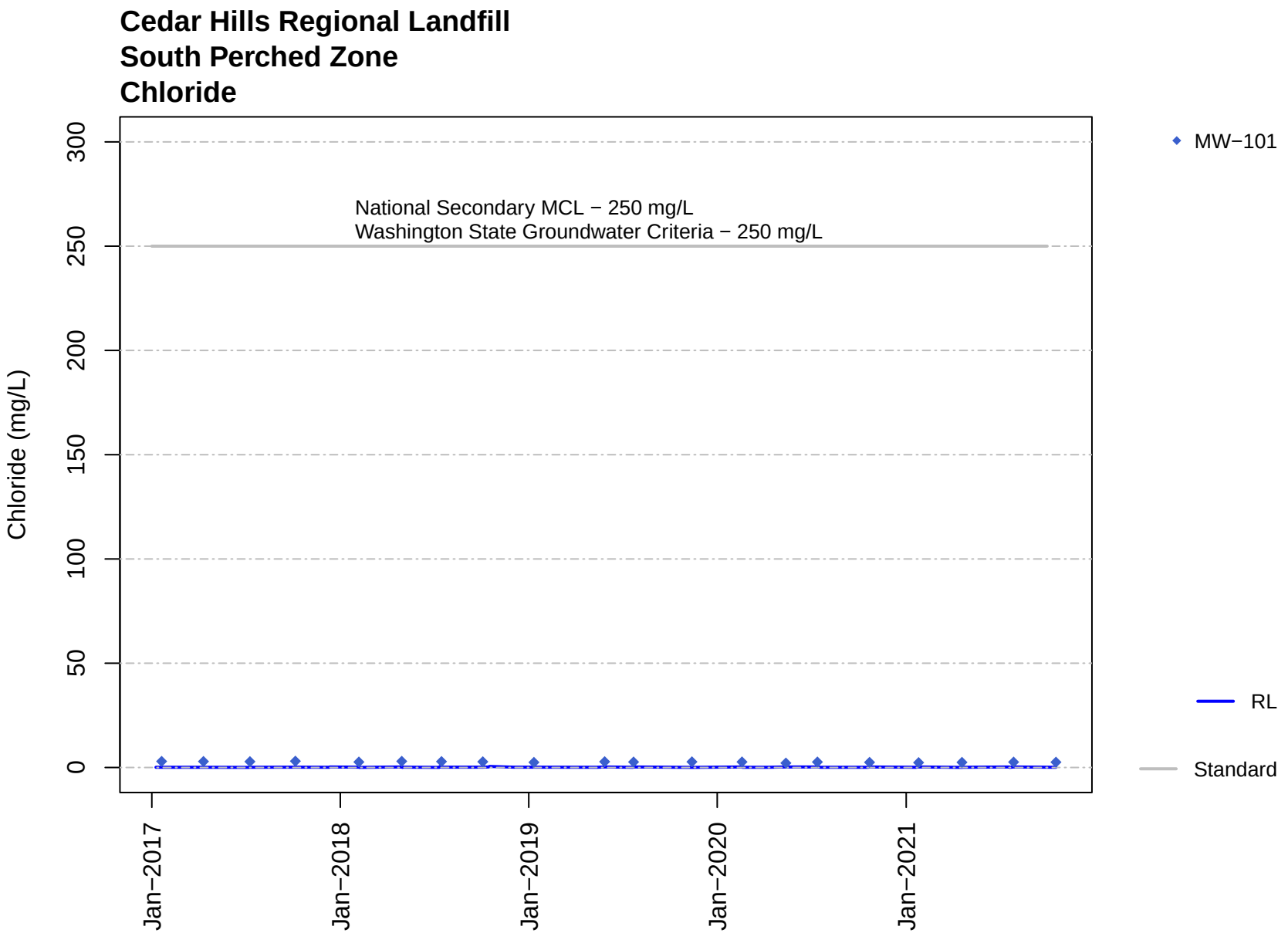

Cedar Hills Regional Landfill
East Perched Zone
Alkalinity
Alkalinity (mg/L)
0
100
200
300
400
500
600
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL

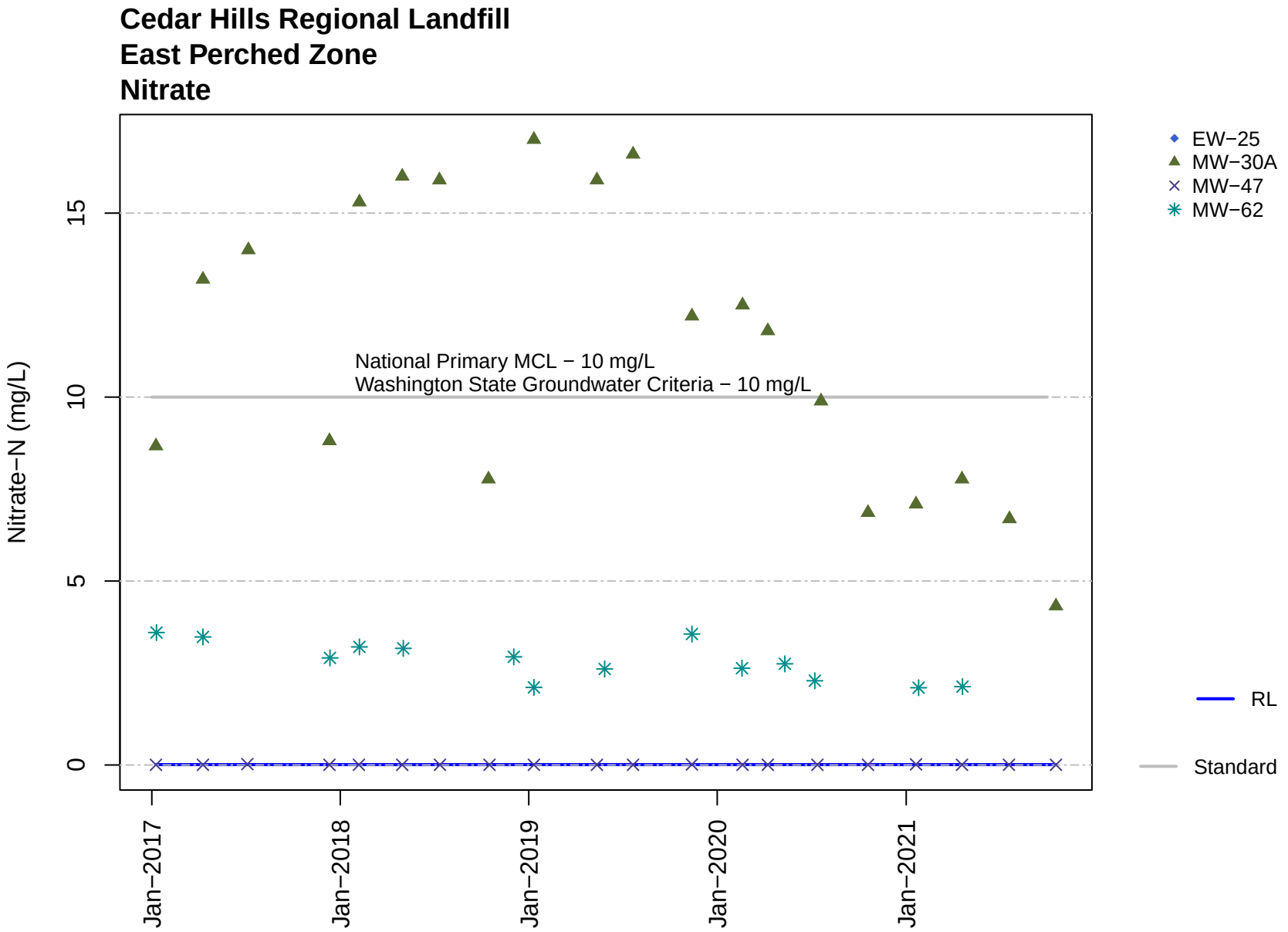

Cedar Hills Regional Landfill
South Perched Zone
Alkalinity
Alkalinity (mg/L)
0
100
200
300
400
500
600
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL

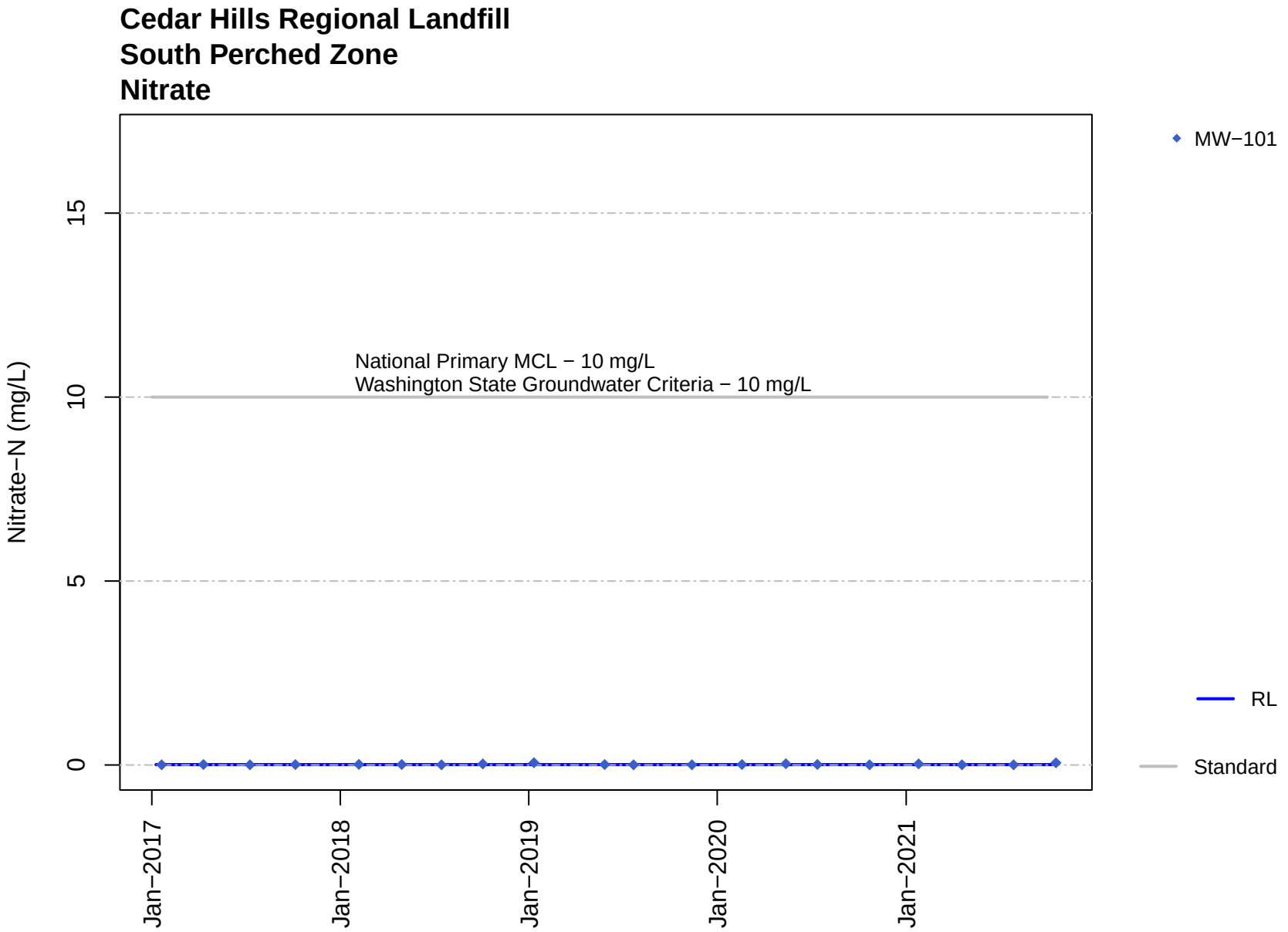

Cedar Hills Regional Landfill
East Perched Zone
Ammonia
Ammonia−N (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL

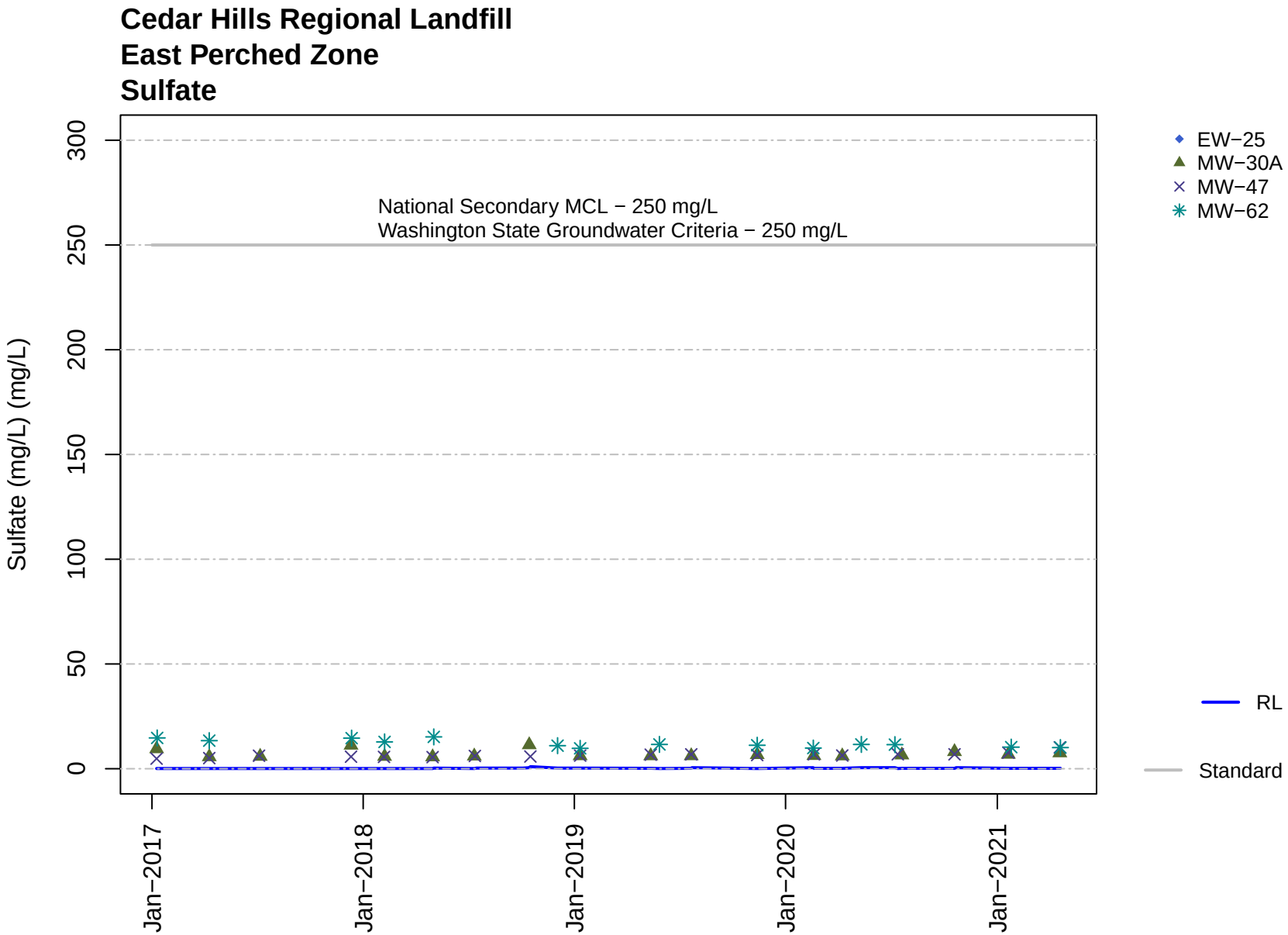

Cedar Hills Regional Landfill
South Perched Zone
Ammonia
Ammonia−N (mg/L)
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL

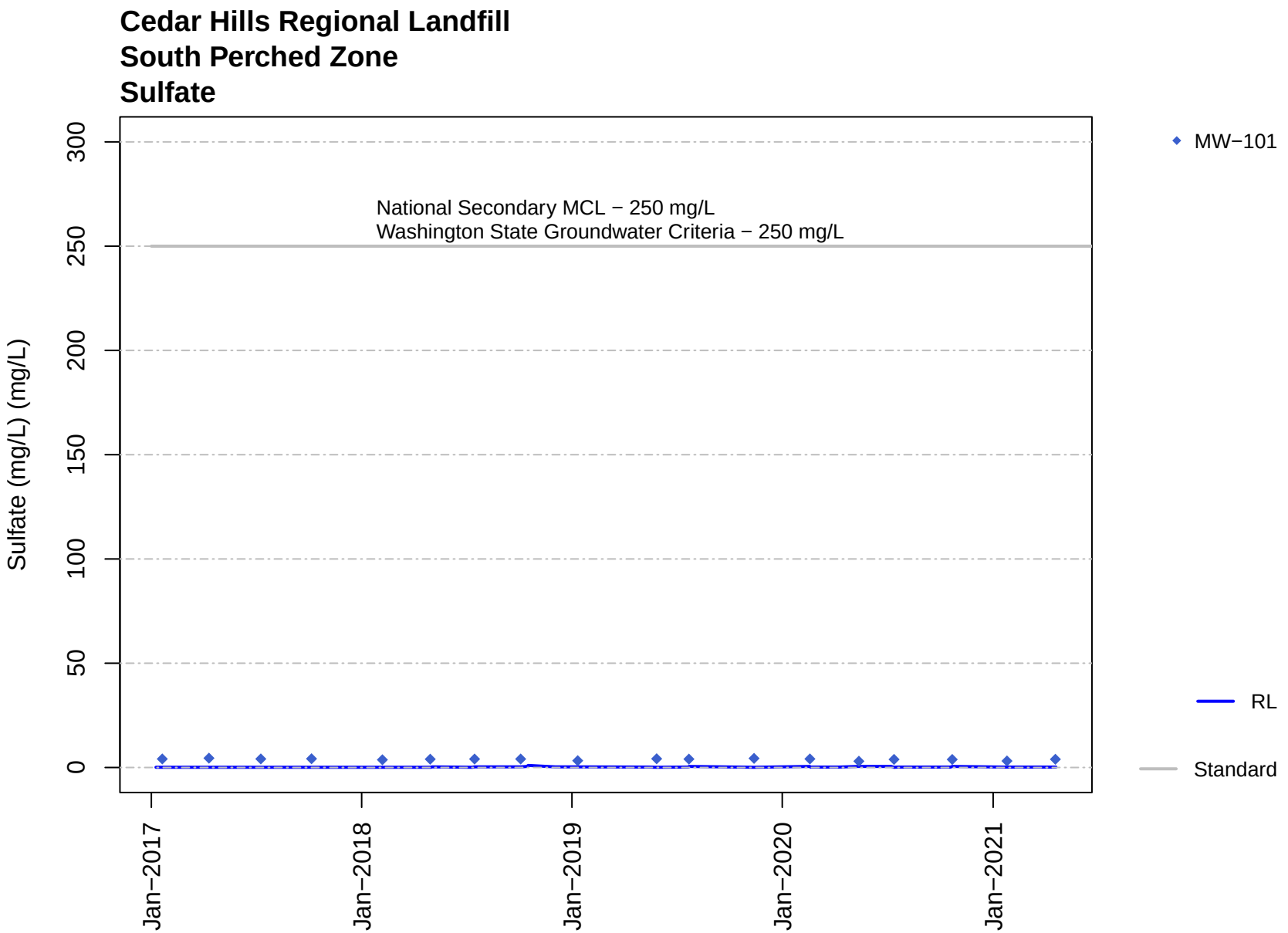

Cedar Hills Regional Landfill
East Perched Zone
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard

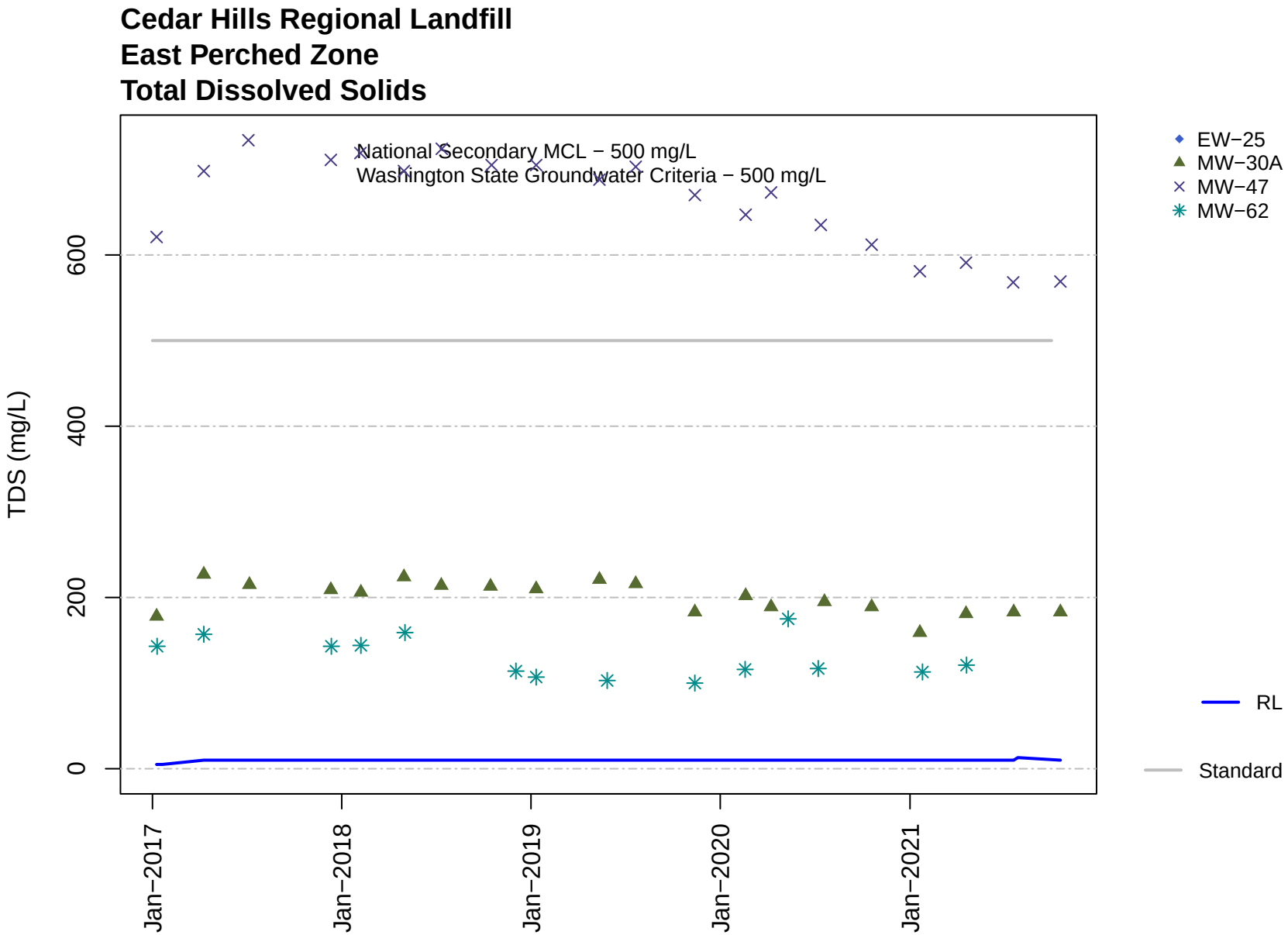

Cedar Hills Regional Landfill
South Perched Zone
Chloride
Chloride (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard

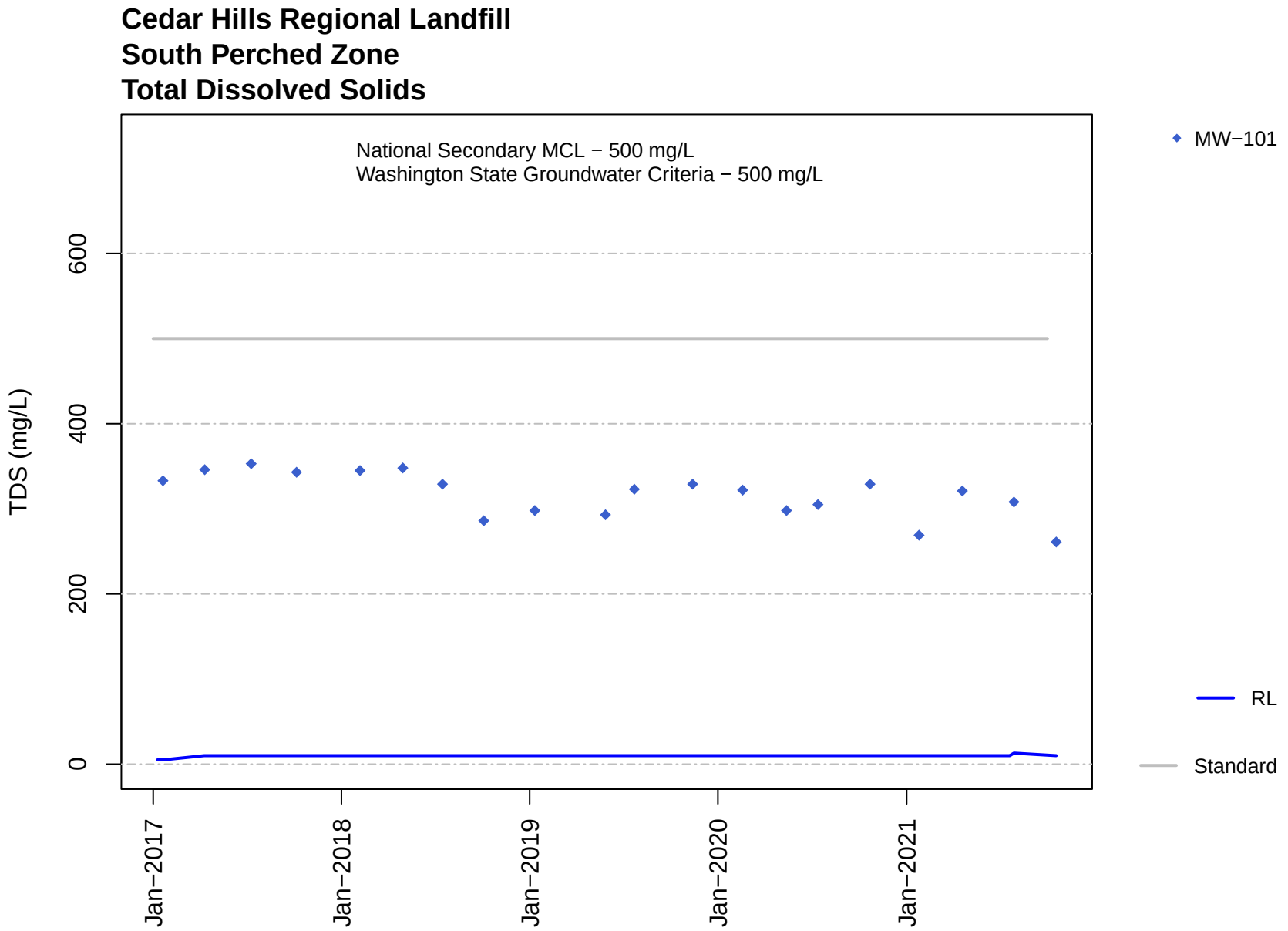

Cedar Hills Regional Landfill
East Perched Zone
Nitrate
Nitrate−N (mg/L)
0
5
10
15
National Primary MCL − 10 mg/L
Washington State Groundwater Criteria − 10 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard

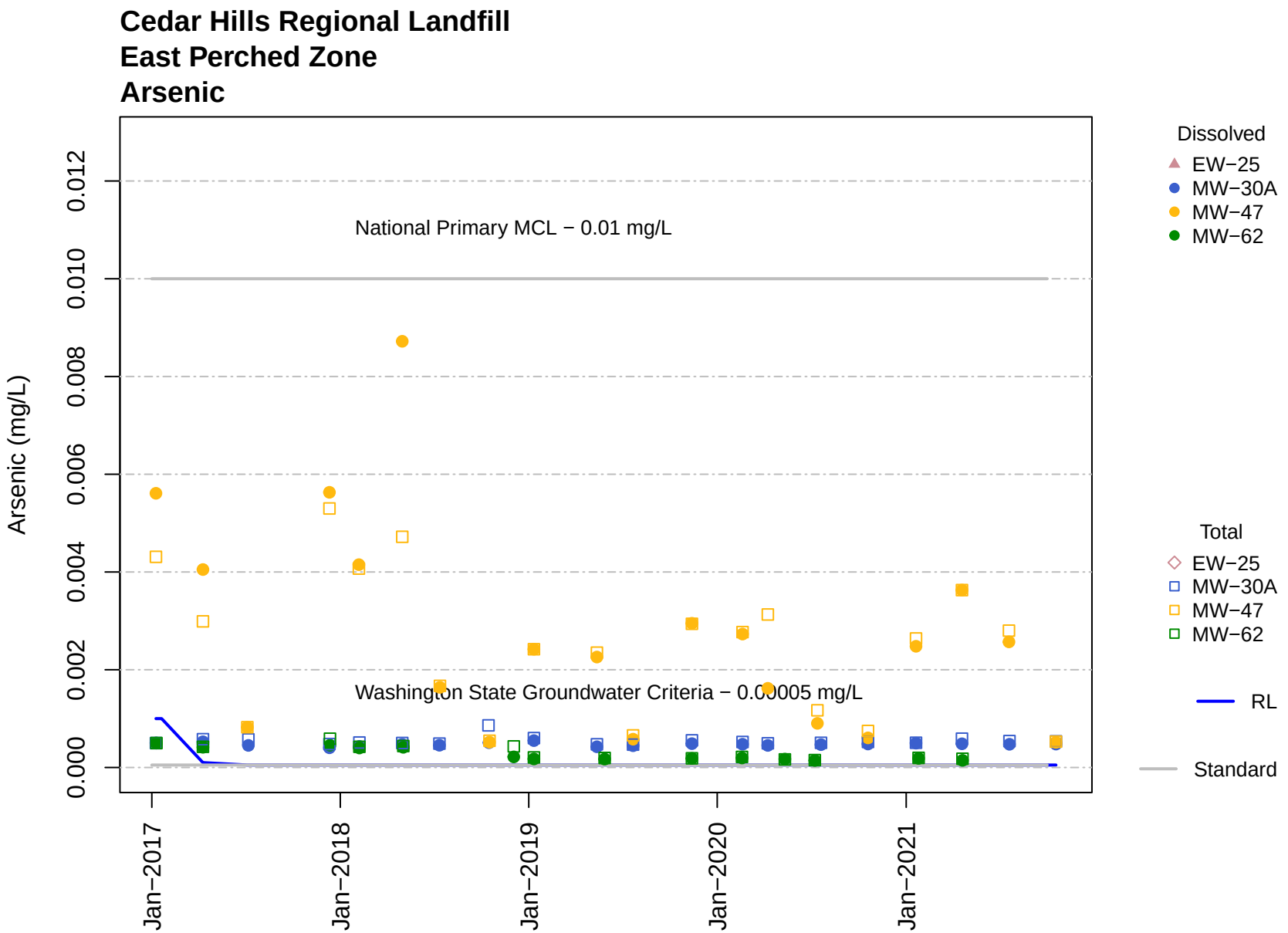

Cedar Hills Regional Landfill
South Perched Zone
Nitrate
Nitrate−N (mg/L)
0
5
10
15
National Primary MCL − 10 mg/L
Washington State Groundwater Criteria − 10 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard

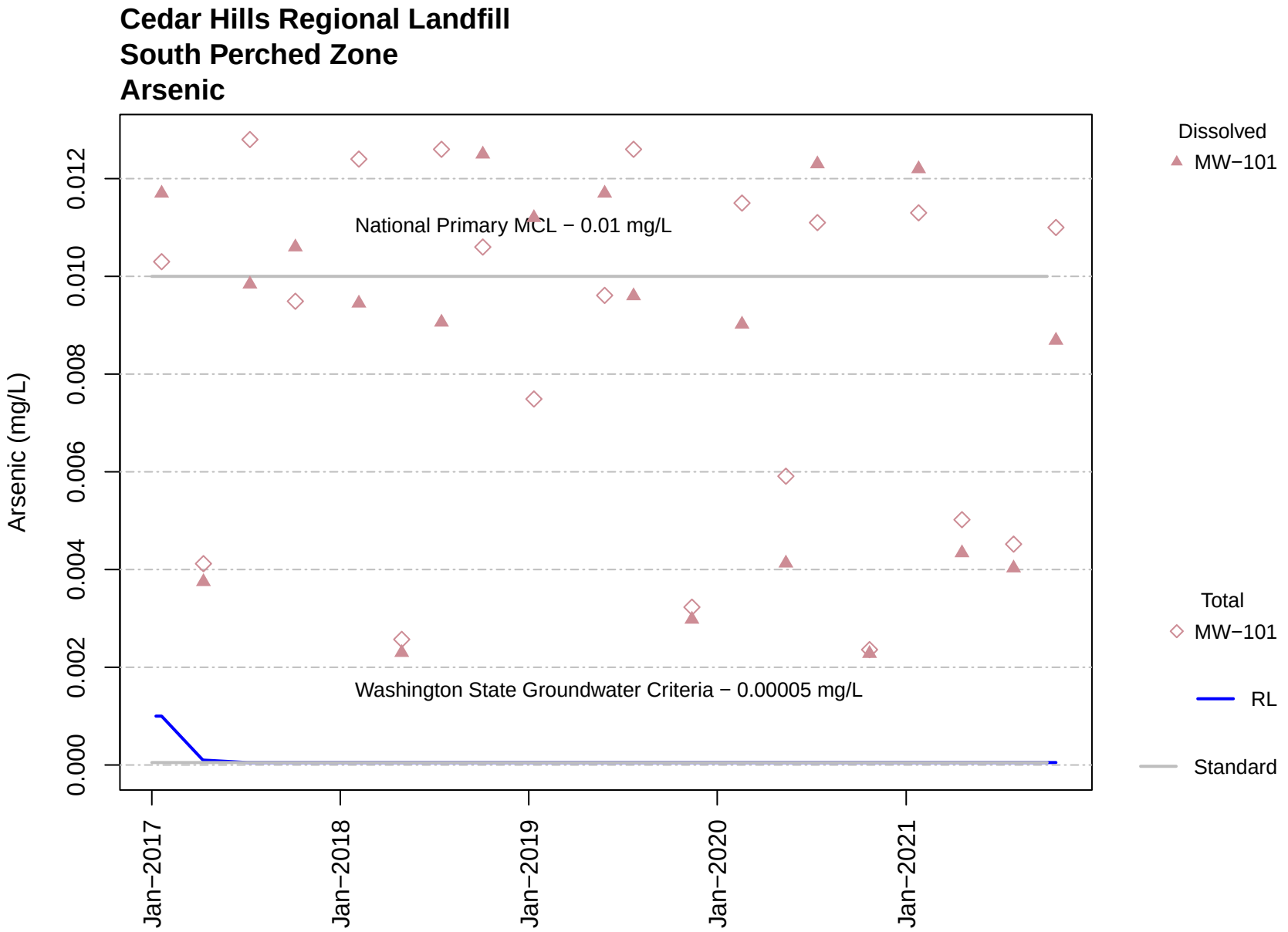

Cedar Hills Regional Landfill
East Perched Zone
Sulfate
Sulfate (mg/L) (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard

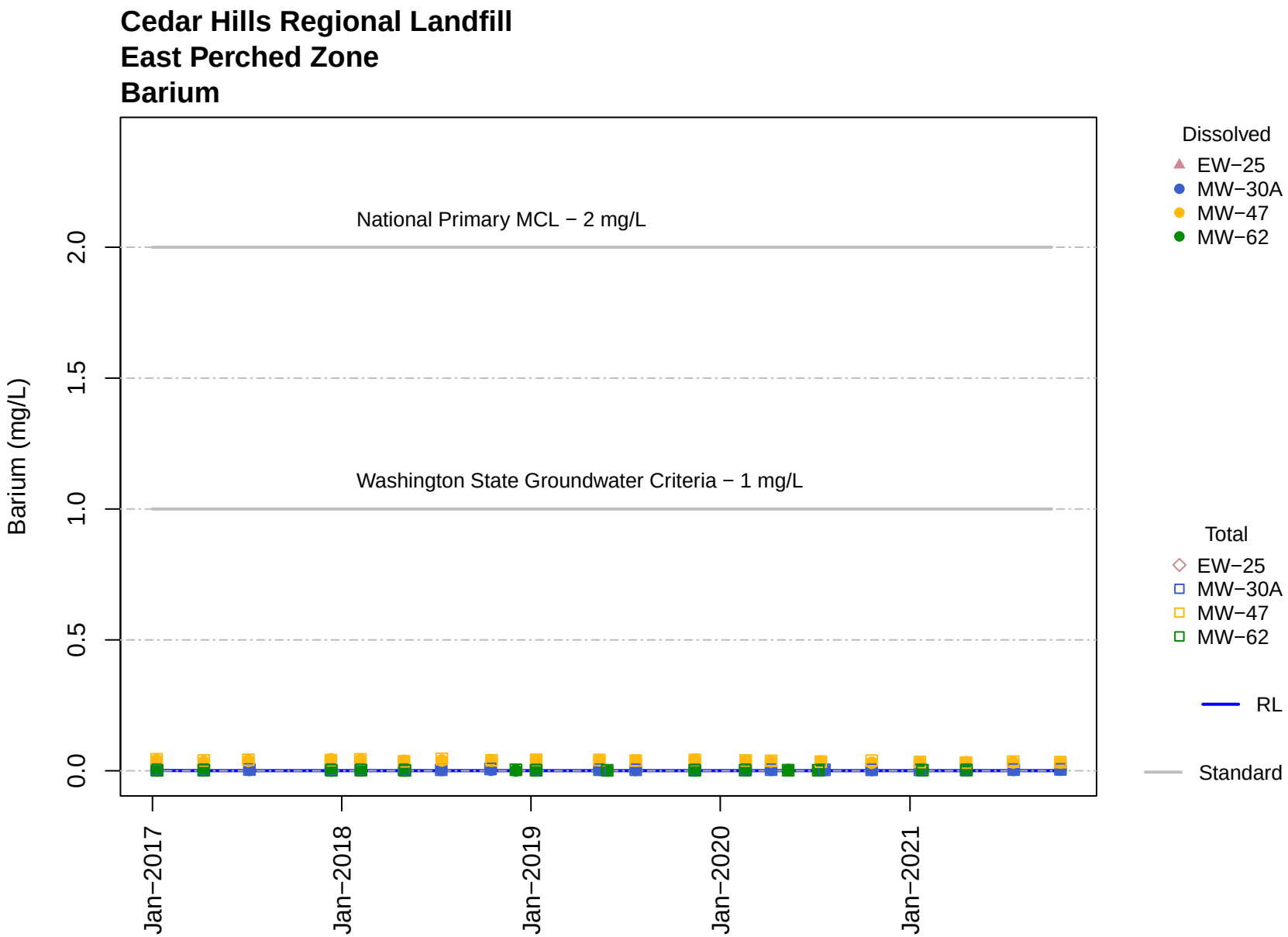

Cedar Hills Regional Landfill
South Perched Zone
Sulfate
Sulfate (mg/L) (mg/L)
0
50
100
150
200
250
300
National Secondary MCL − 250 mg/L
Washington State Groundwater Criteria − 250 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard

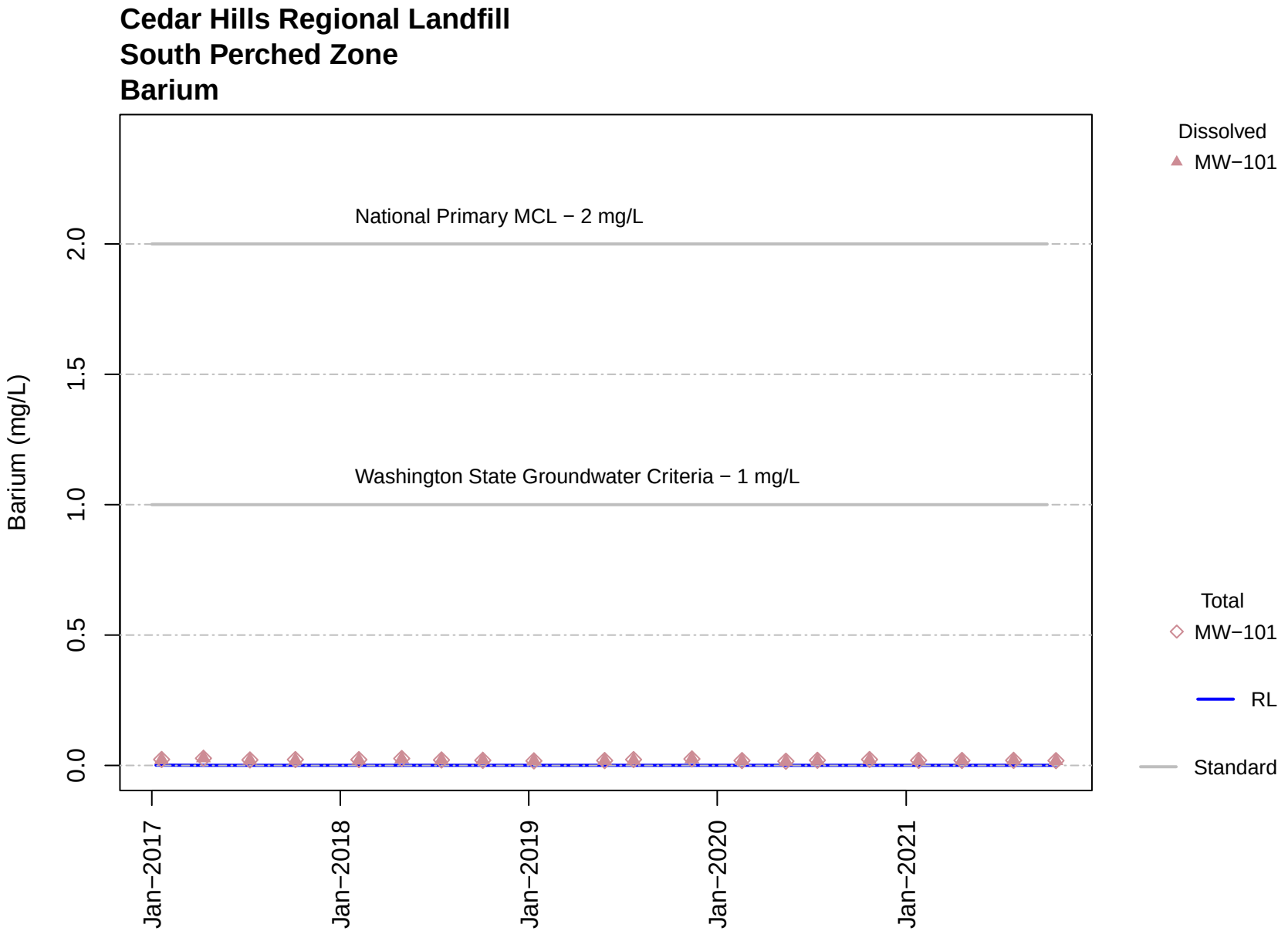

Cedar Hills Regional Landfill
East Perched Zone
Total Dissolved Solids
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
TDS (mg/L)
0
200
400
600
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard

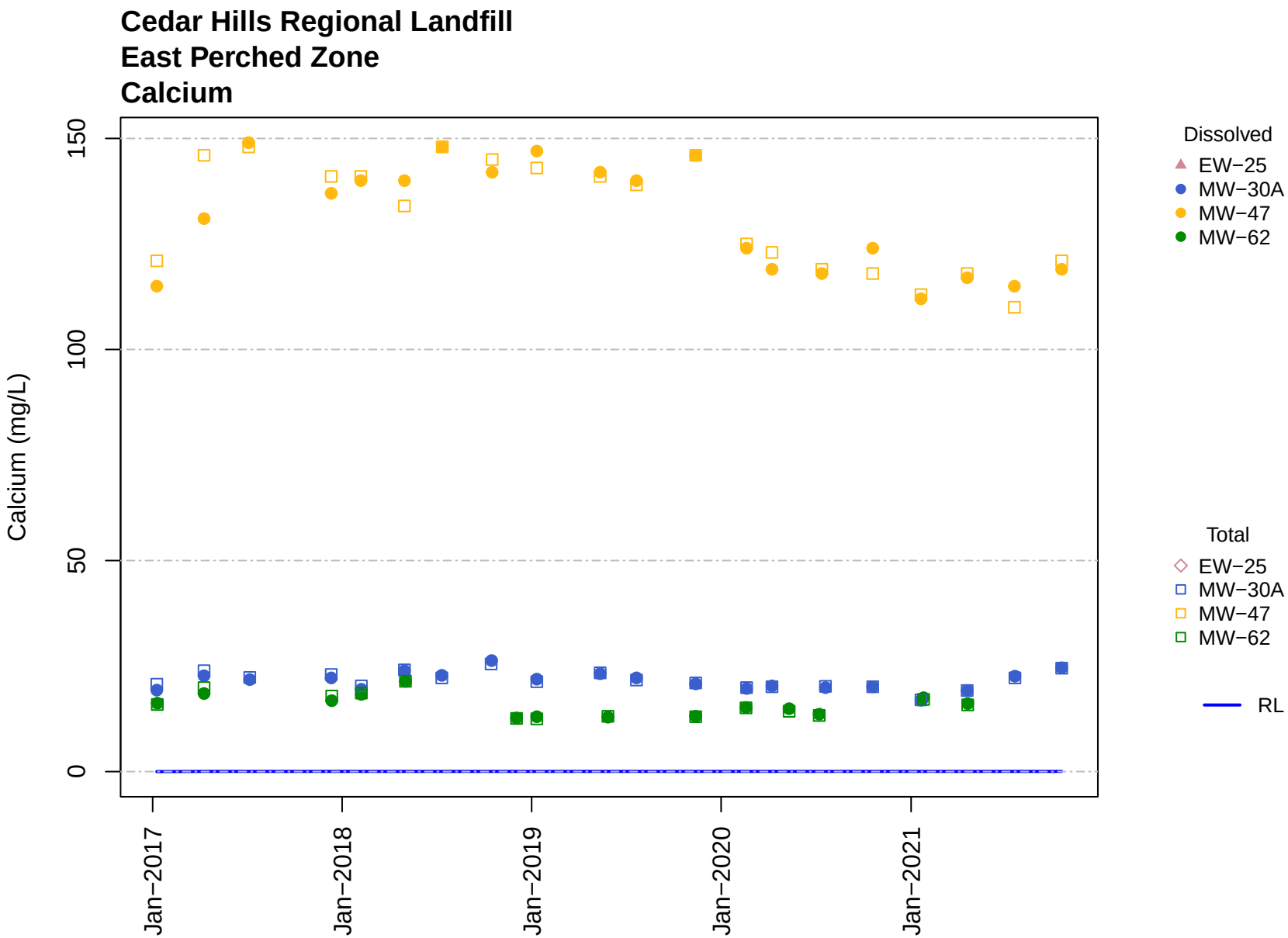

Cedar Hills Regional Landfill
South Perched Zone
Total Dissolved Solids
National Secondary MCL − 500 mg/L
Washington State Groundwater Criteria − 500 mg/L
TDS (mg/L)
0
200
400
600
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard

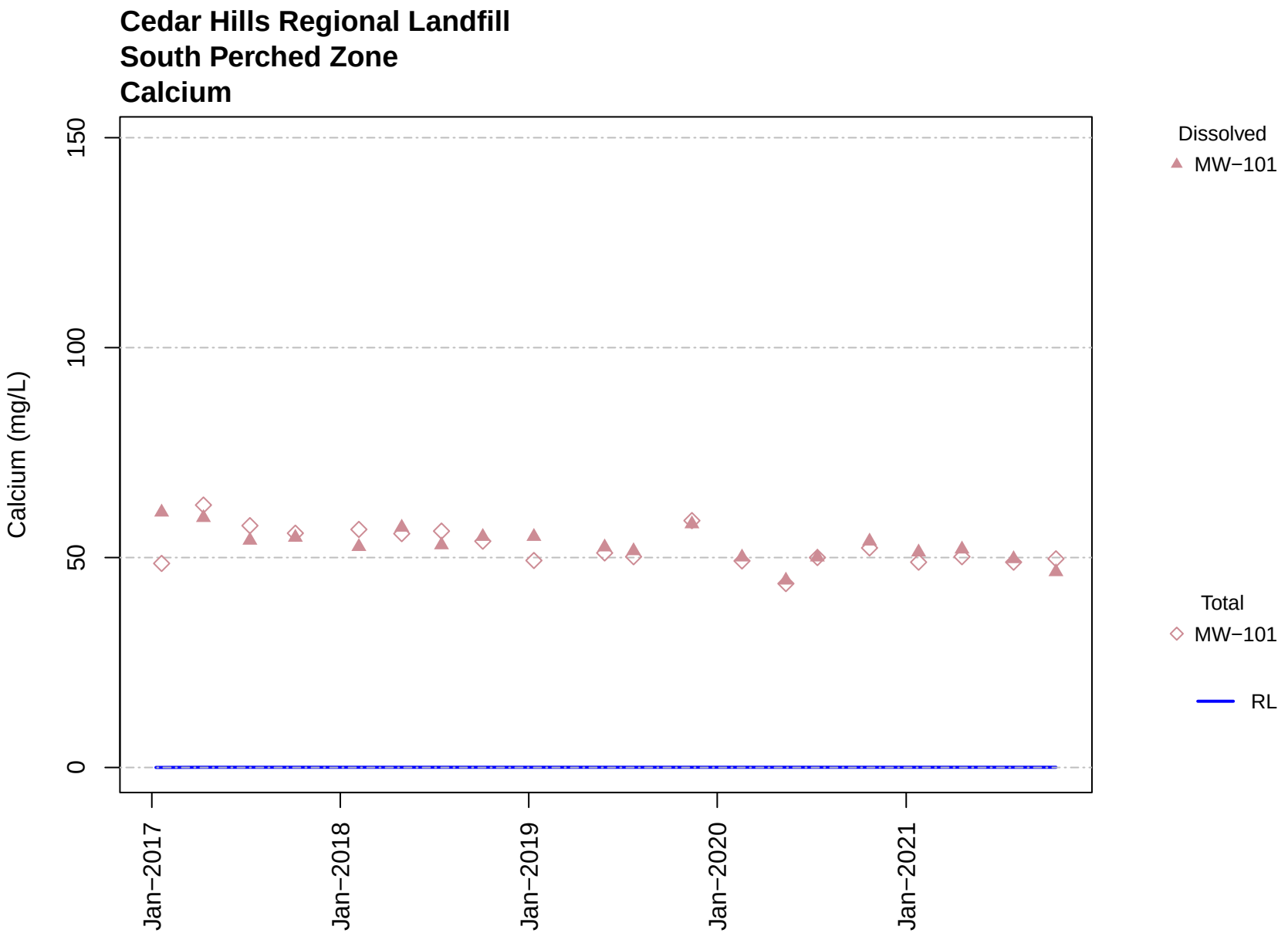

Cedar Hills Regional Landfill
East Perched Zone
Arsenic
Arsenic (mg/L)
0.000
0.002
0.004
0.006
0.008
0.010
0.012
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL
Standard

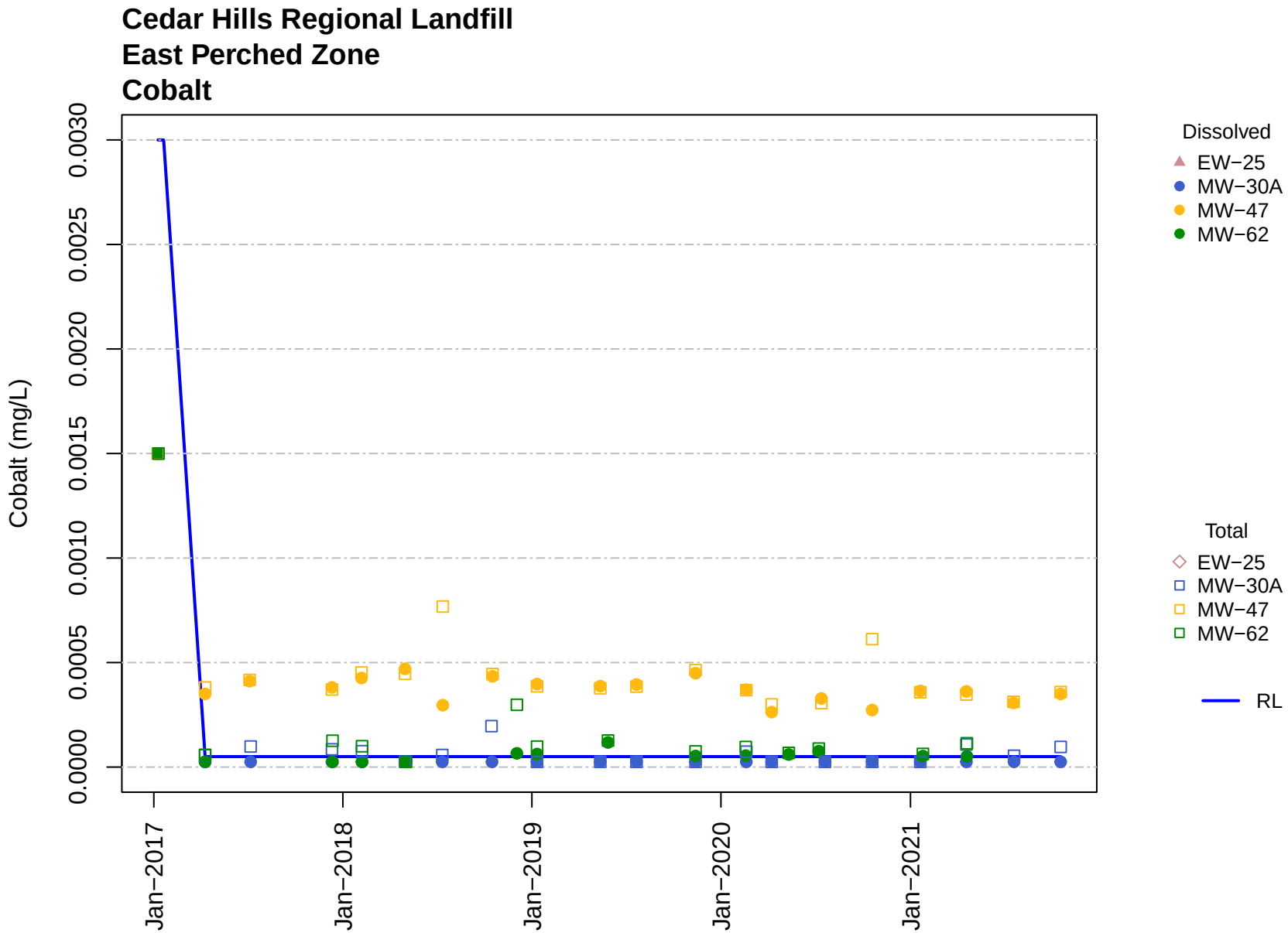

Cedar Hills Regional Landfill
South Perched Zone
Arsenic
Arsenic (mg/L)
0.000
0.002
0.004
0.006
0.008
0.010
0.012
National Primary MCL − 0.01 mg/L
Washington State Groundwater Criteria − 0.00005 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−101
Total
MW−101
RL
Standard

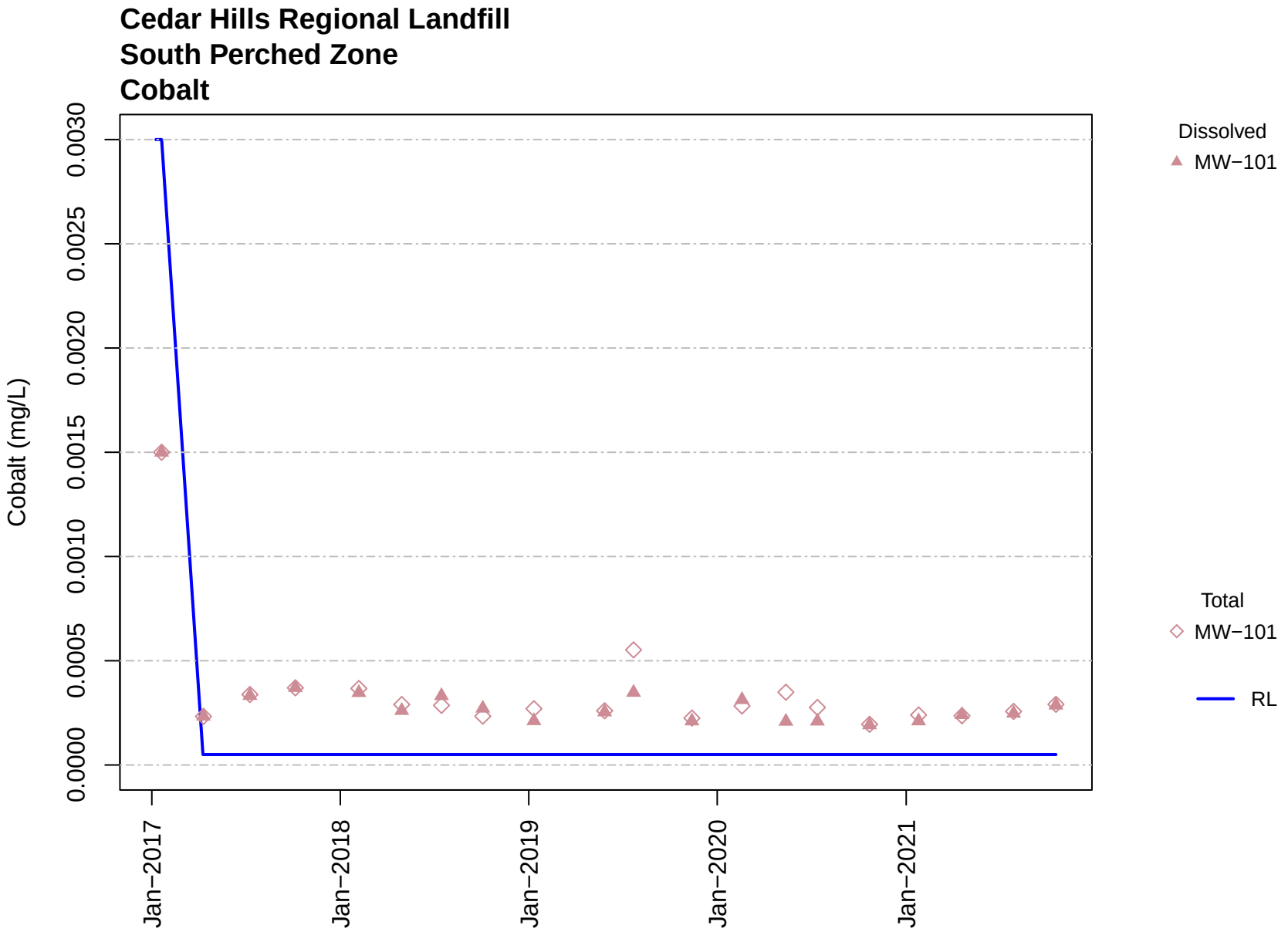

Cedar Hills Regional Landfill
East Perched Zone
Barium
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL
Standard

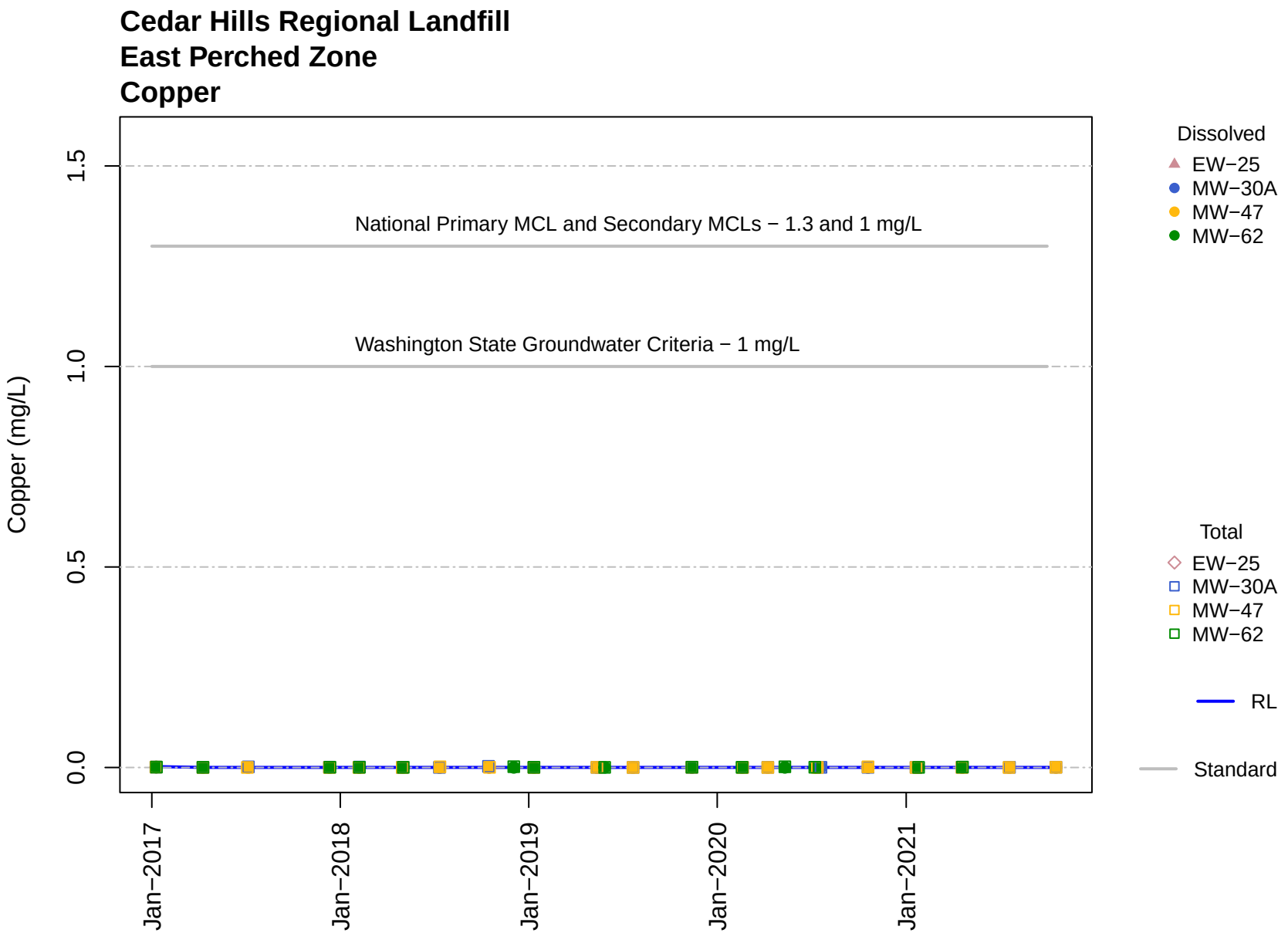

Cedar Hills Regional Landfill
South Perched Zone
Barium
Barium (mg/L)
0.0
0.5
1.0
1.5
2.0
National Primary MCL − 2 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−101
Total
MW−101
RL
Standard

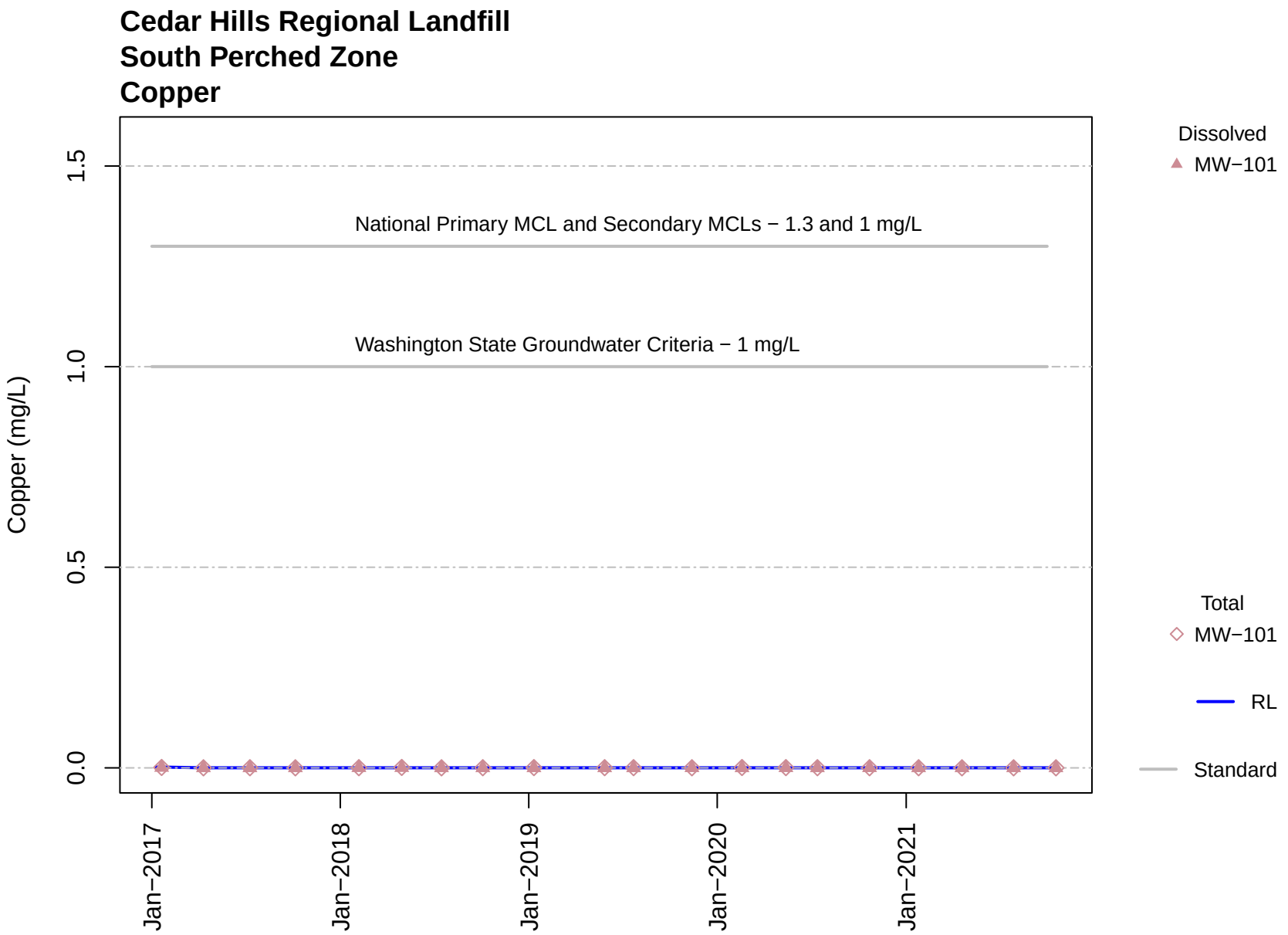

Cedar Hills Regional Landfill
East Perched Zone
Calcium
Calcium (mg/L)
150
100
50
0
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL


Cedar Hills Regional Landfill
South Perched Zone
Calcium
Calcium (mg/L)
150
100
50
0
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−101
Total
MW−101
RL

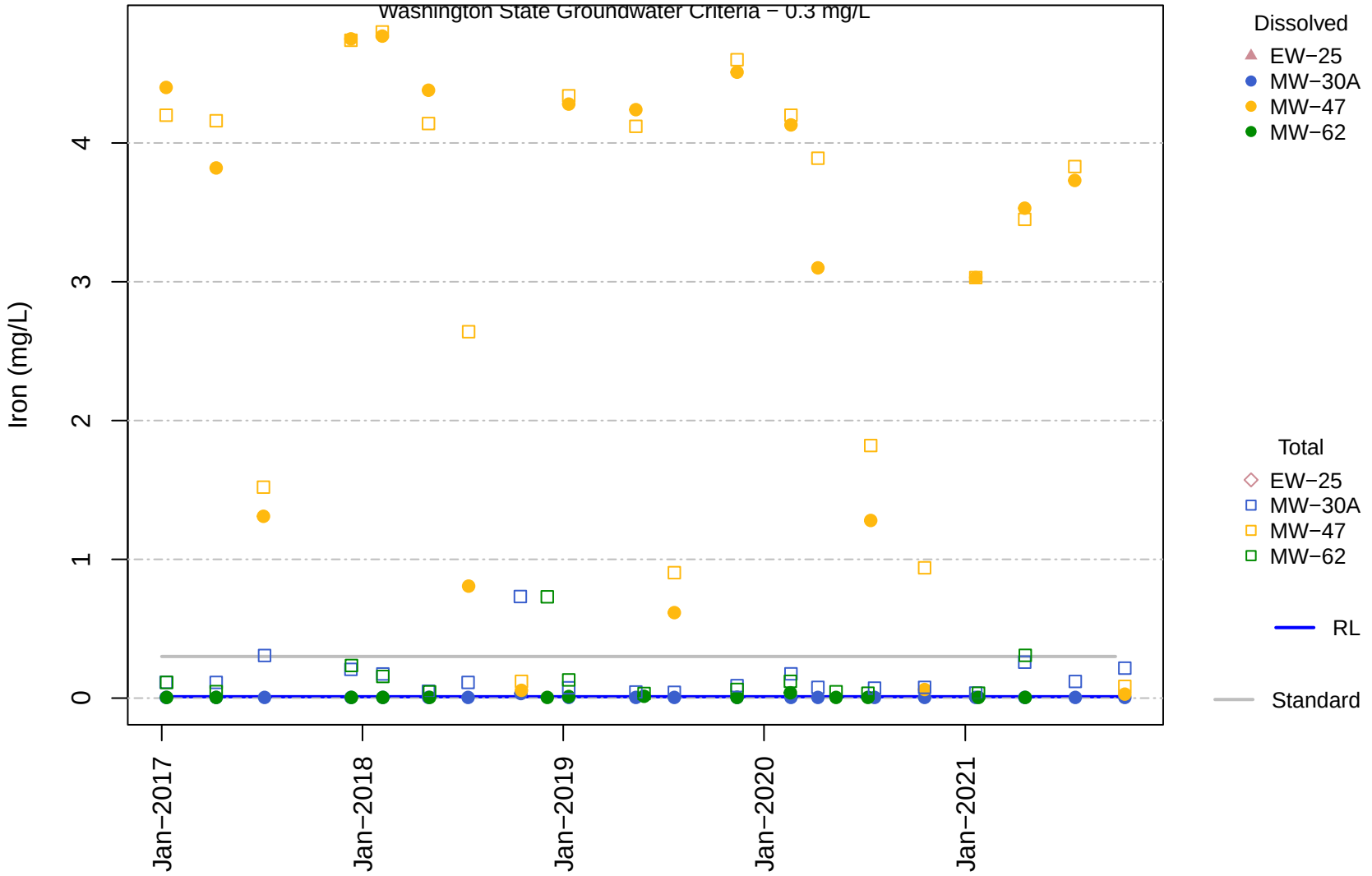

Cedar Hills Regional Landfill
East Perched Zone
Cobalt
Cobalt (mg/L)
0.0000
0.0005
0.0010
0.0015
0.0020
0.0025
0.0030
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL


Cedar Hills Regional Landfill
South Perched Zone
Cobalt
Cobalt (mg/L)
0.0000
0.0005
0.0010
0.0015
0.0020
0.0025
0.0030
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−101
Total
MW−101
RL

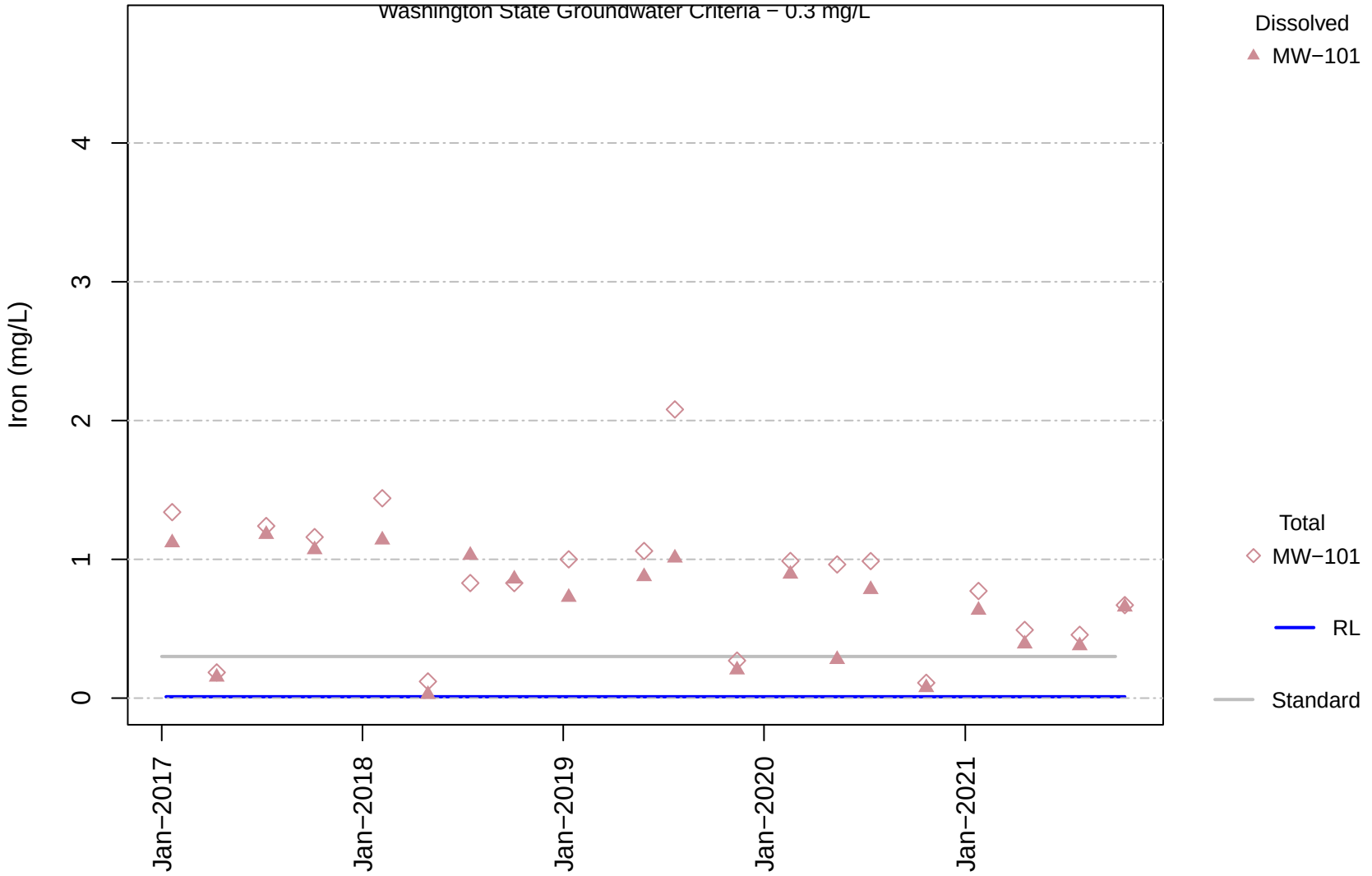

Cedar Hills Regional Landfill
East Perched Zone
Copper
Copper (mg/L)
0.0
0.5
1.0
1.5
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL
Standard

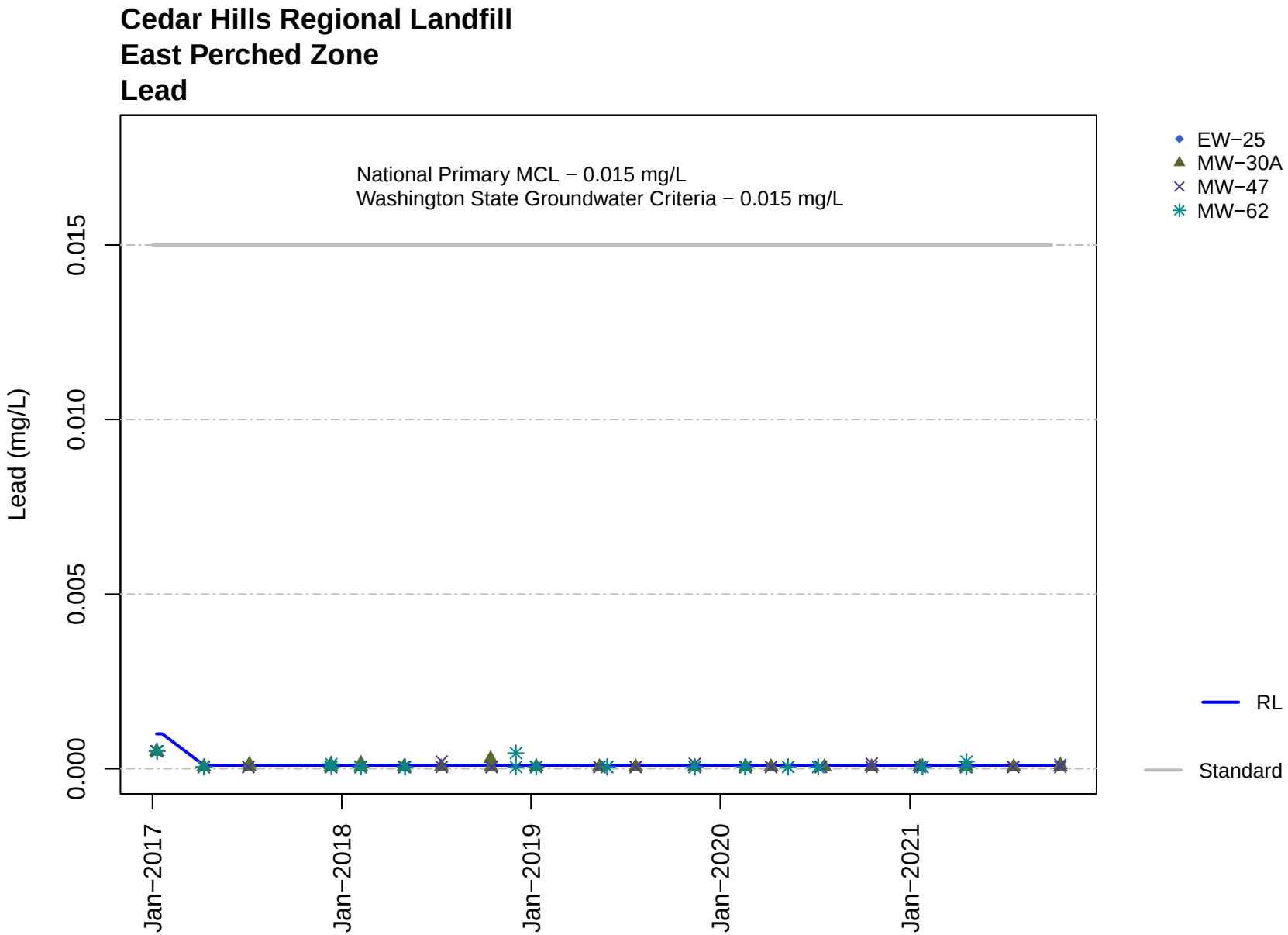

Cedar Hills Regional Landfill
South Perched Zone
Copper
Copper (mg/L)
0.0
0.5
1.0
1.5
National Primary MCL and Secondary MCLs − 1.3 and 1 mg/L
Washington State Groundwater Criteria − 1 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−101
Total
MW−101
RL
Standard

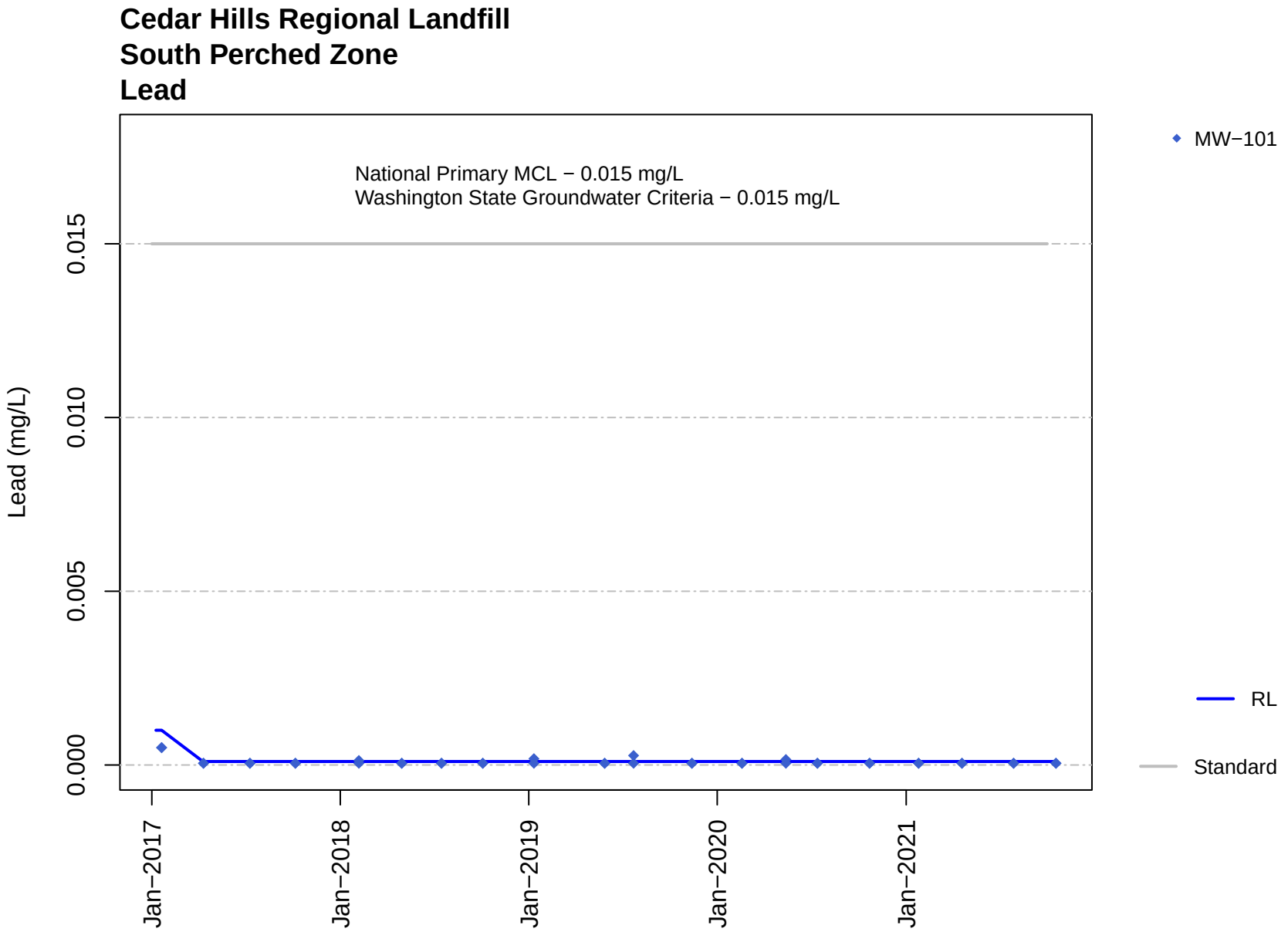
Cedar Hills Regional Landfill
East Perched Zone
Iron

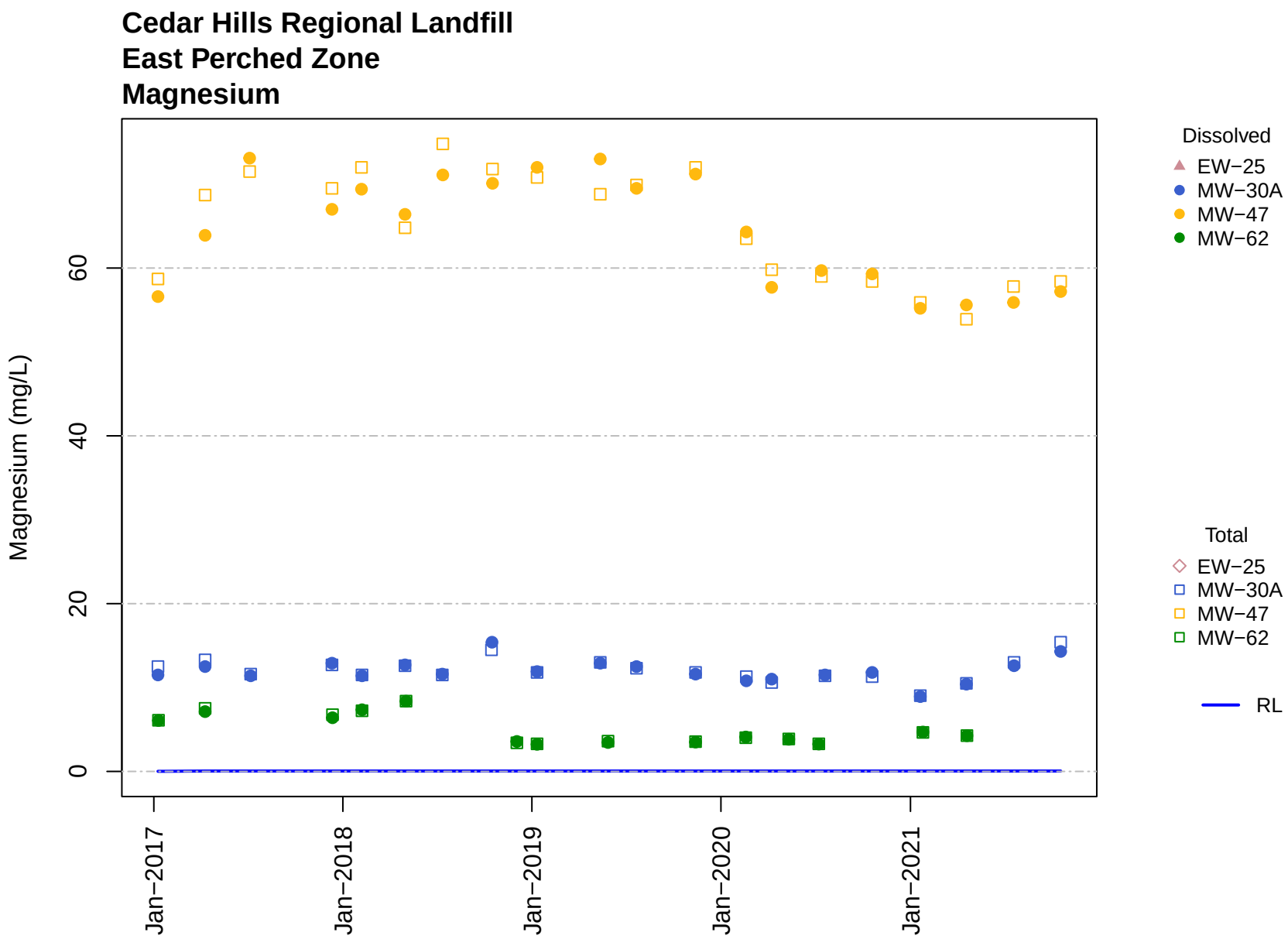


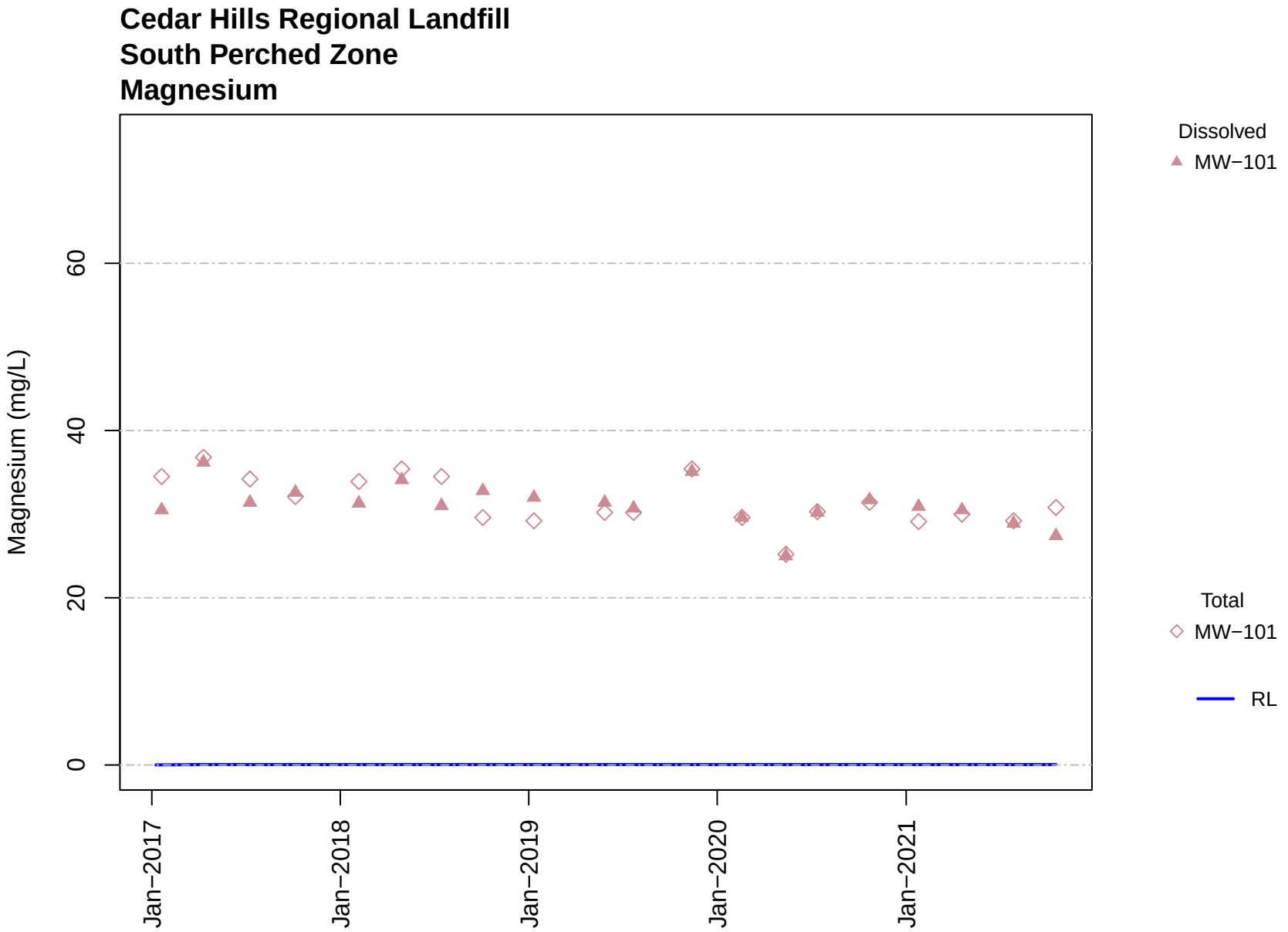
Cedar Hills Regional Landfill
South Perched Zone
Iron

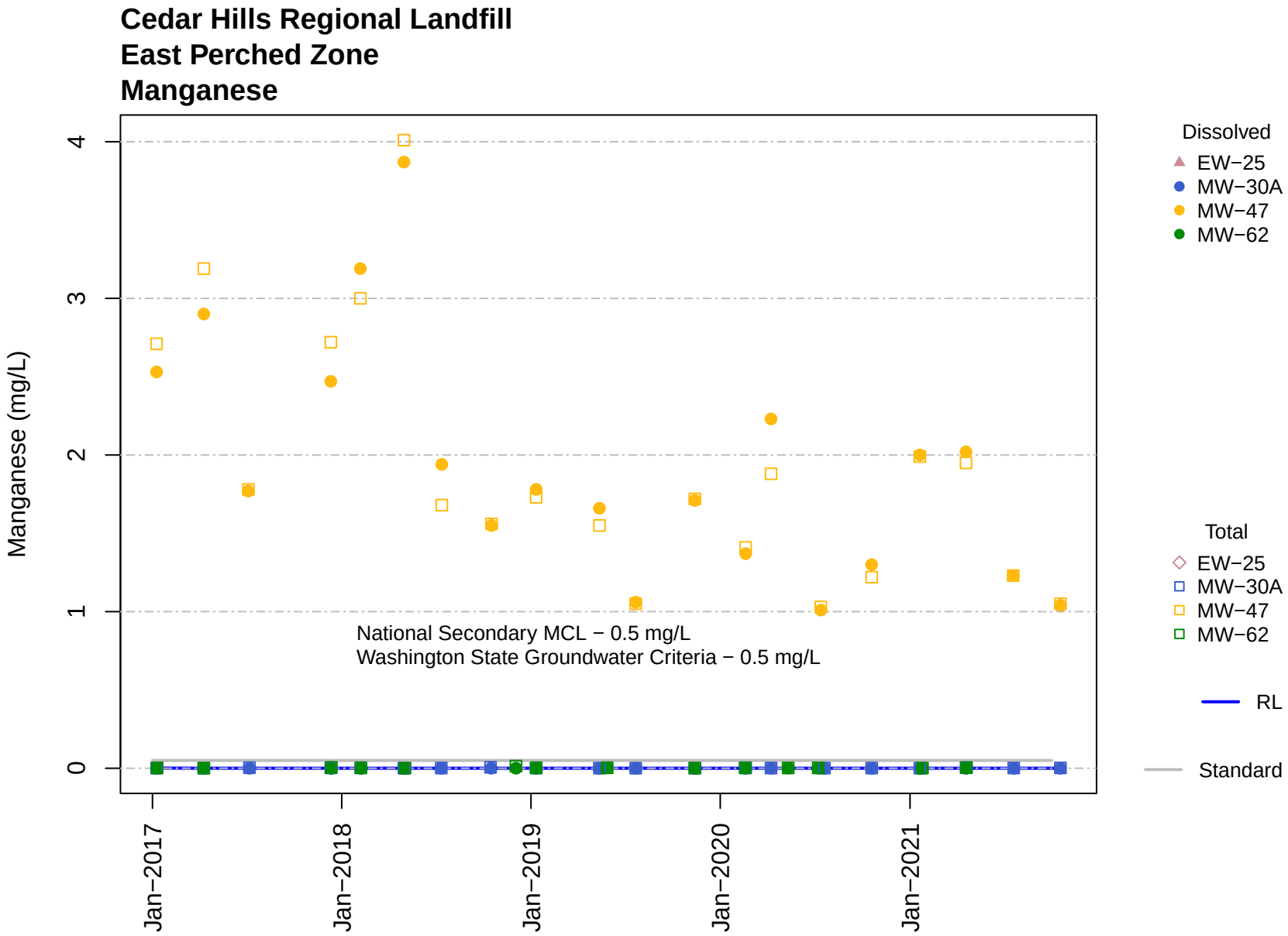


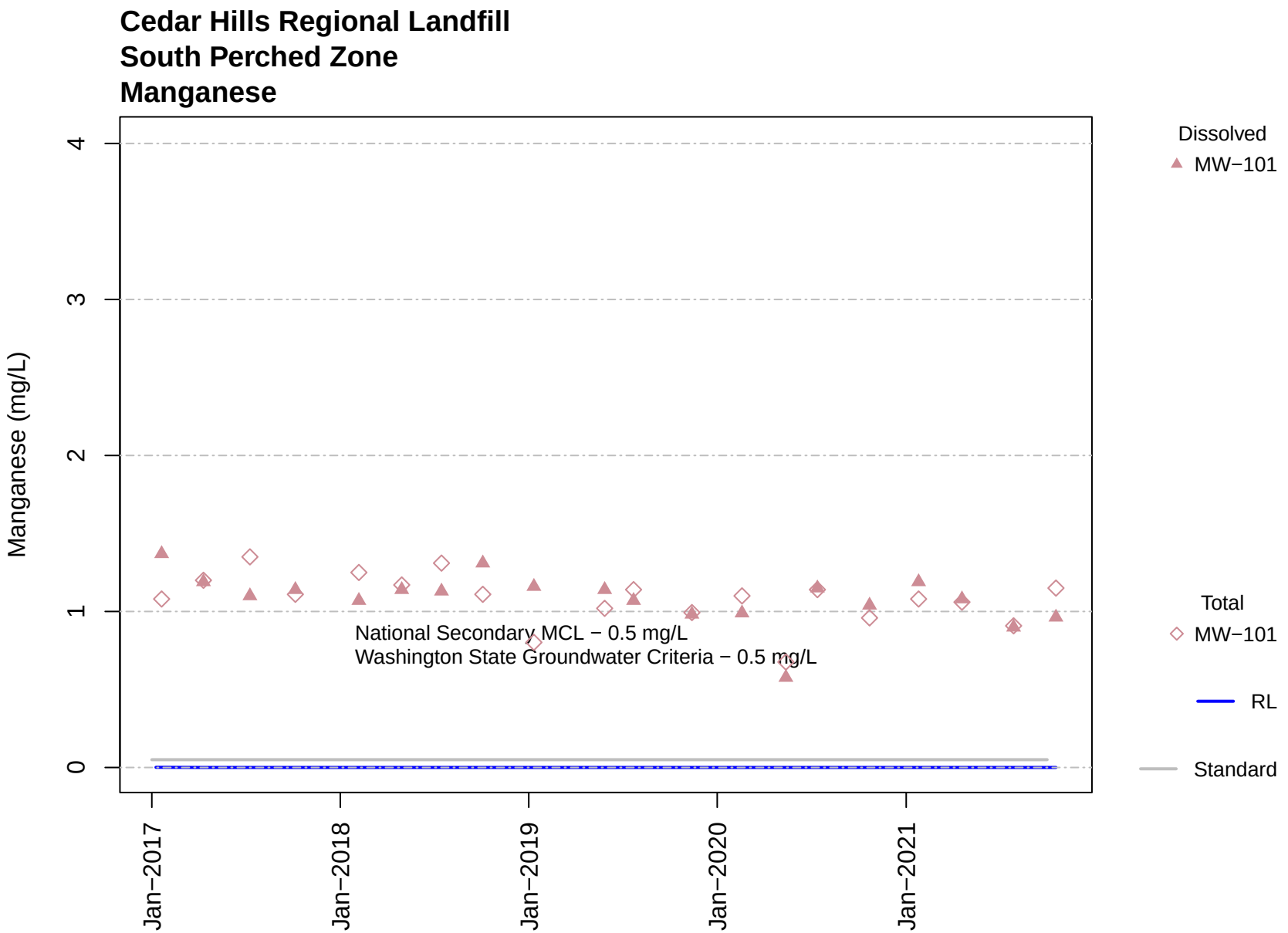

Cedar Hills Regional Landfill
East Perched Zone
Lead
National Primary MCL − 0.015 mg/L
Washington State Groundwater Criteria − 0.015 mg/L
Lead (mg/L)
0.000
0.005
0.010
0.015
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard

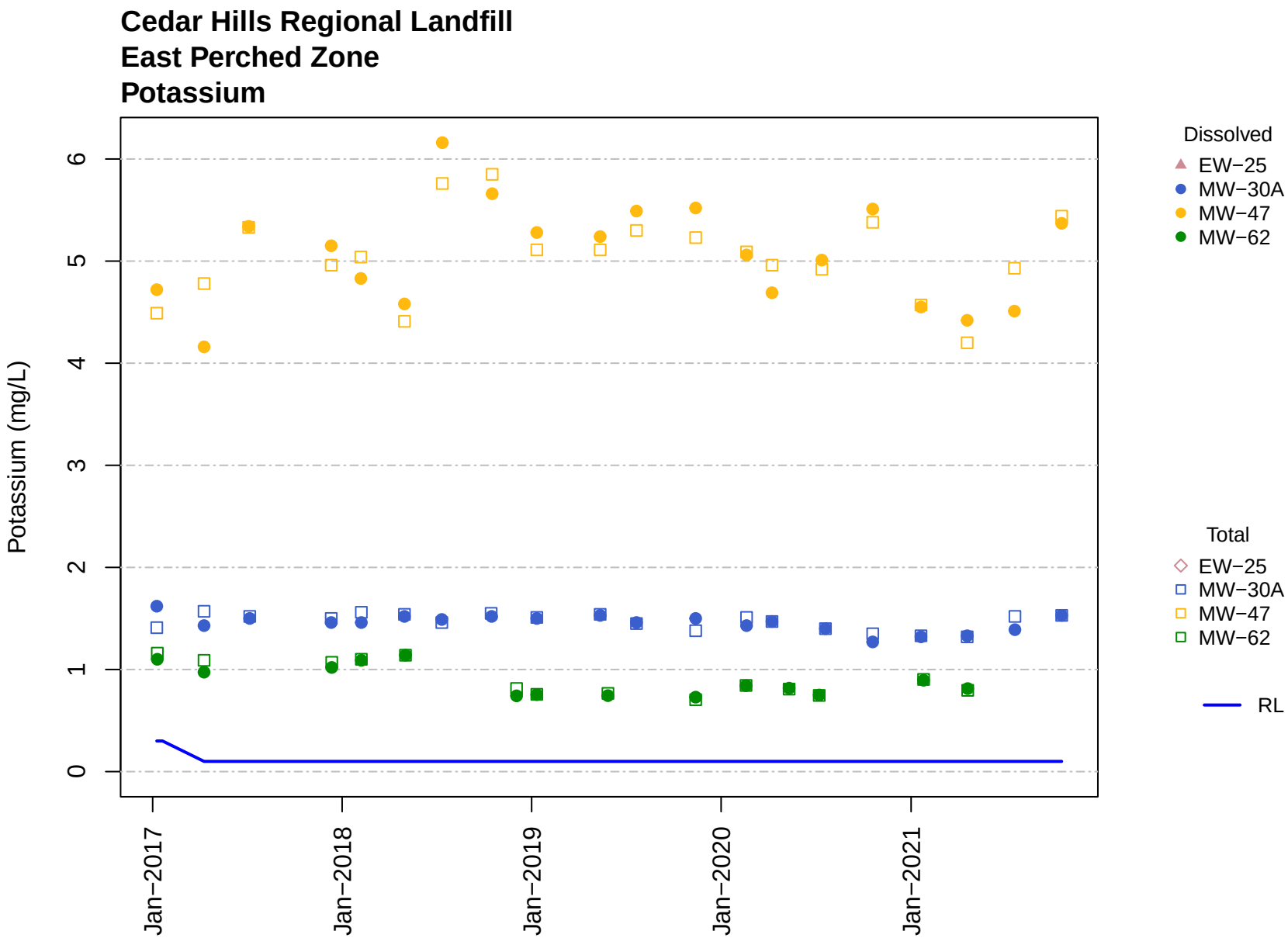

Cedar Hills Regional Landfill
South Perched Zone
Lead
National Primary MCL − 0.015 mg/L
Washington State Groundwater Criteria − 0.015 mg/L
Lead (mg/L)
0.000
0.005
0.010
0.015
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard

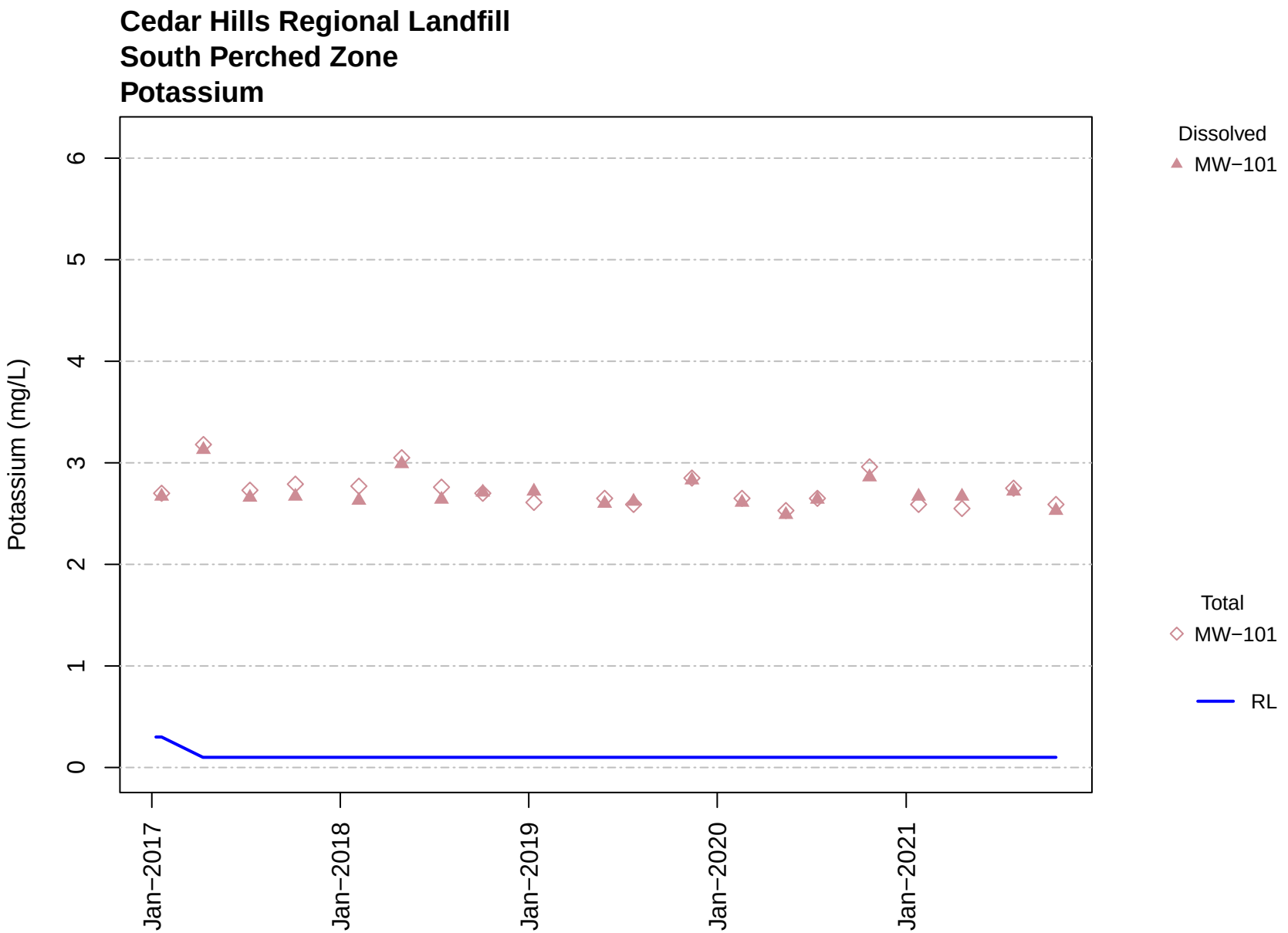

Cedar Hills Regional Landfill
East Perched Zone
Magnesium
Magnesium (mg/L)
0
20
40
60
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL


Cedar Hills Regional Landfill
South Perched Zone
Magnesium
Magnesium (mg/L)
0
20
40
60
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−101
Total
MW−101
RL

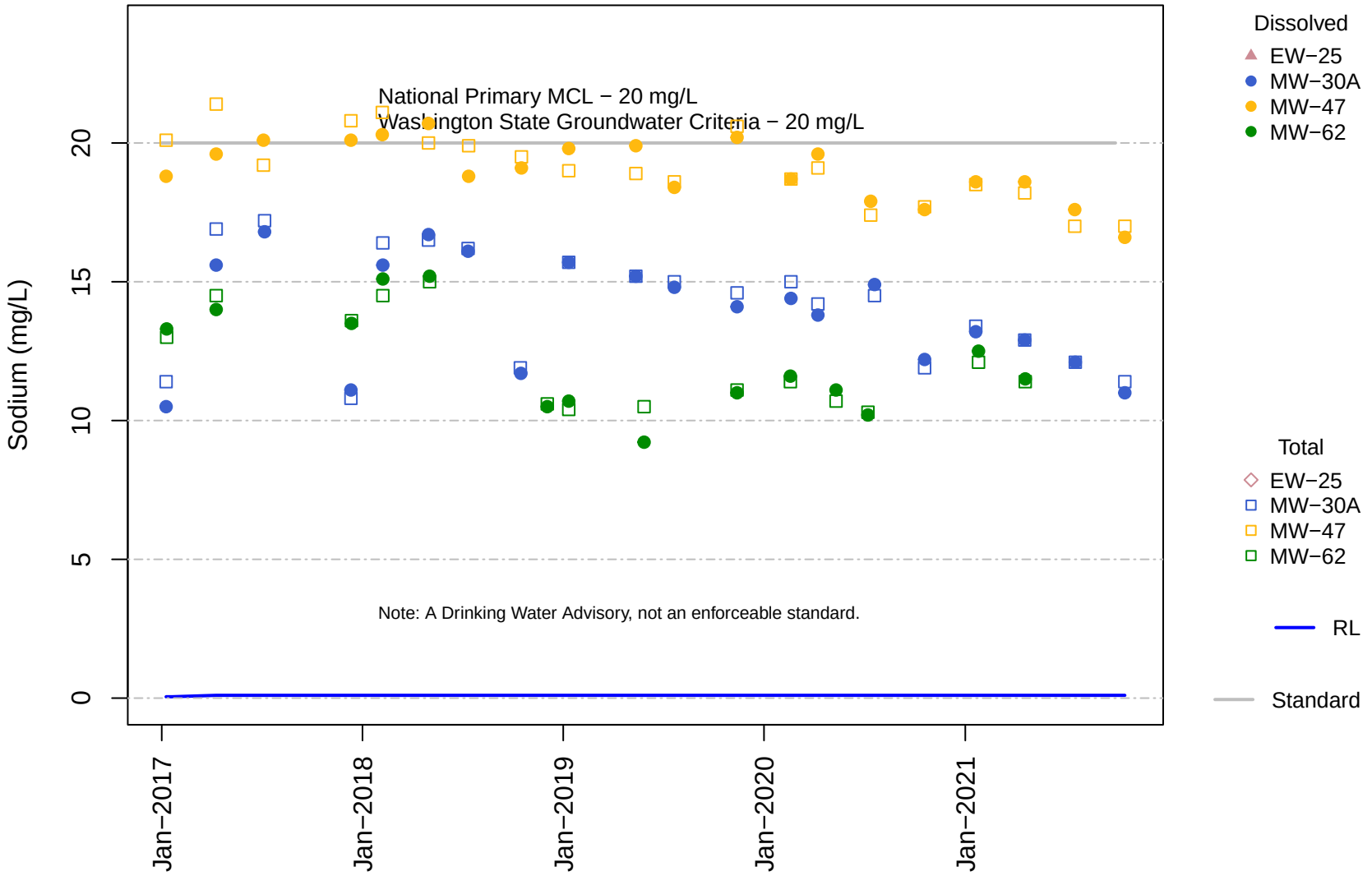

Cedar Hills Regional Landfill
East Perched Zone
Manganese
Manganese (mg/L)
0
1
2
3
4
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL
Standard

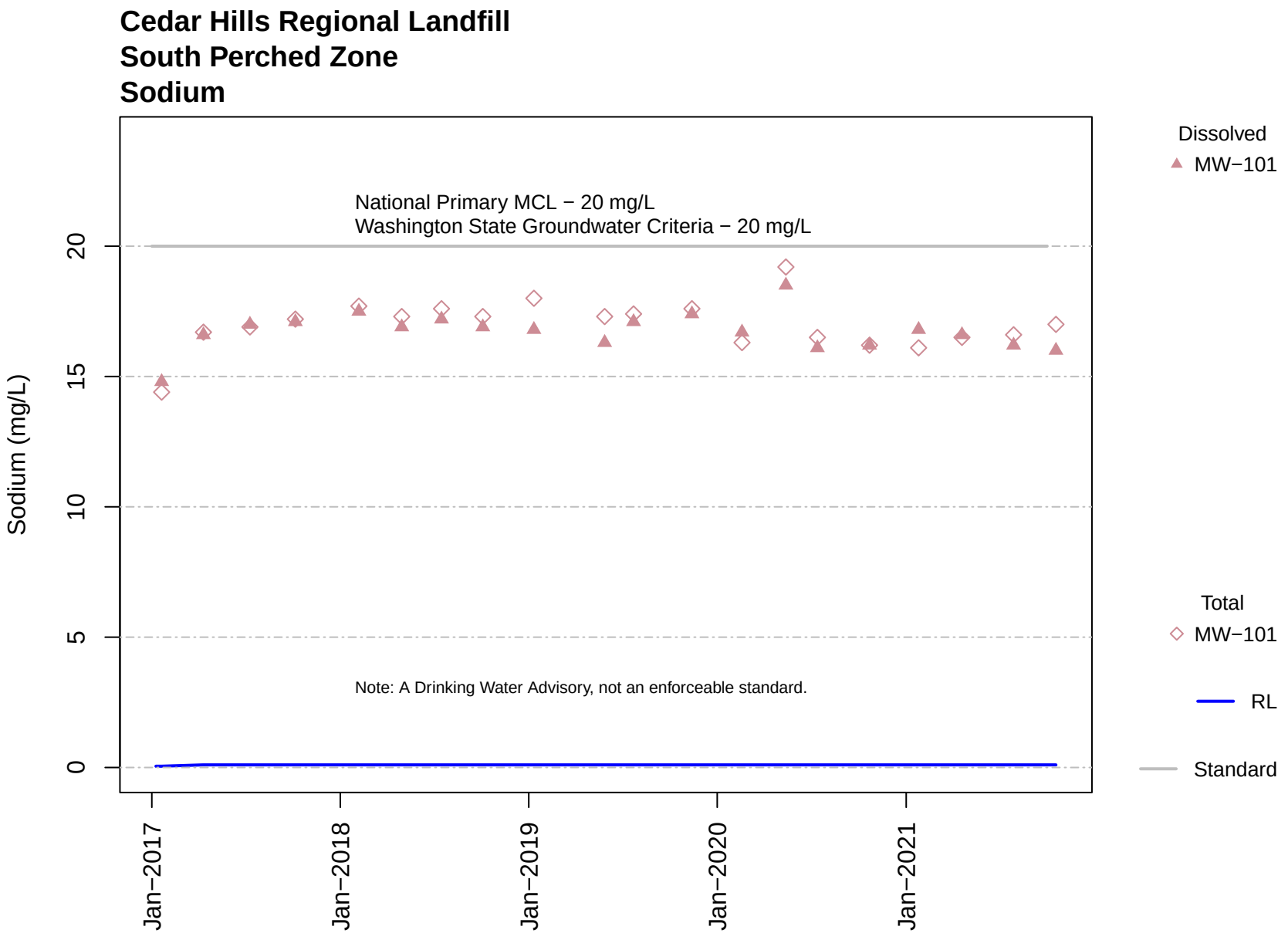

Cedar Hills Regional Landfill
South Perched Zone
Manganese
Manganese (mg/L)
0
1
2
3
4
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
National Secondary MCL − 0.5 mg/L
Washington State Groundwater Criteria − 0.5 mg/L
Dissolved
MW−101
Total
MW−101
RL
Standard

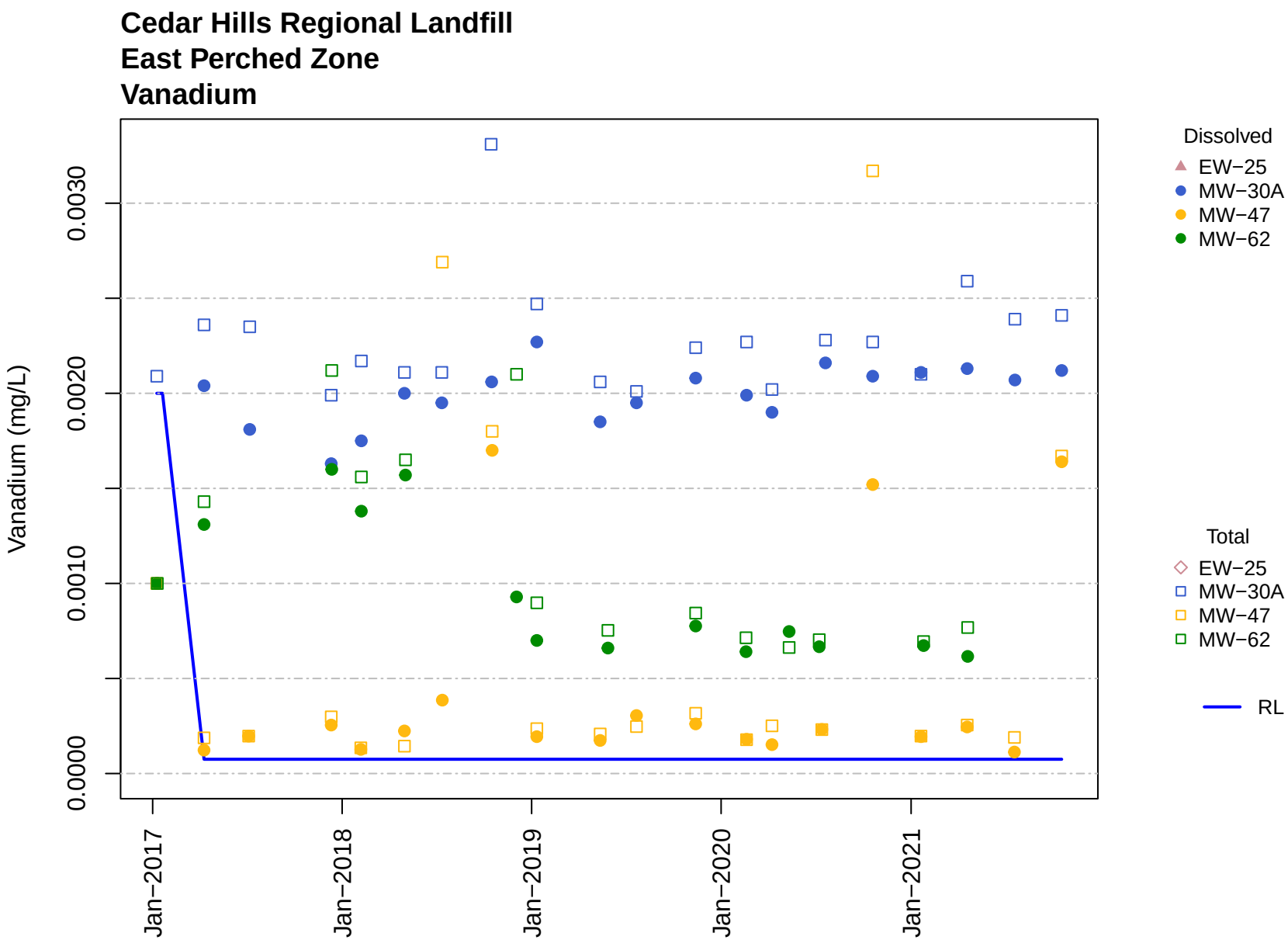

Cedar Hills Regional Landfill
East Perched Zone
Potassium
Potassium (mg/L)
0
1
2
3
4
5
6
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL

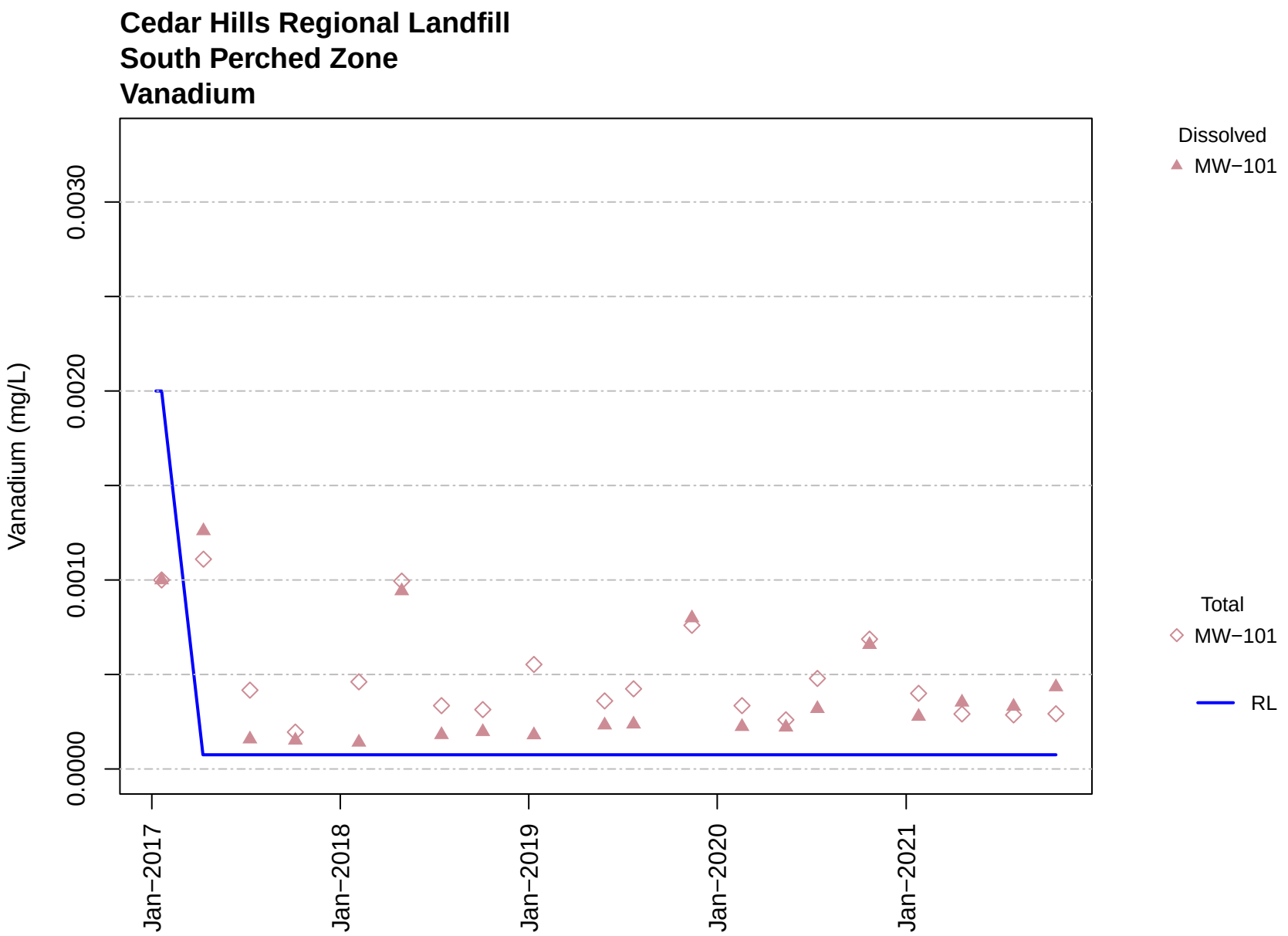

Cedar Hills Regional Landfill
South Perched Zone
Potassium
Potassium (mg/L)
0
1
2
3
4
5
6
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−101
Total
MW−101
RL

Cedar Hills Regional Landfill
East Perched Zone
Sodium

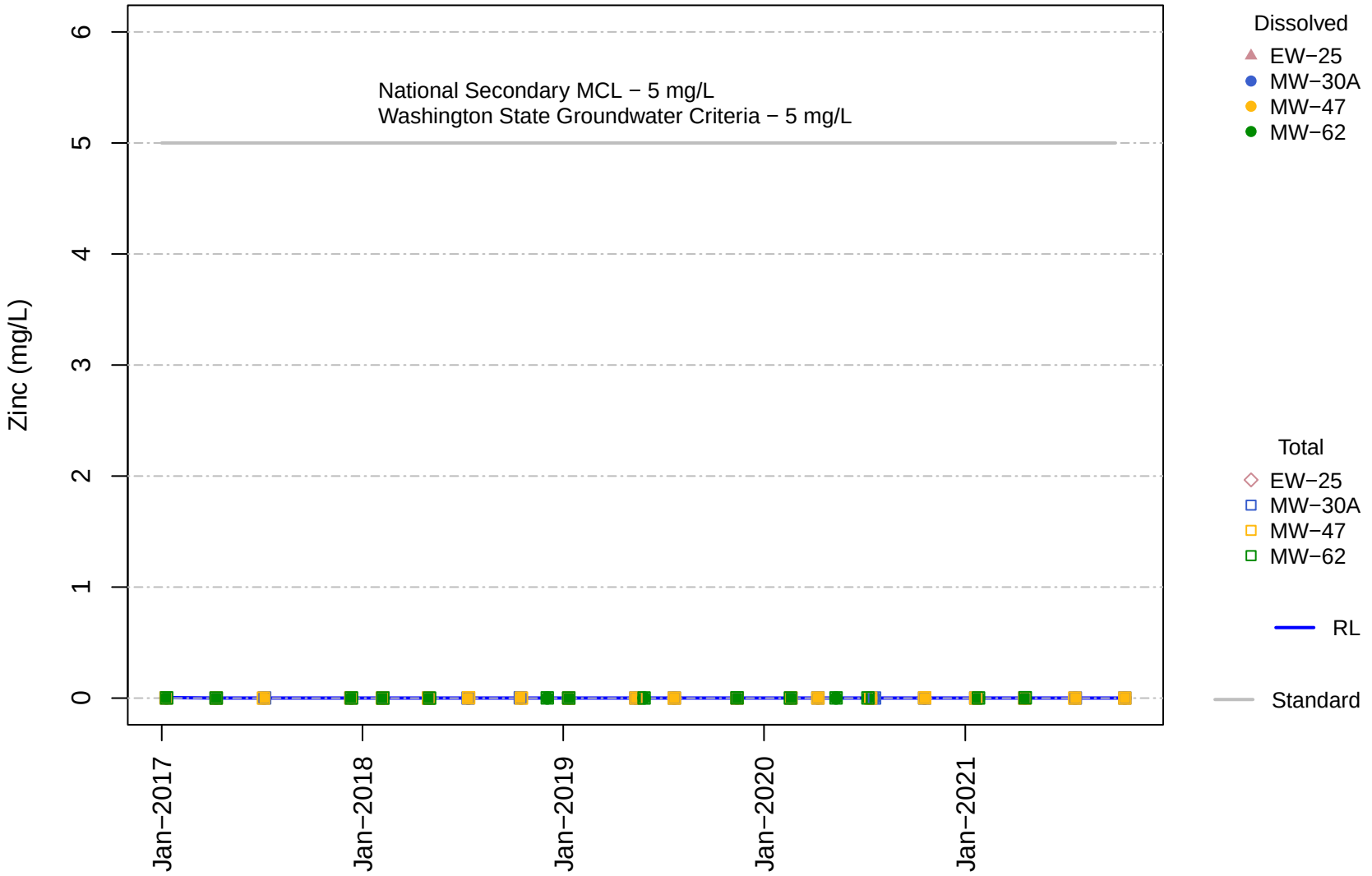


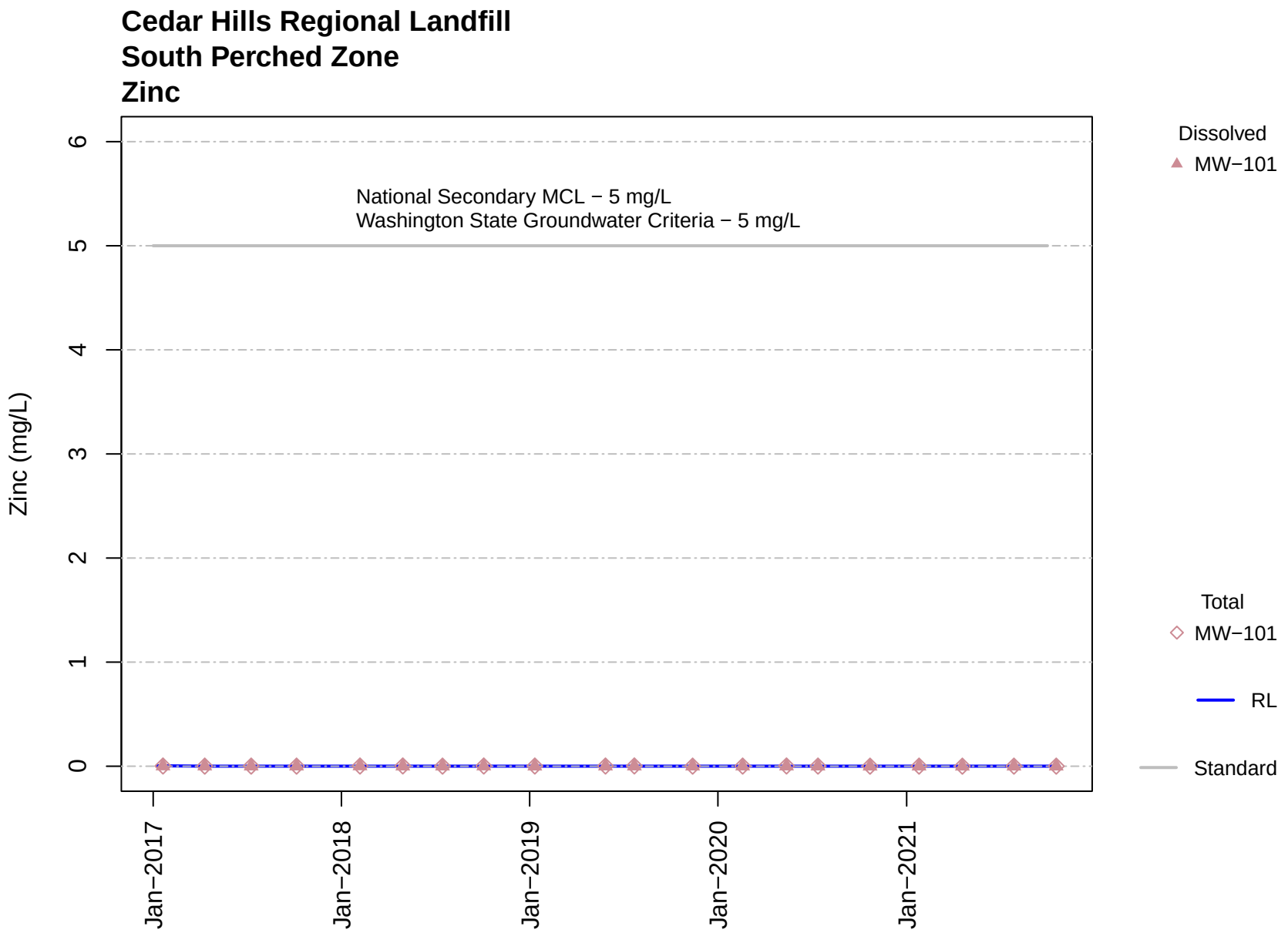

Cedar Hills Regional Landfill
South Perched Zone
Sodium
National Primary MCL − 20 mg/L
Washington State Groundwater Criteria − 20 mg/L
Note: A Drinking Water Advisory, not an enforceable standard.
Sodium (mg/L)
0
5
10
15
20
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−101
Total
MW−101
RL
Standard

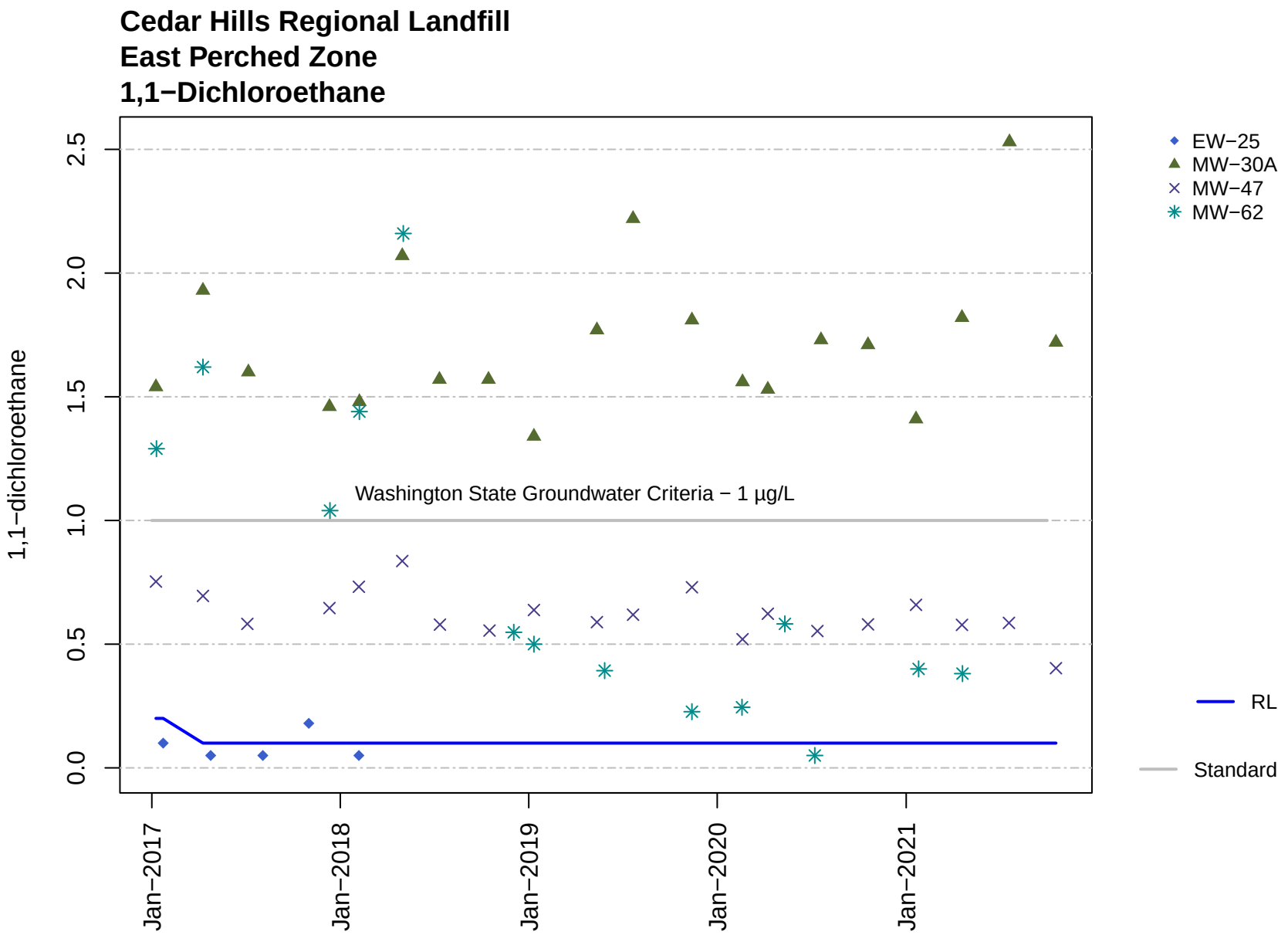

Cedar Hills Regional Landfill
East Perched Zone
Vanadium
Vanadium (mg/L)
0.0000
0.0010
0.0020
0.0030
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
EW−25
MW−30A
MW−47
MW−62
Total
EW−25
MW−30A
MW−47
MW−62
RL

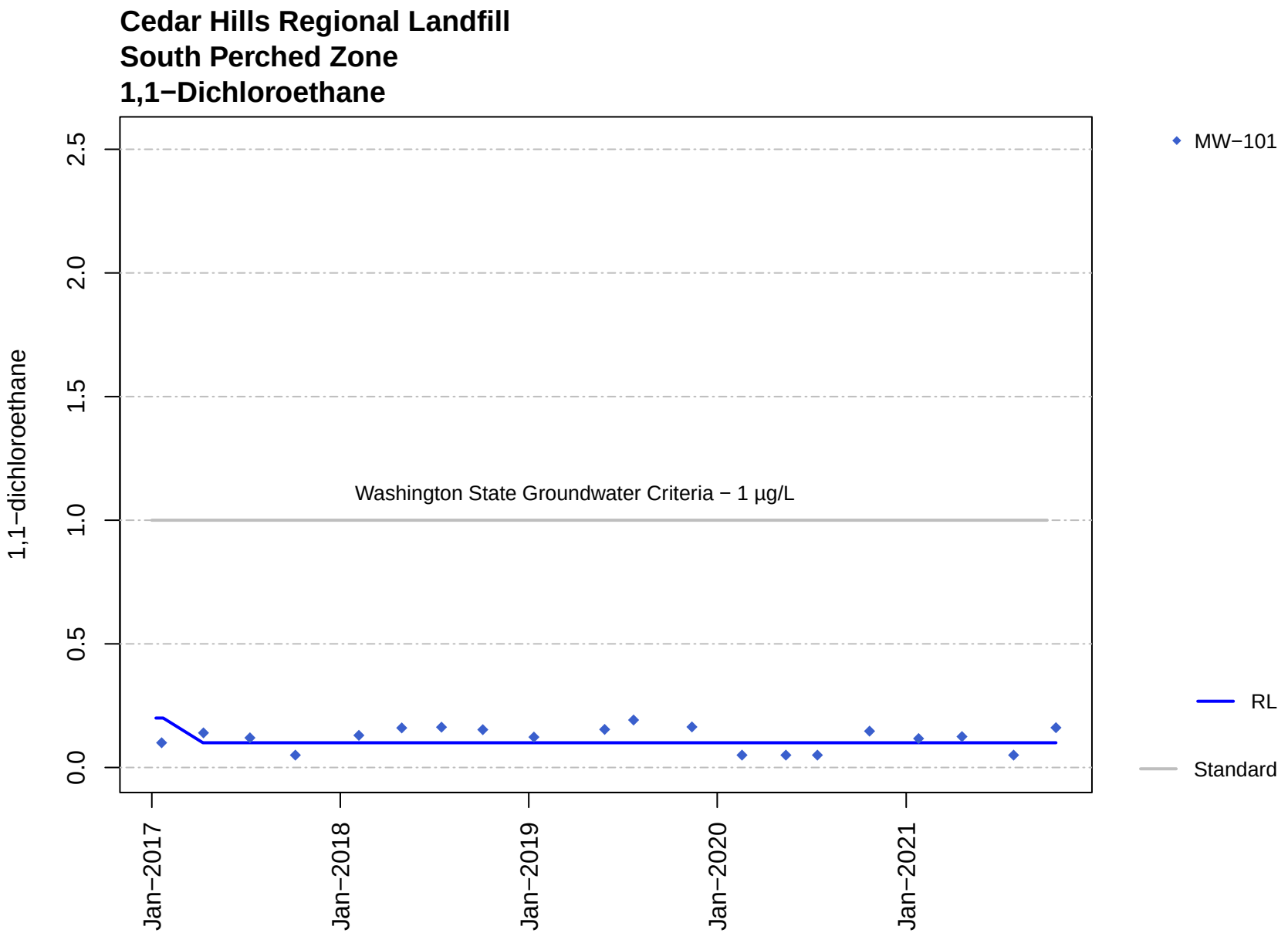

Cedar Hills Regional Landfill
South Perched Zone
Vanadium
Vanadium (mg/L)
0.0000
0.0010
0.0020
0.0030
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−101
Total
MW−101
RL

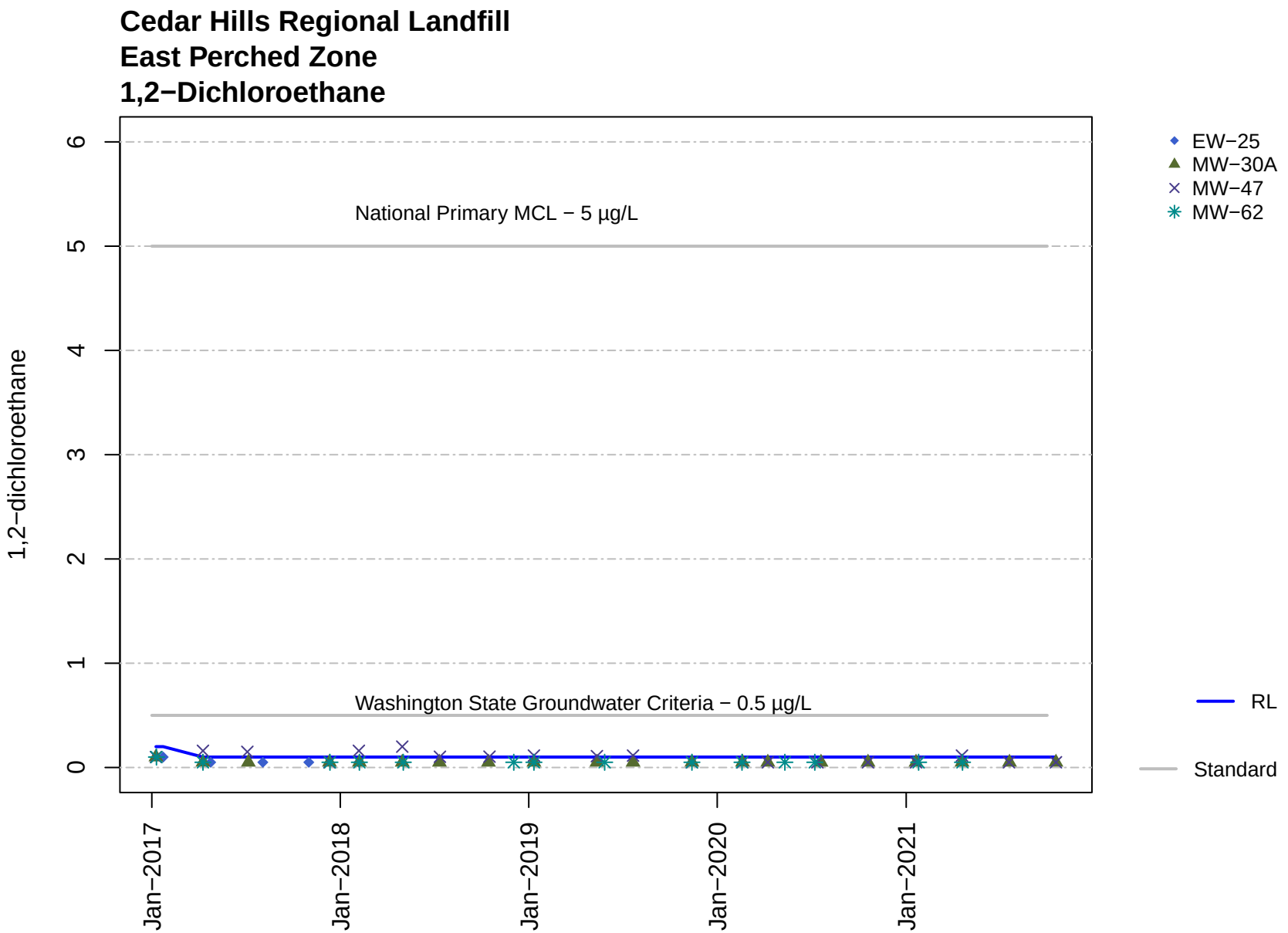
Cedar Hills Regional Landfill
East Perched Zone
Zinc

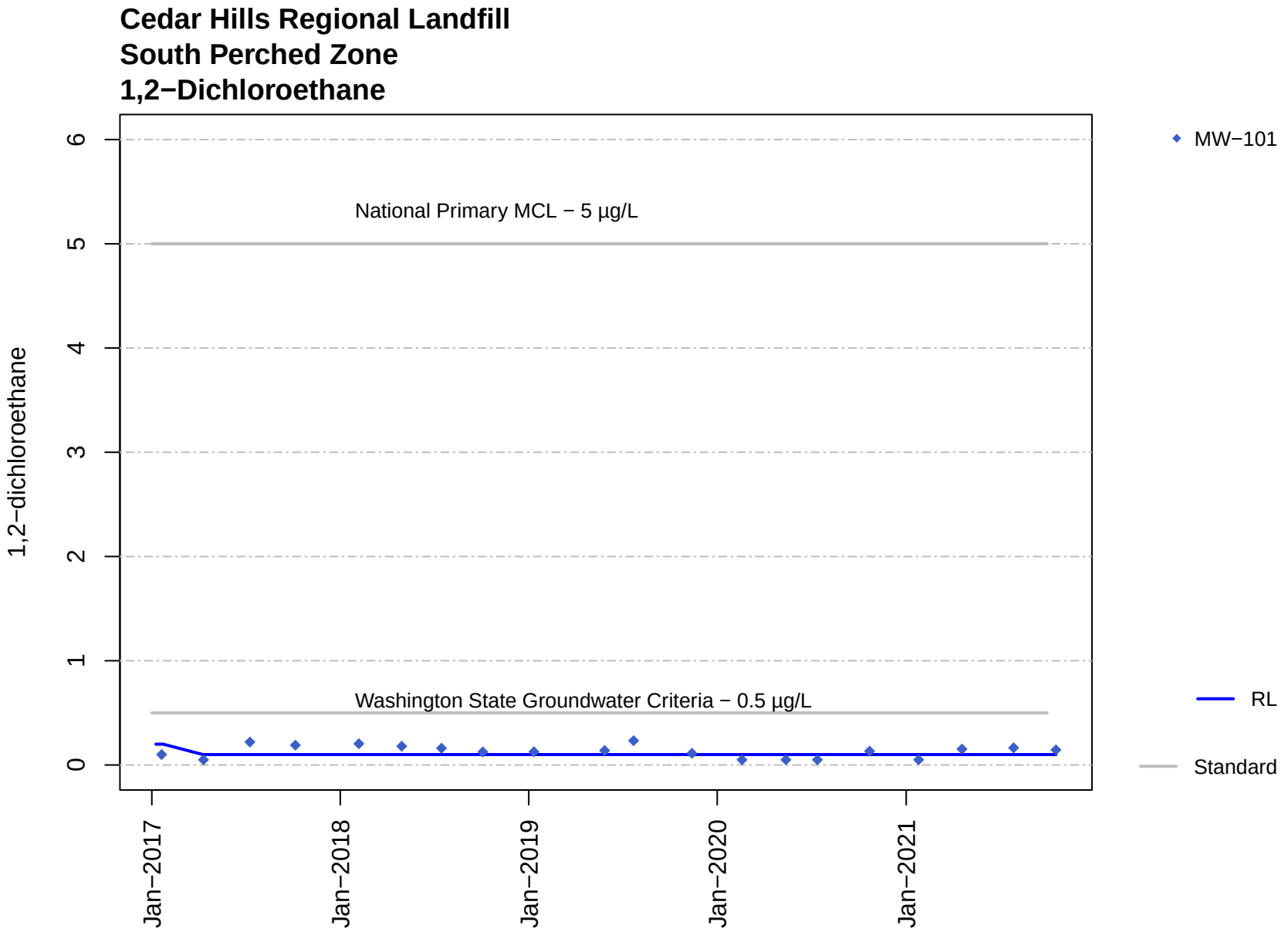


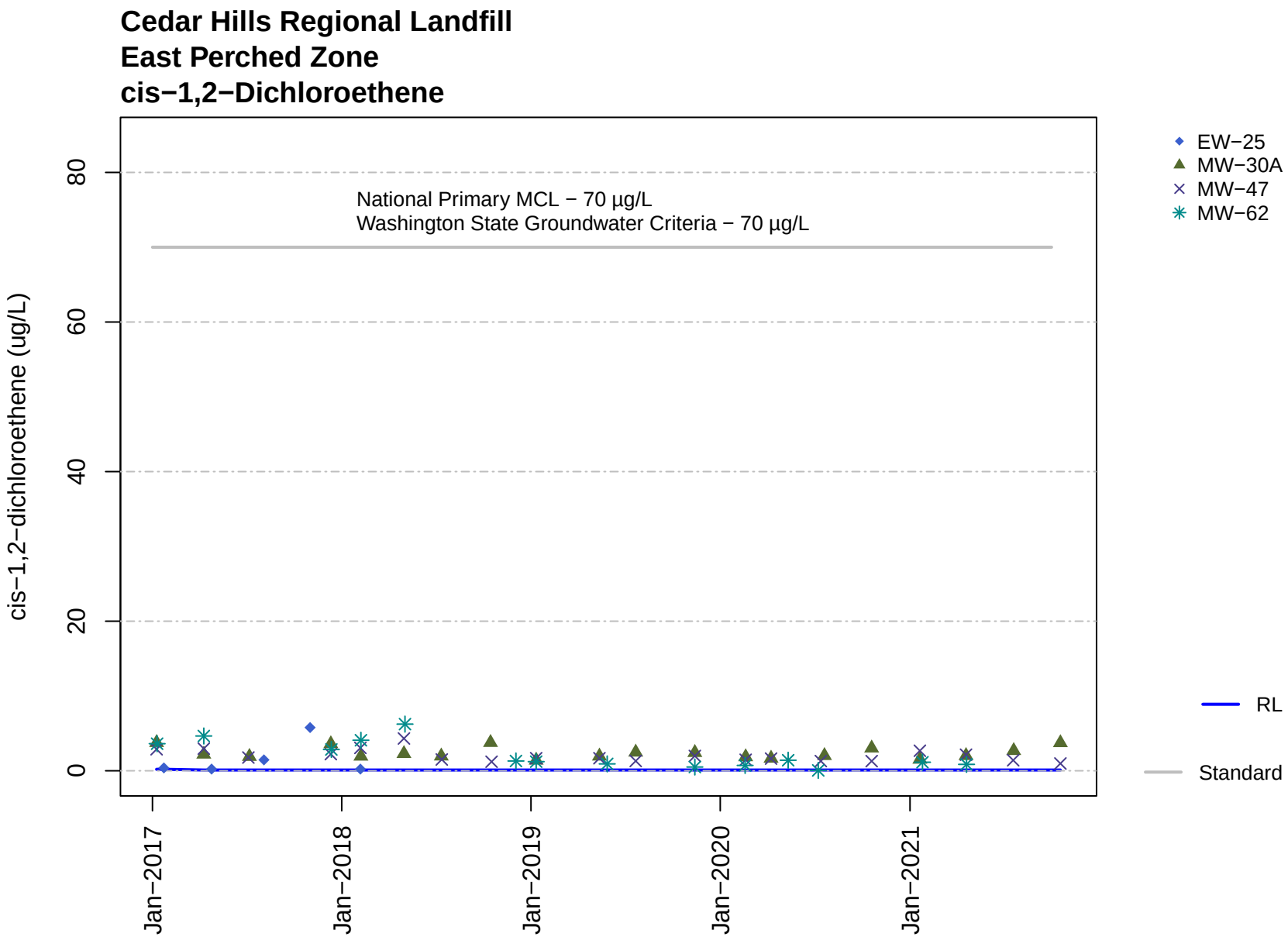

Cedar Hills Regional Landfill
South Perched Zone
Zinc
Zinc (mg/L)
0
1
2
3
4
5
6
National Secondary MCL − 5 mg/L
Washington State Groundwater Criteria − 5 mg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
Dissolved
MW−101
Total
MW−101
RL
Standard

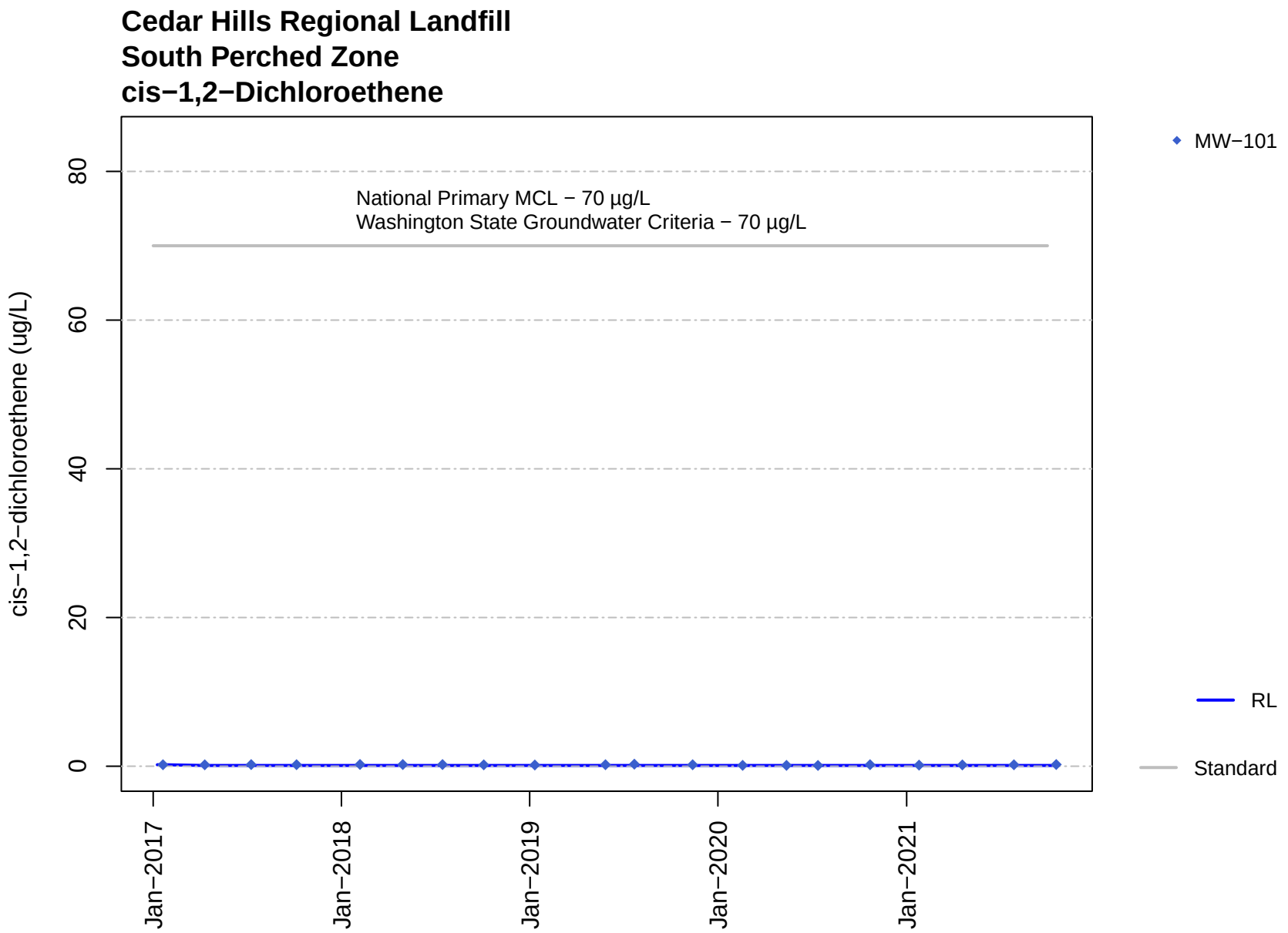

Cedar Hills Regional Landfill
East Perched Zone
1,1−Dichloroethane
1,1−dichloroethane
0.0
0.5
1.0
1.5
2.0
2.5
Washington State Groundwater Criteria − 1 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard

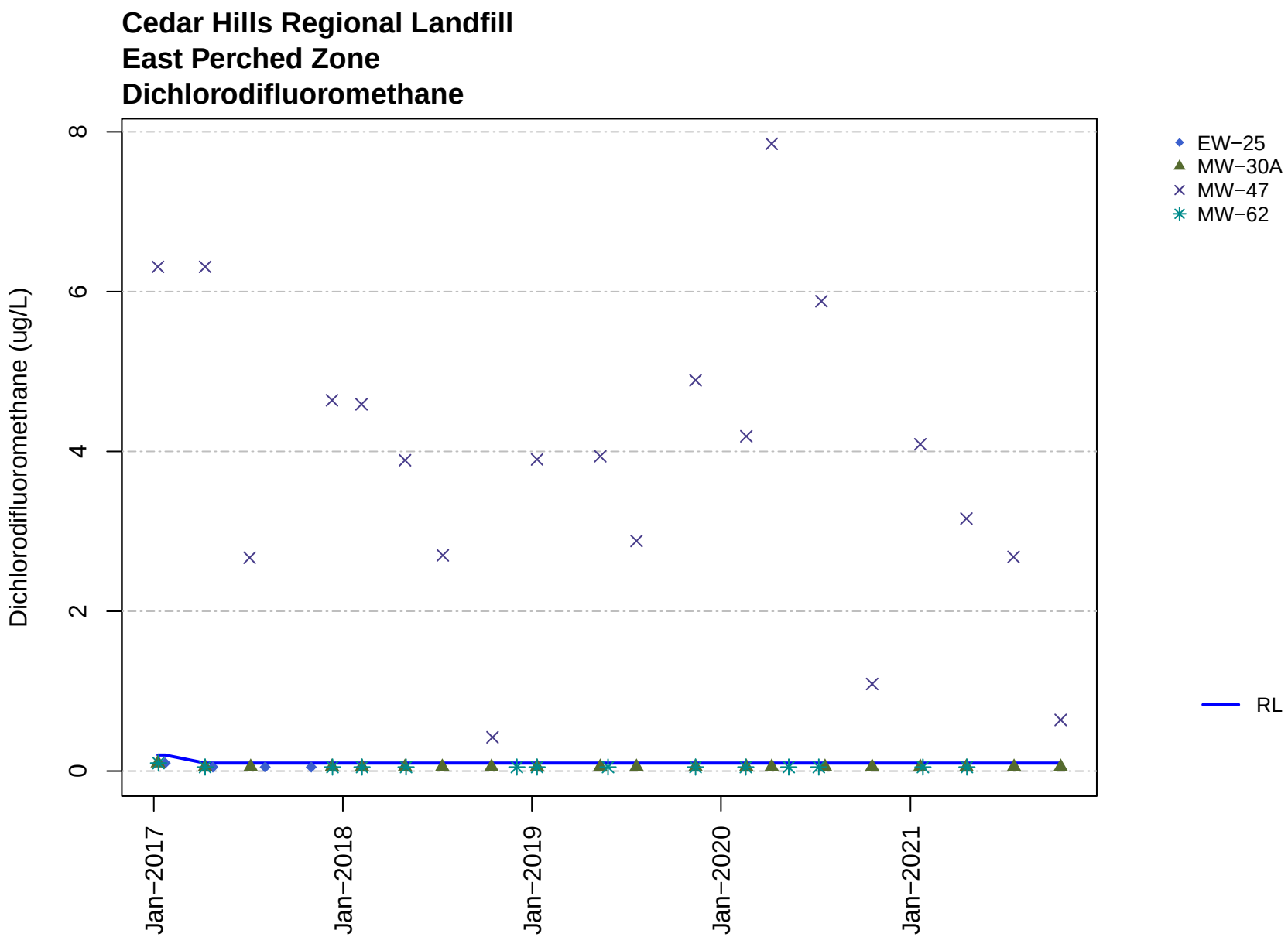

Cedar Hills Regional Landfill
South Perched Zone
1,1−Dichloroethane
1,1−dichloroethane
0.0
0.5
1.0
1.5
2.0
2.5
Washington State Groundwater Criteria − 1 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard

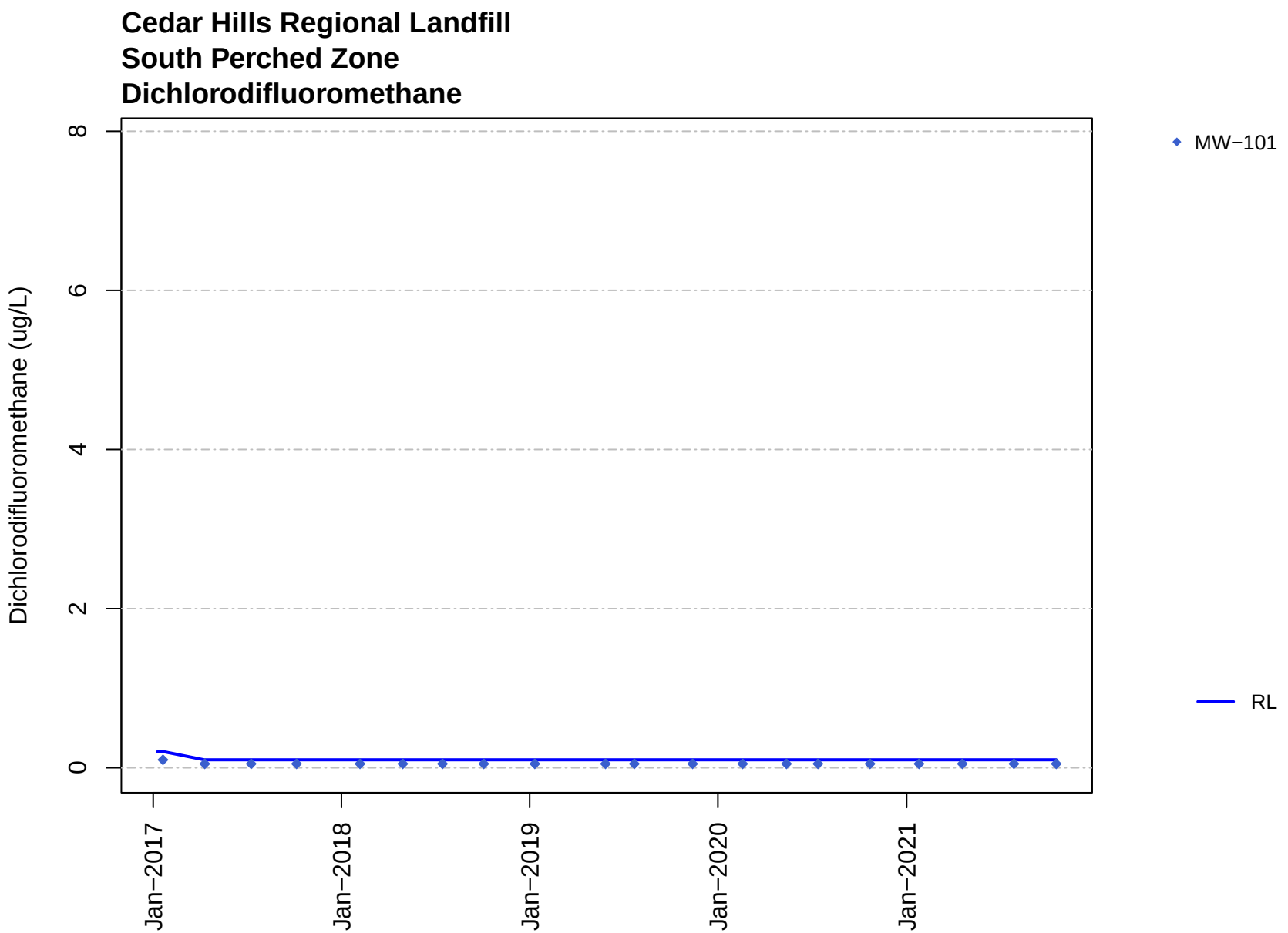

Cedar Hills Regional Landfill
East Perched Zone
1,2−Dichloroethane
1,2−dichloroethane
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.5 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard

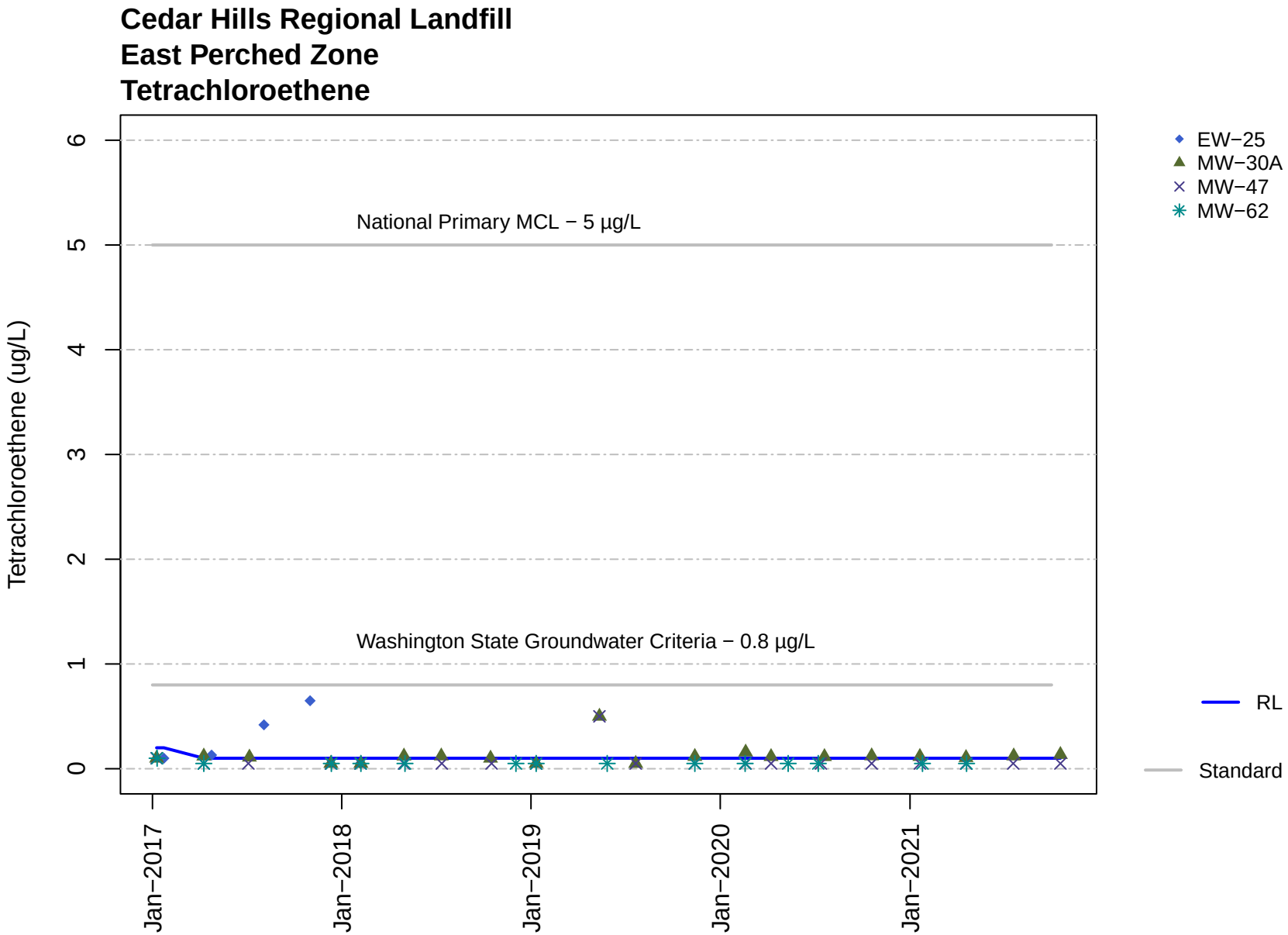

Cedar Hills Regional Landfill
South Perched Zone
1,2−Dichloroethane
1,2−dichloroethane
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.5 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard

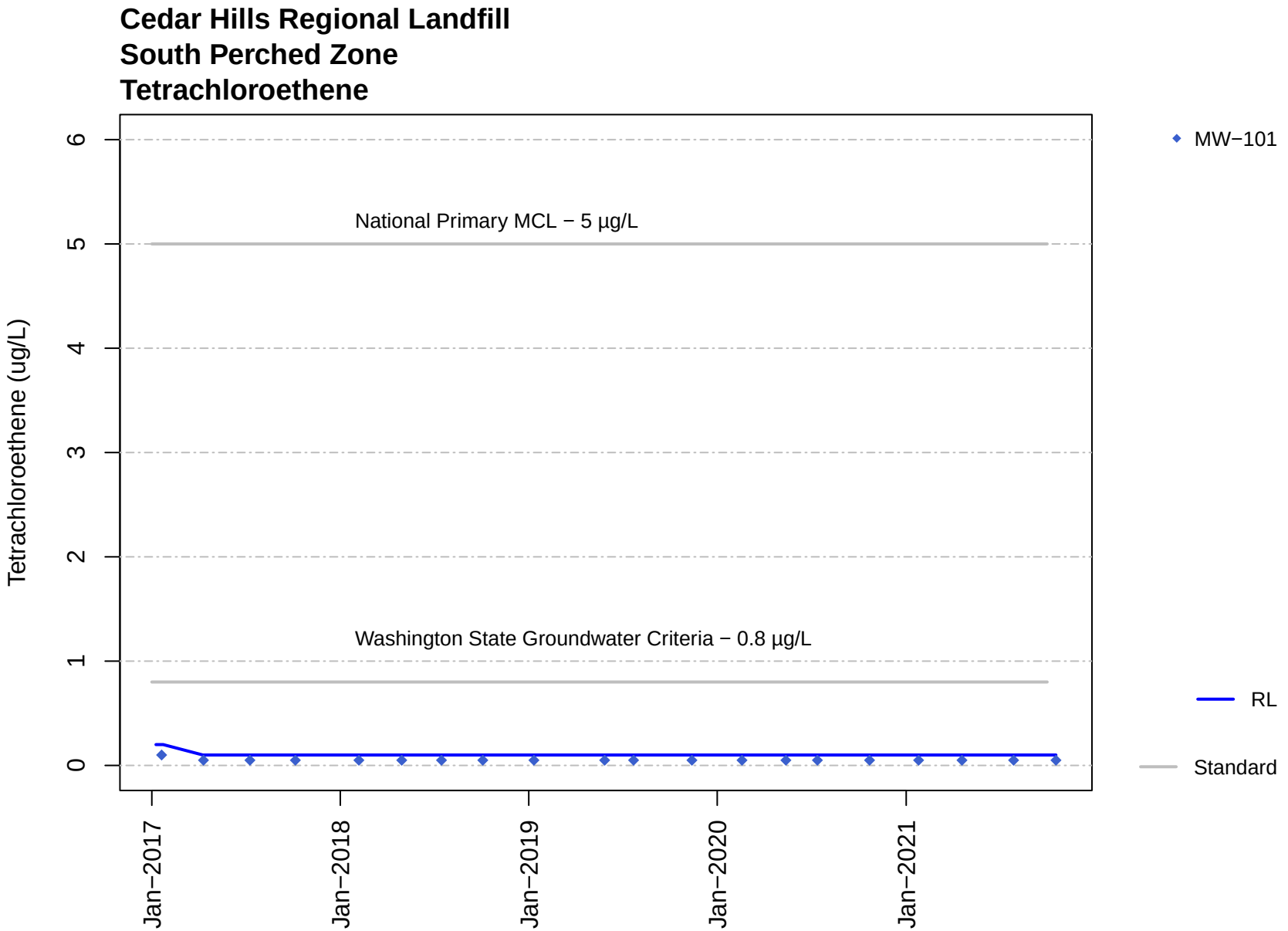

Cedar Hills Regional Landfill
East Perched Zone
cis−1,2−Dichloroethene
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard

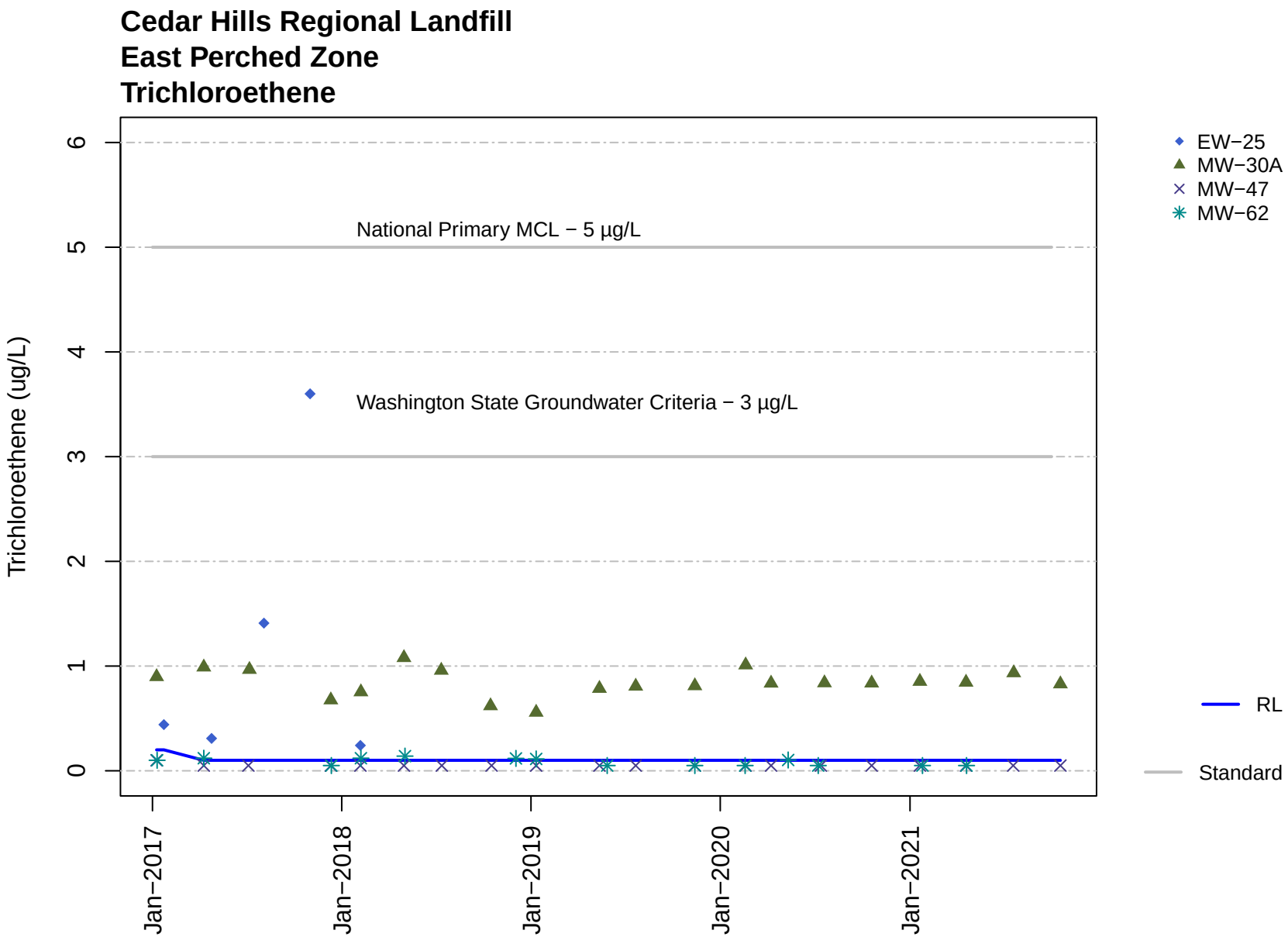

Cedar Hills Regional Landfill
South Perched Zone
cis−1,2−Dichloroethene
cis−1,2−dichloroethene (ug/L)
0
20
40
60
80
National Primary MCL − 70 µg/L
Washington State Groundwater Criteria − 70 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard

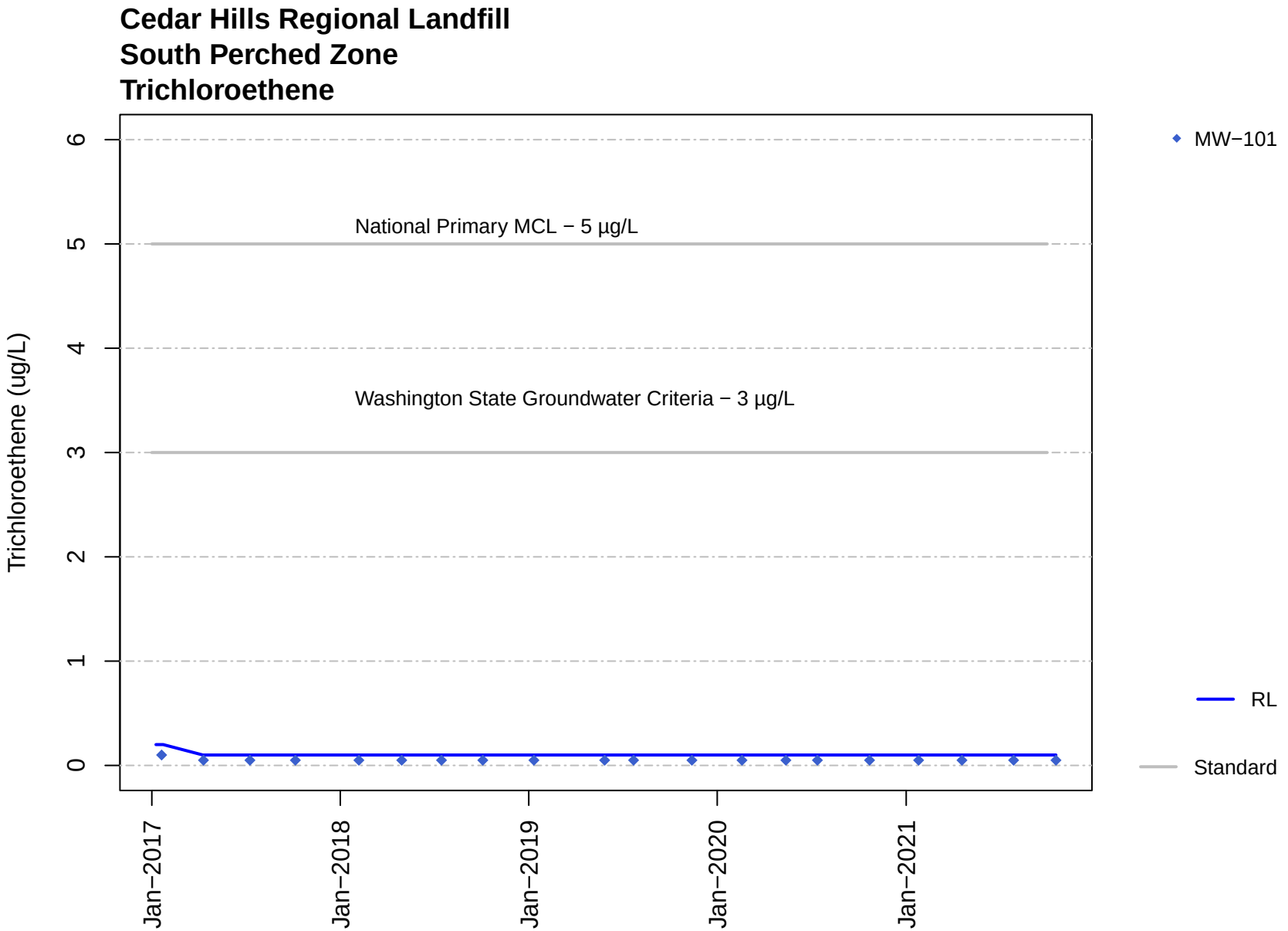

Cedar Hills Regional Landfill
East Perched Zone
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0
2
4
6
8
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL

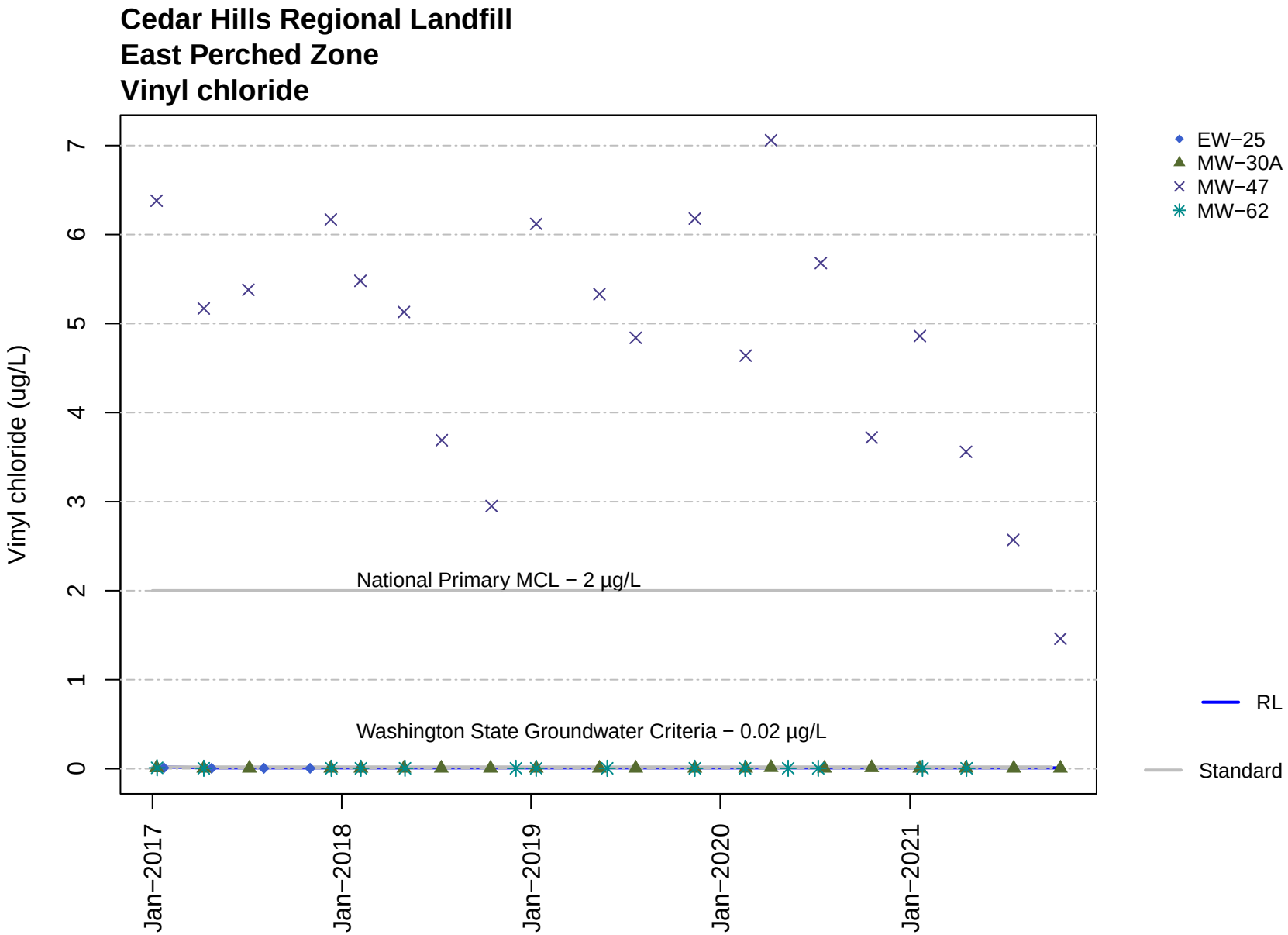

Cedar Hills Regional Landfill
South Perched Zone
Dichlorodifluoromethane
Dichlorodifluoromethane (ug/L)
0
2
4
6
8
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL

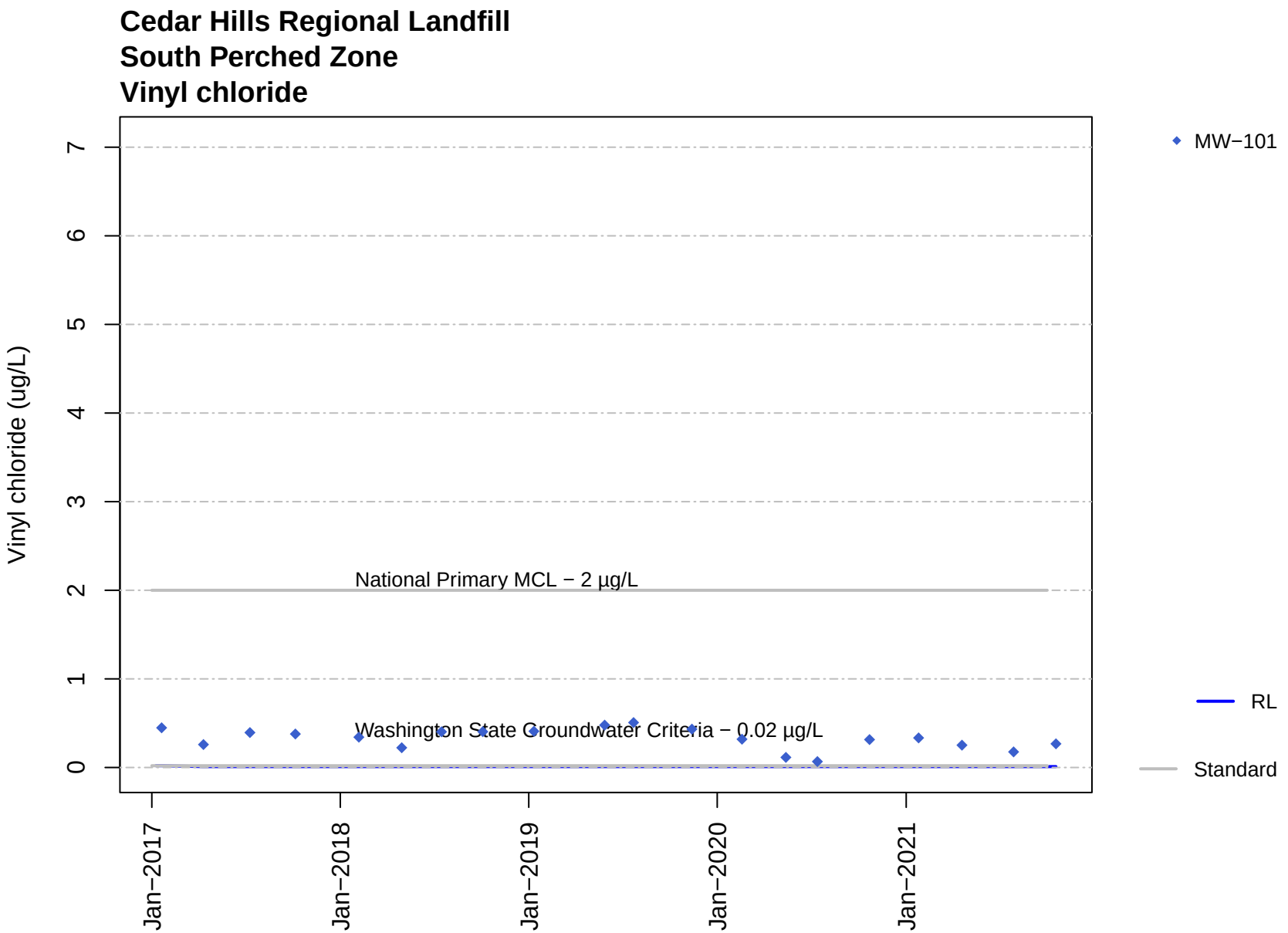

Cedar Hills Regional Landfill
East Perched Zone
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard


Cedar Hills Regional Landfill
South Perched Zone
Tetrachloroethene
Tetrachloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 0.8 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard


Cedar Hills Regional Landfill
East Perched Zone
Trichloroethene
Trichloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 3 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard


Cedar Hills Regional Landfill
South Perched Zone
Trichloroethene
Trichloroethene (ug/L)
0
1
2
3
4
5
6
National Primary MCL − 5 µg/L
Washington State Groundwater Criteria − 3 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard


Cedar Hills Regional Landfill
East Perched Zone
Vinyl chloride
Vinyl chloride (ug/L)
0
1
2
3
4
5
6
7
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
EW−25
MW−30A
MW−47
MW−62
RL
Standard


Cedar Hills Regional Landfill
South Perched Zone
Vinyl chloride
Vinyl chloride (ug/L)
0
1
2
3
4
5
6
7
National Primary MCL − 2 µg/L
Washington State Groundwater Criteria − 0.02 µg/L
Jan−2017
Jan−2018
Jan−2019
Jan−2020
Jan−2021
MW−101
RL
Standard

PART 6

Trilinear Diagrams and Ion Balance Calculations

Regional Aquifer

East Main Hill Perched Zone

South Solid Waste Area Perched Wells

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Figure 5. Trilinear Diagram Up & Crossgradient Regional Wells

Cedar Hills Regional Landfill

First Quarter 2021

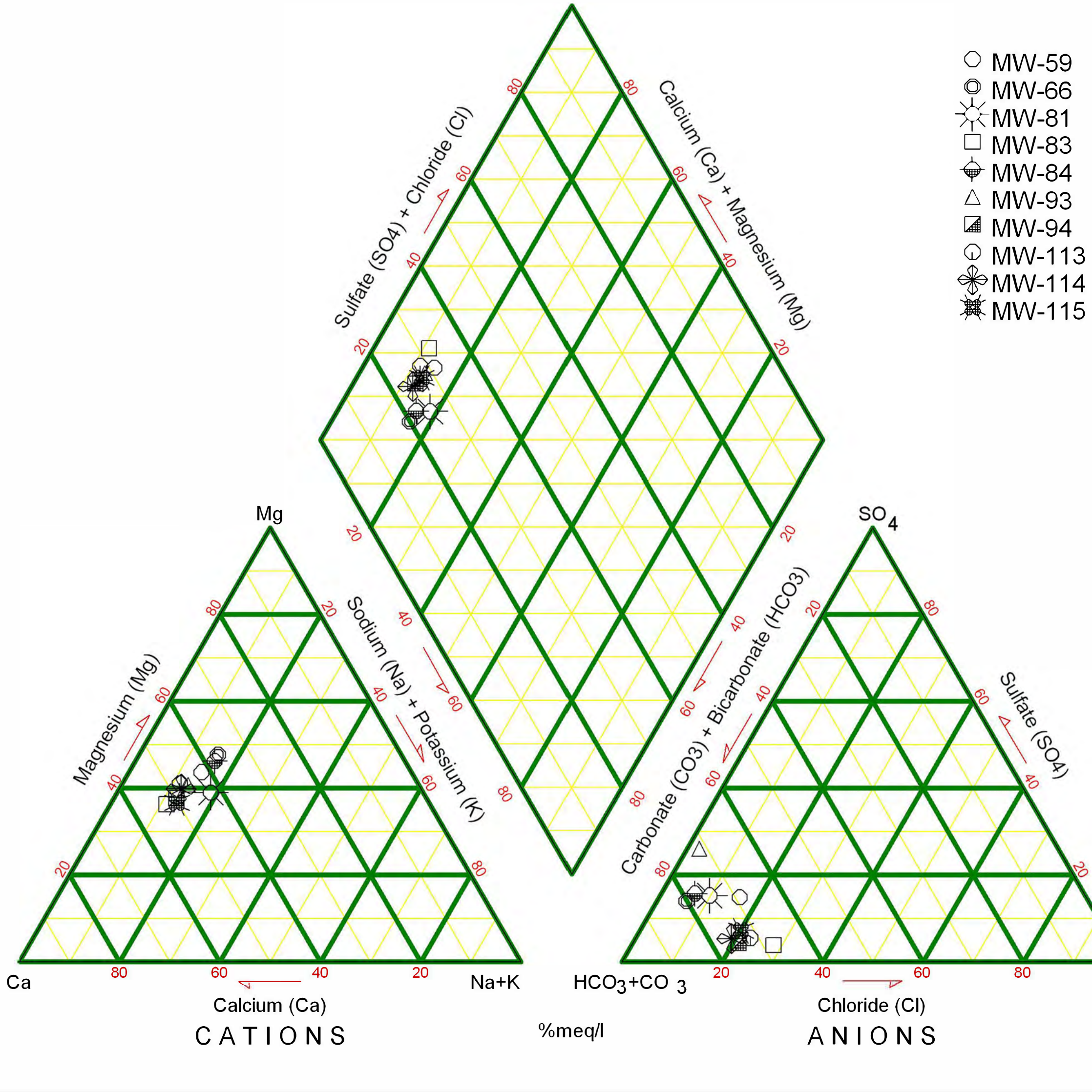


Figure 5. Trilinear Diagram Upgradient and Crossgradient Regional Wells

Cedar Hills Regional Landfill

Second Quarter 2021

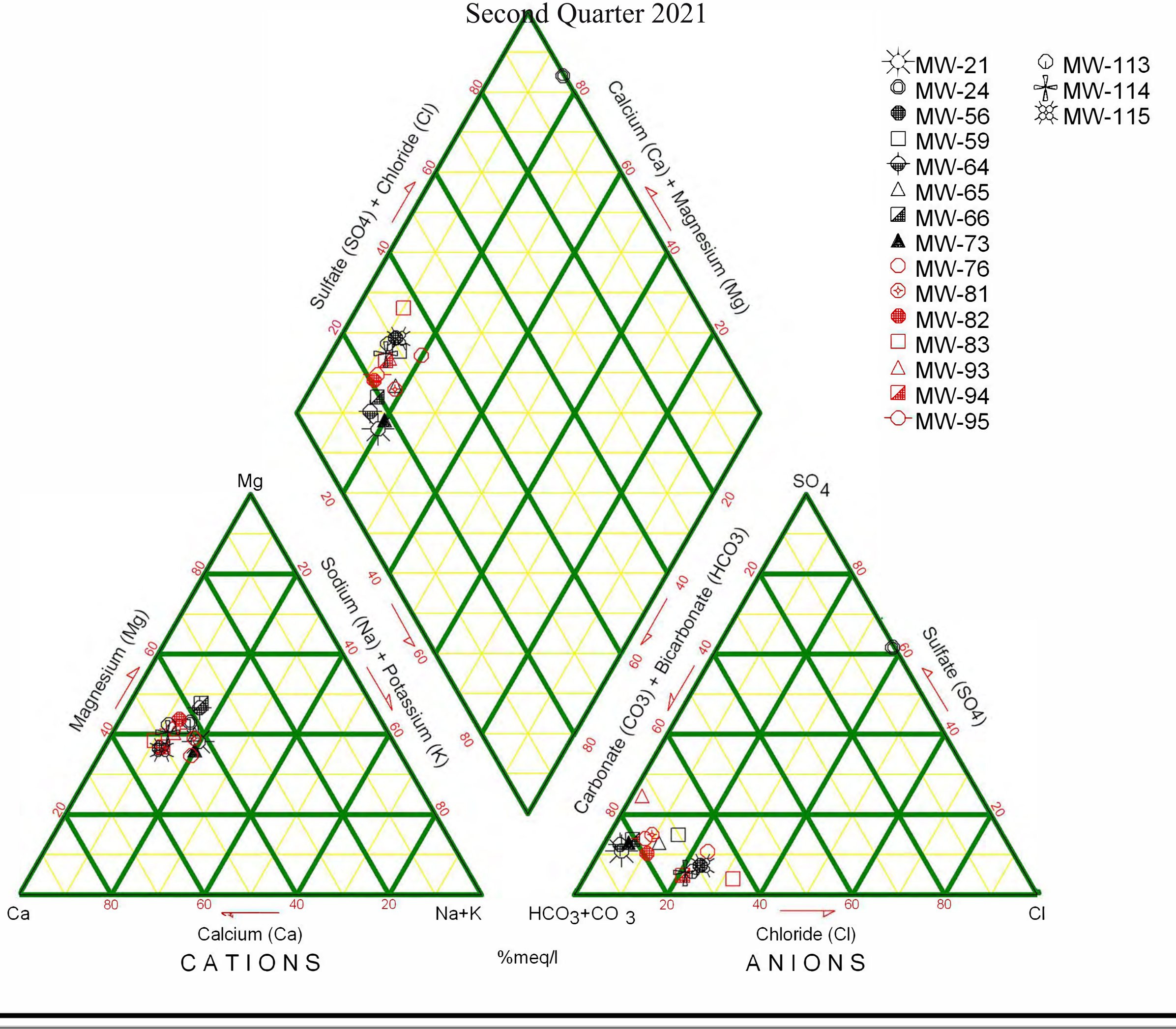


Figure 5. Trilinear Diagram Upgradient and Crossgradient Regional Wells

Cedar Hills Regional Landfill

Third Quarter 2021

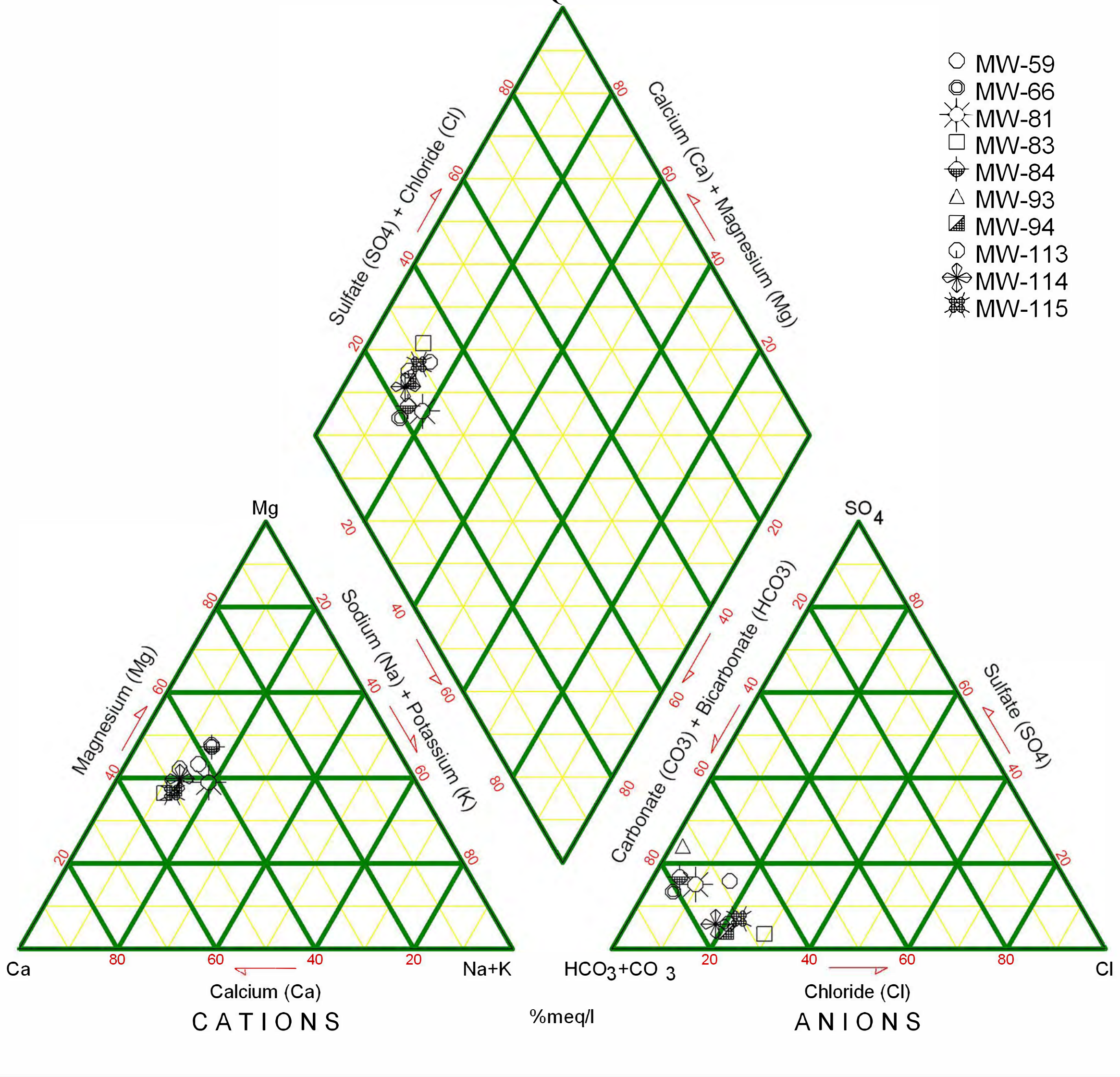


Figure 5. Trilinear Diagram Upgradient and Crossgradient Regional Wells
Cedar Hills Regional Landfill
Fourth Quarter 2021

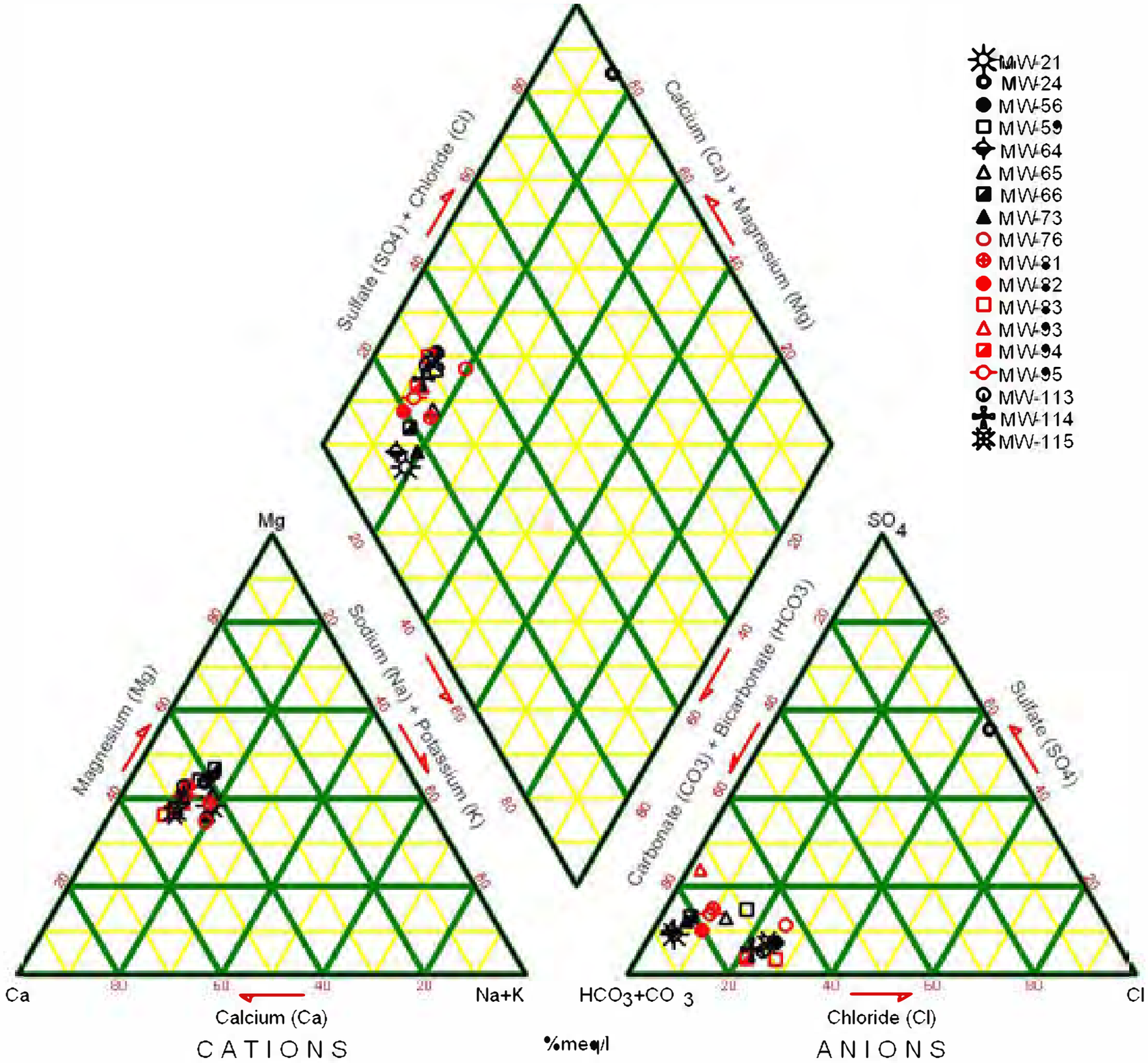


Figure 6. Trilinear Diagram Downgradient Regional Wells

Cedar Hills Regional Landfill

First Quarter 2021

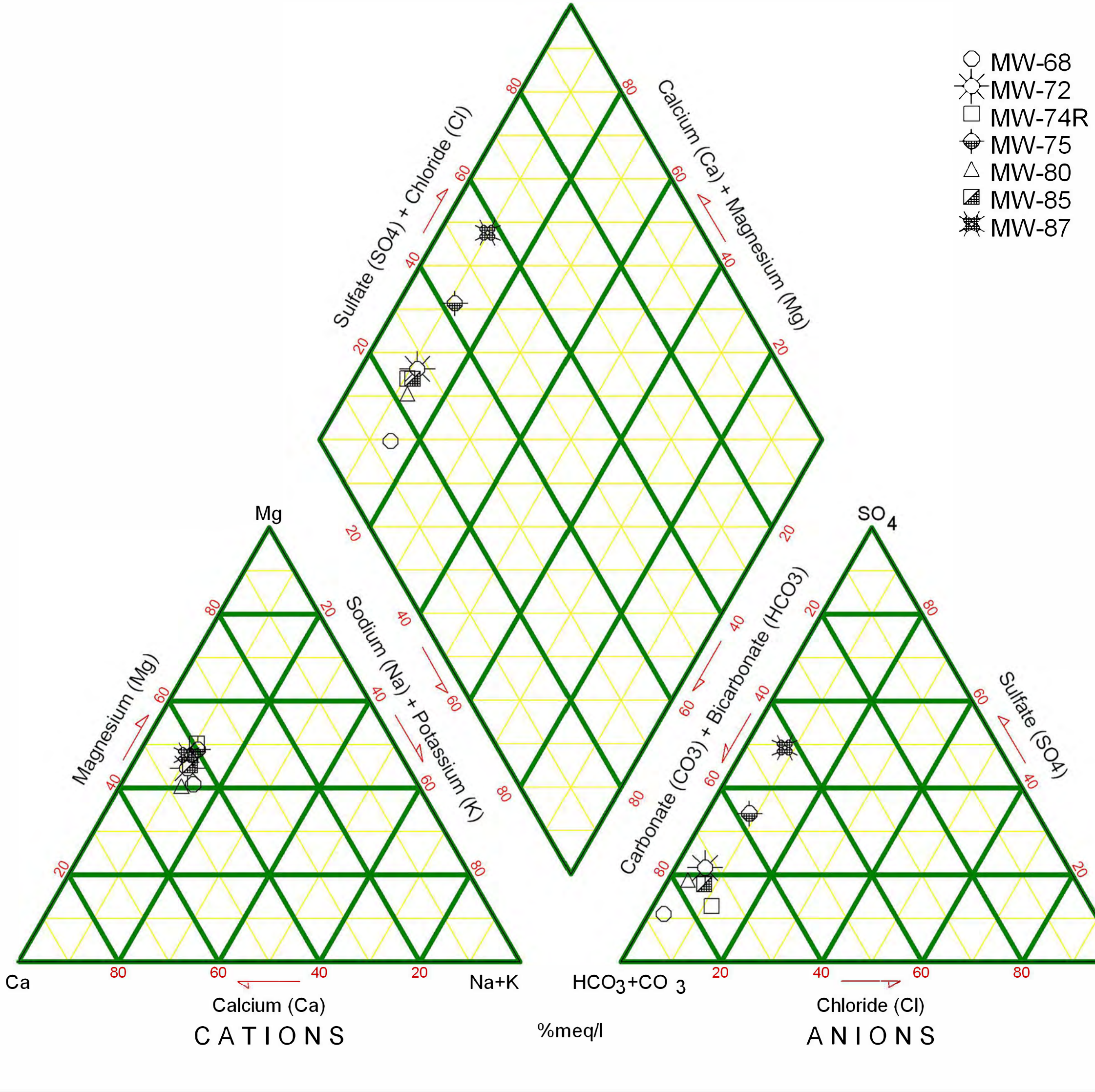


Figure 6. Trilinear Diagram Downgradient Regional Wells

Cedar Hills Regional Landfill

Second Quarter 2021

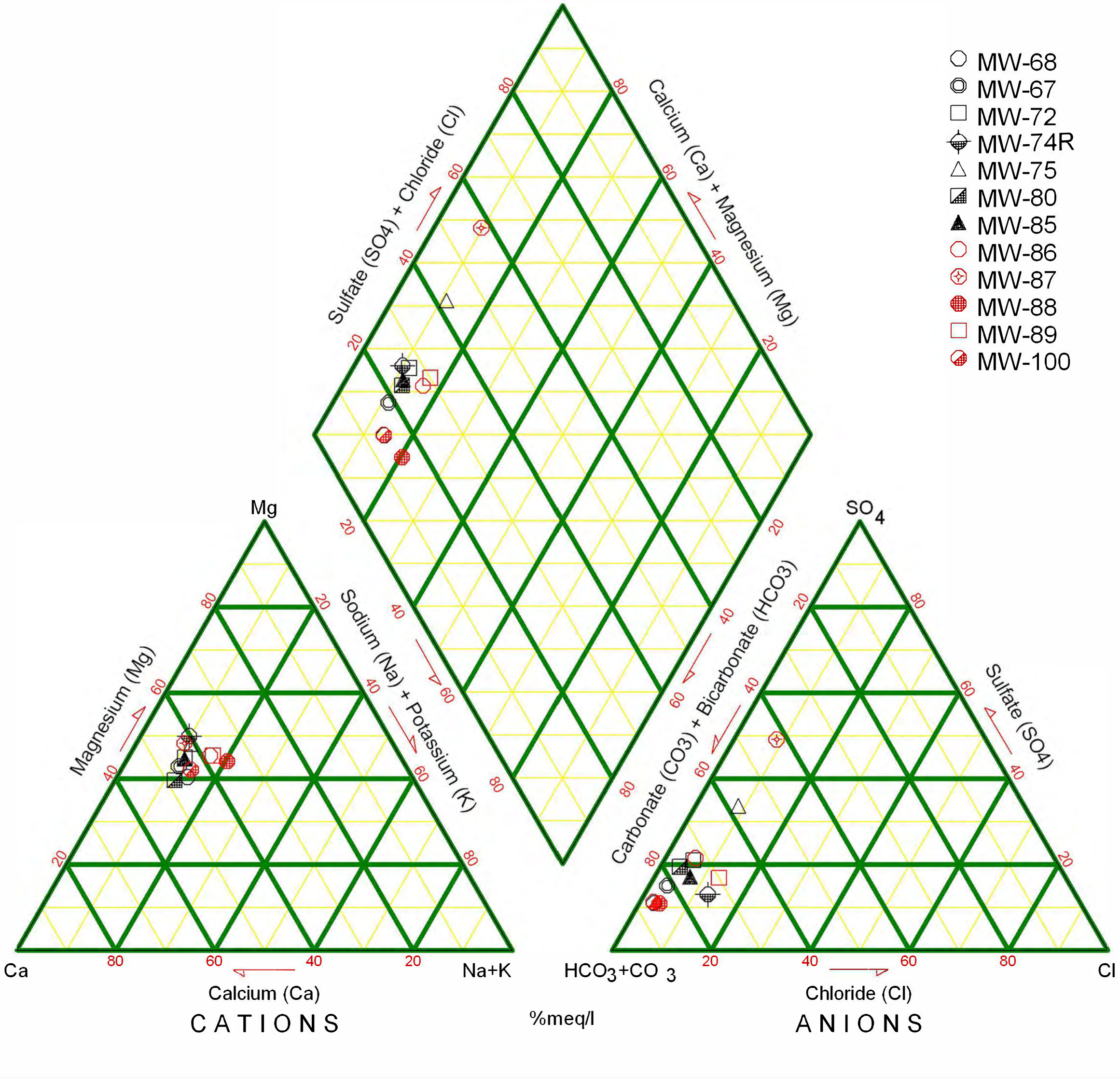


Figure 6. Trilinear Diagram Downgradient Regional Wells

Cedar Hills Regional Landfill

Third Quarter 2021

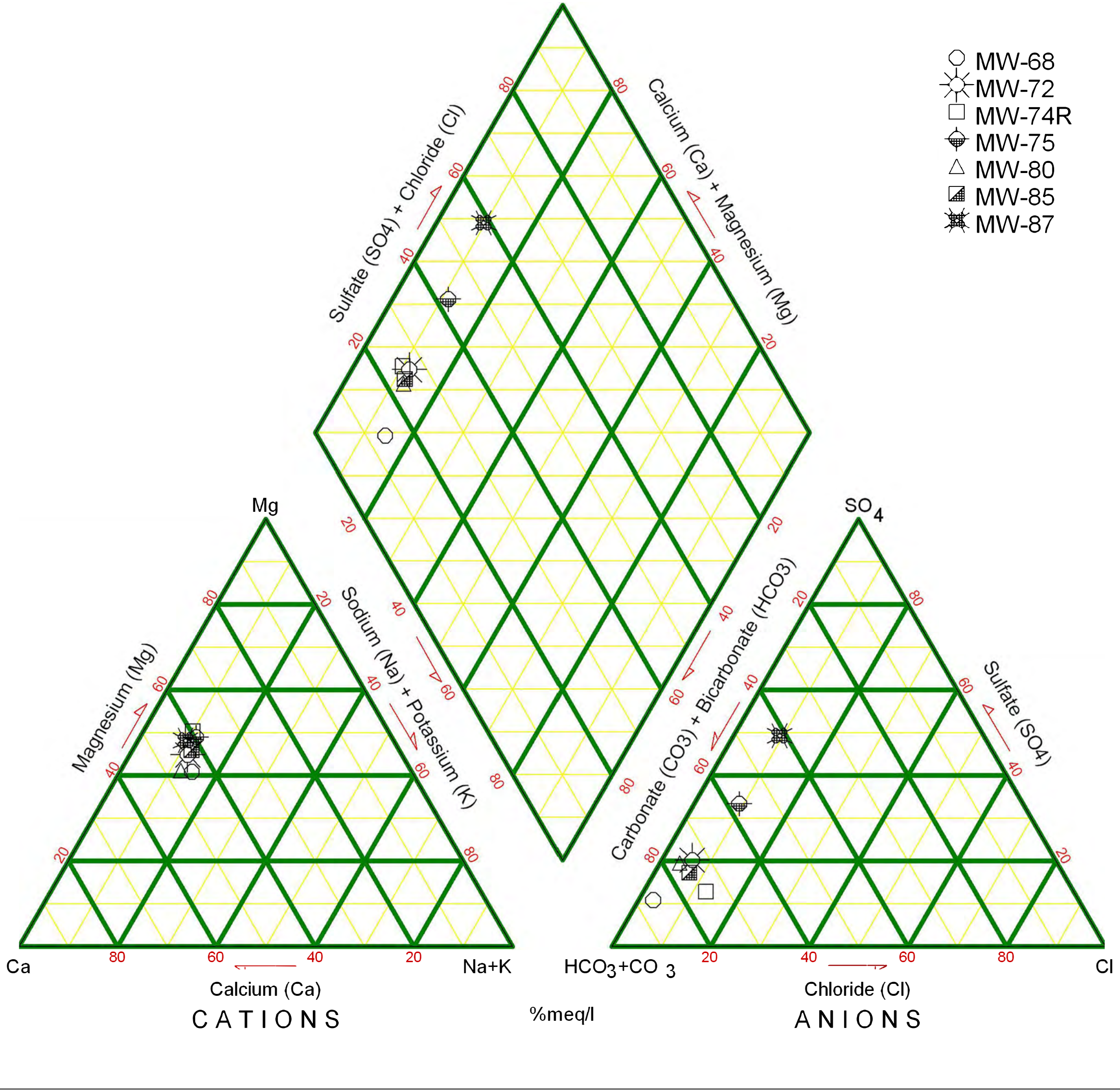


Figure 6. Trilinear Diagram Downgradient Regional Wells
Cedar Hills Regional Landfill
Fourth Quarter 2021

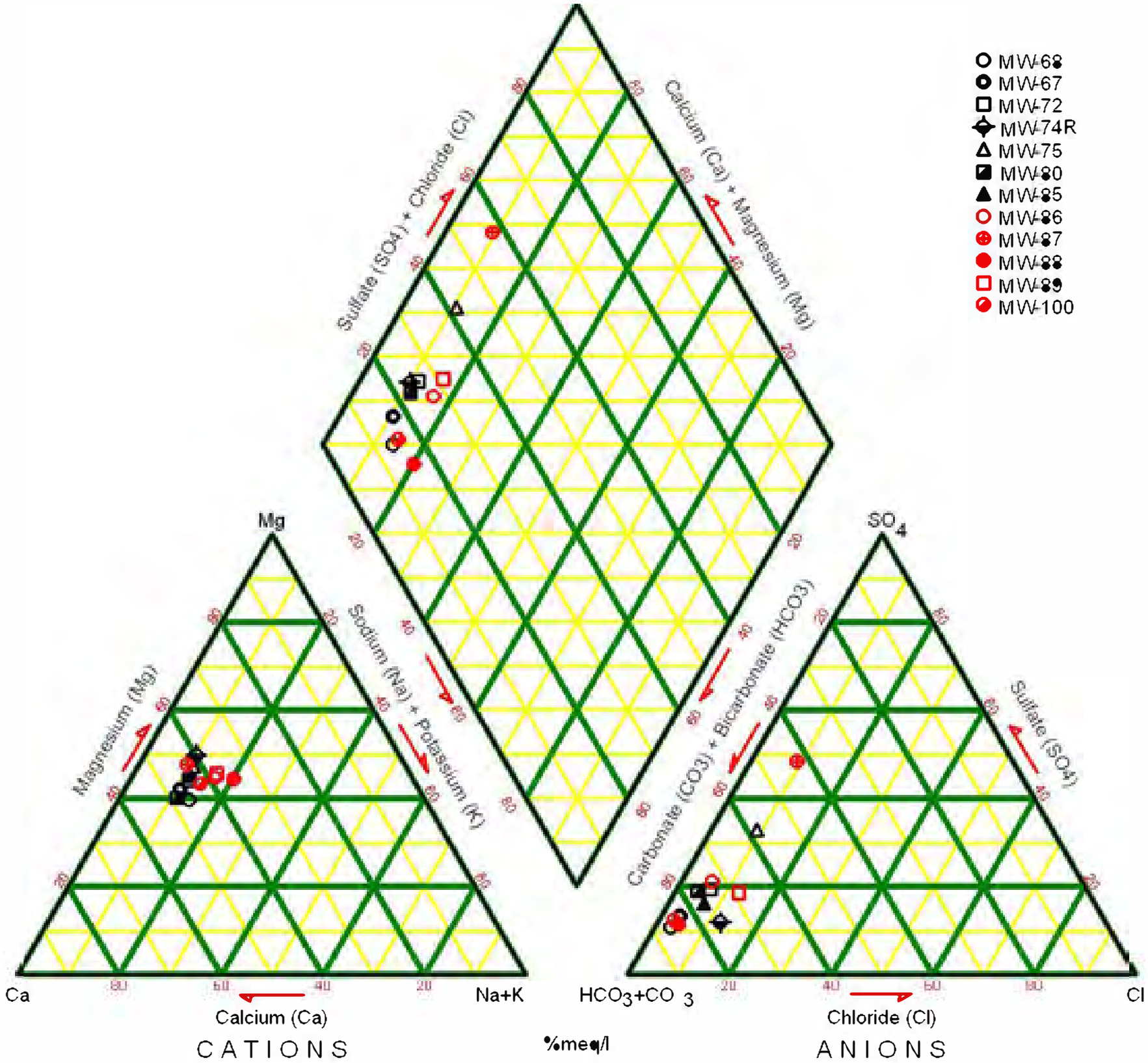


Table 4

Ion Balanace Calculations

Cedar Hills Regional Landfill

Quarterly Regional Aquifer Groundwater Monitoring

Data Collected from Janurary 1, 2021 to March 31, 2021

			Quarterly Upgradient and Crossgradient Wells																	
	Site ID		MW-59			MW-66			MW-81			MW-83			MW-84			MW-93		
	Date		1/11/21			1/5/21			1/5/21			1/7/21			2/1/21			1/6/21		
Cations	**Molecular Weight**	**n**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	%(meq)
pH			6.6			6.7			6.8			6.6			6.8			7.0		
Conductance			210.7			183.8			147.9			601.0			191.8			302.8		
TDSobs			133.0			131.0			109.0			405.0			141.0			209.0		
Calcium	40.1	2	18.0	0.90	38.7	15.9	0.79	36.5	14.3	0.71	42.3	70.7	3.53	52.5	17.0	0.85	37.9	31.9	1.59	45.8
Magnesium	24.3	2	11.4	0.94	40.5	12.6	1.03682	47.7	8.0	0.66	39.0	29.7	2.44	36.3	12.6	1.03682	46.3	17.2	1.42	40.7
Potassium	39.1	1	1.2	0.030	1.3	1.1	0.03	1.3	0.87	0.022	1.3	3.9	0.10	1.5	1.2	0.03	1.4	1.6	0.04	1.1
Sodium	23.0	1	6.5	0.28	12.1	7.2	0.31	14.5	6.7	0.29	17.4	15.0	0.65	9.7	7.4	0.32	14.4	9.6	0.42	12.0
Iron	55.8	2	4.67	0.17	7.2	0.010	0.00036	0.016	0.01	0.00036	0.02	0.01	0.00036	0.0053	0.010	0.00036	0.016	0.010	0.00036	0.010
Manganese	54.9	2	0.13	0.00466	0.20	0.0001	3.6E-06	0.0002	0.0001	3.6E-06	0.0002	0.006	0.0002	0.0030	0.003	9.1E-05	0.004	0.1500	0.00546	0.1572
Ammonia-N	14.0	1	0.006	0.00041	0.02	0.0020	0.00014	0.007	0.0020	0.00014	0.008	0.003	0.00018	0.0027	0.002	0.00014	0.006	0.049	0.00352	0.101
Total Cations (meq/L)				**2.32**			**2.2**			**1.7**			**6.7**			**2.2**			**3.5**	
Anions																				
Alkalinity, Total			74.6			80.6			55.0			216.0			83.6			118.0		
Carbonate	60.0	2	0.020	0.00065	0.0	0.023	0.00076	0.0	0.019	0.00063	0.0	0.046	0.00154	0.0	0.032	0.00106	0.0	0.078	0.00259	0.079
Bicarbonate	61.0	1	90.97	1.49	69.0	98.29	1.61	79.0	67.06	1.10	70.4	263.43	4.32	66.3	101.93	1.67	77.1	143.80	2.36	71.4
Chloride	35.5	1	12.3	0.35	16.0	4.2	0.12	5.8	5.1	0.14	9.3	63.9	1.80	27.7	5.1	0.14	6.6	2.8	0.08	2.4
Nitrate-N	14.0	1	0.010	0.00071	0.03	0.35	0.025	1.2	1.29	0.09	5.9	2.03	0.14	2.2	0.19	0.01	0.6	0.0	0.00	0.0
Sulfate	96.1	2	15.5	0.32	14.9	13.6	0.28	13.9	10.8	0.22	14.4	12.0	0.25	3.8	16.3	0.34	15.7	41.4	0.86	26.1
Total Anions (meq/L)				**2.16**			**2.0**			**1.6**			**6.5**			**2.2**			**3.3**	
Total Ions (meq/L)				**4.5**			**4.2**			**3.2**			**13.2**			**4.4**			**6.8**	
Cation/Anion Ratio				**1.07**			**1.07**			**1.08**			**1.03**			**1.03**			**1.05**	
Percent Difference				**3.5**			**3.2**			**3.9**			**1.6**			**1.6**			**2.6**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				2.15			2.17			1.69			6.72			2.24			3.47	
Calcium					41.84			36.52			42.30			52.46			37.88			45.94
Magnesium					43.70			47.72			39.03			36.34			46.30			40.85
Sodium + Potassium					14.45			15.76			18.67			11.20			15.82			13.22
sum (SO_4, Cl, HCO_3+CO_3)				2.16			2.01			1.47			6.37			2.15			3.30	
Sulfate					14.93			14.07			15.30			3.92			15.75			26.13
Chloride					16.05			5.87			9.85			28.29			6.66			2.35
Bicarbonate + Carbonate					69.02			80.06			74.85			67.79			77.59			71.52

Table 4

Ion Balanace Calculations

Cedar Hills Regional Landfill

Quarterly Regional Aquifer Groundwater Monitoring

Data Collected from Janurary 1, 2021 to March 31, 2021

			Quarterly Upgradient and Crossgradient Wells																	
	Site ID		MW-94			MW-113			MW-114			MW-115			MW-68			MW-72		
	Date		1/7/21			1/11/21			1/11/21			1/11/21			1/11/21			1/5/2021		
Cations	**Molecular Weight**	**n**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**
pH			6.3			7.3			6.6			6.4			6.8			6.9		
Conductance			327.4			365.2			259.7			255.0			244.1			324.5		
TDSobs			213.0			227.0			176.0			169.0			185.0			214.0		
Calcium	40.1	2	35.7	1.78	49.8	38.7	1.93	46.7	27.3	1.36	47.8	27.8	1.39	50.2	26.5	1.32	44.2	33.2	1.66	42.7
Magnesium	24.3	2	16.4	1.35	37.7	20.4	1.68	40.6	13.8	1.14	39.9	12.3	1.01	36.6	14.7	1.21	40.5	20.4	1.68	43.3
Potassium	39.1	1	2.6	0.07	1.8	2.2	0.06	1.4	2.3	0.06	2.1	1.9	0.05	1.8	1.7	0.04	1.5	2.1	0.05	1.4
Sodium	23.0	1	8.8	0.38	10.7	9.4	0.41	9.9	6.7	0.29	10.2	7.2	0.31	11.3	8.8	0.38	12.8	8.680	0.37756	9.736
Iron	55.8	2	0.029	0.00105	0.029	1.270	0.0454814	1.099	0.010	0.0003581	0.013	0.010	0.0003581	0.013	0.51	0.018	0.61	2.7400	0.09813	2.5303
Manganese	54.9	2	0.0029	0.00011	0.0030	0.4540	0.0165277	0.3994	0.0013	4.587E-05	0.0016	0.0122	0.0004441	0.0161	0.29	0.011	0.36	0.373	0.01358	0.350
Ammonia-N	14.0	1	0.002	0.00014	0.004	0.012	0.0008781	0.021	0.002	0.0001428	0.005	0.002	0.0001428	0.005	0.02	0.001	0.039		**0.0**	
Total Cations (meq/L)				**3.6**			**4.1**			**2.8**			**2.8**			**3.0**			**3.9**	
Anions																				
Alkalinity, Total			126.0			142.0			100.0			93.9			124.0			124.000		
Carbonate	60.0	2	0.015	0.0005	0.015	0.155	0.0051709	0.130	0.026	0.0008747	0.031	0.015	0.0004837	0.018	0.046	0.00153	0.05	0.06	0.00	0.1
Bicarbonate	61.0	1	153.69	2.52	74.3	172.92	2.83	71.5	121.95	2.00	71.9	114.53	1.88	69.5	151.19	2.48	85.9	151.2	2.48	72.3
Chloride	35.5	1	25.2	0.71	21.0	32.1	0.91	22.8	18.0	0.51	18.3	18.4	0.52	19.2	3.1	0.086	3.0	7.2	0.20	5.9
Nitrate-N	14.0	1	0.19	0.01	0.4	0.0	0.00	0.0	1.8	0.13	4.6	1.6	0.12	4.3	0.010	0.00071	0.025	0.0	0.00	0.0
Sulfate	96.1	2	7.1	0.15	4.4	10.6	0.22	5.6	6.9	0.14	5.2	9.0	0.19	7.0	15.3	0.32	11.0		**0.7**	
Total Anions (meq/L)				**3.4**			**4.0**			**2.8**			**2.7**			**2.9**			**3.4**	
Total Ions (meq/L)				**7.0**			**8.1**			**5.6**			**5.5**			**5.9**			7.305	
Cation/Anion Ratio				**1.06**			**1.04**			**1.02**			**1.02**			**1.04**			**1.132**	
Percent Difference				**2.7**			**2.1**			**1.2**			**1.1**			**1.8**			**6.171**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				3.58			4.08			2.85			2.76			2.96			3.77	
Calcium					49.79			47.38			47.83			50.25			44.69			44.00
Magnesium					37.72			41.19			39.87			36.66			40.88			44.58
Sodium + Potassium					12.50			11.43			12.30			13.09			14.43			
																				100.000
sum (SO_4, Cl, HCO_3+CO_3)				3.38			3.97			2.65			2.58			2.88			3.43	
Sulfate					4.39			5.57			5.41			7.27			11.04			21.69
Chloride					21.04			22.83			19.15			20.08			2.99			5.94
Bicarbonate + Carbonate					74.57			71.60			75.44			72.65			85.96			72.36

Table 4

Ion Balanace Calculations

Cedar Hills Regional Landfill

Quarterly Regional Aquifer Groundwater Monitoring

Data Collected from Janurary 1, 2021 to March 31, 2021

			Quarterly Downgradient to Waste Cells and North End Facilities													
	Site ID		MW-74R			MW-75			MW-80			MW-85			MW-87	
	Date		1/6/21			1/6/21			1/11/21			1/6/21			1/15/21	
Cations	**Molecular Weight**	**n**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**
pH			6.8			7.0			7.1			6.8			6.7		
Conductance			446.1			340.7			271.6			355.7			505.0		
TDSobs			301.0			248.0			191.0			275.0			370.0		
Calcium	40.1	2	43.6	2.18	39.3	32.4	1.62	38.8	30.6	1.53	46.0	36.6	1.83	43.1	47.7	2.38	41.2
Magnesium	24.3	2	33.8	2.78	50.2	24.2	1.99	47.7	15.9	1.31	39.4	23.3	1.92	45.2	32.3	2.66	46.0
Potassium	39.1	1	2.1	0.05	1.0	2.0	0.05	1.3	1.7	0.044	1.3	1.8	0.046	1.1	2.5	0.06	1.1
Sodium	23.0	1	12.2	0.53	9.6	9.4	0.41	9.8	8.1	0.35	10.6	10.3	0.448	10.6	11.0	0.48	8.3
Iron	55.8	2	0.010	0.00036	0.006	2.56	0.09	2.20	2.03	0.073	2.2	0.010	0.00036	0.0085	4.740	0.16975	2.940
Manganese	54.9	2	0.0001	3.6E-06	0.00007	0.23	0.00837	0.20	0.35	0.013	0.38	0.0001	4.2E-06	0.00010	0.5610	0.02042	0.3538
Ammonia-N	14.0	1	0.002	0.00014	0.003	0.008	0.00058	0.014	0.01	0.00065	0.020	0.002	0.00014	0.0034	0.034	0.00239	0.041
Total Cations (meq/L)				**5.5**			**4.2**			**3.3**			**4.2**			**5.8**	
Anions																	
Alkalinity, Total			198.0			109.0			123.0			144.0			118.0		
Carbonate	60.0	2	0.08	0.00268	0.05	0.06	0.00199	0.05	0.085	0.00283	0.09	0.04981	0.00166	0.04	0.032	0.00106	0.019
Bicarbonate	61.0	1	241.40	3.96	75.1	132.86	2.18	57.2	149.9	2.46	77.1	175.58	2.88	74.3	143.90	2.36	42.7
Chloride	35.5	1	21.7	0.61	11.6	11.5	0.32	8.5	4.4	0.13	3.9	10.5	0.30	7.6	15.6	0.44	8.0
Nitrate-N	14.0	1	0.32	0.02306	0.44	0.010	0.00071	0.019	0.01	0.00071	0.02	0.09	0.00655	0.2	0.0	0.00	0.0
Sulfate	96.1	2	32.4	0.67	12.8	62.4	1.30	34.2	28.9	0.60	18.9	33.3	0.69	17.9	131.0	2.73	49.3
Total Anions (meq/L)				**5.3**			**3.8**			**3.2**			**3.9**			**5.5**	
Total Ions (meq/L)				**10.8**			**8.0**			**6.5**			**8.1**			**11.3**	
Cation/Anion Ratio				**1.05**			**1.10**			**1.04**			**1.09**			**1.04**	
Percent Difference				**2.5**			**4.6**			**2.0**			**4.5**			**2.2**	
Trilinear Diagram Data																	
sum (Ca, Mg, Na+K)				5.54			4.07			3.23			4.24			5.58	
Calcium					39.25			39.72			47.24			43.10			42.65
Magnesium					50.18			48.92			40.48			45.25			47.63
Sodium + Potassium					10.56			11.37			12.29			11.65			9.72
sum (SO_4, Cl, HCO_3+CO_3)				5.25			3.80			3.19			3.87			5.53	
Sulfate					12.86			34.16			18.88			17.92			49.35
Chloride					11.67			8.53			3.93			7.65			7.96
Bicarbonate + Carbonate					75.47			57.31			77.19			74.43			42.69

Table 4
Ion Balance Calculations
Cedar Hills Regional Landfill Semi-annual Aquifer
Groundwater Monitoring
(Data Collected from April 01, 2021 to June 30, 2021)

			Upgradient and Crossgradient															
Site ID			**MW-21**			**MW-24**			**MW-56**			**MW-59**			**MW-64**			**MW-65**		
			4/2/2021			4/12/2021			4/5/2021			4/13/2021			4/5/2021			4/13/2021		
Cations	MW	n	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)
pH			7.6			7.0			6.6			6.6			6.7			6.6		
Conductance			133			166			229			200			194			138		
TDSobs			100			120			153			141			129			95		
Calcium	40.1	2	12.7	0.633733	40.2	15.0	0.748503	39.0	25.9	1.292415	51.2	18.5	0.923154	40.4	16.8	0.838323	37.6	12.0	0.598802	38.6
Magnesium	24.3	2	7.0	0.573545	36.3	9.4	0.774326	40.3	11.2	0.921621	36.5	10.8	0.888706	38.9	12.6	1.036824	46.5	6.9	0.571076	36.9
Potassium	39.1	1	1.1	0.028902	1.8	1.0	0.0266	1.4	1.2	0.029925	1.2	1.2	0.030948	1.4	1.5	0.038109	1.7	0.9	0.023965	1.5
Sodium	23.0	1	6.1	0.266205	16.9	5.8	0.252286	13.1	6.3	0.27447	10.9	6.4	0.276645	12.1	7.2	0.311878	14.0	5.3	0.231407	14.9
Iron	55.8	2	1.93	0.069117	4.4	3.13	0.112092	5.8	0.03	0.001017	0.0	4.47	0.16008	7.0	0.05	0.001633	0.1	3.31	0.118538	7.6
Manganese	54.9	2	0.13	0.004587	0.3	0.10	0.00375	0.2	0.12	0.004478	0.2	0.12	0.004405	0.2	0.07	0.002428	0.1	0.15	0.005534	0.4
Ammonia-N	14.0	1	0.03	0.001928	0.1	0.03	0.002192	0.1	0.00	0.000143	0.0	0.01	0.000457	0.0	0.03	0.001821	0.1	0.00	0.000328	0.0
Total Cations (meq/L)				**1.6**			**1.9**			**2.5**			**2.3**			**2.2**			**1.5**	
Anions																				
Alkalinity, Total			62			68			85			73			93			53		
Carbonate	60.0	2	0.13162	0.004387	0.3	0.03647	0.001216	0.1	0.0182	0.000607	0.0	0.01837	0.000612	0.0	0.02684	0.000895	0.0	0.01367	0.000456	0.0
Bicarbonate	61.0	1	75.25	1.233427	84.1	83.01	1.360579	75.1	104.03	1.705136	68.4	89.39	1.465167	70.0	113.77	1.864824	83.9	65.00	1.065384	75.1
Chloride	35.5	1	2.4	0.068541	4.7	6.1	0.171213	9.4	20.5	0.57823	23.2	11.1	0.313091	15.0	2.8	0.078414	3.5	5.9	0.165853	11.7
Nitrate-N	14.0	1	0.01	0.000714	0.0	0.01	0.000714	0.0	0.38	0.027201	1.1	0.02	0.001428	0.1	0.01	0.000714	0.0	0.02	0.001428	0.1
Sulfate	96.1	2	7.7	0.160112	10.9	13.4	0.278999	15.4	8.7	0.180308	7.2	15.0	0.312313	14.9	13.4	0.278999	12.5	8.9	0.184889	13.0
Total Anions (meq/L)				**1.5**			**1.8**			**2.5**			**2.1**			**2.2**			**1.4**	
Total Ions (meq/L)				**3.0**			**3.7**			**5.0**			**4.4**			**4.5**			**3.0**	
Cation/Anion Ratio				**1.08**			**1.06**			**1.01**			**1.09**			**1.00**			**1.09**	
Percent Difference				**3.6**			**2.9**			**0.6**			**4.4**			**0.2**			**4.4**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				1.50			1.80			2.52			2.12			2.23			1.43	
Calcium					42.18			41.54			51.32			43.56			37.68			42.01
Magnesium					38.18			42.98			36.60			41.93			46.60			40.07
Sodium + Potassium					19.64			15.48			12.09			14.51			15.73			17.92
														100.0						
sum (SO_4, Cl, HCO_3+CO_3)				1.47			1.81			2.46			2.09			2.22			1.42	
Sulfate					10.918			15.397			7.317			14.935			12.550			13.052
Chloride					4.674			9.449			23.464			14.972			3.527			11.708
Bicarbonate + Carbonate					84.408			75.154			69.219			70.093			83.923			75.240
														100.0						

Table 4
Ion Balance Calculations
Cedar Hills Regional Landfill Semi-annual Aquifer
Groundwater Monitoring
(Data Collected from April 01, 2021 to June 30, 2021)

			Upgradient and Crossgradient																		
Site ID			**MW-66**			**MW-73**			**MW-76**			**MW-81**			**MW-82**			**MW-83**			**MW-84**		
			4/2/2021			4/2/2021			4/13/2021			4/5/2021			4/12/2021			4/13/2021			4/5/2021		
Cations	MW	n	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)
pH			6.8			6.5			6.2			7.0			6.7			6.6			6.8		
Conductance			192			126			273			158			267			546			189		
TDSobs			136			106			191			118			191			389			133		
Calcium	40.1	2	16.5	0.823353	36.7	11.9	0.59381	44.0	24.2	1.207585	45.5	14.5	0.723553	42.6	25.5	1.272455	43.4	64.2	3.203593	51.5	15.8	0.788423	37.1
Magnesium	24.3	2	13.0	1.069739	47.7	5.9	0.48797	36.1	11.2	0.921621	34.7	8.1	0.662415	39.0	15.6	1.283686	43.8	29.0	2.38634	38.4	12.1	0.99568	46.9
Potassium	39.1	1	1.1	0.029157	1.3	0.8	0.02051	1.5	1.4	0.035296	1.3	0.9	0.022175	1.3	1.6	0.040155	1.4	3.3	0.084914	1.4	1.2	0.029669	1.4
Sodium	23.0	1	7.3	0.318402	14.2	5.7	0.24794	18.4	11.3	0.491523	18.5	6.6	0.288389	17.0	7.7	0.333192	11.4	12.4	0.53937	8.7	7.1	0.307963	14.5
Iron	55.8	2	0.01	0.000358	0.0	0.01	0.00036	0.0	0.01	0.000358	0.0	0.01	0.000358	0.0	0.01	0.000437	0.0	0.01	0.000358	0.0	0.01	0.000358	0.0
Manganese	54.9	2	0.00	3.64E-06	0.0	0.00	1.5E-05	0.0	0.00	3.64E-06	0.0	0.00	3.64E-06	0.0	0.00	6.95E-06	0.0	0.20	0.007172	0.1	0.00	5.57E-05	0.0
Ammonia-N	14.0	1	0.00	0.000143	0.0	0.00	0.00014	0.0	0.00	0.000143	0.0	0.00	0.000143	0.0	0.00	0.000143	0.0	0.00	0.000143	0.0	0.00	0.000143	0.0
Total Cations (meq/L)				**2.2**			**1.4**			**2.7**			**1.7**			**2.9**			**6.2**			**2.1**	
Anions																							
Alkalinity, Total			86			51			91			59			118			197			81		
Carbonate	60.0	2	0.03407	0.001136	0.1	0.00948	0.00032	0.0	0.00867	0.000289	0.0	0.03441	0.001147	0.1	0.03555	0.001185	0.0	0.044	0.001467	0.0	0.027913	0.00093	0.0
Bicarbonate	61.0	1	104.61	1.714606	79.3	62.20	1.01953	76.7	111.00	1.819437	64.4	71.42	1.170677	70.6	143.89	2.358459	77.1	240.25	3.937939	63.4	98.40	1.612826	78.2
Chloride	35.5	1	4.3	0.120159	5.6	2.3	0.06346	4.8	22.9	0.645926	22.9	5.1	0.142724	8.6	11.1	0.313091	10.2	70.5	1.988548	32.0	3.9	0.109159	5.3
Nitrate-N	14.0	1	0.46	0.033126	1.5	1.16	0.08282	6.2	0.86	0.061469	2.2	1.59	0.113515	6.8	1.09	0.077818	2.5	0.50	0.035696	0.6	0.14	0.009709	0.5
Sulfate	96.1	2	14.1	0.293574	13.6	7.8	0.1624	12.2	14.3	0.297738	10.5	11.1	0.231111	13.9	14.8	0.308148	10.1	11.7	0.243604	3.9	15.9	0.331051	16.0
Total Anions (meq/L)				**2.2**			**1.3**			**2.8**			**1.7**			**3.1**			**6.2**			**2.1**	
Total Ions (meq/L)				**4.4**			**2.7**			**5.5**			**3.4**			**6.0**			**12.4**			**4.2**	
Cation/Anion Ratio				**1.04**			**1.02**			**0.94**			**1.02**			**0.96**			**1.00**			**1.03**	
Percent Difference				**1.8**			**0.8**			**-3.1**			**1.1**			**-2.1**			**0.1**			**1.4**	
Trilinear Diagram Data																							
sum (Ca, Mg, Na+K)				2.24			1.35			2.66			1.70			2.93			6.21			2.12	
Calcium					36.75			43.98			45.47			42.65			43.44			51.55			37.16
Magnesium					47.74			36.14			34.70			39.05			43.82			38.40			46.93
Sodium + Potassium					15.51			19.88			19.83			18.31			12.74			10.05			15.91
											100.0												100.0
sum (SO_4, Cl, HCO_3+CO_3)				2.13			1.25			2.76			1.55			2.98			6.17			2.05	
Sulfate					13.786			13.037			10.774			14.952			10.337			3.947			16.118
Chloride					5.643			5.095			23.374			9.234			10.503			32.221			5.315
Bicarbonate + Carbonate					80.571			81.868			65.851			75.814			79.159			63.832			78.568
											100.0												

Table 4
Ion Balance Calculations
Cedar Hills Regional Landfill Semi-annual Aquifer
Groundwater Monitoring
(Data Collected from April 01, 2021 to June 30, 2021)

			Upgradient and Crossgradient															
Site ID			**MW-113**			**MW-114**			**MW-115**			**MW-93**			**MW-94**			**MW-95**		
			4/12/2021			4/12/2021			4/13/2021			4/5/2021			4/13/2021			4/6/2021		
Cations	MW	n	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)
pH			7.2			6.8			6.5			7.1			6.4			7.2		
Conductance			377			276			191			291			325			207		
TDSobs			248			191			197			216			247			147		
Calcium	40.1	2	35.0	1.746507	45.8	26.7	1.332335	47.6	30.3	1.51197605	51.1	31.8	1.58682635	46.2	37.4	1.86626747	50.4	22.0	1.09780439	45.8
Magnesium	24.3	2	19.4	1.596379	41.8	13.8	1.135569	40.6	13.0	1.06973874	36.1	16.8	1.3824316	40.2	16.6	1.36597408	36.9	12.0	0.98745114	41.2
Potassium	39.1	1	1.8	0.045271	1.2	2.0	0.049874	1.8	2.0	0.05115312	1.7	1.5	0.0393879	1.1	2.7	0.06777788	1.8	1.2	0.0312034	1.3
Sodium	23.0	1	8.5	0.371035	9.7	6.5	0.281864	10.1	7.5	0.32666703	11.0	9.6	0.41627211	12.1	9.3	0.4036578	10.9	6.3	0.27229503	11.4
Iron	55.8	2	1.17	0.0419	1.1	0.01	0.000358	0.0	0.01	0.00035812	0.0	0.01	0.00035812	0.0	0.01	0.00035812	0.0	0.01	0.00035812	0.0
Manganese	54.9	2	0.41	0.014744	0.4	0.00	8.56E-06	0.0	0.00	0.00012086	0.0	0.20	0.00731734	0.2	0.00	5.9704E-06	0.0	0.17	0.0062616	0.3
Ammonia-N	14.0	1	0.01	0.001028	0.0	0.00	0.000143	0.0	0.00	0.00014279	0.0	0.05	0.00369101	0.1	0.00	0.00014279	0.0	0.02	0.00171343	0.1
Total Cations (meq/L)				**3.8**			**2.8**			**3.0**			**3.4**			**3.7**			**2.4**	
Anions																				
Alkalinity, Total			148			105			100			124			132			92		
Carbonate	60.0	2	0.13452	0.004484	0.1	0.04169	0.00139	0.0	0.01815724	0.00060525	0.0	0.08552703	0.00285094	0.1	0.01860601	0.00062021	0.0	0.0796016	0.00265342	0.1
Bicarbonate	61.0	1	180.29	2.95507	72.8	128.02	2.098294	71.5	121.96	1.99909326	68.8	151.11	2.47677555	73.0	161.00	2.63898179	72.9	111.71	1.83107045	77.7
Chloride	35.5	1	30.9	0.871576	21.5	19.6	0.552845	18.8	23.2	0.6543875	22.5	2.7	0.07502891	2.2	26.4	0.74464784	20.6	6.9	0.1943418	8.2
Nitrate-N	14.0	1	0.01	0.000714	0.0	1.88	0.134219	4.6	0.72	0.05118869	1.8	0.02	0.00157064	0.0	0.92	0.06539587	1.8	0.01	0.00071393	0.0
Sulfate	96.1	2	10.9	0.226947	5.6	7.1	0.148661	5.1	9.6	0.19883903	6.8	40.2	0.8369978	24.7	8.1	0.16948164	4.7	15.8	0.32896929	14.0
Total Anions (meq/L)				**4.1**			**2.9**			**2.9**			**3.4**			**3.6**			**2.4**	
Total Ions (meq/L)				**7.9**			**5.7**			**5.9**			**6.8**			**7.3**			**4.8**	
Cation/Anion Ratio				**0.94**			**0.95**			**1.02**			**1.01**			**1.02**			**1.02**	
Percent Difference				**-3.1**			**-2.4**			**1.0**			**0.6**			**1.2**			**0.8**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				3.76			2.80			2.96			3.42			3.70			2.39	
Calcium					46.46			47.59			51.09			46.33			50.39			45.96
Magnesium					42.47			40.56			36.15			40.36			36.88			41.34
Sodium + Potassium					11.07			11.85			12.77			13.30			12.73			12.71
					100.0									100.0						
sum (SO_4, Cl, HCO_3+CO_3)				4.06			2.80			2.85			3.39			3.55			2.36	
Sulfate					5.592			5.307			6.970			24.678			4.769			13.957
Chloride					21.478			19.736			22.937			2.212			20.954			8.245
Bicarbonate + Carbonate					72.930			74.957			70.093			73.110			74.277			77.798

Table 4
Ion Balance Calculations
Cedar Hills Regional Landfill Semi-annual Aquifer
Groundwater Monitoring
(Data Collected from April 01, 2021 to June 30, 2021)

			Downgradient to Waste Cells and North End Facilities															
Site ID			**MW-68**			**MW-67**			**MW-72**			**MW-74R**			**MW-75**			**MW-80**		
			4/15/2021			6/30/2021			4/6/2021			4/9/2021			4/9/2021			4/15/2021		
Cations	MW	n	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)
pH			6.9			6.7			6.9			6.8			6.8			7.0		
Conductance			252			409			312			500			350			292		
TDSobs			174			233			221			338			252			199		
Calcium	40.1	2	27.2	1.357285	44.9	39.2	1.956088	45.6	31.8	1.586826	42.3	47.6	2.37525	40.2	31.2	1.556886	39.7	31.3	1.561876	46.9
Magnesium	24.3	2	14.7	1.209628	40.0	22.3	1.835013	42.7	19.9	1.637523	43.7	35.9	2.954125	50.0	22.3	1.835013	46.8	15.6	1.283686	38.6
Potassium	39.1	1	1.7	0.043224	1.4	1.9	0.049363	1.1	2.0	0.051153	1.4	2.0	0.051409	0.9	1.8	0.044759	1.1	1.7	0.042969	1.3
Sodium	23.0	1	8.8	0.383214	12.7	9.9	0.432366	10.1	8.4	0.365815	9.8	12.2	0.530671	9.0	8.7	0.377124	9.6	8.0	0.347546	10.4
Iron	55.8	2	0.55	0.019732	0.7	0.34	0.012033	0.3	2.66	0.09526	2.5	0.01	0.000358	0.0	2.67	0.095618	2.4	2.16	0.077354	2.3
Manganese	54.9	2	0.30	0.010921	0.4	0.20	0.007427	0.2	0.36	0.013251	0.4	0.00	3.64E-06	0.0	0.23	0.008264	0.2	0.35	0.012632	0.4
Ammonia-N	14.0	1	0.02	0.001264	0.0	0.01	0.000528	0.0	0.02	0.001185	0.0	0.00	0.0003	0.0	0.01	0.000657	0.0	0.01	0.000671	0.0
Total Cations (meq/L)				**3.0**			**4.3**			**3.8**			**5.9**			**3.9**			**3.3**	
Anions																				
Alkalinity, Total			123			162			131			226			115			122		
Carbonate	60.0	2	0.06148	0.002049	0.1	0.04555	0.001518	0.0	0.06399	0.002133	0.1	0.08376	0.002792	0.0	0.04262	0.001421	0.0	0.07675	0.002558	0.1
Bicarbonate	61.0	1	149.93	2.45758	85.9	197.55	3.237993	81.2	159.69	2.617472	73.0	275.55	4.516527	73.9	140.21	2.298233	57.7	148.68	2.437074	76.4
Chloride	35.5	1	3.0	0.084337	2.9	5.0	0.14075	3.5	7.5	0.210984	5.9	27.6	0.778495	12.7	12.1	0.341297	8.6	4.5	0.1258	3.9
Nitrate-N	14.0	1	0.01	0.000714	0.0	0.08	0.005797	0.1	0.01	0.000714	0.0	0.28	0.019847	0.3	0.01	0.000714	0.0	0.01	0.000714	0.0
Sulfate	96.1	2	15.2	0.316477	11.1	29.0	0.603804	15.1	36.2	0.753714	21.0	38.3	0.797438	13.0	64.5	1.342944	33.7	29.9	0.622543	19.5
Total Anions (meq/L)				**2.9**			**4.0**			**3.6**			**6.1**			**4.0**			**3.2**	
Total Ions (meq/L)				**5.9**			**8.3**			**7.3**			**12.0**			**7.9**			**6.5**	
Cation/Anion Ratio				**1.06**			**1.08**			**1.05**			**0.97**			**0.98**			**1.04**	
Percent Difference				**2.8**			**3.7**			**2.3**			**-1.7**			**-0.8**			**2.1**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				2.99			4.27			3.64			5.91			3.81			3.24	
Calcium					45.34			45.78			43.58			40.18			40.82			48.26
Magnesium					40.41			42.95			44.97			49.97			48.12			39.67
Sodium + Potassium					14.25			11.27			11.45			9.85			11.06			12.07
sum (SO_4, Cl, HCO_3+CO_3)				2.86			3.98			3.58			6.10			3.98			3.19	
Sulfate					11.064			15.155			21.028			13.083			33.709			19.528
Chloride					2.948			3.533			5.886			12.772			8.567			3.946
Bicarbonate + Carbonate					85.988			81.312			73.085			74.145			57.724			76.526

Table 4
Ion Balance Calculations
Cedar Hills Regional Landfill Semi-annual Aquifer
Groundwater Monitoring
(Data Collected from April 01, 2021 to June 30, 2021)

			Downgradient to Waste Cells and North End Facilities																	
Site ID			**MW-85**			**MW-86**			**MW-87**			**MW-88**			**MW-89**			**MW-100**		
			4/6/2021			4/6/2021			6/11/2021			4/12/2021			4/12/2021			4/12/2021		
Cations	MW	n	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)
pH			6.8			6.9			6.4			6.8			7.0			6.7		
Conductance			343			183			516			116			228			254		
TDSobs			235			146			359			92			157			157		
Calcium	40.1	2	36.3	1.811377	43.7	16.1	0.803393	37.6	47.6	2.37525	40.6	9.4	0.466567	35.4	19.0	0.948104	36.8	23.3	1.162675	43.4
Magnesium	24.3	2	22.5	1.851471	44.7	11.6	0.954536	44.7	33.2	2.731948	46.7	7.1	0.58095	44.1	13.9	1.143798	44.4	13.6	1.119111	41.7
Potassium	39.1	1	1.8	0.044759	1.1	1.3	0.032482	1.5	2.4	0.060872	1.0	0.8	0.019873	1.5	1.6	0.040155	1.6	1.5	0.037342	1.4
Sodium	23.0	1	10.0	0.433236	10.5	7.1	0.309703	14.5	11.2	0.487173	8.3	5.7	0.248371	18.9	8.8	0.384519	14.9	7.8	0.337106	12.6
Iron	55.8	2	0.01	0.000358	0.0	0.96	0.034523	1.6	4.77	0.170824	2.9	0.01	0.000358	0.0	1.24	0.044407	1.7	0.57	0.020413	0.8
Manganese	54.9	2	0.00	3.64E-06	0.0	0.01	0.000422	0.0	0.54	0.019622	0.3	0.00	3.64E-06	0.0	0.31	0.011358	0.4	0.11	0.003895	0.1
Ammonia-N	14.0	1	0.00	0.000143	0.0	0.00	0.000143	0.0	0.02	0.001228	0.0	0.00	0.000143	0.0	0.02	0.001485	0.1	0.01	0.000543	0.0
Total Cations (meq/L)				**4.1**			**2.1**			**5.8**			**1.3**			**2.6**			**2.7**	
Anions																				
Alkalinity, Total			155			74			117			54			88			120		
Carbonate	60.0	2	0.06298	0.002099	0.1	0.03374	0.001125	0.1	0.01688	0.000563	0.0	0.0214	0.000713	0.1	0.05542	0.001848	0.1	0.03699	0.001233	0.0
Bicarbonate	61.0	1	188.97	3.097433	75.5	90.21	1.478652	72.3	142.71	2.339085	42.2	65.71	1.077124	81.2	107.37	1.759887	69.9	146.32	2.398405	85.9
Chloride	35.5	1	10.3	0.290525	7.1	4.4	0.123544	6.0	16.9	0.476687	8.6	1.8	0.0519	3.9	11.7	0.330014	13.1	2.6	0.074183	2.7
Nitrate-N	14.0	1	0.10	0.007139	0.2	0.01	0.000714	0.0	0.01	0.000714	0.0	0.80	0.057328	4.3	0.01	0.000714	0.0	0.01	0.000714	0.0
Sulfate	96.1	2	33.9	0.705827	17.2	21.2	0.441402	21.6	131.0	2.72753	49.2	6.7	0.139291	10.5	20.5	0.426827	16.9	15.2	0.316477	11.3
Total Anions (meq/L)				**4.1**			**2.0**			**5.5**			**1.3**			**2.5**			**2.8**	
Total Ions (meq/L)				**8.2**			**4.2**			**11.4**			**2.6**			**5.1**			**5.5**	
Cation/Anion Ratio				**1.01**			**1.04**			**1.05**			**0.99**			**1.02**			**0.96**	
Percent Difference				**0.5**			**2.1**			**2.7**			**-0.4**			**1.1**			**-2.0**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				4.14			2.10			5.66			1.32			2.52			2.66	
Calcium					43.74			38.25			42.00			35.46			37.67			43.77
Magnesium					44.71			45.45			48.31			44.15			45.45			42.13
Sodium + Potassium					11.54			16.29			9.69			20.39			16.88			14.10
sum (SO_4, Cl, HCO_3+CO_3)				4.10			2.04			5.54			1.27			2.52			2.79	
Sulfate					17.233			21.587			49.199			10.976			16.947			11.342
Chloride					7.093			6.042			8.598			4.090			13.103			2.659
Bicarbonate + Carbonate					75.674			72.371			42.202			84.934			69.950			85.999

Table 8
Ion Balance Calculations.
Cedar Hills Regional Landfill.
Perched Zones Groundwater Monitoring Wells

Data Collected from July 01, 2021 - September 30, 2021

			Quarterly Upgradient and Crossgradient Wells																
	Site ID		MW-59			MW-66			MW-81			MW-83			MW-84			MW-93		
	Date		1/11/21			1/5/21			1/5/21			1/7/21			2/1/21			1/6/21		
Cations	**Molecular Weight**	**n**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	%(meq)
pH			7.0			6.7			7.2			6.4			6.7			7.2		
Conductance			248.3			229.3			183.9			689.8			214.0			352.9		
TDSobs			152.0			131.0			117.0			444.0			128.0			208.0		
Calcium	40.1	2	18.4	0.92	39.0	16.9	0.84	37.1	14.5	0.72	42.0	69.6	3.47	52.3	15.7	0.78	37.2	31.9	1.59	45.6
Magnesium	24.3	2	11.5	0.95	40.2	13.2	1.086196	47.8	8.2	0.67	39.0	29.5	2.43	36.5	12.1	0.99568	47.3	17.3	1.42	40.8
Potassium	39.1	1	1.2	0.030	1.3	1.2	0.03	1.3	0.9	0.023	1.3	3.6	0.09	1.4	1.2	0.03	1.5	1.6	0.04	1.1
Sodium	23.0	1	6.7	0.29	12.4	7.2	0.31	13.8	7.0	0.30	17.6	15.0	0.65	9.8	6.8	0.29	14.0	9.8	0.43	12.2
Iron	55.8	2	4.6	0.16	7.0	0.0	0.000358	0.016	0.0	0.000358	0.02	0.0	0.000358	0.0054	0.0	0.000358	0.017	0.0	0.000358	0.010
Manganese	54.9	2	0.12	0.004296	0.18	0.00	3.64E-06	0.0002	0.00	3.64E-06	0.0002	0.04	0.001314	0.0198	0.00	3.79E-05	0.002	0.16	0.005934	0.1699
Ammonia-N	14.0	1	0.010	0.000742	0.03	0.002	0.000143	0.006	0.002	0.000143	0.008	0.007	0.000464	0.0070	0.002	0.000143	0.007	0.053	0.003755	0.108
				2.36			**2.3**			**1.7**			**6.6**			**2.1**			**3.5**	
Alkalinity, Total			73.1			85.9			58.1			217.0			78.0			122.0		
Carbonate	60.0	2	0.048	0.001605	0.1	0.026	0.000883	0.0	0.057	0.001886	0.1	0.034	0.001118	0.0	0.023	0.000766	0.0	0.122	0.004052	0.122
Bicarbonate	61.0	1	89.08	1.46	68.0	104.74	1.72	79.5	70.77	1.16	70.3	264.67	4.34	66.1	95.11	1.56	77.4	148.59	2.44	73.4
Chloride	35.5	1	12.1	0.34	15.9	4.3	0.12	5.6	5.1	0.14	8.7	66.6	1.88	28.6	3.8	0.11	5.3	2.7	0.08	2.3
Nitrate-N	14.0	1	0.017	0.001214	0.06	0.499	0.036	1.6	1.560	0.11	6.7	1.560	0.11	1.7	0.133	0.01	0.5	0.015	0.00	0.0
Sulfate	96.1	2	16.4	0.34	15.9	13.7	0.29	13.2	11.2	0.23	14.1	11.0	0.23	3.5	16.2	0.34	16.7	38.4	0.80	24.1
Total Anions (meq/L)				**2.15**			**2.2**			**1.7**			**6.6**			**2.0**			**3.3**	
Total Ions (meq/L)				**4.5**			**4.4**			**3.4**			**13.2**			**4.1**			**6.8**	
Cation/Anion Ratio				**1.10**			**1.05**			**1.04**			**1.01**			**1.04**			**1.05**	
Percent Difference				**4.7**			**2.6**			**2.1**			**0.7**			**2.2**			**2.6**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				2.19			2.27			1.72			6.64			2.10			3.48	
Calcium					42.00			37.09			42.04			52.27			37.23			45.70
Magnesium					43.29			47.77			39.01			36.54			47.32			40.87
Sodium + Potassium					14.71			15.14			18.95			11.19			15.45			13.43
sum (SO_4, Cl, HCO_3+CO_3)				2.14			2.12			1.54			6.45			2.00			3.32	
Sulfate					15.92			13.43			15.15			3.55			16.82			24.11
Chloride					15.91			5.70			9.38			29.14			5.37			2.33
Bicarbonate + Carbonate					68.16			80.87			75.47			67.31			77.80			73.56

Table 8
Ion Balance Calculations.
Cedar Hills Regional Landfill.
Perched Zones Groundwater Monitoring Wells

Data Collected from July 01, 2021 - September 30, 2021

Quarterly Upgradient and Crossgradient Wells

MW-94			MW-113			MW-114			MW-115			MW-68			MW-72		
1/7/21			1/11/21			1/11/21			1/11/21			1/11/21			1/5/2021		
mg/L	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**
6.4			7.1			6.8			6.5			7.0			6.8		
397.4			416.7			316.0			323.6			296.3			377.3		
243.0			253.0			189.0			205.0			179.0			221.0		
37.5	1.87	49.7	36.9	1.84	45.6	27.7	1.38	47.5	30.3	1.51	50.6	26.2	1.31	44.1	31.7	1.58	42.1
17.2	1.42	37.6	20.4	1.68	41.6	14.1	1.16	39.9	13.3	1.09	36.6	14.6	1.20	40.5	19.9	1.64	43.6
2.6	0.07	1.7	1.9	0.05	1.2	2.1	0.05	1.9	1.9	0.05	1.6	1.6	0.04	1.3	2.0	0.05	1.4
9.5	0.41	10.9	9.3	0.41	10.1	7.2	0.31	10.8	7.7	0.33	11.2	9.0	0.39	13.1	8.7	0.377124	10.034
0.0	0.000358	0.010	1.2	0.0433327	1.074	0.0	0.0003581	0.012	0.0	0.0003581	0.012	0.5	0.018	0.61	2.7	0.095977	2.5537
0.00	4.19E-06	0.0001	0.40	0.0147075	0.3646	0.00	7.791E-06	0.0003	0.00	0.000134	0.0045	0.28	0.010	0.34	0.36	0.013251	0.353
0.002	0.000143	0.004	0.017	0.0011994	0.030	0.002	0.0001428	0.005	0.002	0.0001428	0.005	0.018	0.001	0.042	0.017	**0.0**	
	3.8			**4.0**			**2.9**			**3.0**			**3.0**			**3.8**	
135.0			143.0			104.0			102.0			127.0			129.0		
0.018	0.000606	0.017	0.099	0.0032878	0.084	0.038	0.0012556	0.044	0.017	0.0005762	0.020	0.076	0.002544	0.09	0.051	0.00	0.0
164.66	2.70	73.8	174.26	2.86	73.4	126.80	2.08	72.8	124.40	2.04	69.2	154.78	2.54	86.1	157.28	2.58	73.5
27.1	0.76	20.9	28.4	0.80	20.6	17.5	0.49	17.3	22.7	0.64	21.7	3.1	0.087	3.0	7.7	0.22	6.2
0.666	0.05	1.3	0.010	0.00	0.0	1.690	0.12	4.2	0.873	0.06	2.1	0.010	0.000714	0.024	0.010	0.00	0.0
7.1	0.15	4.0	11.1	0.23	5.9	7.7	0.16	5.6	9.9	0.21	7.0	15.4	0.32	10.9	34.1	**0.7**	
	3.7			**3.9**			**2.9**			**2.9**			**2.9**			**3.5**	
	7.4			**7.9**			**5.8**			**5.9**			**5.9**			7.265	
	1.03			**1.04**			**1.02**			**1.01**			**1.01**			**1.072**	
	1.4			**1.8**			**1.0**			**0.7**			**0.3**			**3.464**	
	3.76			3.97			2.91			2.99			2.94			3.65	
		49.72			46.33			47.50			50.62			44.50			43.36
		37.60			42.24			39.87			36.64			40.89			44.89
		12.68			11.43			12.63			12.75			14.61			
																	100.000
	3.61			3.89			2.73			2.89			2.95			3.51	
		4.07			5.94			5.88			7.11			10.88			20.25
		21.17			20.58			18.05			22.19			2.96			6.17
		74.76			73.48			76.07			70.70			86.16			73.58

Table 8
Ion Balance Calculations.
Cedar Hills Regional Landfill.
Perched Zones Groundwater Monitoring Wells

Data Collected from July 01, 2021 - September 30, 2021

Quarterly Downgradient to Waste Cells and North End Facilities

MW-74R 1/6/21			MW-75 1/6/21			MW-80 1/11/21			MW-85 1/6/21			MW-87 1/15/21		
mg/L	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**
6.8			6.9			6.9			6.7			6.7		
619.0			429.6			336.4			411.8			593.0		
371.0			285.0			207.0			243.0			441.0		
50.0	2.50	39.6	33.2	1.66	38.5	31.0	1.55	45.4	35.7	1.78	42.0	48.1	2.40	40.8
38.5	3.17	50.3	24.9	2.05	47.7	16.6	1.37	40.1	23.7	1.95	46.0	33.4	2.75	46.7
2.3	0.06	0.9	2.1	0.05	1.2	1.6	0.041	1.2	1.8	0.046	1.1	2.5	0.06	1.1
13.2	0.57	9.1	9.7	0.42	9.9	8.4	0.37	10.7	10.6	0.461	10.9	11.1	0.48	8.2
0.0	0.000358	0.006	3.0	0.11	2.49	2.1	0.077	2.2	0.0	0.000358	0.0084	4.8	0.171898	2.919
0.00	3.64E-06	0.00006	0.26	0.009356	0.22	0.34	0.012	0.36	0.00	3.64E-06	0.00009	0.52	0.018748	0.3184
0.002	0.000143	0.002	0.009	0.000657	0.015	0.010	0.000693	0.020	0.002	0.000143	0.0034	0.017	0.001242	0.021
	6.3			**4.3**			**3.4**			**4.2**			**5.9**	
224.0			115.0			123.0			155.0			116.0		
0.085	0.002832	0.05	0.056	0.001872	0.05	0.055	0.001827	0.06	0.046	0.001521	0.04	0.033	0.001113	0.020
273.11	4.48	74.2	140.19	2.30	57.4	149.95	2.46	76.4	189.01	3.10	75.4	141.45	2.32	41.3
26.9	0.76	12.6	12.9	0.36	9.1	4.5	0.13	4.0	10.3	0.29	7.1	18.5	0.52	9.3
0.295	0.021061	0.35	0.010	0.000714	0.018	0.010	0.000714	0.02	0.100	0.007139	0.2	0.010	0.00	0.0
37.2	0.77	12.8	64.3	1.34	33.4	30.3	0.63	19.6	34.1	0.71	17.3	133.0	2.77	49.3
	6.0			**4.0**			**3.2**			**4.1**			**5.6**	
	12.3			**8.3**			**6.6**			**8.3**			**11.5**	
	1.04			**1.07**			**1.06**			**1.03**			**1.05**	
	2.1			**3.6**			**2.9**			**1.6**			**2.4**	
	6.30			4.18			3.32			4.24			5.70	
		39.63			39.61			46.60			42.03			42.14
		50.32			48.99			41.15			46.01			48.25
		10.05			11.40			12.25			11.96			9.61
	6.01			4.00			3.22			4.10			5.61	
		12.88			33.45			19.60			17.32			49.36
		12.62			9.09			3.97			7.09			9.30
		74.50			57.46			76.43			75.60			41.34

Table 4
Ion Balance Calculations
Cedar Hills Regional Landfill Semi-annual Aquifer
Groundwater Monitoring
(Data Collected from October 01, 2021 to December 31, 2021)

			Upgradient and Crossgradient															
Site ID			**MW-21**			**MW-24**			**MW-56**			**MW-59**			**MW-64**			**MW-65**		
			10/5/2021			10/12/2021			10/5/2021			10/13/2021			10/11/2021			10/14/2021		
Cations	MW	n	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)
pH			7.5			7.2			6.6			6.7			6.8			6.7		
Conductance			138			172			246			223			174			121		
TDSobs			87			109			154			145			123			89		
Calcium	40.1	2	12.8	0.638723	40.2	15.0	0.748503	38.4	26.0	1.297405	46.8	20.5	1.022954	38.9	18.9	0.943114	39.7	12.2	0.608782	38.1
Magnesium	24.3	2	7.0	0.573545	36.1	9.7	0.794075	40.7	13.8	1.135569	40.9	13.1	1.077967	41.0	12.9	1.06151	44.7	7.4	0.609751	38.1
Potassium	39.1	1	1.1	0.027878	1.8	1.0	0.024528	1.3	1.3	0.034273	1.2	1.3	0.03325	1.3	1.6	0.039644	1.7	1.0	0.024553	1.5
Sodium	23.0	1	5.8	0.254026	16.0	5.7	0.247066	12.7	6.8	0.297524	10.7	6.9	0.301438	11.5	7.4	0.320577	13.5	5.4	0.236192	14.8
Iron	55.8	2	2.44	0.087382	5.5	3.57	0.127849	6.6	0.03	0.00116	0.0	5.18	0.185507	7.1	0.06	0.002238	0.1	3.19	0.114241	7.1
Manganese	54.9	2	0.09	0.003429	0.2	0.11	0.00415	0.2	0.21	0.007645	0.3	0.14	0.005169	0.2	0.13	0.004805	0.2	0.15	0.005315	0.3
Ammonia-N	14.0	1	0.04	0.002677	0.2	0.04	0.002763	0.1	0.00	0.000193	0.0	0.01	0.000471	0.0	0.03	0.00227	0.1	0.01	0.0004	0.0
Total Cations (meq/L)				**1.6**			**1.9**			**2.8**			**2.6**			**2.4**			**1.6**	
Anions																				
Alkalinity, Total			62			68			88			82			95			52		
Carbonate	60.0	2	0.10446	0.003482	0.2	0.06816	0.002272	0.1	0.0221	0.000737	0.0	0.0225	0.00075	0.0	0.03521	0.001174	0.1	0.01653	0.000551	0.0
Bicarbonate	61.0	1	75.18	1.232332	85.9	83.31	1.365522	76.5	107.56	1.762997	66.9	99.87	1.637003	69.2	115.83	1.89854	86.2	63.89	1.047291	74.1
Chloride	35.5	1	2.3	0.065439	4.6	6.5	0.182213	10.2	23.9	0.674132	25.6	13.3	0.375145	15.9	2.9	0.081234	3.7	6.5	0.181931	12.9
Nitrate-N	14.0	1	0.01	0.000714	0.0	0.01	0.000714	0.0	0.03	0.002285	0.1	0.01	0.000714	0.0	0.01	0.000714	0.0	0.01	0.000714	0.1
Sulfate	96.1	2	6.4	0.133253	9.3	11.3	0.235276	13.2	9.3	0.193842	7.4	16.9	0.351872	14.9	10.6	0.220701	10.0	8.8	0.183015	12.9
Total Anions (meq/L)				**1.4**			**1.8**			**2.6**			**2.4**			**2.2**			**1.4**	
Total Ions (meq/L)				**3.0**			**3.7**			**5.4**			**5.0**			**4.6**			**3.0**	
Cation/Anion Ratio				**1.11**			**1.09**			**1.05**			**1.11**			**1.08**			**1.13**	
Percent Difference				**5.0**			**4.4**			**2.6**			**5.2**			**3.8**			**6.2**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				1.49			1.81			2.76			2.44			2.36			1.48	
Calcium					42.75			41.26			46.93			42.00			39.88			41.15
Magnesium					38.39			43.77			41.07			44.26			44.89			41.22
Sodium + Potassium					18.87			14.97			12.00			13.74			15.23			17.63
														100.0						
sum (SO_4, Cl, HCO_3+CO_3)				1.43			1.79			2.63			2.36			2.20			1.41	
Sulfate					9.289			13.179			7.366			14.880			10.024			12.954
Chloride					4.562			10.206			25.616			15.864			3.690			12.877
Bicarbonate + Carbonate					86.149			76.615			67.019			69.256			86.286			74.168
														100.0						

Table 4
Ion Balance Calculations
Cedar Hills Regional Landfill Semi-annual Aquifer
Groundwater Monitoring
(Data Collected from October 01, 2021 to December 31, 2021)

			Upgradient and Crossgradient																			
Site ID			**MW-66**			**MW-73**			**MW-76**			**MW-81**			**MW-82**			**MW-83**			**MW-84**		
			10/11/2021			10/11/2021			10/13/2021			10/6/2021			10/12/2021			10/14/2021			10/6/2021		
Cations	MW	n	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)
pH			6.9			6.7			6.2			7.2			6.8			6.5			7.0		
Conductance			192			127			265			156			283			556			192		
TDSobs			123			94			167			111			189			401			123		
Calcium	40.1	2	16.7	0.833333	37.7	12.4	0.61876	44.5	27.1	1.352295	45.5	14.8	0.738523	42.7	29.6	1.477046	45.0	76.8	3.832335	52.8	16.8	0.838323	37.6
Magnesium	24.3	2	12.6	1.036824	47.0	6.1	0.5036	36.2	12.6	1.036824	34.9	8.2	0.677227	39.1	17.1	1.407118	42.8	32.1	2.641432	36.4	12.7	1.045052	46.9
Potassium	39.1	1	1.1	0.029157	1.3	0.8	0.02077	1.5	1.7	0.042201	1.4	0.9	0.021919	1.3	1.9	0.048851	1.5	4.0	0.103074	1.4	1.2	0.03018	1.4
Sodium	23.0	1	7.1	0.308398	14.0	5.7	0.2475	17.8	12.4	0.53937	18.2	6.7	0.292739	16.9	8.1	0.351026	10.7	15.5	0.674213	9.3	7.2	0.313618	14.1
Iron	55.8	2	0.01	0.000358	0.0	0.01	0.00036	0.0	0.01	0.000358	0.0	0.01	0.000358	0.0	0.01	0.000358	0.0	0.01	0.000358	0.0	0.01	0.000358	0.0
Manganese	54.9	2	0.00	3.64E-06	0.0	0.00	3.6E-06	0.0	0.00	3.64E-06	0.0	0.00	3.64E-06	0.0	0.00	3.64E-06	0.0	0.01	0.000215	0.0	0.00	2.67E-05	0.0
Ammonia-N	14.0	1	0.00	0.000143	0.0	0.00	0.00014	0.0	0.00	0.000143	0.0	0.00	0.000143	0.0	0.00	0.000157	0.0	0.00	0.000157	0.0	0.00	0.000143	0.0
Total Cations (meq/L)				**2.2**			**1.4**			**3.0**			**1.7**			**3.3**			**7.3**			**2.2**	
Anions																							
Alkalinity, Total			84			51			87			58			126			240			81		
Carbonate	60.0	2	0.04204	0.001401	0.1	0.0141	0.00047	0.0	0.00811	0.00027	0.0	0.04954	0.001651	0.1	0.05239	0.001746	0.1	0.04459	0.001486	0.0	0.049922	0.001664	0.1
Bicarbonate	61.0	1	102.52	1.680345	79.6	62.56	1.02538	76.9	106.25	1.741467	61.2	71.15	1.166173	70.5	153.61	2.517874	78.6	292.71	4.79779	67.9	98.96	1.622091	77.9
Chloride	35.5	1	4.3	0.120159	5.7	2.4	0.0677	5.1	24.9	0.702338	24.7	5.1	0.14357	8.7	10.6	0.298987	9.3	67.3	1.898288	26.9	4.5	0.127493	6.1
Nitrate-N	14.0	1	0.46	0.032484	1.5	1.20	0.08567	6.4	1.16	0.082816	2.9	1.53	0.109231	6.6	0.84	0.060184	1.9	1.71	0.122082	1.7	0.19	0.013208	0.6
Sulfate	96.1	2	13.3	0.276917	13.1	7.4	0.1547	11.6	15.2	0.316477	11.1	11.2	0.233193	14.1	15.5	0.322723	10.1	11.8	0.245686	3.5	15.3	0.318559	15.3
Total Anions (meq/L)				**2.1**			**1.3**			**2.8**			**1.7**			**3.2**			**7.1**			**2.1**	
Total Ions (meq/L)				**4.3**			**2.7**			**5.8**			**3.4**			**6.5**			**14.3**			**4.3**	
Cation/Anion Ratio				**1.05**			**1.04**			**1.04**			**1.05**			**1.03**			**1.03**			**1.07**	
Percent Difference				**2.2**			**2.1**			**2.2**			**2.3**			**1.3**			**1.3**			**3.4**	
Trilinear Diagram Data																							
sum (Ca, Mg, Na+K)				2.21			1.39			2.97			1.73			3.28			7.25			2.23	
Calcium					37.75			44.50			45.52			42.68			44.98			52.85			37.64
Magnesium					46.96			36.21			34.90			39.14			42.85			36.43			46.92
Sodium + Potassium					15.29			19.29			19.58			18.18			12.18			10.72			15.44
											100.0												100.0
sum (SO_4, Cl, HCO_3+CO_3)				2.08			1.25			2.76			1.54			3.14			6.94			2.07	
Sulfate					13.321			12.393			11.464			15.097			10.273			3.538			15.391
Chloride					5.780			5.423			25.442			9.295			9.518			27.340			6.160
Bicarbonate + Carbonate					80.899			82.183			63.094			75.607			80.209			69.121			78.450
											100.0												

Table 4
Ion Balance Calculations
Cedar Hills Regional Landfill Semi-annual Aquifer
Groundwater Monitoring
(Data Collected from October 01, 2021 to December 31, 2021)

			Upgradient and Crossgradient																	
Site ID			**MW-113**			**MW-114**			**MW-115**			**MW-93**			**MW-94**			**MW-95**		
			10/13/2021			10/12/2021			10/13/2021			10/11/2021			10/14/2021			10/12/2021		
Cations	MW	n	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)
pH			7.3			7.0			6.5			7.1			6.6			7.1		
Conductance			371			268			271			263			343			214		
TDSobs			232			171			173			201			217			136		
Calcium	40.1	2	39.5	1.971058	45.1	29.1	1.452096	48.6	31.5	1.57185629	50.6	33.0	1.64670659	47.7	39.7	1.98103792	50.7	23.0	1.14770459	46.5
Magnesium	24.3	2	22.4	1.843242	42.2	14.2	1.168484	39.1	13.9	1.14379757	36.8	16.4	1.34951656	39.1	17.8	1.46471919	37.5	12.2	1.00390866	40.6
Potassium	39.1	1	2.2	0.056268	1.3	2.3	0.059593	2.0	2.0	0.05192042	1.7	1.6	0.0409225	1.2	2.8	0.07084707	1.8	1.3	0.03376106	1.4
Sodium	23.0	1	9.8	0.425407	9.7	7.1	0.308398	10.3	7.8	0.33710646	10.9	9.3	0.40583268	11.8	9.1	0.39365335	10.1	6.4	0.27664479	11.2
Iron	55.8	2	1.46	0.052286	1.2	0.01	0.000358	0.0	0.01	0.00035812	0.0	0.01	0.00035812	0.0	0.01	0.00035812	0.0	0.01	0.00035812	0.0
Manganese	54.9	2	0.46	0.016855	0.4	0.00	6.52E-06	0.0	0.01	0.0002217	0.0	0.14	0.00509665	0.1	0.00	6.2252E-06	0.0	0.17	0.00633441	0.3
Ammonia-N	14.0	1	0.01	0.001007	0.0	0.00	0.000186	0.0	0.00	0.00014279	0.0	0.05	0.0035625	0.1	0.00	0.00019276	0.0	0.02	0.00167773	0.1
Total Cations (meq/L)				**4.4**			**3.0**			**3.1**			**3.5**			**3.9**			**2.5**	
Anions																				
Alkalinity, Total			148			101			101			123			137			91		
Carbonate	60.0	2	0.158	0.005267	0.1	0.05664	0.001888	0.1	0.01964996	0.00065501	0.0	0.08883074	0.00296106	0.1	0.02922452	0.00097416	0.0	0.0717358	0.00239123	0.1
Bicarbonate	61.0	1	180.24	2.954288	71.7	123.10	2.017808	70.4	123.18	2.01904049	69.2	149.88	2.45666846	73.6	167.08	2.73861281	73.9	110.39	1.80933592	76.6
Chloride	35.5	1	33.3	0.939272	22.8	20.1	0.566948	19.8	23.1	0.65156686	22.3	2.7	0.07728542	2.3	27.8	0.78413674	21.2	7.8	0.22000959	9.3
Nitrate-N	14.0	1	0.01	0.000714	0.0	1.73	0.12351	4.3	0.60	0.0430499	1.5	0.02	0.00157064	0.0	0.60	0.04255015	1.1	0.01	0.00071393	0.0
Sulfate	96.1	2	10.5	0.218619	5.3	7.5	0.156573	5.5	9.8	0.20321141	7.0	38.4	0.79952029	24.0	6.7	0.13845859	3.7	15.9	0.33105137	14.0
Total Anions (meq/L)				**4.1**			**2.9**			**2.9**			**3.3**			**3.7**			**2.4**	
Total Ions (meq/L)				**8.5**			**5.9**			**6.0**			**6.8**			**7.6**			**4.8**	
Cation/Anion Ratio				**1.06**			**1.04**			**1.06**			**1.03**			**1.06**			**1.05**	
Percent Difference				**2.9**			**2.1**			**3.1**			**1.7**			**2.7**			**2.2**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				4.30			2.99			3.10			3.44			3.91			2.46	
Calcium					45.88			48.59			50.63			47.83			50.66			46.62
Magnesium					42.91			39.10			36.84			39.20			37.46			40.78
Sodium + Potassium					11.21			12.31			12.53			12.98			11.88			12.61
					100.0									100.0						
sum (SO_4, Cl, HCO_3+CO_3)				4.12			2.74			2.87			3.34			3.66			2.36	
Sulfate					5.310			5.708			7.070			23.963			3.781			14.011
Chloride					22.812			20.667			22.667			2.316			21.412			9.311
Bicarbonate + Carbonate					71.878			73.625			70.263			73.720			74.807			76.678

Table 4
Ion Balance Calculations
Cedar Hills Regional Landfill Semi-annual Aquifer
Groundwater Monitoring
(Data Collected from October 01, 2021 to December 31, 2021)

			Downgradient to Waste Cells and North End Facilities																	
Site ID			**MW-68**			**MW-67**			**MW-72**			**MW-74R**			**MW-75**			**MW-80**		
			10/19/2021			10/22/2021			10/12/2021			10/12/2021			10/12/2021			10/20/2021		
Cations	MW	n	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)
pH			6.8			7.1			6.9			6.8			7.0			6.9		
Conductance			225			309			315			428			322			258		
TDSobs			156			223			199			296			247			191		
Calcium	40.1	2	27.3	1.362275	45.8	38.9	1.941118	46.7	31.6	1.576846	42.8	46.5	2.320359	39.9	34.9	1.741517	40.8	32.4	1.616766	47.2
Magnesium	24.3	2	14.3	1.176713	39.6	21.2	1.744497	42.0	19.3	1.588151	43.1	35.3	2.904752	49.9	23.9	1.966674	46.1	16.3	1.341288	39.2
Potassium	39.1	1	1.6	0.04169	1.4	1.8	0.045782	1.1	2.0	0.050897	1.4	2.2	0.055757	1.0	2.0	0.052176	1.2	1.7	0.042713	1.2
Sodium	23.0	1	8.4	0.36625	12.3	9.2	0.398003	9.6	8.3	0.360595	9.8	12.3	0.535021	9.2	9.2	0.400613	9.4	7.7	0.333627	9.7
Iron	55.8	2	0.47	0.016832	0.6	0.46	0.016617	0.4	2.66	0.09526	2.6	0.01	0.000358	0.0	2.70	0.096693	2.3	2.17	0.077712	2.3
Manganese	54.9	2	0.28	0.010084	0.3	0.26	0.009392	0.2	0.35	0.012851	0.3	0.00	3.64E-06	0.0	0.25	0.009138	0.2	0.35	0.012596	0.4
Ammonia-N	14.0	1	0.02	0.001264	0.0	0.01	0.000857	0.0	0.02	0.001199	0.0	0.00	0.000143	0.0	0.01	0.000678	0.0	0.01	0.000707	0.0
Total Cations (meq/L)				**3.0**			**4.2**			**3.7**			**5.8**			**4.3**			**3.4**	
Anions																				
Alkalinity, Total			124			169			130			212			118			124		
Carbonate	60.0	2	0.05039	0.00168	0.1	0.11657	0.003886	0.1	0.06064	0.002021	0.1	0.08815	0.002938	0.1	0.06928	0.00231	0.1	0.05653	0.001884	0.1
Bicarbonate	61.0	1	151.18	2.477947	86.0	205.94	3.375605	82.7	158.48	2.597587	74.0	258.46	4.236423	75.3	143.82	2.357335	58.0	151.17	2.477742	76.7
Chloride	35.5	1	3.1	0.088286	3.1	5.2	0.147237	3.6	8.0	0.226215	6.4	24.3	0.685414	12.2	12.9	0.363862	9.0	4.9	0.137083	4.2
Nitrate-N	14.0	1	0.01	0.000714	0.0	0.06	0.004476	0.1	0.01	0.000714	0.0	0.43	0.030699	0.5	0.01	0.000714	0.0	0.01	0.000714	0.0
Sulfate	96.1	2	15.0	0.312313	10.8	26.4	0.54967	13.5	32.9	0.685006	19.5	32.3	0.672513	11.9	64.4	1.340862	33.0	29.5	0.614215	19.0
Total Anions (meq/L)				**2.9**			**4.1**			**3.5**			**5.6**			**4.1**			**3.2**	
Total Ions (meq/L)				**5.9**			**8.2**			**7.2**			**11.4**			**8.3**			**6.7**	
Cation/Anion Ratio				**1.03**			**1.02**			**1.05**			**1.03**			**1.05**			**1.06**	
Percent Difference				**1.6**			**0.9**			**2.4**			**1.6**			**2.4**			**2.9**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				2.95			4.13			3.58			5.82			4.16			3.33	
Calcium					46.23			47.01			44.09			39.90			41.85			48.49
Magnesium					39.93			42.25			44.41			49.95			47.26			40.23
Sodium + Potassium					13.84			10.75			11.51			10.16			10.88			11.29
sum (SO_4, Cl, HCO_3+CO_3)				2.88			4.08			3.51			5.60			4.06			3.23	
Sulfate					10.843			13.484			19.511			12.015			32.991			19.010
Chloride					3.065			3.612			6.443			12.245			8.952			4.243
Bicarbonate + Carbonate					86.091			82.904			74.045			75.740			58.057			76.747

Table 4
Ion Balance Calculations
Cedar Hills Regional Landfill Semi-annual Aquifer
Groundwater Monitoring
(Data Collected from October 01, 2021 to December 31, 2021)

			Downgradient to Waste Cells and North End Facilities																	
Site ID			**MW-85**			**MW-86**			**MW-87**			**MW-88**			**MW-89**			**MW-100**		
			10/6/2021			10/6/2021			10/13/2021			10/13/2021			10/13/2021			10/14/2021		
Cations	MW	n	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)	mg/L	meq/L	%(meq)
pH			7.0			6.9			6.6			7.0			7.1			6.9		
Conductance			353			188			497			122			235			247		
TDSobs			229			127			362			82			151			153		
Calcium	40.1	2	36.8	1.836327	43.5	16.5	0.823353	38.2	50.1	2.5	41.4	9.9	0.495509	35.2	20.5	1.022954	37.1	25.6	1.277445	41.8
Magnesium	24.3	2	23.2	1.909072	45.2	11.6	0.954536	44.3	34.0	2.797778	46.3	7.6	0.626209	44.5	15.0	1.234314	44.7	16.0	1.316602	43.1
Potassium	39.1	1	1.7	0.043992	1.0	1.3	0.032994	1.5	2.6	0.066243	1.1	0.9	0.022303	1.6	1.8	0.045271	1.6	1.8	0.045271	1.5
Sodium	23.0	1	10.0	0.434976	10.3	7.2	0.313618	14.5	11.1	0.482823	8.0	6.0	0.262726	18.7	9.1	0.394088	14.3	8.9	0.387129	12.7
Iron	55.8	2	0.01	0.000358	0.0	0.89	0.031765	1.5	4.81	0.172256	2.9	0.01	0.000358	0.0	1.36	0.048704	1.8	0.65	0.02335	0.8
Manganese	54.9	2	0.00	1.24E-05	0.0	0.01	0.000455	0.0	0.50	0.018166	0.3	0.00	3.64E-06	0.0	0.35	0.012705	0.5	0.12	0.004187	0.1
Ammonia-N	14.0	1	0.00	0.000143	0.0	0.00	0.000143	0.0	0.02	0.001221	0.0	0.00	0.000143	0.0	0.02	0.001492	0.1	0.01	0.000593	0.0
Total Cations (meq/L)				**4.2**			**2.2**			**6.0**			**1.4**			**2.8**			**3.1**	
Anions																				
Alkalinity, Total			155			72			120			53			87			118		
Carbonate	60.0	2	0.08494	0.002831	0.1	0.03226	0.001075	0.1	0.03007	0.001002	0.0	0.0286	0.000953	0.1	0.07033	0.002344	0.1	0.05764	0.001921	0.1
Bicarbonate	61.0	1	188.93	3.096702	76.6	88.26	1.446707	72.6	146.34	2.398636	42.4	65.09	1.066886	80.3	105.75	1.733394	68.8	143.84	2.357723	84.4
Chloride	35.5	1	9.9	0.278397	6.9	4.3	0.119877	6.0	18.1	0.510535	9.0	1.9	0.054438	4.1	11.2	0.315911	12.5	2.9	0.080388	2.9
Nitrate-N	14.0	1	0.12	0.008353	0.2	0.01	0.000714	0.0	0.01	0.000785	0.0	0.86	0.061112	4.6	0.01	0.000714	0.0	0.01	0.000714	0.0
Sulfate	96.1	2	31.6	0.657939	16.3	20.4	0.424745	21.3	132.0	2.748351	48.6	7.0	0.145954	11.0	22.5	0.468469	18.6	16.9	0.351872	12.6
Total Anions (meq/L)				**4.0**			**2.0**			**5.7**			**1.3**			**2.5**			**2.8**	
Total Ions (meq/L)				**8.3**			**4.1**			**11.7**			**2.7**			**5.3**			**5.8**	
Cation/Anion Ratio				**1.04**			**1.08**			**1.07**			**1.06**			**1.09**			**1.09**	
Percent Difference				**2.2**			**3.9**			**3.2**			**2.8**			**4.5**			**4.5**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				4.22			2.12			5.85			1.41			2.70			3.03	
Calcium					43.47			38.76			42.76			35.22			37.93			42.21
Magnesium					45.19			44.93			47.85			44.51			45.77			43.50
Sodium + Potassium					11.34			16.31			9.39			20.26			16.29			14.29
sum (SO_4, Cl, HCO_3+CO_3)				4.04			1.99			5.66			1.27			2.52			2.79	
Sulfate					16.302			21.318			48.570			11.508			18.589			12.603
Chloride					6.898			6.017			9.022			4.292			12.536			2.879
Bicarbonate + Carbonate					76.800			72.665			42.407			84.199			68.875			84.517

Figure 7. Trilinear Diagram East Area Perched Zone Wells

Cedar Hills Regional Landfill

First Quarter 2021

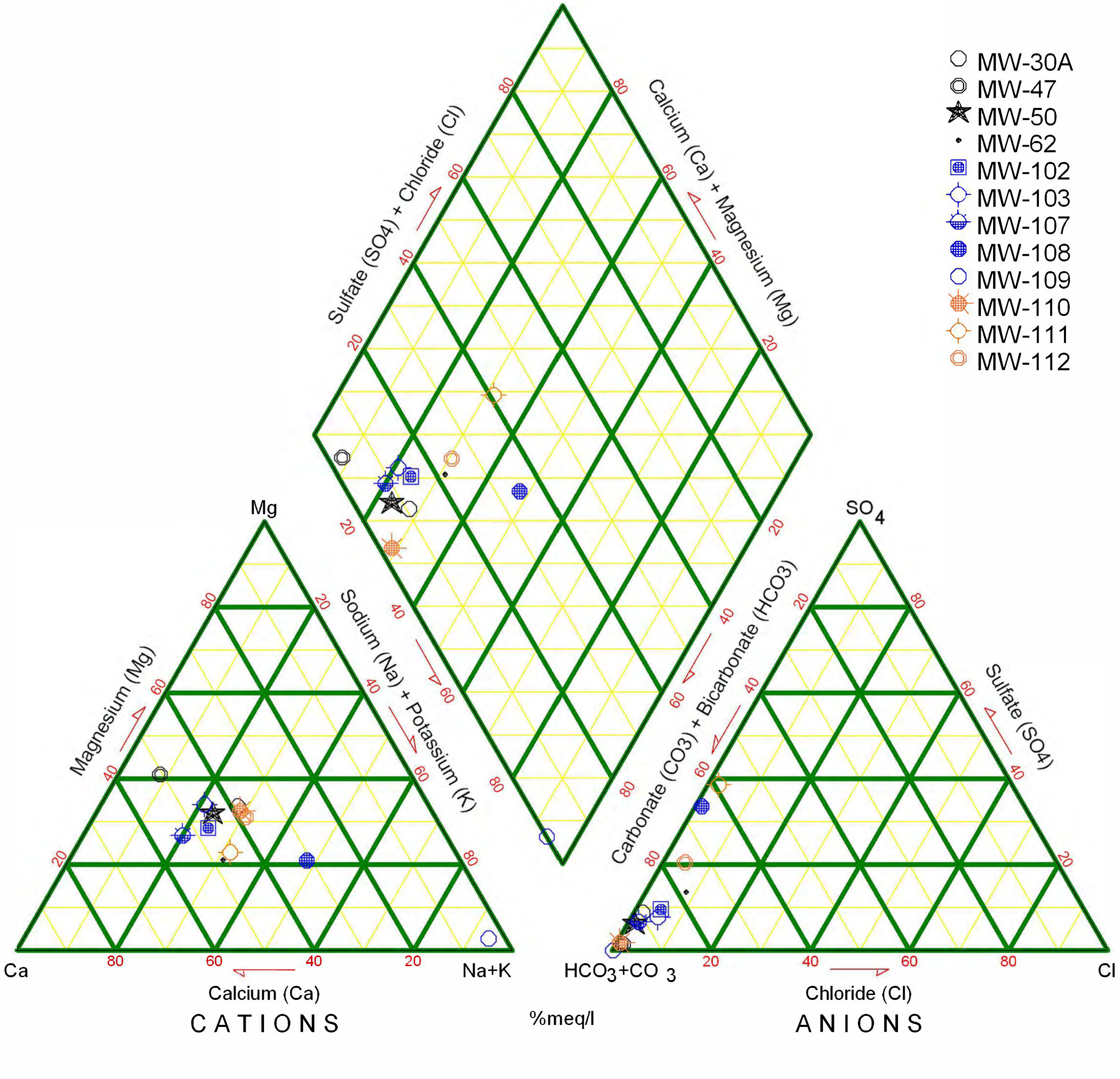


Figure 7. Trilinear Diagram East Perched Zone Wells

Cedar Hills Regional Landfill

Second Quarter 2021

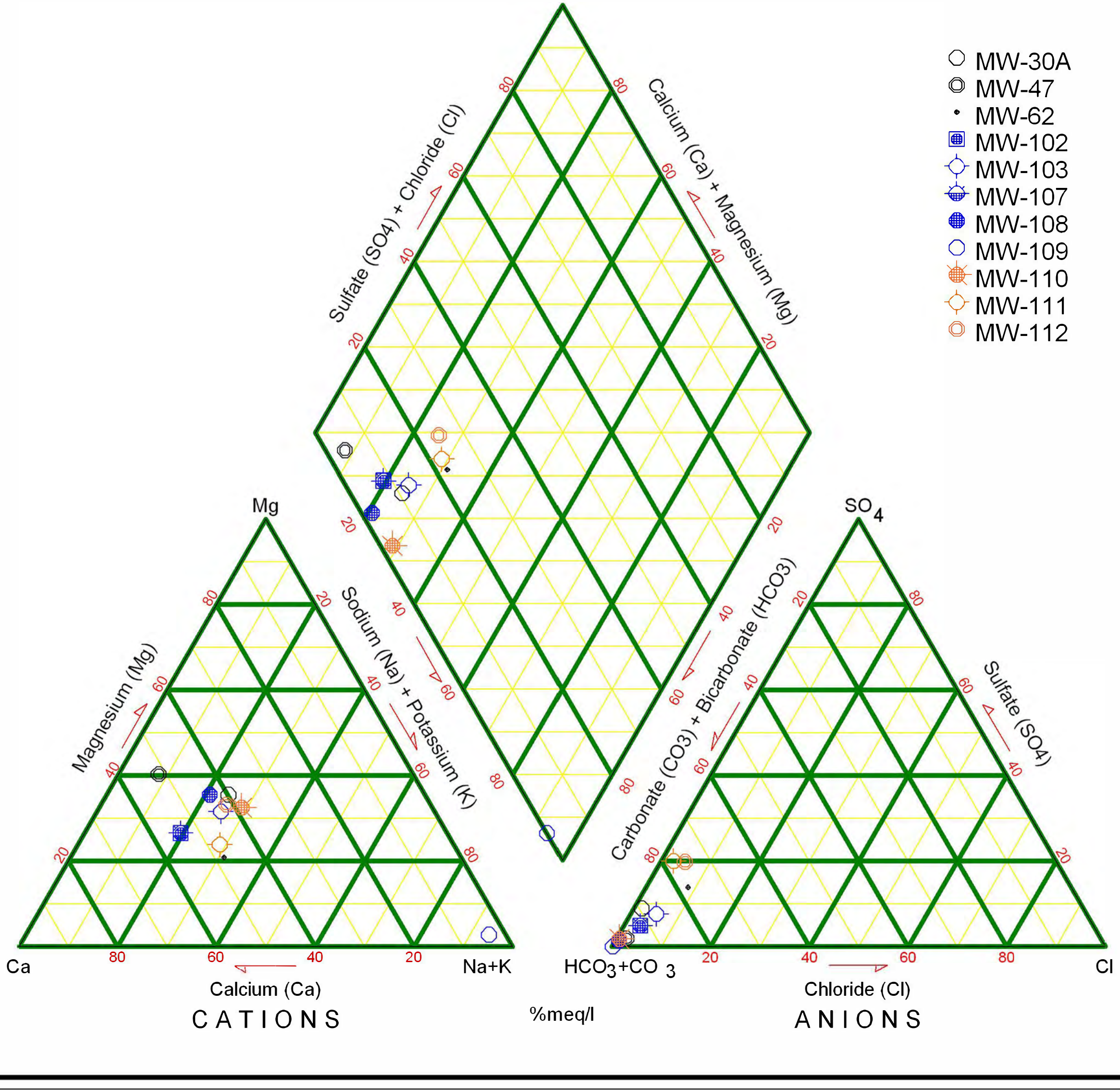


Figure 7. Trilinear Diagram East Perched Zone Wells

Cedar Hills Regional Landfill

Third Quarter 2021

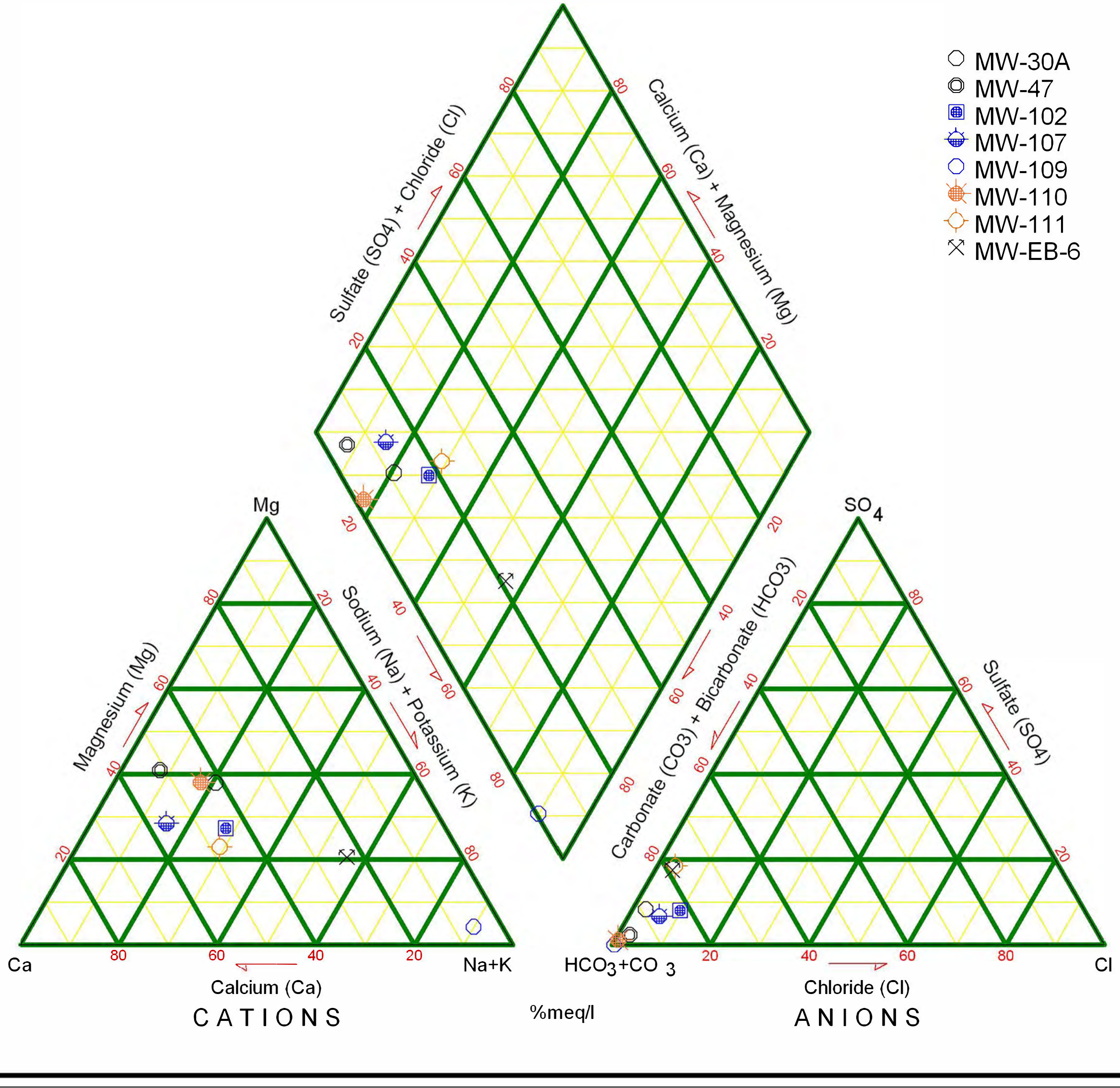


Figure 7. Trilinear Diagram East Perched Zone Wells
Cedar Hills Regional Landfill
Fourth Quarter 2021

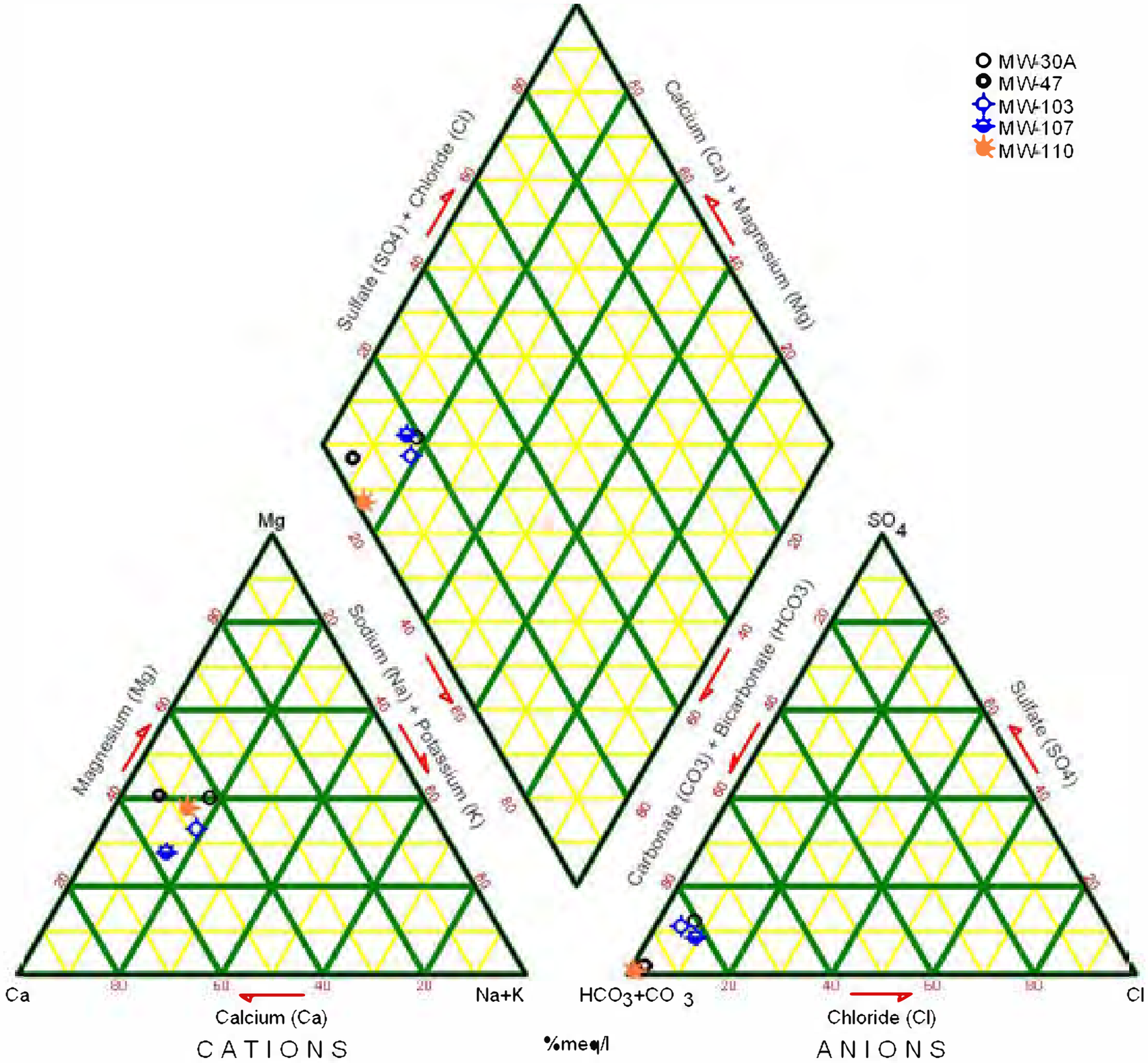


Figure 8. Trilinear Diagram SSW Area Perched Zone Wells

Cedar Hills Regional Landfill

First Quarter 2021

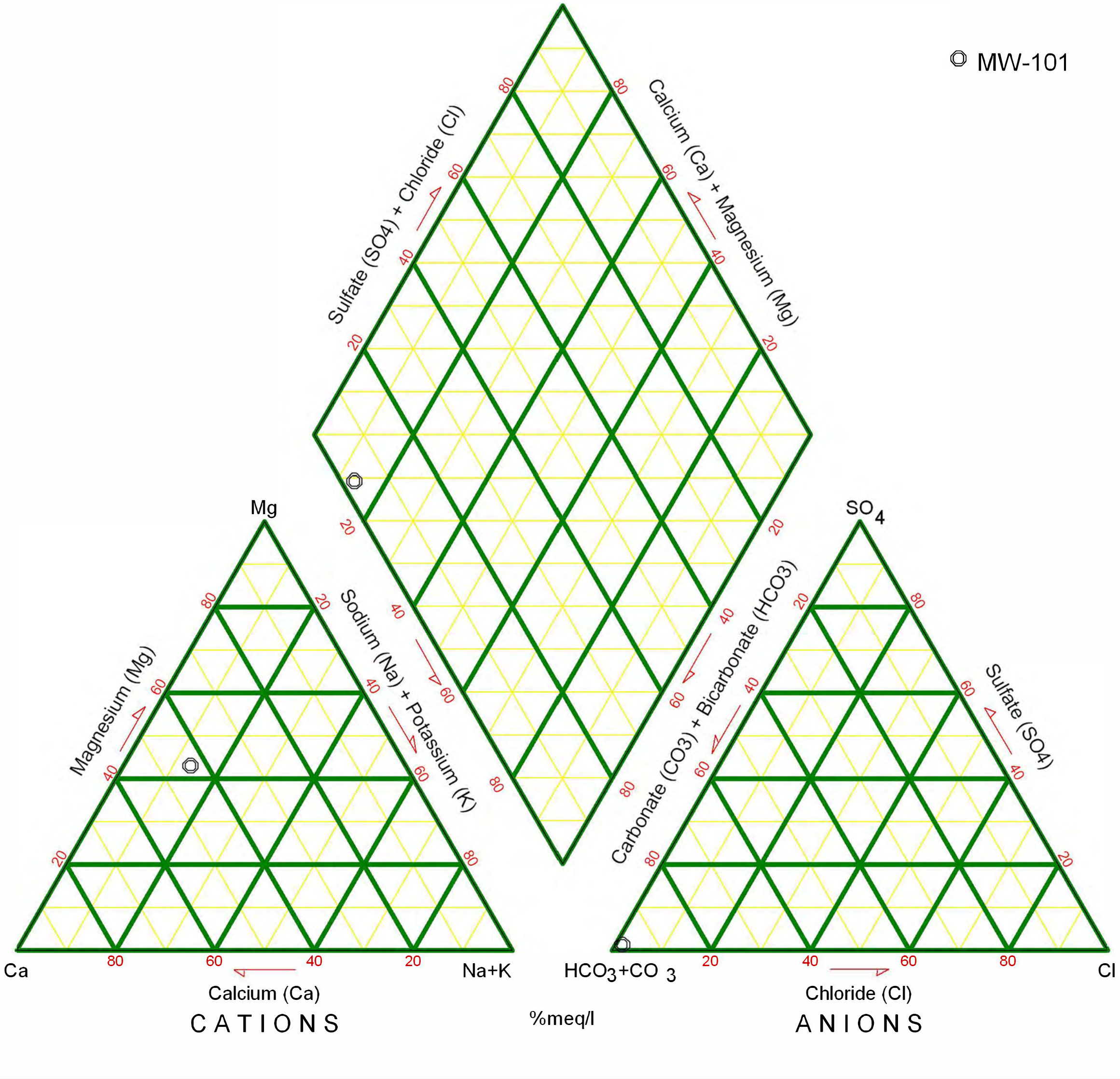


Figure 7. Trilinear Diagram SSW Area Perched Zones Wells

Cedar Hills Regional Landfill

Second Quarter 2021

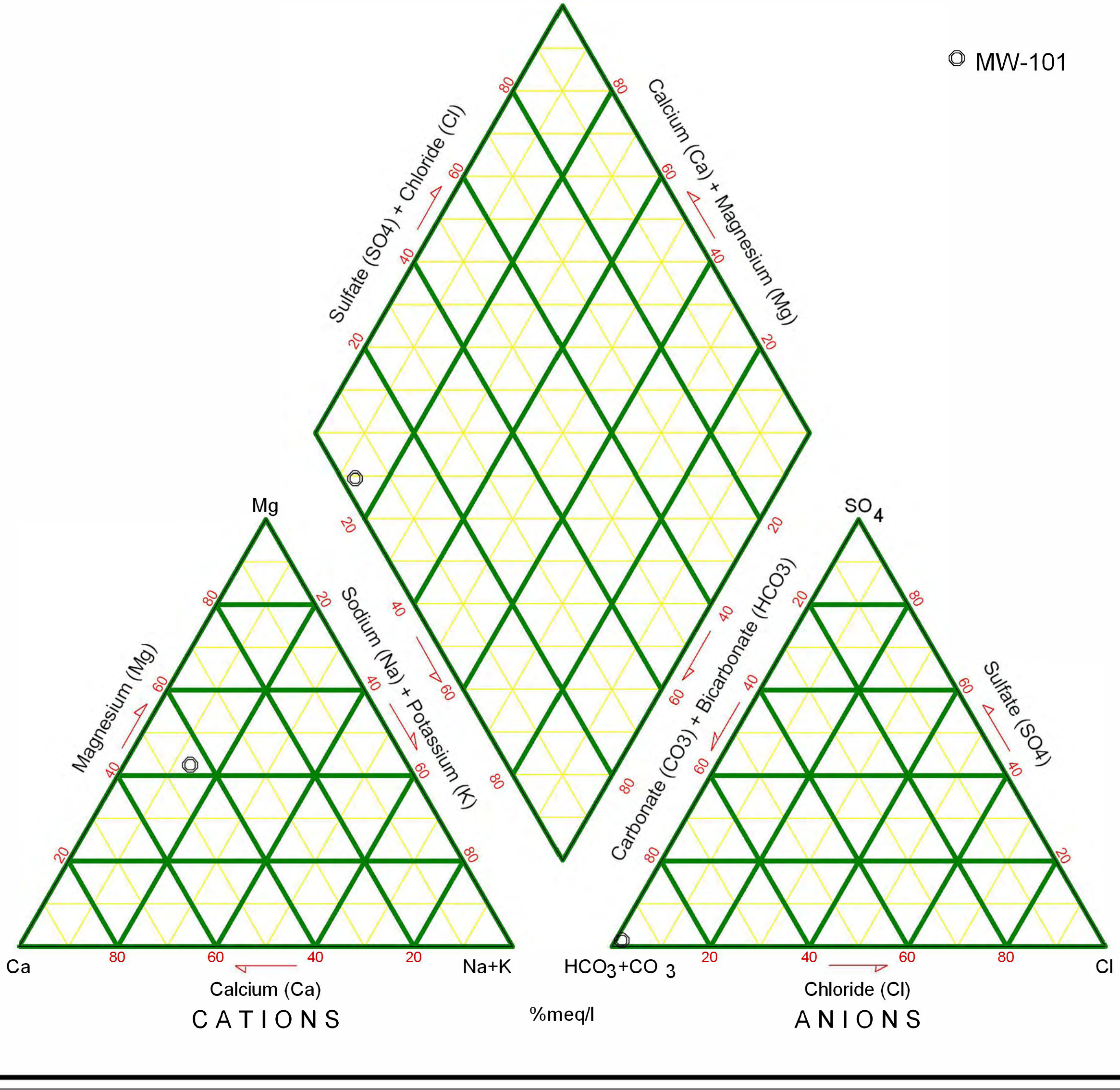


Figure 8. Trilinear Diagram SSW Area Perched Zones Wells
Cedar Hills Regional Landfill
Third Quarter 2021

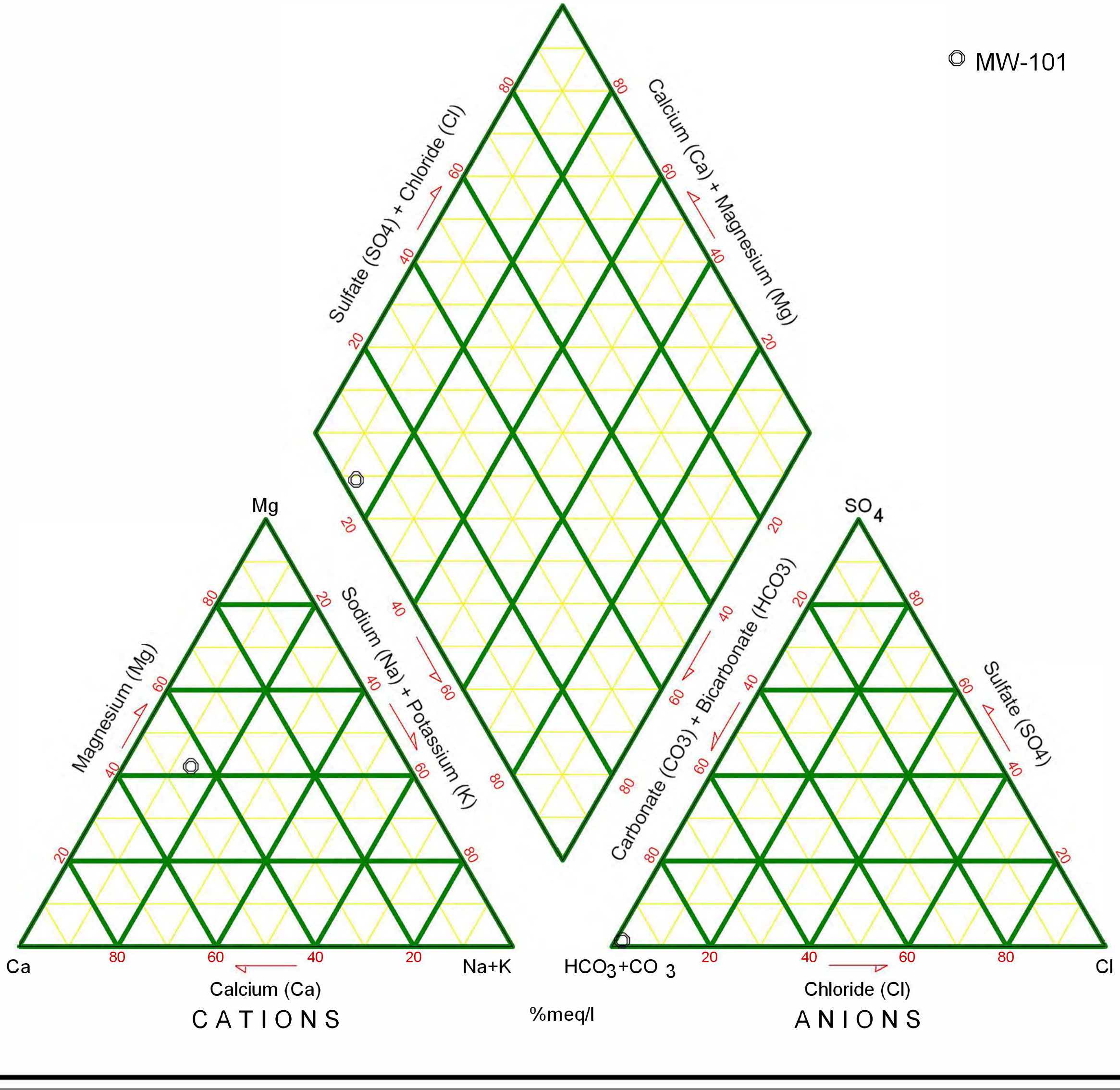


Figure 8. Trilinear Diagram SSW Area Perched Zones Wells
Cedar Hills Regional Landfill
Fourth Quarter 2021

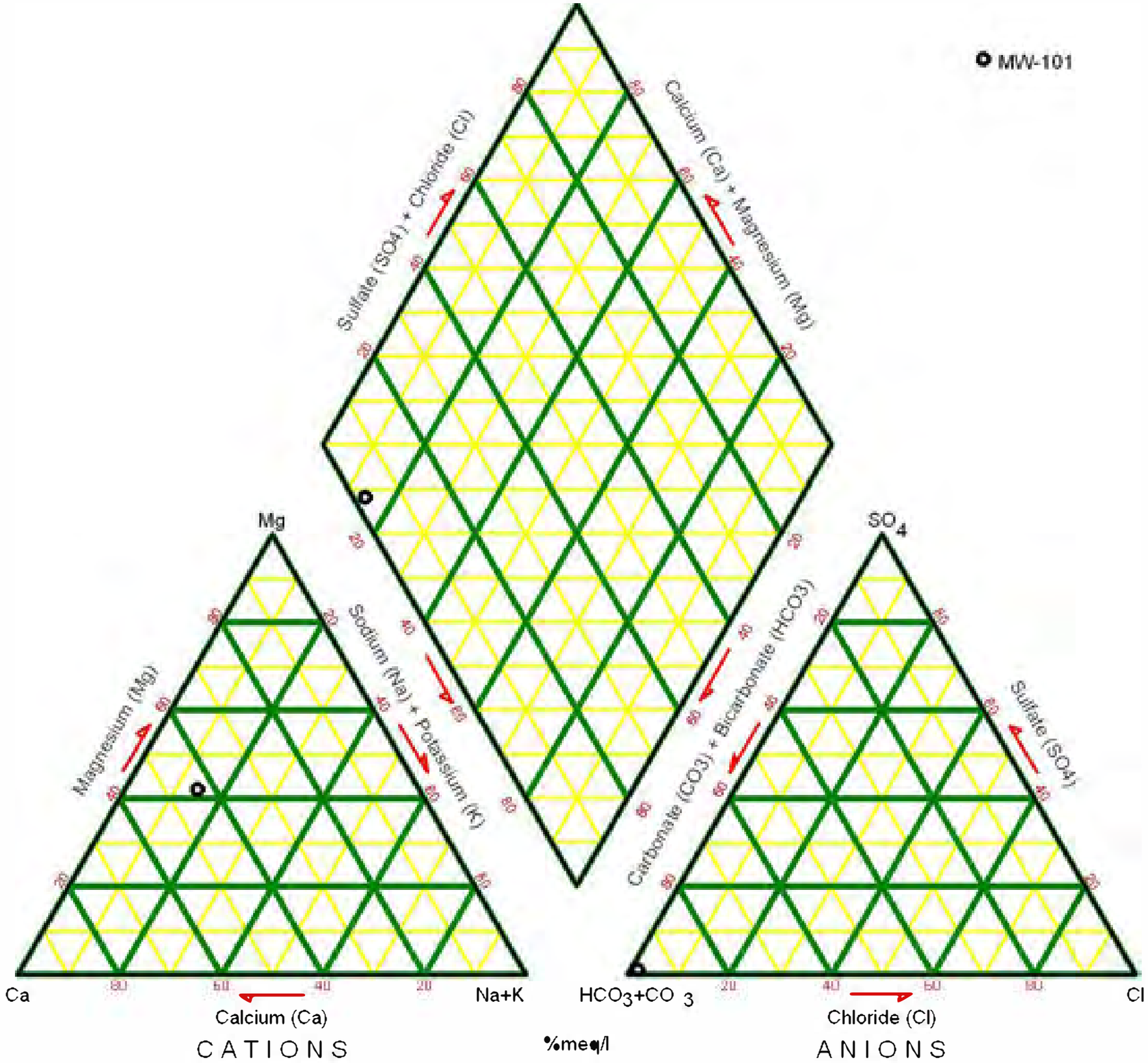


Table 8
Ion Balance Calculations
Cedar Hills Regional Landfill
Perched Zones Groundwater Monitoring Wells

Data Collected from January 1, 2021 to March 31, 2021

			East Perched Zone														
		Site ID	MW-30A			MW-47			MW-50			MW-62			SW-E1		
		Date	1/20/21			1/20/21			1/12/21			1/25/21			1/13/21		
Cations	**Molecular Weight**	**n**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**
pH			6.2			6.7			7.3			6.1			6.2		
Conductance			200			842			314			140			36		
TDSobs			159			581			201			113			43		
Calcium	40.1	2	16.9	0.84	38.6	112.0	5.59	49.7	31.8	1.59	44.5	17.5	0.87	47.8	4.0	0.202	52.1
Magnesium	24.3	2	8.9	0.73	33.6	55.2	4.54	40.4	13.8	1.14	31.8	4.7	0.39	21.1	0.9	0.076	19.6
Potassium	39.1	1	1.3	0.034	1.54	4.6	0.12	1.04	6.24	0.16	4.48	0.90	0.023	1.25	0.541	0.01384	3.58
Sodium	23.0	1	13.2	0.57	26.3	18.6	0.81	7.2	15.7	0.68	19.2	12.5	0.54	29.8	2.17	0.094	24.4
Iron	55.8	2	0.010	0.0003581	0.0164	3.0	0.11	1.0	0.0	0.00	0.0	0.010	0.0004	0.020	0.025	0.001	0.2
Manganese	54.9	2	0.00015	5.534E-06	0.00025	2.0	0.07	0.6	0.0	0.00	0.0	0.0007	2.534E-05	0.0014	0.002	6.2E-05	0.02
Ammonia-N	14.0	1	0.0020	0.0001428	0.0065	0.052	0.004	0.033	0.002	0.000	0.004	0.0020	0.0001428	0.008	0.003	0.00019	0.05
Total Cations (meq/L)				**2.19**			**11.24**			**3.57**			**1.83**			**0.39**	
Anions																	
Alkalinity, Total			72.3			521			164			61.3			9.2		
Carbonate	60.0	2	0.008	0.0002518	0.012	0.14	0.0046635	0.04	0.18	0.005972	0.17	0.004	0.0001444	0.008	0.0009	2.9E-05	0.01
Bicarbonate	61.0	1	88.19	1.45	68.1	635.3	10.4	96.9	199.7	3.3	91.9	74.78	1.23	71.4	11.22	0.18394	53.5
Chloride	35.5	1	1.0	0.028	1.3	5.7	0.2	1.51	1.90	0.1	1.51	4.52	0.127	7.42	1.55	0.04372	12.7
Nitrate-N	14.0	1	7.1	0.51	23.8	0.016	0.0011423	0.011	0.120	0.0085671	0.241	2.10	0.15	8.7	1.21	0.08639	25.1
Sulfate	96.1	2	6.9	0.14	6.7	7.7	0.160	1.49	10.50	0.219	6.14	10.30	0.21	12.5	1.4	0.02977	8.7
Total Anions (meq/L)				**2.12**			**10.74**			**3.56**			**1.72**			**0.34**	
Total Ions (meq/L)				**4.3**			**22.0**			**7.1**			**3.5**			**0.7**	
Cation/Anion Ratio				**1.03**			**1.05**			**1.00**			**1.06**			**1.12**	
Percent Difference				**1.5**			**2.3**			**0.1**			**3.1**			**5.9**	
Trilinear Diagram Data																	
sum (Ca, Mg, Na+K)				2.19			11.06			3.56			1.83			0.39	
Calcium					38.6			50.5			44.5			47.83			52.30
Magnesium					33.6			41.1			31.9			21.14			19.62
Sodium + Potassium					27.8			8.4			23.6			31.03			28.08
sum (SO_4, Cl, HCO_3+CO_3)				1.62			10.74			3.55			1.57			0.26	
Sulfate					8.8			1.5			6.2			13.7			11.6
Chloride					1.7			1.5			1.5			8.1			17.0
Bicarbonate + Carbonate					89.4			97.0			92.3			78.2			71.5

Table 8
Ion Balance Calculations
Cedar Hills Regional Landfill
Perched Zones Groundwater Monitoring Wells

Data Collected from January 1, 2021 to March 31, 2021

			East Perched Zone								
	Site ID		**MW-102**			**MW-103**			**MW-107**		
	Date		1/21/2021			1/12/2021			1/21/2021		
Cations	**Molecular Weight**	**n**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**
pH			6.5			8.0			5.5		
Conductance			191			234			173		
TDSobs			150			171			115		
Calcium	40.1	2	21.4	1.06786	47.0	25.1	1.25	45.0	18.3	0.913	46.1
Magnesium	24.3	2	7.9	0.64760	28.5	11.5	0.95	34.0	5.6	0.461	23.3
Potassium	39.1	1	1.3	0.03274	1.4	2.8	0.07	2.57	2.5	0.063	3.2
Sodium	23.0	1	12.0	0.52197	23.0	11.7	0.51	18.3	6.5	0.283	14.3
Iron	55.8	2	0.010	0.00036	0.016	0.010	0.00	0.0	3.43	0.123	6.20
Manganese	54.9	2	0.001	0.00005	0.002	0.040	0.00	0.1	2.19	0.080	4.03
Ammonia-N	14.0	1	0.003	0.00021	0.009	0.002	0.000	0.005	0.81	0.058	2.92
Total Cations (meq/L)				**2.3**			**2.78**			**2.0**	
Anions											
Alkalinity, Total			89.6			118			80.1		
Carbonate	60.0	2	0.0163	0.0005	0.02	0.66	0.0218728	0.80	0.002	0.000	0.0
Bicarbonate	61.0	1	109.28	1.7912	81.7	142.6	2.3	86.0	97.72	1.602	91.2
Chloride	35.5	1	3.8	0.1063	4.8	5.2	0.1	5.38	1.3	0.036	2.1
Nitrate-N	14.0	1	1.3	0.0928	4.2	0.0	0.0028557	0.105	0.0	0.001	0.0
Sulfate	96.1	2	9.7	0.2018	9.2	10.1	0.210	7.73	5.6	0.117	6.7
Total Anions (meq/L)				**2.2**			**2.72**			**1.8**	
Total Ions (meq/L)				**4.5**			**5.5**			**3.7**	
Cation/Anion Ratio				**1.04**			**1.02**			**1.13**	
Percent Difference				**1.8**			**1.1**			**6.0**	
Trilinear Diagram Data											
sum (Ca, Mg, Na+K)				2.27			2.78			1.72	
Calcium					47.04			45.1			53.10
Magnesium					28.53			34.1			26.80
Sodium + Potassium					24.43			20.9			20.10
sum (SO_4, Cl, HCO_3+CO_3)				2.10			2.72			1.76	
Sulfate					9.6			7.7			6.7
Chloride					5.1			5.4			2.1
Bicarbonate + Carbonate					85.3			86.9			91.2

Table 8
Ion Balance Calculations
Cedar Hills Regional Landfill
Perched Zones Groundwater Monitoring Wells

Data Collected from January 1, 2021 to March 31, 2021

			East Perched Zone															SSWA		
		Site ID	MW-108			MW-109			MW-110			MW-111			MW-112			MW-101		
		Date	1/21/2021			1/20/2021			1/20/2021			1/15/2021			1/15/2021			1/25/2021		
Cations	**Molecular Weight**	**n**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**
pH			6.7			7.2			6.5			5.5			7.2			6.8		
Conductance			356			2785			656			95			754			378		
TDSobs			266			2020			463			94			241			269		
Calcium	40.1	2	25.3	1.26248	31.0	23.9	1.19	3.3	65.6	3.273	38.4	9.4	0.4701	45.4	29.6	1.477	38.2	51.3	2.560	42.9
Magnesium	24.3	2	10.4	0.85579	21.0	12.0	0.99	2.8	33.5	2.757	32.4	2.9	0.2370	22.9	14.6	1.201	31.1	30.9	2.543	42.6
Potassium	39.1	1	1.6	0.04092	1.0	2.3	0.06	0.2	3.2	0.081	0.9	0.3	0.0085	0.8	2.9	0.074	1.9	2.7	0.068	1.1
Sodium	23.0	1	44.1	1.91824	47.0	760.0	33.06	92.4	54.4	2.366	27.8	7.3	0.3188	30.8	25.5	1.109	28.7	16.8	0.731	12.2
Iron	55.8	2	0.010	0.00036	0.009	10.4	0.37	1.0	0.0	0.000	0.0	0.010	0.0004	0.03	0.01	0.000	0.01	0.63	0.023	0.38
Manganese	54.9	2	0.001	0.00003	0.001	2.0	0.07	0.2	1.0	0.035	0.4	0.003	0.0001	0.01	0.03	0.001	0.03	1.19	0.043	0.73
Ammonia-N	14.0	1	0.002	0.00014	0.004	0.3	0.02	0.1	0.1	0.004	0.0	0.002	0.0001	0.01	0.01	0.001	0.01	0.01	0.000	0.01
Total Cations (meq/L)				**4.1**			**35.8**			**8.5**			**1.0**			**3.9**			**6.0**	
Anions																				
Alkalinity, Total			130			1860			406			27.6			141			232		
Carbonate	60.0	2	0.035	0.001	0.03	1.652	0.055	0.1	0.085	0.0028	0.0	0.0005	0.00002	0.0	0.122	0.004	0.1	0.094	0.003	0.1
Bicarbonate	61.0	1	158.53	2.598	64.2	2265.84	37.139	99.7	495.15	8.1160	97.5	33.67	0.5519	58.1	171.77	2.815	74.7	282.85	4.636	97.1
Chloride	35.5	1	1.8	0.050	1.2	2.1	0.060	0.2	1.9	0.0542	0.7	0.7	0.0206	2.2	5.9	0.166	4.4	2.4	0.066	1.4
Nitrate-N	14.0	1	0.8	0.055	1.4	0.1	0.004	0.01	0.02	0.0011	0.01	0.3	0.0179	1.9	0.2	0.012	0.3	0.0	0.002	0.0
Sulfate	96.1	2	64.5	1.343	33.2	0.1	0.003	0.01	7.2	0.1507	1.8	17.3	0.3602	37.9	37.1	0.772	20.5	3.1	0.065	1.4
Total Anions (meq/L)				**4.0**			**37.3**			**8.3**			**1.0**			**3.8**			**4.8**	
Total Ions (meq/L)				**8.1**			**73.0**			**16.8**			**2.0**			**7.6**			**10.7**	
Cation/Anion Ratio				**1.01**			**0.96**			**1.02**			**1.09**			**1.02**			**1.25**	
Percent Difference				**0.4**			**-2.0**			**1.1**			**4.3**			**1.2**			**11.1**	
Trilinear Diagram Data																				
sum (Ca, Mg, Na+K)				4.08			35.30			8.48			1.03			3.86			5.90	
Calcium					30.96			3.38			38.62			45.44			38.25			43.38
Magnesium					20.99			2.80			32.52			22.91			31.11			43.08
Sodium + Potassium					48.05			93.82			28.86			31.65			30.64			13.54
sum (SO_4, Cl, HCO_3+CO_3)				3.99			37.26			8.32			0.93			3.76			4.77	
Sulfate					33.6			0.0			1.8			38.6			20.6			1.4
Chloride					1.2			0.2			0.7			2.2			4.4			1.4
Bicarbonate + Carbonate					65.1			99.8			97.5			59.2			75.0			97.2

Table 8
Ion Balance Calculations.
Cedar Hills Regional Landfill.
Perched Zones Groundwater Monitoring Wells

Data Collected from October 1, 2020 - December 31, 2020

		East Perched Zone																																	
Site ID		**MW-30A**			**MW-47**			**MW-62**			**MW-101**			**MW-102**			**MW-103**			**MW-104**			**MW-107**			**MW-108**			**MW-109**			**MW-110**			**MW-111**			**MW-112**		
Date		4/19/2021			4/19/2021			4/20/2021			4/19/2021			4/20/2021			4/16/2021			Data not taken			4/20/2021			4/15/2021			4/15/2021			4/20/2021			4/15/2021			4/14/2021		
Cations	**Weight**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**
pH		6.1			6.6			6.2			7.1			6.8			8.0			6.6			5.5			6.6			7.1			6.2			5.6			7.5		
Conductance		216.7			851.7			159.9			464.0			162.5			249.8			325.2			203.9			325.2			3727.0			684.0			77.8			239.2		
TDSobs		181.0			591.0			121.0			321.0			134.0			180.0			227.0			131.0			227.0			3090.0			449.0			76.7			198.0		
Calcium	40.1	19.2	0.96	39.8	117.0	5.84	50.6	16.1	0.80	48.0	52.0	2.59	43.6	17.0	0.85	45.5	24.8	1.24	43.2	24.0	1.20	34.9	21.7	1.08	46.5	24.0	1.20	34.9	35.8	1.79	3.2	71.9	3.59	43.0	8.2	0.41	47.3	25.9	1.29	41.3
Magnesium	24.3	10.4	0.86	35.5	55.6	4.58	39.6	4.3	0.35	20.9	30.5	2.51	42.2	6.3	0.52	28.0	11.0	0.91	31.6	10.2	0.84	24.5	6.5	0.53	22.9	10.2	0.84	24.5	19.4	1.60	2.8	35.6	2.93	35.1	2.5	0.21	23.8	12.6	1.04	33.2
Potassium	39.1	1.3	0.034	1.41	4.4	0.113	0.98	0.8	0.021	1.24	2.7	0.068	1.15	1.1	0.028	1.52	2.7	0.070	2.44	1.4	0.037	1.07	2.6	0.065	2.80	1.4	0.037	1.07	2.7	0.069	0.12	3.0	0.077	0.93	0.3	0.008	0.93	2.8	0.071	2.27
Sodium	23.0	12.9	0.56	23.3	18.6	0.81	7.0	11.5	0.50	29.9	16.6	0.72	12.1	10.7	0.47	25.0	14.9	0.65	22.7	31.2	1.36	39.6	7.5	0.33	14.0	31.2	1.36	39.6	1200.0	52.20	92.9	37.8	1.64	19.7	5.5	0.24	27.8	16.6	0.72	23.1
Iron	55.8	0.0	0.0004	0.0149	3.5	0.1264	1.0955	0.0	0.0004	0.0214	0.4	0.014	0.2354	0.0	0.0004	0.0192	0.0	0.0004	0.0125	0.0	0.0004	0.0104	4.2	0.1486	6.3754	0.0	0.0004	0.0104	12.8	0.4584	0.8155	0.1	0.0031	0.0373	0.0	0.0004	0.0415	0.0	0.0004	0.0115
Manganese	54.9	0.0	7E-06	0.00031	2.0	0.0735	0.63728	0.0	2E-05	0.00134	1.1	0.0393	0.66086	0.0	2E-05	0.00109	0.0	0.0002	0.00837	0.0	1E-05	0.00032	3.0	0.1085	4.65376	0.0	1E-05	0.00032	2.1	0.0754	0.13406	2.9	0.1038	1.24281	0.0	7E-05	0.00853	0.1	0.0026	0.08302
Ammonia-N	14.0	0.0	0.0001	0.0059	0.1	0.0036	0.0314	0.0	0.0001	0.0085	0.0	0.0011	0.0188	0.0	0.0001	0.0077	0.0	0.0001	0.0050	0.0	0.0001	0.0042	0.9	0.067	2.8727	0.0	0.0001	0.0042	0.4	0.0289	0.0514	0.0	0.0027	0.0326	0.0	0.0001	0.0166	0.0	0.0013	0.0404
Total Cations (meq/L)			**2.41**			**11.54**			**1.68**			**5.95**			**1.86**			**2.86**			**3.43**			**2.33**			**3.43**			**56.21**			**8.35**			**0.86**			**3.13**		
Anions																																									
Alkalinity, Total		78.40			520.00			58.50			266.00			71.10			117.00			114.00			91.80			114.00			2530.00			403.00			32.80			109.00		
Carbonate	60.0	0.006	0.000	0.009	0.124	0.004	0.038	0.006	0.000	0.012	0.188	0.006	0.114	0.025	0.001	0.045	0.729	0.024	0.905	0.028	0.001	0.027	0.002	0.000	0.003	0.028	0.001	0.027	1.745	0.058	0.115	0.041	0.001	0.017	0.001	0.000	0.003	0.207	0.007	0.296
Bicarbonate	61.0	95.64	1.568	67.919	634.15	10.394	96.008	71.36	1.170	70.473	324.14	5.313	97.095	86.69	1.421	78.535	141.26	2.315	86.177	139.02	2.279	67.062	111.99	1.836	91.731	139.02	2.279	67.062	3083.05	50.534	99.684	491.58	8.057	97.809	40.01	0.656	71.783	132.56	2.173	93.325
Chloride	35.5	1.0	0.028	1.234	7.6	0.215	1.985	4.5	0.127	7.682	2.5	0.070	1.278	5.7	0.162	8.933	4.9	0.139	5.186	1.6	0.045	1.336	2.4	0.067	3.341	1.6	0.045	1.336	3.1	0.087	0.172	2.2	0.061	0.743	0.7	0.021	2.312	5.0	0.142	6.082
Nitrate-N	14.0	7.8	0.555	24.035	0.0	0.001	0.007	2.1	0.152	9.162	0.0	0.001	0.013	1.1	0.079	4.340	0.0	0.003	0.098	0.6	0.044	1.305	0.0	0.001	0.036	0.6	0.044	1.305	0.1	0.007	0.014	0.0	0.001	0.009	0.9	0.067	7.329	0.1	0.007	0.297
Sulfate	96.1	7.5	0.157	6.802	10.2	0.212	1.962	10.1	0.210	12.671	3.9	0.082	1.499	7.1	0.147	8.147	9.9	0.205	7.633	49.4	1.029	30.270	4.7	0.098	4.890	49.4	1.029	30.270	0.4	0.007	0.015	5.6	0.117	1.423	8.2	0.170	18.572	0.0	0.000	0.000
Total Anions (meq/L)			**2.31**			**10.83**			**1.66**			**5.47**			**1.81**			**2.69**			**3.40**			**2.00**			**3.40**			**50.69**			**8.24**			**0.91**			**2.33**		
Total Ions (meq/L)			**4.717**			**22.366**			**3.335**			**11.421**			**3.674**			**5.548**			**6.829**			**4.332**			**6.829**			**106.906**			**16.586**			**1.776**			**5.455**		
Cation/Anion Ratio			**1.044**			**1.066**			**1.010**			**1.087**			**1.030**			**1.065**			**1.010**			**1.165**			**1.010**			**1.109**			**1.013**			**0.944**			**1.343**		
Percent Difference			**2.153**			**3.187**			**0.474**			**4.181**			**1.497**			**3.148**			**0.490**			**7.617**			**0.490**			**5.161**			**0.665**			**-2.877**			**14.637**		
Trilinear Diagram Data																																									
sum (Ca, Mg, Na+K)			2.41			11.34			1.67			5.89			1.86			2.86			3.43			2.01			3.43			55.65			8.24			0.86			3.12		
Calcium				39.8			51.5			48.0			44.0			45.5			43.3			34.9			54.0			34.9			3.2			43.5			47.4			41.4
Magnesium				35.5			40.4			20.9			42.6			28.0			31.6			24.5			26.6			24.5			2.9			35.6			23.9			33.2
Sodium + Potassium				24.7			8.1			31.1			13.4			26.5			25.1			40.6			19.5			40.6			93.9			20.9			28.8			25.4
sum (SO_4, Cl, HCO_3+CO_3)			1.753			10.826			1.508			5.471			1.731			2.684			3.354			2.000			3.354			50.687			8.237			0.847			2.321		
Sulfate				9.0			2.0			13.9			1.5			8.5			7.6			30.7			4.9			30.7			0.0			1.4			20.0			0.0
Chloride				1.6			2.0			8.5			1.3			9.3			5.2			1.4			3.3			1.4			0.2			0.7			2.5			6.1
Bicarbonate + Carbonate				89.4			96.1			77.6			97.2			82.1			87.2			68.0			91.8			68.0			99.8			97.8			77.5			93.9

Table 8
Ion Balance Calculations.
Cedar Hills Regional Landfill.
Perched Zones Groundwater Monitoring Wells

Data Collected from July 01, 2021 - September 30, 2021

		East Perched Zone																										
Site ID		**MW-30A**			**MW-47**			**MW-101**			**MW-102**			**MW-107**			**MW-109**			**MW-110**			**MW-111**			**MW-EB6**		
Date		**7/20/2021**			**7/19/2021**			**7/28/2021**			**7/16/2021**			**7/16/2021**			**7/15/2021**			**7/15/2021**			**7/15/2021**			**7/13/2021**		
Cations	**Molecular Weight**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**
pH		6.2			6.5			7.0			6.5			5.7			6.5			6.1			6.0			6.2		
Conductance		227.2			854.5			457.6			145.6			267.8			809.4			647.2			94.0			83.2		
TDSobs		183.0			568.0			308.0			136.0			153.0			840.0			440.0			76.7			80.7		
Calcium	40.1	22.6	1.13	41.4	115.0	5.74	50.3	49.7	2.48	43.7	14.2	0.71	44.6	26.0	1.30	49.4	17.0	0.85	5.7	73.9	3.69	43.7	8.0	0.40	48.0	3.7	0.19	22.6
Magnesium	24.3	12.6	1.04	38.0	55.9	4.60	40.3	28.9	2.38	41.9	5.3	0.43	27.3	8.0	0.66	25.1	7.6	0.62	4.2	38.5	3.17	37.5	2.3	0.19	23.0	2.0	0.16	19.9
Potassium	39.1	1.4	0.036	1.30	4.5	0.115	1.01	2.7	0.070	1.22	1.0	0.026	1.66	2.7	0.069	2.62	1.1	0.029	0.19	3.0	0.075	0.89	0.4	0.009	1.09	0.7	0.018	2.17
Sodium	23.0	12.1	0.53	19.3	17.6	0.77	6.7	16.2	0.70	12.4	9.6	0.42	26.4	6.6	0.29	10.9	300.0	13.05	87.6	31.8	1.38	16.4	5.3	0.23	27.9	9.8	0.42	51.8
Iron	55.8	0.0	0.00036	0.0131	3.7	0.13358	1.1717	0.4	0.01354	0.2383	0.0	0.00036	0.0225	3.7	0.13143	4.9994	7.6	0.27217	1.8279	0.1	0.00387	0.0458	0.0	0.00036	0.0430	0.3	0.00985	1.2002
Manganese	54.9	0.0	3.6E-06	0.00013	1.2	0.04478	0.39279	0.9	0.03273	0.57621	0.0	7.7E-05	0.00483	3.7	0.13361	5.08211	1.5	0.0557	0.37408	3.4	0.12487	1.47823	0.0	4.7E-05	0.00564	0.0	0.00106	0.12910
Ammonia-N	14.0	0.0	0.00014	0.0052	0.0	0.00233	0.0204	0.0	0.00115	0.0202	0.0	0.00014	0.0090	0.7	0.05105	1.9417	0.2	0.01328	0.0892	0.1	0.00403	0.0478	0.0	0.00014	0.0171	0.3	0.01885	2.2969
			2.73			**11.40**			**5.68**			**1.59**			**2.63**			**14.89**			**8.45**			**0.83**			**0.82**	
Alkalinity, Total		92.4			507.0			260.0			62.7			99.2			572.0			390.0			28.7			31.8		
Carbonate	60.0	0.009	0.000	0.011	0.094	0.003	0.029	0.139	0.005	#DIV/0!	0.011	0.000	#DIV/0!	0.003	0.000	0.004	0.114	0.004	0.033	0.028	0.001	0.012	0.002	0.000	0.007	0.003	0.000	0.011
Bicarbonate	61.0	112.71	1.847	72.302	618.35	10.135	95.135	316.92	5.195	#DIV/0!	76.47	1.253	#DIV/0!	121.02	1.984	86.962	697.61	11.434	99.482	475.74	7.798	98.162	35.01	0.574	71.641	38.79	0.636	78.311
Chloride	35.5	2.0	0.056	2.175	9.0	0.254	2.385	2.6	0.073	#DIV/0!	5.3	0.150	#DIV/0!	5.1	0.143	6.257	1.7	0.048	0.417	1.8	0.051	0.646	0.9	0.026	3.306	1.0	0.028	3.474
Nitrate-N	14.0	6.7	0.478	18.692	0.0	0.001	0.007	0.0	0.001	#DIV/0!	1.2	0.085	#DIV/0!	0.0	0.001	0.031	0.0	0.001	0.006	0.0	0.001	0.009	0.9	0.064	7.995	0.1	0.006	0.740
Sulfate	96.1	8.4	0.174	6.820	12.5	0.260	2.443	3.7	0.077	#DIV/0!	5.9	0.123	#DIV/0!	7.4	0.154	6.746	0.3	0.007	0.062	4.5	0.093	1.172	6.6	0.137	17.051	6.8	0.142	17.464
Total Anions (meq/L)			**2.56**			**10.65**									**2.28**			**11.49**			**7.94**			**0.80**			**0.81**	
Total Ions (meq/L)			**5.282**			**22.054**									**4.910**			**26.384**			**16.391**			**1.634**			**1.632**	
Cation/Anion Ratio			**1.067**			**1.070**									**1.153**			**1.295**			**1.063**			**1.040**			**1.011**	
Percent Difference			**3.252**			**3.385**									**7.086**			**12.870**			**3.070**			**1.979**			**0.530**	
Trilinear Diagram Data																												
sum (Ca, Mg, Na+K)			2.73			11.22									2.31			14.55			8.31			0.83			0.79	
Calcium				41.4			51.1									56.1			5.8			44.4			48.0			23.4
Magnesium				38.0			41.0									28.5			4.3			38.1			23.0			20.6
Sodium + Potassium				20.6			7.9									15.4			89.9			17.5			29.0			56.0
sum (SO_4, Cl, HCO_3+CO_3)			2.078			10.653									2.280			11.493			7.943			0.737			0.806	
Sulfate				8.4			2.4									6.7			0.1			1.2			18.5			17.6
Chloride				2.7			2.4									6.3			0.4			0.6			3.6			3.5
Bicarbonate + Carbonate				88.9			95.2									87.0			99.5			98.2			77.9			78.9

Table 8
Ion Balance Calculations.
Cedar Hills Regional Landfill.
Perched Zones Groundwater Monitoring Wells

Data Collected from October 1, 2021 - December 31, 2021

		East Perched Zone						SSWA			East Perched Zone								
Site ID		**MW-30A**			**MW-47**			**MW-101**			**MW-103**			**MW-107**			**MW-110**		
Date		10/18/2021			10/18/2021			10/18/2021			10/20/2021			10/20/2021			10/21/2021		
Cations	**Weight**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**	**mg/L**	**meq/L**	**%(meq)**
pH		6.3			6.8			6.2			8.1			5.3			6.4		
Conductance		222.9			886.0			463.6			239.3			164.3			646.6		
TDSobs		110.0			515.0			271.0			113.0			84.3			393.0		
Calcium	40.1	4.9	0.24	7.1	8.7	0.43	3.6	2.6	0.13	2.5	4.9	0.24	7.1	7.1	0.36	12.3	1.9	0.10	1.2
Magnesium	24.3	0.0	0.00	0.0	1.0	0.09	0.7	1.0	0.08	1.6	0.0	0.00	0.0	2.8	0.23	7.9	3.2	0.26	3.2
Potassium	39.1	11.0	0.281	8.15	16.6	0.425	3.54	16.0	0.409	8.08	10.0	0.256	7.48	5.2	0.134	4.64	25.4	0.650	7.93
Sodium	23.0	11.5	0.50	14.5	11.8	0.51	4.3	3.1	0.14	2.7	14.9	0.65	18.9	9.2	0.40	13.9	3.6	0.16	1.9
Iron	55.8	14.3	0.51211	14.8364	57.2	2.04845	17.0710	27.4	0.98125	19.3804	11.0	0.39393	11.5177	6.4	0.22956	7.9410	38.2	1.36802	16.7006
Manganese	54.9	4.3	0.15727	4.55621	0.0	0.00036	0.00303	0.1	0.00215	0.04249	0.0	0.00124	0.03619	0.0	0.00157	0.05440	0.0	0.00036	0.00444
Ammonia-N	14.0	24.6	1.75626	50.8806	119.0	8.49575	70.8001	46.6	3.32691	65.7088	26.3	1.87763	54.8977	21.6	1.54209	53.3455	79.3	5.66145	69.1141
Total Cations (meq/L)			**3.45**			**12.00**			**5.06**			**3.42**			**2.89**			**8.19**	
Anions																			
Alkalinity, Total		0.00			0.07			0.00			0.01			0.69			0.03		
Carbonate	60.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Bicarbonate	61.0	0.00	0.000	0.001	0.08	0.001	0.011	0.01	0.000	0.002	0.02	0.000	0.008	0.84	0.014	0.474	0.04	0.001	0.007
Chloride	35.5	0.0	0.000	0.007	0.0	0.001	0.007	0.7	0.019	0.329	0.0	0.000	0.007	1.8	0.050	1.713	0.0	0.001	0.015
Nitrate-N	14.0	1.5	0.109	2.787	5.4	0.383	3.134	2.5	0.181	3.206	2.8	0.196	5.084	2.6	0.185	6.346	3.3	0.238	2.710
Sulfate	96.1	183.0	3.810	97.205	569.0	11.847	96.848	261.0	5.434	96.463	176.0	3.664	94.901	128.0	2.665	91.467	411.0	8.557	97.268
Total Anions (meq/L)			**3.92**			**12.23**			**5.63**			**3.86**			**2.91**			**8.80**	
Total Ions (meq/L)			**7.372**			**24.232**			**10.697**			**7.282**			**5.804**			**16.989**	
Cation/Anion Ratio			**0.881**			**0.981**			**0.899**			**0.886**			**0.992**			**0.931**	
Percent Difference			**-6.349**			**-0.962**			**-5.332**			**-6.058**			**-0.395**			**-3.569**	
Trilinear Diagram Data																			
sum (Ca, Mg, Na+K)			1.03			1.46			0.75			1.15			1.12			1.16	
Calcium				23.8			29.7			17.0			21.2			31.8			8.2
Magnesium				0.0			5.9			10.5			0.0			20.3			22.3
Sodium + Potassium				76.2			64.5			72.5			78.8			47.8			69.5
sum (SO_4, Cl, HCO_3+CO_3)			3.811			11.849			5.453			3.665			2.729			8.559	
Sulfate				100.0			100.0			99.7			100.0			97.7			100.0
Chloride				0.0			0.0			0.3			0.0			1.8			0.0
Bicarbonate + Carbonate				0.0			0.0			0.0			0.0			0.5			0.0

PART 7

Field and Analytical Data for 2021

- **Groundwater**
- **Surface Water and Stormwater**
- **Leachate**

KING COUNTY SOLID WASTE DIVISION
QUALIFIER INFORMATION
(Effective 8/27/2015)

QUAL	QUALIFIER DESCRIPTION
U	Undetected; Analyte Concentration Less than Method Detection Limit (< MDL)
T	Estimated; Less than Reporting Detection Limit (<RDL) but Greater than Method Detection Limit (> MDL)
J	Reported Value is an Estimate
B	Matrix Target Analyte Present in Blank, AND, Sample Result Less than or Equal to 10x Blank Detection
C	Confluent Growth
E	Estimated; Outside Expected Accuracy
H	Exceeds Holding Time
R	Data Rejected
S	Sample Handling Errors
X	Too Numerous to Count
D	Re-analysis Due to Dilution
P	PASS – Qualitative Result Acceptable
F	FAIL – Qualitative Result is not Acceptable
G	Estimated with Low Bias (Coliform; BOD; All Other Chemistry Parameters)
L	Estimated with High Bias (BOD; All Other Chemistry Parameters)

Groundwater Field and Analytical Data

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --- Groundwater Field Parameters
Contact Person: Natalya V. Usova (206) 263-0608

Site	Date	Reference Elevation (msl)	Depth to Water (feet)	Ground-Water Elevation (msl)	Comment
MW-100	1/4/2021	620.32	297.77	322.55	
MW-101	1/4/2021	474.72	29.54	445.18	
MW-101	1/25/2021	474.72	30.31	444.41	
MW-102	1/4/2021	552.48	41.64	510.84	
MW-102	1/21/2021	552.48	43.21	509.27	DTW without pump
MW-103	1/4/2021	639.08	11.13	627.95	
MW-103	1/12/2021	639.08	11.18	627.9	
MW-104	1/4/2021	629.68	26.41	603.27	
MW-104	1/4/2021	629.68	25.77	603.91	Measured WL on 1/15/2021 @ 0745; WL @ 32.00 (bottom of screen) well did not recover. Water level below top of pump. Lowered pump to 31.50 ft.
MW-105	1/4/2021	521.23	18.94	502.29	
MW-106	1/4/2021	475.47	190.25	285.22	
MW-107	1/4/2021	589.029	24.23	564.799	Needs hinged lid
MW-107	1/21/2021	589.03	25.99	563.04	
MW-108	1/4/2021	612.258	13.28	598.978	Needs hinged lid
MW-108	1/21/2021	612.26	14	598.26	
MW-109	1/4/2021	638.728	14.98	623.748	Needs hinged lid
MW-109	1/20/2021	638.73	6.52	632.21	
MW-110	1/4/2021	641.742	3.82	637.922	
MW-110	1/20/2021	641.74	4.34	637.4	
MW-111	1/4/2021	643.797	7	636.797	
MW-112	1/4/2021	638.929	12.92	626.009	
MW-112	1/15/2021	638.93	13.13	625.80	
MW-113	1/4/2021	531.09	188.8	342.29	
MW-113	1/11/2021	531.09	169.14	361.95	
MW-114	1/4/2021	490.45	141.29	349.16	
MW-114	1/11/2021	490.45	141.6	348.85	
MW-115	1/4/2021	484.87	132.96	351.91	
MW-115	1/11/2021	484.87	132.79	352.08	
MW-21	1/4/2021	420.66	124.88	295.78	
MW-22	1/4/2021	517.09	231.92	285.17	
MW-24	1/4/2021	475.99	145.54	330.45	
MW-25	1/4/2021	474.41	2.78	471.63	nearby ponding, water in annulus
MW-27A	1/4/2021	584.23	54.35	529.88	water in annulus
MW-28	1/4/2021	527.75	19.12	508.63	
MW-29	1/4/2021	532.92	7.95	524.97	Needs hinged lid + casing extension
MW-30A	1/4/2021	568.43	27.79	540.64	Needs hinged lid. Water in annulus
MW-30A	1/20/2021	568.43	27.75	540.68	
MW-41D	1/4/2021	462.32	24.65	437.67	
MW-41S	1/4/2021	462.44	3.17	459.27	Ponding near casing
MW-43	1/4/2021	547.06	263.18	283.88	
MW-45	1/4/2021	488.4	13.18	475.22	
MW-47	1/4/2021	634.6	21.59	613.01	casing needs extension and hinged lid
MW-47	1/20/2021	568.43	27.75	634.6	

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --- Groundwater Field Parameters
Contact Person: Natalya V. Usova (206) 263-0608

Site	Date	Reference Elevation (msl)	Depth to Water (feet)	Ground-Water Elevation (msl)	Comment
MW-48	1/4/2021	594.49	41.95	552.54	
MW-50	1/4/2021	637.02	29.73	607.29	

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --- Groundwater Field Parameters
Contact Person: Natalya V. Usova (206) 263-0608

Site	Date	Reference Elevation (msl)	Depth to Water (feet)	Ground-Water Elevation (msl)	Comment
MW-50	1/12/2021	637.05	29.6	607.45	
MW-54	1/4/2021	580.43	273.73	306.70	refuse present
MW-55	1/4/2021	652.29	28.56	623.73	Needs hinged lid
MW-56	1/4/2021	480.33	128.7	351.63	water in annulus
MW-57	1/4/2021	456.64	105.59	351.05	to PVS pipe - 104.09 to casing
MW-58A	1/4/2021	479.27	147.67	331.6	water in annulus
MW-59	1/4/2021	457.13	124.45	332.68	water in annulus
MW-59	1/11/2021	457.13	124.4	332.73	
MW-60	1/4/2021	567.15	229	338.15	
MW-62	1/4/2021	556.21	48.37	507.84	Needs hinged lid
MW-62	1/25/2021	556.21	49.41	506.8	
MW-63	1/4/2021	515.88	4.18	511.70	
MW-64	1/4/2021	596.55	266.03	330.52	
MW-65	1/4/2021	545.83	209.69	336.14	
MW-66	1/4/2021	531.28	238.52	292.76	
MW-66	1/5/2021	531.28	239.29	291.99	
MW-67	1/4/2021	516.43	220.13	296.3	
MW-68	1/4/2021	647.07	331.5	315.57	
MW-68	1/11/2021	647.07	332.12	314.95	
MW-69	1/4/2021	653.69			needs to be fixed
MW-72	1/4/2021	671.87	360.64	311.23	Lid hinge needs repair
MW-72	1/5/2021	671.87	361.22	310.65	
MW-73	1/4/2021	485.7	191.12	294.58	Dead trees N of well
MW-74R	1/4/2021	531.26	239.8	291.46	
MW-74R	1/6/2021	531.26	240.49	290.77	
MW-75	1/4/2021	532.4	245.27	287.13	
MW-75	1/6/2021	532.4	245.86	286.54	
MW-76	1/4/2021	491.71	137.68	354.03	
MW-79	1/4/2021	459.17			NEEDS TO BE FIXED
MW-80	1/4/2021	530.41	238.57	291.84	
MW-80	1/11/2021	530.41	239.18	291.23	
MW-81	1/4/2021	493.66	183.53	310.13	
MW-81	1/5/2021	493.66	184.26	309.4	
MW-82	1/4/2021	474.85	125.9	348.95	
MW-83	1/4/2021	496.81	145.64	351.17	
MW-83	1/7/2021	496.81	146.28	350.53	
MW-84	1/4/2021	530.8	235.95	294.85	
MW-84	2/1/2021	530.8	236.04	294.76	
MW-85	1/4/2021	531.76	245.74	286.02	
MW-85	1/6/2021	531.76	246.23	285.53	
MW-86	1/4/2021	536.04	249.56	286.48	
MW-87	1/4/2021	537.31	247.91	289.4	Lid does not sit flat
MW-88	1/4/2021	513.68	227.22	286.46	
MW-89	1/4/2021	512.82	231.84	280.98	
MW-90	1/4/2021	502.22	221.31	280.91	

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --- Groundwater Field Parameters
Contact Person: Natalya V. Usova (206) 263-0608

Site	Sample ID	Date	pH (Field) (std. Units)	Conductance (Field) (umhos/cm)	Temperature (Field) (^{o} C)	Purge Volume (Field) (gal)	Dissolved Oxygen (Field) (mg/L)	ORP (Field) mV	Turbidity (Field) NTU
MW-101	W101210125-	44221.34167	6.83	378.4	8.2				5.47
MW-102	W102210121-	1/21/2021	6.48	190.7	9.52	1	9.56	390.1	8.67
MW-103	W103210112-	1/12/2021	7.97	234	10.49	2	4.07	371.3	10.6
MW-107	W107210121-	1/21/2021	5.51	173.1	11.37	1	0.68	91	1.75
MW-108	W108210121-	1/21/2021	6.65	355.9	11.199	1	8.41	375.1	2.74
MW-109	W109210120-	1/20/2021	7.17	2785	10.16	0.75	1.34	-116	7.55
MW-110	W110210120-	1/20/2021	6.54	655.9	11.17	2	1.02	311.9	49.9
MW-111	W111210115-	1/15/2021	5.5	94.5	10.33	1.75	7.86	468.7	0.97
MW-112	W112210115-	1/15/2021	7.16	753.7	11.31	1.25	1.56	422.4	1.36
MW-113	W113210111-	1/11/2021	7.26	365.2	10.2	4	0.62	-90.5	6.12
MW-114	W114210111-	1/11/2021	6.64	259.7	9.5	2	5.49	165.2	3.94
MW-115	W115210111-	1/11/2021	6.41	255	9.55	2.25	4.29	164.4	0.52
MW-30A	W30A210120-	1/20/2021	6.24	200.3	10.65	0.75	9.3	287.6	0.95
MW-47	W47-210120-	1/20/2021	6.65	841.6	11.484	13.59			1
MW-50	W50-210112-	1/12/2021	7.26	313.8	10.963				18.8
MW-59	W59-210111-	1/11/2021	6.64	210.7	9.7	4	0.64	-57.3	1.23
MW-62	W62-210125-	1/25/2021	6.07	139.8	9.2				0.9
MW-66	W66-210105-	1/5/2021	6.67	183.8	9.96	2.5	5.69	360.9	0.46
MW-68	W68-210111-	1/11/2021	6.79	244.1	10.18	4.25	0.9	155.5	9.36
MW-72	W72-210105-	1/5/2021	6.89	324.5	10.25	5.5	0.9	-41.6	15
MW-74R	W74R210106-	1/6/2021	6.83	446.1	10.01	3.25	6.01	359.2	6.3
MW-75	W75-210106-	1/6/2021	6.96	340.7	9.679	4	0.89	31	0.95
MW-80	W80-210111-	1/11/2021	7.06	271.6	9.836	4.5	1.32	100.5	0.68
MW-81	W81-210105-	1/5/2021	6.76	147.9	9.664	2	5.76	356.2	0.31
MW-83	W83-210107-	1/7/2021	6.55	601	10.66	4.2	1.05	183.7	0.87
MW-84	W84-210201-	2/1/2021	6.8	191.8	9.25	5.5	1.3	189.4	1.05
MW-85	W85-210106-	1/6/2021	6.76	355.7	9.39	3.6	3.45	240.9	0.22
MW-87	W87-210115-	1/15/2021	6.65	505	10.66				2.79

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --- Groundwater Field Parameters
Contact Person: Natalya V. Usova (206) 263-0608

Site	Sample ID	Date	pH (Field) (std. Units)	Conductance (Field) (umhos/cm)	Temperature (Field) (^{o}C)	Purge Volume (Field) (gal)	Dissolved Oxygen (Field) (mg/L)	ORP (Field) mV	Turbidity (Field) NTU
MW-93	W93-210106-	1/6/2021	7.04	302.8	11.08	3.75	1.09	213.4	0.33
MW-94	W94-210107-	1/7/2021	6.3	327.4	9.06	1.75	2.85	128.8	0.62

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Sample ID	Date	Alkalinity, Total ($CaCO_3$) (mg/L)	Ammonia, (NH_3) (mg/L)	Chloride (mg/L)	Nitrate-Nitrogen, (NO_3 as N) (mg/L)	Specific Conductance (umhos/cm)	Sulfate (SO4) (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Total Solids (mg/L)	Suspended Solids (mg/L)
MW-101	W101210125-	1/25/2021	232	0.0057 T	2.35	0.03 T	442	3.13	269	4.38	287	6.6
MW-102	W102210121-	1/21/2021	89.6	0.0029 T	3.77	1.3	223	9.69	150	1.14	164	6.3
MW-103	W103210112-	1/12/2021	118	0.0021 T	5.19	0.04 T	268	10.1	171	0.5 U	170	1
MW-107	W107210121-	1/21/2021	80.1	0.811	1.29	0.01 U	185	5.64	115	4.78	121	4.62
MW-108	W108210121-	1/21/2021	130	0.002 U	1.76	0.777	403	64.5	266	0.64 T	282	1.3
MW-109	W109210120-	1/20/2021	1860	0.29	2.11	0.05 U	2990	0.13 T	2020	49.9 S	2080	1.73
MW-110	W110210120-	1/20/2021	406	0.0515	1.92	0.016 T	762	7.24	463	2.26	532	56.1
MW-111	W111210115-	1/15/2021	27.6	0.002 U	0.729	0.251	110	17.3	94	0.84 T	89.3	0.5 U
MW-112	W112210115-	1/15/2021	141	0.0079 T	5.89	0.17	369	37.1	241	0.94 T	240	0.57 U
MW-113	W113210111-	1/11/2021	142	0.0123	32.1	0.01 U	403	10.6	227	2.16	238	1.4 T
MW-114	W114210111-	1/11/2021	100	0.002 U	18	1.81	290	6.89	176	0.81 T	189	6.6
MW-115	W115210111-	1/11/2021	93.9	0.002 U	18.4	1.64	282	9.02	169	1.13	172	0.5 U
MW-30A	W30A210120-	1/20/2021	72.3	0.002 U	0.989	7.09	224	6.86	159	0.68 T	165	0.9 T
MW-47	W47-210120-	1/20/2021	521	0.0521	5.74	0.016 T	967	7.69	581	3.88	591	6.67
MW-50	W50-210112-	1/12/2021	164	0.0021 T	1.9	0.12	338	10.5	201	1.3	217	14.3
MW-59	W59-210111-	1/11/2021	74.6	0.0057 T	12.3	0.01 U	223	15.5	133	0.5 U	138	1.4
MW-62	W62-210125-	1/25/2021	61.3	0.002 U	4.52	2.1	177	10.3	113	0.73 T	112	0.5 U
MW-66	W66-210105-	1/5/2021	80.6	0.002 U	4.19	0.352	214	13.6	131	0.5 U	125	0.5 U
MW-68	W68-210111-	1/11/2021	124	0.0163	3.06	0.01 U	281	15.3	185	0.5 U	173	3.37
MW-72	W72-210105-	1/5/2021	124	0.0145	7.22	0.01 U	351	35.7	214	0.67 T	216	8.3
MW-74R	W74R210106-	1/6/2021	198	0.002 U	21.7	0.323	519	32.4	301	0.55 T	306	0.9 T
MW-75	W75-210106-	1/6/2021	109	0.0081 T	11.5	0.01 U	392	62.4	248	0.64 T	252	1 T
MW-80	W80-210111-	1/11/2021	123	0.0091 T	4.44	0.01 U	313	28.9	191	0.5 U	196	2.2
MW-81	W81-210105-	1/5/2021	55	0.002 U	5.13	1.29	171	10.8	109	0.5 U	105	0.5 U
MW-83	W83-210107-	1/7/2021	216	0.0025 T	63.9	2.03	658	12	405	5.78	388	0.6 T
MW-84	W84-210201-	2/1/2021	83.6	0.002 U	5.09	0.187	218	16.3	141	0.5 U	127	0.8 T
MW-85	W85-210106-	1/6/2021	144	0.002 U	10.5	0.0918	392	33.3	275	0.5 U	226	0.5 U
MW-87	W87-210115-	1/15/2021	118	0.0335	15.6	0.01 U	546	131	370	0.5 U	389	5.2
MW-93	W93-210106-	1/6/2021	118	0.0493	2.75	0.014 T	335	41.4	209	0.5 U	208	0.5 U
MW-94	W94-210107-	1/7/2021	126	0.002 U	25.2	0.189	353	7.12	213	3.18	215	0.5 U

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Date	Sample ID	Antimony, dissolved (mg/L)	Antimony, total (mg/L)	Arsenic, dissolved (mg/L)	Arsenic, total (mg/L)	Barium, dissolved (mg/L)	Barium, total (mg/L)	Beryllium, dissolved (mg/L)	Beryllium, total (mg/L)	Cadmium, dissolved (mg/L)	Cadmium, total (mg/L)	Calcium, dissolved (mg/L)	Calcium, total (mg/L)
MW-101	1/25/2021	W101210125-	0.0003 U	0.0003 U	0.0122	0.0113	0.0186	0.0193	0.0001 U	0.0001 U	5E-05 U	5E-05 U	51.3	48.9
MW-102	1/21/2021	W102210121-	0.0003 U	0.0003 U	0.000211	0.000233	0.00386	0.00459	0.0001 U	0.0001 U	5E-05 U	5E-05 U	21.4	21.1
MW-103	1/12/2021	W103210112-	0.0003 U	0.000356	0.00713	0.00679	0.0101	0.0109	0.0001 U	0.0001 U	5E-05 U	5E-05 U	25.1	25.5
MW-107	1/21/2021	W107210121-	0.0003 U	0.0003 U	0.00591	0.00591	0.00963	0.00962	0.0001 U	0.0001 U	5E-05 U	5E-05 U	18.3	18.1
MW-108	1/21/2021	W108210121-	0.000316	0.000313	0.00151	0.0015	0.0107	0.0104	0.0001 U	0.0001 U	5E-05 U	5E-05 U	25.3	24.4
MW-109	1/20/2021	W109210120-	0.0003 U	0.0003 U	0.0301	0.0318	0.0411	0.0484	0.000222	2.75E-04	5E-05 U	5E-05 U	23.9	23.6
MW-110	1/20/2021	W110210120-	0.0003 U	0.0003 U	0.00122	0.00288	0.0241	0.0316	0.0001 U	0.0001 U	0.0000876	0.000106	65.6	67.1
MW-111	1/15/2021	W111210115-	0.0003 U	0.0003 U	0.000562	0.000575	0.00557	0.00576	0.0001 U	0.0001 U	5E-05 U	5E-05 U	9.42	9.65
MW-112	1/15/2021	W112210115-	0.0003 U	0.0003 U	0.00316	0.00316	0.00953	0.0101	0.0001 U	0.0001 U	5E-05 U	5E-05 U	29.6	31.1
MW-113	1/11/2021	W113210111-	0.0003 U	0.0003 U	0.00057	0.000554	0.00216	0.00196	0.0001 U	0.0001 U	5E-05 U	5E-05 U	38.7	38.4
MW-114	1/11/2021	W114210111-	0.0003 U	0.0003 U	0.000281	0.000328	0.0018	0.00237	0.0001 U	0.0001 U	5E-05 U	5E-05 U	27.3	27.7
MW-115	1/11/2021	W115210111-	0.0003 U	0.0003 U	0.000207	0.0002	0.00076	0.000782	0.0001 U	0.0001 U	5E-05 U	5E-05 U	27.8	28.2
MW-30A	1/20/2021	W30A210120-	0.0003 U	0.0003 U	0.000498	0.000506	0.00367	0.00373	0.0001 U	0.0001 U	5E-05 U	5E-05 U	16.9	17
MW-47	1/20/2021	W47-210120-	0.0003 U	0.0003 U	0.00248	0.00264	0.0324	0.0333	0.0001 U	0.0001 U	5E-05 U	5E-05 U	112	113
MW-50	1/12/2021	W50-210112-	1/0/1900	0.000432	0.00452	0.00464	0.0109	0.0138	0.0001 U	0.0001 U	5E-05 U	5E-05 U	31.8	30.9
MW-59	1/11/2021	W59-210111-	0.0003 U	0.0003 U	0.000431	0.000432	0.00429	0.00419	0.0001 U	0.0001 U	5E-05 U	5E-05 U	18	18.5
MW-62	1/25/2021	W62-210125-	0.0003 U	0.0003 U	0.000187	0.000197	0.00223	0.00235	0.0001 U	0.0001 U	5E-05 U	5E-05 U	17.5	17.1
MW-66	1/5/2021	W66-210105-	0.0003 U	0.0003 U	0.00069	0.000715	0.00389	0.00402	0.0001 U	0.0001 U	5E-05 U	5E-05 U	15.9	16.6
MW-68	1/11/2021	W68-210111-	0.0003 U	0.0003 U	0.01	0.0359	0.0105	0.0105	0.0001 U	0.0001 U	5E-05 U	5E-05 U	26.5	26.4
MW-72	1/5/2021	W72-210105-	0.0003 U	0.0003 U	0.0000758	0.000129	0.0122	0.0151	0.0001 U	0.0001 U	5E-05 U	5E-05 U	33.2	38
MW-74R	1/6/2021	W74R210106-	0.0003 U	0.0003 U	0.000389	0.00108	0.0118	0.012	0.0001 U	0.0001 U	5E-05 U	5E-05 U	43.6	45.3
MW-75	1/6/2021	W75-210106-	0.0003 U	0.0003 U	4.27E-04	0.000447	0.0125	0.0132	0.0001 U	0.0001 U	5E-05 U	5E-05 U	32.4	33.4
MW-80	1/11/2021	W80-210111-	0.0003 U	0.0003 U	0.00299	0.00284	0.0136	0.0135	0.0001 U	0.0001 U	5E-05 U	5E-05 U	30.6	30.8
MW-81	1/5/2021	W81-210105-	0.0003 U	0.0003 U	0.000544	0.000552	0.00329	0.00336	0.0001 U	0.0001 U	5E-05 U	5E-05 U	14.3	15.1
MW-83	1/7/2021	W83-210107-	0.0003 U	0.0003 U	0.000375	0.000391	0.0114	0.0116	0.0001 U	0.0001 U	5E-05 U	5E-05 U	70.7	71.1
MW-84	2/1/2021	W84-210201-	0.0003 U	0.0003 U	0.000335	0.000341	0.00533	0.00564	0.0001 U	0.0001 U	5E-05 U	5E-05 U	17	16.8
MW-85	1/6/2021	W85-210106-	0.0003 U	0.0003 U	0.00074	0.000737	0.00734	0.00731	0.0001 U	0.0001 U	5E-05 U	5E-05 U	36.6	37.1
MW-87	1/15/2021	W87-210115-	0.0003 U	0.0003 U	0.000584	0.000938	0.028	0.0284	0.0001 U	0.0001 U	5E-05 U	5E-05 U	47.7	49.2
MW-93	1/6/2021	W93-210106-	0.0003 U	0.0003 U	0.00141	0.00153	0.00771	0.00851	0.0001 U	0.0001 U	5E-05 U	5E-05 U	31.9	34.6
MW-94	1/7/2021	W94-210107-	0.0003 U	0.0003 U	0.000119	0.000131	0.00244	0.00248	0.0001 U	0.0001 U	5E-05 U	5E-05 U	35.7	38.4

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Date	Sample ID	Chromium, dissolved (mg/L)	Chromium total (mg/L)	Cobalt, dissolved (mg/L)	Cobalt, total (mg/L)	Copper, dissolved (mg/L)	Copper, total (mg/L)	Iron, dissolved (mg/L)	Iron, total (mg/L)	Lead, dissolved (mg/L)	Lead, total (mg/L)	, dissolved (mg/L)	, total (mg/L)	Manganese, dissolved (mg/L)
MW-101	1/25/2021	W101210125-	0.0002 U	0.000257	0.000211	0.00024	0.0002 U	0.000277	0.634	0.772	0.0001 U	0.0001 U	30.9	29.1	1.19
MW-102	1/21/2021	W102210121-	0.0002 U	0.000372	5E-05 U	0.0000861	0.000539	0.000656	0.01 U	0.117	0.0001 U	0.0001 U	7.87	7.85	0.00149
MW-103	1/12/2021	W103210112-	0.000349	0.000504	5E-05 U	5E-05 U	0.000544	0.00126	0.01 U	0.0637	0.0001 U	0.000216	11.5	11.8	0.00201
MW-107	1/21/2021	W107210121-	0.000654	0.000734	0.00289	0.00298	0.00112	0.00179	3.43	3.46	0.0001 U	0.0001 U	5.6	5.55	2.19
MW-108	1/21/2021	W108210121-	0.000549	0.000556	5E-05 U	5E-05 U	0.0002 U	0.000233	0.01 U	0.0179	0.0001 U	0.0001 U	10.4	10.3	0.000868
MW-109	1/20/2021	W109210120-	0.0406	0.0453	0.000438	0.000633	0.00518	0.0187	10.4	11.1	0.000316	0.0011	12	11.6	2.01
MW-110	1/20/2021	W110210120-	0.0002 U	0.00158	0.000714	1.54E-03	0.000931	0.00286	0.01 U	1.34	0.0001 U	0.000476	33.5	34.8	0.952
MW-111	1/15/2021	W111210115-	0.00172	0.00172	5E-05 U	5E-05 U	0.0002 U	0.0002 U	0.01 U	0.01 U	0.0001 U	0.0001 U	2.88	2.89	0.00305
MW-112	1/15/2021	W112210115-	0.000557	0.000552	5E-05 U	5E-05 U	0.0002 U	0.0002 U	0.01 U	0.01 U	0.0001 U	0.0001 U	14.6	14.9	0.0333
MW-113	1/11/2021	W113210111-	0.0002 U	0.0002 U	0.0000691	0.0000708	0.0002 U	0.0002 U	1.27	1.27 D	0.0001 U	0.0001 U	20.4	20.6	0.454
MW-114	1/11/2021	W114210111-	0.0002 U	0.000374	3.71E-04	3.67E-03	0.000384	0.00056	0.01 U	0.192 D	0.0001 U	0.0001 U	13.8	13.6	0.00126
MW-115	1/11/2021	W115210111-	0.0002 U	0.0002 U	0.000113	0.000127	0.000258	0.000255	0.01 U	0.0201 D	0.0001 U	0.0001 U	12.3	11.6	0.0122
MW-30A	1/20/2021	W30A210120-	0.000599	0.00062	5E-05 U	5E-05 U	0.000231	0.000357	0.01 U	0.0365	0.0001 U	0.0001 U	8.92	9.03	0.000152
MW-47	1/20/2021	W47-210120-	0.0002 U	0.0002 U	0.000364	0.000358	0.0002 U	0.0002 U	3.03	3.03	0.0001 U	0.0001 U	55.2	55.9	2
MW-50	1/12/2021	W50-210112-	0.000293	0.000978	5E-05 U	0.000344	0.00115	0.00217	0.01 U	0.395	0.0001 U	0.000261	13.8	14	0.00147
MW-59	1/11/2021	W59-210111-	0.0002 U	0.0002 U	5E-05 U	5E-05 U	0.0002 U	0.0002 U	4.67	4.55 D	0.0001 U	0.0001 U	11.4	10.6	0.128
MW-62	1/25/2021	W62-210125-	0.0002 U	0.000221	0.0000526	0.000063	0.000245	0.000299	0.01 U	0.0353	0.0001 U	0.0001 U	4.69	4.65	0.000696
MW-66	1/5/2021	W66-210105-	0.0002 U	0.0002 U	5E-05 U	5E-05 U	0.0002 U	0.00466	0.01 U	0.0148	0.0001 U	0.0001 U	12.6	13	0.0001 U
MW-68	1/11/2021	W68-210111-	0.0002 U	0.0002 U	2.11E-04	2.12E-04	0.0002 U	0.000902	0.51	1.17 D	0.0001 U	0.0001 U	14.7	13.5	0.293
MW-72	1/5/2021	W72-210105-	0.0002 U	0.0002 U	5E-05 U	5E-05 U	0.0002 U	0.0002 U	2.74	5.06	0.0001 U	0.0001 U	20.4	22.7	0.373
MW-74R	1/6/2021	W74R210106-	0.0002 U	0.000225	5E-05 U	5E-05 U	0.000449	0.000354	0.01 U	0.526	0.0001 U	0.0001 U	33.8	33.7	0.0001 U
MW-75	1/6/2021	W75-210106-	0.0002 U	0.0002 U	5E-05 U	5E-05 U	0.0002 U	0.0002 U	2.56	2.67	0.0001 U	0.0001 U	24.2	24.7	0.23
MW-80	1/11/2021	W80-210111-	0.0002 U	0.0002 U	5E-05 U	5E-05 U	0.0002 U	0.000422	2.03	2.07 D	0.0001 U	0.0001 U	15.9	14.8	0.35
MW-81	1/5/2021	W81-210105-	0.0002 U	0.0002 U	5E-05 U	5E-05 U	0.0002 U	0.0002 U	0.01 U	0.01 U	0.0001 U	0.0001 U	8	8.18	0.0001 U
MW-83	1/7/2021	W83-210107-	0.000311	0.00048	0.000273	0.000302	0.00352	0.00401	0.01 U	0.01 U	0.0001 U	0.0001 U	29.7	29.3	0.00558
MW-84	2/1/2021	W84-210201-	0.0002 U	0.0002 U	5E-05 U	0.0000592	0.000277	0.000435	0.01 U	0.0318	0.0001 U	0.0001 U	12.6	12.4	0.0025
MW-85	1/6/2021	W85-210106-	0.0002 U	0.0002 U	5E-05 U	5E-05 U	0.0002 U	0.0002 U	0.01 U	0.01 U	0.0001 U	0.0001 U	23.3	22.9	0.000116
MW-87	1/15/2021	W87-210115-	0.0002 U	0.0002 U	0.00018	0.000176	0.0002 U	0.0006	4.74	4.77	0.0001 U	0.0001 U	32.3	32.8	0.561
MW-93	1/6/2021	W93-210106-	0.0002 U	0.0002 U	0.0000576	0.000103	0.0002 U	0.00053	0.01 U	0.0285	0.0001 U	0.0001 U	17.2	18.2	0.15
MW-94	1/7/2021	W94-210107-	0.0002 U	0.0002 U	0.000125	0.000148	0.00114	0.00119	0.0292	0.0455	0.0001 U	0.0001 U	16.4	17.3	0.00293

Environmental Monitoring Data

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Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Date	Sample ID	Manganese, total (mg/L)	Mercury, dissolved (mg/L)	Mercury, total (mg/L)	Nickel, dissolved (mg/L)	Nickel, total (mg/L)	Potassium, dissolved (mg/L)	Potassium, total (mg/L)	Selenium, dissolved (mg/L)	Selenium, total (mg/L)	Silver, dissolved (mg/L)	Silver, total (mg/L)	Sodium, dissolved (mg/L)	Sodium, total (mg/L)
MW-101	1/25/2021	W101210125-	1.08	5E-05 U	5E-05 U	0.00306	0.00322	2.67	2.59	0.0005 U	0.0005 U	4E-05 U	4E-05 U	16.8	16.1
MW-102	1/21/2021	W102210121-	0.00298	5E-05 U	5E-05 U	0.000597	0.000676	1.28	1.29	0.0005 U	0.0005 U	4E-05 U	4E-05 U	12	11.8
MW-103	1/12/2021	W103210112-	0.0253	5E-05 U	5E-05 U	0.000181	0.000452	2.79	2.8	0.0005 U	0.0005 U	4E-05 U	4E-05 U	11.7	12
MW-107	1/21/2021	W107210121-	2.16	5E-05 U	5E-05 U	0.00579	0.00607	2.46	2.42	0.0005 U	0.0005 U	4E-05 U	4E-05 U	6.5	6.4
MW-108	1/21/2021	W108210121-	0.000784	5E-05 U	5E-05 U	0.000411	0.000405	1.6	1.58	0.0005 U	0.0005 U	4E-05 U	4E-05 U	44.1	42.6
MW-109	1/20/2021	W109210120-	1.93	5E-05 U	5E-05 U	0.0041	0.00551	2.31	2.31	0.0005 U	0.000637	4E-05 U	4E-05 U	760 D	779 D
MW-110	1/20/2021	W110210120-	1.22	5E-05 U	5E-05 U	0.00462	0.00627	3.15	3.28	0.0005 U	0.0005 U	4E-05 U	4E-05 U	54.4	55.9
MW-111	1/15/2021	W111210115-	0.00307	5E-05 U	5E-05 U	0.00182	0.00191	0.334	0.338	0.0005 U	0.0005 U	4E-05 U	4E-05 U	7.33	7.43
MW-112	1/15/2021	W112210115-	0.0344	5E-05 U	5E-05 U	0.000184	0.000192	2.9	2.95	0.0005 U	0.0005 U	4E-05 U	4E-05 U	25.5	25.6
MW-113	1/11/2021	W113210111-	0.44	5E-05 U	5E-05 U	0.000303	0.000282	2.21	2.11	0.0005 U	0.0005 U	4E-05 U	4E-05 U	9.41	9.56
MW-114	1/11/2021	W114210111-	0.0341	5E-05 U	5E-05 U	0.000442	0.000696	2.29	2.14	0.0005 U	0.0005 U	4E-05 U	4E-05 U	6.71	6.87
MW-115	1/11/2021	W115210111-	0.0114	5E-05 U	5E-05 U	0.000508	0.000472	1.9	1.78	0.0005 U	0.0005 U	4E-05 U	4E-05 U	7.19	7.25
MW-30A	1/20/2021	W30A210120-	0.000713	5E-05 U	5E-05 U	0.000592	0.000641	1.32	1.33	0.0005 U	0.0005 U	4E-05 U	4E-05 U	13.2	13.4
MW-47	1/20/2021	W47-210120-	1.99	5E-05 U	5E-05 U	0.00173	0.00175	4.55	4.57	0.0005 U	0.0005 U	4E-05 U	4E-05 U	18.6	18.5
MW-50	1/12/2021	W50-210112-	0.0243	5E-05 U	5E-05 U	0.000408	0.00138	6.24	6.23	0.0005 U	0.0005 U	4E-05 U	4E-05 U	15.7	16.1
MW-59	1/11/2021	W59-210111-	0.117	5E-05 U	5E-05 U	0.0001 U	0.0001 U	1.16	1.12	0.0005 U	0.0005 U	4E-05 U	4E-05 U	6.45	6.75
MW-62	1/25/2021	W62-210125-	0.00116	5E-05 U	5E-05 U	0.000409	0.000469	0.895	0.903	0.0005 U	0.0005 U	4E-05 U	4E-05 U	12.5	12.1
MW-66	1/5/2021	W66-210105-	0.000413	5E-05 U	5E-05 U	0.000142	0.000321	1.11	1.14	0.000903	0.000974	4E-05 U	4E-05 U	7.22	7.72
MW-68	1/11/2021	W68-210111-	0.265	5E-05 U	5E-05 U	0.000414	0.00044	1.7	1.55	0.0005 U	0.0005 U	4E-05 U	4E-05 U	8.82	8.88
MW-72	1/5/2021	W72-210105-	0.432	5E-05 U	5E-05 U	0.000102	0.000171	2.05	2.24	0.0005 U	0.0005 U	4E-05 U	4E-05 U	8.68	9.65
MW-74R	1/6/2021	W74R210106-	0.00697	5E-05 U	5E-05 U	0.000878	0.00093	2.14	2.11	0.00062	0.000619	4E-05 U	4E-05 U	12.2	12.3
MW-75	1/6/2021	W75-210106-	0.231	5E-05 U	5E-05 U	0.0001 U	0.0001 U	2.04	2.06	0.0005 U	0.0005 U	4E-05 U	4E-05 U	9.44	9.7
MW-80	1/11/2021	W80-210111-	0.304	5E-05 U	5E-05 U	0.000107	0.00011	1.72	1.59	0.0005 U	0.0005 U	4E-05 U	4E-05 U	8.12	8.15
MW-81	1/5/2021	W81-210105-	0.0001 U	5E-05 U	5E-05 U	0.000114	0.000122	0.865	0.879	0.000865	0.000871	4E-05 U	4E-05 U	6.73	7.04
MW-83	1/7/2021	W83-210107-	0.209	5E-05 U	5E-05 U	0.00177	0.00258	3.93	3.92	0.0005 U	0.0005 U	4E-05 U	4E-05 U	15	15.2
MW-84	2/1/2021	W84-210201-	0.00546	5E-05 U	5E-05 U	0.000439	0.000582	1.2	1.21	0.000701	0.000729	4E-05 U	4E-05 U	7.44	7.25
MW-85	1/6/2021	W85-210106-	0.000249	5E-05 U	5E-05 U	0.00022	0.000219	1.78	1.76	0.000931	0.000893	4E-05 U	4E-05 U	10.3	10.4
MW-87	1/15/2021	W87-210115-	0.566	5E-05 U	5E-05 U	0.000324	0.000363	2.5	2.57	0.0005 U	0.0005 U	4E-05 U	4E-05 U	11	11
MW-93	1/6/2021	W93-210106-	0.195	5E-05 U	5E-05 U	0.000191	0.00033	1.56	1.61	0.0005 U	0.0005 U	4E-05 U	4E-05 U	9.61	10.3
MW-94	1/7/2021	W94-210107-	0.00352	5E-05 U	5E-05 U	0.000601	0.000651	2.55	2.66	0.0005 U	0.0005 U	4E-05 U	4E-05 U	8.78	9.5

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Date	Sample ID	Thallium, dissolved (mg/L)	Thallium, total (mg/L)	Vanadium, dissolved (mg/L)	Vanadium, total (mg/L)	Zinc, dissolved (mg/L)	Zinc, total (mg/L)
MW-101	1/25/2021	W101210125-	0.0001 U	0.0001 U	0.000278	0.0004	0.000593	0.000825
MW-102	1/21/2021	W102210121-	0.0001 U	0.0001 U	0.000987	0.00118	0.00115	0.00141
MW-103	1/12/2021	W103210112-	0.0001 U	0.0001 U	0.00223	0.00242	0.00233	0.00519
MW-107	1/21/2021	W107210121-	0.0001 U	0.0001 U	0.0011	0.0012	0.00296	0.0032
MW-108	1/21/2021	W108210121-	0.0001 U	0.0001 U	0.00292	0.00288	0.0005 U	0.000735
MW-109	1/20/2021	W109210120-	0.0001 U	0.0001 U	0.119 D	0.143 D	0.000966	0.00169
MW-110	1/20/2021	W110210120-	0.0001 U	0.0001 U	0.00179	0.00411	0.000784	0.00334
MW-111	1/15/2021	W111210115-	0.0001 U	0.0001 U	0.00108	0.00108	0.0005 U	0.0005 U
MW-112	1/15/2021	W112210115-	0.0001 U	0.0001 U	0.000875	0.000731	0.0005 U	0.0005 U
MW-113	1/11/2021	W113210111-	0.0001 U	0.0001 U	0.000108	7.5E-05 U	0.0005 U	0.0005 U
MW-114	1/11/2021	W114210111-	0.0001 U	0.0001 U	0.000848	0.00113	0.000962	0.0012
MW-115	1/11/2021	W115210111-	0.0001 U	0.0001 U	0.000596	0.000497	0.0005 U	0.0005 U
MW-30A	1/20/2021	W30A210120-	0.0001 U	0.0001 U	0.00211	0.0021	0.000931	0.00108
MW-47	1/20/2021	W47-210120-	0.0001 U	0.0001 U	0.000194	0.000197	0.0005 U	0.000543
MW-50	1/12/2021	W50-210112-	0.0001 U	0.0001 U	0.00313	0.00401	0.00143	0.00325
MW-59	1/11/2021	W59-210111-	0.0001 U	0.0001 U	7.5E-05 U	7.5E-05 U	0.000615	0.000752
MW-62	1/25/2021	W62-210125-	0.0001 U	0.0001 U	0.000673	0.000694	0.00121	0.00138
MW-66	1/5/2021	W66-210105-	0.0001 U	0.0001 U	0.000774	0.000808	0.000595	0.00129
MW-68	1/11/2021	W68-210111-	0.0001 U	0.0001 U	0.000224	0.000698	0.0005 U	0.0005 U
MW-72	1/5/2021	W72-210105-	0.0001 U	0.0001 U	0.000128	0.0001	0.000647	0.000926
MW-74R	1/6/2021	W74R210106-	0.0001 U	0.0001 U	0.000677	0.00105	0.000634	0.000609
MW-75	1/6/2021	W75-210106-	0.0001 U	0.0001 U	0.000179	1.26E-04	0.0005 U	0.0005 U
MW-80	1/11/2021	W80-210111-	0.0001 U	0.0001 U	7.5E-05 U	7.5E-05 U	0.00175	0.00217
MW-81	1/5/2021	W81-210105-	0.0001 U	0.0001 U	0.00176	0.00177	0.000639	0.0005 U
MW-83	1/7/2021	W83-210107-	0.0001 U	0.0001 U	9.11E-04	9.95E-04	0.000703	0.00108
MW-84	2/1/2021	W84-210201-	0.0001 U	0.0001 U	0.000617	0.000648	0.017	0.0196
MW-85	1/6/2021	W85-210106-	0.0001 U	0.0001 U	0.00108	0.00107	0.0005 U	0.000549
MW-87	1/15/2021	W87-210115-	0.0001 U	0.0001 U	7.5E-05 U	0.000177	0.00116	0.00184
MW-93	1/6/2021	W93-210106-	0.0001 U	0.0001 U	0.00232	0.00247	0.00312	0.00595
MW-94	1/7/2021	W94-210107-	0.0001 U	0.0001 U	0.00115	0.00122	0.000728	0.0005 U

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Sample ID	Date	1,1,1,2-Tetrachloroethane ug/l 630-20-6	1,1,1-Trichloroethane ug/l 71-55-6	1,1,2,2-Tetrachloroethane ug/l 79-34-5	1,1,2-Trichloroethane ug/l 79-00-5	1,1-Dichloroethane ug/l 75-34-3	1,1-Dichloroethene ug/l 75-35-4	1,2,3-Trichloropropane ug/l 96-18-4	1,2-Dibromo-3-Chloropropane ug/l 96-12-8	1,2-Dibromoethane ug/l 106-93-4	1,2-Dichlorobenzene ug/l 95-50-1	1,2-Dichloroethane ug/l 107-06-2	1,2-Dichloropropane ug/l 78-87-5
MW-101	1/25/2021	W101210125-	0.25 U	0.1 U	0.1 U	0.1 U	0.117 JT	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-102	1/21/2021	W102210121-	0.25 U	0.1 U	0.1 U	0.1 U	0.199 JT	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-103	1/12/2021	W103210112-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-107	1/21/2021	W107210121-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-108	1/21/2021	W108210121-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-109	1/20/2021	W109210120-	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	25 U	1 U	1 U	1 U	1 U
MW-110	1/20/2021	W110210120-	0.25 U	0.1 U	0.1 U	0.1 U	0.332	0.1 U	0.1 U	2.5 U	0.1 U	0.669	0.26	0.245
MW-111	1/15/2021	W111210115-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-112	1/15/2021	W112210115-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-113	1/11/2021	W113210111-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-114	1/11/2021	W114210111-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-115	1/11/2021	W115210111-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-30A	1/20/2021	W30A210120-	0.25 U	0.1 U	0.1 U	0.1 U	1.41	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-47	1/20/2021	W47-210120-	0.25 U	0.1 U	0.1 U	0.1 U	0.659	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-50	1/12/2021	W50-210112-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-59	1/11/2021	W59-210111-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-62	1/25/2021	W62-210125-	0.25 U	0.1 U	0.1 U	0.1 U	0.4	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-66	1/5/2021	W66-210105-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-68	1/11/2021	W68-210111-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-72	1/5/2021	W72-210105-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-74R	1/6/2021	W74R210106-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-75	1/6/2021	W75-210106-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-80	1/11/2021	W80-210111-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-81	1/5/2021	W81-210105-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-83	1/7/2021	W83-210107-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Sample ID	Date	1,1,1,2-Tetrachloroethane ug/l 630-20-6	1,1,1-Trichloroethane ug/l 71-55-6	1,1,2,2-Tetrachloroethane ug/l 79-34-5	1,1,2-Trichloroethane ug/l 79-00-5	1,1-Dichloroethane ug/l 75-34-3	1,1-Dichloroethene ug/l 75-35-4	1,2,3-Trichloropropane ug/l 96-18-4	1,2-Dibromo-3-Chloropropane ug/l 96-12-8	1,2-Dibromoethane ug/l 106-93-4	1,2-Dichlorobenzene ug/l 95-50-1	1,2-Dichloroethane ug/l 107-06-2	1,2-Dichloropropane ug/l 78-87-5
MW-84	2/1/2021	W84-210201-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-85	1/6/2021	W85-210106-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-87	1/15/2021	W87-210115-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-93	1/6/2021	W93-210106-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-94	1/7/2021	W94-210107-	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

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Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Sample ID	Date	1,4-Dichlorobenzene ug/l 106-46-7	2-Butanone ug/l 78-93-3	2-Hexanone ug/l 591-78-6	4-Methyl-2-Pentanone ug/l 108-10-1	Acetone ug/l 67-64-1	Acrylonitrile ug/l 107-13-1	Benzene ug/l 71-43-2	Bromochloromethane ug/l 74-97-5	Bromochloromethane ug/l 75-27-4	Bromoform ug/l 75-25-2	Bromomethane ug/l 74-83-9	Carbon Disulfide ug/l 75-15-0	Carbon Tetrachloride ug/l 56-23-5
MW-101	1/25/2021	W101210125-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-102	1/21/2021	W102210121-	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-103	1/12/2021	W103210112-	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-107	1/21/2021	W107210121-	0.407	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-108	1/21/2021	W108210121-	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-109	1/20/2021	W109210120-	1.08 JT	2.5 U	5 U	25 U	25 U	0.35 U	1.69 JT	1 U	2.5 U	5 U	1 U	1 U	2.5 U
MW-110	1/20/2021	W110210120-	0.14 JT	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.192 JT	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-111	1/15/2021	W111210115-	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-112	1/15/2021	W112210115-	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-113	1/11/2021	W113210111-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-114	1/11/2021	W114210111-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-115	1/11/2021	W115210111-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-30A	1/20/2021	W30A210120-	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-47	1/20/2021	W47-210120-	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-50	1/12/2021	W50-210112-	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-59	1/11/2021	W59-210111-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-62	1/25/2021	W62-210125-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-66	1/5/2021	W66-210105-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-68	1/11/2021	W68-210111-	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-72	1/5/2021	W72-210105-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-74R	1/6/2021	W74R210106-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-75	1/6/2021	W75-210106-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-80	1/11/2021	W80-210111-	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-81	1/5/2021	W81-210105-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-83	1/7/2021	W83-210107-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U

Environmental Monitoring Data

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Contact Person: Natalya V. Usova (206) 263-0608

Site	Sample ID	Date	1,4-Dichlorobenzene ug/l 106-46-7	2-Butanone ug/l 78-93-3	2-Hexanone ug/l 591-78-6	4-Methyl-2-Pentanone ug/l 108-10-1	Acetone ug/l 67-64-1	Acrylonitrile ug/l 107-13-1	Benzene ug/l 71-43-2	Bromochloromethane ug/l 74-97-5	Bromochloromethane ug/l 75-27-4	Bromoform ug/l 75-25-2	Bromomethane ug/l 74-83-9	Carbon Disulfide ug/l 75-15-0	Carbon Tetrachloride ug/l 56-23-5
MW-84	2/1/2021	W84-210201-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-85	1/6/2021	W85-210106-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-87	1/15/2021	W87-210115-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-93	1/6/2021	W93-210106-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U
MW-94	1/7/2021	W94-210107-	0.1 U	1 U	0.5 U	2.5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Sample ID	Date	Chlorbenzene ug/l 108-90-7	Chlorodibromomethane ug/l 124-48-1	Chloroethane ug/l 75-00-3	Chloroform ug/l 67-66-3	Chloromethane ug/l 74-87-3	cis-1,2-Dichloroethene ug/l 156-59-2	cis-1,3-Dichloropropene ug/l 10061-01-5	Dibromomethane ug/l 74-95-3	Dichlorodifluoromethane ug/l 75-71-8	Ethylbenzene ug/l 100-41-4	M & P Xylene ug/l MPX	Methyl Iodide ug/l 74-88-4
MW-101	1/25/2021	W101210125-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.148 JT	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-102	1/21/2021	W102210121-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.106 JT	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-103	1/12/2021	W103210112-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-107	1/21/2021	W107210121-	0.334	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-108	1/21/2021	W108210121-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-109	1/20/2021	W109210120-	1.38 JT	5 U	1 U	1 U	2.5 U	1 U	2.5 U	1 U	1 U	1 U	1 U	1 U
MW-110	1/20/2021	W110210120-	0.593	0.5 U	0.1 U	0.1 U	0.25 U	4.65	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-111	1/15/2021	W111210115-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.192 JT	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-112	1/15/2021	W112210115-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-113	1/11/2021	W113210111-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-114	1/11/2021	W114210111-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-115	1/11/2021	W115210111-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-30A	1/20/2021	W30A210120-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	1.53	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-47	1/20/2021	W47-210120-	0.1 U	0.5 U	0.141 JT	0.1 U	0.25 U	2.68	0.25 U	0.1 U	4.09	0.1 U	0.1 U	0.1 U
MW-50	1/12/2021	W50-210112-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-59	1/11/2021	W59-210111-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	1.43	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-62	1/25/2021	W62-210125-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	1.14	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-66	1/5/2021	W66-210105-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-68	1/11/2021	W68-210111-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-72	1/5/2021	W72-210105-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-74R	1/6/2021	W74R210106-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-75	1/6/2021	W75-210106-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-80	1/11/2021	W80-210111-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-81	1/5/2021	W81-210105-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-83	1/7/2021	W83-210107-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Sample ID	Date	Chlorbenzene ug/l 108-90-7	Chlorodibromomethane ug/l 124-48-1	Chloroethane ug/l 75-00-3	Chloroform ug/l 67-66-3	Chloromethane ug/l 74-87-3	cis-1,2-Dichloroethene ug/l 156-59-2	cis-1,3-Dichloropropene ug/l 10061-01-5	Dibromomethane ug/l 74-95-3	Dichlorodifluoromethane ug/l 75-71-8	Ethylbenzene ug/l 100-41-4	M & P Xylene ug/l MPX	Methyl Iodide ug/l 74-88-4
MW-84	2/1/2021	W84-210201-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-85	1/6/2021	W85-210106-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-87	1/15/2021	W87-210115-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-93	1/6/2021	W93-210106-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-94	1/7/2021	W94-210107-	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Sample ID	Date	Methylene Chloride ug/l 75-09-2	O-Xylene ug/l 95-47-6	Styrene ug/l 100-42-5	Tetrhachloroethene ug/l 127-18-4	Toluene ug/l 108-88-3	Trans-1,2-Dichloroethene ug/l 156-60-5	Trans-1,3-Dichloropropene ug/l 10061-02-6	Trans-1,4-Dichloro-2-Butene ug/l 110-57-6	Trichloroethene ug/l 79-01-6	Trichlorofluoromethane ug/l 75-69-4	Vinyl Acetate ug/l 108-05-4	Vinyl Chloride ug/l 75-01-4
MW-101	1/25/2021	W101210125-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.334 D
MW-102	1/21/2021	W102210121-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 DU
MW-103	1/12/2021	W103210112-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-107	1/21/2021	W107210121-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.675 D
MW-108	1/21/2021	W108210121-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 DU
MW-109	1/20/2021	W109210120-	25 U	1 U	1 U	1 U	113	1 U	5 U	5 U	1 U	1 U	1 U	0.321 D
MW-110	1/20/2021	W110210120-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.0316 D
MW-111	1/15/2021	W111210115-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 DU
MW-112	1/15/2021	W112210115-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 DU
MW-113	1/11/2021	W113210111-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-114	1/11/2021	W114210111-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	9.77	0.1 U	0.1 U	0.01 U
MW-115	1/11/2021	W115210111-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	5.18	0.1 U	0.1 U	0.01 U
MW-30A	1/20/2021	W30A210120-	2.5 U	0.1 U	0.1 U	0.116 JT	0.1 U	0.1 U	0.5 U	0.5 U	0.853	0.1 U	0.1 U	0.01 DU
MW-47	1/20/2021	W47-210120-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	4.86 D
MW-50	1/12/2021	W50-210112-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-59	1/11/2021	W59-210111-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-62	1/25/2021	W62-210125-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 DU
MW-66	1/5/2021	W66-210105-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-68	1/11/2021	W68-210111-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-72	1/5/2021	W72-210105-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-74R	1/6/2021	W74R210106-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-75	1/6/2021	W75-210106-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-80	1/11/2021	W80-210111-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-81	1/5/2021	W81-210105-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-83	1/7/2021	W83-210107-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	2.24	0.1 U	0.1 U	0.01 U

Environmental Monitoring Data

Data Collected from January 01, 2021 to March 31, 2021
Cedar Hills Landfill --Groundwater Conventionals Analytical Data
Contact Person: Natalya V. Usova (206) 263-0608

Site	Sample ID	Date	Methylene Chloride ug/l 75-09-2	O-Xylene ug/l 95-47-6	Styrene ug/l 100-42-5	Tetrhachloroethene ug/l 127-18-4	Toluene ug/l 108-88-3	Trans-1,2-Dichloroethene ug/l 156-60-5	Trans-1,3-Dichloropropene ug/l 10061-02-6	Trans-1,4-Dichloro-2-Butene ug/l 110-57-6	Trichloroethene ug/l 79-01-6	Trichlorofluoromethane ug/l 75-69-4	Vinyl Acetate ug/l 108-05-4	Vinyl Chloride ug/l 75-01-4
MW-84	2/1/2021	W84-210201-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 DU
MW-85	1/6/2021	W85-210106-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-87	1/15/2021	W87-210115-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-93	1/6/2021	W93-210106-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-94	1/7/2021	W94-210107-	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	2.7	0.1 U	0.1 U	0.01 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Reference Elevation (msl)	Depth to Water (feet)	Ground-Water Elevation (msl)	Comment
MW-100	4/1/2021	620.32	297.51	322.81	
MW-100	4/12/2021	620.32	297.91	322.41	
MW-101	4/1/2021	474.72	30.15	444.57	
MW-101	4/19/2021	474.72	30.9	443.82	
MW-102	4/1/2021	552.48	44.75	507.73	
MW-102	4/20/2021	552.48	45.45	507.03	
MW-103	4/1/2021	639.08	11.47	627.61	
MW-103	4/16/2021	639.08	11.95	627.13	
MW-104	4/1/2021	629.68	23.29	606.39	
MW-104	4/14/2021	629.68	23.46	606.22	DRY @ 20.21
MW-105	4/1/2021	521.23	19.33	501.9	
MW-107	4/1/2021	589.029	27.75	561.279	
MW-107	4/20/2021	589.03	29.04	559.99	
MW-108	4/1/2021	612.258	14.48	597.778	DRY
MW-108	4/15/2021	612.26	15.43	596.83	
MW-109	4/1/2021	638.728	6.98	631.748	
MW-109	4/15/2021	638.73	7.95	630.78	
MW-110	4/1/2021	641.742	4.44	637.302	
MW-110	4/20/2021	641.74	6.17	635.57	
MW-111	4/1/2021	643.797	7.99	635.807	
MW-111	4/15/2021	643.8	8.85	634.95	
MW-112	4/1/2021	638.929	12.47	626.459	
MW-112	4/14/2021	638.93	12.78	626.15	
MW-113	4/1/2021	531.09	188.61	342.48	
MW-113	4/12/2021	531.09	188.75	342.34	
MW-114	4/1/2021	490.45	138.94	351.51	
MW-114	4/12/2021	490.45	138.95	351.5	
MW-115	4/1/2021	484.87	128.87	356	H20 IN ANNULUS
MW-115	4/13/2021	484.87	129.26	355.61	
MW-21	4/1/2021	420.66	124.71	295.95	
MW-21	4/2/2021	420.66	124.94	295.72	
MW-24	4/1/2021	475.99	144.51	331.48	
MW-24	4/12/2021	475.99	144.94	331.05	
MW-30A	4/1/2021	568.43	27.27	541.16	
MW-30A	4/19/2021	568.43	27.46	540.97	
MW-47	4/1/2021	634.6	15.92	618.68	
MW-47	4/19/2021	634.6	16.99	617.61	
MW-50	4/1/2021	637.02	29.73	607.29	
MW-50	4/14/2021	637.05	29.61	607.44	
MW-56	4/1/2021	480.33	124.78	355.55	
MW-56	4/5/2021	480.33	125.2	355.13	
MW-59	4/1/2021	457.13	122.91	334.22	
MW-59	4/13/2021	457.13	123.32	333.81	
MW-62	4/1/2021	556.21	50.47	505.74	H20 IN ANNULUS
MW-62	4/20/2021	556.21	51.82	504.39	
MW-64	4/1/2021	596.55	265.69	330.86	
MW-64	4/5/2021	596.55	265.83	330.72	
MW-65	4/1/2021	545.83	208.37	337.46	
MW-65	4/13/2021	545.83	208.84	336.99	
MW-66	4/1/2021	531.28	237.93	293.35	
MW-66	4/2/2021	531.28	238.22	293.06	
MW-67	4/1/2021	516.43	219.9	296.53	

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Reference Elevation (msl)	Depth to Water (feet)	Ground-Water Elevation (msl)	Comment
MW-67	6/30/2021	516.43	220.52	295.91	
MW-68	4/1/2021	647.07	332.07	315	
MW-68	4/15/2021	647.07	332.25	314.82	NEEDS TO BE FIXED
MW-69	4/1/2021	653.69			
MW-72	4/1/2021	671.87	360.85	311.02	

Environmental Monitoring Data

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Contact Person: Natalya Usova (206) 263-0608

Site	Date	Reference Elevation (msl)	Depth to Water (feet)	Ground-Water Elevation (msl)	Comment
MW-72	4/6/2021	671.87	361.24	310.63	
MW-73	4/1/2021	485.7	190.58	295.12	
MW-73	4/2/2021	485.7	190.79	294.91	
MW-74R	4/1/2021	531.26	239.5	291.76	
MW-74R	4/9/2021	531.26	239.85	291.41	NEEDS TO BE FIXED
MW-75	4/1/2021	532.4	244.63	287.77	
MW-75	4/9/2021	532.4	145.05	387.35	
MW-76	4/1/2021	491.71	134.04	357.67	
MW-76	4/13/2021	491.71	134.77	356.94	
MW-80	4/1/2021	530.41	238.27	292.14	
MW-80	4/15/2021	530.41	238.5	291.91	
MW-81	4/1/2021	493.66	183.79	309.87	
MW-81	4/5/2021	493.66	184.07	309.59	
MW-82	4/1/2021	474.85	121.48	353.37	
MW-82	4/12/2021	474.85	121.76	353.09	
MW-83	4/1/2021	496.81	143.87	352.94	
MW-83	4/13/2021	496.81	144.12	352.69	
MW-84	4/1/2021	530.8	235.73	295.07	
MW-84	4/5/2021	530.8	236.04	294.76	
MW-85	4/1/2021	531.76	244.81	286.95	
MW-85	4/6/2021	531.76	245.05	286.71	
MW-86	4/1/2021	536.04	248.82	287.22	
MW-86	4/6/2021	536.04	248.92	287.12	
MW-87	4/1/2021	537.31	247.5	289.81	
MW-87	4/9/2021	537.31	247.84	289.47	
MW-87	6/11/2021	537.31	247.77	289.54	
MW-88	4/1/2021	513.68	226.4	287.28	
MW-88	4/12/2021	513.68	226.75	286.93	
MW-89	4/1/2021	512.82	231.07	281.75	Pulled pump for DTW
MW-89	4/12/2021	512.82	281.37	281.37	
MW-90	4/1/2021	502.22	220.25	281.97	
MW-93	4/1/2021	632.15	308.38	323.77	
MW-93	4/5/2021	632.15	308.75	323.4	

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Field Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	pH (Field) (std. Units)	Conductance (Field) (umhos/cm)	Temperature (Field) (^{o}C)	Purge Volume (Field) (gal)	Dissolved Oxygen (Field) (mg/L)	ORP (Field) mV
MW-21	W21-210402-	4/2/2021	7.55	133.4	8.981	1.75	1.58	-30
MW-24	W24-210412-	4/12/2021	6.95	166.4	9.732	2.75	1.15	61.1
MW-56	W56-210405-	4/5/2021	6.55	228.7	9.513	43.23		
MW-59	W59-210413-	4/13/2021	6.62	200.4	9.48	4	0.82	-56.1
MW-64	W64-210405-	4/5/2021	6.68	194.3	11.06	5.25	1.31	188
MW-65	W65-210413-	4/13/2021	6.63	138.2	9.32	3.6	0.87	-32
MW-66	W66-210402-	4/2/2021	6.82	191.9	9.43	3.75	5.25	245.5
MW-73	W73-210402-	4/2/2021	6.49	125.9	9.21	2.4	9.41	277.7
MW-76	W76-210413-	4/13/2021	6.2	273.4	9.59	2.75	3.88	259.5
MW-81	W81-210405-	4/5/2021	6.99	158	9.75	2.6	5.58	273.3
MW-82	W82-210412-	4/12/2021	6.7	266.7	9.89	4.75	7.01	342.9
MW-83	W83-210413-	4/13/2021	6.57	546.2	10.57	4.75	0.83	409.4
MW-84	W84-210405-	4/5/2021	6.76	189.3	9.63	5.5	0.87	172.3
MW-94	W94-210413-	4/13/2021	6.37	325.1	9.602	3.25	4.74	407
MW-113	W113210412-	4/12/2021	7.18	377.2	10.41	5.75	0.5	-84.2
MW-114	W114210412-	4/12/2021	6.82	276.4	9.69	2.8	4.75	174
MW-115	W115210413-	4/13/2021	6.48	190.7	9.52	1	9.56	390.1
MW-67	W67-210630-	6/30/2021	6.67	408.8	9.874	9.1	1.65	197.1
MW-72	W72-210406-	4/6/2021	6.91	312.1	10.24	4.5	1.25	104.2
MW-74R	W74R210409-	4/9/2021	6.79	499.5	9.49	3.5	5.05	260
MW-75	W75-210409-	4/9/2021	6.79	349.5	9.438	5	0.79	87.7
MW-80	W80-210415-	4/15/2021	7.02	292.1	10.3	4.5	0.76	-65.5
MW-85	W85-210406-	4/6/2021	6.83	342.5	8.96	4.25	2.83	267.5
MW-86	W86-210406-	4/6/2021	6.88	183.1	8.91	5	1.1	-11.9
MW-87	W87-210611-	6/11/2021	6.38	516	11.2	4	1.15	-30.1
MW-88	W88-210412-	4/12/2021	6.82	116.1	9.264	3	5.23	346
MW-89	W89-210412-	4/12/2021	7.02	227.9	9.03	3	1.99	130.8
MW-100	W100210412-	4/12/2021	6.71	254.1	10.76	6.5	0.77	16.9
MW-68	W68-210415-	4/15/2021	6.92	251.7	10.24	5.5	0.79	-1.4
MW-93	W93-210405-	4/5/2021	7.06	290.8	10.74	5	1.35	266.2
MW-95	W95-210406-	4/6/2021	7.16	207.4	9.202	5	1.18	391.8
MW-EB6	WEB6210414-	4/14/2021	6.1	96.5	9.25			
MW-30A	W30A210419-	4/19/2021	6.13	216.7	11.892	5		
MW-47	W47-210419-	4/19/2021	6.6	851.7	11.241	19.44		
MW-62	W62-210420-	4/20/2021	6.22	159.9	10.373	1.44		
MW-102	W102210420-	4/20/2021	6.76	162.5	10.39	2.1		
MW-103	W103210416-	4/16/2021	8.02	249.8	10.6	7.7		
MW-107	W107210420-	4/20/2021	5.5	203.9	11.8	2.2		
MW-108	W108210415-	4/15/2021	6.61	325.2	11.48	1.28		
MW-109	W109210415-	4/15/2021	7.06	3727	11.4			
MW-110	W110210420-	4/20/2021	6.23	684	12.22	6.3		
MW-111	W111210415-	4/15/2021	5.63	77.8	10.836			
MW-112	W112210414-	4/14/2021	7.5	239.2	16.66	0.75		
MW-101	W101210419-	4/19/2021	7.07	464	11.69	4.25		

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Field Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Turbidity (Field) NTU
MW-21	W21-210402-	4/2/2021	6.8
MW-24	W24-210412-	4/12/2021	0.77
MW-56	W56-210405-	4/5/2021	0.5
MW-59	W59-210413-	4/13/2021	0.49
MW-64	W64-210405-	4/5/2021	1.45
MW-65	W65-210413-	4/13/2021	24.3
MW-66	W66-210402-	4/2/2021	0.3
MW-73	W73-210402-	4/2/2021	146
MW-76	W76-210413-	4/13/2021	0.24
MW-81	W81-210405-	4/5/2021	0.31
MW-82	W82-210412-	4/12/2021	2.02
MW-83	W83-210413-	4/13/2021	0.34
MW-84	W84-210405-	4/5/2021	0.39
MW-94	W94-210413-	4/13/2021	0.26
MW-113	W113210412-	4/12/2021	0.26
MW-114	W114210412-	4/12/2021	0.51
MW-115	W115210413-	4/13/2021	8.67
MW-67	W67-210630-	6/30/2021	5.42
MW-72	W72-210406-	4/6/2021	28.5
MW-74R	W74R210409-	4/9/2021	0.35
MW-75	W75-210409-	4/9/2021	1
MW-80	W80-210415-	4/15/2021	1.64
MW-85	W85-210406-	4/6/2021	0.64
MW-86	W86-210406-	4/6/2021	0.75
MW-87	W87-210611-	6/11/2021	122
MW-88	W88-210412-	4/12/2021	0.44
MW-89	W89-210412-	4/12/2021	3.63
MW-100	W100210412-	4/12/2021	25.4
MW-68	W68-210415-	4/15/2021	7.38
MW-93	W93-210405-	4/5/2021	0.64
MW-95	W95-210406-	4/6/2021	0.14
MW-EB6	WEB6210414-	4/14/2021	8.32
MW-30A	W30A210419-	4/19/2021	4.63
MW-47	W47-210419-	4/19/2021	0.33
MW-62	W62-210420-	4/20/2021	4.14
MW-102	W102210420-	4/20/2021	14.3
MW-103	W103210416-	4/16/2021	16
MW-107	W107210420-	4/20/2021	1.04
MW-108	W108210415-	4/15/2021	1.51
MW-109	W109210415-	4/15/2021	59.2
MW-110	W110210420-	4/20/2021	0.22
MW-111	W111210415-	4/15/2021	1.02
MW-112	W112210414-	4/14/2021	0.29
MW-101	W101210419-	4/19/2021	0.42

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Conventionals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Alkalinity, Total ($CaCO_3$) (mg/L)	Ammonia, (NH_3) (mg/L)	Chloride (mg/L)	Nitrate-Nitrogen, (NO_3 as N) (mg/L)	Specific Conductance (umhos/cm)	Sulfate (SO4) (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Total Solids (mg/L)	Suspended Solids (mg/L)
MW-21	W21-210402-	4/2/2021	61.9	0.027	2.43	0.01 U	145	7.69	100 B	0.5 U	97.3	1.56
MW-24	W24-210412-	4/12/2021	68.1	0.0307	6.07	0.01 U	182	13.4	120	0.5 U	117	2.6
MW-56	W56-210405-	4/5/2021	85.3	0.002 U	20.5	0.381	259	8.66	153 B	0.87 T	160	0.5 U
MW-59	W59-210413-	4/13/2021	73.3	0.0064 T	11.1	0.02 U	216	15	141	0.5 U	137	0.9 T
MW-64	W64-210405-	4/5/2021	93.3	0.0255	2.78	0.01 U	215	13.4	129 B	0.5 U	132	0.8 T
MW-65	W65-210413-	4/13/2021	53.3	0.0046 T	5.88	0.02 U	145	8.88	95.3	0.5 U	104	8.53
MW-66	W66-210402-	4/2/2021	85.8	0.002 U	4.26	0.464	215	14.1	136 B	0.5 U	134	0.5 U
MW-73	W73-210402-	4/2/2021	51	0.002 U	2.25	1.16	136	7.8	106 B	0.5 U	294	189
MW-76	W76-210413-	4/13/2021	91	0.002 U	22.9	0.861	297	14.3	191	3.88	194	0.5 U
MW-81	W81-210405-	4/5/2021	58.6	0.002 U	5.06	1.59	170	11.1	118 B	0.5 U	129	0.5 U
MW-82	W82-210412-	4/12/2021	118	0.002 U	11.1	1.09	305	14.8	191	0.56 T	191	3.92
MW-83	W83-210413-	4/13/2021	197	0.002 T	70.5	0.5	621	11.7	389	5.27	397	0.5 U
MW-84	W84-210405-	4/5/2021	80.7	0.002 U	3.87	0.136	204	15.9	133 B	0.5 U	143	0.5 U
MW-94	W94-210413-	4/13/2021	132	0.002 U	26.4	0.916	369	8.14	247	3.35	236	0.54 U
MW-113	W113210412-	4/12/2021	148	0.0144	30.9	0.01 U	405	10.9	248	1.63	244	1.5
MW-114	W114210412-	4/12/2021	105	0.002 U	19.6	1.88	300	7.14	191	0.7 T	191	0.51 U
MW-115	W115210413-	4/13/2021	100	0.002 U	23.2	0.717	302	9.55	197	0.95 T	198	0.5 U
MW-67	W67-210630-	6/30/2021	162	0.0074 T	4.99	0.0812	379	29	233	0.5 U	240	5.4
MW-72	W72-210406-	4/6/2021	131	0.0166	7.48	0.01 U	346	36.2	221	0.5 U	231	14
MW-74R	W74R210409-	4/9/2021	226	0.0042 T	27.6	0.278	570	38.3	338	0.5 U	346	0.5 U
MW-75	W75-210409-	4/9/2021	115	0.0092 T	12.1	0.01 U	392	64.5	252	0.5 U	260	4.1
MW-80	W80-210415-	4/15/2021	122	0.0094 T	4.46	0.01 U	308	29.9	199	0.5 U	209	4.2
MW-85	W85-210406-	4/6/2021	155	0.002 U	10.3	0.1	388	33.9	235	0.5 U	241	0.53 U
MW-86	W86-210406-	4/6/2021	74	0.002 U	4.38	0.01 U	203	21.2	146 B	0.5 U	132	0.9 T
MW-87	W87-210611-	6/11/2021	117	0.0172	16.9	0.01 U	532	131	359	1.34	437	52.8
MW-88	W88-210412-	4/12/2021	53.9	0.002 U	1.84	0.803	133	6.69	92	0.5 U	90.7	0.5 U
MW-89	W89-210412-	4/12/2021	88.1	0.0208	11.7	0.01 U	255	20.5	157	0.5 U	165	3.8
MW-100	W100210412-	4/12/2021	120	0.0076 T	2.63	0.01 U	272	15.2	157	0.5 U	171	8.2
MW-68	W68-210415-	4/15/2021	123	0.0177	2.99	0.01 U	277	15.2	174	0.5 U	183	3.4
MW-93	W93-210405-	4/5/2021	124	0.0517	2.66	0.022 T	327	40.2	216	0.5 U	213	0.5 U
MW-95	W95-210406-	4/6/2021	91.7	0.024	6.89	0.01 U	234	15.8	147 B	0.5 U	148	0.5 U
MW-EB6	WEB6210414-	4/14/2021	48	0.0739	0.635	0.0845	110	5.13	86.7	1.73	107	20.6
MW-30A	W30A210419-	4/19/2021	78.4	0.002 U	1.01	7.77	236	7.54	181	0.59 T	178	1.7
MW-47	W47-210419-	4/19/2021	520	0.0507	7.62	0.01 U	934	10.2	591	3.56	603	6.1
MW-62	W62-210420-	4/20/2021	58.5	0.002 U	4.52	2.13	173	10.1	121	0.96 T	112	3.3
MW-102	W102210420-	4/20/2021	71.1	0.002 U	5.73	1.1	182	7.08	134	0.77 T	145	4.5
MW-103	W103210416-	4/16/2021	117	0.002 U	4.94	0.037 T	262	9.85	180	0.6 T	189	24.6
MW-107	W107210420-	4/20/2021	91.8	0.938	2.37	0.01 U	208	4.7	131	4.63	145	9.6
MW-108	W108210415-	4/15/2021	114	0.002 U	1.61	0.621	336	49.4	227	0.5 U	237	0.8 T

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Conventionals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Alkalinity, Total ($CaCO_3$) (mg/L)	Ammonia, (NH_3) (mg/L)	Chloride (mg/L)	Nitrate-Nitrogen, (NO_3 as N) (mg/L)	Specific Conductance (umhos/cm)	Sulfate (SO4) (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Total Solids (mg/L)	Suspended Solids (mg/L)
MW-109	W109210415-	4/15/2021	2530	0.405	3.1 T	0.1 U	3880	0.36 T	3090	151	3170	5.36
MW-110	W110210420-	4/20/2021	403	0.0381	2.17	0.01 U	729	5.63	449	2.86	449	1 U
MW-111	W111210415-	4/15/2021	32.8	0.002 U	0.749	0.938	95.6	8.15	76.7	0.55 T	78	0.52 U
MW-112	W112210414-	4/14/2021	109	0.0177	5.02	0.0969	284	27.6	198	0.5 U	201	0.52 U
MW-101	W101210419-	4/19/2021	266	0.0157	2.48	0.01 U	500	3.94	321	4.29	324	1.1

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Antimony Dissolved (mg/L)	Antimony Total (mg/L)	Arsenic Dissolved (mg/L)	Arsenic Total (mg/L)	Barium Dissolved (mg/L)	Barium Total (mg/L)	Beryllium Dissolved (mg/L)	Beryllium Total (mg/L)	Cadmium Dissolved (mg/L)	Cadmium Total (mg/L)	Calcium Dissolved (mg/L)
MW-21	W21-210402-	4/2/2021	0.0003 U	0.0003 U	0.000852	0.000966	0.00514	0.00524	0.0001 U	0.0001 U	5E-05 U	5E-05 U	12.7
MW-24	W24-210412-	4/12/2021	0.0003 U	0.0003 U	0.00056	0.000551	0.00219	0.00205	0.0001 U	0.0001 U	5E-05 U	5E-05 U	15
MW-56	W56-210405-	4/5/2021	0.0003 U	0.0003 U	0.0000735	0.0000735	0.00599	0.00575	0.0001 U	0.0001 U	5E-05 U	5E-05 U	25.9
MW-59	W59-210413-	4/13/2021	0.0003 U	0.0003 U	0.000422	0.00044	0.0042	0.00409	0.0001 U	0.0001 U	5E-05 U	5E-05 U	18.5
MW-64	W64-210405-	4/5/2021	0.0003 U	0.0003 U	0.000737	0.000859	0.00635	0.00772	0.0001 U	0.0001 U	5E-05 U	5E-05 U	16.8
MW-65	W65-210413-	4/13/2021	0.0003 U	0.0003 U	0.000356	0.000811	0.00578	0.0061	0.0001 U	0.0001 U	5E-05 U	5E-05 U	12
MW-66	W66-210402-	4/2/2021	0.0003 U	0.0003 U	0.000679	0.00068	0.00419	0.00413	0.0001 U	0.0001 U	5E-05 U	5E-05 U	16.5
MW-73	W73-210402-	4/2/2021	0.0003 U	0.0003 U	0.000689	0.00151	0.0037	0.0225	0.0001 U	0.000204	5E-05 U	5E-05 U	11.9
MW-76	W76-210413-	4/13/2021	0.0003 U	0.0003 U	0.000216	0.000223	0.00434	0.00458	0.0001 U	0.0001 U	5E-05 U	5E-05 U	24.2
MW-81	W81-210405-	4/5/2021	0.0003 U	0.0003 U	5.14E-04	0.000496	0.00329	0.00303	0.0001 U	0.0001 U	5E-05 U	5E-05 U	14.5
MW-82	W82-210412-	4/12/2021	0.0003 U	0.0003 U	0.00023	0.000248	0.00112	0.00136	0.0001 U	0.0001 U	5E-05 U	5E-05 U	25.5
MW-83	W83-210413-	4/13/2021	0.0003 U	0.0003 U	0.000295	0.000291	0.00812	0.00766	0.0001 U	0.0001 U	5E-05 U	5E-05 U	64.2
MW-84	W84-210405-	4/5/2021	0.0003 U	0.0003 U	0.000321	0.000301	0.0051	0.00488	0.0001 U	0.0001 U	5E-05 U	5E-05 U	15.8
MW-94	W94-210413-	4/13/2021	0.0003 U	0.0003 U	0.000118	0.000113	0.00232	0.00223	0.0001 U	0.0001 U	5E-05 U	5E-05 U	37.4
MW-113	W113210412-	4/12/2021	0.0003 U	0.0003 U	0.000517	0.000531	0.00206	0.00218	0.0001 U	0.0001 U	5E-05 U	5E-05 U	35
MW-114	W114210412-	4/12/2021	0.0003 U	0.0003 U	0.000263	0.000278	0.00184	0.00198	0.0001 U	0.0001 U	5E-05 U	5E-05 U	26.7
MW-115	W115210413-	4/13/2021	0.0003 U	0.0003 U	0.000181	0.00019	0.001	0.00102	0.0001 U	0.0001 U	5E-05 U	5E-05 U	30.3
MW-67	W67-210630-	6/30/2021	0.0003 U	0.0003 U	0.000386	0.000694	0.0133	0.0144	0.0001 U	0.0001 U	5E-05 U	5E-05 U	39.2
MW-72	W72-210406-	4/6/2021	0.0003 U	0.0003 U	0.0000739	0.000131	0.0118	0.0126	0.0001 U	0.0001 U	5E-05 U	5E-05 U	31.8
MW-74R	W74R210409-	4/9/2021	0.0003 U	0.0003 U	0.000375	0.000408	0.0129	0.0122	0.0001 U	0.0001 U	5E-05 U	5E-05 U	47.6
MW-75	W75-210409-	4/9/2021	0.0003 U	0.0003 U	0.000431	0.000426	0.0126	0.013	0.0001 U	0.0001 U	5E-05 U	5E-05 U	31.2
MW-80	W80-210415-	4/15/2021	0.0003 U	0.0003 U	0.00292	0.0031	0.0141	0.0137	0.0001 U	0.0001 U	5E-05 U	5E-05 U	31.3
MW-85	W85-210406-	4/6/2021	0.0003 U	0.0003 U	0.000706	0.000704	0.00723	0.00672	0.0001 U	0.0001 U	5E-05 U	5E-05 U	36.3
MW-86	W86-210406-	4/6/2021	0.0003 U	0.0003 U	0.00078	0.00082	0.00543	0.00561	0.0001 U	0.0001 U	5E-05 U	5E-05 U	16.1
MW-87	W87-210611-	6/11/2021	0.0003 U	0.0003 U	0.000618	0.0207	0.0259	0.0382	0.0001 U	0.000147	5E-05 U	0.0000684	47.6
MW-88	W88-210412-	4/12/2021	0.0003 U	0.0003 U	0.000977	0.000991	0.00224	0.00217	0.0001 U	0.0001 U	5E-05 U	5E-05 U	9.35
MW-89	W89-210412-	4/12/2021	0.0003 U	0.0003 U	0.000788	0.00114	0.0078	0.00837	0.0001 U	0.0001 U	5E-05 U	5E-05 U	19
MW-100	W100210412-	4/12/2021	0.0003 U	0.0003 U	0.000305	0.00283	0.00519	0.00617	0.0001 U	0.0001 U	5E-05 U	5E-05 U	23.3
MW-68	W68-210415-	4/15/2021	0.0003 U	0.0003 U	0.00895	0.0426	0.0104	0.0107	0.0001 U	0.0001 U	5E-05 U	5E-05 U	27.2
MW-93	W93-210405-	4/5/2021	0.0003 U	0.0003 U	0.0014	0.00138	0.00776	0.00762	0.0001 U	0.0001 U	5E-05 U	5E-05 U	31.8
MW-95	W95-210406-	4/6/2021	0.0003 U	0.0003 U	0.00102	0.000993	0.00422	0.00415	0.0001 U	0.0001 U	5E-05 U	5E-05 U	22
MW-EB6	WEB6210414-	4/14/2021	0.0003 U	0.0003 U	0.0016	0.00184	0.0058	0.00878	0.0001 U	0.0001 U	5E-05 U	0.0000669	6.56
MW-30A	W30A210419-	4/19/2021	0.0003 U	0.0003 U	0.000485	0.00059	0.0035	0.00404	0.0001 U	0.0001 U	5E-05 U	5E-05 U	19.2
MW-47	W47-210419-	4/19/2021	0.0003 U	0.0003 U	0.00363	0.00363	0.0323	0.0312	0.0001 U	0.0001 U	5E-05 U	5E-05 U	117
MW-62	W62-210420-	4/20/2021	0.0003 U	0.0003 U	0.000146	0.000179	0.00195	0.00264	0.0001 U	0.0001 U	5E-05 U	5E-05 U	16.1
MW-102	W102210420-	4/20/2021	0.0003 U	0.0003 U	0.000192	0.000298	0.004	0.00633	0.0001 U	0.0001 U	5E-05 U	5E-05 U	17
MW-103	W103210416-	4/16/2021	0.0003 U	0.0003 U	0.00718	0.0075	0.00937	0.0142	0.0001 U	0.0001 U	5E-05 U	5E-05 U	24.8
MW-107	W107210420-	4/20/2021	0.0003 U	0.0003 U	0.00624	0.00618	0.0102	0.0108	0.0001 U	0.0001 U	5E-05 U	5E-05 U	21.7
MW-108	W108210415-	4/15/2021	0.0003 U	0.0003 U	0.0015	0.00149	0.0104	0.00994	0.0001 U	0.0001 U	5E-05 U	5E-05 U	24

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Antimony Dissolved (mg/L)	Antimony Total (mg/L)	Arsenic Dissolved (mg/L)	Arsenic Total (mg/L)	Barium Dissolved (mg/L)	Barium Total (mg/L)	Beryllium Dissolved (mg/L)	Beryllium Total (mg/L)	Cadmium Dissolved (mg/L)	Cadmium Total (mg/L)	Calcium Dissolved (mg/L)
MW-109	W109210415-	4/15/2021	0.000655	0.000748	0.0341	0.038	0.168	0.17	0.000793	0.000802	0.0000528	0.000108	35.8
MW-110	W110210420-	4/20/2021	0.0003 U	0.0003 U	0.00154	0.00163	0.0242	0.0251	0.0001 U	0.0001 U	0.000105	0.000102	71.9
MW-111	W111210415-	4/15/2021	0.0003 U	0.0003 U	0.000708	0.000701	0.00485	0.00474	0.0001 U	0.0001 U	5E-05 U	5E-05 U	8.18
MW-112	W112210414-	4/14/2021	0.0003 U	0.0003 U	0.0028	0.00282	0.0075	0.00751	0.0001 U	0.0001 U	5E-05 U	5E-05 U	25.9
MW-101	W101210419-	4/19/2021	0.0003 U	0.0003 U	0.00434	0.00502	0.0195	0.019	0.0001 U	0.0001 U	5E-05 U	5E-05 U	52

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Calcium Total (mg/L)	Chromium Dissolved (mg/L)	Chromium Total (mg/L)	Cobalt Dissolved (mg/L)	Cobalt Total (mg/L)
MW-21	W21-210402-	4/2/2021	12.8	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-24	W24-210412-	4/12/2021	14.9	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-56	W56-210405-	4/5/2021	26.1	0.0002 U	0.0002 U	0.000116	0.000113
MW-59	W59-210413-	4/13/2021	17.8	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-64	W64-210405-	4/5/2021	16.6	0.0002 U	0.0002 U	0.0000706	0.000295
MW-65	W65-210413-	4/13/2021	11.6	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-66	W66-210402-	4/2/2021	16.5	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-73	W73-210402-	4/2/2021	13.1	0.000215	2.07E-03	5E-05 U	0.000893
MW-76	W76-210413-	4/13/2021	26.5	0.000945	0.00104	0.0000948	0.0000981
MW-81	W81-210405-	4/5/2021	14.2	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-82	W82-210412-	4/12/2021	27.7	0.000273	0.000956	5E-05 U	5E-05 U
MW-83	W83-210413-	4/13/2021	63.8	0.0002 U	0.0002 U	1.08E-04	0.0000995
MW-84	W84-210405-	4/5/2021	15.7	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-94	W94-210413-	4/13/2021	36.8	0.000211	0.0002 U	0.000109	0.000102
MW-113	W113210412-	4/12/2021	38.6	0.0002 U	0.0002 U	5E-05 U	0.0000547
MW-114	W114210412-	4/12/2021	28.3	0.0002 U	0.0002 U	0.000226	0.00028
MW-115	W115210413-	4/13/2021	29.8	0.0002 U	0.000226	0.0000651	0.0000718
MW-67	W67-210630-	6/30/2021	37.6	0.0002 U	0.000453	0.000137	0.000214
MW-72	W72-210406-	4/6/2021	31.5	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-74R	W74R210409-	4/9/2021	50.8	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-75	W75-210409-	4/9/2021	31.6	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-80	W80-210415-	4/15/2021	31.1	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-85	W85-210406-	4/6/2021	35.2	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-86	W86-210406-	4/6/2021	15.8	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-87	W87-210611-	6/11/2021	48.2	0.0002 U	0.000772	0.000139	0.000182
MW-88	W88-210412-	4/12/2021	9.71	0.000574	0.000575	5E-05 U	5E-05 U
MW-89	W89-210412-	4/12/2021	19.2	0.0002 U	0.0002 U	5E-05 U	5E-05 U
MW-100	W100210412-	4/12/2021	23.7	0.0002 U	0.0002 U	1.73E-04	2.16E-04
MW-68	W68-210415-	4/15/2021	27	0.0002 U	0.0002 U	2.09E-04	2.04E-04
MW-93	W93-210405-	4/5/2021	31.5	0.0002 U	0.0002 U	7.18E-05	9.30E-05
MW-95	W95-210406-	4/6/2021	22	0.0002 U	0.0002 U	6.55E-05	6.74E-05
MW-EB6	WEB6210414-	4/14/2021	6.43	0.000241	0.000838	0.00019	0.000337
MW-30A	W30A210419-	4/19/2021	19.2	0.000674	9.85E-04	5E-05 U	0.000108
MW-47	W47-210419-	4/19/2021	118	0.0002 U	0.0002 U	3.62E-04	0.000347
MW-62	W62-210420-	4/20/2021	15.8	0.000293	0.000669	0.0000516	0.000114
MW-102	W102210420-	4/20/2021	16.7	0.0002 U	0.000978	5E-05 U	0.000233
MW-103	W103210416-	4/16/2021	23.8	0.0002 U	0.000977	5E-05 U	0.00028
MW-107	W107210420-	4/20/2021	21	0.00057	0.00061	0.0036	0.00357
MW-108	W108210415-	4/15/2021	23.7	0.000603	0.000583	5E-05 U	5E-05 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Calcium Total (mg/L)	Chromium Dissolved (mg/L)	Chromium Total (mg/L)	Cobalt Dissolved (mg/L)	Cobalt Total (mg/L)
MW-109	W109210415-	4/15/2021	36.2	0.167	0.167	1.15E-03	0.00196
MW-110	W110210420-	4/20/2021	71.3	0.0002 U	0.0002 U	0.00231	0.00231
MW-111	W111210415-	4/15/2021	8	0.00193	0.00181	5E-05 U	5E-05 U
MW-112	W112210414-	4/14/2021	25.3	0.000315	0.000317	5E-05 U	5E-05 U
MW-101	W101210419-	4/19/2021	50.2	0.0002 U	0.0002 U	0.000241	0.000236

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Copper Dissolved (mg/L)	Copper Total (mg/L)	Iron Dissolved (mg/L)	Iron Total (mg/L)	Lead Dissolved (mg/L)	Lead Total (mg/L)	Magnesium Dissolved (mg/L)	Magnesium Total (mg/L)	Manganese Dissolved (mg/L)	Manganese Total (mg/L)	Mercury Dissolved (mg/L)
MW-21	W21-210402-	4/2/2021	0.0002 U	0.0002 U	1.93	2.68	0.0001 U	0.0001 U	6.97	6.89	0.126	0.129	5E-05 U
MW-24	W24-210412-	4/12/2021	0.0002 U	0.0002 U	3.13	3.12	0.0001 U	0.0001 U	9.41	9.59	0.103	0.0993	5E-05 U
MW-56	W56-210405-	4/5/2021	0.0002 U	0.000211	0.0284	0.0396	0.0001 U	0.0001 U	11.2	11.1	0.123	0.118	5E-05 U
MW-59	W59-210413-	4/13/2021	0.0002 U	0.0002 U	4.47	4.55	0.0001 U	0.0001 U	10.8	11	0.121	0.118	5E-05 U
MW-64	W64-210405-	4/5/2021	0.0002 U	0.0002 U	0.0456	0.107	0.0001 U	0.0001 U	12.6	12.2	0.0667	0.259	5E-05 U
MW-65	W65-210413-	4/13/2021	0.0002 U	0.0002 U	3.31	4.63	0.0001 U	0.0001 U	6.94	6.77	0.152	0.178	5E-05 U
MW-66	W66-210402-	4/2/2021	0.0002 U	0.0002 U	0.01 U	0.01 U	0.0001 U	0.0001 U	13	12.9	0.0001 U	0.0001 U	5E-05 U
MW-73	W73-210402-	4/2/2021	0.0002 U	0.00303	0.01 U	2.33	0.0001 U	0.00519	5.93	6.75	0.000405	0.0983	5E-05 U
MW-76	W76-210413-	4/13/2021	0.00214	0.00202	0.01 U	0.01 U	0.0001 U	0.0001 U	11.2	11	0.0001 U	0.0001 U	5E-05 U
MW-81	W81-210405-	4/5/2021	0.0002 U	0.0002 U	0.01 U	0.01 U	0.0001 U	0.0001 U	8.05	7.75	0.0001 U	0.0001 U	5E-05 U
MW-82	W82-210412-	4/12/2021	0.0002 U	0.000256	0.0122	0.0474	0.0001 U	0.0001 U	15.6	15.2	0.000191	0.000813	5E-05 U
MW-83	W83-210413-	4/13/2021	0.00236	0.00214	0.01 U	0.01 U	0.0001 U	0.0001 U	29	28.5	0.197	0.199	5E-05 U
MW-84	W84-210405-	4/5/2021	0.0002 U	0.0002 U	0.01 U	0.012	0.0001 U	0.0001 U	12.1	12	0.00153	0.00218	5E-05 U
MW-94	W94-210413-	4/13/2021	0.00144	0.00128	0.01 U	0.01 U	0.0001 U	0.0001 U	16.6	16.6	0.000164	0.000289	5E-05 U
MW-113	W113210412-	4/12/2021	0.0002 U	0.0002 U	1.17	1.29	0.0001 U	0.0001 U	19.4	19.7	0.405	0.427	5E-05 U
MW-114	W114210412-	4/12/2021	0.0002 U	0.0002 U	0.01 U	0.0212	0.0001 U	0.0001 U	13.8	13.1	0.000235	0.00101	5E-05 U
MW-115	W115210413-	4/13/2021	0.00024	0.000364	0.01 U	0.021	0.0001 U	0.0001 U	13	12.7	0.00332	0.00355	5E-05 U
MW-67	W67-210630-	6/30/2021	0.0002 U	0.000349	0.336	0.82	0.0001 U	0.000114	22.3	21.6	0.204	0.22	5E-05 U
MW-72	W72-210406-	4/6/2021	0.0002 U	0.000227	2.66	4.95	0.0001 U	0.0001 U	19.9	19.5	0.364	0.347	5E-05 U
MW-74R	W74R210409-	4/9/2021	0.000201	0.000229	0.01 U	0.0205	0.0001 U	0.0001 U	35.9	34.6	0.0001 U	0.000185	5E-05 U
MW-75	W75-210409-	4/9/2021	0.0002 U	0.0002 U	2.67	2.65	0.0001 U	0.0001 U	22.3	22.2	0.227	0.218	5E-05 U
MW-80	W80-210415-	4/15/2021	0.0002 U	0.0002 U	2.16	2.29	0.0001 U	0.0001 U	15.6	15.8	0.347	0.342	5E-05 U
MW-85	W85-210406-	4/6/2021	0.0002 U	0.0002 U	0.01 U	0.0174	0.0001 U	0.0001 U	22.5	21.6	0.0001 U	0.000447	5E-05 U
MW-86	W86-210406-	4/6/2021	0.00271	0.00308	0.964	0.96	0.0001 U	0.0001 U	11.6	11	0.0116	0.0108	5E-05 U
MW-87	W87-210611-	6/11/2021	0.0002 U	0.00132	4.77	23.5	0.0001 U	0.00037	33.2	32.6	0.539	0.564	5E-05 DU
MW-88	W88-210412-	4/12/2021	0.0002 U	0.0002 U	0.01 U	0.01 U	0.0001 U	0.0001 U	7.06	6.46	0.0001 U	0.0001 U	5E-05 U
MW-89	W89-210412-	4/12/2021	0.000417	0.000344	1.24	1.63	0.0001 U	0.0001 U	13.9	13.1	0.312	0.306	5E-05 U
MW-100	W100210412-	4/12/2021	0.0002 U	0.000233	0.57	3.64	0.0001 U	0.0001 U	13.6	13.6	0.107	0.11	5E-05 U
MW-68	W68-210415-	4/15/2021	0.0002 U	0.00119	0.551	1.37	0.0001 U	0.0001 U	14.7	14.8	0.3	0.298	5E-05 U
MW-93	W93-210405-	4/5/2021	0.0002 U	0.000263	0.01 U	0.0165	0.0001 U	0.0001 U	16.8	16.4	0.201	0.19	5E-05 U
MW-95	W95-210406-	4/6/2021	0.0002 U	0.0002 U	0.01 U	0.01 U	0.0001 U	0.0001 U	12	11.8	0.172	0.166	5E-05 U
MW-EB6	WEB6210414-	4/14/2021	0.0029	0.00708	0.0677	0.45	0.0001 U	0.000716	3.53	3.47	0.00859	0.0139	5E-05 U
MW-30A	W30A210419-	4/19/2021	0.0002 U	0.000633	0.01 U	0.259	0.0001 U	0.0001 U	10.4	10.5	0.000204	0.00336	5E-05 U
MW-47	W47-210419-	4/19/2021	0.0002 U	0.0002 U	3.53	3.45	0.0001 U	0.0001 U	55.6	53.9	2.02	1.95	5E-05 U
MW-62	W62-210420-	4/20/2021	0.0002	0.00103	0.01 U	0.308	0.0001 U	0.000203	4.26	4.27	0.000617	0.00413	5E-05 U
MW-102	W102210420-	4/20/2021	0.000247	0.000983	0.01 U	0.425	0.0001 U	0.000206	6.34	6.47	0.000558	0.00713	5E-05 U
MW-103	W103210416-	4/16/2021	0.000489	0.00178	0.01 U	0.424	0.0001 U	0.000482	11	10.6	0.00658	0.15	5E-05 U
MW-107	W107210420-	4/20/2021	0.000982	0.0016	4.15	4.05	0.0001 U	0.0001 U	6.48	6.62	2.98	2.94	5E-05 U
MW-108	W108210415-	4/15/2021	0.000217	0.000246	0.01 U	0.0219	0.0001 U	0.0001 U	10.2	9.98	0.000303	0.000722	5E-05 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Copper Dissolved (mg/L)	Copper Total (mg/L)	Iron Dissolved (mg/L)	Iron Total (mg/L)	Lead Dissolved (mg/L)	Lead Total (mg/L)	Magnesium Dissolved (mg/L)	Magnesium Total (mg/L)	Manganese Dissolved (mg/L)	Manganese Total (mg/L)	Mercury Dissolved (mg/L)
MW-109	W109210415-	4/15/2021	0.0147	0.039	12.8	15.8	0.00121	0.0044	19.4	18.6	2.07 D	2.14 D	5E-05 U
MW-110	W110210420-	4/20/2021	0.000419	0.00045	0.0869	0.0979	0.0001 U	0.0001 U	35.6	37.5	2.85	2.96	5E-05 U
MW-111	W111210415-	4/15/2021	0.0002 U	0.0002 U	0.01 U	0.0145	0.0001 U	0.0001 U	2.5	2.37	0.00202	0.00215	5E-05 U
MW-112	W112210414-	4/14/2021	0.0002 U	0.0002 U	0.01 U	0.0174	0.0001 U	0.0001 U	12.6	12.7	0.0713	0.083	5E-05 U
MW-101	W101210419-	4/19/2021	0.0002 U	0.0002 U	0.391	0.491	0.0001 U	0.0001 U	30.5	30	1.08	1.06	5E-05 U

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Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Mercury Total (mg/L)	Nickel Dissolved (mg/L)	Nickel Total (mg/L)	Potassium Dissolved (mg/L)	Potassium Total (mg/L)
MW-21	W21-210402-	4/2/2021	5E-05 U	0.0001 U	0.000138	1.13	1.12
MW-24	W24-210412-	4/12/2021	5E-05 U	0.0001 U	0.000103	1.04	0.962
MW-56	W56-210405-	4/5/2021	5E-05 U	0.001	0.000902	1.17	1.11
MW-59	W59-210413-	4/13/2021	5E-05 U	0.000147	0.00011	1.21	1.09
MW-64	W64-210405-	4/5/2021	5E-05 U	0.000236	0.000947	1.49	1.39
MW-65	W65-210413-	4/13/2021	5E-05 U	0.000106	0.000124	0.937	0.858
MW-66	W66-210402-	4/2/2021	5E-05 U	0.000135	0.000145	1.14	1.14
MW-73	W73-210402-	4/2/2021	5E-05 U	0.000311	0.00227	0.802	1.16
MW-76	W76-210413-	4/13/2021	5E-05 U	0.000608	0.000583	1.38	1.49
MW-81	W81-210405-	4/5/2021	5E-05 U	0.000121	0.000115	0.867	0.798
MW-82	W82-210412-	4/12/2021	5E-05 U	0.000863	0.00239	1.57	1.73
MW-83	W83-210413-	4/13/2021	5E-05 U	0.00234	0.00213	3.32	3.1
MW-84	W84-210405-	4/5/2021	5E-05 U	0.000339	0.000325	1.16	1.11
MW-94	W94-210413-	4/13/2021	5E-05 U	0.000727	0.000666	2.65	2.52
MW-113	W113210412-	4/12/2021	5E-05 U	0.000239	0.000258	1.77	1.97
MW-114	W114210412-	4/12/2021	5E-05 U	0.000268	0.00031	1.95	2.08
MW-115	W115210413-	4/13/2021	5E-05 U	0.000403	0.000323	2	1.87
MW-67	W67-210630-	6/30/2021	5E-05 U	0.000333	0.000662	1.93	1.87
MW-72	W72-210406-	4/6/2021	5E-05 U	0.0001 U	0.000116	2	1.81
MW-74R	W74R210409-	4/9/2021	5E-05 U	0.000867	0.000822	2.01	2.09
MW-75	W75-210409-	4/9/2021	5E-05 U	0.0001 U	0.0001 U	1.75	1.81
MW-80	W80-210415-	4/15/2021	5E-05 U	0.0001 U	0.0001 U	1.68	1.59
MW-85	W85-210406-	4/6/2021	5E-05 U	0.000209	0.000212	1.75	1.61
MW-86	W86-210406-	4/6/2021	5E-05 U	0.0001 U	0.0001 U	1.27	1.2
MW-87	W87-210611-	6/11/2021	5E-05 DU	0.00018	0.000326	2.38	2.38
MW-88	W88-210412-	4/12/2021	5E-05 U	0.0001 U	0.000106	0.777	0.79
MW-89	W89-210412-	4/12/2021	5E-05 U	0.000136	0.00011	1.57	1.56
MW-100	W100210412-	4/12/2021	5E-05 U	0.000341	0.000403	1.46	1.54
MW-68	W68-210415-	4/15/2021	5E-05 U	0.000414	0.0004	1.69	1.6
MW-93	W93-210405-	4/5/2021	5E-05 U	0.000184	0.000277	1.54	1.43
MW-95	W95-210406-	4/6/2021	5E-05 U	0.000163	0.00017	1.22	1.16
MW-EB6	WEB6210414-	4/14/2021	5E-05 U	0.00155	0.00177	0.902	0.878
MW-30A	W30A210419-	4/19/2021	5E-05 U	0.000602	0.000925	1.33	1.32
MW-47	W47-210419-	4/19/2021	5E-05 U	0.00192	0.0018	4.42	4.2
MW-62	W62-210420-	4/20/2021	5E-05 U	0.000559	0.00101	0.813	0.796
MW-102	W102210420-	4/20/2021	5E-05 U	0.000325	0.000728	1.11	1.15
MW-103	W103210416-	4/16/2021	5E-05 U	0.000249	0.00104	2.73	2.57
MW-107	W107210420-	4/20/2021	5E-05 U	0.00605	0.00628	2.55	2.47
MW-108	W108210415-	4/15/2021	5E-05 U	0.000388	0.000384	1.44	1.32

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Mercury Total (mg/L)	Nickel Dissolved (mg/L)	Nickel Total (mg/L)	Potassium Dissolved (mg/L)	Potassium Total (mg/L)
MW-109	W109210415-	4/15/2021	0.0000633	0.0158	0.0168	2.71	2.64
MW-110	W110210420-	4/20/2021	5E-05 U	0.00519	0.00522	3.02	2.97
MW-111	W111210415-	4/15/2021	5E-05 U	0.00165	0.00146	0.313	0.295
MW-112	W112210414-	4/14/2021	5E-05 U	0.000148	0.000123	2.78	2.61
MW-101	W101210419-	4/19/2021	5E-05 U	0.00322	0.00303	2.67	2.55

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Selenium Dissolved (mg/L)	Selenium Total (mg/L)	Silver Dissolved (mg/L)	Silver Total (mg/L)	Sodium Dissolved (mg/L)	Sodium Total (mg/L)	Thallium Dissolved (mg/L)	Thallium Total (mg/L)	Vanadium Dissolved (mg/L)	Vanadium Total (mg/L)	Zinc Dissolved (mg/L)
MW-21	W21-210402-	4/2/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	6.12	6.1	0.0001 U	0.0001 U	7.5E-05 U	0.0000828	0.0005 U
MW-24	W24-210412-	4/12/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	5.8	5.88	0.0001 U	0.0001 U	7.5E-05 U	7.5E-05 U	0.0005 U
MW-56	W56-210405-	4/5/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	6.31	6.43	0.0001 U	0.0001 U	0.000161 D	0.000189	0.000933
MW-59	W59-210413-	4/13/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	6.36	6.46	0.0001 U	0.0001 U	7.5E-05 U	7.5E-05 U	0.000622
MW-64	W64-210405-	4/5/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	7.17	7	0.0001 U	0.0001 U	0.000184 D	0.00023	0.0005 U
MW-65	W65-210413-	4/13/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	5.32	5.26	0.0001 U	0.0001 U	7.5E-05 U	7.5E-05 U	0.0005 U
MW-66	W66-210402-	4/2/2021	0.000921	0.00094	4E-05 U	4E-05 U	7.32	7.43	0.0001 U	0.0001 U	0.000836	0.000839	0.0005 U
MW-73	W73-210402-	4/2/2021	0.0005 U	0.00111	4E-05 U	0.0000422	5.7	5.77	0.0001 U	0.0001 U	0.00134	0.00413	0.0005 U
MW-76	W76-210413-	4/13/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	11.3	11.3	0.0001 U	0.0001 U	5.12E-04	0.000609	0.0005 U
MW-81	W81-210405-	4/5/2021	0.000844	0.000823	4E-05 U	4E-05 U	6.63	6.55	0.0001 U	0.0001 U	0.00162 D	1.58E-03	0.0005 U
MW-82	W82-210412-	4/12/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	7.66	7.52	0.0001 U	0.0001 U	0.00117	0.00123	0.0005 U
MW-83	W83-210413-	4/13/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	12.4	12.6	0.0001 U	0.0001 U	0.000771	0.000754	0.000639
MW-84	W84-210405-	4/5/2021	0.000704	0.000673	4E-05 U	4E-05 U	7.08	7.09	0.0001 U	0.0001 U	0.000482 D	0.000505	0.00112
MW-94	W94-210413-	4/13/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	9.28	9.26	0.0001 U	0.0001 U	0.00113	0.00112	0.0005 U
MW-113	W113210412-	4/12/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	8.53	8.87	0.0001 U	0.0001 U	7.5E-05 U	7.5E-05 U	0.0005 U
MW-114	W114210412-	4/12/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	6.48	6.37	0.0001 U	0.0001 U	0.00076	0.00083	0.0005 U
MW-115	W115210413-	4/13/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	7.51	7.39	0.0001 U	0.0001 U	0.000527	0.000543	0.0005 U
MW-67	W67-210630-	6/30/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	9.94	9.57	7.5E-05 U	7.5E-05 U	0.000271	0.00056	0.000677
MW-72	W72-210406-	4/6/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	8.41	8.32	0.0001 U	0.0001 U	7.5E-05 DU	7.5E-05 U	0.000745
MW-74R	W74R210409-	4/9/2021	0.000763	0.000625	4E-05 U	4E-05 U	12.2	12	0.0001 U	0.0001 U	0.000561	0.000605	0.0005 U
MW-75	W75-210409-	4/9/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	8.67	8.84	0.0001 U	0.0001 U	7.5E-05 U	7.5E-05 U	0.0005 U
MW-80	W80-210415-	4/15/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	7.99	8.12	0.0001 U	0.0001 U	7.5E-05 U	0.0000849	0.000855
MW-85	W85-210406-	4/6/2021	0.000934	0.000847	4E-05 U	4E-05 U	9.96	9.73	0.0001 U	0.0001 U	0.000948 D	0.000932	0.000567
MW-86	W86-210406-	4/6/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	7.12	6.99	0.0001 U	0.0001 U	8E-05 D	7.5E-05 U	0.00387
MW-87	W87-210611-	6/11/2021	0.0005 U	0.000701	4E-05 U	4E-05 U	11.2	11.3	7.5E-05 U	7.5E-05 U	7.5E-05 U	0.00464	0.00063
MW-88	W88-210412-	4/12/2021	0.00052	0.000532	4E-05 U	4E-05 U	5.71	5.24	0.0001 U	0.0001 U	0.0026	0.0026	0.0005 U
MW-89	W89-210412-	4/12/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	8.84	8.35	0.0001 U	0.0001 U	7.5E-05 U	0.000114	0.0137
MW-100	W100210412-	4/12/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	7.75	7.88	0.0001 U	0.0001 U	7.5E-05 U	0.0000893	0.000527
MW-68	W68-210415-	4/15/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	8.81	9.07	0.0001 U	0.0001 U	0.000248	0.000819	0.0005 U
MW-93	W93-210405-	4/5/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	9.57	9.47	0.0001 U	0.0001 U	0.00221 D	0.00213	0.00224
MW-95	W95-210406-	4/6/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	6.26	6.23	0.0001 U	0.0001 U	0.000277 D	0.000288	0.0005 U
MW-EB6	WEB6210414-	4/14/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	12	11.8	0.0001 U	0.0001 U	0.00313	0.00398	0.00121
MW-30A	W30A210419-	4/19/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	12.9	12.9	0.0001 U	0.0001 U	0.00213	0.00259	0.000739
MW-47	W47-210419-	4/19/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	18.6	18.2	0.0001 U	0.0001 U	0.000245	0.000255	0.0005 U
MW-62	W62-210420-	4/20/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	11.5	11.4	0.0001 U	0.0001 U	0.000616	0.000768	0.00139
MW-102	W102210420-	4/20/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	10.7	10.5	0.0001 U	0.0001 U	0.000892	0.00162	0.0005 U
MW-103	W103210416-	4/16/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	14.9	14.9	0.0001 U	0.0001 U	0.00188	0.00265	0.000593
MW-107	W107210420-	4/20/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	7.49	7.49	0.0001 U	0.0001 U	0.00128	0.00134	0.00331
MW-108	W108210415-	4/15/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	31.2	33	0.0001 U	0.0001 U	0.00275	0.00274	0.0005 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Selenium Dissolved (mg/L)	Selenium Total (mg/L)	Silver Dissolved (mg/L)	Silver Total (mg/L)	Sodium Dissolved (mg/L)	Sodium Total (mg/L)	Thallium Dissolved (mg/L)	Thallium Total (mg/L)	Vanadium Dissolved (mg/L)	Vanadium Total (mg/L)	Zinc Dissolved (mg/L)
MW-109	W109210415-	4/15/2021	0.00156	0.00344	0.0000948	0.0000682	1200 D	1160 D	0.0001 U	0.0001 U	0.571 D	0.568 D	0.00247
MW-110	W110210420-	4/20/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	37.8	39.1	0.0001 U	0.0001 U	0.00101	0.00102	0.0005 U
MW-111	W111210415-	4/15/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	5.52	5.38	0.0001 U	0.0001 U	0.000996	0.000941	0.0005 U
MW-112	W112210414-	4/14/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	16.6	16.7	0.0001 U	0.0001 U	0.000662	0.000598	0.0005 U
MW-101	W101210419-	4/19/2021	0.0005 U	0.0005 U	4E-05 U	4E-05 U	16.6	16.5	0.0001 U	0.0001 U	0.000353	0.000291	0.0005 U

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Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Zinc Total (mg/L)
MW-21	W21-210402-	4/2/2021	0.0005 U
MW-24	W24-210412-	4/12/2021	0.0005 U
MW-56	W56-210405-	4/5/2021	0.000987
MW-59	W59-210413-	4/13/2021	0.000633
MW-64	W64-210405-	4/5/2021	0.0005 U
MW-65	W65-210413-	4/13/2021	0.0005 U
MW-66	W66-210402-	4/2/2021	0.0005 U
MW-73	W73-210402-	4/2/2021	0.00785
MW-76	W76-210413-	4/13/2021	0.0005 U
MW-81	W81-210405-	4/5/2021	0.0005 U
MW-82	W82-210412-	4/12/2021	0.00056
MW-83	W83-210413-	4/13/2021	0.000626
MW-84	W84-210405-	4/5/2021	0.00124
MW-94	W94-210413-	4/13/2021	0.0005 U
MW-113	W113210412-	4/12/2021	0.0005 U
MW-114	W114210412-	4/12/2021	0.0005 U
MW-115	W115210413-	4/13/2021	0.0005 U
MW-67	W67-210630-	6/30/2021	0.00165
MW-72	W72-210406-	4/6/2021	0.000808
MW-74R	W74R210409-	4/9/2021	0.0005 U
MW-75	W75-210409-	4/9/2021	0.0005 U
MW-80	W80-210415-	4/15/2021	0.00213
MW-85	W85-210406-	4/6/2021	0.000704
MW-86	W86-210406-	4/6/2021	0.00404
MW-87	W87-210611-	6/11/2021	0.00244
MW-88	W88-210412-	4/12/2021	0.0005 U
MW-89	W89-210412-	4/12/2021	0.0146
MW-100	W100210412-	4/12/2021	0.0013
MW-68	W68-210415-	4/15/2021	0.000654
MW-93	W93-210405-	4/5/2021	0.00404
MW-95	W95-210406-	4/6/2021	0.0005 U
MW-EB6	WEB6210414-	4/14/2021	0.00333
MW-30A	W30A210419-	4/19/2021	0.00088
MW-47	W47-210419-	4/19/2021	0.0005 U
MW-62	W62-210420-	4/20/2021	0.00333
MW-102	W102210420-	4/20/2021	0.00119
MW-103	W103210416-	4/16/2021	0.00476
MW-107	W107210420-	4/20/2021	0.00334
MW-108	W108210415-	4/15/2021	0.000612

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Zinc Total (mg/L)
MW-109	W109210415-	4/15/2021	0.00837
MW-110	W110210420-	4/20/2021	0.000527
MW-111	W111210415-	4/15/2021	0.0005 U
MW-112	W112210414-	4/14/2021	0.0005 U
MW-101	W101210419-	4/19/2021	0.0005 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	1,1,1,2-Tetrachloroethane ug/l 630-20-6	1,1,1-Trichloroethane ug/l 71-55-6	1,1,2,2-Tetrachloroethane ug/l 79-34-5	1,1,2-Trichloroethane ug/l 79-00-5	1,1-Dichloroethane ug/l 75-34-3	1,1-Dichloroethene ug/l 75-35-4	1,2,3-Trichloropropane ug/l 96-18-4
MW-21	W21-210402-	4/2/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-24	W24-210412-	4/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-56	W56-210405-	4/5/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-59	W59-210413-	4/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-64	W64-210405-	4/5/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-65	W65-210413-	4/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-66	W66-210402-	4/2/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-73	W73-210402-	4/2/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-76	W76-210413-	4/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-81	W81-210405-	4/5/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-82	W82-210412-	4/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-83	W83-210413-	4/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-84	W84-210405-	4/5/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-94	W94-210413-	4/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-113	W113210412-	4/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-114	W114210412-	4/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-115	W115210413-	4/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-67	W67-210630-	6/30/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-72	W72-210406-	4/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-74R	W74R210409-	4/9/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-75	W75-210409-	4/9/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-80	W80-210415-	4/15/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-85	W85-210406-	4/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-86	W86-210406-	4/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-87	W87-210611-	6/11/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-88	W88-210412-	4/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-89	W89-210412-	4/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-100	W100210412-	4/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-68	W68-210415-	4/15/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-93	W93-210405-	4/5/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-95	W95-210406-	4/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-EB6	WEB6210414-	4/14/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-30A	W30A210419-	4/19/2021	0.25 U	0.1 U	0.1 U	0.1 U	1.82	0.1 U	0.1 U
MW-47	W47-210419-	4/19/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.578	0.1 U	0.1 U
MW-62	W62-210420-	4/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.381	0.1 U	0.1 U
MW-102	W102210420-	4/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-103	W103210416-	4/16/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-107	W107210420-	4/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-108	W108210415-	4/15/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	1,2-Dibromo-3-Chloropropane ug/l 96-12-8	1,2-Dibromoethane ug/l 106-93-4	1,2-Dichlorobenzene ug/l 95-50-1	1,2-Dichloroethane ug/l 107-06-2
MW-21	W21-210402-	4/2/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-24	W24-210412-	4/12/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-56	W56-210405-	4/5/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-59	W59-210413-	4/13/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-64	W64-210405-	4/5/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-65	W65-210413-	4/13/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-66	W66-210402-	4/2/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-73	W73-210402-	4/2/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-76	W76-210413-	4/13/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-81	W81-210405-	4/5/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-82	W82-210412-	4/12/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-83	W83-210413-	4/13/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-84	W84-210405-	4/5/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-94	W94-210413-	4/13/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-113	W113210412-	4/12/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-114	W114210412-	4/12/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-115	W115210413-	4/13/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-67	W67-210630-	6/30/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-72	W72-210406-	4/6/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-74R	W74R210409-	4/9/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-75	W75-210409-	4/9/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-80	W80-210415-	4/15/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-85	W85-210406-	4/6/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-86	W86-210406-	4/6/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-87	W87-210611-	6/11/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-88	W88-210412-	4/12/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-89	W89-210412-	4/12/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-100	W100210412-	4/12/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-68	W68-210415-	4/15/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-93	W93-210405-	4/5/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-95	W95-210406-	4/6/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-EB6	WEB6210414-	4/14/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-30A	W30A210419-	4/19/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-47	W47-210419-	4/19/2021	2.5 U	0.1 U	0.1 U	0.114 JT
MW-62	W62-210420-	4/20/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-102	W102210420-	4/20/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-103	W103210416-	4/16/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-107	W107210420-	4/20/2021	2.5 U	0.1 U	0.1 U	0.1 U
MW-108	W108210415-	4/15/2021	2.5 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	1,2-Dichloropropane ug/l 78-87-5	1,4-Dichlorobenzene ug/l 106-46-7	2-Butanone ug/l 78-93-3	2-Hexanone ug/l 591-78-6	4-Methyl-2-Pentanone ug/l 108-10-1	Acetone ug/l 67-64-1
MW-21	W21-210402-	4/2/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	3.03 JT
MW-24	W24-210412-	4/12/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-56	W56-210405-	4/5/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-59	W59-210413-	4/13/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	3.38 JT
MW-64	W64-210405-	4/5/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-65	W65-210413-	4/13/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-66	W66-210402-	4/2/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-73	W73-210402-	4/2/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-76	W76-210413-	4/13/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-81	W81-210405-	4/5/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-82	W82-210412-	4/12/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-83	W83-210413-	4/13/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-84	W84-210405-	4/5/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-94	W94-210413-	4/13/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-113	W113210412-	4/12/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-114	W114210412-	4/12/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-115	W115210413-	4/13/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-67	W67-210630-	6/30/2021	0.1 U	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U
MW-72	W72-210406-	4/6/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-74R	W74R210409-	4/9/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-75	W75-210409-	4/9/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-80	W80-210415-	4/15/2021	0.1 U	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U
MW-85	W85-210406-	4/6/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-86	W86-210406-	4/6/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-87	W87-210611-	6/11/2021	0.1 U	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U
MW-88	W88-210412-	4/12/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-89	W89-210412-	4/12/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-100	W100210412-	4/12/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-68	W68-210415-	4/15/2021	0.1 U	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U
MW-93	W93-210405-	4/5/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-95	W95-210406-	4/6/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-EB6	WEB6210414-	4/14/2021	0.1 U	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U
MW-30A	W30A210419-	4/19/2021	0.1 U	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U
MW-47	W47-210419-	4/19/2021	0.1 U	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U
MW-62	W62-210420-	4/20/2021	0.1 U	0.1 U	1 U	0.5 U	2.5 U	2.5 U
MW-102	W102210420-	4/20/2021	0.1 U	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U
MW-103	W103210416-	4/16/2021	0.1 U	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U
MW-107	W107210420-	4/20/2021	0.1 U	0.345	0.25 U	0.5 U	2.5 U	2.5 U
MW-108	W108210415-	4/15/2021	0.1 U	0.1 U	0.25 U	0.5 U	2.5 U	2.5 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Acrylonitrile ug/l 107-13-1	Benzene ug/l 71-43-2	Bromochloromethane ug/l 74-97-5	Bromodichloromethane ug/l 75-27-4	Bromoform ug/l 75-25-2
MW-21	W21-210402-	4/2/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-24	W24-210412-	4/12/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-56	W56-210405-	4/5/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-59	W59-210413-	4/13/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-64	W64-210405-	4/5/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-65	W65-210413-	4/13/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-66	W66-210402-	4/2/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-73	W73-210402-	4/2/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-76	W76-210413-	4/13/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-81	W81-210405-	4/5/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-82	W82-210412-	4/12/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-83	W83-210413-	4/13/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-84	W84-210405-	4/5/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-94	W94-210413-	4/13/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-113	W113210412-	4/12/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-114	W114210412-	4/12/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-115	W115210413-	4/13/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-67	W67-210630-	6/30/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-72	W72-210406-	4/6/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-74R	W74R210409-	4/9/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-75	W75-210409-	4/9/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-80	W80-210415-	4/15/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-85	W85-210406-	4/6/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-86	W86-210406-	4/6/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-87	W87-210611-	6/11/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-88	W88-210412-	4/12/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-89	W89-210412-	4/12/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-100	W100210412-	4/12/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-68	W68-210415-	4/15/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-93	W93-210405-	4/5/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-95	W95-210406-	4/6/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-EB6	WEB6210414-	4/14/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-30A	W30A210419-	4/19/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-47	W47-210419-	4/19/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-62	W62-210420-	4/20/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-102	W102210420-	4/20/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-103	W103210416-	4/16/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-107	W107210420-	4/20/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U
MW-108	W108210415-	4/15/2021	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Bromomethane ug/l 74-83-9	Carbon Disulfide ug/l 75-15-0	Carbon Tetrachloride ug/l 56-23-5	Chlorobenzene ug/l 108-90-7	Chlorodibromomethane ug/l 124-48-1	Chloroethane ug/l 75-00-3
MW-21	W21-210402-	4/2/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-24	W24-210412-	4/12/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-56	W56-210405-	4/5/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-59	W59-210413-	4/13/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-64	W64-210405-	4/5/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-65	W65-210413-	4/13/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-66	W66-210402-	4/2/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-73	W73-210402-	4/2/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-76	W76-210413-	4/13/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-81	W81-210405-	4/5/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-82	W82-210412-	4/12/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-83	W83-210413-	4/13/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-84	W84-210405-	4/5/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-94	W94-210413-	4/13/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-113	W113210412-	4/12/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-114	W114210412-	4/12/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-115	W115210413-	4/13/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-67	W67-210630-	6/30/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-72	W72-210406-	4/6/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-74R	W74R210409-	4/9/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-75	W75-210409-	4/9/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-80	W80-210415-	4/15/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-85	W85-210406-	4/6/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-86	W86-210406-	4/6/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-87	W87-210611-	6/11/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-88	W88-210412-	4/12/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-89	W89-210412-	4/12/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-100	W100210412-	4/12/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-68	W68-210415-	4/15/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-93	W93-210405-	4/5/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-95	W95-210406-	4/6/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-EB6	WEB6210414-	4/14/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-30A	W30A210419-	4/19/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-47	W47-210419-	4/19/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.17 JT
MW-62	W62-210420-	4/20/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-102	W102210420-	4/20/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-103	W103210416-	4/16/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
MW-107	W107210420-	4/20/2021	0.1 U	0.1 U	0.25 U	0.222	0.5 U	0.1 U
MW-108	W108210415-	4/15/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Chloroform ug/l 67-66-3	Chloromethane ug/l 74-87-3	Cis-1,2-Dichloroethene ug/l 156-59-2	Cis-1,3-Dichloropropene ug/l 10061-01-5	Dibromomethane ug/l 74-95-3
MW-21	W21-210402-	4/2/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-24	W24-210412-	4/12/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-56	W56-210405-	4/5/2021	0.1 U	0.25 U	1.19	0.25 U	0.1 U
MW-59	W59-210413-	4/13/2021	0.1 U	0.25 U	1.2	0.25 U	0.1 U
MW-64	W64-210405-	4/5/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-65	W65-210413-	4/13/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-66	W66-210402-	4/2/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-73	W73-210402-	4/2/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-76	W76-210413-	4/13/2021	0.1 U	0.25 U	0.238	0.25 U	0.1 U
MW-81	W81-210405-	4/5/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-82	W82-210412-	4/12/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-83	W83-210413-	4/13/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-84	W84-210405-	4/5/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-94	W94-210413-	4/13/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-113	W113210412-	4/12/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-114	W114210412-	4/12/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-115	W115210413-	4/13/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-67	W67-210630-	6/30/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-72	W72-210406-	4/6/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-74R	W74R210409-	4/9/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-75	W75-210409-	4/9/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-80	W80-210415-	4/15/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-85	W85-210406-	4/6/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-86	W86-210406-	4/6/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-87	W87-210611-	6/11/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-88	W88-210412-	4/12/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-89	W89-210412-	4/12/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-100	W100210412-	4/12/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-68	W68-210415-	4/15/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-93	W93-210405-	4/5/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-95	W95-210406-	4/6/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-EB6	WEB6210414-	4/14/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-30A	W30A210419-	4/19/2021	0.1 U	0.25 U	2.02	0.25 U	0.1 U
MW-47	W47-210419-	4/19/2021	0.1 U	0.25 U	2.15	0.25 U	0.1 U
MW-62	W62-210420-	4/20/2021	0.1 U	0.25 U	0.856	0.25 U	0.1 U
MW-102	W102210420-	4/20/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-103	W103210416-	4/16/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-107	W107210420-	4/20/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U
MW-108	W108210415-	4/15/2021	0.1 U	0.25 U	0.1 U	0.25 U	0.1 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Dichlorodifluoromethane ug/l 75-71-8	Ethylbenzene ug/l 100-41-4	M & P Xylene ug/l MPX	Methyl Iodide ug/l 74-88-4	Methylene Chloride ug/l 75-09-2	O-Xylene ug/l 95-47-6
MW-21	W21-210402-	4/2/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-24	W24-210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-56	W56-210405-	4/5/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-59	W59-210413-	4/13/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-64	W64-210405-	4/5/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-65	W65-210413-	4/13/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-66	W66-210402-	4/2/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-73	W73-210402-	4/2/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-76	W76-210413-	4/13/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-81	W81-210405-	4/5/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-82	W82-210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-83	W83-210413-	4/13/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-84	W84-210405-	4/5/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-94	W94-210413-	4/13/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-113	W113210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-114	W114210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-115	W115210413-	4/13/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-67	W67-210630-	6/30/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-72	W72-210406-	4/6/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-74R	W74R210409-	4/9/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-75	W75-210409-	4/9/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-80	W80-210415-	4/15/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-85	W85-210406-	4/6/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-86	W86-210406-	4/6/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-87	W87-210611-	6/11/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-88	W88-210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-89	W89-210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-100	W100210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-68	W68-210415-	4/15/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-93	W93-210405-	4/5/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-95	W95-210406-	4/6/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-EB6	WEB6210414-	4/14/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-30A	W30A210419-	4/19/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-47	W47-210419-	4/19/2021	3.16	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-62	W62-210420-	4/20/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-102	W102210420-	4/20/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-103	W103210416-	4/16/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-107	W107210420-	4/20/2021	0.162 JT	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U
MW-108	W108210415-	4/15/2021	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Styrene ug/l 100-42-5	Tetrachloroethene ug/l 127-18-4	Toluene ug/l 108-88-3	Trans-1,2-Dichloroethene ug/l 156-60-5
MW-21	W21-210402-	4/2/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-24	W24-210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-56	W56-210405-	4/5/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-59	W59-210413-	4/13/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-64	W64-210405-	4/5/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-65	W65-210413-	4/13/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-66	W66-210402-	4/2/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-73	W73-210402-	4/2/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-76	W76-210413-	4/13/2021	0.1 U	0.337	0.1 U	0.1 U
MW-81	W81-210405-	4/5/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-82	W82-210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-83	W83-210413-	4/13/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-84	W84-210405-	4/5/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-94	W94-210413-	4/13/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-113	W113210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-114	W114210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-115	W115210413-	4/13/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-67	W67-210630-	6/30/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-72	W72-210406-	4/6/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-74R	W74R210409-	4/9/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-75	W75-210409-	4/9/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-80	W80-210415-	4/15/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-85	W85-210406-	4/6/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-86	W86-210406-	4/6/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-87	W87-210611-	6/11/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-88	W88-210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-89	W89-210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-100	W100210412-	4/12/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-68	W68-210415-	4/15/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-93	W93-210405-	4/5/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-95	W95-210406-	4/6/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-EB6	WEB6210414-	4/14/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-30A	W30A210419-	4/19/2021	0.1 U	0.106 JT	0.1 U	0.1 U
MW-47	W47-210419-	4/19/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-62	W62-210420-	4/20/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-102	W102210420-	4/20/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-103	W103210416-	4/16/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-107	W107210420-	4/20/2021	0.1 U	0.1 U	0.1 U	0.1 U
MW-108	W108210415-	4/15/2021	0.1 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Trans-1,3-Dichloropropene ug/l 10061-02-6	Trans-1,4-Dichloro-2-Butene ug/l 110-57-6	Trichloroethene ug/l 79-01-6	Trichlorofluoromethane ug/l 75-69-4	Vinyl Acetate ug/l 108-05-4
MW-21	W21-210402-	4/2/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-24	W24-210412-	4/12/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-56	W56-210405-	4/5/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-59	W59-210413-	4/13/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-64	W64-210405-	4/5/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-65	W65-210413-	4/13/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-66	W66-210402-	4/2/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-73	W73-210402-	4/2/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-76	W76-210413-	4/13/2021	0.5 U	5 U	6.01	0.1 U	0.1 U
MW-81	W81-210405-	4/5/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-82	W82-210412-	4/12/2021	0.5 U	5 U	4.11	0.1 U	0.1 U
MW-83	W83-210413-	4/13/2021	0.5 U	5 U	1.48	0.1 U	0.1 U
MW-84	W84-210405-	4/5/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-94	W94-210413-	4/13/2021	0.5 U	5 U	1.97	0.1 U	0.1 U
MW-113	W113210412-	4/12/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-114	W114210412-	4/12/2021	0.5 U	5 U	11.5	0.1 U	0.1 U
MW-115	W115210413-	4/13/2021	0.5 U	5 U	4.35	0.1 U	0.1 U
MW-67	W67-210630-	6/30/2021	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
MW-72	W72-210406-	4/6/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-74R	W74R210409-	4/9/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-75	W75-210409-	4/9/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-80	W80-210415-	4/15/2021	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
MW-85	W85-210406-	4/6/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-86	W86-210406-	4/6/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-87	W87-210611-	6/11/2021	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
MW-88	W88-210412-	4/12/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-89	W89-210412-	4/12/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-100	W100210412-	4/12/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-68	W68-210415-	4/15/2021	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
MW-93	W93-210405-	4/5/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-95	W95-210406-	4/6/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-EB6	WEB6210414-	4/14/2021	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
MW-30A	W30A210419-	4/19/2021	0.5 U	0.5 U	0.845	0.1 U	0.1 U
MW-47	W47-210419-	4/19/2021	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
MW-62	W62-210420-	4/20/2021	0.5 U	5 U	0.1 U	0.1 U	0.1 U
MW-102	W102210420-	4/20/2021	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
MW-103	W103210416-	4/16/2021	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
MW-107	W107210420-	4/20/2021	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
MW-108	W108210415-	4/15/2021	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Vinyl Chloride ug/l 75-01-4
MW-21	W21-210402-	4/2/2021	0.01 U
MW-24	W24-210412-	4/12/2021	0.01 U
MW-56	W56-210405-	4/5/2021	0.01 U
MW-59	W59-210413-	4/13/2021	0.01 U
MW-64	W64-210405-	4/5/2021	0.01 U
MW-65	W65-210413-	4/13/2021	0.022
MW-66	W66-210402-	4/2/2021	0.01 U
MW-73	W73-210402-	4/2/2021	0.01 U
MW-76	W76-210413-	4/13/2021	0.01 U
MW-81	W81-210405-	4/5/2021	0.01 U
MW-82	W82-210412-	4/12/2021	0.01 U
MW-83	W83-210413-	4/13/2021	0.01 U
MW-84	W84-210405-	4/5/2021	0.01 U
MW-94	W94-210413-	4/13/2021	0.01 U
MW-113	W113210412-	4/12/2021	0.01 U
MW-114	W114210412-	4/12/2021	0.01 U
MW-115	W115210413-	4/13/2021	0.01 U
MW-67	W67-210630-	6/30/2021	0.01 U
MW-72	W72-210406-	4/6/2021	0.01 U
MW-74R	W74R210409-	4/9/2021	0.01 U
MW-75	W75-210409-	4/9/2021	0.01 U
MW-80	W80-210415-	4/15/2021	0.01 U
MW-85	W85-210406-	4/6/2021	0.01 U
MW-86	W86-210406-	4/6/2021	0.01 U
MW-87	W87-210611-	6/11/2021	0.01 U
MW-88	W88-210412-	4/12/2021	0.01 U
MW-89	W89-210412-	4/12/2021	0.01 U
MW-100	W100210412-	4/12/2021	0.01 U
MW-68	W68-210415-	4/15/2021	0.01 U
MW-93	W93-210405-	4/5/2021	0.01 U
MW-95	W95-210406-	4/6/2021	0.01 GU
MW-EB6	WEB6210414-	4/14/2021	0.01 U
MW-30A	W30A210419-	4/19/2021	0.01 U
MW-47	W47-210419-	4/19/2021	3.56
MW-62	W62-210420-	4/20/2021	0.01 U
MW-102	W102210420-	4/20/2021	0.01 U
MW-103	W103210416-	4/16/2021	0.01 U
MW-107	W107210420-	4/20/2021	0.341
MW-108	W108210415-	4/15/2021	0.01 U

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Reference Elevation (msl)	Depth to Water (feet)	Ground-Water Elevation (msl)	Comment
MW-100	7/6/2021	620.32	297.99	322.33	
MW-101	7/6/2021	474.72	32.37	442.35	
MW-101	7/28/2021	474.72	33.12	441.6	
MW-102	7/6/2021	552.48	47.4	505.08	
MW-102	7/16/2021	552.48	47.43	505.05	
MW-103	7/6/2021	639.08	16.33	622.75	
MW-103	7/20/2021	639.08	17.47	621.61	
MW-104	7/6/2021	629.68	26.3	603.38	
MW-104	7/20/2021	629.68	26.9	602.78	
MW-105	7/6/2021	521.23	21.48	499.75	
MW-105	7/29/2021	521.23	21.73	499.5	
MW-107	7/6/2021	589.029	29.38	559.649	
MW-107	7/16/2021	589.03	30.82	558.21	
MW-108	7/6/2021	612.258	18.85	593.408	
MW-108	7/16/2021	612.26	19.42	592.84	
MW-109	7/6/2021	638.728	12.07	626.658	
MW-109	7/15/2021	638.73	12.52	626.21	
MW-110	7/6/2021	641.742	10.32	631.422	
MW-110	7/15/2021	641.74	10.95	630.79	
MW-111	7/6/2021	643.797	12.86	630.937	
MW-111	7/15/2021	643.8	13.77	630.03	
MW-112	7/6/2021	638.929	14.93	624.00	
MW-113	7/6/2021	531.09	188.42	342.67	
MW-113	7/12/2021	531.09	188.3	342.79	
MW-114	7/6/2021	490.45	139.37	351.08	
MW-114	7/12/2021	490.45	139.37	351.08	
MW-115	7/6/2021	484.87	131.29	353.58	
MW-115	7/12/2021	484.87	131.34	353.53	
MW-21	7/6/2021	420.66	125.21	295.45	
MW-24	7/6/2021	475.99	145.75	330.24	
MW-30A	7/6/2021	568.43	28.05	540.38	WATER IN ANNULUS
MW-30A	7/20/2021	568.43	28.34	540.09	
MW-47	7/6/2021	634.6	19.68	614.92	
MW-47	7/19/2021	634.6	20.18	614.42	
MW-50	7/6/2021	637.02	30.91	606.11	
MW-50	7/19/2021	637.05	31.33	605.72	sample was not collected due to insufficient
MW-56	7/6/2021	480.33	127.31	353.02	
MW-59	7/6/2021	457.13	124.53	332.6	CONCRETE PAD BROKEN
MW-59	7/12/2021	457.13	124.55	332.58	
MW-62	7/6/2021	556.21	53.98	502.23	WL BELOW TOP OF PUMP; REMOVED

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Reference Elevation (msl)	Depth to Water (feet)	Ground-Water Elevation (msl)	Comment
MW-62	7/21/2021	556.21	54.15	502.06	
MW-64	7/6/2021	596.55	265.85	330.7	
MW-65	7/6/2021	545.83	209.94	335.89	
MW-66	7/6/2021	531.28	238.76	292.52	
MW-66	7/7/2021	531.28	238.65	292.63	
MW-67	7/6/2021	516.43	220.57	295.86	
MW-68	7/6/2021	647.07	332.42	314.65	
MW-68	7/13/2021	647.07	332.35	314.72	
MW-69	7/6/2021	653.69			NEEDS TO BE FIXED
MW-72	7/6/2021	671.87	361.28	310.59	REPAIR LID
MW-72	7/8/2021	671.87	361.26	310.61	
MW-73	7/6/2021	485.7	191.33	294.37	
MW-74R	7/6/2021	531.26	239.9	291.36	
MW-74R	7/9/2021	531.28	240.02	291.26	
MW-75	7/6/2021	532.4	245.43	286.97	
MW-75	7/9/2021	532.4	245.7	286.7	
MW-76	7/6/2021	491.71	138.39	353.32	
MW-80	7/6/2021	530.41	238.85	291.56	WASPS IN STEEL CASING
MW-80	7/13/2021	530.41	238.85	291.56	
MW-81	7/6/2021	493.66	184.13	309.53	
MW-81	7/8/2021	531.28	238.65	292.63	
MW-82	7/6/2021	474.85	123.53	351.32	
MW-83	7/6/2021	496.81	144.56	352.25	
MW-83	7/12/2021	496.81	144.63	352.18	
MW-84	7/6/2021	530.8	236.03	294.77	
MW-84	7/7/2021	530.8	236.06	294.74	
MW-85	7/6/2021	531.76	245.97	285.79	
MW-85	7/9/2021	531.76	245.93	285.83	
MW-86	7/6/2021	536.04	248.58	287.46	
MW-87	7/6/2021	537.31	248.02	289.29	WASPS IN STEEL CASING
MW-87	7/8/2021	537.31	248.18	289.13	
MW-88	7/6/2021	513.68	227.13	286.55	
MW-89	7/6/2021	512.82	232.16	280.66	NEEDS TO BE FIXED
MW-90	7/6/2021	502.22	221.7	280.52	
MW-93	7/6/2021	632.15	308.65	323.5	
MW-93	7/8/2021	530.8	236.06	294.74	
MW-94	7/6/2021	495.51	142.44	353.07	
MW-94	7/12/2021	495.51	142.56	352.95	
MW-95	7/6/2021	571.54	251.55	319.99	
MW-99	7/6/2021	493.64	200.5	293.14	
MW-EB6	7/6/2021	589.61	28.35	561.26	
MW-EB6	7/13/2021	589.61	28.48	561.13	

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Field Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	pH (Field) (std. Units)	Conductance (Field) (umhos/cm)	Temperature (Field) (^{o}C)	Purge Volume (Field) (gal)	Dissolved Oxygen (Field) (mg/L)	ORP (Field) mV	Turbidity (Field) NTU
MW-30A	W30A210720-	7/20/2021	6.19	227.2	12	7.6			2.16
MW-47	W47-210719-	7/19/2021	6.49	854.5	10.94	11.4			0.79
MW-59	W59-210712-	7/12/2021	7.04	248.3	10.32	5.25	0.52	-68.2	1.04
MW-66	W66-210707-	7/7/2021	6.71	229.3	10.213	3	5.64	286.4	0.57
MW-68	W68-210713-	7/13/2021	7	296.3	10.143	5.5	0.81	14.7	5.74
MW-72	W72-210708-	7/8/2021	6.82	377.3	10.33	5.5	1.14	154.9	17.4
MW-74R	W74R210709-	7/9/2021	6.8	619	10.51	3.25	4.98	231.4	0.43
MW-75	W75-210709-	7/9/2021	6.91	429.6	9.75	5.25	0.75	106.8	1.75
MW-80	W80-210713-	7/13/2021	6.87	336.4	9.853	4.25	1.11	-37.5	1.07
MW-81	W81-210708-	7/8/2021	7.21	183.9	10.04	2.25	5.53	101.7	0.17
MW-83	W83-210712-	7/12/2021	6.41	689.8	11.11	4	0.98	437.7	0.89
MW-84	W84-210707-	7/7/2021	6.69	214	9.662	3.5	1.28	288.2	0.58
MW-85	W85-210709-	7/9/2021	6.69	411.8	9.391	4.5	2.89	269.6	0.39
MW-87	W87-210708-	7/8/2021	6.68	593	12.03	2.75	2.1	174.9	86.9
MW-93	W93-210708-	7/8/2021	7.22	352.9	11.46	4.25	1.03	134.6	0.51
MW-94	W94-210712-	7/12/2021	6.35	397.4	10.21	2.75	3.91	445.6	1.32
MW-EB6	WEB6210713-	7/13/2021	6.16	83.2	10.17	1.112			5.74
MW-101	W101210728-	7/28/2021	6.95	457.6	13.49	4.62			2.43
MW-102	W102210716-	7/16/2021	6.46	145.6	10.91	1			36.8
MW-107	W107210716-	7/16/2021	5.65	267.8	12.34	1	0.78	69.5	1.52
MW-109	W109210715-	7/15/2021	6.52	809.4	11.96	0.5			9.54
MW-110	W110210715-	7/15/2021	6.07	647.2	13.05	3.93			1.42
MW-111	W111210715-	7/15/2021	5.98	94	14.44	0.75			0.9
MW-113	W113210712-	7/12/2021	7.06	416.7	10.956	3	0.99	-54.2	0.83
MW-114	W114210712-	7/12/2021	6.78	316	9.82	3.25	5.2	153.2	0.37
MW-115	W115210712-	7/12/2021	6.45	323.6	9.637	4.5	3.08	214.5	0.59

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Conventionals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Alkalinity, Bicarbonate ($CaHCO_3$) (mg/L)	Alkalinity, Total ($CaCO_3$) (mg/L)	Ammonia, (NH_3) (mg/L)	Chloride (mg/L)	Nitrate-Nitrogen, (NO_3 as N) (mg/L)	Specific Conductance (umhos/cm)	Sulfate (SO4) (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Total Solids (mg/L)	Suspended Solids (mg/L)
MW-101	W101210728-	7/28/2021		260	0.0161	2.6	0.01 U	485	3.72	308	4.62	324	1.79
MW-102	W102210716-	7/16/2021	3/2/1900	62.7	0.002 U	5.31	1.19	165	5.93	136	0.87 T	156	18.9
MW-107	W107210716-	7/16/2021	4/8/1900	99.2	0.715	5.06	0.01 U	240	7.39	153	5.52	151	8.2
MW-109	W109210715-	7/15/2021	7/25/1901	572	0.186	1.7 T	0.01 U	1040	0.34 T	840	20.4	859	0.9 T
MW-110	W110210715-	7/15/2021	1/24/1901	390	0.0565	1.82	0.01 U	730	4.47	440	3.02	443	2.22
MW-111	W111210715-	7/15/2021	1/28/1900	28.7	0.002 U	0.939	0.897	87.5	6.56	76.7	0.6 T	83.3	1 U
MW-113	W113210712-	7/12/2021		143	0.0168	28.4	0.01 U	384	11.1	253	1.61	243	1.5
MW-114	W114210712-	7/12/2021		104	0.002 U	17.5	1.69	288	7.72	189	0.6 T	179	0.5 U
MW-115	W115210712-	7/12/2021		102	0.002 U	22.7	0.873	301	9.85	205	1.24	211	0.5 U
MW-30A	W30A210720-	7/20/2021	4/1/1900	92.4	0.002 U	1.97	6.69	260	8.37	183	0.51 T	185	0.83 T
MW-47	W47-210719-	7/19/2021	5/21/1901	507	0.0326	9.01	0.01 U	951	12.5	568	3.8	588	7.8
MW-59	W59-210712-	7/12/2021		73.1	0.0104	12.1	0.017 T	218	16.4	152	0.68 T	149	2.3
MW-66	W66-210707-	7/7/2021		85.9	0.002 U	4.29	0.499	215	13.7	131	0.5 U	131	0.5 U
MW-68	W68-210713-	7/13/2021	5/6/1900	127	0.0176	3.09	0.01 U	283	15.4	179	0.5 U	175	1.9
MW-72	W72-210708-	7/8/2021		129	0.0169	7.67	0.01 U	340	34.1	221	0.5 U	221	11.6
MW-74R	W74R210709-	7/9/2021		224	0.002 U	26.9	0.295	563	37.2	371	0.51 T	352	0.5 U
MW-75	W75-210709-	7/9/2021		115	0.0092 T	12.9	0.01 U	390	64.3	285	0.5 U	279	5.1
MW-80	W80-210713-	7/13/2021	5/2/1900	123	0.0097 T	4.53	0.01 U	310	30.3	207	0.5 U	207	1.2
MW-81	W81-210708-	7/8/2021		58.1	0.002 U	5.12	1.56	167	11.2	117	0.5 U	108	0.52 U
MW-83	W83-210712-	7/12/2021		217	0.0065 T	66.6	1.56	640	11	444	6.18	473	0.52 U
MW-84	W84-210707-	7/7/2021		78	0.002 U	3.82	0.133	200	16.2	128	0.5 U	139	0.5 U
MW-85	W85-210709-	7/9/2021		155	0.002 U	10.3	0.1	385	34.1	243	0.5 U	247	0.5 U
MW-87	W87-210708-	7/8/2021		116	0.0174	18.5	0.01 U	529	133	441	0.89 T	425	47.1
MW-93	W93-210708-	7/8/2021		122.0	0.0526	2.74	0.015 T	322	38.4	208	0.5 U	215	0.5 U
MW-94	W94-210712-	7/12/2021		135	0.002 U	27.1	0.666	369	7.05	243	3.04	256	0.5 U
MW-EB6	WEB6210713-	7/13/2021	1/31/1900	31.8	0.264	1	0.0841	83.3	6.81	80.7	1.82	88	14

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Antimony Dissolved (mg/L)	Antimony Total (mg/L)	Arsenic Dissolved (mg/L)	Arsenic Total (mg/L)	Barium Dissolved (mg/L)	Barium Total (mg/L)	Beryllium Dissolved (mg/L)	Beryllium Total (mg/L)	Cadmium Dissolved (mg/L)	Cadmium Total (mg/L)
MW-101	W101210728-	7/28/2021			0.00403	0.00452	0.0202	0.0193				
MW-102	W102210716-	7/16/2021			0.000191	0.000492	0.00426	0.0114				
MW-107	W107210716-	7/16/2021			0.00358	0.00363	0.0122	0.0124				
MW-109	W109210715-	7/15/2021			0.023	0.0239	0.0174	0.0224	0.000118	0.000169		
MW-110	W110210715-	7/15/2021			0.00164	0.00209	0.028	0.0286			0.0000838	0.0000836
MW-111	W111210715-	7/15/2021			0.0008	0.00152	0.00381	0.00951				
MW-113	W113210712-	7/12/2021			0.000536	0.000545	0.00225	0.00229				
MW-114	W114210712-	7/12/2021			0.000267	0.000274	0.00169	0.00176				
MW-115	W115210712-	7/12/2021			0.000208	0.000214	0.00103	0.00107				
MW-30A	W30A210720-	7/20/2021			4.75E-04	0.000541	0.00382	0.00454				
MW-47	W47-210719-	7/19/2021			0.00257	0.0028	0.0319	0.035				
MW-59	W59-210712-	7/12/2021			0.000432	0.000436	0.00416	0.00421				
MW-66	W66-210707-	7/7/2021			0.000678	0.000673	0.00406	0.00425				
MW-68	W68-210713-	7/13/2021			0.00877	0.0312	0.00996	0.0104				
MW-72	W72-210708-	7/8/2021			0.0000717	0.000161	0.0125	0.0142				
MW-74R	W74R210709-	7/9/2021			0.000384	0.000421	0.0132	0.014				
MW-75	W75-210709-	7/9/2021			0.00044	0.000453	0.0136	0.0133				
MW-80	W80-210713-	7/13/2021			0.00285	0.00294	0.0136	0.0135				
MW-81	W81-210708-	7/8/2021			0.000526	0.000527	0.00321	0.00331				
MW-83	W83-210712-	7/12/2021			0.000354	0.00034	0.00975	0.00983				
MW-84	W84-210707-	7/7/2021			0.000329	0.000335	0.00487	0.00499				
MW-85	W85-210709-	7/9/2021			0.000708	0.00071	0.00735	0.00747				
MW-87	W87-210708-	7/8/2021			0.000641	0.0137	0.0269	0.0348				
MW-93	W93-210708-	7/8/2021			0.00142	0.00143	0.00748	0.00789				
MW-94	W94-210712-	7/12/2021			0.000124	0.00013	0.00228	0.00239				
MW-EB6	WEB6210713-	7/13/2021			0.00101	0.0011	0.00373	0.00455				

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Calcium Dissolved (mg/L)	Calcium Total (mg/L)	Chromium Dissolved (mg/L)	Chromium Total (mg/L)	Cobalt Dissolved (mg/L)	Cobalt Total (mg/L)	Copper Dissolved (mg/L)	Copper Total (mg/L)	Iron Dissolved (mg/L)	Iron Total (mg/L)	Lead Dissolved (mg/L)	Lead Total (mg/L)
MW-101	W101210728-	7/28/2021	49.7	48.9		0.000203	0.000248	2.57E-04			0.378	0.456		
MW-102	W102210716-	7/16/2021	14.2	15	0.000294	0.0025		0.000604	0.000268	0.00256		1.3		0.000593
MW-107	W107210716-	7/16/2021	26	25.9	0.000605	0.000575	0.0046	0.00459	0.000868	0.00182	3.67	3.75		
MW-109	W109210715-	7/15/2021	17	17	0.0237	0.0236	0.000195	0.000379	0.00309	0.0115	7.6	8.66	0.000201	0.000795
MW-110	W110210715-	7/15/2021	73.9	75.1			0.00353	0.00363	0.000402	0.000555	0.108	0.144		
MW-111	W111210715-	7/15/2021	8.01	8.55	0.0024	3.63E-03		0.000308		0.00167		1.08		0.000319
MW-113	W113210712-	7/12/2021	36.9	37.1							1.21	1.21		
MW-114	W114210712-	7/12/2021	27.7	27.7		2.51E-04	0.000182	0.000232				0.0134		
MW-115	W115210712-	7/12/2021	30.3	30.6			0.0000692	0.0000794	0.000241	0.000268		0.0105		
MW-30A	W30A210720-	7/20/2021	22.6	22.2	0.0009	0.000874		0.0000542		0.000388		0.12		
MW-47	W47-210719-	7/19/2021	115	110		0.000344	3.07E-04	0.000312			3.73	3.83		
MW-59	W59-210712-	7/12/2021	18.4	18.2		0.000219					4.6	4.52		
MW-66	W66-210707-	7/7/2021	16.9	16.8	0.000234	2.69E-04								
MW-68	W68-210713-	7/13/2021	26.2	26.3			0.000206	0.000212		0.000965	0.505	1.14		
MW-72	W72-210708-	7/8/2021	31.7	32.4							2.68	5.78		0.000427
MW-74R	W74R210709-	7/9/2021	50	50	0.000233	0.000207				0.000218		0.0421		
MW-75	W75-210709-	7/9/2021	33.2	33.6							2.99	2.88		
MW-80	W80-210713-	7/13/2021	31	31.4							2.14	2.24		
MW-81	W81-210708-	7/8/2021	14.5	14.8	0.000503									
MW-83	W83-210712-	7/12/2021	69.6	69.3	0.000213	0.000261	0.00025	0.000248	0.0033	0.00335				
MW-84	W84-210707-	7/7/2021	15.7	16.1								0.0147		
MW-85	W85-210709-	7/9/2021	35.7	36.6						0.000552				
MW-87	W87-210708-	7/8/2021	48.1	48.4		0.000621	0.000155	0.000189		0.000957	4.8	17.4		0.000265
MW-93	W93-210708-	7/8/2021	31.9	32.7			0.0000634	0.0000856		0.000247		0.0166		
MW-94	W94-210712-	7/12/2021	37.5	38		0.000213	0.000103	0.000102	0.00117	0.00117				
MW-EB6	WEB6210713-	7/13/2021	3.71	3.74	0.000298	0.000816	0.000697	0.000671	0.00189	0.00302	0.275	0.464	0.000341	0.000447

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Magnesium Dissolved (mg/L)	Magnesium Total (mg/L)	Manganese Dissolved (mg/L)	Manganese Total (mg/L)	Mercury Dissolved (mg/L)	Mercury Total (mg/L)	Nickel Dissolved (mg/L)	Nickel Total (mg/L)	Potassium Dissolved (mg/L)	Potassium Total (mg/L)
MW-101	W101210728-	7/28/2021	28.9	29.2	0.899	0.908			0.0032 D	0.00348 D	2.72	2.75
MW-102	W102210716-	7/16/2021	5.28	5.78	0.00211	0.0225			0.000503	0.00149	1.03	1.19
MW-107	W107210716-	7/16/2021	8.01	8.18	3.67	3.61			0.00939	0.00944	2.69	2.61
MW-109	W109210715-	7/15/2021	7.56	7.72	1.53	1.54			0.00161	0.0026	1.13	1.11
MW-110	W110210715-	7/15/2021	38.5	39.5	3.43	3.48			0.00647	0.00661	2.95	2.93
MW-111	W111210715-	7/15/2021	2.33	2.69	0.00129	0.0119			0.00134	0.00257	0.356	0.451
MW-113	W113210712-	7/12/2021	20.4	20.6	0.404	0.406			0.000228	0.000217	1.9	1.9
MW-114	W114210712-	7/12/2021	14.1	13.9	0.000214	0.000706			0.000346	0.000436	2.11	2.12
MW-115	W115210712-	7/12/2021	13.3	13.7	0.00368	0.00391			0.000366	0.000366	1.86	1.89
MW-30A	W30A210720-	7/20/2021	12.6	13		0.00156			0.000719	0.000884	1.39	1.52
MW-47	W47-210719-	7/19/2021	55.9	57.8	1.23	1.23			0.00165	0.00178	4.51	4.93
MW-59	W59-210712-	7/12/2021	11.5	11.3	0.118	0.116				0.000132	1.16	1.15
MW-66	W66-210707-	7/7/2021	13.2	13.4		0.000209			0.000171	0.000253	1.16	1.16
MW-68	W68-210713-	7/13/2021	14.6	14.8	0.277	0.281			0.000364	0.000422	1.56	1.56
MW-72	W72-210708-	7/8/2021	19.9	20.1	0.364	0.412			0.000123	0.000147	2.01	2.02
MW-74R	W74R210709-	7/9/2021	38.5	38.1		0.00122			0.000964	0.000896	2.29	2.26
MW-75	W75-210709-	7/9/2021	24.9	24.5	0.257	0.25					2.07	2
MW-80	W80-210713-	7/13/2021	16.6	16.5	0.339	0.34					1.59	1.6
MW-81	W81-210708-	7/8/2021	8.16	7.81					0.000181	0.000176	0.899	0.903
MW-83	W83-210712-	7/12/2021	29.5	29.4	0.0361	0.0847			0.00167	0.00182	3.56	3.53
MW-84	W84-210707-	7/7/2021	12.1	12.1	0.00104	0.00197			0.000489	0.000517	1.2	1.21
MW-85	W85-210709-	7/9/2021	23.7	22.6					0.000252	0.000223	1.8	1.8
MW-87	W87-210708-	7/8/2021	33.4	32.4	0.515	0.528			0.00022	0.000335	2.53	2.48
MW-93	W93-210708-	7/8/2021	17.3	16.9	0.163	0.185			0.00023	0.000263	1.57	1.62
MW-94	W94-210712-	7/12/2021	17.2	17.1	0.000115	0.000171			0.00058	0.000558	2.55	2.55
MW-EB6	WEB6210713-	7/13/2021	1.98	2.02	0.0291	0.0281			0.00195	0.00207	0.695	0.71

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Selenium Dissolved (mg/L)	Selenium Total (mg/L)	Silver Dissolved (mg/L)	Silver Total (mg/L)	Sodium Dissolved (mg/L)	Sodium Total (mg/L)	Thallium Dissolved (mg/L)	Thallium Total (mg/L)	Vanadium Dissolved (mg/L)	Vanadium Total (mg/L)	Zinc Dissolved (mg/L)	Zinc Total (mg/L)
MW-101	W101210728-	7/28/2021					16.2	16.6			0.000331	0.000286	0.000516	0.000705
MW-102	W102210716-	7/16/2021					9.63	10.2			0.000887	0.00309	0.00108	0.00357
MW-107	W107210716-	7/16/2021					6.61	6.72			0.00148	0.00155	0.00432	0.00449
MW-109	W109210715-	7/15/2021	0.000536	0.000687			300	303 D			0.0567	0.0628	0.000665	0.00176
MW-110	W110210715-	7/15/2021					31.8	31.2			0.000735	0.00081	0.000654	0.00158
MW-111	W111210715-	7/15/2021					5.34	5.59			0.0012	0.00341	0.00197	0.00302
MW-113	W113210712-	7/12/2021					9.33	9.18						
MW-114	W114210712-	7/12/2021					7.21	7.09			0.0008	0.000819		
MW-115	W115210712-	7/12/2021					7.66	7.7			5.19E-04	0.000527		
MW-30A	W30A210720-	7/20/2021					12.1	12.1			0.00207	2.39E-03	0.000592	0.000705
MW-47	W47-210719-	7/19/2021					17.6	17			0.000113	0.00019		
MW-59	W59-210712-	7/12/2021					6.71	6.52					0.000616	0.000751
MW-66	W66-210707-	7/7/2021	0.000862	0.000907			7.23	7.01			0.000764	0.000761	0.000745	0.000913
MW-68	W68-210713-	7/13/2021					8.95	9.1			0.000214	0.000647		
MW-72	W72-210708-	7/8/2021					8.67	8.72			0.000129	0.0000984	0.00074	0.00111
MW-74R	W74R210709-	7/9/2021	0.000583	0.000639			13.2	13.1			0.000684	0.000707		
MW-75	W75-210709-	7/9/2021					9.74	9.6			0.000111	0.0000843		
MW-80	W80-210713-	7/13/2021					8.41	8.35					0.000626	0.000821
MW-81	W81-210708-	7/8/2021	0.000817	0.00091			6.97	6.55			0.00171	0.0017		
MW-83	W83-210712-	7/12/2021					15	14.9			0.000785	0.000815		0.000521
MW-84	W84-210707-	7/7/2021	0.000656	0.00068			6.77	6.7			0.000619	0.00066	0.00221	0.00224
MW-85	W85-210709-	7/9/2021	0.000797	0.000903			10.6	10.3			0.00101	0.00106		0.000524
MW-87	W87-210708-	7/8/2021					11.1	11			0.000142	0.00327		0.0017
MW-93	W93-210708-	7/8/2021					9.83	9.68			0.00227	0.00222	0.00179	0.00285
MW-94	W94-210712-	7/12/2021					9.47	9.37			0.00126	0.00126		
MW-EB6	WEB6210713-	7/13/2021					9.77	9.69			0.00227	0.00293	0.00248	0.00238

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	1,1,1,2-Tetrachloroethane ug/l 630-20-6	1,1,1-Trichloroethane ug/l 71-55-6	1,1,2,2-Tetrachloroethane ug/l 79-34-5	1,1,2-Trichloroethane ug/l 79-00-5	1,1-Dichloroethane ug/l 75-34-3	1,1-Dichloroethene ug/l 75-35-4	1,1-Dichloropropene ug/l 563-58-6	1,2,3-Trichloropropane ug/l 96-18-4	1,2-Dibromo-3-Chloropropane ug/l 96-12-8
MW-101	W101210728-	7/28/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-102	W102210716-	7/16/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
MW-107	W107210716-	7/16/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.166 JT	0.1 U	0.1 U	0.1 U	2.5 U
MW-109	W109210715-	7/15/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
MW-110	W110210715-	7/15/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.325	0.1 U	0.1 U	0.1 U	2.5 U
MW-111	W111210715-	7/15/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
MW-113	W113210712-	7/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-114	W114210712-	7/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-115	W115210712-	7/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-30A	W30A210720-	7/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	2.53	0.1 U	0.1 U	0.1 U	2.5 U
MW-47	W47-210719-	7/19/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.586	0.1 U	0.1 U	0.1 U	2.5 U
MW-59	W59-210712-	7/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-66	W66-210707-	7/7/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-68	W68-210713-	7/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
MW-72	W72-210708-	7/8/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-74R	W74R210709-	7/9/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-75	W75-210709-	7/9/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-80	W80-210713-	7/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
MW-81	W81-210708-	7/8/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-83	W83-210712-	7/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-84	W84-210707-	7/7/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-85	W85-210709-	7/9/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-87	W87-210708-	7/8/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-93	W93-210708-	7/8/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-94	W94-210712-	7/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
MW-EB6	WEB6210713-	7/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210707X	7/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210707Y	7/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
VOA TRIP BLANK	VTRP210707Z	7/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210708X	7/7/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
VOA TRIP BLANK	VTRP210708Z	7/7/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
VOA TRIP BLANK	VTRP210709X	7/8/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
VOA TRIP BLANK	VTRP210709Y	7/8/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
VOA TRIP BLANK	VTRP210709Z	7/8/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
VOA TRIP BLANK	VTRP210712X	7/9/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
VOA TRIP BLANK	VTRP210713X	7/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210713Y	7/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210715X	7/28/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210715Z	7/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210716X	7/15/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210716Z	7/15/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210719X	7/16/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210720X	7/16/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210728X	7/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	2.5 U
VOA TRIP BLANK	VTRP210804X	8/3/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210804Z	8/3/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210907Z	9/2/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210908Z	9/2/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210922X	9/16/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	1,2-Dibromoethane ug/l 106-93-4	1,2-Dichlorobenzene ug/l 95-50-1	1,2-Dichloroethane ug/l 107-06-2	1,2-Dichloropropane ug/l 78-87-5	1,3-Dichlorobenzene ug/l 541-73-1	1,3-Dichloropropane ug/l 142-28-9	1,4-Dichlorobenzene ug/l 106-46-7	2,2-Dichloropropane ug/l 594-20-7	2-Butanone ug/l 78-93-3	2-Hexanone ug/l 591-78-6	2-Methyl-1-Propanol ug/l 78-83-1	3-Chloropropene ug/l 107-05-1	4-Methyl-2-Pentanone ug/l 108-10-1
MW-101	W101210728-	7/28/2021	0.1 U	0.1 U	0.165 JT	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-102	W102210716-	7/16/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
MW-107	W107210716-	7/16/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
MW-109	W109210715-	7/15/2021	0.1 U	0.864	0.1 U	0.1 U	0.1 U	0.1 U	1.75	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
MW-110	W110210715-	7/15/2021	0.1 U	1.34	0.305	0.29	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
MW-111	W111210715-	7/15/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
MW-113	W113210712-	7/12/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-114	W114210712-	7/12/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-115	W115210712-	7/12/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-30A	W30A210720-	7/20/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
MW-47	W47-210719-	7/19/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
MW-59	W59-210712-	7/12/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-66	W66-210707-	7/7/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-68	W68-210713-	7/13/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
MW-72	W72-210708-	7/8/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-74R	W74R210709-	7/9/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-75	W75-210709-	7/9/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-80	W80-210713-	7/13/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
MW-81	W81-210708-	7/8/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-83	W83-210712-	7/12/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-84	W84-210707-	7/7/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-85	W85-210709-	7/9/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-87	W87-210708-	7/8/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-93	W93-210708-	7/8/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-94	W94-210712-	7/12/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
MW-EB6	WEB6210713-	7/13/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210707X	7/6/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210707Y	7/6/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
VOA TRIP BLANK	VTRP210707Z	7/6/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210708X	7/7/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
VOA TRIP BLANK	VTRP210708Z	7/7/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
VOA TRIP BLANK	VTRP210709X	7/8/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
VOA TRIP BLANK	VTRP210709Y	7/8/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
VOA TRIP BLANK	VTRP210709Z	7/8/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
VOA TRIP BLANK	VTRP210712X	7/9/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
VOA TRIP BLANK	VTRP210713X	7/12/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210713Y	7/12/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210715X	7/28/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210715Z	7/13/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210716X	7/15/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210716Z	7/15/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210719X	7/16/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210720X	7/16/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210728X	7/20/2021	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U	0.5 U			2.5 U
VOA TRIP BLANK	VTRP210804X	8/3/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210804Z	8/3/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210907Z	9/2/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210908Z	9/2/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U
VOA TRIP BLANK	VTRP210922X	9/16/2021	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Acetone ug/l 67-64-1	Acetonitrile ug/l 75-05-8	Acrolein ug/l 107-02-8	Acrylonitrile ug/l 107-13-1	Benzene ug/l 71-43-2	Bromochloromethane ug/l 74-97-5	Bromodichloromethane ug/l 75-27-4	Bromoform ug/l 75-25-2	Bromomethane ug/l 74-83-9	Carbon Disulfide ug/l 75-15-0	Carbon Tetrachloride ug/l 56-23-5	Chlorobenzene ug/l 108-90-7	Chlorodibromomethane ug/l 124-48-1
MW-101	W101210728-	7/28/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-102	W102210716-	7/16/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-107	W107210716-	7/16/2021	3.25 JT	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-109	W109210715-	7/15/2021	2.5 U	5 U	2.5 U	0.035 U	1.35	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	1.97	0.5 U
MW-110	W110210715-	7/15/2021	3.24 JT	5 U	2.5 U	0.035 U	0.577	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	1.46	0.5 U
MW-111	W111210715-	7/15/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-113	W113210712-	7/12/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-114	W114210712-	7/12/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-115	W115210712-	7/12/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-30A	W30A210720-	7/20/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-47	W47-210719-	7/19/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-59	W59-210712-	7/12/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-66	W66-210707-	7/7/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-68	W68-210713-	7/13/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-72	W72-210708-	7/8/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-74R	W74R210709-	7/9/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-75	W75-210709-	7/9/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-80	W80-210713-	7/13/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-81	W81-210708-	7/8/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-83	W83-210712-	7/12/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-84	W84-210707-	7/7/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-85	W85-210709-	7/9/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-87	W87-210708-	7/8/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-93	W93-210708-	7/8/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-94	W94-210712-	7/12/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
MW-EB6	WEB6210713-	7/13/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210707X	7/6/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210707Y	7/6/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210707Z	7/6/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210708X	7/7/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210708Z	7/7/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210709X	7/8/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210709Y	7/8/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210709Z	7/8/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210712X	7/9/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021	2.9 JT			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210713X	7/12/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210713Y	7/12/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210715X	7/28/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210715Z	7/13/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210716X	7/15/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210716Z	7/15/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210719X	7/16/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210720X	7/16/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210728X	7/20/2021	2.5 U			0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210804X	8/3/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210804Z	8/3/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210907Z	9/2/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210908Z	9/2/2021	2.5 U	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U
VOA TRIP BLANK	VTRP210922X	9/16/2021	3.55 JT	5 U	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Chloroethane ug/l 75-00-3	Chloroform ug/l 67-66-3	Chloromethane ug/l 74-87-3	Chloroprene ug/l 126-99-8	Cis-1,2-Dichloroethene ug/l 156-59-2	Cis-1,3-Dichloropropene ug/l 10061-01-5	Dibromomethane ug/l 74-95-3	Dichlorodifluoromethane ug/l 75-71-8	Ethylbenzene ug/l 100-41-4	M & P Xylene ug/l MPX	Methyl Iodide ug/l 74-88-4	Methyl Methacrylate ug/l 80-62-6
MW-101	W101210728-	7/28/2021	0.1 U	0.1 U	0.25 U		0.196 JT	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-102	W102210716-	7/16/2021	0.1 U	0.1 U	0.25 GU	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-107	W107210716-	7/16/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-109	W109210715-	7/15/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-110	W110210715-	7/15/2021	0.341	0.1 U	0.25 U	0.1 U	5.05	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-111	W111210715-	7/15/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-113	W113210712-	7/12/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-114	W114210712-	7/12/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-115	W115210712-	7/12/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-30A	W30A210720-	7/20/2021	0.1 U	0.1 U	0.25 U	0.1 U	2.69	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-47	W47-210719-	7/19/2021	0.244	0.1 U	0.25 U	0.1 U	1.41	0.25 U	0.1 U	2.68	0.1 U	0.1 U	0.1 U	0.25 U
MW-59	W59-210712-	7/12/2021	0.1 U	0.1 U	0.25 U		1.17	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-66	W66-210707-	7/7/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-68	W68-210713-	7/13/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-72	W72-210708-	7/8/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-74R	W74R210709-	7/9/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-75	W75-210709-	7/9/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-80	W80-210713-	7/13/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-81	W81-210708-	7/8/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-83	W83-210712-	7/12/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-84	W84-210707-	7/7/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-85	W85-210709-	7/9/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-87	W87-210708-	7/8/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-93	W93-210708-	7/8/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-94	W94-210712-	7/12/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-EB6	WEB6210713-	7/13/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
VOA TRIP BLANK	VTRP210707X	7/6/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210707Y	7/6/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210707Z	7/6/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210708X	7/7/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210708Z	7/7/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210709X	7/8/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210709Y	7/8/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210709Z	7/8/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210712X	7/9/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210713X	7/12/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210713Y	7/12/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210715X	7/28/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210715Z	7/13/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210716X	7/15/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210716Z	7/15/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210719X	7/16/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210720X	7/16/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210728X	7/20/2021	0.1 U	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210804X	8/3/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210804Z	8/3/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210907Z	9/2/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210908Z	9/2/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210922X	9/16/2021	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U		0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Methylacrylonitrile ug/l 126-98-7	Methylene Chloride ug/l 75-09-2	O-Xylene ug/l 95-47-6	Propionitrile ug/l 107-12-0	Styrene ug/l 100-42-5	Tetrachloroethene ug/l 127-18-4	Toluene ug/l 108-88-3	Trans-1,2-Dichloroethene ug/l 156-60-5	Trans-1,3-Dichloropropene ug/l 10061-02-6	Trans-1,4-Dichloro-2-Butene ug/l 110-57-6	Trichloroethene ug/l 79-01-6	Trichlorofluoromethane ug/l 75-69-4	Vinyl Acetate ug/l 108-05-4	Vinyl Chloride ug/l 75-01-4
MW-101	W101210728-	7/28/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.176
MW-102	W102210716-	7/16/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-107	W107210716-	7/16/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.116 JT	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.465
MW-109	W109210715-	7/15/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.398	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-110	W110210715-	7/15/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.348	0.5 U	0.5 U	0.142 JT	0.1 U	0.1 U	0.251
MW-111	W111210715-	7/15/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-113	W113210712-	7/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-114	W114210712-	7/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	10.5	0.1 U	0.1 U	0.01 U
MW-115	W115210712-	7/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	5.08	0.1 U	0.1 U	0.01 U
MW-30A	W30A210720-	7/20/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.121 JT	0.1 U	0.1 U	0.5 U	0.5 U	0.935	0.1 U	0.1 U	0.01 U
MW-47	W47-210719-	7/19/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	2.57
MW-59	W59-210712-	7/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-66	W66-210707-	7/7/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-68	W68-210713-	7/13/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-72	W72-210708-	7/8/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-74R	W74R210709-	7/9/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-75	W75-210709-	7/9/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-80	W80-210713-	7/13/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-81	W81-210708-	7/8/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-83	W83-210712-	7/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	2.19	0.1 U	0.1 U	0.01 U
MW-84	W84-210707-	7/7/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-85	W85-210709-	7/9/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-87	W87-210708-	7/8/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-93	W93-210708-	7/8/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-94	W94-210712-	7/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	2.45	0.1 U	0.1 U	0.01 U
MW-EB6	WEB6210713-	7/13/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
VOA TRIP BLANK	VTRP210707X	7/6/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210707Y	7/6/2021			2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210707Z	7/6/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210708X	7/7/2021			2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210708Z	7/7/2021			2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210709X	7/8/2021			2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210709Y	7/8/2021			2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210709Z	7/8/2021			2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210712X	7/9/2021			2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021			2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021			2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210713X	7/12/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210713Y	7/12/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210715X	7/28/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210715Z	7/13/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210716X	7/15/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210716Z	7/15/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210719X	7/16/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210720X	7/16/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210728X	7/20/2021			2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210804X	8/3/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210804Z	8/3/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210907Z	9/2/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210908Z	9/2/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210922X	9/16/2021	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	3.04	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	**Reference Elevation** (msl)	**Depth to Water** (feet)	**Ground-Water Elevation** (msl)	Comment
MW-100	10/4/2021	620.32	298.16	322.16	
MW-100	10/14/2021	620.32	298.45	321.87	
MW-101	10/4/2021	474.72	43.42	431.3	
MW-101	10/18/2021	474.72	33.2	441.52	
MW-102	10/4/2021	552.48	51.03	501.45	
MW-103	10/4/2021	639.08	23.31	615.77	
MW-103	10/20/2021	639.08	24.8	614.28	
MW-104	10/4/2021	629.68	29.08	600.6	
MW-104	10/19/2021	629.68	29.44	600.24	
MW-105	10/4/2021	521.23	23.3	497.93	
MW-106	10/4/2021	475.47	190.7	284.77	Needs sand in annulus
MW-107	10/4/2021	589.029	27.55	561.48	
MW-107	10/20/2021	589.03	28.05	560.98	
MW-108	10/4/2021	612.258			Dry at 20.25 ft
MW-108	10/19/2021	612.26			Dry at 20.13 ft
MW-109	10/4/2021	638.728			No depth indicated
MW-109	10/19/2021	638.73			Dry at 15.08 ft
MW-110	10/4/2021	641.742	9.74	632	
MW-110	10/21/2021	641.74	8.51	633.23	PERISTALTIC PUMP
MW-111	10/4/2021	643.797			Dry at 15.15 ft
MW-111	10/19/2021	643.8			Dry at 15.07 ft
MW-112	10/4/2021	638.929	16.8	622.13	
MW-112	10/19/2021	638.93	16.84	622.09	
MW-113	10/4/2021	531.09	188.81	342.28	
MW-113	10/13/2021	531.09	188.98	342.11	
MW-114	10/4/2021	490.45	140.68	349.77	
MW-114	10/12/2021	490.45	141.12	349.33	
MW-115	10/4/2021	484.87	133.33	351.54	
MW-115	10/13/2021	484.87	133.63	351.24	
MW-21	10/4/2021	420.66	125.32	295.34	
MW-21	10/5/2021	420.66	125.14	295.52	
MW-22	10/4/2021	517.09	234.62	282.47	
MW-24	10/4/2021	475.99	146.3	329.69	
MW-24	10/12/2021	475.99	147.11	328.88	
MW-25	10/4/2021	474.41	18.73	455.68	
MW-27A	10/4/2021	584.23	55.14	529.09	
MW-28	10/4/2021	527.75	39.49	488.26	
MW-29	10/4/2021	532.92	17.87	515.05	
MW-30A	10/4/2021	568.43	29.98	538.45	Needs sand in annulus

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Reference Elevation (msl)	Depth to Water (feet)	Ground-Water Elevation (msl)	Comment
MW-30A	10/18/2021	568.43	29.88	538.55	
MW-41D	10/4/2021	462.32	31.99	430.33	
MW-41S	10/4/2021	462.44	14.75	447.69	
MW-43	10/4/2021	547.06	262.95	284.11	
MW-45	10/4/2021	488.4	17.63	470.77	
MW-47	10/4/2021	634.6	21.85	612.75	
MW-47	10/18/2021	634.6	21.82	612.78	
MW-48	10/4/2021	594.49	46.15	548.34	Needs sand in annulus
MW-50	10/4/2021	637.02	32.55	604.47	
MW-50	10/19/2021	637.05	33.92	603.13	
MW-54	10/4/2021	580.43	284.26	296.17	
MW-55	10/4/2021	652.29	32.65	619.64	
MW-56	10/4/2021	480.33	129.38	350.95	
MW-56	10/5/2021	480.33	129.38	350.95	
MW-57	10/4/2021	456.64	106.24	350.4	
MW-58A	10/4/2021	479.27	155.7	323.57	
MW-59	10/4/2021	457.13	125.81	331.32	Needs to be fixed
MW-59	10/13/2021	457.13	125.92	331.21	
MW-60	10/4/2021	567.15	229.01	338.14	
MW-62	10/4/2021	556.21	54.88	501.33	Below top of pump at 51.70 ft
MW-62	10/18/2021	556.21			
MW-63	10/4/2021	515.88	18.56	497.32	
MW-64	10/4/2021	596.55	266.12	330.43	
MW-64	10/11/2021	596.55	266.53	330.02	
MW-65	10/4/2021	545.83	210.98	334.85	
MW-65	10/14/2021	545.83	211.19	334.64	
MW-66	10/4/2021	531.28	239.21	292.07	
MW-66	10/11/2021	531.28	239.43	291.85	
MW-67	10/4/2021	516.43	220.45	295.98	
MW-67	10/22/2021	516.43	220.78	295.65	
MW-68	10/4/2021	647.07	332.24	314.83	
MW-68	10/19/2021	647.07	332.17	314.9	
MW-69	10/4/2021	653.69			Needs to be fixed
MW-72	10/4/2021	671.87	361.16	310.71	
MW-72	10/12/2021	671.87	361.4	310.47	
MW-73	10/4/2021	485.7	192.03	293.67	
MW-73	10/11/2021	485.7	192.25	293.45	
MW-74R	10/4/2021	531.26	240.08	291.18	Yellow Jackets
MW-74R	10/12/2021	531.26	240.44	290.82	
MW-75	10/4/2021	532.4	245.78	286.62	
MW-75	10/12/2021	532.4	246.04	286.36	
MW-76	10/4/2021	491.71	141.98	349.73	

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Reference Elevation (msl)	Depth to Water (feet)	Ground-Water Elevation (msl)	Comment
MW-76	10/13/2021	491.71	142.28	349.43	
MW-79	10/4/2021	459.17			
MW-80	10/4/2021	530.41	238.98	291.43	Yellow Jackets
MW-80	10/20/2021	530.41	239.25	291.16	
MW-81	10/4/2021	493.66	184.04	309.62	
MW-81	10/6/2021	493.66	184.41	309.25	
MW-82	10/4/2021	474.85	125.9	348.95	
MW-82	10/12/2021	474.85	126.22	348.63	
MW-83	10/4/2021	496.81	145.53	351.28	
MW-83	10/14/2021	496.81	145.79	351.02	
MW-84	10/4/2021	530.8	236.65	294.15	
MW-84	10/6/2021	530.8	136.67	394.13	
MW-85	10/4/2021	531.76	246.25	285.51	
MW-85	10/6/2021	531.76	246.7	285.06	
MW-86	10/4/2021	536.04	249.98	286.06	
MW-86	10/6/2021	536.04	250.41	285.63	
MW-87	10/4/2021	537.31	248.28	289.03	
MW-87	10/13/2021	537.31	248.45	288.86	
MW-88	10/4/2021	513.68	227.4	286.28	
MW-88	10/13/2021	513.68	227.68	286	
MW-89	10/4/2021	512.82	232.5	280.32	
MW-89	10/13/2021	512.82	232.65	280.17	
MW-90	10/4/2021	502.22	222.08	280.14	Slugs
MW-91	10/4/2021	532.02	247.05	284.97	Water level sticks at 240.0 ft
MW-93	10/4/2021	632.15	308.74	323.41	
MW-93	10/11/2021	632.15	309.11	323.04	
MW-94	10/4/2021	495.51	144.18	351.33	
MW-94	10/14/2021	495.51	144.54	350.97	
MW-95	10/4/2021	571.54	251.57	319.97	
MW-95	10/12/2021	571.54	251.53	320.01	
MW-98	10/4/2021	503.73	22.5	481.23	
MW-99	10/4/2021	493.64	200.78	292.86	
MW-EB5	10/4/2021	645.36	43.72	601.64	
MW-EB5S	10/4/2021	645.77	21.08	624.69	
MW-EB6	10/4/2021	589.61	31.38	558.23	Below top of pump at 30.75 ft
MW-EB6	10/19/2021	589.61	31.35	558.26	
WS-NPW-1	10/4/2021	646.33	332.98	313.35	From upper plug
WS-NPW-3	10/4/2021	645.81	331.25	314.56	From lower plug

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Field Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	pH (Field) (std. Units)	Conductance (Field) (umhos/cm)	Temperature (Field) (^{o} C)	Purge Volume (Field) (gal)	Dissolved Oxygen (Field) (mg/L)	ORP (Field) mV	Turbidity (Field) NTU
MW-100	W100211014-	10/14/2021	6.91	246.7	10.93	5.5	0.22	134.3	12.0
MW-101	W101211018-	10/18/2021	6.22	463.6	11.53	2.5	6.22	398.3	2.0
MW-103	W103211020-	10/20/2021	8.09	239.3	10.71	4.3	2.40	211.8	187.0
MW-105	W105211014-	10/14/2021	-	216.3	-	-	-	-	-
MW-107	W107211020-	10/20/2021	5.29	164.3	12.73	1.0	0.88	167.3	1.0
MW-110	W110211021-	10/21/2021	6.37	646.6	15.60	5.1	0.17	340.5	0.7
MW-113	W113211013-	10/13/2021	7.25	370.8	10.47	5.0	0.05	-62.0	0.4
MW-114	W114211012-	10/12/2021	6.97	267.6	9.52	2.5	4.91	435.9	0.3
MW-115	W115211013-	10/13/2021	6.51	271.0	9.73	4.0	3.33	455.4	0.5
MW-21	W21-211005-	10/5/2021	7.45	137.9	9.44	3.8	0.82	-144.7	2.7
MW-24	W24-211012-	10/12/2021	7.22	172.1	9.50	4.5	0.92	-73.4	0.5
MW-30A	W30A211018-	10/18/2021	6.29	222.9	12.95	9.2	-	-	5.4
MW-47	W47-211018-	10/18/2021	6.81	886.0	10.93	26.0	5.97	207.6	1.4
MW-56	W56-211005-	10/5/2021	6.62	245.5	9.42	30.0	-	-	0.8
MW-59	W59-211013-	10/13/2021	6.66	22.7	9.78	2.3	0.88	-16.7	1.3
MW-64	W64-211011-	10/11/2021	6.79	174.4	12.07	6.3	1.43	81.7	7.4
MW-65	W65-211014-	10/14/2021	6.72	121.2	9.60	5.3	0.91	-21.4	12.3
MW-66	W66-211011-	10/11/2021	6.92	191.9	9.58	4.5	5.68	303.1	1.1
MW-67	W67-211022-	10/22/2021	7.06	309.2	9.95	2.8	2.32	102.7	135.0
MW-68	W68-211019-	10/19/2021	6.83	224.9	10.47	4.3	0.79	25.2	10.6
MW-72	W72-211012-	10/12/2021	6.89	315.2	9.91	6.0	1.06	5.3	9.1
MW-73	W73-211011-	10/11/2021	6.66	126.7	9.00	3.8	9.91	342.5	7.4
MW-74R	W74R211012-	10/12/2021	6.84	428.3	10.32	3.6	6.45	216.0	0.3
MW-75	W75-211012-	10/12/2021	6.99	322.4	9.67	4.8	0.73	10.1	0.9
MW-76	W76-211013-	10/13/2021	6.19	264.7	9.68	4.8	4.38	441.3	0.4
MW-80	W80-211020-	10/20/2021	6.88	258.0	10.09	5.3	0.80	-55.1	1.1
MW-80	W80-211020D	10/20/2021	6.88	258.0	10.09	5.3	0.80	-55.1	1.1
MW-81	W81-211006-	10/6/2021	7.15	156.2	9.93	2.5	5.79	441.2	0.5
MW-82	W82-211012-	10/12/2021	6.84	283.2	9.73	5.8	6.29	408.1	1.5
MW-83	W83-211014-	10/14/2021	6.49	556.4	11.01	4.8	0.79	125.6	0.5
MW-84	W84-211006-	10/6/2021	7.01	191.9	9.71	3.5	1.69	441.7	0.3
MW-85	W85-211006-	10/6/2021	6.96	352.6	9.69	3.0	3.26	456.9	0.2
MW-85	W85-211006D	10/6/2021	6.96	352.6	9.69	3.0	3.26	456.9	0.2
MW-86	W86-211006-	10/6/2021	6.87	187.8	9.20	5.5	1.35	74.2	0.9
MW-87	W87-211013-	10/13/2021	6.62	496.8	10.34	4.0	1.33	32.7	16.8
MW-88	W88-211013-	10/13/2021	6.95	122.0	9.01	5.5	4.96	228.6	0.9
MW-89	W89-211013-	10/13/2021	7.13	235.2	9.34	5.5	1.23	10.4	11.2
MW-93	W93-211011-	10/11/2021	7.08	263.1	11.37	4.0	1.42	165.7	0.5
MW-94	W94-211014-	10/14/2021	6.55	342.6	10.08	3.3	3.88	480.1	0.5
MW-95	W95-211012-	10/12/2021	7.12	214.1	9.08	6.0	0.91	252.1	0.8

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Conventional Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Alkalinity, Total ($CaCO_3$) (mg/L)	Ammonia, (NH_3) (mg/L)	Chloride (mg/L)	Cyanide (mg/L)	Nitrate-Nitrogen, (NO_3 as N) (mg/L)	Specific Conductance (umhos/cm)	Sulfate (SO4) (mg/L)
MW-21	W21-211005-	10/5/2021	61.8	0.0375	2.32		0.01 U	144	6.4
MW-24	W24-211012-	10/12/2021	68.4	0.0387	6.46		0.01 U	181	11.3
MW-30A	W30A211018-	10/18/2021	110	0.002 U	4.9	0.002 U	4.32	283	11.5
MW-47	W47-211018-	10/18/2021	515	0.0692	8.65	0.002 SU	0.01 U	958	11.8
MW-56	W56-211005-	10/5/2021	88.2	0.0027 T	23.9		0.032 T	270	9.31
MW-59	W59-211013-	10/13/2021	81.9	0.0066 T	13.3		0.01 U	239	16.9
MW-64	W64-211011-	10/11/2021	95	0.0318	2.88		0.01 U	215	10.6
MW-65	W65-211014-	10/14/2021	52.4	0.0056 T	6.45		0.01 U	142	8.79
MW-66	W66-211011-	10/11/2021	84.1	0.002 U	4.26		0.455	210	13.3
MW-67	W67-211022-	10/22/2021	169	0.012	5.22		0.0627	381	26.4
MW-68	W68-211019-	10/19/2021	124	0.0177	3.13		0.01 U	276	15
MW-72	W72-211012-	10/12/2021	130	0.0168	8.02		0.01 U	339	32.9
MW-73	W73-211011-	10/11/2021	51.3	0.002 U	2.4		1.2	137	7.43
MW-74R	W74R211012-	10/12/2021	212	0.002 U	24.3		0.43	528	32.3
MW-75	W75-211012-	10/12/2021	118	0.0095 T	12.9		0.01 U	396	64.4
MW-76	W76-211013-	10/13/2021	87.1	0.002 U	24.9		1.16	290	15.2
MW-80	W80-211020-	10/20/2021	124	0.0099 T	4.86		0.01 U	312	29.5
MW-80	W80-211020D	10/20/2021	124	0.0099 T	4.66		0.01 U	313	29.4
MW-81	W81-211006-	10/6/2021	58.4	0.002 U	5.09		1.53	171	11.2
MW-82	W82-211012-	10/12/2021	126	0.0022 T	10.6		0.843	313	15.5
MW-83	W83-211014-	10/14/2021	240	0.0022 T	67.3		1.71	682	11.8
MW-84	W84-211006-	10/6/2021	81.2	0.002 U	4.52		0.185	210	15.3
MW-85	W85-211006-	10/6/2021	155	0.002 U	9.87		0.117	386	31.6
MW-85	W85-211006D	10/6/2021	155	0.002 U	9.9		0.116	386	31.5
MW-86	W86-211006-	10/6/2021	72.4	0.002 U	4.25		0.01 U	203	20.4
MW-87	W87-211013-	10/13/2021	120	0.0171	18.1		0.011 T	538	132
MW-88	W88-211013-	10/13/2021	53.4	0.002 U	1.93		0.856	133	7.01
MW-89	W89-211013-	10/13/2021	86.8	0.0209	11.2		0.01 U	252	22.5
MW-93	W93-211011-	10/11/2021	123	0.0499	2.74		0.022 T	322	38.4
MW-94	W94-211014-	10/14/2021	137	0.0027 T	27.8		0.596	373	6.65
MW-95	W95-211012-	10/12/2021	90.6	0.0235	7.8		0.01 U	234	15.9
MW-100	W100211014-	10/14/2021	118	0.0083 T	2.85		0.01 U	268	16.9

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Conventional Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Alkalinity, Total ($CaCO_3$) (mg/L)	Ammonia, (NH_3) (mg/L)	Chloride (mg/L)	Cyanide (mg/L)	Nitrate-Nitrogen, (NO_3 as N) (mg/L)	Specific Conductance (umhos/cm)	Sulfate (SO4) (mg/L)
MW-101	W101211018-	10/18/2021	271	0.0047 T	2.56	0.002 U	0.0591	501	3.14
MW-103	W103211020-	10/20/2021	113	0.0148	4.88		0.034 T	262	14.9
MW-107	W107211020-	10/20/2021	84.3	0.69	7.13		0.0432	221	9.21
MW-110	W110211021-	10/21/2021	393	0.0289	1.91		0.01 U	713	3.62
MW-113	W113211013-	10/13/2021	148	0.0141	33.3		0.01 U	402	10.5
MW-114	W114211012-	10/12/2021	101	0.0026 T	20.1		1.73	291	7.52
MW-115	W115211013-	10/13/2021	101	0.002 U	23.1		0.603	296	9.76

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Conventional Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Total Solids (mg/L)	Suspended Solids (mg/L)
MW-21	W21-211005-	10/5/2021		87.3	0.5 U	90.7	1.8 T
MW-24	W24-211012-	10/12/2021		109	0.5 U	107	2.53
MW-30A	W30A211018-	10/18/2021	0.01 U	183	0.97 T	189	0.9 T
MW-47	W47-211018-	10/18/2021	0.01 U	569	4.02	583	11.2
MW-56	W56-211005-	10/5/2021		154	0.98 T	161	0.5 U
MW-59	W59-211013-	10/13/2021		145	0.59 T	140	2.3
MW-64	W64-211011-	10/11/2021		123	0.5 U	127	8.2
MW-65	W65-211014-	10/14/2021		89.3	0.5 T	88.7	3.2
MW-66	W66-211011-	10/11/2021		123	0.5 U	129	0.5 U
MW-67	W67-211022-	10/22/2021		223	0.5 U	250	20.8
MW-68	W68-211019-	10/19/2021		156	0.5 U	160	3.6
MW-72	W72-211012-	10/12/2021		199	0.52 T	207	7.09
MW-73	W73-211011-	10/11/2021		94	0.5 U	107	13.8
MW-74R	W74R211012-	10/12/2021		296	0.54 T	301	0.5 U
MW-75	W75-211012-	10/12/2021		247	0.52 T	254	2.3
MW-76	W76-211013-	10/13/2021		167	2.15	163	0.5 U
MW-80	W80-211020-	10/20/2021		191	0.5 U	193	1.6
MW-80	W80-211020D	10/20/2021		189	0.51 T	196	0.9 T
MW-81	W81-211006-	10/6/2021		111	0.5 U	113	0.5 U
MW-82	W82-211012-	10/12/2021		189	0.63 T	187	5
MW-83	W83-211014-	10/14/2021		401	5.79	419	0.5 U
MW-84	W84-211006-	10/6/2021		123	0.5 U	126	0.5 U
MW-85	W85-211006-	10/6/2021		229	0.5 U	236	0.5 U
MW-85	W85-211006D	10/6/2021		223	0.5 U	228	0.51 U
MW-86	W86-211006-	10/6/2021		127	0.5 U	129	1.4 T
MW-87	W87-211013-	10/13/2021		362	0.51 T	371	11.6
MW-88	W88-211013-	10/13/2021		82	0.5 U	81.3	0.5 U
MW-89	W89-211013-	10/13/2021		151	0.5 T	155	6.5
MW-93	W93-211011-	10/11/2021		201	0.5 U	202	0.5 U
MW-94	W94-211014-	10/14/2021		217	2.89	225	0.51 U
MW-95	W95-211012-	10/12/2021		136	0.5 U	137	0.5 U
MW-100	W100211014-	10/14/2021		153	0.5 U	154	4

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Conventional Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Sulfide (mg/L)	Total Dissolved Solids (mg/L)	Total Organic Carbon (mg/L)	Total Solids (mg/L)	Suspended Solids (mg/L)
MW-101	W101211018-	10/18/2021	0.01 U	261	4.51	271	6.1
MW-103	W103211020-	10/20/2021		176	1.85	324	180
MW-107	W107211020-	10/20/2021		128	4.95	127	4.6
MW-110	W110211021-	10/21/2021		411	2.91	436	0.5 U
MW-113	W113211013-	10/13/2021		232	1.73	226	1.9
MW-114	W114211012-	10/12/2021		171	0.81 T	172	0.5 U
MW-115	W115211013-	10/13/2021		173	1.07	181	0.5 U

See Data Qualifier List for Qualifier Information

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Antimony Dissolved (mg/L)	Antimony Total (mg/L)	Arsenic Dissolved (mg/L)	Arsenic Total (mg/L)	Barium Dissolved (mg/L)	Barium Total (mg/L)	Beryllium Dissolved (mg/L)	Beryllium Total (mg/L)	Cadmium Dissolved (mg/L)	Cadmium Total (mg/L)
MW-21	W21-211005-	10/5/2021	0.0003 U	0.0003 U	0.00106	0.00112	0.00535 D	0.00536	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-24	W24-211012-	10/12/2021	0.0003 U	0.0003 U	0.000581	0.000558	0.00213	0.00211	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-30A	W30A211018	10/18/2021	0.0003 U	0.0003 U	0.000479	0.000535	0.0042	0.00533	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-47	W47-211018-	10/18/2021	0.0003 U	0.0003 U	0.000516	0.000529	0.032	0.033	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-56	W56-211005-	10/5/2021	0.0003 U	0.0003 U	0.0000696	0.0000794	0.00538 D	0.00548	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-59	W59-211013-	10/13/2021	0.0003 U	0.0003 U	0.000453	0.000468	0.00464	0.00459	0.0001 DU	0.0001 U	0.00005 U	0.00005 U
MW-64	W64-211011-	10/11/2021	0.0003 U	0.0003 U	0.000887	0.00174	0.00715	0.0106	0.0001 U	0.0001 U	0.00005 U	0.0000846
MW-65	W65-211014-	10/14/2021	0.0003 U	0.0003 U	0.000384	0.00072	0.00587	0.00606	0.0001 DU	0.0001 U	0.00005 U	0.00005 U
MW-66	W66-211011-	10/11/2021	0.0003 U	0.0003 U	0.000707	0.000718	0.00399	0.00389	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-67	W67-211022-	10/22/2021	0.0003 U	0.0003 U	4.22E-04	0.00501	0.0133	0.0205	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-68	W68-211019-	10/19/2021	0.0003 U	0.0003 U	0.00863	0.0486	0.0107	0.0118	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-72	W72-211012-	10/12/2021	0.0003 U	0.0003 U	0.0000754	0.000116	0.0115	0.0129	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-73	W73-211011-	10/11/2021	0.0003 U	0.0003 U	0.000721	0.000786	0.00271	0.00441	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-74R	W74R211012	10/12/2021	0.0003 U	0.0003 U	0.000397	0.000424	0.0122	0.0127	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-75	W75-211012-	10/12/2021	0.0003 U	0.0003 U	0.000448	0.000463	0.0141	0.014	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-76	W76-211013-	10/13/2021	0.0003 U	0.0003 U	0.000234	0.000228	0.00471	0.00476	0.0001 DU	0.0001 U	0.00005 U	0.00005 U
MW-80	W80-211020-	10/20/2021	0.0003 U	0.0003 U	0.00315	0.0032	0.0148	0.0156	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-80	W80-211020D	10/20/2021	0.0003 U	0.0003 U	0.00305	0.00315	0.0147	0.0149	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-81	W81-211006-	10/6/2021	0.0003 U	0.0003 U	0.00057	0.000574	0.00319 D	0.00334	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-82	W82-211012-	10/12/2021	0.0003 U	0.0003 U	0.000263	0.00028	0.00121	0.00156	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-83	W83-211014-	10/14/2021	0.0003 U	0.0003 U	0.0004	0.000395	0.0116	0.0115	0.0001 DU	0.0001 U	0.00005 U	0.00005 U
MW-84	W84-211006-	10/6/2021	0.0003 U	0.0003 U	0.000322	0.000348	0.0051 D	0.00513	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-85	W85-211006-	10/6/2021	0.0003 U	0.0003 U	0.000747	0.000756	0.0076 D	0.00761	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-85	W85-211006D	10/6/2021	0.0003 U	0.0003 U	0.000741	0.00076	0.00738 D	0.00761	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-86	W86-211006-	10/6/2021	0.0003 U	0.0003 U	0.000742	0.000873	0.00558 D	0.00587	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-87	W87-211013-	10/13/2021	0.0003 U	0.0003 U	0.000682	0.00327	0.0261	0.0282	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-88	W88-211013-	10/13/2021	0.0003 U	0.0003 U	0.00111	0.00112	0.00213	0.00216	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-89	W89-211013-	10/13/2021	0.0003 U	0.0003 U	0.000819	0.00171	0.00813	0.00932	0.0001 DU	0.0001 U	0.00005 U	0.00005 U
MW-93	W93-211011-	10/11/2021	0.0003 U	0.0003 U	0.00149	0.00152	0.00773	0.00842	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-94	W94-211014-	10/14/2021	0.0003 U	0.0003 U	0.00014	0.000143	0.00268	0.0026	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-95	W95-211012-	10/12/2021	0.0003 U	0.0003 U	0.00104	0.00105	0.00463	0.00452	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-100	W100211014-	10/14/2021	0.0003 U	0.0003 U	0.00045	0.00147	0.00552	0.00566	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-101	W101211018-	10/18/2021	0.0003 U	0.0003 U	0.00869	0.011	0.0179	0.0183	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-103	W103211020-	10/20/2021	0.0003 U	0.000386	0.0086	0.0109	0.0106	0.0712	0.0001 U	0.000357	0.00005 U	0.000129
MW-107	W107211020-	10/20/2021	0.0003 U	0.0003 U	0.00328	0.00315	0.0133	0.0142	0.0001 U	0.0001 U	0.000245	0.000261
MW-110	W110211021-	10/21/2021	0.0003 U	0.0003 U	0.00263	0.00251	0.0312	0.0314	0.0001 U	0.0001 U	0.000123	0.000143
MW-113	W113211013-	10/13/2021	0.0003 U	0.0003 U	0.000544	0.000556	0.00269	0.00267	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-114	W114211012-	10/12/2021	0.0003 U	0.0003 U	0.000287	0.000284	0.00179	0.0018	0.0001 U	0.0001 U	0.00005 U	0.00005 U
MW-115	W115211013-	10/13/2021	0.0003 U	0.0003 U	0.000231	0.000237	0.00112	0.00114	0.0001 U	0.0001 U	0.00005 U	0.00005 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Calcium Dissolved (mg/L)	Calcium Total (mg/L)	Chromium Dissolved (mg/L)	Chromium Total (mg/L)	Cobalt Dissolved (mg/L)	Cobalt Total (mg/L)	Copper Dissolved (mg/L)	Copper Total (mg/L)	Iron Dissolved (mg/L)	Iron Total (mg/L)
MW-21	W21-211005-	10/5/2021	12.8 D	13.3	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.0002 U	2.44	2.7
MW-24	W24-211012-	10/12/2021	15	15	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.0002 U	3.57	3.51
MW-30A	W30A211018	10/18/2021	24.6	24.5	0.000685	0.00101	0.00005 U	0.0000964	0.000413	0.00073	0.01 U	0.216
MW-47	W47-211018-	10/18/2021	119	121	0.0002 U	0.000366	0.00035	0.000359	0.000366	0.000431	0.0286	0.0847
MW-56	W56-211005-	10/5/2021	26 D	26.2	0.0002 U	0.0002 U	0.000131	0.000144	0.000206	0.000333	0.0324	0.0529
MW-59	W59-211013-	10/13/2021	20.5	20.3	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.0002 U	5.18	5.03
MW-64	W64-211011-	10/11/2021	18.9	18.6	0.0002 U	0.0002 U	0.000124	0.00096	0.0002 U	0.000297	0.0625	0.354
MW-65	W65-211014-	10/14/2021	12.2	11.9	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.000204	0.0002 U	3.19	4.13
MW-66	W66-211011-	10/11/2021	16.7	16.7	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.0002 U	0.01 U	0.01 U
MW-67	W67-211022-	10/22/2021	38.9	40.1	0.0002 U	0.000264	0.000119	0.000434	0.0002 U	0.000659	0.464	6.21
MW-68	W68-211019-	10/19/2021	27.3	27.2	0.0002 U	0.0002 U	2.07E-04	0.000224	0.0002 U	0.00182	0.47	1.4
MW-72	W72-211012-	10/12/2021	31.6	32.2	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.00035	2.66	3.85
MW-73	W73-211011-	10/11/2021	12.4	12.9	0.000222	6.20E-04	0.00005 U	0.000132	0.000204	0.000408	0.01 U	0.203
MW-74R	W74R211012	10/12/2021	46.5	48.1	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.000218	0.000284	0.01 U	0.0172
MW-75	W75-211012-	10/12/2021	34.9	34.1	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.0002 U	2.7	2.72
MW-76	W76-211013-	10/13/2021	27.1	27.4	0.000327	0.000314	0.0000625	0.0000617	0.00141	0.00135	0.01 U	0.01 U
MW-80	W80-211020-	10/20/2021	32.4	32.7	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.0002 U	2.17	2.03
MW-80	W80-211020D	10/20/2021	32	31.6	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.0002 U	2.13	2.05
MW-81	W81-211006-	10/6/2021	14.8 D	15.5	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.0002 U	0.01 U	0.01 U
MW-82	W82-211012-	10/12/2021	29.6	29.5	0.0002 U	0.00133	0.00005 U	0.00005 U	0.000262	0.000298	0.01 U	0.0696
MW-83	W83-211014-	10/14/2021	76.8	76.3	0.000278	0.000348	0.000284	0.00028	0.00365	0.00372	0.01 U	0.01 U
MW-84	W84-211006-	10/6/2021	16.8 D	17.4	0.0002 U	0.0002 U	0.00005 U	0.0000527	0.0002 U	0.000292	0.01 U	0.0229
MW-85	W85-211006-	10/6/2021	36.8 D	38.3	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.000331	0.01 U	0.01 U
MW-85	W85-211006D	10/6/2021	36.6 D	38.7	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.0002 U	0.01 U	0.01 U
MW-86	W86-211006-	10/6/2021	16.5 D	17	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.00225	0.00434	0.887	0.977
MW-87	W87-211013-	10/13/2021	50.1	49.2	0.0002 U	0.0002 U	0.000167	0.000171	0.0002 U	0.000238	4.81	7.42
MW-88	W88-211013-	10/13/2021	9.93	9.92	0.000642	0.000673	0.00005 U	0.00005 U	0.0002 U	0.0002 U	0.01 U	0.01 U
MW-89	W89-211013-	10/13/2021	20.5	20.1	0.0002 U	0.0002 U	0.00005 U	0.00005 U	0.0002 U	0.000892	1.36	2.74
MW-93	W93-211011-	10/11/2021	33	33.4	0.0002 U	0.0002 U	5.87E-05	1.67E-04	0.0002 U	0.000396	0.01 U	0.0382
MW-94	W94-211014-	10/14/2021	39.7	39.5	0.0002 U	0.0002 U	1.04E-04	1.09E-04	0.00123	0.00125	0.01 U	0.01 U
MW-95	W95-211012-	10/12/2021	23	23	0.0002 U	0.0002 U	7.10E-05	6.94E-05	0.0002 U	0.0002 U	0.01 U	0.01 U
MW-100	W100211014-	10/14/2021	25.6	25.3	0.0002 U	0.0002 U	0.000185	0.0002	0.0002 U	0.0002 U	0.652	1.87
MW-101	W101211018-	10/18/2021	46.6	49.7	0.0002 U	6.60E-04	2.87E-04	0.000291	0.0002 U	0.0002 U	0.657	0.67
MW-103	W103211020-	10/20/2021	26.3	27.1	0.0002 U	1.52E-02	0.00005 U	0.00562	0.000927	0.0246	0.01 U	6.34
MW-107	W107211020-	10/20/2021	21.6	21.9	0.00044	0.000415	0.00356	0.00364	0.00338	0.00595	1.77	1.67
MW-110	W110211021-	10/21/2021	79.3	76.8	0.0002 U	0.0002 U	0.0014	0.00136	0.00054	0.00155	0.048	0.0545
MW-113	W113211013-	10/13/2021	39.5	39.2	0.0002 U	0.0002 U	0.0000525	0.0000542	0.0002 U	0.0002 U	1.46	1.47
MW-114	W114211012-	10/12/2021	29.1	29.6	0.0002 U	0.000238	0.000191	0.000331	0.0002 U	0.0002 U	0.01 U	0.012
MW-115	W115211013-	10/13/2021	31.5	30.7	0.0002 U	0.0002 U	0.0000673	0.0000854	0.00025	0.000272	0.01 U	0.0151

See Data Qualifier List for Qualifier In

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Lead Dissolved (mg/L)	Lead Total (mg/L)	Magnesium Dissolved (mg/L)	Magnesium Total (mg/L)	Manganese Dissolved (mg/L)	Manganese Total (mg/L)	Mercury Dissolved (mg/L)	Mercury Total (mg/L)	Nickel Dissolved (mg/L)
MW-21	W21-211005-	10/5/2021	0.0001 U	0.0001 U	6.97	7.16	0.0942	0.105	0.00005 U	0.00005 U	0.000104
MW-24	W24-211012-	10/12/2021	0.0001 U	0.0001 U	9.65	9.73	0.114	0.113	0.00005 U	0.00005 U	0.000143
MW-30A	W30A211018	10/18/2021	0.0001 U	0.000113	14.3	15.4	0.000169	0.00235	0.00005 U	0.00005 U	0.00101
MW-47	W47-211018-	10/18/2021	0.0001 U	0.000111	57.2	58.4	1.04	1.05	0.00005 U	0.00005 U	0.00159
MW-56	W56-211005-	10/5/2021	0.0001 U	0.0001 U	13.8	13.7	0.21	0.227	0.00005 U	0.00005 U	0.00121
MW-59	W59-211013-	10/13/2021	0.0001 U	0.0001 U	13.1	12.5	0.142	0.139	0.00005 U	0.00005 U	0.000159
MW-64	W64-211011-	10/11/2021	0.0001 U	0.0001 U	12.9	12.4	0.132	0.813	0.00005 U	0.00005 U	0.000476
MW-65	W65-211014-	10/14/2021	0.0001 U	0.0001 U	7.41	6.97	0.146	0.168	0.00005 U	0.00005 U	0.000364
MW-66	W66-211011-	10/11/2021	0.0001 U	0.0001 U	12.6	12.5	0.0001 U	0.00012	0.00005 U	0.00005 U	0.00019
MW-67	W67-211022-	10/22/2021	0.0001 U	0.000129	21.2	21.2	0.258	0.935	0.00005 U	0.00005 U	0.000262
MW-68	W68-211019-	10/19/2021	0.0001 U	0.0001 U	14.3	14.3	0.277	0.265	0.00005 U	0.00005 U	0.000408
MW-72	W72-211012-	10/12/2021	0.0001 U	0.0001 U	19.3	19.4	0.353	0.369	0.00005 U	0.00005 U	0.000129
MW-73	W73-211011-	10/11/2021	0.0001 U	0.000422	6.12	6.36	0.0001 U	0.0112	0.00005 U	0.00005 U	0.0004
MW-74R	W74R211012	10/12/2021	0.0001 U	0.0001 U	35.3	35.6	0.0001 U	0.00024	0.00005 U	0.00005 U	0.00105
MW-75	W75-211012-	10/12/2021	0.0001 U	0.0001 U	23.9	24.2	0.251	0.242	0.00005 U	0.00005 U	0.0001 U
MW-76	W76-211013-	10/13/2021	0.0001 U	0.0001 U	12.6	12.4	0.0001 U	0.000186	0.00005 U	0.00005 U	0.000547
MW-80	W80-211020-	10/20/2021	0.0001 U	0.0001 U	16.3	16.1	0.346	0.323	0.00005 U	0.00005 U	0.0001 U
MW-80	W80-211020D	10/20/2021	0.0001 U	0.0001 U	15.6	15.7	0.336	0.322	0.00005 U	0.00005 U	0.0001 U
MW-81	W81-211006-	10/6/2021	0.0001 U	0.0001 U	8.23	8.31	0.0001 U	0.000294	0.00005 U	0.00005 U	0.000168
MW-82	W82-211012-	10/12/2021	0.0001 U	0.0001 U	17.1	17.5	0.0001 U	0.00101	0.00005 U	0.00005 U	0.000675
MW-83	W83-211014-	10/14/2021	0.0001 U	0.0001 U	32.1	32.2	0.00591	0.0158	0.00005 U	0.00005 U	0.00212
MW-84	W84-211006-	10/6/2021	0.0001 U	0.0001 U	12.7	12.6	0.000733	0.00343	0.00005 U	0.00005 U	0.000444
MW-85	W85-211006-	10/6/2021	0.0001 U	0.0001 U	23.2	22.9	0.000341	0.000551	0.00005 U	0.00005 U	0.000244
MW-85	W85-211006D	10/6/2021	0.0001 U	0.0001 U	22.7	23.4	0.000374	0.000515	0.00005 U	0.00005 U	0.000249
MW-86	W86-211006-	10/6/2021	0.0001 U	0.0001 U	11.6	11.5	0.0125	0.0133	0.00005 U	0.00005 U	0.000111
MW-87	W87-211013-	10/13/2021	0.0001 U	0.0001 U	34	34.2	0.499	0.504	0.00005 U	0.00005 U	0.000237
MW-88	W88-211013-	10/13/2021	0.0001 U	0.0001 U	7.61	7.68	0.0001 U	0.0001 U	0.00005 U	0.00005 U	0.000137
MW-89	W89-211013-	10/13/2021	0.0001 U	0.0001 U	15	14.5	0.349	0.406	0.00005 U	0.00005 U	0.00014
MW-93	W93-211011-	10/11/2021	0.0001 U	0.0001 U	16.4	17	0.14	0.197	0.00005 U	0.00005 U	0.000266
MW-94	W94-211014-	10/14/2021	0.0001 U	0.0001 U	17.8	17.5	0.000171	0.000267	0.00005 U	0.00005 U	0.000631
MW-95	W95-211012-	10/12/2021	0.0001 U	0.0001 U	12.2	12.4	0.174	0.175	0.00005 U	0.00005 U	0.000244
MW-100	W100211014-	10/14/2021	0.0001 U	0.0001 U	16	15.1	0.115	0.115	0.00005 U	0.00005 U	0.000534
MW-101	W101211018-	10/18/2021	0.0001 U	0.0001 U	27.4	30.8	0.963	1.15	0.00005 U	0.00005 U	0.00332
MW-103	W103211020-	10/20/2021	0.0001 U	0.00796	11	12.3	0.000535	0.998	0.00005 U	0.00005 U	0.000211
MW-107	W107211020-	10/20/2021	0.0001 U	0.0001 U	6.41	6.45	2.76	2.58	0.00005 U	0.00005 U	0.00721
MW-110	W110211021-	10/21/2021	0.0001 U	0.0001 U	38.2	37.7	3.15	2.86	0.00005 U	0.00005 U	0.00729
MW-113	W113211013-	10/13/2021	0.0001 U	0.0001 U	22.4	22.5	0.463	0.456	0.00005 U	0.00005 U	0.000297
MW-114	W114211012-	10/12/2021	0.0001 U	0.0001 U	14.2	14.4	0.000179	0.00122	0.00005 U	0.00005 U	0.000352
MW-115	W115211013-	10/13/2021	0.0001 U	0.0001 U	13.9	13.3	0.00609	0.00647	0.00005 U	0.00005 U	0.000451

See Data Qualifier List for Qualifier In

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Nickel Total (mg/L)	Potassium Dissolved (mg/L)	Potassium Total (mg/L)	Selenium Dissolved (mg/L)	Selenium Total (mg/L)	Silver Dissolved (mg/L)	Silver Total (mg/L)	Sodium Dissolved (mg/L)	Sodium Total (mg/L)	Thallium Dissolved (mg/L)
MW-21	W21-211005-	10/5/2021	0.000169	1.09	1.17	0.0005 DU	0.0005 U	0.00004 U	0.00004 U	5.84	5.93	0.000075 U
MW-24	W24-211012-	10/12/2021	0.000166	0.959	0.979	0.0005 U	0.0005 U	0.00004 U	0.00004 U	5.68	5.87	0.000075 U
MW-30A	W30A211018	10/18/2021	0.00125	1.53	1.53	0.0005 U	0.0005 U	0.00004 U	0.00004 U	11	11.4	0.000075 U
MW-47	W47-211018-	10/18/2021	0.00167	5.37	5.44	0.0005 U	0.0005 U	0.00004 U	0.00004 U	16.6	17	0.000075 U
MW-56	W56-211005-	10/5/2021	0.00187	1.34	1.46	0.0005 DU	0.0005 U	0.00004 U	0.00004 U	6.84	6.57	0.000075 U
MW-59	W59-211013-	10/13/2021	0.000152	1.3	1.26	0.0005 U	0.0005 U	0.00004 U	0.00004 U	6.93	6.73	0.000075 U
MW-64	W64-211011-	10/11/2021	0.00233	1.55	1.53	0.0005 U	0.0005 U	0.00004 U	0.00004 U	7.37	6.94	0.000075 U
MW-65	W65-211014-	10/14/2021	0.000142	0.96	0.928	0.0005 U	0.0005 U	0.00004 U	0.00004 U	5.43	5.25	0.000075 U
MW-66	W66-211011-	10/11/2021	0.000224	1.14	1.15	0.000992	0.000969	0.00004 U	0.00004 U	7.09	7.02	0.000075 U
MW-67	W67-211022-	10/22/2021	0.000749	1.79	1.86	0.0005 U	0.0005 U	0.00004 U	0.00004 U	9.15	8.71	0.000075 U
MW-68	W68-211019-	10/19/2021	0.000511	1.63	1.68	0.0005 U	0.0005 U	0.00004 U	0.00004 U	8.42	7.79	0.000075 U
MW-72	W72-211012-	10/12/2021	0.000202	1.99	1.98	0.0005 U	0.0005 U	0.00004 U	0.00004 U	8.29	8.37	0.000075 U
MW-73	W73-211011-	10/11/2021	0.000735	0.812	0.877	0.000506	0.000506	0.00004 U	0.00004 U	5.69	5.65	0.000075 U
MW-74R	W74R211012	10/12/2021	0.000949	2.18	2.2	0.000574	0.000619	0.00004 U	0.00004 U	12.3	12.3	0.000075 U
MW-75	W75-211012-	10/12/2021	0.0001 U	2.04	2.1	0.0005 U	0.0005 U	0.00004 U	0.00004 U	9.21	9.21	0.000075 U
MW-76	W76-211013-	10/13/2021	0.000556	1.65	1.64	0.0005 U	0.0005 U	0.00004 U	0.00004 U	12.4	12.1	0.000075 U
MW-80	W80-211020-	10/20/2021	0.000109	1.67	1.72	0.0005 U	0.0005 U	0.00004 U	0.00004 U	7.67	7.34	0.000075 U
MW-80	W80-211020D	10/20/2021	0.000111	1.65	1.71	0.0005 U	0.0005 U	0.00004 U	0.00004 U	7.54	7.18	0.000075 U
MW-81	W81-211006-	10/6/2021	0.000161	0.857	0.924	0.000851 D	0.000868	0.00004 U	0.00004 U	6.73	6.71	0.000075 U
MW-82	W82-211012-	10/12/2021	0.0028	1.91	1.97	0.0005 U	0.0005 U	0.00004 U	0.00004 U	8.07	8.19	0.000075 U
MW-83	W83-211014-	10/14/2021	0.00218	4.03	4.06	0.0005 U	0.0005 U	0.00004 U	0.00004 U	15.5	15.6	0.000075 U
MW-84	W84-211006-	10/6/2021	0.000817	1.18	1.27	0.000714 D	0.00066	0.00004 U	0.00004 U	7.21	7.03	0.000075 U
MW-85	W85-211006-	10/6/2021	0.000477	1.72	1.87	0.000901 D	0.000852	0.00004 U	0.00004 U	10	9.75	0.000075 U
MW-85	W85-211006D	10/6/2021	0.000259	1.73	1.91	0.000858 D	0.000889	0.00004 U	0.00004 U	9.96	9.83	0.000075 U
MW-86	W86-211006-	10/6/2021	0.000155	1.29	1.39	0.0005 DU	0.0005 U	0.00004 U	0.00004 U	7.21	6.82	0.000075 U
MW-87	W87-211013-	10/13/2021	0.000258	2.59	2.54	0.0005 U	0.0005 U	0.00004 U	0.00004 U	11.1	11.1	0.000075 U
MW-88	W88-211013-	10/13/2021	0.000158	0.872	0.879	0.0005 U	0.000561	0.00004 U	0.00004 U	6.04	5.87	0.000075 U
MW-89	W89-211013-	10/13/2021	0.00014	1.77	1.76	0.0005 U	0.0005 U	0.00004 U	0.00004 U	9.06	8.72	0.000075 U
MW-93	W93-211011-	10/11/2021	0.000409	1.6	1.59	0.0005 U	0.0005 U	0.00004 U	0.00004 U	9.33	9.42	0.000075 U
MW-94	W94-211014-	10/14/2021	0.000635	2.77	2.74	0.0005 U	0.0005 U	0.00004 U	0.00004 U	9.05	8.71	0.000075 U
MW-95	W95-211012-	10/12/2021	0.000238	1.32	1.3	0.0005 U	0.0005 U	0.00004 U	0.00004 U	6.36	6.54	0.000075 U
MW-100	W100211014-	10/14/2021	0.000449	1.77	1.73	0.0005 U	0.0005 U	0.00004 U	0.00004 U	8.9	8.32	0.000075 U
MW-101	W101211018-	10/18/2021	0.00367	2.53	2.59	0.0005 U	0.0005 U	0.00004 U	0.00004 U	16	17	0.000075 U
MW-103	W103211020-	10/20/2021	0.0126	2.75	3.57	0.0005 U	0.000649	0.00004 U	0.00004 U	10	9.47	0.000075 U
MW-107	W107211020-	10/20/2021	0.00705	2.59	2.64	0.0005 U	0.0005 U	0.00004 U	0.00004 U	5.24	4.95	0.000075 U
MW-110	W110211021-	10/21/2021	0.01	3.34	3.39	0.0005 U	0.0005 U	0.00004 U	0.00004 U	25.4	20.8	0.000075 U
MW-113	W113211013-	10/13/2021	0.000321	2.2	2.18	0.0005 U	0.0005 U	0.00004 U	0.00004 U	9.78	9.6	0.000075 U
MW-114	W114211012-	10/12/2021	0.000386	2.33	2.31	0.0005 U	0.0005 U	0.00004 U	0.00004 U	7.09	6.94	0.000075 U
MW-115	W115211013-	10/13/2021	0.00049	2.03	2	0.0005 U	0.0005 U	0.00004 U	0.00004 U	7.75	7.42	0.000075 U

See Data Qualifier List for Qualifier In

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Metals Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Thallium Total (mg/L)	Tin Dissolved (mg/L)	Tin Total (mg/L)	Vanadium Dissolved (mg/L)	Vanadium Total (mg/L)	Zinc Dissolved (mg/L)	Zinc Total (mg/L)
MW-21	W21-211005-	10/5/2021	0.000075 U			0.000075 U	0.000075 U	0.0005 U	0.0005 U
MW-24	W24-211012-	10/12/2021	0.000075 U			0.0000976	0.000124	0.0005 U	0.0005 U
MW-30A	W30A211018	10/18/2021	0.000075 U	0.0005 U	0.0005 U	0.00212	0.00241	0.0008	0.00121
MW-47	W47-211018-	10/18/2021	0.000075 U	0.0005 U	0.0005 U	0.00164	0.00167	0.000626	0.0005 U
MW-56	W56-211005-	10/5/2021	0.000075 U			0.000193	0.0002	0.00118	0.00127
MW-59	W59-211013-	10/13/2021	0.000075 U			0.000085	0.0000864	0.000669	0.000701
MW-64	W64-211011-	10/11/2021	0.000075 U			0.000265	0.000455	0.0005 U	0.000755
MW-65	W65-211014-	10/14/2021	0.000075 U			0.000075 U	0.000075 U	0.00106	0.0005 U
MW-66	W66-211011-	10/11/2021	0.000075 U			0.000796	0.000762	0.0005 U	0.0005 U
MW-67	W67-211022-	10/22/2021	0.000075 U			0.000201	0.00219 D	0.0005 U	0.00216
MW-68	W68-211019-	10/19/2021	0.000075 U			0.000234	0.00105 D	0.0005 U	0.0005 U
MW-72	W72-211012-	10/12/2021	0.000075 U			0.000106	0.000075 U	0.0005 U	0.00114
MW-73	W73-211011-	10/11/2021	0.000075 U			0.00123	0.00147	0.0005 U	0.000848
MW-74R	W74R211012	10/12/2021	0.000075 U			0.00071	0.000646	0.0005 U	0.0005 U
MW-75	W75-211012-	10/12/2021	0.000075 U			0.000075 U	0.0000888	0.001	0.0005 U
MW-76	W76-211013-	10/13/2021	0.000075 U			0.000709	0.000724	0.0019	0.0005 U
MW-80	W80-211020-	10/20/2021	0.000075 U			0.0000804	0.000075 DU	0.0005 U	0.000609
MW-80	W80-211020D	10/20/2021	0.000075 U			0.000075 U	0.000075 DU	0.0005 U	0.000552
MW-81	W81-211006-	10/6/2021	0.000075 U			0.00169	0.00173	0.000563	0.0005 U
MW-82	W82-211012-	10/12/2021	0.000075 U			0.00143	0.00148	0.0005 U	0.000507
MW-83	W83-211014-	10/14/2021	0.000075 U			0.000981	0.000964	0.0005 U	0.000507
MW-84	W84-211006-	10/6/2021	0.000075 U			0.000527	0.000632	0.00259	0.0036
MW-85	W85-211006-	10/6/2021	0.000075 U			0.000957	0.00103	0.0005 U	0.00106
MW-85	W85-211006D	10/6/2021	0.000075 U			0.000955	0.001	0.0005 U	0.000633
MW-86	W86-211006-	10/6/2021	0.000075 U			0.0000823	0.000153	0.00115	0.00117
MW-87	W87-211013-	10/13/2021	0.000075 U			0.000111	0.000765	0.000641	0.000908
MW-88	W88-211013-	10/13/2021	0.000075 U			0.00303	0.00298	0.0005 U	0.0005 U
MW-89	W89-211013-	10/13/2021	0.000075 U			0.000106	0.000253	0.00505	0.0124
MW-93	W93-211011-	10/11/2021	0.000075 U			0.00219	0.00238	0.00195	0.00462
MW-94	W94-211014-	10/14/2021	0.000075 U			0.00139	0.00139	0.0005 U	0.0005 U
MW-95	W95-211012-	10/12/2021	0.000075 U			0.000405	0.000413	0.0005 U	0.0005 U
MW-100	W100211014-	10/14/2021	0.000075 U			0.000151	0.0000919	0.000709 J	0.000568
MW-101	W101211018-	10/18/2021	0.000075 U	0.0005 U	0.0005 U	0.000434	0.000292	0.00061	0.000623
MW-103	W103211020-	10/20/2021	0.000075 U			0.00229	0.0149 D	0.000526	0.0236
MW-107	W107211020-	10/20/2021	0.000075 U			0.00085	0.000951 D	0.00337	0.00329
MW-110	W110211021-	10/21/2021	0.000075 U			0.00096	0.00115 D	0.000668	0.00418
MW-113	W113211013-	10/13/2021	0.000075 U			0.0000927	0.0000979	0.0005 U	0.0005 U
MW-114	W114211012-	10/12/2021	0.000075 U			0.000888	0.000923	0.0005 U	0.000502
MW-115	W115211013-	10/13/2021	0.000075 U			0.000624	0.000633	0.0005 U	0.0005 U

See Data Qualifier List for Qualifier In

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater VOA Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	1,1,1,2-Tetrachloroethane ug/l 630-20-6	1,1,1-Trichloroethane ug/l 71-55-6	1,1,2,2-Tetrachloroethane ug/l 79-34-5	1,1,2-Trichloroethane ug/l 79-00-5	1,1-Dichloroethane ug/l 75-34-3	1,1-Dichloroethene ug/l 75-35-4	1,1-Dichloropropene ug/l 563-58-6	1,2,3-Trichloropropane ug/l 96-18-4
MW-21	W21-211005-	10/5/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-24	W24-211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-30A	W30A211018-	10/18/2021	0.25 U	0.1 U	0.1 U	0.1 U	1.72	0.1 U	0.1 U	0.1 U
MW-47	W47-211018-	10/18/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.403	0.1 U	0.1 U	0.1 U
MW-56	W56-211005-	10/5/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-59	W59-211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-64	W64-211011-	10/11/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-65	W65-211014-	10/14/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-66	W66-211011-	10/11/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-67	W67-211022-	10/22/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-68	W68-211019-	10/19/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-72	W72-211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-73	W73-211011-	10/11/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-74R	W74R211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-75	W75-211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-76	W76-211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-80	W80-211020-	10/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-80	W80-211020D	10/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-81	W81-211006-	10/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-82	W82-211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-83	W83-211014-	10/14/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-84	W84-211006-	10/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-85	W85-211006-	10/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-85	W85-211006D	10/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-86	W86-211006-	10/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-87	W87-211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-88	W88-211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-89	W89-211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-93	W93-211011-	10/11/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-94	W94-211014-	10/14/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-95	W95-211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-100	W100211014-	10/14/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-101	W101211018-	10/18/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.161 JT	0.1 U	0.1 U	0.1 U
MW-103	W103211020-	10/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-107	W107211020-	10/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-110	W110211021-	10/21/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.344	0.1 U	0.1 U	0.1 U
MW-113	W113211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-114	W114211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
MW-115	W115211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater VOA Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	1,2-Dibromo-3-Chloropropane ug/l 96-12-8	1,2-Dibromoethane ug/l 106-93-4	1,2-Dichlorobenzene ug/l 95-50-1	1,2-Dichloroethane ug/l 107-06-2	1,2-Dichloropropane ug/l 78-87-5	1,3-Dichlorobenzene ug/l 541-73-1	1,3-Dichloropropane ug/l 142-28-9	1,4-Dichlorobenzene ug/l 106-46-7
MW-21	W21-211005-	10/5/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-24	W24-211012-	10/12/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-30A	W30A211018-	10/18/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-47	W47-211018-	10/18/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-56	W56-211005-	10/5/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-59	W59-211013-	10/13/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-64	W64-211011-	10/11/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-65	W65-211014-	10/14/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-66	W66-211011-	10/11/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-67	W67-211022-	10/22/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-68	W68-211019-	10/19/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-72	W72-211012-	10/12/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-73	W73-211011-	10/11/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-74R	W74R211012-	10/12/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-75	W75-211012-	10/12/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-76	W76-211013-	10/13/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-80	W80-211020-	10/20/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-80	W80-211020D	10/20/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-81	W81-211006-	10/6/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-82	W82-211012-	10/12/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-83	W83-211014-	10/14/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-84	W84-211006-	10/6/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-85	W85-211006-	10/6/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-85	W85-211006D	10/6/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-86	W86-211006-	10/6/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-87	W87-211013-	10/13/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-88	W88-211013-	10/13/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-89	W89-211013-	10/13/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-93	W93-211011-	10/11/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-94	W94-211014-	10/14/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-95	W95-211012-	10/12/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-100	W100211014-	10/14/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-101	W101211018-	10/18/2021	2.5 U	0.1 U	0.1 U	0.145 JT	0.1 U	0.1 U	0.1 U	0.1 U
MW-103	W103211020-	10/20/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-107	W107211020-	10/20/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.325
MW-110	W110211021-	10/21/2021	2.5 U	0.1 U	1.18	0.356	0.294	0.1 U	0.1 U	0.246
MW-113	W113211013-	10/13/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-114	W114211012-	10/12/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U
MW-115	W115211013-	10/13/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater VOA Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	2,2-Dichloropropane ug/l 594-20-7	2-Butanone ug/l 78-93-3	2-Hexanone ug/l 591-78-6	2-Methyl-1-Propanol ug/l 78-83-1	3-Chloropropene ug/l 107-05-1	4-Methyl-2-Pentanone ug/l 108-10-1	Acetone ug/l 67-64-1	Acetonitrile ug/l 75-05-8
MW-21	W21-211005-	10/5/2021		1 U	0.5 U			2.5 U	3.02 JT	
MW-24	W24-211012-	10/12/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-30A	W30A211018-	10/18/2021	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U
MW-47	W47-211018-	10/18/2021	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U
MW-56	W56-211005-	10/5/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-59	W59-211013-	10/13/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-64	W64-211011-	10/11/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-65	W65-211014-	10/14/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-66	W66-211011-	10/11/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-67	W67-211022-	10/22/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-68	W68-211019-	10/19/2021	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U
MW-72	W72-211012-	10/12/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-73	W73-211011-	10/11/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-74R	W74R211012-	10/12/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-75	W75-211012-	10/12/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-76	W76-211013-	10/13/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-80	W80-211020-	10/20/2021	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U
MW-80	W80-211020D	10/20/2021	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U
MW-81	W81-211006-	10/6/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-82	W82-211012-	10/12/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-83	W83-211014-	10/14/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-84	W84-211006-	10/6/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-85	W85-211006-	10/6/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-85	W85-211006D	10/6/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-86	W86-211006-	10/6/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-87	W87-211013-	10/13/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-88	W88-211013-	10/13/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-89	W89-211013-	10/13/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-93	W93-211011-	10/11/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-94	W94-211014-	10/14/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-95	W95-211012-	10/12/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-100	W100211014-	10/14/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-101	W101211018-	10/18/2021	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U
MW-103	W103211020-	10/20/2021	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U
MW-107	W107211020-	10/20/2021	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U
MW-110	W110211021-	10/21/2021	0.1 U	0.25 U	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U
MW-113	W113211013-	10/13/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-114	W114211012-	10/12/2021		1 U	0.5 U			2.5 U	2.5 U	
MW-115	W115211013-	10/13/2021		1 U	0.5 U			2.5 U	2.5 U	

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater VOA Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Acrolein ug/l 107-02-8	Acrylonitrile ug/l 107-13-1	Benzene ug/l 71-43-2	Bromochloromethane ug/l 74-97-5	Bromodichloromethane ug/l 75-27-4	Bromoform ug/l 75-25-2	Bromomethane ug/l 74-83-9
MW-21	W21-211005-	10/5/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-24	W24-211012-	10/12/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-30A	W30A211018-	10/18/2021	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-47	W47-211018-	10/18/2021	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-56	W56-211005-	10/5/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-59	W59-211013-	10/13/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-64	W64-211011-	10/11/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-65	W65-211014-	10/14/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-66	W66-211011-	10/11/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-67	W67-211022-	10/22/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-68	W68-211019-	10/19/2021	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-72	W72-211012-	10/12/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-73	W73-211011-	10/11/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-74R	W74R211012-	10/12/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-75	W75-211012-	10/12/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-76	W76-211013-	10/13/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-80	W80-211020-	10/20/2021	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-80	W80-211020D	10/20/2021	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-81	W81-211006-	10/6/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-82	W82-211012-	10/12/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-83	W83-211014-	10/14/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-84	W84-211006-	10/6/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-85	W85-211006-	10/6/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-85	W85-211006D	10/6/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-86	W86-211006-	10/6/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-87	W87-211013-	10/13/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-88	W88-211013-	10/13/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-89	W89-211013-	10/13/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-93	W93-211011-	10/11/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-94	W94-211014-	10/14/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-95	W95-211012-	10/12/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-100	W100211014-	10/14/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-101	W101211018-	10/18/2021	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-103	W103211020-	10/20/2021	2.5 U	0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-107	W107211020-	10/20/2021	2.5 U	0.035 U	0.389	0.1 U	0.25 U	0.5 U	0.1 U
MW-110	W110211021-	10/21/2021	2.5 U	0.035 U	0.486	0.1 U	0.25 U	0.5 U	0.1 U
MW-113	W113211013-	10/13/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-114	W114211012-	10/12/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U
MW-115	W115211013-	10/13/2021		0.035 U	0.1 U	0.1 U	0.25 U	0.5 U	0.1 U

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater VOA Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Carbon Disulfide ug/l 75-15-0
MW-21	W21-211005-	10/5/2021	0.1 U
MW-24	W24-211012-	10/12/2021	0.1 U
MW-30A	W30A211018-	10/18/2021	0.1 U
MW-47	W47-211018-	10/18/2021	0.1 U
MW-56	W56-211005-	10/5/2021	0.1 U
MW-59	W59-211013-	10/13/2021	0.1 U
MW-64	W64-211011-	10/11/2021	0.1 U
MW-65	W65-211014-	10/14/2021	0.1 U
MW-66	W66-211011-	10/11/2021	0.1 U
MW-67	W67-211022-	10/22/2021	0.1 U
MW-68	W68-211019-	10/19/2021	0.1 U
MW-72	W72-211012-	10/12/2021	0.1 U
MW-73	W73-211011-	10/11/2021	0.1 U
MW-74R	W74R211012-	10/12/2021	0.1 U
MW-75	W75-211012-	10/12/2021	0.1 U
MW-76	W76-211013-	10/13/2021	0.1 U
MW-80	W80-211020-	10/20/2021	0.1 U
MW-80	W80-211020D	10/20/2021	0.1 U
MW-81	W81-211006-	10/6/2021	0.1 U
MW-82	W82-211012-	10/12/2021	0.1 U
MW-83	W83-211014-	10/14/2021	0.1 U
MW-84	W84-211006-	10/6/2021	0.1 U
MW-85	W85-211006-	10/6/2021	0.1 U
MW-85	W85-211006D	10/6/2021	0.1 U
MW-86	W86-211006-	10/6/2021	0.1 U
MW-87	W87-211013-	10/13/2021	0.1 U
MW-88	W88-211013-	10/13/2021	0.1 U
MW-89	W89-211013-	10/13/2021	0.1 U
MW-93	W93-211011-	10/11/2021	0.1 U
MW-94	W94-211014-	10/14/2021	0.1 U
MW-95	W95-211012-	10/12/2021	0.1 U
MW-100	W100211014-	10/14/2021	0.1 U
MW-101	W101211018-	10/18/2021	0.1 U
MW-103	W103211020-	10/20/2021	0.1 U
MW-107	W107211020-	10/20/2021	0.1 U
MW-110	W110211021-	10/21/2021	0.1 U
MW-113	W113211013-	10/13/2021	0.1 U
MW-114	W114211012-	10/12/2021	0.1 U
MW-115	W115211013-	10/13/2021	0.1 U

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater VOA Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Carbon Tetrachloride ug/l 56-23-5	Chlorobenzene ug/l 108-90-7	Chlorodibromomethane ug/l 124-48-1	Chloroethane ug/l 75-00-3	Chloroform ug/l 67-66-3	Chloromethane ug/l 74-87-3	Chloroprene ug/l 126-99-8	Cis-1,2-Dichloroethene ug/l 156-59-2
MW-21	W21-211005-	10/5/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-24	W24-211012-	10/12/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-30A	W30A211018-	10/18/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	3.74
MW-47	W47-211018-	10/18/2021	0.25 U	0.1 U	0.5 U	0.175 JT	0.1 U	0.25 U	0.1 U	0.974
MW-56	W56-211005-	10/5/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		1.46
MW-59	W59-211013-	10/13/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		1.27
MW-64	W64-211011-	10/11/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-65	W65-211014-	10/14/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-66	W66-211011-	10/11/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-67	W67-211022-	10/22/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-68	W68-211019-	10/19/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U
MW-72	W72-211012-	10/12/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-73	W73-211011-	10/11/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-74R	W74R211012-	10/12/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-75	W75-211012-	10/12/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-76	W76-211013-	10/13/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.139 JT
MW-80	W80-211020-	10/20/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U
MW-80	W80-211020D	10/20/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U
MW-81	W81-211006-	10/6/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-82	W82-211012-	10/12/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-83	W83-211014-	10/14/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-84	W84-211006-	10/6/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-85	W85-211006-	10/6/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-85	W85-211006D	10/6/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-86	W86-211006-	10/6/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-87	W87-211013-	10/13/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-88	W88-211013-	10/13/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-89	W89-211013-	10/13/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-93	W93-211011-	10/11/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-94	W94-211014-	10/14/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-95	W95-211012-	10/12/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-100	W100211014-	10/14/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-101	W101211018-	10/18/2021	0.25 U	0.1 U	0.5 U	0.148 JT	0.1 U	0.25 U	0.1 U	0.228
MW-103	W103211020-	10/20/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U
MW-107	W107211020-	10/20/2021	0.25 U	0.27	0.5 U	0.142 JT	0.1 U	0.25 U	0.1 U	0.213
MW-110	W110211021-	10/21/2021	0.25 U	1.24	0.5 U	0.224	0.1 U	0.25 U	0.1 U	5.82
MW-113	W113211013-	10/13/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-114	W114211012-	10/12/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U
MW-115	W115211013-	10/13/2021	0.25 U	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U		0.1 U

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater VOA Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Cis-1,3-Dichloropropene ug/l 10061-01-5	Dibromomethane ug/l 74-95-3	Dichlorodifluoromethane ug/l 75-71-8	Ethylbenzene ug/l 100-41-4	M & P Xylene ug/l MPX	Methyl Iodide ug/l 74-88-4	Methyl Methacrylate ug/l 80-62-6
MW-21	W21-211005-	10/5/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-24	W24-211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-30A	W30A211018-	10/18/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-47	W47-211018-	10/18/2021	0.25 U	0.1 U	0.64	0.1 U	0.1 U	0.1 U	0.25 U
MW-56	W56-211005-	10/5/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-59	W59-211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-64	W64-211011-	10/11/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-65	W65-211014-	10/14/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-66	W66-211011-	10/11/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-67	W67-211022-	10/22/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-68	W68-211019-	10/19/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-72	W72-211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-73	W73-211011-	10/11/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-74R	W74R211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-75	W75-211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-76	W76-211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-80	W80-211020-	10/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-80	W80-211020D	10/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-81	W81-211006-	10/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-82	W82-211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-83	W83-211014-	10/14/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-84	W84-211006-	10/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-85	W85-211006-	10/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-85	W85-211006D	10/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-86	W86-211006-	10/6/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-87	W87-211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-88	W88-211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-89	W89-211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-93	W93-211011-	10/11/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-94	W94-211014-	10/14/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-95	W95-211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-100	W100211014-	10/14/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-101	W101211018-	10/18/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-103	W103211020-	10/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-107	W107211020-	10/20/2021	0.25 U	0.1 U	0.134 JT	0.1 U	0.1 U	0.1 U	0.25 U
MW-110	W110211021-	10/21/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
MW-113	W113211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-114	W114211012-	10/12/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	
MW-115	W115211013-	10/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater VOA Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Methylacrylonitrile ug/l 126-98-7	Methylene Chloride ug/l 75-09-2	O-Xylene ug/l 95-47-6	Propionitrile ug/l 107-12-0	Styrene ug/l 100-42-5	Tetrachloroethene ug/l 127-18-4	Toluene ug/l 108-88-3	Trans-1,2-Dichloroethene ug/l 156-60-5
MW-21	W21-211005-	10/5/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-24	W24-211012-	10/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-30A	W30A211018-	10/18/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.135 JT	0.1 U	0.102 JT
MW-47	W47-211018-	10/18/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-56	W56-211005-	10/5/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-59	W59-211013-	10/13/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-64	W64-211011-	10/11/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-65	W65-211014-	10/14/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-66	W66-211011-	10/11/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-67	W67-211022-	10/22/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-68	W68-211019-	10/19/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-72	W72-211012-	10/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-73	W73-211011-	10/11/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-74R	W74R211012-	10/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-75	W75-211012-	10/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-76	W76-211013-	10/13/2021		2.5 U	0.1 U		0.1 U	0.408	0.1 U	0.1 U
MW-80	W80-211020-	10/20/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-80	W80-211020D	10/20/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-81	W81-211006-	10/6/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-82	W82-211012-	10/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-83	W83-211014-	10/14/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-84	W84-211006-	10/6/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-85	W85-211006-	10/6/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-85	W85-211006D	10/6/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-86	W86-211006-	10/6/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-87	W87-211013-	10/13/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-88	W88-211013-	10/13/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-89	W89-211013-	10/13/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-93	W93-211011-	10/11/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-94	W94-211014-	10/14/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-95	W95-211012-	10/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-100	W100211014-	10/14/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-101	W101211018-	10/18/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-103	W103211020-	10/20/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U
MW-107	W107211020-	10/20/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.103 JT
MW-110	W110211021-	10/21/2021	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U	0.1 U	0.335
MW-113	W113211013-	10/13/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-114	W114211012-	10/12/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U
MW-115	W115211013-	10/13/2021		2.5 U	0.1 U		0.1 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater VOA Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Trans-1,3-Dichloropropene ug/l 10061-02-6
MW-21	W21-211005-	10/5/2021	0.5 U
MW-24	W24-211012-	10/12/2021	0.5 U
MW-30A	W30A211018-	10/18/2021	0.5 U
MW-47	W47-211018-	10/18/2021	0.5 U
MW-56	W56-211005-	10/5/2021	0.5 U
MW-59	W59-211013-	10/13/2021	0.5 U
MW-64	W64-211011-	10/11/2021	0.5 U
MW-65	W65-211014-	10/14/2021	0.5 U
MW-66	W66-211011-	10/11/2021	0.5 U
MW-67	W67-211022-	10/22/2021	0.5 U
MW-68	W68-211019-	10/19/2021	0.5 U
MW-72	W72-211012-	10/12/2021	0.5 U
MW-73	W73-211011-	10/11/2021	0.5 U
MW-74R	W74R211012-	10/12/2021	0.5 U
MW-75	W75-211012-	10/12/2021	0.5 U
MW-76	W76-211013-	10/13/2021	0.5 U
MW-80	W80-211020-	10/20/2021	0.5 U
MW-80	W80-211020D	10/20/2021	0.5 U
MW-81	W81-211006-	10/6/2021	0.5 U
MW-82	W82-211012-	10/12/2021	0.5 U
MW-83	W83-211014-	10/14/2021	0.5 U
MW-84	W84-211006-	10/6/2021	0.5 U
MW-85	W85-211006-	10/6/2021	0.5 U
MW-85	W85-211006D	10/6/2021	0.5 U
MW-86	W86-211006-	10/6/2021	0.5 U
MW-87	W87-211013-	10/13/2021	0.5 U
MW-88	W88-211013-	10/13/2021	0.5 U
MW-89	W89-211013-	10/13/2021	0.5 U
MW-93	W93-211011-	10/11/2021	0.5 U
MW-94	W94-211014-	10/14/2021	0.5 U
MW-95	W95-211012-	10/12/2021	0.5 U
MW-100	W100211014-	10/14/2021	0.5 U
MW-101	W101211018-	10/18/2021	0.5 U
MW-103	W103211020-	10/20/2021	0.5 U
MW-107	W107211020-	10/20/2021	0.5 U
MW-110	W110211021-	10/21/2021	0.5 U
MW-113	W113211013-	10/13/2021	0.5 U
MW-114	W114211012-	10/12/2021	0.5 U
MW-115	W115211013-	10/13/2021	0.5 U

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater VOA Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Trans-1,4-Dichloro-2-Butene ug/l 110-57-6	Trichloroethene ug/l 79-01-6	Trichloro-fluoromethane ug/l 75-69-4	Vinyl Acetate ug/l 108-05-4	Vinyl Chloride ug/l 75-01-4
MW-21	W21-211005-	10/5/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-24	W24-211012-	10/12/2021	5 U	0.1 U	0.1 U	0.1 U	0.0166 JT
MW-30A	W30A211018-	10/18/2021	0.5 U	0.829	0.1 U	0.1 U	0.01 U
MW-47	W47-211018-	10/18/2021	0.5 U	0.1 U	0.1 U	0.1 U	1.46
MW-56	W56-211005-	10/5/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-59	W59-211013-	10/13/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-64	W64-211011-	10/11/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-65	W65-211014-	10/14/2021	5 U	0.1 U	0.1 U	0.1 U	0.0171 JT
MW-66	W66-211011-	10/11/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-67	W67-211022-	10/22/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-68	W68-211019-	10/19/2021	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-72	W72-211012-	10/12/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-73	W73-211011-	10/11/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-74R	W74R211012-	10/12/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-75	W75-211012-	10/12/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-76	W76-211013-	10/13/2021	5 U	7.26	0.1 U	0.1 U	0.01 U
MW-80	W80-211020-	10/20/2021	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-80	W80-211020D	10/20/2021	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-81	W81-211006-	10/6/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-82	W82-211012-	10/12/2021	5 U	4.1	0.1 U	0.1 U	0.01 U
MW-83	W83-211014-	10/14/2021	5 U	2	0.1 U	0.1 U	0.01 U
MW-84	W84-211006-	10/6/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-85	W85-211006-	10/6/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-85	W85-211006D	10/6/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-86	W86-211006-	10/6/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-87	W87-211013-	10/13/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-88	W88-211013-	10/13/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-89	W89-211013-	10/13/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-93	W93-211011-	10/11/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-94	W94-211014-	10/14/2021	5 U	2.2	0.1 U	0.1 U	0.01 U
MW-95	W95-211012-	10/12/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-100	W100211014-	10/14/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-101	W101211018-	10/18/2021	0.5 U	0.1 U	0.1 U	0.1 U	0.267
MW-103	W103211020-	10/20/2021	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-107	W107211020-	10/20/2021	0.5 U	0.1 U	0.1 U	0.1 U	0.627
MW-110	W110211021-	10/21/2021	0.5 U	0.148 JT	0.1 U	0.1 U	0.15
MW-113	W113211013-	10/13/2021	5 U	0.1 U	0.1 U	0.1 U	0.01 U
MW-114	W114211012-	10/12/2021	5 U	9.75	0.1 U	0.1 U	0.01 U
MW-115	W115211013-	10/13/2021	5 U	4.65	0.1 U	0.1 U	0.01 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Surface Water Elevation-Staff Gage Measurements
Contact Person: Natalya Usova (206-263-0608)

Staff Gage	Location	Date	Reference Elevation Staff Gage 0' (msl)	Reference Elevation Top of Peizo (msl)	Depth to Water (Peizometer) (feet)	Staff Gage Reading (feet)	Surface Water Elevation (msl)	Comments
SW-G1	SW-W1	1/4/2021	415.38	418.84		0.9	416.28	
SW-G1	SW-W1	2/17/2021	415.38	418.84		0.53	415.91	
SW-G1	SW-W1	3/8/2021	415.38	418.84		0.5	415.88	
SW-G2	SW-N1	1/4/2021	355.68	358.21		1.31	356.99	
SW-G2	SW-N1	2/17/2021	355.68	358.21		0.62	356.30	
SW-G2	SW-N1	3/8/2021	355.68	358.21		0.25	355.93	
SW-G3	SW -V	1/4/2021	466.46	469.88		0.3	466.76	
SW-G3	SW -V	2/17/2021	466.46	469.88		0.16	466.62	
SW-G3	SW -V	3/8/2021	466.46	469.88		0.14	466.60	
SW-G4	Upstream of SW-E1	1/4/2021	502.41	505.85		0.74	505.85	
SW-G4	Upstream of SW-E1	2/17/2021	502.41	505.85		0.46	502.87	
SW-G4	Upstream of SW-E1	3/8/2021	502.41	505.85		0.33	502.74	
SW-G5	SW-E1	1/4/2021	486.92	490.34		1.03	487.95	
SW-G5	SW-E1	2/17/2021	486.92	490.34		0.71	487.63	
SW-G5	SW-E1	3/8/2021	486.92	490.34		0.61	487.53	
SW-G6	Upstream of SW-GS1	1/4/2021	490.72	494.12		1.08	491.80	
SW-G6	Upstream of SW-GS1	2/17/2021	490.72	494.12	2.68		491.44	
SW-G6	Upstream of SW-GS1	3/8/2021	490.72	494.12	3.44		490.68	
SW-G7	SW-S2	1/4/2021	453.03	456.41		1.32	454.35	
SW-G7	SW-S2	2/17/2021	453.03	456.41		1.15	454.18	
SW-G7	SW-S2	3/8/2021	453.03	456.41		0.79	453.82	
SW-G8	Upstream of SW-S1	1/4/2021	510.61	515.56		1.47	512.08	
SW-G8	Upstream of SW-S1	2/17/2021	510.61	515.56		0.52	511.13	
SW-G8	Upstream of SW-S1	3/8/2021	510.61	515.56		0.3	510.91	
SW-G9	SW-S1	1/4/2021	490.93	494.35		1.51	492.44	
SW-G9	SW-S1	2/17/2021	490.93	494.35		0.85	491.78	
SW-G9	SW-S1	3/8/2021	490.93	494.35		0.67	491.60	

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Surface Water Field Parameters
Contact Person: Natalya Usova (206-263-0608)

Site	Sample ID	Date	pH (Field) (std. Units)	Spec. Conductance (Field) (umho/cm)	Temperature (Field) (^{o}C)	Turbidity (Field) (NTU)	Dissolved Oxygen, (Field) (mg/L)
SW-E1	SE1-210113Q	1/13/2021	6.19	36	7.62	1.89	10.2
SW-GS1	SGS1210107P	1/7/2021	6.83		6.2		
SW-N4	SN4-210107P	1/7/2021	7.46		7.2		
SW-SL3	SSL3210107P	1/7/2021	7.31		6.2		
SW-TD1	STD1210315-	3/15/2021	7.87	389.9	3.95	8.31	13.15

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Surface Water ISGP Analytes
Contact Person: Natalya Usova (206-263-0608)

Site	Sample ID	Date	Ammonia, (NH3) (mg/L)	Biological Oxygen Demand (mg/L)	Total Suspended Solids (mg/L)	Zinc, total (mg/L)
SW-GS1	SGS1210107P	1/7/2021	0.121	2 U	1.4	0.00189
SW-N4	SN4-210107P	1/7/2021	0.0128	2 U	3.1	0.0427
SW-SL3	SSL3210107P	1/7/2021	0.127	2 U	6.8	0.0122

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Surface Water VOAs Analytes
Contact Person: Natalya Usova (206-263-0608)

Site	Sample ID	Date	3-,4-Methylphenol mixture 15831-10-4 (ug/L)	Alpha-Terpineol 98-55-5 (ug/L)	Benzoic Acid 65-85-0 (ug/L)	Phenol 108-95-2 (ug/L)
SW-GS1	SGS1210107P	1/7/2021	0.476 U	0.476 U	9.52 U	0.476 U
SW-N4	SN4-210107P	1/7/2021	0.472 U	0.472 U	9.43 U	0.472 U
SW-SL3	SSL3210107P	1/7/2021	0.472 U	0.472 U	9.43 U	0.472 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---SW-E1 Analytical Data
Contact Person: Natalya Usova (206-263-0608)

			1,1,1,2-TETRACHLOROETHANE	1,1,1-TRICHLOROETHANE	1,1,2,2-TETRACHLOROETHANE	1,1,2-TRICHLOROETHANE	1,1-DICHLOROETHANE	1,1-DICHLOROETHENE
			630-20-6	71-55-6	79-34-5	79-00-5	75-34-3	75-35-4
			ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Site	Sample ID	Date	N	N	N	N	N	N
SW-E1	SE1-210113Q	1/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---SW-E1 Analytical Data
Contact Person: Natalya Usova (206-263-0608)

			1,2,3-TRICHLOROPROPANE	1,2-DIBROMO-3-CHLOROPROPANE	1,2-DIBROMOETHANE	1,2-DICHLOROBENZENE	1,2-DICHLOROETHANE	1,2-DICHLOROPROPANE	1,4-DICHLOROBENZENE	2-BUTANONE
			96-18-4	96-12-8	106-93-4	95-50-1	107-06-2	78-87-5	106-46-7	78-93-3
			ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Site	Sample ID	Date	N	N	N	N	N	N	N	N
SW-E1	SE1-210113Q	1/13/2021	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---SW-E1 Analytical Data
Contact Person: Natalya Usova (206-263-0608)

			2-HEXANONE	4-METHYL-2-PENTANONE	ACETONE	ACRYLONITRILE	ALKALINITY, TOTAL (AS CACO3)	AMMONIA AS N	ANTIMONY	ANTIMONY	ARSENIC	ARSENIC	BARIUM	BARIUM	BENZENE
			591-78-6	108-10-1	67-64-1	107-13-1	ALK	7664-41-7	7440-36-0	7440-36-0	7440-38-2	7440-38-2	7440-39-3	7440-39-3	71-43-2
			ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l
Site	Sample ID	Date	N	N	N	N	N	N	D	T	D	T	D	T	N
SW-E1	SE1-210113Q	1/13/2021	0.5 U	2.5 U	2.5 U	0.035 U	9.2	0.0026 T	0.0003 U	0.0003 U	0.000168	0.000176	0.00291	0.00334	0.1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---SW-E1 Analytical Data
Contact Person: Natalya Usova (206-263-0608)

			BERYLLIUM	BERYLLIUM	BROMOCHLOROMETHANE	BROMODICHLOROMETHANE	BROMOFORM	BROMOMETHANE	CADMIUM	CADMIUM	CALCIUM	CALCIUM	CARBON DISULFIDE	CARBON TETRACHLORIDE	CHLORIDE
			7440-41-7	7440-41-7	74-97-5	75-27-4	75-25-2	74-83-9	7440-43-9	7440-43-9	7440-70-2	7440-70-2	75-15-0	56-23-5	16887-00-6
			mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	mg/l
Site	Sample ID	Date	D	T	N	N	N	N	D	T	D	T	N	N	N
SW-E1	SE1-210113Q	1/13/2021	0.0001 U	0.0001 U	0.1 U	0.25 U	0.5 U	0.1 U	5E-05 U	5E-05 U	4.04	4.13	0.1 U	0.25 U	1.55

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---SW-E1 Analytical Data
Contact Person: Natalya Usova (206-263-0608)

			CHLOROBENZENE	CHLORODIBROMOMETHANE	CHLOROETHANE	CHLOROFORM	CHLOROMETHANE	CHROMIUM	CHROMIUM	CIS-1,2-DICHLOROETHENE	CIS-1,3-DICHLOROPROPENE	COBALT	COBALT	COPPER	COPPER	DIBROMOMETHANE
			108-90-7	124-48-1	75-00-3	67-66-3	74-87-3	7440-47-3	7440-47-3	156-59-2	10061-01-5	7440-48-4	7440-48-4	7440-50-8	7440-50-8	74-95-3
			ug/l	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	ug/l	ug/l	mg/l	mg/l	mg/l	mg/l	ug/l
Site	Sample ID	Date	N	N	N	N	N	D	T	N	N	D	T	D	T	N
SW-E1	SE1-210113Q	1/13/2021	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.0002 U	0.0002 U	0.1 U	0.25 U	5E-05 U	5E-05 U	0.000485	0.00054	0.1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---SW-E1 Analytical Data
Contact Person: Natalya Usova (206-263-0608)

			DICHLORODIFLUOROMETHANE	ETHYLBENZENE	IRON	IRON	LEAD	LEAD	M & P XYLENE	MAGNESIUM	MAGNESIUM	MANGANESE	MANGANESE	MERCURY	MERCURY	METHYL IODIDE
			75-71-8	100-41-4	7439-89-6	7439-89-6	7439-92-1	7439-92-1	MPX	7439-95-4	7439-95-4	7439-96-5	7439-96-5	7439-97-6	7439-97-6	74-88-4
			ug/l	ug/l	mg/l	mg/l	mg/l	mg/l	ug/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l
Site	Sample ID	Date	N	N	D	T	D	T	N	D	T	D	T	D	T	N
SW-E1	SE1-210113Q	1/13/2021	0.1 U	0.1 U	0.0253	0.0463	0.0001 U	0.0001 U	0.1 U	0.919	0.922	0.00169	0.00303	5E-05 U	5E-05 U	0.1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---SW-E1 Analytical Data
Contact Person: Natalya Usova (206-263-0608)

			METHYLENE CHLORIDE	NICKEL	NICKEL	NITRATE	O-XYLENE	POTASSIUM	POTASSIUM	SELENIUM	SELENIUM	SILVER	SILVER	SODIUM	SODIUM	SPECIFIC CONDUCTANCE
			75-09-2	7440-02-0	7440-02-0	14797-55-8	95-47-6	7440-09-7	7440-09-7	7782-49-2	7782-49-2	7440-22-4	7440-22-4	7440-23-5	7440-23-5	COND
			ug/l	mg/l	mg/l	mg/l	ug/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	umhos/cm
Site	Sample ID	Date	N	D	T	N	N	D	T	D	T	D	T	D	T	N
SW-E1	SE1-210113Q	1/13/2021	2.5 U	0.00016	0.000188	1.21	0.1 U	0.541	0.546	0.0005 U	0.0005 U	4E-05 U	4E-05 U	2.17	2.18	43.8

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---SW-E1 Analytical Data
Contact Person: Natalya Usova (206-263-0608)

			STYRENE	SULFATE	TETRACHLOROETHENE	THALLIUM	THALLIUM	TOLUENE	TOTAL DISSOLVED SOLIDS	TOTAL ORGANIC CARBON	TOTAL SOLIDS	TOTAL SUSPENDED SOLIDS	TRANS-1,2-DICHLOROETHENE	TRANS-1,3-DICHLOROPROPENE	TRANS-1,4-DICHLORO-2-BUTENE	TRICHLOROETHENE
			100-42-5		127-18-4	7440-28-0	7440-28-0	108-88-3	TDS	TOC	TS	TSS	156-60-5	10061-02-6	110-57-6	79-01-6
			ug/l		ug/l	mg/l	mg/l	ug/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l
Site	Sample ID	Date	N		N	D	T	N	N	N	N	N	N	N	N	N
SW-E1	SE1-210113Q	1/13/2021	0.1 U	1.43	0.1 U	0.0001 U	0.0001 U	0.1 U	42.5	3.93	45	0.9 T	0.1 U	0.5 U	5 U	0.1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---SW-E1 Analytical Data
Contact Person: Natalya Usova (206-263-0608)

			TRICHLOROFLUOROMETHANE	VANADIUM	VANADIUM	VINYL ACETATE	VINYL CHLORIDE	ZINC	ZINC
			75-69-4	7440-62-2	7440-62-2	108-05-4	75-01-4	7440-66-6	7440-66-6
			ug/l	mg/l	mg/l	ug/l	ug/l	mg/l	mg/l
Site	Sample ID	Date	N	D	T	N	N	D	T
SW-E1	SE1-210113Q	1/13/2021	0.1 U	0.000468	0.000512	0.1 U	0.01 DU	0.00186	0.00277

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill --- Area 5 Top Deck Surface Water Monitoring Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	DO	pH	Conductance	Temperature	Turbidity	Alkalinity, (Total)	Chemical Oxygen Demand	Chloride	Iron, (Dissolved)	Iron, (Total)	Sulfate	Total Organic Carbon
			(Field)	(Field)	(Field)	(Field)	(Field)	(CaCO3)					(SO4)	
			mg/L	(std. Units)	(umho/cm)	(^{o}C)	(NTU)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
SW-TD1	3/15/2021	STD1210315-	13.15	7.87	389.9	3.95	8.31	111	7.2 T	2.92	0.0119	0.544	107	3.12

Washington Department of Ecology
Electronic Submission Cover Letter

DEPARTMENT OF ECOLOGY
State of Washington

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1760740 - 2/11/2021 5:07:51 PM

Company Name	Signer Name	System Name
King County Solid Waste Division	Joan Kenton	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for King County Solid Waste Division	Copy of Record KingCountySolidWasteDivision Thursday February 11 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



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+3Q/2Nmmu8MIx6IYhtQh2TnrH5lh2VQccORsM=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 01/01/2021 - 01/31/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
1-F	**1/1/21**	M	M
1-Sa	**1/2/21**	M	M
2-Su	**1/3/21**	M	M
2-M	**1/4/21**	M	M
2-T	**1/5/21**	M	M
2-W	**1/6/21**	M	M
2-Th	**1/7/21**	M	M
2-F	**1/8/21**	M	M
2-Sa	**1/9/21**	M	M
3-Su	**1/10/21**		M
3-M	**1/11/21**		M
3-T	**1/12/21**		M
3-W	**1/13/21**		M
3-Th	**1/14/21**		M
3-F	**1/15/21**	26.1	M
3-Sa	**1/16/21**		M
4-Su	**1/17/21**	M	M
4-M	**1/18/21**	M	M
4-T	**1/19/21**	M	M
4-W	**1/20/21**	M	M
4-Th	**1/21/21**	M	M
4-F	**1/22/21**	M	M
4-Sa	**1/23/21**	M	M
5-Su	**1/24/21**	M	M
5-M	**1/25/21**	5.62	M
5-T	**1/26/21**	M	M
5-W	**1/27/21**	M	M
5-Th	**1/28/21**	M	M
5-F	**1/29/21**	M	M
5-Sa	**1/30/21**		M
6-Su	**1/31/21**	M	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		26.1*	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Overall DMR Notes/Comment

Construction activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-2025 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once every calendar month. Monitoring will continue on this monthly inspection schedule until construction activities recommence in Spring 2021.

Outfall: CHL - Queen City Farms Lake (QCFL)

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
CHL	Turbidity (Nephelometric) Measured NTU	Maximum	26.1	The SWPPP was reviewed following the turbidity measurement of 26.1; the SWPPP did not need to be updated. Maintenance was performed on the BMPs and turbidity measurements dropped to < 25 ntus.

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Other
	2	Check Dams
	2	Other
	3	Check Dams
	3	Other
	4	Check Dams
	4	Other
	5	Check Dams
	5	Other
	6	Check Dams
	6	Other

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 01/01/2021 - 01/31/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C3	C3
1-F	**1/1/21**	M	M
1-Sa	**1/2/21**	M	M
2-Su	**1/3/21**	M	M
2-M	**1/4/21**	M	M
2-T	**1/5/21**	M	M
2-W	**1/6/21**	M	M
2-Th	**1/7/21**	M	M
2-F	**1/8/21**	M	M
2-Sa	**1/9/21**	M	M
3-Su	**1/10/21**		M
3-M	**1/11/21**		M
3-T	**1/12/21**		M
3-W	**1/13/21**		M
3-Th	**1/14/21**		M
3-F	**1/15/21**	36.9	M
3-Sa	**1/16/21**		M
4-Su	**1/17/21**	M	M
4-M	**1/18/21**	M	M
4-T	**1/19/21**	M	M
4-W	**1/20/21**	M	M
4-Th	**1/21/21**	M	M
4-F	**1/22/21**	M	M
4-Sa	**1/23/21**	M	M
5-Su	**1/24/21**	M	M
5-M	**1/25/21**	3.82	M
5-T	**1/26/21**	M	M
5-W	**1/27/21**	M	M
5-Th	**1/28/21**	M	M
5-F	**1/29/21**	M	M
5-Sa	**1/30/21**	M	M
6-Su	**1/31/21**	M	M
Minimum			
			BM: >= 6.5 (RO)
Maximum		36.9*	
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Overall DMR Notes/Comment

Construction activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-2025 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once every calendar month. Monitoring will continue on this monthly inspection schedule until construction activities recommence in Spring 2021.

Outfall: grav - The gravel pit lake infiltrates and has no surface discharge outlet

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C3	Turbidity (Nephelometric) Measured NTU	Maximum	36.9	The SWPPP was reviewed following the turbidity measurement of 36.9; the SWPPP did not need to be updated. Maintenance was performed on the BMPs and turbidity measurements dropped to < 25 ntus.

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Gravel Filter Berm
	1	Other
	2	Check Dams
	2	Gravel Filter Berm
	2	Other
	3	Check Dams
	3	Gravel Filter Berm
	3	Other
	4	Check Dams
	4	Gravel Filter Berm
	4	Other
	5	Check Dams
	5	Gravel Filter Berm
	5	Other
	6	Check Dams
	6	Gravel Filter Berm
	6	Other

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 01/01/2021 - 01/31/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **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
		C1	C1	C2	C2
1-F	**1/1/21**	M	M	M	M
1-Sa	**1/2/21**	M	M	M	M
2-Su	**1/3/21**	M	M	M	M
2-M	**1/4/21**	M	M	M	M
2-T	**1/5/21**	M	M	M	M
2-W	**1/6/21**	M	M	M	M
2-Th	**1/7/21**	M	M	M	M
2-F	**1/8/21**	M	M	M	M
2-Sa	**1/9/21**	M	M	M	M
3-Su	**1/10/21**		M		M
3-M	**1/11/21**		M		M
3-T	**1/12/21**		M		M
3-W	**1/13/21**		M		M
3-Th	**1/14/21**		M		M
3-F	**1/15/21**	4.35	M	6.98	M
3-Sa	**1/16/21**		M		M
4-Su	**1/17/21**	M	M	M	M
4-M	**1/18/21**	M	M	M	M
4-T	**1/19/21**	M	M	M	M
4-W	**1/20/21**	M	M	M	M
4-Th	**1/21/21**	M	M	M	M
4-F	**1/22/21**	M	M	M	M
4-Sa	**1/23/21**	M	M	M	M
5-Su	**1/24/21**	M	M	M	M
5-M	**1/25/21**	M	M	M	M
5-T	**1/26/21**	M	M	M	M
5-W	**1/27/21**	M	M	M	M
5-Th	**1/28/21**	M	M	M	M
5-F	**1/29/21**	M	M	M	M
5-Sa	**1/30/21**	M	M	M	M
6-Su	**1/31/21**	M	M	M	M
Minimum			M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		4.36	M	6.98	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

Overall DMR Notes/Comment

Construction activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-2025 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once every calendar month. Monitoring will continue on this monthly inspection schedule until construction activities recommence in Spring 2021.

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Other
	1	Silt Fence

	2	Check Dams
	2	Other
	2	Silt Fence
	3	Check Dams
	3	Other
	3	Silt Fence
	4	Check Dams
	4	Other
	4	Silt Fence
	5	Check Dams
	5	Other
	5	Silt Fence
	6	Check Dams
	6	Other
	6	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.

Joan Kenton
Signature

2/11/2021 5:07:53 PM
Date

Washington Department of Ecology
Electronic Submission Cover Letter

DEPARTMENT OF ECOLOGY
State of Washington

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1764445 - 3/15/2021 10:33:18 AM

Company Name	Signer Name	System Name
King County Solid Waste Division	Joan Kenton	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for King County Solid Waste Division	Copy of Record KingCountySolidWasteDivision Monday March 15 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



yy06TEw0jhJ+0g85Nx+awMxcEhKT2+EvU3KfyZcaSR5hrSxU86b
+DFWveMhq849RR4HsIuhUJD7eABIRQ/43feweG5FG1yKAB1CMDq5ml0s=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 02/01/2021 - 02/28/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
1-M	**2/1/21**	M	M
1-T	**2/2/21**	M	M
1-W	**2/3/21**	M	M
1-Th	**2/4/21**	M	M
1-F	**2/5/21**	M	M
1-Sa	**2/6/21**	M	M
2-Su	**2/7/21**	M	M
2-M	**2/8/21**	M	M
2-T	**2/9/21**	M	M
2-W	**2/10/21**	M	M
2-Th	**2/11/21**	M	M
2-F	**2/12/21**	M	M
2-Sa	**2/13/21**	M	M
3-Su	**2/14/21**		M
3-M	**2/15/21**		M
3-T	**2/16/21**	24.2	M
3-W	**2/17/21**		M
3-Th	**2/18/21**		M
3-F	**2/19/21**		M
3-Sa	**2/20/21**		M
4-Su	**2/21/21**	M	M
4-M	**2/22/21**	M	M
4-T	**2/23/21**	M	M
4-W	**2/24/21**	M	M
4-Th	**2/25/21**	M	M
4-F	**2/26/21**	M	M
4-Sa	**2/27/21**	M	M
5-Su	**2/28/21**	M	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		24.2	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Overall DMR Notes/Comment

Construction activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-2025 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once every calendar month. Monitoring will continue on this monthly inspection schedule until construction activities recommence in Spring 2021.

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Other
	2	Check Dams
	2	Other
	3	Check Dams
	3	Other
	4	Check Dams

	4	Other
	5	Check Dams
	5	Other

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 02/01/2021 - 02/28/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C3	C3
1-M	**2/1/21**	M	M
1-T	**2/2/21**	M	M
1-W	**2/3/21**	M	M
1-Th	**2/4/21**	M	M
1-F	**2/5/21**	M	M
1-Sa	**2/6/21**	M	M
2-Su	**2/7/21**	M	M
2-M	**2/8/21**	M	M
2-T	**2/9/21**	M	M
2-W	**2/10/21**	M	M
2-Th	**2/11/21**	M	M
2-F	**2/12/21**	M	M
2-Sa	**2/13/21**	M	M
3-Su	**2/14/21**		M
3-M	**2/15/21**		M
3-T	**2/16/21**	26.5	M
3-W	**2/17/21**	31.5	M
3-Th	**2/18/21**		M
3-F	**2/19/21**		M
3-Sa	**2/20/21**		M
4-Su	**2/21/21**	M	M
4-M	**2/22/21**	M	M
4-T	**2/23/21**	M	M
4-W	**2/24/21**	M	M
4-Th	**2/25/21**	M	M
4-F	**2/26/21**	3.48	M
4-Sa	**2/27/21**	M	M
5-Su	**2/28/21**	M	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		31.5*	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Overall DMR Notes/Comment

Construction activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-2025 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once every calendar month. Monitoring will continue on this monthly inspection schedule until construction activities recommence in Spring 2021.

Outfall: grav - The gravel pit lake infiltrates and has no surface discharge outlet

Monitoring Point	Parameter	Sample Date/ Statistical Base	Value	Notes/Comment
C3	Turbidity (Nephelometric) Measured NTU	Maximum	31.5	The SWPPP was reviewed following the turbidity measurements of 26.5 and 31.5 ntu; the SWPPP did not need to be updated. Maintenance was performed on the BMPs and turbidity measurements dropped to <25 ntu.

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Gravel Filter Berm
	1	Other
	2	Check Dams
	2	Gravel Filter Berm
	2	Other
	3	Check Dams
	3	Gravel Filter Berm
	3	Other
	4	Check Dams
	4	Gravel Filter Berm
	4	Other
	5	Check Dams
	5	Gravel Filter Berm
	5	Other

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 02/01/2021 - 02/28/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **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
		C1	C1	C2	C2
1-M	**2/1/21**	M	M	M	M
1-T	**2/2/21**	M	M	M	M
1-W	**2/3/21**	M	M	M	M
1-Th	**2/4/21**	M	M	M	M
1-F	**2/5/21**	M	M	M	M
1-Sa	**2/6/21**	M	M	M	M
2-Su	**2/7/21**	M	M	M	M
2-M	**2/8/21**	M	M	M	M
2-T	**2/9/21**	M	M	M	M
2-W	**2/10/21**	M	M	M	M
2-Th	**2/11/21**	M	M	M	M
2-F	**2/12/21**	M	M	M	M
2-Sa	**2/13/21**	M	M	M	M
3-Su	**2/14/21**		M		M
3-M	**2/15/21**		M		M
3-T	**2/16/21**	12.6	M	4.10	M
3-W	**2/17/21**		M		M
3-Th	**2/18/21**		M		M
3-F	**2/19/21**		M		M
3-Sa	**2/20/21**		M		M
4-Su	**2/21/21**	M	M	M	M
4-M	**2/22/21**	M	M	M	M
4-T	**2/23/21**	M	M	M	M
4-W	**2/24/21**	M	M	M	M
4-Th	**2/25/21**	M	M	M	M
4-F	**2/26/21**	M	M	M	M
4-Sa	**2/27/21**	M	M	M	M
5-Su	**2/28/21**	M	M	M	M
Minimum			M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		12.6	M	4.10	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

Overall DMR Notes/Comment

Construction activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-2025 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once every calendar month. Monitoring will continue on this monthly inspection schedule until construction activities recommence in Spring 2021.

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Other
	1	Silt Fence
	2	Check Dams
	2	Other
	2	Silt Fence

	3	Check Dams
	3	Other
	3	Silt Fence
	4	Check Dams
	4	Other
	4	Silt Fence
	5	Check Dams
	5	Other
	5	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.

Joan Kenton
Signature

3/15/2021 10:33:27 AM
Date

Washington Department of Ecology
Electronic Submission Cover Letter

DEPARTMENT OF ECOLOGY
State of Washington

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1768355 - 4/15/2021 2:29:32 PM

Company Name	Signer Name	System Name
King County Solid Waste Division	Joan Kenton	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for King County Solid Waste Division	Copy of Record KingCountySolidWasteDivision Thursday April 15 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



lq75DIsDRls1FRawrIh683HvK2JVJbVBnO6jbxE1vZLxkfC/kv1KvjXeB1Py2ILZd71wh2F4abiPl0inJ0aLEHZNO7uFjoMrYtC0eI256eY=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 03/01/2021 - 03/31/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
1-M	**3/1/21**	M	M
1-T	**3/2/21**	M	M
1-W	**3/3/21**	M	M
1-Th	**3/4/21**	M	M
1-F	**3/5/21**	M	M
1-Sa	**3/6/21**	M	M
2-Su	**3/7/21**		M
2-M	**3/8/21**		M
2-T	**3/9/21**		M
2-W	**3/10/21**		M
2-Th	**3/11/21**	3.35	M
2-F	**3/12/21**		M
2-Sa	**3/13/21**		M
3-Su	**3/14/21**	M	M
3-M	**3/15/21**	M	M
3-T	**3/16/21**	M	M
3-W	**3/17/21**	M	M
3-Th	**3/18/21**	M	M
3-F	**3/19/21**	M	M
3-Sa	**3/20/21**	M	M
4-Su	**3/21/21**	M	M
4-M	**3/22/21**	M	M
4-T	**3/23/21**	M	M
4-W	**3/24/21**	M	M
4-Th	**3/25/21**	M	M
4-F	**3/26/21**	M	M
4-Sa	**3/27/21**	M	M
5-Su	**3/28/21**	M	M
5-M	**3/29/21**	M	M
5-T	**3/30/21**	M	M
5-W	**3/31/21**	M	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		3.35	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Overall DMR Notes/Comment

Construction activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-25 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once a month. Construction activities are recommencing Spring 2021. King County Solid Waste Division (KCSWD) executed the construction contract for all remaining construction work with Goodfellow Brothers, Inc. in April 2021. Goodfellow are scheduled to begin mobilizing in April and construction work commencing in April - May 2021. KCSWD will be transferring the CSGP to Goodfellow Brothers in accordance with Section S2.A.2 of the permit. The completed Transfer of Coverage Form will be submitted to Ecology by KCSWD sometime the week of April 19-25, 2021. The transfer will comprise the entire site and will go into effect in April. This March 2021 DMR is the last DMR being submitted by KCSWD for this CSGP.

BMPs

Monitoring Point	Week	BMP
	1	Check Dams

	2	Check Dams
	3	Check Dams
	4	Check Dams
	5	Check Dams

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 03/01/2021 - 03/31/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C3	C3
1-M	**3/1/21**	M	M
1-T	**3/2/21**	M	M
1-W	**3/3/21**	M	M
1-Th	**3/4/21**	M	M
1-F	**3/5/21**	M	M
1-Sa	**3/6/21**	M	M
2-Su	**3/7/21**		M
2-M	**3/8/21**		M
2-T	**3/9/21**		M
2-W	**3/10/21**		M
2-Th	**3/11/21**	6.65	M
2-F	**3/12/21**		M
2-Sa	**3/13/21**		M
3-Su	**3/14/21**	M	M
3-M	**3/15/21**	M	M
3-T	**3/16/21**	M	M
3-W	**3/17/21**	M	M
3-Th	**3/18/21**	M	M
3-F	**3/19/21**	M	M
3-Sa	**3/20/21**	M	M
4-Su	**3/21/21**	M	M
4-M	**3/22/21**	M	M
4-T	**3/23/21**	M	M
4-W	**3/24/21**	M	M
4-Th	**3/25/21**	M	M
4-F	**3/26/21**	M	M
4-Sa	**3/27/21**	M	M
5-Su	**3/28/21**	M	M
5-M	**3/29/21**	M	M
5-T	**3/30/21**	M	M
5-W	**3/31/21**	M	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		6.65	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

Overall DMR Notes/Comment

Construction activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-25 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once a month. Construction activities are recommencing Spring 2021. King County Solid Waste Division (KCSWD) executed the construction contract for all remaining construction work with Goodfellow Brothers, Inc. in April 2021. Goodfellow are scheduled to begin mobilizing in April and construction work commencing in April - May 2021. KCSWD will be transferring the CSGP to Goodfellow Brothers in accordance with Section S2.A.2 of the permit. The completed Transfer of Coverage Form will be submitted to Ecology by KCSWD sometime the week of April 19-25, 2021. The transfer will comprise the entire site and will go into effect in April. This March 2021 DMR is the last DMR being submitted by KCSWD for this CSGP.

BMPs

Monitoring Point	Week	BMP
	1	Check Dams

	1	Gravel Filter Berm
	1	Other
	2	Check Dams
	2	Gravel Filter Berm
	2	Other
	3	Check Dams
	3	Gravel Filter Berm
	3	Other
	4	Check Dams
	4	Gravel Filter Berm
	4	Other
	5	Check Dams
	5	Gravel Filter Berm
	5	Other

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 03/01/2021 - 03/31/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **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
		C1	C1	C2	C2
1-M	**3/1/21**	M	M	M	M
1-T	**3/2/21**	M	M	M	M
1-W	**3/3/21**	M	M	M	M
1-Th	**3/4/21**	M	M	M	M
1-F	**3/5/21**	M	M	M	M
1-Sa	**3/6/21**	M	M	M	M
2-Su	**3/7/21**		M		M
2-M	**3/8/21**		M		M
2-T	**3/9/21**		M		M
2-W	**3/10/21**		M		M
2-Th	**3/11/21**	2.33	M	3.27	M
2-F	**3/12/21**		M		M
2-Sa	**3/13/21**		M		M
3-Su	**3/14/21**	M	M	M	M
3-M	**3/15/21**	M	M	M	M
3-T	**3/16/21**	M	M	M	M
3-W	**3/17/21**	M	M	M	M
3-Th	**3/18/21**	M	M	M	M
3-F	**3/19/21**	M	M	M	M
3-Sa	**3/20/21**	M	M	M	M
4-Su	**3/21/21**	M	M	M	M
4-M	**3/22/21**	M	M	M	M
4-T	**3/23/21**	M	M	M	M
4-W	**3/24/21**	M	M	M	M
4-Th	**3/25/21**	M	M	M	M
4-F	**3/26/21**	M	M	M	M
4-Sa	**3/27/21**	M	M	M	M
5-Su	**3/28/21**	M	M	M	M
5-M	**3/29/21**	M	M	M	M
5-T	**3/30/21**	M	M	M	M
5-W	**3/31/21**	M	M	M	M
Minimum			M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		2.33	M	3.27	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

Overall DMR Notes/Comment

Construction activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-25 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once a month. Construction activities are recommencing Spring 2021. King County Solid Waste Division (KCSWD) executed the construction contract for all remaining construction work with Goodfellow Brothers, Inc. in April 2021. Goodfellow are scheduled to begin mobilizing in April and construction work commencing in April - May 2021. KCSWD will be transferring the CSGP to Goodfellow Brothers in accordance with Section S2.A.2 of the permit. The completed Transfer of Coverage Form will be submitted to Ecology by KCSWD sometime the week of April 19-25, 2021. The transfer will comprise the entire site and will go into effect in April. This March 2021 DMR is the last DMR being submitted by KCSWD for this CSGP.

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Other
	1	Silt Fence
	2	Check Dams
	2	Other
	2	Silt Fence
	3	Check Dams
	3	Other
	3	Silt Fence
	4	Check Dams
	4	Other
	4	Silt Fence
	5	Check Dams
	5	Other
	5	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.

Joan Kenton
Signature

4/15/2021 2:29:35 PM
Date

Washington Department of Ecology
Electronic Submission Cover Letter

DEPARTMENT OF ECOLOGY
State of Washington

WQWebDMR - Permit# WAR000756 - DMR Submission Id: 1769237 - 4/26/2021 11:19:29 AM

Company Name	Signer Name	System Name
King County Solid Waste Division	Jennifer Keune	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for King County Solid Waste Division	Copy of Record KingCountySolidWasteDivision Monday April 26 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



+RwlP6B+syCxvU9KvcyZP3etk63YWgLnR0Wy+smq4VBnVLUaF3w1CzfhaAgZ5VUdyL
+T9WiqD8CHwxIrWeR06RV/JfRQASmbzA9/M4gLXn0=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 01/01/2021 - 03/31/2021 **Outfall:** GS1 - Discharge to unnamed stream (wetland) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1
Limit Set		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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
2-Th	**1/7/21**	A	No	A	<2	1.4	0.121	<0.476	<9.52	<0.476	<0.476	1.89
Minimum												
Average		A		A								
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average					<2	1.4	0.121	<0.476	<9.52	<0.476	<0.476	1.89
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: A - Consistent Attainment Of Benchmark, B - Below Detection Limit/No Detection, M - Monitoring Is Conditional/Not Req This MP

Week	Monitoring Point	pH Standard Units Quarterly Grab
		GS1
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
2-Th	1/7/21	6.83
Minimum		6.83
		>= 6.0 (RO)
Average		
Maximum		6.83
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 01/01/2021 - 03/31/2021 **Outfall:** N4 - Discharge to unnamed stream (McDonald Cr) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4
Limit Set		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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
2-Th	**1/7/21**	A	No	17.5	<2	3.1	0.0128	<0.472	<9.43	<0.472	<0.472	42.7
6-W	**2/3/21**	M	M	9.91	M	M	M	M	M	M	M	M
Minimum												
Average		A		13.705								
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average					<2	3.1	0.0128	<0.472	<9.43	<0.472	<0.472	42.7
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: A - Consistent Attainment Of Benchmark, B - Below Detection Limit/No Detection, M - Monitoring Is Conditional/Not Req This MP

Week	Monitoring Point	pH Standard Units Quarterly Grab
		N4
Limit Set		**ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit**
2-Th	**1/7/21**	7.46
6-W	**2/3/21**	M
Minimum		7.46
		>= 6.0 (RO)
Average		
Maximum		7.46
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 01/01/2021 - 03/31/2021 **Outfall:** SL3 - Discharge to unnamed stream (ditch) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Weasured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3
Limit Set		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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
2-Th	**1/7/21**	A	No	A	<2	6.8	0.127	<.472	<9.43	<.472	<.472	12.2
Minimum												
Average		A		A								
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average					<2	6.8	0.127	<.472	<9.43	<.472	<.472	12.2
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: A - Consistent Attainment Of Benchmark, B - Below Detection Limit/No Detection, M - Monitoring Is Conditional/Not Req This MP

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.

Jennifer Keune
Signature

4/26/2021 11:19:36 AM
Date

Week	Monitoring Point	pH Standard Units Quarterly Grab
		SL3
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
2-Th	1/7/21	7.31
Minimum		7.31
		>= 6.0 (RO)
Average		
Maximum		7.31
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill ---Surface Water Elevation-Staff Gage Measurements
Contact Person: Natalya Usova (206) 263-0608

Staff Gage	Location	Date	Reference Elevation Staff Gage 0' (msl)	Reference Elevation Top of Peizo (msl)	Depth to Water (Peizometer) (feet)	Staff Gage Reading (feet)	Surface Water Elevation (msl)	Comments
SW-G1	SW-W1	4/1/2021	415.38	418.84		0.46	415.84	
SW-G1	SW-W1	5/27/2021	415.38	418.84		0.45	415.83	
SW-G2	SW-N1	10/1/2020	355.68	358.21		0.2	358.21	
SW-G2	SW-N1	11/25/2020	355.68	358.21		0.04	355.72	
SW-G3	SW -V	10/1/2020	466.46	469.88			466.46	DRY
SW-G3	SW -V	11/25/2020	466.46	469.88	DRY		466.46	DRY
SW-G4	Upstream of SW-E1	10/1/2020	502.41	505.85		0.29	502.70	
SW-G4	Upstream of SW-E1	11/25/2020	502.41	505.85	4.65		502.41	
SW-G5	SW-E1	10/1/2020	486.92	490.34		0.59	487.51	
SW-G5	SW-E1	11/25/2020	486.92	490.34	3.00		486.92	
SW-G6	Upstream of SW-GS	10/1/2020	490.72	494.12	3.60		490.72	
SW-G6	Upstream of SW-GS	11/25/2020	490.72	494.12	3.2		490.72	
SW-G7	SW-S2	10/1/2020	453.03	456.41		0.75	453.78	DRY
SW-G7	SW-S2	11/25/2020	453.03	456.41		0.65	453.68	
SW-G8	Upstream of SW-S1	10/1/2020	510.61	515.56		0.3	510.91	DRY
SW-G8	Upstream of SW-S1	11/25/2020	510.61	515.56		0.11	510.72	
SW-G9	SW-S1	10/1/2020	490.93	494.35		0.64	491.57	DRY
SW-G9	SW-S1	11/25/2020	490.93	494.35		0.4	491.33	

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill - Surface Water Field Parameters

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	pH (Field) (std. Units)	Spec. Conductance (Field) (umho/cm)	Temperature (Field) (^{o}C)	Turbidity (Field) (NTU)	Dissolved Oxygen, (Field) (mg/L)
SW-GS1	SGS1210426P	4/26/2021	7		12.6		
SW-N4	SN4-210426P	4/26/2021	7.78		12.2		
SW-SL3	SSL3210426P	4/26/2021	6.97		13.4		

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Surface Water Conventionals and Metals Parameters
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Ammonia, (NH3) (mg/L)	Biological Oxygen Demand (mg/L)	Total Suspended Solids (mg/L)	Zinc, total (mg/L)
SW-GS1	SGS1210426P	4/26/2021	0.009 T	3.41	8.8	0.00232
SW-N4	SN4-210426P	4/26/2021	0.0042 T	2.36	0.8 T	0.00763
SW-SL3	SSL3210426P	4/26/2021	0.0065 T	2 U	4.6	0.00249

lifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Surface Water Volatile Organic Compounds
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	3-,4-Methylphenol mixture 15831-10-4 (ug/L)	Alpha-Terpineol 98-55-5 (ug/L)	Benzoic Acid 65-85-0 (ug/L)	Phenol 108-95-2 (ug/L)
SW-GS1	SGS1201119P	11/19/2020	0.5 U	0.5 U	10 U	0.5 U
SW-N4	SN4-201012P	10/12/2020	0.505 U	0.505 U	10.1 U	0.505 U
SW-SL3	SSL3201119P	11/19/2020	0.5 U	0.5 U	10 U	0.5 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	1,1,1,2-TETRACHLOROETHANE	1,1,1-TRICHLOROETHANE	1,1,2,2-TETRACHLOROETHANE	1,1,2-TRICHLOROETHANE	1,1-DICHLOROETHANE	1,1-DICHLOROETHENE	1,2,3-TRICHLOROPROPANE	1,2-DIBROMO-3-CHLOROPROPANE	1,2-DIBROMOETHANE	1,2-DICHLOROBENZENE	1,2-DICHLOROETHANE	1,2-DICHLOROPROPANE	1,4-DICHLOROBENZENE	2-BUTANONE
			630-20-6	71-55-6	79-34-5	79-00-5	75-34-3	75-35-4	96-18-4	96-12-8	106-93-4	95-50-1	107-06-2	78-87-5	106-46-7	78-93-3
			ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
			N	N	N	N	N	N	N	N	N	N	N	N	N	N
SW-E1	4/20/2021	SE1-210420Q	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	2-HEXANONE	3-,4-Methylphenol mixture	4-METHYL-2-PENTANONE	ACETONE	ACRYLONITRILE	ALKALINITY, TOTAL (AS CACO3)	ALPHA-TERPINEOL	AMMONIA AS N	ANTIMONY	ANTIMONY	ARSENIC	ARSENIC	BARIUM
			591-78-6	15831-10-4	108-10-1	67-64-1	107-13-1	ALK	98-55-5	7664-41-7	7440-36-0	7440-36-0	7440-38-2	7440-38-2	7440-39-3
			ug/l	ug/l	ug/l	ug/l	ug/l	mg/l	ug/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
			N	N	N	N	N	N	N	N	D	T	D	T	D
SW-E1	4/20/2021	SE1-210420Q	0.5 U		2.5 U	2.5 U	0.035 U	21		0.0117	0.0003 U	0.0003 U	0.000317	0.000345	0.00365

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	BARIUM	BENZENE	BENZOIC ACID	BERYLLIUM	BERYLLIUM	BIOLOGICAL OXYGEN DEMAND - 5 DAY	BROMOCHLOROMETHANE	BROMODICHLOROMETHANE	BROMOFORM	BROMOMETHANE	CADMIUM	CADMIUM	CALCIUM
			7440-39-3	71-43-2	65-85-0	7440-41-7	7440-41-7	BOD	74-97-5	75-27-4	75-25-2	74-83-9	7440-43-9	7440-43-9	7440-70-2
			mg/l	ug/l	ug/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l
			T	N	N	D	T	N	N	N	N	N	D	T	D
SW-E1	4/20/2021	SE1-210420Q	0.00413	0.1 U		0.0001 U	0.0001 U		0.1 U	0.25 U	0.5 U	0.1 U	5E-05 U	5E-05 U	5.92

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	CALCIUM	CARBON DISULFIDE	CARBON TETRACHLORIDE	CHLORIDE	CHLOROBENZENE	CHLORODIBROMOMETHANE	CHLOROETHANE	CHLOROFORM	CHLOROMETHANE	CHROMIUM	CHROMIUM	CIS-1,2-DICHLOROETHENE	-DICHLOROPR	COBALT
			7440-70-2	75-15-0	56-23-5	16887-00-6	108-90-7	124-48-1	75-00-3	67-66-3	74-87-3	7440-47-3	7440-47-3	156-59-2	10061-01-5	7440-48-4
			mg/l	ug/l	ug/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	ug/l	ug/l	mg/l
			T	N	N	N	N	N	N	N	N	D	T	N	N	D
SW-E1	4/20/2021	SE1-210420Q	5.9	0.1 U	0.25 U	2.02	0.1 U	0.5 U	0.1 U	0.1 U	0.25 U	0.0002 U	0.000258	0.1 U	0.25 U	8.13E-05

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	COBALT	COPPER	COPPER	DIBROMOMETHANE	DICHLORODIFLUOROMETHANE	DISSOLVED OXYGEN, FIELD	ETHYLBENZENE	IRON	IRON	LEAD	LEAD	M & P XYLENE	MAGNESIUM	MAGNESIUM
			7440-48-4	7440-50-8	7440-50-8	74-95-3	75-71-8	DO-F	100-41-4	7439-89-6	7439-89-6	7439-92-1	7439-92-1	MPX	7439-95-4	7439-95-4
			mg/l	mg/l	mg/l	ug/l	ug/l	mg/l	ug/l	mg/l	mg/l	mg/l	mg/l	ug/l	mg/l	mg/l
			T	D	T	N	N	N	N	D	T	D	T	N	D	T
SW-E1	4/20/2021	SE1-210420Q	0.00011	0.00077	0.0008	0.1 U	0.1 U	6.99	0.1 U	0.0997	0.163	0.0001 U	0.000131	0.1 U	1.31	1.31

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	MANGANESE	MANGANESE	MERCURY	MERCURY	METHYL IODIDE	METHYLENE CHLORIDE	NICKEL	NICKEL	NITRATE	O-XYLENE	pH, FIELD	PHENOL	POTASSIUM	POTASSIUM
			7439-96-5	7439-96-5	7439-97-6	7439-97-6	74-88-4	75-09-2	7440-02-0	7440-02-0	14797-55-8	95-47-6	pH-F	108-95-2	7440-09-7	7440-09-7
			mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	mg/l	mg/l	mg/l	ug/l	pH units	ug/l	mg/l	mg/l
			D	T	D	T	N	N	D	T	N	N	N	N	D	T
SW-E1	4/20/2021	SE1-210420Q	0.0461	0.0539	5E-05 U	5E-05 U	0.1 U	2.5 U	0.000227	0.000291	0.0923	0.1 U	5.94		0.423	0.394

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	SELENIUM	SELENIUM	SILVER	SILVER	SODIUM	SODIUM	SPEC COND, FIELD	SPECIFIC CONDUCTANCE	STYRENE	SULFATE	TEMPERATURE, FIELD	TETRACHLOROETHENE	THALLIUM	THALLIUM
			7782-49-2	7782-49-2	7440-22-4	7440-22-4	7440-23-5	7440-23-5	COND-F	COND	100-42-5	14808-79-8	TEMP	127-18-4	7440-28-0	7440-28-0
			mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	umhos/cm	umhos/cm	ug/l	mg/l	deg c	ug/l	mg/l	mg/l
			D	T	D	T	D	T	N	N	N	N	N	N	D	T
SW-E1	4/20/2021	SE1-210420Q	0.0005 U	0.0005 U	4E-05 U	4E-05 U	3.05	3.01	50	55.2	0.1 U	1.22	8.99	0.1 U	0.0001 U	0.0001 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	TOLUENE 108-88-3 ug/l N	TOTAL DISSOLVED SOLIDS TDS mg/l N	TOTAL ORGANIC CARBON TOC mg/l N	TOTAL SOLIDS TS mg/l N	TOTAL SUSPENDED SOLIDS TSS mg/l N	TRANS-1,2-DICHLOROETHENE 156-60-5 ug/l N	TRANS-1,3-DICHLOROPROPENE 10061-02-6 ug/l N
SW-E1	4/20/2021	SE1-210420Q	0.1 U	49.3	2.69	54	1.4	0.1 U	0.5 U

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Surfacewater Top Deck Data
Contact Person: Natalya Usova (206) 263-0608

Sample ID	Date	pH (Field) (std. Units)	Conductance (Field) (umho/cm)	Temperature (Field) (^{o}C)	Turbidity (Field) (NTU)	Alkalinity, (Total) (CaCO3) (mg/L)	Chemical Oxygen Demand (mg/L)	Chloride (mg/L)	Iron, (Dissolved) (mg/L)	Iron, (Total) (mg/L)	Sulfate (SO4) (mg/L)	Total Organic Carbon (mg/L)
SW-TD1		No samples Collected due to no flow										
SW-TD2												
SW-TD7												

Washington Department of Ecology
Electronic Submission Cover Letter

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1772702 - 5/14/2021 3:18:08 PM

Company Name	Signer Name	System Name
Goodfellow Bros LLC	Kyle Williams	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for Goodfellow Bros LLC	Copy of Record GoodfellowBrosLLC Friday May 14 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



kxjiNjEsc4K6qOWng7ow8Gam4iMkIXWJskAkDGOIQX2KaAkjh015PzbSejIze4BAJE3KSv4VIxJyJQZvBzCVuBis5JvAotNz5buvb1AAyoA=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 04/01/2021 - 04/30/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
1-Th	**4/1/21**	M	M
1-F	**4/2/21**	M	M
1-Sa	**4/3/21**	M	M
2-Su	**4/4/21**	M	M
2-M	**4/5/21**	M	M
2-T	**4/6/21**	M	M
2-W	**4/7/21**	M	M
2-Th	**4/8/21**	M	M
2-F	**4/9/21**	M	M
2-Sa	**4/10/21**	M	M
3-Su	**4/11/21**	M	M
3-M	**4/12/21**	M	M
3-T	**4/13/21**	M	M
3-W	**4/14/21**	M	M
3-Th	**4/15/21**	M	M
3-F	**4/16/21**	M	M
3-Sa	**4/17/21**	M	M
4-Su	**4/18/21**	M	M
4-M	**4/19/21**	M	M
4-T	**4/20/21**	M	M
4-W	**4/21/21**	M	M
4-Th	**4/22/21**	M	M
4-F	**4/23/21**	M	M
4-Sa	**4/24/21**	M	M
5-Su	**4/25/21**	M	M
5-M	**4/26/21**	4.11	M
5-T	**4/27/21**	M	M
5-W	**4/28/21**	M	M
5-Th	**4/29/21**	M	M
5-F	**4/30/21**	M	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		4.11	M
		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 activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-2025 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once every calendar month. Monitoring will continue on this monthly inspection schedule until construction activities recommence in Spring 2021.

Construction Activities began 4/25/11 and daily reporting will be captured starting with the May report.

BMPs

Monitoring Point	Week	BMP
	1	Silt Fence
	2	Silt Fence
	3	Silt Fence
	4	Silt Fence

	5	Check Dams
	5	Gravel Filter Berm
	5	Silt Fence
	5	Straw Wattles
	5	Triangular Silt Dike

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 04/01/2021 - 04/30/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C3	C3
1-Th	**4/1/21**	M	M
1-F	**4/2/21**	M	M
1-Sa	**4/3/21**	M	M
2-Su	**4/4/21**	M	M
2-M	**4/5/21**	M	M
2-T	**4/6/21**	M	M
2-W	**4/7/21**	M	M
2-Th	**4/8/21**	M	M
2-F	**4/9/21**	M	M
2-Sa	**4/10/21**	M	M
3-Su	**4/11/21**	M	M
3-M	**4/12/21**	M	M
3-T	**4/13/21**	M	M
3-W	**4/14/21**	M	M
3-Th	**4/15/21**	M	M
3-F	**4/16/21**	M	M
3-Sa	**4/17/21**	M	M
4-Su	**4/18/21**	M	M
4-M	**4/19/21**	M	M
4-T	**4/20/21**	M	M
4-W	**4/21/21**	M	M
4-Th	**4/22/21**	M	M
4-F	**4/23/21**	M	M
4-Sa	**4/24/21**	M	M
5-Su	**4/25/21**	M	M
5-M	**4/26/21**	3.51	M
5-T	**4/27/21**	M	M
5-W	**4/28/21**	M	M
5-Th	**4/29/21**	M	M
5-F	**4/30/21**	M	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		3.51	M
		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 activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-2025 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once every calendar month. Monitoring will continue on this monthly inspection schedule until construction activities recommence in Spring 2021.

Construction Activities began 4/25/11 and daily reporting will be captured starting with the May report.

BMPs

Monitoring Point	Week	BMP
	1	Silt Fence
	2	Silt Fence
	3	Silt Fence

	4	Silt Fence
	5	Check Dams
	5	Silt Fence
	5	Straw Wattles

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 04/01/2021 - 04/30/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **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
		C1	C1	C2	C2
1-Th	**4/1/21**	M	M	M	M
1-F	**4/2/21**	M	M	M	M
1-Sa	**4/3/21**	M	M	M	M
2-Su	**4/4/21**	M	M	M	M
2-M	**4/5/21**	M	M	M	M
2-T	**4/6/21**	M	M	M	M
2-W	**4/7/21**	M	M	M	M
2-Th	**4/8/21**	M	M	M	M
2-F	**4/9/21**	M	M	M	M
2-Sa	**4/10/21**	M	M	M	M
3-Su	**4/11/21**	M	M	M	M
3-M	**4/12/21**	M	M	M	M
3-T	**4/13/21**	M	M	M	M
3-W	**4/14/21**	M	M	M	M
3-Th	**4/15/21**	M	M	M	M
3-F	**4/16/21**	M	M	M	M
3-Sa	**4/17/21**	M	M	M	M
4-Su	**4/18/21**	M	M	M	M
4-M	**4/19/21**	M	M	M	M
4-T	**4/20/21**	M	M	M	M
4-W	**4/21/21**	M	M	M	M
4-Th	**4/22/21**	M	M	M	M
4-F	**4/23/21**	M	M	M	M
4-Sa	**4/24/21**	M	M	M	M
5-Su	**4/25/21**	M	M	M	M
5-M	**4/26/21**	2.50	M	C	C
5-T	**4/27/21**	M	M	M	M
5-W	**4/28/21**	M	M	M	M
5-Th	**4/29/21**	M	M	M	M
5-F	**4/30/21**	M	M	M	M
Minimum			M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		2.50	M	C	M
		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 activities for 2020 ended November 20, 2020 and the site is currently inactive and temporarily stabilized. In accordance with Section S4.B.3. of the 2021-2025 permit, while the site is inactive and temporarily stabilized the inspection frequency will be reduced to once every calendar month. Monitoring will continue on this monthly inspection schedule until construction activities recommence in Spring 2021.

Construction Activities began 4/25/11 and daily reporting will be captured starting with the May report.

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	2	Check Dams

	3	Check Dams
	4	Check Dams
	5	Check Dams
	5	Gravel Filter Berm
	5	Silt Fence
	5	Straw Wattles

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.

Kyle Williams
Signature

5/14/2021 3:18:13 PM
Date

Washington Department of Ecology
Electronic Submission Cover Letter

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1776531 - 6/15/2021 6:52:38 AM

Company Name	Signer Name	System Name
Goodfellow Bros LLC	Kyle Williams	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for Goodfellow Bros LLC	Copy of Record GoodfellowBrosLLC Tuesday June 15 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



wWrBkEQzoJZrDxZOa/jiXzNPg7DMTmaSc/rbU9pDut4LHvwBtS1nV7t4HwJJTaLz5L/QwVPmz1i3V0xiJWFr4wnBdzNCuY
OaEJra0KWfLpE=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 05/01/2021 - 05/31/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
1-Sa	**5/1/21**	M	M
2-Su	**5/2/21**	M	M
3-Su	**5/9/21**	M	M
4-Su	**5/16/21**	M	M
5-Su	**5/23/21**	M	M
6-Su	**5/30/21**	M	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		7.09	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Silt Fence
	1	Straw Wattles
	2	Check Dams
	2	Silt Fence
	2	Straw Wattles
	3	Check Dams
	3	Silt Fence
	3	Straw Wattles
	4	Check Dams
	4	Silt Fence
	4	Straw Wattles
	5	Check Dams
	5	Silt Fence
	5	Straw Wattles
	6	Check Dams
	6	Silt Fence
	6	Straw Wattles

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 05/01/2021 - 05/31/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C3	C3
1-Sa	**5/1/21**	C	C
2-Su	**5/2/21**	C	C
3-Su	**5/9/21**	C	C
4-Su	**5/16/21**	C	C
5-Su	**5/23/21**	C	C
6-Su	**5/30/21**	C	C
Minimum			
			BM: >= 6.5 (RO)
Maximum			
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Silt Fence
	1	Straw Wattles
	2	Check Dams
	2	Silt Fence
	2	Straw Wattles
	3	Check Dams
	3	Silt Fence
	3	Straw Wattles
	4	Check Dams
	4	Silt Fence
	4	Straw Wattles
	5	Check Dams
	5	Silt Fence
	5	Straw Wattles
	6	Check Dams
	6	Silt Fence
	6	Straw Wattles

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 05/01/2021 - 05/31/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **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
		C1	C1	C2	C2
1-Sa	**5/1/21**	C	C	C	C
2-Su	**5/2/21**	C	C	C	C
3-Su	**5/9/21**	C	C	C	C
4-Su	**5/16/21**	C	C	C	C
5-Su	**5/23/21**	C	C	C	C
6-Su	**5/30/21**	C	C	C	C
Minimum			C		C
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		C	C	C	C
		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

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Silt Fence
	1	Straw Wattles
	2	Check Dams
	2	Silt Fence
	2	Straw Wattles
	3	Check Dams
	3	Silt Fence
	3	Straw Wattles
	4	Check Dams
	4	Silt Fence
	4	Straw Wattles
	5	Check Dams
	5	Silt Fence
	5	Straw Wattles
	6	Check Dams
	6	Silt Fence
	6	Straw Wattles

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.

Kyle Williams — **Signature**

6/15/2021 6:52:38 AM — **Date**

Washington Department of Ecology
Electronic Submission Cover Letter

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1780562 - 7/14/2021 1:35:52 PM

Company Name	Signer Name	System Name
Goodfellow Bros LLC	Kyle Williams	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for Goodfellow Bros LLC	Copy of Record GoodfellowBrosLLC Wednesday July 14 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only

8C3eytnJLglxXKLrwgilurnfUZ3udtjB8GWS7UpwGGyyUv2ooulPSfmIMiyX0V5PpvygK0Pcta/cOrhAiXpx1ARDU86H+drV3wqwokBnsv0=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 06/01/2021 - 06/30/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
1-T	**6/1/21**	2.12	M
1-W	**6/2/21**	1.26	M
1-Th	**6/3/21**	2.57	M
1-F	**6/4/21**	4.78	M
1-Sa	**6/5/21**	M	M
2-Su	**6/6/21**	M	M
2-M	**6/7/21**	2.88	M
2-T	**6/8/21**	4.78	M
2-W	**6/9/21**	1.81	M
2-Th	**6/10/21**	1.71	M
2-F	**6/11/21**	1.23	M
2-Sa	**6/12/21**	M	M
3-Su	**6/13/21**	M	M
3-M	**6/14/21**	3.68	M
3-T	**6/15/21**	2.73	M
3-W	**6/16/21**	2.04	M
3-Th	**6/17/21**	1.77	M
3-F	**6/18/21**	1.54	M
3-Sa	**6/19/21**	M	M
4-Su	**6/20/21**	C	C
5-Su	**6/27/21**	C	C
Minimum			M
			BM: >= 6.5 (RO)
Maximum		4.78	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Silt Fence
	1	Straw Wattles
	2	Check Dams
	2	Silt Fence
	2	Straw Wattles
	3	Check Dams
	3	Silt Fence
	3	Straw Wattles
	4	Check Dams
	4	Silt Fence
	4	Straw Wattles
	5	Check Dams
	5	Silt Fence
	5	Straw Wattles

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 06/01/2021 - 06/30/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C3	C3
1-T	**6/1/21**	C	C
2-Su	**6/6/21**	C	C
3-Su	**6/13/21**	C	C
4-Su	**6/20/21**	C	C
5-Su	**6/27/21**	C	C
Minimum			
			BM: >= 6.5 (RO)
Maximum			
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Silt Fence
	1	Straw Wattles
	2	Check Dams
	2	Silt Fence
	2	Straw Wattles
	3	Check Dams
	3	Silt Fence
	3	Straw Wattles
	4	Check Dams
	4	Silt Fence
	4	Straw Wattles
	5	Check Dams
	5	Silt Fence
	5	Straw Wattles

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 06/01/2021 - 06/30/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **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
		C1	C1	C2	C2
1-T	**6/1/21**	C	C	C	C
2-Su	**6/6/21**	C	C	C	C
3-Su	**6/13/21**	C	C	C	C
4-Su	**6/20/21**	C	C	C	C
5-Su	**6/27/21**	C	C	C	C
Minimum					
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum					
		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

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Silt Fence
	1	Straw Wattles
	2	Check Dams
	2	Silt Fence
	2	Straw Wattles
	3	Check Dams
	3	Silt Fence
	3	Straw Wattles
	4	Check Dams
	4	Silt Fence
	4	Straw Wattles
	5	Check Dams
	5	Silt Fence
	5	Straw Wattles

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.

Kyle Williams — **Signature**

7/14/2021 1:35:54 PM — **Date**

Washington Department of Ecology
Electronic Submission Cover Letter

DEPARTMENT OF ECOLOGY
State of Washington

WQWebDMR - Permit# WAR000756 - DMR Submission Id: 1785866 - 8/12/2021 10:15:45 AM

Company Name	Signer Name	System Name
King County Solid Waste Division	Jennifer Keune	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for King County Solid Waste Division	Copy of Record KingCountySolidWasteDivision Thursday August 12 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



9phjv2XIYOIRyQwQ4f2pwtvuZi3FaCtUIFbupnkI2h
+TUVBngBQPhfXO90ykB5qMMx2H8O9gK3usFF16mUMRoxoQfiENhaxTLpmegOTfg7c=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 04/01/2021 - 06/30/2021 **Outfall:** GS1 - Discharge to unnamed stream (wetland) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1
Limit Set		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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-M	**4/26/21**	A	No	A	3.41	8.8	0.009	<0.481	<9.62	<0.481	<0.481	2.32
Minimum												
Average		A		A								
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average					3.41	8.8	0.009	<0.481	<9.62	<0.481	<0.481	2.32
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: A - Consistent Attainment Of Benchmark, B - Below Detection Limit/No Detection, M - Monitoring Is Conditional/Not Req This MP

Week	Monitoring Point	pH Standard Units Quarterly Grab
		GS1
	Limit Set	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-M	4/26/21	7
Minimum		7
		>= 6.0 (RO)
Average		
Maximum		7
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 04/01/2021 - 06/30/2021 **Outfall:** N4 - Discharge to unnamed stream (McDonald Cr) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4
Limit Set		**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**	**ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit**	**ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit**
5-M	**4/26/21**	A	No	A	2.36	0.8	0.0042	<0.481	<9.62	<0.481	<0.481	7.63
Minimum												
Average		A		A								
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average					2.36	0.8	0.0042	<0.505	<9.43	<0.481	<0.481	7.63
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: A - Consistent Attainment Of Benchmark, B - Below Detection Limit/No Detection, M - Monitoring Is Conditional/Not Req This MP

Week	Monitoring Point	pH Standard Units Quarterly Grab
		N4
	Limit Set	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-M	**4/26/21**	7.78
Minimum		7.78
		>= 6.0 (RO)
Average		
Maximum		7.78
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 04/01/2021 - 06/30/2021 **Outfall:** SL3 - Discharge to unnamed stream (ditch) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Weasured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3
Limit Set		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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-M	**4/26/21**	A	No	A	<2	4.6	0.0065	<0.476	<9.52	<0.476	<0.476	2.49
Minimum												
Average		A		A								
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average					<2	4.6	0.0065	<0.476	<9.52	<0.476	<0.476	2.49
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: A - Consistent Attainment Of Benchmark, B - Below Detection Limit/No Detection, M - Monitoring Is Conditional/Not Req This MP

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.

Jennifer Keune — **Signature**

8/12/2021 10:15:43 AM — **Date**

Week	Monitoring Point	pH Standard Units Quarterly Grab
		SL3
		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
	Limit Set	
5-M	4/26/21	6.97
Minimum		6.97
		>= 6.0 (RO)
Average		
Maximum		6.97
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill ---Surface Water Elevation-Staff Gage Measurements
Contact Person: Natalya Usova (206) 263-0608

Staff Gage	Location	Date	Reference Elevation Staff Gage 0' (msl)	Reference Elevation Top of Peizo (msl)	Depth to Water (Peizometer) (feet)	Staff Gage Reading (feet)	Surface Water Elevation (msl)	Comments
SW-G1	SW-W1	4/1/2021	415.38	418.84		0.46	415.84	
SW-G1	SW-W1	5/27/2021	415.38	418.84		0.45	415.83	
SW-G2	SW-N1	10/1/2020	355.68	358.21		0.2	358.21	
SW-G2	SW-N1	11/25/2020	355.68	358.21		0.04	355.72	
SW-G3	SW -V	10/1/2020	466.46	469.88			466.46	DRY
SW-G3	SW -V	11/25/2020	466.46	469.88	DRY		466.46	DRY
SW-G4	Upstream of SW-E1	10/1/2020	502.41	505.85		0.29	502.70	
SW-G4	Upstream of SW-E1	11/25/2020	502.41	505.85	4.65		502.41	
SW-G5	SW-E1	10/1/2020	486.92	490.34		0.59	487.51	
SW-G5	SW-E1	11/25/2020	486.92	490.34	3.00		486.92	
SW-G6	Upstream of SW-GS	10/1/2020	490.72	494.12	3.60		490.72	
SW-G6	Upstream of SW-GS	11/25/2020	490.72	494.12	3.2		490.72	
SW-G7	SW-S2	10/1/2020	453.03	456.41		0.75	453.78	DRY
SW-G7	SW-S2	11/25/2020	453.03	456.41		0.65	453.68	
SW-G8	Upstream of SW-S1	10/1/2020	510.61	515.56		0.3	510.91	DRY
SW-G8	Upstream of SW-S1	11/25/2020	510.61	515.56		0.11	510.72	
SW-G9	SW-S1	10/1/2020	490.93	494.35		0.64	491.57	DRY
SW-G9	SW-S1	11/25/2020	490.93	494.35		0.4	491.33	

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill - Surface Water Field Parameters

Contact Person: Natalya Usova (206) 263-0608

			pH	Spec. Conductance	Temperature	Turbidity	Dissolved Oxygen,
			(Field)	(Field)	(Field)	(Field)	(Field)
Site	Sample ID	Date	(std. Units)	(umho/cm)	(^{o}C)	(NTU)	(mg/L)
SW-TD1	STD1210930-	9/30/2021	7.29	370.9	14.99	198	9.61

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Surface Water Conventionals and Metals Parameters
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Ammonia, (NH3) (mg/L)	Biological Oxygen Demand (mg/L)	Total Suspended Solids (mg/L)	Zinc, total (mg/L)
SW-GS1 SW-N4 SW-SL3			No sample taken			

lifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Surface Water Volatile Organic Compounds
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	3-,4-Methylphenol mixture 15831-10-4 (ug/L)	Alpha-Terpineol 98-55-5 (ug/L)	Benzoic Acid 65-85-0 (ug/L)	Phenol 108-95-2 (ug/L)
SW-GS1 SW-N4 SW-SL3			No sample taken			

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	1,1,1,2-TETRACHLOROETHANE	1,1,1-TRICHLOROETHANE	1,1,2,2-TETRACHLOROETHANE	1,1,2-TRICHLOROETHANE	1,1-DICHLOROETHANE	1,1-DICHLOROETHENE	1,2,3-TRICHLOROPROPANE	1,2-DIBROMO-3-CHLOROPROPANE	1,2-DIBROMOETHANE	1,2-DICHLOROBENZENE	1,2-DICHLOROETHANE	1,2-DICHLOROPROPANE	1,4-DICHLOROBENZENE	2-BUTANONE
			630-20-6	71-55-6	79-34-5	79-00-5	75-34-3	75-35-4	96-18-4	96-12-8	106-93-4	95-50-1	107-06-2	78-87-5	106-46-7	78-93-3
			ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
			N	N	N	N	N	N	N	N	N	N	N	N	N	N
SW-E1			No sample taken													

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	2-HEXANONE	3-,4-Methylphenol mixture	4-METHYL-2-PENTANONE	ACETONE	ACRYLONITRILE	ALKALINITY, TOTAL (AS CACO3)	ALPHA-TERPINEOL	AMMONIA AS N	ANTIMONY	ANTIMONY	ARSENIC	ARSENIC	BARIUM
			591-78-6	15831-10-4	108-10-1	67-64-1	107-13-1	ALK	98-55-5	7664-41-7	7440-36-0	7440-36-0	7440-38-2	7440-38-2	7440-39-3
			ug/l	ug/l	ug/l	ug/l	ug/l	mg/l	ug/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
			N	N	N	N	N	N	N	N	D	T	D	T	D
SW-E1			No sample taken												

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	BARIUM	BENZENE	BENZOIC ACID	BERYLLIUM	BERYLLIUM	BIOLOGICAL OXYGEN DEMAND - 5 DAY	BROMOCHLOROMETHANE	BROMODICHLOROMETHANE	BROMOFORM	BROMOMETHANE	CADMIUM	CADMIUM	CALCIUM
			7440-39-3	71-43-2	65-85-0	7440-41-7	7440-41-7	BOD	74-97-5	75-27-4	75-25-2	74-83-9	7440-43-9	7440-43-9	7440-70-2
			mg/l	ug/l	ug/l	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l
			T	N	N	D	T	N	N	N	N	N	D	T	D
SW-E1			No sample taken												

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	CALCIUM	CARBON DISULFIDE	CARBON TETRACHLORIDE	CHLORIDE	CHLOROBENZENE	CHLORODIBROMOMETHANE	CHLOROETHANE	CHLOROFORM	CHLOROMETHANE	CHROMIUM	CHROMIUM	CIS-1,2-DICHLOROETHENE	-DICHLOROPR	COBALT
			7440-70-2	75-15-0	56-23-5	16887-00-6	108-90-7	124-48-1	75-00-3	67-66-3	74-87-3	7440-47-3	7440-47-3	156-59-2	10061-01-5	7440-48-4
			mg/l	ug/l	ug/l	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	ug/l	ug/l	mg/l
			T	N	N	N	N	N	N	N	N	D	T	N	N	D
SW-E1			No sample taken													

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	COBALT	COPPER	COPPER	DIBROMOMETHANE	DICHLORODIFLUOROMETHANE	DISSOLVED OXYGEN, FIELD	ETHYLBENZENE	IRON	IRON	LEAD	LEAD	M & P XYLENE	MAGNESIUM	MAGNESIUM
			7440-48-4	7440-50-8	7440-50-8	74-95-3	75-71-8	DO-F	100-41-4	7439-89-6	7439-89-6	7439-92-1	7439-92-1	MPX	7439-95-4	7439-95-4
			mg/l T	mg/l D	mg/l T	ug/l N	ug/l N	mg/l N	ug/l N	mg/l D	mg/l T	mg/l D	mg/l T	ug/l N	mg/l D	mg/l T
SW-E1			No sample taken													

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	MANGANESE	MANGANESE	MERCURY	MERCURY	METHYL IODIDE	METHYLENE CHLORIDE	NICKEL	NICKEL	NITRATE	O-XYLENE	pH, FIELD	PHENOL	POTASSIUM	POTASSIUM
			7439-96-5	7439-96-5	7439-97-6	7439-97-6	74-88-4	75-09-2	7440-02-0	7440-02-0	14797-55-8	95-47-6	pH-F	108-95-2	7440-09-7	7440-09-7
			mg/l	mg/l	mg/l	mg/l	ug/l	ug/l	mg/l	mg/l	mg/l	ug/l	pH units	ug/l	mg/l	mg/l
			D	T	D	T	N	N	D	T	N	N	N	N	D	T
SW-E1			No sample taken													

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	SELENIUM	SELENIUM	SILVER	SILVER	SODIUM	SODIUM	SPEC COND, FIELD	SPECIFIC CONDUCTANCE	STYRENE	SULFATE	TEMPERATURE, FIELD	TETRACHLOROETHENE	THALLIUM	THALLIUM
			7782-49-2	7782-49-2	7440-22-4	7440-22-4	7440-23-5	7440-23-5	COND-F	COND	100-42-5	14808-79-8	TEMP	127-18-4	7440-28-0	7440-28-0
			mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	umhos/cm	umhos/cm	ug/l	mg/l	deg c	ug/l	mg/l	mg/l
			D	T	D	T	D	T	N	N	N	N	N	N	D	T
SW-E1			No sample taken													

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Surface Water Elevation Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	TOLUENE	TOTAL DISSOLVED SOLIDS	TOTAL ORGANIC CARBON	TOTAL SOLIDS	TOTAL SUSPENDED SOLIDS	TRANS-1,2-DICHLOROETHENE	TRANS-1,3-DICHLOROPROPENE
			108-88-3	TDS	TOC	TS	TSS	156-60-5	10061-02-6
			ug/l	mg/l	mg/l	mg/l	mg/l	ug/l	ug/l
			N	N	N	N	N	N	N
SW-E1									

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Surfacewater Top Deck Data
Contact Person: Natalya Usova (206) 263-0608

	Sample ID	Date	pH (Field) (std. Units)	Conductance (Field) (umho/cm)	Temperature (Field) (^{o}C)	Turbidity (Field) (NTU)	Alkalinity, (Total) (CaCO3) (mg/L)	Chemical Oxygen Demand (mg/L)	Chloride (mg/L)	Dissolved Oxygen	Iron, (Dissolved) (mg/L)	Iron, (Total) (mg/L)	Sulfate (SO4) (mg/L)	Total Organic Carbon (mg/L)
SW-TD1	STD1210930-	9/30/2021	7.29	370.9	14.99	198	40	17 T	2.26	9.61	0.0248	6.23	143	7.69

Washington Department of Ecology
Electronic Submission Cover Letter

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1786025 - 8/12/2021 5:14:03 PM

Company Name	Signer Name	System Name
Goodfellow Bros LLC	Kyle Williams	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for Goodfellow Bros LLC	Copy of Record GoodfellowBrosLLC Thursday August 12 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

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vWrAltacLb3NpqloItRZJwwY5+IvbJbCFrFeZgtwJHG0QB0UDc2sRGGGi0+Wc8Wui5eNYVG/i1H
+ibeahXgrkno9i7u6V7gL1Zuzln9gr0I=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 07/01/2021 - 07/31/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
Minimum			
			BM: >= 6.5 (RO)
Maximum			
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

NO FLOW in July

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 07/01/2021 - 07/31/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab C3	pH Standard Units Weekly Grab C3
Minimum			
			BM: >= 6.5 (RO)
Maximum			
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

NO FLOW in July

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 07/01/2021 - 07/31/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab C1	pH Standard Units Weekly Grab C1	Turbidity (NTU) Measured NTU Weekly Grab C2	pH Standard Units Weekly Grab C2
Minimum					
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum					
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

NO FLOW in July

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.

Kyle Williams — **Signature**

8/12/2021 5:14:02 PM — **Date**

Washington Department of Ecology
Electronic Submission Cover Letter

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1789287 - 9/14/2021 5:29:04 PM

Company Name	Signer Name	System Name
Goodfellow Bros LLC	Kyle Williams	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for Goodfellow Bros LLC	Copy of Record GoodfellowBrosLLC Tuesday September 14 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

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Jc9ijYXI2mBy3Q0fAjSAxOePjGWcDLT1okvrKeKqO7VU8143PbBiu+akmFblyIjKwxdcUT6C
+YSmOp423IPgWrQ2Xxle9y3XIDpMuBzsisE=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 08/01/2021 - 08/31/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
1-Su	**8/1/21**	C	C
2-Su	**8/8/21**	C	C
3-Su	**8/15/21**	C	C
4-Su	**8/22/21**	C	C
5-Su	**8/29/21**	C	C
Minimum			
			BM: >= 6.5 (RO)
Maximum			
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 08/01/2021 - 08/31/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C3	C3
1-Su	**8/1/21**	C	C
2-Su	**8/8/21**	C	C
3-Su	**8/15/21**	C	C
4-Su	**8/22/21**	C	C
5-Su	**8/29/21**	C	C
Minimum			
			BM: >= 6.5 (RO)
Maximum			
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 08/01/2021 - 08/31/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **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
		C1	C1	C2	C2
1-Su	**8/1/21**	C	C	C	C
2-Su	**8/8/21**	C	C	C	C
3-Su	**8/15/21**	C	C	C	C
4-Su	**8/22/21**	C	C	C	C
5-Su	**8/29/21**	C	C	C	C
Minimum					
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum					
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

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.

Kyle Williams — **Signature**

9/14/2021 5:29:02 PM — **Date**

Washington Department of Ecology
Electronic Submission Cover Letter

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1792068 - 10/12/2021 8:29:25 AM

Company Name	Signer Name	System Name
Goodfellow Bros LLC	Kyle Williams	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for Goodfellow Bros LLC	Copy of Record GoodfellowBrosLLC Tuesday October 12 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

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Nkit4OS2VLV2Zitu8JM830K
+Nu7QbhkG7mEFNqCRdGoN8pPvOWpjOQP5pyLYtWfhlcrsML8qWBJAUYdHcWJCv9DYPr2MvjksegXJNfX0C4g=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 09/01/2021 - 09/30/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
Minimum			
			BM: >= 6.5 (RO)
Maximum			
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 09/01/2021 - 09/30/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab C3	pH Standard Units Weekly Grab C3
Minimum			
			BM: >= 6.5 (RO)
Maximum			
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 09/01/2021 - 09/30/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **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
		C1	C1	C2	C2
Minimum					
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum					
		BM: <= 25 (RO)	BM: <= 8.5 (RO)	BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

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.

Kyle Williams — **Signature**

10/12/2021 8:29:23 AM — **Date**

Washington Department of Ecology
Electronic Submission Cover Letter

DEPARTMENT OF ECOLOGY
State of Washington

WQWebDMR - Permit# WAR000756 - DMR Submission Id: 1797578 - 11/10/2021 3:05:39 PM

Company Name	Signer Name	System Name
King County Solid Waste Division	Jennifer Keune	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for King County Solid Waste Division	Copy of Record KingCountySolidWasteDivision Wednesday November 10 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



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+V4F0oJjISqqSvPkpiCG8=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 07/01/2021 - 09/30/2021 **Outfall:** GS1 - Discharge to unnamed stream (wetland) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1
Limit Set		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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
Minimum												
Average												
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average												
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average												
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average												
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

No sampleable discharge occurred during the monitoring period.

Week	Monitoring Point	pH Standard Units Quarterly Grab
		GS1
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
Minimum		
		>= 6.0 (RO)
Average		
Maximum		
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 07/01/2021 - 09/30/2021 **Outfall:** N4 - Discharge to unnamed stream (McDonald Cr) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4
Limit Set		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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
Minimum												
Average												
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average												
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average												
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average												
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

No sampleable discharge occurred during the monitoring period.

Week	Monitoring Point	pH Standard Units Quarterly Grab
		N4
	Limit Set	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
Minimum		
		>= 6.0 (RO)
Average		
Maximum		
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 07/01/2021 - 09/30/2021 **Outfall:** SL3 - Discharge to unnamed stream (ditch) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3
Limit Set		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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
Minimum												
Average												
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average												
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average												
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average												
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: C - No Discharge

Overall DMR Notes/Comment

Reporting Code: C - No Discharge

No sampleable discharge occurred during the monitoring period.

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.

Jennifer Keune — **Signature**

11/10/2021 3:05:38 PM — **Date**

Week	Monitoring Point	pH Standard Units Quarterly Grab
		SL3
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
Minimum		
		>= 6.0 (RO)
Average		
Maximum		
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Groundwater Field Data

Contact Person: Natalya Usova (206) 263-0608

Staff Gage	Location	Date	Reference Elevation Staff Gage 0' (msl)	Reference Elevation Top of Peizo (msl)	Depth to Water (Peizometer) (feet)	Staff Gage Reading (feet)	Surface Water Elevation (msl)	Comments
SW-G1	SW-W1	10/4/2021	415.38	418.84		0.26	415.64	
SW-G1	SW-W1	11/3/2021	415.38	418.84		0.48	415.86	
SW-G1	SW-W1	12/6/2021	415.38	418.84		0.59	415.97	
SW-G2	SW-N1	10/4/2021	355.68	358.21	3.70		354.51	
SW-G2	SW-N1	11/3/2021	355.68	358.21		0.17	355.85	
SW-G2	SW-N1	12/6/2021	355.68	358.21		0.38	356.06	
SW-G3	SW -V	10/4/2021	466.46	469.88	5.45		464.43	DRY
SW-G3	SW -V	11/3/2021	466.46	469.88	5.48		464.40	DRY
SW-G3	SW -V	12/6/2021	466.46	469.88		0.18	466.64	
SW-G4	Upstream of SW-E1	10/4/2021	502.41	505.85	6.25		499.60	DRY
SW-G4	Upstream of SW-E1	11/3/2021	502.41	505.85	5.05		500.80	
SW-G4	Upstream of SW-E1	12/6/2021	502.41	505.85		0.40	502.81	
SW-G5	SW-E1	10/4/2021	486.92	490.34	5.35		484.99	DRY
SW-G5	SW-E1	11/3/2021	486.92	490.34	3.91		486.43	
SW-G5	SW-E1	12/6/2021	486.92	490.34		0.65	487.57	
SW-G6	Upstream of SW-GS1	10/4/2021	490.72	494.12	5.15		488.97	DRY
SW-G6	Upstream of SW-GS1	11/3/2021	490.72	494.12	3.23		490.89	
SW-G6	Upstream of SW-GS1	12/6/2021	490.72	494.12	3.01		491.11	
SW-G7	SW-S2	10/4/2021	453.03	456.41	8.86		447.55	DRY
SW-G7	SW-S2	11/3/2021	453.03	456.41		0.87	453.90	
SW-G7	SW-S2	12/6/2021	453.03	456.41		0.94	453.97	
SW-G8	Upstream of SW-S1	10/4/2021	510.61	515.56	4.80		510.76	DRY
SW-G8	Upstream of SW-S1	11/3/2021	510.61	515.56	4.75	0.06	510.81	
SW-G8	Upstream of SW-S1	12/6/2021	510.61	515.56		0.39	511.00	
SW-G9	SW-S1	10/4/2021	490.93	494.35	6.38		487.97	DRY
SW-G9	SW-S1	11/3/2021	490.93	494.35		0.30	491.23	
SW-G9	SW-S1	12/6/2021	490.93	494.35		1.00	491.93	

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Surfacewater Field Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	pH (Field) (std. Units)	Spec. Conductance (Field) (umho/cm)	Temperature (Field) (^{o}C)	Turbidity (Field) (NTU)	Dissolved Oxygen, (Field) (mg/L)
SW-GS1	SGS1211028P	10/28/2021	6.64		13.83		
SW-GS1	SGS1211213P	12/13/2021	7.03		5.16	27.3	
SW-N4	SN4-211025D	10/25/2021	7.20		11.91		
SW-N4	SN4-211025P	10/25/2021	7.20		11.91		
SW-N4	SN4-211213P	12/13/2021	7.40		8.71	7.21	
SW-SL3	SSL3211028P	10/28/2021	6.93		11.78		
SW-SL3	SSL3211213P	12/13/2021	7.22		5.86	3.75	

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Surfacewater Conventional Data

Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Ammonia, (NH3) (mg/L)	Biological Oxygen Demand (mg/L)	Copper (mg/L)	Total Suspended Solids (mg/L)	Zinc, total (mg/L)
SW-GS1	SGS1211213P	12/13/2021	0.0207	2 U	0.00427	2.8 G	0.00351
SW-N4	SN4-211213P	12/13/2021	0.0436	2 U	0.0122	1.4 G	0.0254
SW-SL3	SSL3211213P	12/13/2021	0.0141	2 U	0.00542	4.3 G	0.00622

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill ---Surfacewater VOA Data

Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	3-,4-Methylphenol mixture 15831-10-4 (ug/L)	Alpha-Terpineol 98-55-5 (ug/L)	Benzoic Acid 65-85-0 (ug/L)	Phenol 108-95-2 (ug/L)
SW-GS1	SGS1211213P	12/13/2021	0.472 U	0.472 U	9.43 U	0.472 U
SW-N4	SN4-211213P	12/13/2021	0.500 U	0.500 U	10.00 U	0.500 U
SW-SL3	SSL3211213P	12/13/2021	0.476 U	0.476 U	9.52 U	0.476 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Surfacewater Station East 1 Data
Contact Person: Natalya Usova (206) 263-0608

CEDAR HILLS REGIONAL LANDFILL.
SURFACE WATER STATION EAST 1

(Data Collected from October 01, 2021 to December 31, 2021)

Site	Date	Sample ID	CONVENTIONALS	METALS	VOAs
SW-E1	10/19/2021	SE1-211019-	No Sample Taken Q4-2021		

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- TopDeck Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	pH (Field) (std. Units)	Conductance (Field) (umho/cm)	Temperature (Field) (^{o}C)	Turbidity (Field) (NTU)	Alkalinity, (Total) (CaCO3) (mg/L)	Chemical Oxygen Demand (mg/L)	Chloride (mg/L)	Iron, (Dissolved) (mg/L)	Iron, (Total) (mg/L)	Sulfate (SO4) (mg/L)	Total Organic Carbon (mg/L)
SW-TD1	STD1211028-	10/28/2021	7.18	92.9	13.31	339.0	24.9	17.0	1.61	0.038	9.650	21.90	7.4
SW-TD2	STD2211028-	10/28/2021	6.95	35.3	13.83	13.1	14.7	42.5	0.55	0.111	0.466	1.35	13.8
SW-TD4	N/A	N/A	No Sample Taken Q4 2021 - No Flow										
SW-TD6	N/A	N/A											

Washington Department of Ecology
Electronic Submission Cover Letter

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1798999 - 11/16/2021 10:48:49 AM

Company Name	Signer Name	System Name
Goodfellow Bros LLC	Kyle Williams	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for Goodfellow Bros LLC	Copy of Record GoodfellowBrosLLC Tuesday November 16 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



HPiaqp7sajs0JuuBDSIrfqewHiglSv5nW9S19RDrfe9QbABFX5MTQjncpNPUz1GiUV8olj/IpiqLhGAH8nuamF5SY/6gYq6ZdMyi6cQqDhc=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 10/01/2021 - 10/31/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
1-F	**10/1/21**	C	C
2-Su	**10/3/21**	C	C
3-Su	**10/10/21**	C	C
4-Su	**10/17/21**	C	C
5-Su	**10/24/21**	C	M
5-M	**10/25/21**	C	M
5-T	**10/26/21**	C	M
5-W	**10/27/21**	C	M
5-Th	**10/28/21**	C	M
5-F	**10/29/21**	74.9	M
5-Sa	**10/30/21**	75.3	M
Minimum			
			BM: >= 6.5 (RO)
Maximum			
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
	5	Check Dams
	5	Gravel Filter Berm
	5	Silt Fence
	5	Straw Wattles

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 10/01/2021 - 10/31/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C3	C3
1-F	**10/1/21**	C	C
2-Su	**10/3/21**	C	C
3-Su	**10/10/21**	C	C
4-Su	**10/17/21**	C	C
5-Su	**10/24/21**	C	M
5-M	**10/25/21**	C	M
5-T	**10/26/21**	C	M
5-W	**10/27/21**	C	M
5-Th	**10/28/21**	C	M
5-F	**10/29/21**	49.5	M
5-Sa	**10/30/21**	49.7	M
Minimum			
			BM: >= 6.5 (RO)
Maximum			
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

Reporting Codes Used: C - No Discharge, M - Monitoring Is Conditional/Not Req This MP

BMPs

Monitoring Point	Week	BMP
	5	Check Dams
	5	Gravel Filter Berm
	5	Silt Fence
	5	Straw Wattles

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 10/01/2021 - 10/31/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **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
		C1	C1	C2	C2
1-F	**10/1/21**	C	C	C	C
2-Su	**10/3/21**	C	C	C	C
3-Su	**10/10/21**	C	C	C	C
4-Su	**10/17/21**	C	C	C	C
5-Su	**10/24/21**	C	M	C	M
5-M	**10/25/21**	C	M	C	M
5-T	**10/26/21**	C	M	C	M
5-W	**10/27/21**	C	M	C	M
5-Th	**10/28/21**	C	M	C	M
5-F	**10/29/21**	7.89	M	3.48	M
5-Sa	**10/30/21**	6.31	M	3.25	M
Minimum					
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum					
		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

BMPs

Monitoring Point	Week	BMP
	5	Check Dams
	5	Gravel Filter Berm
	5	Silt Fence
	5	Straw Wattles

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.

Kyle Williams — **Signature**

11/16/2021 10:48:48 AM — **Date**

Washington Department of Ecology
Electronic Submission Cover Letter

DEPARTMENT OF ECOLOGY
State of Washington

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1801621 - 12/14/2021 4:32:54 PM

Company Name	Signer Name	System Name
Goodfellow Bros LLC	Kyle Williams	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for Goodfellow Bros LLC	Copy of Record GoodfellowBrosLLC Tuesday December 14 2021

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



+2Td7ZxrpOnIH/dJKJrcHSXtHDY8gngadEhnZetky7K2ILSy8q7ITvskhdX+2/QT/xWx0c46o+UYYG4eDD34j
+73vEKBiMCM6WFUEPhk6q4=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 11/01/2021 - 11/30/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
1-M	**11/1/21**	10.23	M
1-T	**11/2/21**	9.37	M
1-W	**11/3/21**	10.24	M
1-Th	**11/4/21**	10.75	M
1-F	**11/5/21**	13.46	M
1-Sa	**11/6/21**	M	M
2-Su	**11/7/21**	M	M
2-M	**11/8/21**	15.89	M
2-T	**11/9/21**	14.10	M
2-W	**11/10/21**	14.28	M
2-Th	**11/11/21**	17.48	M
2-F	**11/12/21**	16.91	M
2-Sa	**11/13/21**	M	M
3-Su	**11/14/21**	M	M
3-M	**11/15/21**	18.21	M
3-T	**11/16/21**	16.28	M
3-W	**11/17/21**	16.01	M
3-Th	**11/18/21**	14.02	M
3-F	**11/19/21**	13.91	M
3-Sa	**11/20/21**	M	M
4-Su	**11/21/21**	M	M
4-M	**11/22/21**	9.42	M
4-T	**11/23/21**	9.26	M
4-W	**11/24/21**	8.98	M
4-Th	**11/25/21**	M	M
4-F	**11/26/21**	M	M
4-Sa	**11/27/21**	M	M
5-Su	**11/28/21**	M	M
5-M	**11/29/21**	11.62	M
5-T	**11/30/21**	10.75	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		18.21	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Silt Fence
	1	Straw Wattles
	1	Triangular Silt Dike
	2	Check Dams
	2	Gravel Filter Berm
	2	Silt Fence
	2	Straw Wattles
	2	Triangular Silt Dike

	3	Check Dams
	3	Silt Fence
	3	Straw Wattles
	3	Triangular Silt Dike
	4	Check Dams
	4	Silt Fence
	4	Straw Wattles
	4	Triangular Silt Dike
	5	Check Dams
	5	Silt Fence
	5	Straw Wattles
	5	Triangular Silt Dike

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 11/01/2021 - 11/30/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C3	C3
1-M	**11/1/21**	4.19	M
1-T	**11/2/21**	4.20	M
1-W	**11/3/21**	4.04	M
1-Th	**11/4/21**	4.23	M
1-F	**11/5/21**	3.64	M
1-Sa	**11/6/21**	M	M
2-Su	**11/7/21**	M	M
2-M	**11/8/21**	2.49	M
2-T	**11/9/21**	2.13	M
2-W	**11/10/21**	2.20	M
2-Th	**11/11/21**	2.18	M
2-F	**11/12/21**	2.54	M
2-Sa	**11/13/21**	M	M
3-Su	**11/14/21**	M	M
3-M	**11/15/21**	2.33	M
3-T	**11/16/21**	2.48	M
3-W	**11/17/21**	2.26	M
3-Th	**11/18/21**	2.49	M
3-F	**11/19/21**	2.75	M
3-Sa	**11/20/21**	M	M
4-Su	**11/21/21**	M	M
4-M	**11/22/21**	3.11	M
4-T	**11/23/21**	3.26	M
4-W	**11/24/21**	3.30	M
4-Th	**11/25/21**	3.21	M
4-F	**11/26/21**	3.20	M
4-Sa	**11/27/21**	M	M
5-Su	**11/28/21**	M	M
5-M	**11/29/21**	3.02	M
5-T	**11/30/21**	2.97	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		4.23	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Silt Fence
	1	Straw Wattles
	2	Check Dams
	2	Silt Fence
	2	Straw Wattles
	3	Check Dams
	3	Silt Fence

	3	Straw Wattles
	4	Check Dams
	4	Silt Fence
	4	Straw Wattles
	5	Check Dams
	5	Silt Fence
	5	Straw Wattles

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 11/01/2021 - 11/30/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **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
		C1	C1	C2	C2
1-M	**11/1/21**	3.05	M	2.49	M
1-T	**11/2/21**	3.09	M	2.45	M
1-W	**11/3/21**	3.08	M	2.97	M
1-Th	**11/4/21**	3.26	M	3.24	M
1-F	**11/5/21**	3.48	M	4.60	M
1-Sa	**11/6/21**	M	M	M	M
2-Su	**11/7/21**	M	M	M	M
2-M	**11/8/21**	3.69	M	4.92	M
2-T	**11/9/21**	3.10	M	4.89	M
2-W	**11/10/21**	3.08	M	4.74	M
2-Th	**11/11/21**	3.17	M	5.02	M
2-F	**11/12/21**	3.77	M	4.89	M
2-Sa	**11/13/21**	M	M	M	M
3-Su	**11/14/21**	M	M	M	M
3-M	**11/15/21**	3.75	M	5.26	M
3-T	**11/16/21**	3.74	M	5.30	M
3-W	**11/17/21**	3.66	M	4.97	M
3-Th	**11/18/21**	3.68	M	4.45	M
3-F	**11/19/21**	3.75	M	4.07	M
3-Sa	**11/20/21**	M	M	M	M
4-Su	**11/21/21**	M	M	M	M
4-M	**11/22/21**	2.87	M	3.78	M
4-T	**11/23/21**	2.98	M	3.77	M
4-W	**11/24/21**	3.01	M	3.44	M
4-Th	**11/25/21**	M	M	M	M
4-F	**11/26/21**	M	M	M	M
4-Sa	**11/27/21**	M	M	M	M
5-Su	**11/28/21**	M	M	M	M
5-M	**11/29/21**	2.62	M	2.98	M
5-T	**11/30/21**	2.78	M	3.26	M
Minimum			M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		3.77	M	5.3	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
	1	Check Dams
	1	Gravel Filter Berm
	1	Sediment Trap
	1	Silt Fence
	1	Straw Wattles
	1	Triangular Silt Dike
	2	Check Dams

	2	Gravel Filter Berm
	2	Sediment Trap
	2	Silt Fence
	2	Straw Wattles
	2	Triangular Silt Dike
	3	Check Dams
	3	Gravel Filter Berm
	3	Sediment Trap
	3	Silt Fence
	3	Straw Wattles
	4	Check Dams
	4	Gravel Filter Berm
	4	Sediment Trap
	4	Silt Fence
	4	Straw Wattles
	5	Check Dams
	5	Gravel Filter Berm
	5	Silt Fence
	5	Straw Wattles

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.

Kyle Williams
Signature

12/14/2021 4:32:52 PM
Date

Washington Department of Ecology
Electronic Submission Cover Letter

DEPARTMENT OF ECOLOGY
State of Washington

WQWebDMR - Permit# WAR305034 - DMR Submission Id: 1805364 - 1/14/2022 10:19:15 AM

Company Name	Signer Name	System Name
Goodfellow Bros LLC	Kyle Williams	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for Goodfellow Bros LLC	Copy of Record GoodfellowBrosLLC Friday January 14 2022

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



CzgLmvENbq60Jp94jCMnYdLJwWNamMfhT+DwgivQ7gS+mzXrpirP3mZnJe
+gXJwopGSN8sjvRpTBYDlzimcuSkQ5gH51LSu8zEnBu0v6jtA=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** Queen City Farms Lake (QCFL)

Monitoring Period: 12/01/2021 - 12/31/2021 **Outfall:** CHL - Queen City Farms Lake (QCFL) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		CHL	CHL
1-W	**12/1/21**	M	M
1-Th	**12/2/21**	M	M
1-F	**12/3/21**	M	M
1-Sa	**12/4/21**	M	M
2-Su	**12/5/21**	M	M
2-M	**12/6/21**	14.82	M
2-T	**12/7/21**	M	M
2-W	**12/8/21**	M	M
2-Th	**12/9/21**	M	M
2-F	**12/10/21**	M	M
2-Sa	**12/11/21**	M	M
3-Su	**12/12/21**	M	M
3-M	**12/13/21**	12.87	M
3-T	**12/14/21**	M	M
3-W	**12/15/21**	M	M
3-Th	**12/16/21**	M	M
3-F	**12/17/21**	M	M
3-Sa	**12/18/21**	M	M
4-Su	**12/19/21**	M	M
4-M	**12/20/21**	12.03	M
4-T	**12/21/21**	M	M
4-W	**12/22/21**	M	M
4-Th	**12/23/21**	M	M
4-F	**12/24/21**	M	M
4-Sa	**12/25/21**	M	M
5-Su	**12/26/21**	M	M
5-M	**12/27/21**	14	M
5-T	**12/28/21**	M	M
5-W	**12/29/21**	M	M
5-Th	**12/30/21**	M	M
5-F	**12/31/21**	M	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		14.82	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Sediment Trap
	2	Check Dams
	2	Sediment Trap
	3	Check Dams
	4	Check Dams
	4	Sediment Trap
	5	Check Dams

	5	Sediment Trap

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** gravel pit lake

Monitoring Period: 12/01/2021 - 12/31/2021 **Outfall:** grav - The gravel pit lake infiltrates and has no surface discharge outlet **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Weekly Grab	pH Standard Units Weekly Grab
		C3	C3
1-W	**12/1/21**	M	M
1-Th	**12/2/21**	M	M
1-F	**12/3/21**	M	M
1-Sa	**12/4/21**	M	M
2-Su	**12/5/21**	M	M
2-M	**12/6/21**	10.6	M
2-T	**12/7/21**	M	M
2-W	**12/8/21**	M	M
2-Th	**12/9/21**	M	M
2-F	**12/10/21**	M	M
2-Sa	**12/11/21**	M	M
3-Su	**12/12/21**	M	M
3-M	**12/13/21**	8.2	M
3-T	**12/14/21**	M	M
3-W	**12/15/21**	M	M
3-Th	**12/16/21**	M	M
3-F	**12/17/21**	M	M
3-Sa	**12/18/21**	M	M
4-Su	**12/19/21**	M	M
4-M	**12/20/21**	6.85	M
4-T	**12/21/21**	M	M
4-W	**12/22/21**	M	M
4-Th	**12/23/21**	M	M
4-F	**12/24/21**	M	M
4-Sa	**12/25/21**	M	M
5-Su	**12/26/21**	M	M
5-M	**12/27/21**	8.36	M
5-T	**12/28/21**	M	M
5-W	**12/29/21**	M	M
5-Th	**12/30/21**	M	M
5-F	**12/31/21**	M	M
Minimum			M
			BM: >= 6.5 (RO)
Maximum		10.6	M
		BM: <= 25 (RO)	BM: <= 8.5 (RO)

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

BMPs

Monitoring Point	Week	BMP
	1	Check Dams
	1	Silt Fence
	1	Straw Wattles
	1	Triangular Silt Dike
	2	Check Dams
	2	Silt Fence
	2	Straw Wattles

	2	Triangular Silt Dike
	3	Check Dams
	3	Silt Fence
	3	Straw Wattles
	3	Triangular Silt Dike
	4	Check Dams
	4	Silt Fence
	4	Straw Wattles
	4	Triangular Silt Dike
	5	Check Dams
	5	Silt Fence
	5	Straw Wattles
	5	Triangular Silt Dike

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR305034 **Permittee:** Cedar Hills regional Landfill

Facility County: King **Receiving Waterbody:** McDonald Creek

Monitoring Period: 12/01/2021 - 12/31/2021 **Outfall:** McDo - Outfall SW N4 The discharge on the northern boundary drains to McDonald Creek at Lat 47 477875 and Long 122 054943 **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
		C1	C1	C2	C2
1-W	**12/1/21**	M	M	M	M
1-Th	**12/2/21**	M	M	M	M
1-F	**12/3/21**	M	M	M	M
1-Sa	**12/4/21**	M	M	M	M
2-Su	**12/5/21**	M	M	M	M
2-M	**12/6/21**	2.85	M	3.98	M
2-T	**12/7/21**	M	M	M	M
2-W	**12/8/21**	M	M	M	M
2-Th	**12/9/21**	M	M	M	M
2-F	**12/10/21**	M	M	M	M
2-Sa	**12/11/21**	M	M	M	M
3-Su	**12/12/21**	M	M	M	M
3-M	**12/13/21**	2.82	M	4.02	M
3-T	**12/14/21**	M	M	M	M
3-W	**12/15/21**	M	M	M	M
3-Th	**12/16/21**	M	M	M	M
3-F	**12/17/21**	M	M	M	M
3-Sa	**12/18/21**	M	M	M	M
4-Su	**12/19/21**	M	M	M	M
4-M	**12/20/21**	2.75	M	3.8	M
4-T	**12/21/21**	M	M	M	M
4-W	**12/22/21**	M	M	M	M
4-Th	**12/23/21**	M	M	M	M
4-F	**12/24/21**	M	M	M	M
4-Sa	**12/25/21**	M	M	M	M
5-Su	**12/26/21**	M	M	M	M
5-M	**12/27/21**	4.01	M	4.05	M
5-T	**12/28/21**	M	M	M	M
5-W	**12/29/21**	M	M	M	M
5-Th	**12/30/21**	M	M	M	M
5-F	**12/31/21**	M	M	M	M
Minimum			M		M
			BM: >= 6.5 (RO)		BM: >= 6.5 (RO)
Maximum		4.01	M	4.05	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
	1	Check Dams
	1	Sediment Trap
	1	Silt Fence
	1	Straw Wattles
	1	Triangular Silt Dike
	2	Check Dams

	2	Silt Fence
	2	Straw Wattles
	2	Triangular Silt Dike
	3	Check Dams
	3	Sediment Trap
	3	Silt Fence
	3	Straw Wattles
	3	Triangular Silt Dike
	4	Check Dams
	4	Sediment Trap
	4	Silt Fence
	4	Straw Wattles
	4	Triangular Silt Dike
	5	Check Dams
	5	Sediment Trap
	5	Silt Fence
	5	Straw Wattles
	5	Triangular Silt Dike

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.

Kyle Williams
Signature

1/14/2022 10:19:13 AM
Date

Washington Department of Ecology
Electronic Submission Cover Letter

WQWebDMR - Permit# WAR000756 - DMR Submission Id: 1806311 - 1/19/2022 9:51:15 AM

Company Name	Signer Name	System Name
King County Solid Waste Division	Jennifer Keune	WQWebPortal

Attachments:

Document Name Or Description	Document Name
Submitted Copy of Record for King County Solid Waste Division	Copy of Record KingCountySolidWasteDivision Wednesday January 19 2022

Attestation Agreed to at Signing:

I certify I personally signed and submitted to the Department of Ecology an Electronic Signature Agreement. I understand that use of my electronic signature account/password to submit this information is equal to my written signature. I have read and followed all the rules of use in my Electronic Signature Agreement. I believe no one but me has had access to my password and other account information.

I further certify: I had the opportunity to review the content or meaning of the submittal before signing it; and to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I intend to submit this information as part of the implementation, oversight, and enforcement of a federal environmental program. I am aware there are significant penalties for submitting false information, including possible fines and imprisonment.

For Ecology Use Only



nd7oEgG02DwKmF1bHSizAEvDQd/EGnY9Bi6bRDg3Q2/u5URJE20OcDj0fGigIdNn0oXFsIGF
+mCinKjp7hN4RoelqrdJOmAF9Yq4NFF8uzA=

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 10/01/2021 - 12/31/2021 **Outfall:** GS1 - Discharge to unnamed stream (wetland) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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.,4-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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1	GS1
Limit Set		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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-Th	**10/28/21**	A	No	A	<2	<1	0.014	<0.51	<10.2	<0.51	<0.51	1.4
12-M	**12/13/21**	27.3	No	4.72	<2	2.8	0.0207	<0.472	<9.43	<0.472	<0.472	3.51
12-F	**12/17/21**	7.7	M	M	M	M	M	M	M	M	M	M
Minimum												
Average		17.5		4.72								
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average					<2	<1	0.014	<0.51	<10.2	<0.51	<0.51	1.4
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average					<2	2.8	0.0207	<0.472	<9.43	<0.472	<0.472	3.51
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: A - Consistent Attainment Of Benchmark, B - Below Detection Limit/No Detection, M - Monitoring Is Conditional/Not Req This MP

Week	Monitoring Point	pH Standard Units Quarterly Grab
		GS1
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-Th	**10/28/21**	6.64
12-M	**12/13/21**	7.03
12-F	**12/17/21**	M
Minimum		6.64
		>= 6.0 (RO)
Average		
Maximum		7.03
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 10/01/2021 - 12/31/2021 **Outfall:** N4 - Discharge to unnamed stream (McDonald Cr) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		N4	N4	N4	N4	N4	N4	N4	N4	N4	N4	N4
Limit Set		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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-M	**10/25/21**	A	No	A	<2	1.4	0.228	<0.515	<10.2	<0.515	<0.515	44.1
12-M	**12/13/21**	7.21	No	12.2	<2	1.4	0.0436	<0.5	<10	<0.5	<0.5	25.4
Minimum												
Average		7.21		12.2								
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average					<2	1.4	0.228	<0.515	<10.2	<0.515	<0.515	44.1
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average					<2	1.4	0.0436	<0.5	<10	<0.5	<0.5	25.4
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: A - Consistent Attainment Of Benchmark, B - Below Detection Limit/No Detection, M - Monitoring Is Conditional/Not Req This MP

Week	Monitoring Point	pH Standard Units Quarterly Grab
		N4
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-M	10/25/21	7.2
12-M	12/13/21	7.4
Minimum		7.2
		>= 6.0 (RO)
Average		
Maximum		7.4
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Washington State Department of Ecology **Discharge Monitoring Report (DMR)**

Permit Number: WAR000756 **Permittee:** CEDAR HILLS REGIONAL LANDFILL

Facility County: King **Receiving Waterbody:** Unnamed stream

Monitoring Period: 10/01/2021 - 12/31/2021 **Outfall:** SL3 - Discharge to unnamed stream (ditch) **Version:** 1

Week	Monitoring Point	Turbidity (NTU) Measured NTU Quarterly Grab	Oil & Grease Yes/No Quarterly Visual Observation	Copper 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	Phenol Micrograms/L (ug/L) Quarterly Grab	Zinc Total Micrograms/L (ug/L) Quarterly Grab
		SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3	SL3
Limit Set		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	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit	ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-Th	**10/28/21**	A	No	A	<2	9.6	0.152	<0.51	<10.2	<0.51	<0.51	9.29
12-M	**12/13/21**	3.75	No	5.42	<2	4.3	0.0141	<0.476	<9.52	<0.476	<0.476	6.22
Minimum												
Average		3.75		5.42								
		BM: <= 25		BM: <= 14								
Maximum												
Month 1 Average					<2	9.6	0.152	<0.51	<10.2	<0.51	<0.51	9.29
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 2 Average					M	M	M	M	M	M	M	M
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110
Month 3 Average					<2	4.3	0.0141	<0.476	<9.52	<0.476	<0.476	6.22
					<= 37	<= 27	<= 4.9	<= 16	<= 71	<= 14	<= 15	<= 110

Reporting Codes Used: A - Consistent Attainment Of Benchmark, B - Below Detection Limit/No Detection, M - Monitoring Is Conditional/Not Req This MP

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.

Jennifer Keune — **Signature**

1/19/2022 9:51:14 AM — **Date**

Week	Monitoring Point	pH Standard Units Quarterly Grab
		SL3
Limit Set		ISGP Non-Haz Waste Landfill (40CFR part 445 subpart B)- 2020 permit
5-Th	**10/28/21**	6.93
12-M	**12/13/21**	7.22
Minimum		6.93
		>= 6.0 (RO)
Average		
Maximum		7.22
		<= 9.0 (RO)
Month 1 Average		
Month 2 Average		
Month 3 Average		

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate Field Parameters
Contact Person: Natalya Usova (206-263-0608)

Leachate Monitoring Activities 1st Quarter 2021

Station ID	Date	Activity	Sample ID	Comment
LS-46N	1/13/2021	Monthly Characterization Sample	L46N200715M	
LS-46N	2/4/2021	Monthly Characterization Sample	L46N200812M	
LS-46N	3/10/2021	Monthly Characterization Sample	L46N200909M	
LS-A567	1/14/2021	Special Investigation	L567210114I	
LS-A567	2/3/2021	Special Investigation	L567210203I	
LS-A567	3/11/2021	Special Investigation	L567210311I	
LS-A8	1/14/2021	Special Investigation	LA81210114I	
LS-A8	2/3/2021	Special Investigation	LA81210203I	
LS-A8	3/11/2021	Special Investigation	LA81210311I	
LS-BEW	1/6/2021	Special Investigation	LBC-210106I	
LS-CSW	1/14/2021	Special Investigation	LCSW210114I	
FIELD BLANK	1/13/2021	QA/QC Sample	LEPS210113F	
FIELD BLANK	2/3/2021	QA/QC Sample	LEPS210203F	
FIELD BLANK	3/11/2021	QA/QC Sample	LP1A210311F	
LS-LEPS	1/5/2021	Permit	LEPS210105P	
LS-LEPS	1/12/2021	Monthly Characterization Sample	LEPS210112M	
LS-LEPS	1/12/2021	Permit	LEPS210112P	
LS-LEPS	1/20/2021	Permit	LEPS210120P	
LS-LEPS	1/27/2021	Permit	LEPS210126P	
LS-LEPS	1/27/2021	QA/QC Sample	LEPS210126D	
LS-LEPS	2/3/2021	Monthly Characterization Sample	LEPS210208M	
LS-LEPS	2/4/2021	Permit	LEPS210204P	
LS-LEPS	2/9/2021	Permit	LEPS210209P	
LS-LEPS	2/16/2021	Permit	LEPS210216P	
LS-LEPS	2/23/2021	Permit	LEPS210223P	
LS-LEPS	3/2/2021	Permit	LEPS210302P	
LS-LEPS	3/10/2021	Monthly Characterization Sample	LEPS210310M	
LS-LEPS	3/10/2021	Permit	LEPS210310P	
LS-LEPS	3/16/2021	Permit	LEPS210316P	
LS-LEPS	3/23/2021	Permit	LEPS210323P	
LS-LEPS	3/30/2021	Permit	LEPS210330P	
LS-PS1A	1/14/2021	Special Investigation	LP1A210114I	
LS-PS1A	2/3/2021	Special Investigation	LP1A210203I	
LS-PS1A	3/11/2021	Special Investigation	LP1A210311I	
LS-PS2A	1/13/2021	Monthly Characterization Sample	LP2A210113M	
LS-PS2A	2/4/2021	Monthly Characterization Sample	LP2A210204M	
LS-PS2A	3/10/2021	Monthly Characterization Sample	LP2A210310M	
LS-PS4	1/14/2021	Special Investigation	LP4-210114I	
LS-PS4	2/3/2021	Special Investigation	LP4-210203I	
LS-PS4	3/11/2021	Special Investigation	LP4-210311I	

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate Field Parameters
Contact Person: Natalya Usova (206-263-0608)

Leachate Monitoring Activities 1st Quarter 2021

Station ID	Date	Activity	Sample ID	Comment
LS-V1A	1/14/2021	Monthly Characterization Sample	LV1A210114M	
LS-V1A	1/26/2021	Resample	LV1A210126R	
LS-V1A	2/4/2021	Monthly Characterization Sample	LV1A210204M	
LS-V1A	3/10/2021	Monthly Characterization Sample	LV1A210310M	

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate Field Parameters
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	pH (Field) (std. Units)	Specific Conductance (Field) (umho/cm)	Temperature (Field) (^{o}C)
LS-A567	1/14/2021	L567210114I	7.95	18165	31
LS-A567	2/3/2021	L567210203I	8.08	18369	27.6
LS-A567	3/11/2021	L567210311I	8.12	18320	23.3
LS-A81	2/3/2021	LA81210203I	5.88	4245	9.2
LS-A81	3/11/2021	LA81210311I	6.93	18114	5
LS-CSW	1/14/2021	LCSW210114I	7.16	309.7	6.4
LS-LEPS	1/5/2021	LEPS210105P	8	2754	10.3
LS-LEPS	1/12/2021	LEPS210112M	7.7	3039	9.6
LS-LEPS	1/12/2021	LEPS210112P	7.7	3039	9.6
LS-LEPS	1/20/2021	LEPS210120P	6.39	2800	9.3
LS-LEPS	1/26/2021	LEPS210126D	8.27	3377	8.2
LS-LEPS	1/26/2021	LEPS210126P	8.27	3377	8.2
LS-LEPS	2/3/2021	LEPS210203M	7.95	3782	8.8
LS-LEPS	2/4/2021	LEPS210204P	8.3	4360	8.9
LS-LEPS	2/9/2021	LEPS210209P	8.26	3615	8.8
LS-LEPS	2/16/2021	LEPS210216P	8.34	4420	6.7
LS-LEPS	2/23/2021	LEPS210223P	8.18	3960	9.1
LS-LEPS	3/2/2021	LEPS210302P	8.15	4080	10.1
LS-LEPS	3/10/2021	LEPS210310M	8.16	4012	9.9
LS-LEPS	3/10/2021	LEPS210310P	8.16	4012	9.9
LS-LEPS	3/16/2021	LEPS210316P	8.11	4524	10.4
LS-LEPS	3/23/2021	LEPS210323P	8.26	6040	10.7
LS-LEPS	3/30/2021	LEPS210330P	8.2	5176	12
LS-MH46N	1/13/2021	L46N210113M	6.61	7700	24.7
LS-MH46N	2/4/2021	L46N210204M	6.76	4090	27.2
LS-MH46N	3/10/2021	L46N210310M	6.67	9950	25.5
LS-PS4	1/14/2021	LP4-210114I	7.6	728	12.4
LS-PS4	2/3/2021	LP4-210203I	6.83	550	9.8
LS-PS4	3/11/2021	LP4-210311I	7.17	940	10.5
LS-V1A	1/14/2021	LV1A210114M	6.78	3755	11.7
LS-V1A	1/26/2021	LV1A210126R	8.06	1620	5.5
LS-V1A	2/3/2021	LV1A210204M	6.98	4672	10
LS-V1A	3/10/2021	LV1A210310M	8.09	5271	11.1
FIELD BLANK	1/13/2021	LEPS210113F	7.92	20.5	11.7
FIELD BLANK	2/4/2021	LEPS210203F	7.95	3	8.2
FIELD BLANK	3/11/2021	LP1A210311F	8.37	0.6	5.6

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate Conventionals Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	Alkalinity, Carbonate (mg/l)	Alkalinity, Total (CaCO3) (mg/L)	Ammonia, (NH3 as N) (mg/L)	Biological Oxygen Demand (mg/L)	Chemical Oxygen Demand (mg/L)	Chloride (mg/L)	Coliforms, Fecal (CFU/100mL)	Coliforms, Total (CFU/100mL)	Cyanide (mg/L)	Fluoride (mg/L)	Nitrate+Nitrite (NO3+NO2 as N) (mg/L)
LS-A567	1/14/2021	L567210114I	1 U	6960	1170	1500	4760 S	1730				5 U	0.2 U
LS-A567	2/3/2021	L567210203I	1 U	8170	1680	1810	5160	2140				2 U	0.2 U
LS-A567	3/11/2021	L567210311I	1 U	8290	1690	1820	5240 S	2160				5 U	0.2 U
LS-A81	2/3/2021	LA81210203I	1 U	1710	256	4300	5660	288				20 U	0.01 U
LS-A81	3/11/2021	LA81210311I	1 U	7750	1380	21100	27900 S	1670				100 U	0.05 U
LS-CSW	1/14/2021	LCSW210114I	1 U	108	14.4	6.58	43.3	16.2				0.045 T	0.0548
LS-LEPS	1/12/2021	LEPS210112M		1110	174	529	1180	227	9600	180000	0.0036 T	0.28 T	0.05 U
LS-LEPS	2/3/2021	LEPS210203M		1600	283	900	1940	343	6200	37000	0.008 SU	1 U	0.02 U
LS-LEPS	3/10/2021	LEPS210310M		1710	276	593	1270	361	19000	81000	0.008 SU	0.33 T	0.05 U
LS-MH46N	1/13/2021	L46N210113M		2410	424	48.5	1080	1040	1 U	1 U	0.0091 ST	5 U	0.05 U
LS-MH46N	2/4/2021	L46N210204M		1860	342	34.2	802	759	1 U	120	0.008 SU	0.892	0.05 U
LS-MH46N	3/10/2021	L46N210310M		1960	361	34.9	834	845	1 U	90 CU	0.0084 ST	0.869	0.05 U
LS-PS1A	1/14/2021	LP1A210114I	1 U	39.5	5.8 J	2 U	13 T	5.65				0.044 T	1.48
LS-PS1A	2/3/2021	LP1A210203I	1 U	204	31	14.8	86	56.8				0.08 T	0.761
LS-PS1A	3/11/2021	LP1A210311I	1 U	707	128	38.2	289	218				0.4 U	0.638
LS-PS4	2/3/2021	LP4-210203I	1 U	164	30.1	74.7	195	26.4				0.1 U	0.764
LS-PS4	3/11/2021	LP4-210311I	1 U	386	60.1	110	328	61.7				0.1 U	0.658
LS-V1A	1/14/2021	LV1A210114M		1040	188	653	1140	233	45000	52000	0.0038 ST	5 U	0.918
LS-V1A	1/26/2021	LV1A210126R		1460	269	1420	2330	320	25000 C	76000	0.008 SU	50 U	0.12 T
LS-V1A	2/3/2021	LV1A210204M		2300	433	2190	3280	490	24000 C	86000	0.008 SU	5 U	0.16 T
LS-V1A	3/10/2021	LV1A210310M		3500	701	4110	5740	796	74000	410000	0.011 ST	10 U	0.29 T

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate Conventionals Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	Specific Conductance (umho/cm)	Sulfate (SO4) (mg/L)	Sulfide Total (mg/L)	Total Fats, Oils and Grease (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Total Organic Carbon (mg/L)	Total Suspended Solids (mg/L)	Total Volatile Solids (mg/L)	Volatile Suspended Solids (mg/L)
LS-A567	1/14/2021	L567210114I	17000	23.9	3.86		1420 S	1250 S	38.7	2520 H	30.7
LS-A567	2/3/2021	L567210203I	20400	22.5	1.06		1660	1590 S	16	3300	12.8
LS-A567	3/11/2021	L567210311I	17300	22.9	1.7 T		1660 S	1640 S	13.8	3470	11.3
LS-A81	2/3/2021	LA81210203I	4680	130	1.15		257	1420	85	2110	38
LS-A81	3/11/2021	LA81210311I	16300	540	1.12		1610 S	9120 S	103	11400	46.7
LS-CSW	1/14/2021	LCSW210114I	309	7.07	0.01 U		15.2	10.8	12	62 H	4.2
LS-LEPS	1/12/2021	LEPS210112M	2980	36.8	0.19 ST	2.6 T	207	179	153	930 H	113
LS-LEPS	2/3/2021	LEPS210203M	4380	33.4	0.28 T	2 U	319	240	108	1170	84.6
LS-LEPS	3/10/2021	LEPS210310M	4300	38.9	0.2 T	1.9 U	328	299	116	1160	98.7
LS-MH46N	1/13/2021	L46N210113M	7750	0.5 U	1.52	2.8 T	463	320	0.5 U	865 H	0.5 U
LS-MH46N	2/4/2021	L46N210204M	5960	0.36 T	1.29	2 U	351	272	0.54 U	710	0.54 U
LS-MH46N	3/10/2021	L46N210310M	6090	2.01	1.21	1.9 U	369	259	0.51 U	816	0.51 U
LS-PS1A	1/14/2021	LP1A210114I	140	6.52	0.011 T		2.51 J	5.24	4.9 J	55.3 H	2.7
LS-PS1A	2/3/2021	LP1A210203I	650	7.74	0.0603		32.3	25.2	6.21	103 B	4.11
LS-PS1A	3/11/2021	LP1A210311I	2140	10	0.0667		135	82.1	12.9	237	10.9
LS-PS4	2/3/2021	LP4-210203I	529	37.6	0.0795		24.8	38.7	57.5	175 B	35.5
LS-PS4	3/11/2021	LP4-210311I	1070	25	0.0477		61.7	64.7	55	232	45
LS-V1A	1/14/2021	LV1A210114M	2990	24.3	0.16 ST	2.2 U	213	293	21.7	580 H	12
LS-V1A	1/26/2021	LV1A210126R	4080	33.4	0.2 T	63.7	289	558	36.6	1060	21.4
LS-V1A	2/3/2021	LV1A210204M	6190	48.7	0.33 T	1.9 U	463	991	37.2	2180	21
LS-V1A	3/10/2021	LV1A210310M	8560	65.4	0.39 T	3.4 T	792	1910 S	123	2910	53

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate Metals Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	Aluminum, dissolved (mg/L)	Aluminum, total (mg/L)	Antimony, dissolved (mg/L)	Antimony, total (mg/L)	Arsenic, dissolved (mg/L)	Arsenic, total (mg/L)	Barium, dissolved (mg/L)	Barium, total (mg/L)
LS-A567	1/14/2021	L567210114I	0.354	0.403	0.0116	0.0109	0.202	0.214	0.314	0.371
LS-A567	2/3/2021	L567210203I	0.432	0.464	0.016	0.0159	0.26	0.272	0.339	0.381
LS-A567	3/11/2021	L567210311I	0.413	0.451	0.021	0.0214	0.295	0.299	0.359	0.363
LS-A81	2/3/2021	LA81210203I	0.152	2.44	0.00485	0.00532	0.00781	0.0111	0.121	0.148
LS-A81	3/11/2021	LA81210311I	0.223	0.725	0.0215	0.0238	0.0293	0.0414	0.209	0.377
LS-CSW	1/14/2021	LCSW210114I	0.0495 U	0.378	0.00297 U	0.00296 U	0.00317	0.00344	0.0107	0.0137
LS-LEPS	1/5/2021	LEPS210105P		1.52		0.00536		0.0343		0.0724
LS-LEPS	1/12/2021	LEPS210112M	0.0836		0.00488		0.0314		0.0492	
LS-LEPS	1/12/2021	LEPS210112P		1.49		0.00494		0.0318		0.0643
LS-LEPS	1/20/2021	LEPS210120P		0.911		0.00447		0.0334		0.0831
LS-LEPS	1/26/2021	LEPS210126D		0.891		0.00479		0.0367		0.0695
LS-LEPS	1/26/2021	LEPS210126P		0.649		0.0046		0.0361		0.0666
LS-LEPS	2/3/2021	LEPS210203M	0.122		0.00598		0.0521		0.0694	
LS-LEPS	2/4/2021	LEPS210204P		1.11		0.00598		0.0517		0.0802
LS-LEPS	2/9/2021	LEPS210209P		0.465		0.00537		0.0459		0.0649
LS-LEPS	2/16/2021	LEPS210216P		2.09 J		0.0058		0.0498		0.0824
LS-LEPS	2/23/2021	LEPS210223P		0.67		0.00567		0.0467		0.062
LS-LEPS	3/2/2021	LEPS210302P		1.12		0.00525		0.0427		0.067
LS-LEPS	3/10/2021	LEPS210310M	0.127		0.00647		0.0512		0.0596	
LS-LEPS	3/10/2021	LEPS210310P		1.04		0.00691		0.0535		0.0751
LS-LEPS	3/16/2021	LEPS210316P		0.864		0.0211		0.156		0.0828
LS-LEPS	3/23/2021	LEPS210323P		0.792		0.0235		0.203		0.0815
LS-LEPS	3/30/2021	LEPS210330P		0.869		0.0218		0.17		0.0854
LS-MH46N	1/13/2021	L46N210113M		0.0513 U		0.00308 U		0.0718		0.237
LS-MH46N	2/4/2021	L46N210204M		0.052 U		0.00312 U		0.0597		0.18
LS-MH46N	3/10/2021	L46N210310M		0.0504 U		0.00302 U		0.0657		0.186
LS-PS1A	1/14/2021	LP1A210114I	0.0498 U	0.138	0.00299 U	0.00297 U	0.00197	0.00248	0.0083	0.00882
LS-PS1A	2/3/2021	LP1A210203I	0.0493 U	0.117	0.00296 U	0.00296 U	0.00991	0.0105	0.0201	0.0236
LS-PS1A	3/11/2021	LP1A210311I	0.05 U	0.0818	0.00537	0.00541	0.0316	0.0325	0.0623	0.0643
LS-PS4	2/3/2021	LP4-210203I	0.283	2.03	0.00987	0.0103	0.2	0.195	0.0133	0.0199
LS-PS4	3/11/2021	LP4-210311I	0.0979	1.68	0.023	0.0227	0.224	0.224	0.0231	0.0298
LS-V1A	1/14/2021	LV1A210114M	0.0999	0.422	0.00461	0.00431	0.0369	0.0377	0.0582	0.0647
LS-V1A	1/26/2021	LV1A210126R	0.0932	0.785	0.00628	0.00614	0.0516	0.0545	0.0501	0.0741
LS-V1A	2/3/2021	LV1A210204M	0.156	1.05	0.00715	0.00804	0.0758	0.0806	0.0609	0.105
LS-V1A	3/10/2021	LV1A210310M	0.133	2.46	0.0116	0.0123	0.103	0.11	0.073	0.166

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate Metals Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	Beryllium, dissolved (mg/L)	Beryllium, total (mg/L)	Cadmium, dissolved (mg/L)	Cadmium, total (mg/L)	Calcium, dissolved (mg/L)	Calcium, total (mg/L)	Chromium, dissolved (mg/L)	Chromium, total (mg/L)
LS-A567	1/14/2021	L567210114I	0.00103 U	0.001 U	0.000515 U	0.000501 U	57.8	70.2	0.169	0.153
LS-A567	2/3/2021	L567210203I	0.00103 U	0.00101 U	0.000517 U	0.000505 U	61.5	60.1	0.188	0.2
LS-A567	3/11/2021	L567210311I	0.000995 U	0.00099 U	0.000498 U	0.000495 U	57.6	56.9	0.177	0.186
LS-A81	2/3/2021	LA81210203I	0.000992 U	0.000987 U	0.000496 U	0.000494 U	371	401	0.0453	0.0497
LS-A81	3/11/2021	LA81210311I	0.000992 U	0.000987 U	0.000496 U	0.000537	1680	1610	0.145	0.193
LS-CSW	1/14/2021	LCSW210114I	0.00099 U	0.000988 U	0.000495 U	0.000494 U	11.6	12.3	0.00198 U	0.00221
LS-LEPS	1/5/2021	LEPS210105P		0.000994 U		0.000497 U		91.9		0.0319
LS-LEPS	1/12/2021	LEPS210112M	0.000987 U		0.000494 U		84.5		0.0274	
LS-LEPS	1/12/2021	LEPS210112P		0.001 U		0.0005 U		83.8		0.0329
LS-LEPS	1/20/2021	LEPS210120P		0.001 U		0.000501 U		103		0.0313
LS-LEPS	1/26/2021	LEPS210126D		0.000995 U		0.000498 U		79.3		0.0308
LS-LEPS	1/26/2021	LEPS210126P		0.000983 U		0.000492 U		78.1		0.0299
LS-LEPS	2/3/2021	LEPS210203M	0.00101 U		0.000503 U		98.9		0.04	
LS-LEPS	2/4/2021	LEPS210204P		0.000992 U		0.000496 U		98.2		0.0434
LS-LEPS	2/9/2021	LEPS210209P		0.000986 U		0.000493 U		91.6		0.0363
LS-LEPS	2/16/2021	LEPS210216P		0.000999 U		0.0005 U		101		0.0413
LS-LEPS	2/23/2021	LEPS210223P		0.001 U		0.000502 U		95.1		0.0367
LS-LEPS	3/2/2021	LEPS210302P		0.001 U		0.000501 U		103		0.0344
LS-LEPS	3/10/2021	LEPS210310M	0.00101 U		0.000504 U		115		0.0343	
LS-LEPS	3/10/2021	LEPS210310P		0.000988 U		0.000494 U		114		0.0443
LS-LEPS	3/16/2021	LEPS210316P		0.001 U		0.000501 U		120		0.054
LS-LEPS	3/23/2021	LEPS210323P		0.00101 U		0.000503 U		117		0.0562
LS-LEPS	3/30/2021	LEPS210330P		0.000999 U		0.0005 U		123		0.0601
LS-MH46N	1/13/2021	L46N210113M		0.00103 U		0.000513 U		54.3		0.0606
LS-MH46N	2/4/2021	L46N210204M		0.00104 U		0.00052 U		49.2		0.0461
LS-MH46N	3/10/2021	L46N210310M		0.00101 U		0.000504 U		55.6		0.0493
LS-PS1A	1/14/2021	LP1A210114I	0.000996 U	0.00099 U	0.000498 U	0.000495 U	10.1	10.1	0.00199 U	0.00198 U
LS-PS1A	2/3/2021	LP1A210203I	0.000987 U	0.000988 U	0.000493 U	0.000494 U	14.9	16	0.00339	0.00377
LS-PS1A	3/11/2021	LP1A210311I	0.001 U	0.000996 U	0.0005 U	0.000498 U	30	30.3	0.00995	0.0109
LS-PS4	2/3/2021	LP4-210203I	0.000988 U	0.000975 U	0.000494 U	0.000488 U	21.2	22.8	0.00393	0.00652
LS-PS4	3/11/2021	LP4-210311I	0.000999 U	0.000988 U	0.000499 U	0.000494 U	32.8	32.9	0.0117	0.00652
LS-V1A	1/14/2021	LV1A210114M	0.000992 U	0.001 U	0.000496 U	0.000501 U	53.3	53.1	0.0315	0.0298
LS-V1A	1/26/2021	LV1A210126R	0.001 U	0.00101 U	0.000502 U	0.000504 U	89.6	94.1	0.0409	0.0445
LS-V1A	2/3/2021	LV1A210204M	0.00101 U	0.00102 U	0.000503 U	0.000511 U	136	148	0.064	0.0787
LS-V1A	3/10/2021	LV1A210310M	0.00101 U	0.000999 U	0.000503 U	0.000499 U	225	232	0.0805	0.0974

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate Metals Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	Cobalt, dissolved (mg/L)	Cobalt, total (mg/L)	Copper, dissolved (mg/L)	Copper, total (mg/L)	Iron, dissolved (mg/L)	Iron, total (mg/L)	Lead, dissolved (mg/L)	Lead, total (mg/L)
LS-A567	1/14/2021	L567210114I	0.0483	0.0476	0.0212	0.0509	2.25	3.59	0.00103 U	0.00171
LS-A567	2/3/2021	L567210203I	0.0546	0.057	0.0167	0.0367	2.77	3.15	0.00189	0.00202
LS-A567	3/11/2021	L567210311I	0.0535	0.0534	0.0231	0.0593	2.72	2.97	0.000995 U	0.0022
LS-A81	2/3/2021	LA81210203I	0.0252	0.0275	0.00198 U	0.0106	39.5	43.3	0.000992 U	0.00293
LS-A81	3/11/2021	LA81210311I	0.0596	0.0662	0.00258	0.0142	22	88.2	0.000992 U	0.00304
LS-CSW	1/14/2021	LCSW210114I	0.000733	0.000856	0.00376	0.00836	0.284	0.782	0.00099 U	0.000988 U
LS-LEPS	1/5/2021	LEPS210105P		0.0107		0.00934		9.08		0.00179
LS-LEPS	1/12/2021	LEPS210112M	0.00912		0.00197 U		3.77		0.000987 U	
LS-LEPS	1/12/2021	LEPS210112P		0.00956		0.0101		7.89		0.00162
LS-LEPS	1/20/2021	LEPS210120P		0.0089		0.00805		8.45		0.0012
LS-LEPS	1/26/2021	LEPS210126D		0.0085		0.00752		6.44		0.00103
LS-LEPS	1/26/2021	LEPS210126P		0.00853		0.00744		6.36		0.00101
LS-LEPS	2/3/2021	LEPS210203M	0.011		0.00204		5.83		0.00101 U	
LS-LEPS	2/4/2021	LEPS210204P		0.0116		0.00992		8.63		0.00155
LS-LEPS	2/9/2021	LEPS210209P		0.0107		0.00507		6.89		0.000986 U
LS-LEPS	2/16/2021	LEPS210216P		0.0116		0.0112		9.67		0.00168
LS-LEPS	2/23/2021	LEPS210223P		0.0111		0.00671		8.86		0.00107
LS-LEPS	3/2/2021	LEPS210302P		0.0103		0.00801		9.51		0.0012
LS-LEPS	3/10/2021	LEPS210310M	0.0105		0.00202 U		5.14		0.00101 U	
LS-LEPS	3/10/2021	LEPS210310P		0.0123		0.00725		9.37		0.00104
LS-LEPS	3/16/2021	LEPS210316P		0.0139		0.00654		10.1		0.00102
LS-LEPS	3/23/2021	LEPS210323P		0.0146		0.00574		9.57		0.00101 U
LS-LEPS	3/30/2021	LEPS210330P		0.0162		0.00677		10.5		0.00107
LS-MH46N	1/13/2021	L46N210113M		0.0214		0.00205 U		1.85		0.00103 U
LS-MH46N	2/4/2021	L46N210204M		0.0167		0.00208 U		2.21		0.00104 U
LS-MH46N	3/10/2021	L46N210310M		0.0167		0.00202 U		1.97		0.00101 U
LS-PS1A	1/14/2021	LP1A210114I	0.000602	0.000652	0.0071	0.00916	0.204	0.762	0.000996 U	0.00099 U
LS-PS1A	2/3/2021	LP1A210203I	0.00172	0.00179	0.00693	0.0101	0.469	1.38	0.000987 U	0.000988 U
LS-PS1A	3/11/2021	LP1A210311I	0.00527	0.00516	0.00305	0.00595	0.592	1.11	0.001 U	0.000996 U
LS-PS4	2/3/2021	LP4-210203I	0.00205	0.00237	0.0045	0.0103	3.89	5.16	0.000988 U	0.000975 U
LS-PS4	3/11/2021	LP4-210311I	0.00239	0.00251	0.00334	0.00467	2.04	4.87	0.000999 U	0.000988 U
LS-V1A	1/14/2021	LV1A210114M	0.00783	0.00768	0.00456	0.00826	2.83	3.75	0.000992 U	0.001 U
LS-V1A	1/26/2021	LV1A210126R	0.0108	0.0115	0.00261	0.00986	4.47	8.44	0.001 U	0.00134
LS-V1A	2/3/2021	LV1A210204M	0.0169	0.0183	0.00296	0.00839	6.49	13.6	0.00101 U	0.00119
LS-V1A	3/10/2021	LV1A210310M	0.0224	0.0245	0.0028	0.0125	5.23	17.2	0.00101 U	0.00229

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	1,1,1,2-Tetrachloro-ethane 630-20-6 (ug/L)	1,1,1-Trichloro-ethane 71-55-6 (ug/L)	1,1,2,2-Tetrachloro-ethane 79-34-5 (ug/L)	1,1,2-Trichloro-ethane 79-00-5 (ug/L)	1,1-Dichloro-ethane 75-34-3 (ug/L)	1,1-Dichloro-ethene 75-35-4 (ug/L)	1,1-Dichloro-propene 563-58-6 (ug/L)	1,2,3-Trichloro-propane 96-18-4 (ug/L)
LS-LEPS	1/12/2021	LEPS210112M	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-LEPS	2/3/2021	LEPS210203M	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-LEPS	3/10/2021	LEPS210310M	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-MH46N	1/13/2021	L46N210113M	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-MH46N	2/4/2021	L46N210204M	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-MH46N	3/10/2021	L46N210310M	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-V1A	1/14/2021	LV1A210114M	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-V1A	1/26/2021	LV1A210126R	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-V1A	2/3/2021	LV1A210204M	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-V1A	3/10/2021	LV1A210310M	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOA TRIP BLANK	1/12/2021	VTRP210113X	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	1/12/2021	VTRP210113Z	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	1/13/2021	VTRP210114X	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	1/25/2021	VTRP210126Z	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	2/3/2021	VTRP210203X2	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	2/3/2021	VTRP210204Z	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	3/9/2021	VTRP210310Y	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	3/9/2021	VTRP210310Z	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	1,2-Dibromo-3-Chloropropane 96-12-8 (ug/L)	1,2-Dibromo-ethane 106-93-4 (ug/L)	1,2-Dichloro-benzene 95-50-1 (ug/L)	1,2-Dichloro-ethane 107-06-2 (ug/L)	1,2-Dichloro-propane 78-87-5 (ug/L)	1,3 Dichloro-benzene 541-73-1 (ug/L)	1,3-Dichloro-propane 142-28-9 (ug/L)	1,4-Dichloro-benzene 106-46-7 (ug/L)	2,2-Dichloro-propane 594-20-7 (ug/L)	2-Butanone 78-93-3 (ug/L)
LS-LEPS	1/12/2021	LEPS210112M	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1780 D
LS-LEPS	2/3/2021	LEPS210203M	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2390 D
LS-LEPS	3/10/2021	LEPS210310M	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1270 D
LS-MH46N	1/13/2021	L46N210113M	25 U	1 U	2.26	1 U	1 U	1 U	1 U	8.07	1 U	2.5 U
LS-MH46N	2/4/2021	L46N210204M	25 U	1 U	2.07	1 U	1 U	1 U	1 U	7.3	1 U	2.5 U
LS-MH46N	3/10/2021	L46N210310M	25 U	1 U	2.08	1 U	1 U	1 U	1 U	8.24	1 U	2.5 U
LS-V1A	1/14/2021	LV1A210114M	25 U	1 U	1 U	1.17 JT	1 U	1 U	1 U	1 U	1 U	1060 D
LS-V1A	1/26/2021	LV1A210126R	25 U	1 U	1 U	1.55 JT	1 U	1 U	1 U	1 U	1 U	2810 D
LS-V1A	2/3/2021	LV1A210204M	25 U	1 U	1 U	6.33	1 U	1 U	1 U	1.48 JT	1 U	4960 D
LS-V1A	3/10/2021	LV1A210310M	25 U	1 U	1 U	1.85 JT	1 U	1 U	1 U	1 JT	1 U	10200 D
VOA TRIP BLANK	1/12/2021	VTRP210113X	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
VOA TRIP BLANK	1/12/2021	VTRP210113Z	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
VOA TRIP BLANK	1/13/2021	VTRP210114X	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
VOA TRIP BLANK	1/25/2021	VTRP210126Z	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
VOA TRIP BLANK	2/3/2021	VTRP210203X2	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
VOA TRIP BLANK	2/3/2021	VTRP210204Z	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
VOA TRIP BLANK	3/9/2021	VTRP210310Y	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
VOA TRIP BLANK	3/9/2021	VTRP210310Z	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	2-Hexanone 591-78-6 (ug/L)	2-Methyl-1-propanol 78-83-1 (ug/L)	3-Chloro-propene 107-05-1 (ug/L)	4-Methyl-2-Pentanone 108-10-1 (ug/L)	Acetone 67-64-1 (ug/L)	Acetonitrile 75-05-8 (ug/L)	Acrolein 107-02-8 (ug/L)	Acrylonitrile 107-13-1 (ug/L)	Benzene 71-43-2 (ug/L)
LS-LEPS	1/12/2021	LEPS210112M	8.18 JT	60.9 JT	1 U	25 U	2140 D	50 U	25 U	0.35 U	1 U
LS-LEPS	2/3/2021	LEPS210203M	12.8	130	1 U	25 U	4020 D	50 U	25 U	0.35 U	1 U
LS-LEPS	3/10/2021	LEPS210310M	5 U	50 U	1 U	25 U	2430 D	50 U	25 U	0.35 U	1 U
LS-MH46N	1/13/2021	L46N210113M	5 U	50 U	1 U	25 U	34.1 JT	50 U	25 U	0.35 U	3.91
LS-MH46N	2/4/2021	L46N210204M	5 U	50 U	1 U	25 U	25 U	50 U	25 U	0.35 U	3.07
LS-MH46N	3/10/2021	L46N210310M	8.7 JT	50 U	1 U	25 U	25 U	50 U	25 U	0.35 U	3.6
LS-V1A	1/14/2021	LV1A210114M	12.1	83.9 JT	1 U	25 U	1520 D	50 U	25 U	0.35 U	1 U
LS-V1A	1/26/2021	LV1A210126R	6.01 JT	139 D	1 U	25 U	3190 D	50 U	25 U	0.35 U	1 U
LS-V1A	2/3/2021	LV1A210204M	9.28 JT	250	1 U	42.7 JT	5130 D	50 U	25 U	0.35 U	1.37 JT
LS-V1A	3/10/2021	LV1A210310M	11.2	294	1 U	55.9	8790 D	50 U	25 U	0.35 U	1 U
VOA TRIP BLANK	1/12/2021	VTRP210113X	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U
VOA TRIP BLANK	1/12/2021	VTRP210113Z	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U
VOA TRIP BLANK	1/13/2021	VTRP210114X	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U
VOA TRIP BLANK	1/25/2021	VTRP210126Z	0.5 U	5 DU	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U
VOA TRIP BLANK	2/3/2021	VTRP210203X2	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U
VOA TRIP BLANK	2/3/2021	VTRP210204Z	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U
VOA TRIP BLANK	3/9/2021	VTRP210310Y	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U
VOA TRIP BLANK	3/9/2021	VTRP210310Z	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	Bromochloro-methane 74-97-5 (ug/L)	Bromodichloro-methane 75-27-4 (ug/L)	Bromoform 75-25-2 (ug/L)	Bromo-methane 74-83-9 (ug/L)	Carbon Disulfide 75-15-0 (ug/L)	Carbon Tetrachloride 56-23-5 (ug/L)	Chloro-benzene 108-90-7 (ug/L)	Chloro-dibromo-methane 124-48-1 (ug/L)	Chloroethane 75-00-3 (ug/L)
LS-LEPS	1/12/2021	LEPS210112M	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-LEPS	2/3/2021	LEPS210203M	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-LEPS	3/10/2021	LEPS210310M	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-MH46N	1/13/2021	L46N210113M	1 U	2.5 U	5 U	1 U	1 U	2.5 U	2.14	5 U	1 U
LS-MH46N	2/4/2021	L46N210204M	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1.82 JT	5 U	1 U
LS-MH46N	3/10/2021	L46N210310M	1 U	2.5 U	5 U	1 U	1 U	2.5 U	2 JT	5 U	1 U
LS-V1A	1/14/2021	LV1A210114M	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-V1A	1/26/2021	LV1A210126R	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-V1A	2/3/2021	LV1A210204M	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-V1A	3/10/2021	LV1A210310M	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
VOA TRIP BLANK	1/12/2021	VTRP210113X	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	1/12/2021	VTRP210113Z	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	1/13/2021	VTRP210114X	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	1/25/2021	VTRP210126Z	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	2/3/2021	VTRP210203X2	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	2/3/2021	VTRP210204Z	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	3/9/2021	VTRP210310Y	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	3/9/2021	VTRP210310Z	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	Chloroform 67-66-3 (ug/L)	Chloro-methane 74-87-3 (ug/L)	Chloroprene 126-99-8 (ug/L)	cis-1,2-Dichloro-ethene 156-59-2 (ug/L)	cis-1,3-Dichloro-propene 10061-01-5 (ug/L)	Dibromo-methane 74-95-3 (ug/L)	Dichloro-difluoro-methane 75-71-8 (ug/L)	Ethylbenzene 100-41-4 (ug/L)	m & p Xylenes mpx (ug/L)
LS-LEPS	1/12/2021	LEPS210112M	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U
LS-LEPS	2/3/2021	LEPS210203M	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1.68 JT
LS-LEPS	3/10/2021	LEPS210310M	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	16
LS-MH46N	1/13/2021	L46N210113M	1 U	2.5 U	1 U	3.42	2.5 U	1 U	1 U	38.3	52.1
LS-MH46N	2/4/2021	L46N210204M	1 U	2.5 U	1 U	6.49	2.5 U	1 U	1 U	29.6	43.7
LS-MH46N	3/10/2021	L46N210310M	1 U	2.5 U	1 U	4.33	2.5 U	1 U	1 U	38.3	61
LS-V1A	1/14/2021	LV1A210114M	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1.27 JT	2.59
LS-V1A	1/26/2021	LV1A210126R	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1.64 JT	3.36
LS-V1A	2/3/2021	LV1A210204M	1 U	2.5 U	1 U	1.66 JT	2.5 U	1 U	1 U	4.17	9.73
LS-V1A	3/10/2021	LV1A210310M	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	2.28	20.8
VOA TRIP BLANK	1/12/2021	VTRP210113X	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	1/12/2021	VTRP210113Z	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	1/13/2021	VTRP210114X	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	1/25/2021	VTRP210126Z	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	2/3/2021	VTRP210203X2	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	2/3/2021	VTRP210204Z	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	3/9/2021	VTRP210310Y	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	3/9/2021	VTRP210310Z	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	Methyl Iodide 74-88-4 (ug/L)	Methyl Methacrylate 80-62-6 (ug/L)	Methylacrylo-nitrile 126-98-7 (ug/L)	Methylene Chloride 75-09-2 (ug/L)	o-Xylene 95-47-6 (ug/L)	Proprionitrile 107-12-0 (ug/L)	Styrene 100-42-5 (ug/L)	Tetrachloro-ethene 127-18-4 (ug/L)
LS-LEPS	1/12/2021	LEPS210112M	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-LEPS	2/3/2021	LEPS210203M	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-LEPS	3/10/2021	LEPS210310M	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-MH46N	1/13/2021	L46N210113M	1 U	2.5 U	1 U	25 U	2.06	5 U	1.54 JT	1 U
LS-MH46N	2/4/2021	L46N210204M	1 U	2.5 U	1 U	25 U	1.54 JT	5 U	1.49 JT	1 U
LS-MH46N	3/10/2021	L46N210310M	1 U	2.5 U	1 U	26.7 JT	1.85 JT	5 U	1.1 JT	1 U
LS-V1A	1/14/2021	LV1A210114M	1 U	2.5 U	1 U	25 U	1.33 JT	5 U	1 U	1 U
LS-V1A	1/26/2021	LV1A210126R	1 U	2.5 U	1 U	25 U	1.62 JT	5 U	1 U	1 U
LS-V1A	2/3/2021	LV1A210204M	1 U	2.5 U	1 U	25 U	4.83	5 U	1.94 JT	1 U
LS-V1A	3/10/2021	LV1A210310M	1 U	2.5 U	1 U	25 U	2.65	5 U	1 U	1 U
VOA TRIP BLANK	1/12/2021	VTRP210113X	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
VOA TRIP BLANK	1/12/2021	VTRP210113Z	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
VOA TRIP BLANK	1/13/2021	VTRP210114X	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
VOA TRIP BLANK	1/25/2021	VTRP210126Z	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
VOA TRIP BLANK	2/3/2021	VTRP210203X2	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
VOA TRIP BLANK	2/3/2021	VTRP210204Z	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
VOA TRIP BLANK	3/9/2021	VTRP210310Y	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
VOA TRIP BLANK	3/9/2021	VTRP210310Z	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206-263-0608)

Site	Date	Sample ID	Toluene 108-88-3 (ug/L)	trans-1,2-Dichloro-ethene 156-60-5 (ug/L)	trans-1,3-Dichloro-propene 10061-02-6 (ug/L)	trans-1,4-Dichloro-2-butene 110-57-6 (ug/L)	Trichloro-ethene 79-01-6 (ug/L)	Trichloro-fluoro-methane 75-69-4 (ug/L)	Vinyl Acetate 108-05-4 (ug/L)	Vinyl Chloride 75-01-4 (ug/L)
LS-LEPS	1/12/2021	LEPS210112M	1 U	1 U	5 U	5 U	1 U	1 U	1 U	0.1 DU
LS-LEPS	2/3/2021	LEPS210203M	7.65	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-LEPS	3/10/2021	LEPS210310M	1.66 JT	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-MH46N	1/13/2021	L46N210113M	2.22	1 U	5 U	5 U	1 U	1 U	1 U	8.52 D
LS-MH46N	2/4/2021	L46N210204M	2.41	1 U	5 U	5 U	1 U	1 U	1 U	6.48
LS-MH46N	3/10/2021	L46N210310M	3.42	1 U	5 U	5 U	1 U	1 U	1 U	5.7
LS-V1A	1/14/2021	LV1A210114M	7.44	1 U	5 U	5 U	1 U	1 U	1 U	0.112 DJT
LS-V1A	1/26/2021	LV1A210126R	8.07	1 U	5 U	5 U	1 U	1 U	1 U	0.1 DU
LS-V1A	2/3/2021	LV1A210204M	27.8	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-V1A	3/10/2021	LV1A210310M	14.9	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
VOA TRIP BLANK	1/12/2021	VTRP210113X	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 DU
VOA TRIP BLANK	1/12/2021	VTRP210113Z	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 DU
VOA TRIP BLANK	1/13/2021	VTRP210114X	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 DU
VOA TRIP BLANK	1/25/2021	VTRP210126Z	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 DU
VOA TRIP BLANK	2/3/2021	VTRP210203X2	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
VOA TRIP BLANK	2/3/2021	VTRP210204Z	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
VOA TRIP BLANK	3/9/2021	VTRP210310Y	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
VOA TRIP BLANK	3/9/2021	VTRP210310Z	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate PCB Analytical Data
Contact Person: Natalya Usova (206-263-0608)

		Chemical_Name	2,4,5-T	2,4,5-TP SILVEX	2,4-D	4,4'DDD	4,4'DDE	4,4'DDT	ALDRIN	ALPHA BHC	ALPHA CHLORDANE	AROCLOR 1016	AROCLOR 1221
		CAS_RN	93-76-5	93-72-1	94-75-7	72-54-8	72-55-9	50-29-3	309-00-2	319-84-6	5103-71-9	12674-11-2	11104-28-2
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	1/12/2021	LEPS210112M	0.5 U	0.5 U	2.95	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U
LS-LEPS	2/3/2021	LEPS210203M	0.5 U	0.5 U	2.55	0.1 U	0.1 GU	0.1 U	0.1 GU	0.1 U	0.1 U	0.025 U	0.025 U
LS-LEPS	3/10/2021	LEPS210310M	0.5 U	0.5 U	2.09	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 U	0.05 U
LS-MH46N	1/13/2021	L46N210113M	0.5 U	1 U	1 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U
LS-MH46N	2/4/2021	L46N210204M	0.5 U	1 U	1.09	0.1 U	0.1 GU	0.1 U	0.1 GU	0.1 U	0.1 U	0.025 U	0.075 U
LS-MH46N	3/10/2021	L46N210310M	0.5 U	0.5 U	1 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.05 U	0.025 GU	0.025 U	0.1 U
LS-V1A	1/14/2021	LV1A210114M	0.5 U	0.5 U	1.42	0.025 HU	0.025 HU	0.025 HU	0.025 HU	0.025 HU	0.025 HU	0.025 U	0.025 U
LS-V1A	1/26/2021	LV1A210126R	0.5 U	0.5 U	2.13	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
LS-V1A	2/3/2021	LV1A210204M	0.5 U	0.5 U	3.59	0.1 U	0.1 GU	0.1 U	0.1 GU	0.1 U	0.1 U	0.025 U	0.025 U
LS-V1A	3/10/2021	LV1A210310M	0.5 U	1 U	3.09	0.025 U	0.05 GU	0.025 U	0.025 U	0.05 U	0.025 GU	0.025 U	0.1 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate PCB Analytical Data
Contact Person: Natalya Usova (206-263-0608)

		Chemical_Name	AROCLOR 1232	AROCLOR 1242	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	BETA BHC	DELTA BHC	DIELDRIN	DINOSEB	ENDOSULFAN I	ENDOSULFAN II
		CAS_RN	11141-16-5	53469-21-9	12672-29-6	11097-69-1	11096-82-5	319-85-7	319-86-8	60-57-1	88-85-7	959-98-8	33213-65-9
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	1/12/2021	LEPS210112M	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.5 U	0.025 U	0.025 U
LS-LEPS	2/3/2021	LEPS210203M	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.1 U	0.1 U	0.1 U	0.5 U	0.1 U	0.1 U
LS-LEPS	3/10/2021	LEPS210310M	0.025 U	0.0469	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.5 U	0.075 U	0.025 U
LS-MH46N	1/13/2021	L46N210113M	0.025 U	0.149	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.5 U	0.025 U	0.025 U
LS-MH46N	2/4/2021	L46N210204M	0.025 U	0.176	0.025 U	0.025 U	0.025 U	0.1 U	0.1 U	0.1 U	0.5 U	0.1 U	0.1 U
LS-MH46N	3/10/2021	L46N210310M	0.025 U	0.16	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.5 U	0.05 U	0.025 U
LS-V1A	1/14/2021	LV1A210114M	0.025 U	0.0569	0.025 U	0.0322	0.025 U	0.025 GHU	0.025 HU	0.025 HU	0.5 U	0.025 HU	0.025 HU
LS-V1A	1/26/2021	LV1A210126R	0.025 U	0.0583	0.025 U	0.029	0.025 U	0.025 U	0.025 U	0.025 U	0.5 GU	0.025 U	0.025 U
LS-V1A	2/3/2021	LV1A210204M	0.025 U	0.069	0.025 U	0.025 U	0.025 U	0.1 U	0.1 U	0.1 U	0.5 U	0.1 U	0.1 U
LS-V1A	3/10/2021	LV1A210310M	0.025 U	0.0872	0.025 U	0.0321	0.025 U	0.025 GU	0.125 U	0.025 U	0.5 U	0.025 U	0.025 U

Environmental Monitoring Data

Data Collected from January 1, 2021 to March 31, 2021
Cedar Hills Landfill ---Leachate PCB Analytical Data
Contact Person: Natalya Usova (206-263-0608)

		Chemical_Name	ENDOSULFAN SULFATE	ENDRIN	ENDRIN ALDEHYDE	HEPTACHLOR	HEPTACHLOR EPOXIDE	ISODRIN	LINDANE (GAMMA BHC)	METHOXYCHLOR	Total Aroclors	TOXAPHENE	trans-Chlordane
		CAS_RN	1031-07-8	72-20-8	7421-93-4	76-44-8	1024-57-3	465-73-6	58-89-9	72-43-5	T_AROCLOR	8001-35-2	5103-74-2
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	1/12/2021	LEPS210112M	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 U	0.125 U	0.025 U	2.5 U	0.025 GU
LS-LEPS	2/3/2021	LEPS210203M	0.1 U	0.1 U	0.1 GU	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.025 U	10 U	0.1 GU
LS-LEPS	3/10/2021	LEPS210310M	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 U	0.125 U	0.0469	2.5 U	0.025 GU
LS-MH46N	1/13/2021	L46N210113M	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 U	0.125 U	0.149	2.5 U	0.025 GU
LS-MH46N	2/4/2021	L46N210204M	0.1 U	0.1 U	0.1 GU	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.176	10 U	0.1 GU
LS-MH46N	3/10/2021	L46N210310M	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 U	0.125 U	0.16	2.5 U	0.025 GU
LS-V1A	1/14/2021	LV1A210114M	0.025 HU	0.025 HU	0.025 GHU	0.025 HU	0.025 HU	0.025 HU	0.05 HU	0.125 HU	0.0891	2.5 HU	0.025 GHU
LS-V1A	1/26/2021	LV1A210126R	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 U	0.125 U	0.0873	2.5 U	0.0669
LS-V1A	2/3/2021	LV1A210204M	0.1 U	0.1 U	0.1 GU	0.1 U	0.1 U	0.1 U	0.1 U	0.5 U	0.069	10 U	0.1 GU
LS-V1A	3/10/2021	LV1A210310M	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.1 U	0.125 U	0.1193	2.5 U	0.025 GU

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Sample Roster
Contact Person: Natalya Usova (206) 263-0608

Leachate Monitoring Activities 2nd Quarter 2021

Station ID	Date	Activity	Sample ID	Comment
LS-A567	4/8/2021	Special Investigation	L567210408I	
LS-A567	5/13/2021	Special Investigation	L567210513I	
LS-A567	6/3/2021	Special Investigation	L567210603I2	
LS-A567	6/3/2021	Special Investigation	L567210603I	
LS-A8	4/8/2021	Special Investigation	LA81210408I	
LS-A8	6/3/2021	Special Investigation	LA81210603I2	
LS-A8	6/3/2021	Special Investigation	LA81210603I	
LS-CSW	4/8/2021	Special Investigation	LCSW210408I	
LS-LEPS	4/7/2021	Monthly Characterization Sample	LEPS210407M	
LS-LEPS	4/7/2021	Permit Sample	LEPS210407P	
LS-LEPS	4/13/2021	Permit Sample	LEPS210413P	
LS-LEPS	4/20/2021	Permit Sample	LEPS210420P	
LS-LEPS	4/27/2021	Permit Sample	LEPS210427P	
LS-LEPS	5/4/2021	Permit Sample	LEPS210504P	
LS-LEPS	5/12/2021	Monthly Characterization Sample	LEPS210512M	
LS-LEPS	5/12/2021	Permit Sample	LEPS210512P	
LS-LEPS	5/18/2021	Permit Sample	LEPS210518P	
LS-LEPS	5/25/2021	Permit Sample	LEPS210525P	
LS-LEPS	6/2/2021	Monthly Characterization Sample	LEPS210602M	
LS-LEPS	6/2/2021	Permit Sample	LEPS210602P	
LS-LEPS	6/3/2021	Special Investigation	LEPS210603I2	
LS-LEPS	6/8/2021	Permit Sample	LEPS210608P	
LS-LEPS	6/15/2021	Permit Sample	LEPS210615P	
LS-LEPS	6/22/2021	Permit Sample	LEPS210622P	
LS-LEPS	6/30/2021	Permit Sample	LEPS210630P	
LS-PS1A	4/8/2021	Special Investigation	LP1A210408I	
LS-PS1A	6/3/2021	Special Investigation	LP1A210603I2	
LS-PS1A	6/3/2021	Special Investigation	LP1A210603I	
LS-PS2A	4/7/2021	Monthly Characterization Sample	LP2A210407M	
LS-PS2A	5/13/2021	Monthly Characterization Sample	LP2A210513M	
LS-PS2A	5/13/2021	Special Investigation	LP1A210513I	
LS-PS2A	6/2/2021	Monthly Characterization Sample	LP2A210602M	
LS-PS4	4/8/2021	Special Investigation	LP4-210408I	
LS-PS4	5/13/2021	Special Investigation	LP4-210513I	
LS-PS4	6/3/2021	Special Investigation	LP4-210603I2	
LS-PS4	6/3/2021	Special Investigation	LP4-210603I	
LS-PS4	6/3/2021	QA/QC Sample	LP4-210603D	
LS-V1A	4/7/2021	Monthly Characterization Sample	LV1A210407M	
LS-V1A	5/12/2021	Monthly Characterization Sample	LV1A210512M	
LS-V1A	6/2/2021	Monthly Characterization Sample	LV1A210602M	
LS-V1A	6/3/2021	Special Investigation	LV1A210603I2	
LS-46N	4/7/2021	Monthly Characterization Sample	L46N210407M	
LS-46N	4/7/2021	QA/QC Sample	L46N210407D	
LS-46N	5/13/2021	Monthly Characterization Sample	L46N210513M	
LS-46N	6/2/2021	Monthly Characterization Sample	L46N210602M	
FIELD BLANK	5/13/2021	QA/QC Sample	LP1A210513F	
FIELD BLANK	6/3/2021	QA/QC Sample	LP4-210603F2	

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Field Parameter
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	pH (Field) (std. Units)	Specific Conductance (Field) (umho/cm)	Temperature (Field) (^{o}C)
LS-A567	L567210513I	5/13/2021	8.16	24716	30.8
LS-A567	L567210603I	6/3/2021	8.09	22179	31.6
LS-A567	L567210603I2	6/3/2021	8.09	22179	31.6
LS-A81	LA81210408I	4/8/2021	7.21	21507	7.4
LS-A81	LA81210603I	6/3/2021	7.44	19500	17.9
LS-A81	LA81210603I2	6/3/2021	7.44	19500	17.9
LS-CSW	LCSW210408I	4/8/2021	7.93	549	9.5
LS-LEPS	LEPS210407M	4/7/2021	7.96	5536	11.3
LS-LEPS	LEPS210407P	4/7/2021	7.96	5536	11.3
LS-LEPS	LEPS210413P	4/13/2021	7.54	4950	12
LS-LEPS	LEPS210420P	4/20/2021	8.38	8233	15.5
LS-LEPS	LEPS210427P	4/27/2021	7.98	6373	14.1
LS-LEPS	LEPS210504P	5/4/2021	8.34	6955	14.8
LS-LEPS	LEPS210512M	5/12/2021	8.38	8233	15.5
LS-LEPS	LEPS210512P	5/12/2021	8.38	8233	15.5
LS-LEPS	LEPS210518P	5/18/2021	8.25	8540	16.1
LS-LEPS	LEPS210525P	5/25/2021	8.47	6843	15.2
LS-LEPS	LEPS210602M	6/2/2021	8.21	9079	19.3
LS-LEPS	LEPS210602P	6/2/2021	8.21	9079	19.3
LS-LEPS	LEPS210608P	6/8/2021	8.47	9297	17
LS-LEPS	LEPS210615P	6/15/2021	9.71	8889	17.8
LS-LEPS	LEPS210622P	6/22/2021	8.52	8382	23.6
LS-LEPS	LEPS210630P	6/30/2021	8.48	10206	24.9
LS-MH46N	L46N210407M	4/7/2021	7.1	7025	24.2
LS-MH46N	L46N210513M	5/13/2021	6.96	8486	26.3
LS-MH46N	L46N210602M	6/2/2021	7.14	9501	26.3
LS-PS1A	LP1A210408I	4/8/2021	7.62	1207	12.5
LS-PS1A	LP1A210513I	5/13/2021	7.79	3373	13.9
LS-PS1A	LP1A210603I	6/3/2021	7.88	8228	19.4
LS-PS1A	LP1A210603I2	6/3/2021	7.88	8228	19.4
LS-PS2A	LP2A210407M	4/7/2021	7.1	115.1	9.1
LS-PS2A	LP2A210513M	5/13/2021	7.08	346.5	12.8
LS-PS2A	LP2A210602M	6/2/2021	7.11	408.5	13.5
LS-PS4	LP4-210408I	4/8/2021	7.19	557	9.8
LS-PS4	LP4-210513I	5/13/2021	7.58	1457	13.6
LS-PS4	LP4-210603I	6/3/2021	7.68	2262	15.3
LS-PS4	LP4-210603I2	6/3/2021	7.68	2262	15.3
LS-V1A	LV1A210407M	4/7/2021	7.37	9553	12
LS-V1A	LV1A210512M	5/12/2021	8.13	20900	23.2
LS-V1A	LV1A210602M	6/2/2021	8.25	11740	29.4
LS-V1A	LV1A210603I2	6/3/2021	8.27	18930	26.2

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Conventional Analyticl Data
Contact Person: Natalya Usova (206) 263-0608

			Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Total (As Caco3)	Ammonia As N	Biological Oxygen Demand - 5 Day	Chemical Oxygen Demand	Chloride	Coliforms, Fecal	Coliforms, Total	Cyanide	Fixed Suspended Solids
			Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Cfu/100ml	Cfu/100ml	Mg/L	Mg/L
Site	Sample ID	Date	(mg/l)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(CFU/100mL)	(CFU/100mL)	(mg/L)	(mg/L)	(mg/L)
LS-A567	L567210513I	5/13/2021	9870	1 U	9870	2030	2100	6910 S	2560				18.8
LS-A567	L567210513I	5/13/2021											
LS-A567	L567210603I	6/3/2021	9530	1 U	9530	2000	1980	5680 S	2620				4.4
LS-A567	L567210603I	6/3/2021											
LS-A81	LA81210408I	4/8/2021	9450	1 U	9450	1660	20600	27000 S	2060				70
LS-A81	LA81210408I	4/8/2021											
LS-A81	LA81210603I	6/3/2021	8370	1 U	8370	1490	16800	30200 S	1780				8.6 T
LS-A81	LA81210603I	6/3/2021											
LS-CSW	LCSW210408I	4/8/2021	221	1 U	221	21.3	19.8	117	48.7				1.7 T
LS-CSW	LCSW210408I	4/8/2021											
LS-LEPS	LEPS210407M	4/7/2021								9200	80000 C		
LS-LEPS	LEPS210407M	4/7/2021			2380	391	538	1650	494			0.008 SU	
LS-LEPS	LEPS210407M	4/7/2021											
LS-LEPS	LEPS210512M	5/12/2021								770	4500		
LS-LEPS	LEPS210512M	5/12/2021			3300	571	159	1630	772			0.008 SU	
LS-LEPS	LEPS210512M	5/12/2021											
LS-LEPS	LEPS210602M	6/2/2021								300	4200		
LS-LEPS	LEPS210602M	6/2/2021			3920	700	151	1630	968			0.008 SU	
LS-LEPS	LEPS210602M	6/2/2021											
LS-MH46N	L46N210407M	4/7/2021								1 U	1 U		
LS-MH46N	L46N210407M	4/7/2021			2300	432	52.4	967	1080			0.008 SU	
LS-MH46N	L46N210407M	4/7/2021											
LS-MH46N	L46N210513M	5/13/2021								1 U	1 U		
LS-MH46N	L46N210513M	5/13/2021			2550	515	58	1340	1260			0.008 SU	
LS-MH46N	L46N210513M	5/13/2021											
LS-MH46N	L46N210602M	6/2/2021								1 U	30		

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Conventional Analyticl Data
Contact Person: Natalya Usova (206) 263-0608

			Alkalinity, Bicarbonate	Alkalinity, Carbonate	Alkalinity, Total (As Caco3)	Ammonia As N	Biological Oxygen Demand - 5 Day	Chemical Oxygen Demand	Chloride	Coliforms, Fecal	Coliforms, Total	Cyanide	Fixed Suspended Solids
			Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Cfu/100ml	Cfu/100ml	Mg/L	Mg/L
Site	Sample ID	Date	(mg/l)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(CFU/100mL)	(CFU/100mL)	(mg/L)	(mg/L)	(mg/L)
LS-MH46N	L46N210602M	6/2/2021			2890	571	44.9	1400	1470			0.011 ST	
LS-MH46N	L46N210602M	6/2/2021											
LS-PS1A	LP1A210408I	4/8/2021	407	1 U	407	67.5	26.2	181	129				1.1 T
LS-PS1A	LP1A210408I	4/8/2021											
LS-PS1A	LP1A210513I	5/13/2021	1080	1 U	1080	217	56.1	446	339				0.73 U
LS-PS1A	LP1A210513I	5/13/2021											
LS-PS1A	LP1A210603I	6/3/2021	3000	1 U	3000	620	122	1170	1000				3.3 T
LS-PS1A	LP1A210603I	6/3/2021											
LS-PS2A	LP2A210407M	4/7/2021								1 U	1		
LS-PS2A	LP2A210407M	4/7/2021			43.5	3.18	3.24	18 T	2.44			0.002 U	
LS-PS2A	LP2A210407M	4/7/2021											
LS-PS2A	LP2A210513M	5/13/2021								1 U	1 U		
LS-PS2A	LP2A210513M	5/13/2021			82.8	18.5	5.23	30	13.7			0.002 U	
LS-PS2A	LP2A210513M	5/13/2021											
LS-PS2A	LP2A210602M	6/2/2021								1 U	200		
LS-PS2A	LP2A210602M	6/2/2021			86.3	20.6	6.5	30.7	20.3			0.002 U	
LS-PS2A	LP2A210602M	44349.42361											
LS-PS4	LP4-210408I	44294.34722	254	1 U	254	26	31.5	142	30.3				78.1
LS-PS4	LP4-210408I	44294.34722											
LS-PS4	LP4-210513I	44329.40625	445	1 U	445	97.8	140	315	79.2				28
LS-PS4	LP4-210513I	44329.40625											
LS-PS4	LP4-210603I	44350.41319	878	1 U	878	178	345	631	136				8.5
LS-PS4	LP4-210603I	44350.41319											
LS-V1A	LV1A210407M	44293.47569								56000	440000		
LS-V1A	LV1A210407M	44293.47569			3330	639	3070	4450	722			0.008 SU	
LS-V1A	LV1A210407M	44293.47569											
LS-V1A	LV1A210512M	44328.27778								140000	3000000 C		
LS-V1A	LV1A210512M	44328.27778			5500	1170	4780	8460	1250			0.011 ST	
LS-V1A	LV1A210512M	44328.27778											
LS-V1A	LV1A210602M	44349.33333								180000	3400000 C		
LS-V1A	LV1A210602M	44349.33333			6490	1430	5880	11300 S	1440			0.014 ST	
LS-V1A	LV1A210602M	44349.33333											

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Conventional Analyticl Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Fluoride Mg/L (umho/cm)	Hardness Mg/L (mg/L)	Nitrate + Nitrite As N Mg/L (mg/L)	Phosphorus, Soluble Reactive Mg/L (mg/L)	Specific Conductance Umhos/Cm (mg/L)	Sulfate Mg/L (mg/L)	Sulfide Mg/L (mg/L)	Total Dissolved Solids Mg/L (mg/L)	Total Fats, Oils & Grease Mg/L (mg/L)	Total Kjeldahl Nitrogen Mg/L	Total Organic Carbon Mg/L	Total Solids Mg/L	Total Suspended Solids Mg/L	Total Volatile Solids Mg/L	Volatile Suspended Solids Mg/L
LS-A567	L567210513I	5/13/2021	1 U	540	0.2 U			29	1.6	11900		2060 S	2310 S	12100	91.9	4580	73.1
LS-A567	L567210513I	5/13/2021					20100										
LS-A567	L567210603I	6/3/2021	5 U	522	0.066 T			30.2	5.04	11500		2160 S	2250 S	12000	22.4	4480	18
LS-A567	L567210603I	6/3/2021					19100										
LS-A81	LA81210408I	4/8/2021	200 U	5630	0.02 U			866	3.54	21100		1840 S	11200 S	22100	168	11000	97.5
LS-A81	LA81210408I	4/8/2021					18900										
LS-A81	LA81210603I	6/3/2021	100 U	4610	0.02 U			171	12.3	16700		1590 S	9170 S	18300	60.5	8600	51.9
LS-A81	LA81210603I	6/3/2021					15900										
LS-CSW	LCSW210408I	4/8/2021	0.063 T	98.2	0.083			12.3	0.01 U	328		28.3	39.3	415	16.9	291	15.1
LS-CSW	LCSW210408I	4/8/2021					608										
LS-LEPS	LEPS210407M	4/7/2021															
LS-LEPS	LEPS210407M	4/7/2021	0.51 T		0.1 U	0.0514		39.2	0.18 T		4.4 T	465	530		61.4	1370 B	52.9
LS-LEPS	LEPS210407M	4/7/2021					5780										
LS-LEPS	LEPS210512M	5/12/2021															
LS-LEPS	LEPS210512M	5/12/2021	0.2 U		0.1 U	0.168		47.5	0.32 T		3.6 T	600	446		286	1510	221
LS-LEPS	LEPS210512M	5/12/2021					7490										
LS-LEPS	LEPS210602M	6/2/2021															
LS-LEPS	LEPS210602M	6/2/2021	0.74 T		0.05 U	0.15 T		51.5	0.35 T		3.7 T	771	445		441	1660	359
LS-LEPS	LEPS210602M	6/2/2021					8730										
LS-MH46N	L46N210407M	4/7/2021															
LS-MH46N	L46N210407M	4/7/2021	1.06		0.05 U	2.71		1.88	1.08		2.9 T	444	388		0.53 U	700 B	0.53 U
LS-MH46N	L46N210407M	4/7/2021					7290										
LS-MH46N	L46N210513M	5/13/2021															
LS-MH46N	L46N210513M	5/13/2021	1 U		0.241	2.79		9.83	0.431		3 T	504	412		3	912	2.33
LS-MH46N	L46N210513M	5/13/2021					8320										
LS-MH46N	L46N210602M	6/2/2021															

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Conventional Analyticl Data
Contact Person: Natalya Usova (206) 263-0608

			Fluoride	Hardness	Nitrate + Nitrite As N	Phosphorus, Soluble Reactive	Specific Conductance	Sulfate	Sulfide	Total Dissolved Solids	Total Fats, Oils & Grease	Total Kjeldahl Nitrogen	Total Organic Carbon	Total Solids	Total Suspended Solids	Total Volatile Solids	Volatile Suspended Solids
			Mg/L	Mg/L	Mg/L	Mg/L	Umhos/Cm	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L	Mg/L
Site	Sample ID	Date	(umho/cm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)						
LS-MH46N	L46N210602M	6/2/2021	1 T		0.05 U	3.2		3.9 T	0.521		2.2 T	611	478		1	984	1
LS-MH46N	L46N210602M	6/2/2021					9010										
LS-PS1A	LP1A210408I	4/8/2021	0.11 T	82.5	1.07			9.86	0.0558	483		74.5	57.9	562	6.12	223	5.06
LS-PS1A	LP1A210408I	4/8/2021					1290										
LS-PS1A	LP1A210513I	5/13/2021	0.16 T	143	1/1/1900			11.5	0.0438	1230		219	134	1240	5.84	271	5.26
LS-PS1A	LP1A210513I	5/13/2021					3190										
LS-PS1A	LP1A210603I	6/3/2021	1 U	327	0.05 U			17.9	0.45	3260		769	384	3340	15.4	1200	12.1
LS-PS1A	LP1A210603I	6/3/2021					7970										
LS-PS2A	LP2A210407M	4/7/2021															
LS-PS2A	LP2A210407M	4/7/2021	0.0899		1/1/1900	1/0/1900		8.98	0.01 T		2 U	4.65	7.3		2.8	89 B	1.3
LS-PS2A	LP2A210407M	4/7/2021					131										
LS-PS2A	LP2A210513M	5/13/2021															
LS-PS2A	LP2A210513M	5/13/2021	0.042 T		1/3/1900	1/0/1900		35.7	0.018 T		1.9 U	17.6	9.93		1.2	46	0.8 T
LS-PS2A	LP2A210513M	5/13/2021					343										
LS-PS2A	LP2A210602M	6/2/2021															
LS-PS2A	LP2A210602M	6/2/2021	0.0416		1/3/1900	1/0/1900		52.1	0.019 T		1.8 U	19.4	12.1		0.64 T	55.3	0.64 T
LS-PS2A	LP2A210602M	44349.42361					420										
LS-PS4	LP4-210408I	44294.34722	0.077 T	136	1/0/1900			11.5	0.05 U	279		30.9	33.4	404	95.6	129 B	17.5
LS-PS4	LP4-210408I	44294.34722					617										
LS-PS4	LP4-210513I	44329.40625	0.077 T	174	1/0/1900			12.5	0.071 T	516		103	93.4	585	50.9	200	22.9
LS-PS4	LP4-210513I	44329.40625					1100										
LS-PS4	LP4-210603I	44350.41319	0.33 T	199	1/0/1900			15.9	0.13 T	903		390	219	953	52.5	404	44
LS-PS4	LP4-210603I	44350.41319					2250										
LS-V1A	LV1A210407M	44293.47569															
LS-V1A	LV1A210407M	44293.47569	10 U		0.27 T	1.85		47.8	0.65 T		5.4 T	732	1680		164	2850 B	100
LS-V1A	LV1A210407M	44293.47569					8080										
LS-V1A	LV1A210512M	44328.27778															
LS-V1A	LV1A210512M	44328.27778	10 U		0.1 U	3.03		66.1	6.09		9.7	1160	2930		423	3830	200
LS-V1A	LV1A210512M	44328.27778					12300										
LS-V1A	LV1A210602M	44349.33333															
LS-V1A	LV1A210602M	44349.33333	20 U		0.05 U	3.07		78	7.76		25.5 S	1520 S	3980 S		735	4730	341
LS-V1A	LV1A210602M	44349.33333					13800										

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Metal Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Aluminum, total (mg/L)	Antimony, total (mg/L)	Arsenic, total (mg/L)	Barium, total (mg/L)	Beryllium, total (mg/L)	Cadmium, total (mg/L)	Calcium, total (mg/L)	Chromium, total (mg/L)
LS-A567	L567210513I	5/13/2021	0.504	0.0242	0.343	0.469	0.000998 U	0.000499 U	58.3	0.235
LS-A567	L567210603I	6/3/2021	0.575	0.0229	0.357	0.444	0.001 U	0.0005 U	57.4	0.217
LS-A81	LA81210408I	4/8/2021	0.88	0.0261	0.0538	0.259	0.000988 U	0.000564	1780	0.185
LS-A81	LA81210603I	6/3/2021	0.853	0.0279	0.0732	0.316	0.000991 U	0.000574	1380	0.161
LS-CSW	LCSW210408I	4/8/2021	0.108	0.003 U	0.00573	0.0297	0.000998 U	0.000499 U	25.4	0.00322
LS-LEPS	LEPS210407P	4/7/2021	0.562	0.0171	0.137	0.0907	0.000999 U	0.0005 U	116	0.0643
LS-LEPS	LEPS210413P	4/13/2021	0.321	0.015	0.119	0.0867	0.00102 U	0.000508 U	115	0.0614
LS-LEPS	LEPS210427P	4/27/2021	0.658	0.0146	0.118	0.0845	0.000997 U	0.000499 U	106	0.076
LS-LEPS	LEPS210504P	5/4/2021	0.593	0.0169	0.126	0.0551	0.00101 U	0.000505 U	80.2	0.0835
LS-LEPS	LEPS210512P	5/12/2021	0.597	0.015	0.139	0.0581	0.00101 U	0.000504 U	84.3	0.0881
LS-LEPS	LEPS210518P	5/18/2021	0.684	0.0157	0.144	0.0597	0.00103 U	0.000515 U	83.5	0.0926
LS-LEPS	LEPS210525P	5/25/2021	0.291	0.0172	0.155	0.0295	0.000996 U	0.000498 U	58	0.103
LS-LEPS	LEPS210602P	6/2/2021	0.504	0.0185	0.166	0.0596	0.001 U	0.000501 U	80.1	0.109
LS-LEPS	LEPS210608P	6/8/2021	0.468	0.017	0.158	0.0353	0.000985 U	0.000492 U	59	0.104
LS-LEPS	LEPS210615P	6/15/2021	0.411	0.018	0.174	0.0376	0.000992 U	0.000496 U	62.9	0.109
LS-LEPS	LEPS210622P	6/22/2021	0.369	0.0158	0.157	0.0507	0.000995 U	0.000498 U	71.8	0.107
LS-LEPS	LEPS210630P	6/30/2021	0.473	0.0156	0.163	0.06	0.00099 U	0.000495 U	74.8	0.0969
LS-MH46N	L46N210407M	4/7/2021	0.0504 U	0.00302 U	0.0797	0.271	0.00101 U	0.000504 U	68.9	0.0623
LS-MH46N	L46N210513M	5/13/2021	0.0502 U	0.00301 U	0.091	0.353	0.001 U	0.000502 U	78	0.0756
LS-MH46N	L46N210602M	6/2/2021	0.0504 U	0.00302 U	0.098	0.378	0.00101 U	0.000504 U	84.4	0.0833
LS-PS1A	LP1A210408I	4/8/2021	0.0497 U	0.00396	0.0204	0.0371	0.000995 U	0.000497 U	19.5	0.00673
LS-PS1A	LP1A210513I	5/13/2021	0.0502 U	0.0113	0.0589	0.0939	0.001 U	0.000502 U	31.1	0.0157
LS-PS1A	LP1A210603I	6/3/2021	0.13	0.0205	0.164	0.253	0.00101 U	0.000505 U	68.1	0.0428
LS-PS2A	LP2A210407M	4/7/2021	0.072	0.00297 U	0.00143	0.00518	0.000991 U	0.000496 U	9.6	0.00198 U
LS-PS2A	LP2A210513M	5/13/2021	0.0492 U	0.00755	0.00928	0.00738	0.000984 U	0.000492 U	13.2	0.00197 U
LS-PS2A	LP2A210602M	6/2/2021	0.0497 U	0.0061	0.0054	0.0156	0.000994 U	0.000497 U	16.2	0.00199 U
LS-PS4	LP4-210408I	4/8/2021	3.76	0.00528	0.0292	0.0529	0.000986 U	0.000493 U	31.8	0.00715
LS-PS4	LP4-210513I	5/13/2021	0.957	0.0165	0.131	0.0454	0.000989 U	0.000494 U	39.9	0.00745
LS-PS4	LP4-210603I	6/3/2021	0.249	0.0208	0.204	0.0477	0.00099 U	0.000495 U	45.6	0.0112
LS-V1A	LV1A210407M	4/7/2021	0.626	0.0158	0.143	0.143	0.001 U	0.000502 U	169	0.0917
LS-V1A	LV1A210512M	5/12/2021	5.71	0.0253	0.219	0.377	0.00101 U	0.000503 U	301	0.183
LS-V1A	LV1A210602M	6/2/2021	2.9 J	0.0337	0.3	0.231	0.00101 U	0.000504 U	296	0.176

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Metal Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Aluminum, total (mg/L)	Antimony, total (mg/L)	Arsenic, total (mg/L)	Barium, total (mg/L)	Beryllium, total (mg/L)	Cadmium, total (mg/L)	Calcium, total (mg/L)	Chromium, total (mg/L)

alifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Metal Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Cobalt, total (mg/L)	Copper, total (mg/L)	Iron, total (mg/L)	Lead, total (mg/L)	Magnesium, total (mg/L)	Manganese, total (mg/L)	Mercury, total (mg/L)	Nickel, total (mg/L)
LS-A567	L567210513I	5/13/2021	0.0671	0.0452	3.59	0.00262	95.7	0.294	0.0001 U	0.253
LS-A567	L567210603I	6/3/2021	0.069	0.0213	4.08	0.00234	92	0.28	0.0001 U	0.254
LS-A81	LA81210408I	4/8/2021	0.0603	0.0138	27.8	0.00383	289	21.5	0.0001 U	0.32
LS-A81	LA81210603I	6/3/2021	0.0547	0.0152	27.9	0.00401	283	10.9	0.0001 U	0.322
LS-CSW	LCSW210408I	4/8/2021	0.00197	0.00746	1.23	0.0019	8.45	0.315	0.0001 U	0.0057
LS-LEPS	LEPS210407P	4/7/2021	0.0165	0.00611	9.2	0.00116	39.4	1.06	0.0001 U	0.0665
LS-LEPS	LEPS210413P	4/13/2021	0.0158	0.00555	8.15	0.00105	40.8	1.03	0.0001 U	0.0659
LS-LEPS	LEPS210427P	4/27/2021	0.0182	0.00656	8.3	0.00125	44.5	0.904	0.0001 U	0.0756
LS-LEPS	LEPS210504P	5/4/2021	0.0202	0.007	8.01	0.0011	49.7	0.443	0.0001 U	0.0837
LS-LEPS	LEPS210512P	5/12/2021	0.0223	0.00702	7.92	0.00118	51.4	0.549	0.0001 U	0.0916
LS-LEPS	LEPS210518P	5/18/2021	0.0231	0.00645	7.79	0.0012	52.1	0.575	0.0001 U	0.0914
LS-LEPS	LEPS210525P	5/25/2021	0.024	0.00487	6.42	0.000996 U	55.2	0.21	0.0001 U	0.106
LS-LEPS	LEPS210602P	6/2/2021	0.0268	0.00669	6.73	0.00124	58.7	0.555	0.0001 U	0.116
LS-LEPS	LEPS210608P	6/8/2021	0.0254	0.00514	5.82	0.000985 U	59.1	0.3	0.0001 U	0.104
LS-LEPS	LEPS210615P	6/15/2021	0.0277	0.00519	6.62	0.000992 U	63.5	0.336	0.0001 U	0.114
LS-LEPS	LEPS210622P	6/22/2021	0.0244	0.00349	6.29	0.00138	63.4	0.483	0.0001 U	0.118
LS-LEPS	LEPS210630P	6/30/2021	0.0249	0.00498	6.71	0.00158	62.7	0.55	0.0001 U	0.11
LS-MH46N	L46N210407M	4/7/2021	0.0207	0.00202 U	2.3	0.00101 U	38.7	0.535	0.0001 U	0.0807
LS-MH46N	L46N210513M	5/13/2021	0.0263	0.00201 U	2.39	0.001 U	44.3	0.532	0.0001 U	0.107
LS-MH46N	L46N210602M	6/2/2021	0.0292	0.00201 U	2.45	0.00101 U	46.4	0.496	0.0001 U	0.113
LS-PS1A	LP1A210408I	4/8/2021	0.00297	0.00721	1.13	0.000995 U	8.2	0.309	0.0001 U	0.0112
LS-PS1A	LP1A210513I	5/13/2021	0.00825	0.00428	0.749	0.001 U	16	0.395	0.0001 U	0.0301
LS-PS1A	LP1A210603I	6/3/2021	0.0215	0.00483	2.95	0.00101 U	38	0.577	0.000264	0.0762
LS-PS2A	LP2A210407M	4/7/2021	0.000496 U	0.0146	1.44	0.000991 U	3.76	0.066	0.0001 U	0.00492
LS-PS2A	LP2A210513M	5/13/2021	0.00111	0.0108	1.01	0.000984 U	5.31	0.283	0.0001 U	0.00922
LS-PS2A	LP2A210602M	6/2/2021	0.00084	0.00992	1.53	0.000994 U	6.64	0.155	0.0001 U	0.00809
LS-PS4	LP4-210408I	4/8/2021	0.00262	0.0178	4.89	0.00316	13.7	0.459	0.0001 U	0.0076
LS-PS4	LP4-210513I	5/13/2021	0.00297	0.00997	3.44	0.00121	17.9	0.892	0.0001 U	0.0106
LS-PS4	LP4-210603I	6/3/2021	0.00422	0.00598	3.02	0.00108	20.6	1.05	0.0001 U	0.014
LS-V1A	LV1A210407M	4/7/2021	0.0221	0.00798	11.5	0.0018	55.1	2.02	0.0001 U	0.0873
LS-V1A	LV1A210512M	5/12/2021	0.0446	0.0326	37.9	0.00633	100	4.5	0.0001 U	0.173
LS-V1A	LV1A210602M	6/2/2021	0.0472	0.0172	28.7	0.00418	108	3.31	0.0001 U	0.182

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Metal Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Cobalt, total (mg/L)	Copper, total (mg/L)	Iron, total (mg/L)	Lead, total (mg/L)	Magnesium, total (mg/L)	Manganese, total (mg/L)	Mercury, total (mg/L)	Nickel, total (mg/L)

alifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Metal Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Potassium, total (mg/L)	Selenium, total (mg/L)	Silver, total (mg/L)	Sodium, total (mg/L)	Thallium, total (mg/L)	Tin, total (mg/L)	Vanadium, total (mg/L)	Zinc, total (mg/L)
LS-A567	L567210513I	5/13/2021	831	0.00499 U	0.000399 U	2730 D	0.000998 U	0.0436	0.152	0.115
LS-A567	L567210603I	6/3/2021	757	0.005 U	0.0004 U	2560 D	0.00075 U	0.0402	0.165	0.098
LS-A81	LA81210408I	4/8/2021	818	0.0088	0.000395 U	1840	0.000988 U	0.0195	0.0321	1.95
LS-A81	LA81210603I	6/3/2021	748	0.00885	0.000396 U	1710	0.000743 U	0.0178	0.0492	2.27
LS-CSW	LCSW210408I	4/8/2021	14.9	0.00499 U	0.000399 U	50.1	0.000998 U	0.00499 U	0.00191	0.0207
LS-LEPS	LEPS210407P	4/7/2021	178	0.005 U	0.0004 U	500	0.000999 U	0.0083	0.0196	0.12
LS-LEPS	LEPS210413P	4/13/2021	179	0.00508 U	0.000406 U	504	0.00102 U	0.00812	0.0191 D	0.103
LS-LEPS	LEPS210427P	4/27/2021	203	0.00499 U	0.000399 U	576	0.000997 U	0.0078	0.0226	0.122
LS-LEPS	LEPS210504P	5/4/2021	242	0.00505 U	0.000404 U	667	0.00101 U	0.00798	0.0263	0.129
LS-LEPS	LEPS210512P	5/12/2021	258	0.00504 U	0.000403 U	721	0.00101 U	0.0079	0.0292	0.156
LS-LEPS	LEPS210518P	5/18/2021	272	0.00515 U	0.000412 U	751	0.00103 U	0.009	0.0306	0.162
LS-LEPS	LEPS210525P	5/25/2021	311	0.00498 U	0.000398 U	830	0.000996 U	0.0104	0.032 D	0.112
LS-LEPS	LEPS210602P	6/2/2021	328	0.00501 U	0.000401 U	936	0.001 U	0.0077	0.035	0.184
LS-LEPS	LEPS210608P	6/8/2021	323	0.00492 U	0.000394 U	895	0.000985 U	0.0102	0.0348	0.133
LS-LEPS	LEPS210615P	6/15/2021	357	0.00496 U	0.000397 U	1000	0.000744 U	0.00927	0.0377	0.167
LS-LEPS	LEPS210622P	6/22/2021	340	0.00498 U	0.000398 U	957	0.000746 U	0.00671	0.0351	0.199
LS-LEPS	LEPS210630P	6/30/2021	344	0.00495 U	0.000396 U	966	0.000742 U	0.00538 J	0.0362	0.24
LS-MH46N	L46N210407M	4/7/2021	241	0.00504 U	0.000403 U	810	0.00101 U	0.00504 U	0.0794	0.00504 U
LS-MH46N	L46N210513M	5/13/2021	275	0.00502 U	0.000402 U	897	0.001 U	0.00502 U	0.0932	0.0186
LS-MH46N	L46N210602M	6/2/2021	308	0.00504 U	0.000403 U	1050	0.000755 U	0.00504 U	0.117	0.00504 U
LS-PS1A	LP1A210408I	4/8/2021	29.9	0.00497 U	0.000398 U	115	0.000995 U	0.00497 U	0.00779	0.0141
LS-PS1A	LP1A210513I	5/13/2021	77.8	0.00502 U	0.000402 U	287	0.001 U	0.00502 U	0.0176	0.011
LS-PS1A	LP1A210603I	6/3/2021	208	0.00505 U	0.000404 U	788	0.000757 U	0.00505 U	0.0533	0.0399
LS-PS2A	LP2A210407M	4/7/2021	1.67	0.00496 U	0.000396 U	3.9	0.000991 U	0.00496 U	0.00254	0.0147
LS-PS2A	LP2A210513M	5/13/2021	4.99	0.00492 U	0.000393 U	14	0.000984 U	0.00492 U	0.00146	0.0104
LS-PS2A	LP2A210602M	6/2/2021	6.71	0.00497 U	0.000398 U	20.9	0.000746 U	0.00497 U	0.00123	0.0189
LS-PS4	LP4-210408I	4/8/2021	10.1	0.00493 U	0.000394 U	32.4	0.000986 U	0.00493 U	0.00673	0.0527
LS-PS4	LP4-210513I	5/13/2021	24.8	0.00494 U	0.000395 U	78.3	0.000989 U	0.00494 U	0.00469	0.0424
LS-PS4	LP4-210603I	6/3/2021	45.7	0.00495 U	0.000396 U	140	0.000742 U	0.00495 U	0.00507	0.049
LS-V1A	LV1A210407M	4/7/2021	262	0.00502 U	0.000402 U	766	0.001 U	0.0121	0.03	0.218
LS-V1A	LV1A210512M	5/12/2021	464	0.00503 U	0.000402 U	1310	0.00101 U	0.0224	0.0598	0.864
LS-V1A	LV1A210602M	6/2/2021	552	0.00504 U	0.000403 U	1550	0.000756 U	0.0224	0.0592	0.855

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill --- Leachate Metal Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Potassium, total (mg/L)	Selenium, total (mg/L)	Silver, total (mg/L)	Sodium, total (mg/L)	Thallium, total (mg/L)	Tin, total (mg/L)	Vanadium, total (mg/L)	Zinc, total (mg/L)

alifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	1,1,1,2-Tetrachloro-ethane 630-20-6 (ug/L)	1,1,1-Trichloro-ethane 71-55-6 (ug/L)	1,1,2,2-Tetrachloro-ethane 79-34-5 (ug/L)	1,1,2-Trichloro-ethane 79-00-5 (ug/L)	1,1-Dichloro-ethane 75-34-3 (ug/L)	1,1-Dichloro-ethene 75-35-4 (ug/L)	1,1-Dichloro-propene 563-58-6 (ug/L)	1,2,3-Trichloro-propane 96-18-4 (ug/L)
LS-LEPS	LEPS210407M	4/7/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-LEPS	LEPS210512M	5/12/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-LEPS	LEPS210602M	6/2/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-MH46N	L46N210407M	4/7/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-MH46N	L46N210513M	5/13/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-MH46N	L46N210602M	6/2/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.174 JT	0.1 U	0.1 U	0.1 U
LS-PS2A	LP2A210407M	4/7/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
LS-PS2A	LP2A210513M	5/13/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
LS-PS2A	LP2A210602M	6/2/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
LS-V1A	LV1A210407M	4/7/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-V1A	LV1A210512M	5/12/2021	25 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
LS-V1A	LV1A210602M	6/2/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOA TRIP BLANK	4/6/2021	VTRP210407X	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	4/6/2021	VTRP210407Y	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	5/12/2021	VTRP210513Y	6.25 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
VOA TRIP BLANK	6/1/2021	VTRP210602Y	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	6/1/2021	VTRP210602Z	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

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Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	1,2-Dibromo-3-Chloropropane 96-12-8 (ug/L)	1,2-Dibromo-ethane 106-93-4 (ug/L)	1,2-Dichloro-benzene 95-50-1 (ug/L)	1,2-Dichloro-ethane 107-06-2 (ug/L)	1,2-Dichloro-propane 78-87-5 (ug/L)	1,3 Dichloro-benzene 541-73-1 (ug/L)	1,3-Dichloro-propane 142-28-9 (ug/L)	1,4-Dichloro-benzene 106-46-7 (ug/L)	2,2-Dichloro-propane 594-20-7 (ug/L)	2-Butanone 78-93-3 (ug/L)
LS-LEPS	LEPS210407M	4/7/2021	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	833 D
LS-LEPS	LEPS210512M	5/12/2021	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U
LS-LEPS	LEPS210602M	6/2/2021	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U
LS-MH46N	L46N210407M	4/7/2021	25 U	1 U	2.22	1 U	1 U	1 U	1 U	9.6	1 U	2.5 U
LS-MH46N	L46N210513M	5/13/2021	25 U	1 U	1.83 JT	1 U	1 U	1 U	1 U	7.71	1 U	2.5 U
LS-MH46N	L46N210602M	6/2/2021	2.5 U	0.1 U	1.16	0.1 U	0.1 U	0.1 U	0.1 U	4.46	0.1 U	3.19
LS-PS2A	LP2A210407M	4/7/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.17 JT	0.1 U	1.87
LS-PS2A	LP2A210513M	5/13/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.159 JT	0.1 U	0.25 U
LS-PS2A	LP2A210602M	6/2/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	2.37
LS-V1A	LV1A210407M	4/7/2021	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	6680 D
LS-V1A	LV1A210512M	5/12/2021	250 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	29700 D
LS-V1A	LV1A210602M	6/2/2021	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	11200 D
VOA TRIP BLANK	4/6/2021	VTRP210407X	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
VOA TRIP BLANK	4/6/2021	VTRP210407Y	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
VOA TRIP BLANK	5/12/2021	VTRP210513Y	62.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	6.25 U
VOA TRIP BLANK	6/1/2021	VTRP210602Y	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
VOA TRIP BLANK	6/1/2021	VTRP210602Z	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	2-Hexanone 591-78-6 (ug/L)	2-Methyl-1-propanol 78-83-1 (ug/L)	3-Chloro-propene 107-05-1 (ug/L)	4-Methyl-2-Pentanone 108-10-1 (ug/L)	Acetone 67-64-1 (ug/L)	Acetonitrile 75-05-8 (ug/L)	Acrolein 107-02-8 (ug/L)	Acrylonitrile 107-13-1 (ug/L)	Benzene 71-43-2 (ug/L)
LS-LEPS	LEPS210407M	4/7/2021	5 U	50 U	1 U	25 U	2680 D	50 U	25 U	0.35 U	1 U
LS-LEPS	LEPS210512M	5/12/2021	13.4	50 U	1 U	25 U	41.9 JT	50 U	25 U	0.35 U	1 U
LS-LEPS	LEPS210602M	6/2/2021	5 U	50 U	1 U	25 U	107	50 U	25 U	0.35 U	1 U
LS-MH46N	L46N210407M	4/7/2021	5 U	50 U	1 U	25 U	27.5 JT	50 U	25 U	0.35 U	3.73
LS-MH46N	L46N210513M	5/13/2021	5 U	50 U	1 U	25 U	25 U	50 U	25 U	0.35 U	2.97
LS-MH46N	L46N210602M	6/2/2021	0.5 U	5 U	0.1 U	2.5 U	12.4	5 U	2.5 U	0.035 U	1.73
LS-PS2A	LP2A210407M	4/7/2021	0.5 U	5 U	0.1 U	2.5 U	3.69 JT	5 U	2.5 U	0.035 U	0.1 U
LS-PS2A	LP2A210513M	5/13/2021	0.5 U	5 U	0.1 U	2.5 U	3.24 JT	5 U	2.5 U	0.035 U	0.1 U
LS-PS2A	LP2A210602M	6/2/2021	0.5 U	5 U	0.1 U	2.5 U	7.73	5 U	2.5 U	0.035 U	0.1 U
LS-V1A	LV1A210407M	4/7/2021	8.6 JT	174	1 U	33.9 JT	8310 D	50 U	25 U	1.88	1 U
LS-V1A	LV1A210512M	5/12/2021	50 U	500 U	10 U	250 U	36100 D	500 U	250 U	3.5 U	10 U
LS-V1A	LV1A210602M	6/2/2021	22.4	479	1 U	105	10900 D	50 U	25 U	0.35 U	1 U
VOA TRIP BLANK	4/6/2021	VTRP210407X	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U
VOA TRIP BLANK	4/6/2021	VTRP210407Y	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U
VOA TRIP BLANK	5/12/2021	VTRP210513Y	12.5 U	125 U	2.5 U	62.5 U	62.5 U	125 U	62.5 U	0.875 U	2.5 U
VOA TRIP BLANK	6/1/2021	VTRP210602Y	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U
VOA TRIP BLANK	6/1/2021	VTRP210602Z	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Bromochloro-methane 74-97-5 (ug/L)	Bromodichloro-methane 75-27-4 (ug/L)	Bromoform 75-25-2 (ug/L)	Bromo-methane 74-83-9 (ug/L)	Carbon Disulfide 75-15-0 (ug/L)	Carbon Tetrachloride 56-23-5 (ug/L)	Chloro-benzene 108-90-7 (ug/L)	Chloro-dibromo-methane 124-48-1 (ug/L)	Chloroethane 75-00-3 (ug/L)
LS-LEPS	LEPS210407M	4/7/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-LEPS	LEPS210512M	5/12/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-LEPS	LEPS210602M	6/2/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-MH46N	L46N210407M	4/7/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	2.08	5 U	1 U
LS-MH46N	L46N210513M	5/13/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1.71 JT	5 U	1 U
LS-MH46N	L46N210602M	6/2/2021	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.976	0.5 U	0.1 U
LS-PS2A	LP2A210407M	4/7/2021	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
LS-PS2A	LP2A210513M	5/13/2021	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
LS-PS2A	LP2A210602M	6/2/2021	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
LS-V1A	LV1A210407M	4/7/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-V1A	LV1A210512M	5/12/2021	10 U	25 U	50 U	10 U	10 U	25 U	10 U	50 U	10 U
LS-V1A	LV1A210602M	6/2/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
VOA TRIP BLANK	4/6/2021	VTRP210407X	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	4/6/2021	VTRP210407Y	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	5/12/2021	VTRP210513Y	2.5 U	6.25 U	12.5 U	2.5 U	2.5 U	6.25 U	2.5 U	12.5 U	2.5 U
VOA TRIP BLANK	6/1/2021	VTRP210602Y	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	6/1/2021	VTRP210602Z	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Chloroform 67-66-3 (ug/L)	Chloro-methane 74-87-3 (ug/L)	Chloroprene 126-99-8 (ug/L)	cis-1,2-Dichloro-ethene 156-59-2 (ug/L)	cis-1,3-Dichloro-propene 10061-01-5 (ug/L)	Dibromo-methane 74-95-3 (ug/L)	Dichloro-difluoro-methane 75-71-8 (ug/L)	Ethylbenzene 100-41-4 (ug/L)	m & p Xylenes mpx (ug/L)
LS-LEPS	LEPS210407M	4/7/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U
LS-LEPS	LEPS210512M	5/12/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U
LS-LEPS	LEPS210602M	6/2/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U
LS-MH46N	L46N210407M	4/7/2021	1 U	2.5 U	1 U	1.92 JT	2.5 U	1 U	1 U	42.5	47.5
LS-MH46N	L46N210513M	5/13/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	32	32.1
LS-MH46N	L46N210602M	6/2/2021	0.1 U	0.25 U	0.1 U	0.525	0.25 U	0.1 U	0.1 U	16.8	14.7
LS-PS2A	LP2A210407M	4/7/2021	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
LS-PS2A	LP2A210513M	5/13/2021	0.1 U	0.25 GU	0.1 U	0.1 U	0.25 U	0.1 U	0.1 GU	0.1 U	0.1 U
LS-PS2A	LP2A210602M	6/2/2021	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
LS-V1A	LV1A210407M	4/7/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	2.24
LS-V1A	LV1A210512M	5/12/2021	10 U	25 U	10 U	10 U	25 U	10 U	10 U	10 U	10 U
LS-V1A	LV1A210602M	6/2/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U
VOA TRIP BLANK	4/6/2021	VTRP210407X	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	4/6/2021	VTRP210407Y	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	5/12/2021	VTRP210513Y	2.5 U	6.25 U	2.5 U	2.5 U	6.25 U	2.5 U	2.5 U	2.5 U	2.5 U
VOA TRIP BLANK	6/1/2021	VTRP210602Y	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	6/1/2021	VTRP210602Z	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Methyl Iodide 74-88-4 (ug/L)	Methyl Methacrylate 80-62-6 (ug/L)	Methylacrylo-nitrile 126-98-7 (ug/L)	Methylene Chloride 75-09-2 (ug/L)	o-Xylene 95-47-6 (ug/L)	Proprionitrile 107-12-0 (ug/L)	Styrene 100-42-5 (ug/L)	Tetrachloro-ethene 127-18-4 (ug/L)
LS-LEPS	LEPS210407M	4/7/2021	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-LEPS	LEPS210512M	5/12/2021	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-LEPS	LEPS210602M	6/2/2021	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-MH46N	L46N210407M	4/7/2021	1 U	2.5 U	1 U	25 U	1.65 JT	5 U	1.07 JT	1 U
LS-MH46N	L46N210513M	5/13/2021	1 U	2.5 U	1 U	25 U	1.26 JT	5 U	1 U	1 U
LS-MH46N	L46N210602M	6/2/2021	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.519	0.1 U
LS-PS2A	LP2A210407M	4/7/2021	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
LS-PS2A	LP2A210513M	5/13/2021	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
LS-PS2A	LP2A210602M	6/2/2021	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
LS-V1A	LV1A210407M	4/7/2021	1 U	2.5 U	1 U	25 U	1.25 JT	5 U	1 U	1 U
LS-V1A	LV1A210512M	5/12/2021	10 U	25 U	10 U	250 U	10 U	50 U	10 U	10 U
LS-V1A	LV1A210602M	6/2/2021	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
VOA TRIP BLANK	4/6/2021	VTRP210407X	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
VOA TRIP BLANK	4/6/2021	VTRP210407Y	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
VOA TRIP BLANK	5/12/2021	VTRP210513Y	2.5 U	6.25 U	2.5 U	62.5 U	2.5 U	12.5 U	2.5 U	2.5 U
VOA TRIP BLANK	6/1/2021	VTRP210602Y	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
VOA TRIP BLANK	6/1/2021	VTRP210602Z	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Toluene 108-88-3 (ug/L)	trans-1,2-Dichloro-ethene 156-60-5 (ug/L)	trans-1,3-Dichloro-propene 10061-02-6 (ug/L)	trans-1,4-Dichloro-2-butene 110-57-6 (ug/L)	Trichloro-ethene 79-01-6 (ug/L)	Trichloro-fluoro-methane 75-69-4 (ug/L)	Vinyl Acetate 108-05-4 (ug/L)	Vinyl Chloride 75-01-4 (ug/L)
LS-LEPS	LEPS210407M	4/7/2021	1 U	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-LEPS	LEPS210512M	5/12/2021	1 U	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-LEPS	LEPS210602M	6/2/2021	1 U	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-MH46N	L46N210407M	4/7/2021	2.81	1 U	5 U	5 U	1 U	1 U	1 U	4.1
LS-MH46N	L46N210513M	5/13/2021	1.83 JT	1 U	5 U	5 U	1 U	1 U	1 U	2.27
LS-MH46N	L46N210602M	6/2/2021	1.18	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	1.39
LS-PS2A	LP2A210407M	4/7/2021	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 GU
LS-PS2A	LP2A210513M	5/13/2021	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 GU
LS-PS2A	LP2A210602M	6/2/2021	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
LS-V1A	LV1A210407M	4/7/2021	5.2	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-V1A	LV1A210512M	5/12/2021	10 U	10 U	50 U	50 U	10 U	10 U	10 U	1 U
LS-V1A	LV1A210602M	6/2/2021	12.7	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
VOA TRIP BLANK	4/6/2021	VTRP210407X	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
VOA TRIP BLANK	4/6/2021	VTRP210407Y	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
VOA TRIP BLANK	5/12/2021	VTRP210513Y	2.5 U	2.5 U	12.5 U	12.5 U	2.5 U	2.5 U	2.5 U	0.25 U
VOA TRIP BLANK	6/1/2021	VTRP210602Y	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
VOA TRIP BLANK	6/1/2021	VTRP210602Z	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U

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Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill ---Leachate PCB Analytical Data
Contact Person: Natalya Usova (206) 263-0608

		Chemical_Name	2,4,5-T	2,4,5-TP SILVEX	2,4-D	4,4'DDD	4,4'DDE	4,4'DDT	ALDRIN	ALPHA BHC	ALPHA CHLORDANE	AROCLOR 1016	AROCLOR 1221	AROCLOR 1232	AROCLOR 1242
		CAS_RN	93-76-5	93-72-1	94-75-7	72-54-8	72-55-9	50-29-3	309-00-2	319-84-6	5103-71-9	12674-11-2	11104-28-2	11141-16-5	53469-21-9
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	LEPS210407M	4/7/2021	0.5 U	0.5 U	1.81	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 U
LS-LEPS	LEPS210512M	5/12/2021	0.5 U	1 U	1.42	0.025 GU	0.025 GU	0.025 GU	0.025 GU	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.0323
LS-LEPS	LEPS210602M	6/2/2021	0.5 U	1 U	1 U	0.1 GU	0.1 GU	0.1 GU	0.1 GU	0.1 U	0.1 GU	0.025 U	0.025 U	0.025 U	0.025 U
LS-MH46N	L46N210407M	4/7/2021	0.5 U	0.67	1 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 U	0.0798	0.025 U	0.134
LS-MH46N	L46N210513M	5/13/2021	0.5 U	0.695	1 U	0.025 GU	0.025 GU	0.025 GU	0.025 GU	0.025 U	0.025 GU	0.025 U	0.0478 J	0.025 U	0.13
LS-MH46N	L46N210602M	6/2/2021	0.5 U	0.737	1 U	0.1 GU	0.1 GU	0.1 GU	0.1 GU	0.1 U	0.1 GU	0.025 U	0.075 U	0.025 U	0.121
LS-PS2A	LP2A210407M	4/7/2021	0.5 U	0.5 U	1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.025 U	0.025 U	0.025 U	0.025 U
LS-PS2A	LP2A210513M	5/13/2021	0.5 U	0.5 U	1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.025 U	0.025 U	0.025 U	0.025 U
LS-PS2A	LP2A210602M	6/2/2021	0.5 U	0.5 U	1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.025 U	0.025 U	0.025 U	0.025 U
LS-V1A	LV1A210407M	4/7/2021	0.5 U	1.5 U	2.16	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 U	0.025 U	0.0622
LS-V1A	LV1A210512M	5/12/2021	0.5 GU	2.5 GU	2.56 G	0.1 GU	0.1 GU	0.1 GU	0.1 GU	0.1 U	0.1 GU	0.025 U	0.2 U	0.025 U	0.0779
LS-V1A	LV1A210602M	6/2/2021	0.5 GU	2.5 GU	3.36 G	0.1 GU	0.1 GU	0.1 GU	0.1 GU	0.1 U	0.1 GU	0.025 U	0.025 U	0.025 U	0.367 J

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Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill ---Leachate PCB Analytical Data
Contact Person: Natalya Usova (206) 263-0608

		Chemical_Name	AROCLOR 1248	AROCLOR 1254	AROCLOR 1260	BETA BHC	DELTA BHC	DIELDRIN	DINOSEB	ENDOSULFAN I	ENDOSULFAN II	ENDOSULFAN SULFATE	ENDRIN
		CAS_RN	12672-29-6	11097-69-1	11096-82-5	319-85-7	319-86-8	60-57-1	88-85-7	959-98-8	33213-65-9	1031-07-8	72-20-8
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	LEPS210407M	4/7/2021	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 GU	0.025 U	0.5 U	0.025 U	0.025 U	0.025 U	0.025 U
LS-LEPS	LEPS210512M	5/12/2021	0.025 U	0.025 U	0.025 U	0.1 GU	0.025 U	0.025 GU	0.5 U	0.1 U	0.025 U	0.025 U	0.025 GU
LS-LEPS	LEPS210602M	6/2/2021	0.025 U	0.025 U	0.025 U	0.1 U	0.1 GU	0.1 GU	1 U	0.1 U	0.1 U	0.1 U	0.1 GU
LS-MH46N	L46N210407M	4/7/2021	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 GU	0.025 U	0.5 U	0.025 U	0.025 U	0.025 U	0.025 U
LS-MH46N	L46N210513M	5/13/2021	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 U	0.025 GU	0.5 U	0.025 U	0.025 U	0.025 U	0.025 GU
LS-MH46N	L46N210602M	6/2/2021	0.025 U	0.025 U	0.025 U	0.1 U	0.1 GU	0.1 GU	0.5 U	0.1 U	0.1 U	0.1 U	0.1 GU
LS-PS2A	LP2A210407M	4/7/2021	0.025 U	0.025 U	0.025 U	0.01 U	0.01 U	0.01 U	0.5 U	0.01 U	0.01 U	0.01 U	0.01 U
LS-PS2A	LP2A210513M	5/13/2021	0.025 U	0.025 U	0.025 U	0.01 U	0.01 U	0.01 U	0.5 U	0.01 U	0.01 U	0.01 U	0.01 U
LS-PS2A	LP2A210602M	6/2/2021	0.025 U	0.025 U	0.025 U	0.01 U	0.01 U	0.01 U	0.5 U	0.01 U	0.01 U	0.01 U	0.01 U
LS-V1A	LV1A210407M	4/7/2021	0.025 U	0.0358	0.025 U	0.025 GU	0.025 GU	0.025 U	0.5 U	0.025 U	0.025 U	0.025 U	0.025 U
LS-V1A	LV1A210512M	5/12/2021	0.025 U	0.0324	0.025 U	0.1 GU	0.1 U	0.1 GU	0.5 GU	0.1 U	0.1 U	0.1 U	0.1 GU
LS-V1A	LV1A210602M	6/2/2021	0.025 U	0.0478 J	0.025 U	0.1 U	0.1 GU	0.1 GU	0.5 GU	0.1 U	0.1 U	0.1 U	0.1 GU

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Environmental Monitoring Data

Data Collected from April 01, 2021 to June 30, 2021
Cedar Hills Landfill ---Leachate PCB Analytical Data
Contact Person: Natalya Usova (206) 263-0608

		Chemical_Name	ENDRIN ALDEHYDE	HEPTACHLOR	HEPTACHLOR EPOXIDE	ISODRIN	LINDANE (GAMMA BHC)	METHOXYCHLOR	Total Aroclors	TOXAPHENE	trans-Chlordane
		CAS_RN	7421-93-4	76-44-8	1024-57-3	465-73-6	58-89-9	72-43-5	T_AROCLOR	8001-35-2	5103-74-2
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	LEPS210407M	4/7/2021	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 U	0.125 U	0.025 U	2.5 U	0.025 GU
LS-LEPS	LEPS210512M	5/12/2021	0.025 GU	0.025 GU	0.025 U	0.025 GU	0.025 U	0.125 U	0.0323	2.5 U	0.025 GU
LS-LEPS	LEPS210602M	6/2/2021	0.1 GU	0.1 U	0.1 GU	0.1 U	0.1 U	0.5 U	0.025 U	10 U	0.1 GU
LS-MH46N	L46N210407M	4/7/2021	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 U	0.125 U	0.2138	2.5 U	0.025 GU
LS-MH46N	L46N210513M	5/13/2021	0.025 GU	0.025 GU	0.025 U	0.025 GU	0.025 U	0.125 U	0.1778	2.5 U	0.025 GU
LS-MH46N	L46N210602M	6/2/2021	0.1 GU	0.1 U	0.1 GU	0.1 U	0.1 U	0.5 U	0.121	10 U	0.1 GU
LS-PS2A	LP2A210407M	4/7/2021	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.025 U	1 U	0.01 U
LS-PS2A	LP2A210513M	5/13/2021	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.025 U	1 U	0.01 U
LS-PS2A	LP2A210602M	6/2/2021	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.025 U	1 U	0.01 U
LS-V1A	LV1A210407M	4/7/2021	0.025 GU	0.025 U	0.025 U	0.025 U	0.025 U	0.125 U	0.098	2.5 U	0.025 GU
LS-V1A	LV1A210512M	5/12/2021	0.1 GU	0.1 GU	0.1 U	0.1 GU	0.1 U	0.5 U	0.1103	10 U	0.1 GU
LS-V1A	LV1A210602M	6/2/2021	0.1 GU	0.1 U	0.1 GU	0.1 U	0.1 U	0.5 U	0.4148	10 U	0.1 GU

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Leachate Sample Roster
Contact Person: Natalya Usova (206) 263-0608

Leachate Monitoring Activities 3rd Quarter 2021

Station ID	Date	Activity	Sample ID	Comment
LS-46N	7/7/2021	Monthly Characterization Sample	L46N210707M	
LS-46N	8/4/2021	Monthly Characterization Sample	L46N210804M	
LS-46N	9/7/2021	Monthly Characterization Sample	L46N210907M	
LS-A567	7/8/2021	Special Investigation	L567210708I	
LS-A567	8/5/2021	Special Investigation	L567210805I	
LS-A567	9/9/2021	Special Investigation	L567210909I	
LS-A8	7/8/2021	Special Investigation	LA81210708I	
LS-A8	8/5/2021	Special Investigation	LA81210805I	
LS-A8	9/9/2021	Special Investigation	LA81210909I	
LS-LEPS	7/7/2021	Permit Sample	LEPS210707P	
LS-LEPS	7/7/2021	Monthly Characterization Sample	LEPS210707M	
LS-LEPS	7/13/2021	Permit Sample	LEPS210713P	
LS-LEPS	7/23/2021	Permit Sample	LEPS210723P	
LS-LEPS	7/29/2021	Permit Sample	LEPS210729P	
LS-LEPS	8/4/2021	Permit Sample	LEPS210804P	
LS-LEPS	8/4/2021	Monthly Characterization Sample	LEPS210804M	
LS-LEPS	8/10/2021	Permit Sample	LEPS210810P	
LS-LEPS	8/31/2021	Permit Sample	LEPS210831P	
LS-LEPS	9/14/2021	Permit Sample	LEPS210914P	
LS-LEPS	9/22/2021	Monthly Characterization Sample	LEPS210922M	
LS-LEPS	9/22/2021	Permit Sample	LEPS210922P	
LS-LEPS	9/28/2021	Permit Sample	LEPS210928P	
LS-PS1A	7/8/2021	Special Investigation	LP1A210708I	
LS-PS1A	8/5/2021	Special Investigation	LP1A210805I	
LS-PS1A	9/9/2021	Special Investigation	LP1A210909I	
LS-PS2A	7/7/2021	Monthly Characterization Sample	LP2A210707M	
LS-PS2A	8/4/2021	Monthly Characterization Sample	LP2A210804M	
LS-PS2A	9/7/2021	Monthly Characterization Sample	LP2A210907M	
LS-PS4	7/8/2021	Special Investigation	LP4-210708I	
LS-PS4	8/5/2021	Special Investigation	LP4-210805I	
LS-PS4	9/9/2021	Special Investigation	LP4-210909I	
LS-V1A	7/7/2021	Monthly Characterization Sample	LV1A210707M	
LS-V1A	8/4/2021	Monthly Characterization Sample	LV1A210804M	
LS-V1A	9/8/2021	Monthly Characterization Sample	LV1A210908M	
LS-46N	7/7/2021	Duplicate	L46N210707D	
LS-A567	8/5/2021	Duplicate	L567210805D	
LS-LEPS	9/14/2021	Duplicate	LEPS210914D	
LS-LEPS	7/23/2021	QA/QC Sample	LEPS210723F	

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Leachate Field Parameter
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	pH (Field) (std. Units)	Specific Conductance (Field) (umho/cm)	Temperature (Field) (^{o}C)
LS-A567	L567210708I	7/8/2021	8.05	26753	29.7
LS-A567	L567210805I	8/5/2021	8.1	23068	32.1
LS-A567	L567210909I	9/9/2021	8.1	23190	32.5
LS-A81	LA81210708I	7/8/2021	7.65	22966	18
LS-A81	LA81210805I	8/5/2021	7.07	30024	24.6
LS-A81	LA81210909I	9/9/2021	7.71	27138	22.6
LS-LEPS	LEPS210707M	7/7/2021	8.63	10155	20.9
LS-LEPS	LEPS210707P	7/7/2021	8.63	10155	20.9
LS-LEPS	LEPS210713P	7/13/2021	8.64	10329	21.1
LS-LEPS	LEPS210723P	7/23/2021	8.68	10229	18.4
LS-LEPS	LEPS210729P	7/29/2021	8.69	10709	20.6
LS-LEPS	LEPS210804M	8/4/2021	8.47	9123	28.5
LS-LEPS	LEPS210804P	8/4/2021	8.47	9123	28.5
LS-LEPS	LEPS210810P	8/10/2021	8.15	9546	20.5
LS-LEPS	LEPS210831P	8/31/2021	8.66	9510	18.6
LS-LEPS	LEPS210914P	9/14/2021	8.62	11646	18.3
LS-LEPS	LEPS210922P	9/22/2021	8.57	13789	17.5
LS-LEPS	LEPS210928P	9/28/2021	8.56	12171	17.1
LS-MH46N	L46N210707M	7/7/2021	7.05	12183	23
LS-MH46N	L46N210804M	8/4/2021	7.24	10481	24.5
LS-MH46N	L46N210907M	9/7/2021	7.26	11097	23.9
LS-PS1A	LP1A210708I	7/8/2021	7.96	2772	14.6
LS-PS1A	LP1A210805I	8/5/2021	7.84	6091	17.2
LS-PS1A	LP1A210909I	9/9/2021	8.06	10680	17.5
LS-PS2A	LP2A210707M	7/7/2021	7.45	412.1	14
LS-PS2A	LP2A210804M	8/4/2021	6.24	1174	16.1
LS-PS2A	LP2A210907M	9/7/2021	6.77	288.4	16.9
LS-PS4	LP4-210708I	7/8/2021	7.68	1830	16.1
LS-PS4	LP4-210805I	8/5/2021	7.79	2062	17.6
LS-PS4	LP4-210909I	9/9/2021	8.09	2133	18.2
LS-V1A	LV1A210707M	7/7/2021	8.43	19457	26.8
LS-V1A	LV1A210804M	8/4/2021	8.33	18432	26.4
LS-V1A	LV1A210908M	9/8/2021	8.24	19356	32.1

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Leachate Conventional Analyticl Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Alkalinity, Bicarbonate mg/l	Alkalinity, Carbonate mg/l	Alkalinity, Total (As Caco3) mg/l	Ammonia As N mg/l	Biological Oxygen Demand - 5 Day mg/l	Chemical Oxygen Demand mg/l	Chloride mg/l	Coliforms, Fecal cfu/100ml	Coliforms, Total cfu/100ml	Cyanide mg/l	Fixed Suspended Solids mg/l
LS-LEPS	LEPS210922M	9/22/2021			5170	802	577	2960	1720	100000 CU	19000	0.015 ST	
LS-A567	L567210708I	7/8/2021	10100	1 U	10100	2060	2330	7110 S	2760				3.3 T
LS-A567	L567210805I	8/5/2021	10200	1 U	10200	2170	2550	7760 S	2880				4 T
LS-A567	L567210909I	9/9/2021	10400	1 U	10400	2220	2090	6430 S	2880				2.7 T
LS-A81	LA81210708I	7/8/2021	9760	1 U	9760	1790	493	2570 S	1710				24.4
LS-A81	LA81210805I	8/5/2021	13900	1 U	13900	2950	24700	36000 S	3260				22.4
LS-A81	LA81210909I	9/9/2021	12800	1 U	12800	2680	11900	18700 S	3240				520
LS-LEPS	LEPS210707M	7/7/2021			3780	603	190	1850	1060	140 C	7900	0.008 SU	
LS-LEPS	LEPS210804M	8/4/2021			3870	596	118	1510	1180	1000 C	20000	0.014 T	
LS-MH46N	L46N210707M	7/7/2021			3180	642	67.9	1630	1730	1 U	1 U	0.012 ST	
LS-MH46N	L46N210804M	8/4/2021			3360	658	104	1780	1790	1	390	0.008 SU	
LS-MH46N	L46N210907M	9/7/2021			3450	730	86	1860	1940	1 U	43	0.0096 ST	
LS-PS1A	LP1A210708I	7/8/2021	800	1 U	800	147	35	332	295				0.51 U
LS-PS1A	LP1A210805I	8/5/2021	2160	1 U	2160	426	54.3	877	862				2.75
LS-PS1A	LP1A210909I	9/9/2021	3760	1 U	3760	794	151	1850	1580				1.4 U
LS-PS2A	LP2A210707M	7/7/2021			93.1	11.3	3.2	25.4	15.1	1 U	650	0.002 U	
LS-PS2A	LP2A210804M	8/4/2021			188	56.2	4.9	127	97	2	4300	0.008 U	
LS-PS2A	LP2A210907M	9/7/2021			148	204	56	227	245	1 U	23000	0.008 U	
LS-PS4	LP4-210708I	7/8/2021	679	1 U	679	122	117	315	86.7				24
LS-PS4	LP4-210805I	8/5/2021	925	1 U	925	199	111	443	110				9.55
LS-PS4	LP4-210909I	9/9/2021	889	1 U	889	177	182	492	144				14.8
LS-V1A	LV1A210707M	7/7/2021			5640	1240	2610	5800	1390	120000	3700000	0.02 SU	
LS-V1A	LV1A210804M	8/4/2021			7720	1810	3790	8560 S	1920	47000	1800000	0.013 ST	
LS-V1A	LV1A210908M	9/8/2021			10200	2250 J	5670	11300 S	2640	64000	700000	0.019 ST	

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Leachate Conventional Analyticl Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	Fluoride mg/l	Hardness mg/l	Nitrate + Nitrite As N mg/l	Phosphorus, Soluble Reactive mg/l	Specific Conductance umhos/cm	Sulfate mg/l	Sulfide mg/l	Total Dissolved Solids mg/l	Total Fats, Oils & Grease mg/l	Total Kjeldahl Nitrogen mg/l	Total Organic Carbon mg/l	Total Solids mg/l	Total Suspended Solids mg/l	Total Volatile Solids mg/l	Volatile Suspended Solids mg/l
LS-LEPS	LEPS210922M	9/22/2021	5 U		2 U	1.46	13200	37.3	2.29		3.8 ST	923	1010 S		713	3090	600
LS-A567	L567210708I	7/8/2021	10 U	534	0.05 U		24100	30.5	2.59	13800		2020 S	2730 S	13100	24	5620	20.7
LS-A567	L567210805I	8/5/2021	10 U	534	0.21 T		24700	35.2	6.16	12500		1860 S	2830 S	14800	30.5	6640	26.5
LS-A567	L567210909I	9/9/2021	5 U	534	0.5 U		25000	71.3	15.2	12500 H		2190 S	2210 S	13200	14.2	6440	11.6
LS-A81	LA81210708I	7/8/2021	1 U	1310	0.1 U		20500	191	43.6	8580		1970 S	845 S	9680	64.4	3460	40
LS-A81	LA81210805I	8/5/2021	200 U	5000	0.1 U		31900	13.7	38.7	23900		2850 S	13300 S	27500	77.6	13500	55.1
LS-A81	LA81210909I	9/9/2021	50 U	3670	0.1 U		30300	181	41.1	19500 H		2750 S	6520 S	21400	800	11300	280
LS-LEPS	LEPS210707M	7/7/2021	1.21		0.05 U	0.0854	8530	15	0.296		3.8 T	685	504		567	1940	473
LS-LEPS	LEPS210804M	8/4/2021	0.5 T		13.9	1.59	9690	34.9	0.55 T		3.7 T	656	428		291	2160	235
LS-MH46N	L46N210707M	7/7/2021	2.26		0.05 U	3.02	9840	0.25 T	1.12		2.7 T	640	566	0.63 T		1520	0.52 T
LS-MH46N	L46N210804M	8/4/2021	2 U		0.054 T	3.57	11200	3.1 T	1.07		3.4 ST	690	540		2.37	2040	1.44
LS-MH46N	L46N210907M	9/7/2021	2.19		0.346	3.64	11800	0.76 T	0.759		2.2 T	703	615	0.8 T		1390	0.7 T
LS-PS1A	LP1A210708I	7/8/2021	0.5 T	122	0.145		2450	24.6	0.01 U	1020		172	106	1070	2.32	316	1.92
LS-PS1A	LP1A210805I	8/5/2021	0.55 T	261	0.05 T		6550	30.6	0.18 T	2610		467	297	2850	11.3	800	8.5
LS-PS1A	LP1A210909I	9/9/2021	2 U	432	0.056 T		11400	40	3.85	5060 H		800	527 S	5020	4.57	1640	4
LS-PS2A	LP2A210707M	7/7/2021	0.047 T		2.2	0.00813	378	50.2	0.011 T		2.2 U	12.2	9.78		2.34	71.3	1.49
LS-PS2A	LP2A210804M	8/4/2021	0.072 T		1	0.08 T	1230	226	0.01 U		1.8 T	54.3	38.8		5.5	134	3.75
LS-PS2A	LP2A210907M	9/7/2021	0.19 T		34.7	0.0237	3100	704	0.063 T		1.9 U	190	67.1		2.68	591 J	1.75
LS-PS4	LP4-210708I	7/8/2021	0.26 T	183	0.408		1600	29.4	0.045	580		124	86.4	657	64	241	40
LS-PS4	LP4-210805I	8/5/2021	0.269	143	0.268		2210	14.3	0.0576	569		212	108	688	72.7	245	63.2
LS-PS4	LP4-210909I	9/9/2021	0.1 U	216	0.603		2280	35	0.0993	805 H		179	144	931	54.4	413	39.6
LS-V1A	LV1A210707M	7/7/2021	5 U		0.22 T	6.66	14200	33.3	0.58 T		15.4 S	1350	2180		35.6	4040	28
LS-V1A	LV1A210804M	8/4/2021	5 U		0.31 T	9.59	18800	41.5	9.36 S		23.3 S	1750 S	3230		319	6730	152
LS-V1A	LV1A210908M	9/8/2021	10 U		0.1 U	4.14	24700	72.9	1.76		10.2 S	1020 JS	3900 S		124	6700	73.3

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Leachate Metal Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Aluminum Dissolved mg/l	Aluminum Total mg/l	Antimony Dissolved mg/l	Antimony Total mg/l	Arsenic Dissolved mg/l	Arsenic Total mg/l	Barium Dissolved mg/l	Barium Total mg/l	Beryllium Dissolved mg/l	Beryllium Total mg/l
LS-LEPS	9/22/2021	LEPS210922M	0.414		0.0291		0.198		0.464		0.000993 U	
LS-A567	7/8/2021	L567210708I	0.484	0.82	0.0175	0.0239	0.344	0.359	0.444	0.481	0.00099 U	0.000999 U
LS-A567	8/5/2021	L567210805I	0.521	0.579	0.0237	0.0213	0.366	0.37	0.425	0.44	0.000994 U	0.00103 U
LS-A567	9/9/2021	L567210909I	0.525	0.645	0.0188	0.0193	0.388	0.39	0.447	0.438	0.000982 U	0.000979 U
LS-A81	7/8/2021	LA81210708I	0.376	8.85	0.0139	0.0178	0.0443	0.0665	0.103	0.15	0.000997 U	0.000998 U
LS-A81	8/5/2021	LA81210805I	0.42	0.905	0.0307	0.0339	0.0682	0.115	1.01	1.05	0.000991 U	0.000999 U
LS-A81	9/9/2021	LA81210909I		21.1		0.0358		0.164		0.846		0.000953 U
LS-LEPS	7/7/2021	LEPS210707M	0.168		0.0167		0.161		0.0177		0.000997 U	
LS-LEPS	7/7/2021	LEPS210707P		0.454		0.016		0.172		0.0557		0.000989 U
LS-LEPS	7/13/2021	LEPS210713P		0.371		0.0173		0.178		0.0526		0.000996 U
LS-LEPS	7/23/2021	LEPS210723P		0.355		0.0173		0.19		0.0434		0.000987 U
LS-LEPS	7/29/2021	LEPS210729P		0.536		0.0192		0.199		0.0493		0.000997 U
LS-LEPS	8/4/2021	LEPS210804M	0.135		0.0217		0.213		0.0293		0.00101 U	
LS-LEPS	8/4/2021	LEPS210804P		0.326		0.0203		0.205		0.0539		0.001 U
LS-LEPS	8/10/2021	LEPS210810P		0.292		0.0243		0.219		0.0521		0.000996 U
LS-LEPS	8/31/2021	LEPS210831P		0.519		0.024		0.265		0.115		0.001 U
LS-LEPS	9/14/2021	LEPS210914P		0.992		0.0419		0.351		0.143		0.00103 U
LS-LEPS	9/22/2021	LEPS210922P		0.985		0.0305		0.278		0.159		0.000972 U
LS-LEPS	9/28/2021	LEPS210928P		0.665		0.0273		0.268		0.137		0.00101 U
LS-MH46N	7/7/2021	L46N210707M		0.0502 U		0.00301 U		0.1		0.455		0.001 U
LS-MH46N	8/4/2021	L46N210804M		0.0504 U		0.00303 U		0.103		0.456		0.00101 U
LS-MH46N	9/7/2021	L46N210907M		0.0495 U		0.00297 U		0.107		0.483		0.00099 U
LS-PS1A	7/8/2021	LP1A210708I	0.0503 U	0.0513	0.00831	0.00828	0.0497	0.0508	0.075	0.0776	0.00101 U	0.00101 U
LS-PS1A	8/5/2021	LP1A210805I	0.117	0.214	0.0203	0.0187	0.147	0.154	0.158	0.168	0.00101 U	0.00102 U
LS-PS1A	9/9/2021	LP1A210909I	0.143	0.158	0.041	0.0411	0.345	0.346	0.332	0.332	0.000977 U	0.000965 U
LS-PS2A	7/7/2021	LP2A210707M		0.0496 U		0.00423		0.0069		0.0209		0.000992 U
LS-PS2A	8/4/2021	LP2A210804M		0.0504 U		0.0128		0.0244		0.0354		0.00101 U
LS-PS2A	9/7/2021	LP2A210907M		0.0491 U		0.046		0.0574		0.0287		0.000981 U
LS-PS4	7/8/2021	LP4-210708I	0.0496 U	0.842	0.0221	0.0227	0.171	0.173	0.0345	0.0469	0.000993 U	0.000983 U
LS-PS4	8/5/2021	LP4-210805I	0.0497 U	0.284	0.057	0.0532	0.375	0.373	0.0421	0.0476	0.000993 U	0.00101 U
LS-PS4	9/9/2021	LP4-210909I	0.0704	0.736	0.0384	0.0397	0.366	0.37	0.0367	0.0471	0.000972 U	0.00097 U
LS-V1A	7/7/2021	LV1A210707M	0.395	0.727	0.0328	0.0334	0.329	0.334	0.213	0.228	0.001 U	0.001 U
LS-V1A	8/4/2021	LV1A210804M	0.627	6.38	0.0362	0.037	0.394	0.396	0.284	0.574	0.001 U	0.000992 U
LS-V1A	9/8/2021	LV1A210908M	0.298	1.88	0.0323	0.0342	0.305	0.244	0.0374	0.474	0.000994 U	0.000982 U

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Leachate Metal Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Cadmium Dissolved mg/l	Cadmium Total mg/l	Calcium Dissolved mg/l	Calcium Total mg/l	Chromium Dissolved mg/l	Chromium Total mg/l	Cobalt Dissolved mg/l	Cobalt Total mg/l	Copper Dissolved mg/l
LS-LEPS	9/22/2021	LEPS210922M	0.000496 U		145		0.247		0.0444		0.00217
LS-A567	7/8/2021	L567210708I	0.000495 U	0.0005 U	52.4	57.9	0.201	0.239	0.0603	0.0706	0.02
LS-A567	8/5/2021	L567210805I	0.000497 U	0.000517 U	48.8	49	0.229	0.235	0.0701	0.0697	0.00484
LS-A567	9/9/2021	L567210909I	0.000491 U	0.00049 U	52	53.6	0.232	0.236	0.0738	0.0767	0.00302
LS-A81	7/8/2021	LA81210708I	0.000499 U	0.000675	135	135	0.16	0.174	0.041	0.0768	0.00199 U
LS-A81	8/5/2021	LA81210805I	0.000496 U	0.000953	1270	1280	0.234	0.245	0.0312	0.0497	0.00198 U
LS-A81	9/9/2021	LA81210909I		0.00174		825		0.291		0.161	
LS-LEPS	7/7/2021	LEPS210707M	0.000498 U		34.1		0.103		0.0247		0.00233
LS-LEPS	7/7/2021	LEPS210707P		0.000495 U		67.6		0.0993		0.0256	
LS-LEPS	7/13/2021	LEPS210713P		0.000498 U		59.9		0.105		0.0249	
LS-LEPS	7/23/2021	LEPS210723P		0.000494 U		47.5		0.106		0.0252	
LS-LEPS	7/29/2021	LEPS210729P		0.000499 U		45.9		0.122		0.0266	
LS-LEPS	8/4/2021	LEPS210804M	0.000503 U		30.7		0.118		0.03		0.00845
LS-LEPS	8/4/2021	LEPS210804P		0.0005 U		45.5		0.113		0.0294	
LS-LEPS	8/10/2021	LEPS210810P		0.000498 U		38.4		0.13		0.0318	
LS-LEPS	8/31/2021	LEPS210831P		0.000501 U		63		0.13		0.0341	
LS-LEPS	9/14/2021	LEPS210914P		0.000513 U		64		0.173		0.0416	
LS-LEPS	9/22/2021	LEPS210922P		0.000486 U		81.6		0.161		0.0373	
LS-LEPS	9/28/2021	LEPS210928P		0.000503 U		70.1		0.157		0.0356	
LS-MH46N	7/7/2021	L46N210707M		0.000502 U		88.2		0.0985		0.0331	
LS-MH46N	8/4/2021	L46N210804M		0.000504 U		88.2		0.102		0.036	
LS-MH46N	9/7/2021	L46N210907M		0.000495 U		91.7		0.106		0.0371	
LS-PS1A	7/8/2021	LP1A210708I	0.000503 U	0.000504 U	27.8	27.3	0.0124	0.0129	0.00732	0.00714	0.00439
LS-PS1A	8/5/2021	LP1A210805I	0.000503 U	0.000512 U	52.7	53.5	0.0344	0.036	0.0244	0.0281	0.00201 U
LS-PS1A	9/9/2021	LP1A210909I	0.000488 U	0.000482 U	82.7	81.6	0.0618	0.0609	0.0333	0.0345	0.00195 U
LS-PS2A	7/7/2021	LP2A210707M		0.000496 U		23.2		0.00198 U		0.00221	
LS-PS2A	8/4/2021	LP2A210804M		0.000504 U		31		0.00631		0.00663	
LS-PS2A	9/7/2021	LP2A210907M		0.000491 U		22.7		0.00424		0.00699	
LS-PS4	7/8/2021	LP4-210708I	0.000496 U	0.000491 U	42.3	42.5	0.00566	0.0104	0.00286	0.00331	0.00199 U
LS-PS4	8/5/2021	LP4-210805I	0.000497 U	0.000506 U	36.5	34.8	0.00907	0.0105	0.00349	0.00396	0.00199 U
LS-PS4	9/9/2021	LP4-210909I	0.000486 U	0.000485 U	44.4	45.4	0.00995	0.012	0.00439	0.00471	0.00206
LS-V1A	7/7/2021	LV1A210707M	0.000501 U	0.000502 U	48.9	49.7	0.161	0.171	0.037	0.0373	0.00315
LS-V1A	8/4/2021	LV1A210804M	0.000501 U	0.000615	53.3	191	0.239	0.264	0.0485	0.0642	0.00203
LS-V1A	9/8/2021	LV1A210908M	0.000497 U	0.000505	36.7	153	0.171	0.261	0.0376	0.0546	0.00199 U

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Leachate Metal Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Copper Total mg/l	Iron Dissolved mg/l	Iron Total mg/l	Lead Dissolved mg/l	Lead Total mg/l	Magnesium Dissolved mg/l	Magnesium Total mg/l	Manganese Dissolved mg/l	Manganese Total mg/l	Mercury Dissolved mg/l
LS-LEPS	9/22/2021	LEPS210922M		10		0.00102		255		1.03		0.0001 U
LS-A567	7/8/2021	L567210708I	0.139	2.61	11.5	0.00142	0.00493	93.1	94.6	0.257	0.299	0.0001 U
LS-A567	8/5/2021	L567210805I	0.0295	2.25	4.52	0.000994 U	0.0026	92.9	99.9	0.286	0.292	0.0001 U
LS-A567	9/9/2021	L567210909I	0.039	2.1	4.66 D	0.000982 U	0.00242	96.5	97.2	0.297	0.255	0.0001 U
LS-A81	7/8/2021	LA81210708I	0.0353	0.245	42.6	0.000997 U	0.0083	241	237	0.819	0.938	0.0001 U
LS-A81	8/5/2021	LA81210805I	0.0177	0.921	19.5	0.000991 U	0.00771	431	435	9.03	9.1	0.0001 U
LS-A81	9/9/2021	LA81210909I	0.0807		221 D		0.0253		390		7.76	
LS-LEPS	7/7/2021	LEPS210707M		5		0.000997 U		59.4		0.02		0.0001 U
LS-LEPS	7/7/2021	LEPS210707P	0.00805		6.49		0.00167		63.1		0.461	
LS-LEPS	7/13/2021	LEPS210713P	0.0076		6.34		0.00174		63.2		0.404	
LS-LEPS	7/23/2021	LEPS210723P	0.00771		5.83		0.00157		63.8		0.249	
LS-LEPS	7/29/2021	LEPS210729P	0.0099		6.02		0.00223		63.1		0.248	
LS-LEPS	8/4/2021	LEPS210804M		5.5		0.0017		67.1		0.034		0.0001 U
LS-LEPS	8/4/2021	LEPS210804P	0.0108		6.27		0.00205		68		0.237	
LS-LEPS	8/10/2021	LEPS210810P	0.0107		5.6		0.0026		67.9		0.168	
LS-LEPS	8/31/2021	LEPS210831P	0.0118		6.63		0.00383		78		0.541	
LS-LEPS	9/14/2021	LEPS210914P	0.0158		8.3		0.00429		97.8		0.459	
LS-LEPS	9/22/2021	LEPS210922P	0.0177		9.29 D		0.00425		103		0.673	
LS-LEPS	9/28/2021	LEPS210928P	0.00753		8.69		0.00383		100		0.573	
LS-MH46N	7/7/2021	L46N210707M	0.00201 U		3.09		0.001 U		48.7		0.55	
LS-MH46N	8/4/2021	L46N210804M	0.00202 U		3.11		0.00101 U		49.9		0.565	
LS-MH46N	9/7/2021	L46N210907M	0.00198 U		2.31 D		0.00099 U		53.5		0.423	
LS-PS1A	7/8/2021	LP1A210708I	0.00729	0.791	0.88	0.00101 U	0.00101 U	13.1	13.1	0.28	0.269	0.0001 U
LS-PS1A	8/5/2021	LP1A210805I	0.0101	3.33	5.55	0.00101 U	0.00102 U	29.6	30.8	3.08	3.02	0.0001 U
LS-PS1A	9/9/2021	LP1A210909I	0.00531	0.874	4 D	0.000977 U	0.000965 U	56	55.5	0.913	0.839	0.0001 U
LS-PS2A	7/7/2021	LP2A210707M	0.0112		0.646		0.000992 U		8.59		0.879	
LS-PS2A	8/4/2021	LP2A210804M	0.0129		4.29		0.00101 U		12.8		3.28	
LS-PS2A	9/7/2021	LP2A210907M	0.0314		1.67 D		0.000981 U		12.2		1.32	
LS-PS4	7/8/2021	LP4-210708I	0.00741	0.84	2.99	0.000993 U	0.000983 U	18.4	18.6	0.899	0.923	0.0001 U
LS-PS4	8/5/2021	LP4-210805I	0.00549	1.18	2.5	0.000993 U	0.00101 U	13.7	13.7	0.899	0.856	0.0001 U
LS-PS4	9/9/2021	LP4-210909I	0.00698	1.06	3.88 D	0.000972 U	0.00097 U	25	24.8	0.905	0.91	0.0001 U
LS-V1A	7/7/2021	LV1A210707M	0.00861	2.9	4.33	0.001 U	0.00152	57.1	59.2	0.614	0.626	0.0001 U
LS-V1A	8/4/2021	LV1A210804M	0.039	4.77	69.6	0.001 U	0.0079	72	80.8	0.624	3.63	0.0001 U
LS-V1A	9/8/2021	LV1A210908M	0.0175	4.96	15.4 D	0.000994 U	0.00543	105	267	0.0351	0.961	0.0001 U

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Leachate Metal Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Mercury Total mg/l	Nickel Dissolved mg/l	Nickel Total mg/l	Potassium Dissolved mg/l	Potassium Total mg/l	Selenium Dissolved mg/l	Selenium Total mg/l	Silver Dissolved mg/l	Silver Total mg/l	Sodium Dissolved mg/l
LS-LEPS	9/22/2021	LEPS210922M		0.311		874		0.00856		0.000397 U		2420
LS-A567	7/8/2021	L567210708I	0.0001 U	0.235	0.268	797	814	0.00495 U	0.005 U	0.000396 U	0.0004 U	2640
LS-A567	8/5/2021	L567210805I	0.0001 U	0.285 D	0.275	825	826	0.00497 U	0.00517 U	0.000397 U	0.000413 U	2750 D
LS-A567	9/9/2021	L567210909I	0.0001 U	0.281	0.291 D	860	849	0.00491 U	0.0049 U	0.000393 U	0.000392 U	2690 D
LS-A81	7/8/2021	LA81210708I	0.0001 U	0.272	0.348	847	821	0.00964	0.0123	0.000399 U	0.000399 U	1720
LS-A81	8/5/2021	LA81210805I	0.0001 U	0.43 D	0.441	1210 D	1160 D	0.0144	0.0161	0.000397 U	0.0004 U	3100 D
LS-A81	9/9/2021	LA81210909I	0.00016		0.777 D		1200		0.0224		0.000381 U	
LS-LEPS	7/7/2021	LEPS210707M		0.11		356		0.00498 U		0.000399 U		1010
LS-LEPS	7/7/2021	LEPS210707P	0.0001 U		0.114		349		0.00495 U		0.000396 U	
LS-LEPS	7/13/2021	LEPS210713P	0.0001 U		0.114		365		0.00498 U		0.000399 U	
LS-LEPS	7/23/2021	LEPS210723P	0.0001 U		0.126 D		380		0.00494 U		0.000395 U	
LS-LEPS	7/29/2021	LEPS210729P	0.0001 U		0.127		375		0.00499 U		0.000399 U	
LS-LEPS	8/4/2021	LEPS210804M		0.138 D		411		0.00503 U		0.000402 U		1170
LS-LEPS	8/4/2021	LEPS210804P	0.0001 U		0.127		393		0.005 U		0.0004 U	
LS-LEPS	8/10/2021	LEPS210810P	0.0005 U		0.136		407		0.00498 U		0.000398 U	
LS-LEPS	8/31/2021	LEPS210831P	0.0001 U		0.142		478		0.00501 U		0.000401 U	
LS-LEPS	9/14/2021	LEPS210914P	0.0001 U		0.172		542		0.00513 U		0.00041 U	
LS-LEPS	9/22/2021	LEPS210922P	0.0001 U		0.184 D		546		0.00486 U		0.000389 U	
LS-LEPS	9/28/2021	LEPS210928P	0.0001 U		0.184		547		0.00503 U		0.000403 U	
LS-MH46N	7/7/2021	L46N210707M	0.0001 U		0.133		351		0.00502 U		0.000402 U	
LS-MH46N	8/4/2021	L46N210804M	0.0001 U		0.141		353		0.00504 U		0.000403 U	
LS-MH46N	9/7/2021	L46N210907M	0.0001 U		0.151 D		387		0.00495 U		0.000396 U	
LS-PS1A	7/8/2021	LP1A210708I	0.0001 U	0.0244	0.0241	57.8	58.3	0.00503 U	0.00504 U	0.000402 U	0.000403 U	220
LS-PS1A	8/5/2021	LP1A210805I	0.0001 U	0.0671 D	0.0685	167	167	0.00503 U	0.00512 U	0.000402 U	0.00041 U	616
LS-PS1A	9/9/2021	LP1A210909I	0.0001 U	0.118	0.12 D	309	304	0.00488 U	0.00482 U	0.000391 U	0.000386 U	1160
LS-PS2A	7/7/2021	LP2A210707M	0.0001 U		0.0181		5.82		0.00496 U		0.000397 U	
LS-PS2A	8/4/2021	LP2A210804M	0.0001 U		0.0451		27.4		0.00504 U		0.000403 U	
LS-PS2A	9/7/2021	LP2A210907M	0.0001 U		0.0481 D		72.9		0.00491 U		0.000392 U	
LS-PS4	7/8/2021	LP4-210708I	0.0001 U	0.00986	0.0108	24	24.4	0.00496 U	0.00491 U	0.000397 U	0.000393 U	86.2
LS-PS4	8/5/2021	LP4-210805I	0.0001 U	0.0127 D	0.0147	28.7	27.7	0.00497 U	0.00506 U	0.000397 U	0.000405 U	103
LS-PS4	9/9/2021	LP4-210909I	0.0001 U	0.0143	0.0137 D	38.8	38.3	0.00486 U	0.00485 U	0.000389 U	0.000388 U	131
LS-V1A	7/7/2021	LV1A210707M	0.0001 U	0.117	0.124	460	464	0.00501 U	0.00502 U	0.000401 U	0.000402 U	1370
LS-V1A	8/4/2021	LV1A210804M	0.000154	0.178 D	0.199	642	639	0.00501 U	0.00497	0.000401 U	0.000397 U	1850
LS-V1A	9/8/2021	LV1A210908M	0.000111	0.191	0.346 D	579	878	0.00497 U	0.0123	0.000398 U	0.000393 U	1660

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill --- Leachate Metal Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Sodium Total mg/l	Thallium Dissolved mg/l	Thallium Total mg/l	Tin Dissolved mg/l	Tin Total mg/l	Vanadium Dissolved mg/l	Vanadium Total mg/l	Zinc Dissolved mg/l	Zinc Total mg/l
LS-LEPS	9/22/2021	LEPS210922M		0.000745 U		0.0221		0.229		0.411	
LS-A567	7/8/2021	L567210708I	2650	0.000742 U	0.000749 U	0.032	0.0438	0.163	0.172	0.0997	0.203
LS-A567	8/5/2021	L567210805I	2790 D	0.000745 U	0.000775 U	0.041	0.0369	0.162	0.17	0.0686	0.14
LS-A567	9/9/2021	L567210909I	2880	0.000736 U	0.000735 U	0.0341	0.0348	0.176	0.177	0.0345	0.128
LS-A81	7/8/2021	LA81210708I	1650	0.000748 U	0.000749 U	0.00499 U	0.0128	0.0559	0.073	0.0151	2.88
LS-A81	8/5/2021	LA81210805I	2950 D	0.000743 U	0.000749 U	0.00874	0.0242	0.109	0.117	0.2	4.21
LS-A81	9/9/2021	LA81210909I	2980		0.000715 U		0.0415		0.188		10.8
LS-LEPS	7/7/2021	LEPS210707M		0.000748 U		0.00933		0.0371		0.0481	
LS-LEPS	7/7/2021	LEPS210707P	1010		0.000742 U		0.00867		0.0375		0.229
LS-LEPS	7/13/2021	LEPS210713P	991		0.000747 U		0.00949		0.0383		0.166
LS-LEPS	7/23/2021	LEPS210723P	1060		0.00074 U		0.0085		0.0405		0.137
LS-LEPS	7/29/2021	LEPS210729P	1060		0.000748 U		0.00944		0.0416		0.151
LS-LEPS	8/4/2021	LEPS210804M		0.000754 U		0.0106		0.0453		0.0963	
LS-LEPS	8/4/2021	LEPS210804P	1170		0.00075 U		0.0109		0.0441		0.161
LS-LEPS	8/10/2021	LEPS210810P	1200		0.000747 U		0.0133		0.0444 D		0.147
LS-LEPS	8/31/2021	LEPS210831P	1330		0.000752 U		0.0104		0.0576		0.246
LS-LEPS	9/14/2021	LEPS210914P	1540		0.000769 U		0.0127		0.0796		0.398
LS-LEPS	9/22/2021	LEPS210922P	1540		0.000729 U		0.0127		0.0855		0.499
LS-LEPS	9/28/2021	LEPS210928P	1500		0.000755 U		0.0104		0.0835		0.438
LS-MH46N	7/7/2021	L46N210707M	1210		0.000753 U		0.00502 U		0.138		0.0108
LS-MH46N	8/4/2021	L46N210804M	1270		0.000757 U		0.00504 U		0.139		0.00798
LS-MH46N	9/7/2021	L46N210907M	1330		0.000742 U		0.00495 U		0.149		0.00495 U
LS-PS1A	7/8/2021	LP1A210708I	225	0.000755 U	0.000755 U	0.00503 U	0.00504 U	0.0159	0.0162	0.0163	0.0195
LS-PS1A	8/5/2021	LP1A210805I	655	0.000754 U	0.000768 U	0.00503 U	0.00512 U	0.052	0.0554	0.0471	0.0579
LS-PS1A	9/9/2021	LP1A210909I	1180	0.000733 U	0.000724 U	0.00488 U	0.00482 U	0.0824	0.081	0.0282	0.0319
LS-PS2A	7/7/2021	LP2A210707M	16.9		0.000744 U		0.00496 U		0.000759		0.234
LS-PS2A	8/4/2021	LP2A210804M	105		0.000756 U		0.00504 U		0.00287		0.318
LS-PS2A	9/7/2021	LP2A210907M	212		0.000736 U		0.00491 U		0.00167		0.142
LS-PS4	7/8/2021	LP4-210708I	85.4	0.000745 U	0.000737 U	0.00496 U	0.00491 U	0.00377	0.00522	0.0138	0.0347
LS-PS4	8/5/2021	LP4-210805I	104	0.000745 U	0.000758 U	0.00497 U	0.00506 U	0.00518	0.00577	0.0211	0.0424
LS-PS4	9/9/2021	LP4-210909I	127	0.000729 U	0.000728 U	0.00527	0.0055	0.00566	0.00697	0.0196	0.0828
LS-V1A	7/7/2021	LV1A210707M	1410	0.000751 U	0.000753 U	0.0214	0.022	0.0581	0.0602	0.0412	0.0868
LS-V1A	8/4/2021	LV1A210804M	1890	0.000751 U	0.000744 U	0.0292	0.0275	0.075	0.0963	0.0536	0.925
LS-V1A	9/8/2021	LV1A210908M	2590	0.000746 U	0.000737 U	0.0145	0.0272	0.0863	0.242	0.0502	1.78

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	1,1,1,2-Tetrachloroethane 630-20-6 (ug/L)	1,1,1-Trichloroethane 71-55-6 (ug/L)	1,1,2,2-Tetrachloroethane 79-34-5 (ug/L)	1,1,2-Trichloroethane 79-00-5 (ug/L)	1,1-Dichloroethane 75-34-3 (ug/L)	1,1-Dichloroethene 75-35-4 (ug/L)	1,1-Dichloropropene 563-58-6 (ug/L)	1,2,3-Trichloropropane 96-18-4 (ug/L)
LS-LEPS	LEPS210922M	9/22/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-LEPS	LEPS210707M	7/7/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-LEPS	LEPS210804M	8/4/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-MH46N	L46N210707M	7/7/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-MH46N	L46N210804M	8/4/2021	12.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
LS-MH46N	L46N210907M	9/7/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-PS2A	LP2A210707M	7/7/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
LS-PS2A	LP2A210804M	8/4/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
LS-PS2A	LP2A210907M	9/7/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
LS-V1A	LV1A210707M	7/7/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
LS-V1A	LV1A210804M	8/4/2021	2.5 U	1 U	1 U	1 U	1 U	2.73	1 U	1 U
LS-V1A	LV1A210908M	9/8/2021	2.5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
VOA TRIP BLANK	VTRP210712X	7/9/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U
VOA TRIP BLANK	VTRP210728X	7/20/2021	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U		0.1 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	1,2-Dibromo-3-Chloropropane 96-12-8 (ug/L)	1,2-Dibromoethane 106-93-4 (ug/L)	1,2-Dichlorobenzene 95-50-1 (ug/L)	1,2-Dichloroethane 107-06-2 (ug/L)	1,2-Dichloropropane 78-87-5 (ug/L)	1,3-Dichlorobenzene 541-73-1 (ug/L)	1,3-Dichloropropane 142-28-9 (ug/L)	1,4-Dichlorobenzene 106-46-7 (ug/L)	2,2-Dichloropropane 594-20-7 (ug/L)	2-Butanone 78-93-3 (ug/L)
LS-LEPS	LEPS210922M	9/22/2021	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	963 D
LS-LEPS	LEPS210707M	7/7/2021	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	2.5 U
LS-LEPS	LEPS210804M	8/4/2021	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	17.7
LS-MH46N	L46N210707M	7/7/2021	25 U	1 U	1 U	1 U	1 U	1 U	1 U	6.78	1 U	2.5 U
LS-MH46N	L46N210804M	8/4/2021	125 U	5 U	5 U	5 U	5 U	5 U	5 U	6.58 JT	5 U	51.4
LS-MH46N	L46N210907M	9/7/2021	25 U	1 U	2.24	1 U	1 U	1 U	1 U	9.19	1 U	13.5
LS-PS2A	LP2A210707M	7/7/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.25 U
LS-PS2A	LP2A210804M	8/4/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.207	0.1 U	0.25 U
LS-PS2A	LP2A210907M	9/7/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.317	0.1 U	0.754
LS-V1A	LV1A210707M	7/7/2021	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	3950 D
LS-V1A	LV1A210804M	8/4/2021	25 U	1 U	1 U	1 U	1 U	1 U	1 U	1.3 JT	1 U	4320 D
LS-V1A	LV1A210908M	9/8/2021	25 U	1 U	1 U	1.32 JT	1 U	1 U	1 U	1 U	1 U	25700 D
VOA TRIP BLANK	VTRP210712X	7/9/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U
VOA TRIP BLANK	VTRP210728X	7/20/2021	2.5 U	0.1 U	0.1 U	0.1 U	0.1 U			0.1 U		1 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	2-Hexanone 591-78-6 (ug/L)	2-Methyl-1-Propanol 78-83-1 (ug/L)	3-Chloropropene 107-05-1 (ug/L)	4-Methyl-2-Pentanone 108-10-1 (ug/L)	Acetone 67-64-1 (ug/L)	Acetonitrile 75-05-8 (ug/L)	Acrolein 107-02-8 (ug/L)	Acrylonitrile 107-13-1 (ug/L)	Benzene 71-43-2 (ug/L)
LS-LEPS	LEPS210922M	9/22/2021	5 U	50 U	1 U	25 U	1480 D	50 U	25 U	0.35 U	1 U
LS-LEPS	LEPS210707M	7/7/2021	5 U	50 U	1 U	25 U	112	50 U	25 U	0.35 U	1 U
LS-LEPS	LEPS210804M	8/4/2021	5 U	50 U	1 U	25 U	147	50 U	25 U	0.35 U	1 U
LS-MH46N	L46N210707M	7/7/2021	5 U	50 U	1 U	25 U	51.9	50 U	25 U	0.35 U	2.97
LS-MH46N	L46N210804M	8/4/2021	25 U	250 U	5 U	125 U	543	250 U	125 U	1.75 U	5 U
LS-MH46N	L46N210907M	9/7/2021	5 U	50 U	1 U	25 U	49.4 JT	50 U	25 U	0.35 U	4.03
LS-PS2A	LP2A210707M	7/7/2021	0.5 U	5 U	0.1 U	2.5 U	2.5 U	5 U	2.5 U	0.035 U	0.1 U
LS-PS2A	LP2A210804M	8/4/2021	0.5 U	5 U	0.1 U	2.5 U	4.91 JT	5 U	2.5 U	0.035 U	0.1 U
LS-PS2A	LP2A210907M	9/7/2021	0.5 U	5 U	0.1 U	2.5 U	6.5	5 U	2.5 U	0.035 U	0.1 U
LS-V1A	LV1A210707M	7/7/2021	14.9	91.5 JT	1 U	57.3	6400 D	83.2 JT	25 U	0.35 U	1 U
LS-V1A	LV1A210804M	8/4/2021	19.4	111	1 U	61.9	7330 D	86.2 JT	25 U	0.35 U	1 U
LS-V1A	LV1A210908M	9/8/2021	40.6	50 U	1 U	275	28800 D	50 U	25 U	0.35 U	1 U
VOA TRIP BLANK	VTRP210712X	7/9/2021	0.5 U			2.5 U	2.5 U			0.035 U	0.1 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021	0.5 U			2.5 U	2.5 U			0.035 U	0.1 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021	0.5 U			2.5 U	2.9 JT			0.035 U	0.1 U
VOA TRIP BLANK	VTRP210728X	7/20/2021	0.5 U			2.5 U	2.5 U			0.035 U	0.1 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Bromochloromethane 74-97-5 (ug/L)	Bromodichloromethane 75-27-4 (ug/L)	Bromoform 75-25-2 (ug/L)	Bromomethane 74-83-9 (ug/L)	Carbon Disulfide 75-15-0 (ug/L)	Carbon Tetrachloride 56-23-5 (ug/L)	Chlorobenzene 108-90-7 (ug/L)	Chlorodibromomethane 124-48-1 (ug/L)	Chloroethane 75-00-3 (ug/L)
LS-LEPS	LEPS210922M	9/22/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-LEPS	LEPS210707M	7/7/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-LEPS	LEPS210804M	8/4/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-MH46N	L46N210707M	7/7/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-MH46N	L46N210804M	8/4/2021	5 U	12.5 U	25 U	5 GU	5 U	12.5 U	5 U	25 U	5 U
LS-MH46N	L46N210907M	9/7/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	2.19	5 U	1 U
LS-PS2A	LP2A210707M	7/7/2021	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
LS-PS2A	LP2A210804M	8/4/2021	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
LS-PS2A	LP2A210907M	9/7/2021	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
LS-V1A	LV1A210707M	7/7/2021	1 U	2.5 U	5 U	1 U	1 U	2.5 U	1 U	5 U	1 U
LS-V1A	LV1A210804M	8/4/2021	1 U	2.5 U	5 U	1 U	1.39 JT	2.5 U	1 U	5 U	1 U
LS-V1A	LV1A210908M	9/8/2021	1 U	2.5 U	5 U	1 U	1.33 JT	2.5 U	1 U	5 U	1 U
VOA TRIP BLANK	VTRP210712X	7/9/2021	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U
VOA TRIP BLANK	VTRP210728X	7/20/2021	0.1 U	0.25 U	0.5 U	0.1 U	0.1 U	0.25 U	0.1 U	0.5 U	0.1 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Chloroform 67-66-3 (ug/L)	Chloromethane 74-87-3 (ug/L)	Chloroprene 126-99-8 (ug/L)	Cis-1,2-Dichloroethene 156-59-2 (ug/L)	Cis-1,3-Dichloropropene 10061-01-5 (ug/L)	Dibromomethane 74-95-3 (ug/L)	Dichlorodifluoromethane 75-71-8 (ug/L)	Ethylbenzene 100-41-4 (ug/L)	M & P Xylene MPX (ug/L)
LS-LEPS	LEPS210922M	9/22/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U
LS-LEPS	LEPS210707M	7/7/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U
LS-LEPS	LEPS210804M	8/4/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U
LS-MH46N	L46N210707M	7/7/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	27.4	23.8
LS-MH46N	L46N210804M	8/4/2021	5 U	12.5 U	5 U	5 U	12.5 U	5 U	5 U	29.1	25.1
LS-MH46N	L46N210907M	9/7/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	41.5	34.9
LS-PS2A	LP2A210707M	7/7/2021	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
LS-PS2A	LP2A210804M	8/4/2021	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
LS-PS2A	LP2A210907M	9/7/2021	0.1 U	0.25 U	0.1 U	0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
LS-V1A	LV1A210707M	7/7/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U
LS-V1A	LV1A210804M	8/4/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1 U	1 U
LS-V1A	LV1A210908M	9/8/2021	1 U	2.5 U	1 U	1 U	2.5 U	1 U	1 U	1.59 JT	3.01
VOA TRIP BLANK	VTRP210712X	7/9/2021	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U
VOA TRIP BLANK	VTRP210728X	7/20/2021	0.1 U	0.25 U		0.1 U	0.25 U	0.1 U	0.1 U	0.1 U	0.1 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Methyl Iodide 74-88-4 (ug/L)	Methyl Methacrylate 80-62-6 (ug/L)	Methylacrylonitrile 126-98-7 (ug/L)	Methylene Chloride 75-09-2 (ug/L)	O-Xylene 95-47-6 (ug/L)	Propionitrile 107-12-0 (ug/L)	Styrene 100-42-5 (ug/L)	Tetrachloroethene 127-18-4 (ug/L)
LS-LEPS	LEPS210922M	9/22/2021	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-LEPS	LEPS210707M	7/7/2021	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-LEPS	LEPS210804M	8/4/2021	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-MH46N	L46N210707M	7/7/2021	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-MH46N	L46N210804M	8/4/2021	5 U	12.5 U	5 U	125 U	5 U	25 U	5 U	5 U
LS-MH46N	L46N210907M	9/7/2021	1 U	2.5 U	1 U	25 U	3.37	5 U	1 U	1 U
LS-PS2A	LP2A210707M	7/7/2021	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
LS-PS2A	LP2A210804M	8/4/2021	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
LS-PS2A	LP2A210907M	9/7/2021	0.1 U	0.25 U	0.1 U	2.5 U	0.1 U	0.5 U	0.1 U	0.1 U
LS-V1A	LV1A210707M	7/7/2021	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-V1A	LV1A210804M	8/4/2021	1 U	2.5 U	1 U	25 U	1 U	5 U	1 U	1 U
LS-V1A	LV1A210908M	9/8/2021	1 U	2.5 U	1 U	25 U	2.09	5 U	1 U	1 U
VOA TRIP BLANK	VTRP210712X	7/9/2021	0.1 U			2.5 U	0.1 U		0.1 U	0.1 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021	0.1 U			2.5 U	0.1 U		0.1 U	0.1 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021	0.1 U			2.5 U	0.1 U		0.1 U	0.1 U
VOA TRIP BLANK	VTRP210728X	7/20/2021	0.1 U			2.5 U	0.1 U		0.1 U	0.1 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill ---Leachate VOAs Analytical Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Toluene 108-88-3 (ug/L)	Trans-1,2-Dichloroethene 156-60-5 (ug/L)	Trans-1,3-Dichloropropene 10061-02-6 (ug/L)	Trans-1,4-Dichloro-2-Butene 110-57-6 (ug/L)	Trichloroethene 79-01-6 (ug/L)	Trichlorofluoromethane 75-69-4 (ug/L)	Vinyl Acetate 108-05-4 (ug/L)	Vinyl Chloride 75-01-4 (ug/L)
LS-LEPS	LEPS210922M	9/22/2021	2.38	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-LEPS	LEPS210707M	7/7/2021	1 U	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-LEPS	LEPS210804M	8/4/2021	6.57	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-MH46N	L46N210707M	7/7/2021	2.52	1 U	5 U	5 U	1 U	1 U	1 U	1.99
LS-MH46N	L46N210804M	8/4/2021	5 U	5 U	25 U	25 U	5 U	5 U	5 U	1.39
LS-MH46N	L46N210907M	9/7/2021	6.04	1 U	5 U	5 U	1 U	1 U	1 U	1.75
LS-PS2A	LP2A210707M	7/7/2021	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
LS-PS2A	LP2A210804M	8/4/2021	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
LS-PS2A	LP2A210907M	9/7/2021	0.1 U	0.1 U	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.01 U
LS-V1A	LV1A210707M	7/7/2021	3.33	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-V1A	LV1A210804M	8/4/2021	3.52	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
LS-V1A	LV1A210908M	9/8/2021	40	1 U	5 U	5 U	1 U	1 U	1 U	0.1 U
VOA TRIP BLANK	VTRP210712X	7/9/2021	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
VOA TRIP BLANK	VTRP210712Y	7/9/2021	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
VOA TRIP BLANK	VTRP210712Z	7/9/2021	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U
VOA TRIP BLANK	VTRP210728X	7/20/2021	0.1 U	0.1 U	0.5 U	5 U	0.1 U	0.1 U	0.1 U	0.01 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill ---Leachate PCB Analytical Data
Contact Person: Natalya Usova (206) 263-0608

		Chemical_Name	2,4,5-T	2,4,5-Tp Silvex	2,4-D	4,4'ddd	4,4'dde	4,4'ddt	Aldrin	Alpha Bhc	Alpha Chlordane	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242
		CAS_RN	93-76-5	93-72-1	94-75-7	72-54-8	72-55-9	50-29-3	309-00-2	319-84-6	5103-71-9	12674-11-2	11104-28-2	11141-16-5	53469-21-9
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	LEPS210922M	9/22/2021	0.5 U	1 U	1.76	0.05 GU	0.05 GU	0.05 GU	0.05 GU	0.05 U	0.05 GU	0.1 GU	0.1 GU	0.1 GU	0.1 GU
LS-LEPS	LEPS210707M	7/7/2021	0.5 U	4 U	1.55 J	0.1 GU	0.1 GU	0.1 GU	0.1 GU	0.1 U	0.1 GU	0.125 U	0.125 U	0.125 U	0.125 U
LS-LEPS	LEPS210804M	8/4/2021	0.5 U	0.5 U	1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 GU	0.025 U	0.025 U	0.025 U	0.0478
LS-MH46N	L46N210707M	7/7/2021	0.5 U	0.9	2.5 U	0.1 GU	0.1 GU	0.1 GU	0.1 GU	0.1 U	0.1 GU	0.025 U	0.0578 J	0.025 U	0.12
LS-MH46N	L46N210804M	8/4/2021	0.5 U	1 U	4 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 GU	0.025 U	0.0593 J	0.025 U	0.139
LS-PS2A	LP2A210707M	7/7/2021	0.5 U	0.5 U	1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.025 U	0.025 U	0.025 U	0.025 U
LS-PS2A	LP2A210804M	8/4/2021	0.5 U	0.5 U	1 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.025 U	0.025 U	0.025 U	0.025 U
LS-V1A	LV1A210707M	7/7/2021	0.5 U	5 U	2.57	0.1 GU	0.1 GU	0.1 GU	0.1 GU	0.1 U	0.1 GU	0.025 U	0.025 U	0.025 U	0.202
LS-V1A	LV1A210804M	8/4/2021	0.5 U	1 U	2.03	0.125 U	0.125 U	0.125 U	0.125 U	0.125 U	0.125 GU	0.05 U	0.05 U	0.05 U	0.432

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill ---Leachate PCB Analytical Data
Contact Person: Natalya Usova (206) 263-0608

		Chemical_Name	Aroclor 1248	Aroclor 1254	Aroclor 1260	Beta Bhc	Delta Bhc	Dieldrin	Dinoseb	Endosulfan I	Endosulfan Ii	Endosulfan Sulfate	Endrin
		CAS_RN	12672-29-6	11097-69-1	11096-82-5	319-85-7	319-86-8	60-57-1	88-85-7	959-98-8	33213-65-9	1031-07-8	72-20-8
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	LEPS210922M	9/22/2021	0.1 GU	0.1 GU	0.1 GU	0.1 U	0.05 U	0.05 GU	1 U	0.05 U	0.05 U	0.05 GU	0.05 GU
LS-LEPS	LEPS210707M	7/7/2021	0.125 U	0.125 U	0.125 GU	0.1 GU	0.1 GU	0.1 GU	0.5 U	0.2 U	0.1 U	0.1 U	0.1 GU
LS-LEPS	LEPS210804M	8/4/2021	0.025 U	0.025 U	0.025 U	0.1 JU	0.1 U	0.1 U	1.5 U	0.1 U	0.1 U	0.1 GU	0.1 U
LS-MH46N	L46N210707M	7/7/2021	0.025 U	0.025 U	0.025 U	0.1 GU	0.1 GU	0.1 GU	0.5 U	0.1 U	0.1 U	0.1 U	0.1 GU
LS-MH46N	L46N210804M	8/4/2021	0.025 U	0.025 U	0.025 U	0.05 JU	0.025 U	0.025 U	0.5 U	0.025 U	0.025 U	0.025 GU	0.025 U
LS-PS2A	LP2A210707M	7/7/2021	0.025 U	0.025 U	0.025 U	0.01 U	0.01 U	0.01 U	0.5 U	0.01 U	0.01 U	0.01 U	0.01 U
LS-PS2A	LP2A210804M	8/4/2021	0.025 U	0.025 U	0.025 U	0.01 U	0.01 U	0.01 U	0.5 U	0.01 U	0.01 U	0.01 U	0.01 U
LS-V1A	LV1A210707M	7/7/2021	0.025 U	0.0646	0.025 U	0.1 GU	0.1 GU	0.1 GU	0.5 U	0.1 U	0.1 U	0.1 U	0.1 GU
LS-V1A	LV1A210804M	8/4/2021	0.05 U	0.184	0.05 U	0.75 JU	0.125 U	0.125 U	0.5 U	0.125 U	0.125 U	0.125 GU	0.125 U

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from July 01, 2021 to September 30, 2021
Cedar Hills Landfill ---Leachate PCB Analytical Data
Contact Person: Natalya Usova (206) 263-0608

		Chemical_Name	Endrin Aldehyde	Heptachlor	Heptachlor Epoxide	Isodrin	Lindane(Gamma Bhc)	Methoxychlor	Total Aroclors	Toxaphene	Trans-Chlordane
		CAS_RN	7421-93-4	76-44-8	1024-57-3	465-73-6	58-89-9	72-43-5	T_AROCLOR	8001-35-2	5103-74-2
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	LEPS210922M	9/22/2021	0.05 GU	0.05 GU	0.05 GU	0.05 GU	0.05 U	0.25 GU	0.1 U	5 U	0.05 GU
LS-LEPS	LEPS210707M	7/7/2021	0.1 GU	0.1 GU	0.1 GU	0.1 GU	0.1 U	0.5 U	0.125 U	10 U	0.1 GU
LS-LEPS	LEPS210804M	8/4/2021	0.1 GU	0.1 U	0.1 U	0.1 GU	0.1 U	0.5 U	0.0478	10 U	0.1 GU
LS-MH46N	L46N210707M	7/7/2021	0.1 GU	0.1 GU	0.1 GU	0.1 GU	0.1 U	0.5 U	0.1778	10 U	0.1 GU
LS-MH46N	L46N210804M	8/4/2021	0.025 GU	0.025 U	0.025 U	0.025 GU	0.025 U	0.125 U	0.1983	2.5 U	0.025 GU
LS-PS2A	LP2A210707M	7/7/2021	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.025 U	1 U	0.01 U
LS-PS2A	LP2A210804M	8/4/2021	0.01 GU	0.01 U	0.01 U	0.01 U	0.01 U	0.05 U	0.025 U	1 U	0.01 U
LS-V1A	LV1A210707M	7/7/2021	0.1 GU	0.1 GU	0.1 GU	0.1 GU	0.1 U	0.5 U	0.2666	10 U	0.1 GU
LS-V1A	LV1A210804M	8/4/2021	0.125 GU	0.125 U	0.125 U	0.125 GU	0.125 U	0.625 U	0.616	12.5 U	0.125 GU

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

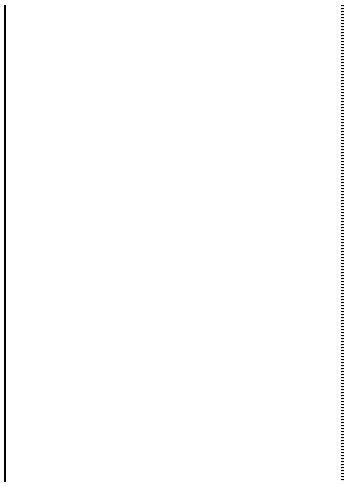
Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Sample Roaster
Contact Person: Natalya Usova (206) 263-0608

Leachate Monitoring Activities 4th Quarter 2021

Station ID	Date	Activity	Sample ID	Comment
LS-A567	10/11/2021	Special Investigation	L567211011I	
LS-A567	11/4/2021	Special Investigation	L567211104I	
LS-A567	12/9/2021	Special Investigation	L567211209I	
LS-A567	12/9/2021	Special Investigation	L567211209I2	
LS-A81	10/11/2021	Special Investigation	LA81211011I	
LS-A81	11/4/2021	Special Investigation	LA81211104I	
LS-A81	12/9/2021	Special Investigation	LA81211209I	
LS-A81	12/9/2021	Special Investigation	LA81211209I2	
LS-CSW	11/4/2021	Special Investigation	LCSW211104I	
LS-CSW	12/9/2021	Special Investigation	LCSW211209I	
LS-CSW	12/9/2021	Special Investigation	LCSW211209I2	
LS-LEPS	10/6/2021	Monthly Characterization Sample	LEPS211006M	
LS-LEPS	10/6/2021	Permit Sample	LEPS211006P	
LS-LEPS	10/13/2021	Permit Sample	LEPS211013P	
LS-LEPS	10/21/2021	Permit Sample	LEPS211021P	
LS-LEPS	10/26/2021	Permit Sample	LEPS211026P	
LS-LEPS	11/4/2021	Permit Sample	LEPS211104P	
LS-LEPS	11/9/2021	Permit Sample	LEPS211109P	
LS-LEPS	11/16/2021	Monthly Characterization Sample	LEPS211116M	
LS-LEPS	11/16/2021	Permit Sample	LEPS211116P	
LS-LEPS	11/23/2021	Permit Sample	LEPS211123P	
LS-LEPS	11/30/2021	Permit Sample	LEPS211130P	
LS-LEPS	12/7/2021	Monthly Characterization Sample	LEPS211207M	
LS-LEPS	12/7/2021	Permit Sample	LEPS211207P	
LS-LEPS	12/9/2021	Special Investigation	LEPS211209I2	
LS-LEPS	12/14/2021	Permit Sample	LEPS211214P	
LS-LEPS	12/21/2021	Permit Sample	LEPS211221P	
LS-LEPS	12/29/2021	Permit Sample	LEPS211229P	
LS-PS1A	10/11/2021	Special Investigation	LP1A211011I	
LS-PS1A	11/4/2021	Special Investigation	LP1A211104I	
LS-PS1A	12/9/2021	Special Investigation	LP1A211209I	
LS-PS1A	12/9/2021	Special Investigation	LP1A211209I2	
LS-PS2A	10/6/2021	Monthly Characterization Sample	LP2A211006M	
LS-PS2A	11/3/2021	Monthly Characterization Sample	LP2A211103M	
LS-PS2A	12/8/2021	Monthly Characterization Sample	LP2A211208M	
LS-PS4	10/11/2021	Special Investigation	LP4-211011D	
LS-PS4	10/11/2021	Special Investigation	LP4-211011I	
LS-PS4	11/4/2021	Special Investigation	LP4-211104I	
LS-PS4	12/9/2021	Special Investigation	LP4-211209D	
LS-PS4	12/9/2021	Special Investigation	LP4-211209I	
LS-PS4	12/9/2021	Special Investigation	LP4-211209I2	
LS-V1A	10/6/2021	Monthly Characterization Sample	LV1A211006M	
LS-V1A	11/3/2021	Monthly Characterization Sample	LV1A211103M	
LS-V1A	11/4/2021	Monthly Characterization Sample	LV1A211104M	
LS-V1A	12/8/2021	Monthly Characterization Sample	LV1A211208M	
LS-V1A	12/9/2021	Special Investigation	LV1A211209I2	
LS-46N	10/6/2021	Monthly Characterization Sample	L46N211006M	
LS-46N	11/3/2021	Monthly Characterization Sample	L46N211103M	
LS-46N	12/8/2021	Monthly Characterization Sample	L46N211208M	
FIELD BLANK	11/3/2021	QA/QC Sample	LV1A211103F	

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Sample Roaster
Contact Person: Natalya Usova (206) 263-0608



Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Field Data
Contact Person: Natalya Usova (206) 263-0608

Site	Sample ID	Date	pH (Field) (std. Units)	Specific Conductance (Field) (umho/cm)	Temperature (Field) (^{o}C)
LS-A567	10/11/2021	L567211011I	7.71	12995	29.5
LS-A567	11/4/2021	L567211104I	7.76	18604	25.4
LS-A567	12/9/2021	L567211209I	7.78	15952	29.7
LS-A567	12/9/2021	L56721209I2	7.78	15952	29.7
LS-A81	10/11/2021	LA81211011I	6.76	3931	17.2
LS-A81	11/4/2021	LA81211104I	6.76	6150	13.6
LS-A81	12/9/2021	LA81211209I	7.29	9690	5.8
LS-A81	12/9/2021	LA81211209I2	7.29	9690	5.8
LS-CSW	11/4/2021	LCSW211104I	7.35	172	10.2
LS-CSW	12/9/2021	LCSW211209I	6.84	134	5.6
LS-CSW	12/9/2021	LCSW211209I2	6.84	134	5.6
LS-LEPS	10/6/2021	LEPS211006M	8.58	11619	15.2
LS-LEPS	10/6/2021	LEPS211006P	8.58	11619	15.2
LS-LEPS	10/13/2021	LEPS211013P	8.61	10909	12.6
LS-LEPS	10/21/2021	LEPS211021P	8.50	10678	13.0
LS-LEPS	10/26/2021	LEPS211026P	8.56	9351	12.9
LS-LEPS	11/4/2021	LEPS211104P	8.42	3857	10.6
LS-LEPS	11/9/2021	LEPS211109P	8.38	3368	10.6
LS-LEPS	11/16/2021	LEPS211116M	8.19	2204	12.2
LS-LEPS	11/16/2021	LEPS211116P	8.19	2204	12.2
LS-LEPS	11/23/2021	LEPS211123P	6.65	2340	9.4
LS-LEPS	11/30/2021	LEPS211130P	7.84	2762	13.1
LS-LEPS	12/7/2021	LEPS211207M	8.27	2727	10.0
LS-LEPS	12/7/2021	LEPS211207P	8.27	2727	10.0
LS-LEPS	12/9/2021	LEPS211209I2	8.25	2623	8.8
LS-LEPS	12/14/2021	LEPS211214P	8.32	2842	8.7
LS-LEPS	12/21/2021	LEPS211221P	8.37	3166	8.0
LS-LEPS	12/29/2021	LEPS211229P	8.21	3142	6.2
LS-MH46N	10/6/2021	L46N211006M	7.35	11396	20.8
LS-MH46N	11/3/2021	L46N211103M	7.34	11447	19.6
LS-MH46N	12/8/2021	L46N211208M	7.34	8961	20.3
LS-PS1A	10/11/2021	LP1A211011I	7.49	2531	14.3
LS-PS1A	11/4/2021	LP1A211104I	6.46	368	13.3
LS-PS1A	12/9/2021	LP1A211209I	6.42	1131	12.1
LS-PS1A	12/9/2021	LP1A211209I2	6.42	1131	12.1
LS-PS2A	10/6/2021	LP2A211006M	6.27	136	14.2
LS-PS2A	11/3/2021	LP2A211103M	5.95	110	13.9
LS-PS2A	12/8/2021	LP2A211208M	5.94	109	10.3
LS-PS4	10/11/2021	LP4-211011D	7.41	1399	14.5
LS-PS4	10/11/2021	LP4-211011I	7.41	1399	14.5
LS-PS4	11/4/2021	LP4-211104I	7.02	493	14.4
LS-PS4	12/9/2021	LP4-211209D	7.26	1027	12.3
LS-PS4	12/9/2021	LP4-211209I	7.26	1027	12.3
LS-PS4	12/9/2021	LP4-211209I2	7.26	1027	12.3
LS-V1A	10/6/2021	LV1A211006M	8.00	8420	22.6
LS-V1A	11/3/2021	LV1A211103M	7.53	3883	15.3
LS-V1A	11/4/2021	LV1A211104M	7.56	3791	16.6
LS-V1A	12/8/2021	LV1A211208M	8.33	2520	9.3
LS-V1A	12/9/2021	LV1A211209I2	7.92	1046	7.0

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Conventional Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Alkalinity, Carbonate mg/l	Alkalinity, Total (as $CaCO_3$) mg/l	Ammonia as N mg/l	Biological Oxygen Demand mg/l	Chemical Oxygen Demand mg/l	Chloride mg/l
LS-A567	10/11/2021	L567211011I	1	5280	1370	2230	4280	1350
LS-A567	11/4/2021	L567211104I	1	8030	1940	2210	5540	2150
LS-A567	12/9/2021	L567211209I	1	6840	1510	1270	3830	1790
LS-A81	10/11/2021	LA81211011I	1	1620	347	1690	2010	230
LS-A81	11/4/2021	LA81211104I	1	2860	404	3660	6350	446
LS-A81	12/9/2021	LA81211209I	1	4440	866	2360	4560	845
LS-CSW	11/4/2021	LCSW211104I	1	55.6	0.0235	4.09	28	8.06
LS-CSW	12/9/2021	LCSW211209I	1	50.3	0.316	8.96	34.7	4.78
LS-MH46N	10/6/2021	L46N211006M		3560	708	87.4	1730	1980
LS-MH46N	11/3/2021	L46N211103M		3680	620	115	1920	2020
LS-MH46N	12/8/2021	L46N211208M		2950	676	75.9	1540	1530
LS-PS1A	10/11/2021	LP1A211011I	1	900	199	67	385	312
LS-PS1A	11/4/2021	LP1A211104I	1	106	18.9	6.8	56.9	33.7
LS-PS1A	12/9/2021	LP1A211209I	1	425	76.9	33.4	179	101
LS-PS2A	10/6/2021	LP2A211006M		22	0.618	2.93	24.8	7.86
LS-PS2A	11/3/2021	LP2A211103M		32.1	0.282	2	18	3.58
LS-PS2A	12/8/2021	LP2A211208M		43.5	0.569	2.41	23.4	1.46
LS-PS4	10/11/2021	LP4-211011D	1	605	112	319	479	81.9
LS-PS4	10/11/2021	LP4-211011I	1	593	107	255	468	83.2
LS-PS4	11/4/2021	LP4-211104I	1	148	29.2	31.7	143	27.7
LS-PS4	12/9/2021	LP4-211209D	1	474	170	449	924	82.1
LS-PS4	12/9/2021	LP4-211209I	1	471	174	517	943	81.8
LS-V1A	10/6/2021	LV1A211006M		3140	712	1670	3350	752
LS-V1A	11/3/2021	LV1A211103M		1700	284	984	1950	347
LS-V1A	12/8/2021	LV1A211208M		1370	272	737	1360	284
LS-LEPS (Monthly)	10/6/2021	LEPS211006M		5080	837	684	2500	1440
LS-LEPS (Monthly)	11/16/2021	LEPS211116M		934	180	84.9	401	185
LS-LEPS (Monthly)	12/7/2021	LEPS211207M		1130	222	119	626	232
LS-LEPS (Permit)	10/6/2021	LEPS211006P						
LS-LEPS (Permit)	10/13/2021	LEPS211013P						
LS-LEPS (Permit)	10/21/2021	LEPS211021P						
LS-LEPS (Permit)	10/26/2021	LEPS211026P						
LS-LEPS (Permit)	11/4/2021	LEPS211104P						
LS-LEPS (Permit)	11/9/2021	LEPS211109P						
LS-LEPS (Permit)	11/16/2021	LEPS211116P						
LS-LEPS (Permit)	11/23/2021	LEPS211123P						
LS-LEPS (Permit)	11/30/2021	LEPS211130P						
LS-LEPS (Permit)	12/7/2021	LEPS211207P						
LS-LEPS (Permit)	12/14/2021	LEPS211214P						
LS-LEPS (Permit)	12/21/2021	LEPS211221P						
LS-LEPS (Permit)	12/29/2021	LEPS211229P						

ı Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Conventional Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Coliforms, Fecal cfu/100ml
LS-A567	10/11/2021	L567211011I	
LS-A567	11/4/2021	L567211104I	
LS-A567	12/9/2021	L567211209I	
LS-A81	10/11/2021	LA81211011I	
LS-A81	11/4/2021	LA81211104I	
LS-A81	12/9/2021	LA81211209I	
LS-CSW	11/4/2021	LCSW211104I	
LS-CSW	12/9/2021	LCSW211209I	
LS-MH46N	10/6/2021	L46N211006M	6
LS-MH46N	11/3/2021	L46N211103M	1
LS-MH46N	12/8/2021	L46N211208M	1
LS-PS1A	10/11/2021	LP1A211011I	
LS-PS1A	11/4/2021	LP1A211104I	
LS-PS1A	12/9/2021	LP1A211209I	
LS-PS2A	10/6/2021	LP2A211006M	2
LS-PS2A	11/3/2021	LP2A211103M	3
LS-PS2A	12/8/2021	LP2A211208M	1
LS-PS4	10/11/2021	LP4-211011D	
LS-PS4	10/11/2021	LP4-211011I	
LS-PS4	11/4/2021	LP4-211104I	
LS-PS4	12/9/2021	LP4-211209D	
LS-PS4	12/9/2021	LP4-211209I	
LS-V1A	10/6/2021	LV1A211006M	100000
LS-V1A	11/3/2021	LV1A211103M	31000
LS-V1A	12/8/2021	LV1A211208M	40000
LS-LEPS (Monthly)	10/6/2021	LEPS211006M	2300
LS-LEPS (Monthly)	11/16/2021	LEPS211116M	24000
LS-LEPS (Monthly)	12/7/2021	LEPS211207M	3000
LS-LEPS (Permit)	10/6/2021	LEPS211006P	
LS-LEPS (Permit)	10/13/2021	LEPS211013P	
LS-LEPS (Permit)	10/21/2021	LEPS211021P	
LS-LEPS (Permit)	10/26/2021	LEPS211026P	
LS-LEPS (Permit)	11/4/2021	LEPS211104P	
LS-LEPS (Permit)	11/9/2021	LEPS211109P	
LS-LEPS (Permit)	11/16/2021	LEPS211116P	
LS-LEPS (Permit)	11/23/2021	LEPS211123P	
LS-LEPS (Permit)	11/30/2021	LEPS211130P	
LS-LEPS (Permit)	12/7/2021	LEPS211207P	
LS-LEPS (Permit)	12/14/2021	LEPS211214P	
LS-LEPS (Permit)	12/21/2021	LEPS211221P	
LS-LEPS (Permit)	12/29/2021	LEPS211229P	

ı Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Conventional Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Coliforms, Total	Cyanide	Fixed Suspended Solids	Fluoride	Hardness	Nitrate + Nitrite as N
			cfu/100ml	mg/l	mg/l	mg/l	mg/l	mg/l
LS-A567	10/11/2021	L567211011I			84	5	721	0.1
LS-A567	11/4/2021	L567211104I			2.5	1	507	0.2
LS-A567	12/9/2021	L567211209I			8.8	1	428	0.14
LS-A81	10/11/2021	LA81211011I			16	5	585	0.01
LS-A81	11/4/2021	LA81211104I			20.7	10	1550	0.01
LS-A81	12/9/2021	LA81211209I			2.53	2	1320	0.028
LS-CSW	11/4/2021	LCSW211104I			46	0.073	73.2	0.81
LS-CSW	12/9/2021	LCSW211209I			269	0.064	85.4	0.375
LS-MH46N	10/6/2021	L46N211006M	13000	0.008		2.27		0.082
LS-MH46N	11/3/2021	L46N211103M	90	0.016		3.03		0.19
LS-MH46N	12/8/2021	L46N211208M	230	0.012		3.4		0.05
LS-PS1A	10/11/2021	LP1A211011I			7.2	1	149	1.41
LS-PS1A	11/4/2021	LP1A211104I			2	0.14	62.9	1.89
LS-PS1A	12/9/2021	LP1A211209I			2.86	0.1	93.7	0.425
LS-PS2A	10/6/2021	LP2A211006M	950	0.002		0.042		2.24
LS-PS2A	11/3/2021	LP2A211103M	41	0.002		0.0801		2.04
LS-PS2A	12/8/2021	LP2A211208M	13	0.002		0.06		0.186
LS-PS4	10/11/2021	LP4-211011D			128	0.3	214	1.81
LS-PS4	10/11/2021	LP4-211011I			110	1	218	1.8
LS-PS4	11/4/2021	LP4-211104I			114	0.13	103	1.19
LS-PS4	12/9/2021	LP4-211209D			17.4	0.2	127	0.65
LS-PS4	12/9/2021	LP4-211209I			18.5	0.2	127	0.663
LS-V1A	10/6/2021	LV1A211006M	640000	0.008		2		0.35
LS-V1A	11/3/2021	LV1A211103M	110000	0.008		2		0.908
LS-V1A	12/8/2021	LV1A211208M	130000	0.008		2		0.256
LS-LEPS (Monthly)	10/6/2021	LEPS211006M	9300	0.011		1		0.1
LS-LEPS (Monthly)	11/16/2021	LEPS211116M	43000	0.008		0.208		0.01
LS-LEPS (Monthly)	12/7/2021	LEPS211207M	24000	0.008		0.56		0.022
LS-LEPS (Permit)	10/6/2021	LEPS211006P						
LS-LEPS (Permit)	10/13/2021	LEPS211013P						
LS-LEPS (Permit)	10/21/2021	LEPS211021P						
LS-LEPS (Permit)	10/26/2021	LEPS211026P						
LS-LEPS (Permit)	11/4/2021	LEPS211104P						
LS-LEPS (Permit)	11/9/2021	LEPS211109P						
LS-LEPS (Permit)	11/16/2021	LEPS211116P						
LS-LEPS (Permit)	11/23/2021	LEPS211123P						
LS-LEPS (Permit)	11/30/2021	LEPS211130P						
LS-LEPS (Permit)	12/7/2021	LEPS211207P						
LS-LEPS (Permit)	12/14/2021	LEPS211214P						
LS-LEPS (Permit)	12/21/2021	LEPS211221P						
LS-LEPS (Permit)	12/29/2021	LEPS211229P						

ı Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Conventional Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Phosphorus, Soluble Reactive mg/l
LS-A567	10/11/2021	L567211011I	
LS-A567	11/4/2021	L567211104I	
LS-A567	12/9/2021	L567211209I	
LS-A81	10/11/2021	LA81211011I	
LS-A81	11/4/2021	LA81211104I	
LS-A81	12/9/2021	LA81211209I	
LS-CSW	11/4/2021	LCSW211104I	
LS-CSW	12/9/2021	LCSW211209I	
LS-MH46N	10/6/2021	L46N211006M	3.71
LS-MH46N	11/3/2021	L46N211103M	3.86
LS-MH46N	12/8/2021	L46N211208M	3.21
LS-PS1A	10/11/2021	LP1A211011I	
LS-PS1A	11/4/2021	LP1A211104I	
LS-PS1A	12/9/2021	LP1A211209I	
LS-PS2A	10/6/2021	LP2A211006M	0.00811
LS-PS2A	11/3/2021	LP2A211103M	0.00939
LS-PS2A	12/8/2021	LP2A211208M	0.00658
LS-PS4	10/11/2021	LP4-211011D	
LS-PS4	10/11/2021	LP4-211011I	
LS-PS4	11/4/2021	LP4-211104I	
LS-PS4	12/9/2021	LP4-211209D	
LS-PS4	12/9/2021	LP4-211209I	
LS-V1A	10/6/2021	LV1A211006M	4.58
LS-V1A	11/3/2021	LV1A211103M	1.17
LS-V1A	12/8/2021	LV1A211208M	1.04
LS-LEPS (Monthly)	10/6/2021	LEPS211006M	0.0849
LS-LEPS (Monthly)	11/16/2021	LEPS211116M	0.00573
LS-LEPS (Monthly)	12/7/2021	LEPS211207M	0.0244
LS-LEPS (Permit)	10/6/2021	LEPS211006P	
LS-LEPS (Permit)	10/13/2021	LEPS211013P	
LS-LEPS (Permit)	10/21/2021	LEPS211021P	
LS-LEPS (Permit)	10/26/2021	LEPS211026P	
LS-LEPS (Permit)	11/4/2021	LEPS211104P	
LS-LEPS (Permit)	11/9/2021	LEPS211109P	
LS-LEPS (Permit)	11/16/2021	LEPS211116P	
LS-LEPS (Permit)	11/23/2021	LEPS211123P	
LS-LEPS (Permit)	11/30/2021	LEPS211130P	
LS-LEPS (Permit)	12/7/2021	LEPS211207P	
LS-LEPS (Permit)	12/14/2021	LEPS211214P	
LS-LEPS (Permit)	12/21/2021	LEPS211221P	
LS-LEPS (Permit)	12/29/2021	LEPS211229P	

ı Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Conventional Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Phosphorus, Total (as P) mg/l	Specific Conductance umhos/cm	Sulfate mg/l	Sulfide mg/l	Total Dissolved Solids mg/l	Total Fats, Oils & Grease mg/l
LS-A567	10/11/2021	L567211011I		8420	20.4	1.69	7020	
LS-A567	11/4/2021	L567211104I		20500	17.3	1.55	10000	
LS-A567	12/9/2021	L567211209I		17100	26.8	1.73	7580	
LS-A81	10/11/2021	LA81211011I		4020	27.1	5.04	2360	
LS-A81	11/4/2021	LA81211104I		6740	46.5	1.78	4880	
LS-A81	12/9/2021	LA81211209I		10400	30.8	3.17	5360	
LS-CSW	11/4/2021	LCSW211104I		192	17.1	0.1	116	
LS-CSW	12/9/2021	LCSW211209I		148	12.3	0.1	119	
LS-MH46N	10/6/2021	L46N211006M	4.25	12100	1.02	1.41		2.3
LS-MH46N	11/3/2021	L46N211103M	4.2	12300	11.2	0.449		5.1
LS-MH46N	12/8/2021	L46N211208M	3.29	9910	0.61	0.523		2.5
LS-PS1A	10/11/2021	LP1A211011I		2980	21.1	0.35	1070	
LS-PS1A	11/4/2021	LP1A211104I		394	10.4	0.029	154	
LS-PS1A	12/9/2021	LP1A211209I		1260	14.8	0.0718	418	
LS-PS2A	10/6/2021	LP2A211006M	0.993	148	16.8	0.014		2
LS-PS2A	11/3/2021	LP2A211103M	0.993	123	9.42	0.013		2.6
LS-PS2A	12/8/2021	LP2A211208M	0.998	122	8.16	0.01		1.9
LS-PS4	10/11/2021	LP4-211011D		1560	29.9	0.16	634	
LS-PS4	10/11/2021	LP4-211011I		1560	29.8	0.13	616	
LS-PS4	11/4/2021	LP4-211104I		458	12.7	0.1	198	
LS-PS4	12/9/2021	LP4-211209D		1350	9.53	0.05	913	
LS-PS4	12/9/2021	LP4-211209I		1350	9.92	0.05	927	
LS-V1A	10/6/2021	LV1A211006M	5.87	13800	30.1	0.22		7.2
LS-V1A	11/3/2021	LV1A211103M	1.96	4470	23.2			2.3
LS-V1A	12/8/2021	LV1A211208M	1.82	3660	15.4	0.12		3.6
LS-LEPS (Monthly)	10/6/2021	LEPS211006M		12100	20.6	0.819		2.9
LS-LEPS (Monthly)	11/16/2021	LEPS211116M		2430	18.1	0.034		1.8
LS-LEPS (Monthly)	12/7/2021	LEPS211207M		2930	15.2	0.036		6.5
LS-LEPS (Permit)	10/6/2021	LEPS211006P	6					
LS-LEPS (Permit)	10/13/2021	LEPS211013P	4.61					
LS-LEPS (Permit)	10/21/2021	LEPS211021P	3.03					
LS-LEPS (Permit)	10/26/2021	LEPS211026P	2.6					
LS-LEPS (Permit)	11/4/2021	LEPS211104P	1.2					
LS-LEPS (Permit)	11/9/2021	LEPS211109P	1.37					
LS-LEPS (Permit)	11/16/2021	LEPS211116P	0.999					
LS-LEPS (Permit)	11/23/2021	LEPS211123P	1.07					
LS-LEPS (Permit)	11/30/2021	LEPS211130P	1.29					
LS-LEPS (Permit)	12/7/2021	LEPS211207P	1.19					
LS-LEPS (Permit)	12/14/2021	LEPS211214P	1.1					
LS-LEPS (Permit)	12/21/2021	LEPS211221P	1.54					
LS-LEPS (Permit)	12/29/2021	LEPS211229P	1.45					

ı Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Conventional Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Total Kjeldahl Nitrogen mg/l
LS-A567	10/11/2021	L567211011I	1060
LS-A567	11/4/2021	L567211104I	1780
LS-A567	12/9/2021	L567211209I	1510
LS-A81	10/11/2021	LA81211011I	279
LS-A81	11/4/2021	LA81211104I	434
LS-A81	12/9/2021	LA81211209I	808
LS-CSW	11/4/2021	LCSW211104I	3.24
LS-CSW	12/9/2021	LCSW211209I	1.58
LS-MH46N	10/6/2021	L46N211006M	764
LS-MH46N	11/3/2021	L46N211103M	737
LS-MH46N	12/8/2021	L46N211208M	629
LS-PS1A	10/11/2021	LP1A211011I	177
LS-PS1A	11/4/2021	LP1A211104I	15.8
LS-PS1A	12/9/2021	LP1A211209I	87.3
LS-PS2A	10/6/2021	LP2A211006M	1.26
LS-PS2A	11/3/2021	LP2A211103M	0.893
LS-PS2A	12/8/2021	LP2A211208M	1.23
LS-PS4	10/11/2021	LP4-211011D	95
LS-PS4	10/11/2021	LP4-211011I	99.3
LS-PS4	11/4/2021	LP4-211104I	27.9
LS-PS4	12/9/2021	LP4-211209D	146
LS-PS4	12/9/2021	LP4-211209I	149
LS-V1A	10/6/2021	LV1A211006M	771
LS-V1A	11/3/2021	LV1A211103M	346
LS-V1A	12/8/2021	LV1A211208M	285
LS-LEPS (Monthly)	10/6/2021	LEPS211006M	863
LS-LEPS (Monthly)	11/16/2021	LEPS211116M	146
LS-LEPS (Monthly)	12/7/2021	LEPS211207M	227
LS-LEPS (Permit)	10/6/2021	LEPS211006P	
LS-LEPS (Permit)	10/13/2021	LEPS211013P	
LS-LEPS (Permit)	10/21/2021	LEPS211021P	
LS-LEPS (Permit)	10/26/2021	LEPS211026P	
LS-LEPS (Permit)	11/4/2021	LEPS211104P	
LS-LEPS (Permit)	11/9/2021	LEPS211109P	
LS-LEPS (Permit)	11/16/2021	LEPS211116P	
LS-LEPS (Permit)	11/23/2021	LEPS211123P	
LS-LEPS (Permit)	11/30/2021	LEPS211130P	
LS-LEPS (Permit)	12/7/2021	LEPS211207P	
LS-LEPS (Permit)	12/14/2021	LEPS211214P	
LS-LEPS (Permit)	12/21/2021	LEPS211221P	
LS-LEPS (Permit)	12/29/2021	LEPS211229P	

ı Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Conventional Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Total Organic Carbon mg/l	Total Solids mg/l	Total Suspended Solids mg/l	Total Volatile Solids mg/l	Volatile Suspended Solids mg/l
LS-A567	10/11/2021	L567211011I	1740	7520	234	3240	150
LS-A567	11/4/2021	L567211104I	2150	10400	8.5	3940	6.5
LS-A567	12/9/2021	L567211209I	1470	8400	23.6	3480	14.8
LS-A81	10/11/2021	LA81211011I	715	3360	37.3	1620	21.3
LS-A81	11/4/2021	LA81211104I	2230	5120	38.7	2800	18
LS-A81	12/9/2021	LA81211209I	1570	6160	14.5	2400	12
LS-CSW	11/4/2021	LCSW211104I	11.5	183	54.8	63	8.8
LS-CSW	12/9/2021	LCSW211209I	16.7	386	295	40	25.3
LS-MH46N	10/6/2021	L46N211006M	664		2.36	1300	1.23
LS-MH46N	11/3/2021	L46N211103M	694		2.22	1530	2
LS-MH46N	12/8/2021	L46N211208M	539		0.5	1200	0.5
LS-PS1A	10/11/2021	LP1A211011I	124	1050	26.4	280	19.2
LS-PS1A	11/4/2021	LP1A211104I	19.9	204	4.4	168	3.2
LS-PS1A	12/9/2021	LP1A211209I	53.7	652	8.57	576	5.71
LS-PS2A	10/6/2021	LP2A211006M	7.93		8.1	62	3.5
LS-PS2A	11/3/2021	LP2A211103M	10.2		1.04	44	0.83
LS-PS2A	12/8/2021	LP2A211208M	10.6		6	47	3.6
LS-PS4	10/11/2021	LP4-211011D	136	1460	616	940	488
LS-PS4	10/11/2021	LP4-211011I	133	1290	476	754	366
LS-PS4	11/4/2021	LP4-211104I	52.3	410	150	222	36
LS-PS4	12/9/2021	LP4-211209D	219	984	27.6	564	10.2
LS-PS4	12/9/2021	LP4-211209I	215	994	30.3	558	11.9
LS-V1A	10/6/2021	LV1A211006M	1200		131	2090	37.6
LS-V1A	11/3/2021	LV1A211103M	708		70	1120	28.7
LS-V1A	12/8/2021	LV1A211208M	473		165	800	35
LS-LEPS (Monthly)	10/6/2021	LEPS211006M	854		1050	2740	880
LS-LEPS (Monthly)	11/16/2021	LEPS211116M	110		98	950	76
LS-LEPS (Monthly)	12/7/2021	LEPS211207M	186		156	520	129
LS-LEPS (Permit)	10/6/2021	LEPS211006P					
LS-LEPS (Permit)	10/13/2021	LEPS211013P					
LS-LEPS (Permit)	10/21/2021	LEPS211021P					
LS-LEPS (Permit)	10/26/2021	LEPS211026P					
LS-LEPS (Permit)	11/4/2021	LEPS211104P					
LS-LEPS (Permit)	11/9/2021	LEPS211109P					
LS-LEPS (Permit)	11/16/2021	LEPS211116P					
LS-LEPS (Permit)	11/23/2021	LEPS211123P					
LS-LEPS (Permit)	11/30/2021	LEPS211130P					
LS-LEPS (Permit)	12/7/2021	LEPS211207P					
LS-LEPS (Permit)	12/14/2021	LEPS211214P					
LS-LEPS (Permit)	12/21/2021	LEPS211221P					
LS-LEPS (Permit)	12/29/2021	LEPS211229P					

ı Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Metal Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Aluminum, Total (mg/L)	Antimony, Total (mg/L)	Arsenic, Total (mg/L)	Barium, Total (mg/L)	Beryllium, Total (mg/L)	Cadmium, Total (mg/L)	Calcium, Total (mg/L)	Chromium, Total (mg/L)
LS-A567	10/11/2021	L567211011I	0.693	0.0156	0.244	0.812	0.001	0.000501	175	0.123
LS-A567	11/4/2021	L567211104I	0.418	0.0175	0.379	0.452	0.001	0.000501	65.2	0.166
LS-A567	12/9/2021	L567211209I	0.294	0.015	0.275	0.33	0.001	0.000501	57.4	0.128
LS-A81	10/11/2021	LA81211011I	0.776	0.00357	0.0135	0.0631	0.000985	0.000493	169	0.0301
LS-A81	11/4/2021	LA81211104I	1.09	0.00651	0.0213	0.216	0.001	0.000501	494	0.0514
LS-A81	12/9/2021	LA81211209I	0.617	0.00944	0.0349	0.179	0.000999	0.000499	343	0.0985
LS-CSW	11/4/2021	LCSW211104I	2.49	0.00298	0.00315	0.0303	0.000993	0.000497	18.7	0.00428
LS-CSW	12/9/2021	LCSW211209I	9.58	0.00299	0.00338	0.074	0.000998	0.000499	19.2	0.0181
LS-LEPS (Monthly)	10/6/2021	LEPS211006M								
LS-LEPS (Monthly)	11/16/2021	LEPS211116M								
LS-LEPS (Monthly)	12/7/2021	LEPS211207M								
LS-LEPS (Permit)	10/6/2021	LEPS211006P	1.3	0.0305	0.259	0.183	0.001	0.0005	99.1	0.154
LS-LEPS (Permit)	10/13/2021	LEPS211013P	0.799	0.0255	0.22	0.132	0.001	0.000501	74.9	0.123
LS-LEPS (Permit)	10/21/2021	LEPS211021P	0.604	0.0213	0.214	0.109	0.000996	0.000498	69.6	0.121
LS-LEPS (Permit)	10/26/2021	LEPS211026P	0.773	0.0185	0.178	0.119	0.001	0.000632	74.5	0.106
LS-LEPS (Permit)	11/4/2021	LEPS211104P	0.66	0.00796	0.062	0.0655	0.00099	0.000495	71.8	0.0434
LS-LEPS (Permit)	11/9/2021	LEPS211109P	0.701	0.00551	0.0483	0.0655	0.000996	0.000498	75.1	0.0332
LS-LEPS (Permit)	11/16/2021	LEPS211116P	0.79	0.00348	0.0297	0.048	0.000999	0.000499	53.4	0.0208
LS-LEPS (Permit)	11/23/2021	LEPS211123P	0.891	0.00378	0.0345	0.0498	0.001	0.000501	48.4	0.0229
LS-LEPS (Permit)	11/30/2021	LEPS211130P	0.834	0.00456	0.0392	0.0604	0.000997	0.000498	55.1	0.0289
LS-LEPS (Permit)	12/7/2021	LEPS211207P	0.861	0.00445	0.0385	0.0572	0.001	0.000501	45.9	0.0279
LS-LEPS (Permit)	12/14/2021	LEPS211214P	0.546	0.00462	0.0407	0.0568	0.001	0.0005	46.7	0.0294
LS-LEPS (Permit)	12/21/2021	LEPS211221P	1.49	0.00537	0.0481	0.0704	0.00102	0.000509	51.4	0.0326
LS-LEPS (Permit)	12/29/2021	LEPS211229P	0.355	0.00558	0.0497	0.0789	0.00101	0.000503	65.1	0.0374
LS-MH46N	10/6/2021	L46N211006M	0.0503	0.00302	0.107	0.542	0.00101	0.000503	96.1	0.116
LS-MH46N	11/3/2021	L46N211103M	0.129	0.00304	0.107	0.55	0.00101	0.000506	96.5	0.117
LS-MH46N	12/8/2021	L46N211208M	0.0501	0.00301	0.0985	0.353	0.001	0.000501	70.3	0.0863
LS-PS1A	10/11/2021	LP1A211011I	0.0885	0.00999	0.0634	0.0938	0.001	0.000502	32.4	0.0151
LS-PS1A	11/4/2021	LP1A211104I	0.0963	0.00298	0.00658	0.0178	0.000993	0.000497	15.6	0.00303
LS-PS1A	12/9/2021	LP1A211209I	0.0851	0.00685	0.0293	0.0404	0.000994	0.000497	23.4	0.00595
LS-PS2A	10/6/2021	LP2A211006M	0.0865	0.00298	0.00394	0.0123	0.000993	0.000497	14.3	0.00199
LS-PS2A	11/3/2021	LP2A211103M	0.0707	0.00298	0.00101	0.00644	0.000993	0.000497	13.1	0.00199
LS-PS2A	12/8/2021	LP2A211208M	0.0914	0.00299	0.00166	0.00639	0.000998	0.000499	12.4	0.00234
LS-PS4	10/11/2021	LP4-211011D	2.9	0.00647	0.0345	0.0683	0.000992	0.000496	53.3	0.012
LS-PS4	10/11/2021	LP4-211011I	2.9	0.00635	0.0334	0.0692	0.000988	0.000494	53.8	0.0113
LS-PS4	11/4/2021	LP4-211104I	4.08	0.00293	0.00663	0.0462	0.000976	0.000488	25.4	0.00758
LS-PS4	12/9/2021	LP4-211209D	0.609	0.00299	0.0194	0.0312	0.000996	0.000498	27.8	0.00824
LS-PS4	12/9/2021	LP4-211209I	0.592	0.00301	0.0189	0.03	0.000996	0.000498	28	0.00822
LS-V1A	10/6/2021	LV1A211006M	4.42	0.0172	0.181	0.194	0.00101	0.000503	55.6	0.109
LS-V1A	11/3/2021	LV1A211103M	1.93	0.00713	0.0638	0.111	0.00101	0.000506	110	0.0462
LS-V1A	12/8/2021	LV1A211208M	6.89	0.00662	0.0517	0.102	0.001	0.000502	55.1	0.0408

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Metal Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Cobalt, Total (mg/L)	Copper, Total (mg/L)	Iron, Total (mg/L)	Lead, Total (mg/L)	Magnesium, Total (mg/L)	Manganese, Total (mg/L)	Mercury, Total (mg/L)	Nickel, Total (mg/L)
LS-A567	10/11/2021	L567211011I	0.0425	0.0539	17.4	0.00359	69.3	1.55	0.0001	0.152
LS-A567	11/4/2021	L567211104I	0.0594	0.0588	4.49	0.0022	83.6	0.369	0.0001	0.2
LS-A567	12/9/2021	L567211209I	0.0432	0.0645	2.79	0.00187	69.1	0.36	0.0001	0.168
LS-A81	10/11/2021	LA81211011I	0.00916	0.00613	10.9	0.000985	39.7	2.78	0.0001	0.051
LS-A81	11/4/2021	LA81211104I	0.0118	0.0075	13.1	0.00178	76.4	8.04	0.0001	0.0765
LS-A81	12/9/2021	LA81211209I	0.0241	0.00574	4.2	0.00211	112	2.73	0.0001	0.135
LS-CSW	11/4/2021	LCSW211104I	0.00205	0.0113	3.15	0.000993	6.43	0.13	0.0001	0.00843
LS-CSW	12/9/2021	LCSW211209I	0.00711	0.0265	12.6	0.00343	9.1	0.473	0.0001	0.022
LS-LEPS (Monthly)	10/6/2021	LEPS211006M								
LS-LEPS (Monthly)	11/16/2021	LEPS211116M								
LS-LEPS (Monthly)	12/7/2021	LEPS211207M								
LS-LEPS (Permit)	10/6/2021	LEPS211006P	0.0368	0.0245	9.69	0.00348	91.1	0.98	0.0001	0.168
LS-LEPS (Permit)	10/13/2021	LEPS211013P	0.031	0.0136	7.4	0.00291	81.5	0.581	0.0001	0.146
LS-LEPS (Permit)	10/21/2021	LEPS211021P	0.0303	0.00874	6.71	0.00241	80.4	0.545	0.0002	0.15
LS-LEPS (Permit)	10/26/2021	LEPS211026P	0.0254	0.0117	6.17	0.00239	71	0.662	0.0001	0.126
LS-LEPS (Permit)	11/4/2021	LEPS211104P	0.00987	0.00939	3.5	0.00121	32.7	0.997	0.0001	0.0467
LS-LEPS (Permit)	11/9/2021	LEPS211109P	0.00772	0.00839	3.21	0.001	29.1	0.892	0.0001	0.0357
LS-LEPS (Permit)	11/16/2021	LEPS211116P	0.00507	0.00849	2.75	0.000999	18.4	0.621	0.0001	0.0234
LS-LEPS (Permit)	11/23/2021	LEPS211123P	0.00566	0.00791	2.36	0.001	18.6	0.479	0.0001	0.0242
LS-LEPS (Permit)	11/30/2021	LEPS211130P	0.00684	0.00865	2.67	0.000997	21.9	0.606	0.0001	0.0309
LS-LEPS (Permit)	12/7/2021	LEPS211207P	0.0068	0.00794	2.59	0.001	20.7	0.51	0.0001	0.0294
LS-LEPS (Permit)	12/14/2021	LEPS211214P	0.00702	0.00555	1.97	0.001	21	0.506	0.0001	0.0308
LS-LEPS (Permit)	12/21/2021	LEPS211221P	0.00846	0.00889	3.39	0.00111	25.7	0.6	0.0001	0.0375
LS-LEPS (Permit)	12/29/2021	LEPS211229P	0.00841	0.00517	2.57	0.00101	27.9	0.898	0.0001	0.0379
LS-MH46N	10/6/2021	L46N211006M	0.0399	0.00201	2.43	0.00101	58.3	0.465	0.0001	0.165
LS-MH46N	11/3/2021	L46N211103M	0.0413	0.00202	2.33	0.00101	57.9	0.442	0.0001	0.168
LS-MH46N	12/8/2021	L46N211208M	0.0304	0.00201	2	0.001	41.4	0.36	0.0001	0.123
LS-PS1A	10/11/2021	LP1A211011I	0.0095	0.0148	3.6	0.001	16.5	0.536	0.000225	0.0335
LS-PS1A	11/4/2021	LP1A211104I	0.0018	0.0151	1.39	0.000993	5.83	0.276	0.0001	0.0095
LS-PS1A	12/9/2021	LP1A211209I	0.00376	0.00842	2.75	0.000994	8.53	0.394	0.0001	0.0137
LS-PS2A	10/6/2021	LP2A211006M	0.00197	0.0192	3.54	0.000993	5.08	0.266	0.0001	0.0103
LS-PS2A	11/3/2021	LP2A211103M	0.000947	0.0251	0.481	0.000993	5.06	0.168	0.0001	0.00877
LS-PS2A	12/8/2021	LP2A211208M	0.00174	0.022	1.3	0.000998	4.76	0.278	0.0001	0.0102
LS-PS4	10/11/2021	LP4-211011D	0.00385	0.0149	10	0.0012	19.6	0.774	0.000113	0.0119
LS-PS4	10/11/2021	LP4-211011I	0.00381	0.0144	10.1	0.00112	20.3	0.781	0.0001	0.0117
LS-PS4	11/4/2021	LP4-211104I	0.00315	0.0197	5.19	0.00268	9.66	0.365	0.0001	0.0104
LS-PS4	12/9/2021	LP4-211209D	0.00287	0.00792	2.06	0.000996	14	0.388	0.0001	0.00884
LS-PS4	12/9/2021	LP4-211209I	0.00281	0.00768	2.04	0.000996	13.9	0.394	0.0001	0.00895
LS-V1A	10/6/2021	LV1A211006M	0.0257	0.0241	9.17	0.00346	41.4	0.615	0.0001	0.0856
LS-V1A	11/3/2021	LV1A211103M	0.0101	0.0126	4.18	0.0016	37.8	1.34	0.0001	0.0454
LS-V1A	12/8/2021	LV1A211208M	0.0114	0.0227	7.92	0.00318	27.8	0.688	0.0001	0.0429

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Metal Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Potassium, Total (mg/L)	Selenium, Total (mg/L)	Silver, Total (mg/L)	Sodium, Total (mg/L)	Thallium, Total (mg/L)	Tin, Total (mg/L)	Vanadium, Total (mg/L)	Zinc, Total (mg/L)
LS-A567	10/11/2021	L567211011I	439	0.00501	0.000401	1420	0.000752	0.0251	0.0955	0.172
LS-A567	11/4/2021	L567211104I	662	0.00501	0.000401	2140	0.000752	0.0401	0.12	0.139
LS-A567	12/9/2021	L567211209I	526	0.00501	0.000401	1670	0.000752	0.0277	0.102	0.109
LS-A81	10/11/2021	LA81211011I	138	0.00493	0.000394	270	0.000739	0.00493	0.0157	0.408
LS-A81	11/4/2021	LA81211104I	190	0.00501	0.000401	463	0.000752	0.00501	0.0306	0.606
LS-A81	12/9/2021	LA81211209I	341	0.00499	0.000399	793	0.000749	0.0091	0.0326	0.562
LS-CSW	11/4/2021	LCSW211104I	4.53	0.00497	0.000397	8.76	0.000745	0.00497	0.00729	0.0113
LS-CSW	12/9/2021	LCSW211209I	3.93	0.00499	0.000399	6.2	0.000748	0.00499	0.024	0.0491
LS-LEPS (Monthly)	10/6/2021	LEPS211006M								
LS-LEPS (Monthly)	11/16/2021	LEPS211116M								
LS-LEPS (Monthly)	12/7/2021	LEPS211207M								
LS-LEPS (Permit)	10/6/2021	LEPS211006P	476	0.005	0.0004	1360	0.00075	0.0121	0.0756	0.458
LS-LEPS (Permit)	10/13/2021	LEPS211013P	445	0.00501	0.000401	1220	0.000752	0.0106	0.068	0.342
LS-LEPS (Permit)	10/21/2021	LEPS211021P	435	0.00498	0.000399	1210	0.000747	0.0104	0.0654	0.311
LS-LEPS (Permit)	10/26/2021	LEPS211026P	381	0.005	0.0004	1020	0.00075	0.00986	0.0522	0.3
LS-LEPS (Permit)	11/4/2021	LEPS211104P	131	0.00495	0.000396	341	0.000743	0.00495	0.0208	0.134
LS-LEPS (Permit)	11/9/2021	LEPS211109P	109	0.00498	0.000398	289	0.000747	0.00498	0.0169	0.119
LS-LEPS (Permit)	11/16/2021	LEPS211116P	68.1	0.00499	0.000399	175	0.000749	0.00499	0.0107	0.0704
LS-LEPS (Permit)	11/23/2021	LEPS211123P	70.8	0.00501	0.000401	188	0.000752	0.00501	0.011	0.0699
LS-LEPS (Permit)	11/30/2021	LEPS211130P	84.2	0.00498	0.000399	235	0.000747	0.00498	0.0123	0.0749
LS-LEPS (Permit)	12/7/2021	LEPS211207P	81.4	0.00501	0.000401	222	0.000751	0.00501	0.0116	0.07
LS-LEPS (Permit)	12/14/2021	LEPS211214P	87.9	0.005	0.0004	238	0.000751	0.005	0.0113	0.0601
LS-LEPS (Permit)	12/21/2021	LEPS211221P	105	0.00509	0.000407	282	0.000763	0.00509	0.0147	0.0952
LS-LEPS (Permit)	12/29/2021	LEPS211229P	111	0.00503	0.000402	310	0.000754	0.00503	0.0138	0.0906
LS-MH46N	10/6/2021	L46N211006M	413	0.00503	0.000402	1370	0.000754	0.00503	0.159	0.00503
LS-MH46N	11/3/2021	L46N211103M	405	0.00506	0.000405	1420	0.000759	0.00506	0.156	0.00506
LS-MH46N	12/8/2021	L46N211208M	294	0.00501	0.000401	1040	0.000752	0.00501	0.112	0.00501
LS-PS1A	10/11/2021	LP1A211011I	69.5	0.00502	0.000402	259	0.000753	0.00502	0.0192	0.0637
LS-PS1A	11/4/2021	LP1A211104I	8.23	0.00497	0.000397	29	0.000745	0.00497	0.00325	0.0233
LS-PS1A	12/9/2021	LP1A211209I	27.2	0.00497	0.000398	91.3	0.000746	0.00497	0.00806	0.0124
LS-PS2A	10/6/2021	LP2A211006M	2.23	0.00497	0.000397	3.49	0.000745	0.00497	0.00529	0.0628
LS-PS2A	11/3/2021	LP2A211103M	1.71	0.00497	0.000397	2.61	0.000745	0.00497	0.00202	0.0185
LS-PS2A	12/8/2021	LP2A211208M	1.6	0.00499	0.000399	2.59	0.000748	0.00499	0.00329	0.0225
LS-PS4	10/11/2021	LP4-211011D	30.3	0.00496	0.000397	83.7	0.000744	0.00496	0.00985	0.0582
LS-PS4	10/11/2021	LP4-211011I	30.4	0.00494	0.000395	83.2	0.000741	0.00494	0.00978	0.0537
LS-PS4	11/4/2021	LP4-211104I	11	0.00488	0.000391	28.9	0.000732	0.00488	0.00884	0.0782
LS-PS4	12/9/2021	LP4-211209D	44.8	0.00498	0.000399	121	0.000747	0.00498	0.005	0.0229
LS-PS4	12/9/2021	LP4-211209I	45	0.00498	0.000398	121	0.000747	0.00498	0.00468	0.0219
LS-V1A	10/6/2021	LV1A211006M	266	0.00503	0.000402	732	0.000754	0.0138	0.0423	0.0955
LS-V1A	11/3/2021	LV1A211103M	125	0.00506	0.000405	353	0.000759	0.00539	0.0217	0.189
LS-V1A	12/8/2021	LV1A211208M	102	0.00502	0.000401	278	0.000753	0.00559	0.0216	0.131

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Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate VOA Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	1,1,1,2-Tetrachloro-ethane 630-20-6 (ug/L)	1,1,1-Trichloro-ethane 71-55-6 (ug/L)	1,1,2,2-Tetrachloro-ethane 79-34-5 (ug/L)	1,1,2-Trichloro-ethane 79-00-5 (ug/L)	1,1-Dichloro-ethane 75-34-3 (ug/L)	1,1-Dichloro-ethene 75-35-4 (ug/L)	1,1-Dichloro-propene 563-58-6 (ug/L)	1,2,3-Trichloro-propane 96-18-4 (ug/L)
LS-LEPS	10/6/2021	LEPS211006M	2.5	1	1	1	1	1	1	1
LS-LEPS	11/16/2021	LEPS211116M	1.25	0.5	0.5	0.5	0.5	0.5	0.5	0.5
LS-LEPS	12/7/2021	LEPS211207M	2.5	1	1	1	1	1	1	1
LS-MH46N	10/6/2021	L46N211006M	2.5	1	1	1	1	1	1	1
LS-MH46N	11/3/2021	L46N211103M	2.5	1	1	1	1	1	1	1
LS-MH46N	12/8/2021	L46N211208M	2.5	1	1	1	1	1	1	1
LS-PS2A	10/6/2021	LP2A211006M	0.25	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LS-PS2A	11/3/2021	LP2A211103M	0.25	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LS-PS2A	12/8/2021	LP2A211208M	0.25	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LS-V1A	10/6/2021	LV1A211006M	2.5	1	1	1	1	1	1	1
LS-V1A	11/3/2021	LV1A211103M	2.5	1	1	1	1	1	1	1
LS-V1A	12/8/2021	LV1A211208M	2.5	1	1	1	1	1	1	1

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Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate VOA Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	1,2-Dibromo-3-Chloropropane 96-12-8 (ug/L)	1,2-Dibromo-ethane 106-93-4 (ug/L)	1,2-Dichloro-benzene 95-50-1 (ug/L)	1,2-Dichloro-ethane 107-06-2 (ug/L)	1,2-Dichloro-propane 78-87-5 (ug/L)	1,3 Dichloro-benzene 541-73-1 (ug/L)	1,3-Dichloro-propane 142-28-9 (ug/L)	1,4-Dichloro-benzene 106-46-7 (ug/L)
LS-LEPS	10/6/2021	LEPS211006M	25	1	1	1	1	1	1	1
LS-LEPS	11/16/2021	LEPS211116M	12.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
LS-LEPS	12/7/2021	LEPS211207M	25	1	1	1	1	1	1	1
LS-MH46N	10/6/2021	L46N211006M	25	1	1	1	1	1	1	6.84
LS-MH46N	11/3/2021	L46N211103M	25	1	1	1	1	1	1	7.77
LS-MH46N	12/8/2021	L46N211208M	25	1	1.53	1	1	1	1	6.53
LS-PS2A	10/6/2021	LP2A211006M	2.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1
LS-PS2A	11/3/2021	LP2A211103M	2.5	0.1	0.1	0.1	0.1	0.1	0.1	0.504
LS-PS2A	12/8/2021	LP2A211208M	2.5	0.1	0.1	0.1	0.1	0.1	0.1	0.385
LS-V1A	10/6/2021	LV1A211006M	25	1	1	1	1	1	1	1
LS-V1A	11/3/2021	LV1A211103M	25	1	1	1	1	1	1	1
LS-V1A	12/8/2021	LV1A211208M	25	1	1	1	1	1	1	1

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Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate VOA Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	2,2-Dichloro-propane 594-20-7 (ug/L)	2-Butanone 78-93-3 (ug/L)
LS-LEPS	10/6/2021	LEPS211006M	1	709
LS-LEPS	11/16/2021	LEPS211116M	0.5	31.5
LS-LEPS	12/7/2021	LEPS211207M	1	24.1
LS-MH46N	10/6/2021	L46N211006M	1	2.5
LS-MH46N	11/3/2021	L46N211103M	1	2.5
LS-MH46N	12/8/2021	L46N211208M	1	2.5
LS-PS2A	10/6/2021	LP2A211006M	0.1	0.25
LS-PS2A	11/3/2021	LP2A211103M	0.1	0.25
LS-PS2A	12/8/2021	LP2A211208M	0.1	8.43
LS-V1A	10/6/2021	LV1A211006M	1	2440
LS-V1A	11/3/2021	LV1A211103M	1	3270
LS-V1A	12/8/2021	LV1A211208M	1	2270

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Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate VOA Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	2-Hexanone 591-78-6 (ug/L)	2-Methyl-1-propanol 78-83-1 (ug/L)	3-Chloro-propene 107-05-1 (ug/L)	4-Methyl-2-Pentanone 108-10-1 (ug/L)	Acetone 67-64-1 (ug/L)	Acetonitrile 75-05-8 (ug/L)	Acrolein 107-02-8 (ug/L)	Acrylonitrile 107-13-1 (ug/L)	Benzene 71-43-2 (ug/L)
LS-LEPS	10/6/2021	LEPS211006M	5	50	1	25	1230	50	25	0.35	1
LS-LEPS	11/16/2021	LEPS211116M	2.5	25	0.5	12.5	393	25	12.5	0.175	0.5
LS-LEPS	12/7/2021	LEPS211207M	5	50	1	25	162	50	25	0.35	1
LS-MH46N	10/6/2021	L46N211006M	5	50	1	25	25	50	25	0.35	1
LS-MH46N	11/3/2021	L46N211103M	5	50	1	25	25	50	25	0.35	3.36
LS-MH46N	12/8/2021	L46N211208M	5	50	1	25	25	50	25	0.35	1
LS-PS2A	10/6/2021	LP2A211006M	0.5	5	0.1	2.5	4.37	5	2.5	0.035	0.1
LS-PS2A	11/3/2021	LP2A211103M	0.5	5	0.1	2.5	3.79	5	2.5	0.035	0.1
LS-PS2A	12/8/2021	LP2A211208M	0.5	5	0.1	2.5	17.4	5	2.5	0.035	0.11
LS-V1A	10/6/2021	LV1A211006M	5	50	1	30.4	3740	50	25	0.35	1
LS-V1A	11/3/2021	LV1A211103M	5.67	87.9	1	36	3020	50	25	0.35	1
LS-V1A	12/8/2021	LV1A211208M	5	50	1	25	2490	50	25	0.35	1

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Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate VOA Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Bromochloro-methane 74-97-5 (ug/L)	Bromodichloro-methane 75-27-4 (ug/L)	Bromoform 75-25-2 (ug/L)	Bromo-methane 74-83-9 (ug/L)	Carbon Disulfide 75-15-0 (ug/L)	Carbon Tetrachloride 56-23-5 (ug/L)	Chloro-benzene 108-90-7 (ug/L)	Chloro-dibromo-methane 124-48-1 (ug/L)	Chloroethane 75-00-3 (ug/L)
LS-LEPS	10/6/2021	LEPS211006M	1	2.5	5	1	1	2.5	1	5	1
LS-LEPS	11/16/2021	LEPS211116M	0.5	1.25	2.5	0.5	0.5	1.25	0.5	2.5	0.5
LS-LEPS	12/7/2021	LEPS211207M	1	2.5	5	1	1	2.5	1	5	1
LS-MH46N	10/6/2021	L46N211006M	1	2.5	5	1	1	2.5	1.73	5	1
LS-MH46N	11/3/2021	L46N211103M	1	2.5	5	1	1	2.5	1	5	1
LS-MH46N	12/8/2021	L46N211208M	1	2.5	5	1	1	2.5	1.57	5	1
LS-PS2A	10/6/2021	LP2A211006M	0.1	0.25	0.5	0.1	0.1	0.25	0.1	0.5	0.1
LS-PS2A	11/3/2021	LP2A211103M	0.1	0.25	0.5	0.1	0.1	0.25	0.206	0.5	0.1
LS-PS2A	12/8/2021	LP2A211208M	0.1	0.25	0.5	0.1	0.1	0.25	0.152	0.5	0.1
LS-V1A	10/6/2021	LV1A211006M	1	2.5	5	1	1	2.5	1	5	1
LS-V1A	11/3/2021	LV1A211103M	1	2.5	5	1	1	2.5	1	5	1
LS-V1A	12/8/2021	LV1A211208M	1	2.5	5	1	1	2.5	1	5	1

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate VOA Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Chloroform 67-66-3 (ug/L)	Chloro-methane 74-87-3 (ug/L)	Chloroprene 126-99-8 (ug/L)	cis-1,2-Dichloro-ethene 156-59-2 (ug/L)	cis-1,3-Dichloro-propene 10061-01-5 (ug/L)	Dibromo-methane 74-95-3 (ug/L)	Dichloro-difluoro-methane 75-71-8 (ug/L)	Ethylbenzene 100-41-4 (ug/L)
LS-LEPS	10/6/2021	LEPS211006M	1	2.5	1	1	2.5	1	1	1
LS-LEPS	11/16/2021	LEPS211116M	0.5	1.25	0.5	0.5	1.25	0.5	0.5	0.5
LS-LEPS	12/7/2021	LEPS211207M	1	2.5	1	1	2.5	1	1	1
LS-MH46N	10/6/2021	L46N211006M	1	2.5	1	1	2.5	1	1	30.4
LS-MH46N	11/3/2021	L46N211103M	1	2.5	1	1	2.5	1	1	35.5
LS-MH46N	12/8/2021	L46N211208M	1	2.5	1	1	2.5	1	1	29.1
LS-PS2A	10/6/2021	LP2A211006M	0.1	0.25	0.1	0.1	0.25	0.1	0.1	0.1
LS-PS2A	11/3/2021	LP2A211103M	0.1	0.25	0.1	0.1	0.25	0.1	0.1	0.1
LS-PS2A	12/8/2021	LP2A211208M	0.1	0.25	0.1	0.1	0.25	0.1	0.1	0.16
LS-V1A	10/6/2021	LV1A211006M	1	2.5	1	1.03	2.5	1	1	1
LS-V1A	11/3/2021	LV1A211103M	1	2.5	1	1	2.5	1	1	2.65
LS-V1A	12/8/2021	LV1A211208M	1	2.5	1	1	2.5	1	1	1.42

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate VOA Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	m & p Xylenes mpx (ug/L)
LS-LEPS	10/6/2021	LEPS211006M	1
LS-LEPS	11/16/2021	LEPS211116M	0.586
LS-LEPS	12/7/2021	LEPS211207M	1
LS-MH46N	10/6/2021	L46N211006M	25
LS-MH46N	11/3/2021	L46N211103M	30.1
LS-MH46N	12/8/2021	L46N211208M	34.5
LS-PS2A	10/6/2021	LP2A211006M	0.1
LS-PS2A	11/3/2021	LP2A211103M	0.1
LS-PS2A	12/8/2021	LP2A211208M	0.358
LS-V1A	10/6/2021	LV1A211006M	1
LS-V1A	11/3/2021	LV1A211103M	5.27
LS-V1A	12/8/2021	LV1A211208M	3.02

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate VOA Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Methyl Iodide 74-88-4 (ug/L)	Methyl Methacrylate 80-62-6 (ug/L)	Methylacrylo-nitrile 126-98-7 (ug/L)	Methylene Chloride 75-09-2 (ug/L)	o-Xylene 95-47-6 (ug/L)	Proprionitrile 107-12-0 (ug/L)	Styrene 100-42-5 (ug/L)	Tetrachloro-ethene 127-18-4 (ug/L)
LS-LEPS	10/6/2021	LEPS211006M	1	2.5	1	25	1	5	1	1
LS-LEPS	11/16/2021	LEPS211116M	0.5	1.25	0.5	12.5	0.5	2.5	0.5	0.5
LS-LEPS	12/7/2021	LEPS211207M	1	2.5	1	25	1	5	1	1
LS-MH46N	10/6/2021	L46N211006M	1	2.5	1	25	1	5	1	1
LS-MH46N	11/3/2021	L46N211103M	1	2.5	1	25	1	5	1	1
LS-MH46N	12/8/2021	L46N211208M	1	2.5	1	25	1	5	1	1
LS-PS2A	10/6/2021	LP2A211006M	0.1	0.25	0.1	2.5	0.1	0.5	0.1	0.1
LS-PS2A	11/3/2021	LP2A211103M	0.1	0.25	0.1	2.5	0.1	0.5	0.1	0.1
LS-PS2A	12/8/2021	LP2A211208M	0.1	0.25	0.1	2.5	0.138	0.5	0.1	0.1
LS-V1A	10/6/2021	LV1A211006M	1	2.5	1	25	1	5	1	1
LS-V1A	11/3/2021	LV1A211103M	1	2.5	1	25	2.69	5	1	1
LS-V1A	12/8/2021	LV1A211208M	1	2.5	1	25	1.46	5	1	1

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate VOA Data
Contact Person: Natalya Usova (206) 263-0608

Site	Date	Sample ID	Toluene 108-88-3 (ug/L)	trans-1,2-Dichloro-ethene 156-60-5 (ug/L)	trans-1,3-Dichloro-propene 10061-02-6 (ug/L)	trans-1,4-Dichloro-2-butene 110-57-6 (ug/L)	Trichloro-ethene 79-01-6 (ug/L)	Trichloro-fluoro-methane 75-69-4 (ug/L)	Vinyl Acetate 108-05-4 (ug/L)	Vinyl Chloride 75-01-4 (ug/L)
LS-LEPS	10/6/2021	LEPS211006M	1	1	5	5	1	1	1	0.1
LS-LEPS	11/16/2021	LEPS211116M	0.568	0.5	2.5	2.5	0.5	0.5	0.5	0.05
LS-LEPS	12/7/2021	LEPS211207M	1	1	5	5	1	1	1	0.1
LS-MH46N	10/6/2021	L46N211006M	3.2	1	5	5	1	1	1	2.05
LS-MH46N	11/3/2021	L46N211103M	3.76	1	5	5	1	1	1	1.2
LS-MH46N	12/8/2021	L46N211208M	3.58	1	5	5	1	1	1	4.35
LS-PS2A	10/6/2021	LP2A211006M	0.1	0.1	0.5	0.5	0.1	0.1	0.1	0.01
LS-PS2A	11/3/2021	LP2A211103M	0.1	0.1	0.5	0.5	0.1	0.1	0.1	0.01
LS-PS2A	12/8/2021	LP2A211208M	0.165	0.1	0.5	0.5	0.1	0.1	0.1	0.0504
LS-V1A	10/6/2021	LV1A211006M	1	1	5	5	1	1	1	0.1
LS-V1A	11/3/2021	LV1A211103M	63.7	1	5	5	1	1	1	0.1
LS-V1A	12/8/2021	LV1A211208M	20.2	1	5	5	1	1	1	0.1

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Pest-Herb-PCB Data
Contact Person: Natalya Usova (206) 263-0608

		Chemical Name	2,4,5-T	2,4,5-TP SILVEX	2,4-D	4,4'DDD	4,4'DDE	4,4'DDT	Aldrin	Alpha BHC	Alpha Chlordane	Aroclor 1016	Aroclor 1221	Aroclor 1232
		CAS_RN	93-76-5	93-72-1	94-75-7	72-54-8	72-55-9	50-29-3	309-00-2	319-84-6	5103-71-9	12674-11-2	11104-28-2	11141-16-5
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	10/6/2021	LEPS211006M	0.5	2	1.83	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
LS-LEPS	11/16/2021	LEPS211116M	0.5	0.5	1	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
LS-LEPS	12/7/2021	LEPS211207M	0.5	0.5	1	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
LS-MH46N	10/6/2021	L46N211006M	0.5	1.04	2.44	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.0675	0.025
LS-MH46N	11/3/2021	L46N211103M	0.5	1.01	1	0.1	0.1	0.1	0.1	0.1	0.1	0.025	0.025	0.025
LS-MH46N	12/8/2021	L46N211208M	0.5	0.666	1.8	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.0624	0.025
LS-PS2A	10/6/2021	LP2A211006M	0.5	0.5	1	0.01	0.01	0.01	0.01	0.01	0.01	0.025	0.025	0.025
LS-PS2A	11/3/2021	LP2A211103M	0.5	0.5	1	0.01	0.01	0.01	0.01	0.01	0.01	0.025	0.025	0.025
LS-PS2A	12/8/2021	LP2A211208M	0.5	0.5	1	0.01	0.01	0.01	0.01	0.01	0.01	0.025	0.025	0.025
LS-V1A	10/6/2021	LV1A211006M	0.5	1	1	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
LS-V1A	11/3/2021	LV1A211103M	0.5	0.5	1	0.1	0.1	0.1	0.1	0.1	0.1	0.025	0.075	0.025
LS-V1A	12/8/2021	LV1A211208M	0.5	0.5	1	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.05	0.025

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Pest-Herb-PCB Data
Contact Person: Natalya Usova (206) 263-0608

		Chemical Name	Aroclor 1242
		CAS_RN	53469-21-9
Site	Date	Sample ID	ug/l
LS-LEPS	10/6/2021	LEPS211006M	0.0589
LS-LEPS	11/16/2021	LEPS211116M	0.0561
LS-LEPS	12/7/2021	LEPS211207M	0.0417
LS-MH46N	10/6/2021	L46N211006M	0.161
LS-MH46N	11/3/2021	L46N211103M	0.0876
LS-MH46N	12/8/2021	L46N211208M	0.123
LS-PS2A	10/6/2021	LP2A211006M	0.025
LS-PS2A	11/3/2021	LP2A211103M	0.025
LS-PS2A	12/8/2021	LP2A211208M	0.025
LS-V1A	10/6/2021	LV1A211006M	0.223
LS-V1A	11/3/2021	LV1A211103M	0.0668
LS-V1A	12/8/2021	LV1A211208M	0.0457

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Pest-Herb-PCB Data
Contact Person: Natalya Usova (206) 263-0608

		Chemical Name	Aroclor 1248	Aroclor 1254	Aroclor 1260	Beta BHC	Delta BHC	Dieldrin	Dinoseb	Endosulfan I	Endosulfan II	Endosulfan Sulfate
		CAS_RN	12672-29-6	11097-69-1	11096-82-5	319-85-7	319-86-8	60-57-1	88-85-7	959-98-8	33213-65-9	1031-07-8
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	10/6/2021	LEPS211006M	0.025	0.025	0.025	0.075	0.05	0.025	0.5	0.025	0.025	0.025
LS-LEPS	11/16/2021	LEPS211116M	0.025	0.025	0.025	0.025	0.025	0.025	0.5	0.05	0.025	0.025
LS-LEPS	12/7/2021	LEPS211207M	0.025	0.025	0.025	0.025	0.025	0.025	0.5	0.025	0.025	0.025
LS-MH46N	10/6/2021	L46N211006M	0.025	0.025	0.025	0.025	0.025	0.025	0.5	0.025	0.025	0.025
LS-MH46N	11/3/2021	L46N211103M	0.025	0.025	0.025	0.1	0.1	0.1	0.5	0.1	0.1	0.1
LS-MH46N	12/8/2021	L46N211208M	0.025	0.025	0.025	0.025	0.025	0.025	0.5	0.025	0.025	0.025
LS-PS2A	10/6/2021	LP2A211006M	0.025	0.025	0.025	0.01	0.01	0.01	0.5	0.01	0.01	0.01
LS-PS2A	11/3/2021	LP2A211103M	0.025	0.025	0.025	0.01	0.01	0.01	0.5	0.01	0.01	0.01
LS-PS2A	12/8/2021	LP2A211208M	0.025	0.025	0.025	0.01	0.01	0.01	0.5	0.01	0.01	0.01
LS-V1A	10/6/2021	LV1A211006M	0.025	0.0465	0.025	0.025	0.025	0.025	0.5	0.025	0.025	0.025
LS-V1A	11/3/2021	LV1A211103M	0.025	0.025	0.025	0.1	0.1	0.1	0.5	0.1	0.1	0.1
LS-V1A	12/8/2021	LV1A211208M	0.025	0.025	0.025	0.025	0.025	0.025	0.5	0.025	0.025	0.025

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Pest-Herb-PCB Data
Contact Person: Natalya Usova (206) 263-0608

		Chemical Name	Endrin
		CAS_RN	72-20-8
Site	Date	Sample ID	ug/l
LS-LEPS	10/6/2021	LEPS211006M	0.025
LS-LEPS	11/16/2021	LEPS211116M	0.025
LS-LEPS	12/7/2021	LEPS211207M	0.025
LS-MH46N	10/6/2021	L46N211006M	0.025
LS-MH46N	11/3/2021	L46N211103M	0.1
LS-MH46N	12/8/2021	L46N211208M	0.025
LS-PS2A	10/6/2021	LP2A211006M	0.01
LS-PS2A	11/3/2021	LP2A211103M	0.01
LS-PS2A	12/8/2021	LP2A211208M	0.01
LS-V1A	10/6/2021	LV1A211006M	0.025
LS-V1A	11/3/2021	LV1A211103M	0.1
LS-V1A	12/8/2021	LV1A211208M	0.025

See Data Qualifier List for Qualifier Information.

Environmental Monitoring Data

Data Collected from October 01, 2021 to December 31, 2021
Cedar Hills Landfill --- Leachate Pest-Herb-PCB Data
Contact Person: Natalya Usova (206) 263-0608

		Chemical Name	Endrin Aldehyde	Heptachlor	Heptachlor Epoxide	Isodrin	Lindane (Gamma BHC)	Methoxychlor	Total Aroclors	Toxaphene	Trans-Chlordane
		CAS_RN	7421-93-4	76-44-8	1024-57-3	465-73-6	58-89-9	72-43-5	T_AROCLOR	8001-35-2	5103-74-2
Site	Date	Sample ID	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
LS-LEPS	10/6/2021	LEPS211006M	0.025	0.025	0.025	0.025	0.025	0.125	0.0589	2.5	0.025
LS-LEPS	11/16/2021	LEPS211116M	0.025	0.025	0.025	0.025	0.025	0.125	0.0561	2.5	0.025
LS-LEPS	12/7/2021	LEPS211207M	0.025	0.025	0.025	0.025	0.025	0.125	0.0417	2.5	0.025
LS-MH46N	10/6/2021	L46N211006M	0.025	0.025	0.025	0.025	0.025	0.125	0.2285	2.5	0.025
LS-MH46N	11/3/2021	L46N211103M	0.1	0.1	0.1	0.1	0.1	0.5	0.0876	10	0.1
LS-MH46N	12/8/2021	L46N211208M	0.025	0.025	0.025	0.025	0.025	0.125	0.1854	2.5	0.025
LS-PS2A	10/6/2021	LP2A211006M	0.01	0.01	0.01	0.01	0.01	0.05	0.025	1	0.01
LS-PS2A	11/3/2021	LP2A211103M	0.01	0.01	0.01	0.01	0.01	0.05	0.025	1	0.01
LS-PS2A	12/8/2021	LP2A211208M	0.01	0.01	0.01	0.01	0.01	0.05	0.025	1	0.01
LS-V1A	10/6/2021	LV1A211006M	0.025	0.025	0.025	0.025	0.025	0.125	0.2695	2.5	0.025
LS-V1A	11/3/2021	LV1A211103M	0.1	0.1	0.1	0.1	0.1	0.5	0.0668	10	0.1
LS-V1A	12/8/2021	LV1A211208M	0.025	0.025	0.025	0.025	0.025	0.125	0.0457	2.5	0.025

See Data Qualifier List for Qualifier Information.