S.S. PAPADOPULOS & ASSOCIATES, INC.
Environmental & Water-Resource Consultants

Memorandum

Date: October 30, 2019

From: Xiaomin Wang, Dominique Sorel and Matt Tonkin (SSP&A)

To: Judy Canova and David Wilson (USEPA Region V)

Project: SSP-1453, Task 39

Subject: **Evaluation of EW4 pumping and source control – Pristine, OH**

S.S. Papadopulos & Associates, Inc. (SSP&A) conducted analyses to evaluate the effectiveness of the current pumping system and to evaluate the progress of natural attenuation (MNA) of volatile organic compounds (VOCs) at the Pristine, Inc. Superfund Site (herein referred to as the Site). This technical memorandum is the most recent of a series of memoranda prepared by SSP&A for the Pristine site (SSP&A 2019a, b, c and d) that serve as an overview of Site conditions and remedial operations to guide ongoing remediation. The current evaluation focuses on conditions proximal to the contamination source area. Prior to 2011, five extraction wells were operating at the Site.

Between 2011 and October 2018 only two extraction wells (GW108 in the upper aquifer and EW1 in the lower aquifer) were operating (extraction was initiated in GW108 in 2008). Since October 2019, extraction well EW4 resumed operation. An investigation of the source and its migration path has also been conducted. To perform the analyses, SSP&A adapted and used a groundwater flow model prepared by O'Brien and Gere (2011) for the neighboring GE Aviation Site.

This technical memorandum documents SSP&A's approach and presents the results and recommendations for each analysis. The description of the adaptation of the O'Brien and Gere numerical model is provided in Attachment A.

Scope of the Analyses

The memorandum presents the analyses of the following issues: (1) evaluation of the extent of the hydraulic capture from pumping UA well GW108, and LA wells EW1 and EW4 and their effectiveness on plume control; (2) evaluation of the magnitude of hydraulic gradients outside of the capture zone; and (3) evaluation of the validity of the model at representing the hydraulic connection between the Upper Aquifer (UA) and Lower Aquifer (LA) zones.

In October 2018, the Lower Aquifer extraction well EW4 was turned on at a rate of approximately 50 gallons per minutes (gpm). The primary focus of the analysis was to evaluate whether the current remedial system is effectively controlling the source and migrating of contamination. The current system consists of UA extraction well GW108, LA extraction well EW1 located within the property boundary (pumping at a rate of 33.6 gpm) and well EW4 located further downgradient.

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SSP&A performed an analysis to evaluate whether the operation of extraction well EW4 is achieving the goal of slowing down plume migration, i.e. affecting hydraulic gradients and flow directions in areas located outside and to the west of the hydraulic capture zone, such that conditions supportive of natural attenuation are maintained.

Finally, the hydraulic connectivity between the UA and the LA has been evaluated using the groundwater model by releasing particles and tracing their pathlines forward at the "magic pit", source zones A and B and shallow monitoring wells GW53 and GW63 to evaluate the possibility of capturing source contamination located in the Upper Aquifer by the extraction wells screened in the UA.

Groundwater Model

The SSP&A modified groundwater model (based on the O'Brien and Gere (2011) model for the adjacent GE Aviation Site) is a three-dimensional, steady-state numerical groundwater flow model developed using the United States Geological Survey simulator MODFLOW (Harbaugh and others, 2000). SSP&A used a modified version of MODFLOW-2000. The modifications include alleviating issues related to drying and rewetting of dry cells in MODFLOW by implementing Newton-Raphson linearization for stable and robust simulation of unconfined flow conditions (Bedekar et al., 2012). The model incorporates a simplified representation of the complex stratigraphy in the greater Cincinnati industrial area in Southwestern Ohio. The model includes 7 layers representing 6 distinct stratigraphic units:

- Layer 1: Overburden silt and clay;
- Layer 2: Perched sand and gravel zone;
- Layer 3: Silt and clay of the Upper Confining Layer (UCL);
- Layer 4: Upper Sand and Gravel (USG);
- Layer 5: Silt and clay of the Lower Confining Layer (LCL); and
- Layer 6 and 7: Lower Sand and Gravel (LSG).

The limits of the model domain, including the current extraction wells and monitoring wells at the Site are shown in Figure 1. Details of modifications performed by SSP&A on the GE model are presented in Attachment A.

No-flow conditions are assigned along the western and eastern sides of the LA between the limits of the model and the intersection of the LA with the bedrock valley wall. Specified-head conditions are assigned along the northern and southern boundaries of the active model domain. These conditions simulate the general southwesterly direction of groundwater flow. River boundary conditions are assigned in the model representing Mill Creek and West Fork Mill Creek. A general head boundary condition is incorporated along the portion of the western side of the model where the West Fork Mill Creek enters the model domain. The sanitary sewer system is represented by a drain boundary condition. The sewer system present on the GE property is represented by the drain package implemented in Layer 2.

The total average annual precipitation is approximately 40 inches. Fidler (1970) suggested that the average annual recharge at the Site is six inches. In the model, two additional recharge zones were added with recharge rates of 2 inches/year and 36 inches/year, shown in Figure 2. The high recharge zone (36 inches/year) was incorporated in the model to represent leakage from the sewer system into the subsurface. The pumping rates of the five LA extraction wells (EW1 through EW5) and one UA extraction well are listed on Table 1. The rates of EW4 in 2018 are marked as 'varying' in red as different rates were applied for the model simulations.

An examination of the hydraulic heads in the lower aquifer reveals that the drain boundary has little impact on the heads in the LA because the confining unit between the UA and the LA has a very low vertical permeability.

Table 1 Historic Pumping Rates (ft^3/d)

Year	EW1	EW2	EW3	EW4	EW5	GW108
1997	184.69	213.60	488.23	0.00	0.00	0.00
1998	2105.55	2448.94	5597.59	4419.69	4419.69	0.00
1999	3915.81	4997.09	11421.93	22820.96	22820.96	0.00
2000	4281.48	5267.91	12040.94	24414.93	24414.93	0.00
2001	5987.74	4285.06	11426.82	22739.99	22739.99	0.00
2002	6645.76	5103.32	10206.65	21873.61	21873.61	0.00
2003	5317.23	4918.41	9836.82	18978.86	18978.86	0.00
2004	5635.11	5208.44	10416.88	20263.54	20263.54	0.00
2005	5371.55	5608.63	11217.26	19279.22	19279.22	0.00
2006	5229.61	0.00	9775.68	4776.28	13460.22	0.00
2007	5132.52	0.00	7850.53	0.00	11673.02	0.00
2008	6387.44	0.00	5375.18	0.00	11886.79	463.11
2009	7065.03	0.00	0.00	0.00	15216.93	715.99
2010	7025.57	17.53	17.53	0.00	16687.24	655.90
2011	6840.01	0.00	0.00	0.00	3984.15	695.14
2012	6403.41	0.10	0.10	0.00	0.00	717.32
2013	5641.34	0.00	0.00	0.00	0.00	793.93
2014	6288.64	0.00	0.00	0.00	0.00	684.04
2015	6595.82	0.00	0.00	0.00	0.00	829.00
2016	6609.36	0.00	0.00	0.00	0.00	774.29
2017	7000.62	0.00	0.00	0.00	0.00	956.08
2018	6705.28	0.00	0.00	varying	0.00	680.75

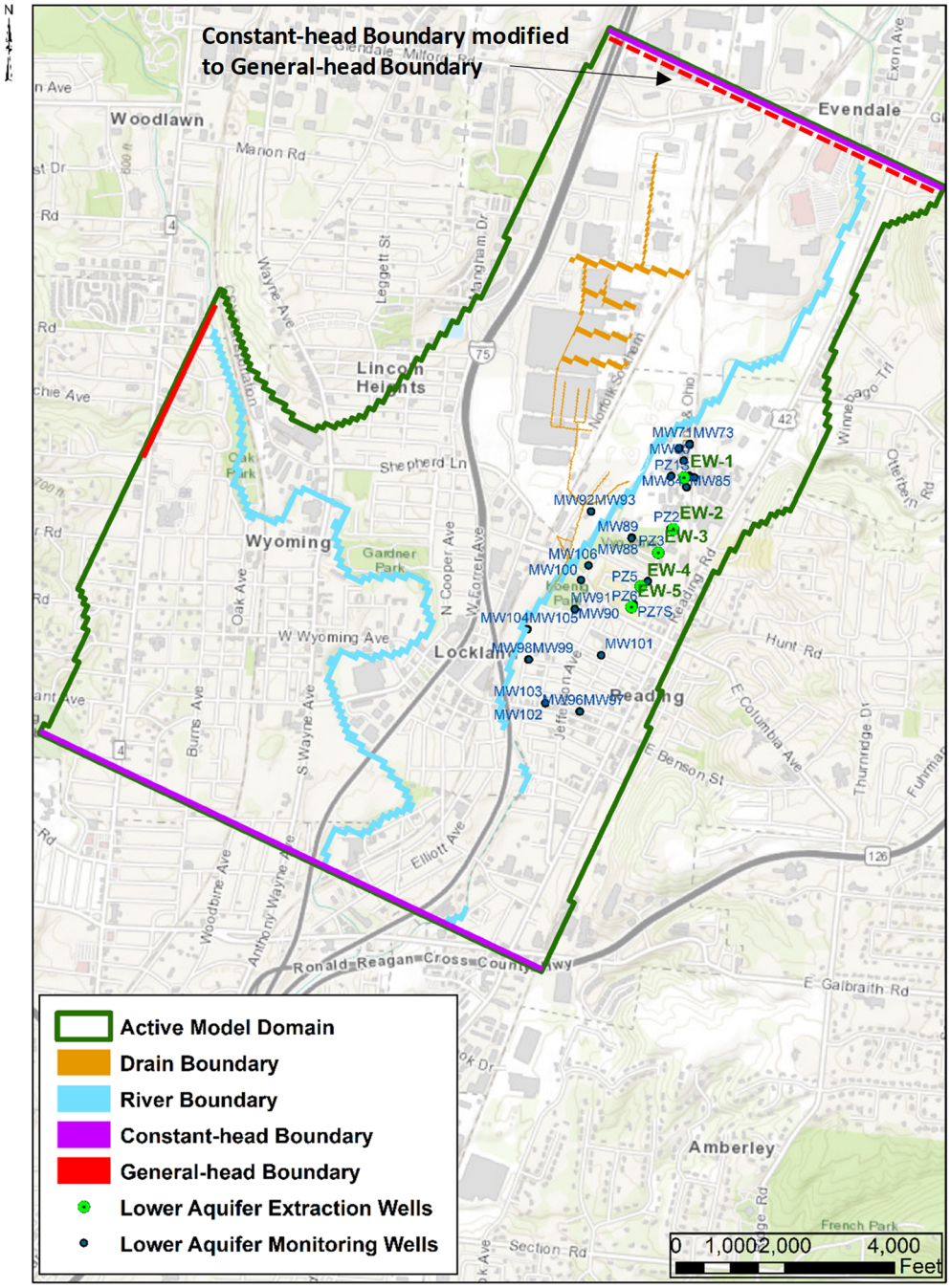

Figure 1 Model Boundary Conditions and Well Locations

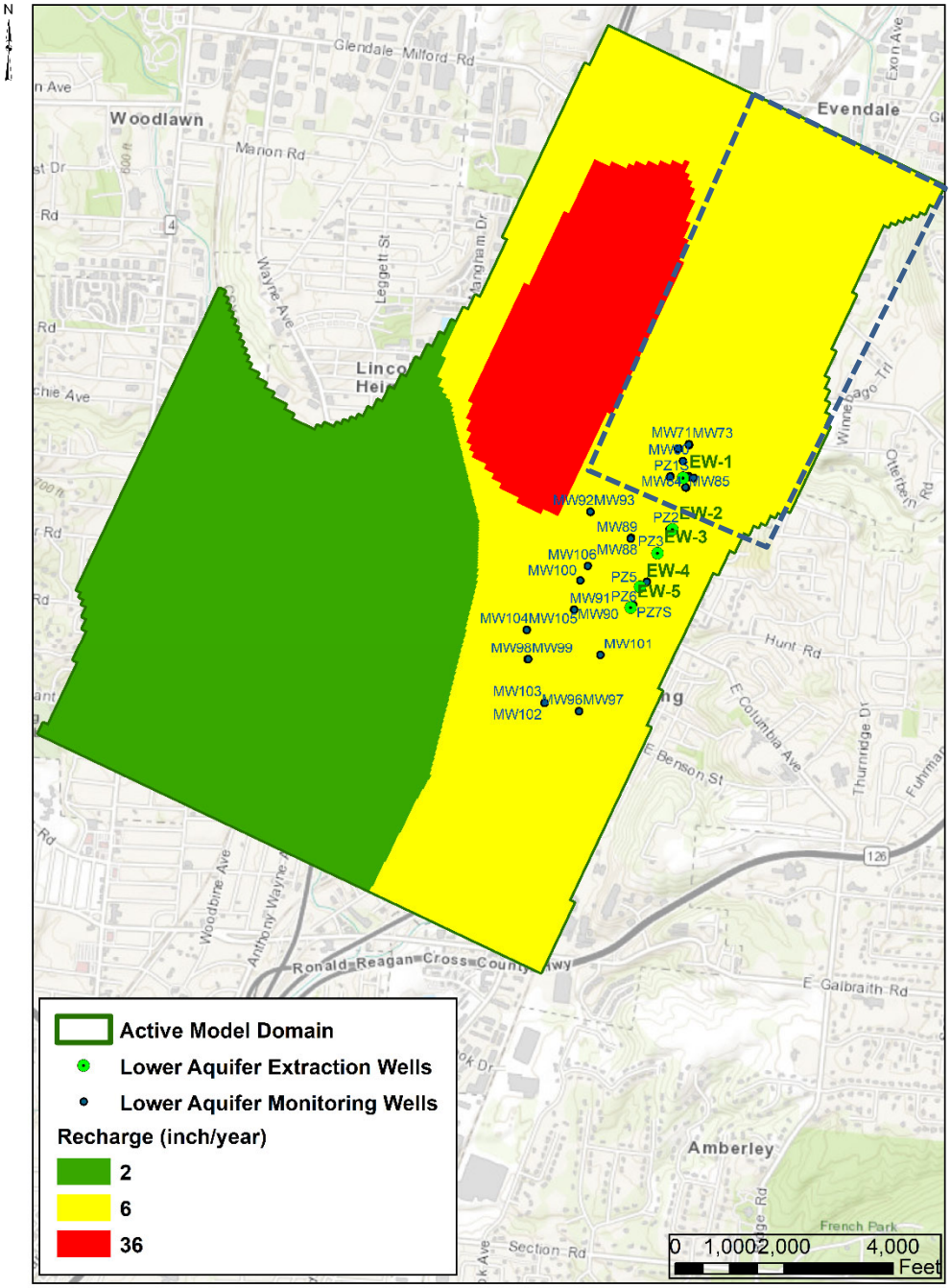

Figure 2 Model Recharge Condition

Sensitivity analyses were conducted during the model calibration process and a set of optimal parameters were selected, including:

- Recharge rate of 18 in/yr over the area covered by the sewer system (show in red on Figure 2);
- Replacing the Constant-Head (CH) with General-Head Boundary (GHB) and assigning a conductance value of 200 ft^2/d;
- Drain conductance reduced by a factor of 10; and
- Vertical hydraulic conductivity increased 100 times near the source area. This increase in vertical conductivity is based on observations in boring logs for well GW67 showing the presence of a lake deposit lens that acts as a connection between the UA and the LA (GHD, 2019). It is represented in the model by a zone of 200 x 200 approximately centered around GW67.

Goodness-of-Fit

Statistics for the simulated heads generated from the selected model were compared to the original model. The observed water levels in the Upper and Lower Aquifers between 1997 and 2018 were selected as the water level targets, including:

- Upper Aquifer: average water levels over the entire monitoring history;
- Lower Aquifer (2003): water levels in 2003; and
- Lower Aquifer (2013): water levels in 2013.

For the Upper Aquifer targets, only the water levels of the monitoring wells installed in the Middle Outwash Lens (MOL) and the Lower Outwash Lens (LOL) are considered in this analysis. The calculated Root-Mean-Square-Errors (RMSEs) are listed on Table 2. The RMSEs for the original model and the selected model are similar.

Table 2 Root-Mean-Square-Errors for each Model (unit: ft)

Model	Lower Aquifer (2003)	Lower Aquifer (2013)	Upper Aquifer	Overall
Original	2.06	1.89	3.56	9.16
Selected (Case 2)	1.97	2.01	3.60	9.50

The simulated water levels are plotted against the observed water levels for the original and the selected models in Figures 3 (a, b) and 4 (a, b), respectively. The water levels in the Upper Aquifer

and in the Lower Aquifer are plotted separately using different symbols. Comparison of Figures 3 (a) and 3(b) or 4(a) and 4(b) show that the original and selected models have similar calibration results.

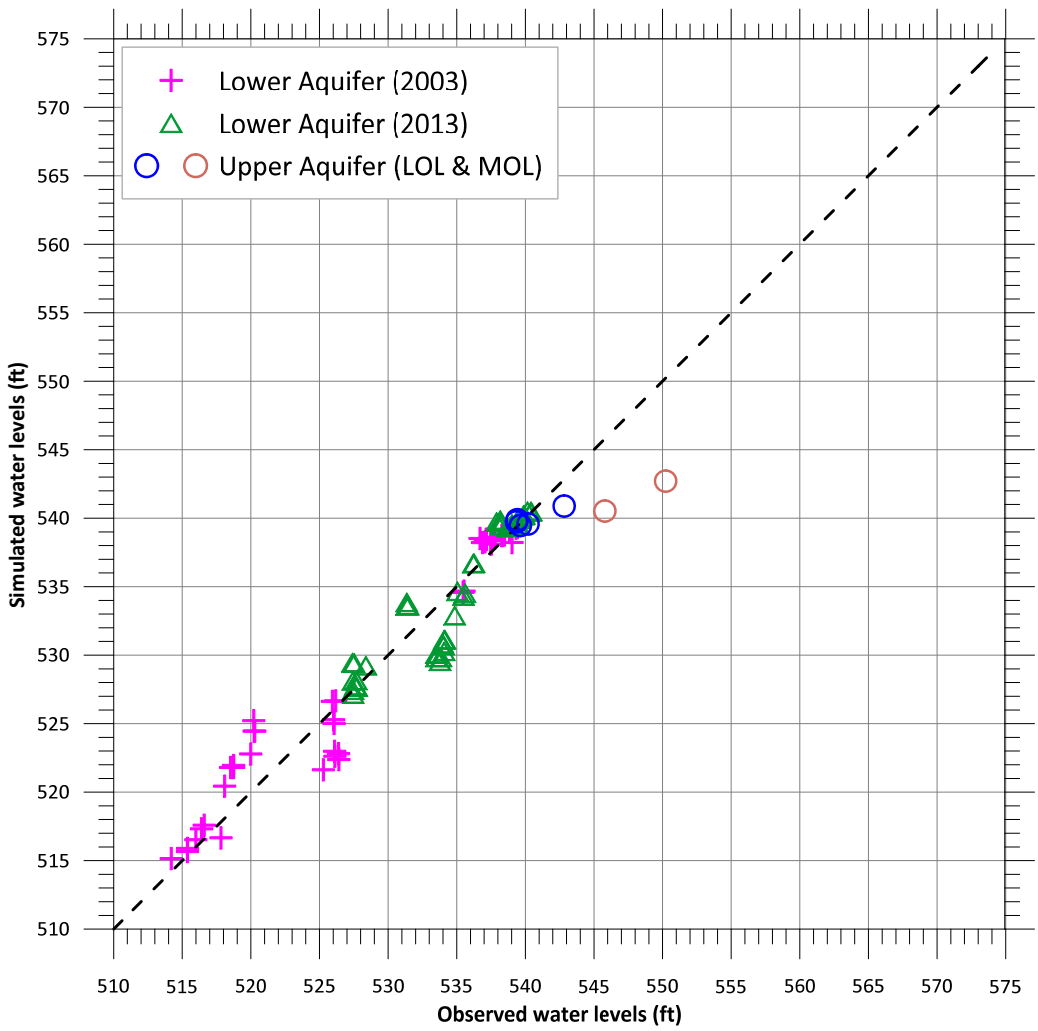

Figure 3(a) Original Model: Simulated vs. Observed

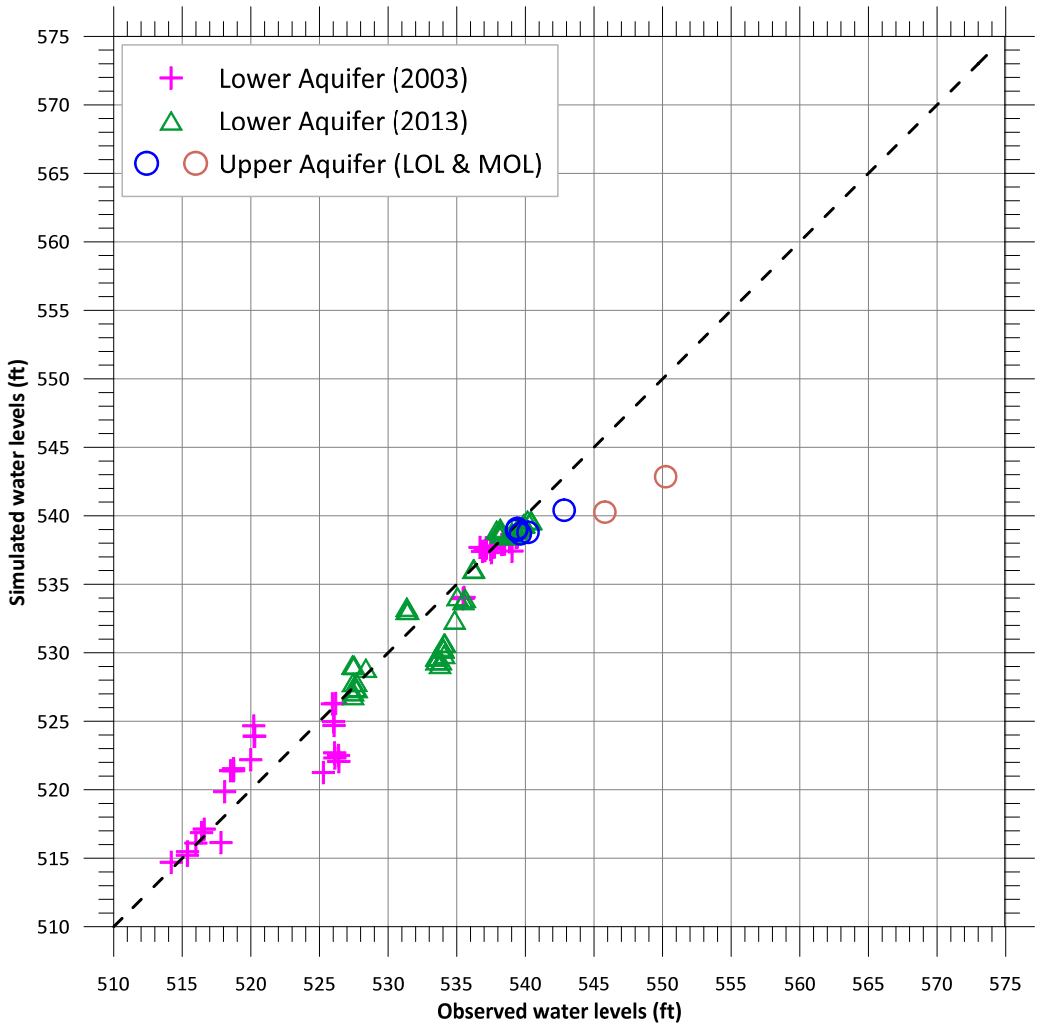

Figure 3(b) Selected Model: Simulated vs. Observed

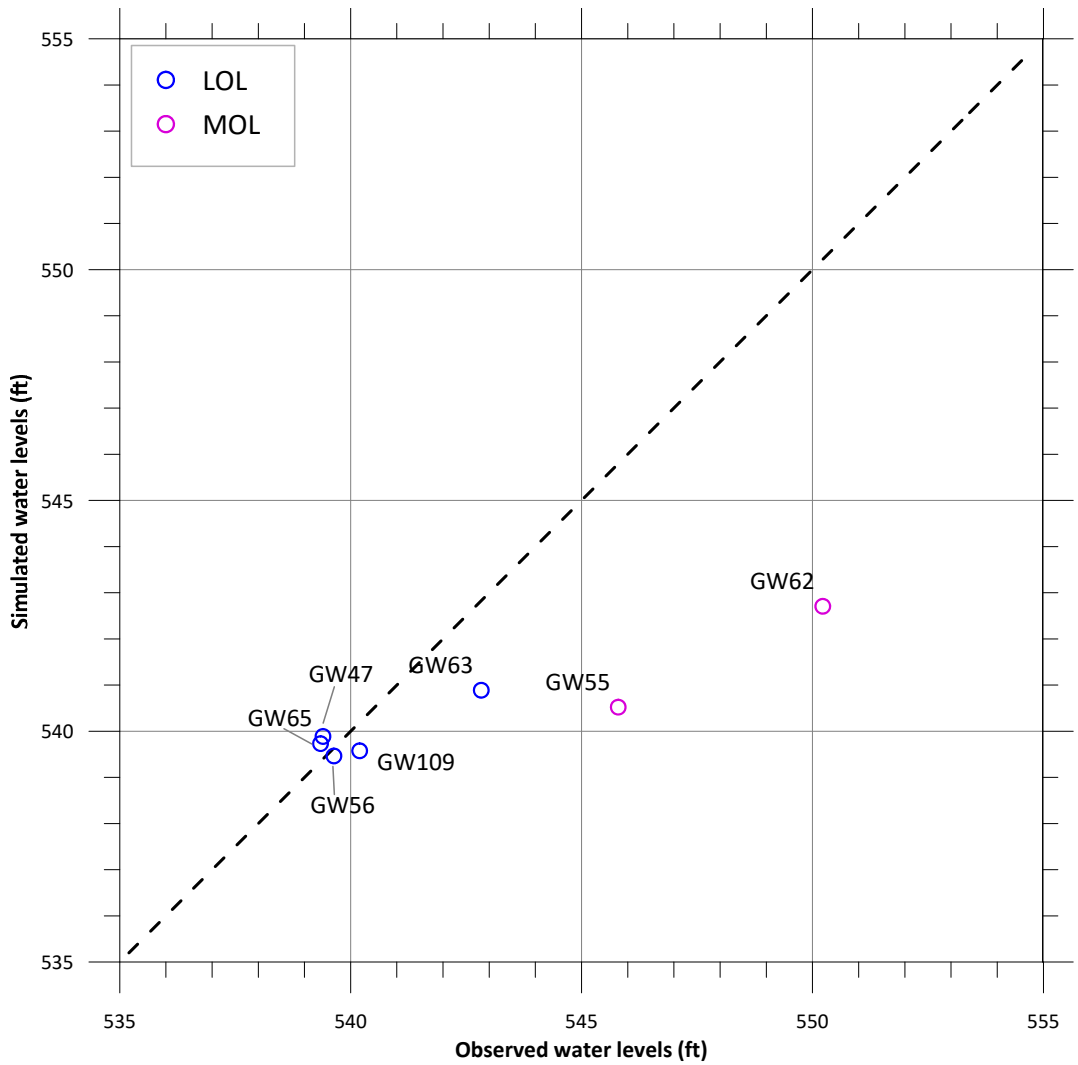

Figure 4(a) Original Model: Blow-Up of Simulated vs. Observed in Upper Aquifer

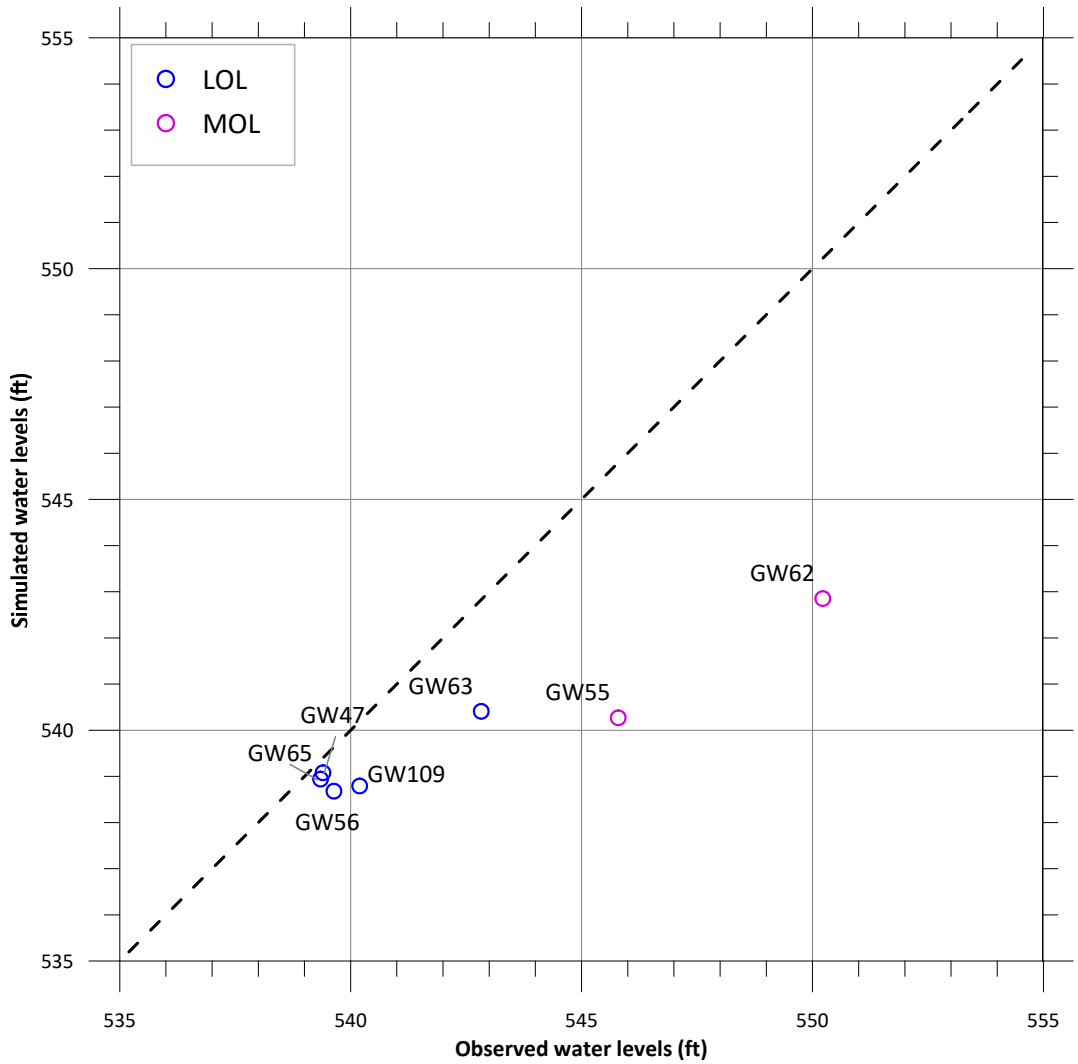

Figure 4(b) Selected Model: blow-Up of Simulated vs. Observed in Upper Aquifer

Evaluation of Capture Zone Extent in Existing UA Well GW108

Initially, a capture zone analysis was conducted for only UA extraction well, GW108. Forward tracking was performed using the USGS particle tracking simulator MODPATH. The delineated capture zone of GW108 is presented in Figure 5. As seen in the figure, the capture zone is narrow, effectively the width of one model grid block at any particular location along its length.

The mass balance in a specified area represented in the dashed polygon of Figure 2 is presented in Figure 6. As seen in the figure, the inflow flux from the constant-head boundary (CH) is over 12 times higher than the amount of recharge within the specified area. This demonstrates that the narrow capture from the north border of the model area to the south is dominated by the constant-head boundaries.

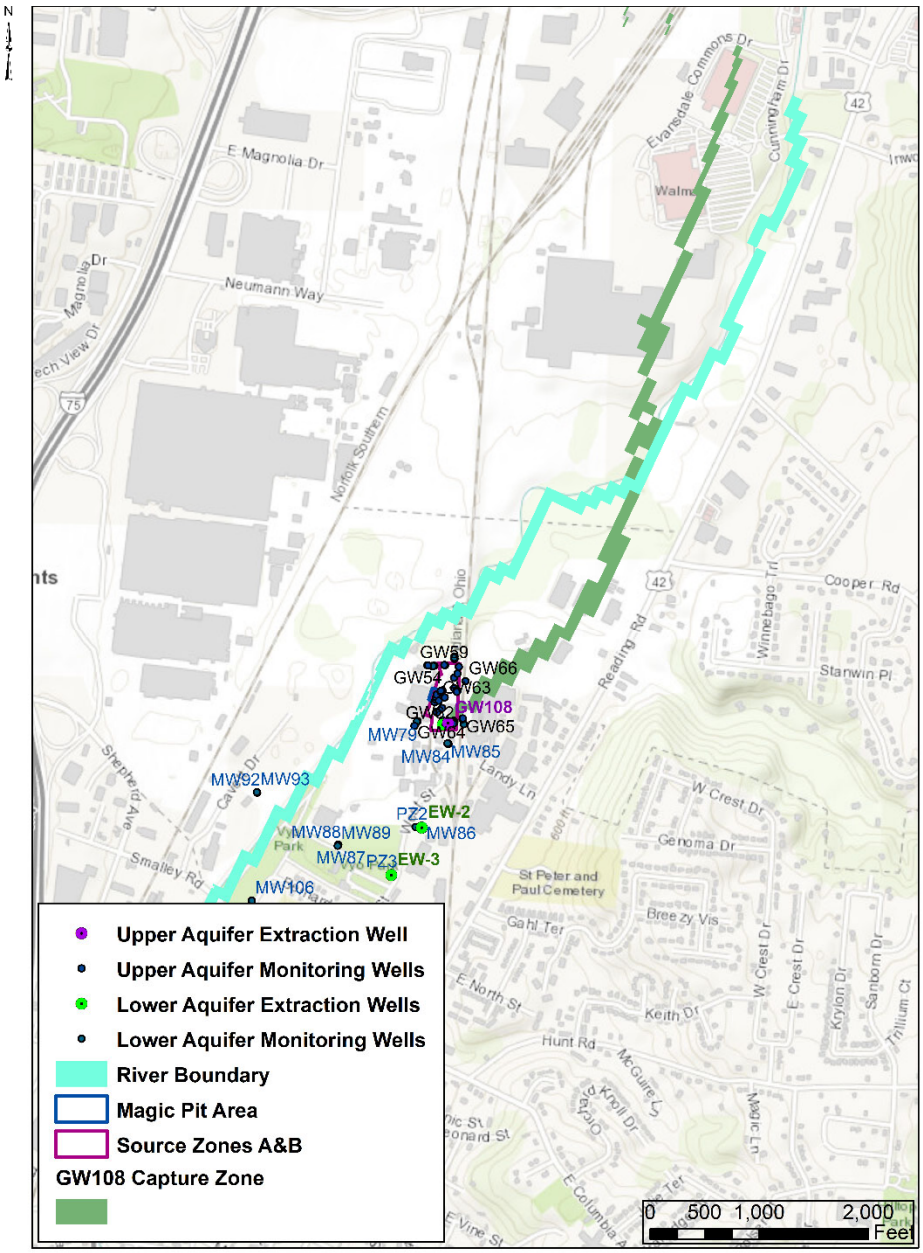

Figure 5 GW108 Capture Zone

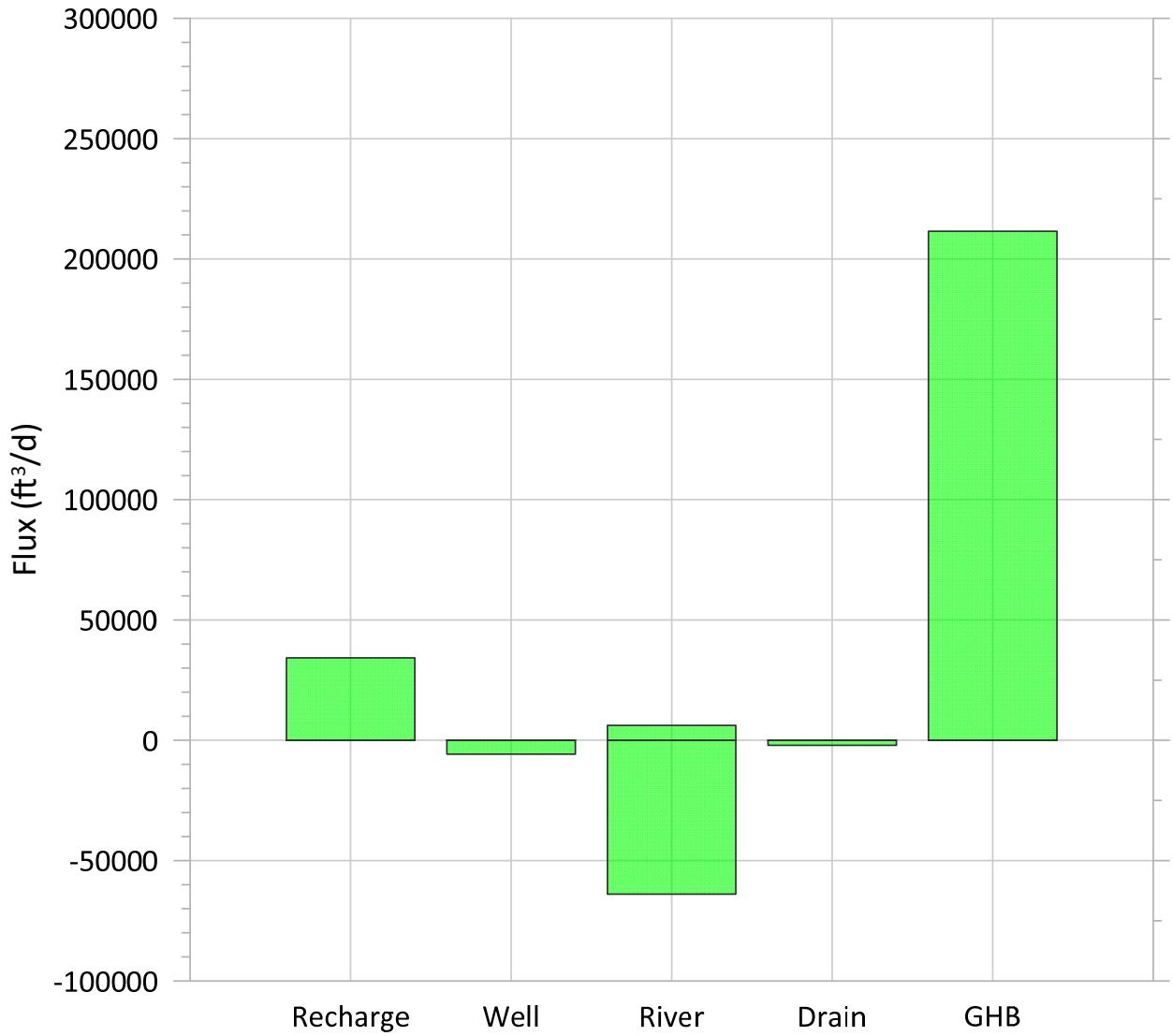

Figure 6 Mass Balance Summary over the Dashed Area in Figure 2
(Units of flux are ft^3/d)

Effectiveness of Capture by the Existing Extraction Wells (EW1, EW4 and EW5)

Among the five extraction wells in the LA, well EW1 has been maintained in operation while all the other wells were turned off gradually starting in 2012 (see Table 1 for a list of annual pumping rates at each extraction well). In October 2018, extraction resumed at well EW4 at a pumping rate of approximately 50 gpm.

The effectiveness of using well EW4 as a replacement for EW5 was evaluated using a capture zone analysis. The possibilities of replacing EW4 with EW5 pumping at the same or different rates were investigated and the capture areas of EW4 and EW5 pumping were compared. In this analysis, capture zones were delineated assuming only EW1 and EW4 or EW1 and EW5 were pumping. Capture zone analyses were conducted using the SSP&A groundwater flow model and the USGS MODPATH code (build 6.0). MODPATH used the simulated heads and flow rates obtained from the MODFLOW simulation and data on aquifer porosity to calculate average groundwater velocities. Particles were released in each cell of the northern part of the active model domain covering the Site. The particles were tracked forward until they reached a point of discharge.

EW1 and EW4 Capture Zones

Two LA extraction wells were in operation at the following rates for this analysis:

- EW-1: 6463.5 ft^3/d (33.6 gpm, historical average from 2012 to 2018 after EW5 was turned off); and
- EW-4: 9625 ft^3/d (50 gpm).

The delineated capture zones in the lower aquifer are presented in Figure 7.

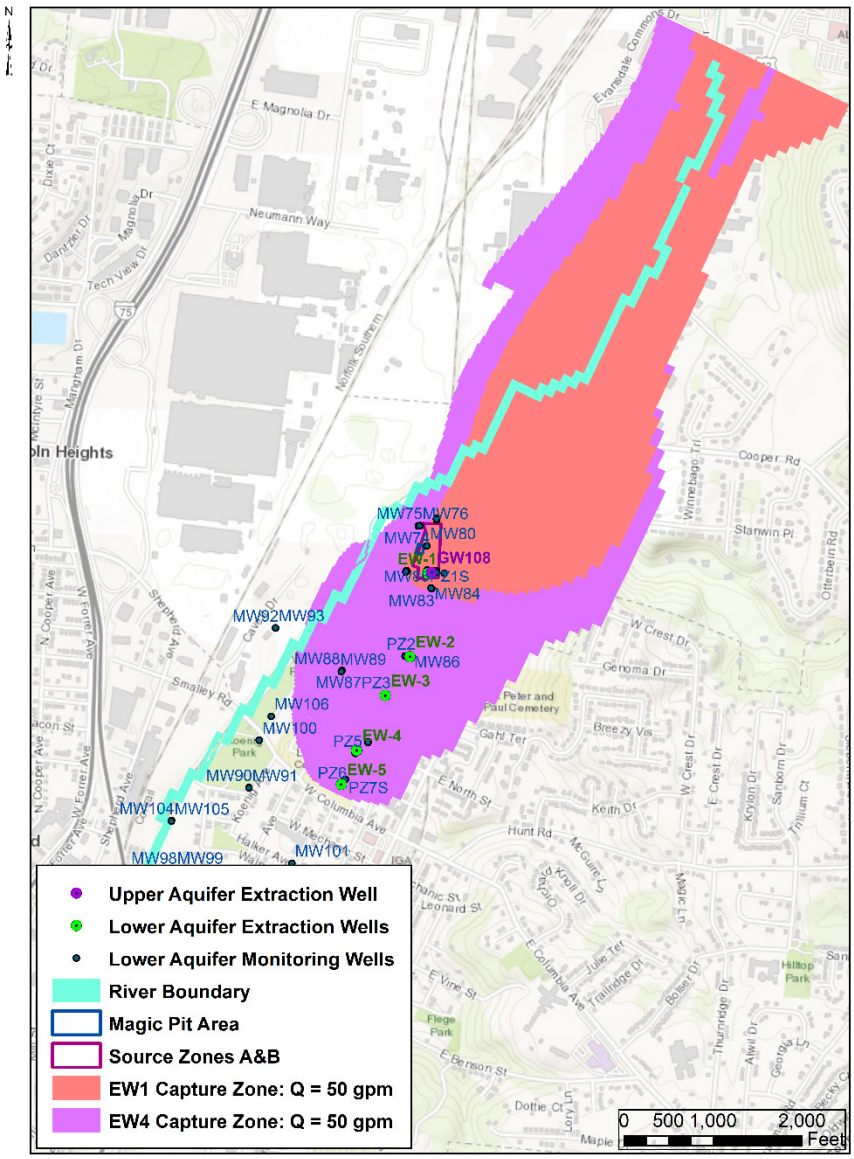

Figure 7 EW1 and EW4 Capture Zones -- Lower Aquifer (Q_{EW4} = 50 gpm)

EW1 and EW5 Capture Zones

Extraction wells EW1 and EW5 were in operation at the following pumping rates for this analysis:

- EW-1: 6463.5 ft^3/d (the same as the rate as in the previous analysis); and
- EW-5: 9625 ft^3/d (50 gpm) or the same rate as EW4 in the previous analysis.

The delineated capture zones are presented in Figure 8. The comparison of the width of the capture zones for wells EW4 and EW5 while EW1 is also in operation is presented in Figure 9. The two capture zones widths are similar as shown on the figures. However, the EW5 capture zone extends further south of the EW4 capture zone; while the EW4 capture zone extends further east of the EW5 capture zone. Both capture zones cover the center of the extraction system where the plume center is situated.

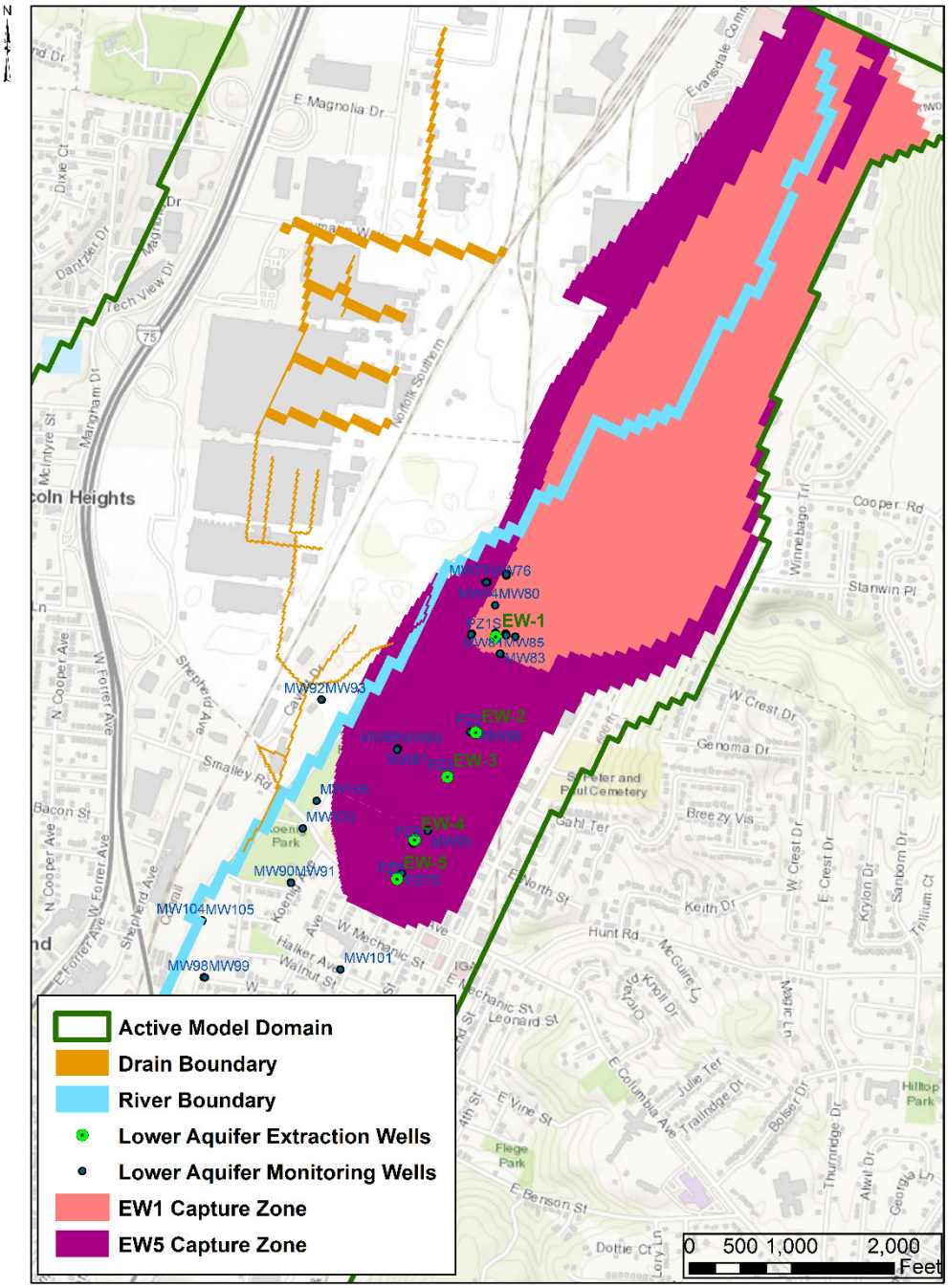

Figure 8 EW1 and EW5 Capture Zones -- Lower Aquifer

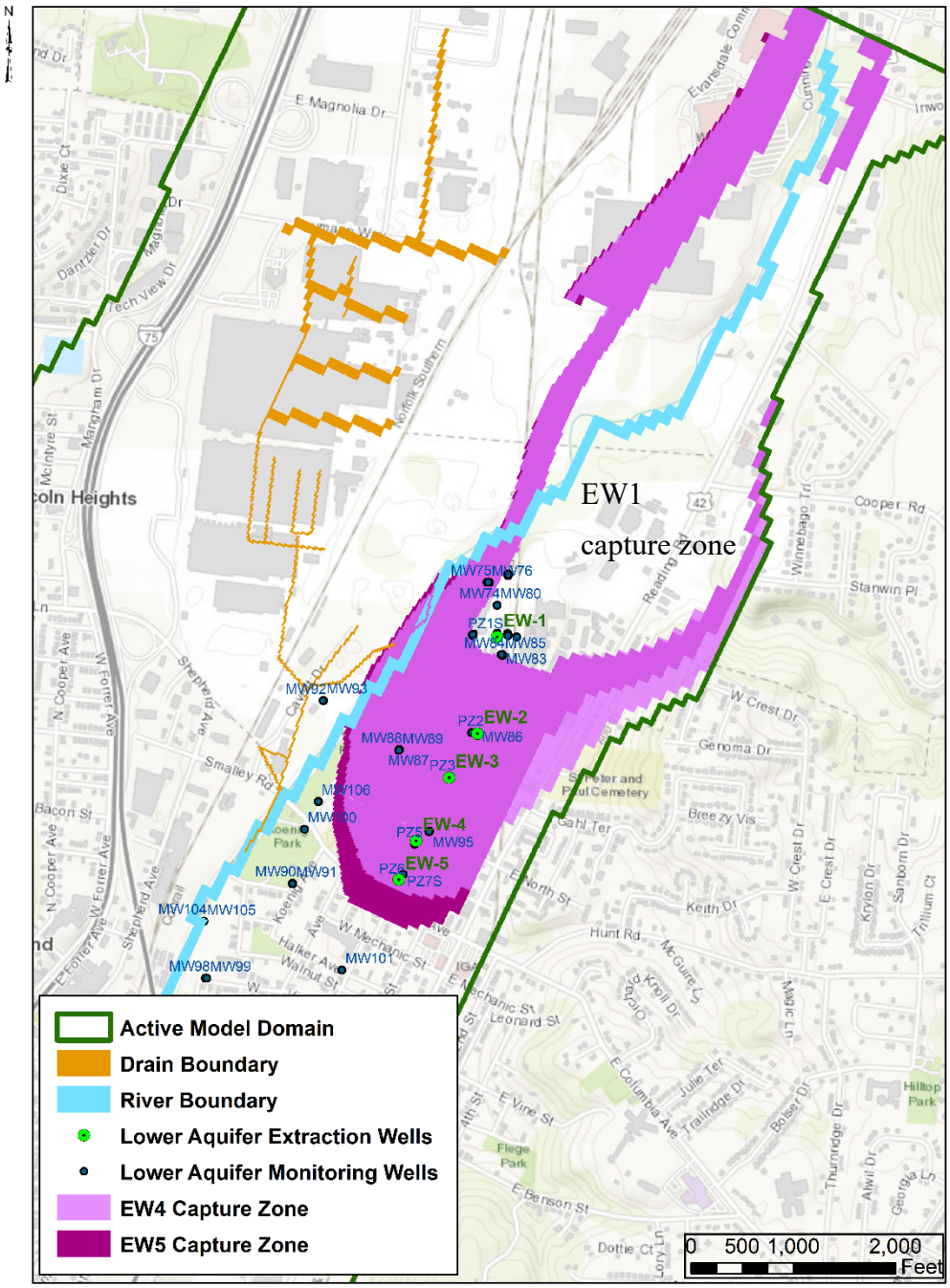

Figure 9 EW4 and EW5 Capture Zones -- Lower Aquifer

Enhanced Pumping at EW-4 to Match the Southern Extent of the EW-5 Capture Zone

For this analysis, the pumping rate in EW4 was increased to obtain a capture zone with a similar downgradient extent as the extent of the EW5 capture zone when pumping at 50 gpm. Extraction wells EW1 and EW4 were in operation at the following pumping rates for this analysis:

- EW-1: 6463.5 ft^3/d (the same as the rate as in the previous analysis); and
- EW-4: 16,362.5 ft^3/d (85 gpm).

The delineated capture zones are presented in Figure 10. Figure 11 includes pathlines released at wells EW1 and EW4 and traced backward.

This analysis suggests that with a pumping rate of 85 gpm at EW4, the downgradient extent of the original capture zone from EW5 (at 50 gpm) is matched. Therefore, to achieve the remedial objectives for the Pristine site, based on extraction from well EW4 instead of EW5, we recommend increasing the extraction rate at EW4 to 85 gpm.

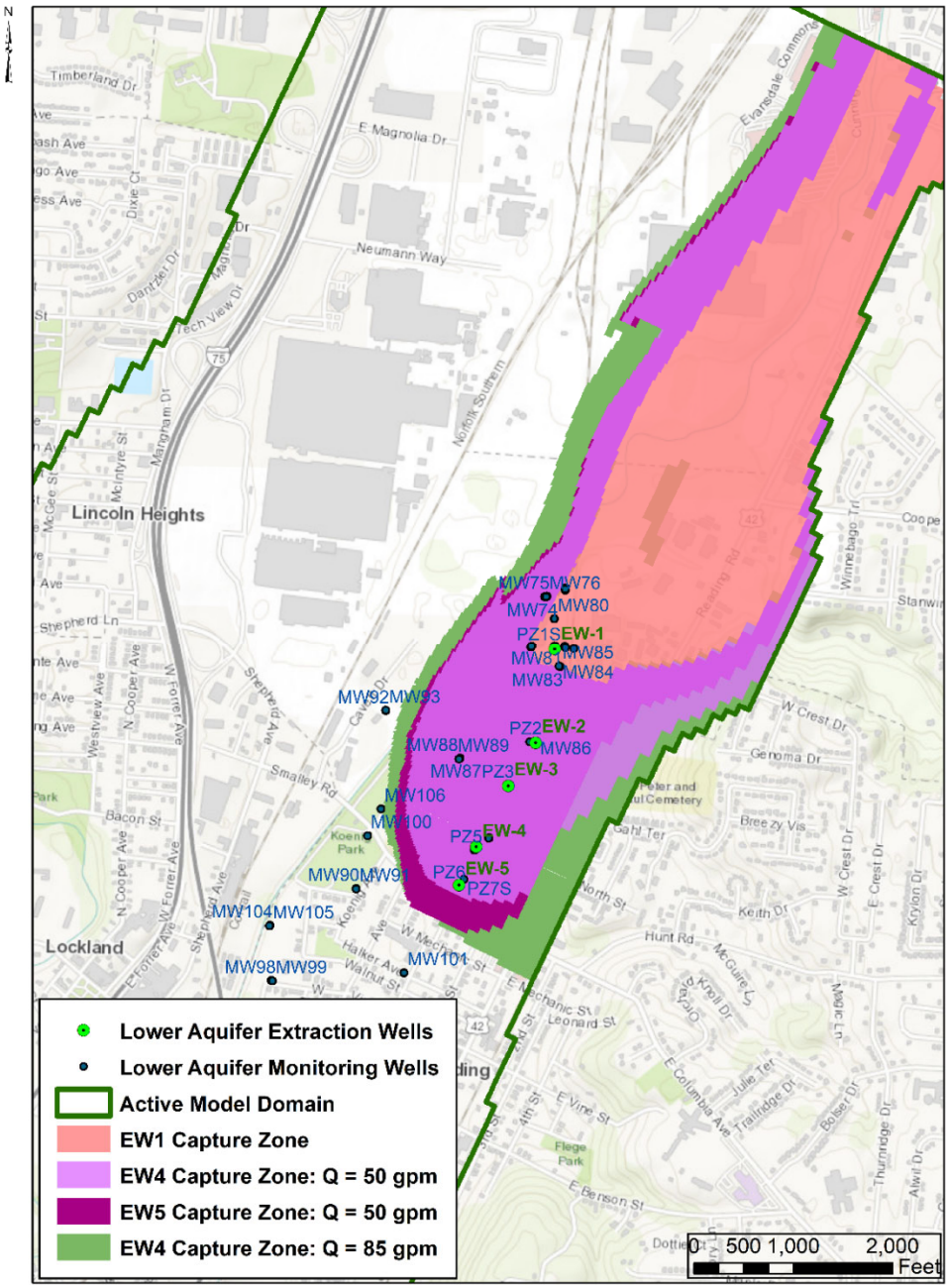

Figure 10 EW4 Capture Zone at 85 gpm Matching Original EW5 Capture Zone -- Lower Aquifer

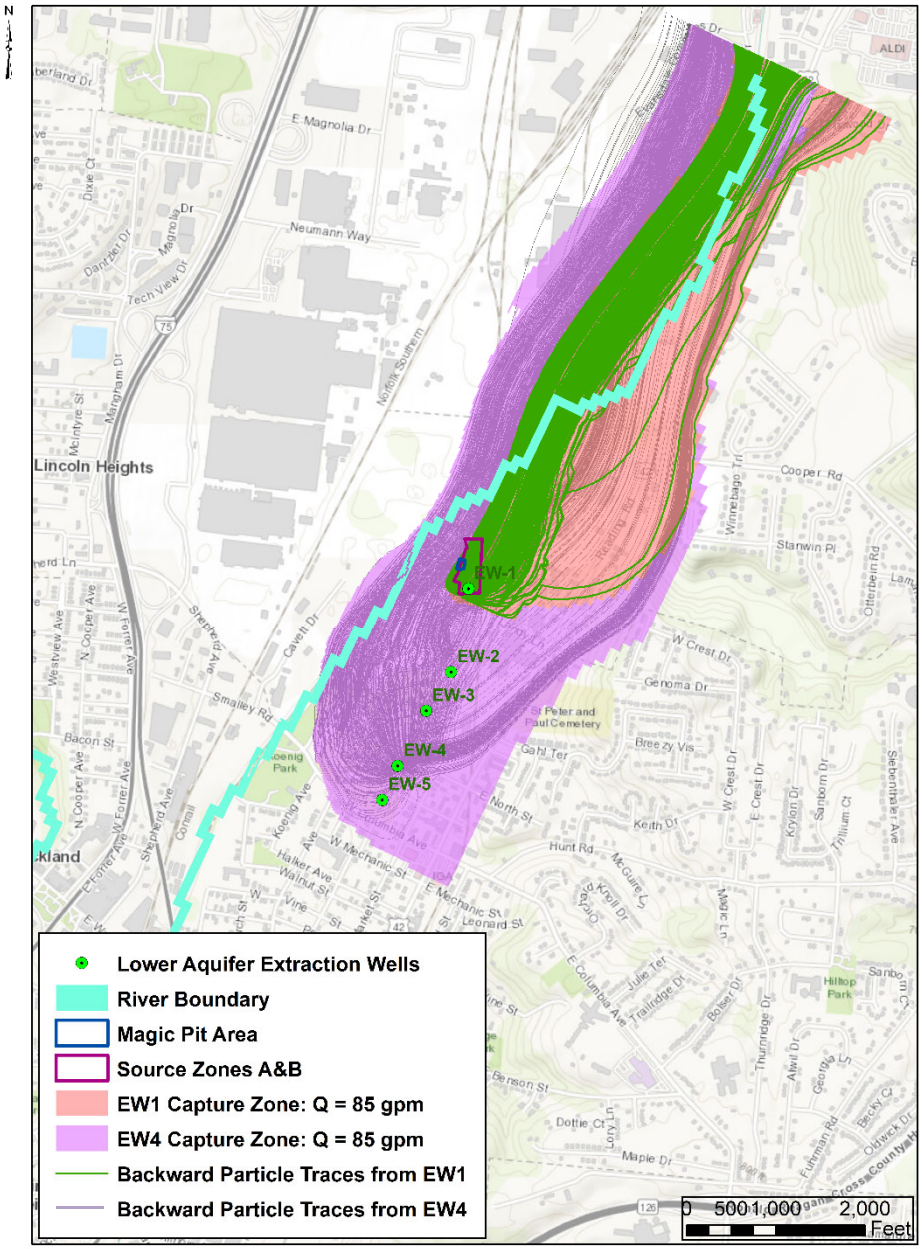

Figure 11 Backward Pathlines from EW1 and EW4 (Q_{EW4} = 85 gpm) -- Lower Aquifer

Hydraulic Gradient Analysis

In SSP&A (2019a)[1], an evaluation of changes in 1,2-DCA concentrations in monitoring wells MW104 and MW100 was performed and it was found that after the shutdown of well EW5, increase in concentrations were observed. The increasing concentrations are likely related to changes in the magnitude and direction of the hydraulic gradient post shutdown of well EW5. Based on the observed concentrations and pumping regime, an optimal hydraulic gradient magnitude range for containing plume migration in this area was identified to be between 0.00146 and 0.00446 ft/ft (with an angle between 228 and 268 degrees in the southwest direction) calculated from 3-point gradient triangles composed of MW91-MW100-MW104 and MW91-MW98-MW104 and MW91-MW98-MW104. Figures 12 and 13 (from SSP&A, 2019) are reproduced here as a reference.

An analysis is performed herein to calculate if the optimal hydraulic gradient conditions can be maintained while operating well EW4 instead of EW5.

[1] From SSP&A (2019a): Prior to shutdown of LA extraction well EW5 (May 15, 2011), both LA monitoring wells MW104 and MW100 were non-detect for 1,2-DCA. Once extraction well EW5 was shutdown, concentrations in both wells started to increase. Part of this increase is likely due to the change in groundwater flow direction, which changed by 47 degrees. The other likely cause of the observed increases in 1,2-DCA is changes in hydraulic gradient, which increased by about 0.00683 ft/ft (Figure 5). If it is assumed that plume migration was contained when LA extraction well EW5 was pumping (hydraulic gradient of 0.00146 ft/ft) it was no longer contained post-shutdown (hydraulic gradient of 0.00729 ft/ft). Therefore, the optimal hydraulic gradient for containing plume migration in this area is between 0.00146 and 0.00729 ft/ft. In October 2018, LA extraction well EW4 was turned on at a rate of approximately 50 gpm. This resulted in a decrease in the hydraulic gradient of 0.00283 ft/ft (mean gradient post-EW4 turning on is 0.00446 ft/ft) (Figure 6). However, concentrations of 1,2-DCA in MW100 continue to increase and show no indication that turning on LA extraction well EW4 had any impact on the rate of increase in concentration. Therefore, a hydraulic gradient of 0.00446 ft/ft is insufficient for preventing continued migration of 1,2-DCA along the western edge of the plume.

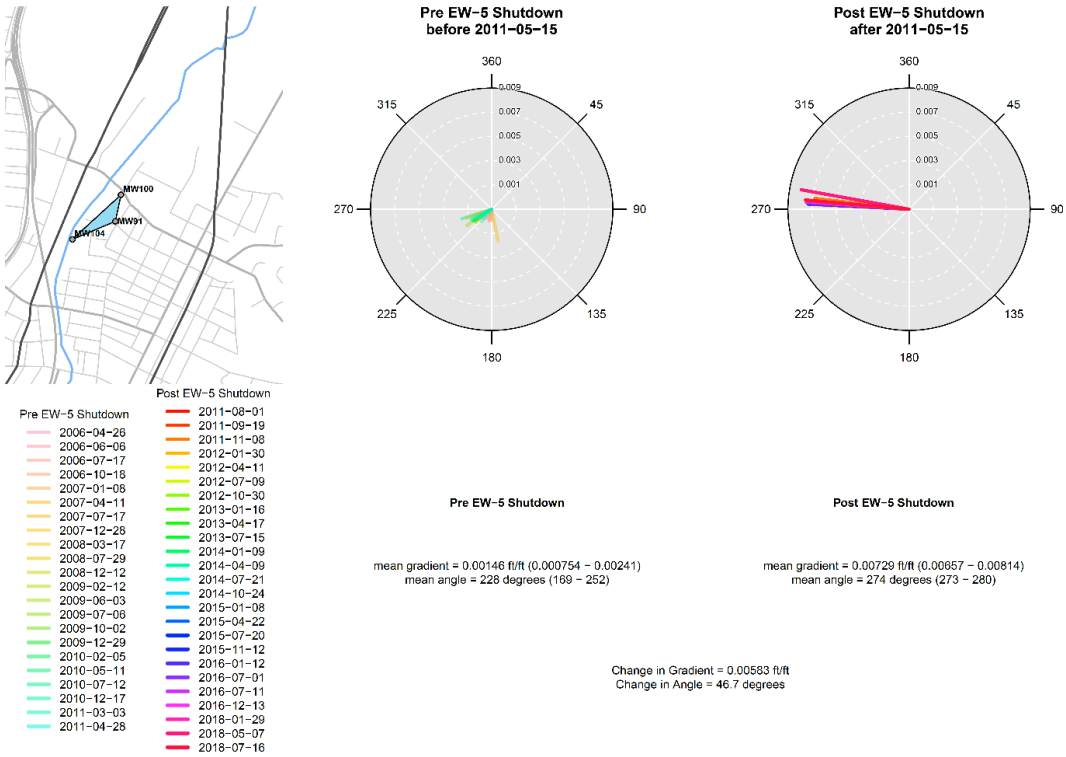

Figure 12 Change in Hydraulic Gradient and Groundwater Flow Drection Pre- and Post-Shutdown of LA Extraction Well EW5 (SSP&A, 2019a)

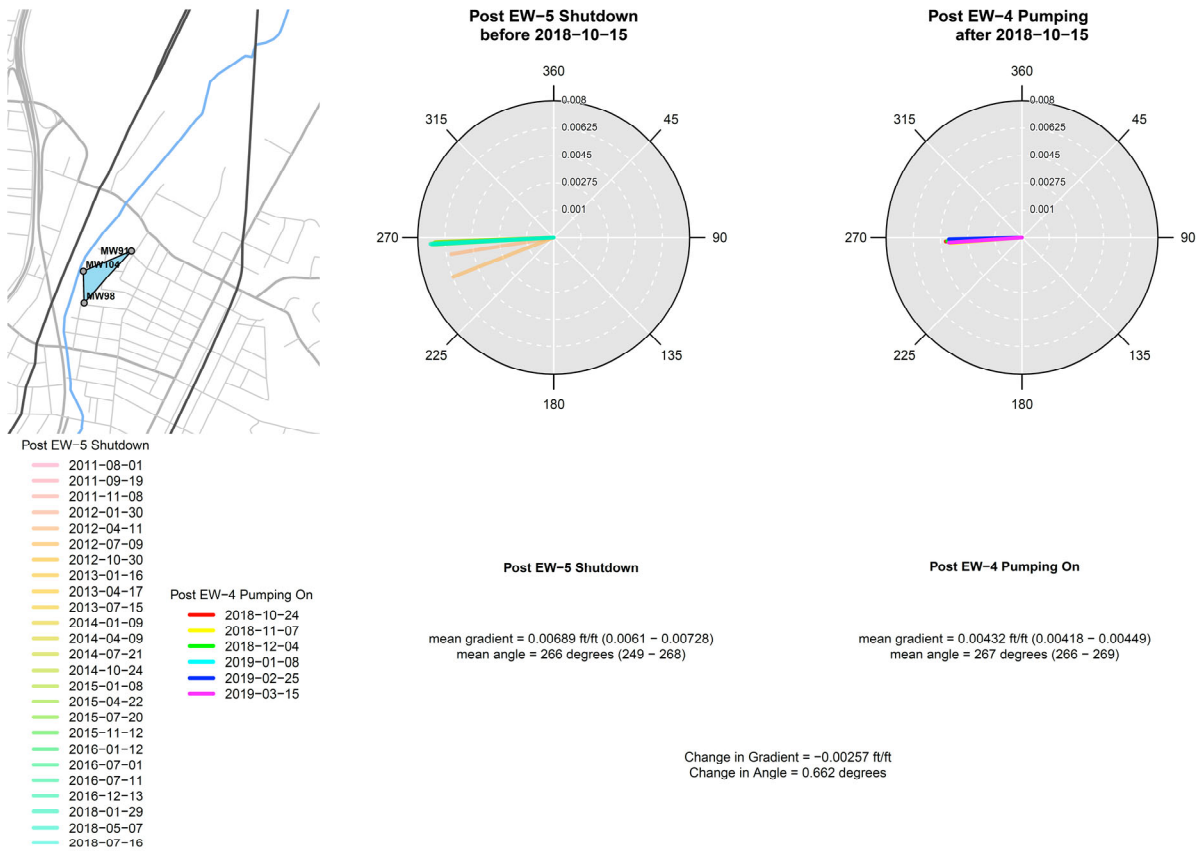

Figure 13 Change in Hydraulic Gradient and Groundwater Flow Direction before and after Turning on Extraction Well EW4 in October 2018 (SSP&A, 2019a)

Gradient Analysis for Hypothetical Variations in Pumping from EW4 in 2018

This analysis evaluated whether it is possible to maintain the hydraulic gradient in the area of wells MW91, MW98, MW100, and MW104 in the optimal range between magnitude 0.00146 and 0.00446 ft/ft by increasing the pumping rate for EW4 and in the direction of 109-268 degrees based on the range of observations pre-EW5 shutdown in MW104-MW91-MW100 or MW91-MW98-MW104. To assess this hypothesis and to investigate the changes in flow conditions outside of the contaminant plume, a transient model was developed simulating groundwater flow from 1997 to 2018 with 23 stress periods, each with a duration of one year.

A set of model runs were set up with varied hypothetical pumping rates for EW4 in 2018, including:

- Q = 25 gpm;
- Q = 50 gpm;
- Q = 100 gpm;
- Q = 200 gpm;
- Q = 350 gpm; and
- Q = 500 gpm.

The pumping rates of the five LA extraction wells and one UA extraction well are listed on Table 1. The rate of EW4 in 2018 is marked as 'varying' in red.

The two 3-point gradient groups used for calculating the magnitude and direction of the hydraulic gradient are:

- Group 1: MW104, MW91 and MW100; and
- Group 2: MW104, MW98 and MW91.

The locations of the 3-point gradient groups are shown on Figure 14. The mapped 1,2-DCA plume in 2010 and the EW4 capture zone after the resumption of pumping in October 2018 at a rate of 85 gpm are also shown in the figure.

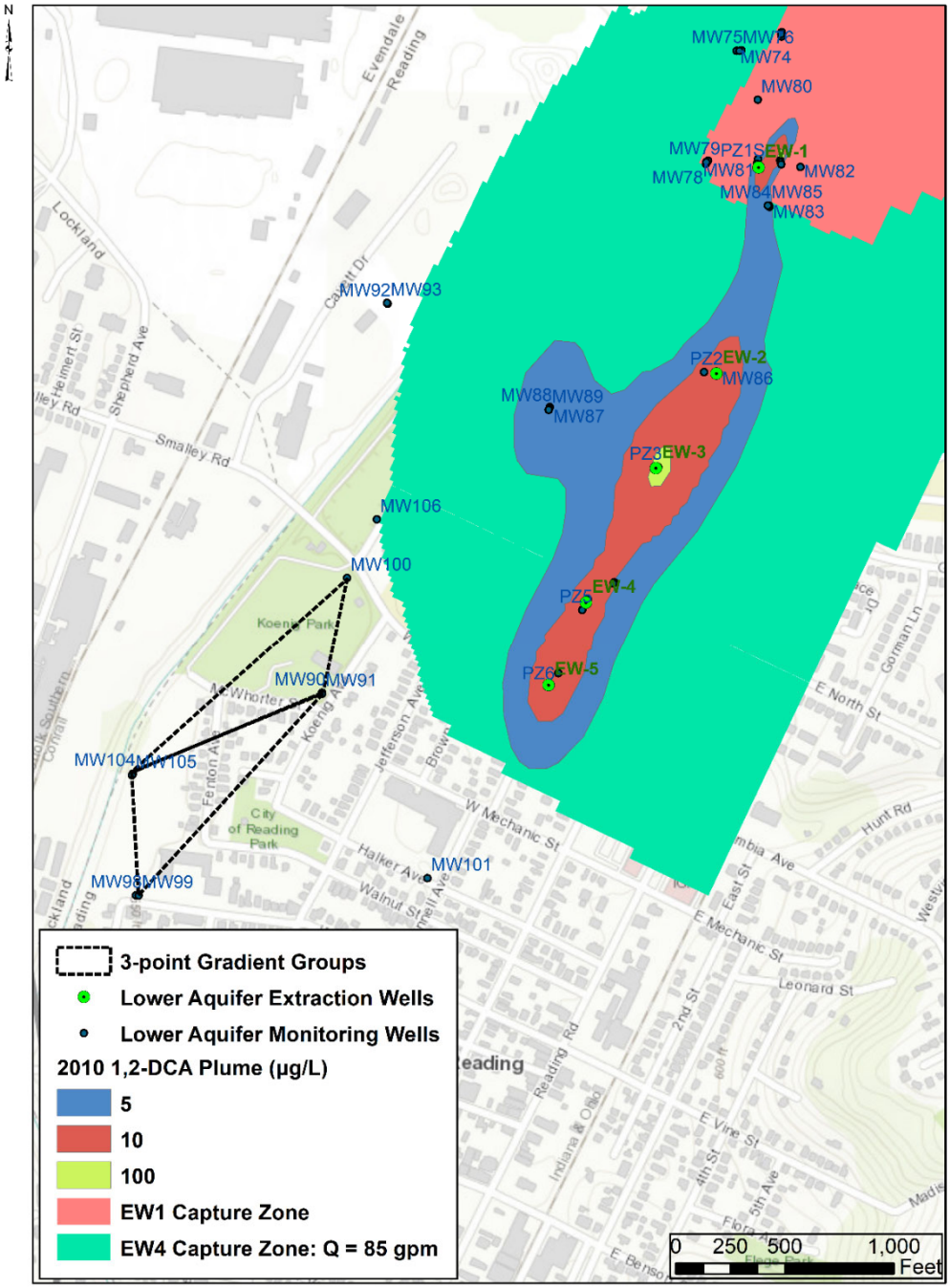

Figure 14 Locations of the 3-point Hydraulic Gradient Well Groups

The simulated hydraulic gradients and flow directions at the two 3-point gradient groups for the whole simulation period are compared against the measured data and plotted in Figures 15 and 16. As seen in the two figures, the calculated gradient magnitude and directions from the simulated heads are smaller than the calculated gradients from the measured data since 2011 (after EW5 extraction ceases).

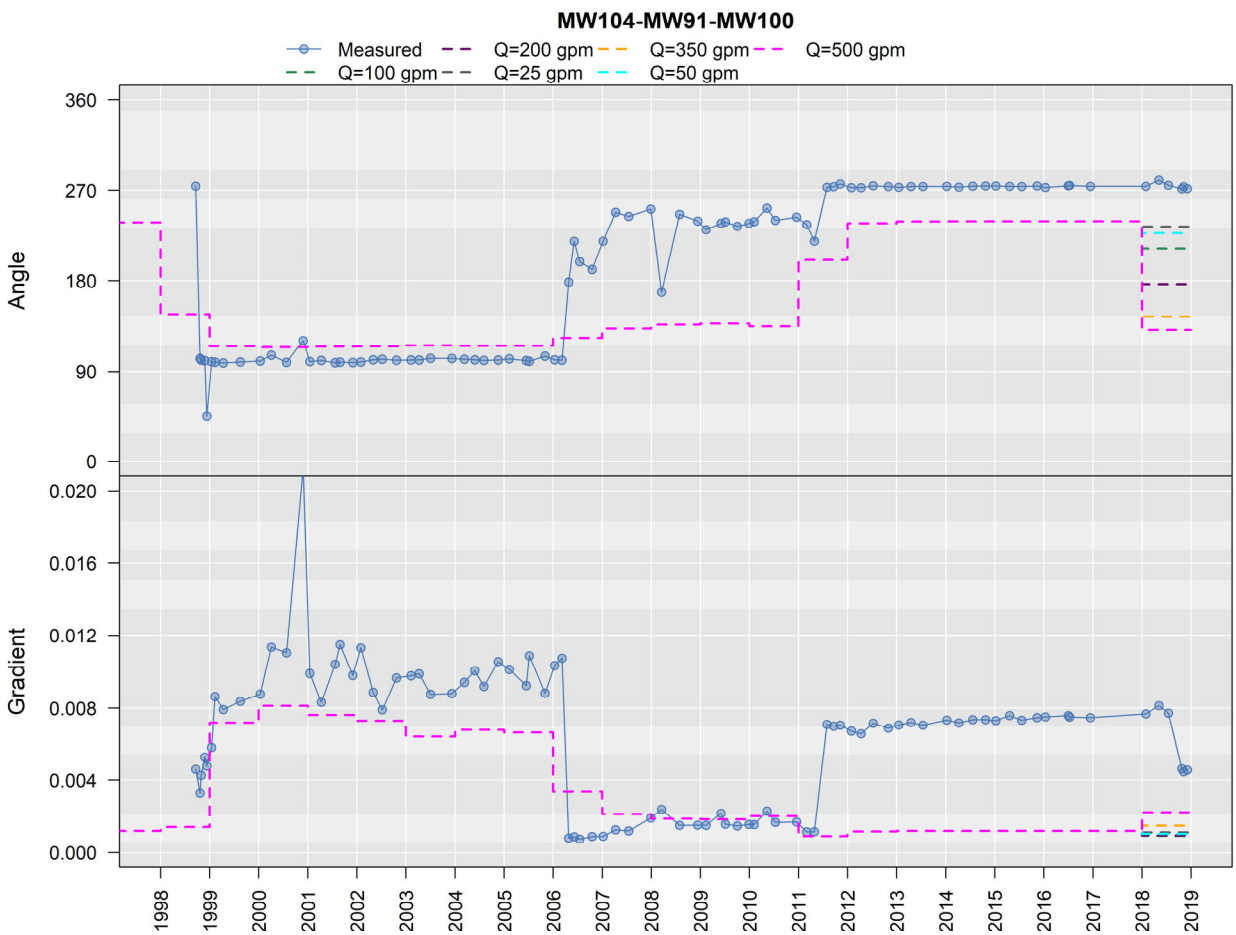

Figure 15 Measured vs. Modeled Hydraulic Gradient & Angle for MW104-MW91-MW100

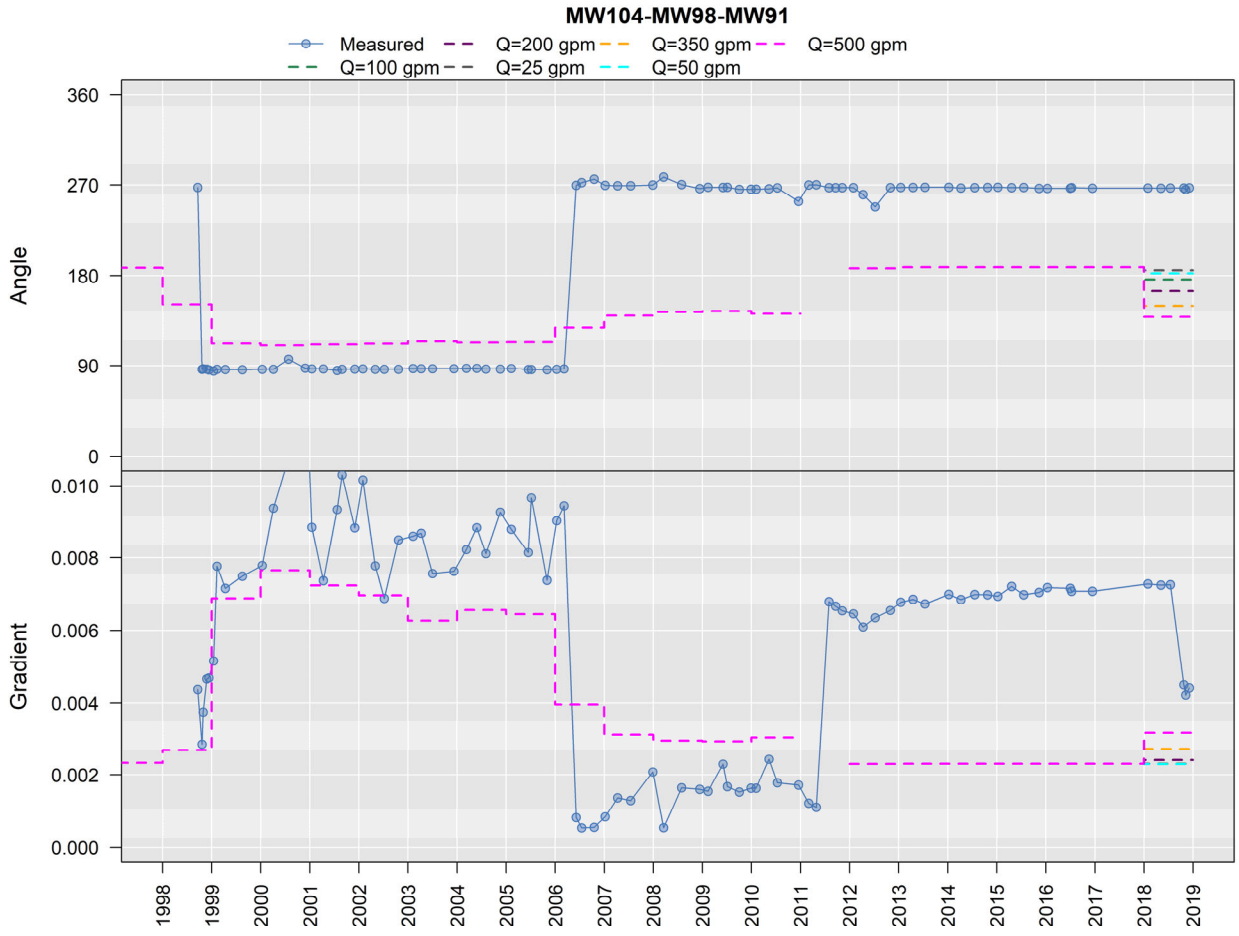

Figure 16 Measured vs. Modeled Hydraulic Gradient & Angle for MW104-MW98-MW91

Hydraulic gradient magnitude and groundwater flow direction calculated from the different pumping rates applied at EW4 in 2018 for the two 3-point groups are listed on Table 3. The simulated hydraulic gradients are based on varying pumping rates applied only during the year 2018. The calculated hydraulic gradient magnitudes are summarized and plotted in Figure 16 and the angles changes in 2018 are plotted in Figure 17 and the calculated angles are plotted in Figure 18.

Table 3 Changes in Hydraulic Gradient and Angle with Different Pumping Rates of EW4

EW4 pumping rate (gpm)	MW104-MW91-MW100		MW104-MW98-MW91	
	Direction (degree)	Gradient (ft/ft)	Direction (degree)	Gradient (ft/ft)
25	233	1.12E-03	185	2.30E-03
50	227	1.04E-03	182	2.30E-03
100	211	9.33E-04	176	2.31E-03
200	177	9.63E-04	165	2.41E-03
350	144	1.50E-03	150	2.72E-03
500	131	2.24E-03	139	3.17E-03

Note: Optimal gradient magnitude range is 0.00146 to 0.00446 ft/ft

As seen in Figure 17, for the MW104-MW91-MW100 group, the hydraulic gradient first decreases with the increasing of EW4 pumping rate, then increases with increasing pumping rate. The transition of the different trends occurs between 100 gpm and 200 gpm. This suggests that this area is under the influence of EW4 pumping when the pumping rate is over 100 gpm which is also indicated from the flow direction plot. The flow direction changes from southwest to southeast towards the center of extraction system between the pumping rates of 100 gpm and 200 gpm. The changes in magnitude of hydraulic gradients between the pumping rates of 25 gpm and 100 gpm are less than 10 percent. For the MW104-MW98-MW91 group, the hydraulic gradient continues to increase with increasing pumping rates, suggesting that this area is under the influence of pumping at EW4.

Based on the available measured data, the optimal hydraulic gradient for containing plume migration in this area is between 0.00146 and 0.00446 ft/ft. The simulated hydraulic gradients for an EW4 pumping rates of 50 to 200 gpm are smaller than the lower limit of the optimal range

(0.00146 ft/ft). This result is not considered a reliable estimate and likely reflects limitations of the model calibration.

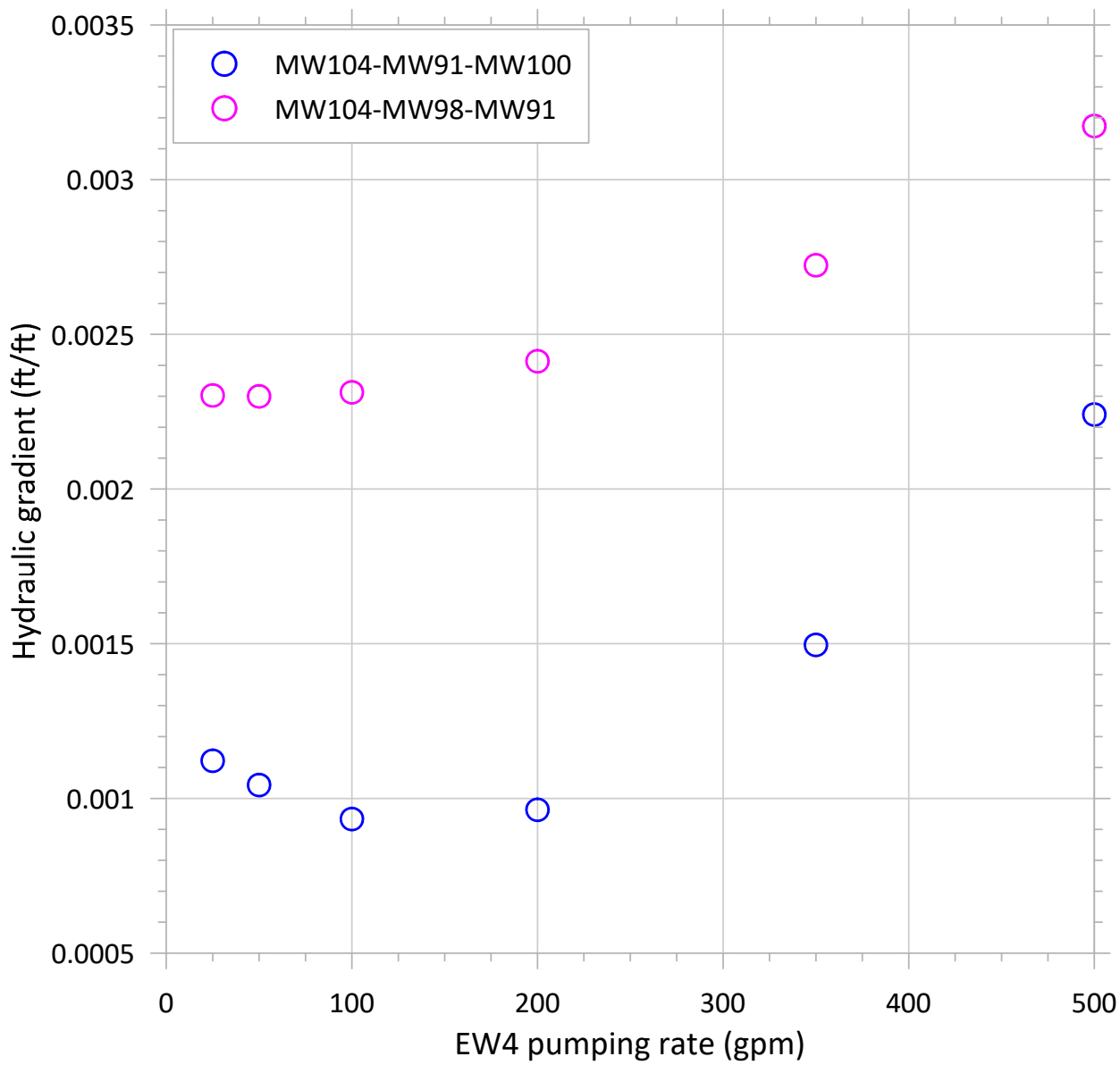

Figure 17 Calculated Hydraulic Gradients with Varied Pumping Rates

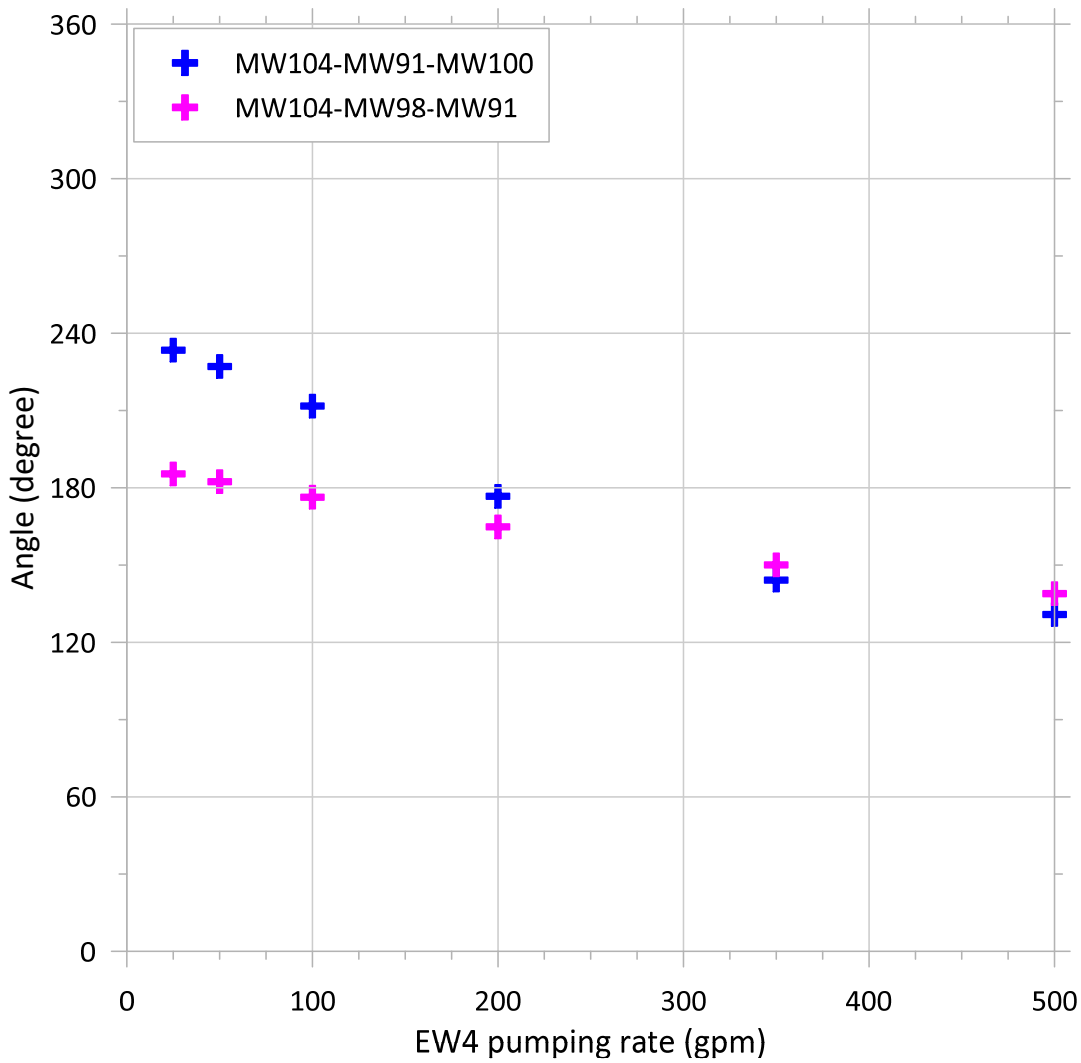

Figure 18 Calculated in Flow Direction (angle) with Varied Pumping Rates

To evaluate the model performance in this area, the simulated and observed water levels in the four wells MW104, MW100, MW98 and MW91 are compared on Figure 19. As seen in the figure, the match of the simulated water levels to the observed are generally good. However, the differences between the simulated and the observed water levels at MW100 and MW91 after 2011 are slightly larger compared to the 2007-2011 period by approximately 3 feet.

The magnitude of the head residuals may introduce biases in the results of the 3-point gradient calculations which diminishes accuracy of predicted water levels and limits applicability of the model for such a calculation.

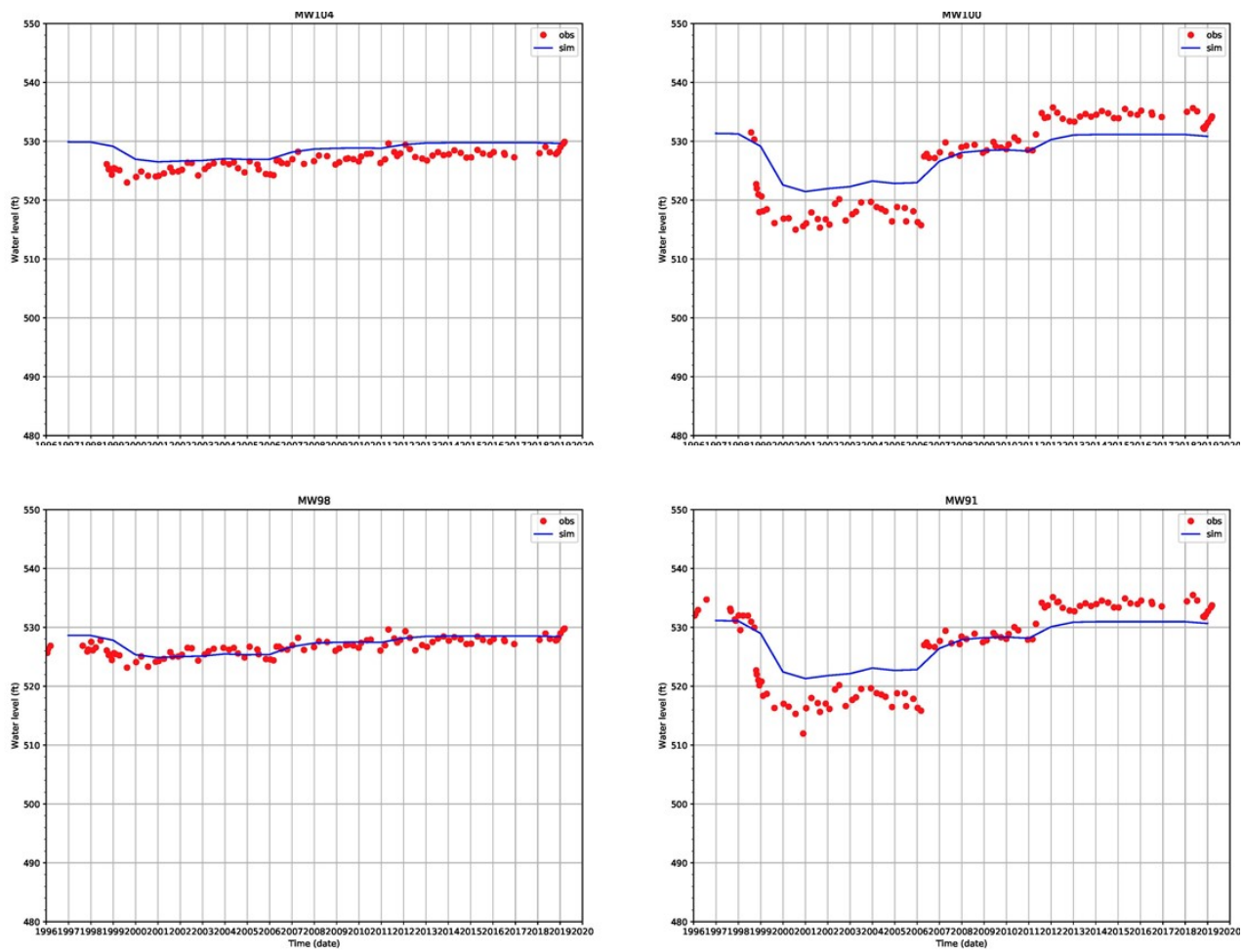

Figure 19 Simulated vs. Observed Water Levels in MW104, MW100, MW98 and MW91

Gradient Analysis Based on Measured Data

Because of the limitation of the model to perform a reliable calculation of 3-point gradients, an alternative may be to continue observing the gradient calculated with measured data. Figure 20 below shows the locations of six 3-point gradient analysis triangles in the southern portion of the hydraulic capture zone. Figures 23 to 28 present rose diagrams and time series of the gradients magnitude and direction calculated using the complete available water level record at these locations. In the figures, the shaded area in the rose diagram to the left corresponds to the range of gradient magnitude and direction observed during the period where EW5 was in operation; on rose diagram located on the right, the shaded area correspond to the "optimal gradient range" consisting of the range of directions observed during the period where EW5 was operating, and the magnitude corresponds to the mean of the magnitudes observed during the period of operation of EW5. The darker colors correspond to measurements after startup of EW4. In the (b) figures, the shaded area on the rose diagram corresponds to the "optimal gradient range".

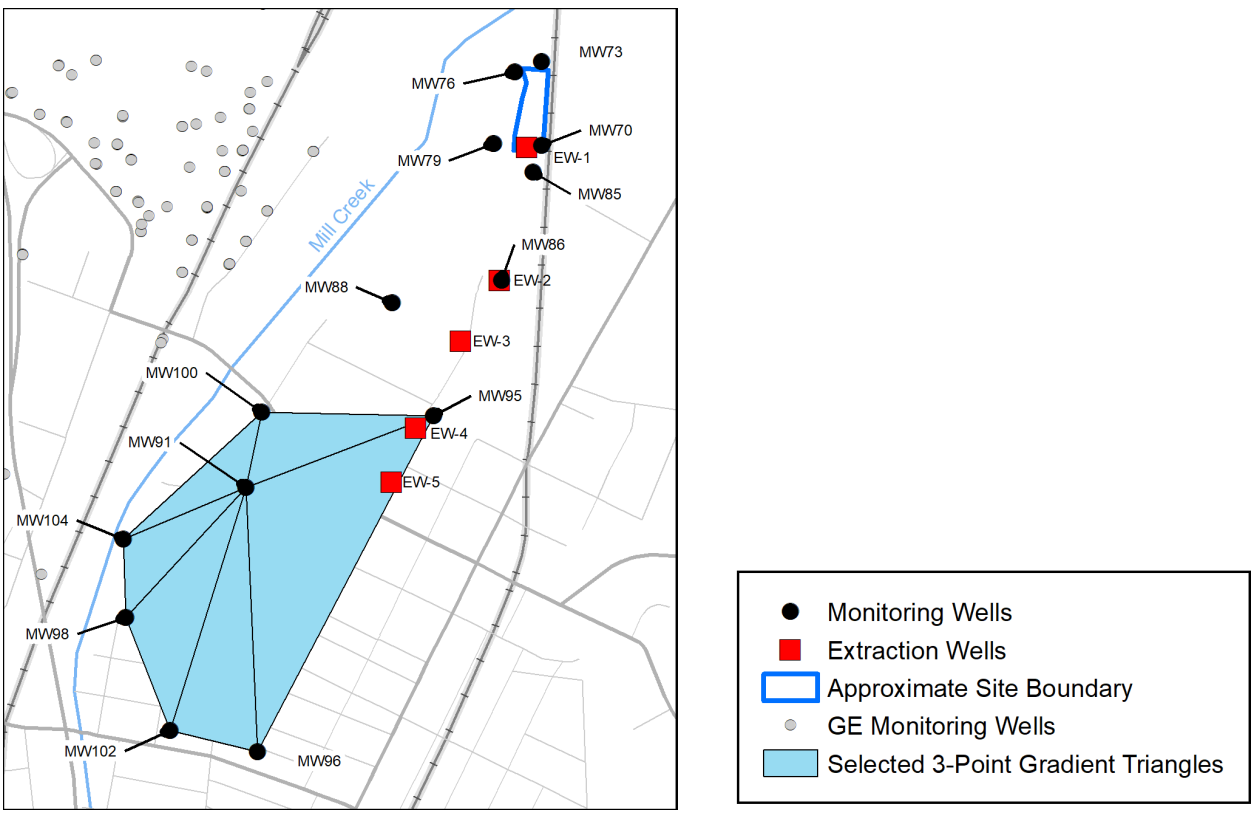

Figure 20 Location of 3-Point Gradient Triangles

To: Judy Canova and David Wilson
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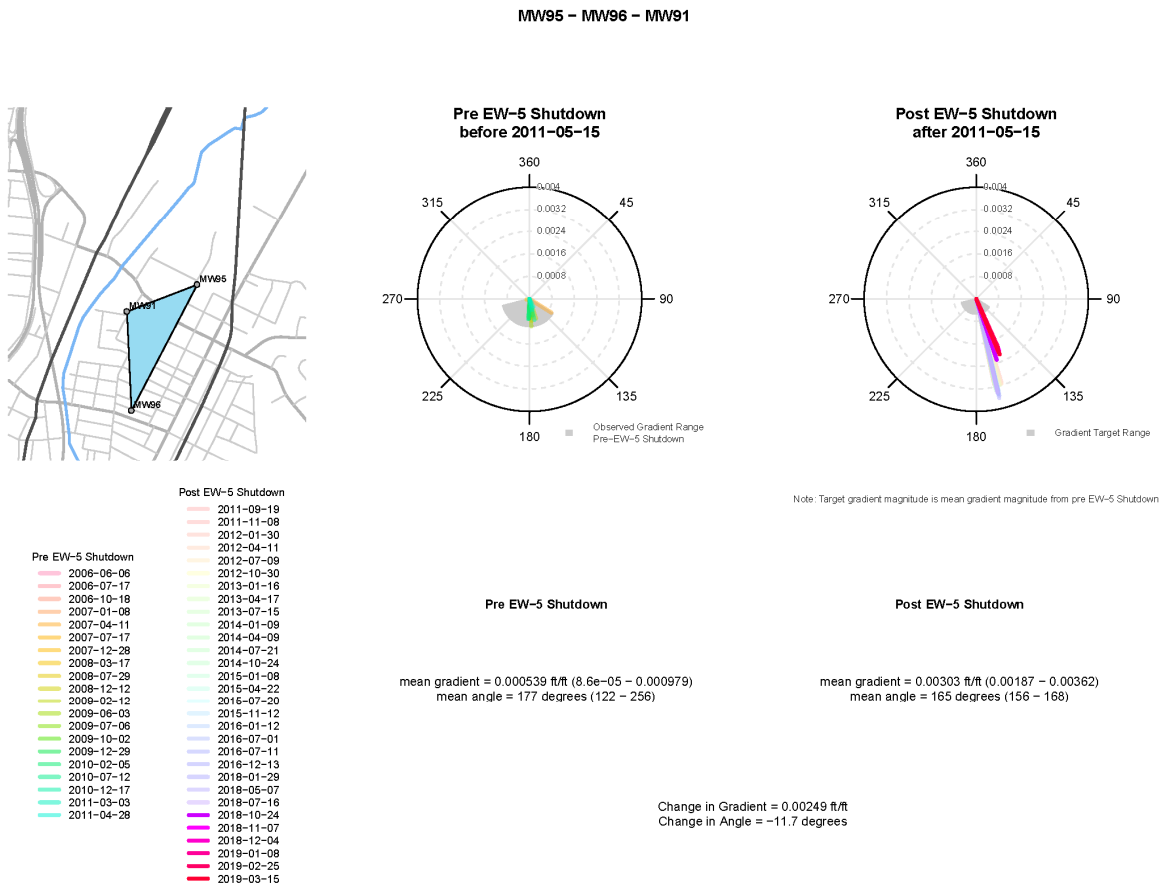

Figure 21(a) Measured Hydraulic Gradients and Directions for MW95-MW96-MW91 and Range of Optimal Gradients

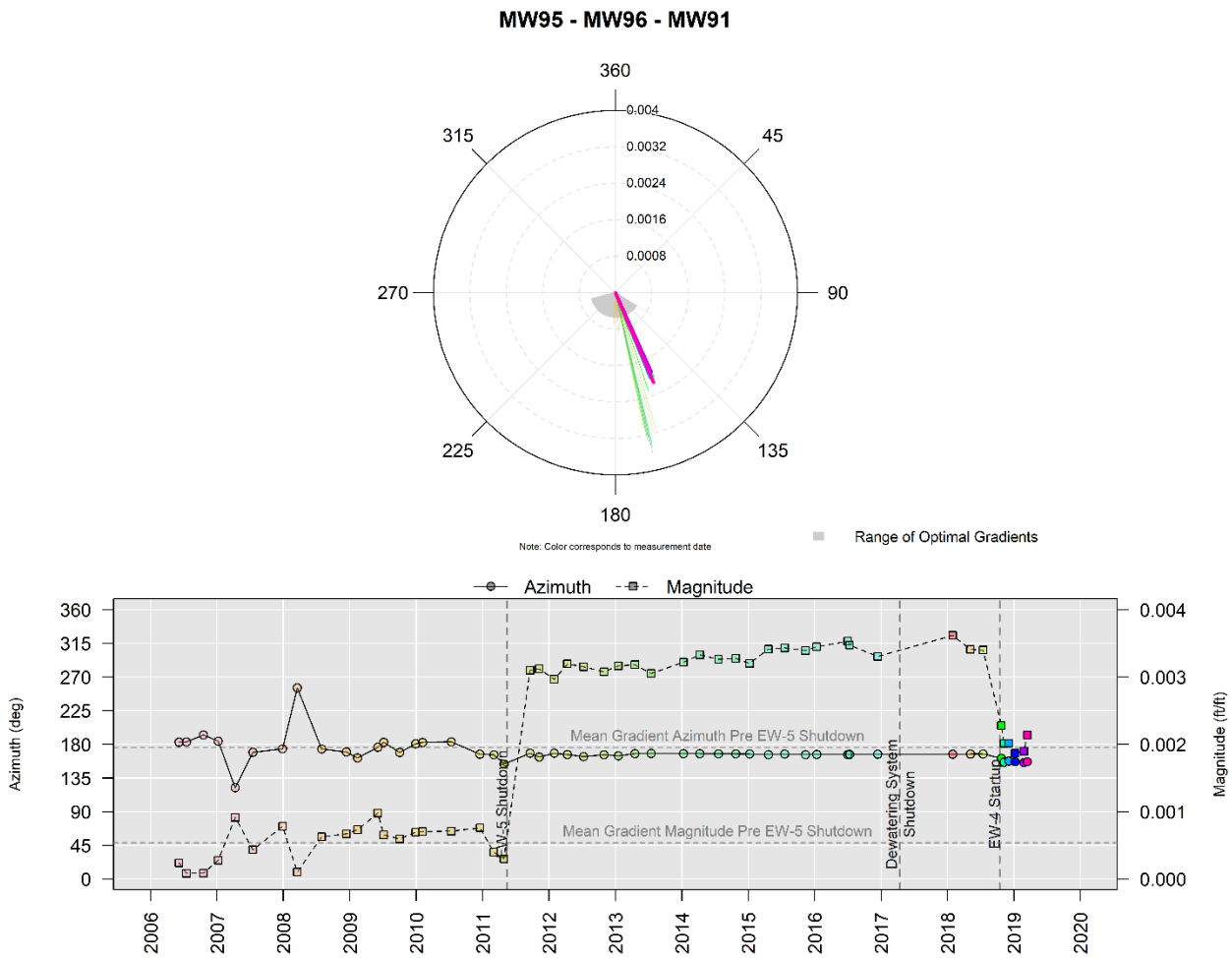

Figure 21(b) Measured Hydraulic Gradient Magnitudes and Directions for MW95-MW96-MW91 and Range of Optimal Gradients

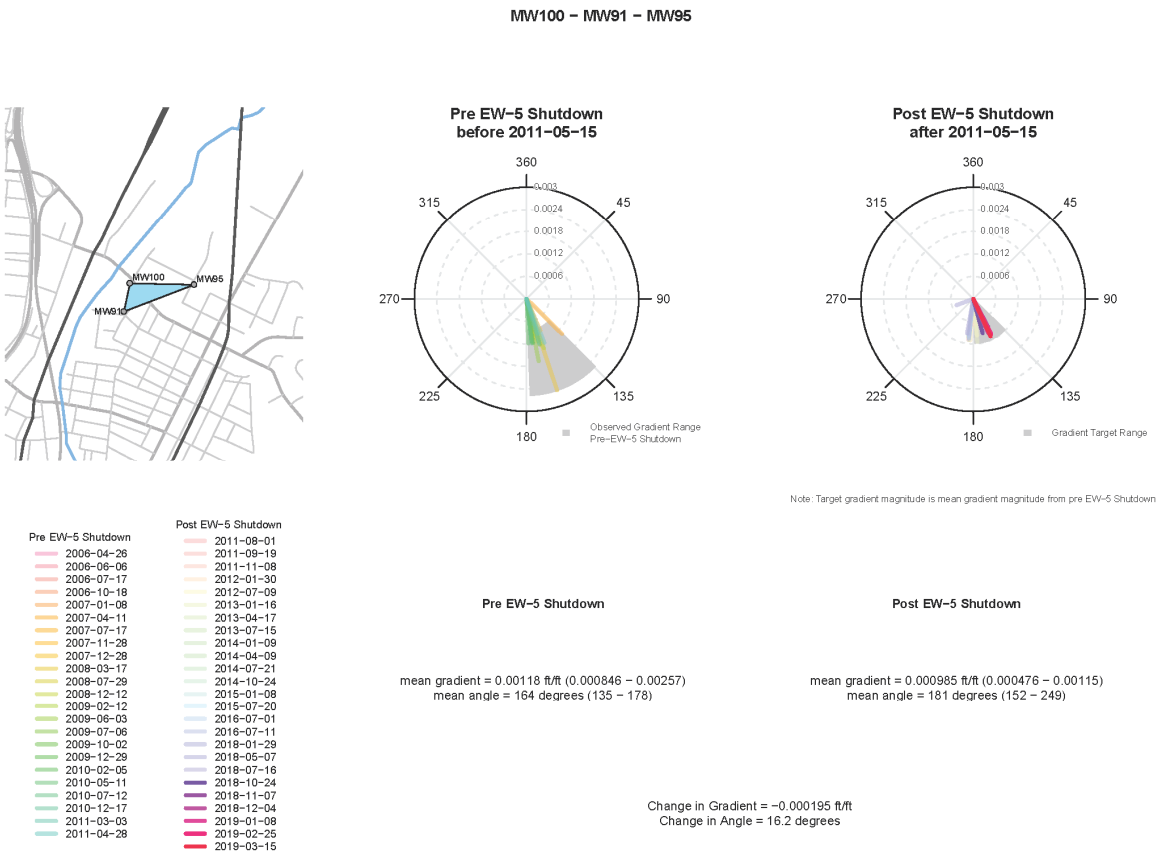

Figure 22 (a) Measured Hydraulic Gradients and Directions for MW100-MW91-MW95 and Range of Optimal Gradients

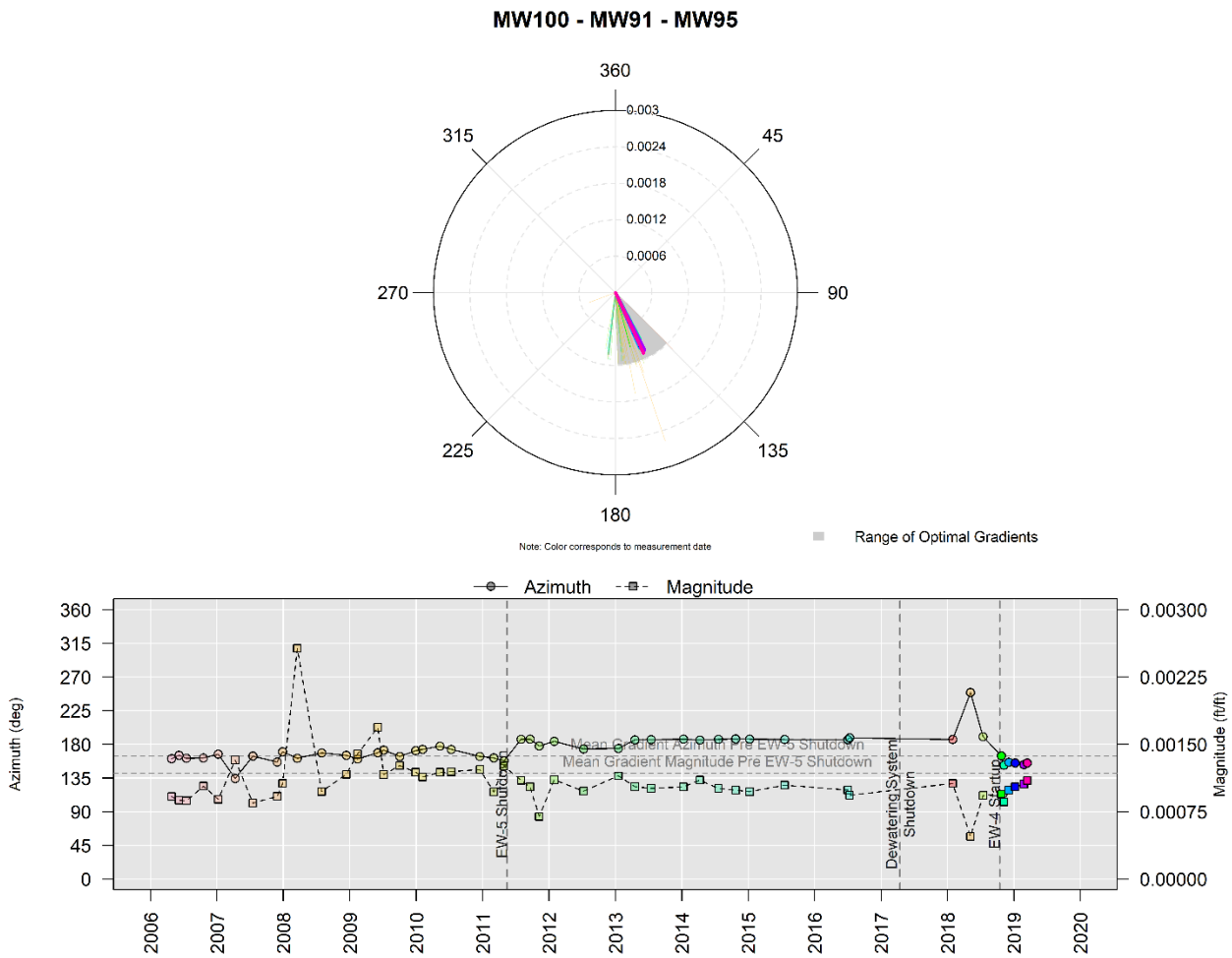

Figure 22 (b) Measured Hydraulic Gradients and Directions for MW100-MW91-MW95 and Range of Optimal Gradients

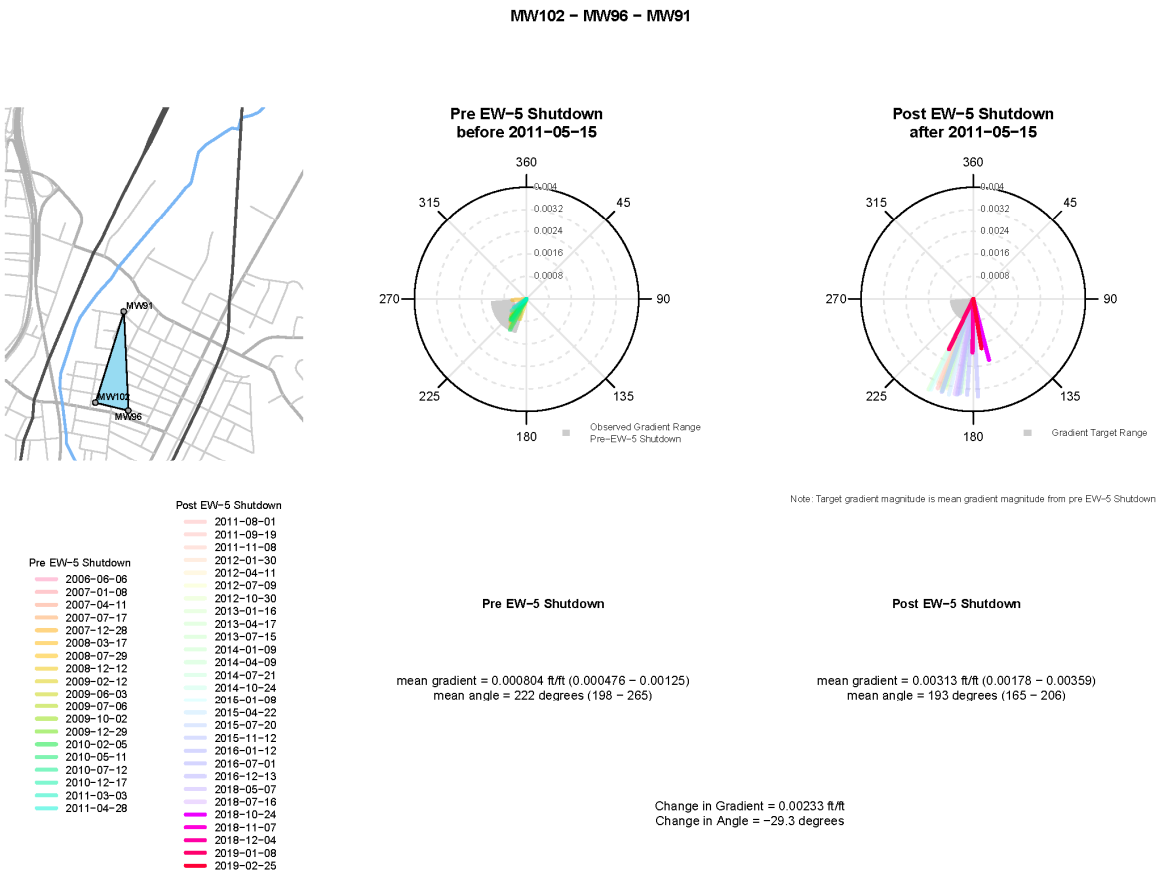

Figure 23 (a) Measured Hydraulic Gradients and Directions for MW102-MW96-MW91 and Range of Optimal Gradients

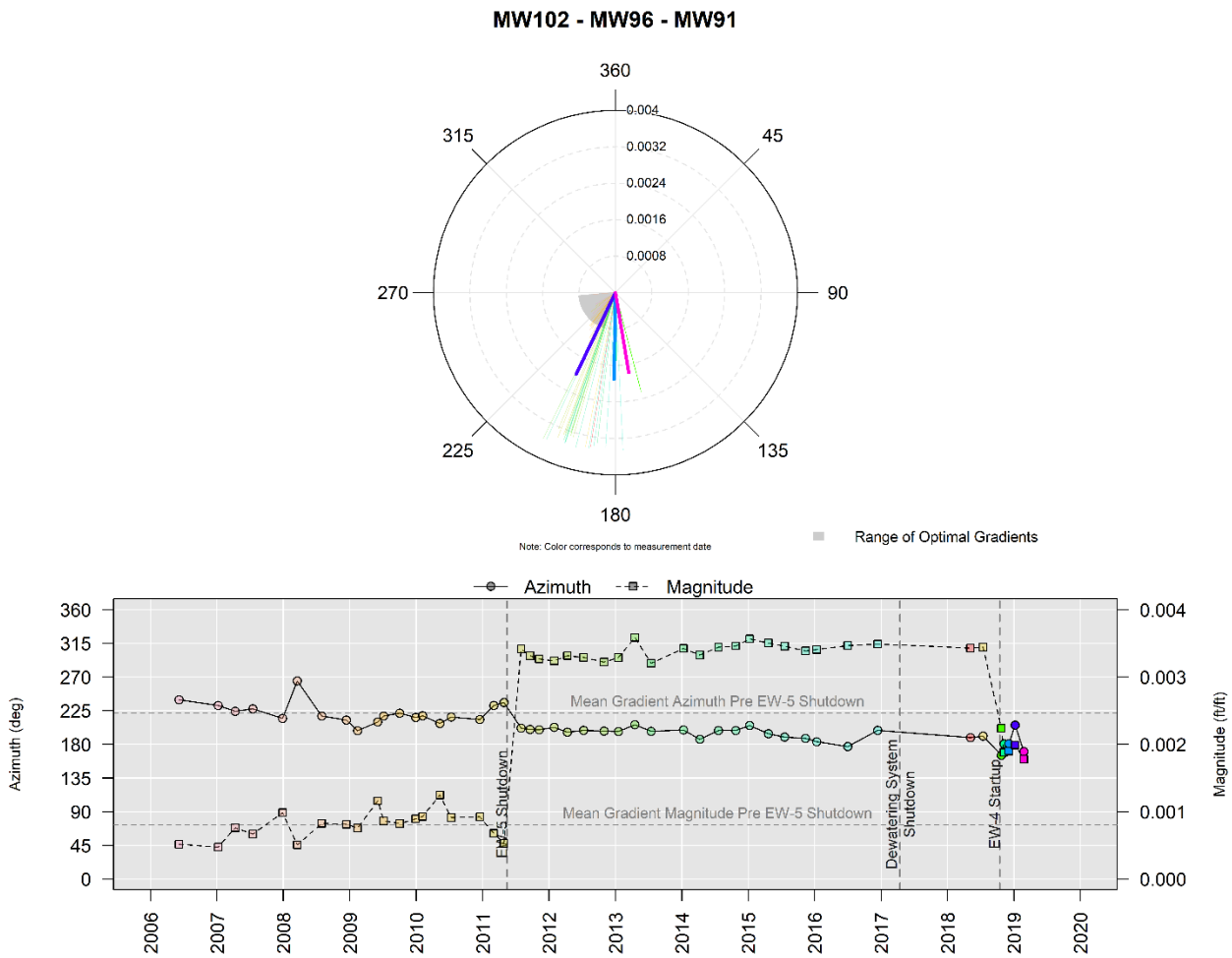

Figure 23 (b) Measured Hydraulic Gradients and Directions for MW102-MW96-MW91 and Range of Optimal Gradients

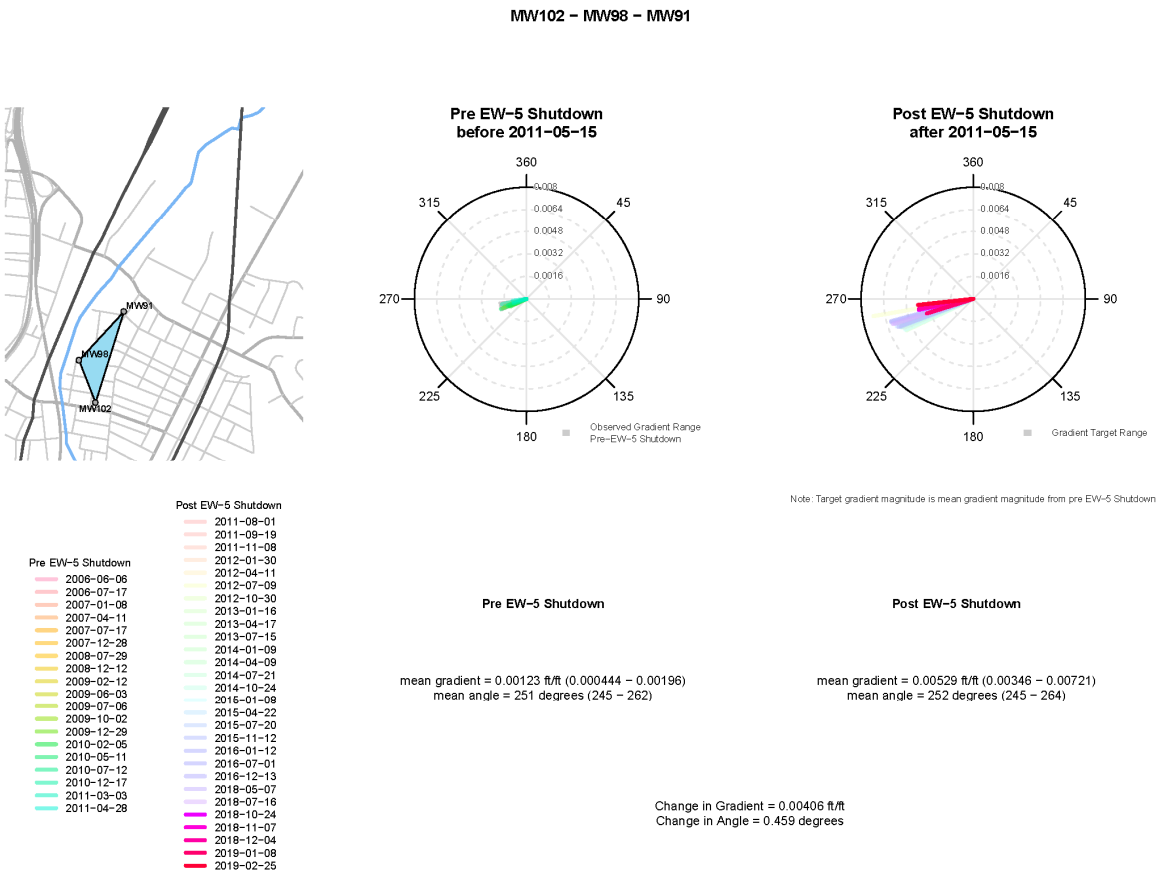

Figure 24 (a) Measured Hydraulic Gradients and Directions for MW102-MW98-MW91 and Range of Optimal Gradients

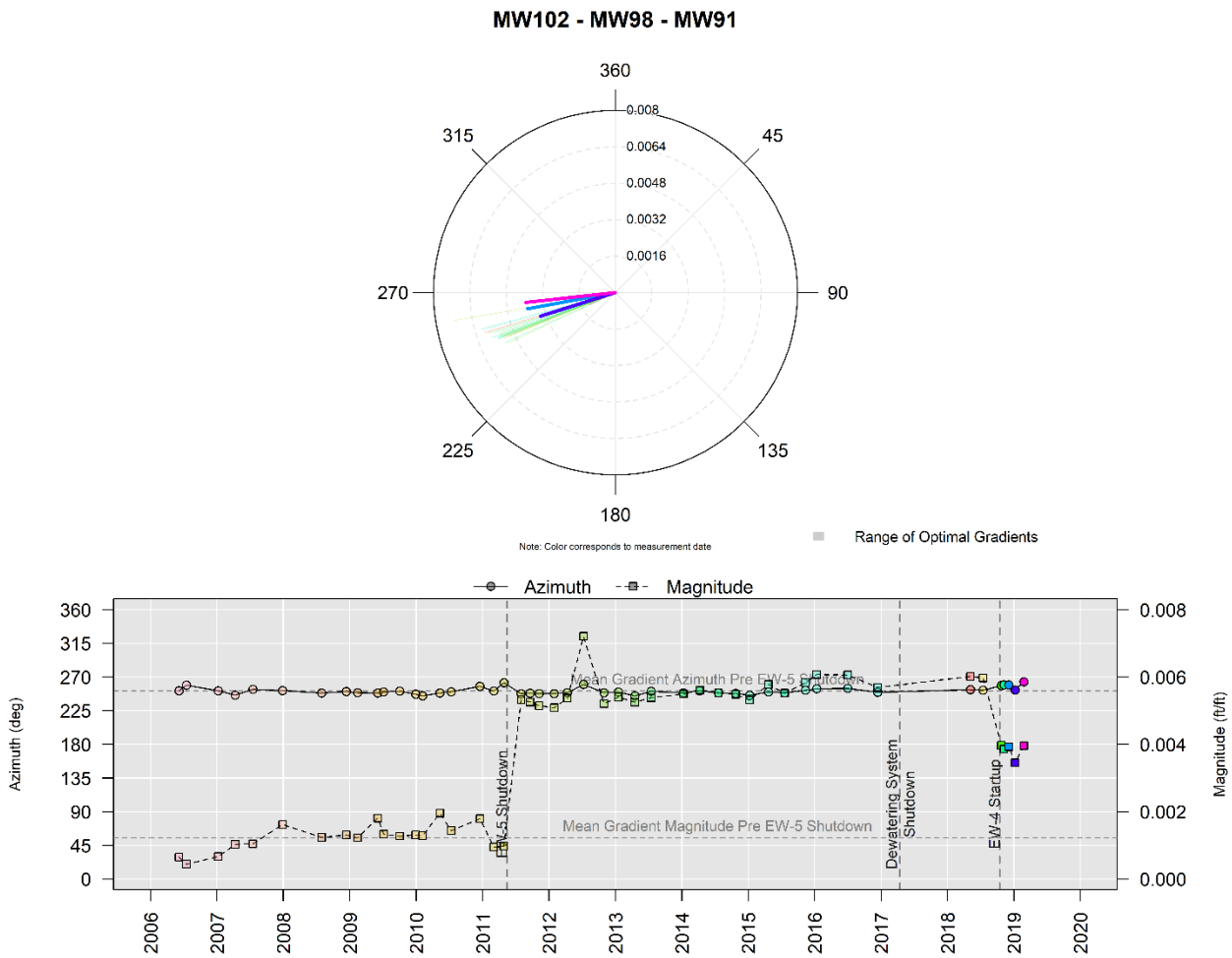

Figure 24 (b) Measured Hydraulic Gradients and Directions for MW102-MW98-MW91 and Range of Optimal Gradients

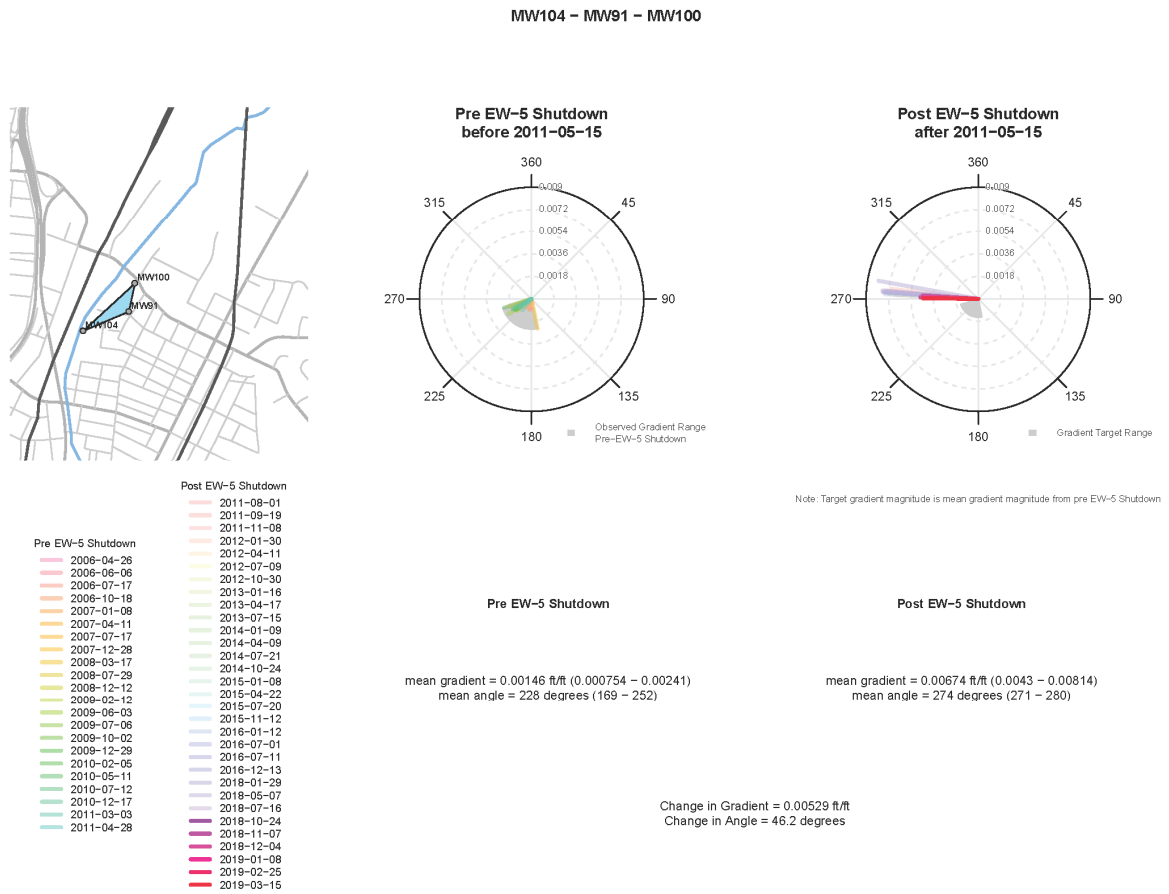

Figure 25 (a) Measured Hydraulic Gradients and Directions for MW104-MW91-MW100 and Range of Optimal Gradients

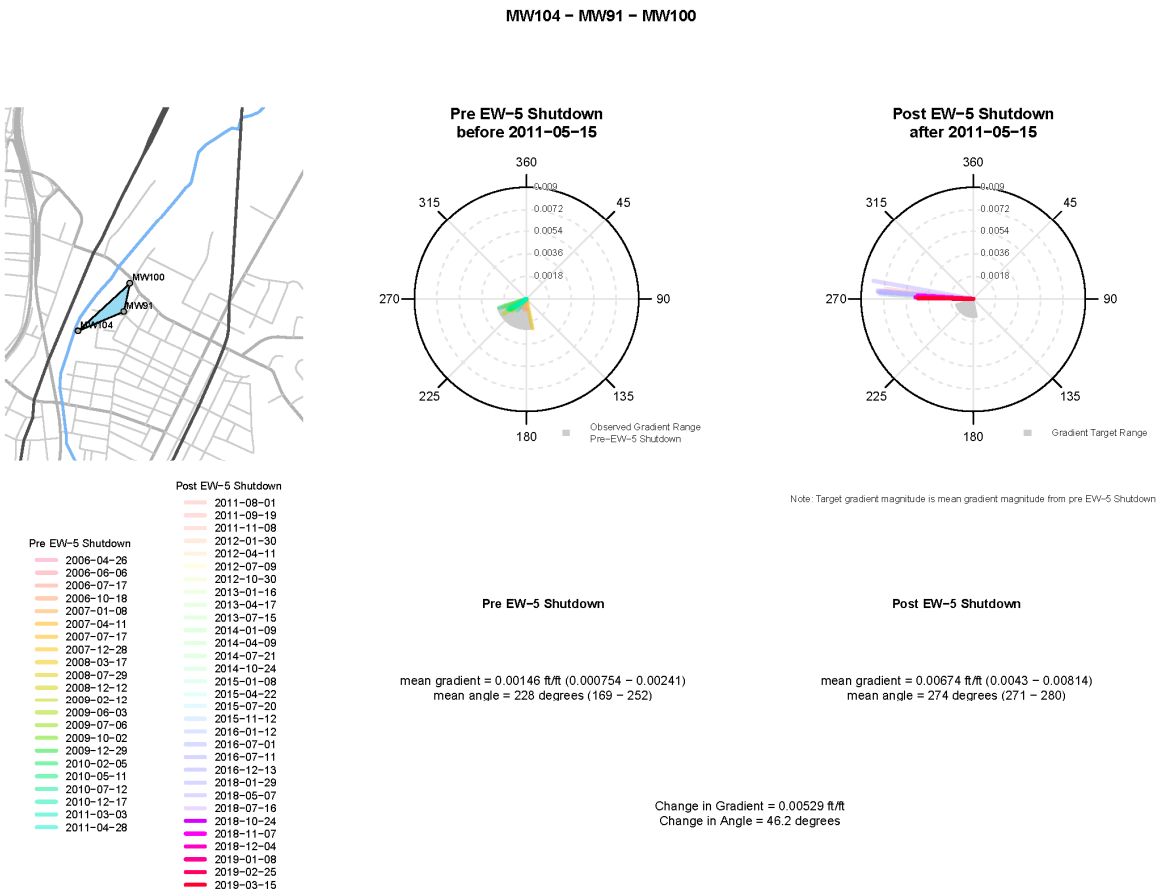

Figure 25 (b) Measured Hydraulic Gradients and Directions for MW104-MW91-MW100 and Range of Optimal Gradients

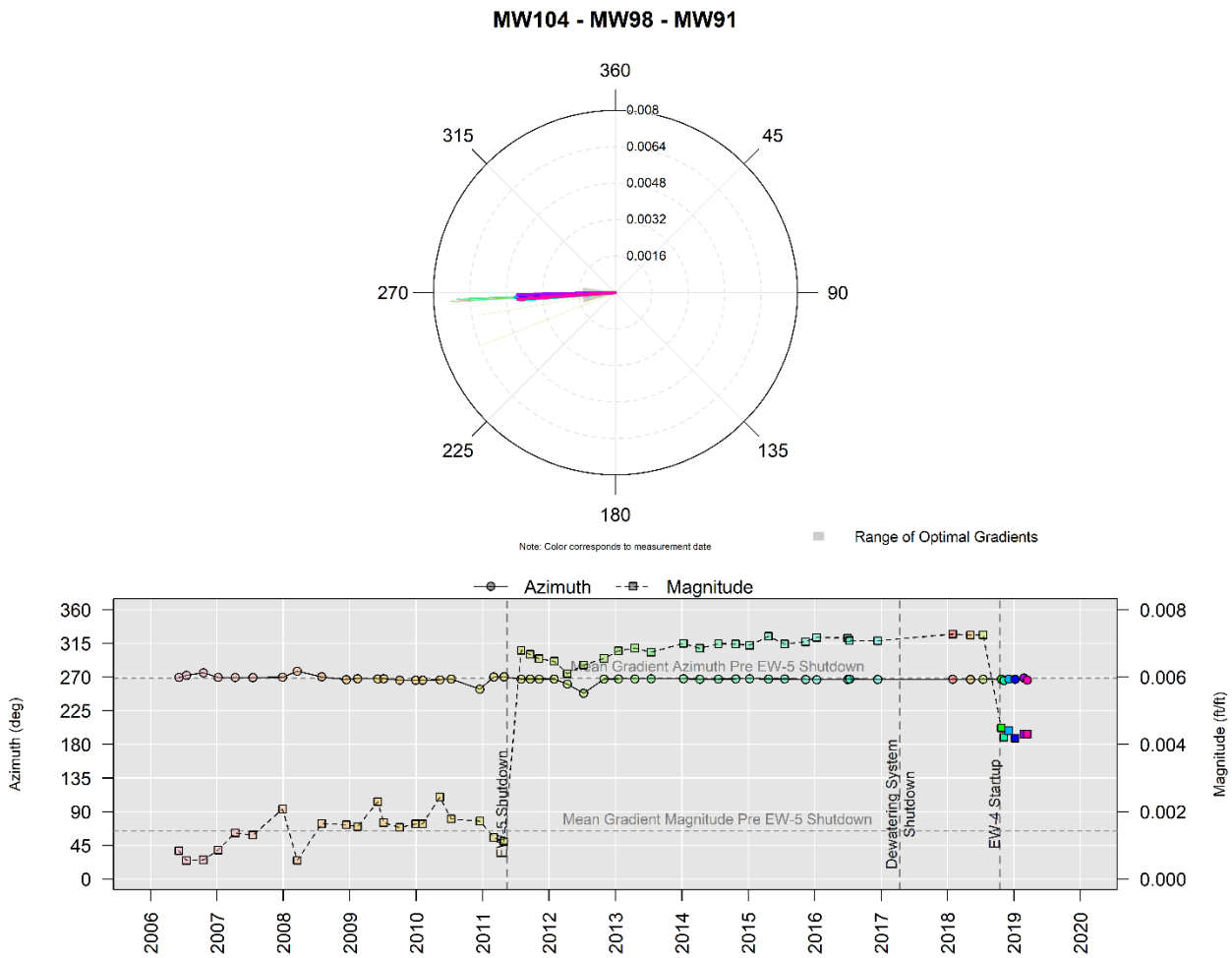

Figure 26 (a) Measured Hydraulic Gradients and Directions for MW104-MW98-MW91 and Range of Optimal Gradients

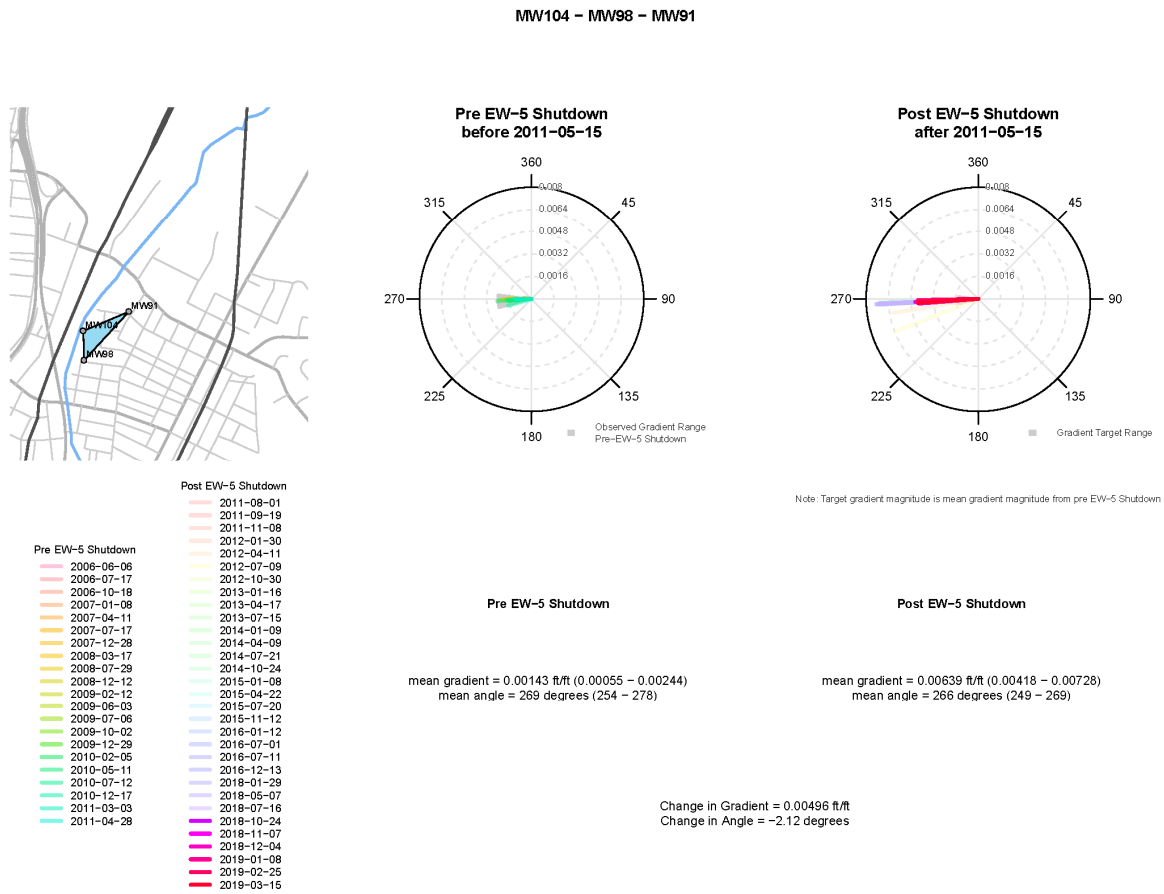

Figure 26 (b) Measured Hydraulic Gradients and Directions for MW104-MW98-MW91 and Range of Optimal Gradients

The increase from 50 to 85 gpm at well EW4 could be applied in steps, accompanied by an evaluation of 3-point hydraulic gradients, with the selection of optimal extraction rate based on a comparison between the observed 3-point gradients after adjustments and the gradients when EW5 was in operation, or if the observed gradients fall within the optimal ranges shown in Figures 21 to 26.

Hydraulic Connection between the Source Zones (Upper Aquifer) and the Lower Aquifer and Identification of Data Gaps

A steady-state groundwater flow model was developed to evaluate the connection between the Source Zones and the Upper and Lower Aquifers. The historical average pumping rates of the extraction wells before EW5 was turned off were used for the analysis:

- EW1: 5141.67 ft3/d (26.71 gpm);
- EW2: 4227.93 ft3/d (21.96 gpm);
- EW3: 8804.54 ft3/d (45.74 gpm);
- EW4: 17729.68 ft3/d (92.10 gpm);
- EW5: 16264.22 ft3/d (84.49 gpm); and
- GW108: 632.54 ft3/d (3.29 gpm).

The subsections below a) evaluate the hydraulic connection between the Magic Pit and Source Zones A and B and the LA; b) evaluate the hydraulic connection between shallow wells GW53 and GW63 and the LA; c) discuss potential data gaps in the network of groundwater monitoring wells.

Hydraulic Connection between the Magic Pit and Source Zones A and B and the Lower Aquifer

A total of 1,572 particles were placed within an area referred to as the "magic pit" and also source zones A and B (GHD, 2019) in the water table layer. The particles were released at the elevation corresponding to the elevation of the water table and were tracked forward; the particle traces are presented in Figures 27 and 28 (the extent in Figures 28b and 28c is zoomed in closer to the source area and Figure 28c shows different colors for the particles captured by the different wells, note that no particles are captured by well EW1). As seen in the figures, particles move along and reach the specified-head boundary at the south border of the model and stay within the upper layers of the model (blue pathlines) or migrate downward to the Lower Aquifer, layers 6 and 7 (orange pathlines) to be captured by the extraction wells EW3, EW4 and EW5. The number of particles migrating from the "magic pit" to the Lower Aquifer is 300, approximately 19% of the total (1572) number of particle; for source zones A and B, 1,060 particles reached the Lower Aquifer, or 14% of the total number of particles (7680) released in source zones A and B. The results show that there is vertical hydraulic connection between the UA and the LA.

Figure 29 shows the particles captured by well GW108, note that no particle is captured by LA well EW1. In Figure 30 (particles released from the source zones A and B) and Figure 31 (particles released from the Magic Pit) are captured by the wells in operation under the following pumping regime (yellow or purple pathlines or are not captured as shown by the grey pathlines), which corresponds to the current pumping scenario:

- EW1: 6705.28 ft^3/d (34.83 gpm);
- EW4: 9625 ft^3/d (50 gpm);
- GW108: 680.75 ft^3/d (3.54 gpm).

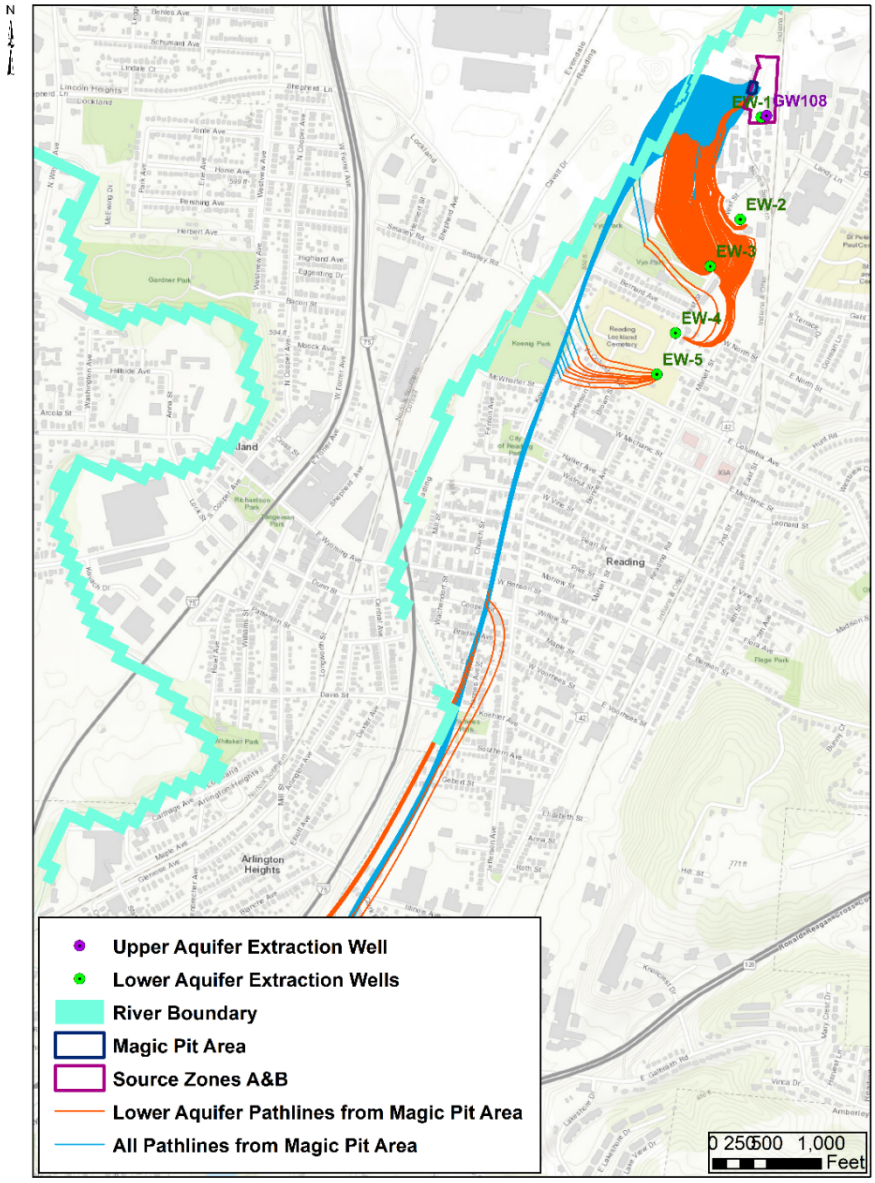

Figure 27 Particle Traces Released from the "Magic Pit" (historical average pumping rates)

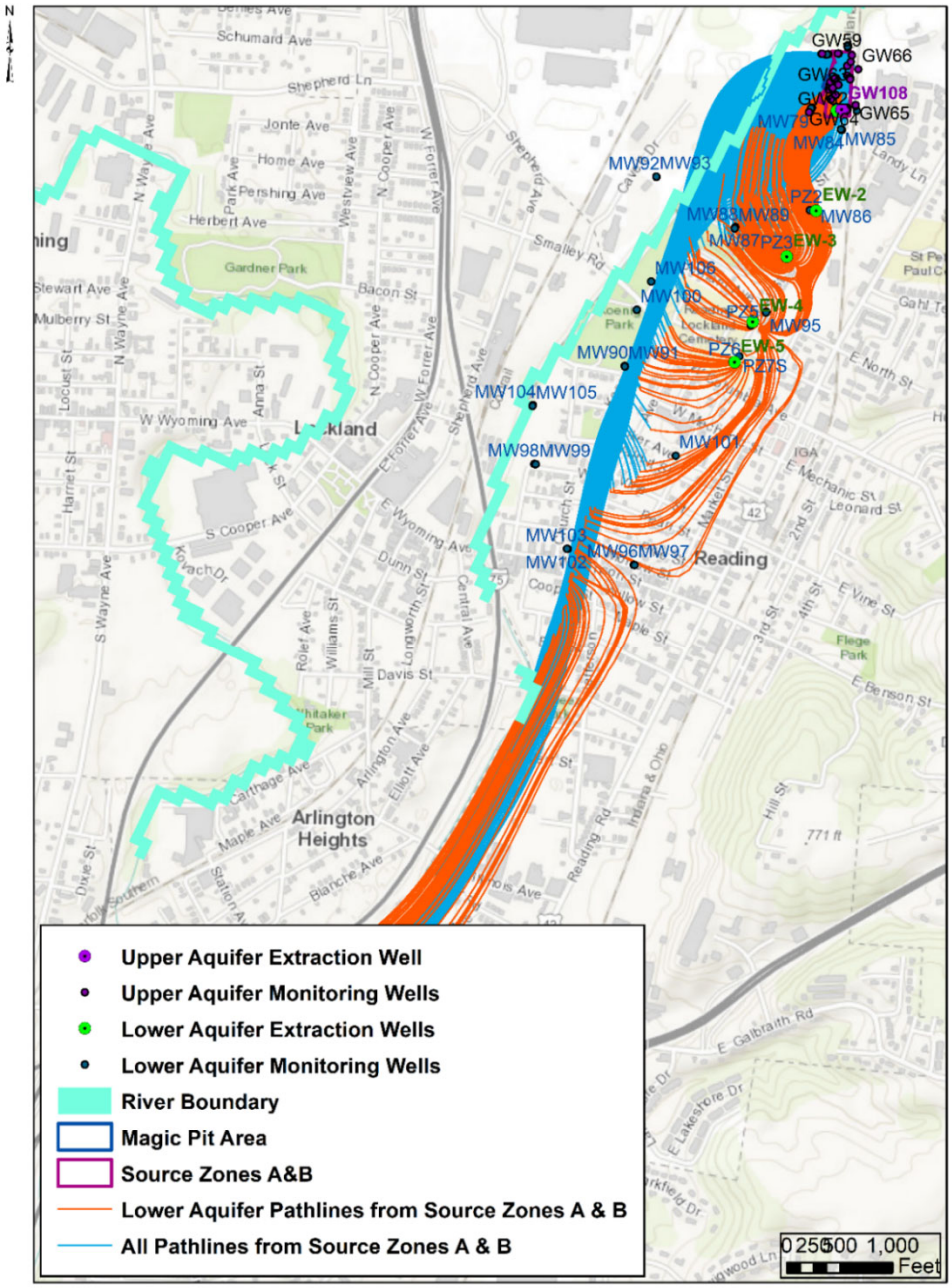

Figure 28(a) Selected Model -- Particle Traces from the Source Zones A and B (historical average pumping rates)

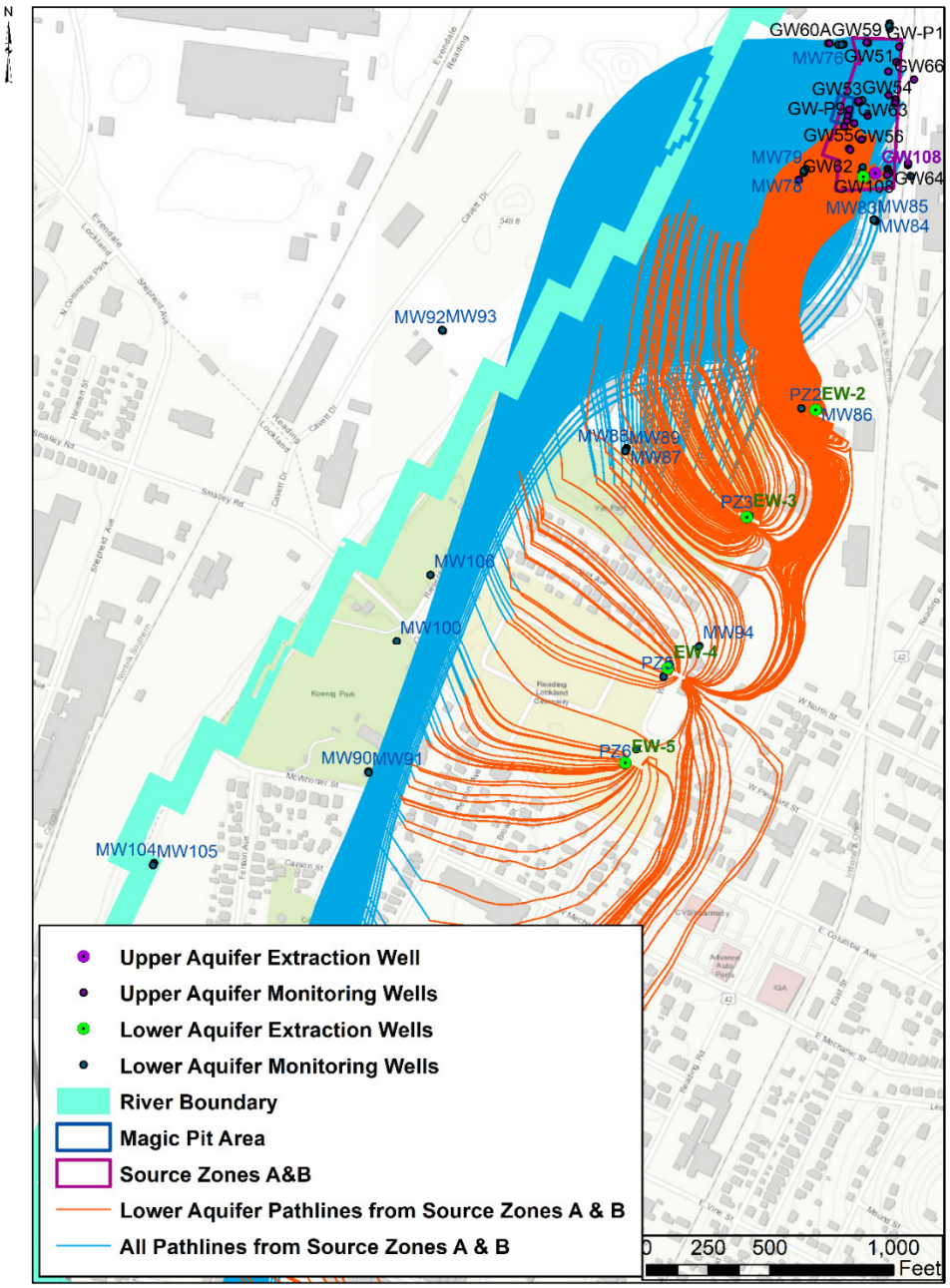

Figure 28(b) Selected Model -- Particle Traces from the Source Zones A and B (historical average pumping rates)

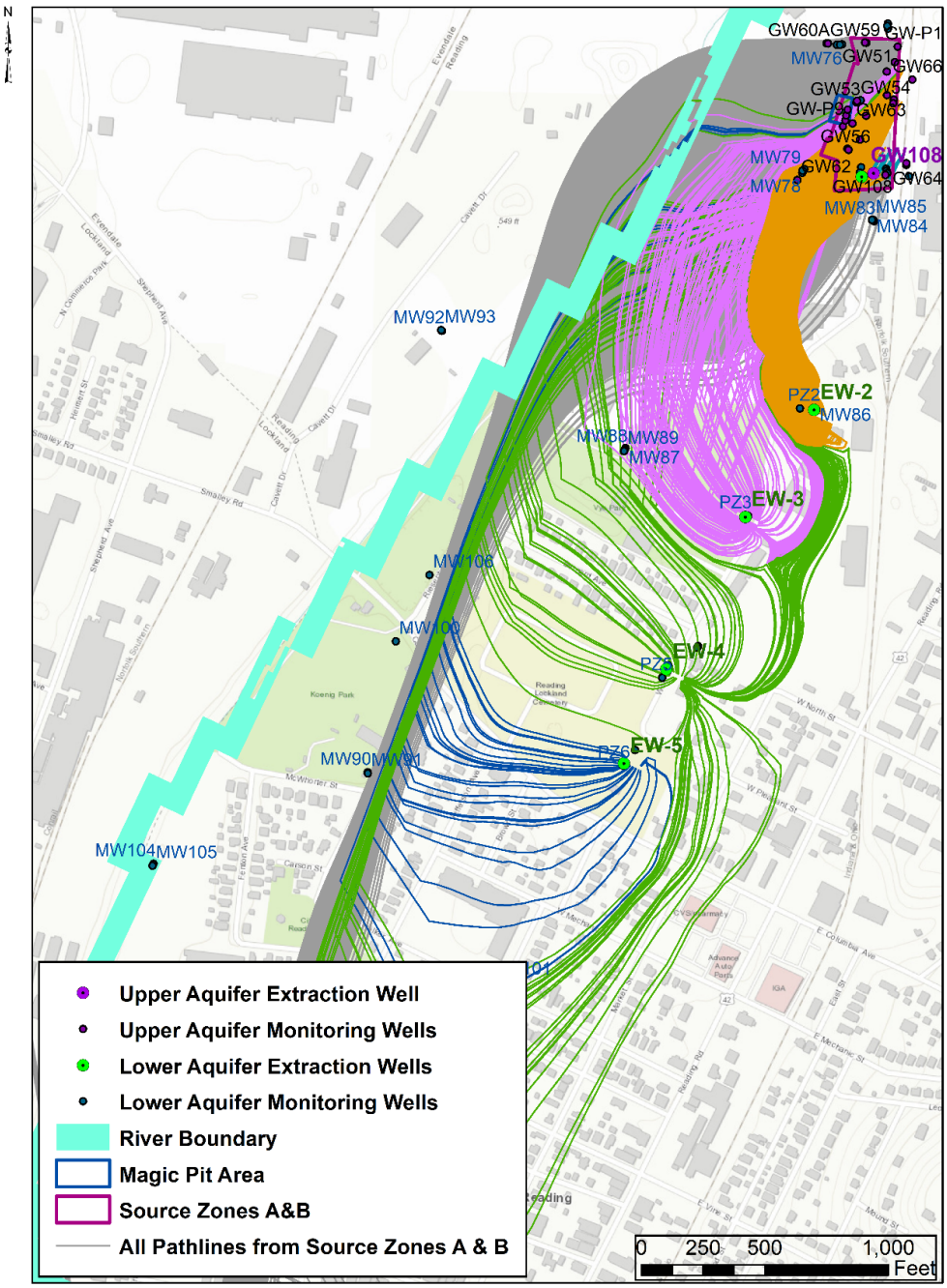

Figure 28(c) Selected Model -- Particle Traces from the Source Zones A and B (different colors assigned to particles captured by different wells, historical average pumping rates)

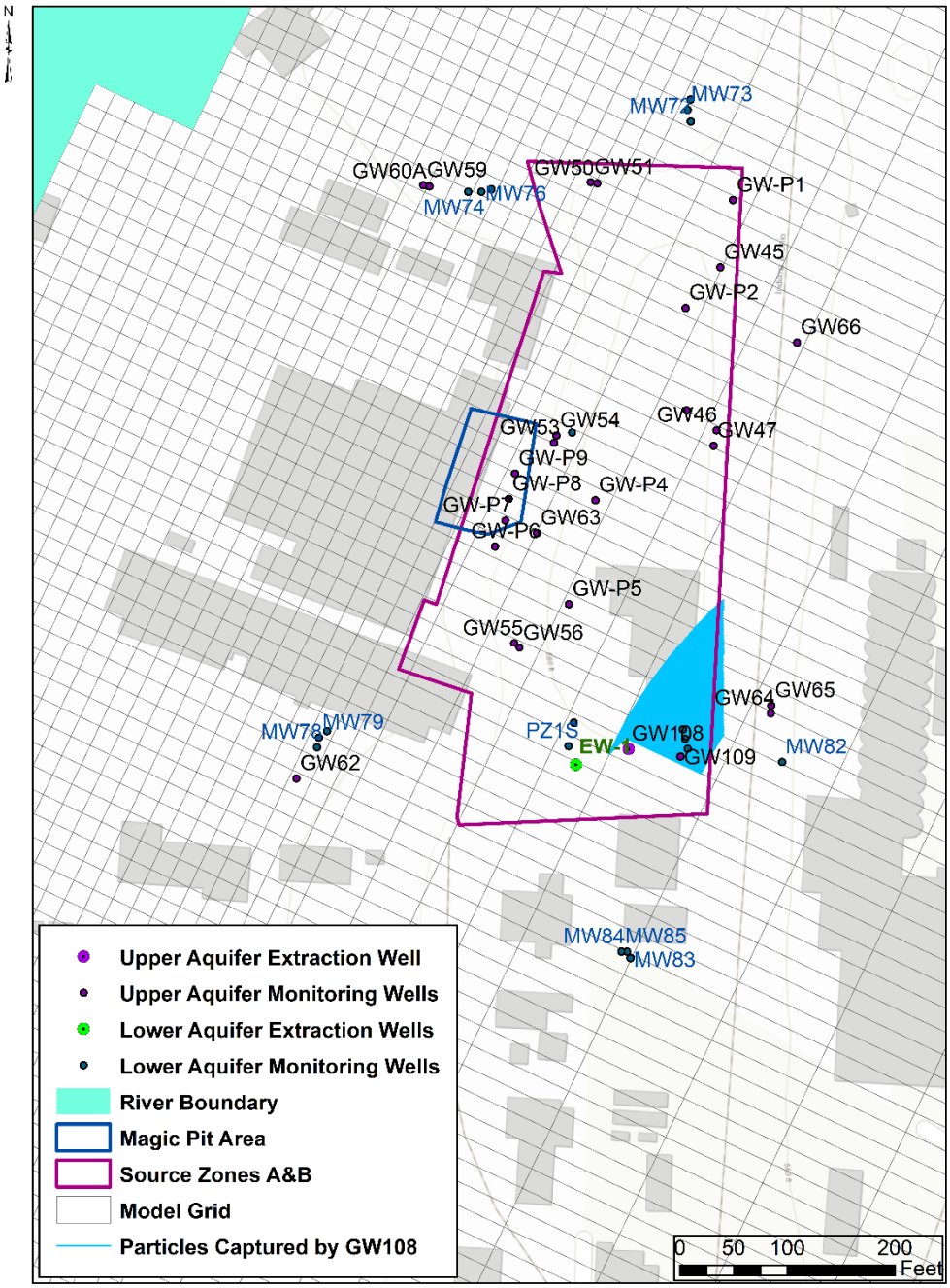

Figure 29 Selected Model -- Particle Traces Captured by Wells GW108 (UA) and EW1 (LA) (no capture by EW1, historical average pumping rates)

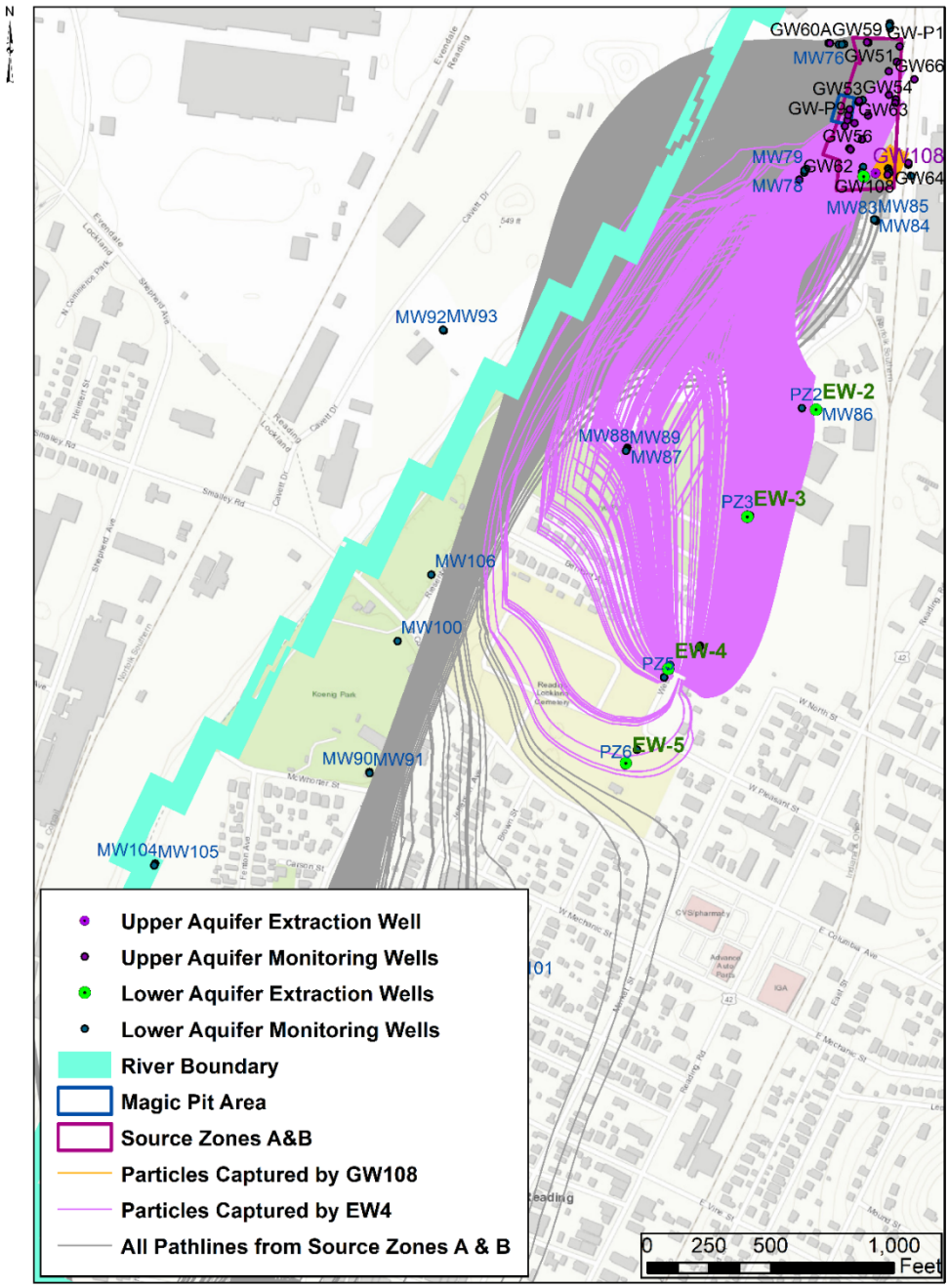

Figure 30 Selected Model -- Particle Traces from the Source Zones A and B (current pumping scenario)

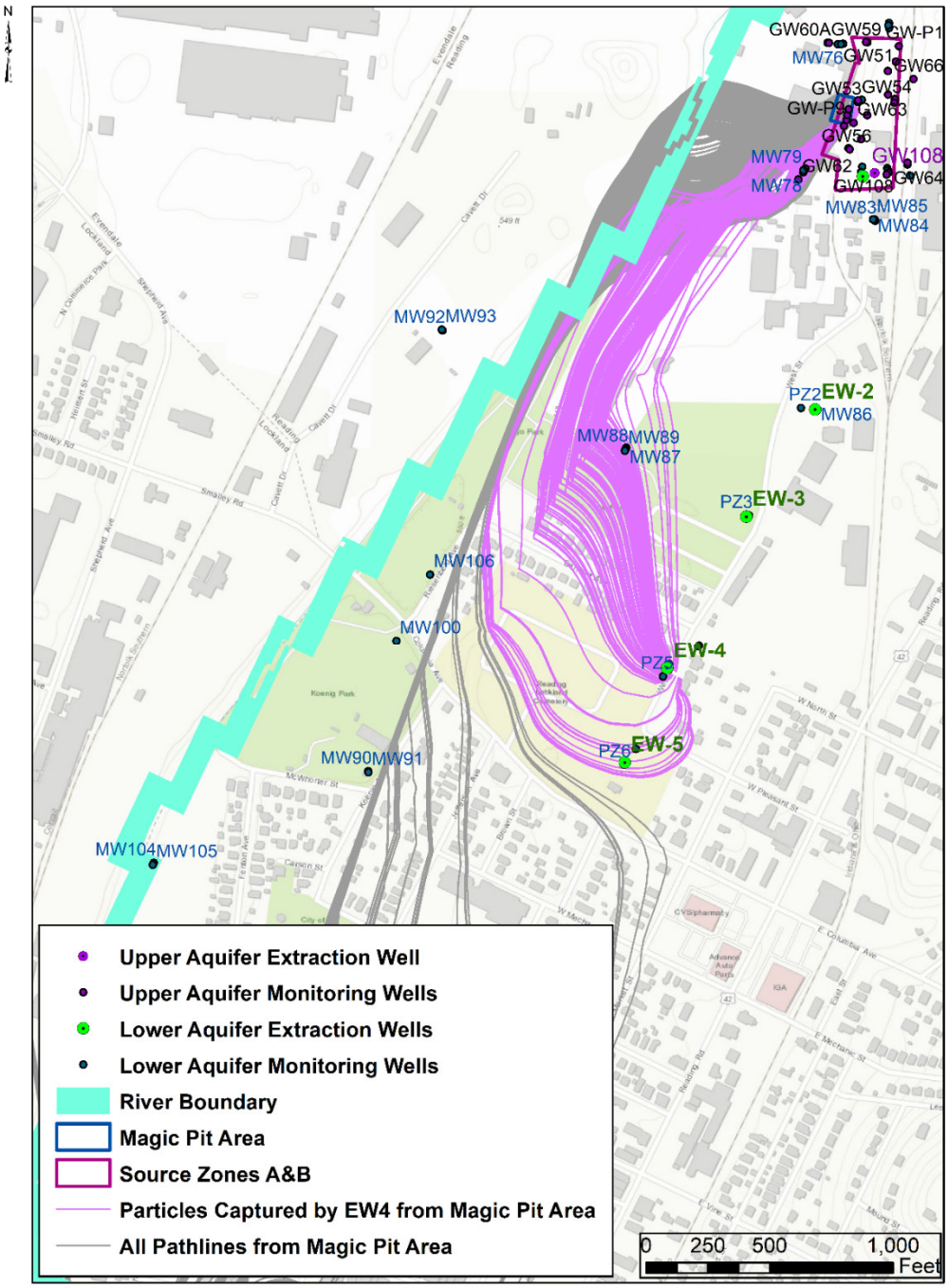

Figure 31 Selected Model -- Particle Traces from the Magic Pit (current pumping scenario)

Hydraulic Connection between Shallow Wells GW53 and GW63 and the Lower Aquifer

A review of groundwater monitoring data from the network of shallow monitoring well identified recent elevated concentrations of 1,2-dichloroethane in wells GW53 (until recently above its MCL of 5 µg/L) and GW63 (above MCL and as high as 570 µg/L in February 2017) (see Figures 32 and 33, respectively).

Figure 34 illustrates the trajectory of particles released at the water table in the vicinity of wells GW53 and GW63 (selected model and historical pumping regime). Note that no particles are captured by shallow wells GW108 or EW1.

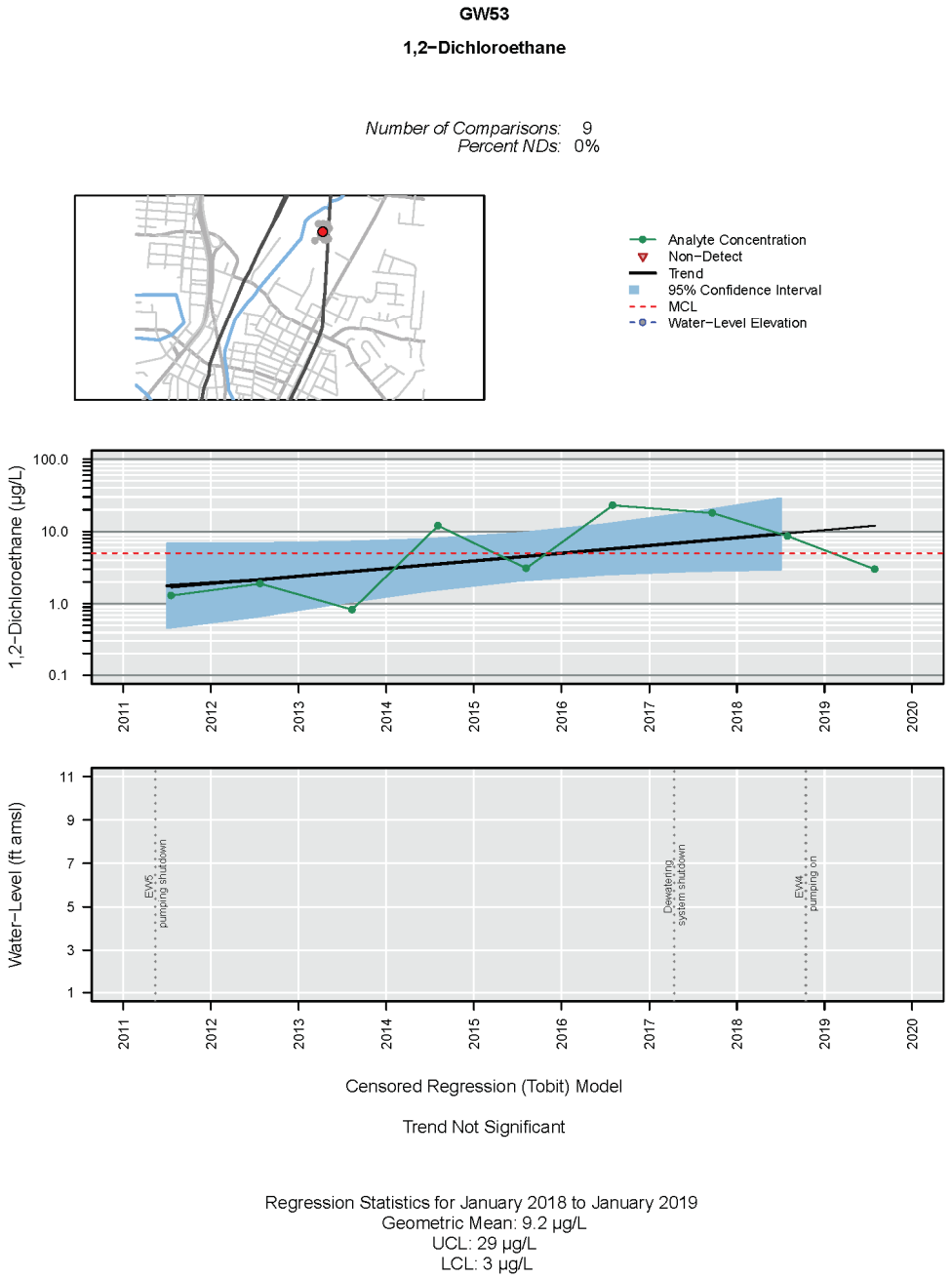

Figure 32 Concentrations of 1,2-Dichloroethane in Monitoring Well GW53

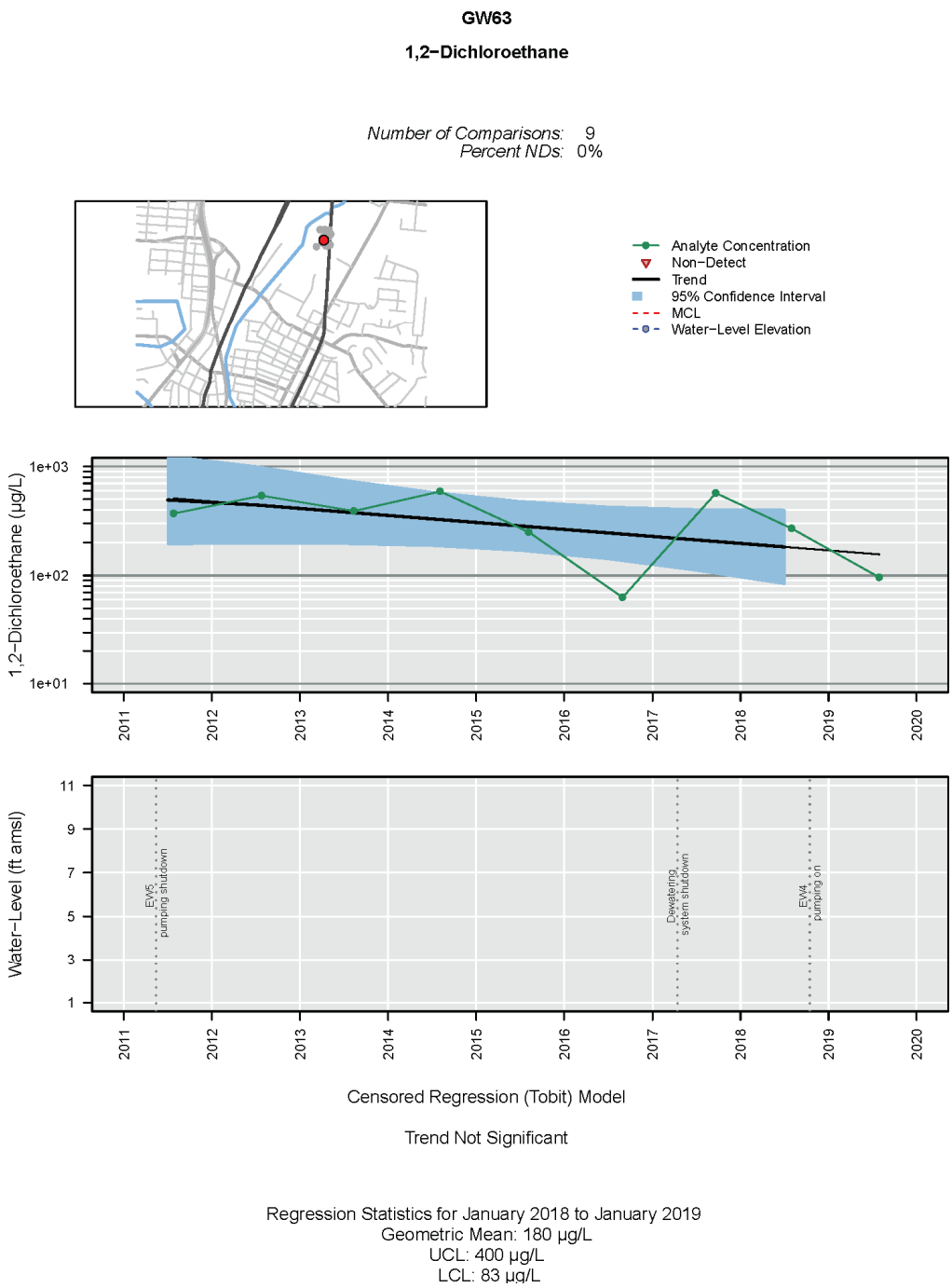

Figure 33 Concentrations of 1,2-Dichloroethane in Monitoring Well GW63

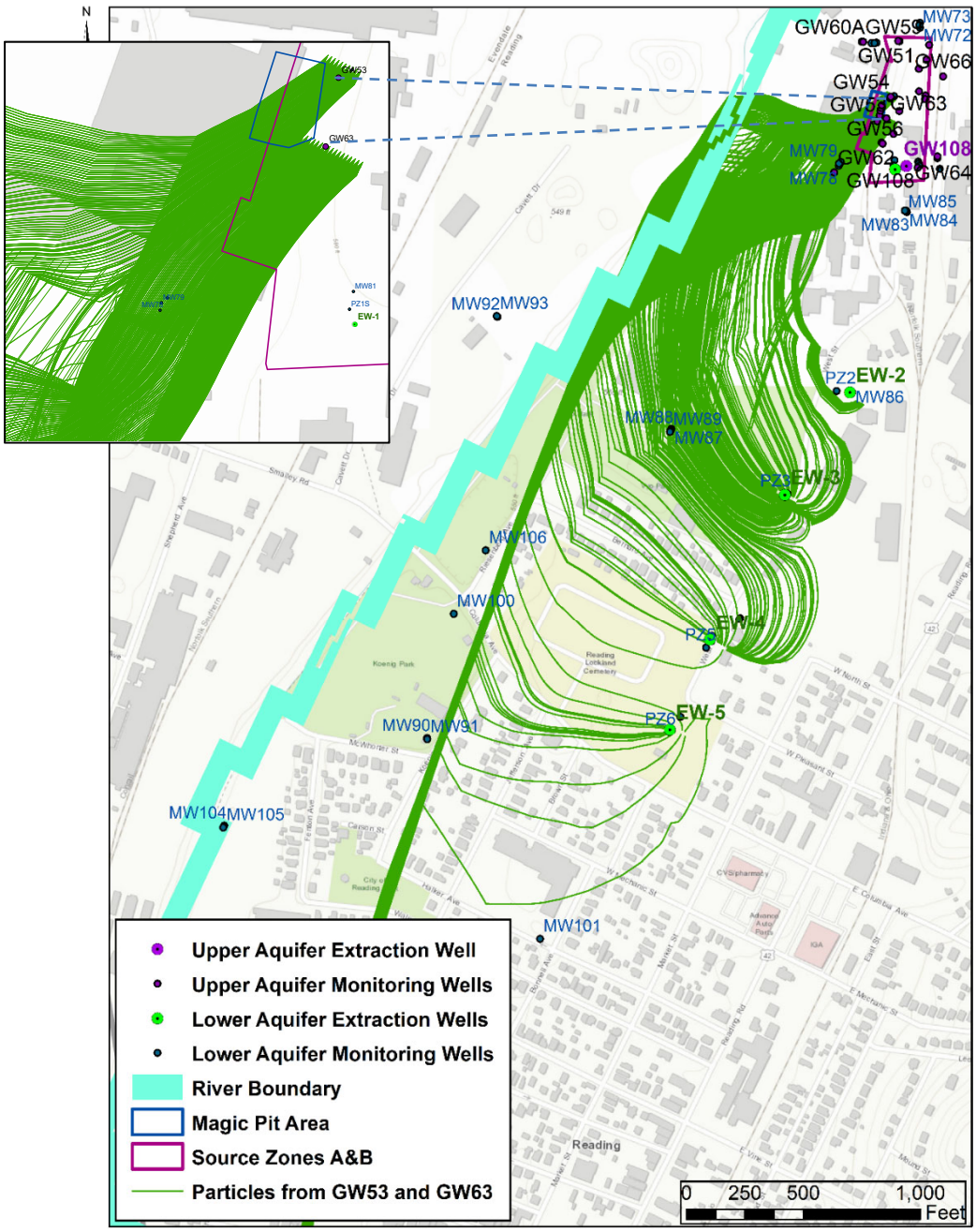

Figure 34 Selected Model -- Particle Traces from Monitoring Wells GW53 and GW63 (historical pumping scenario)

Identification of Data Gap

Figures 35 and 36 below show that the contrasting hydraulic conductivities included in the model caused the pathlines released from the source zones to travel westward before being captured in the extraction wells located to the south. Figure 37 shows that no monitoring wells are located in this area. The installation of monitoring wells is recommended to fill this gap in data.

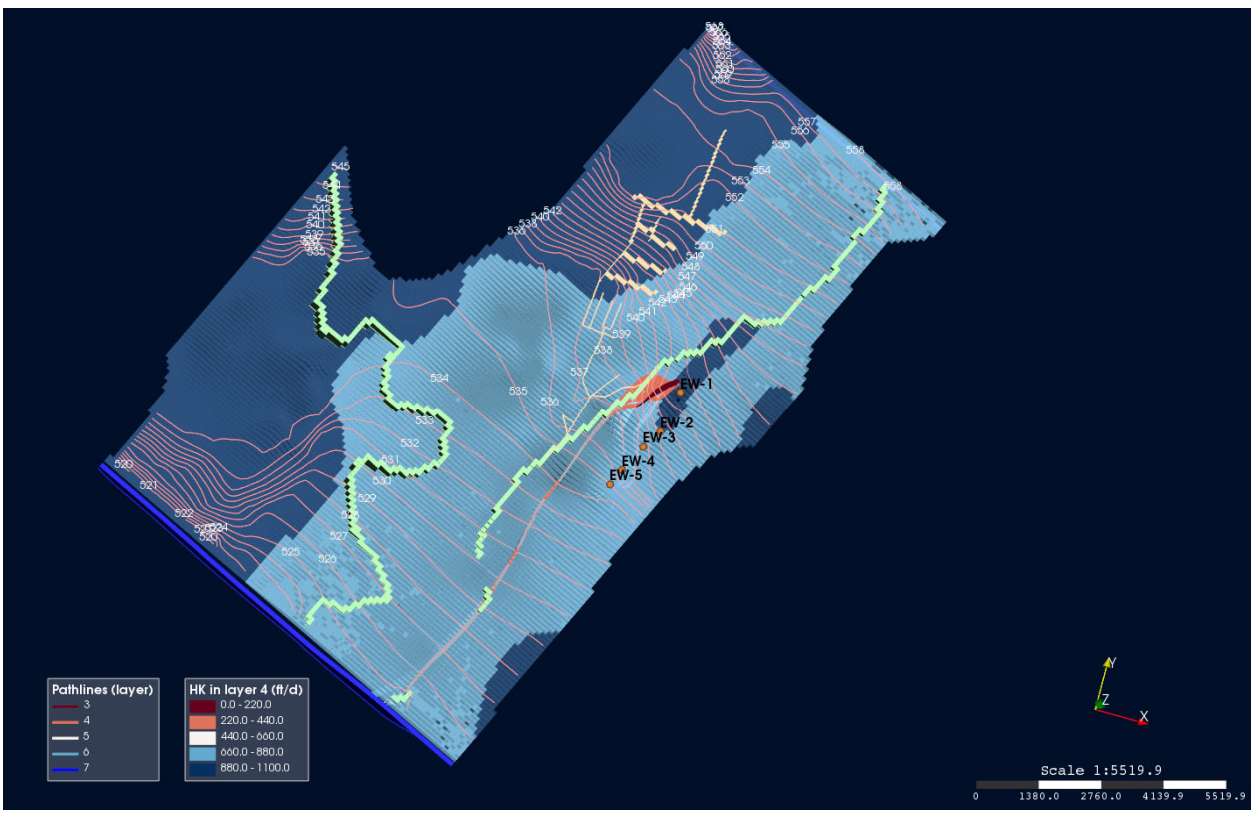

Figure 35 Influence of Hydraulic Conductivities in Model Layer 4 on Pathlines Trajectories

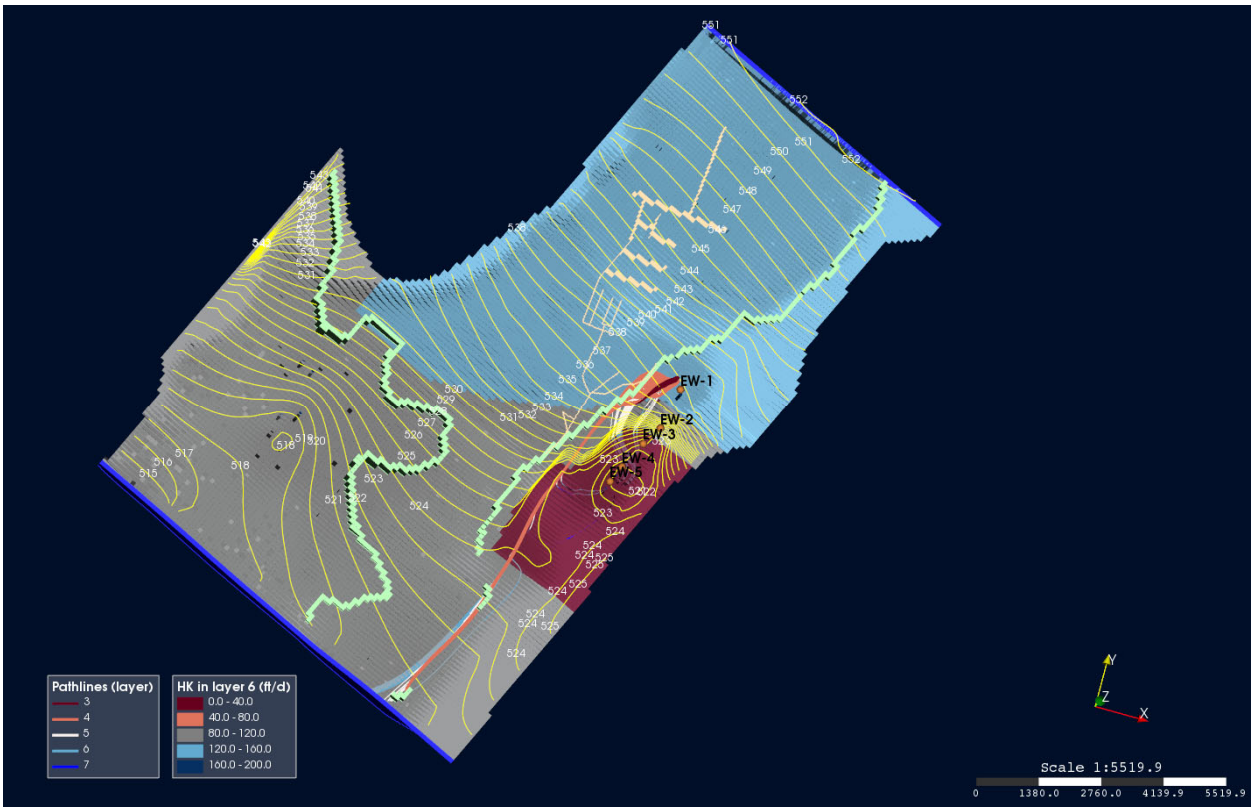

Figure 36 Influence of Hydraulic Conductivities in Model Layer 6 on Pathlines Trajectories

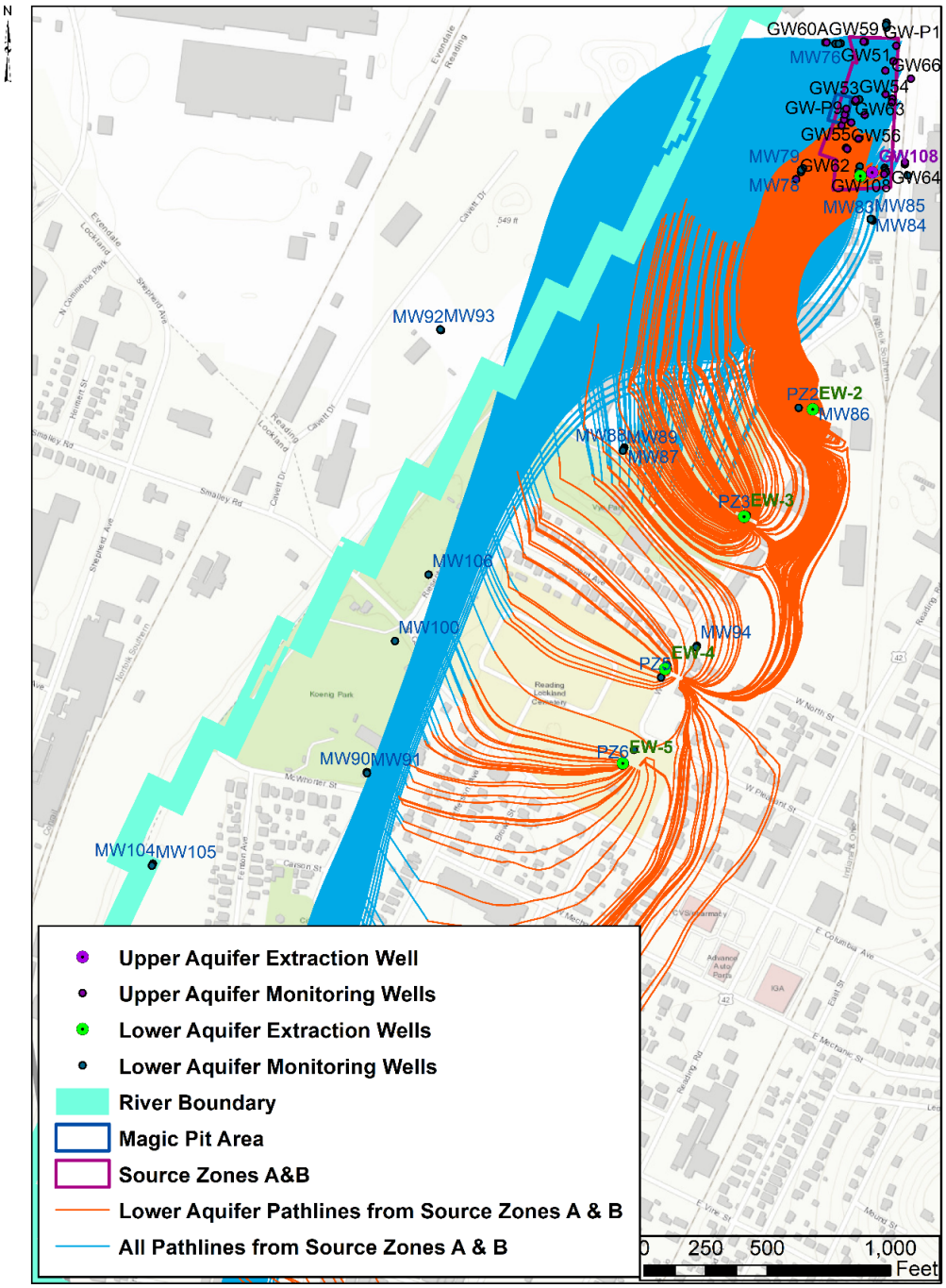

Figure 37 Particle Traces from the Source Zones A and B and Monitoring Network

Concentration Trend Analyses

Finally, SSP&A is providing the results of a preliminary analysis of groundwater concentration trends collected at the site. Two periods were considered for the calculation of trends: all available data and post-2011 (i.e., after shutdown of EW5). Trends were calculated for 7 volatile organic chemical (VOC) constituents present in groundwater.

Methodology

This section describes the method used to calculate concentration trends to evaluate whether changes in site conditions are reflected in groundwater monitoring and if water quality sample results from monitoring wells are progressing toward the attainment of remedial action objectives (RAOs). The methods used in this preliminary analysis were originally developed for and applied at the U.S. Department of Energy (DOE) Hanford Site (CH2M, 2015) in accordance with guidance provided by the U.S. Environmental Protection Agency (EPA), as cited throughout and incorporated in the list of references. The approach is consistent with established guidance and can incorporate independent (covariate) information in a statistically rigorous manner, as detailed below.

Background

Numerous guidance documents describe the assessment of progress toward and attainment of RAOs, and the use of statistical methods for this purpose. Much of the guidance relates to the performance assessment of monitored natural attenuation (MNA). However, the methods are applicable to a range of remedial technologies. The published guidance collectively provides a framework for undertaking statistical analyses to support the assessment of remedy progress. The EPA Guidance for Evaluating Completion of Groundwater Restoration Remedial Actions (Office of Solid Waste and Emergency Response [OSWER] directive 9355.0-129) published in 2013, recommends evaluating data on a well-by-well (i.e., intra-well rather than inter-well) basis separately for each COC to evaluate progress toward RAOs. Following this guidance, OSWER 9283.1-44, Recommended Approach for Evaluating Completion of Groundwater Restoration Remedial Actions at a Groundwater Monitoring Well, published in 2014 (U.S. EPA, 2014a), distinguishes two stages in the assessment of remedy performance — the 'remediation monitoring phase' and the 'attainment monitoring phase.' It re-emphasizes the importance of well-by-well data evaluation and states that attainment monitoring should be conducted "separately for each COC at each well". Further, OSWER 9283.1-44 states that the goal is to meet and to continue to meet cleanup levels, in part by using the data to discern trends.

With regard to discernment of trends, Dr. John T. Wilson of the EPA provides the following useful qualitative advice on trend analysis in response to the question, "What does it mean to have a clear

and meaningful trend?" Dr. Wilson replies "The first order rate constant for attenuation over time is greater than zero at some predetermined level of confidence" (Wilson, 2008). Dr. Wilson provides further guidance on the calculation of trends in EPA 600/R-11/204, An Approach for Evaluating the Progress of Natural Attenuation in Groundwater (Wilson, 2011). In the particular context of MNA, that guidance re-asserts the goal of determining whether MNA "continues to perform as expected and whether the recent performance … is adequate to meet the cleanup goals." It is also stated that the analysis must account for changes in attenuation rates, especially temporary trends due to other influences such as high water tables, depletion of geochemical substrates, and effects of active source control; and that "[t]he entire record should be evaluated unless there is a significant change in conditions at the site that justifies using some smaller portion of the record." In other words, it is important to separate a long-term attenuation rate from transient effects on concentrations versus time, and to evaluate and account for changing conditions that affect changes in concentration, so that the underlying long-term trend can be properly determined.

At least two EPA documents tackle the issue of periodic or cyclical (e.g., seasonal) concentration variations that may result from external ("independent") processes such as water level changes or precipitation. For example, EPA/600/R-04/017 (Performance Monitoring of MNA Remedies for VOCs in Ground Water [Pope, 2004]) presents a schematic to illustrate how concentrations are affected by changing groundwater levels in response to seasonal precipitation patterns.

With regard to sample frequency and data sufficiency, OSWER directive 9200.4-17P (EPA, 1999) asserts "it may be appropriate to decrease the monitoring frequency at some point in time, once it has been determined that natural attenuation is progressing as expected and very little change is observed from one sampling round to the next. In contrast, the monitoring frequency may need to be increased if unexpected conditions (e.g., plume migration) are observed." OSWER 9283.1-44 recommends that statistical analyses should generally be based upon a data set comprising at least eight data points. However, during his 2008 presentation, Dr. John T. Wilson concluded that eight samples would have failed to detect attenuation at many sites. As a result, more than eight samples may be necessary to clearly identify attenuation because small data sets can potentially be misleading and lack the power to detect subtle changes. The method proposed in this document can often mitigate this difficulty by combining, rather than separating, estimation of the trend and the mean sample statistics (such as the upper confidence limit [UCL] estimate for the mean).

Trend Testing and Slope Estimation

The analysis of representative concentrations and trends, together with confidence limits, is important to both the remediation and attainment monitoring phases. A range of methods exists for estimating a representative (mean) concentration, determining whether a trend is present in sample data and estimating the slope of the trend where present, and for calculating confidence limits for these parameters. Non-parametric methods are often used to detect the presence of a

trend and to quantify the slope of the trend when a large number of measurements are reported as non-detects. These methods include the Mann-Kendall (standard or seasonal) trend test, which identifies the presence of a trend but does not quantify the slope; and, the Theil-Sen trend estimator (standard or seasonal), which estimates the slope value. These tests are typically conducted on the (natural) logarithm of the concentration value, rather than the native concentration value, consistent with EPA guidance. These methods are strictly applicable in the case of a consistent monotonic trend in either the entire data set or within seasonal subsets that can be separated and analyzed.

In some instances, trends may not be monotonic in either the entire data set or within seasonal subsets. This occurs when changes in concentration are related to other factors, such as the impact of a remedy or changes in groundwater levels. In such cases, the influence of these other factors may be incorporated in the trend analysis procedure by presenting them as an independent variable (or 'covariate'). Doing so enables influencing factors to be used as covariates in the detection of a trend and estimation of the slope, and in the calculation of a statistic representing the mean concentration over a defined time period. The most commonly-applied of these procedures is Ordinary Least Squares (OLS). However, some of the assumptions that underlie OLS can limit its application: in particular, multiple regression methods based on OLS cannot be directly applied to censored data (such as non-detects [NDs]) in a manner that achieves consistent results.

However, there are parametric regression techniques that can accommodate a fairly high proportion of censored data (non-detects), a particular example of which is the Tobit family of regression models, which is a special case of a censored regression model that assumes a normally distributed error (residual) and can accommodate low- or high-end tailing (censoring). The interpretation of a Tobit model is similar to that of an OLS fit. As with OLS, the Tobit model assumes that the observed dependent variable is produced via a linear model of the form $Y = X\beta + \varepsilon$; however, the measured values Y may be censored at levels that are independent of their actual values. Like OLS, the Tobit model performs well in the case of homoskedastic normal errors, but its performance can diminish in the presence of heteroskedastic or non-normal errors.

There are cases when a statistically significant rate of attenuation can be calculated based on short-term data, but rates calculated based on longer-term data sets may not be statistically significant. This usually occurs following a substantial change in the system being monitored, such as active remediation. The converse can also occur, where long-term data exhibit a trend, but recent data do not. This phenomenon can be indicative of tailing. It is, therefore, important to determine the appropriate data set to perform statistical analysis in order to calculate meaningful attenuation rates and evaluate the efficacy of the attenuation processes. For that reason, pre-/post-source-removal trends should be analyzed to discern the appropriate period of the historical record to conduct trend and means tests.

Calculation of Trends using the Tobit Method

Because of its similarity to OLS, ability to incorporate covariates in the estimation process, and desirable properties in the presence of censored data, the Tobit family of censored (parametric) regression models was used to estimate trends at the Pristine site. Because historical sample data indicate that some constituents exhibit variability that results from changes in groundwater levels, this was incorporated using the Tobit model, to obtain estimates of the trend that consider this effect of variation in groundwater levels. Following EPA guidance, trend analysis using the Tobit censored regression was used to assess trends in the natural logarithm of the constituent concentration.

For the Pristine site, two periods were considered for the calculation of trends: pre- and post-June 26, 2008 (i.e., prior to and following the end of the period of Foundry demolition). Trends were calculated for the following chemicals, at a total of 57 groundwater monitoring wells (cleanup goals specified in the Record of Decision [ROD, U.S. EPA, 1997] are indicated where available):

- 1,1-Dichloroethane
- 1,2-Dichloroethane
- Chloroethane
- Cis-1,2-Dichloroethene (Cleanup Level of 70 µg/L for the total of cis- and trans-1,2-Dichloroethene)
- Trichloroethene (TCE, Cleanup Level of 5 µg/L)
- Tetrachloroethene (PCE, Cleanup Level of 5 µg/L)
- Vinyl Chloride (Cleanup Level of 2 µg/L)
- Total VOCs

Trends are calculated using a minimum of 6 samples, with the caveat that the post-2011 samples only consider samples collected after May 2011. Also, the dataset must have greater than a 50% detection rate for the trend to be calculated.

Appendix B contains maps prepared from the output of the trend calculations, each page contains the following elements:

- Top left – map showing location of the monitoring well sampled;
- Top right – legend;
- Top graph – trend analysis, semi-log, assuming no water level influence;
- Middle graph – trend analysis, semi-log, assuming there is a water level influence (included in the trend analysis);
- Bottom graph – water level elevations;

- Bottom text -- trend equations for the pre- and post-demolition periods including water level as a covariate.
- Regression statistics (including water-level as a covariate)
- On the bottom water level graph, vertical text indicates the approximate timing of changes in pumping schedules at the site.

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Attachment A: Extension and re-calibration of the GE model – Pristine, OH

Attachment B: Trend Graphs

Attachment A

Extension and Recalibration of the GE Model – Pristine, OH

S.S. PAPADOPULOS & ASSOCIATES, INC.
Environmental & Water-Resource Consultants

Attachment A

Date: October 30, 2019

From: Xiaomin Wang, Dominique Sorel and Matt Tonkin (SSP&A)

To: Judy Canova and David Wilson (USEPA Region V)

Project: SSP-1453, Task 39

Subject: **Extension and re-calibration of the GE model – Pristine, OH**

SSP&A has extended and re-calibrated a groundwater flow model for the Pristine Superfund site in Reading, Ohio, based on an existing model from the neighboring GE Aviation Site. In this memorandum, a description of the flow model is provided, including the design of the original 2011 GE Aviation Site model (designated as GE model) and SSP&A's modifications to the model. Detailed information on the data sources supporting the development of the GE model and the model calibration process is presented in O'Brien and Gere (2011).

Groundwater modeling of the GE Aviation Site and the Pristine Site has been an iterative process and this memorandum documents the most recent modifications. The first three-dimensional regional groundwater flow model was developed by CRA for the Pristine Site (CRA, 2004). The GE Aviation Site model was refined in 2011 incorporating aspects of the 2004 CRA groundwater flow model, foremost the geology (O'Brien and Gere, 2011). SSP&A used the 2011 GE Aviation Site model in its 2018 evaluation of monitored natural attenuation (SSP&A, 2018). Recently, SSP&A has modified the 2011 GE Aviation Site model to account for discrepancies between the geologic cross sections in the Conceptual Site Model (CSM) Report for the Site (GHD, 2019) and the model layers/hydraulic conductivity zones. In addition, the GE Aviation model has been converted into a transient flow model to evaluate impacts from changes in the pump-and-treat system for the Site.

Geologic and Hydrogeologic Setting

The Pristine Site is located along the east side of the Mill Creek valley. The regional and site geologic conditions are summarized in CRA (2004) and O'Brien and Gere (2011). The simplified hydrostratigraphy incorporated in the 2011 GE conceptual model is shown on Table 1. Seven stratigraphic units are identified. The seven stratigraphic units are lumped into three hydrostratigraphic units.

In their recent Conceptual Site Model (CSM) Report, GHD (2019) presented a stratigraphic interpretation that considers five units within the overburden around the Pristine Site.

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- Fill;
- Upper Lake Sediment (Upper Aquifer);
    - upper outwash lens
    - middle outwash lens
    - lower outwash lens
- Glacial Till;
- Lower Lake Sediment; and
- Lower Outwash (Lower Aquifer).

Table 1 Hydrostratigraphic Interpretations

Stratigraphic Units (GE Model)	**Hydrostratigraphy (GE Model)**
Overburden silty and clay	Upper Aquifer
Perched sand and gravel zone	
Silt and clay of the Upper Confining Layer	
Upper Sand and Gravel (USG)	
Silt and clay of the Lower Confining Layer (LCL)	Leaking Confining Unit
Lower Sand and Gravel (LSG)	Lower Aquifer

Model Design

The GE model is a three-dimensional, steady-state numerical groundwater flow model developed with the United States Geological Survey simulator MODFLOW (Harbaugh and others, 2000). SSP&A has used a modified version of MODFLOW-2000. The modifications include alleviating issues related to drying and rewetting of dry cells in MODFLOW by implementing Newton-Raphson linearization for stable and robust simulation of unconfined flow conditions (Bedekar et al., 2012). The model incorporates a simplified representation of the complex stratigraphy in the greater Cincinnati industrial area in Southwestern Ohio.

The limits of the model domain are shown in Figure 1. The approximate location of the Pristine Site and the boundary conditions for the model are also shown in the figure. No-flow conditions are assigned along the western and eastern sides of the Lower Aquifer (LA) between the limits of the model and the intersection of the LA with the bedrock valley wall. It is assumed that there is negligible flow in the bedrock. Specified-head conditions are assigned along the northern and southern boundaries of the active model domain. These conditions simulate the general southwesterly direction of groundwater flow. River boundary conditions are assigned in the model representing Mill Creek and West Fork Mill Creek. A general head boundary condition is incorporated along the portion of the western side of the model where the West Fork Mill Creek enters the model domain. The sanitary sewer system is represented by a drain boundary condition.

The finite-difference grid for the model is shown in Figure 2. The grid spacing at the Pristine Site and its vicinity is 1.33 m by 20 m. The grid spacing increases to 100 m×100 m away from the Site. The grid contains 280 columns in the x-direction (east-west) and 435 rows in the y-direction (north-south).

In the GE model the overburden is divided into seven layers as shown on Table 2. It is important to note that the GE stratigraphic designations are not directly comparable with the GHD (2019) interpretation. Approximation correlations are indicated on Table 2. The GHD conceptualization of the Upper Lake Sediments is evidently an oversimplification with respect to the GE stratigraphic interpretation. As indicated previously, GHD identified three subunits within the Upper Lake Sediments (upper outwash lens, middle outwash lens, and lower outwash lens). However, these subunits are not included explicitly in any model.

Table 2 Layers in the GE model

GE Model Layer	GE Stratigraphic Unit Designation	GHD Rough Equivalent
1	Overburden silty and clay	
2	Perched sand and gravel zone	
3	Silt and clay of the Upper Confining Layer	
4	Upper Sand and Gravel (USG)	Upper Lake Sediments
5	Silt and clay of the Lower Confining Layer (LCL)	Glacial Till
6	Lower Sand and Gravel (LSG)	Lower Lake Sediments/ Lower Outwash
7	Lower Sand and Gravel (LSG)	

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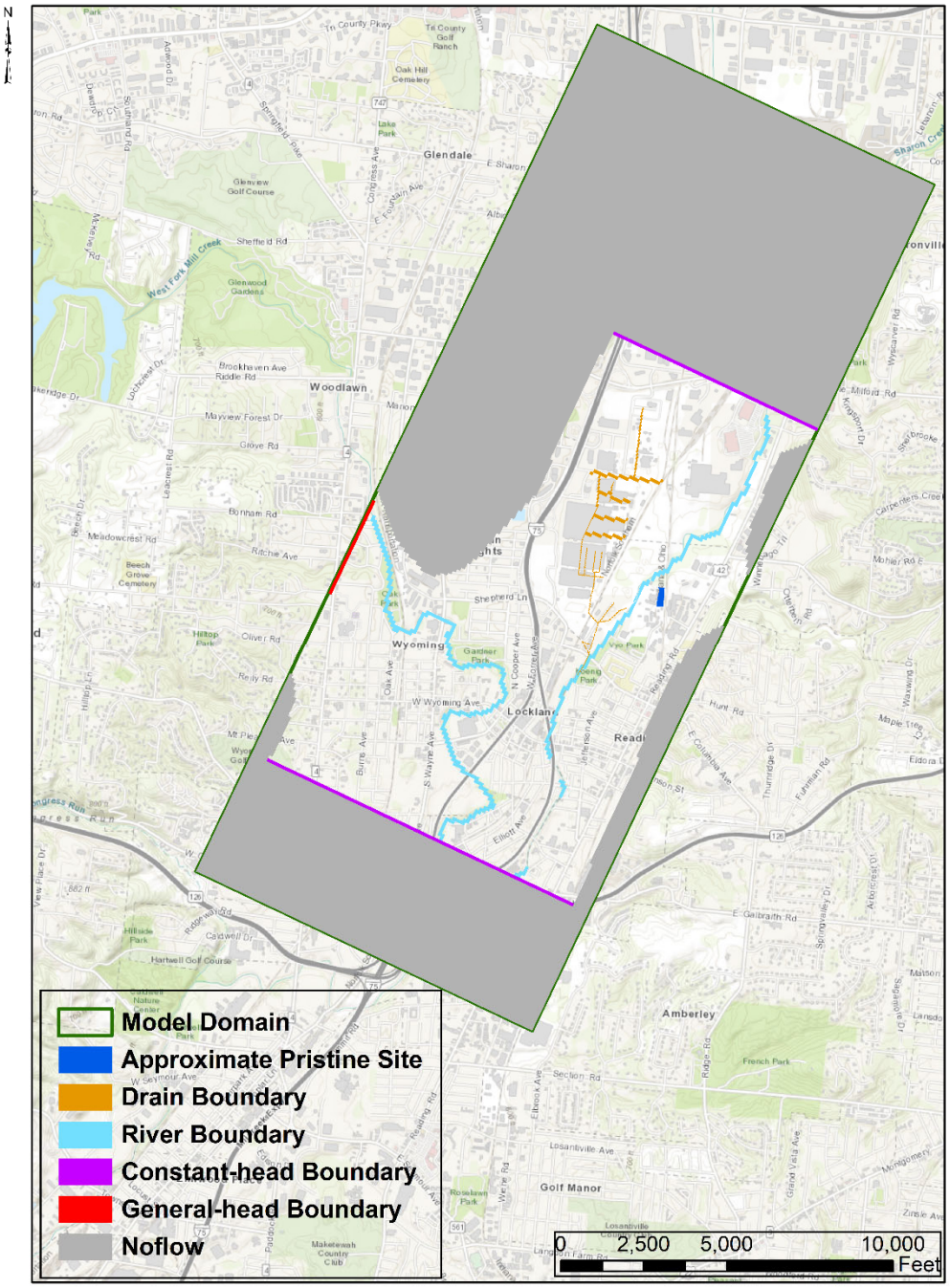

Figure 1 Model Domain and Boundary Conditions

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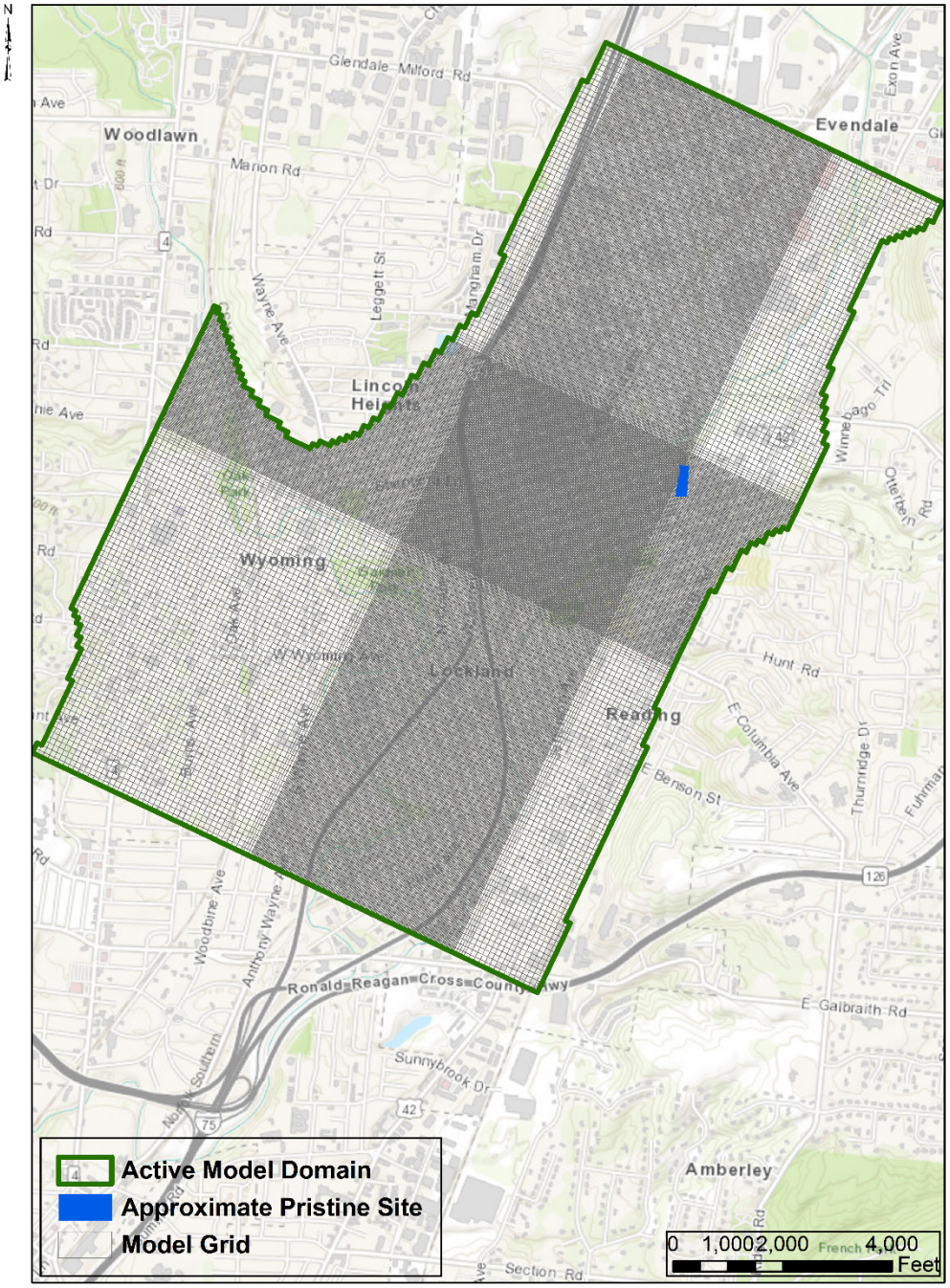

Figure 2 Finite-Difference Model Grid

Initial Values of Model Parameters

The key parameters assigned in the three-dimensional groundwater flow model are:

- Recharge;
- Horizontal hydraulic conductivity of each hydrostratigraphic unit, K_H; and
- Vertical hydraulic conductivity of each hydrostratigraphic unit, K_V;

Recharge

The total average annual precipitation is approximately 40 inches. Fidler (1970) suggested that only six inches of the average annual precipitation infiltrates to the groundwater. In the 2011 GE model, two additional recharge zones were added with recharge rates of 2 inches/year and 36 inches/year, shown in Figure 3. The high recharge zone (36 inches/year) was incorporated in the model to represent leakage from the sewer system into the subsurface. The low recharge zone (2 inches/year) in the southwestern region of the model was added based on the 2010 focused calibration of the 2011 GE model.

Hydraulic conductivity

The hydraulic properties of the 2011 GE model were derived from the 2010 focused calibration (O'Brien & Gere, 2011). The range of the hydraulic conductivity values inferred from the focused calibration were supported by interpretations of pumping tests summarized in O'Brien & Gere (2008), Hydraulic Control IRM Work Plan (O'Brien & Gere, 2009), and the Hydrogeologic Modeling Report (CRA, 2004). The horizontal and vertical hydraulic conductivities of the model from layer 1 to layer 7 are presented in Figures 4a – 4g, reproduced from O'Brien & Gere (2011). The anisotropy ratios, defined as the ratio of the horizontal and vertical hydraulic conductivities, vary over relatively wide ranges, from 10 to over 1,000.

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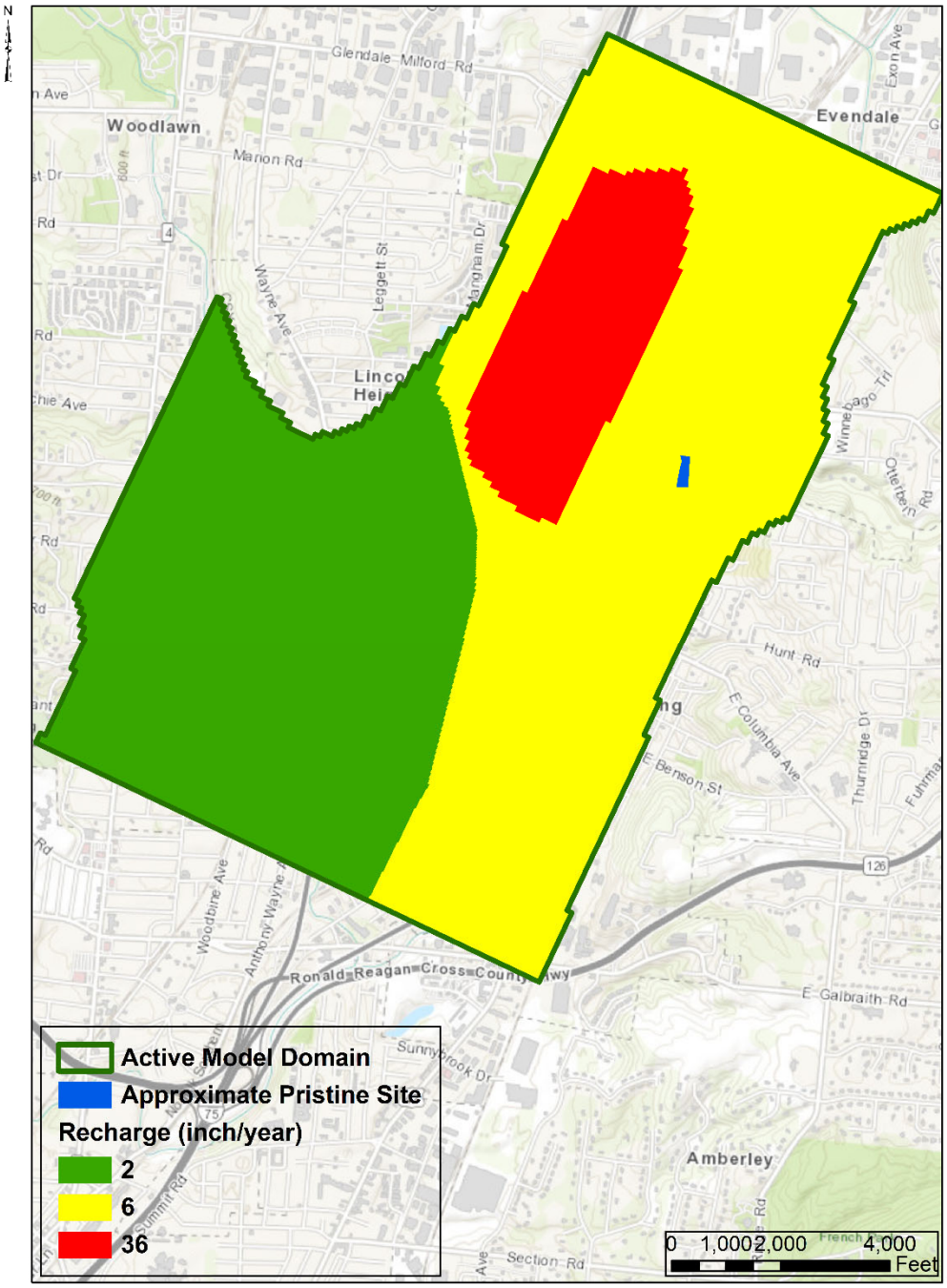


Figure 3 Model Recharge Rates

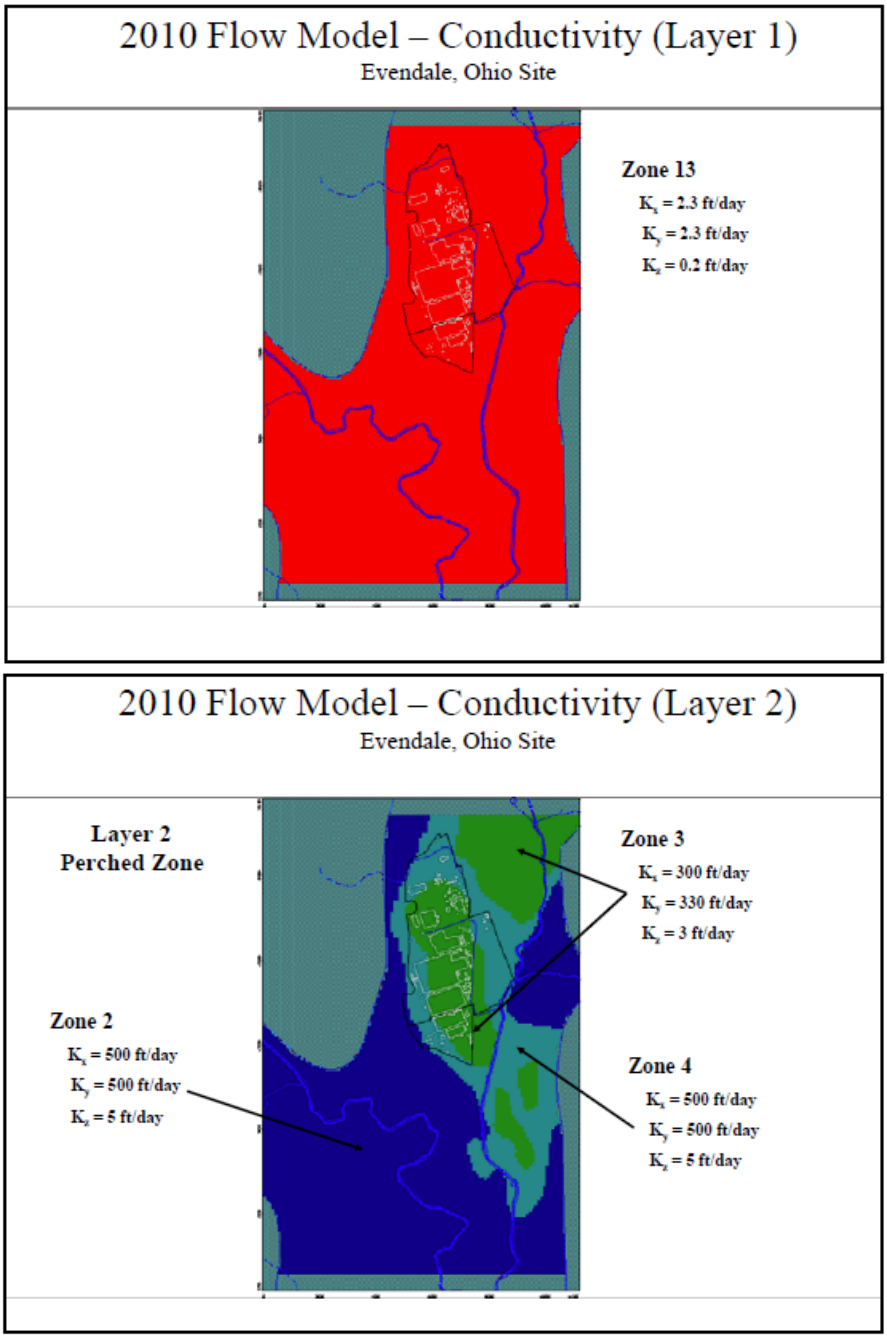
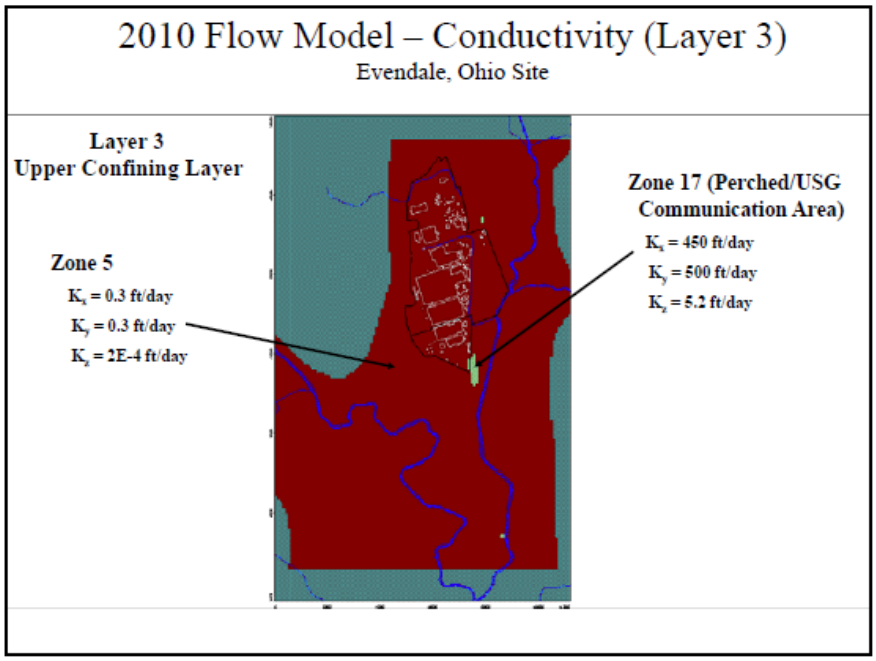


Figure 4a, b Hydraulic Conductivities in (a) Layer 1 and (b) Layer 2



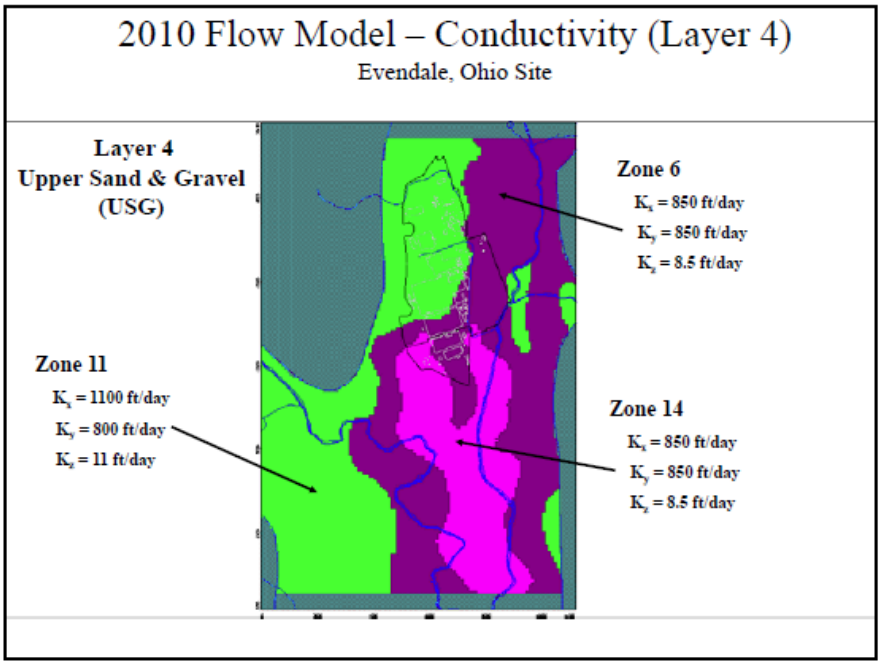
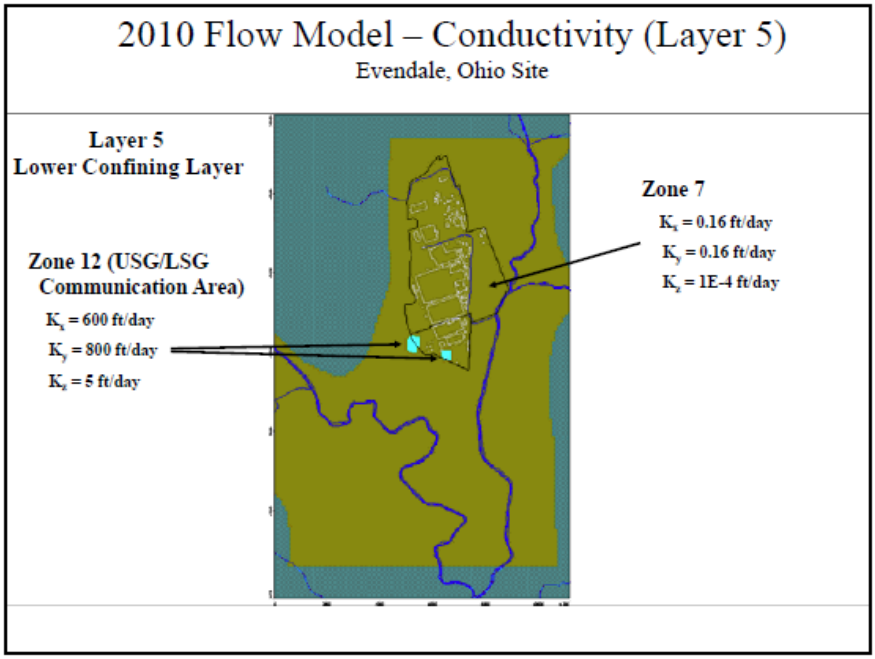


Figure 4c, d Hydraulic Conductivities in (c) Layer 3 and (d) Layer 4



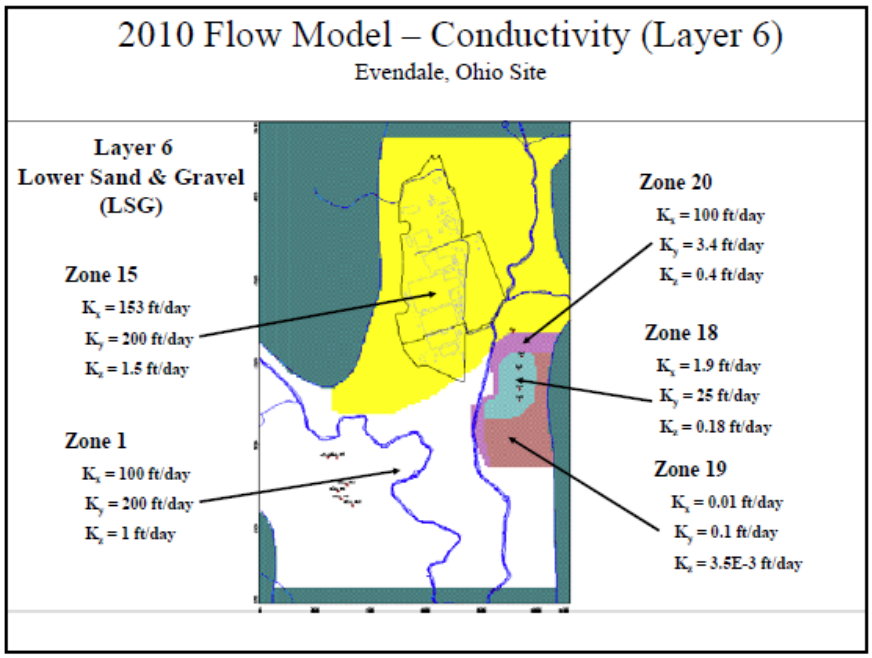


Figure 4e, f Hydraulic Conductivities in (e) Layer 5 and (f) Layer 6

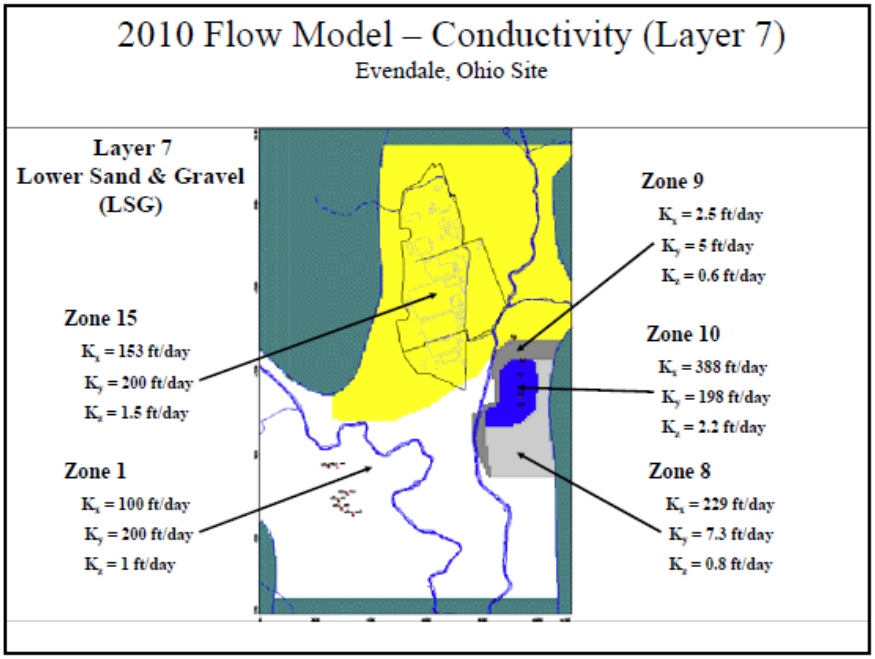


Figure 4g Hydraulic Conductivities in Layer 7

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SSP&A's Modification of the Geologic Surfaces

To assess whether the 2011 GE model was consistent with the updated stratigraphic information of the Site, SSP&A extracted the model surfaces along the geologic cross-section locations provided in Figure 2.6 of GHD (2019) and compared the model surfaces against the geologic cross-sections included in the CSM report (Figures 2.7a- 2.7f of GHD, 2019). A comparison of the surfaces revealed that the model surfaces were generally consistent with the geologic surfaces, with the exception of the USG and LCL surfaces presented on GHD cross-section B-B' (GHD, 2019; Figure 2.7b). Cross-section B-B' is reproduced in Figure 5. The 2011 GE model surfaces superimposed over the digitized cross-section B-B' are plotted in Figure 6. There are two dips in the vicinity of MW90/91 on the USG and LCL model surfaces which are not mapped on the GHD cross-section. To improve the geological representation, the USG and LCL model surfaces have been re-interpreted. The modified model surfaces superimposed over cross-section B-B' are plotted in Figure 7. The modification of the model surfaces does not change the interpretation of hydrostratigraphic units shown on Table 1.

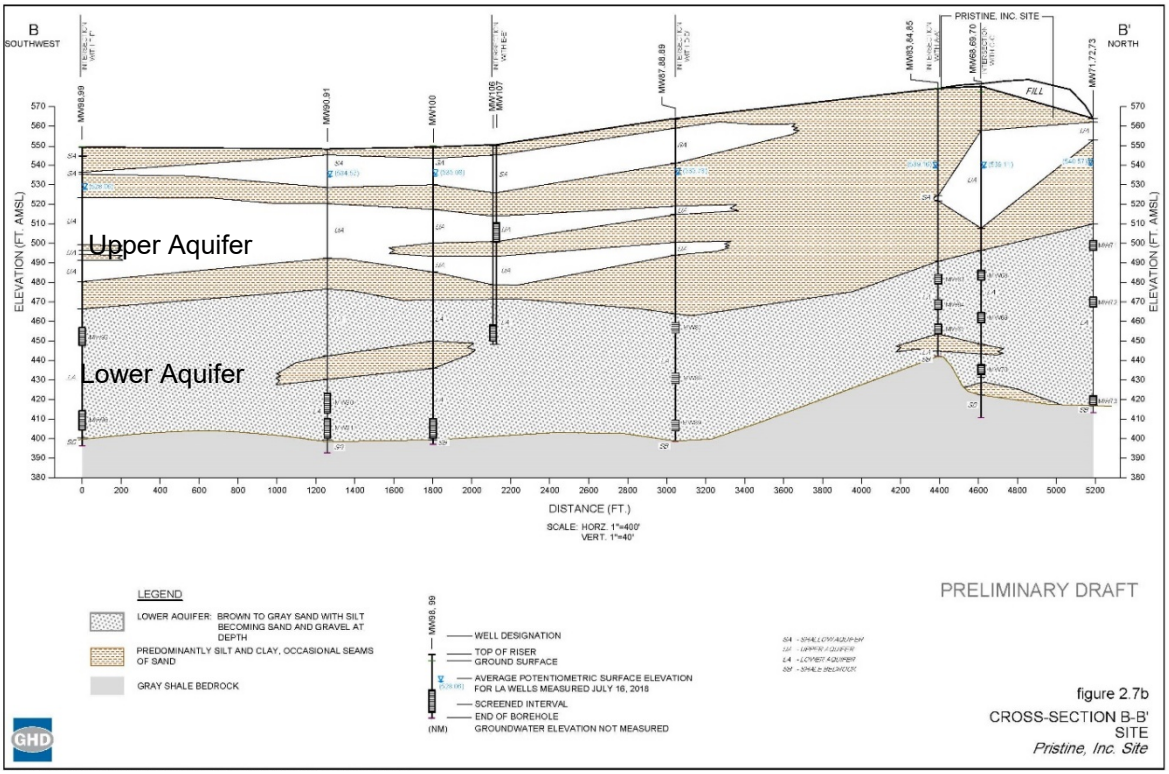

Figure 5 Reproduction of the Geologic Cross-D Section B-B' (Figure 2.7b of GHD, 2019)

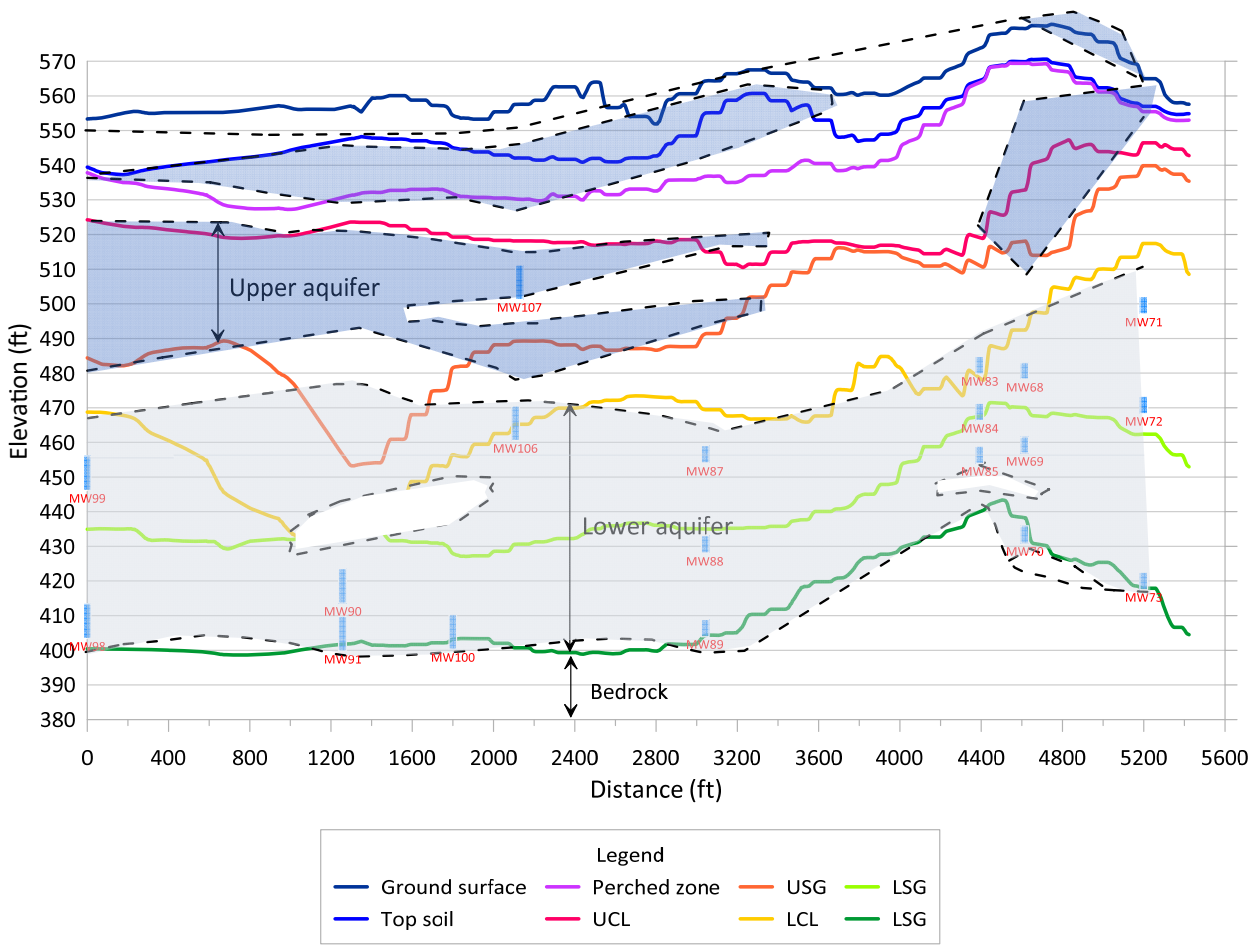

Figure 6 The GE Model Surfaces (colored lines) Superimposed over the Geological Cross-Section B-B' (dashed lines)

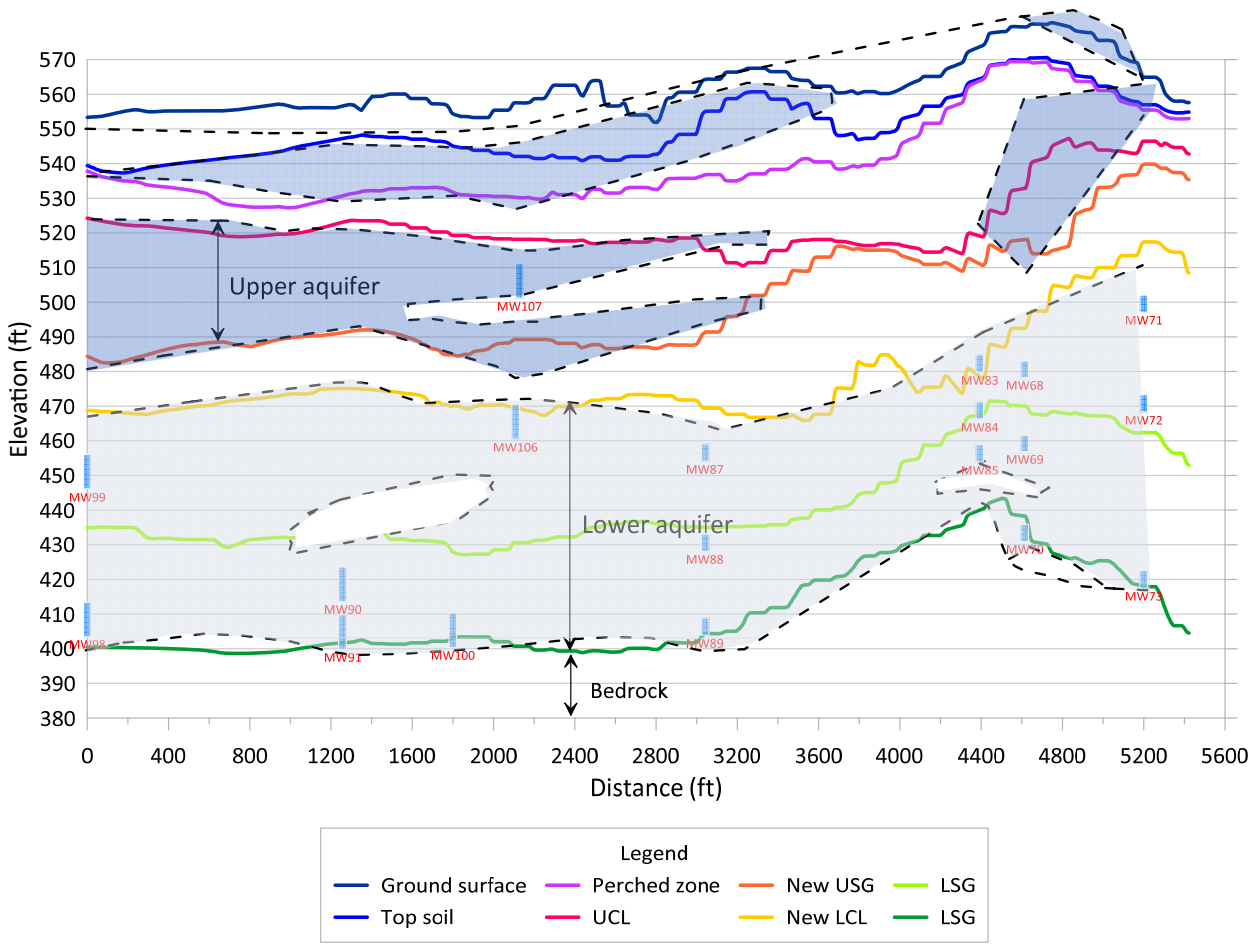

Figure 7 The SSP&A Modified Model Surfaces (colored lines) Superimposed over the Geological Cross-Section B-B' (dashed lines)

Extension of the Modified GE Model for Transient Conditions

The steady-state GE model has been extended to reproduce transient hydrogeologic conditions observed at the Site. Values of specific storage for a confined aquifer and specific yield for an unconfined aquifer are required for transient analyses. The specific storage values are assigned according to the Table C-1 of O'Brien and Gere (2011) and are summarized on Table 3.

Table 3 Specific Storage Values

Hydraulic conductivity zone	Specific storage (ft^{-1})
Perched - zones 2, 3, 4, 17	3.9×10^{-3}
USG - zones 6, 11, 12, 14	1.95×10^{-3}
LSG – zones 8, 9, 10, 18, 19, 20	7×10^{-4}
LSG – zones 1 and 15	4.9×10^{-5}

The specific yield of model layer 1 (an unconfined layer), S_y, is assigned as 0.1, representing a typical value for silty clay materials (Stephens et al., 1998).

All the boundary conditions are constant through time, except for the pumping conditions. Six wells are in use during the simulation period, from 1997 to 2018, including:

- EW1 (Lower Aquifer well);
- EW2 (Lower Aquifer well);
- EW3 (Lower Aquifer well);
- EW4 (Lower Aquifer well);
- EW5 (Lower Aquifer well); and
- GW108 (Upper Aquifer well).

The model simulates groundwater flow from 1997 to 2018. The transient model has 23 stress periods and the length of each stress is one year. Each stress period is represented with a single time step in the MODFLOW model. The pumping rates for the six wells vary between time periods. The annual pumping rates are specified based on Table 2.1 of the CSM report (GHD, 2019). The pumping rates are listed on Table 4.

Table 4 Historic pumping rates (ft^3/d)

Year	EW1	EW2	EW3	EW4	EW5	GW108
1997	184.69	213.60	488.23	0.00	0.00	0.00
1998	2105.55	2448.94	5597.59	4419.69	4419.69	0.00
1999	3915.81	4997.09	11421.93	22820.96	22820.96	0.00
2000	4281.48	5267.91	12040.94	24414.93	24414.93	0.00
2001	5987.74	4285.06	11426.82	22739.99	22739.99	0.00
2002	6645.76	5103.32	10206.65	21873.61	21873.61	0.00
2003	5317.23	4918.41	9836.82	18978.86	18978.86	0.00
2004	5635.11	5208.44	10416.88	20263.54	20263.54	0.00
2005	5371.55	5608.63	11217.26	19279.22	19279.22	0.00
2006	5229.61	0.00	9775.68	4776.28	13460.22	0.00
2007	5132.52	0.00	7850.53	0.00	11673.02	0.00
2008	6387.44	0.00	5375.18	0.00	11886.79	463.11
2009	7065.03	0.00	0.00	0.00	15216.93	715.99
2010	7025.57	17.53	17.53	0.00	16687.24	655.90
2011	6840.01	0.00	0.00	0.00	3984.15	695.14
2012	6403.41	0.10	0.10	0.00	0.00	717.32
2013	5641.34	0.00	0.00	0.00	0.00	793.93
2014	6288.64	0.00	0.00	0.00	0.00	684.04
2015	6595.82	0.00	0.00	0.00	0.00	829.00
2016	6609.36	0.00	0.00	0.00	0.00	774.29
2017	7000.62	0.00	0.00	0.00	0.00	956.08
2018	6705.28	0.00	0.00	2138.33	0.00	680.75

Calibration of the Modified GE Model

The modified groundwater model was re-calibrated to match observations between 1997 and 2018. The transient model has been applied to match the observed water levels for 73 monitoring wells. The historical water levels of the monitoring wells at the Site are presented on Table 2.3 (Shallow wells) and Table 2.4 (Lower Aquifer) of the CSM report (GHD, 2019).

The hydraulic conductivity of the Lower Aquifer in Layer 7 was adjusted to match the water level changes observed historically. After each transient simulation, the simulated water levels were plotted against the observed water levels and the Root-Mean-Square-Error (RMSE) was calculated. This iterative process was continued until a close match was obtained to both the Lower Aquifer water levels and Upper Aquifer water levels.

Two changes made to the horizontal hydraulic conductivity, K_x, of Layer 7 yielded a close match to the water levels observed in the Lower and Upper Aquifers. The changes are:

- Reducing K_x in Zone 10 to 80 ft/day from 388 ft/d; and
- Increasing K_x from 229 to 1100 ft/day within the zone outlined in red of Figure 8.

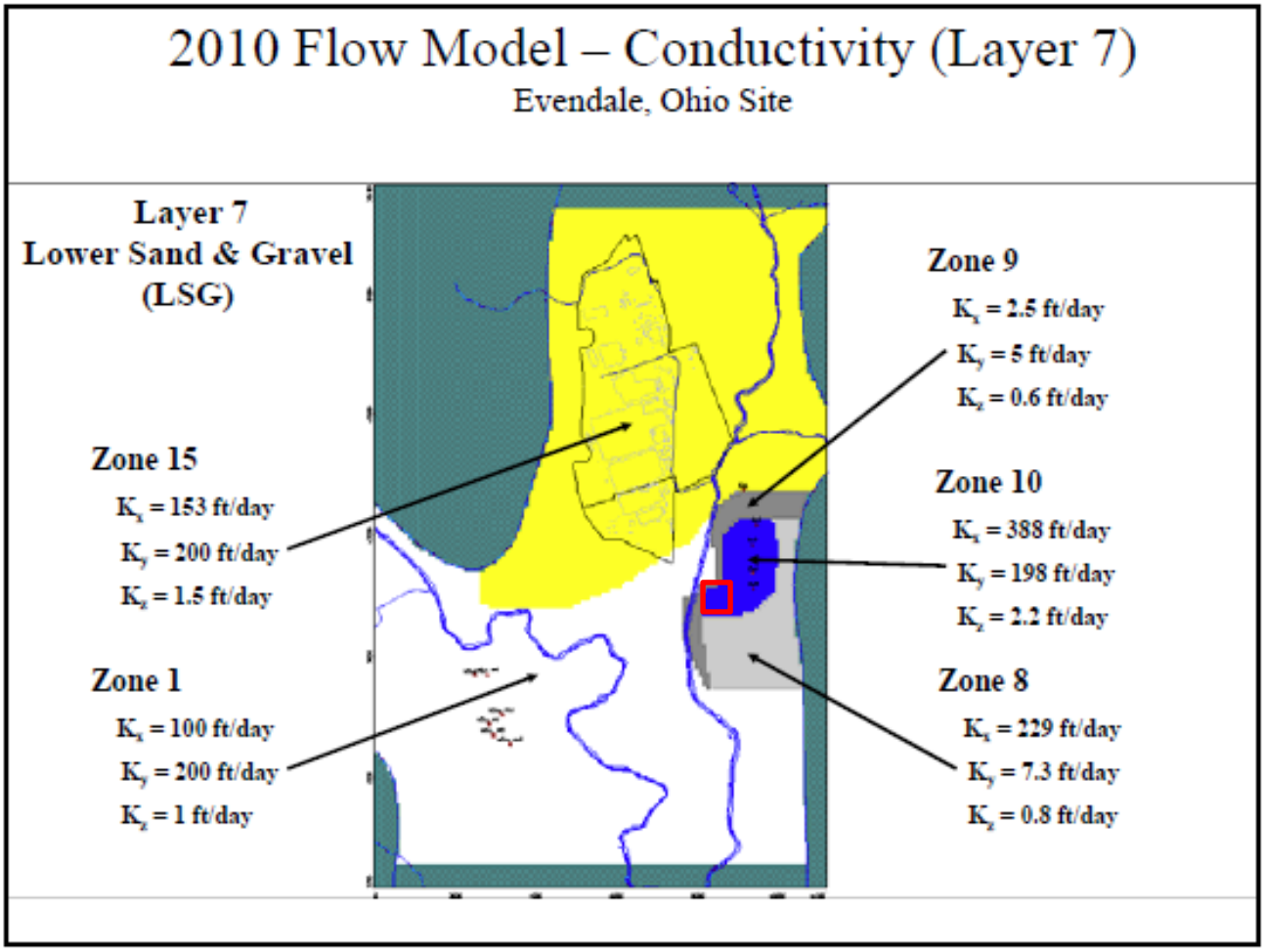

Figure 8 Outline of Zone for Hydraulic Conductivity Adjustment in Layer 7

The trend of water levels in the Upper Aquifer is relatively steady; however, the trend of the water levels is variable as the Lower Aquifer had two distinct pumping periods. One year in each of the two pumping periods was selected for matching the Lower Aquifer water levels. The intervals for focused matching of water levels are:

- Upper Aquifer: average water levels over the entire monitoring history;
- Lower Aquifer (2003): water levels in 2003; and
- Lower Aquifer (2013): water levels in 2013.

The simulated water levels of the original model and the re-calibrated model are plotted against the observed water levels in Figure 9 and Figure 10, respectively. The water levels in the Upper Aquifer and in the Lower Aquifer are plotted separately using different symbols. Overall, the simulated water levels in the Lower Aquifer match closely the observed levels for both the original model and the re-calibrated model. The re-calibrated model shows an improved result for the Lower Aquifer. The match to the Upper Aquifer water level targets is not improved substantially for the re-calibrated model. A complete record of the simulated and observed water levels in each monitoring well is provided in Appendix A.

The RMSEs calculated for the Upper and Lower Aquifers in the two models are listed on Table 5. The re-calibrated model yields smaller errors for the Lower Aquifer and the overall targets. The reported RMSE values are similar in magnitude to the typical fluctuations in water levels observed during each of the intervals for matching.

Table 5 Root-Mean-Square-Errors for each Model (unit: ft)

Model	Lower Aquifer (2003)	Lower Aquifer (2013)	Upper Aquifer	Overall
Original	2.75	1.63	15.33	9.04
Re-calibrated	2.06	1.89	15.32	8.99

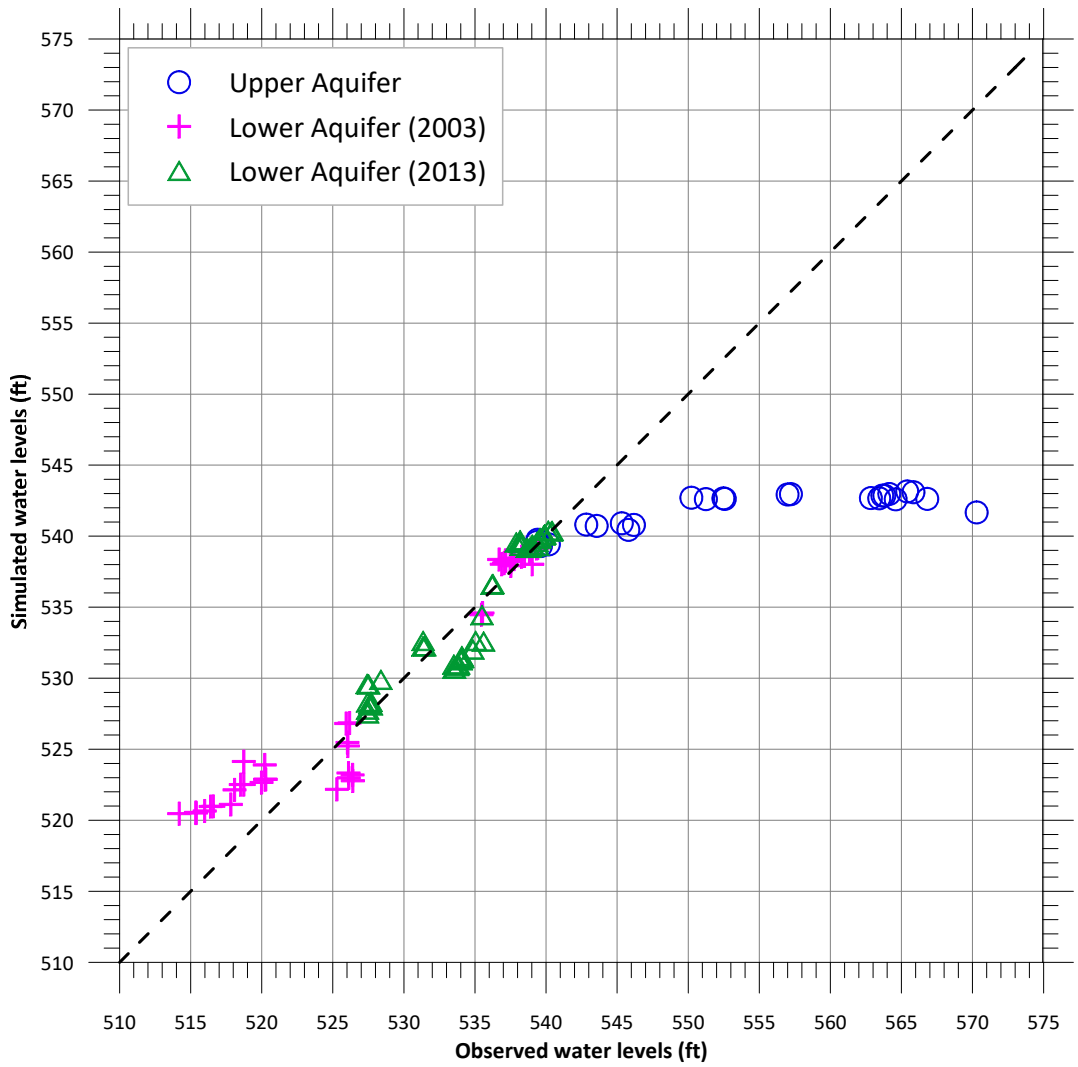

Figure 9 Original Model: Simulated vs. Observed Water Levels

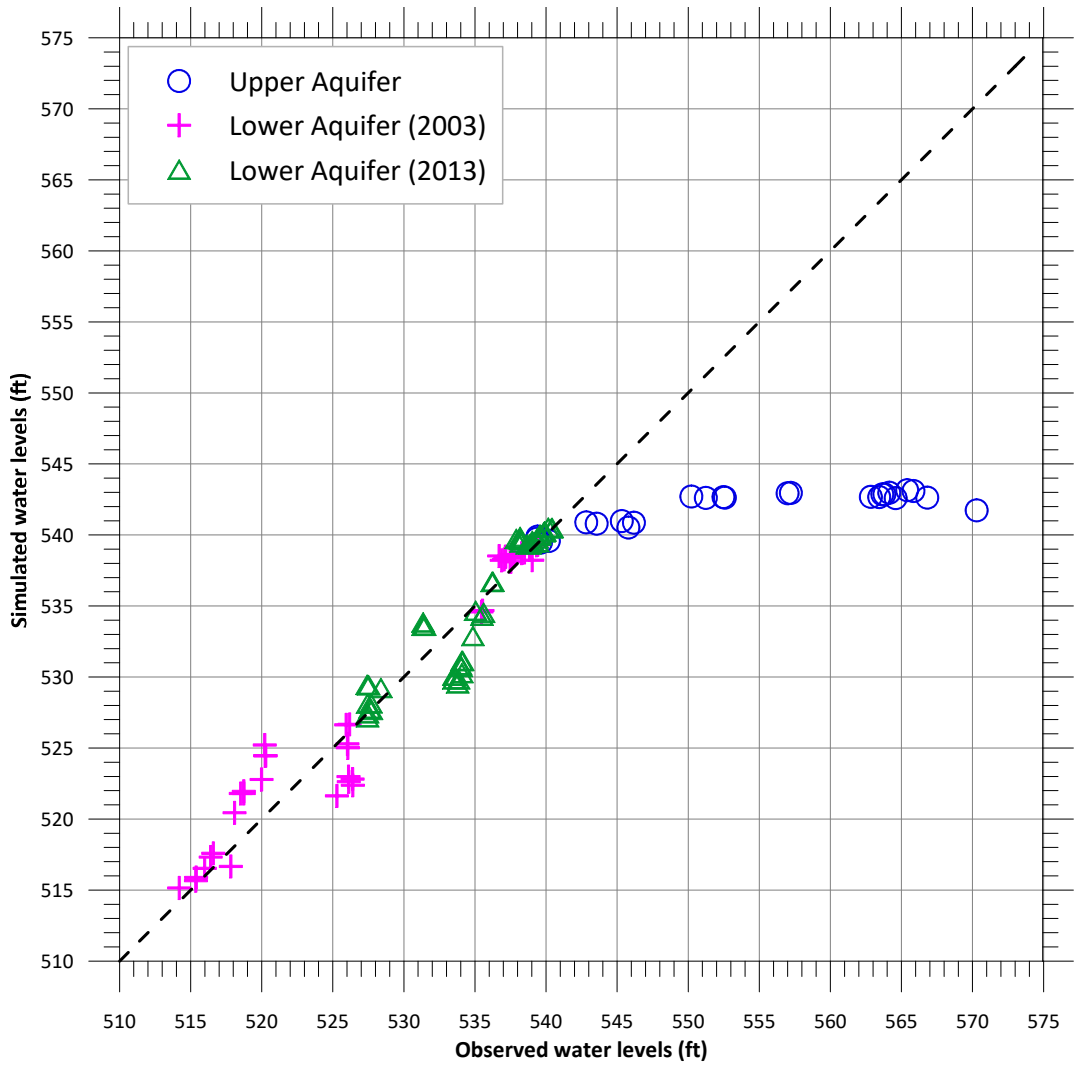

Figure 10 Re-Calibrated Model: Simulated vs. Observed Water Levels

On Page 5 of the CSM report (GHD, 2019) it is stated that the remedial investigation monitoring wells in the Upper Aquifer were installed in three different units, the Upper Outwash Lens (UOL), the Middle Outwash Lens (MOL) and the Lower Outwash Lens (LOL). The screened aquifer for each monitoring well is listed on Table 6.

Table 6 Screened Aquifer in Monitoring Wells

Well Name	Aquifer
GW109	LOL
GW47	LOL
GW56	LOL
GW63	LOL
GW65	LOL
GW55	MOL
GW62	MOL
GW-P1	-
GW-P2	-
GW-P3	-
GW-P4	-
GW-P5	-
GW-P6	-
GW-P7	-
GW-P8	-
GW-P9	-
GW45	UOL
GW46	UOL
GW50	UOL
GW51	UOL
GW53	UOL
GW59	UOL
GW60A	UOL
GW64	UOL
GW66	UOL

The water levels in the Upper Aquifer wells calculated with the re-calibrated model are compared with the observations in Figure 11, with separate symbol colors representing the targets for the three shallow units. The symbol colors are consistent with the colors on Table 6. As seen in the figure, the match to the water levels in the LOL wells is relatively good. The mismatch is effectively restricted to the UOL wells. The observed levels are much higher than are simulated and may be representative of local perched conditions.

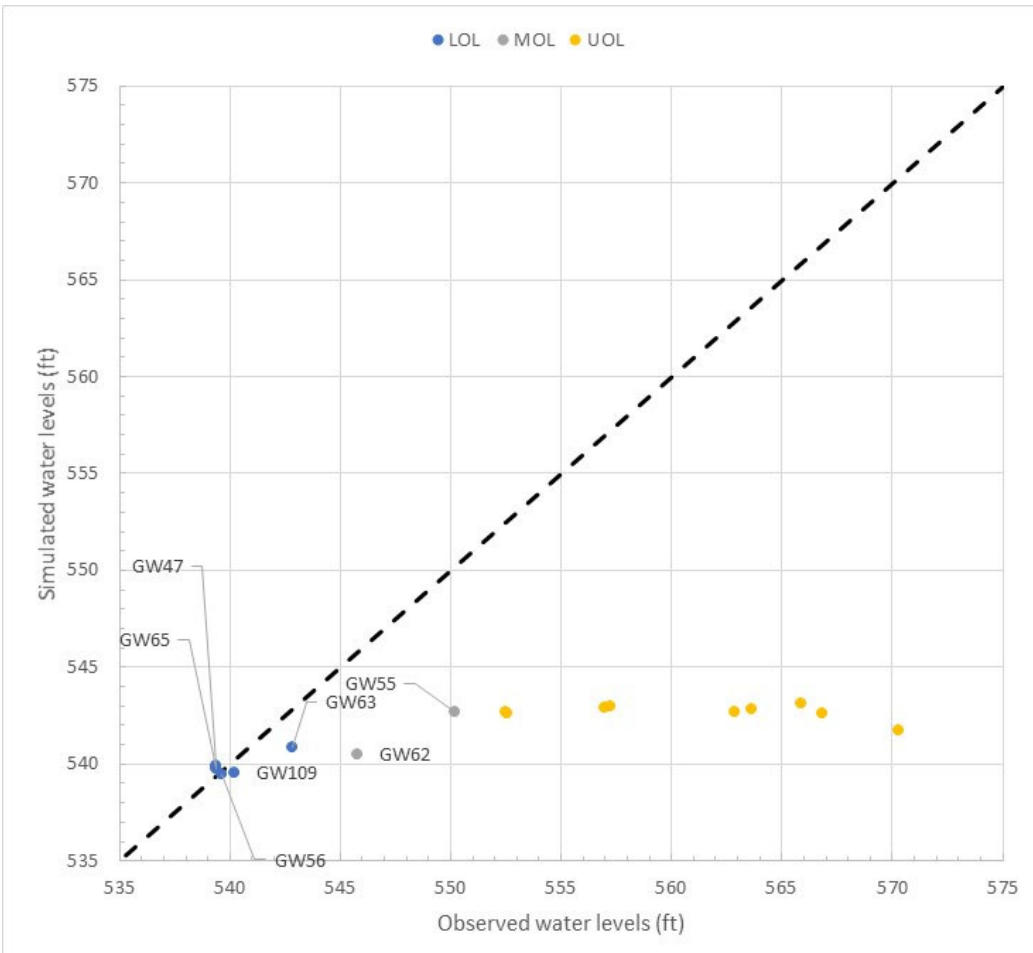

Figure 11 Simulated vs. Observed Water Levels in LOL, MOL and UOL Wells

Sensitivity Analysis

A series of sensitivity analyses were conducted to evaluate the effects of parameter uncertainty and variability on the Pristine model. The sensitivity analyses were conducted as a means of demonstrating that the calibration was optimal. The adjustable parameters included:

- Recharge rate;
- Vertical hydraulic conductivity in the confining unit between Upper and Lower Aquifers;
- Drain conductance; and
- General-Head Boundary

Sensitivity Analysis on Recharge Rate

A high recharge area with a recharge value of 36 in/yr was assigned in the original model. The high recharge zone was used to represent leakage from the sewer system into the subsurface which were represented by DRAIN packages. A sensitivity analysis was performed to investigate the impact of the high recharge zone. Two additional recharge values were specified for the analysis, including:

- Recharge = 18 in/yr; and
- Recharge = 6 in/yr.

The water budget of the model for different recharge cases is listed on Table 7. Each component of the water budget is compared among the 3 cases and is plotted in Figure 12.

Table 7 Mass Balances for Different Recharge Values within the Model (unit: ft^3/d)

	Recharge = 36 in/yr		Recharge = 18 in/yr		Recharge = 6 in/yr	
Category	Inflow	Outflow	Inflow	Outflow	Inflow	Outflow
Recharge	3.43×10^4		1.78×10^5		1.38×10^5	
Constant-Head	6.33×10^5	-2.32×10^3	6.35×10^5	-2.31×10^5	6.37×10^5	-2.30×10^5
River	3.46×10^5	-4.32×10^5	3.50×10^5	-4.29×10^5	3.52×10^5	-4.27×10^5
Drain		-4.50×10^5		-3.99×10^5		-3.65×10^5
GHB	7.42×10^4		7.43×10^4		7.44×10^4	
Well		-1.79×105		-1.79×105		-1.79×105

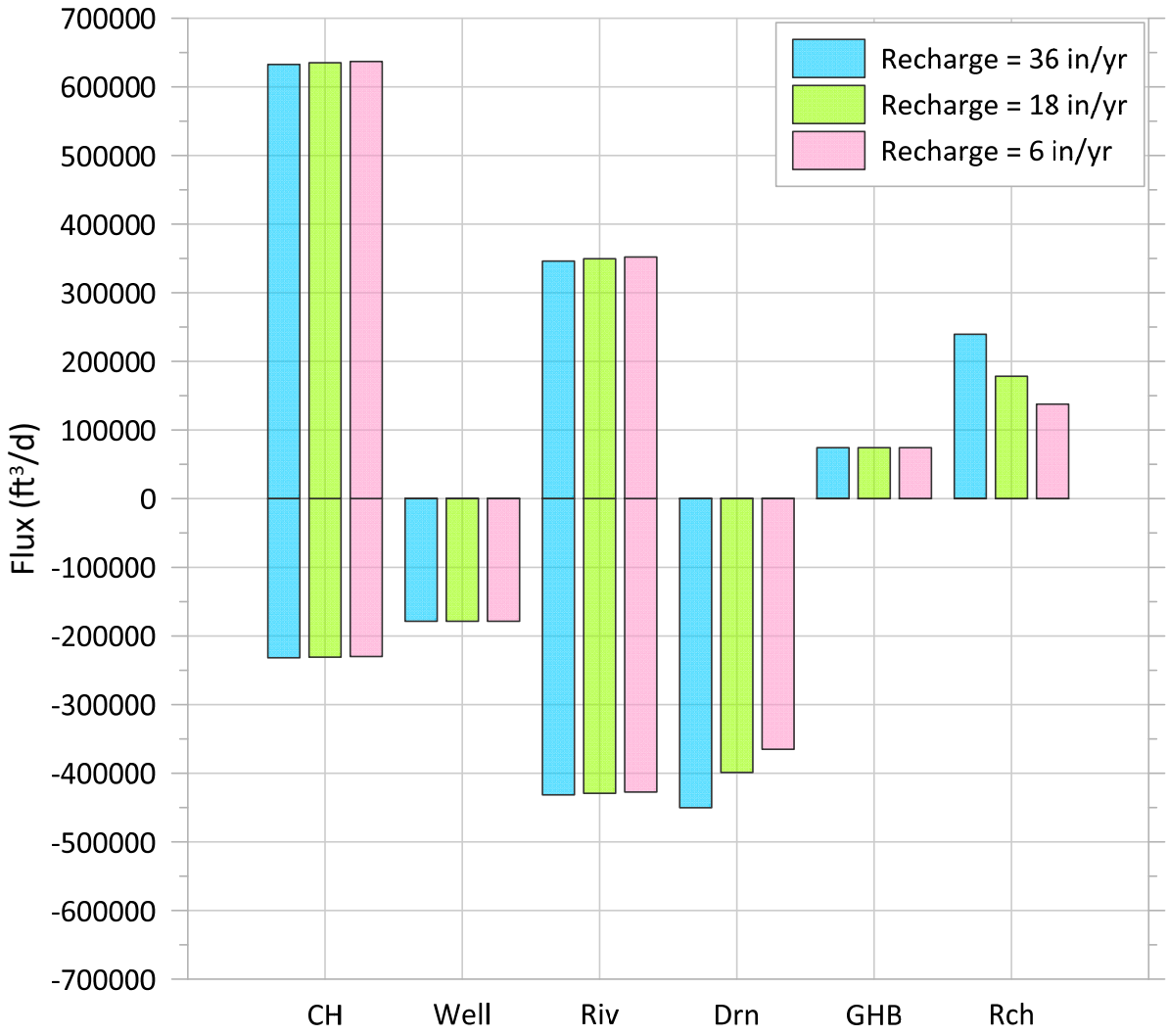

Figure 12 Sensitivity Analysis on Recharge Rate: Water Budget

The impact of the recharge from the sanitary system on the water levels in the Upper Aquifer and the Lower Aquifer are demonstrated in Figures 13 and 14. As seen in the figure, the impact on the Upper Aquifer is small and no discernible changes of the water levels are observed within the Lower Aquifer as a result of varying the recharge rate.

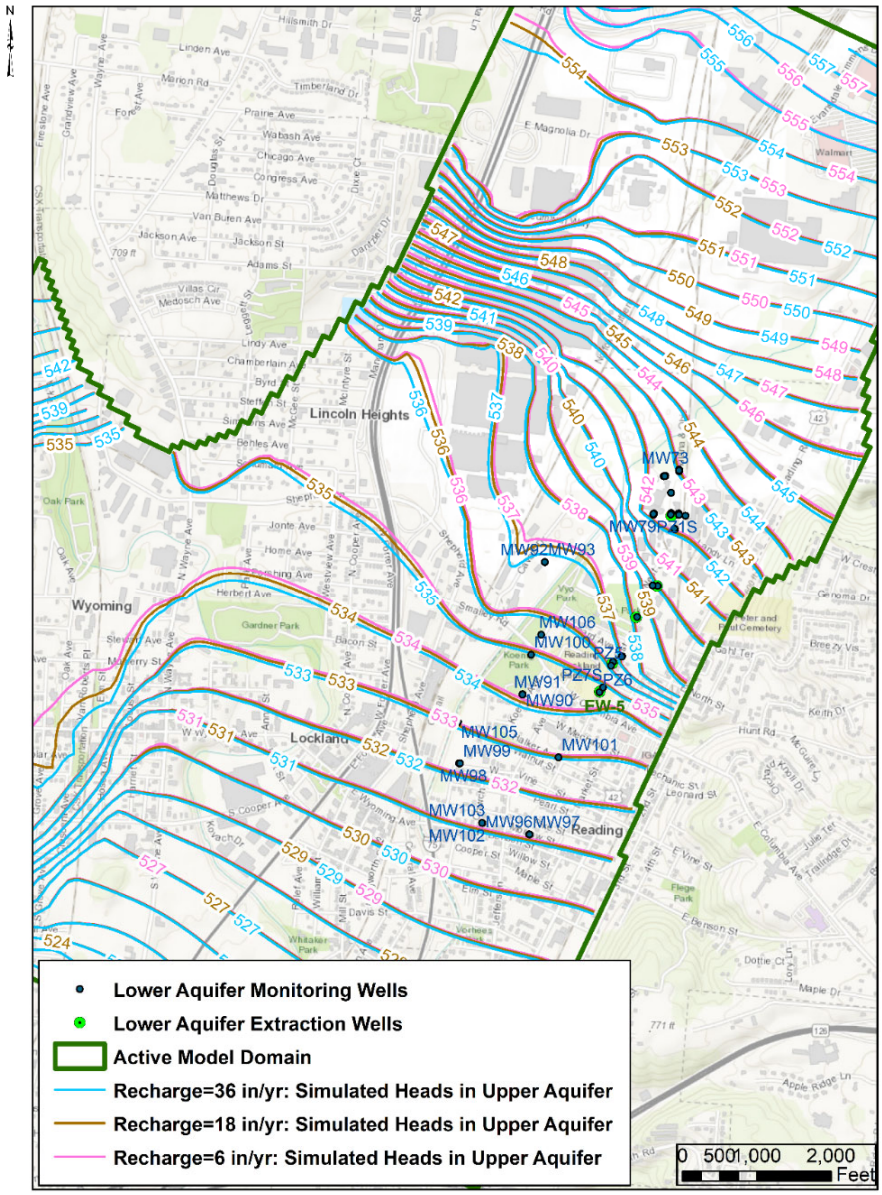

Figure 13 Water Levels in the Upper Aquifer

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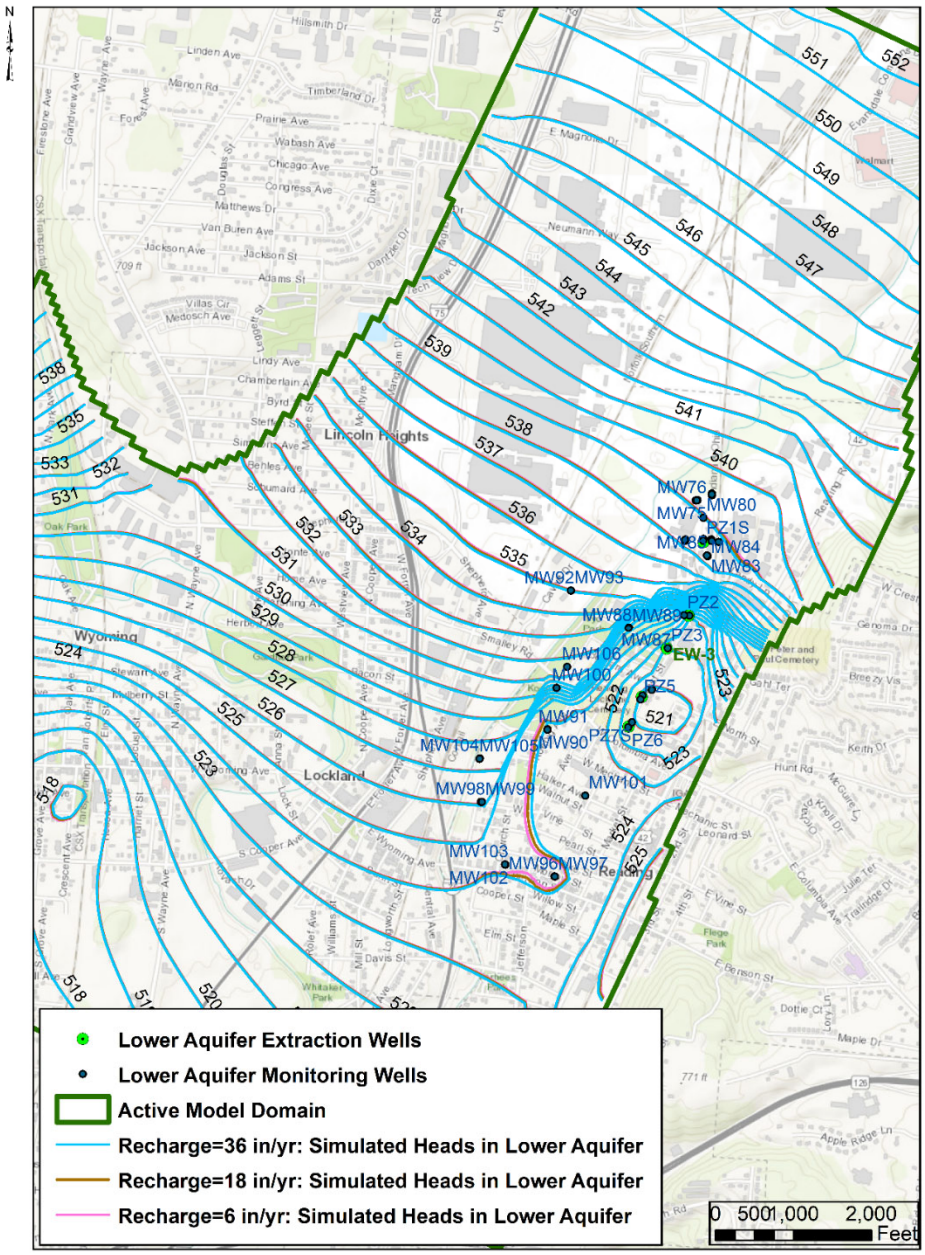

Figure 14 Water Levels in the Lower Aquifer

The particle traces of the particles released within the magic pit area for the 3 recharge models are shown in Figure 15.

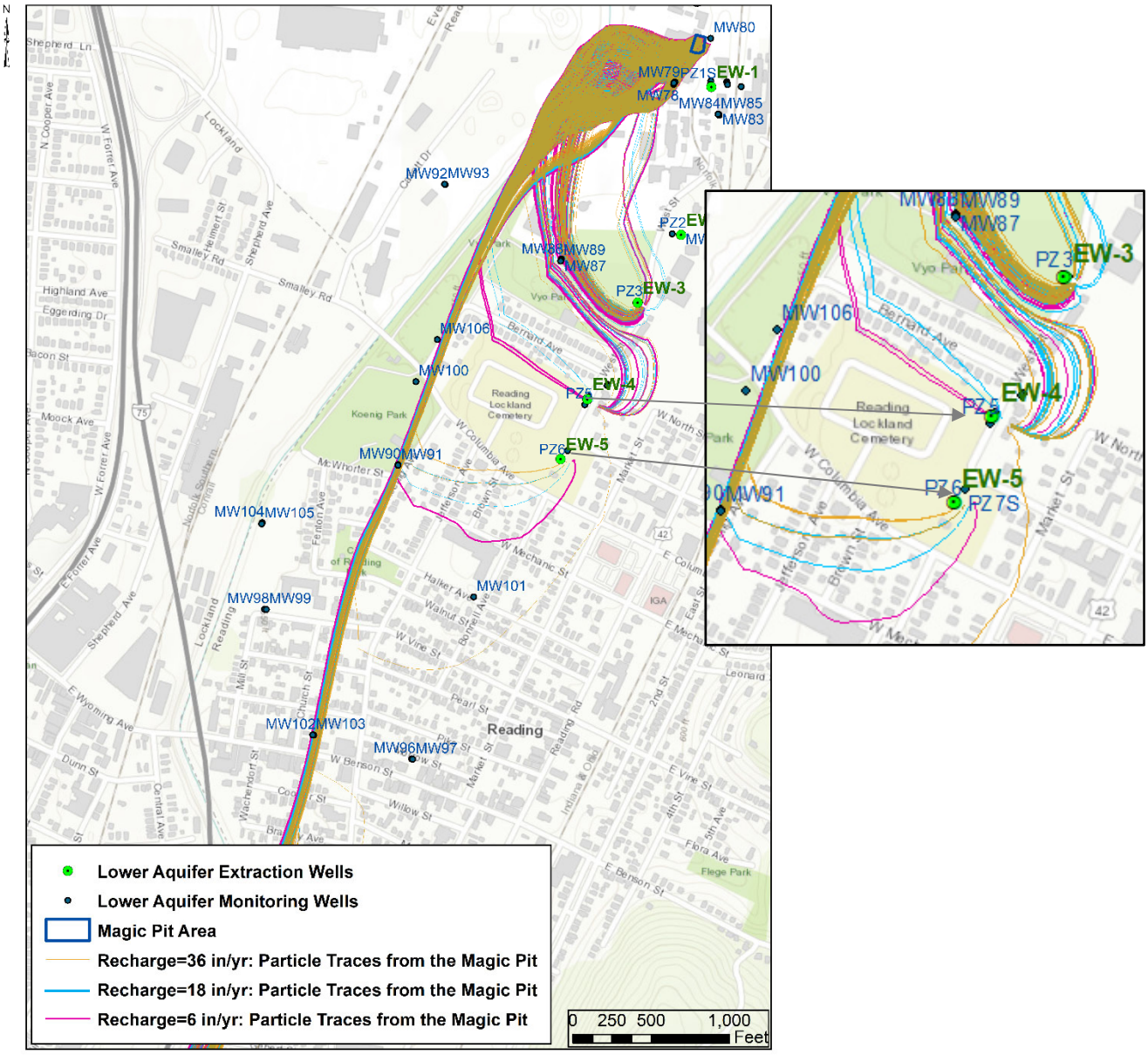

Figure 15 Particle Traces from the Magic Pit for the Recharge Analyses

Sensitivity Analysis on Vertical Hydraulic Conductivity

In the CSM report it is suggested that there is an area of connection between UA and LA around GW67. A sensitivity analysis was performed to investigate the impact of the vertical hydraulic conductivity within the potential contact area. The hydraulic conductivities in the original model within the contact area are:

- Horizontal: 0.1628 ft/d; and
- Vertical: 0.0001 ft/d.

Three additional cases were simulated in which the vertical hydraulic conductivities were increased by factors of 10, 100 and 1000. The values of the vertical hydraulic conductivity in each case are summarized:

Original model: K_v = 0.0001 ft/d;

Case 1: K_v = 0.001 ft/d;

Case 2: K_v = 0.01 ft/d; and

Case 3: K_v = 0.1 ft/d.

Particles released from the magic pit were tracked forward for all the cases. The particle traces for each case are presented in Figures 16, 17, 18 and 19, respectively.

For a closer look, the pathlines of case 2 (x100) and case 3 (x1000) are compared from the top view and the cross-section view, respectively, in Figures 20 and 21.

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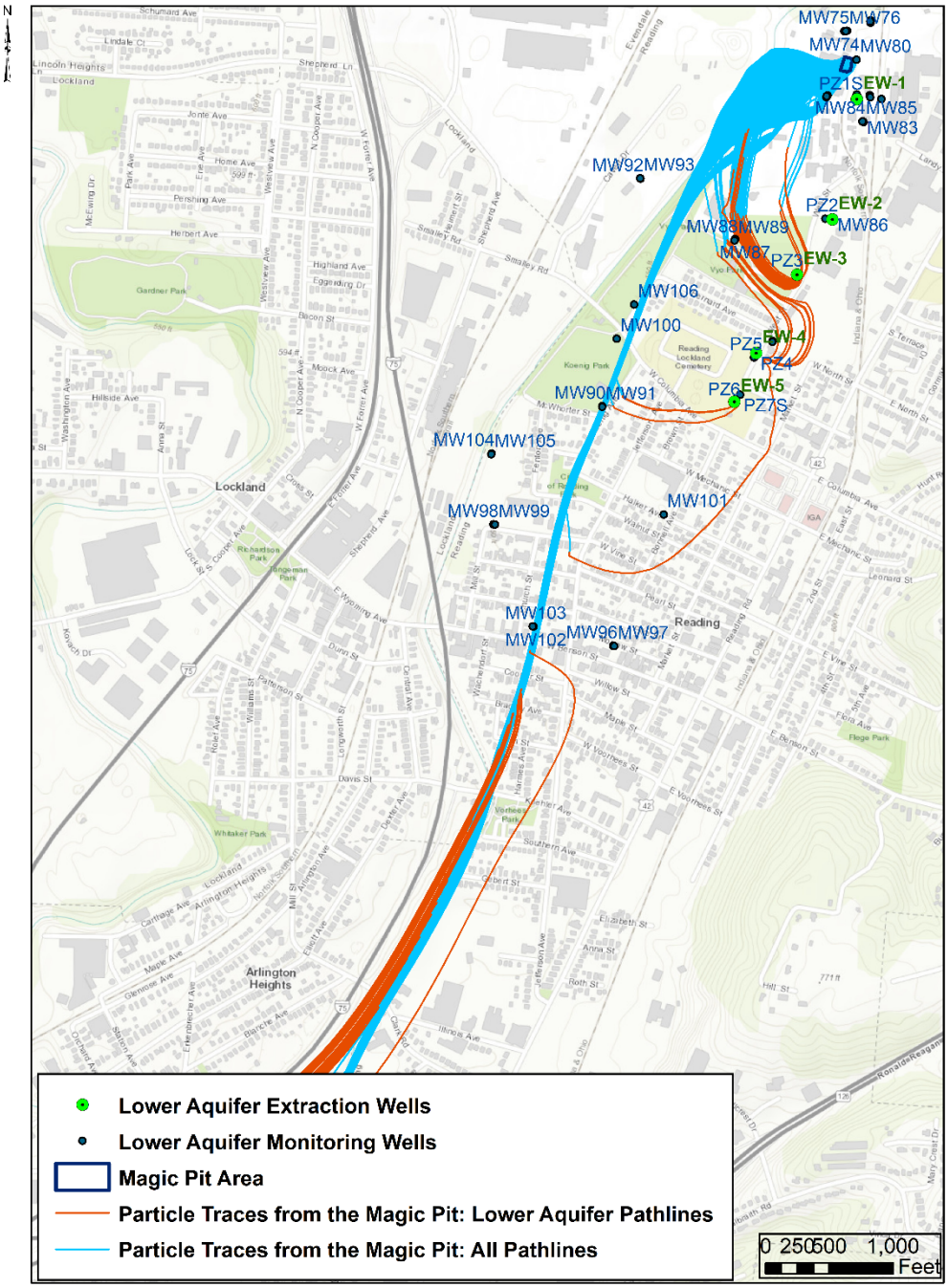

Figure 16 Original Model Particle Traces

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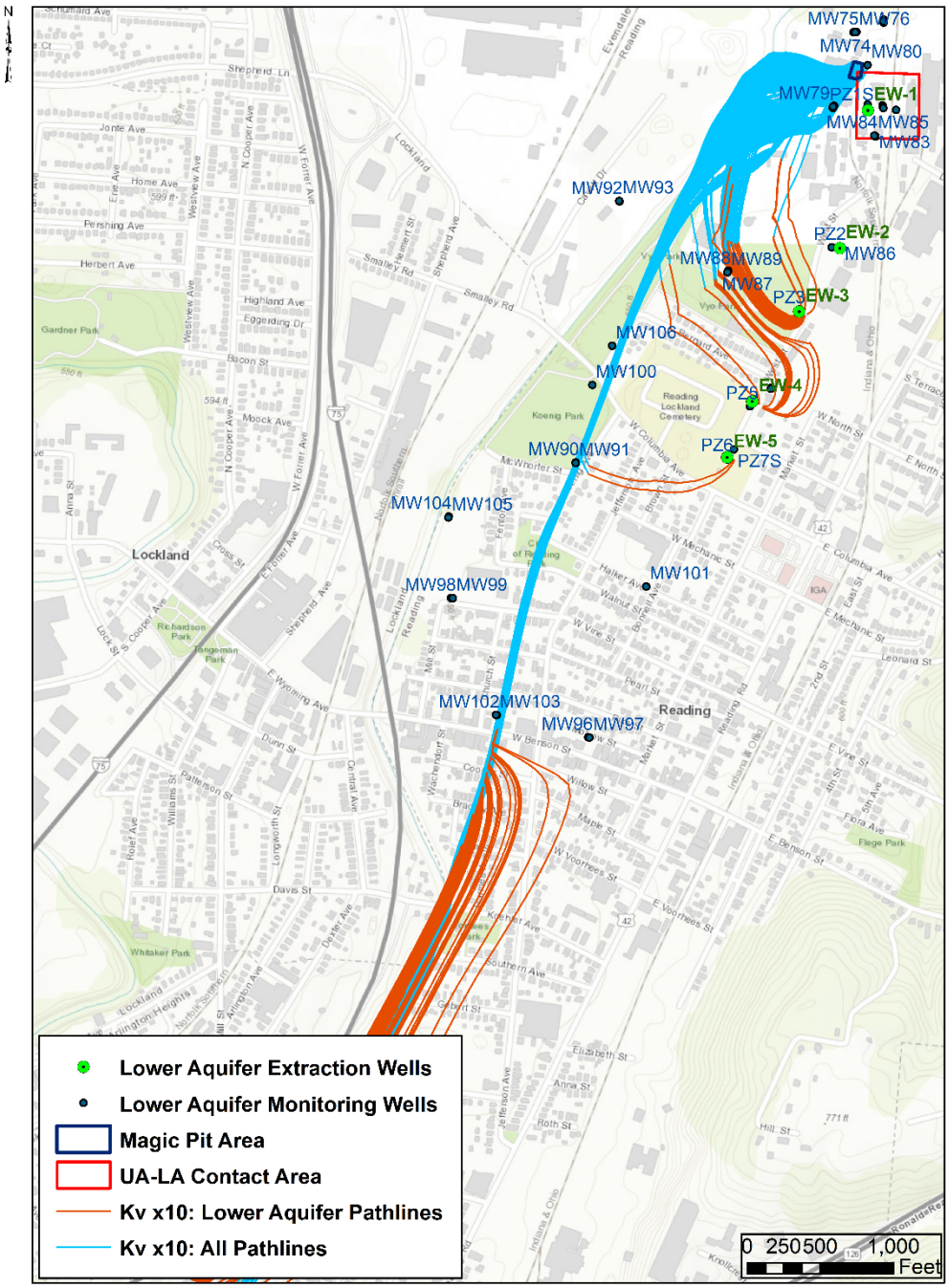

Figure 17 Case 1 (x10) Particle Traces

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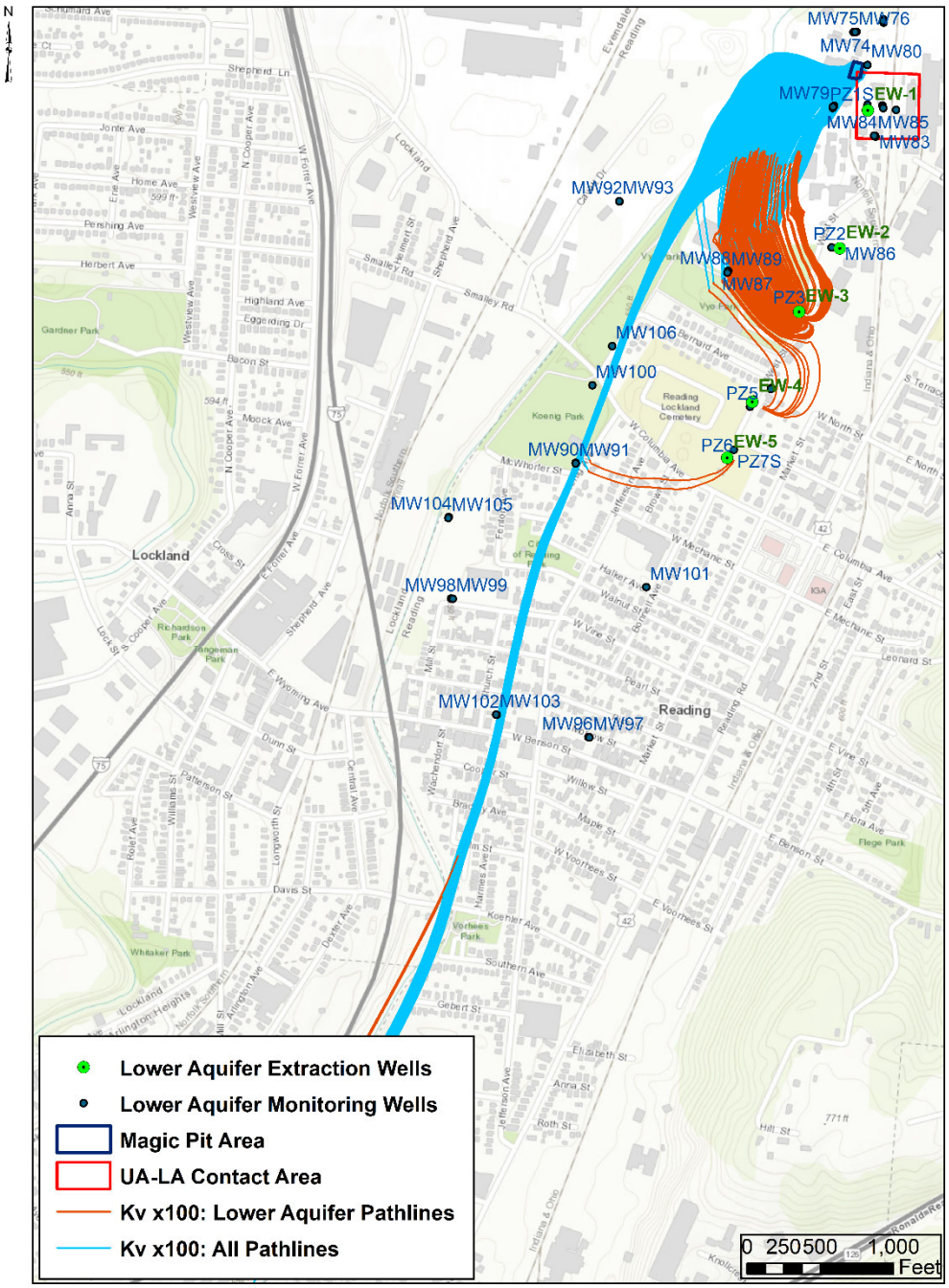

Figure 18 Case 2 (x100) Particle Traces

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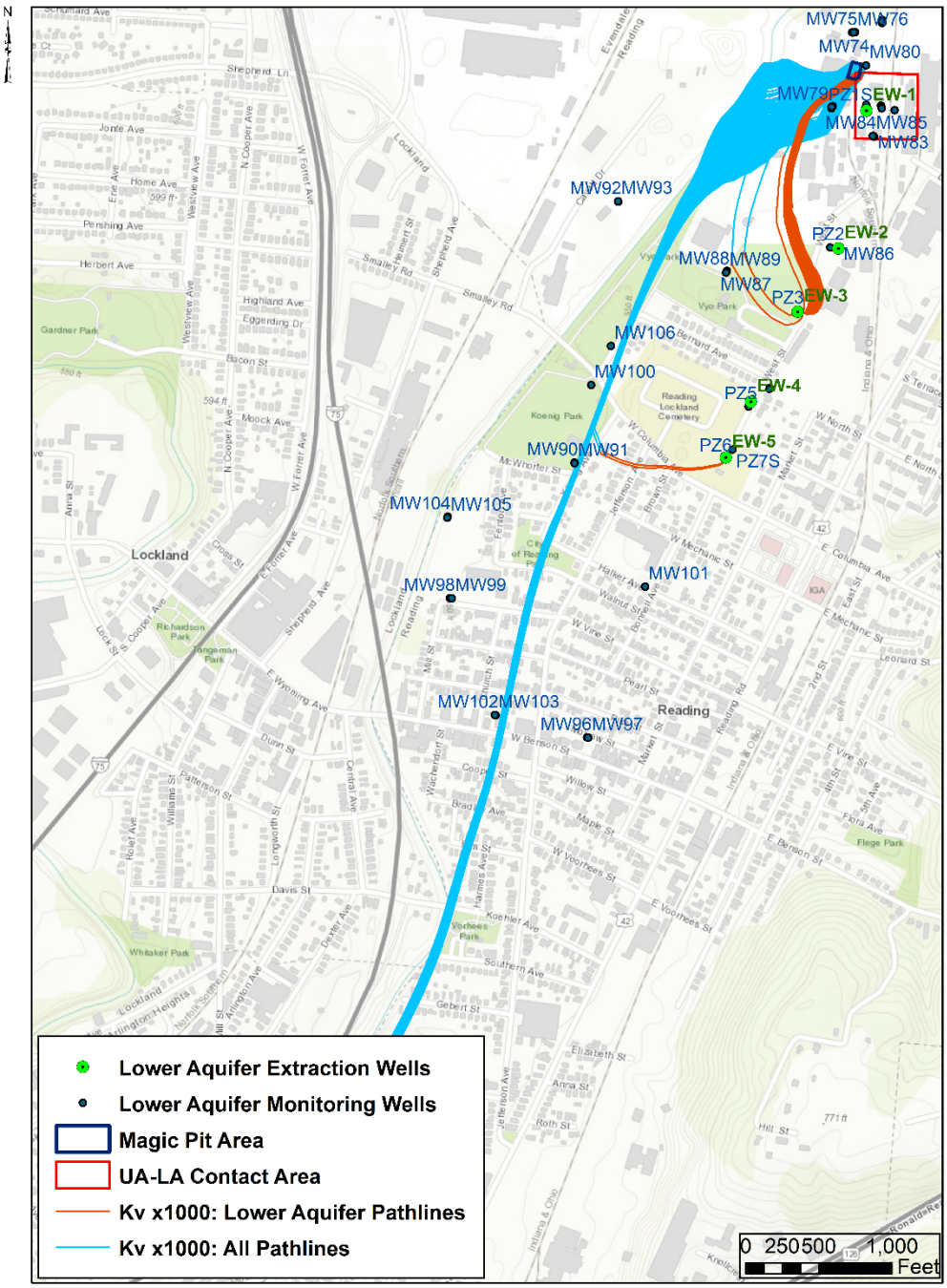
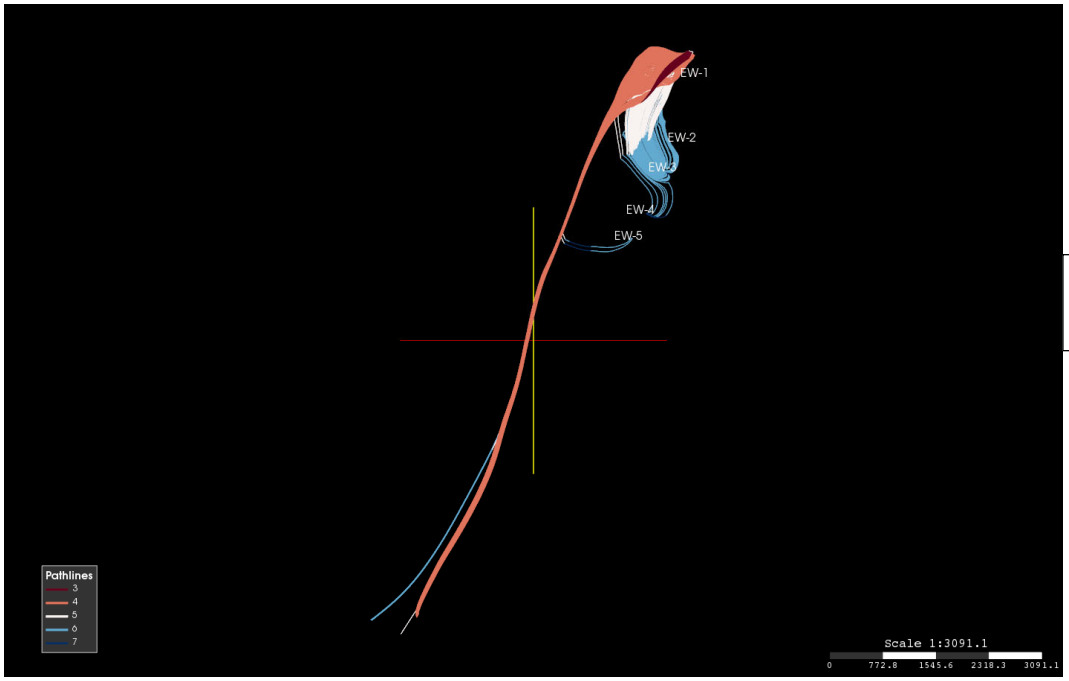
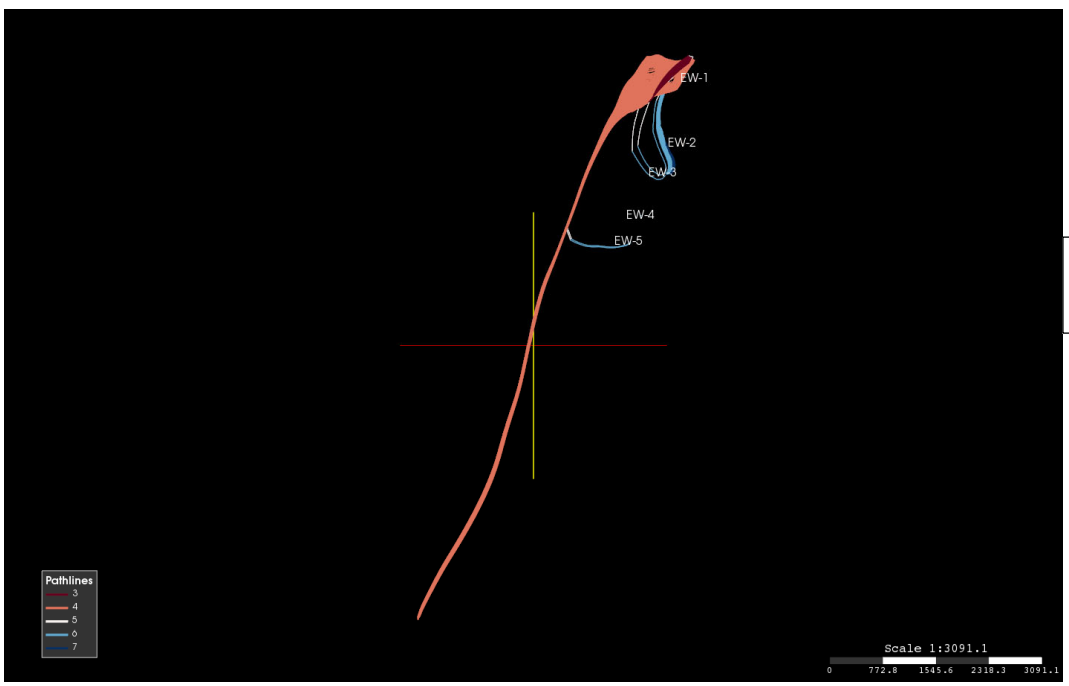


Figure 19 Case 3 (x1000) Particle Traces

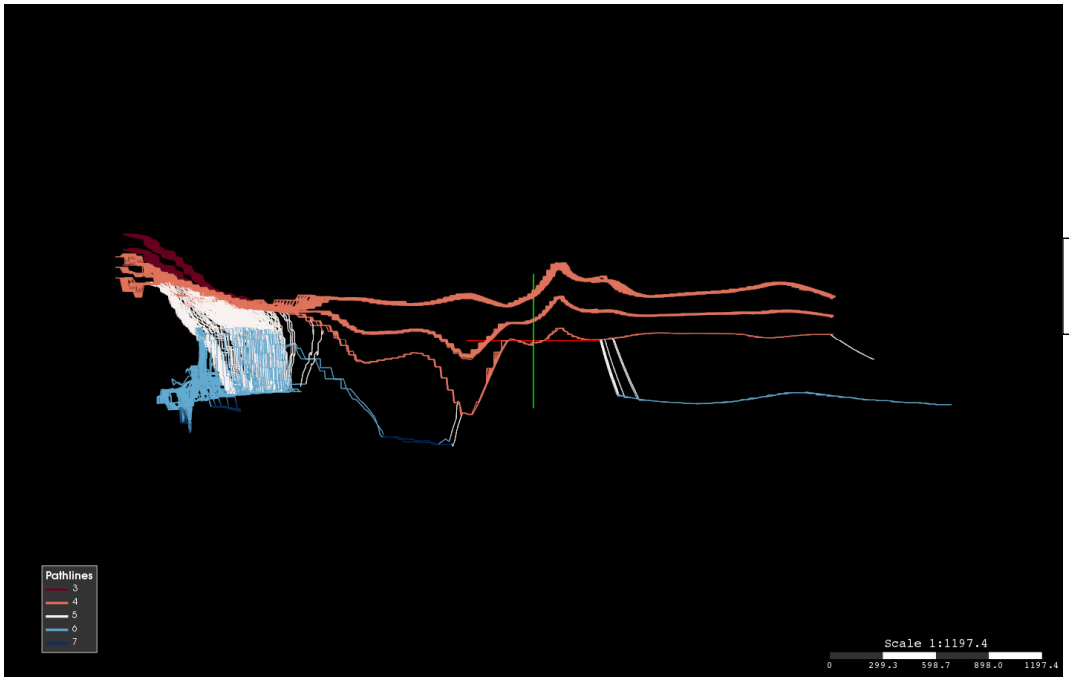


Case 2

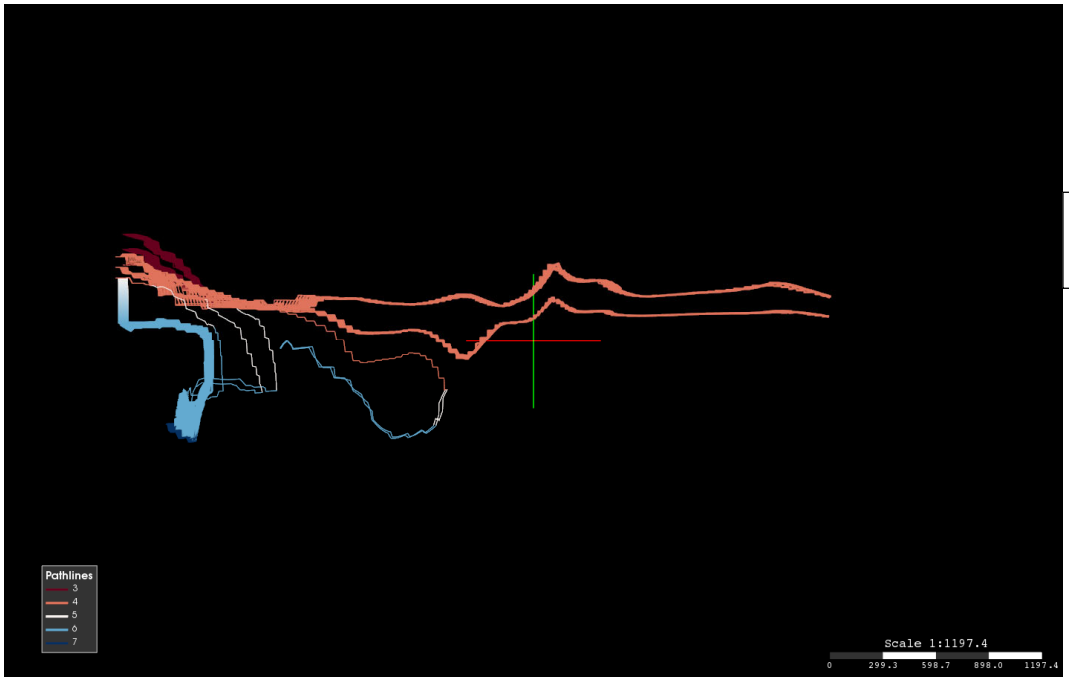


Case 3

Figure 20 Comparison of Case 2 and Case 3 Particle Traces: Top View



Case 2



Case 3

Figure 21 Comparison of Case 2 and Case 3 Particle Traces: Cross-Section View

Sensitivity Analysis on Drain Conductance

A sensitivity analysis on the drain conductance was performed. The drain conductance was reduced by factors of:

- Case 1: 10;
- Case 2: 100;
- Case 3: 1000; and
- Case 4: 10000.

The model conditions remained the same as the original model except the recharge value over the drain was specified as 18 in/yr. The change of water budget with reducing the drain conductance is shown in Figure 22.

The impact of drain conductance on the heads in the lower aquifer is shown in Figure 23. It suggests that the drains do not have a big influence on water levels in the Lower Aquifer. The biggest impact occurs in the vicinity of MW100/MW90. The pathlines for the five different cases are shown in Figures 24 – 28.

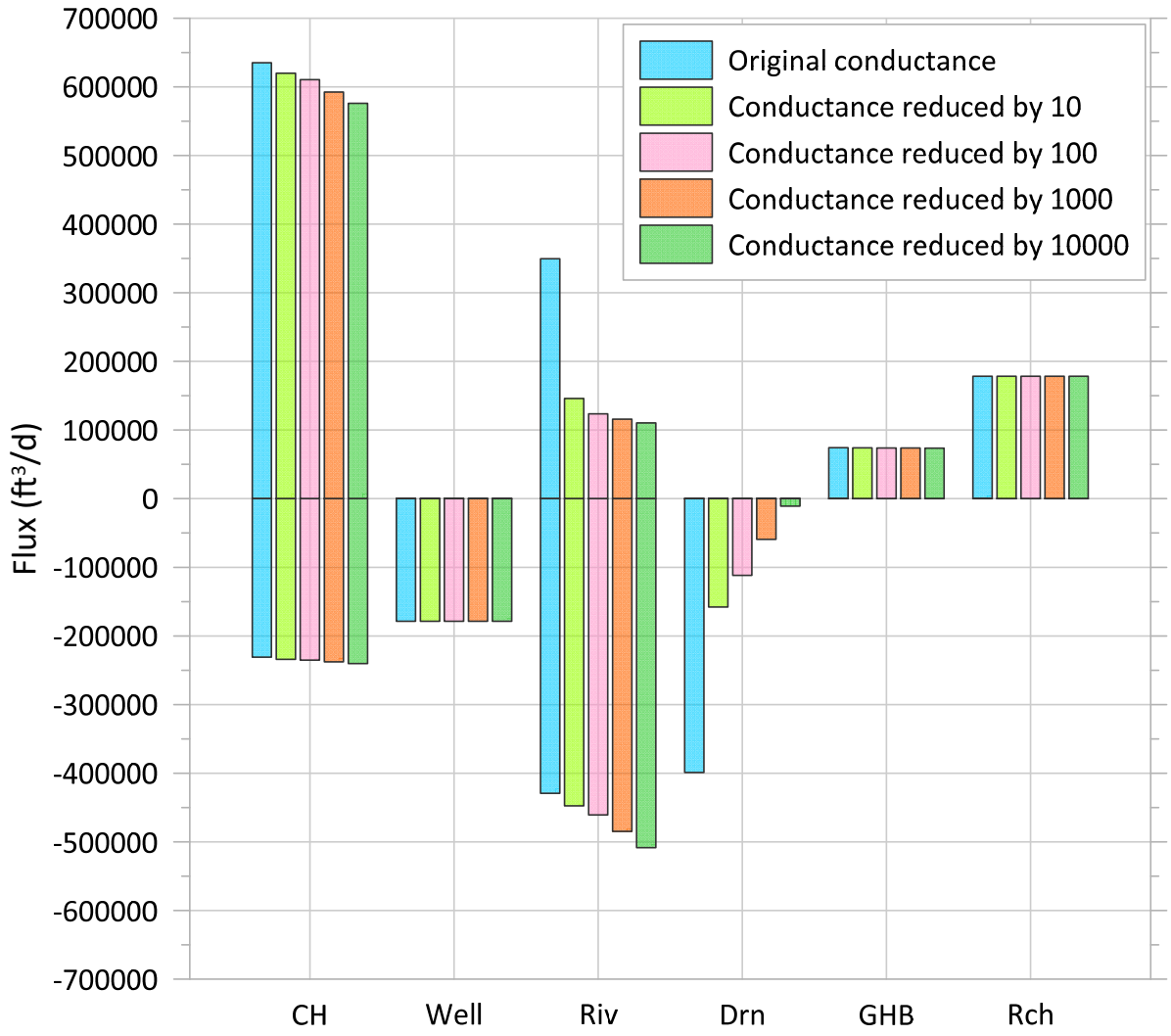


Figure 22 Change in Water Budget

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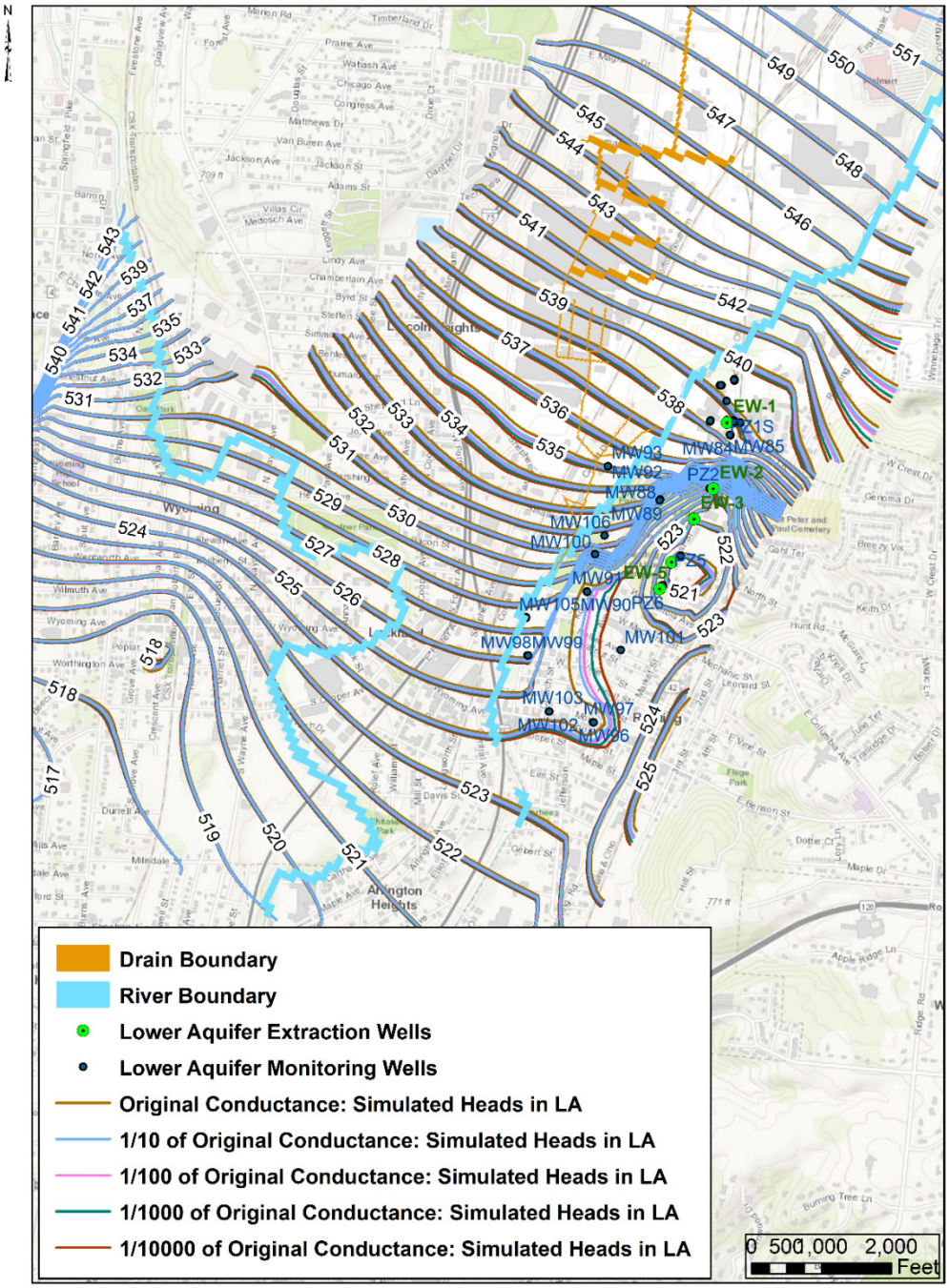

Figure 23 Drain Conductance Analysis: Water Levels in Lower Aquifer

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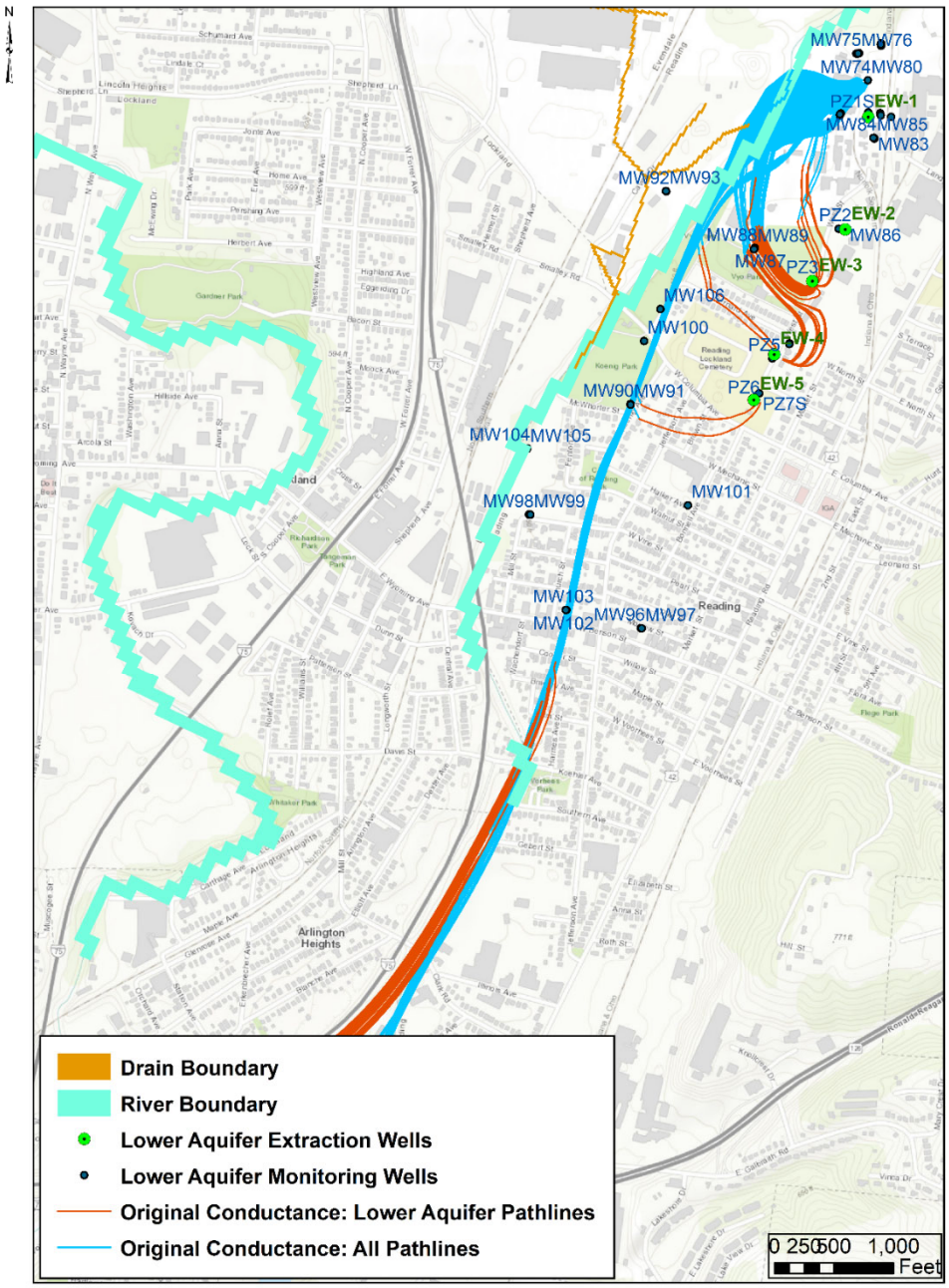

Figure 24 Original Conductance: Pathlines

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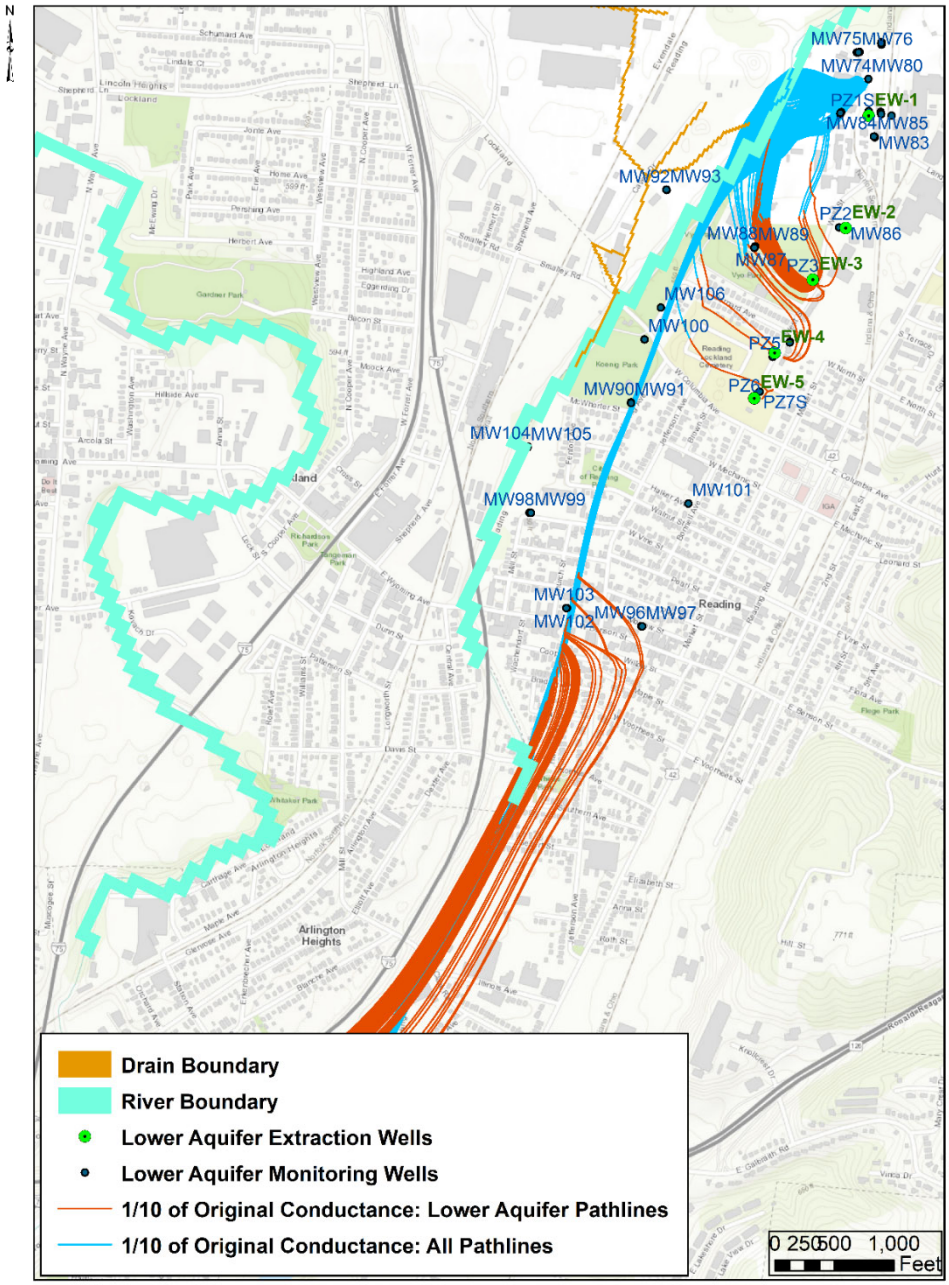

Figure 25 Case 1 - Conductance Reduced by a Factor of 10: Pathlines

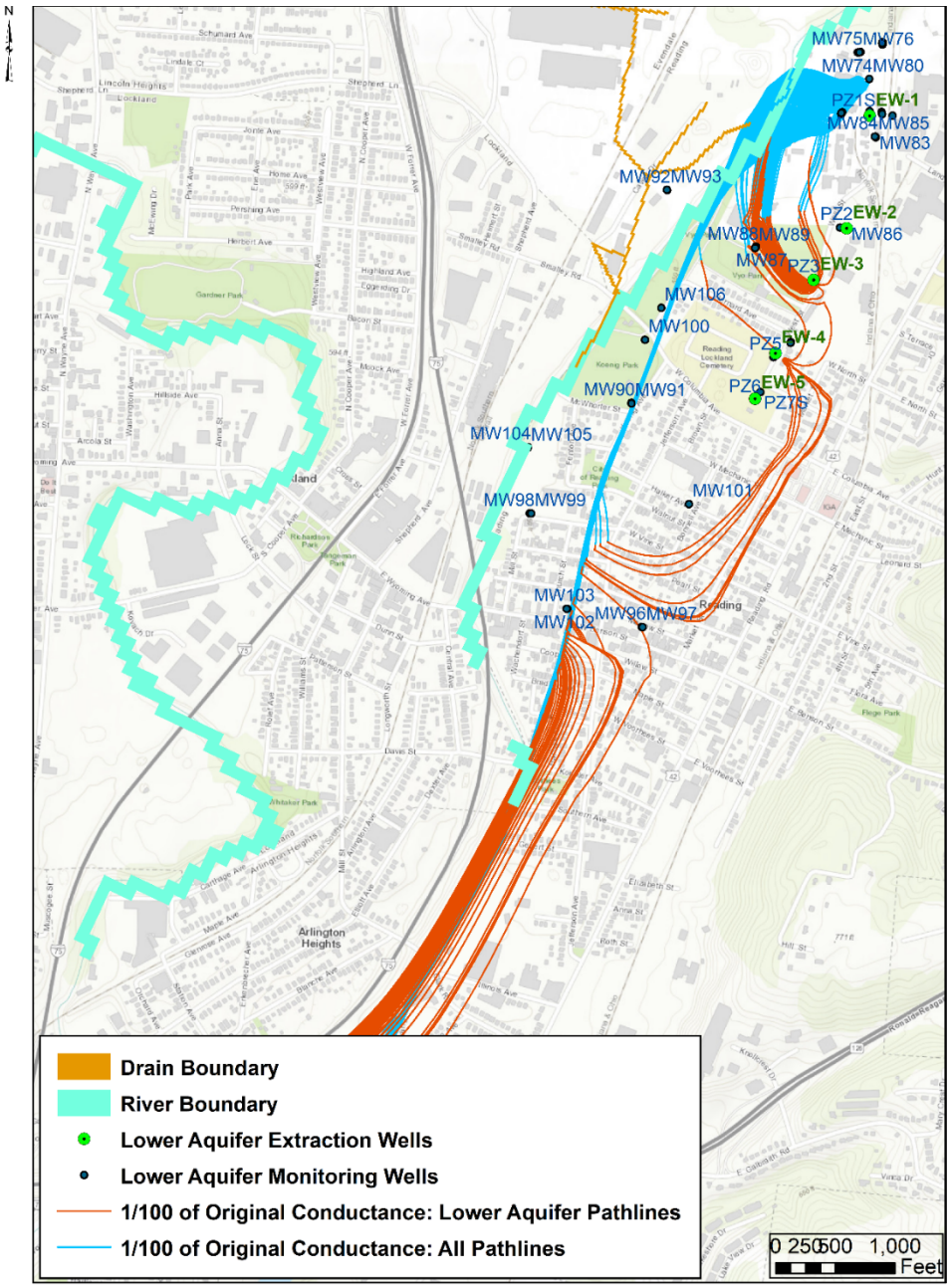

Figure 26 Case 2 - Conductance Reduced by a Factor of 100: Pathlines

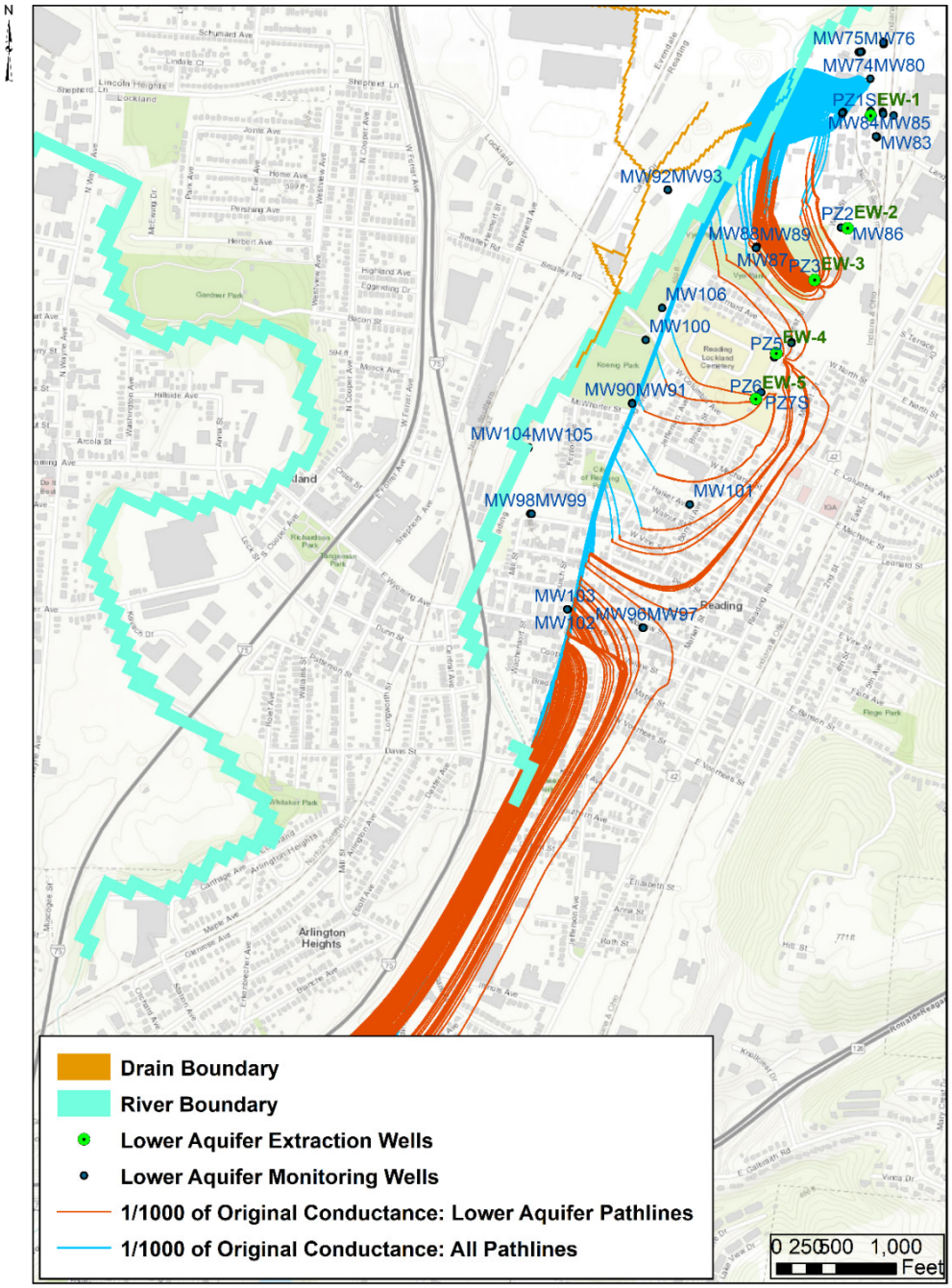

Figure 27 Case 3 - Conductance Reduced by a Factor of 1000: Pathlines

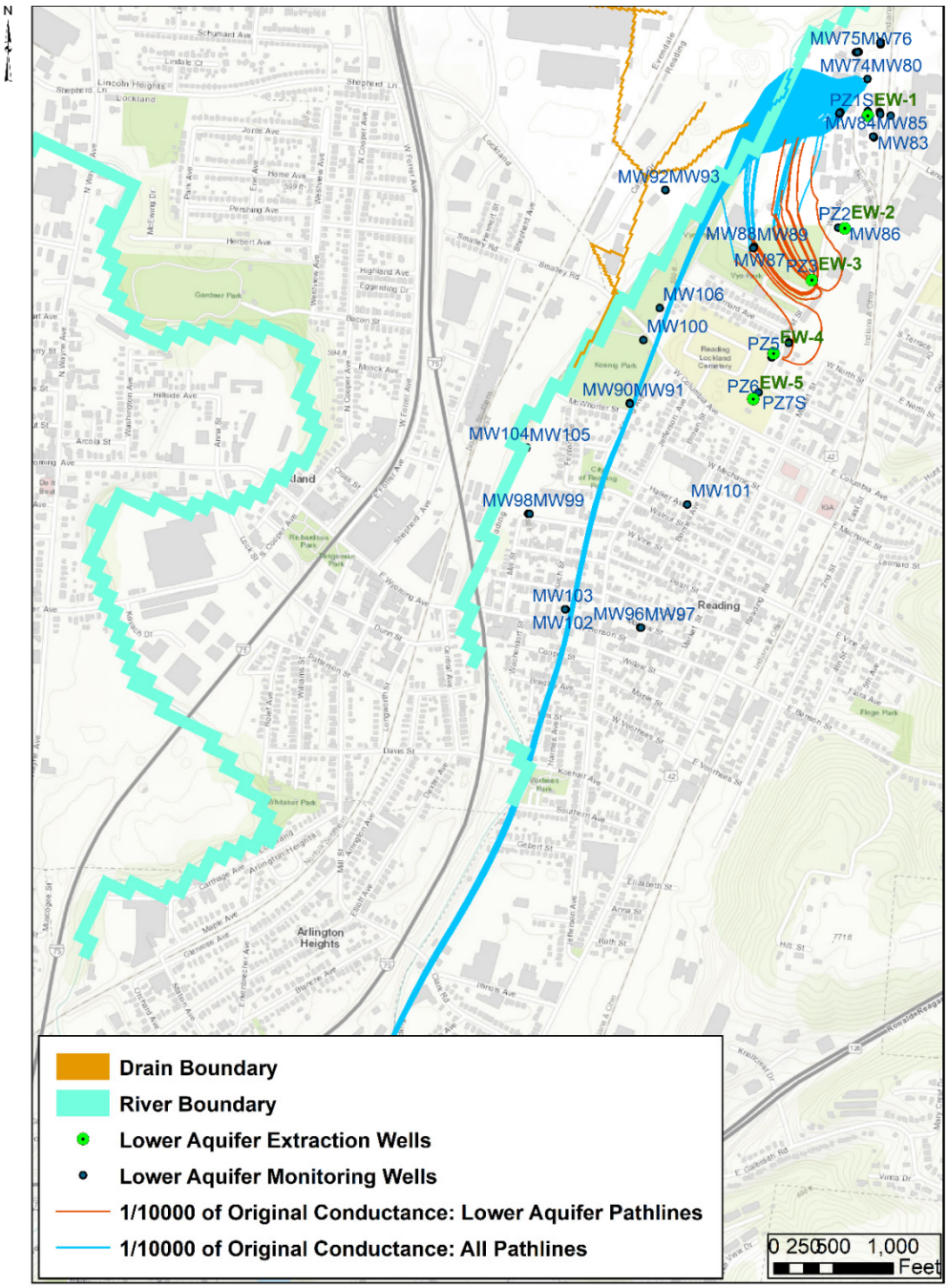

Figure 28 Case 4 - Conductance Reduced by a Factor of 10000: Pathlines

A detailed cross-section view of the pathlines for all the cases are shown in Figure 29.

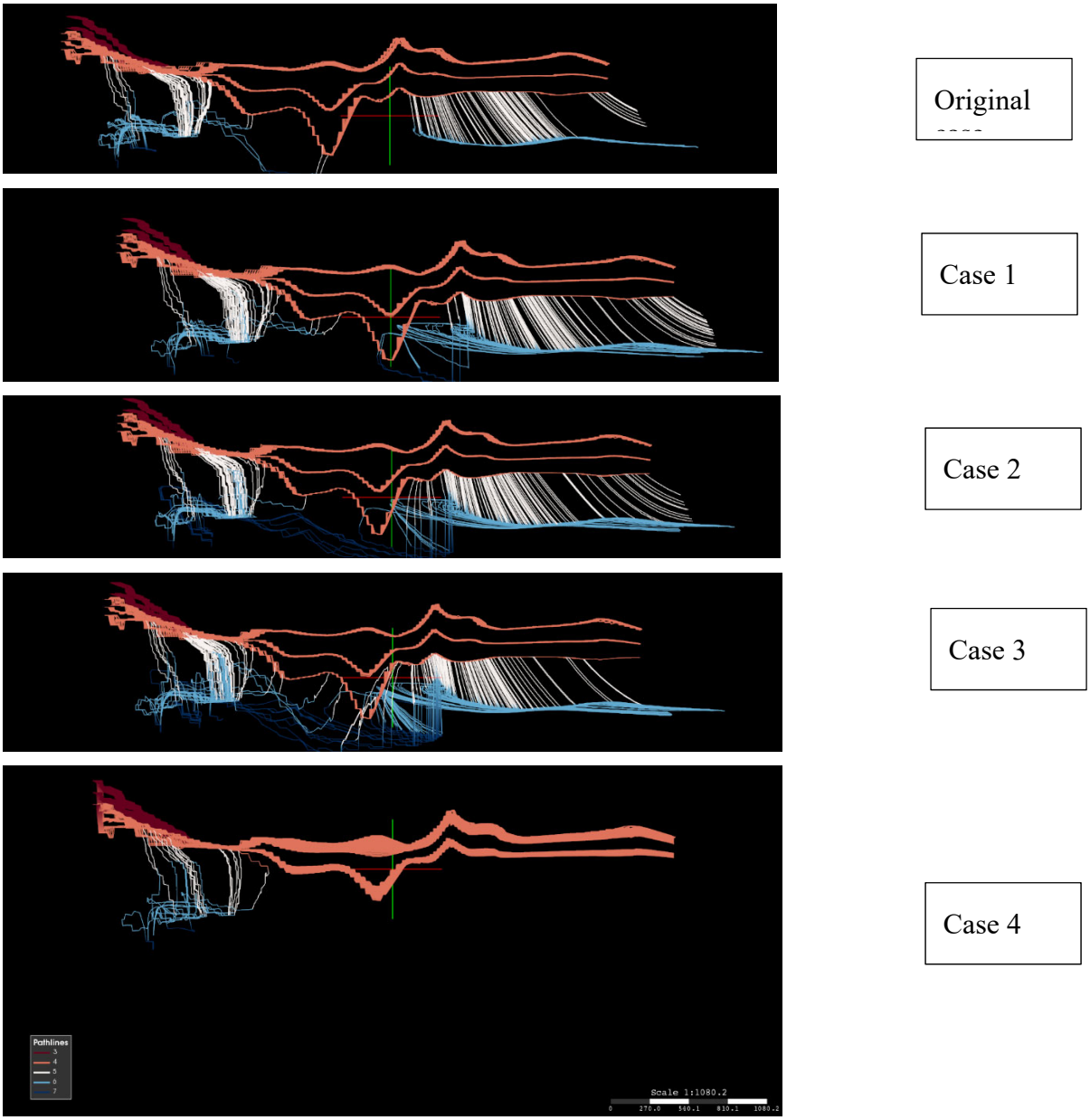

Figure 29 Cross-Section View of the Pathlines for All Cases

Sensitivity Analysis of General-Head Boundary

This analysis was designed to investigate the impact of the Constant-Head (CH) boundary located on the northern part of the model domain. A General-Head Boundary (GHB) is assigned to replace the CH boundary and sensitivity analyses were performed on the hydraulic conductance of the GHB, designated as *Cond*. Sensitivity evaluations were conducted with the following conductance values:

- Case 0: *Cond* = 10,000 ft^2/d;
- Case 1: *Cond* = 1,000 ft^2/d;
- Case 2: *Cond* = 200 ft^2/d;
- Case 3: *Cond* = 10 ft^2/d; and
- Case 4: *Cond* = 1 ft^2/d.

The results of the sensitivity analysis of the general-head boundary are described in the following five subsections with respect to the following topics:

- Water budget;
- Proof of concept – GHB replacing CHD;
- Range of conductance values;
- Comparison between simulated and observed water levels; and
- Particle traces from the magic pit.

Water Budget

The mass balances of the original model compared to the five model cases (described above) are shown in Figure 30.

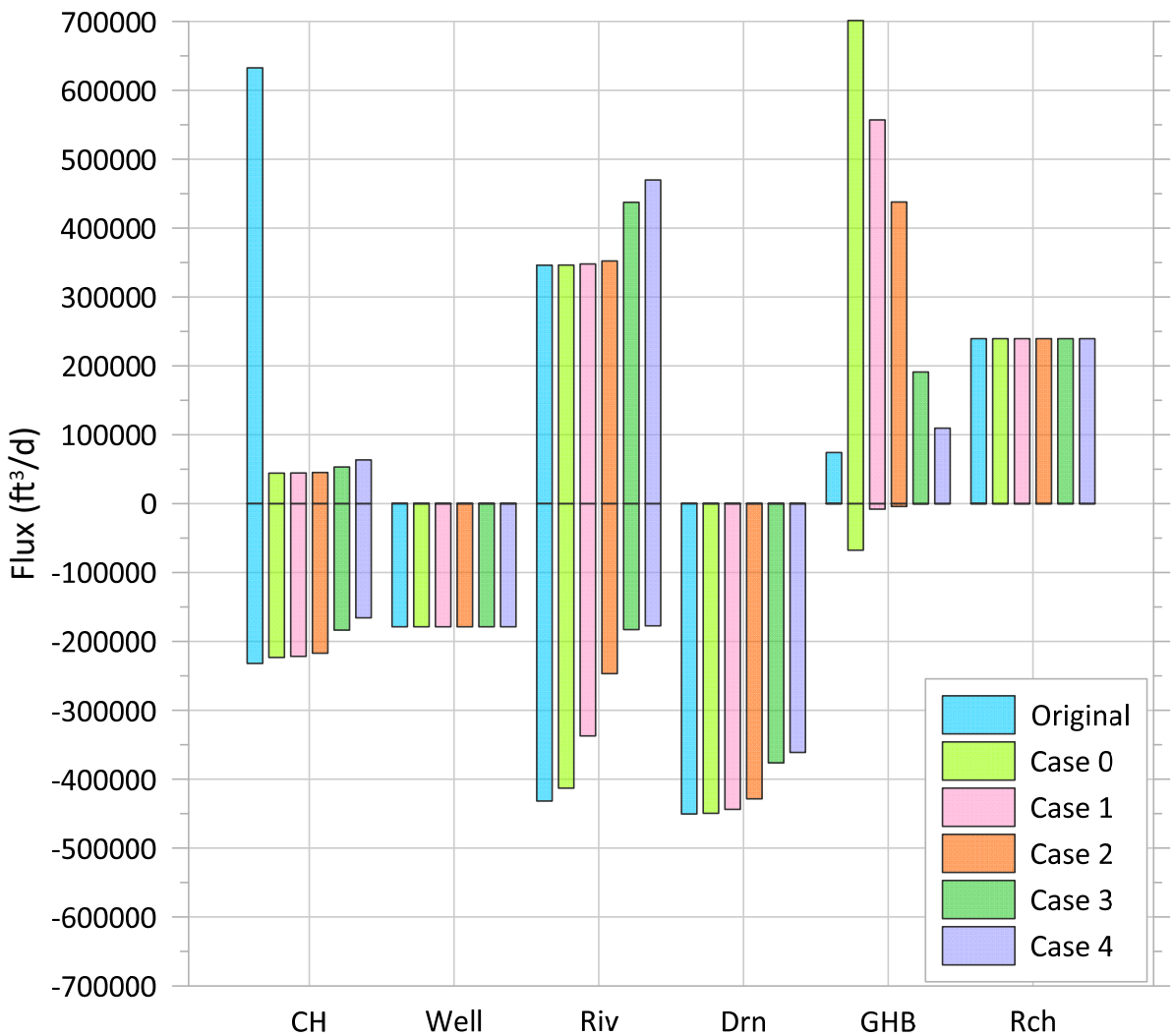

Figure 30 Water Budget

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Proof of Concept – GHB Replacing CHD

The simulated water levels within the Upper and Lower Aquifers of the original model are compared against the water levels in Case 0, presented in Figures 31 and 32. The water levels in the two models are similar, suggesting that a GHB is appropriate to represent the constant-head boundary.

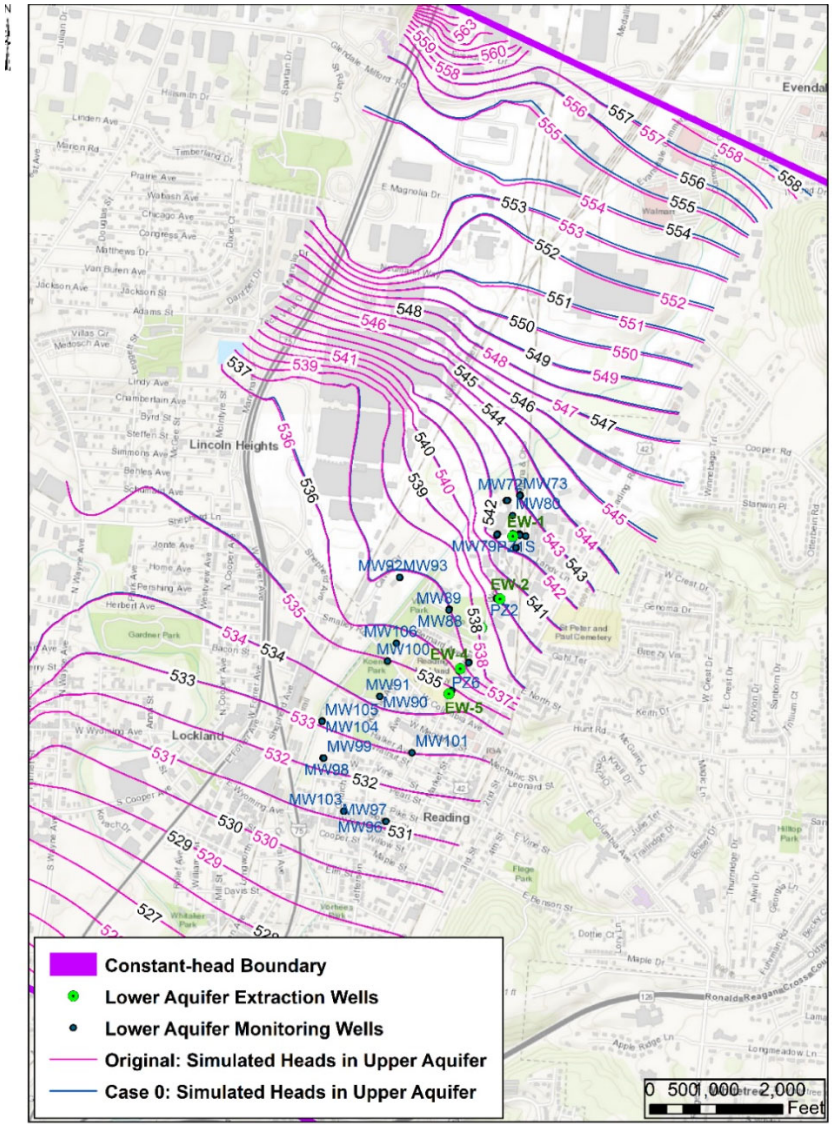

Figure 31 Original Model vs. Case 0: Water Levels in the Upper Aquifer

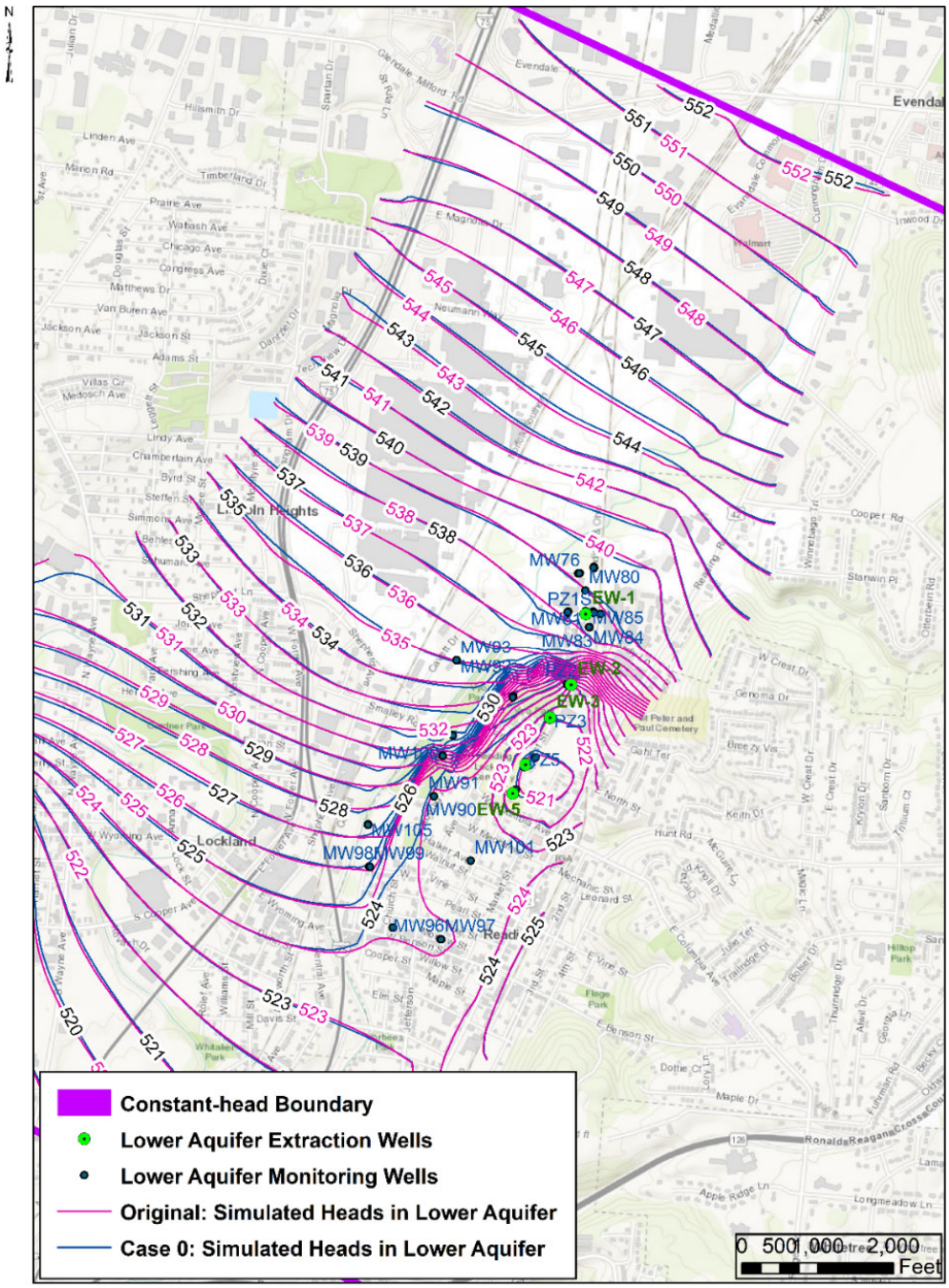

Figure 32 Original Model vs. Case 0: Water Levels in the Lower Aquifer

Range of Conductance Values

The simulated water levels in the Lower Aquifer of Case 4 (*Cond* = 1 ft^2/d) show an usual pattern: no hydraulic gradient is observed north of the Site. This suggests that the hydraulic conductance of 1 ft^2/d is too small. Our opinion is that it is appropriate to adjust the *Cond* between 10 (Case 3) and 1000 ft^2/d (Case 1).

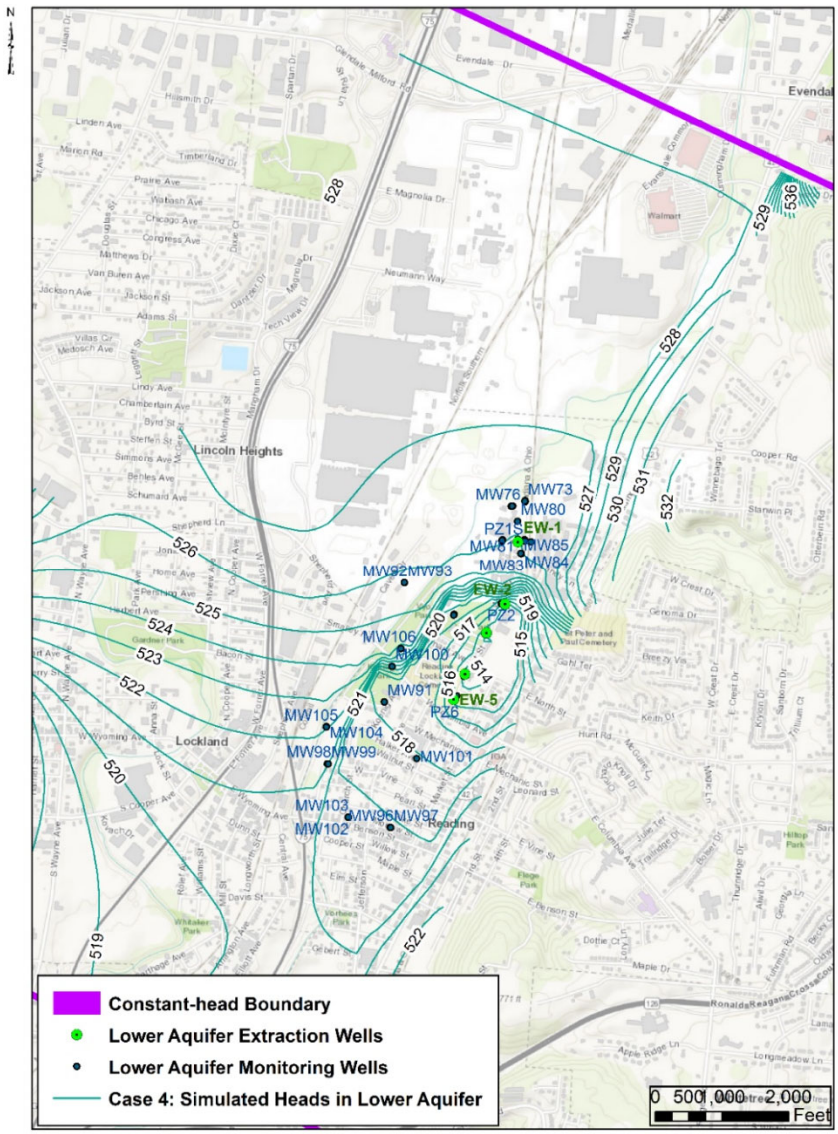

Figure 33 Case 4: Water Levels in the Lower Aquifer

Comparison between Simulated and Observed Water Levels

As discussed earlier, the reasonable range of General Head Boundary conductance values is 10 to 1000 ft^2/d; therefore, Case 1 (1000 ft^2/d), Case 2 (200 ft^2/d) and Case 3 (10 ft^2/d) are used for this analysis. The only difference between the three cases lies in the value of the hydraulic conductance specified at the GHB. The overall water level targets are the observed water levels in the Upper and Lower Aquifers between 1997 and 2018, including:

- Upper Aquifer: average water levels over the entire monitoring history;
- Lower Aquifer (2003): water levels in 2003; and
- Lower Aquifer (2013): water levels in 2013.

Detailed information on the original model, model calibration and the selection of the water level targets is documented in the SSP&A modeling memorandum. For the Upper Aquifer targets, only the water levels of the monitoring wells installed in the Middle Outwash Lens (MOL) and the Lower Outwash Lens (LOL) are considered in this analysis.

The RMSEs calculated from the water levels in the Upper and Lower Aquifers are listed on Table 8. The RMSEs for the original model, Case 1 and Case 2 are very similar. The reported RMSE values are similar in magnitude to the typical observed fluctuations in water levels. The RMSEs for Case 3 are quite large.

Table 8 Root-Mean-Square-Errors for Each Model (unit: ft)

Model	Lower Aquifer (2003)	Lower Aquifer (2013)	Upper Aquifer	Overall
Original	2.06	1.89	3.56	2.62
Case 1	2.02	1.90	3.57	2.61
Case 2	1.97	2.01	3.60	2.64
Case 3	5.70	5.93	4.68	5.46

The simulated water levels are plotted against the observed water levels for the original model, Case 1, Case 2 and Case 3, shown in Figures 34, 35, 36 and 37, respectively. The water levels in the Upper Aquifer and in the Lower Aquifer are plotted separately using different symbols. Overall, the simulated water levels in the Lower Aquifer match closely to the observed levels for

the original model, Case 1 and Case 2. The match to the Upper Aquifer water level targets is also consistent for the three models. The matches to both the Upper and Lower Aquifer water levels in Case 3 are poor. It indicates that the GHB conductance value is greater than 1 ft^2/d (Case 3).

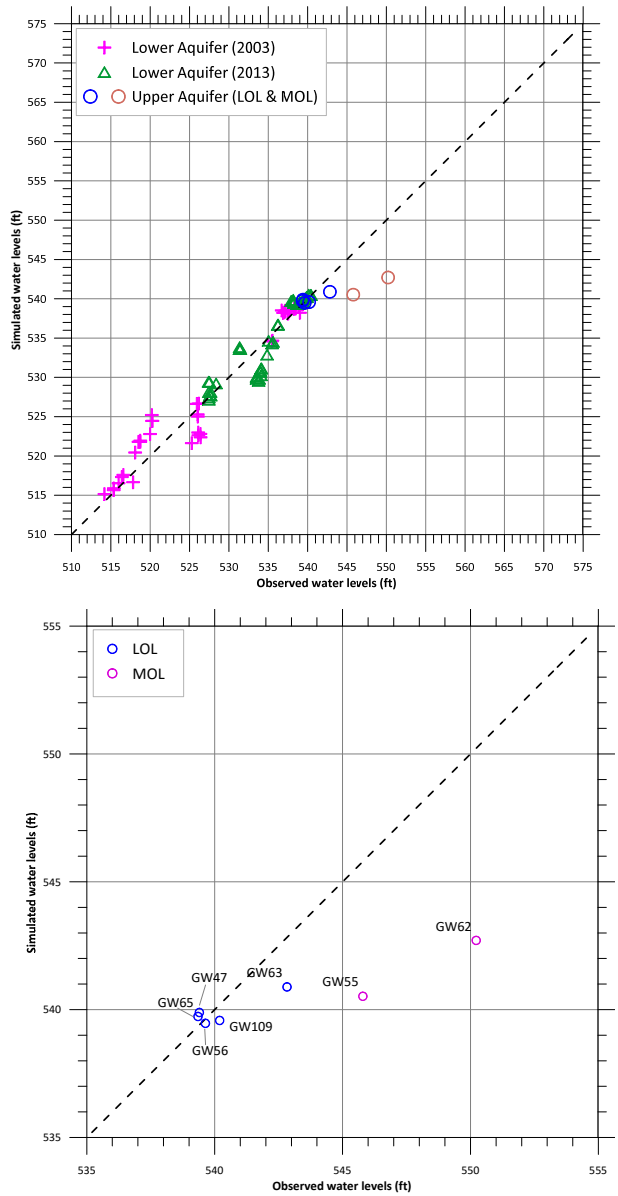

Figure 34 Original Model: Simulated vs. Observed

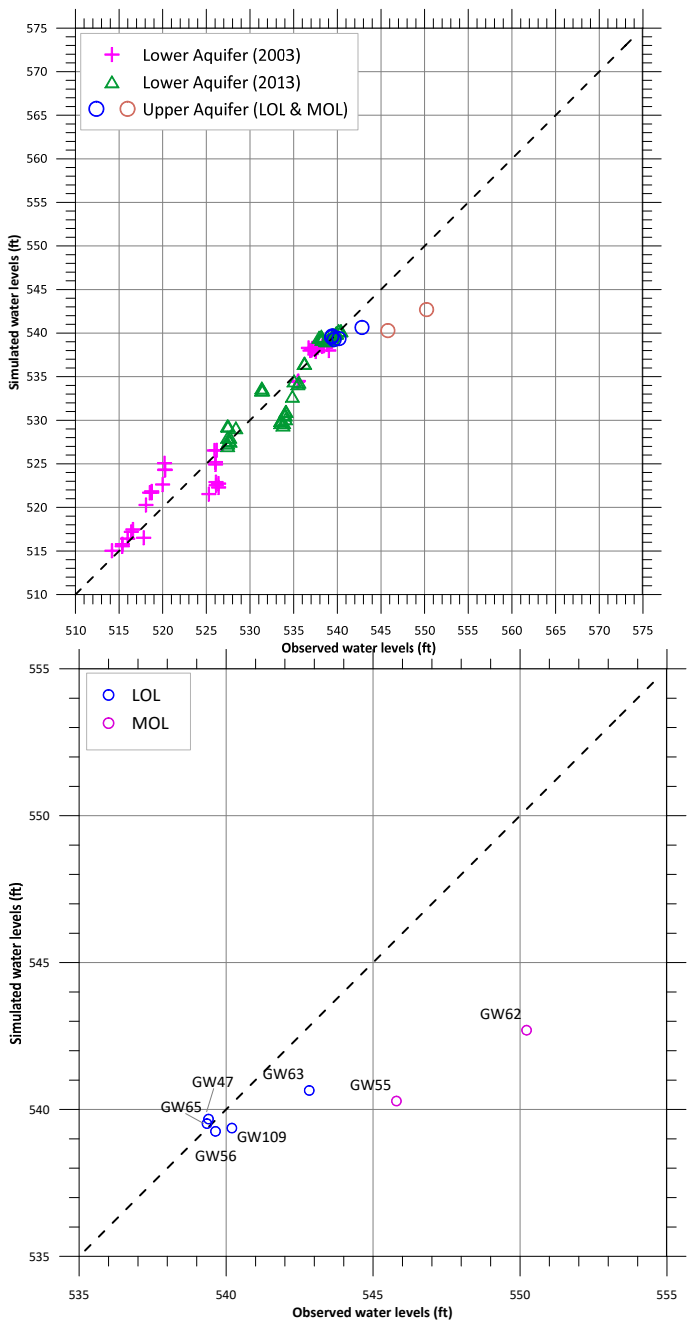

Figure 35 Case 1: Simulated vs. Observed

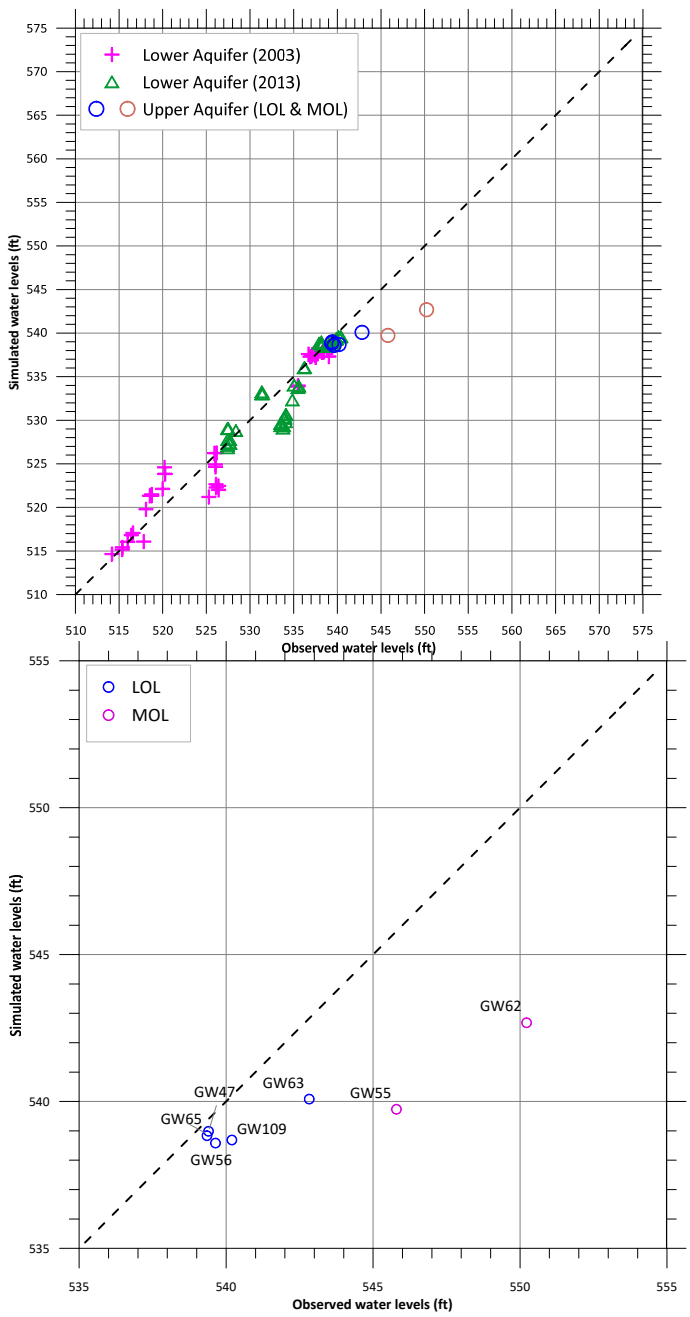

Figure 36 Case 2: Simulated vs. Observed

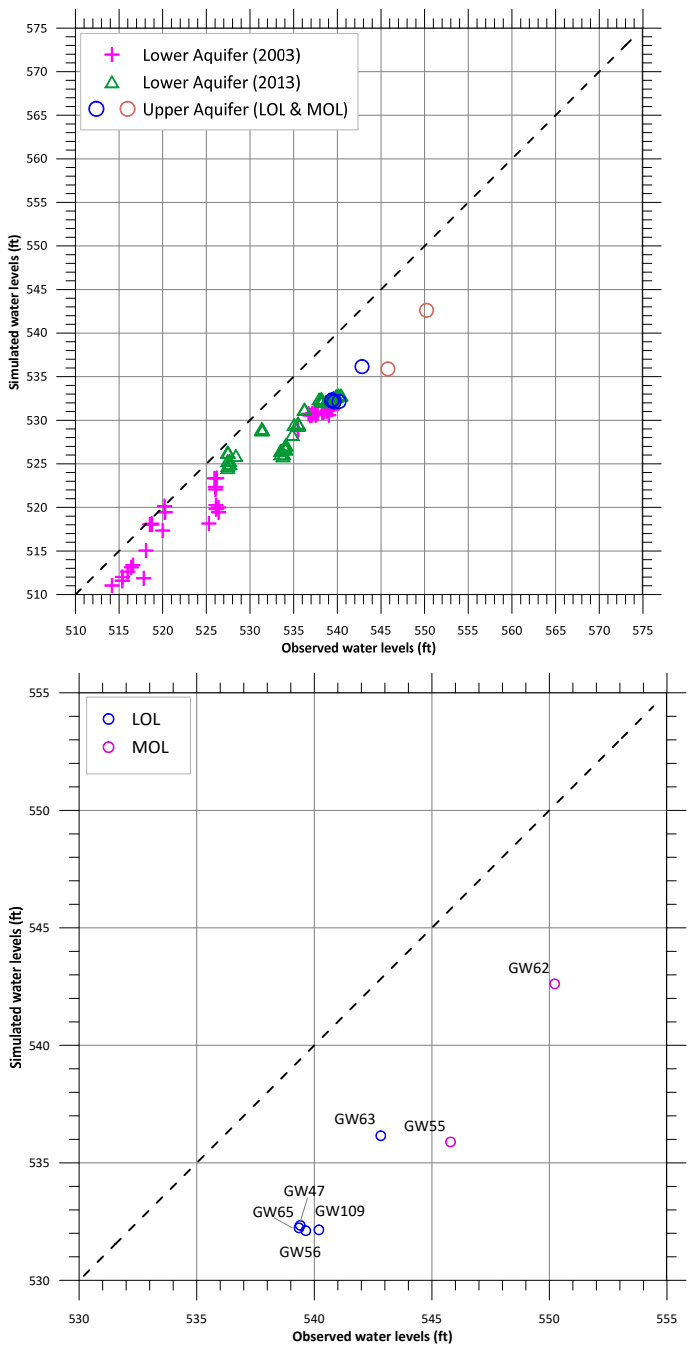

Figure 37 Case 3: Simulated vs. Observed

Summary

SSP&A has improved the original 2011 GE Aviation Site model in the following ways:

- SSP&A has modified the model surfaces to better represent the geologic conditions at that Site;
- SSP&A has extended the 2011 GE Aviation model to the simulation of transient conditions; and
- SSP&A has calibrated the transient model to match the historical water levels in the monitoring wells installed in both Upper and Lower Aquifers. The results of the analyses confirm that the re-calibrated model can match relatively closely the observations over an extended period during which pumping rates varied at the Pristine Site.

SSP&A has demonstrated that the current numerical model simulates well the groundwater flow conditions in the Lower Aquifer. The mismatch to the water levels in the Upper Aquifer suggests that the current model is not suitable for representing the complex conditions in the shallow subsurface (UOL). Simulation results obtained for the Upper Aquifer layer are likely only representative of the LOL interval of the Upper Aquifer.

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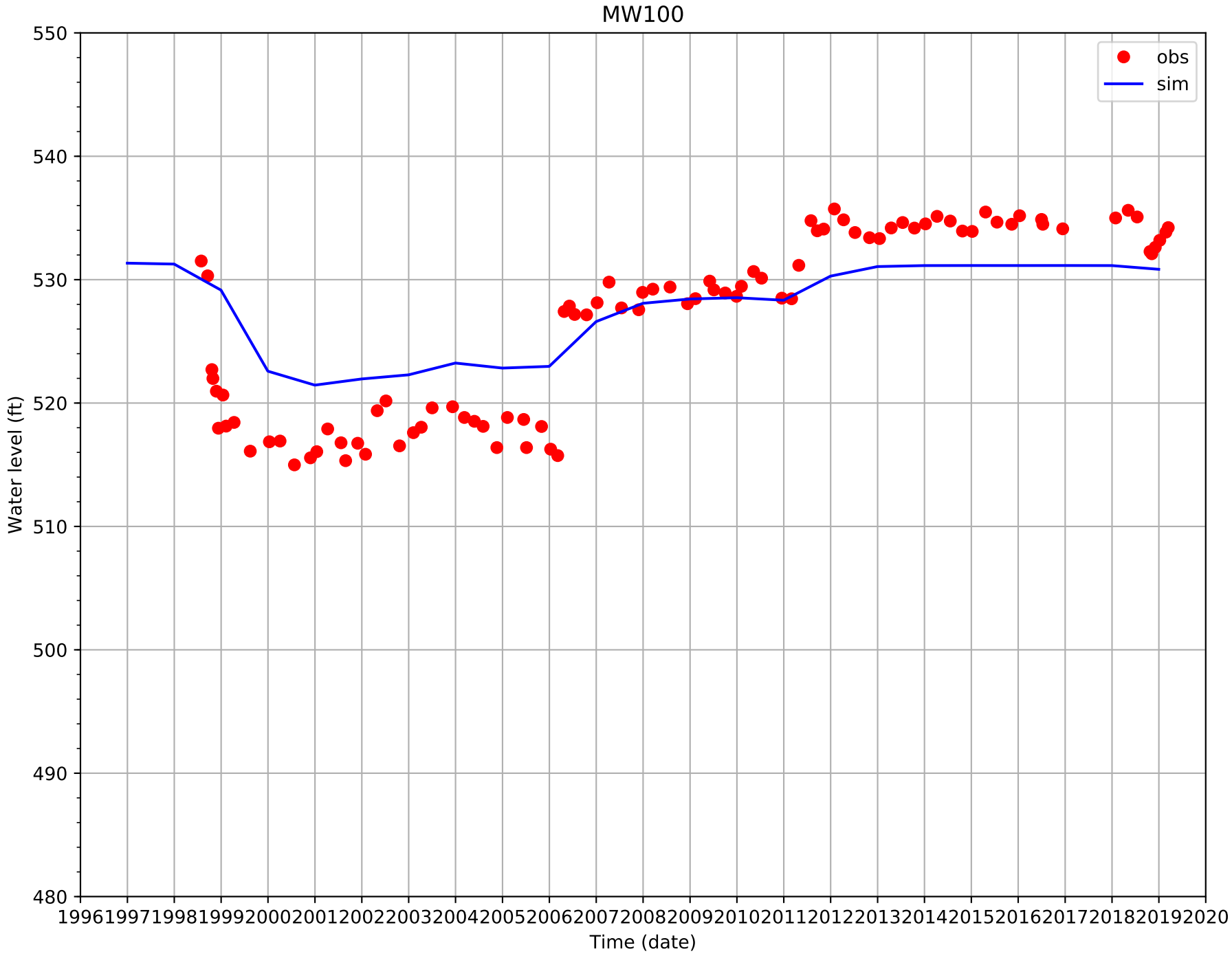
Appendix A

Simulated vs. Observed Water Levels

Water Levels in Lower Aquifer Monitoring Wells


MW100
obs
sim
Water level (ft)
550
540
530
520
510
500
490
480
1996
1997
1998
1999
2000
2001
2002
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2008
2009
2010
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2012
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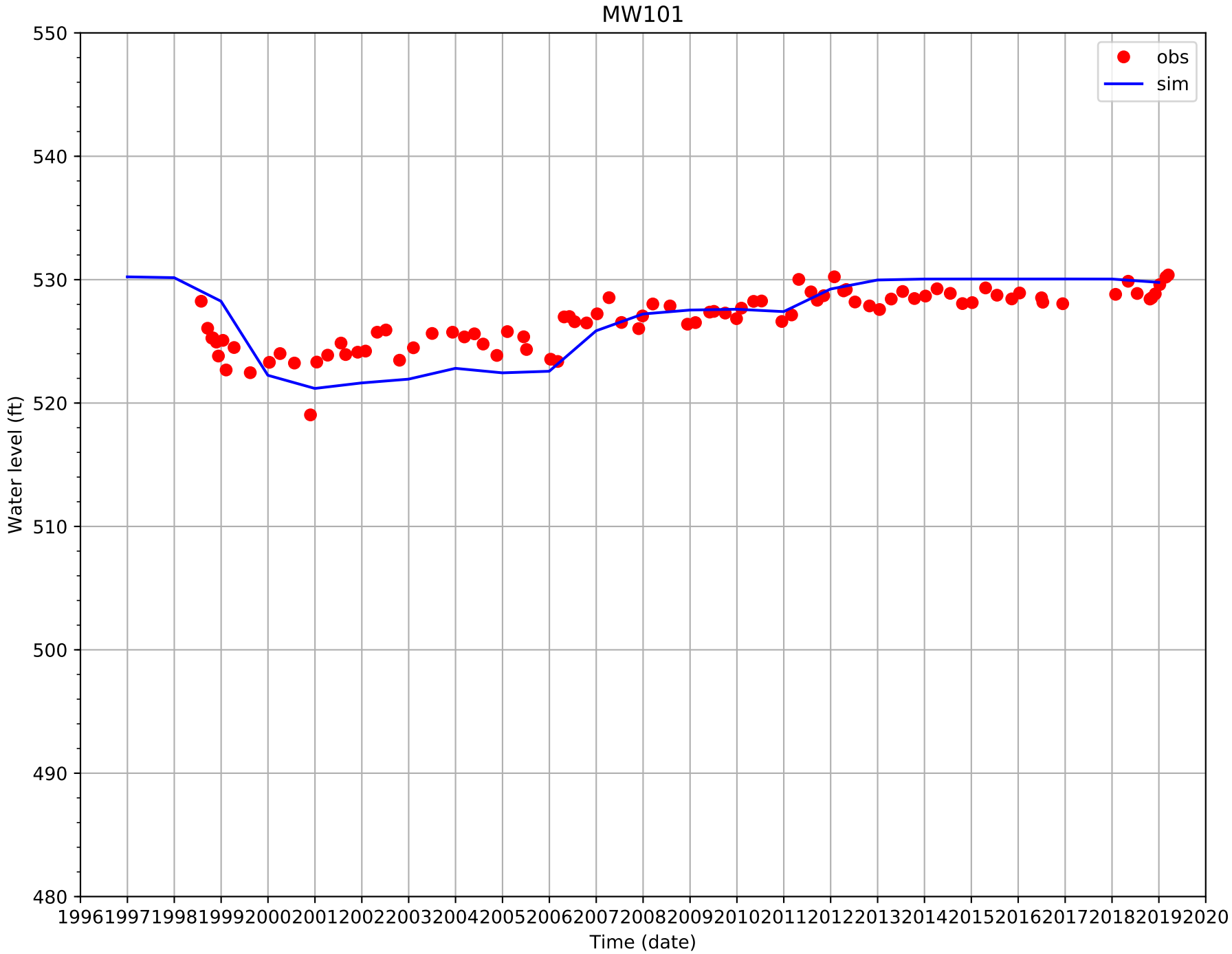
2015
2016
2017
2018
2019
2020
Time (date)


MW101
obs
sim
Water level (ft)
550
540
530
520
510
500
490
480
Time (date)
1996
1997
1998
1999
2000
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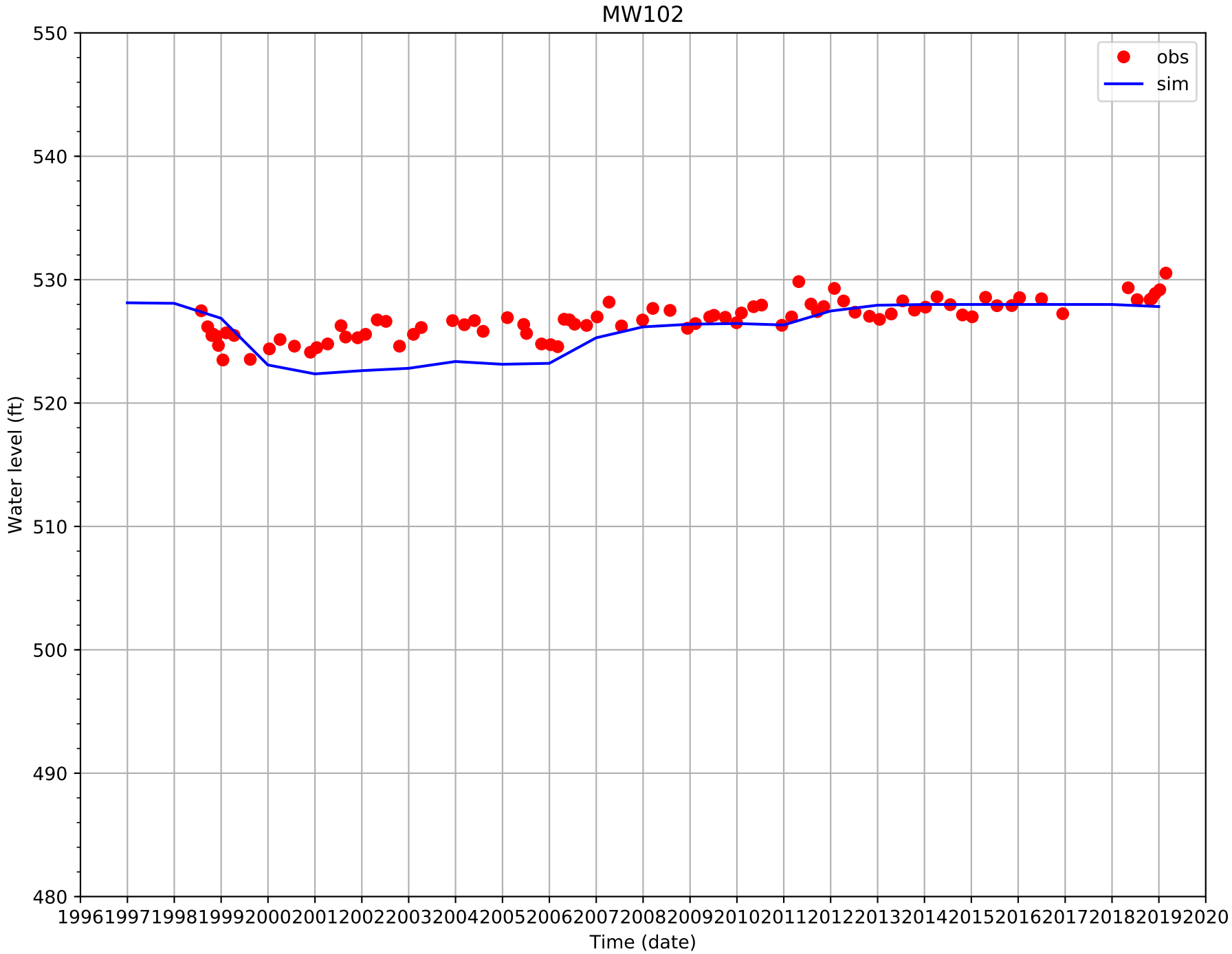
2015
2016
2017
2018
2019
2020


MW102
obs
sim
Water level (ft)
550
540
530
520
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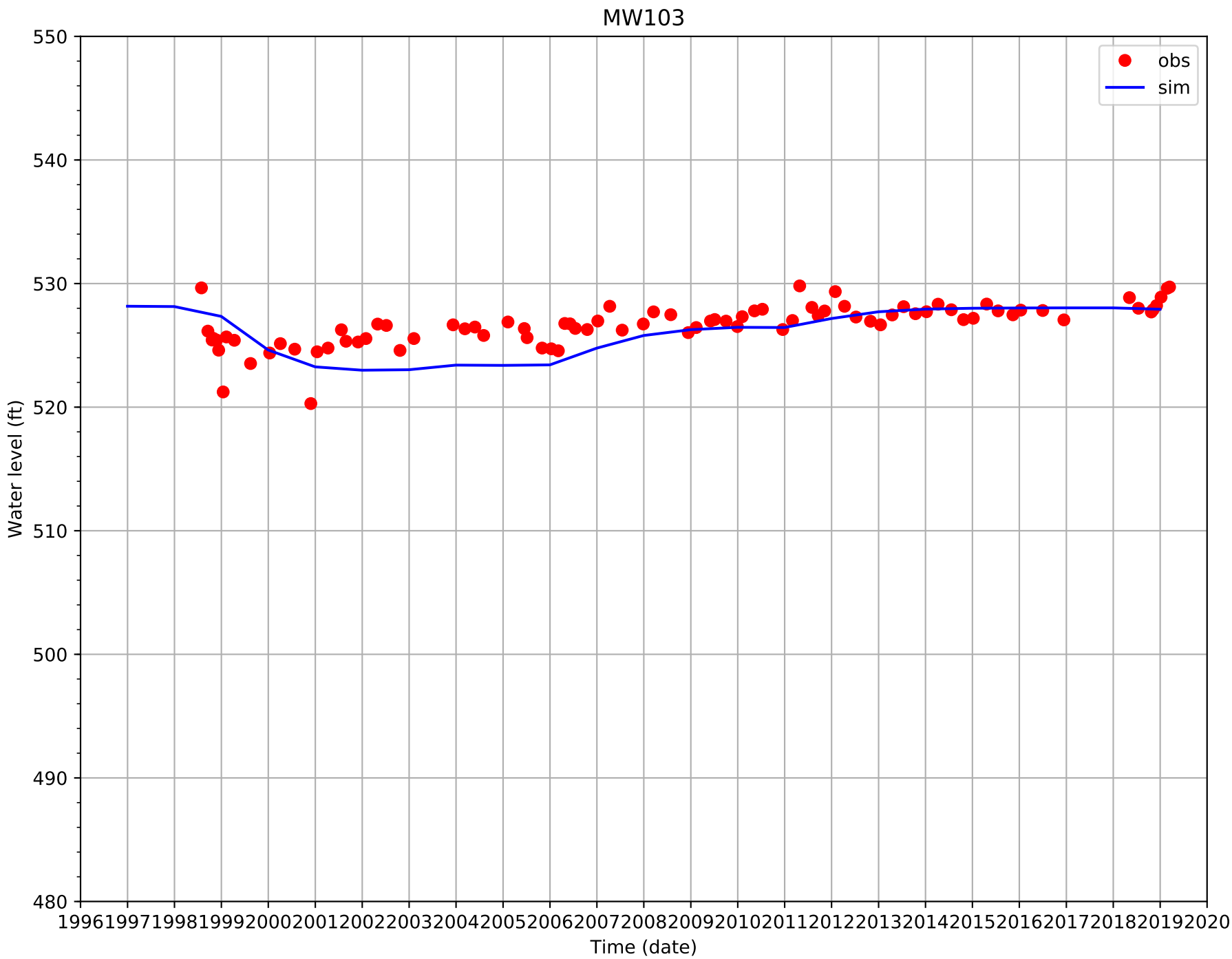
MW103
obs
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Water level (ft)
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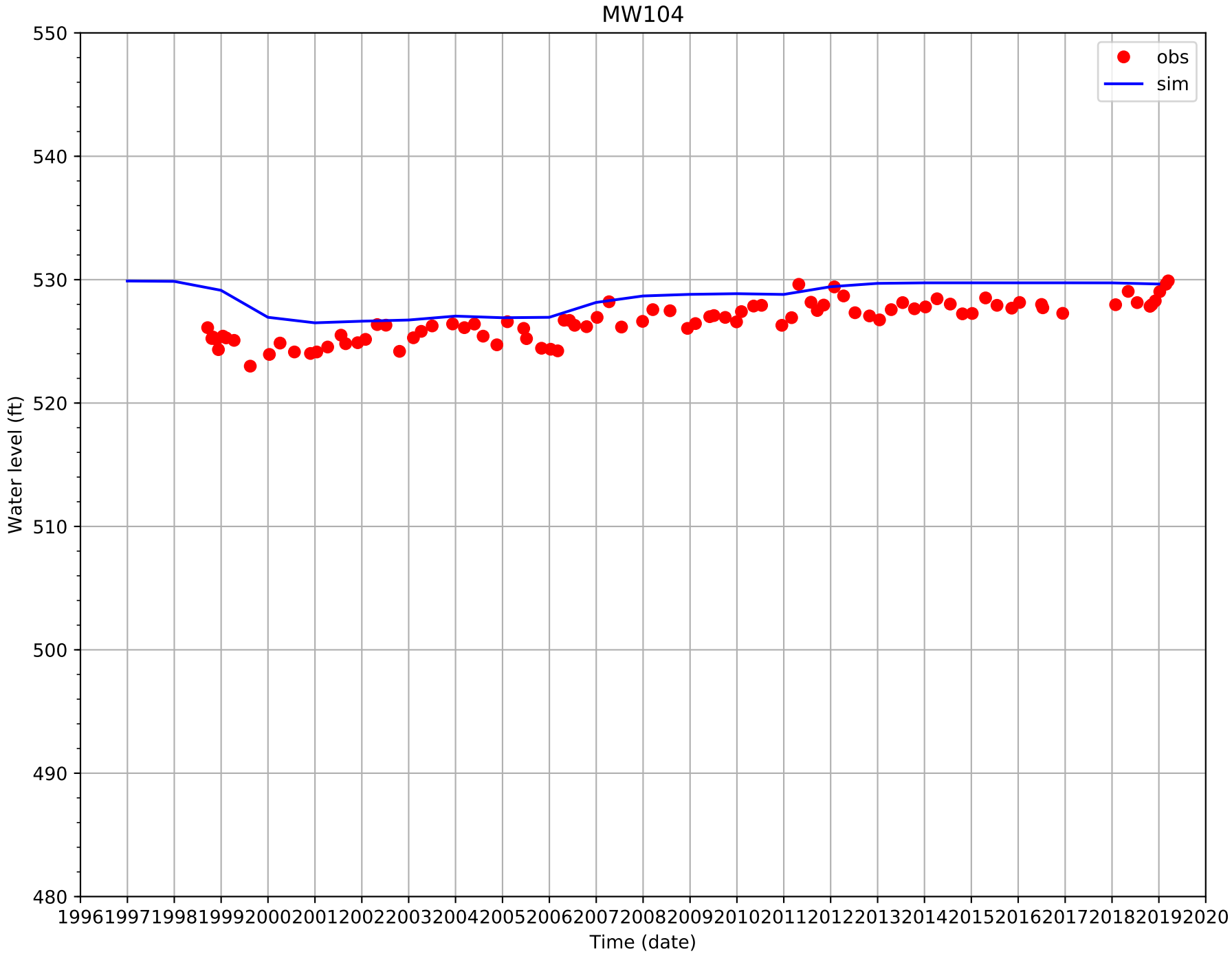
MW104
obs
sim
Water level (ft)
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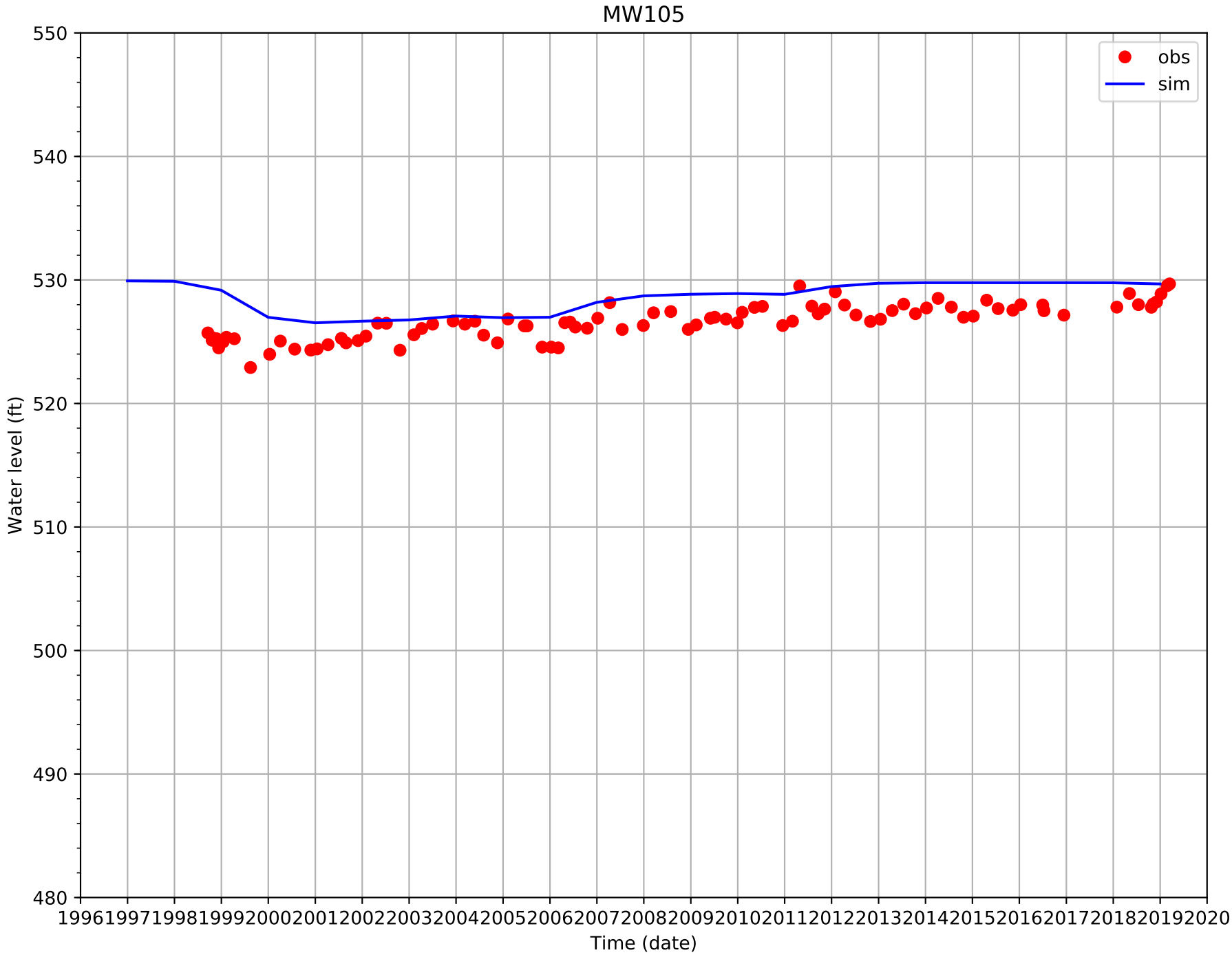
MW105
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Water level (ft)
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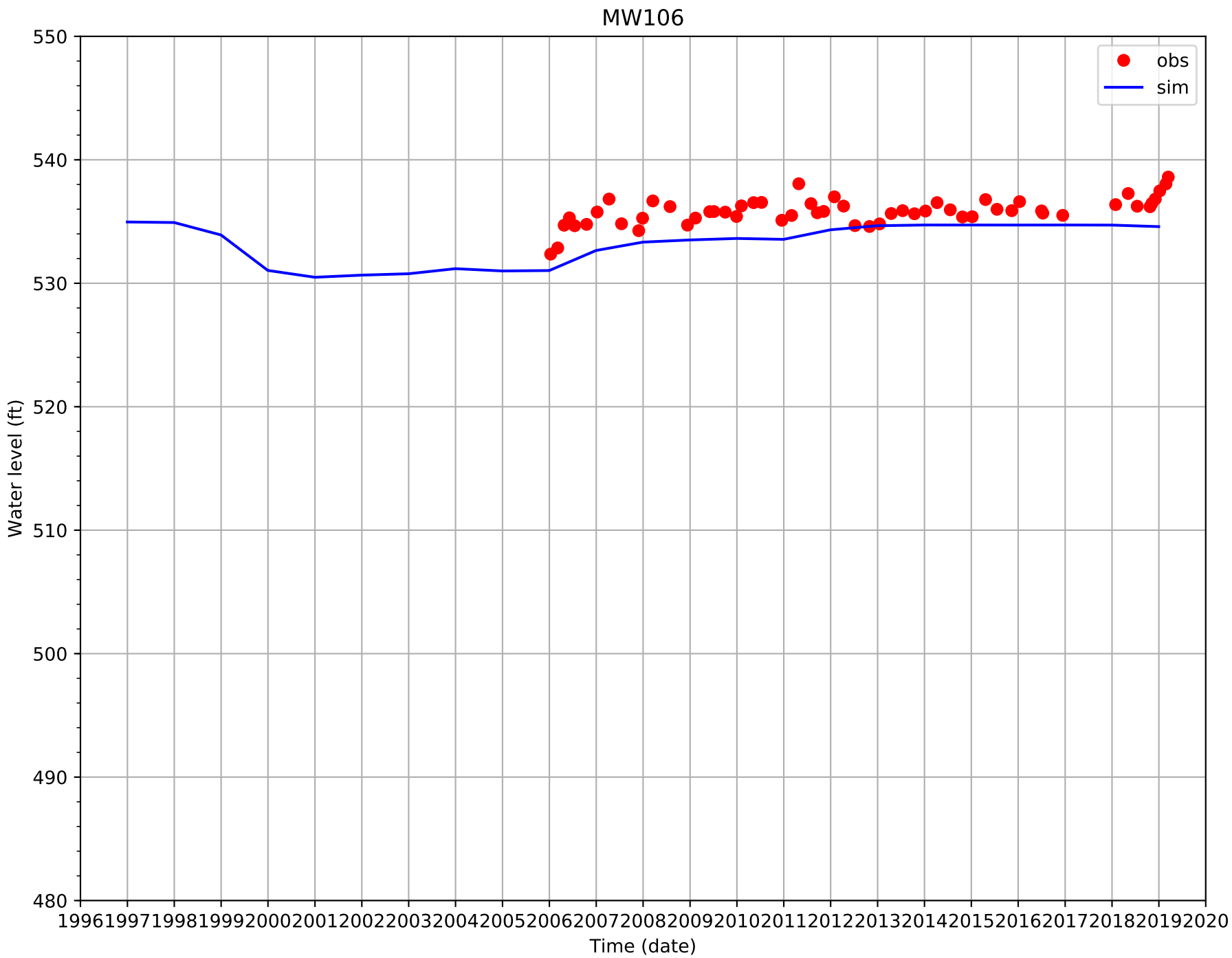
MW106
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Water level (ft)
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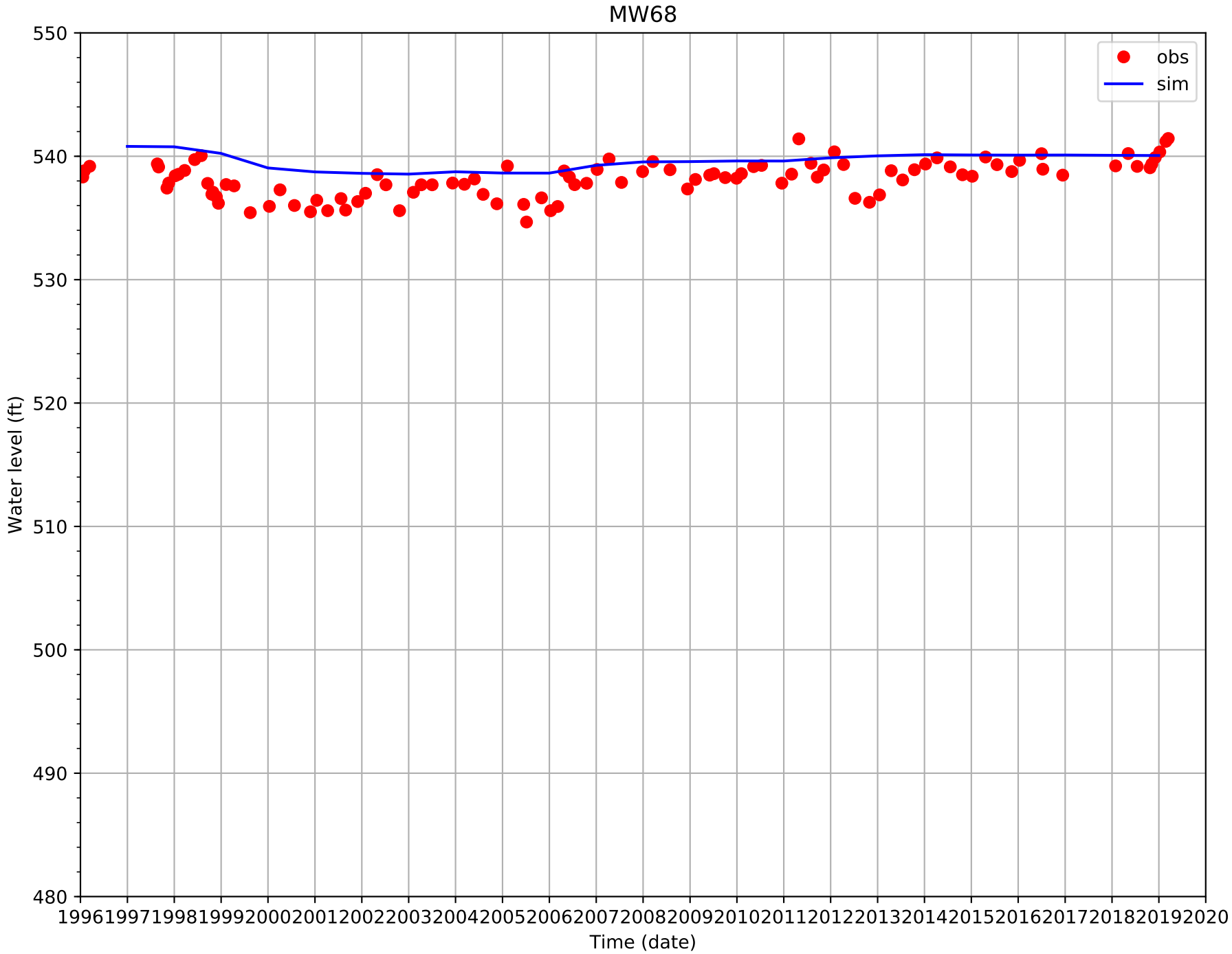
MW68
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Water level (ft)
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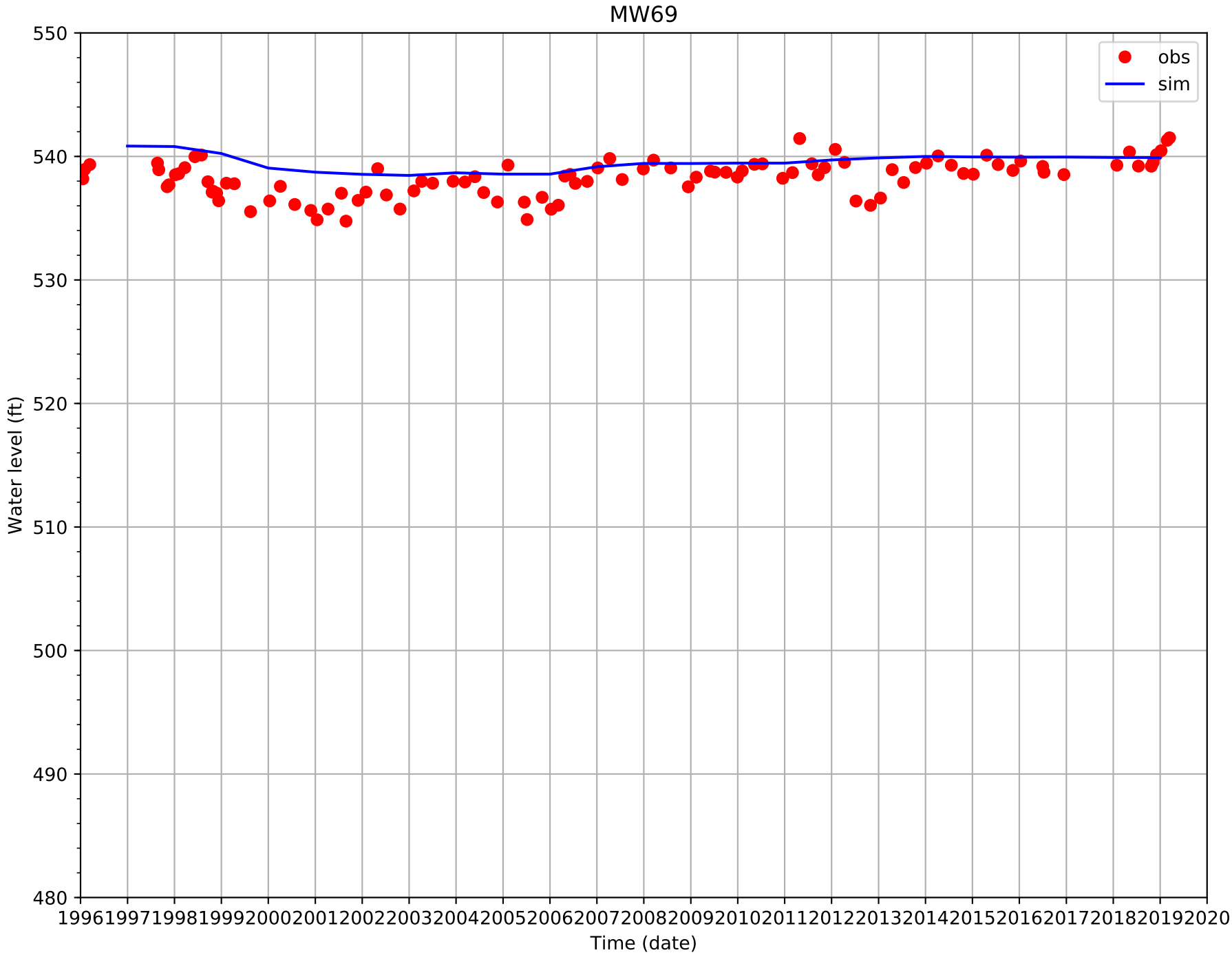
MW69
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Water level (ft)
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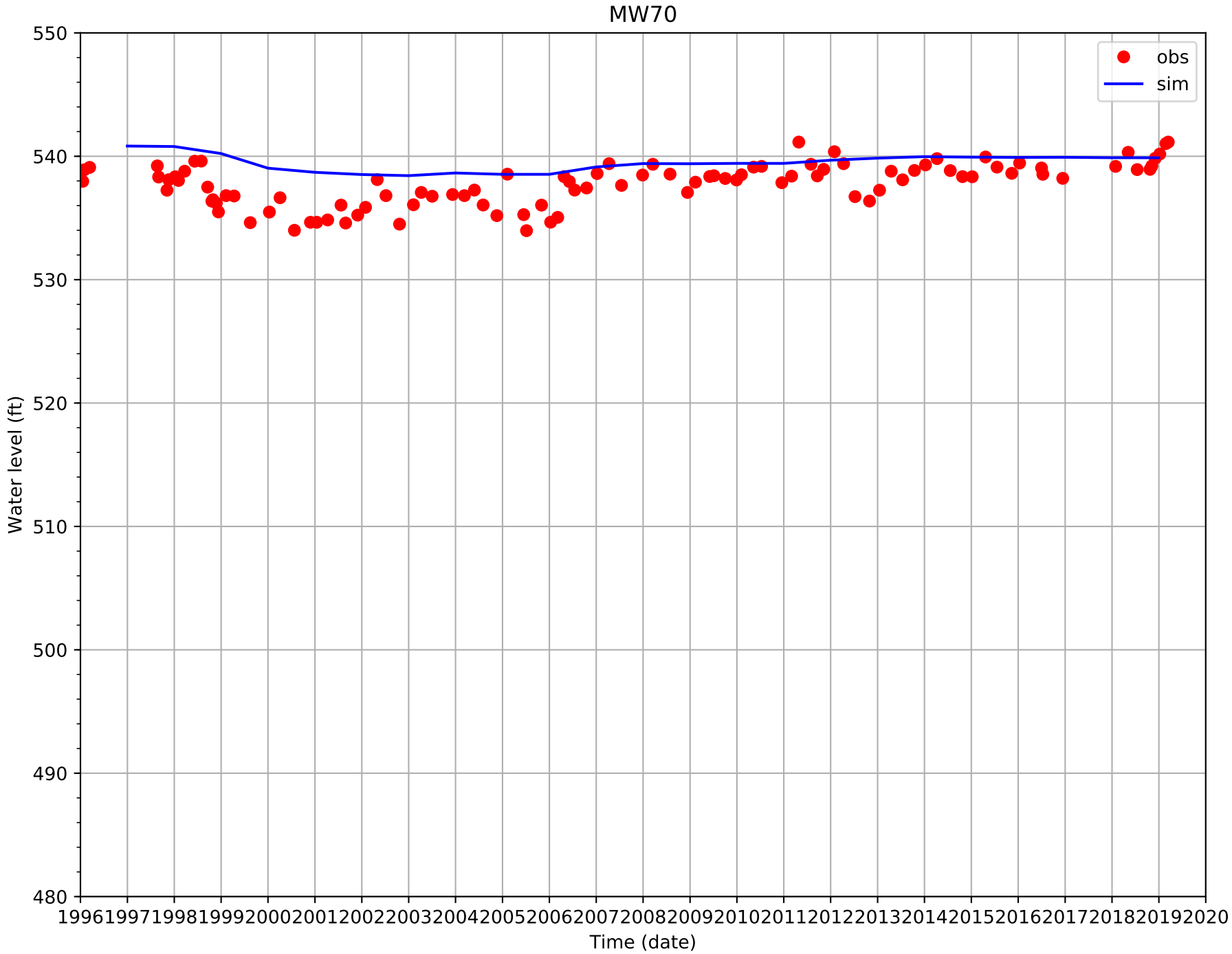
MW70
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Water level (ft)
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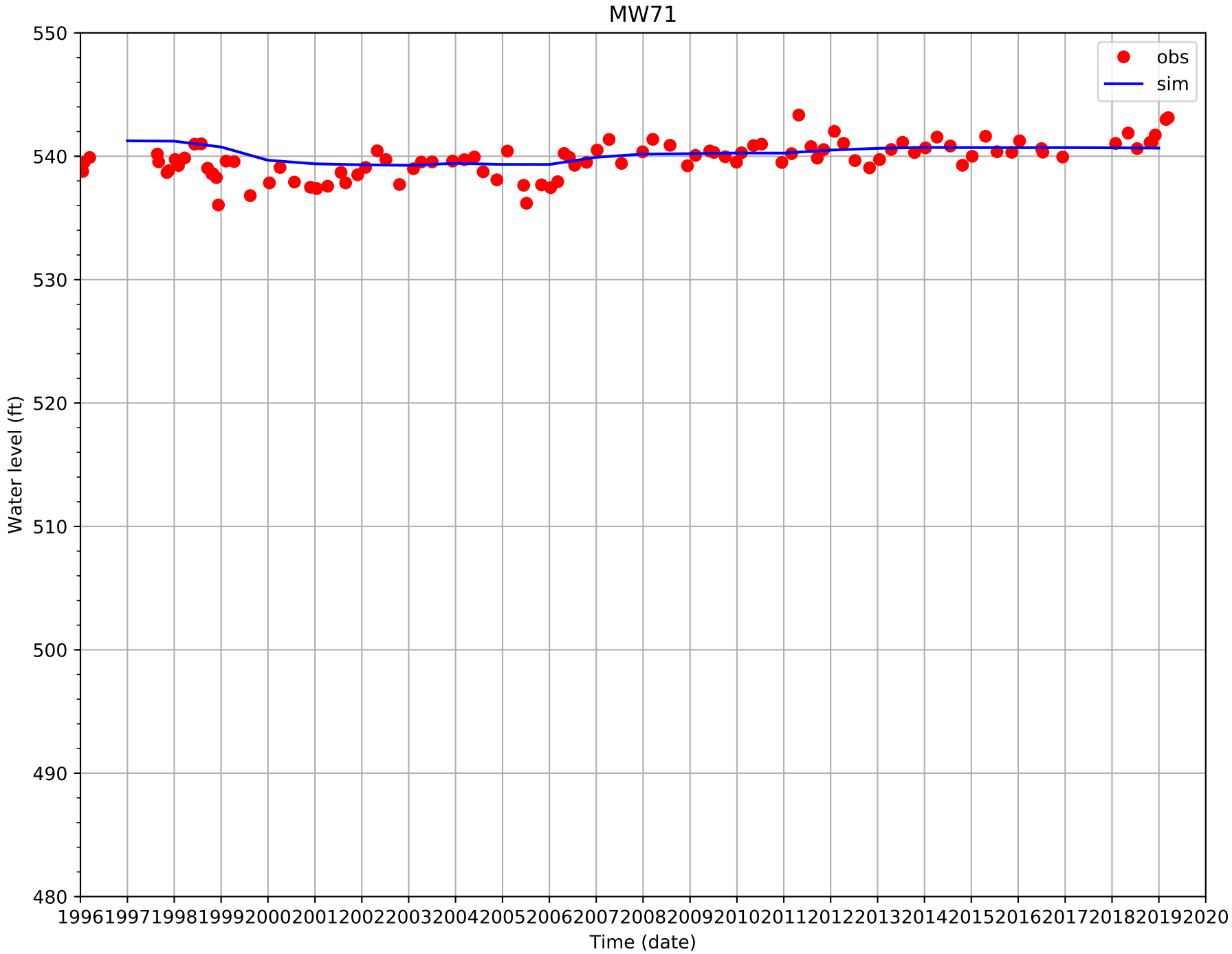
MW71
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Water level (ft)
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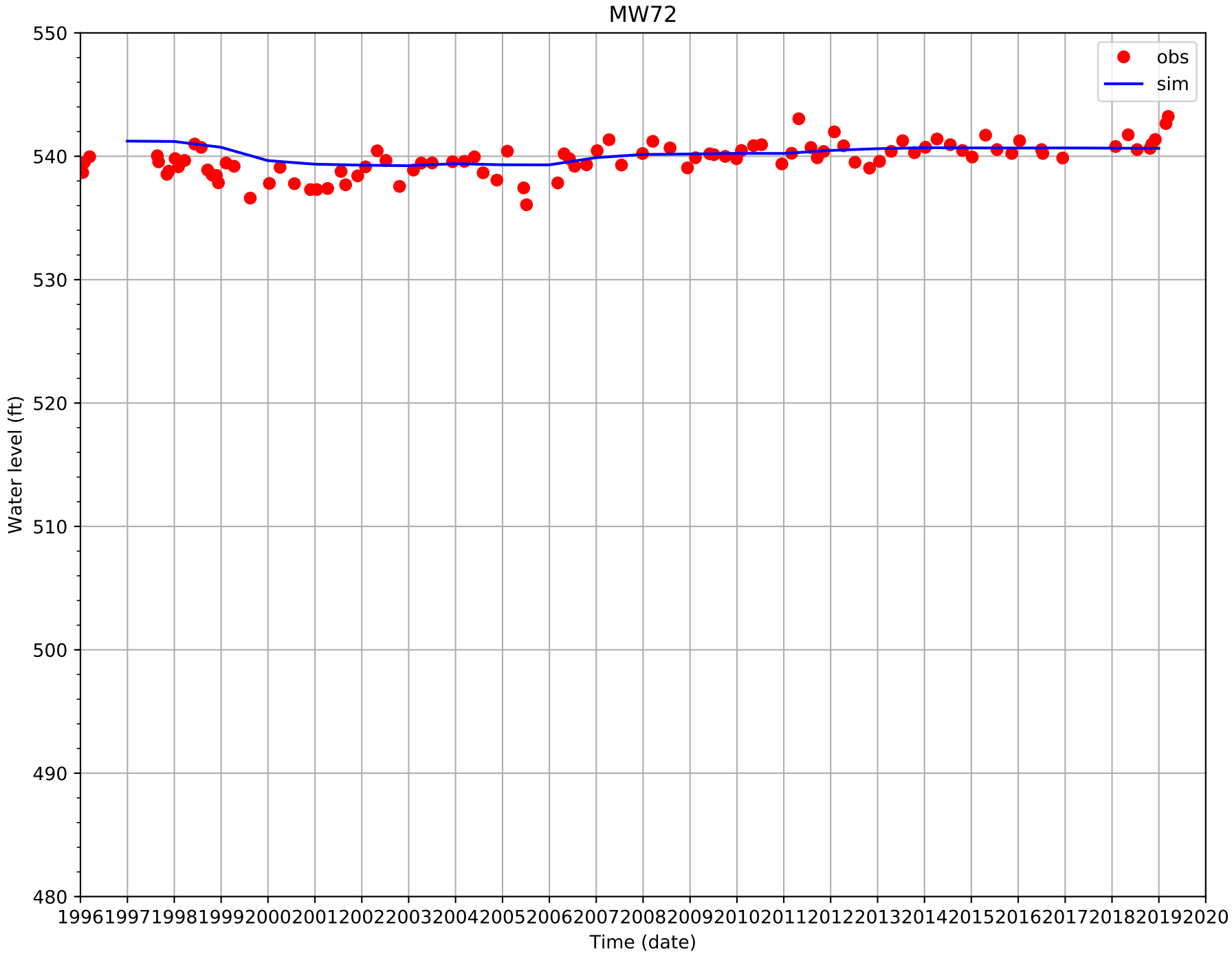
MW72
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Water level (ft)
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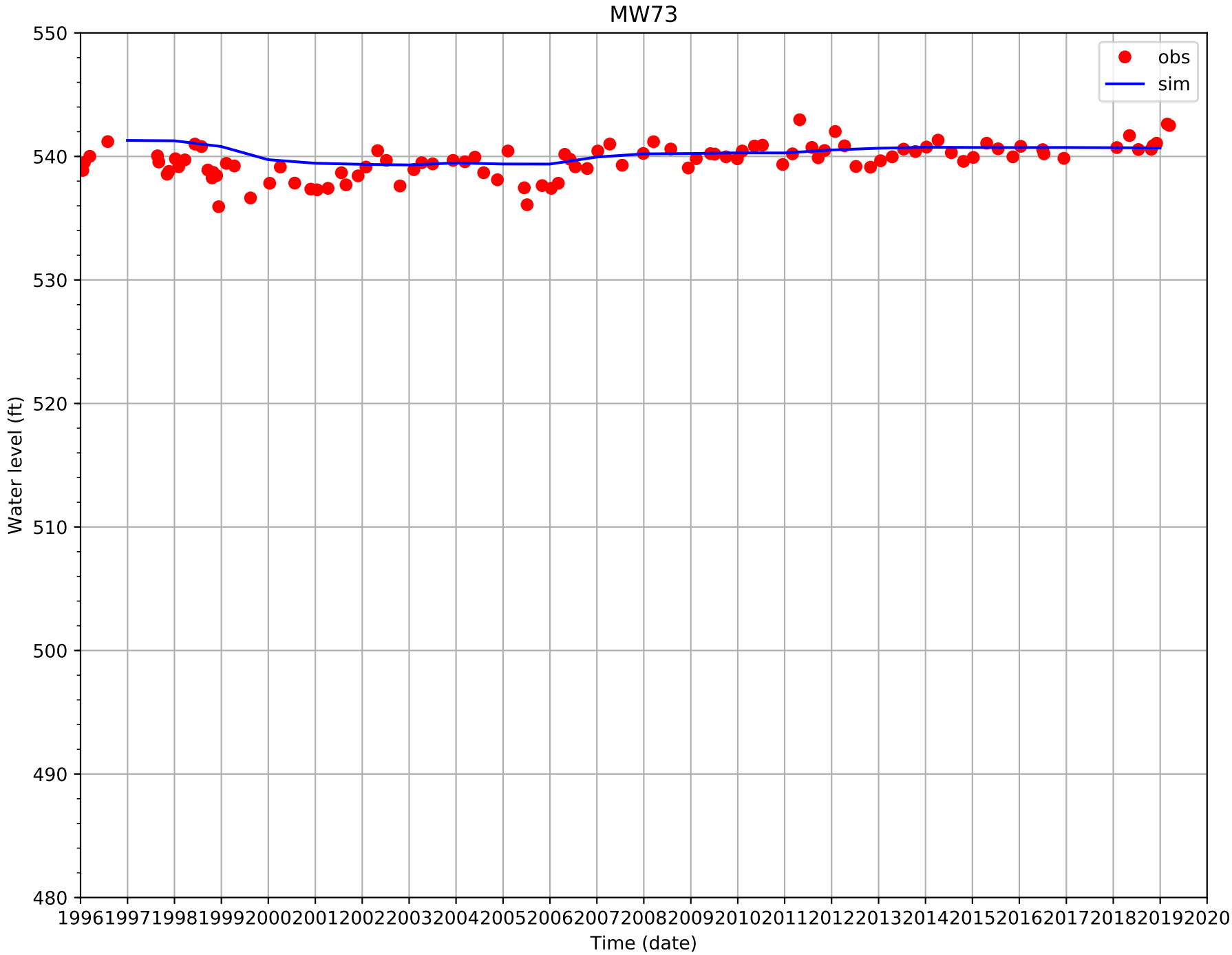
MW73
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Water level (ft)
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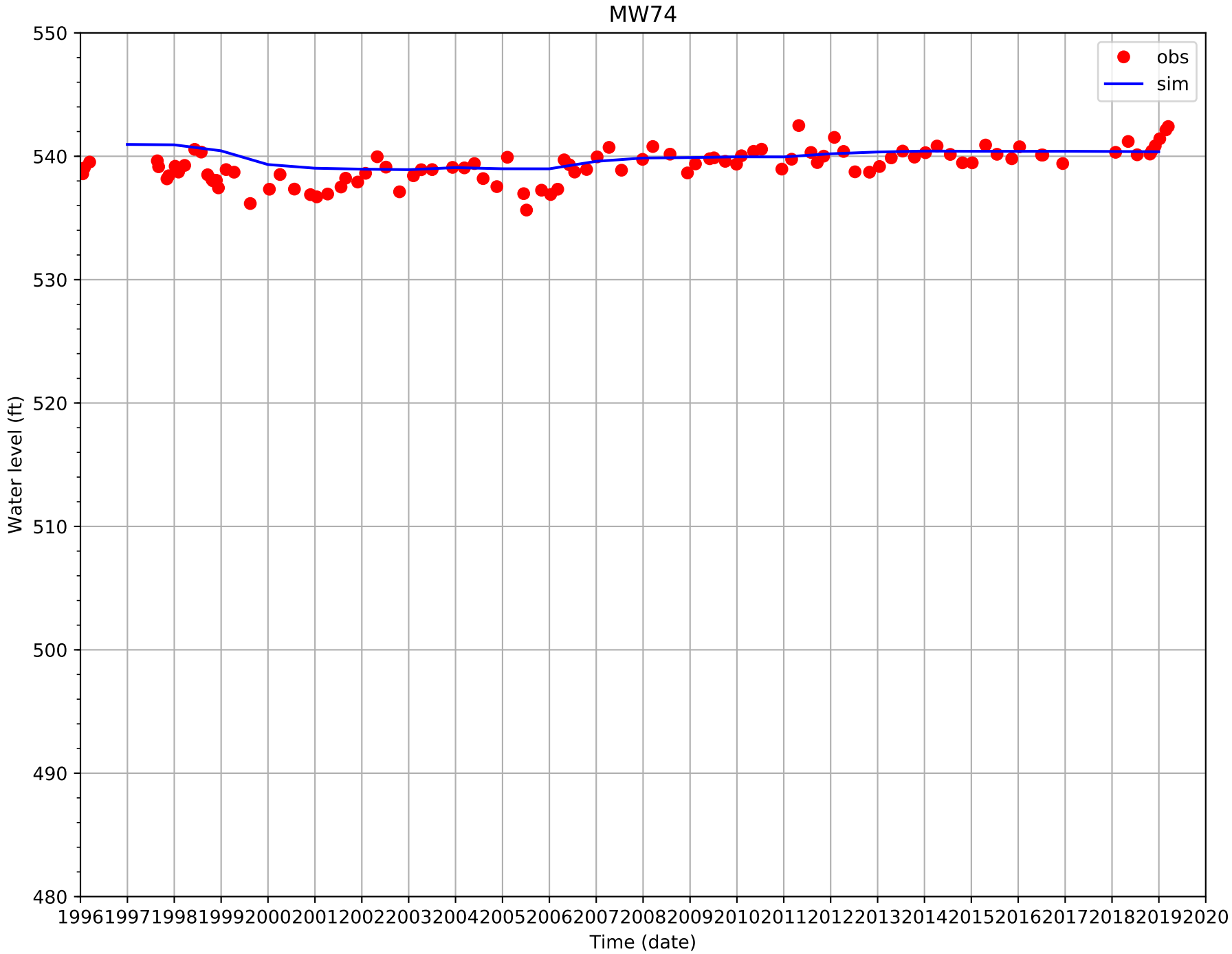
MW74
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Water level (ft)
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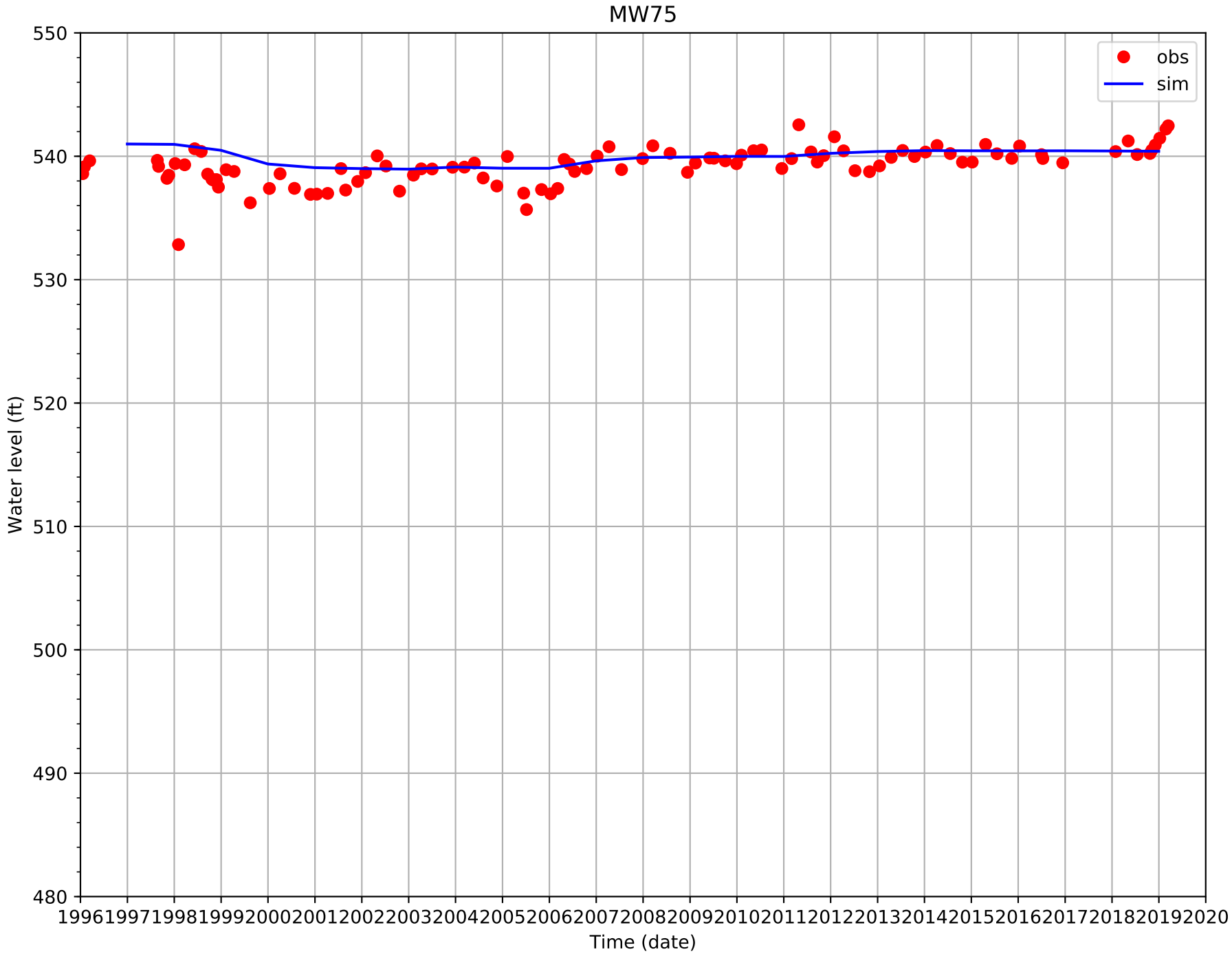
MW75
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Water level (ft)
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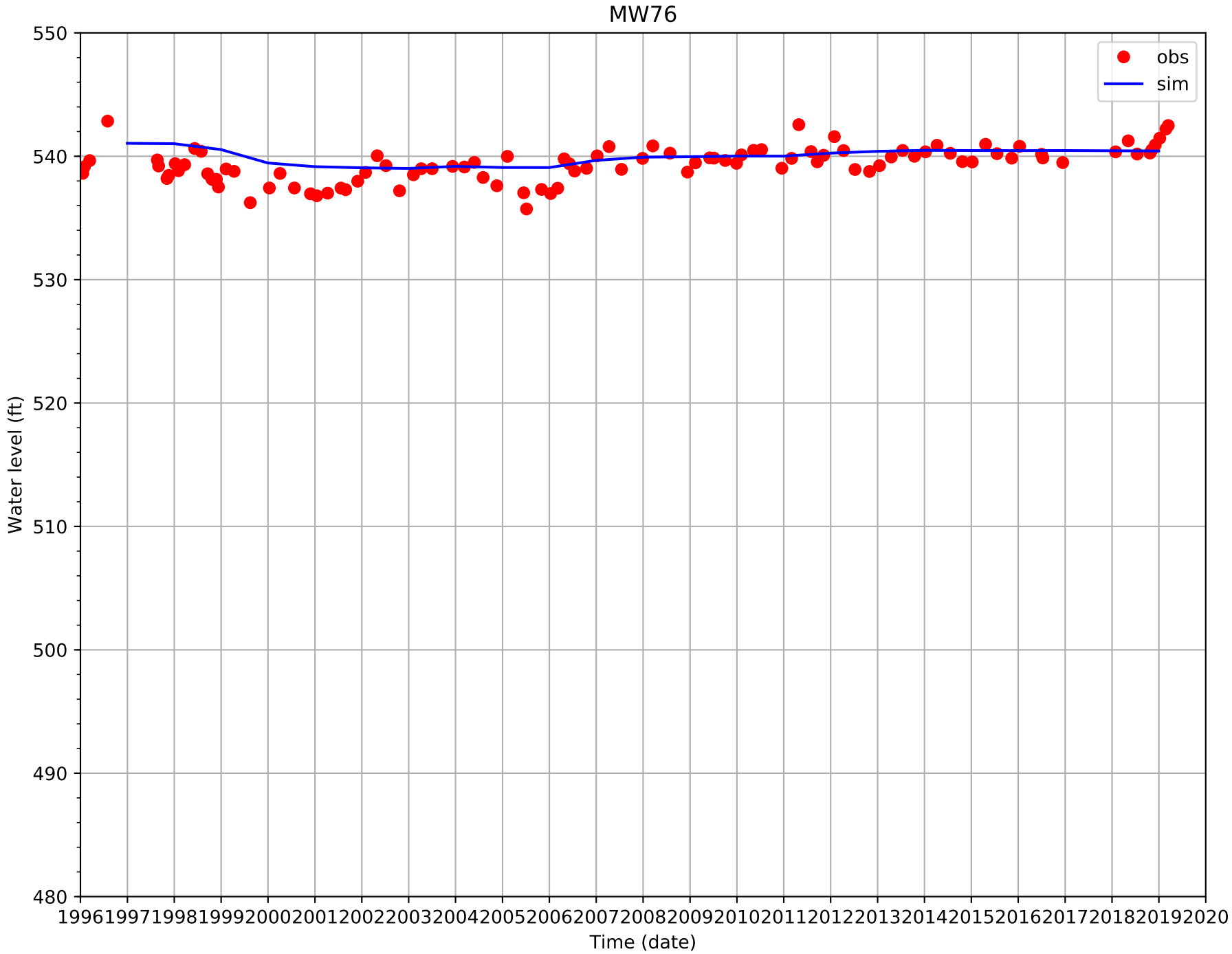
MW76
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Water level (ft)
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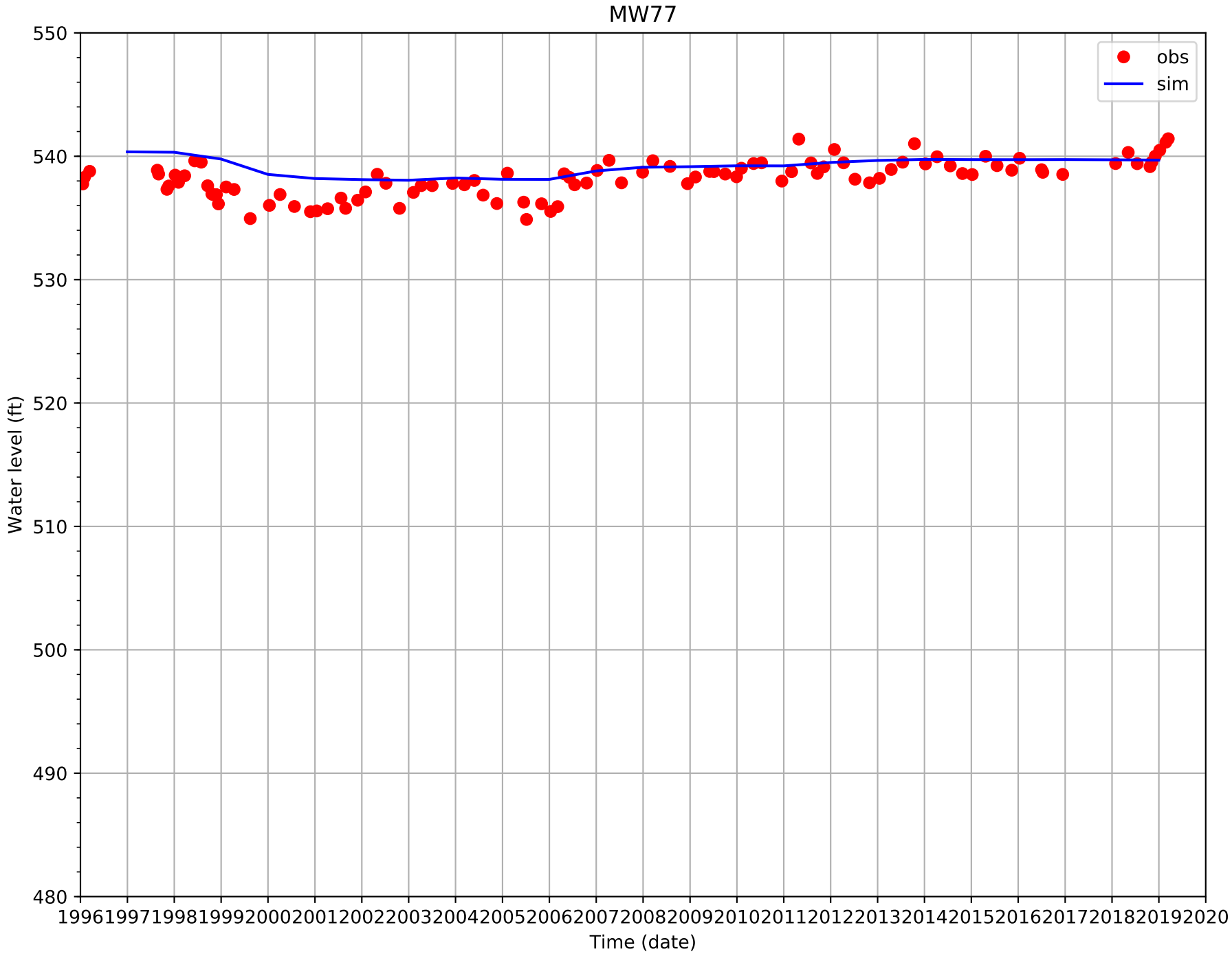
MW77
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Water level (ft)
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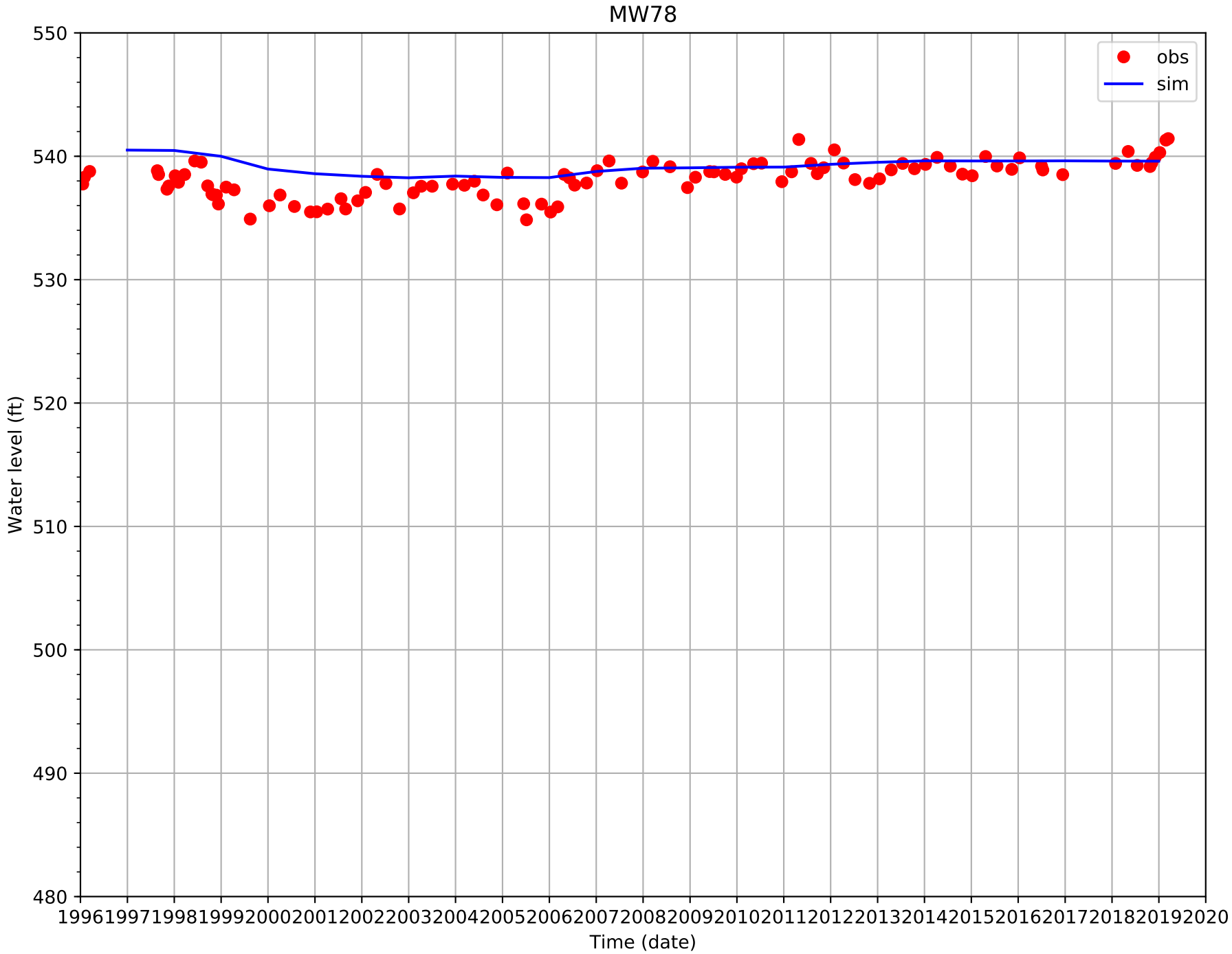
MW78
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Water level (ft)
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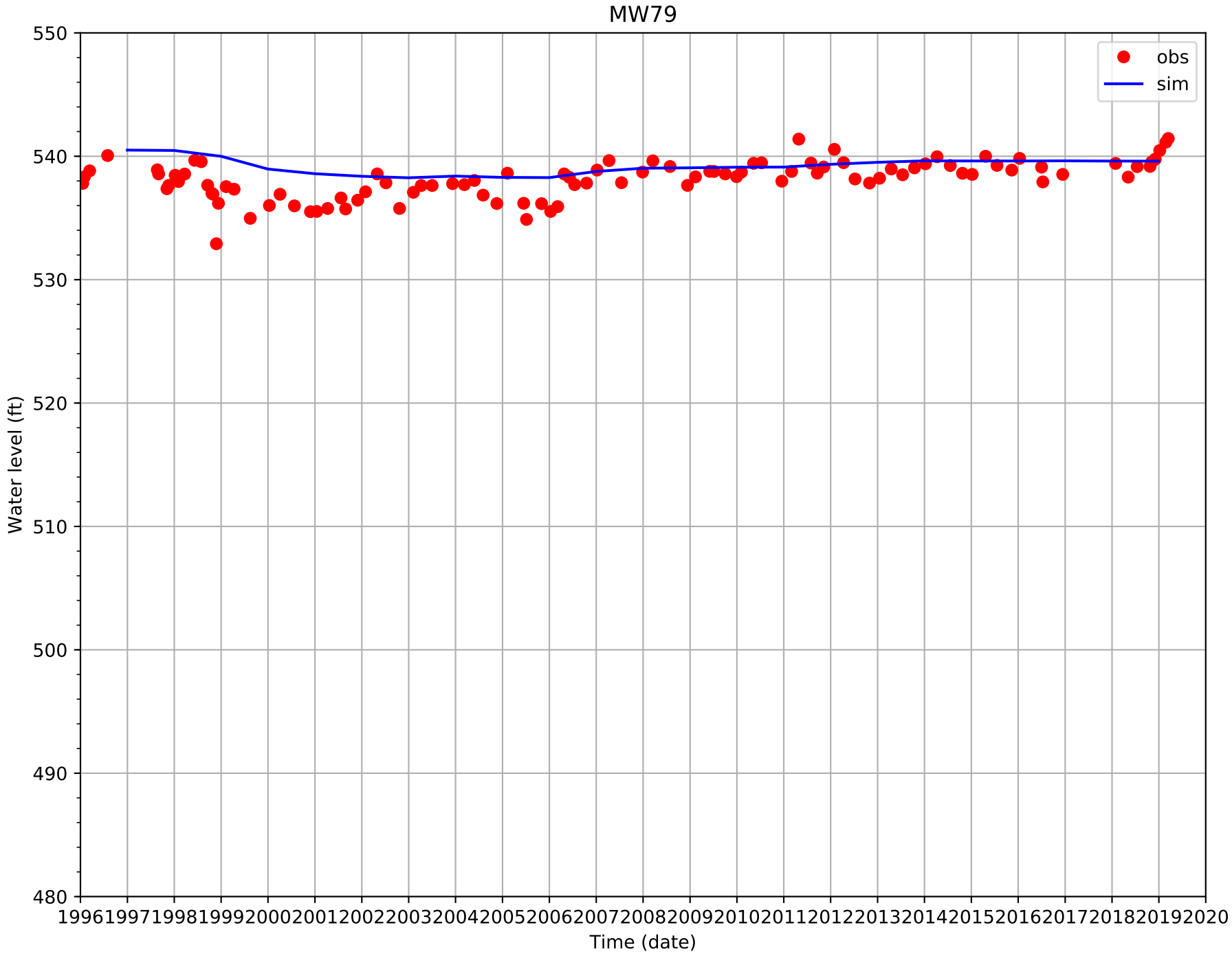
MW79
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Water level (ft)
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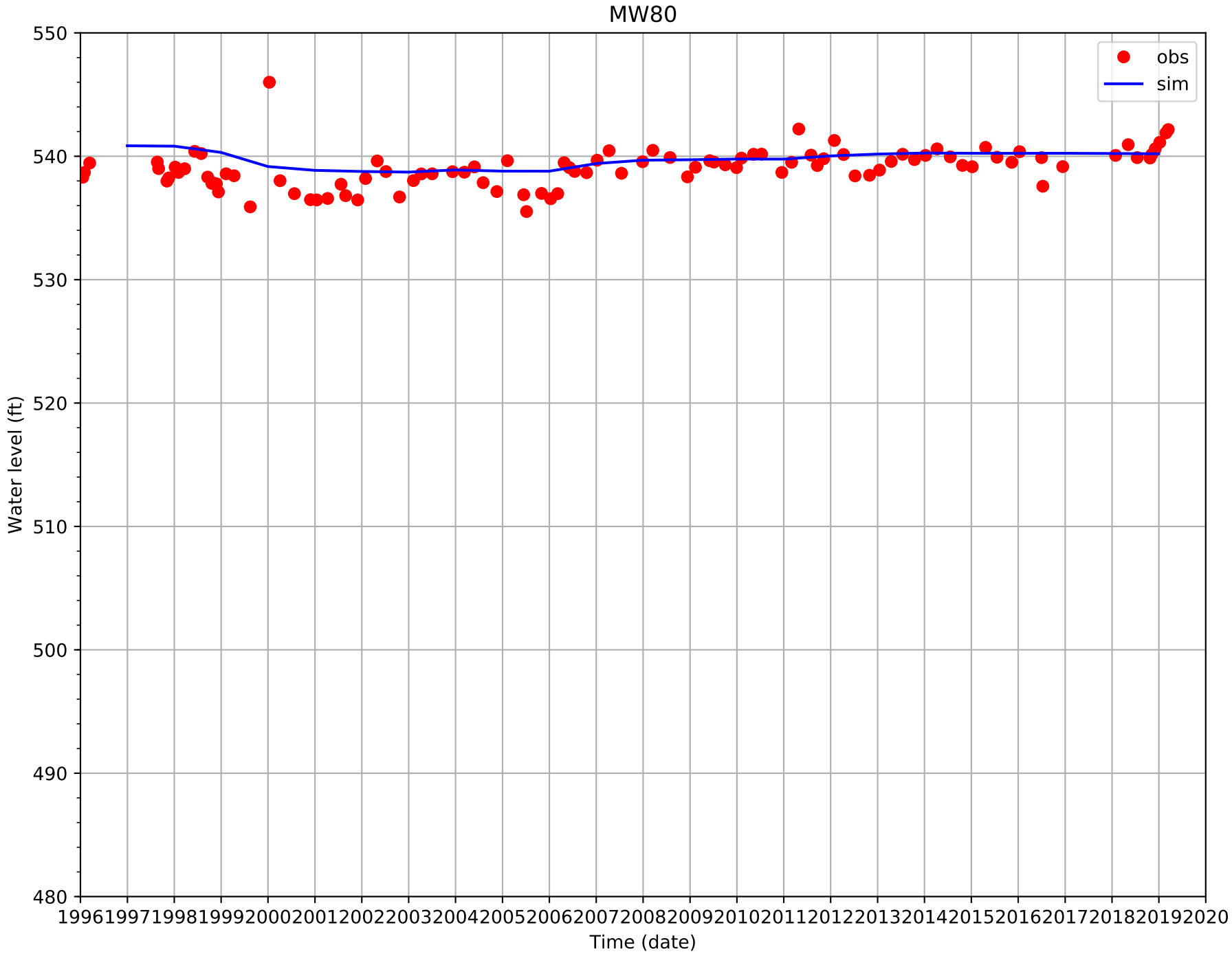
MW80
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Water level (ft)
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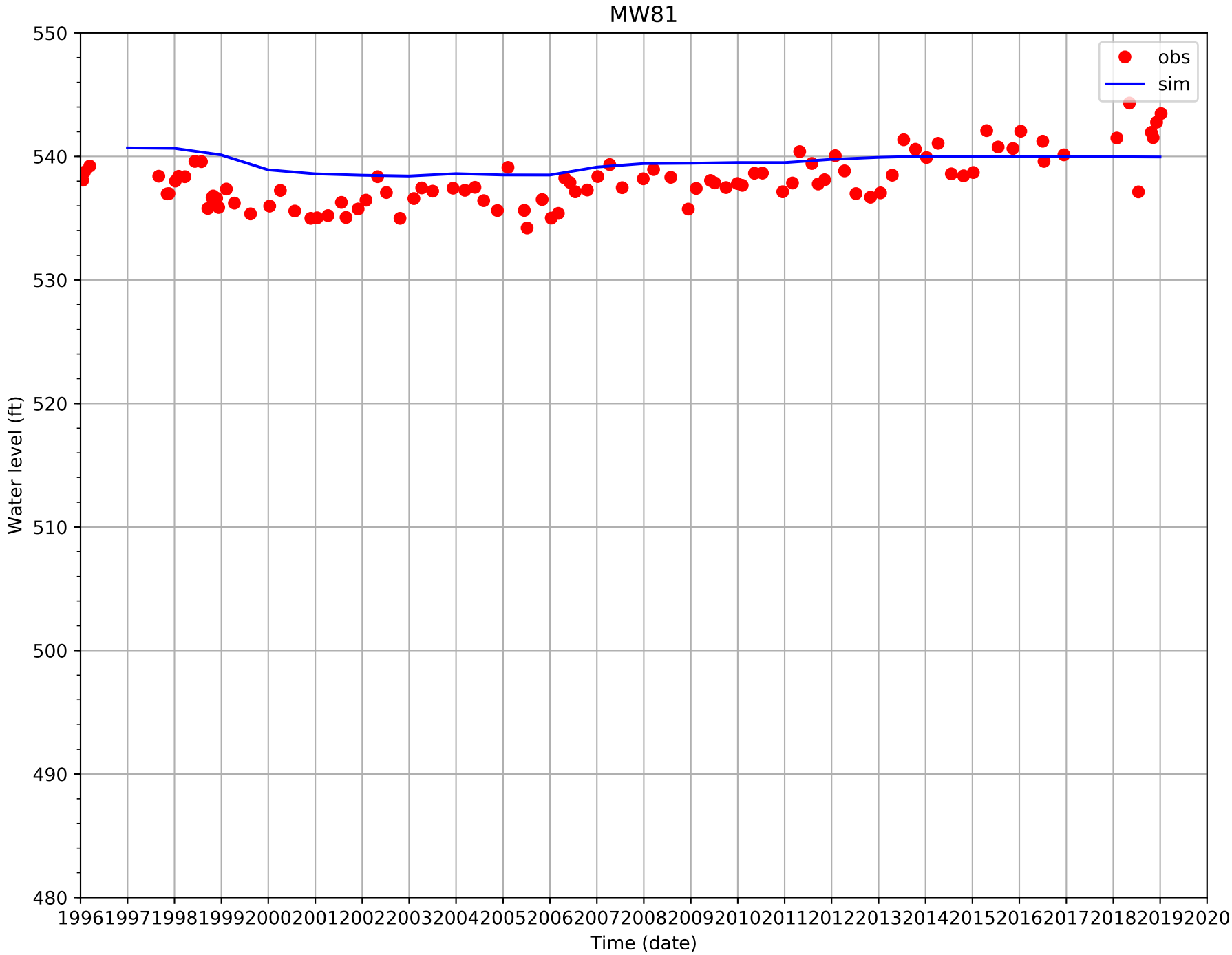
MW81
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Water level (ft)
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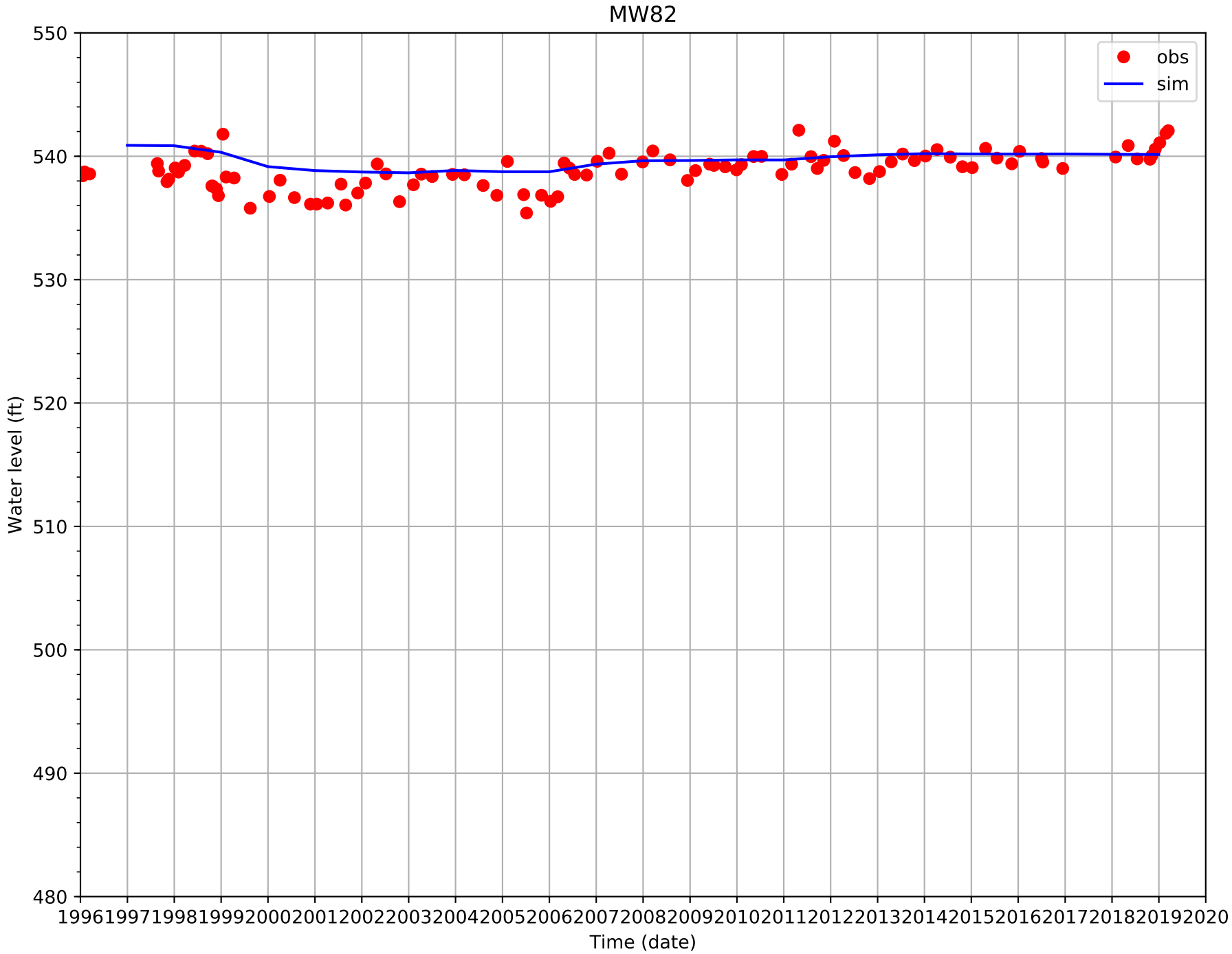
MW82
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Water level (ft)
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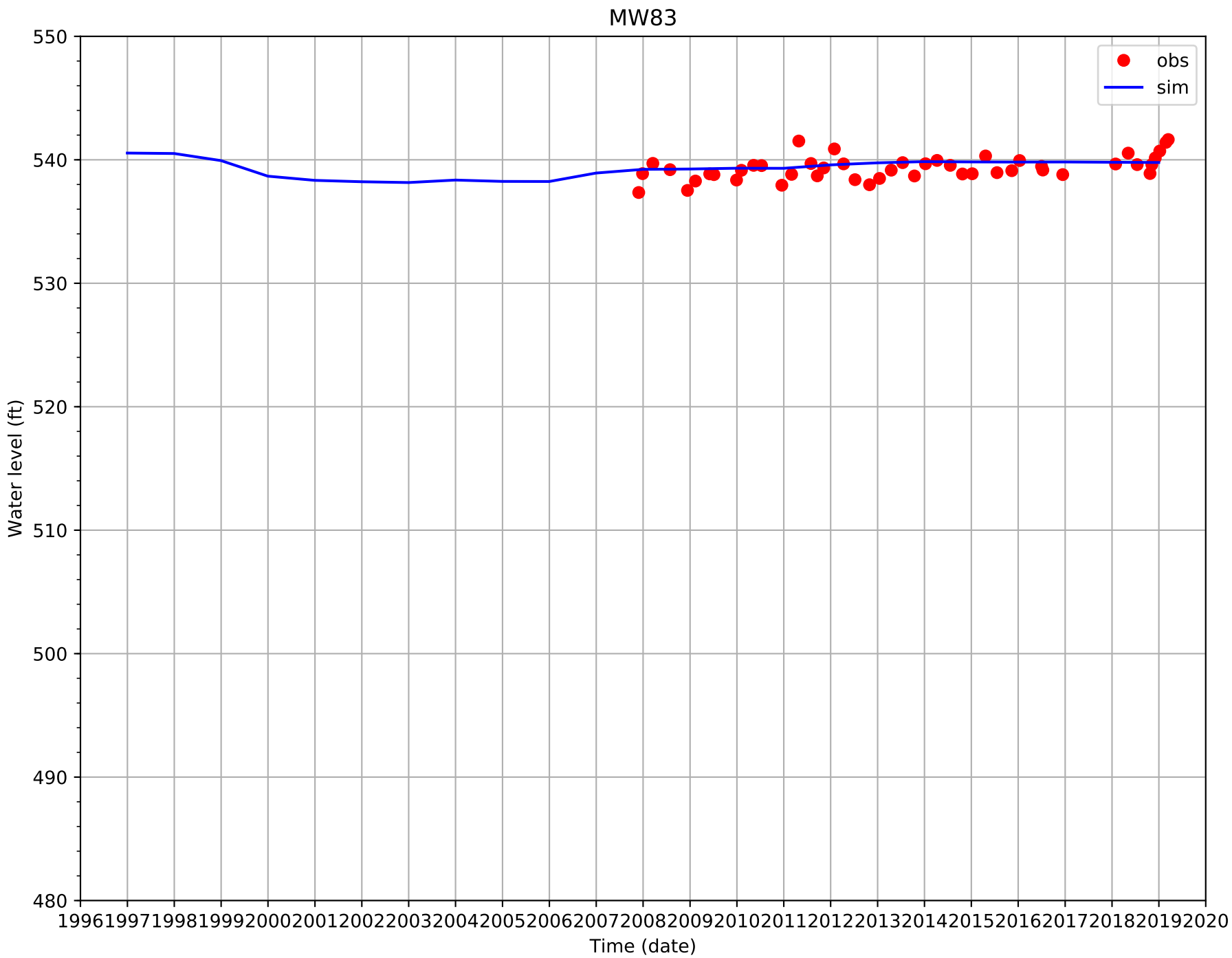
MW83
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Water level (ft)
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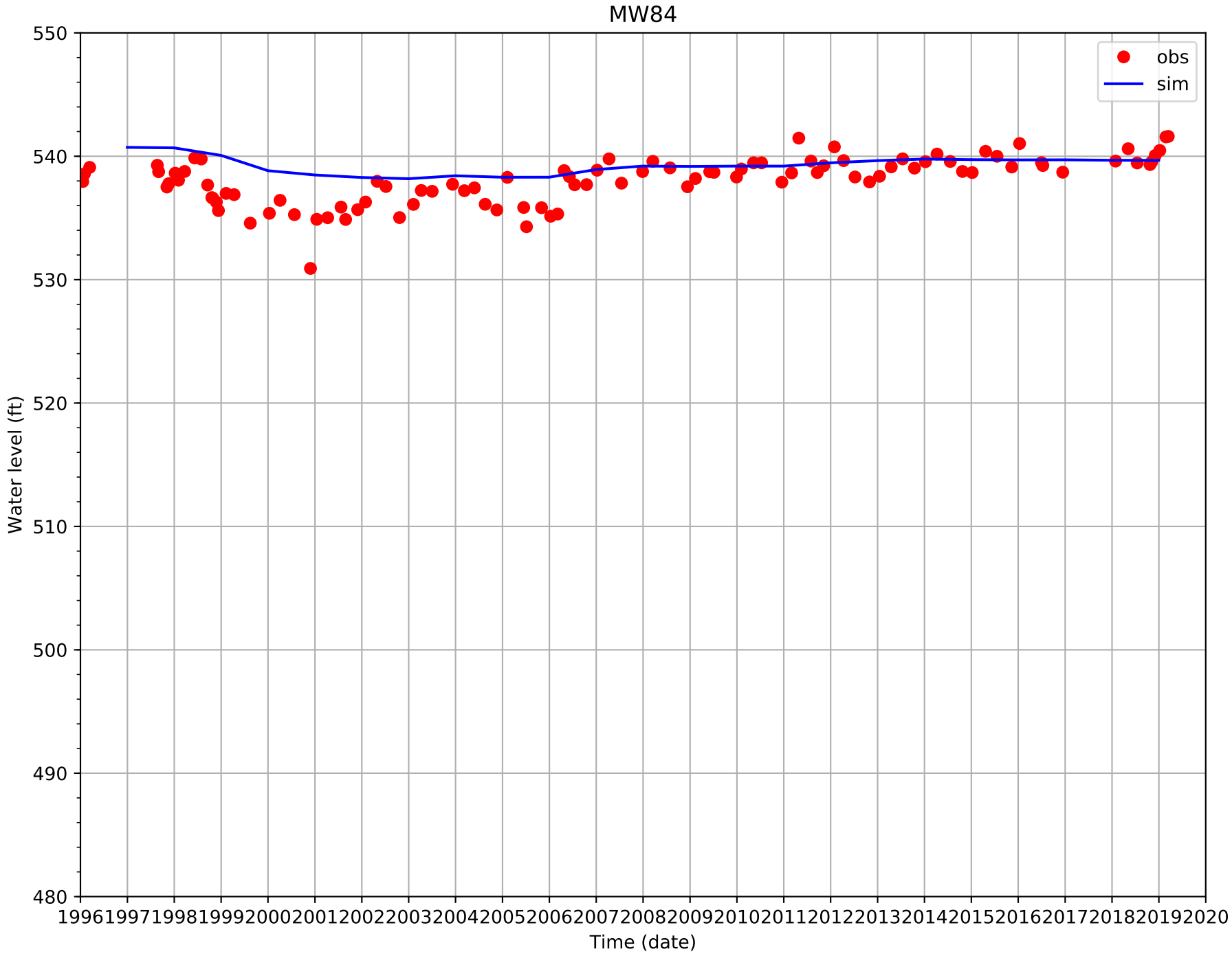
MW84
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Water level (ft)
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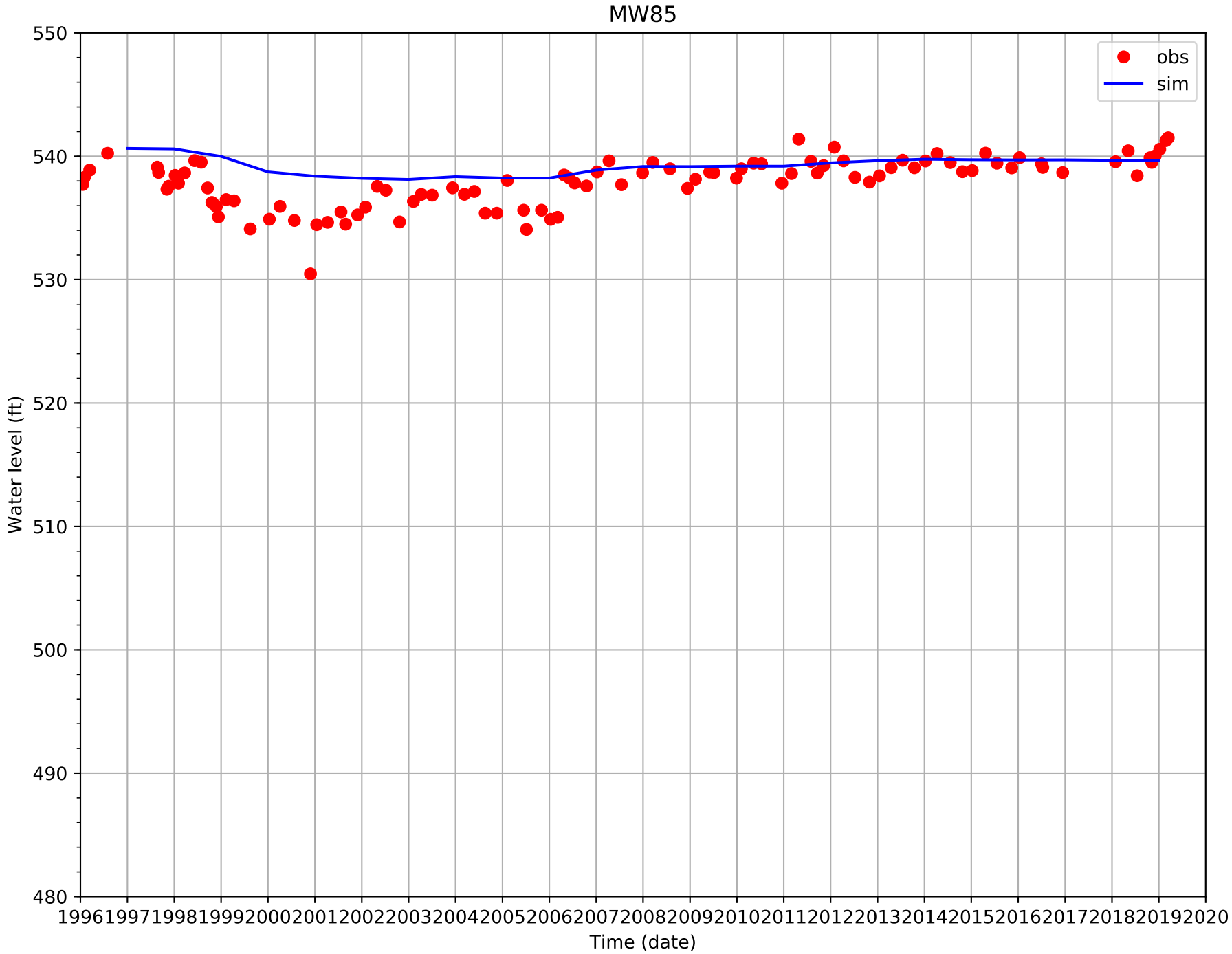
MW85
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Water level (ft)
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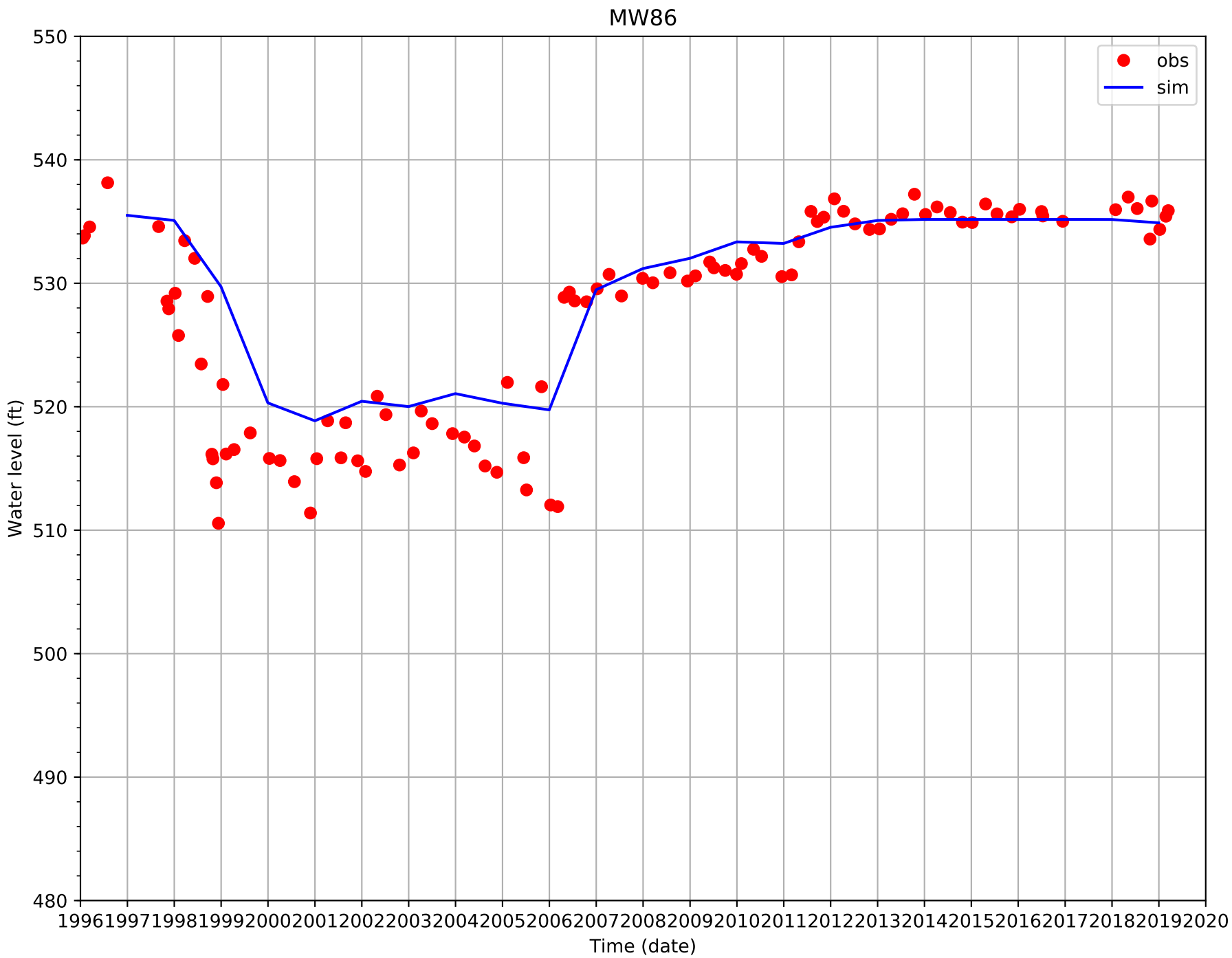
MW86
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Water level (ft)
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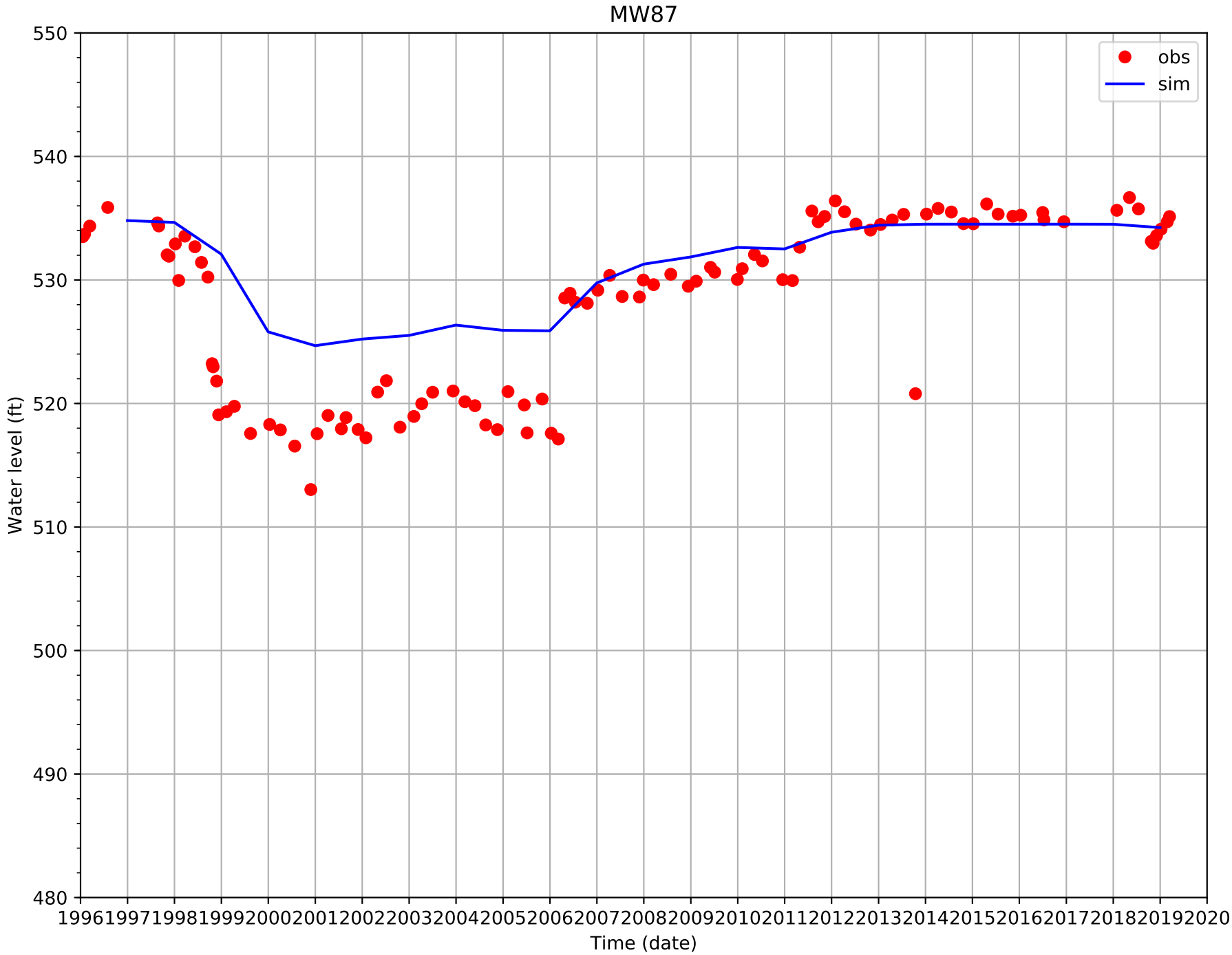
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Water level (ft)
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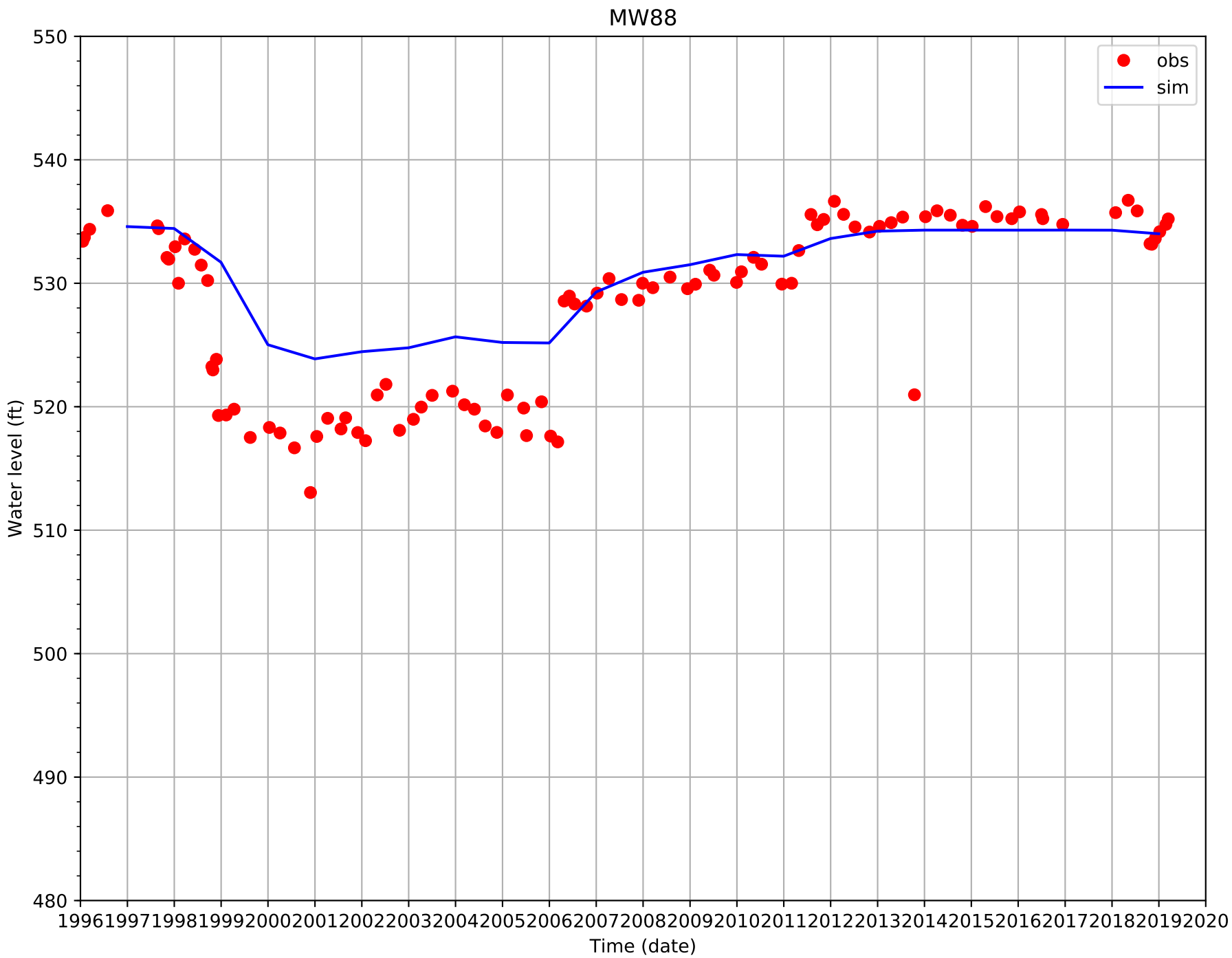
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Water level (ft)
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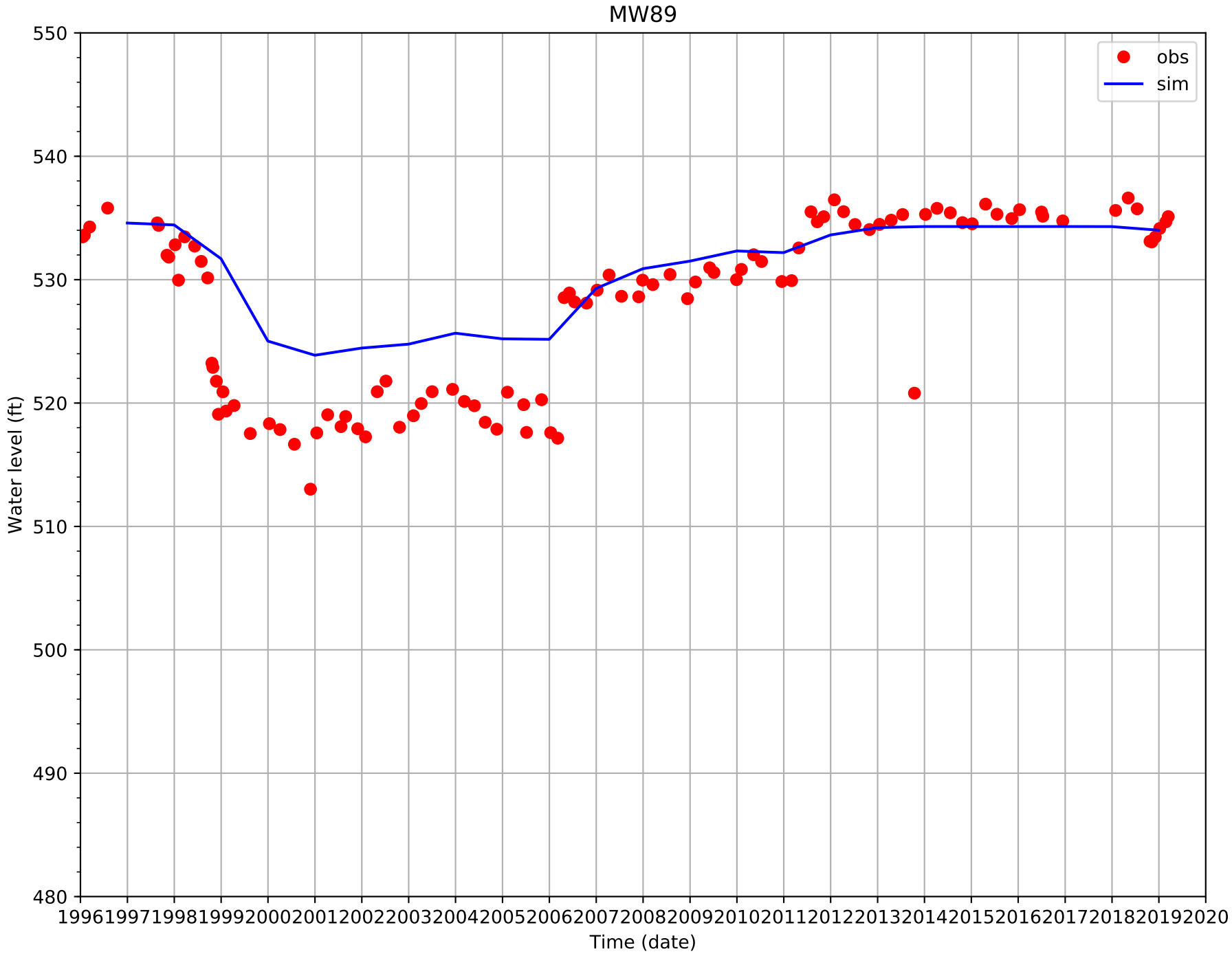
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Water level (ft)
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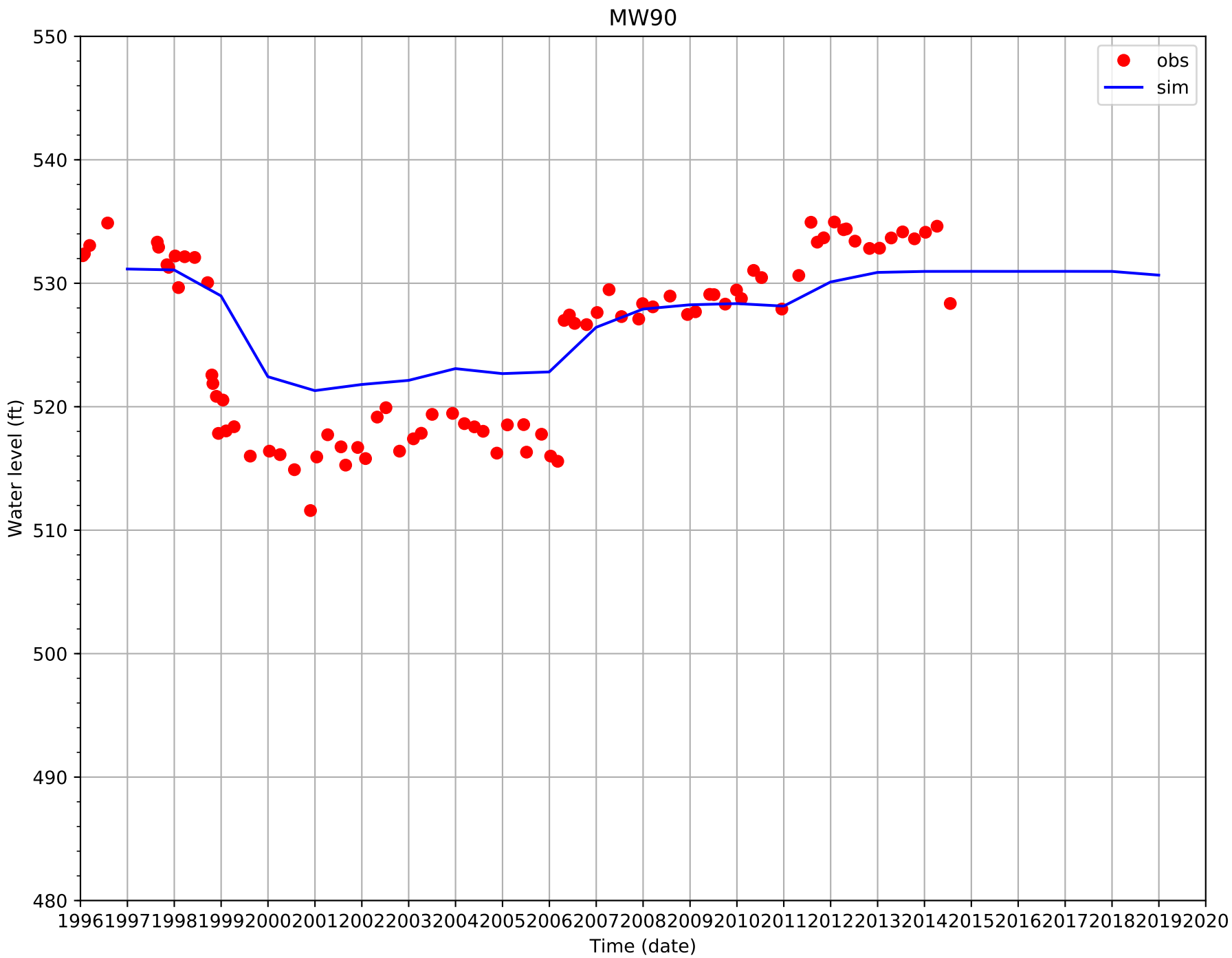
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Water level (ft)
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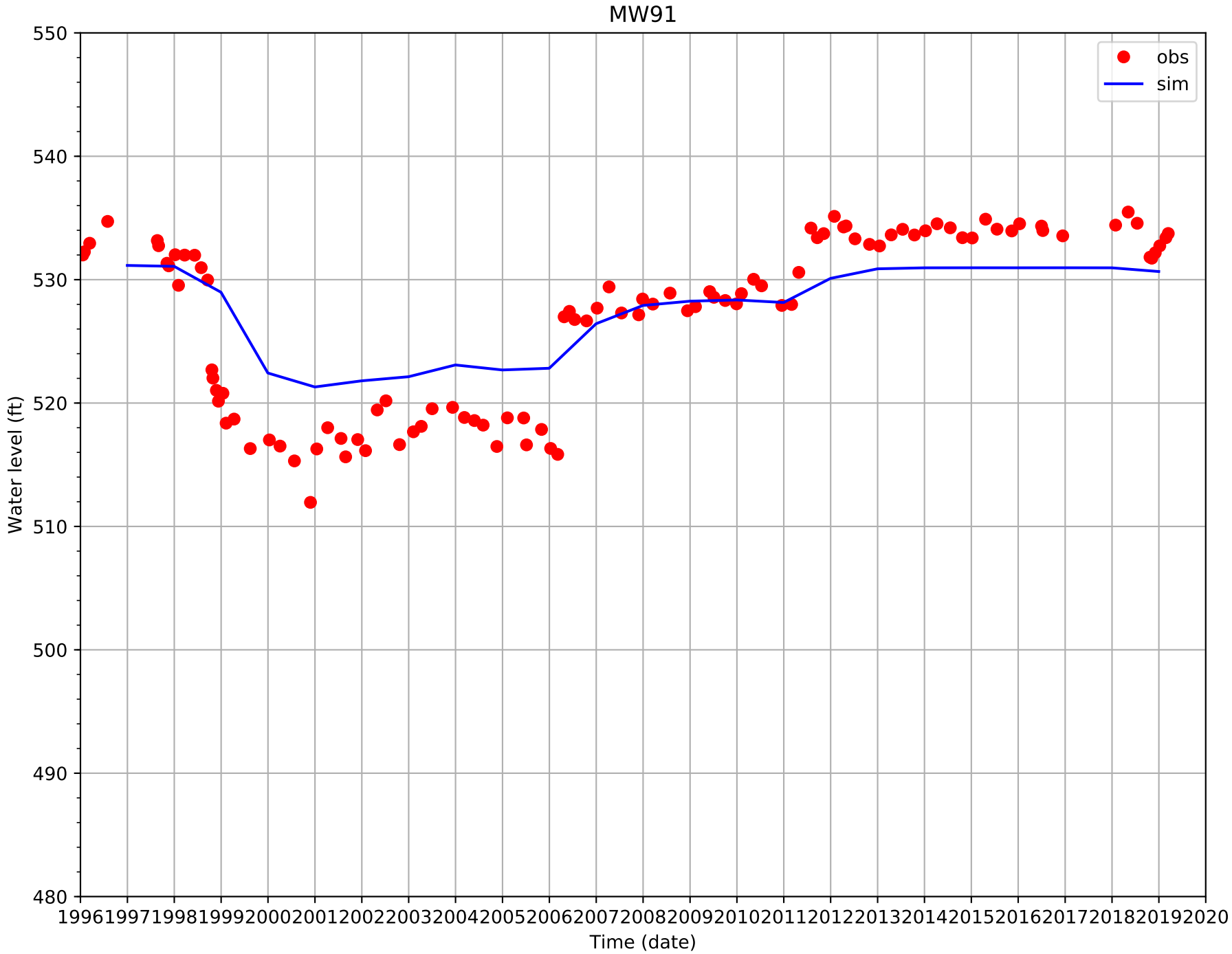
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Water level (ft)
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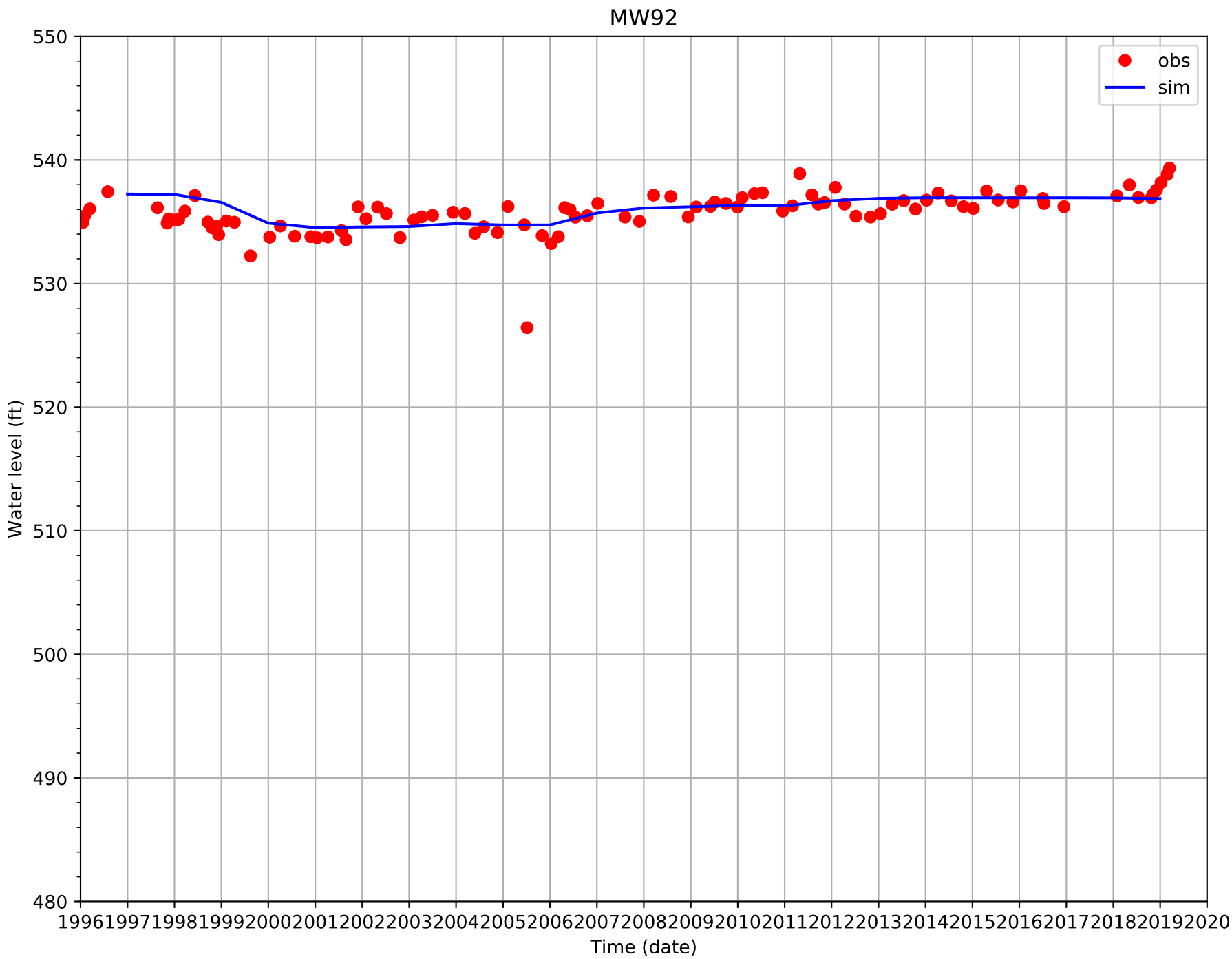
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Water level (ft)
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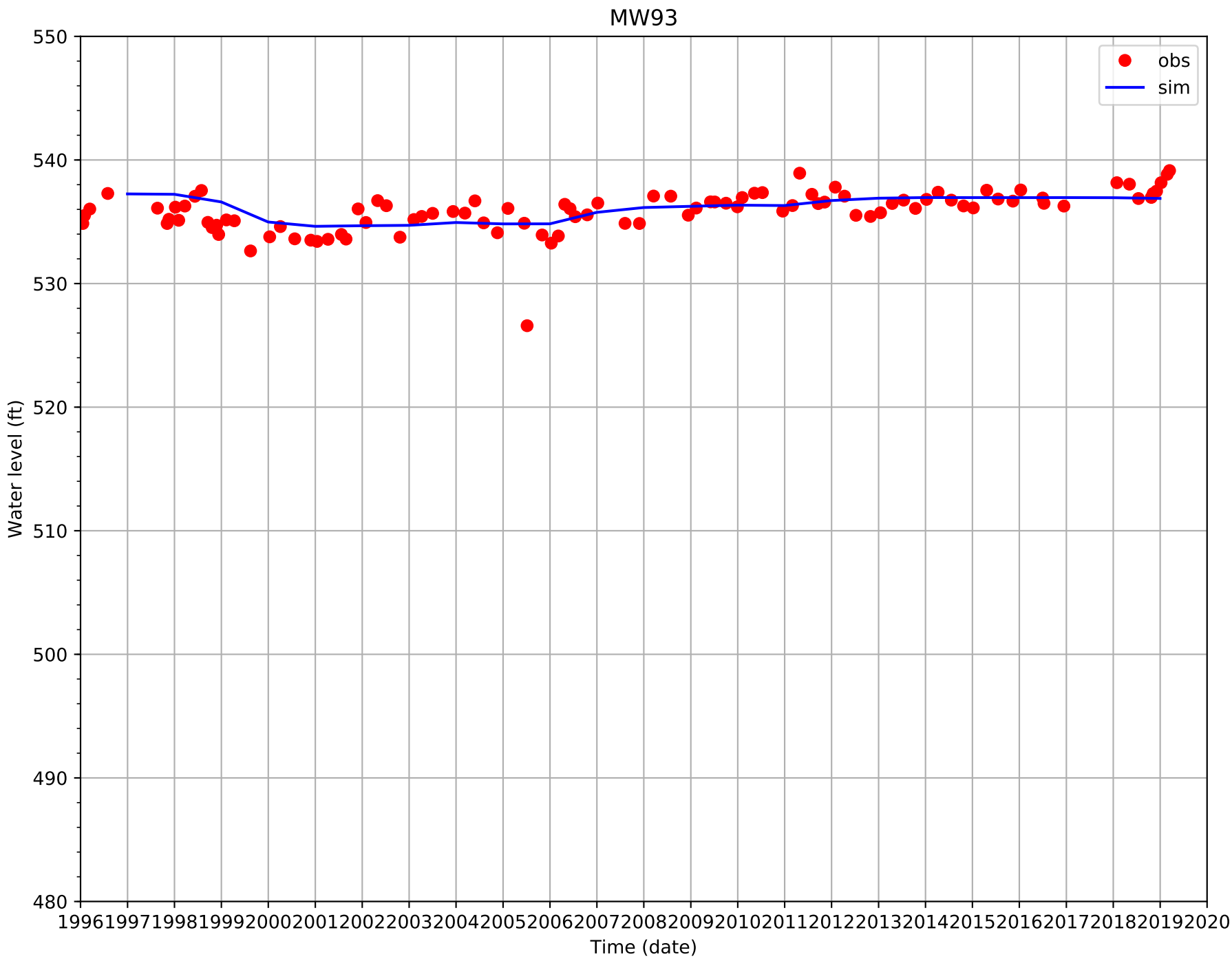
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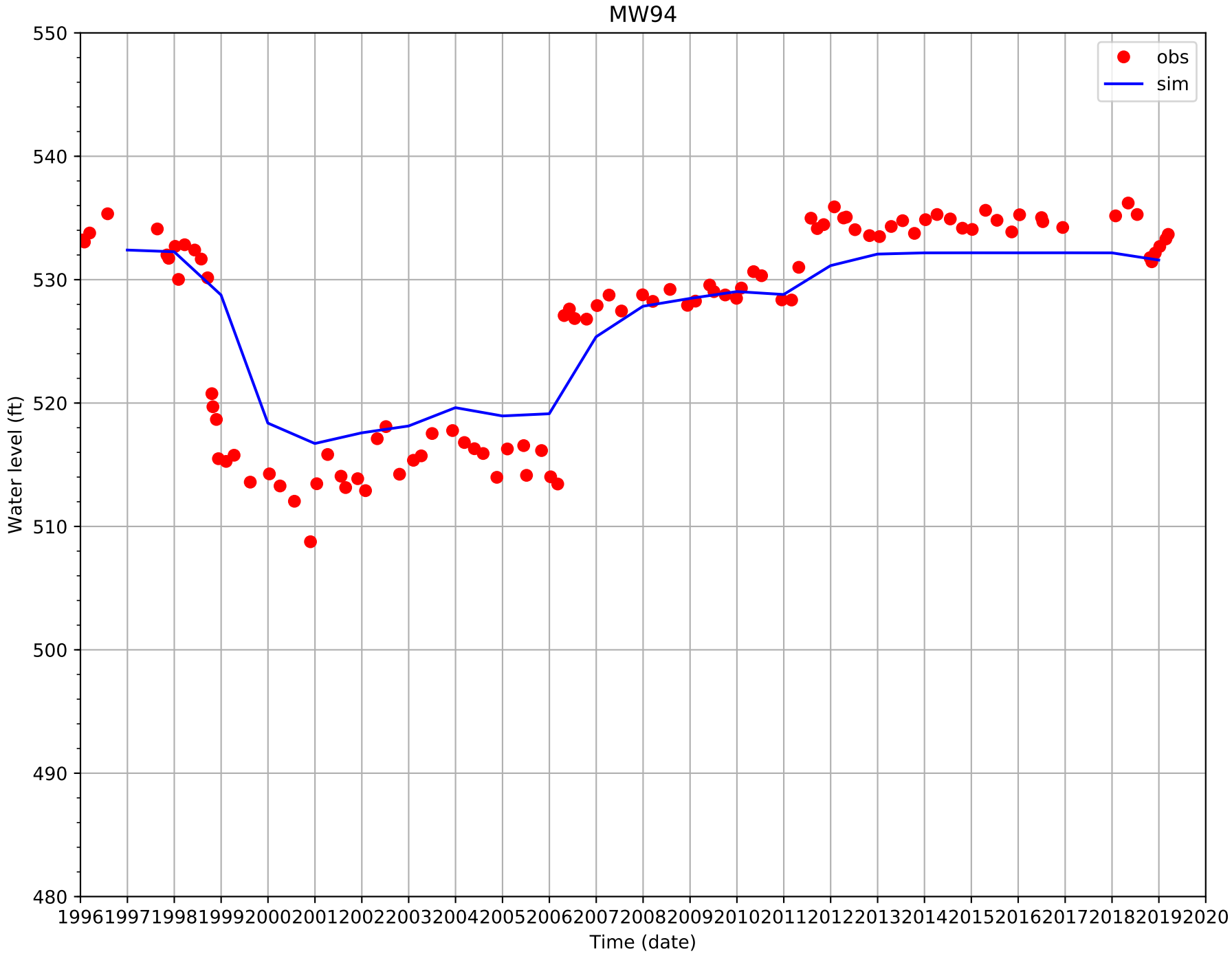
MW94
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Water level (ft)
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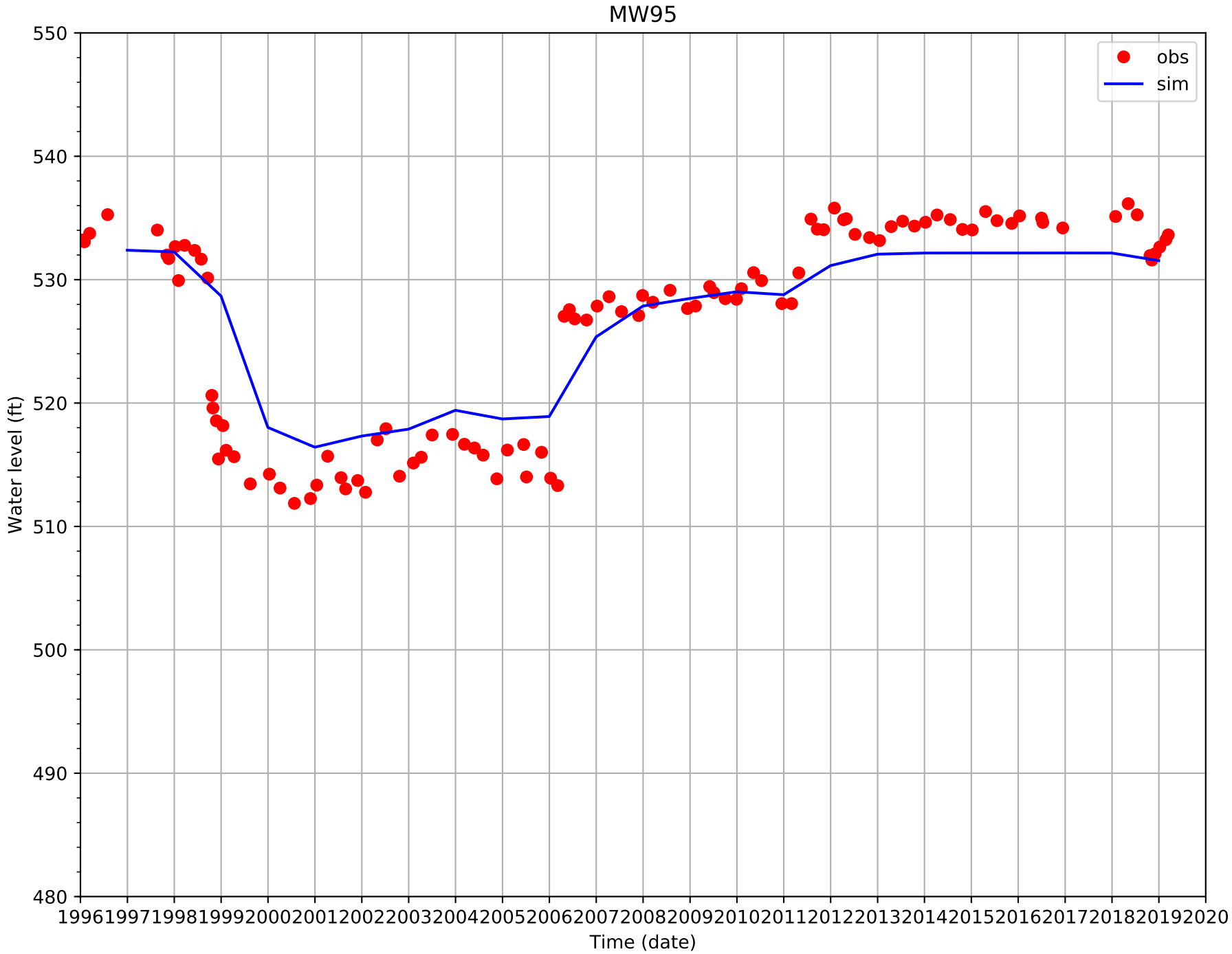
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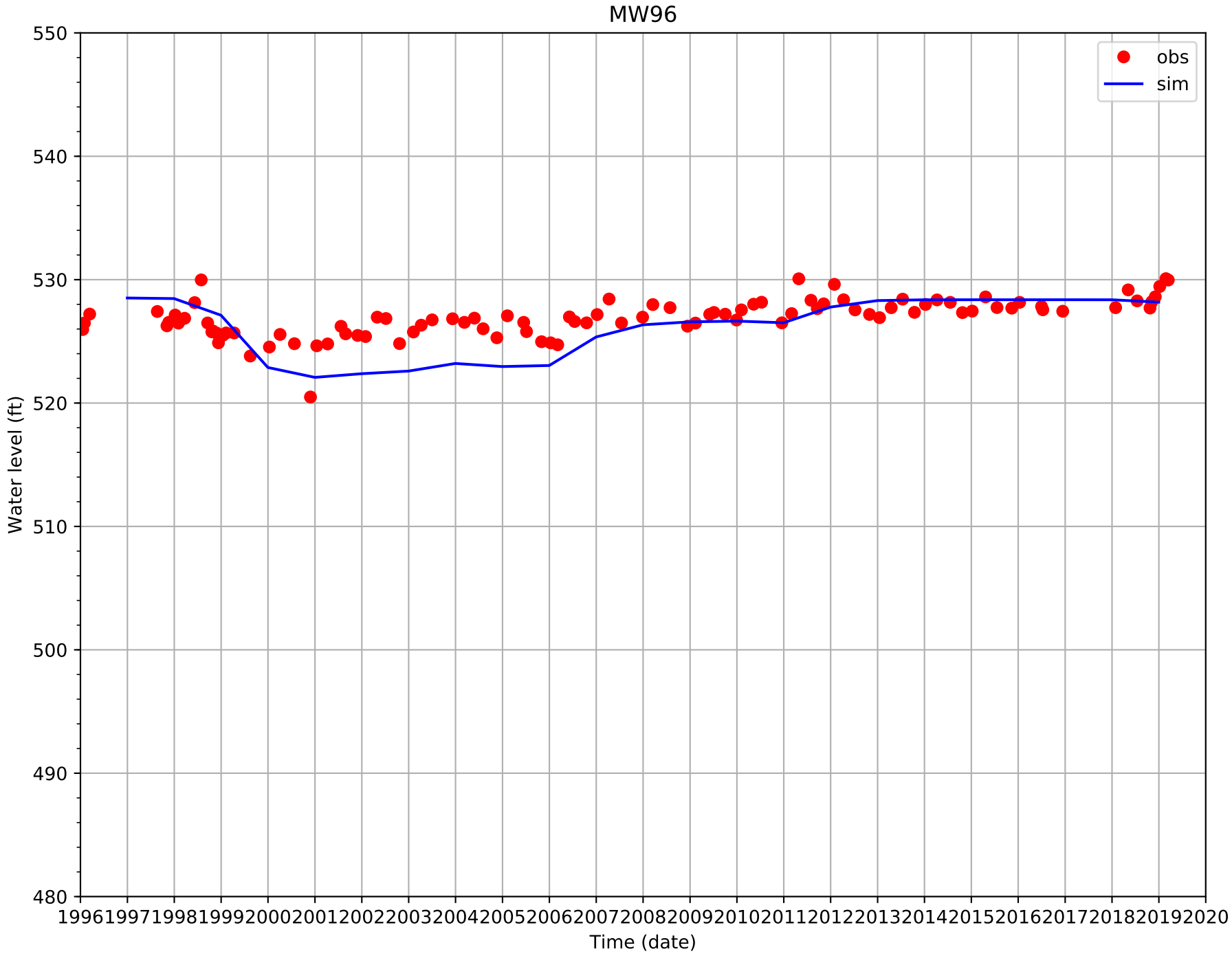
Time (date)


MW96
obs
sim
Water level (ft)
550
540
530
520
510
500
490
480
1996
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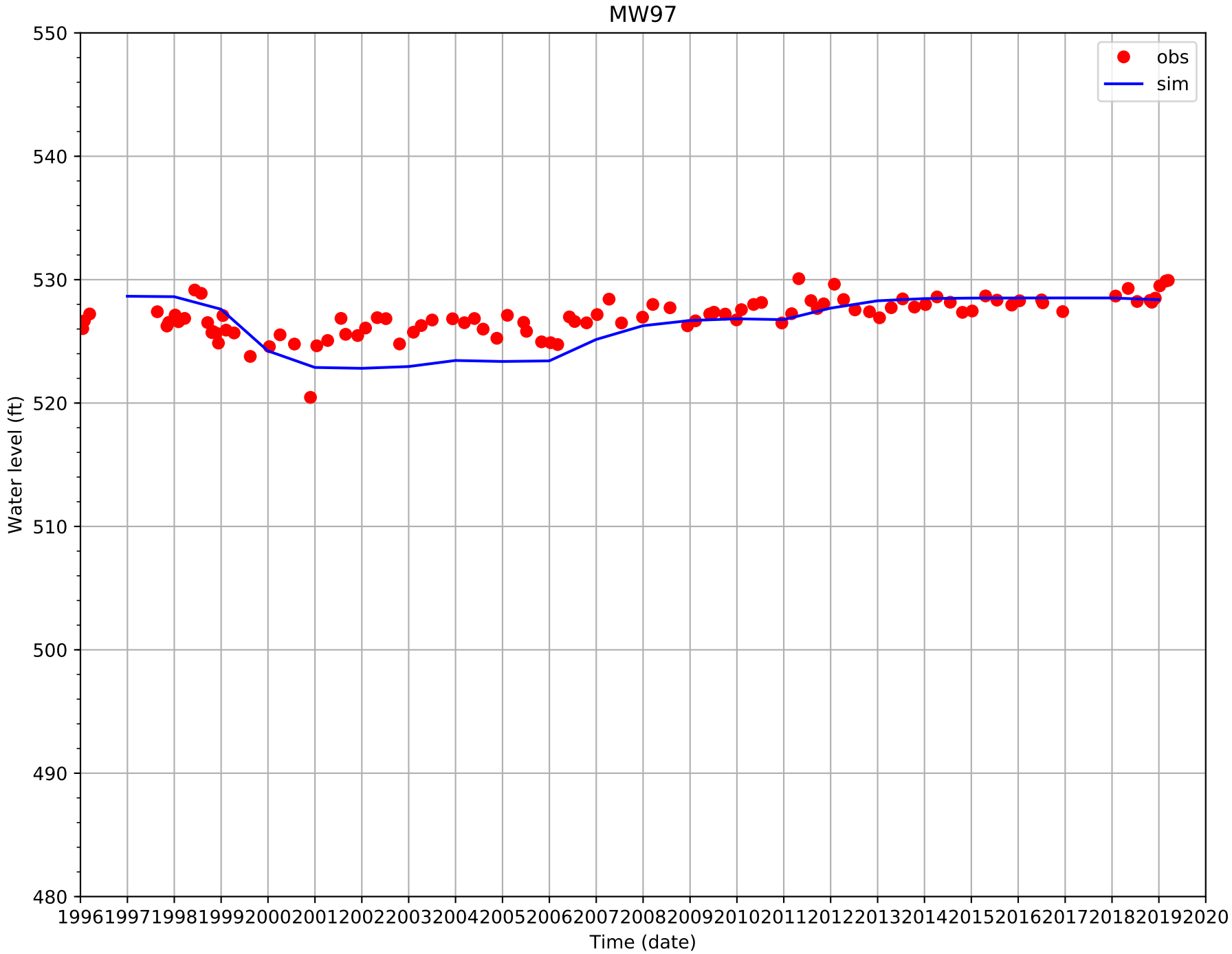
Time (date)


MW97
obs
sim
Water level (ft)
550
540
530
520
510
500
490
480
1996
1997
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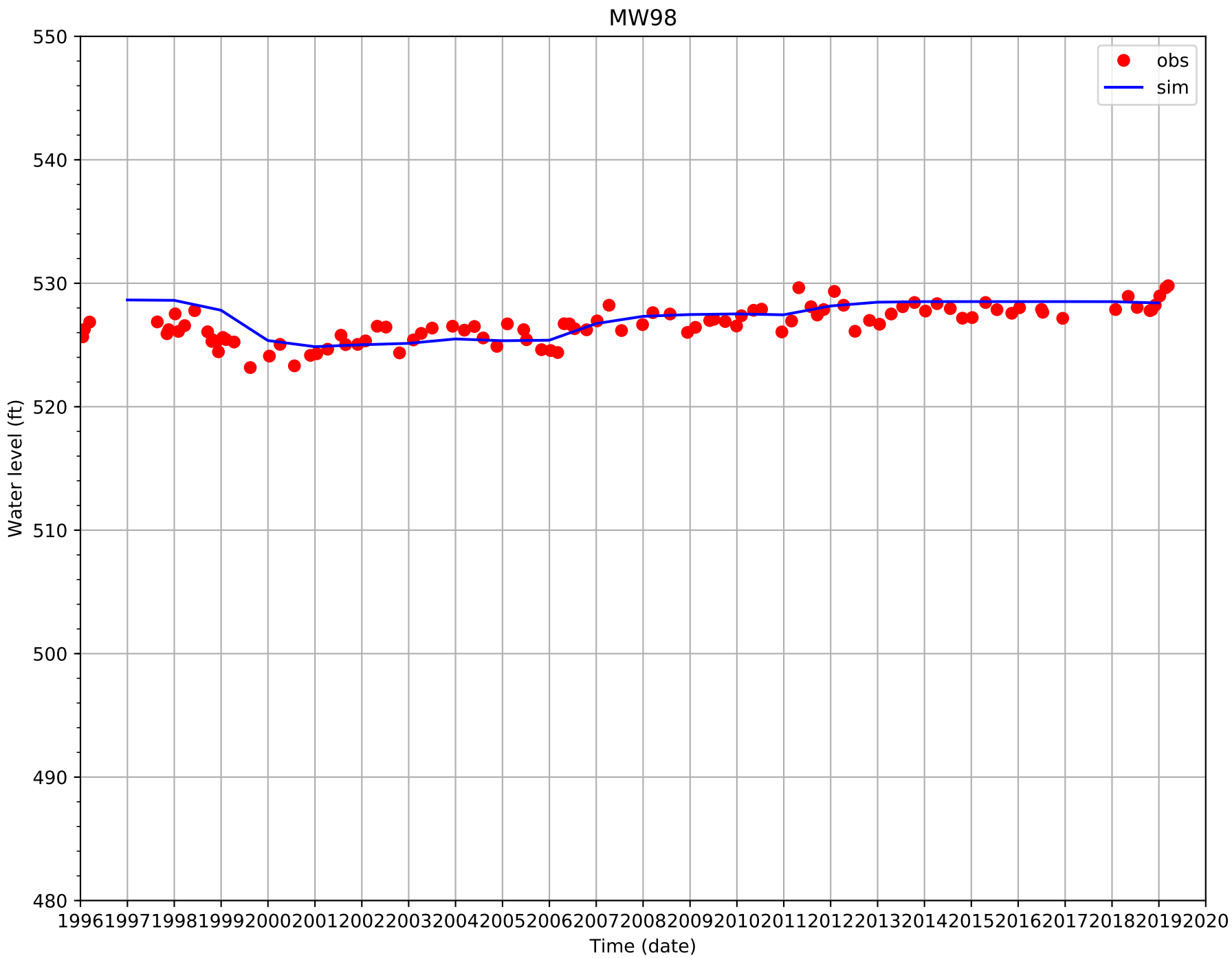
Time (date)


MW98
obs
sim
Water level (ft)
550
540
530
520
510
500
490
480
1996
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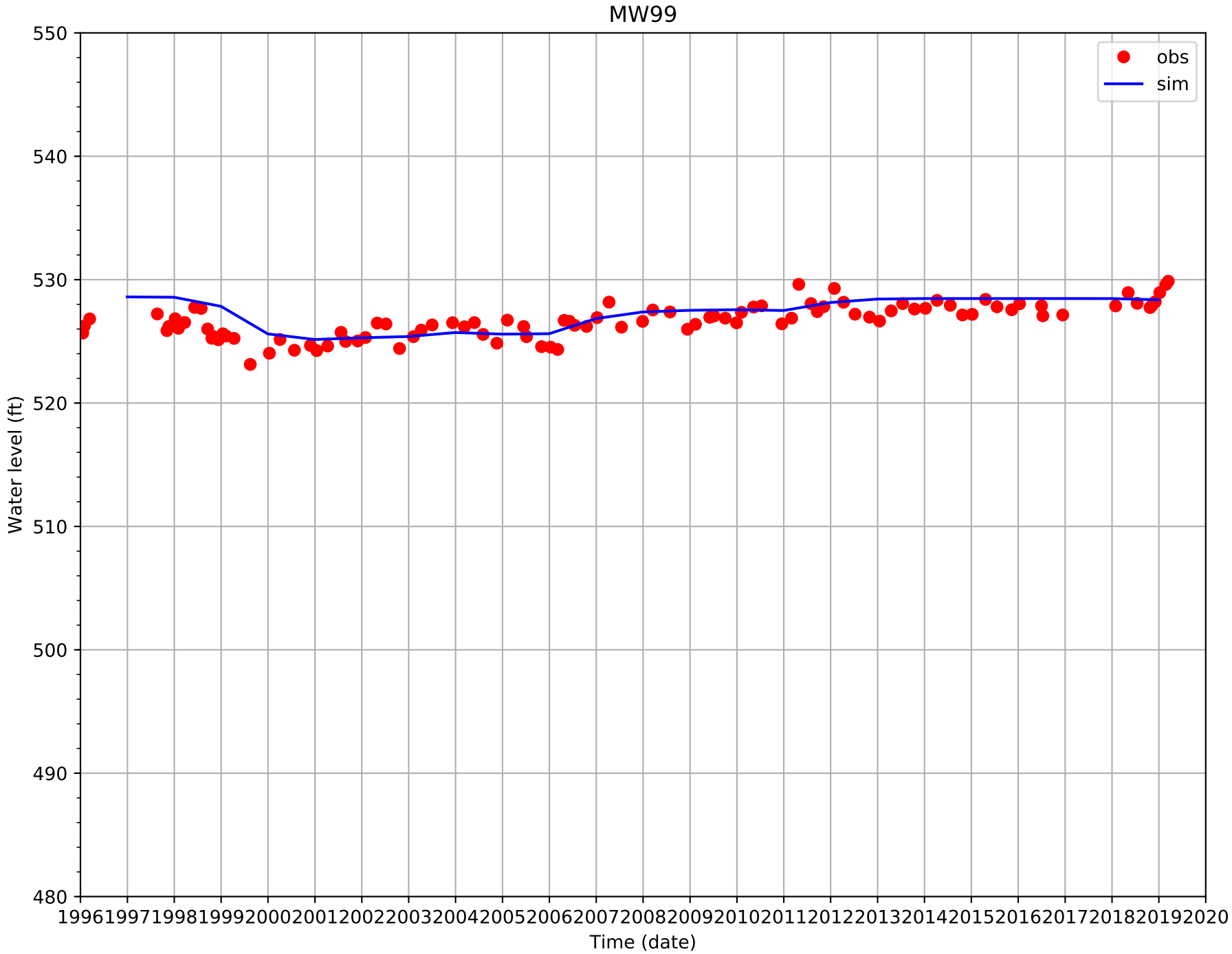
Time (date)


MW99
obs
sim
Water level (ft)
550
540
530
520
510
500
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1996
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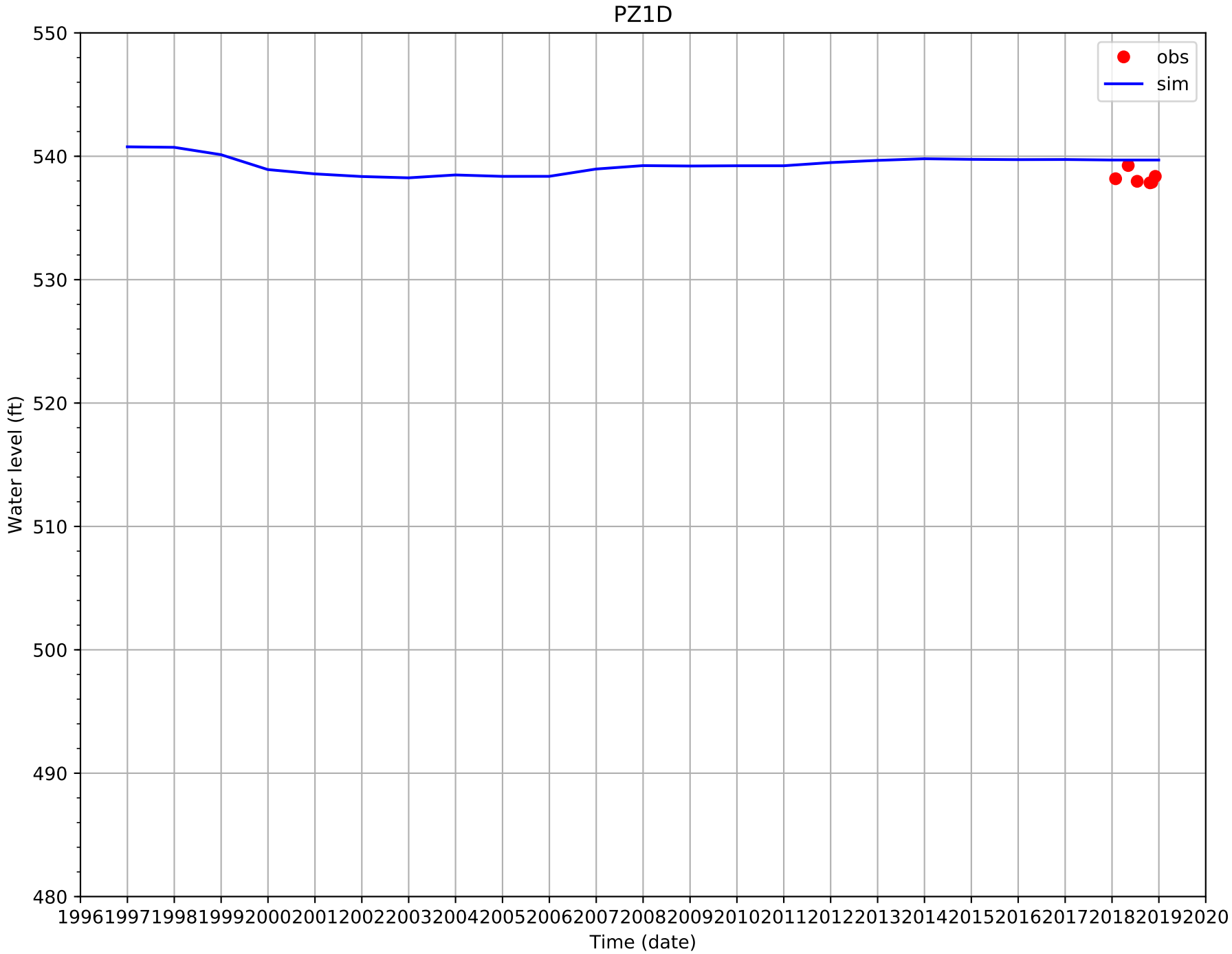
Time (date)


PZ1D
obs
sim
Water level (ft)
550
540
530
520
510
500
490
480
1996
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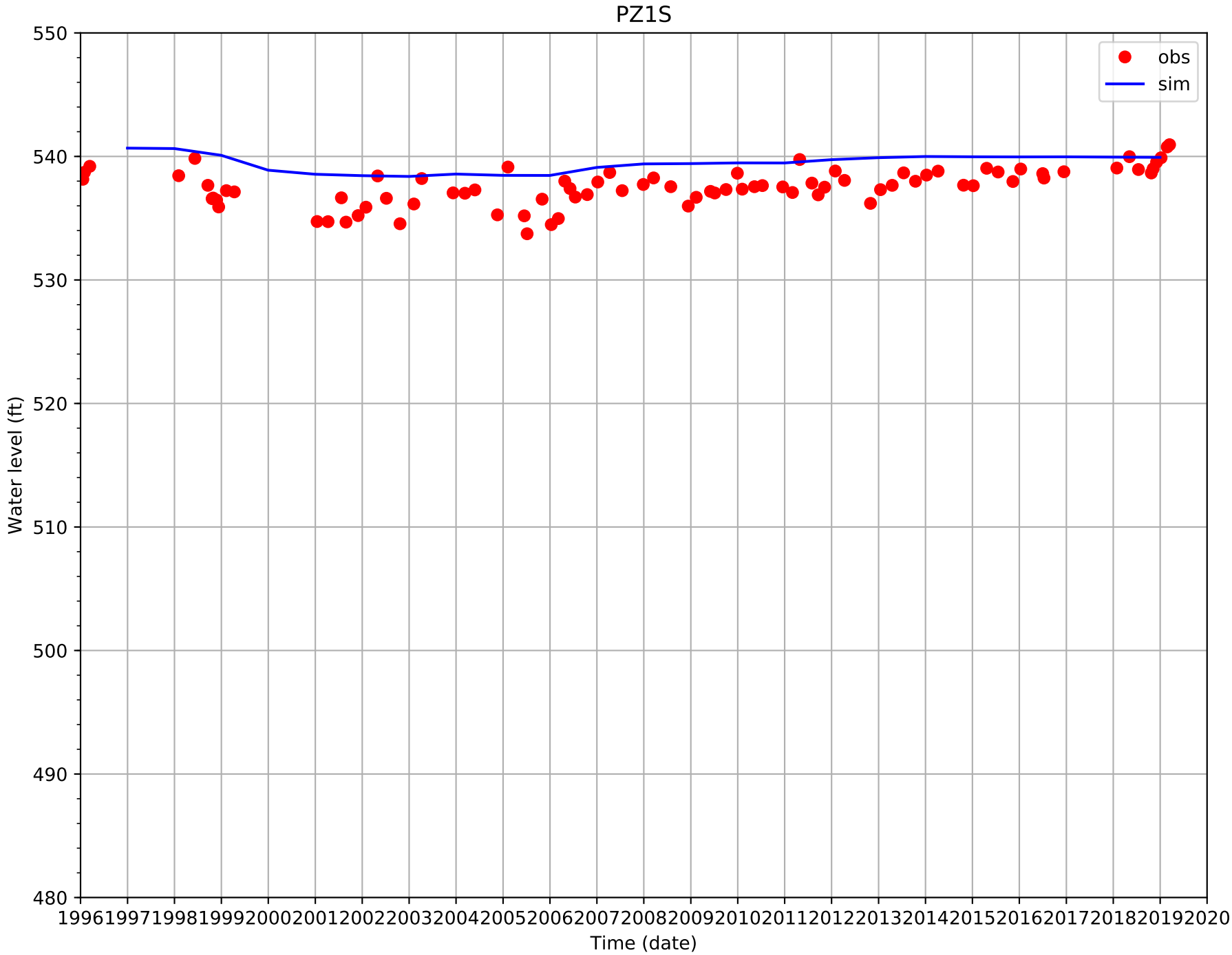
Time (date)


PZ1S
obs
sim
Water level (ft)
550
540
530
520
510
500
490
480
1996
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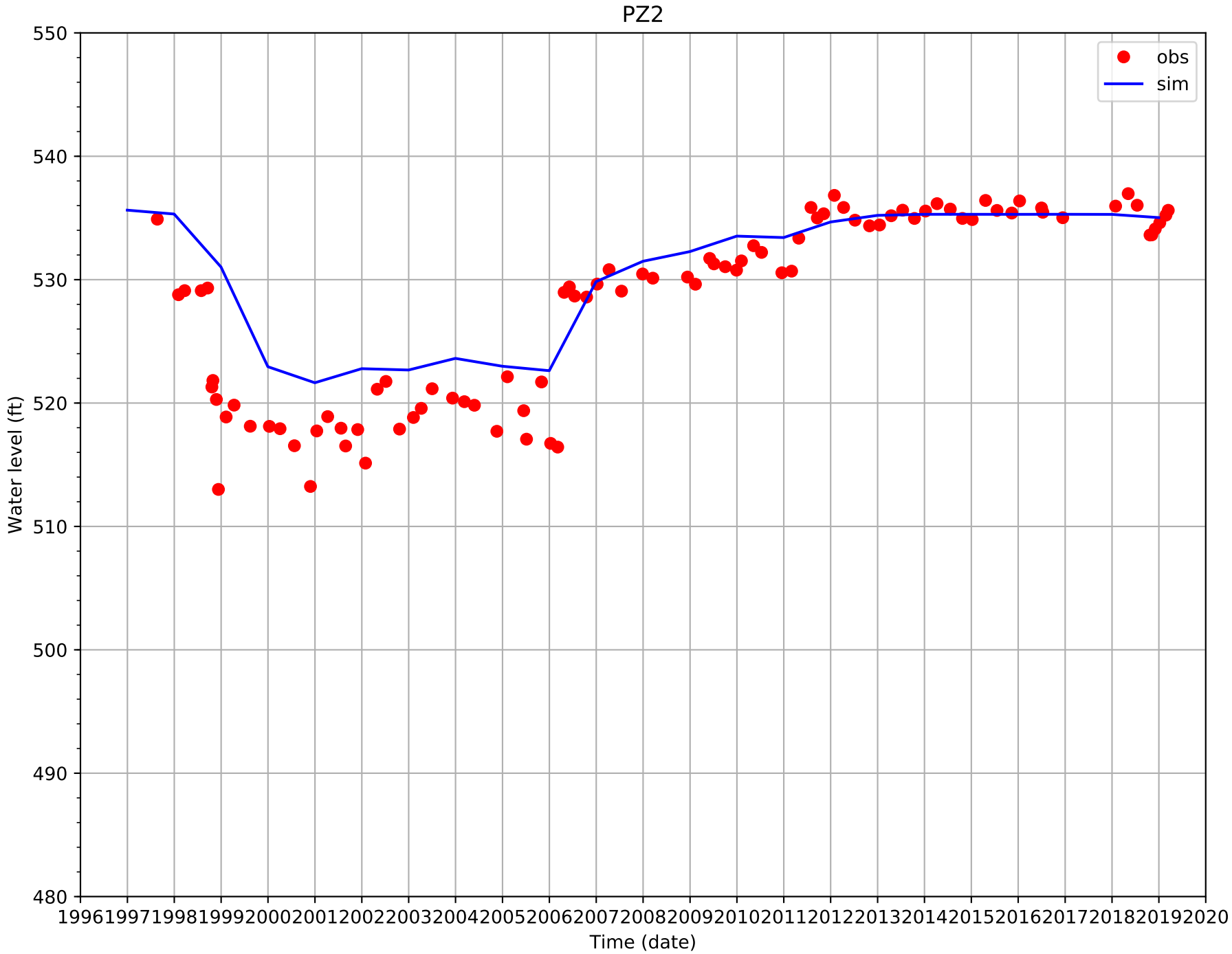
Time (date)


PZ2
obs
sim
Water level (ft)
550
540
530
520
510
500
490
480
1996
1997
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2001
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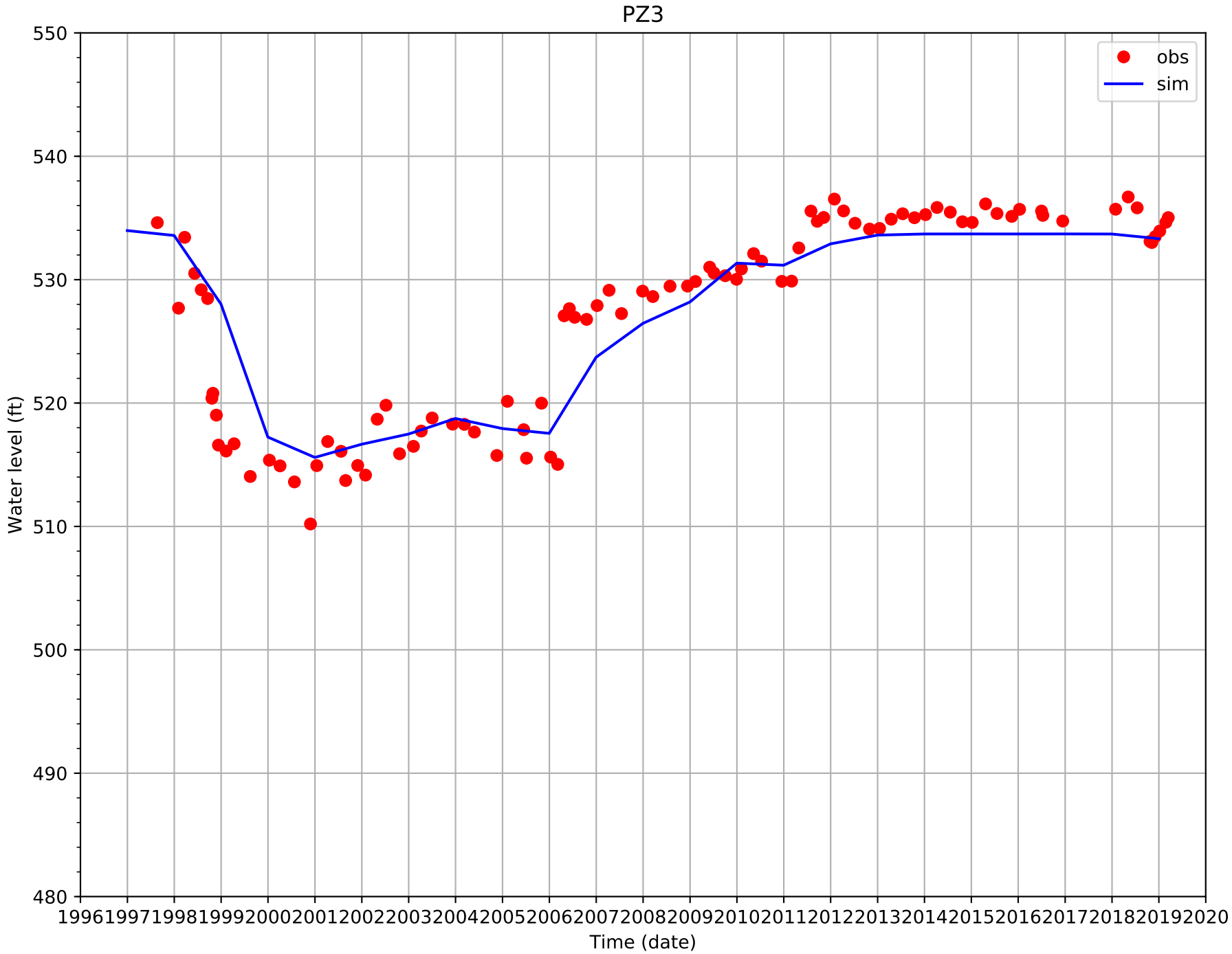
Time (date)


PZ3
obs
sim
Water level (ft)
550
540
530
520
510
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1996
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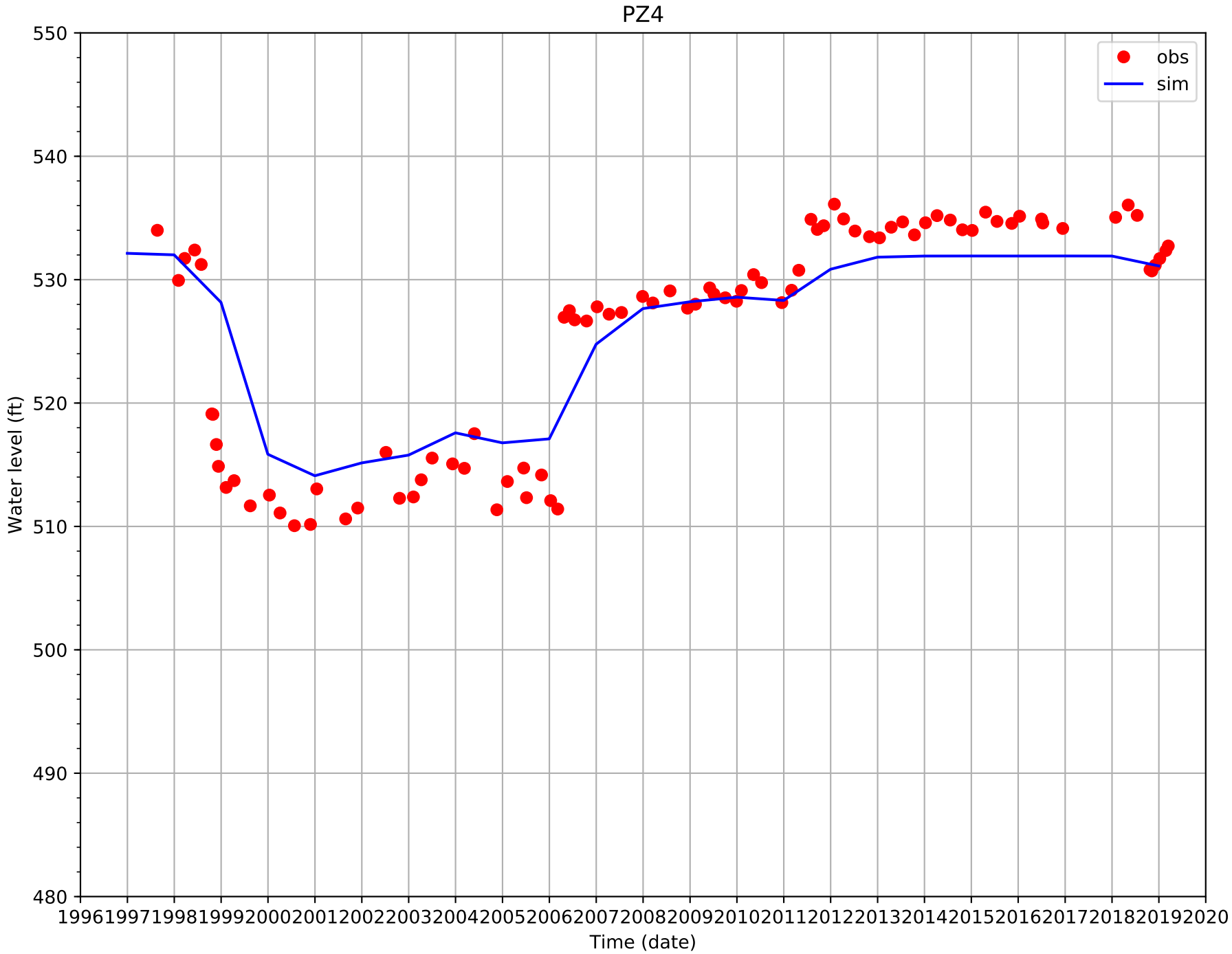
Time (date)


PZ4
obs
sim
Water level (ft)
550
540
530
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1996
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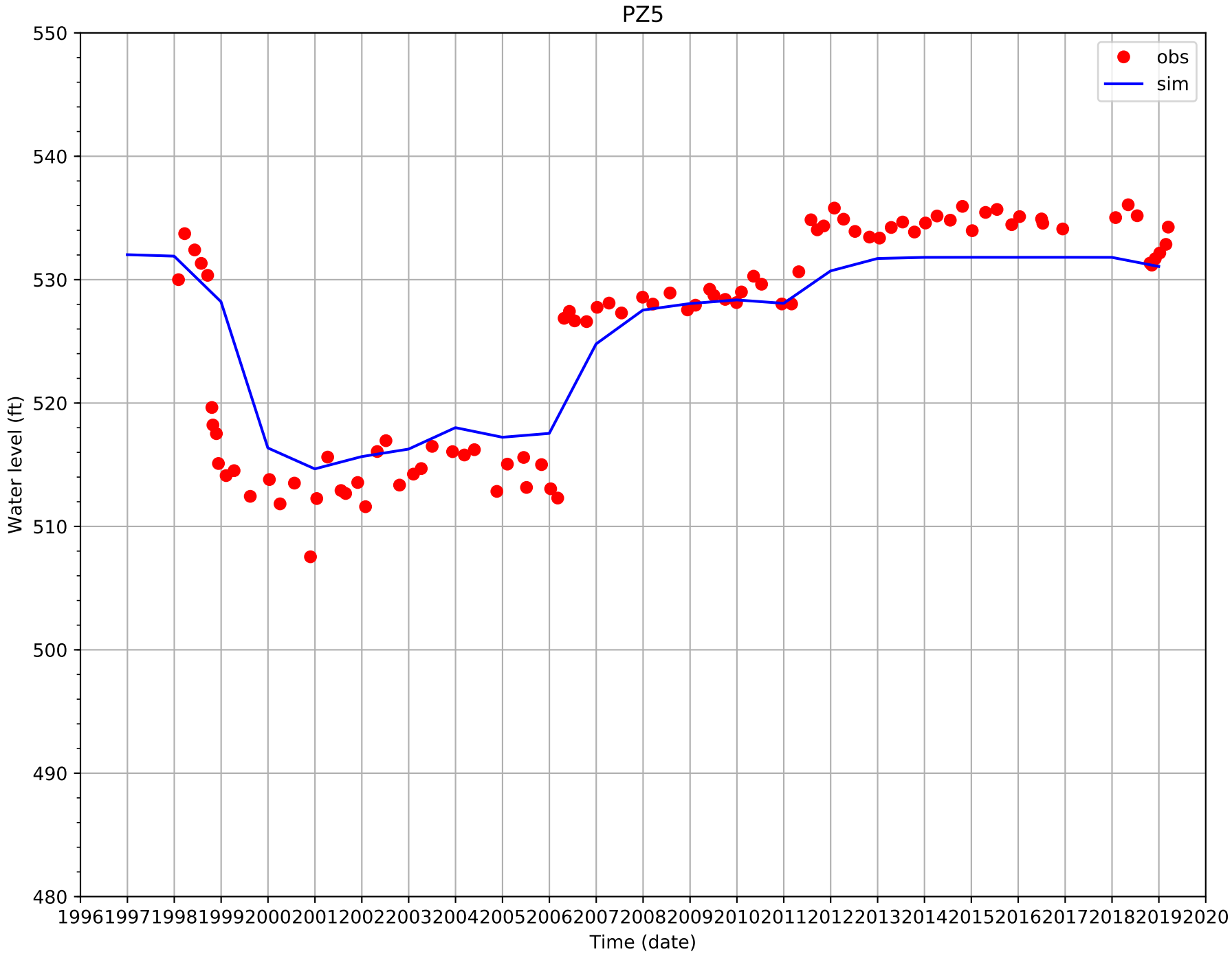
Time (date)


PZ5
obs
sim
Water level (ft)
550
540
530
520
510
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1996
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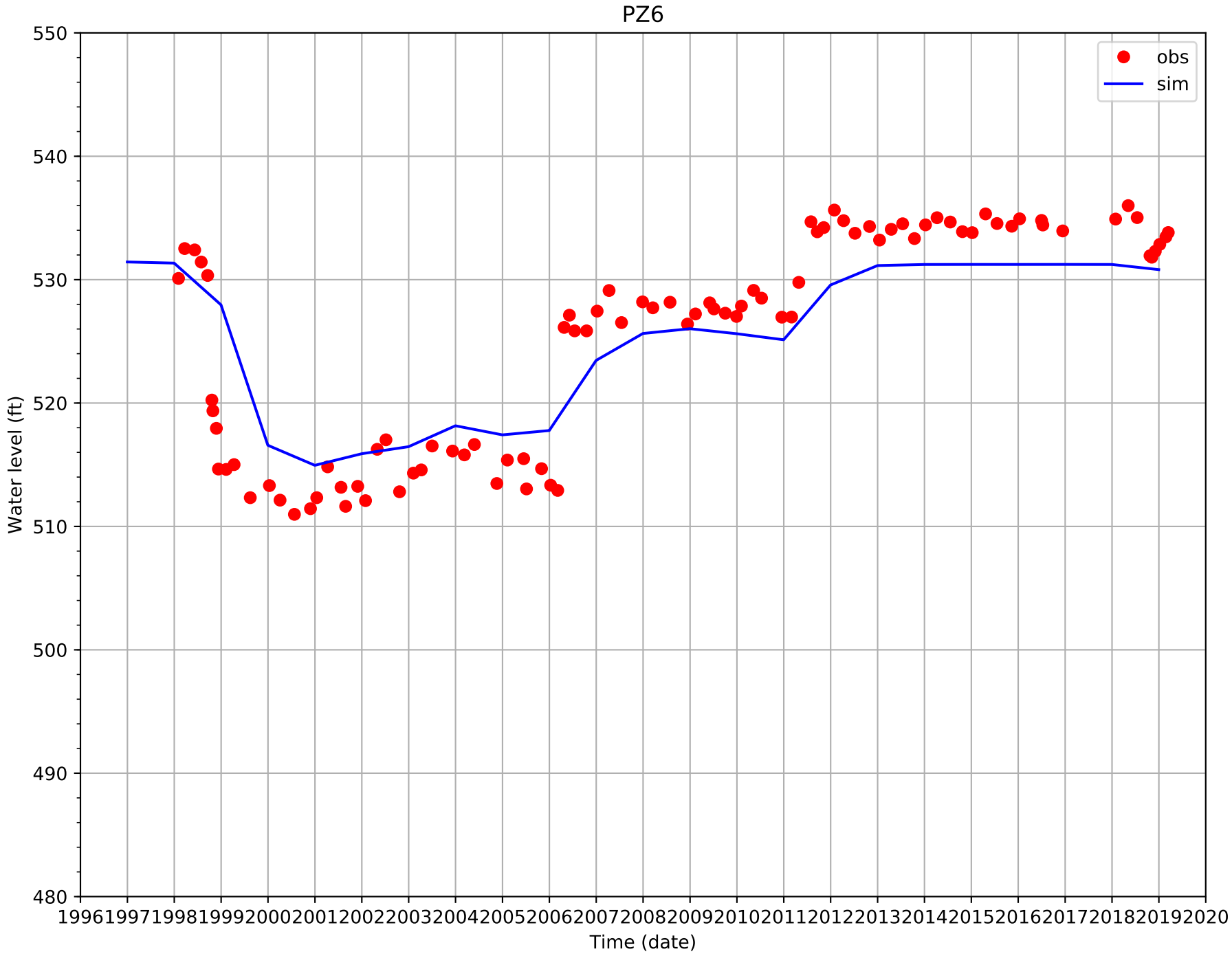
Time (date)


PZ6
obs
sim
Water level (ft)
550
540
530
520
510
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490
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1996
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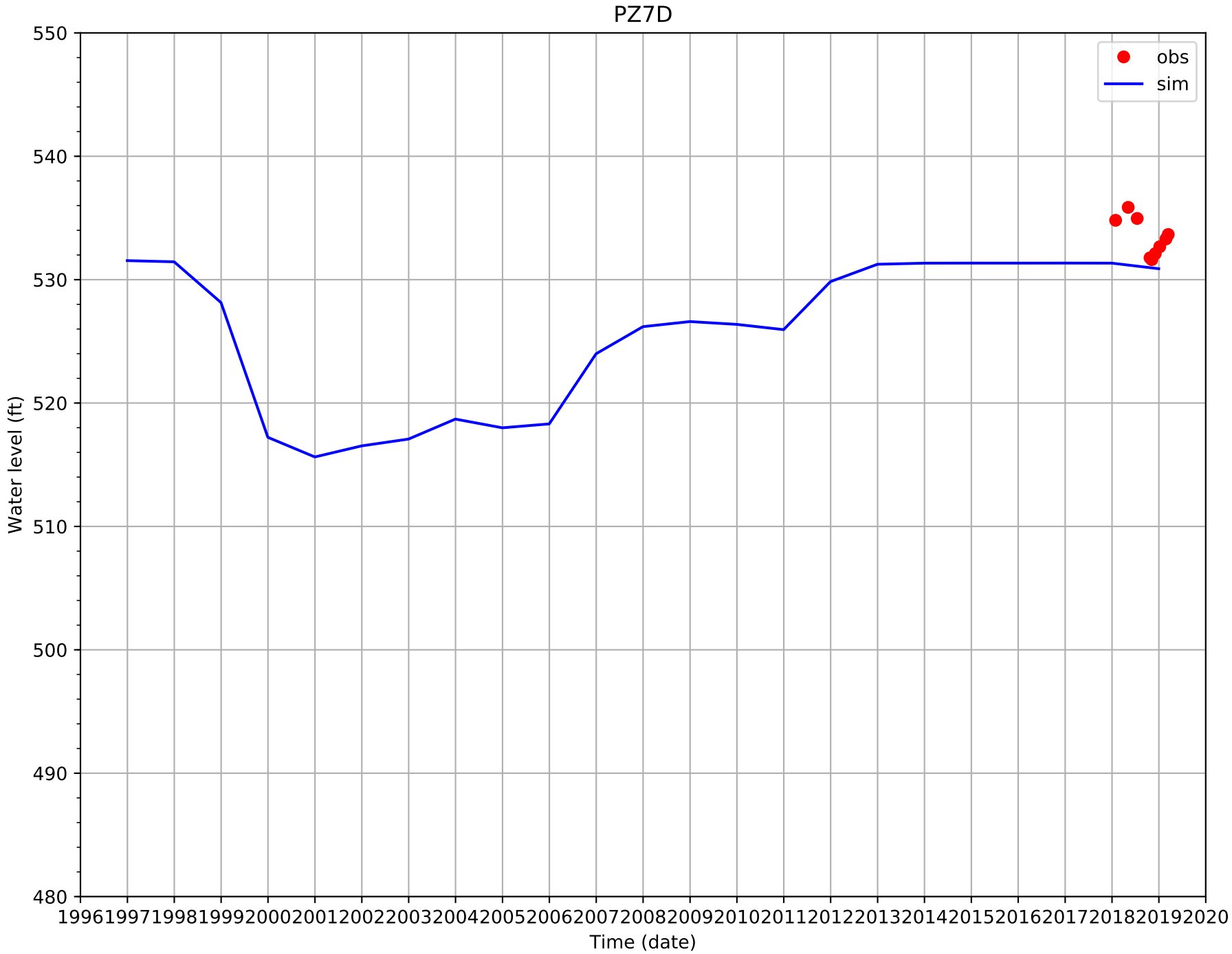
Time (date)


PZ7D
obs
sim
Water level (ft)
550
540
530
520
510
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1996
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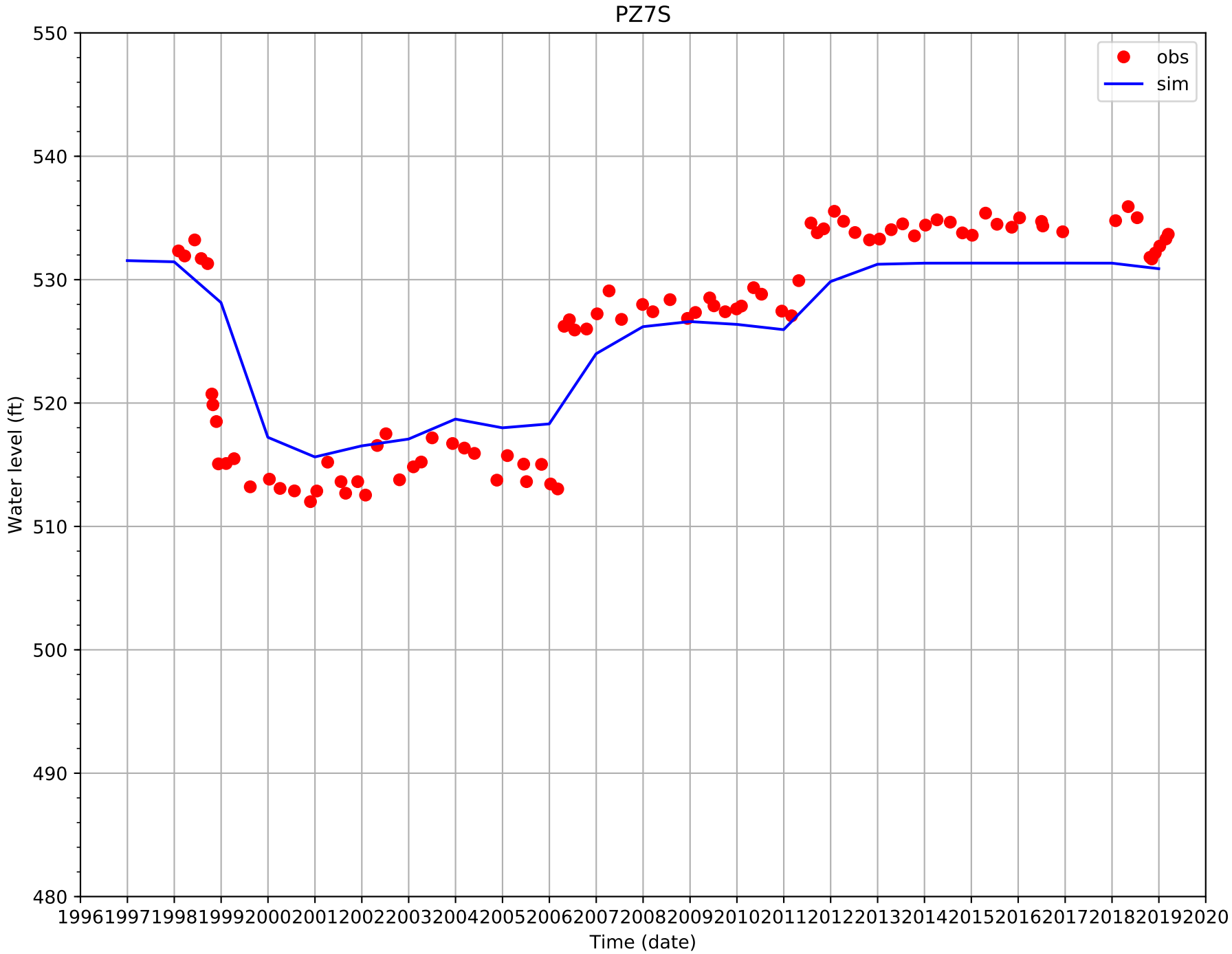
Time (date)


PZ7S
obs
sim
Water level (ft)
550
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Time (date)
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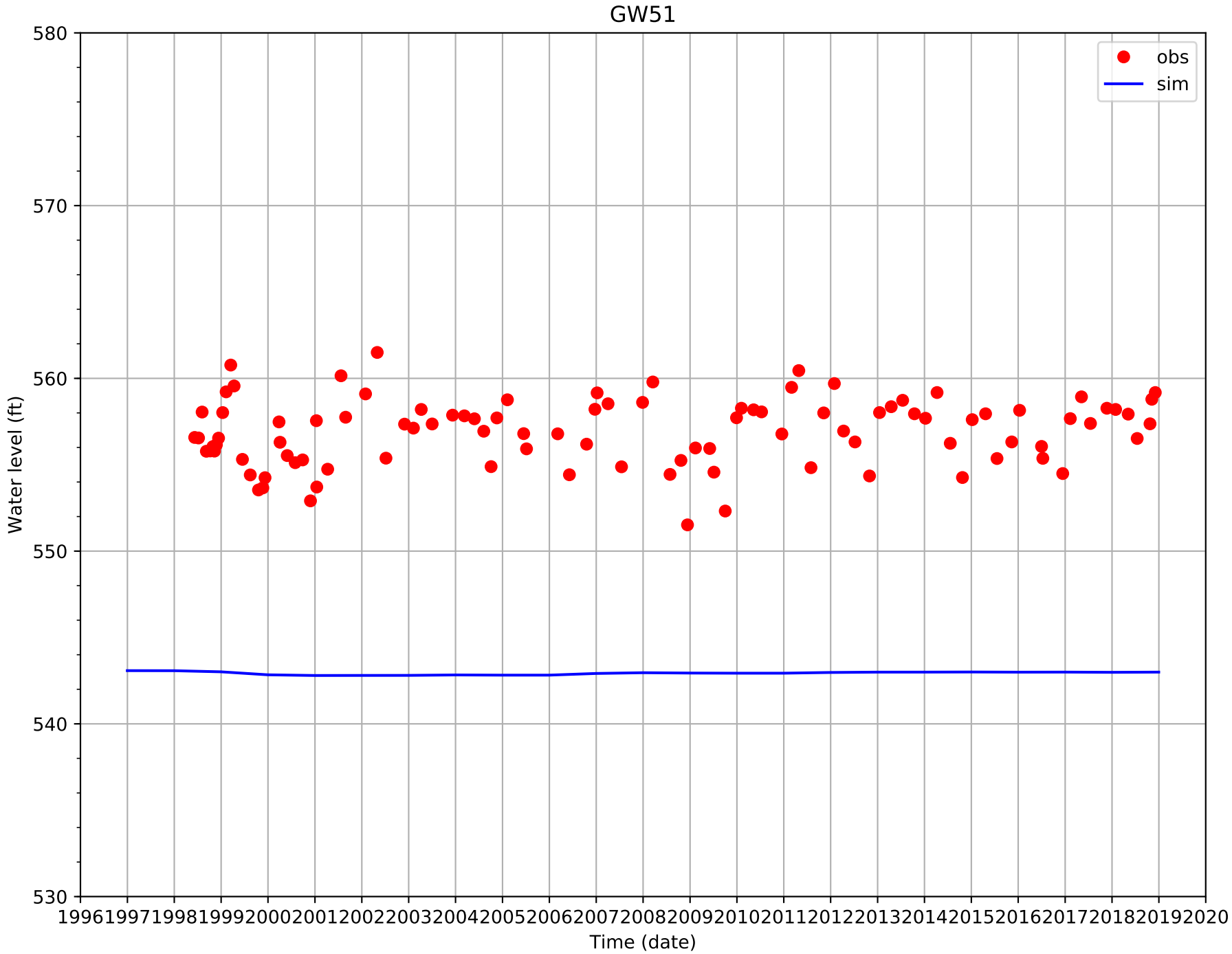
Water Levels in Upper Aquifer Monitoring Wells


GW51
obs
sim
Water level (ft)
580
570
560
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1996
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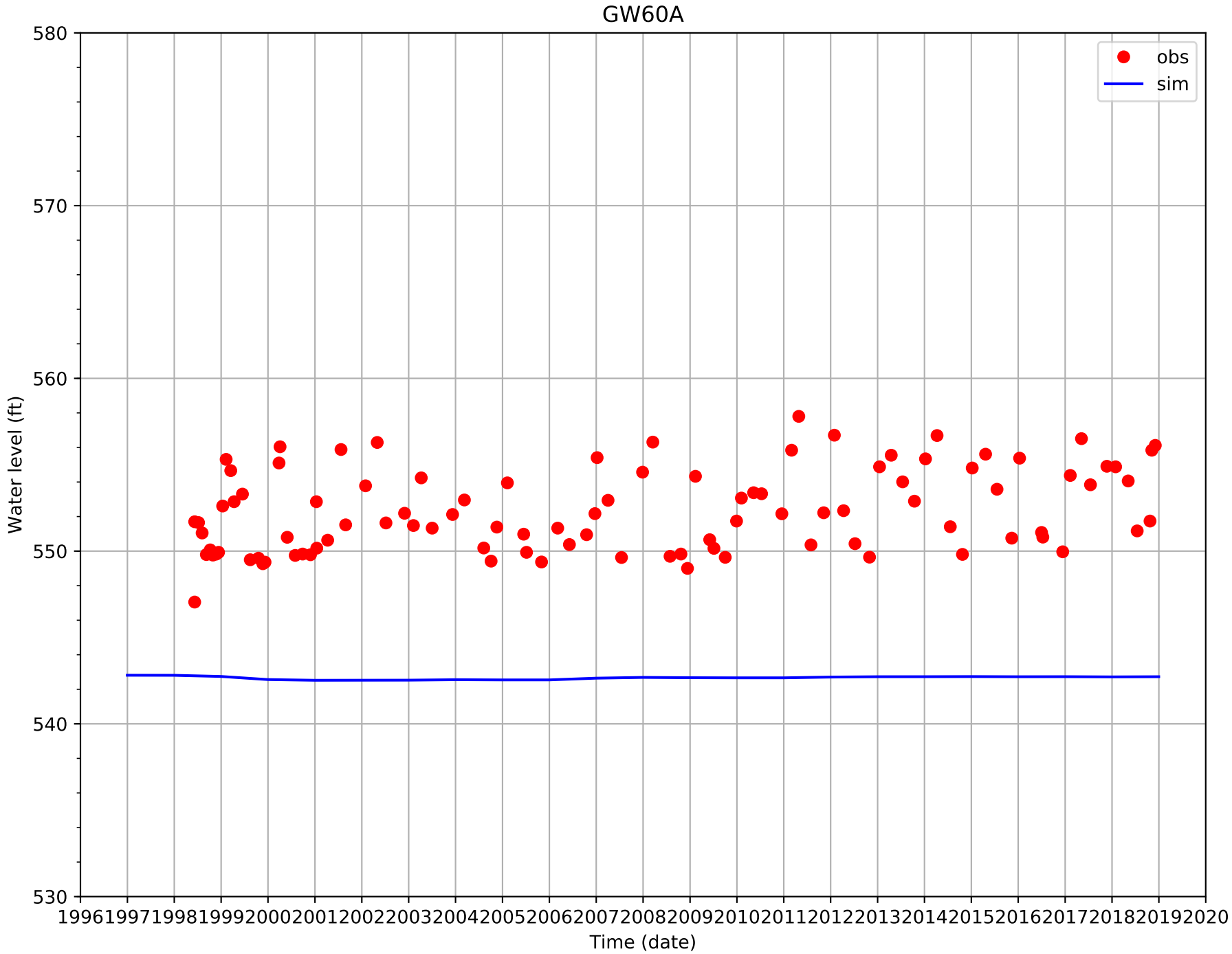
Time (date)


GW60A
obs
sim
Water level (ft)
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570
560
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1996
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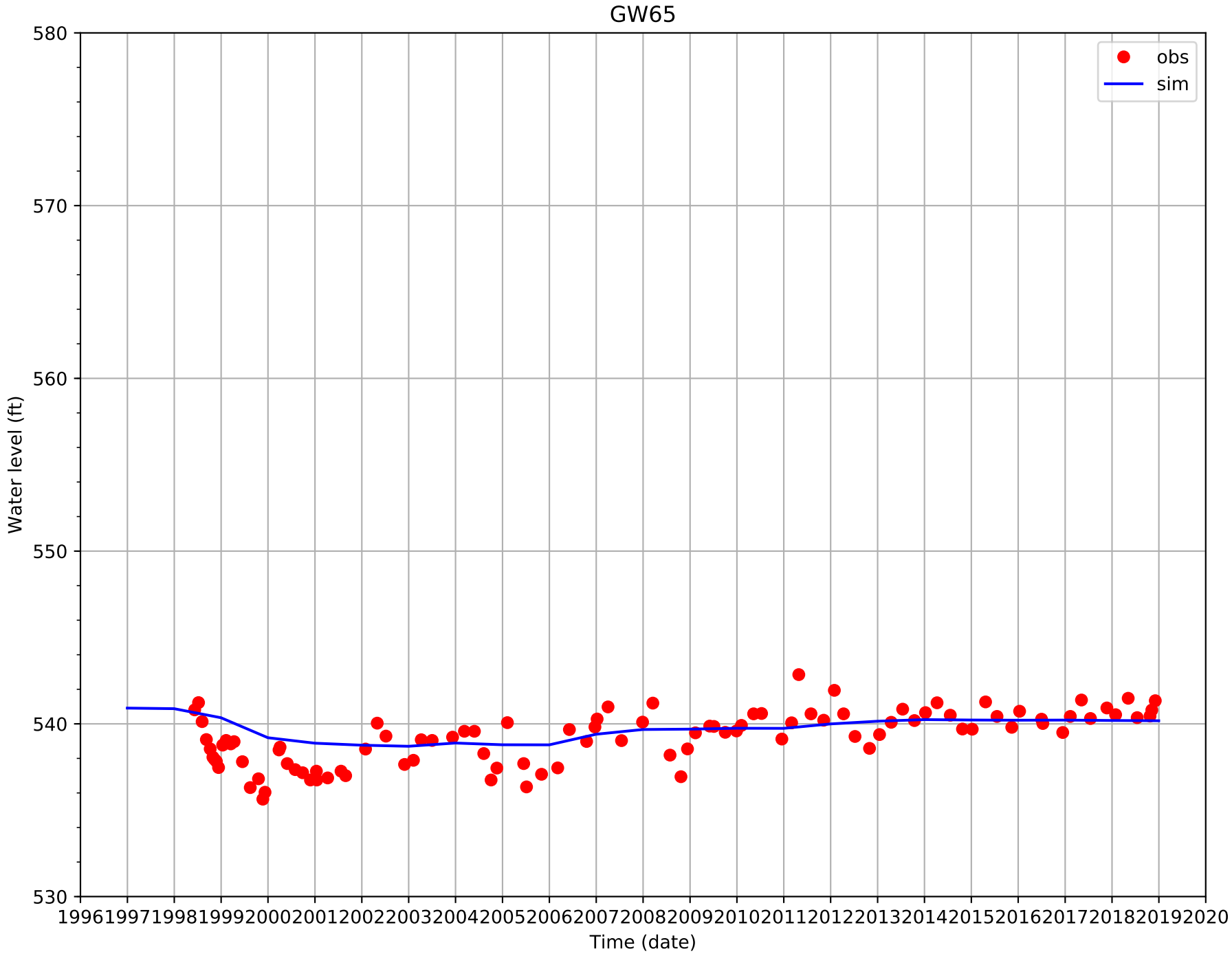
Time (date)


GW65
obs
sim
Water level (ft)
580
570
560
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1996
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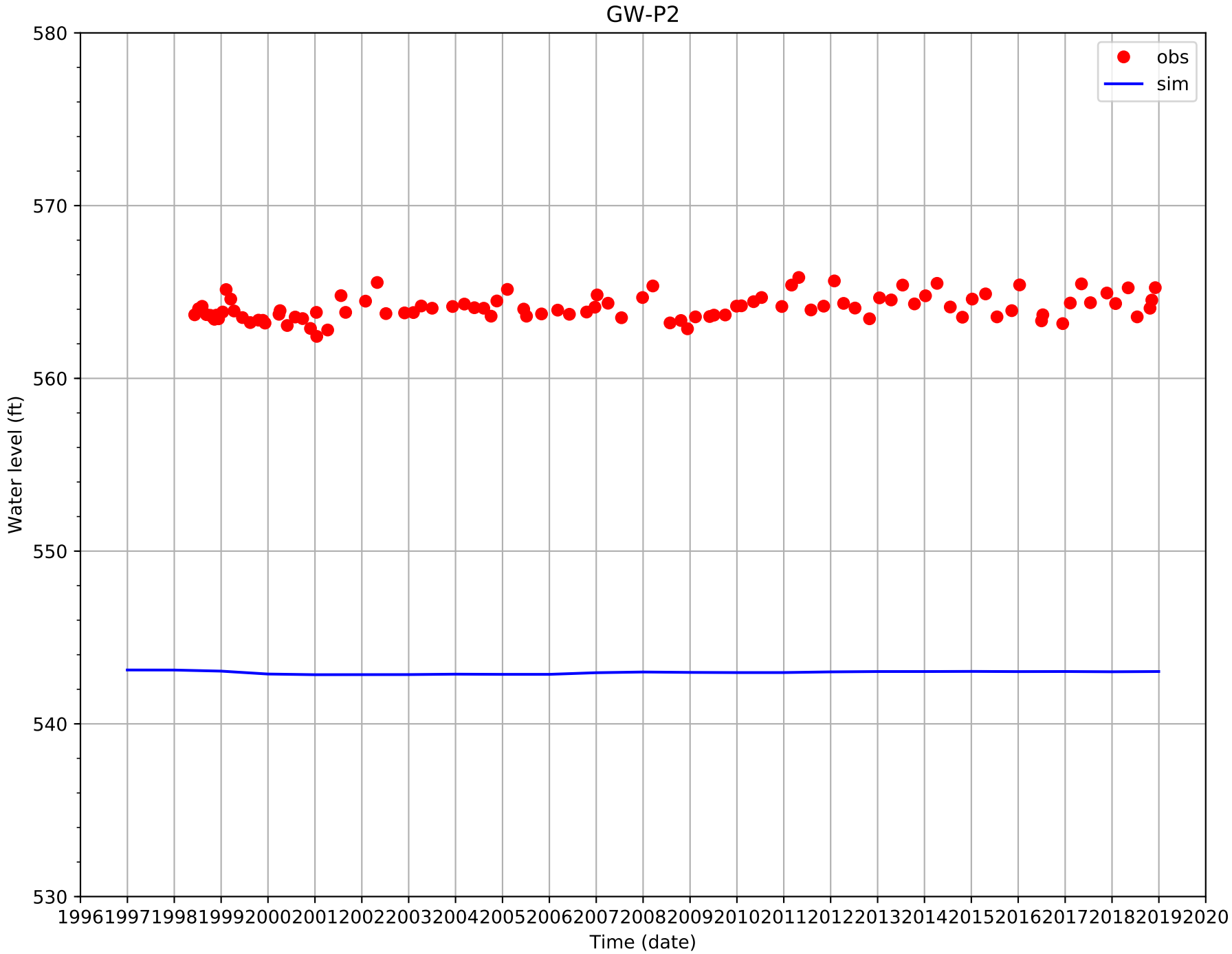
Time (date)


GW-P2
obs
sim
580
570
560
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Water level (ft)
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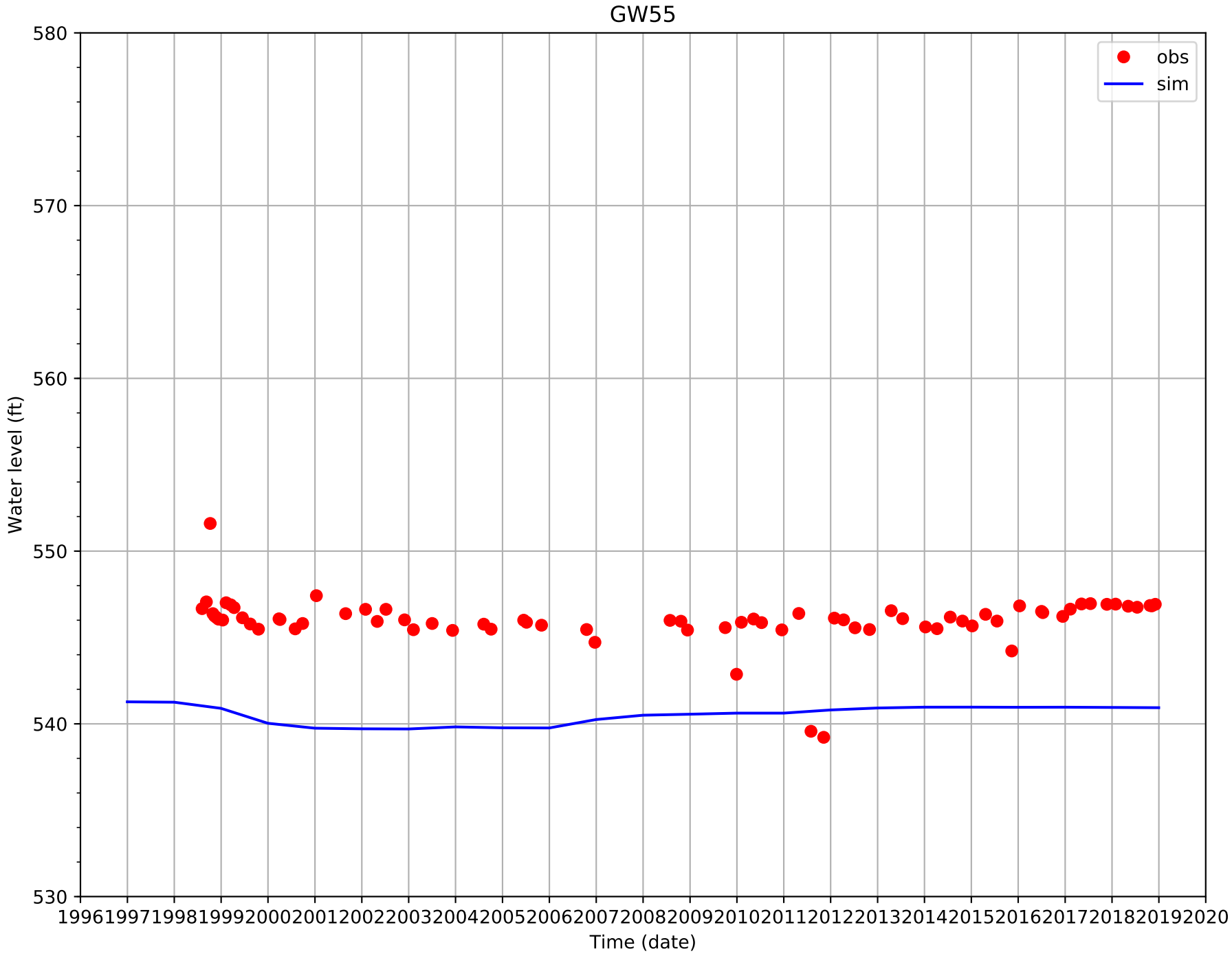
Time (date)


GW55
obs
sim
Water level (ft)
580
570
560
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1996
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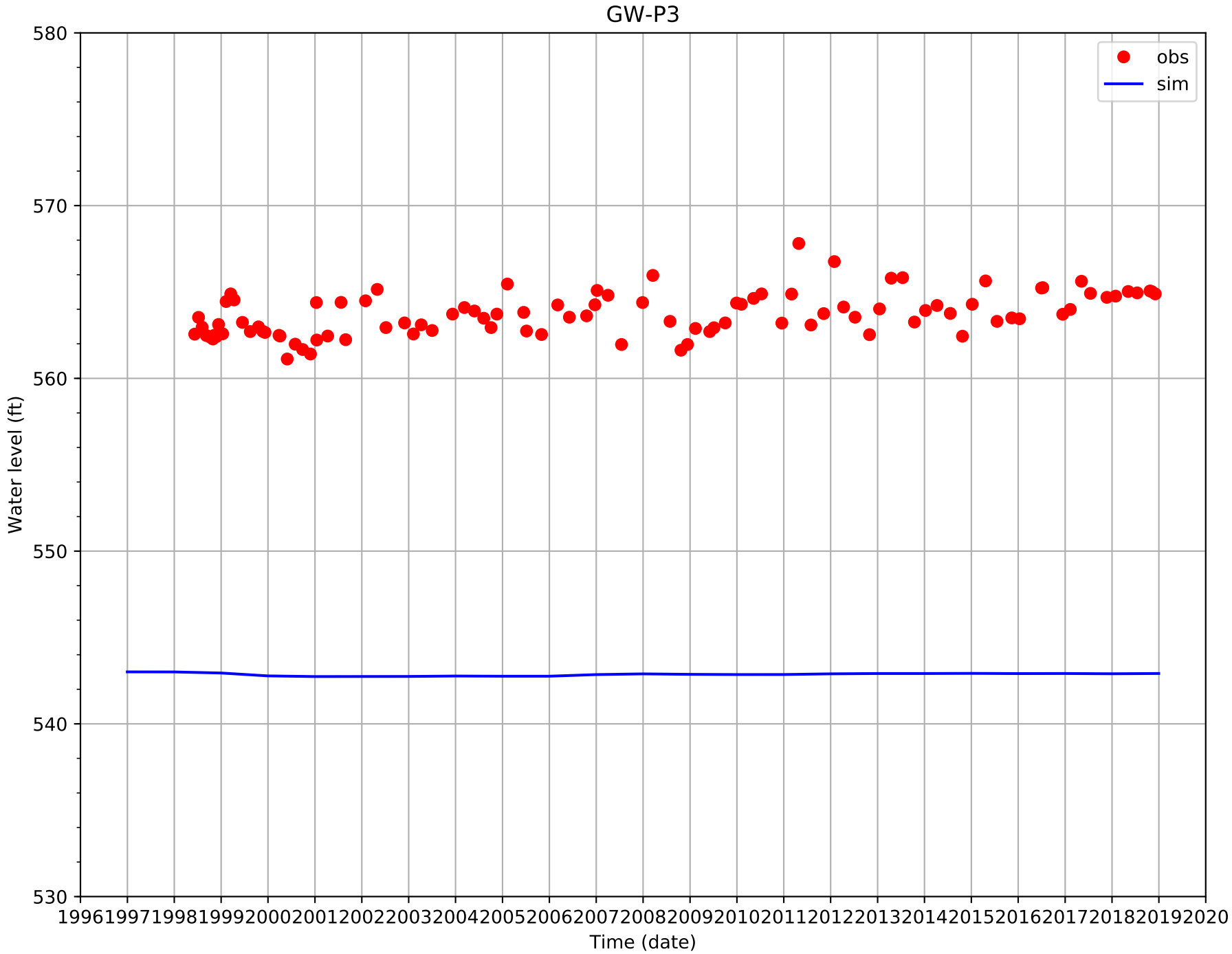
Time (date)


GW-P3
obs
sim
Water level (ft)
580
570
560
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1996
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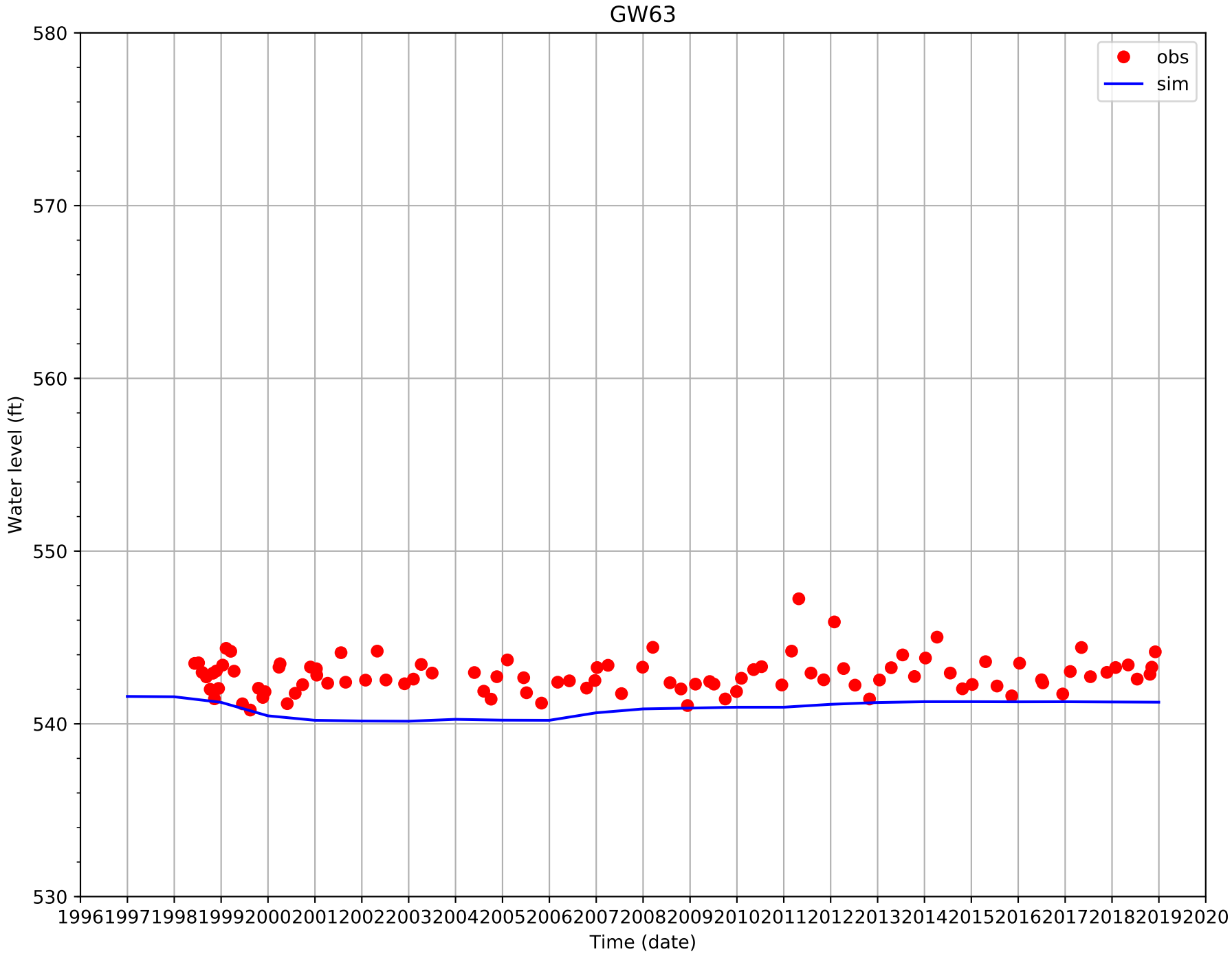
Time (date)


GW63
obs
sim
Water level (ft)
580
570
560
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1996
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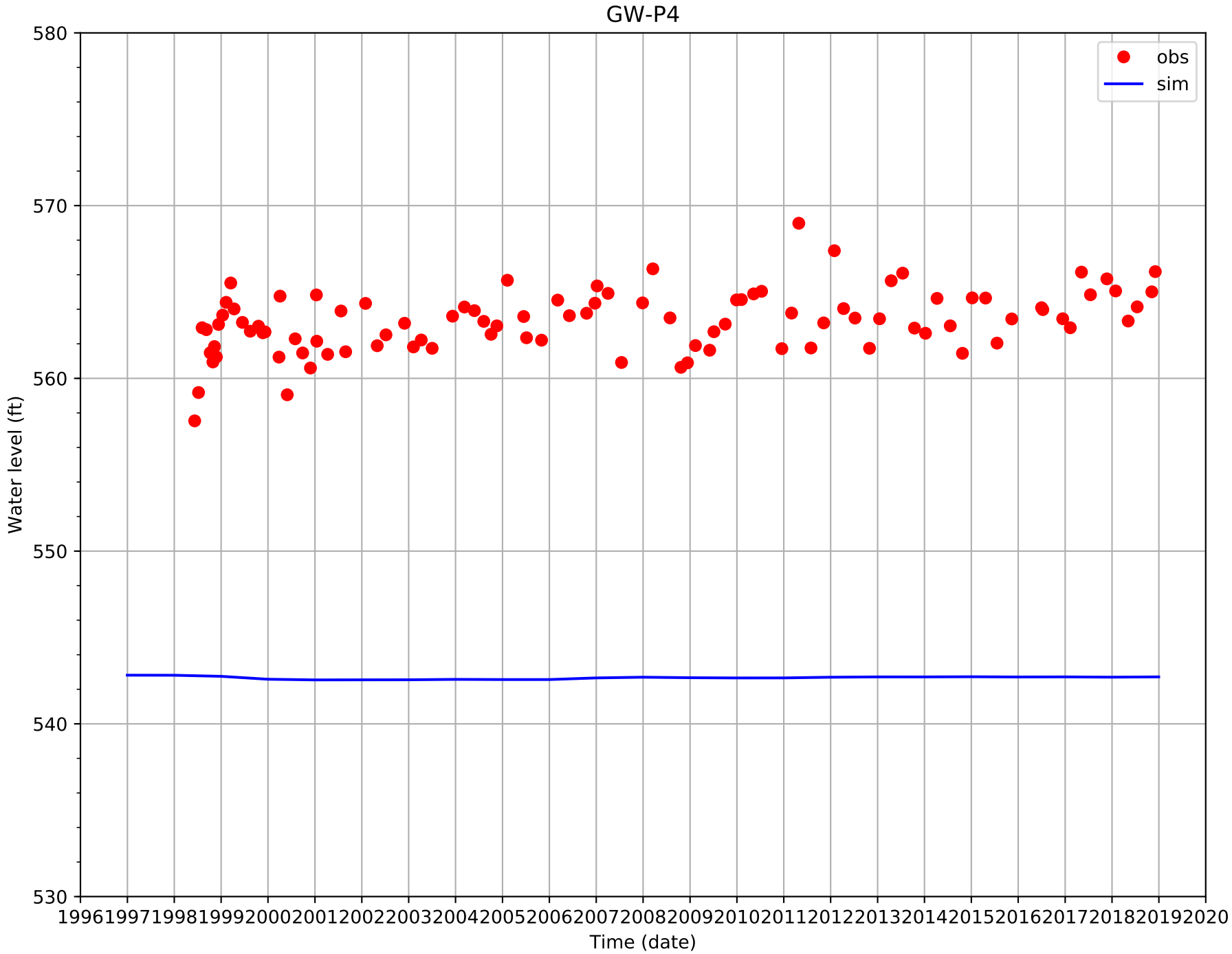
Time (date)


GW-P4
obs
sim
Water level (ft)
580
570
560
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1996
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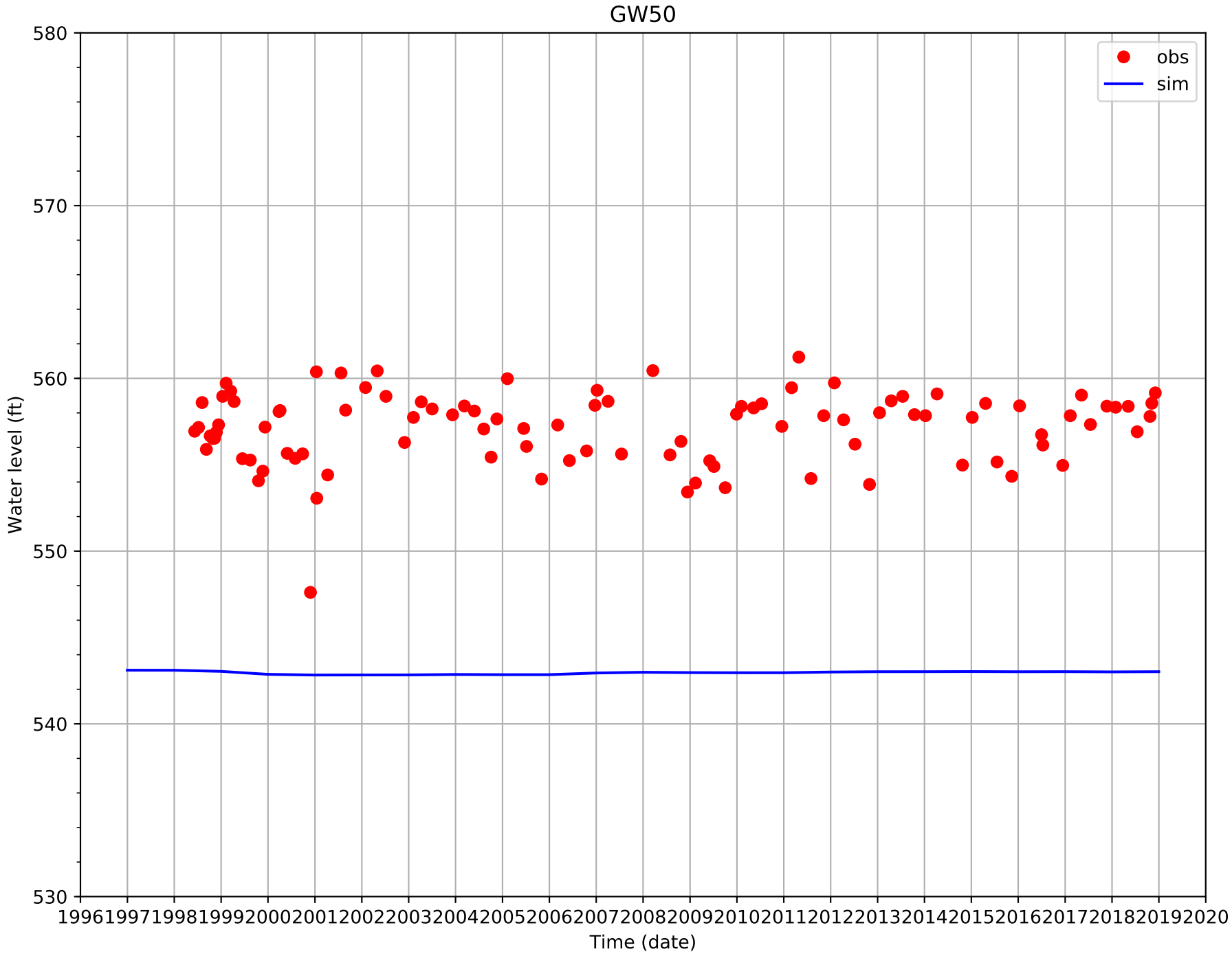
Time (date)


GW50
obs
sim
Water level (ft)
580
570
560
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1996
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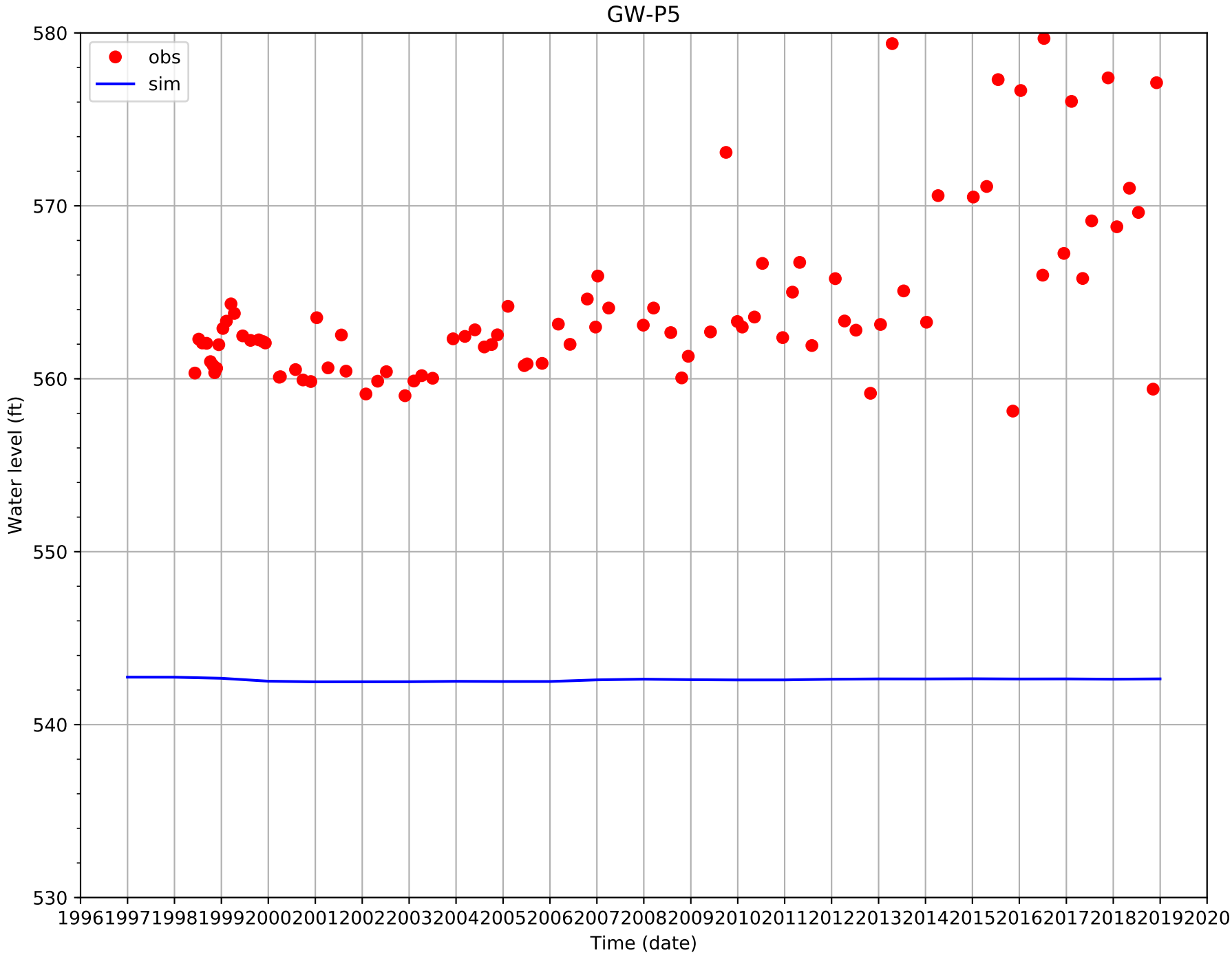
Time (date)


GW-P5
obs
sim
580
570
560
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Water level (ft)
1996
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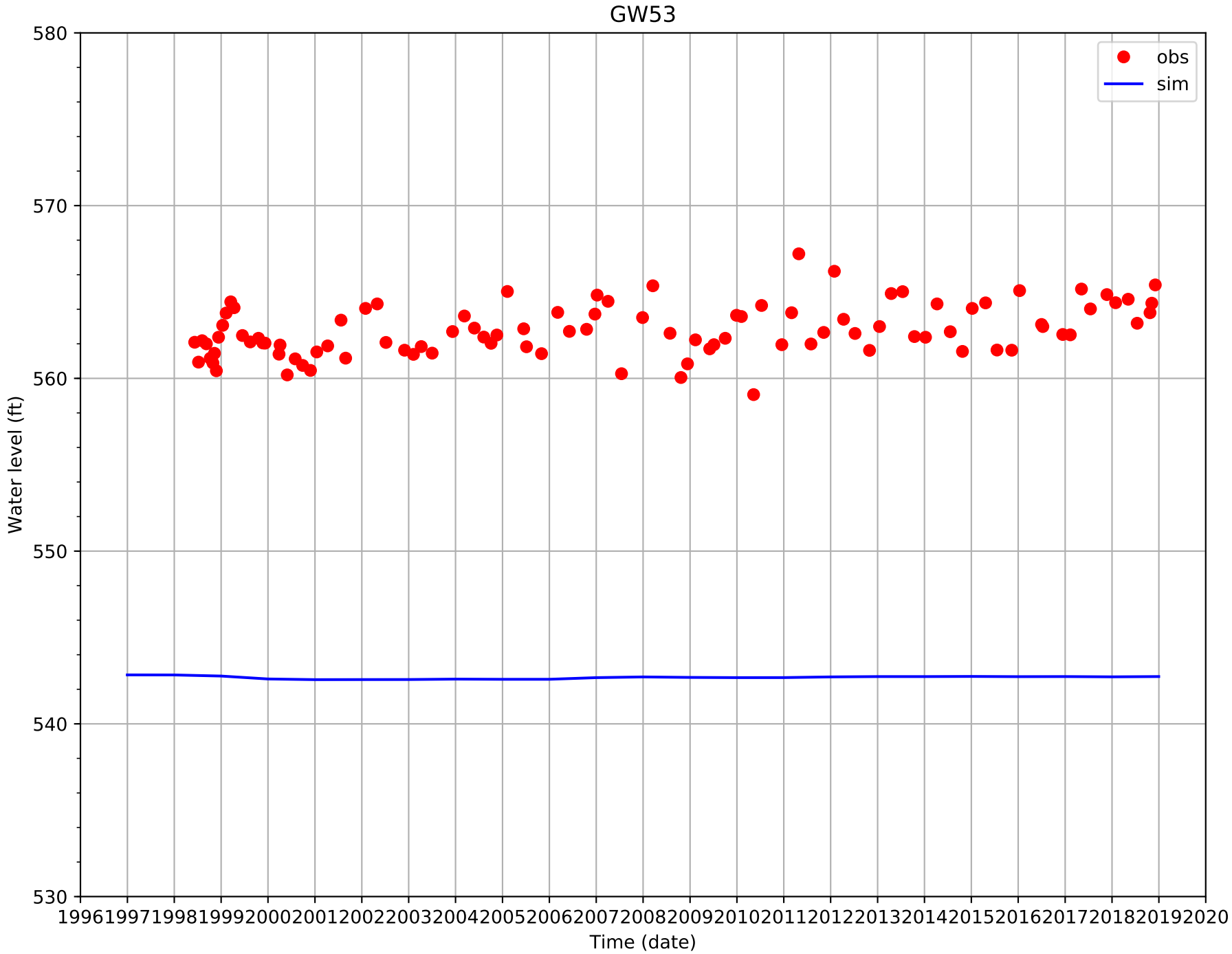
Time (date)


GW53
obs
sim
580
570
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Water level (ft)
1996
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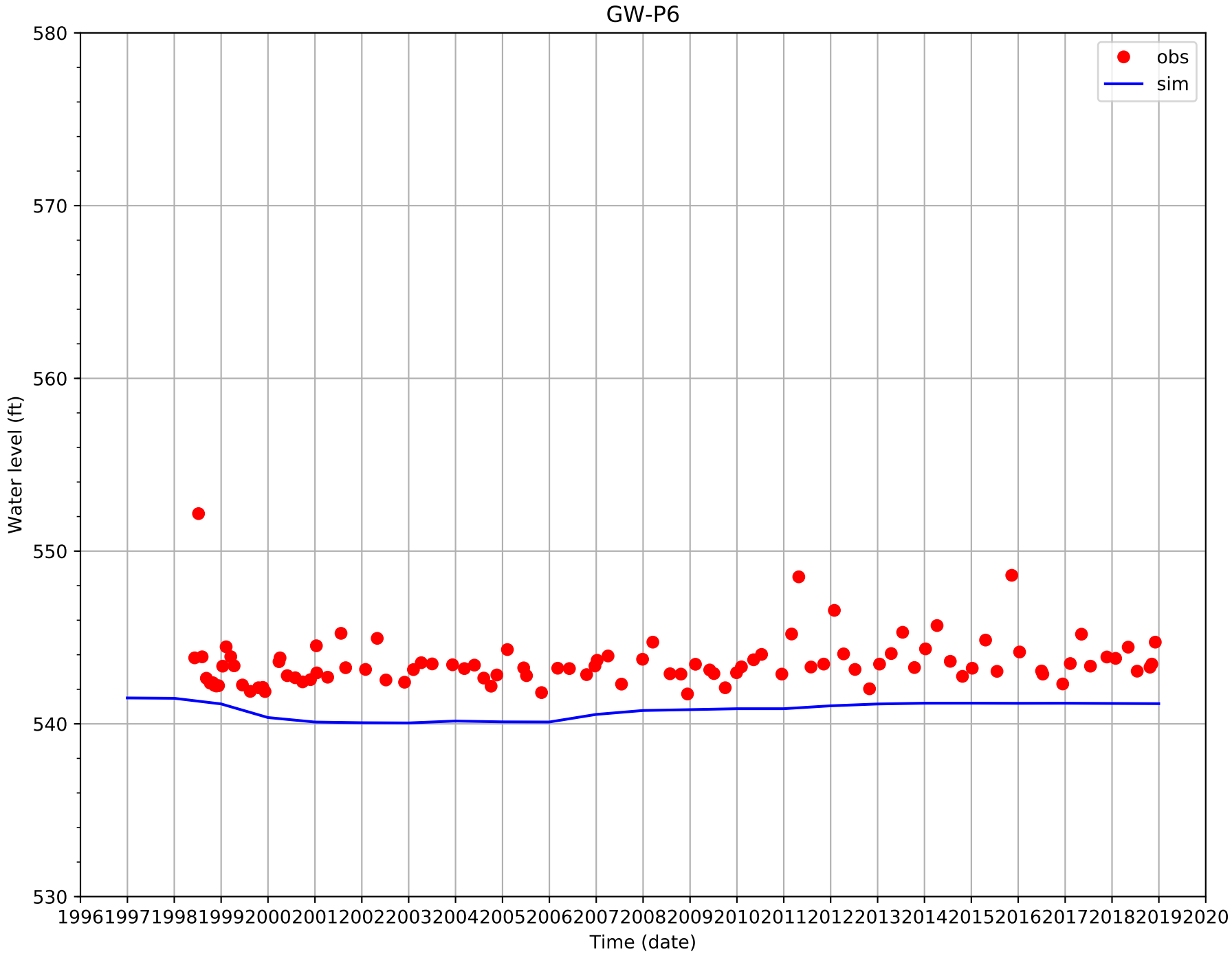
Time (date)


GW-P6
obs
sim
Water level (ft)
580
570
560
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1996
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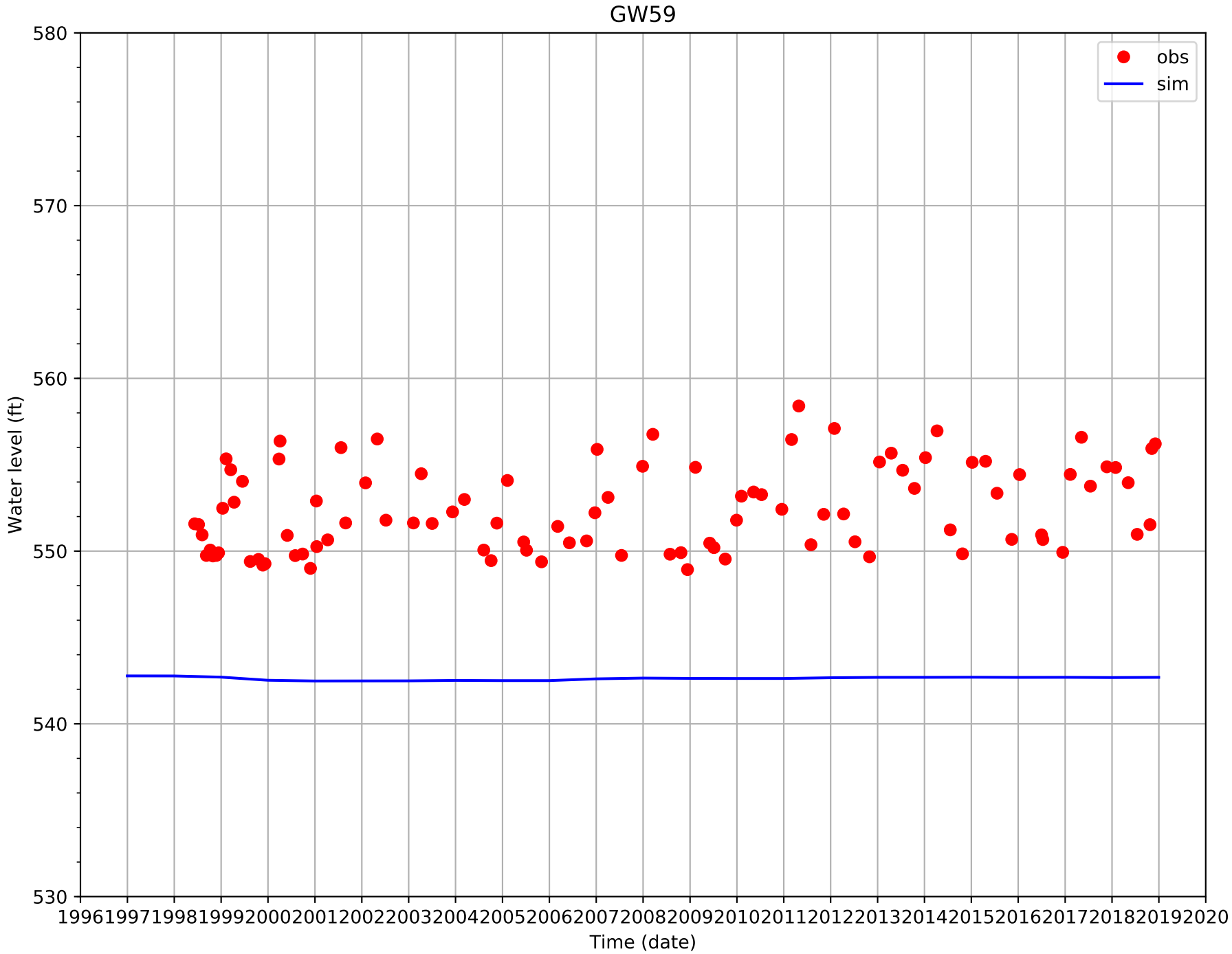
Time (date)


GW59
obs
sim
Water level (ft)
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570
560
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1996
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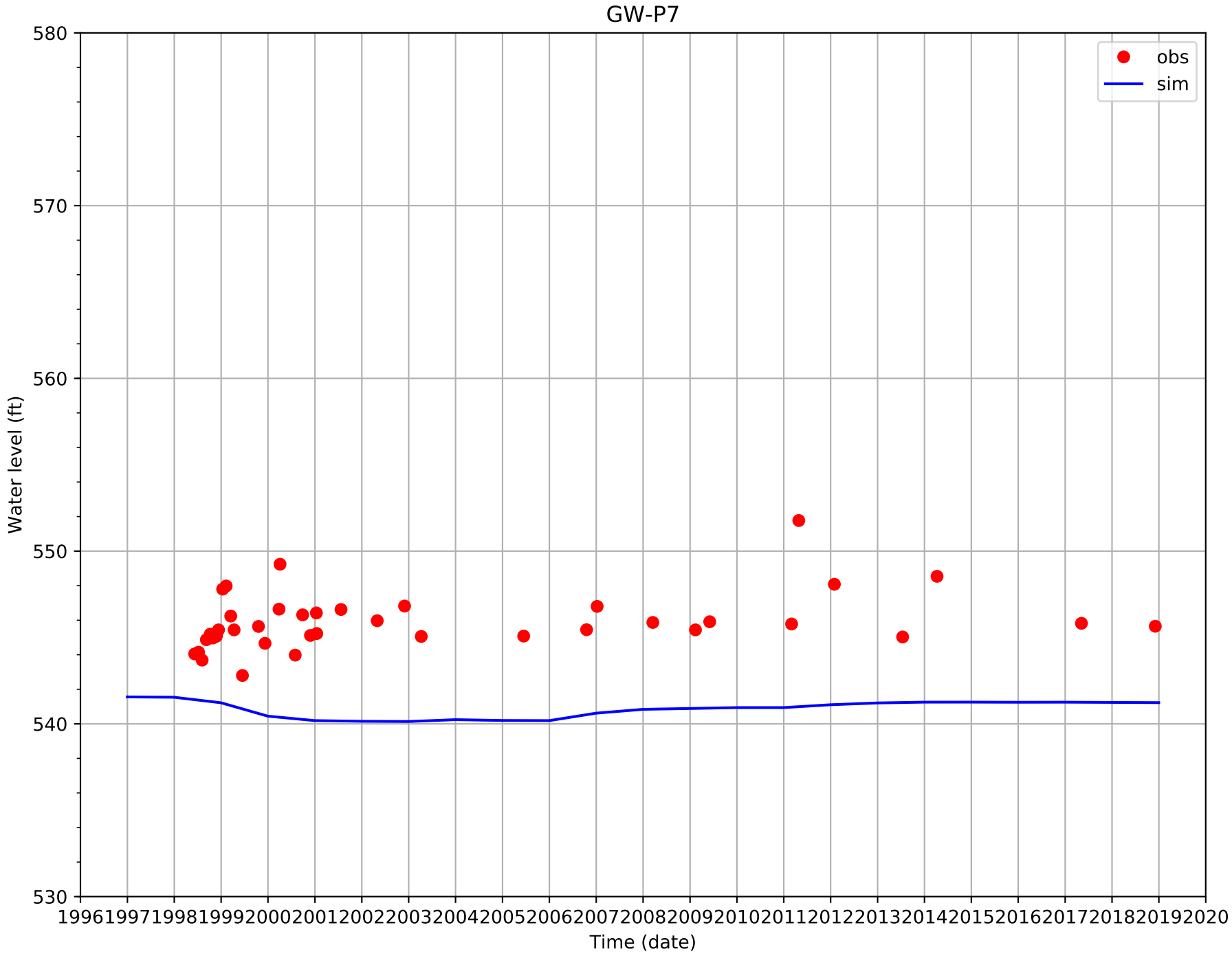
Time (date)


GW-P7
obs
sim
Water level (ft)
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570
560
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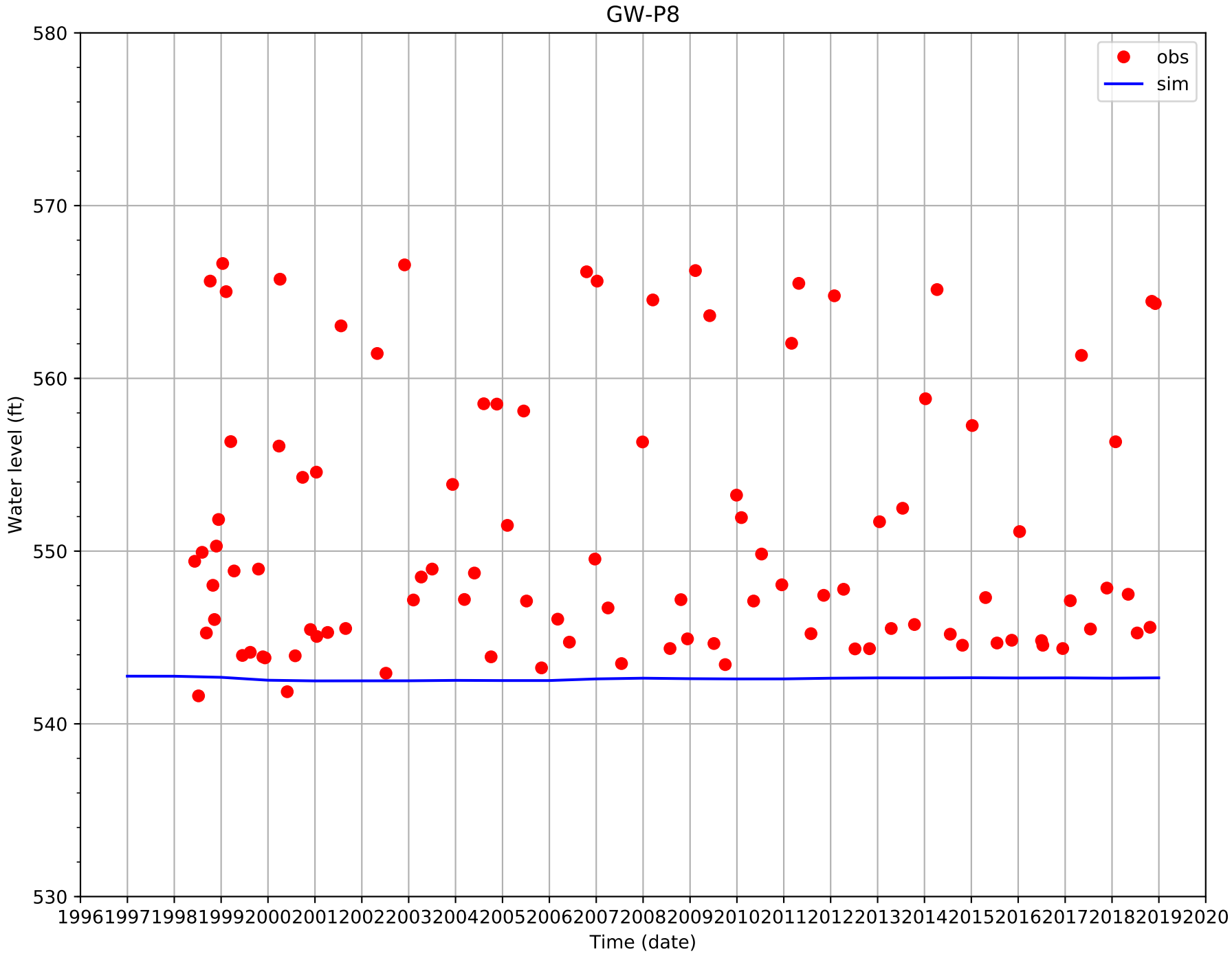
Time (date)


GW-P8
obs
sim
Water level (ft)
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570
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1996
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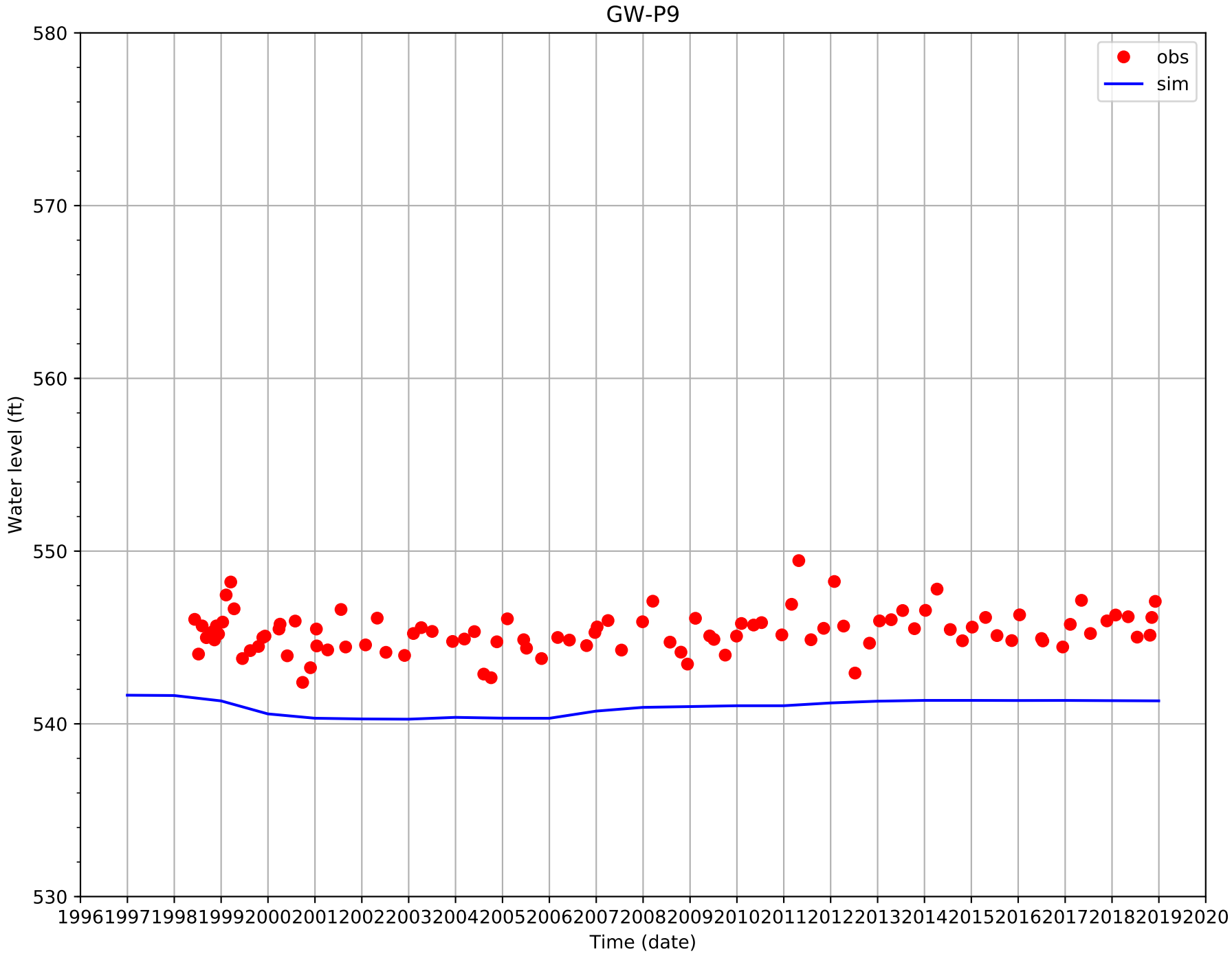
2020
Time (date)


GW-P9
obs
sim
Water level (ft)
580
570
560
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540
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1996
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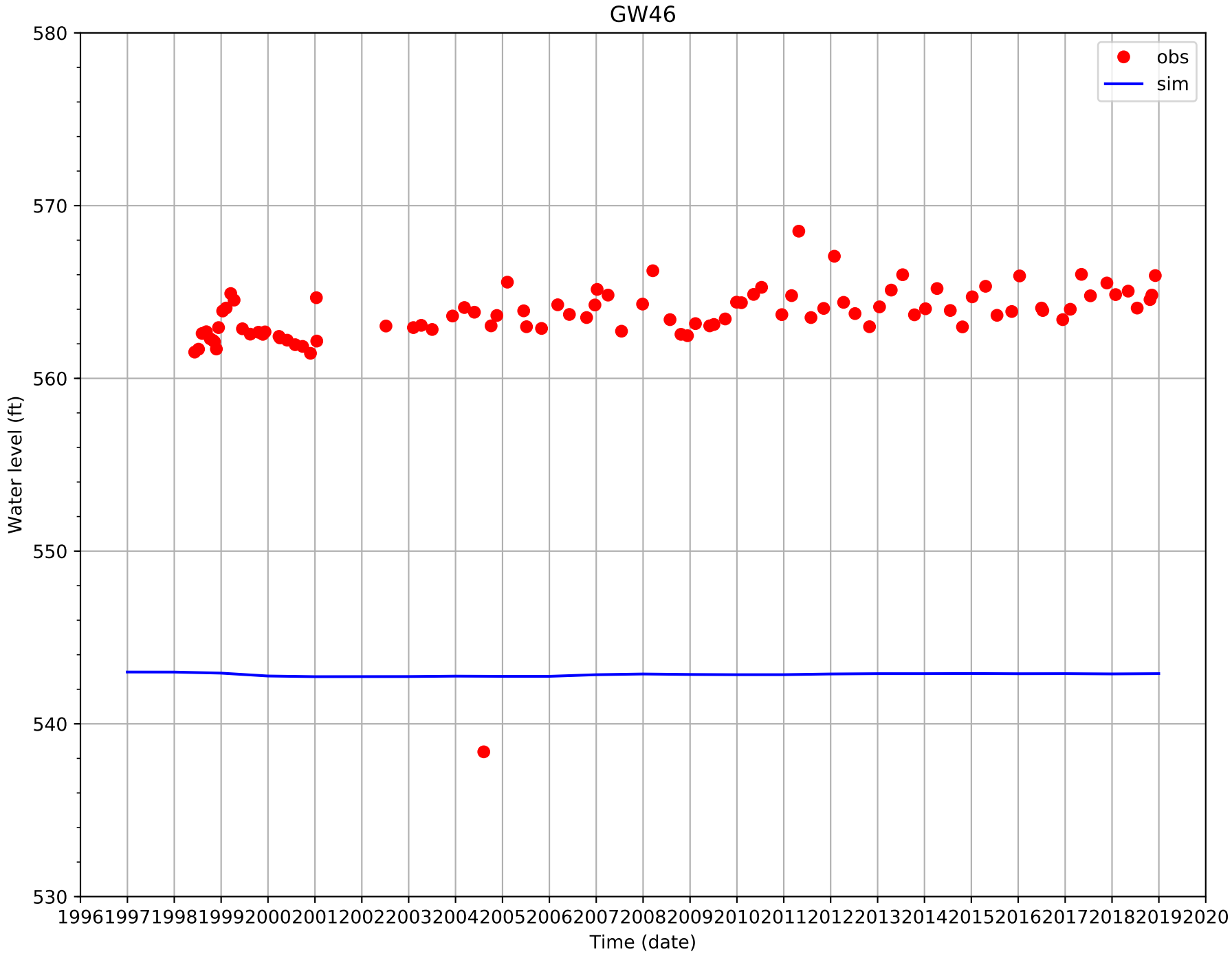
Time (date)


GW46
obs
sim
Water level (ft)
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570
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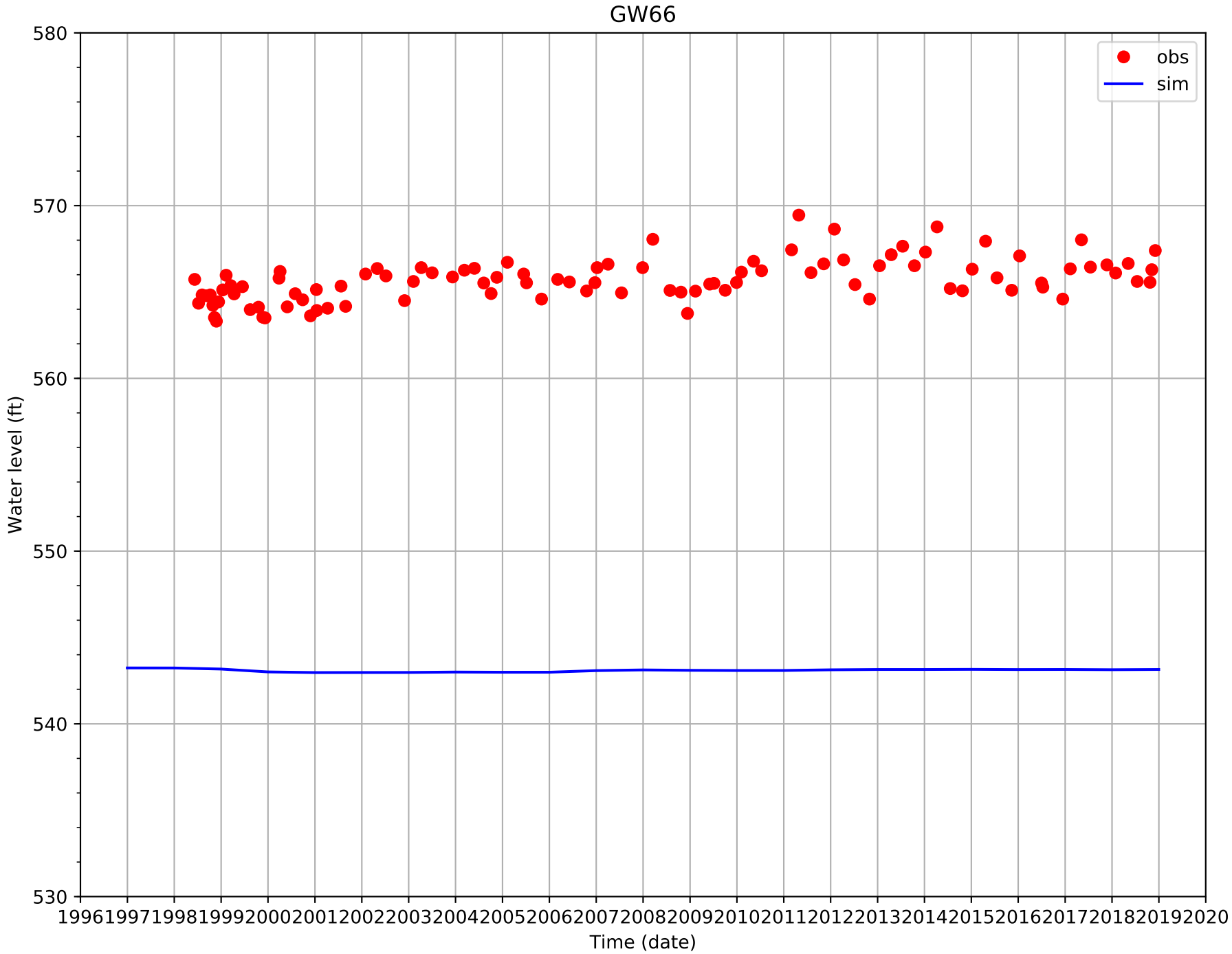
Time (date)


GW66
obs
sim
Water level (ft)
580
570
560
550
540
530
1996
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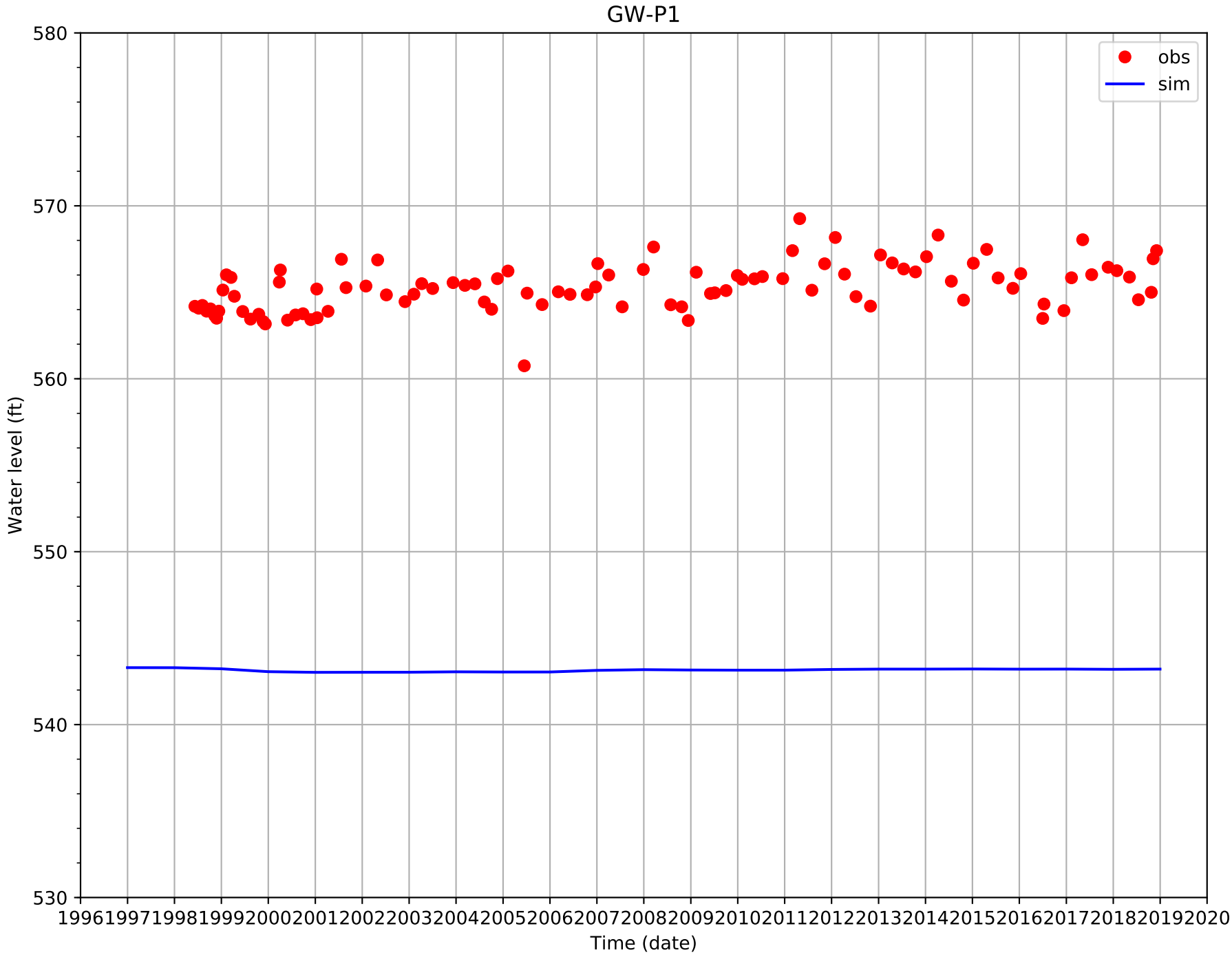
2020
Time (date)


GW-P1
obs
sim
Water level (ft)
580
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560
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1996
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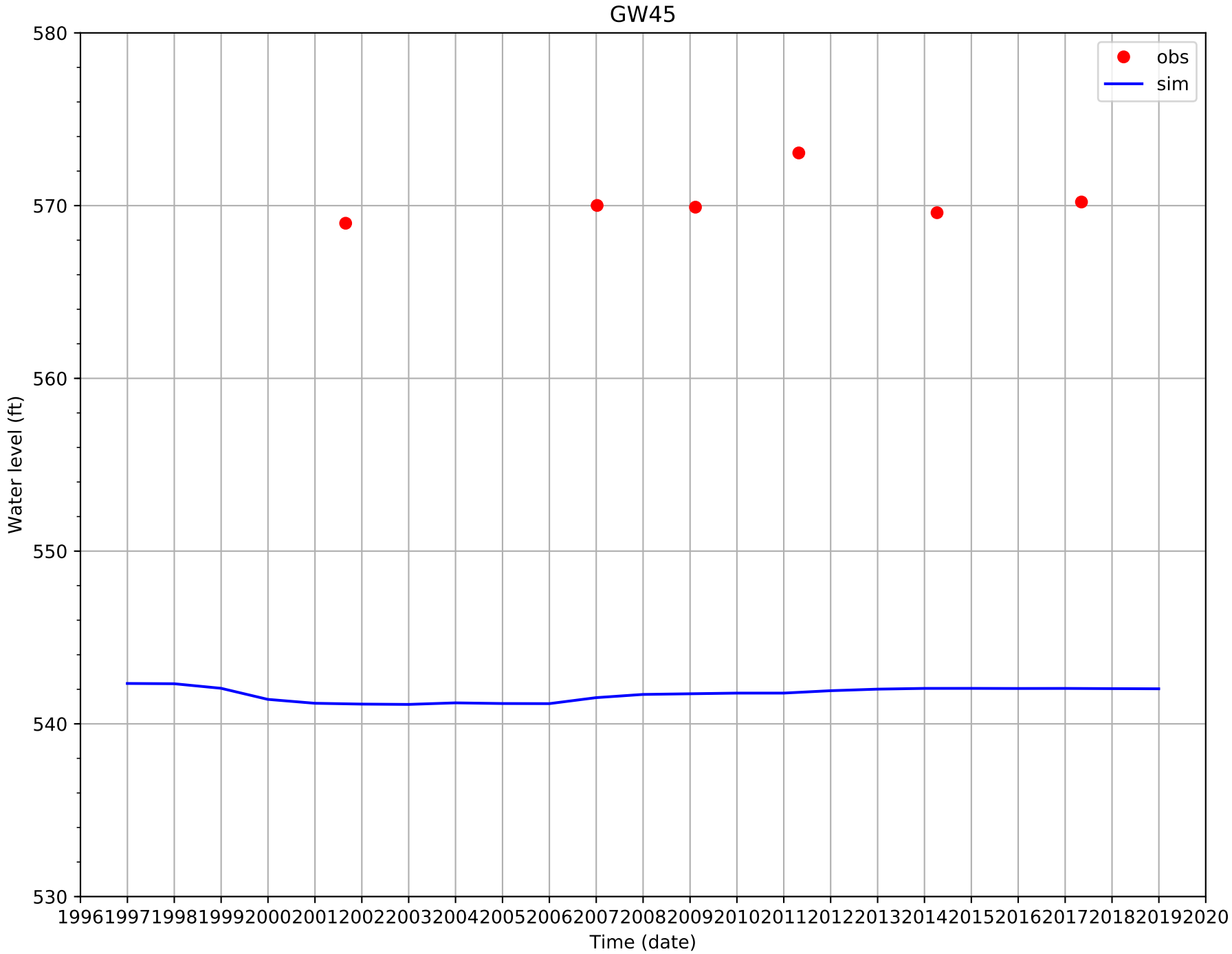
2019
2020
Time (date)


GW45
obs
sim
580
570
560
550
540
530
Water level (ft)
1996
1997
1998
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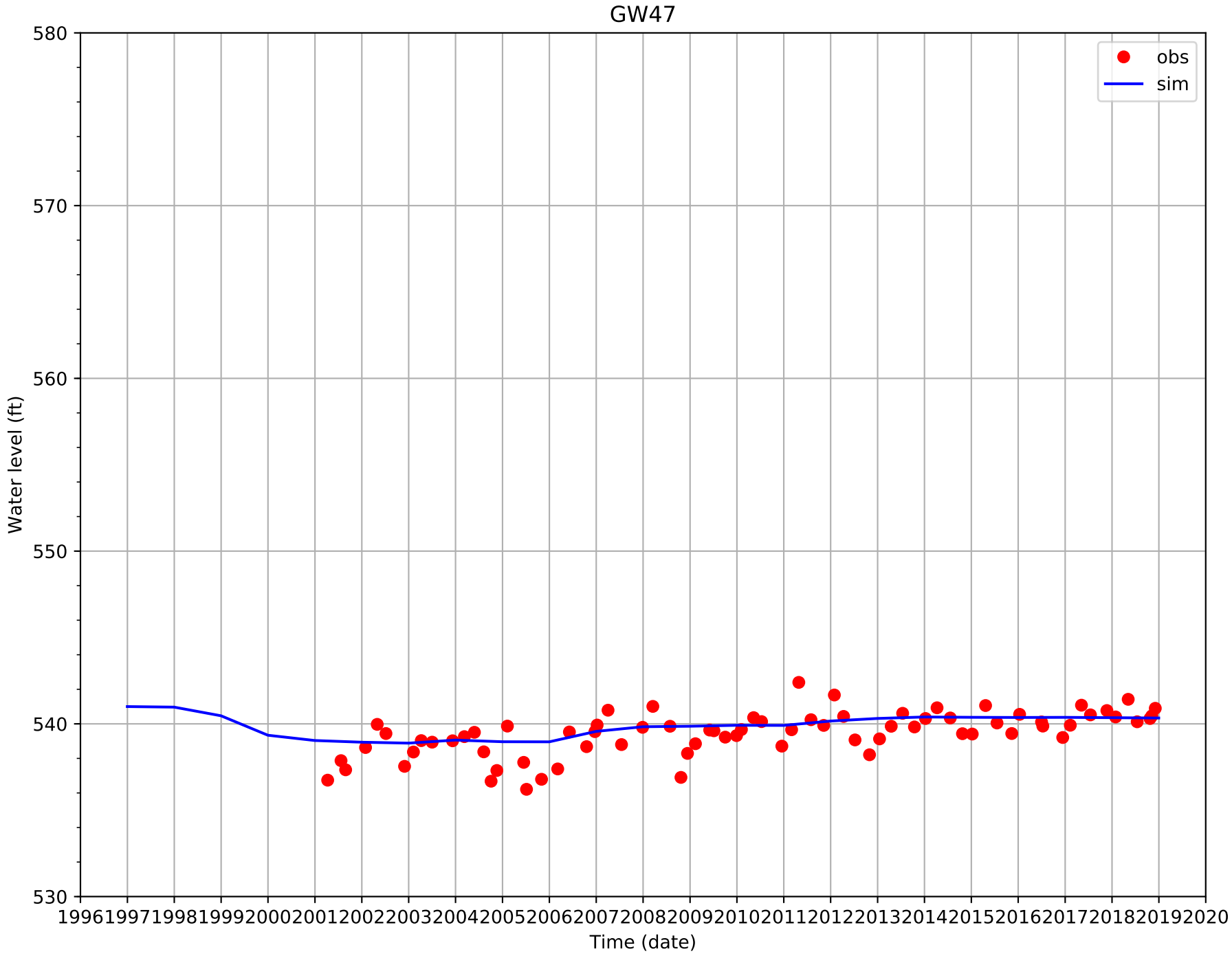
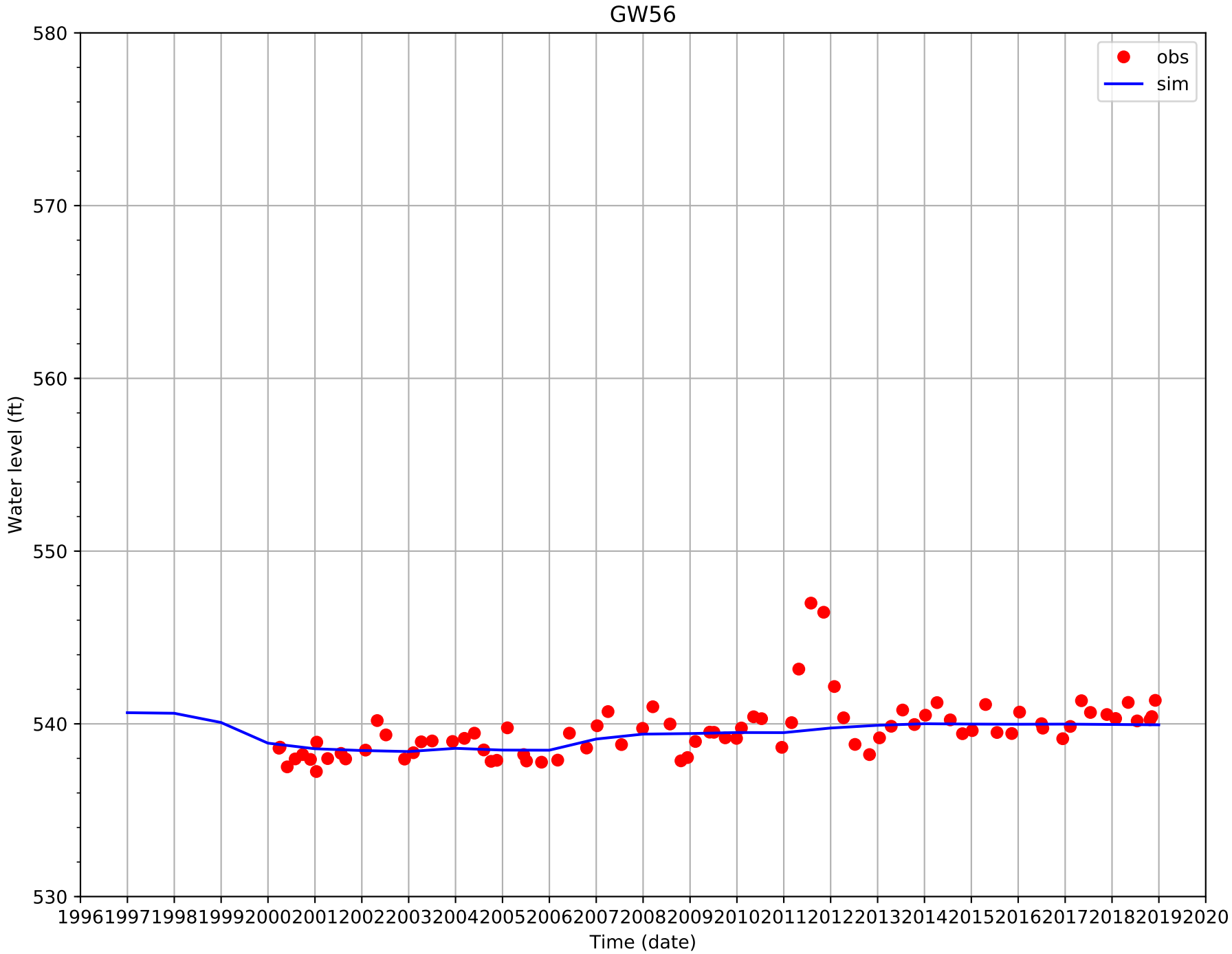
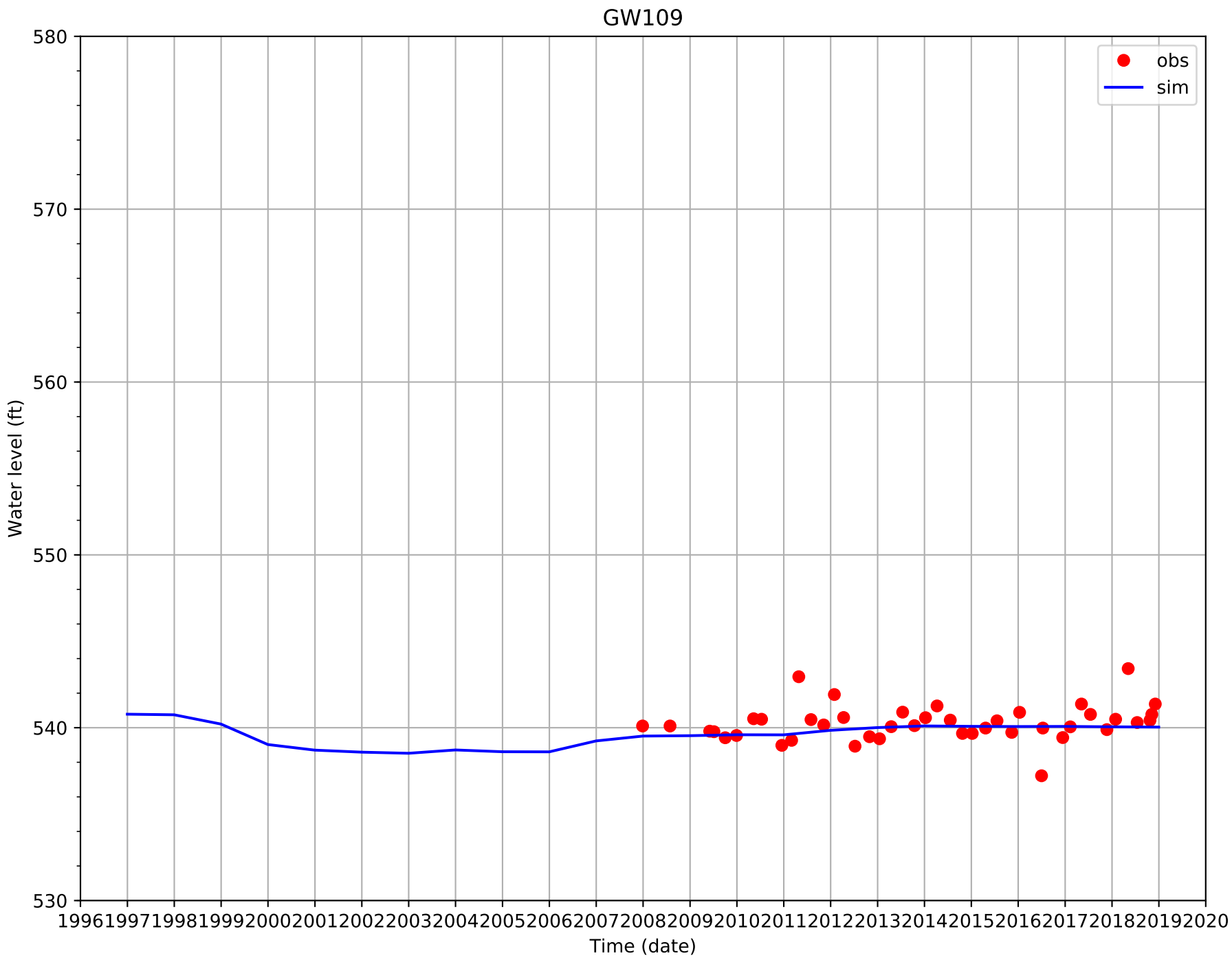
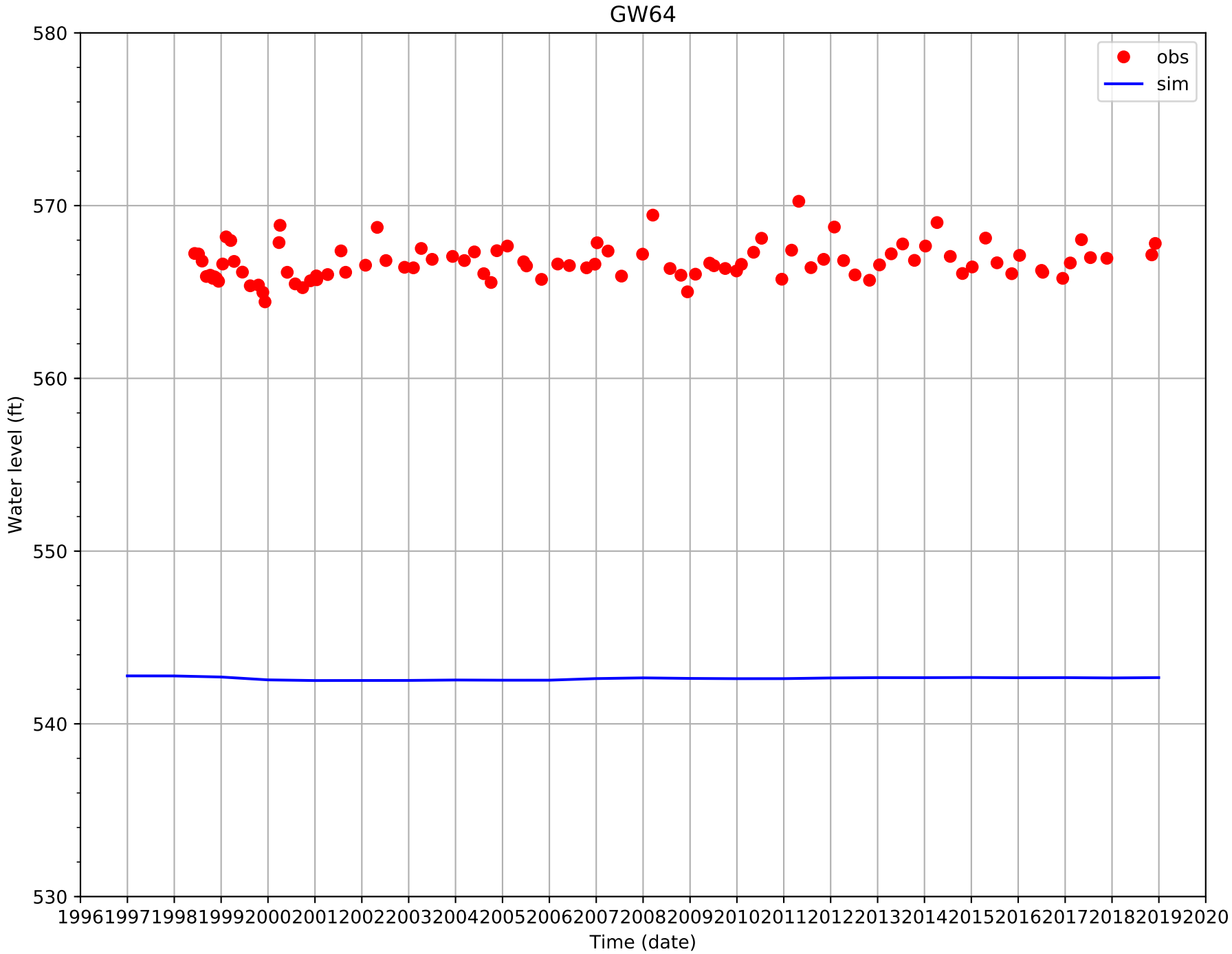
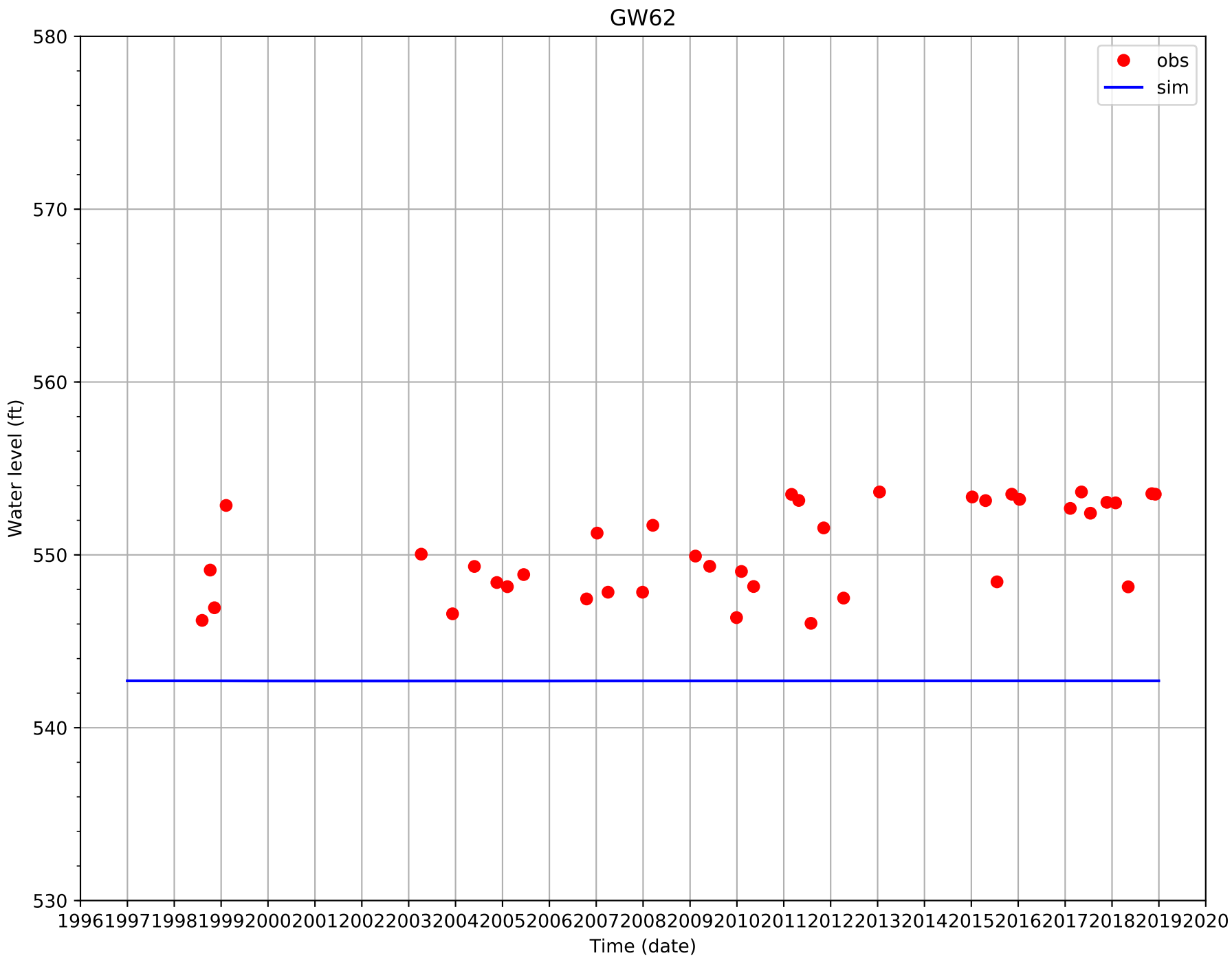
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Time (date)


GW47
obs
sim
Water level (ft)
580
570
560
550
540
530
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Time (date)


GW56
obs
sim
Water level (ft)
580
570
560
550
540
530
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Time (date)


GW109
obs
sim
Water level (ft)
580
570
560
550
540
530
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Time (date)


GW64
obs
sim
Water level (ft)
580
570
560
550
540
530
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Time (date)


GW62
obs
sim
Water level (ft)
580
570
560
550
540
530
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Time (date)

Attachment B

Trend Graphs

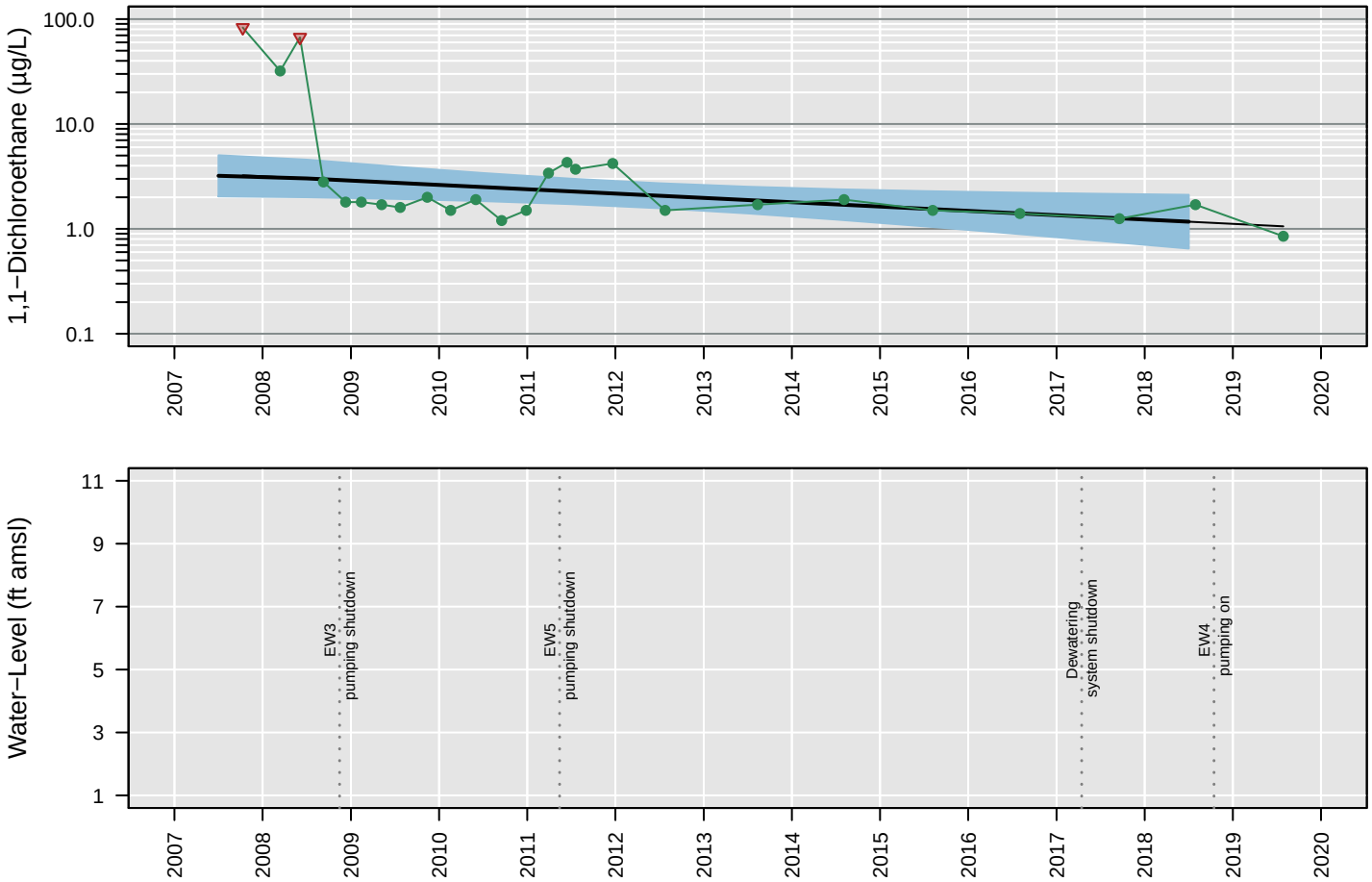
Trend Calculations (All Data) - Upper Aquifer

GW108

1,1−Dichloroethane

Number of Comparisons: 25
Percent NDs: 8%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

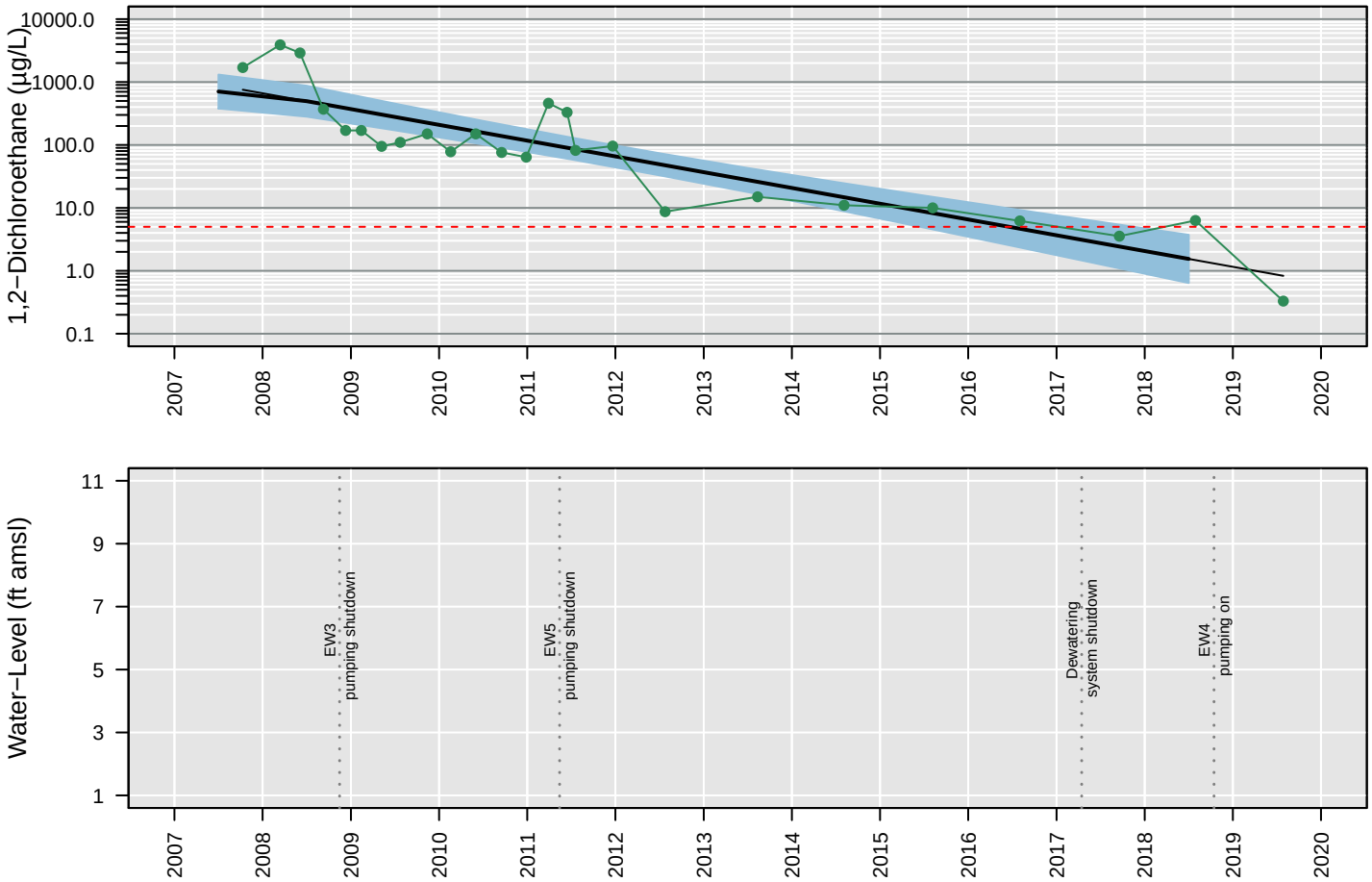
ln Conc. = −0.00026 (+/− 0.00011)*Date + 4.8 (+/− 1.7)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.2 µg/L
UCL: 2.1 µg/L
LCL: 0.65 µg/L

GW108

1,2−Dichloroethane

Number of Comparisons: 25
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.0016 (+/− 0.00016)*Date + 28 (+/− 2.4)

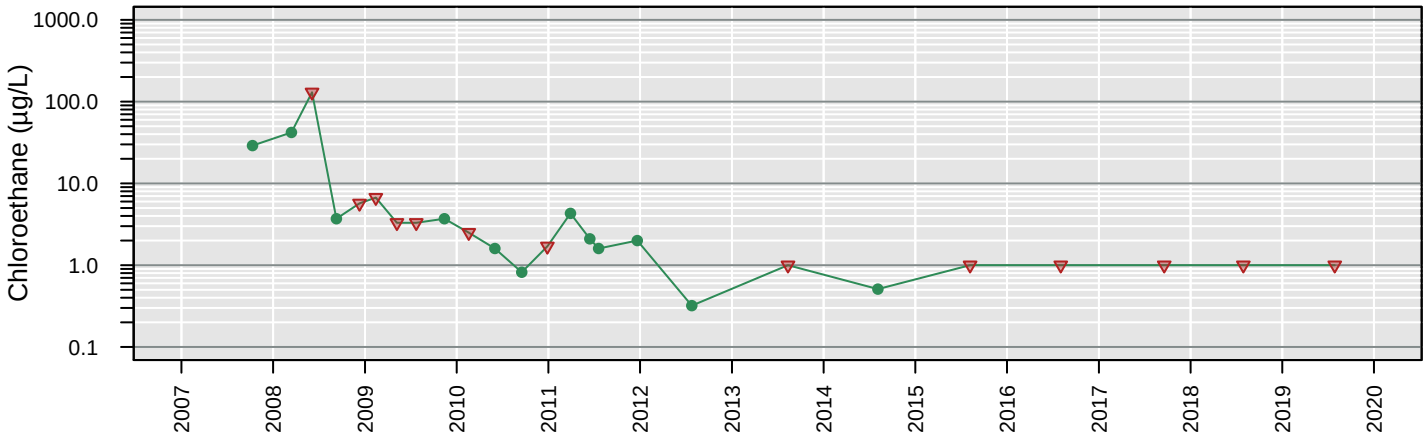
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.5 µg/L
UCL: 3.7 µg/L
LCL: 0.64 µg/L

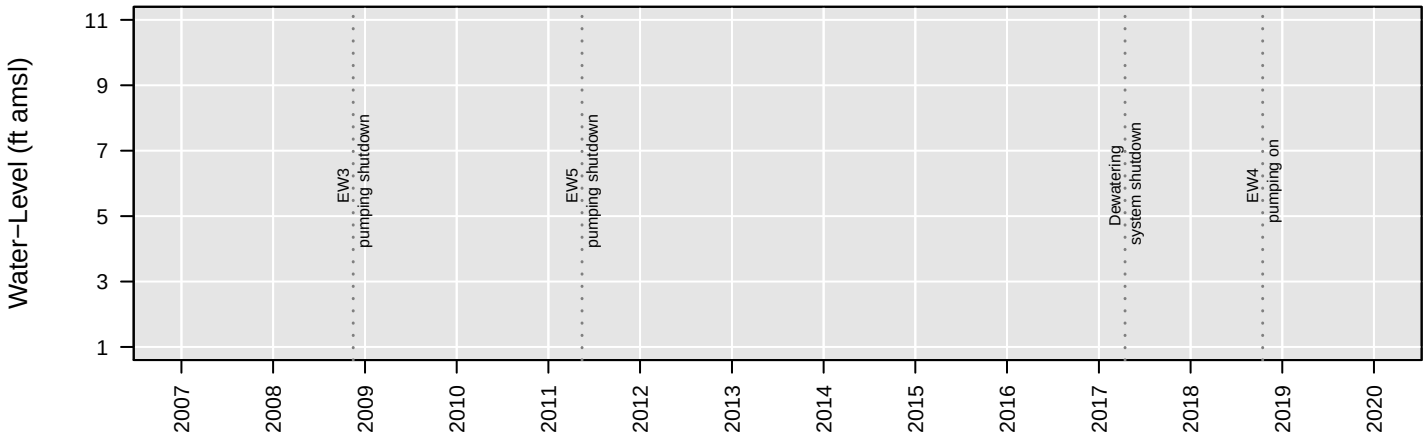
GW108

Chloroethane

Number of Comparisons: 25
Percent NDs: 52%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





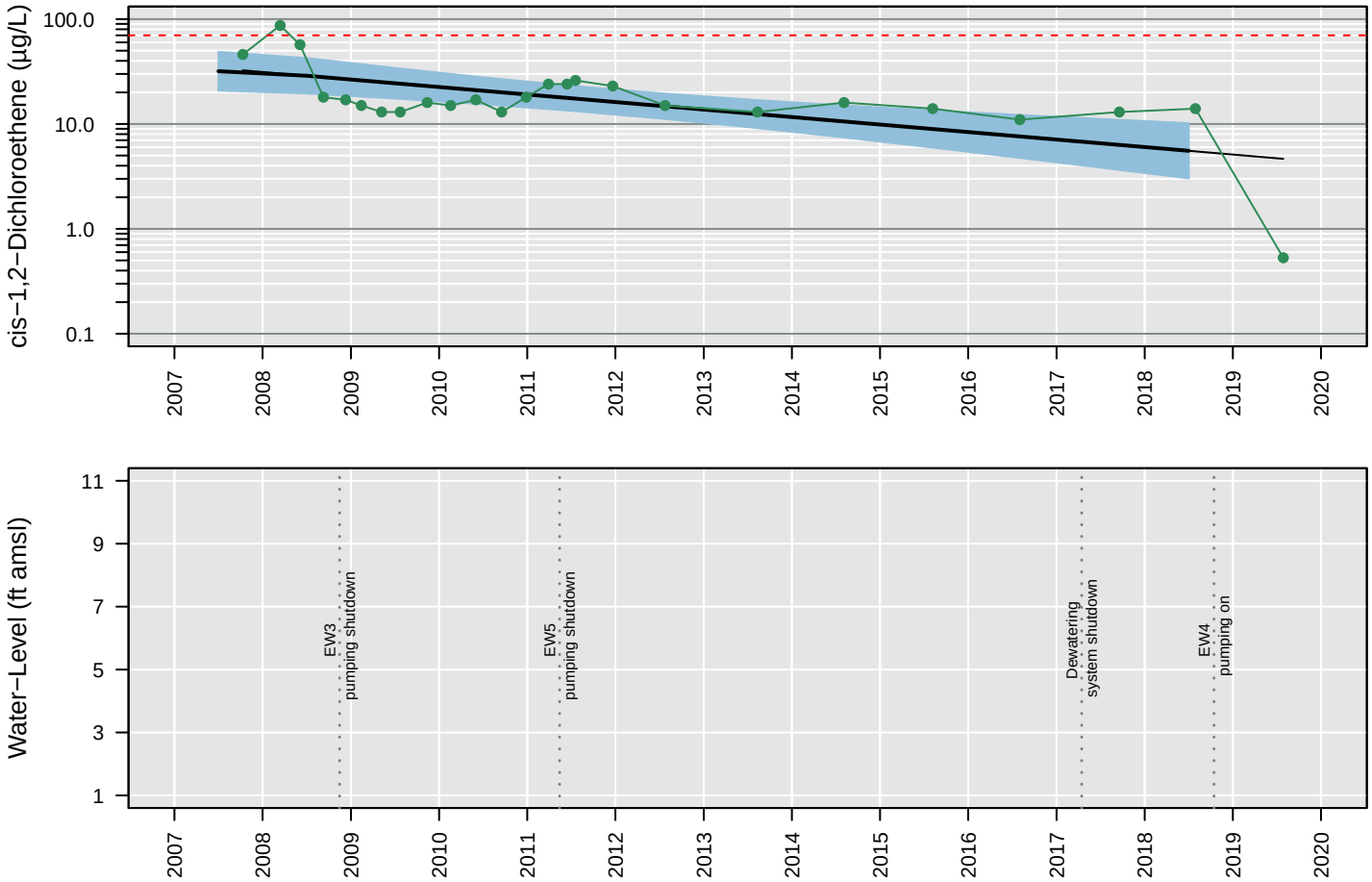
No Analysis Performed

GW108

cis−1,2−Dichloroethene

Number of Comparisons: 25
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

ln Conc. = −0.00045 (+/− 0.00011)*Date + 9.7 (+/− 1.7)

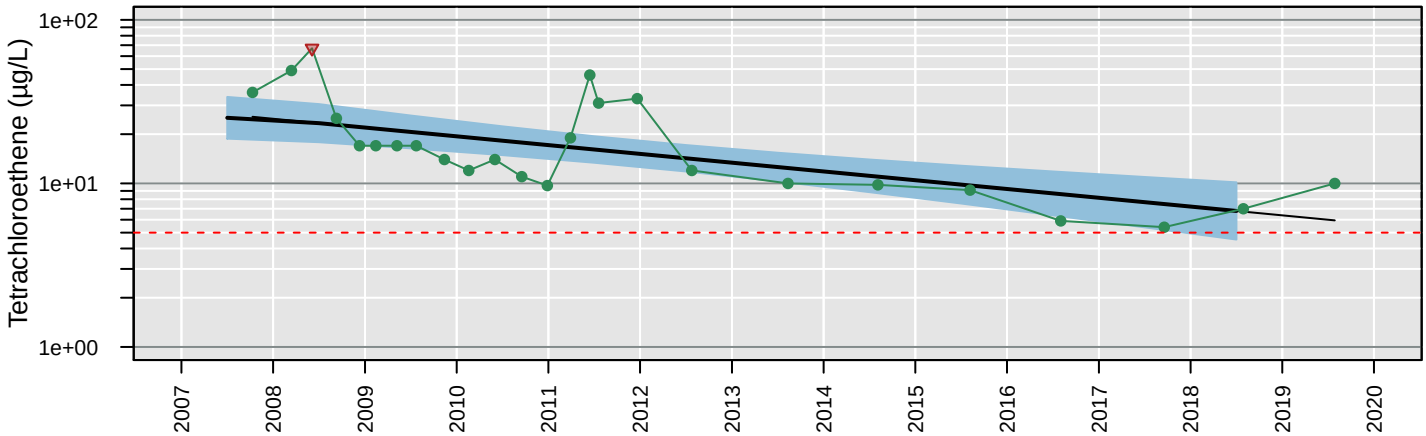
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.5 µg/L
UCL: 10 µg/L
LCL: 3 µg/L

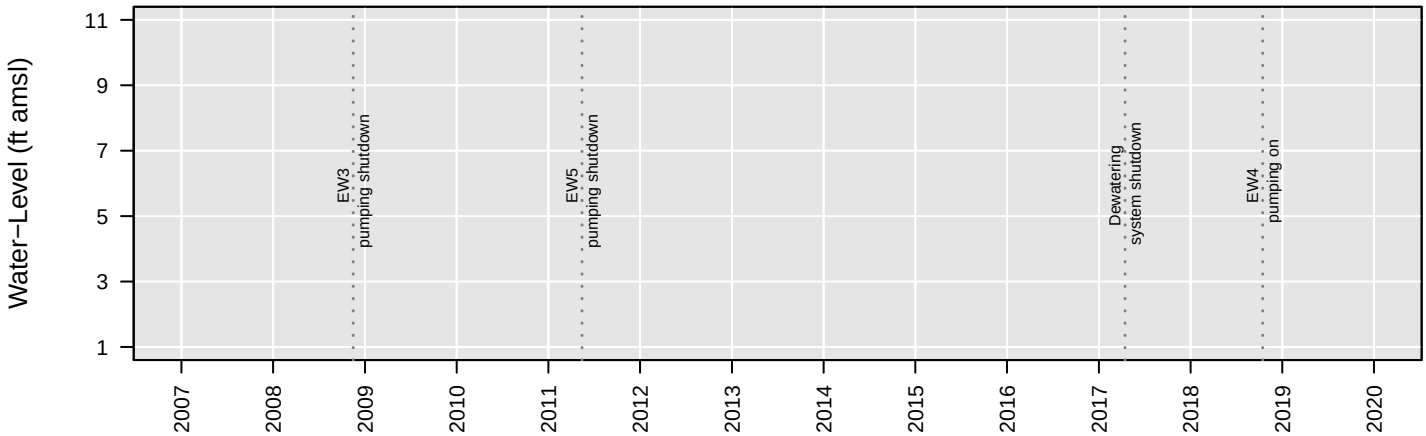
GW108

Tetrachloroethene

Number of Comparisons: 25
Percent NDs: 4%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00034 (+/− 0.000073)*Date + 7.9 (+/− 1.1)

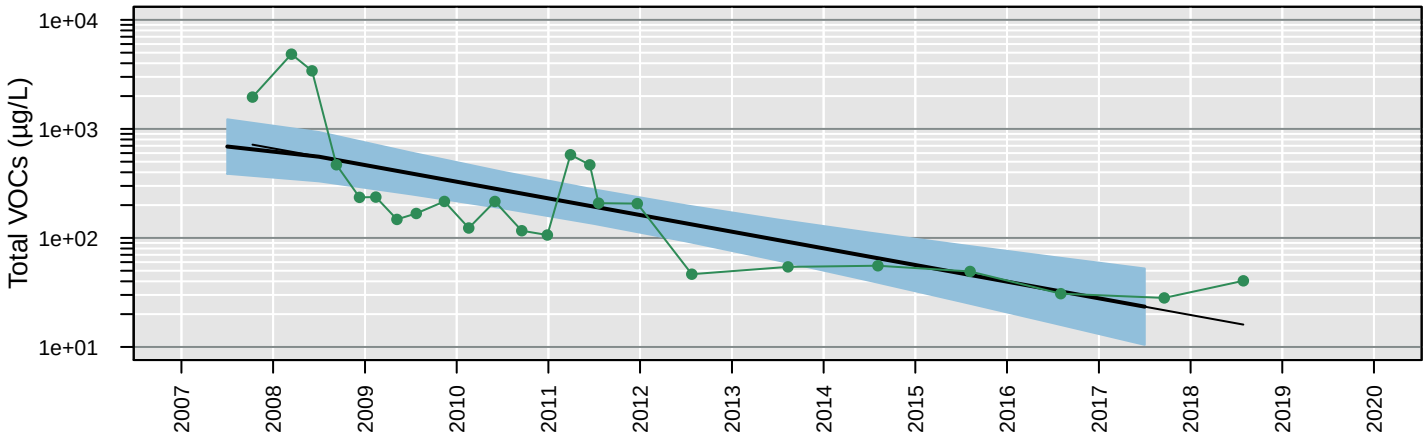
Regression Statistics for January 2018 to January 2019
Geometric Mean: 6.8 µg/L
UCL: 10 µg/L
LCL: 4.5 µg/L

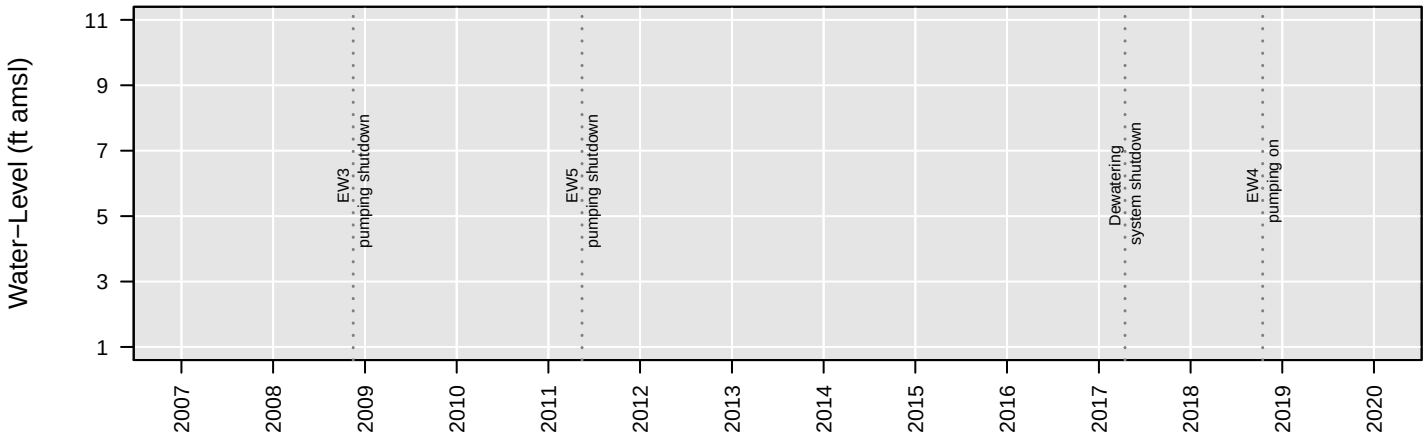
GW108

Total VOCs

Number of Comparisons: 24
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

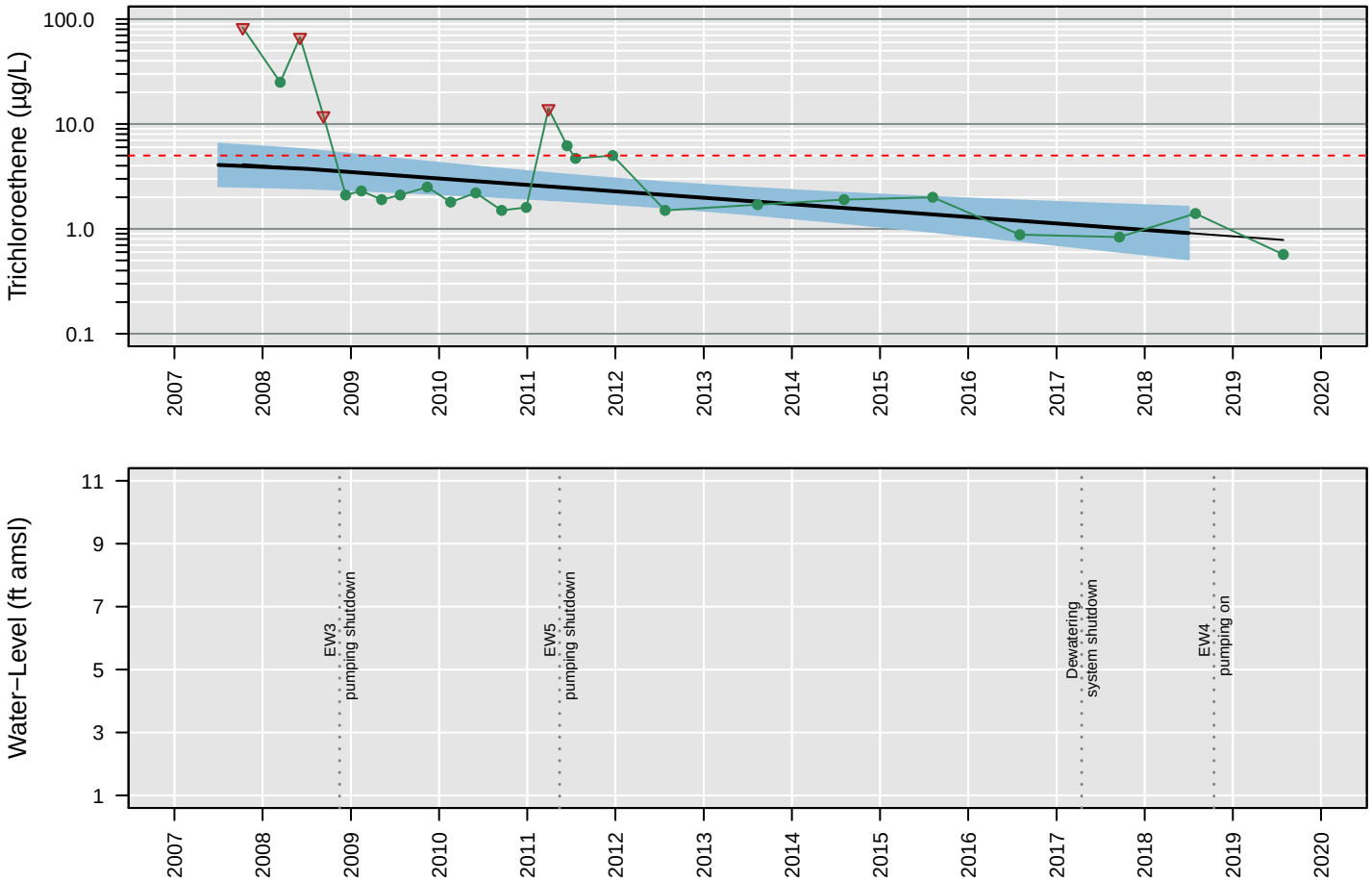
ln Conc. = −0.00096 (+/− 0.00016)*Date + 20 (+/− 2.4)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 23 µg/L
UCL: 52 µg/L
LCL: 10 µg/L

GW108

Trichloroethene

Number of Comparisons: 25
Percent NDs: 16%



Censored Regression (Tobit) Model

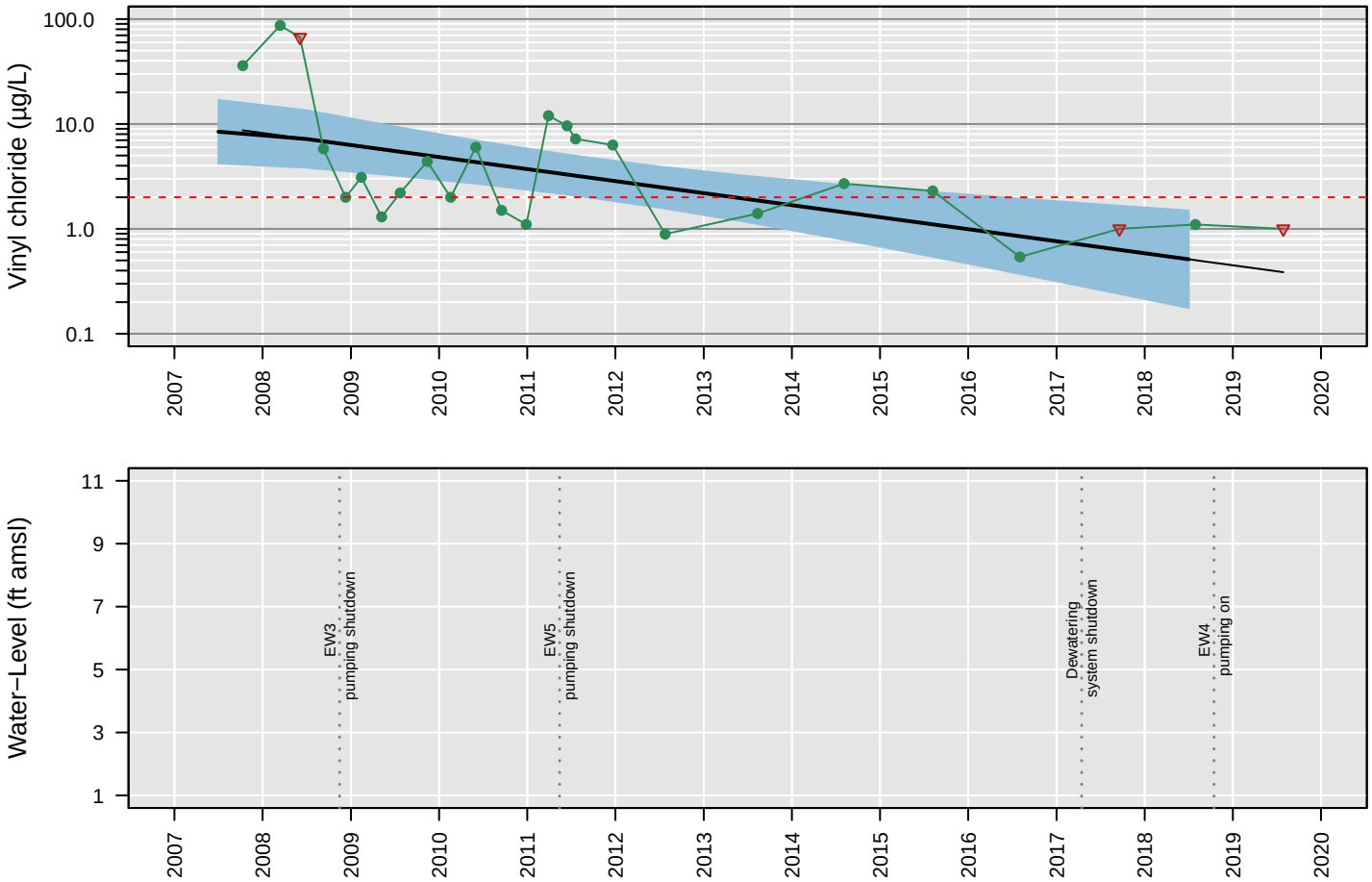
ln Conc. = −0.00039 (+/− 0.00011)*Date + 6.7 (+/− 1.7)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.91 µg/L
UCL: 1.6 µg/L
LCL: 0.51 µg/L

GW108

Vinyl chloride

Number of Comparisons: 25
Percent NDs: 12%



Censored Regression (Tobit) Model

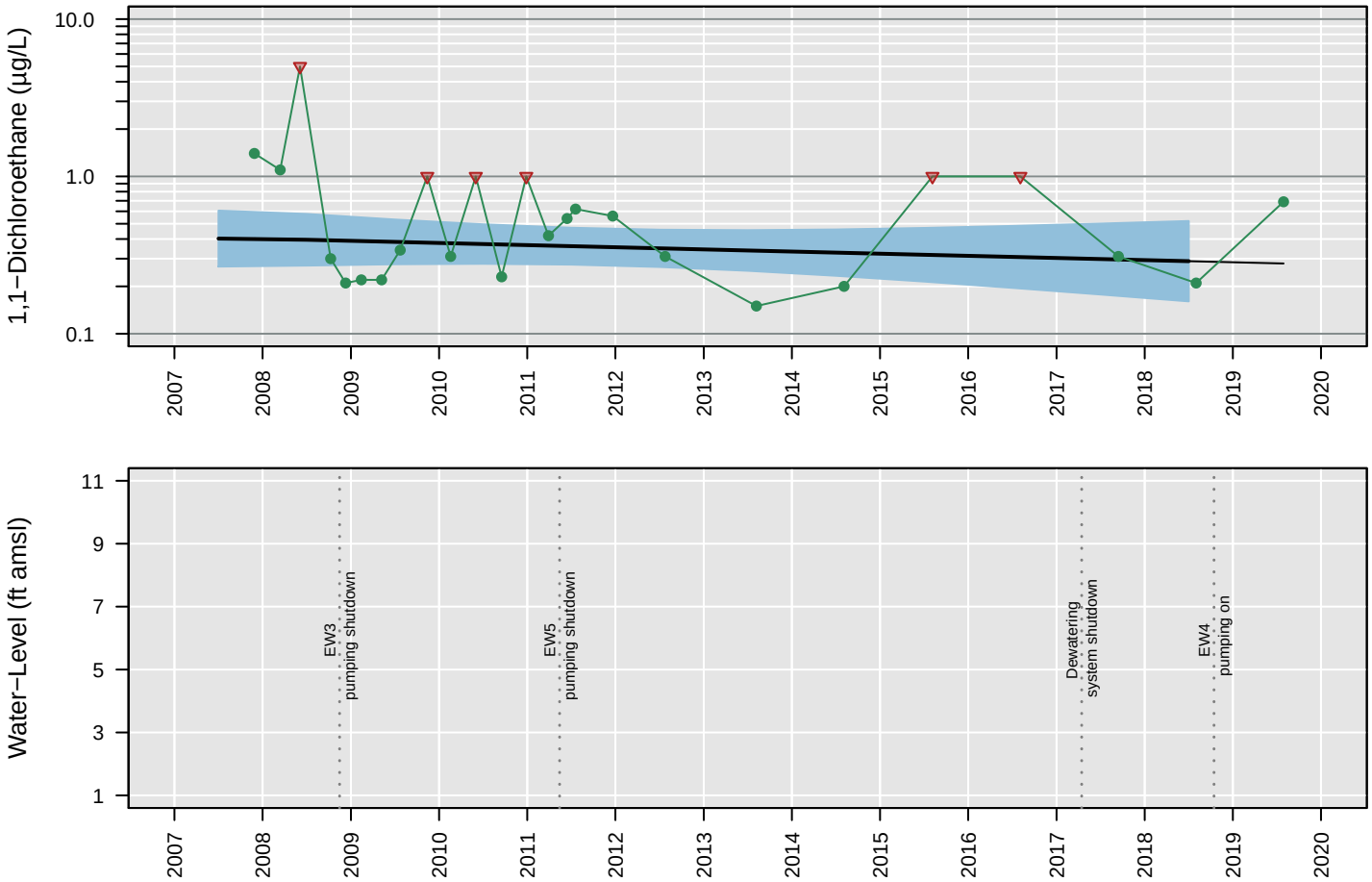
ln Conc. = −0.00072 (+/− 0.00019)*Date + 12 (+/− 2.9)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.51 µg/L
UCL: 1.5 µg/L
LCL: 0.18 µg/L

GW109

1,1−Dichloroethane

Number of Comparisons: 25
Percent NDs: 24%



Censored Regression (Tobit) Model

Trend Not Significant

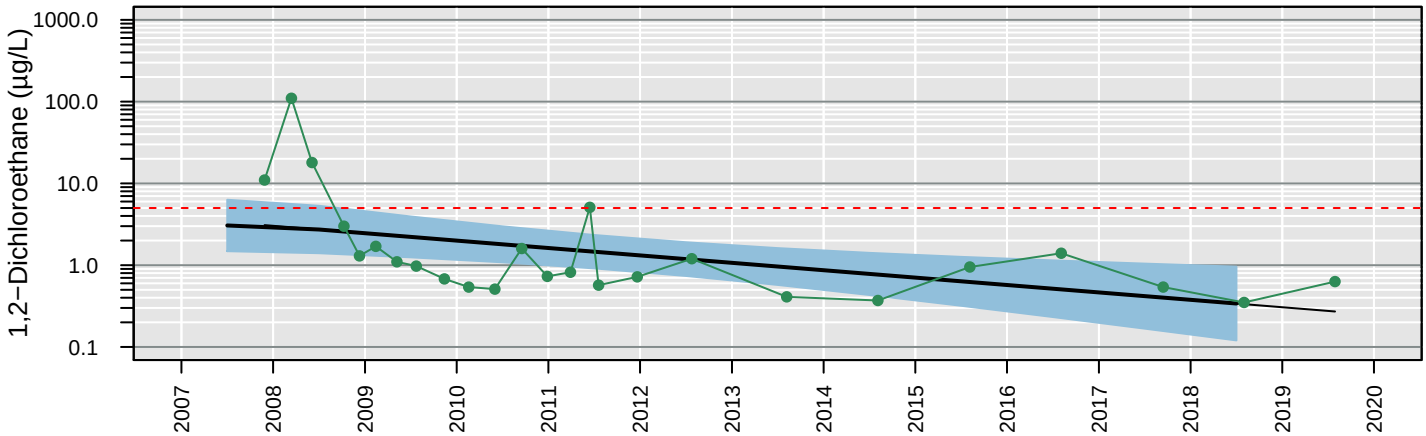
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.29 µg/L
UCL: 0.52 µg/L
LCL: 0.16 µg/L

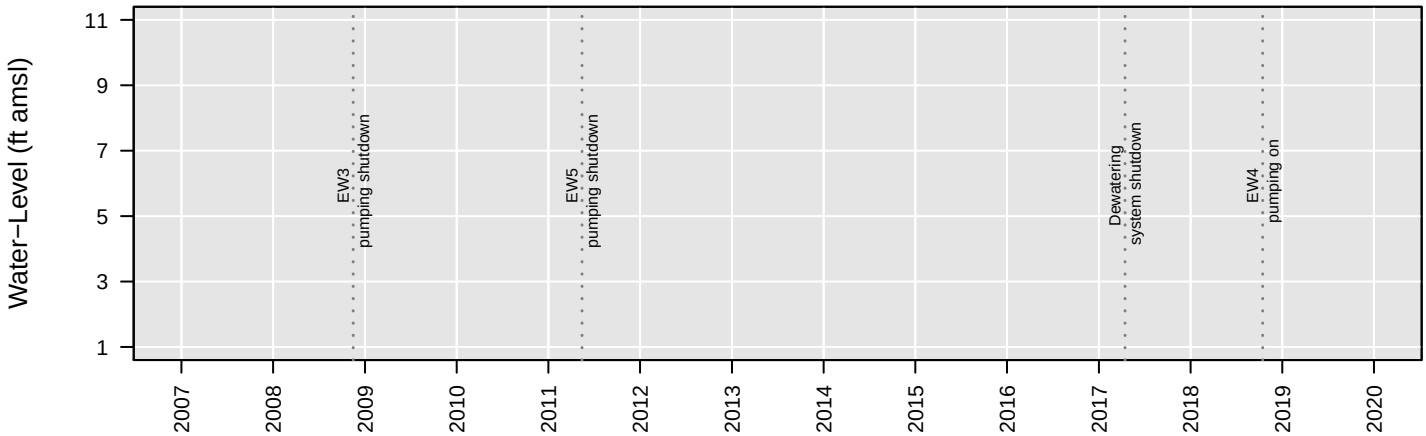
GW109

1,2−Dichloroethane

Number of Comparisons: 25
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00057 (+/− 0.00019)*Date + 9 (+/− 2.8)

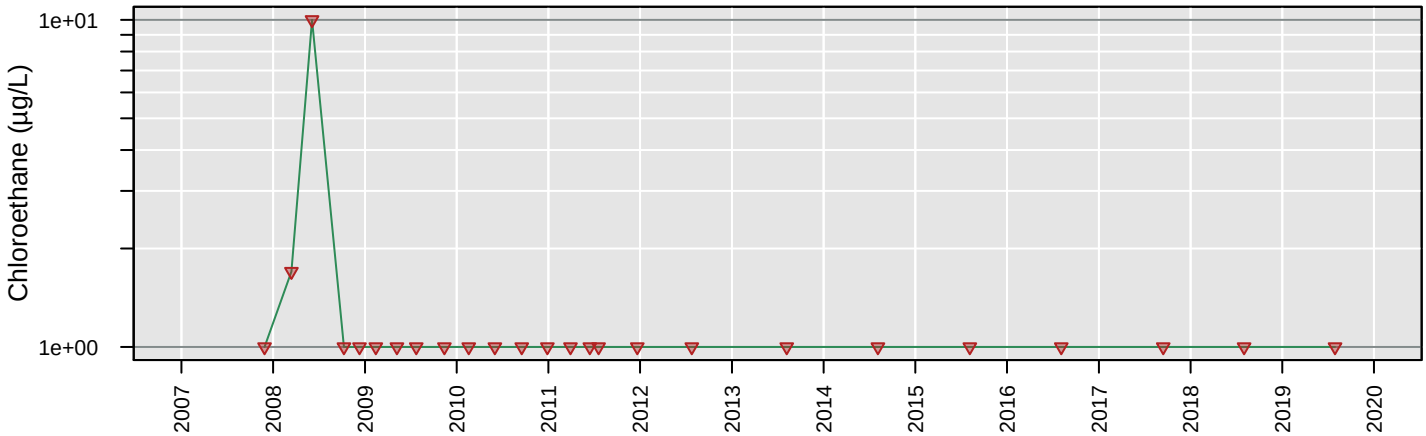
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.34 µg/L
UCL: 0.96 µg/L
LCL: 0.12 µg/L

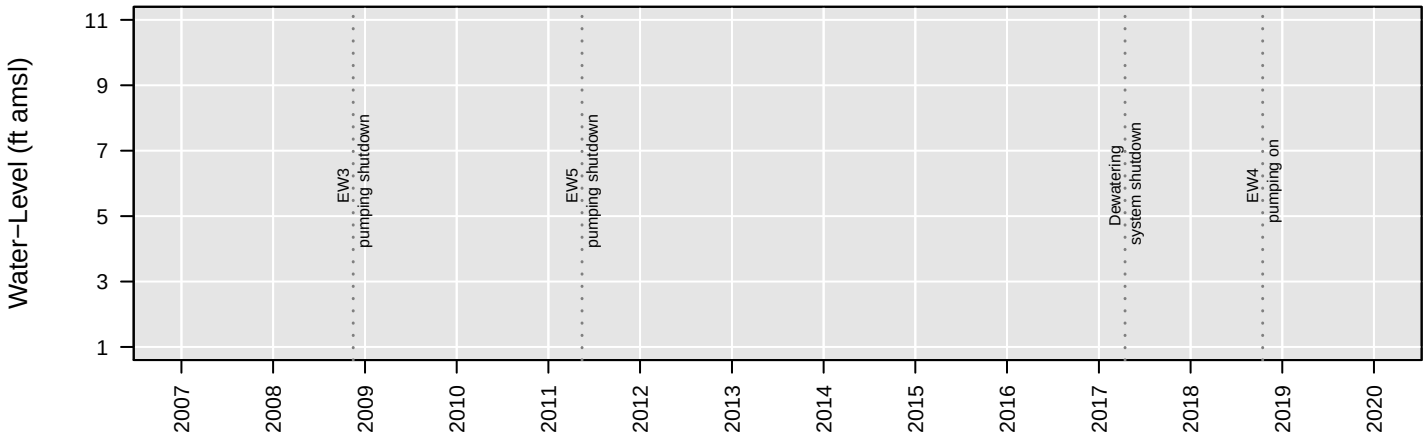
GW109

Chloroethane

Number of Comparisons: 25
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





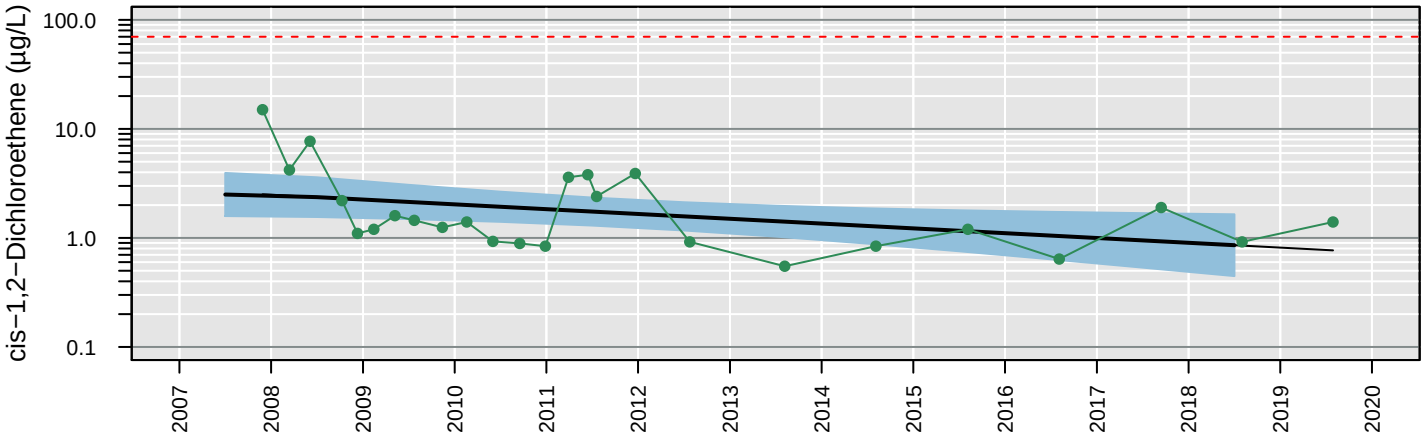
No Analysis Performed

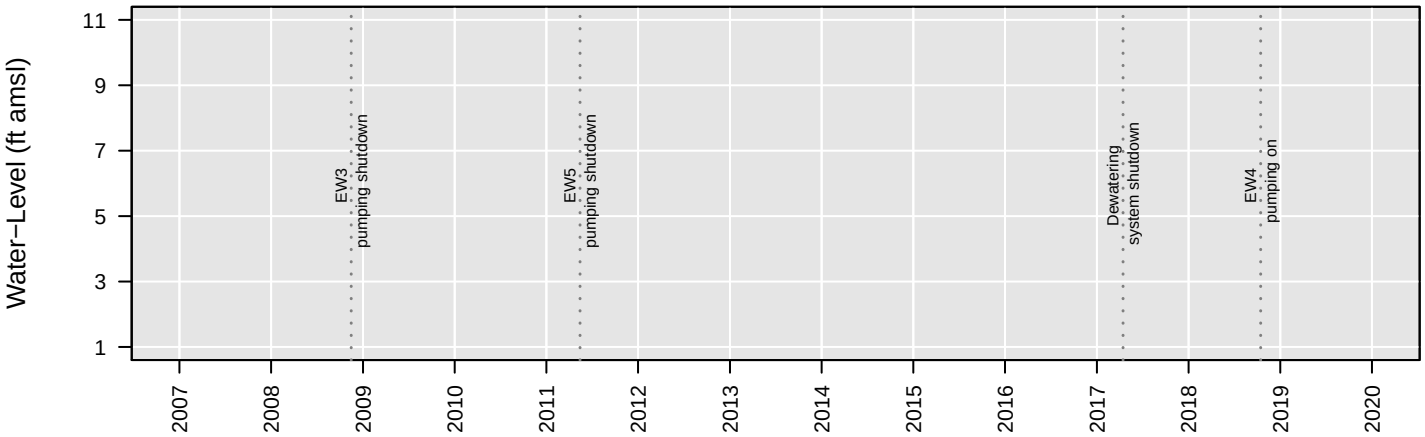
GW109

cis−1,2−Dichloroethene

Number of Comparisons: 25
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00028 (+/− 0.00012)*Date + 4.8 (+/− 1.8)

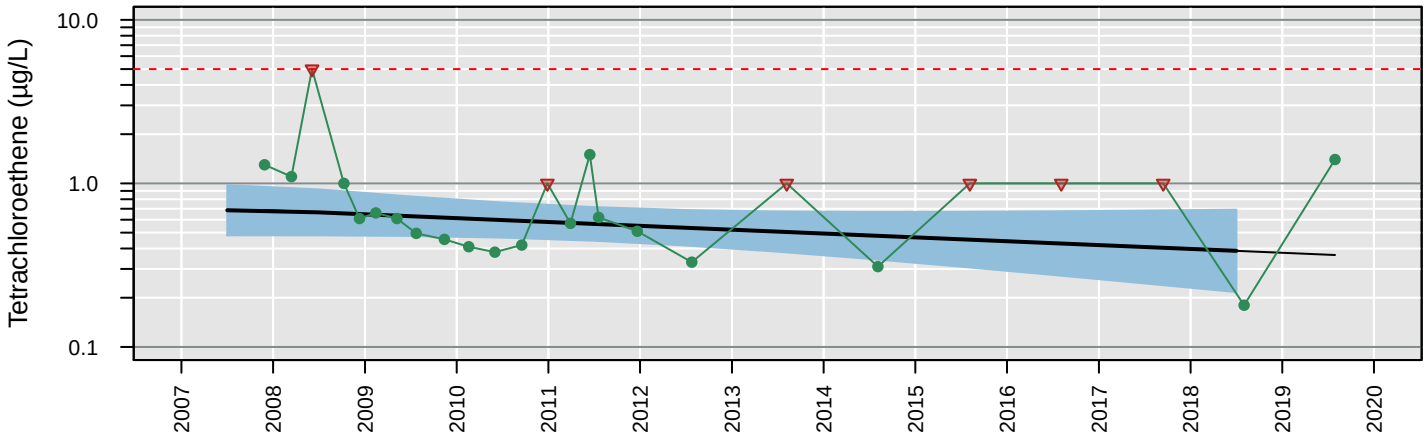
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.86 µg/L
UCL: 1.6 µg/L
LCL: 0.45 µg/L

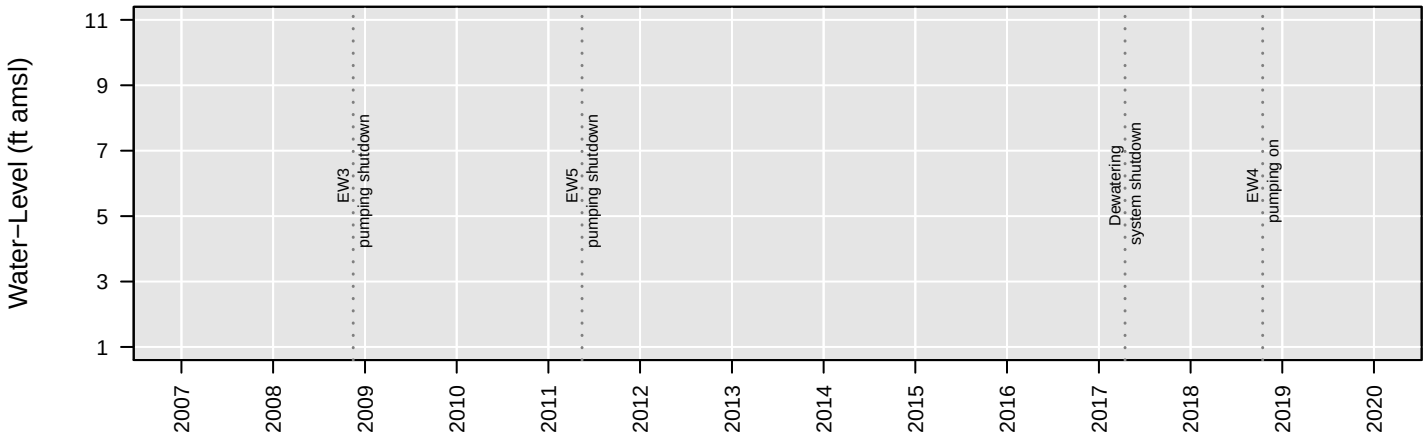
GW109

Tetrachloroethene

Number of Comparisons: 25
Percent NDs: 24%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

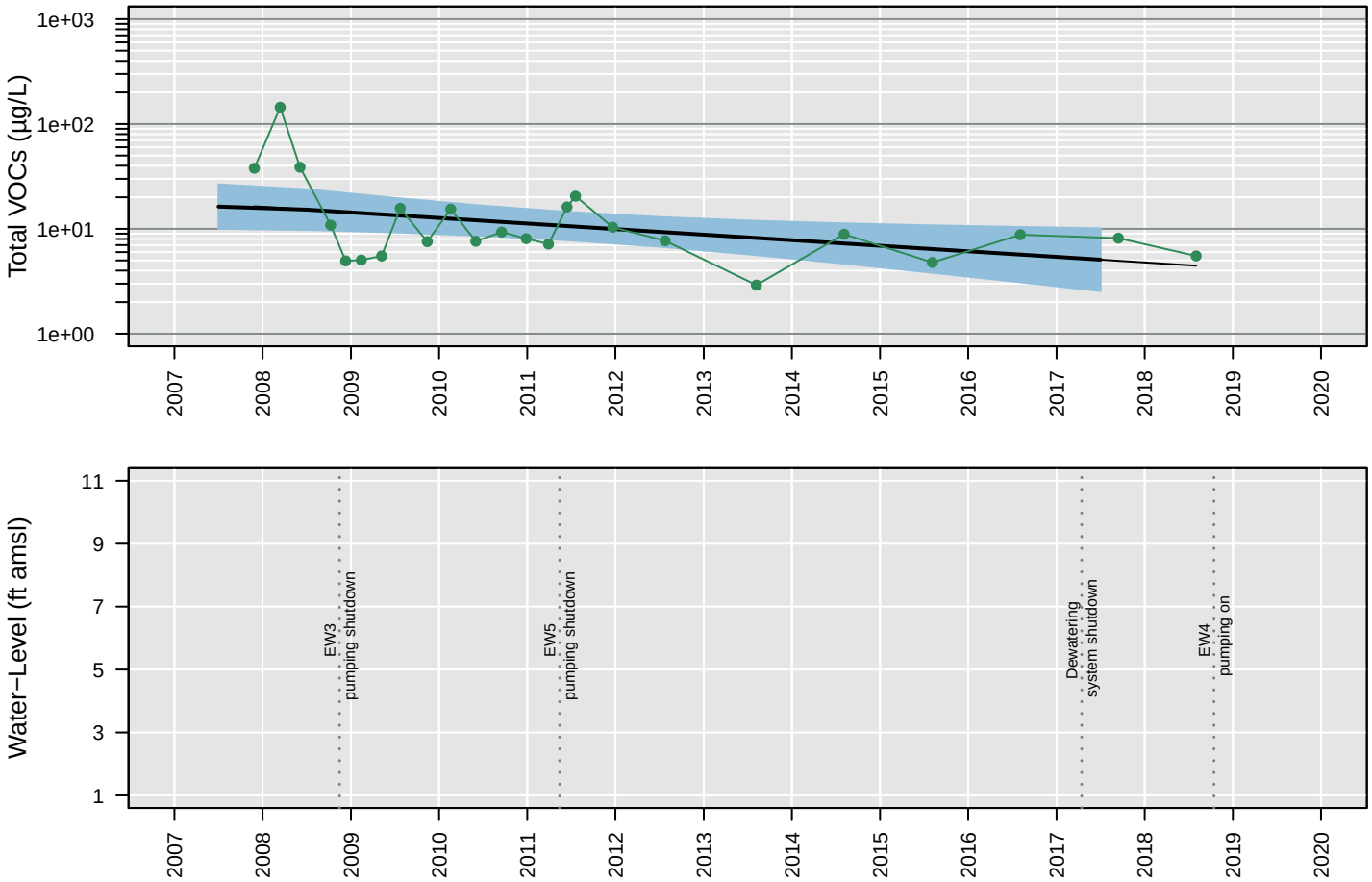
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.39 µg/L
UCL: 0.69 µg/L
LCL: 0.22 µg/L

GW109

Total VOCs

Number of Comparisons: 24
Percent NDs: 0%



Censored Regression (Tobit) Model

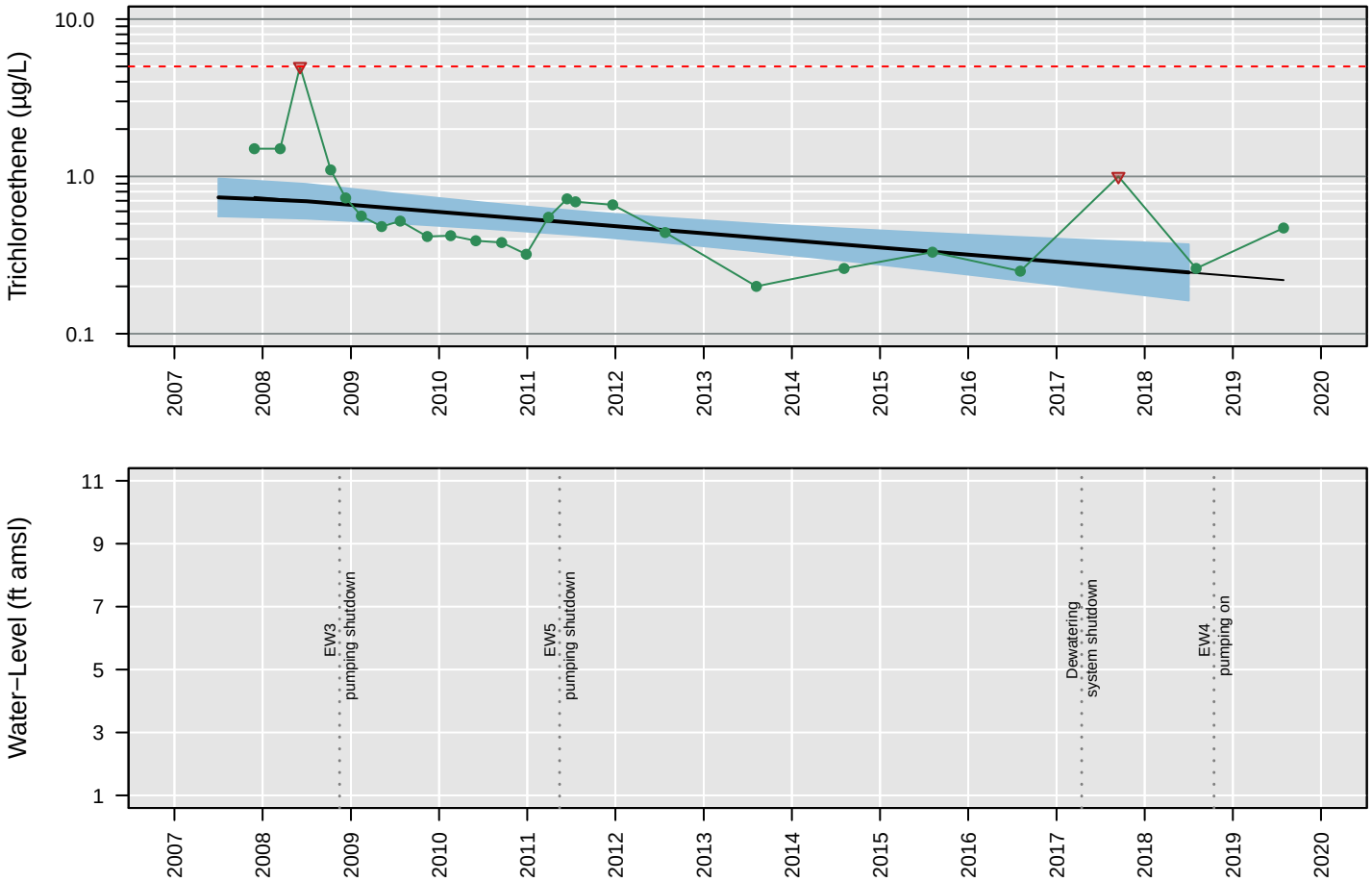
ln Conc. = −0.00033 (+/− 0.00014)*Date + 7.4 (+/− 2.1)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 5.1 µg/L
UCL: 10 µg/L
LCL: 2.6 µg/L

GW109

Trichloroethene

Number of Comparisons: 25
Percent NDs: 8%



Censored Regression (Tobit) Model

ln Conc. = −0.00029 (+/− 0.000073)*Date + 3.6 (+/− 1.1)

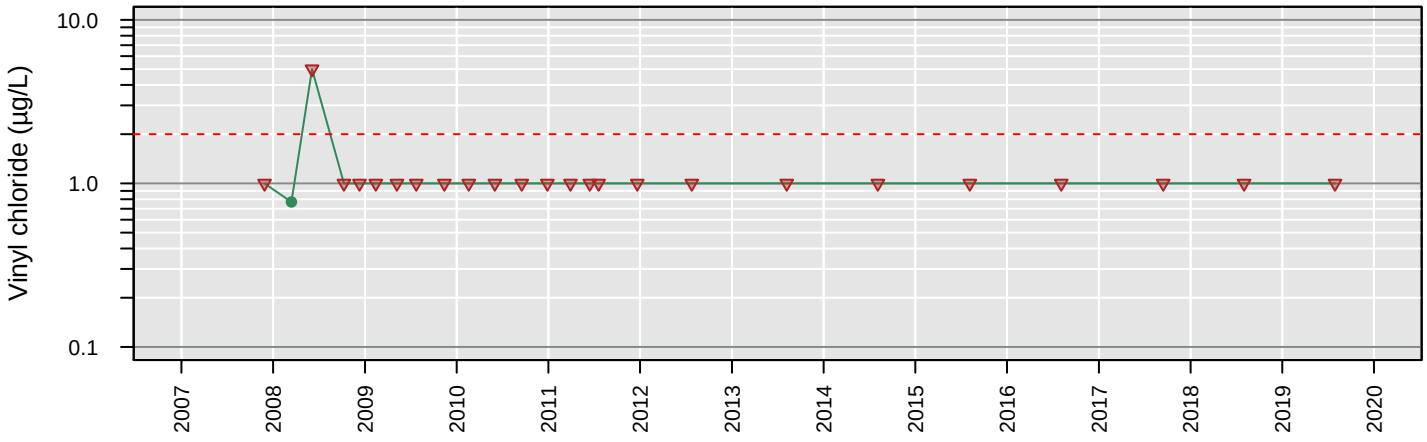
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.25 µg/L
UCL: 0.37 µg/L
LCL: 0.16 µg/L

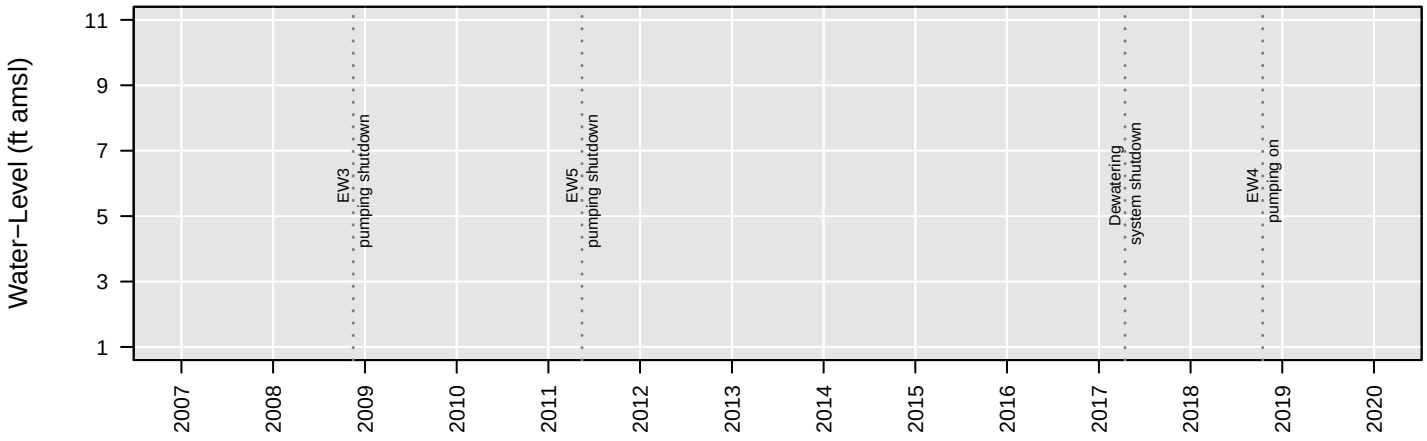
GW109

Vinyl chloride

Number of Comparisons: 25
Percent NDs: 96%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





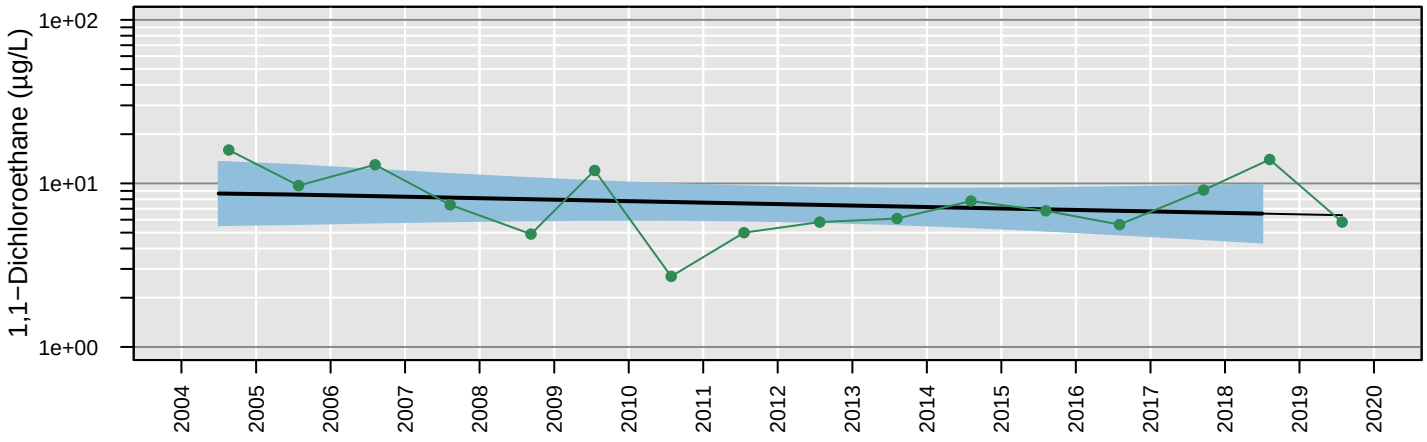
No Analysis Performed

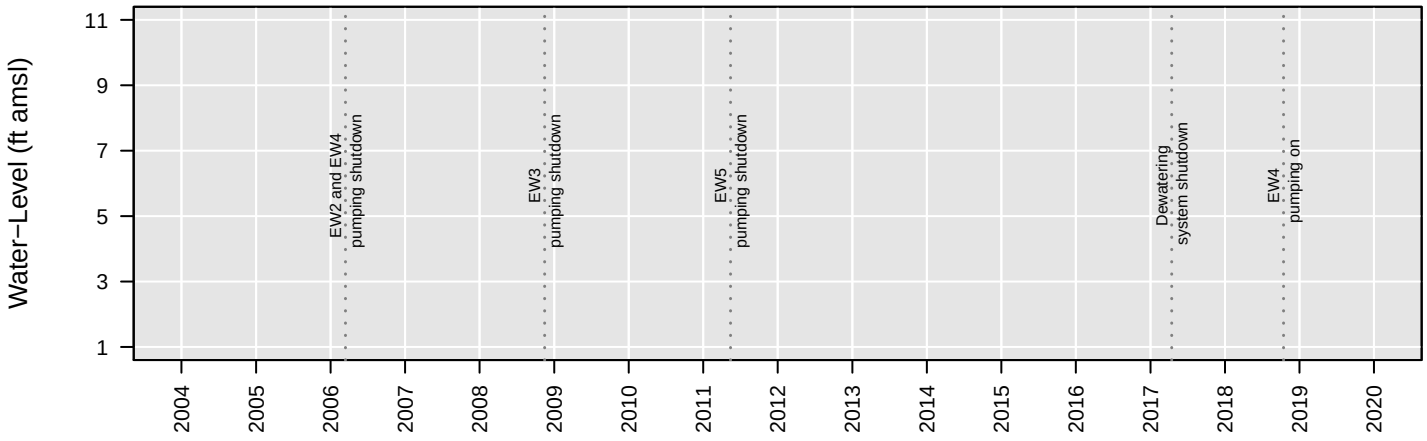
GW50

1,1−Dichloroethane

Number of Comparisons: 16
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

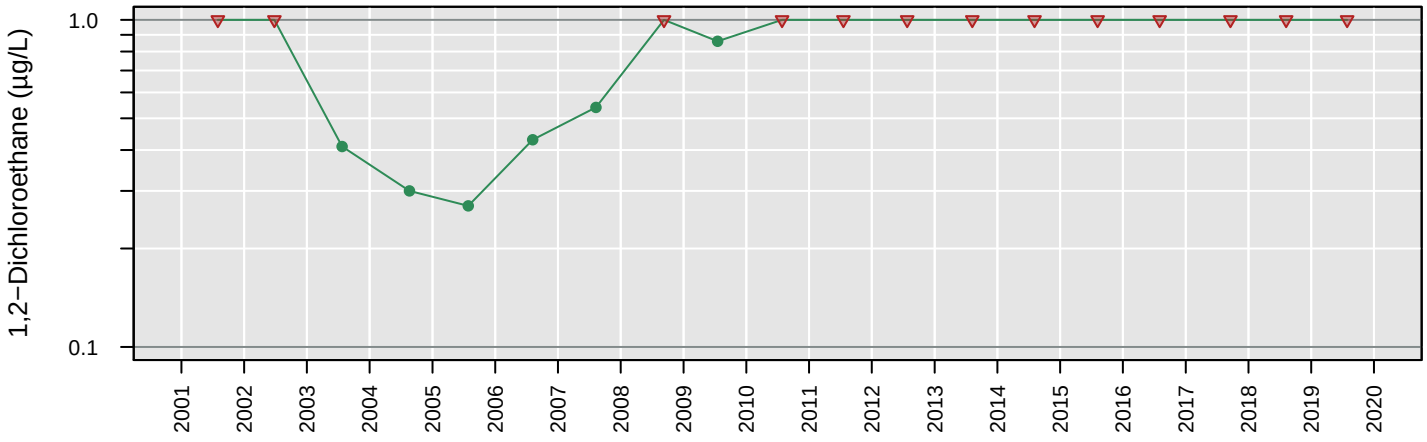
Regression Statistics for January 2018 to January 2019
Geometric Mean: 6.5 µg/L
UCL: 9.8 µg/L
LCL: 4.4 µg/L

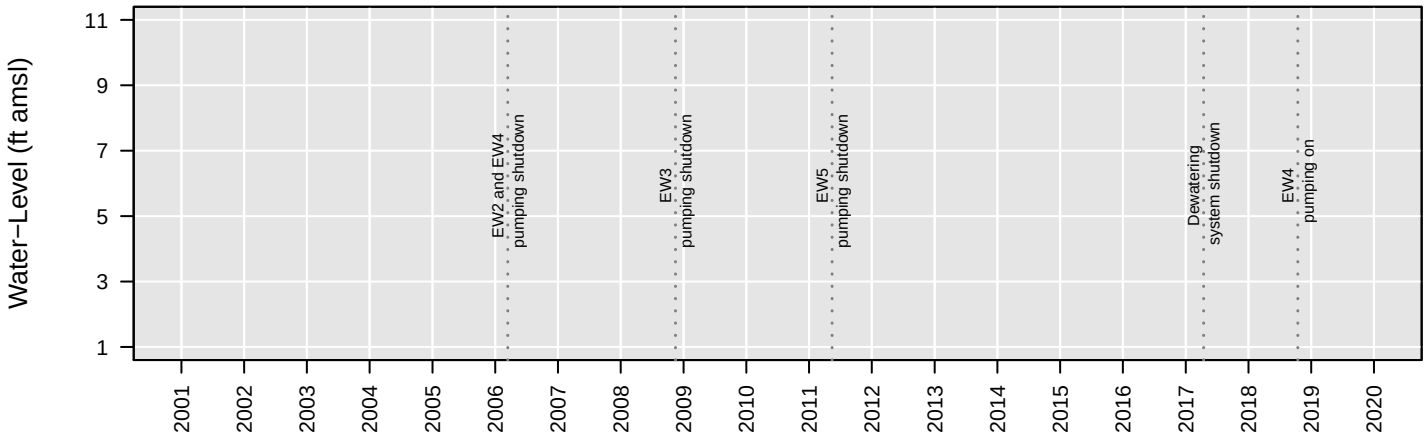
GW50

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 68%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





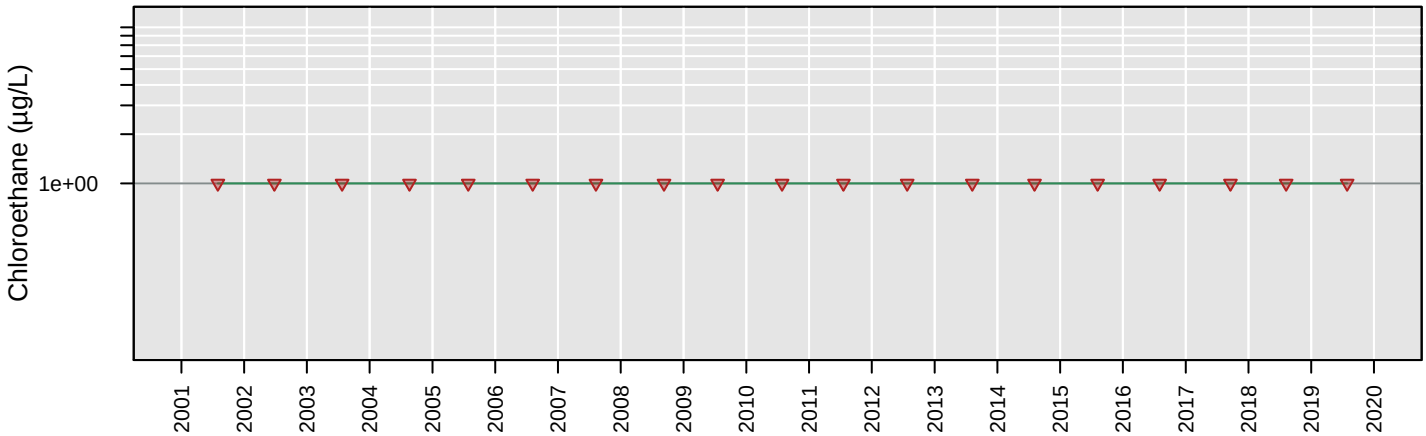
No Analysis Performed

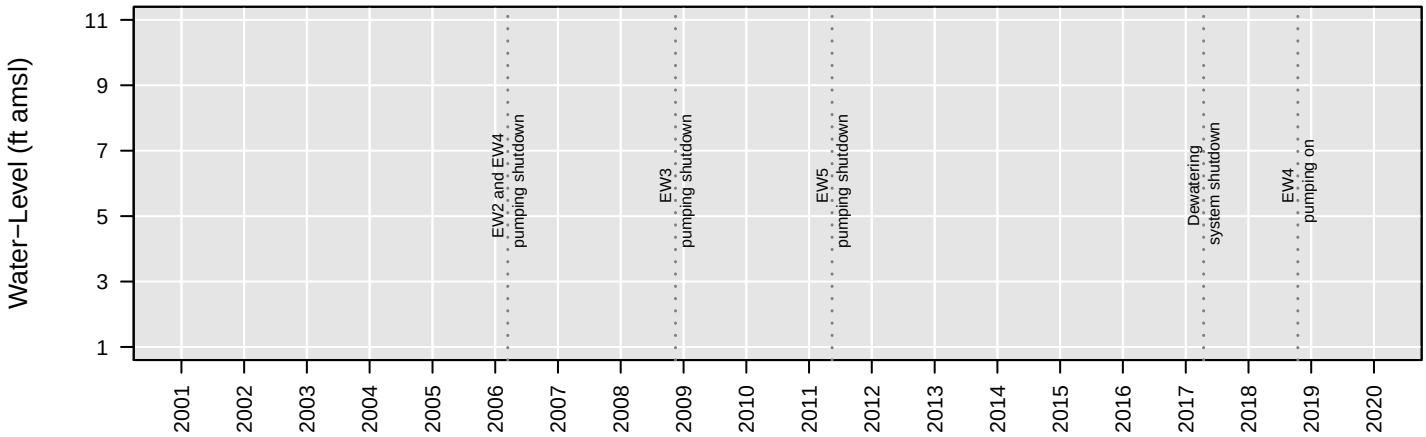
GW50

Chloroethane

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





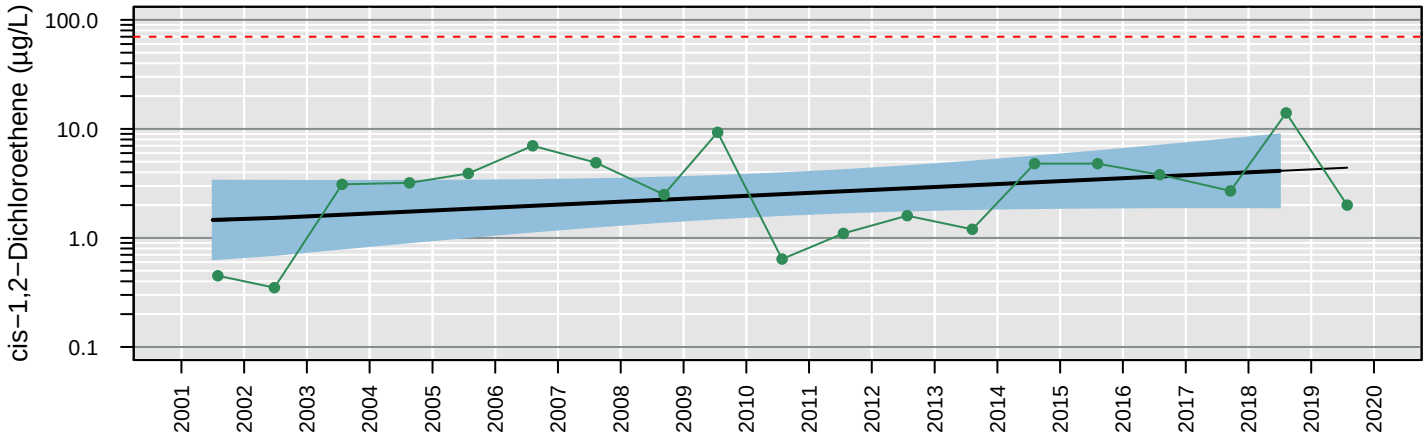
No Analysis Performed

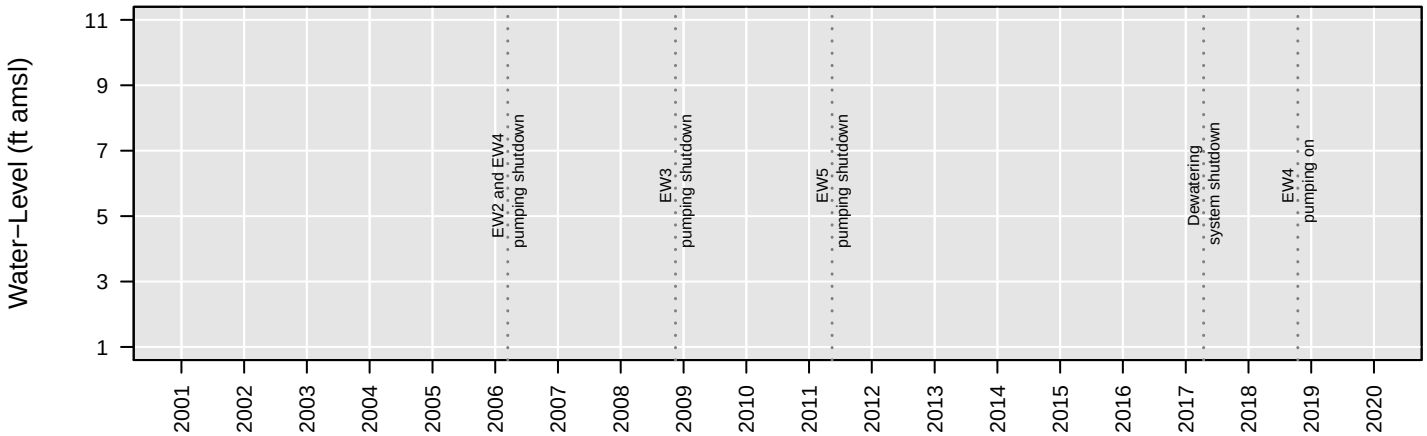
GW50

cis−1,2−Dichloroethene

Number of Comparisons: 19
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

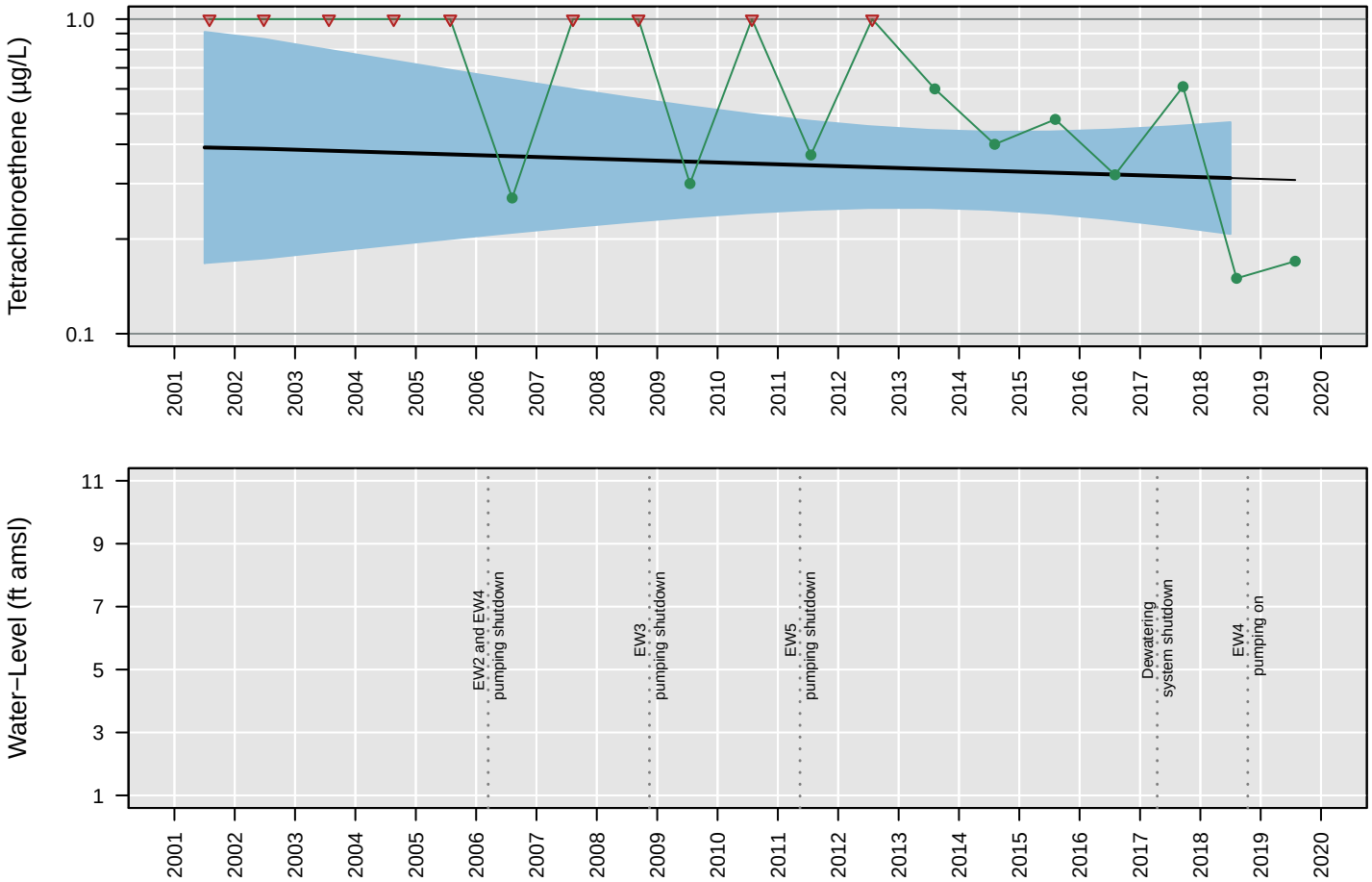
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.1 µg/L
UCL: 8.9 µg/L
LCL: 1.9 µg/L

GW50

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 47%



Censored Regression (Tobit) Model

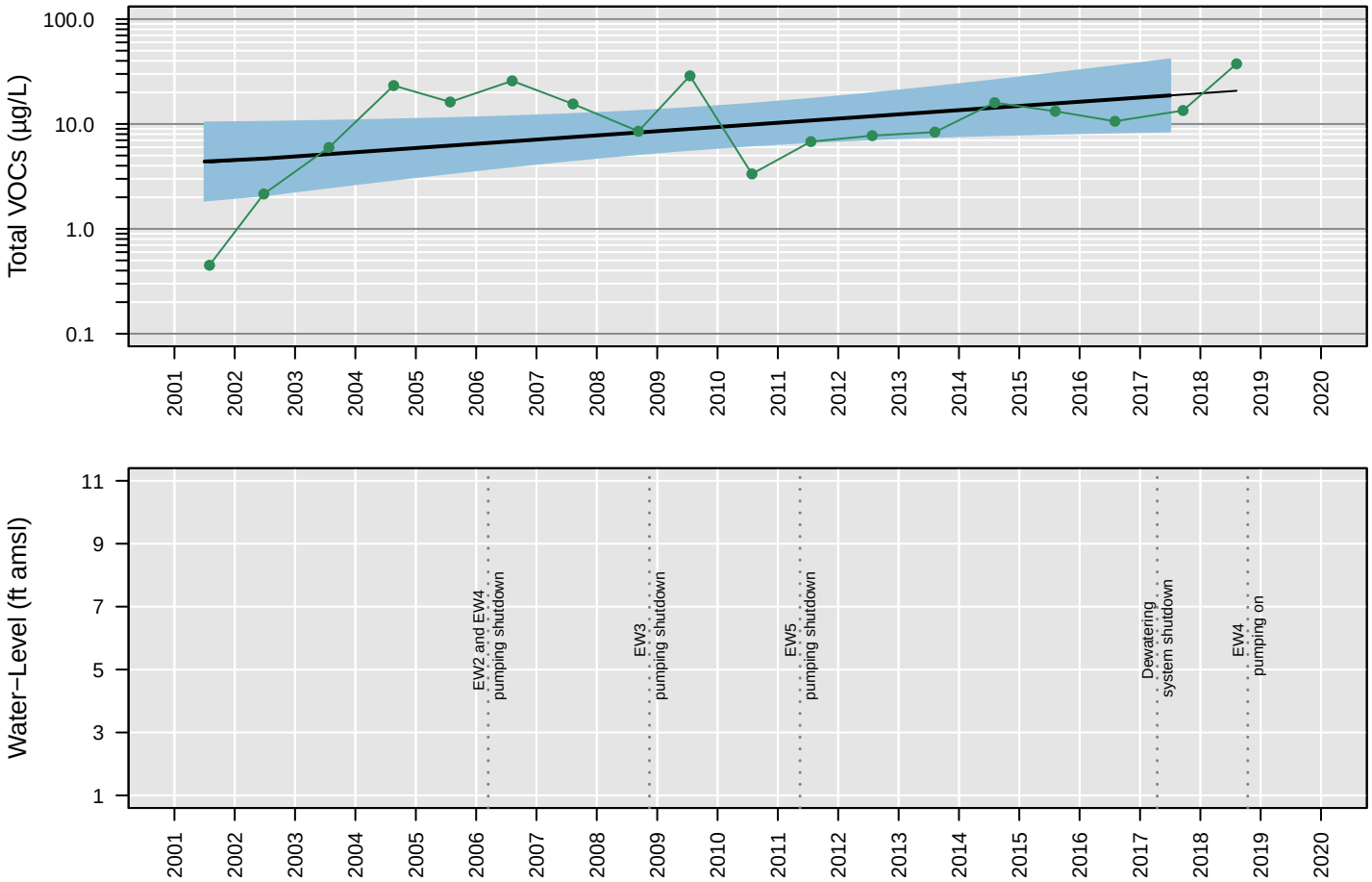
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.31 µg/L
UCL: 0.47 µg/L
LCL: 0.21 µg/L

GW50

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = 0.00025 (+/− 0.00011)*Date + −1.5 (+/− 1.7)

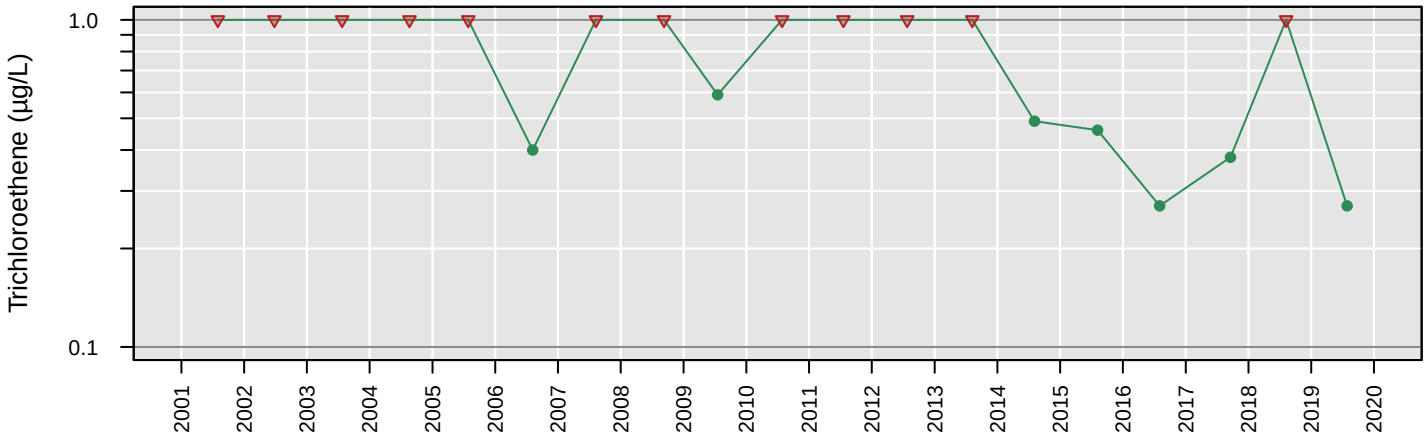
Regression Statistics for January 2017 to January 2018
Geometric Mean: 19 µg/L
UCL: 41 µg/L
LCL: 8.5 µg/L

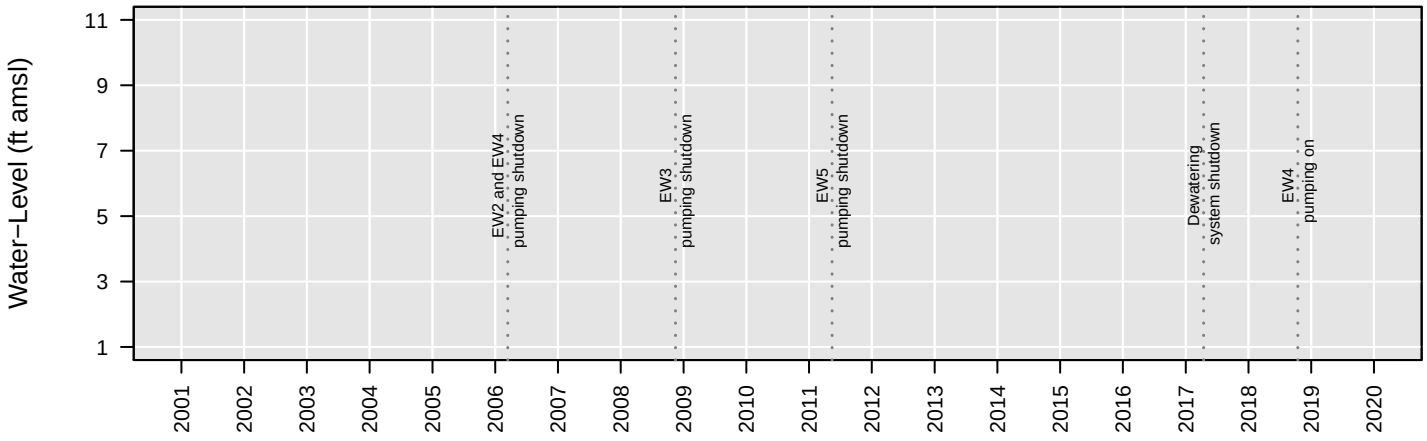
GW50

Trichloroethene

Number of Comparisons: 19
Percent NDs: 63%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



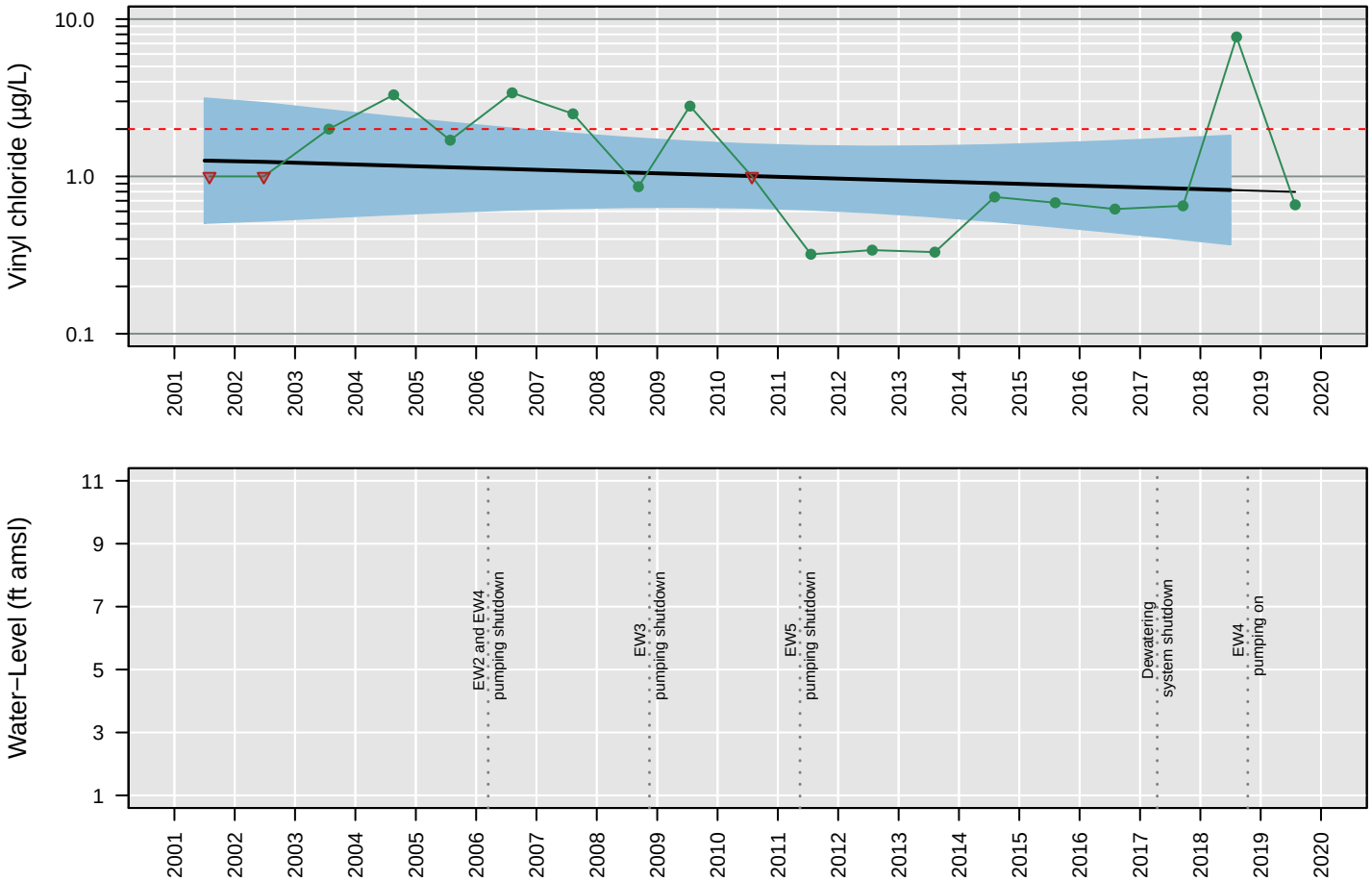


No Analysis Performed

GW50

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 16%



Censored Regression (Tobit) Model

Trend Not Significant

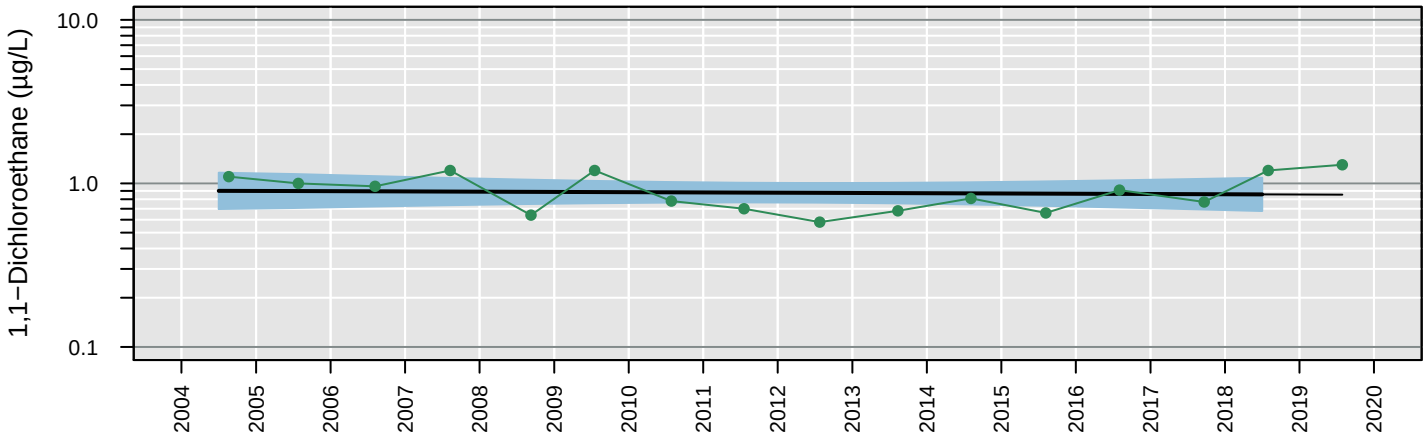
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.82 µg/L
UCL: 1.8 µg/L
LCL: 0.37 µg/L

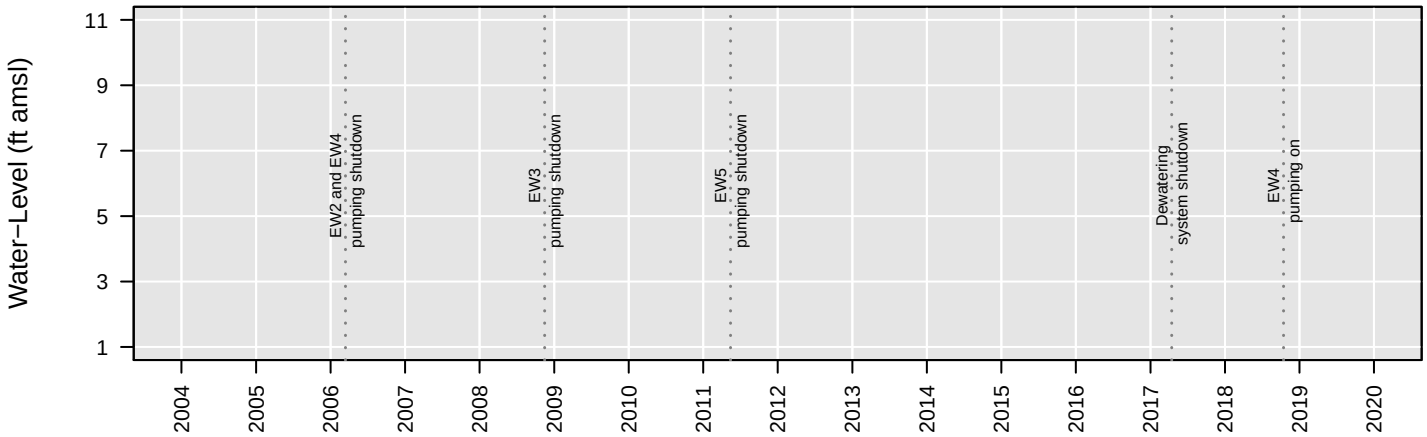
GW53

1,1−Dichloroethane

Number of Comparisons: 16
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

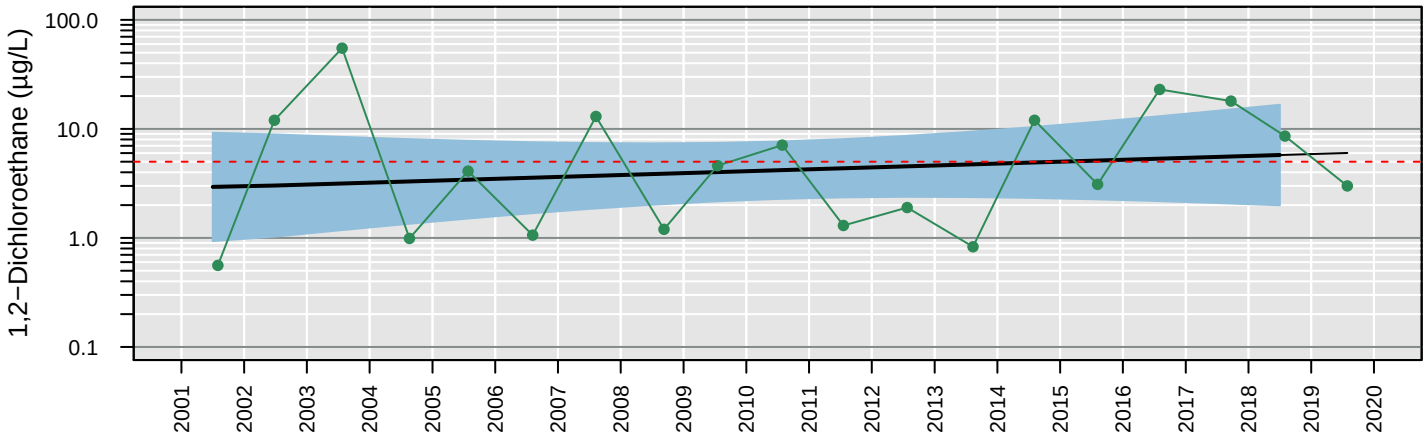
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.86 µg/L
UCL: 1.1 µg/L
LCL: 0.68 µg/L

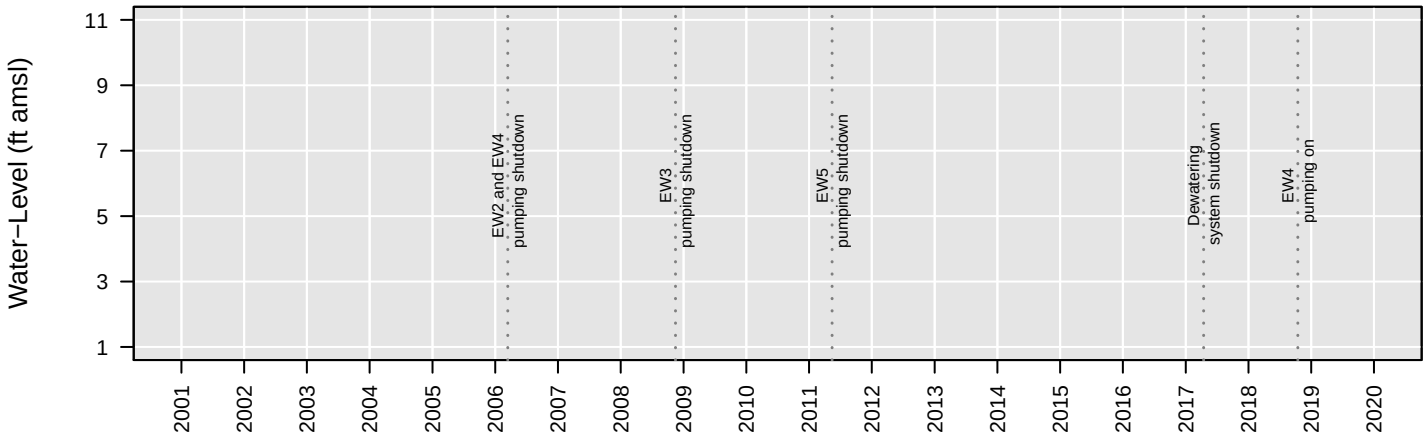
GW53

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

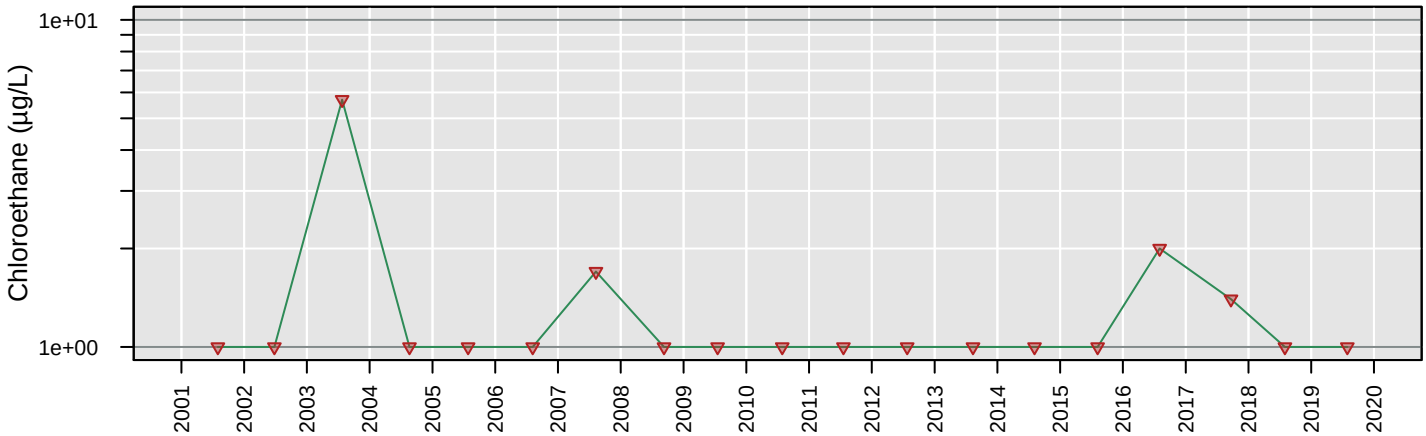
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.8 µg/L
UCL: 17 µg/L
LCL: 2 µg/L

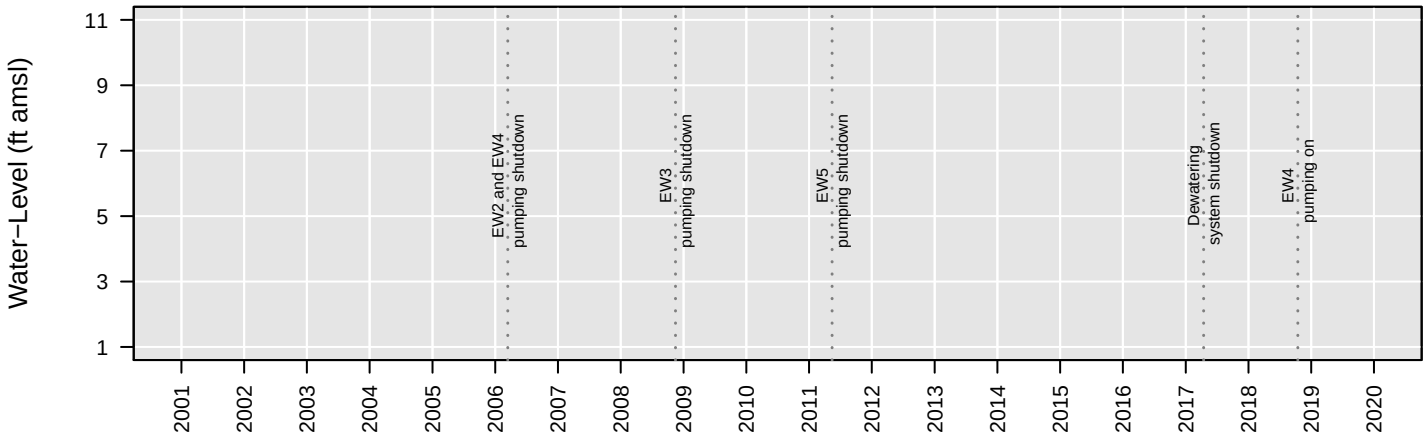
GW53

Chloroethane

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





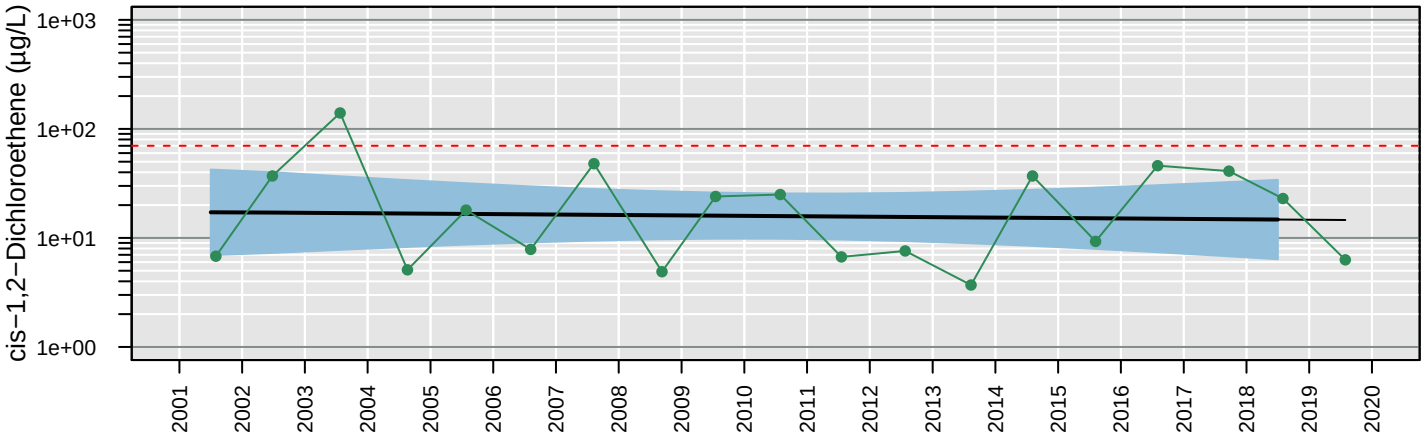
No Analysis Performed

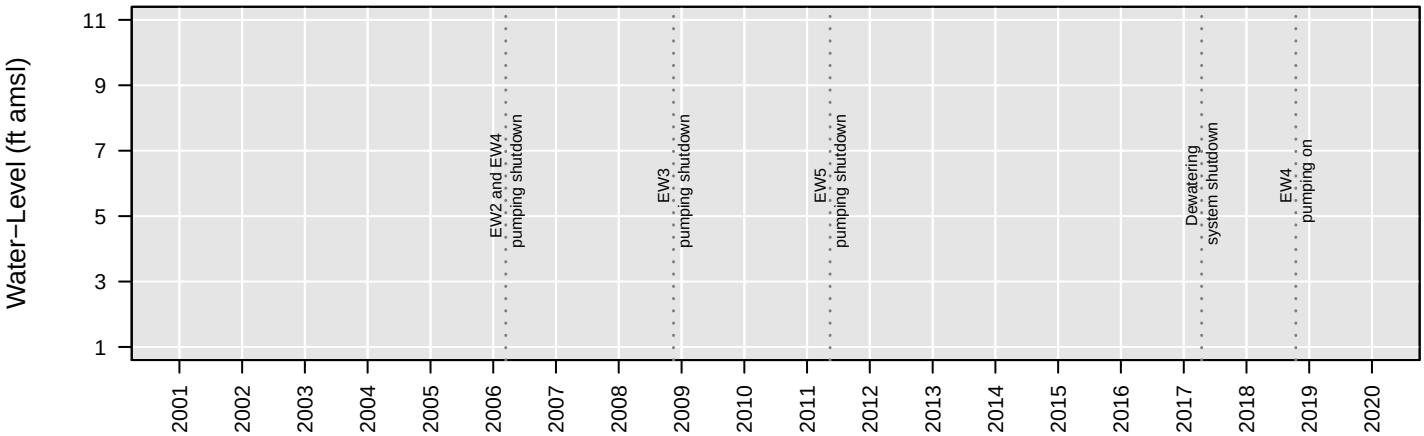
GW53

cis−1,2−Dichloroethene

Number of Comparisons: 19
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

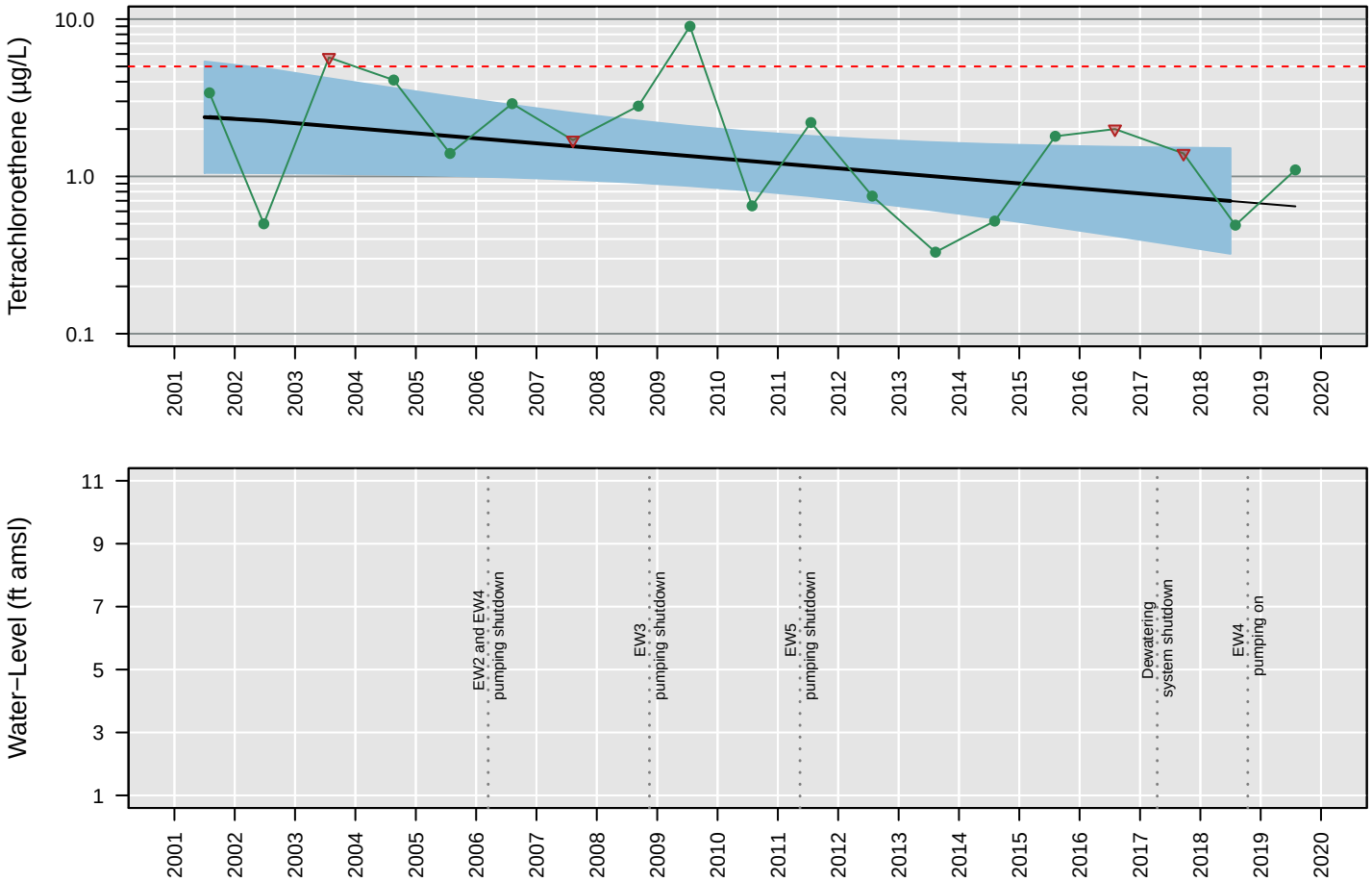
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 15 µg/L
UCL: 34 µg/L
LCL: 6.4 µg/L

GW53

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 21%



Censored Regression (Tobit) Model

Trend Not Significant

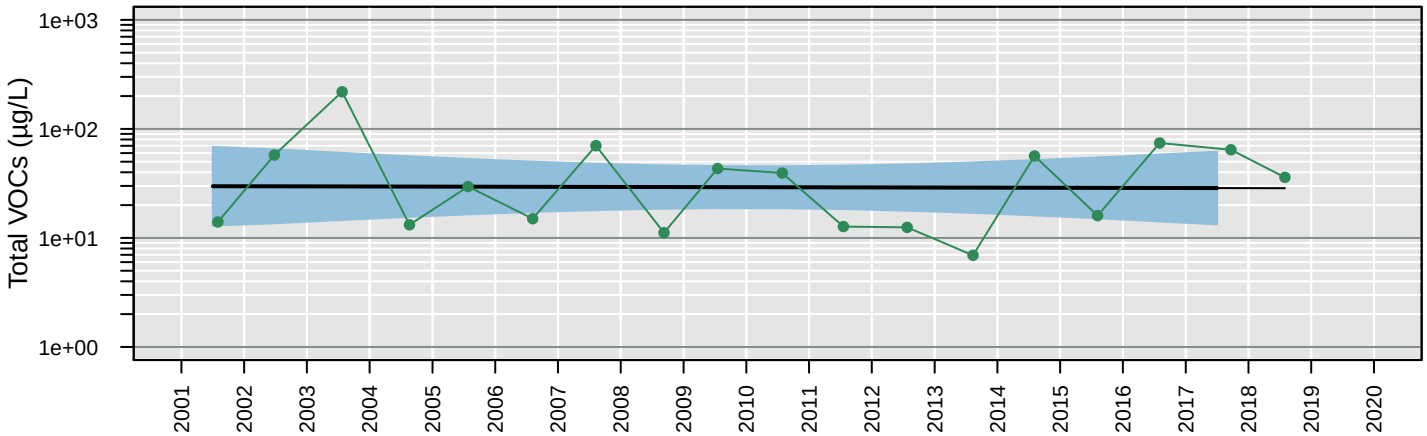
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.7 µg/L
UCL: 1.5 µg/L
LCL: 0.32 µg/L

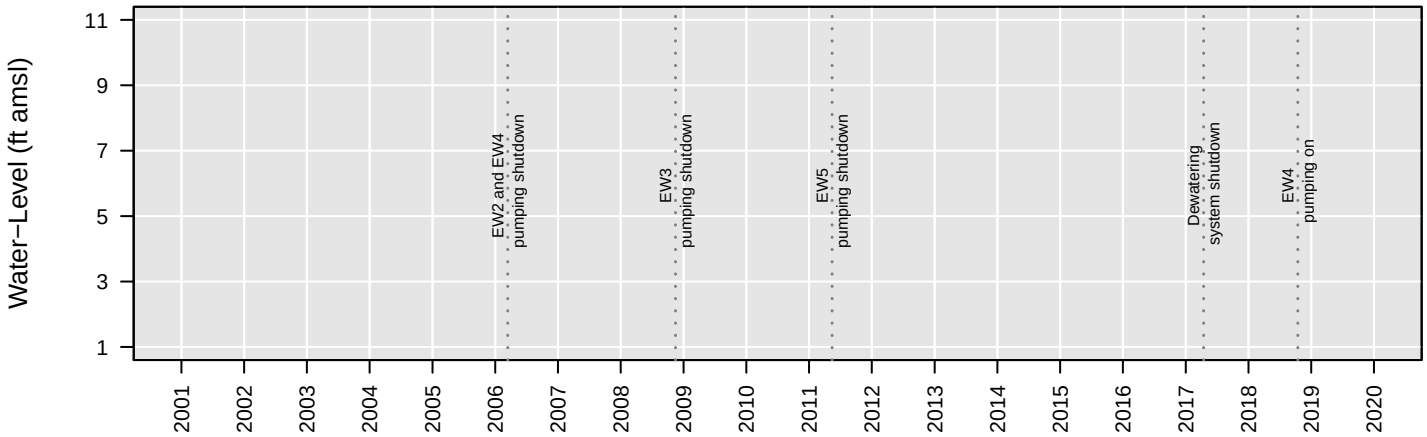
GW53

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

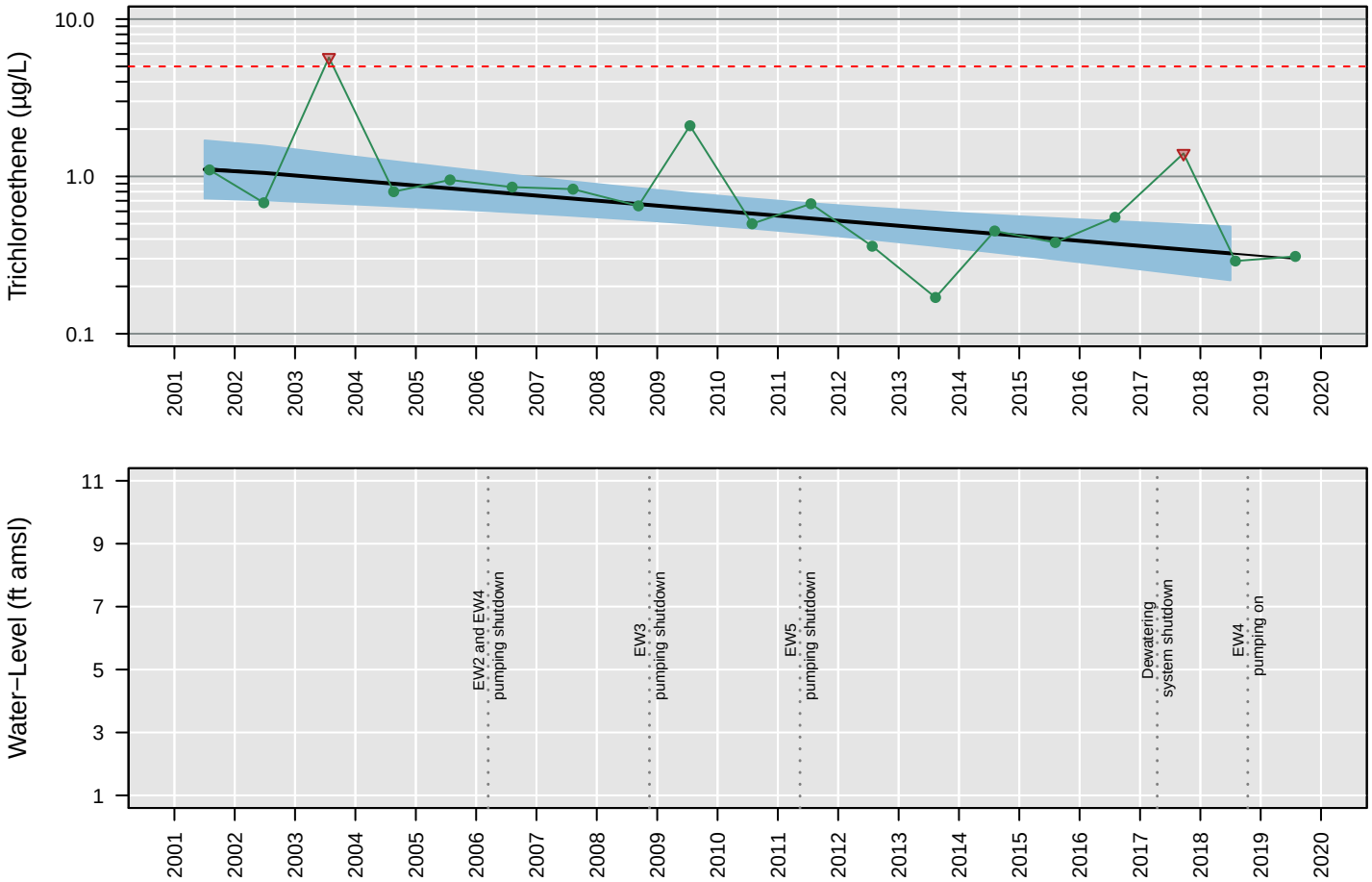
Trend Not Significant

Regression Statistics for January 2017 to January 2018
Geometric Mean: 29 µg/L
UCL: 62 µg/L
LCL: 13 µg/L

GW53

Trichloroethene

Number of Comparisons: 19
Percent NDs: 11%



Censored Regression (Tobit) Model

ln Conc. = −0.0002 (+/− 0.000053)*Date + 2.4 (+/− 0.8)

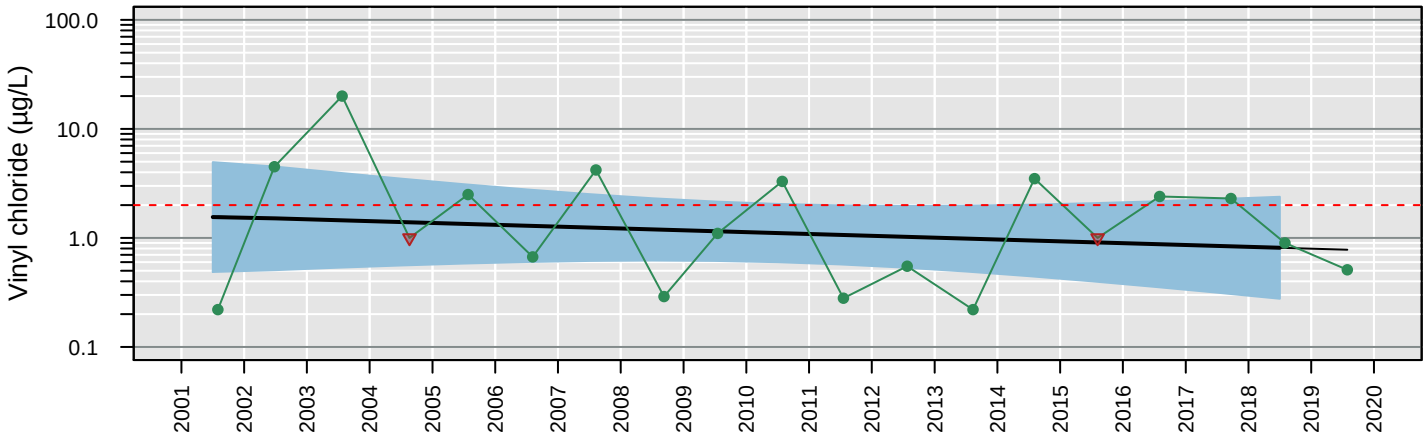
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.32 µg/L
UCL: 0.48 µg/L
LCL: 0.22 µg/L

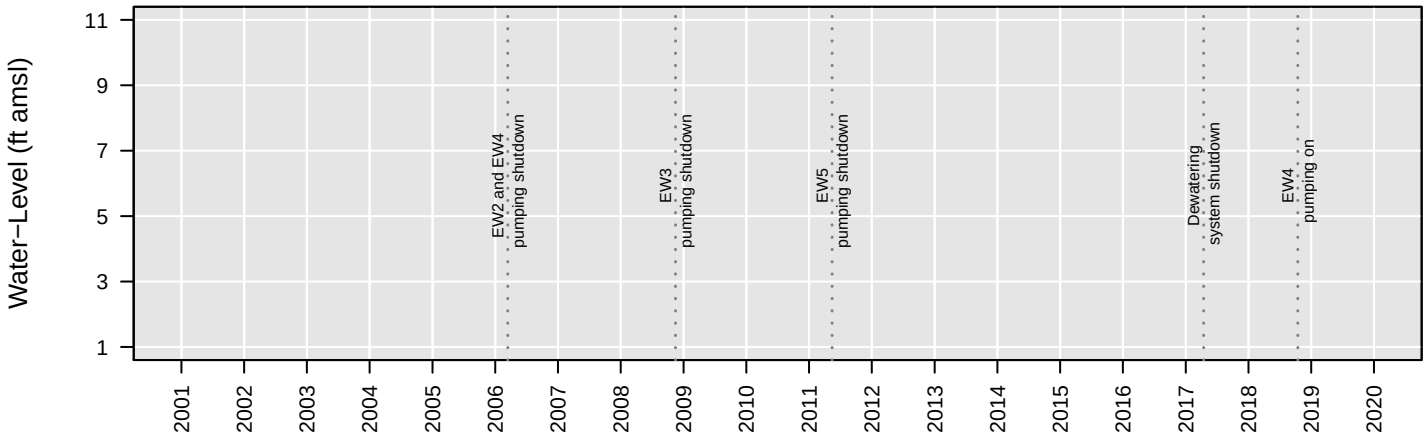
GW53

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 11%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

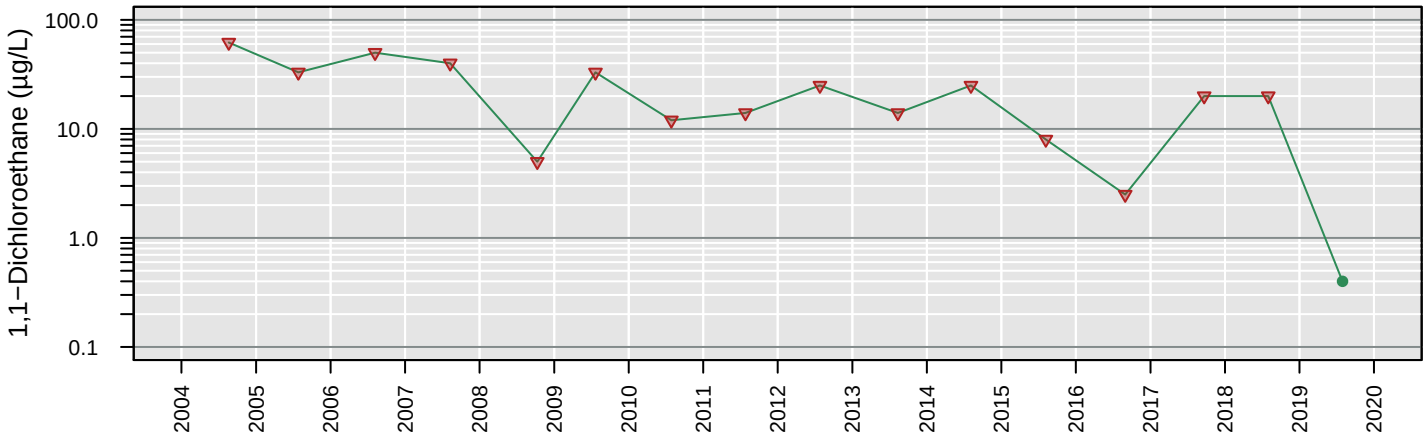
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.81 µg/L
UCL: 2.4 µg/L
LCL: 0.28 µg/L

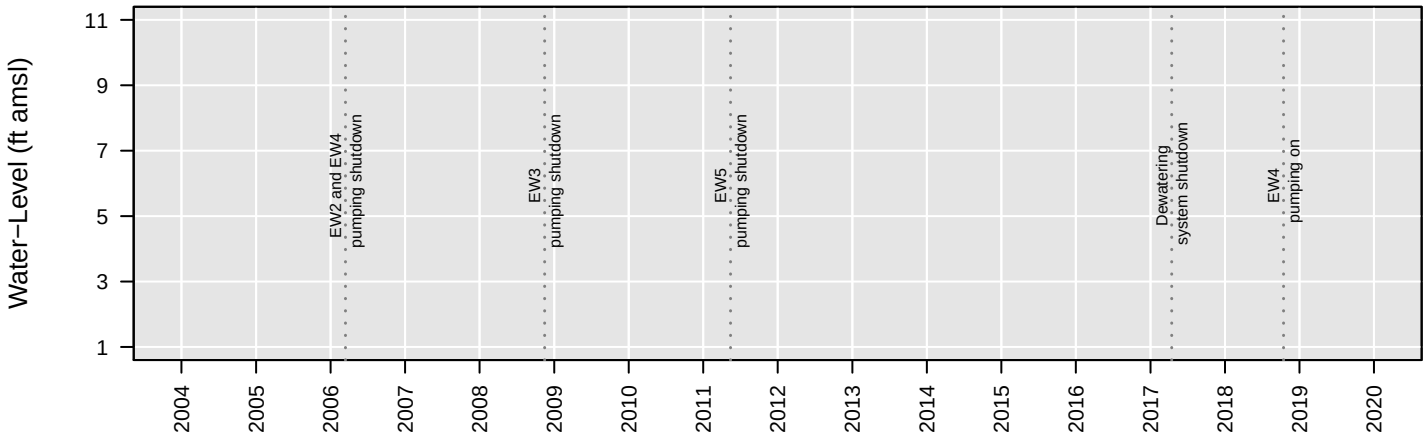
GW63

1,1−Dichloroethane

Number of Comparisons: 16
Percent NDs: 94%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





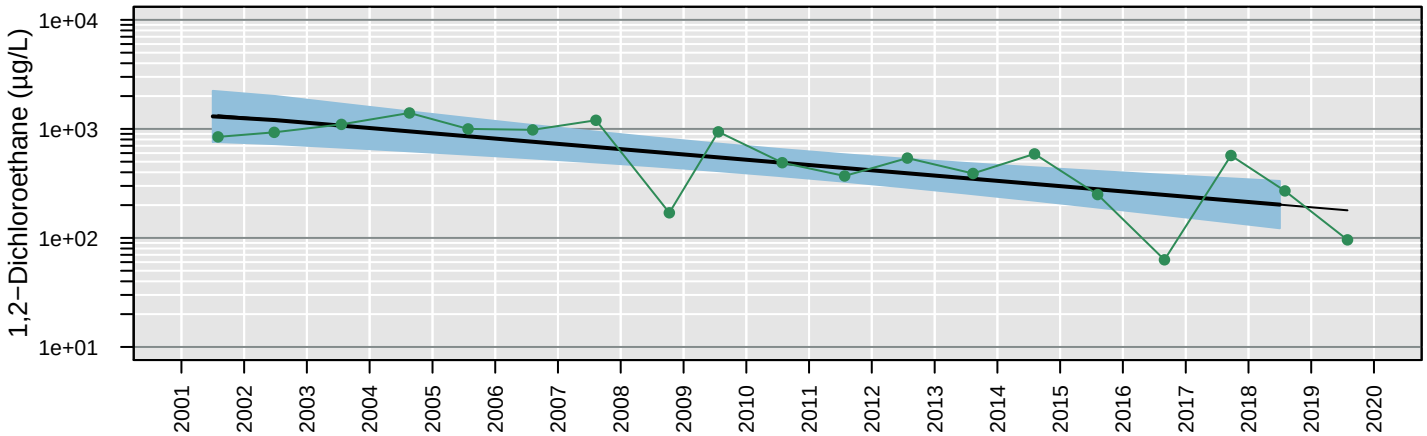
No Analysis Performed

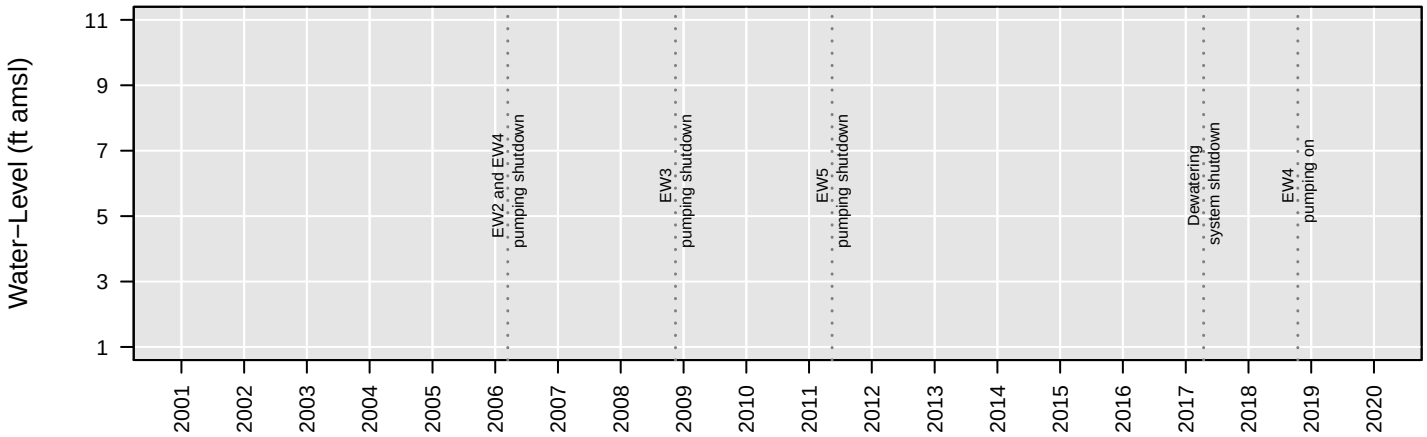
GW63

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00031 (+/− 0.000067)*Date + 11 (+/− 1)

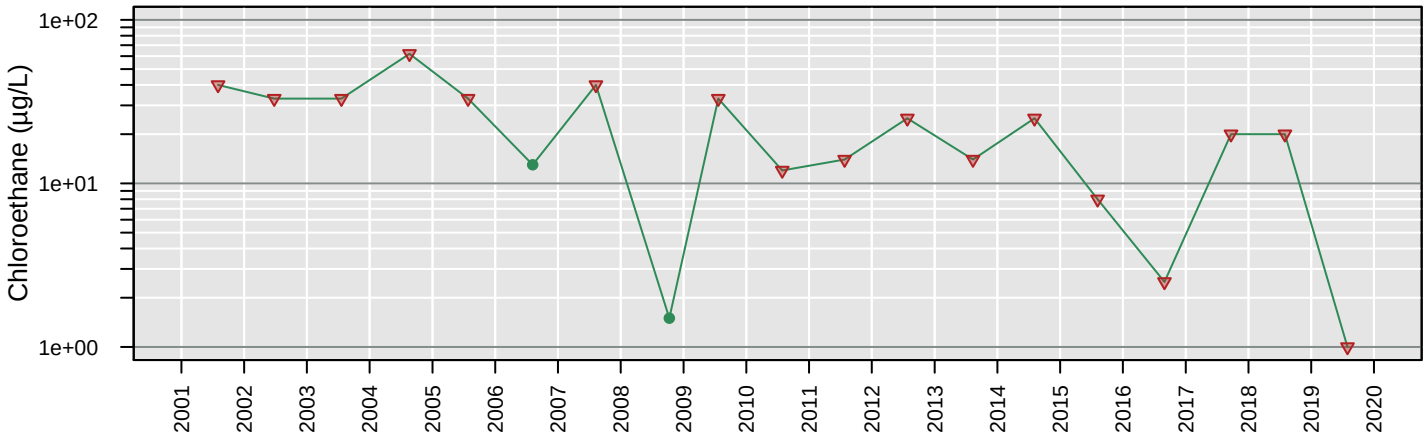
Regression Statistics for January 2018 to January 2019
Geometric Mean: 200 µg/L
UCL: 330 µg/L
LCL: 120 µg/L

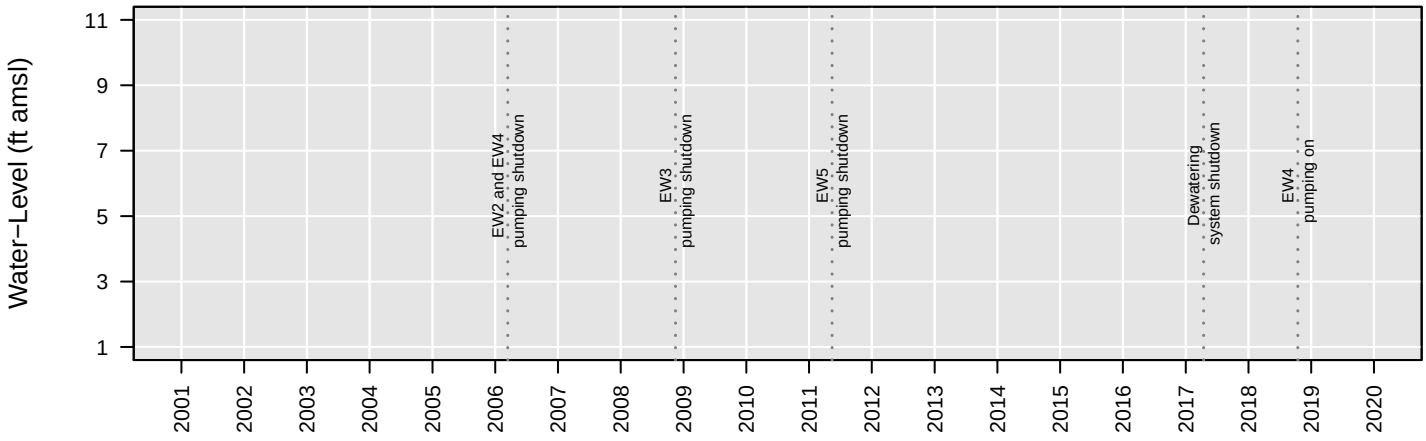
GW63

Chloroethane

Number of Comparisons: 19
Percent NDs: 89%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





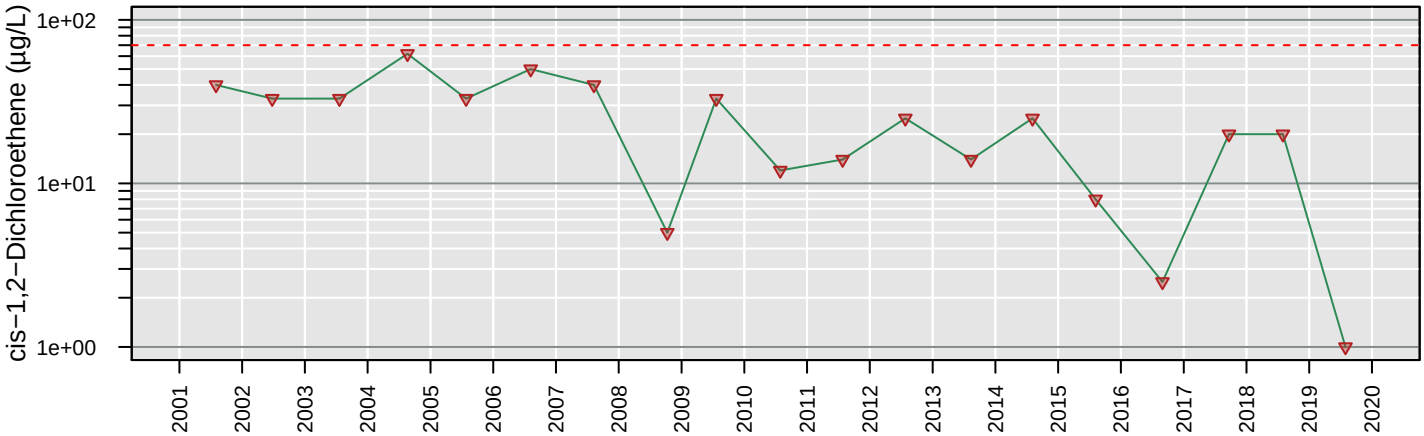
No Analysis Performed

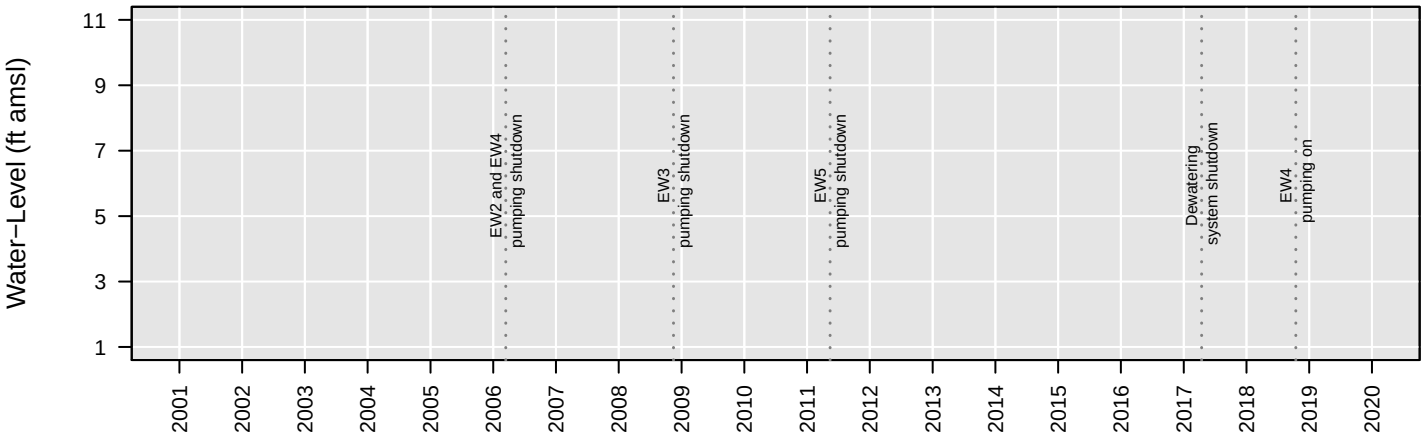
GW63

cis−1,2−Dichloroethene

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





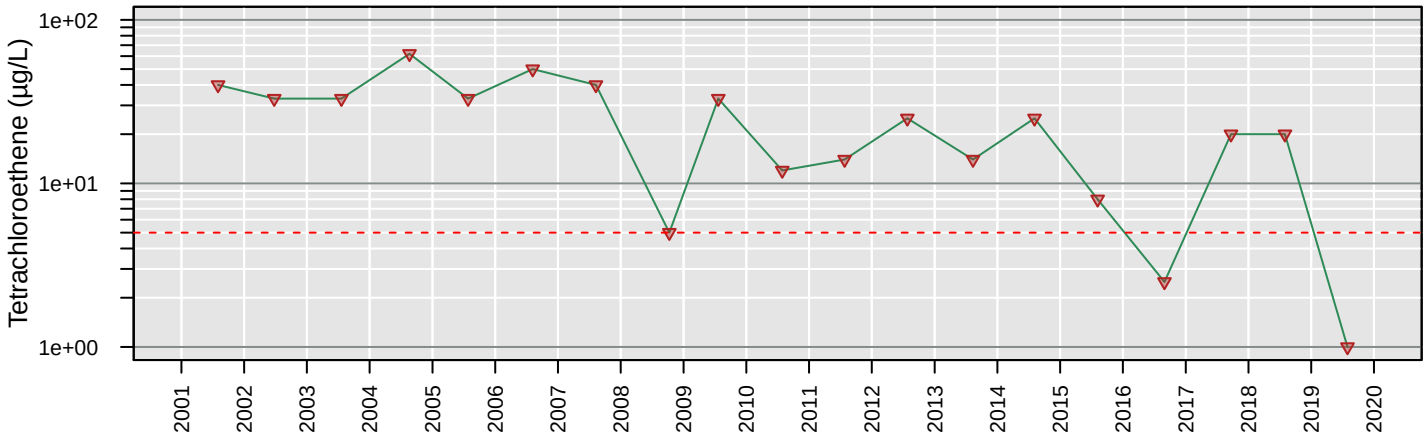
No Analysis Performed

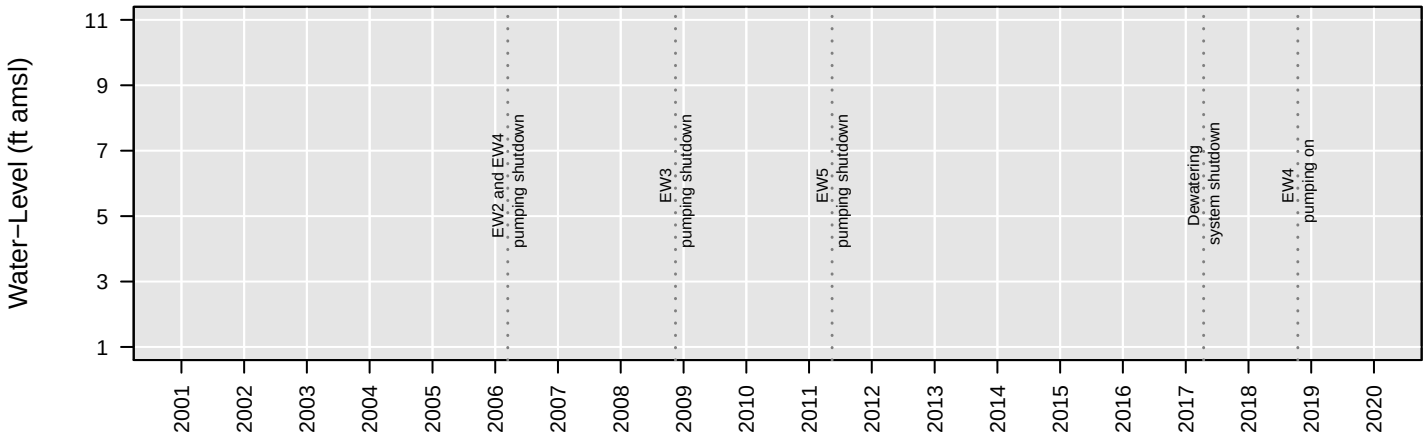
GW63

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





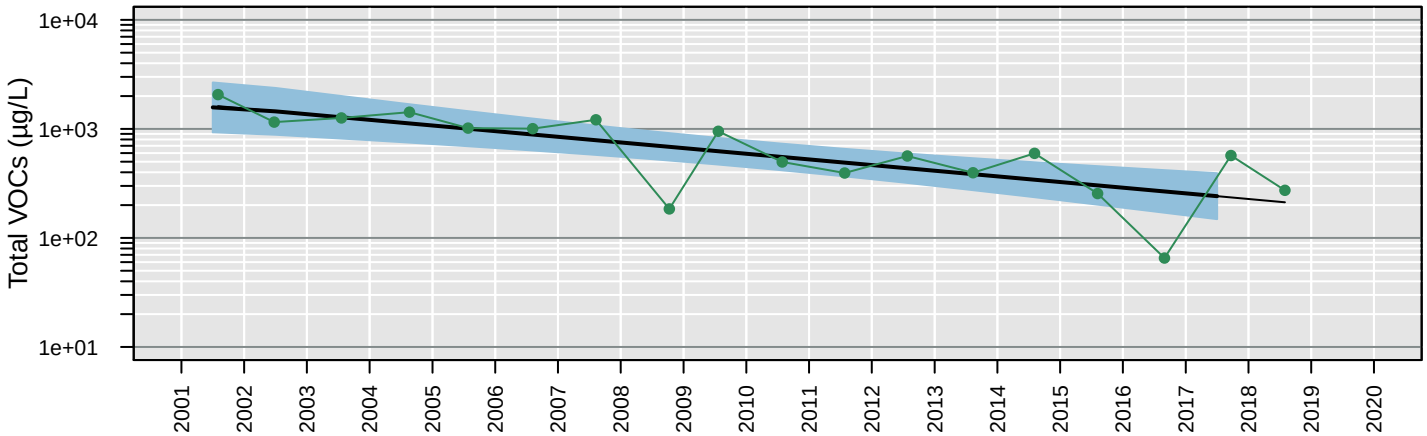
No Analysis Performed

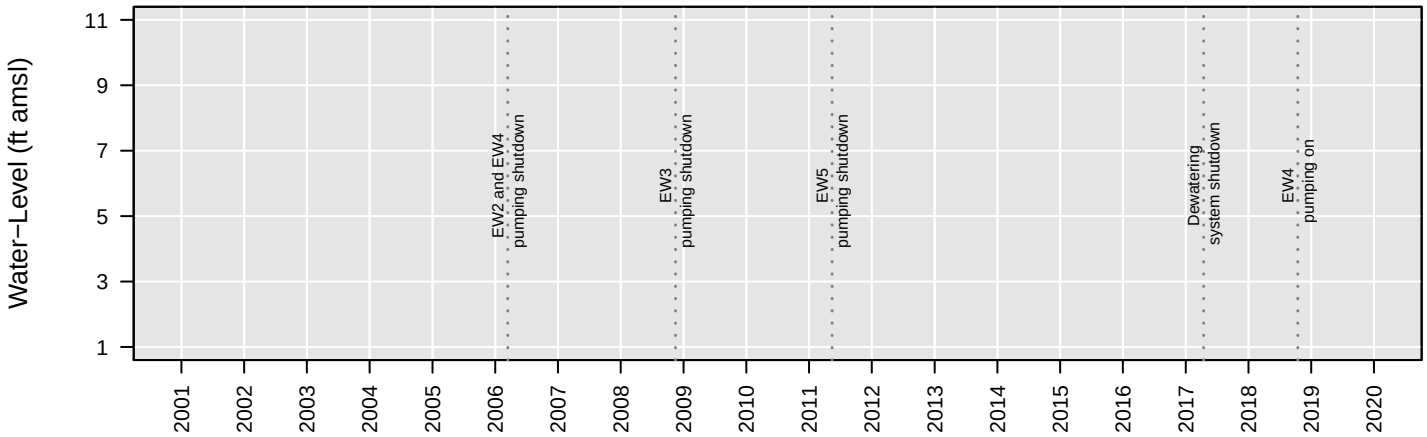
GW63

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00033 (+/− 0.000069)*Date + 11 (+/− 1)

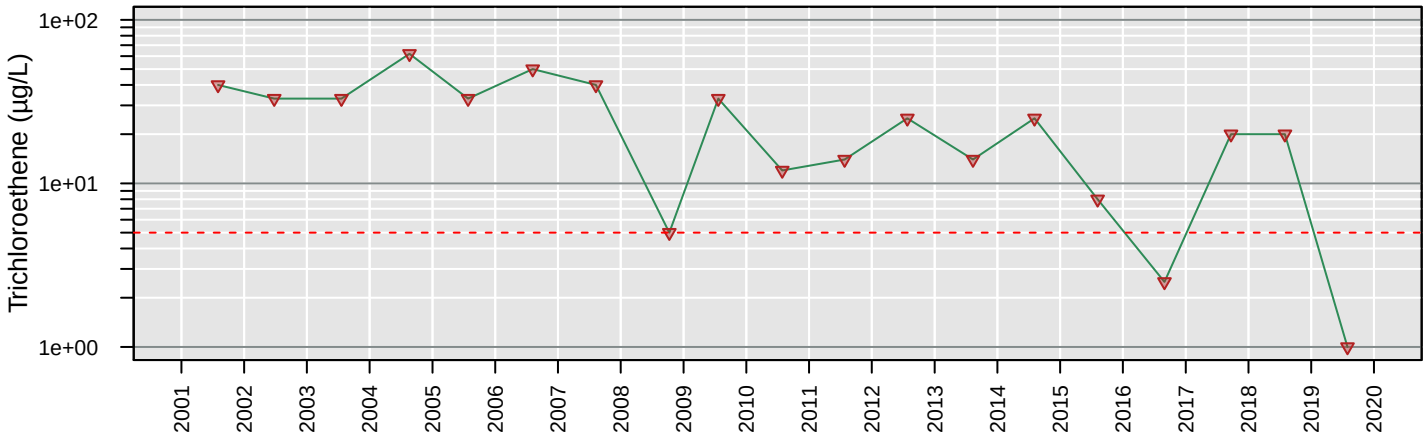
Regression Statistics for January 2017 to January 2018
Geometric Mean: 240 µg/L
UCL: 390 µg/L
LCL: 150 µg/L

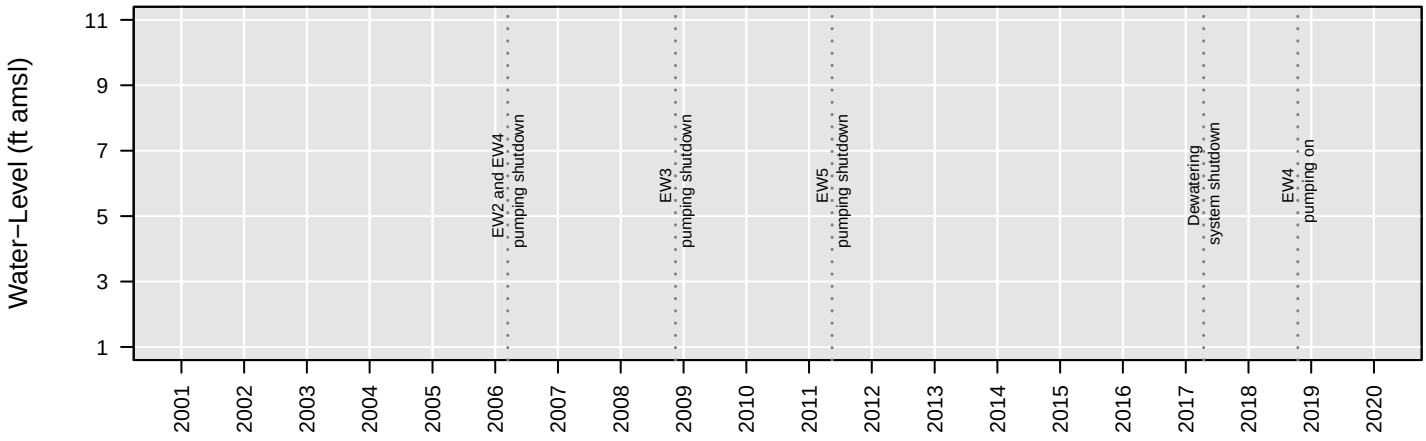
GW63

Trichloroethene

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



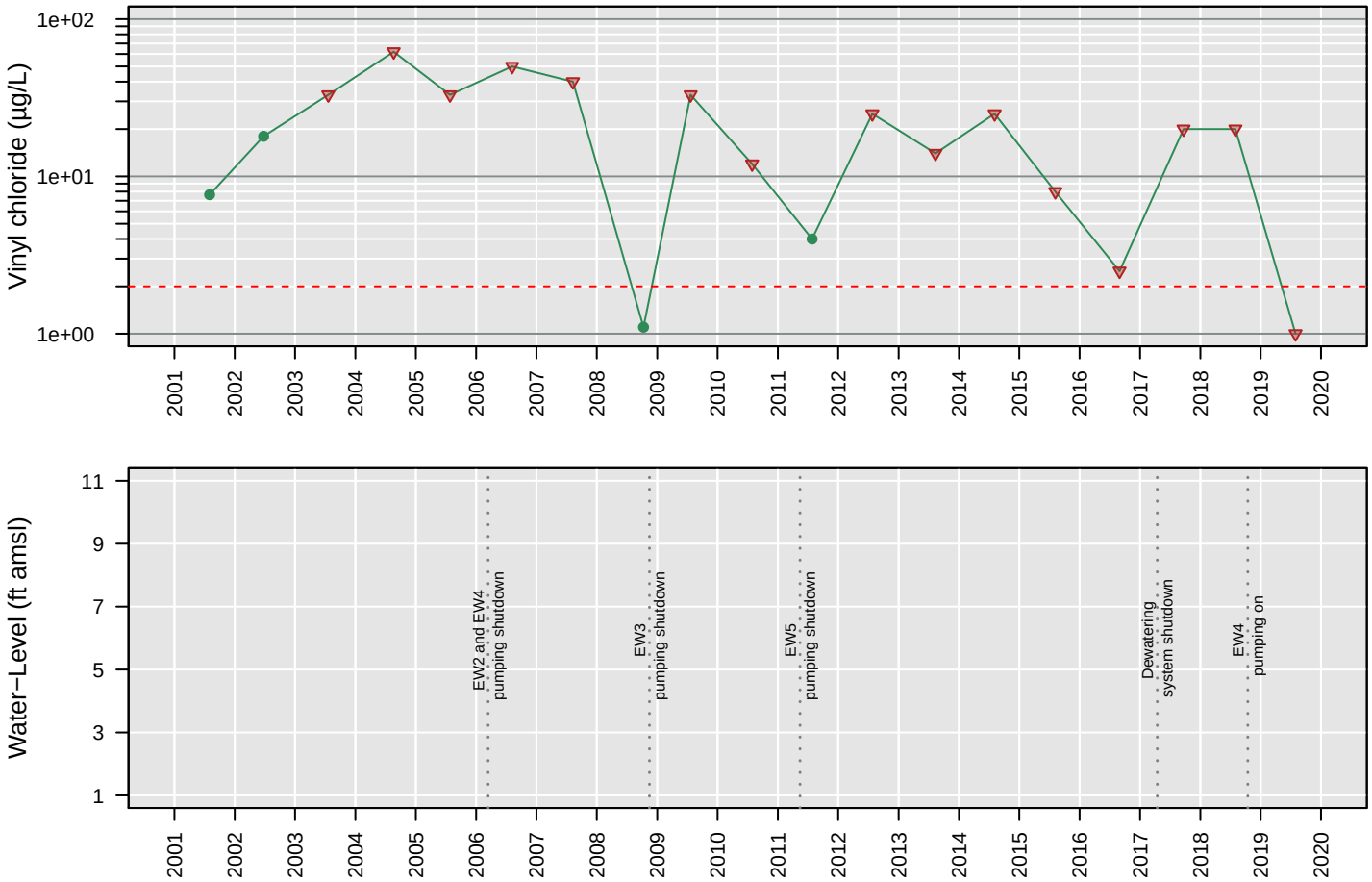


No Analysis Performed

GW63

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 79%



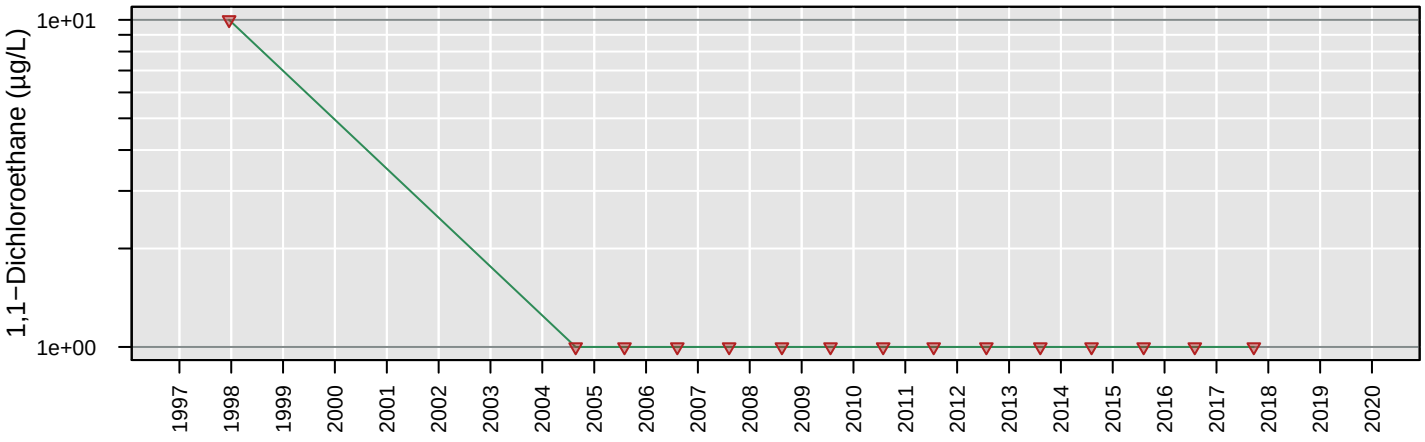
No Analysis Performed

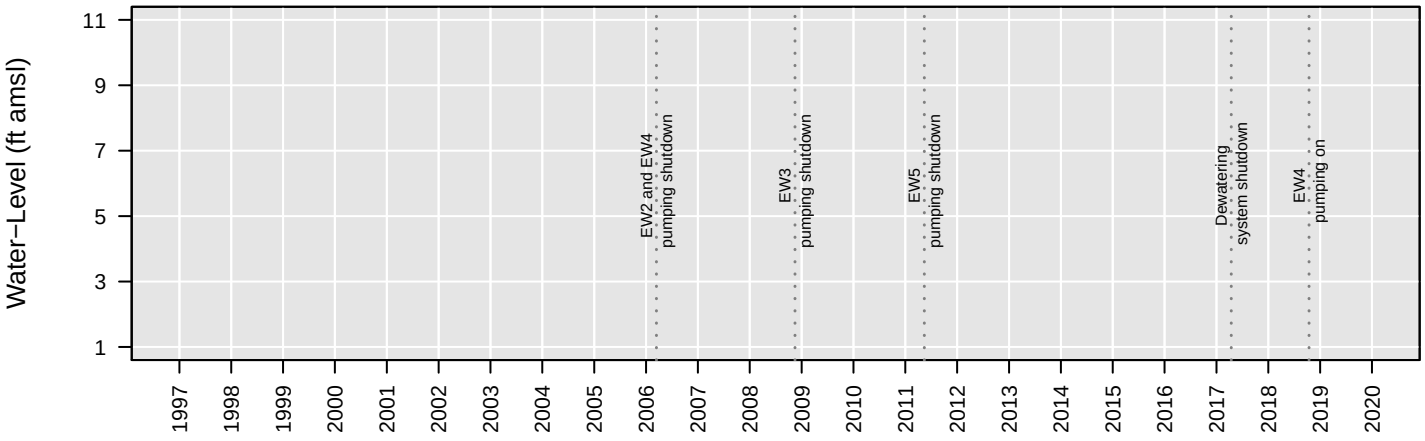
GW64

1,1−Dichloroethane

Number of Comparisons: 15
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





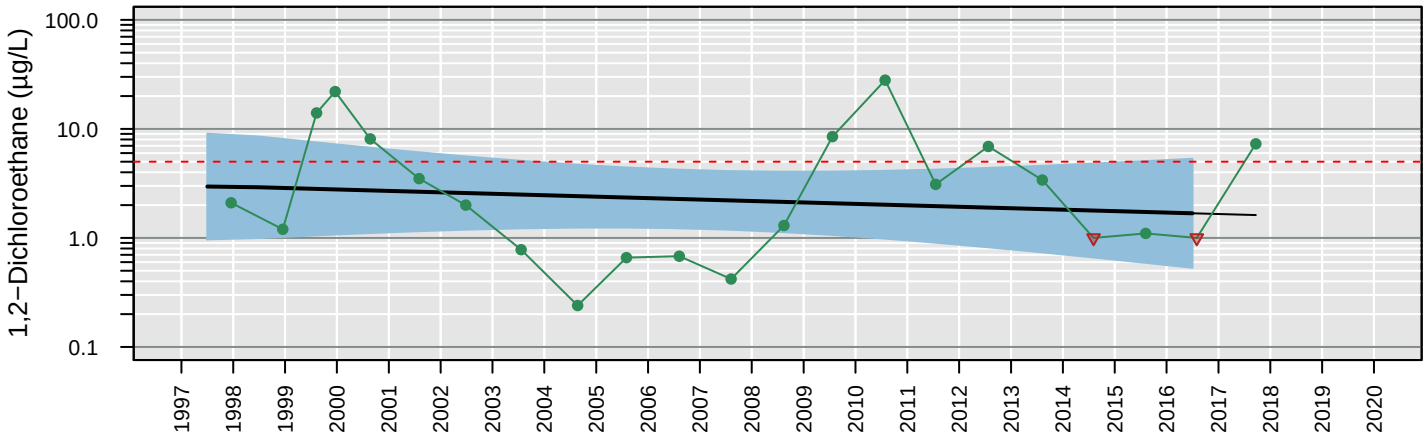
No Analysis Performed

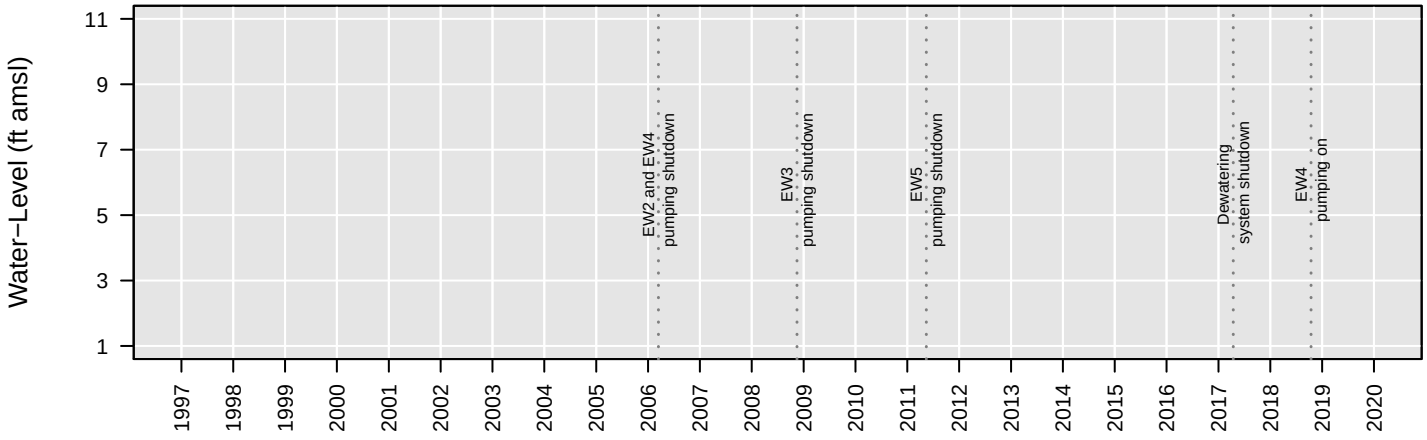
GW64

1,2−Dichloroethane

Number of Comparisons: 22
Percent NDs: 9%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

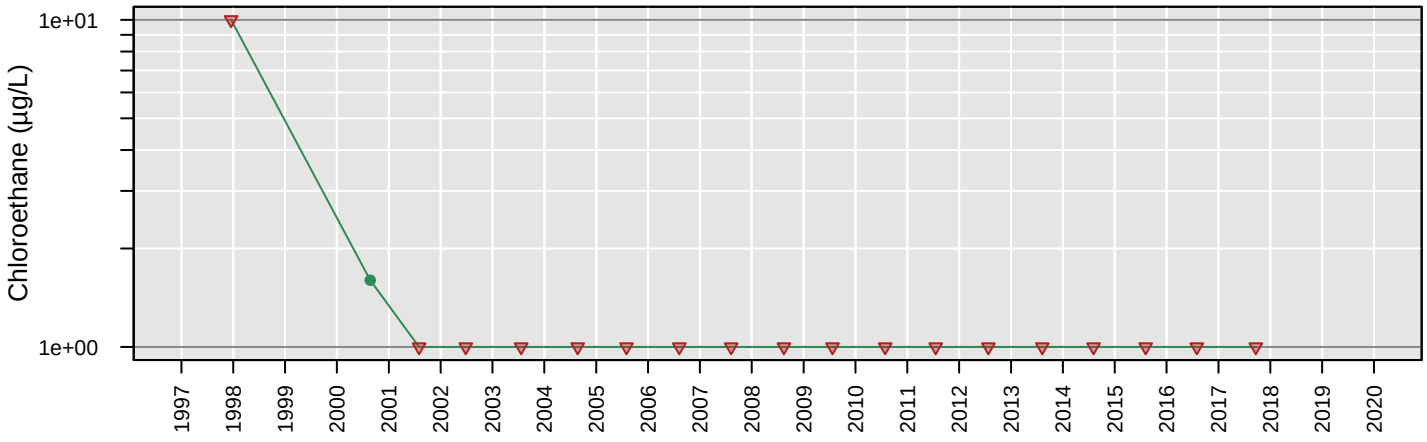
Regression Statistics for January 2016 to January 2017
Geometric Mean: 1.7 µg/L
UCL: 5.3 µg/L
LCL: 0.53 µg/L

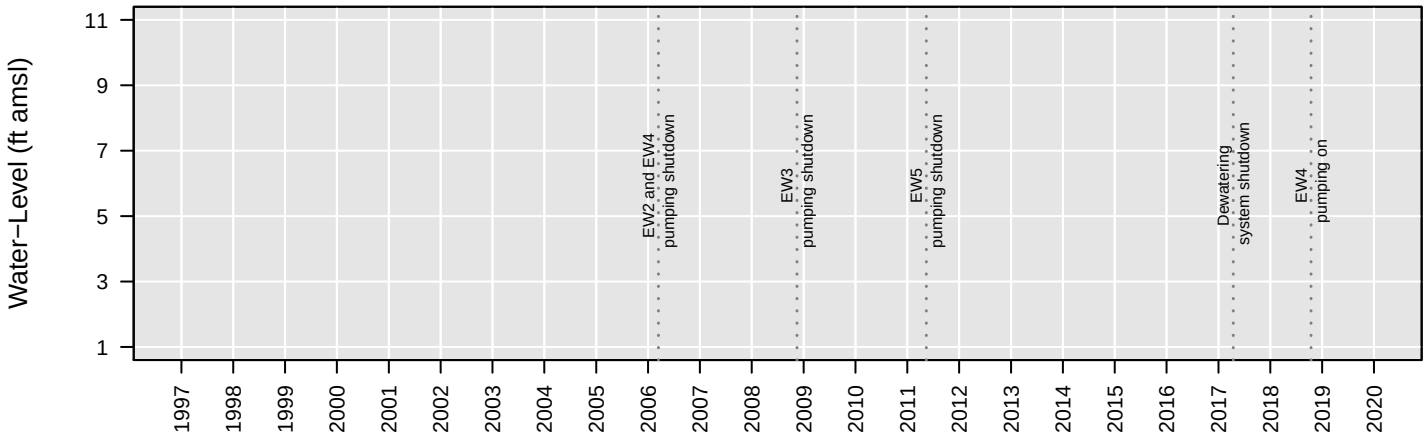
GW64

Chloroethane

Number of Comparisons: 19
Percent NDs: 95%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



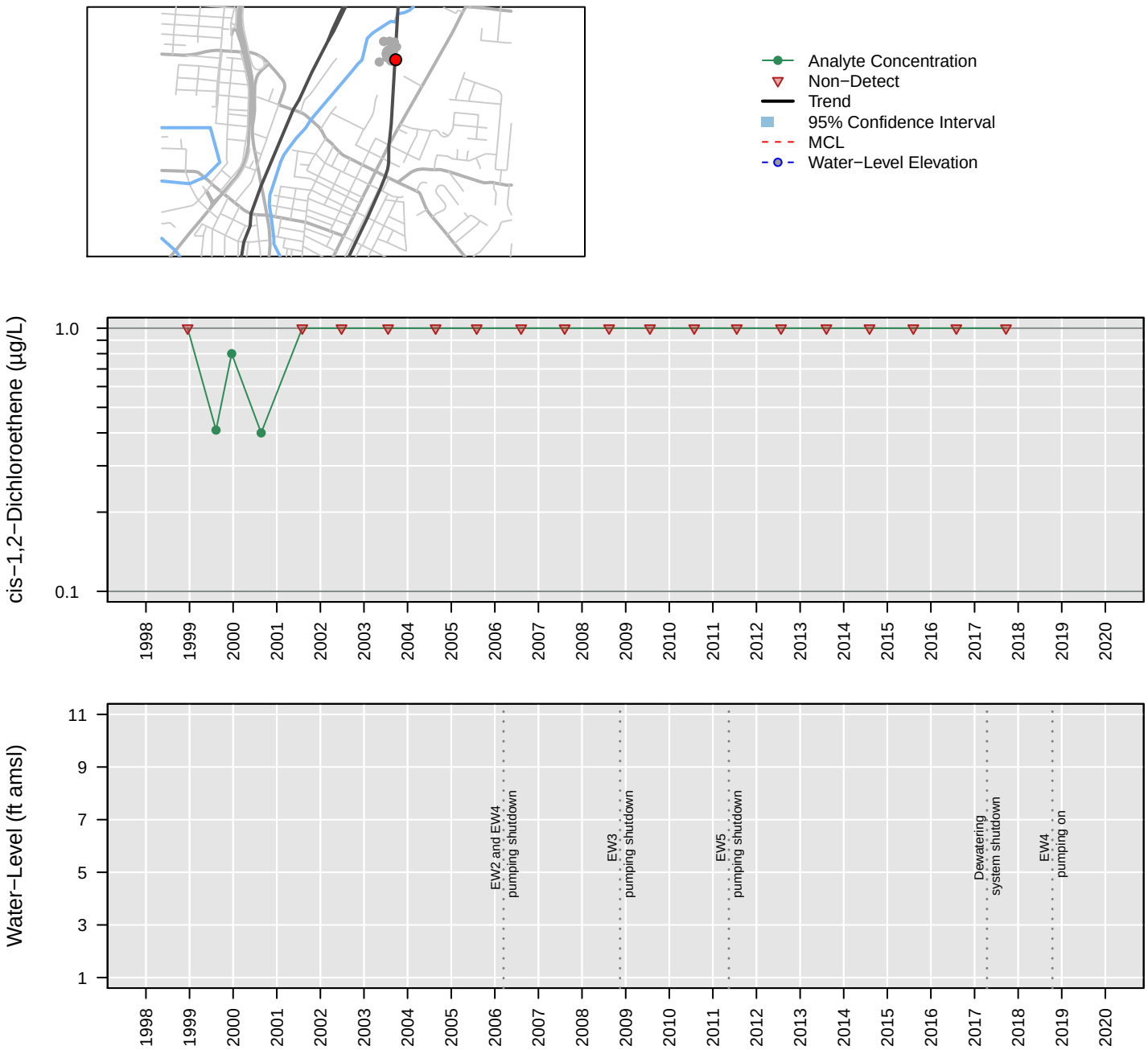


No Analysis Performed

GW64

cis−1,2−Dichloroethene

Number of Comparisons: 21
Percent NDs: 86%



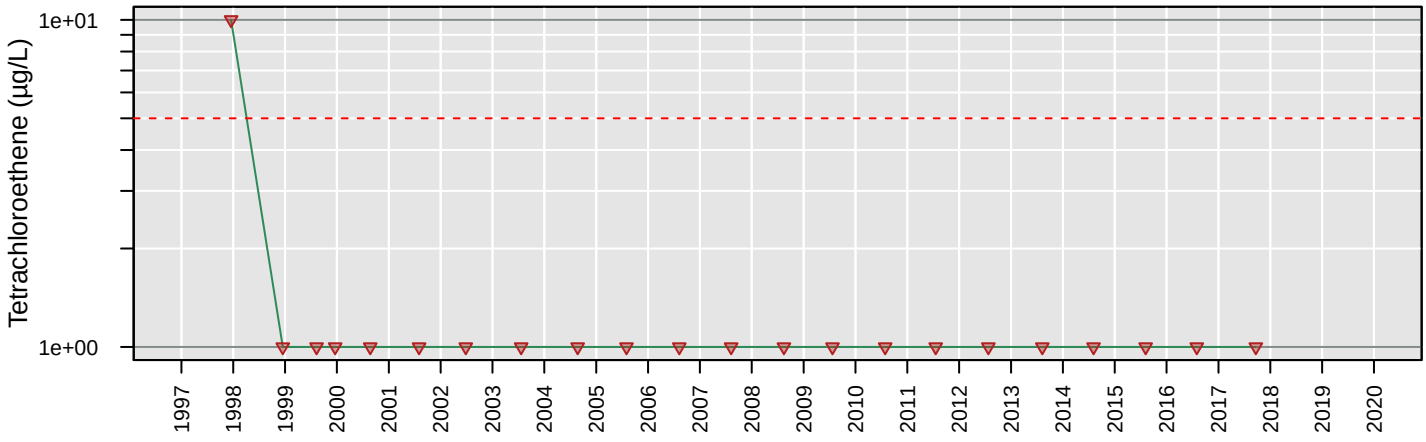
No Analysis Performed

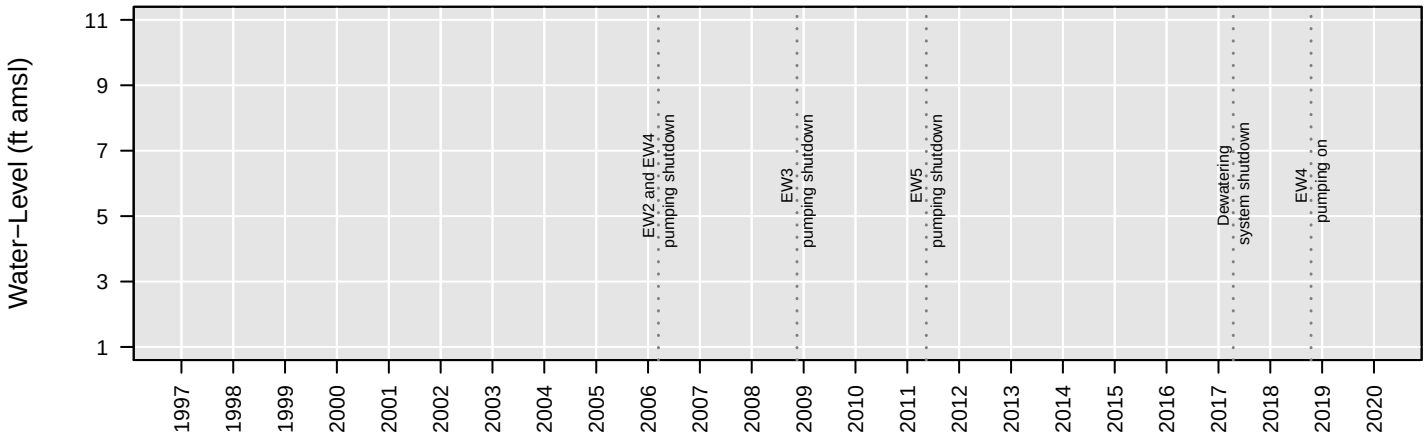
GW64

Tetrachloroethene

Number of Comparisons: 22
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



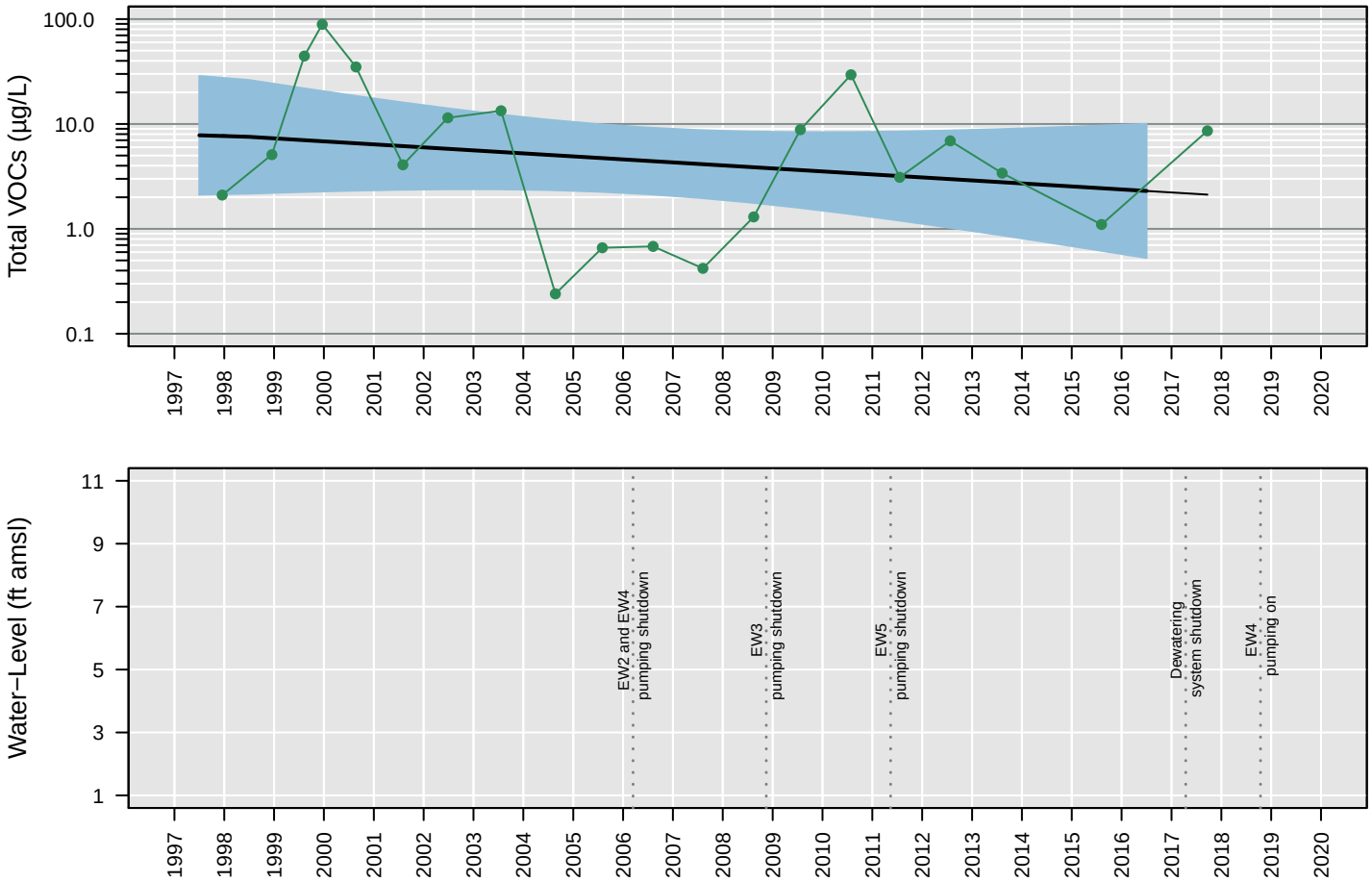


No Analysis Performed

GW64

Total VOCs

Number of Comparisons: 20
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

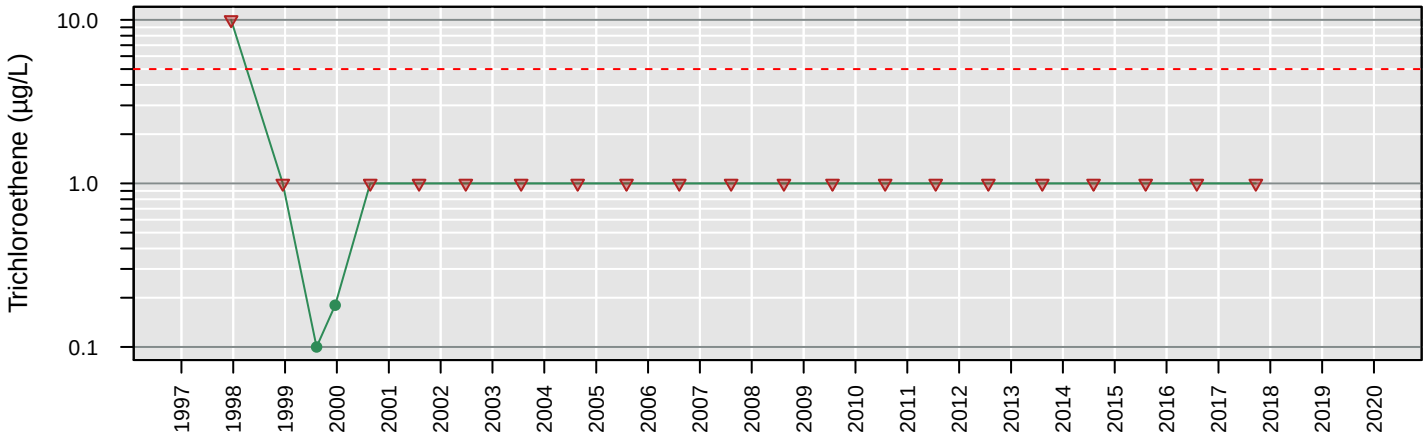
Regression Statistics for January 2016 to January 2017
Geometric Mean: 2.3 µg/L
UCL: 10 µg/L
LCL: 0.53 µg/L

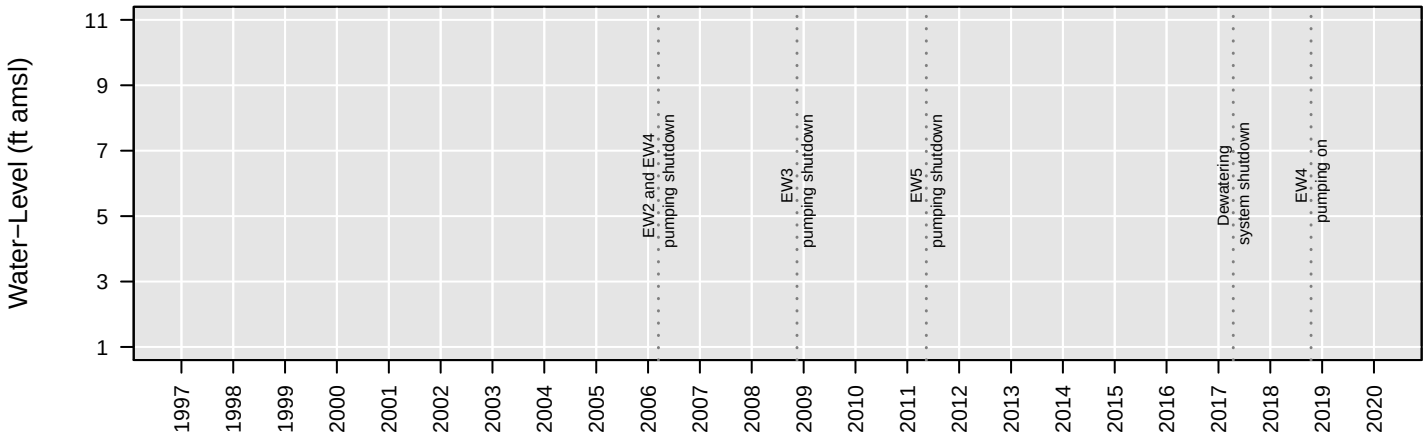
GW64

Trichloroethene

Number of Comparisons: 22
Percent NDs: 91%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



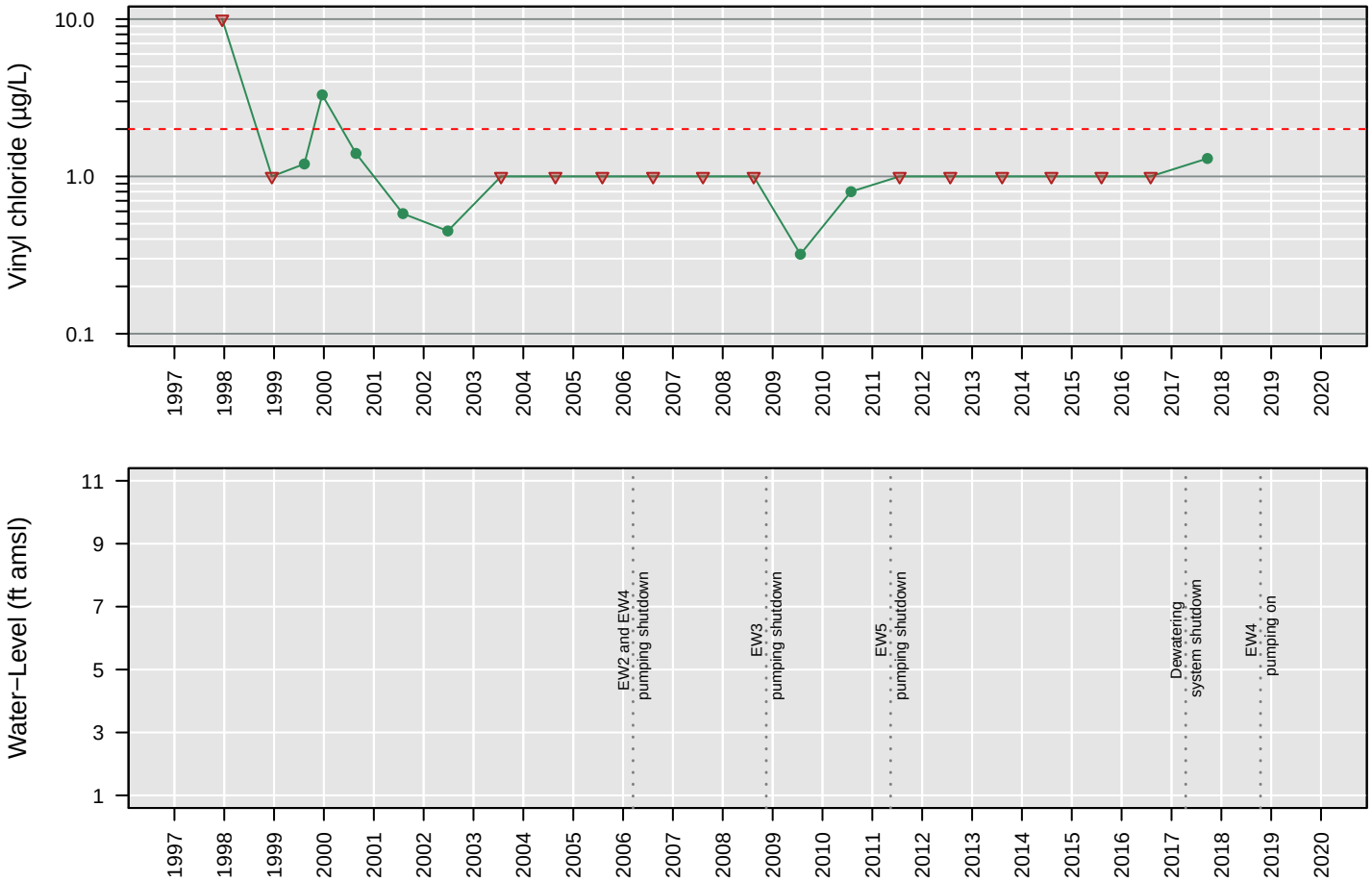


No Analysis Performed

GW64

Vinyl chloride

Number of Comparisons: 22
Percent NDs: 64%

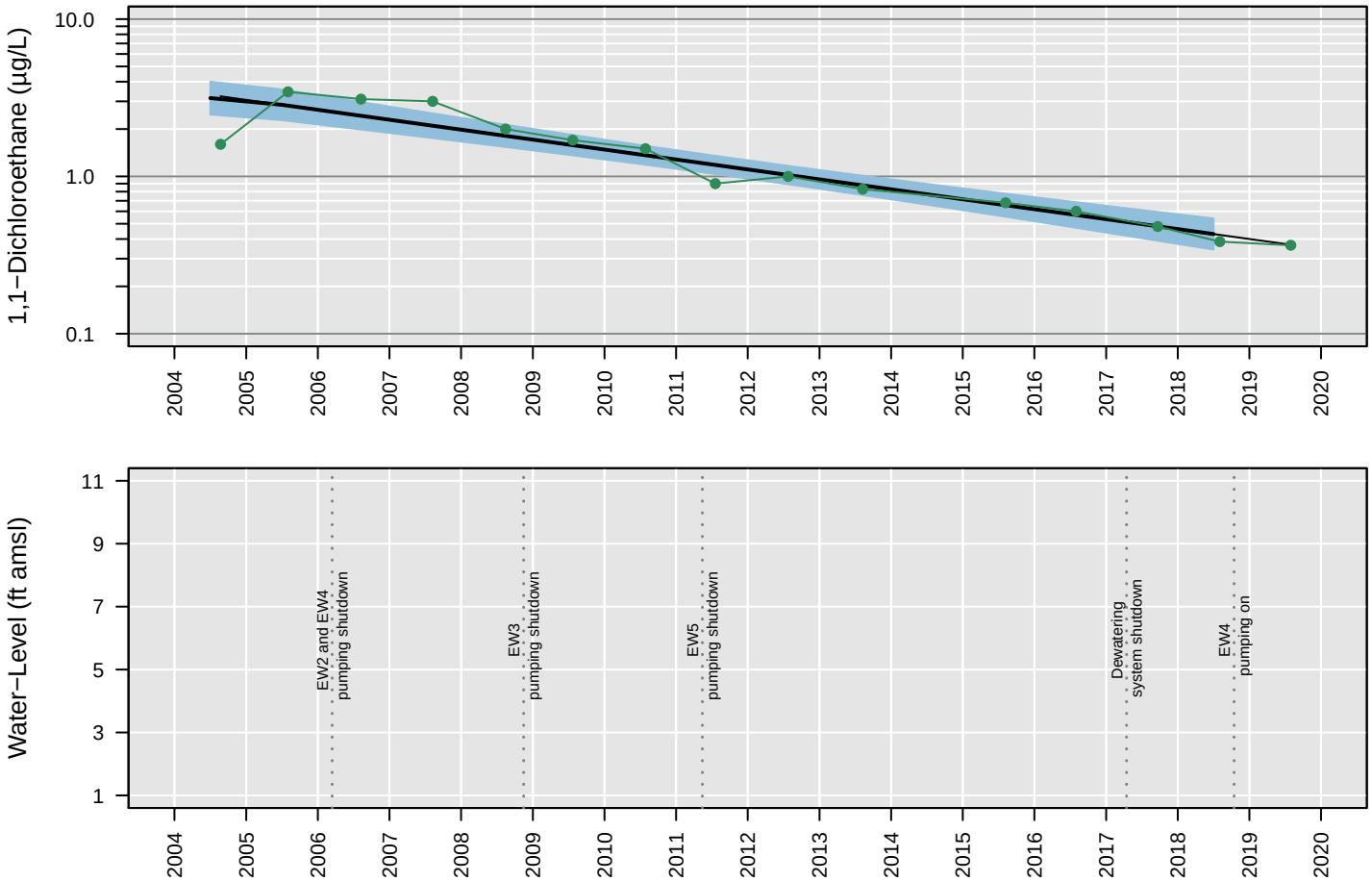


No Analysis Performed

GW65

1,1−Dichloroethane

Number of Comparisons: 15
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.0004 (+/− 0.000035)*Date + 6.2 (+/− 0.55)

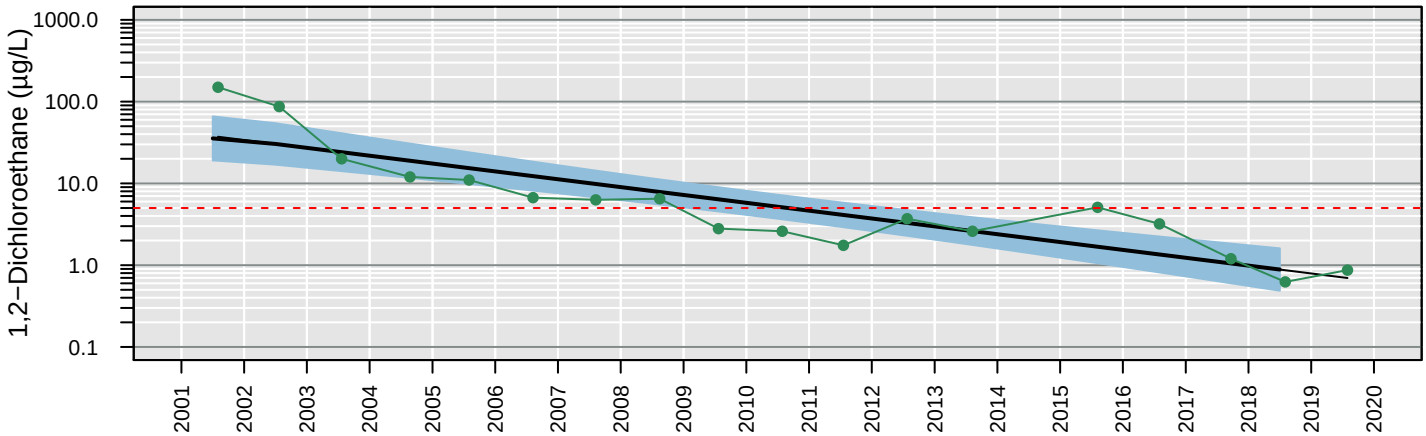
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.43 µg/L
UCL: 0.54 µg/L
LCL: 0.34 µg/L

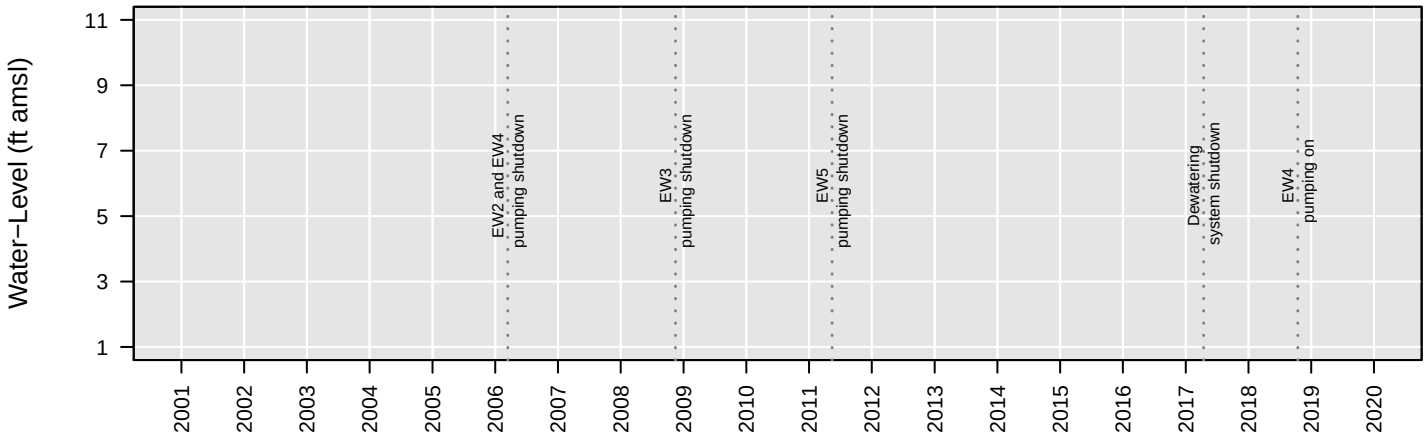
GW65

1,2−Dichloroethane

Number of Comparisons: 18
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00061 (+/− 0.000078)*Date + 11 (+/− 1.2)

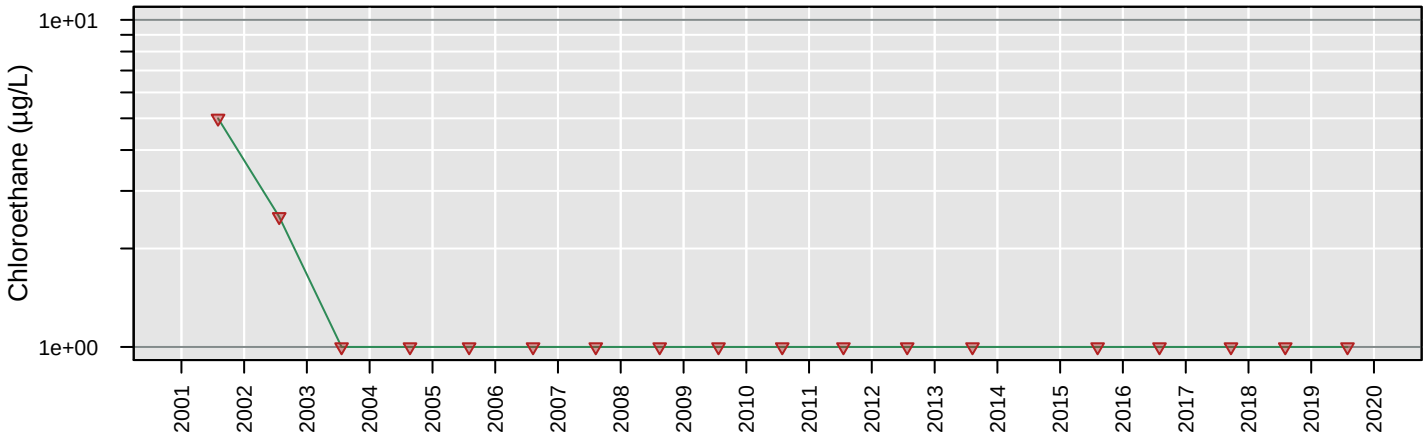
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.88 µg/L
UCL: 1.6 µg/L
LCL: 0.49 µg/L

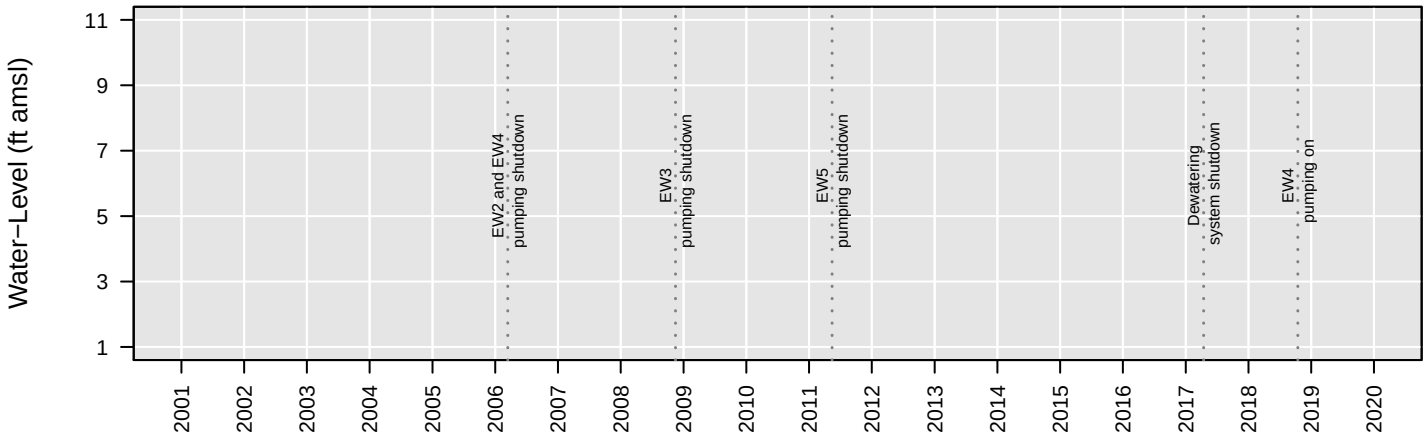
GW65

Chloroethane

Number of Comparisons: 18
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





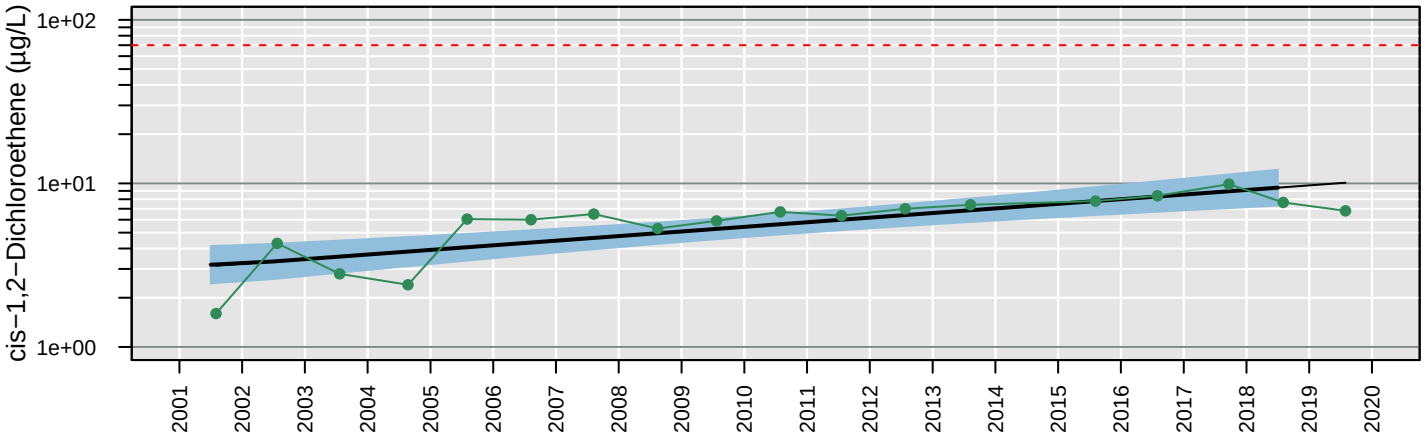
No Analysis Performed

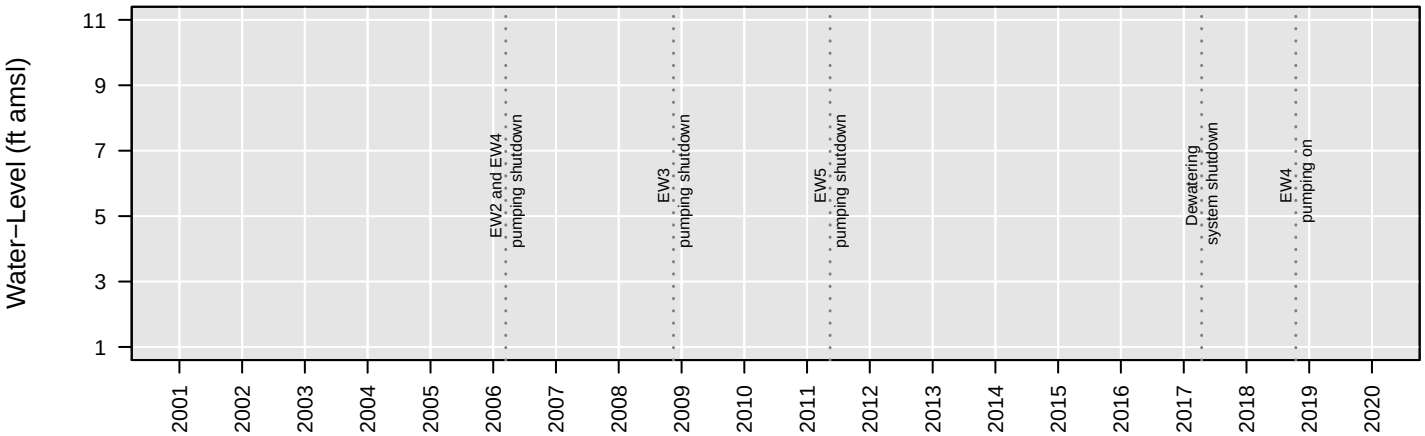
GW65

cis−1,2−Dichloroethene

Number of Comparisons: 18
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = 0.00018 (+/− 0.000033)*Date + −0.91 (+/− 0.49)

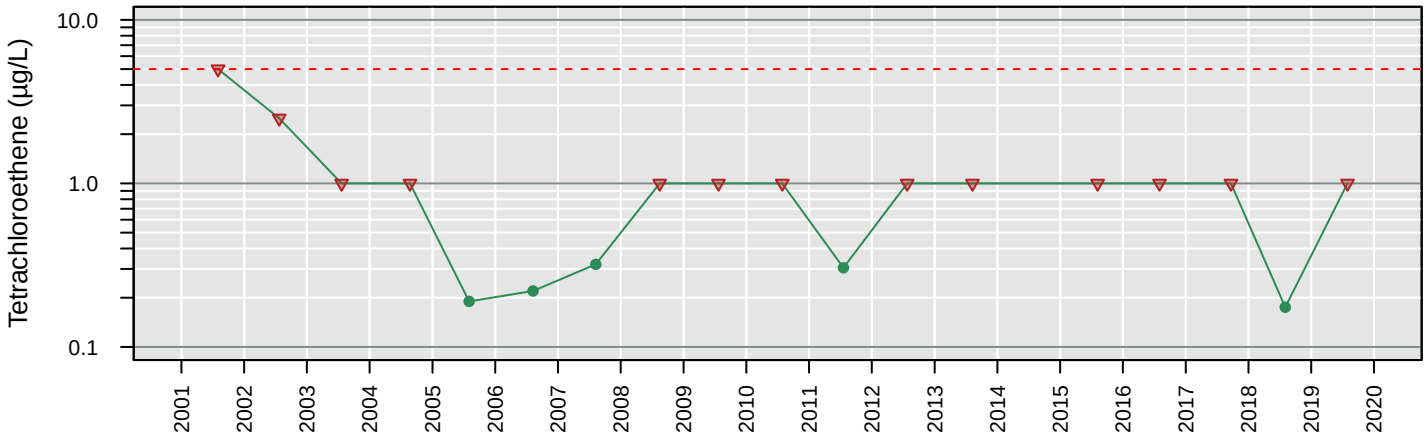
Regression Statistics for January 2018 to January 2019
Geometric Mean: 9.4 µg/L
UCL: 12 µg/L
LCL: 7.3 µg/L

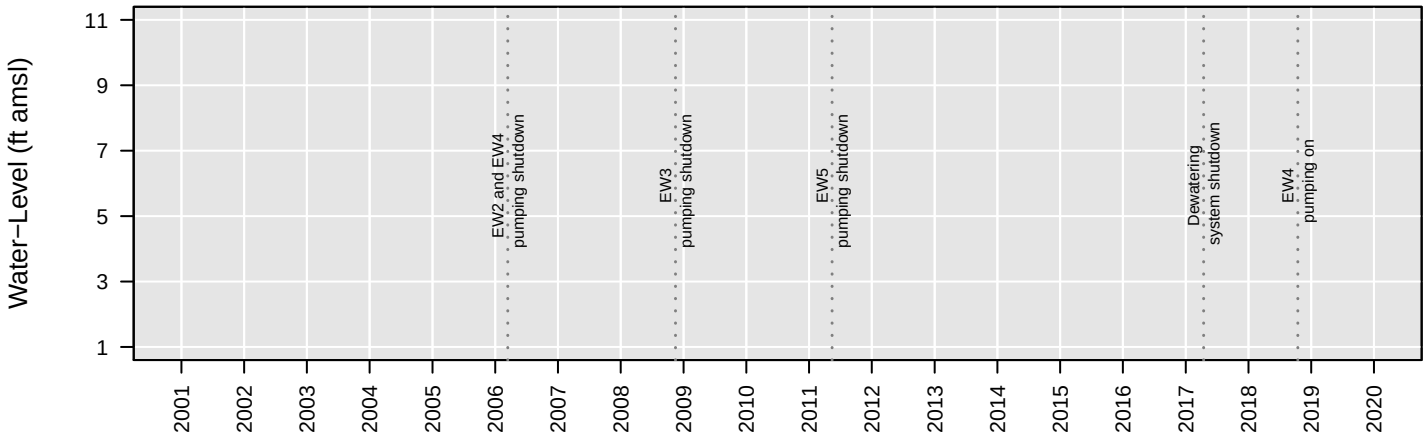
GW65

Tetrachloroethene

Number of Comparisons: 18
Percent NDs: 72%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



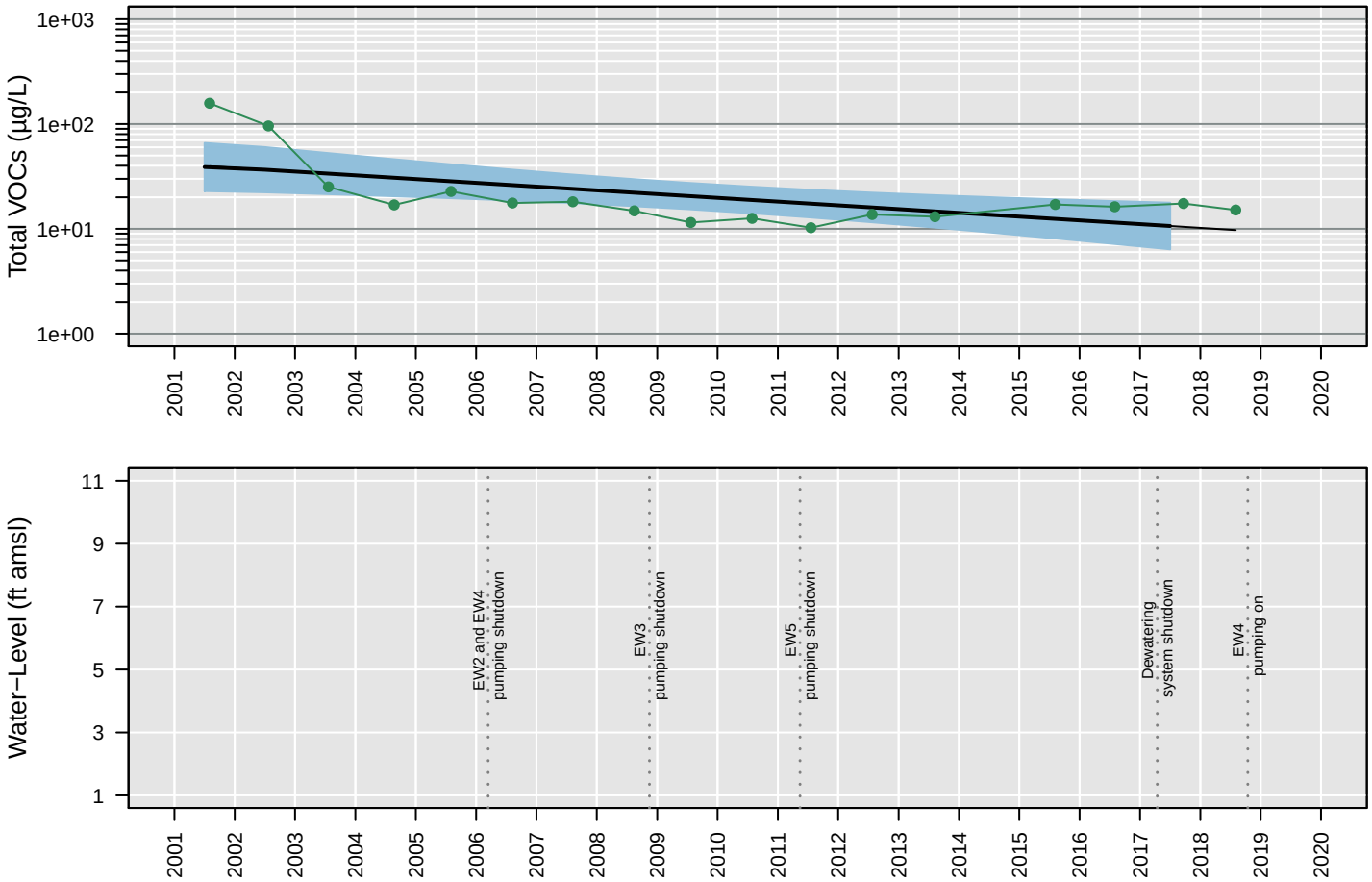


No Analysis Performed

GW65

Total VOCs

Number of Comparisons: 17
Percent NDs: 0%



Censored Regression (Tobit) Model

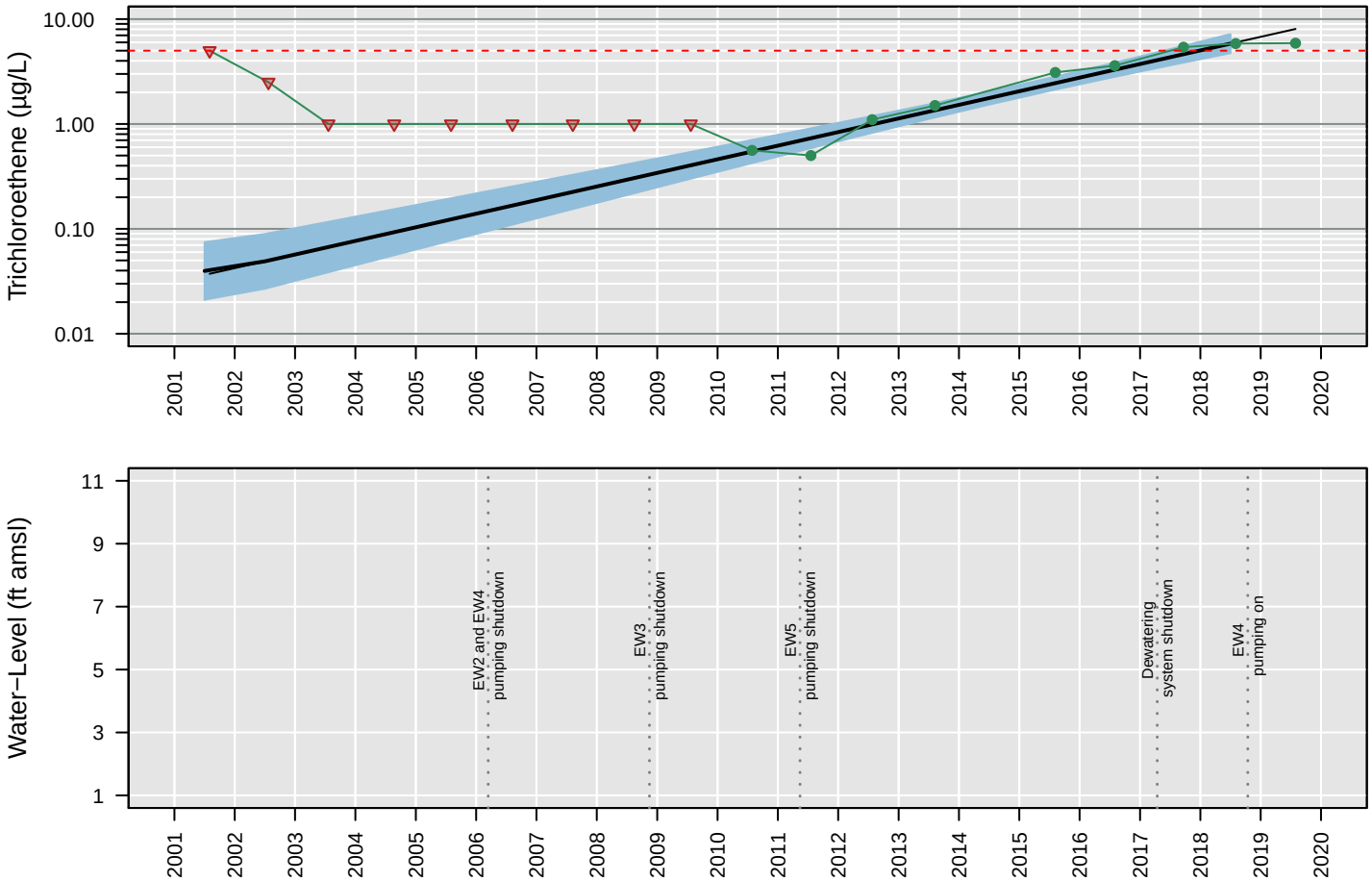
ln Conc. = −0.00023 (+/− 0.00007)*Date + 6.3 (+/− 1)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 11 µg/L
UCL: 18 µg/L
LCL: 6.4 µg/L

GW65

Trichloroethene

Number of Comparisons: 18
Percent NDs: 50%



Censored Regression (Tobit) Model

ln Conc. = 0.00082 (+/− 0.000059)*Date + −13 (+/− 0.98)

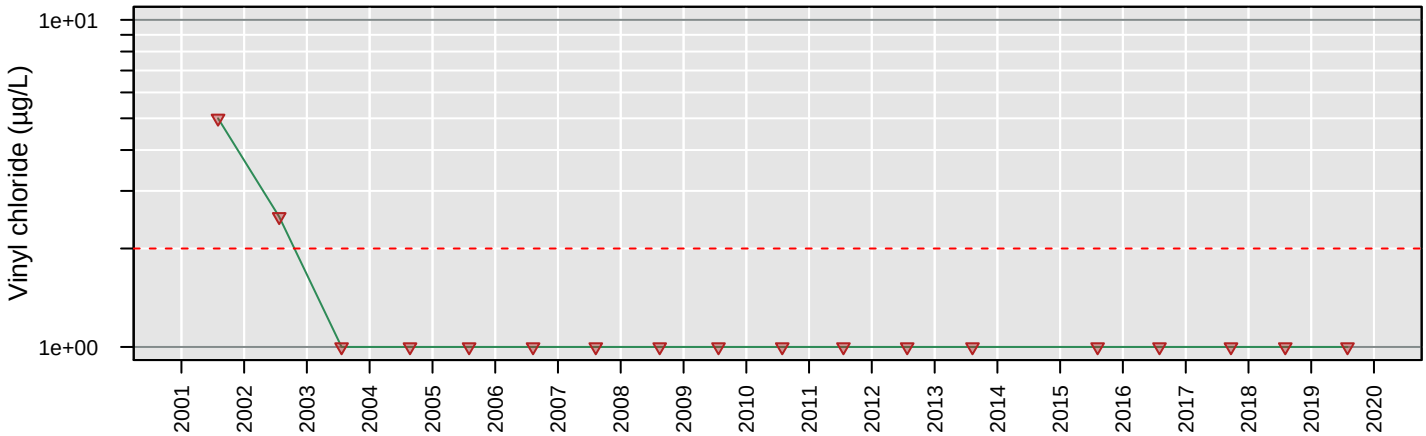
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.8 µg/L
UCL: 7.2 µg/L
LCL: 4.7 µg/L

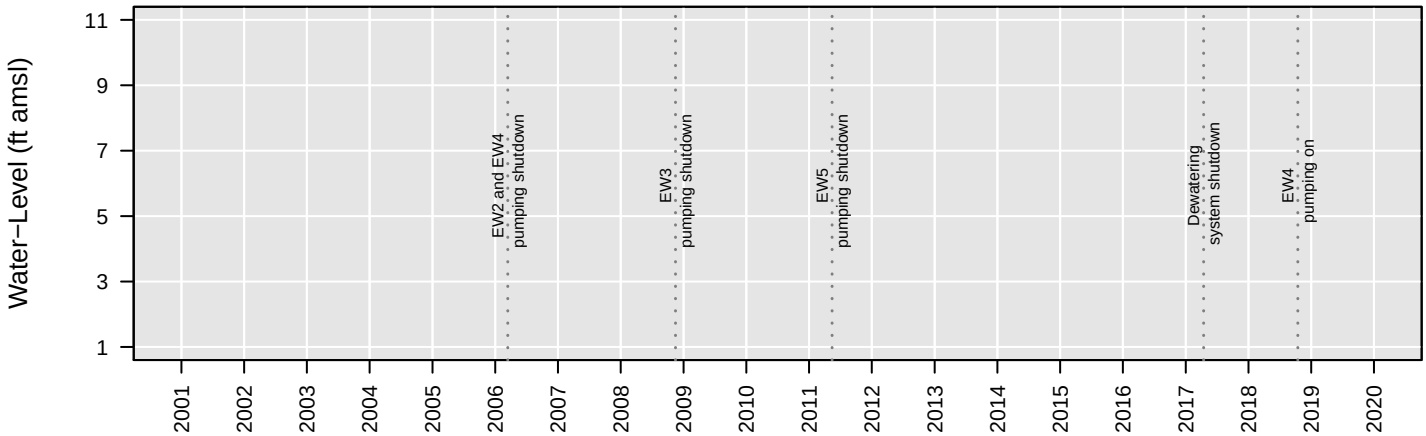
GW65

Vinyl chloride

Number of Comparisons: 18
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





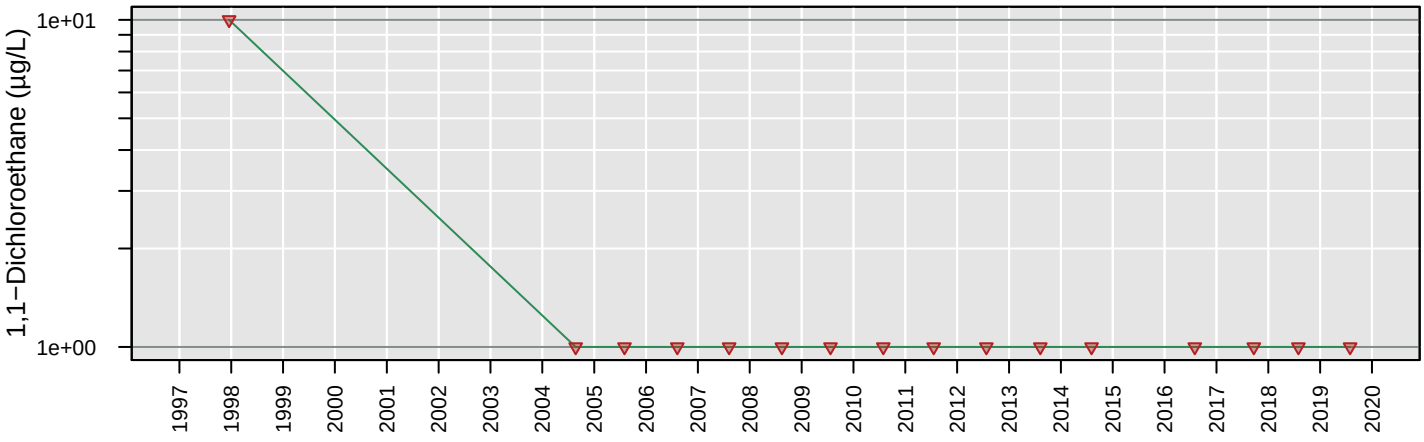
No Analysis Performed

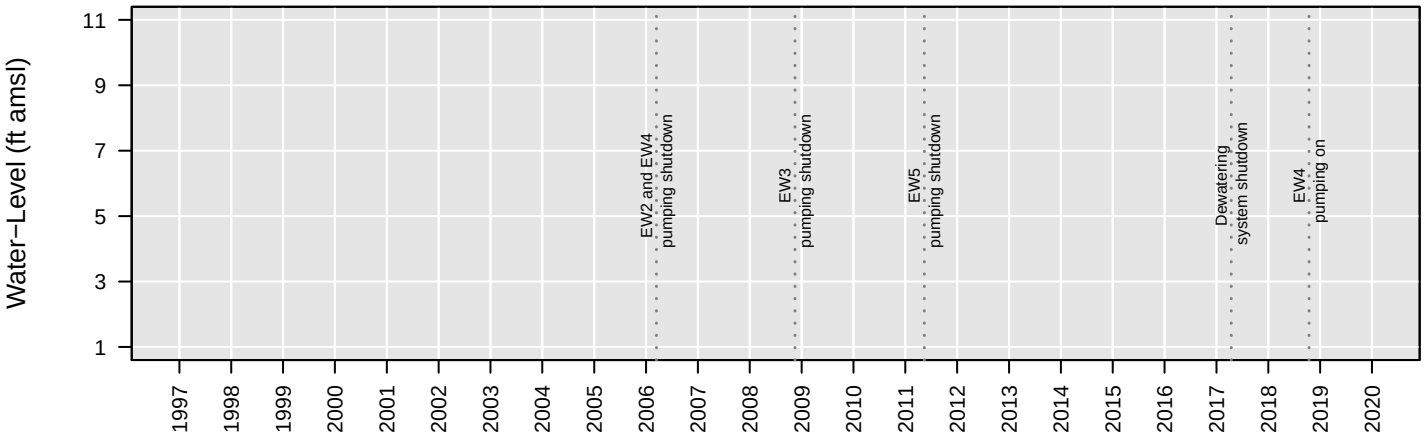
GW66

1,1−Dichloroethane

Number of Comparisons: 16
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





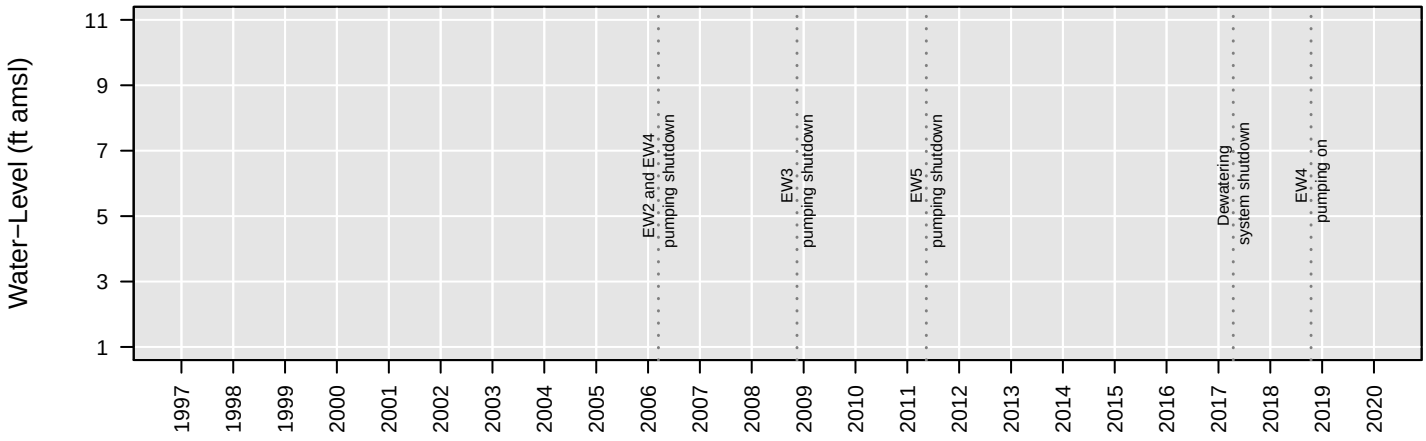
No Analysis Performed

GW66

1,2−Dichloroethane

Number of Comparisons: 23
Percent NDs: 78%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



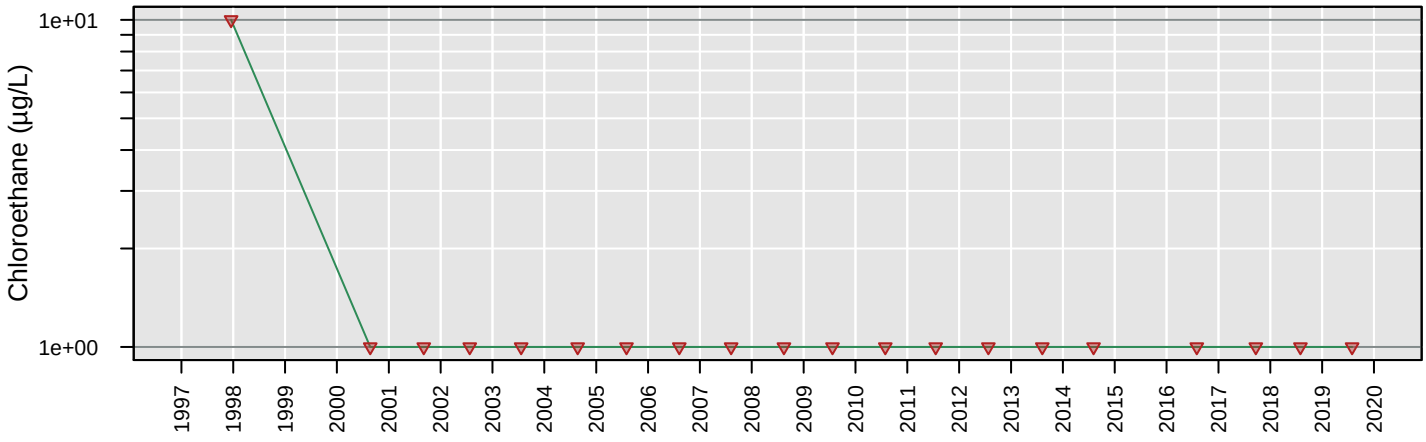
No Analysis Performed

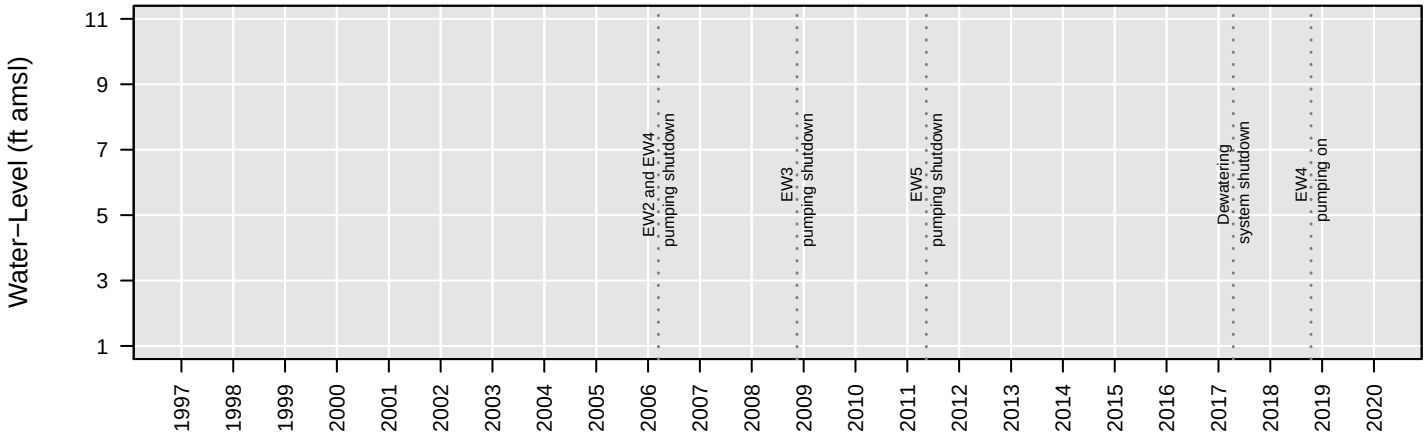
GW66

Chloroethane

Number of Comparisons: 20
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





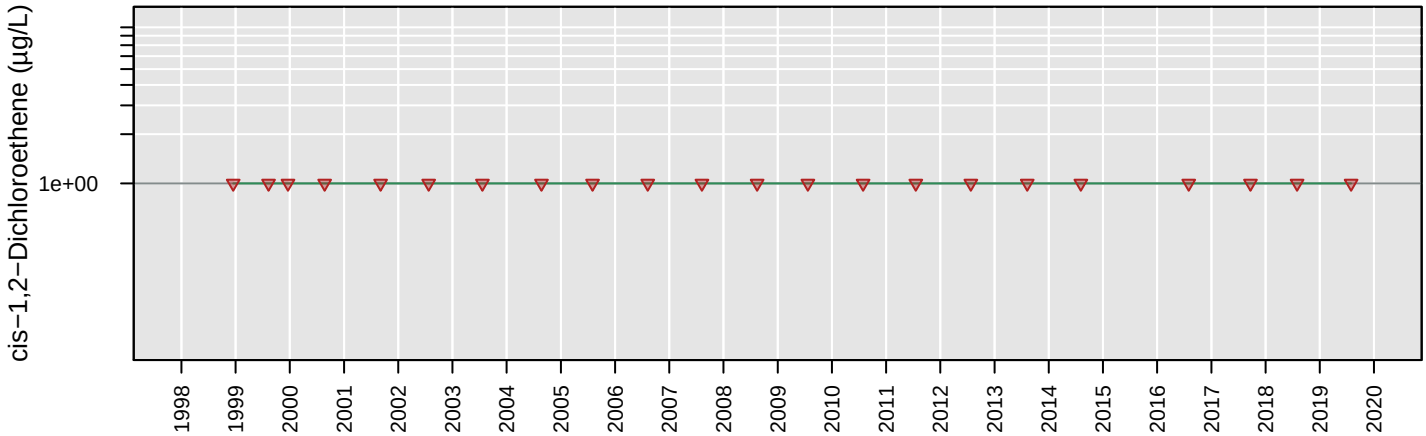
No Analysis Performed

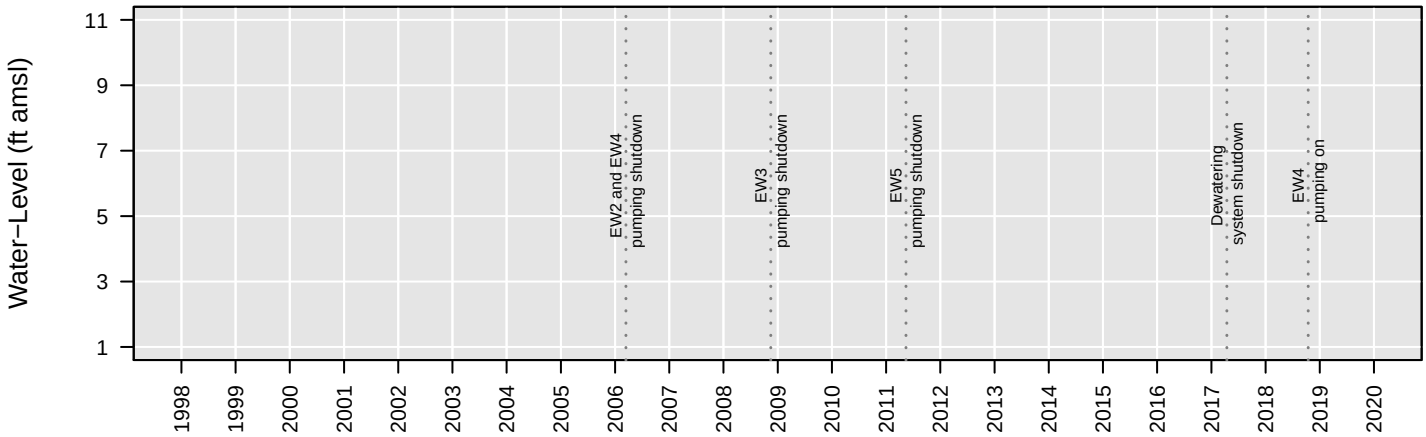
GW66

cis−1,2−Dichloroethene

Number of Comparisons: 22
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





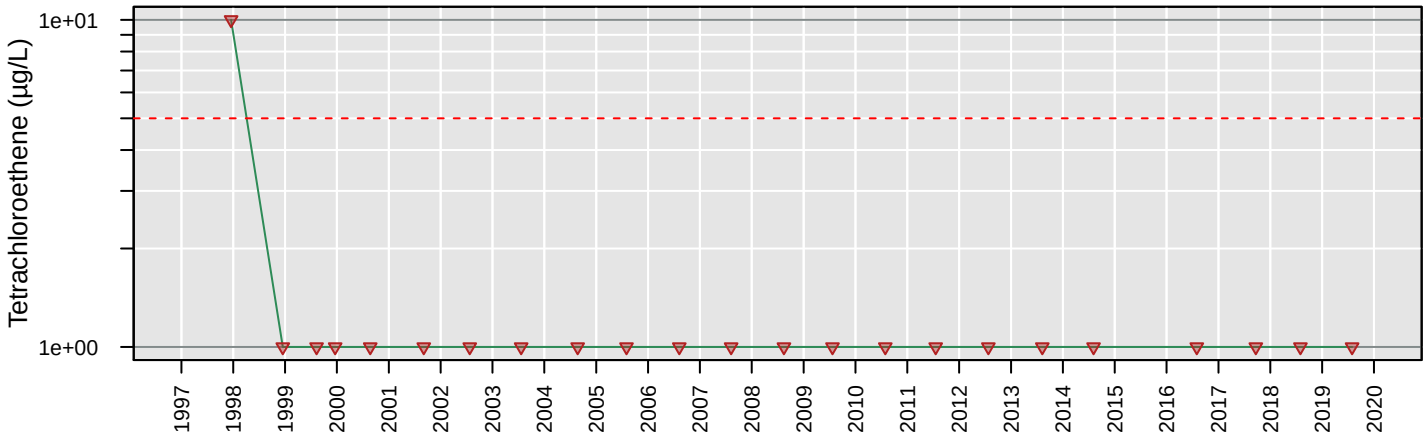
No Analysis Performed

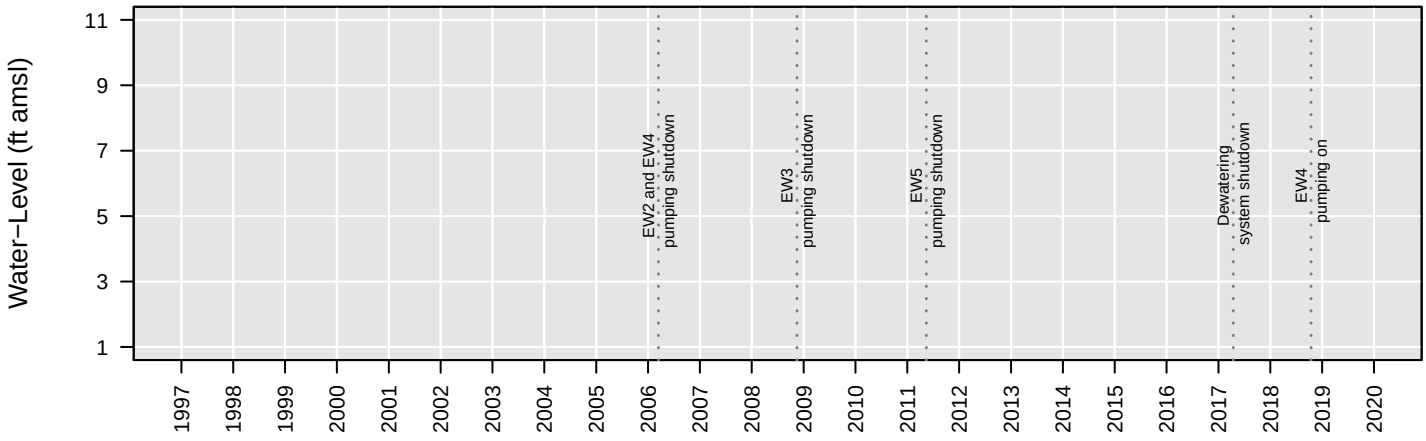
GW66

Tetrachloroethene

Number of Comparisons: 23
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





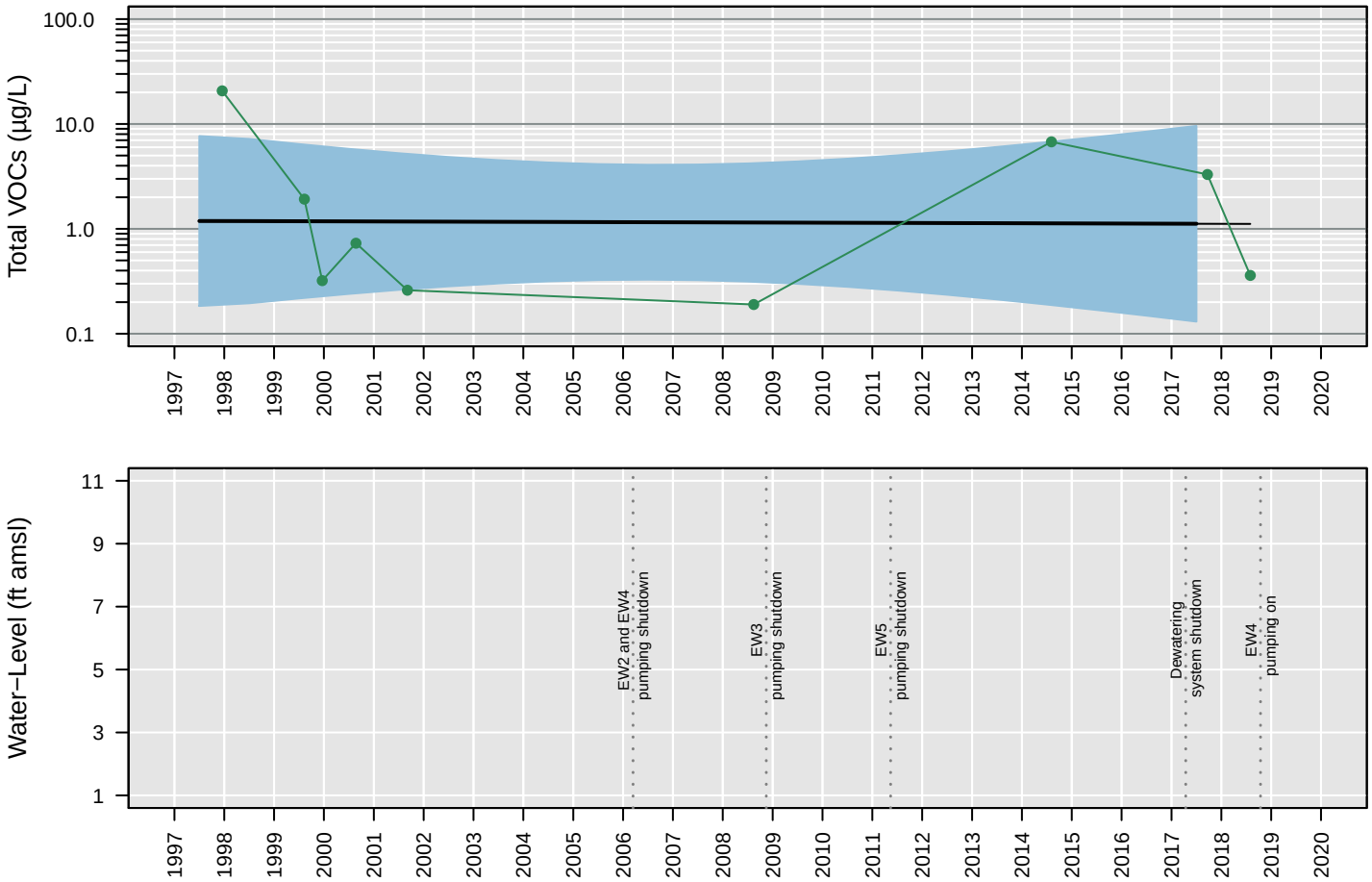
No Analysis Performed

GW66

Total VOCs

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

Trend Not Significant

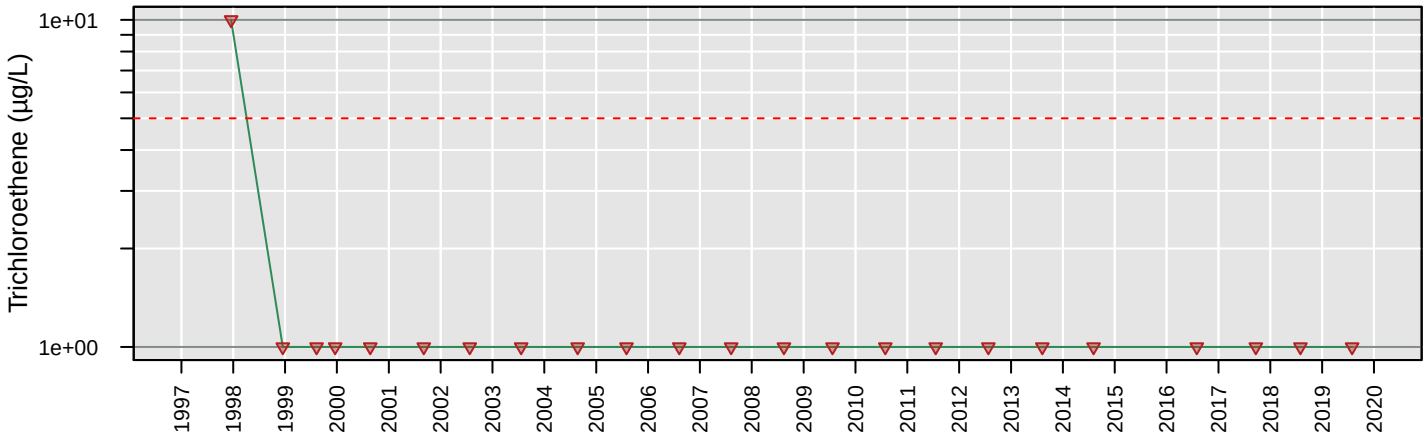
Regression Statistics for January 2017 to January 2018
Geometric Mean: 1.1 µg/L
UCL: 9.6 µg/L
LCL: 0.13 µg/L

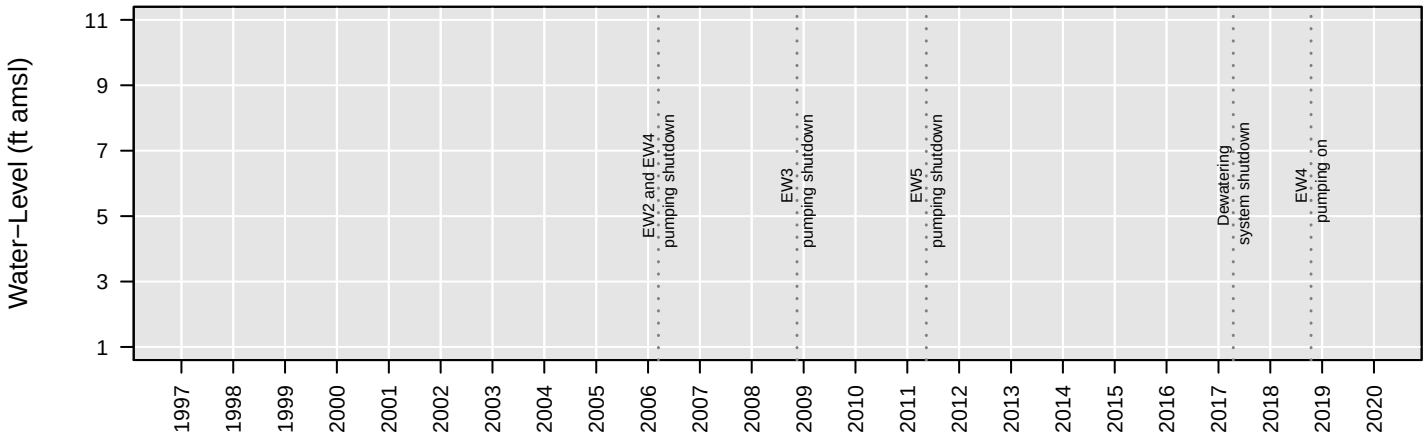
GW66

Trichloroethene

Number of Comparisons: 23
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





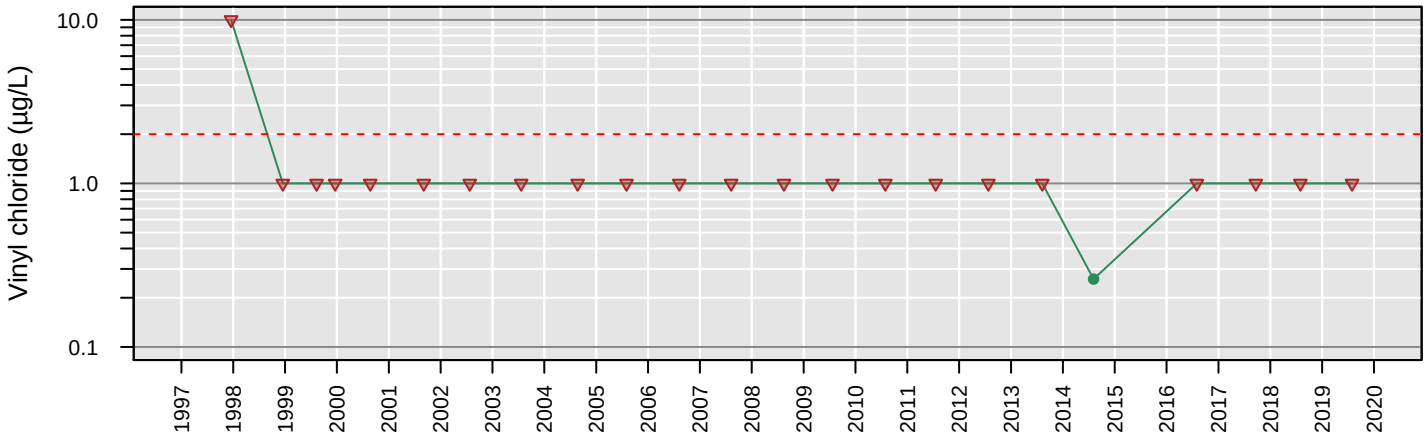
No Analysis Performed

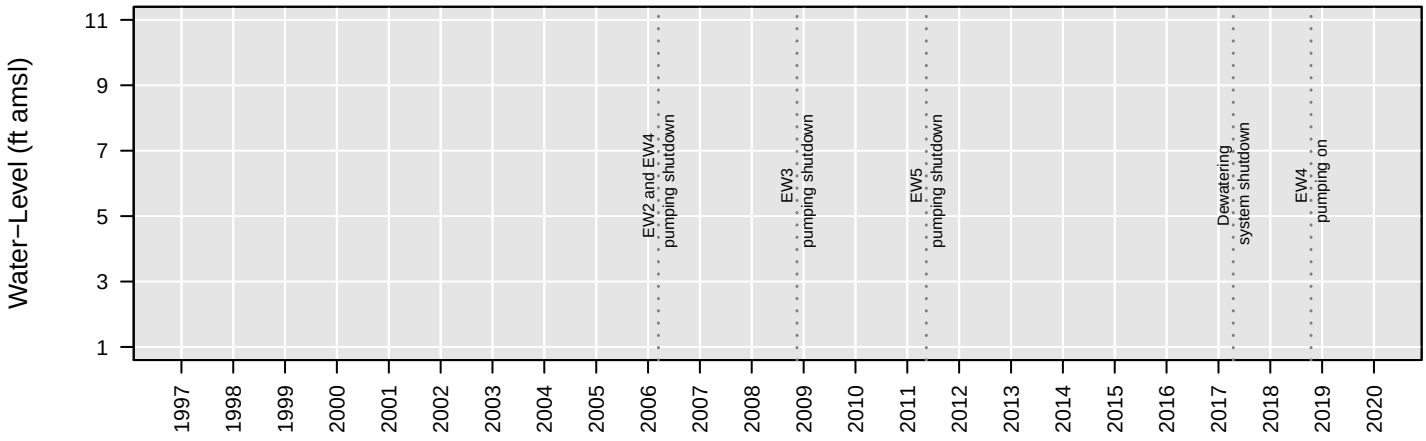
GW66

Vinyl chloride

Number of Comparisons: 23
Percent NDs: 96%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





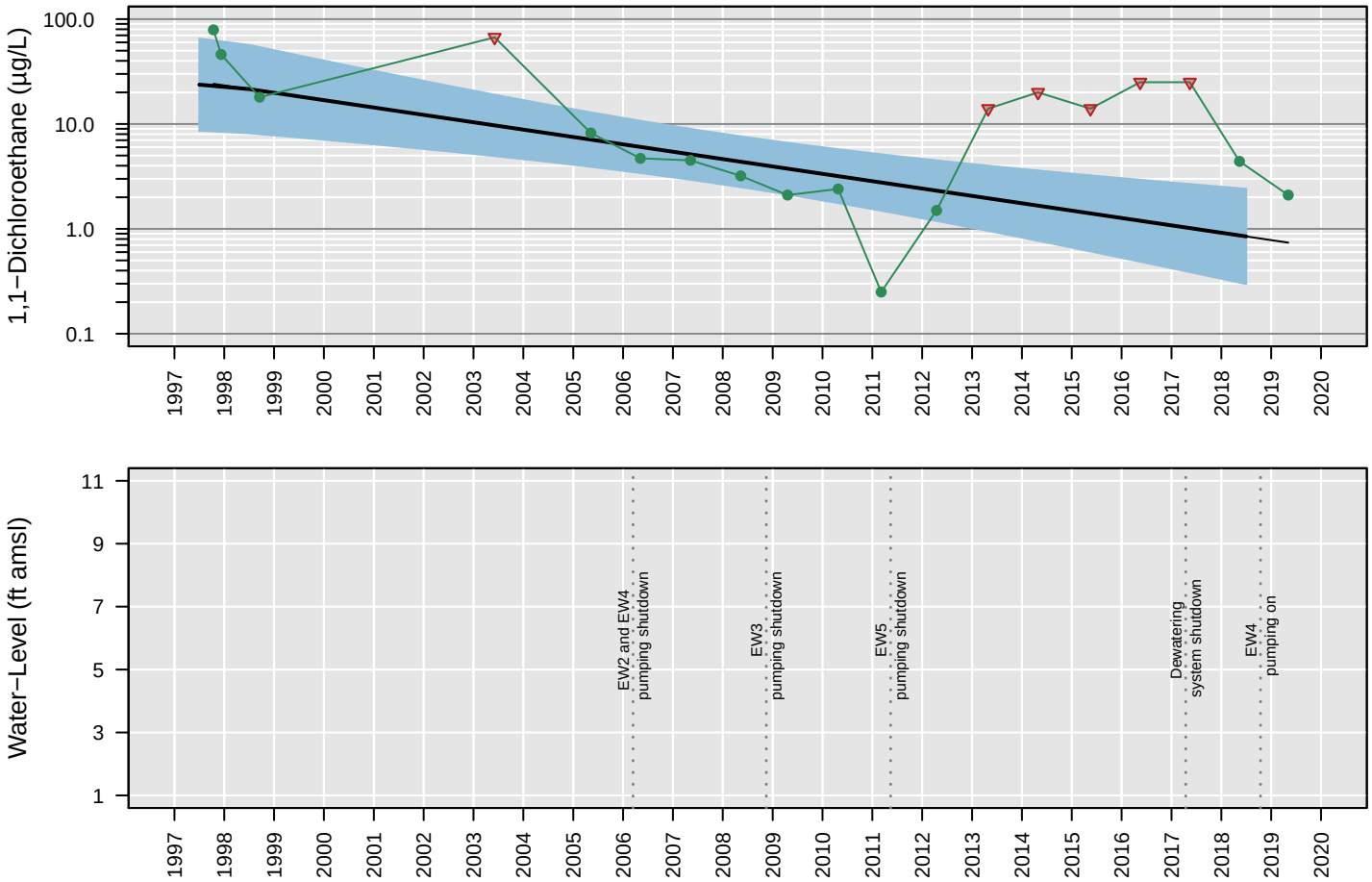
No Analysis Performed

Trend Calculations (All Data) - Lower Aquifer

EW1

1,1−Dichloroethane

Number of Comparisons: 19
Percent NDs: 32%



Censored Regression (Tobit) Model

ln Conc. = −0.00044 (+/− 0.00011)*Date + 7.7 (+/− 1.5)

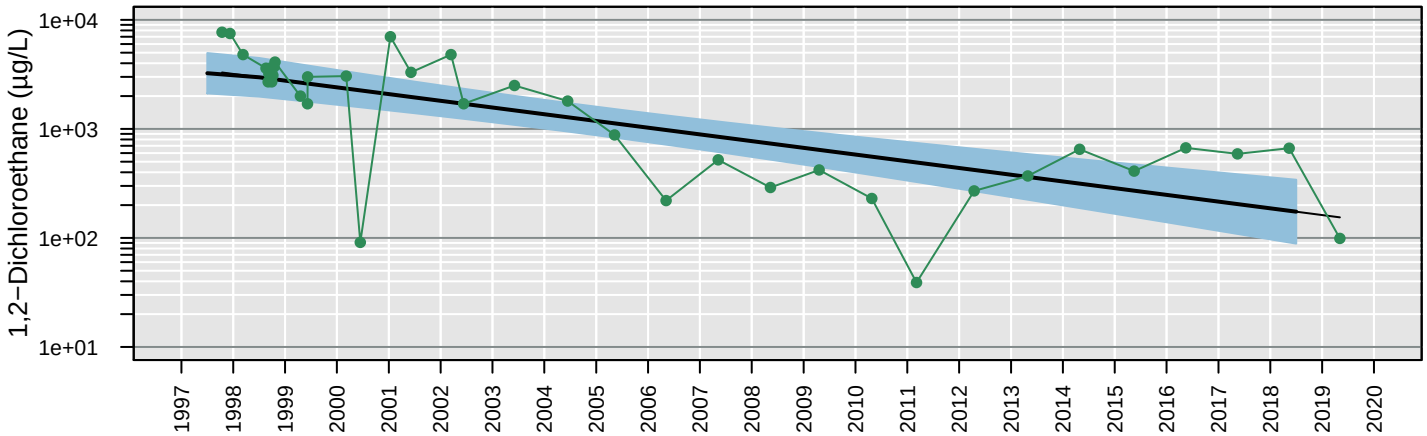
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.85 µg/L
UCL: 2.4 µg/L
LCL: 0.3 µg/L

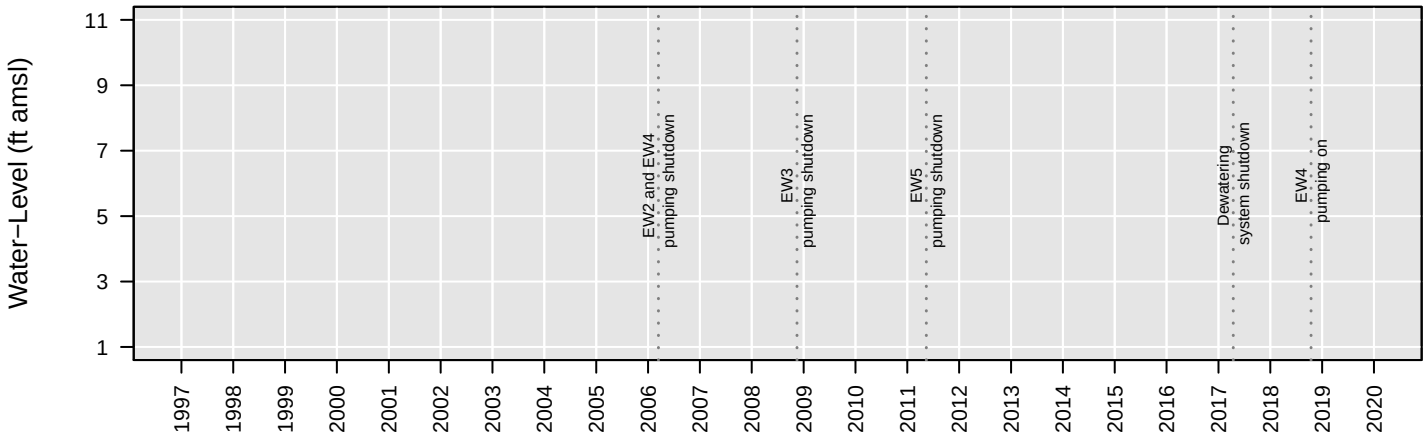
EW1

1,2−Dichloroethane

Number of Comparisons: 38
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

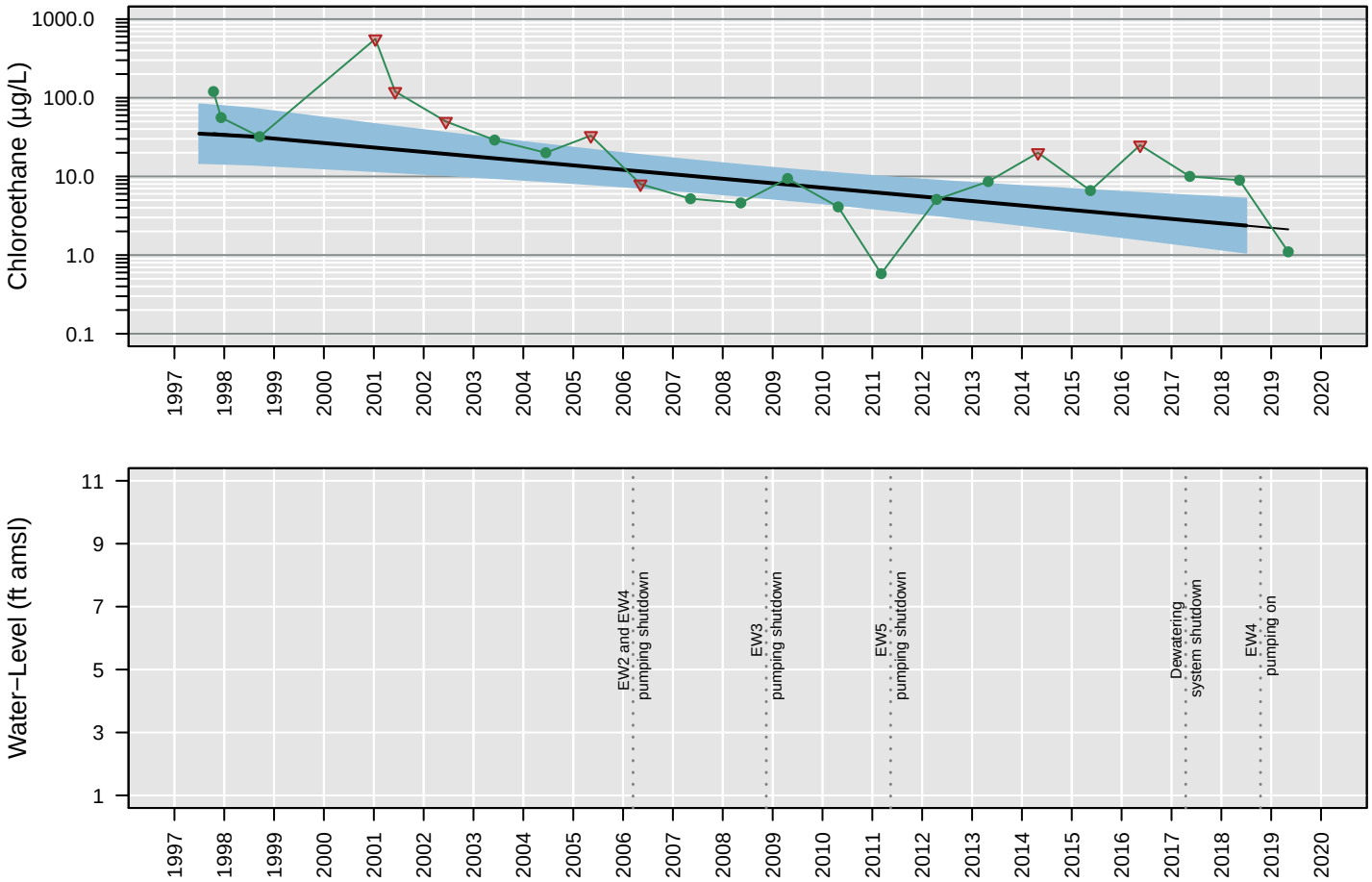
ln Conc. = −0.00039 (+/− 0.000059)*Date + 12 (+/− 0.77)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 170 µg/L
UCL: 340 µg/L
LCL: 89 µg/L

EW1

Chloroethane

Number of Comparisons: 23
Percent NDs: 30%



Censored Regression (Tobit) Model

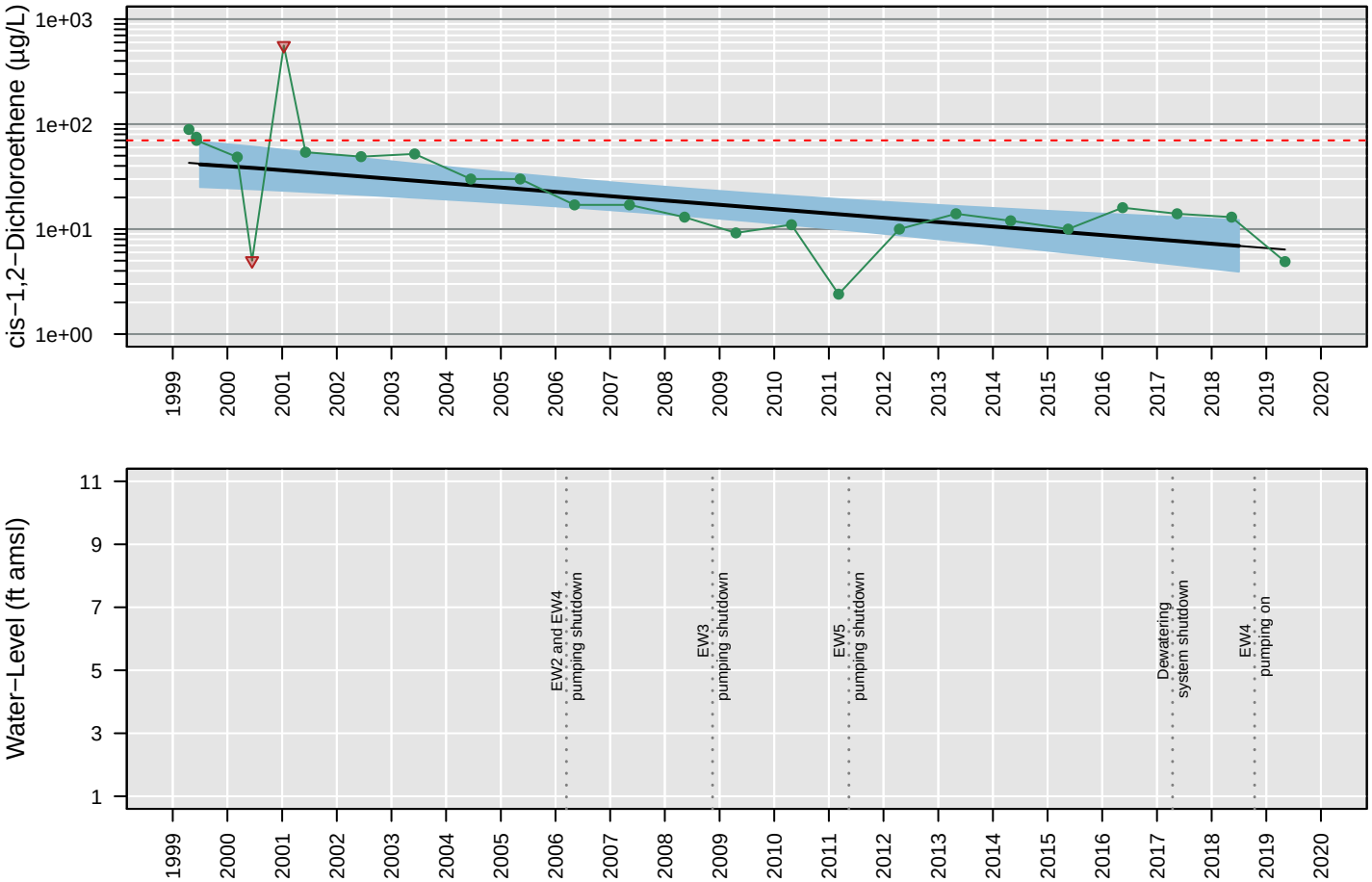
ln Conc. = −0.00036 (+/− 0.000088)*Date + 7.2 (+/− 1.3)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.4 µg/L
UCL: 5.2 µg/L
LCL: 1.1 µg/L

EW1

cis−1,2−Dichloroethene

Number of Comparisons: 25
Percent NDs: 8%



Censored Regression (Tobit) Model

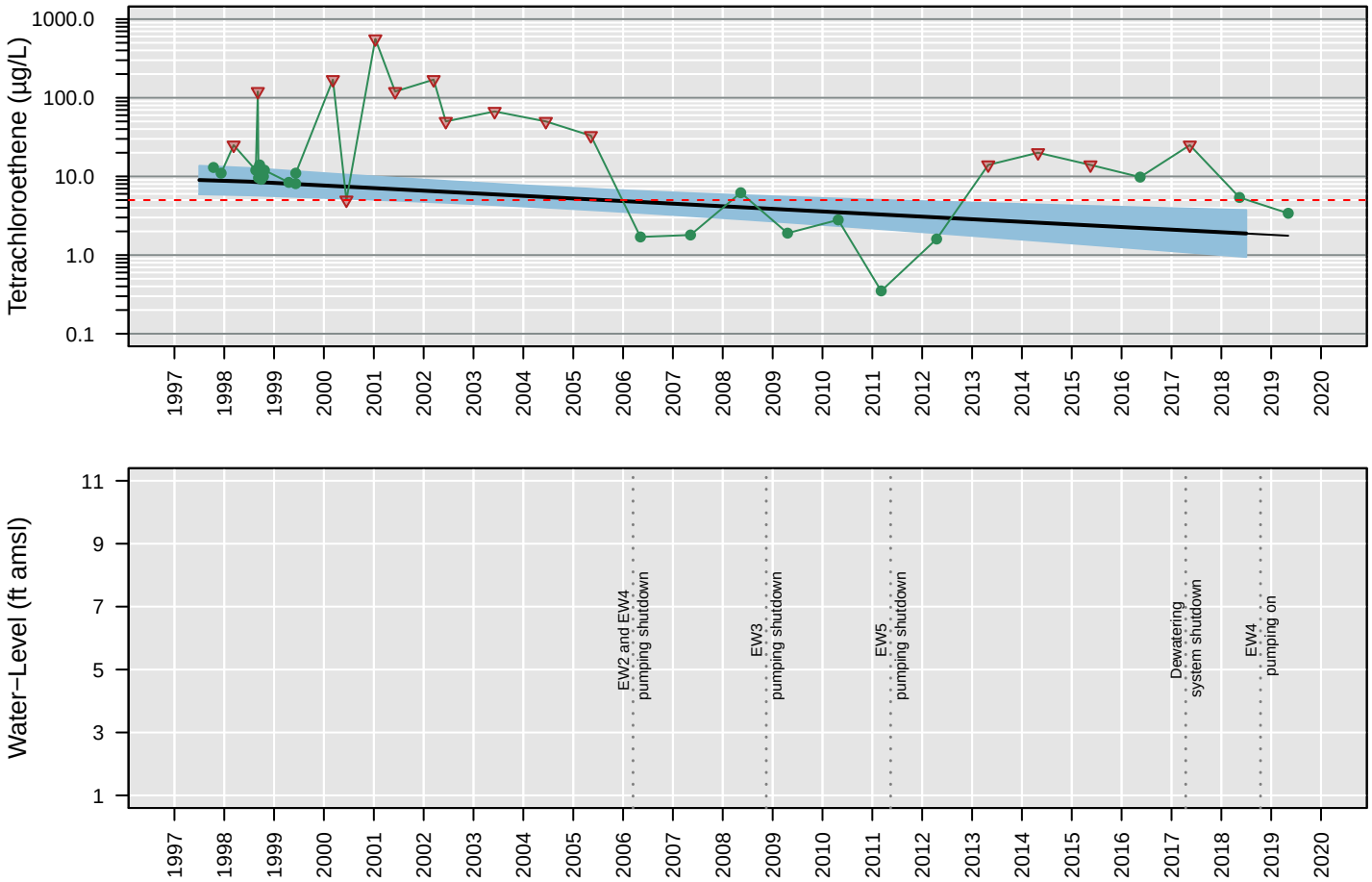
ln Conc. = −0.00026 (+/− 0.000061)*Date + 6.5 (+/− 0.87)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 6.9 µg/L
UCL: 12 µg/L
LCL: 3.9 µg/L

EW1

Tetrachloroethene

Number of Comparisons: 38
Percent NDs: 39%



Censored Regression (Tobit) Model

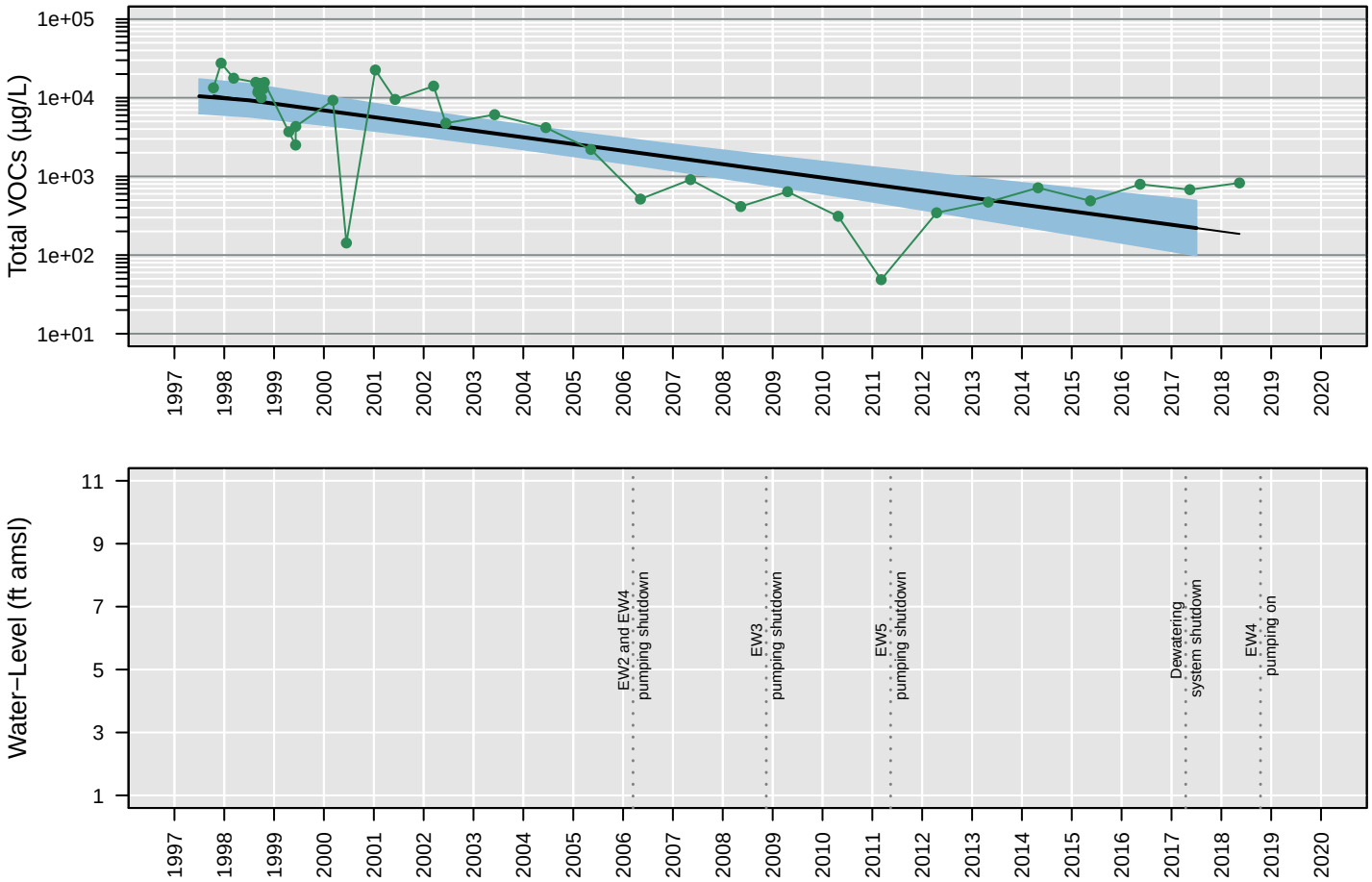
ln Conc. = −0.00021 (+/− 0.000059)*Date + 4.3 (+/− 0.75)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.9 µg/L
UCL: 3.7 µg/L
LCL: 0.95 µg/L

EW1

Total VOCs

Number of Comparisons: 37
Percent NDs: 0%



Censored Regression (Tobit) Model

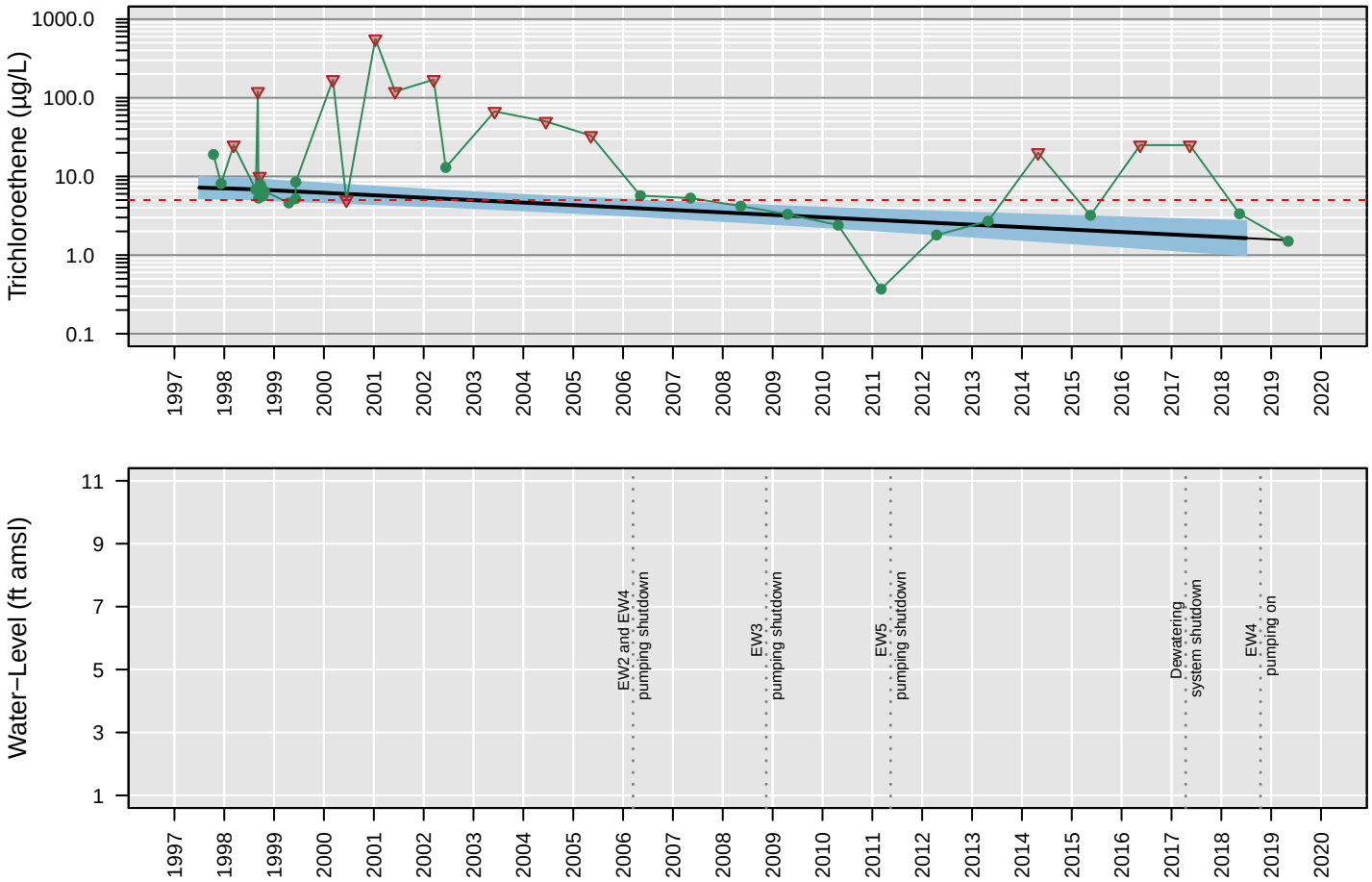
ln Conc. = −0.00054 (+/− 0.000074)*Date + 15 (+/− 0.94)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 220 µg/L
UCL: 490 µg/L
LCL: 99 µg/L

EW1

Trichloroethene

Number of Comparisons: 38
Percent NDs: 37%



Censored Regression (Tobit) Model

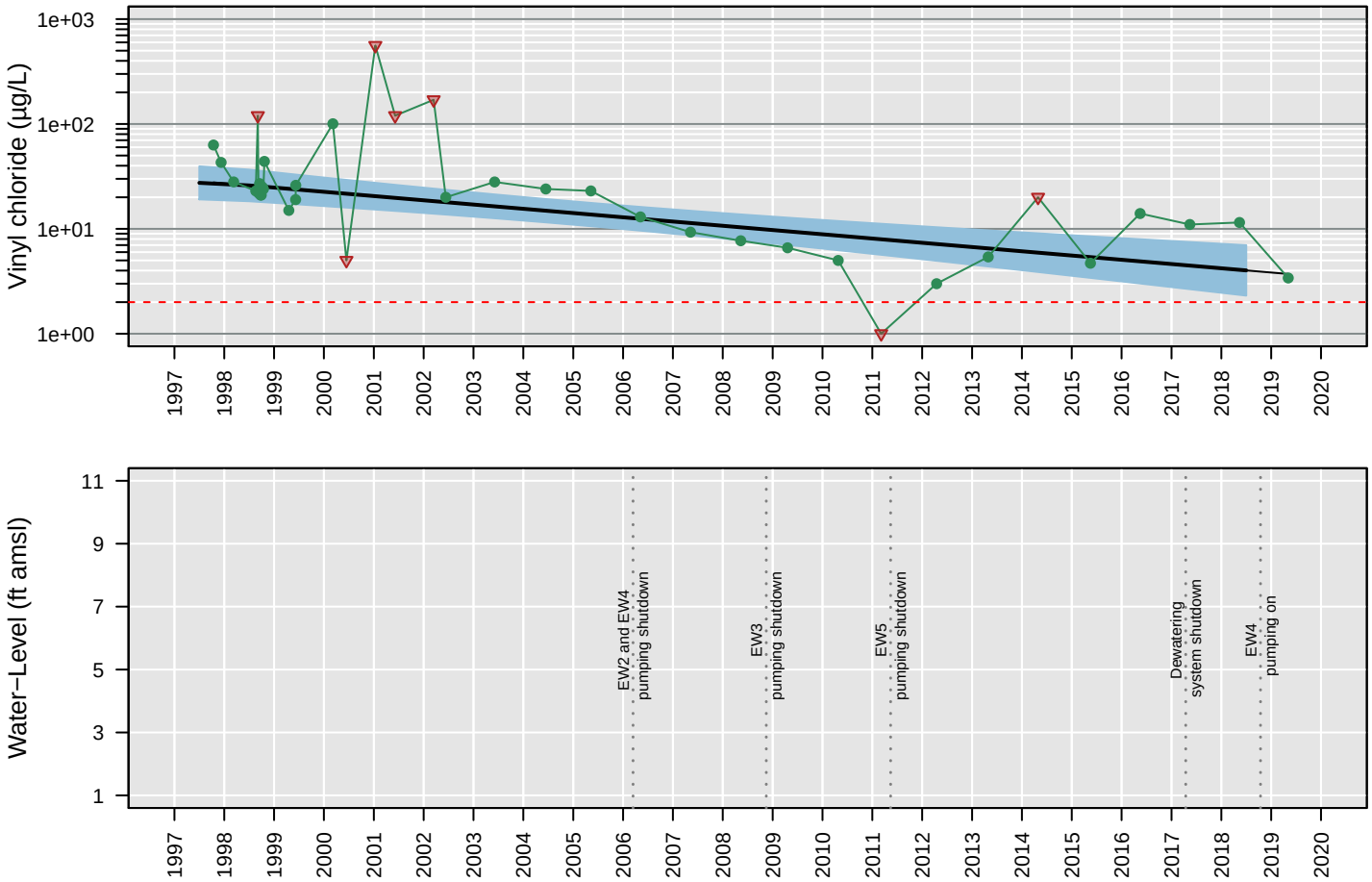
ln Conc. = −0.0002 (+/− 0.000043)*Date + 4 (+/− 0.56)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.6 µg/L
UCL: 2.7 µg/L
LCL: 1 µg/L

EW1

Vinyl chloride

Number of Comparisons: 38
Percent NDs: 18%



Censored Regression (Tobit) Model

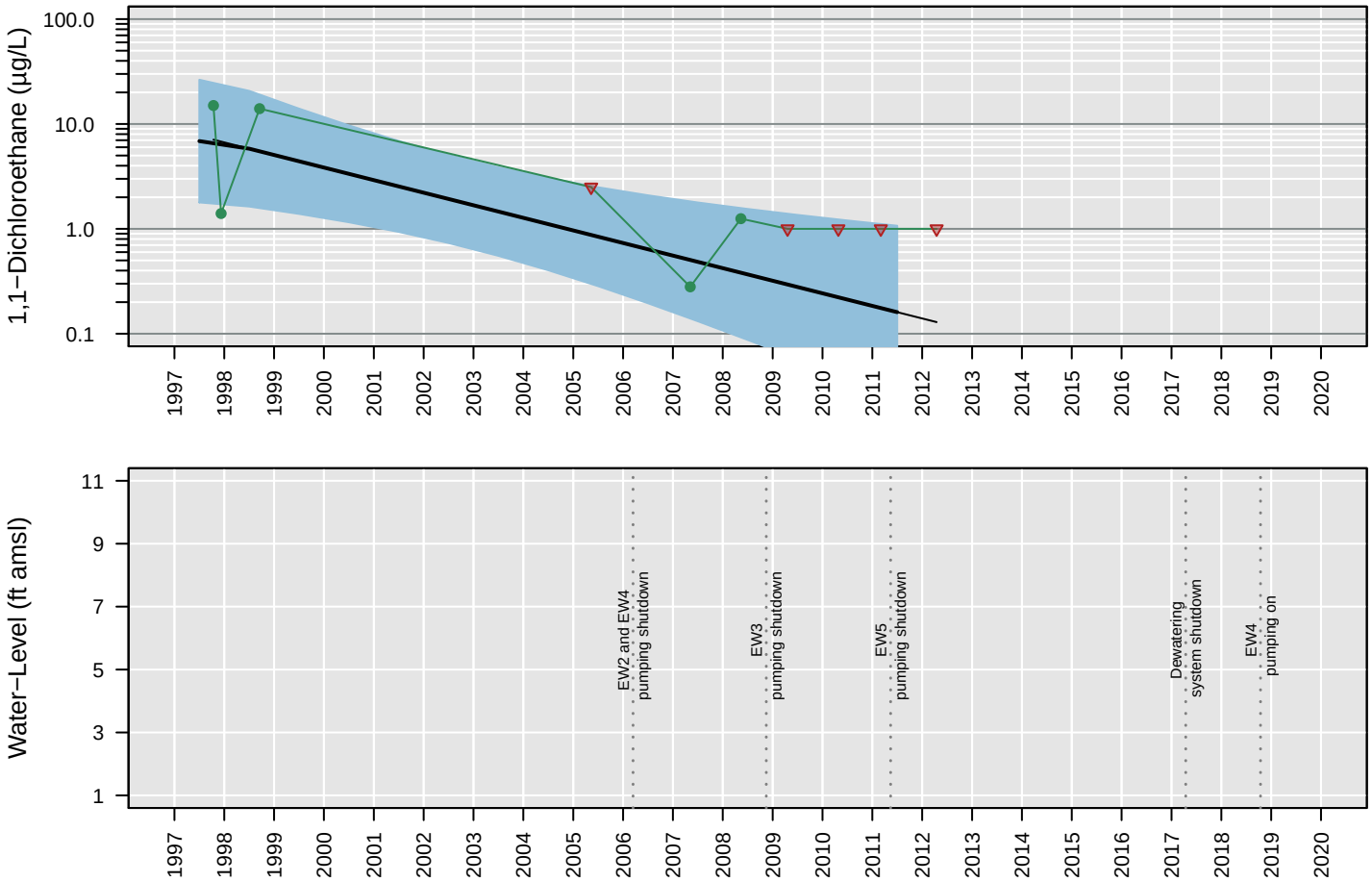
ln Conc. = −0.00026 (+/− 0.000049)*Date + 5.9 (+/− 0.64)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 4 µg/L
UCL: 7 µg/L
LCL: 2.3 µg/L

EW2

1,1−Dichloroethane

Number of Comparisons: 10
Percent NDs: 50%



Censored Regression (Tobit) Model

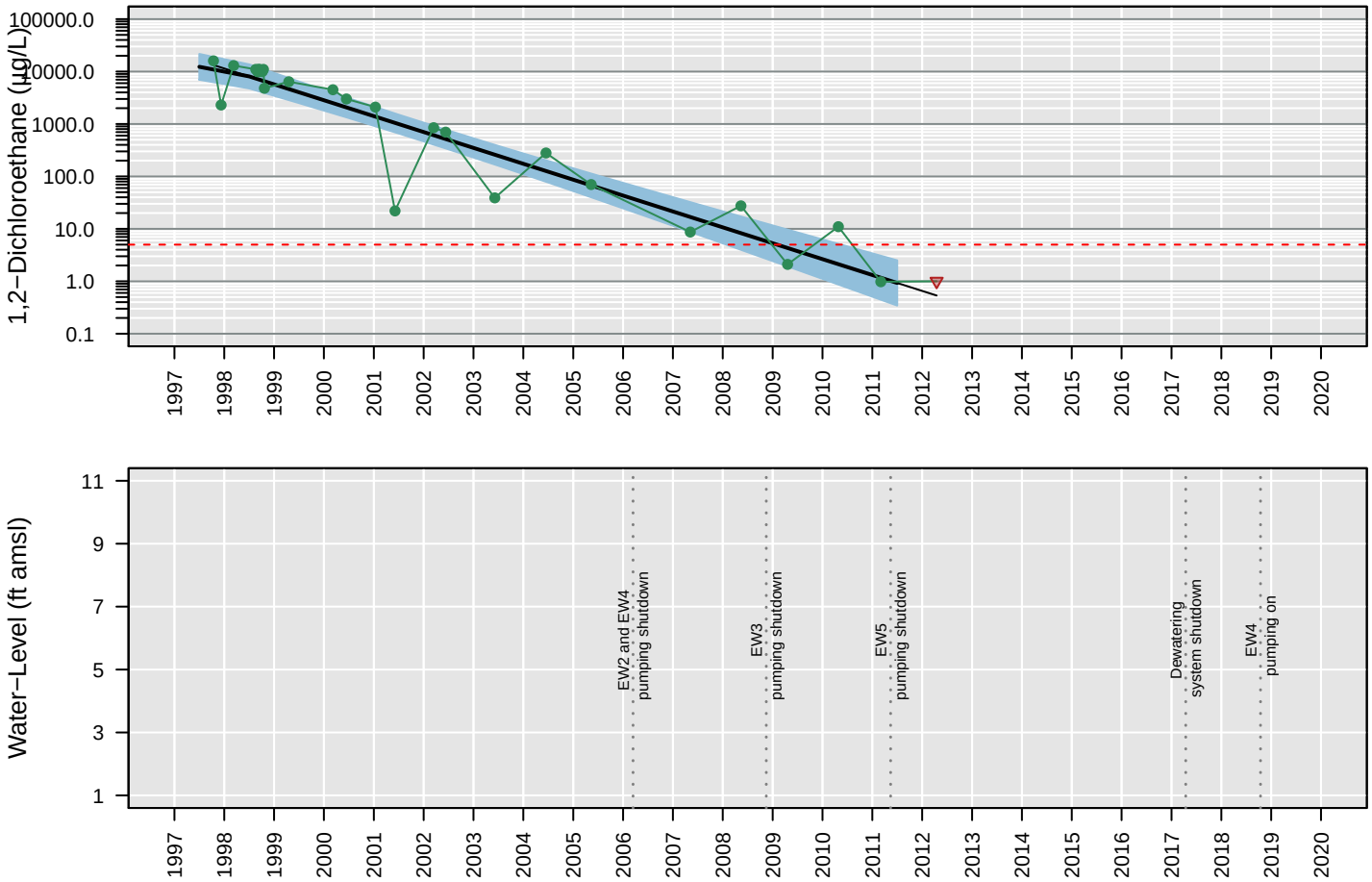
ln Conc. = −0.00076 (+/− 0.00022)*Date + 9.6 (+/− 2.7)

Regression Statistics for January 2011 to January 2012
Geometric Mean: 0.16 µg/L
UCL: 1.1 µg/L
LCL: 0.024 µg/L

EW2

1,2−Dichloroethane

Number of Comparisons: 28
Percent NDs: 4%



Censored Regression (Tobit) Model

ln Conc. = −0.0019 (+/− 0.00013)*Date + 29 (+/− 1.5)

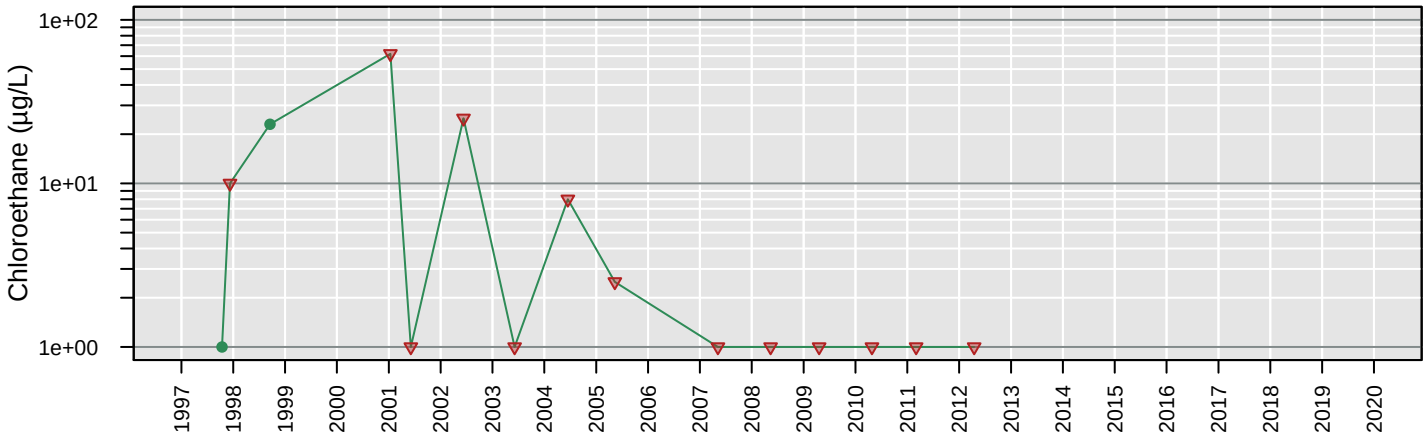
Regression Statistics for January 2011 to January 2012
Geometric Mean: 0.93 µg/L
UCL: 2.5 µg/L
LCL: 0.34 µg/L

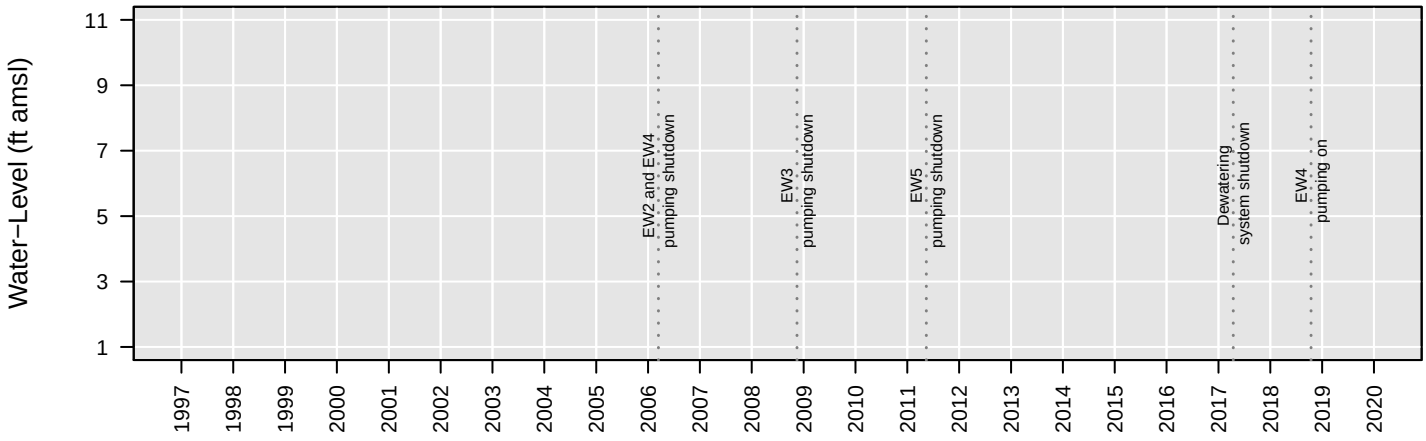
EW2

Chloroethane

Number of Comparisons: 15
Percent NDs: 87%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



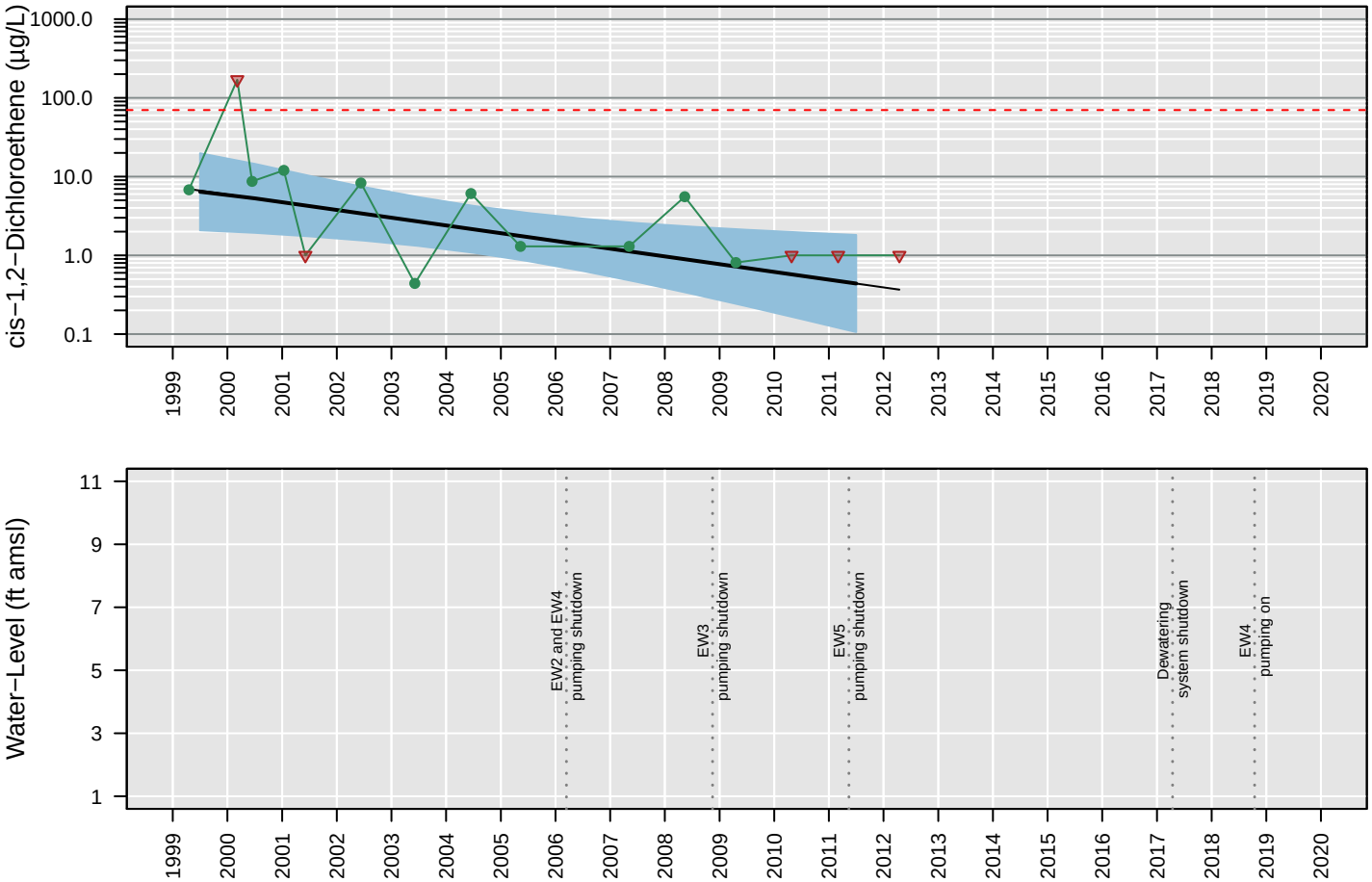


No Analysis Performed

EW2

cis−1,2−Dichloroethene

Number of Comparisons: 15
Percent NDs: 33%



Censored Regression (Tobit) Model

ln Conc. = −0.00062 (+/− 0.00023)*Date + 8.6 (+/− 2.9)

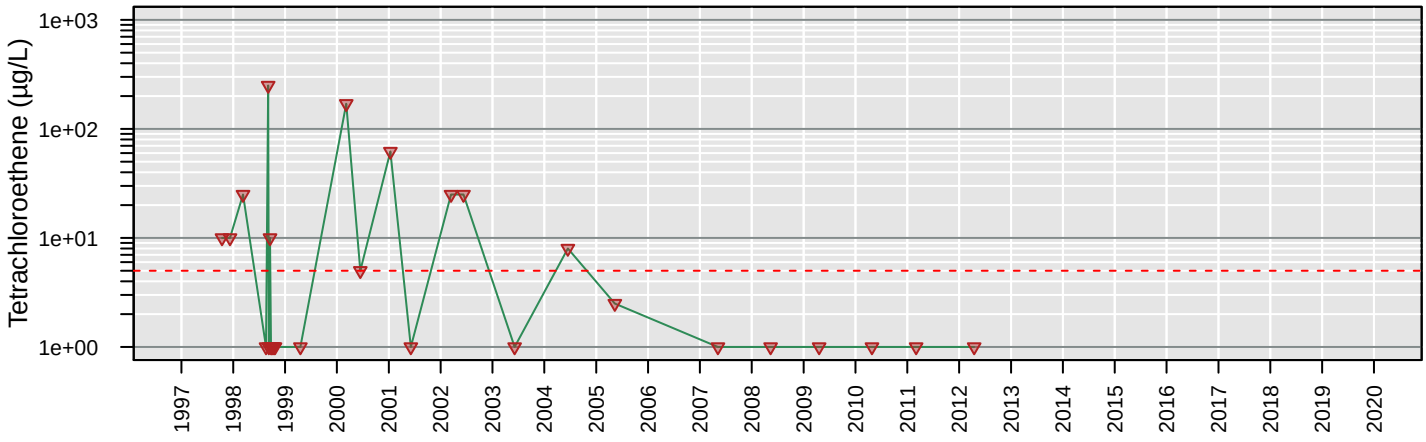
Regression Statistics for January 2011 to January 2012
Geometric Mean: 0.44 µg/L
UCL: 1.8 µg/L
LCL: 0.11 µg/L

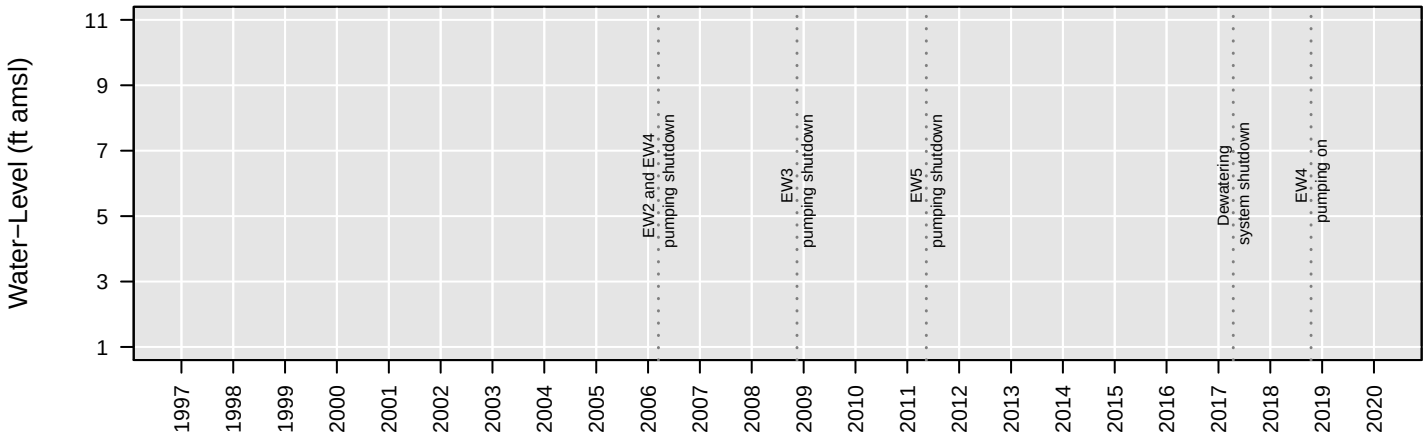
EW2

Tetrachloroethene

Number of Comparisons: 28
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



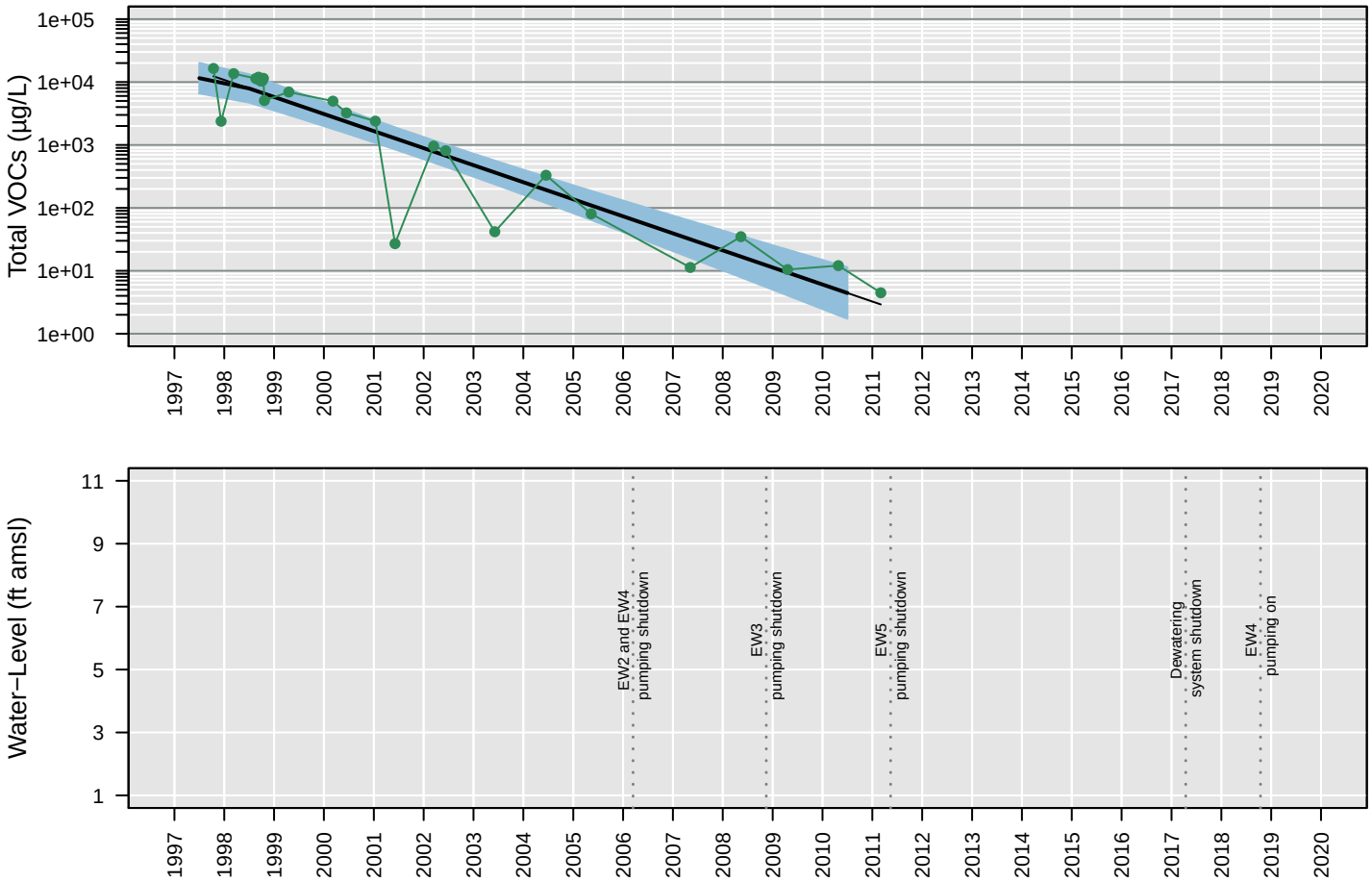


No Analysis Performed

EW2

Total VOCs

Number of Comparisons: 27
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.0017 (+/− 0.00013)*Date + 27 (+/− 1.5)

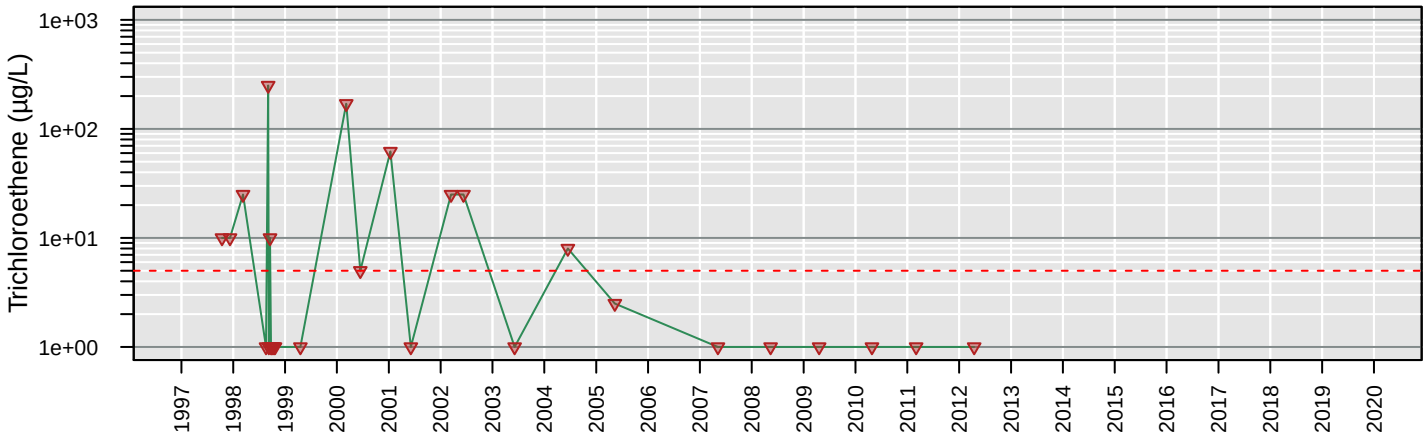
Regression Statistics for January 2010 to January 2011
Geometric Mean: 4.4 µg/L
UCL: 11 µg/L
LCL: 1.7 µg/L

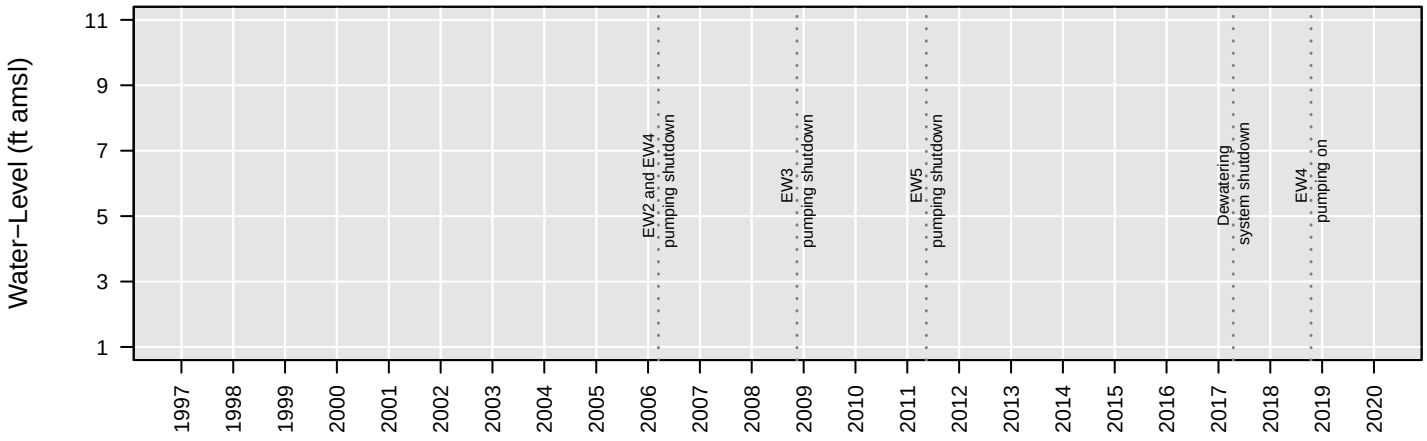
EW2

Trichloroethene

Number of Comparisons: 28
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



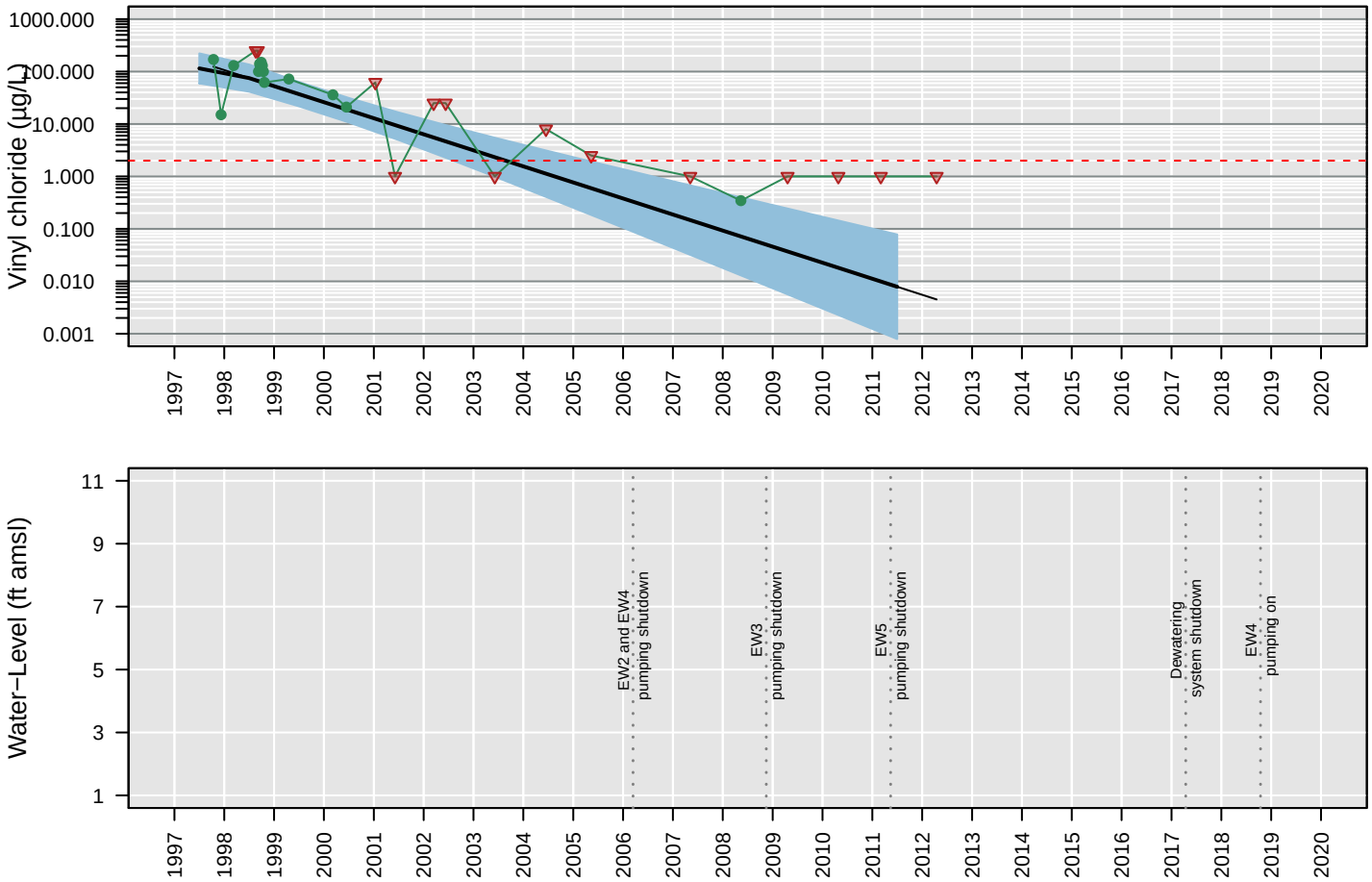


No Analysis Performed

EW2

Vinyl chloride

Number of Comparisons: 28
Percent NDs: 50%



Censored Regression (Tobit) Model

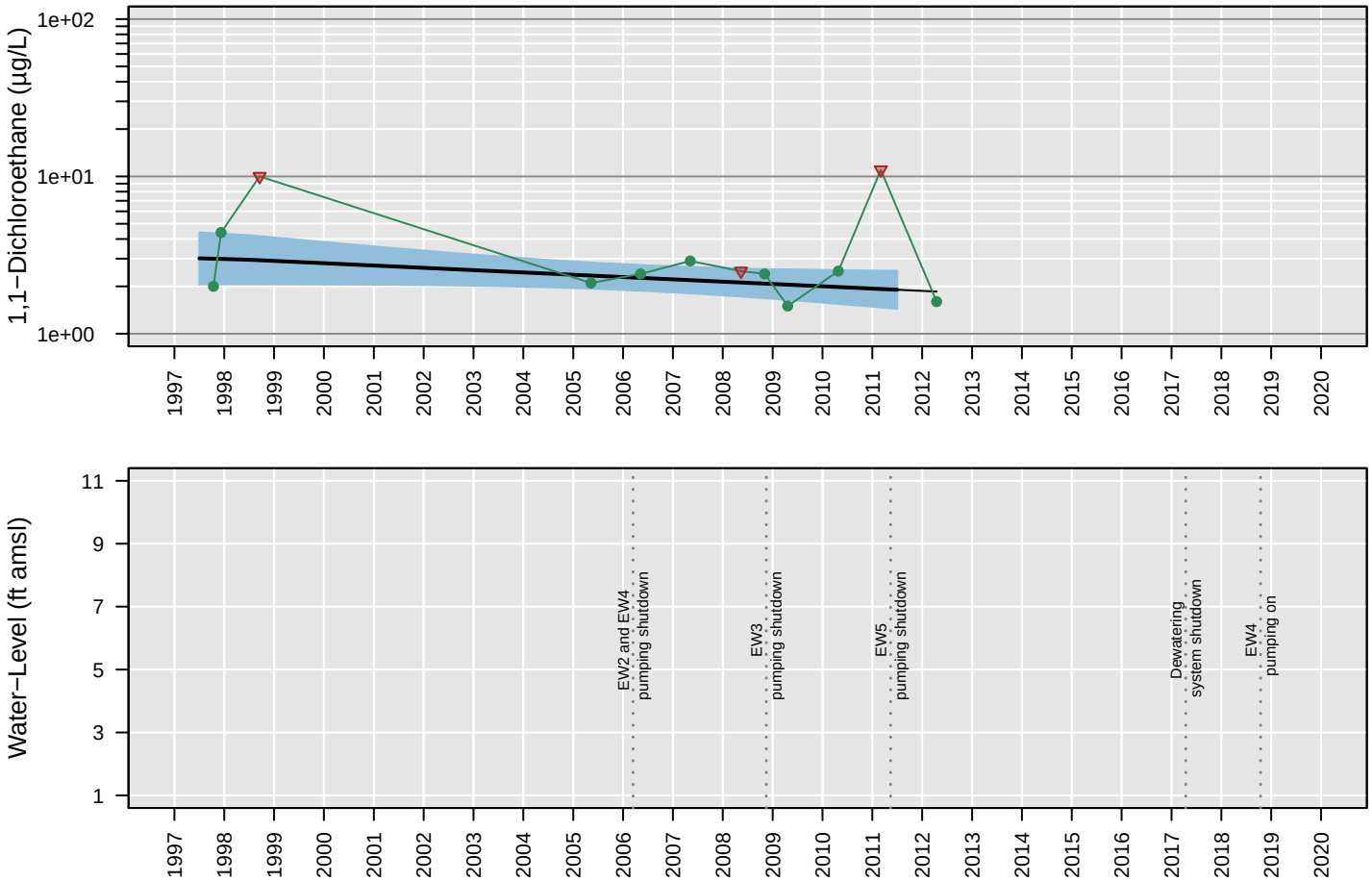
ln Conc. = −0.0019 (+/− 0.00026)*Date + 24 (+/− 2.8)

Regression Statistics for January 2011 to January 2012
Geometric Mean: 0.0079 µg/L
UCL: 0.078 µg/L
LCL: 0.00079 µg/L

EW3

1,1−Dichloroethane

Number of Comparisons: 12
Percent NDs: 25%



Censored Regression (Tobit) Model

Trend Not Significant

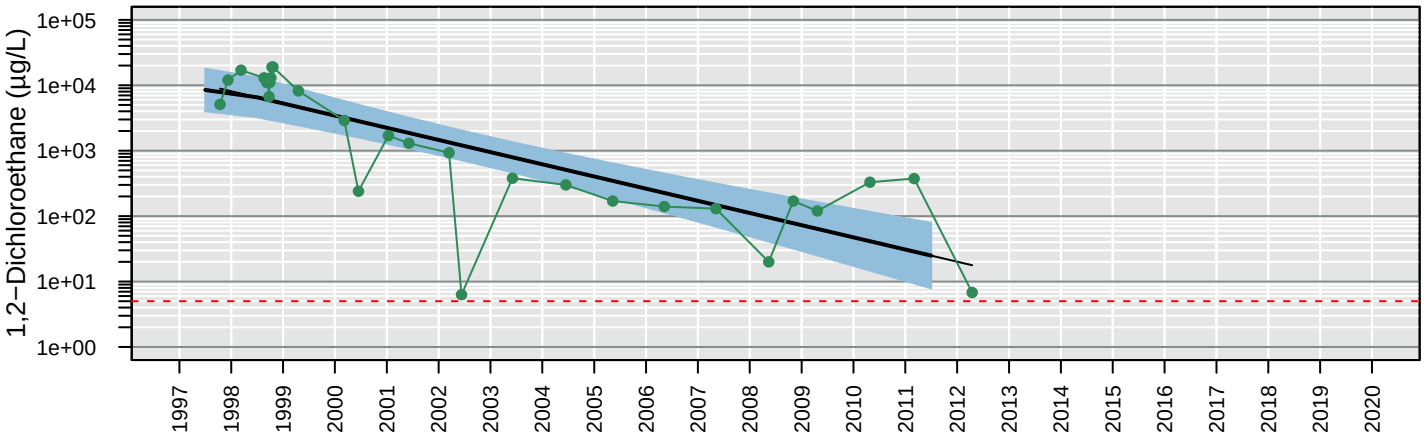
Regression Statistics for January 2011 to January 2012
Geometric Mean: 1.9 µg/L
UCL: 2.5 µg/L
LCL: 1.4 µg/L

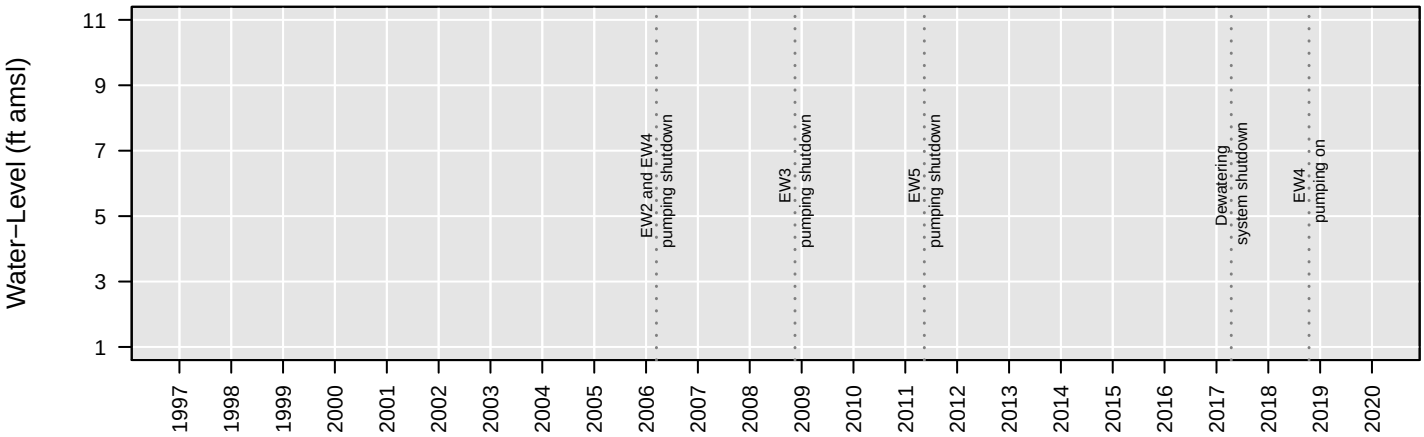
EW3

1,2−Dichloroethane

Number of Comparisons: 30
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.0012 (+/− 0.00015)*Date + 21 (+/− 1.8)

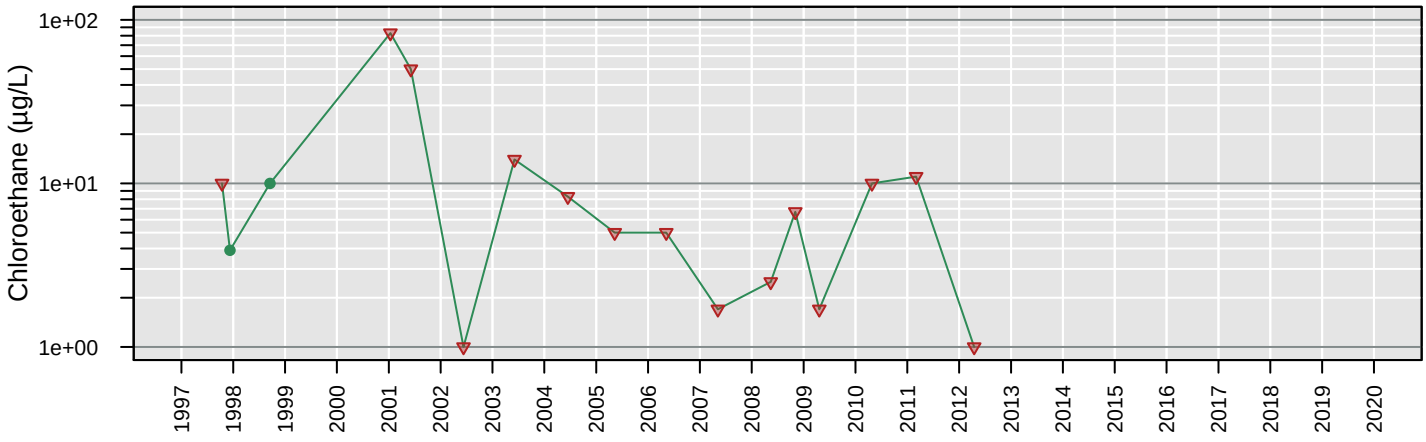
Regression Statistics for January 2011 to January 2012
Geometric Mean: 25 µg/L
UCL: 79 µg/L
LCL: 7.9 µg/L

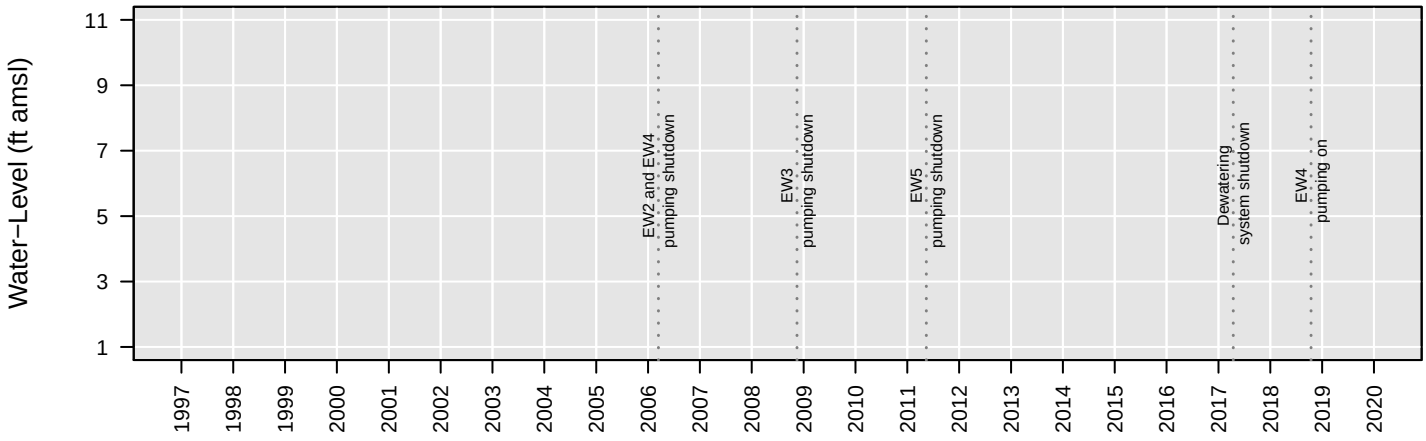
EW3

Chloroethane

Number of Comparisons: 17
Percent NDs: 88%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



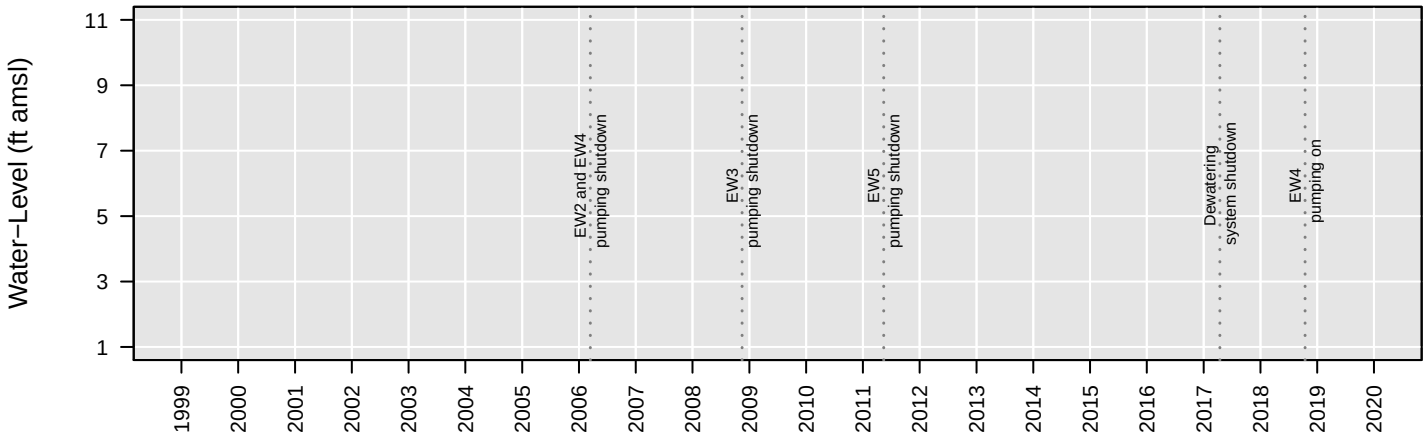


No Analysis Performed

EW3

cis−1,2−Dichloroethene

Number of Comparisons: 17
Percent NDs: 41%



Censored Regression (Tobit) Model

Trend Not Significant

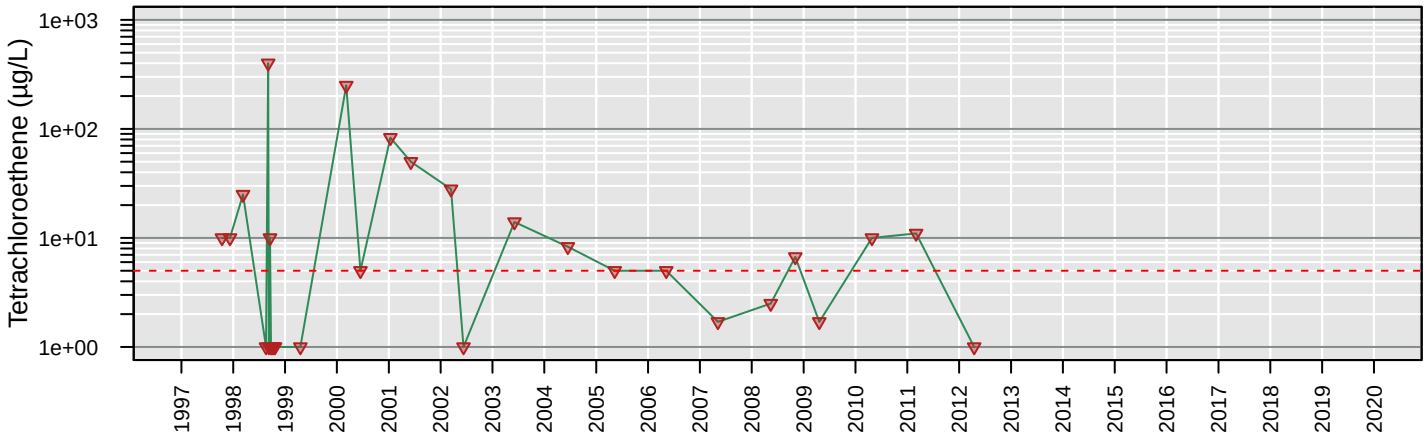
Regression Statistics for January 2011 to January 2012
Geometric Mean: 4.1 µg/L
UCL: 6.7 µg/L
LCL: 2.5 µg/L

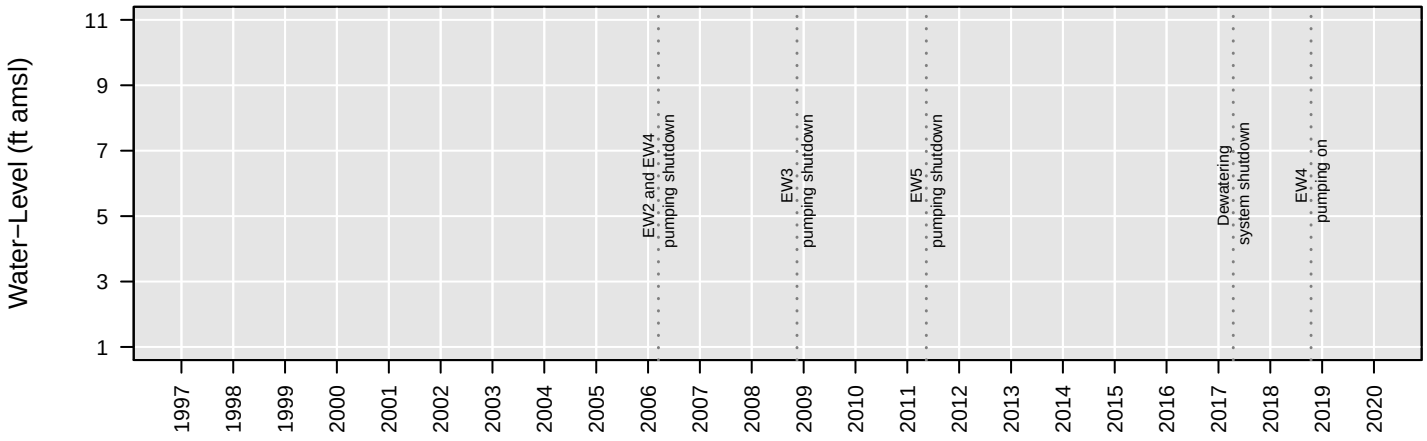
EW3

Tetrachloroethene

Number of Comparisons: 30
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



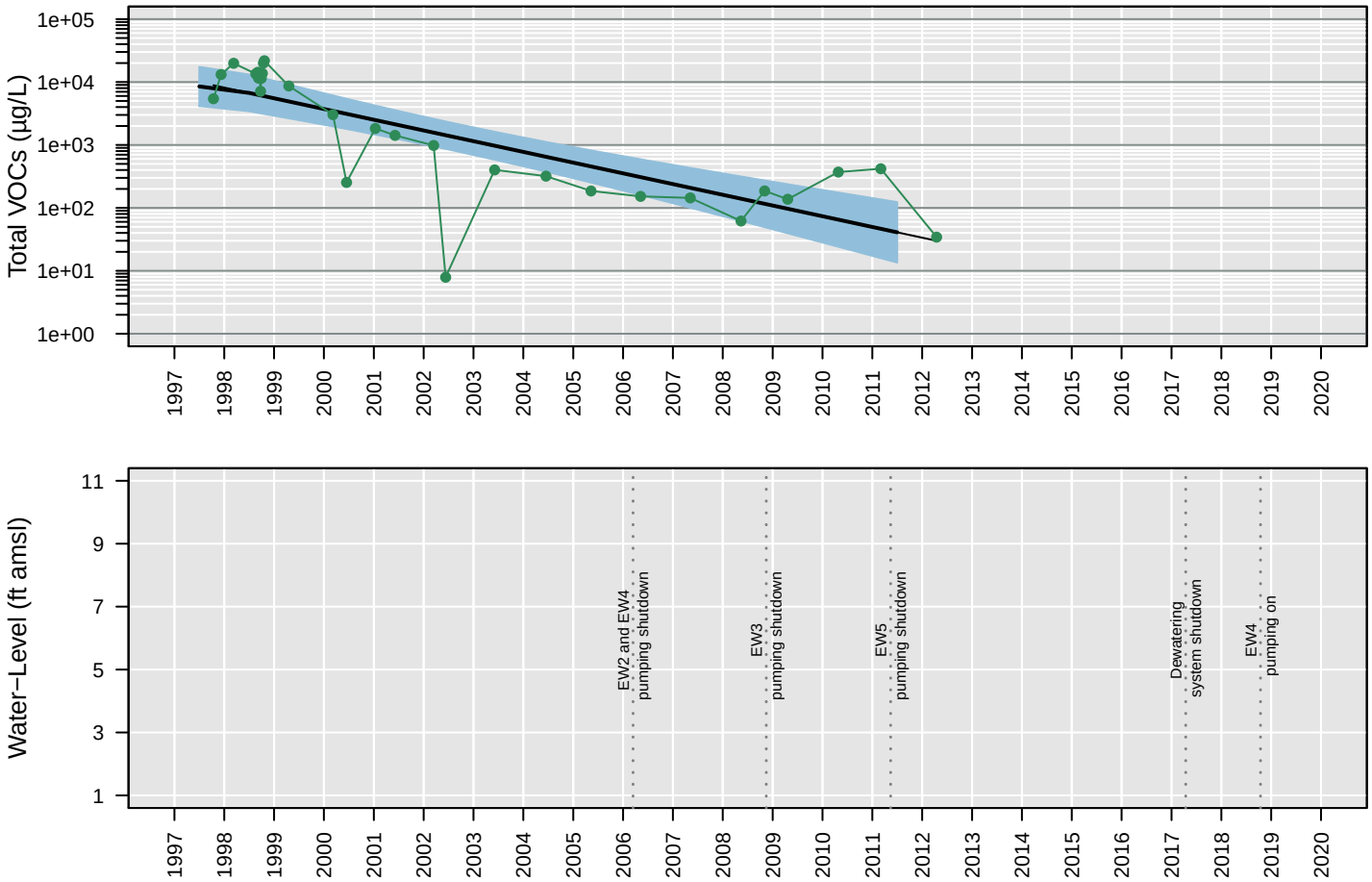


No Analysis Performed

EW3

Total VOCs

Number of Comparisons: 30
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.0011 (+/− 0.00015)*Date + 20 (+/− 1.8)

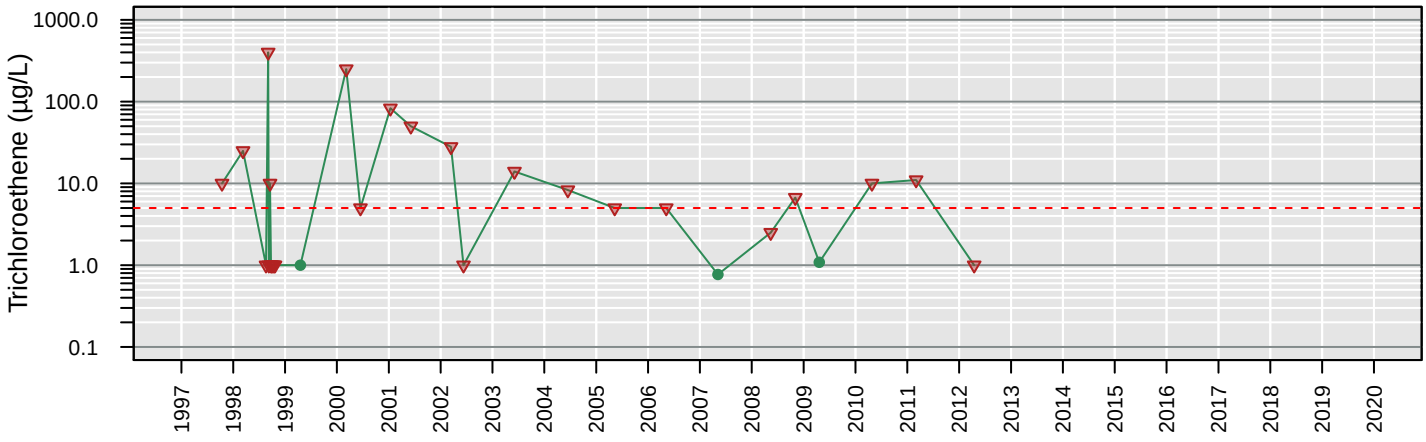
Regression Statistics for January 2011 to January 2012
Geometric Mean: 41 µg/L
UCL: 120 µg/L
LCL: 14 µg/L

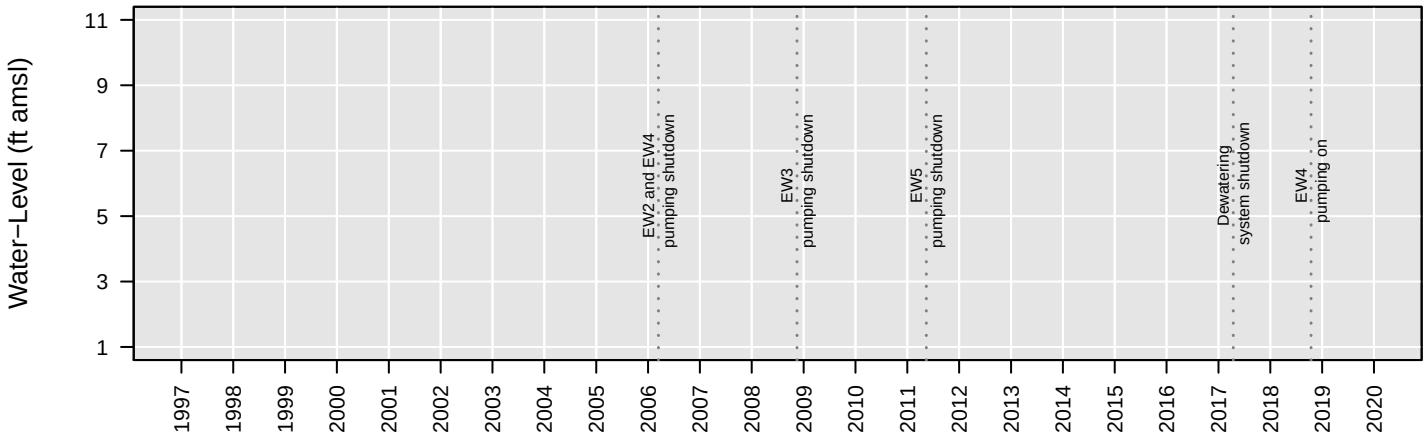
EW3

Trichloroethene

Number of Comparisons: 29
Percent NDs: 90%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





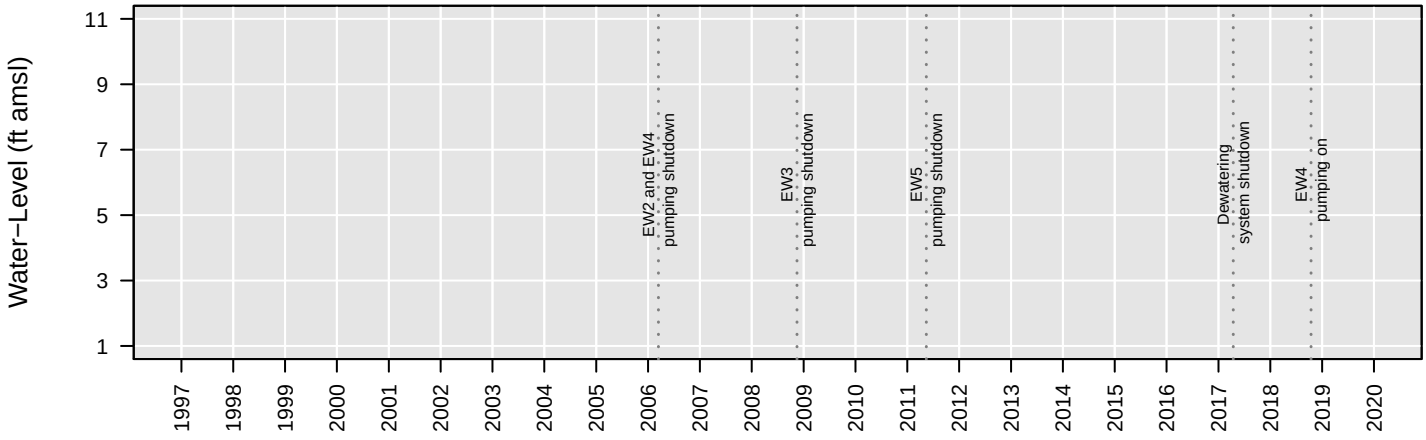
No Analysis Performed

EW3

Vinyl chloride

Number of Comparisons: 30
Percent NDs: 60%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

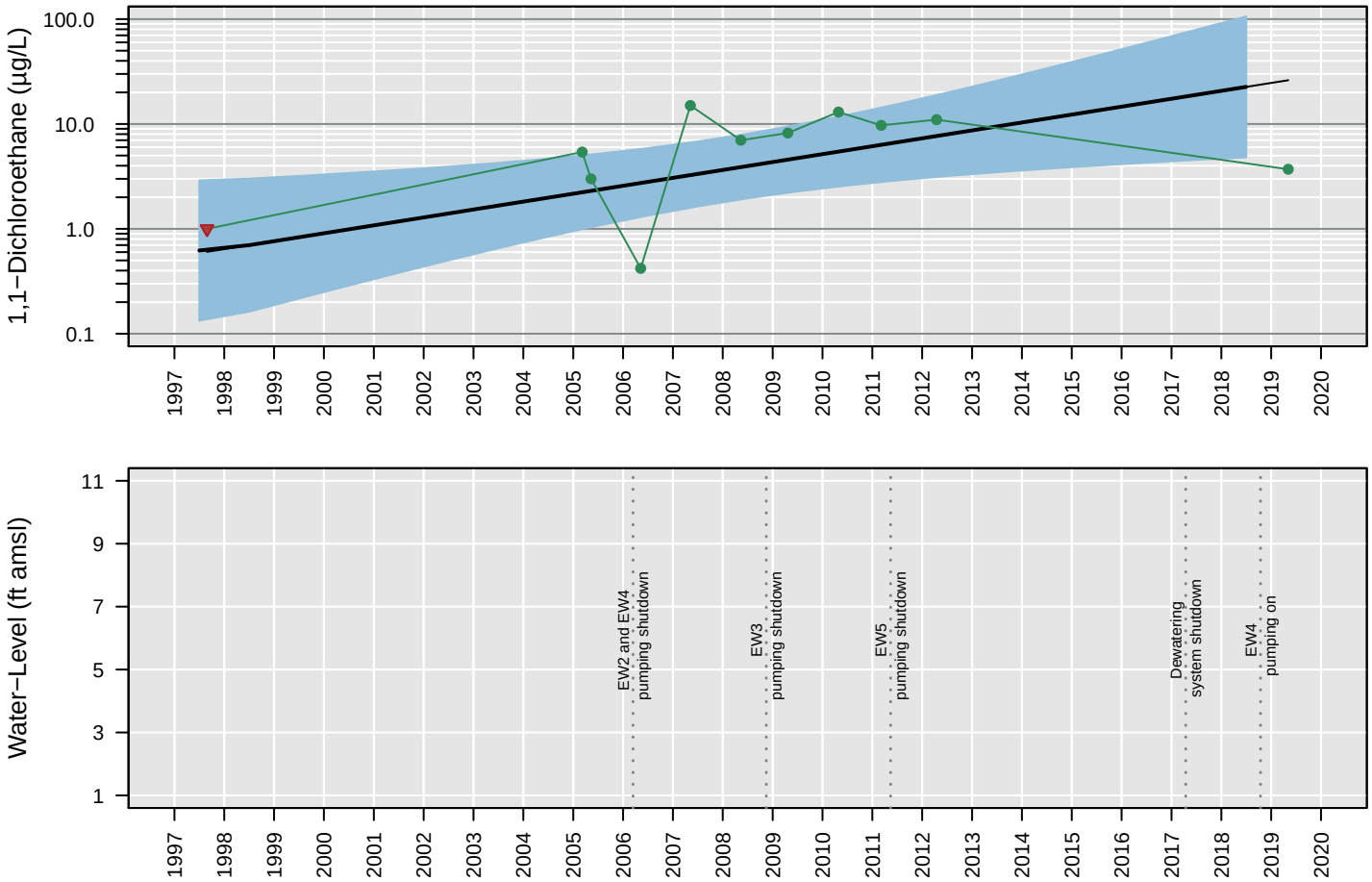


No Analysis Performed

EW4

1,1−Dichloroethane

Number of Comparisons: 13
Percent NDs: 23%



Censored Regression (Tobit) Model

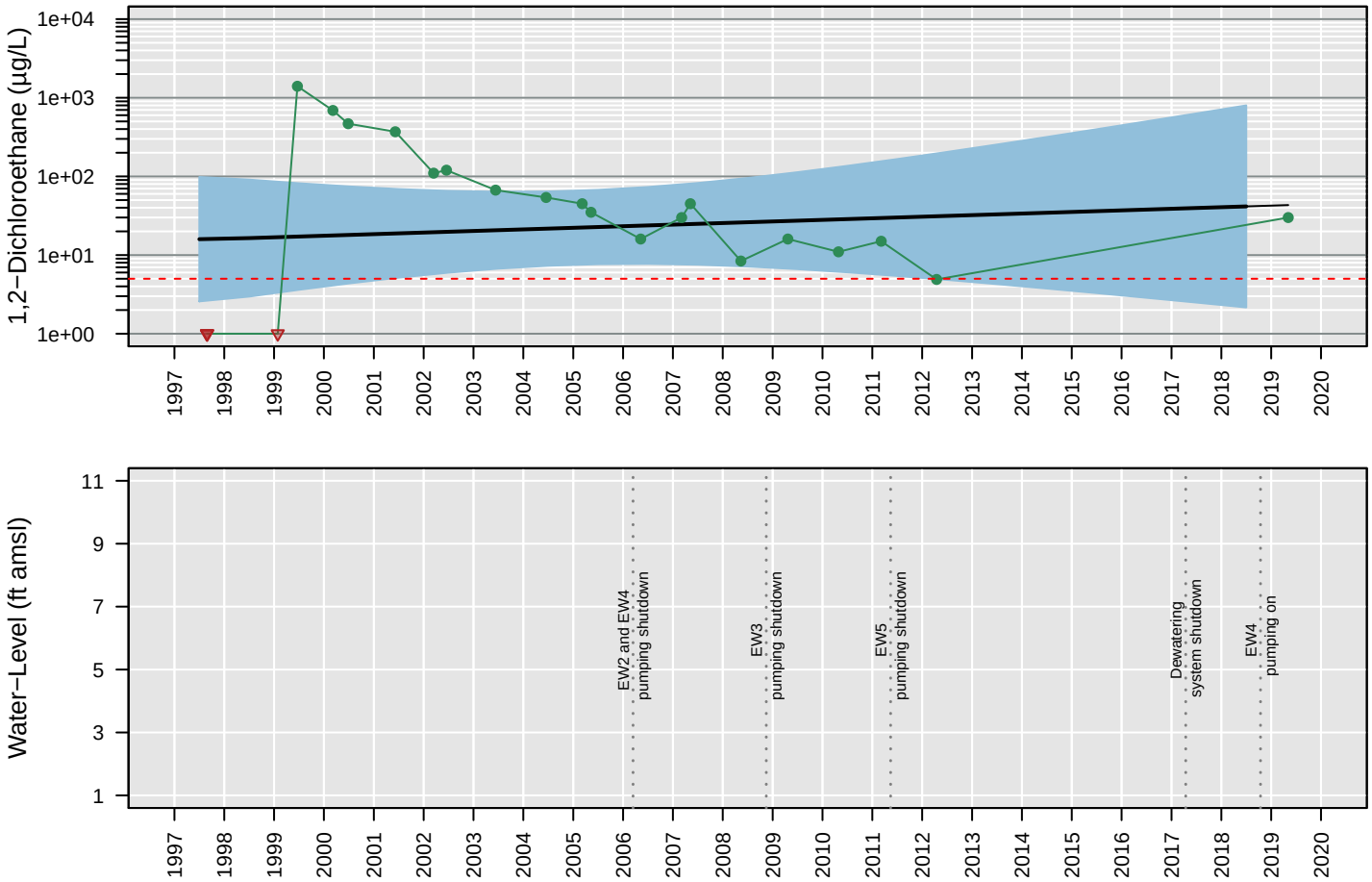
ln Conc. = 0.00048 (+/− 0.00016)*Date + −5.3 (+/− 2.3)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 23 µg/L
UCL: 110 µg/L
LCL: 4.8 µg/L

EW4

1,2−Dichloroethane

Number of Comparisons: 23
Percent NDs: 17%



Censored Regression (Tobit) Model

Trend Not Significant

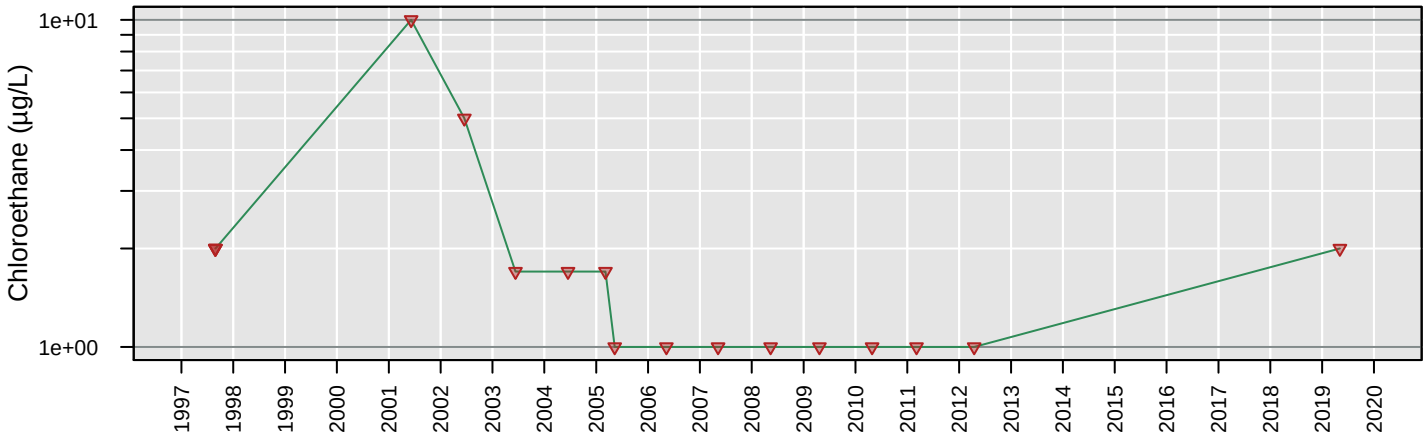
Regression Statistics for January 2018 to January 2019
Geometric Mean: 42 µg/L
UCL: 800 µg/L
LCL: 2.2 µg/L

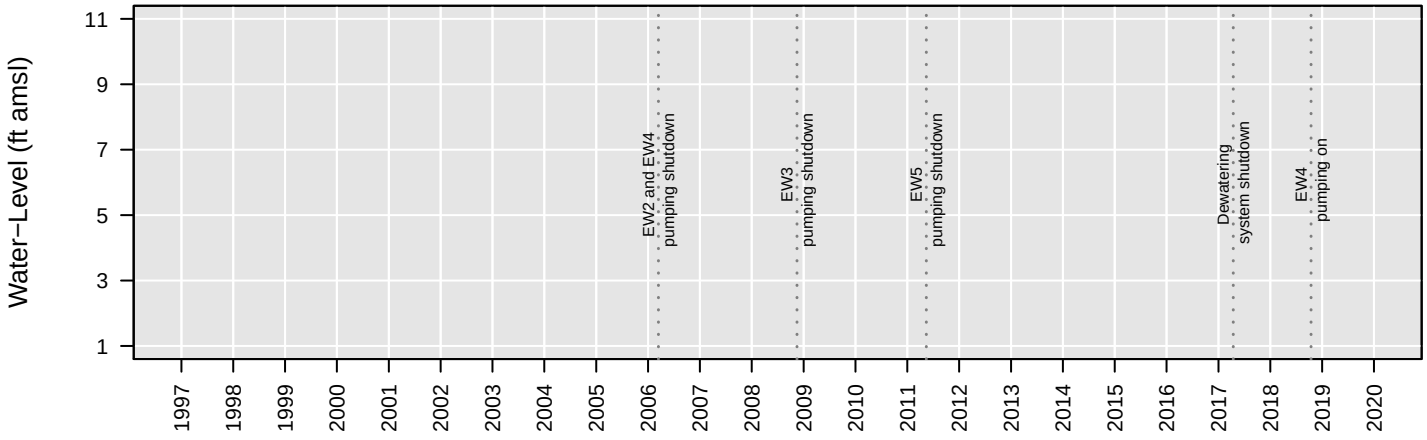
EW4

Chloroethane

Number of Comparisons: 17
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



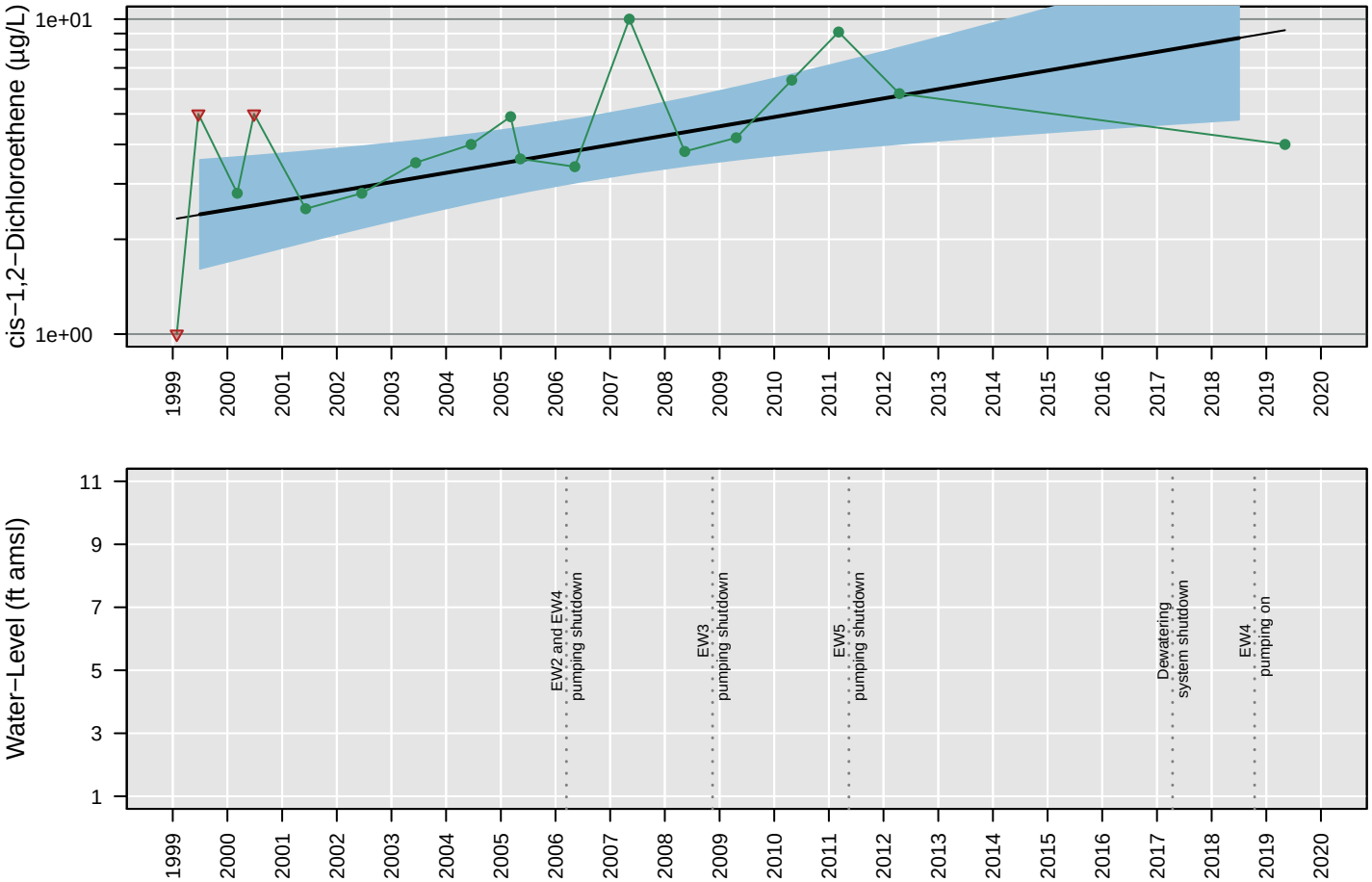


No Analysis Performed

EW4

cis−1,2−Dichloroethene

Number of Comparisons: 18
Percent NDs: 17%



Censored Regression (Tobit) Model

ln Conc. = 0.00019 (+/− 0.000059)*Date + −1.1 (+/− 0.8)

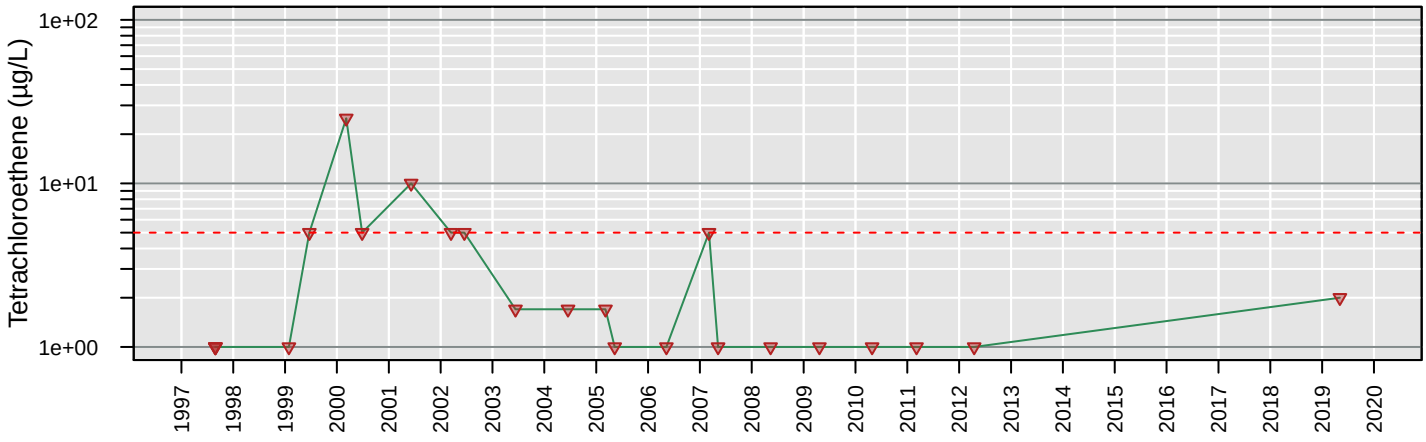
Regression Statistics for January 2018 to January 2019
Geometric Mean: 8.7 µg/L
UCL: 16 µg/L
LCL: 4.8 µg/L

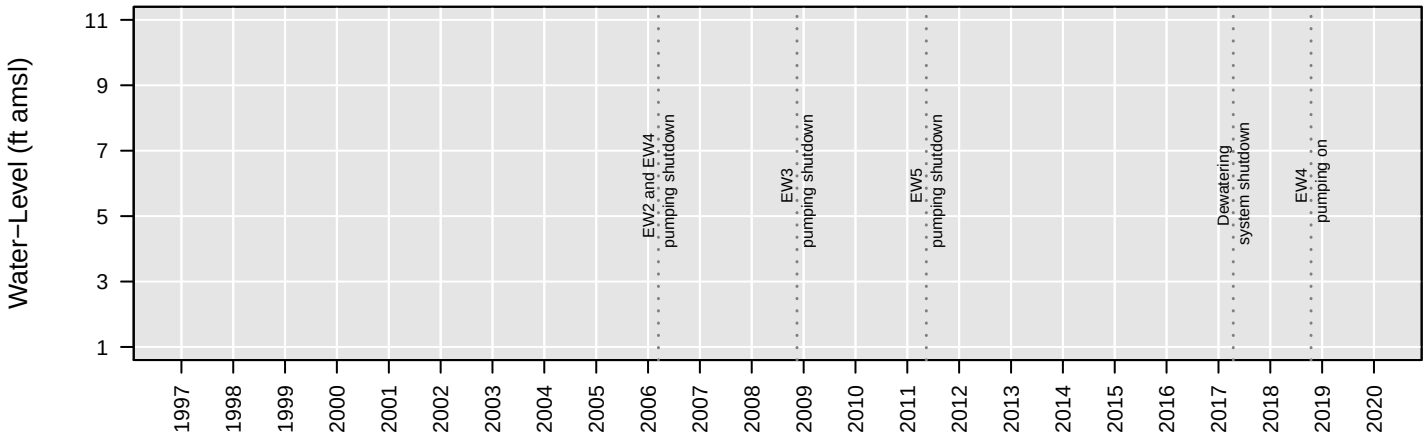
EW4

Tetrachloroethene

Number of Comparisons: 23
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



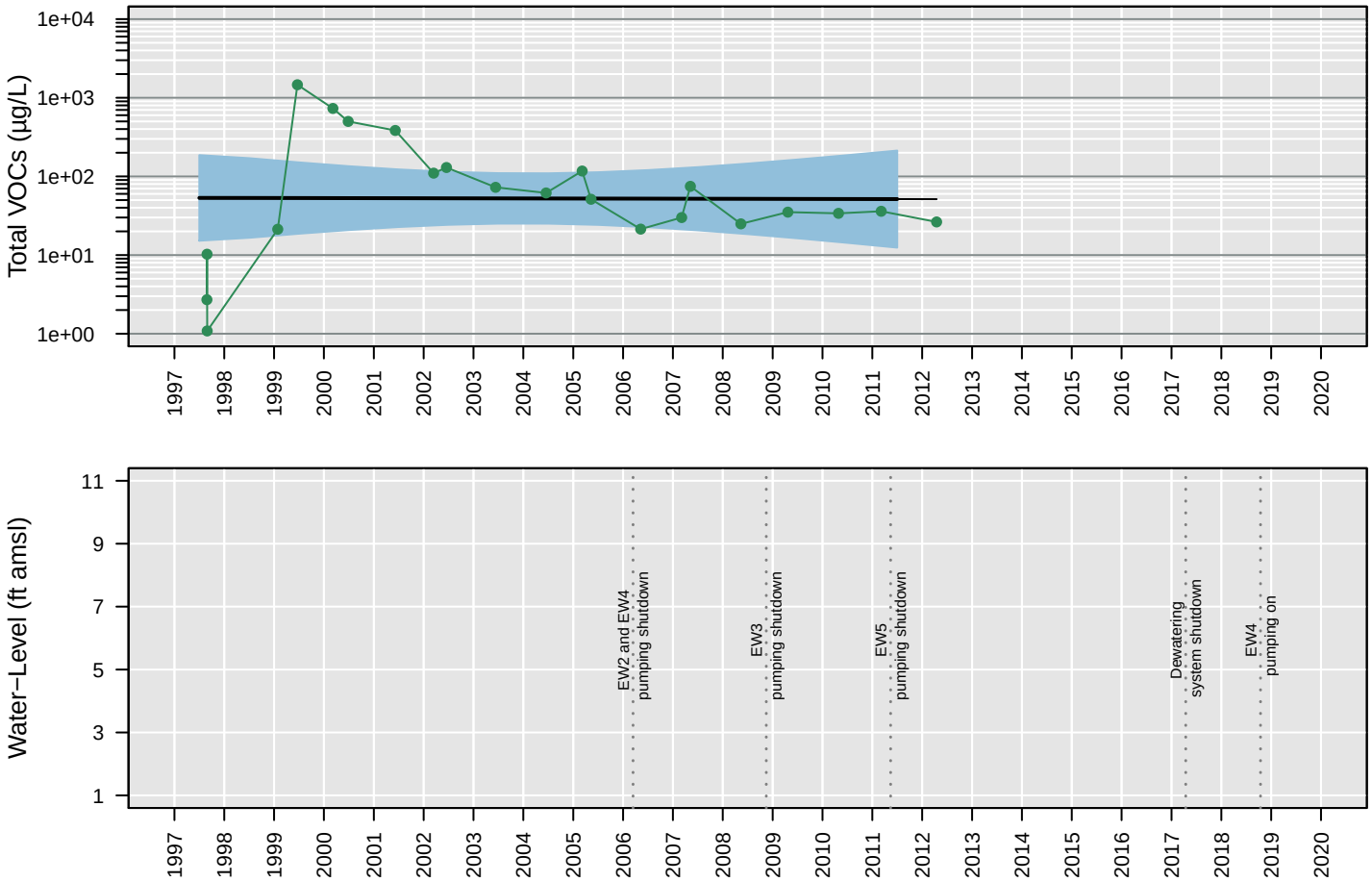


No Analysis Performed

EW4

Total VOCs

Number of Comparisons: 22
Percent NDs: 0%



Censored Regression (Tobit) Model

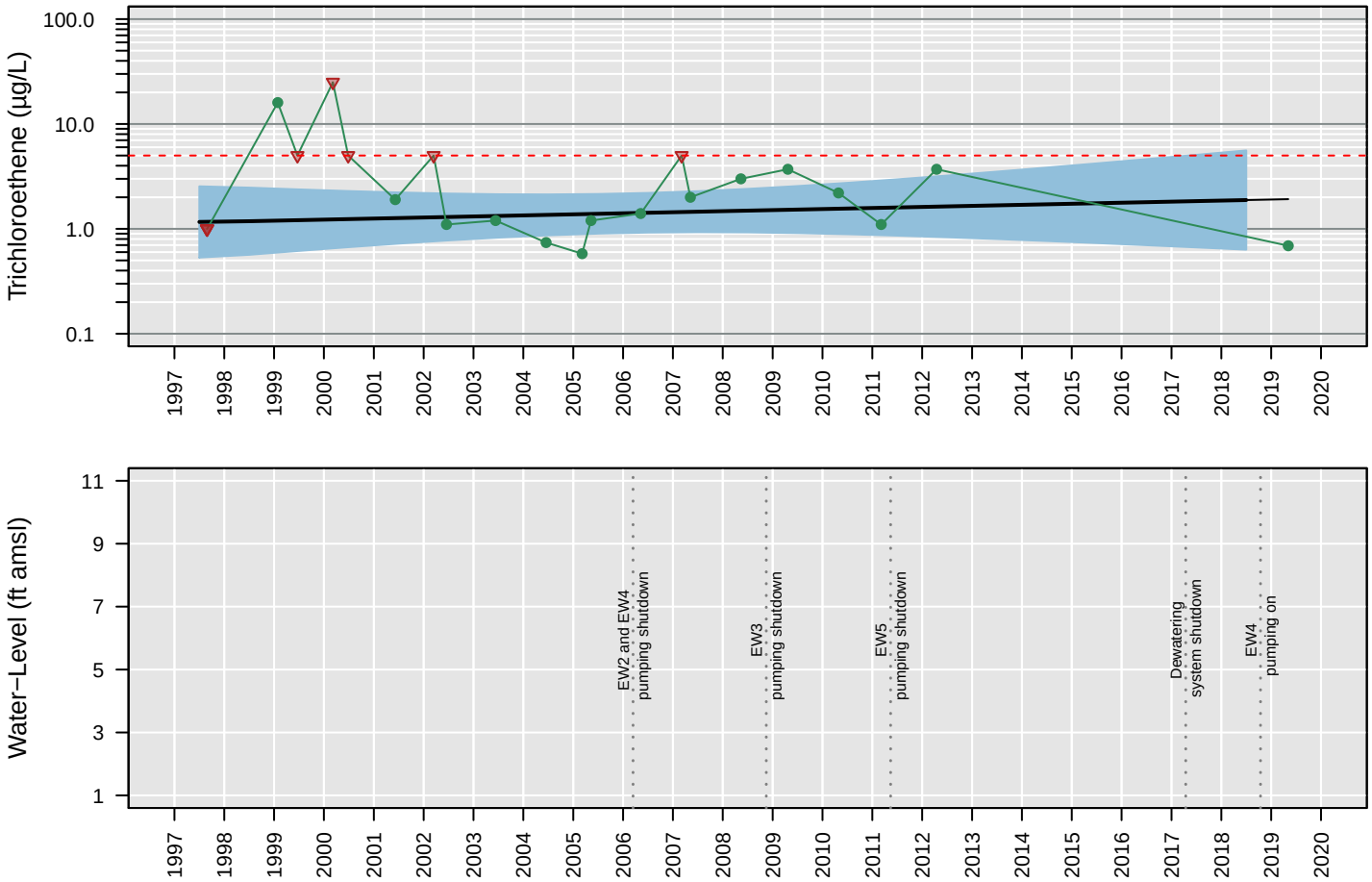
Trend Not Significant

Regression Statistics for January 2011 to January 2012
Geometric Mean: 51 µg/L
UCL: 210 µg/L
LCL: 12 µg/L

EW4

Trichloroethene

Number of Comparisons: 23
Percent NDs: 35%



Censored Regression (Tobit) Model

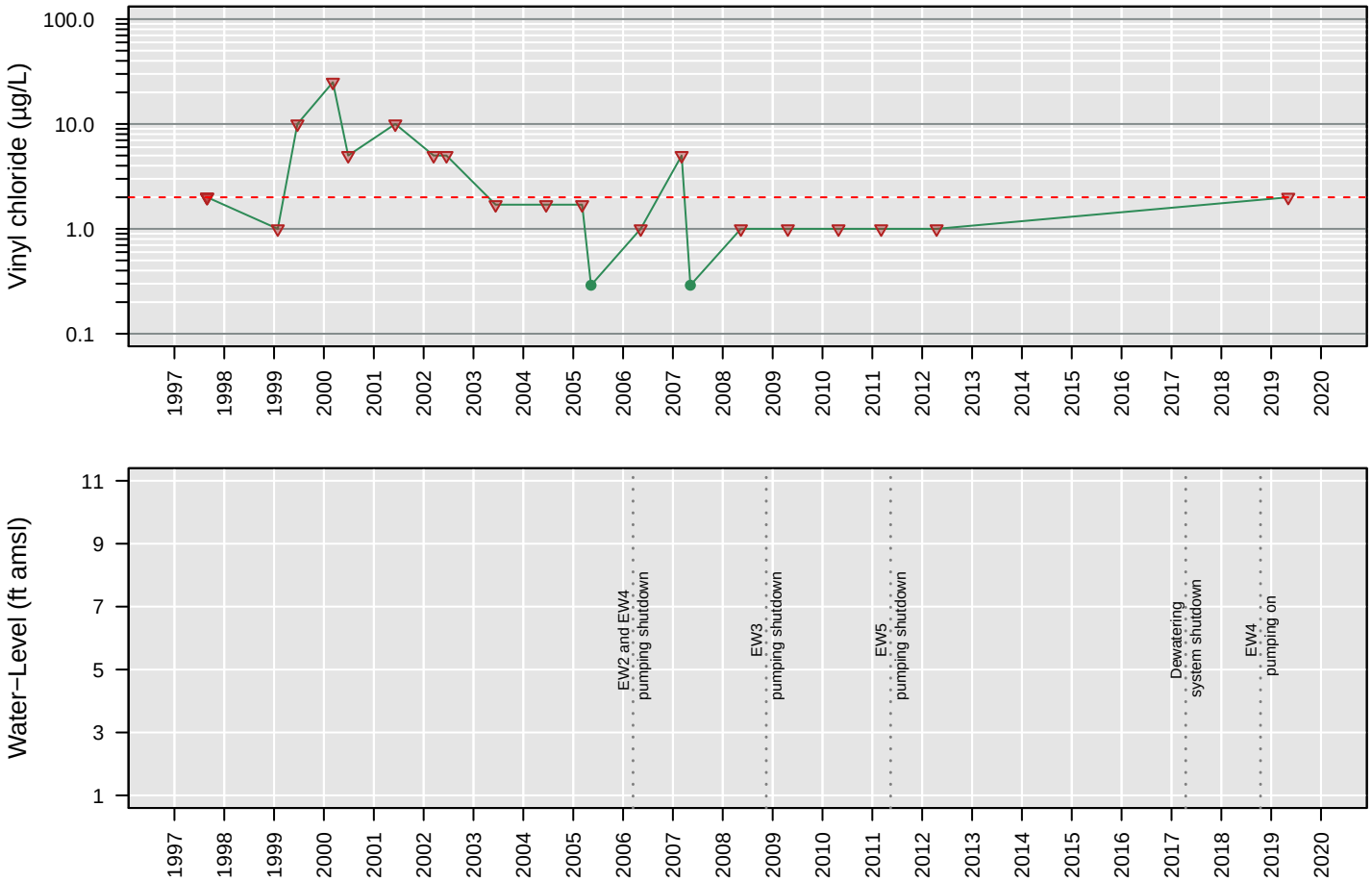
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.9 µg/L
UCL: 5.6 µg/L
LCL: 0.63 µg/L

EW4

Vinyl chloride

Number of Comparisons: 23
Percent NDs: 91%

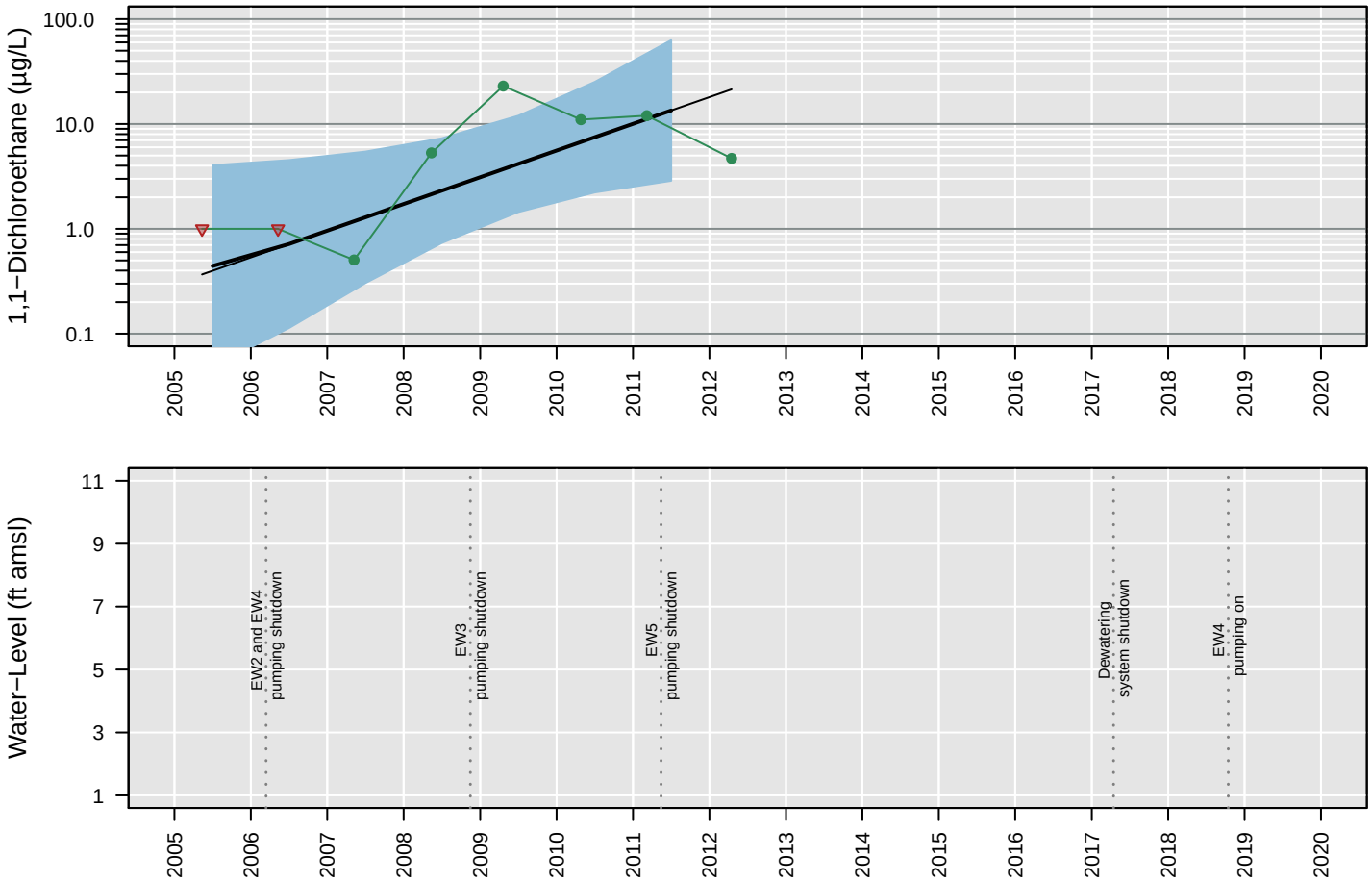


No Analysis Performed

EW5

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 25%



Censored Regression (Tobit) Model

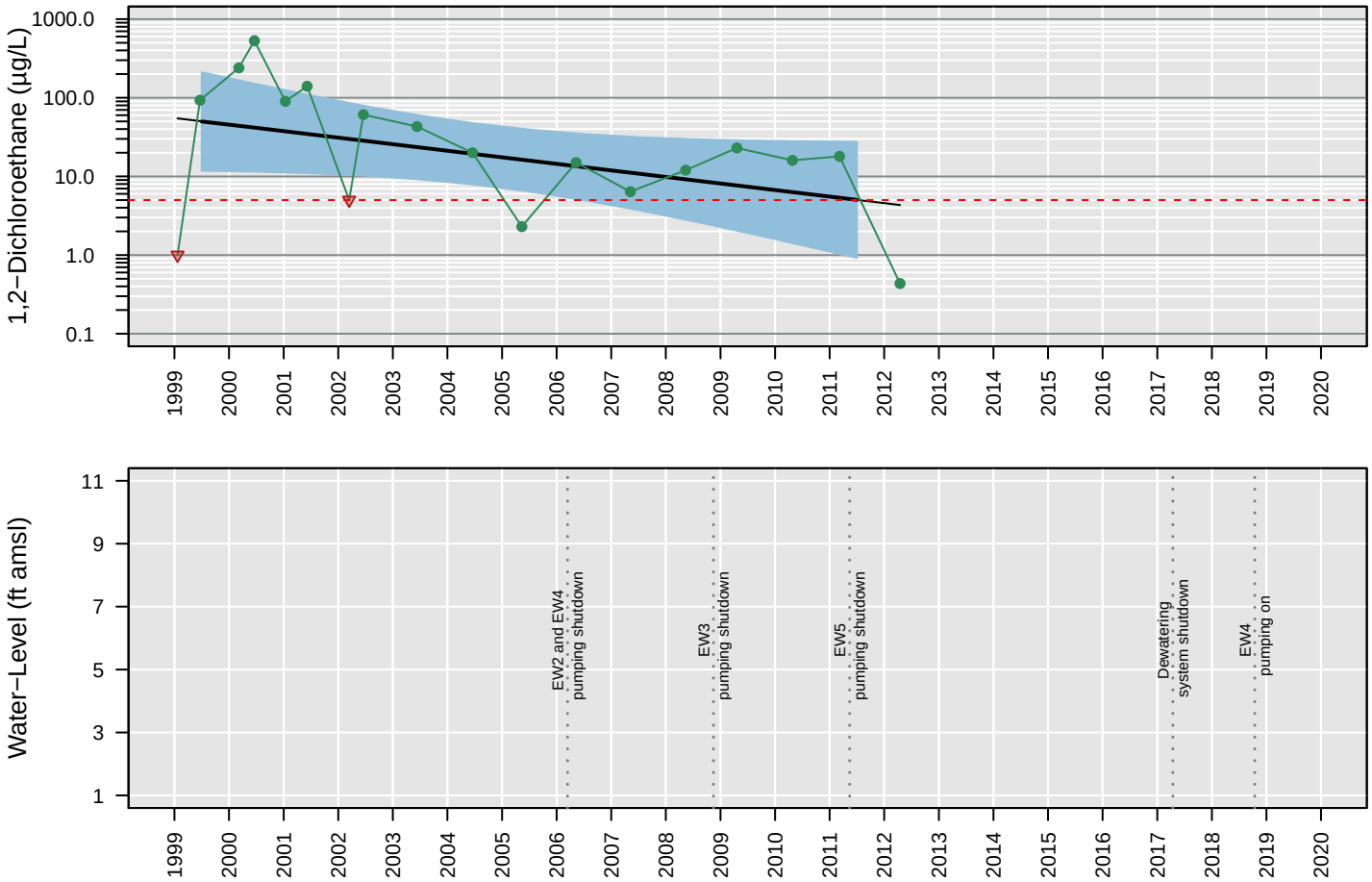
ln Conc. = 0.0016 (+/− 0.00056)*Date + −22 (+/− 8.1)

Regression Statistics for January 2011 to January 2012
Geometric Mean: 13 µg/L
UCL: 63 µg/L
LCL: 2.9 µg/L

EW5

1,2−Dichloroethane

Number of Comparisons: 18
Percent NDs: 11%



Censored Regression (Tobit) Model

Trend Not Significant

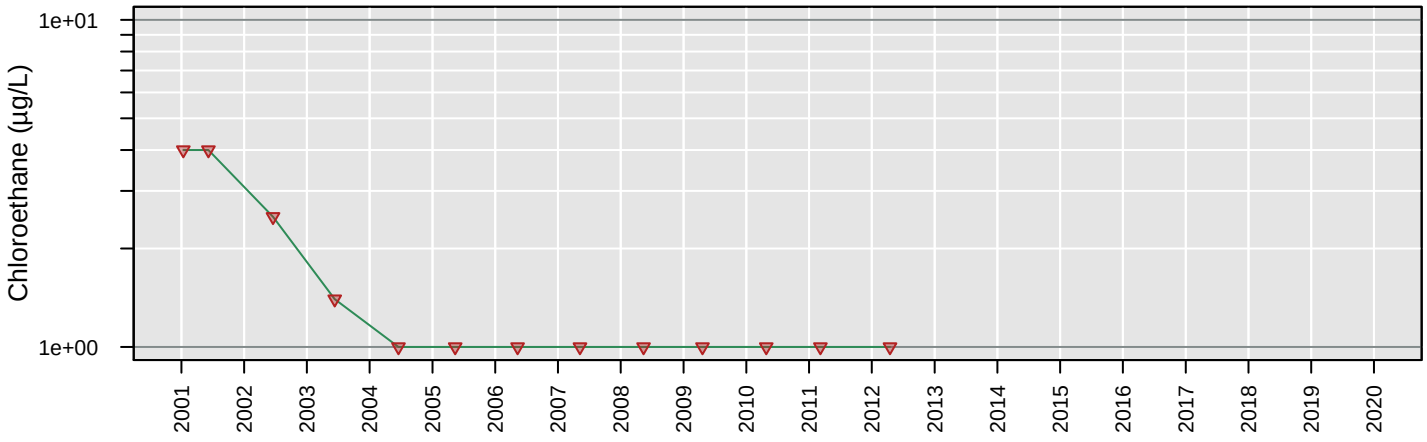
Regression Statistics for January 2011 to January 2012
Geometric Mean: 5 µg/L
UCL: 28 µg/L
LCL: 0.92 µg/L

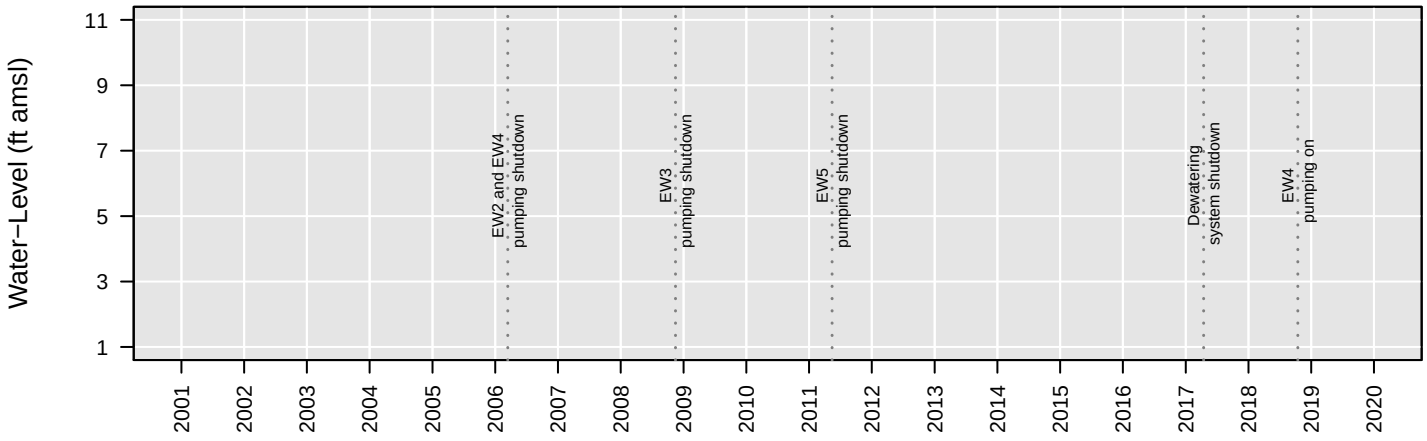
EW5

Chloroethane

Number of Comparisons: 13
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



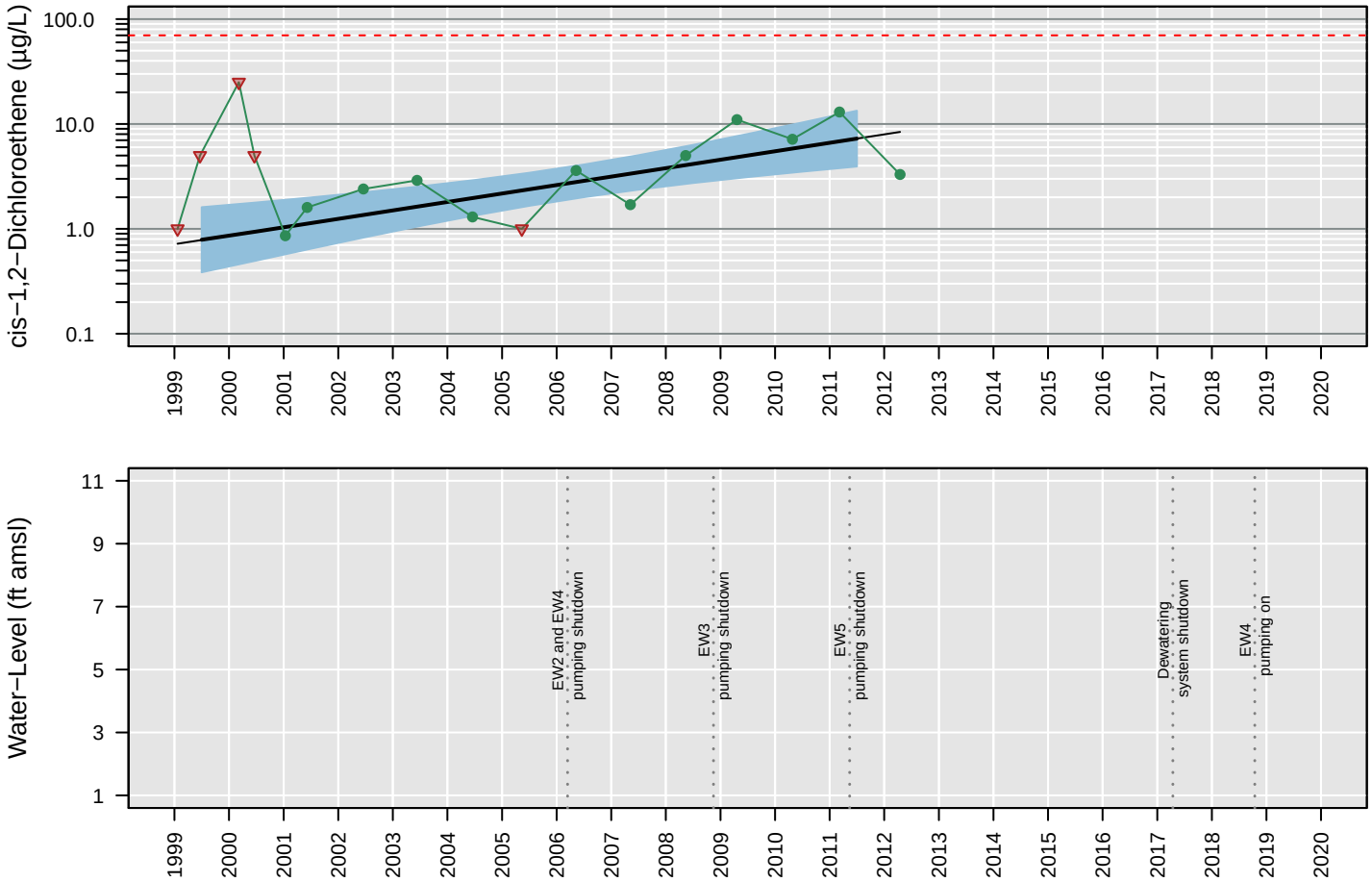


No Analysis Performed

EW5

cis−1,2−Dichloroethene

Number of Comparisons: 17
Percent NDs: 29%



Censored Regression (Tobit) Model

ln Conc. = 0.00051 (+/− 0.00012)*Date + −5.7 (+/− 1.6)

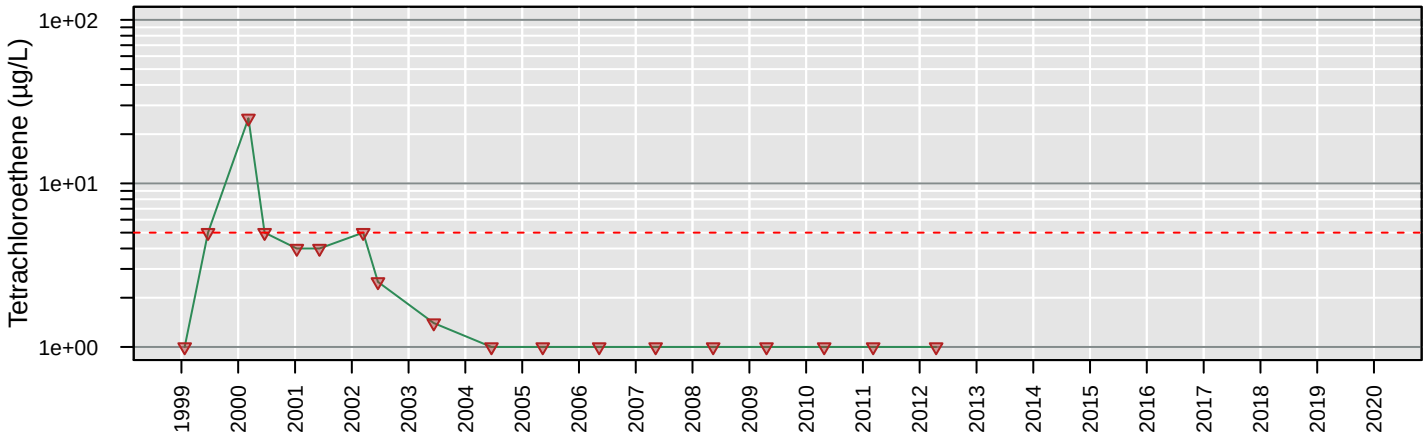
Regression Statistics for January 2011 to January 2012
Geometric Mean: 7.3 µg/L
UCL: 13 µg/L
LCL: 3.9 µg/L

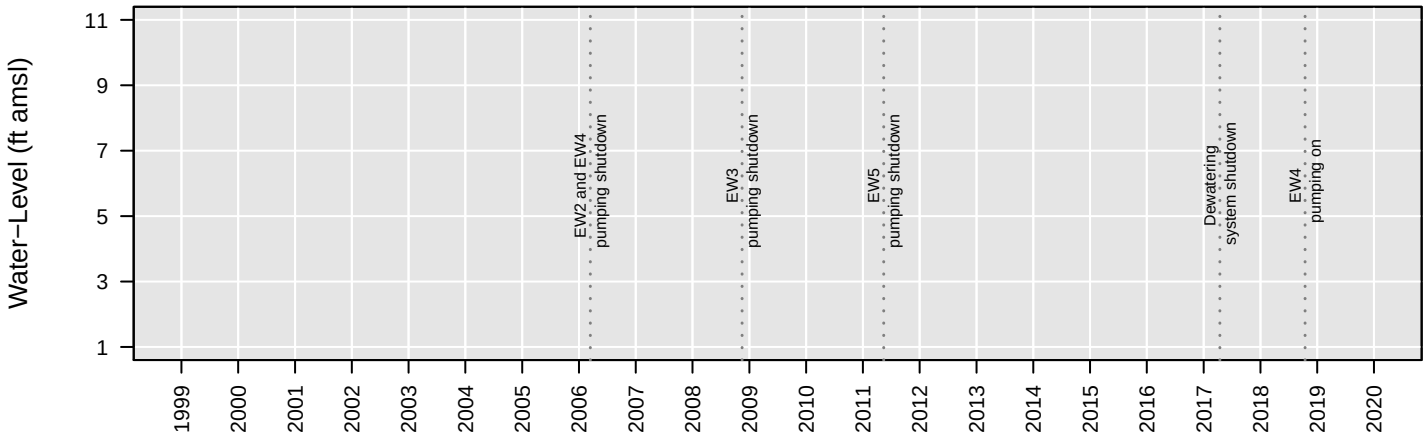
EW5

Tetrachloroethene

Number of Comparisons: 18
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



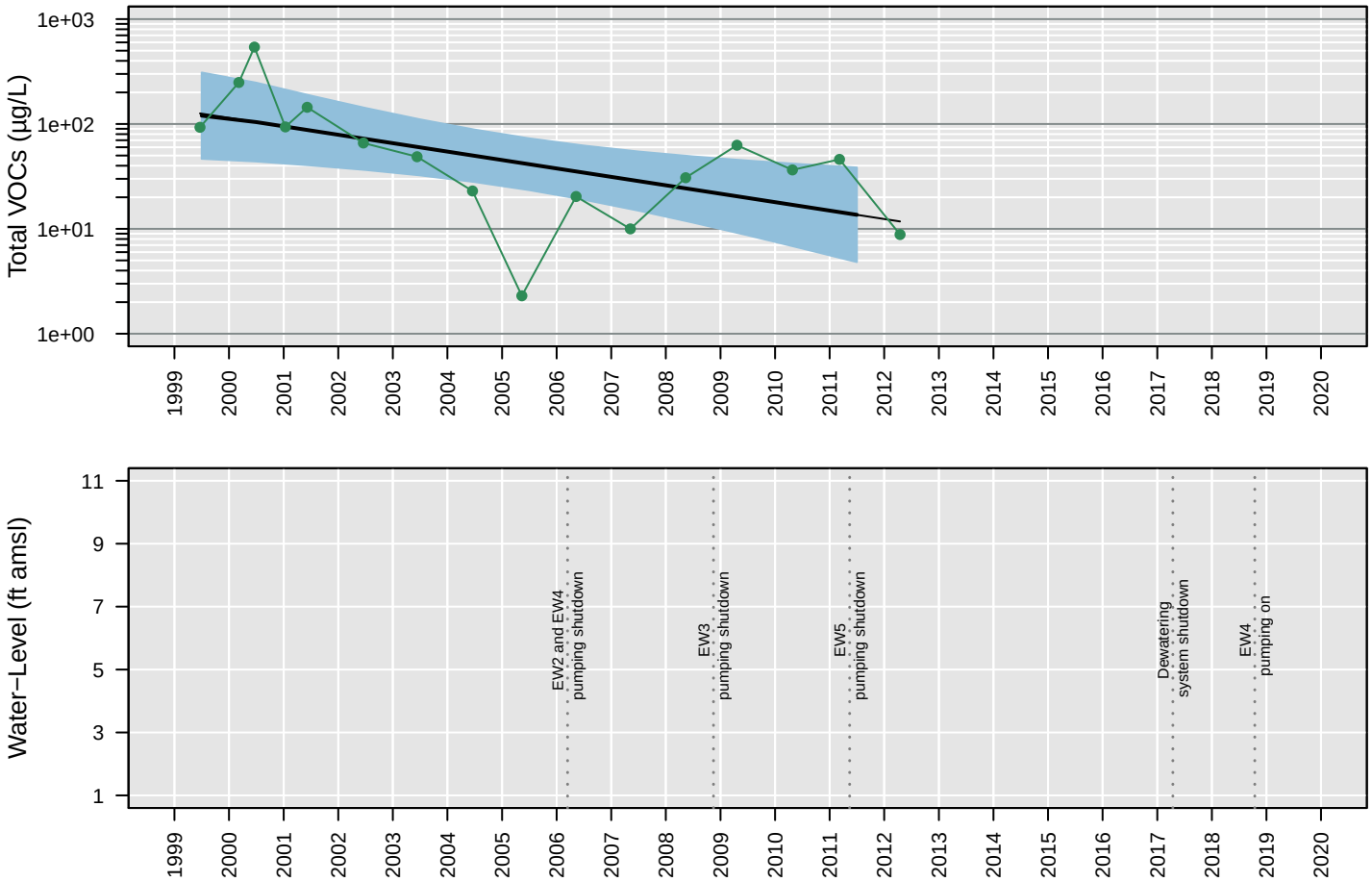


No Analysis Performed

EW5

Total VOCs

Number of Comparisons: 16
Percent NDs: 0%



Censored Regression (Tobit) Model

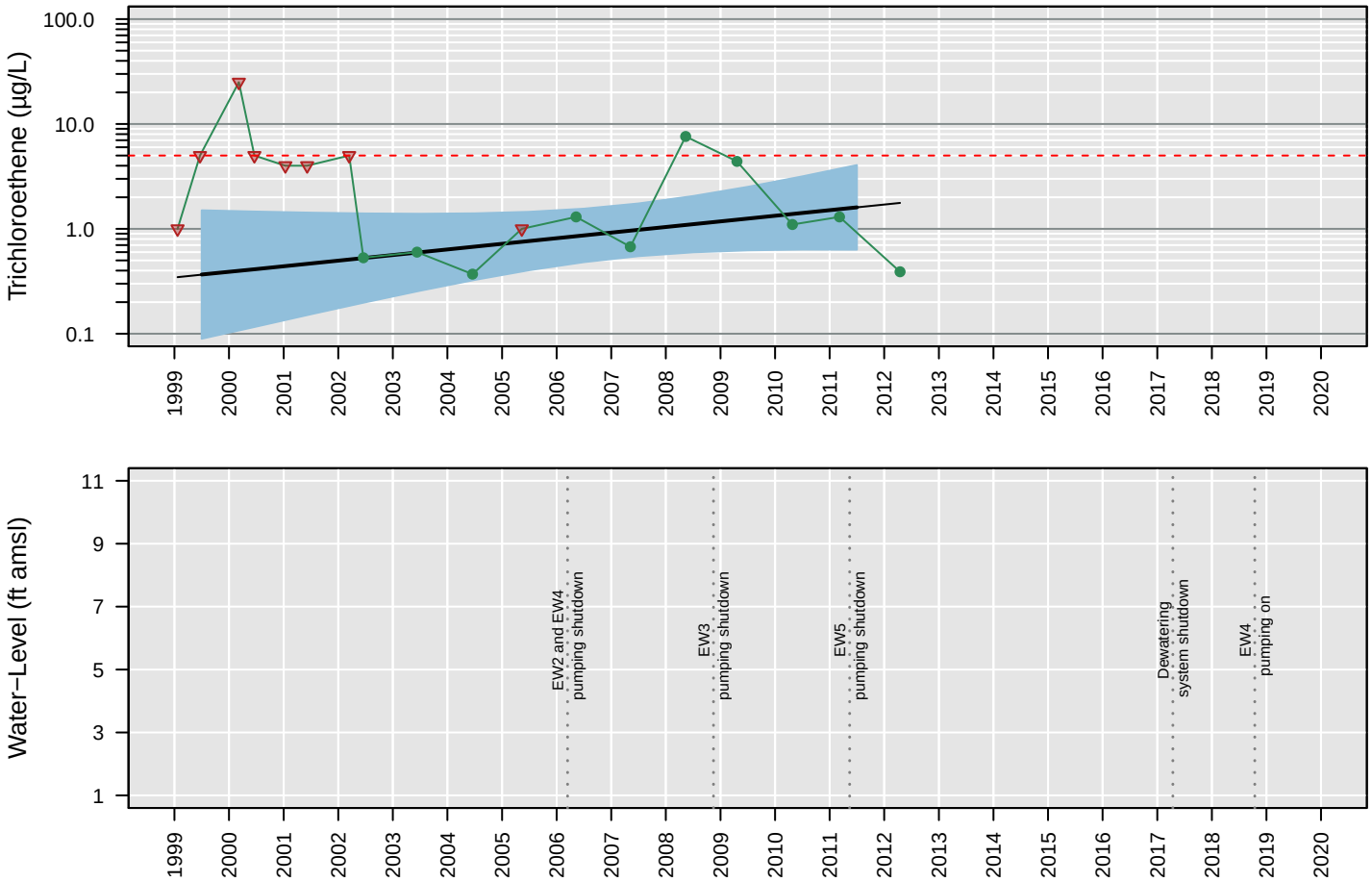
ln Conc. = −0.00051 (+/− 0.00018)*Date + 10 (+/− 2.3)

Regression Statistics for January 2011 to January 2012
Geometric Mean: 14 µg/L
UCL: 38 µg/L
LCL: 4.8 µg/L

EW5

Trichloroethene

Number of Comparisons: 18
Percent NDs: 44%



Censored Regression (Tobit) Model

Trend Not Significant

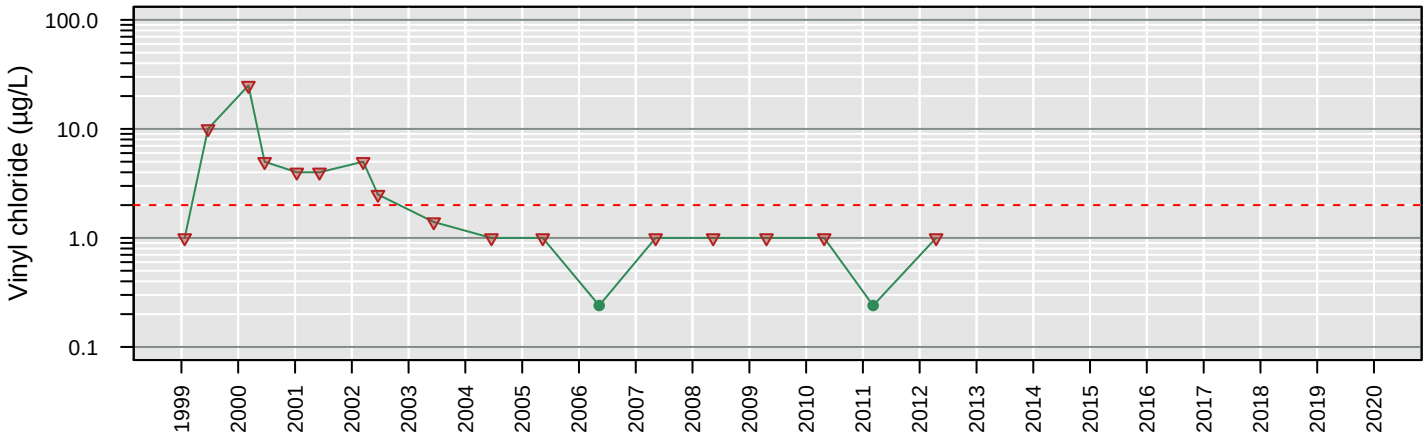
Regression Statistics for January 2011 to January 2012
Geometric Mean: 1.6 µg/L
UCL: 4.1 µg/L
LCL: 0.63 µg/L

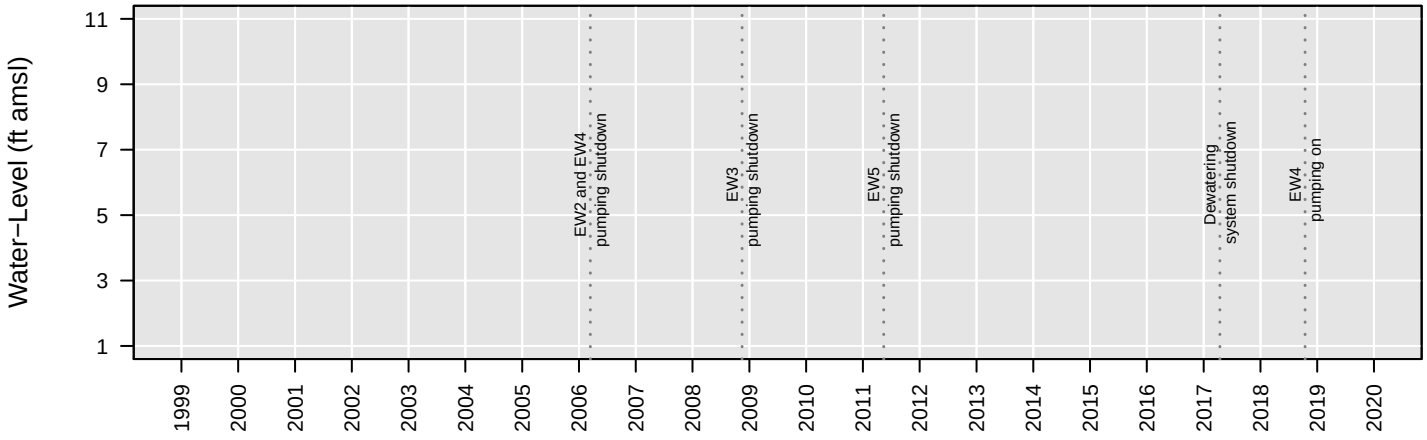
EW5

Vinyl chloride

Number of Comparisons: 18
Percent NDs: 89%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



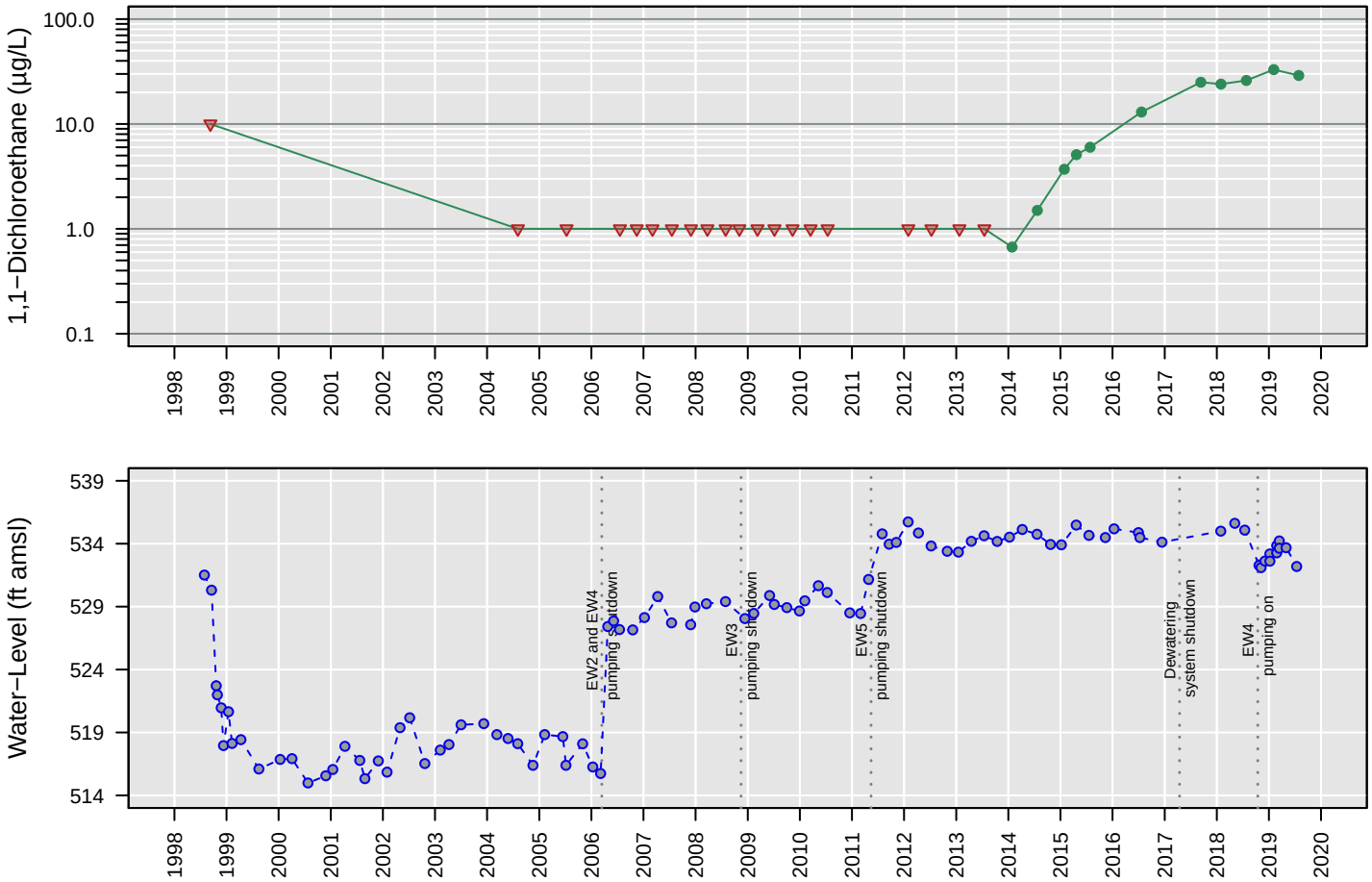


No Analysis Performed

MW100

1,1−Dichloroethane

Number of Comparisons: 31
Percent NDs: 65%

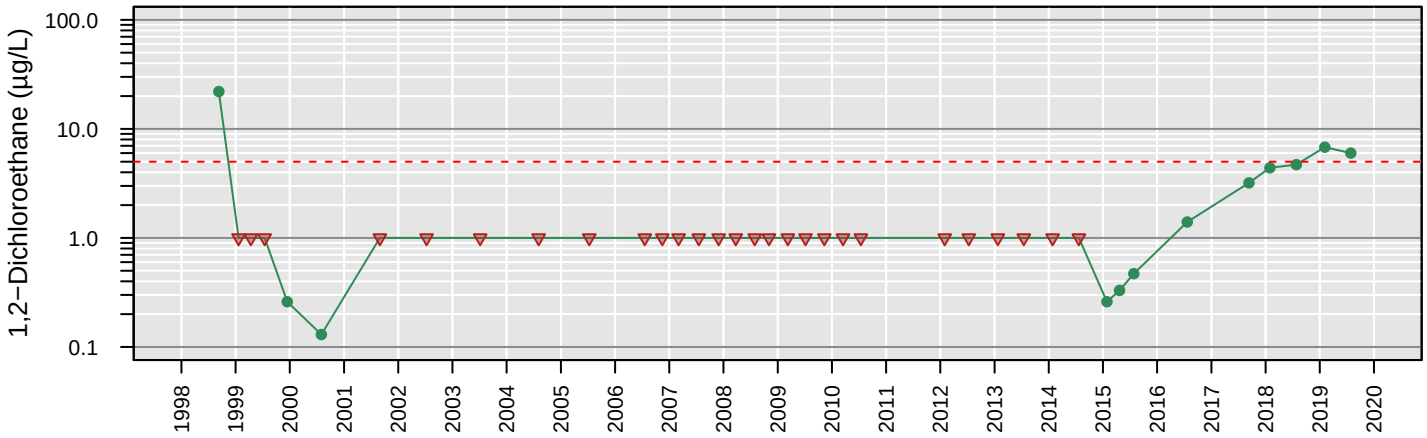


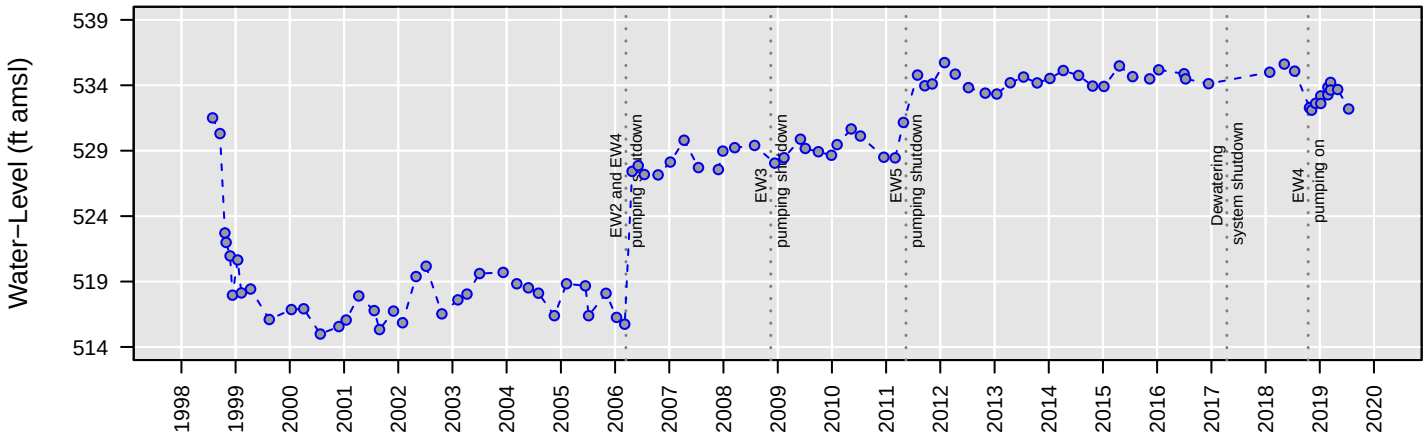
No Analysis Performed

MW100

1,2−Dichloroethane

Number of Comparisons: 39
Percent NDs: 69%





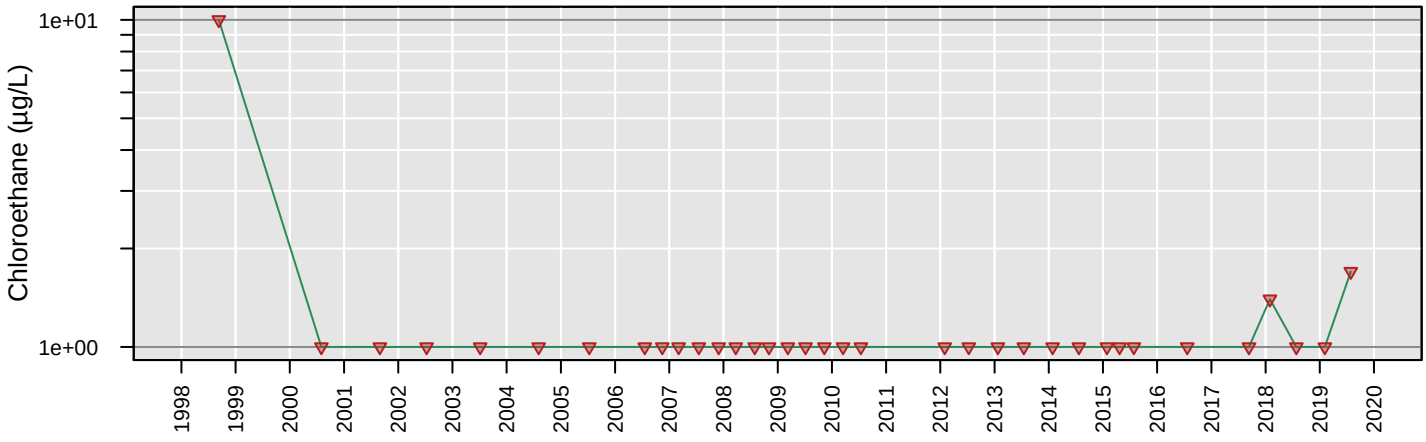
No Analysis Performed

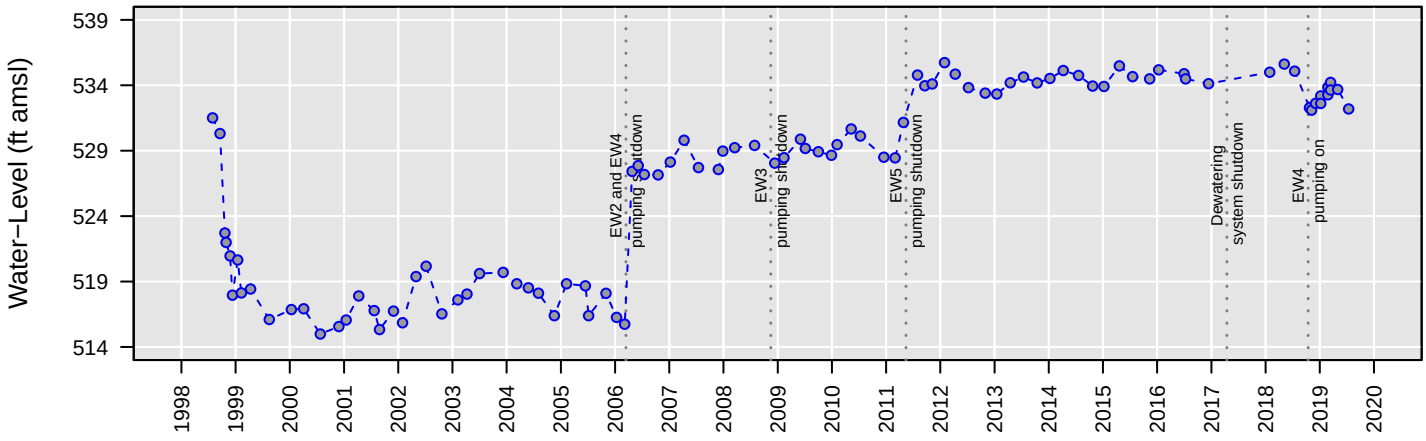
MW100

Chloroethane

Number of Comparisons: 35
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



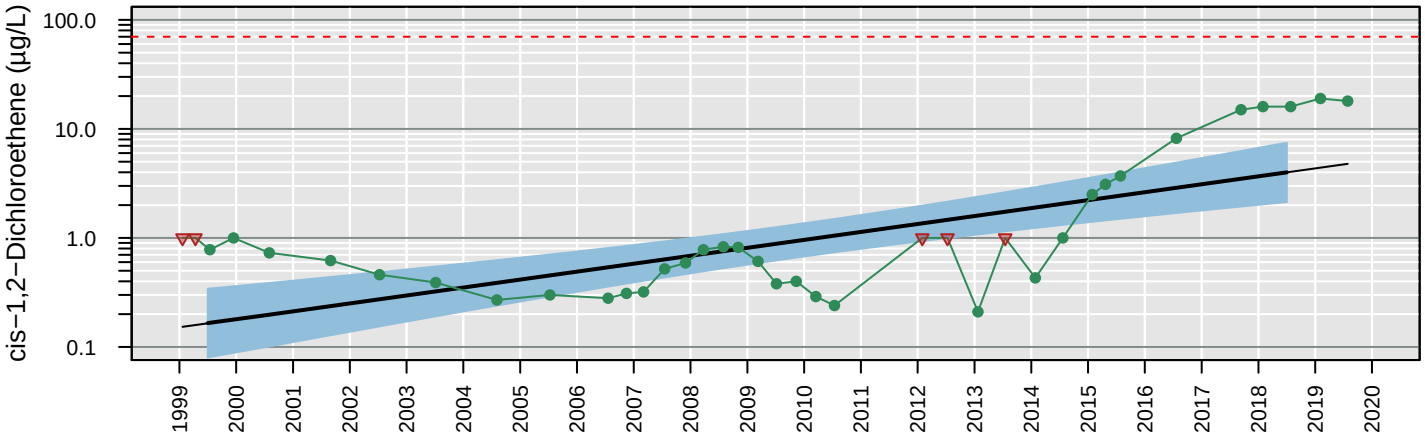


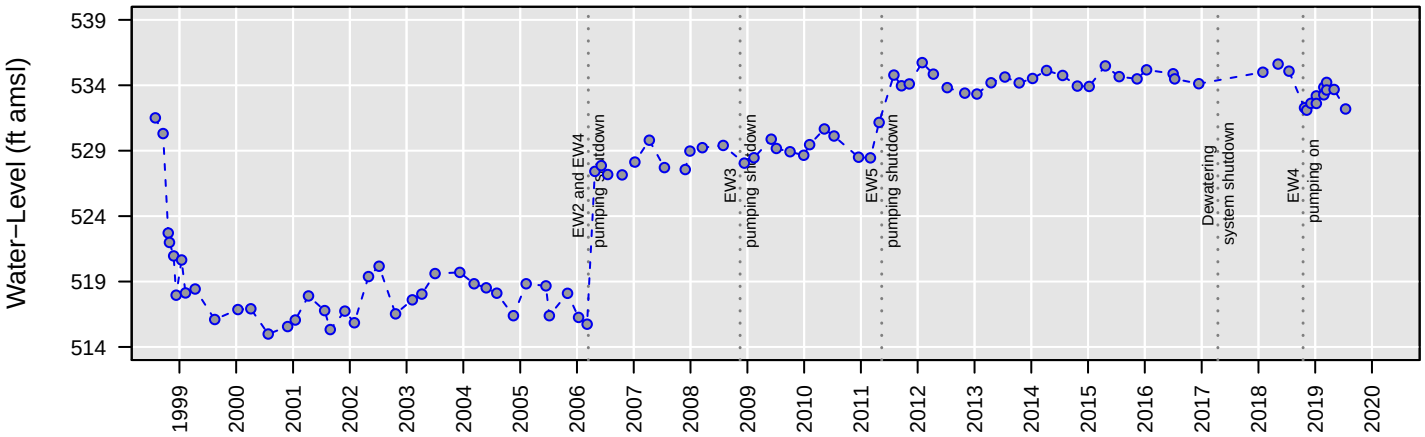
No Analysis Performed

MW100

cis−1,2−Dichloroethene

Number of Comparisons: 38
Percent NDs: 13%





Censored Regression (Tobit) Model

ln Conc. = 0.00046 (+/− 0.000082)*Date + −6.8 (+/− 1.2)

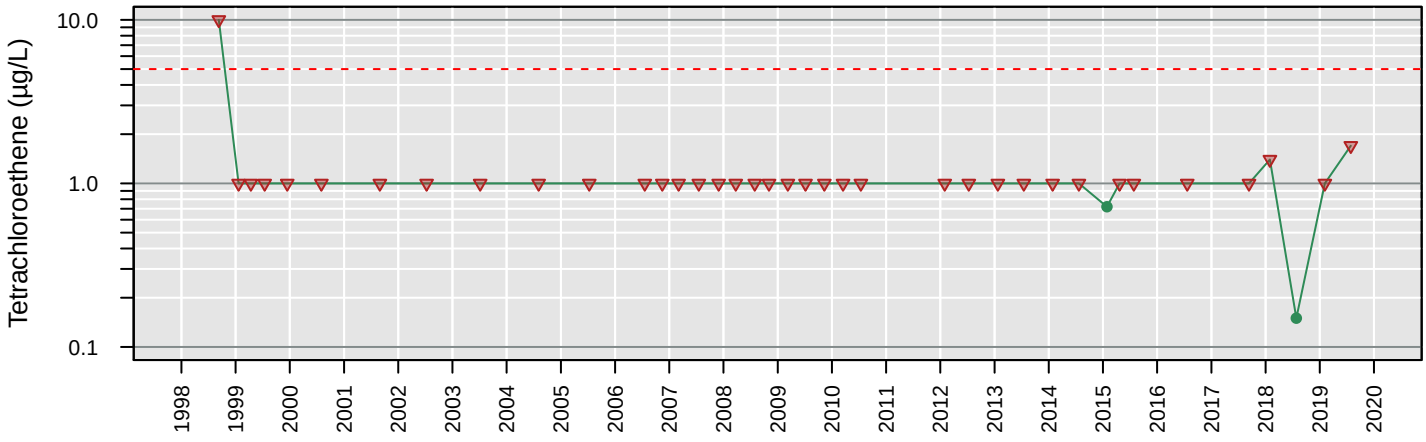
Regression Statistics for January 2018 to January 2019
Geometric Mean: 4 µg/L
UCL: 7.5 µg/L
LCL: 2.1 µg/L

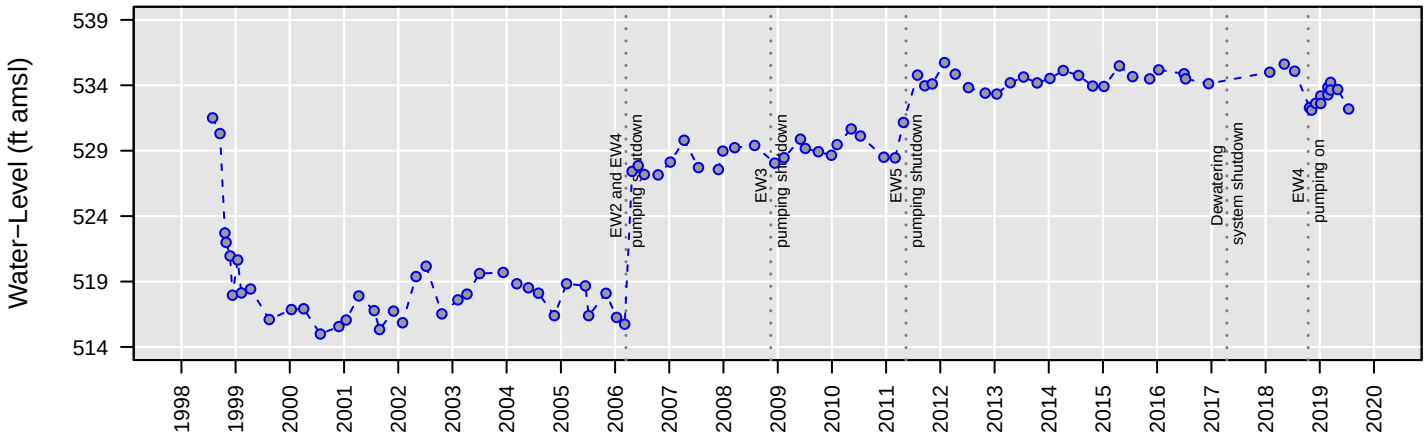
MW100

Tetrachloroethene

Number of Comparisons: 39
Percent NDs: 95%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



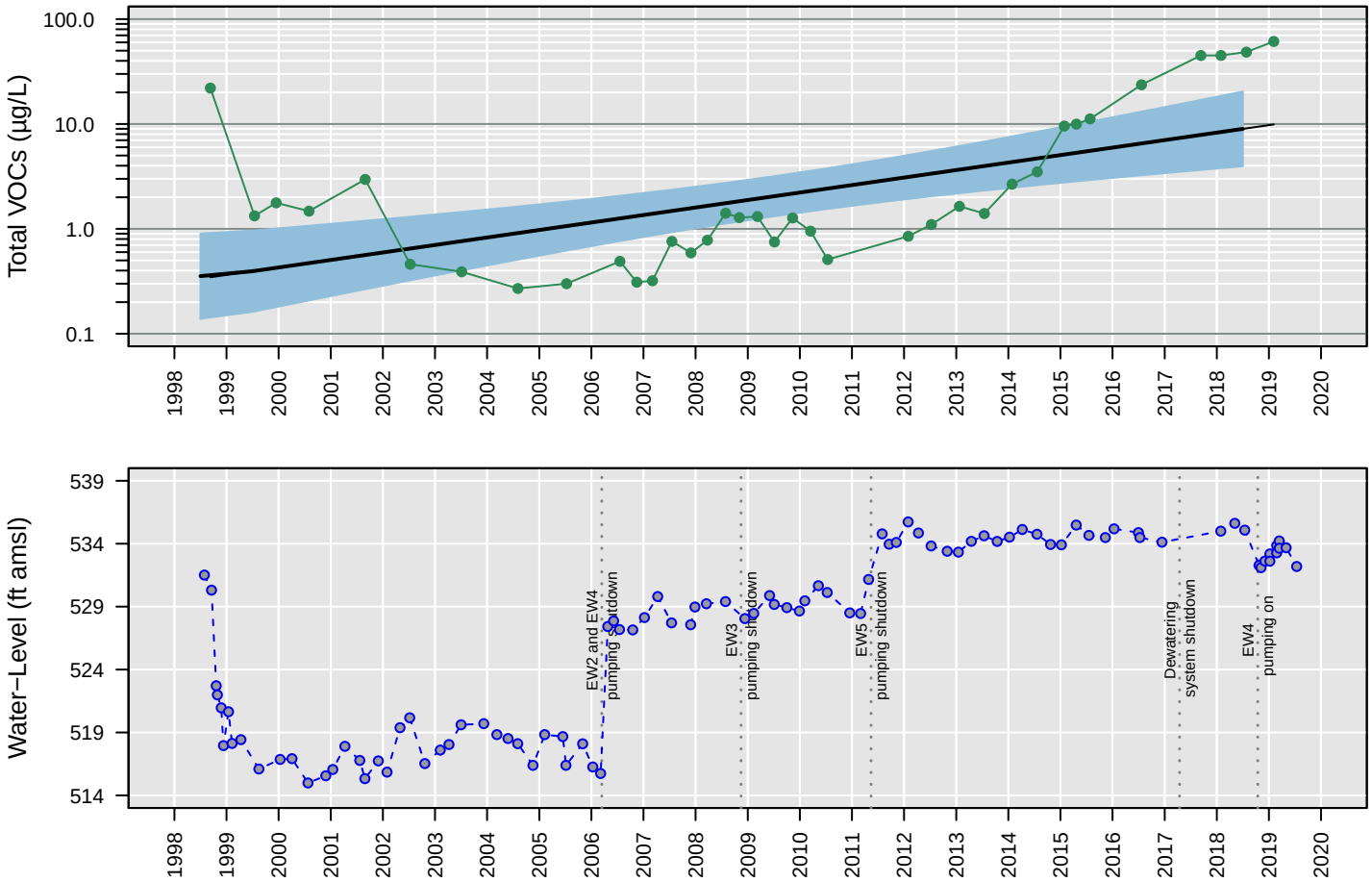


No Analysis Performed

MW100

Total VOCs

Number of Comparisons: 36
Percent NDs: 0%



Censored Regression (Tobit) Model

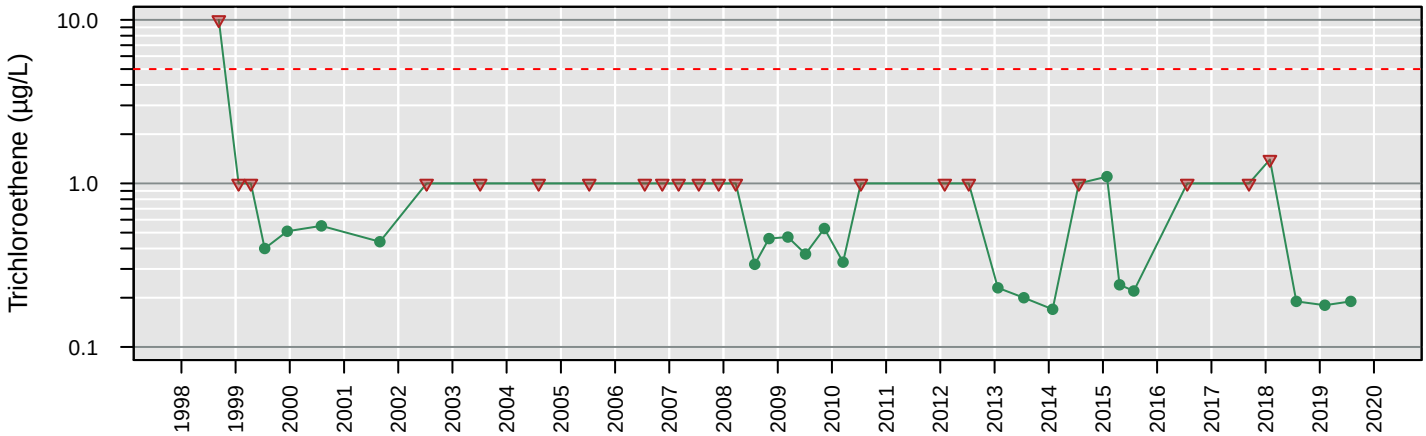
ln Conc. = 0.00045 (+/− 0.0001)*Date + −5.8 (+/− 1.5)

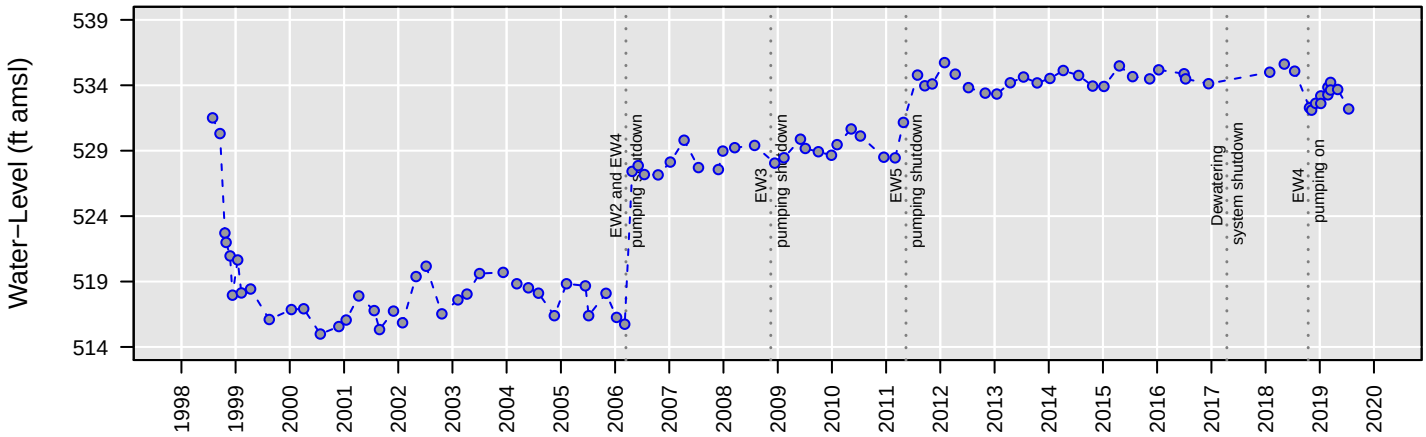
Regression Statistics for January 2018 to January 2019
Geometric Mean: 9 µg/L
UCL: 20 µg/L
LCL: 4 µg/L

MW100

Trichloroethene

Number of Comparisons: 39
Percent NDs: 51%



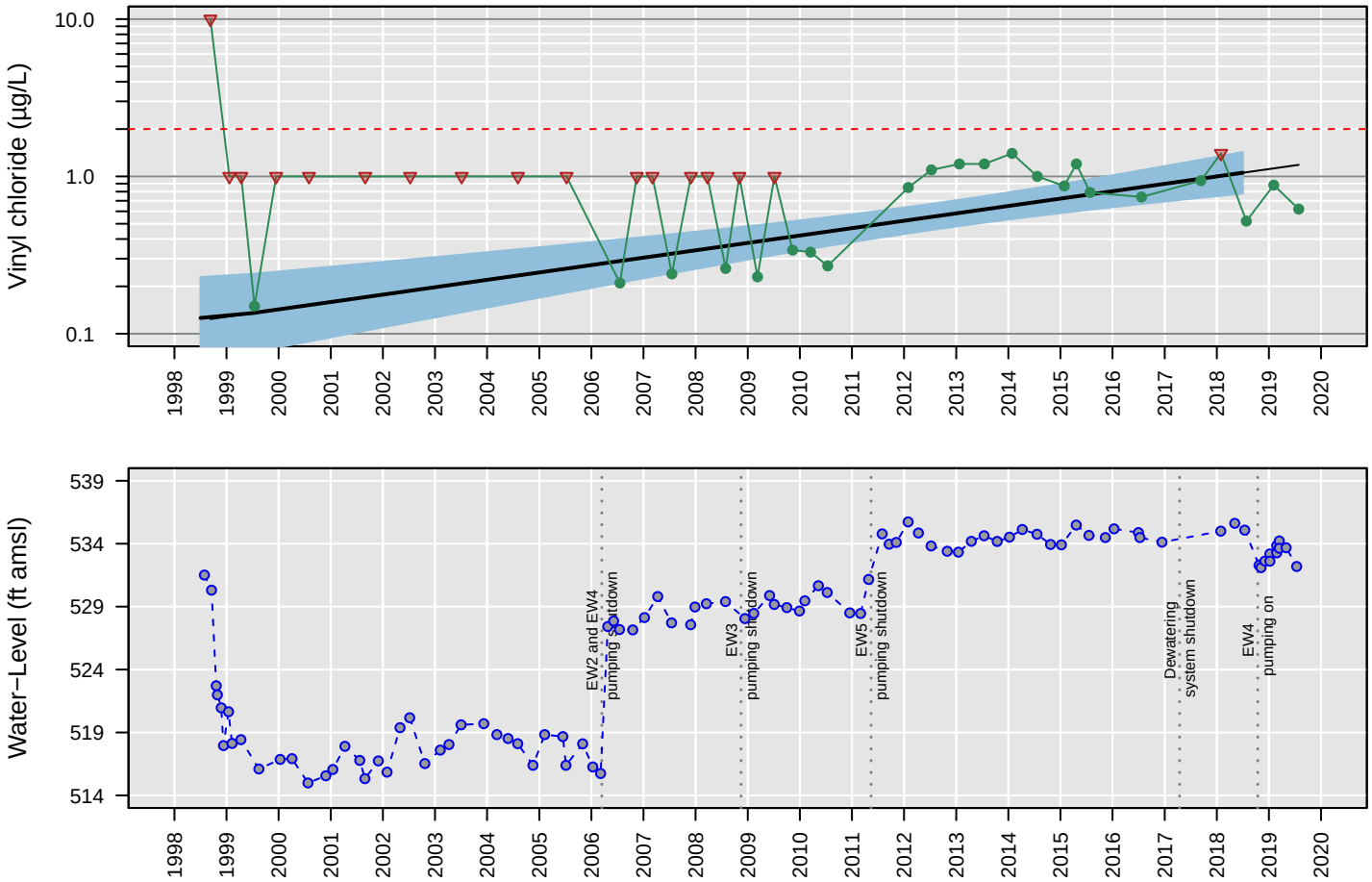


No Analysis Performed

MW100

Vinyl chloride

Number of Comparisons: 39
Percent NDs: 44%



Censored Regression (Tobit) Model

ln Conc. = 0.0003 (+/− 0.000055)*Date + −5.2 (+/− 0.87)

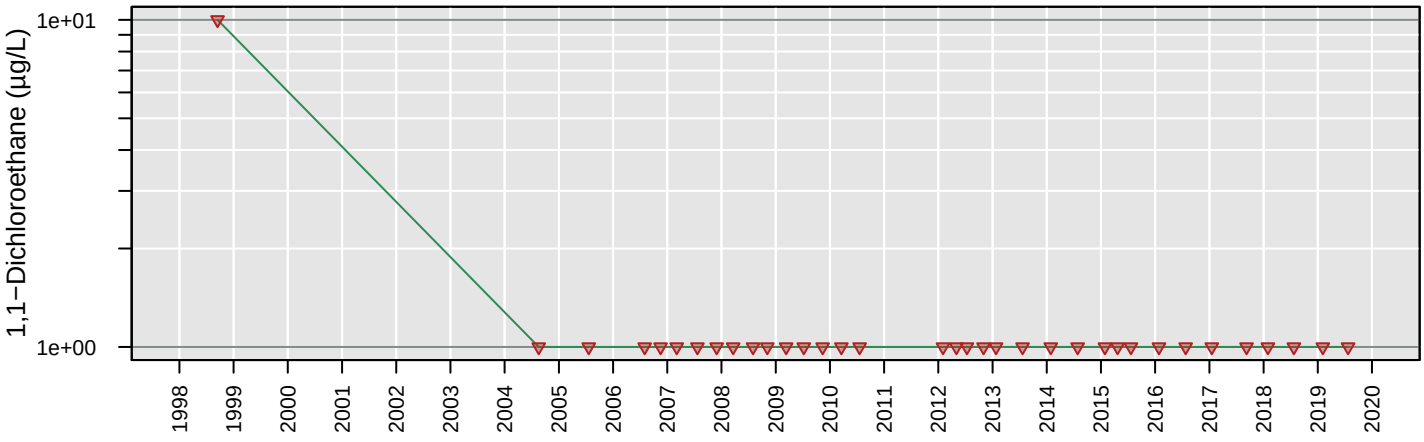
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.1 µg/L
UCL: 1.4 µg/L
LCL: 0.78 µg/L

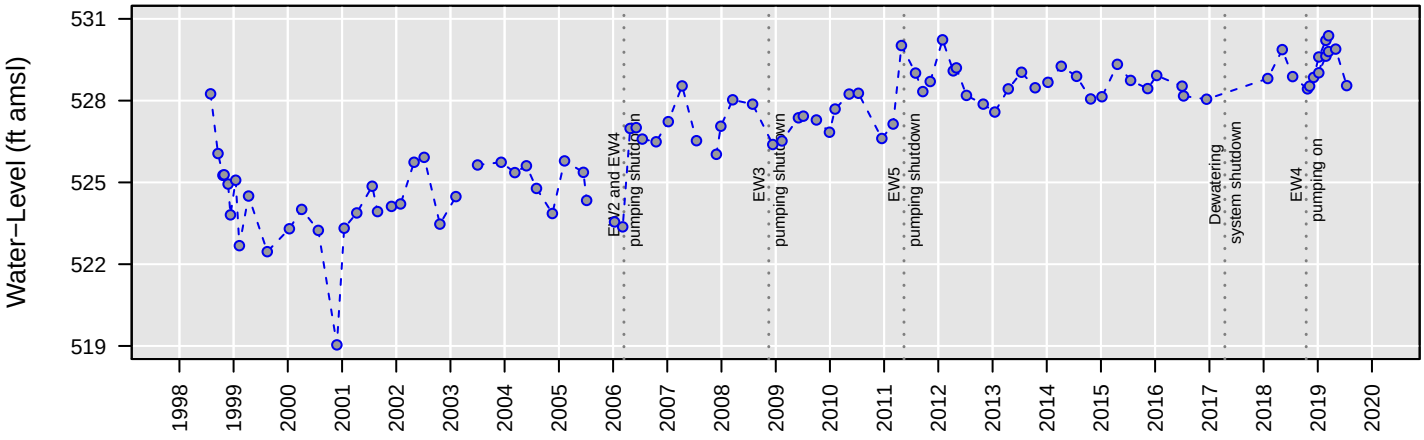
MW101

1,1−Dichloroethane

Number of Comparisons: 35
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





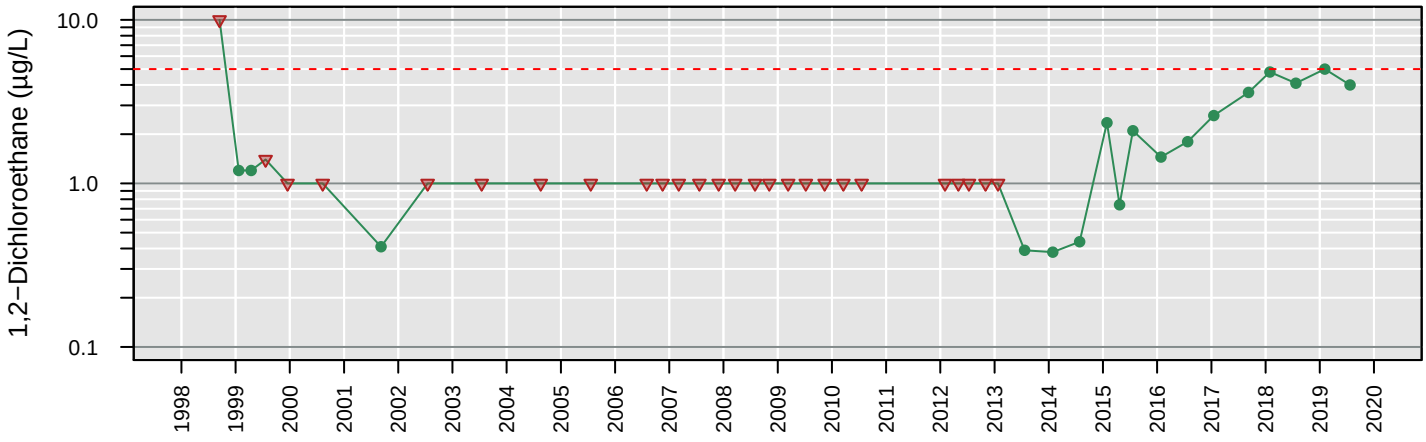
No Analysis Performed

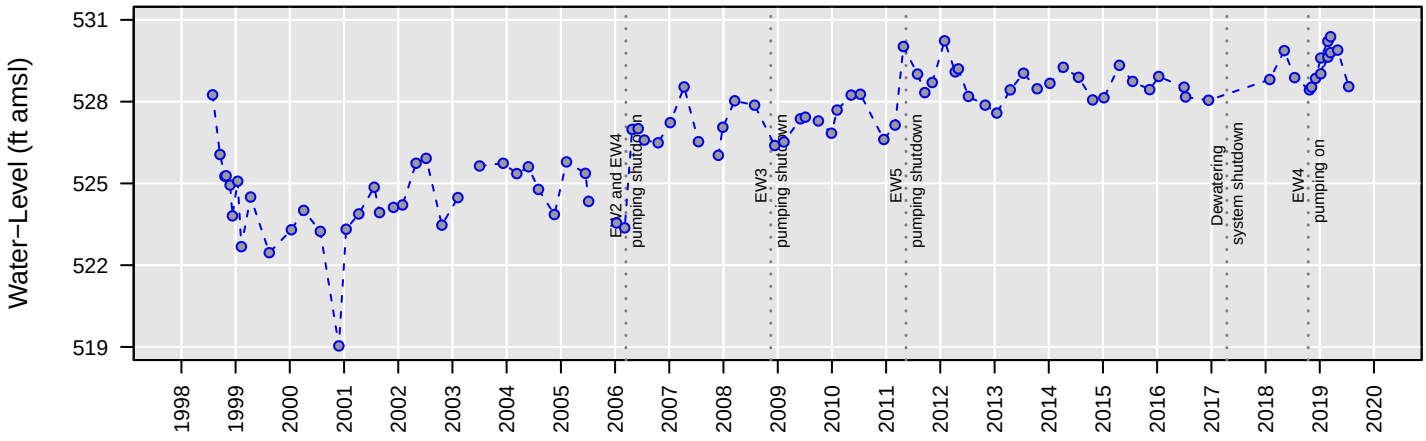
MW101

1,2−Dichloroethane

Number of Comparisons: 43
Percent NDs: 60%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





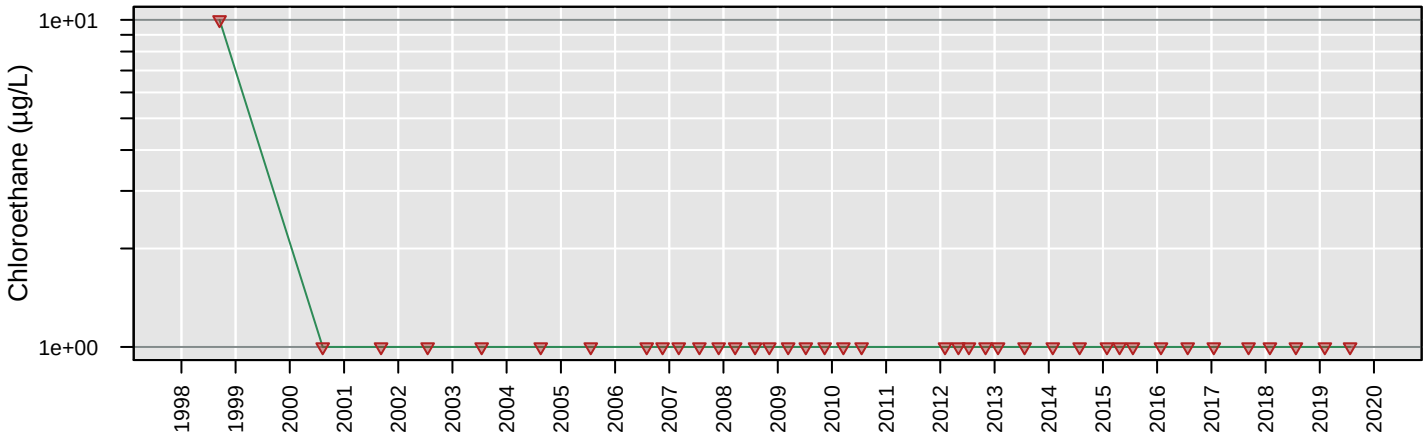
No Analysis Performed

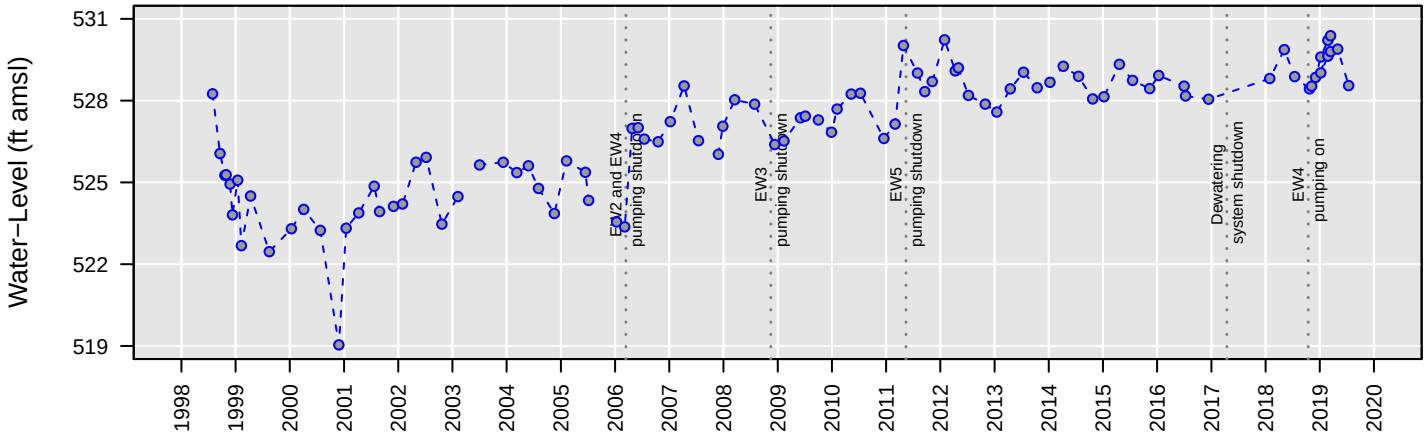
MW101

Chloroethane

Number of Comparisons: 39
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





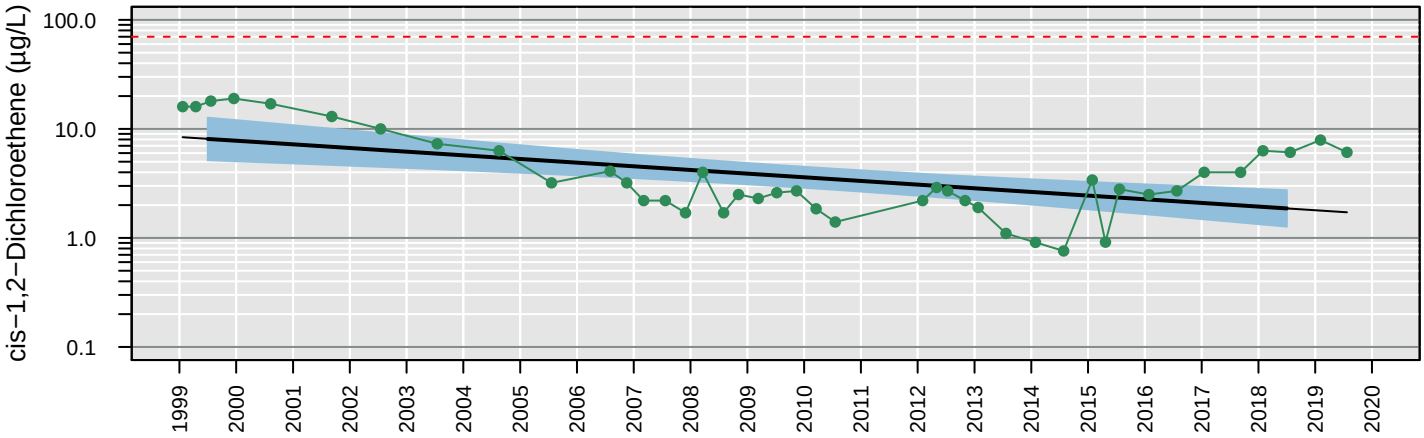
No Analysis Performed

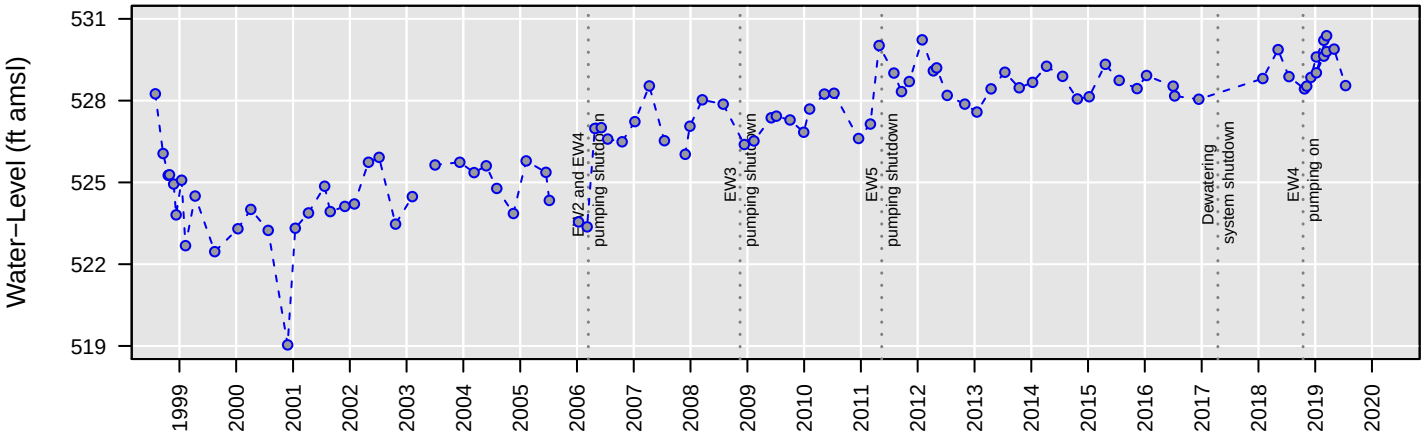
MW101

cis−1,2−Dichloroethene

Number of Comparisons: 42
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

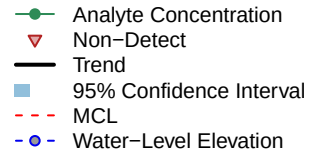
ln Conc. = −0.00021 (+/− 0.00005)*Date + 4.4 (+/− 0.75)

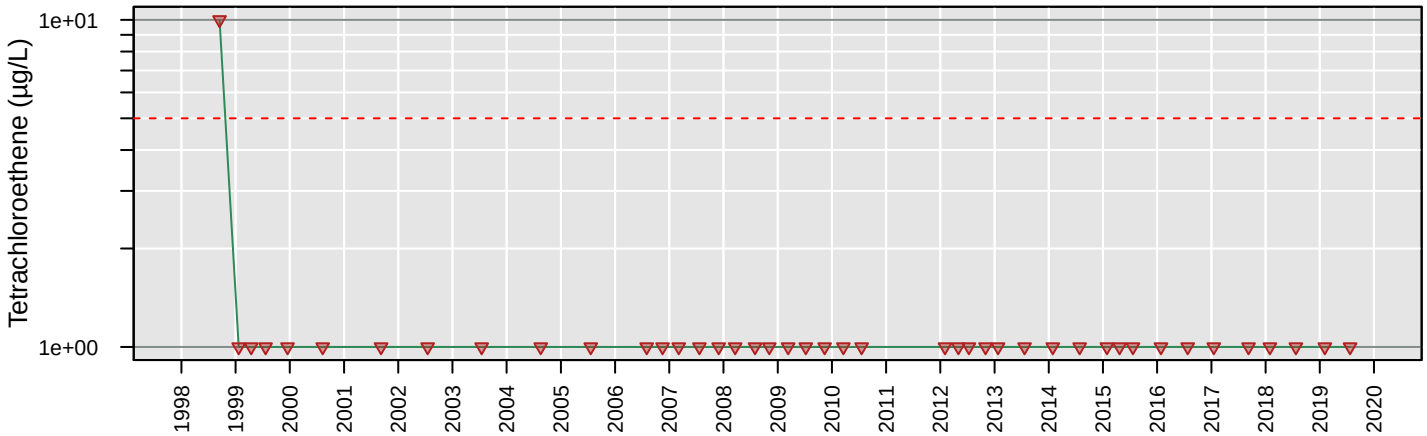
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.9 µg/L
UCL: 2.7 µg/L
LCL: 1.3 µg/L

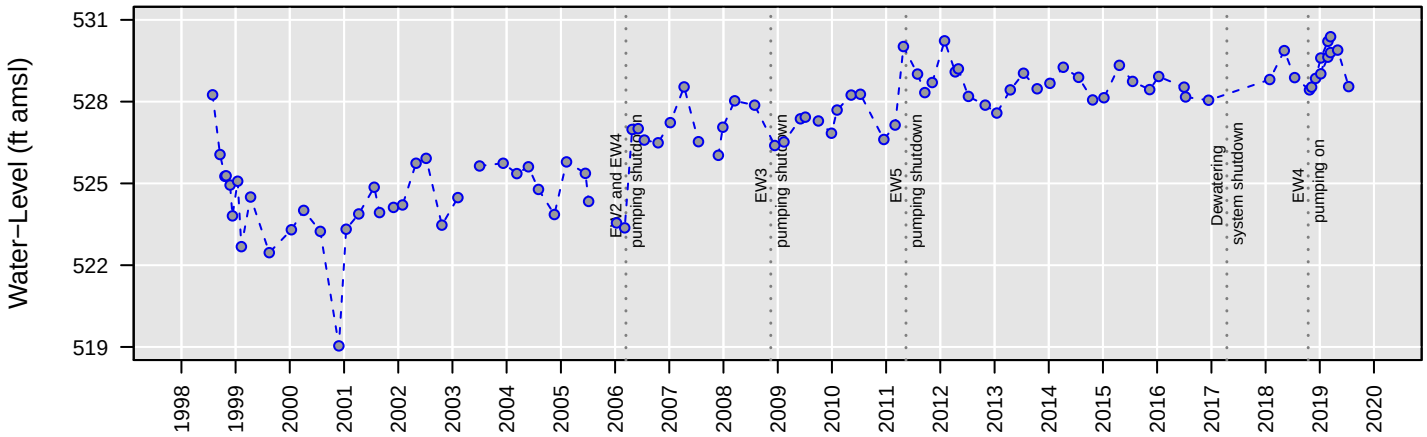
MW101

Tetrachloroethene

Number of Comparisons: 43
Percent NDs: 100%





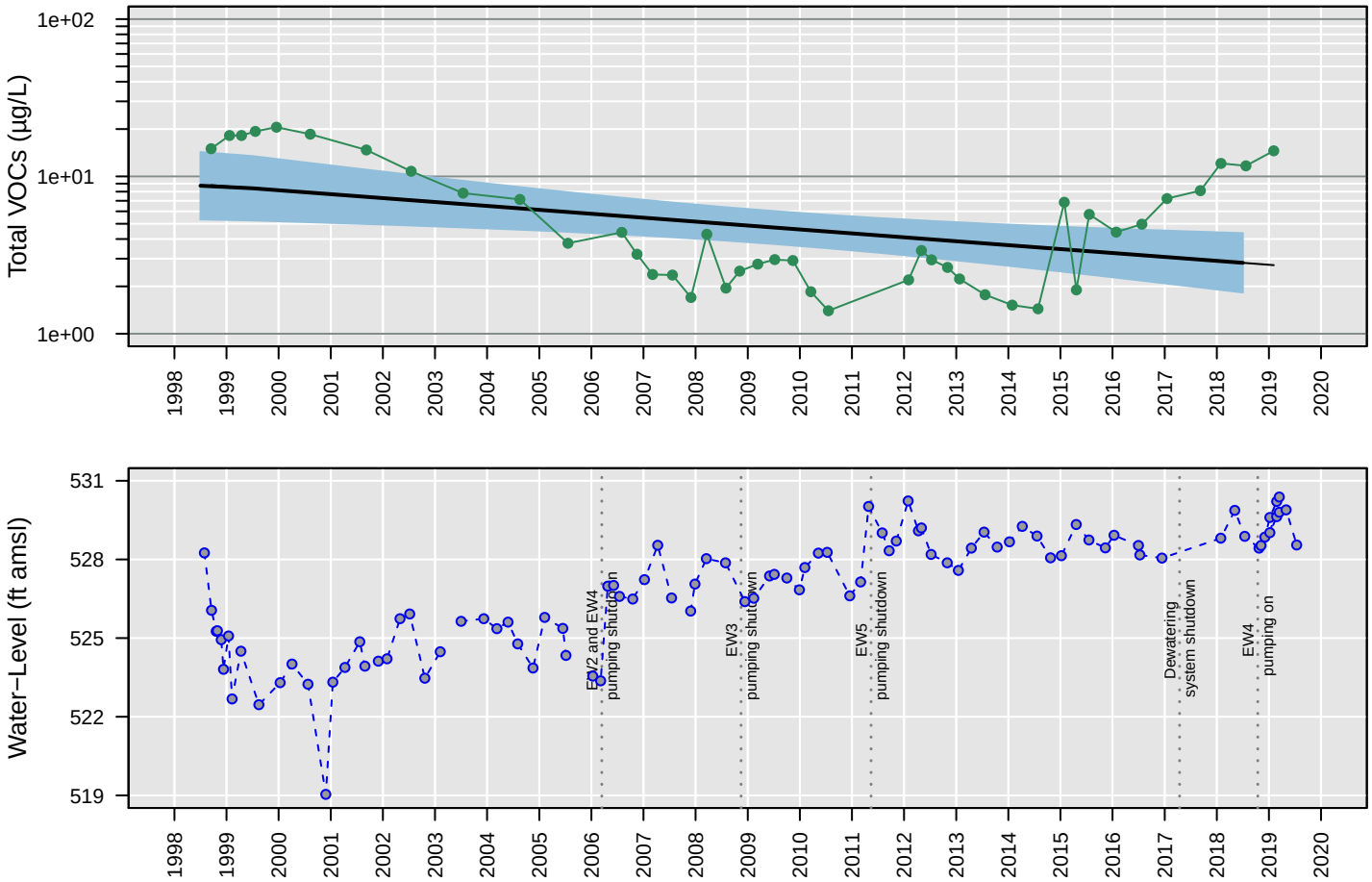


No Analysis Performed

MW101

Total VOCs

Number of Comparisons: 42
Percent NDs: 0%



Censored Regression (Tobit) Model

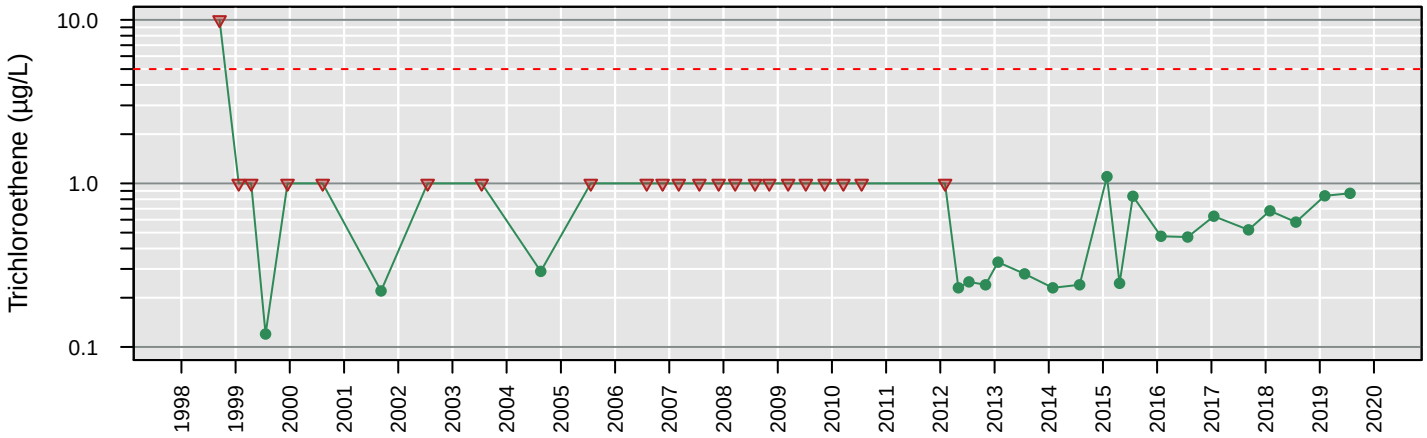
ln Conc. = −0.00016 (+/− 0.000055)*Date + 3.8 (+/− 0.8)

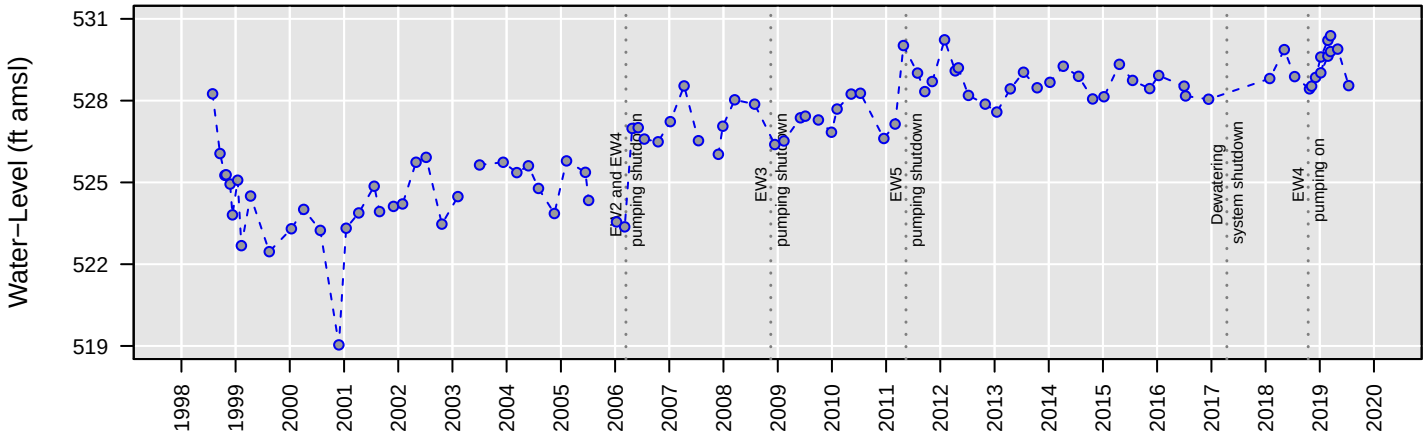
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.8 µg/L
UCL: 4.4 µg/L
LCL: 1.8 µg/L

MW101

Trichloroethene

Number of Comparisons: 43
Percent NDs: 51%



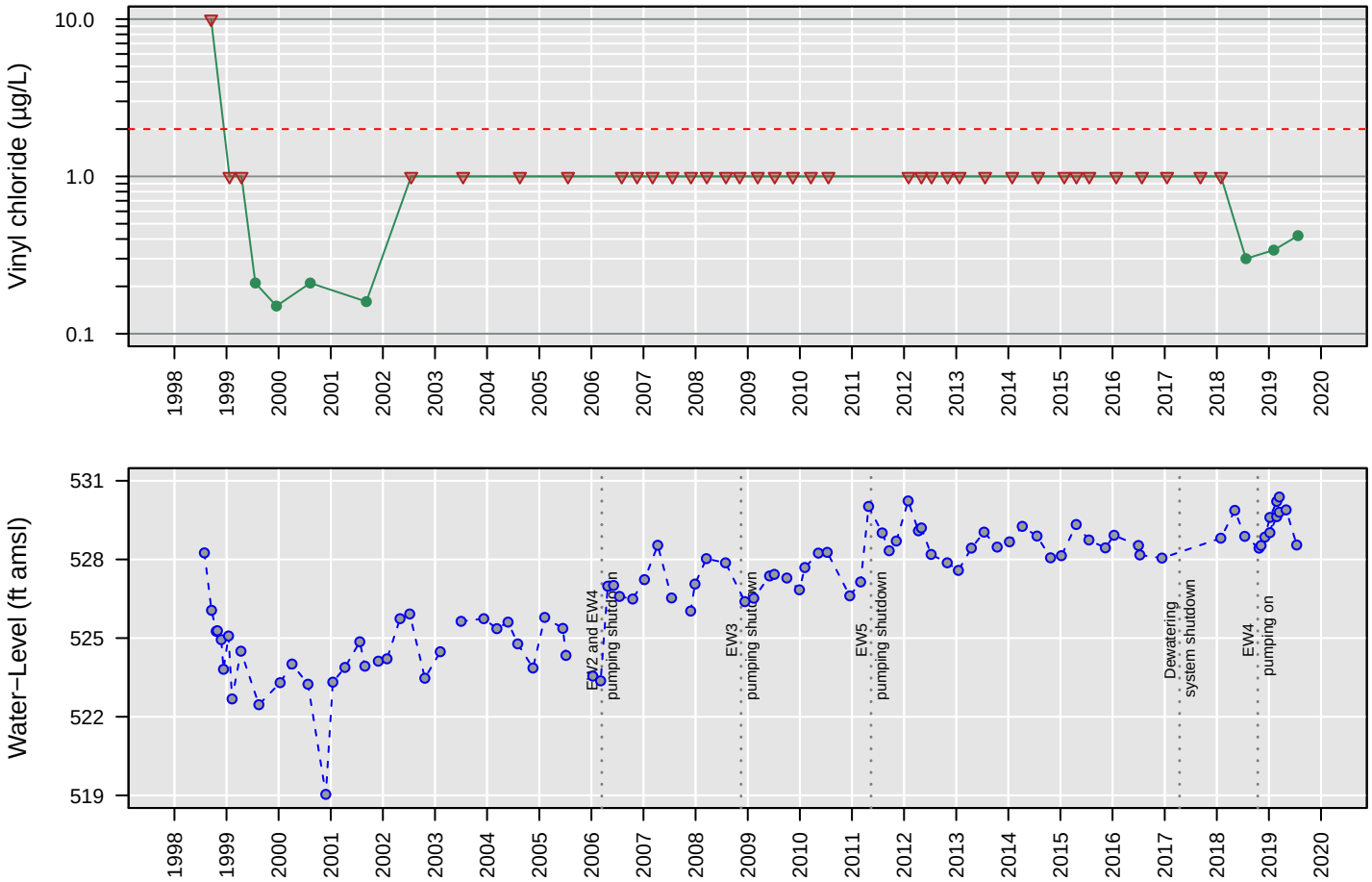


No Analysis Performed

MW101

Vinyl chloride

Number of Comparisons: 43
Percent NDs: 84%

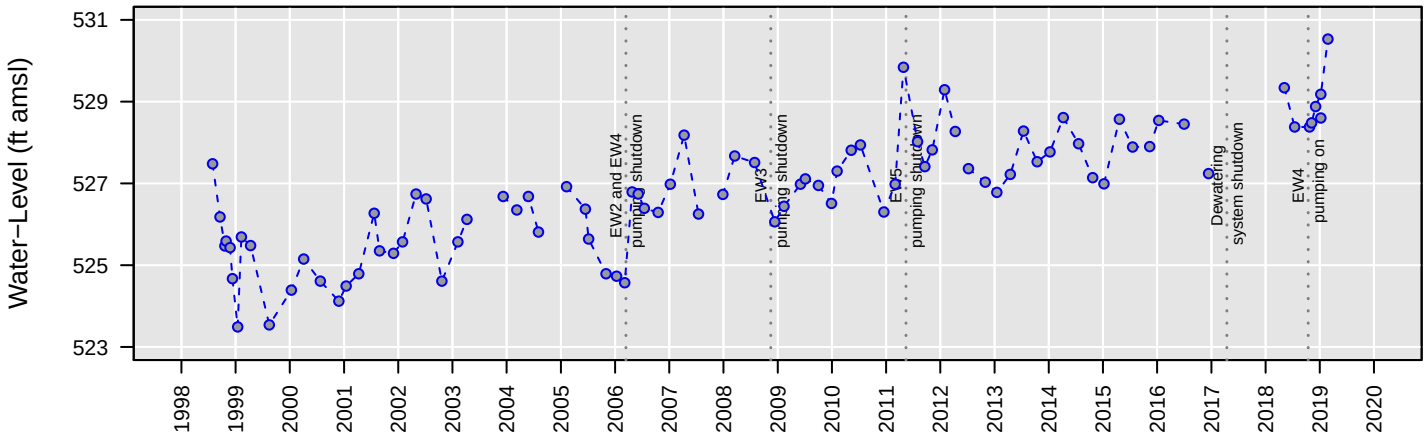


No Analysis Performed

MW102

1,1−Dichloroethane

Number of Comparisons: 16
Percent NDs: 94%

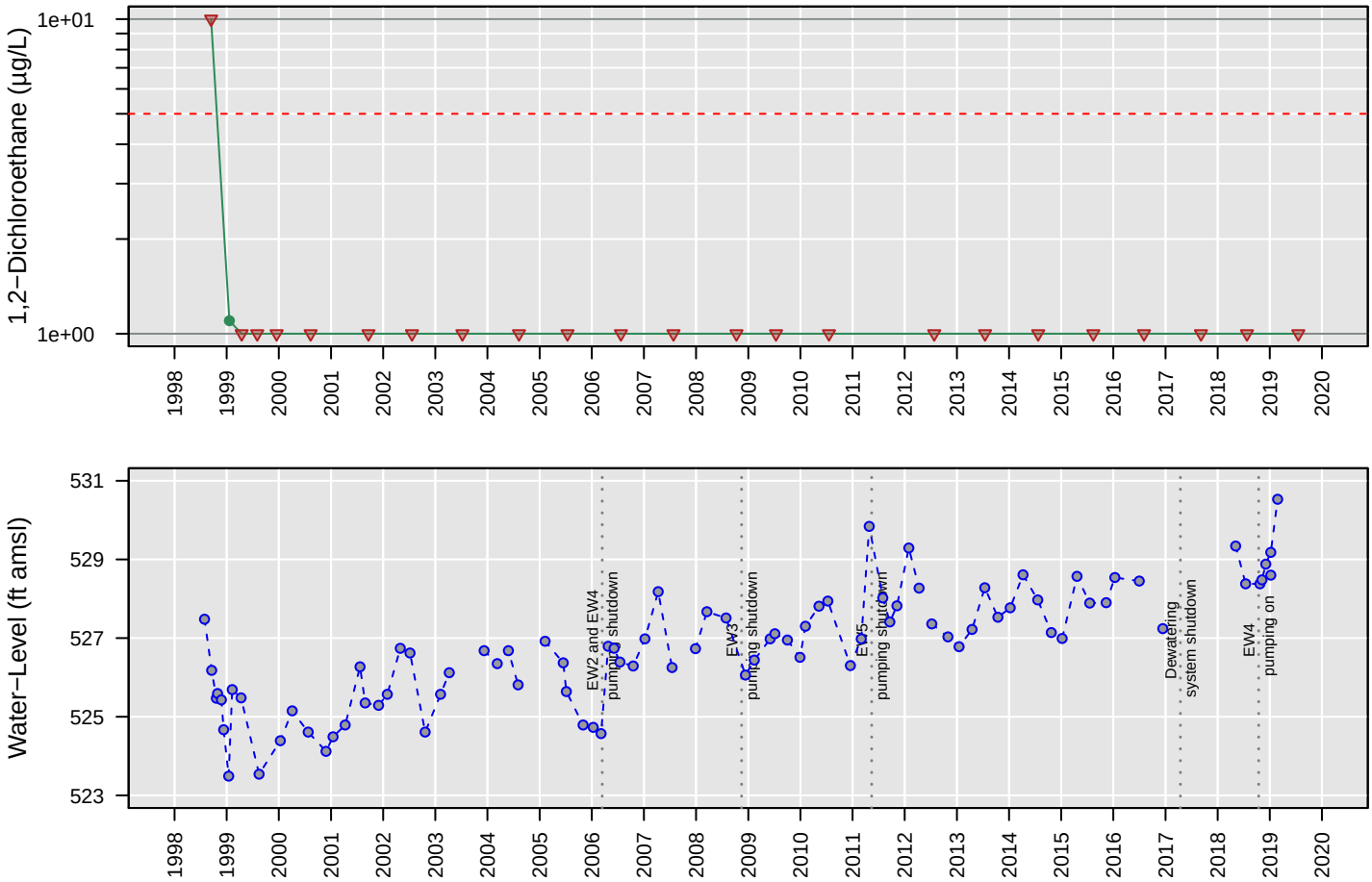


No Analysis Performed

MW102

1,2−Dichloroethane

Number of Comparisons: 24
Percent NDs: 96%



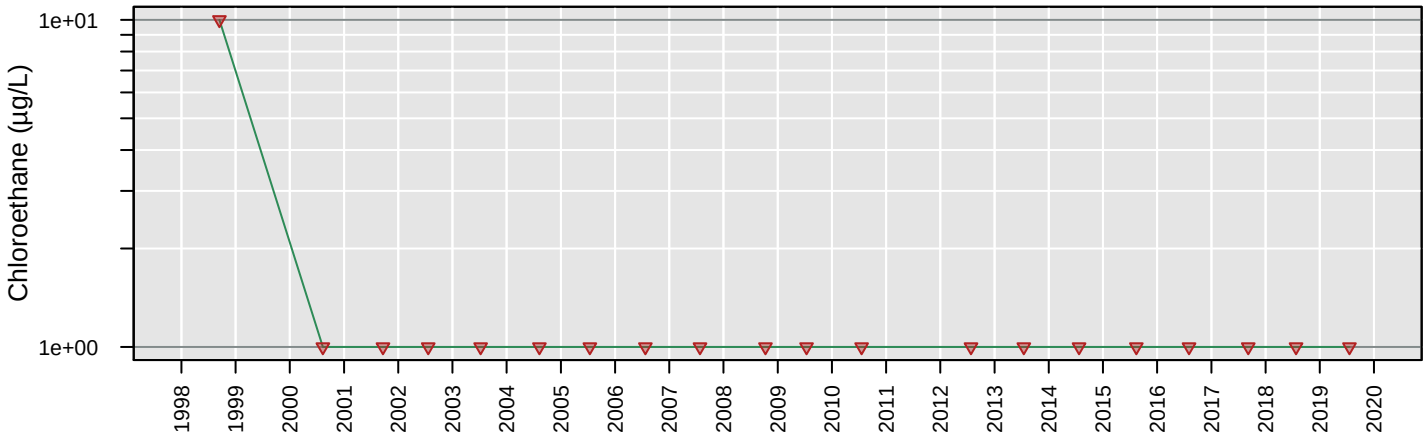
No Analysis Performed

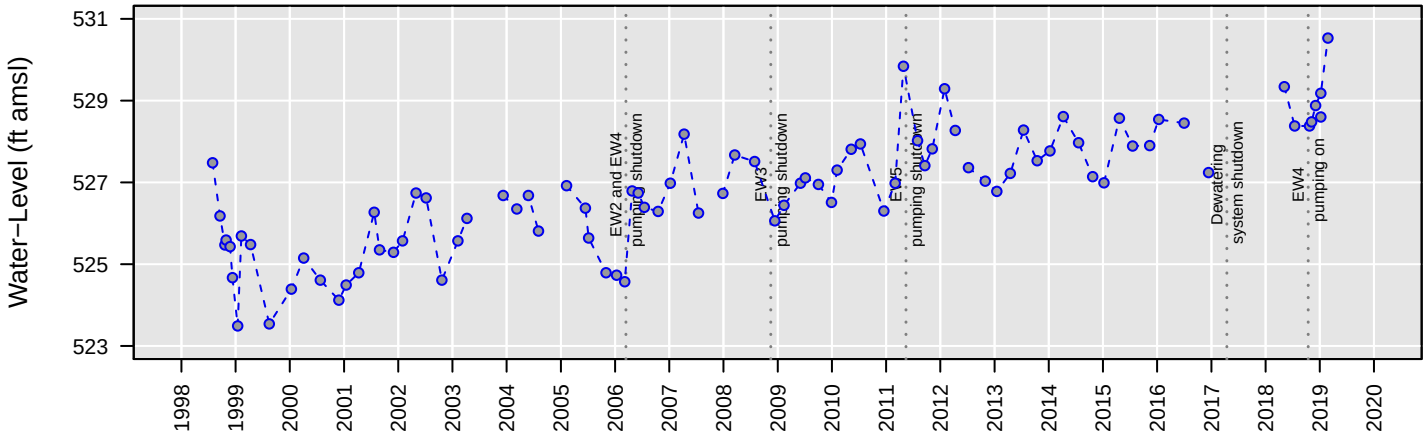
MW102

Chloroethane

Number of Comparisons: 20
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



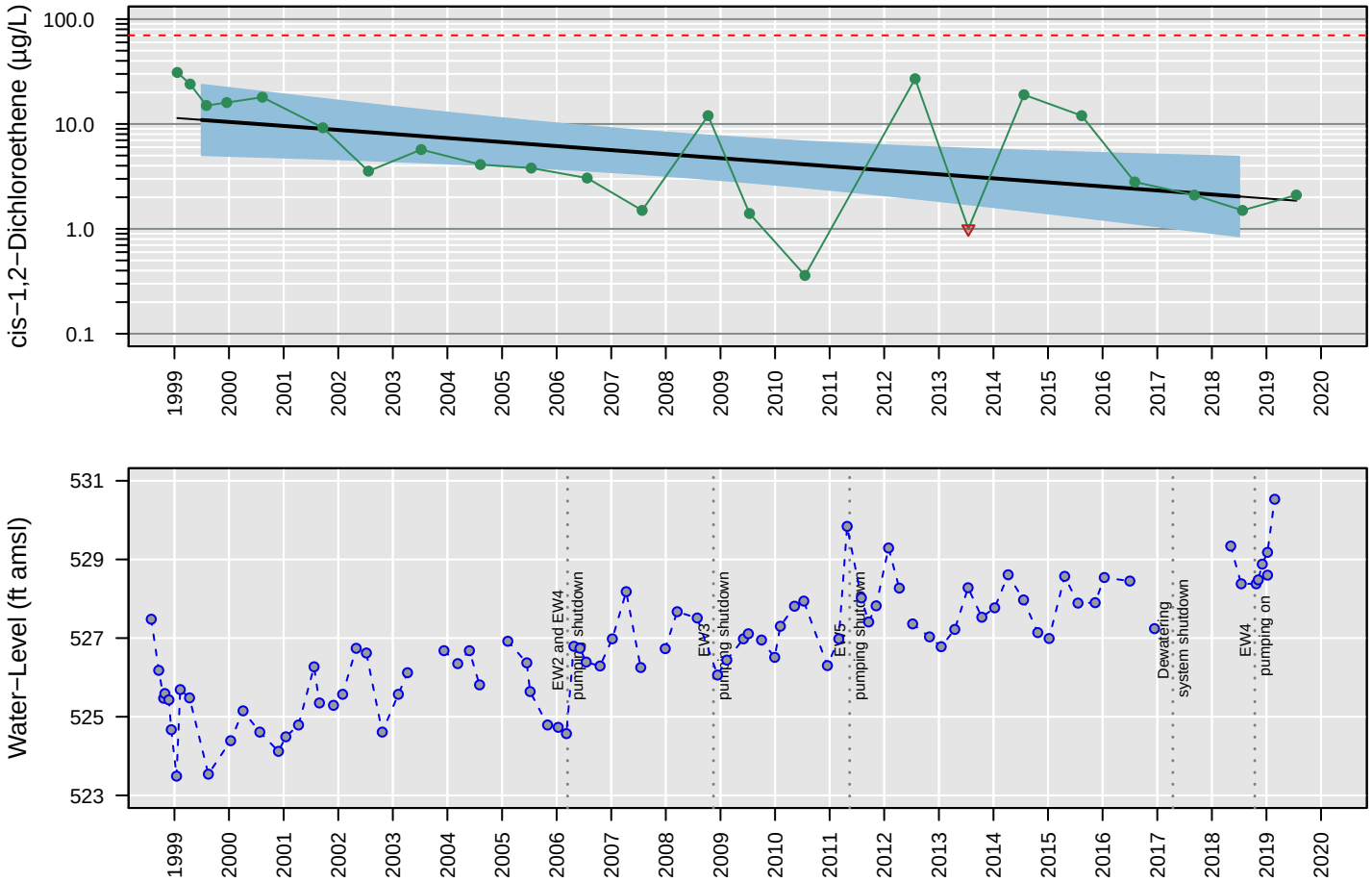


No Analysis Performed

MW102

cis−1,2−Dichloroethene

Number of Comparisons: 23
Percent NDs: 4%



Censored Regression (Tobit) Model

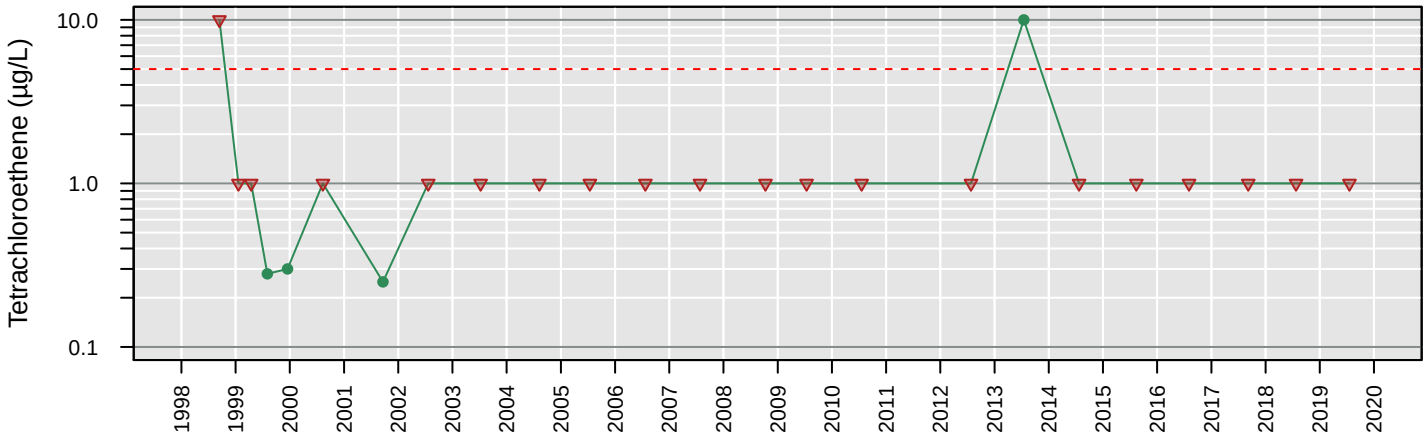
ln Conc. = −0.00024 (+/− 0.000093)*Date + 5 (+/− 1.3)

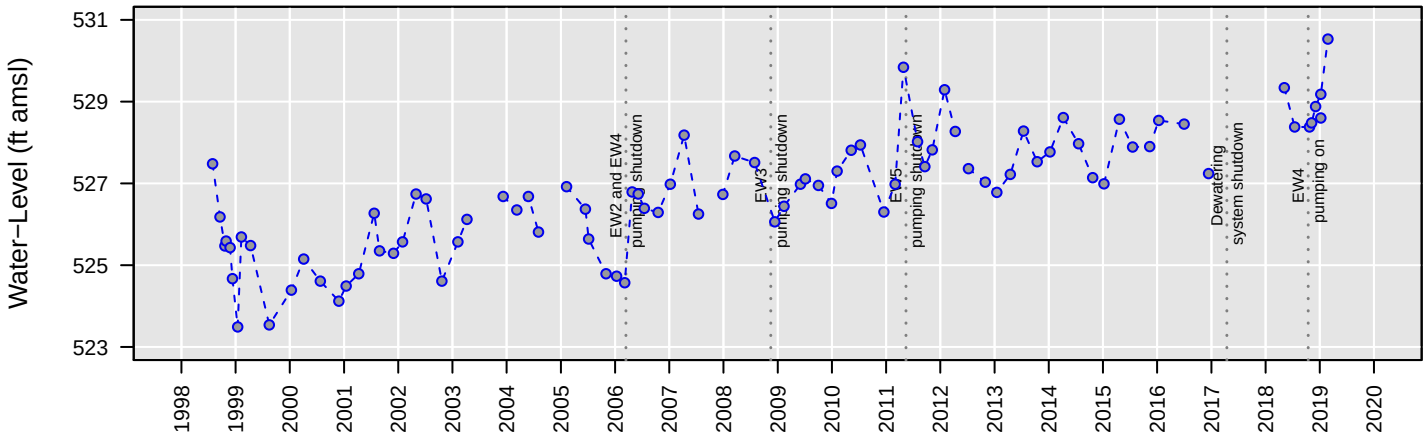
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2 µg/L
UCL: 4.9 µg/L
LCL: 0.85 µg/L

MW102

Tetrachloroethene

Number of Comparisons: 24
Percent NDs: 83%



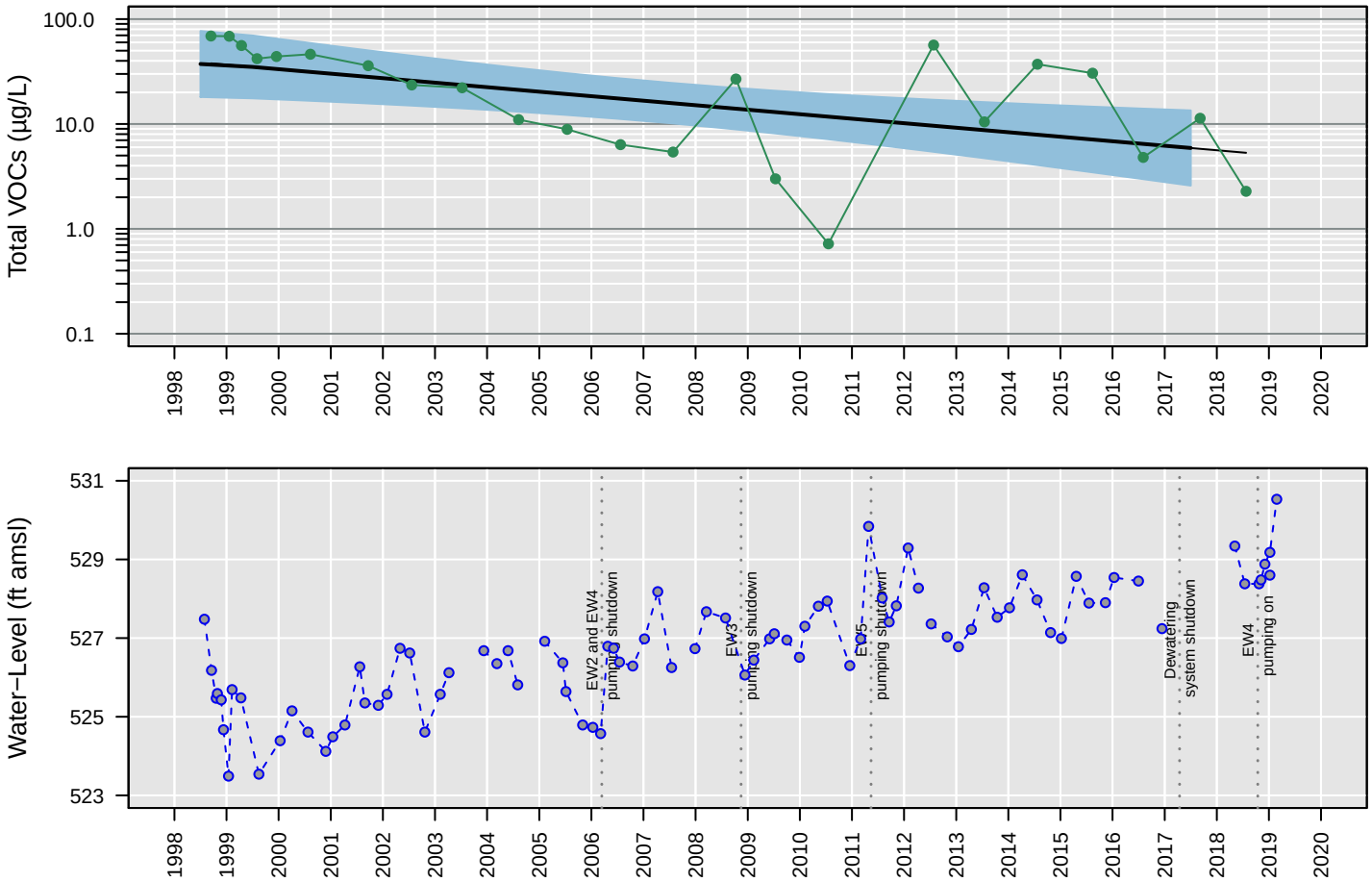


No Analysis Performed

MW102

Total VOCs

Number of Comparisons: 23
Percent NDs: 0%



Censored Regression (Tobit) Model

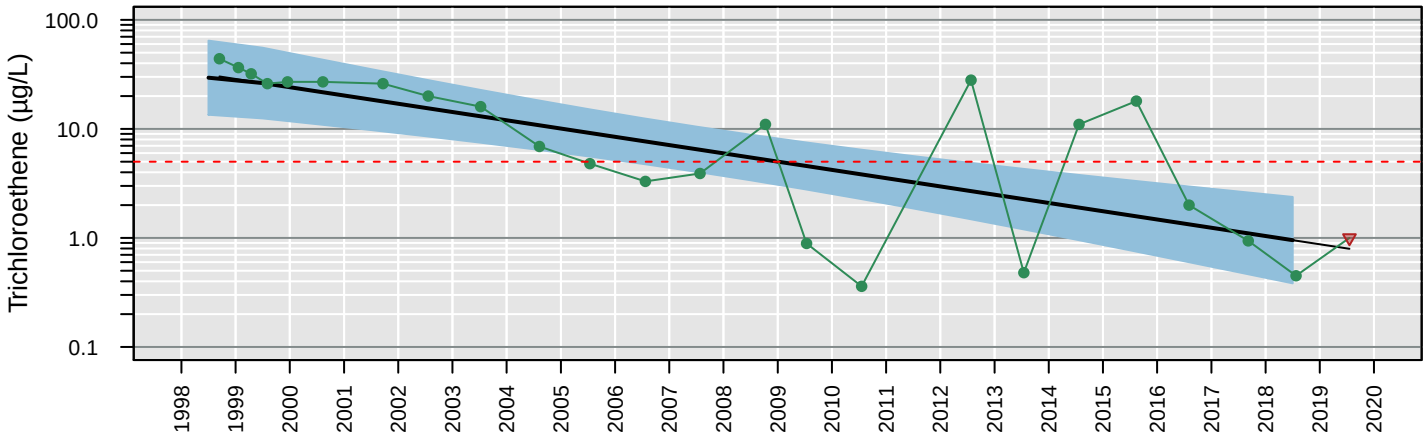
ln Conc. = −0.00027 (+/− 0.000089)*Date + 6.5 (+/− 1.2)

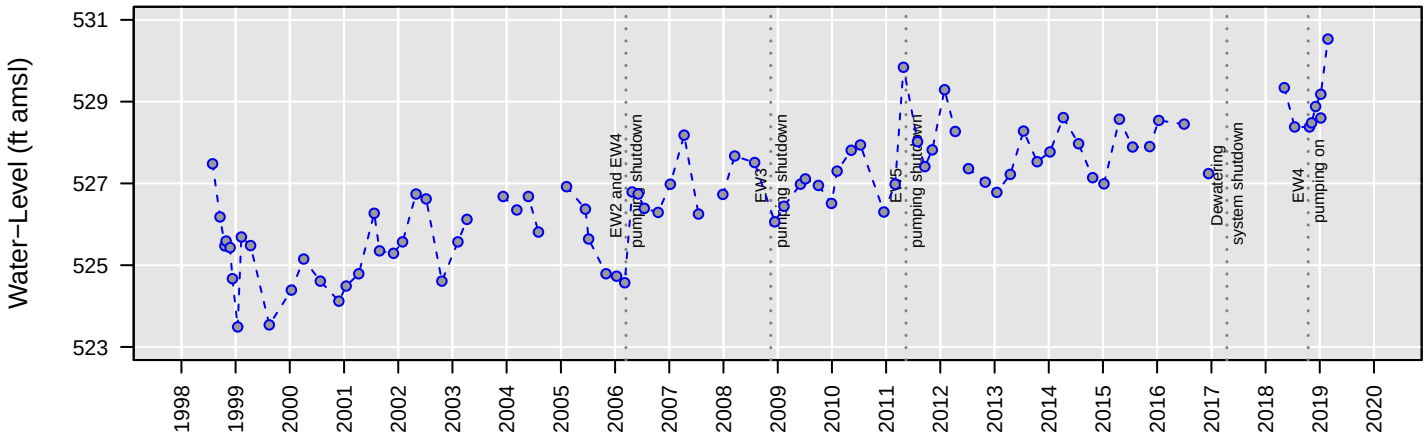
Regression Statistics for January 2017 to January 2018
Geometric Mean: 5.9 µg/L
UCL: 13 µg/L
LCL: 2.6 µg/L

MW102

Trichloroethene

Number of Comparisons: 24
Percent NDs: 4%





Censored Regression (Tobit) Model

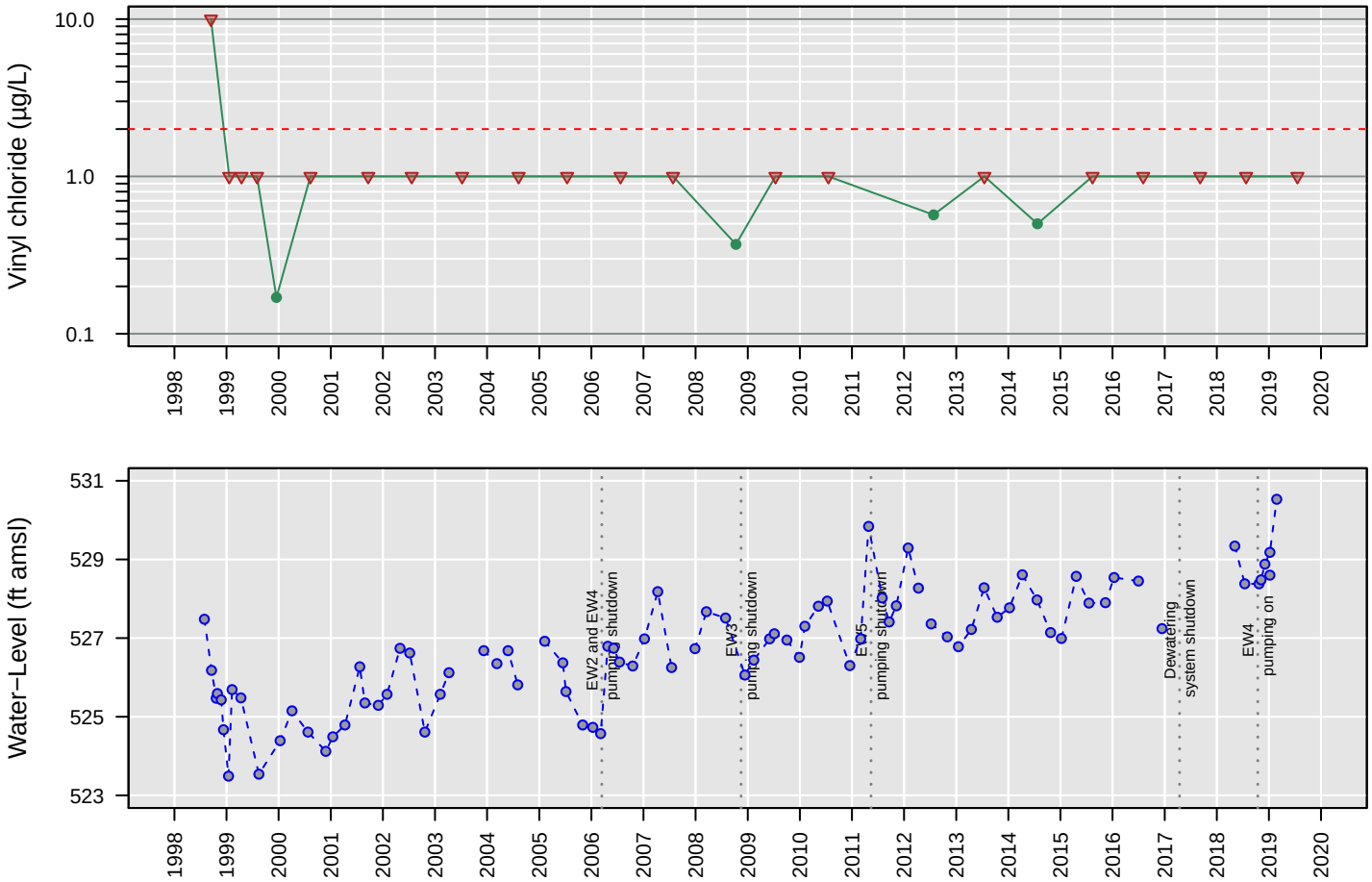
ln Conc. = −0.00048 (+/− 0.000094)*Date + 8.4 (+/− 1.3)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.95 µg/L
UCL: 2.4 µg/L
LCL: 0.38 µg/L

MW102

Vinyl chloride

Number of Comparisons: 24
Percent NDs: 83%



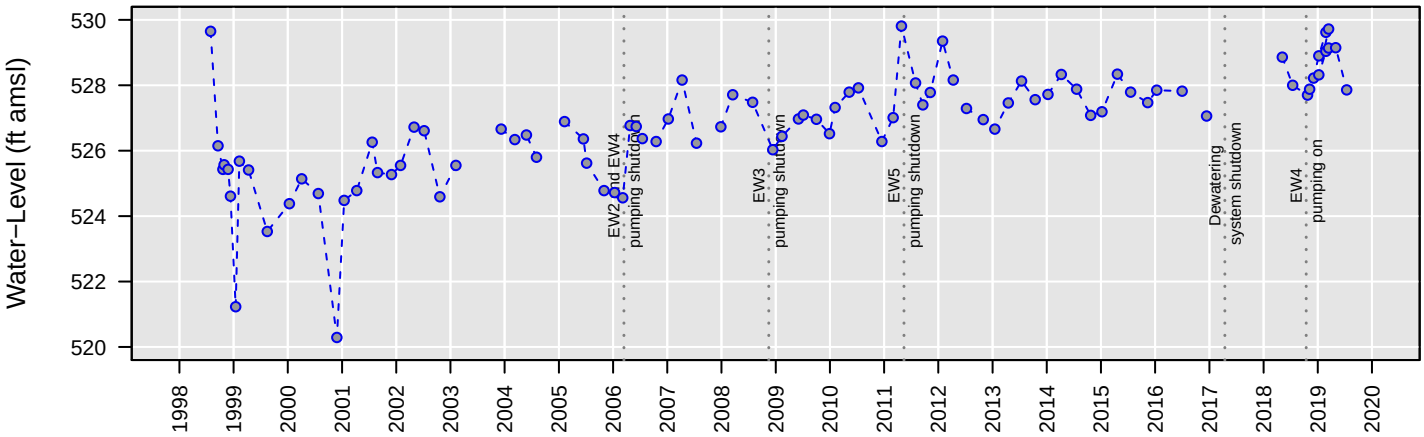
No Analysis Performed

MW103

1,1−Dichloroethane

Number of Comparisons: 16
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



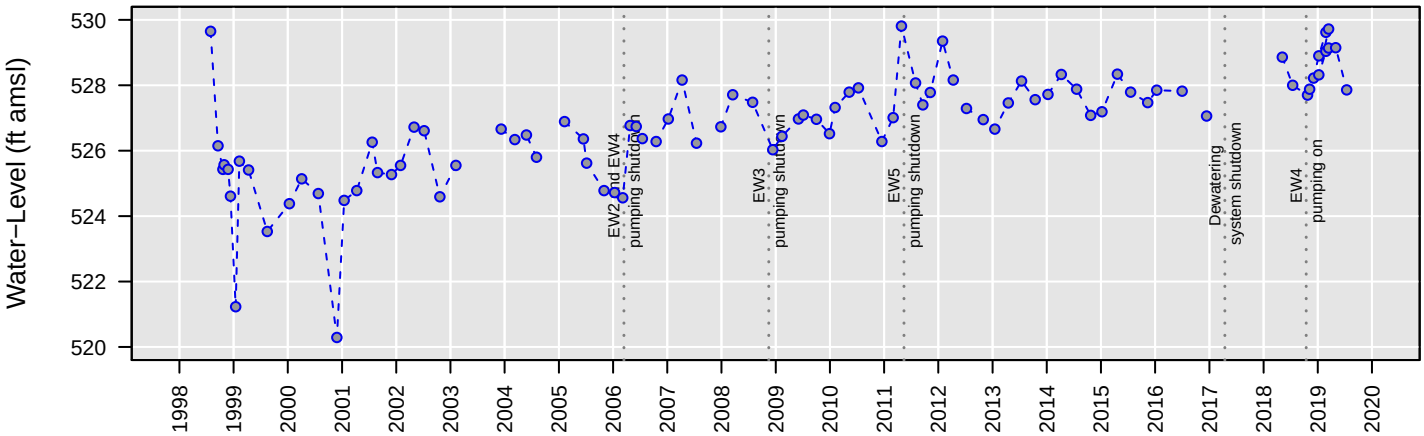
No Analysis Performed

MW103

1,2−Dichloroethane

Number of Comparisons: 24
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



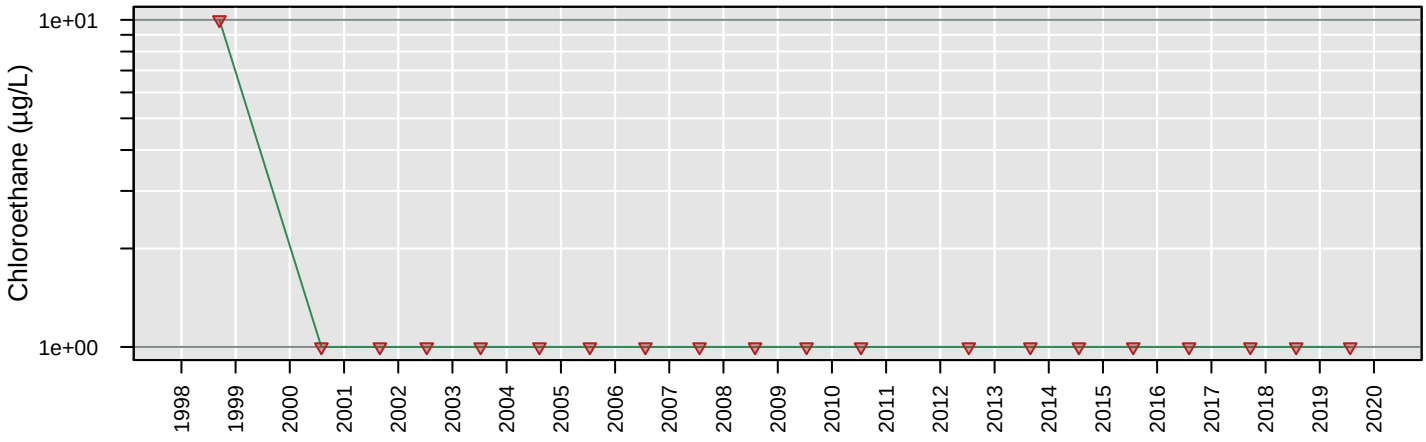
No Analysis Performed

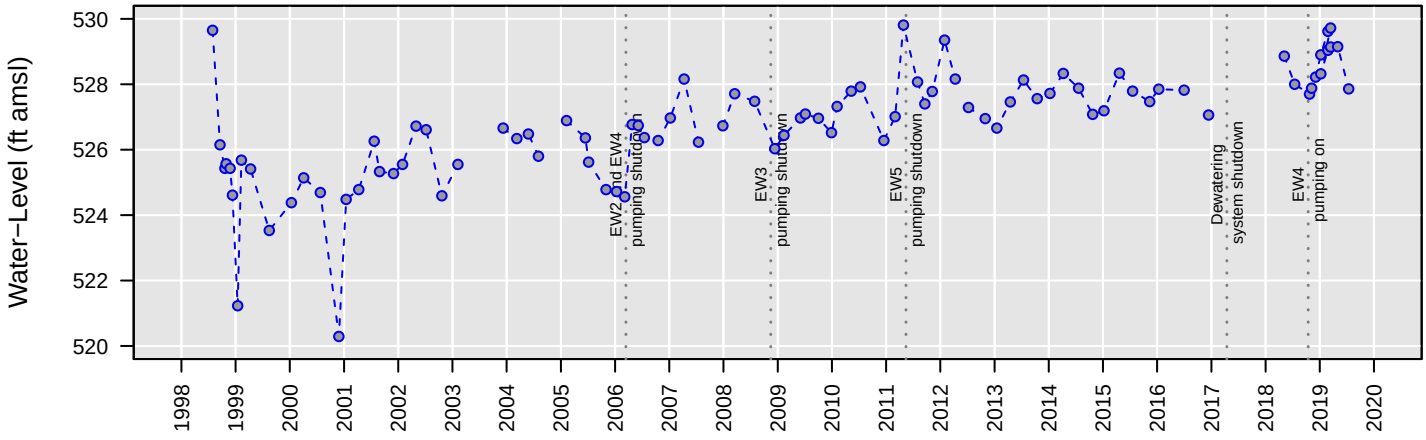
MW103

Chloroethane

Number of Comparisons: 20
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



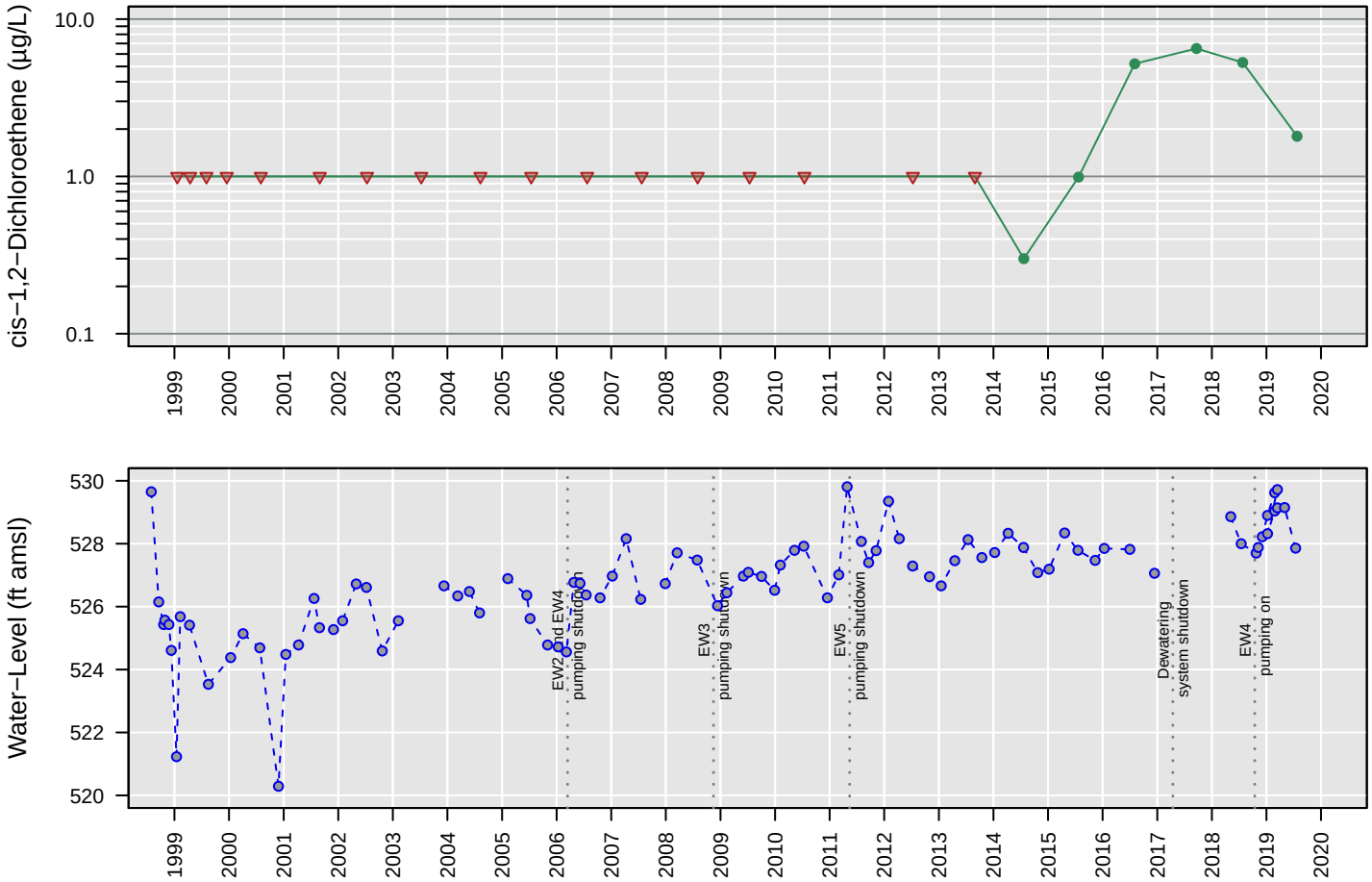


No Analysis Performed

MW103

cis−1,2−Dichloroethene

Number of Comparisons: 23
Percent NDs: 74%

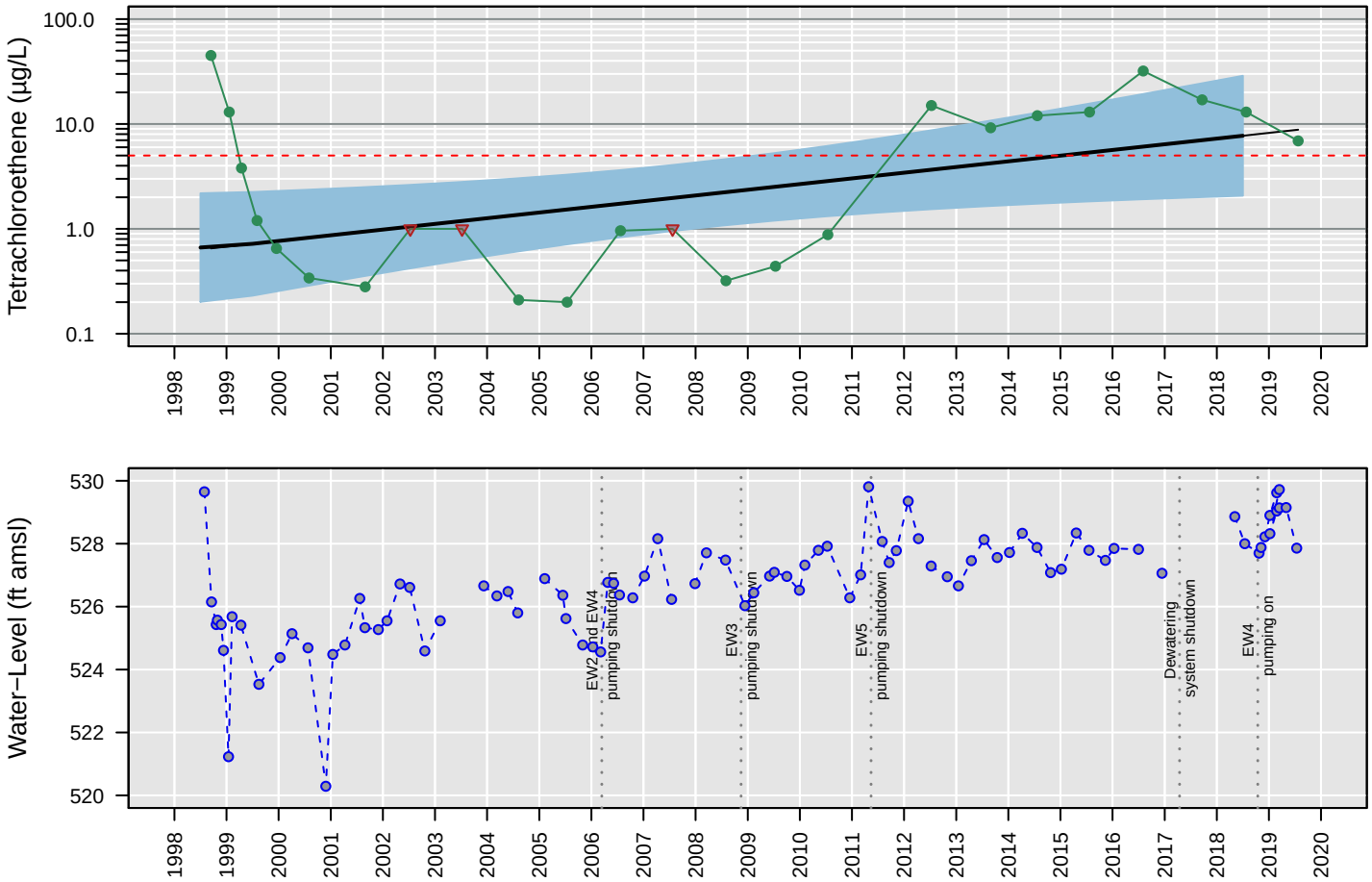


No Analysis Performed

MW103

Tetrachloroethene

Number of Comparisons: 24
Percent NDs: 12%



Censored Regression (Tobit) Model

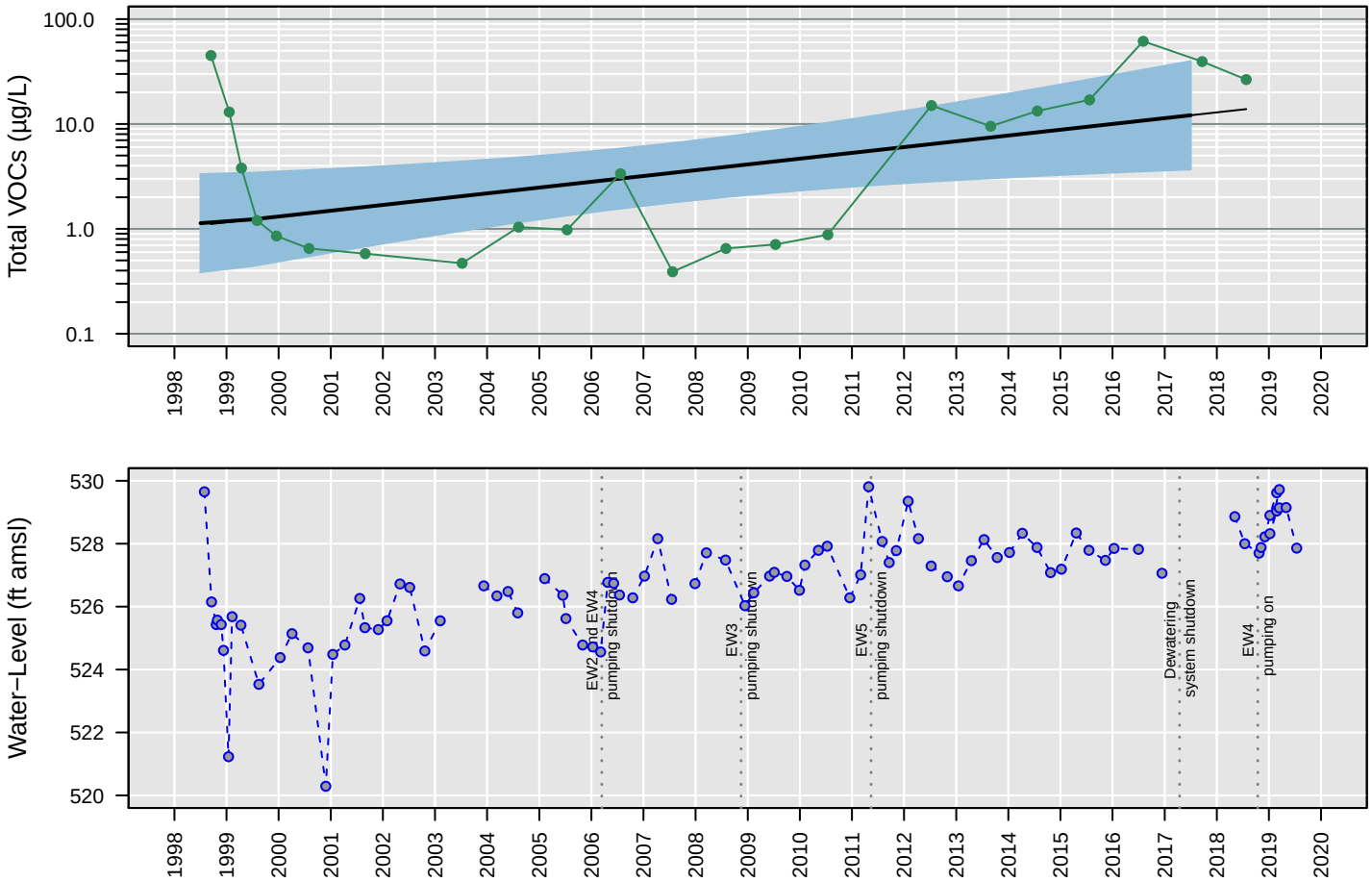
ln Conc. = 0.00034 (+/− 0.00014)*Date + −4 (+/− 1.9)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 7.7 µg/L
UCL: 29 µg/L
LCL: 2.1 µg/L

MW103

Total VOCs

Number of Comparisons: 22
Percent NDs: 0%



Censored Regression (Tobit) Model

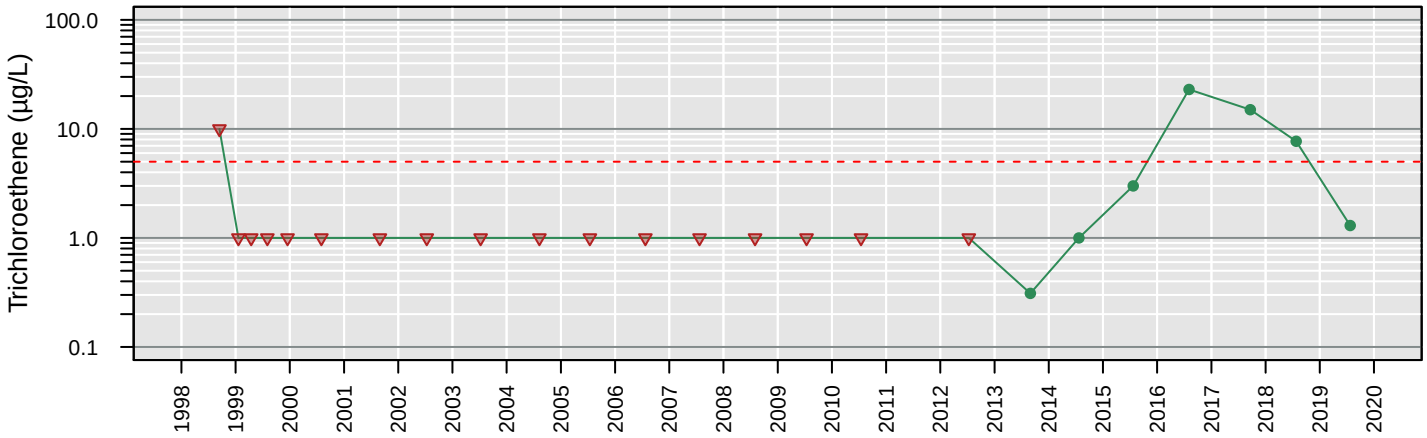
ln Conc. = 0.00035 (+/− 0.00013)*Date + −3.5 (+/− 1.8)

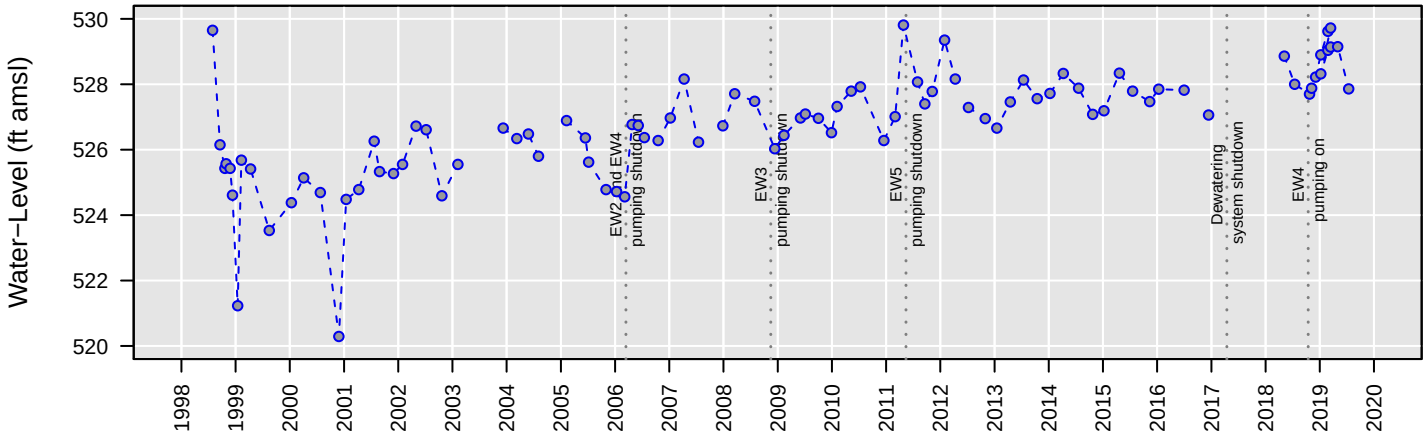
Regression Statistics for January 2017 to January 2018
Geometric Mean: 12 µg/L
UCL: 40 µg/L
LCL: 3.7 µg/L

MW103

Trichloroethene

Number of Comparisons: 24
Percent NDs: 71%



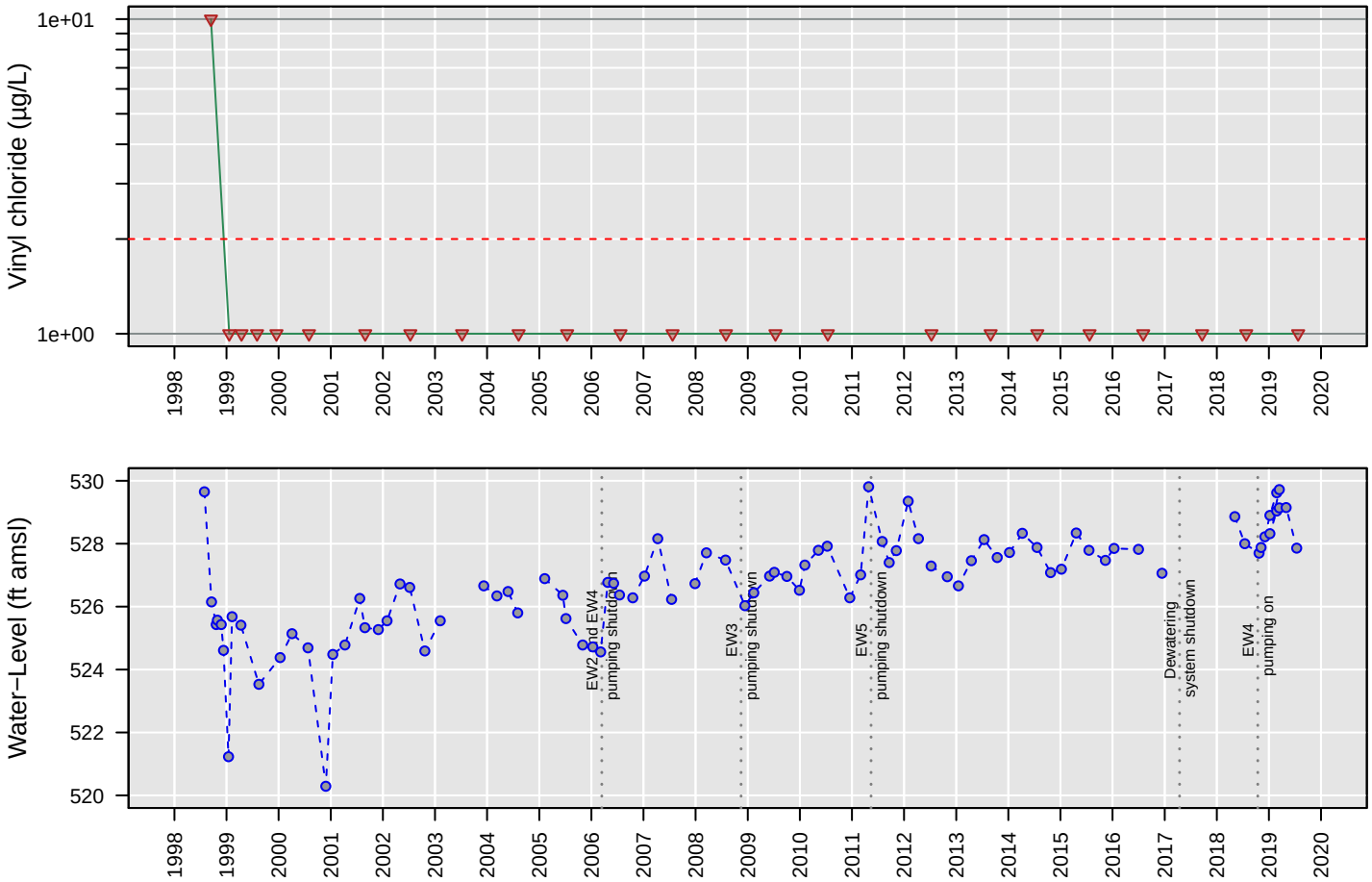


No Analysis Performed

MW103

Vinyl chloride

Number of Comparisons: 24
Percent NDs: 100%



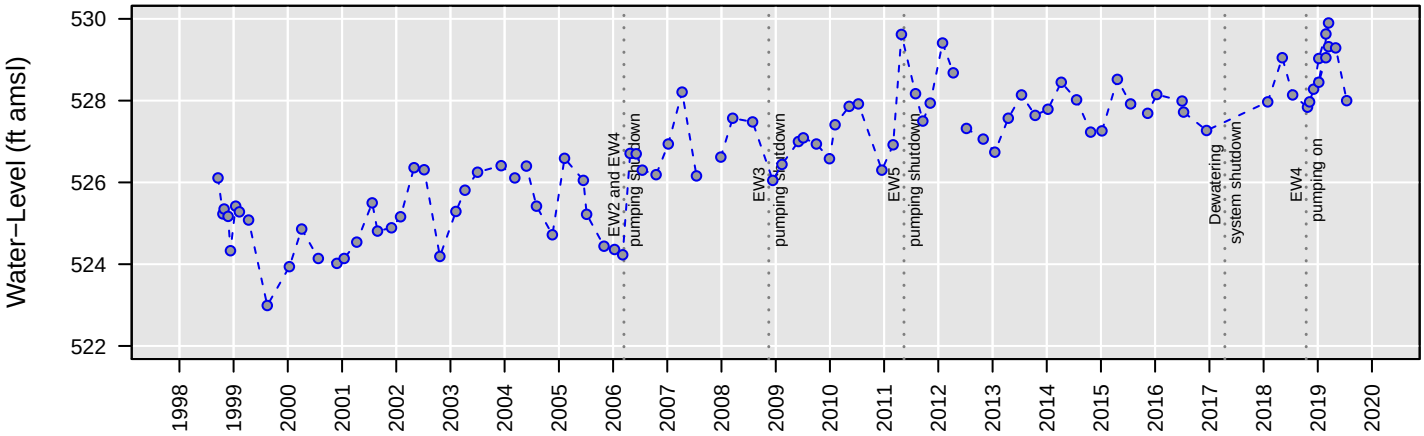
No Analysis Performed

MW104

1,1−Dichloroethane

Number of Comparisons: 16
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

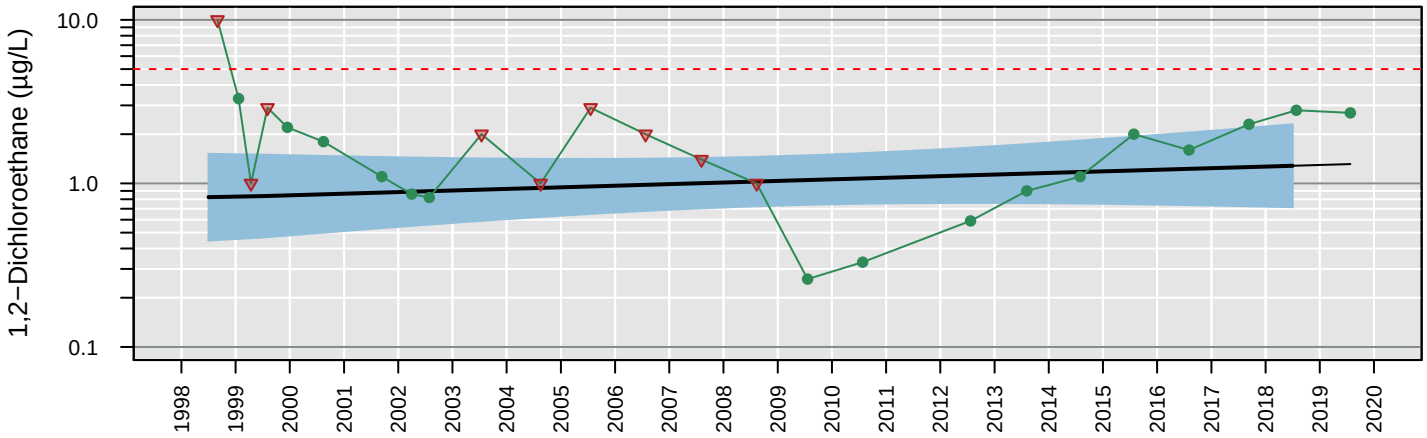


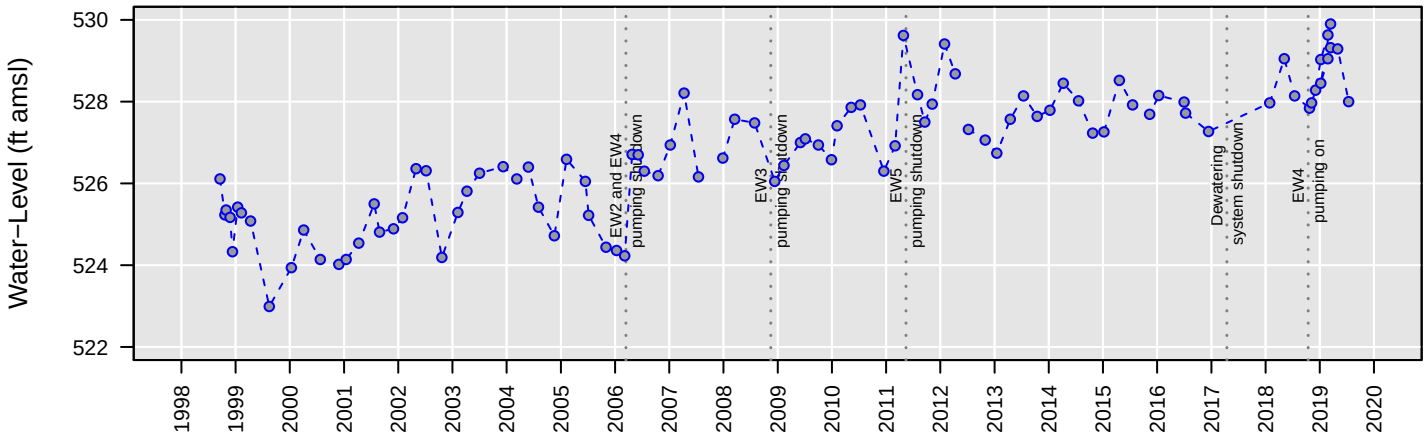
No Analysis Performed

MW104

1,2−Dichloroethane

Number of Comparisons: 25
Percent NDs: 36%





Censored Regression (Tobit) Model

Trend Not Significant

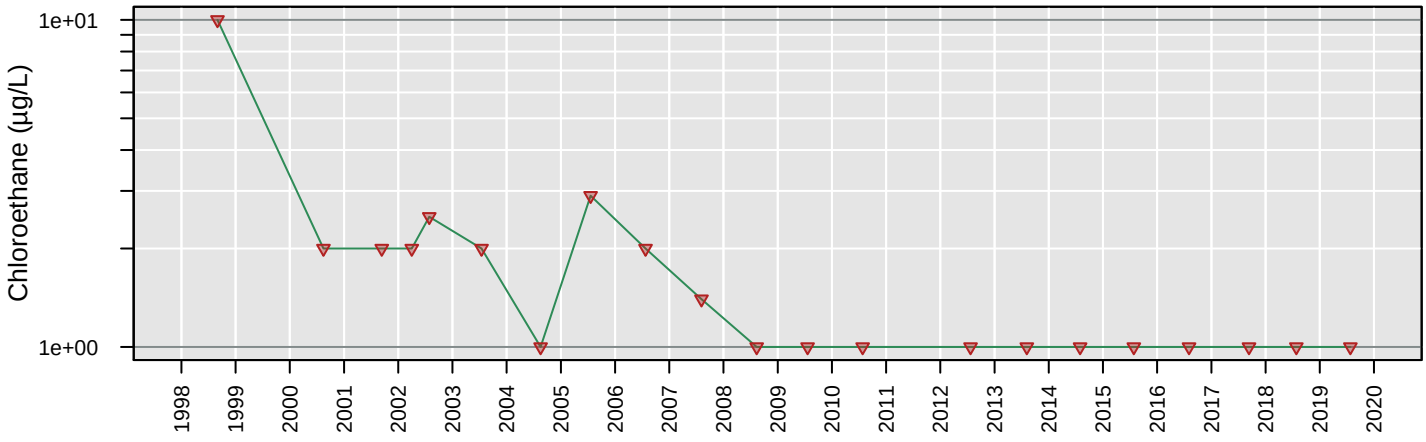
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.3 µg/L
UCL: 2.3 µg/L
LCL: 0.72 µg/L

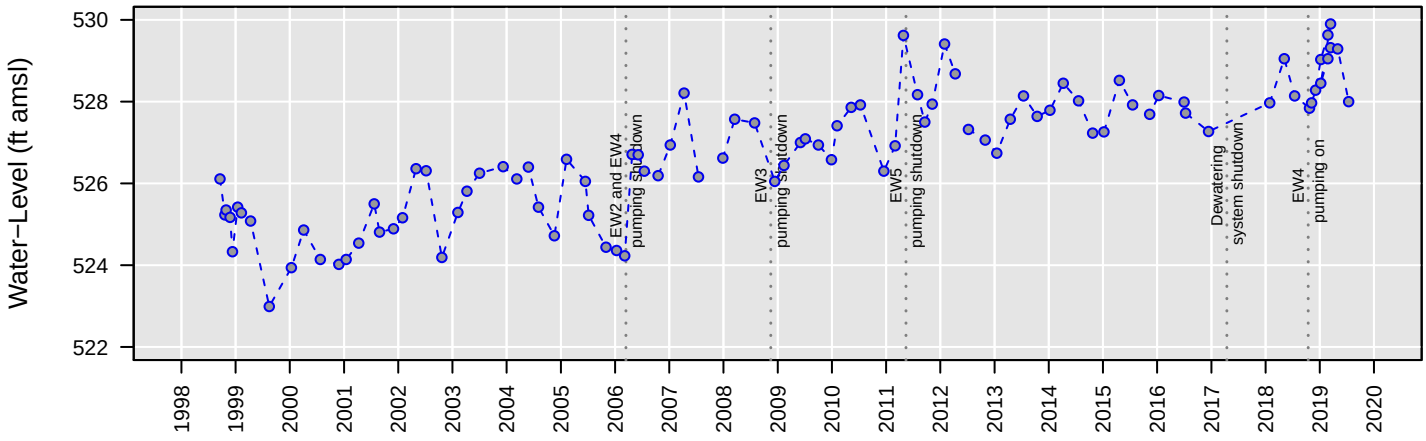
MW104

Chloroethane

Number of Comparisons: 21
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



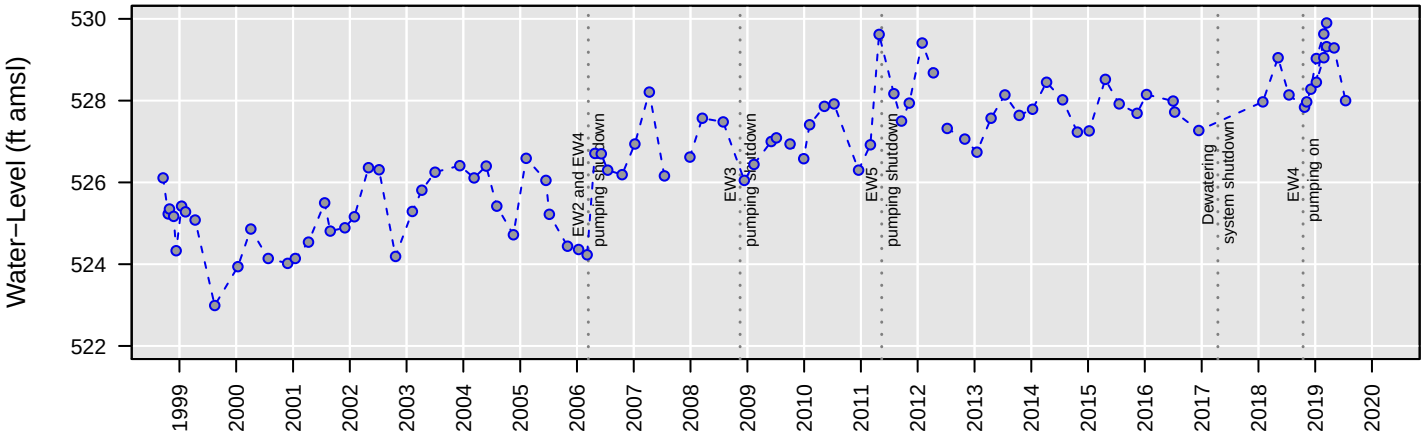


No Analysis Performed

MW104

cis−1,2−Dichloroethene

Number of Comparisons: 24
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.00016 (+/− 0.000034)*Date + 5.4 (+/− 0.48)

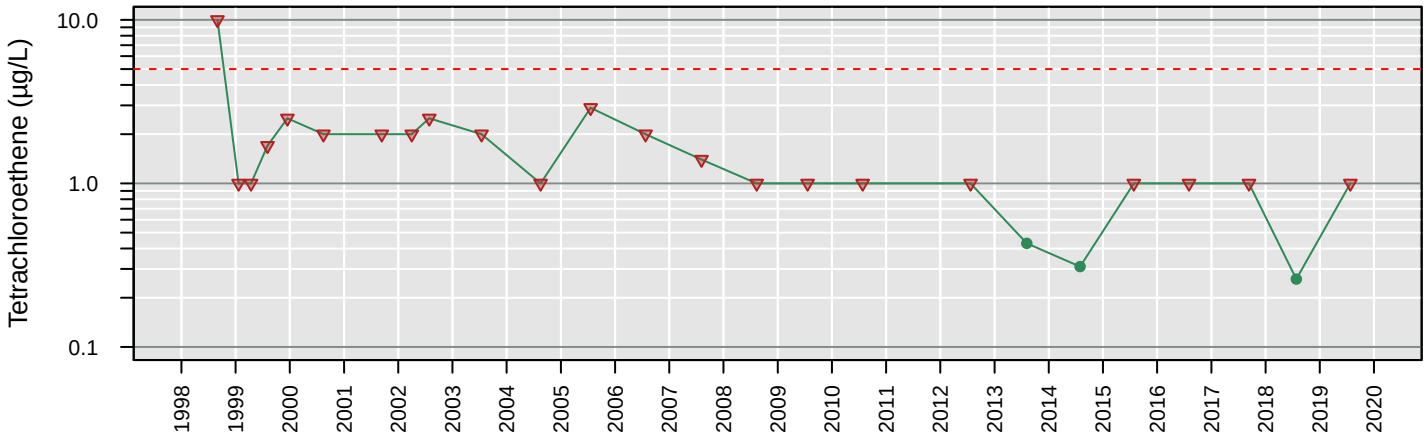
Regression Statistics for January 2018 to January 2019
Geometric Mean: 14 µg/L
UCL: 20 µg/L
LCL: 10 µg/L

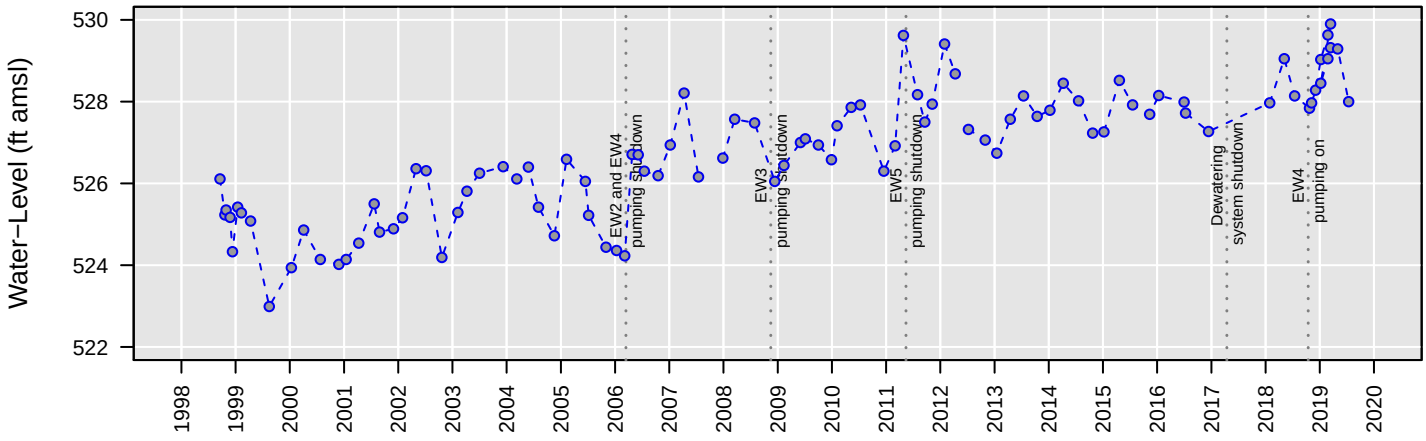
MW104

Tetrachloroethene

Number of Comparisons: 25
Percent NDs: 88%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



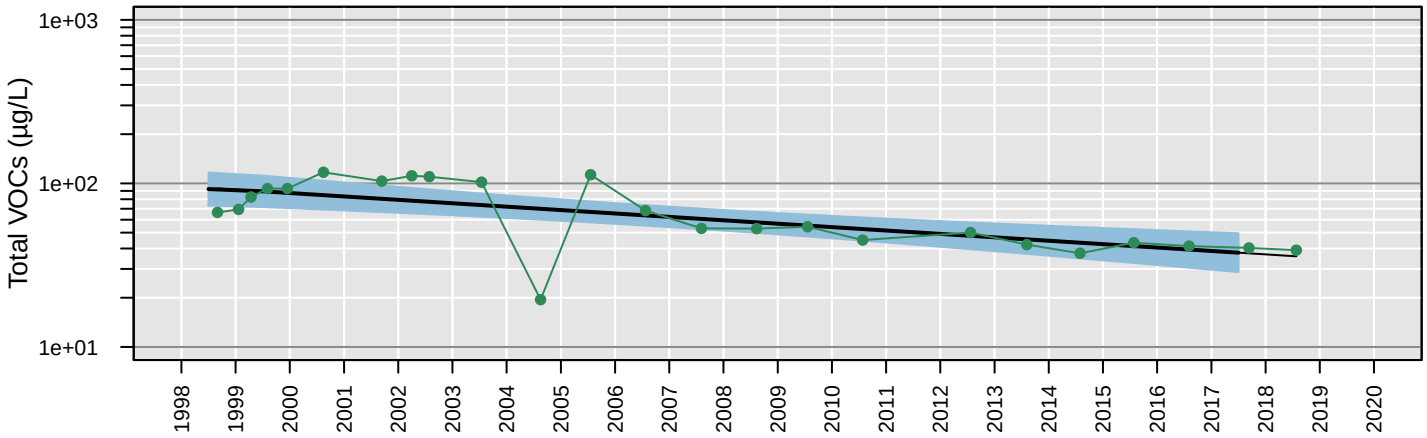


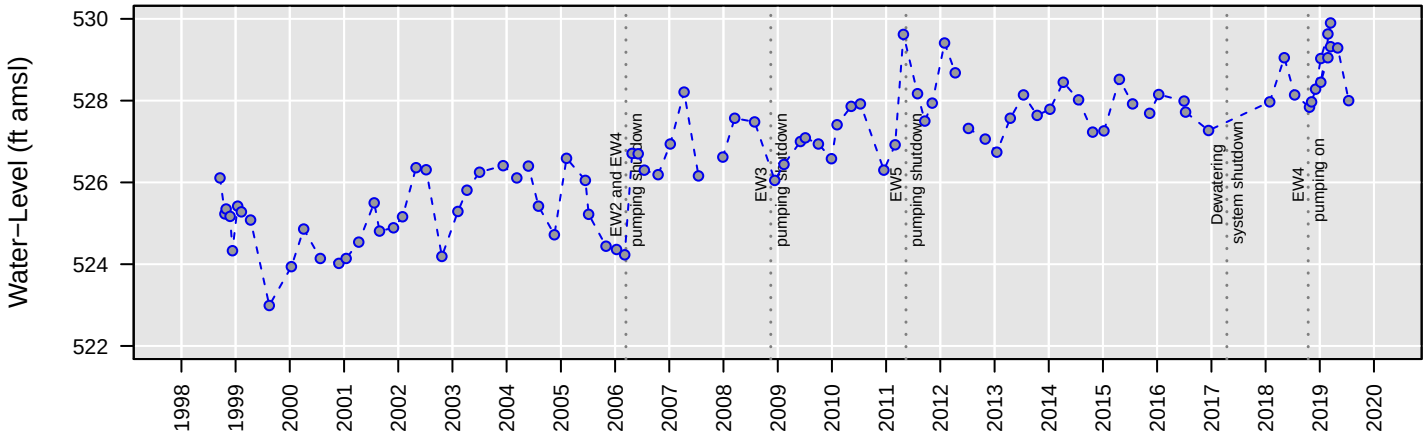
No Analysis Performed

MW104

Total VOCs

Number of Comparisons: 24
Percent NDs: 0%





Censored Regression (Tobit) Model

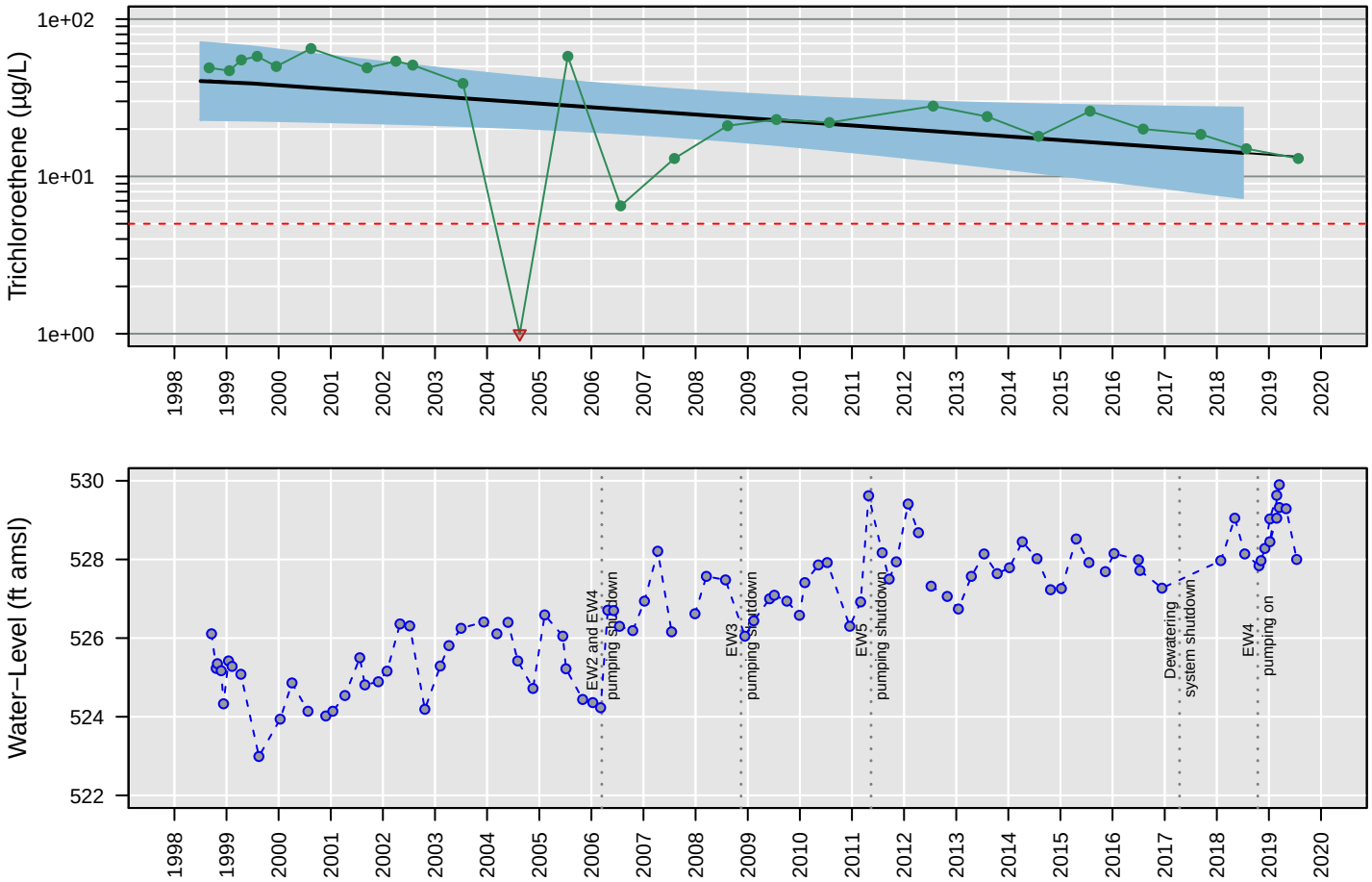
ln Conc. = −0.00013 (+/− 0.000029)*Date + 5.9 (+/− 0.4)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 38 µg/L
UCL: 50 µg/L
LCL: 29 µg/L

MW104

Trichloroethene

Number of Comparisons: 25
Percent NDs: 4%



Censored Regression (Tobit) Model

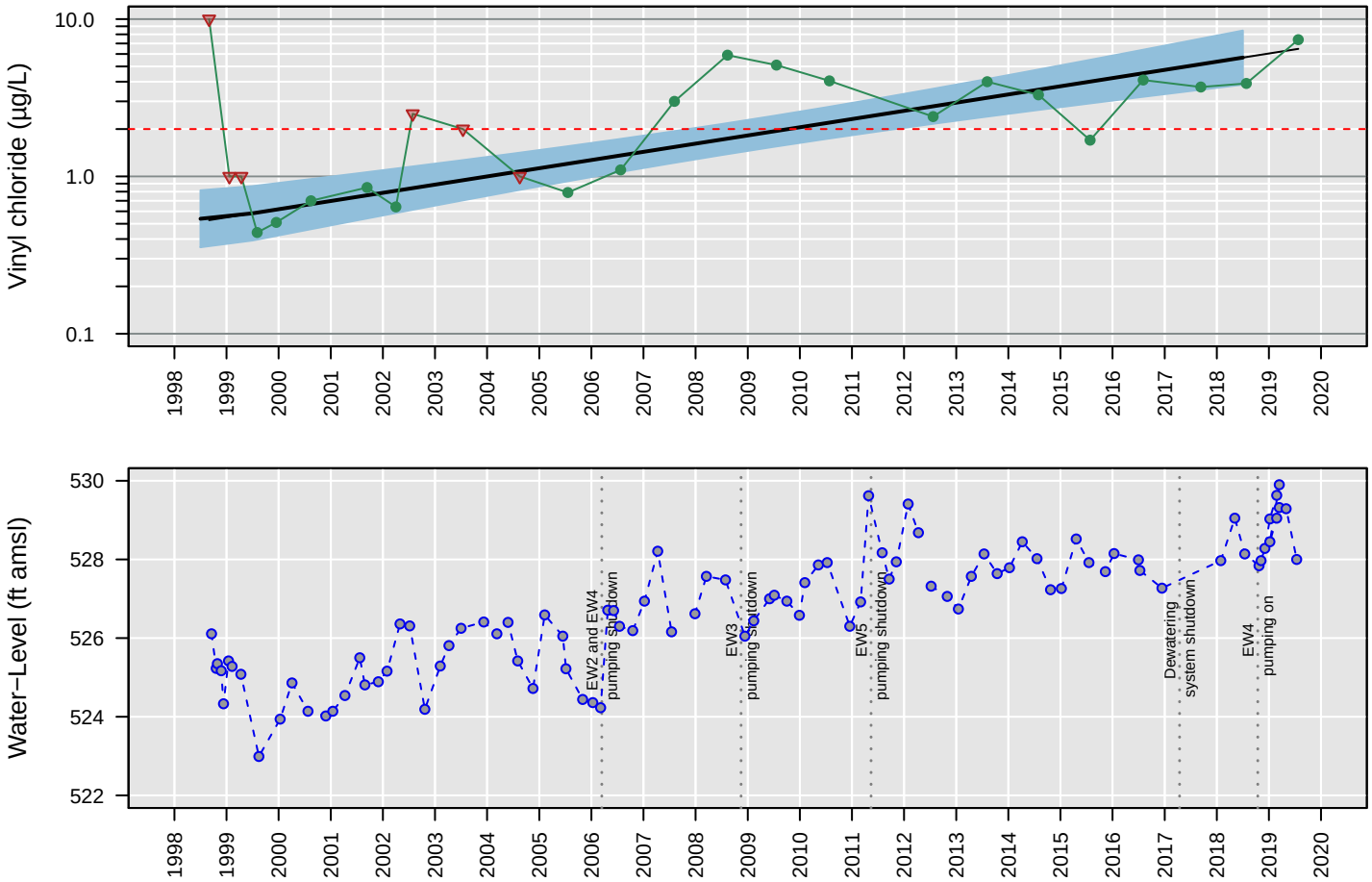
ln Conc. = −0.00015 (+/− 0.000068)*Date + 5.2 (+/− 0.95)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 14 µg/L
UCL: 27 µg/L
LCL: 7.3 µg/L

MW104

Vinyl chloride

Number of Comparisons: 25
Percent NDs: 24%



Censored Regression (Tobit) Model

ln Conc. = 0.00033 (+/− 0.000045)*Date + −4.1 (+/− 0.66)

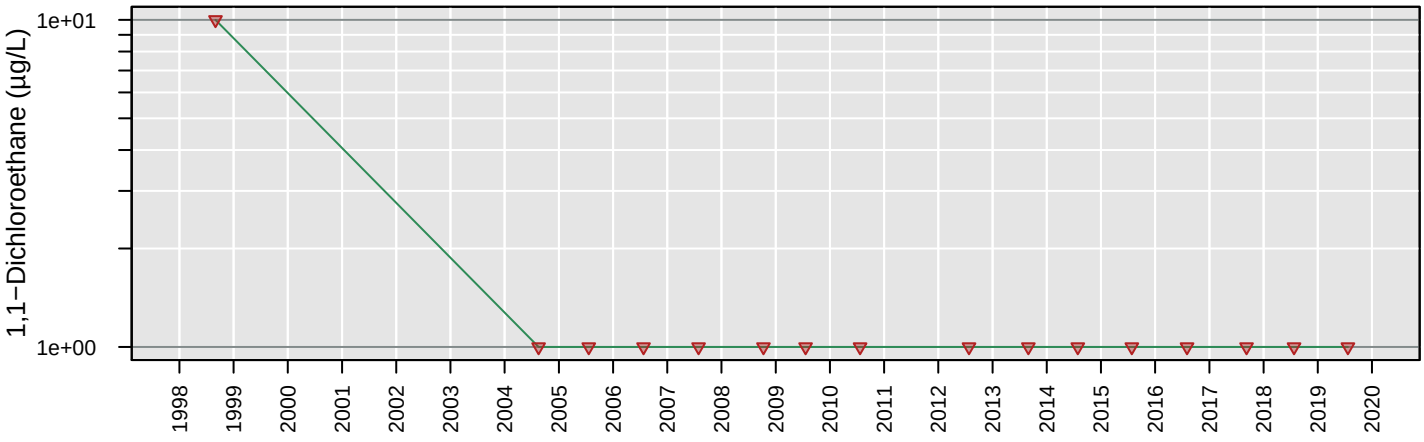
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.7 µg/L
UCL: 8.5 µg/L
LCL: 3.8 µg/L

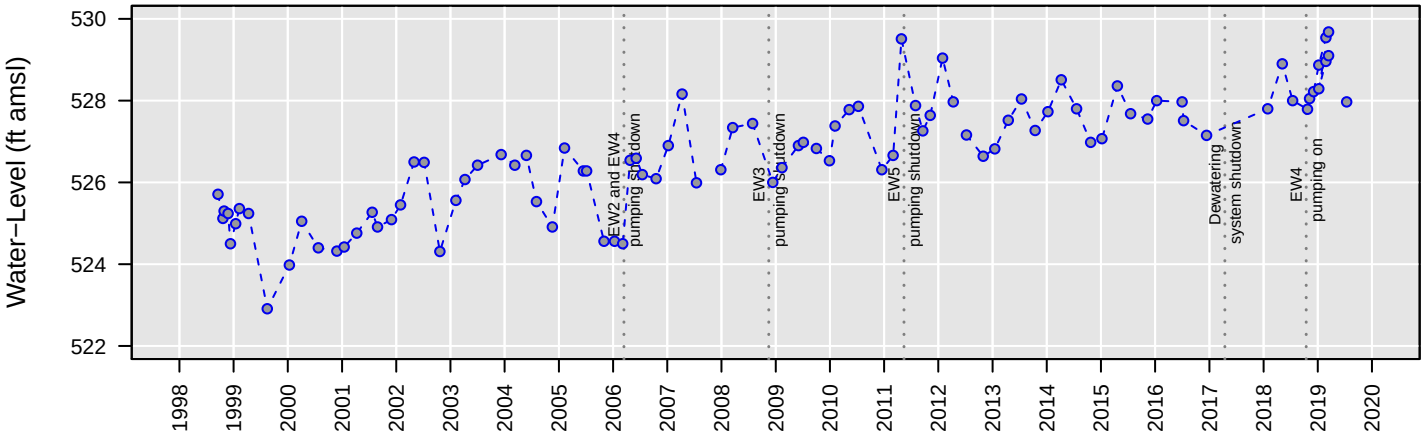
MW105

1,1−Dichloroethane

Number of Comparisons: 16
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





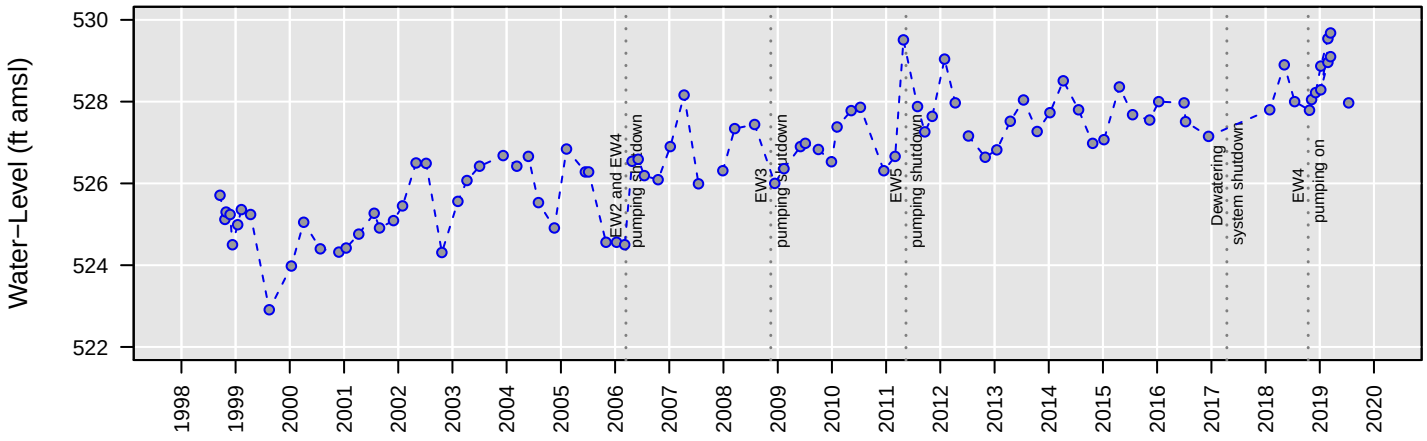
No Analysis Performed

MW105

1,2−Dichloroethane

Number of Comparisons: 24
Percent NDs: 96%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



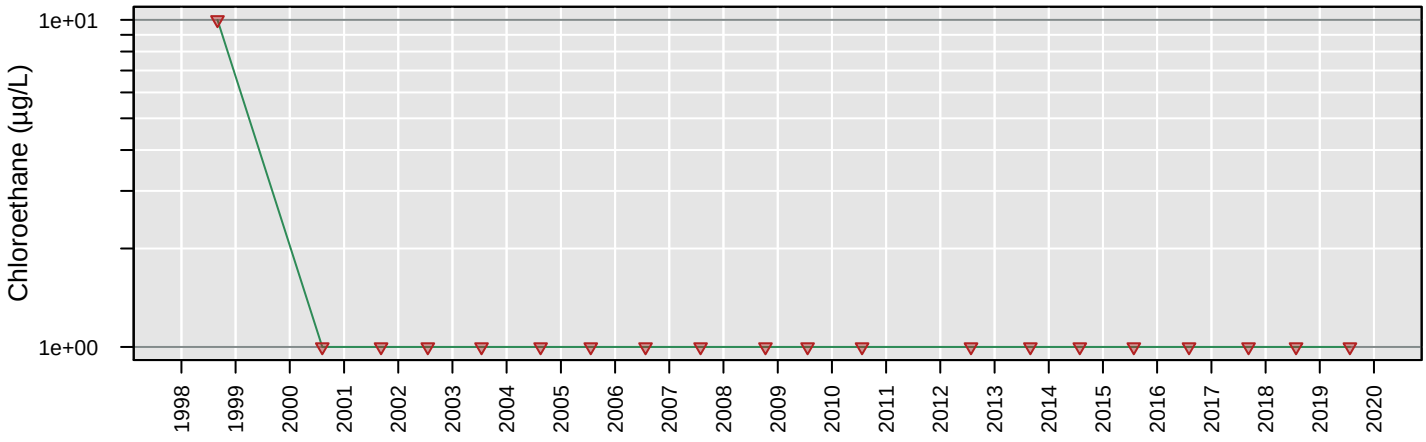
No Analysis Performed

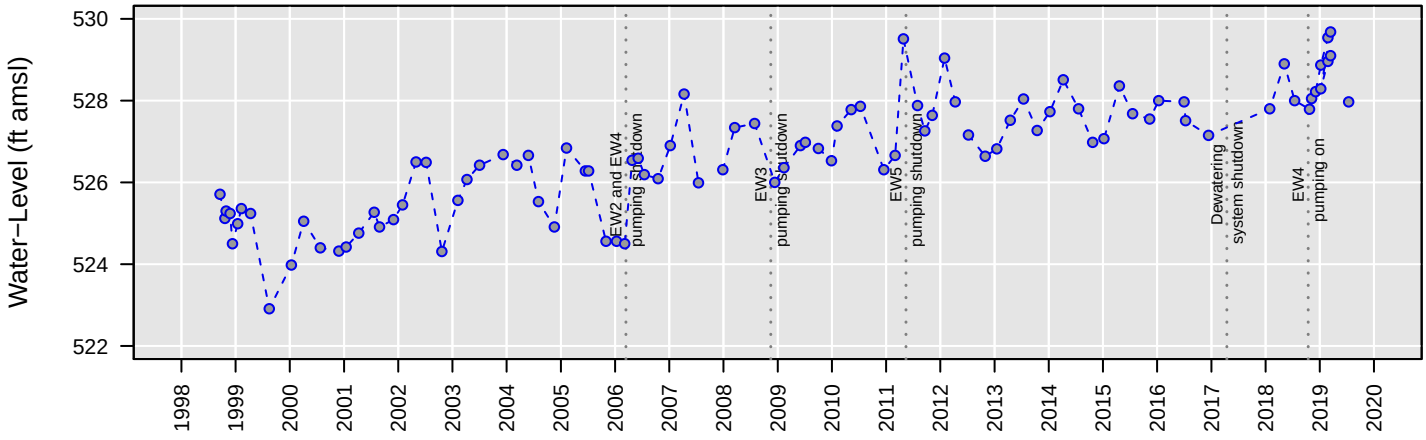
MW105

Chloroethane

Number of Comparisons: 20
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



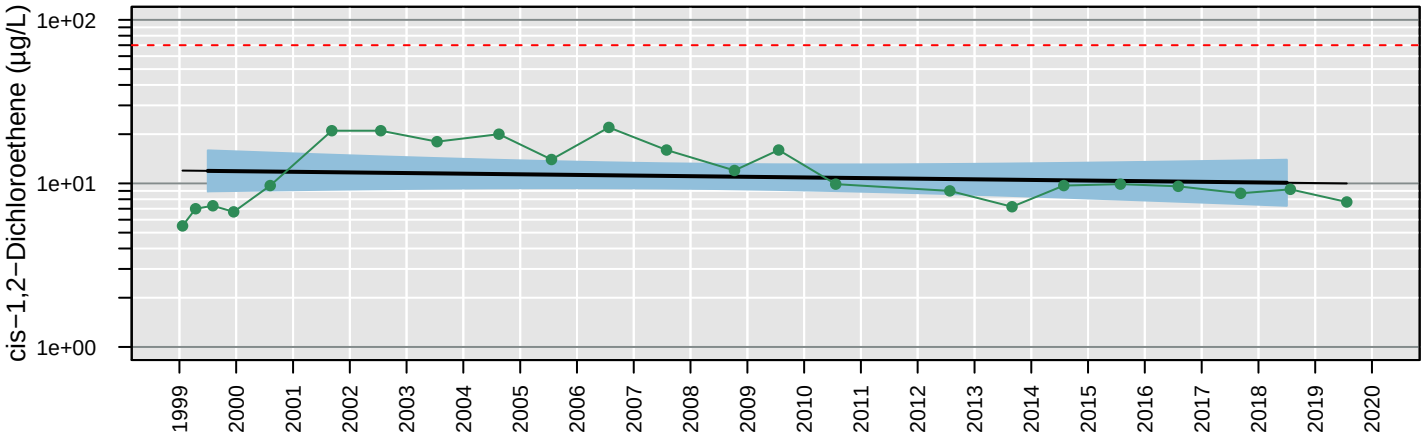


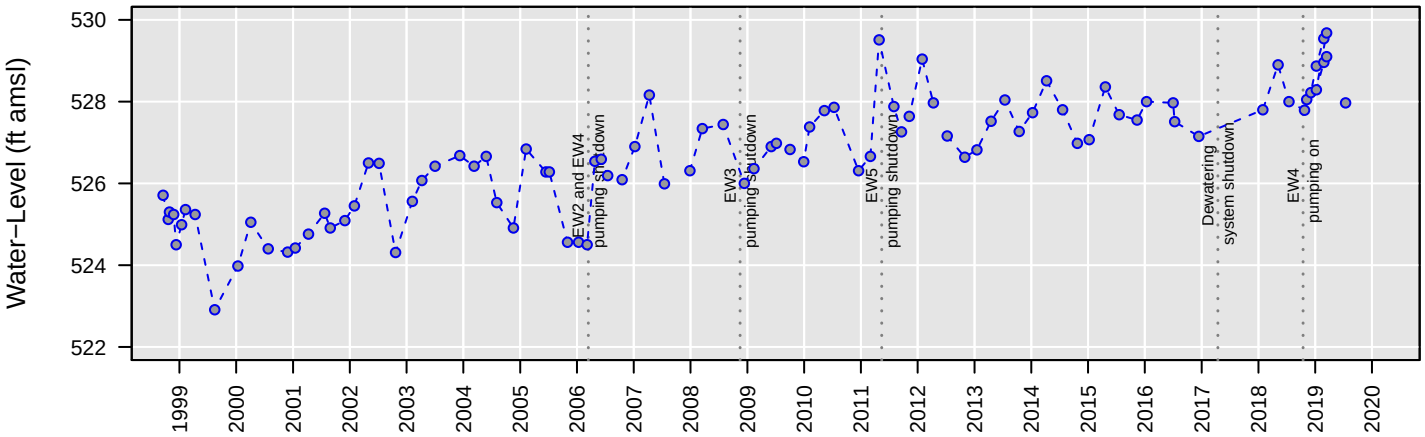
No Analysis Performed

MW105

cis−1,2−Dichloroethene

Number of Comparisons: 23
Percent NDs: 0%





Censored Regression (Tobit) Model

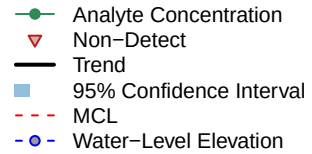
Trend Not Significant

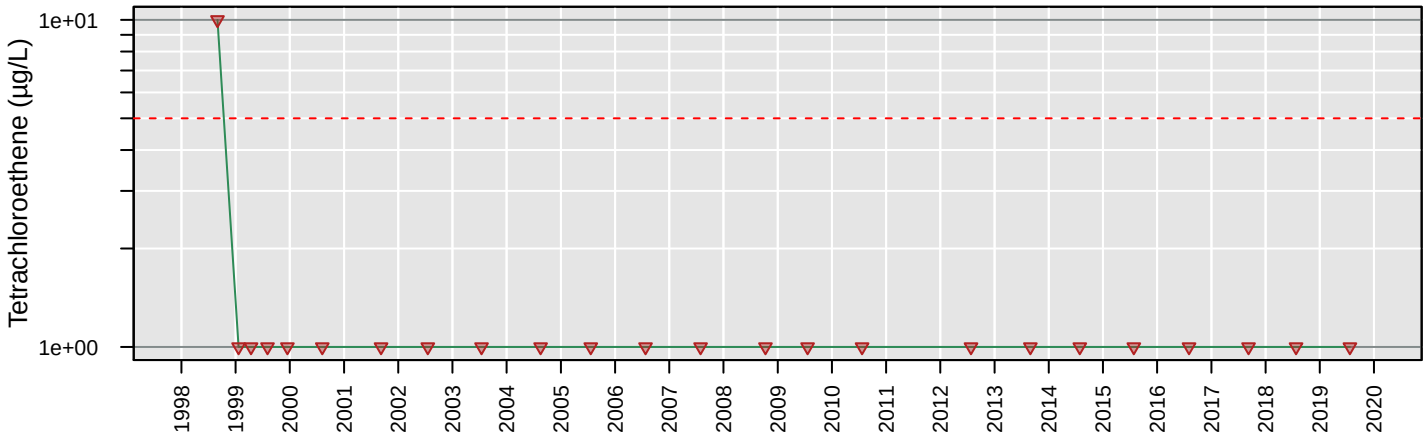
Regression Statistics for January 2018 to January 2019
Geometric Mean: 10 µg/L
UCL: 14 µg/L
LCL: 7.3 µg/L

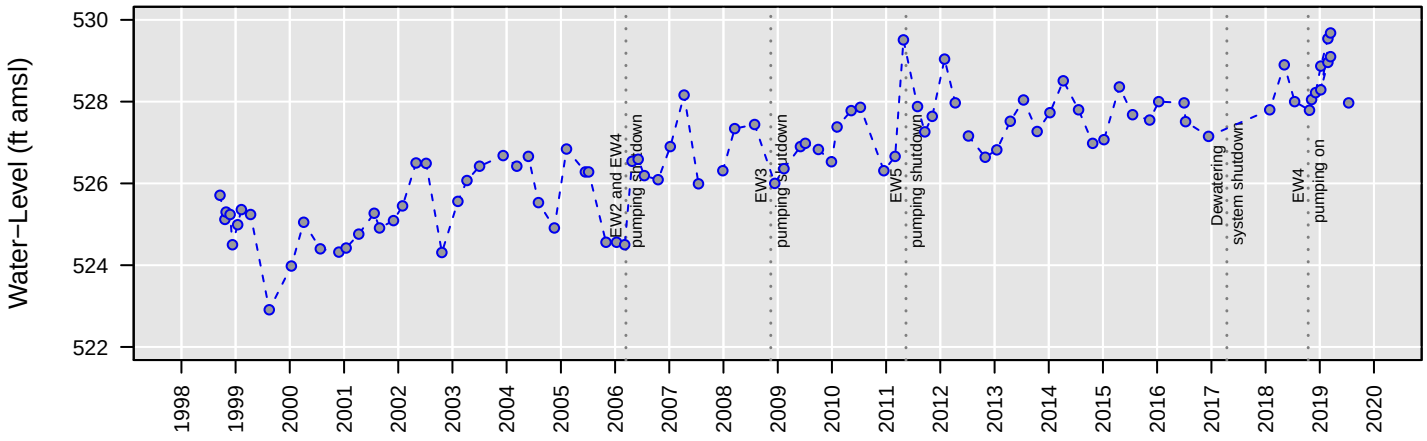
MW105

Tetrachloroethene

Number of Comparisons: 24
Percent NDs: 100%





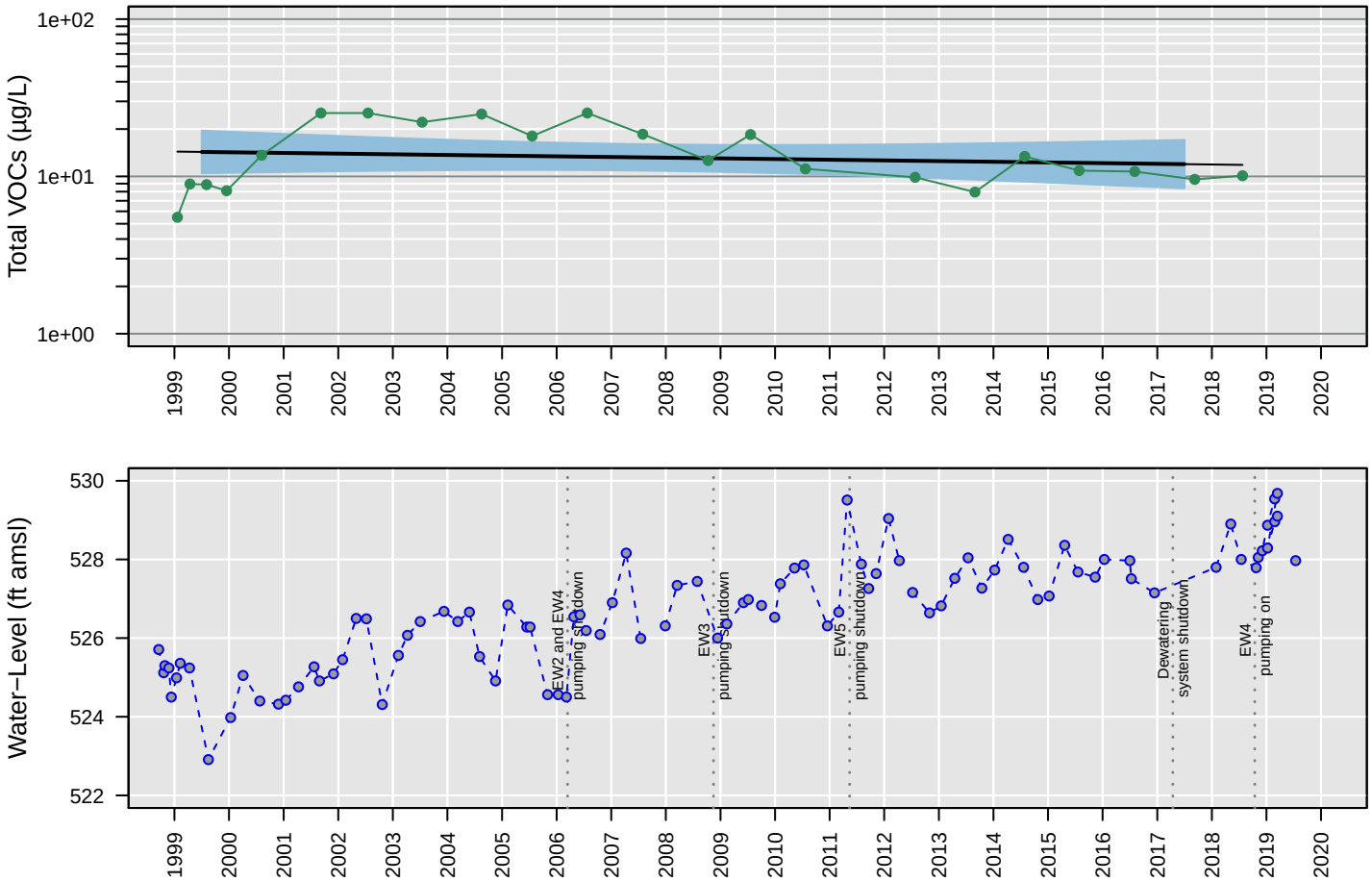


No Analysis Performed

MW105

Total VOCs

Number of Comparisons: 22
Percent NDs: 0%



Censored Regression (Tobit) Model

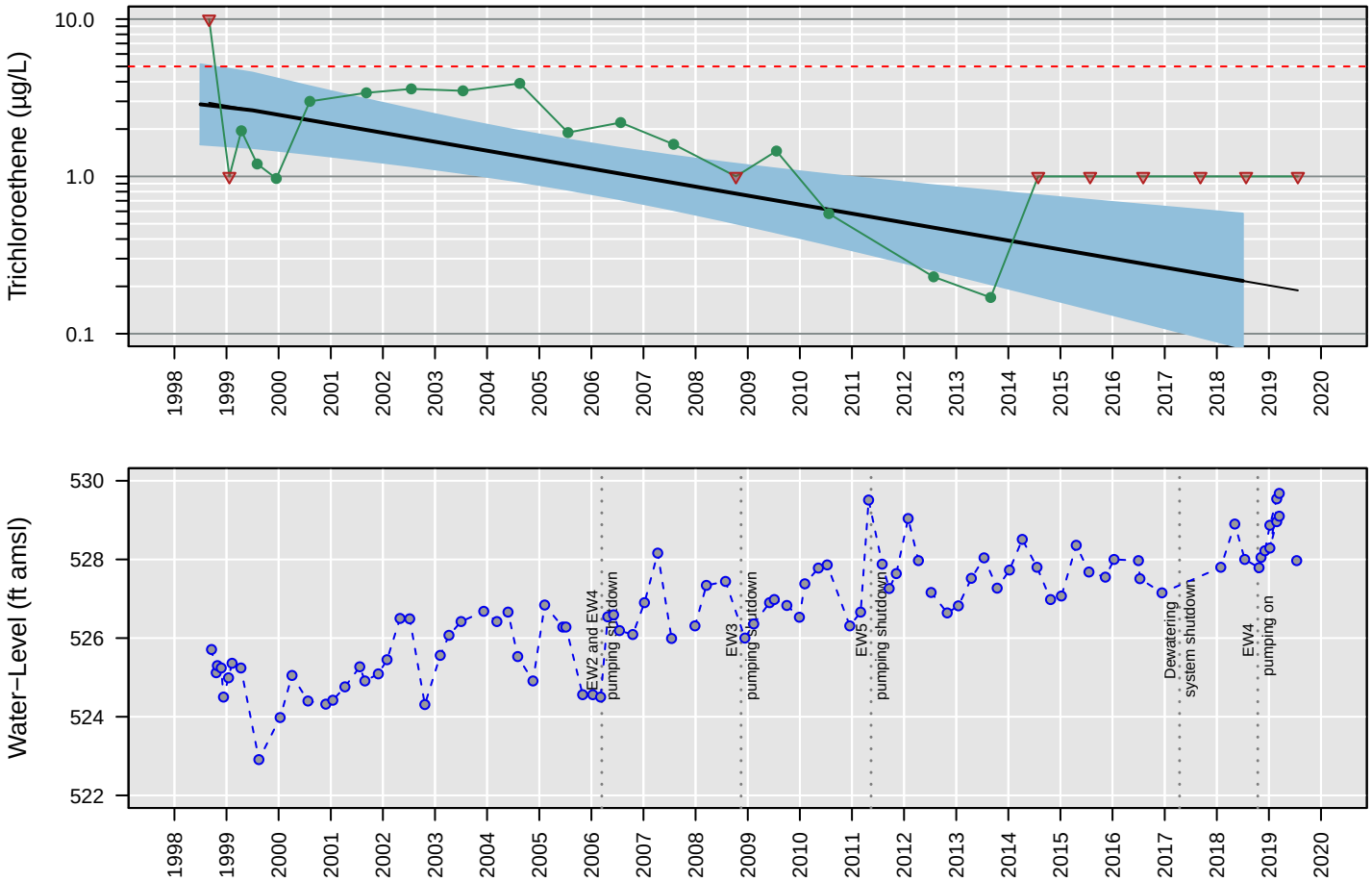
Trend Not Significant

Regression Statistics for January 2017 to January 2018
Geometric Mean: 12 µg/L
UCL: 17 µg/L
LCL: 8.4 µg/L

MW105

Trichloroethene

Number of Comparisons: 24
Percent NDs: 38%



Censored Regression (Tobit) Model

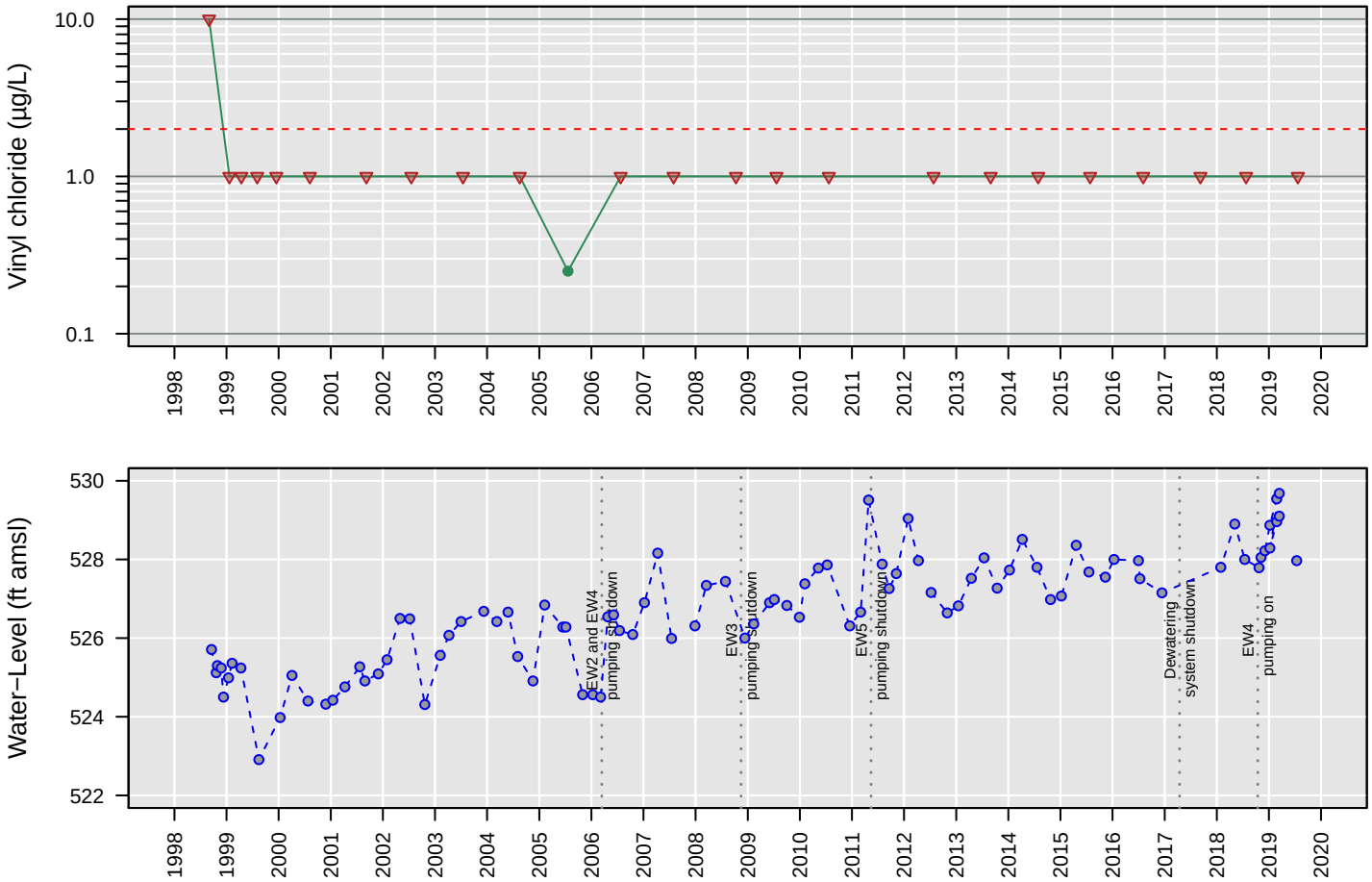
ln Conc. = −0.00036 (+/− 0.000092)*Date + 4.8 (+/− 1.2)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.22 µg/L
UCL: 0.58 µg/L
LCL: 0.081 µg/L

MW105

Vinyl chloride

Number of Comparisons: 24
Percent NDs: 96%



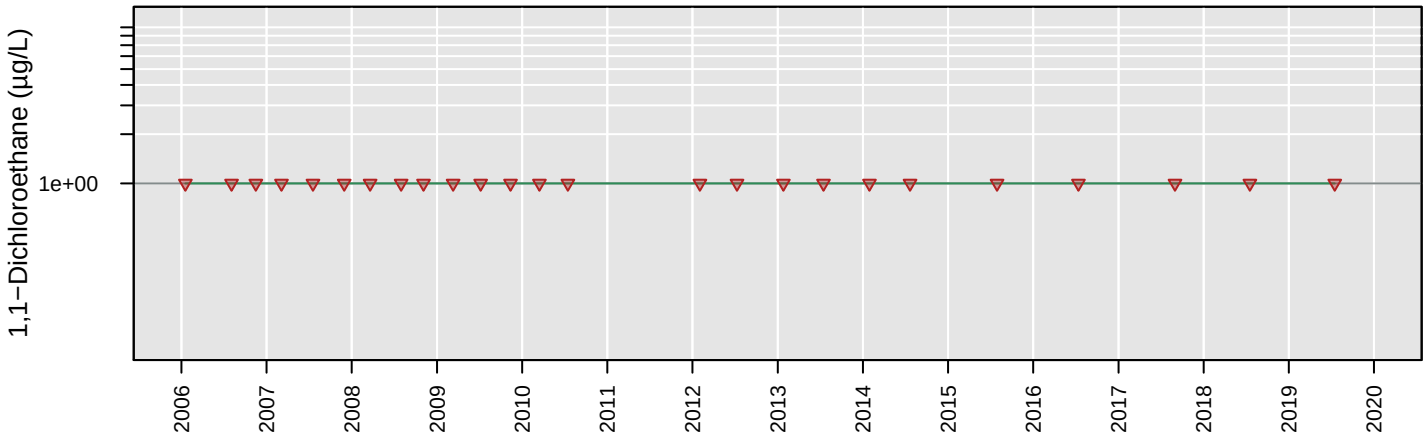
No Analysis Performed

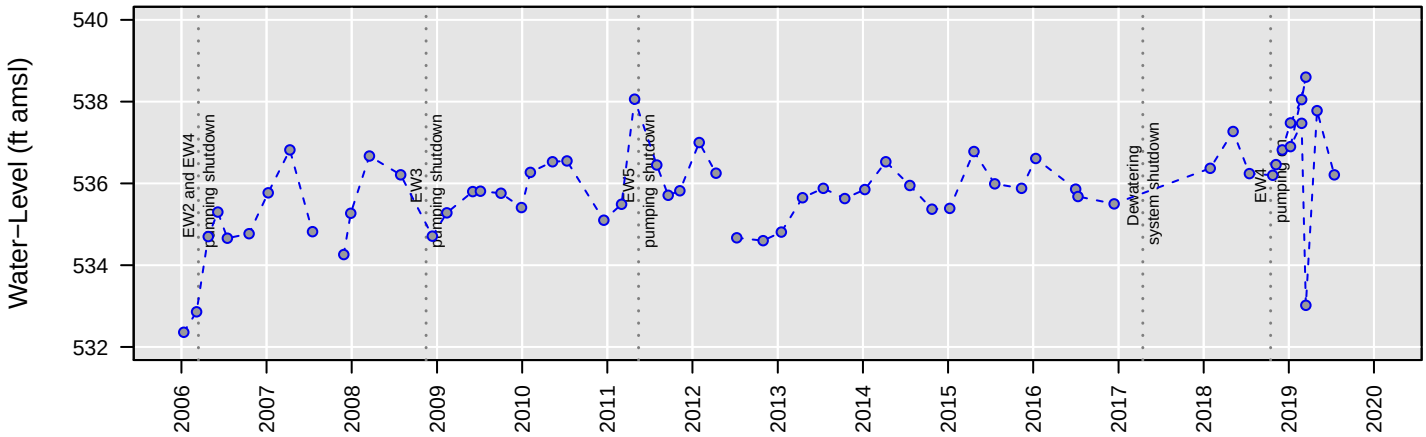
MW106

1,1−Dichloroethane

Number of Comparisons: 25
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





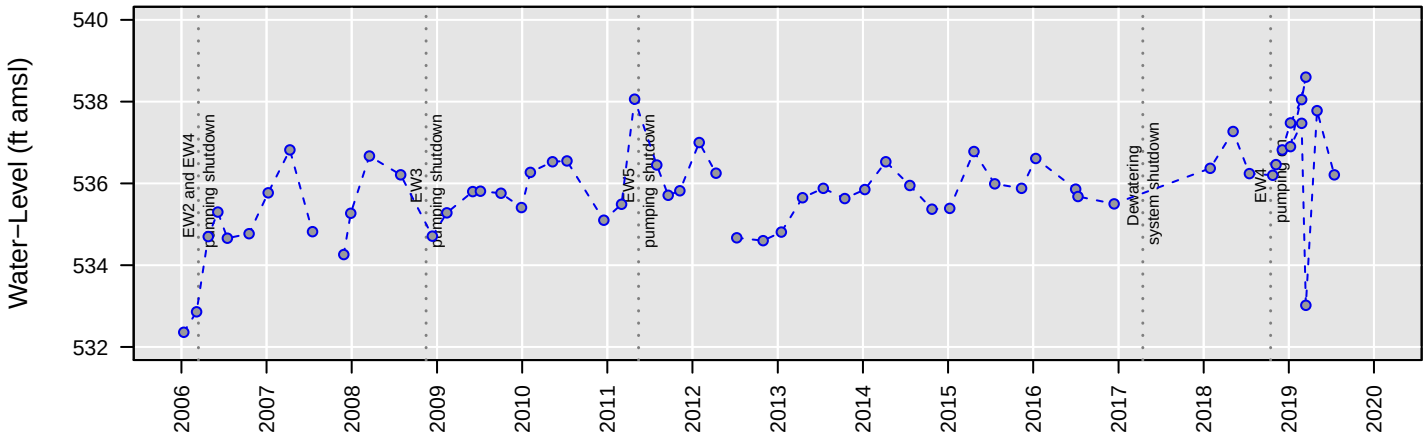
No Analysis Performed

MW106

1,2−Dichloroethane

Number of Comparisons: 25
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



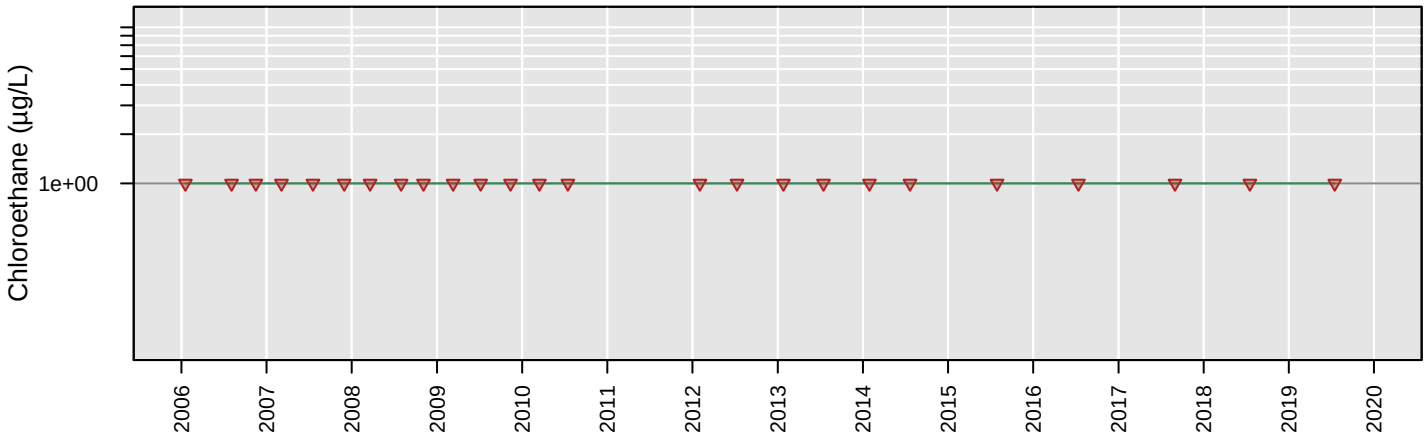
No Analysis Performed

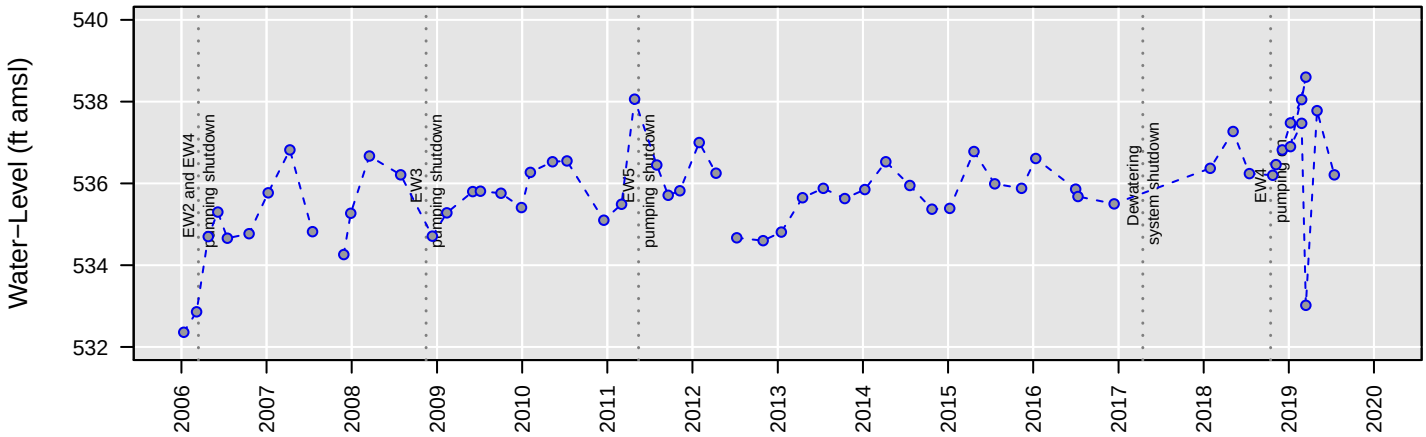
MW106

Chloroethane

Number of Comparisons: 25
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





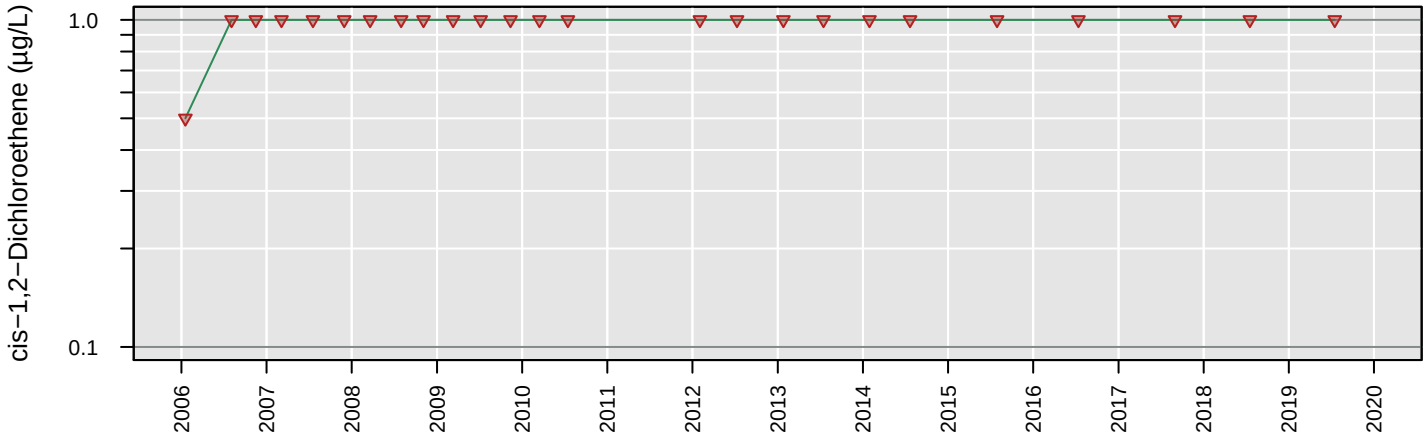
No Analysis Performed

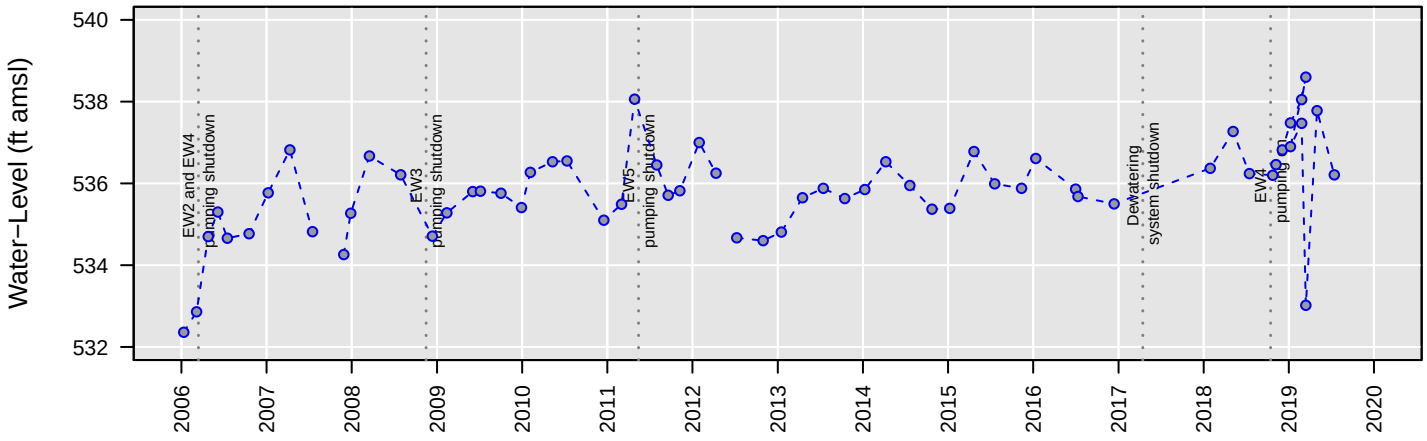
MW106

cis−1,2−Dichloroethene

Number of Comparisons: 25
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



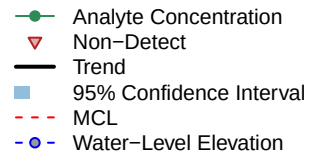


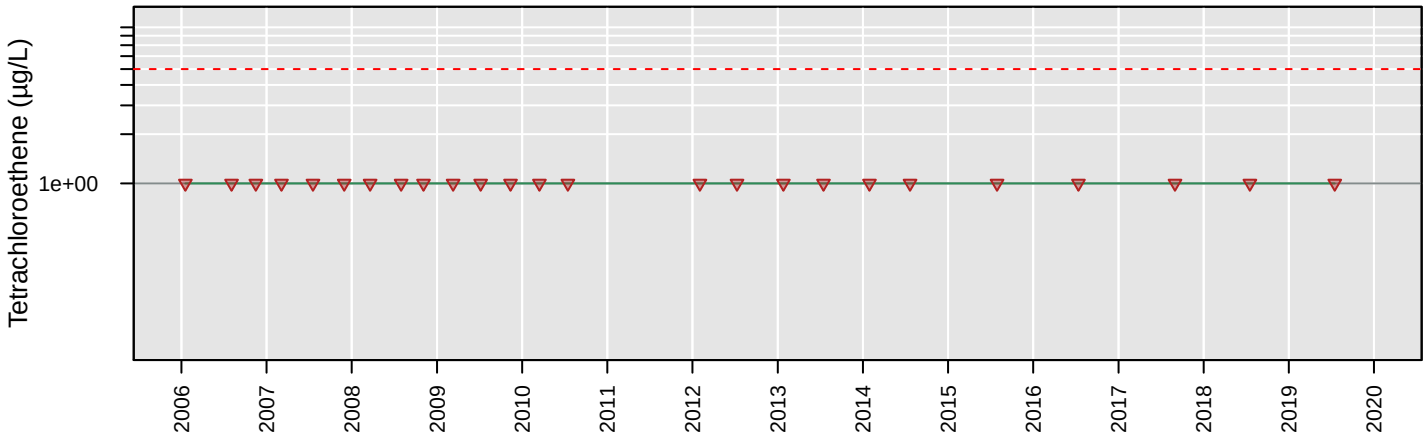
No Analysis Performed

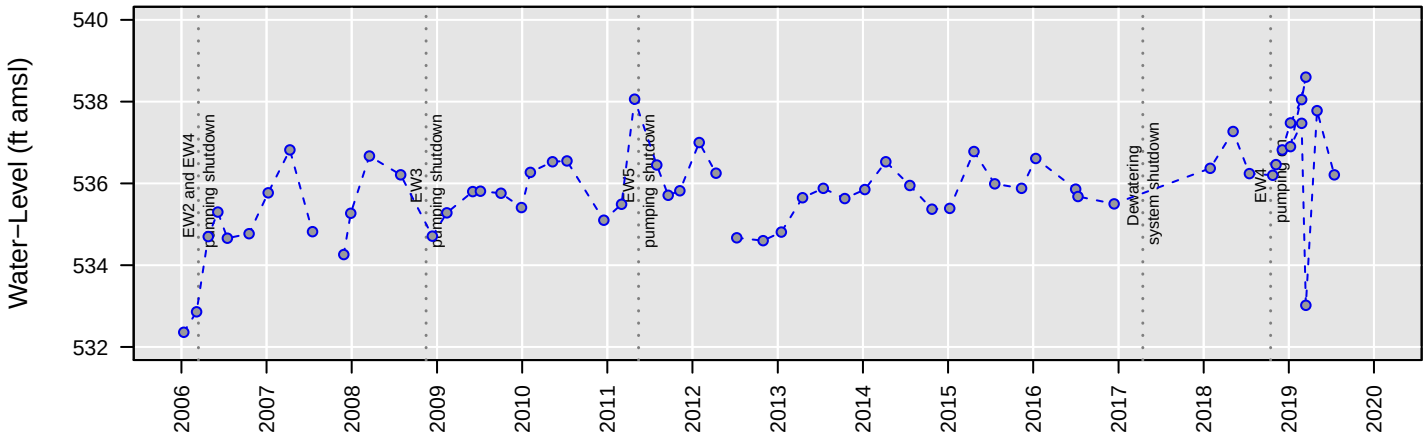
MW106

Tetrachloroethene

Number of Comparisons: 25
Percent NDs: 100%





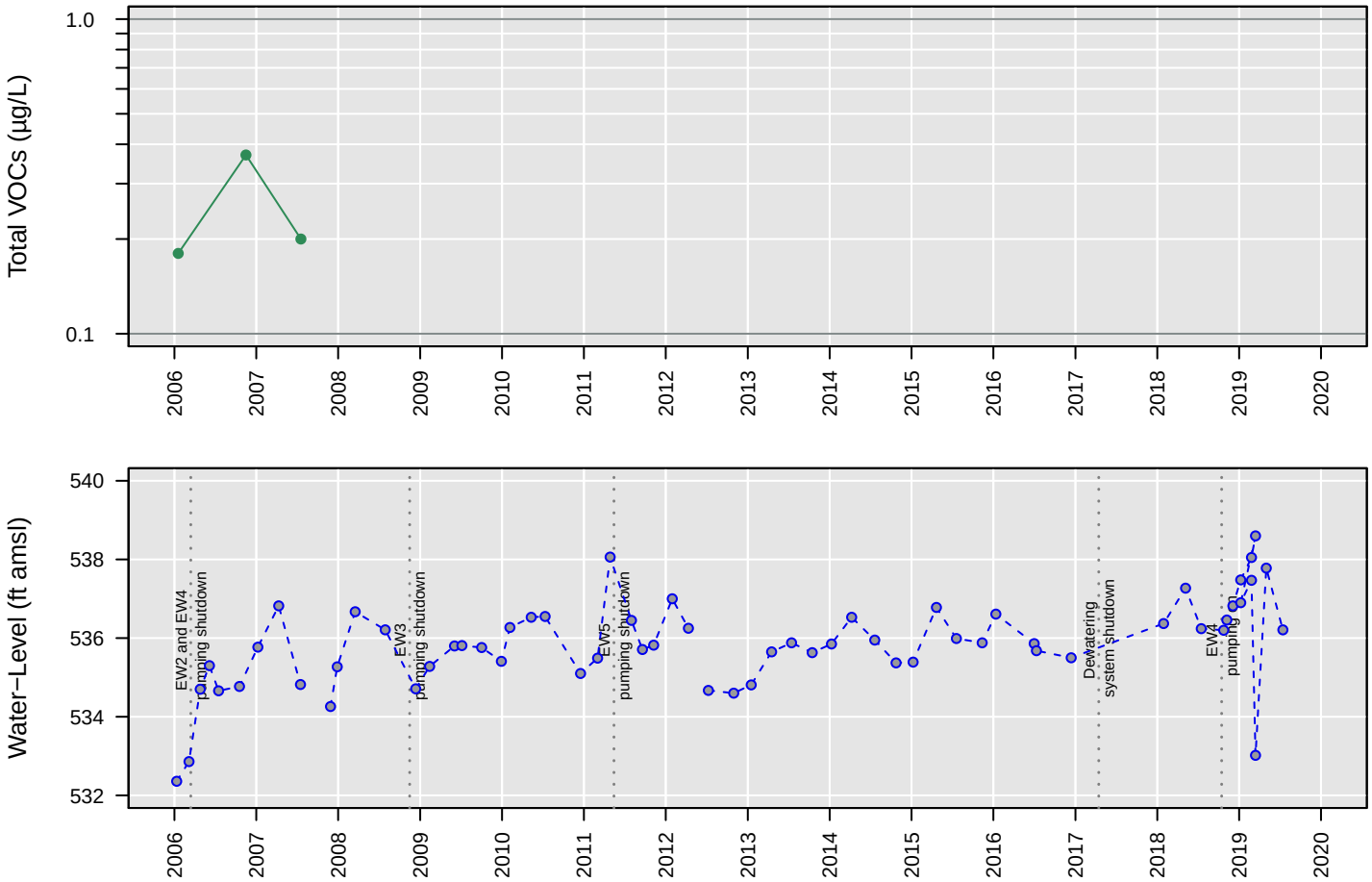


No Analysis Performed

MW106

Total VOCs

Number of Comparisons: 3
Percent NDs: 0%

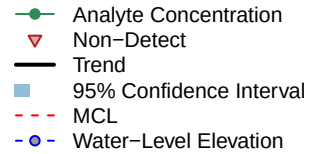


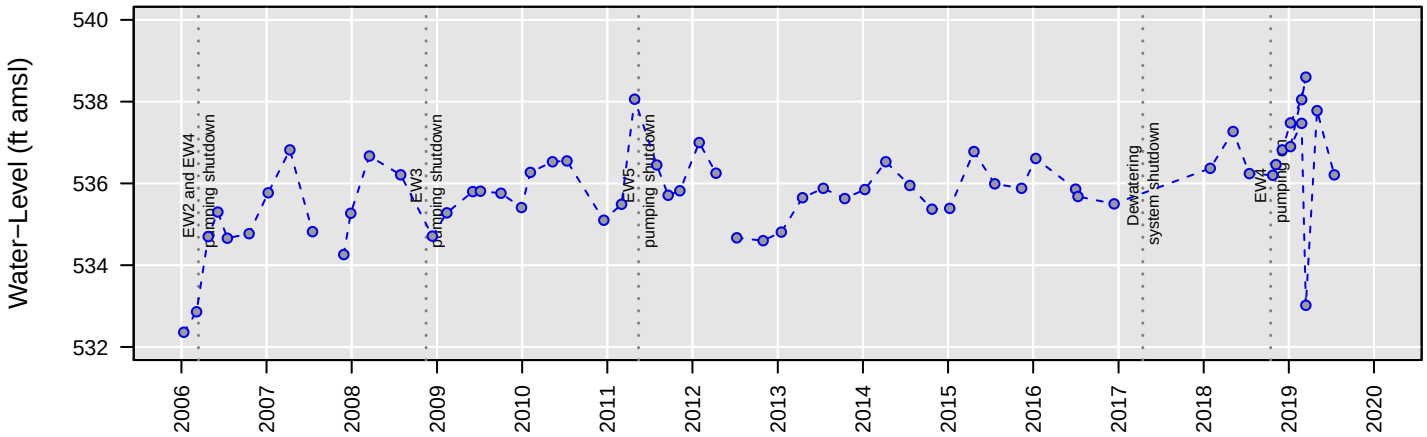
No Analysis Performed

MW106

Trichloroethene

Number of Comparisons: 25
Percent NDs: 100%



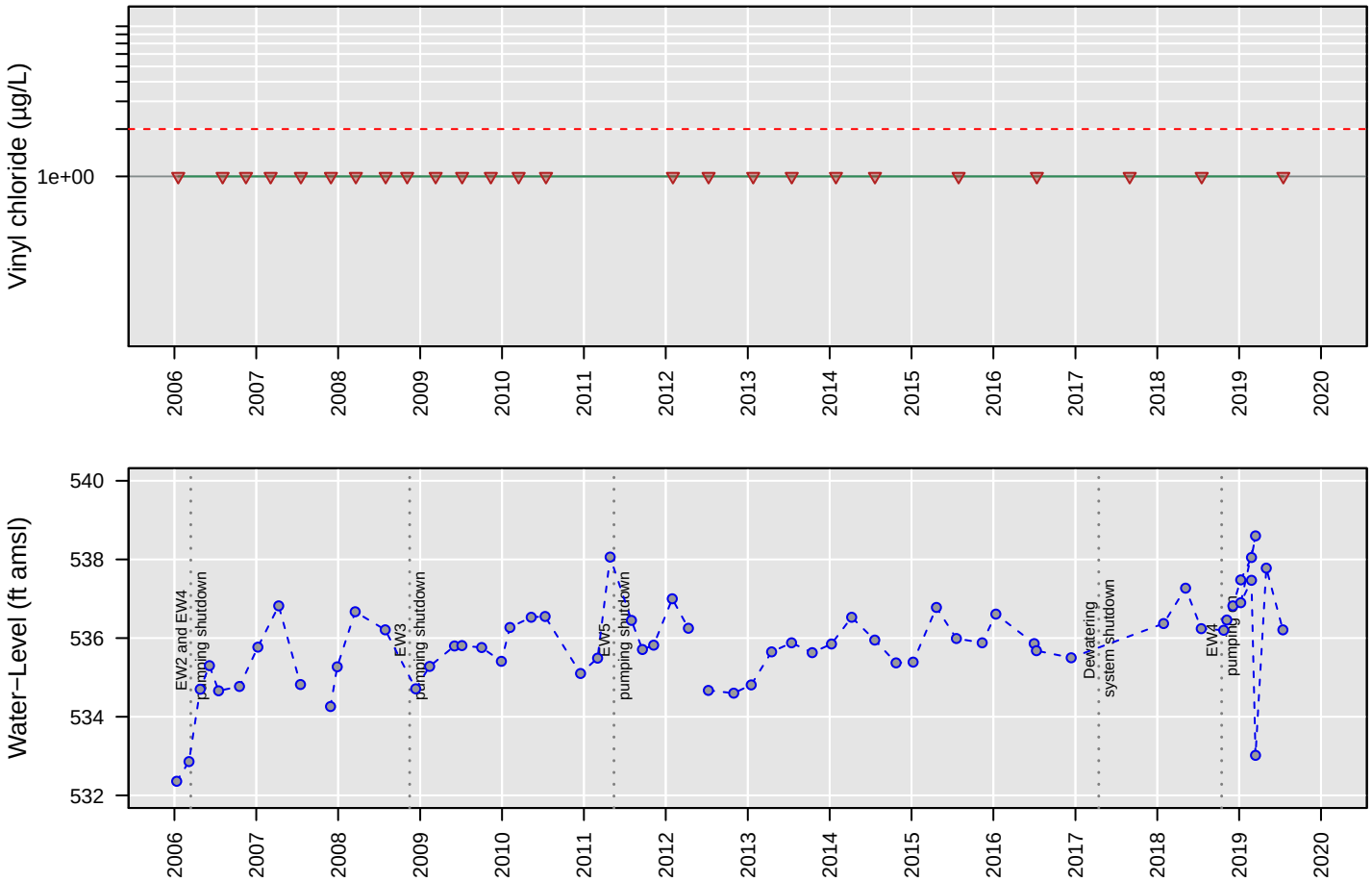


No Analysis Performed

MW106

Vinyl chloride

Number of Comparisons: 25
Percent NDs: 100%



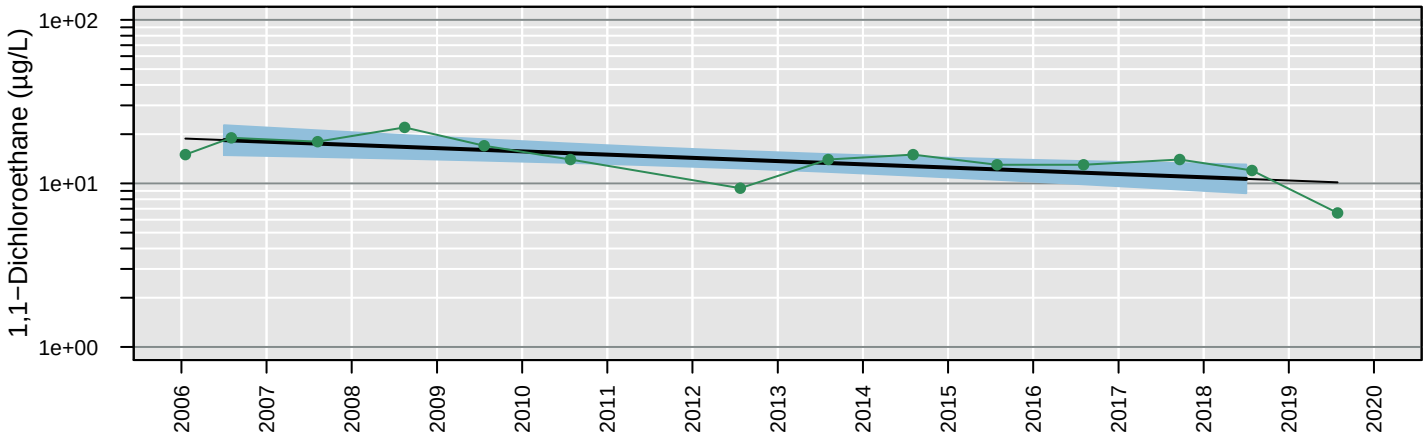
No Analysis Performed

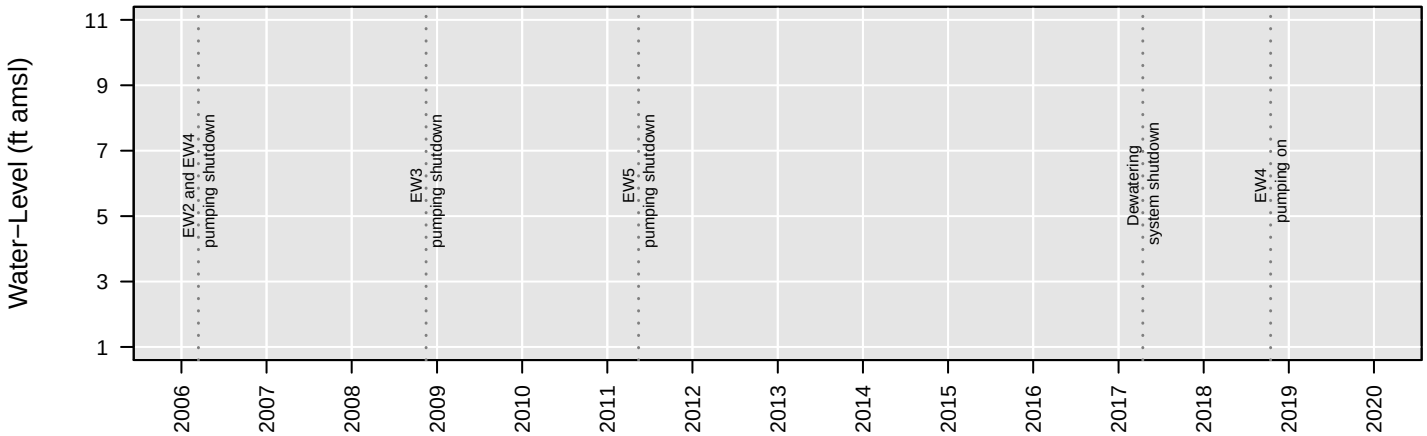
MW107

1,1−Dichloroethane

Number of Comparisons: 14
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00012 (+/− 0.000034)*Date + 4.6 (+/− 0.54)

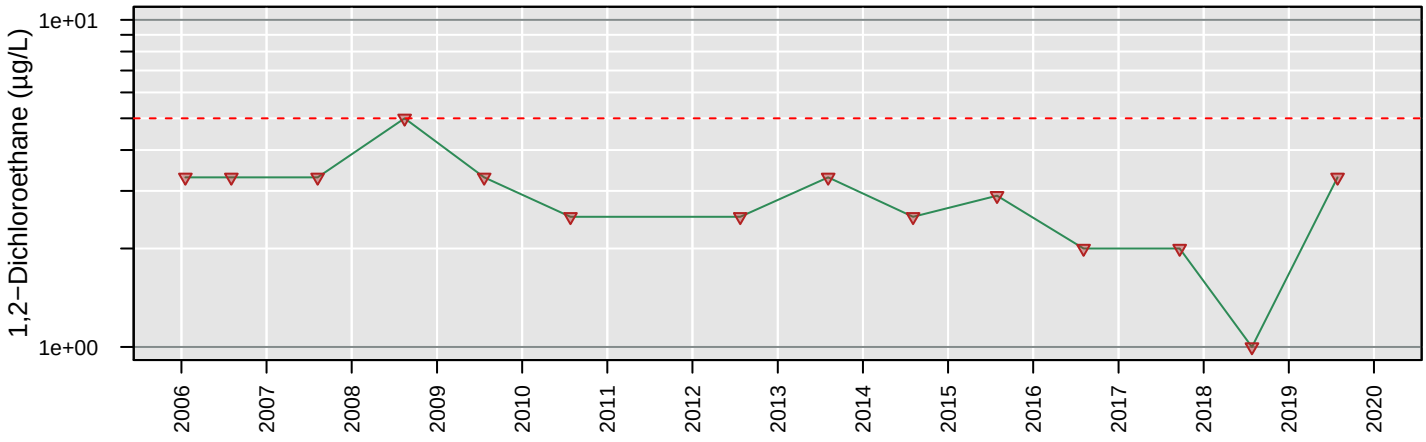
Regression Statistics for January 2018 to January 2019
Geometric Mean: 11 µg/L
UCL: 13 µg/L
LCL: 8.7 µg/L

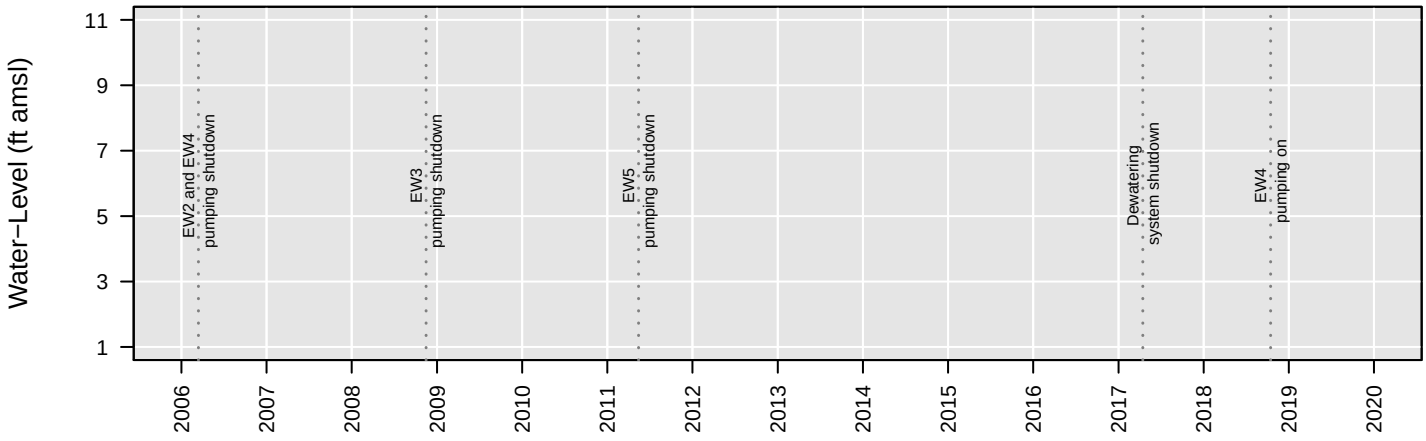
MW107

1,2−Dichloroethane

Number of Comparisons: 14
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





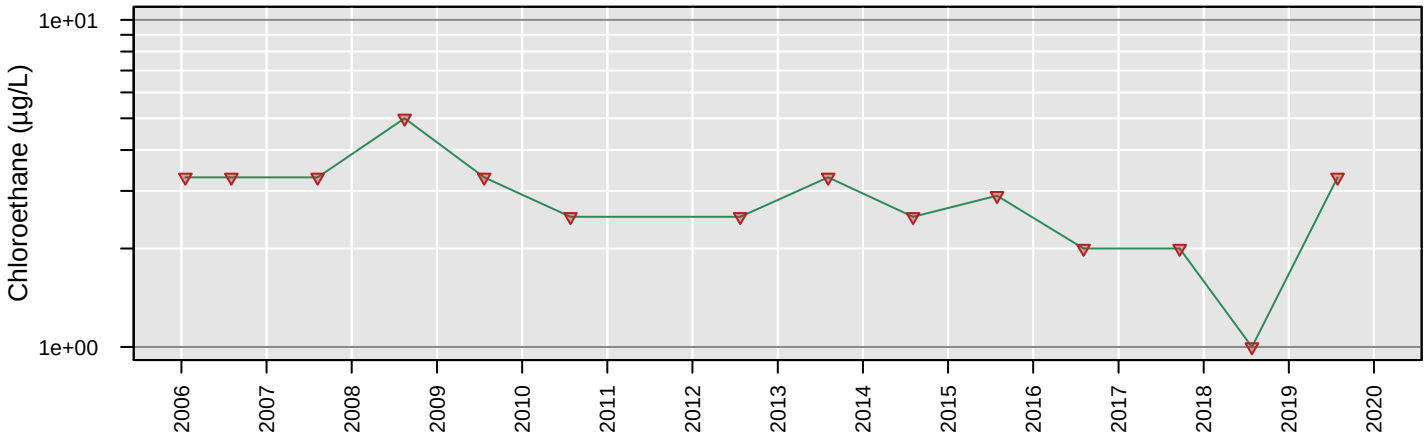
No Analysis Performed

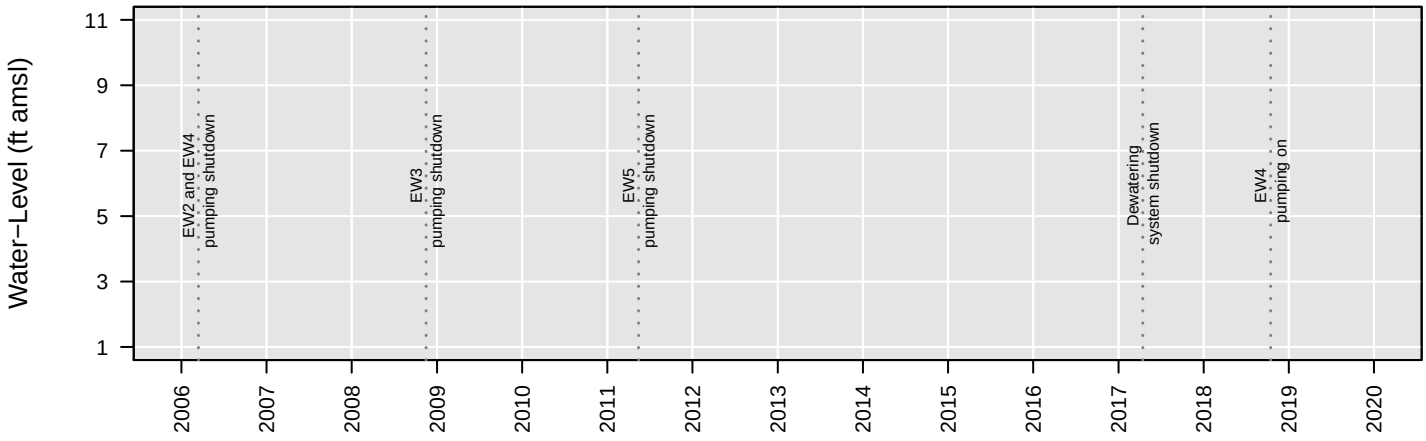
MW107

Chloroethane

Number of Comparisons: 14
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



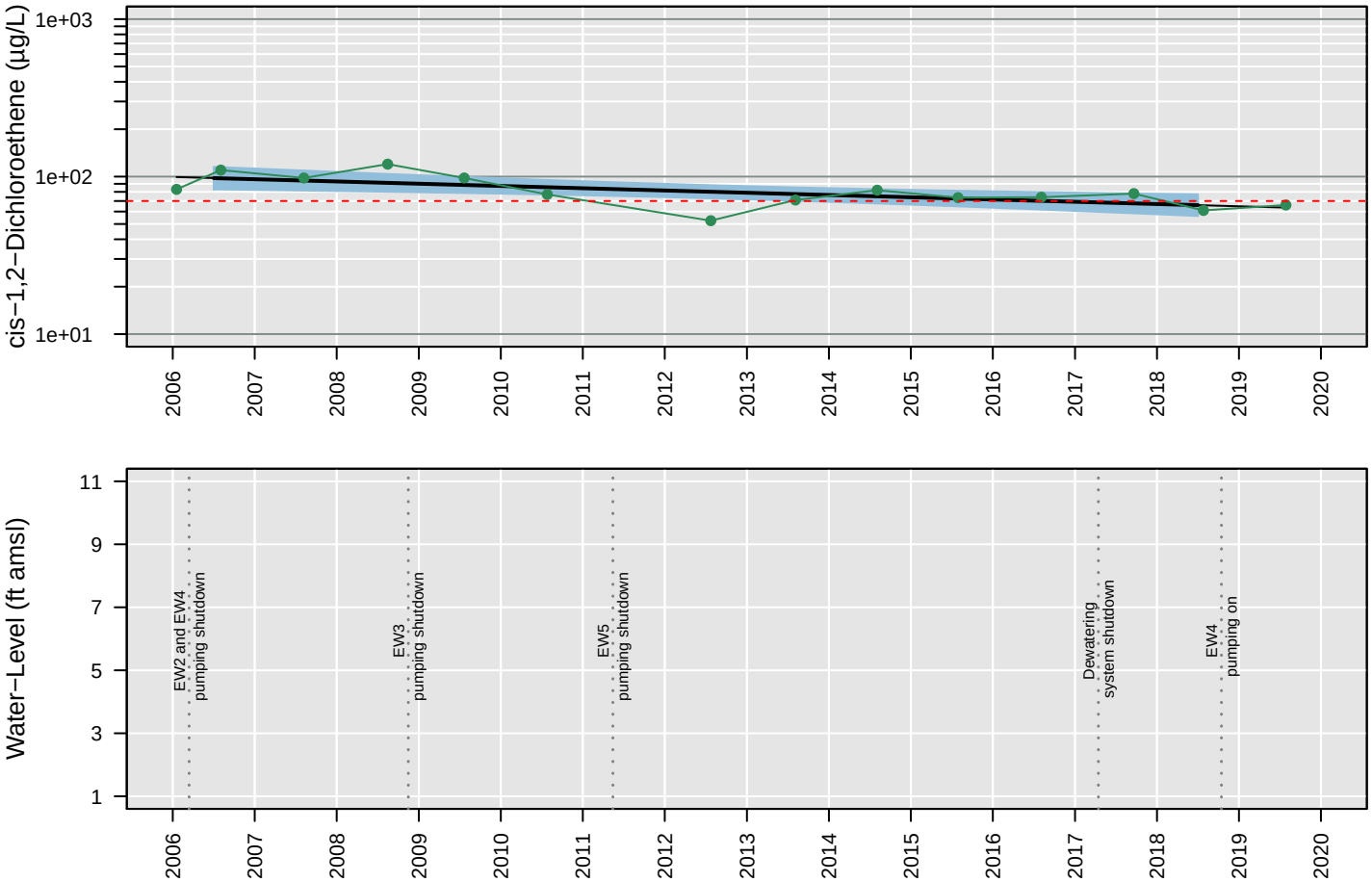


No Analysis Performed

MW107

cis−1,2−Dichloroethene

Number of Comparisons: 14
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.00009 (+/− 0.000027)*Date + 5.8 (+/− 0.42)

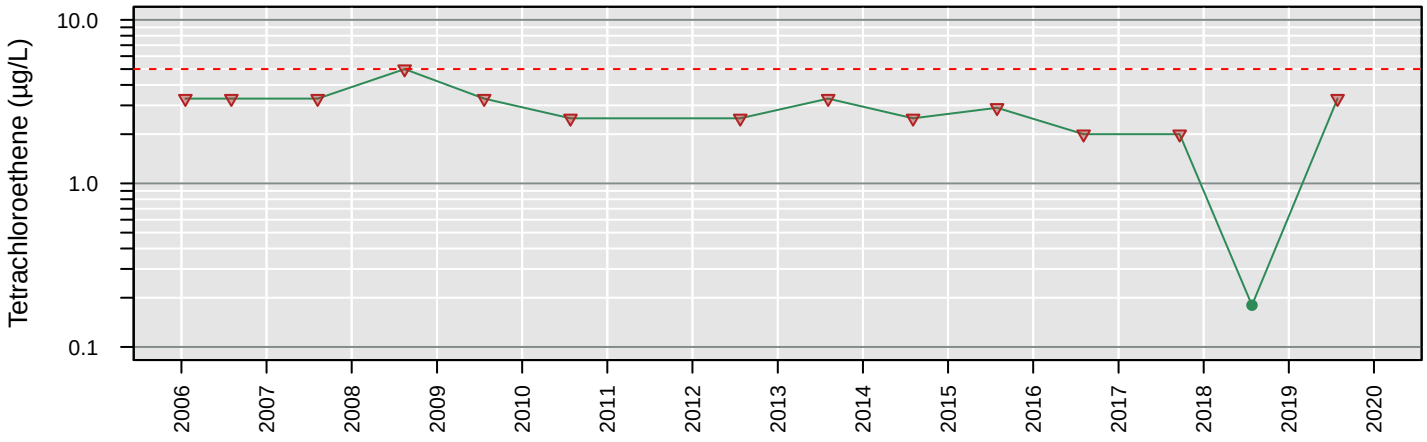
Regression Statistics for January 2018 to January 2019
Geometric Mean: 66 µg/L
UCL: 77 µg/L
LCL: 56 µg/L

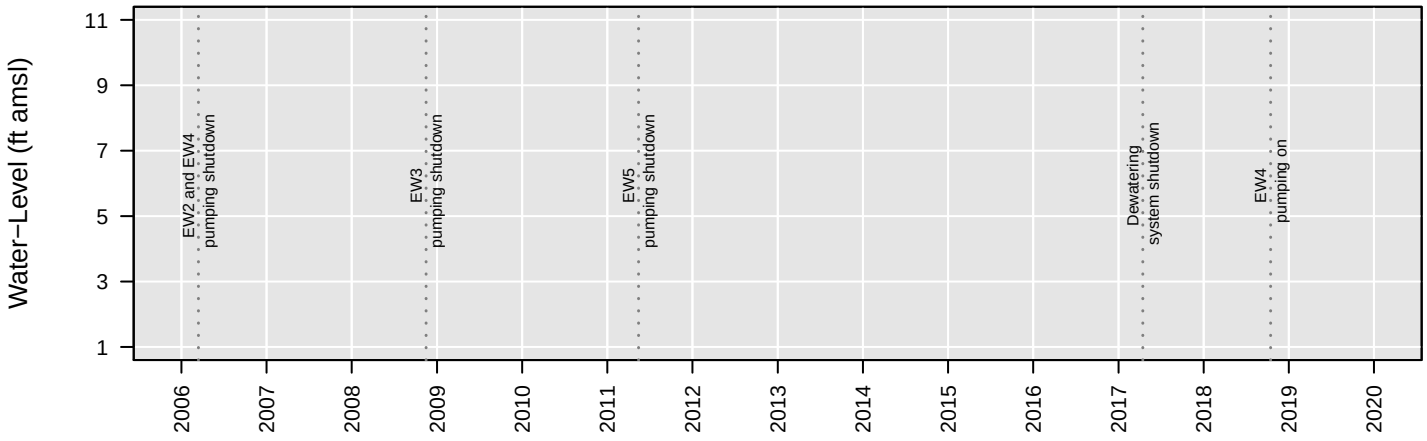
MW107

Tetrachloroethene

Number of Comparisons: 14
Percent NDs: 93%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





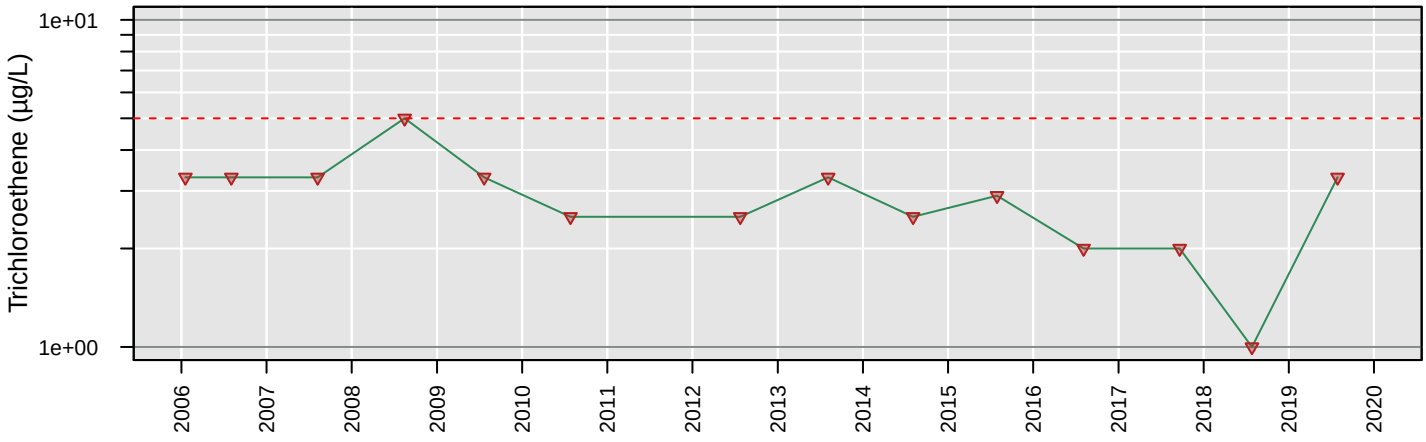
No Analysis Performed

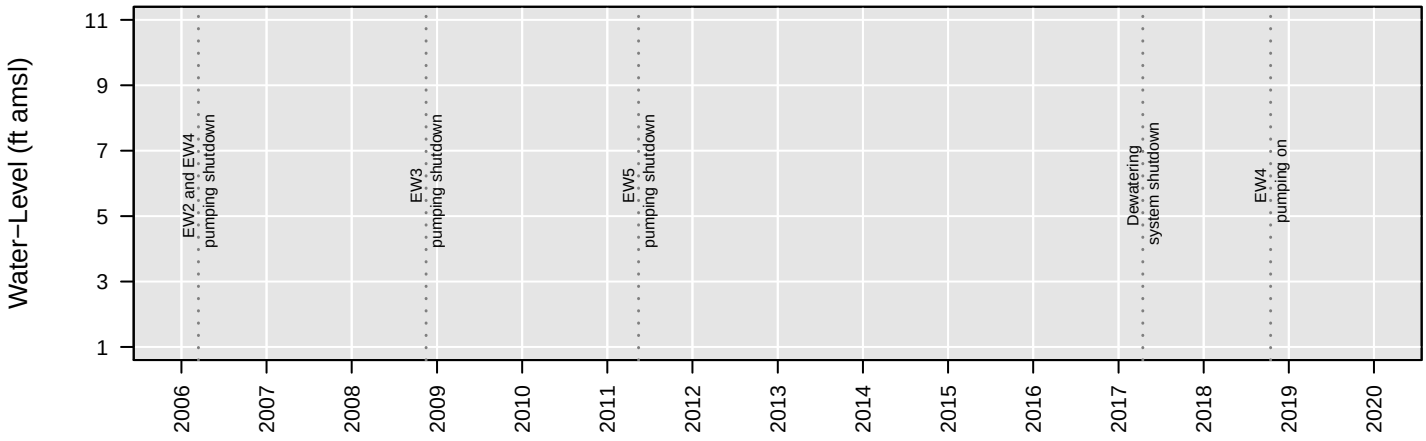
MW107

Trichloroethene

Number of Comparisons: 14
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





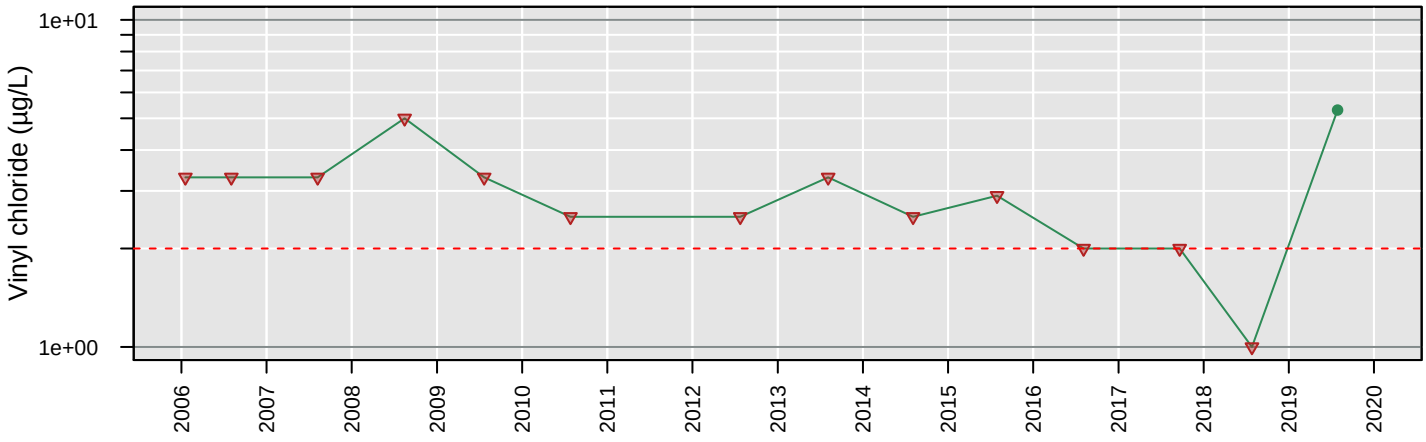
No Analysis Performed

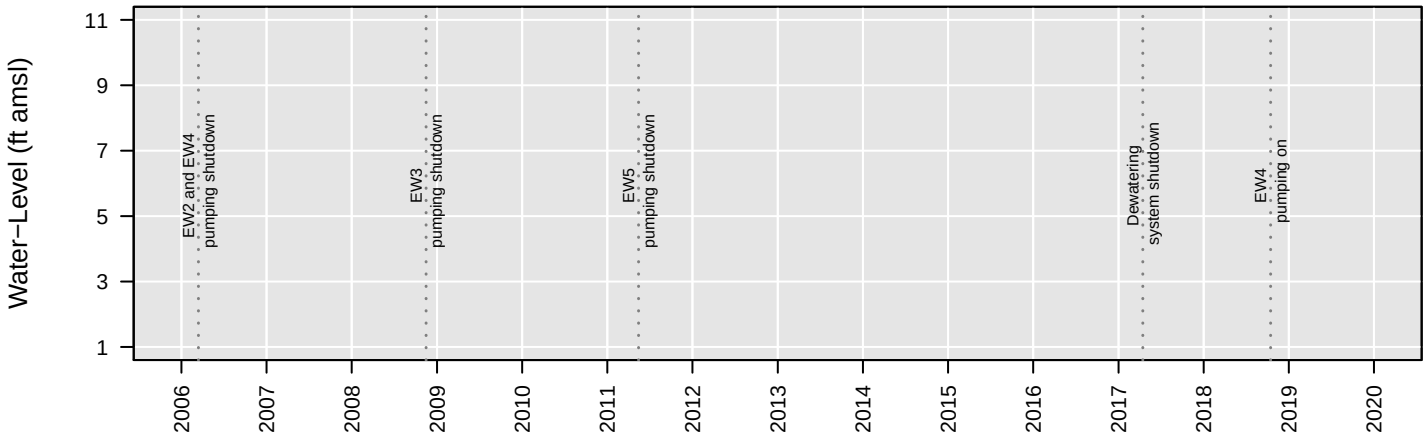
MW107

Vinyl chloride

Number of Comparisons: 14
Percent NDs: 93%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



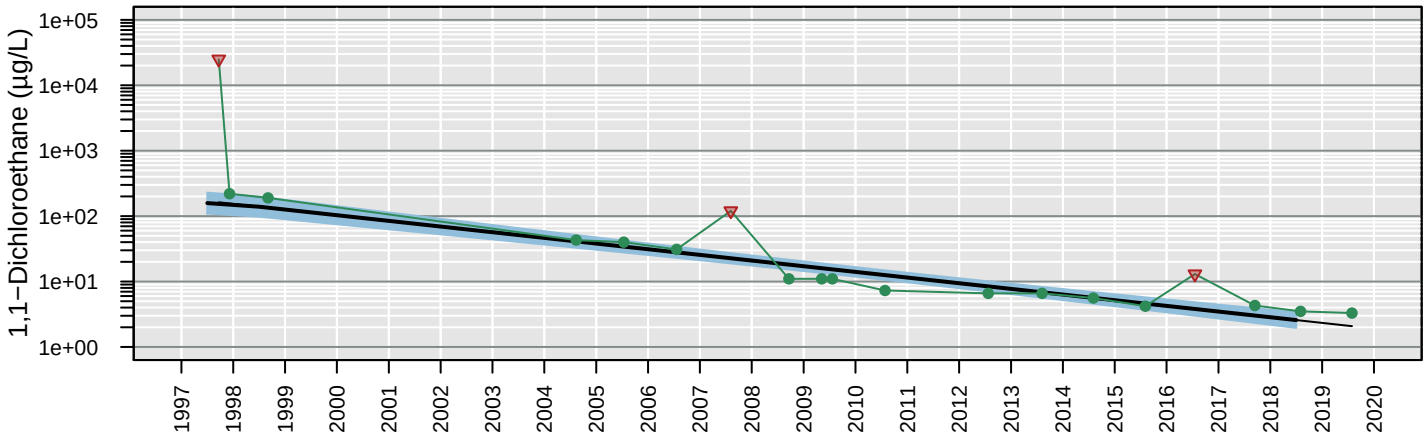


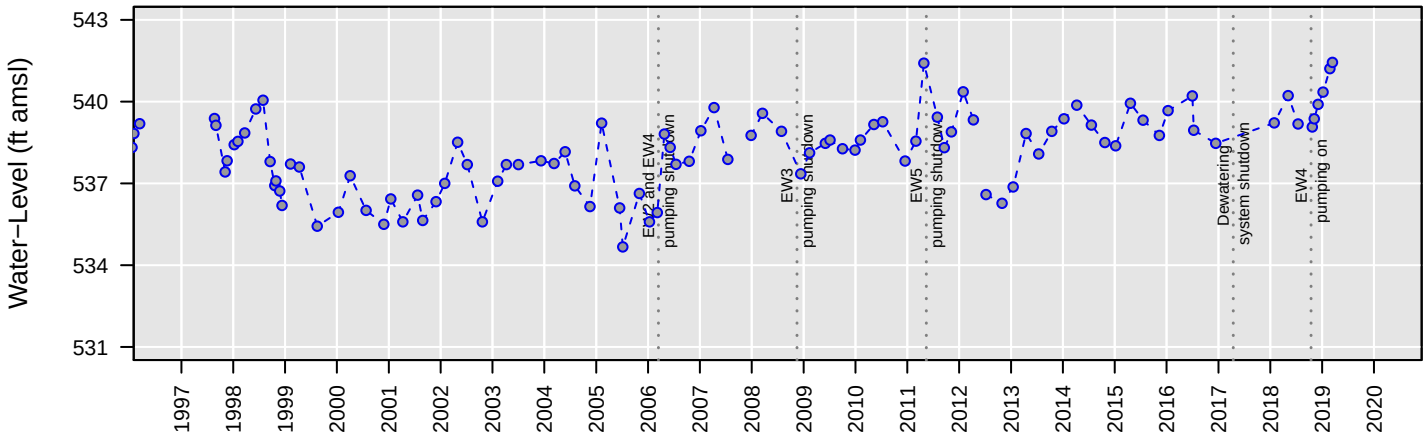
No Analysis Performed

MW68

1,1−Dichloroethane

Number of Comparisons: 19
Percent NDs: 16%





Censored Regression (Tobit) Model

ln Conc. = −0.00055 (+/− 0.000034)*Date + 11 (+/− 0.51)

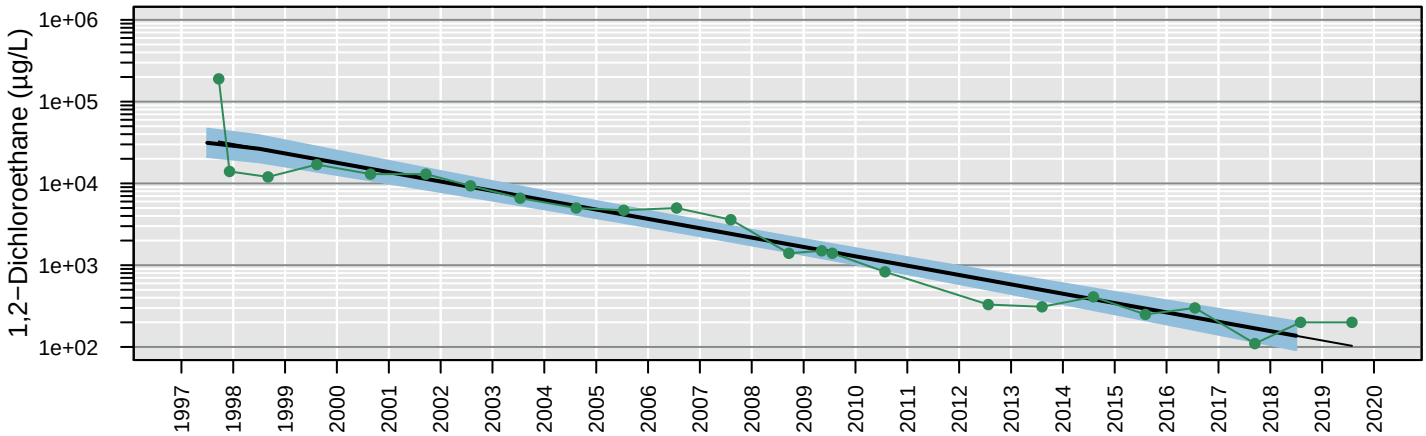
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.6 µg/L
UCL: 3.4 µg/L
LCL: 2 µg/L

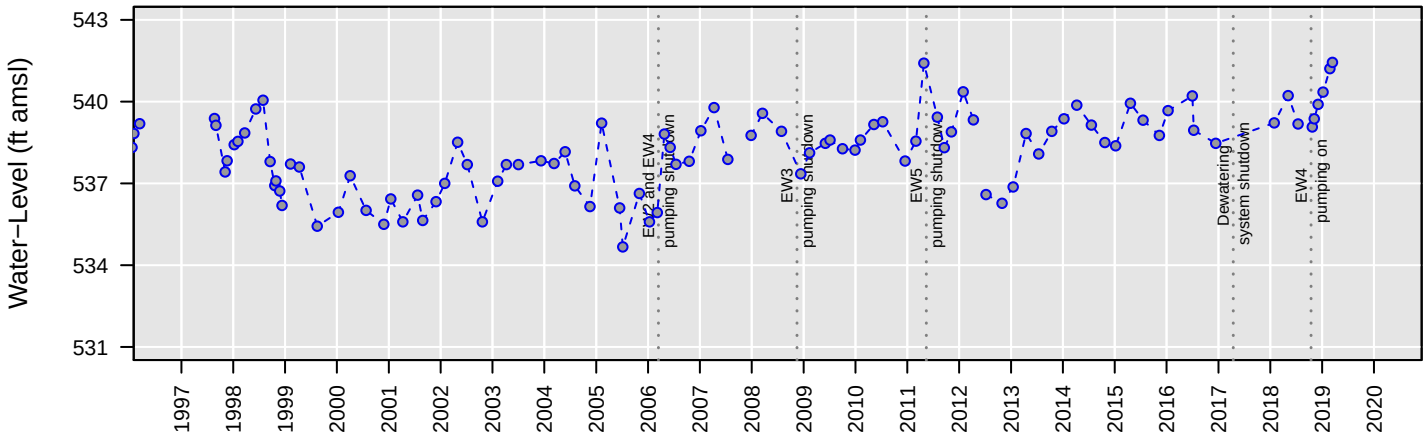
MW68

1,2−Dichloroethane

Number of Comparisons: 24
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00072 (+/− 0.000043)*Date + 18 (+/− 0.6)

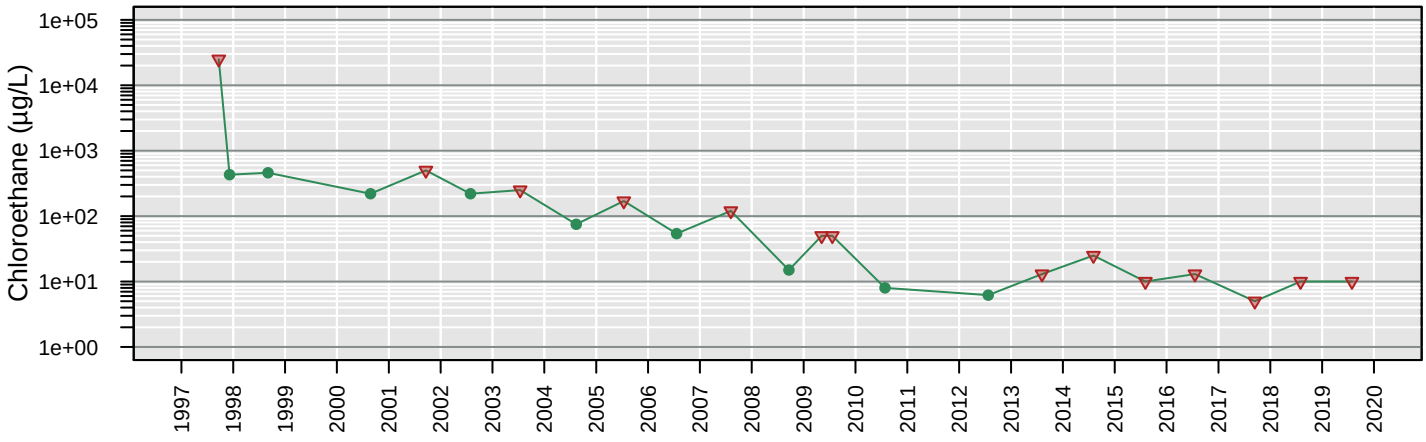
Regression Statistics for January 2018 to January 2019
Geometric Mean: 140 µg/L
UCL: 210 µg/L
LCL: 91 µg/L

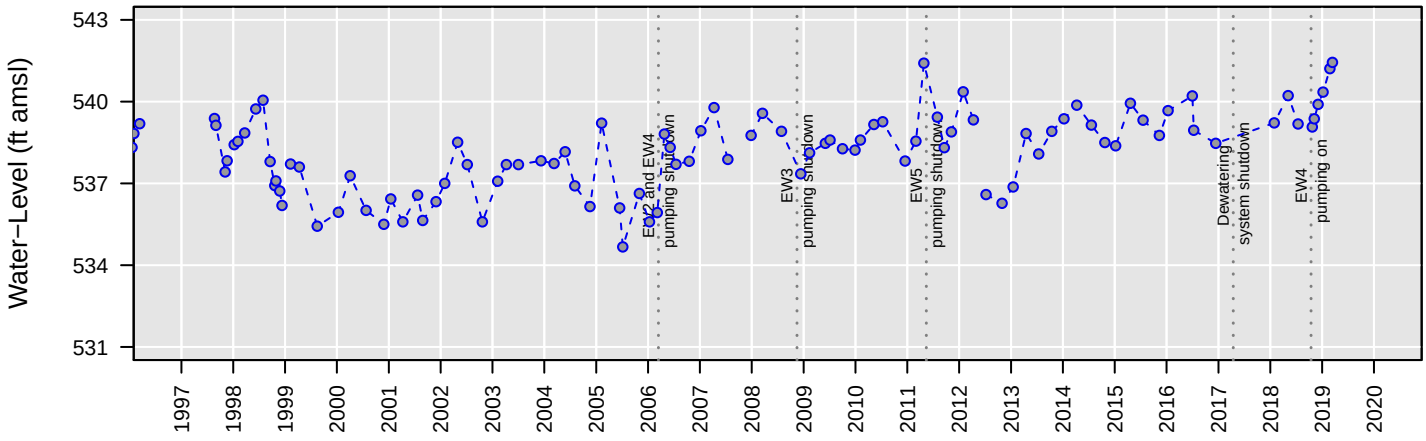
MW68

Chloroethane

Number of Comparisons: 23
Percent NDs: 61%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



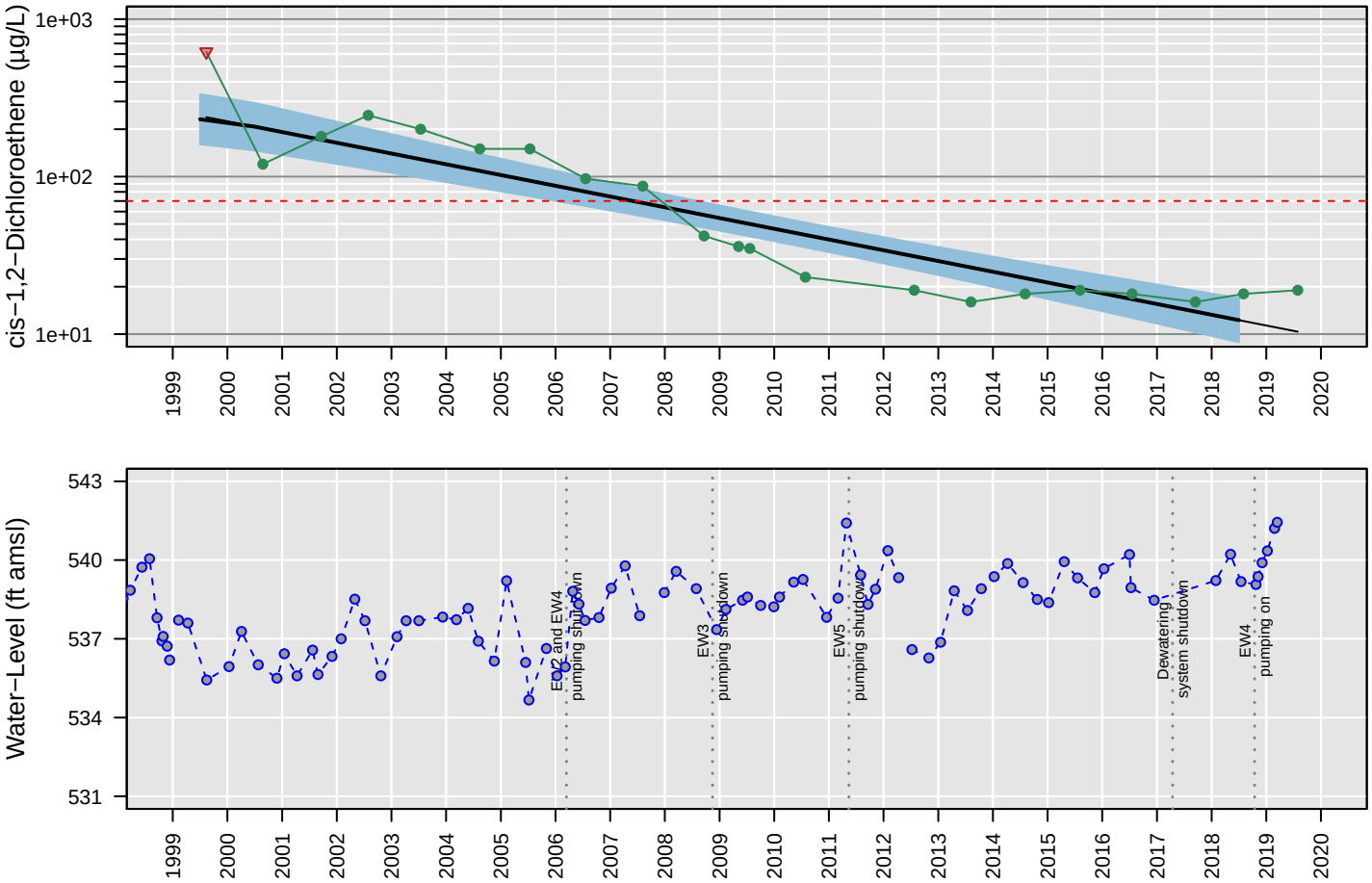


No Analysis Performed

MW68

cis−1,2−Dichloroethene

Number of Comparisons: 21
Percent NDs: 5%



Censored Regression (Tobit) Model

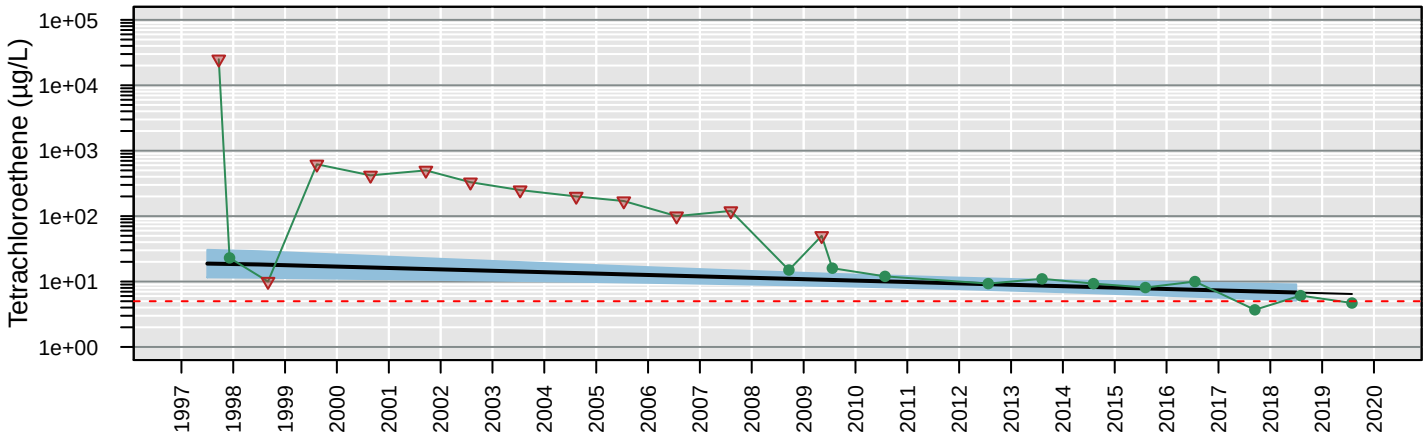
ln Conc. = −0.00043 (+/− 0.000041)*Date + 10 (+/− 0.6)

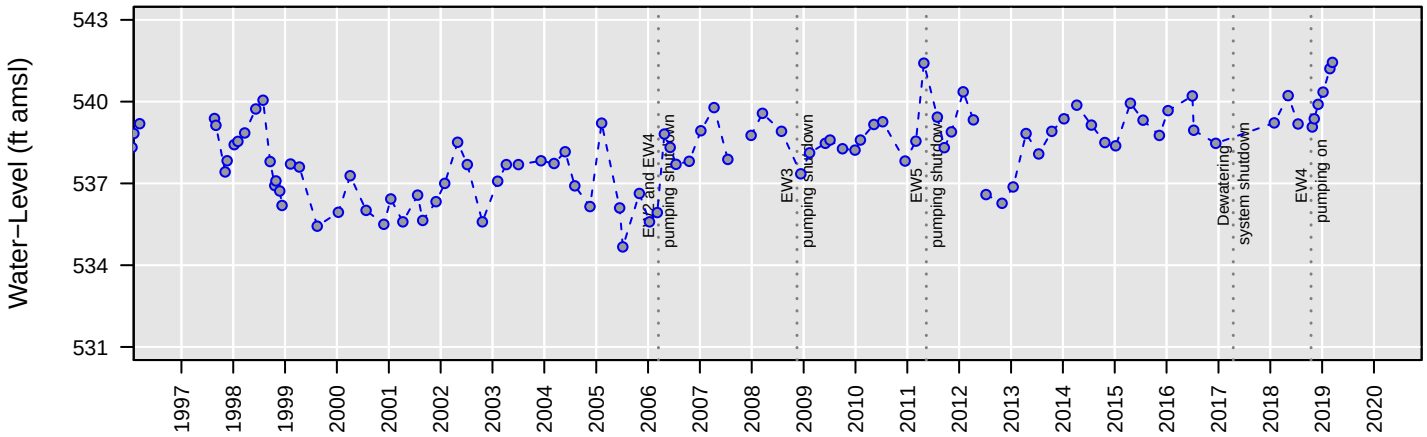
Regression Statistics for January 2018 to January 2019
Geometric Mean: 12 µg/L
UCL: 17 µg/L
LCL: 8.9 µg/L

MW68

Tetrachloroethene

Number of Comparisons: 24
Percent NDs: 50%





Censored Regression (Tobit) Model

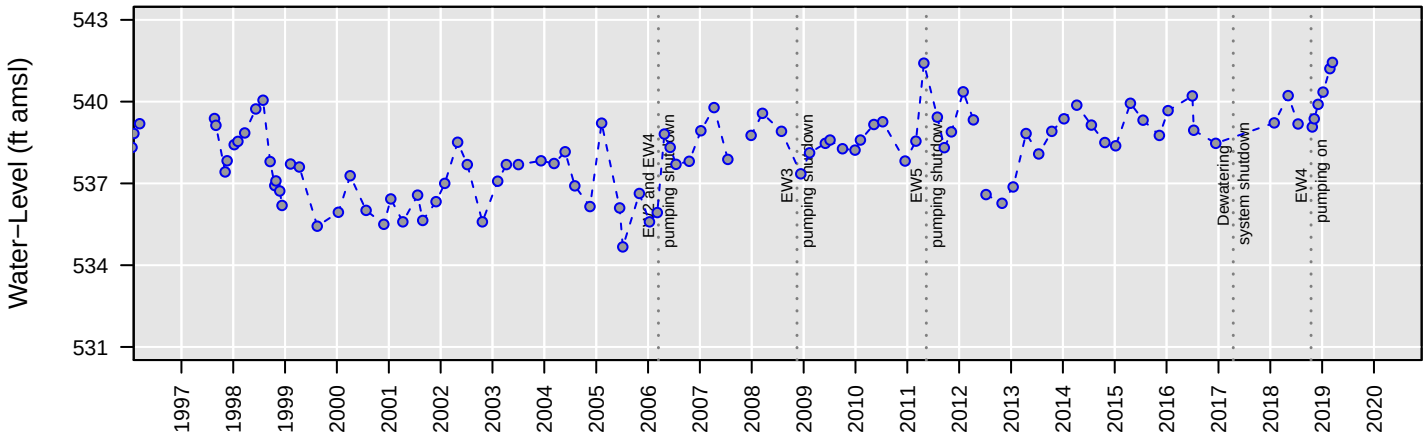
ln Conc. = −0.00013 (+/− 0.000041)*Date + 4.3 (+/− 0.64)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 6.8 µg/L
UCL: 9.1 µg/L
LCL: 5.1 µg/L

MW68

Total VOCs

Number of Comparisons: 23
Percent NDs: 0%



Censored Regression (Tobit) Model

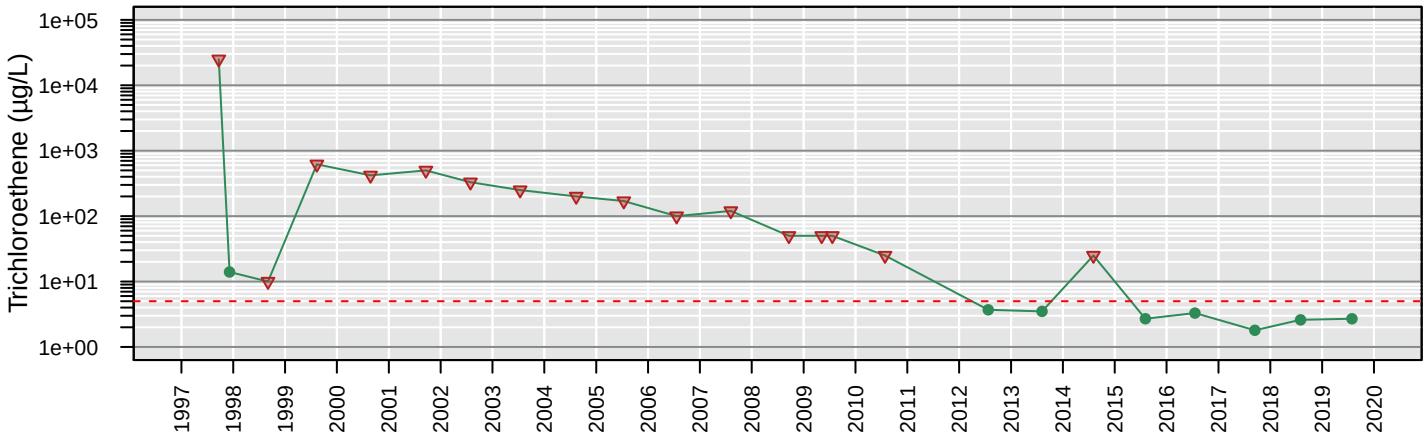
ln Conc. = −0.00078 (+/− 0.000065)*Date + 19 (+/− 0.91)

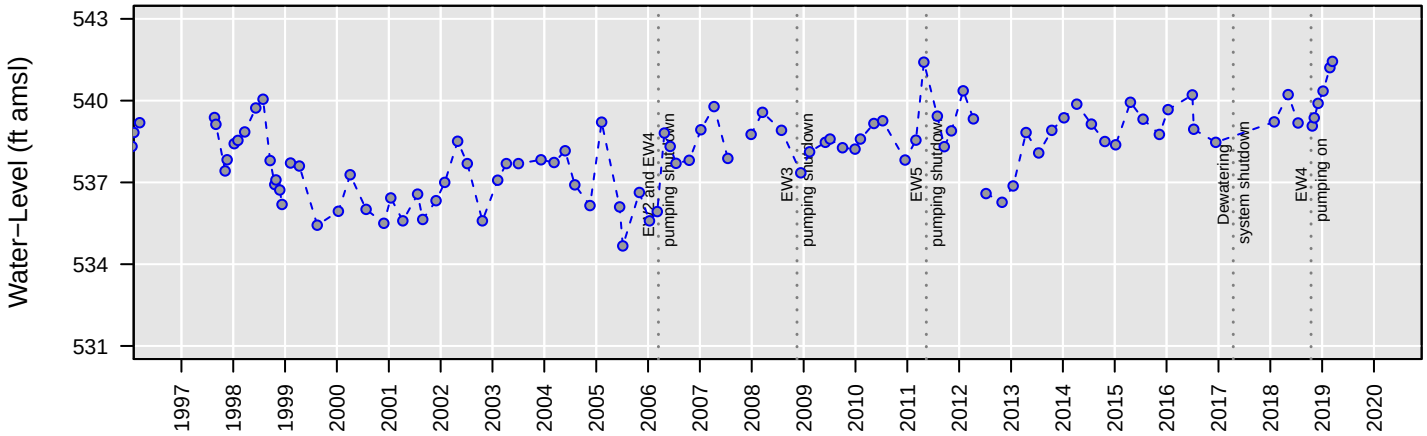
Regression Statistics for January 2017 to January 2018
Geometric Mean: 170 µg/L
UCL: 310 µg/L
LCL: 97 µg/L

MW68

Trichloroethene

Number of Comparisons: 24
Percent NDs: 67%



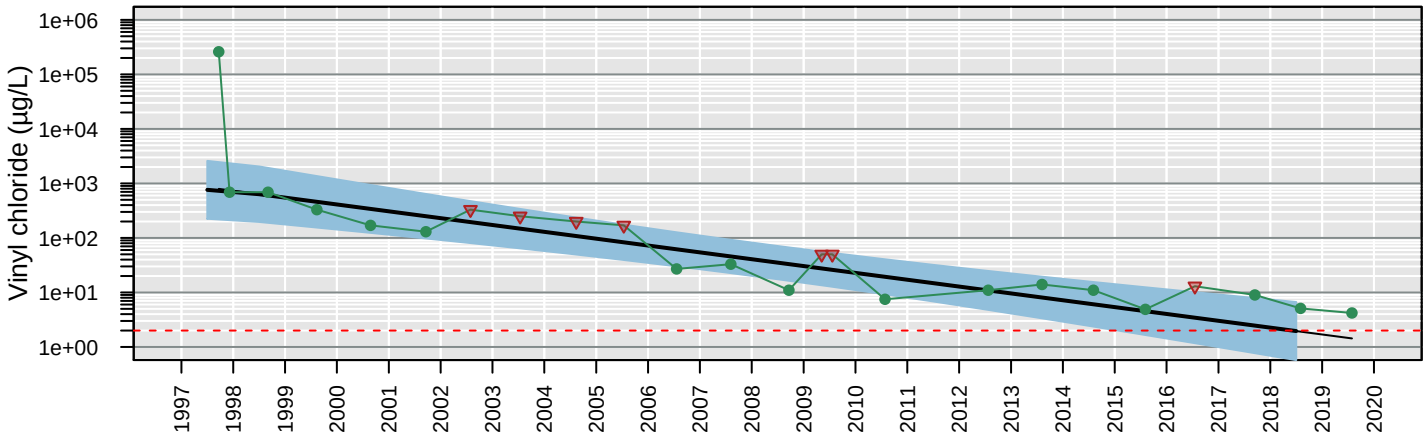


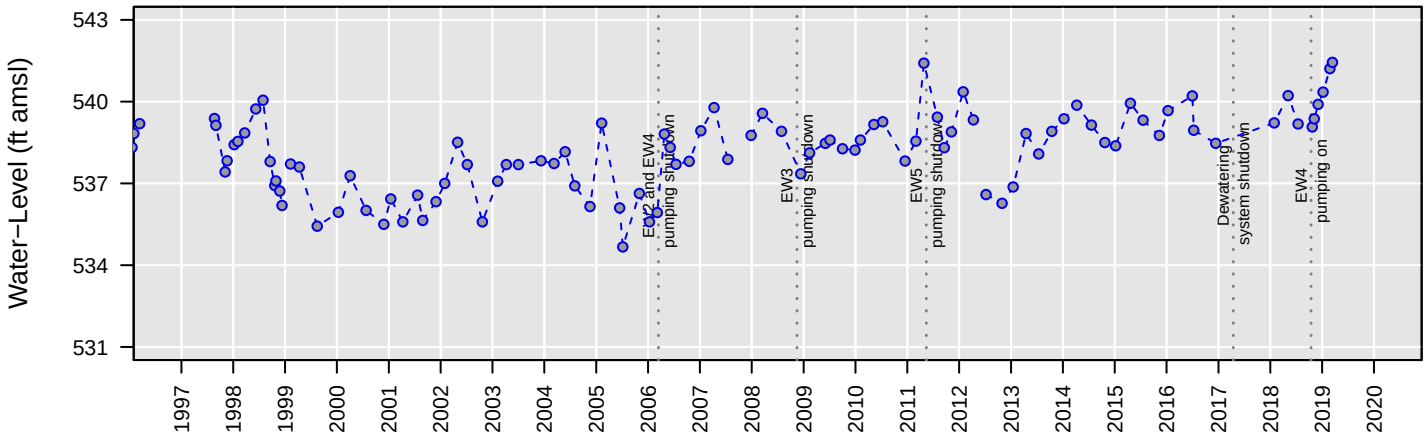
No Analysis Performed

MW68

Vinyl chloride

Number of Comparisons: 24
Percent NDs: 29%





Censored Regression (Tobit) Model

ln Conc. = −0.00079 (+/− 0.00013)*Date + 15 (+/− 1.8)

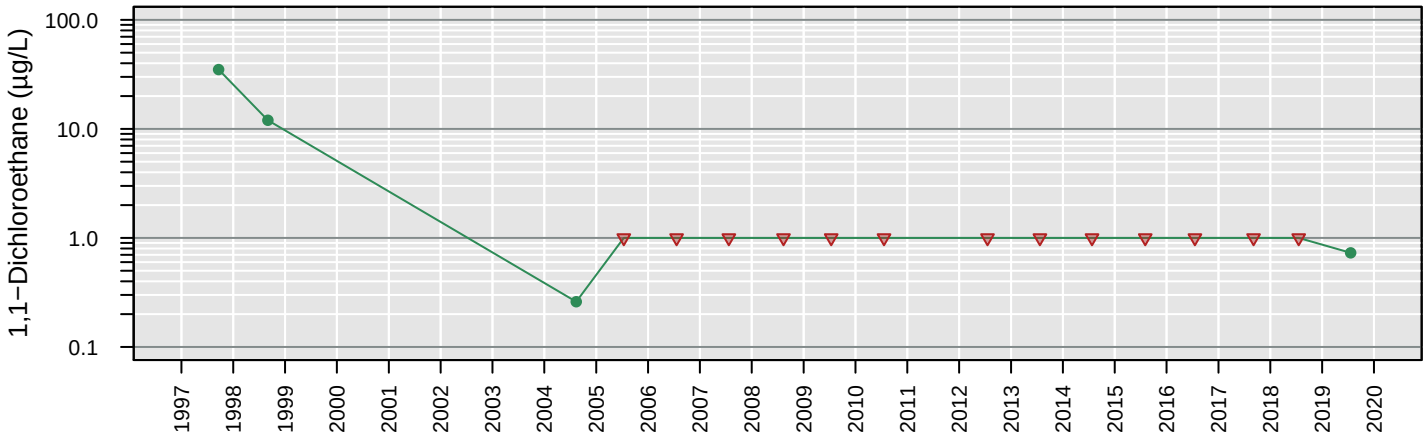
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2 µg/L
UCL: 6.7 µg/L
LCL: 0.57 µg/L

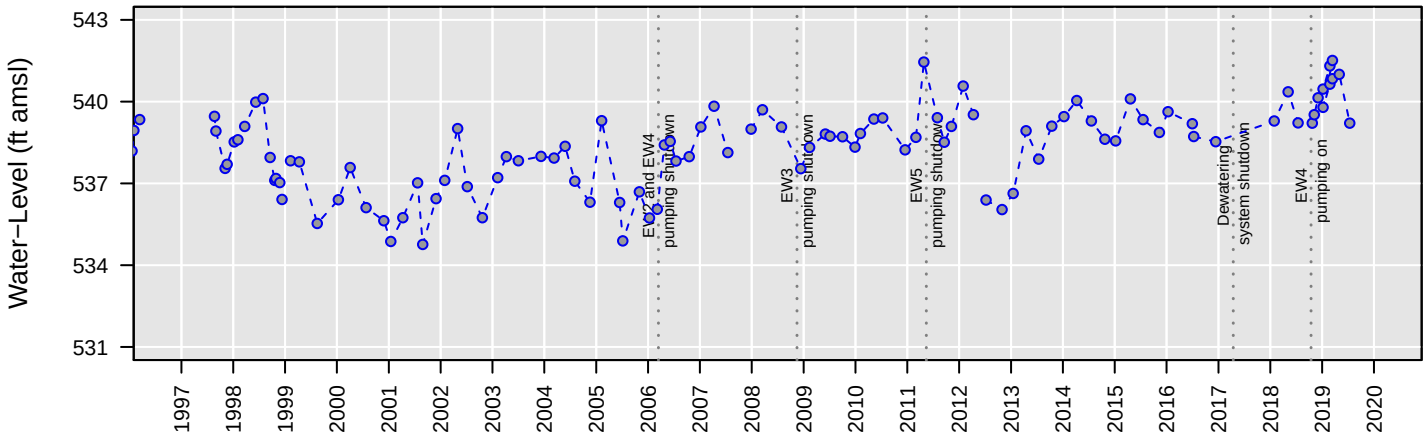
MW69

1,1−Dichloroethane

Number of Comparisons: 17
Percent NDs: 76%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





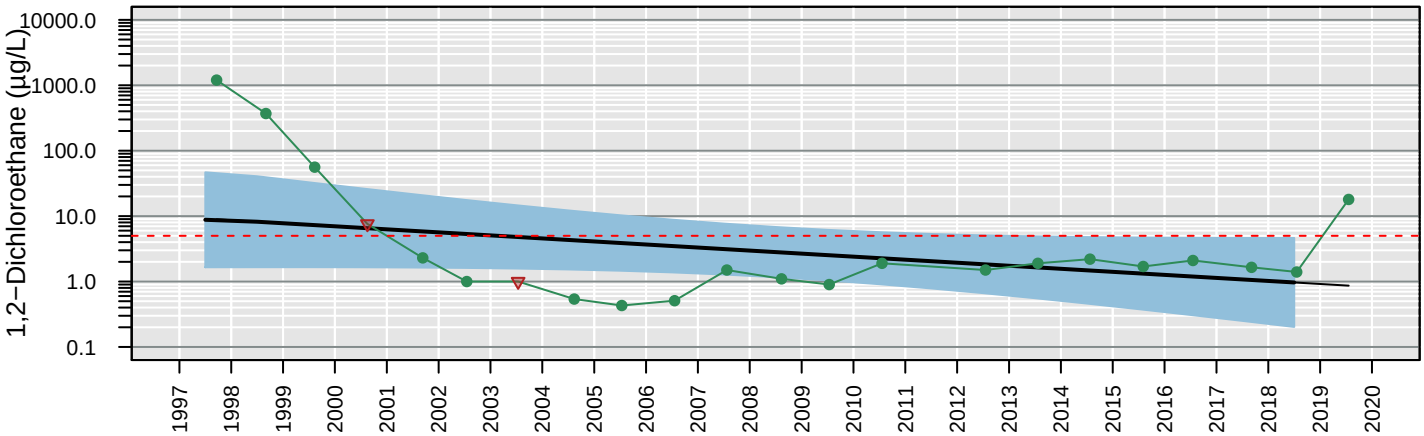
No Analysis Performed

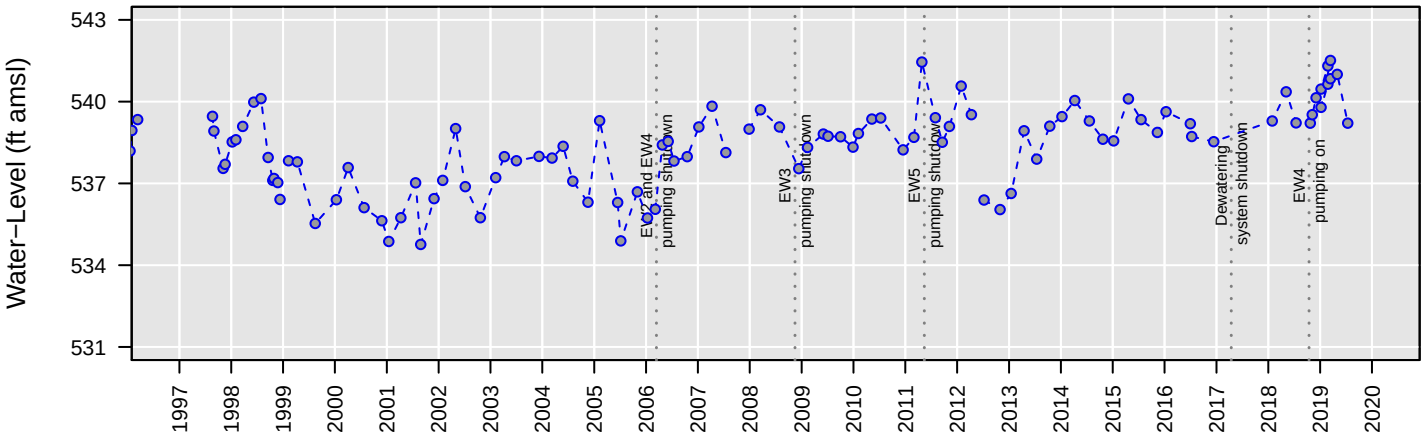
MW69

1,2−Dichloroethane

Number of Comparisons: 22
Percent NDs: 9%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

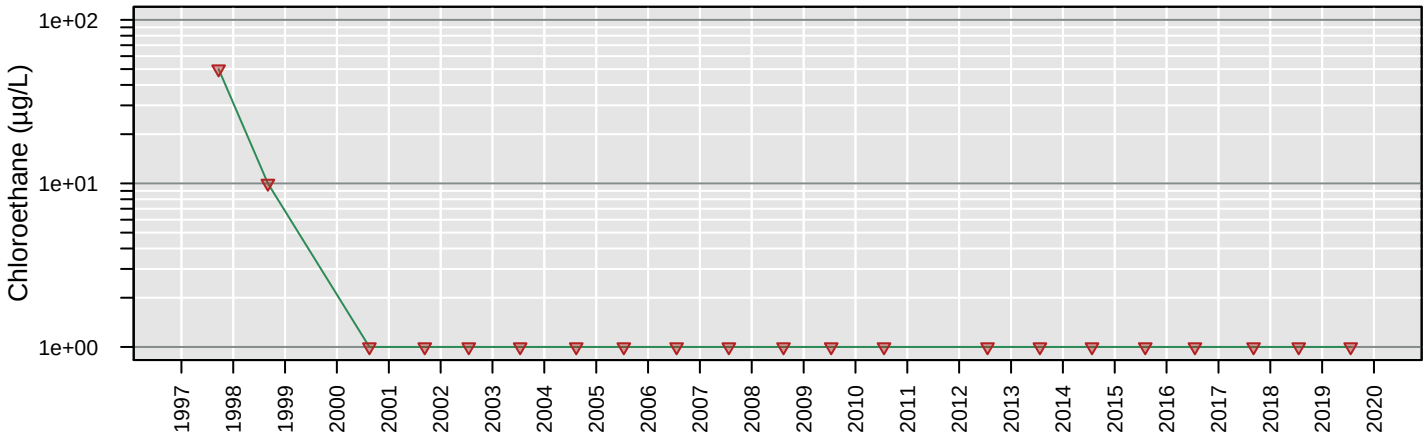
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.97 µg/L
UCL: 4.6 µg/L
LCL: 0.2 µg/L

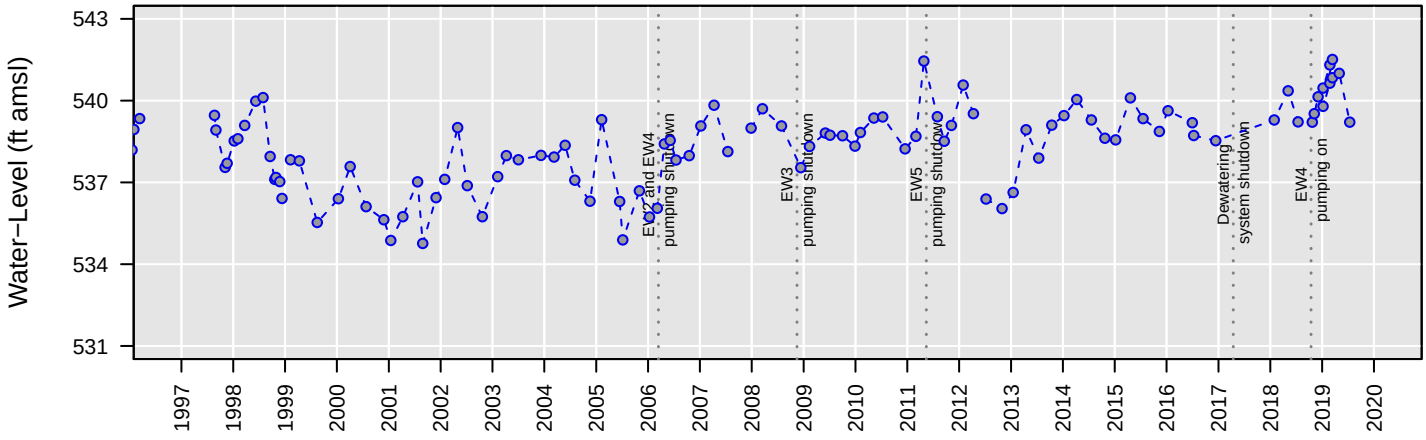
MW69

Chloroethane

Number of Comparisons: 21
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



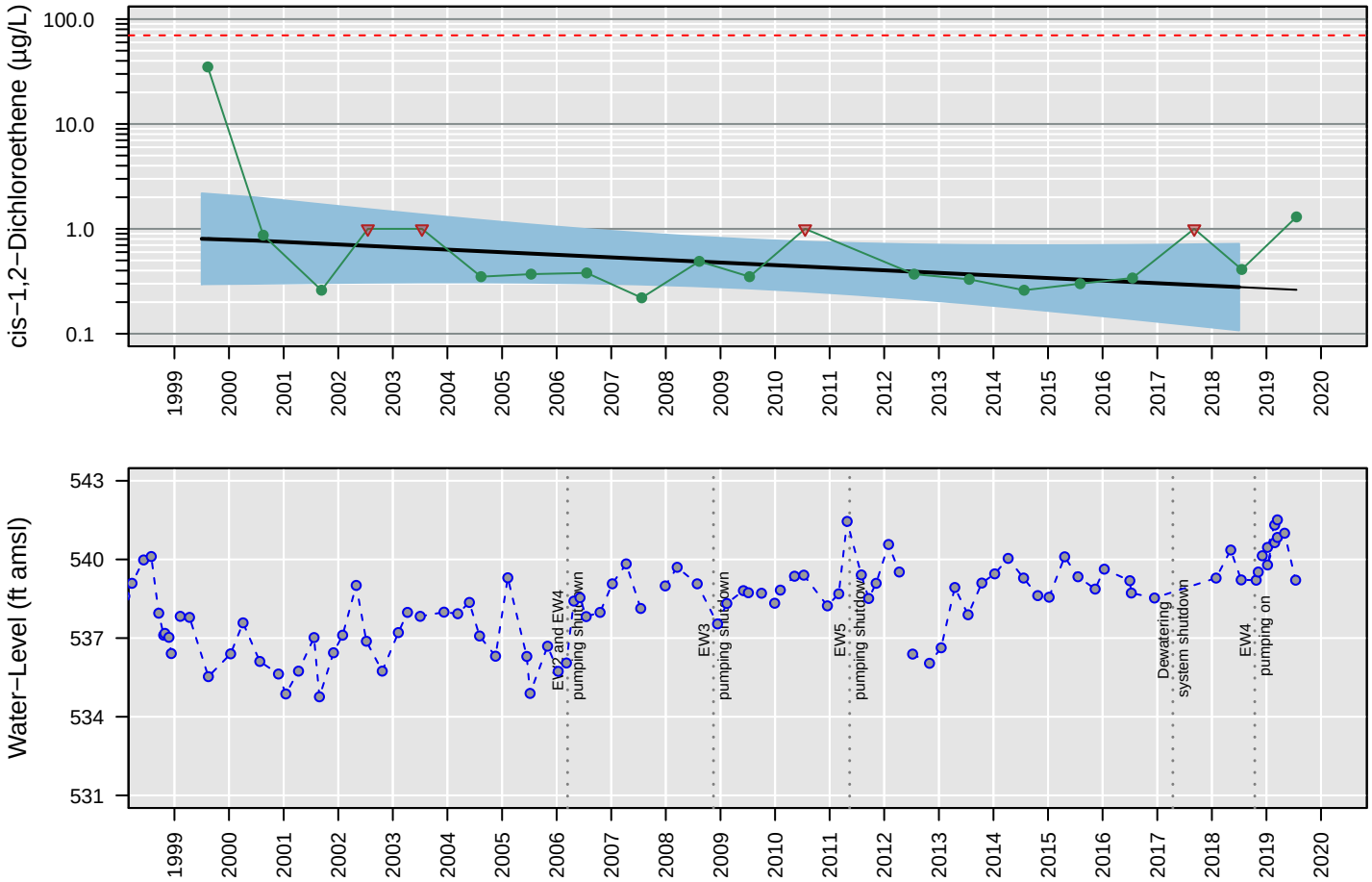


No Analysis Performed

MW69

cis−1,2−Dichloroethene

Number of Comparisons: 20
Percent NDs: 20%



Censored Regression (Tobit) Model

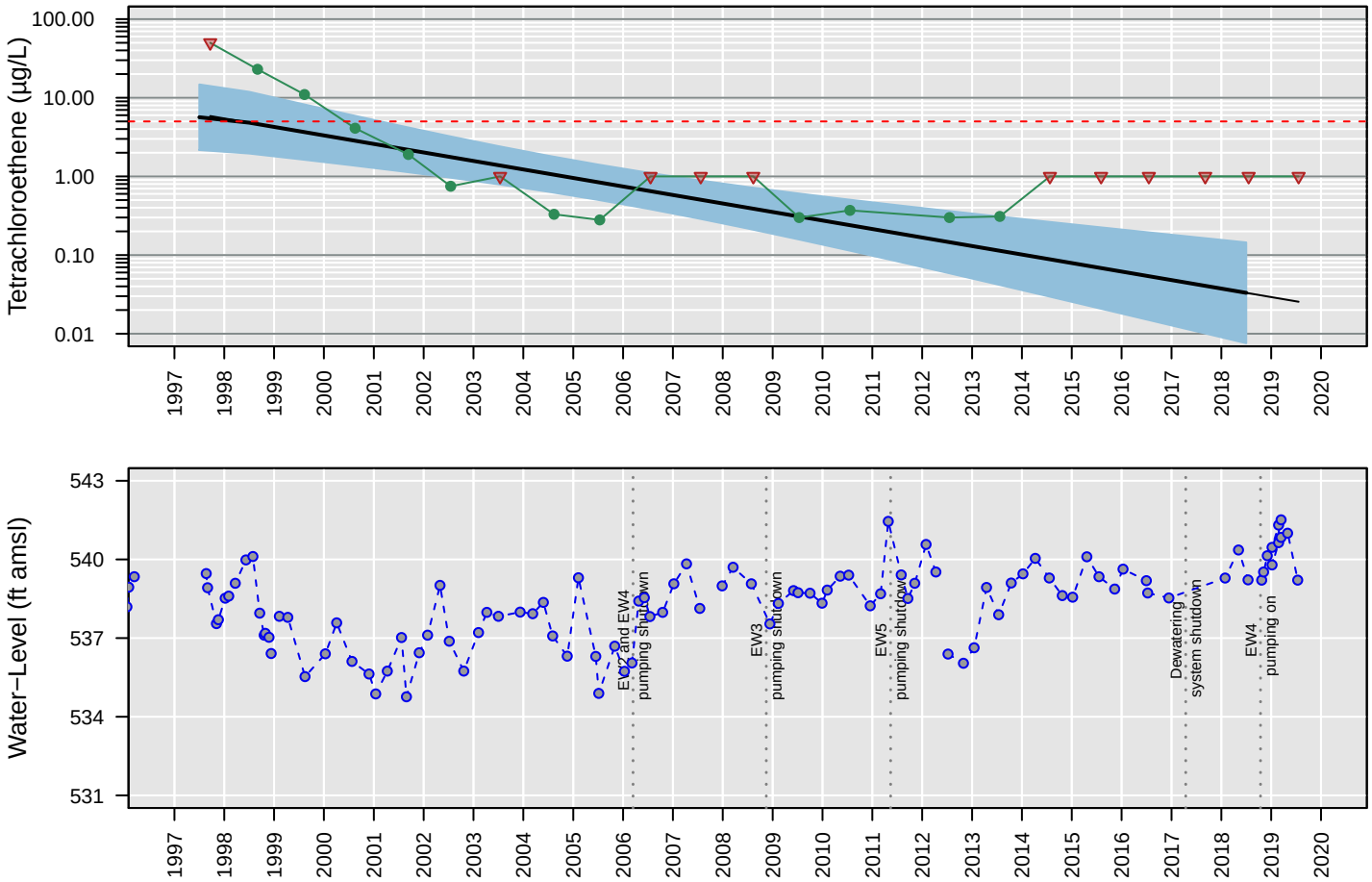
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.28 µg/L
UCL: 0.72 µg/L
LCL: 0.11 µg/L

MW69

Tetrachloroethene

Number of Comparisons: 22
Percent NDs: 50%



Censored Regression (Tobit) Model

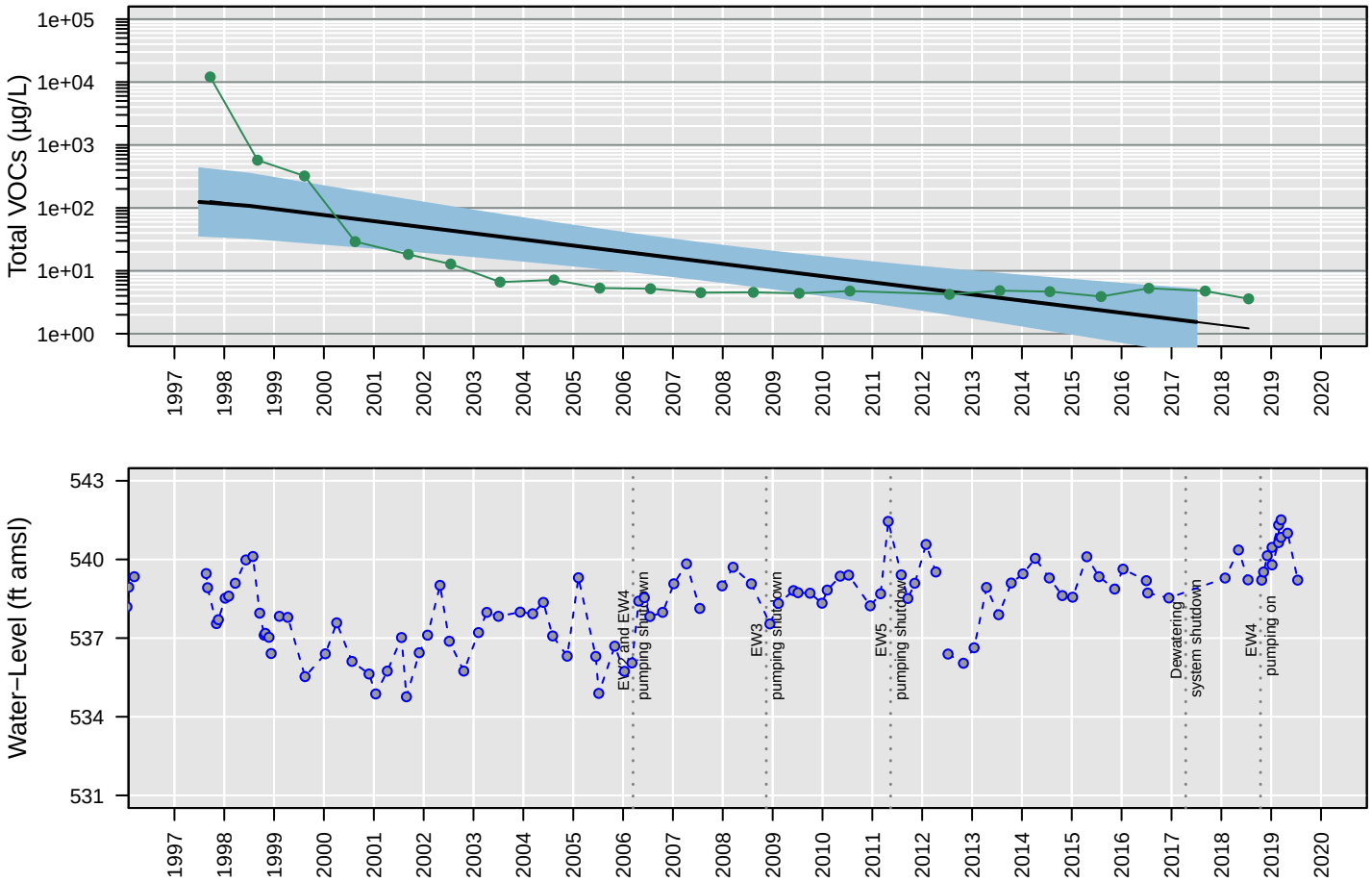
ln Conc. = −0.00068 (+/− 0.00014)*Date + 8.7 (+/− 1.8)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.033 µg/L
UCL: 0.14 µg/L
LCL: 0.0076 µg/L

MW69

Total VOCs

Number of Comparisons: 21
Percent NDs: 0%



Censored Regression (Tobit) Model

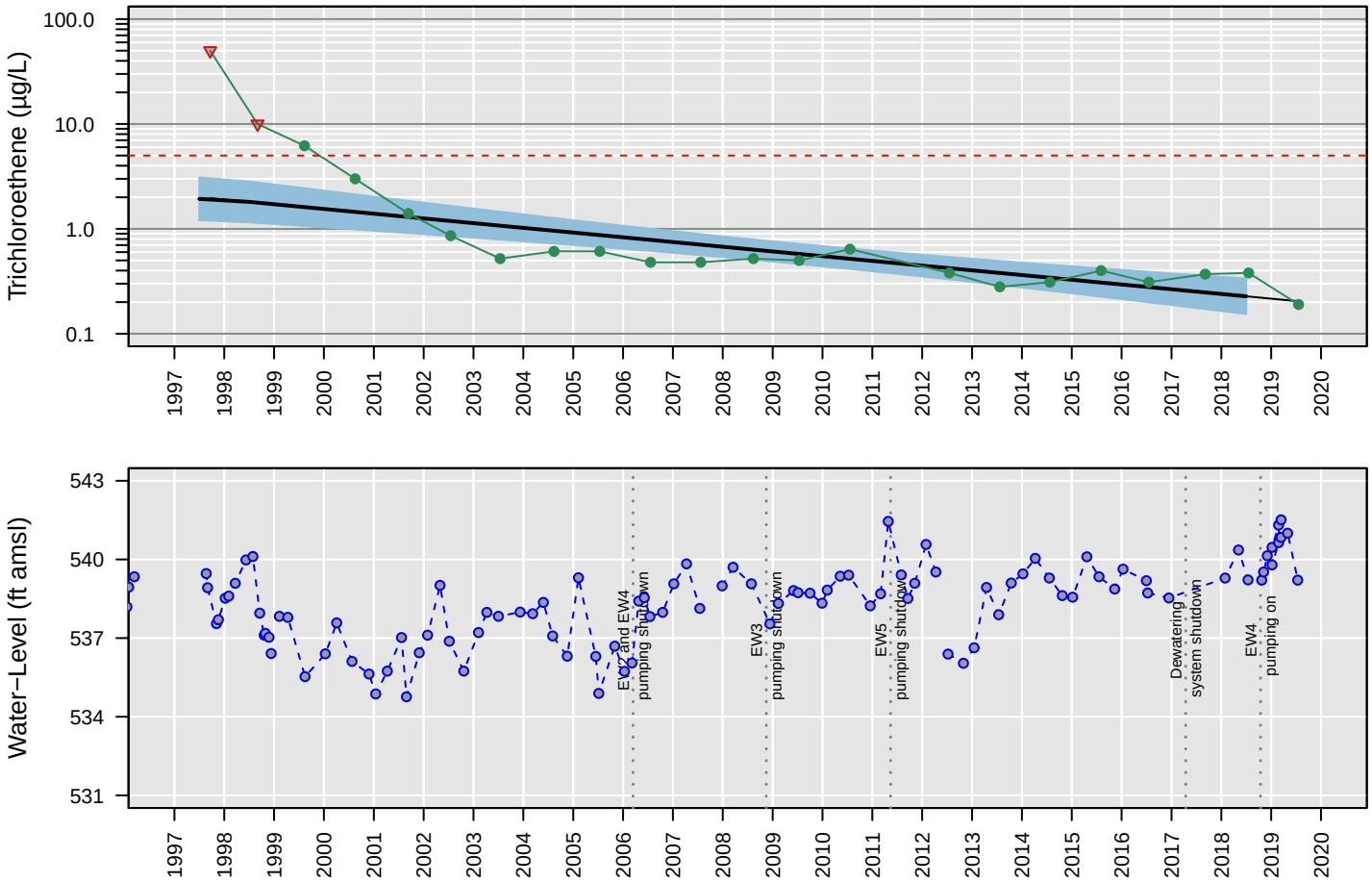
ln Conc. = −0.00061 (+/− 0.00013)*Date + 11 (+/− 1.9)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 1.5 µg/L
UCL: 5 µg/L
LCL: 0.47 µg/L

MW69

Trichloroethene

Number of Comparisons: 22
Percent NDs: 9%



Censored Regression (Tobit) Model

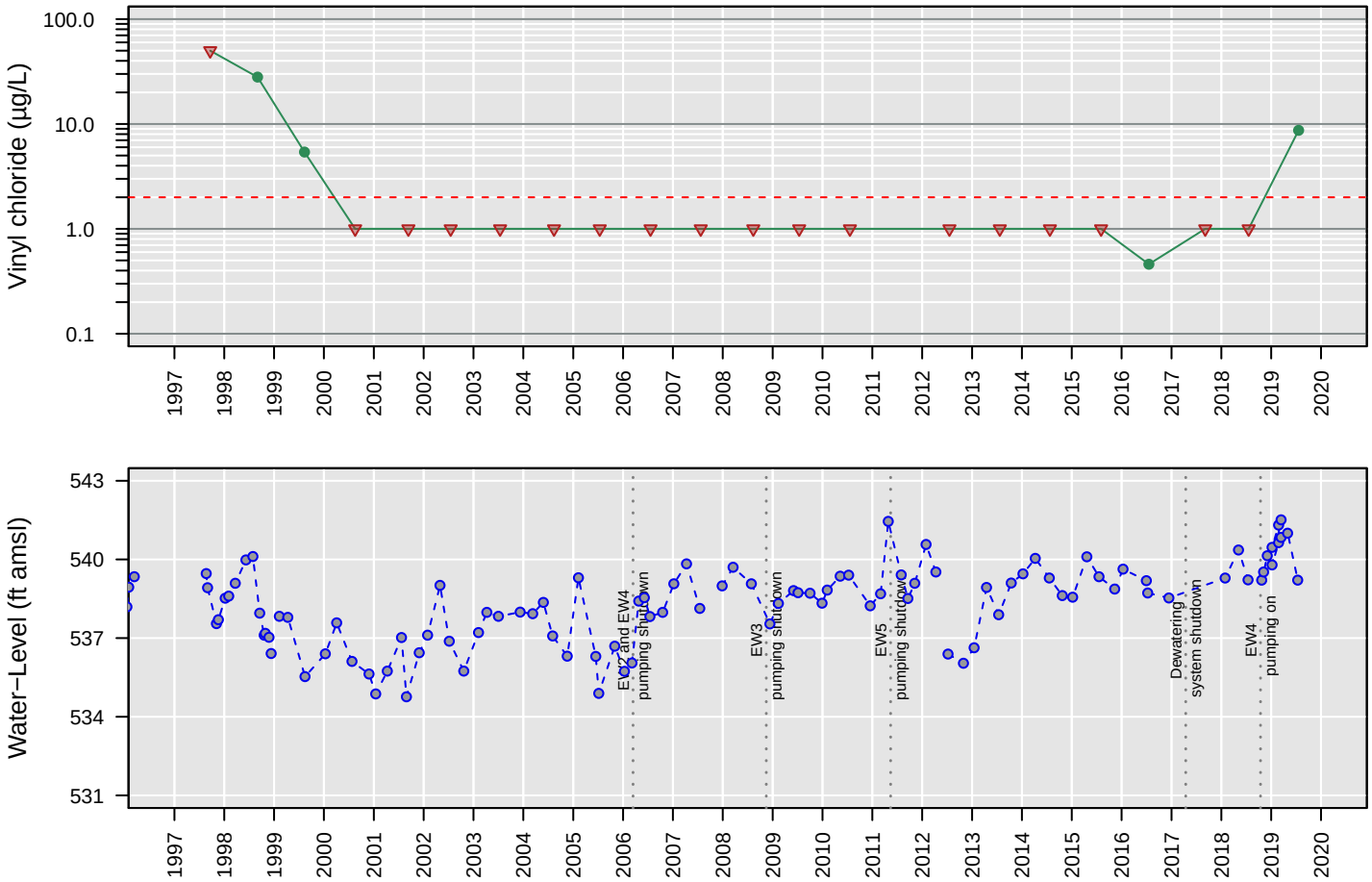
ln Conc. = −0.00028 (+/− 0.000047)*Date + 3.5 (+/− 0.68)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.23 µg/L
UCL: 0.34 µg/L
LCL: 0.15 µg/L

MW69

Vinyl chloride

Number of Comparisons: 22
Percent NDs: 82%

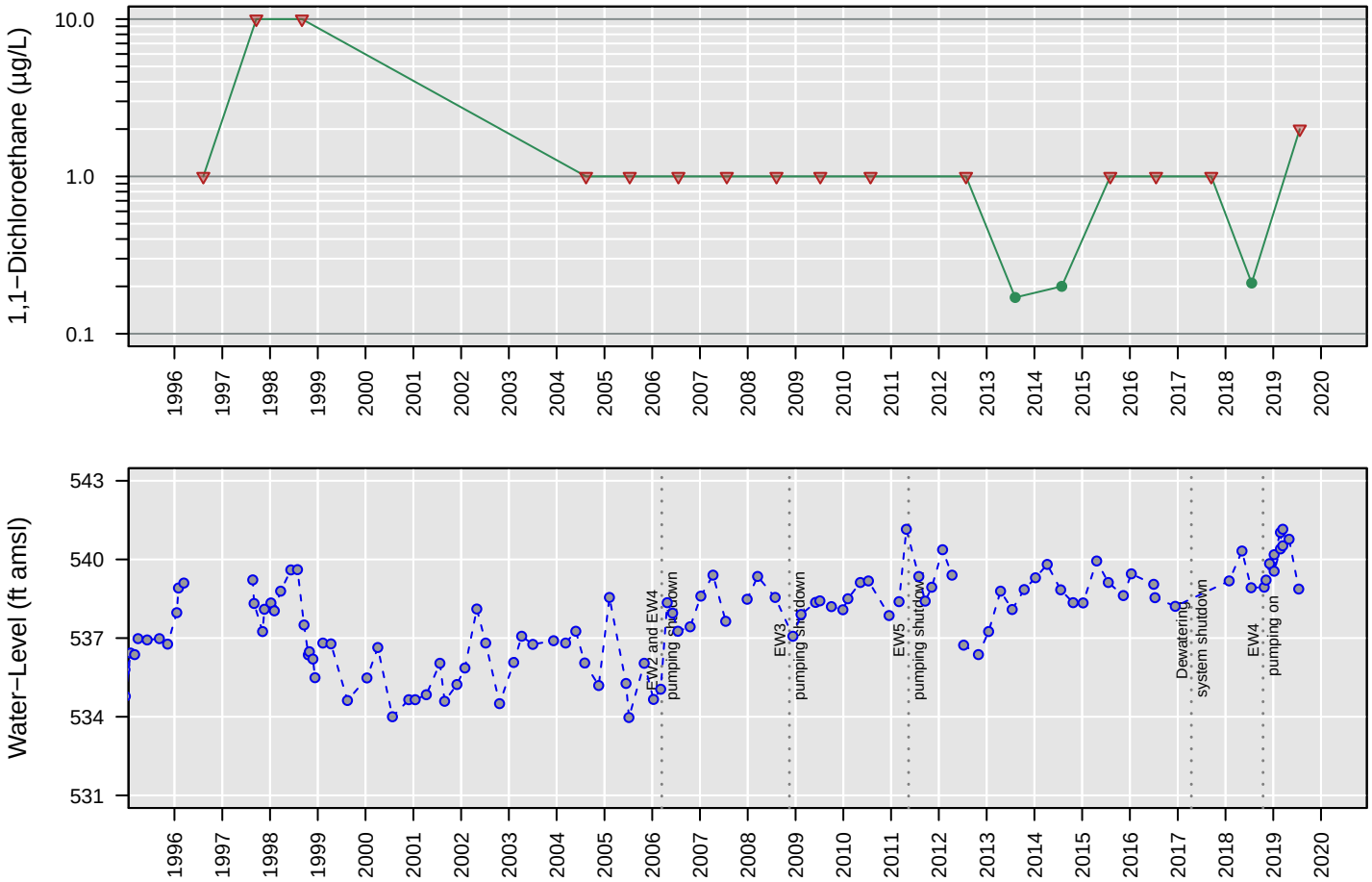


No Analysis Performed

MW70

1,1−Dichloroethane

Number of Comparisons: 18
Percent NDs: 83%

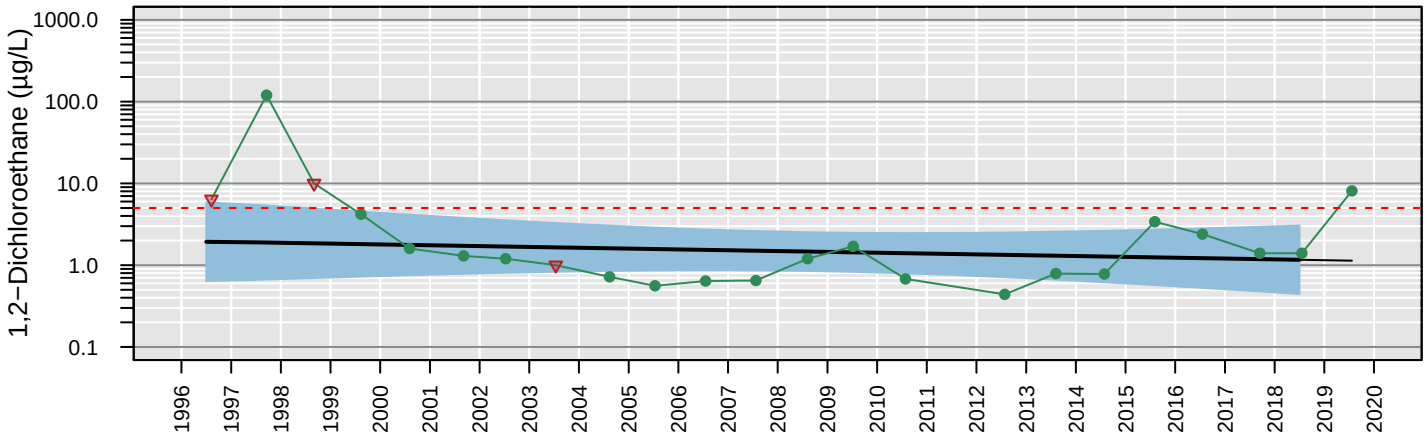


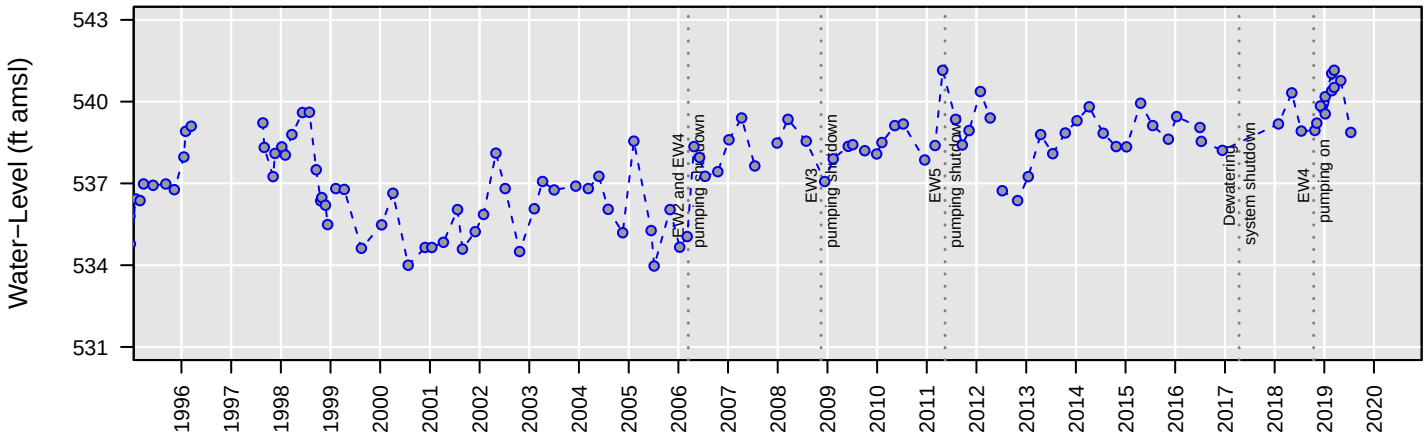
No Analysis Performed

MW70

1,2−Dichloroethane

Number of Comparisons: 23
Percent NDs: 13%





Censored Regression (Tobit) Model

Trend Not Significant

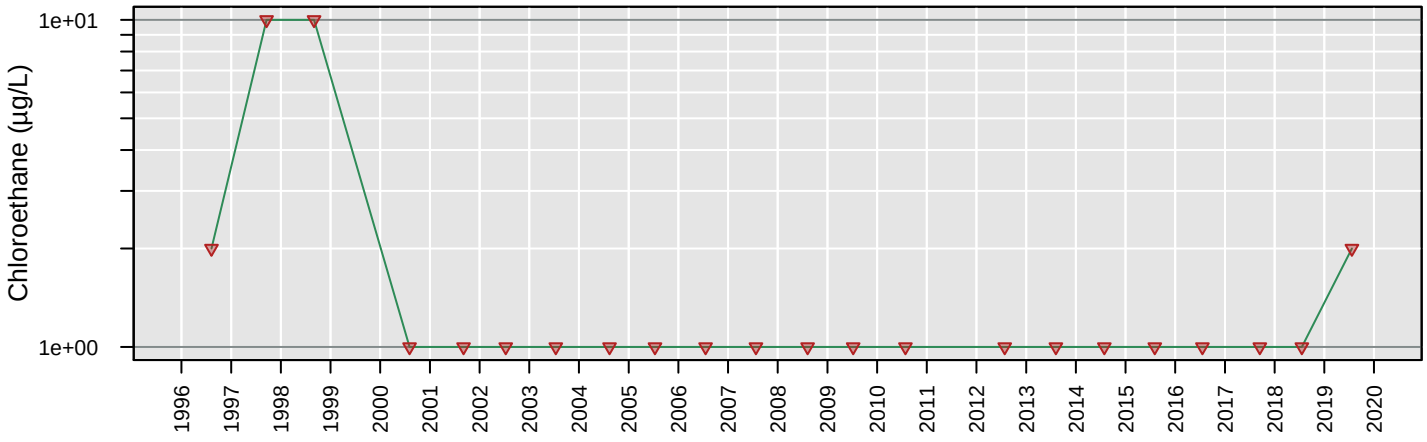
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.2 µg/L
UCL: 3 µg/L
LCL: 0.45 µg/L

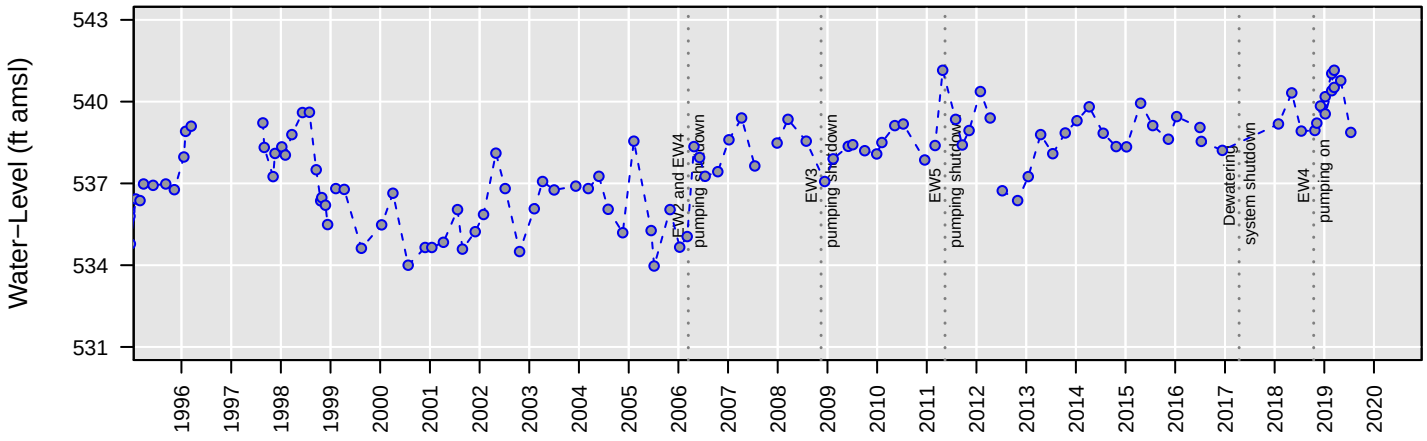
MW70

Chloroethane

Number of Comparisons: 22
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





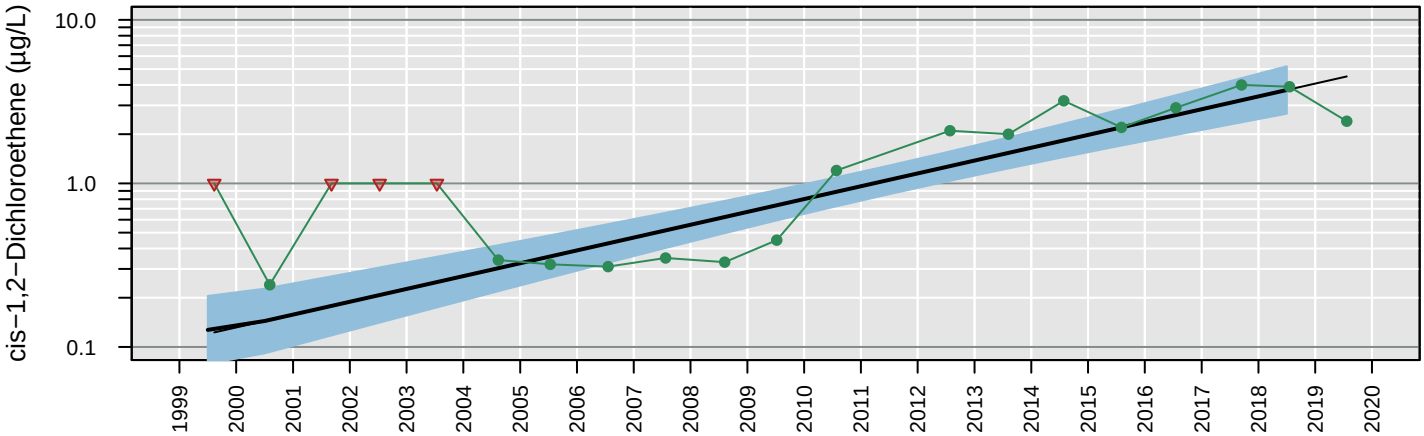
No Analysis Performed

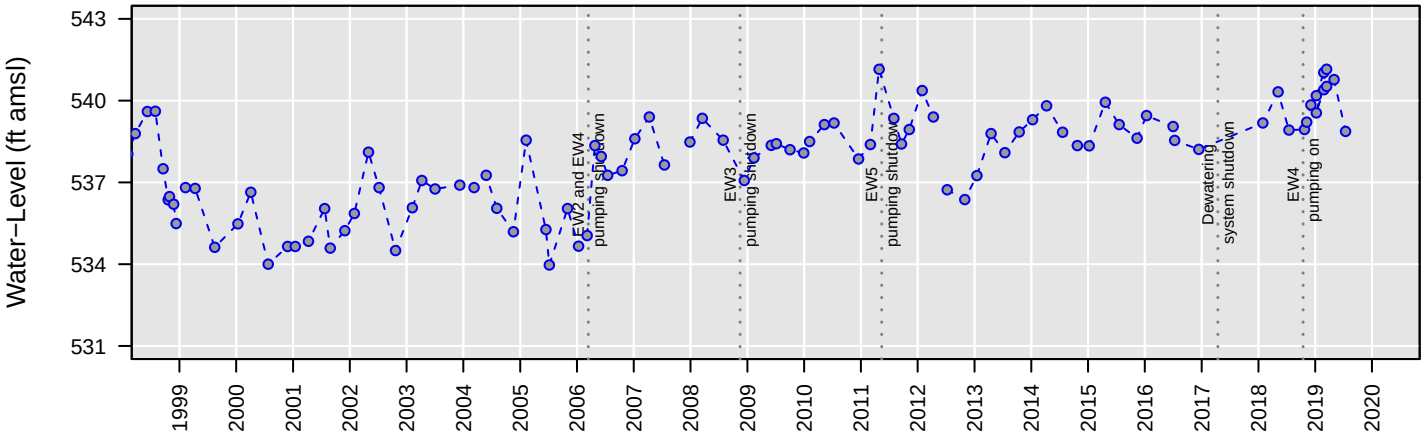
MW70

cis−1,2−Dichloroethene

Number of Comparisons: 20
Percent NDs: 20%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

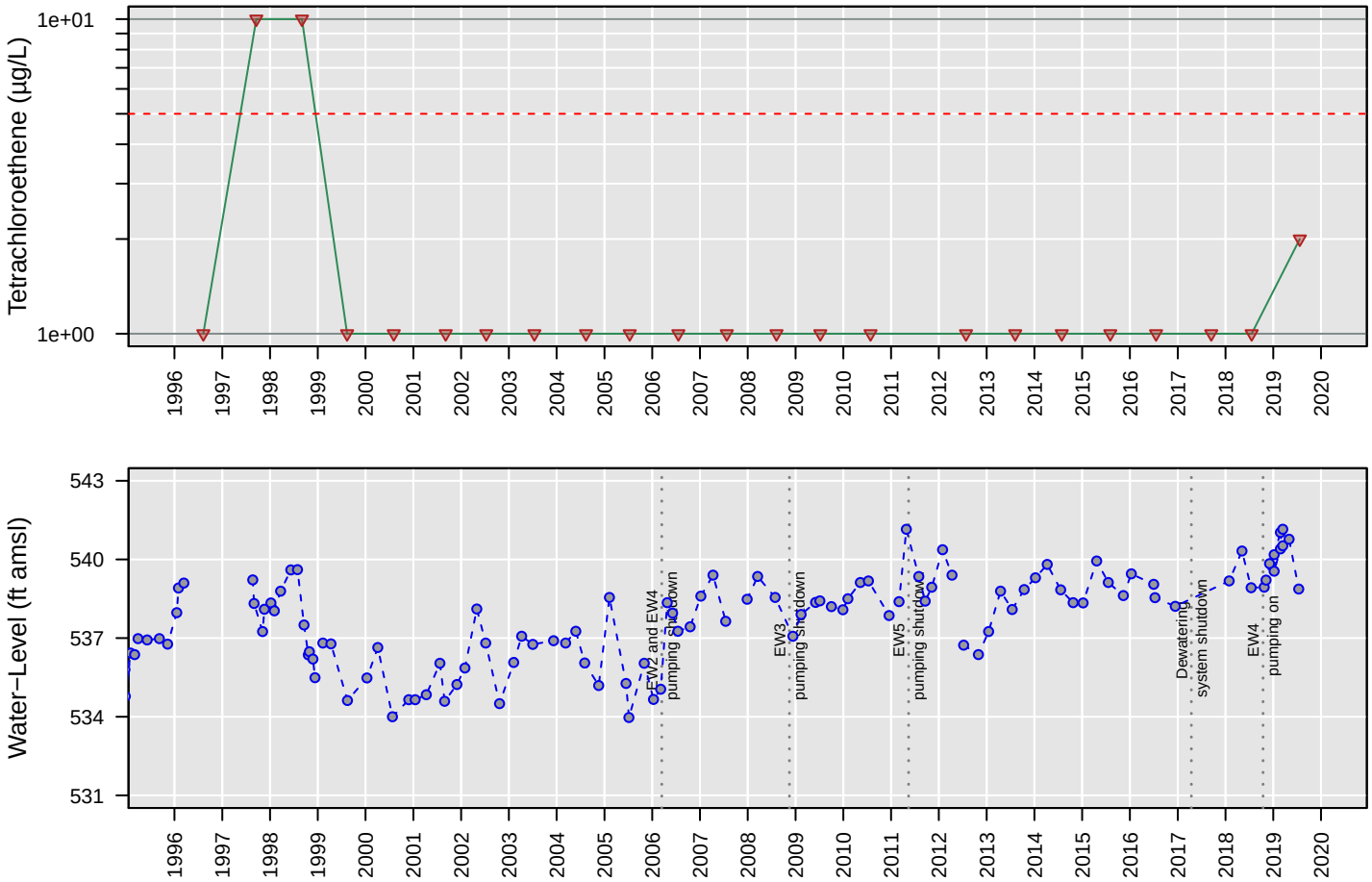
ln Conc. = 0.00049 (+/− 0.000049)*Date + −7.4 (+/− 0.74)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.7 µg/L
UCL: 5.2 µg/L
LCL: 2.7 µg/L

MW70

Tetrachloroethene

Number of Comparisons: 23
Percent NDs: 100%



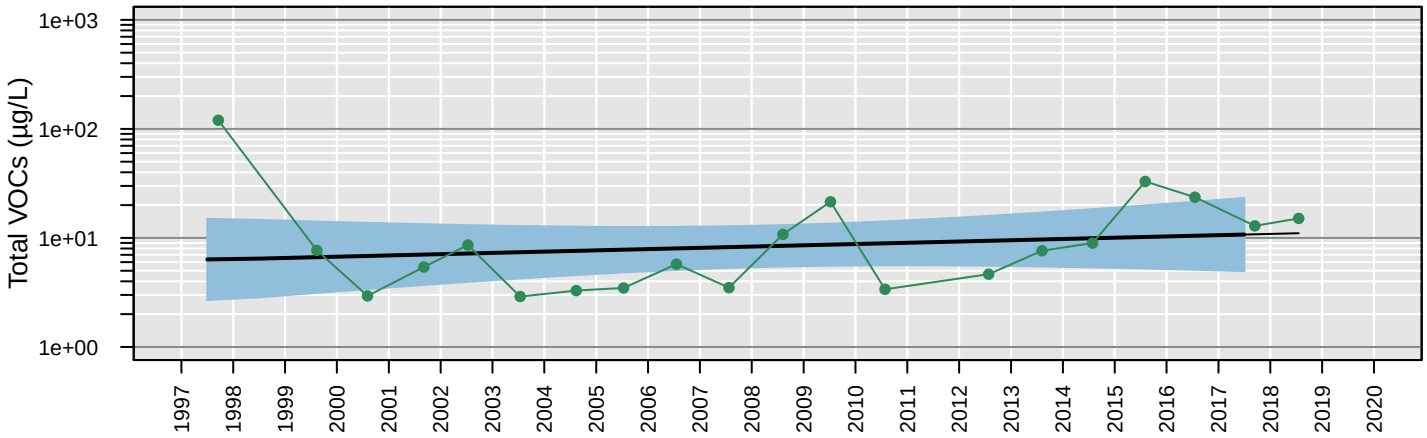
No Analysis Performed

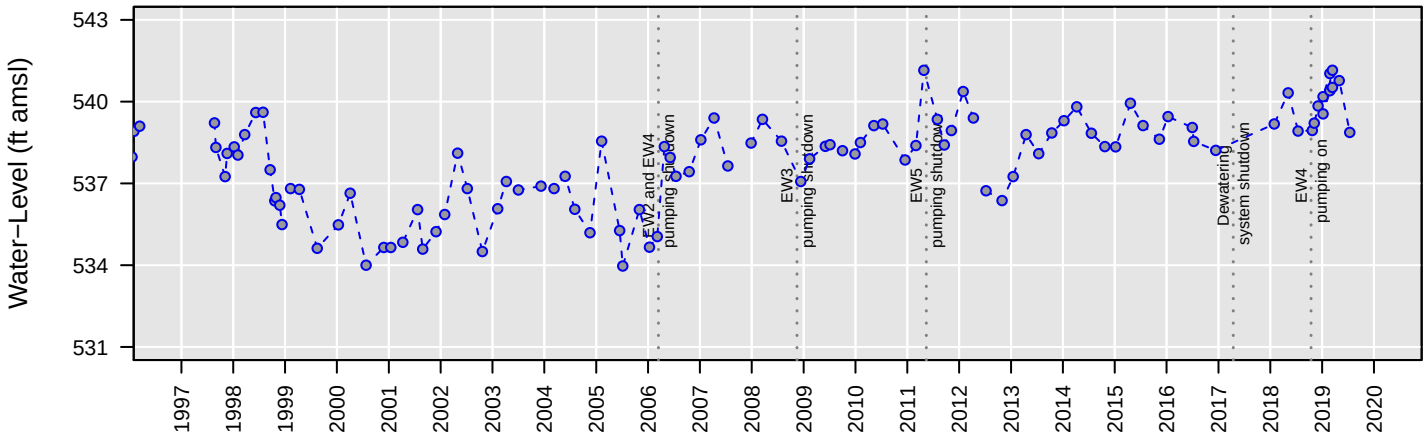
MW70

Total VOCs

Number of Comparisons: 20
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

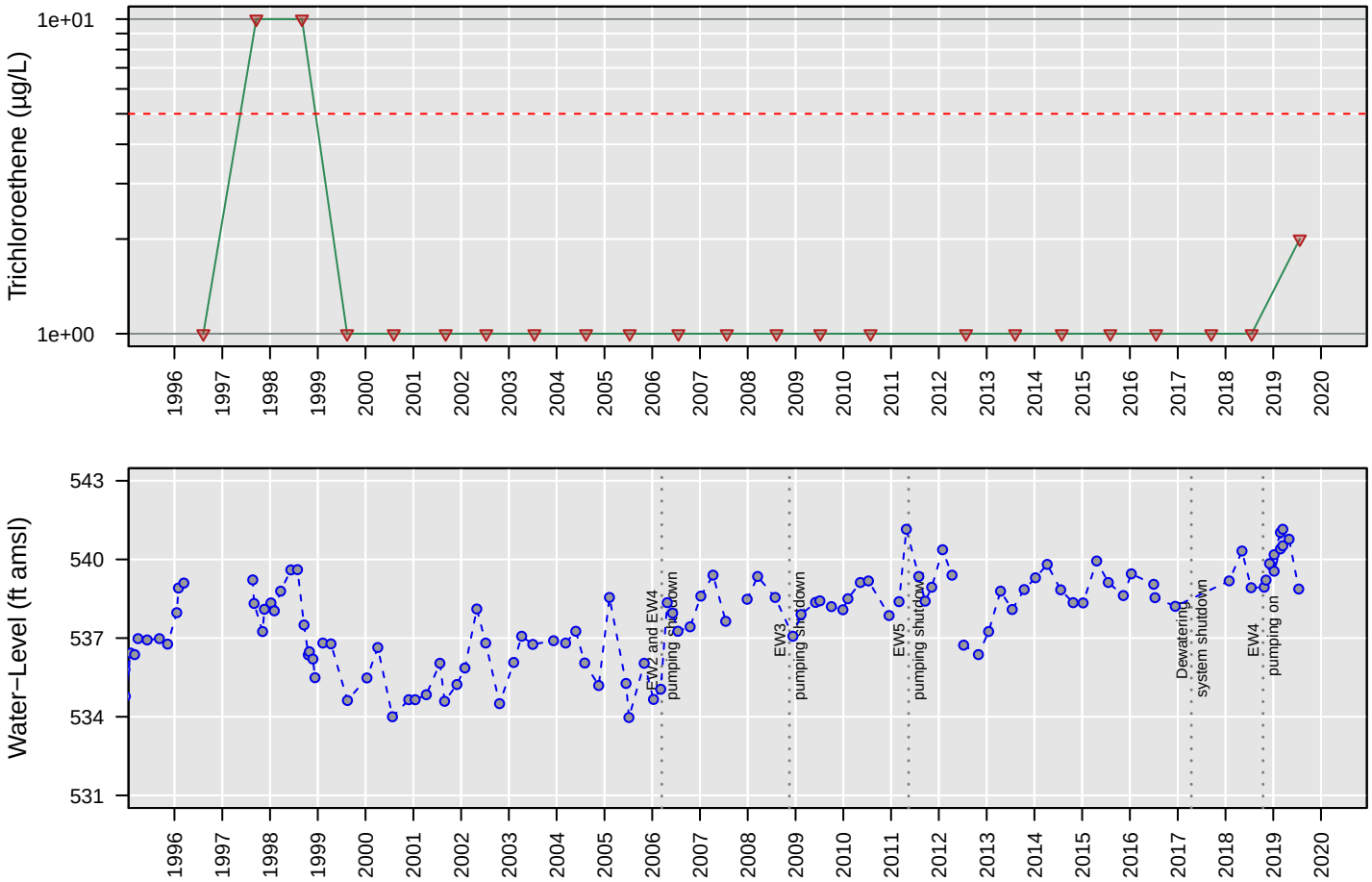
Trend Not Significant

Regression Statistics for January 2017 to January 2018
Geometric Mean: 11 µg/L
UCL: 23 µg/L
LCL: 5 µg/L

MW70

Trichloroethene

Number of Comparisons: 23
Percent NDs: 100%

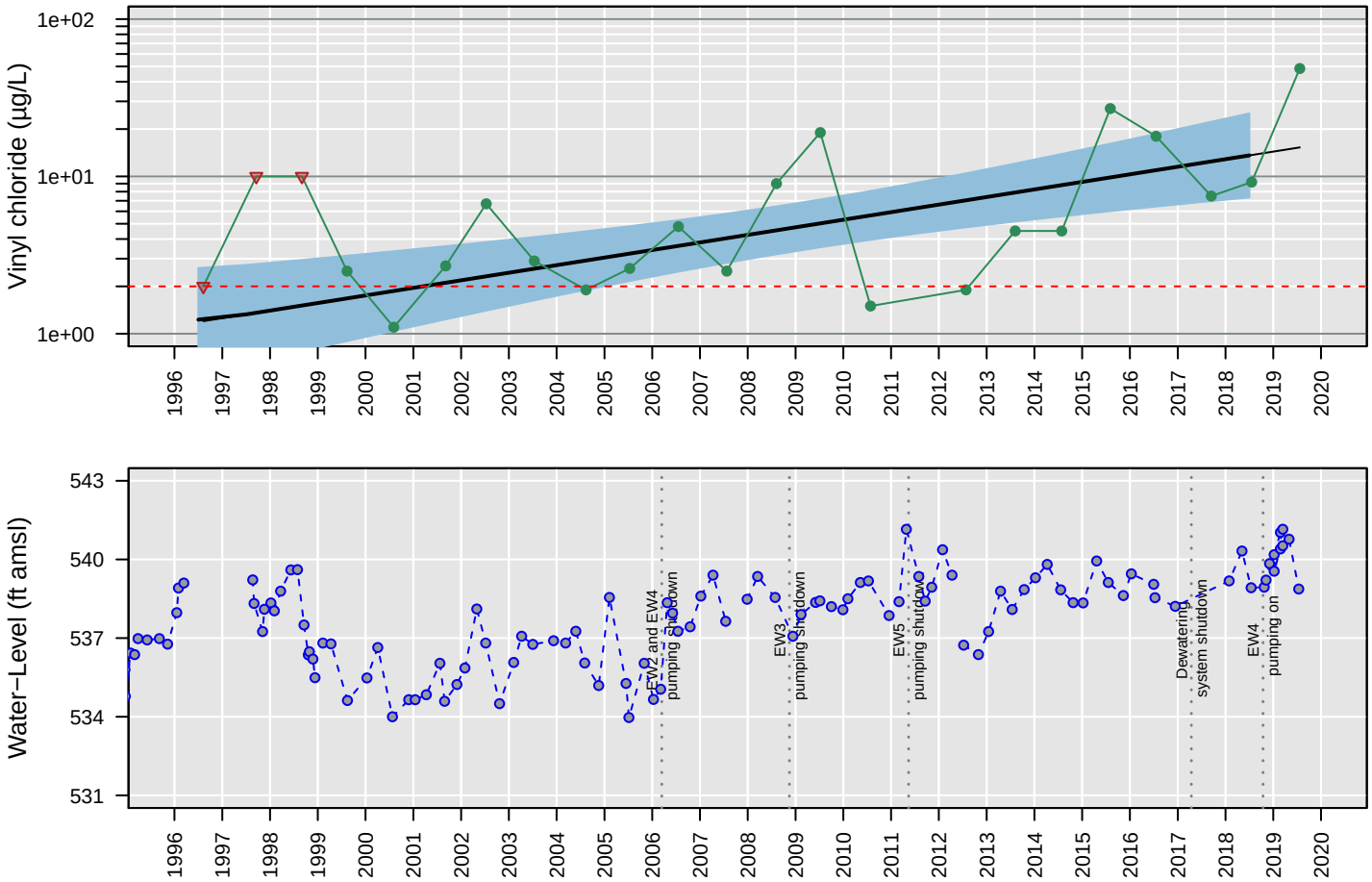


No Analysis Performed

MW70

Vinyl chloride

Number of Comparisons: 23
Percent NDs: 13%



Censored Regression (Tobit) Model

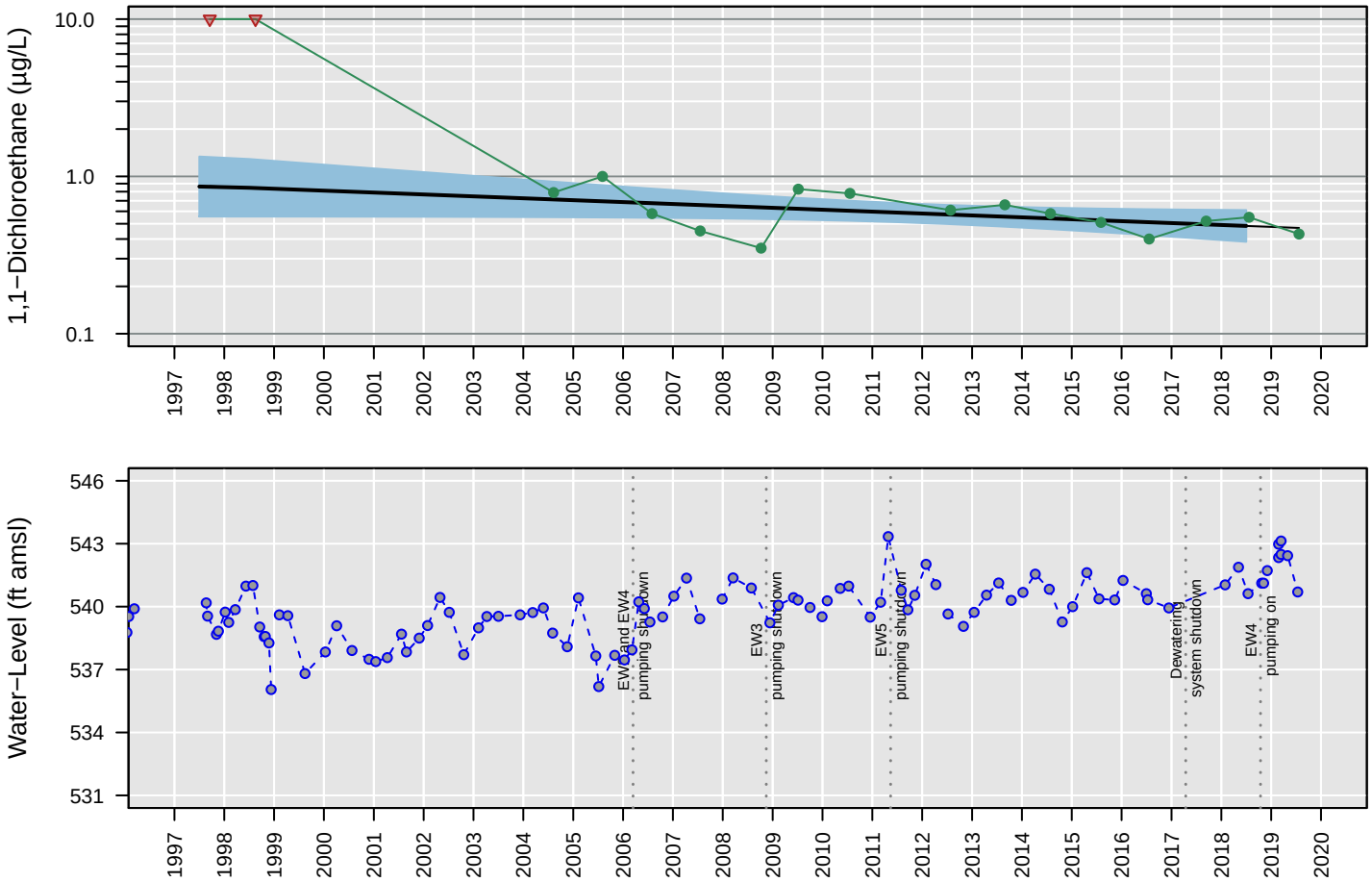
ln Conc. = 0.0003 (+/− 0.000071)*Date + −2.8 (+/− 1)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 14 µg/L
UCL: 25 µg/L
LCL: 7.3 µg/L

MW71

1,1−Dichloroethane

Number of Comparisons: 17
Percent NDs: 12%



Censored Regression (Tobit) Model

Trend Not Significant

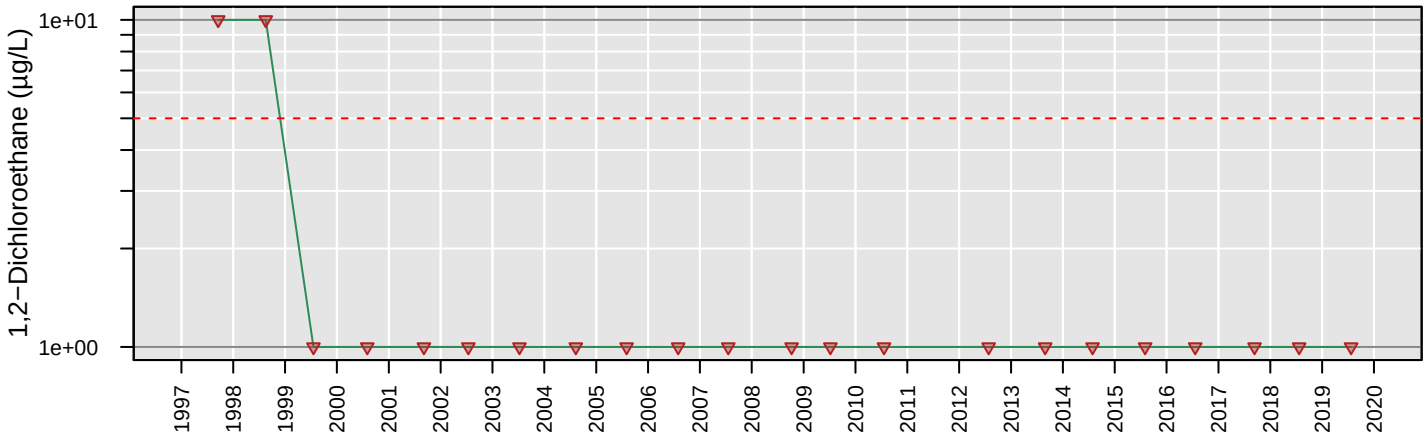
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.48 µg/L
UCL: 0.61 µg/L
LCL: 0.38 µg/L

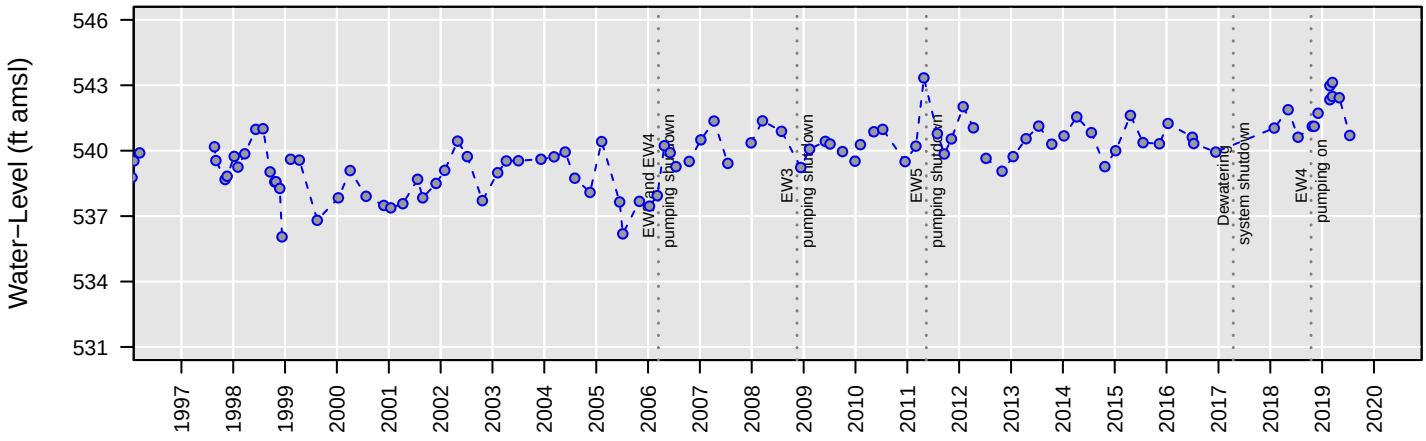
MW71

1,2−Dichloroethane

Number of Comparisons: 22
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





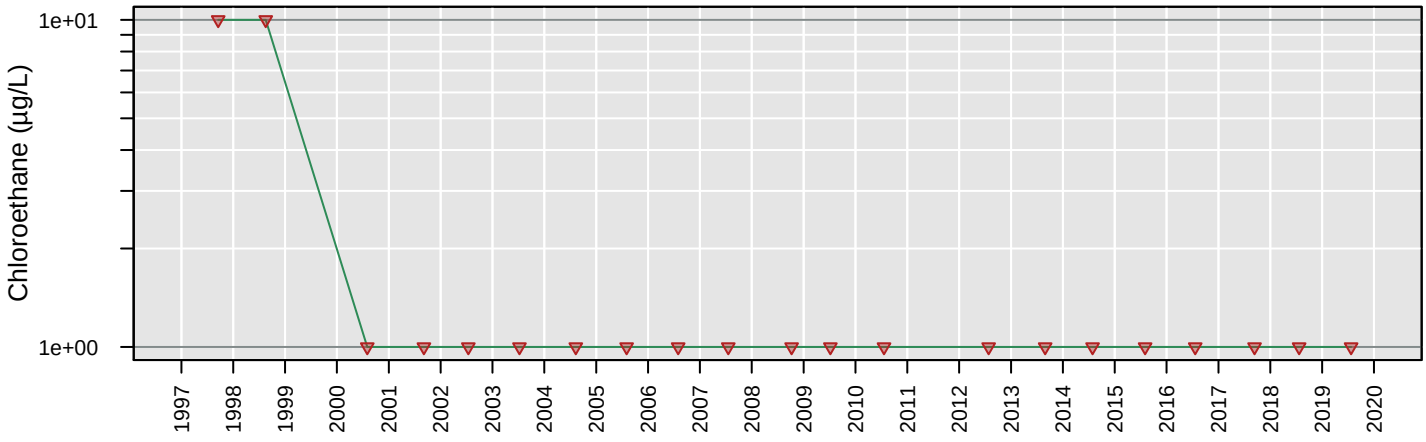
No Analysis Performed

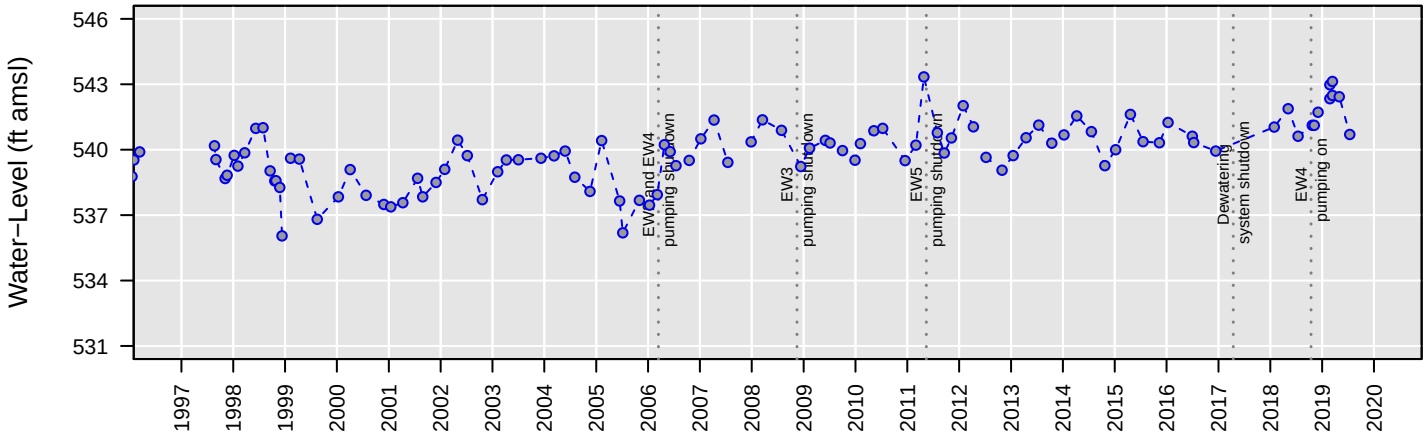
MW71

Chloroethane

Number of Comparisons: 21
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



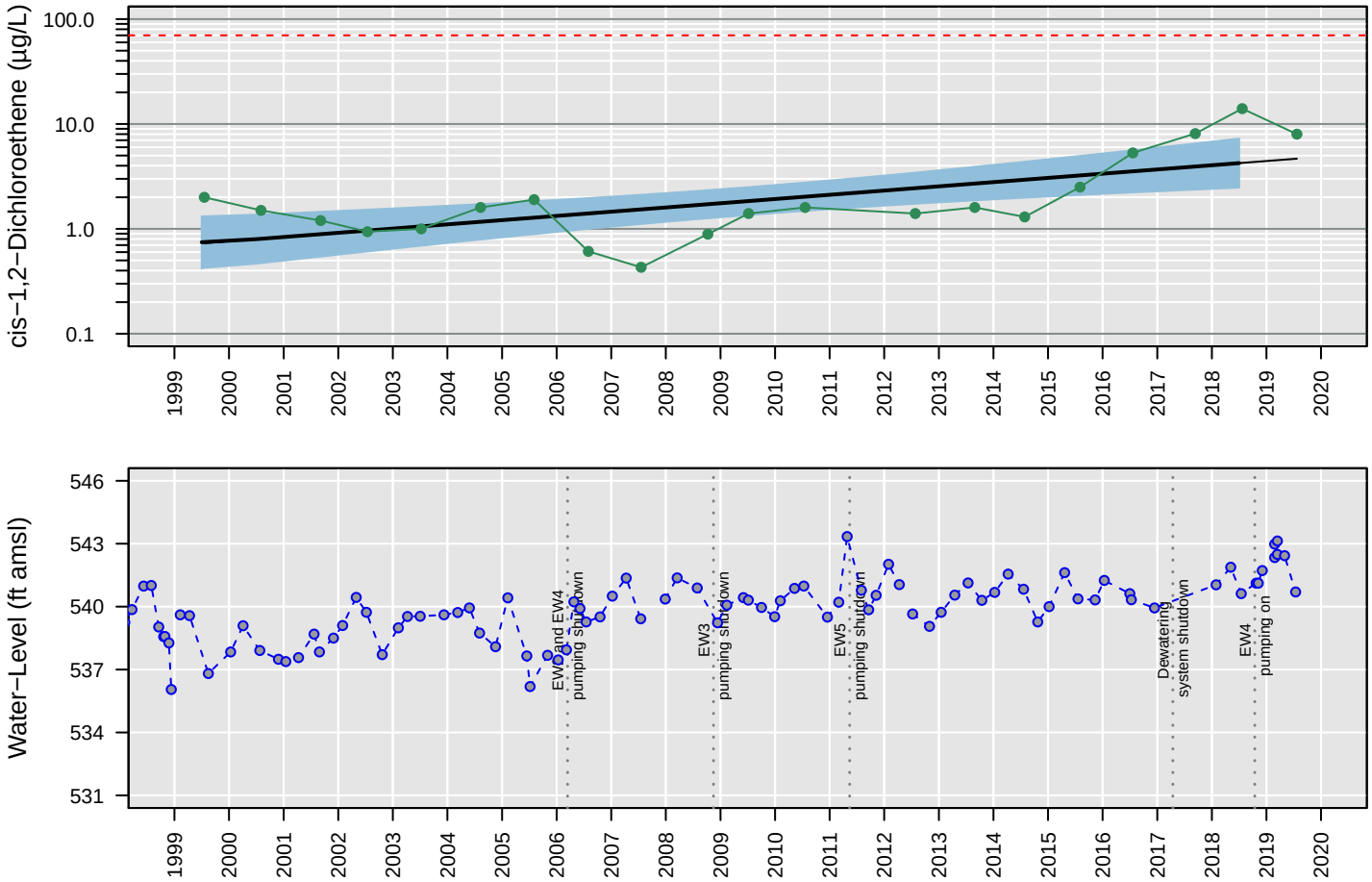


No Analysis Performed

MW71

cis−1,2−Dichloroethene

Number of Comparisons: 20
Percent NDs: 0%



Censored Regression (Tobit) Model

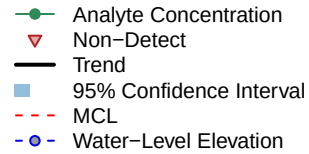
ln Conc. = 0.00025 (+/− 0.000064)*Date + −3.1 (+/− 0.93)

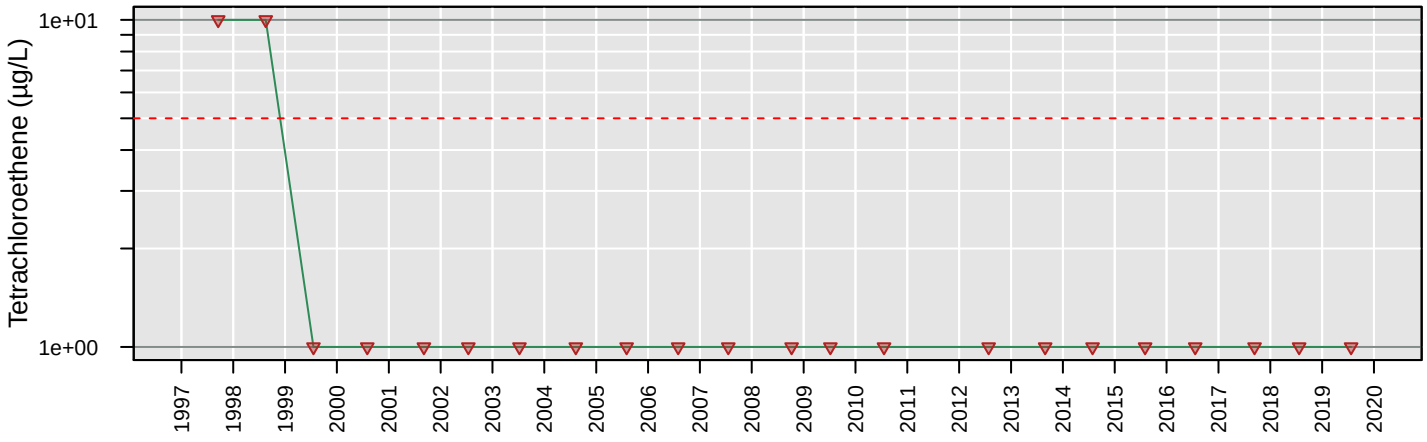
Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.2 µg/L
UCL: 7.2 µg/L
LCL: 2.5 µg/L

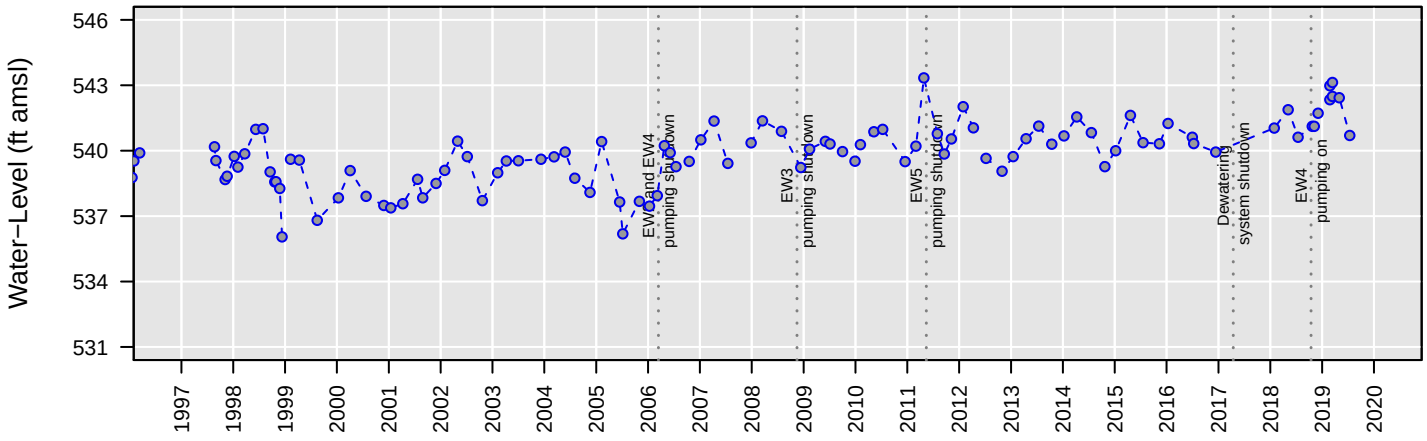
MW71

Tetrachloroethene

Number of Comparisons: 22
Percent NDs: 100%





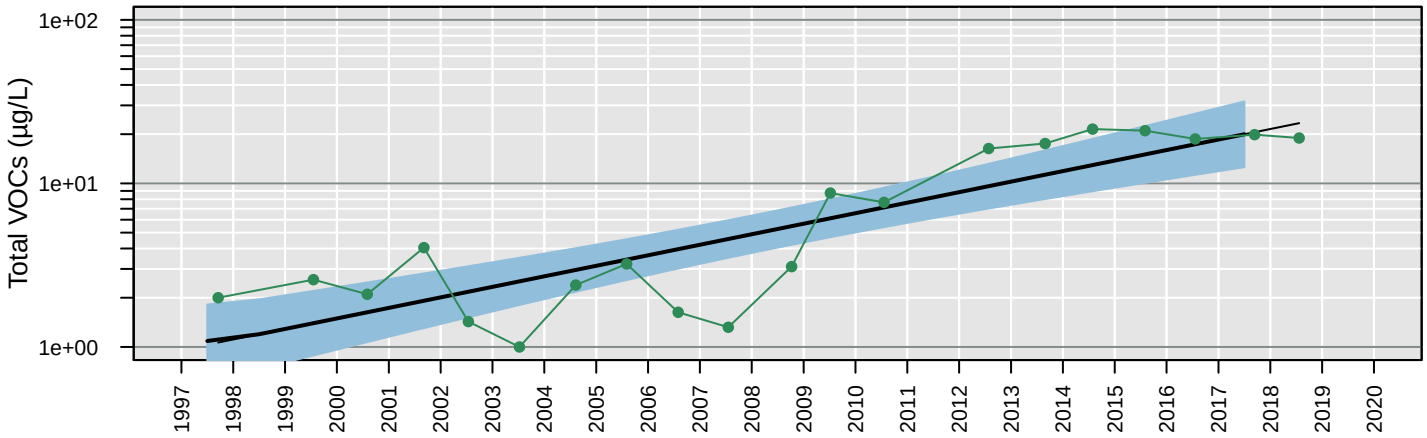


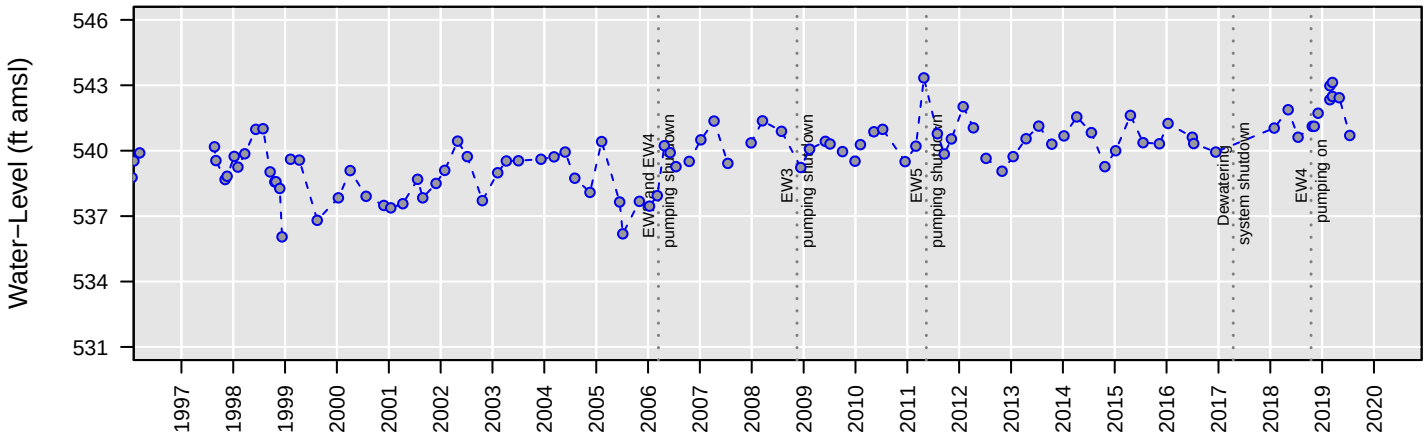
No Analysis Performed

MW71

Total VOCs

Number of Comparisons: 20
Percent NDs: 0%





Censored Regression (Tobit) Model

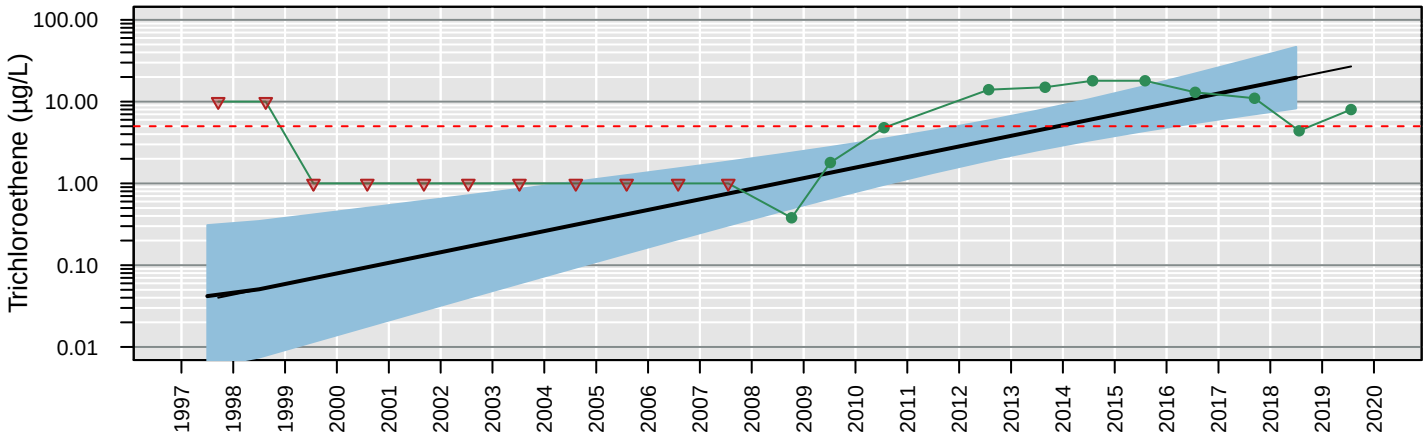
ln Conc. = 0.00041 (+/− 0.000054)*Date + −4 (+/− 0.77)

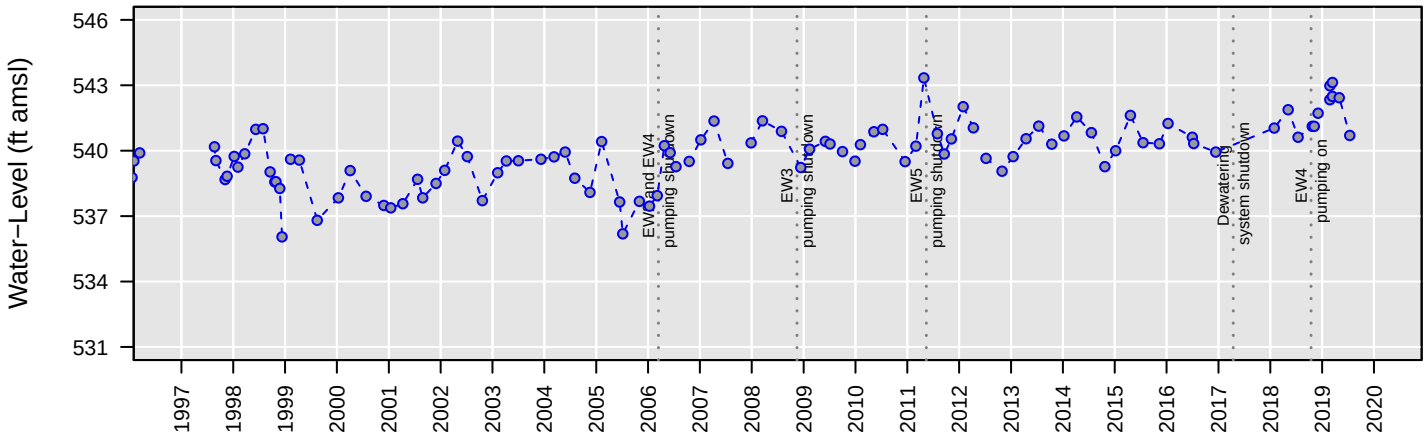
Regression Statistics for January 2017 to January 2018
Geometric Mean: 20 µg/L
UCL: 32 µg/L
LCL: 13 µg/L

MW71

Trichloroethene

Number of Comparisons: 22
Percent NDs: 50%





Censored Regression (Tobit) Model

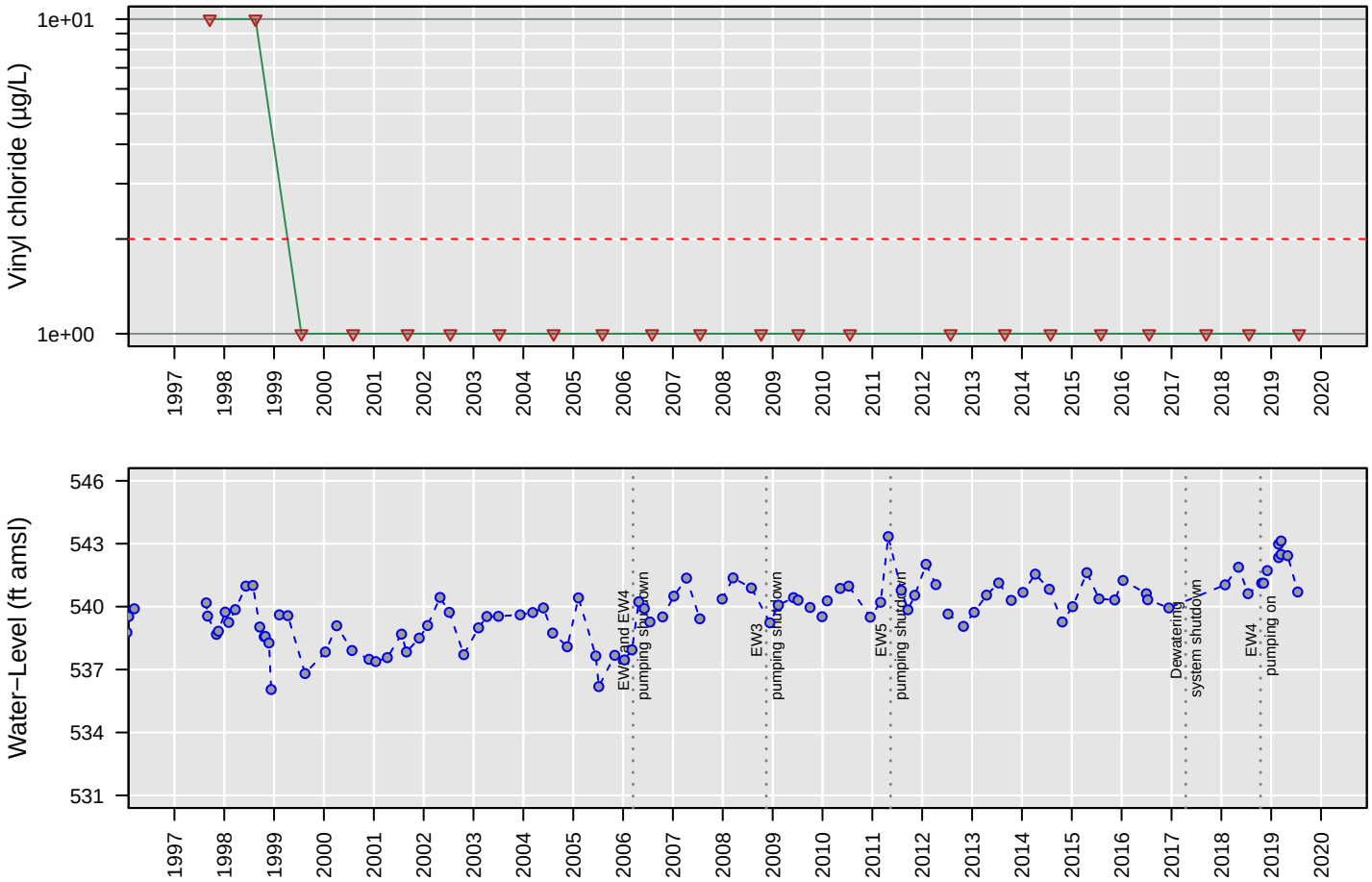
ln Conc. = 0.00082 (+/− 0.00016)*Date + −11 (+/− 2.6)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 20 µg/L
UCL: 47 µg/L
LCL: 8.3 µg/L

MW71

Vinyl chloride

Number of Comparisons: 22
Percent NDs: 100%

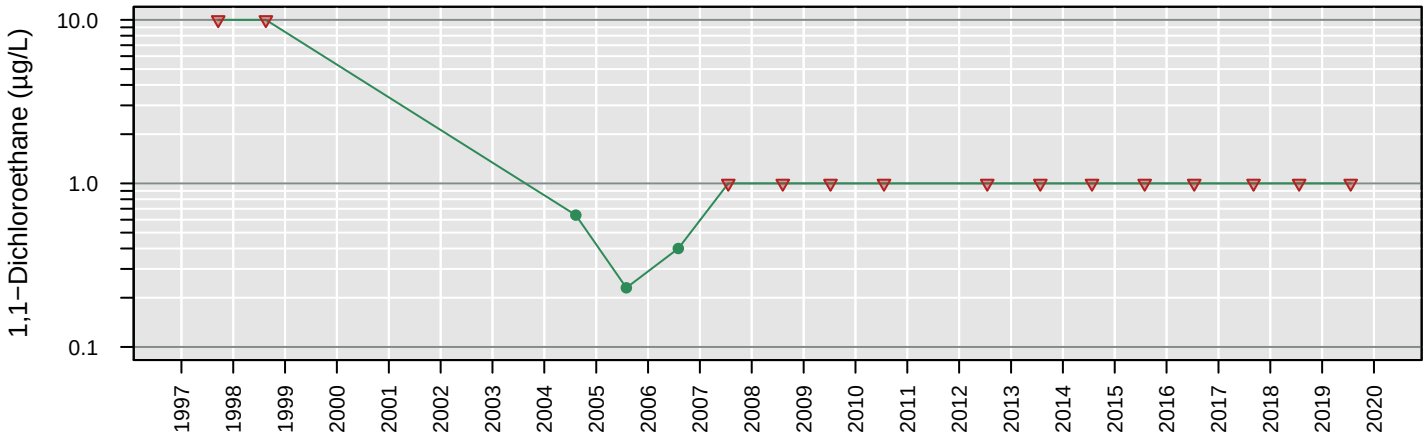


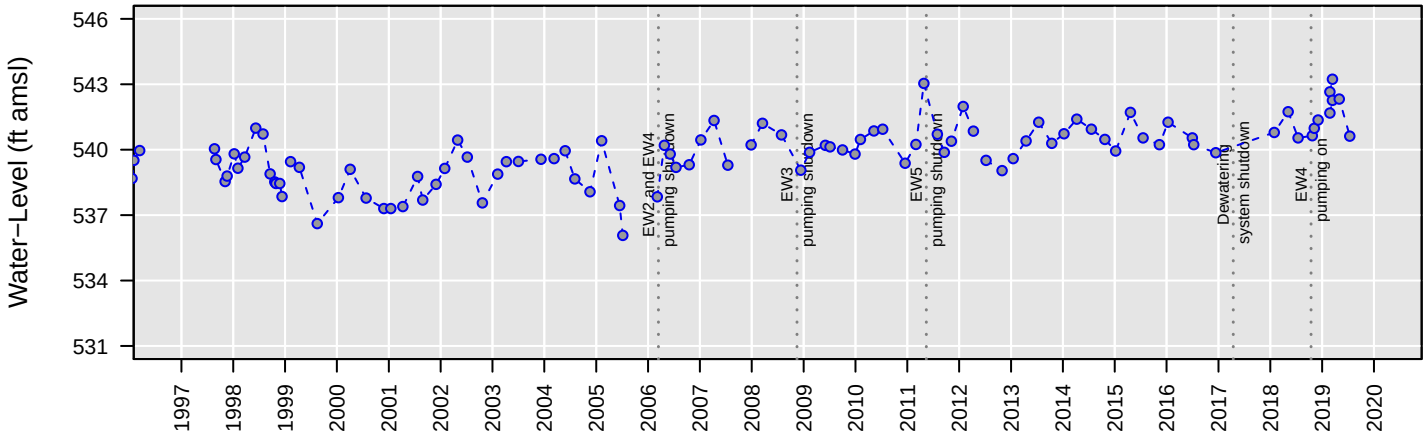
No Analysis Performed

MW72

1,1−Dichloroethane

Number of Comparisons: 17
Percent NDs: 82%





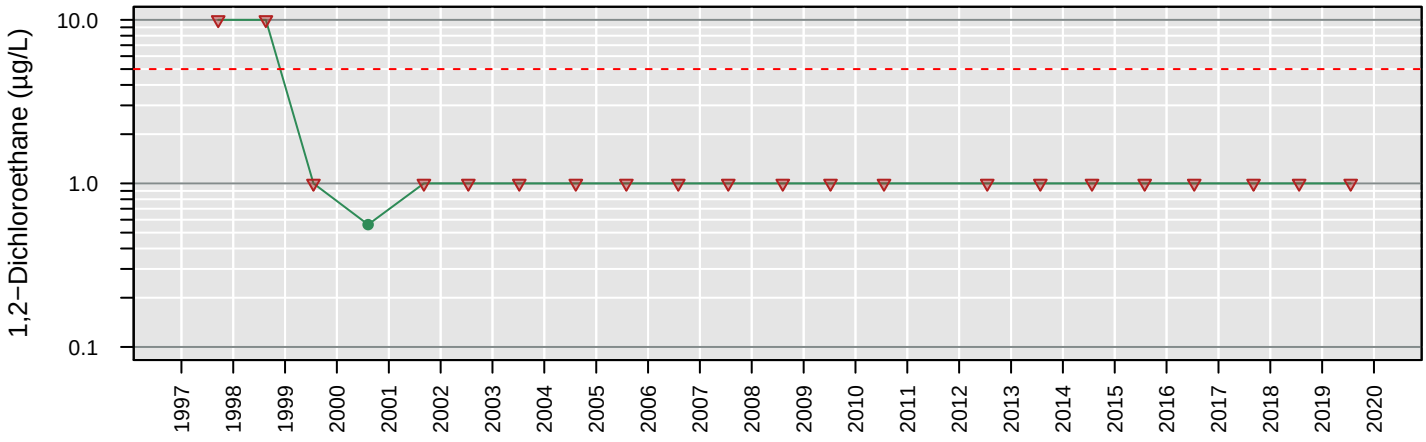
No Analysis Performed

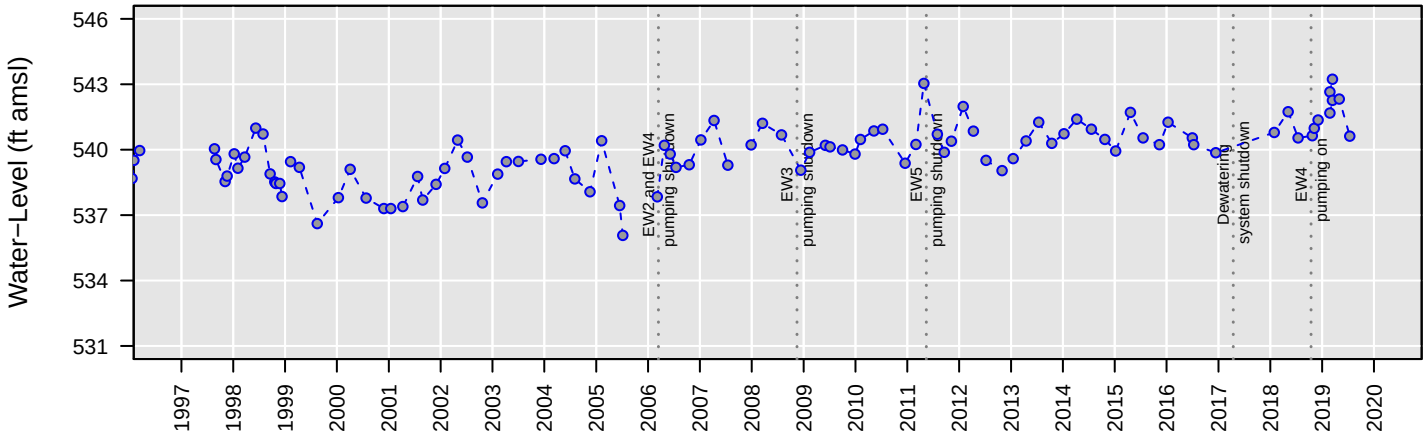
MW72

1,2−Dichloroethane

Number of Comparisons: 22
Percent NDs: 95%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



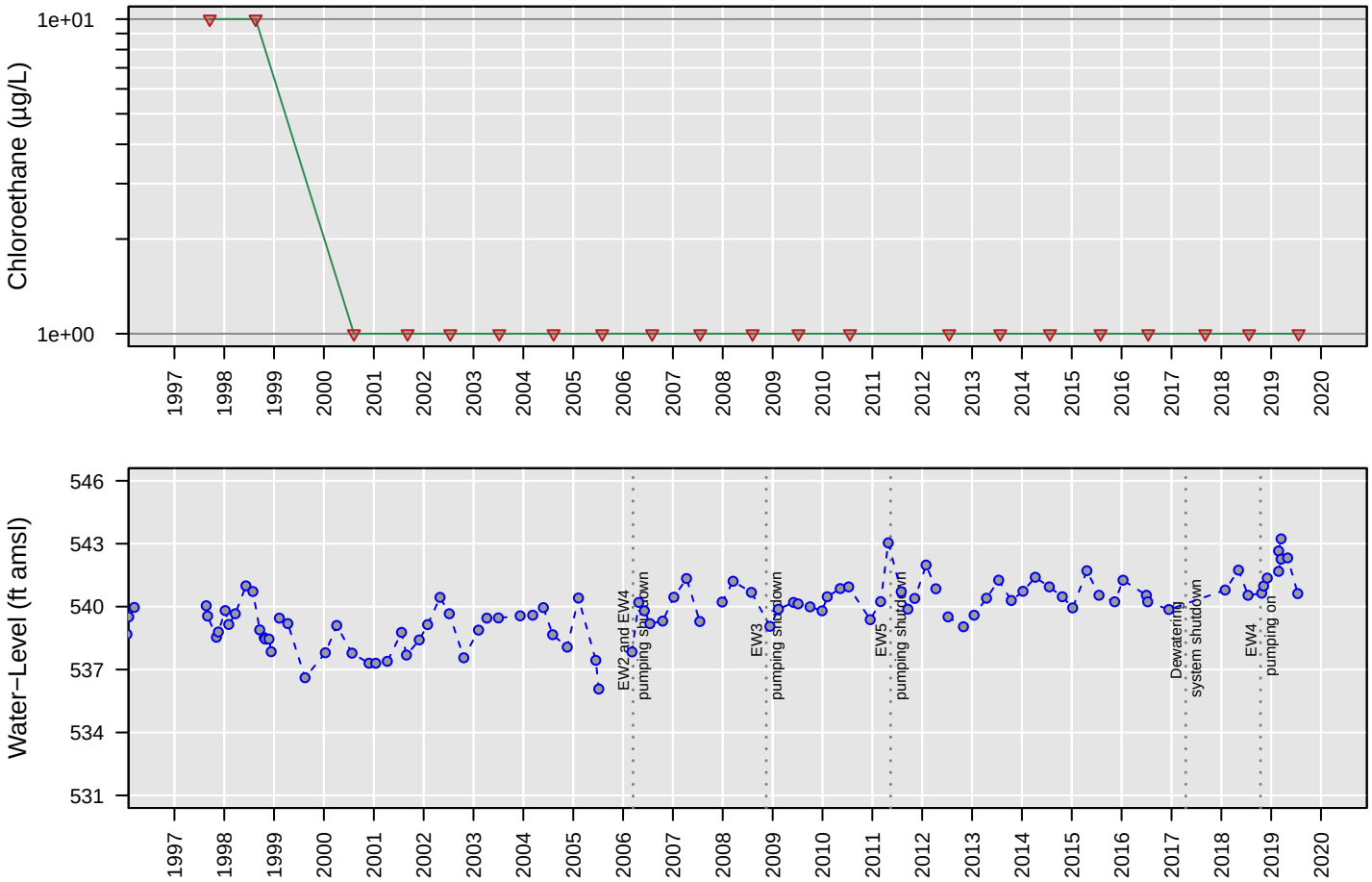


No Analysis Performed

MW72

Chloroethane

Number of Comparisons: 21
Percent NDs: 100%

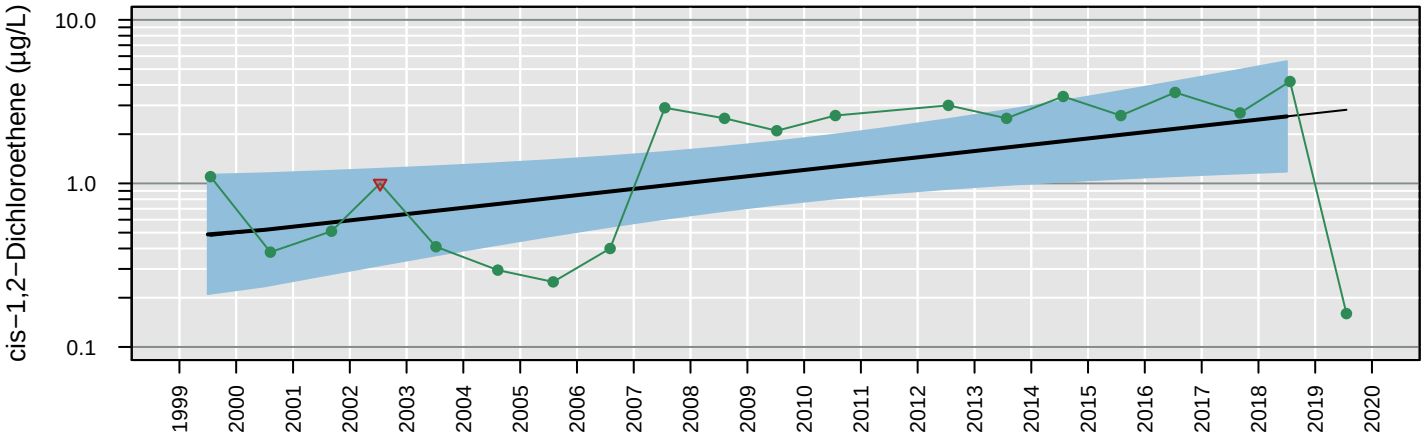


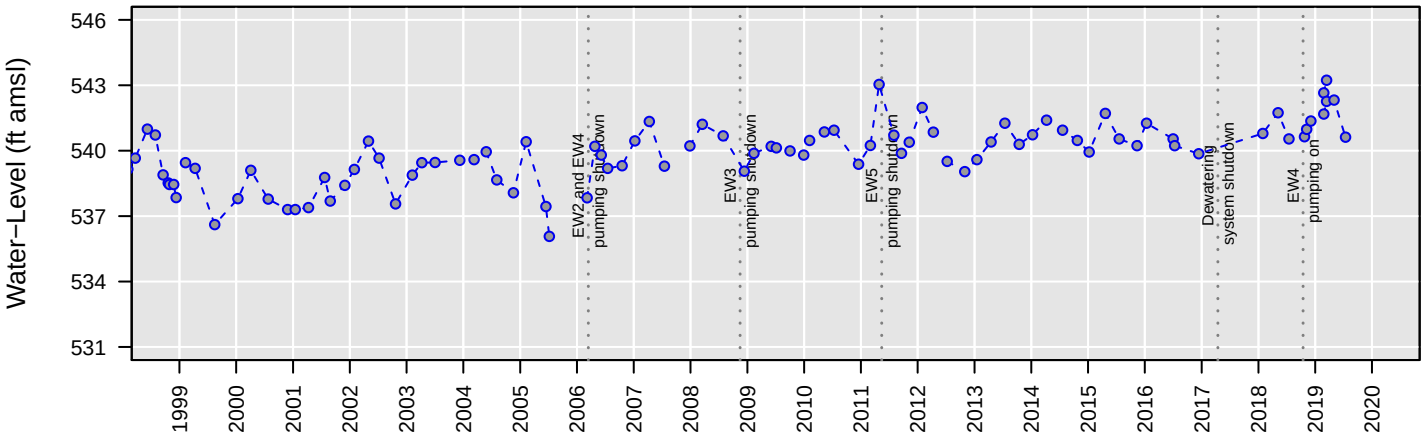
No Analysis Performed

MW72

cis−1,2−Dichloroethene

Number of Comparisons: 20
Percent NDs: 5%





Censored Regression (Tobit) Model

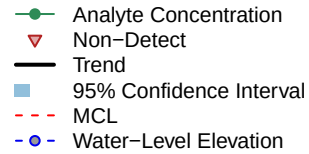
ln Conc. = 0.00024 (+/− 0.000094)*Date + −3.4 (+/− 1.4)

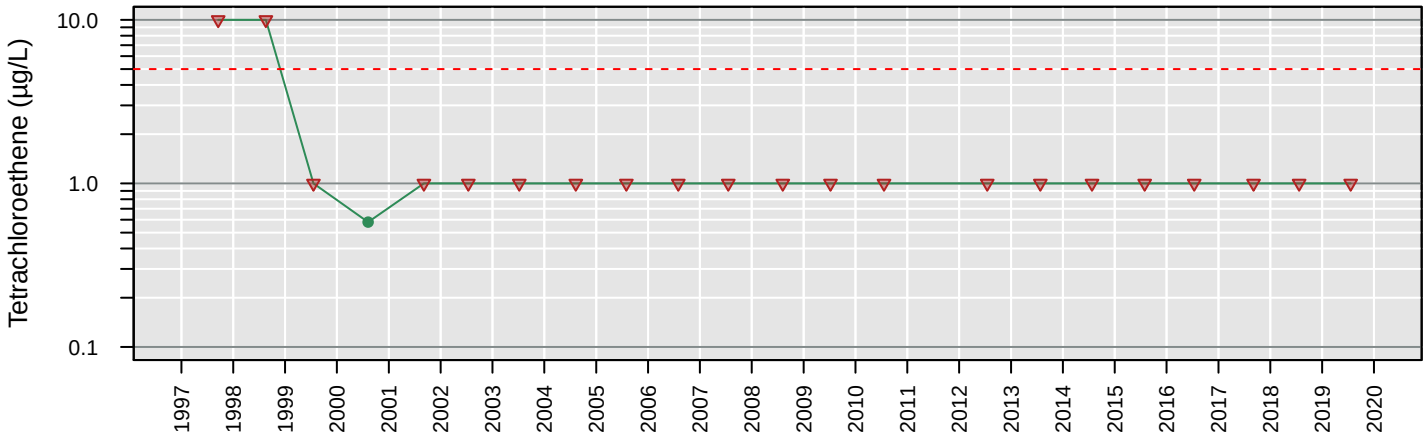
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.6 µg/L
UCL: 5.6 µg/L
LCL: 1.2 µg/L

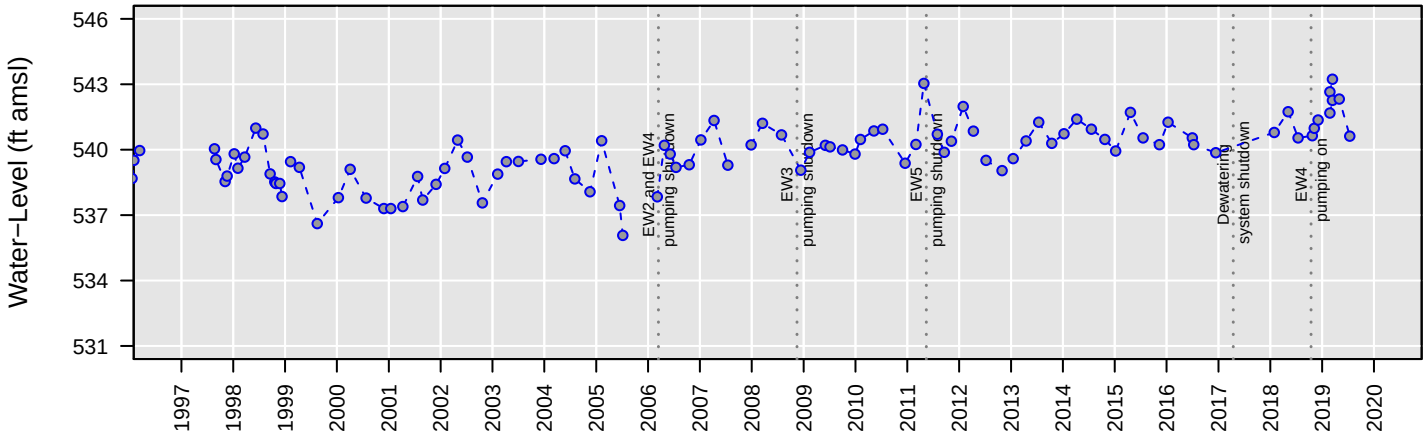
MW72

Tetrachloroethene

Number of Comparisons: 22
Percent NDs: 95%





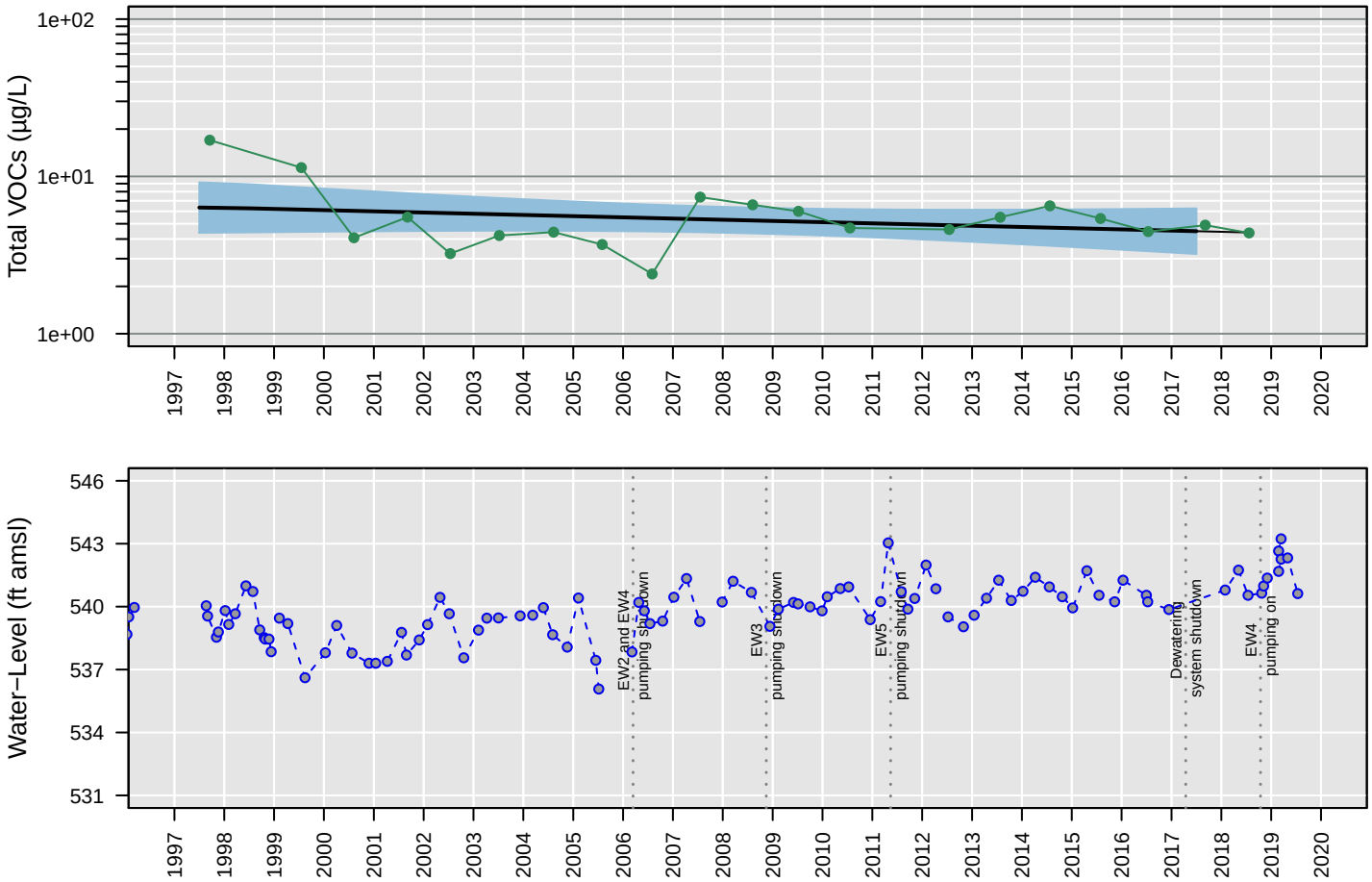


No Analysis Performed

MW72

Total VOCs

Number of Comparisons: 20
Percent NDs: 0%



Censored Regression (Tobit) Model

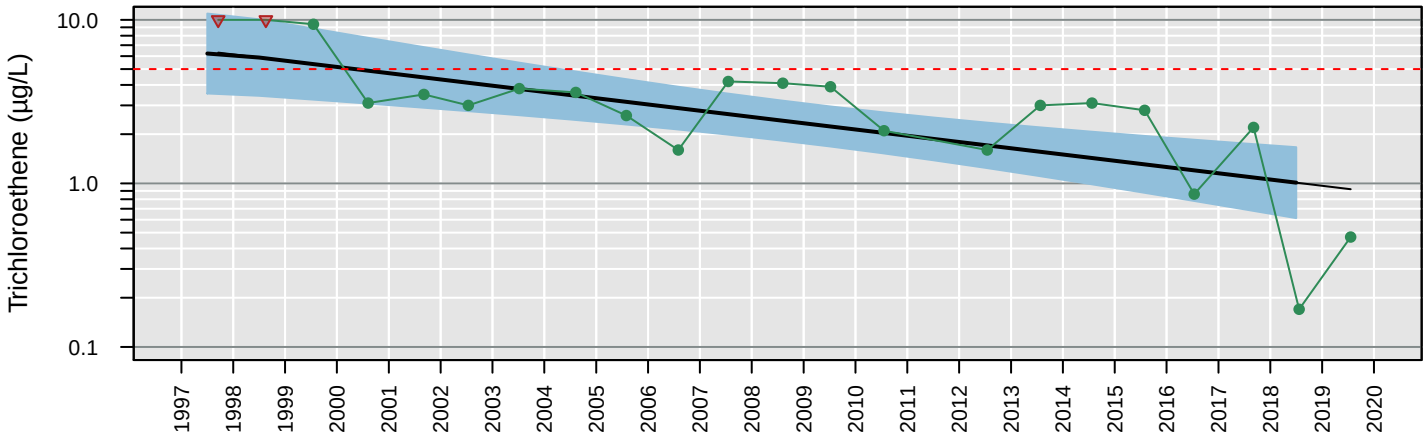
Trend Not Significant

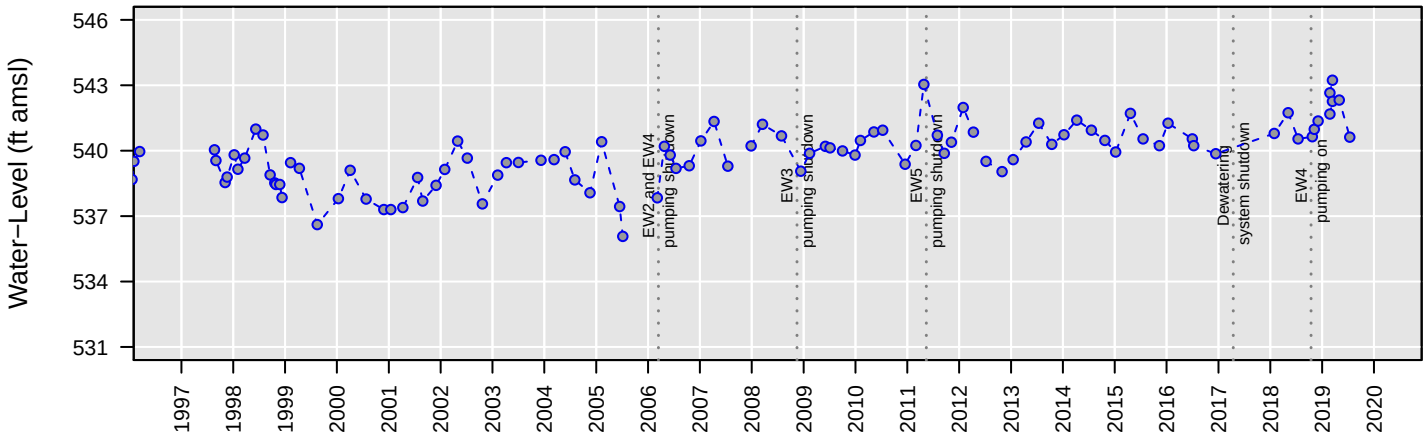
Regression Statistics for January 2017 to January 2018
Geometric Mean: 4.5 µg/L
UCL: 6.3 µg/L
LCL: 3.2 µg/L

MW72

Trichloroethene

Number of Comparisons: 22
Percent NDs: 9%





Censored Regression (Tobit) Model

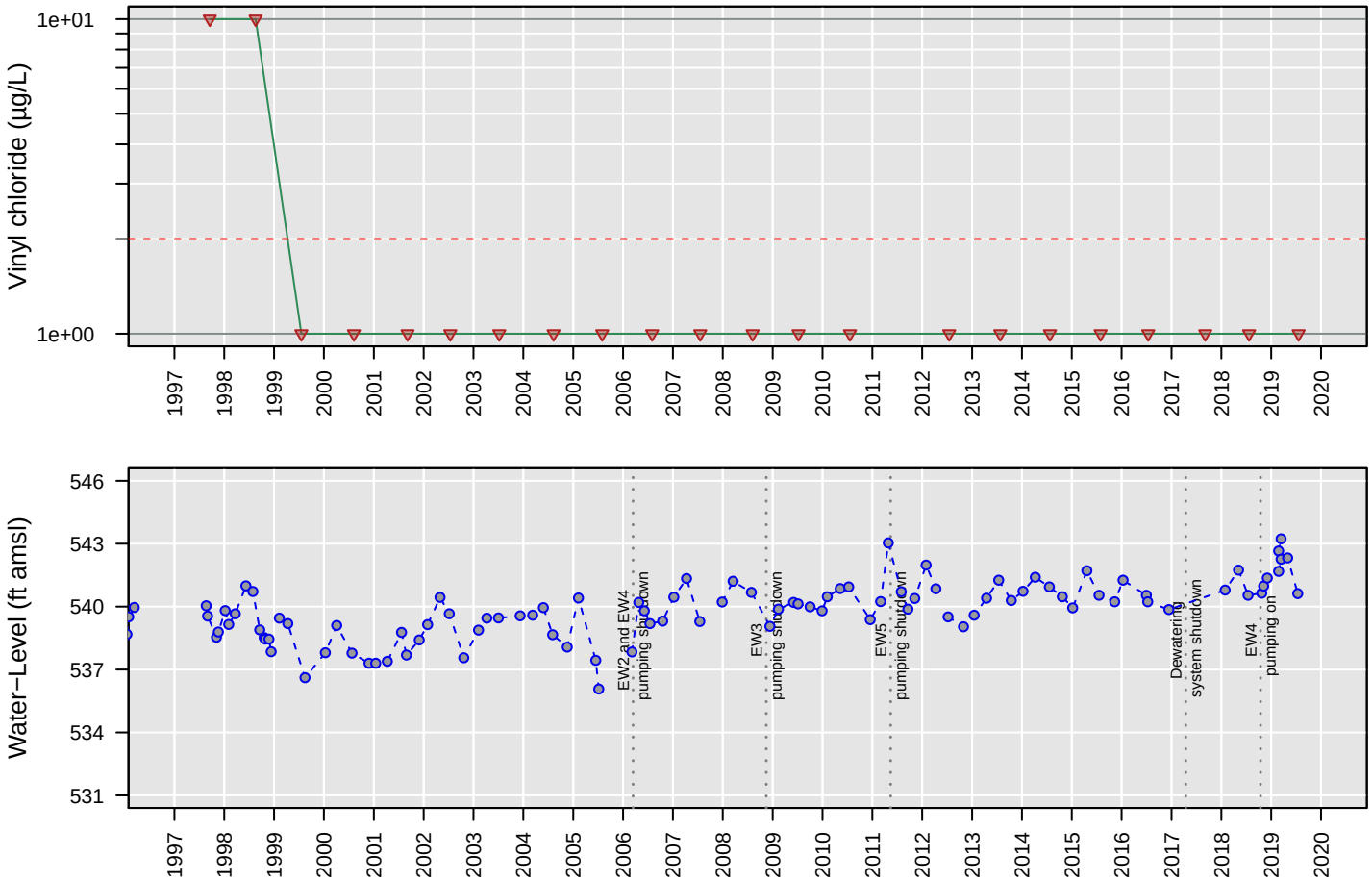
ln Conc. = −0.00024 (+/− 0.000057)*Date + 4.3 (+/− 0.82)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1 µg/L
UCL: 1.7 µg/L
LCL: 0.61 µg/L

MW72

Vinyl chloride

Number of Comparisons: 22
Percent NDs: 100%

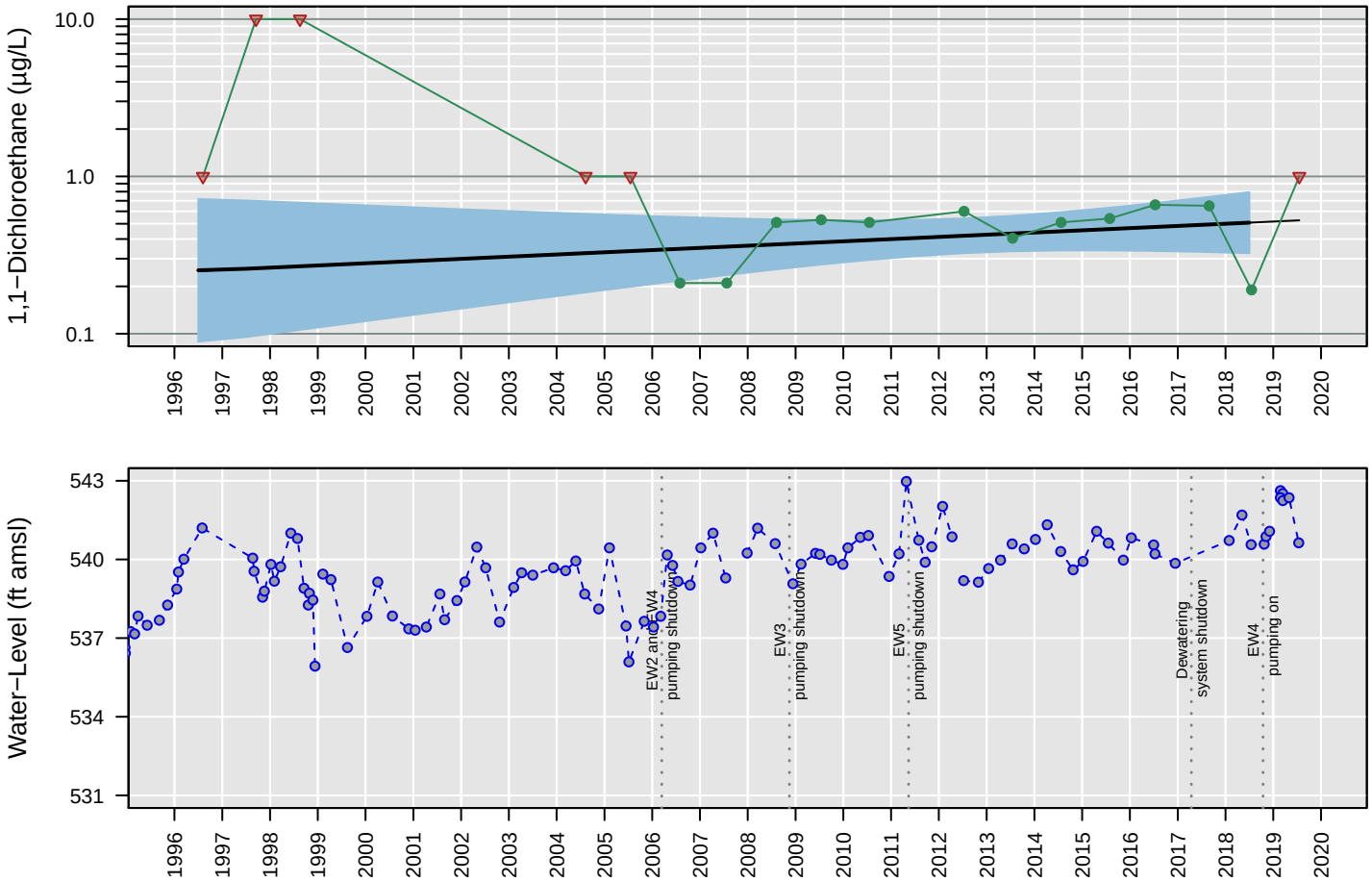


No Analysis Performed

MW73

1,1−Dichloroethane

Number of Comparisons: 18
Percent NDs: 33%



Censored Regression (Tobit) Model

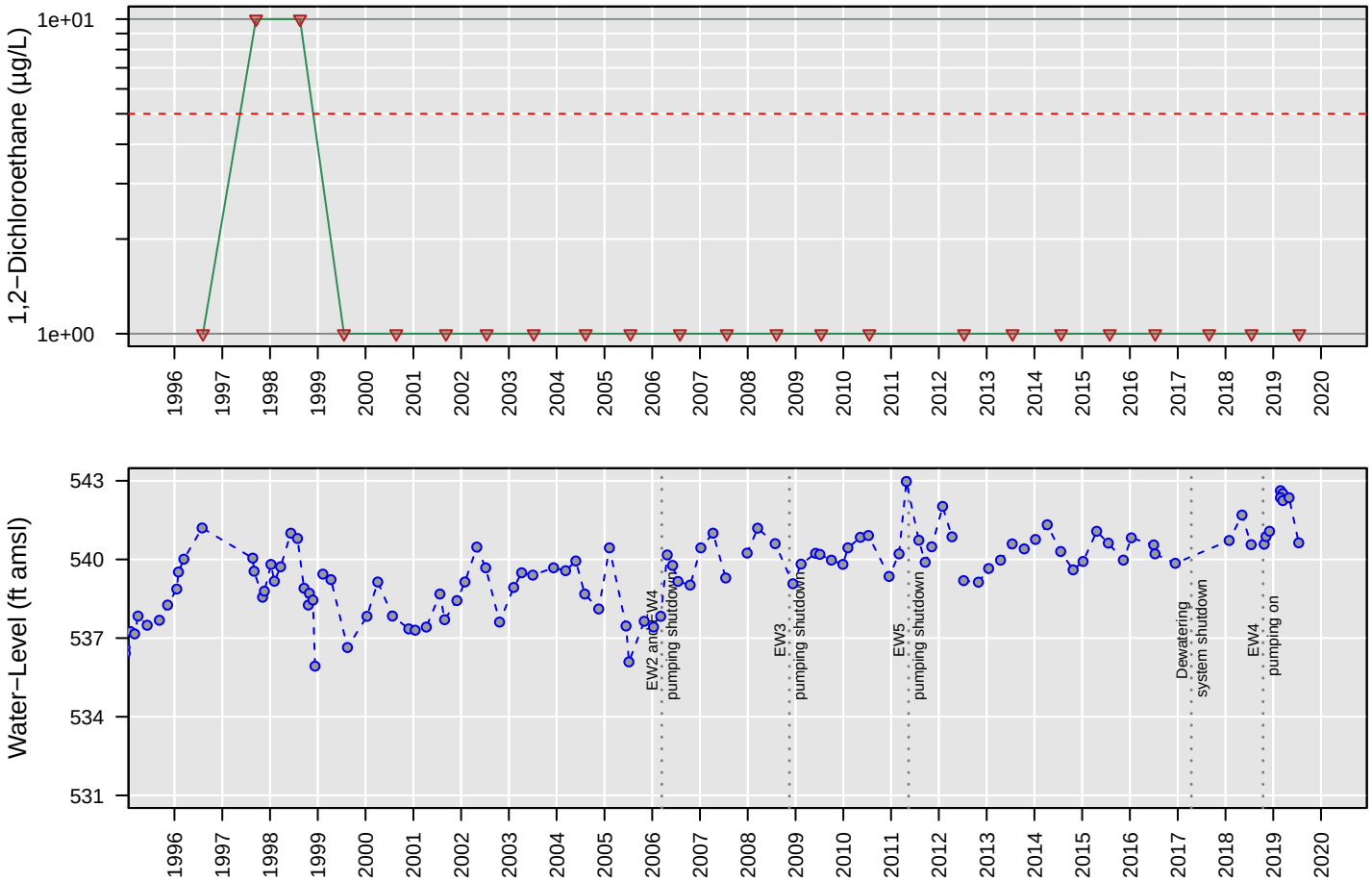
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.51 µg/L
UCL: 0.79 µg/L
LCL: 0.33 µg/L

MW73

1,2−Dichloroethane

Number of Comparisons: 23
Percent NDs: 100%

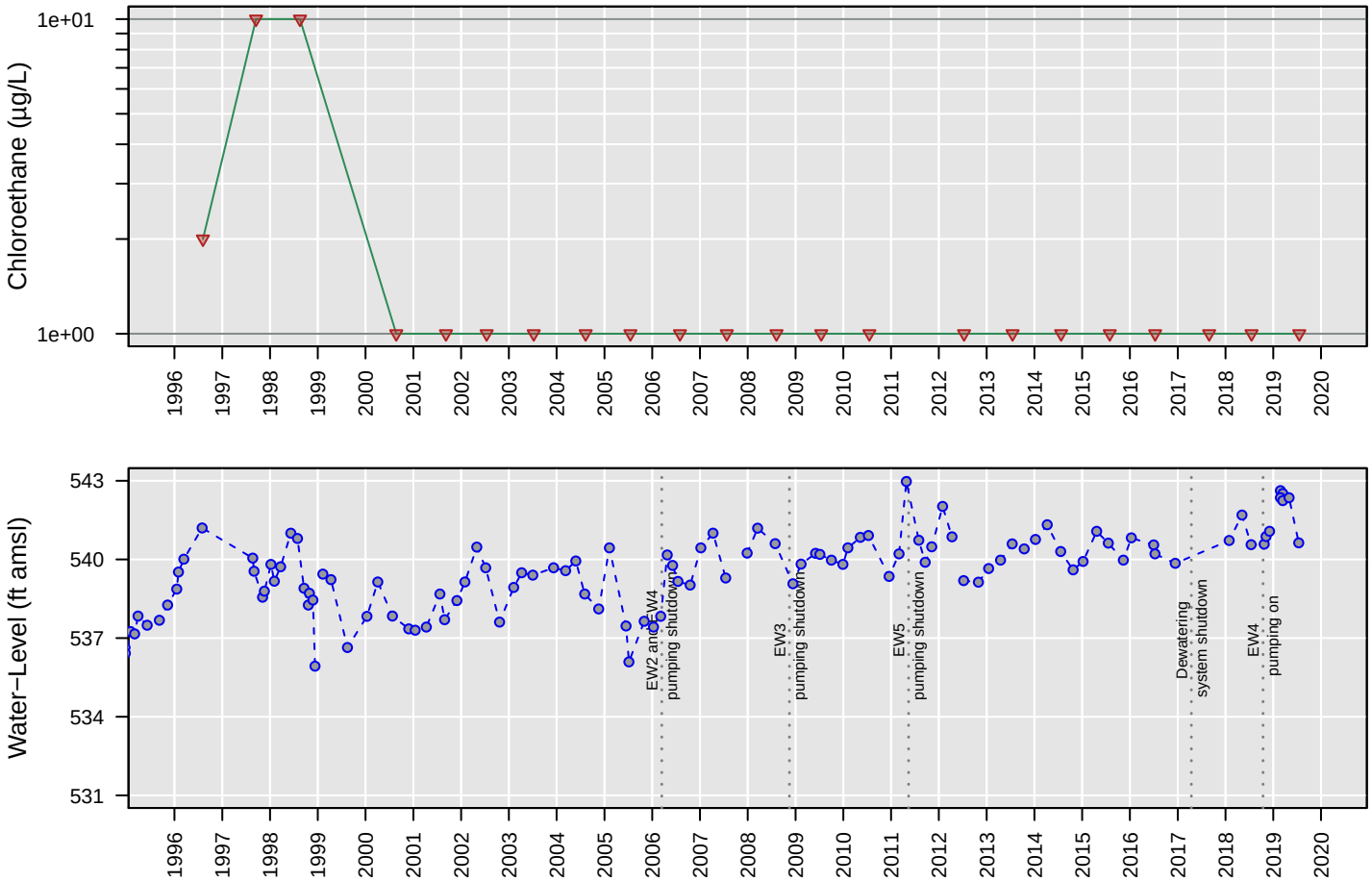


No Analysis Performed

MW73

Chloroethane

Number of Comparisons: 22
Percent NDs: 100%



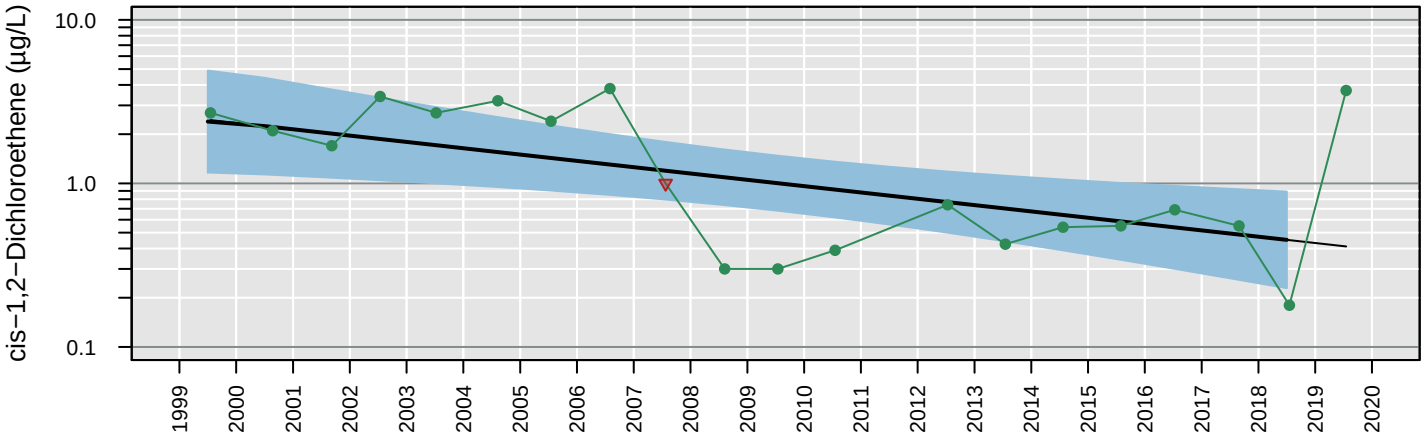
No Analysis Performed

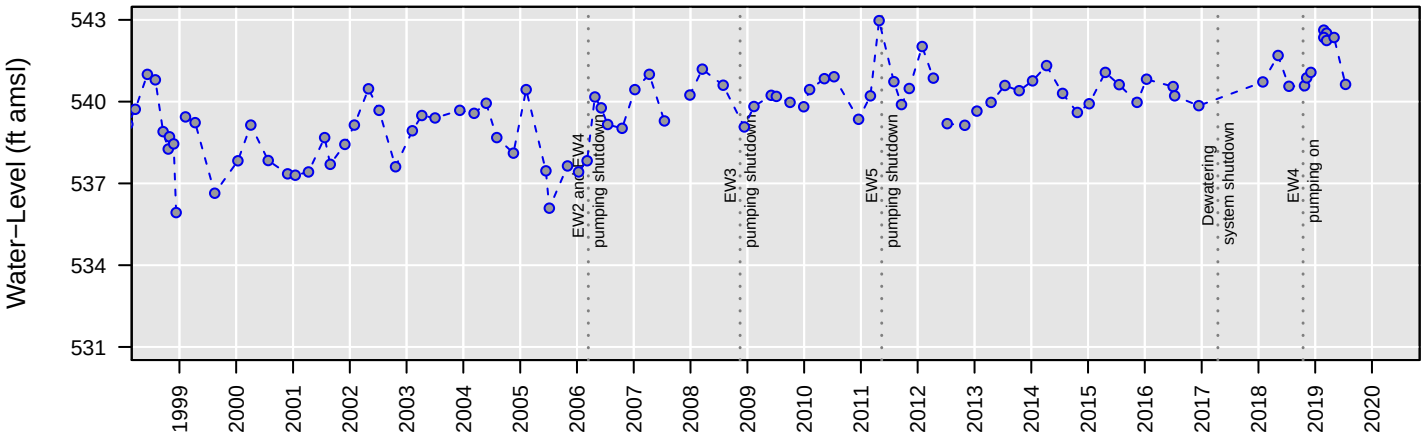
MW73

cis−1,2−Dichloroethene

Number of Comparisons: 20
Percent NDs: 5%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

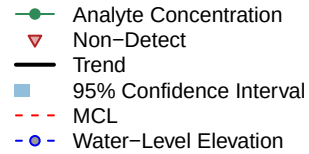
ln Conc. = −0.00024 (+/− 0.000081)*Date + 3.5 (+/− 1.2)

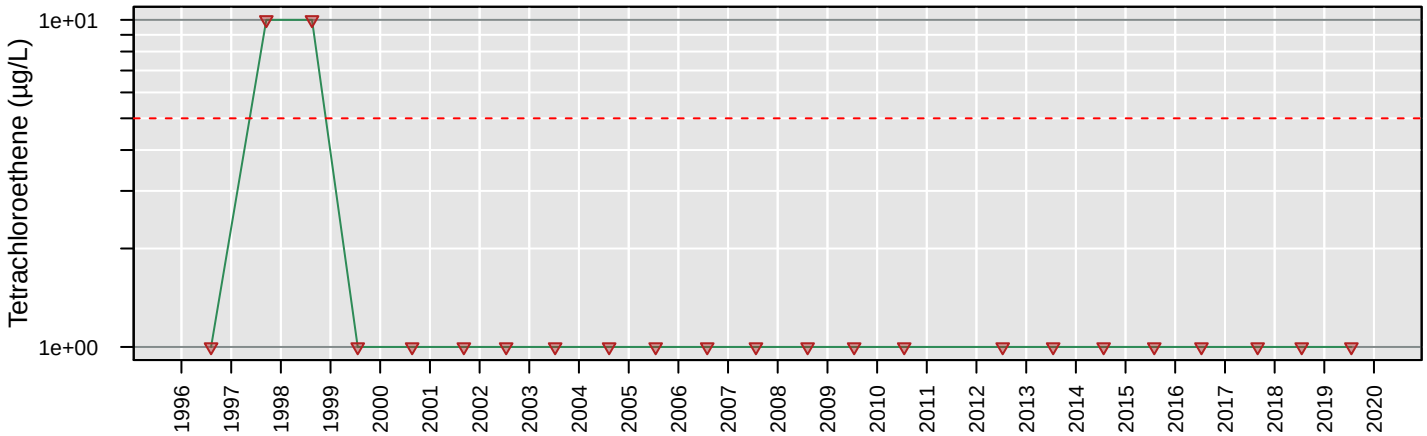
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.45 µg/L
UCL: 0.89 µg/L
LCL: 0.23 µg/L

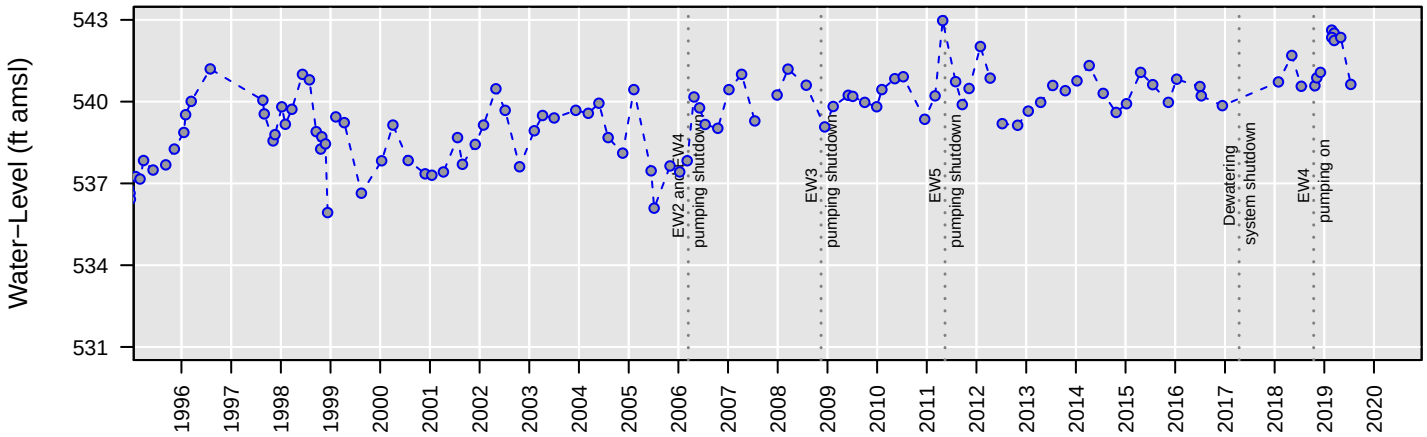
MW73

Tetrachloroethene

Number of Comparisons: 23
Percent NDs: 100%







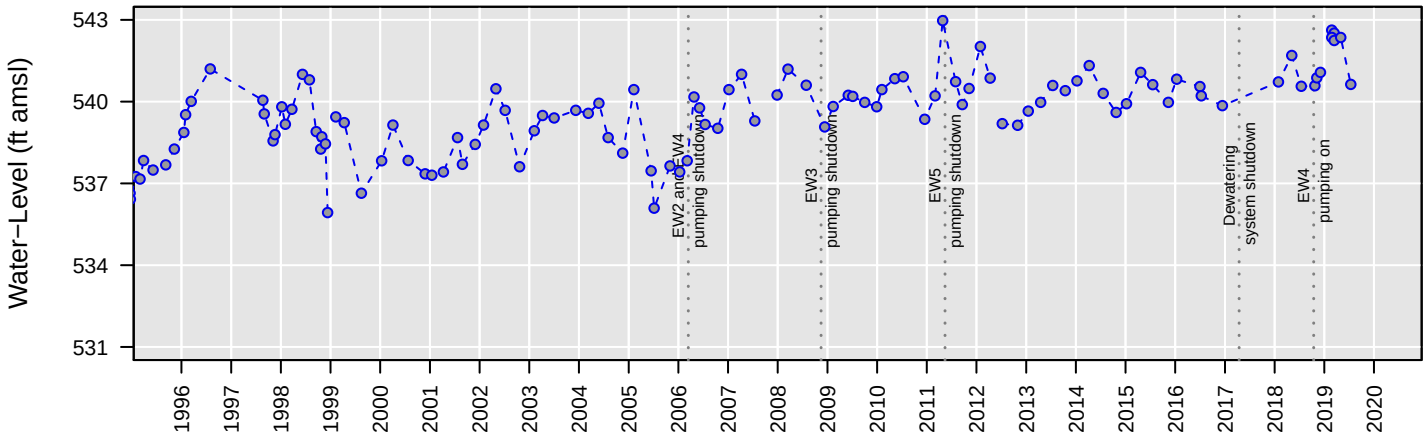
No Analysis Performed

MW73

Total VOCs

Number of Comparisons: 21
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

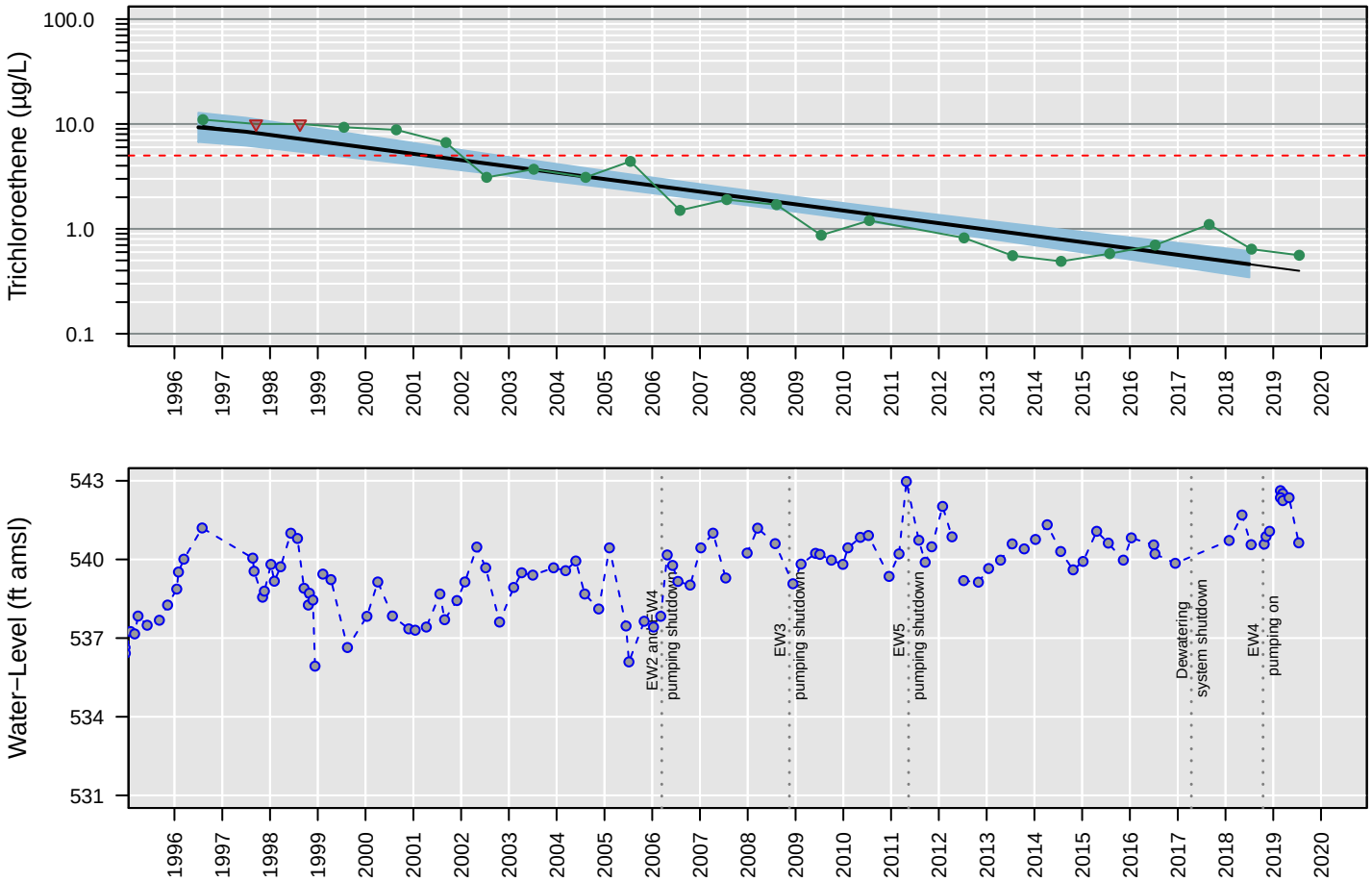
ln Conc. = −0.00031 (+/− 0.000027)*Date + 5.6 (+/− 0.37)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 1.3 µg/L
UCL: 1.6 µg/L
LCL: 0.99 µg/L

MW73

Trichloroethene

Number of Comparisons: 23
Percent NDs: 9%



Censored Regression (Tobit) Model

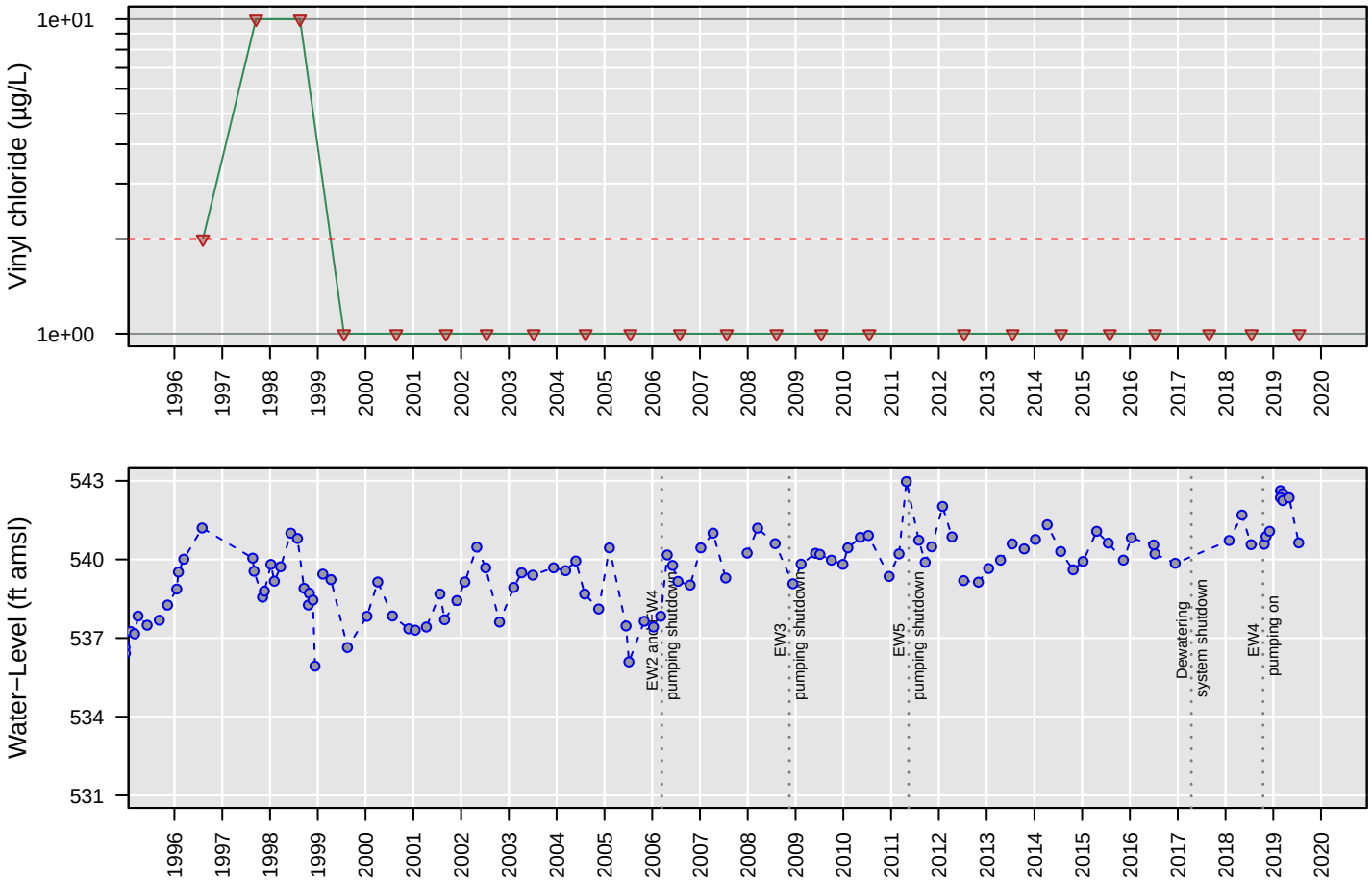
ln Conc. = −0.00038 (+/− 0.000031)*Date + 5.9 (+/− 0.44)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.46 µg/L
UCL: 0.61 µg/L
LCL: 0.34 µg/L

MW73

Vinyl chloride

Number of Comparisons: 23
Percent NDs: 100%

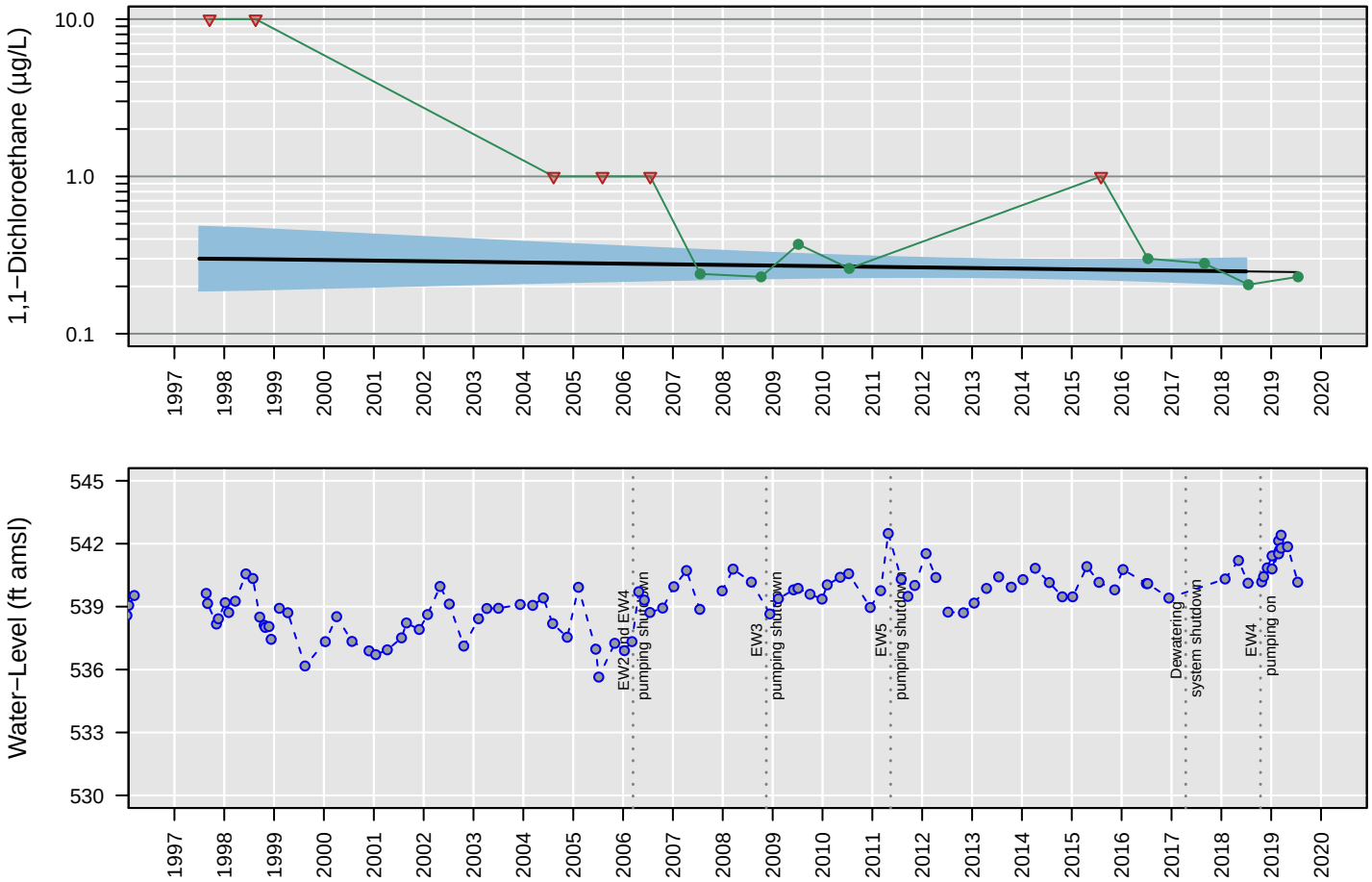


No Analysis Performed

MW74

1,1−Dichloroethane

Number of Comparisons: 14
Percent NDs: 43%



Censored Regression (Tobit) Model

Trend Not Significant

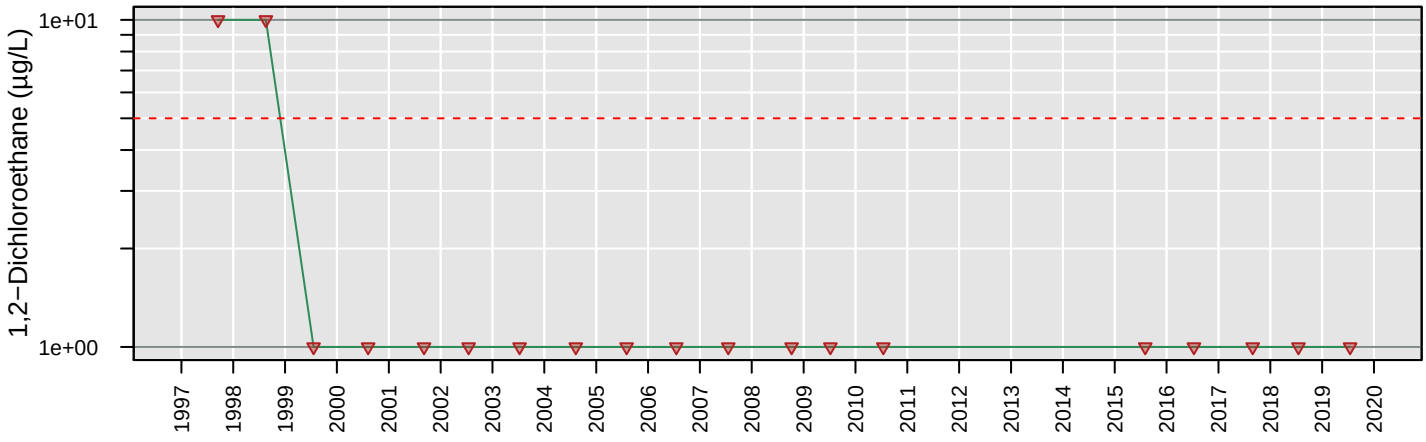
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.25 µg/L
UCL: 0.3 µg/L
LCL: 0.21 µg/L

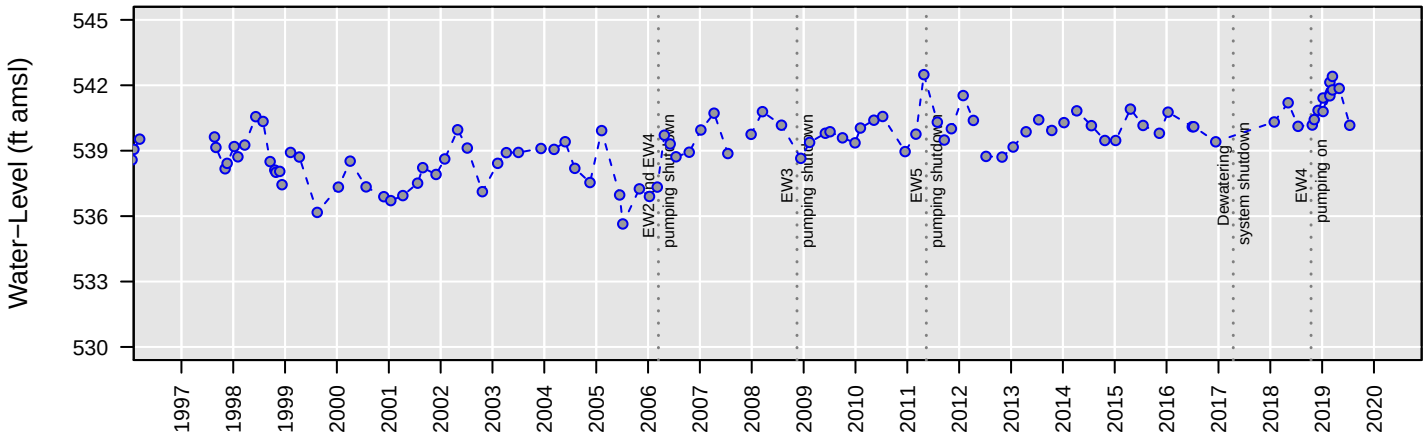
MW74

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





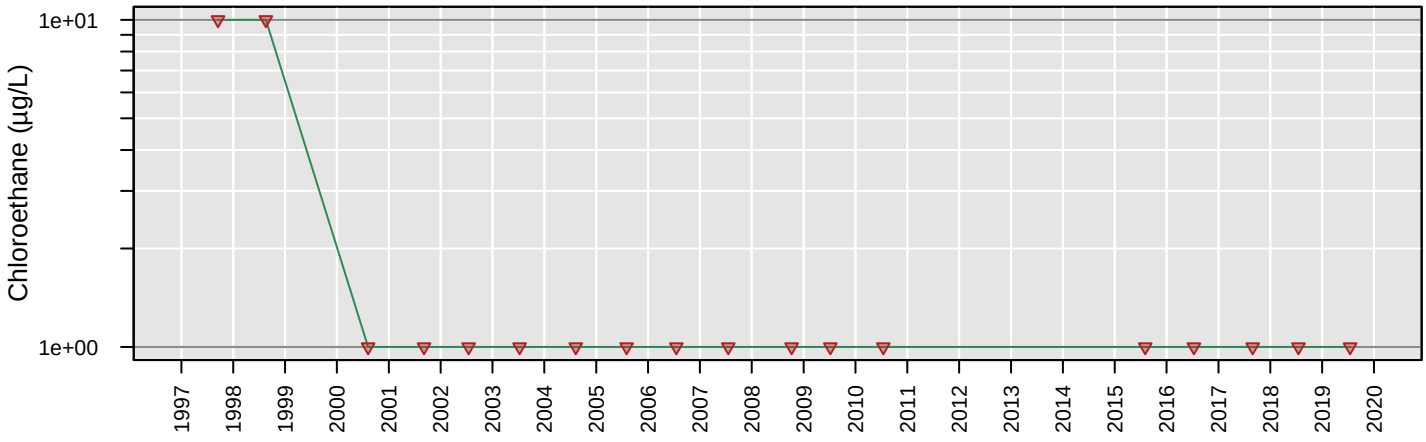
No Analysis Performed

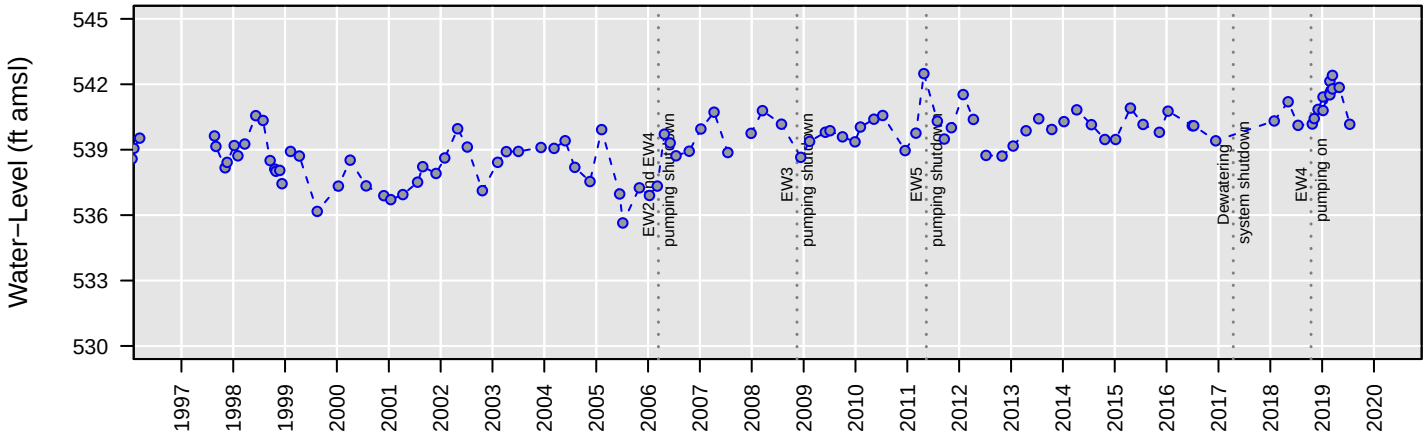
MW74

Chloroethane

Number of Comparisons: 18
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



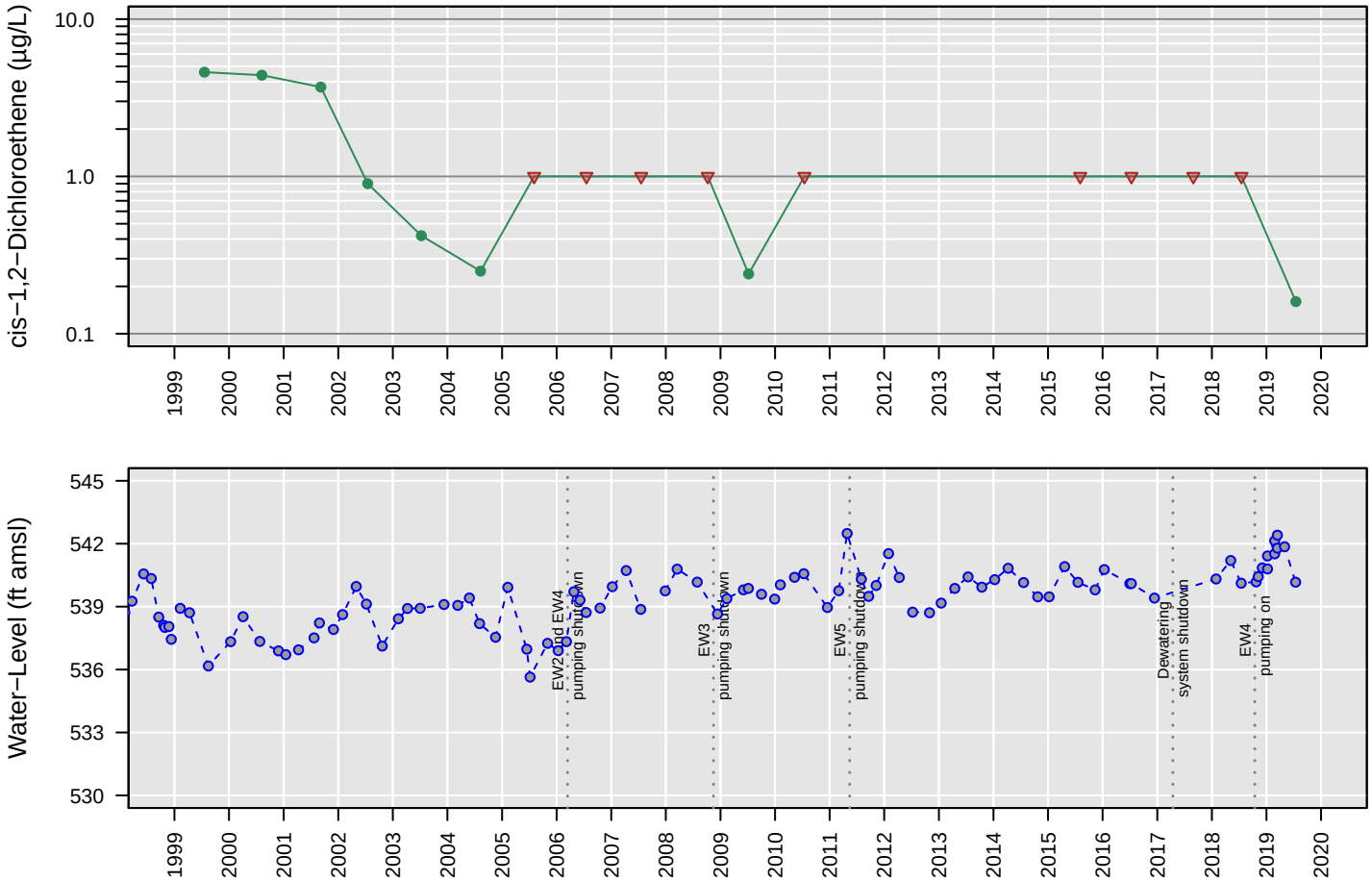


No Analysis Performed

MW74

cis−1,2−Dichloroethene

Number of Comparisons: 17
Percent NDs: 53%

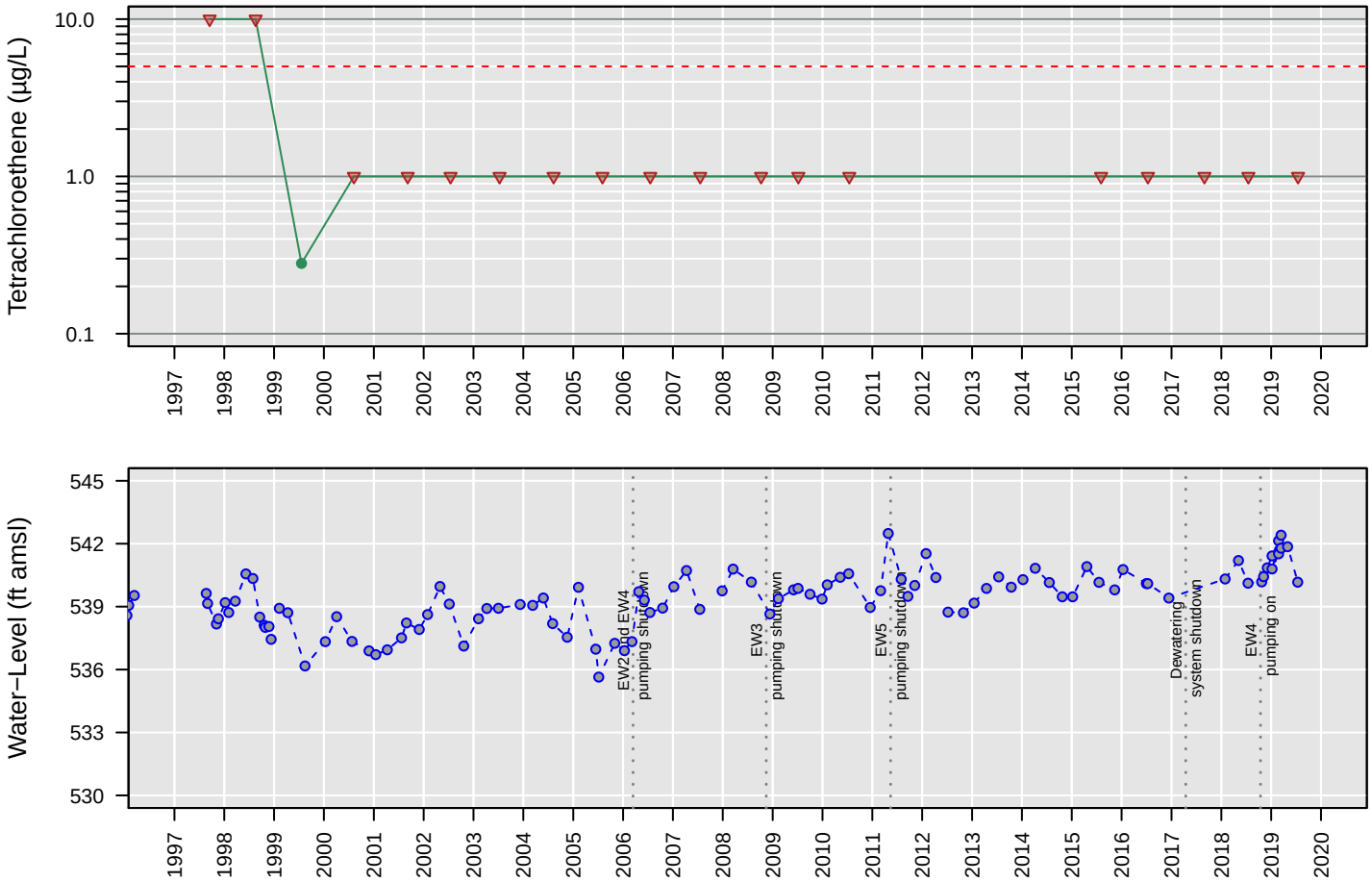


No Analysis Performed

MW74

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 95%



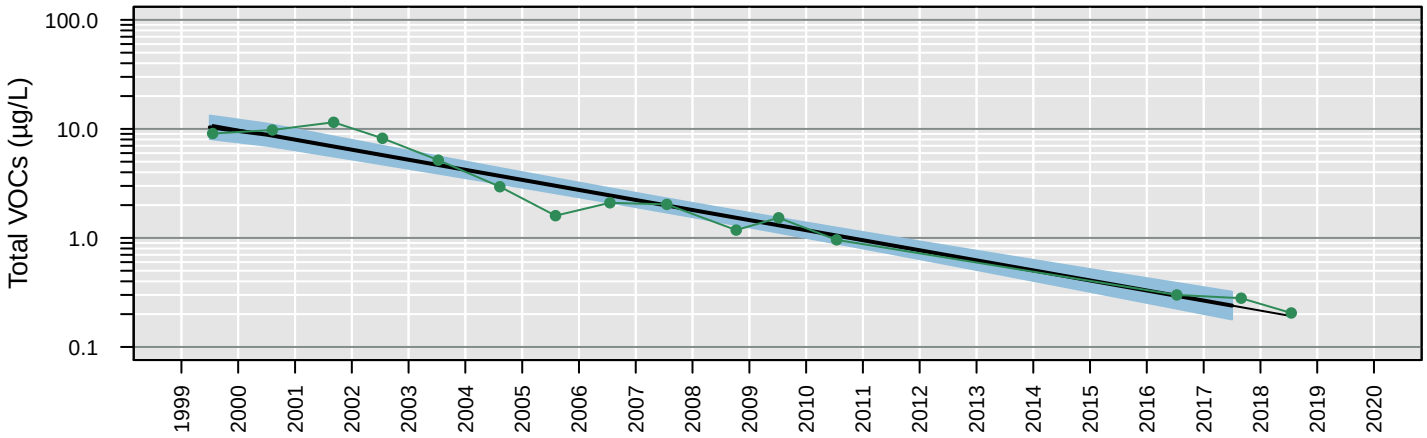
No Analysis Performed

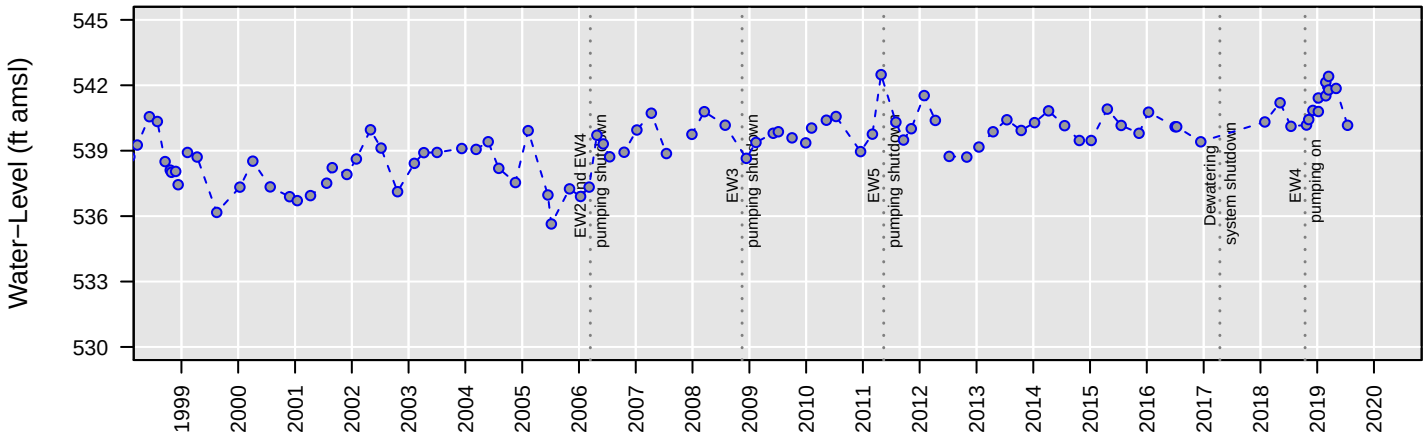
MW74

Total VOCs

Number of Comparisons: 15
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

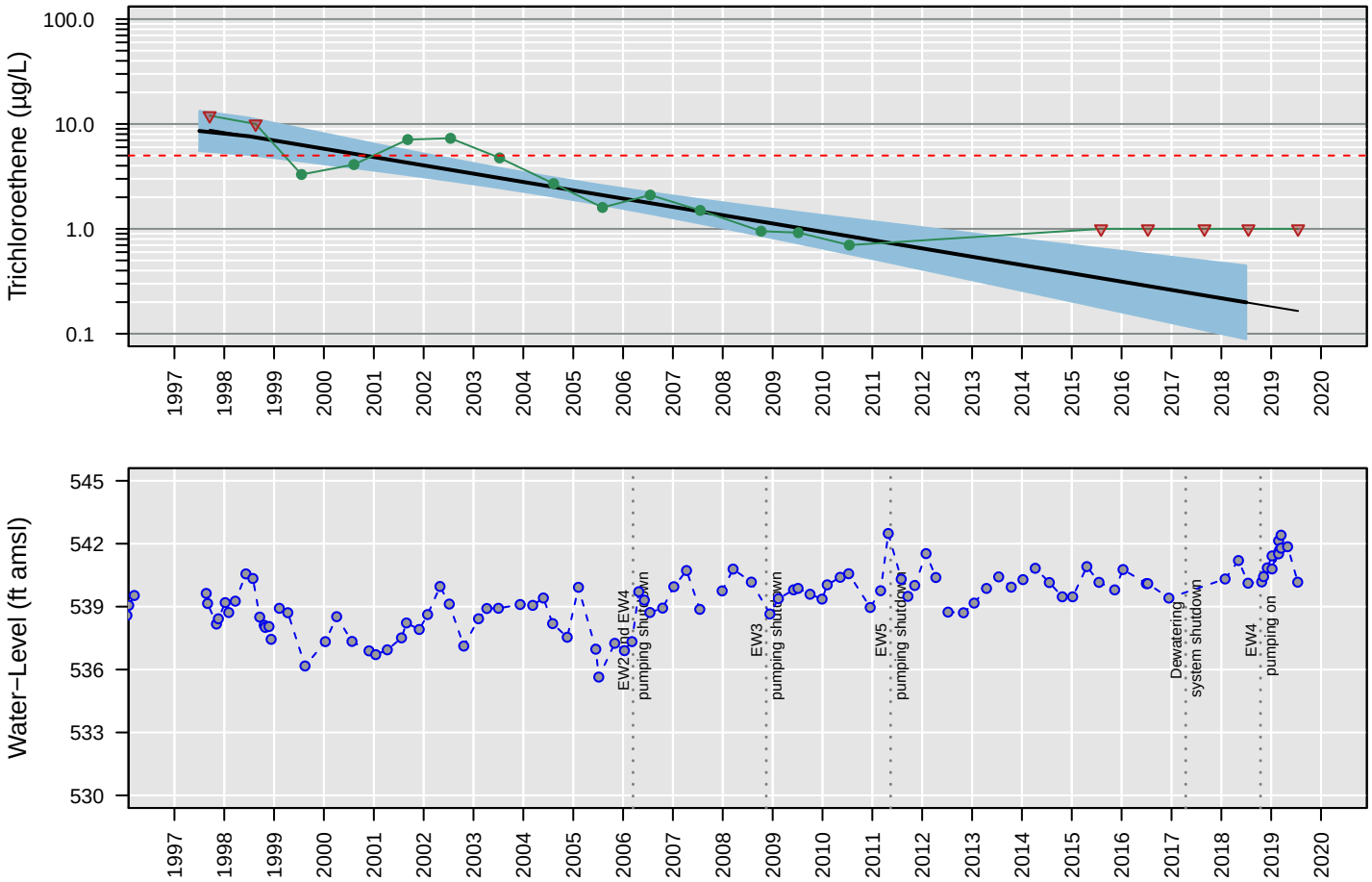
ln Conc. = −0.00058 (+/− 0.000032)*Date + 8.7 (+/− 0.44)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 0.24 µg/L
UCL: 0.32 µg/L
LCL: 0.18 µg/L

MW74

Trichloroethene

Number of Comparisons: 19
Percent NDs: 37%



Censored Regression (Tobit) Model

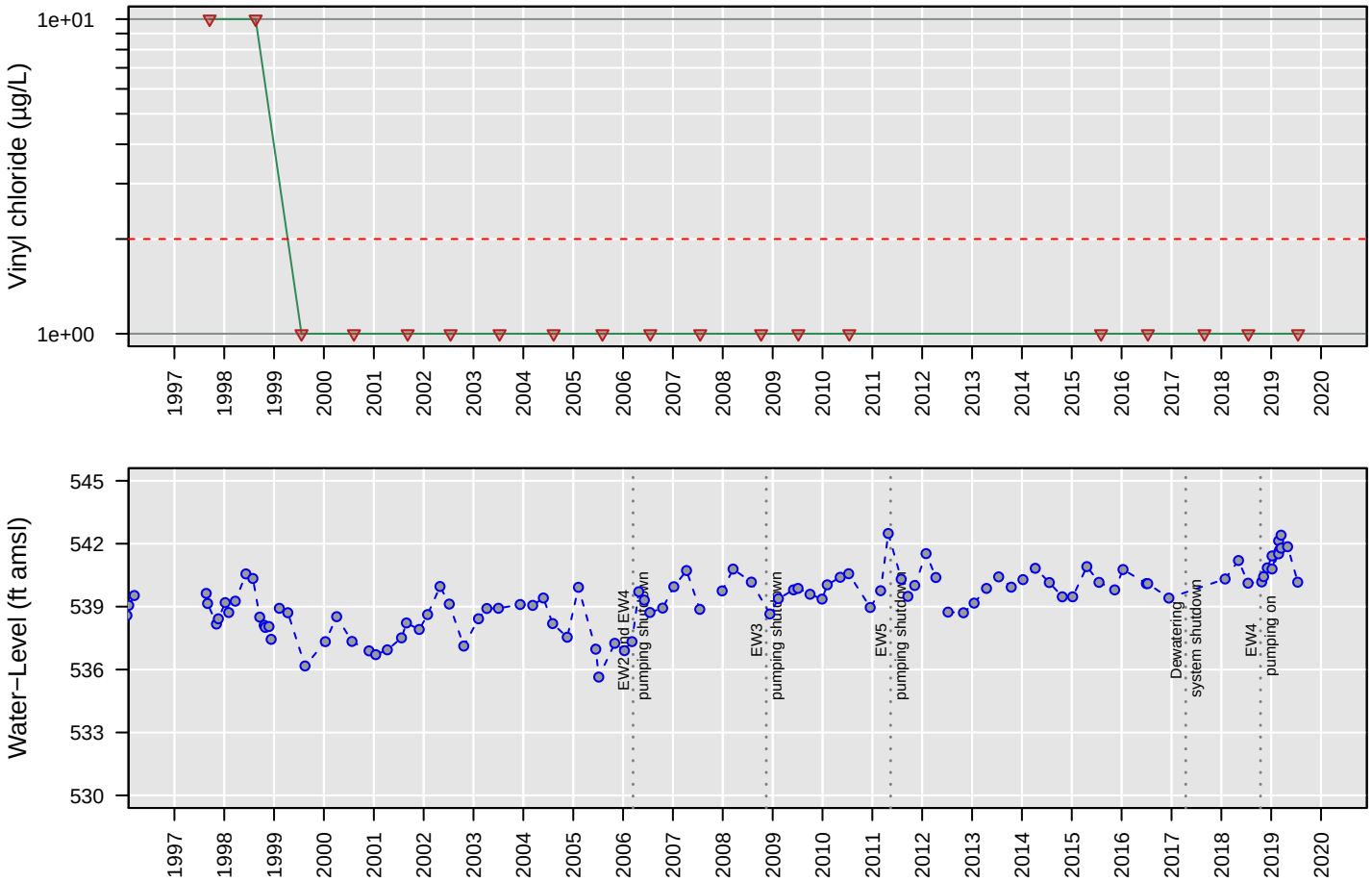
ln Conc. = −0.0005 (+/− 0.000073)*Date + 7.2 (+/− 0.93)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.2 µg/L
UCL: 0.45 µg/L
LCL: 0.089 µg/L

MW74

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 100%

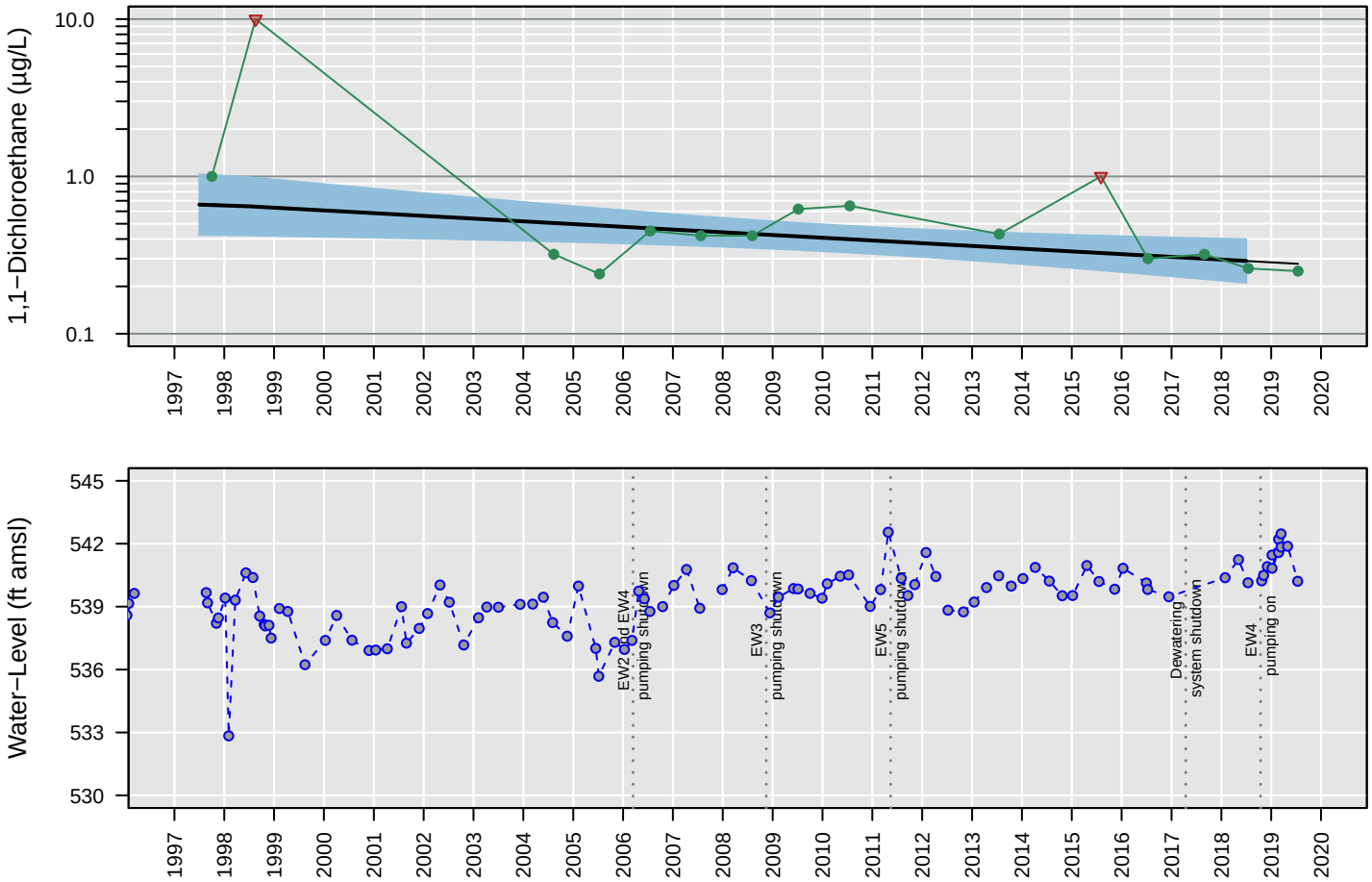


No Analysis Performed

MW75

1,1−Dichloroethane

Number of Comparisons: 15
Percent NDs: 13%



Censored Regression (Tobit) Model

ln Conc. = −0.00011 (+/− 0.00004)*Date + 0.7 (+/− 0.59)

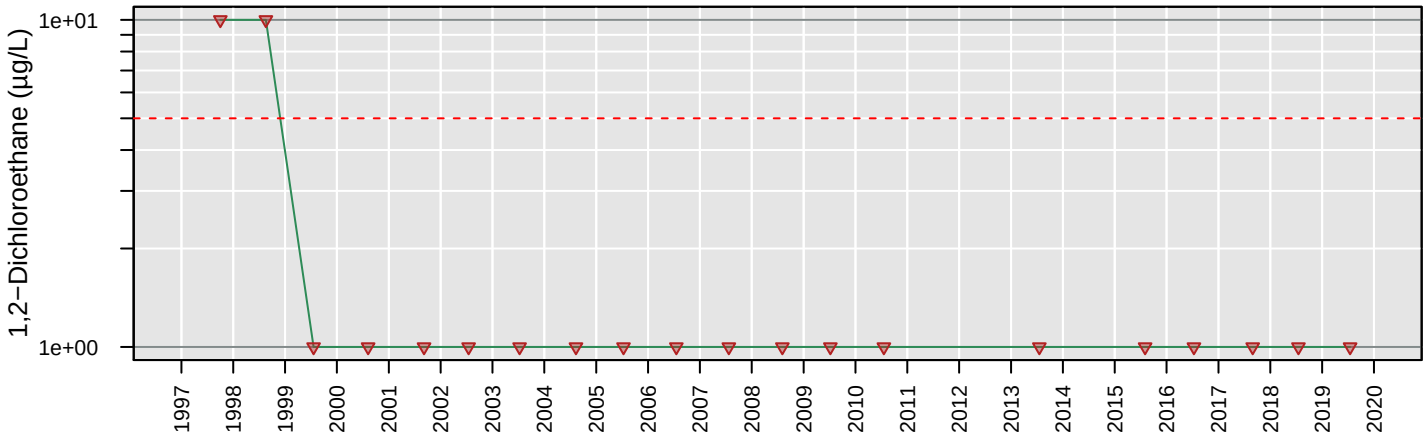
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.29 µg/L
UCL: 0.4 µg/L
LCL: 0.21 µg/L

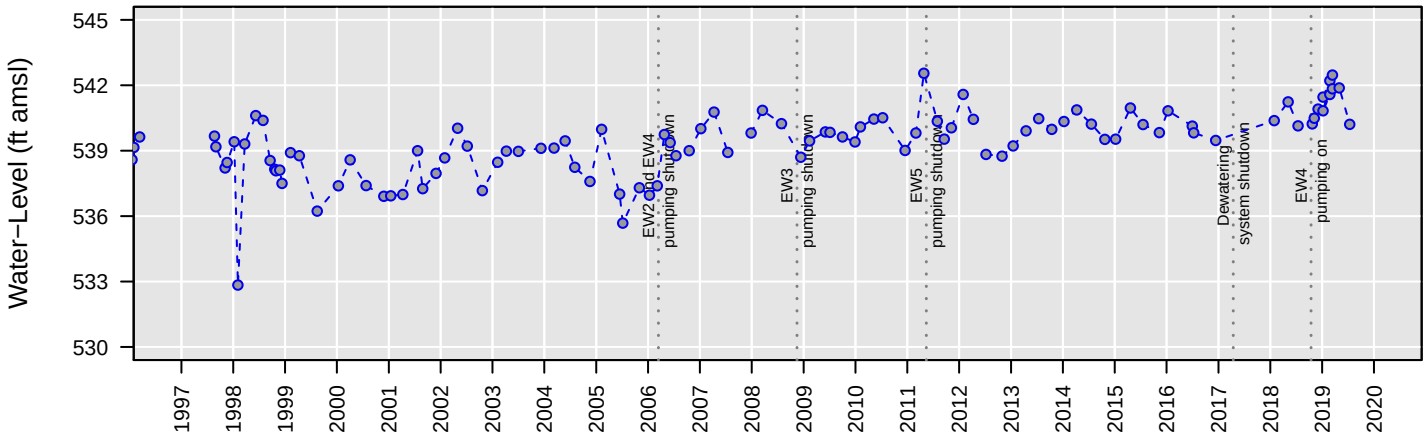
MW75

1,2−Dichloroethane

Number of Comparisons: 20
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



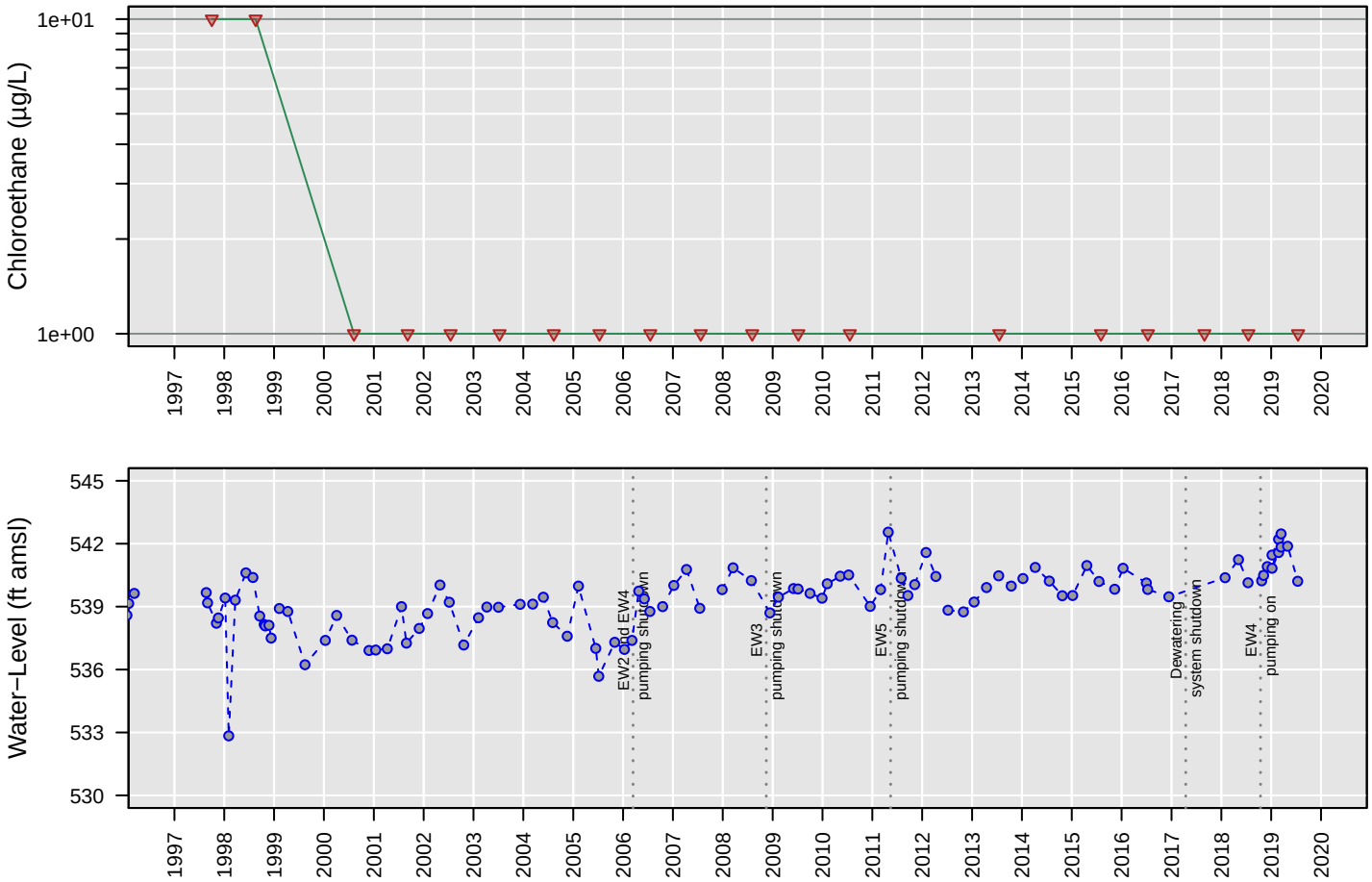


No Analysis Performed

MW75

Chloroethane

Number of Comparisons: 19
Percent NDs: 100%

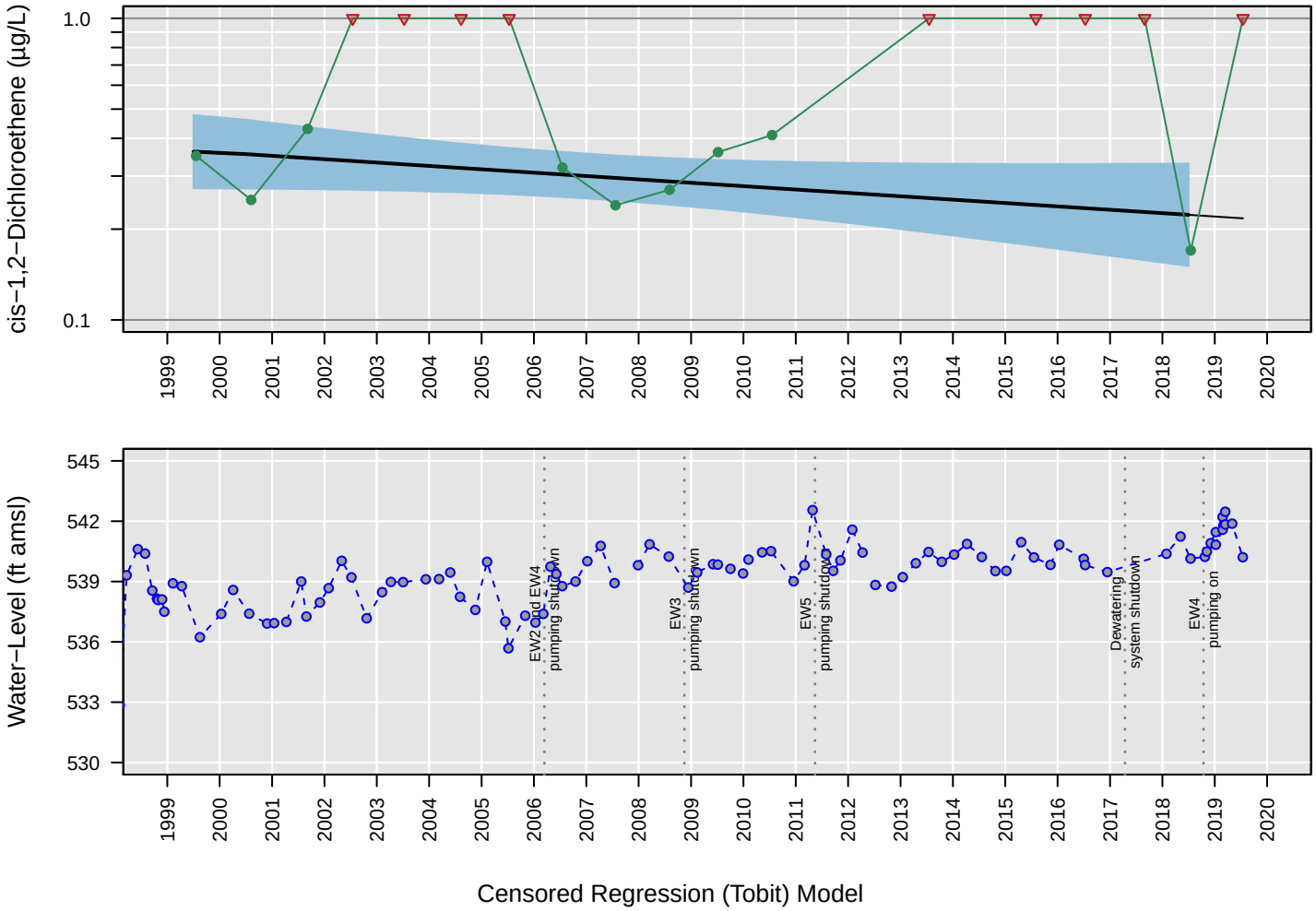


No Analysis Performed

MW75

cis−1,2−Dichloroethene

Number of Comparisons: 18
Percent NDs: 50%



Censored Regression (Tobit) Model

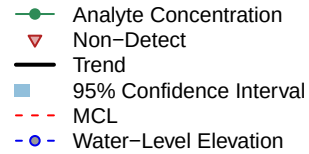
Trend Not Significant

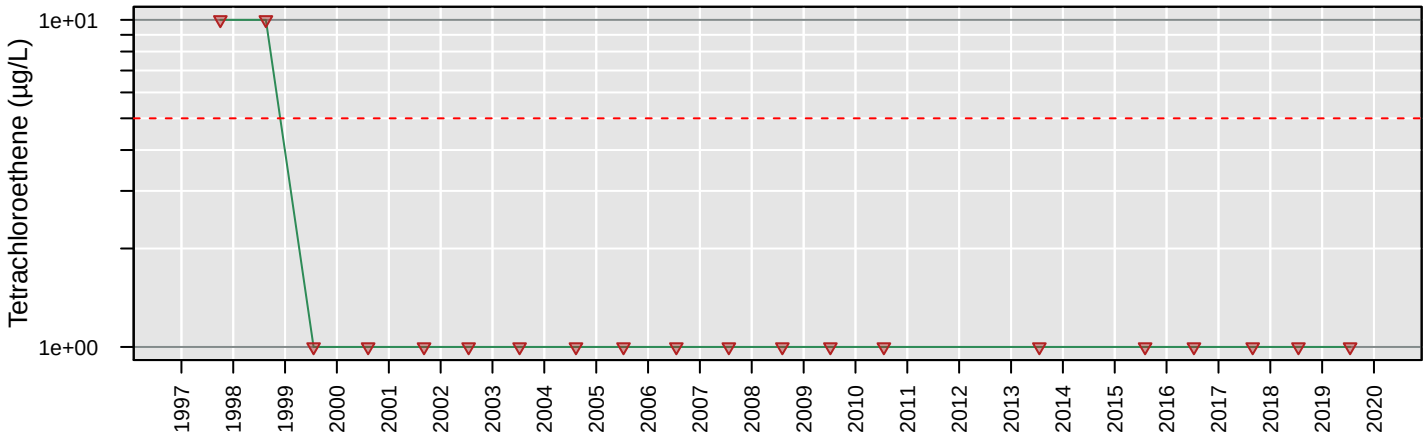
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.22 µg/L
UCL: 0.33 µg/L
LCL: 0.15 µg/L

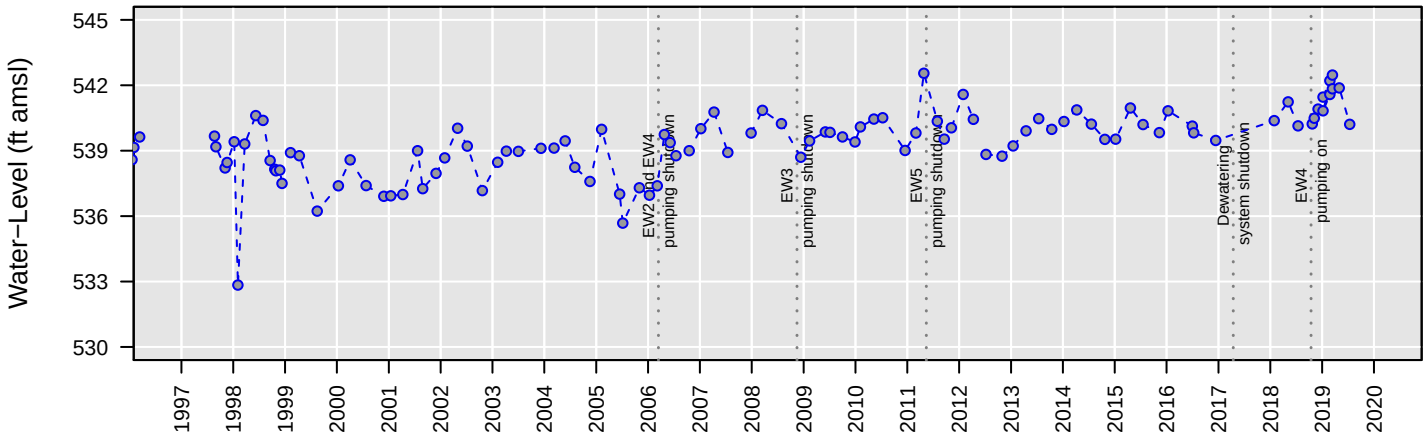
MW75

Tetrachloroethene

Number of Comparisons: 20
Percent NDs: 100%





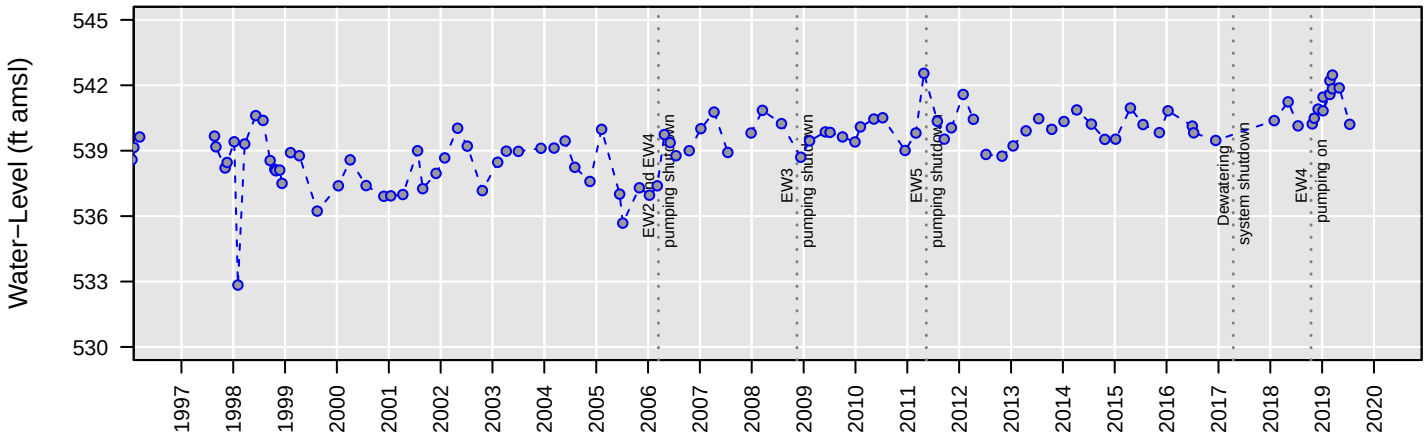


No Analysis Performed

MW75

Total VOCs

Number of Comparisons: 17
Percent NDs: 0%



Censored Regression (Tobit) Model

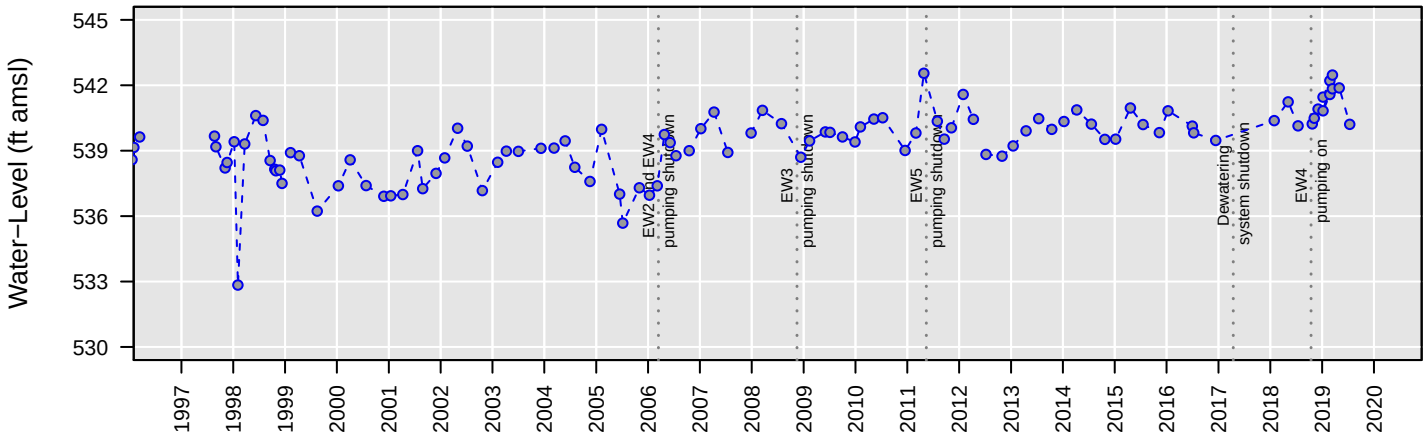
ln Conc. = −0.00049 (+/− 0.000039)*Date + 7.5 (+/− 0.53)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 0.34 µg/L
UCL: 0.49 µg/L
LCL: 0.24 µg/L

MW75

Trichloroethene

Number of Comparisons: 20
Percent NDs: 35%



Censored Regression (Tobit) Model

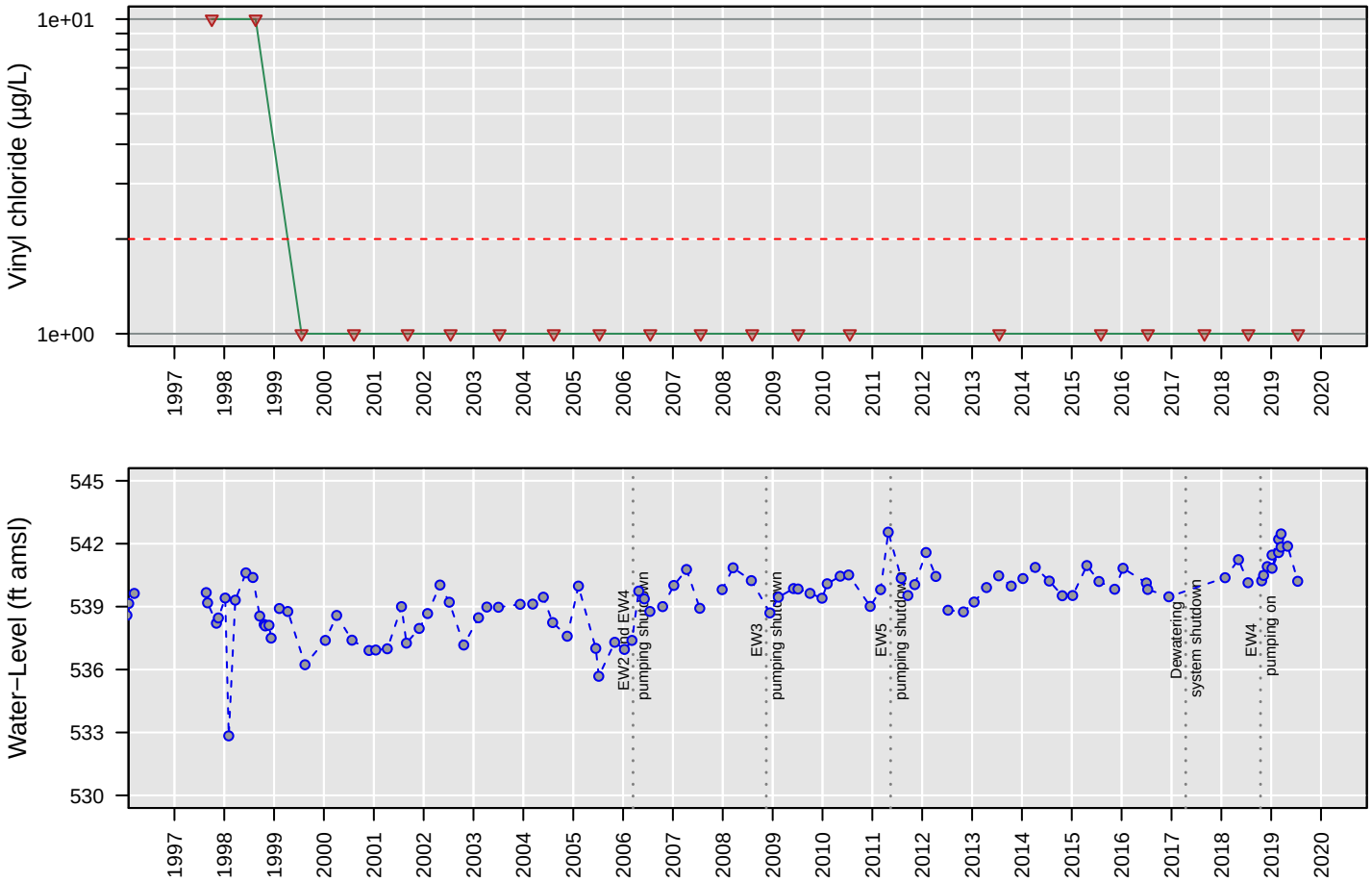
ln Conc. = −0.00052 (+/− 0.000088)*Date + 7.5 (+/− 1.1)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.18 µg/L
UCL: 0.48 µg/L
LCL: 0.066 µg/L

MW75

Vinyl chloride

Number of Comparisons: 20
Percent NDs: 100%

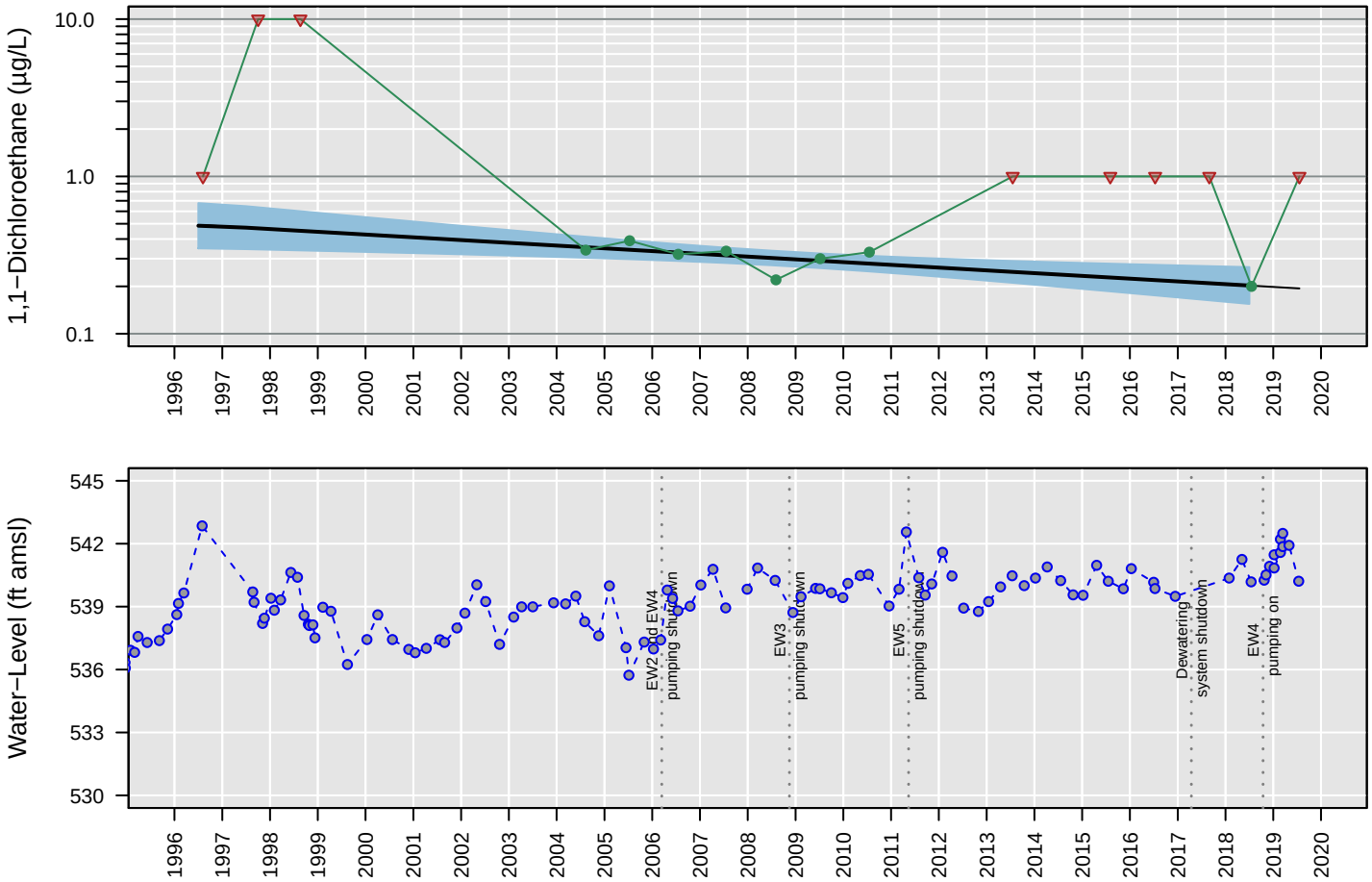


No Analysis Performed

MW76

1,1−Dichloroethane

Number of Comparisons: 16
Percent NDs: 50%



Censored Regression (Tobit) Model

ln Conc. = −0.00011 (+/− 0.000033)*Date + 0.36 (+/− 0.47)

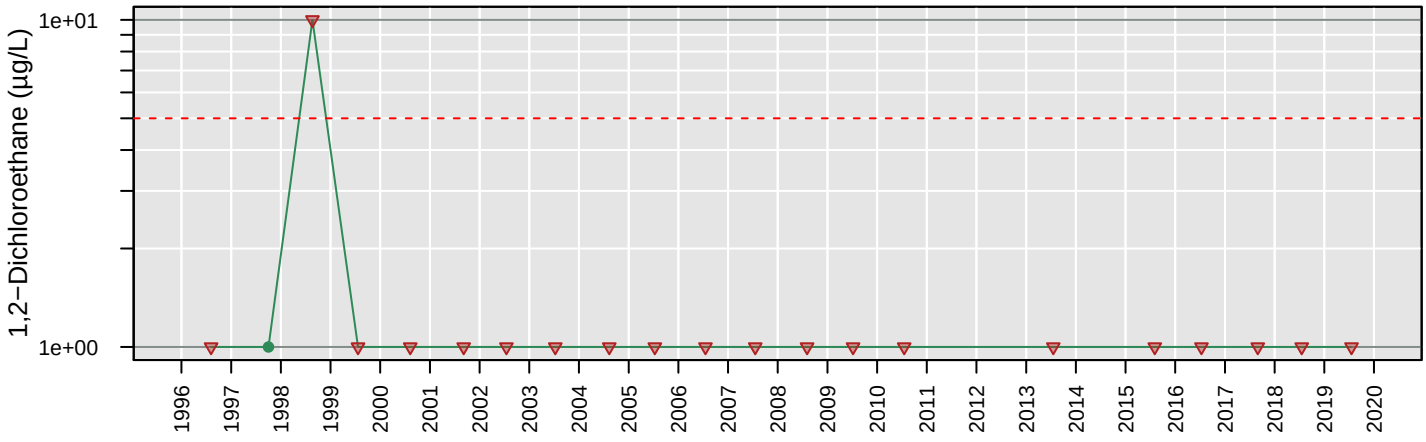
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.2 µg/L
UCL: 0.27 µg/L
LCL: 0.15 µg/L

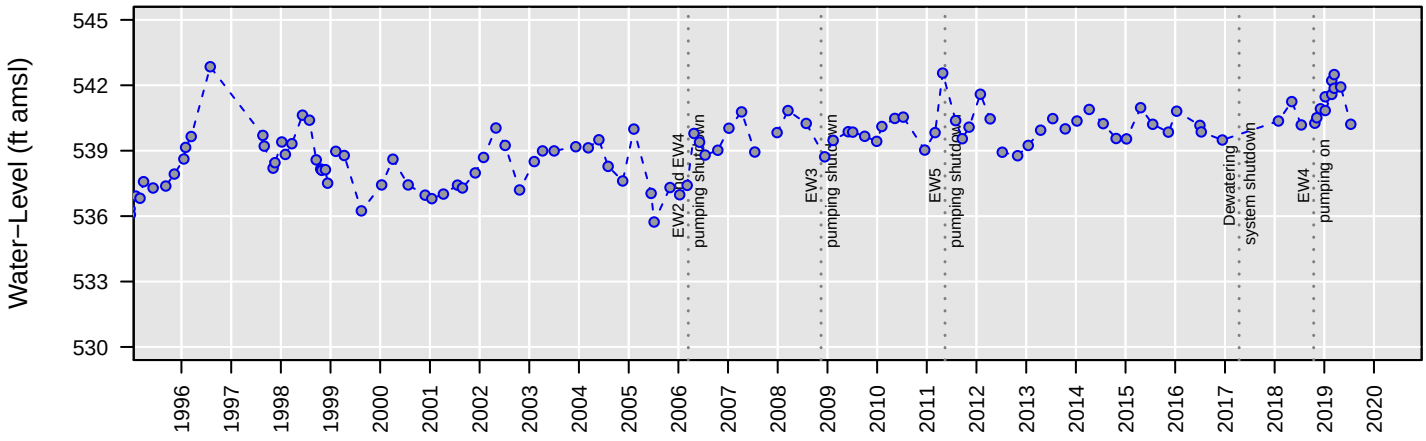
MW76

1,2−Dichloroethane

Number of Comparisons: 21
Percent NDs: 95%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





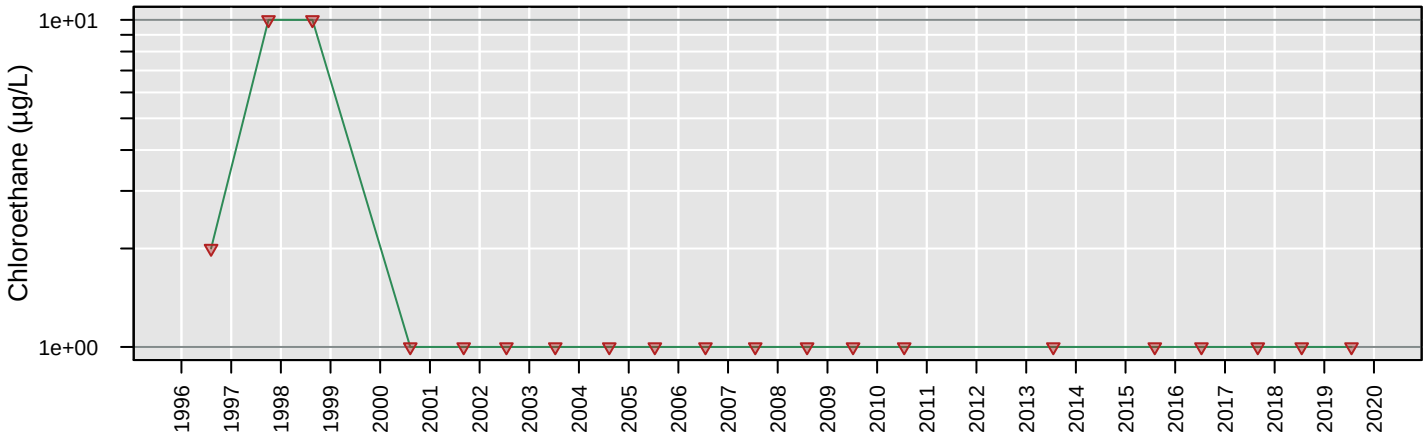
No Analysis Performed

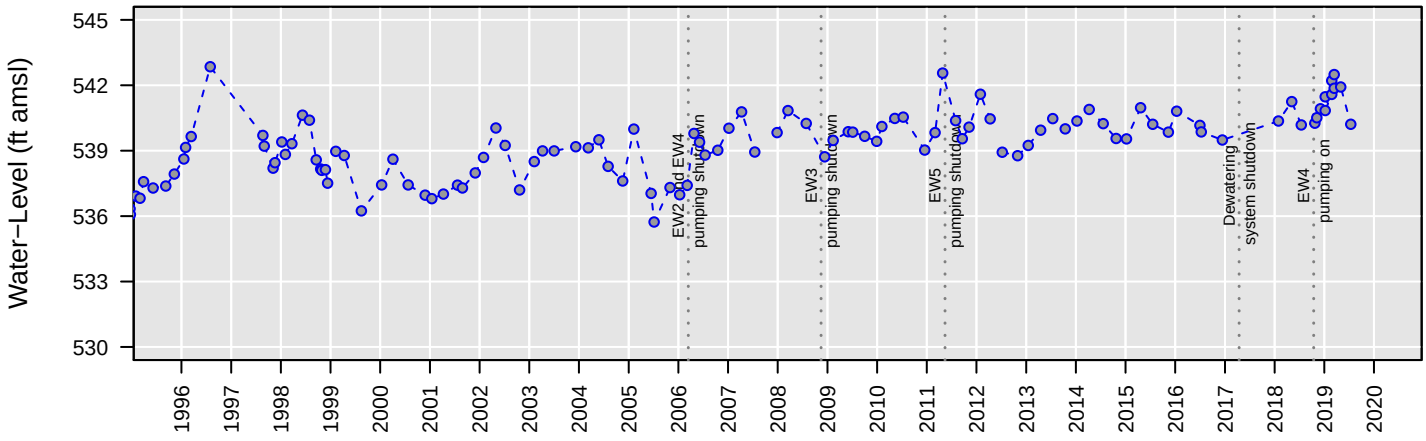
MW76

Chloroethane

Number of Comparisons: 20
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



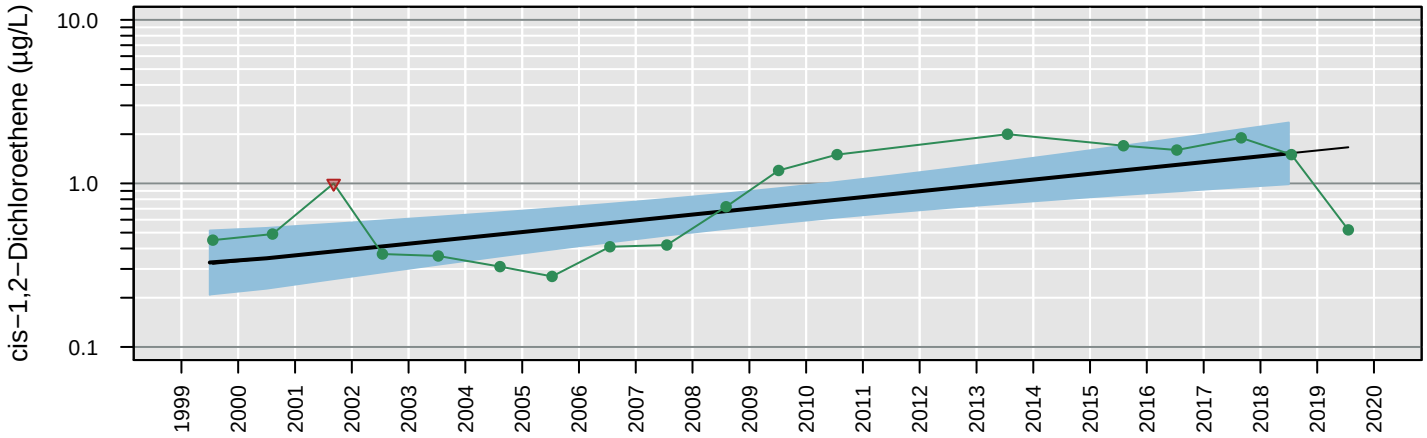


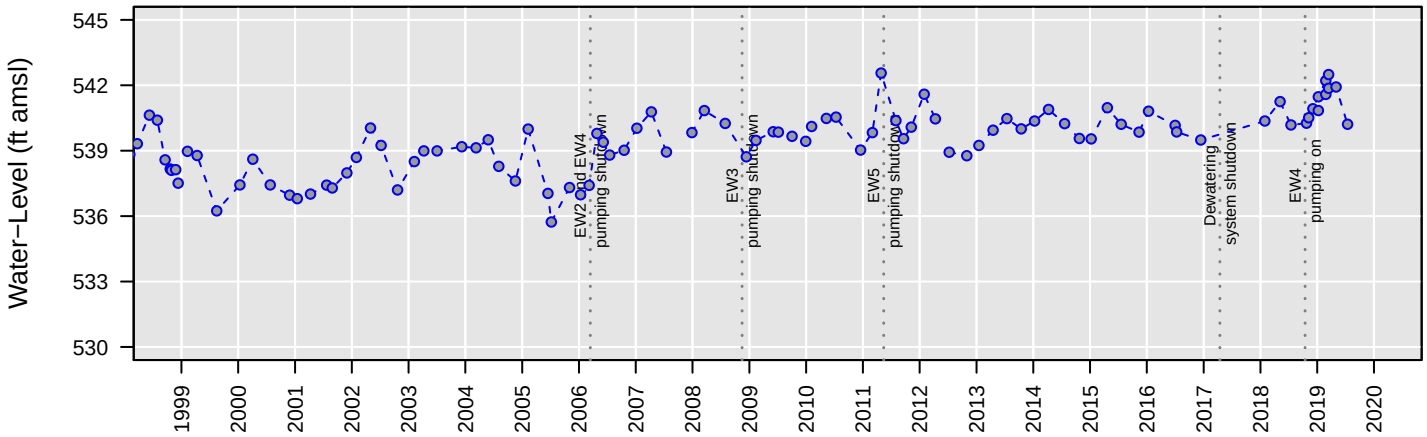
No Analysis Performed

MW76

cis−1,2−Dichloroethene

Number of Comparisons: 18
Percent NDs: 6%





Censored Regression (Tobit) Model

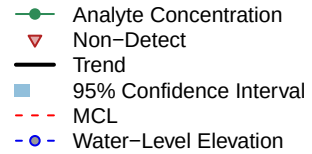
ln Conc. = 0.00022 (+/− 0.00005)*Date + −3.6 (+/− 0.73)

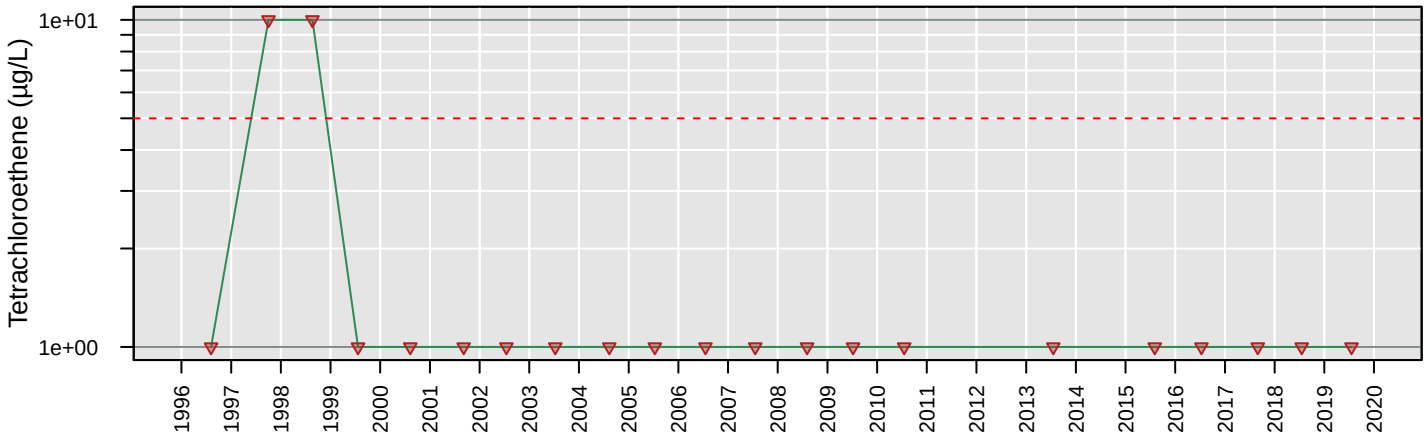
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.5 µg/L
UCL: 2.4 µg/L
LCL: 0.99 µg/L

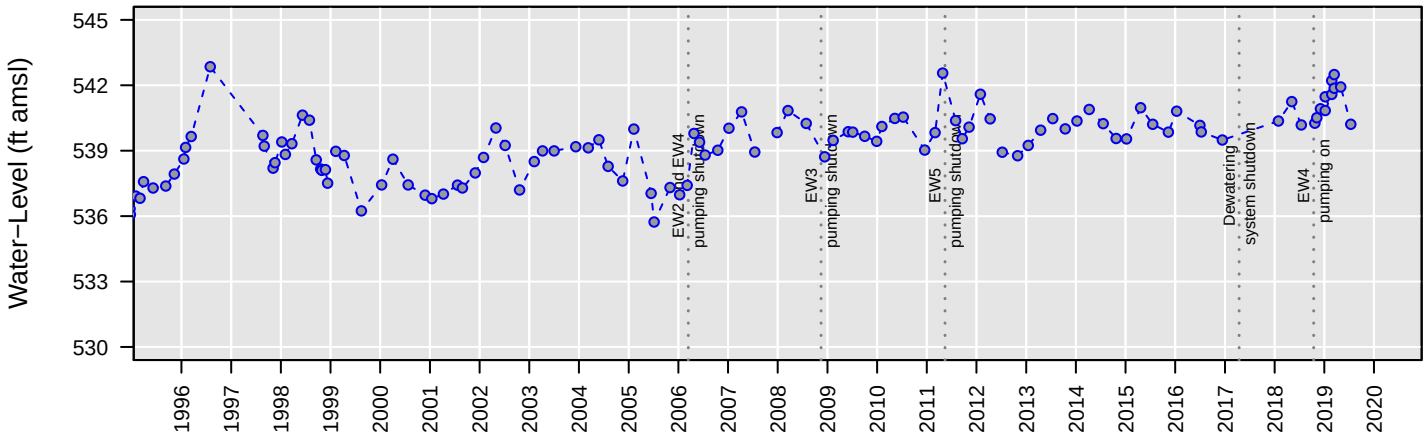
MW76

Tetrachloroethene

Number of Comparisons: 21
Percent NDs: 100%





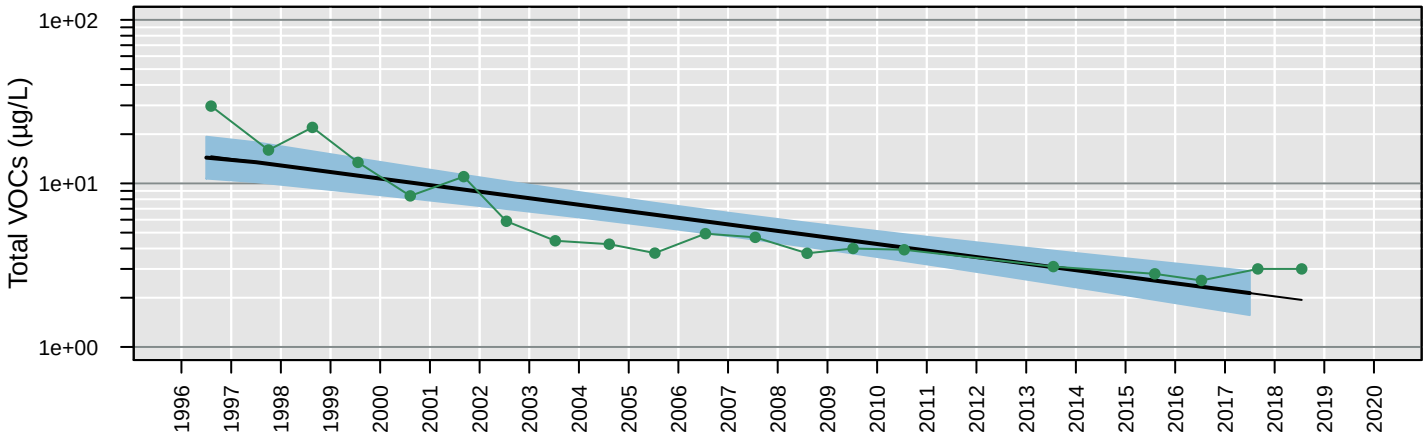


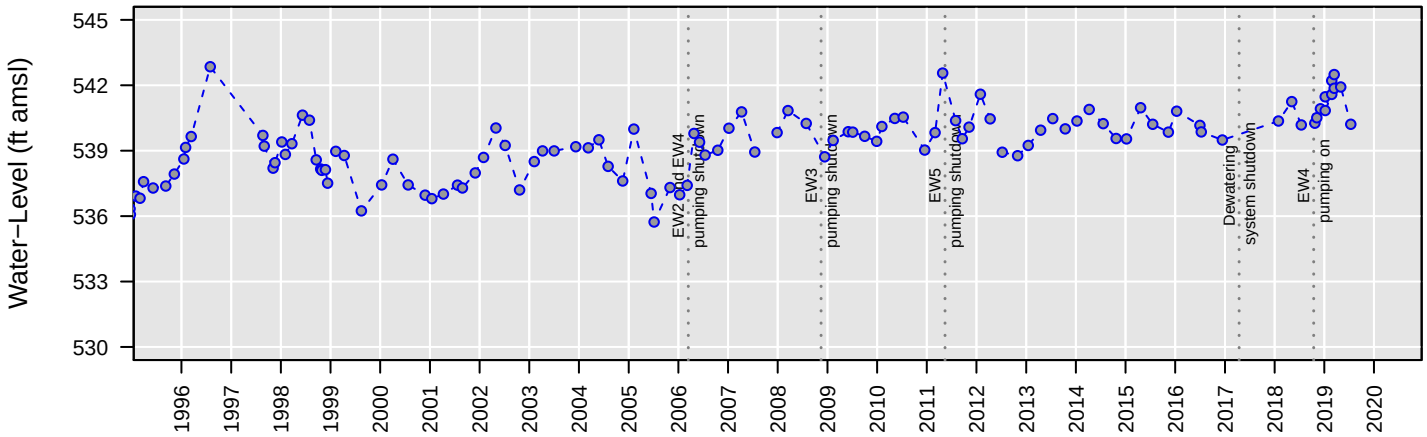
No Analysis Performed

MW76

Total VOCs

Number of Comparisons: 20
Percent NDs: 0%





Censored Regression (Tobit) Model

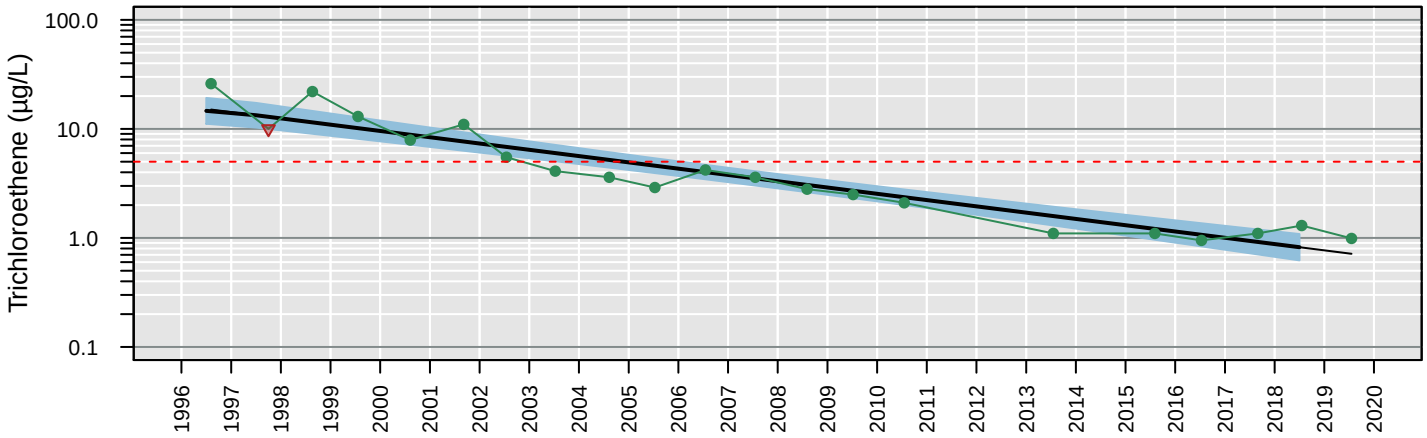
ln Conc. = −0.00025 (+/− 0.000032)*Date + 5.1 (+/− 0.43)

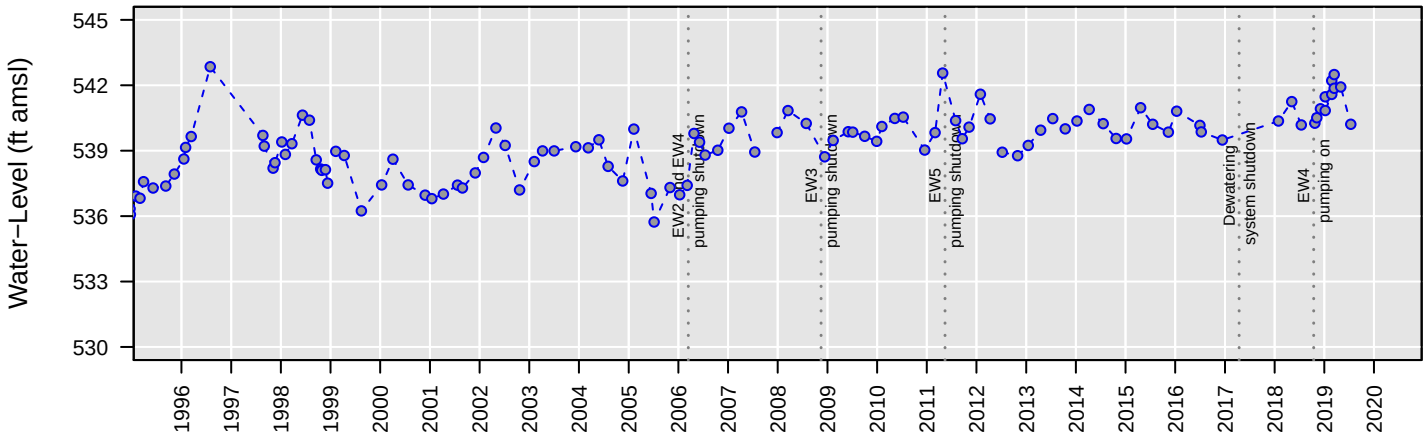
Regression Statistics for January 2017 to January 2018
Geometric Mean: 2.1 µg/L
UCL: 2.9 µg/L
LCL: 1.6 µg/L

MW76

Trichloroethene

Number of Comparisons: 21
Percent NDs: 5%





Censored Regression (Tobit) Model

ln Conc. = −0.00036 (+/− 0.000028)*Date + 6.2 (+/− 0.39)

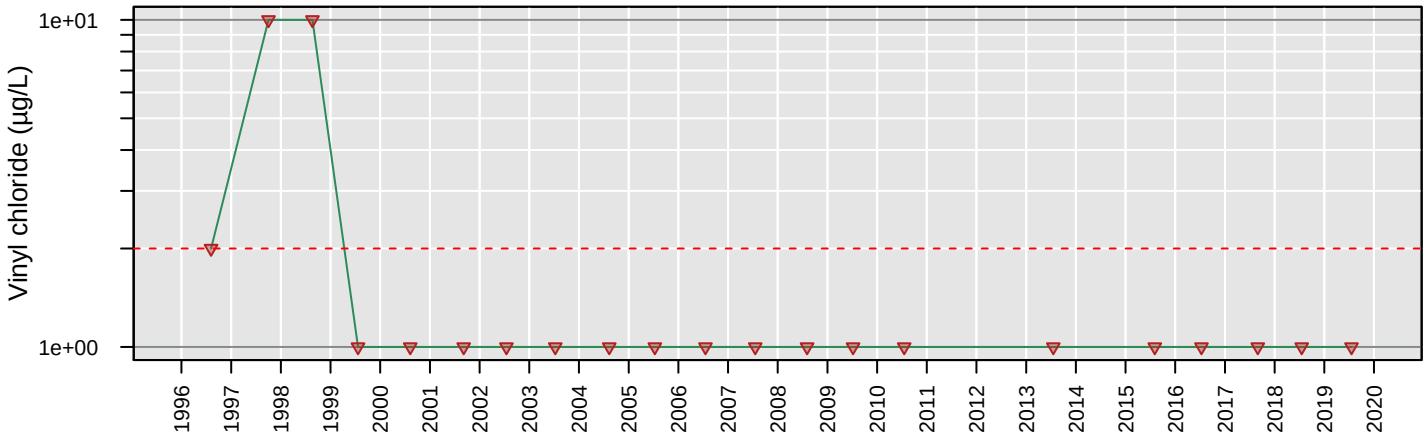
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.82 µg/L
UCL: 1.1 µg/L
LCL: 0.62 µg/L

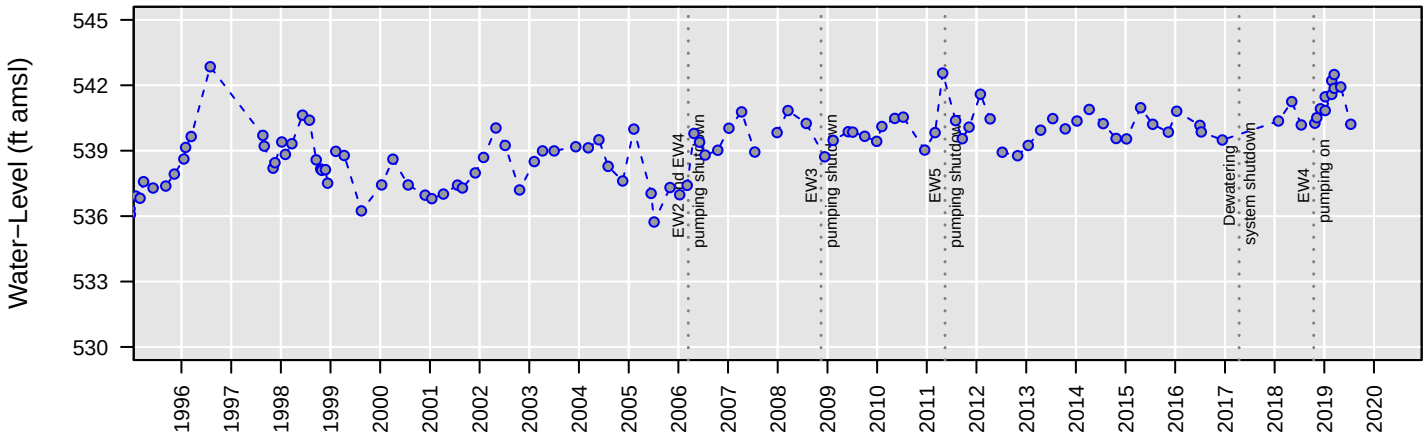
MW76

Vinyl chloride

Number of Comparisons: 21
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



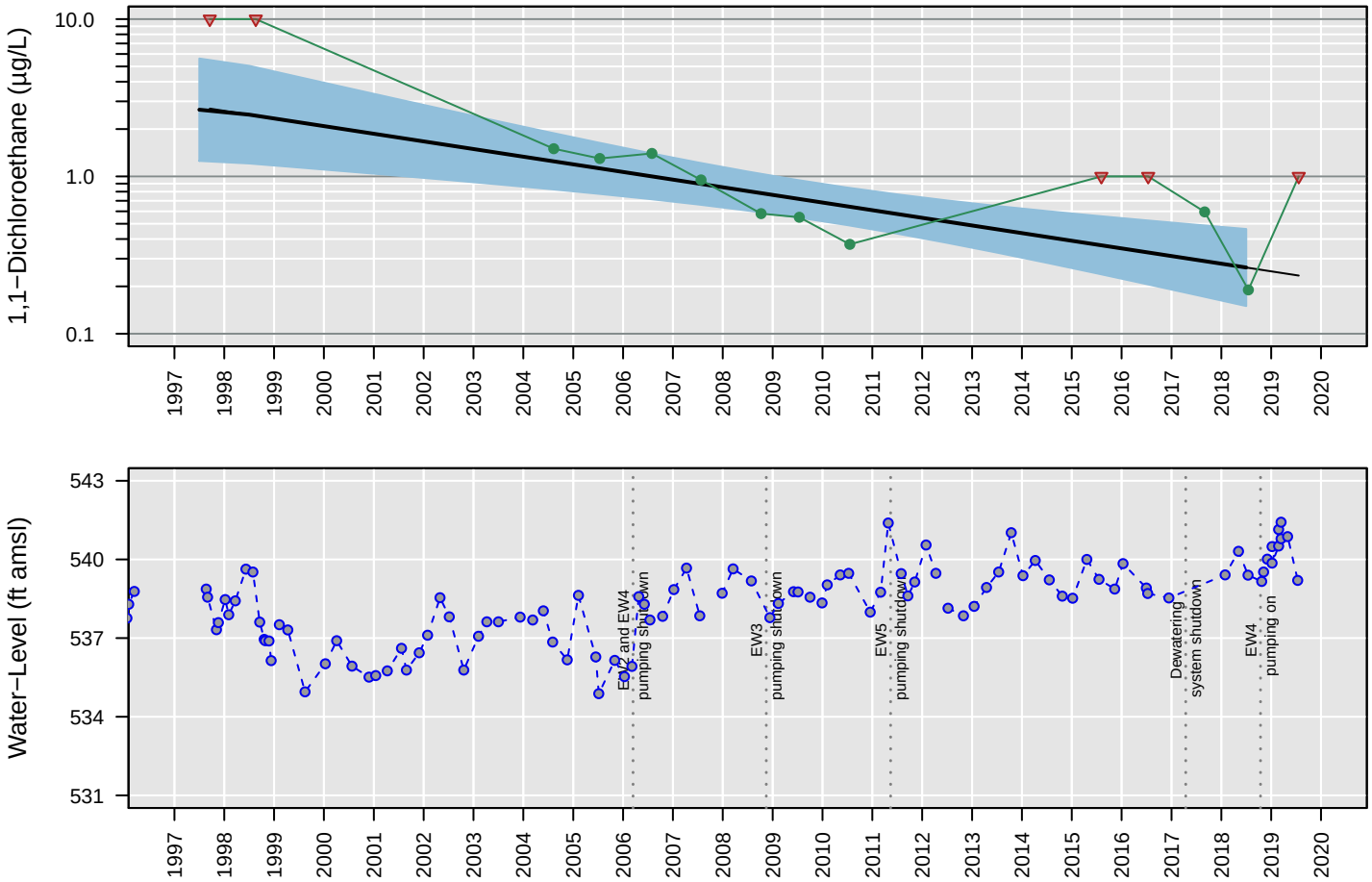


No Analysis Performed

MW77

1,1−Dichloroethane

Number of Comparisons: 14
Percent NDs: 36%



Censored Regression (Tobit) Model

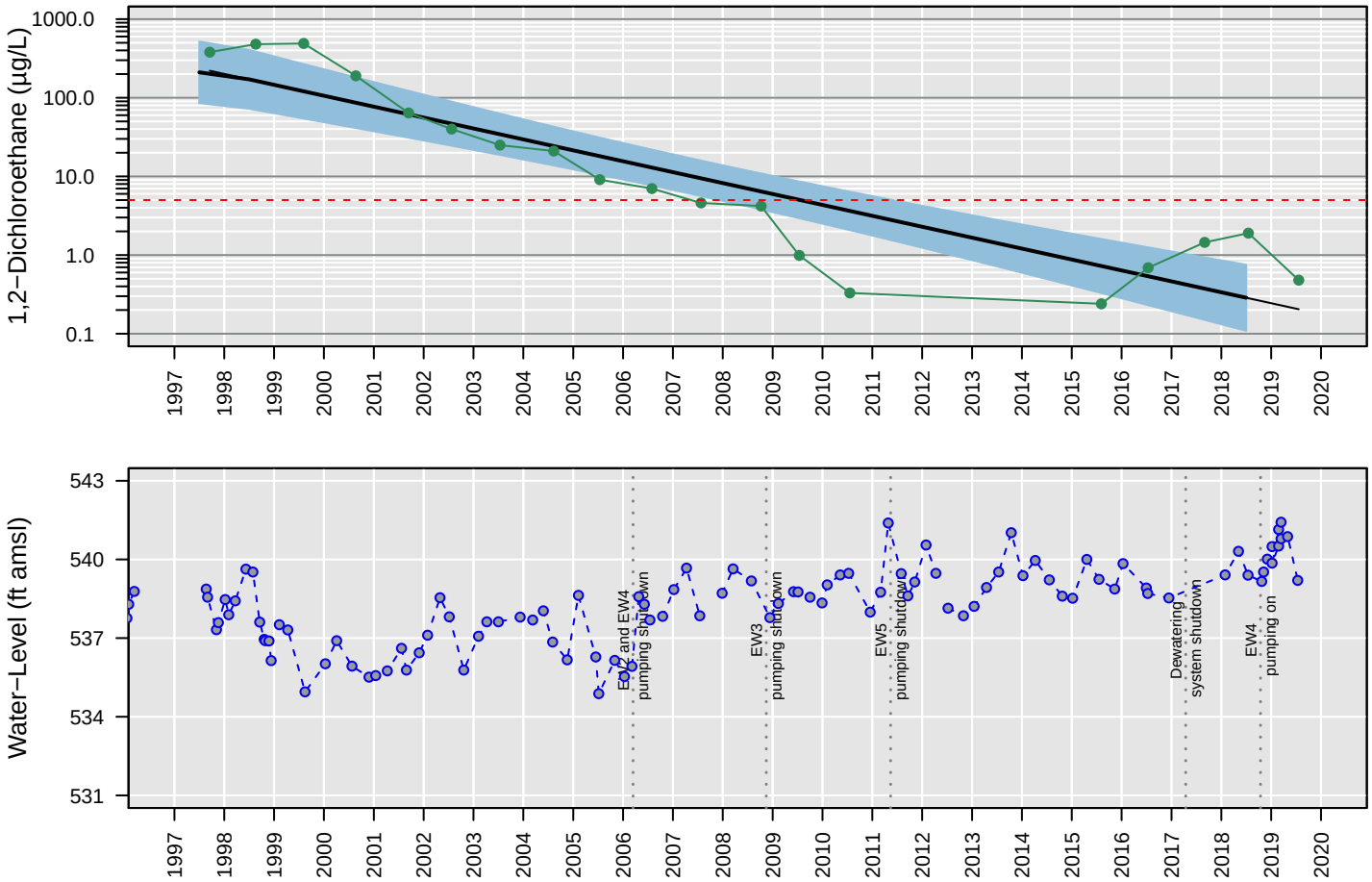
ln Conc. = −0.00031 (+/− 0.000072)*Date + 4.1 (+/− 1.1)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.26 µg/L
UCL: 0.46 µg/L
LCL: 0.15 µg/L

MW77

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.00088 (+/− 0.000097)*Date + 14 (+/− 1.4)

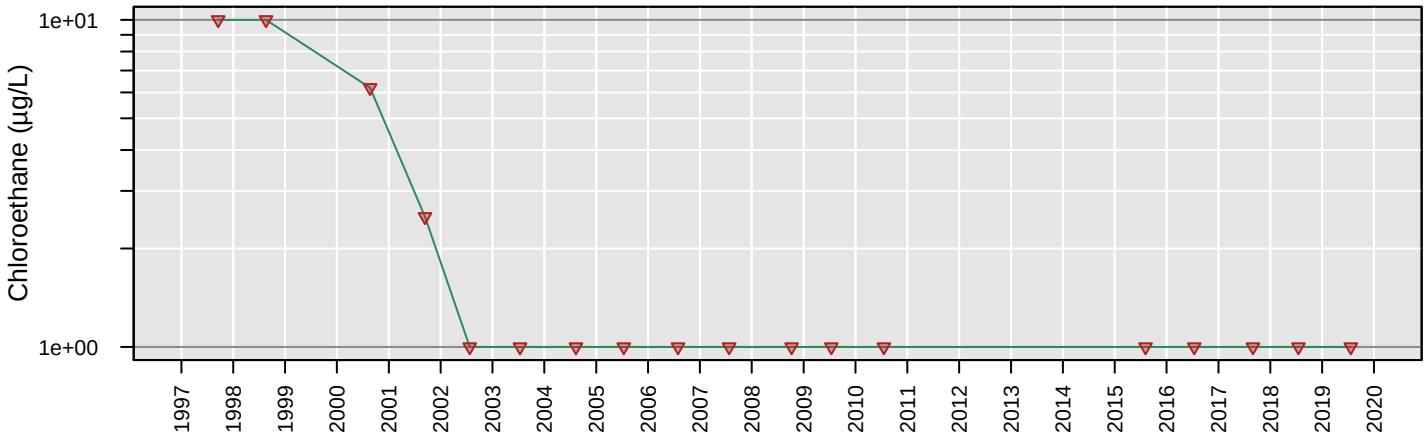
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.29 µg/L
UCL: 0.75 µg/L
LCL: 0.11 µg/L

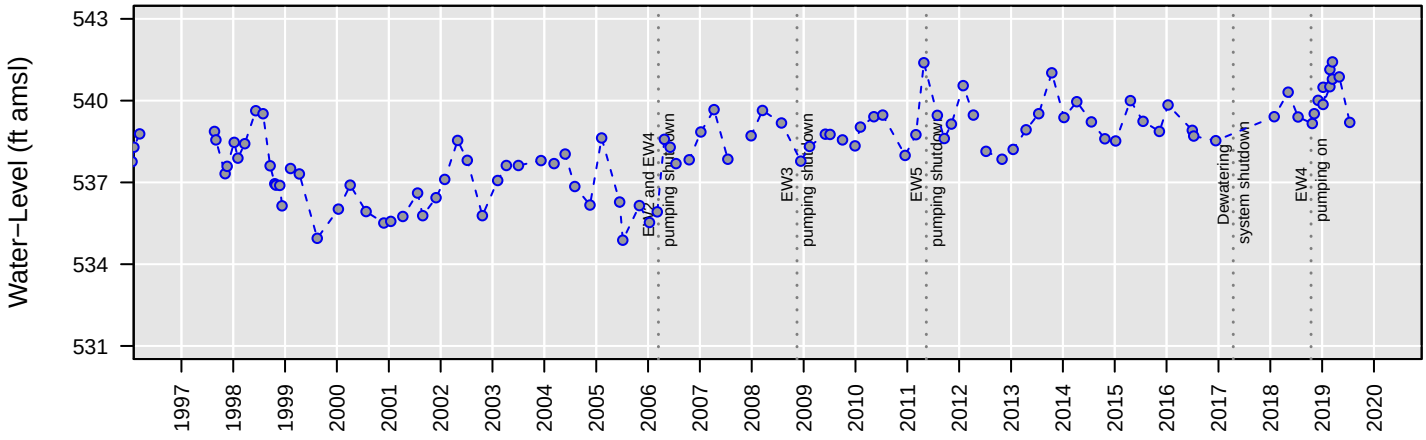
MW77

Chloroethane

Number of Comparisons: 18
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



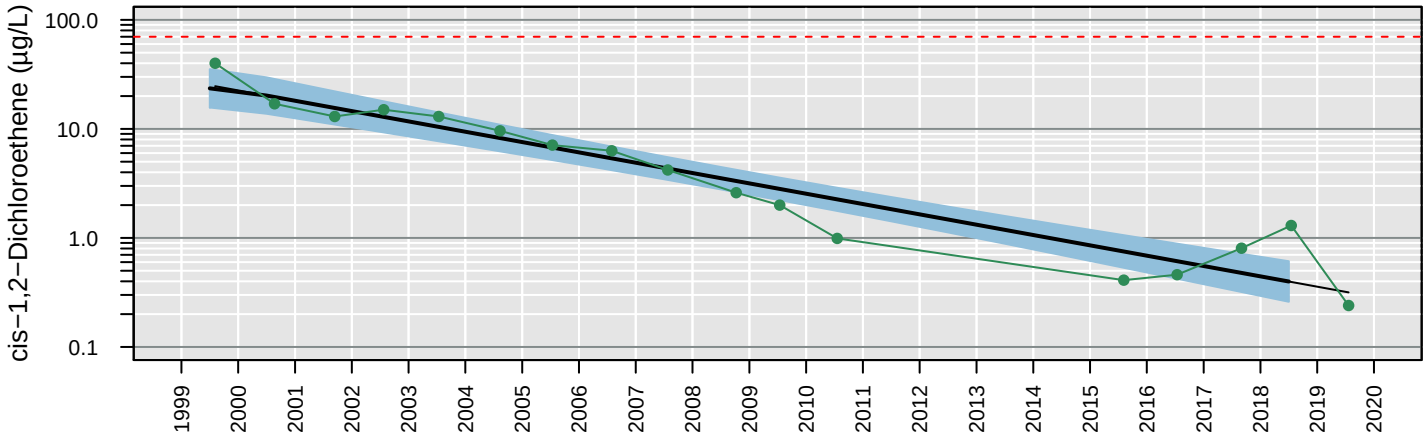


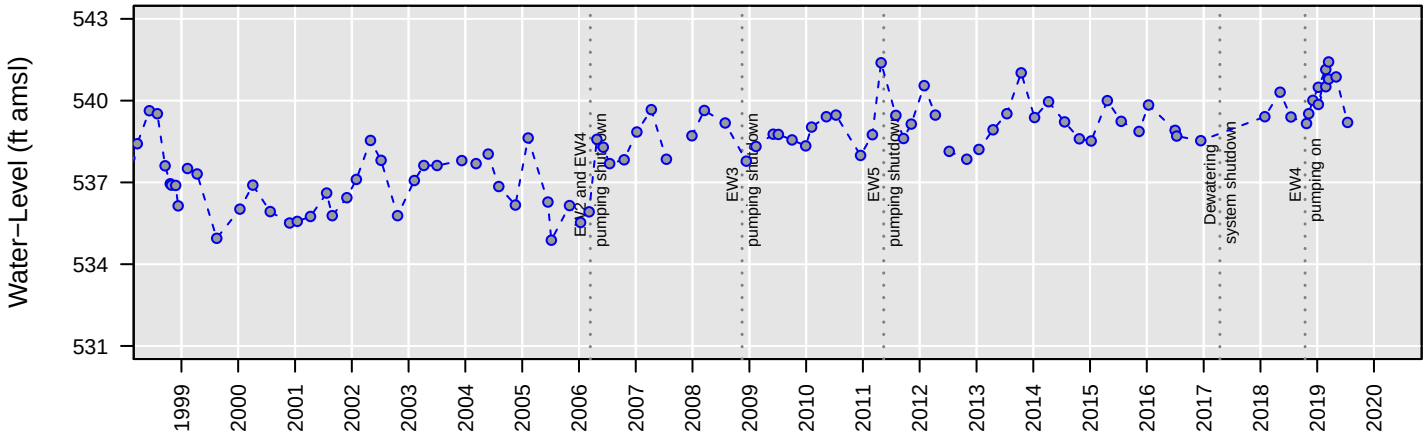
No Analysis Performed

MW77

cis−1,2−Dichloroethene

Number of Comparisons: 17
Percent NDs: 0%





Censored Regression (Tobit) Model

ln Conc. = −0.0006 (+/− 0.000047)*Date + 9.7 (+/− 0.67)

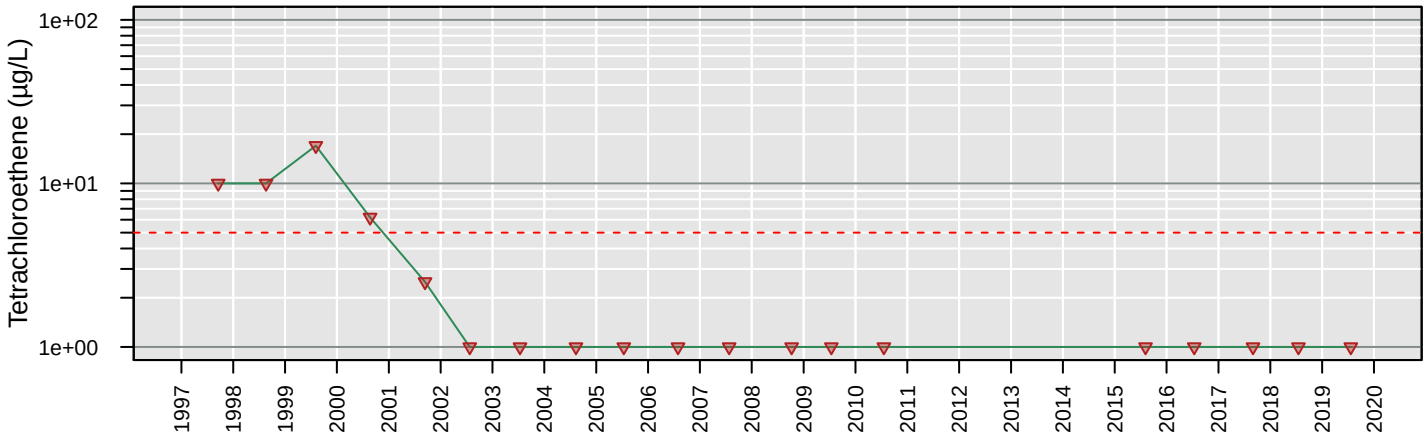
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.4 µg/L
UCL: 0.61 µg/L
LCL: 0.26 µg/L

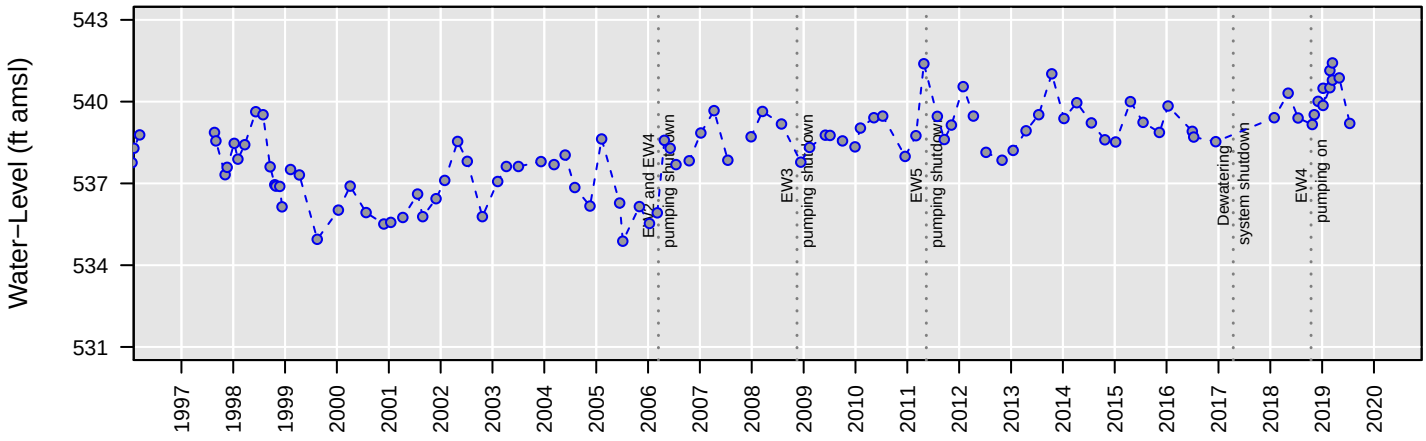
MW77

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



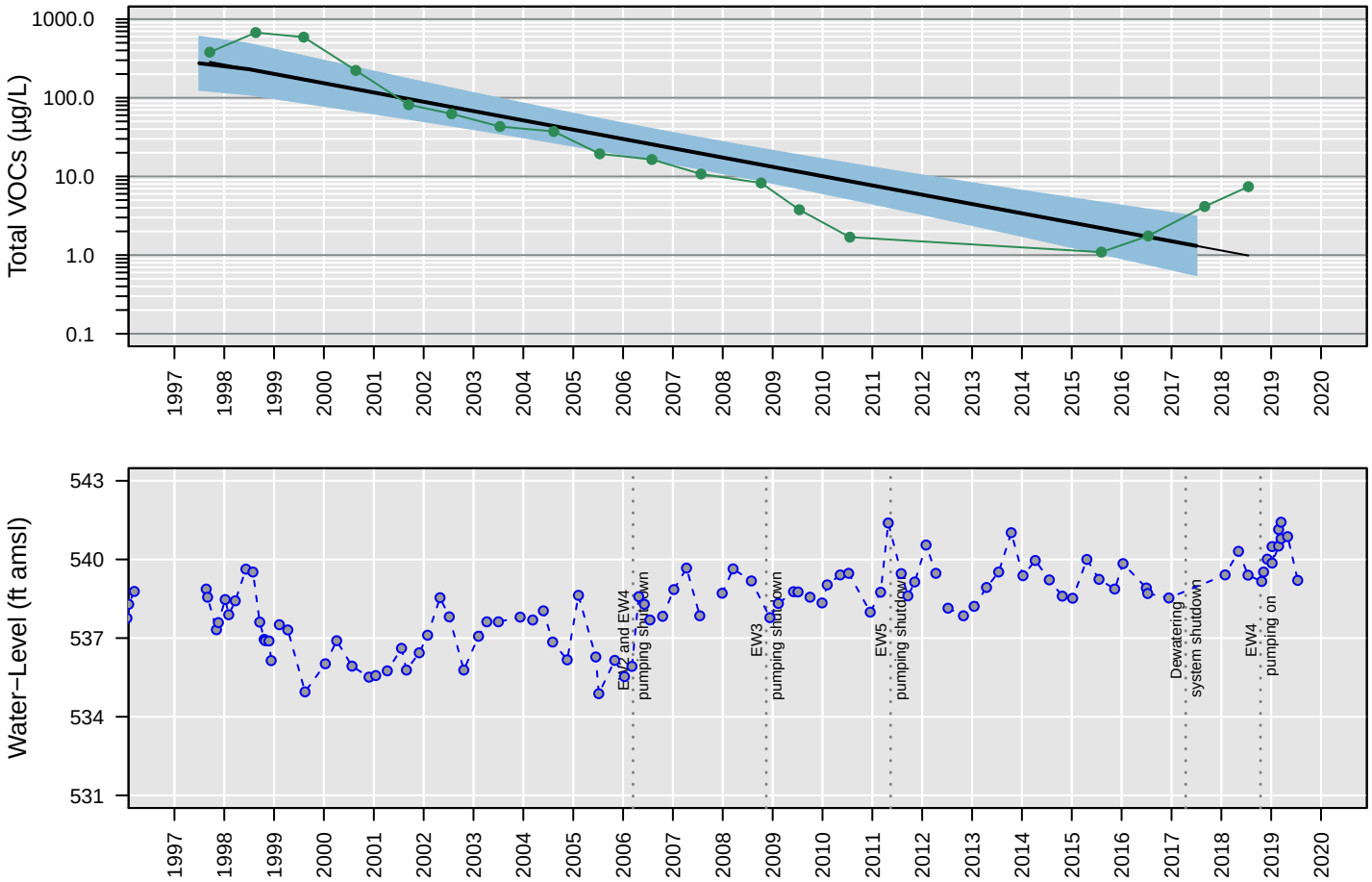


No Analysis Performed

MW77

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%



Censored Regression (Tobit) Model

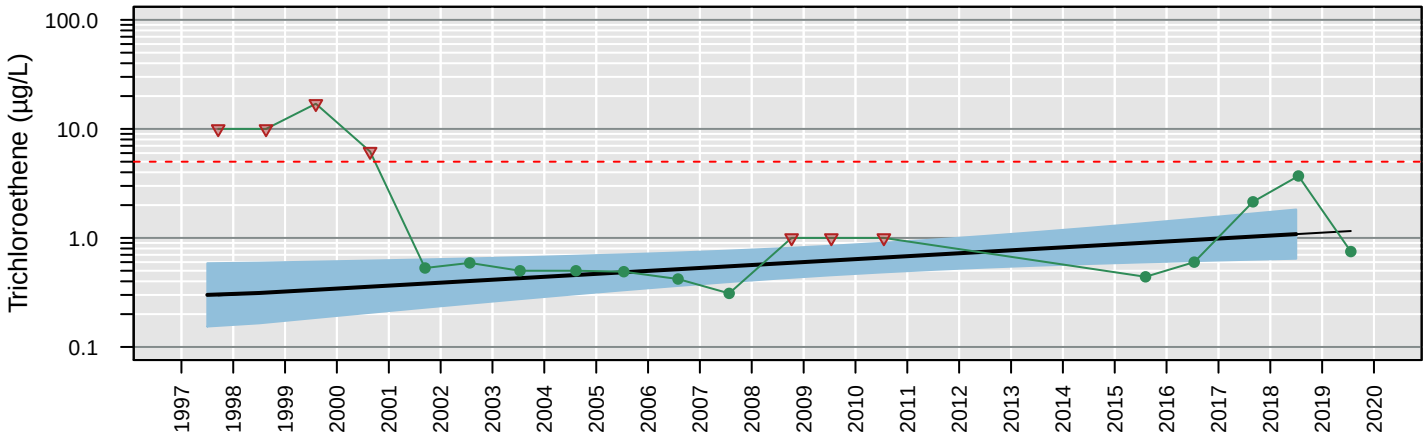
ln Conc. = −0.00074 (+/− 0.000089)*Date + 13 (+/− 1.2)

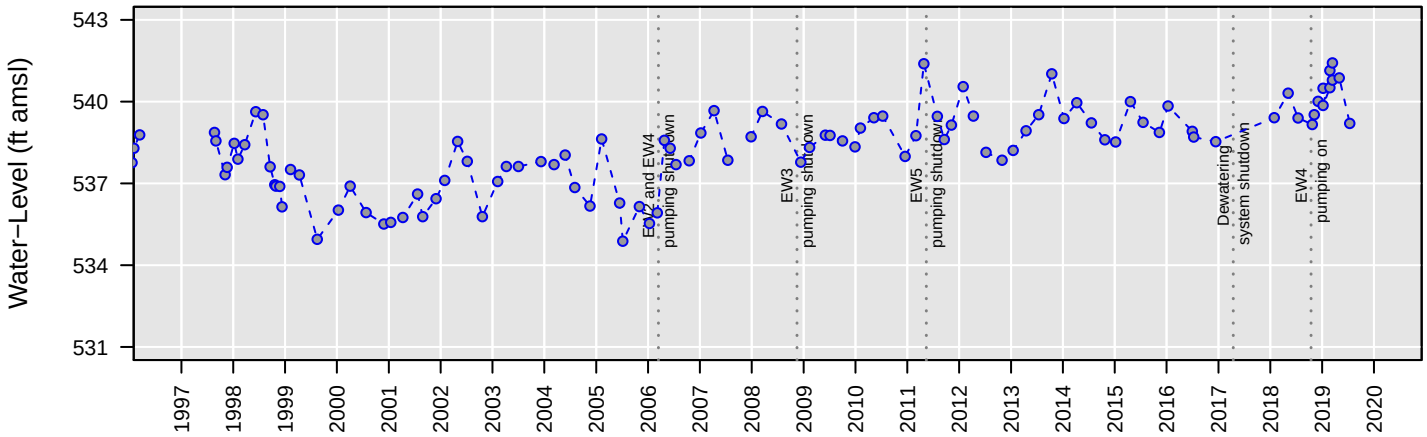
Regression Statistics for January 2017 to January 2018
Geometric Mean: 1.3 µg/L
UCL: 3.1 µg/L
LCL: 0.56 µg/L

MW77

Trichloroethene

Number of Comparisons: 19
Percent NDs: 37%





Censored Regression (Tobit) Model

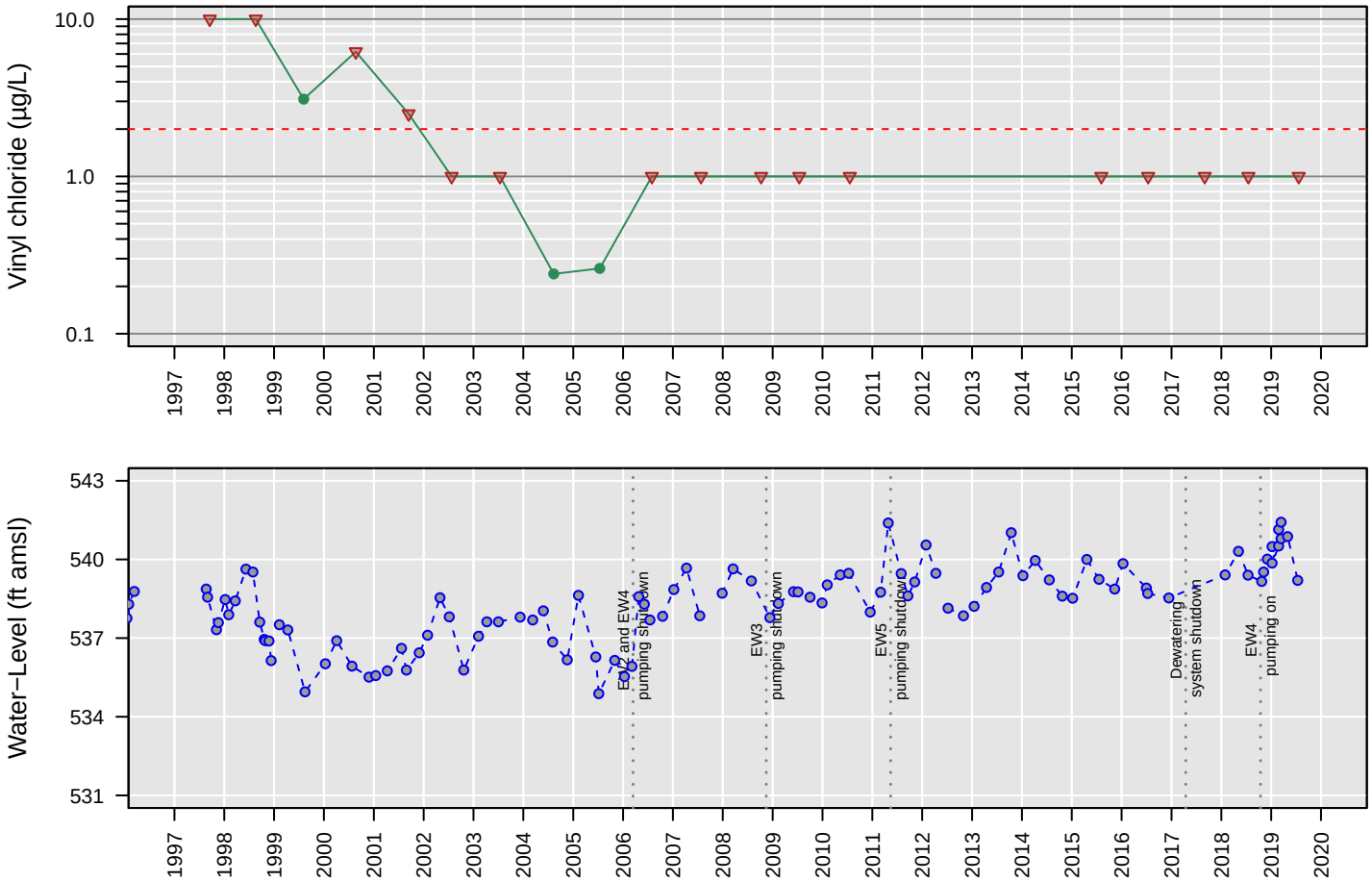
ln Conc. = 0.00017 (+/− 0.000063)*Date + −2.9 (+/− 0.93)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.1 µg/L
UCL: 1.8 µg/L
LCL: 0.64 µg/L

MW77

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 84%

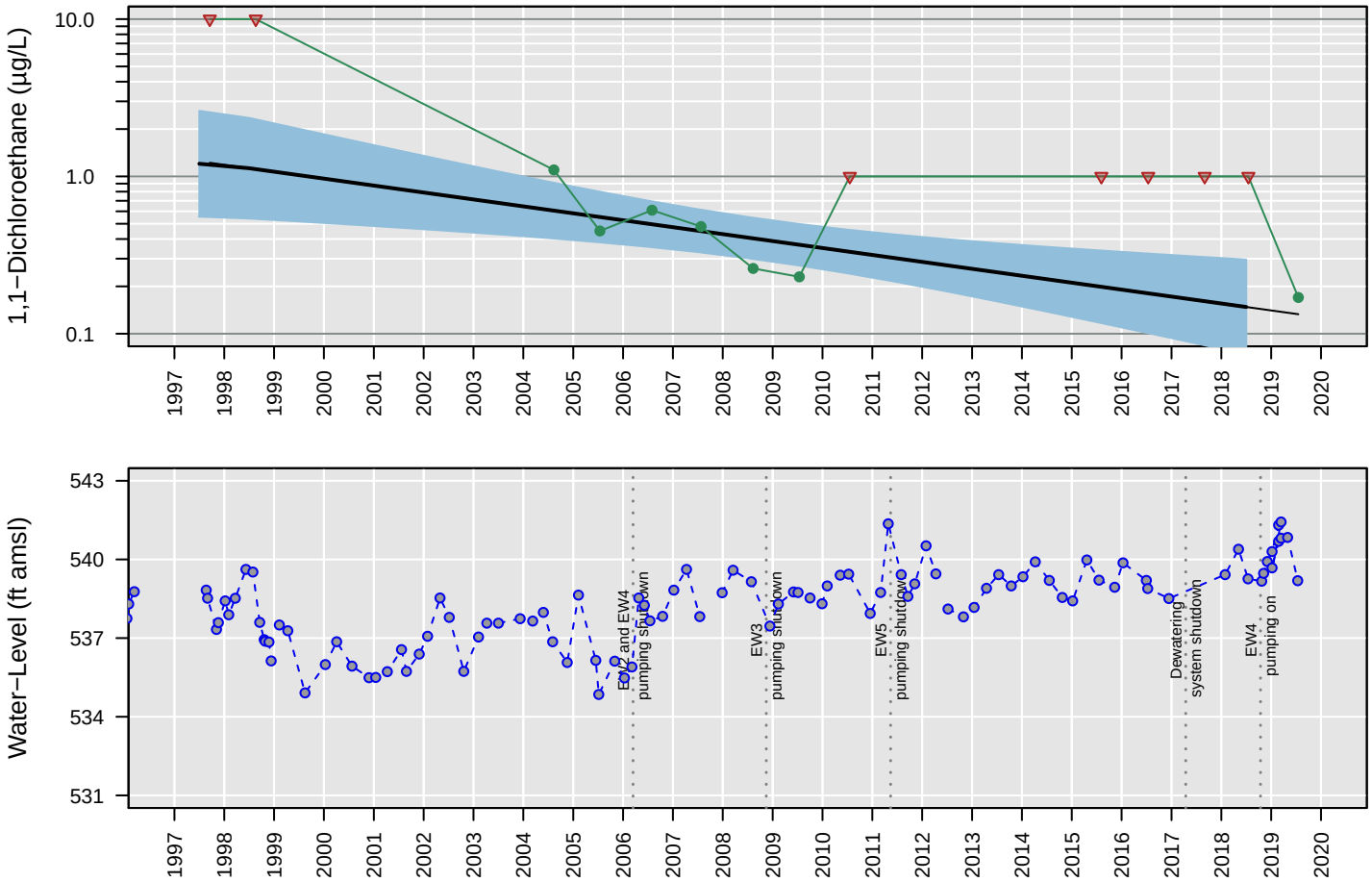


No Analysis Performed

MW78

1,1−Dichloroethane

Number of Comparisons: 14
Percent NDs: 50%



Censored Regression (Tobit) Model

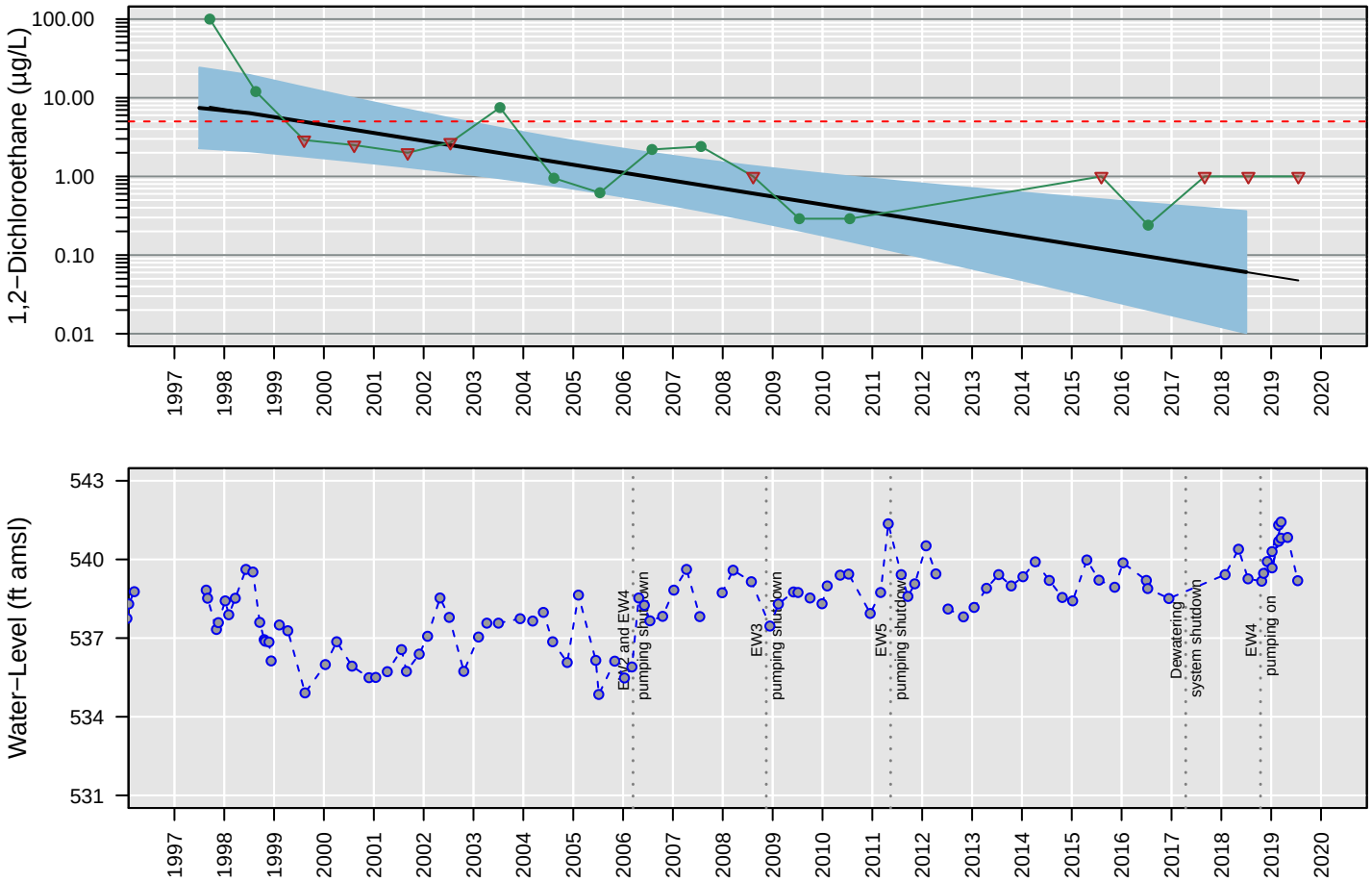
ln Conc. = −0.00028 (+/− 0.000081)*Date + 3 (+/− 1.2)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.15 µg/L
UCL: 0.3 µg/L
LCL: 0.074 µg/L

MW78

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 47%



Censored Regression (Tobit) Model

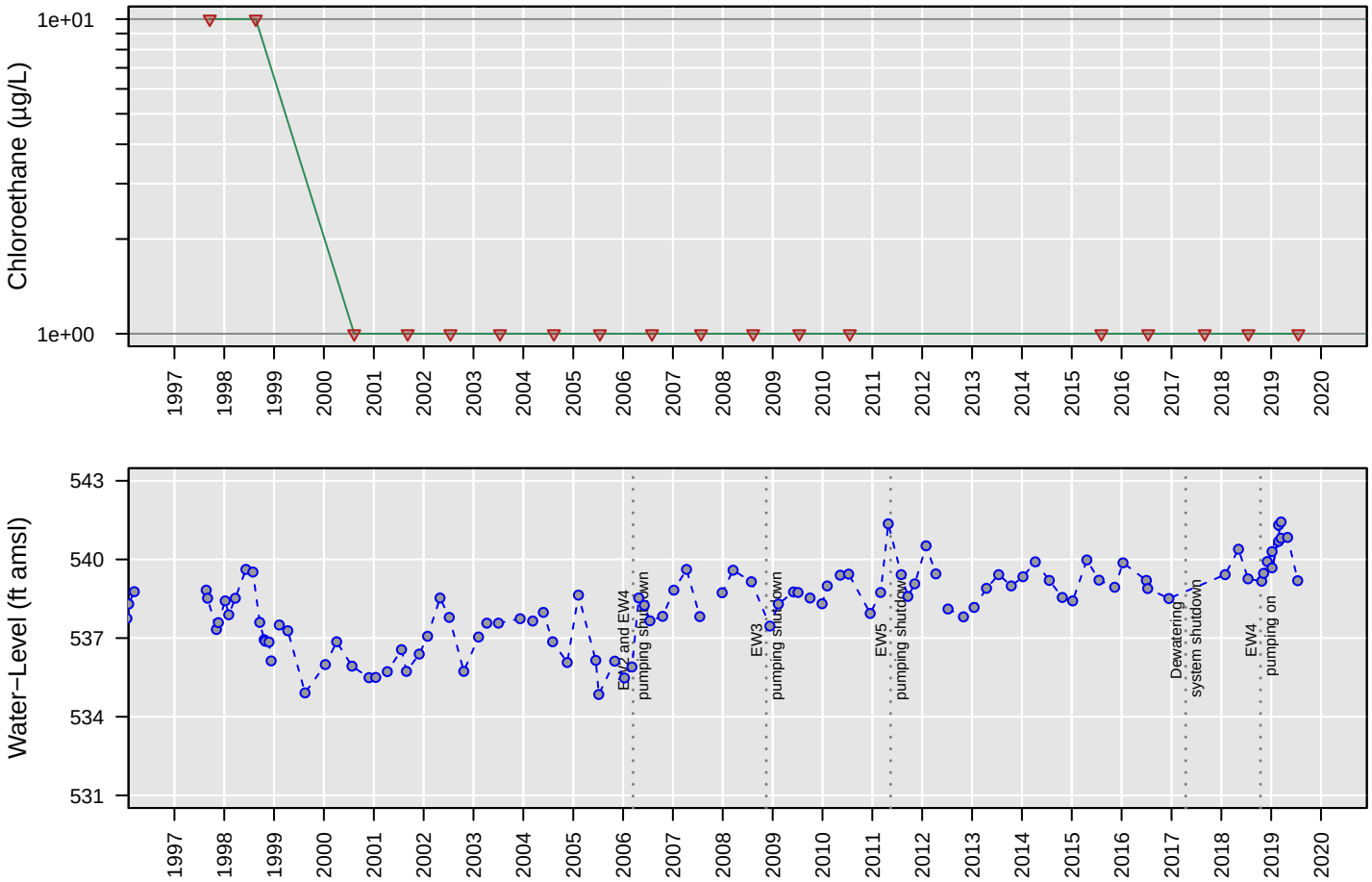
ln Conc. = −0.00064 (+/− 0.00016)*Date + 8.5 (+/− 2.1)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.061 µg/L
UCL: 0.36 µg/L
LCL: 0.01 µg/L

MW78

Chloroethane

Number of Comparisons: 18
Percent NDs: 100%



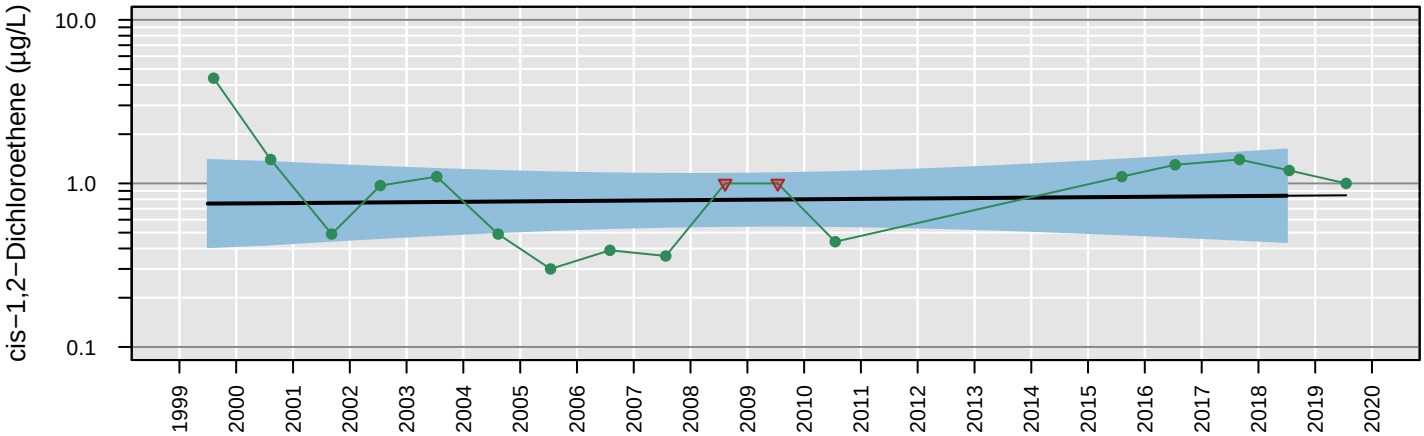
No Analysis Performed

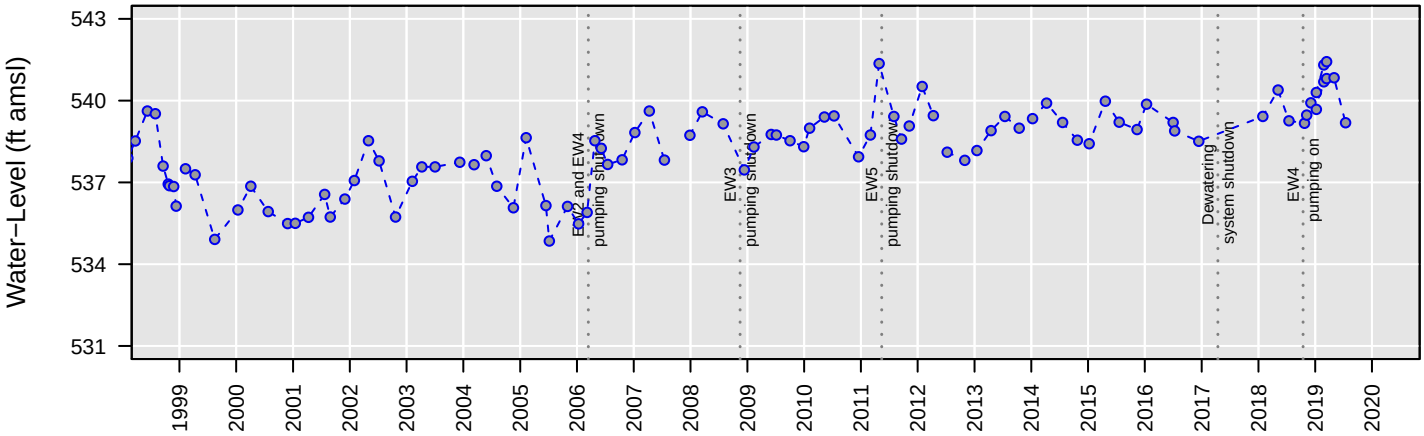
MW78

cis−1,2−Dichloroethene

Number of Comparisons: 17
Percent NDs: 12%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

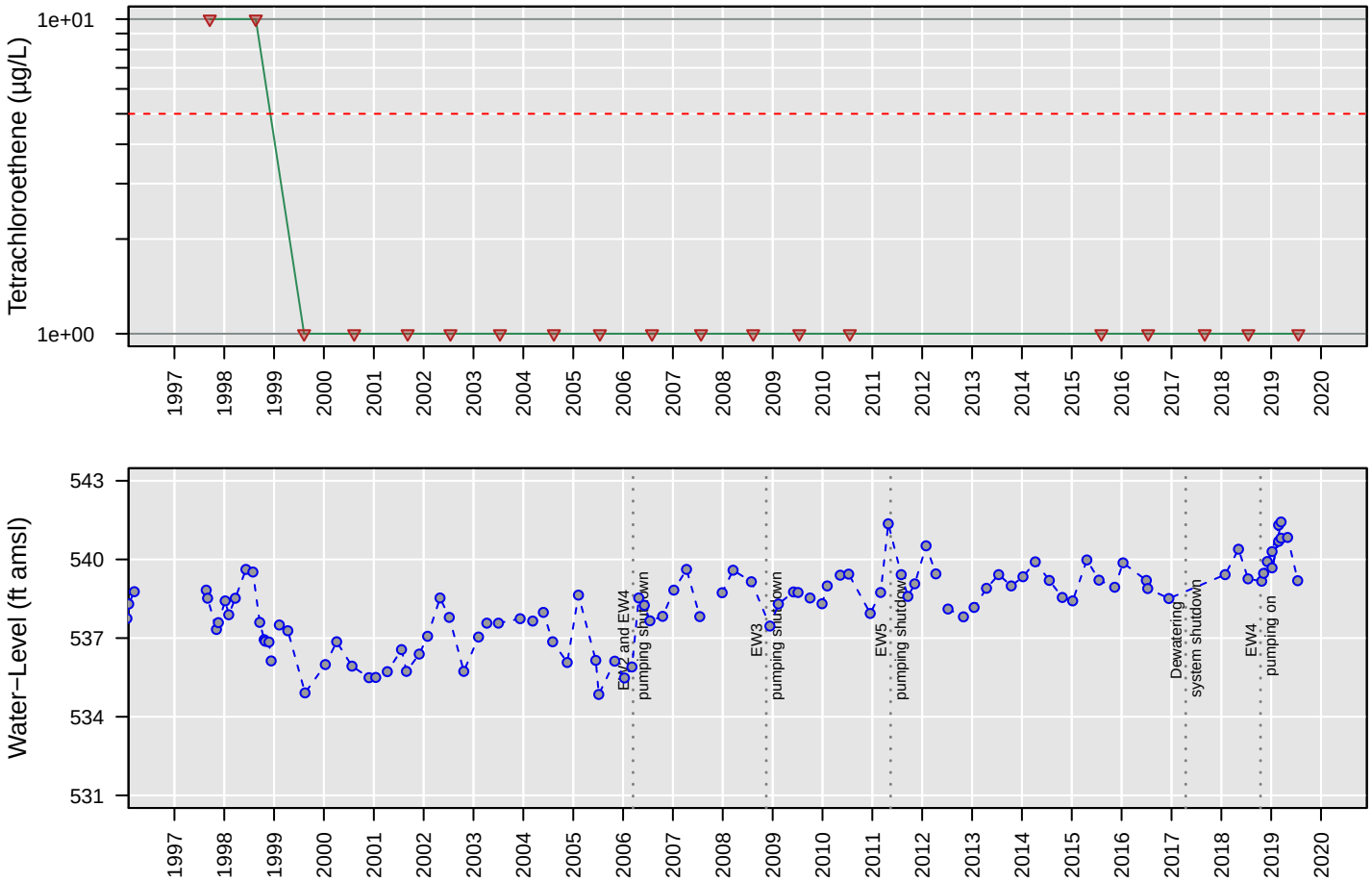
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.84 µg/L
UCL: 1.6 µg/L
LCL: 0.44 µg/L

MW78

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 100%

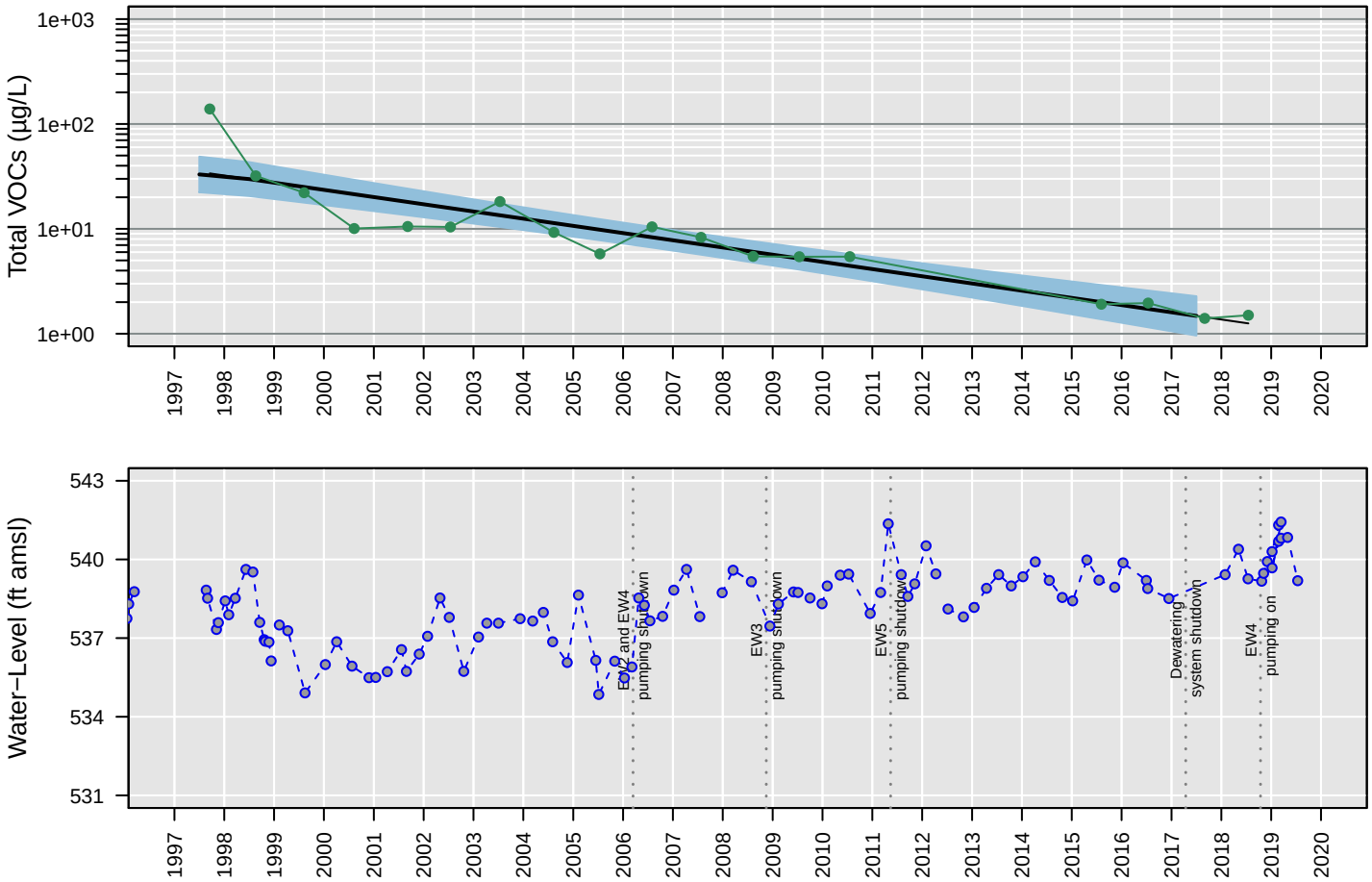


No Analysis Performed

MW78

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%



Censored Regression (Tobit) Model

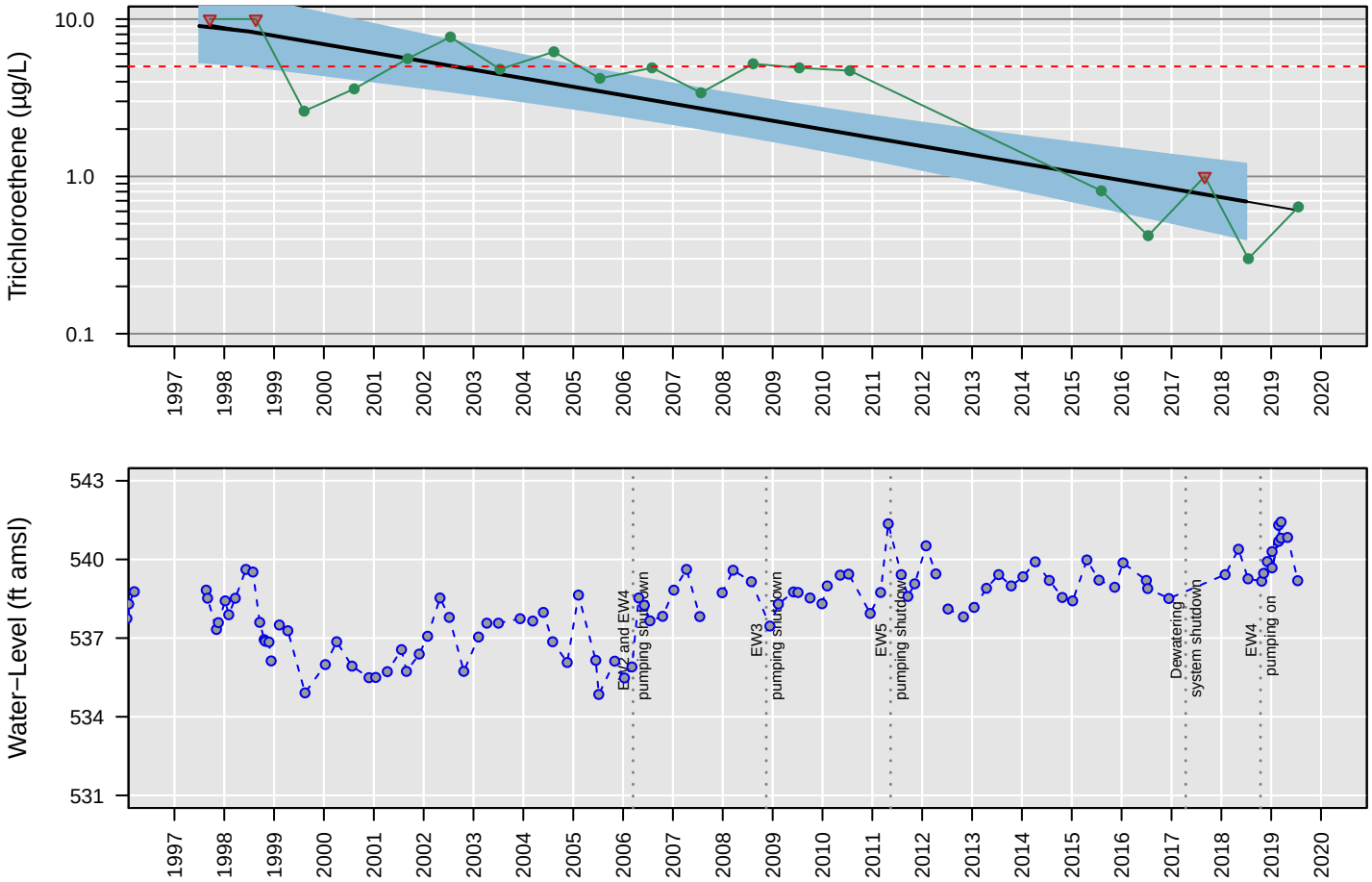
ln Conc. = −0.00043 (+/− 0.000045)*Date + 7.9 (+/− 0.62)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 1.5 µg/L
UCL: 2.3 µg/L
LCL: 0.96 µg/L

MW78

Trichloroethene

Number of Comparisons: 19
Percent NDs: 16%



Censored Regression (Tobit) Model

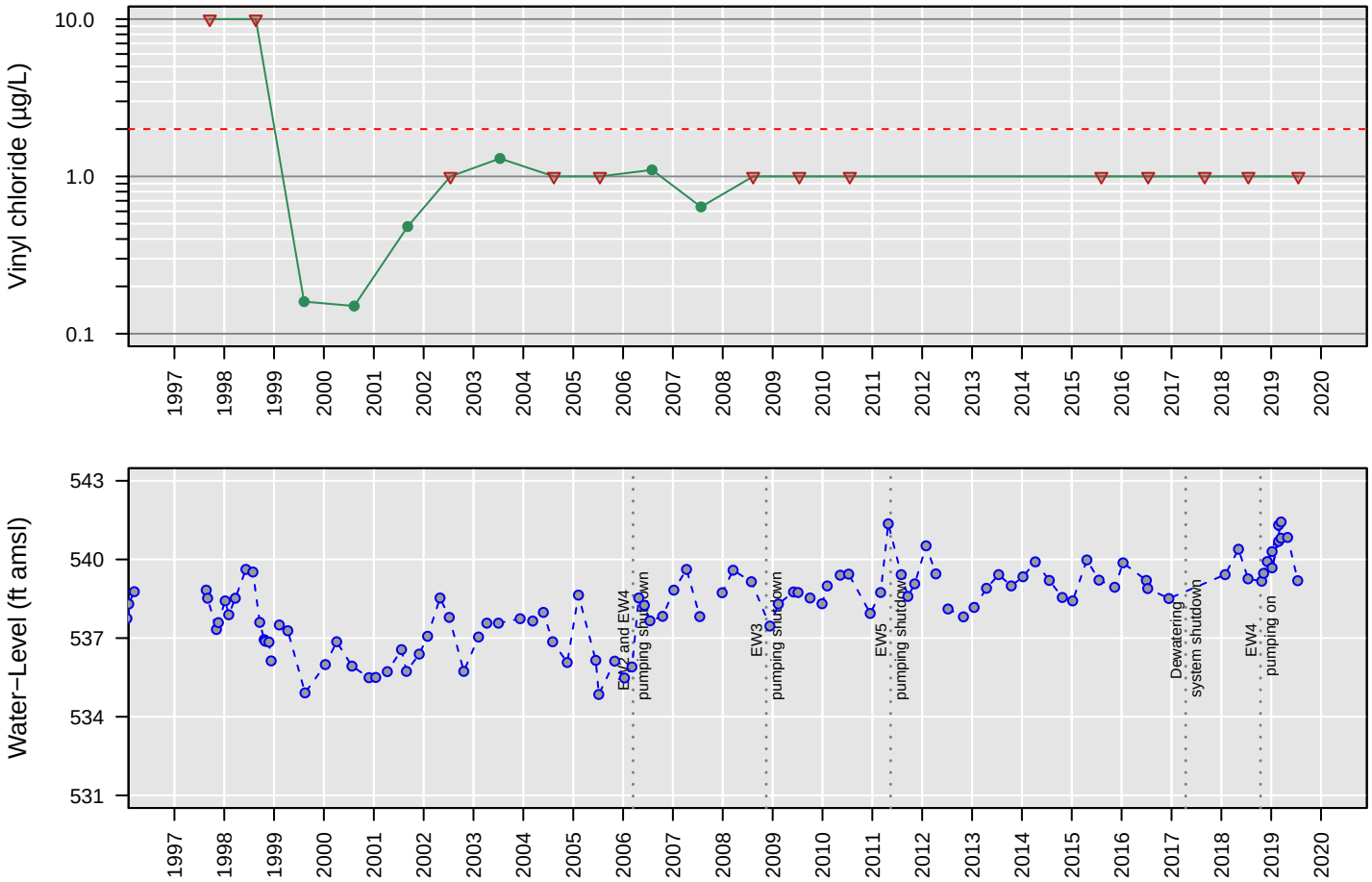
ln Conc. = −0.00034 (+/− 0.000057)*Date + 5.7 (+/− 0.8)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.69 µg/L
UCL: 1.2 µg/L
LCL: 0.4 µg/L

MW78

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 68%



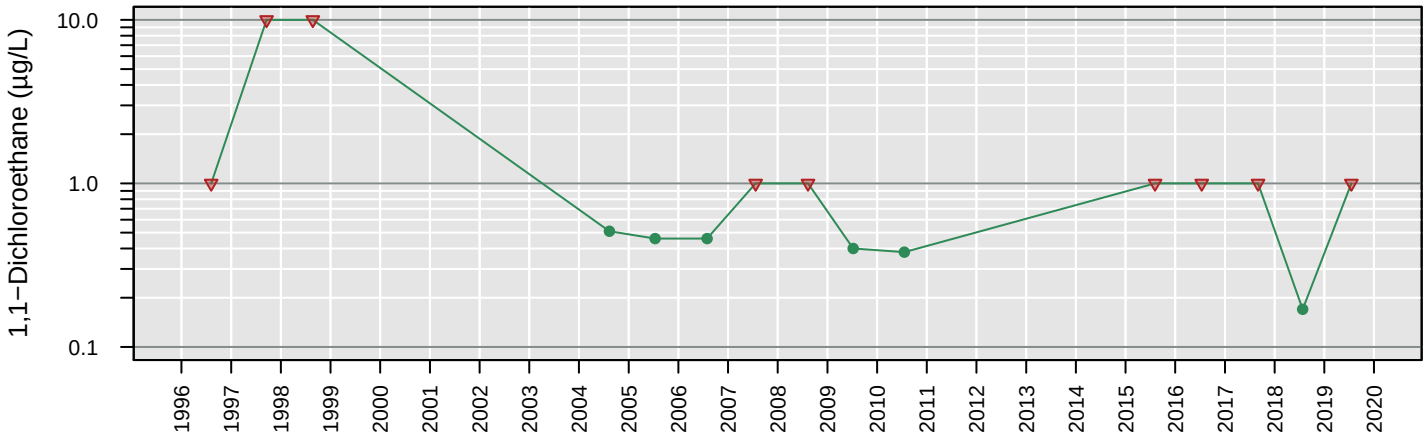
No Analysis Performed

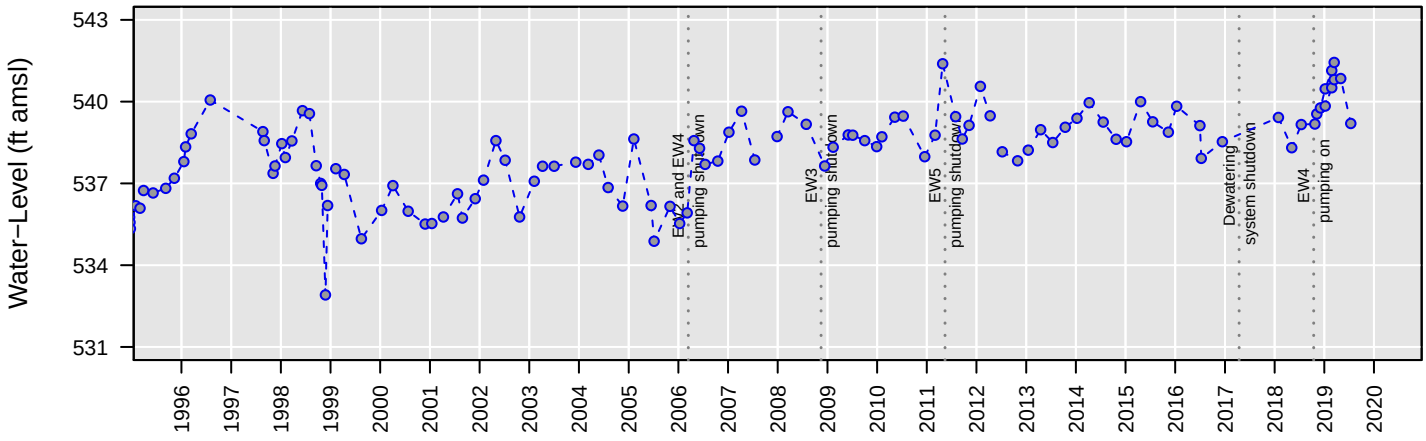
MW79

1,1−Dichloroethane

Number of Comparisons: 15
Percent NDs: 60%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



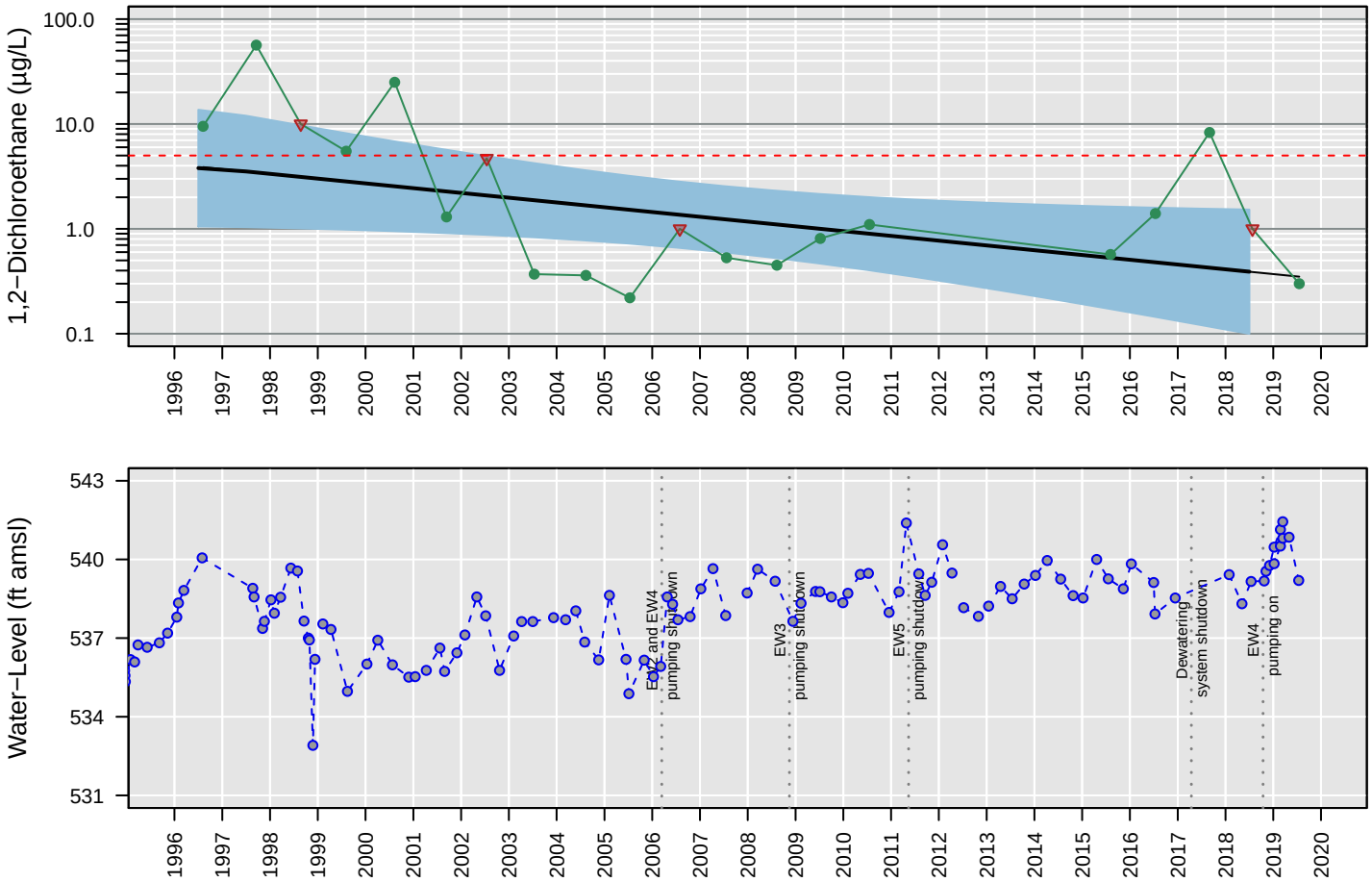


No Analysis Performed

MW79

1,2−Dichloroethane

Number of Comparisons: 20
Percent NDs: 20%



Censored Regression (Tobit) Model

ln Conc. = −0.00029 (+/− 0.00013)*Date + 4.1 (+/− 1.8)

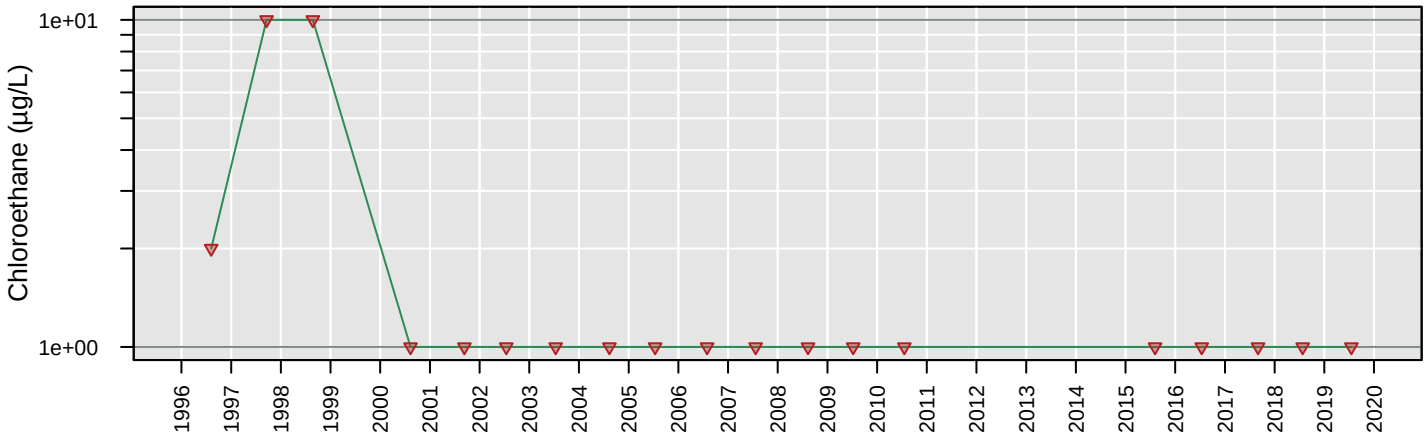
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.39 µg/L
UCL: 1.5 µg/L
LCL: 0.1 µg/L

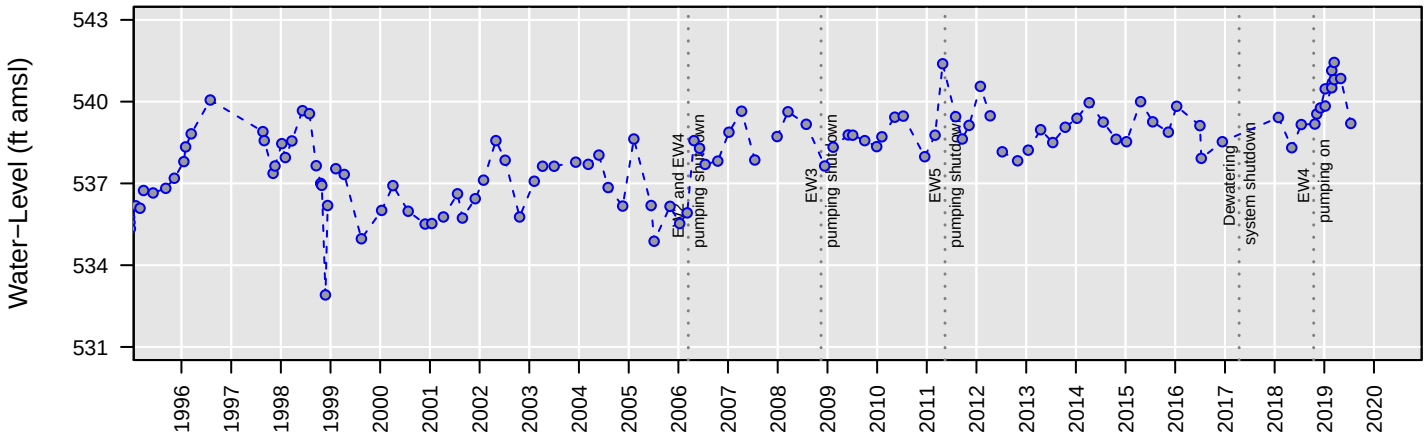
MW79

Chloroethane

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



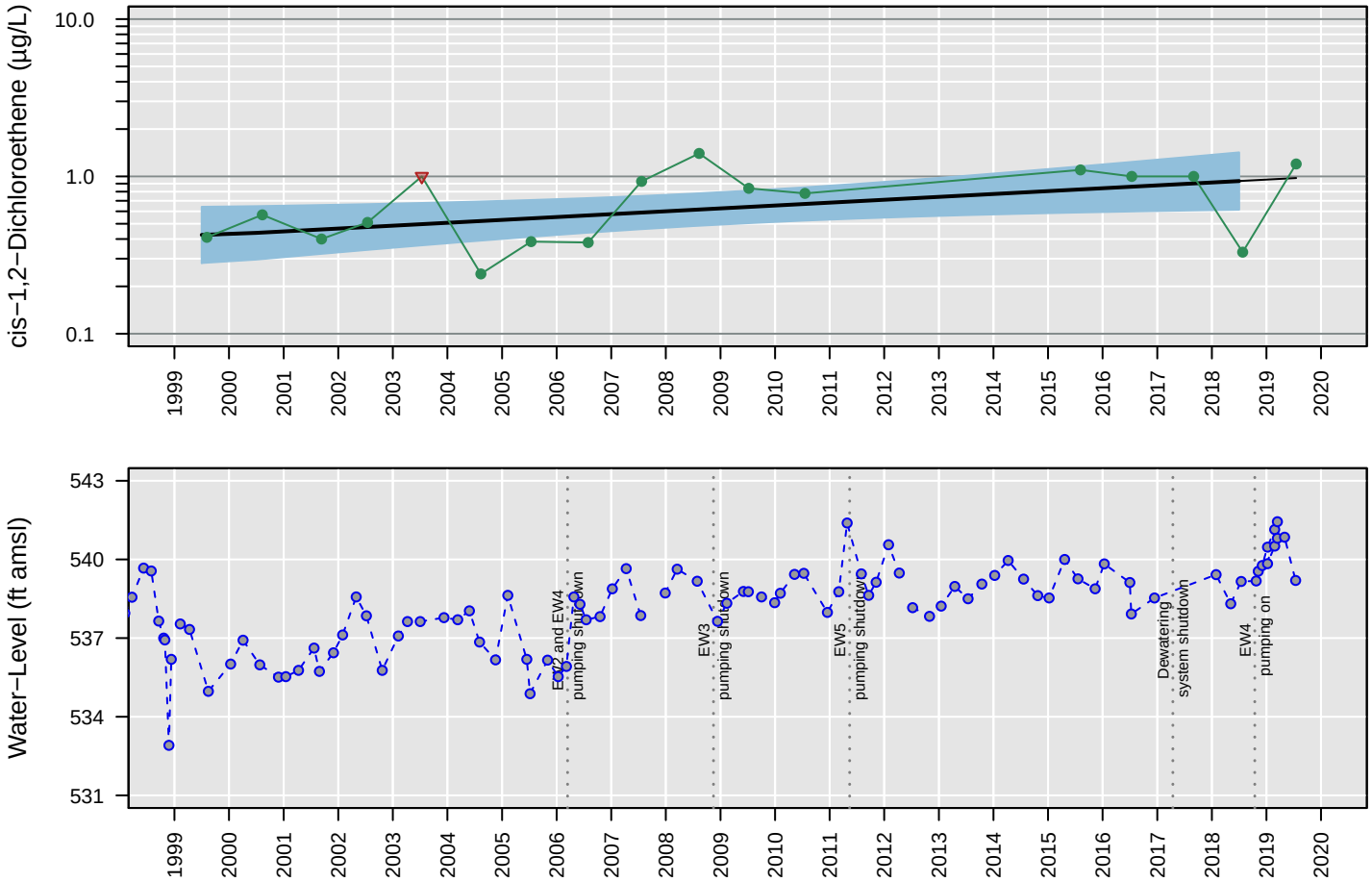


No Analysis Performed

MW79

cis−1,2−Dichloroethene

Number of Comparisons: 17
Percent NDs: 6%



Censored Regression (Tobit) Model

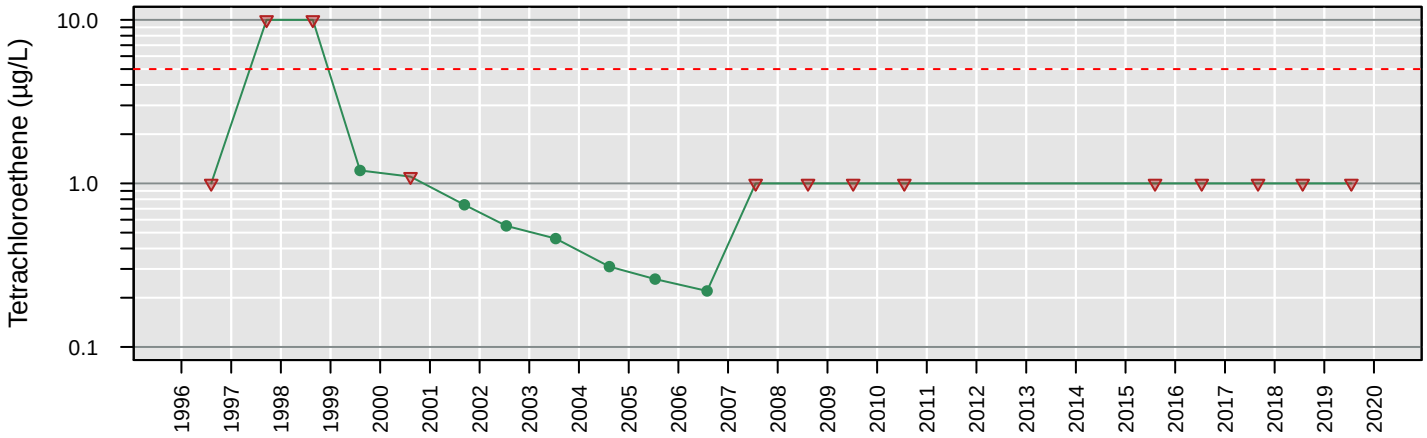
ln Conc. = 0.00012 (+/− 0.000047)*Date + −2.1 (+/− 0.67)

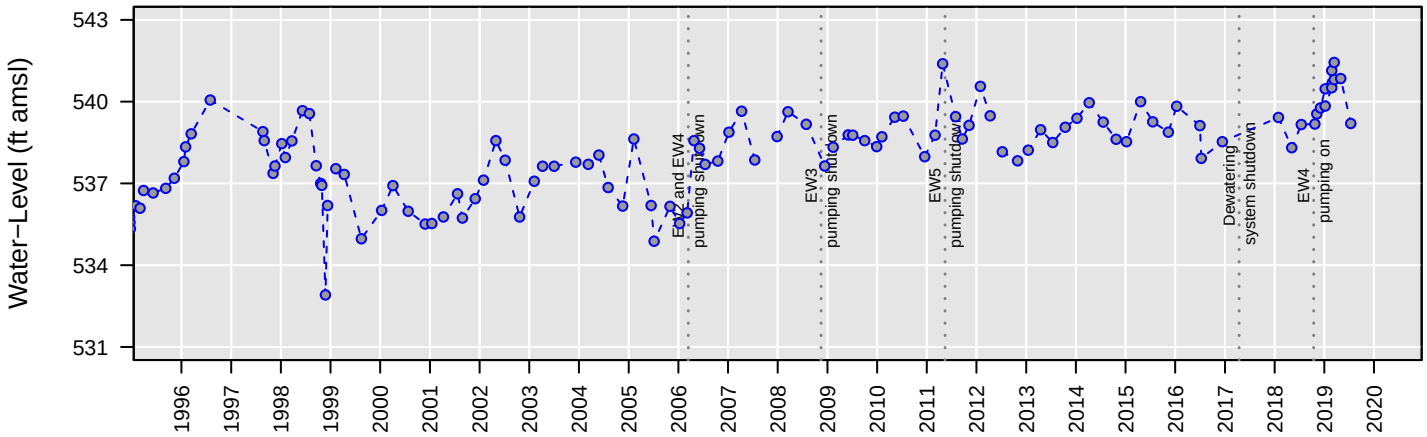
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.93 µg/L
UCL: 1.4 µg/L
LCL: 0.61 µg/L

MW79

Tetrachloroethene

Number of Comparisons: 20
Percent NDs: 65%



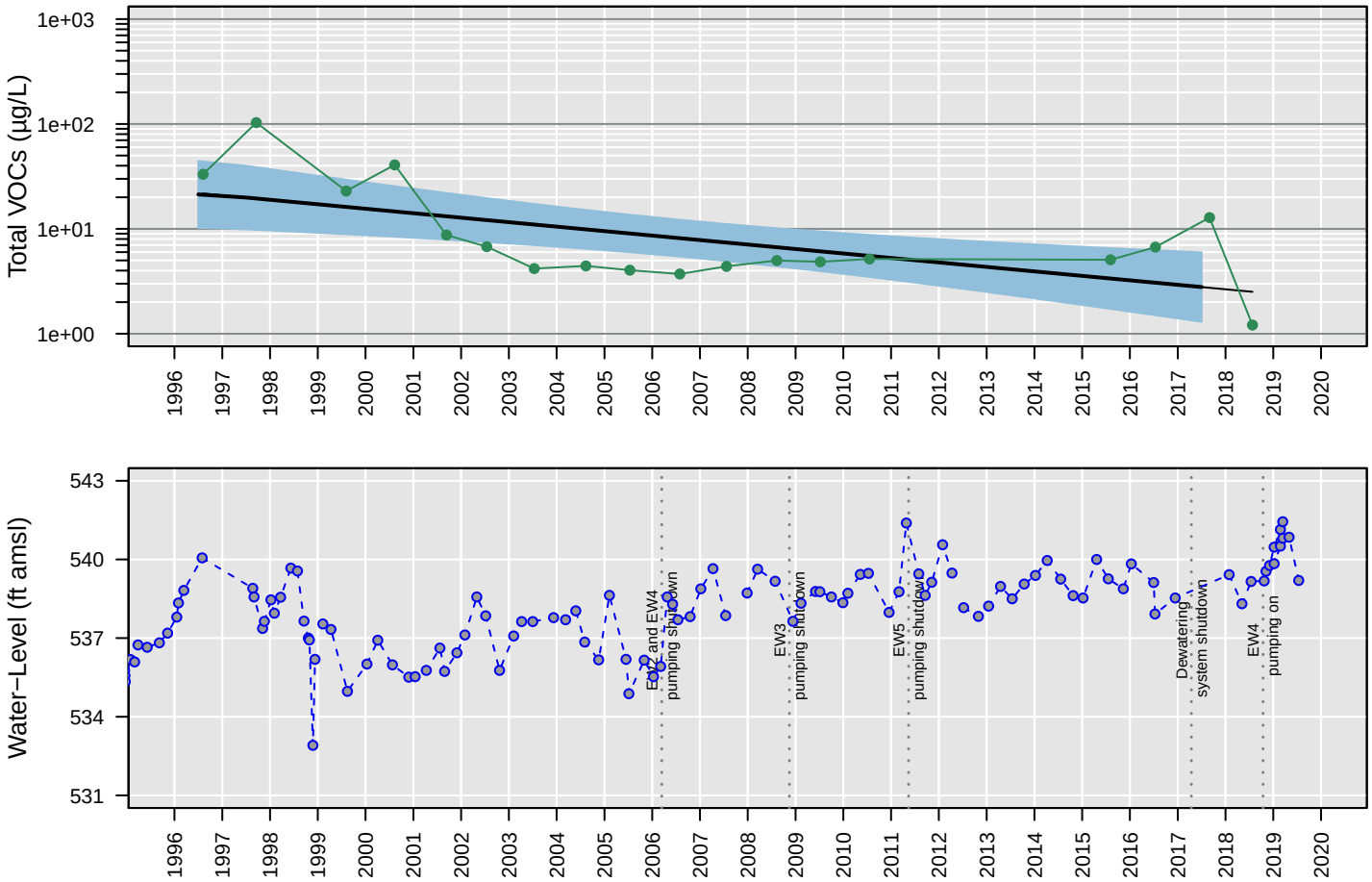


No Analysis Performed

MW79

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%



Censored Regression (Tobit) Model

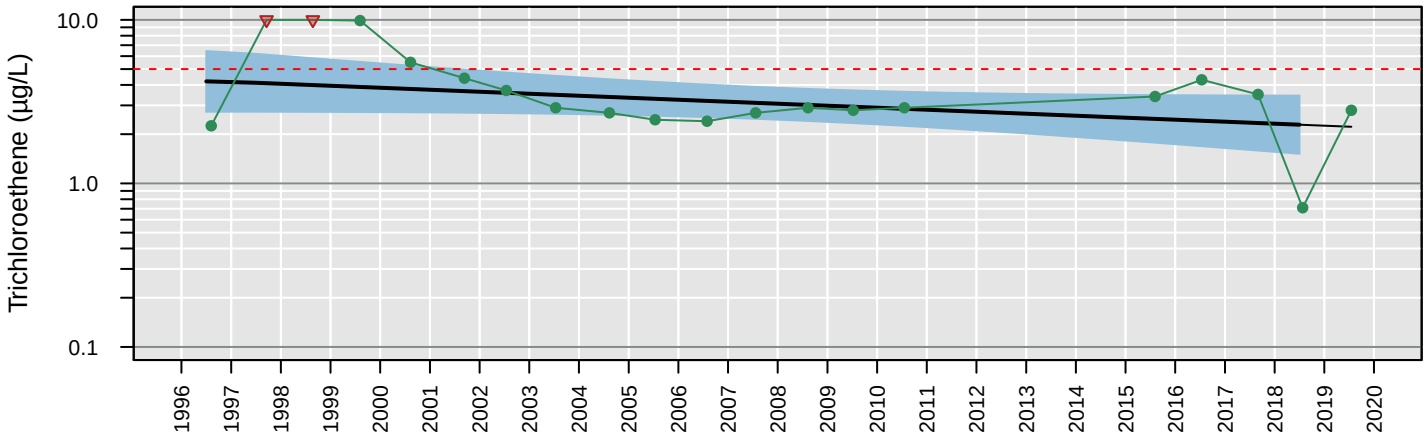
ln Conc. = −0.00027 (+/− 0.000078)*Date + 5.7 (+/− 1.1)

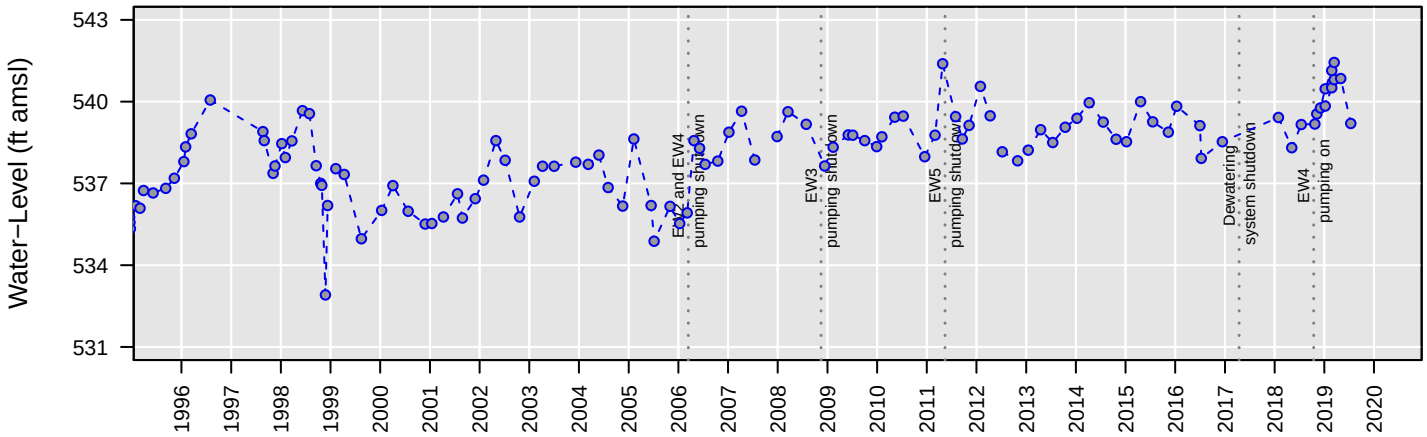
Regression Statistics for January 2017 to January 2018
Geometric Mean: 2.8 µg/L
UCL: 6 µg/L
LCL: 1.3 µg/L

MW79

Trichloroethene

Number of Comparisons: 20
Percent NDs: 10%





Censored Regression (Tobit) Model

Trend Not Significant

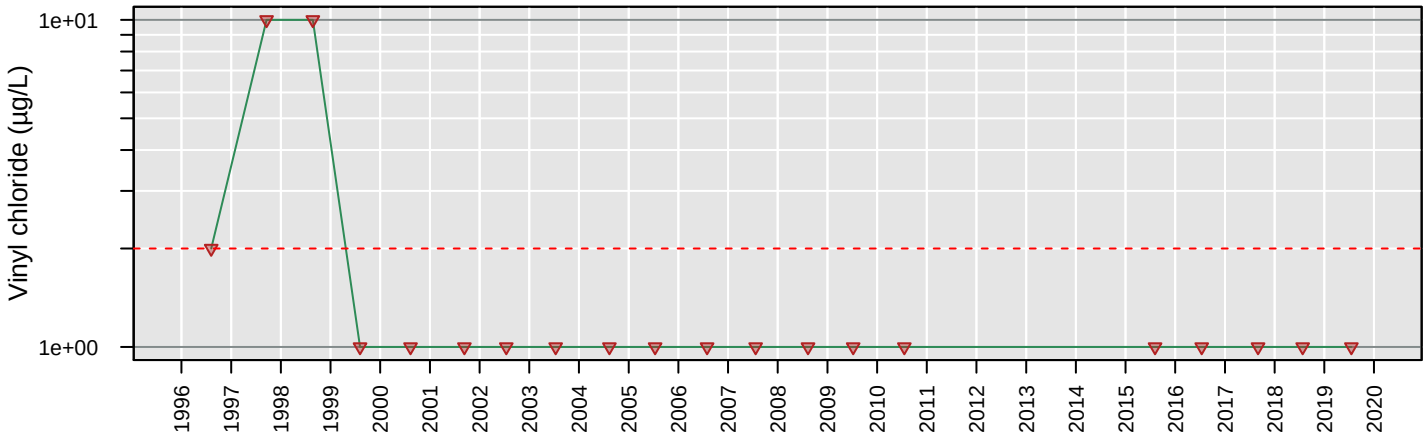
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.3 µg/L
UCL: 3.4 µg/L
LCL: 1.5 µg/L

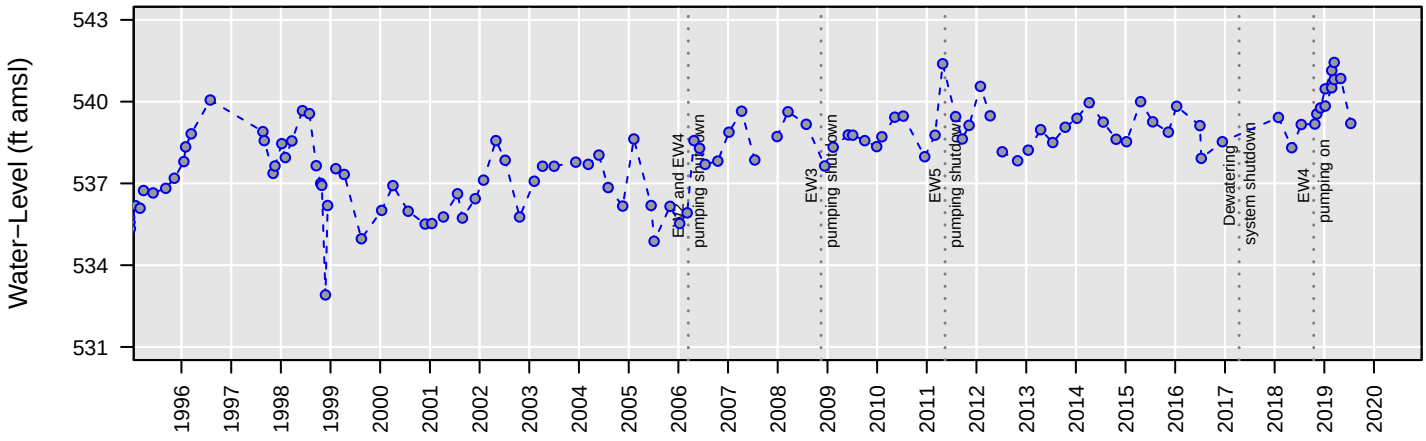
MW79

Vinyl chloride

Number of Comparisons: 20
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



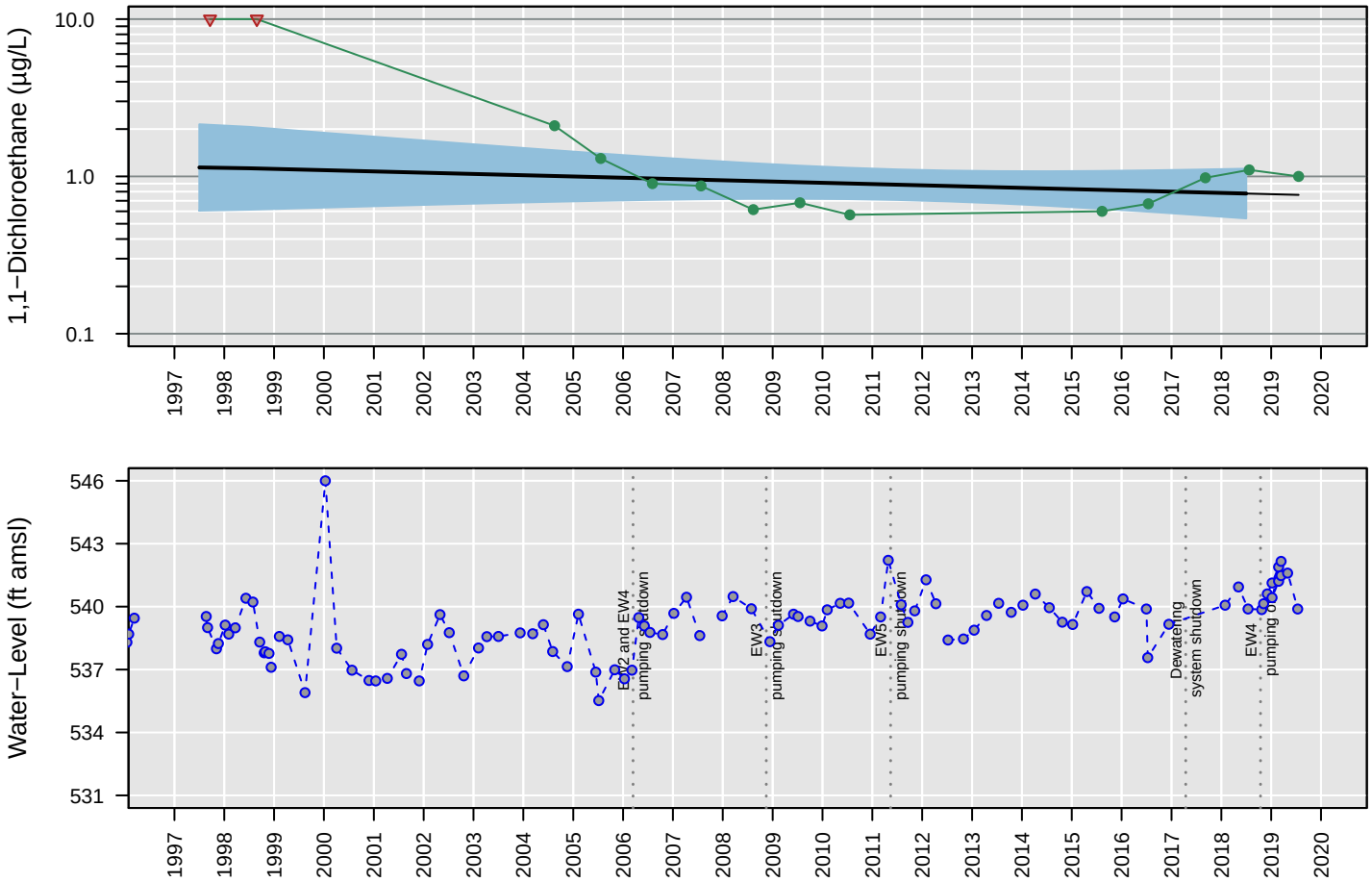


No Analysis Performed

MW80

1,1−Dichloroethane

Number of Comparisons: 14
Percent NDs: 14%



Censored Regression (Tobit) Model

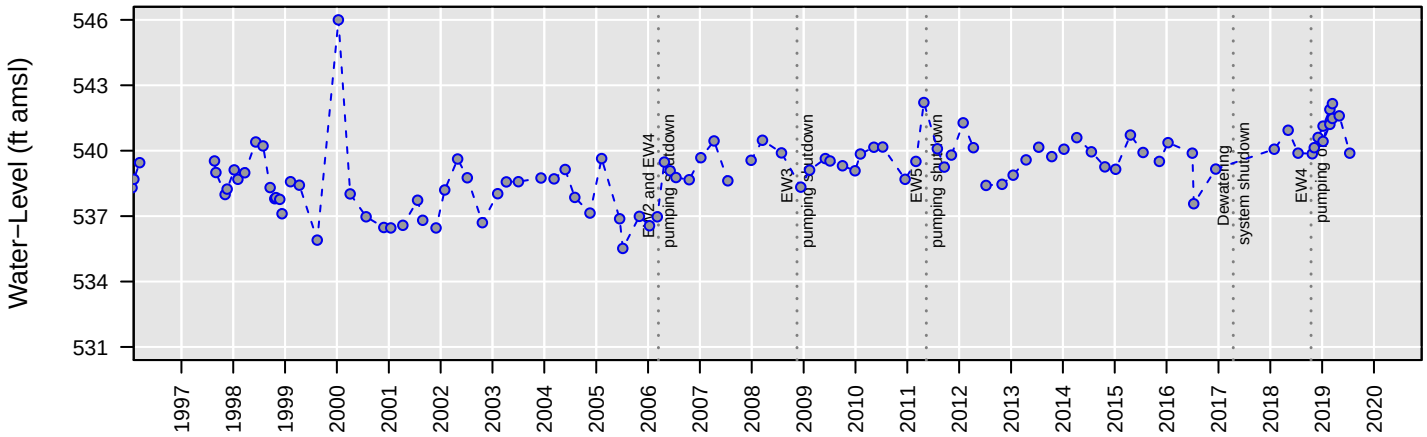
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.78 µg/L
UCL: 1.1 µg/L
LCL: 0.54 µg/L

MW80

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 32%



Censored Regression (Tobit) Model

ln Conc. = −0.00092 (+/− 0.000097)*Date + 13 (+/− 1.2)

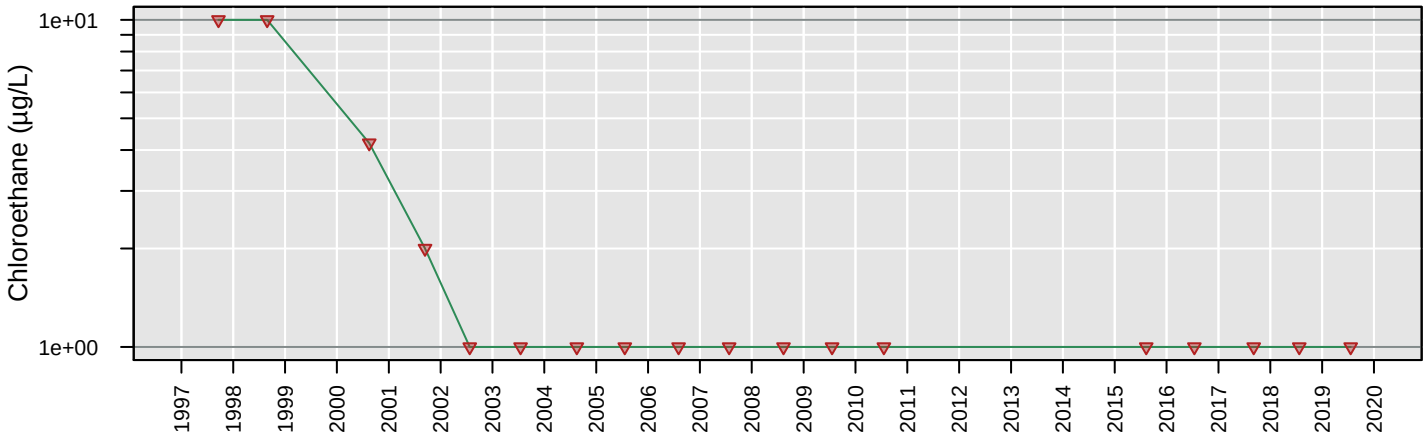
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.05 µg/L
UCL: 0.15 µg/L
LCL: 0.017 µg/L

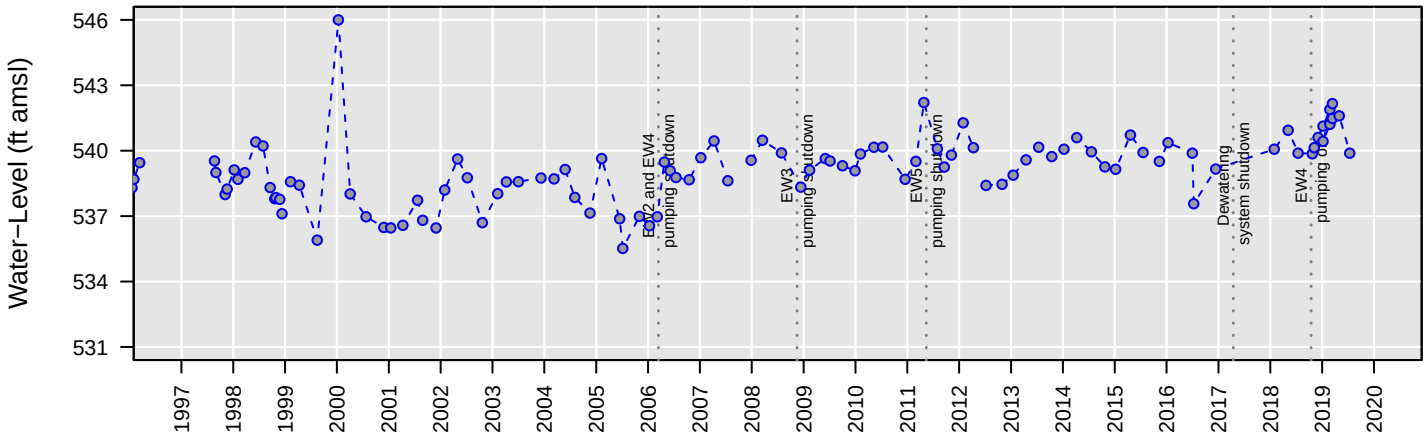
MW80

Chloroethane

Number of Comparisons: 18
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





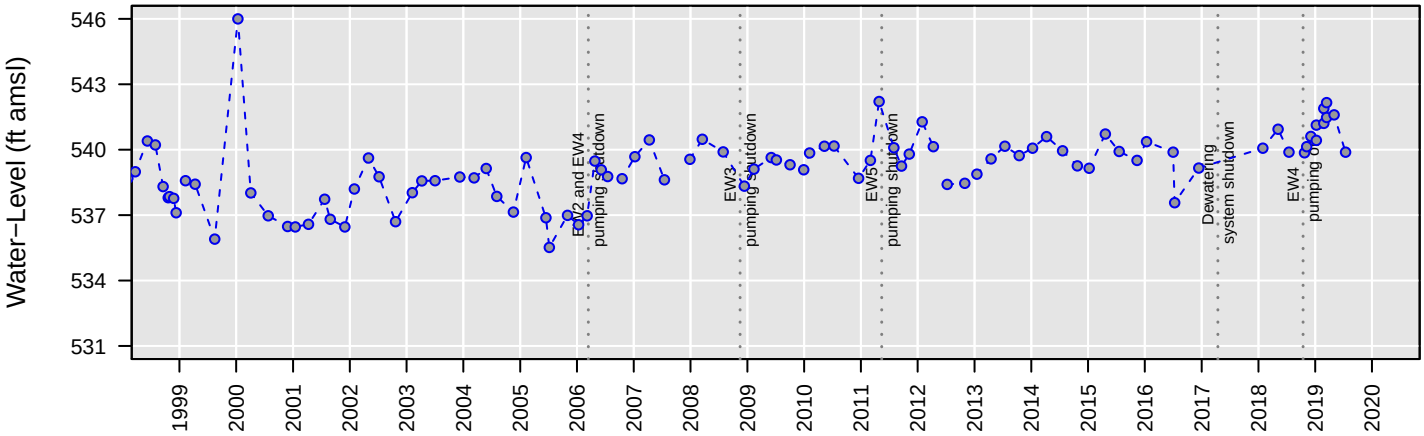
No Analysis Performed

MW80

cis−1,2−Dichloroethene

Number of Comparisons: 17
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

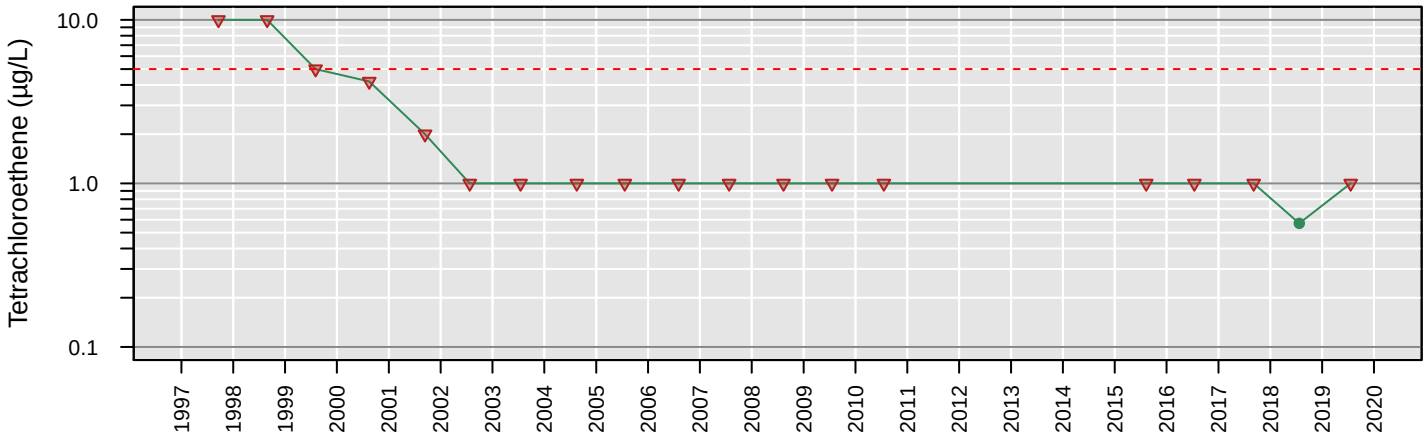
ln Conc. = −0.00067 (+/− 0.000064)*Date + 11 (+/− 0.91)

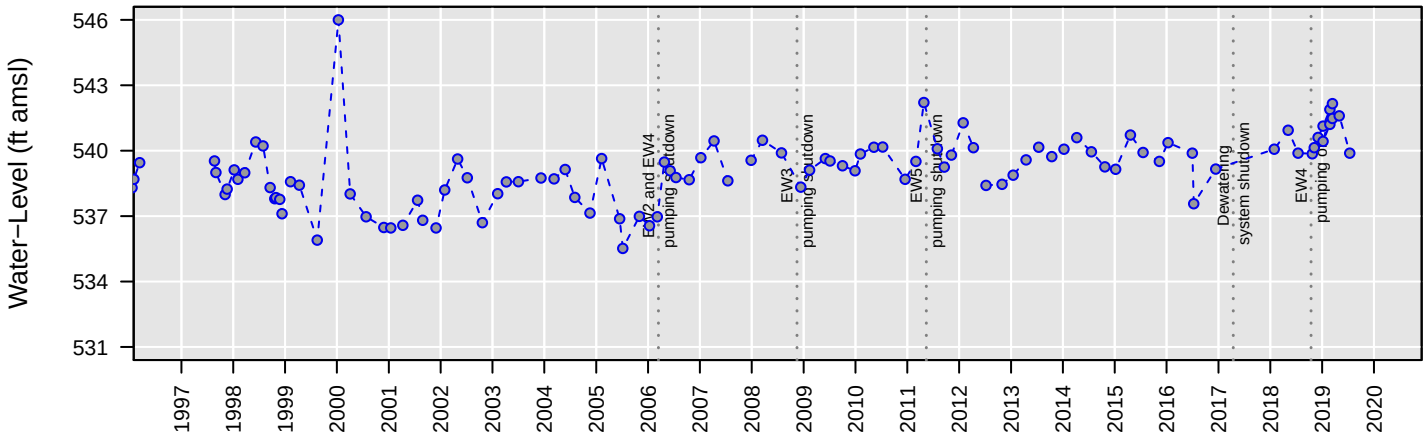
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.58 µg/L
UCL: 1 µg/L
LCL: 0.33 µg/L

MW80

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 95%



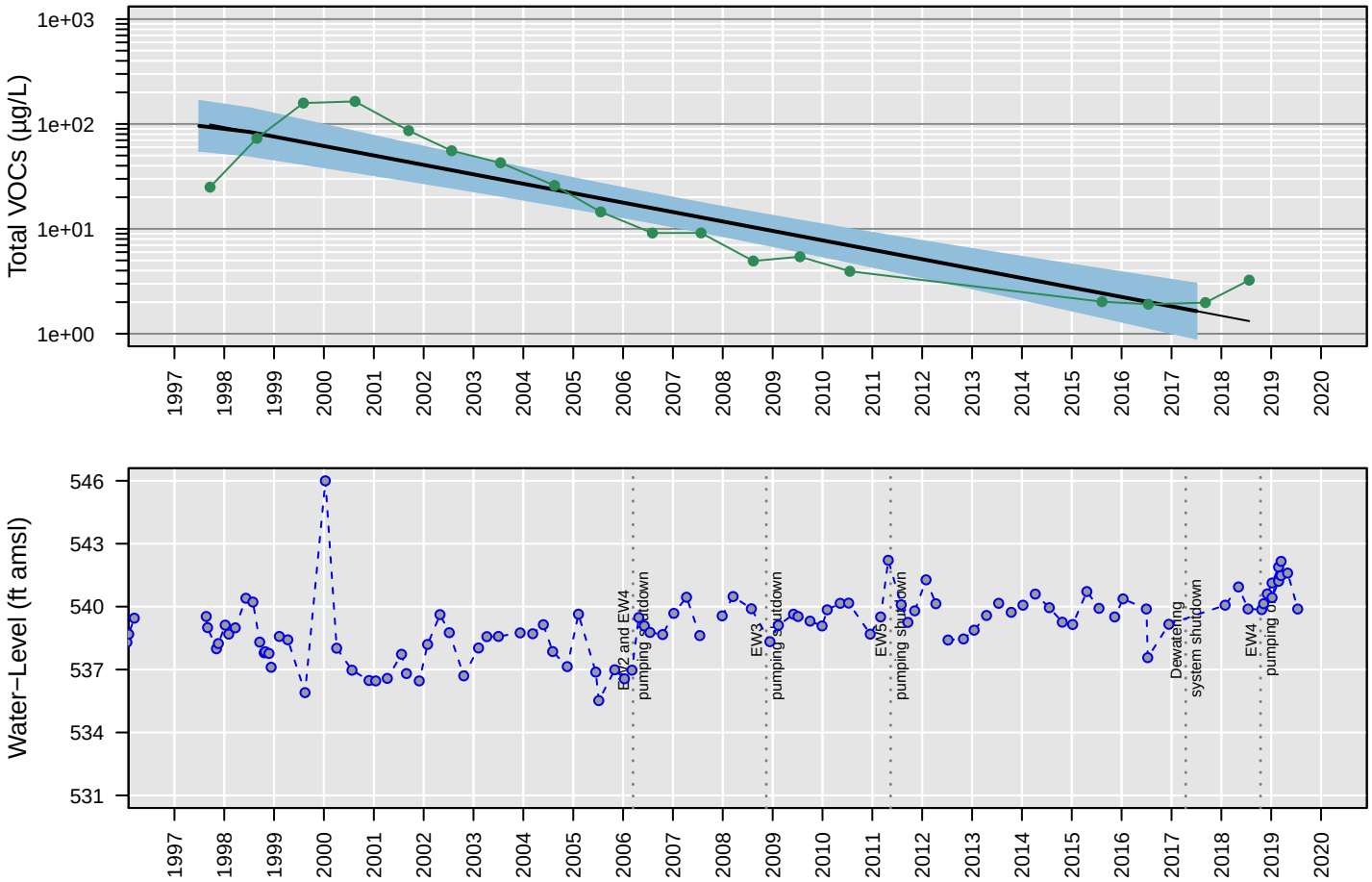


No Analysis Performed

MW80

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%



Censored Regression (Tobit) Model

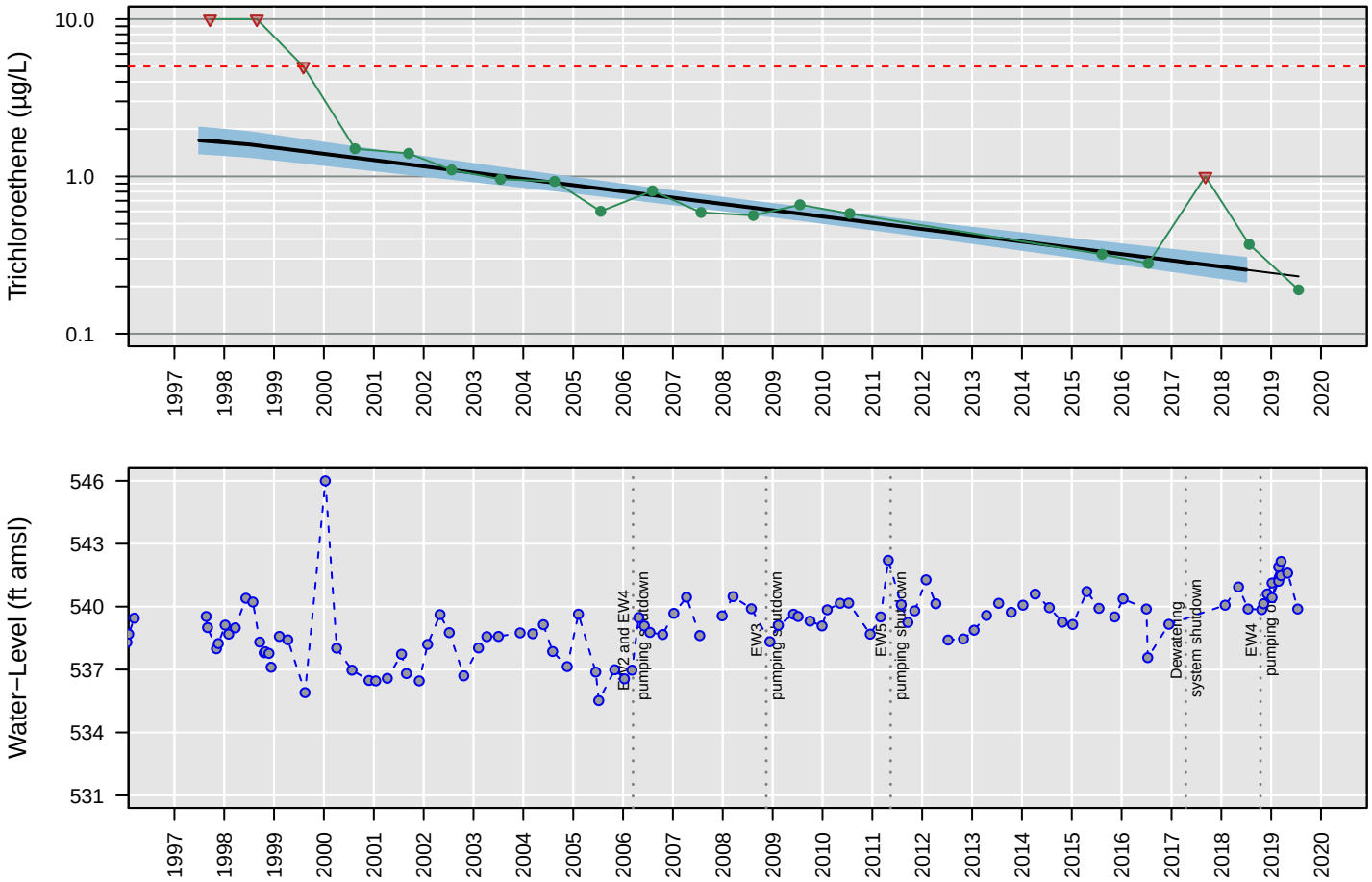
ln Conc. = −0.00057 (+/− 0.000063)*Date + 10 (+/− 0.86)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 1.6 µg/L
UCL: 3 µg/L
LCL: 0.9 µg/L

MW80

Trichloroethene

Number of Comparisons: 19
Percent NDs: 21%



Censored Regression (Tobit) Model

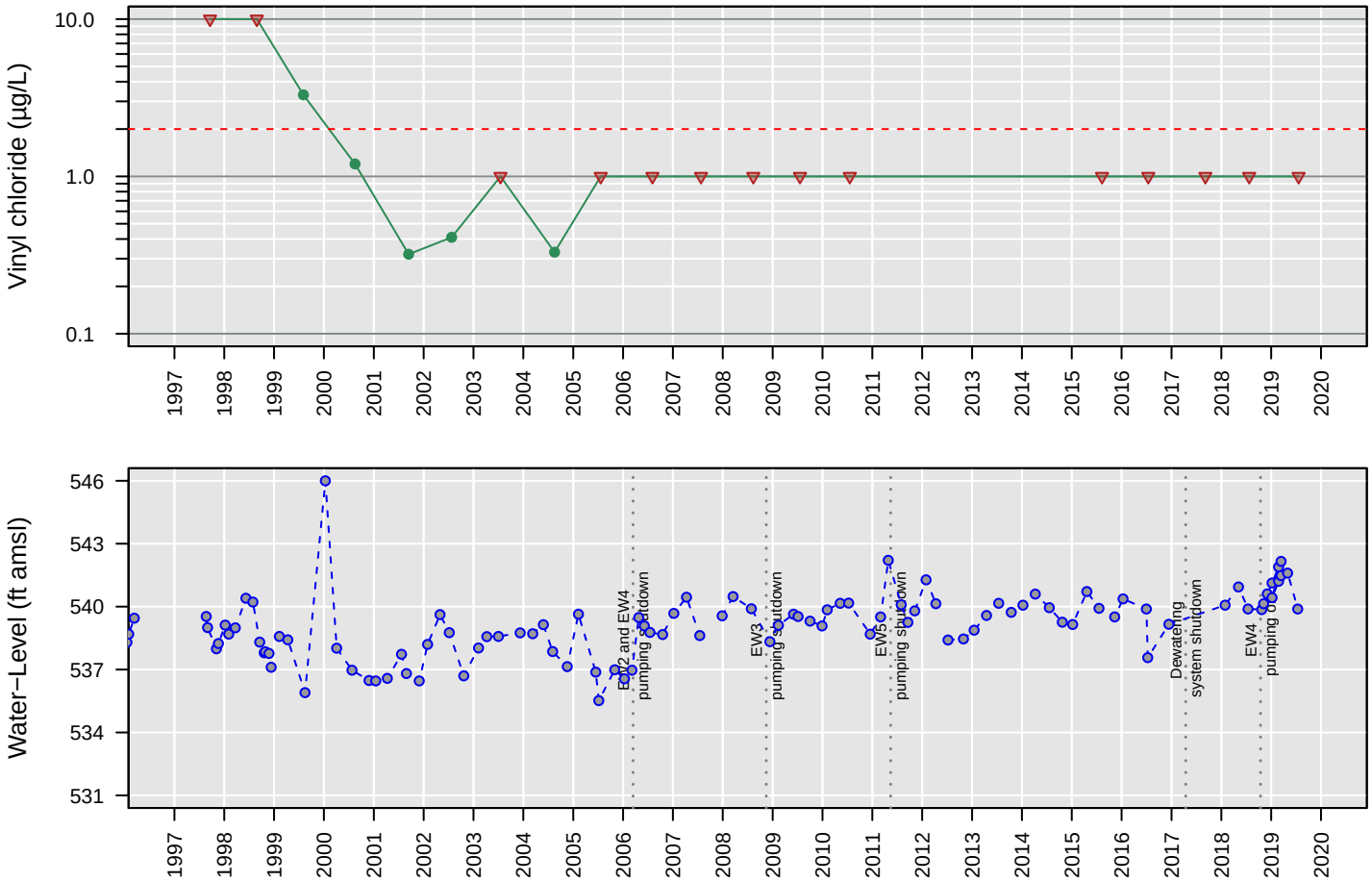
ln Conc. = −0.00025 (+/− 0.00002)*Date + 3.1 (+/− 0.28)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.25 µg/L
UCL: 0.3 µg/L
LCL: 0.21 µg/L

MW80

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 74%

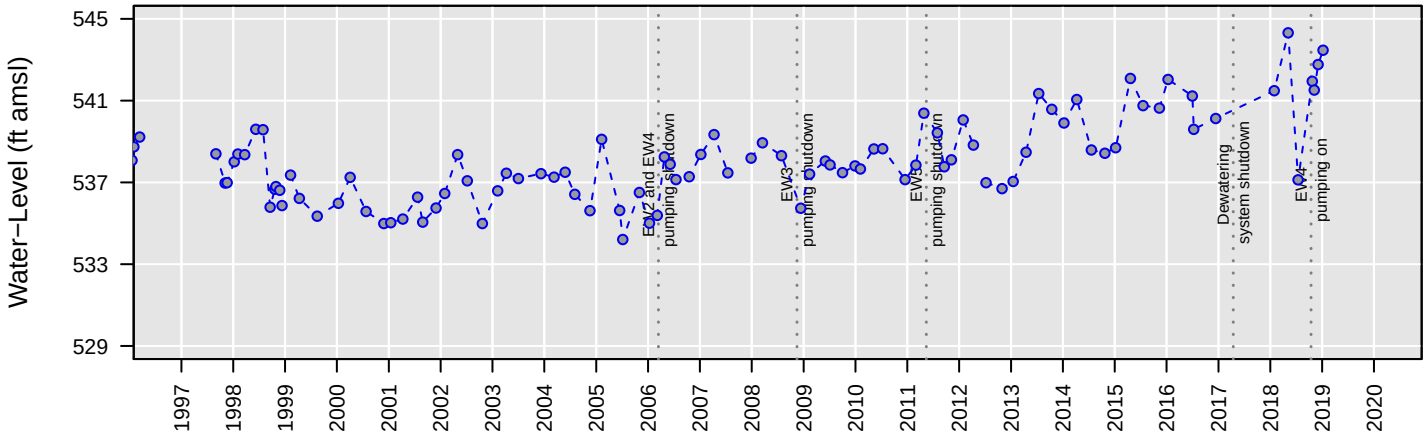


No Analysis Performed

MW81

1,1−Dichloroethane

Number of Comparisons: 14
Percent NDs: 64%

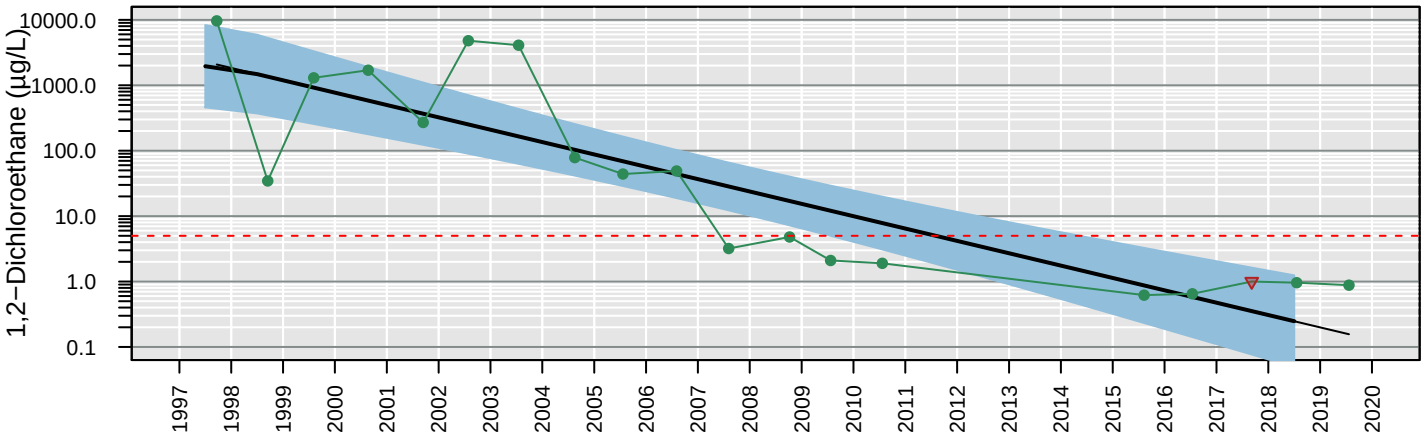


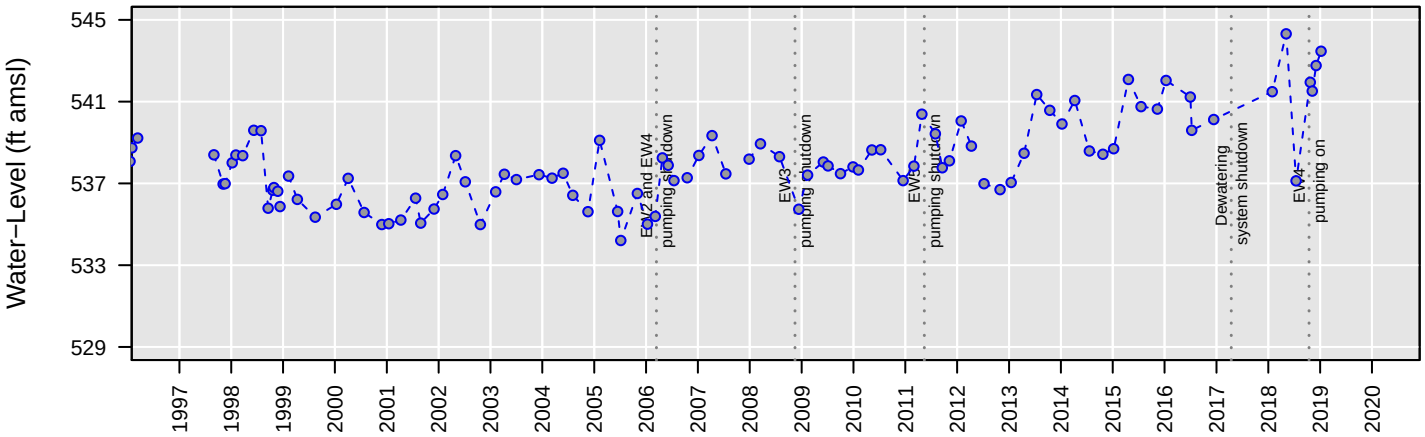
No Analysis Performed

MW81

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 5%





Censored Regression (Tobit) Model

ln Conc. = −0.0012 (+/− 0.00016)*Date + 20 (+/− 2.2)

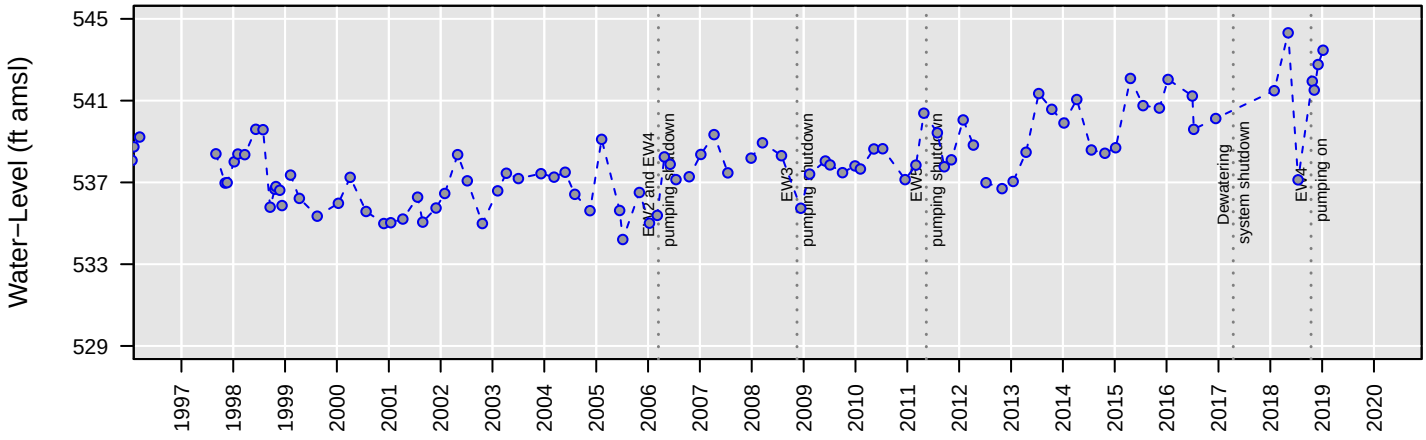
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.25 µg/L
UCL: 1.2 µg/L
LCL: 0.049 µg/L

MW81

Chloroethane

Number of Comparisons: 18
Percent NDs: 78%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

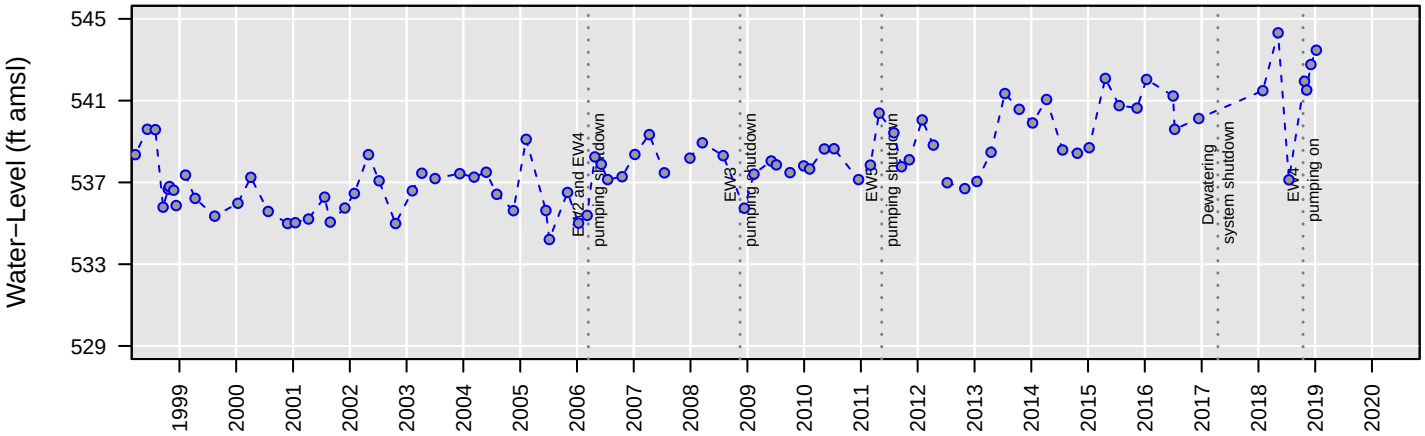


No Analysis Performed

MW81

cis−1,2−Dichloroethene

Number of Comparisons: 17
Percent NDs: 0%



Censored Regression (Tobit) Model

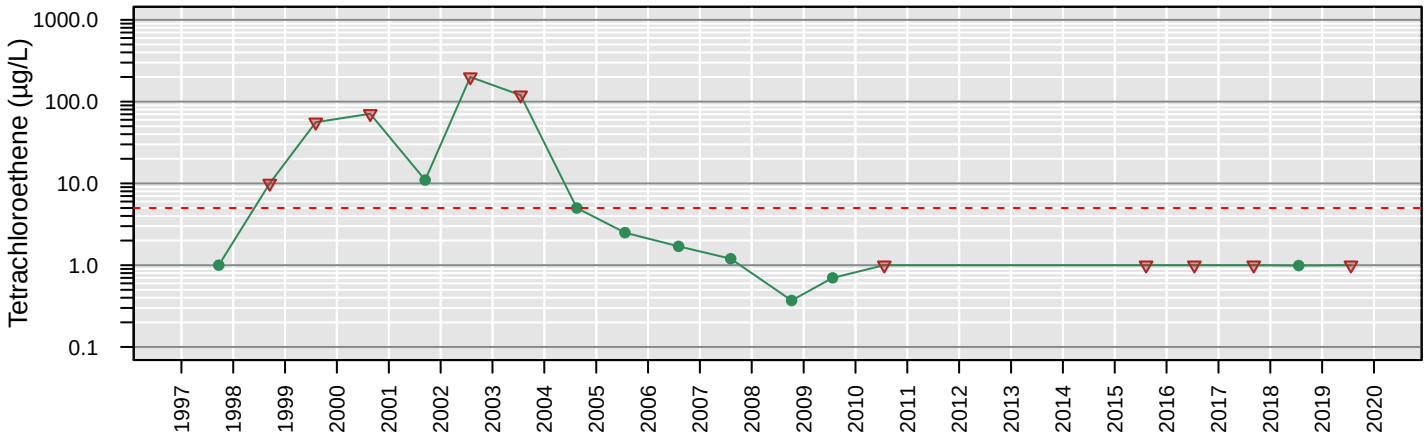
ln Conc. = −0.00071 (+/− 0.00012)*Date + 12 (+/− 1.7)

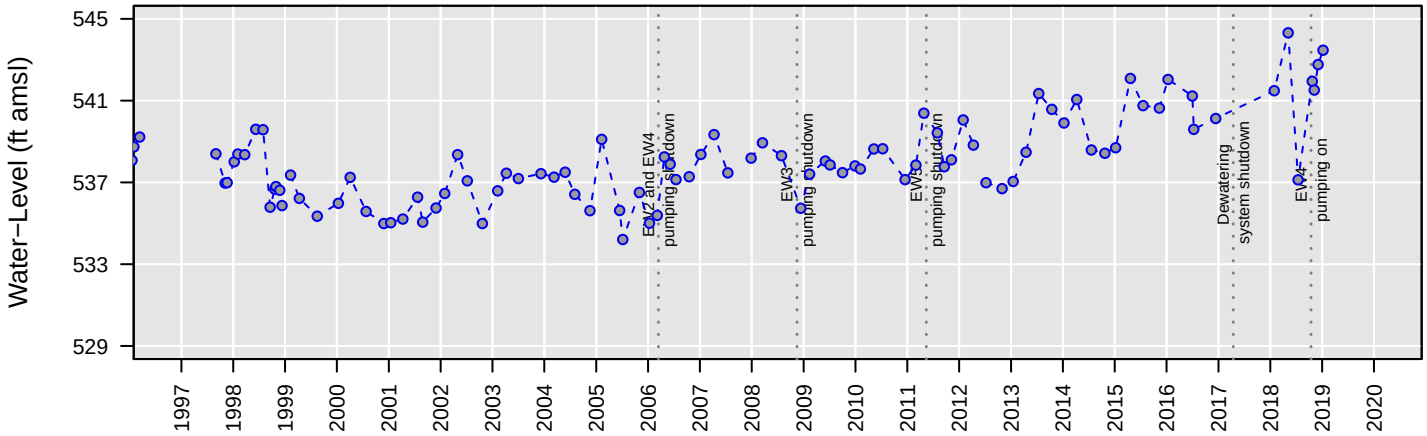
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.91 µg/L
UCL: 2.8 µg/L
LCL: 0.3 µg/L

MW81

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 53%



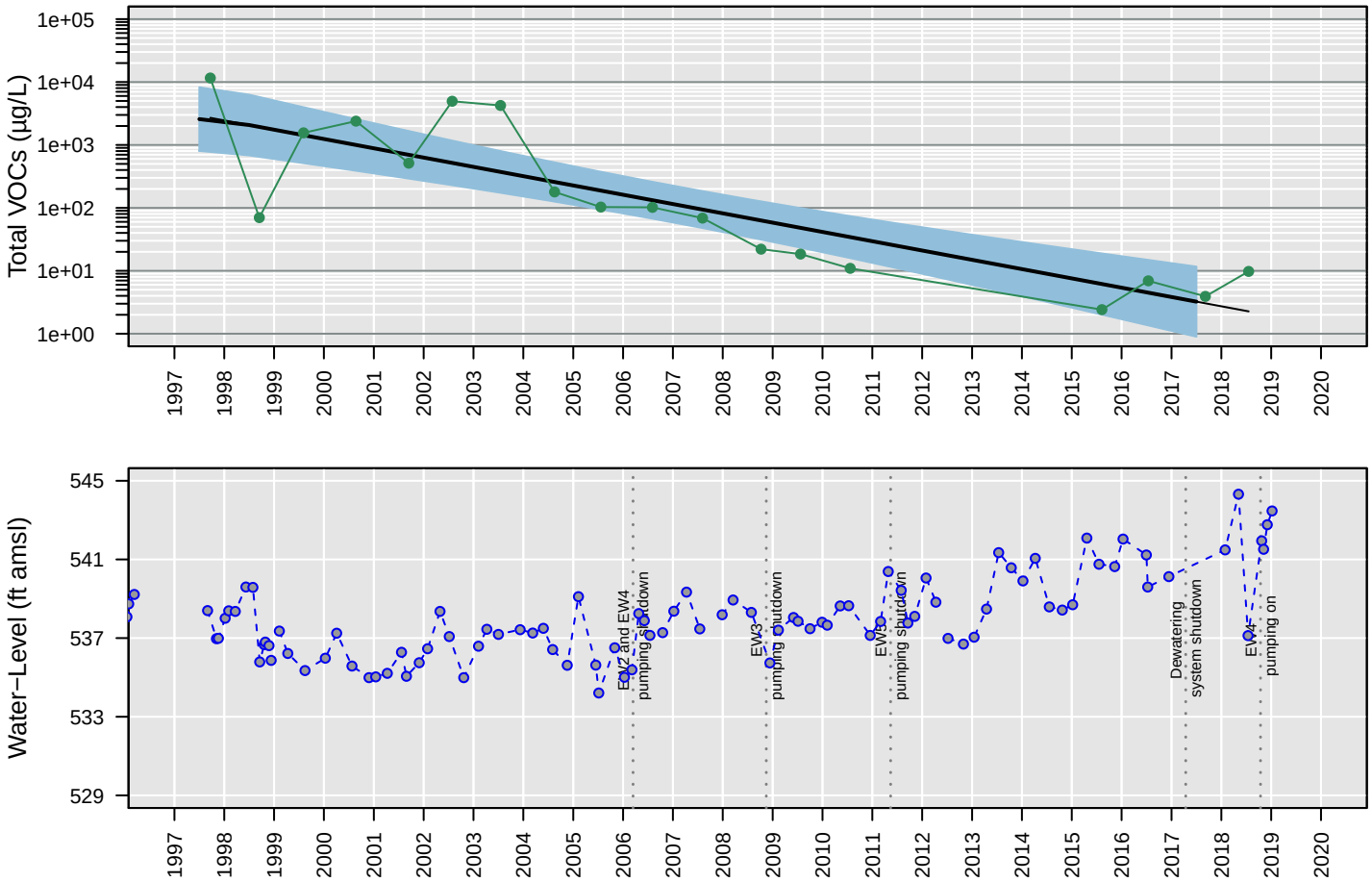


No Analysis Performed

MW81

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%



Censored Regression (Tobit) Model

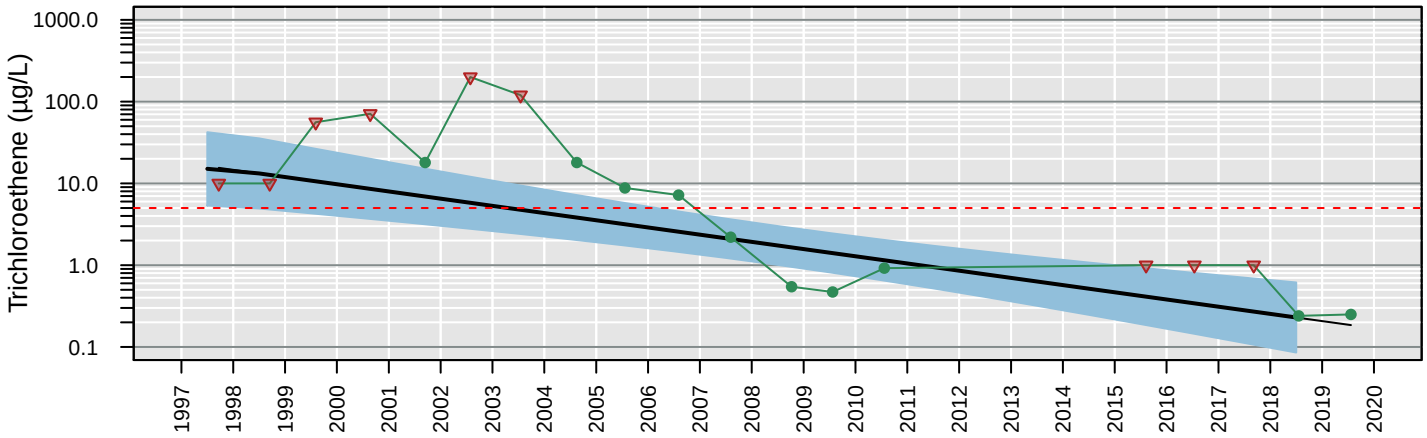
ln Conc. = −0.00093 (+/− 0.00013)*Date + 17 (+/− 1.8)

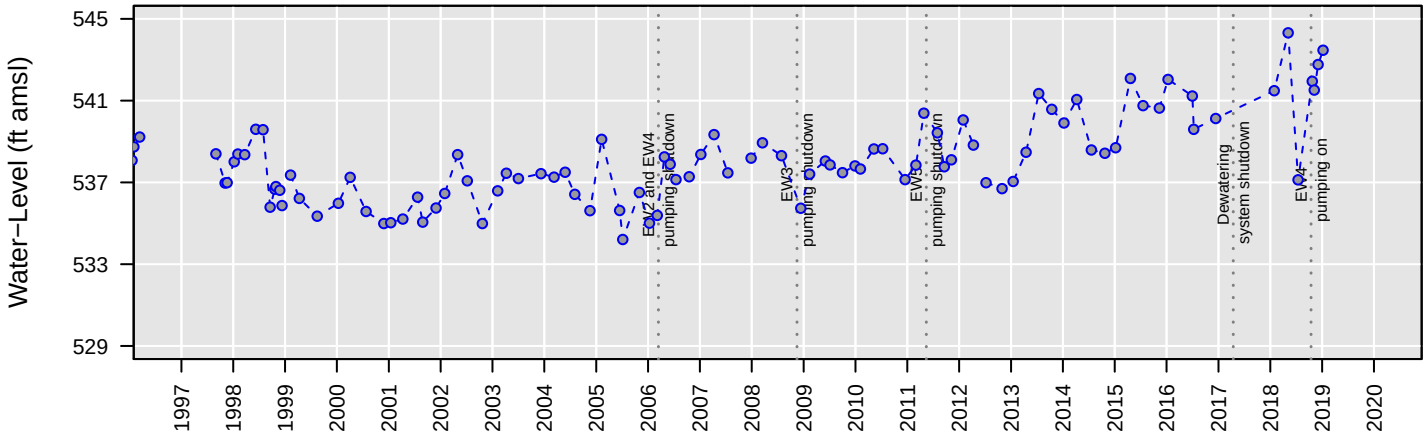
Regression Statistics for January 2017 to January 2018
Geometric Mean: 3.2 µg/L
UCL: 12 µg/L
LCL: 0.9 µg/L

MW81

Trichloroethene

Number of Comparisons: 19
Percent NDs: 47%





Censored Regression (Tobit) Model

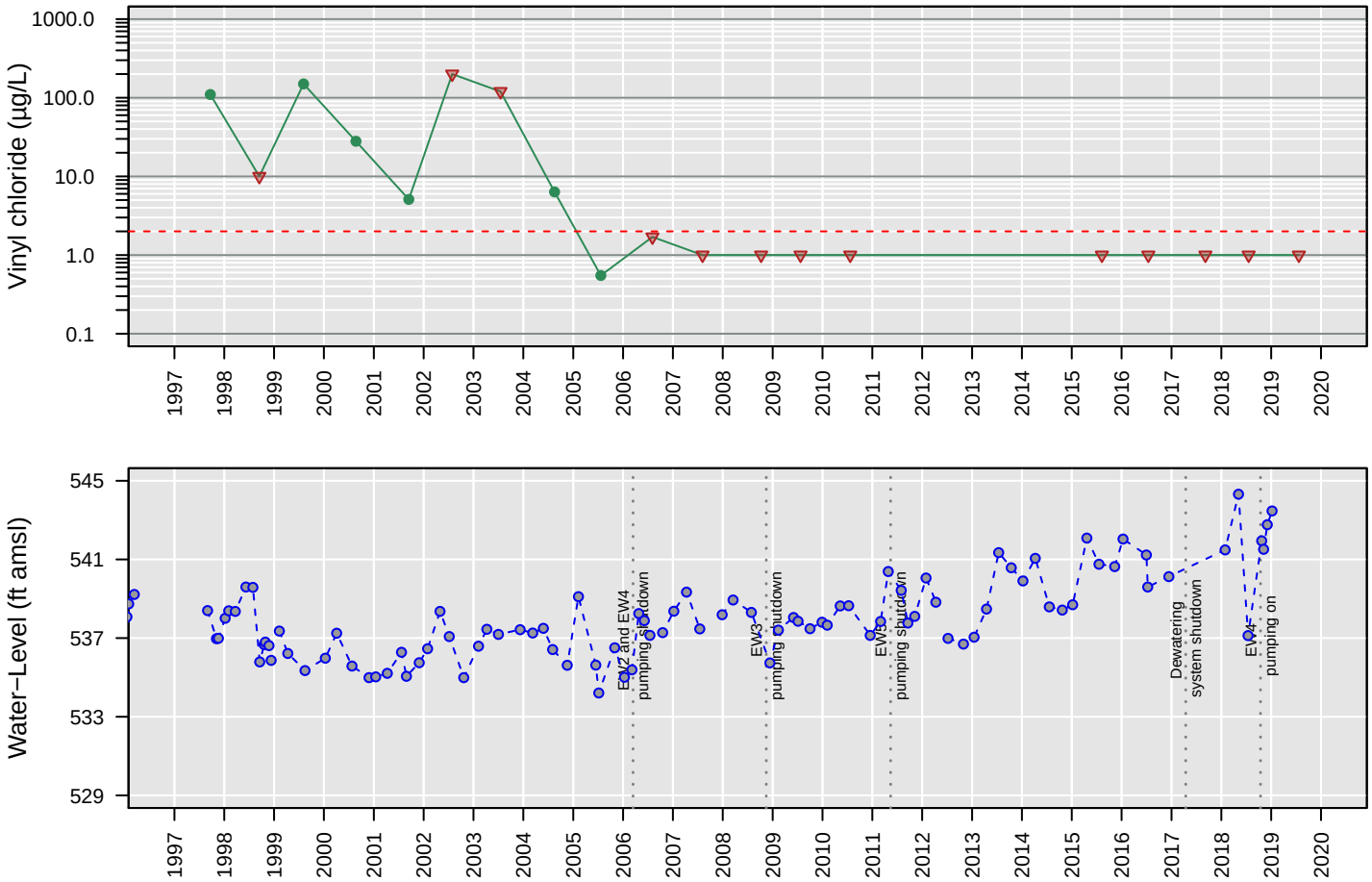
ln Conc. = −0.00056 (+/− 0.00011)*Date + 8.4 (+/− 1.5)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.23 µg/L
UCL: 0.61 µg/L
LCL: 0.086 µg/L

MW81

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 68%



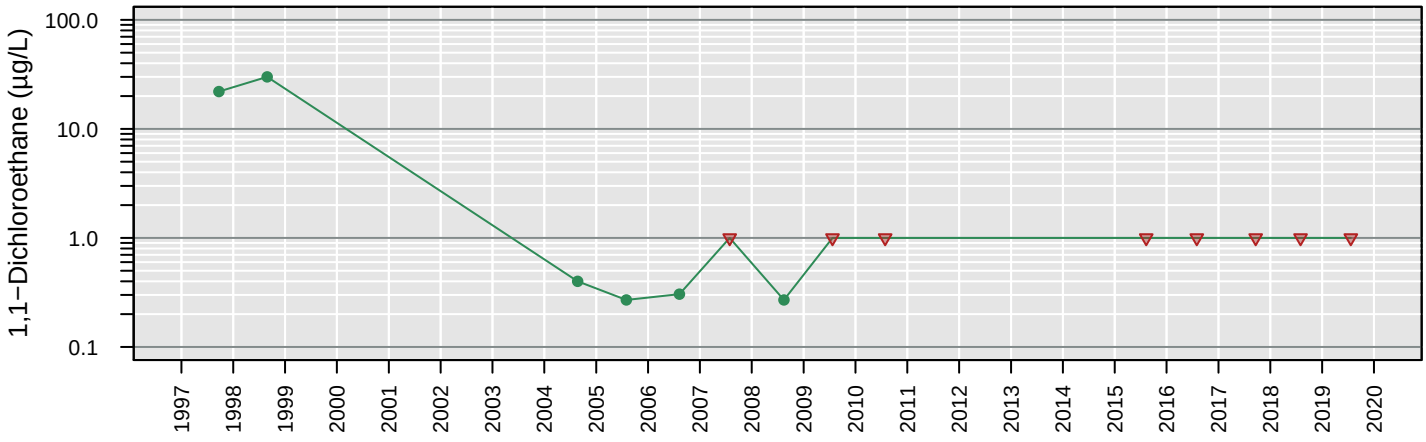
No Analysis Performed

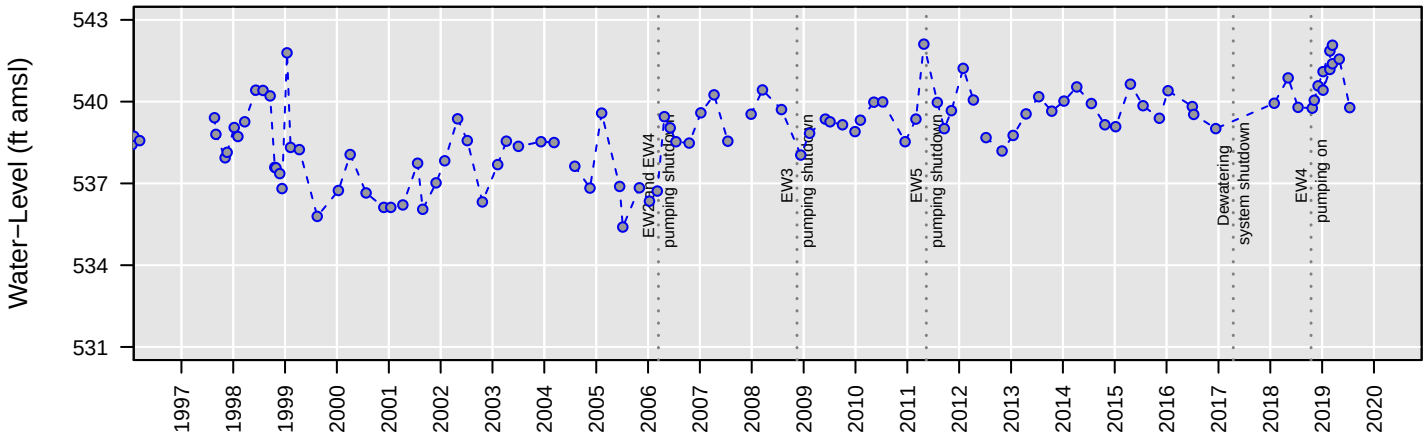
MW82

1,1−Dichloroethane

Number of Comparisons: 14
Percent NDs: 57%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





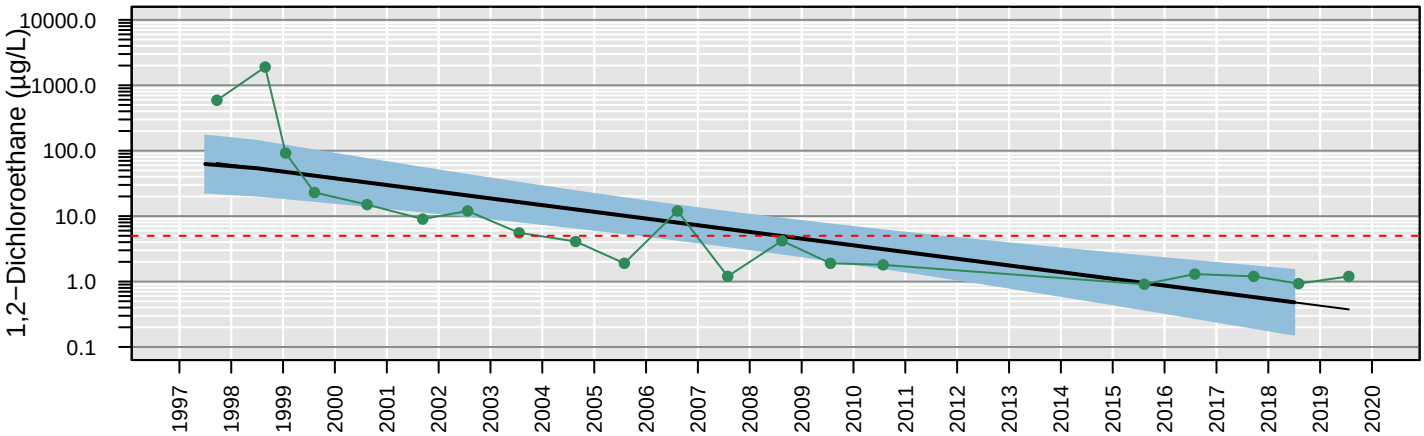
No Analysis Performed

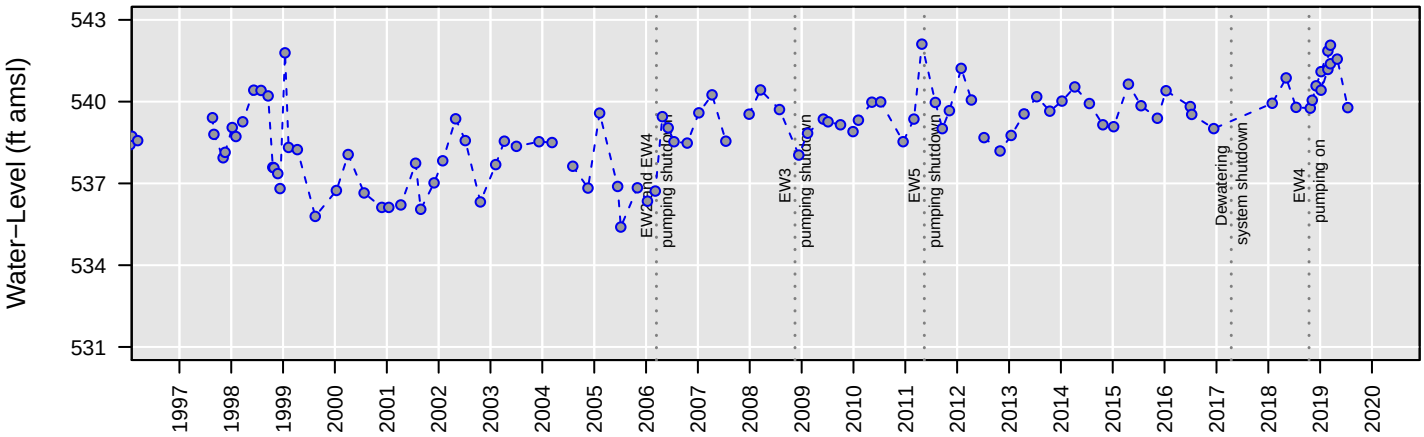
MW82

1,2−Dichloroethane

Number of Comparisons: 20
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00065 (+/− 0.00011)*Date + 11 (+/− 1.5)

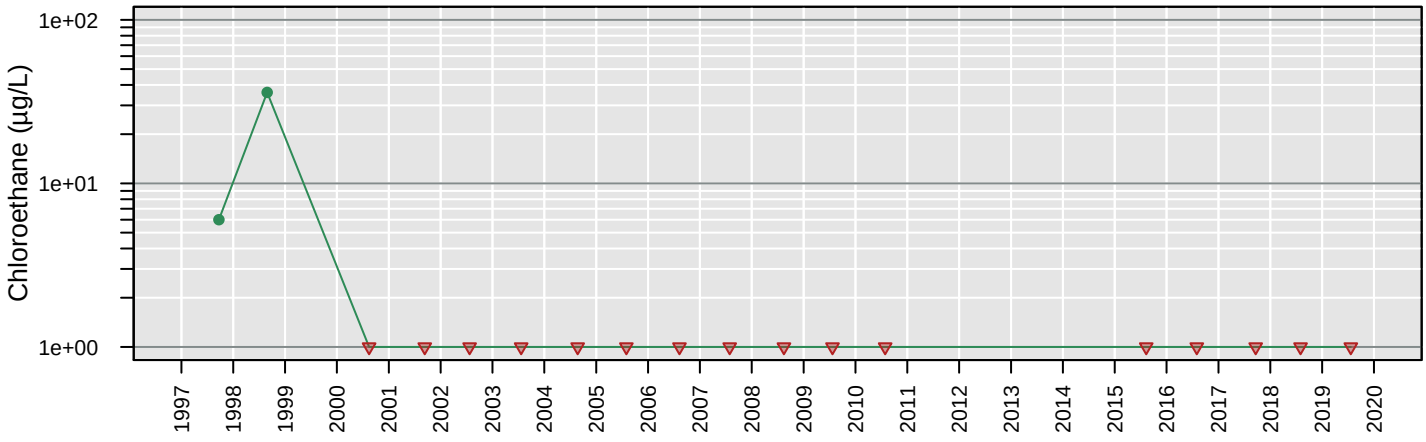
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.48 µg/L
UCL: 1.5 µg/L
LCL: 0.15 µg/L

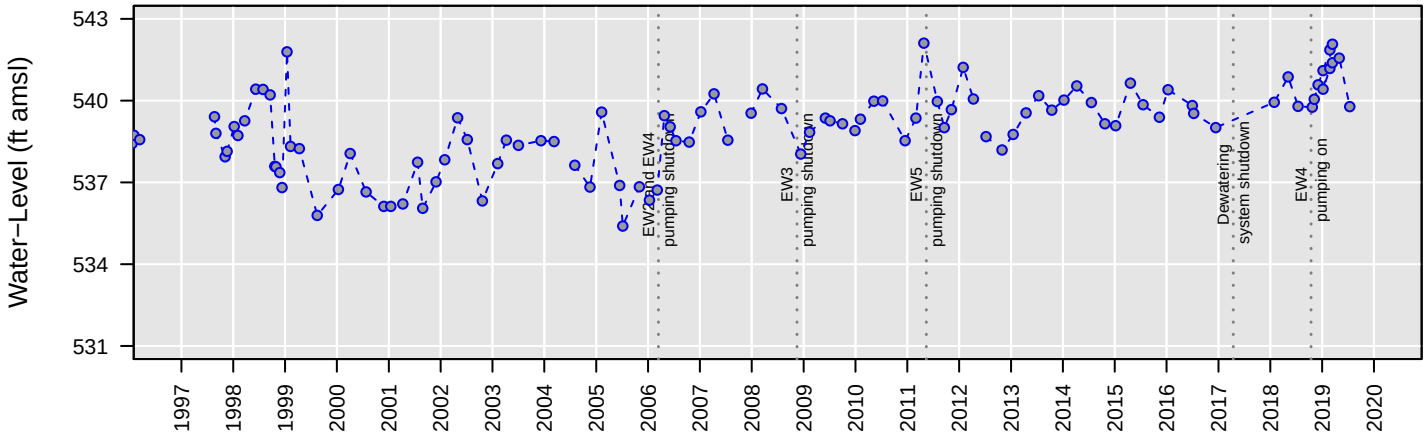
MW82

Chloroethane

Number of Comparisons: 18
Percent NDs: 89%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



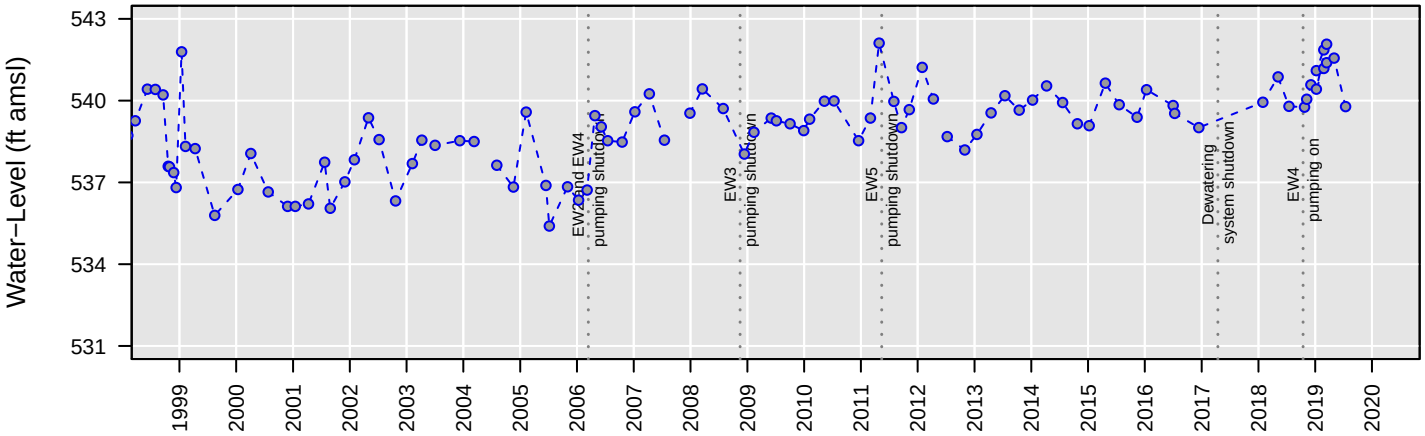


No Analysis Performed

MW82

cis−1,2−Dichloroethene

Number of Comparisons: 18
Percent NDs: 0%



Censored Regression (Tobit) Model

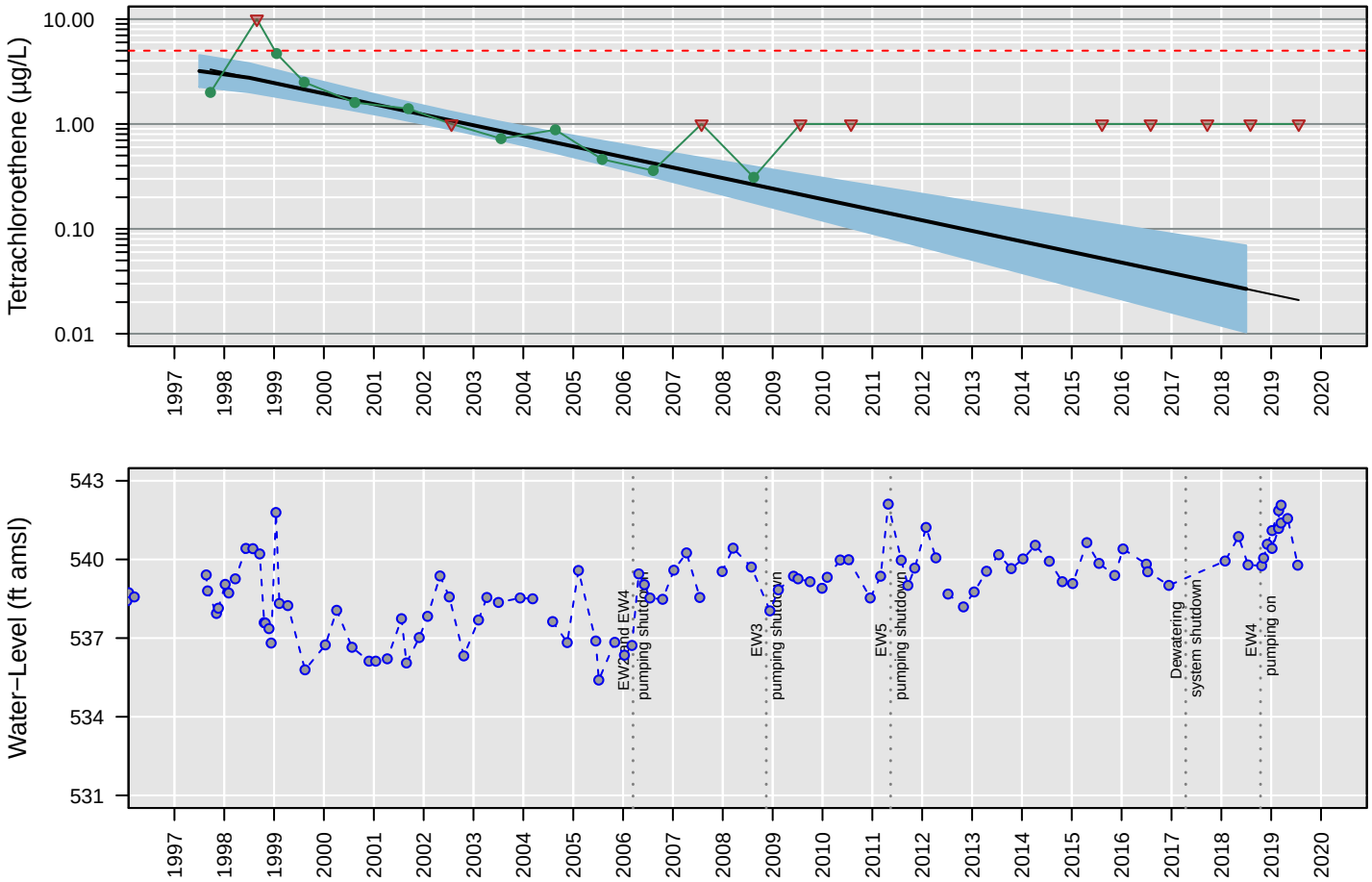
ln Conc. = −0.00031 (+/− 0.000088)*Date + 4.9 (+/− 1.2)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.59 µg/L
UCL: 1.4 µg/L
LCL: 0.26 µg/L

MW82

Tetrachloroethene

Number of Comparisons: 20
Percent NDs: 50%



Censored Regression (Tobit) Model

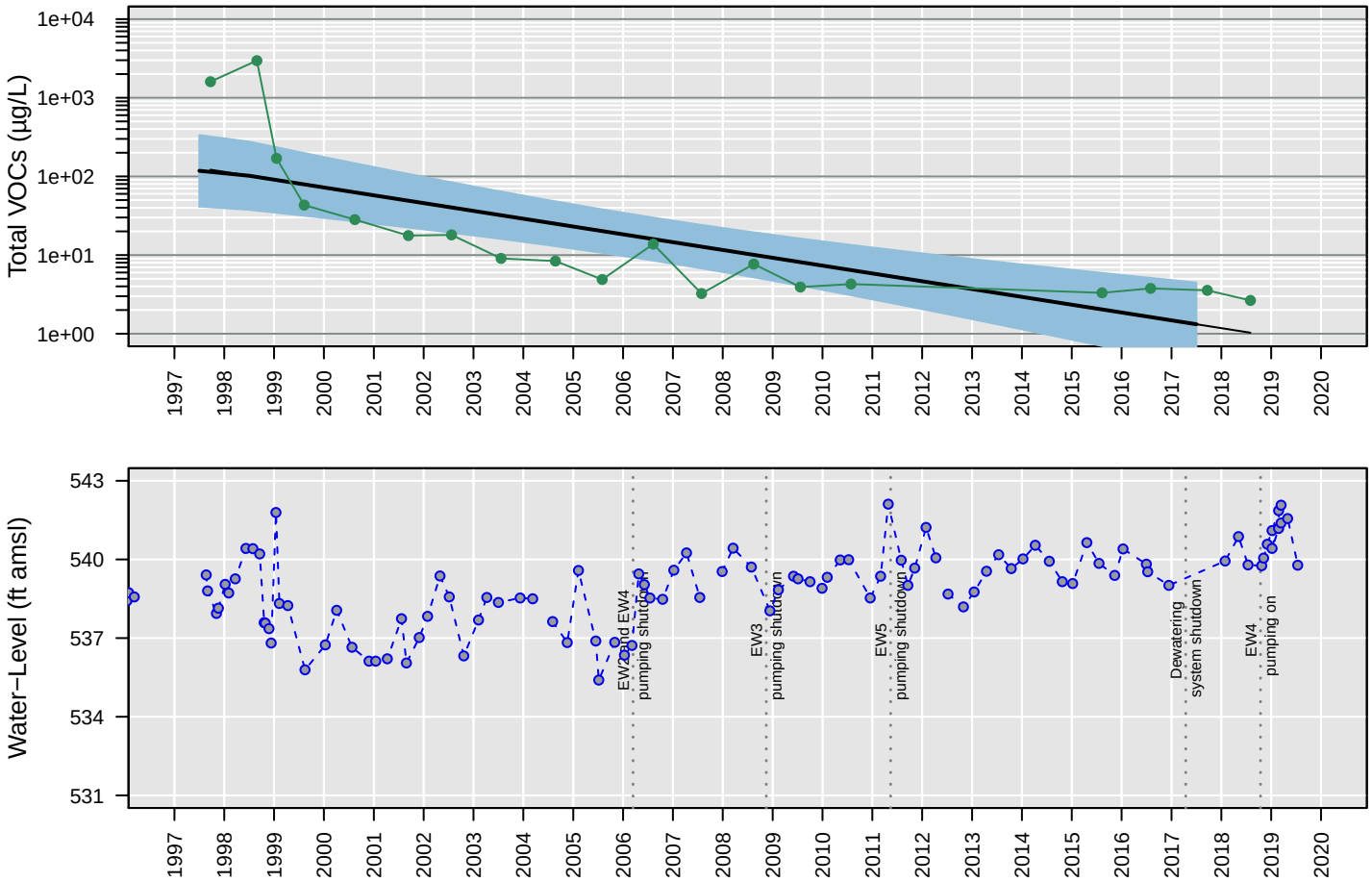
ln Conc. = −0.00063 (+/− 0.000077)*Date + 7.6 (+/− 0.93)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.027 µg/L
UCL: 0.069 µg/L
LCL: 0.01 µg/L

MW82

Total VOCs

Number of Comparisons: 19
Percent NDs: 0%



Censored Regression (Tobit) Model

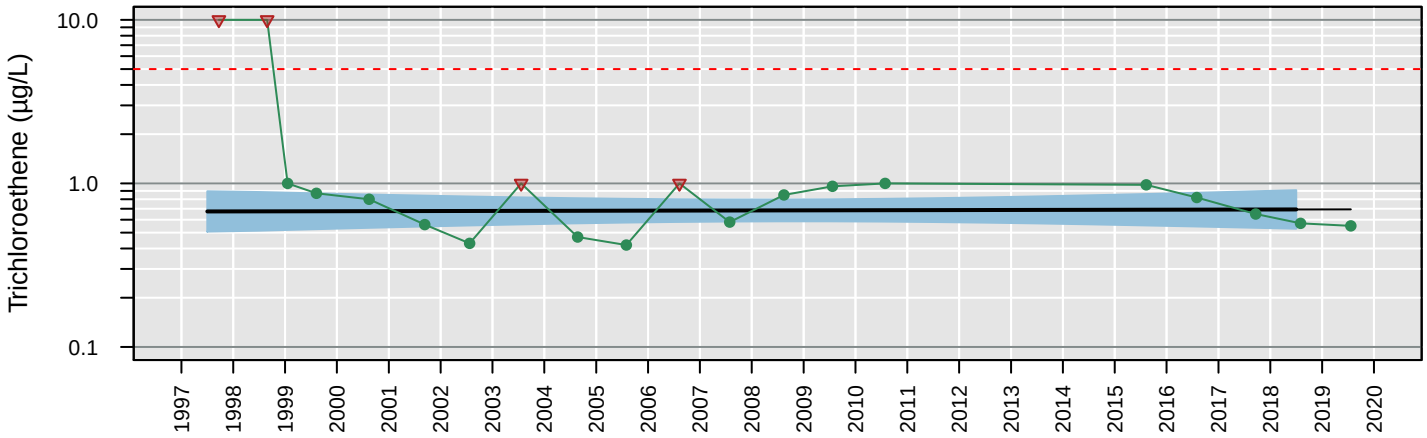
ln Conc. = −0.00063 (+/− 0.00012)*Date + 11 (+/− 1.7)

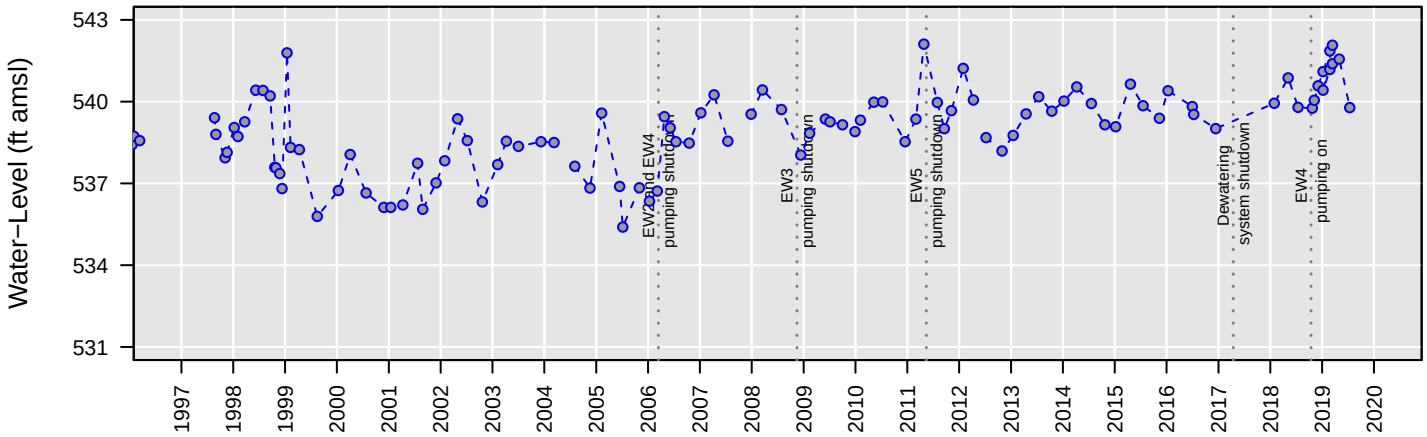
Regression Statistics for January 2017 to January 2018
Geometric Mean: 1.3 µg/L
UCL: 4.5 µg/L
LCL: 0.39 µg/L

MW82

Trichloroethene

Number of Comparisons: 20
Percent NDs: 20%





Censored Regression (Tobit) Model

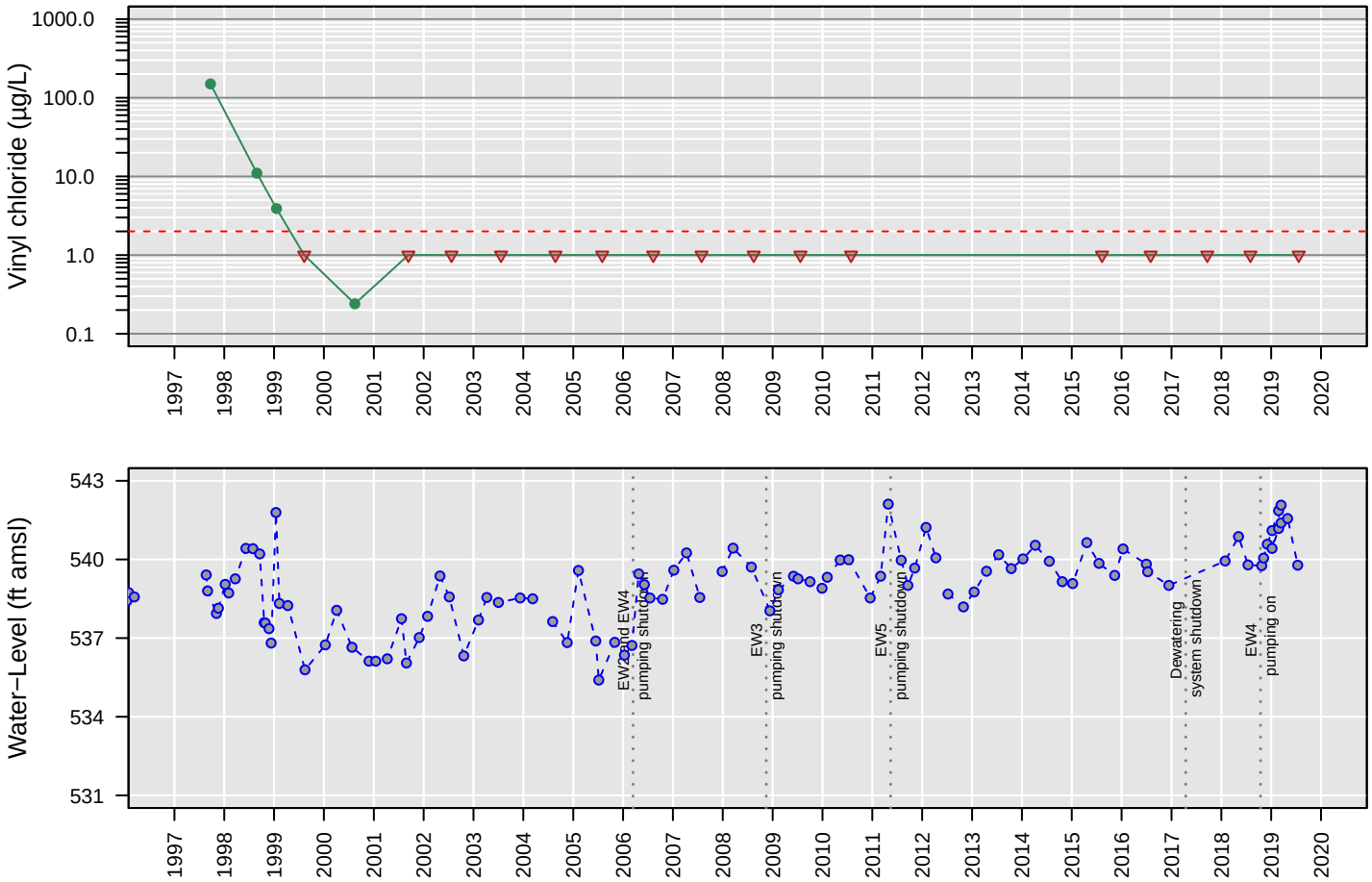
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.69 µg/L
UCL: 0.91 µg/L
LCL: 0.53 µg/L

MW82

Vinyl chloride

Number of Comparisons: 20
Percent NDs: 80%

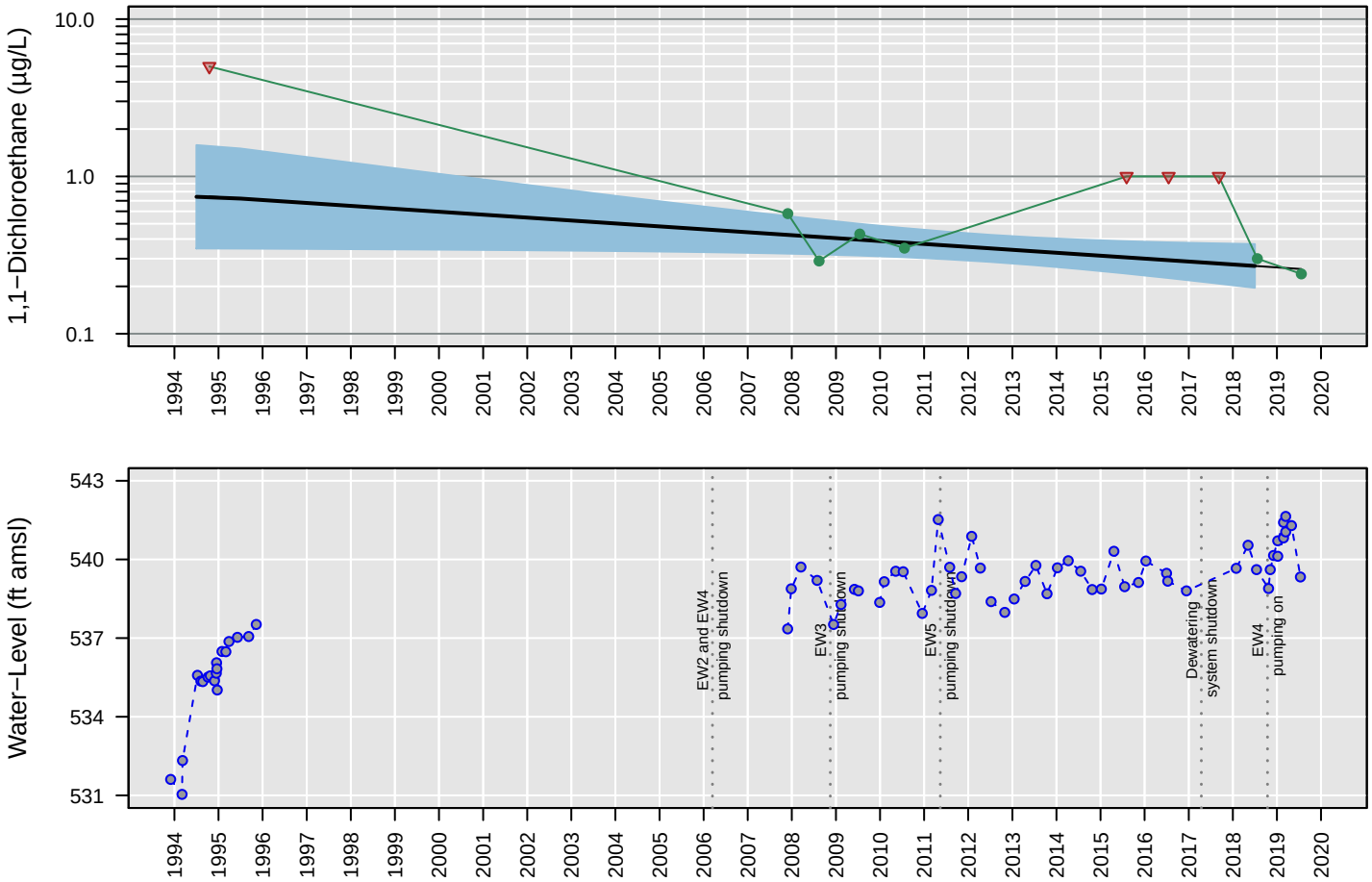


No Analysis Performed

MW83

1,1−Dichloroethane

Number of Comparisons: 10
Percent NDs: 40%



Censored Regression (Tobit) Model

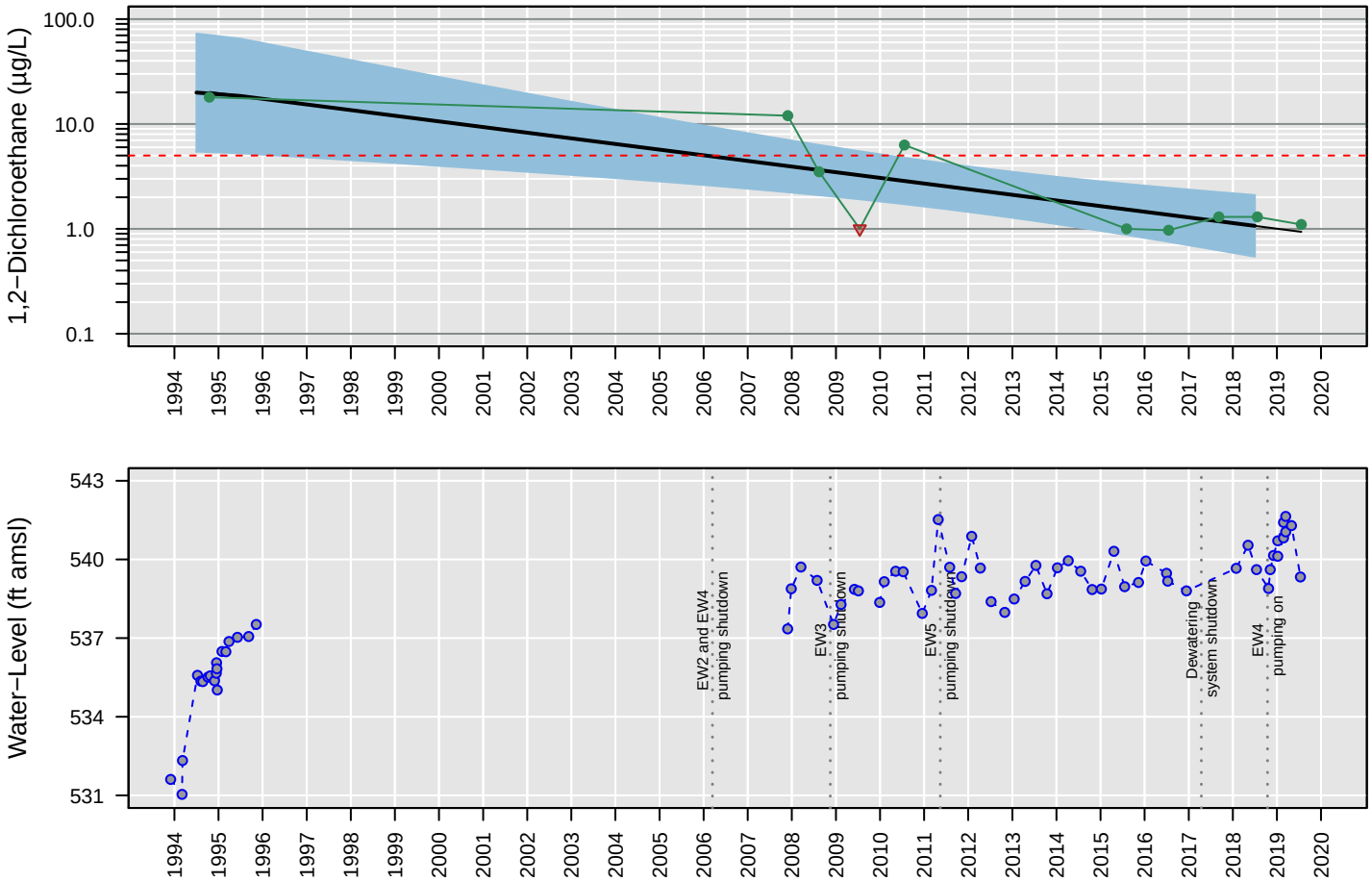
ln Conc. = −0.00012 (+/− 0.000048)*Date + 0.77 (+/− 0.75)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.27 µg/L
UCL: 0.37 µg/L
LCL: 0.2 µg/L

MW83

1,2−Dichloroethane

Number of Comparisons: 10
Percent NDs: 10%



Censored Regression (Tobit) Model

ln Conc. = −0.00034 (+/− 0.000081)*Date + 6.1 (+/− 1.3)

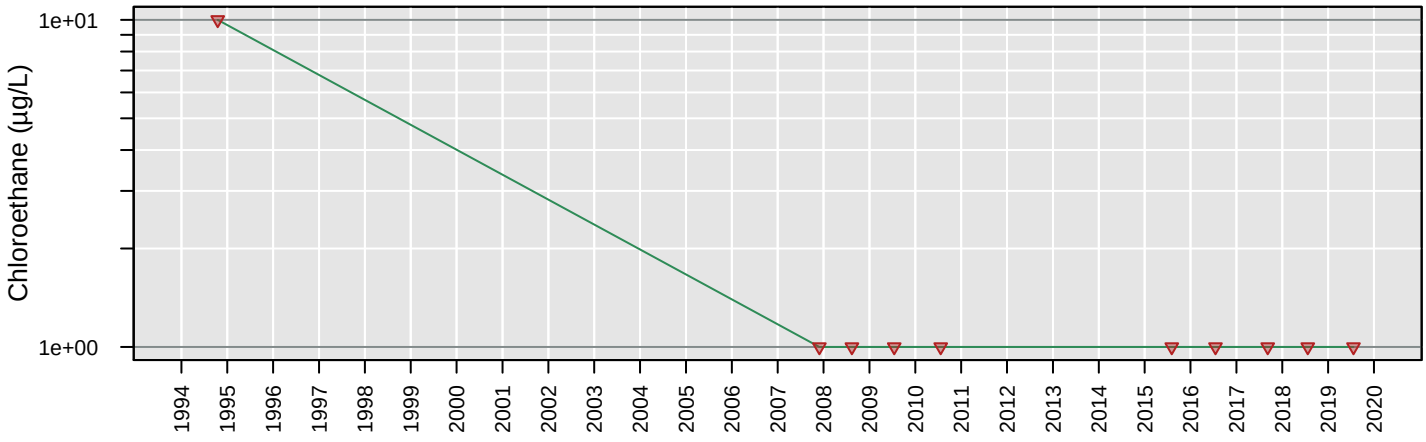
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.1 µg/L
UCL: 2.1 µg/L
LCL: 0.54 µg/L

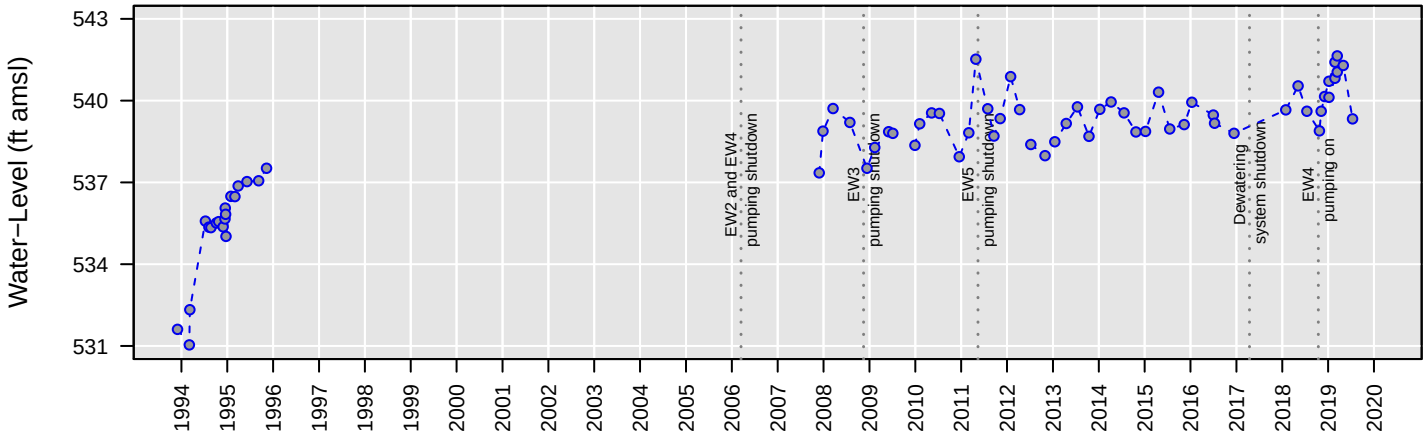
MW83

Chloroethane

Number of Comparisons: 10
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





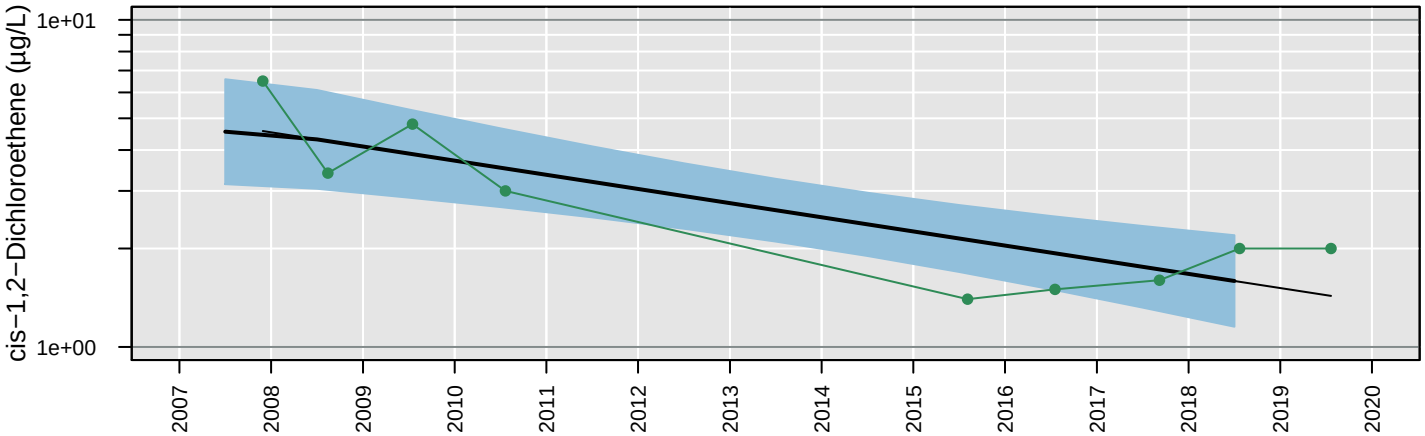
No Analysis Performed

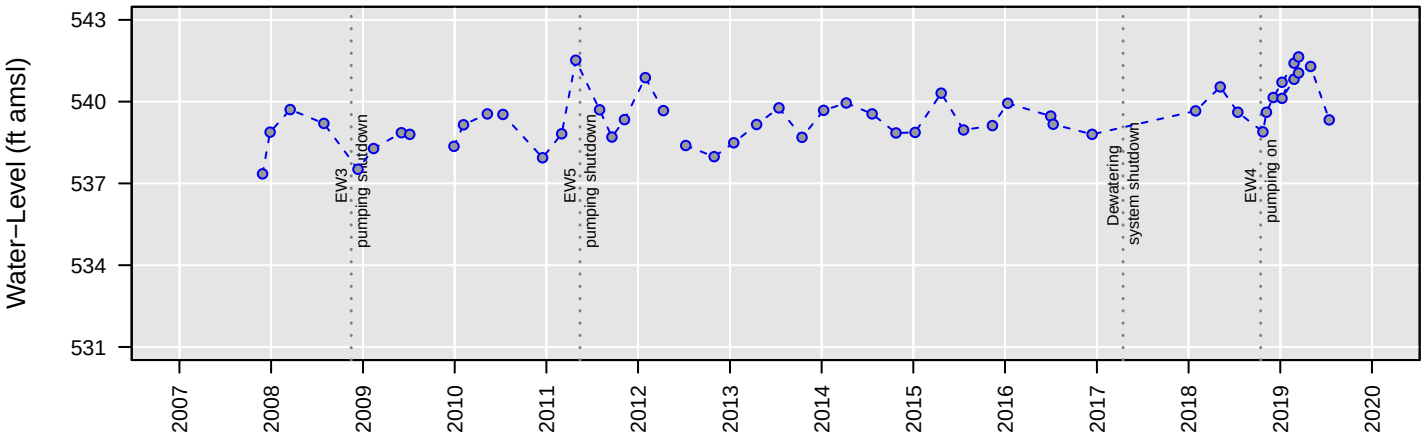
MW83

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

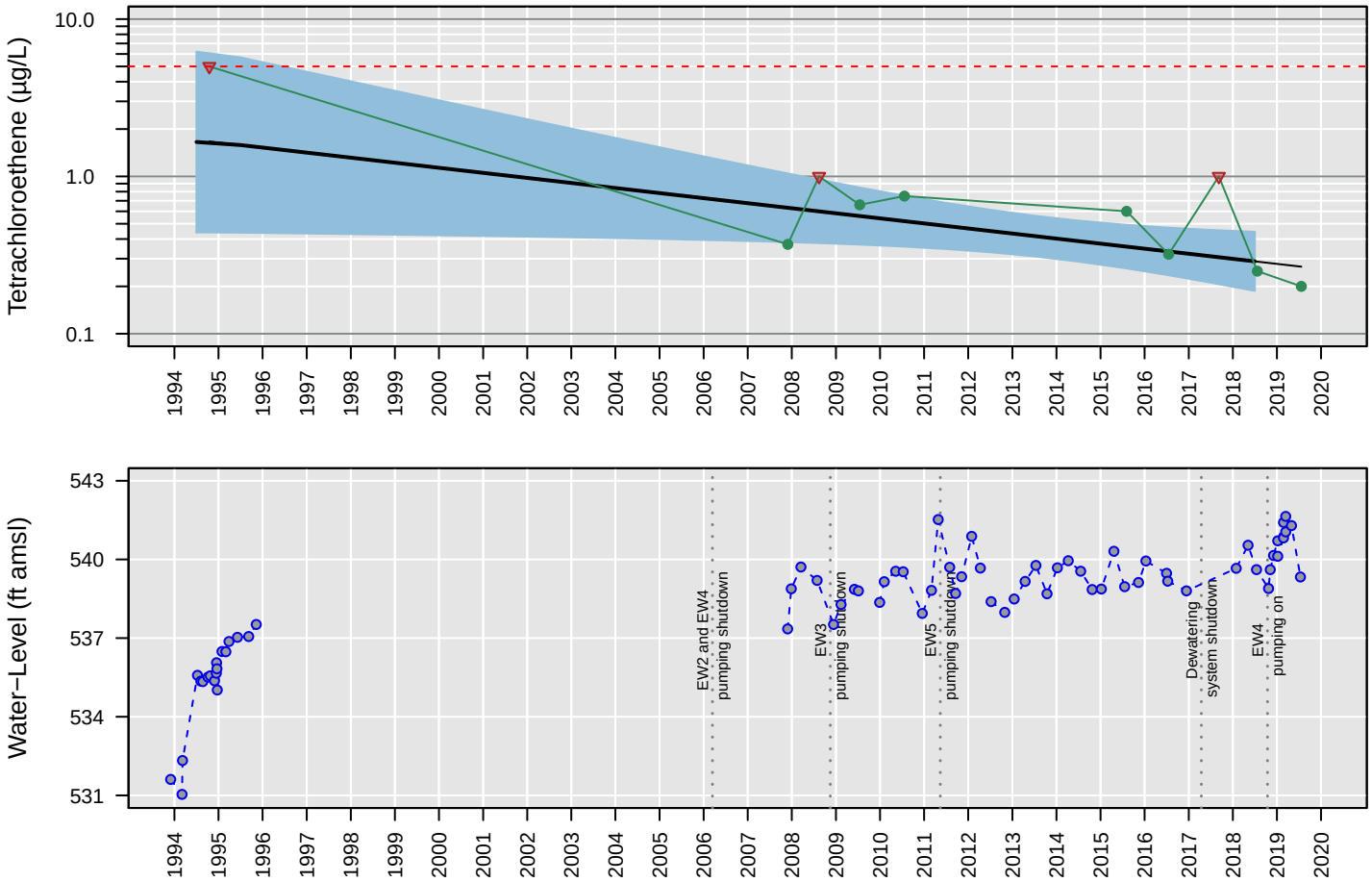
ln Conc. = −0.00027 (+/− 0.000056)*Date + 5.3 (+/− 0.91)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.6 µg/L
UCL: 2.2 µg/L
LCL: 1.2 µg/L

MW83

Tetrachloroethene

Number of Comparisons: 10
Percent NDs: 30%



Censored Regression (Tobit) Model

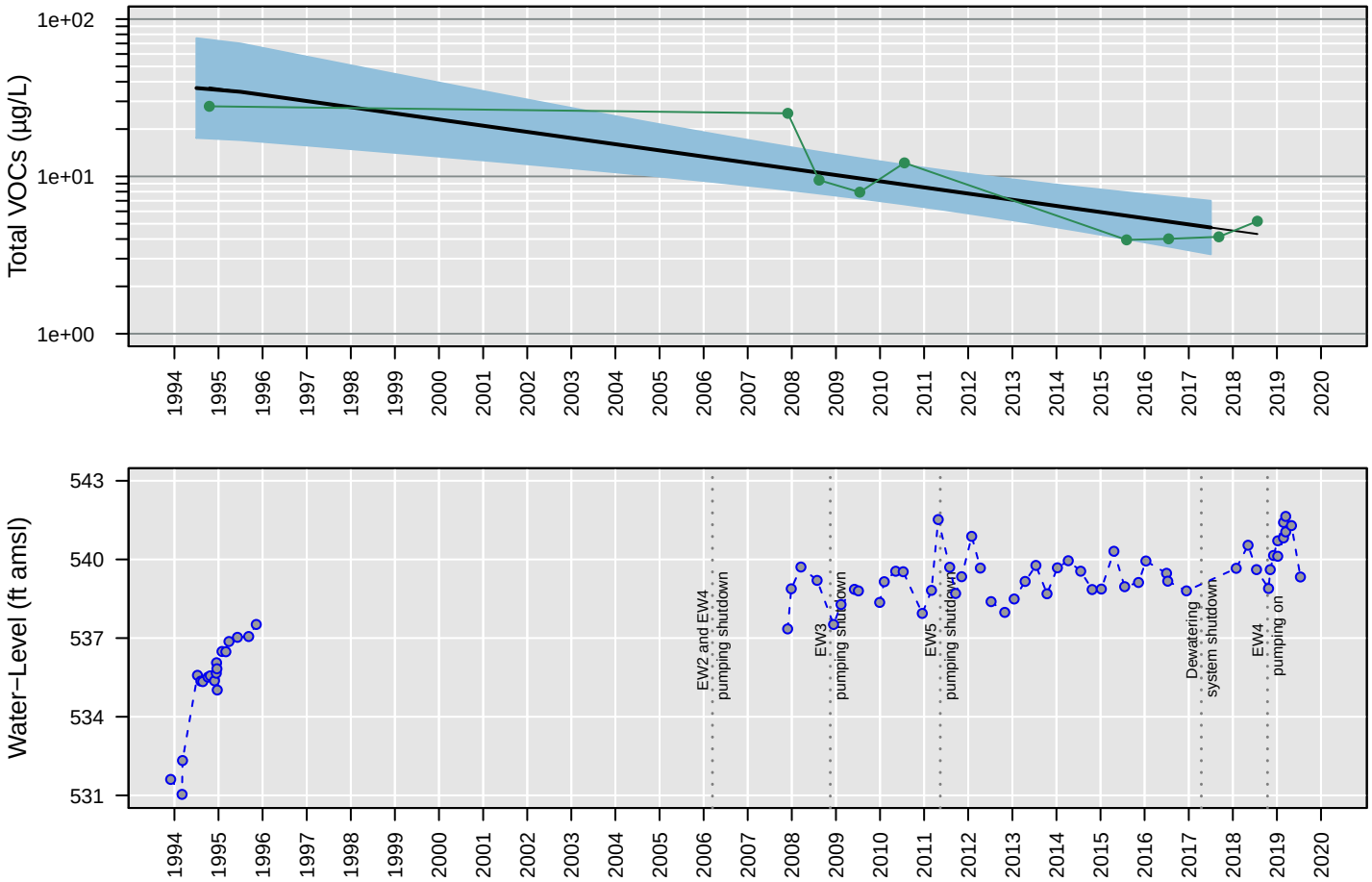
ln Conc. = −0.0002 (+/− 0.000079)*Date + 2.3 (+/− 1.3)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.29 µg/L
UCL: 0.44 µg/L
LCL: 0.19 µg/L

MW83

Total VOCs

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

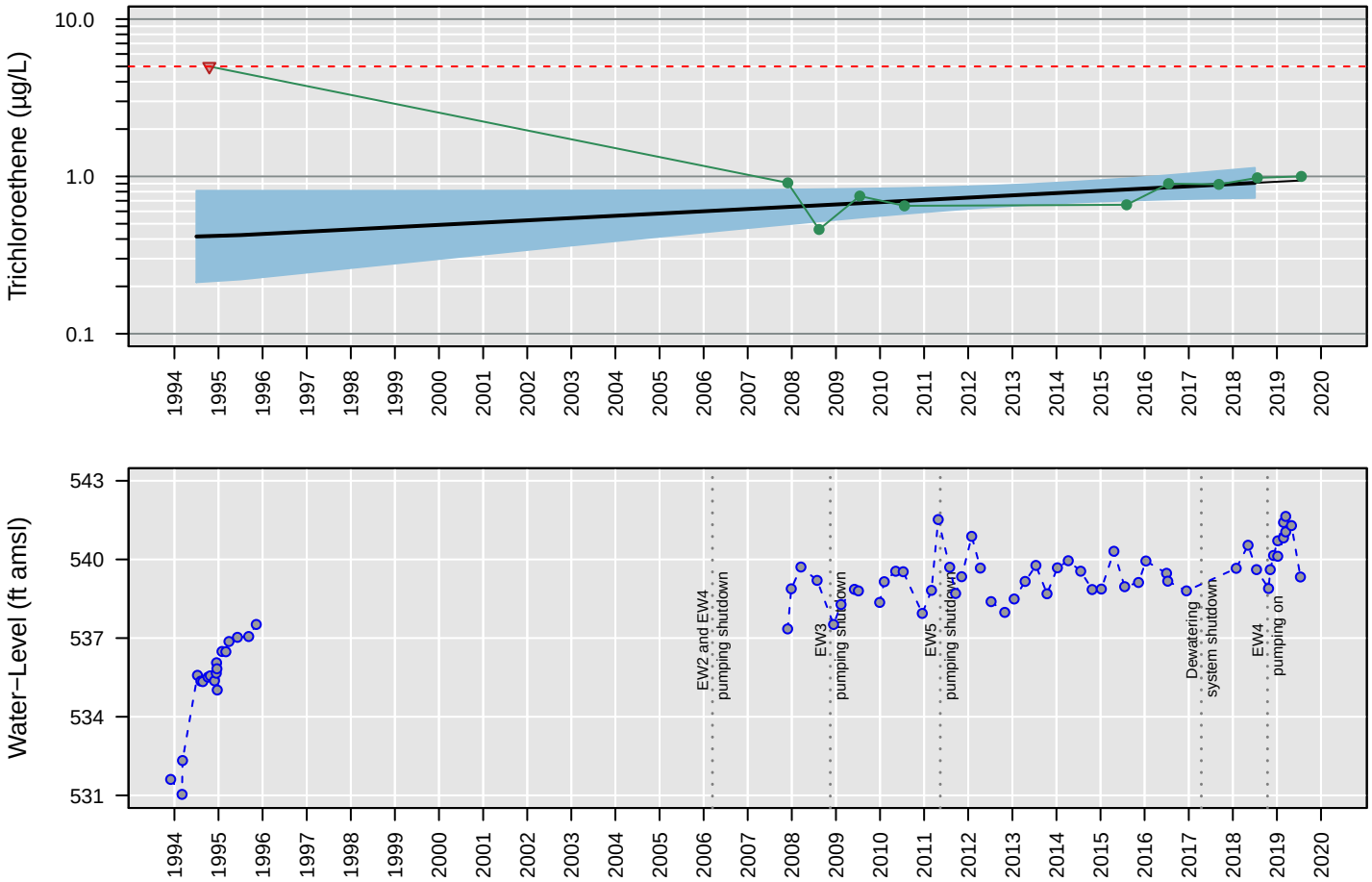
ln Conc. = −0.00025 (+/− 0.000046)*Date + 5.8 (+/− 0.7)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 4.7 µg/L
UCL: 7 µg/L
LCL: 3.2 µg/L

MW83

Trichloroethene

Number of Comparisons: 10
Percent NDs: 10%



Censored Regression (Tobit) Model

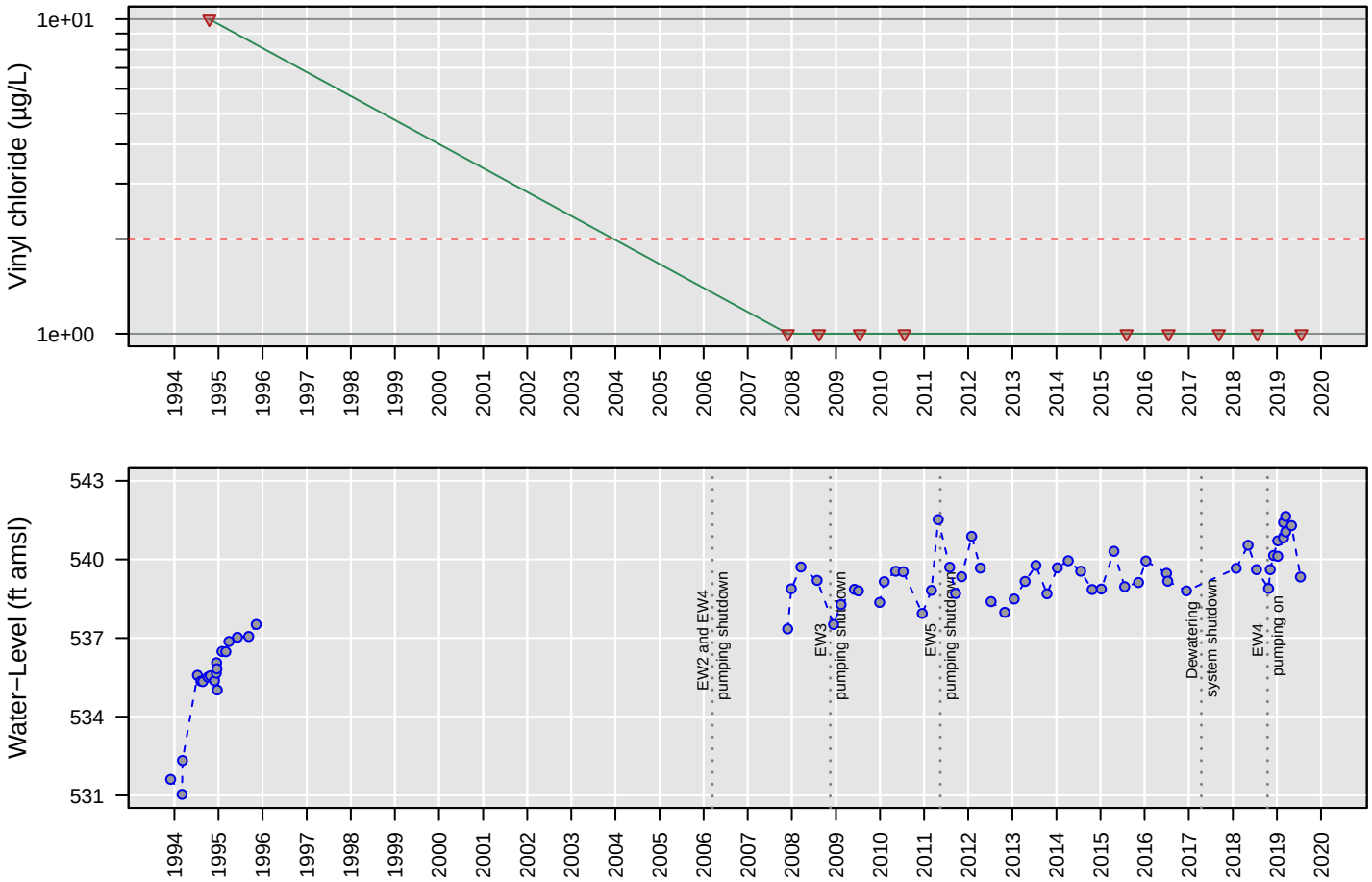
ln Conc. = 0.000091 (+/− 0.00004)*Date + −1.7 (+/− 0.64)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.91 µg/L
UCL: 1.1 µg/L
LCL: 0.73 µg/L

MW83

Vinyl chloride

Number of Comparisons: 10
Percent NDs: 100%



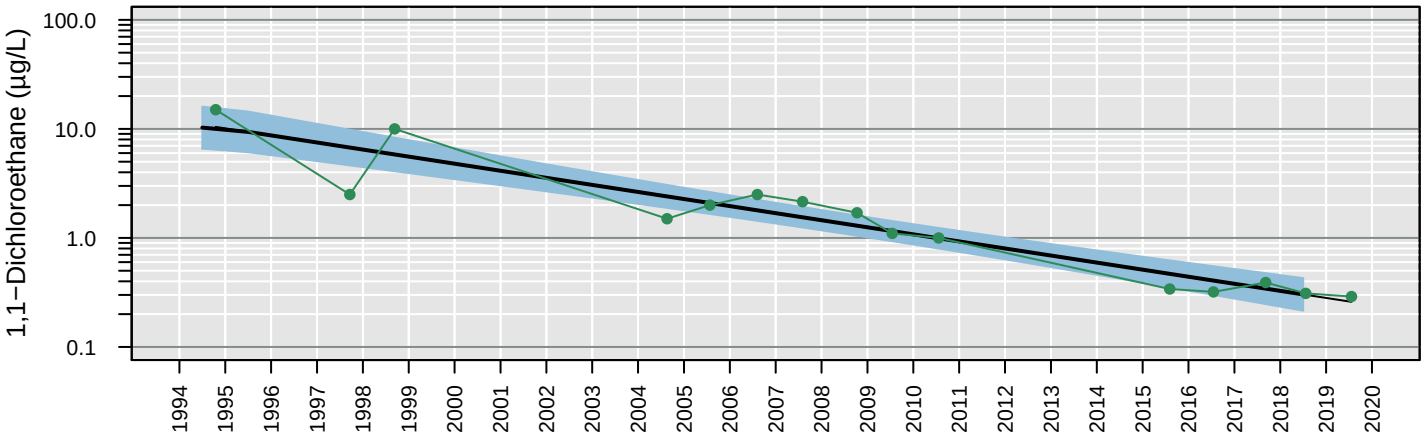
No Analysis Performed

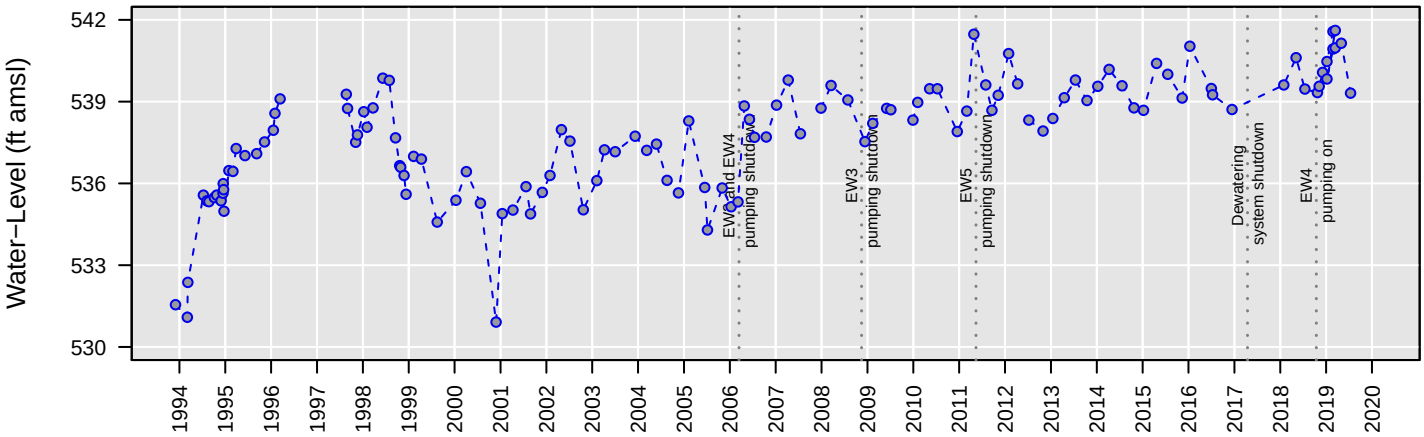
MW84

1,1−Dichloroethane

Number of Comparisons: 15
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

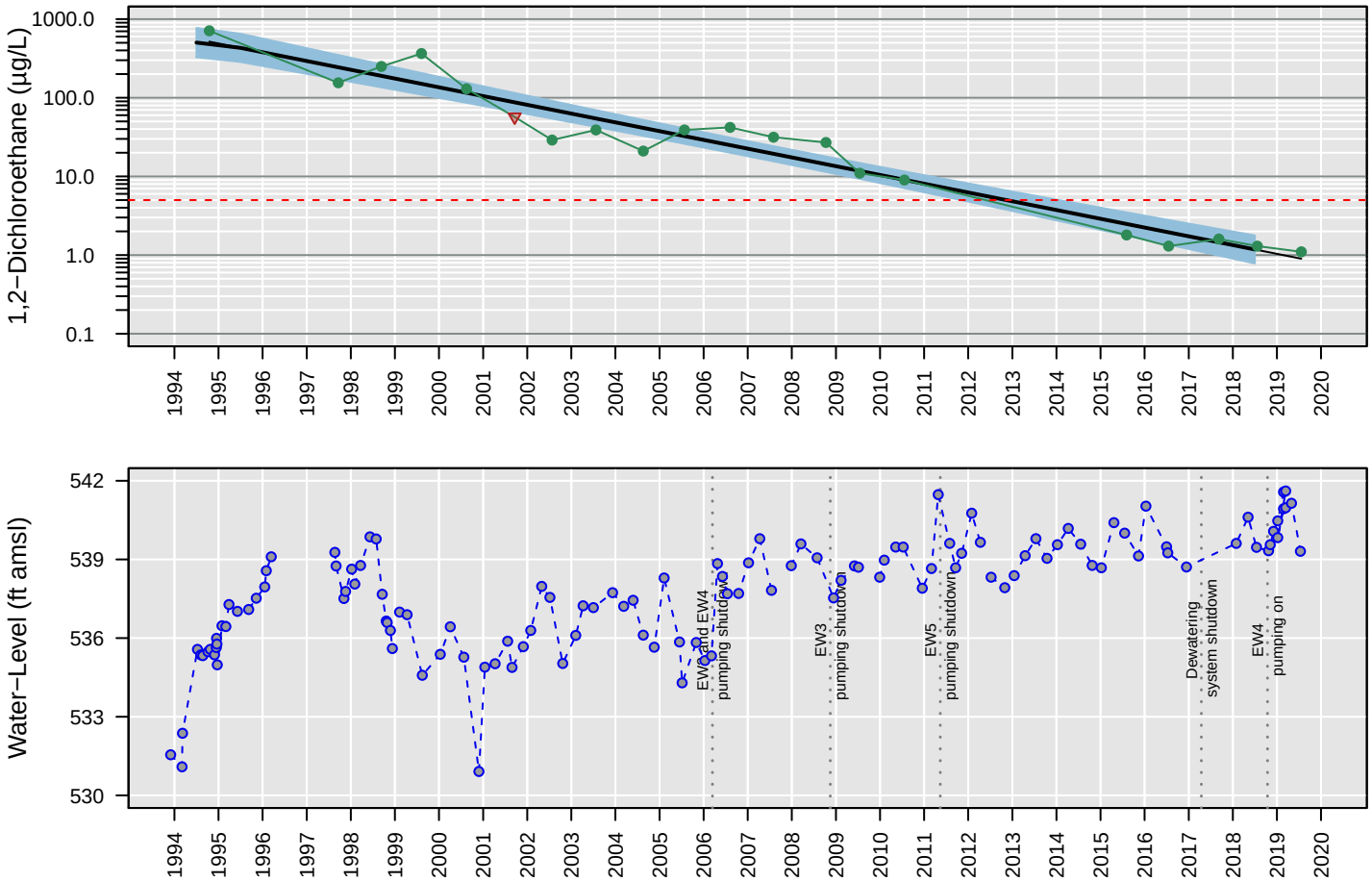
ln Conc. = −0.00041 (+/− 0.000035)*Date + 6 (+/− 0.51)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.3 µg/L
UCL: 0.43 µg/L
LCL: 0.22 µg/L

MW84

1,2−Dichloroethane

Number of Comparisons: 20
Percent NDs: 5%



Censored Regression (Tobit) Model

ln Conc. = −0.0007 (+/− 0.000039)*Date + 13 (+/− 0.54)

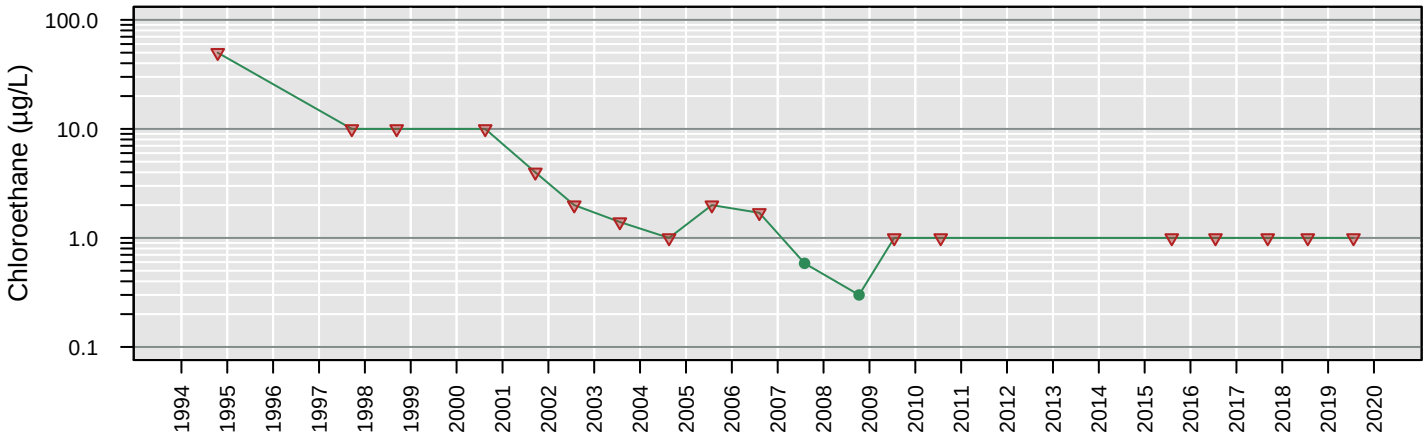
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.2 µg/L
UCL: 1.8 µg/L
LCL: 0.78 µg/L

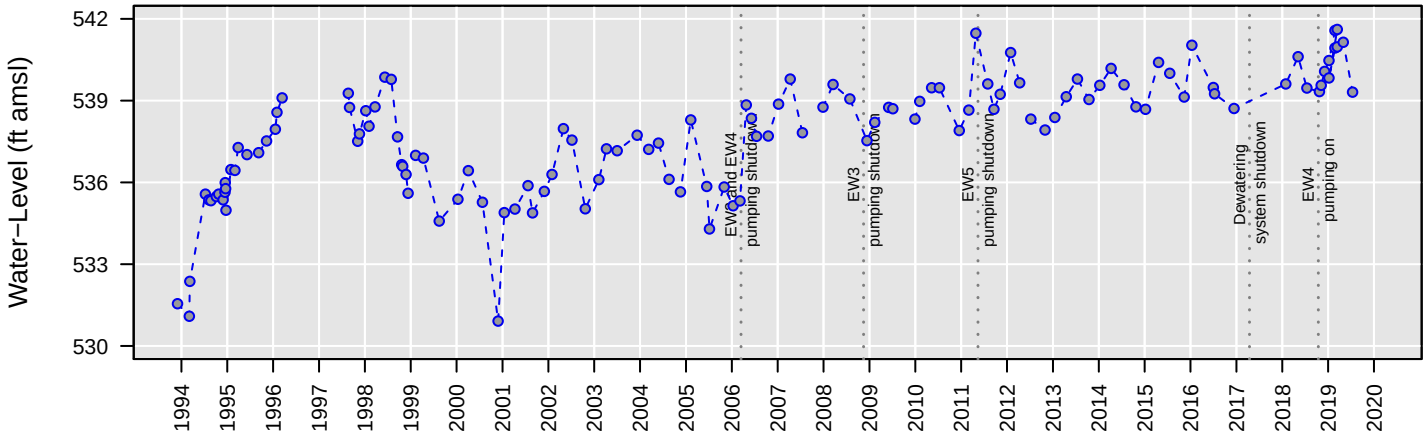
MW84

Chloroethane

Number of Comparisons: 19
Percent NDs: 89%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



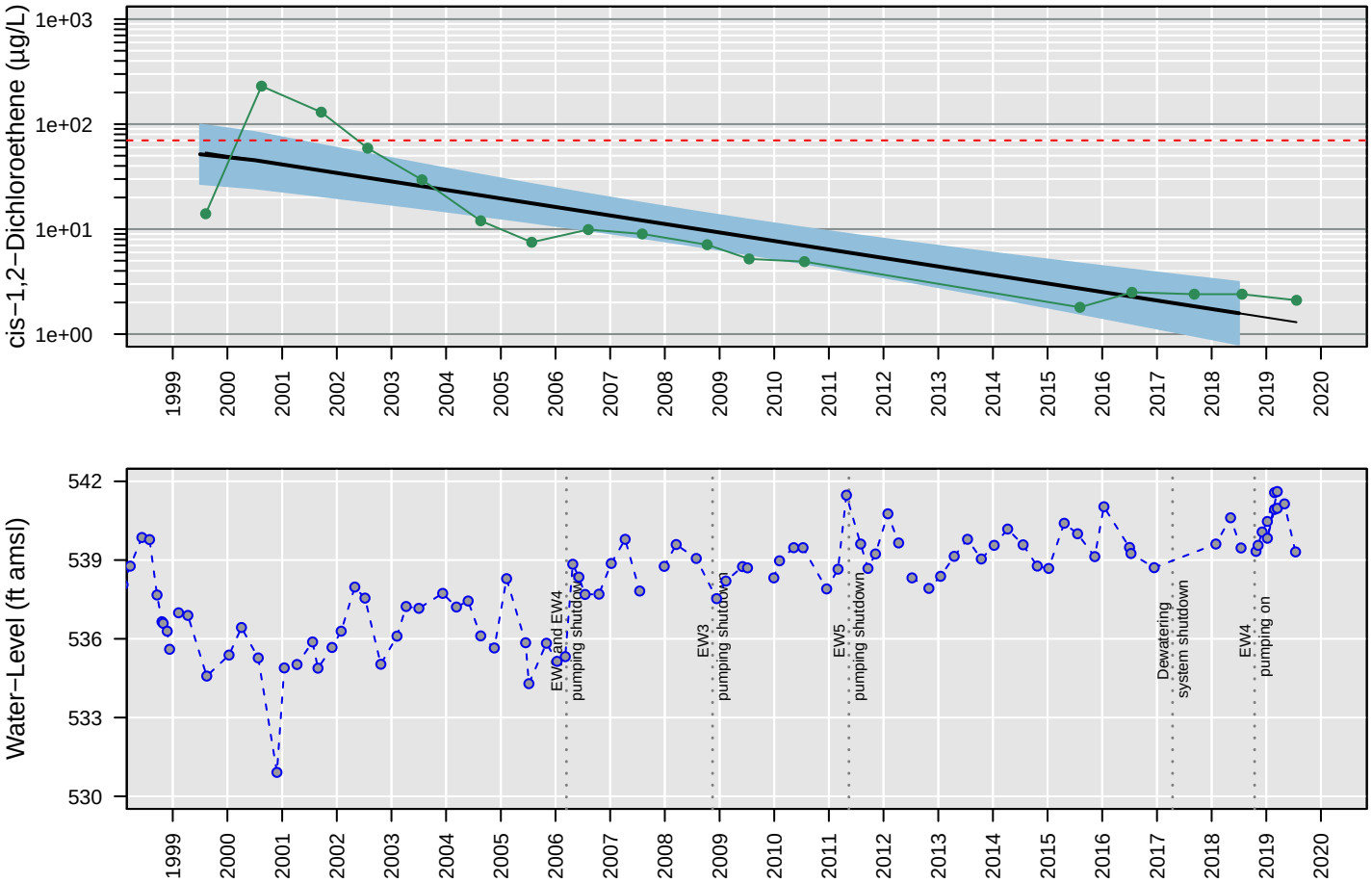


No Analysis Performed

MW84

cis−1,2−Dichloroethene

Number of Comparisons: 17
Percent NDs: 0%



Censored Regression (Tobit) Model

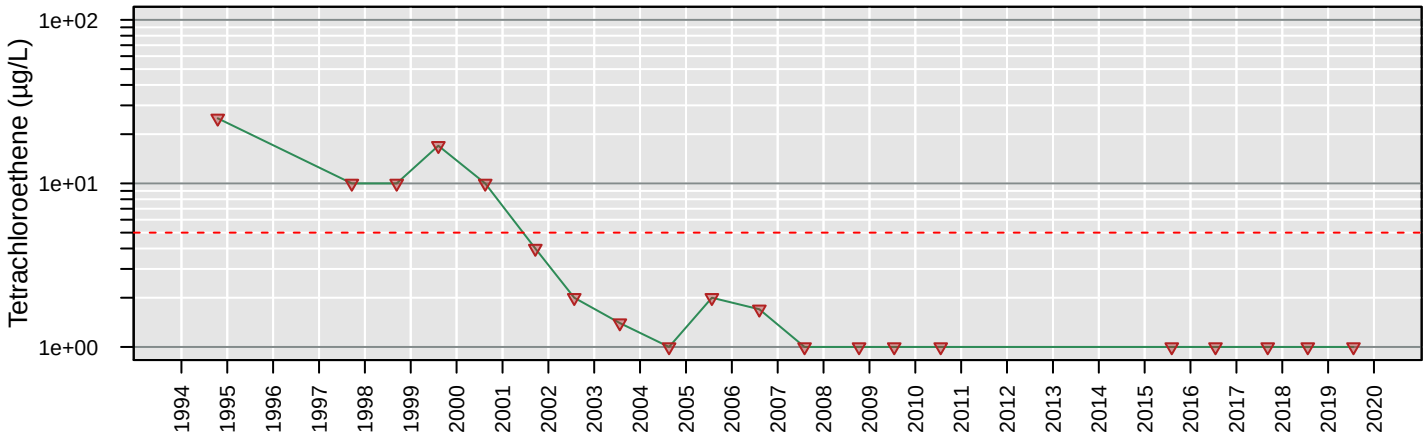
ln Conc. = −0.00051 (+/− 0.000075)*Date + 9.5 (+/− 1.1)

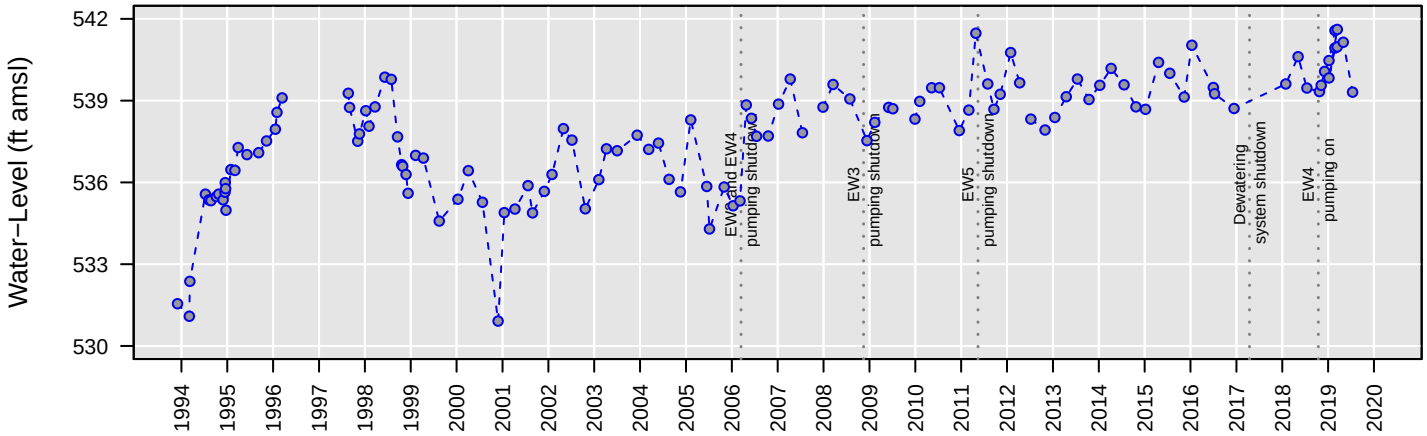
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.6 µg/L
UCL: 3.1 µg/L
LCL: 0.8 µg/L

MW84

Tetrachloroethene

Number of Comparisons: 20
Percent NDs: 100%





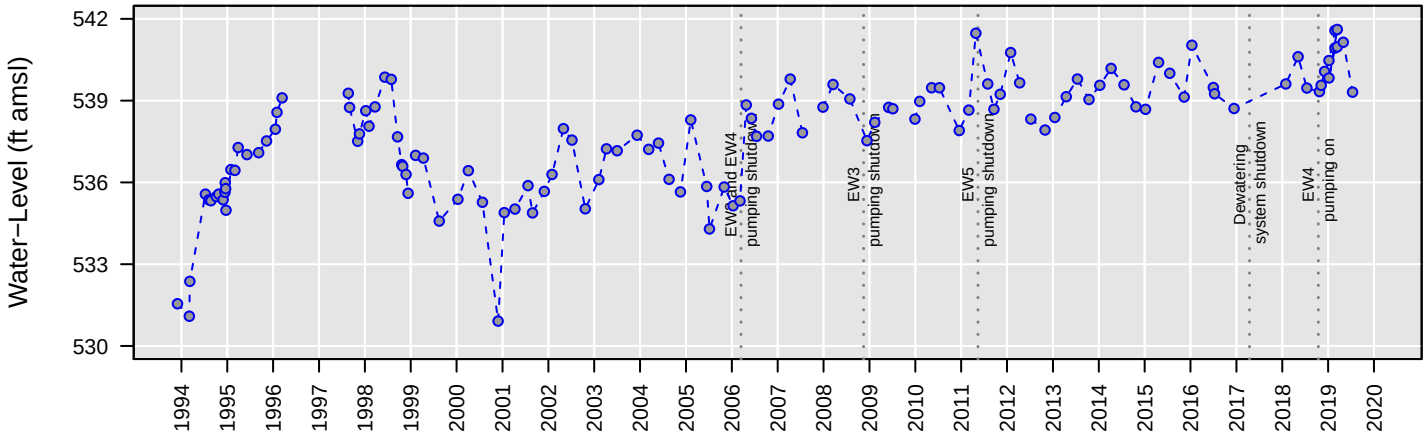
No Analysis Performed

MW84

Total VOCs

Number of Comparisons: 19
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

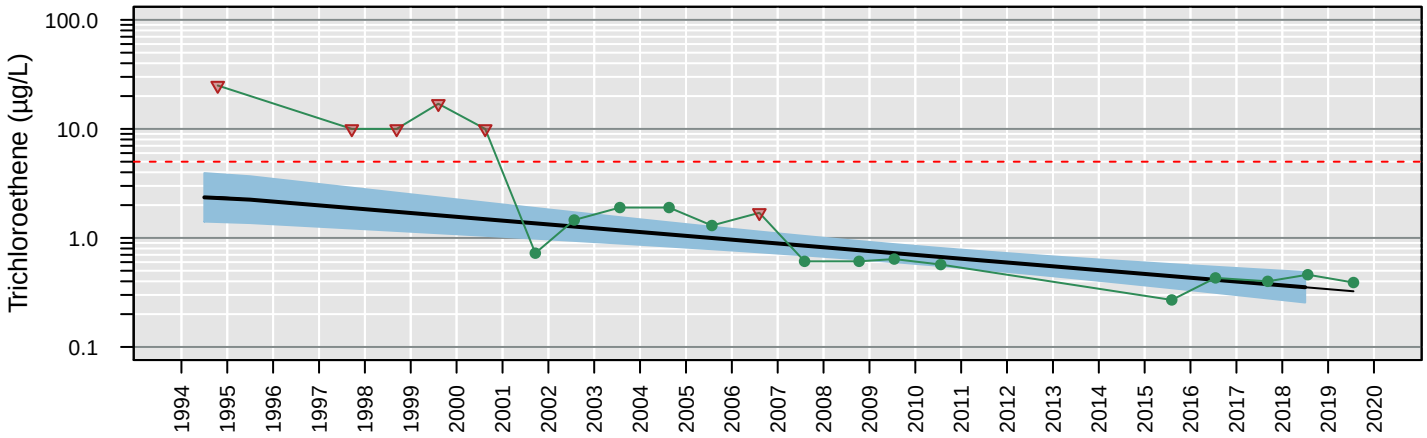
ln Conc. = −0.00064 (+/− 0.000032)*Date + 12 (+/− 0.44)

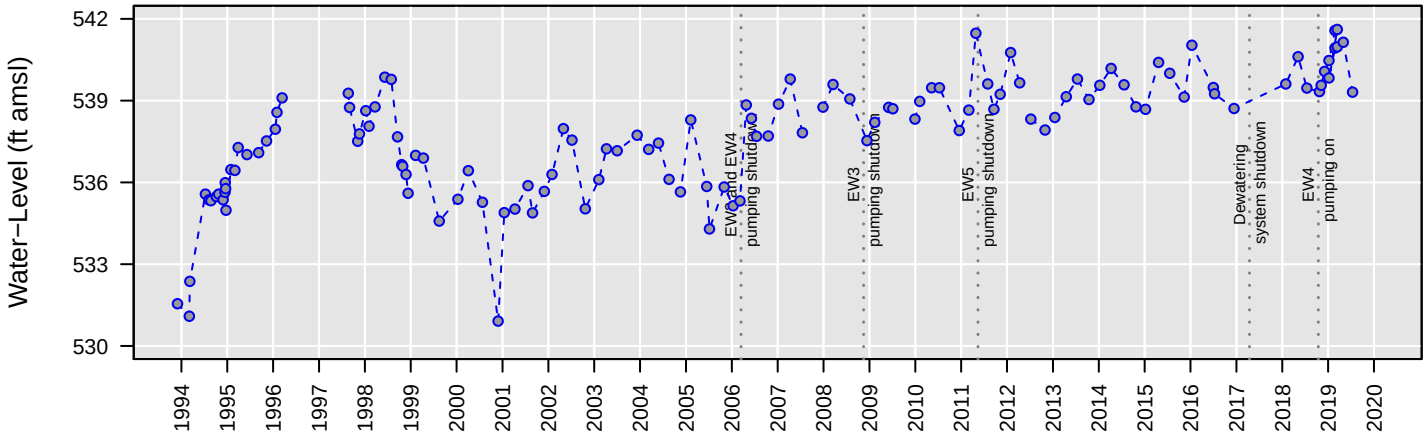
Regression Statistics for January 2017 to January 2018
Geometric Mean: 3.9 µg/L
UCL: 5.4 µg/L
LCL: 2.8 µg/L

MW84

Trichloroethene

Number of Comparisons: 20
Percent NDs: 30%





Censored Regression (Tobit) Model

ln Conc. = −0.00022 (+/− 0.00004)*Date + 2.9 (+/− 0.6)

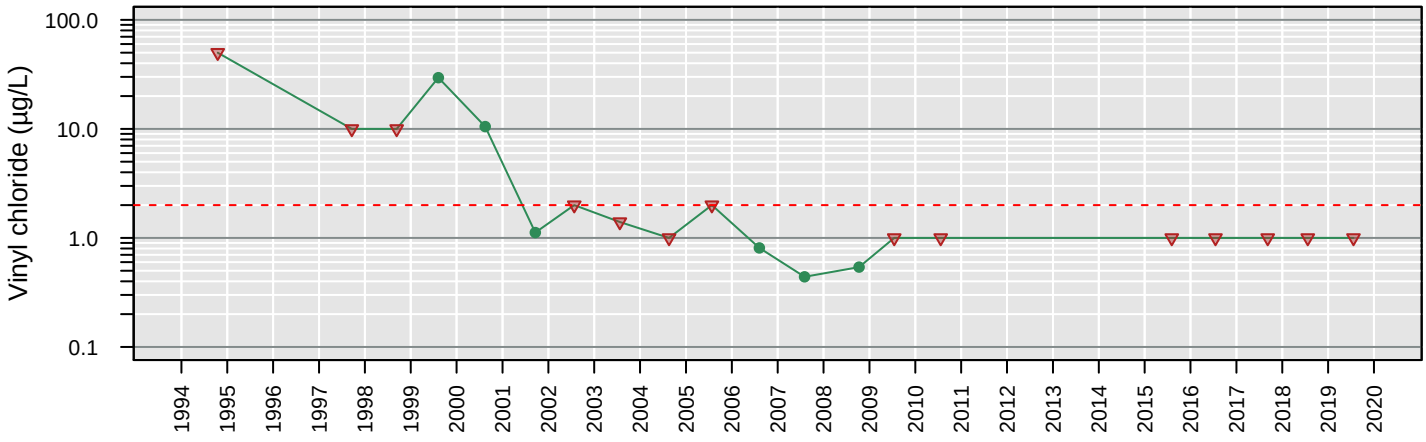
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.35 µg/L
UCL: 0.49 µg/L
LCL: 0.26 µg/L

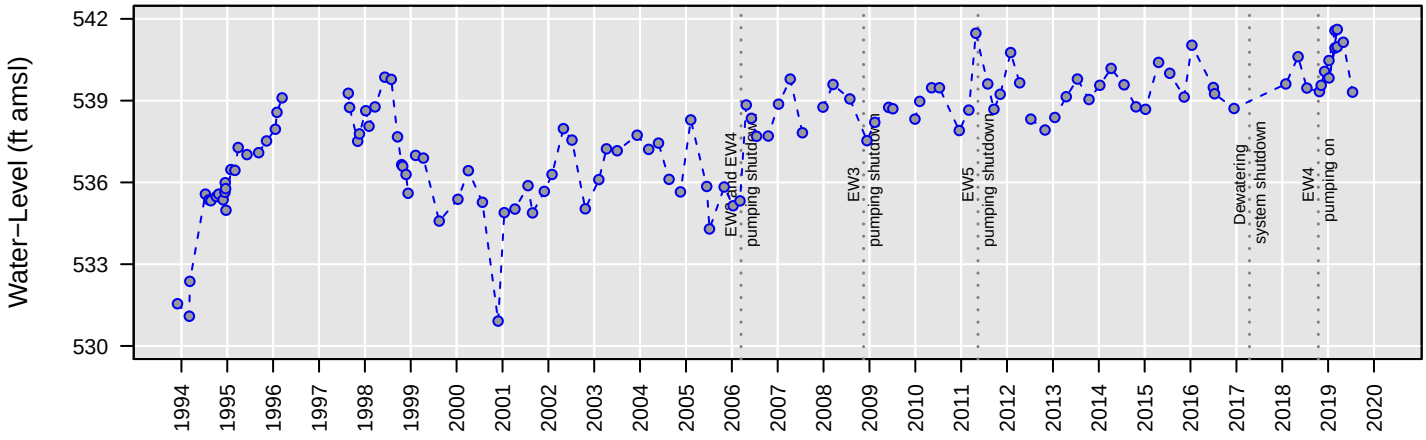
MW84

Vinyl chloride

Number of Comparisons: 20
Percent NDs: 70%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



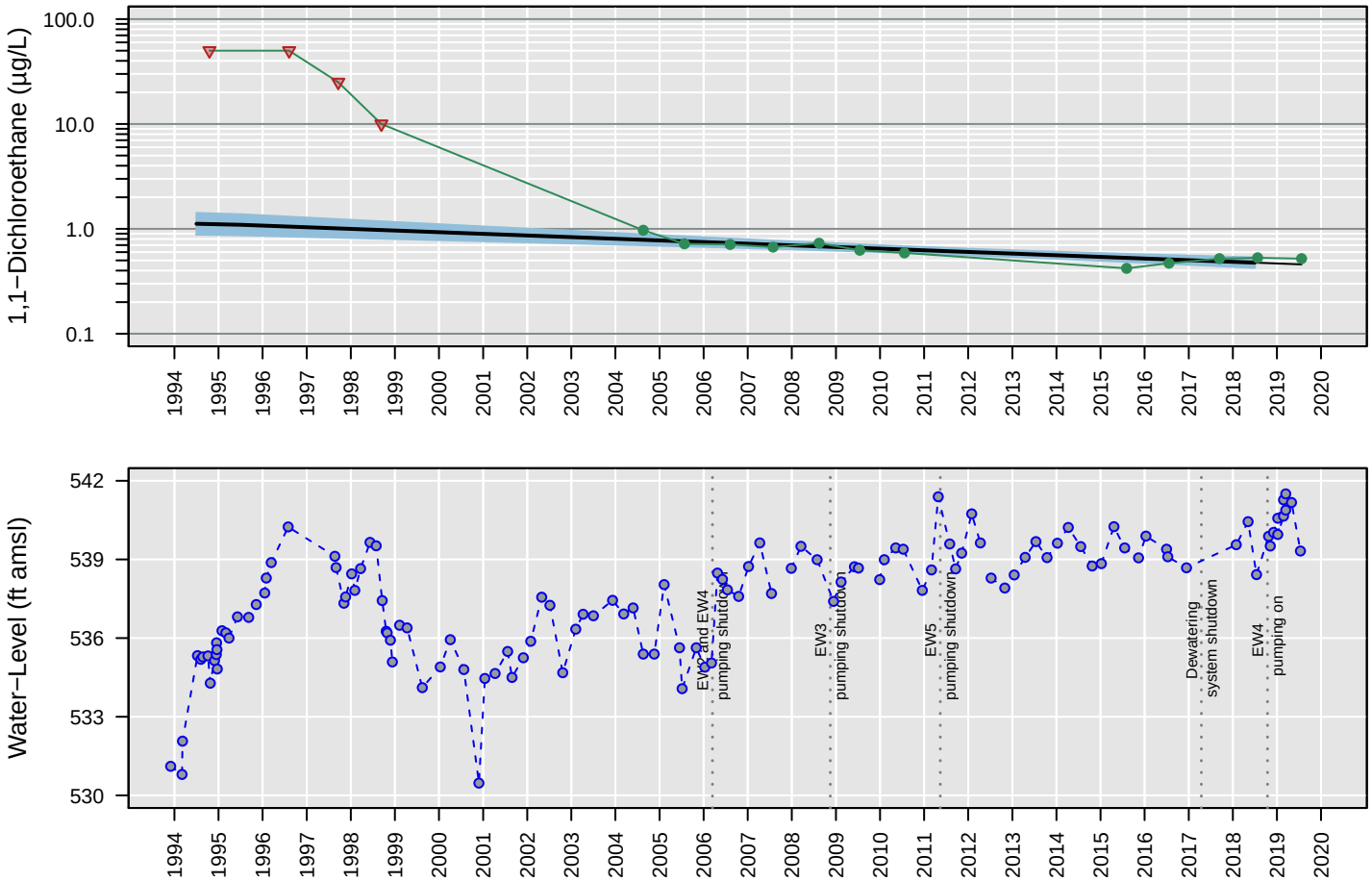


No Analysis Performed

MW85

1,1−Dichloroethane

Number of Comparisons: 16
Percent NDs: 25%



Censored Regression (Tobit) Model

ln Conc. = −0.000099 (+/− 0.000017)*Date + 1 (+/− 0.26)

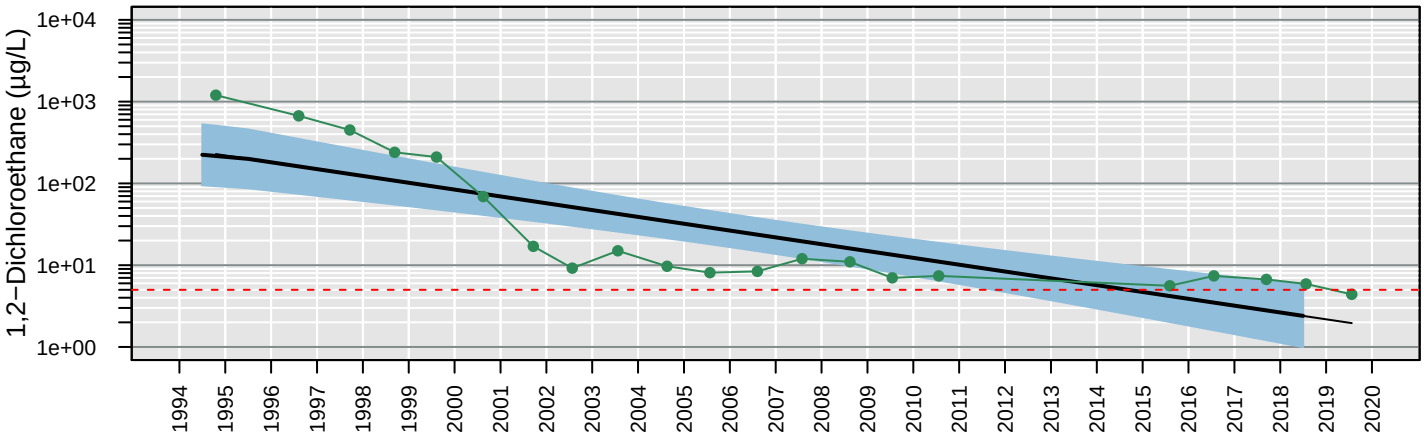
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.48 µg/L
UCL: 0.53 µg/L
LCL: 0.42 µg/L

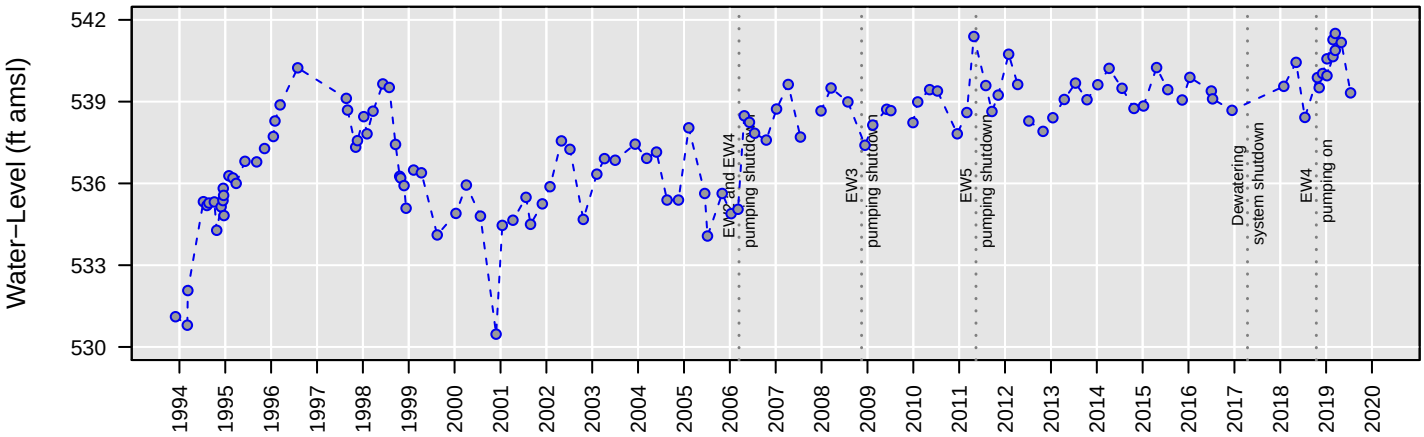
MW85

1,2−Dichloroethane

Number of Comparisons: 21
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00053 (+/− 0.000081)*Date + 10 (+/− 1.1)

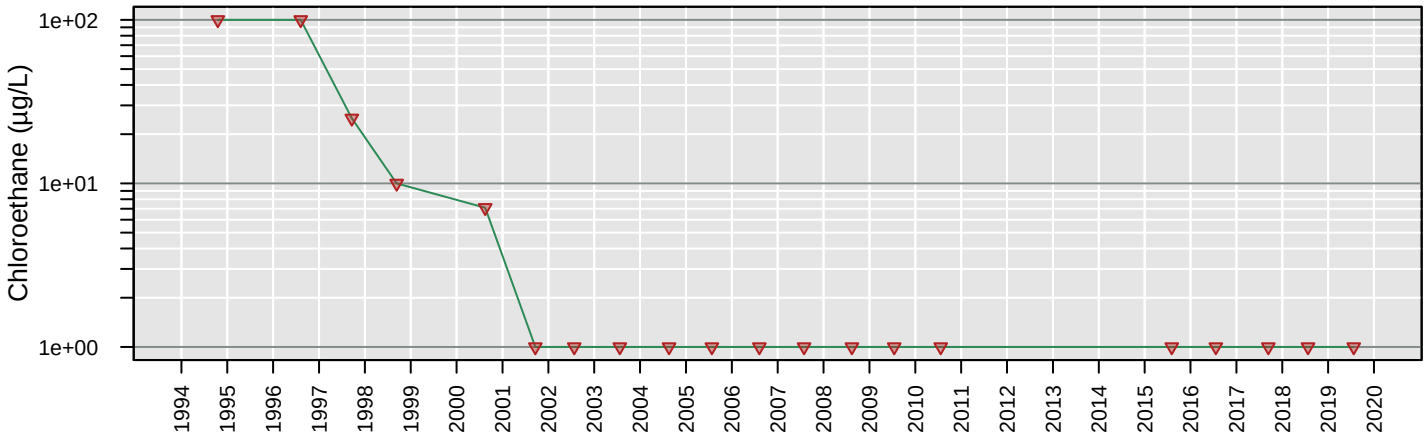
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.4 µg/L
UCL: 5.8 µg/L
LCL: 1 µg/L

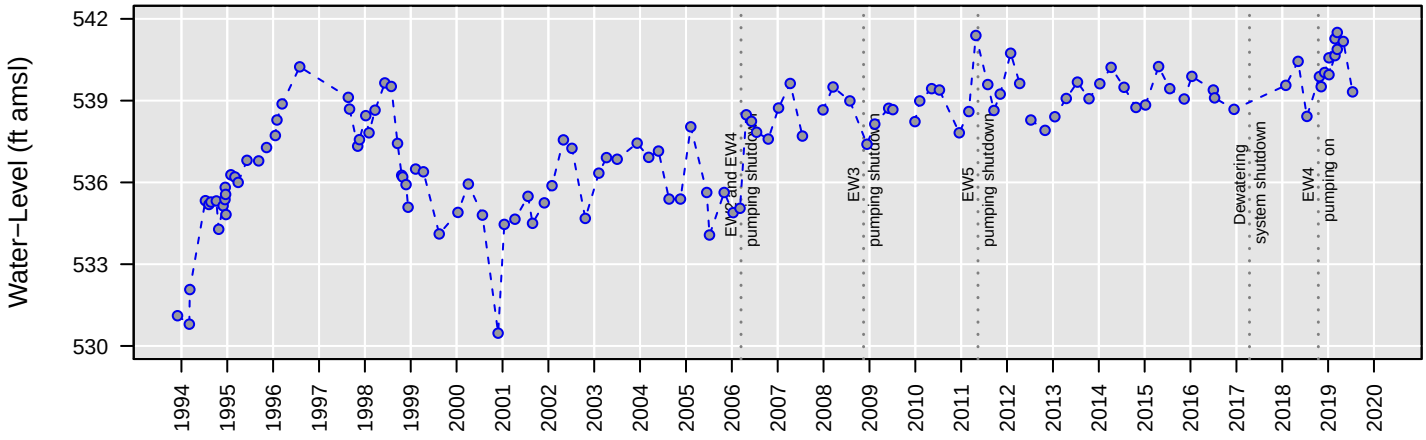
MW85

Chloroethane

Number of Comparisons: 20
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



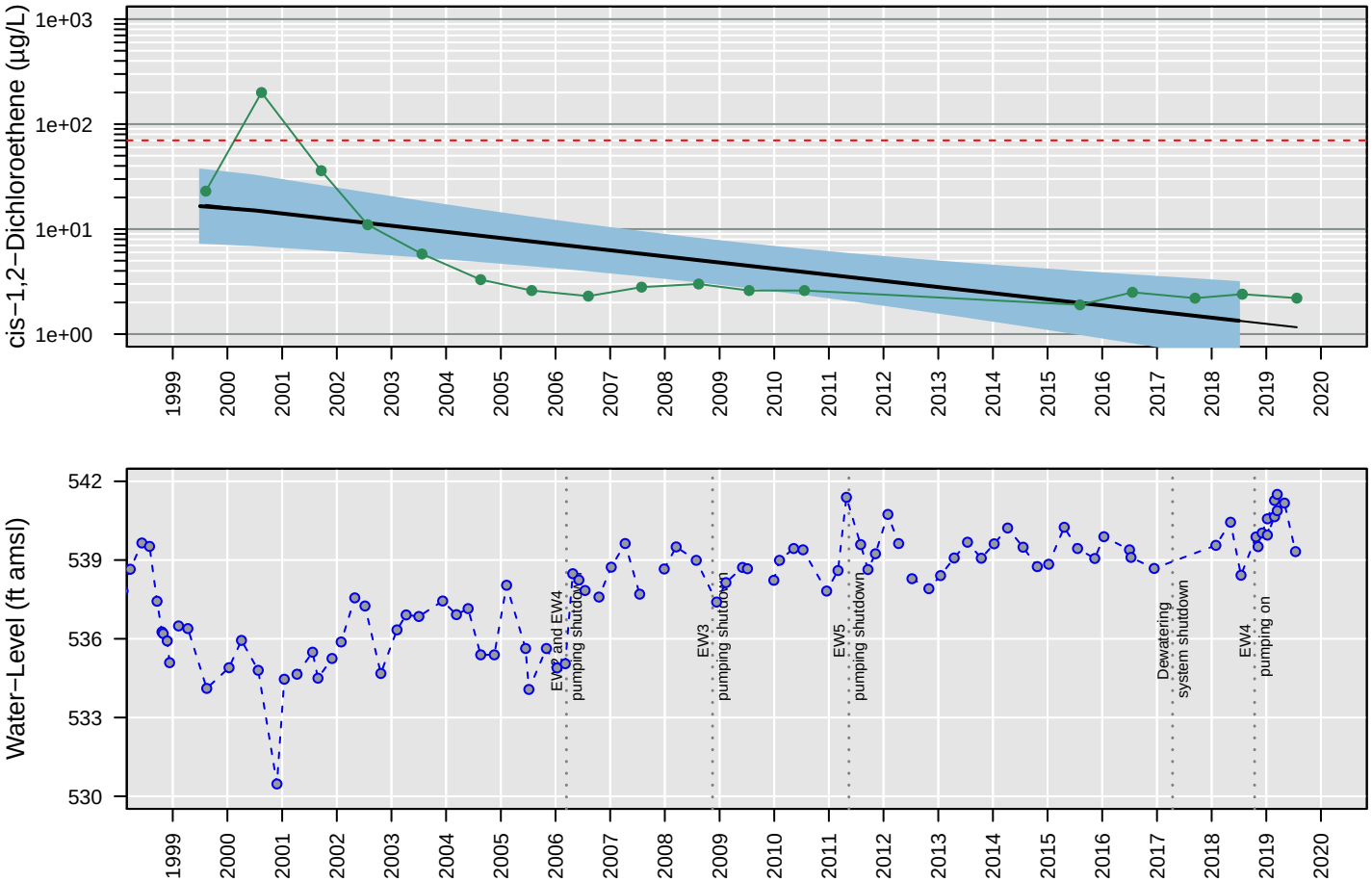


No Analysis Performed

MW85

cis−1,2−Dichloroethene

Number of Comparisons: 17
Percent NDs: 0%



Censored Regression (Tobit) Model

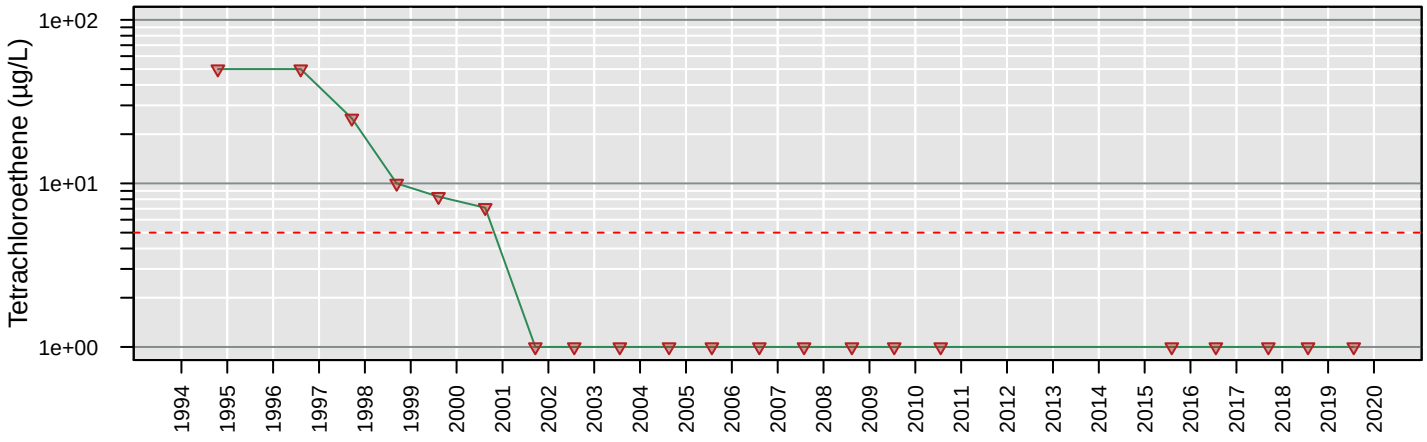
ln Conc. = −0.00037 (+/− 0.000093)*Date + 6.8 (+/− 1.3)

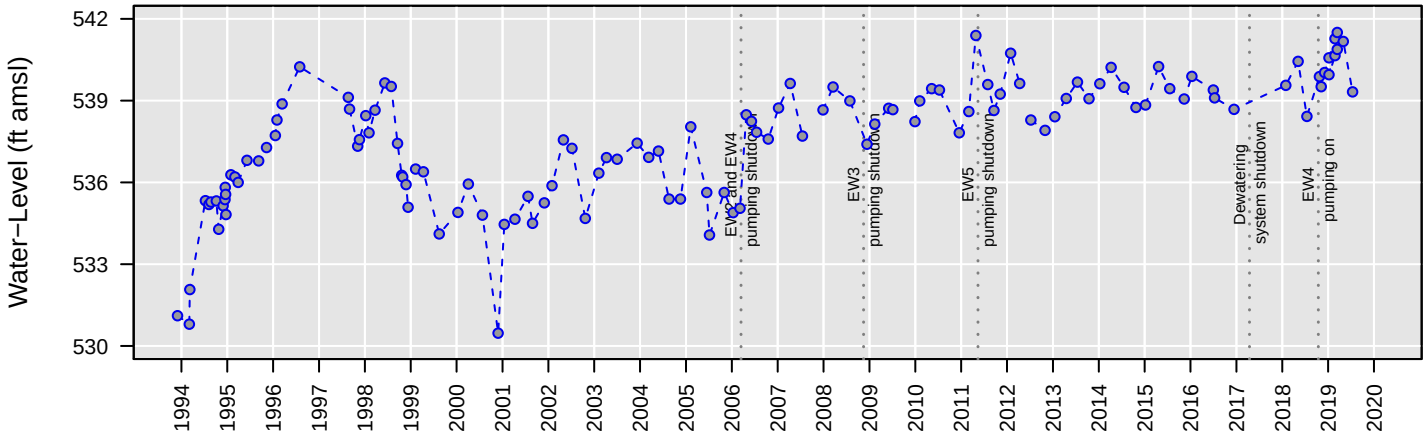
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.3 µg/L
UCL: 3.1 µg/L
LCL: 0.57 µg/L

MW85

Tetrachloroethene

Number of Comparisons: 21
Percent NDs: 100%



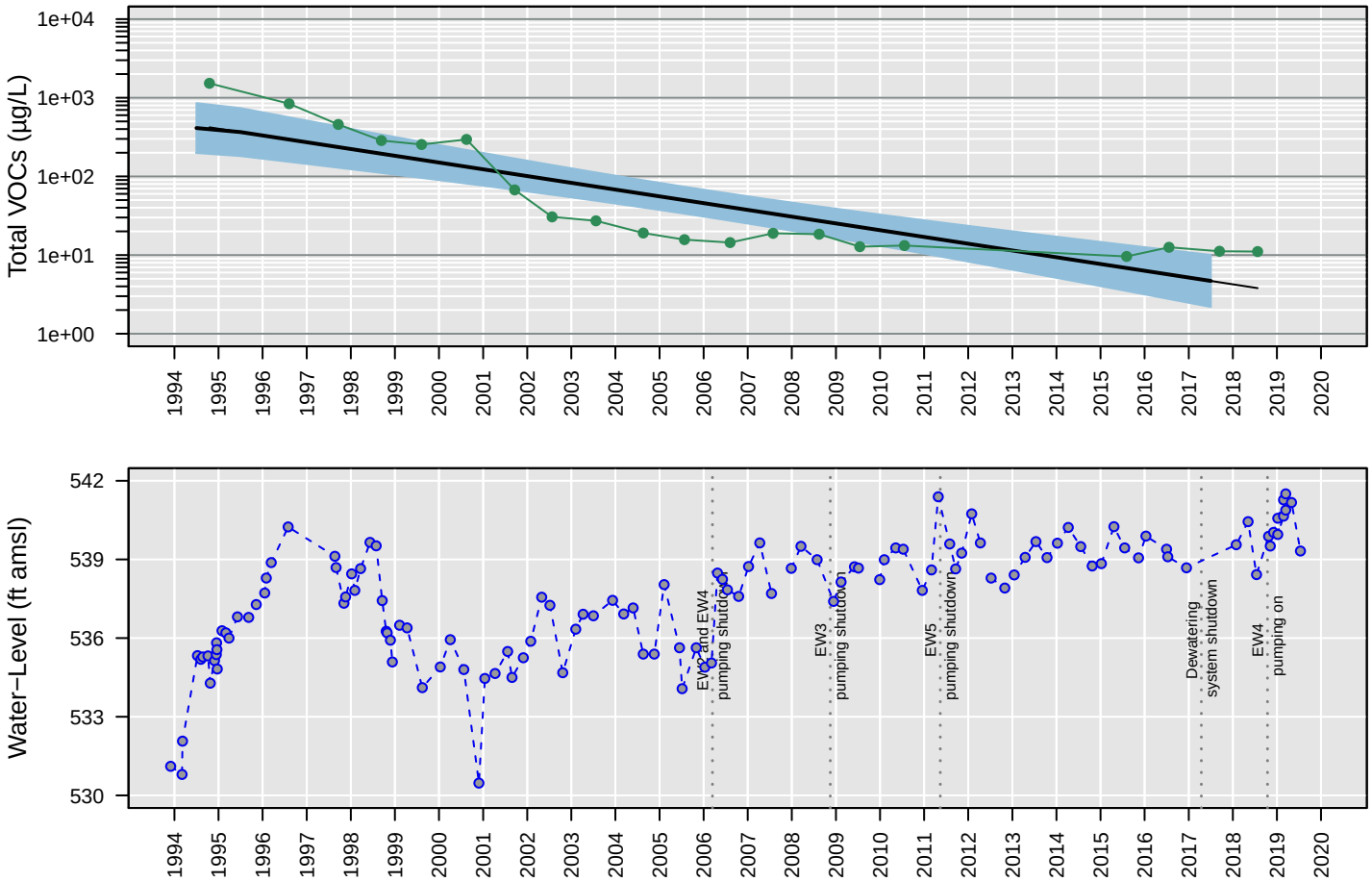


No Analysis Performed

MW85

Total VOCs

Number of Comparisons: 20
Percent NDs: 0%



Censored Regression (Tobit) Model

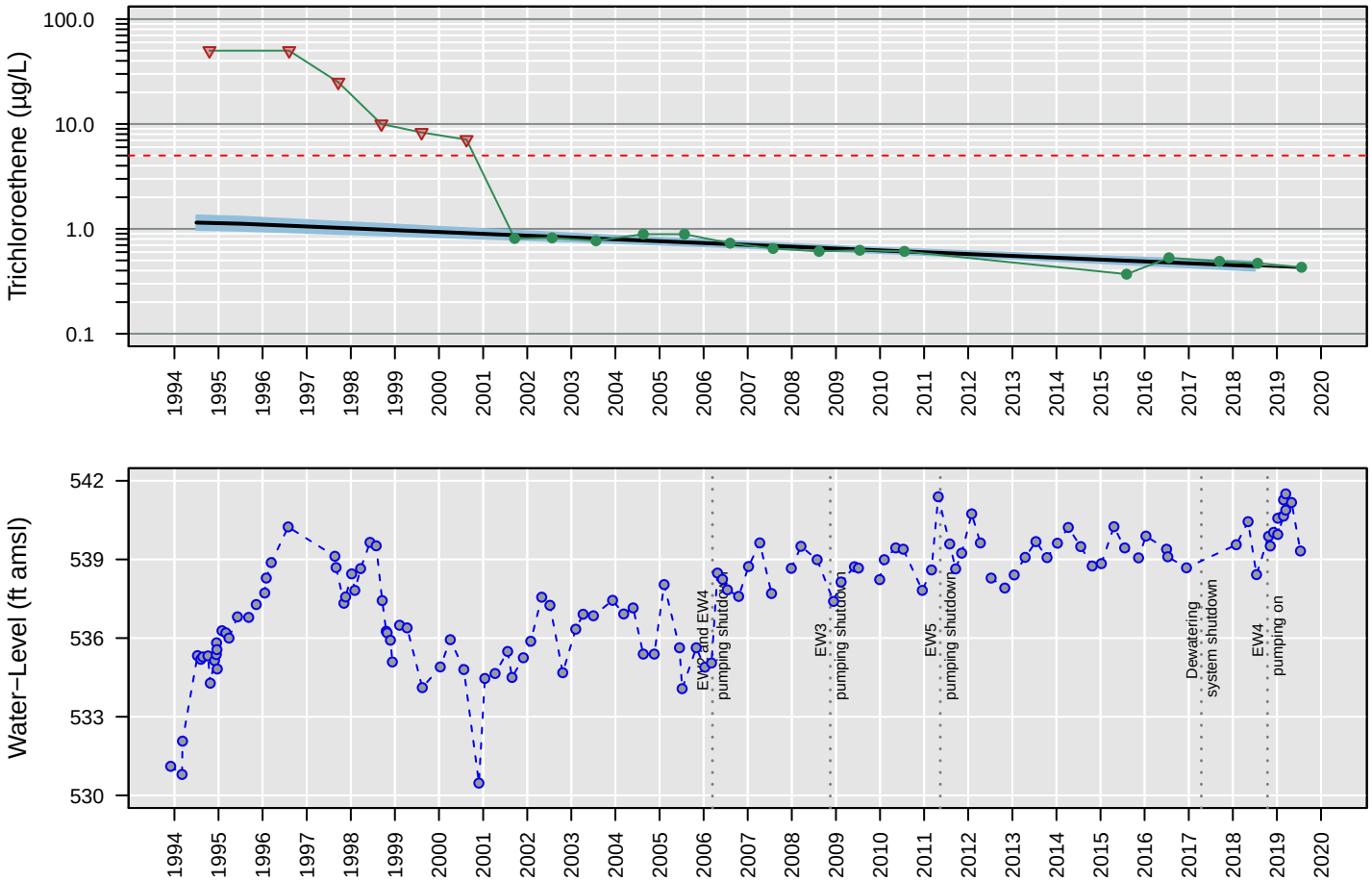
ln Conc. = −0.00054 (+/− 0.000073)*Date + 11 (+/− 0.97)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 4.7 µg/L
UCL: 10 µg/L
LCL: 2.2 µg/L

MW85

Trichloroethene

Number of Comparisons: 21
Percent NDs: 29%



Censored Regression (Tobit) Model

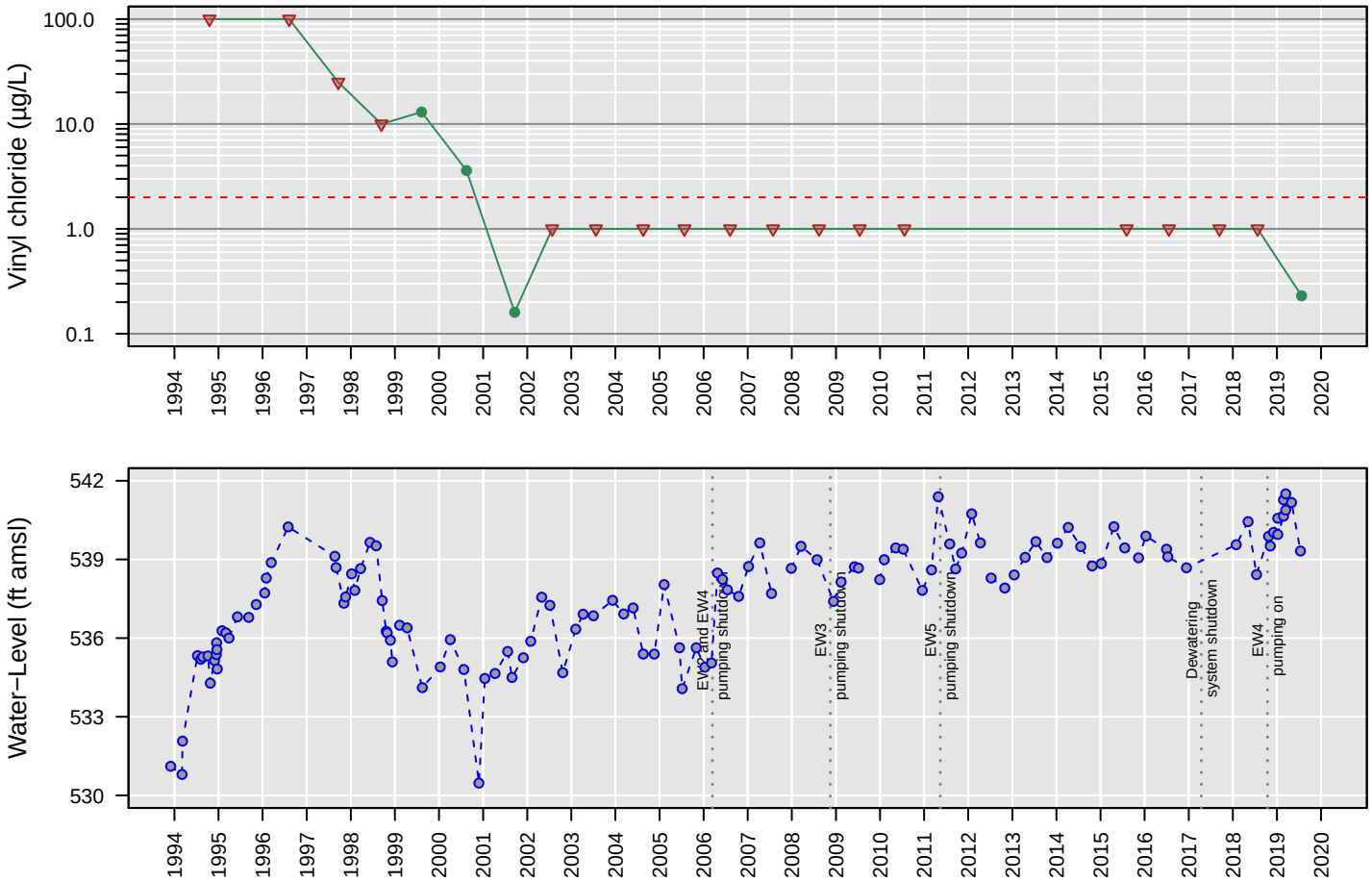
ln Conc. = −0.00011 (+/− 0.000013)*Date + 1.1 (+/− 0.19)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.44 µg/L
UCL: 0.49 µg/L
LCL: 0.4 µg/L

MW85

Vinyl chloride

Number of Comparisons: 21
Percent NDs: 81%

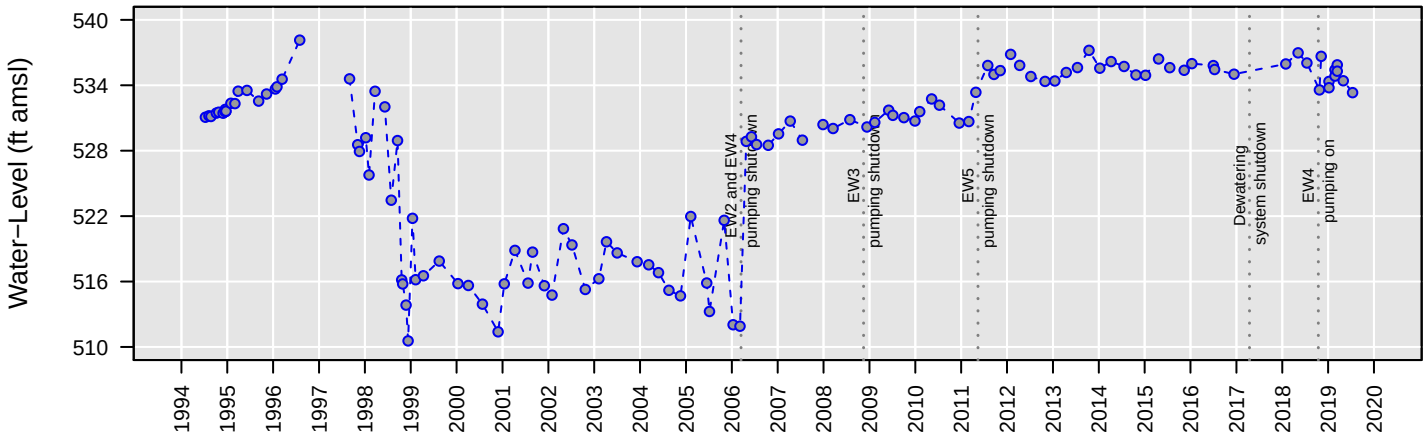


No Analysis Performed

MW86

1,1−Dichloroethane

Number of Comparisons: 26
Percent NDs: 27%



Censored Regression (Tobit) Model

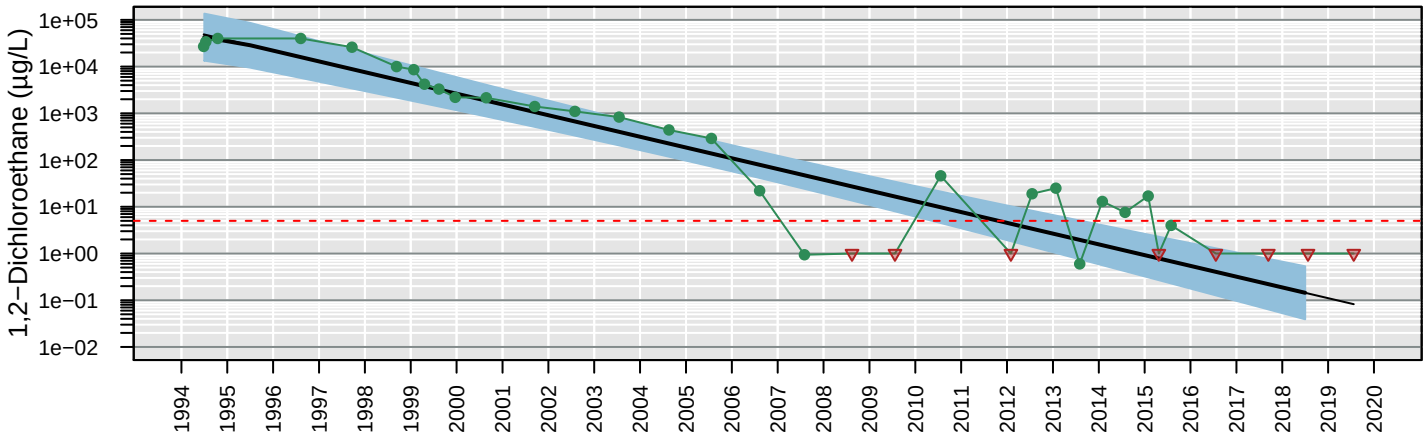
ln Conc. = −0.00021 (+/− 0.000051)*Date + 4.1 (+/− 0.8)

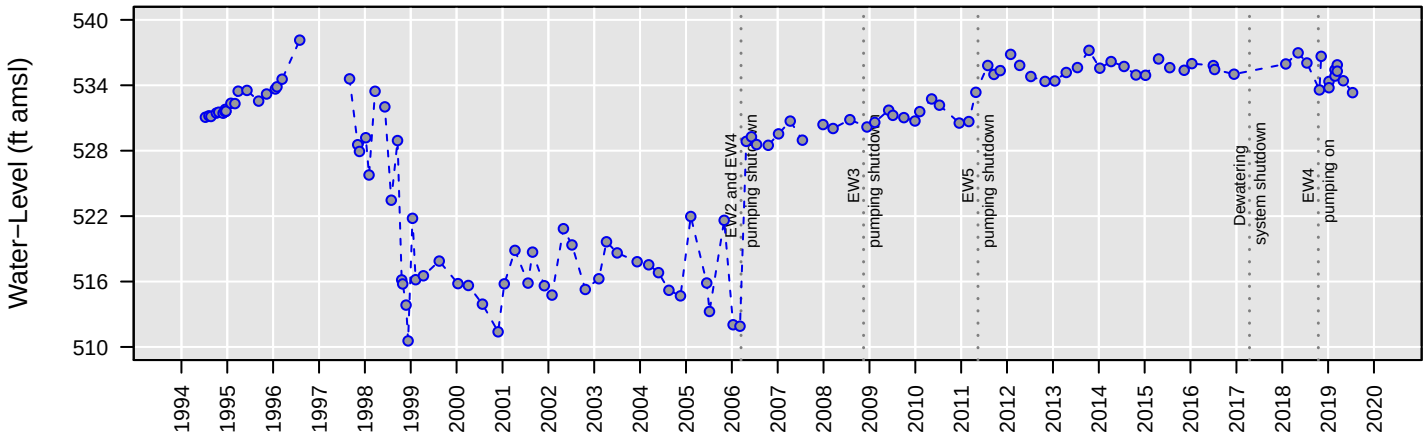
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.5 µg/L
UCL: 2.1 µg/L
LCL: 1.1 µg/L

MW86

1,2−Dichloroethane

Number of Comparisons: 34
Percent NDs: 24%





Censored Regression (Tobit) Model

ln Conc. = −0.0015 (+/− 0.00012)*Date + 24 (+/− 1.6)

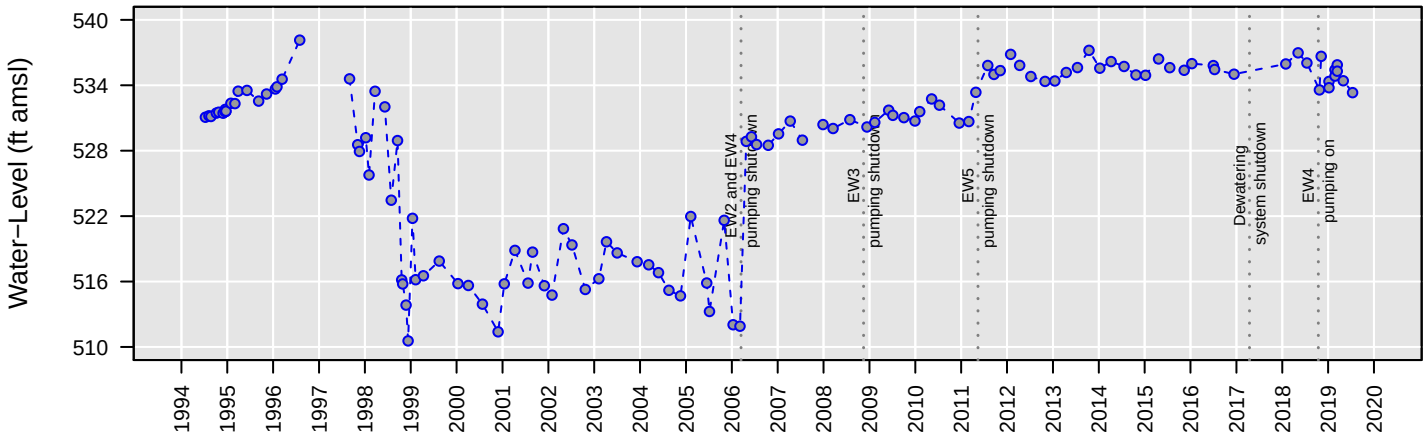
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.14 µg/L
UCL: 0.53 µg/L
LCL: 0.039 µg/L

MW86

Chloroethane

Number of Comparisons: 30
Percent NDs: 97%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

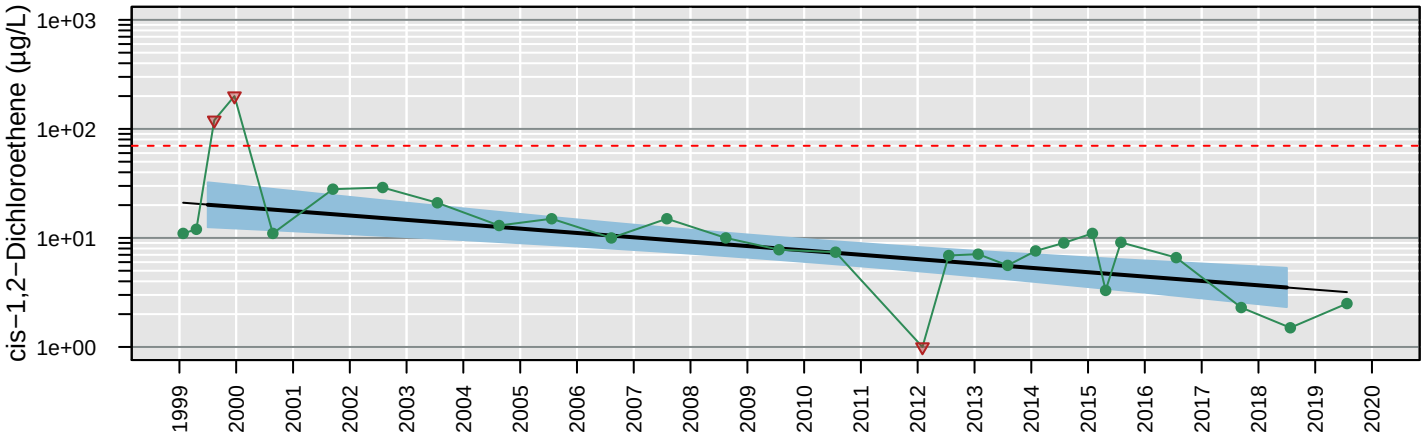


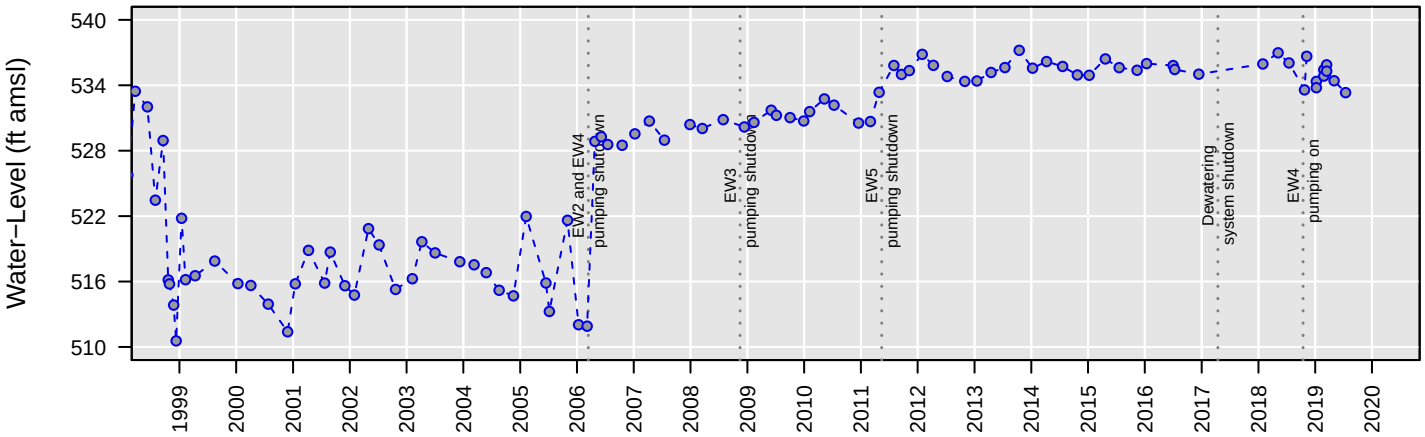
No Analysis Performed

MW86

cis−1,2−Dichloroethene

Number of Comparisons: 28
Percent NDs: 11%





Censored Regression (Tobit) Model

ln Conc. = −0.00025 (+/− 0.000052)*Date + 5.7 (+/− 0.77)

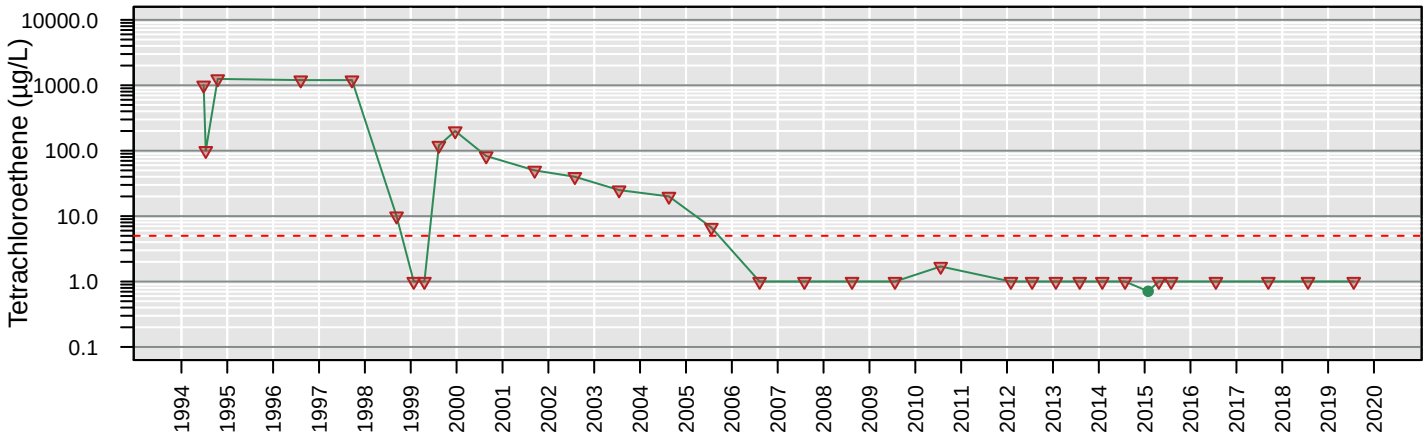
Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.5 µg/L
UCL: 5.3 µg/L
LCL: 2.3 µg/L

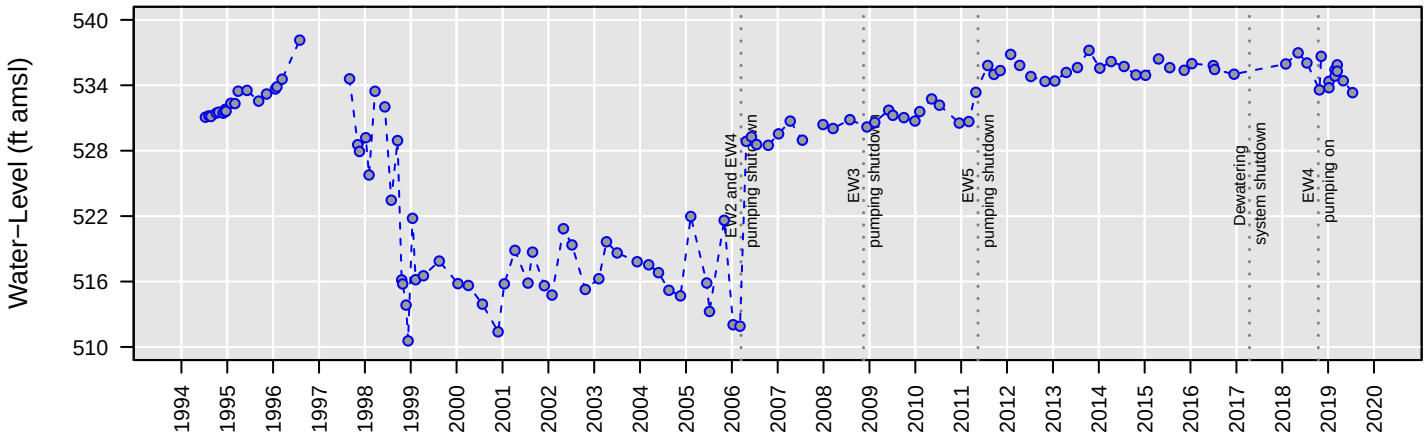
MW86

Tetrachloroethene

Number of Comparisons: 34
Percent NDs: 97%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



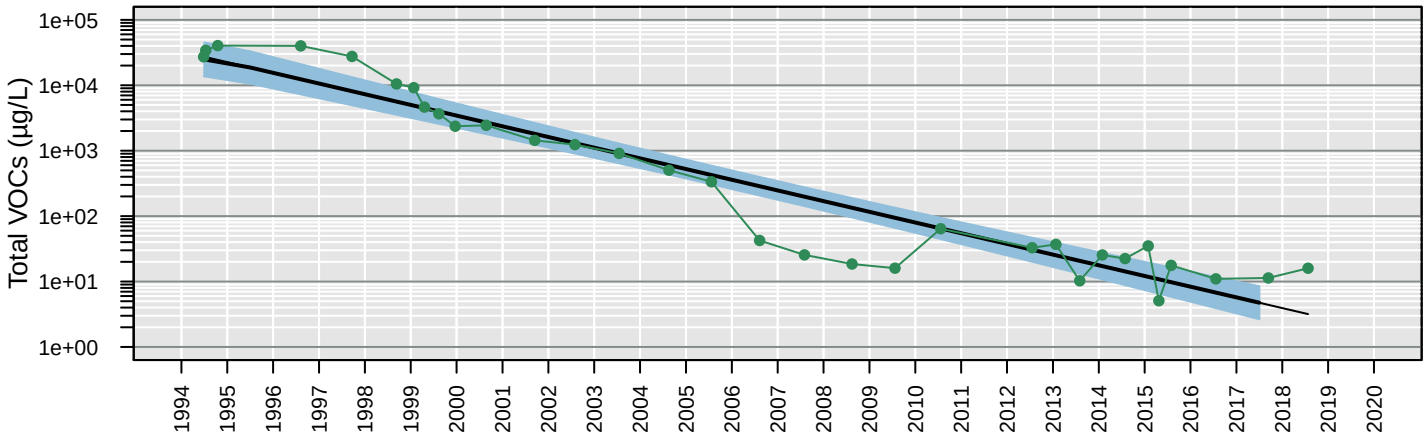


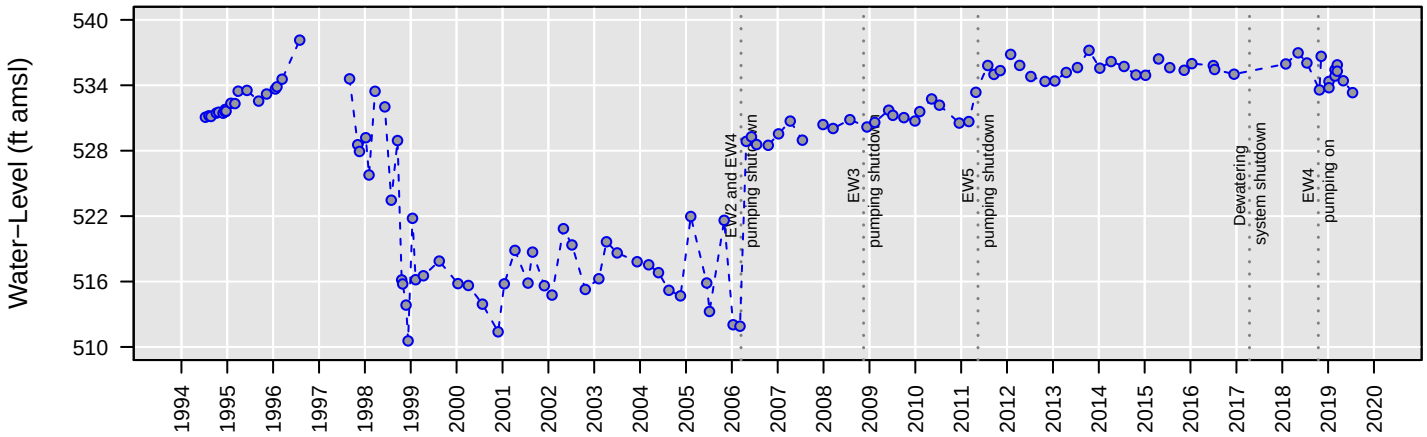
No Analysis Performed

MW86

Total VOCs

Number of Comparisons: 32
Percent NDs: 0%





Censored Regression (Tobit) Model

ln Conc. = −0.001 (+/− 0.000058)*Date + 19 (+/− 0.78)

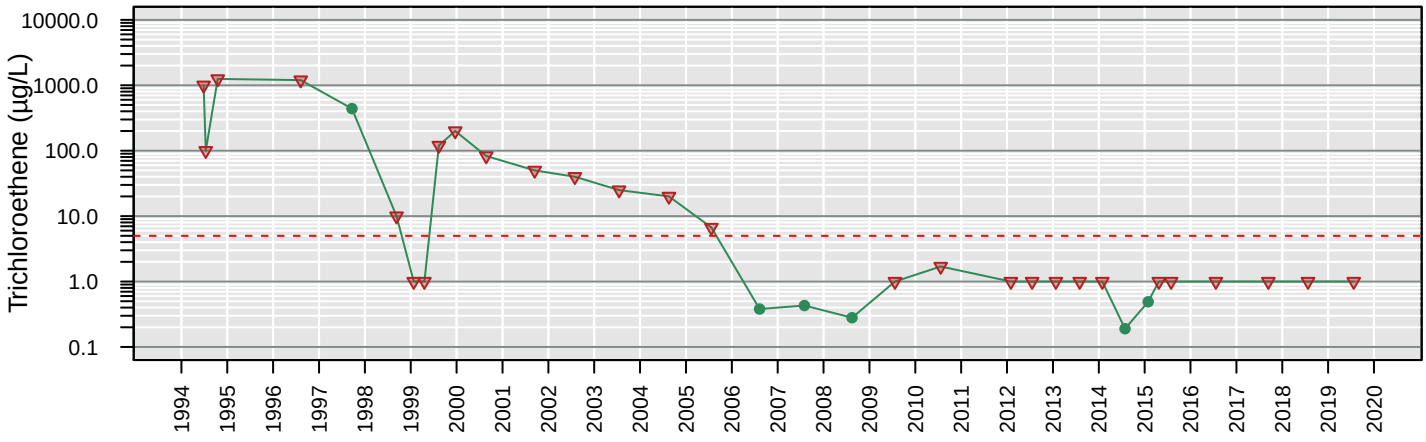
Regression Statistics for January 2017 to January 2018
Geometric Mean: 4.7 µg/L
UCL: 8.5 µg/L
LCL: 2.7 µg/L

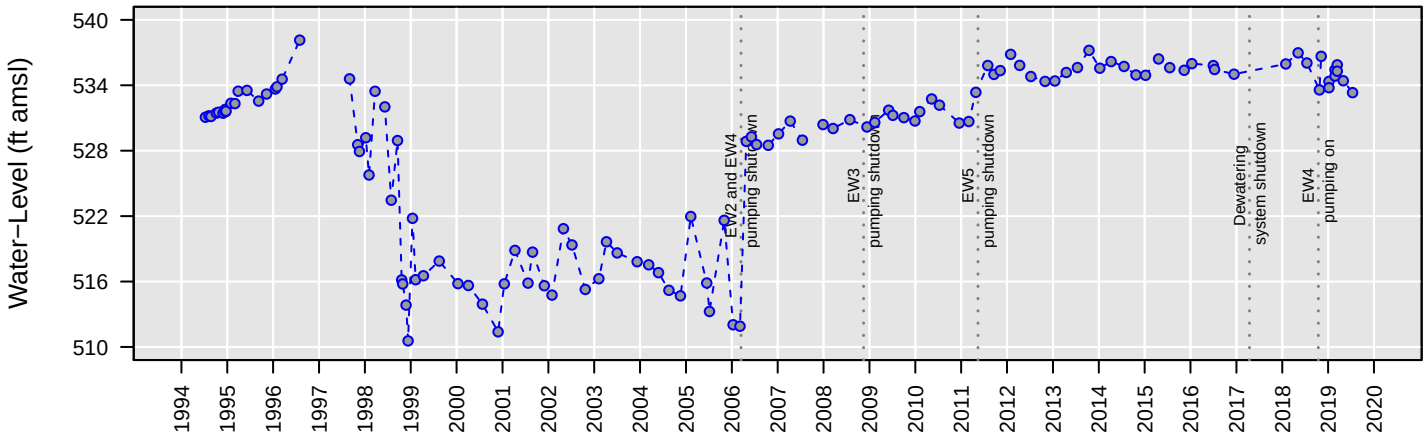
MW86

Trichloroethene

Number of Comparisons: 34
Percent NDs: 82%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



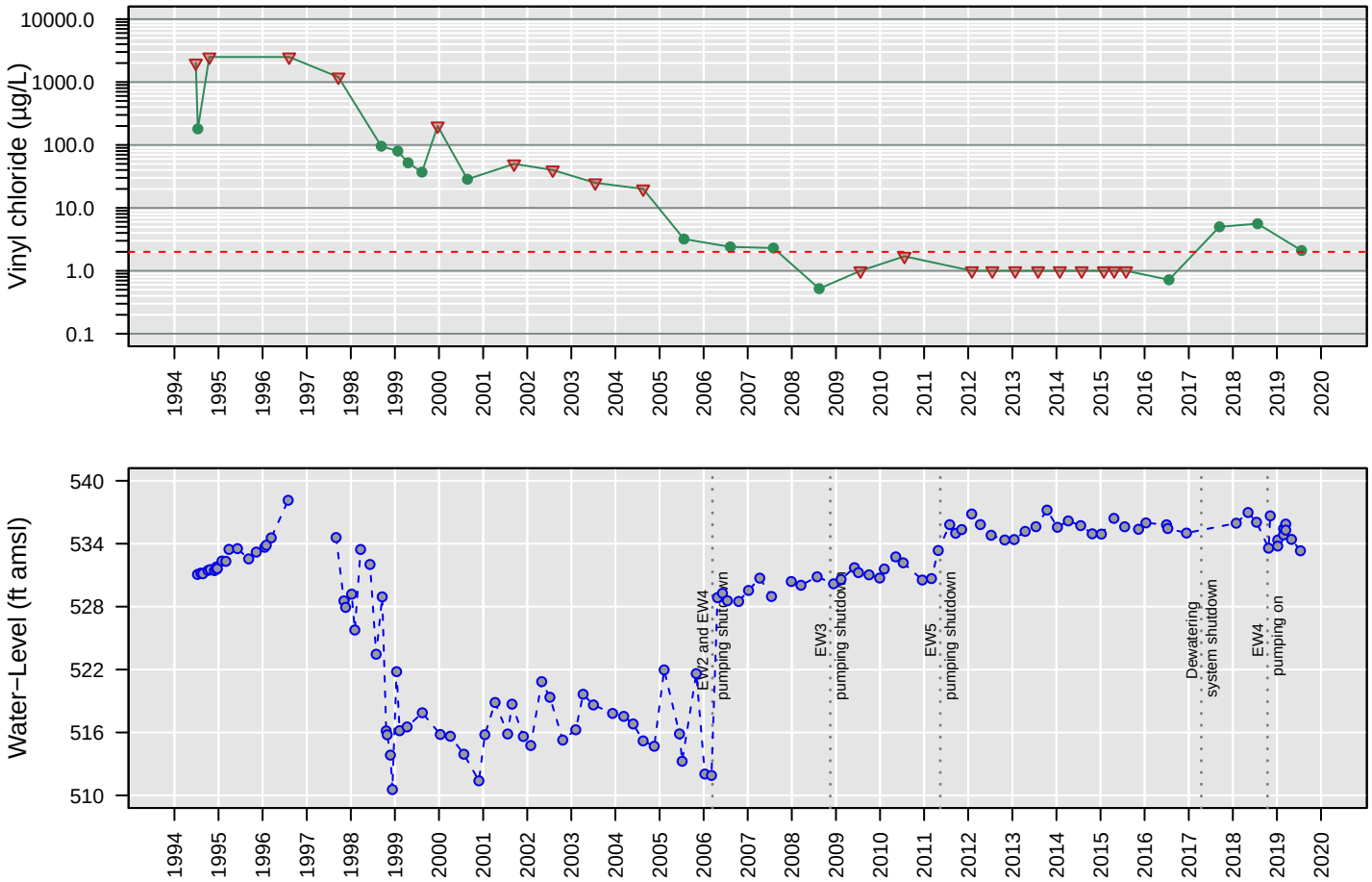


No Analysis Performed

MW86

Vinyl chloride

Number of Comparisons: 34
Percent NDs: 59%



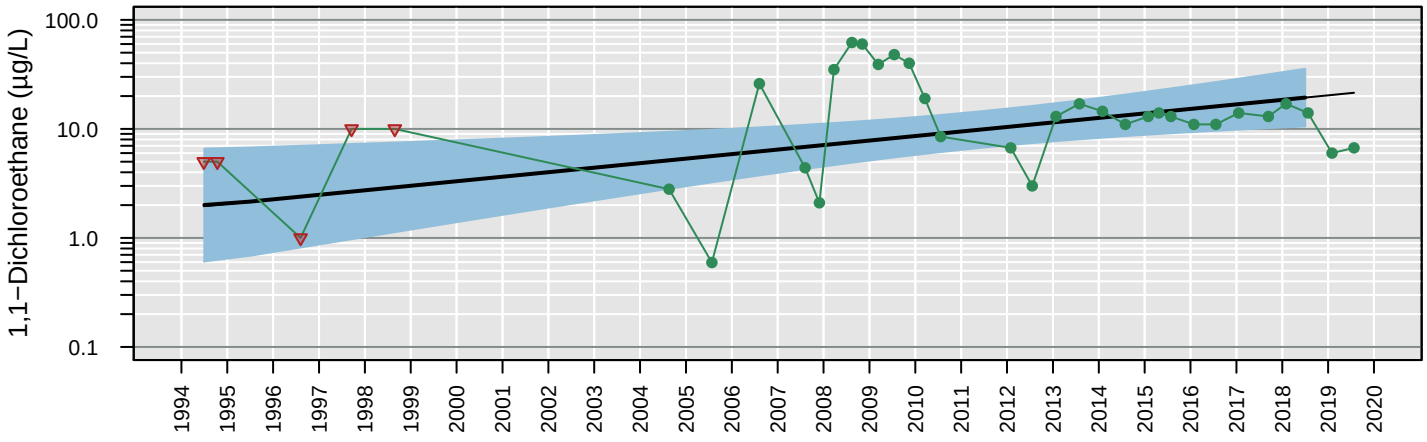
No Analysis Performed

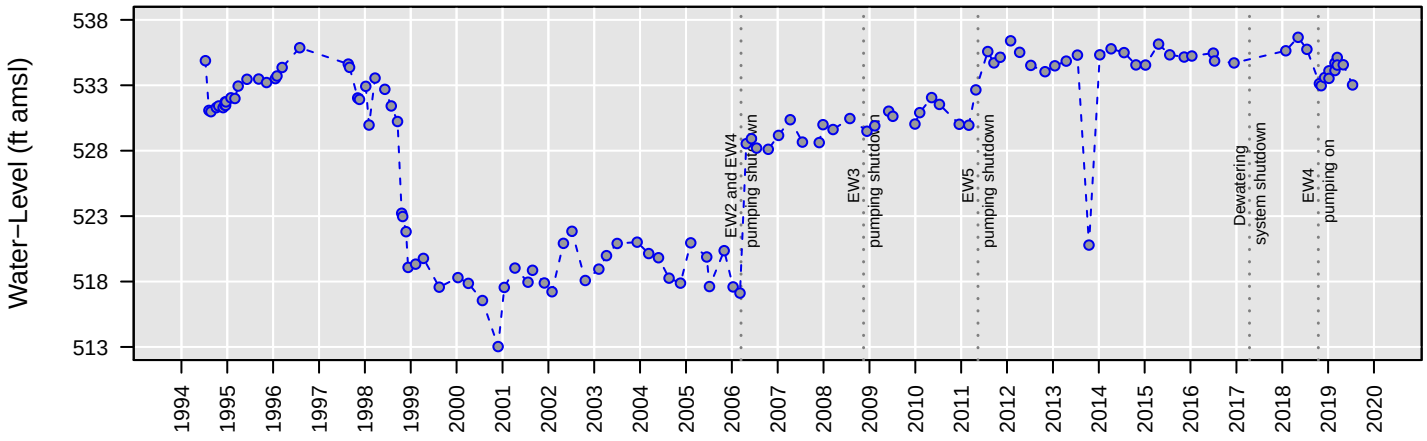
MW87

1,1−Dichloroethane

Number of Comparisons: 35
Percent NDs: 14%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

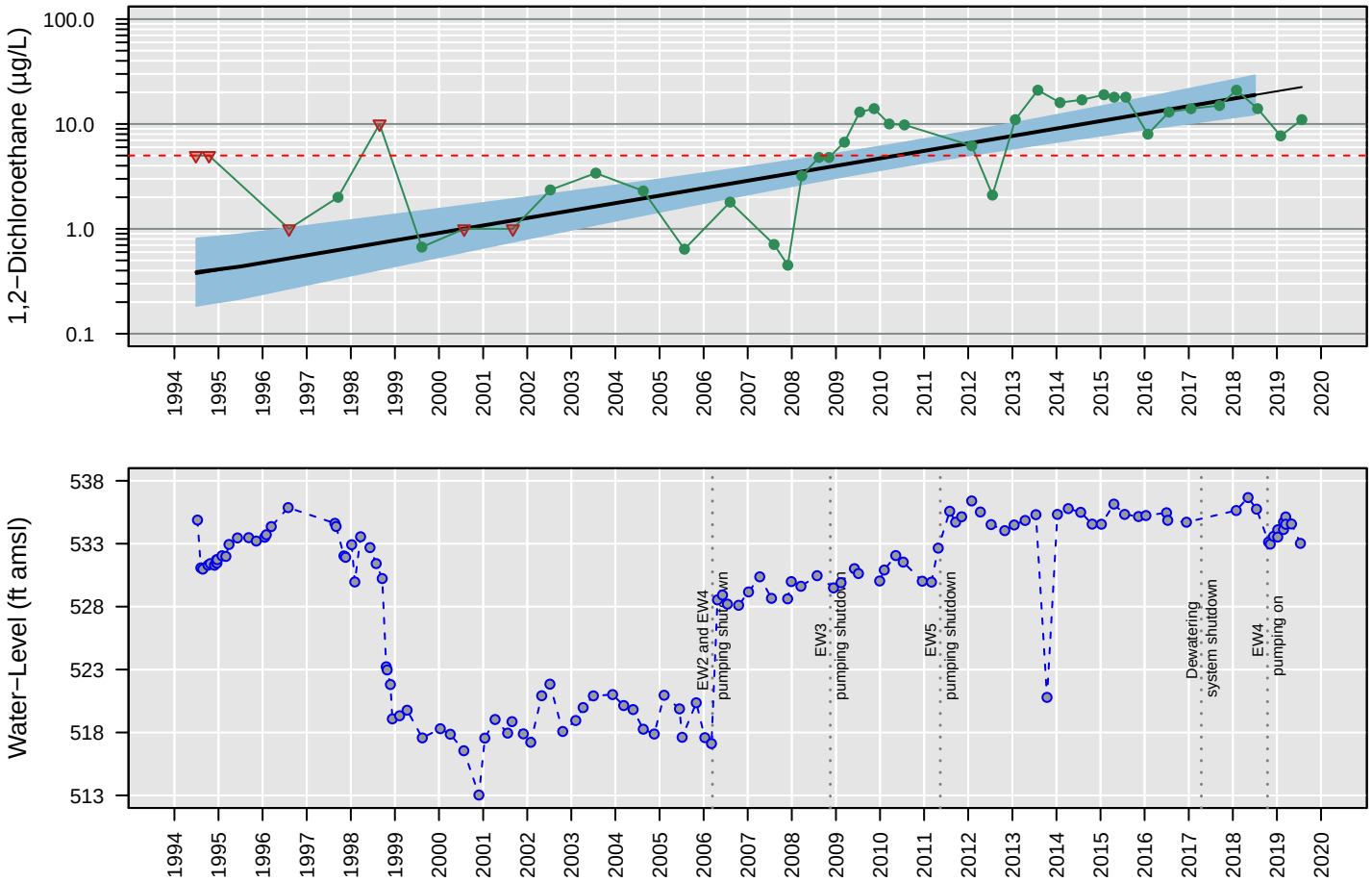
ln Conc. = 0.00026 (+/− 0.00009)*Date + −1.7 (+/− 1.4)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 19 µg/L
UCL: 36 µg/L
LCL: 11 µg/L

MW87

1,2−Dichloroethane

Number of Comparisons: 40
Percent NDs: 15%



Censored Regression (Tobit) Model

ln Conc. = 0.00045 (+/− 0.000059)*Date + −5 (+/− 0.88)

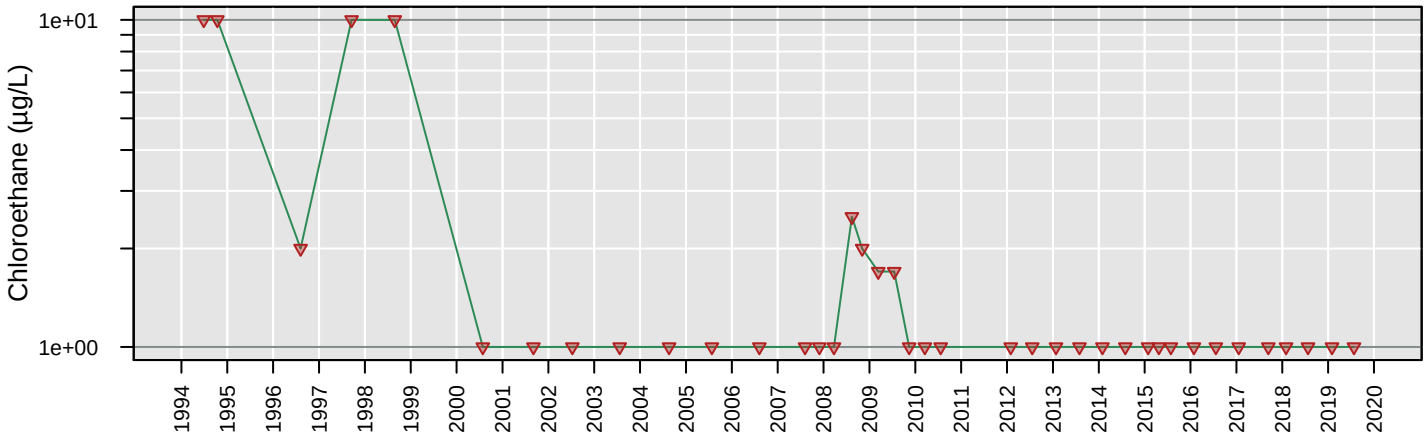
Regression Statistics for January 2018 to January 2019
Geometric Mean: 19 µg/L
UCL: 29 µg/L
LCL: 12 µg/L

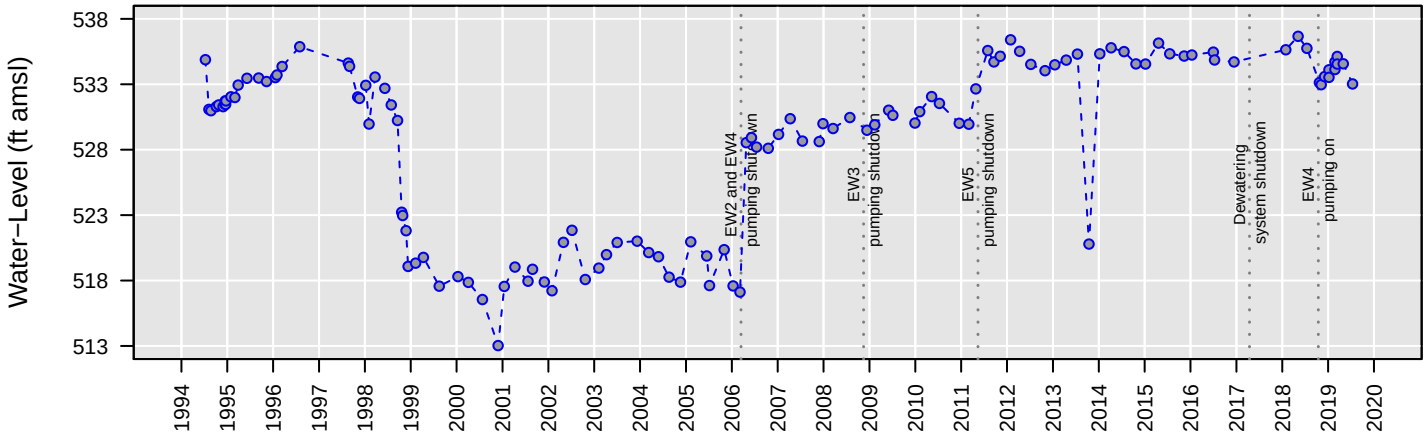
MW87

Chloroethane

Number of Comparisons: 39
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



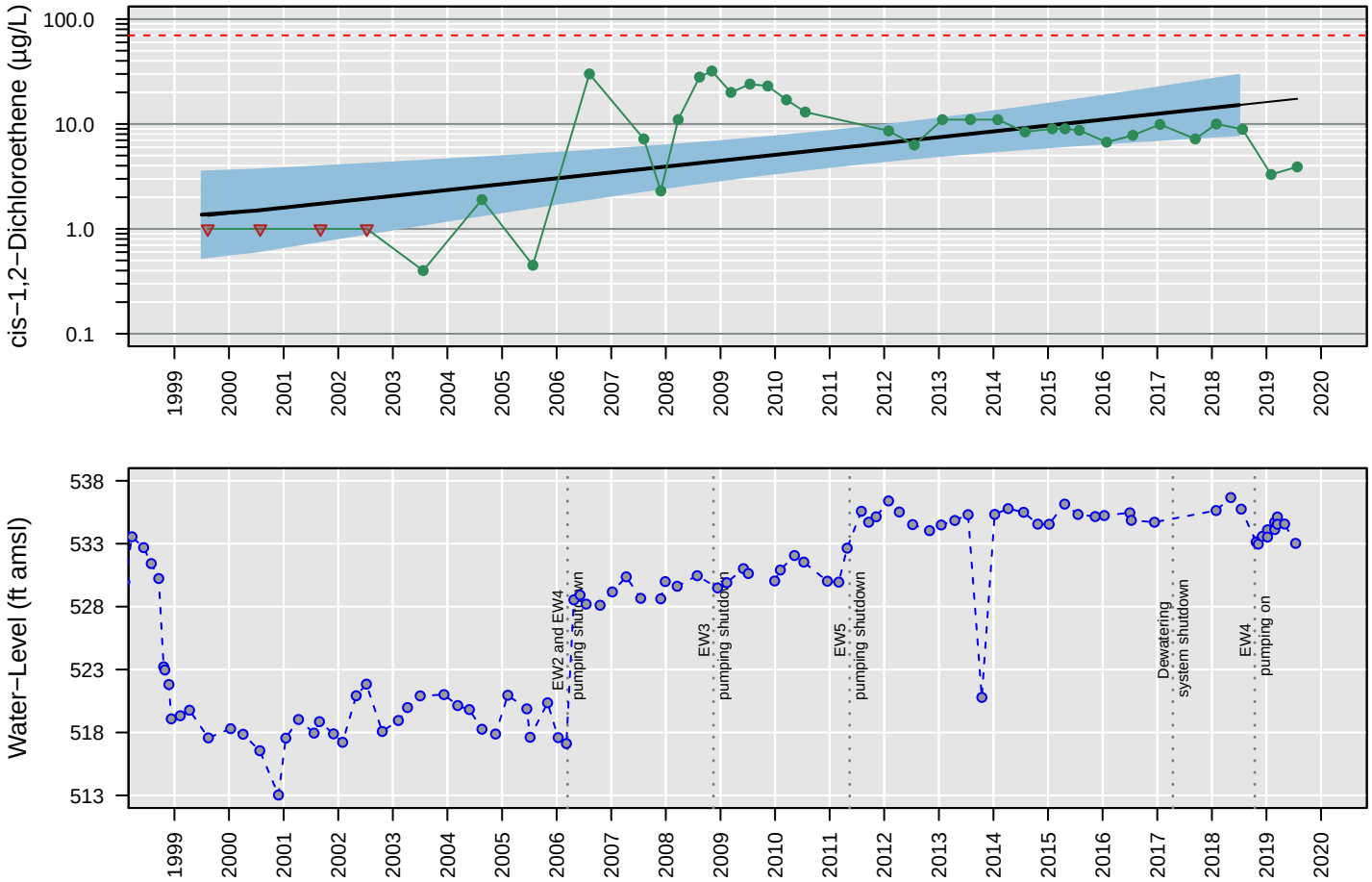


No Analysis Performed

MW87

cis−1,2−Dichloroethene

Number of Comparisons: 35
Percent NDs: 11%



Censored Regression (Tobit) Model

ln Conc. = 0.00035 (+/− 0.0001)*Date + −3.5 (+/− 1.5)

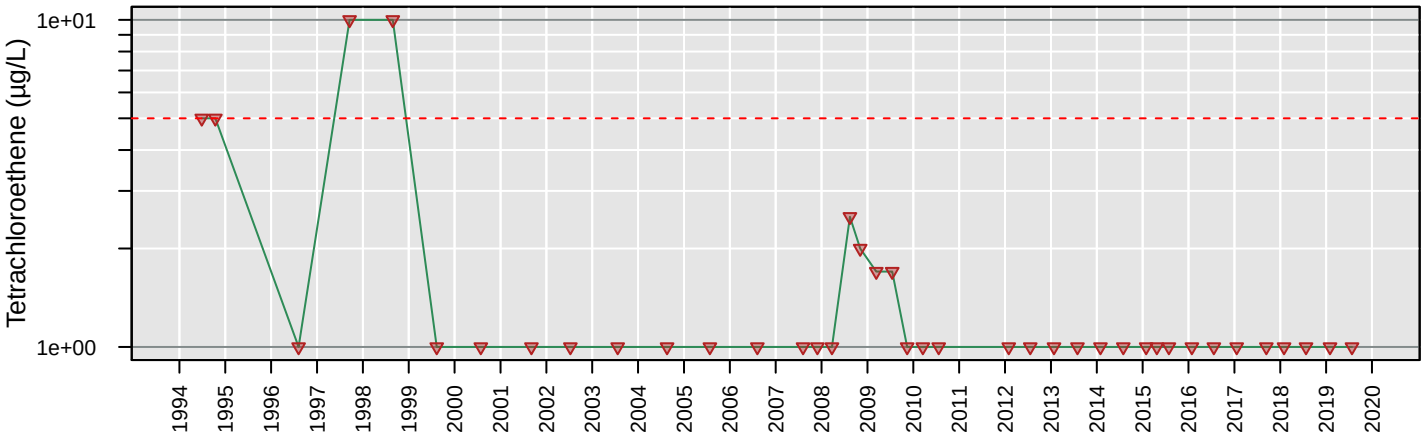
Regression Statistics for January 2018 to January 2019
Geometric Mean: 15 µg/L
UCL: 29 µg/L
LCL: 7.8 µg/L

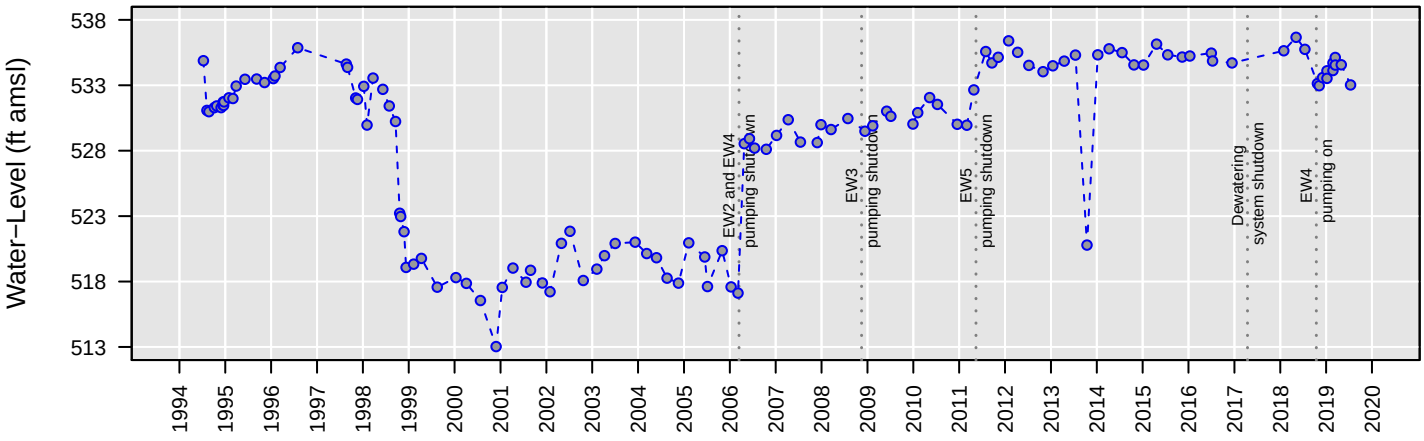
MW87

Tetrachloroethene

Number of Comparisons: 40
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





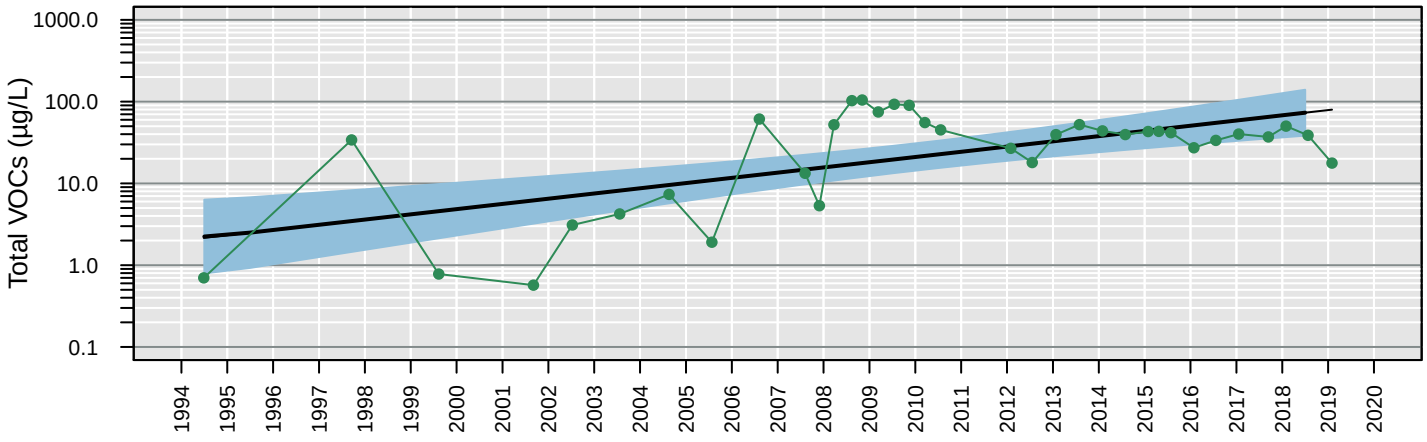
No Analysis Performed

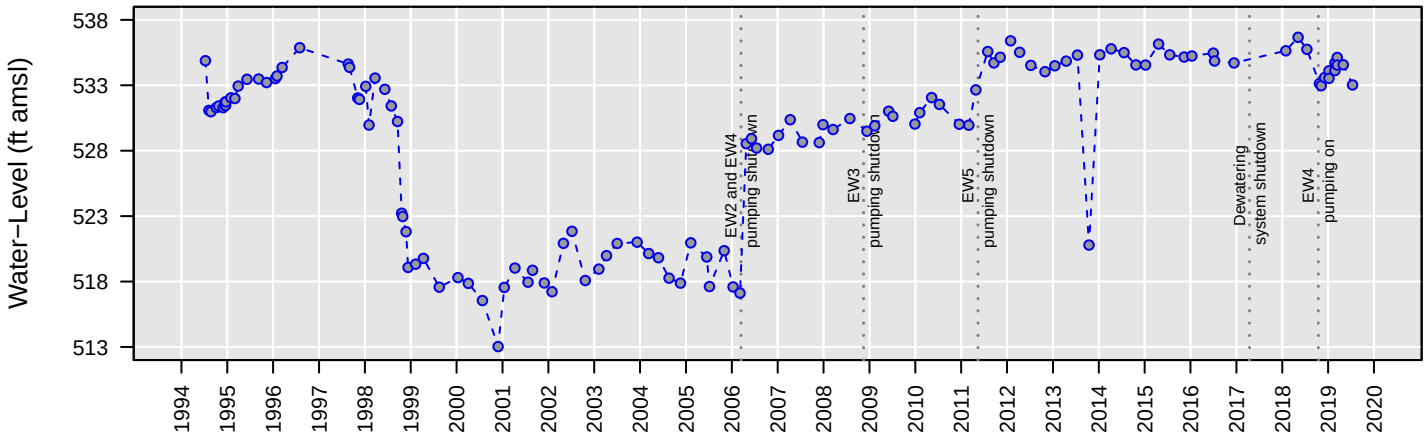
MW87

Total VOCs

Number of Comparisons: 35
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

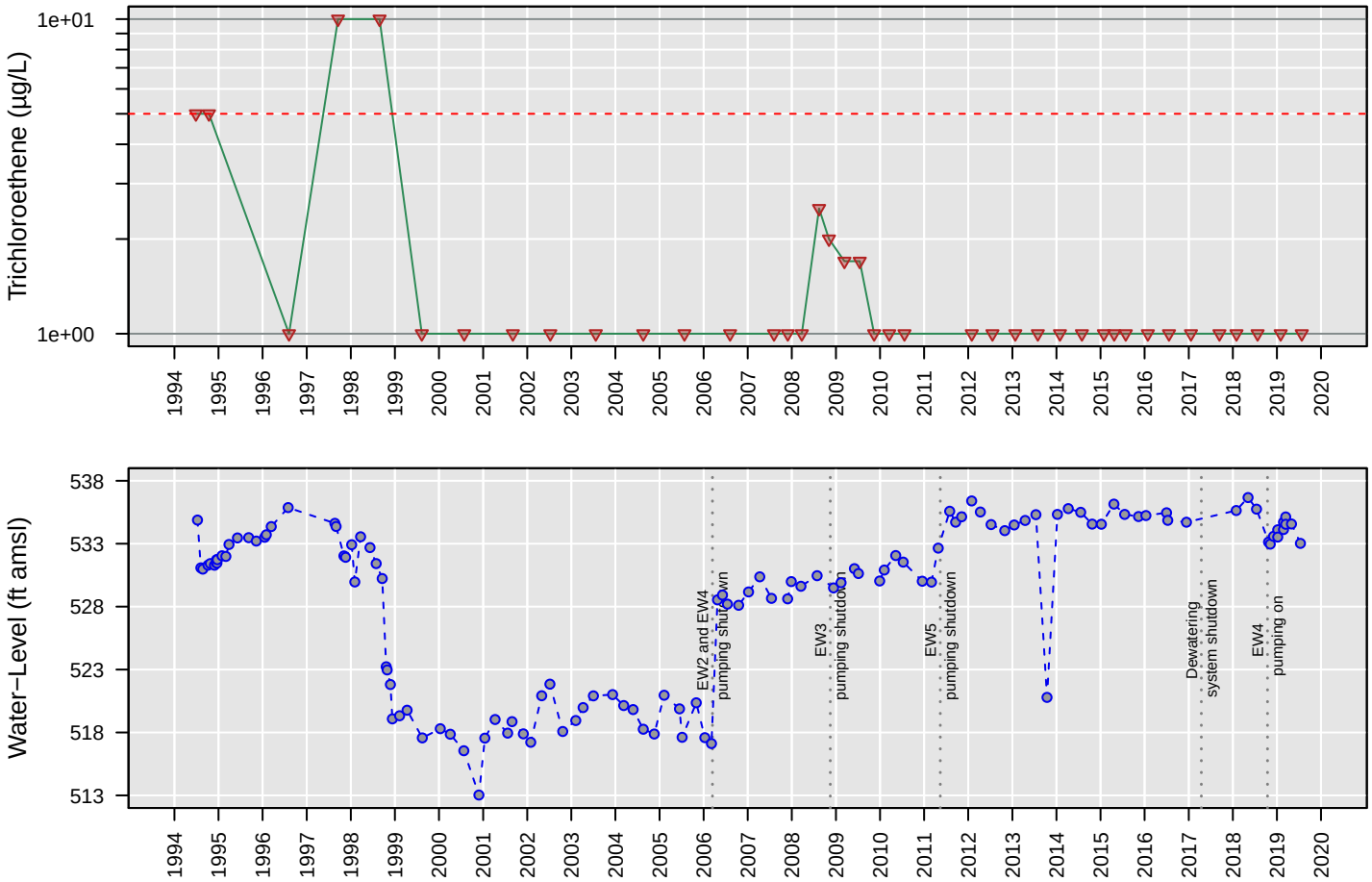
ln Conc. = 0.0004 (+/− 0.000084)*Date + −2.8 (+/− 1.2)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 73 µg/L
UCL: 140 µg/L
LCL: 38 µg/L

MW87

Trichloroethene

Number of Comparisons: 40
Percent NDs: 100%



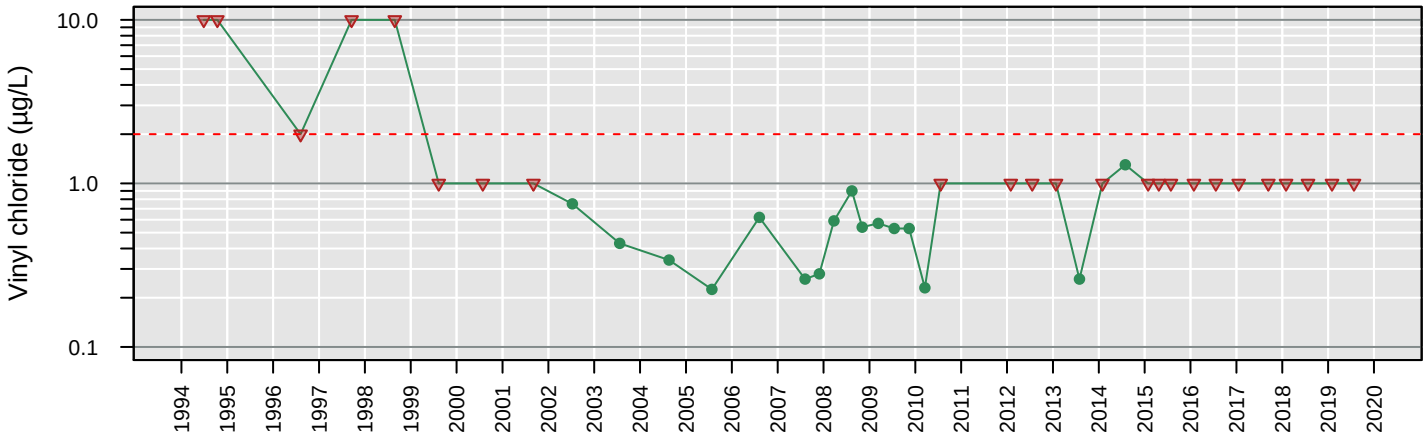
No Analysis Performed

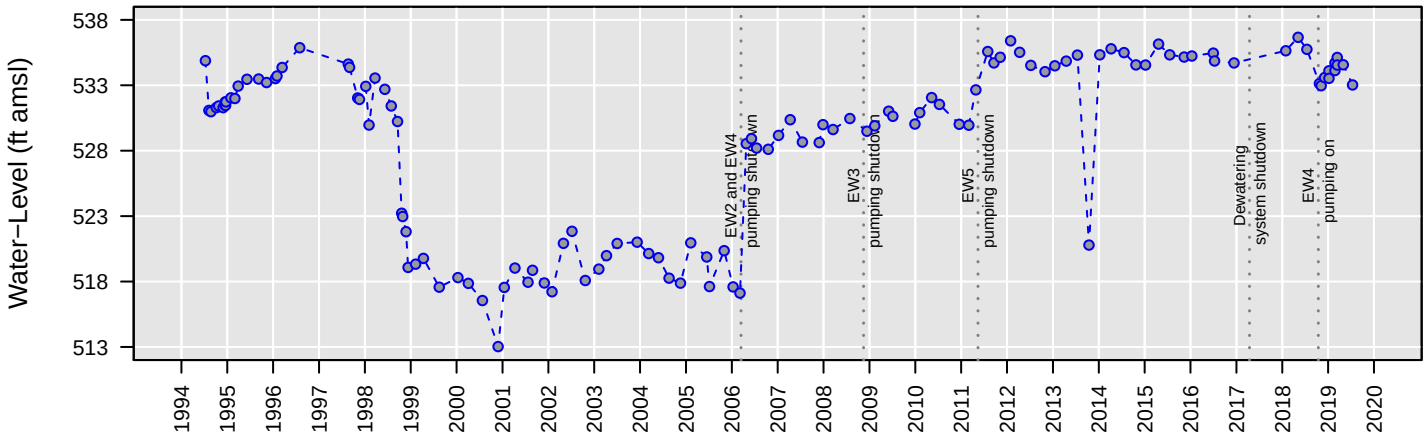
MW87

Vinyl chloride

Number of Comparisons: 40
Percent NDs: 60%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





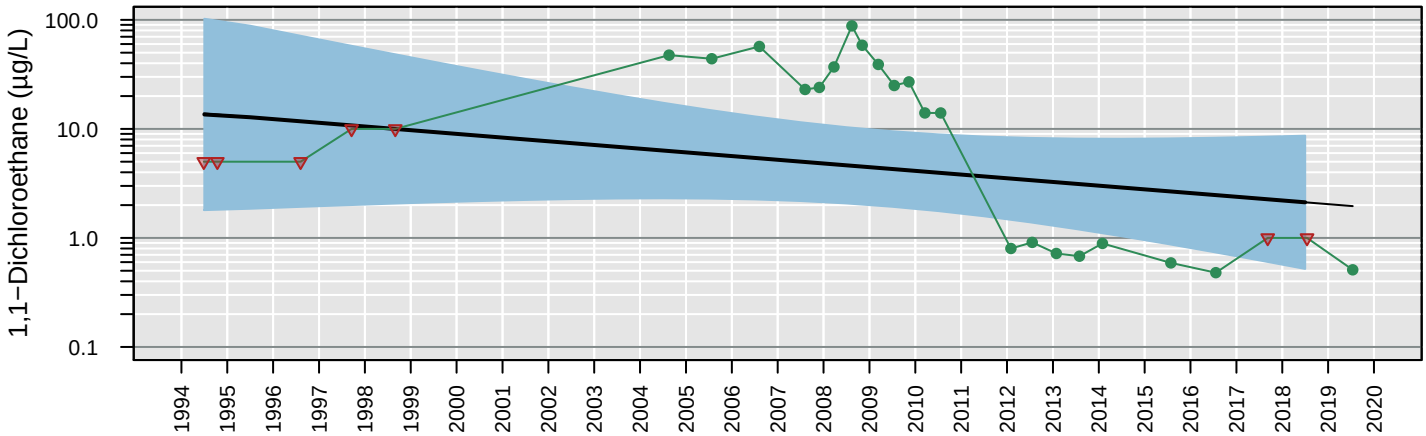
No Analysis Performed

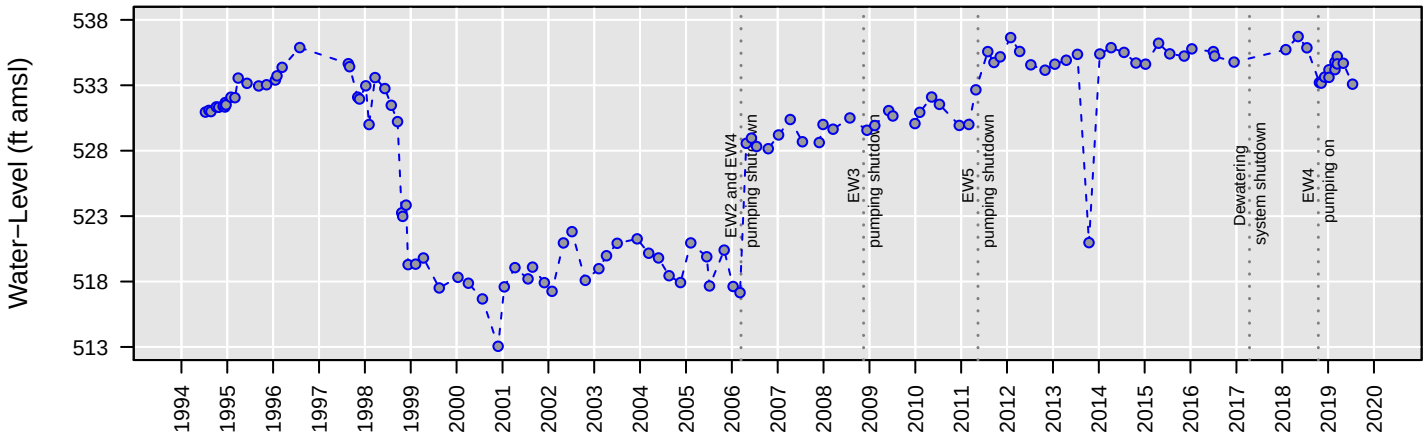
MW88

1,1−Dichloroethane

Number of Comparisons: 28
Percent NDs: 25%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

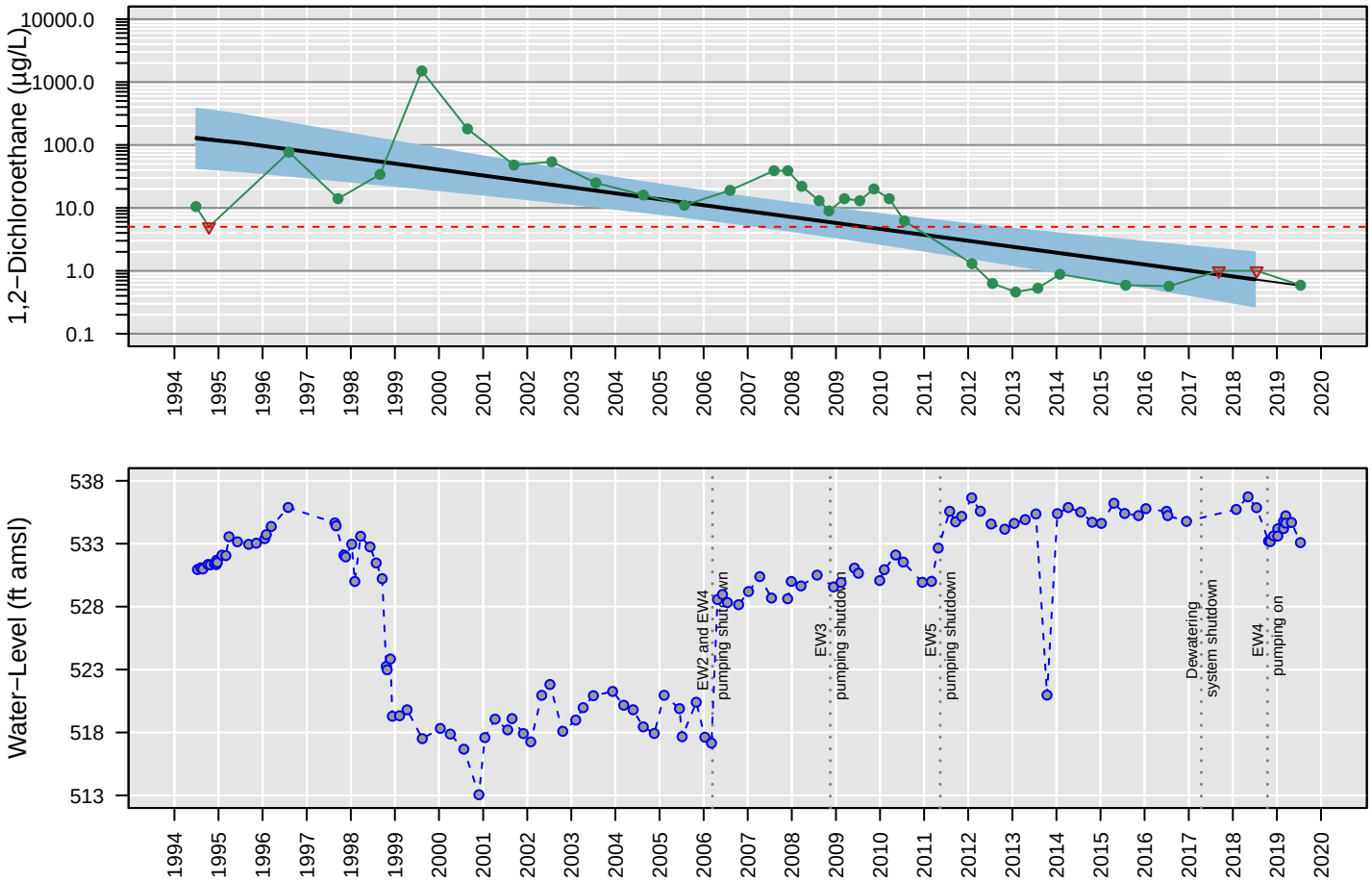
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.1 µg/L
UCL: 8.7 µg/L
LCL: 0.52 µg/L

MW88

1,2−Dichloroethane

Number of Comparisons: 33
Percent NDs: 9%



Censored Regression (Tobit) Model

ln Conc. = −0.00059 (+/− 0.0001)*Date + 10 (+/− 1.4)

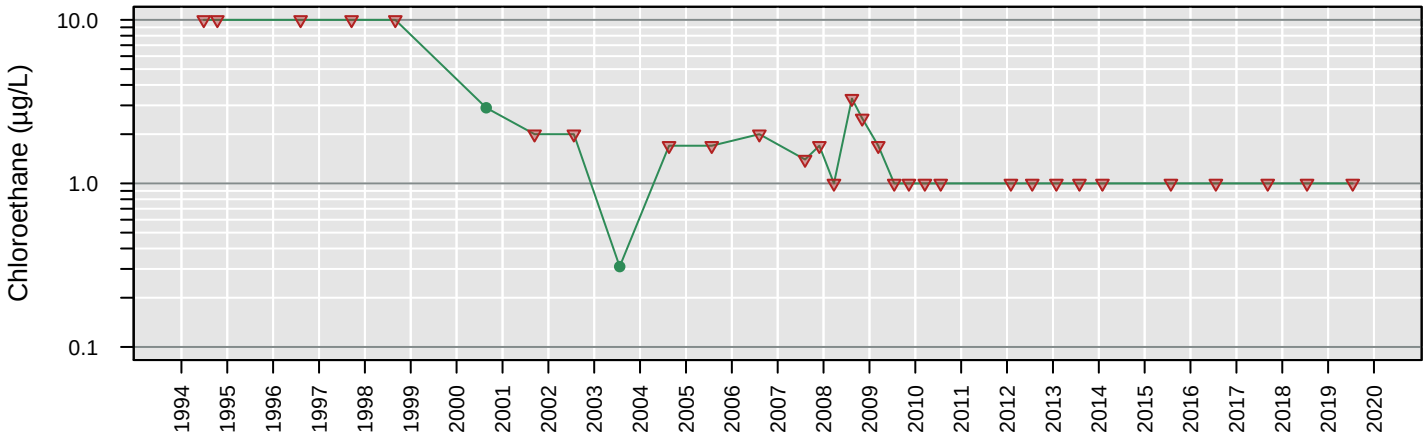
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.73 µg/L
UCL: 2 µg/L
LCL: 0.27 µg/L

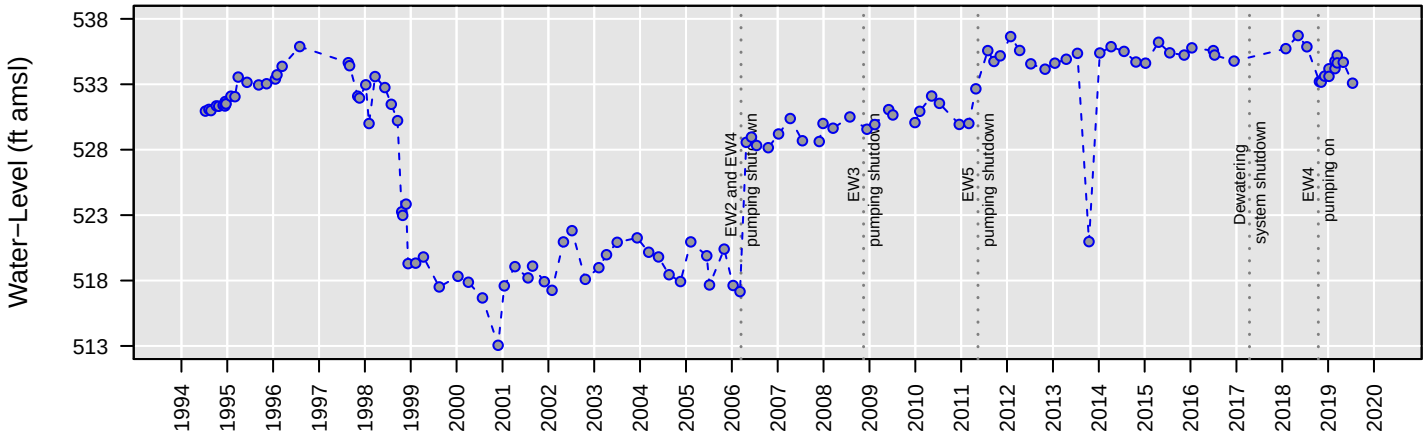
MW88

Chloroethane

Number of Comparisons: 32
Percent NDs: 94%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





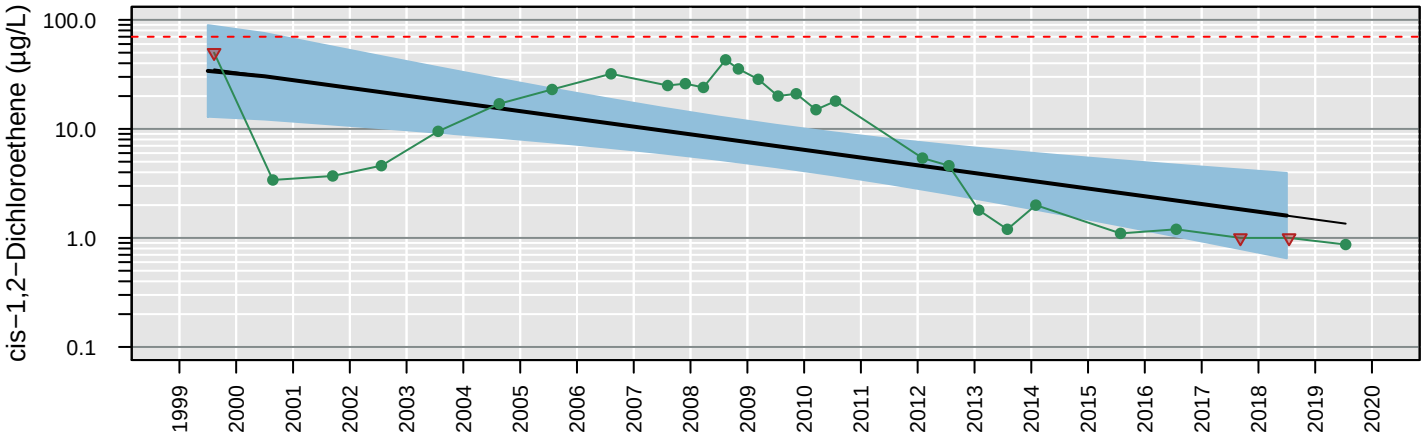
No Analysis Performed

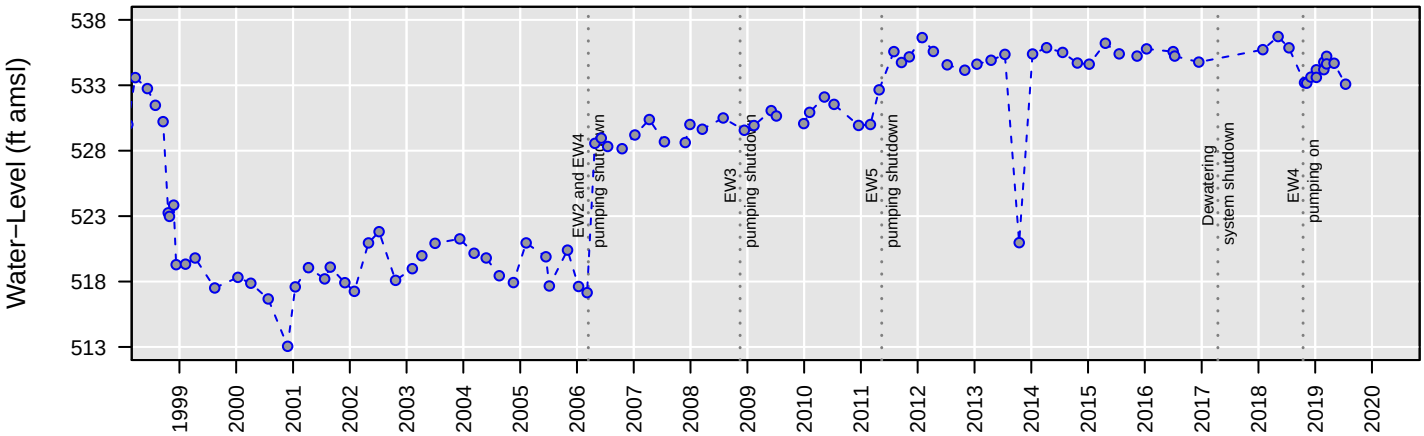
MW88

cis−1,2−Dichloroethene

Number of Comparisons: 28
Percent NDs: 11%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

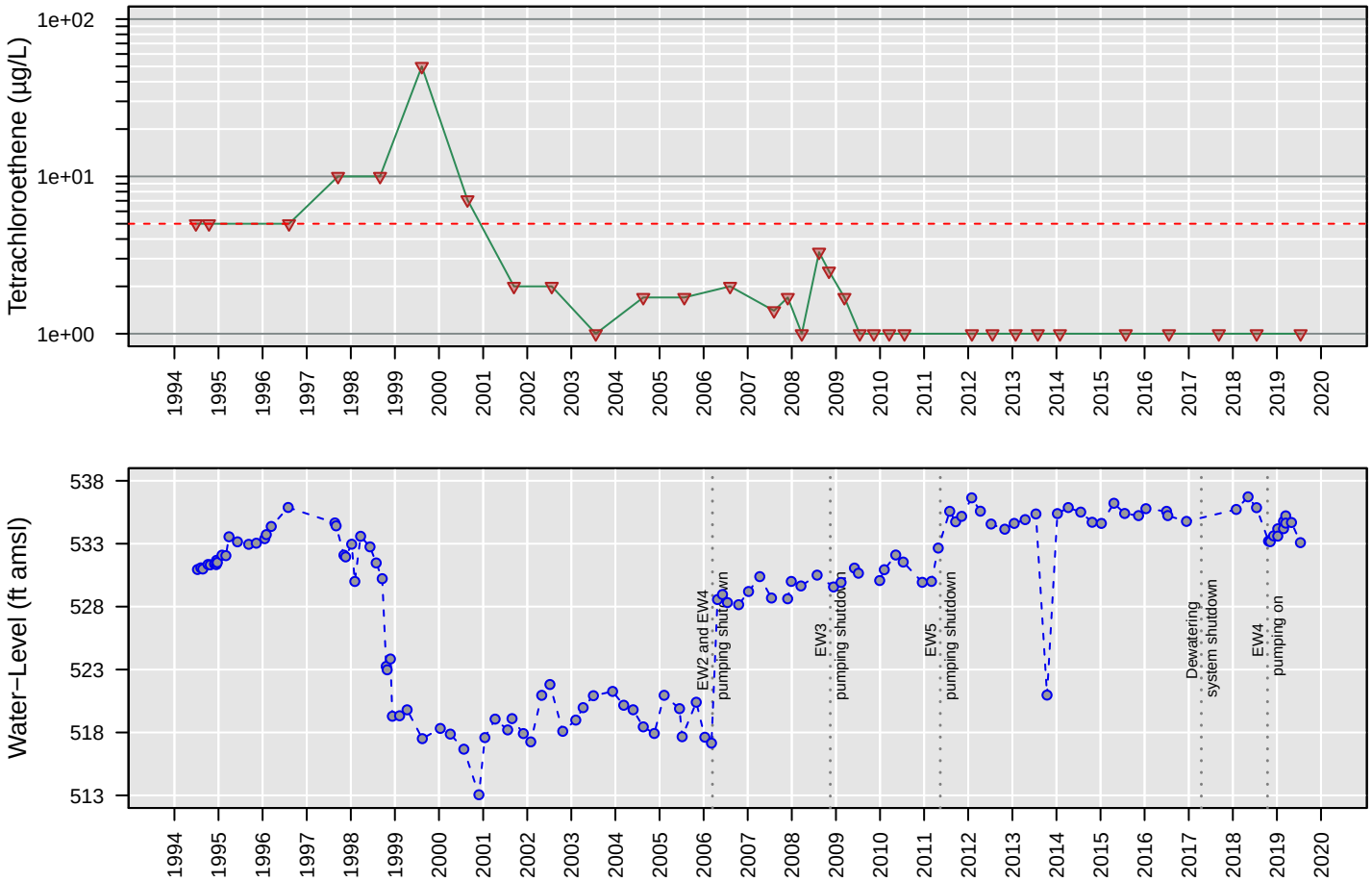
ln Conc. = −0.00045 (+/− 0.00012)*Date + 8.4 (+/− 1.7)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.6 µg/L
UCL: 3.9 µg/L
LCL: 0.65 µg/L

MW88

Tetrachloroethene

Number of Comparisons: 33
Percent NDs: 100%

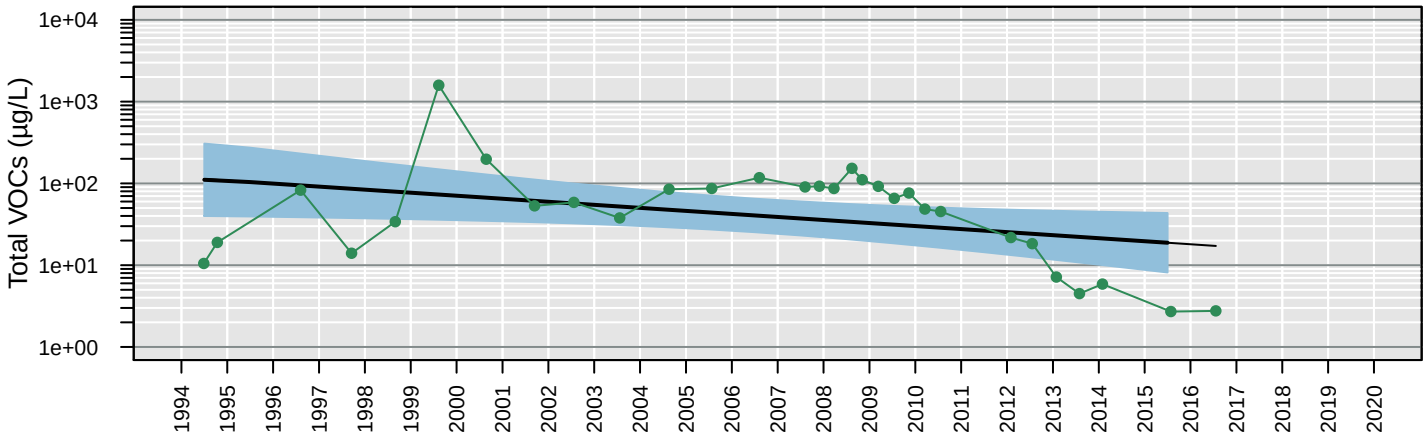


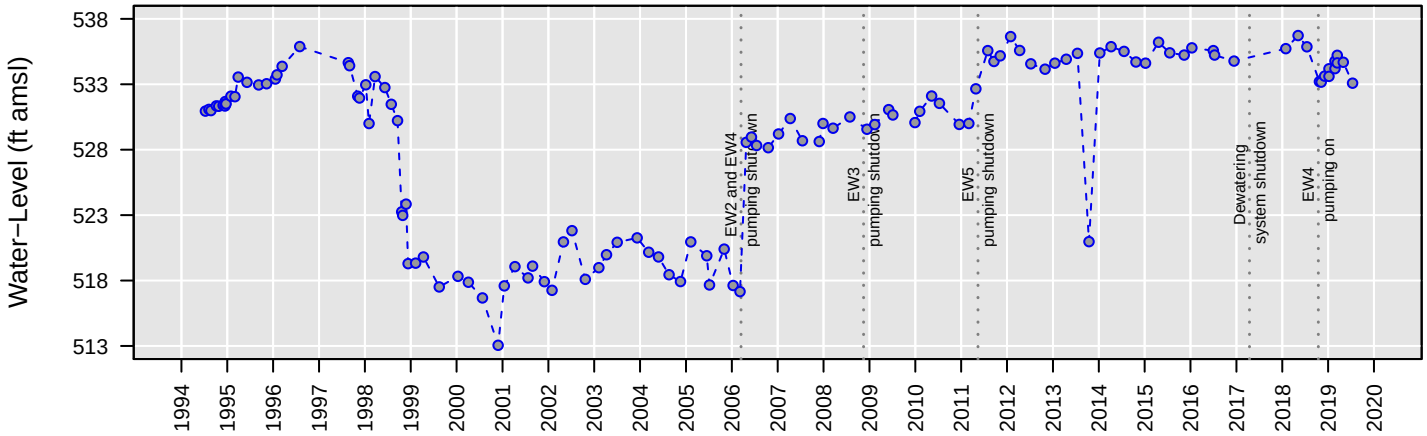
No Analysis Performed

MW88

Total VOCs

Number of Comparisons: 30
Percent NDs: 0%





Censored Regression (Tobit) Model

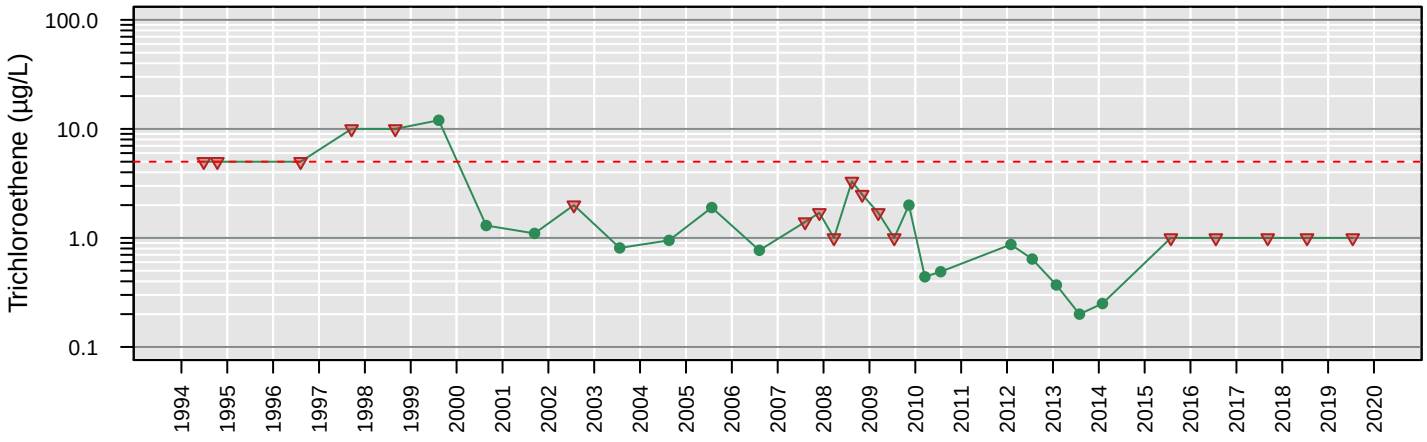
ln Conc. = −0.00023 (+/− 0.0001)*Date + 6.8 (+/− 1.4)

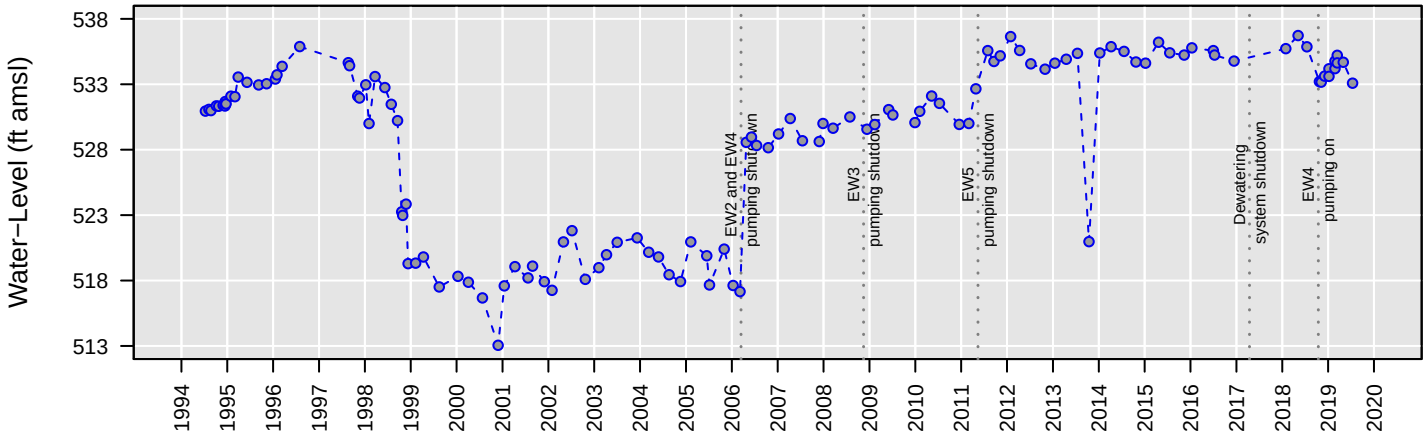
Regression Statistics for January 2015 to January 2016
Geometric Mean: 19 µg/L
UCL: 43 µg/L
LCL: 8.2 µg/L

MW88

Trichloroethene

Number of Comparisons: 33
Percent NDs: 55%



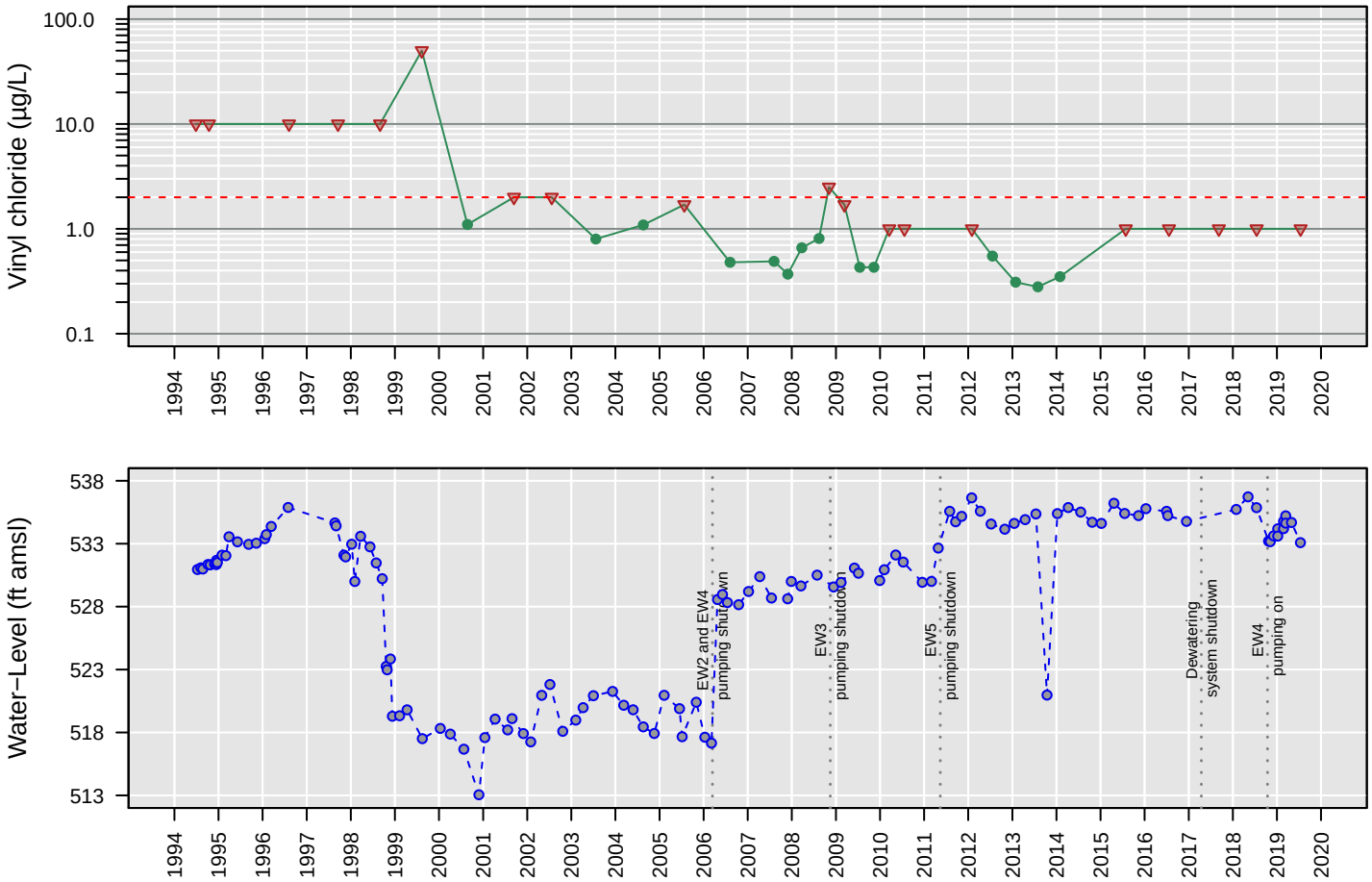


No Analysis Performed

MW88

Vinyl chloride

Number of Comparisons: 33
Percent NDs: 58%



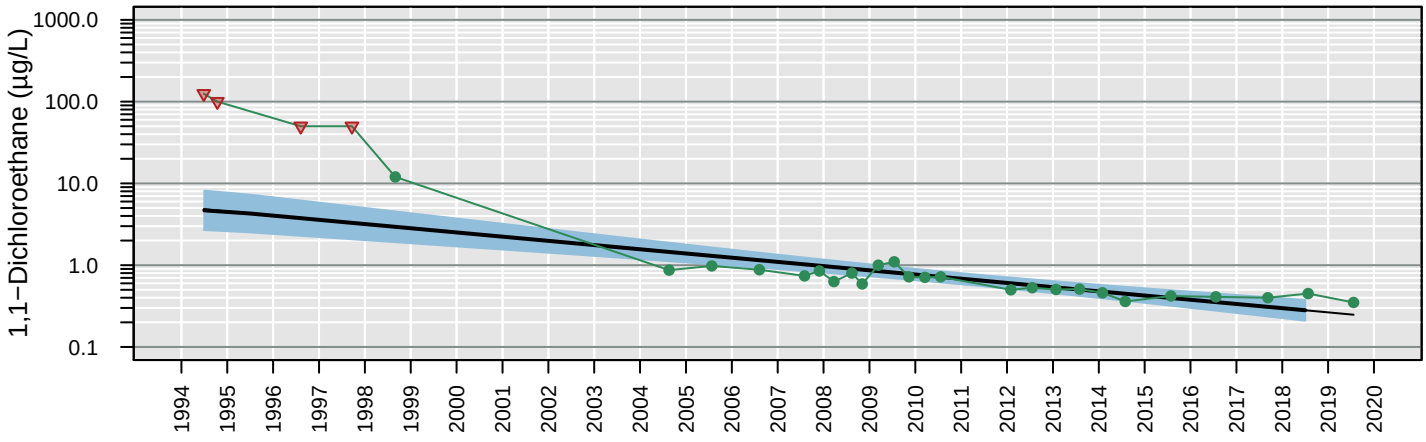
No Analysis Performed

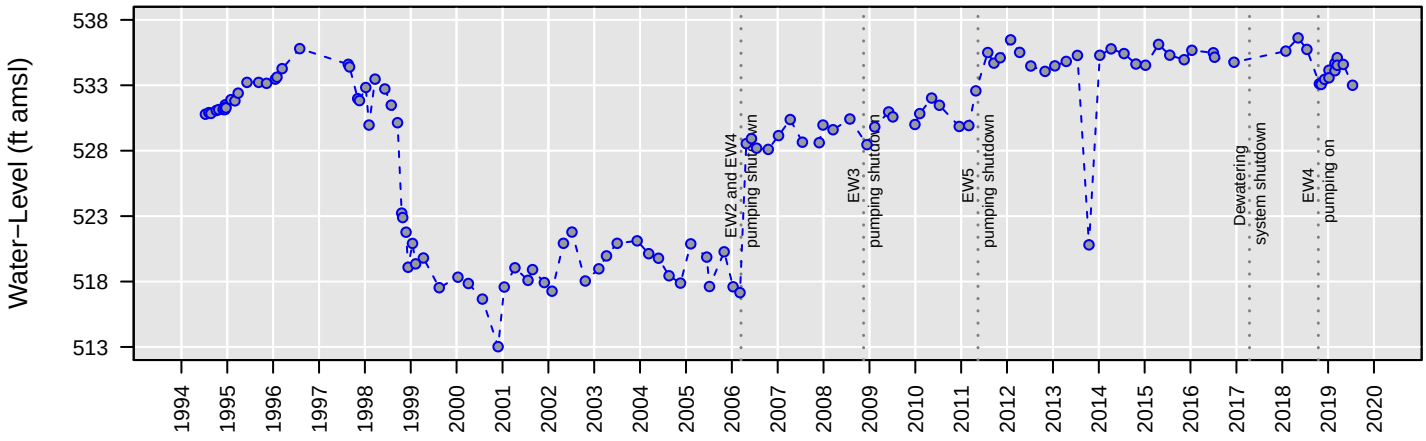
MW89

1,1−Dichloroethane

Number of Comparisons: 29
Percent NDs: 14%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00032 (+/− 0.000044)*Date + 4.5 (+/− 0.66)

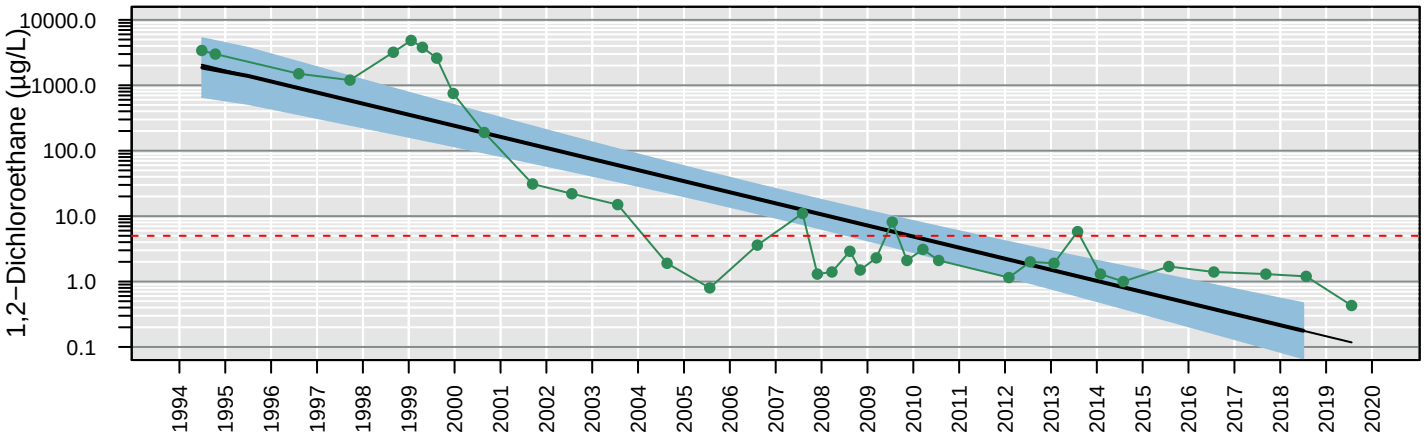
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.28 µg/L
UCL: 0.38 µg/L
LCL: 0.21 µg/L

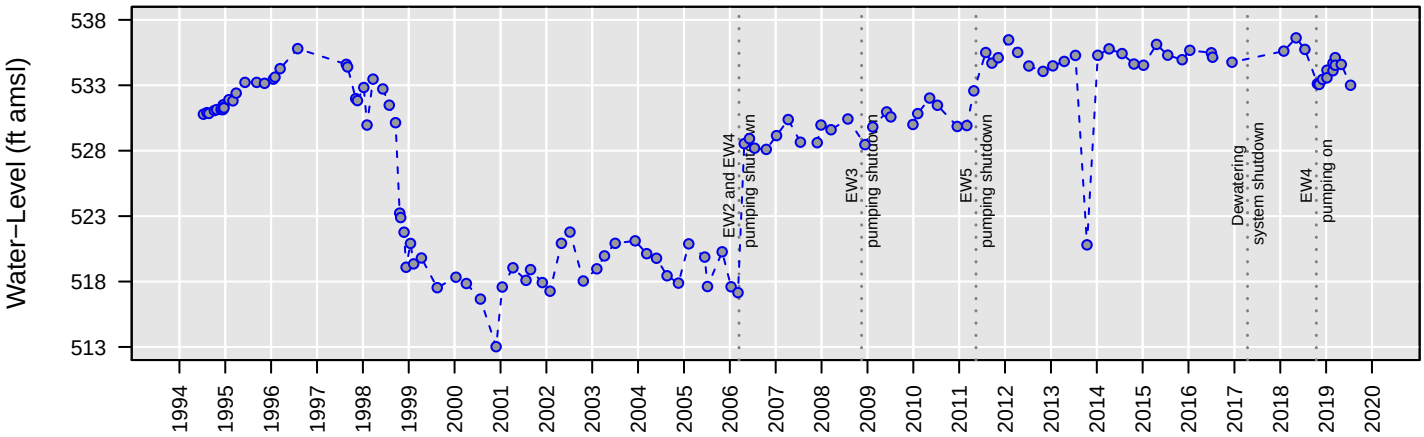
MW89

1,2−Dichloroethane

Number of Comparisons: 37
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.0011 (+/− 0.000098)*Date + 17 (+/− 1.4)

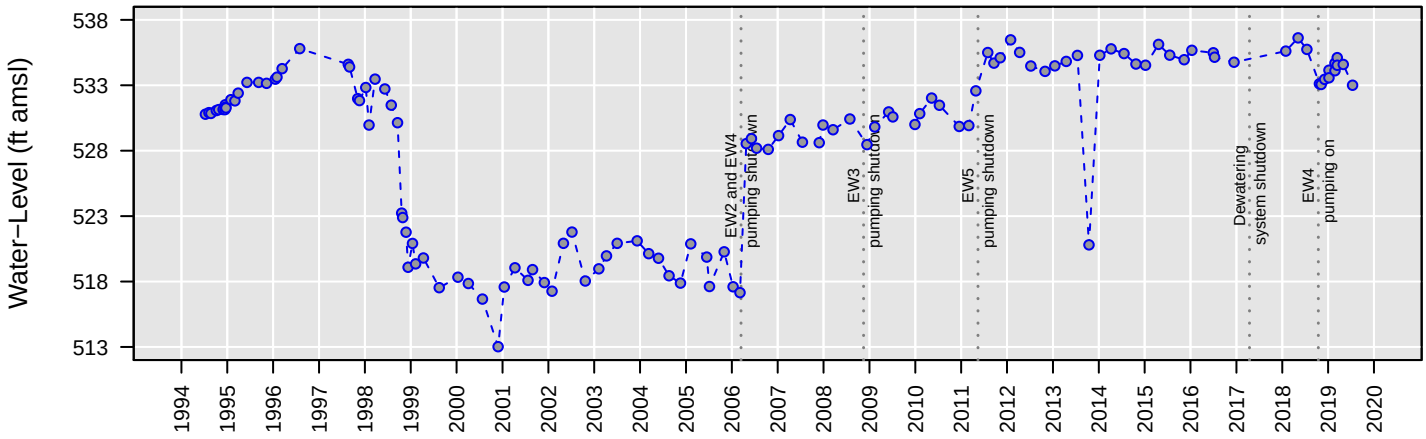
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.18 µg/L
UCL: 0.47 µg/L
LCL: 0.067 µg/L

MW89

Chloroethane

Number of Comparisons: 33
Percent NDs: 91%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



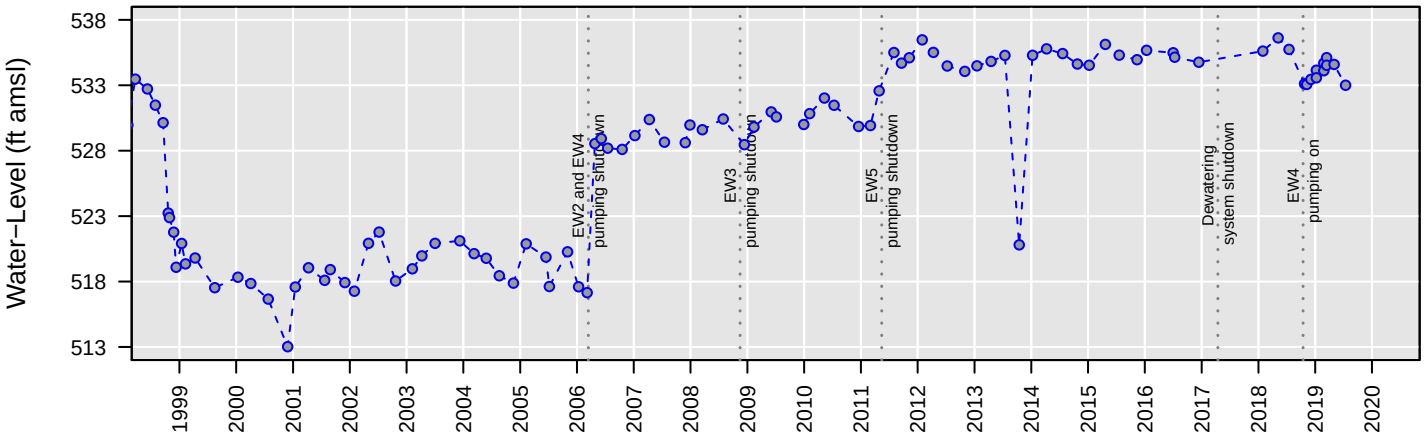
No Analysis Performed

MW89

cis−1,2−Dichloroethene

Number of Comparisons: 32
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

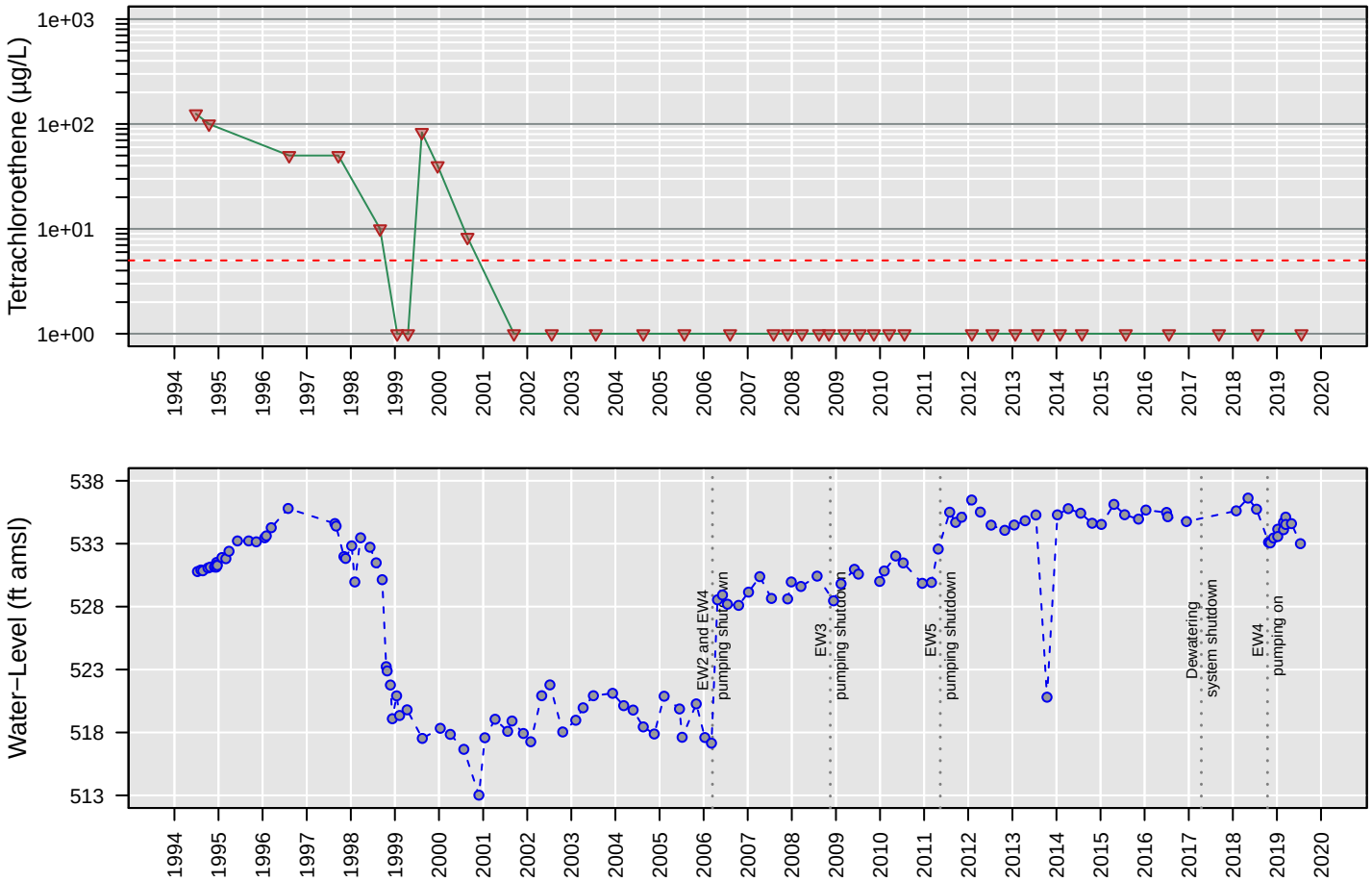
ln Conc. = −0.00012 (+/− 0.000035)*Date + 3.6 (+/− 0.5)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.6 µg/L
UCL: 6.2 µg/L
LCL: 3.5 µg/L

MW89

Tetrachloroethene

Number of Comparisons: 37
Percent NDs: 100%

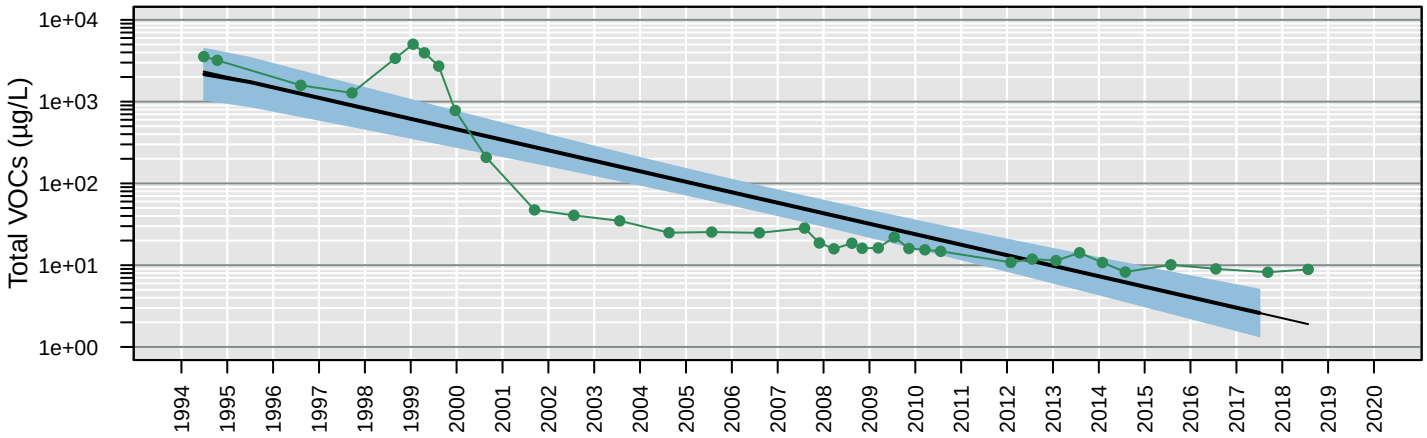


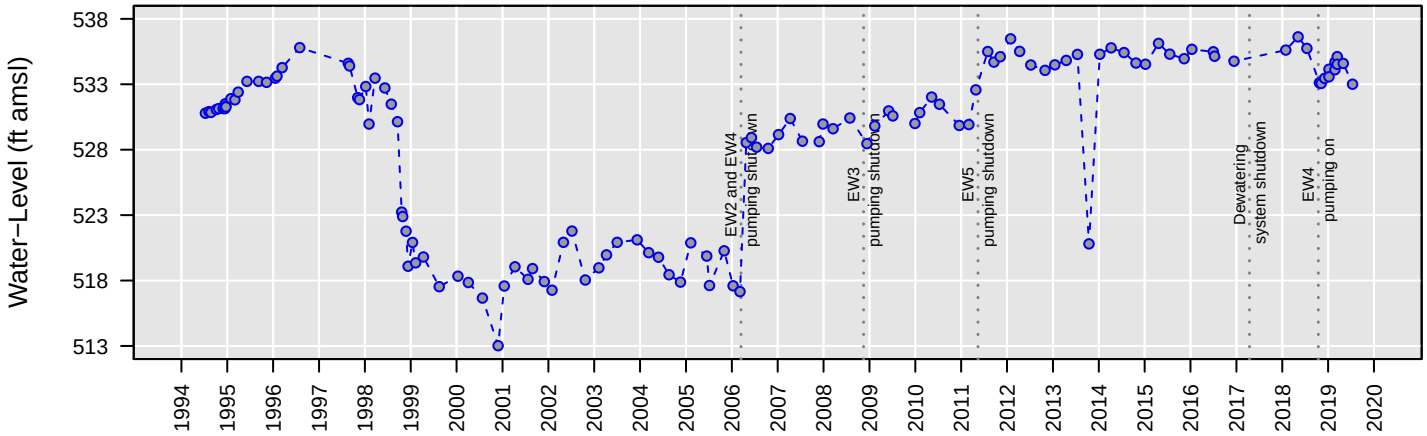
No Analysis Performed

MW89

Total VOCs

Number of Comparisons: 36
Percent NDs: 0%





Censored Regression (Tobit) Model

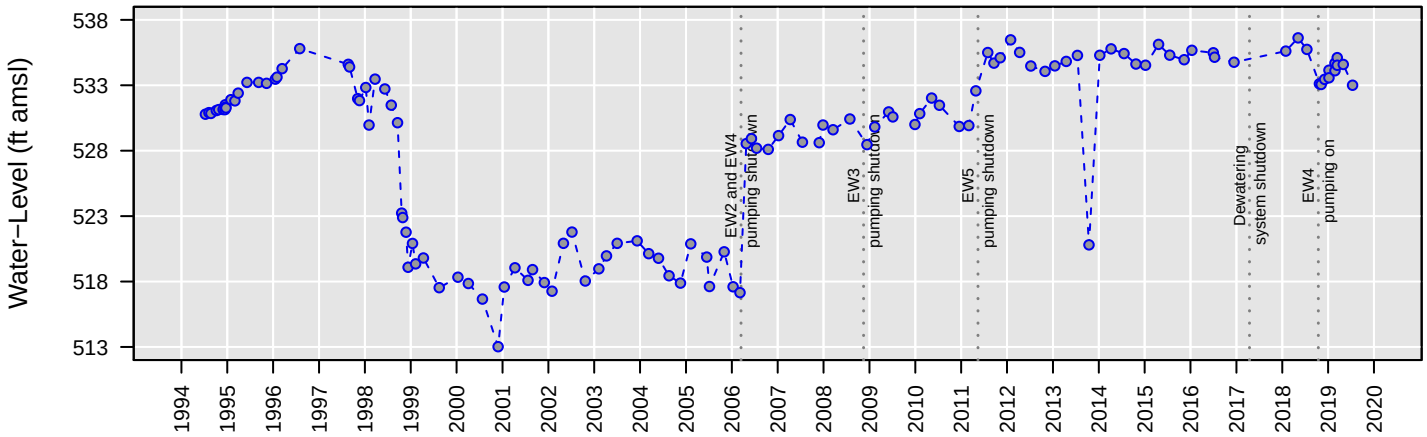
ln Conc. = −0.00081 (+/− 0.00007)*Date + 15 (+/− 0.95)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 2.6 µg/L
UCL: 5 µg/L
LCL: 1.4 µg/L

MW89

Trichloroethene

Number of Comparisons: 37
Percent NDs: 11%



Censored Regression (Tobit) Model

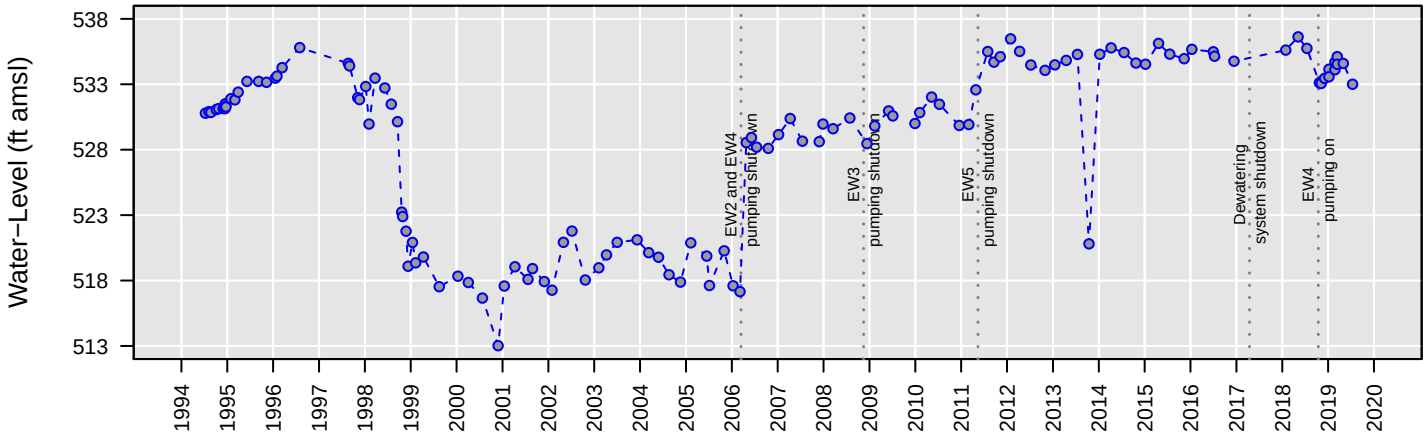
ln Conc. = −0.0005 (+/− 0.000025)*Date + 8.7 (+/− 0.35)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.86 µg/L
UCL: 1.1 µg/L
LCL: 0.68 µg/L

MW89

Vinyl chloride

Number of Comparisons: 37
Percent NDs: 84%



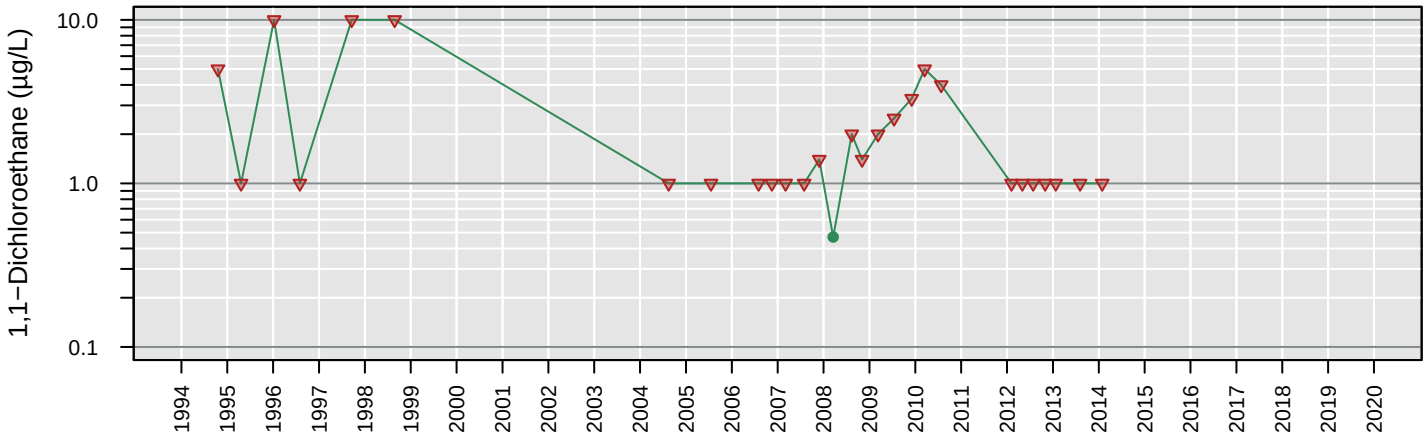
No Analysis Performed

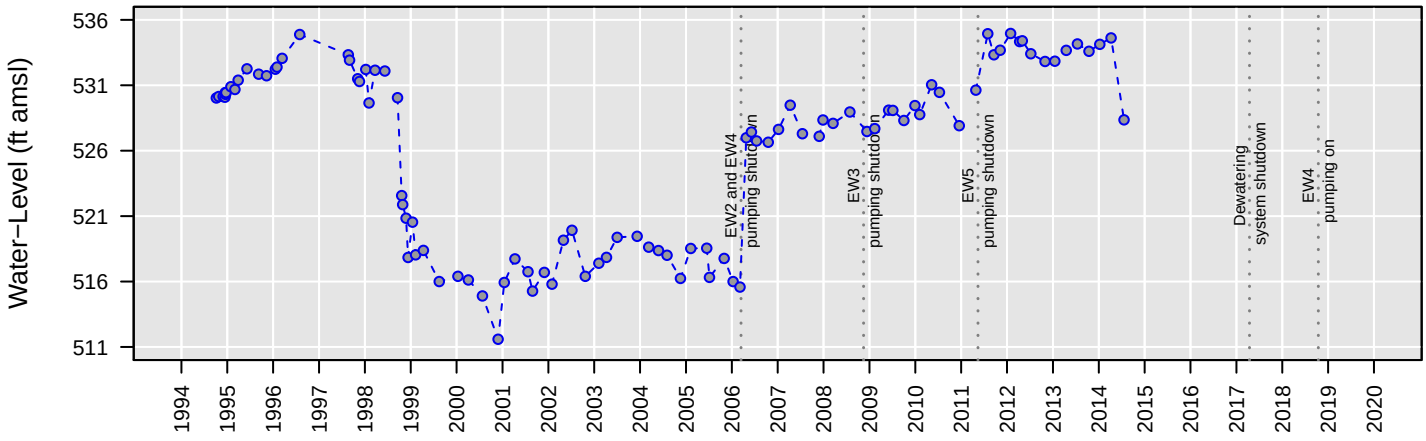
MW90

1,1−Dichloroethane

Number of Comparisons: 28
Percent NDs: 96%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



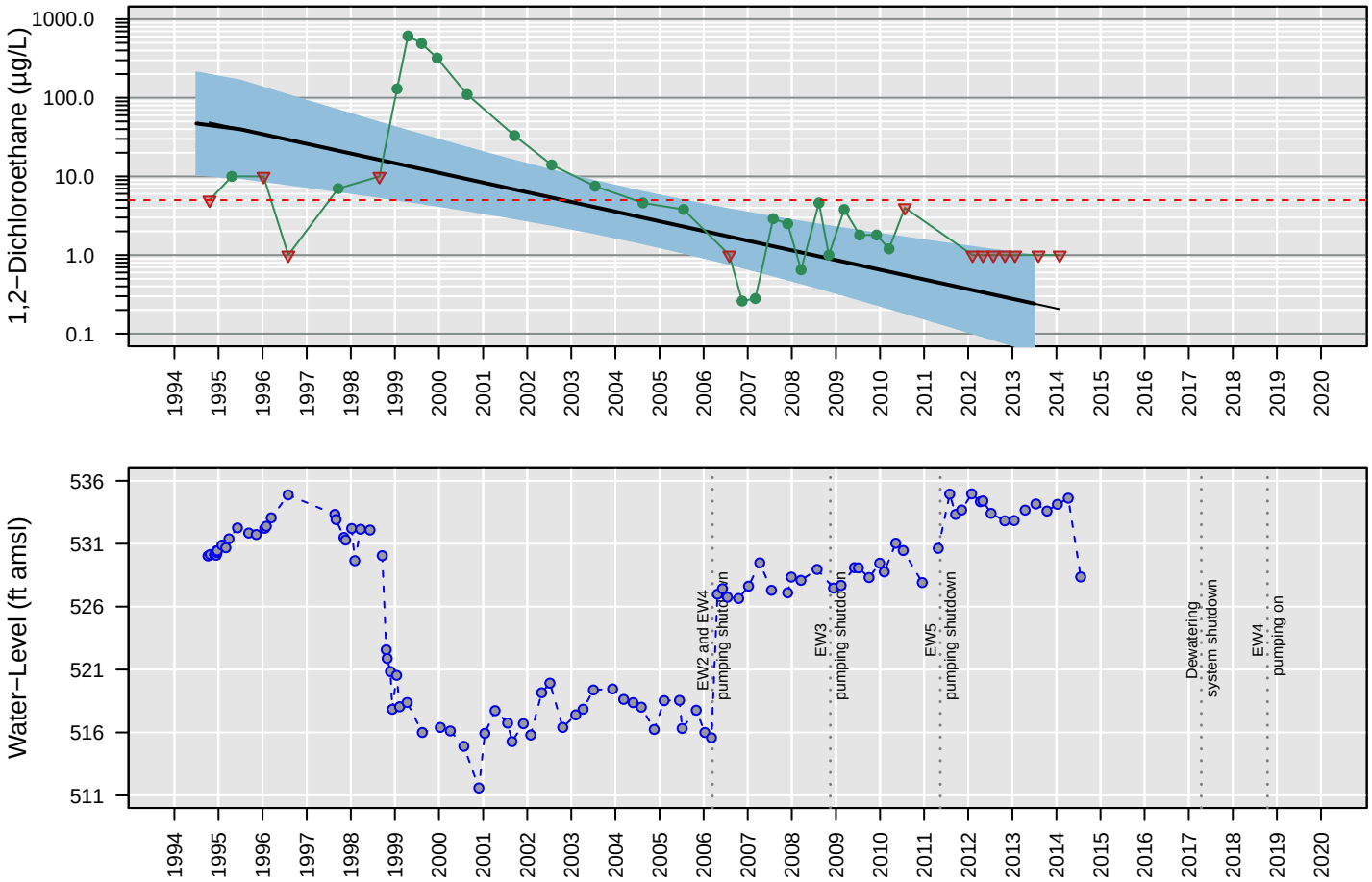


No Analysis Performed

MW90

1,2−Dichloroethane

Number of Comparisons: 36
Percent NDs: 36%



Censored Regression (Tobit) Model

ln Conc. = −0.00078 (+/− 0.00018)*Date + 11 (+/− 2.3)

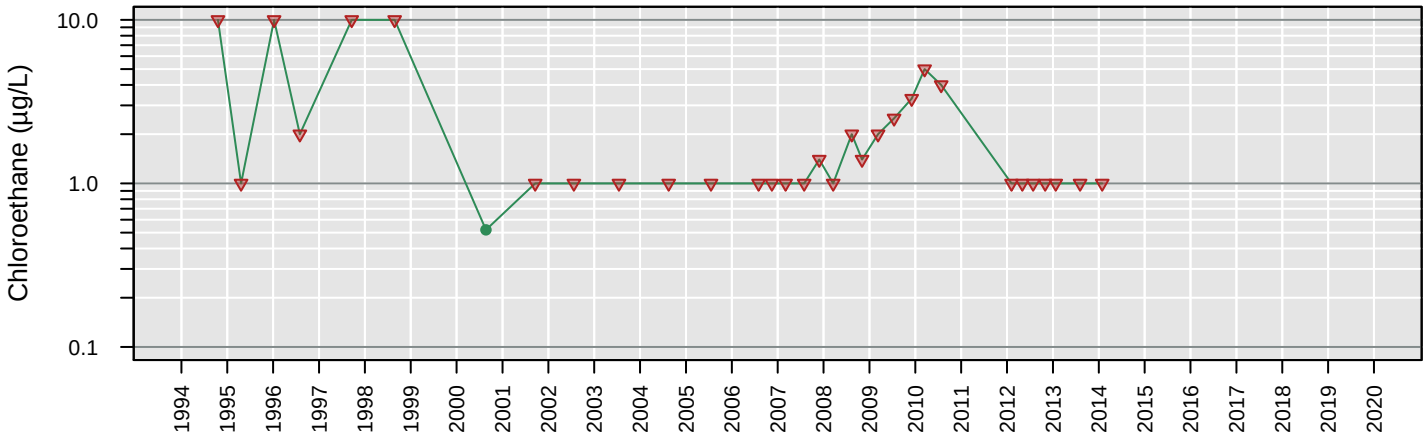
Regression Statistics for January 2013 to January 2014
Geometric Mean: 0.24 µg/L
UCL: 0.99 µg/L
LCL: 0.058 µg/L

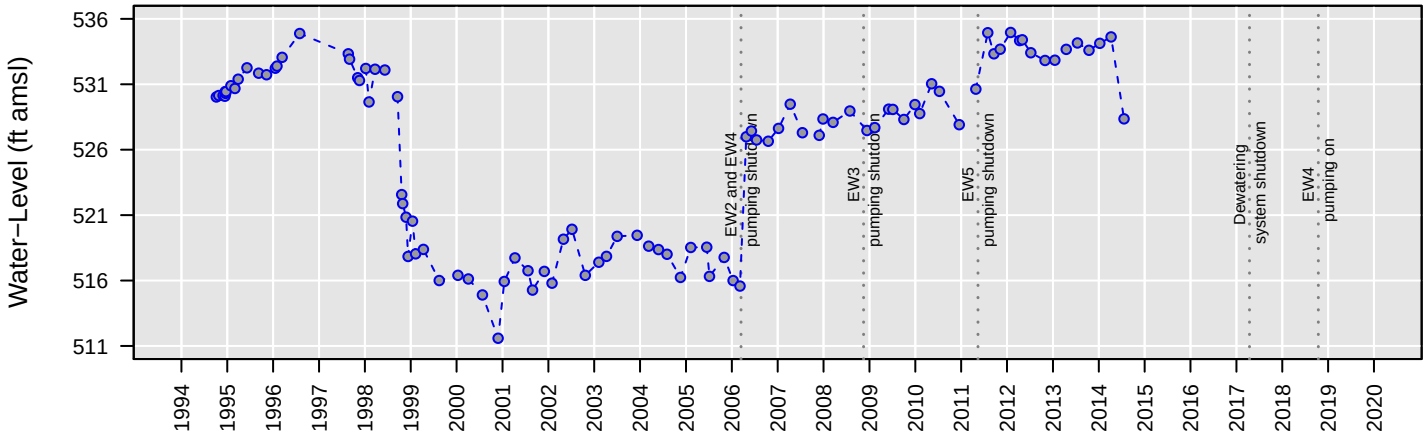
MW90

Chloroethane

Number of Comparisons: 32
Percent NDs: 97%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





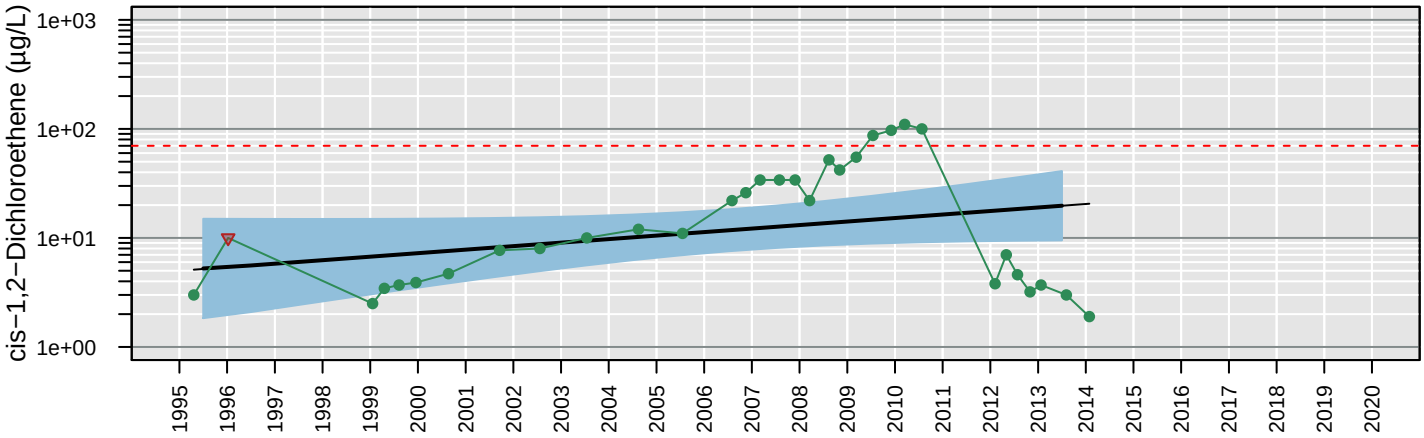
No Analysis Performed

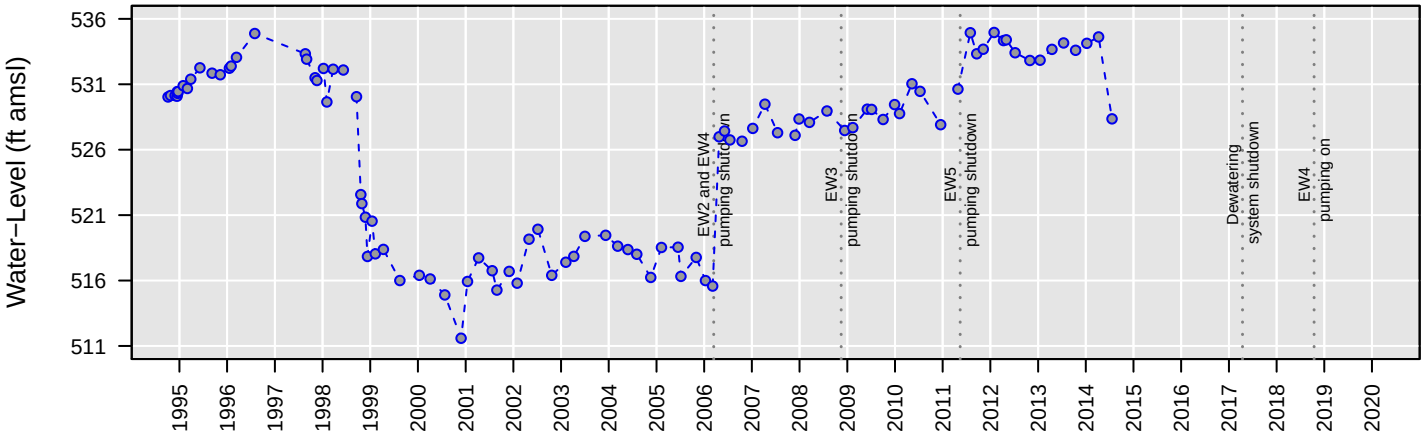
MW90

cis−1,2−Dichloroethene

Number of Comparisons: 32
Percent NDs: 3%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

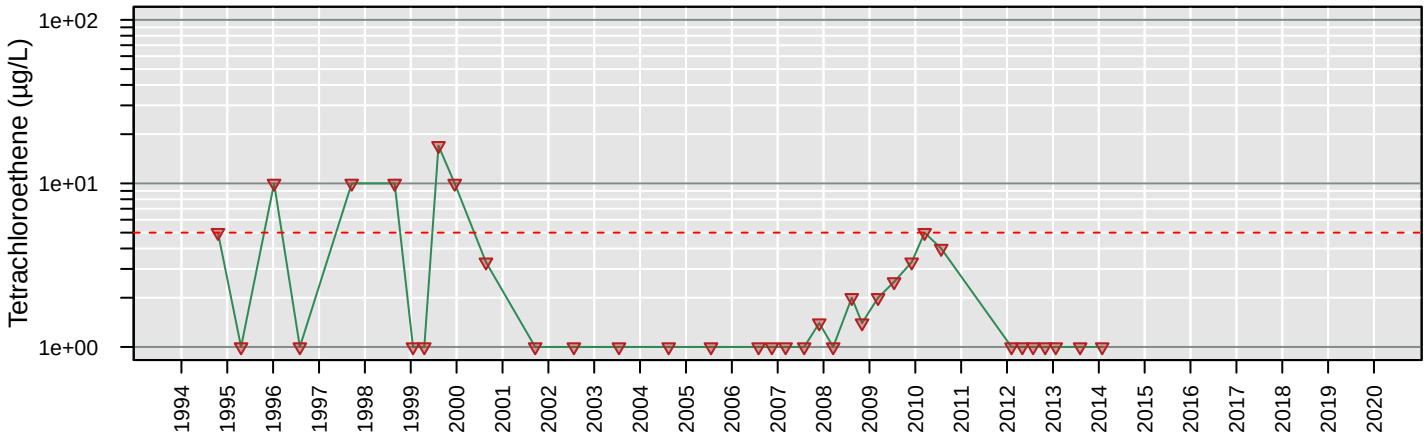
Trend Not Significant

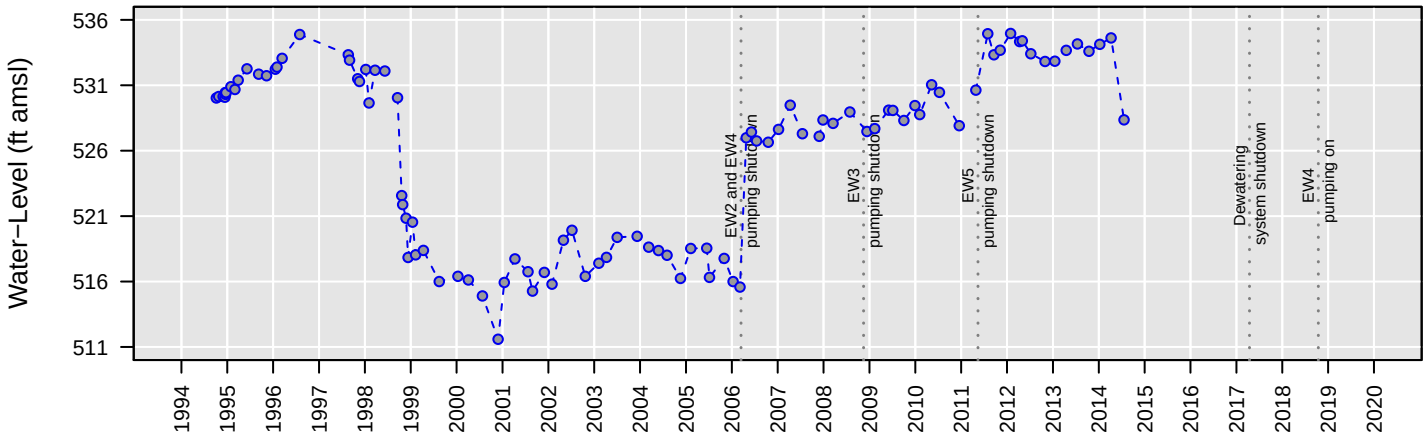
Regression Statistics for January 2013 to January 2014
Geometric Mean: 20 µg/L
UCL: 41 µg/L
LCL: 9.5 µg/L

MW90

Tetrachloroethene

Number of Comparisons: 36
Percent NDs: 100%





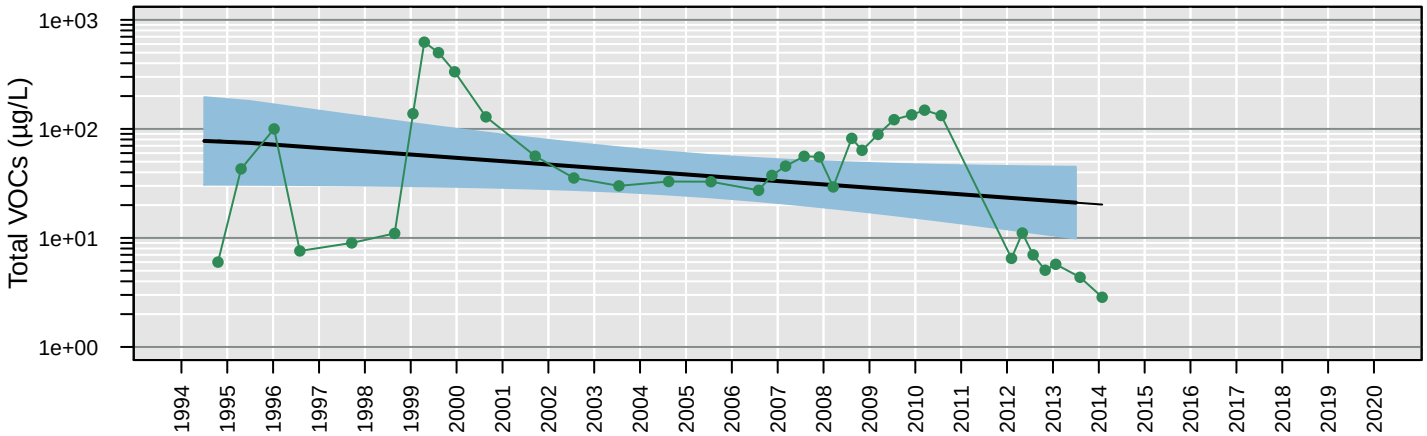
No Analysis Performed

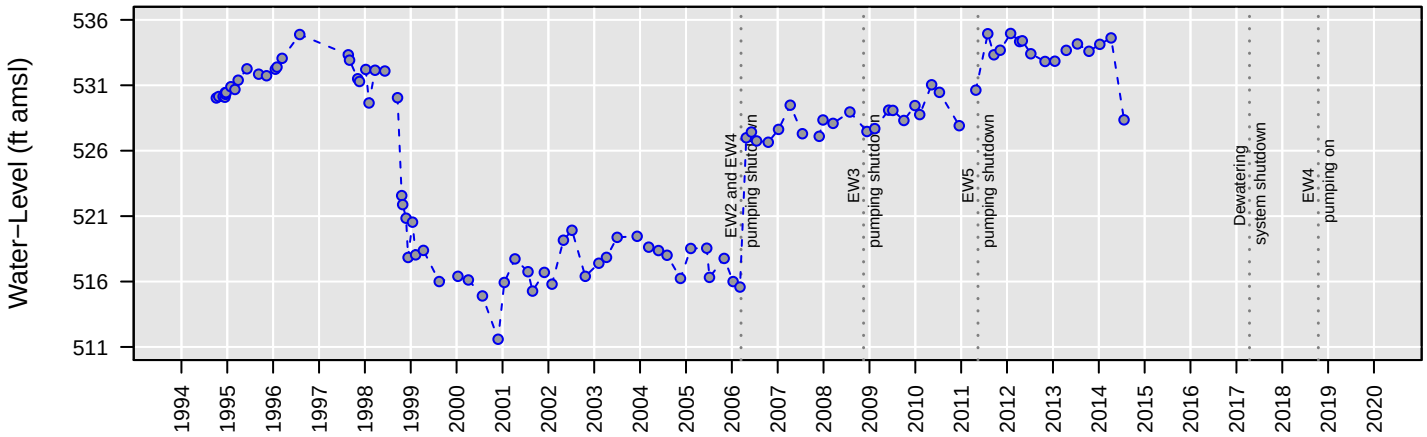
MW90

Total VOCs

Number of Comparisons: 36
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

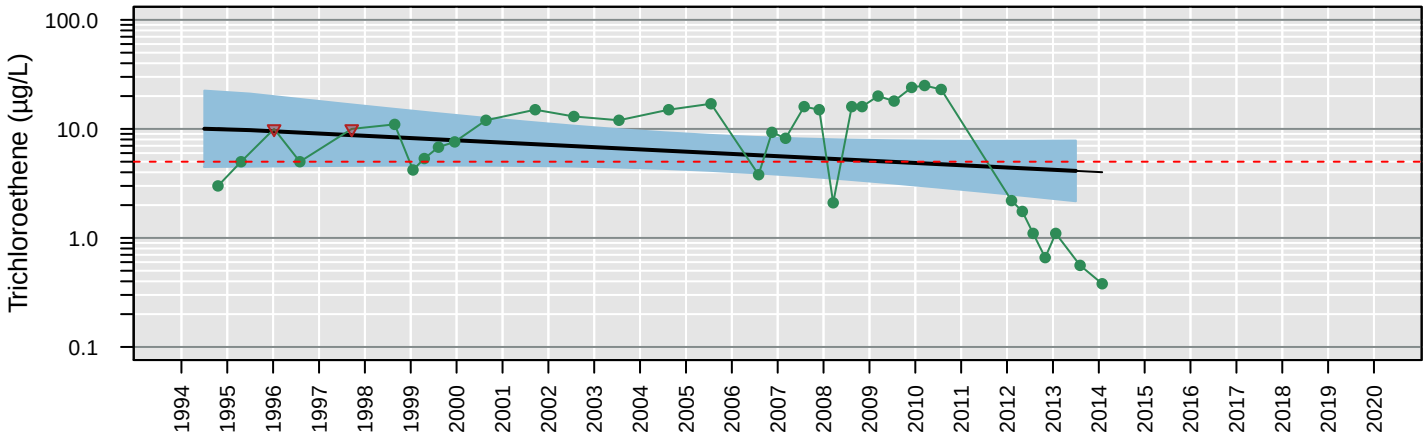
Trend Not Significant

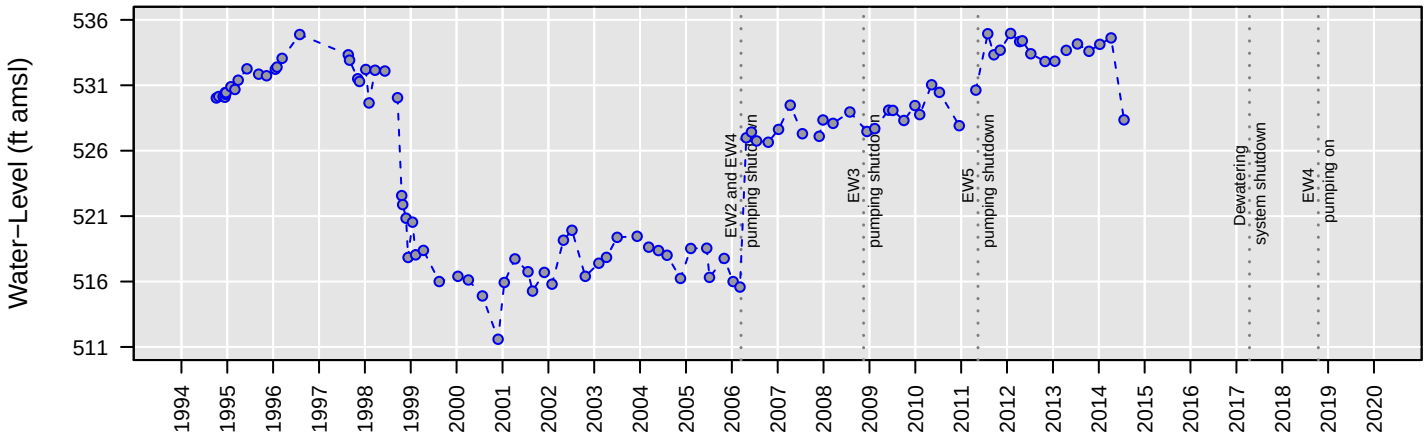
Regression Statistics for January 2013 to January 2014
Geometric Mean: 21 µg/L
UCL: 45 µg/L
LCL: 9.9 µg/L

MW90

Trichloroethene

Number of Comparisons: 36
Percent NDs: 6%





Censored Regression (Tobit) Model

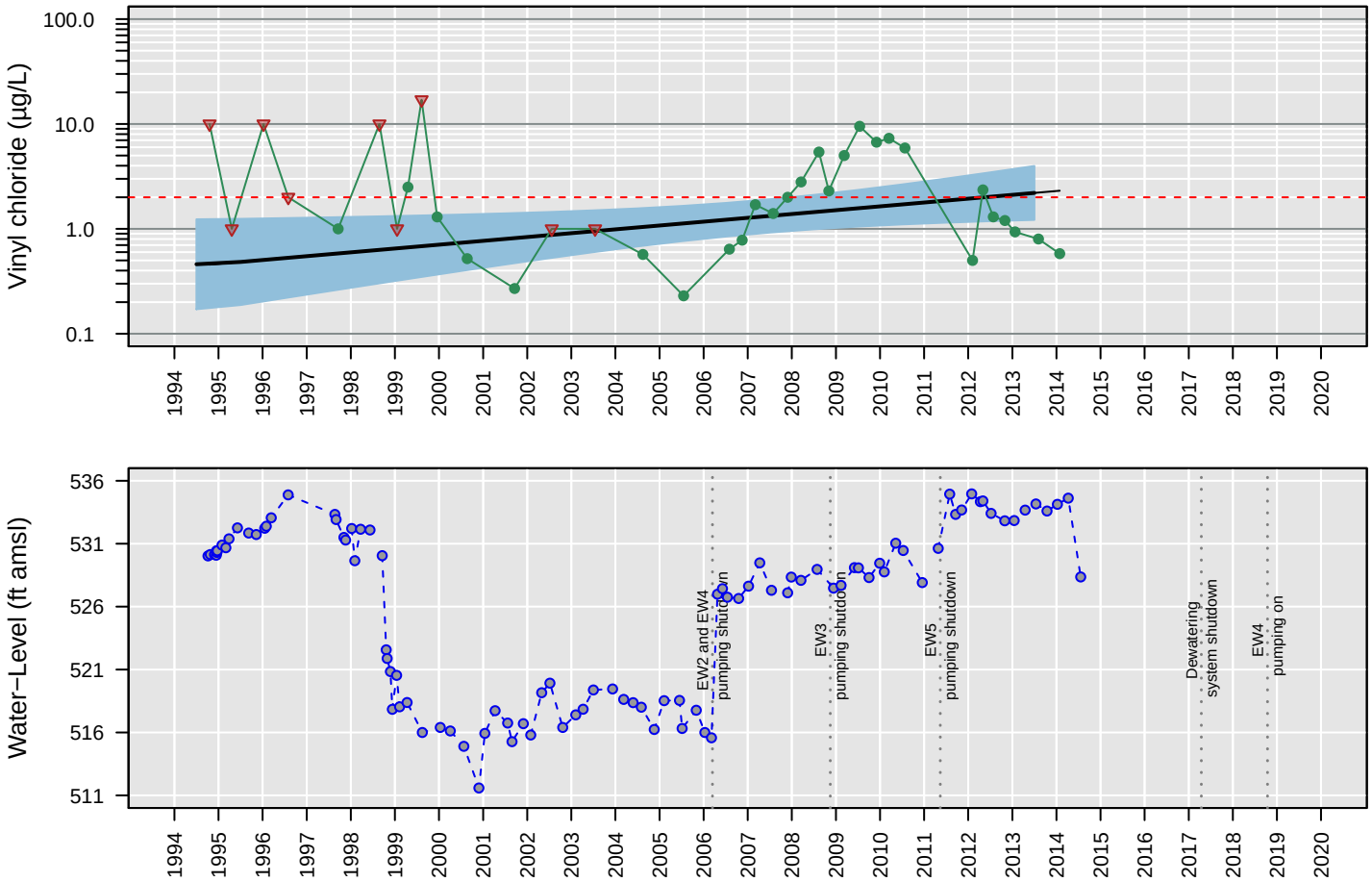
Trend Not Significant

Regression Statistics for January 2013 to January 2014
Geometric Mean: 4.1 µg/L
UCL: 7.8 µg/L
LCL: 2.2 µg/L

MW90

Vinyl chloride

Number of Comparisons: 36
Percent NDs: 25%



Censored Regression (Tobit) Model

ln Conc. = 0.00023 (+/− 0.0001)*Date + −2.9 (+/− 1.4)

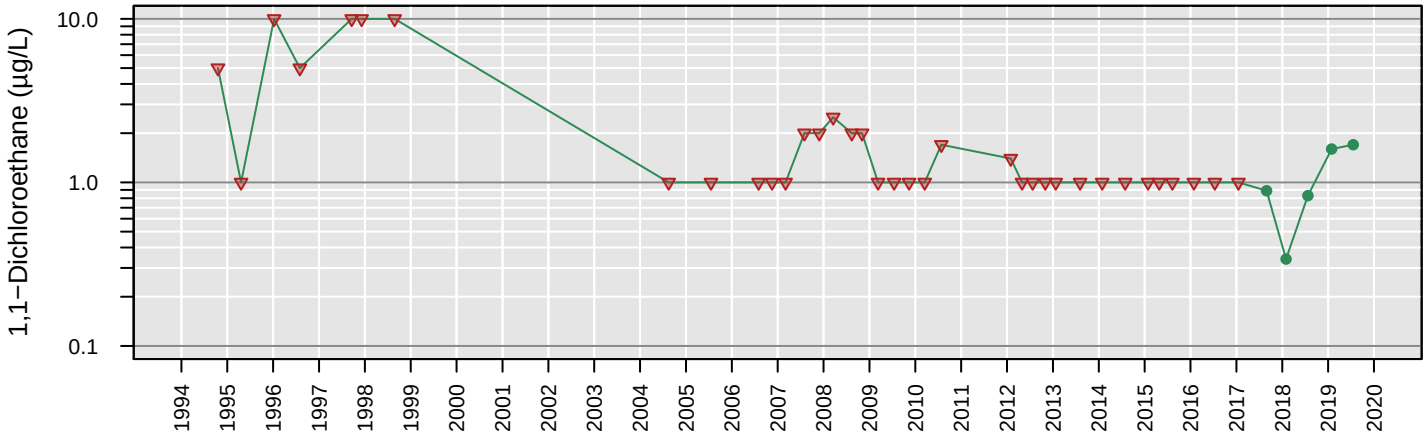
Regression Statistics for January 2013 to January 2014
Geometric Mean: 2.2 µg/L
UCL: 4 µg/L
LCL: 1.2 µg/L

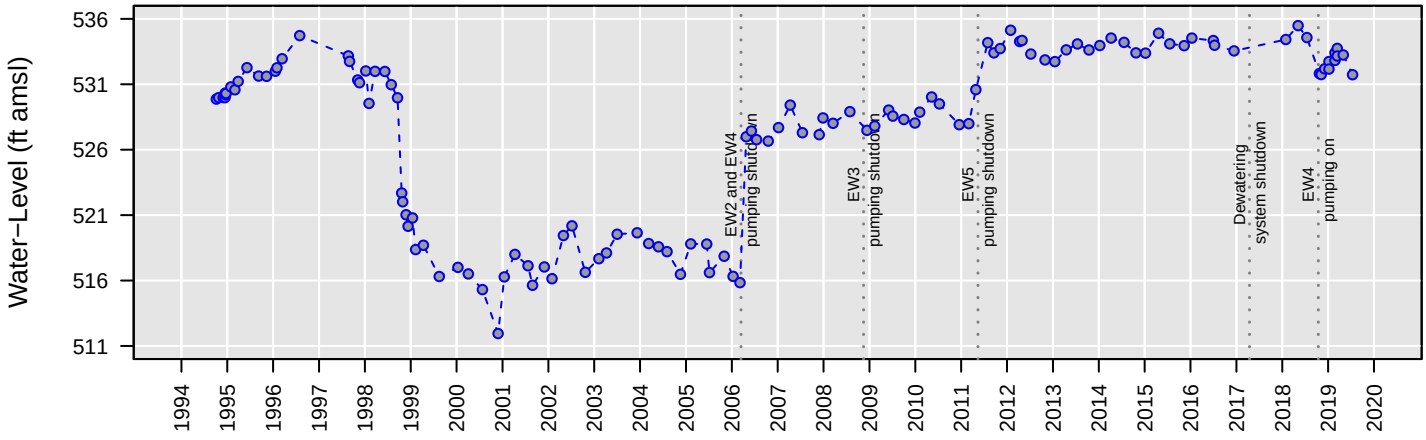
MW91

1,1−Dichloroethane

Number of Comparisons: 41
Percent NDs: 88%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



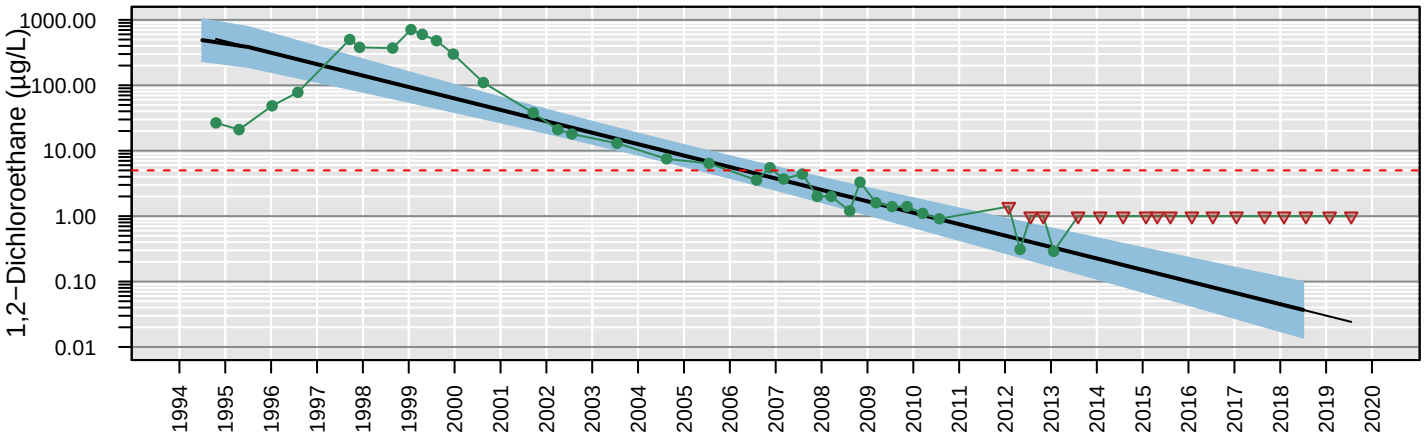


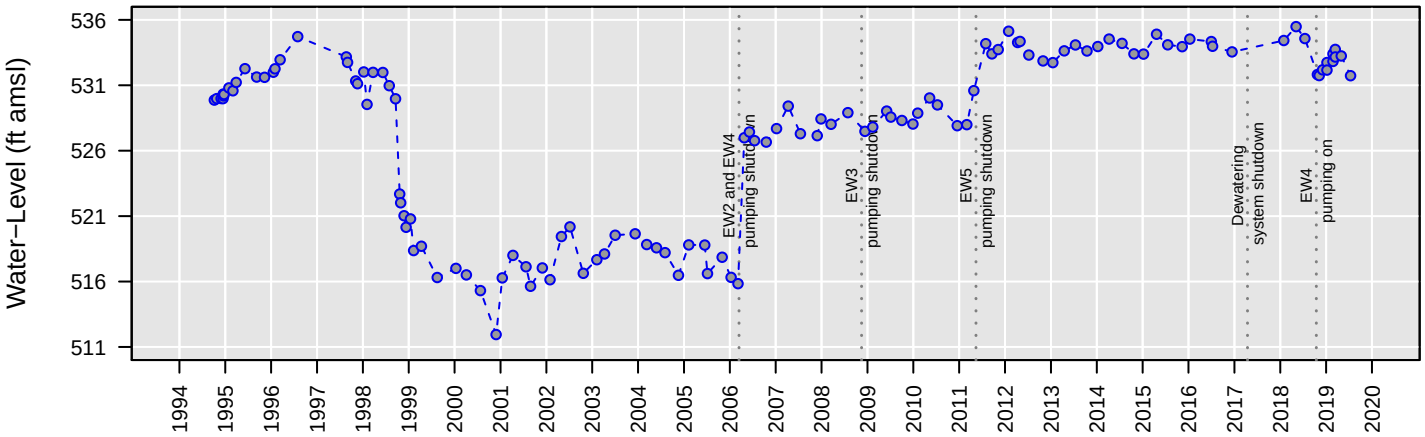
No Analysis Performed

MW91

1,2−Dichloroethane

Number of Comparisons: 50
Percent NDs: 34%





Censored Regression (Tobit) Model

ln Conc. = −0.0011 (+/− 0.000089)*Date + 16 (+/− 1.1)

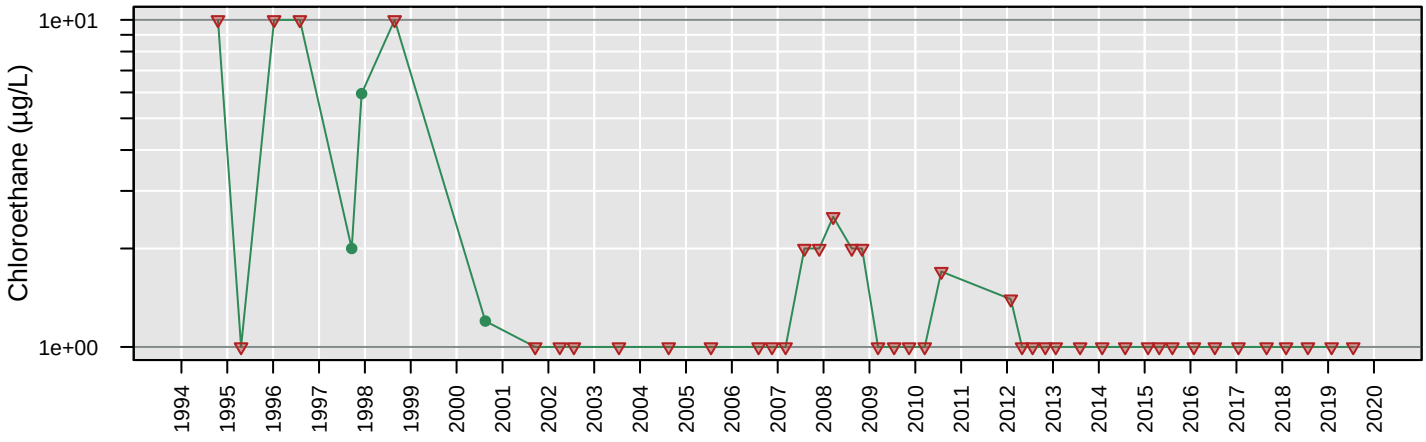
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.037 µg/L
UCL: 0.098 µg/L
LCL: 0.014 µg/L

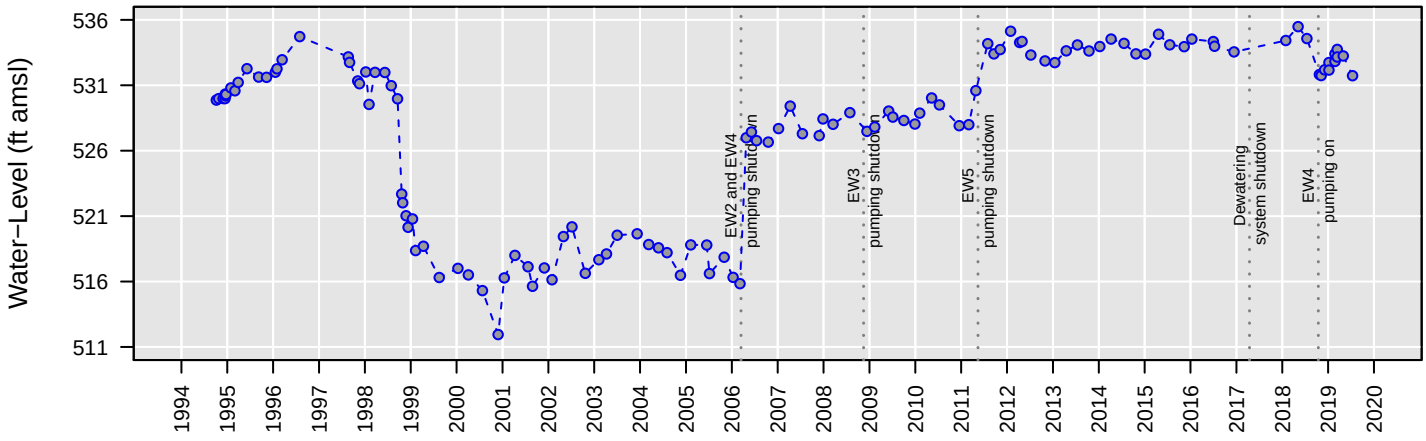
MW91

Chloroethane

Number of Comparisons: 46
Percent NDs: 93%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



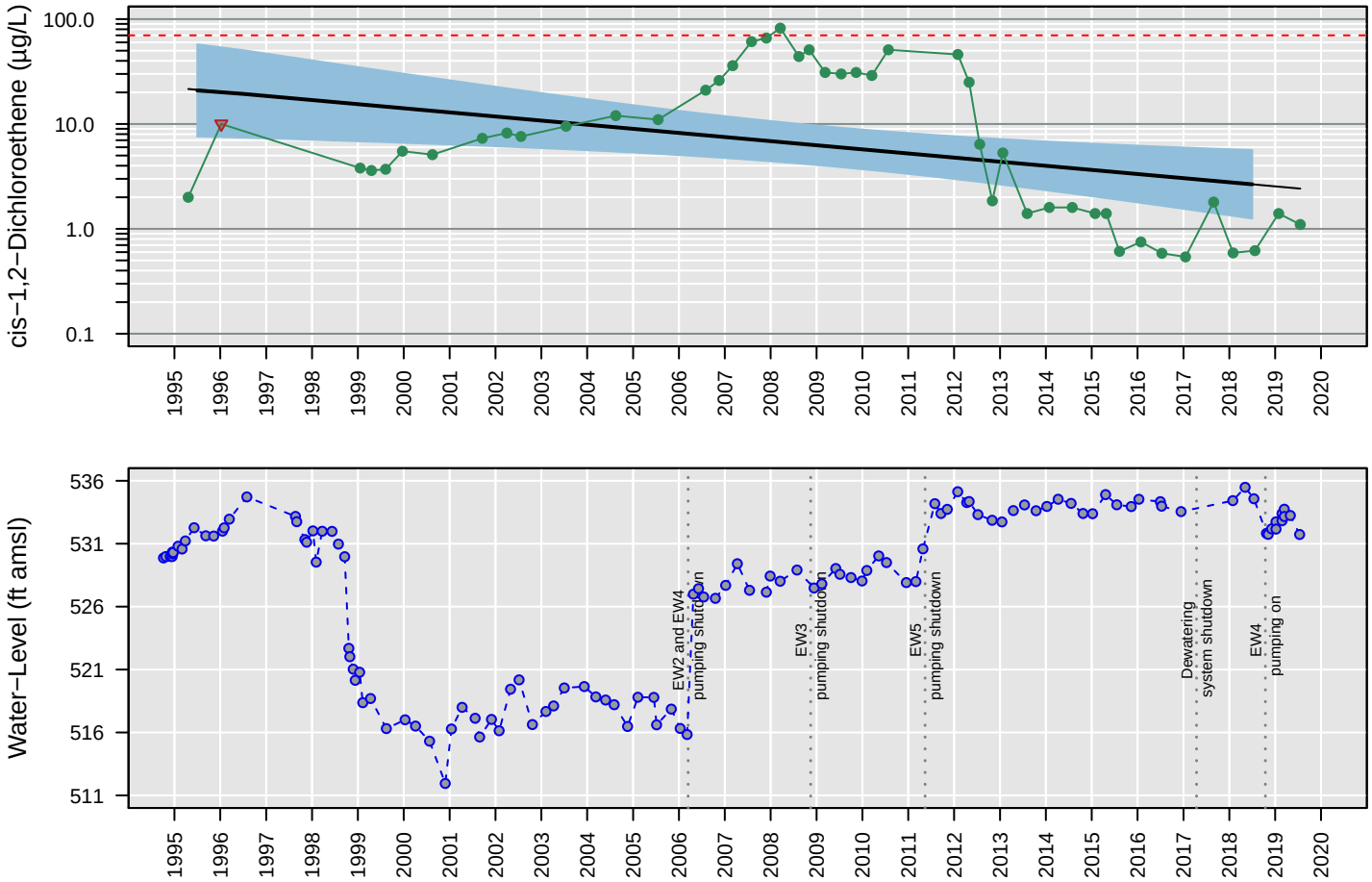


No Analysis Performed

MW91

cis−1,2−Dichloroethene

Number of Comparisons: 45
Percent NDs: 2%



Censored Regression (Tobit) Model

ln Conc. = −0.00025 (+/− 0.000091)*Date + 5.4 (+/− 1.3)

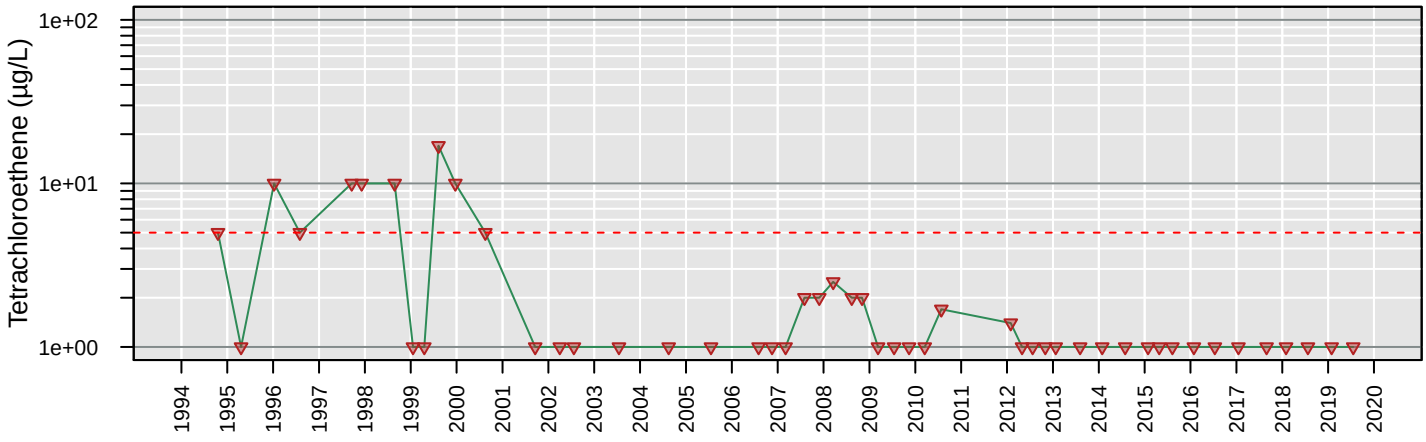
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.7 µg/L
UCL: 5.6 µg/L
LCL: 1.3 µg/L

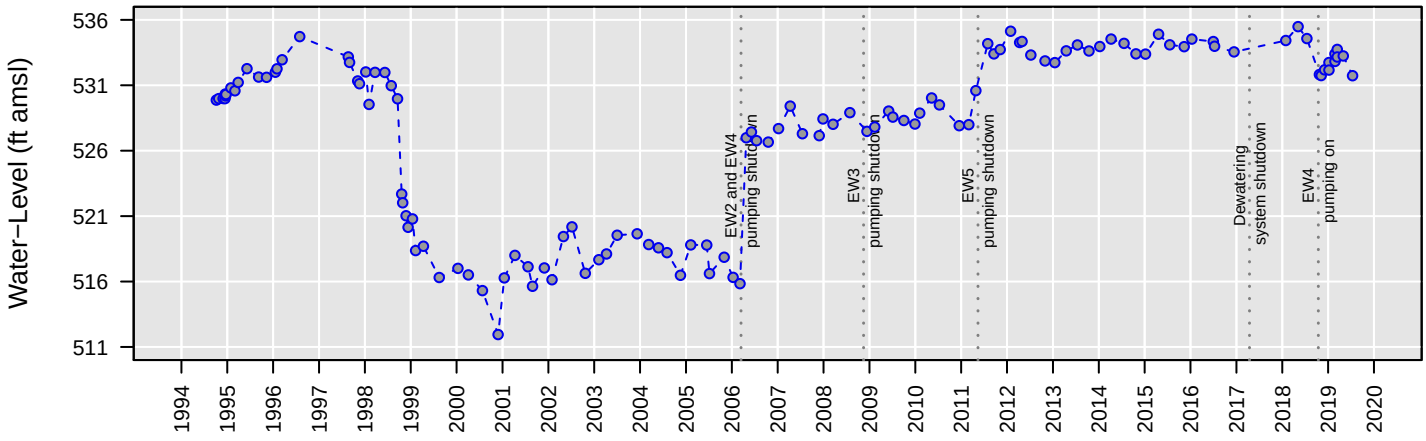
MW91

Tetrachloroethene

Number of Comparisons: 50
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



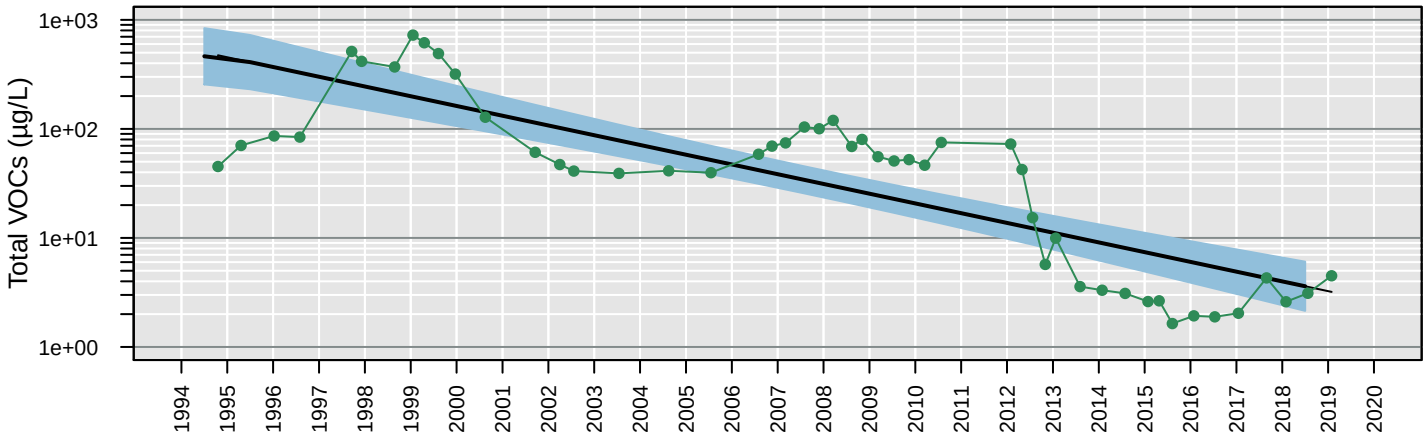


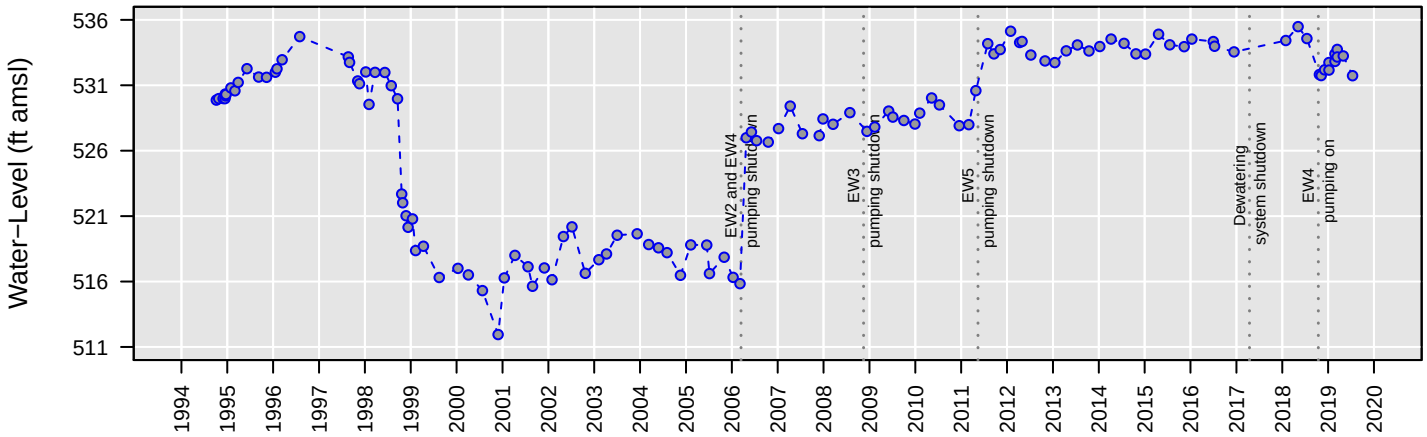
No Analysis Performed

MW91

Total VOCs

Number of Comparisons: 49
Percent NDs: 0%





Censored Regression (Tobit) Model

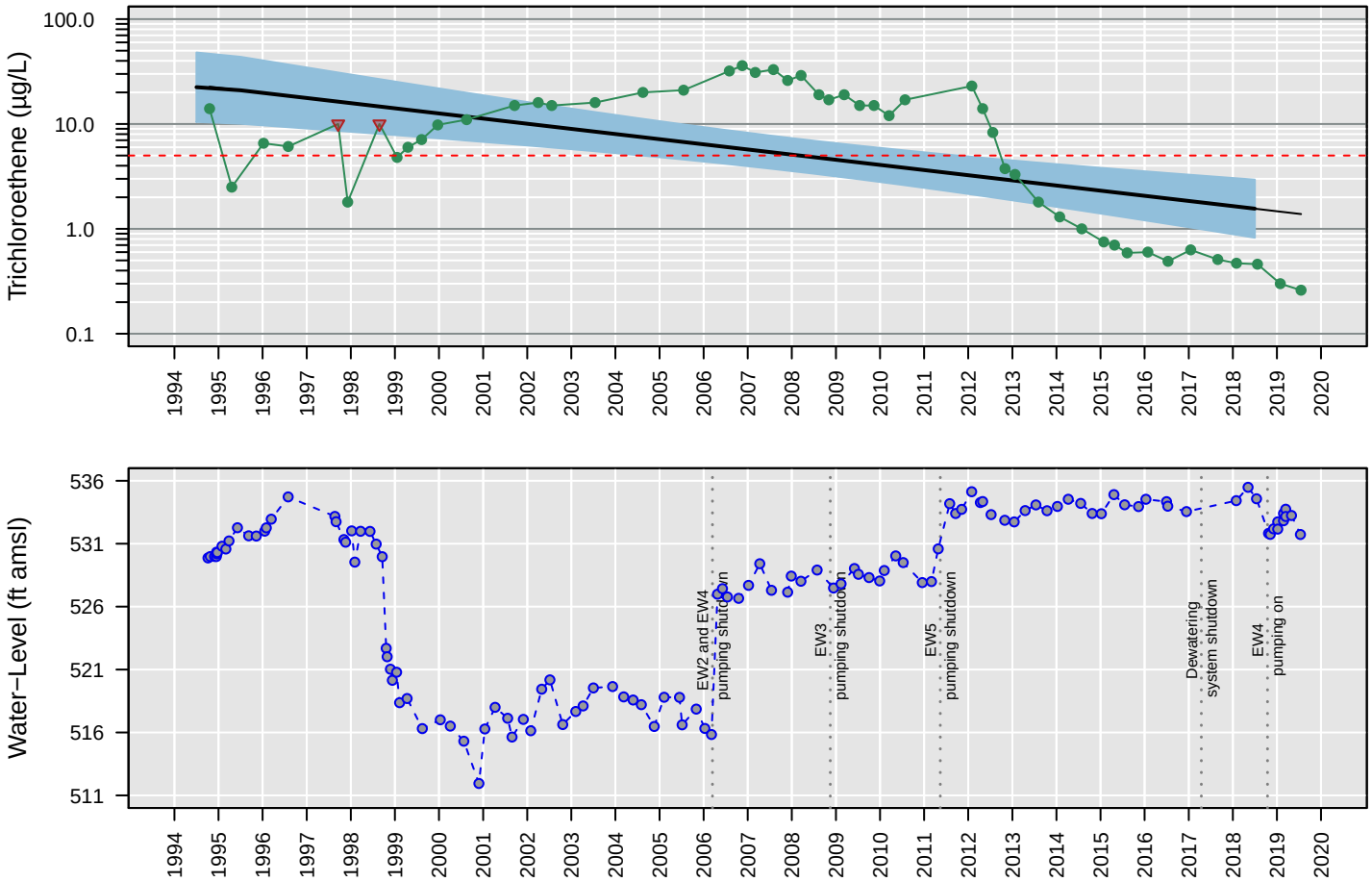
ln Conc. = −0.00056 (+/− 0.000055)*Date + 11 (+/− 0.77)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.6 µg/L
UCL: 6.1 µg/L
LCL: 2.1 µg/L

MW91

Trichloroethene

Number of Comparisons: 50
Percent NDs: 4%



Censored Regression (Tobit) Model

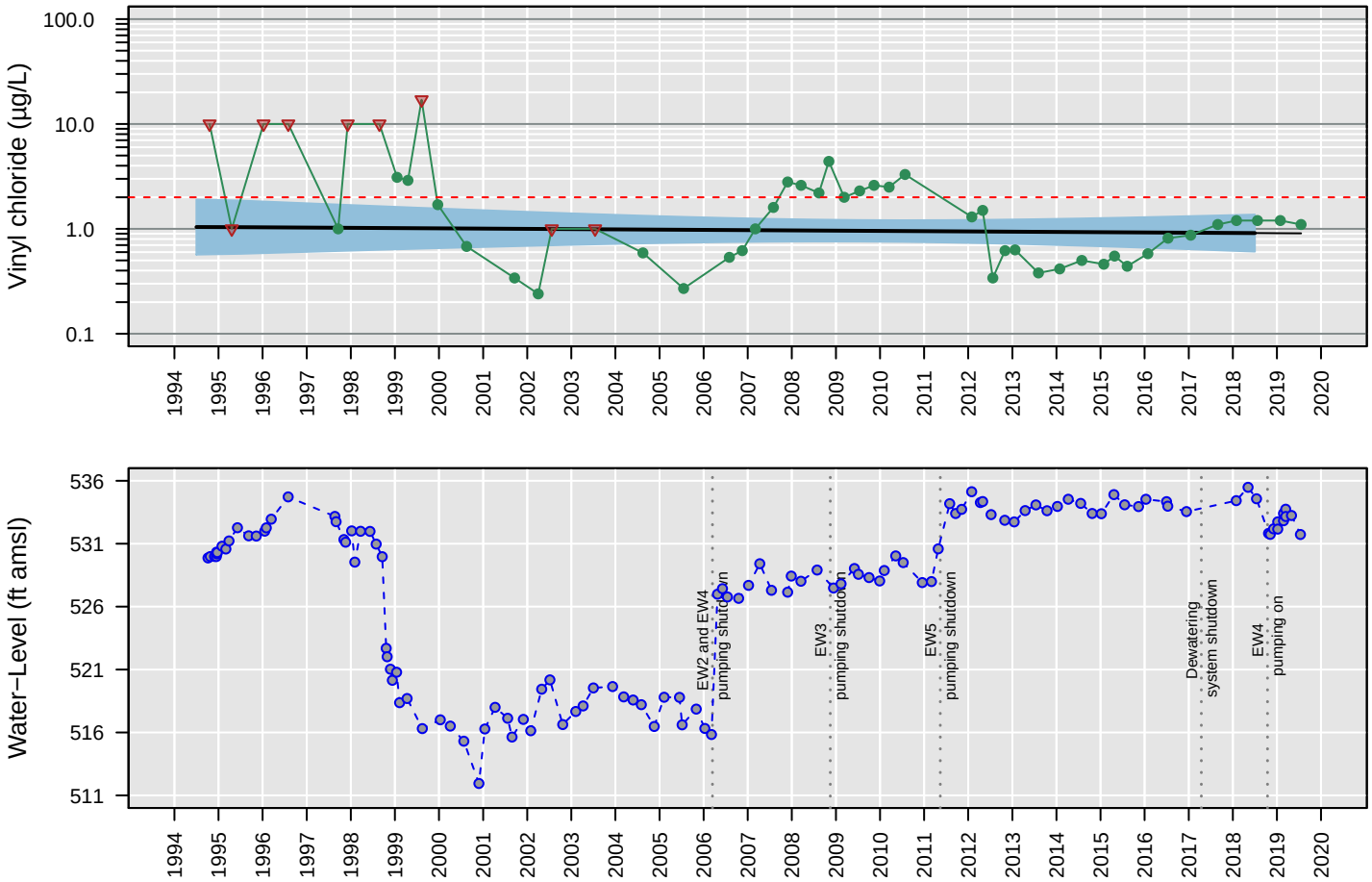
ln Conc. = −0.00031 (+/− 0.000069)*Date + 5.9 (+/− 0.98)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.6 µg/L
UCL: 2.9 µg/L
LCL: 0.82 µg/L

MW91

Vinyl chloride

Number of Comparisons: 50
Percent NDs: 18%



Censored Regression (Tobit) Model

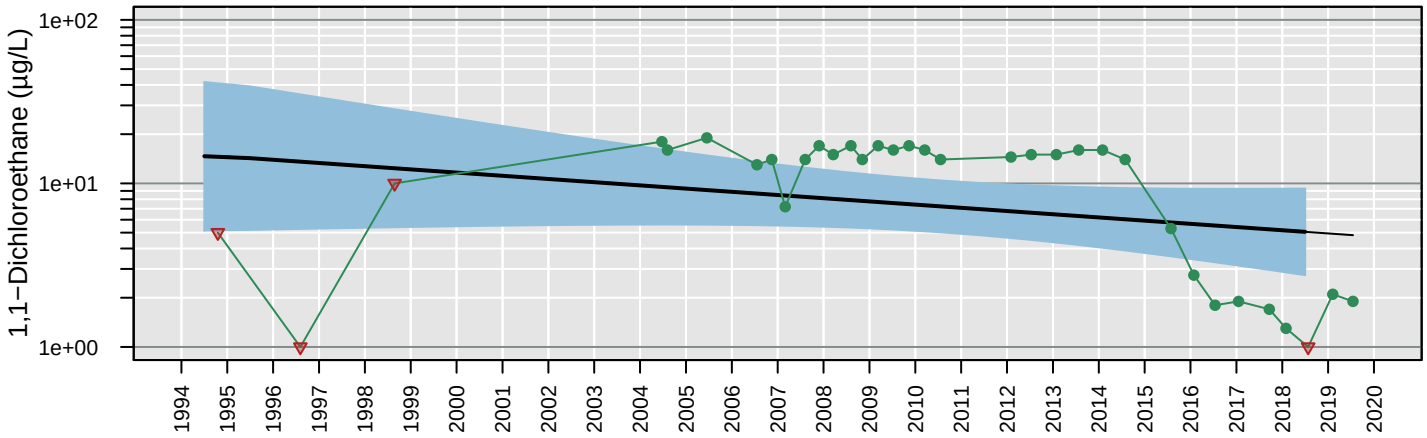
Trend Not Significant

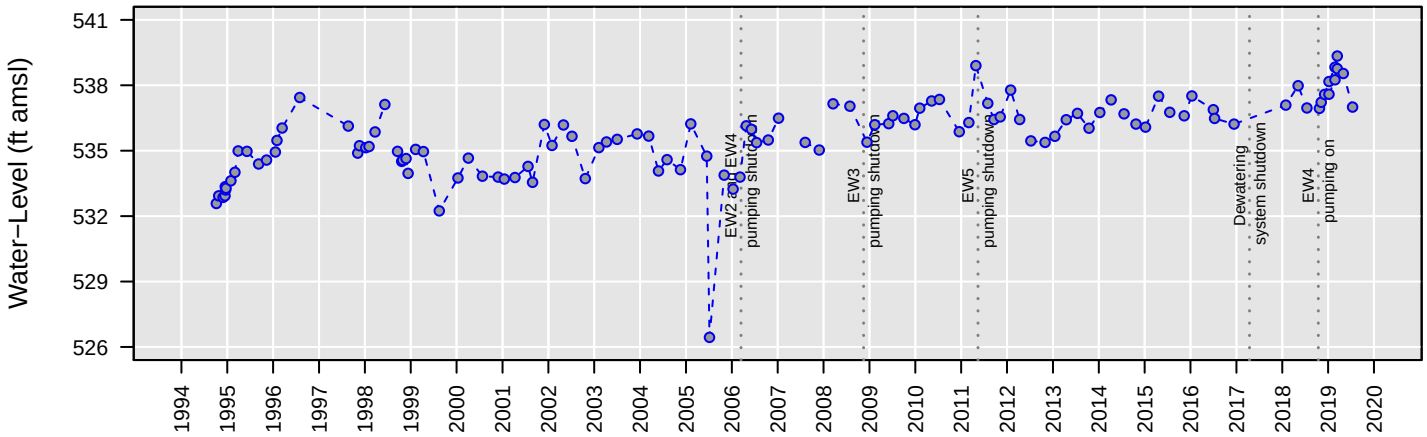
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.91 µg/L
UCL: 1.4 µg/L
LCL: 0.61 µg/L

MW92

1,1−Dichloroethane

Number of Comparisons: 34
Percent NDs: 12%





Censored Regression (Tobit) Model

Trend Not Significant

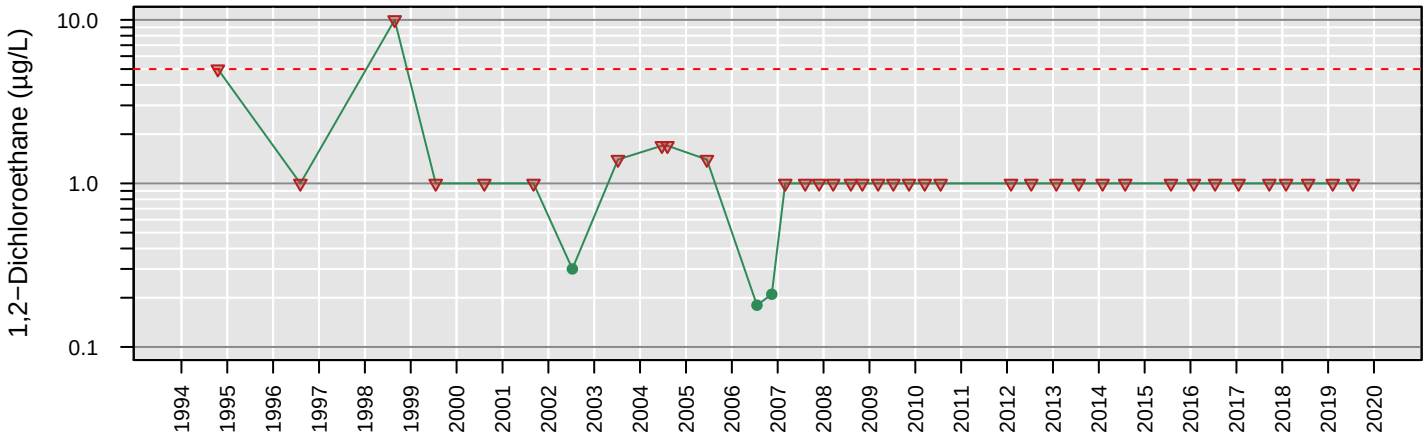
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.1 µg/L
UCL: 9.3 µg/L
LCL: 2.7 µg/L

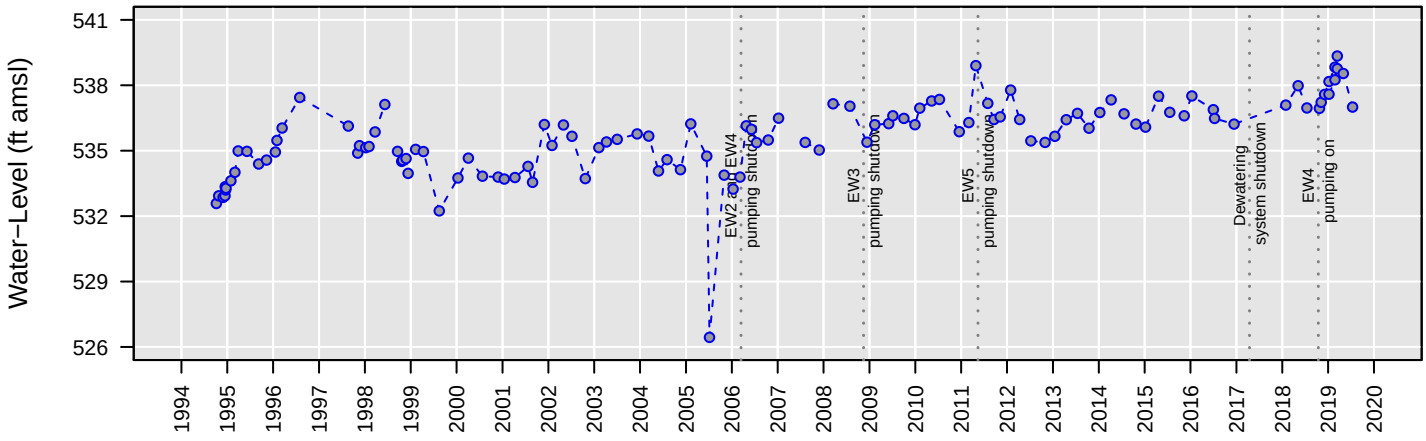
MW92

1,2−Dichloroethane

Number of Comparisons: 39
Percent NDs: 92%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





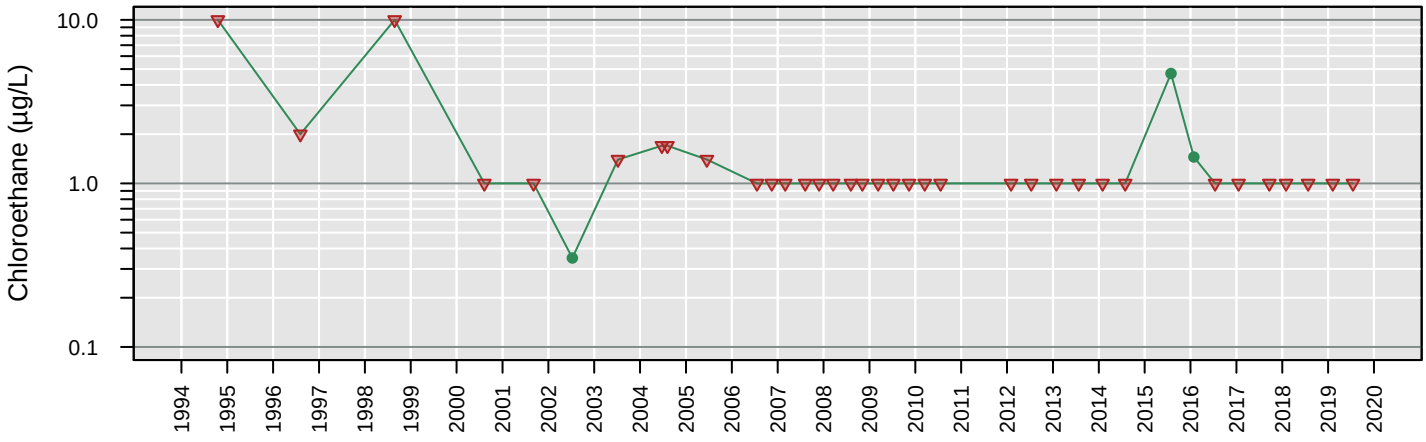
No Analysis Performed

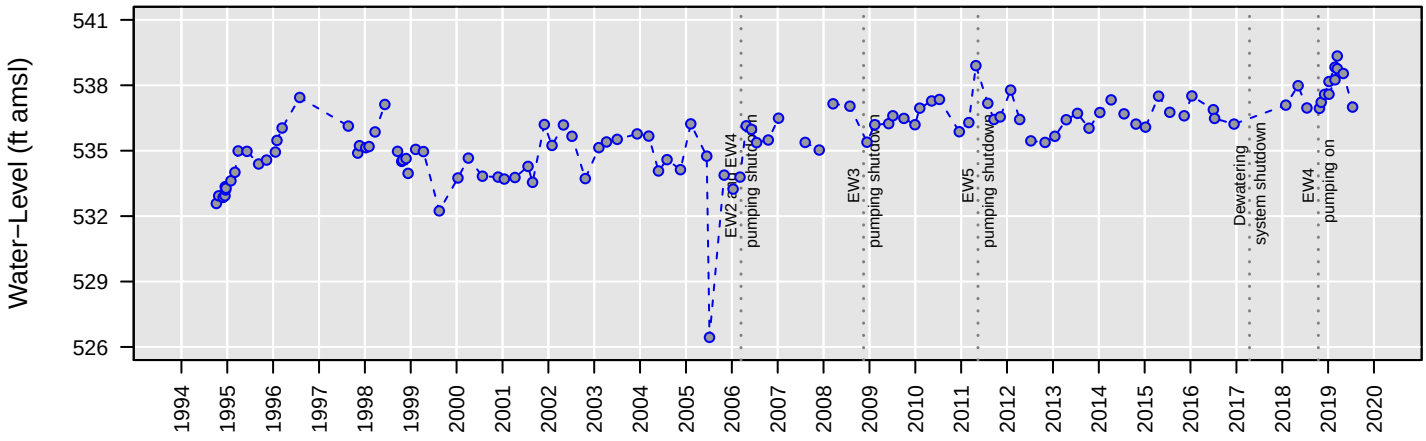
MW92

Chloroethane

Number of Comparisons: 38
Percent NDs: 92%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





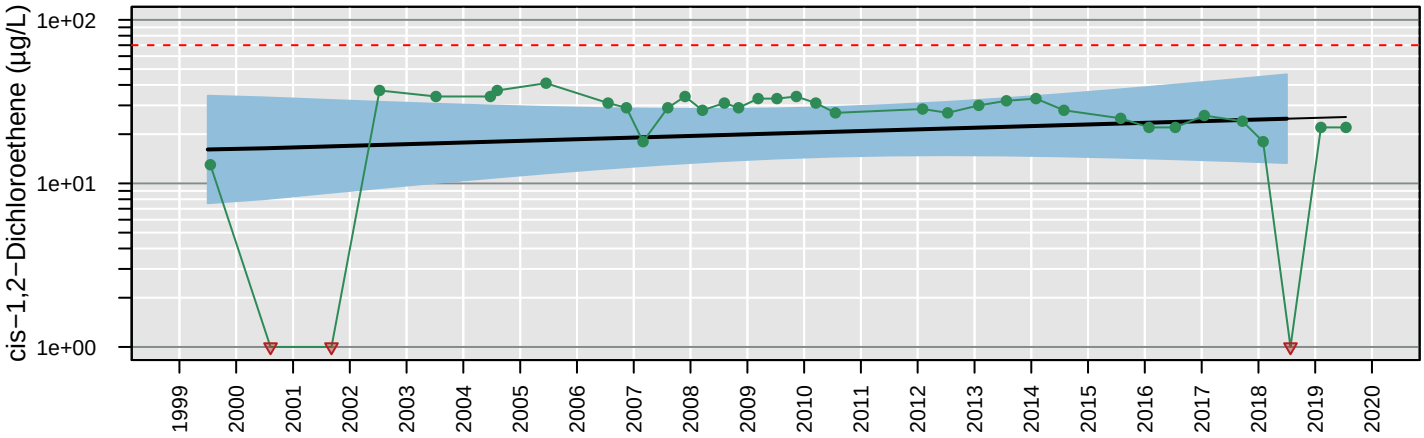
No Analysis Performed

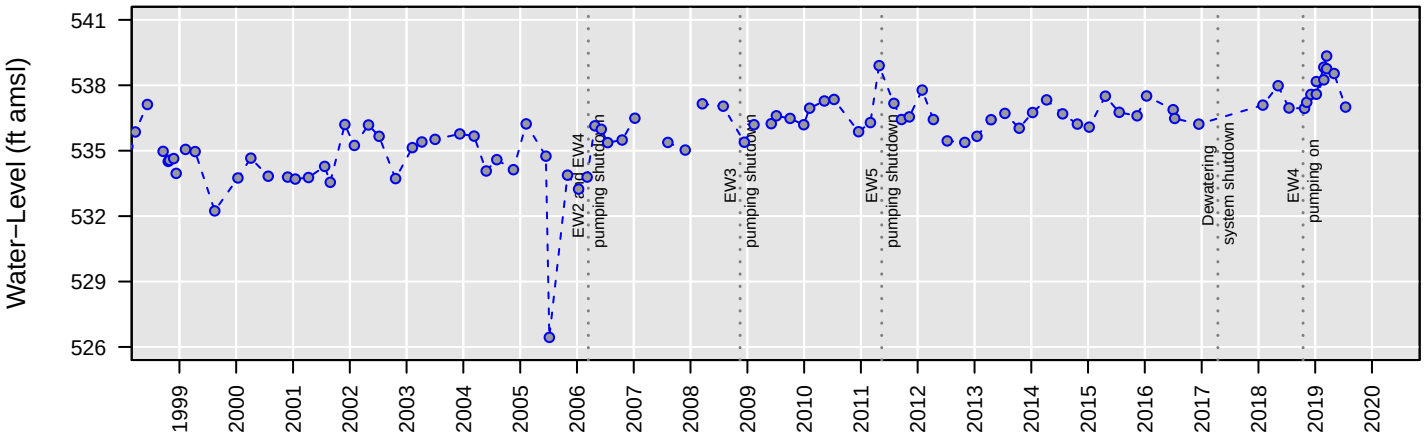
MW92

cis−1,2−Dichloroethene

Number of Comparisons: 36
Percent NDs: 8%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

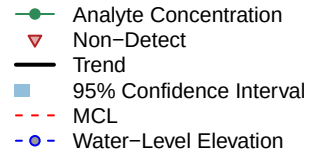
Trend Not Significant

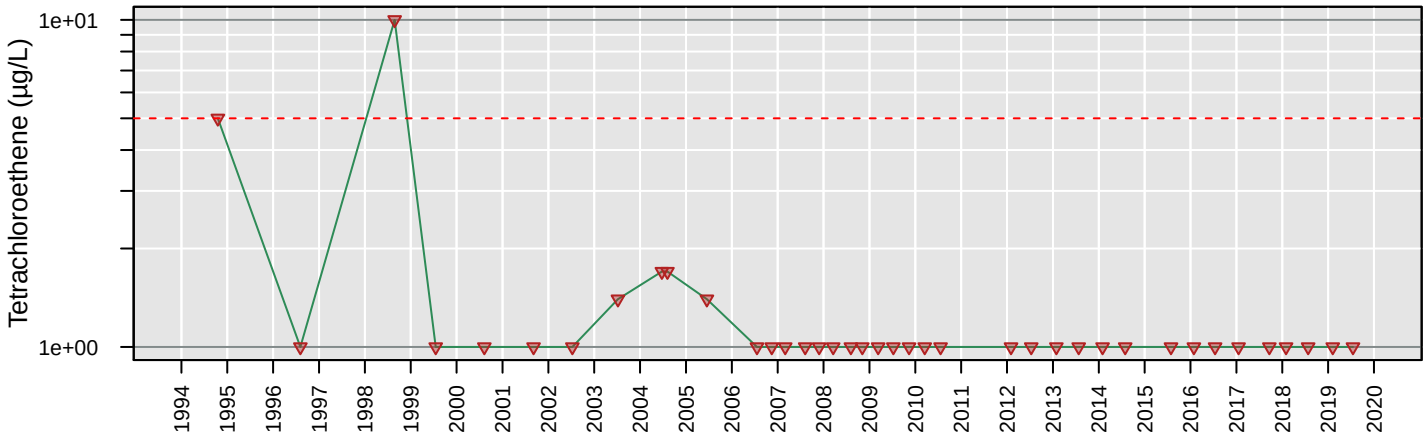
Regression Statistics for January 2018 to January 2019
Geometric Mean: 25 µg/L
UCL: 46 µg/L
LCL: 13 µg/L

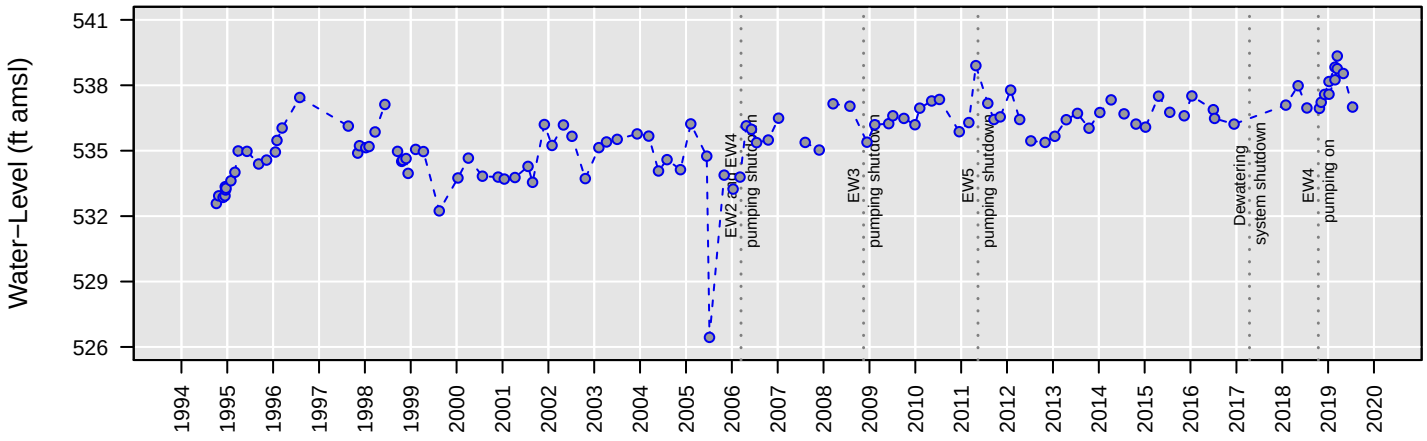
MW92

Tetrachloroethene

Number of Comparisons: 39
Percent NDs: 100%







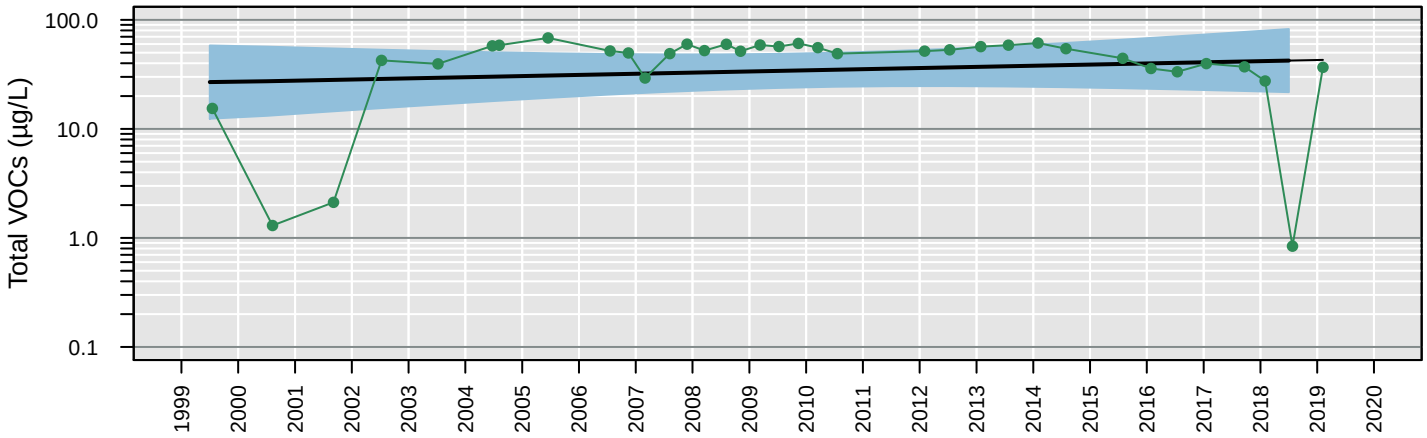
No Analysis Performed

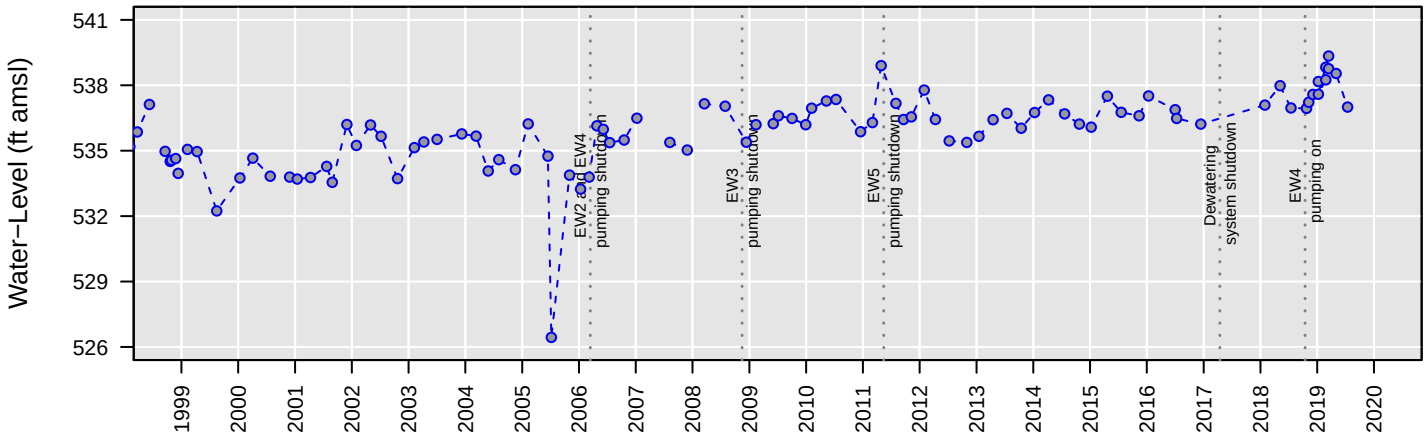
MW92

Total VOCs

Number of Comparisons: 35
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

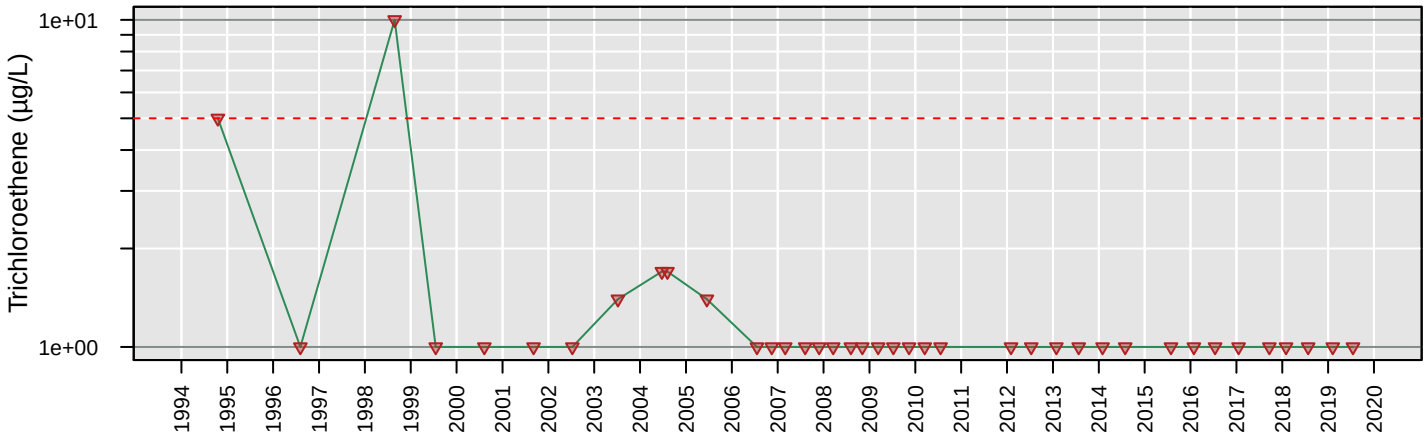
Trend Not Significant

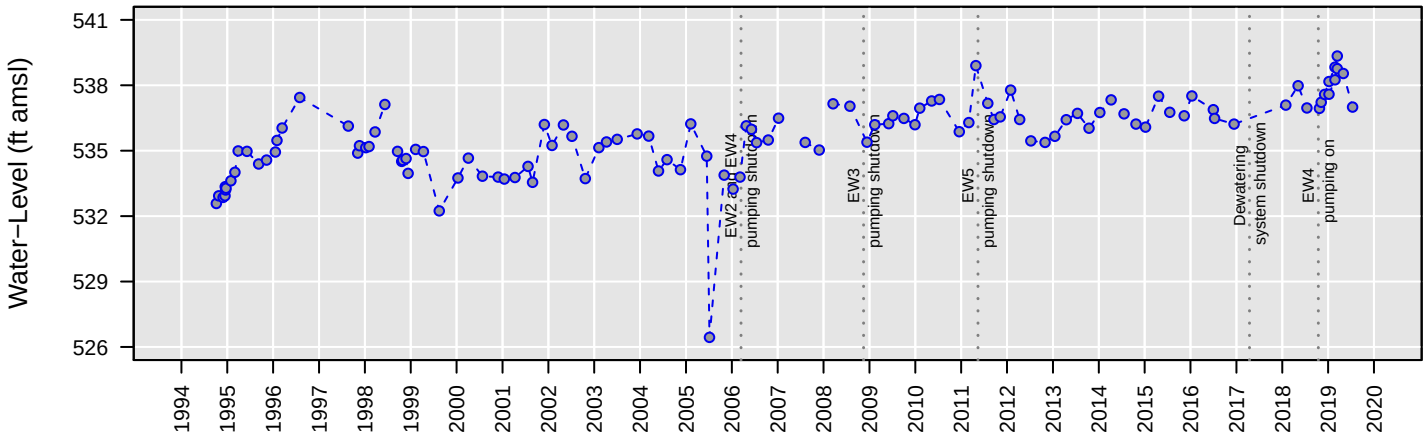
Regression Statistics for January 2018 to January 2019
Geometric Mean: 42 µg/L
UCL: 82 µg/L
LCL: 22 µg/L

MW92

Trichloroethene

Number of Comparisons: 39
Percent NDs: 100%



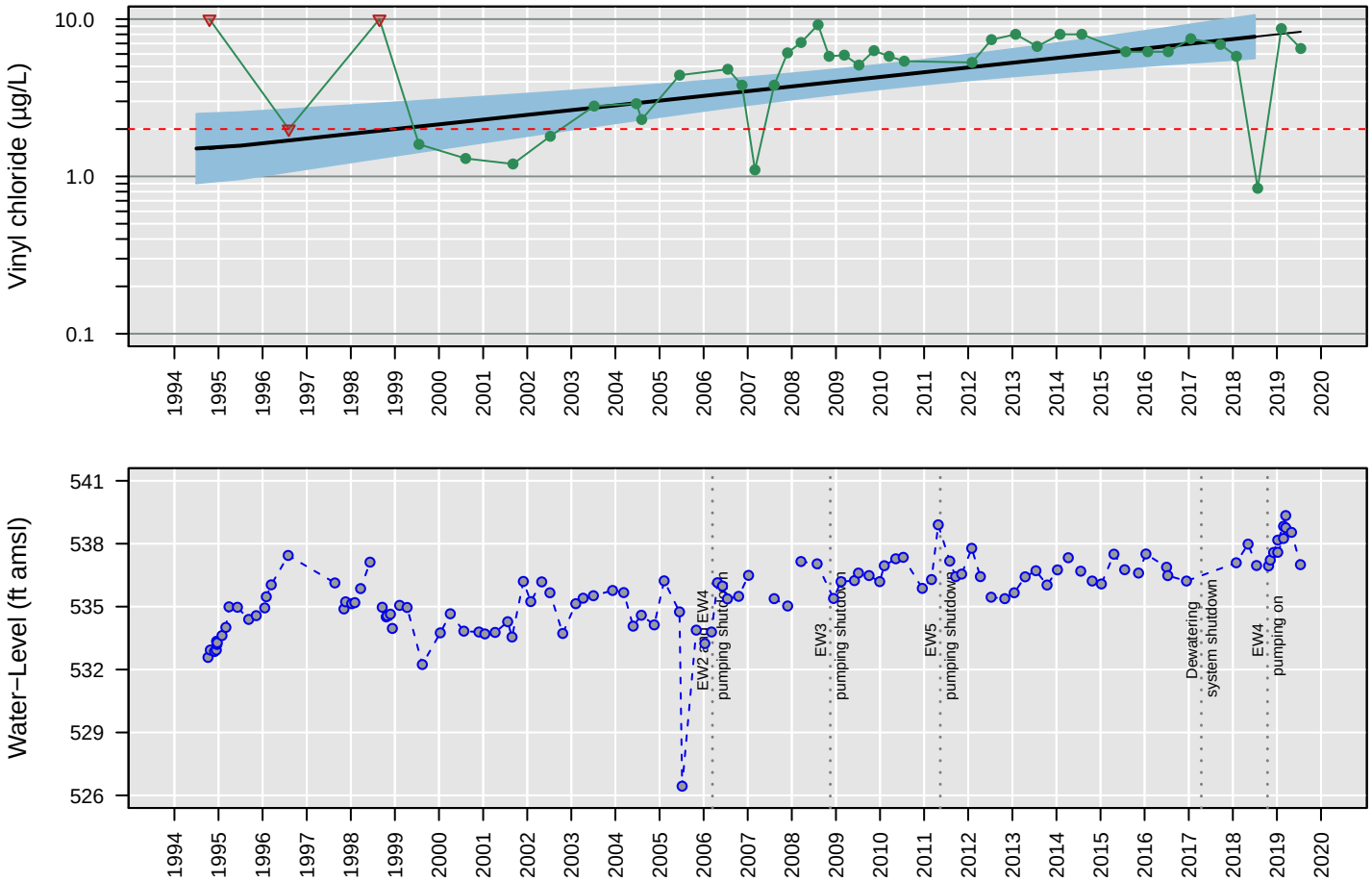


No Analysis Performed

MW92

Vinyl chloride

Number of Comparisons: 39
Percent NDs: 8%



Censored Regression (Tobit) Model

ln Conc. = 0.00019 (+/− 0.000042)*Date + −1.3 (+/− 0.62)

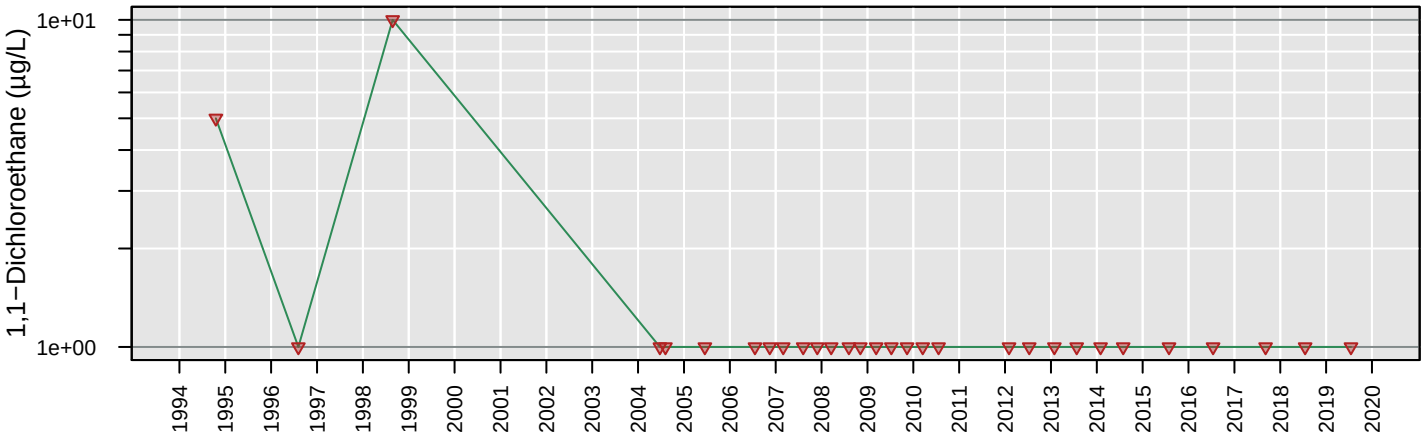
Regression Statistics for January 2018 to January 2019
Geometric Mean: 7.7 µg/L
UCL: 11 µg/L
LCL: 5.6 µg/L

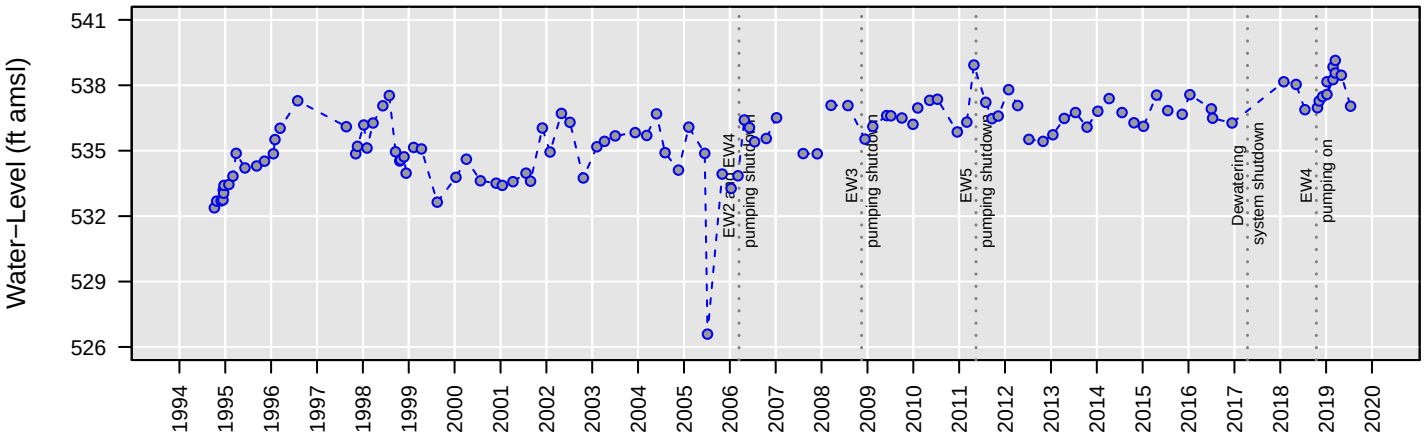
MW93

1,1−Dichloroethane

Number of Comparisons: 30
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





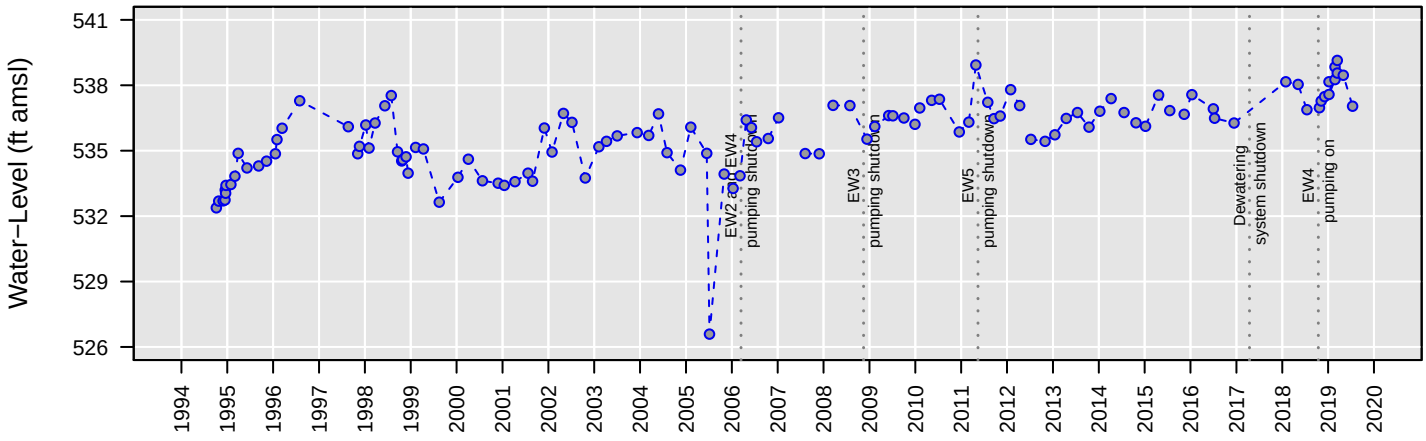
No Analysis Performed

MW93

1,2−Dichloroethane

Number of Comparisons: 37
Percent NDs: 92%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

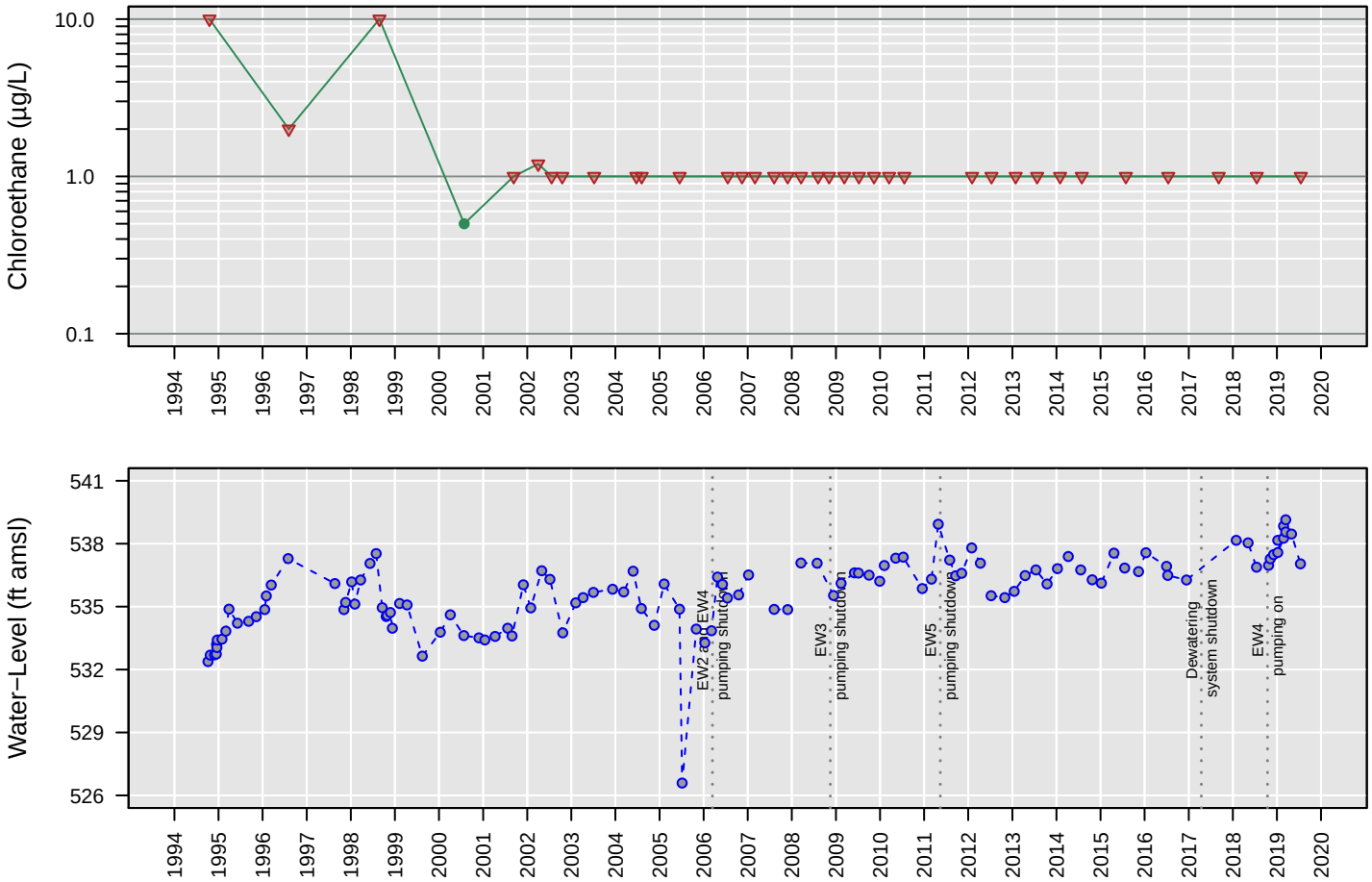


No Analysis Performed

MW93

Chloroethane

Number of Comparisons: 36
Percent NDs: 97%



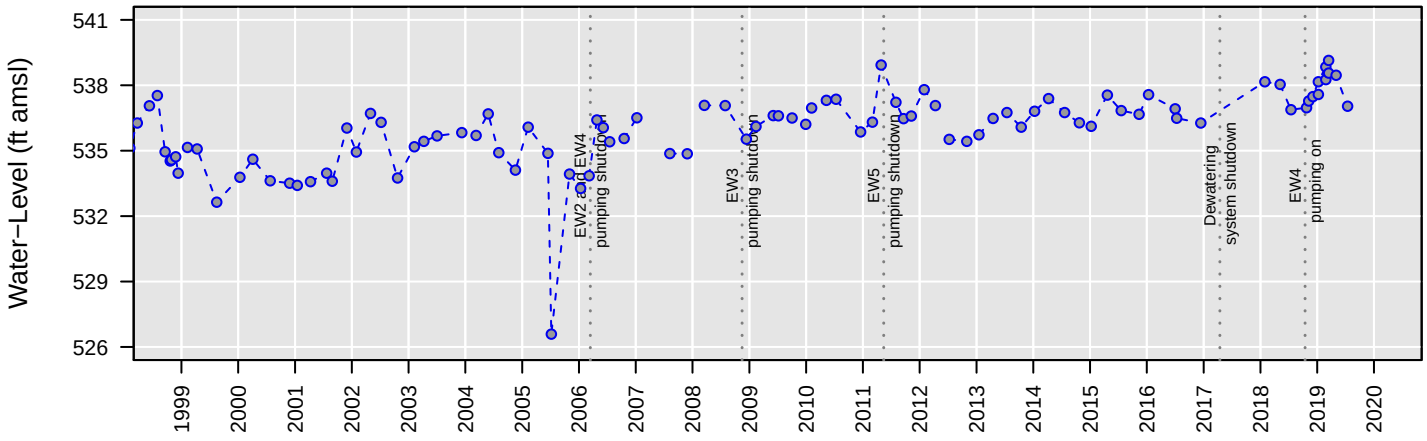
No Analysis Performed

MW93

cis−1,2−Dichloroethene

Number of Comparisons: 34
Percent NDs: 91%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



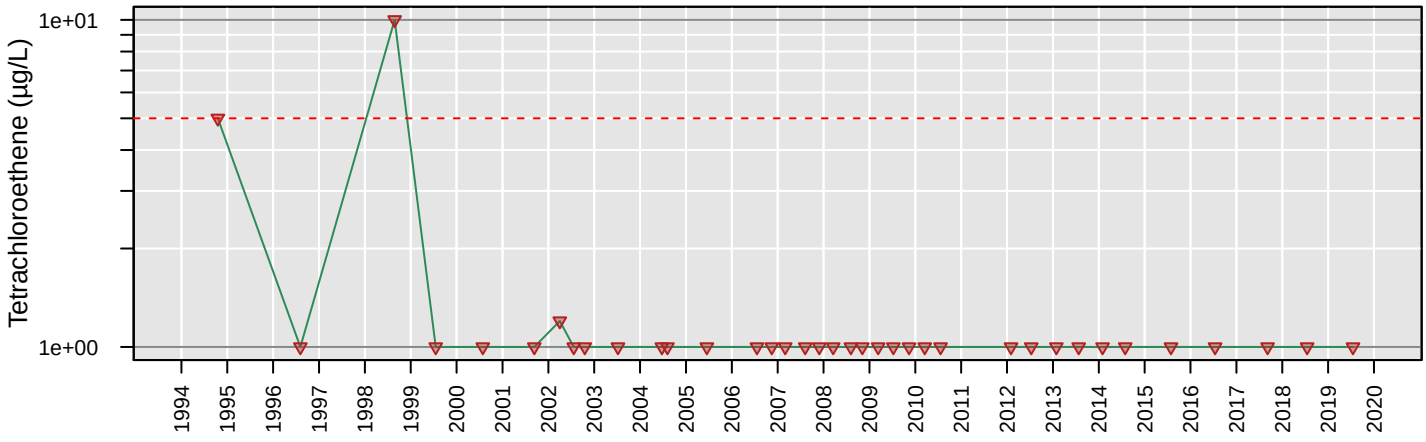
No Analysis Performed

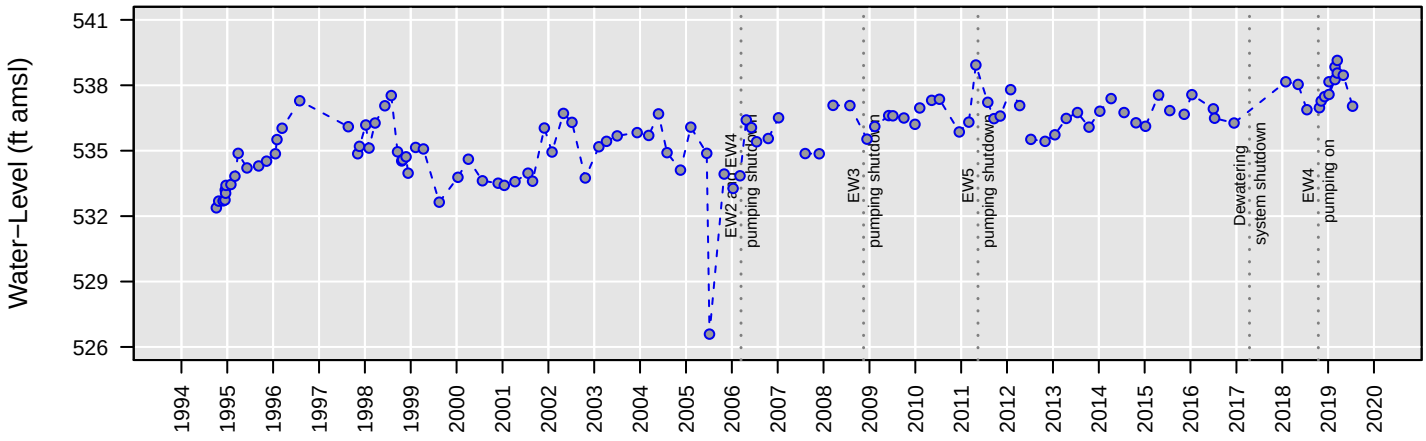
MW93

Tetrachloroethene

Number of Comparisons: 37
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



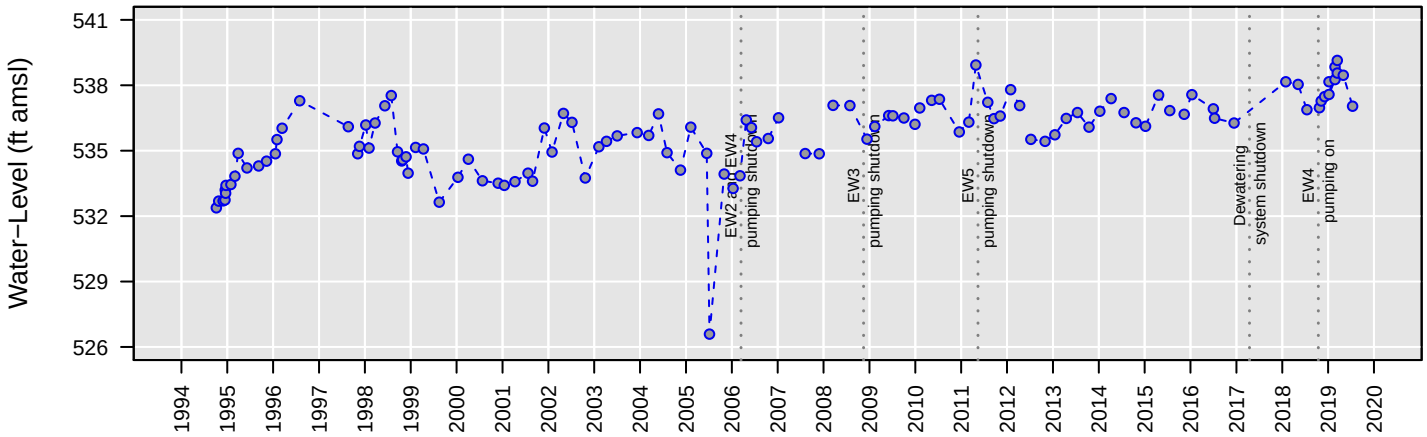


No Analysis Performed

MW93

Total VOCs

Number of Comparisons: 33
Percent NDs: 0%



Censored Regression (Tobit) Model

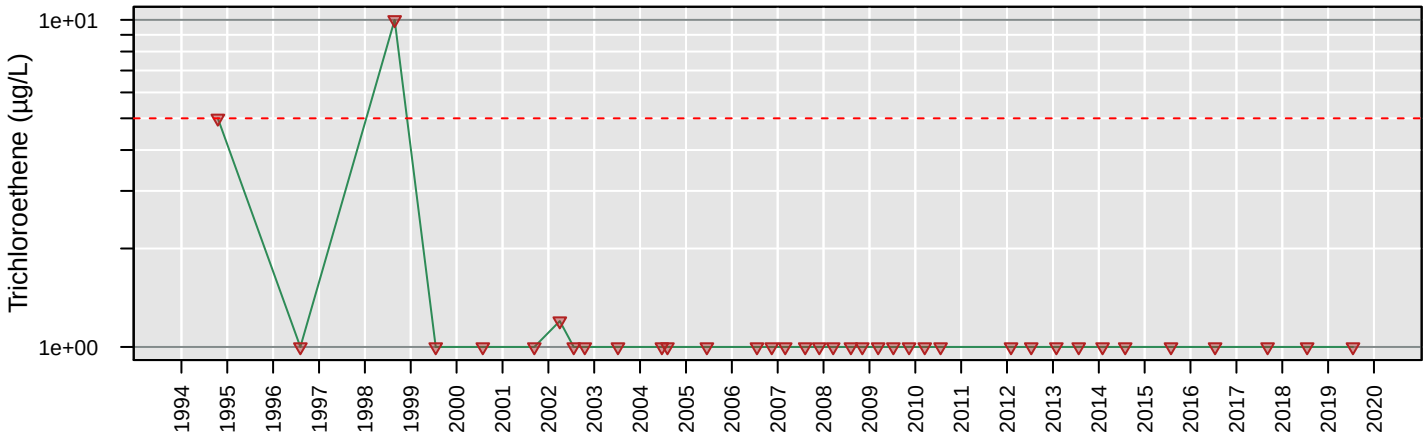
ln Conc. = −0.00028 (+/− 0.000069)*Date + 4.7 (+/− 0.97)

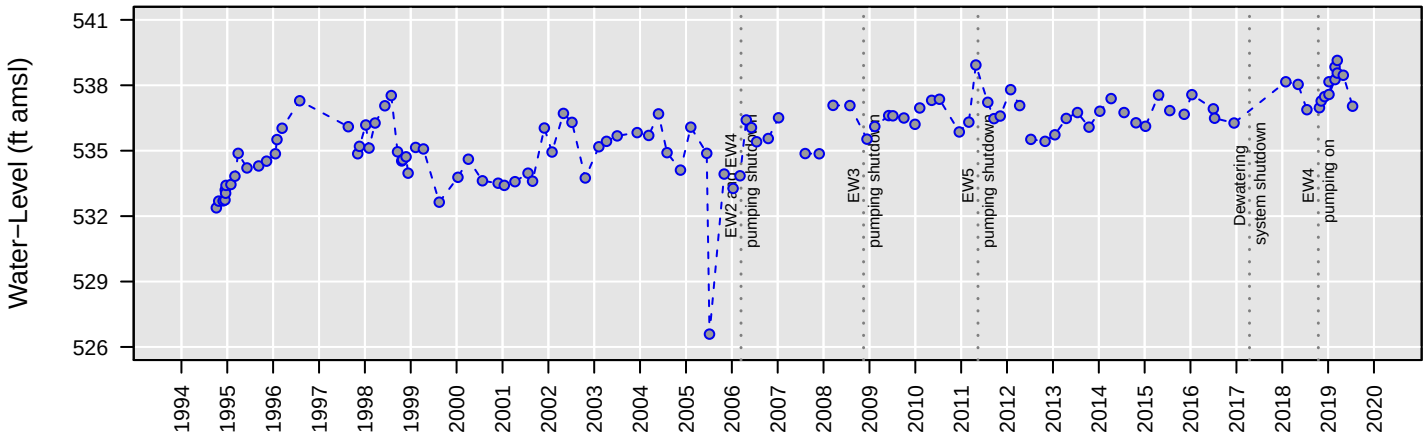
Regression Statistics for January 2017 to January 2018
Geometric Mean: 0.82 µg/L
UCL: 1.4 µg/L
LCL: 0.47 µg/L

MW93

Trichloroethene

Number of Comparisons: 37
Percent NDs: 100%



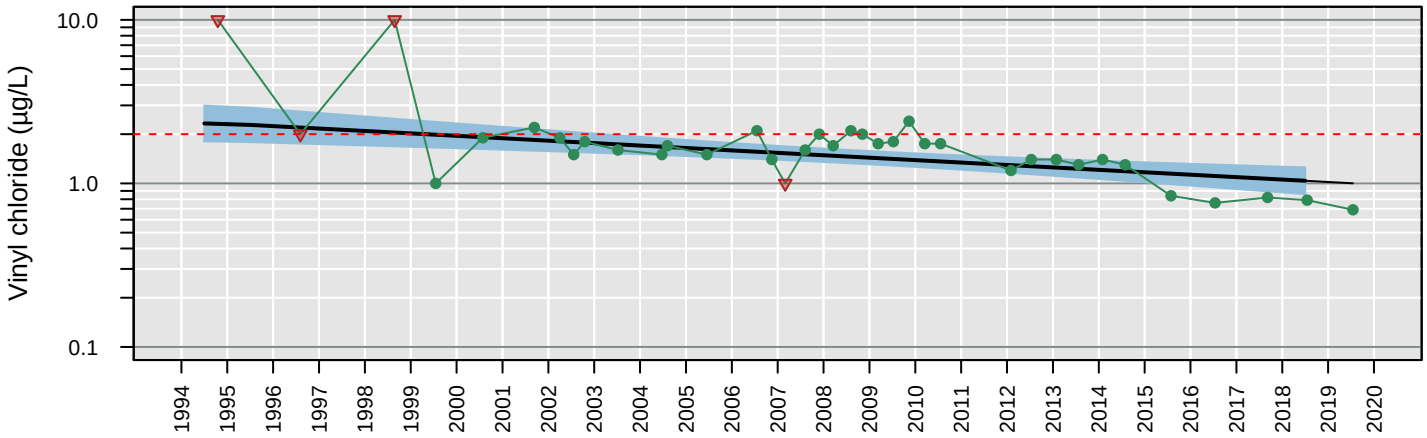


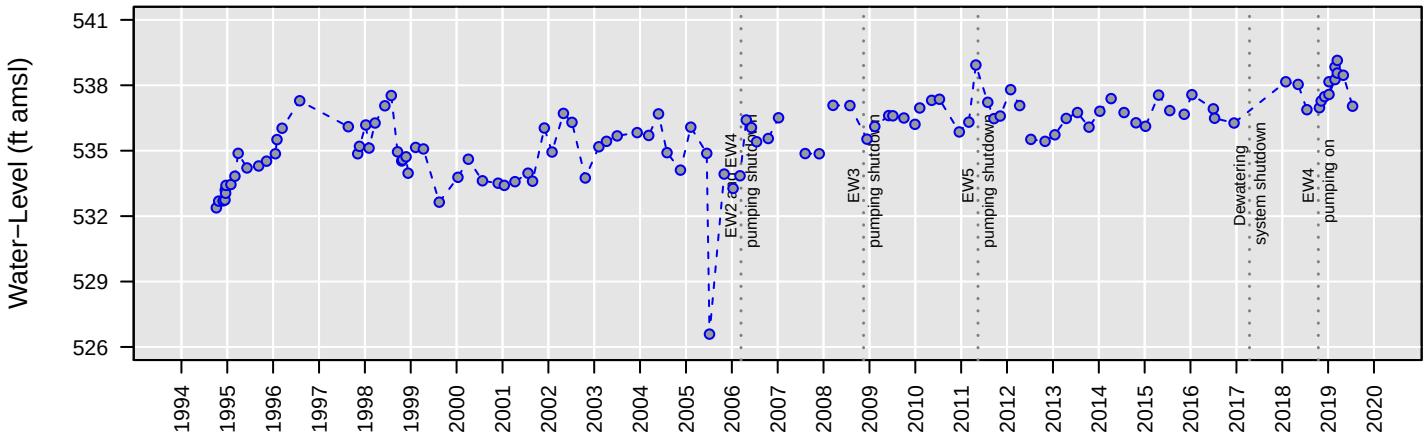
No Analysis Performed

MW93

Vinyl chloride

Number of Comparisons: 37
Percent NDs: 11%





Censored Regression (Tobit) Model

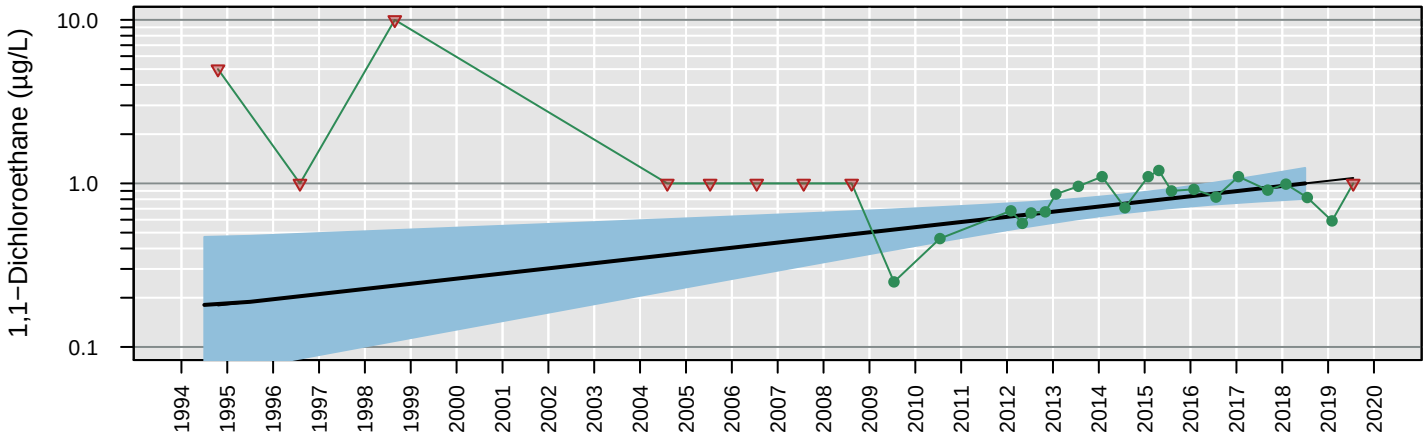
ln Conc. = −0.000094 (+/− 0.000023)*Date + 1.7 (+/− 0.32)

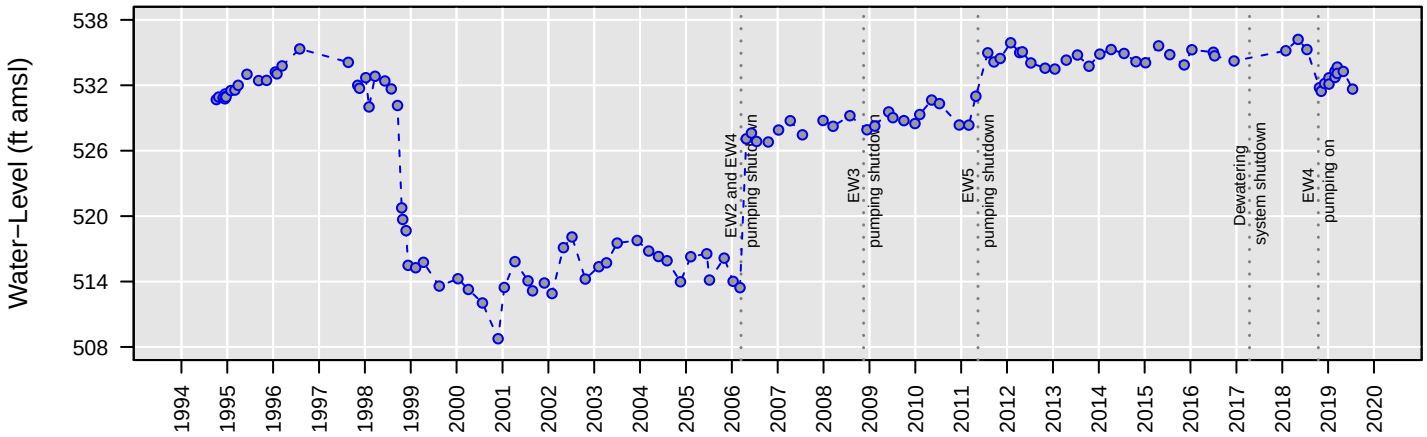
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1 µg/L
UCL: 1.3 µg/L
LCL: 0.86 µg/L

MW94

1,1−Dichloroethane

Number of Comparisons: 29
Percent NDs: 31%





Censored Regression (Tobit) Model

ln Conc. = 0.0002 (+/− 0.000063)*Date + −3.5 (+/− 1)

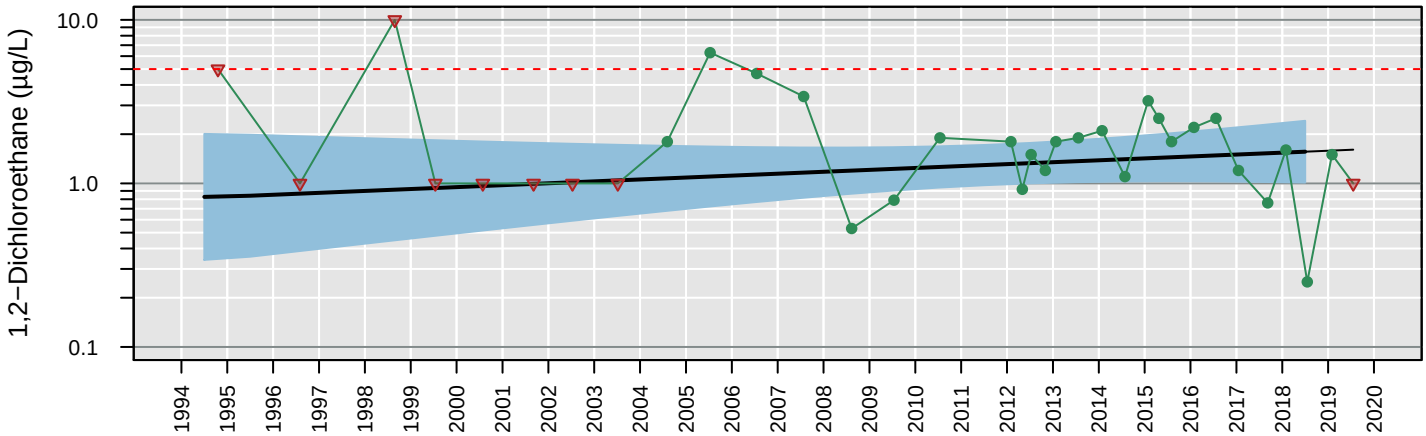
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1 µg/L
UCL: 1.2 µg/L
LCL: 0.8 µg/L

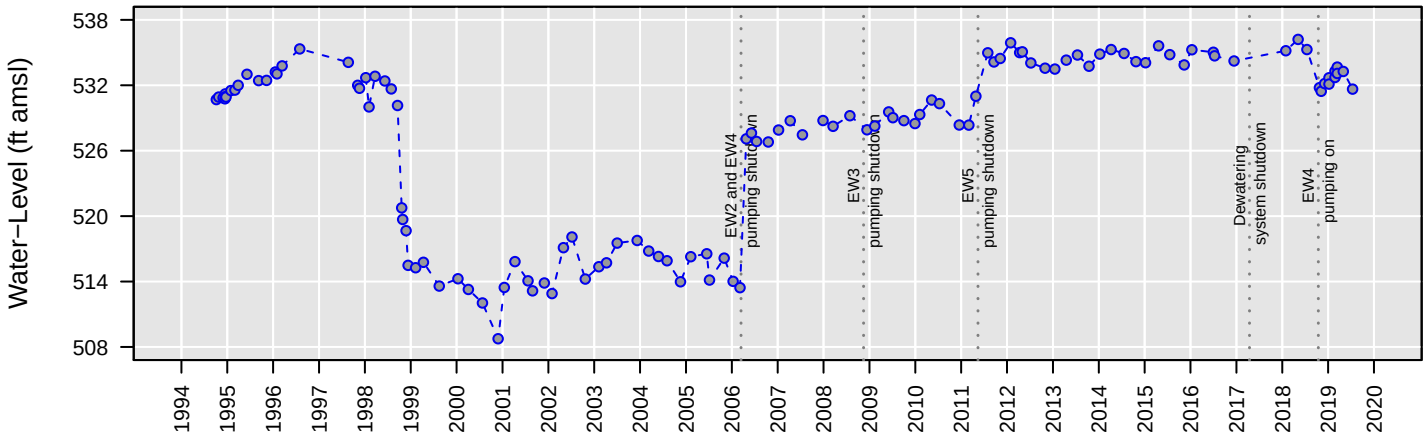
MW94

1,2−Dichloroethane

Number of Comparisons: 34
Percent NDs: 26%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

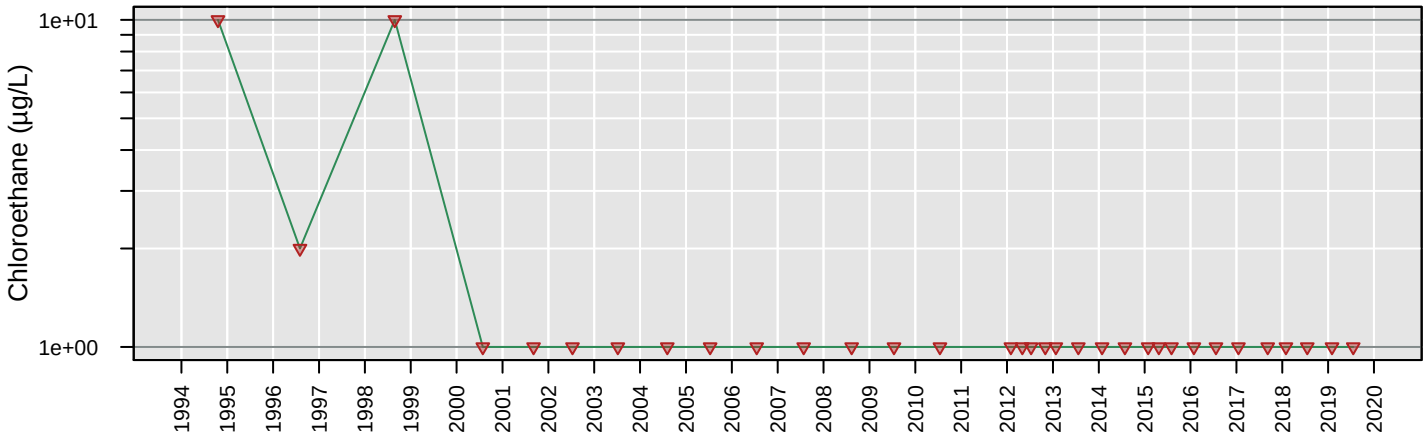
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.6 µg/L
UCL: 2.4 µg/L
LCL: 1 µg/L

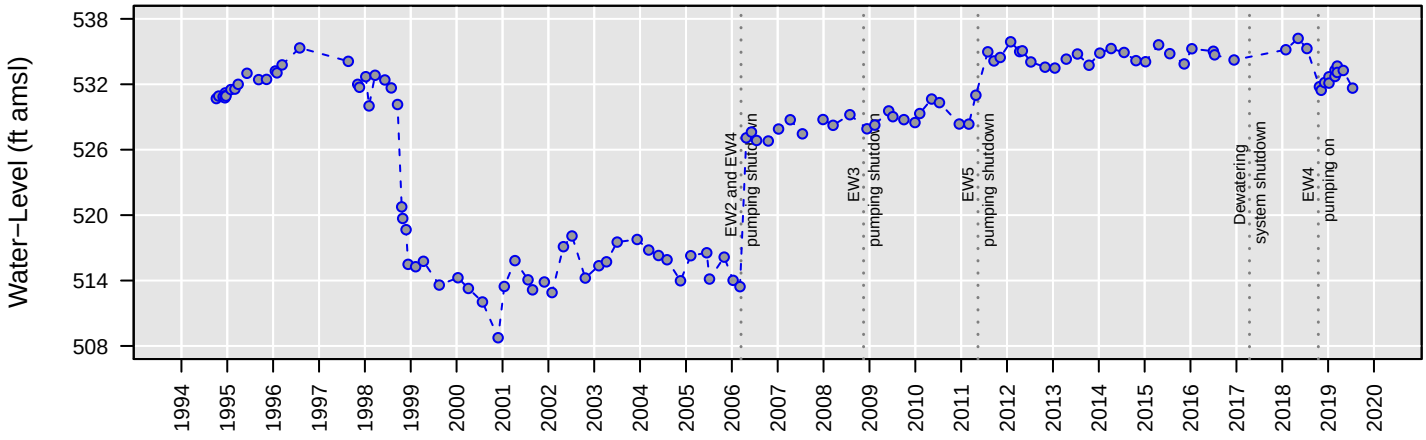
MW94

Chloroethane

Number of Comparisons: 33
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





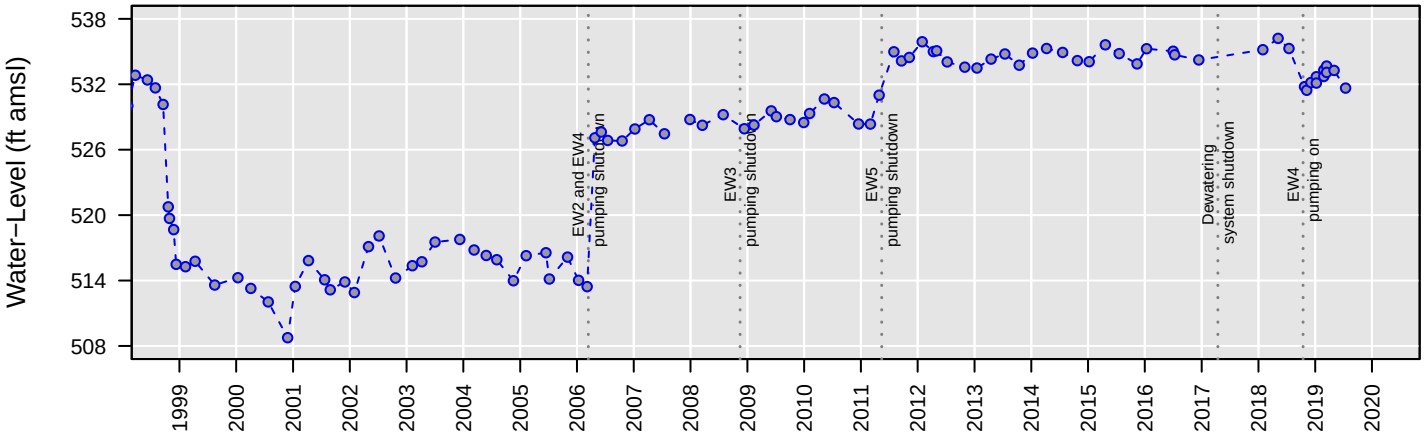
No Analysis Performed

MW94

cis−1,2−Dichloroethene

Number of Comparisons: 31
Percent NDs: 55%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

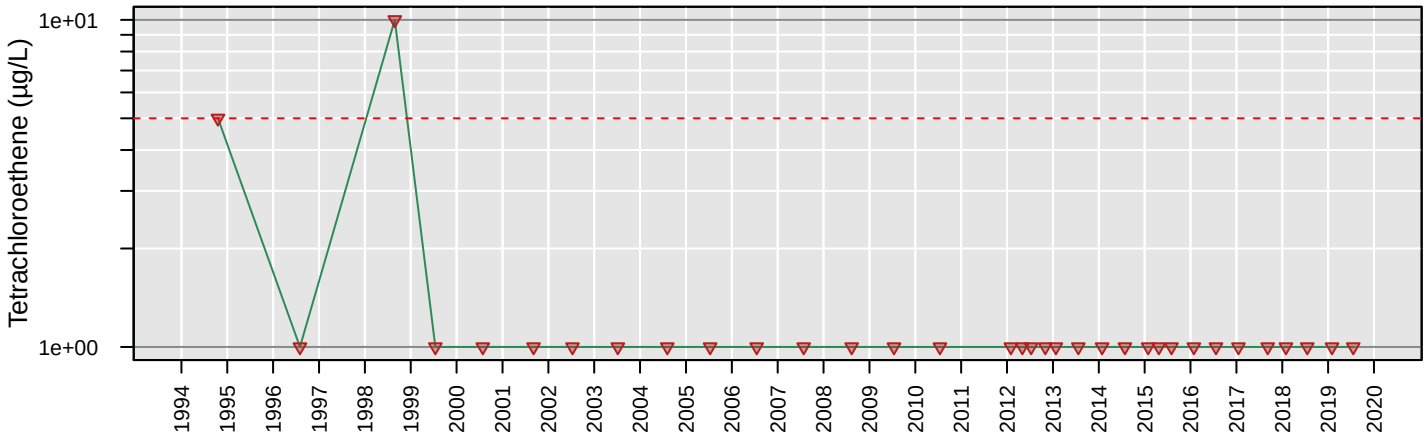


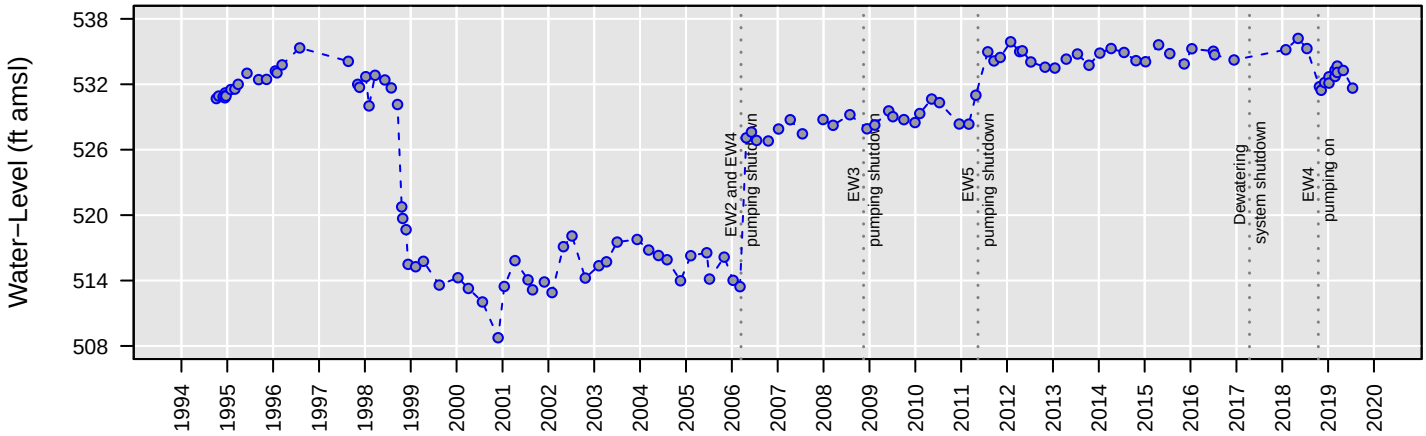
No Analysis Performed

MW94

Tetrachloroethene

Number of Comparisons: 34
Percent NDs: 100%



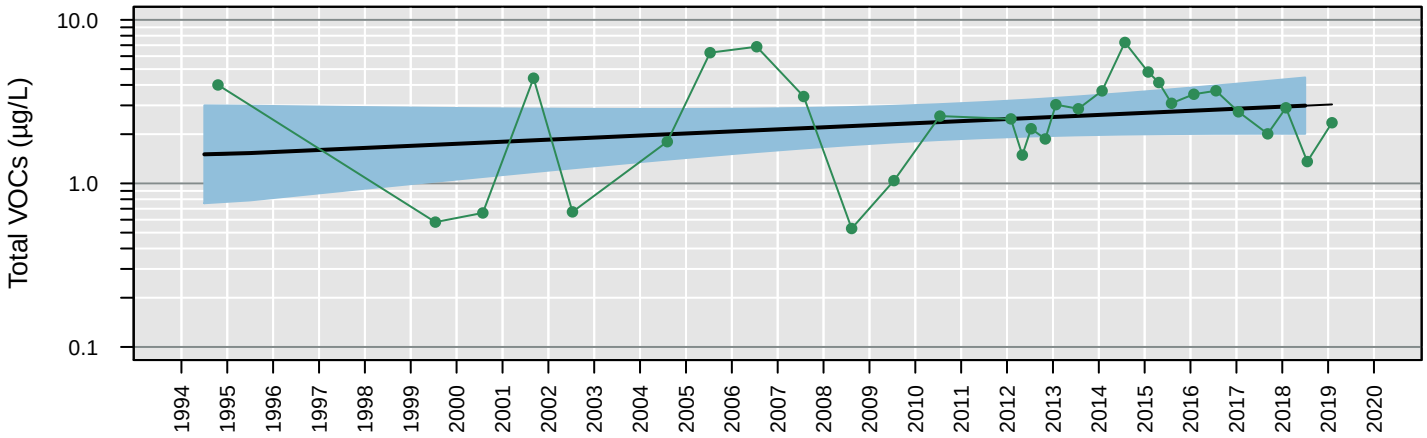


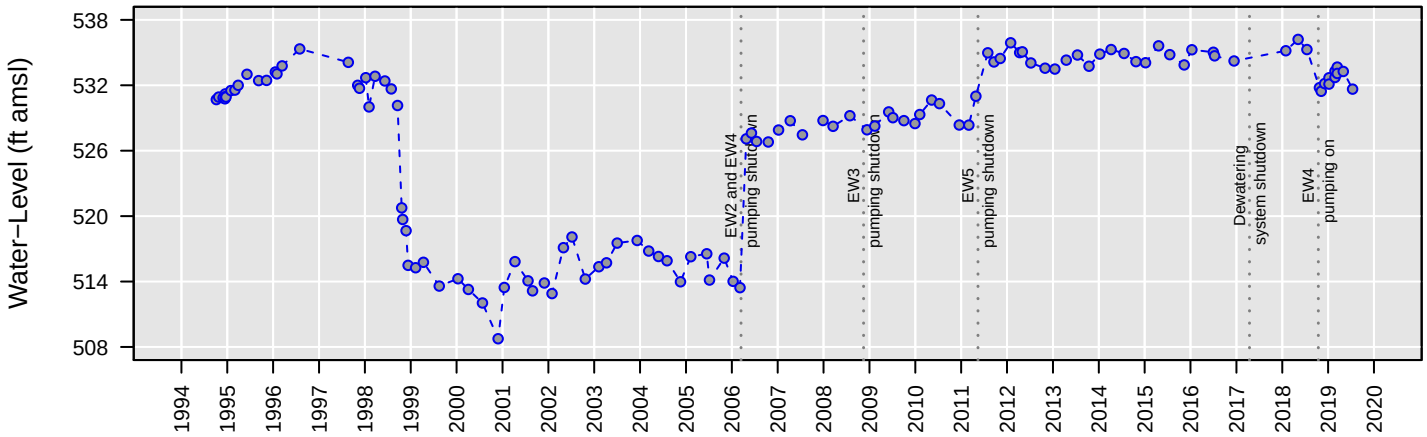
No Analysis Performed

MW94

Total VOCs

Number of Comparisons: 30
Percent NDs: 0%





Censored Regression (Tobit) Model

Trend Not Significant

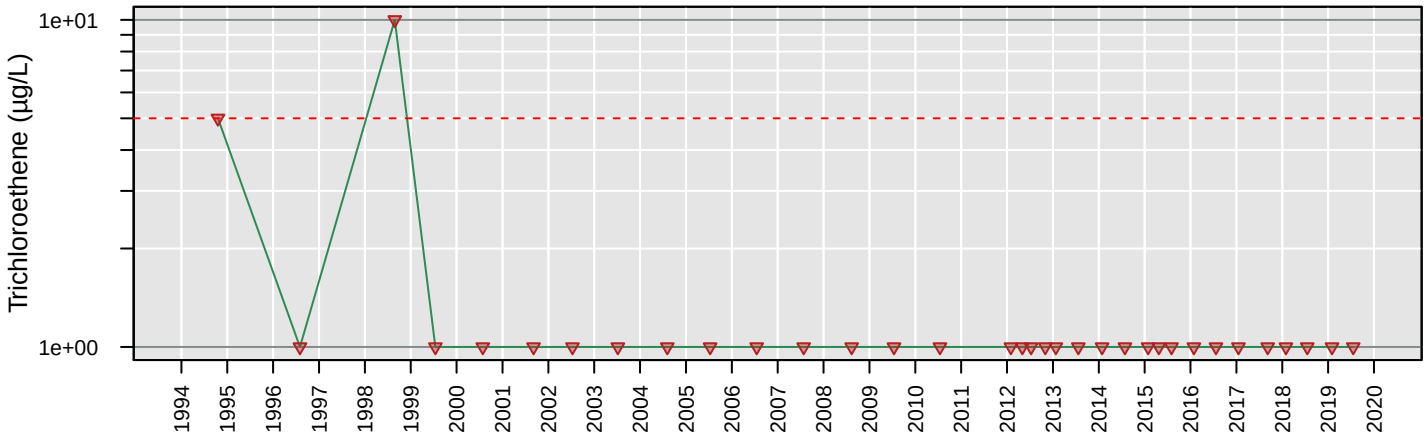
Regression Statistics for January 2018 to January 2019
Geometric Mean: 3 µg/L
UCL: 4.4 µg/L
LCL: 2 µg/L

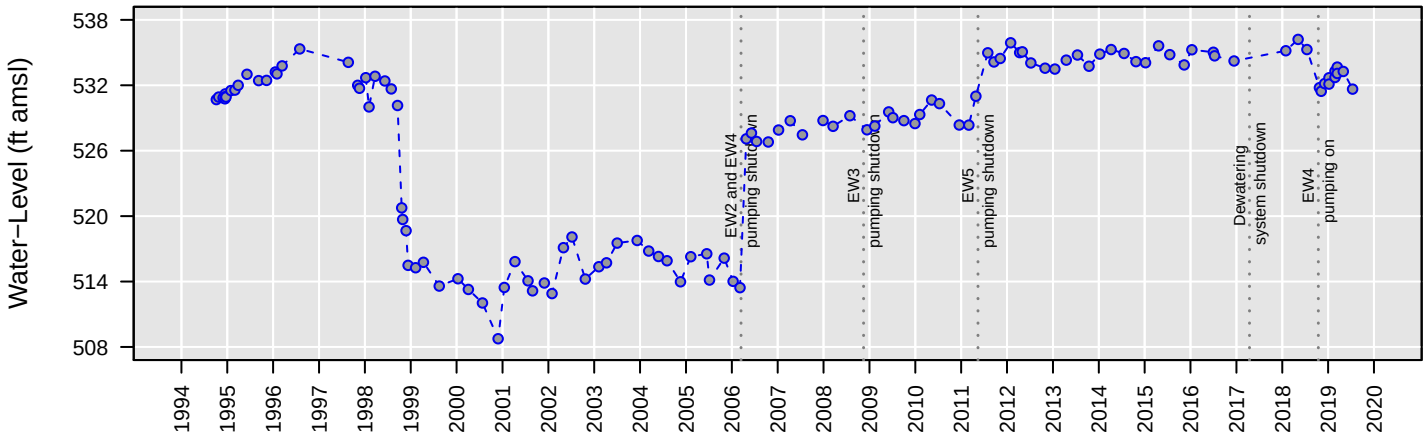
MW94

Trichloroethene

Number of Comparisons: 34
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





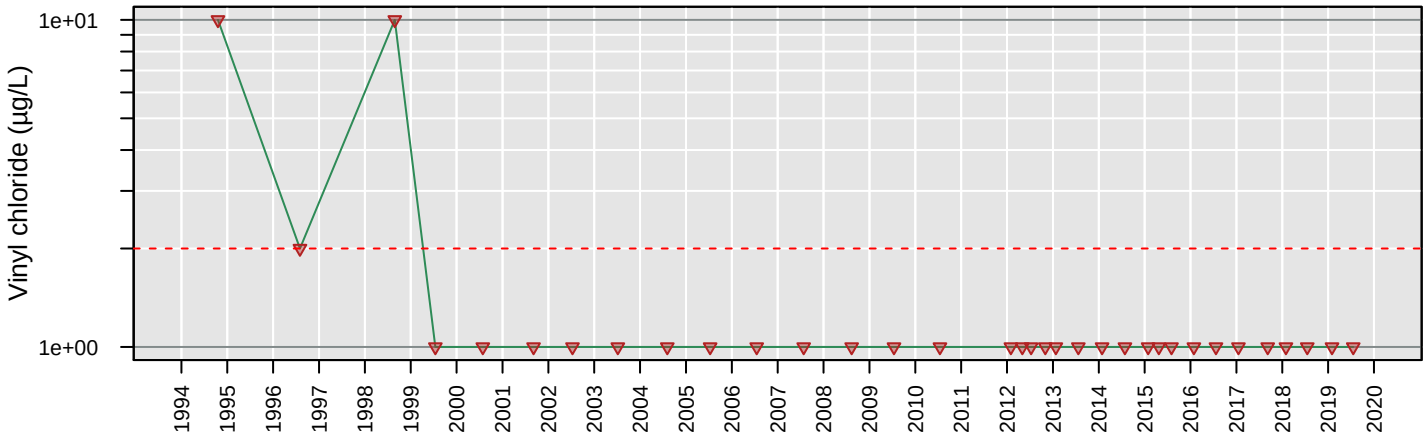
No Analysis Performed

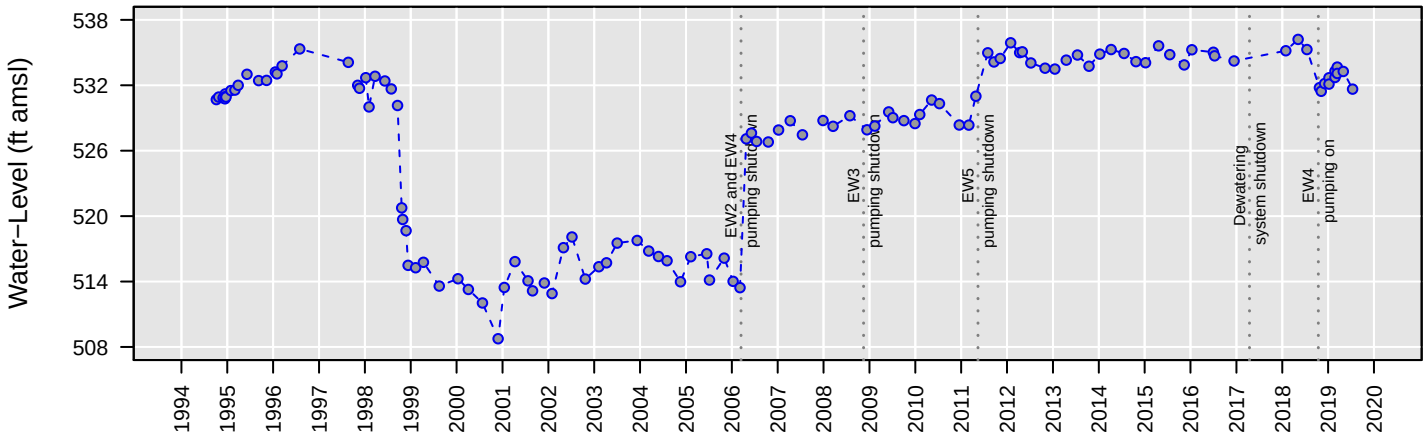
MW94

Vinyl chloride

Number of Comparisons: 34
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



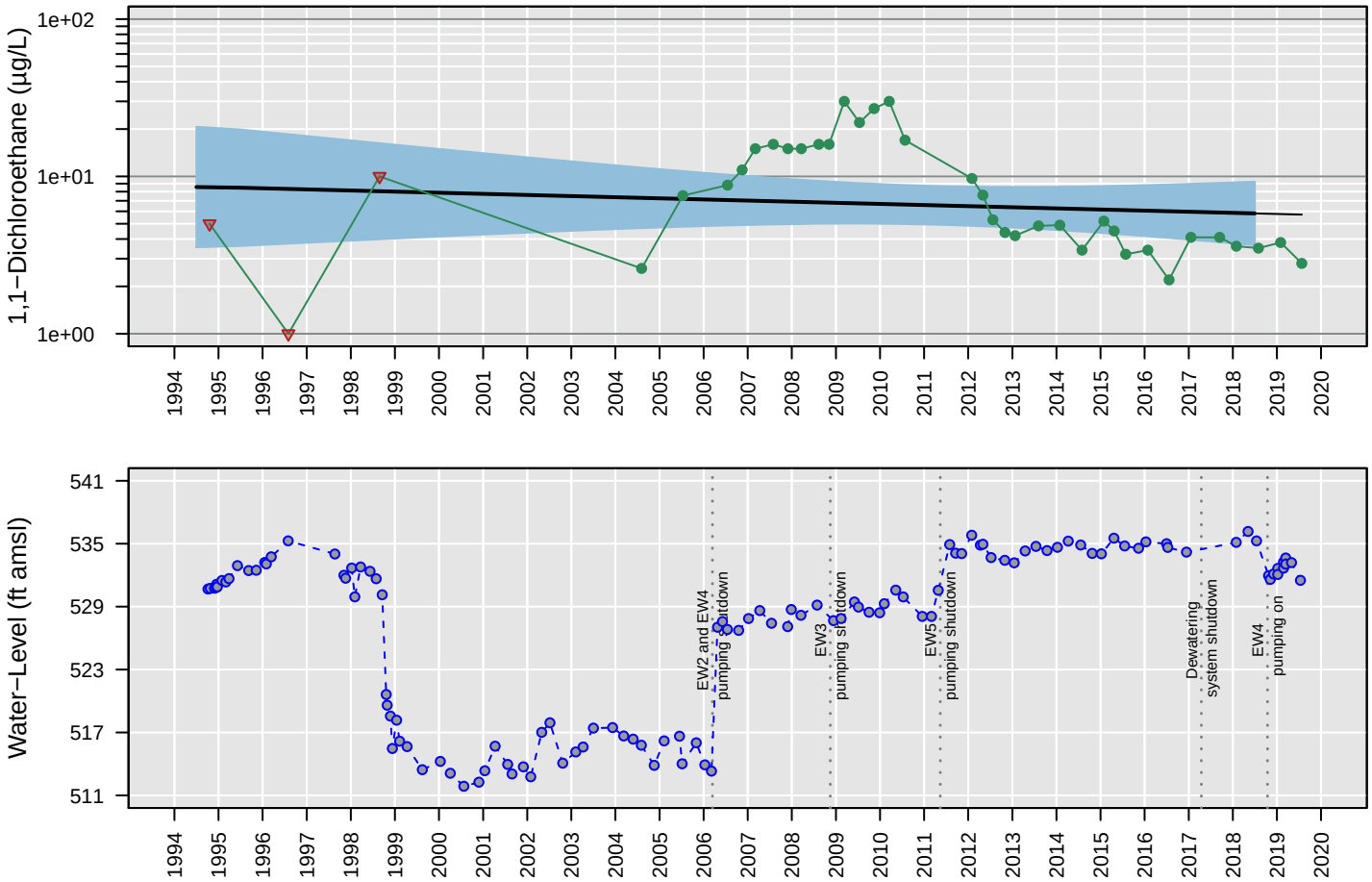


No Analysis Performed

MW95

1,1−Dichloroethane

Number of Comparisons: 37
Percent NDs: 8%



Censored Regression (Tobit) Model

Trend Not Significant

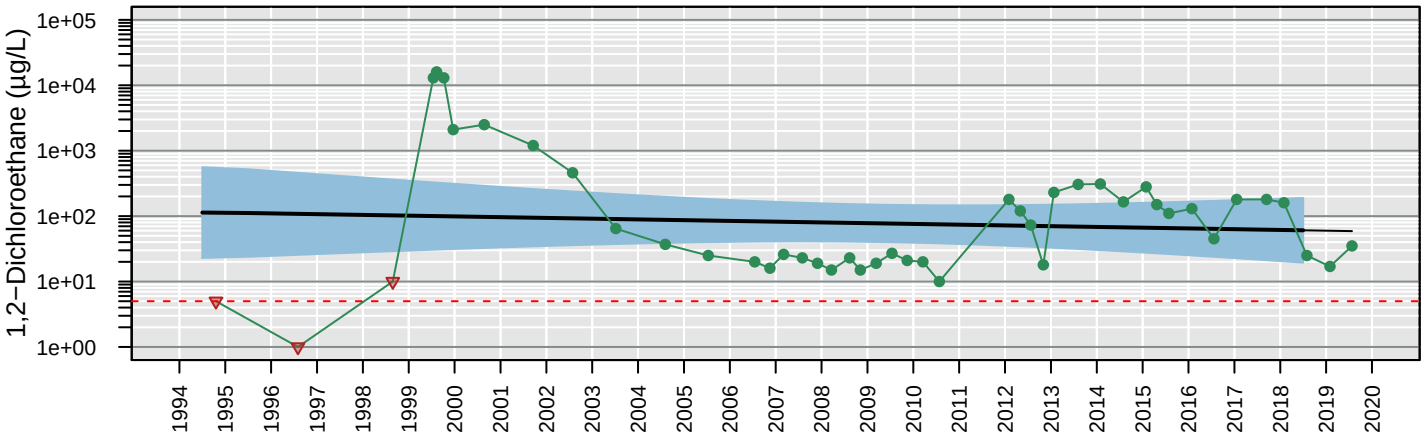
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.8 µg/L
UCL: 9.3 µg/L
LCL: 3.7 µg/L

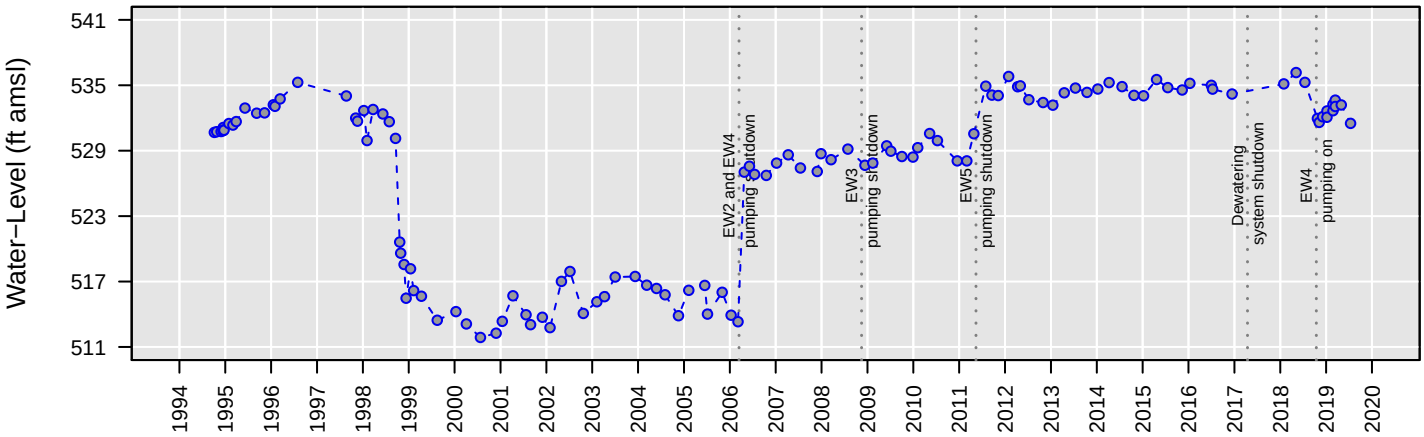
MW95

1,2−Dichloroethane

Number of Comparisons: 45
Percent NDs: 7%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

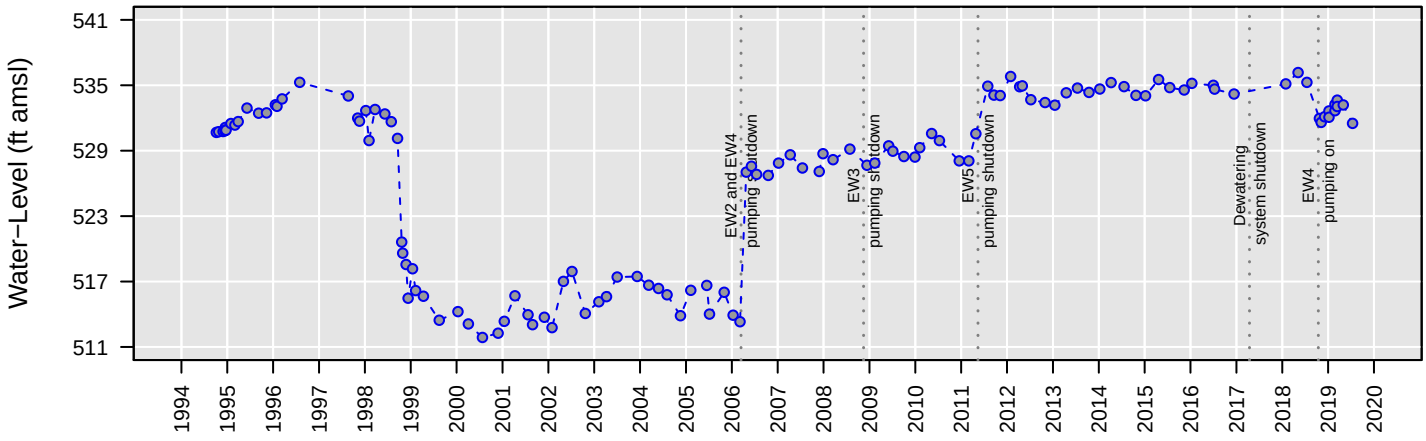
Regression Statistics for January 2018 to January 2019
Geometric Mean: 61 µg/L
UCL: 190 µg/L
LCL: 19 µg/L

MW95

Chloroethane

Number of Comparisons: 41
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



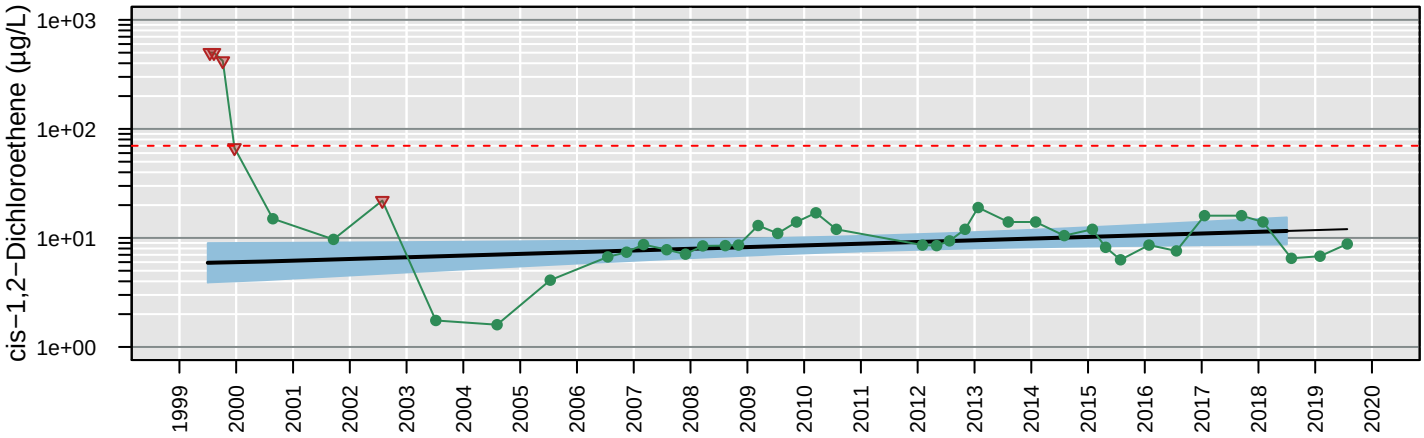
No Analysis Performed

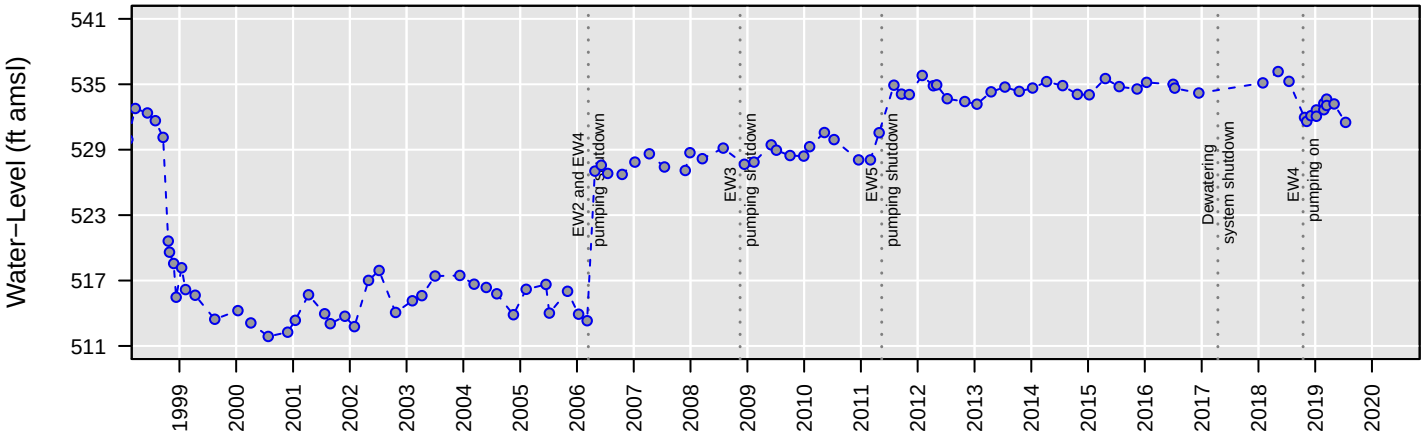
MW95

cis−1,2−Dichloroethene

Number of Comparisons: 42
Percent NDs: 12%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

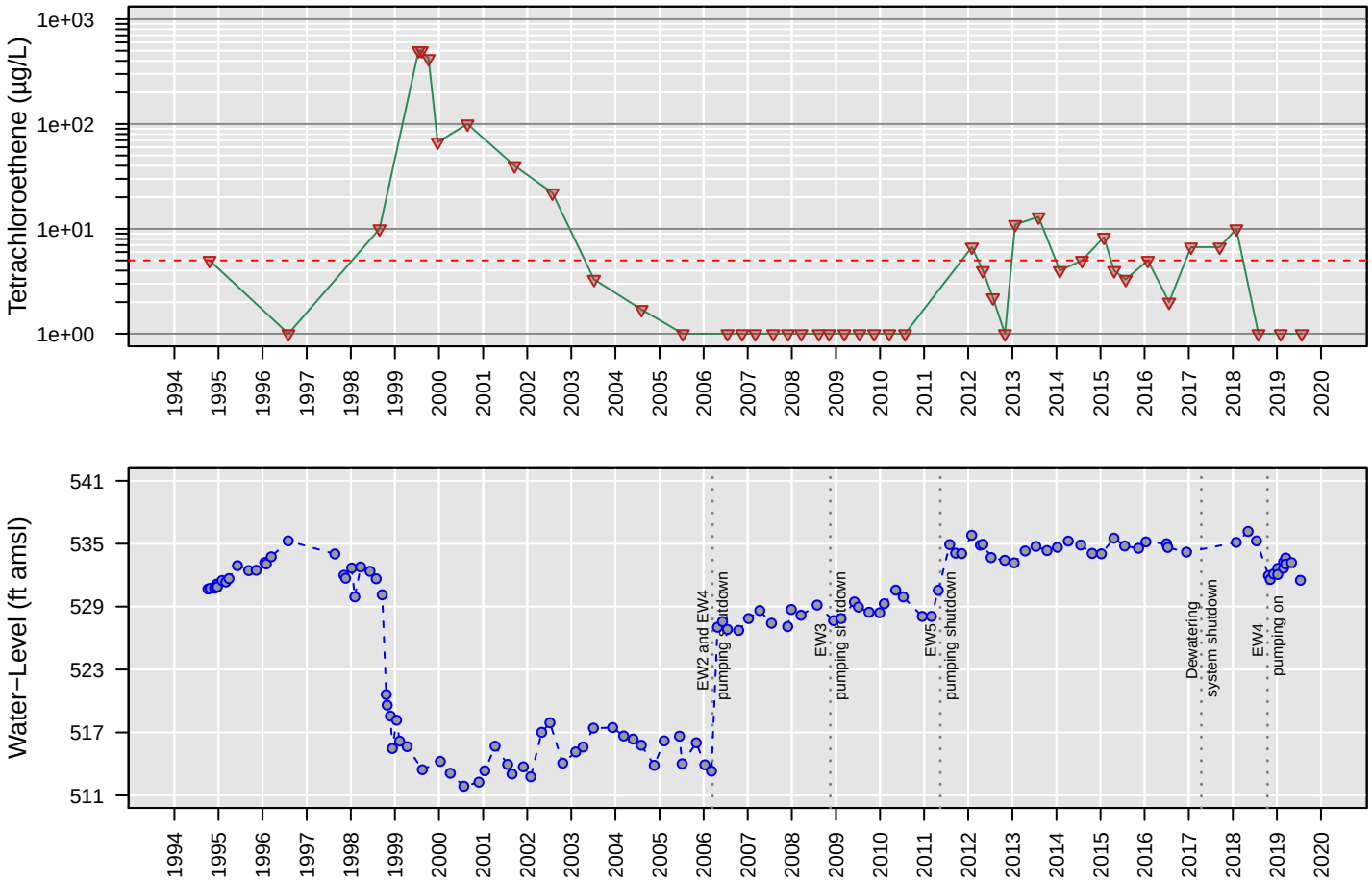
ln Conc. = 0.000098 (+/− 0.000045)*Date + 0.71 (+/− 0.68)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 12 µg/L
UCL: 15 µg/L
LCL: 8.7 µg/L

MW95

Tetrachloroethene

Number of Comparisons: 45
Percent NDs: 100%

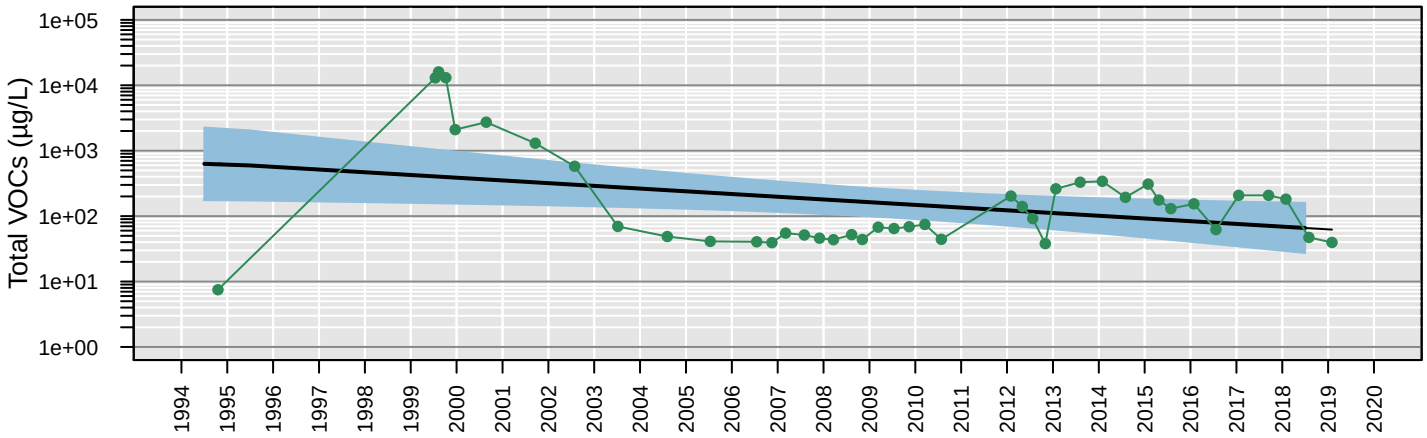


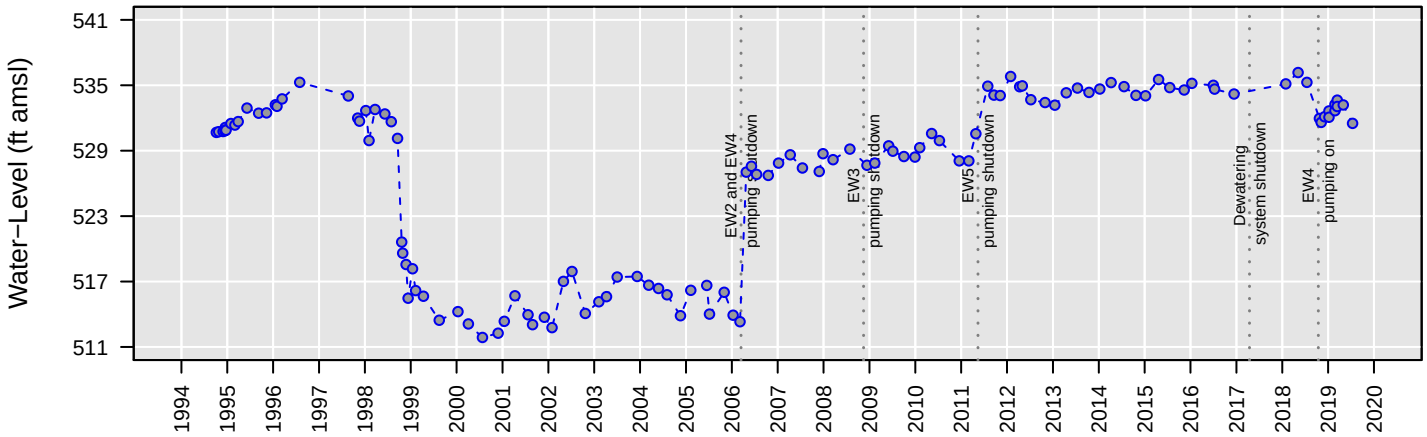
No Analysis Performed

MW95

Total VOCs

Number of Comparisons: 42
Percent NDs: 0%





Censored Regression (Tobit) Model

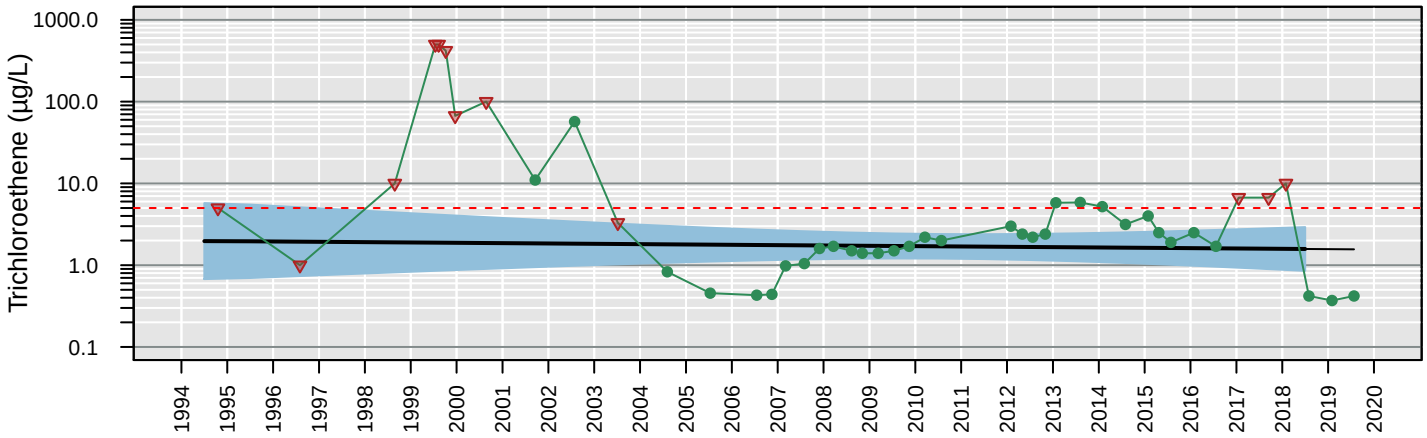
ln Conc. = −0.00026 (+/− 0.00011)*Date + 8.8 (+/− 1.6)

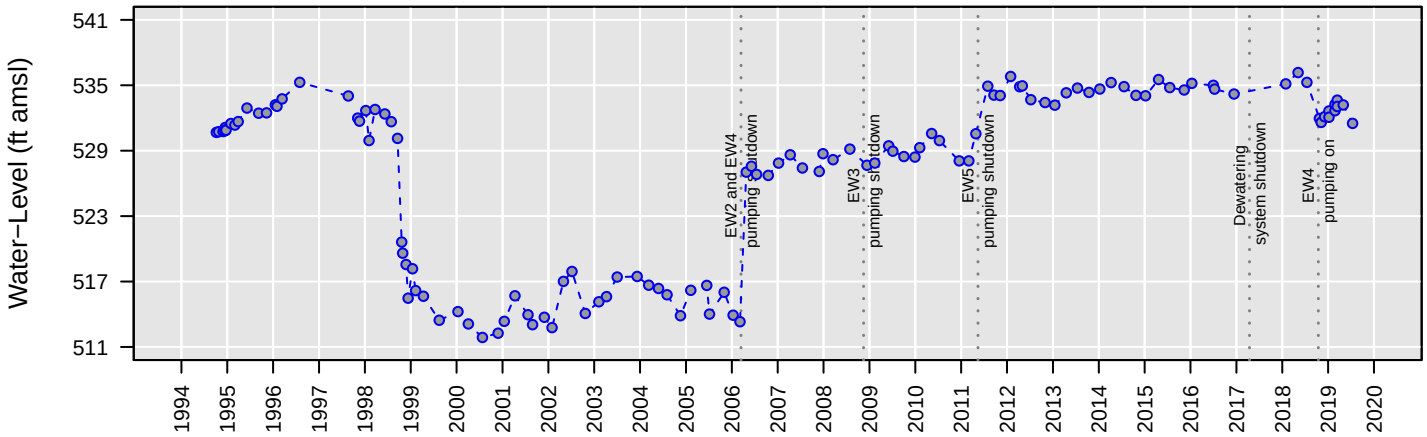
Regression Statistics for January 2018 to January 2019
Geometric Mean: 66 µg/L
UCL: 160 µg/L
LCL: 27 µg/L

MW95

Trichloroethene

Number of Comparisons: 45
Percent NDs: 27%





Censored Regression (Tobit) Model

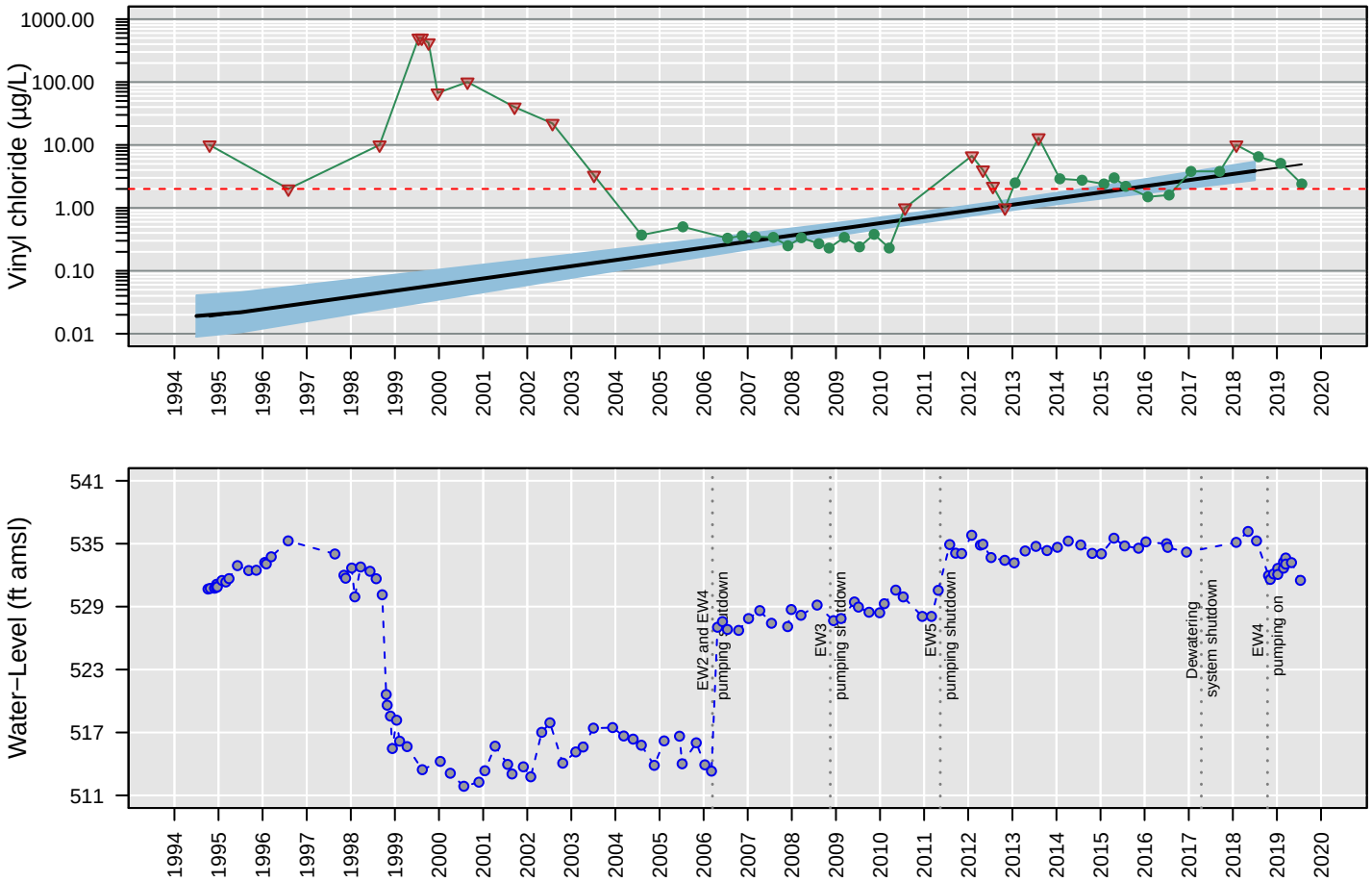
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.6 µg/L
UCL: 2.9 µg/L
LCL: 0.85 µg/L

MW95

Vinyl chloride

Number of Comparisons: 45
Percent NDs: 40%



Censored Regression (Tobit) Model

ln Conc. = 0.00062 (+/− 0.000058)*Date + −9.6 (+/− 0.9)

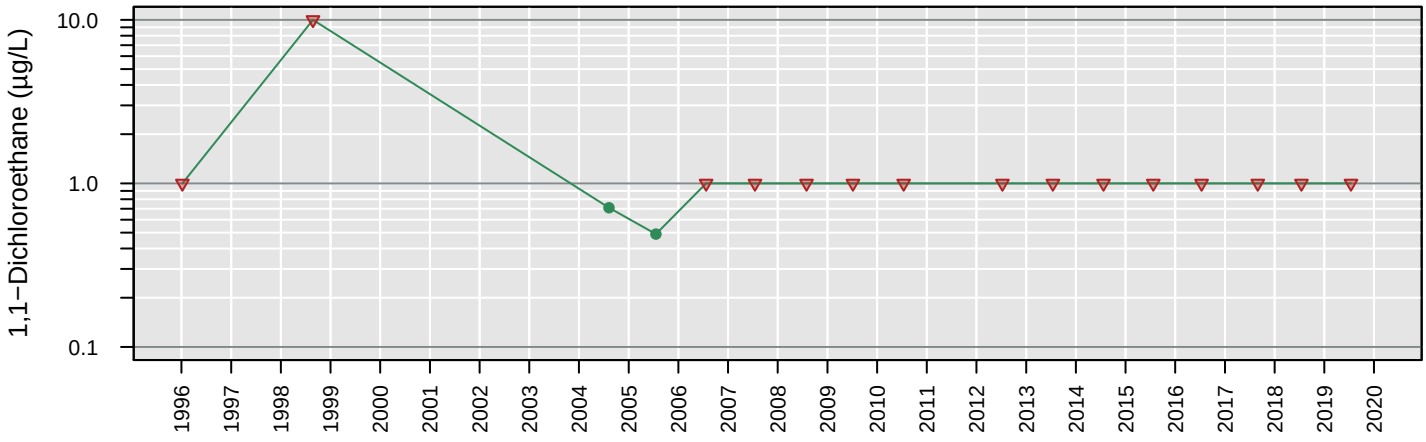
Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.9 µg/L
UCL: 5.4 µg/L
LCL: 2.8 µg/L

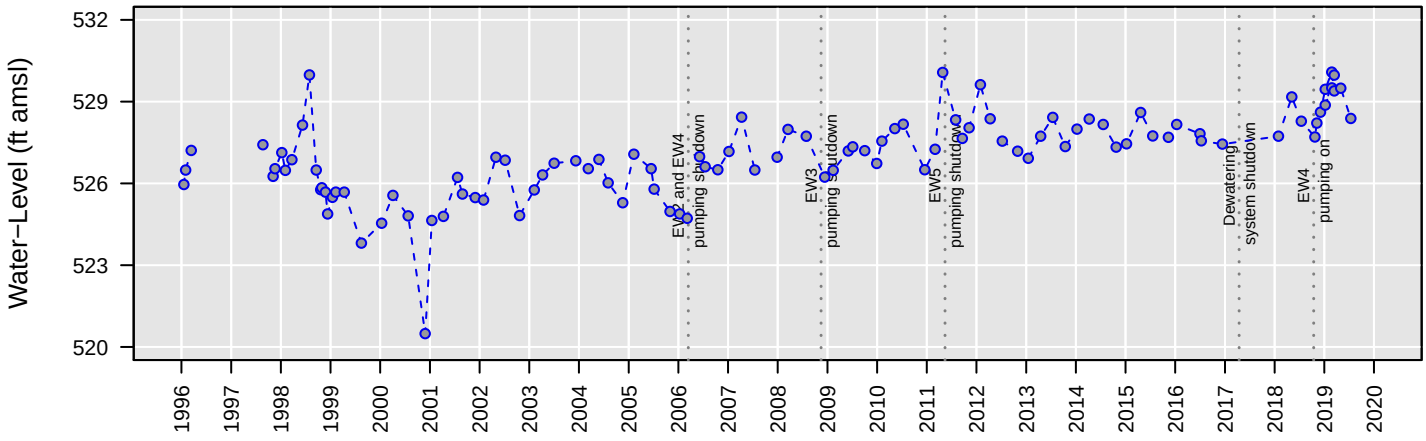
MW96

1,1−Dichloroethane

Number of Comparisons: 17
Percent NDs: 88%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



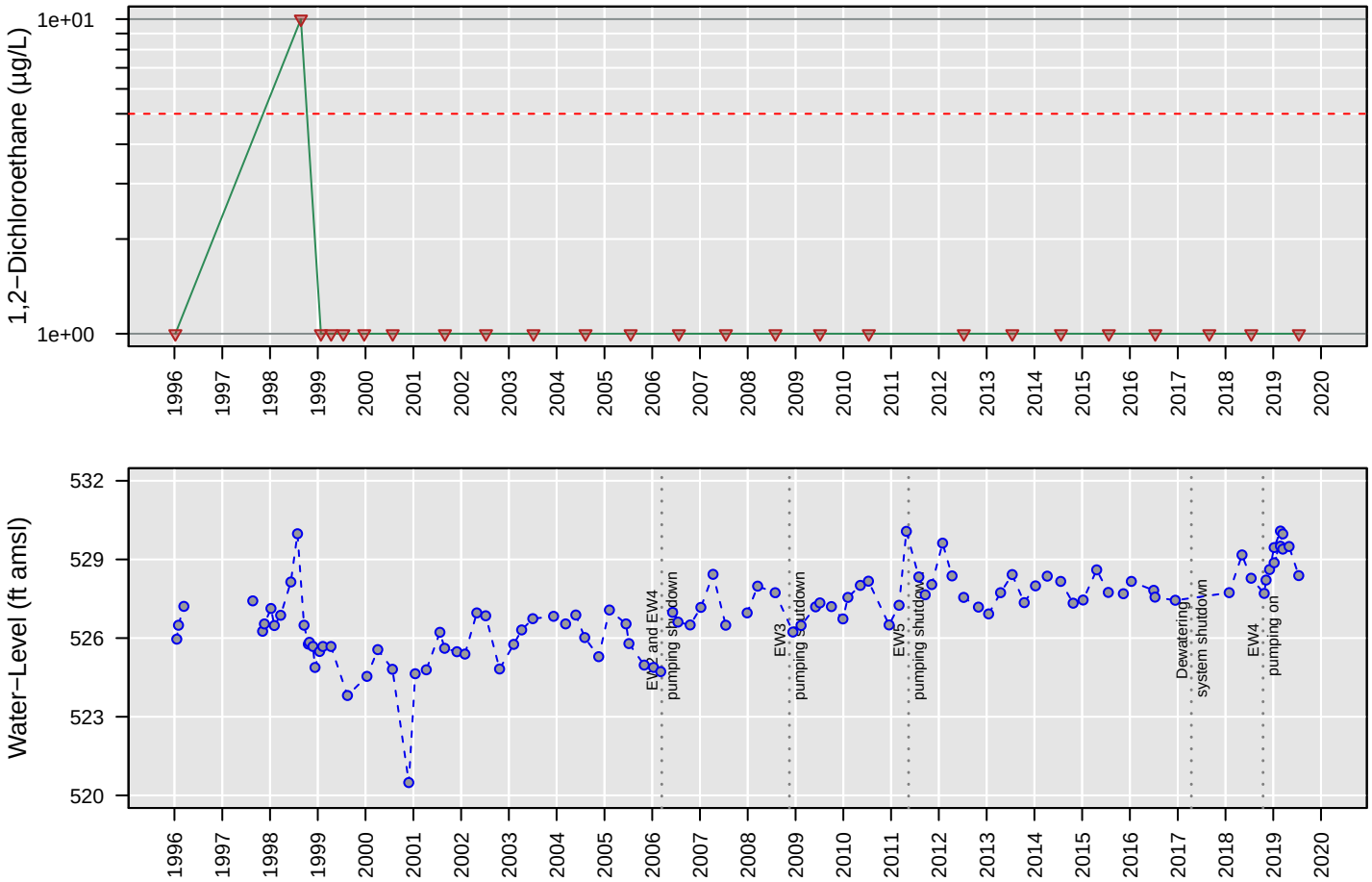


No Analysis Performed

MW96

1,2−Dichloroethane

Number of Comparisons: 25
Percent NDs: 100%



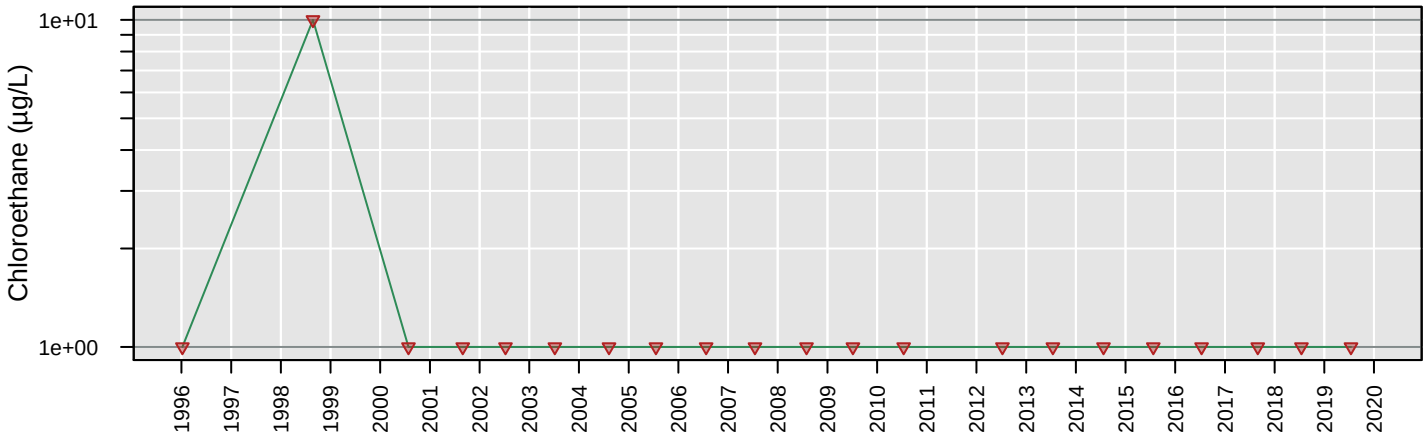
No Analysis Performed

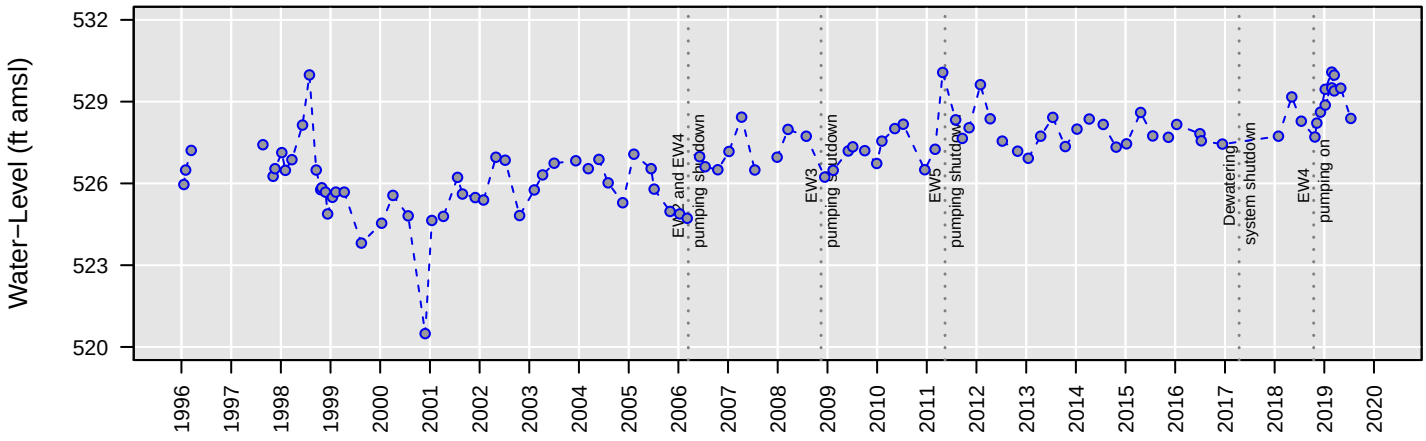
MW96

Chloroethane

Number of Comparisons: 21
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





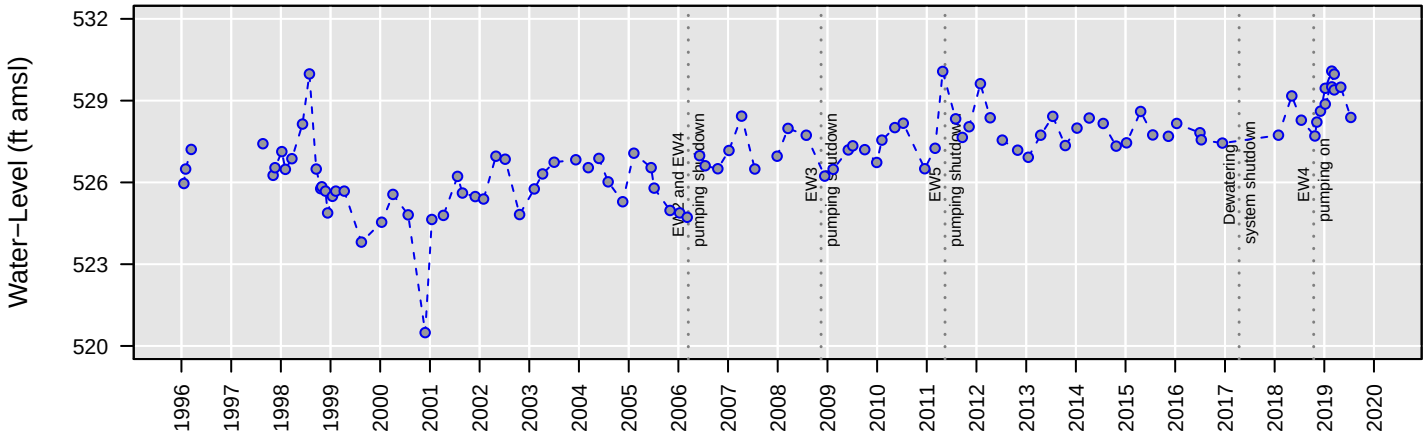
No Analysis Performed

MW96

cis−1,2−Dichloroethene

Number of Comparisons: 24
Percent NDs: 88%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

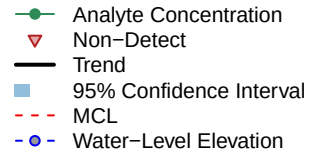


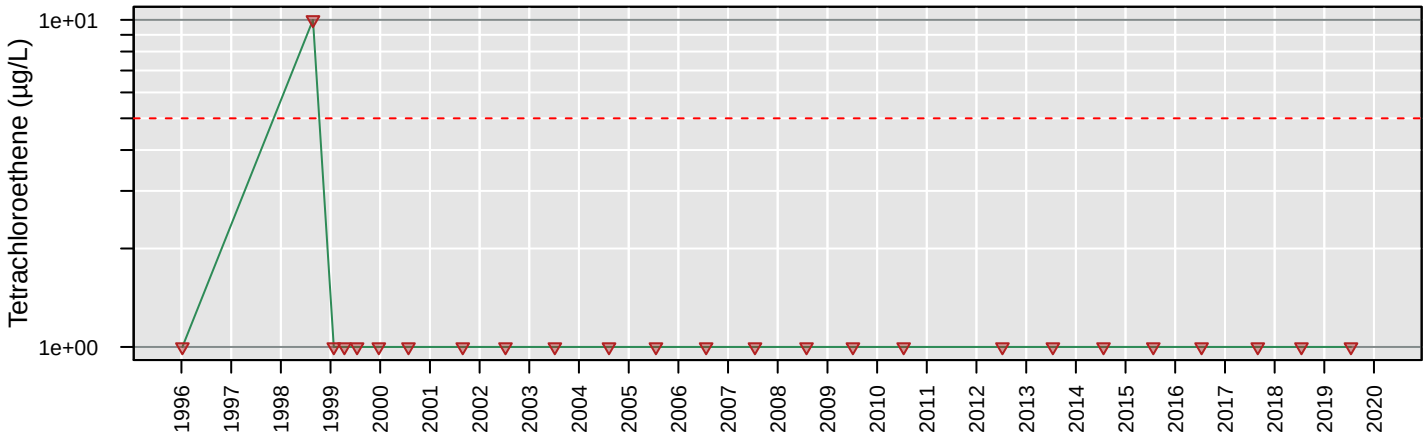
No Analysis Performed

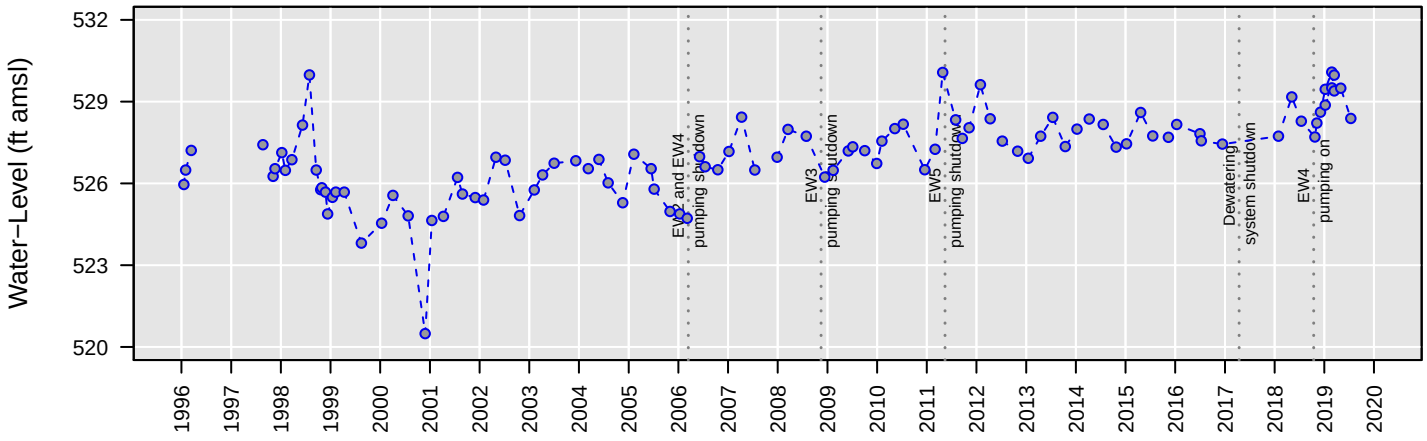
MW96

Tetrachloroethene

Number of Comparisons: 25
Percent NDs: 100%







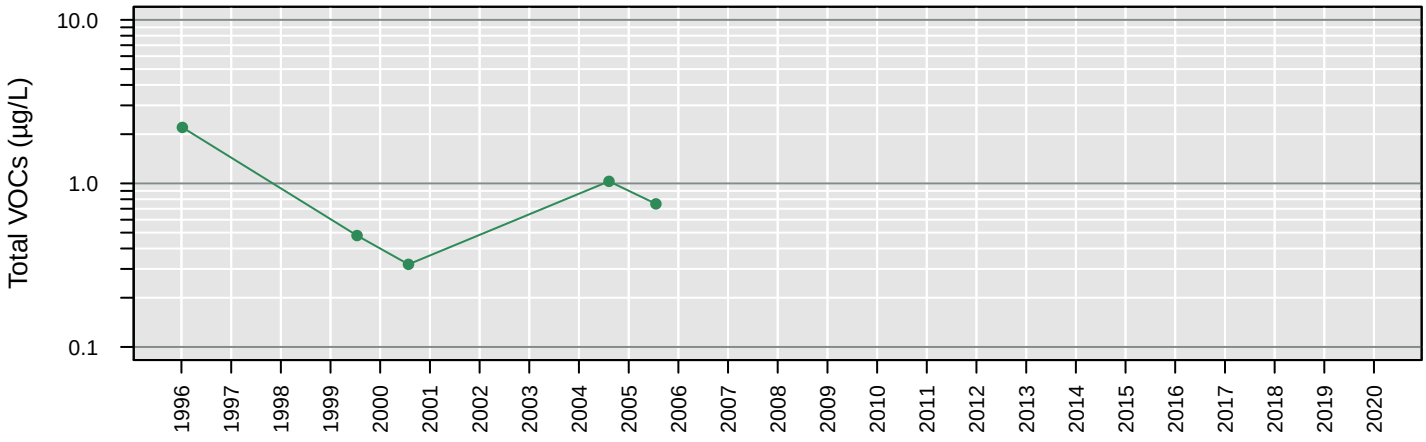
No Analysis Performed

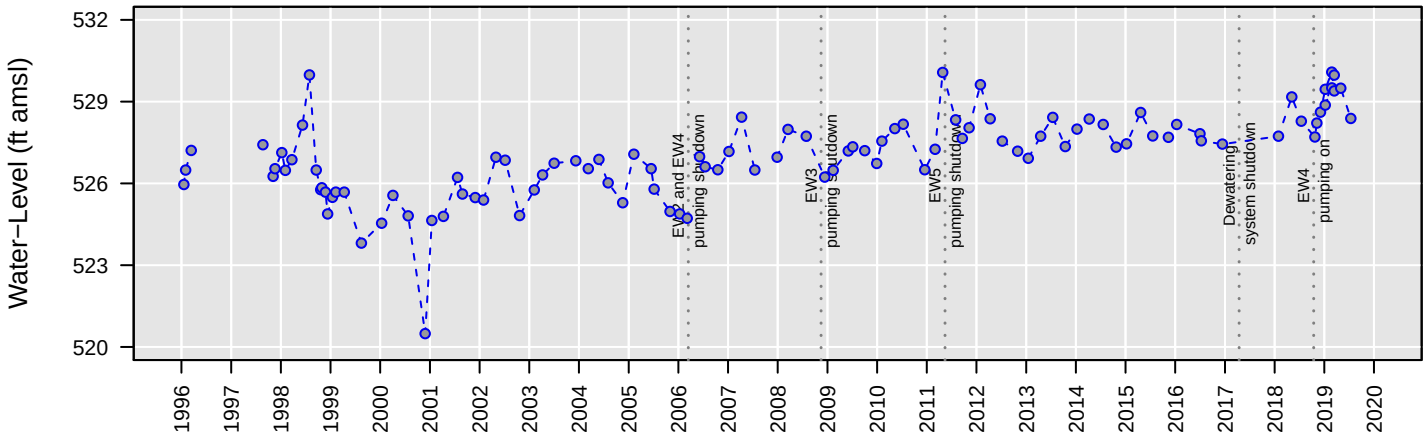
MW96

Total VOCs

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



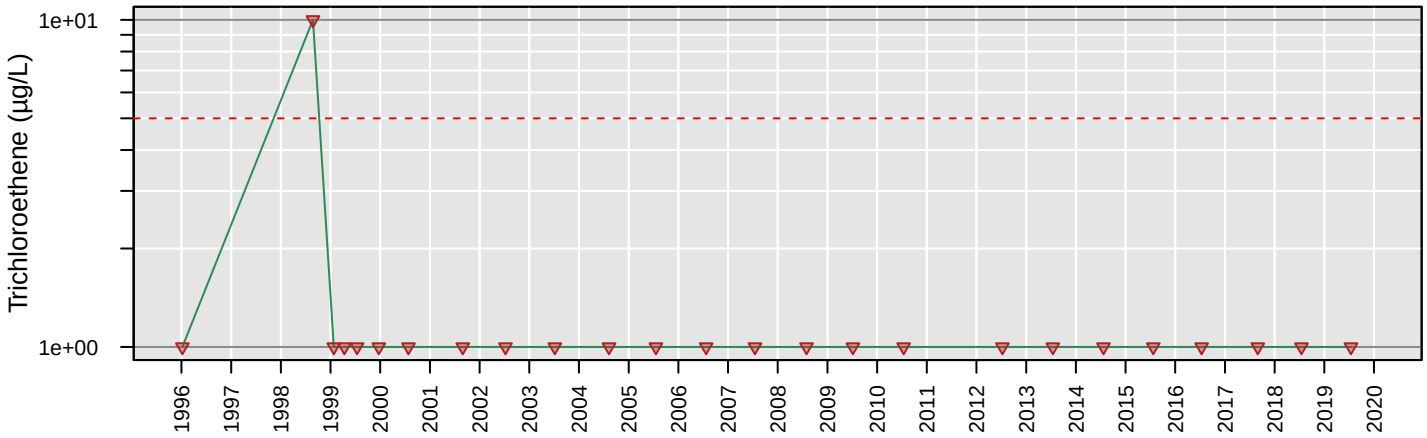


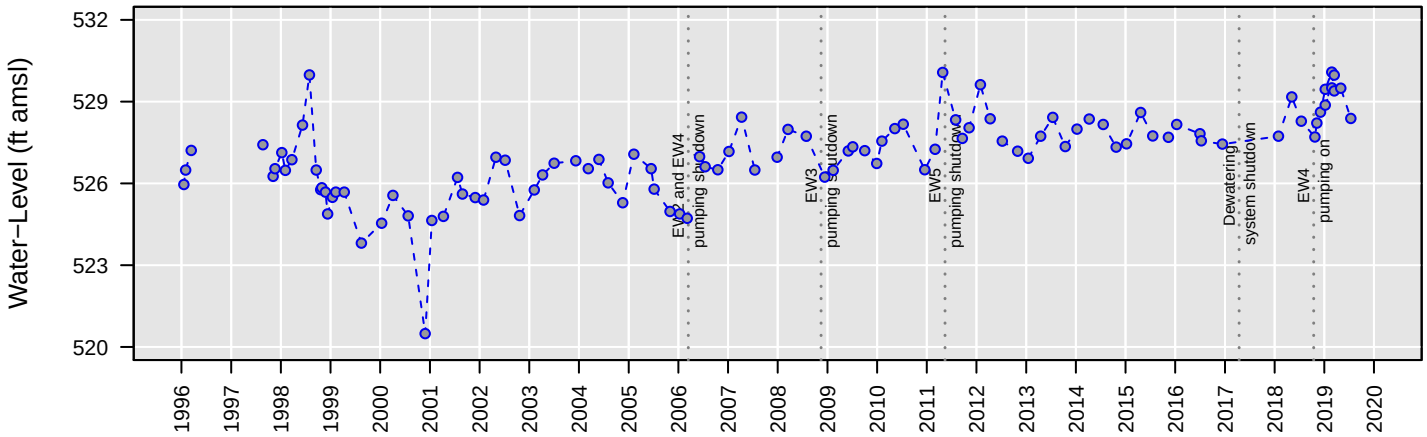
No Analysis Performed

MW96

Trichloroethene

Number of Comparisons: 25
Percent NDs: 100%



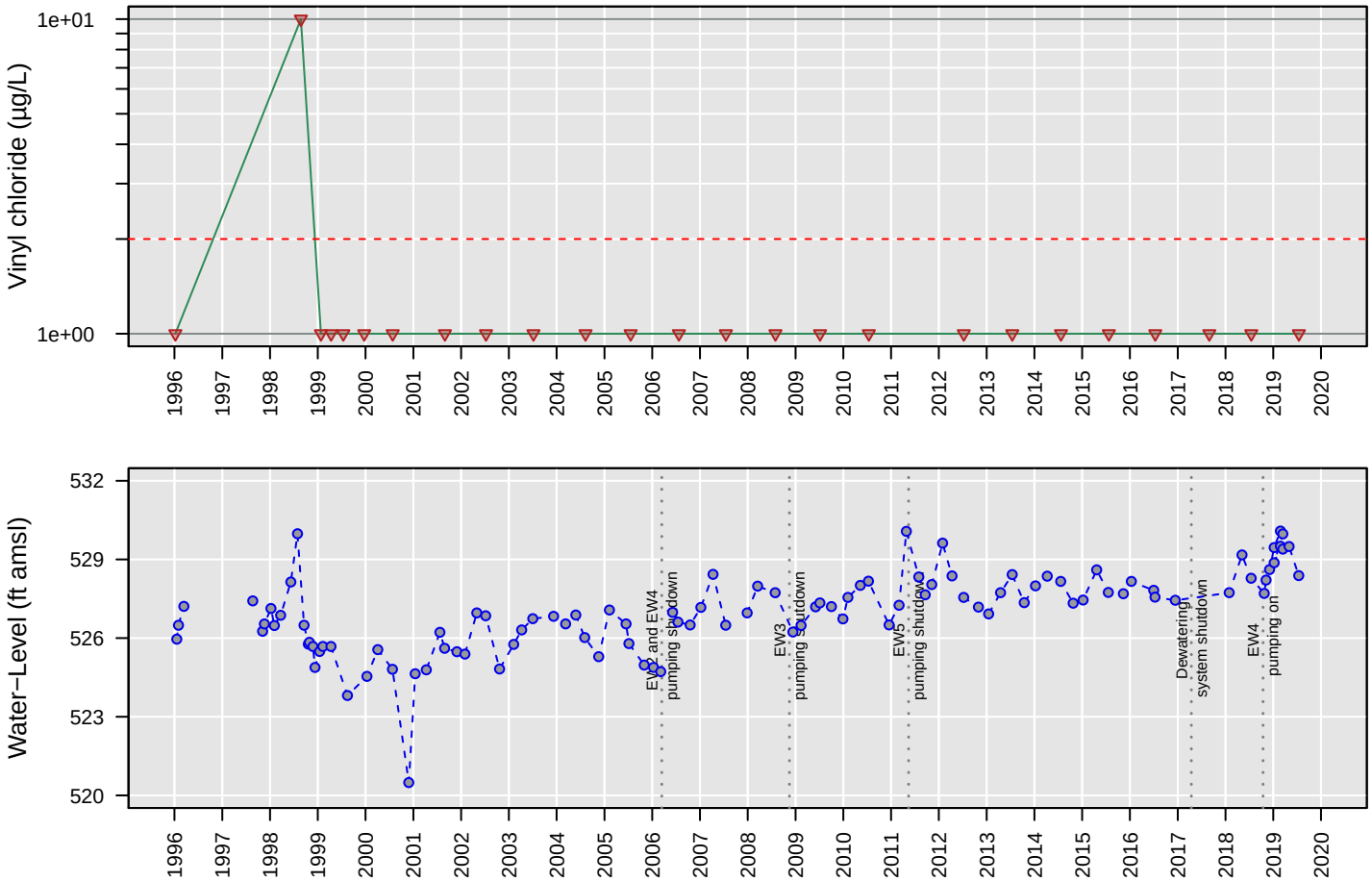


No Analysis Performed

MW96

Vinyl chloride

Number of Comparisons: 25
Percent NDs: 100%



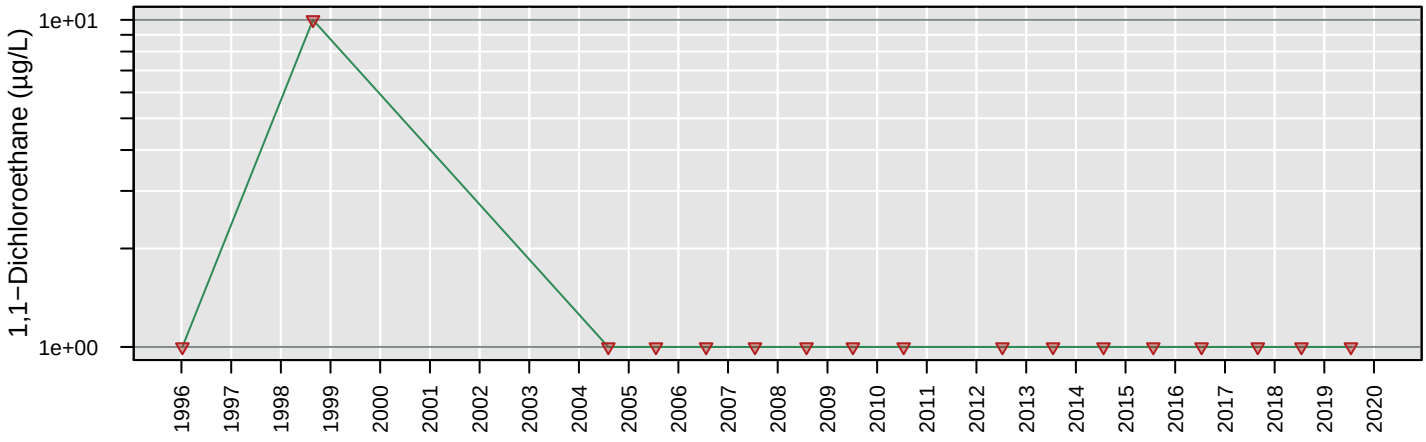
No Analysis Performed

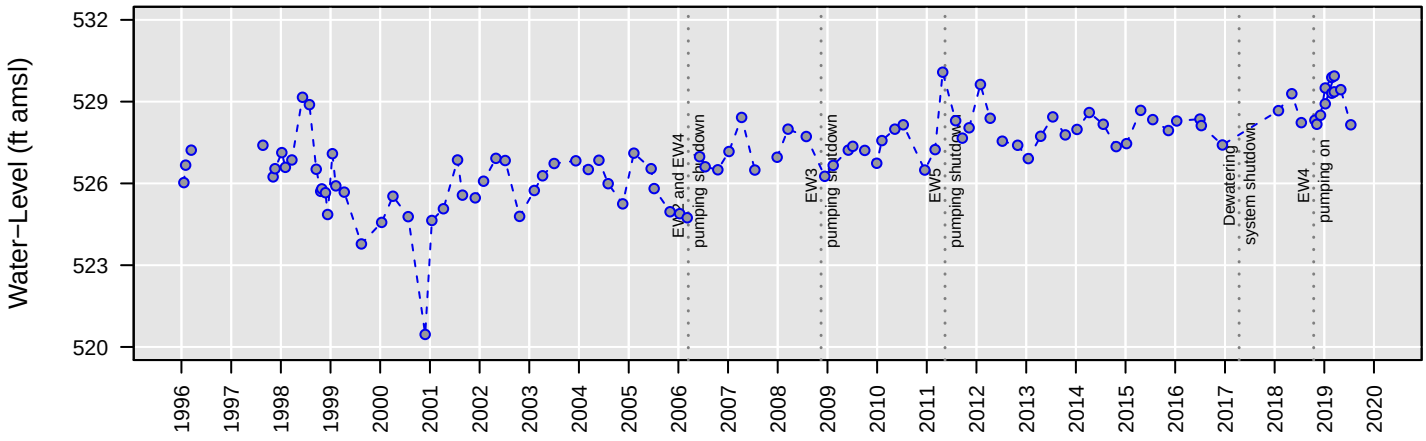
MW97

1,1−Dichloroethane

Number of Comparisons: 17
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



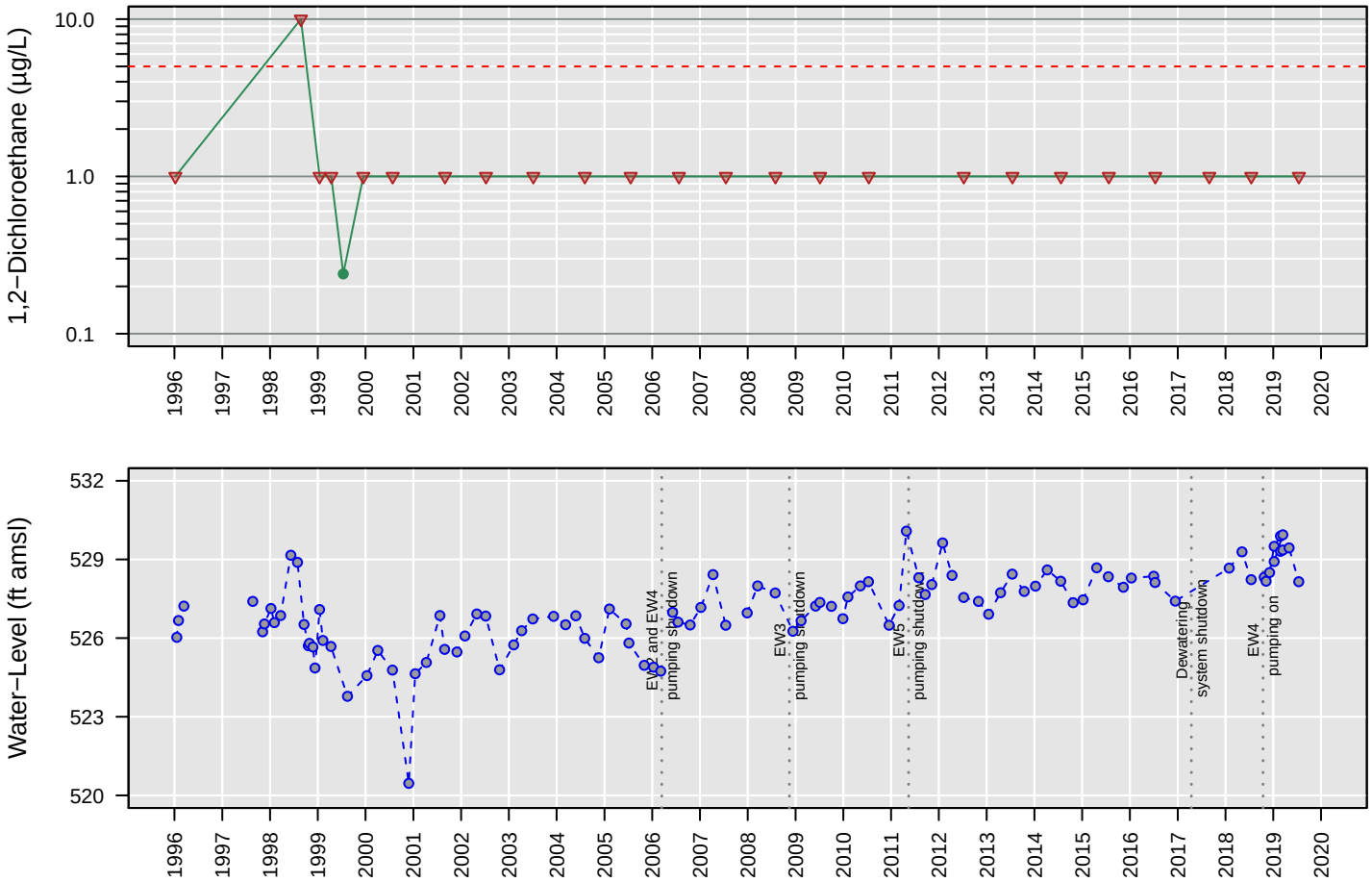


No Analysis Performed

MW97

1,2−Dichloroethane

Number of Comparisons: 25
Percent NDs: 96%



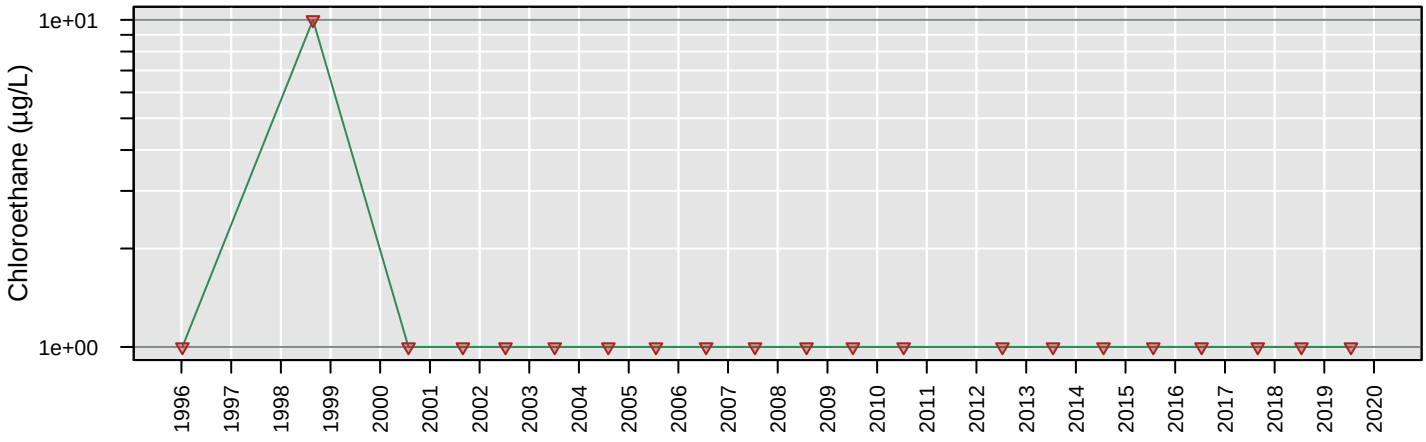
No Analysis Performed

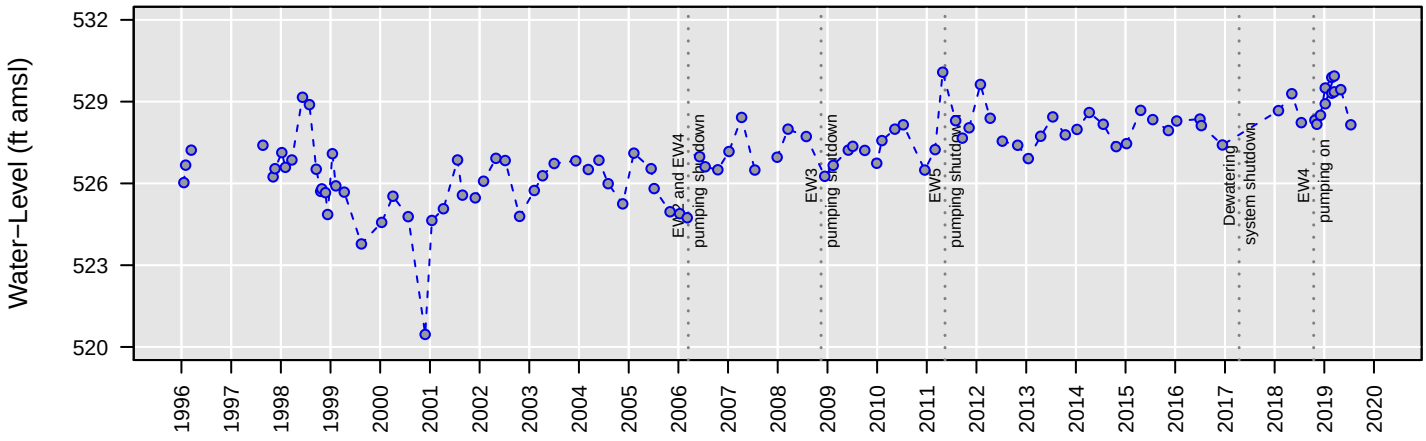
MW97

Chloroethane

Number of Comparisons: 21
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





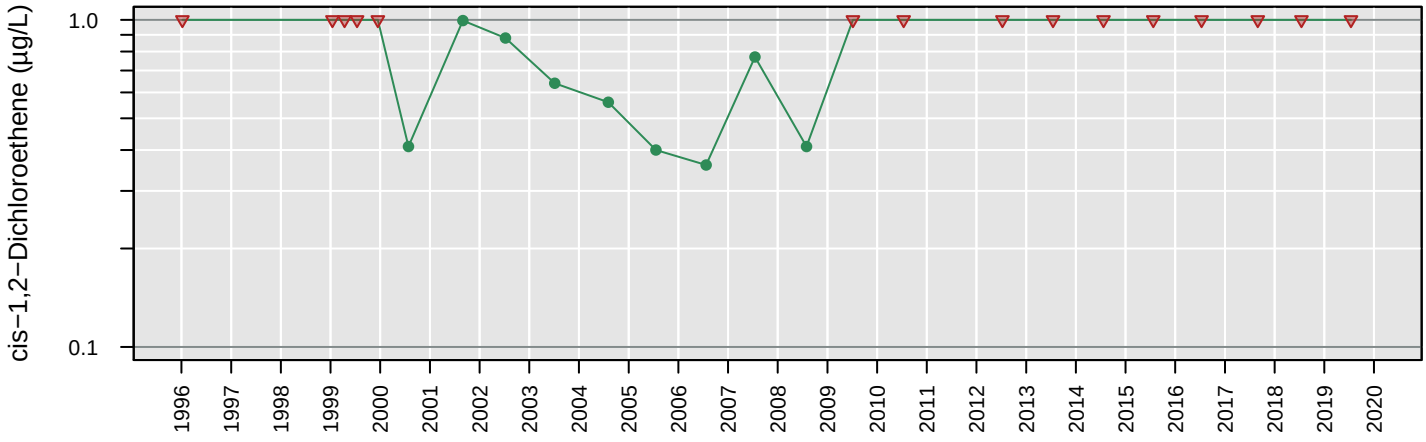
No Analysis Performed

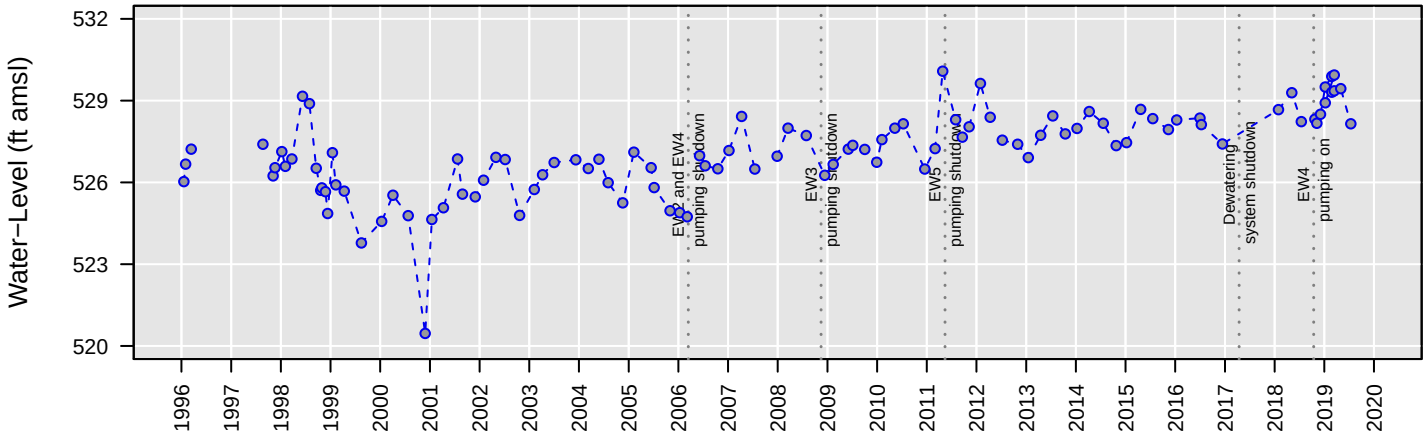
MW97

cis−1,2−Dichloroethene

Number of Comparisons: 24
Percent NDs: 62%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



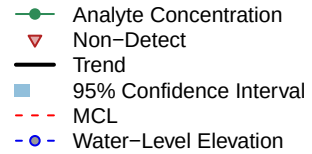


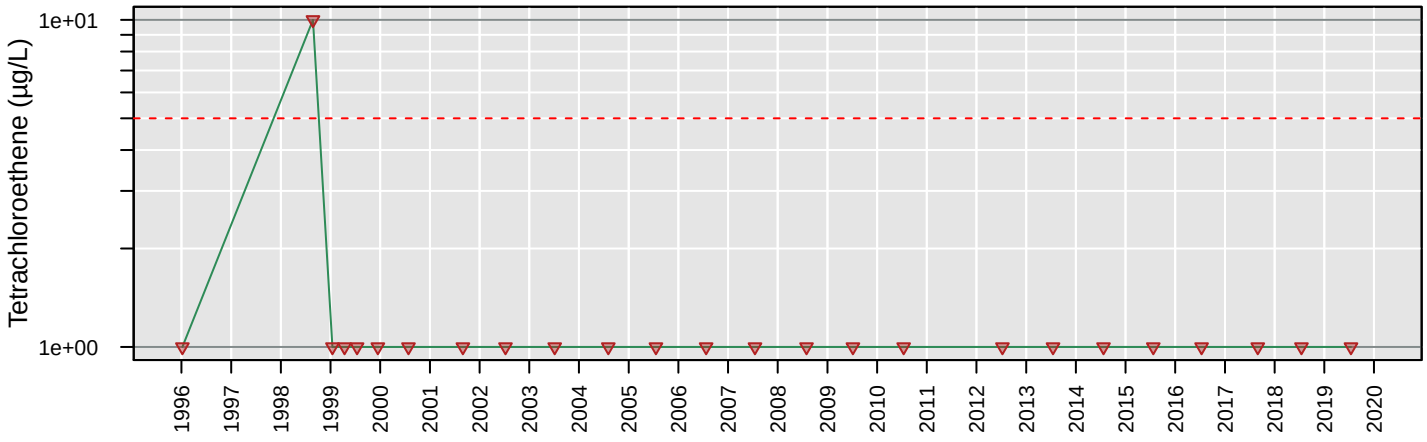
No Analysis Performed

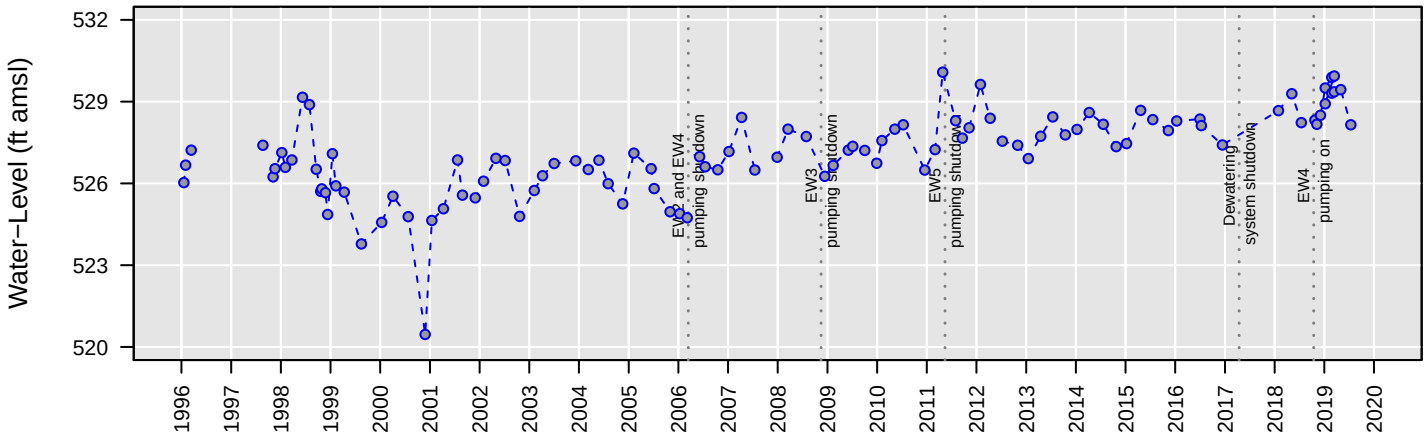
MW97

Tetrachloroethene

Number of Comparisons: 25
Percent NDs: 100%





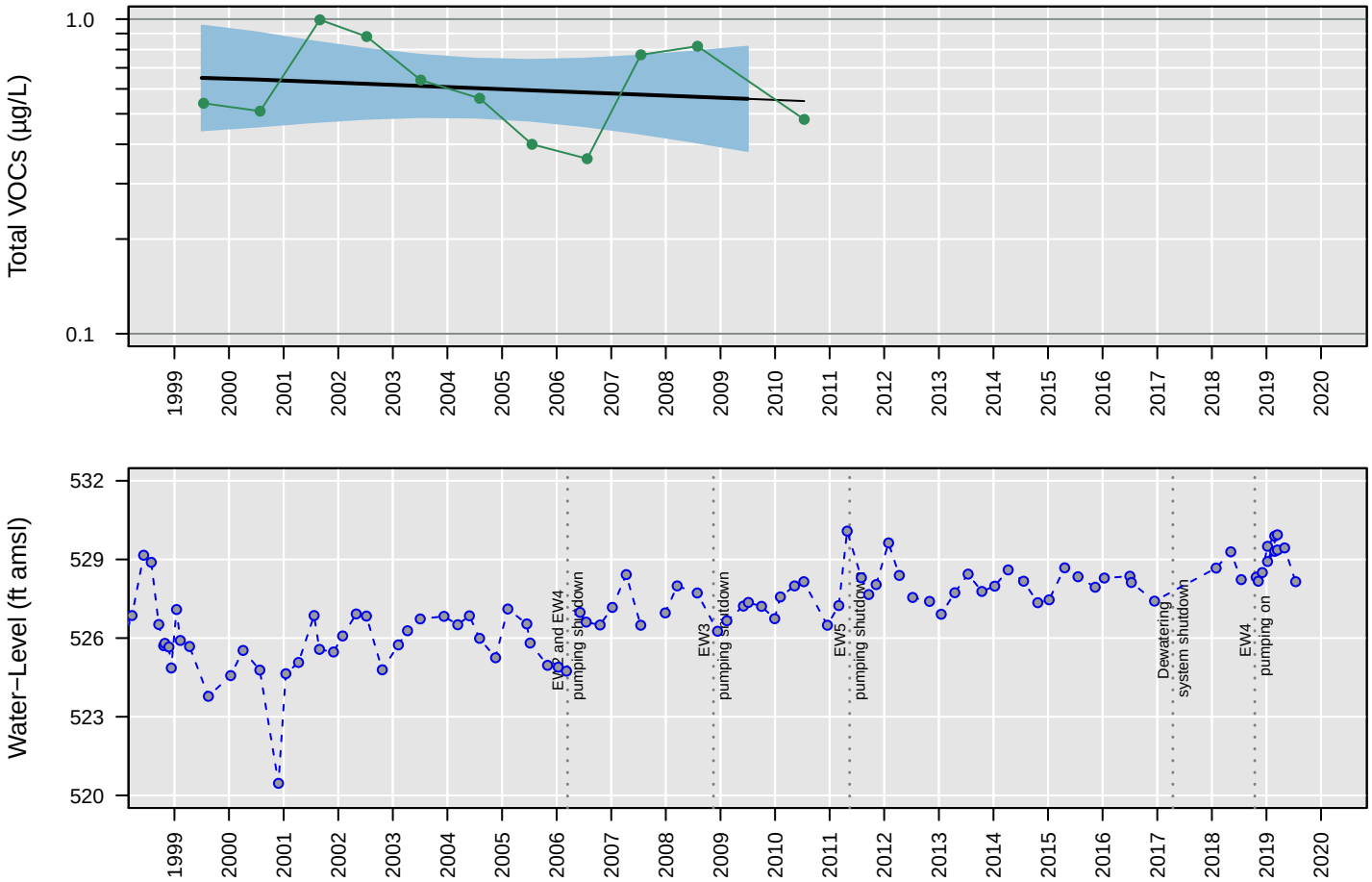


No Analysis Performed

MW97

Total VOCs

Number of Comparisons: 11
Percent NDs: 0%



Censored Regression (Tobit) Model

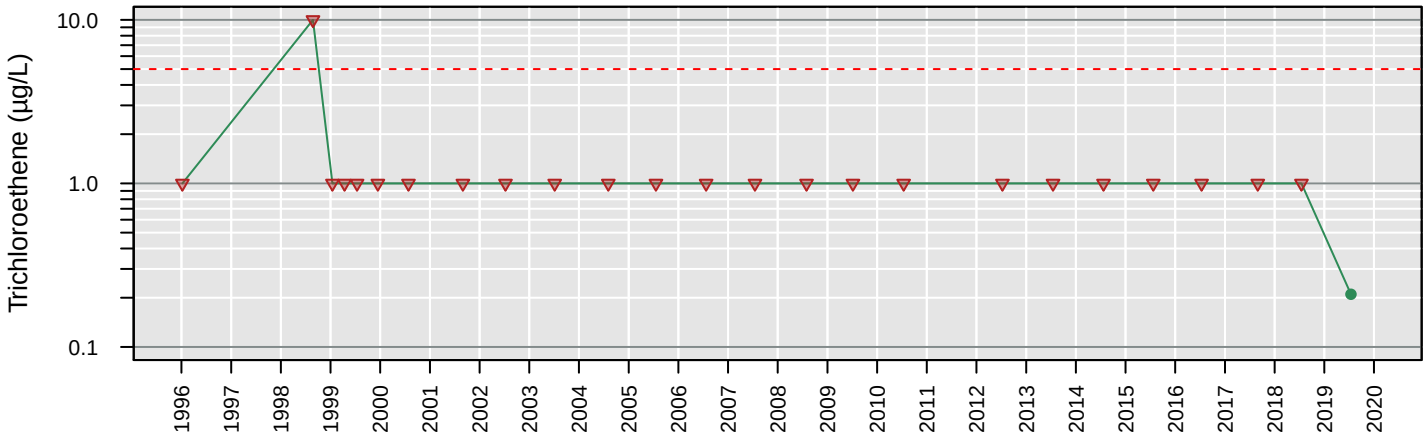
Trend Not Significant

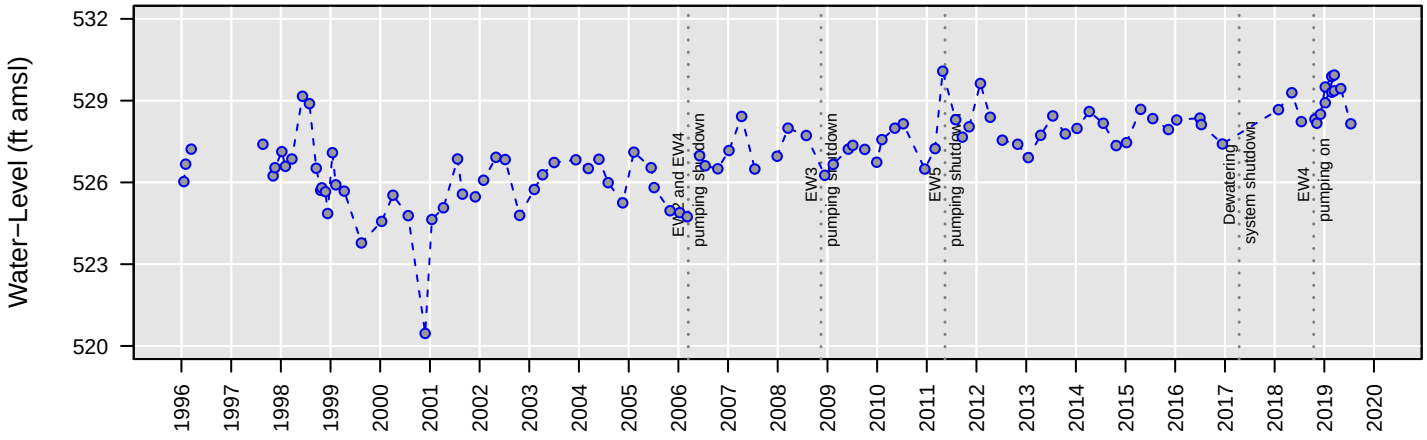
Regression Statistics for January 2009 to January 2010
Geometric Mean: 0.56 µg/L
UCL: 0.82 µg/L
LCL: 0.38 µg/L

MW97

Trichloroethene

Number of Comparisons: 25
Percent NDs: 96%



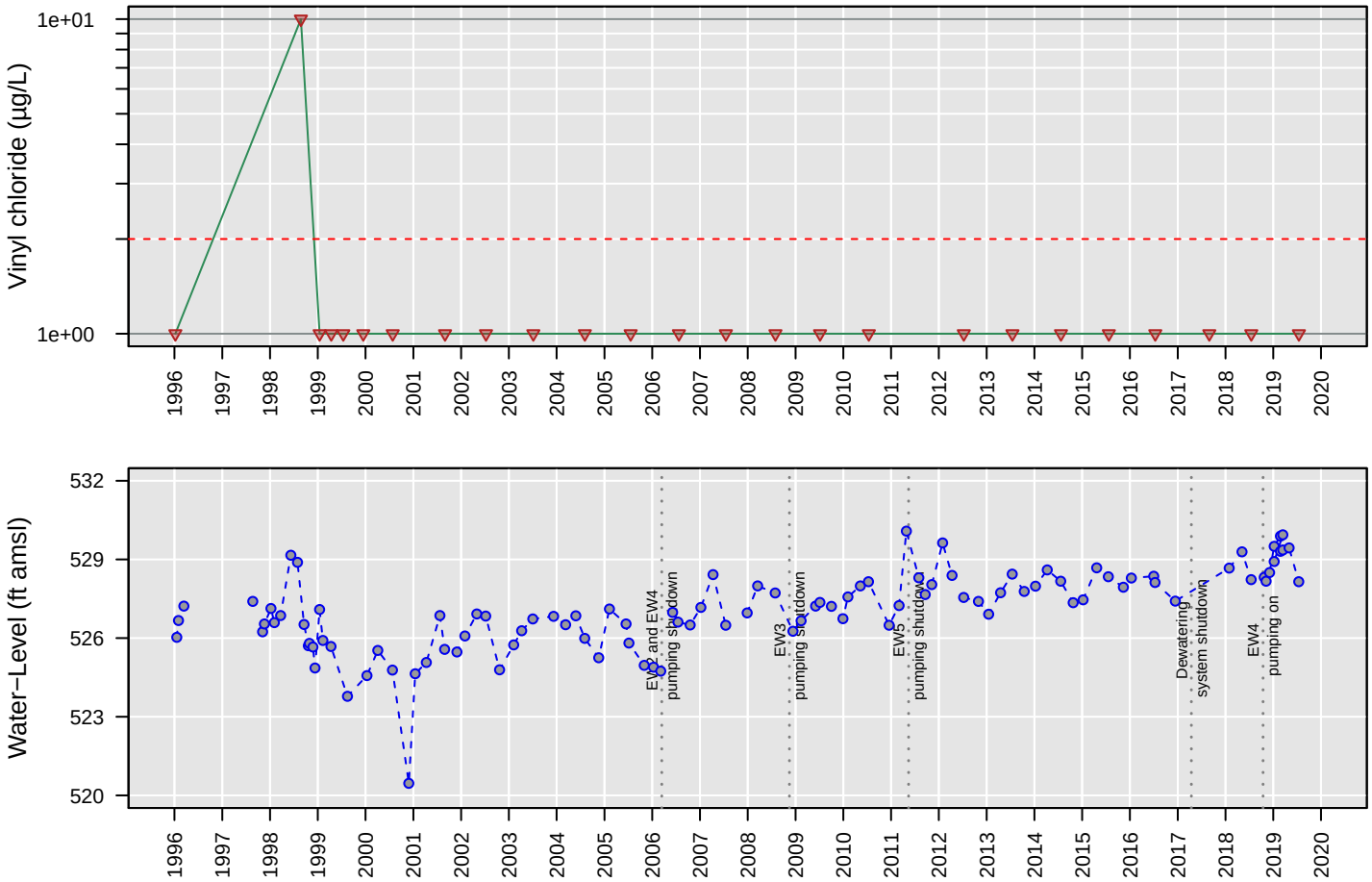


No Analysis Performed

MW97

Vinyl chloride

Number of Comparisons: 25
Percent NDs: 100%



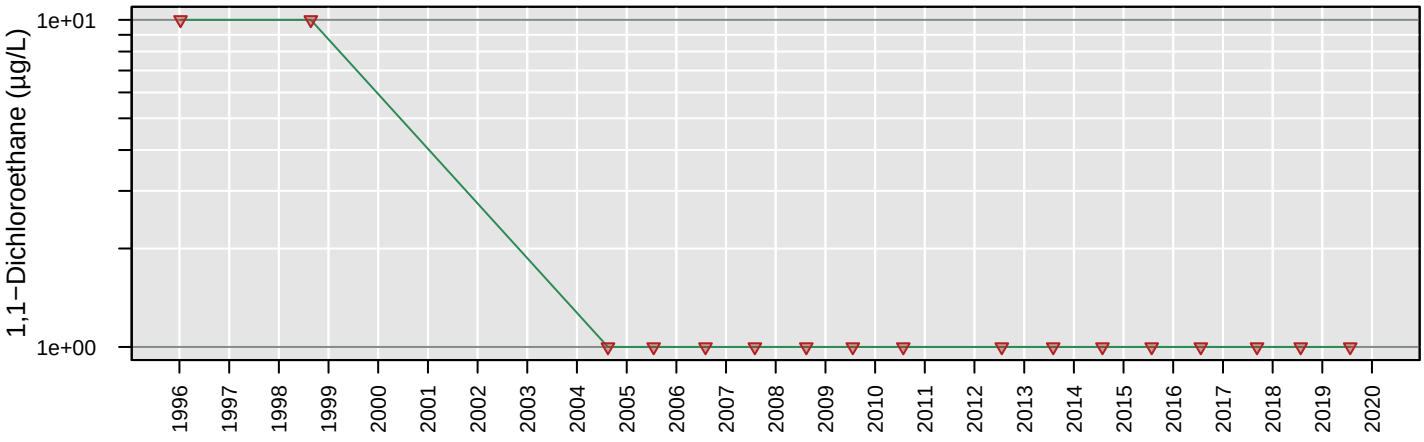
No Analysis Performed

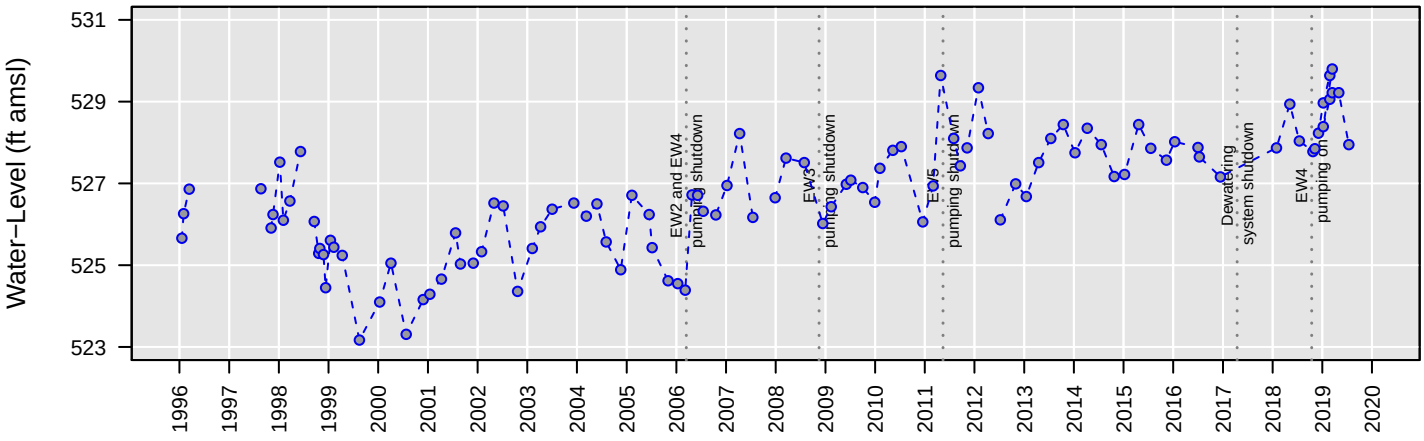
MW98

1,1−Dichloroethane

Number of Comparisons: 17
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



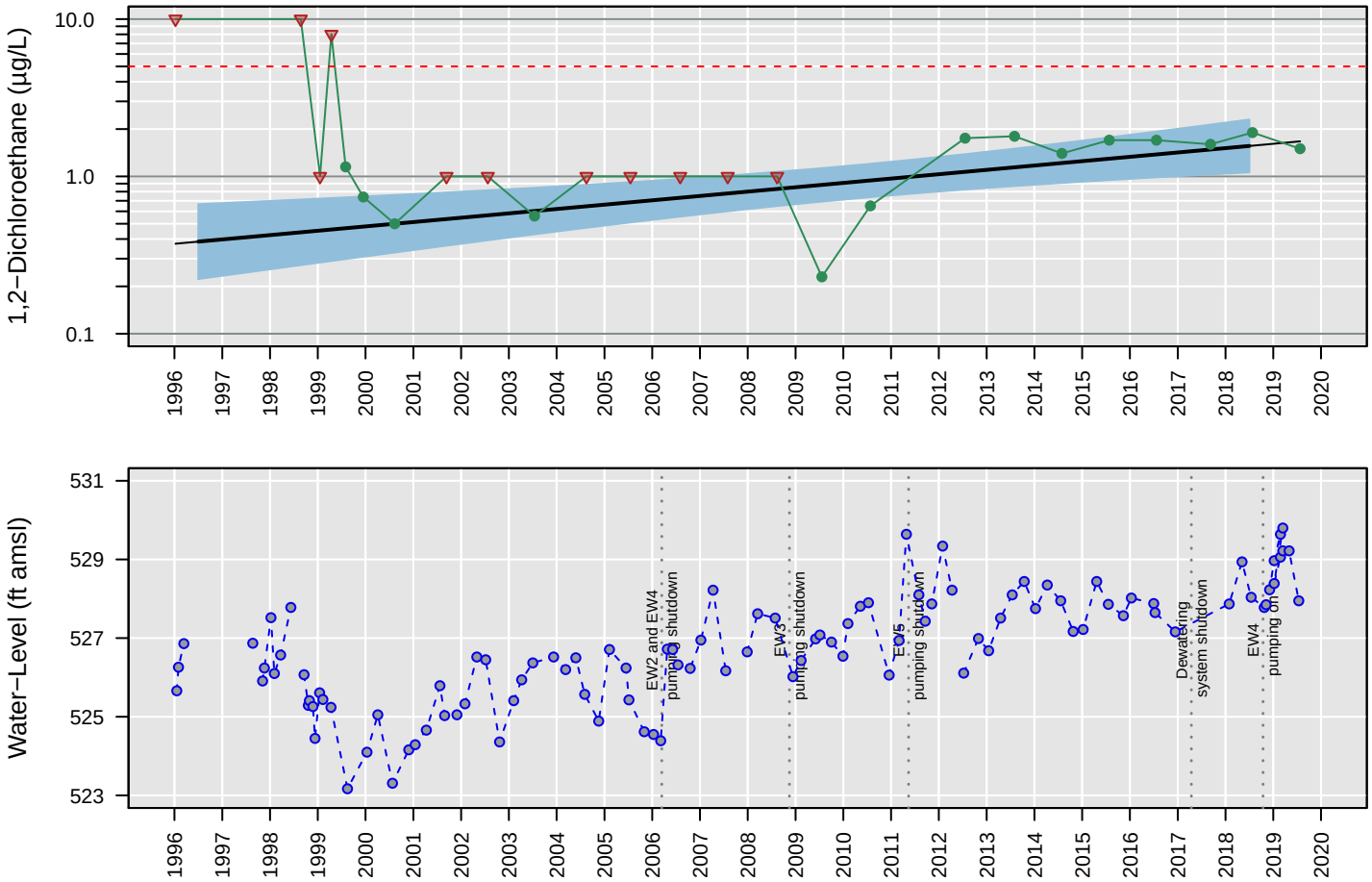


No Analysis Performed

MW98

1,2−Dichloroethane

Number of Comparisons: 25
Percent NDs: 44%



Censored Regression (Tobit) Model

ln Conc. = 0.00017 (+/− 0.000047)*Date + −2.6 (+/− 0.71)

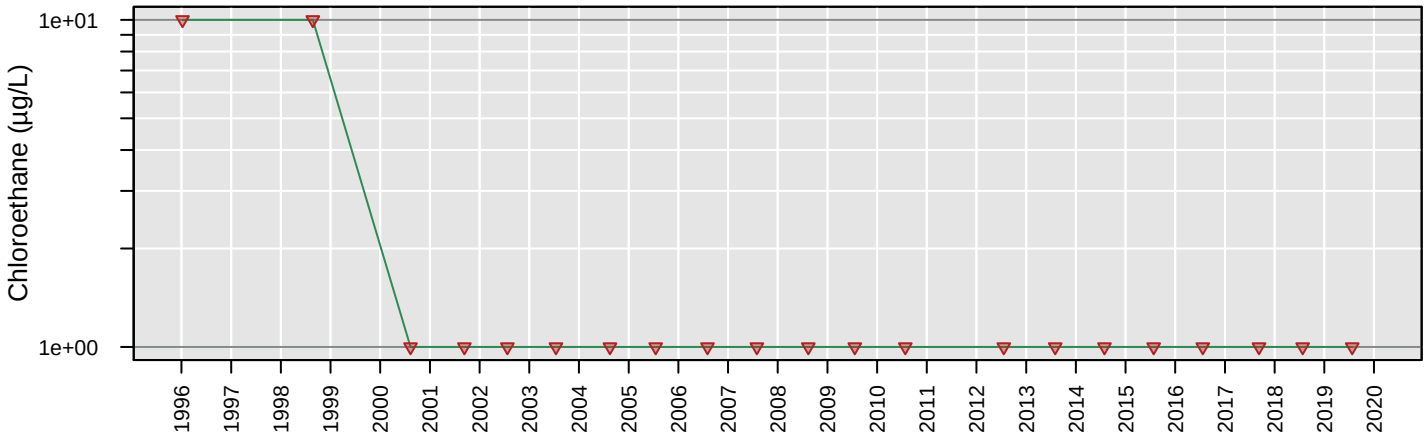
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.6 µg/L
UCL: 2.3 µg/L
LCL: 1.1 µg/L

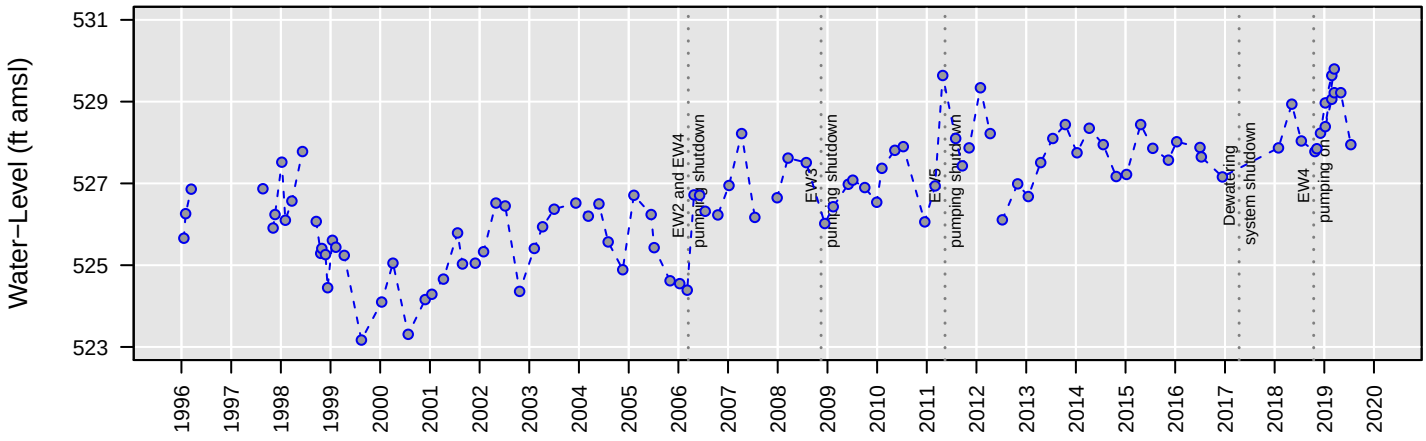
MW98

Chloroethane

Number of Comparisons: 21
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



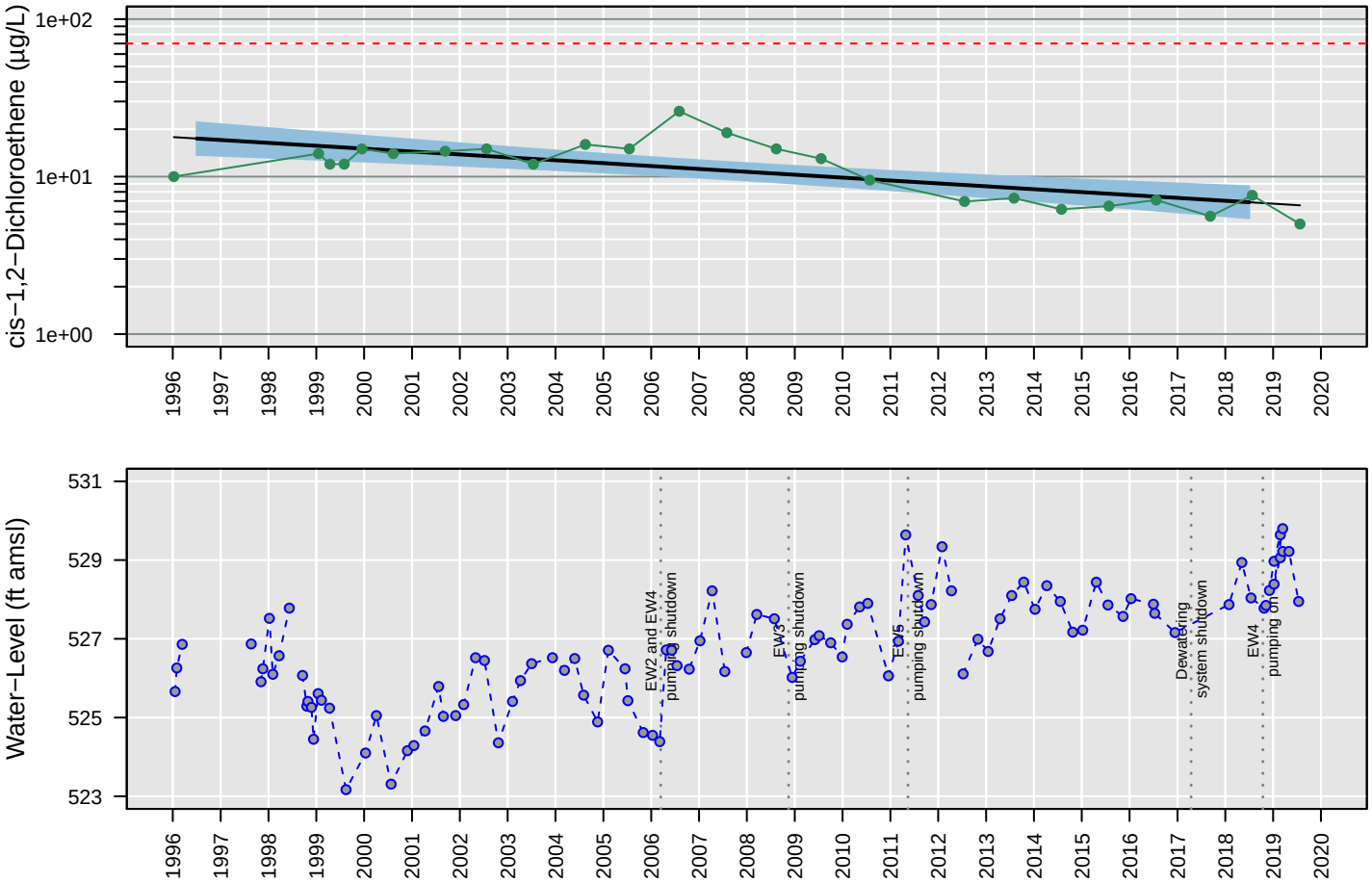


No Analysis Performed

MW98

cis−1,2−Dichloroethene

Number of Comparisons: 24
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.00012 (+/− 0.000024)*Date + 4 (+/− 0.33)

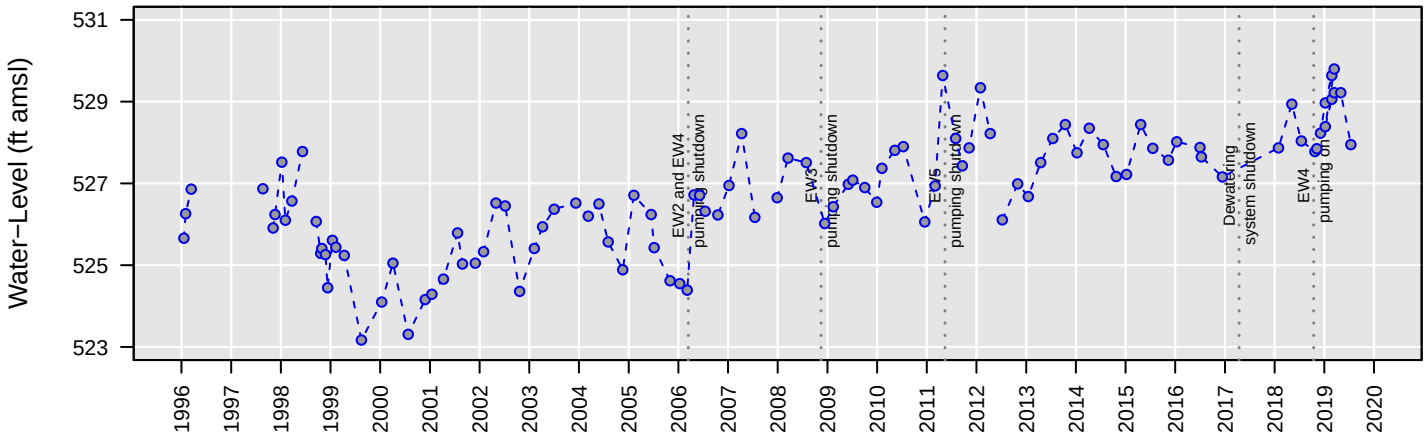
Regression Statistics for January 2018 to January 2019
Geometric Mean: 6.9 µg/L
UCL: 8.7 µg/L
LCL: 5.4 µg/L

MW98

Tetrachloroethene

Number of Comparisons: 25
Percent NDs: 68%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

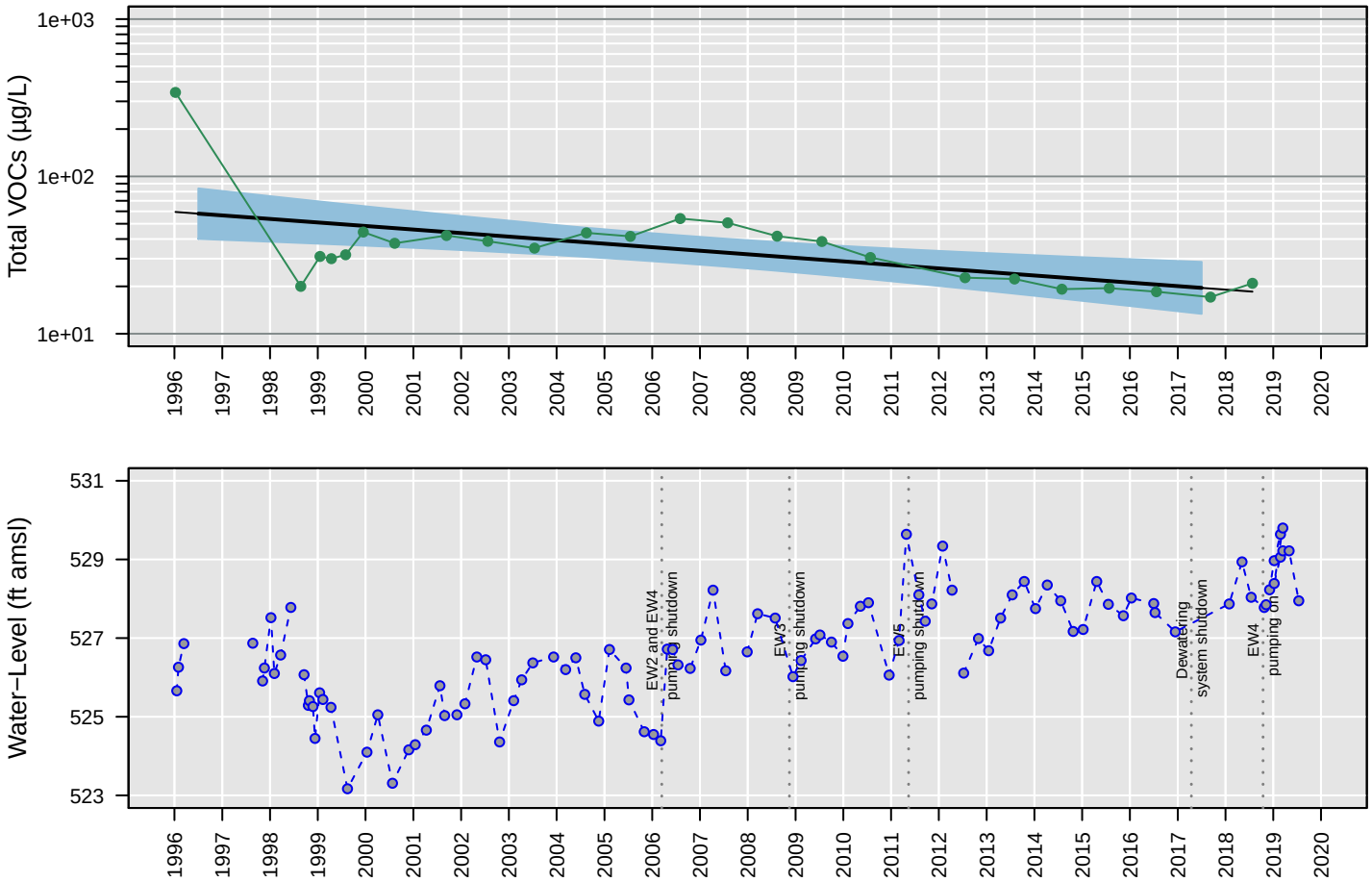


No Analysis Performed

MW98

Total VOCs

Number of Comparisons: 24
Percent NDs: 0%



Censored Regression (Tobit) Model

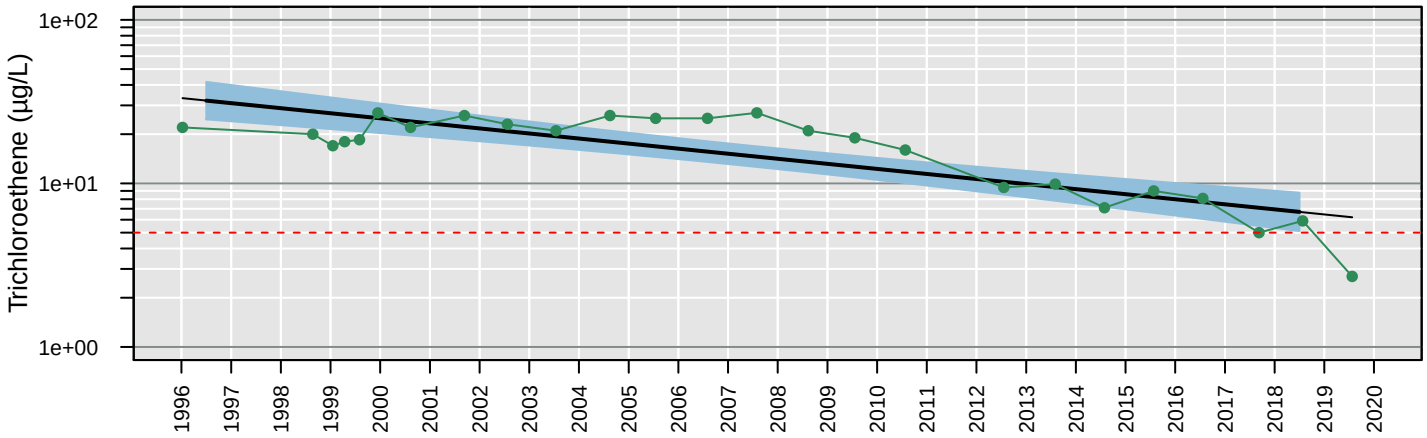
ln Conc. = −0.00014 (+/− 0.00004)*Date + 5.4 (+/− 0.54)

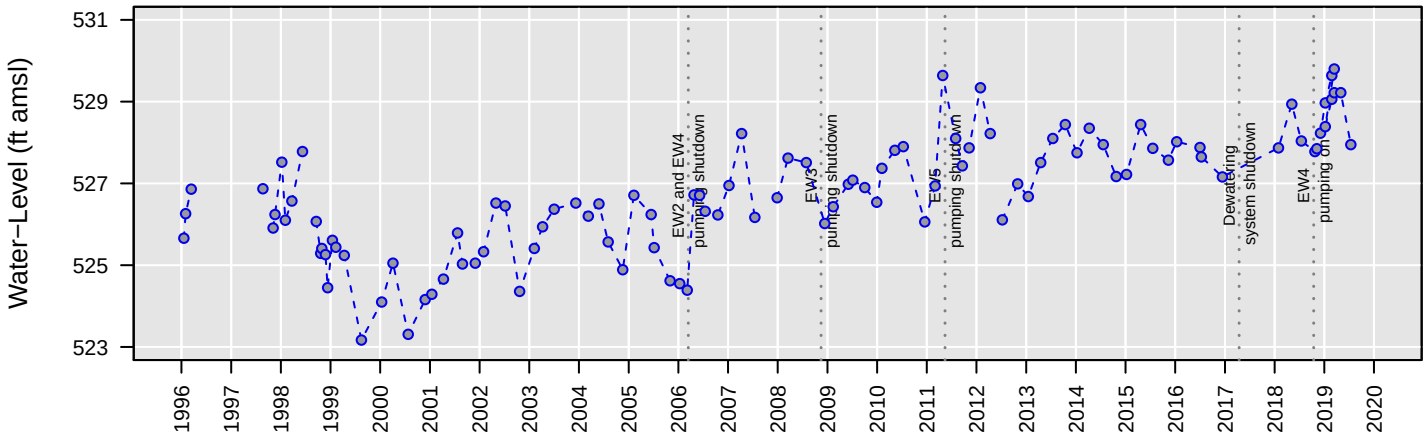
Regression Statistics for January 2017 to January 2018
Geometric Mean: 20 µg/L
UCL: 29 µg/L
LCL: 13 µg/L

MW98

Trichloroethene

Number of Comparisons: 25
Percent NDs: 0%





Censored Regression (Tobit) Model

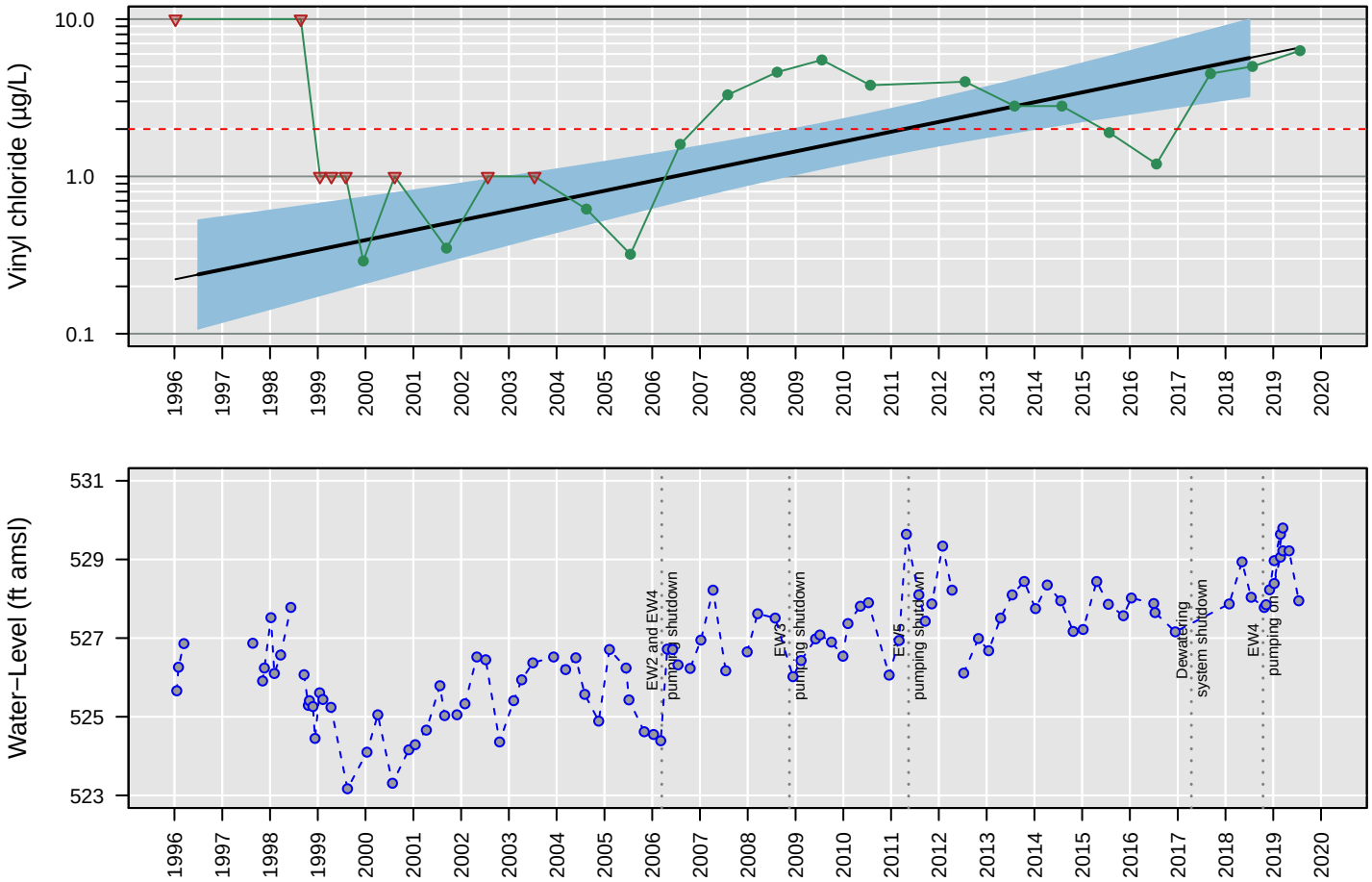
ln Conc. = −0.0002 (+/− 0.000027)*Date + 5.4 (+/− 0.37)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 6.7 µg/L
UCL: 8.8 µg/L
LCL: 5.1 µg/L

MW98

Vinyl chloride

Number of Comparisons: 25
Percent NDs: 32%



Censored Regression (Tobit) Model

ln Conc. = 0.00039 (+/− 0.000071)*Date + −5.3 (+/− 1)

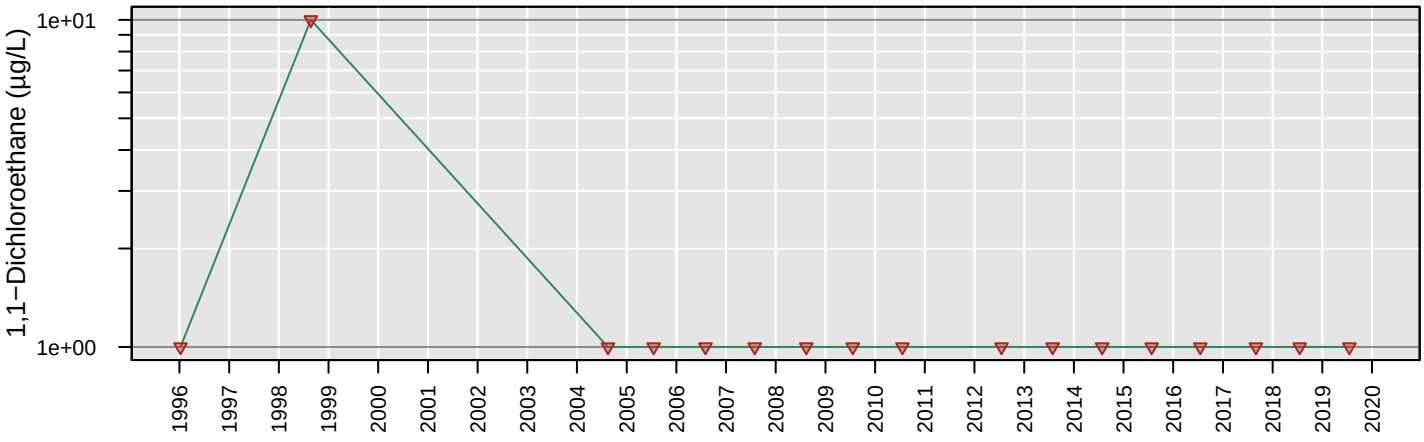
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.7 µg/L
UCL: 9.9 µg/L
LCL: 3.2 µg/L

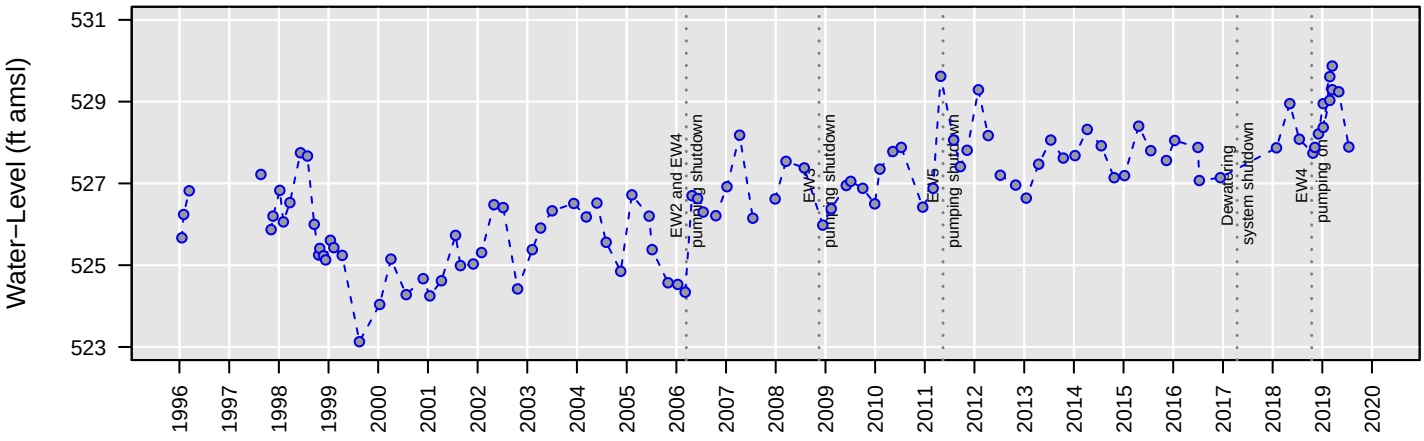
MW99

1,1−Dichloroethane

Number of Comparisons: 17
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



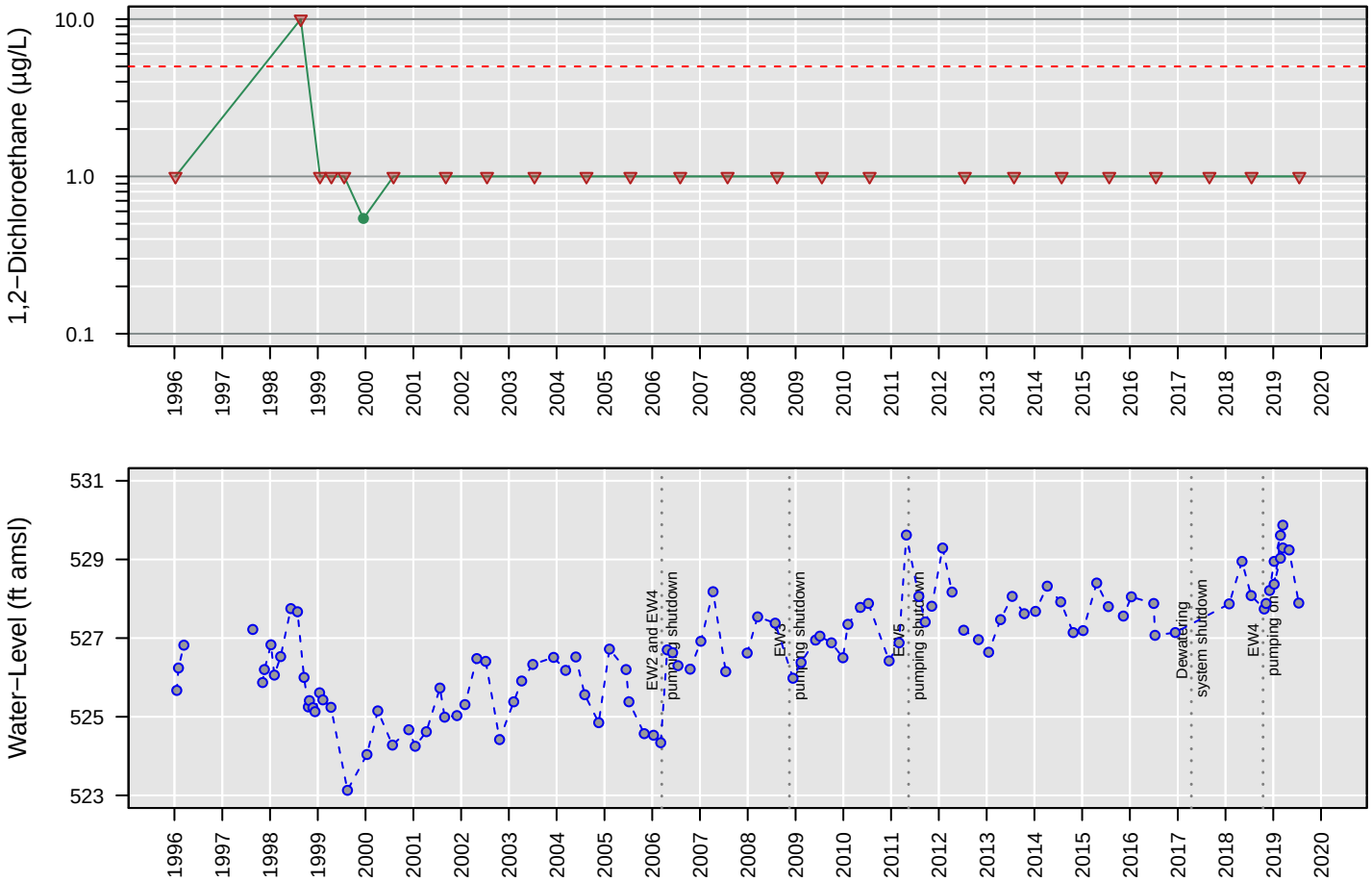


No Analysis Performed

MW99

1,2−Dichloroethane

Number of Comparisons: 25
Percent NDs: 96%



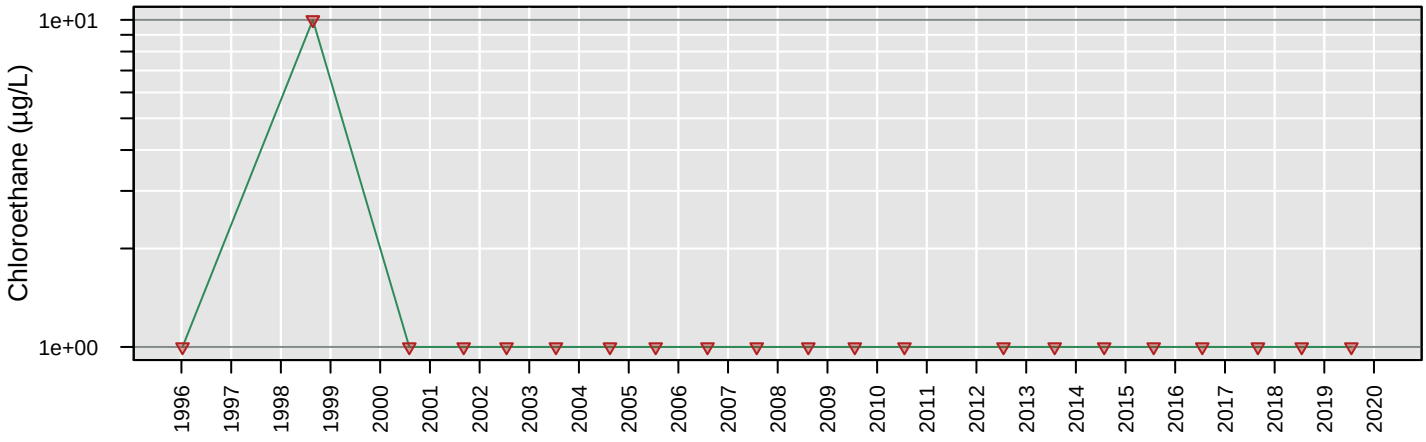
No Analysis Performed

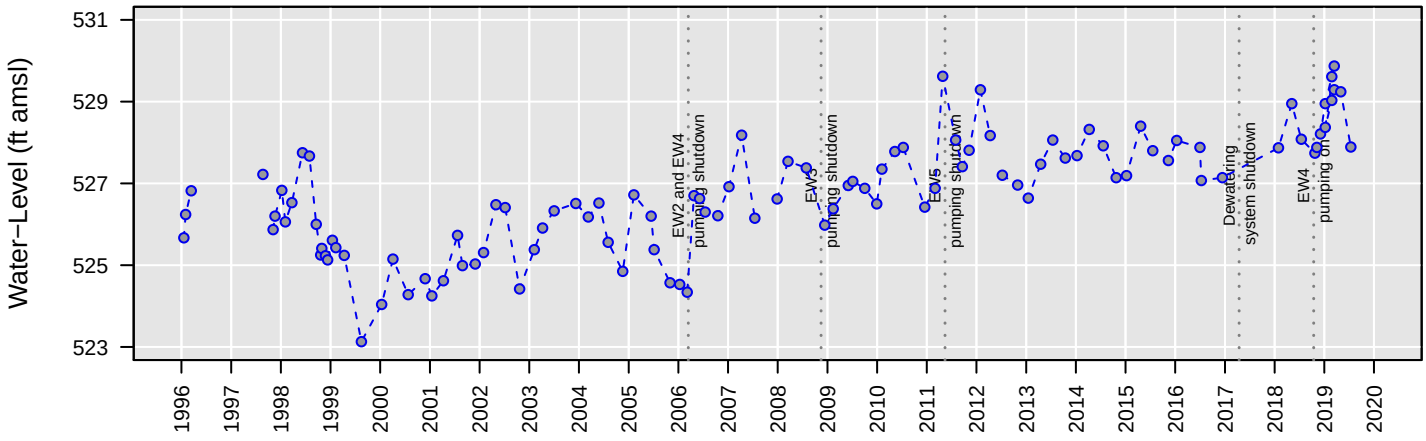
MW99

Chloroethane

Number of Comparisons: 21
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



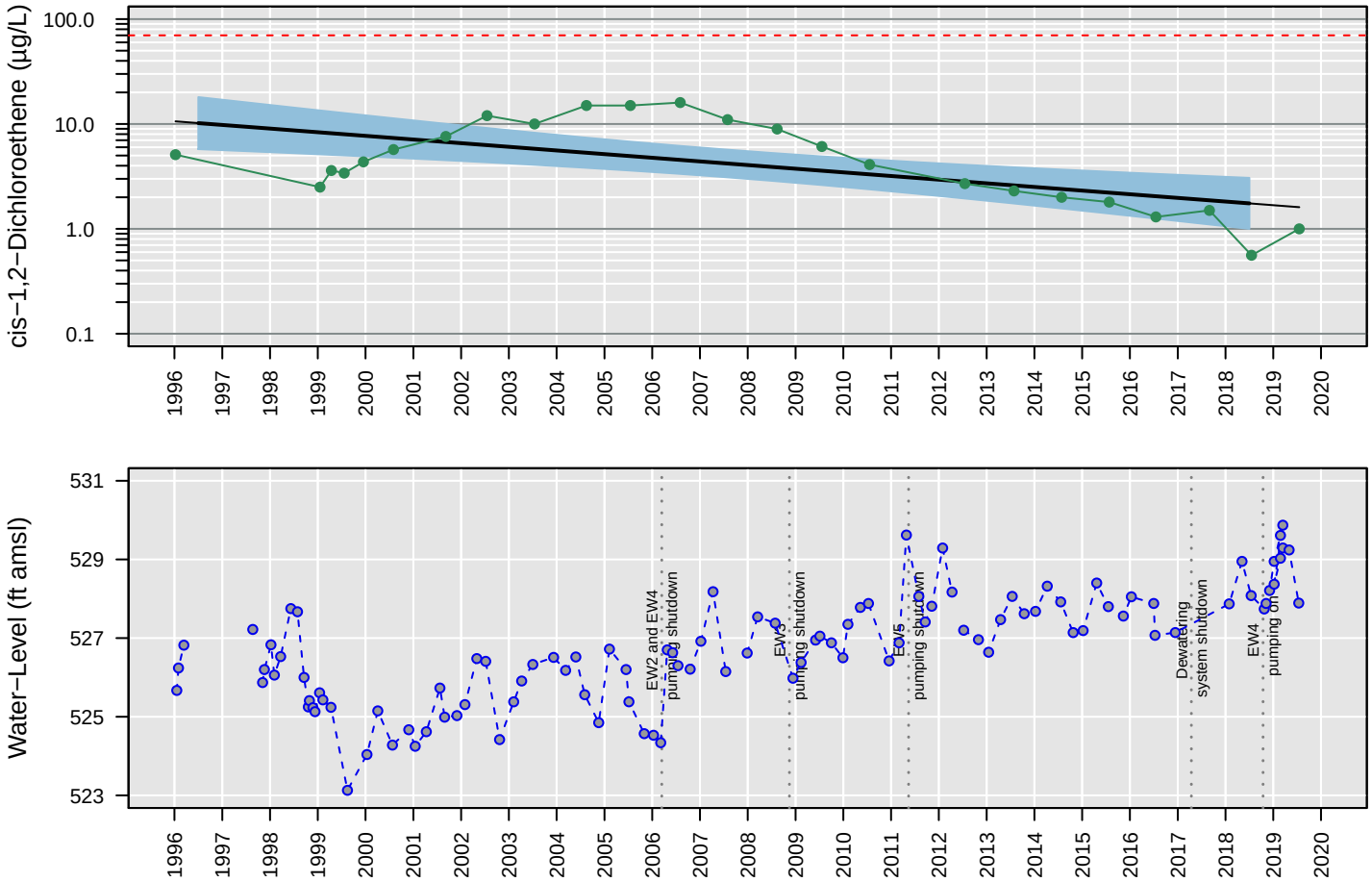


No Analysis Performed

MW99

cis−1,2−Dichloroethene

Number of Comparisons: 24
Percent NDs: 0%



Censored Regression (Tobit) Model

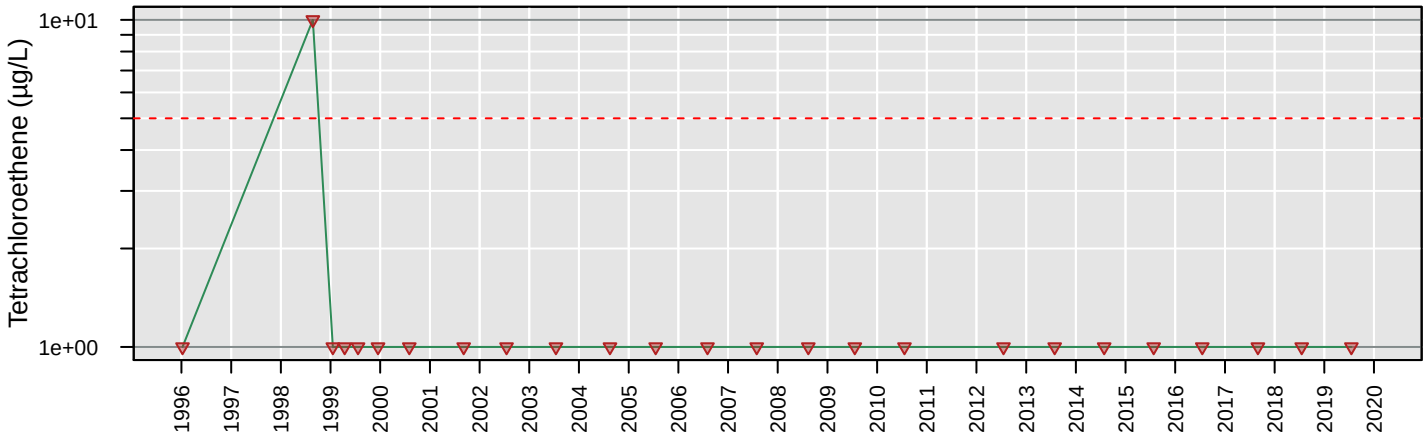
ln Conc. = −0.00022 (+/− 0.000057)*Date + 4.4 (+/− 0.8)

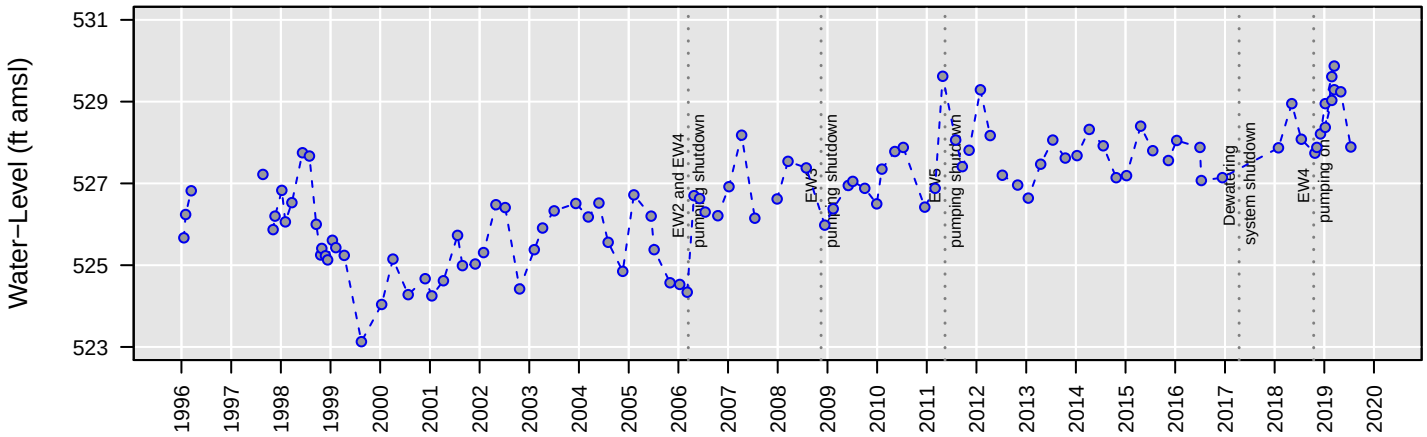
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.7 µg/L
UCL: 3.1 µg/L
LCL: 1 µg/L

MW99

Tetrachloroethene

Number of Comparisons: 25
Percent NDs: 100%



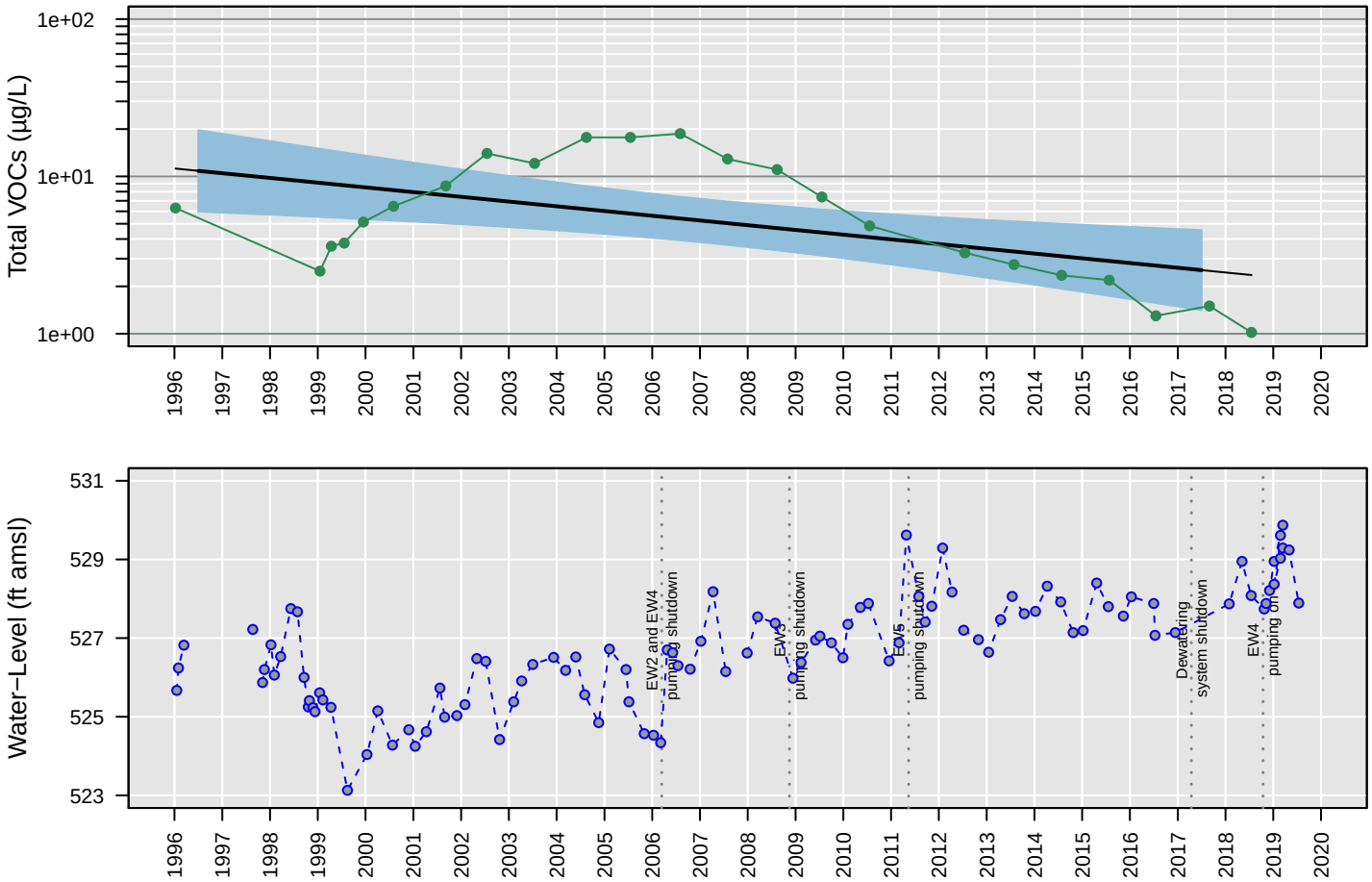


No Analysis Performed

MW99

Total VOCs

Number of Comparisons: 23
Percent NDs: 0%



Censored Regression (Tobit) Model

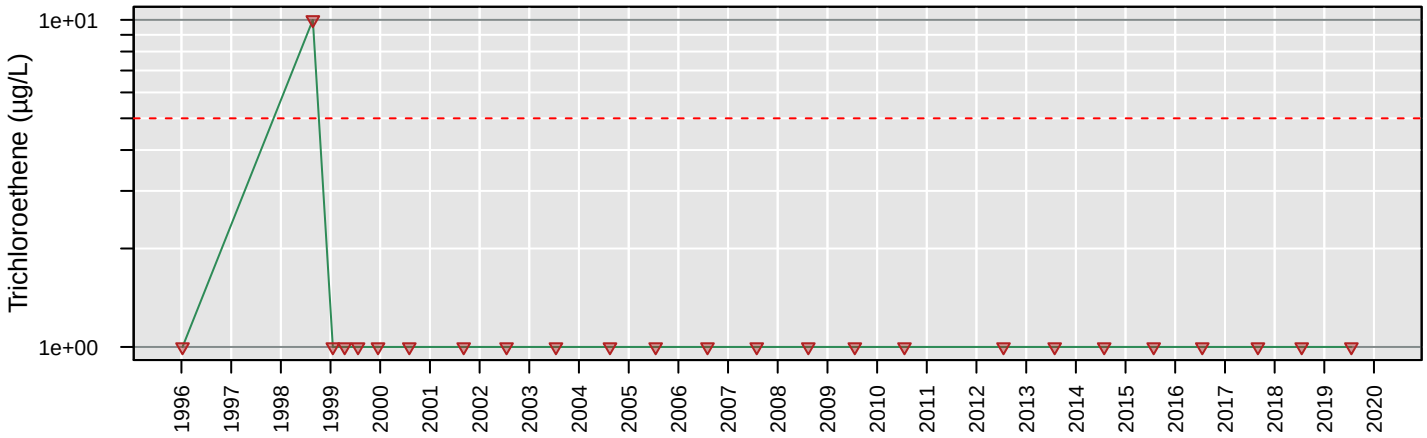
ln Conc. = −0.00019 (+/− 0.000062)*Date + 4.2 (+/− 0.86)

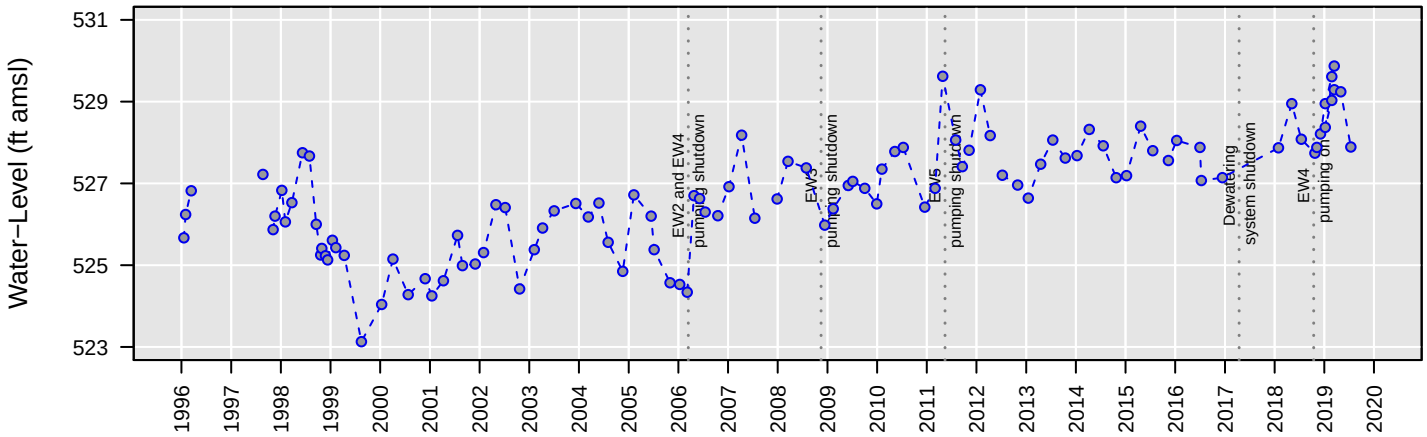
Regression Statistics for January 2017 to January 2018
Geometric Mean: 2.5 µg/L
UCL: 4.6 µg/L
LCL: 1.4 µg/L

MW99

Trichloroethene

Number of Comparisons: 25
Percent NDs: 100%



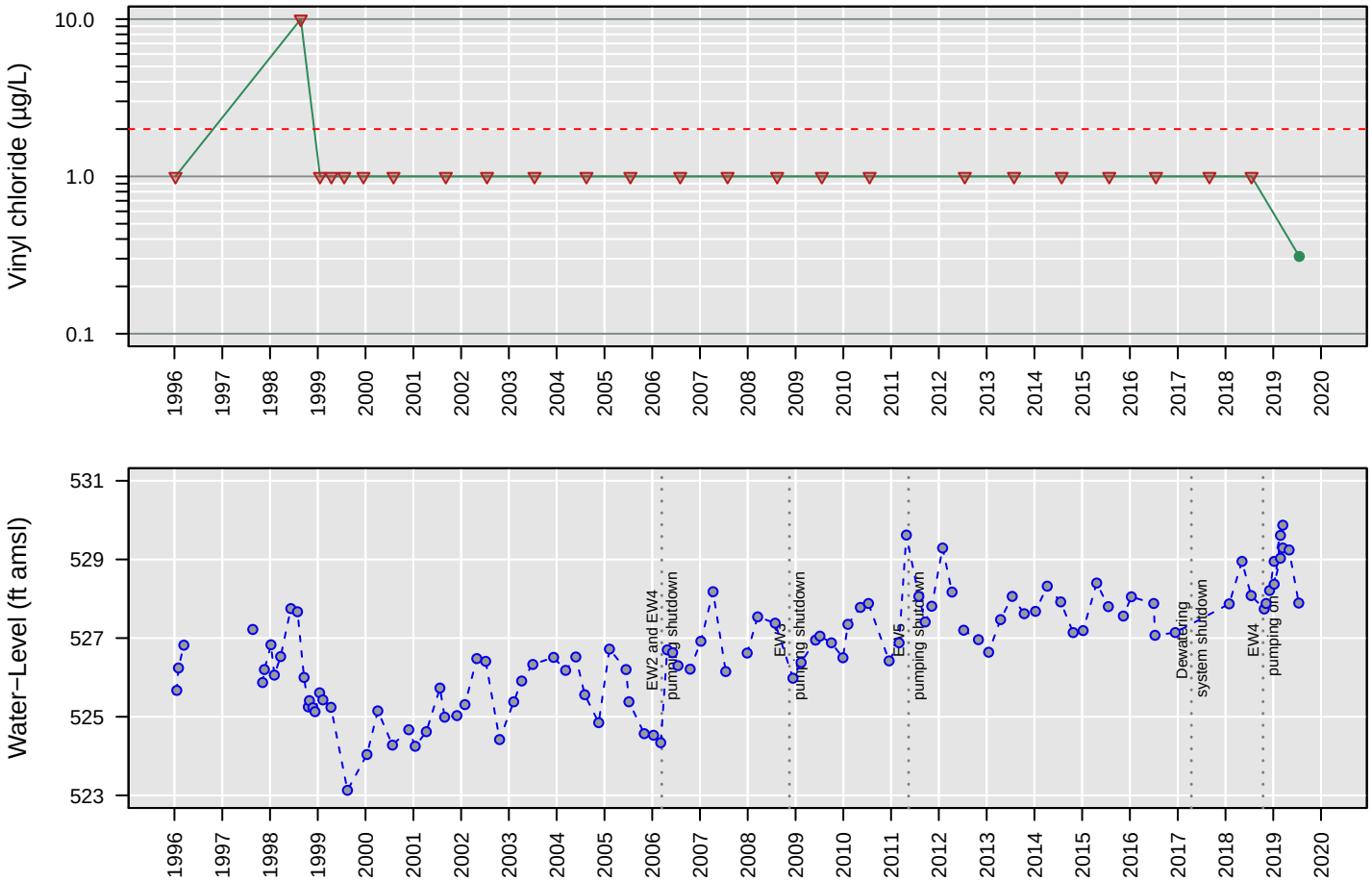


No Analysis Performed

MW99

Vinyl chloride

Number of Comparisons: 25
Percent NDs: 96%



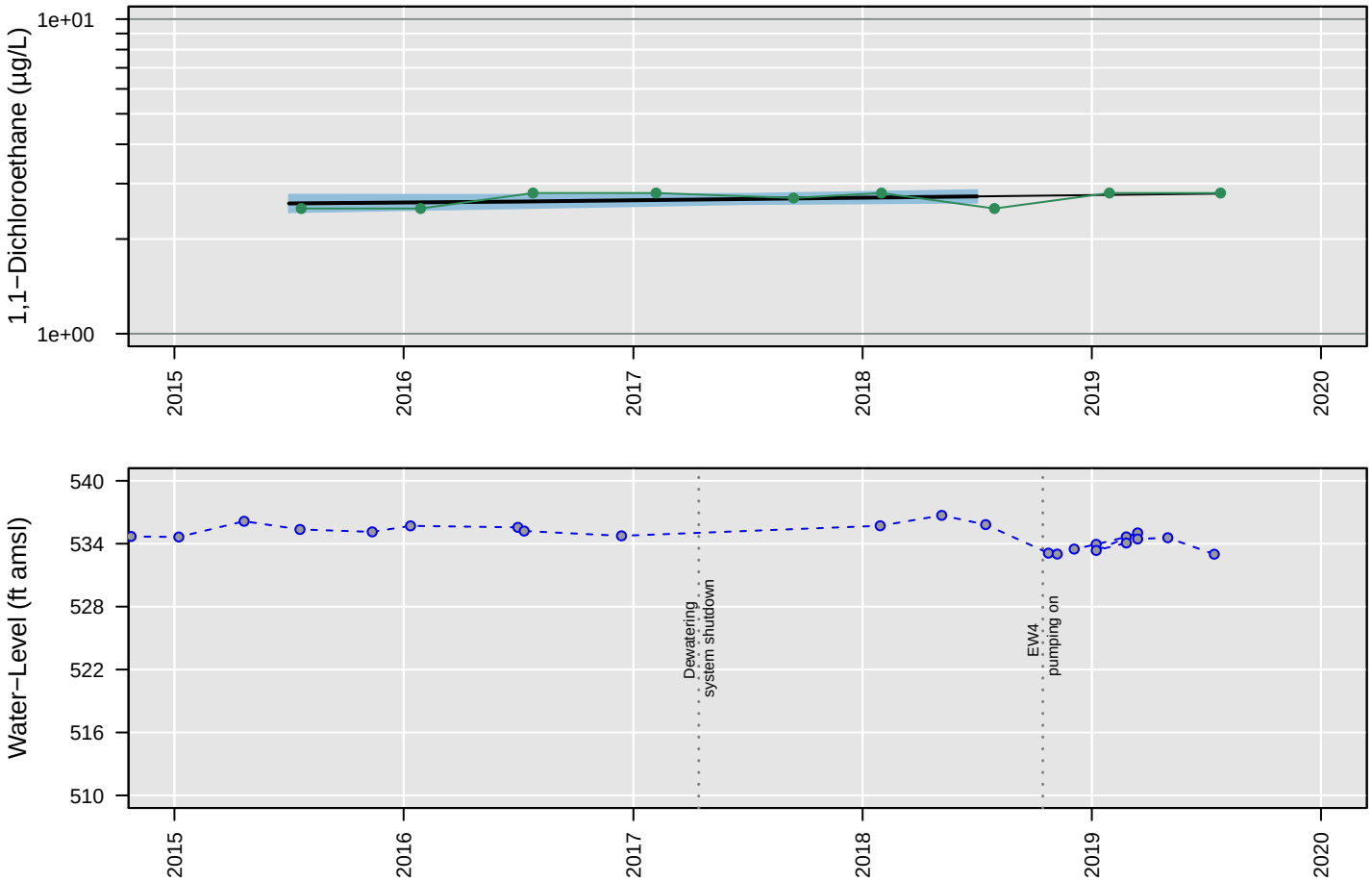
No Analysis Performed

PZ3

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

Trend Not Significant

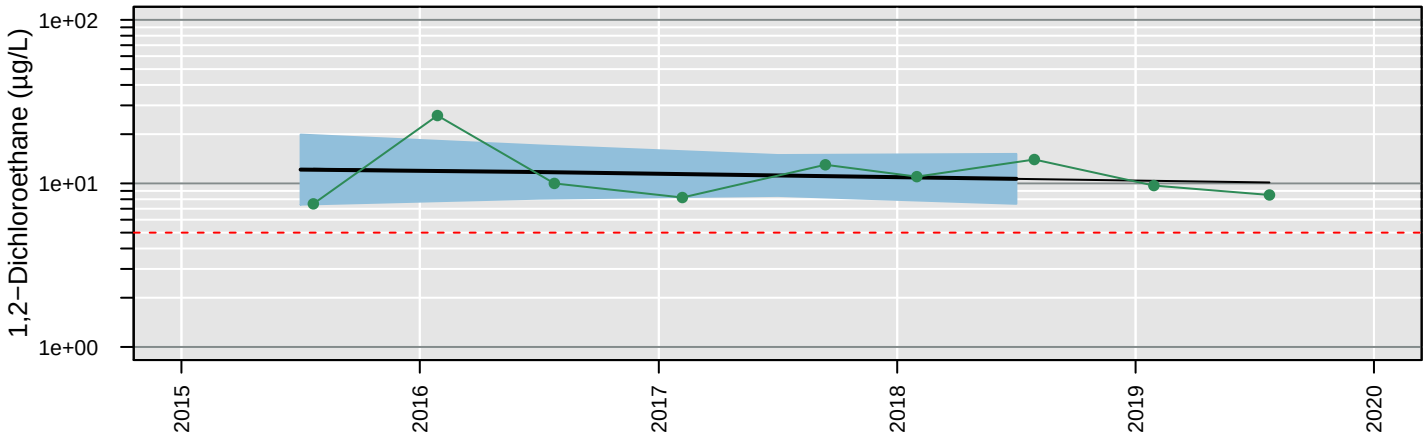
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.7 µg/L
UCL: 2.9 µg/L
LCL: 2.6 µg/L

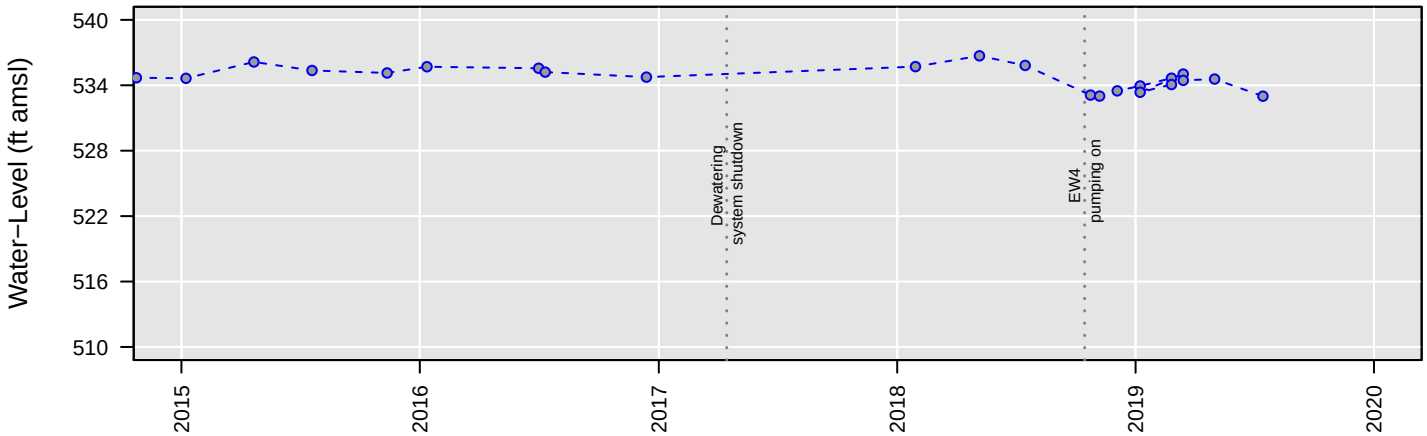
PZ3

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

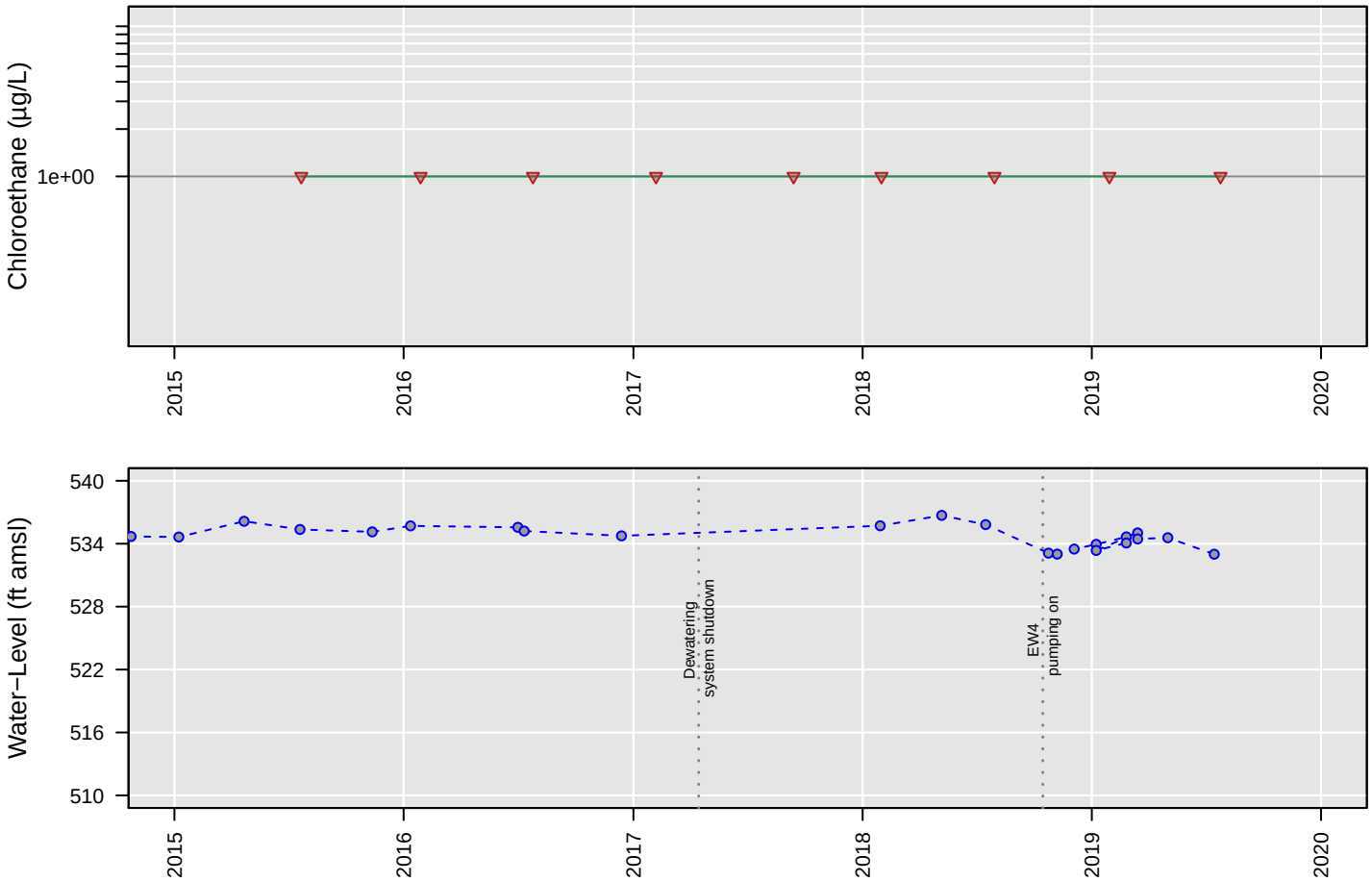
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 11 µg/L
UCL: 15 µg/L
LCL: 7.5 µg/L

PZ3

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%



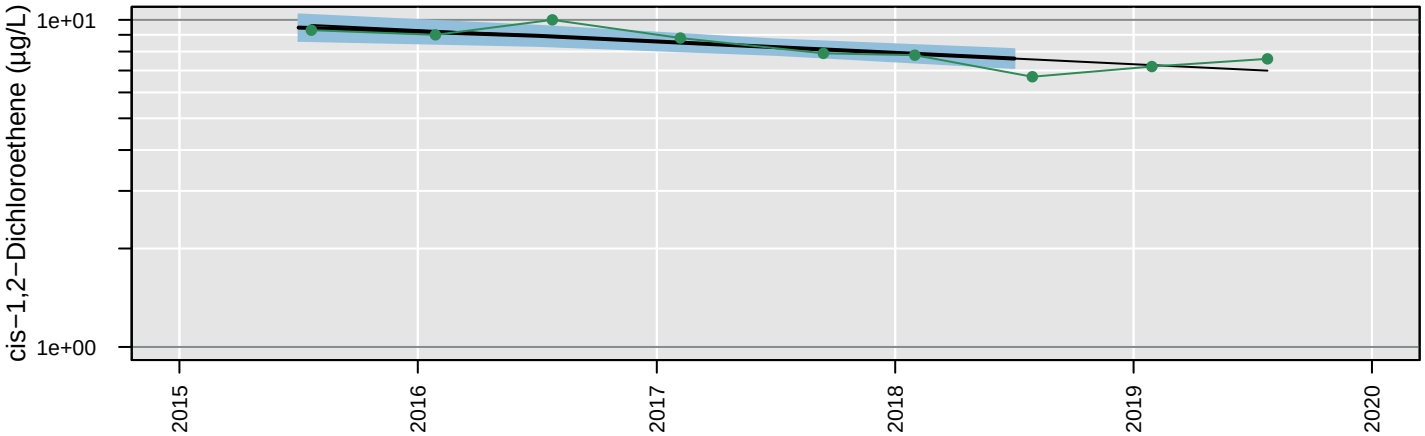
No Analysis Performed

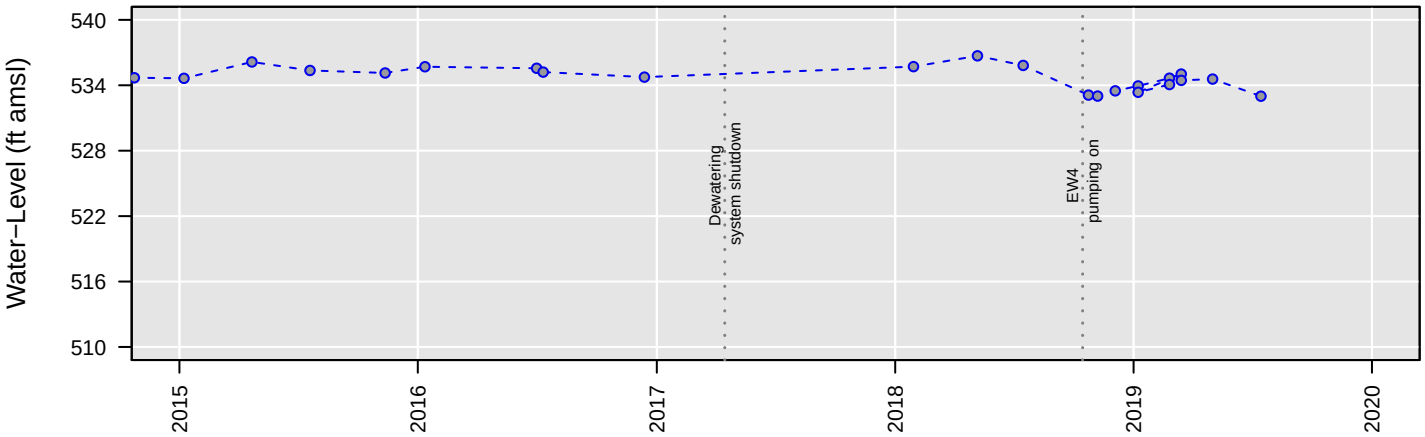
PZ3

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00022 (+/− 0.000047)*Date + 5.9 (+/− 0.81)

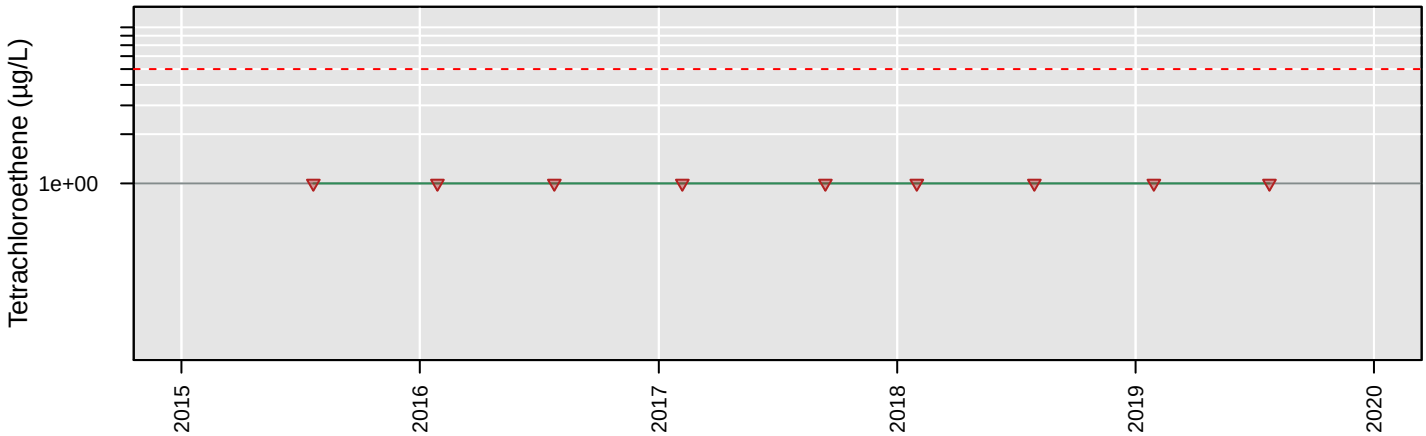
Regression Statistics for January 2018 to January 2019
Geometric Mean: 7.6 µg/L
UCL: 8.1 µg/L
LCL: 7.1 µg/L

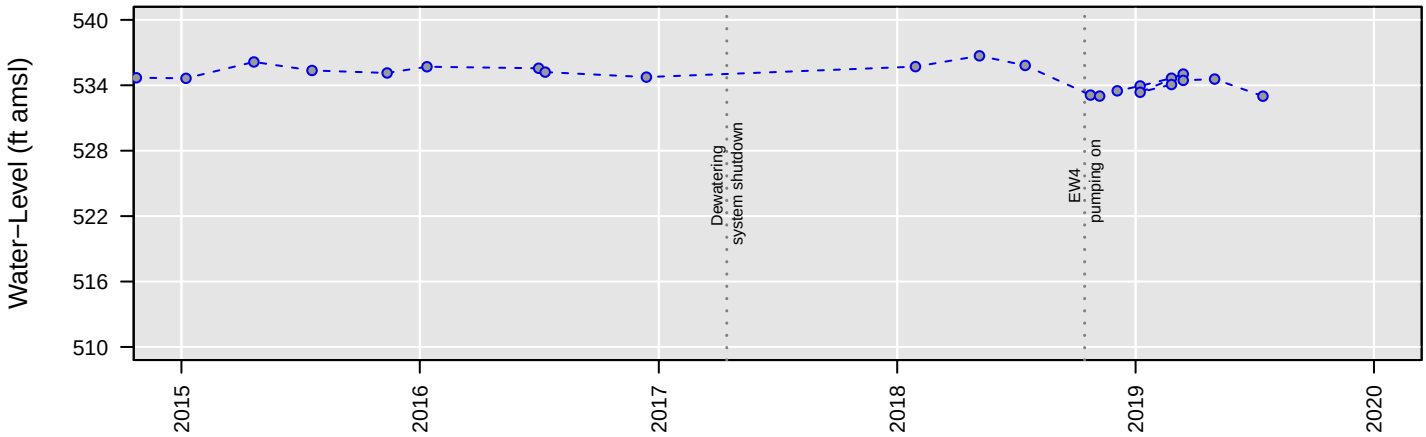
PZ3

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



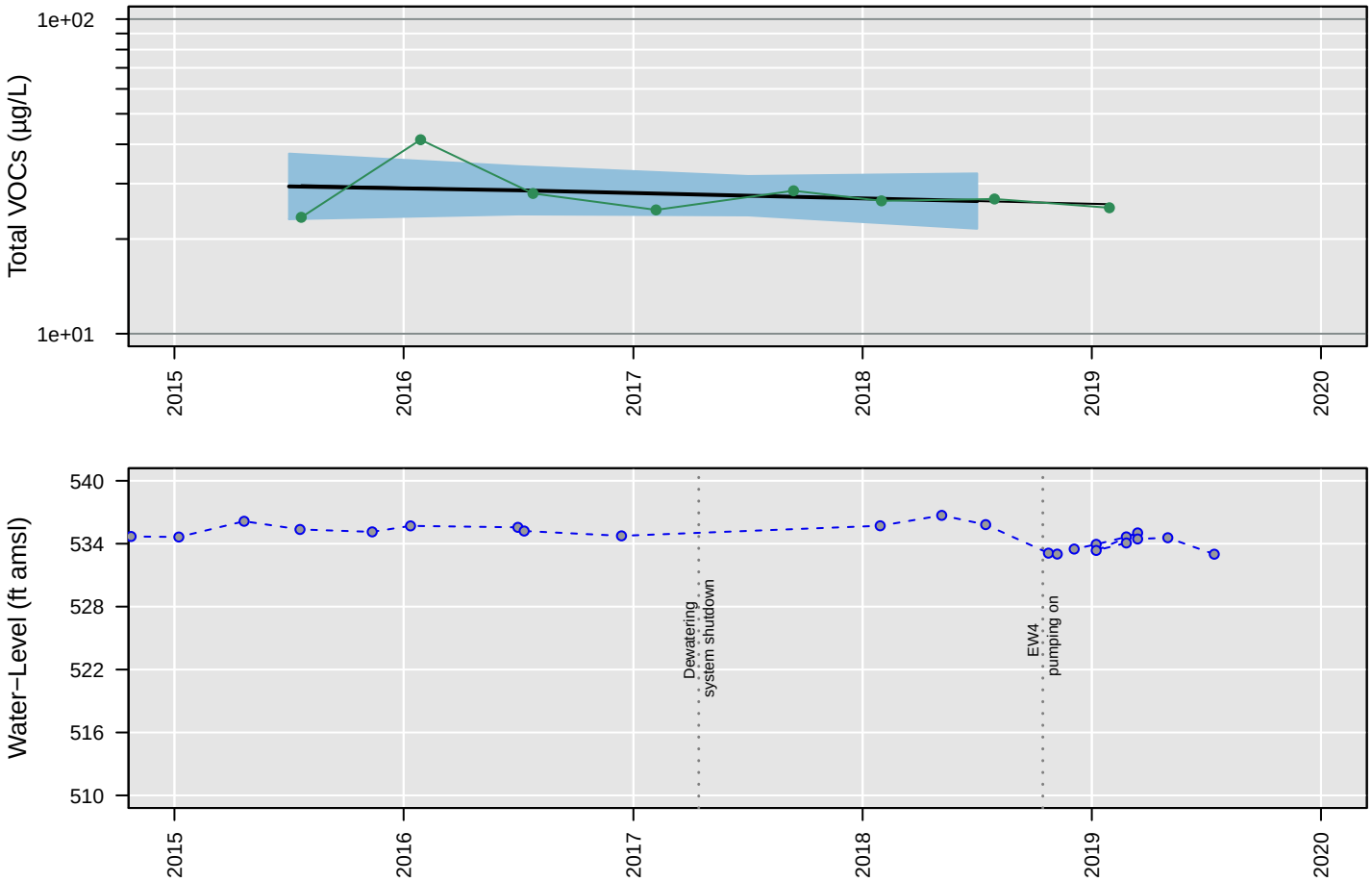


No Analysis Performed

PZ3

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

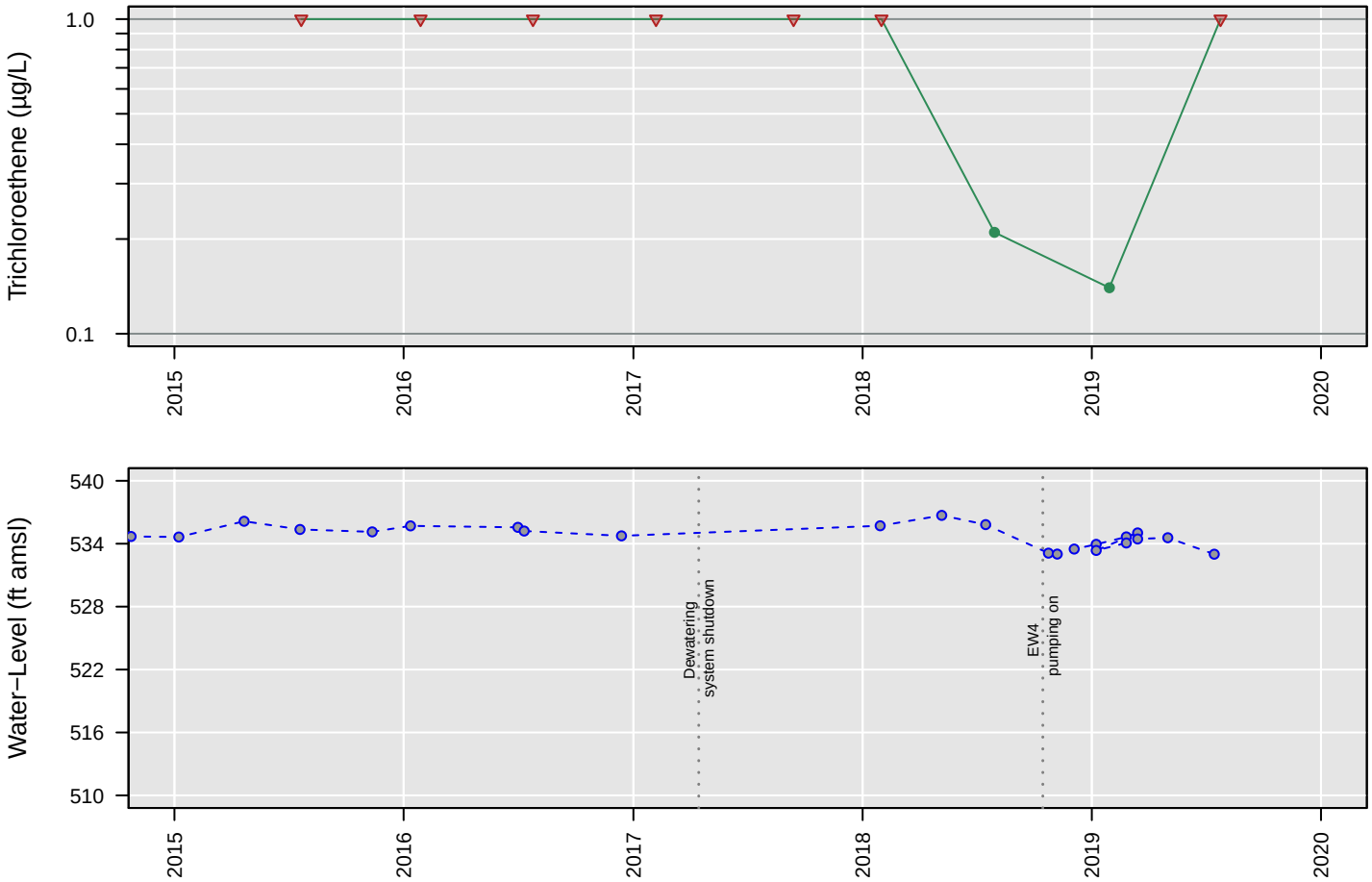
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 26 µg/L
UCL: 32 µg/L
LCL: 22 µg/L

PZ3

Trichloroethene

Number of Comparisons: 9
Percent NDs: 78%

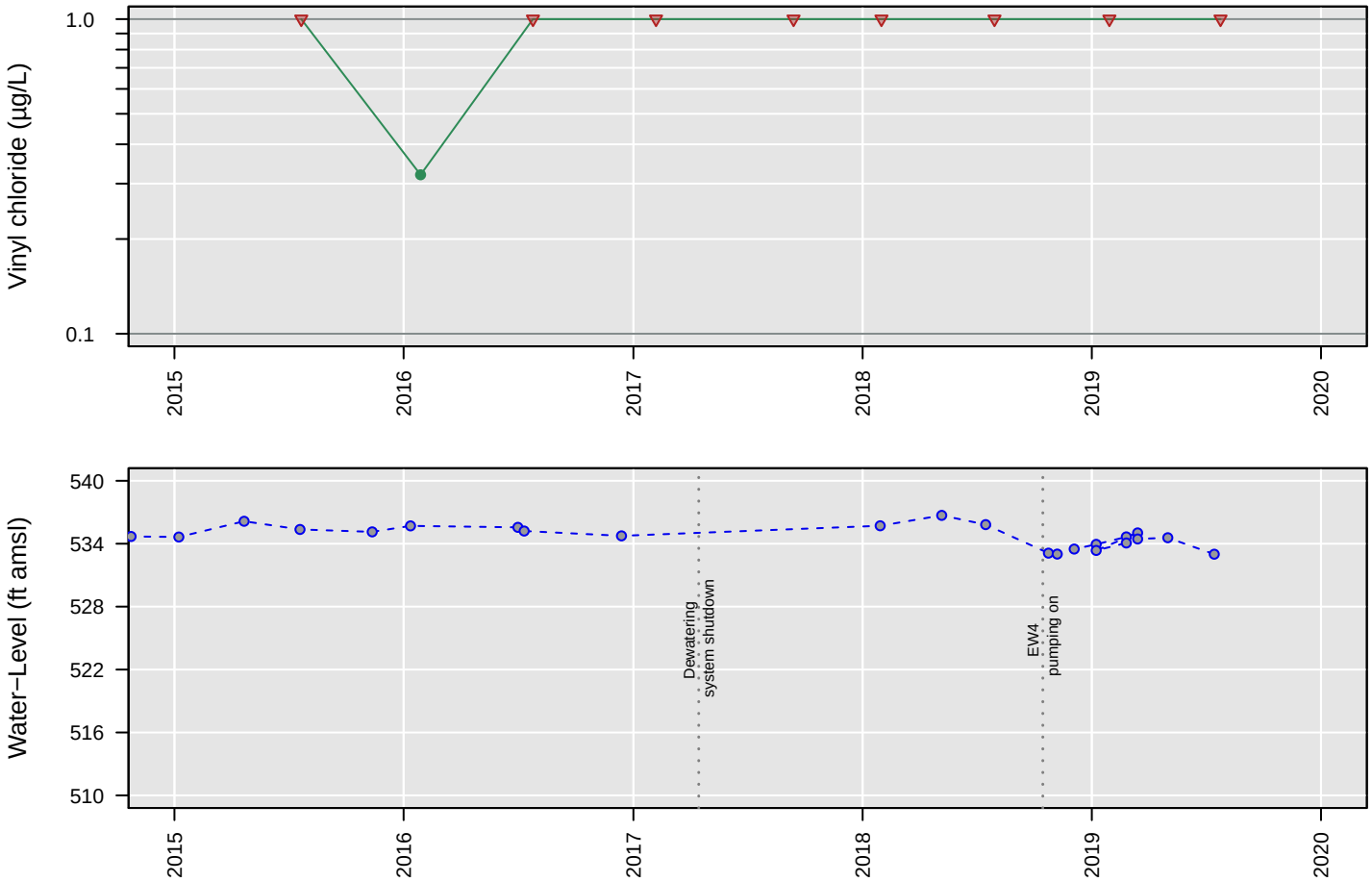


No Analysis Performed

PZ3

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 89%

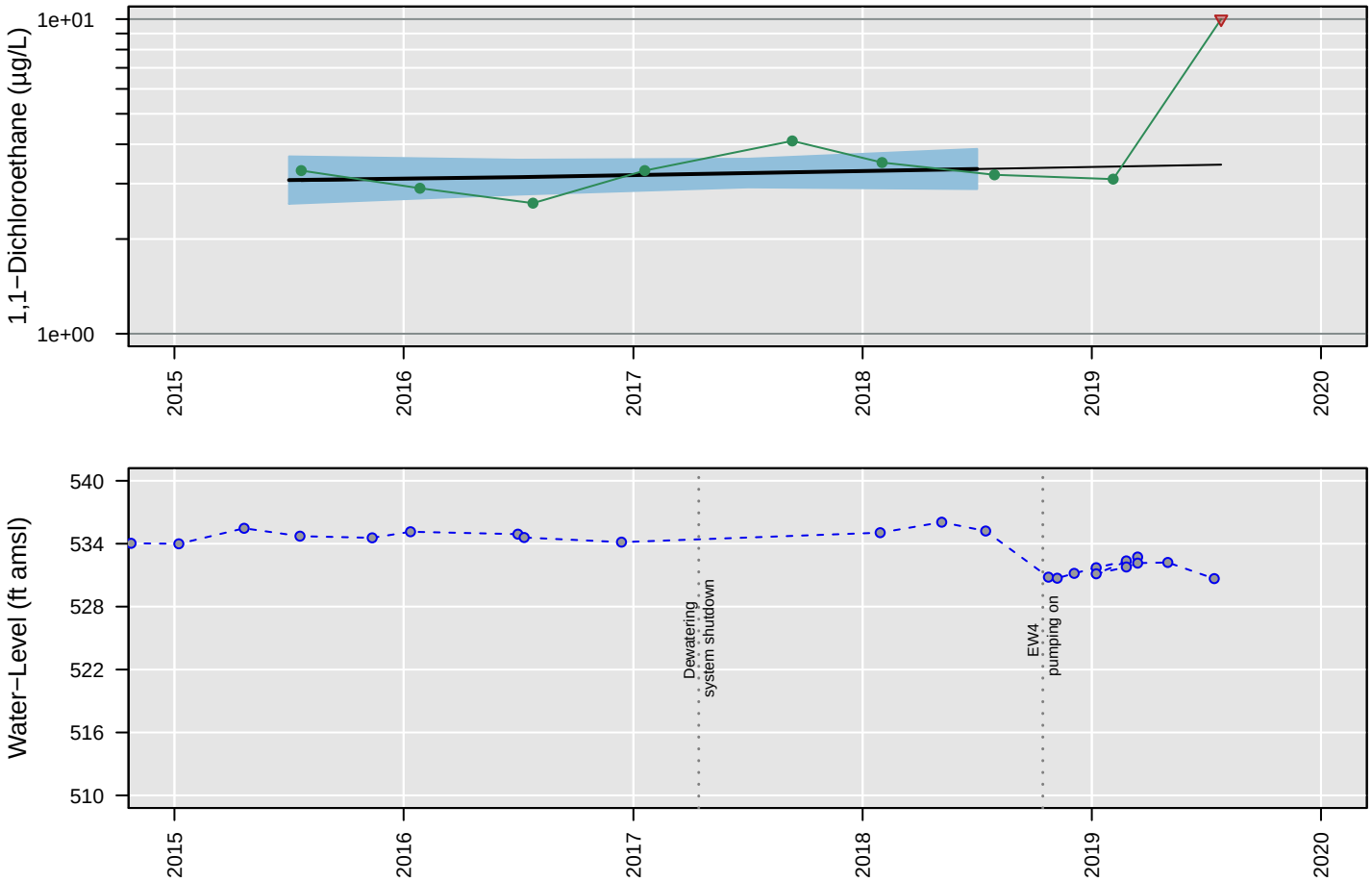


No Analysis Performed

PZ4

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 11%



Censored Regression (Tobit) Model

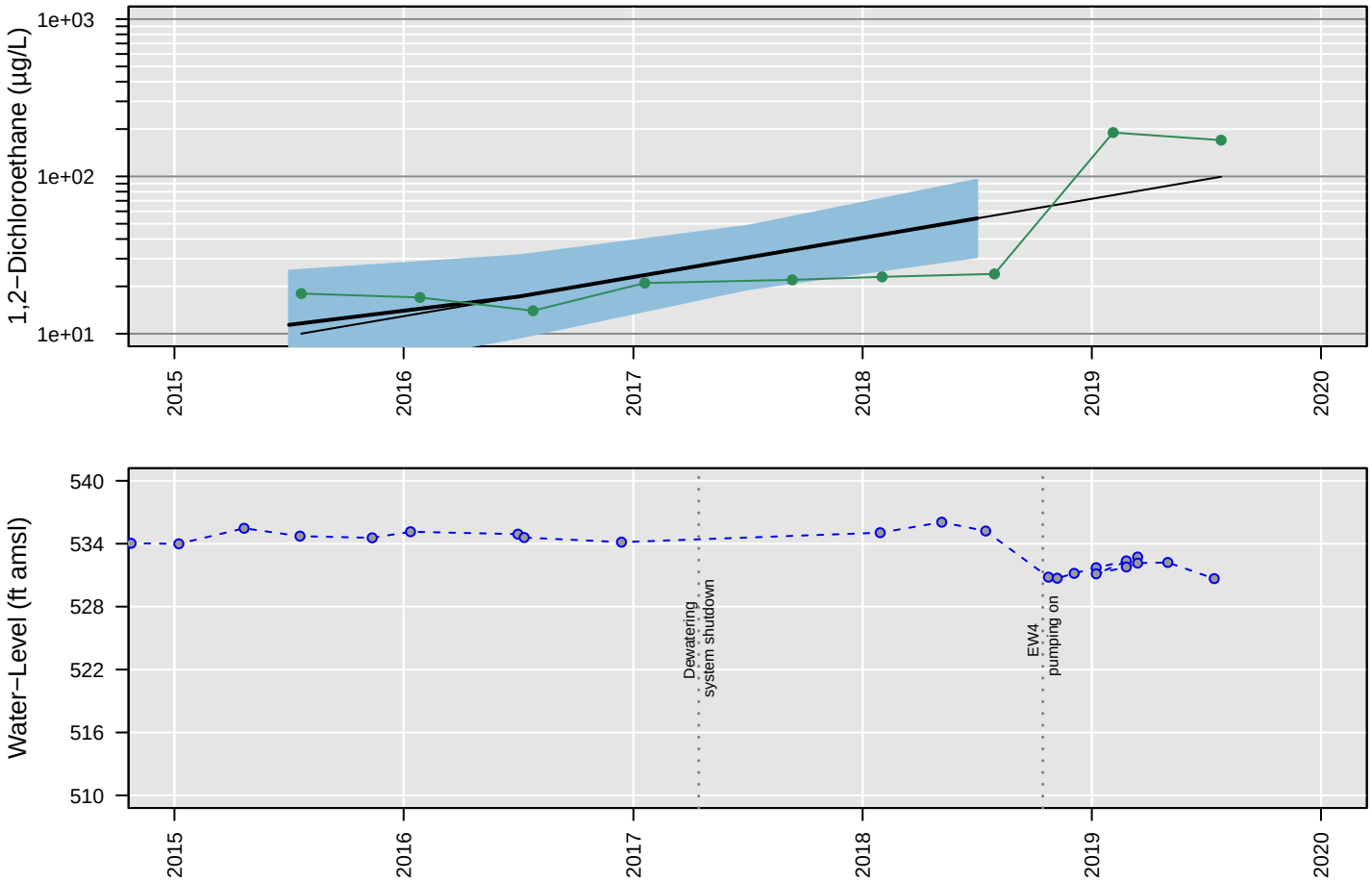
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.3 µg/L
UCL: 3.9 µg/L
LCL: 2.9 µg/L

PZ4

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

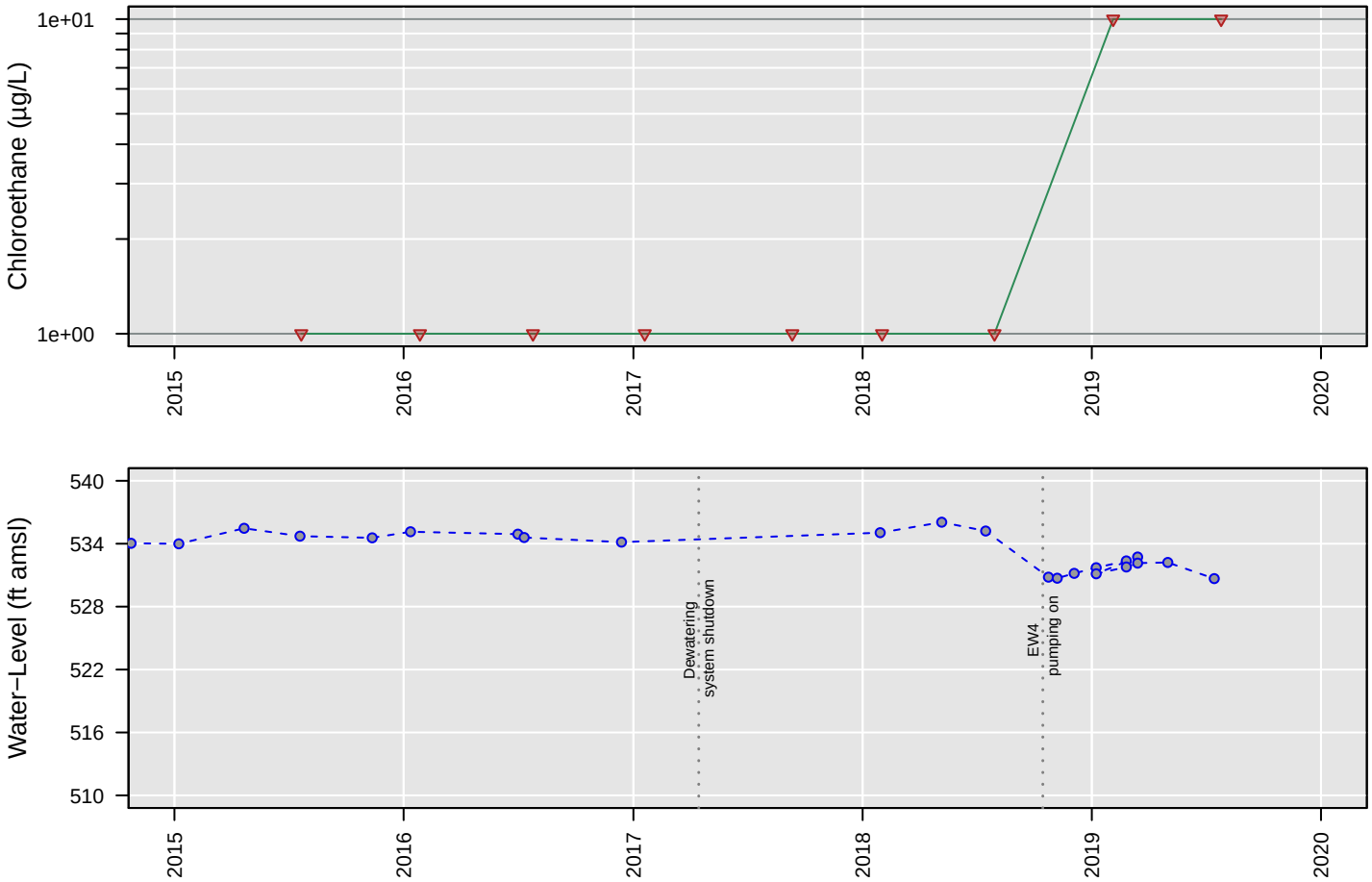
ln Conc. = 0.0016 (+/− 0.0004)*Date + −24 (+/− 6.9)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 54 µg/L
UCL: 95 µg/L
LCL: 31 µg/L

PZ4

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%



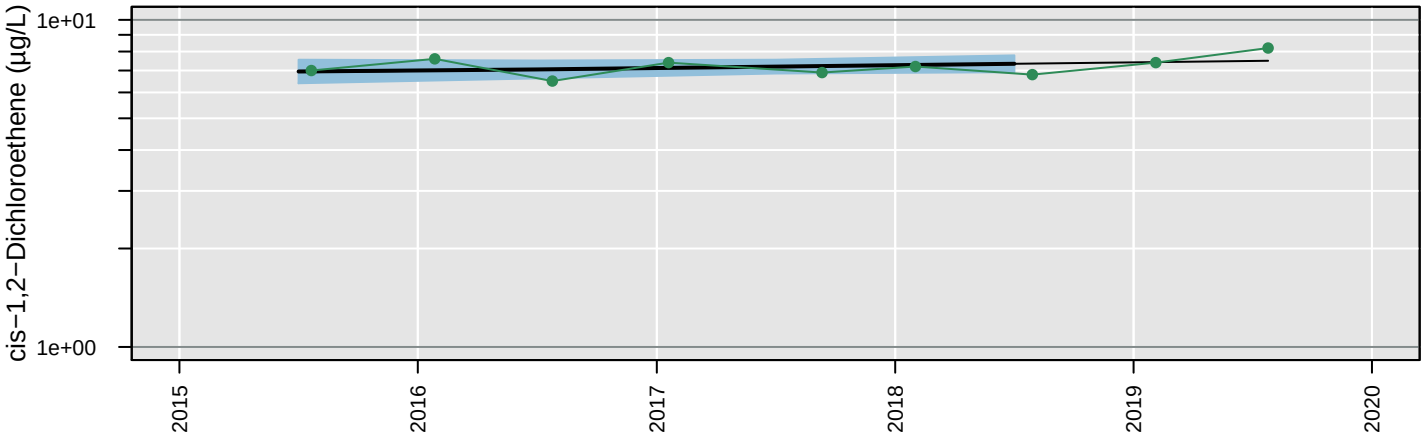
No Analysis Performed

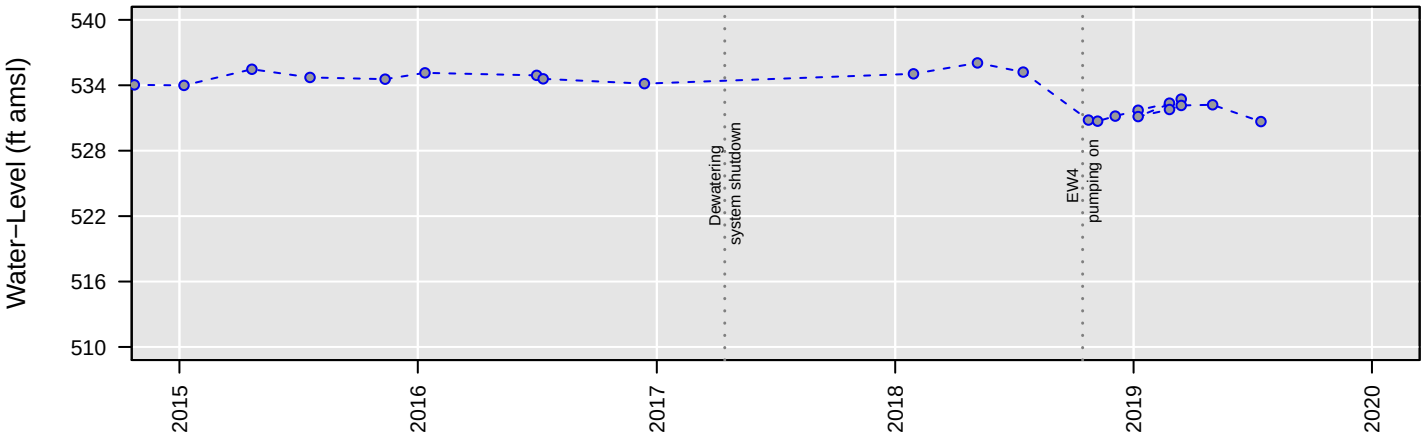
PZ4

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

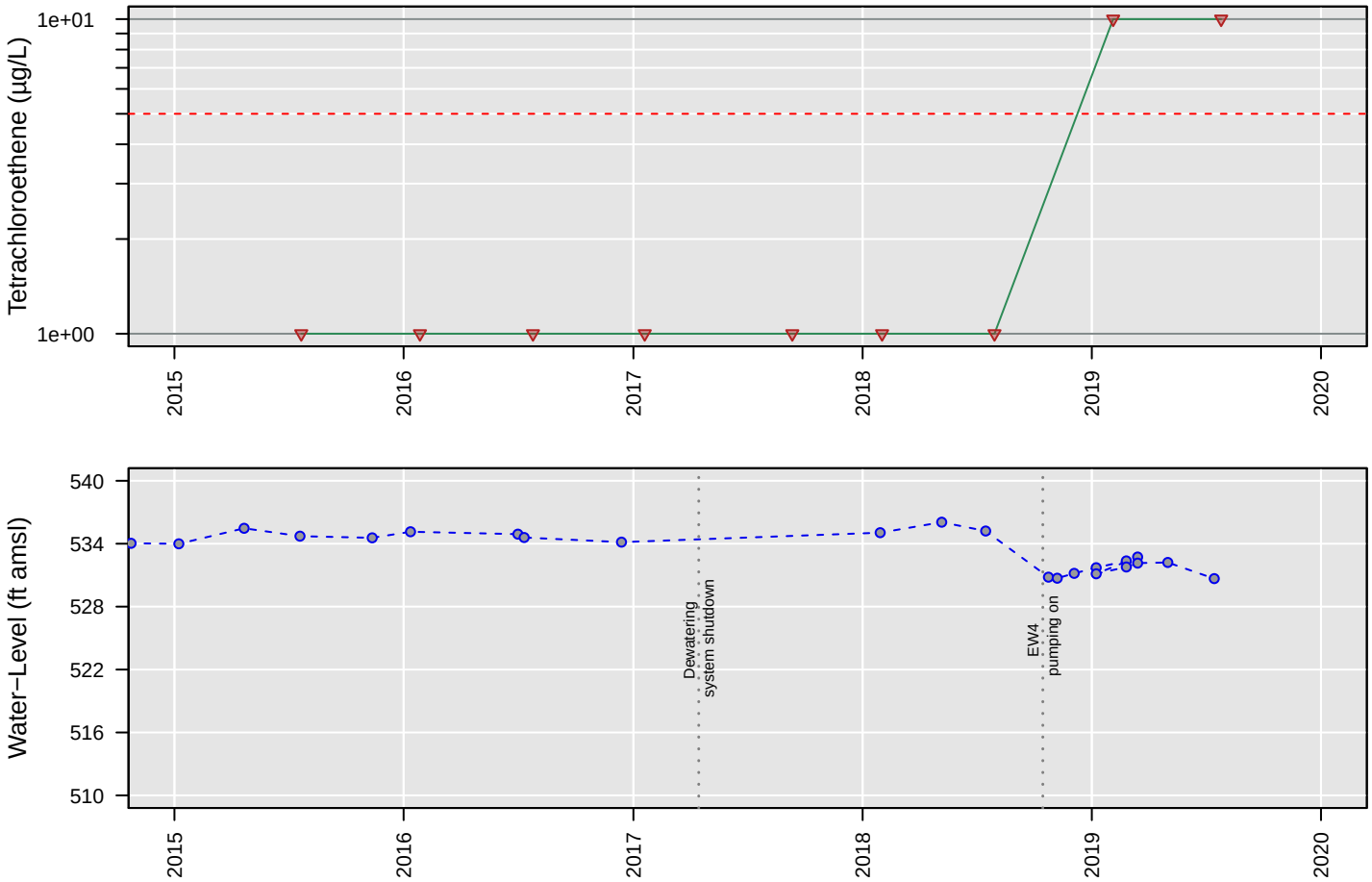
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 7.3 µg/L
UCL: 7.8 µg/L
LCL: 6.9 µg/L

PZ4

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%



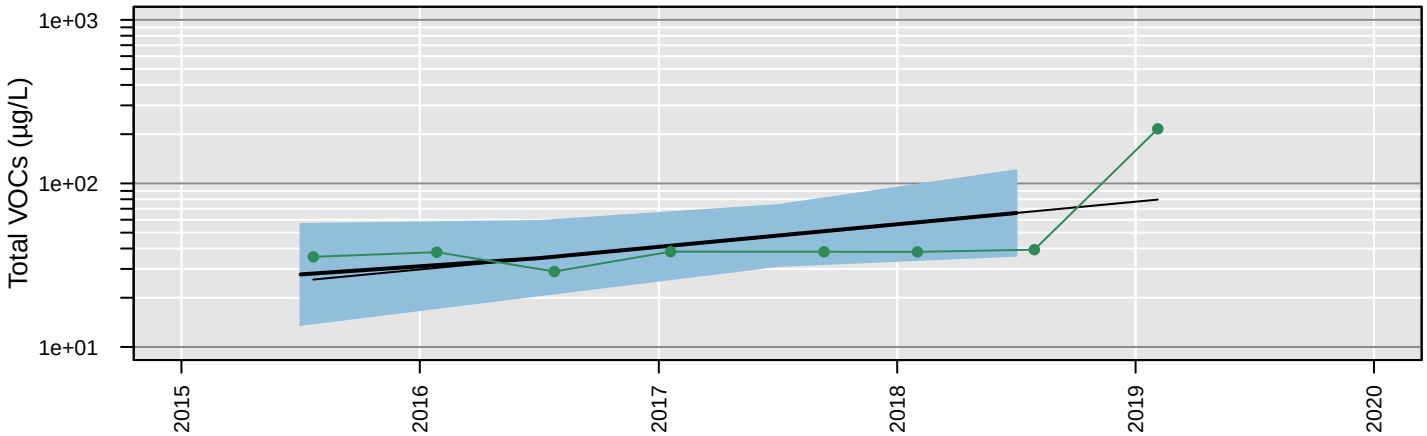
No Analysis Performed

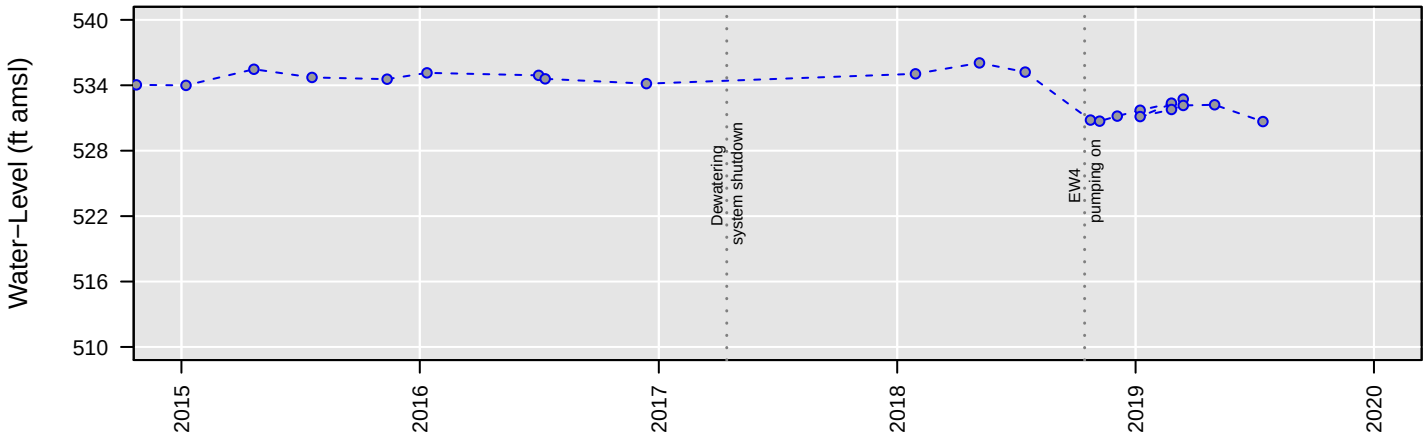
PZ4

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

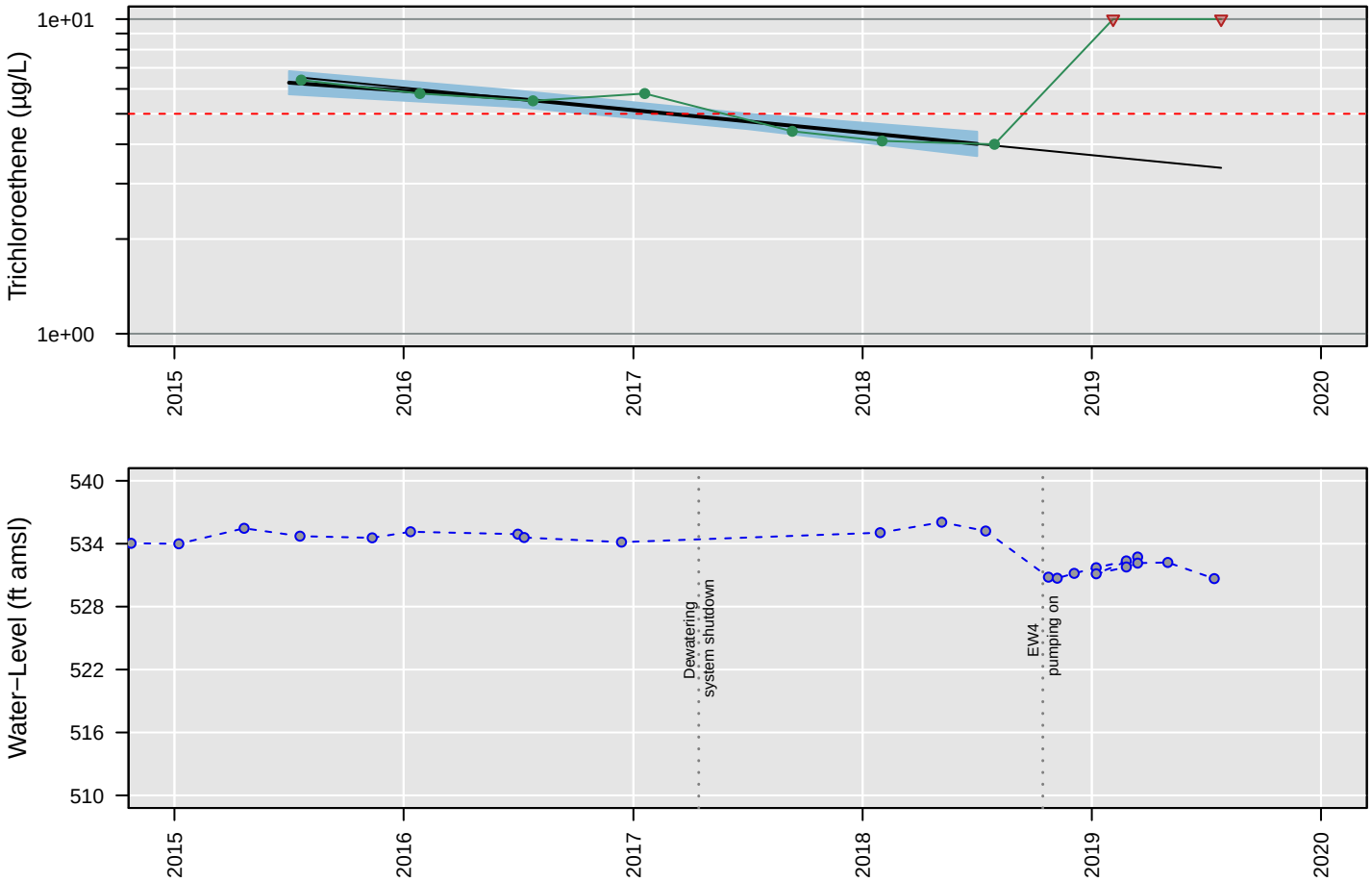
ln Conc. = 0.00087 (+/− 0.00039)*Date + −11 (+/− 6.7)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 66 µg/L
UCL: 120 µg/L
LCL: 36 µg/L

PZ4

Trichloroethene

Number of Comparisons: 9
Percent NDs: 22%



Censored Regression (Tobit) Model

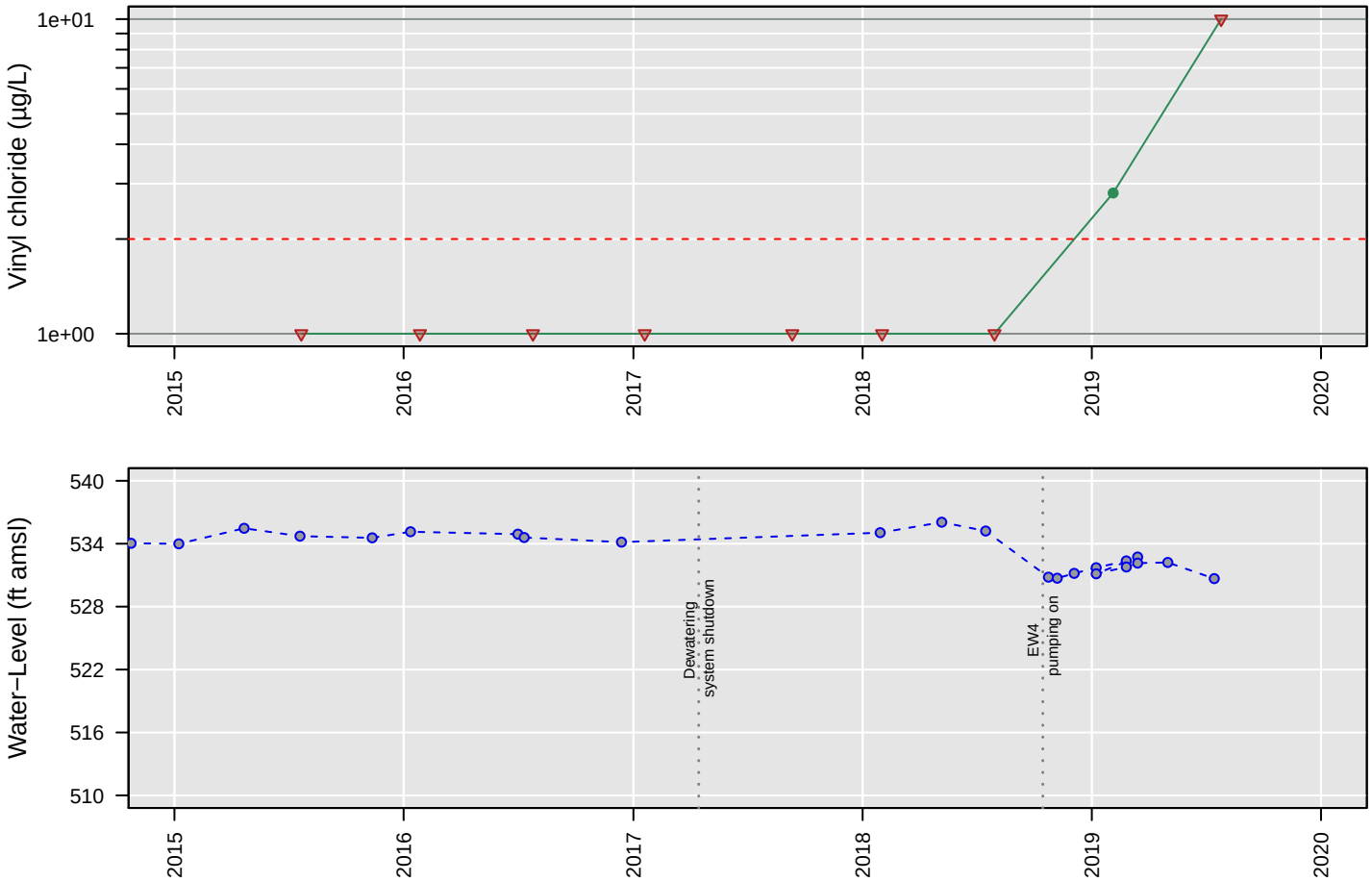
ln Conc. = −0.00045 (+/− 0.000057)*Date + 9.4 (+/− 0.98)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 4 µg/L
UCL: 4.4 µg/L
LCL: 3.7 µg/L

PZ4

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 89%

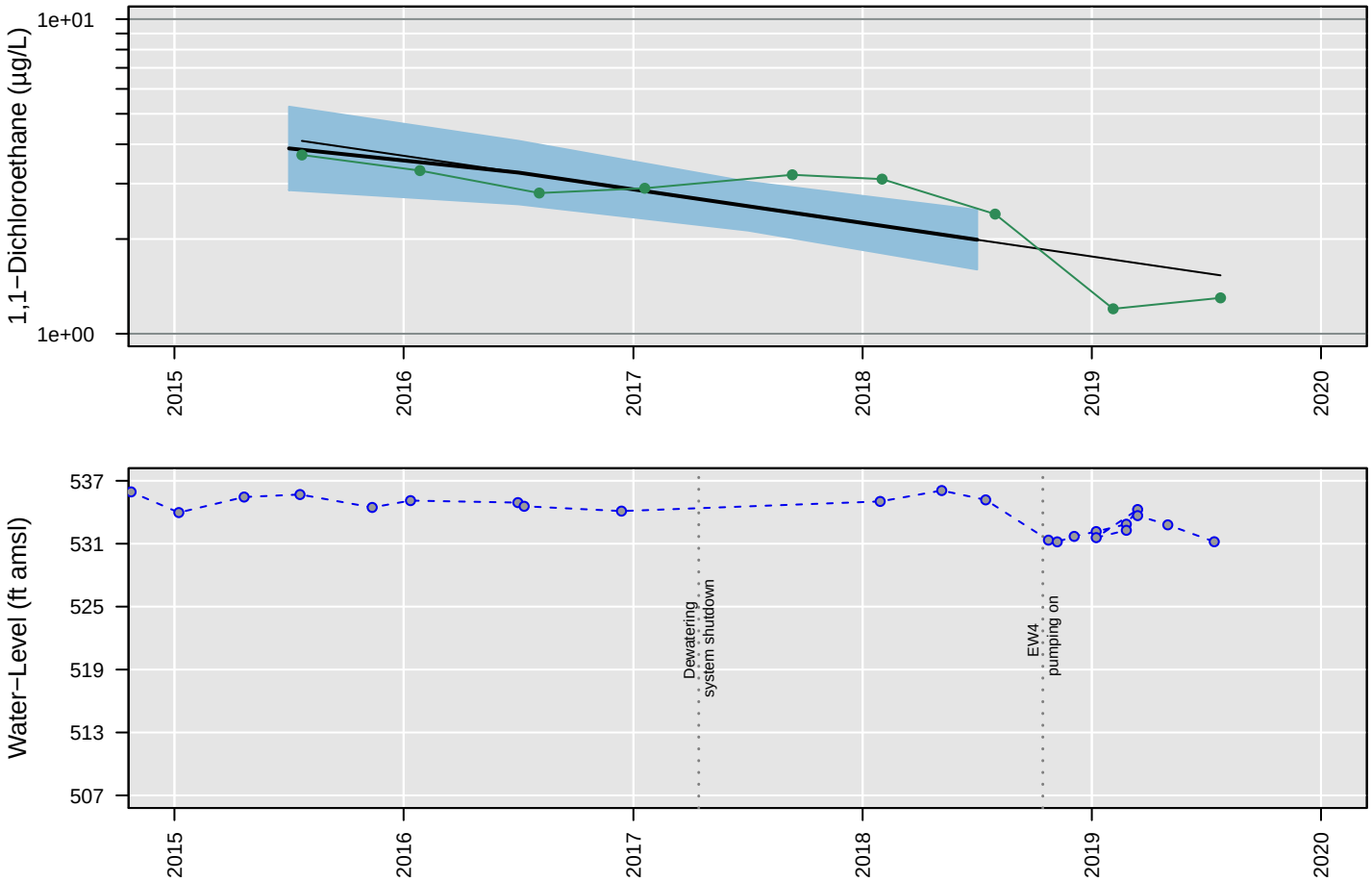


No Analysis Performed

PZ5

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

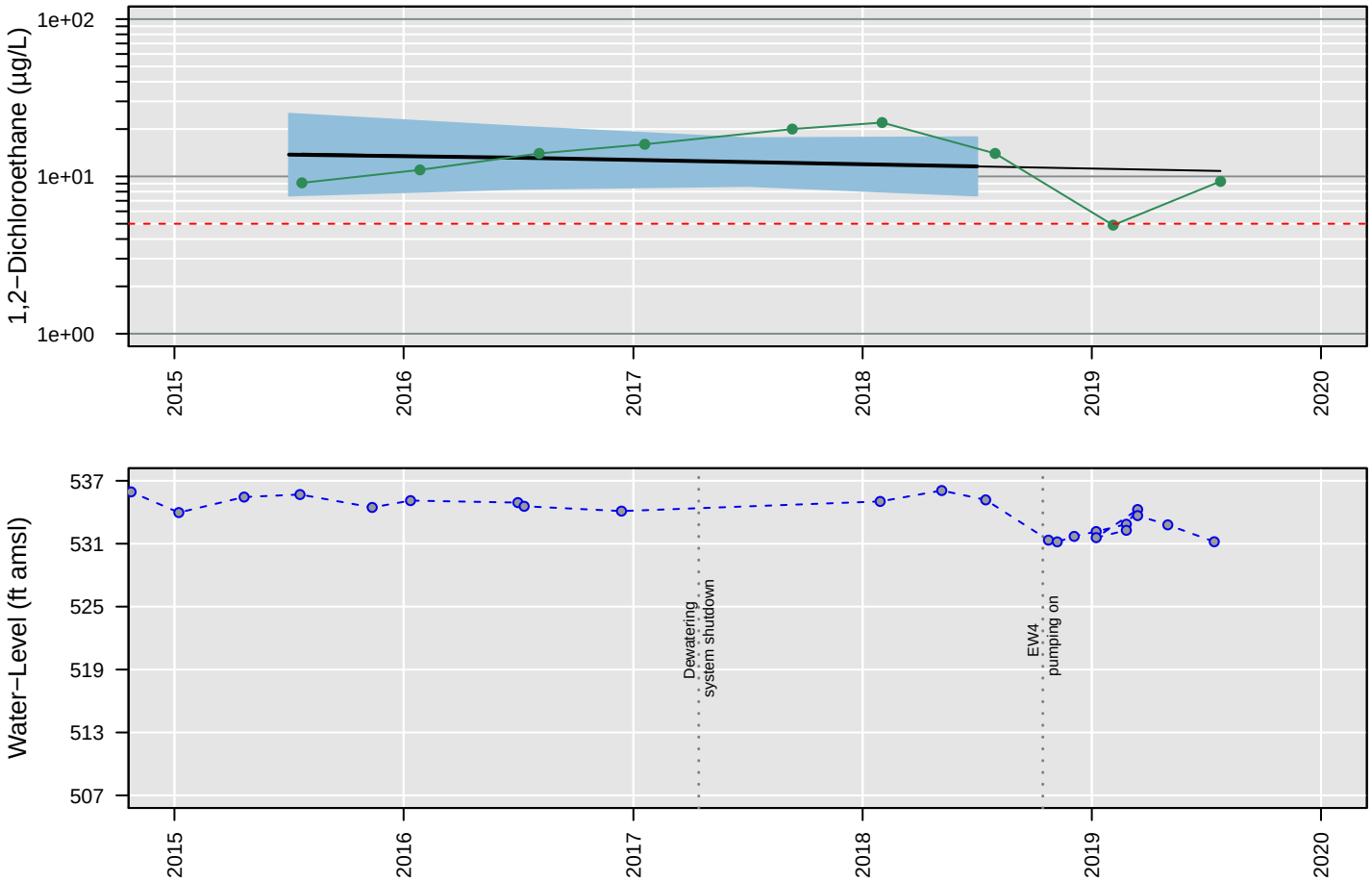
ln Conc. = −0.00067 (+/− 0.00015)*Date + 13 (+/− 2.7)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 2 µg/L
UCL: 2.5 µg/L
LCL: 1.6 µg/L

PZ5

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

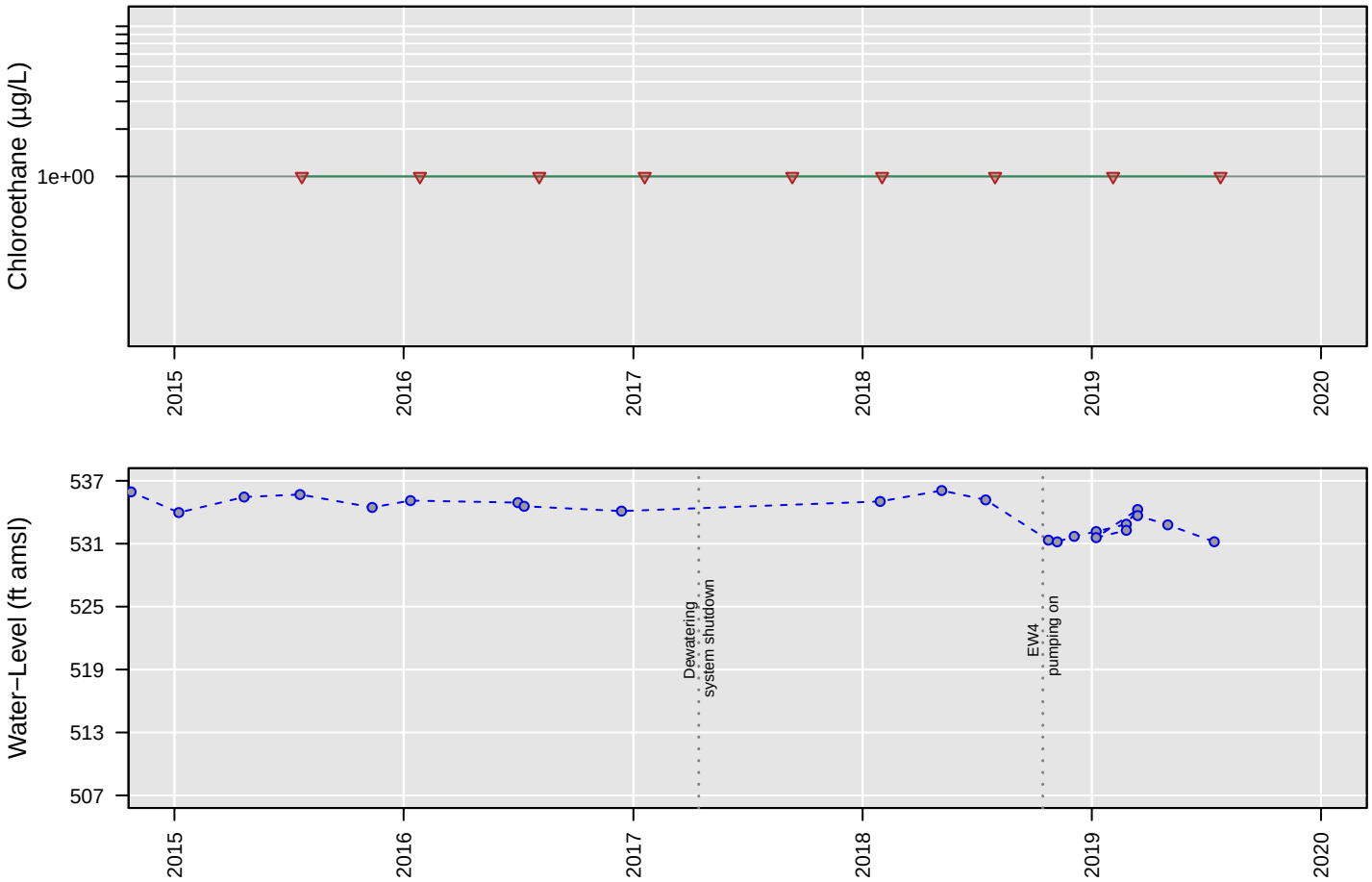
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 12 µg/L
UCL: 18 µg/L
LCL: 7.6 µg/L

PZ5

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%



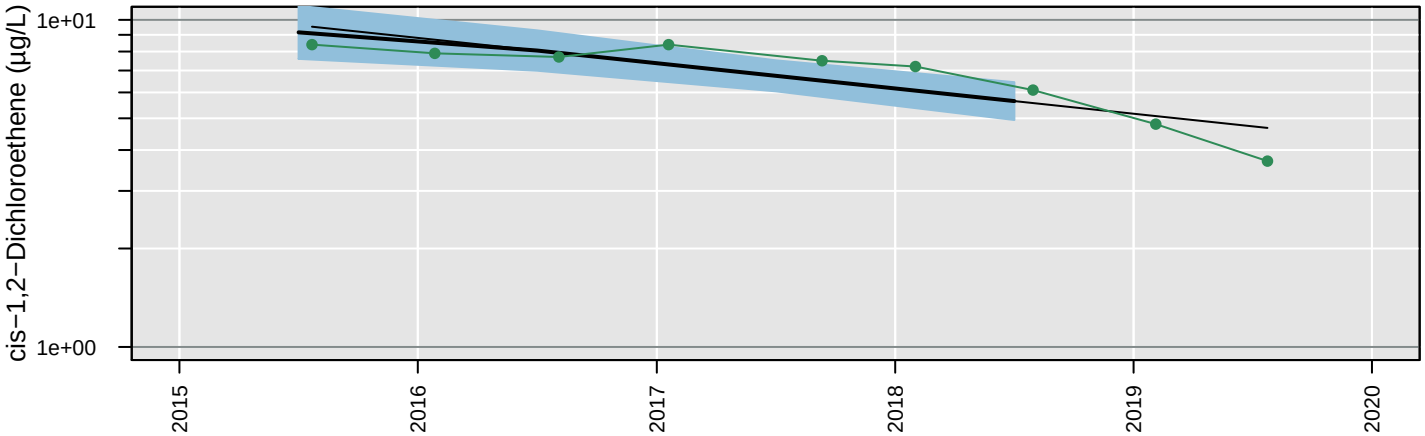
No Analysis Performed

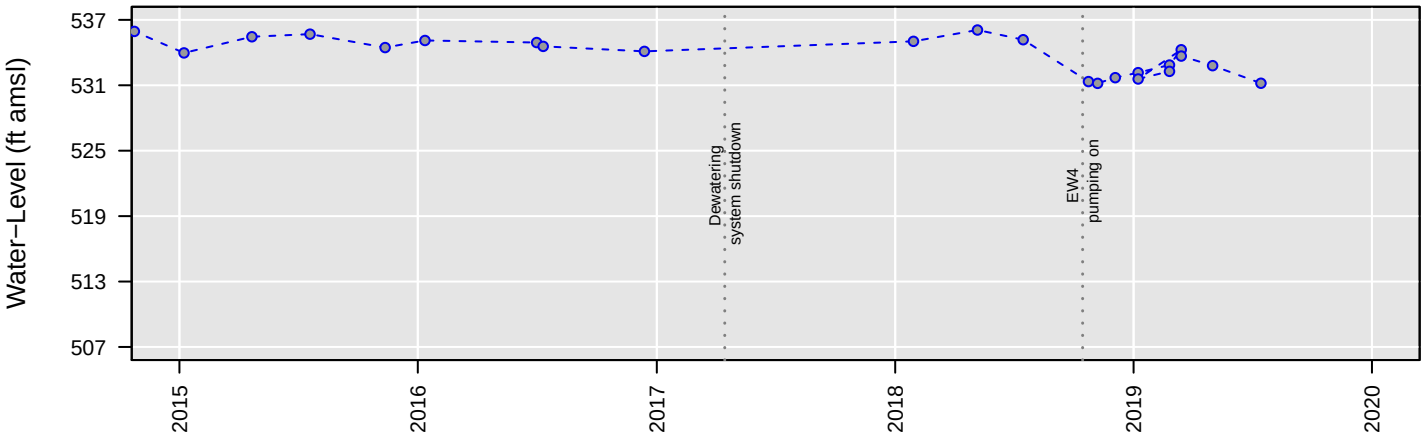
PZ5

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00049 (+/− 0.000094)*Date + 10 (+/− 1.6)

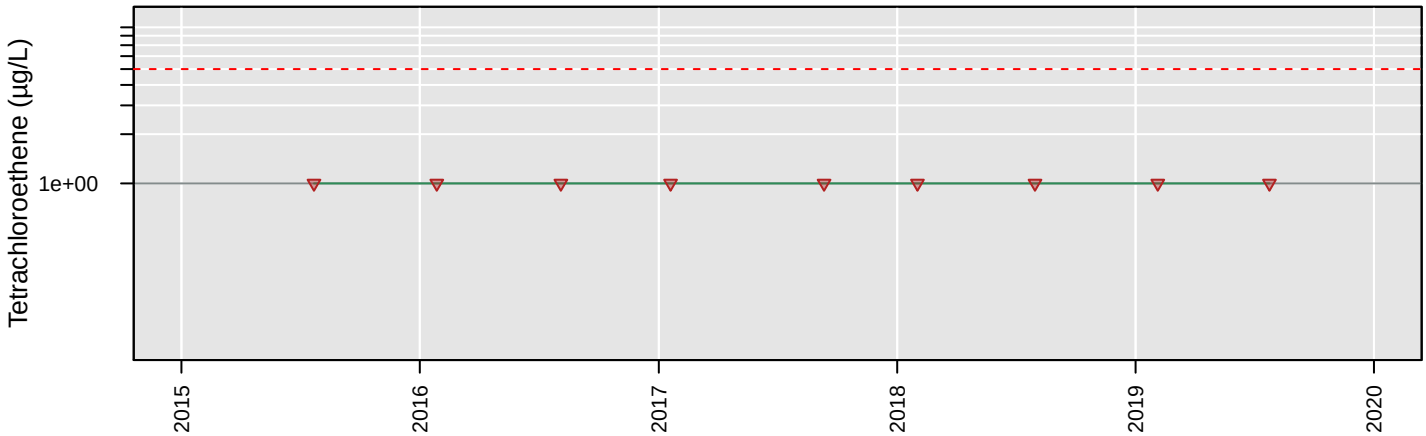
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.6 µg/L
UCL: 6.4 µg/L
LCL: 4.9 µg/L

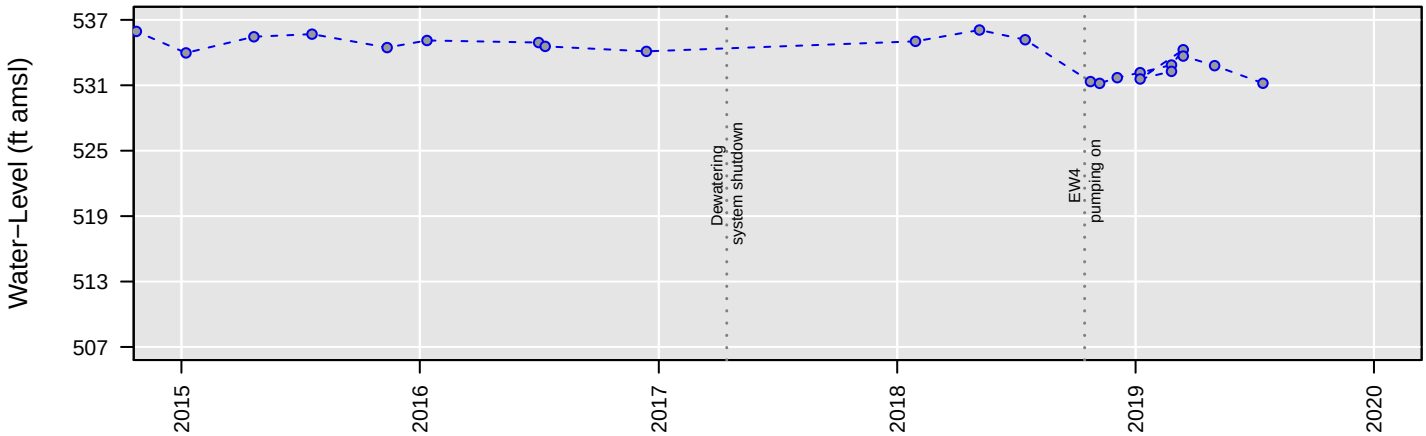
PZ5

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



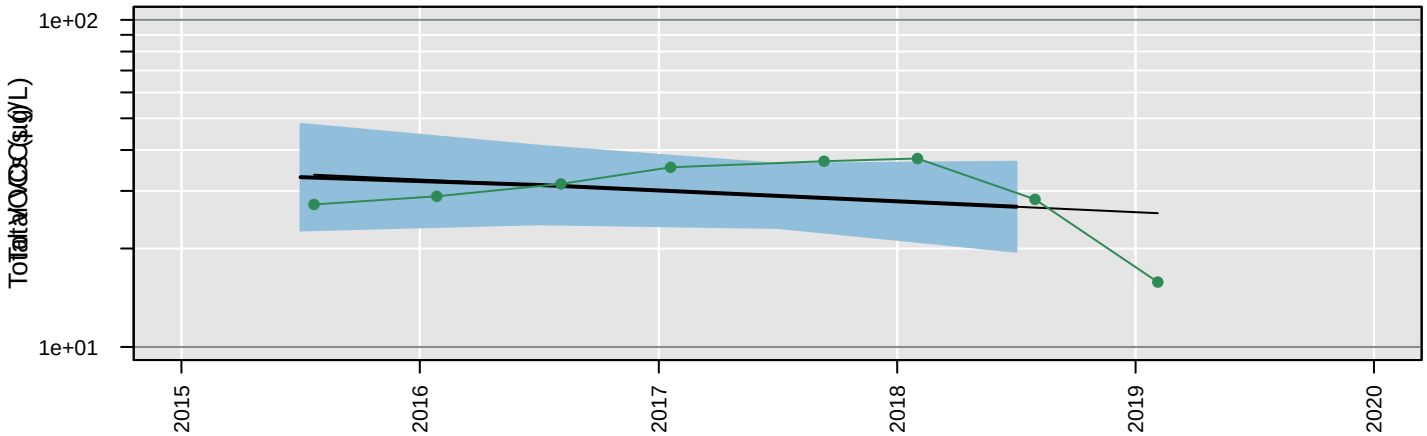


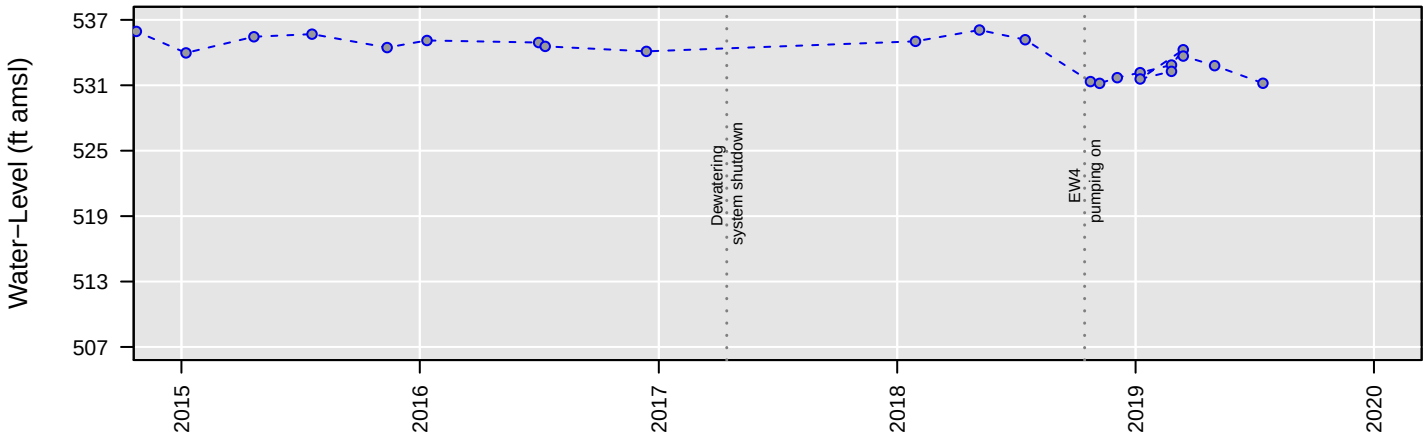
No Analysis Performed

PZ5

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%





Censored Regression (Tobit) Model

Trend Not Significant

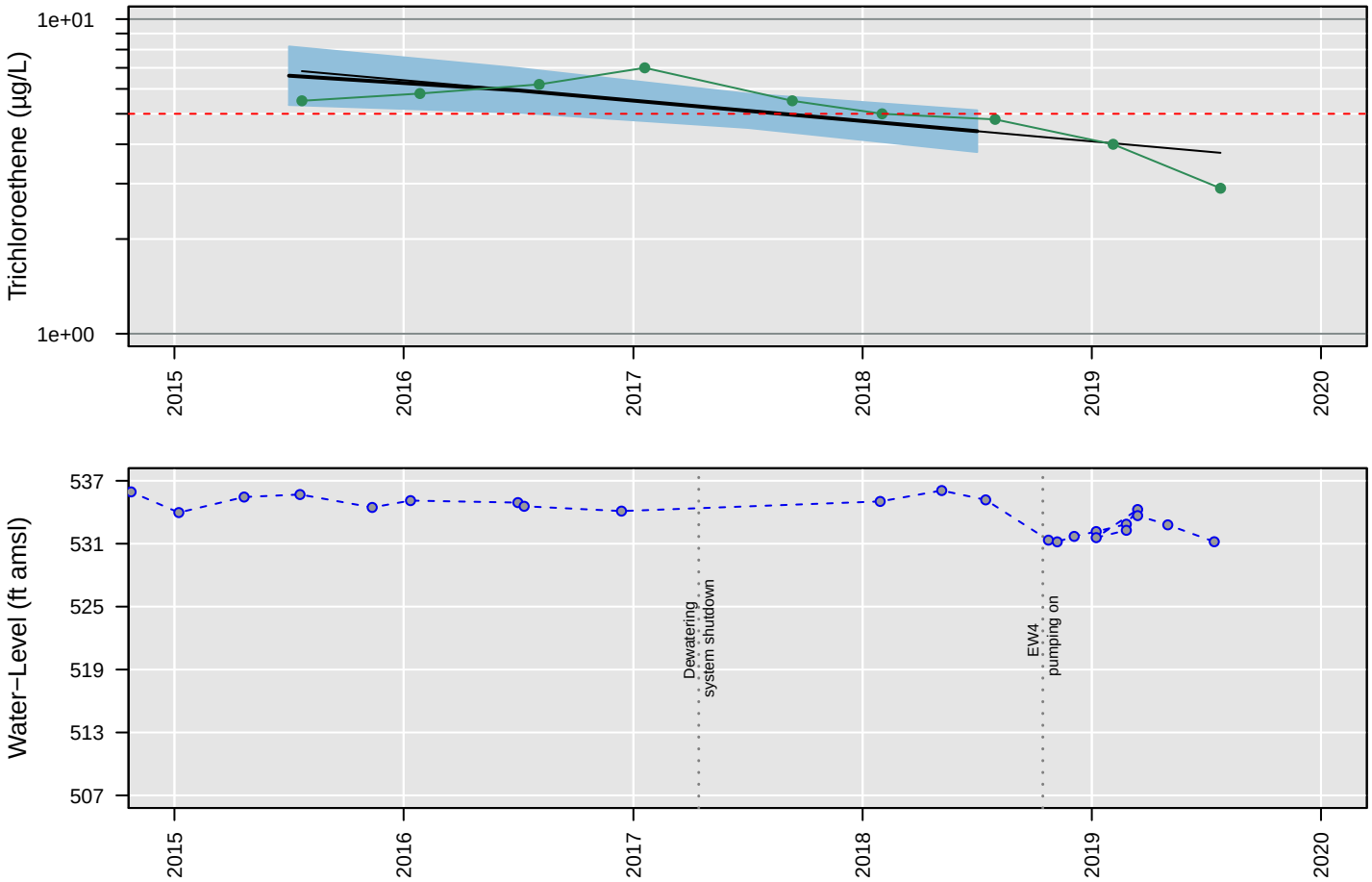
Regression Statistics for January 2018 to January 2019

Geometric Mean: 27 µg/L
UCL: 37 µg/L
LCL: 20 µg/L

PZ5

Trichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

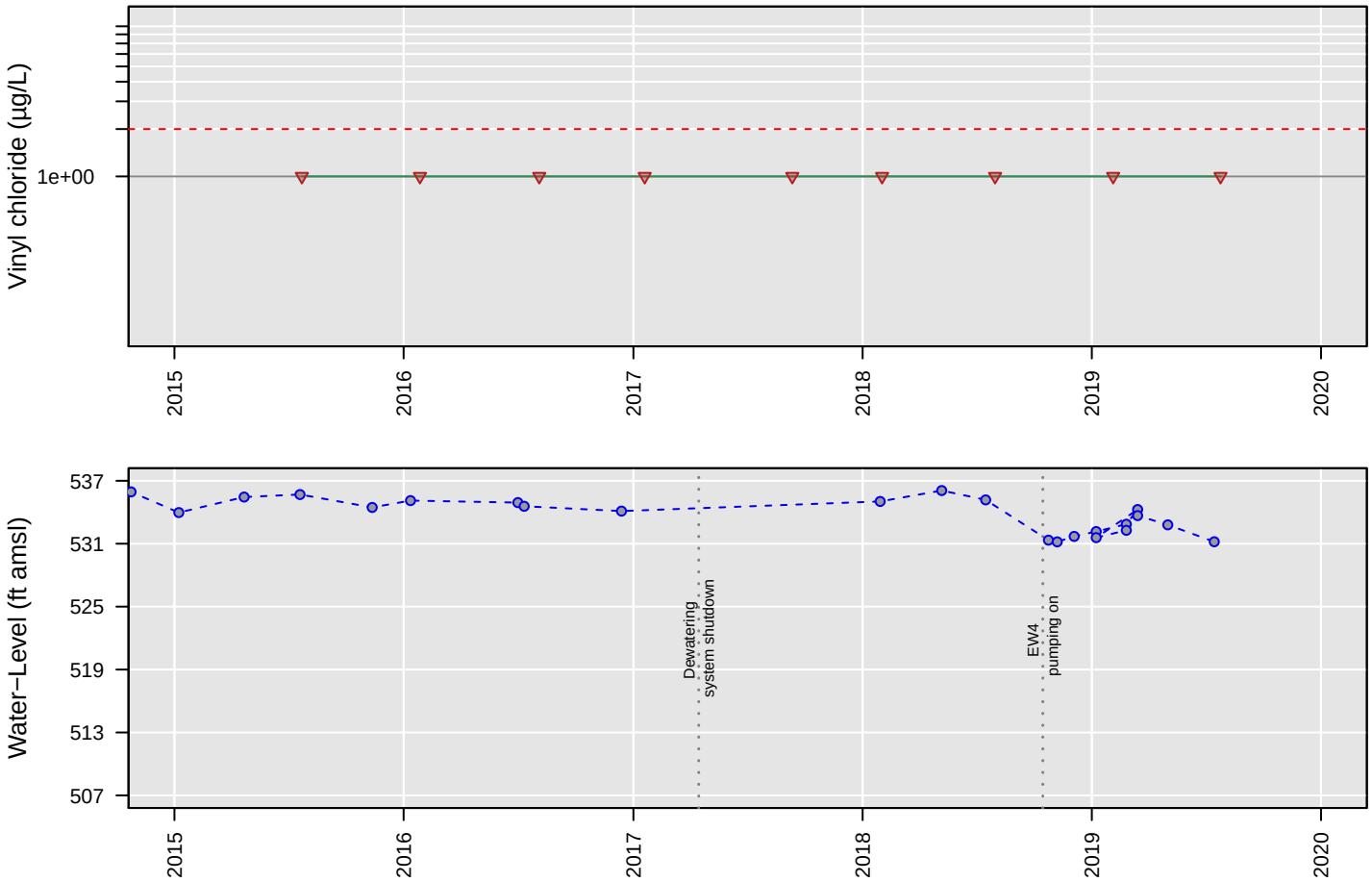
ln Conc. = −0.00041 (+/− 0.00011)*Date + 8.7 (+/− 1.9)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.4 µg/L
UCL: 5.1 µg/L
LCL: 3.8 µg/L

PZ5

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 100%



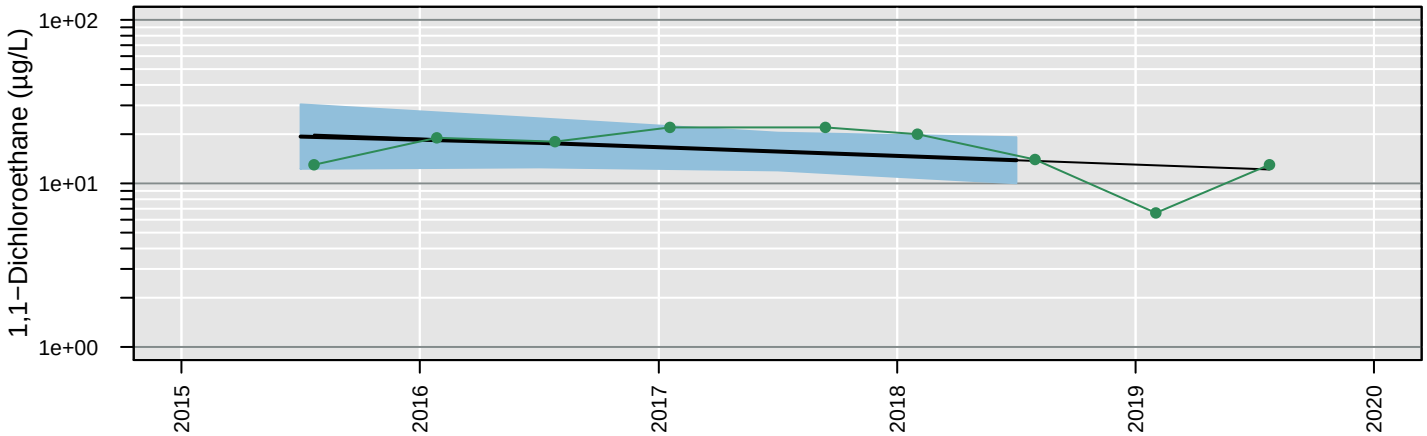
No Analysis Performed

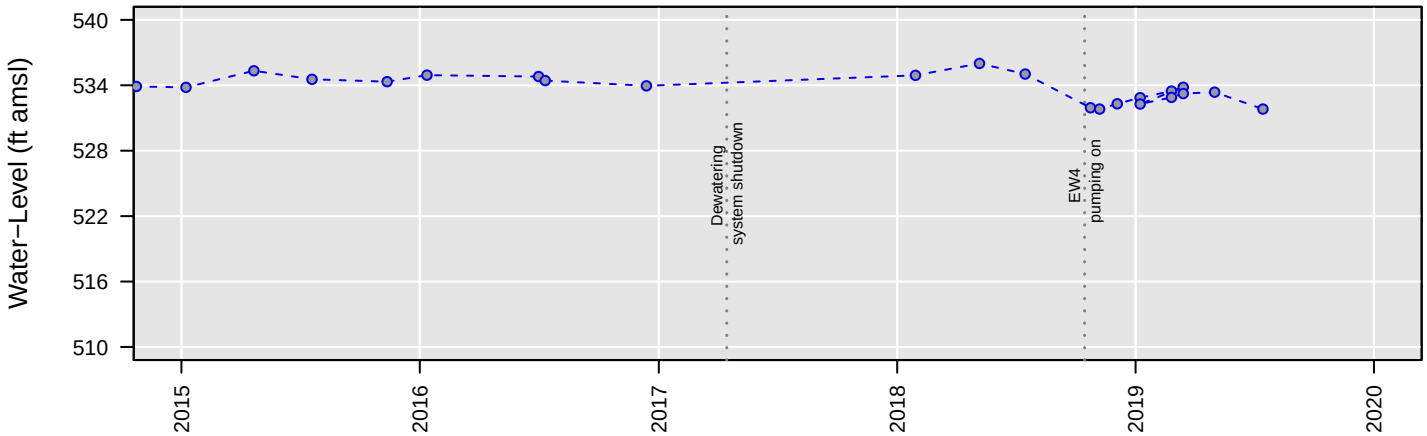
PZ6

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

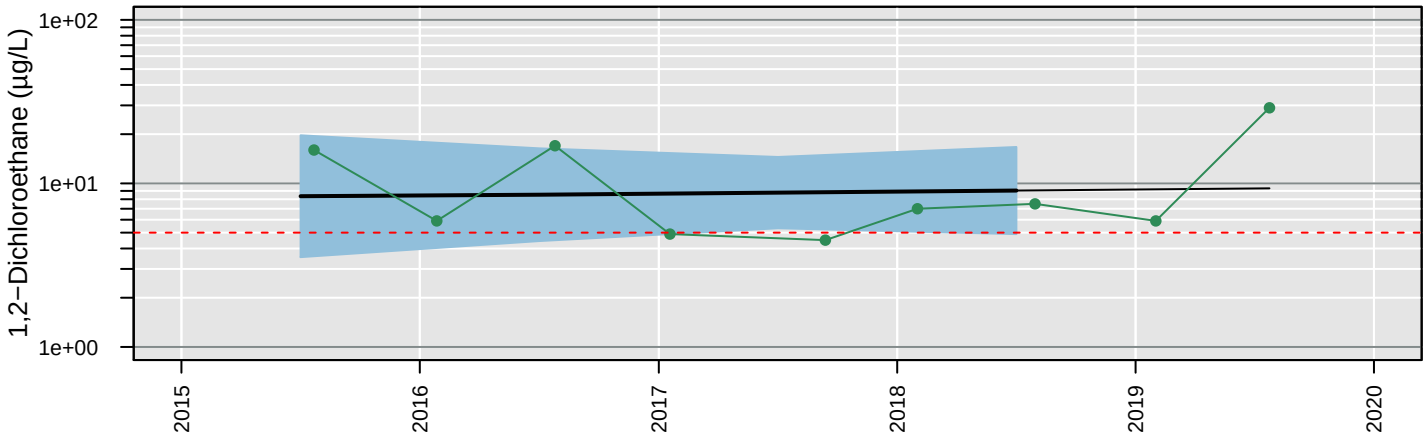
Regression Statistics for January 2018 to January 2019
Geometric Mean: 14 µg/L
UCL: 19 µg/L
LCL: 10 µg/L

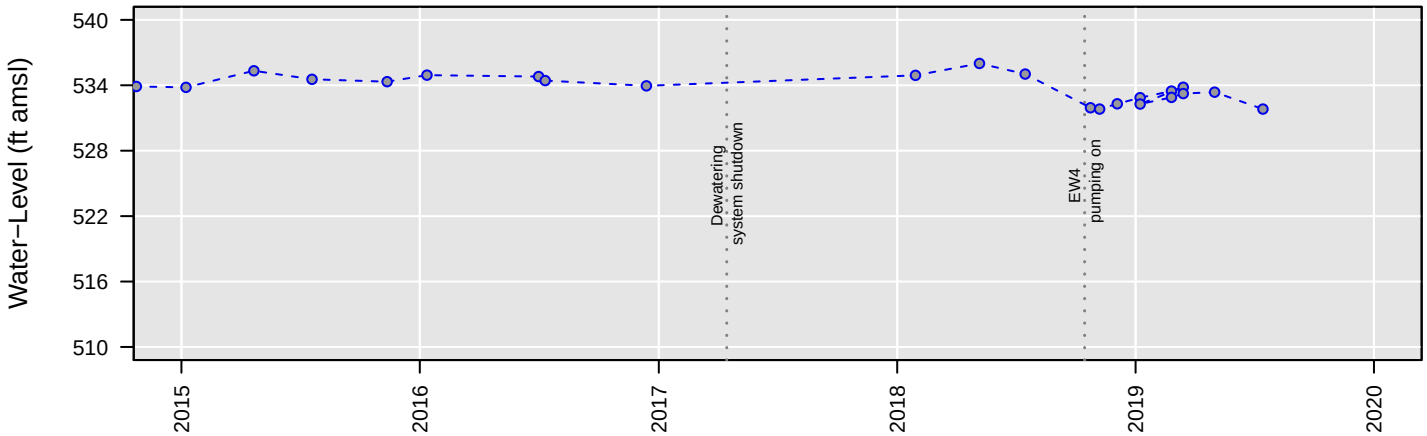
PZ6

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

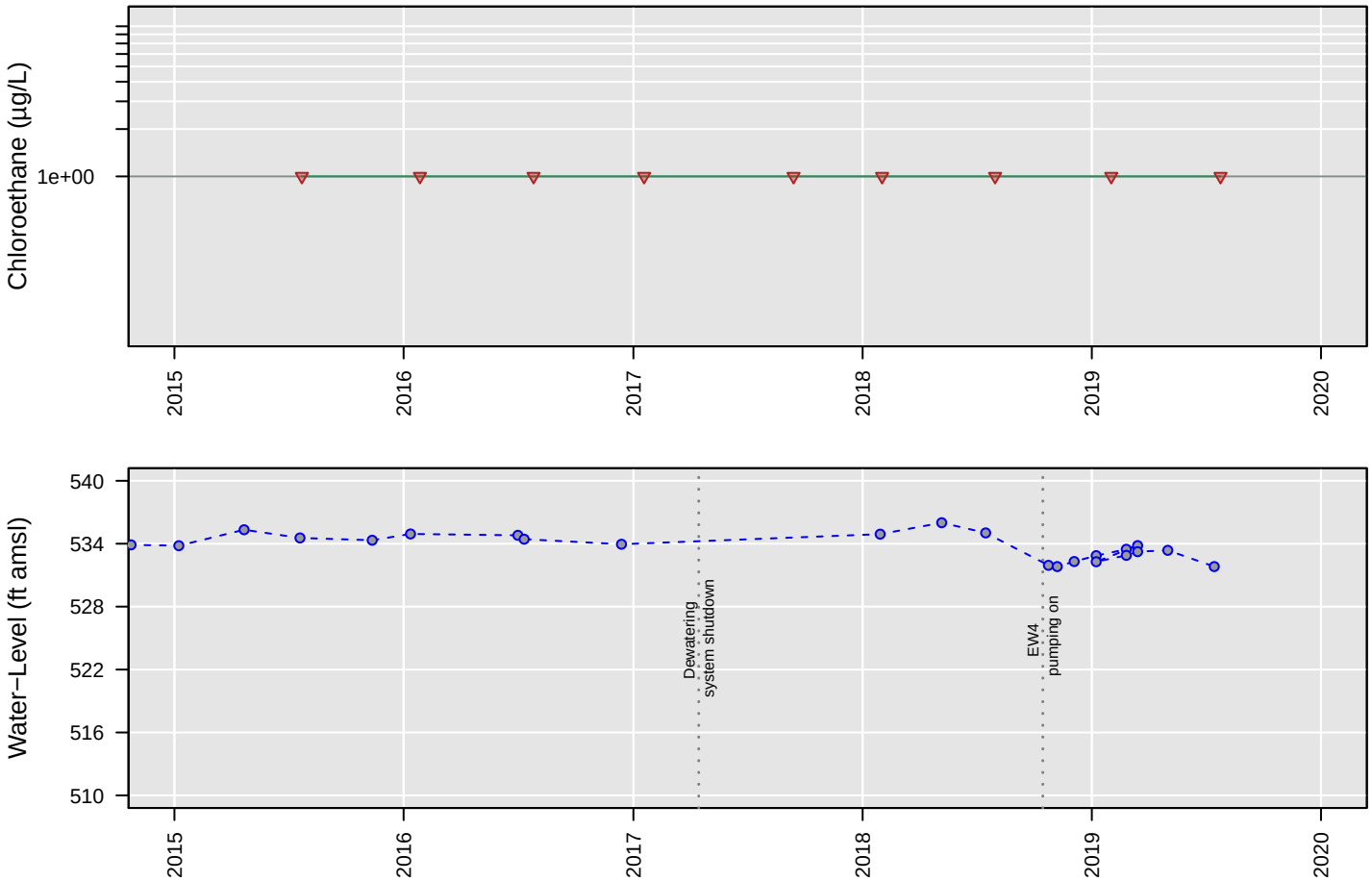
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 9 µg/L
UCL: 17 µg/L
LCL: 4.9 µg/L

PZ6

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%

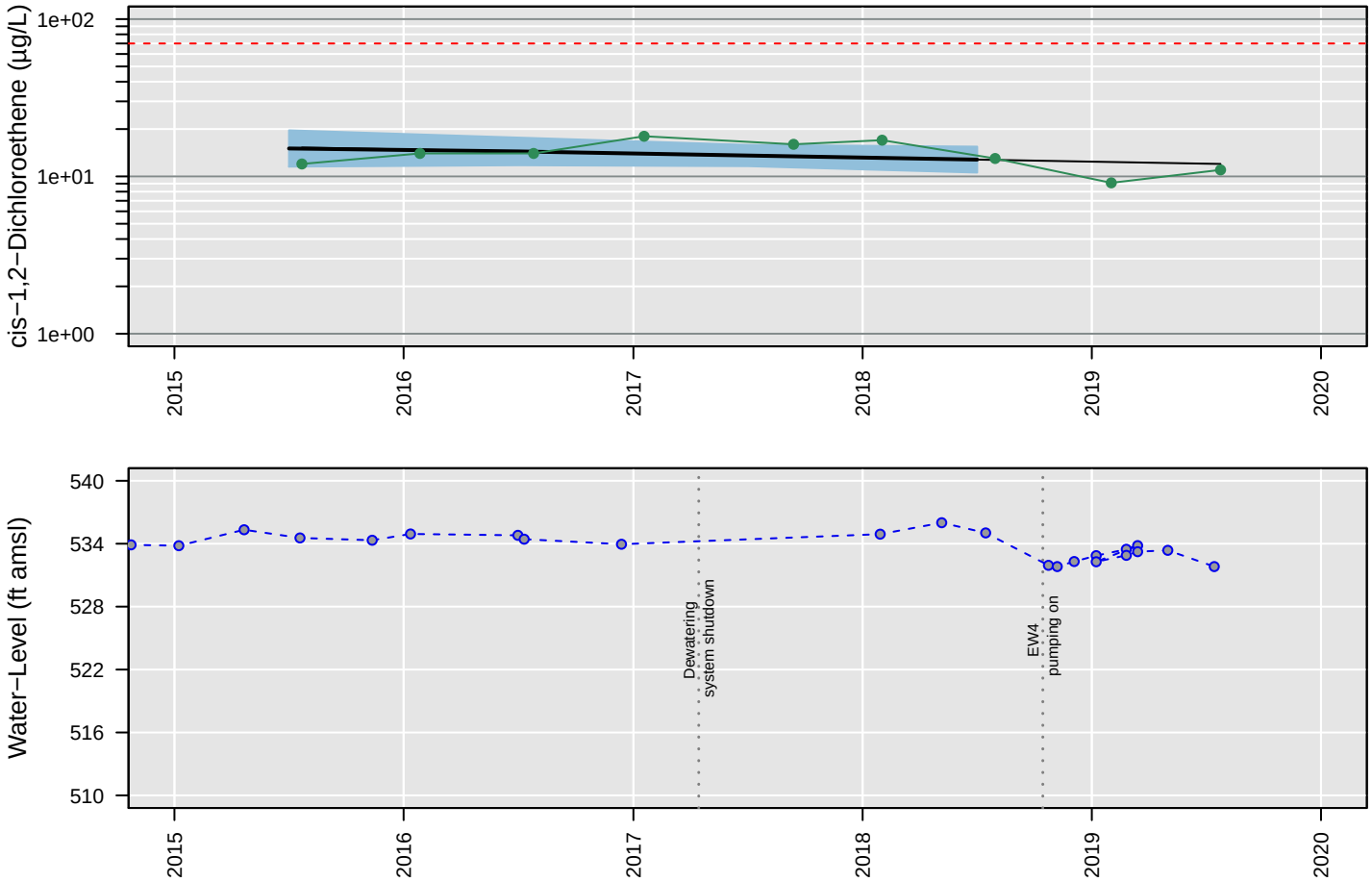


No Analysis Performed

PZ6

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

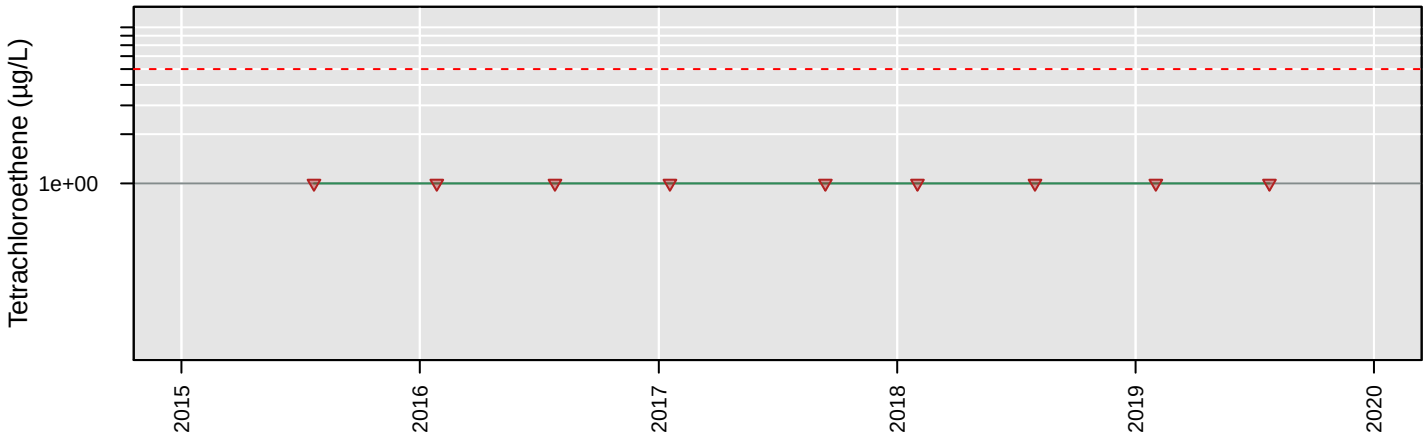
Regression Statistics for January 2018 to January 2019
Geometric Mean: 13 µg/L
UCL: 15 µg/L
LCL: 11 µg/L

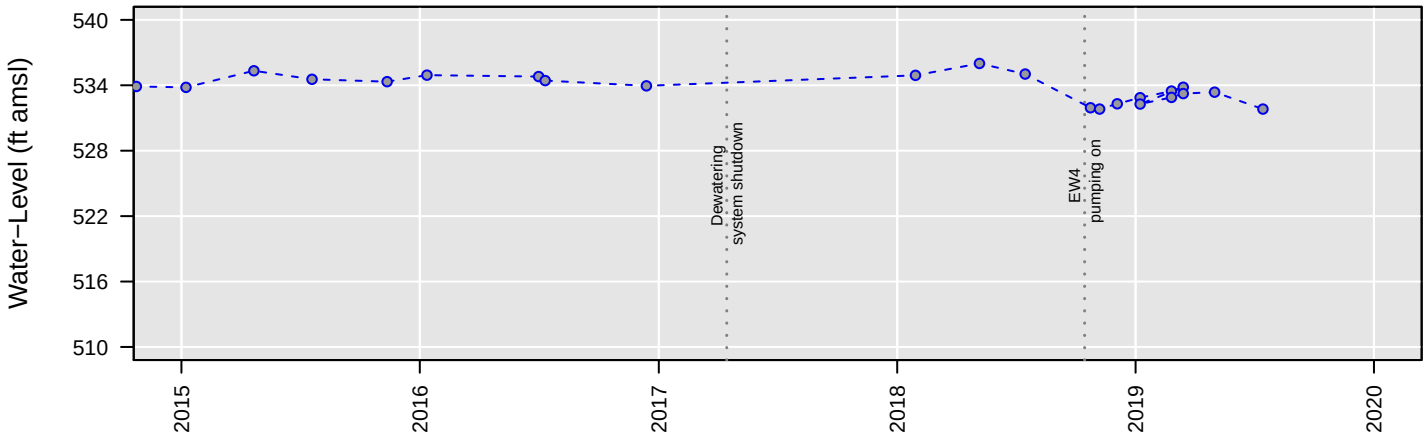
PZ6

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



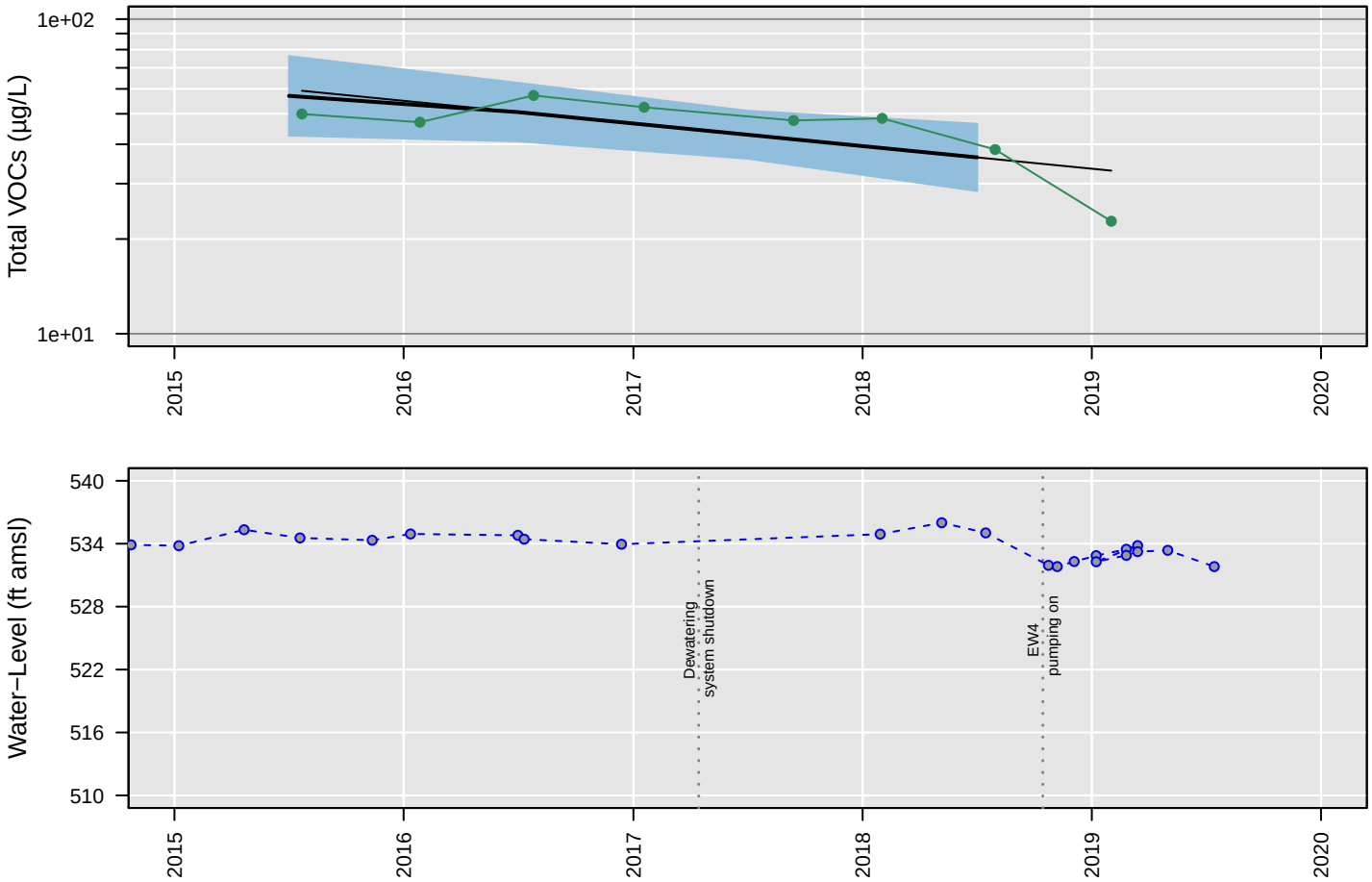


No Analysis Performed

PZ6

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

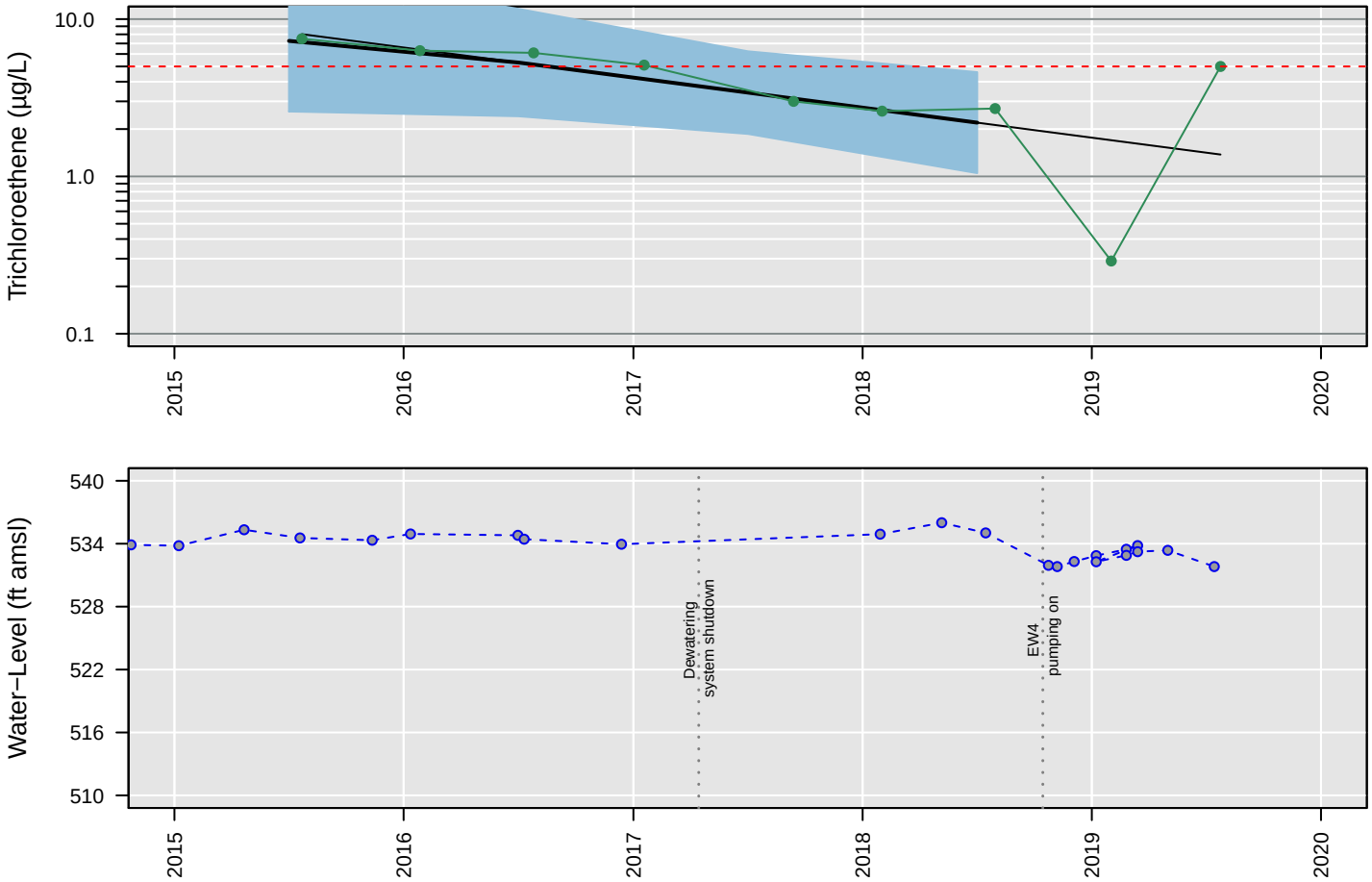
ln Conc. = −0.00045 (+/− 0.00016)*Date + 12 (+/− 2.8)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 36 µg/L
UCL: 46 µg/L
LCL: 28 µg/L

PZ6

Trichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.0012 (+/− 0.00052)*Date + 22 (+/− 9)

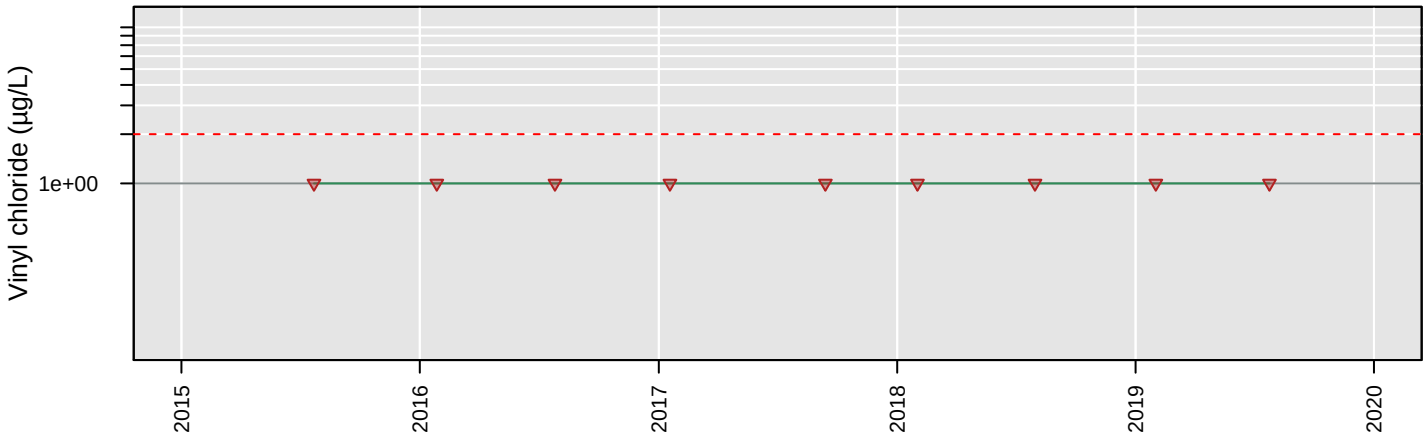
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.2 µg/L
UCL: 4.6 µg/L
LCL: 1 µg/L

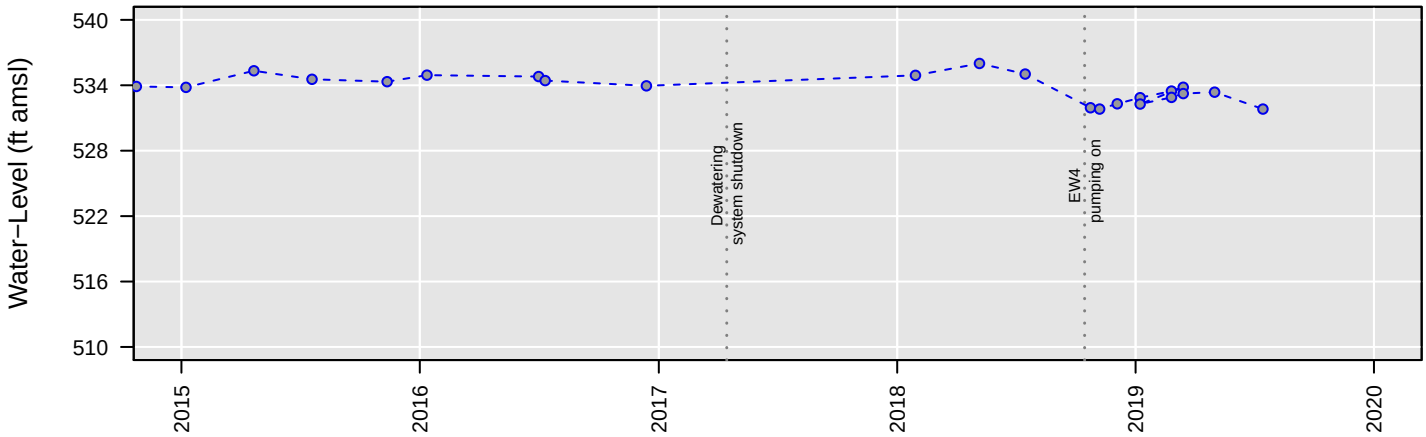
PZ6

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





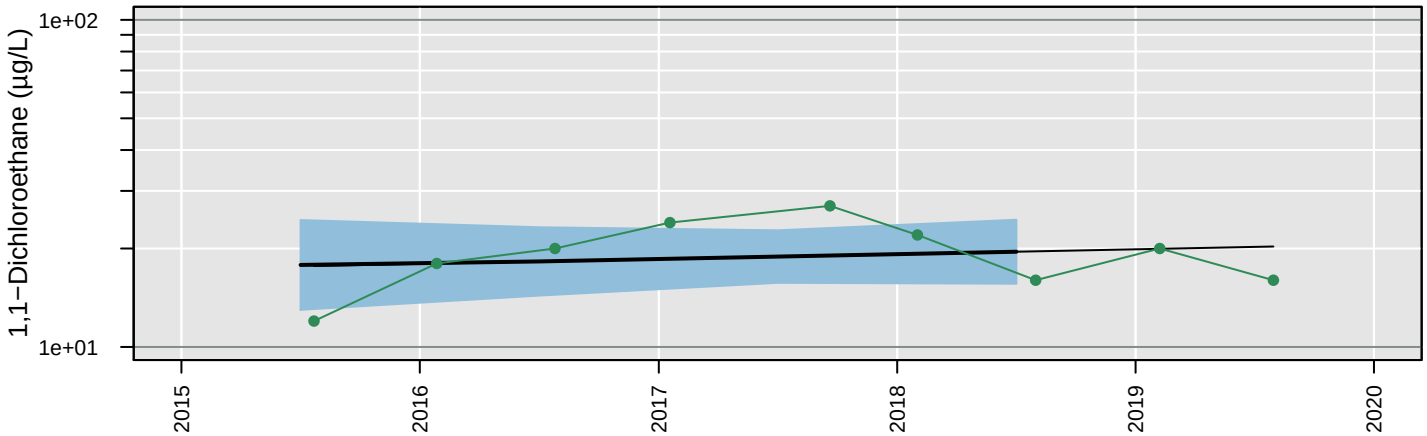
No Analysis Performed

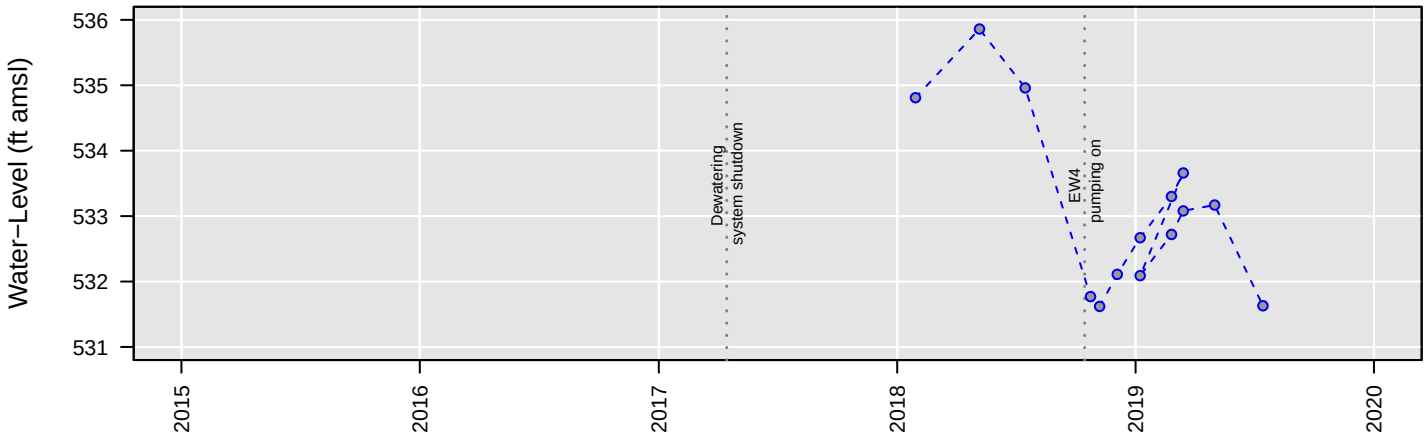
PZ7D

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

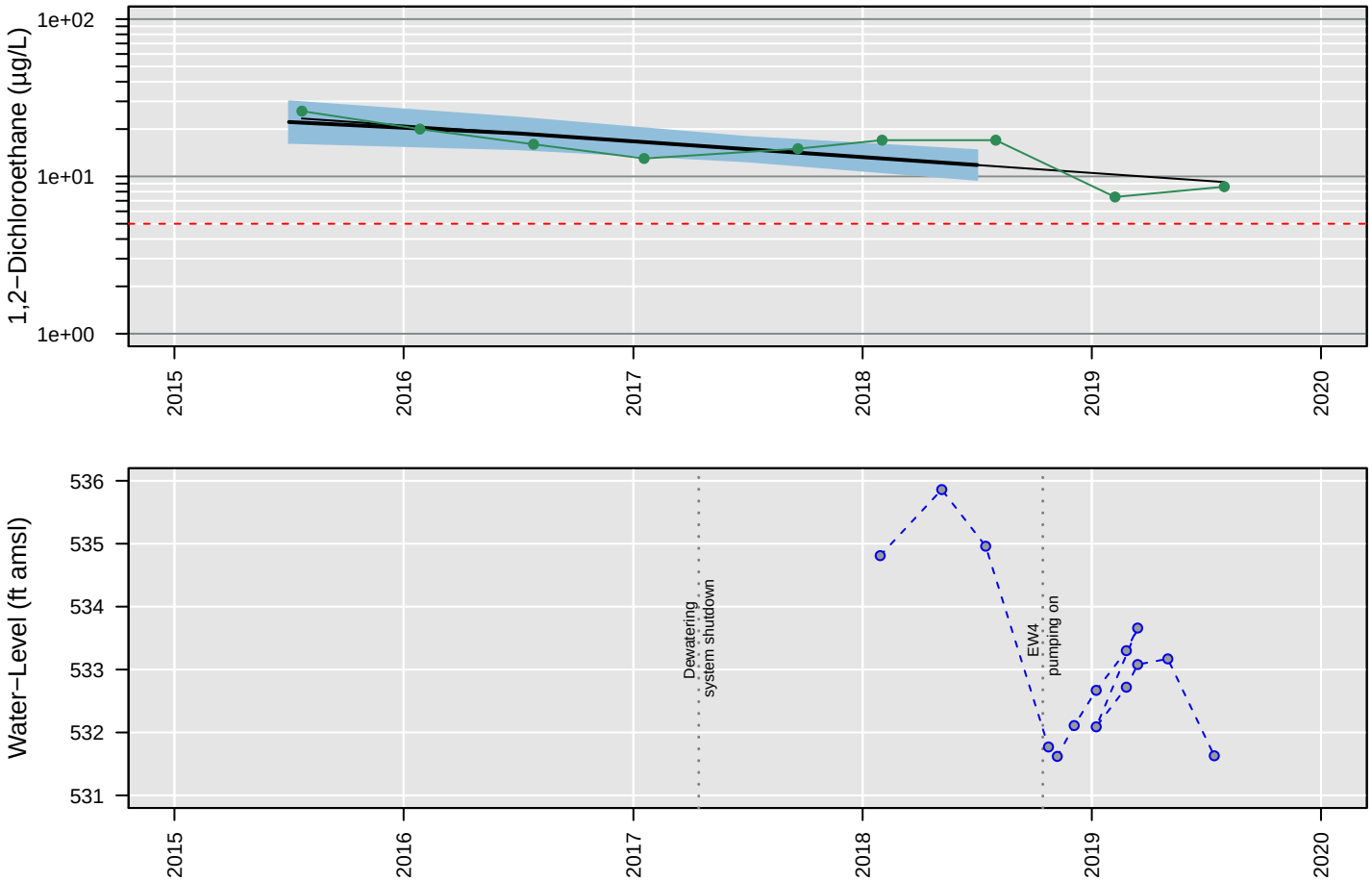
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 20 µg/L
UCL: 24 µg/L
LCL: 16 µg/L

PZ7D

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

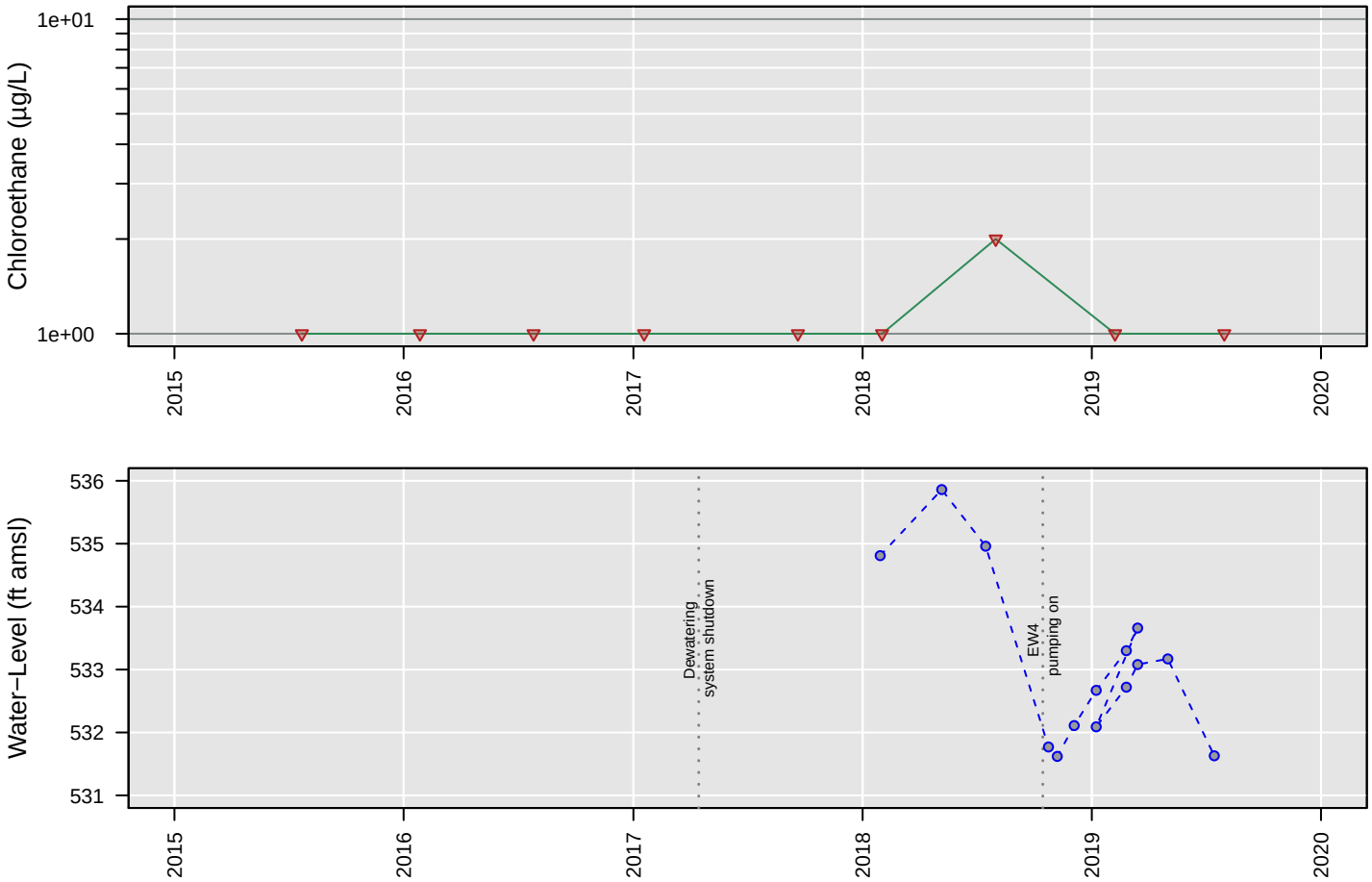
ln Conc. = −0.00063 (+/− 0.00015)*Date + 14 (+/− 2.6)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 12 µg/L
UCL: 15 µg/L
LCL: 9.5 µg/L

PZ7D

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%

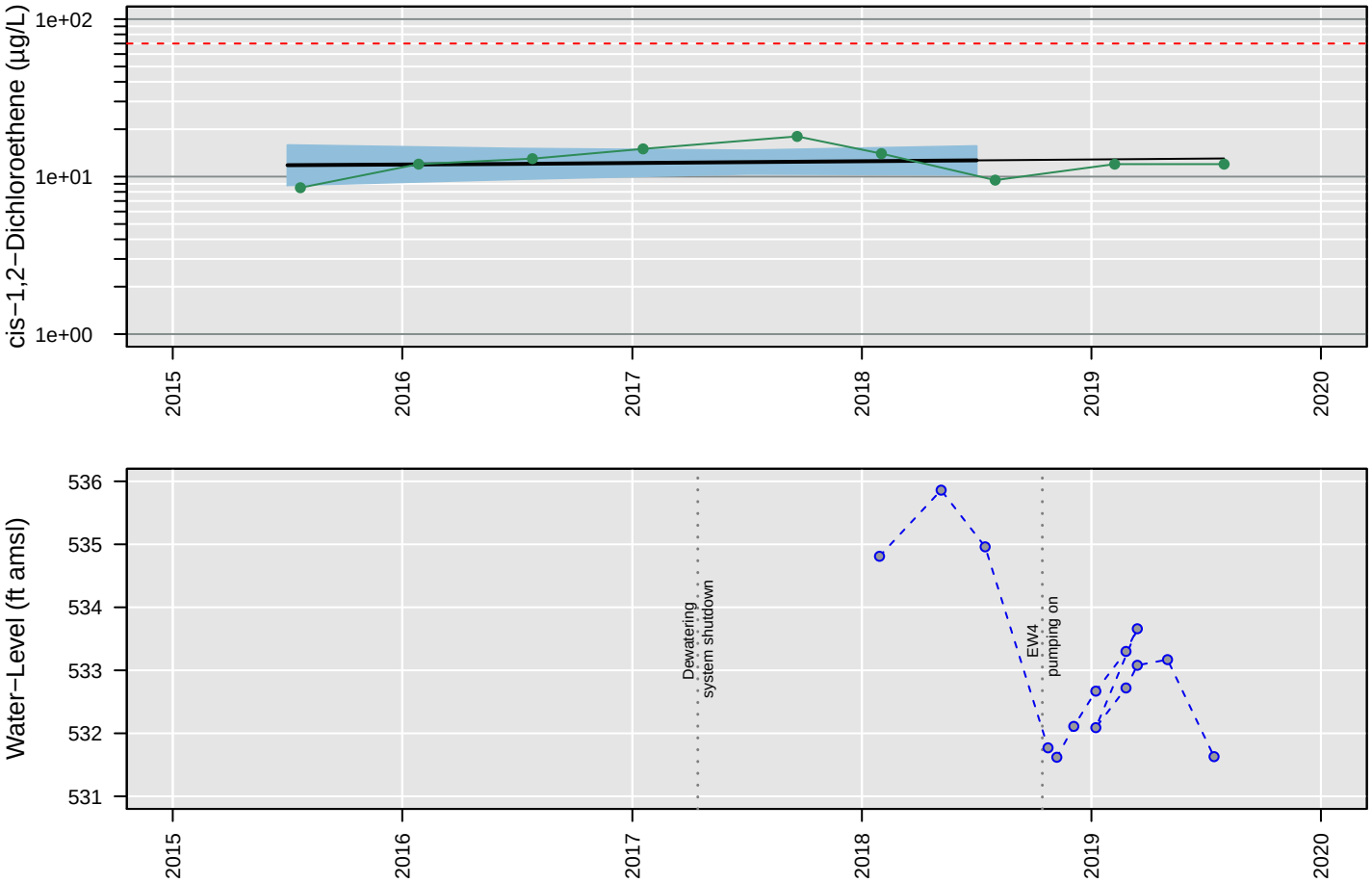


No Analysis Performed

PZ7D

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

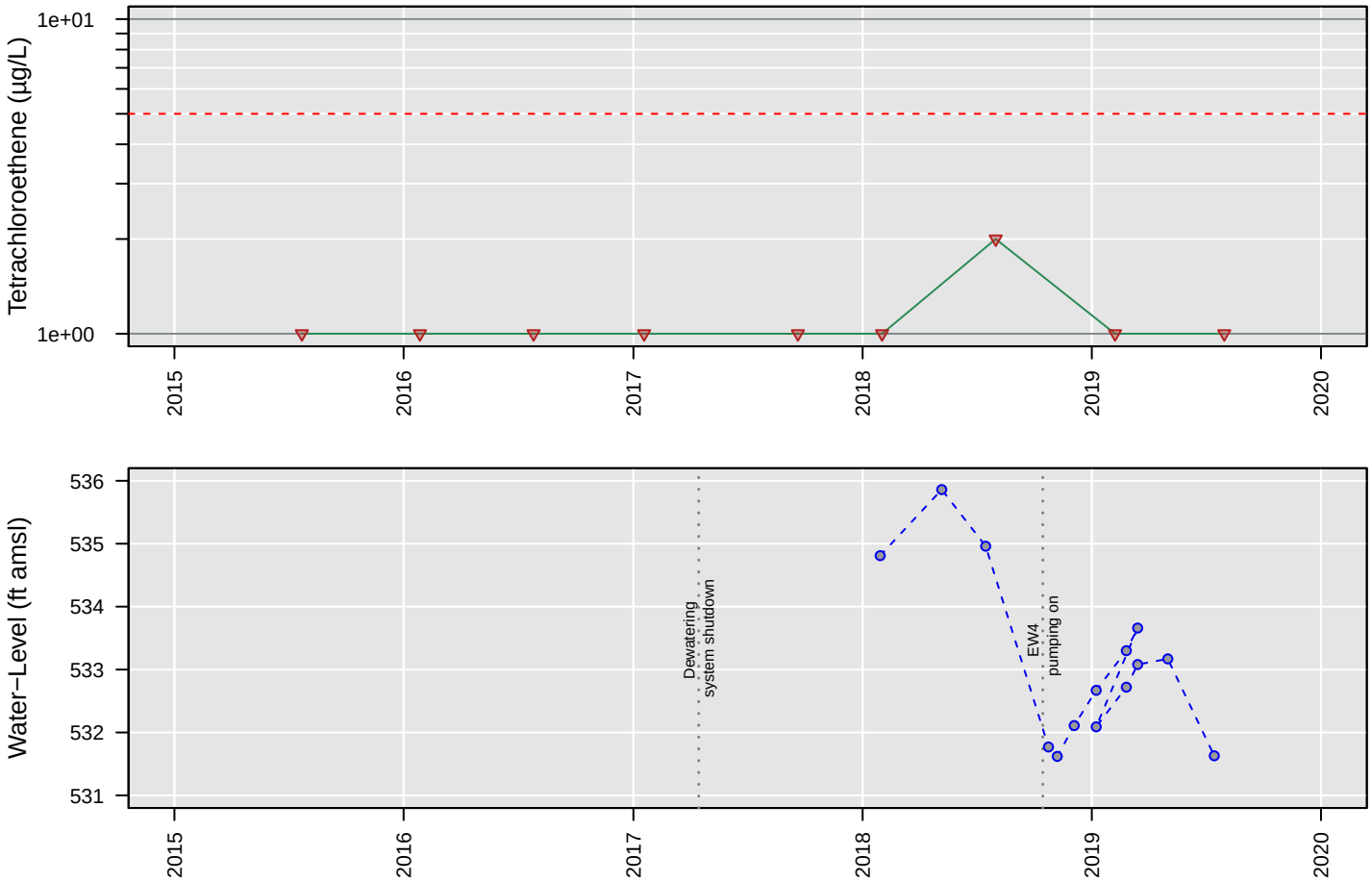
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 13 µg/L
UCL: 16 µg/L
LCL: 10 µg/L

PZ7D

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%

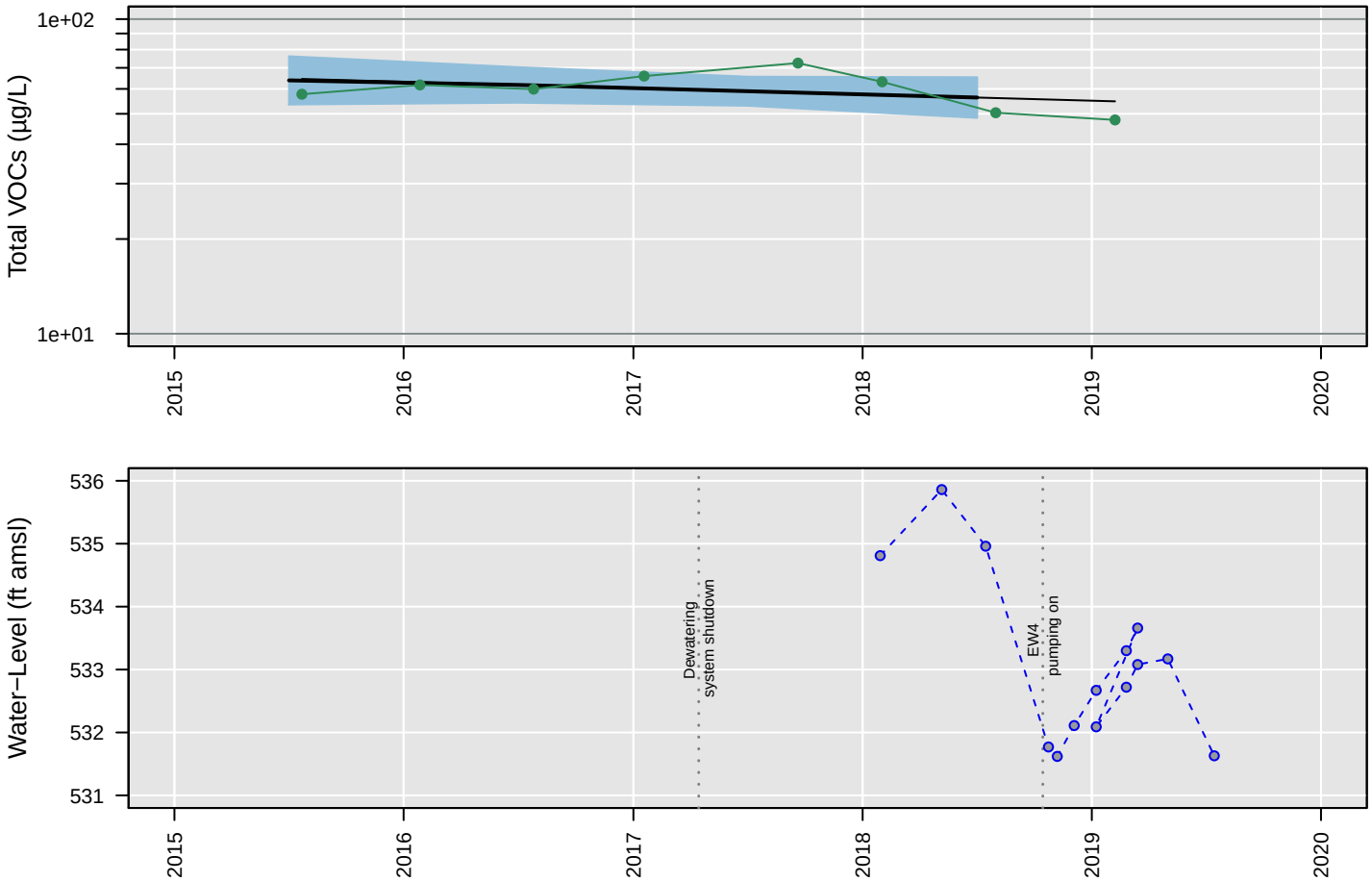


No Analysis Performed

PZ7D

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

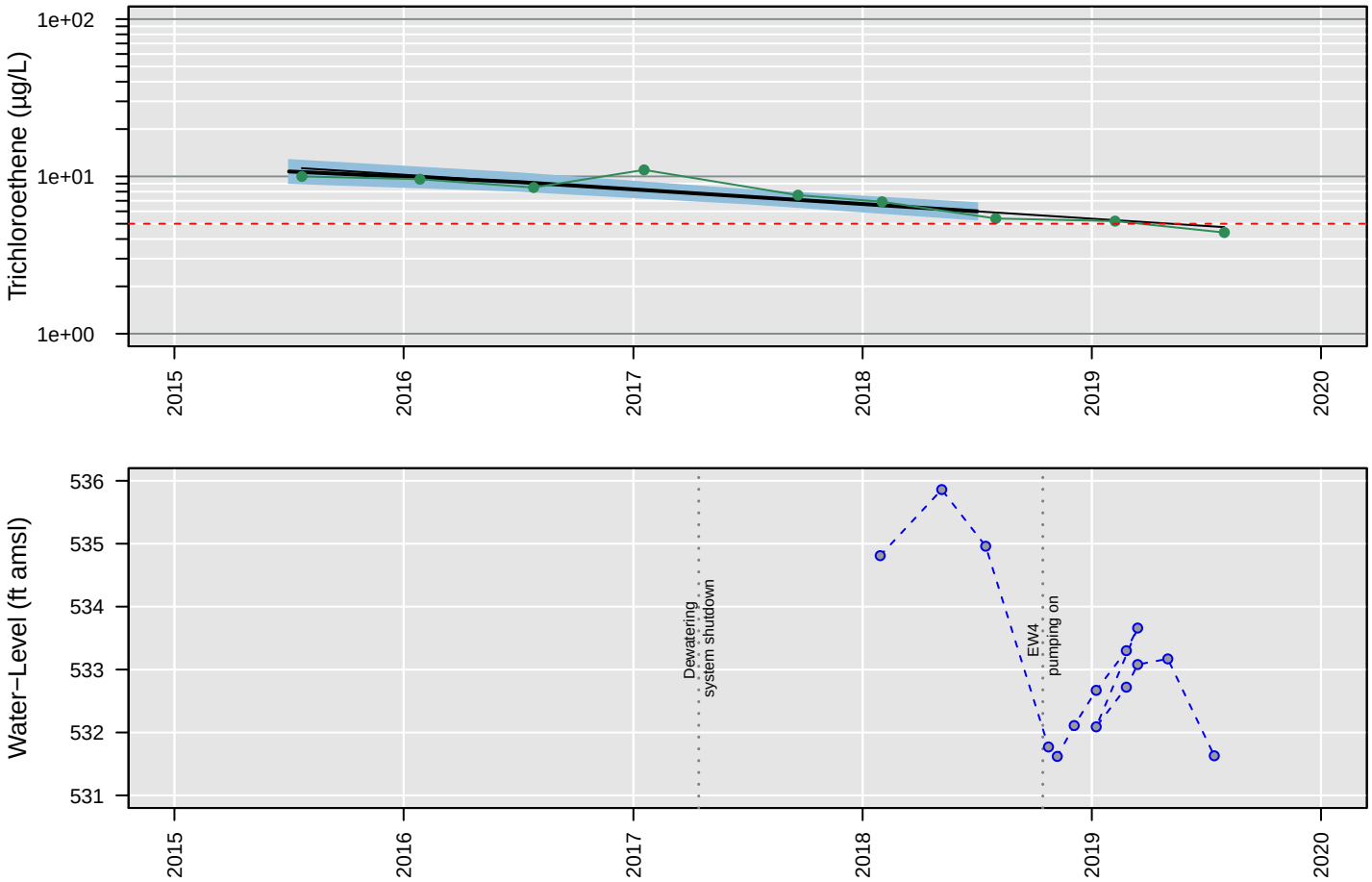
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 56 µg/L
UCL: 65 µg/L
LCL: 49 µg/L

PZ7D

Trichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

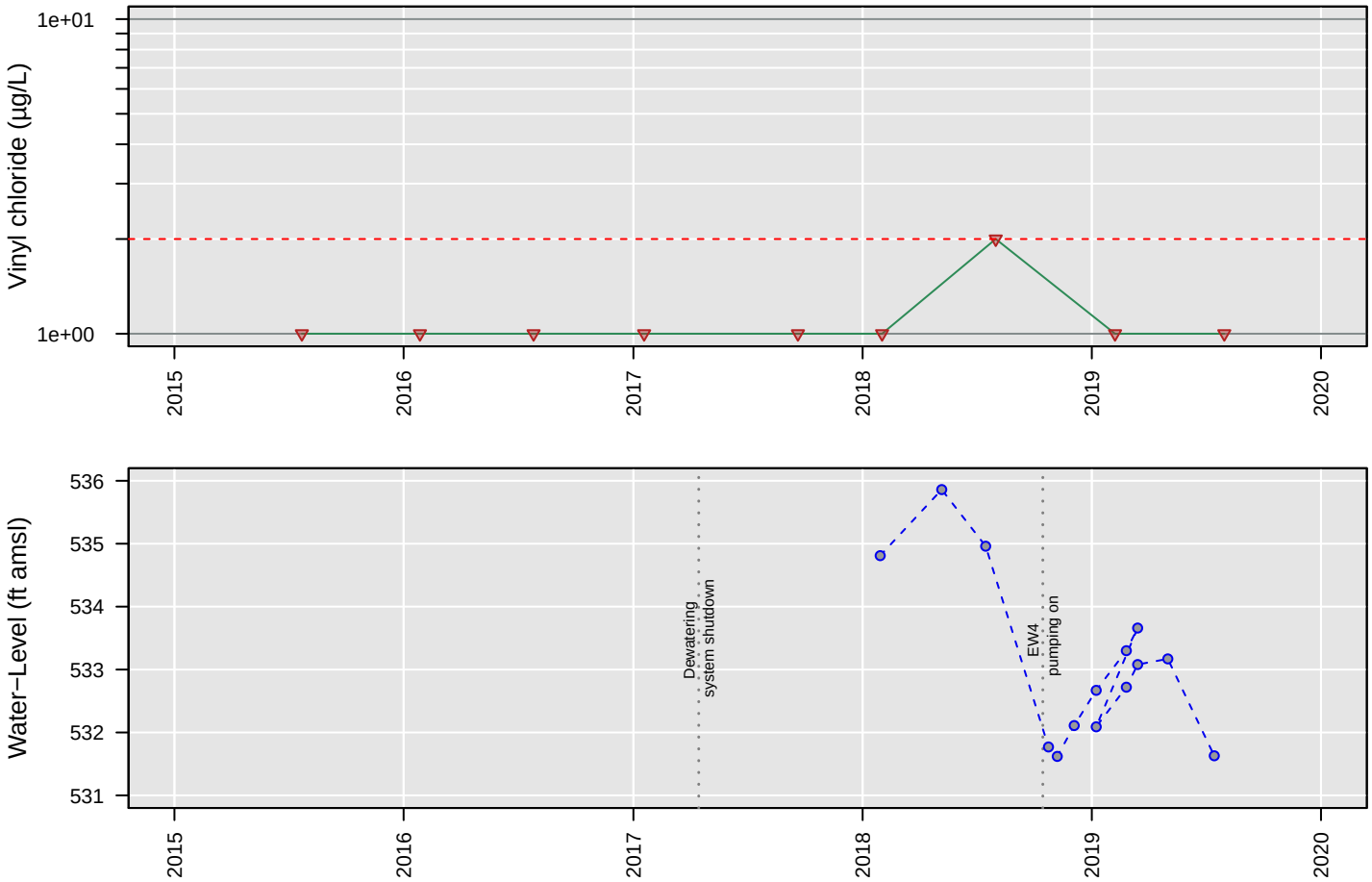
ln Conc. = −0.00059 (+/− 0.000084)*Date + 12 (+/− 1.5)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 6 µg/L
UCL: 6.8 µg/L
LCL: 5.3 µg/L

PZ7D

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 100%



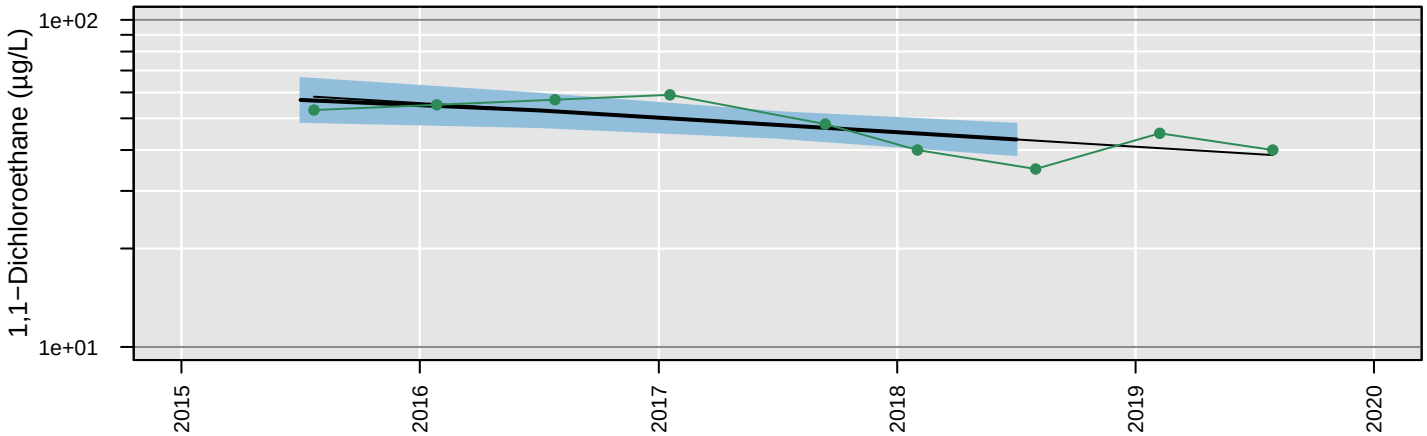
No Analysis Performed

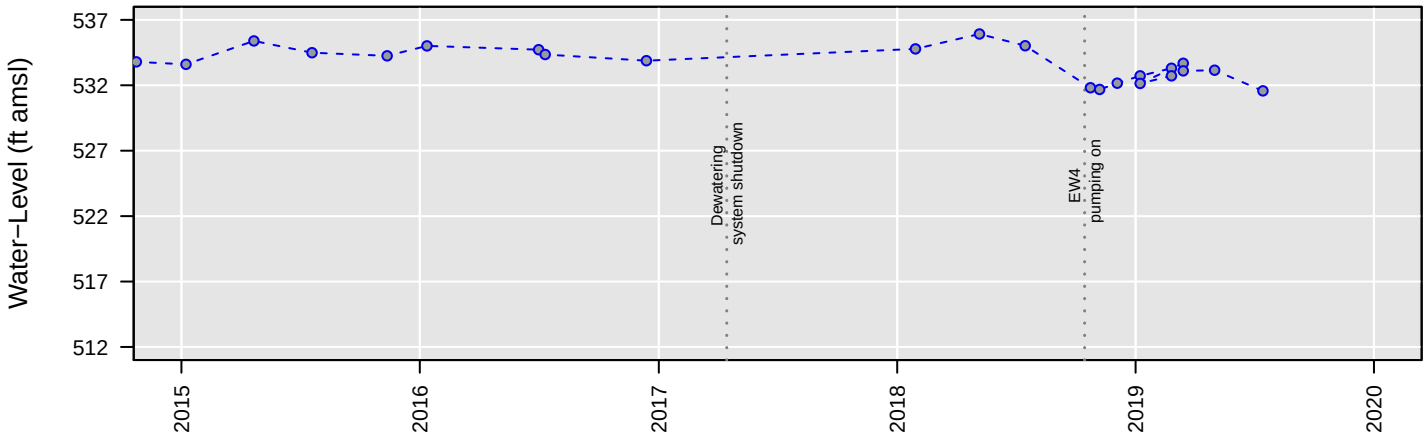
PZ7S

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00028 (+/− 0.000077)*Date + 8.7 (+/− 1.3)

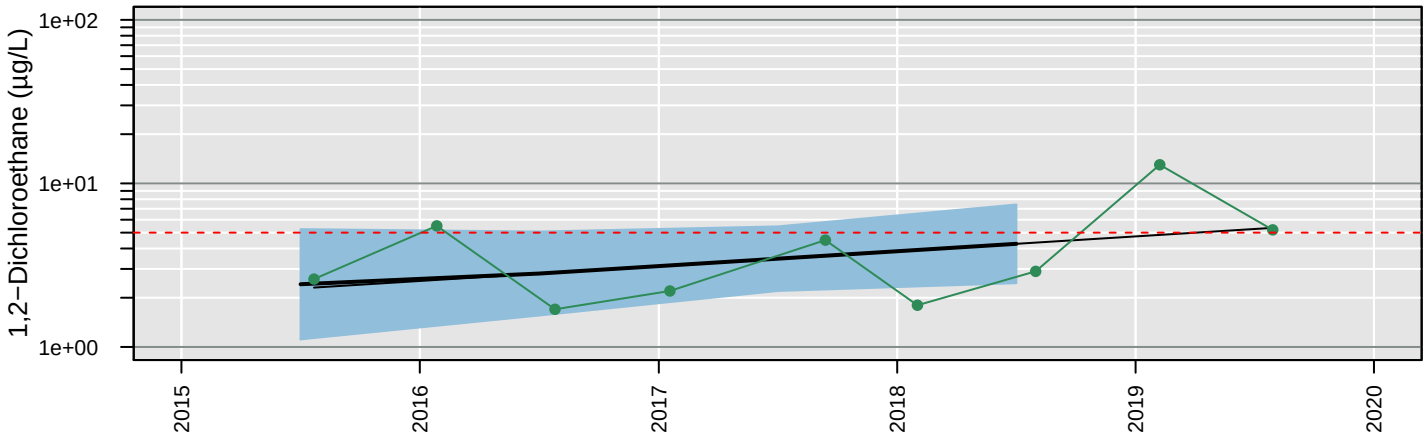
Regression Statistics for January 2018 to January 2019
Geometric Mean: 43 µg/L
UCL: 48 µg/L
LCL: 39 µg/L

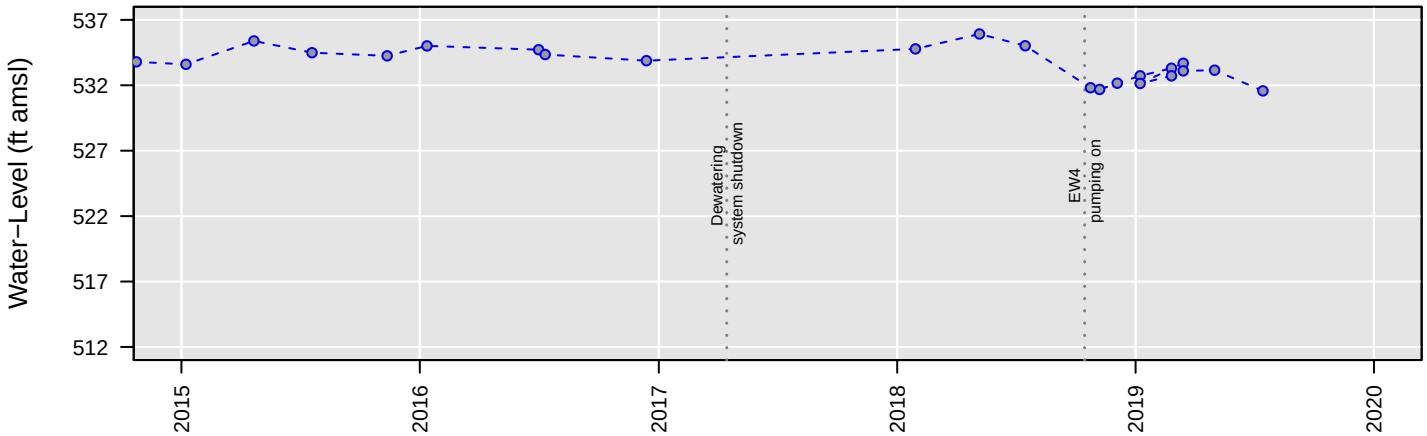
PZ7S

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

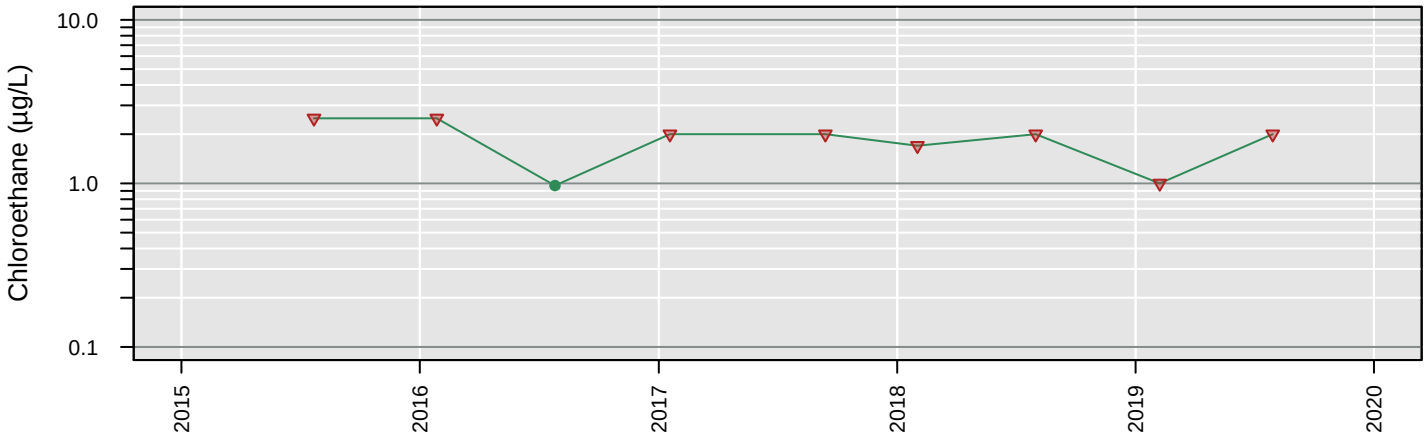
Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.3 µg/L
UCL: 7.4 µg/L
LCL: 2.5 µg/L

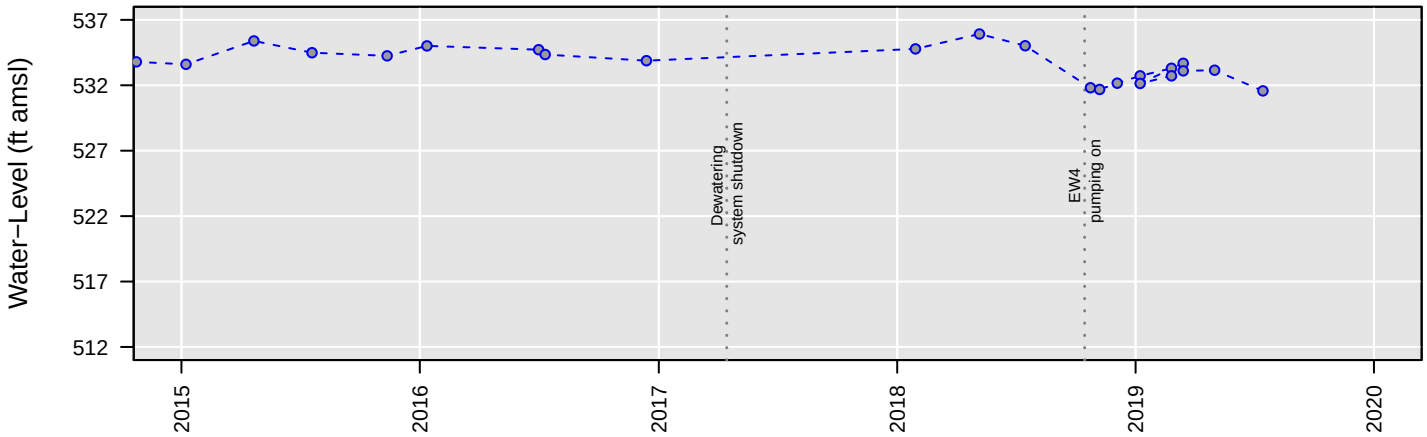
PZ7S

Chloroethane

Number of Comparisons: 9
Percent NDs: 89%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



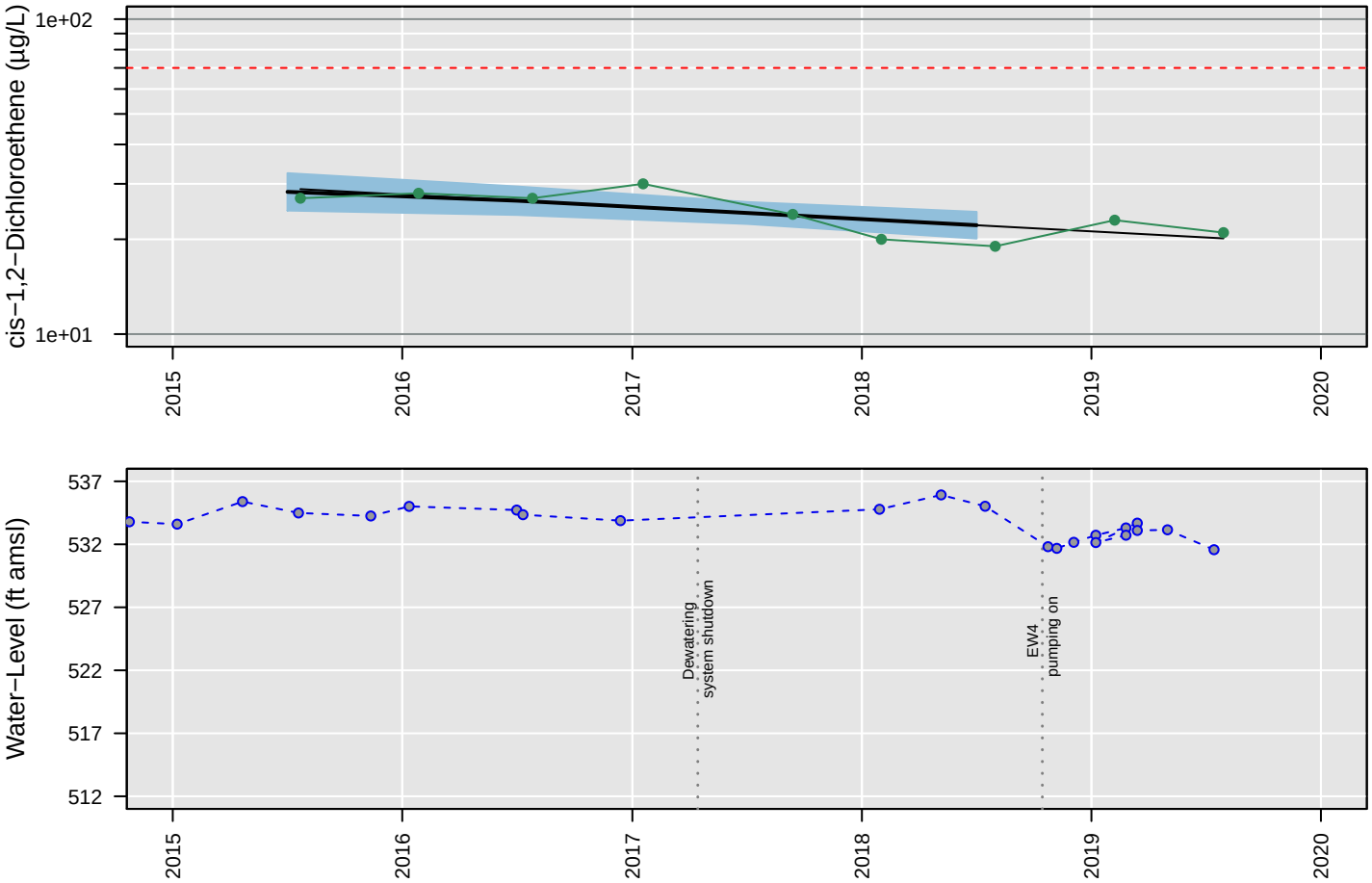


No Analysis Performed

PZ7S

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.00025 (+/− 0.000069)*Date + 7.4 (+/− 1.2)

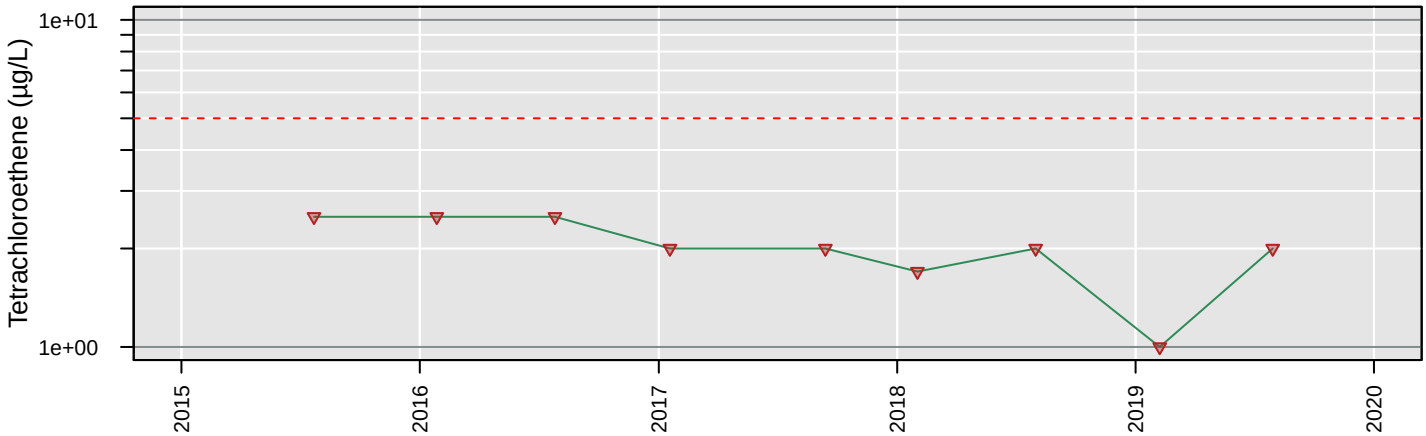
Regression Statistics for January 2018 to January 2019
Geometric Mean: 22 µg/L
UCL: 24 µg/L
LCL: 20 µg/L

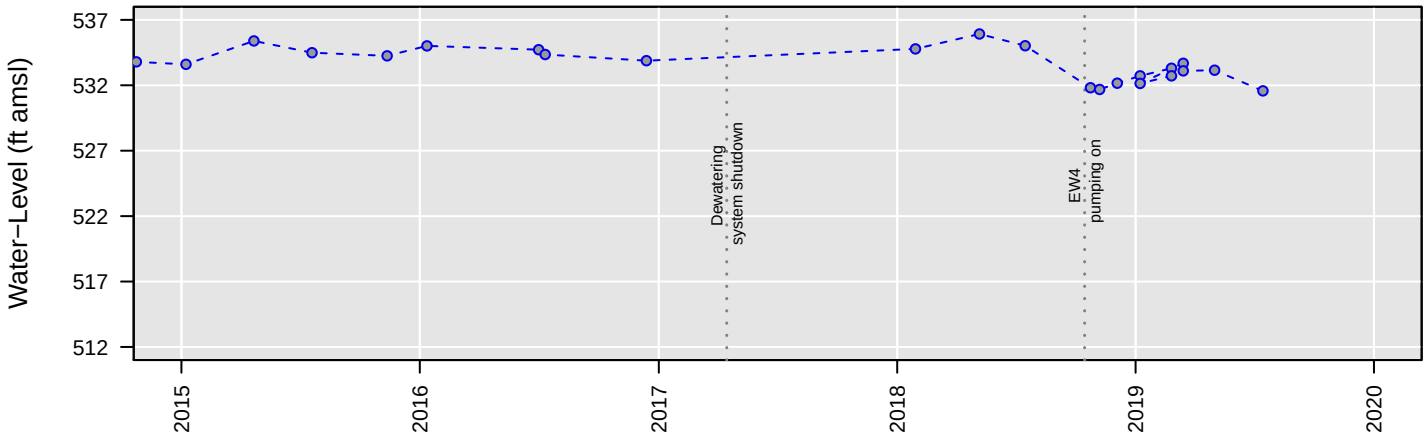
PZ7S

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



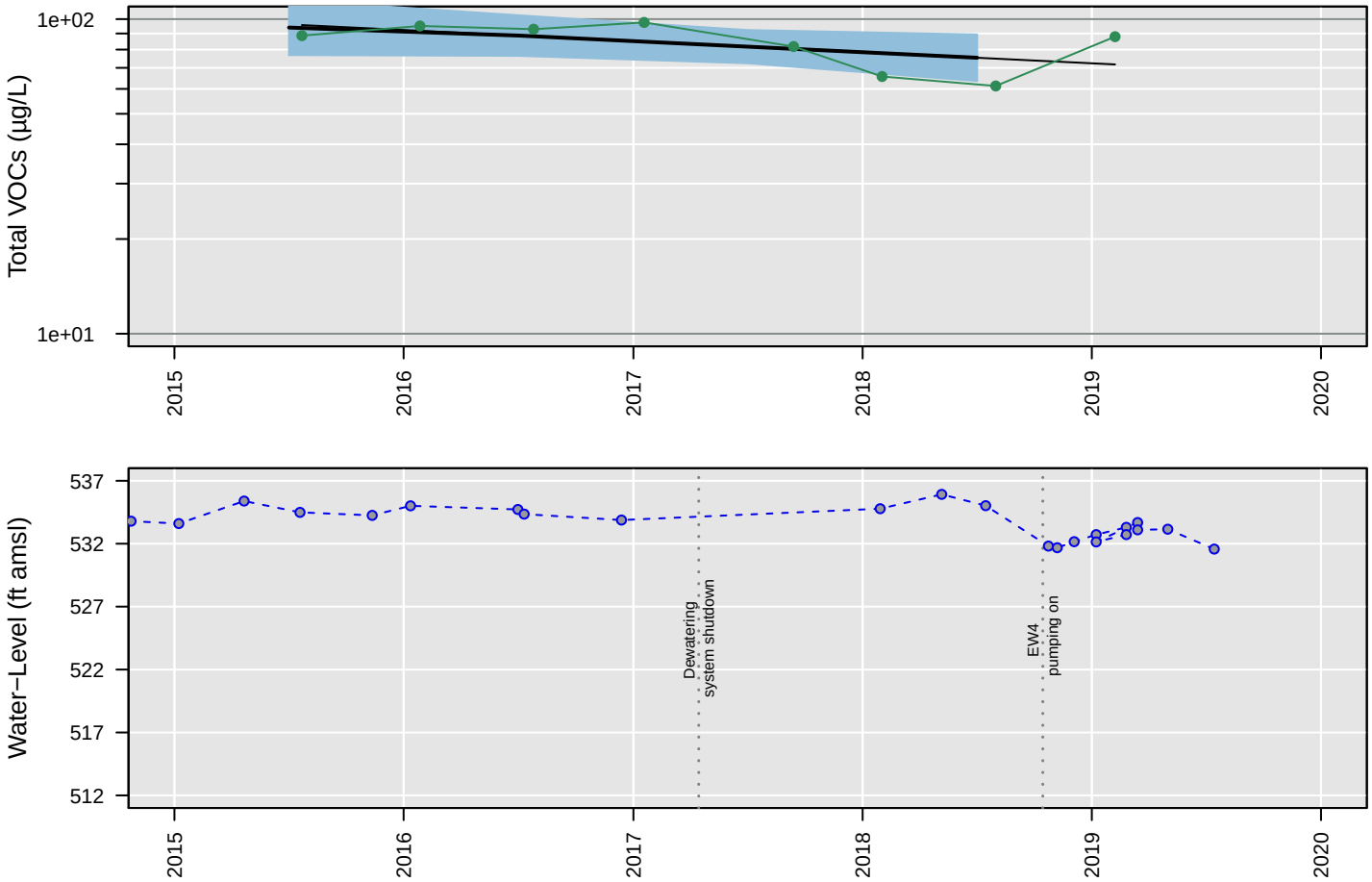


No Analysis Performed

PZ7S

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

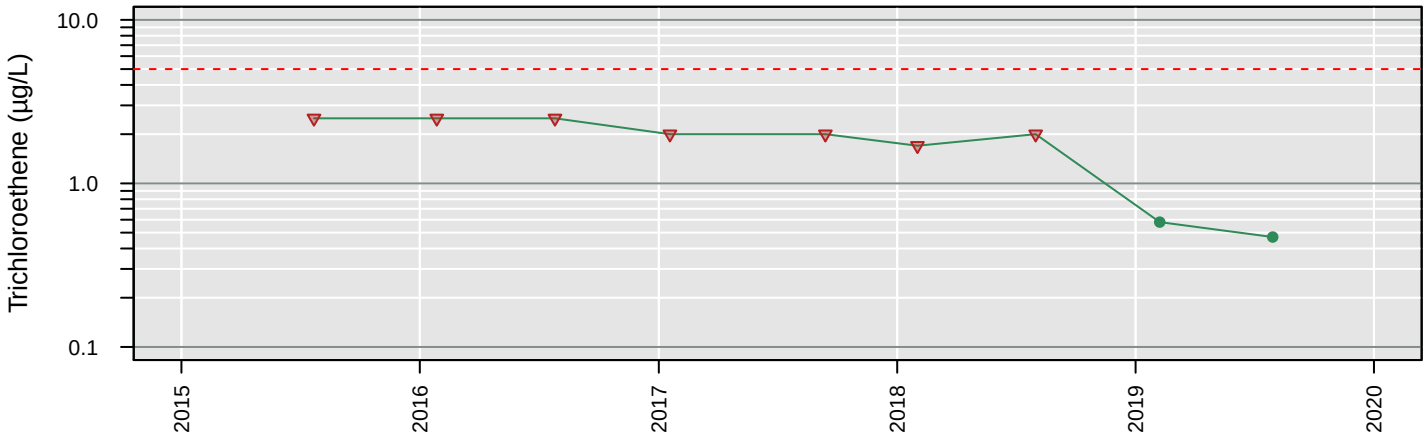
Regression Statistics for January 2018 to January 2019
Geometric Mean: 75 µg/L
UCL: 89 µg/L
LCL: 64 µg/L

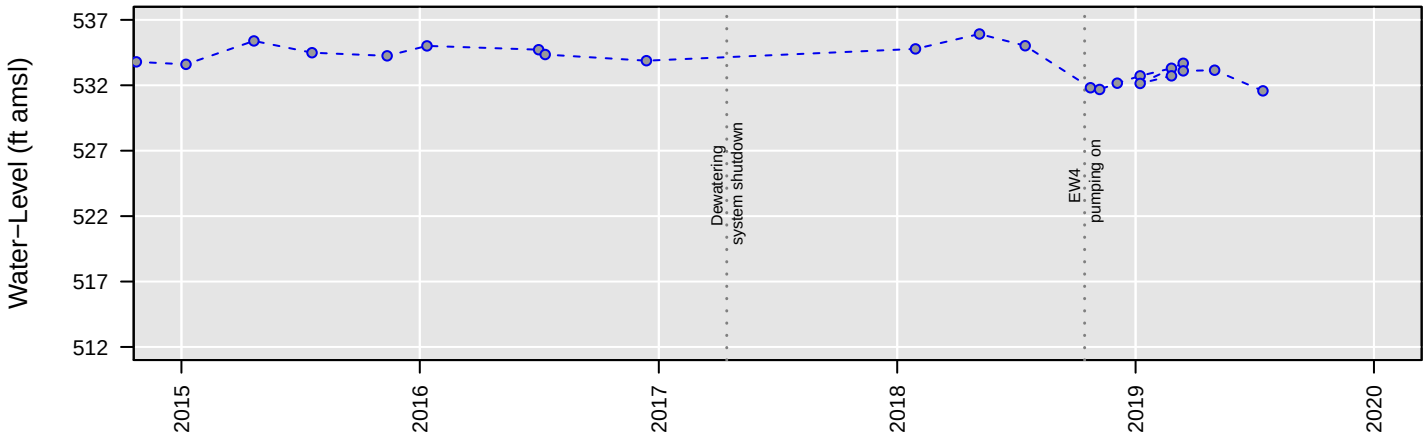
PZ7S

Trichloroethene

Number of Comparisons: 9
Percent NDs: 78%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





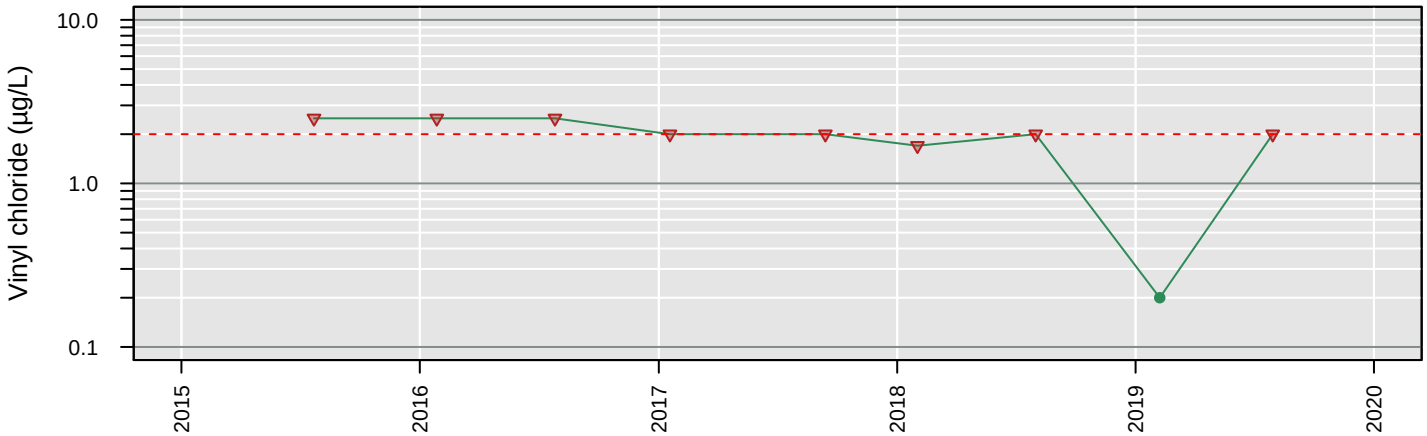
No Analysis Performed

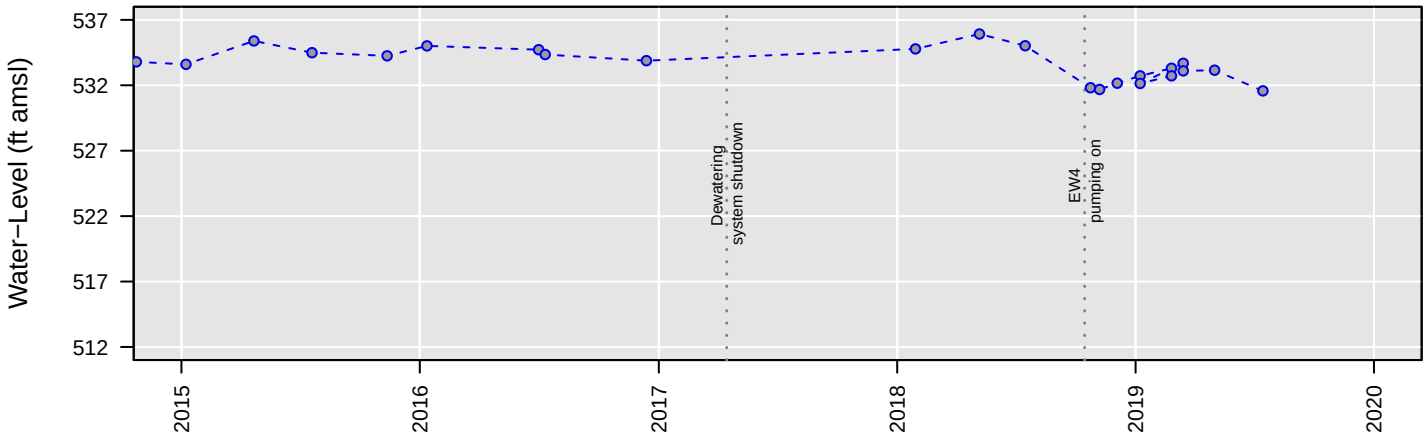
PZ7S

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 89%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





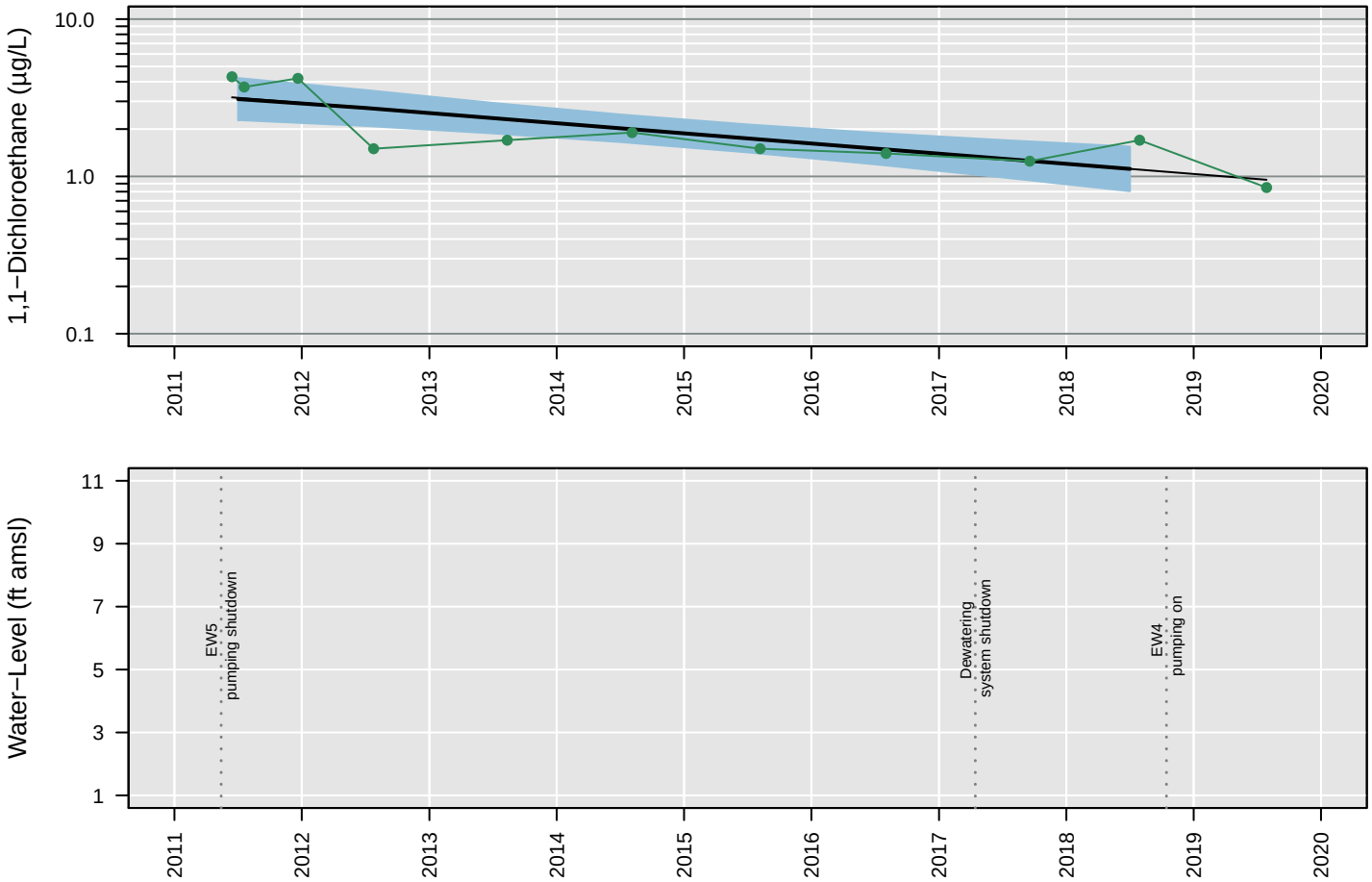
No Analysis Performed

Trend Calculations (Post-May 2011 Data) - Upper Aquifer

GW108

1,1−Dichloroethane

Number of Comparisons: 11
Percent NDs: 0%



Censored Regression (Tobit) Model

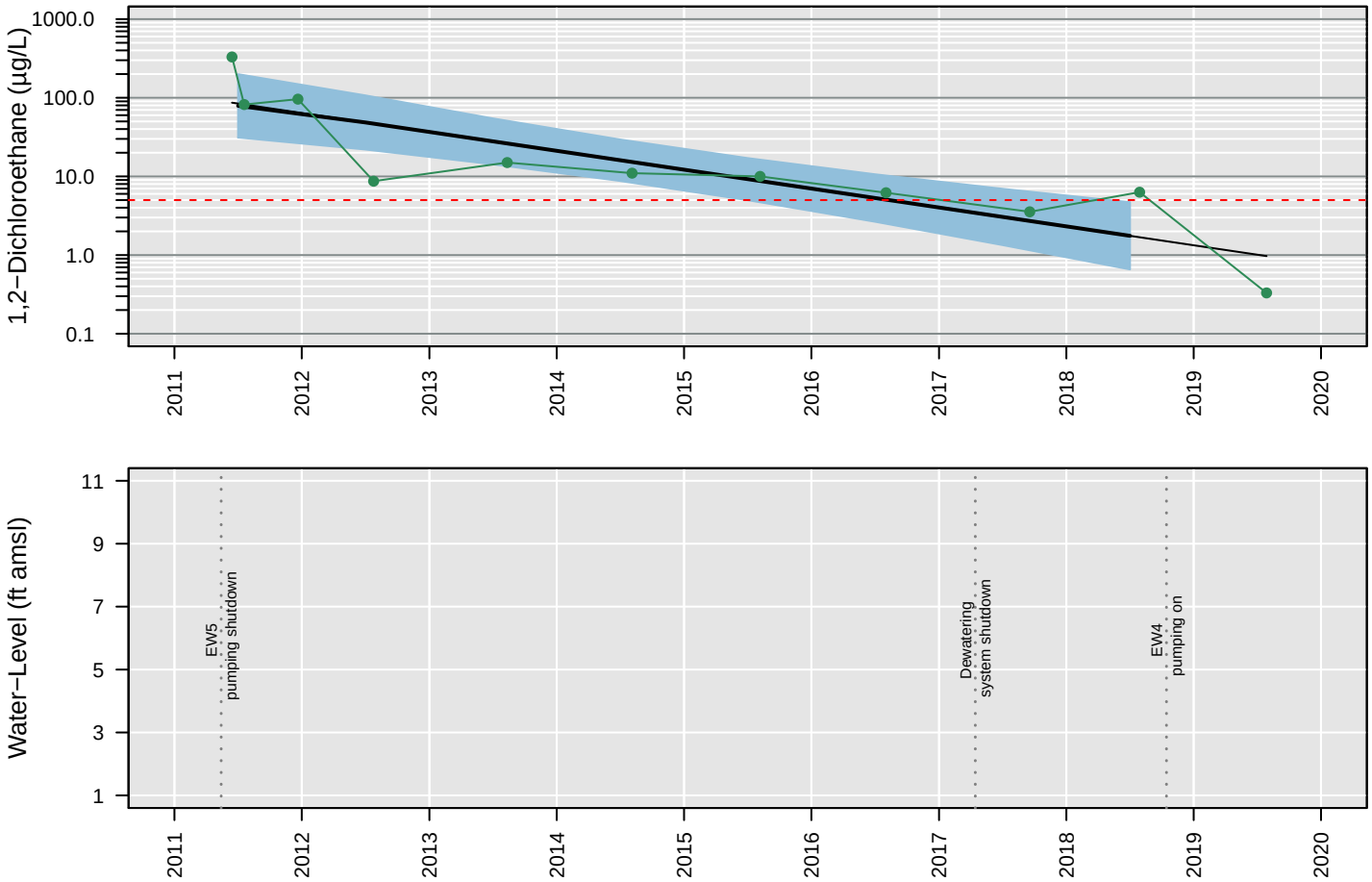
ln Conc. = −0.00041 (+/− 0.000085)*Date + 7.3 (+/− 1.4)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.1 µg/L
UCL: 1.5 µg/L
LCL: 0.81 µg/L

GW108

1,2−Dichloroethane

Number of Comparisons: 11
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.0015 (+/− 0.00026)*Date + 27 (+/− 4.2)

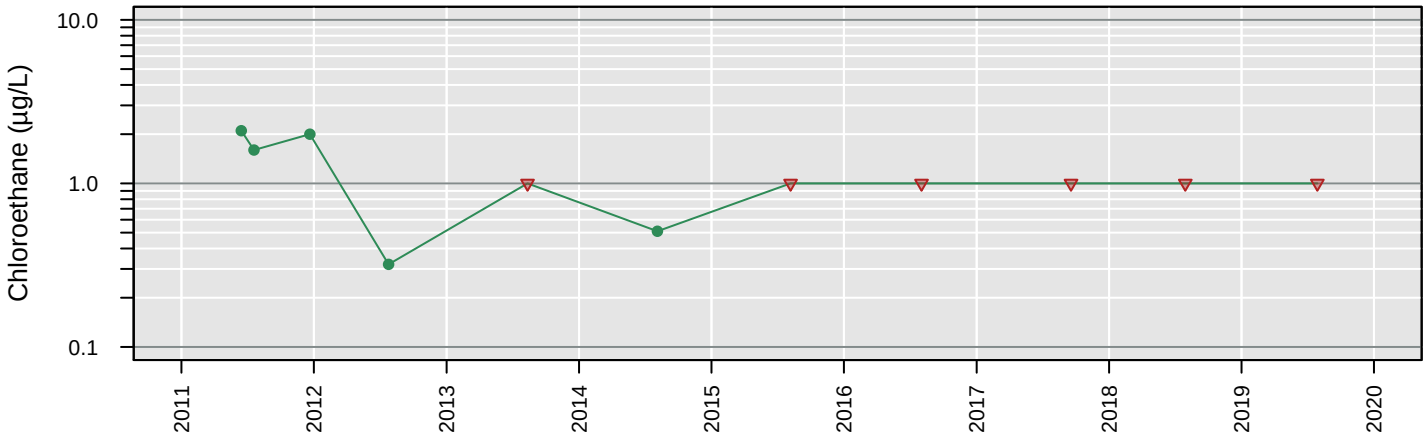
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.8 µg/L
UCL: 4.7 µg/L
LCL: 0.66 µg/L

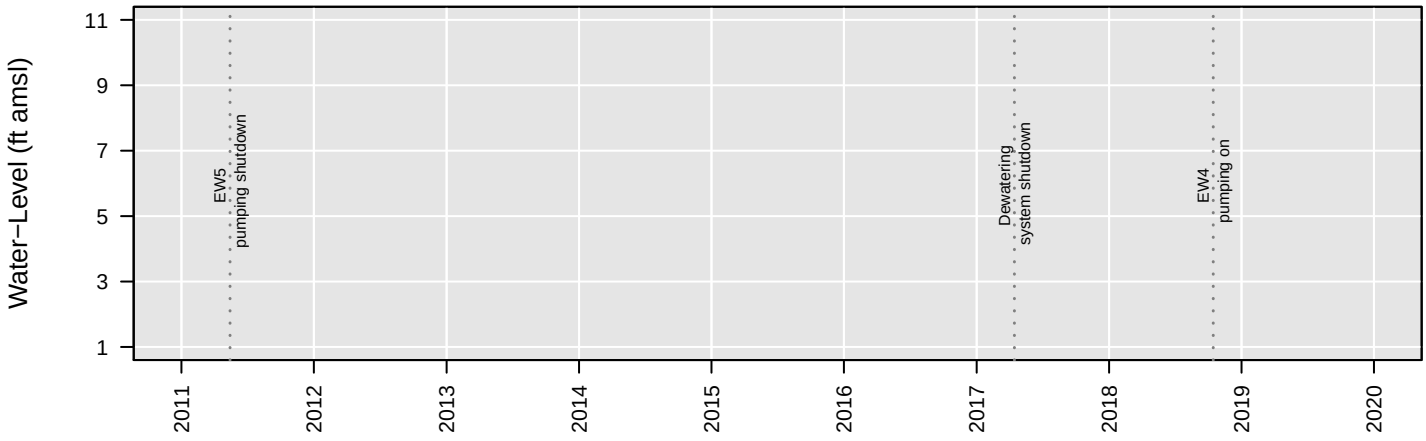
GW108

Chloroethane

Number of Comparisons: 11
Percent NDs: 55%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





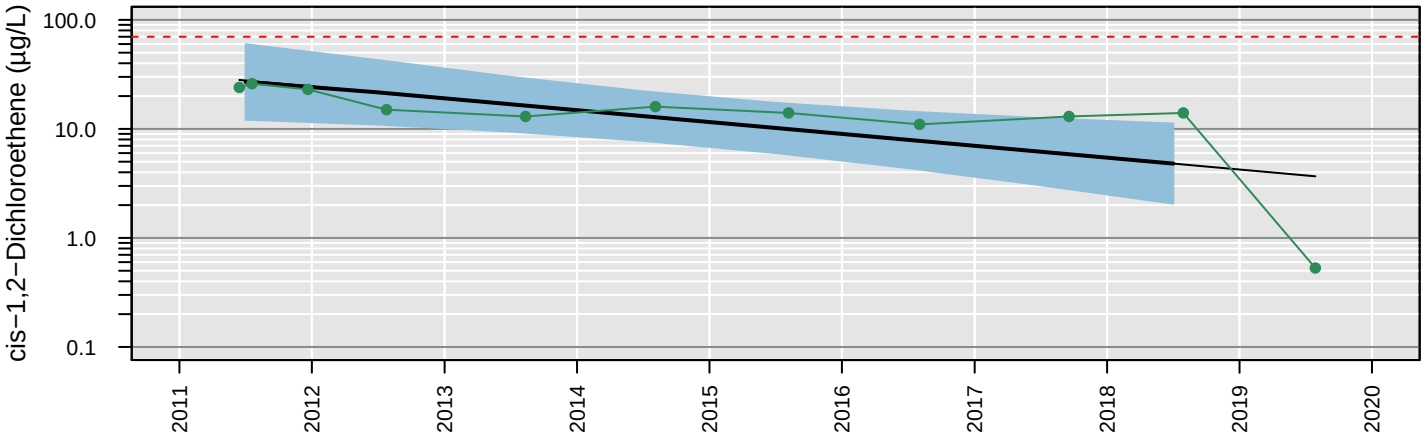
No Analysis Performed

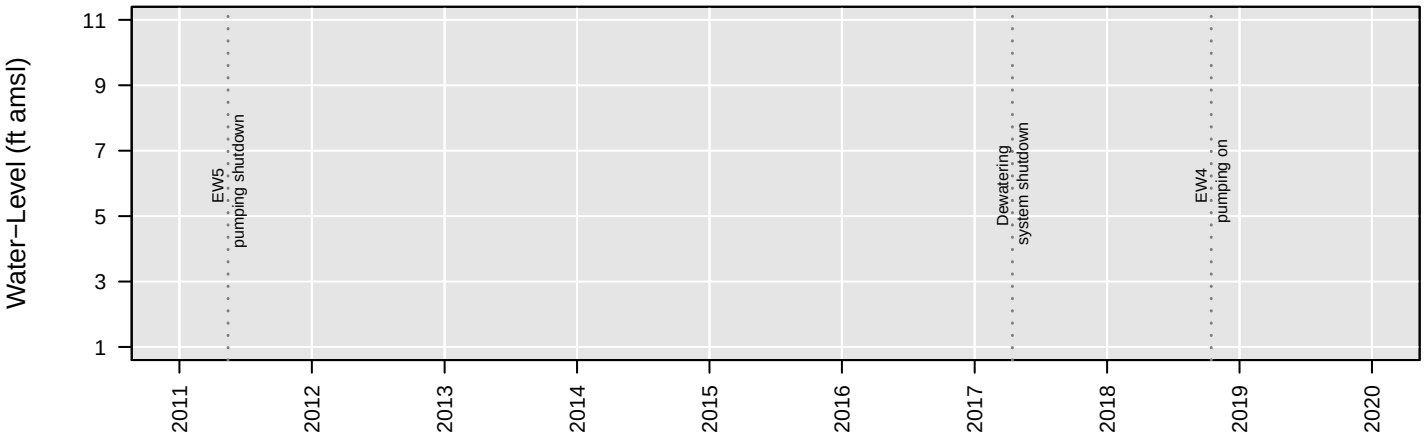
GW108

cis−1,2−Dichloroethene

Number of Comparisons: 11
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00069 (+/− 0.00022)*Date + 14 (+/− 3.6)

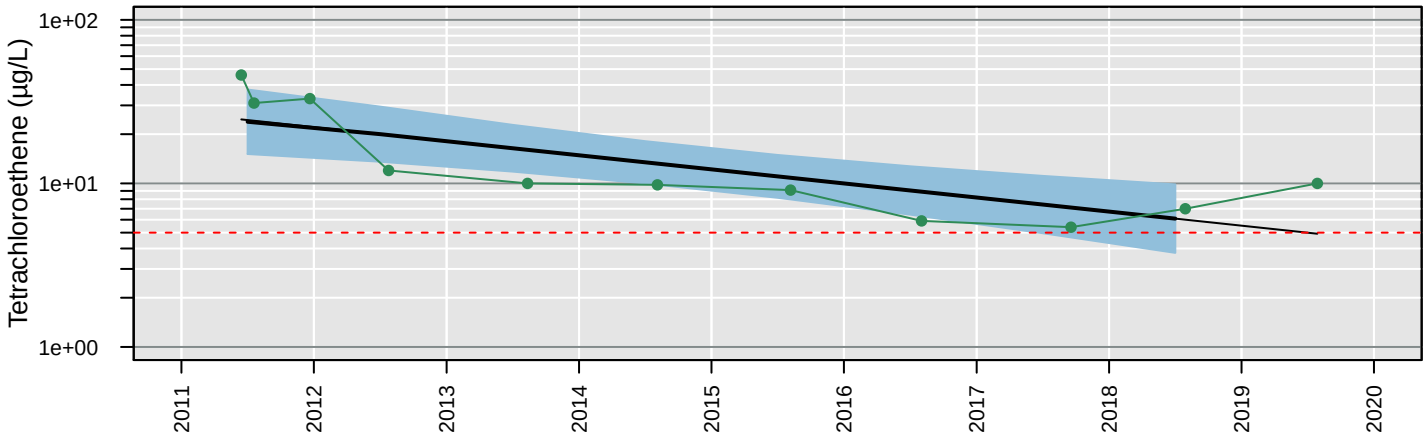
Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.8 µg/L
UCL: 11 µg/L
LCL: 2.1 µg/L

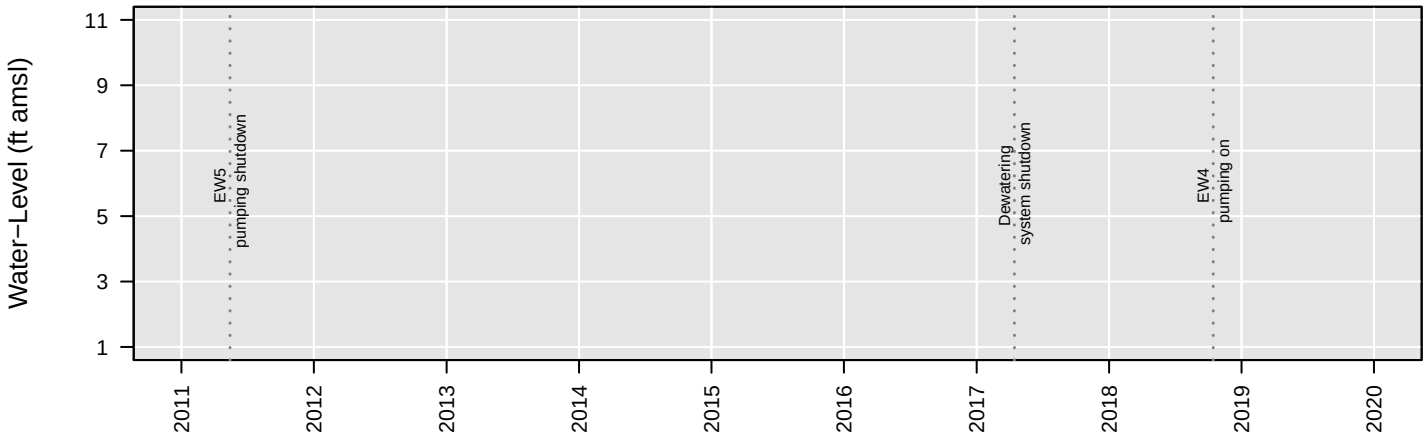
GW108

Tetrachloroethene

Number of Comparisons: 11
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

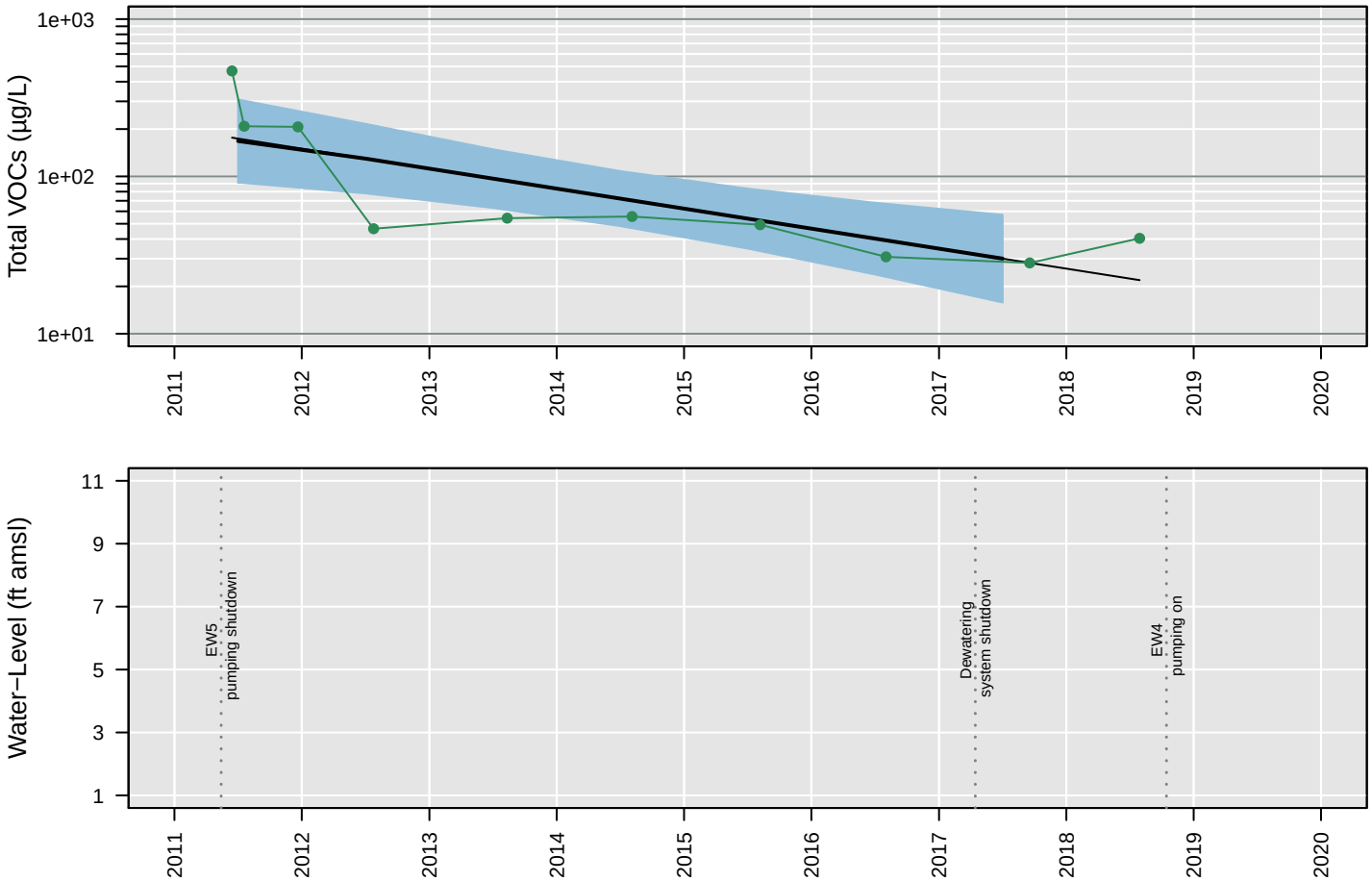
ln Conc. = −0.00054 (+/− 0.00013)*Date + 11 (+/− 2.1)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 6.1 µg/L
UCL: 9.9 µg/L
LCL: 3.8 µg/L

GW108

Total VOCs

Number of Comparisons: 10
Percent NDs: 0%



Censored Regression (Tobit) Model

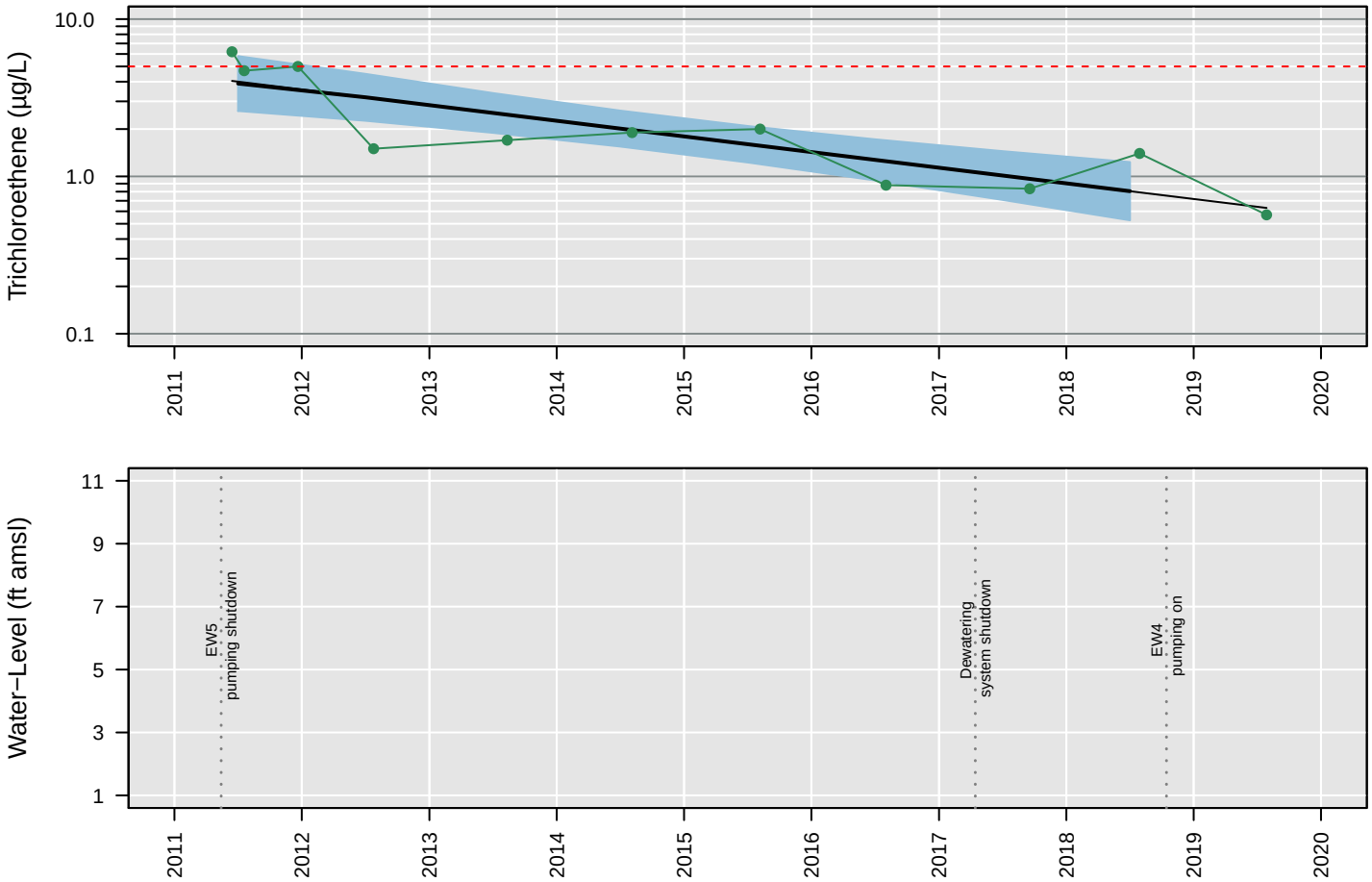
ln Conc. = −0.0008 (+/− 0.00019)*Date + 17 (+/− 3.1)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 30 µg/L
UCL: 57 µg/L
LCL: 16 µg/L

GW108

Trichloroethene

Number of Comparisons: 11
Percent NDs: 0%



Censored Regression (Tobit) Model

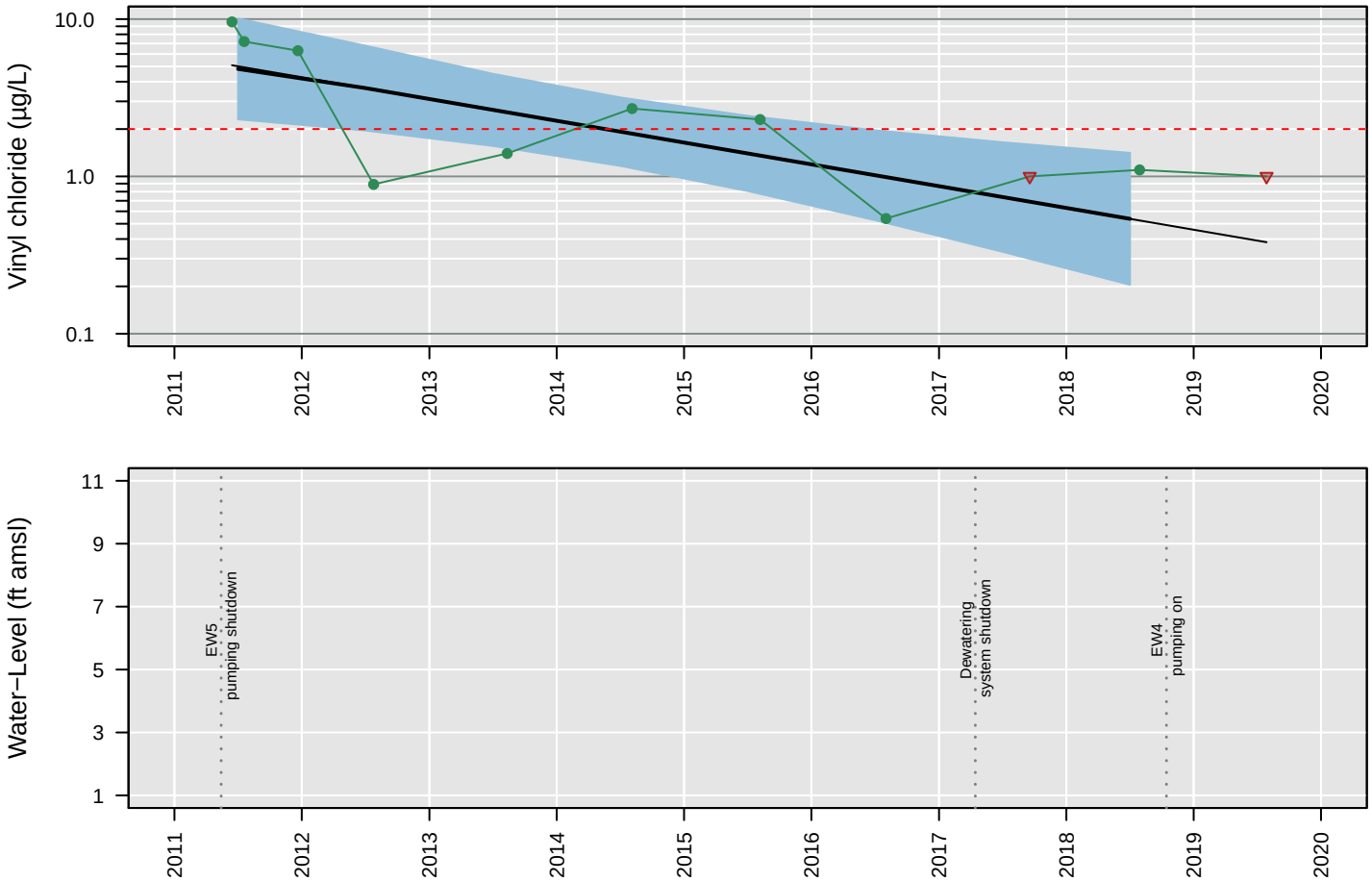
ln Conc. = −0.00063 (+/− 0.00011)*Date + 11 (+/− 1.8)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.81 µg/L
UCL: 1.2 µg/L
LCL: 0.53 µg/L

GW108

Vinyl chloride

Number of Comparisons: 11
Percent NDs: 18%



Censored Regression (Tobit) Model

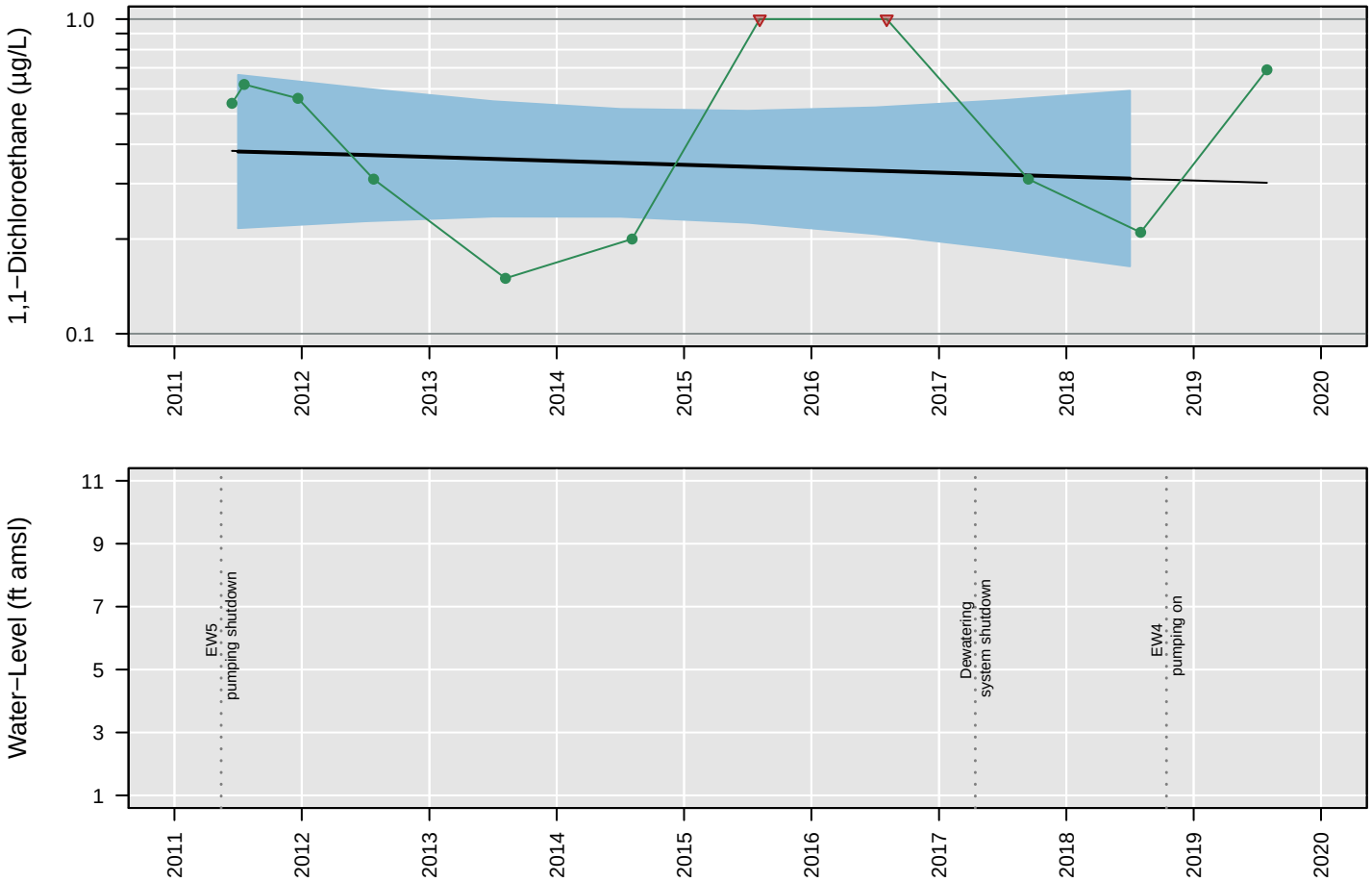
ln Conc. = −0.00087 (+/− 0.00024)*Date + 15 (+/− 3.8)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.54 µg/L
UCL: 1.4 µg/L
LCL: 0.2 µg/L

GW109

1,1−Dichloroethane

Number of Comparisons: 11
Percent NDs: 18%



Censored Regression (Tobit) Model

Trend Not Significant

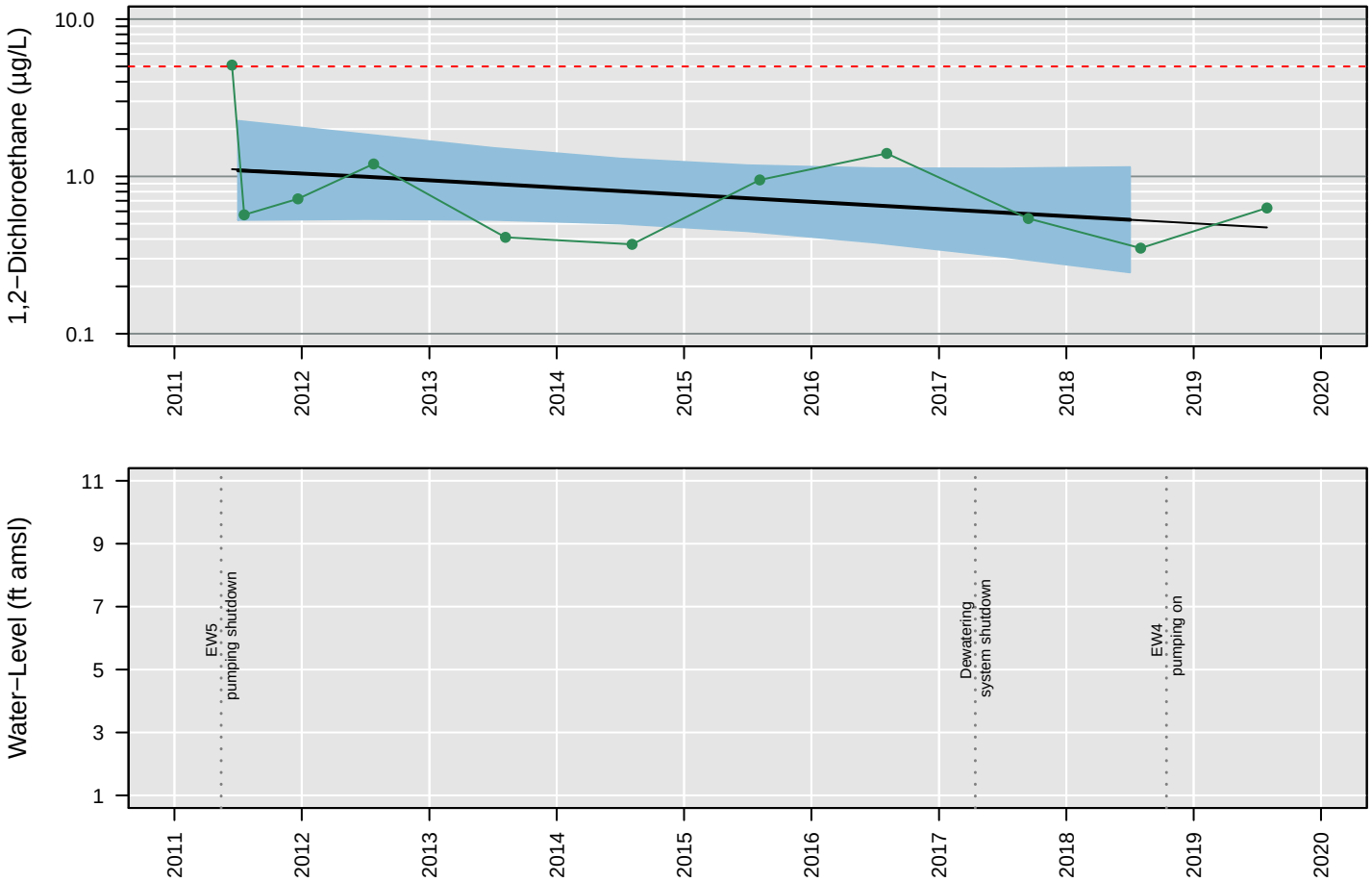
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.31 µg/L
UCL: 0.59 µg/L
LCL: 0.16 µg/L

GW109

1,2−Dichloroethane

Number of Comparisons: 11
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

Trend Not Significant

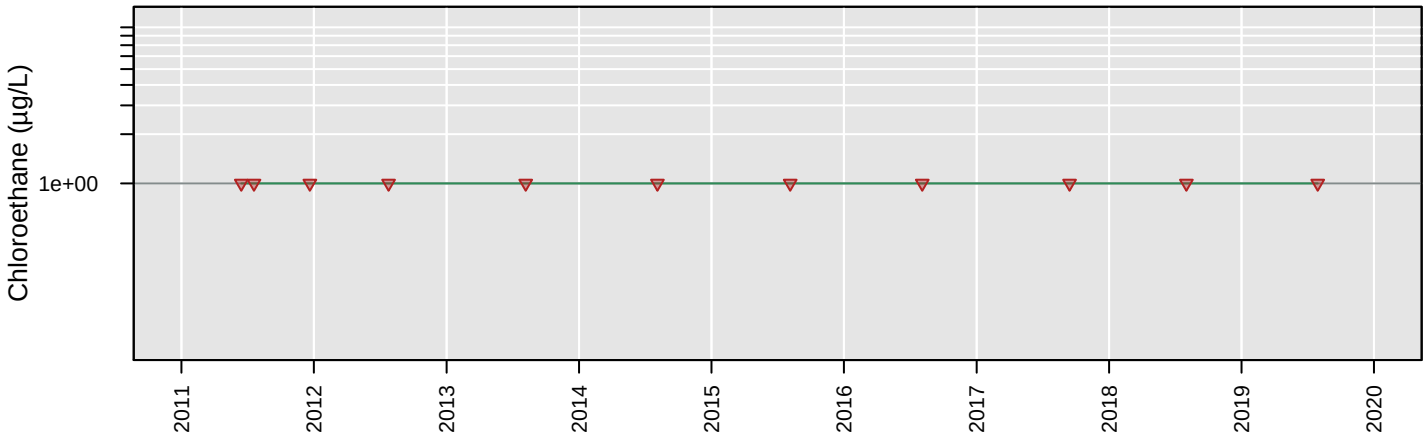
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.53 µg/L
UCL: 1.1 µg/L
LCL: 0.25 µg/L

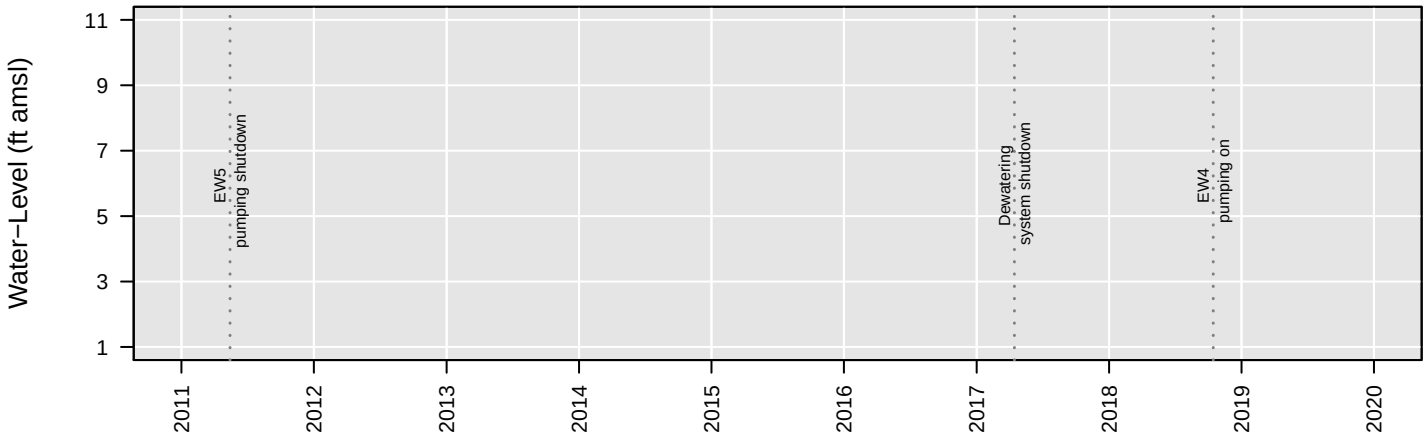
GW109

Chloroethane

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





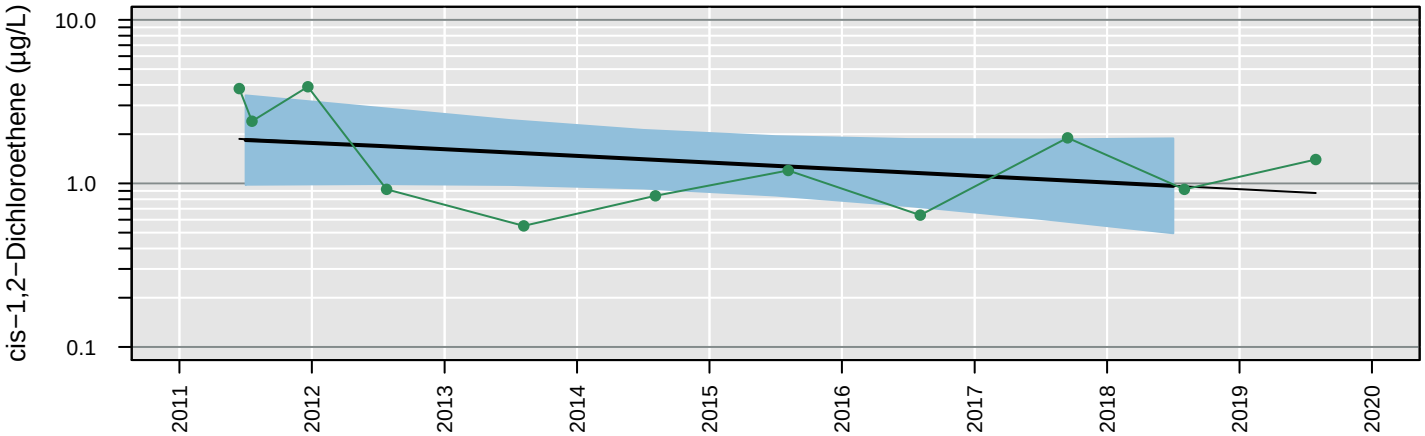
No Analysis Performed

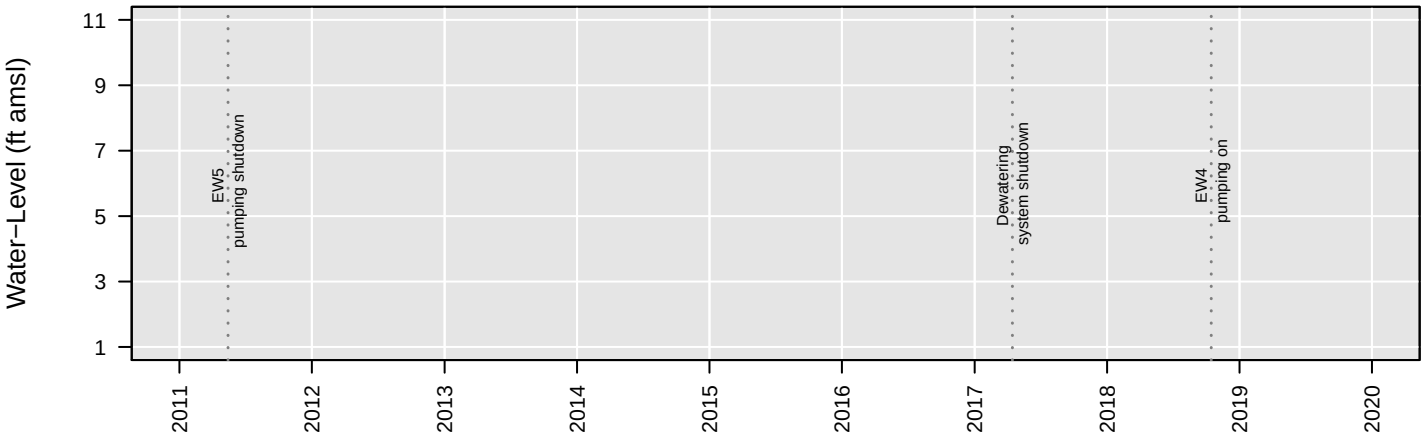
GW109

cis−1,2−Dichloroethene

Number of Comparisons: 11
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

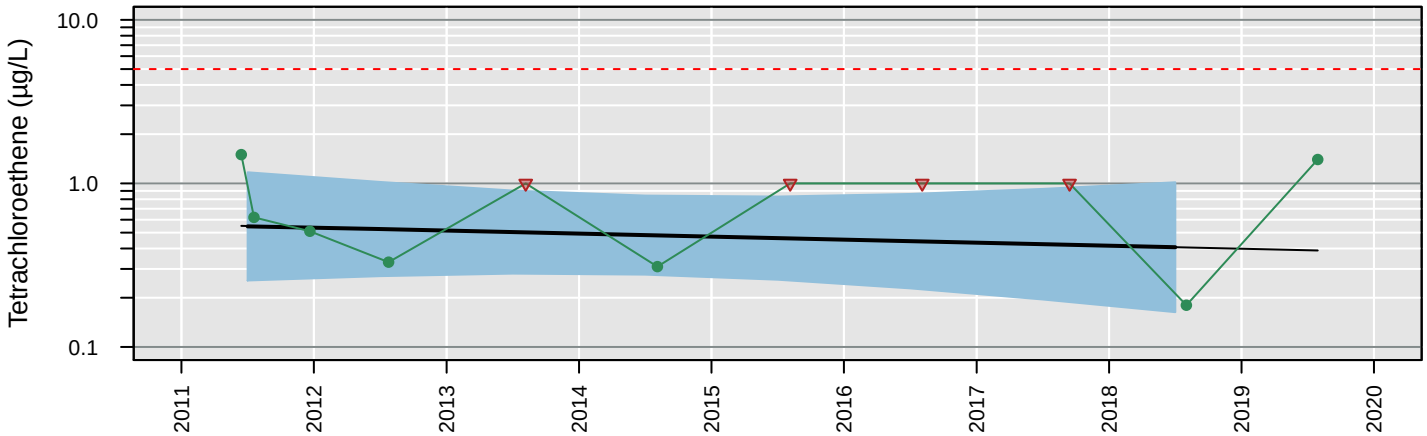
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.97 µg/L
UCL: 1.9 µg/L
LCL: 0.5 µg/L

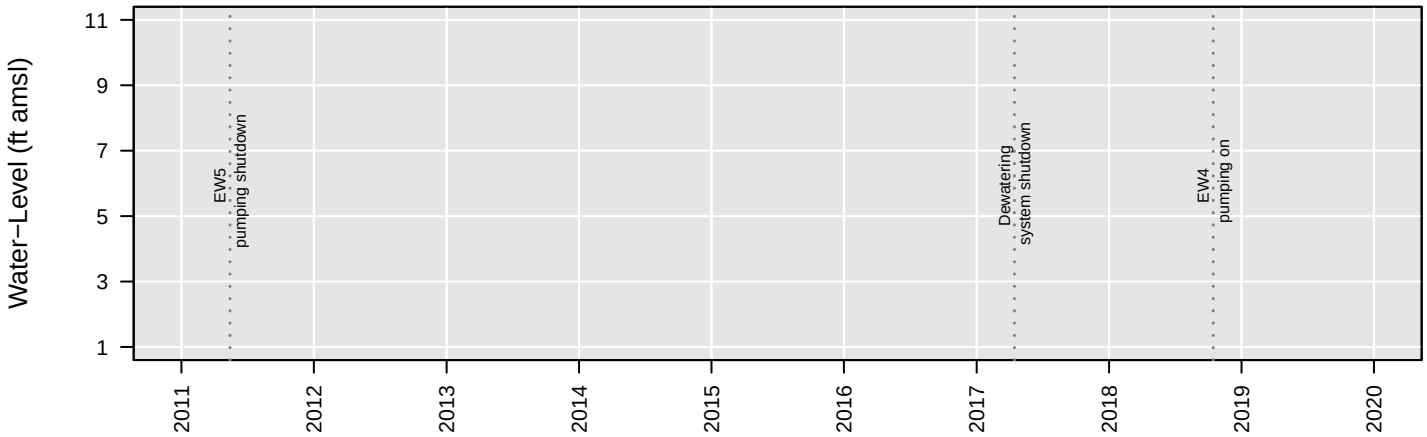
GW109

Tetrachloroethene

Number of Comparisons: 11
Percent NDs: 36%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

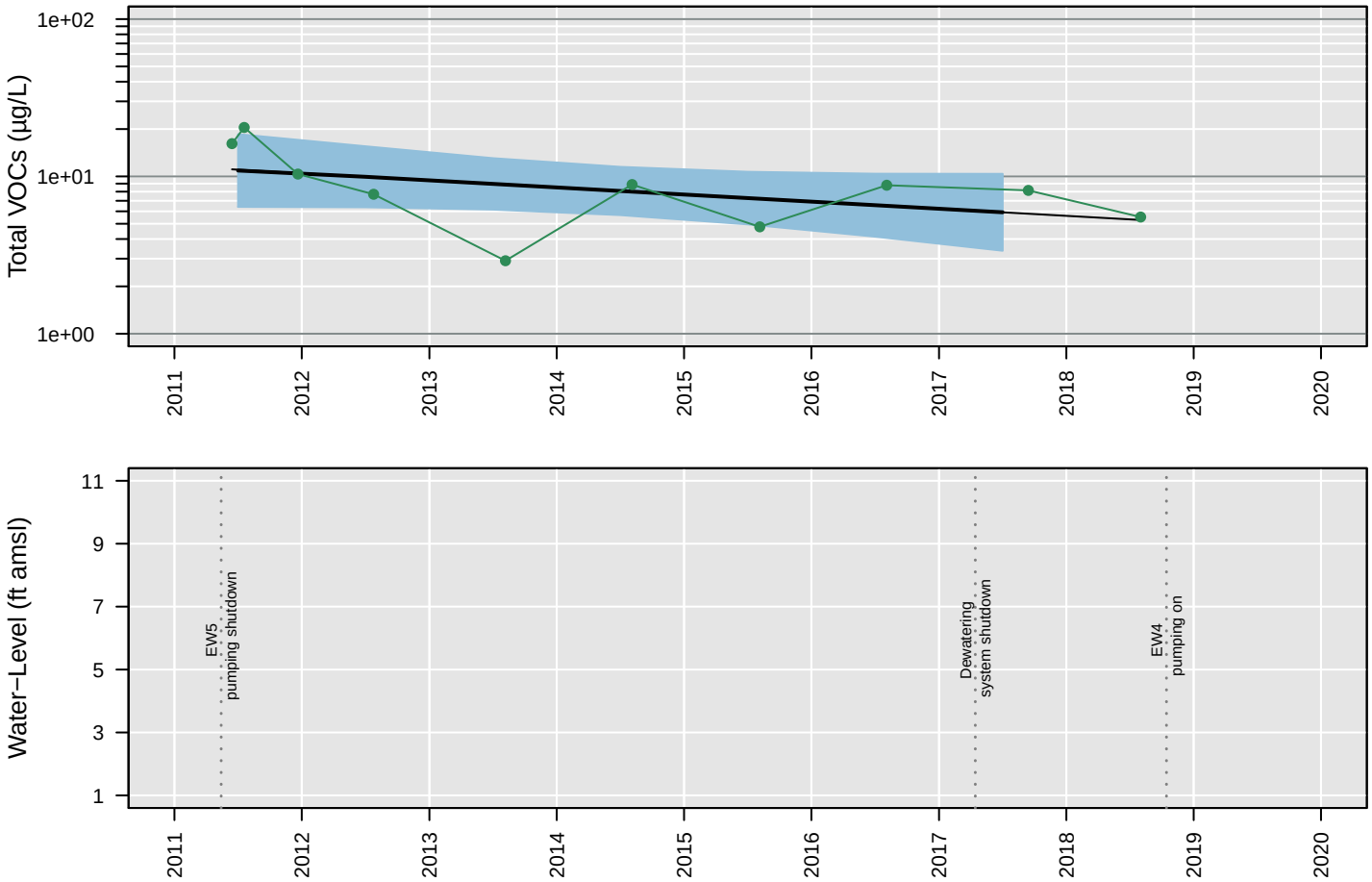
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.41 µg/L
UCL: 1 µg/L
LCL: 0.16 µg/L

GW109

Total VOCs

Number of Comparisons: 10
Percent NDs: 0%



Censored Regression (Tobit) Model

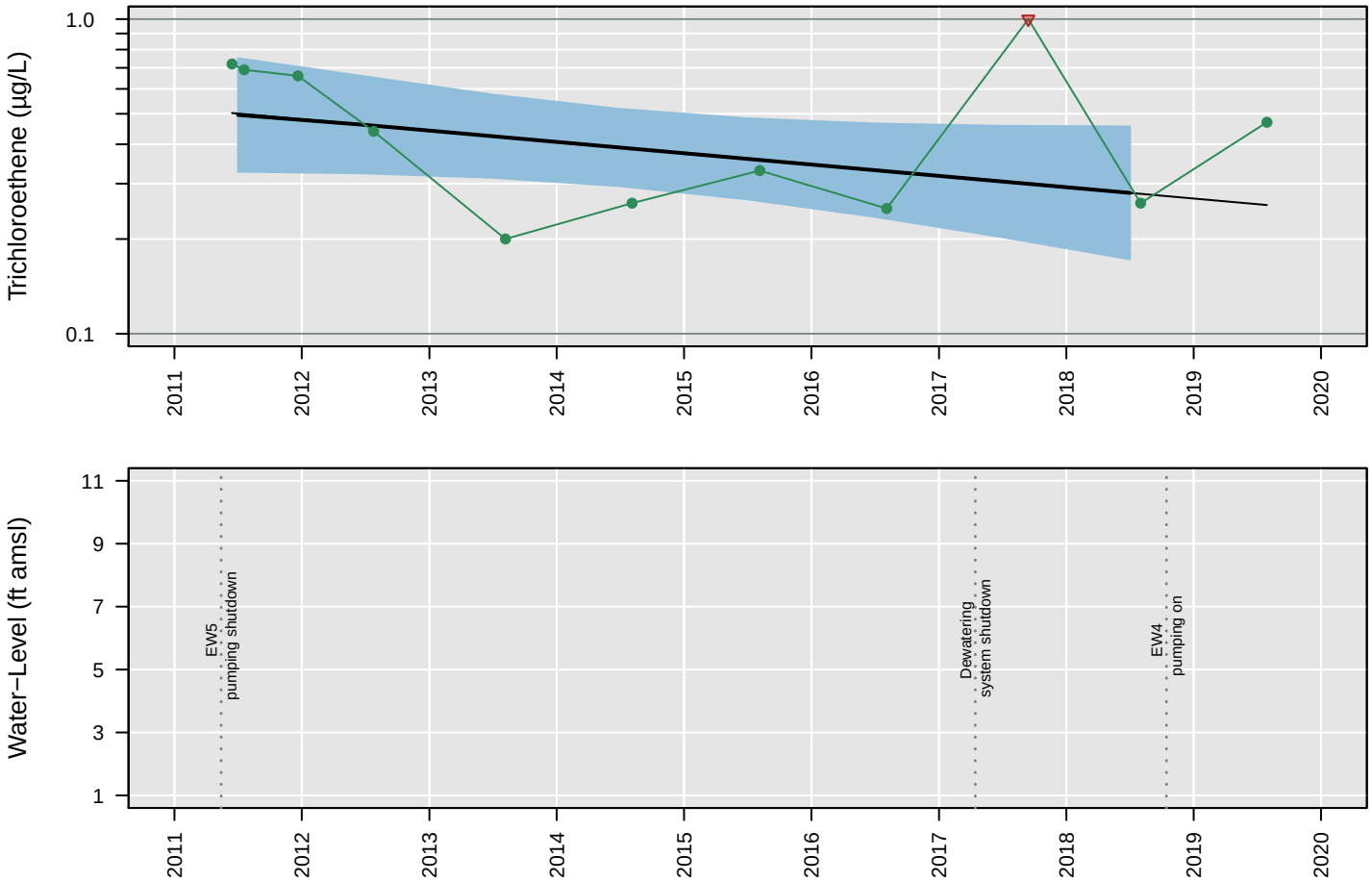
Trend Not Significant

Regression Statistics for January 2017 to January 2018
Geometric Mean: 5.9 µg/L
UCL: 10 µg/L
LCL: 3.4 µg/L

GW109

Trichloroethene

Number of Comparisons: 11
Percent NDs: 9%



Censored Regression (Tobit) Model

Trend Not Significant

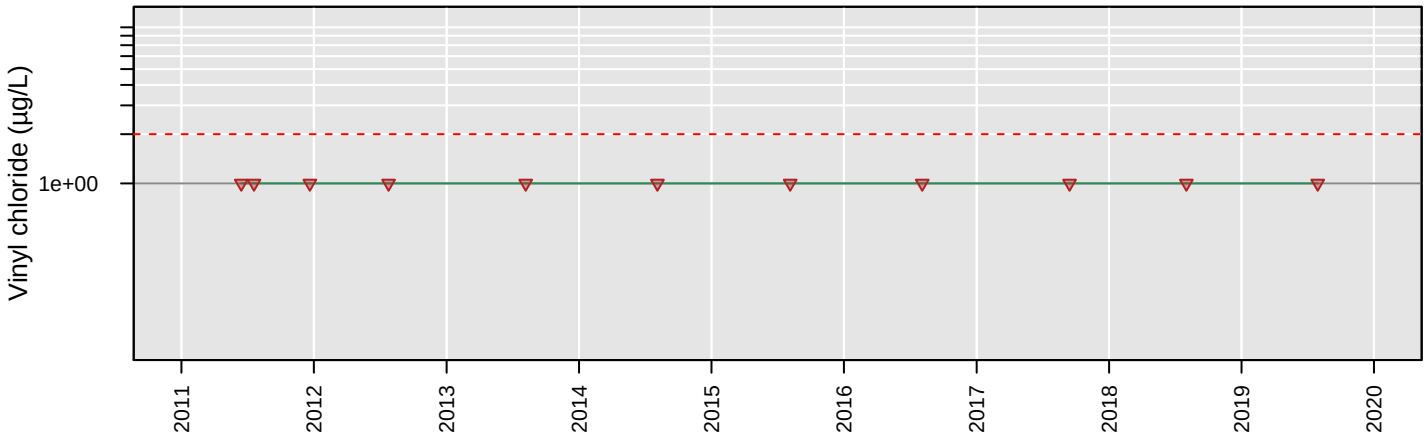
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.28 µg/L
UCL: 0.46 µg/L
LCL: 0.17 µg/L

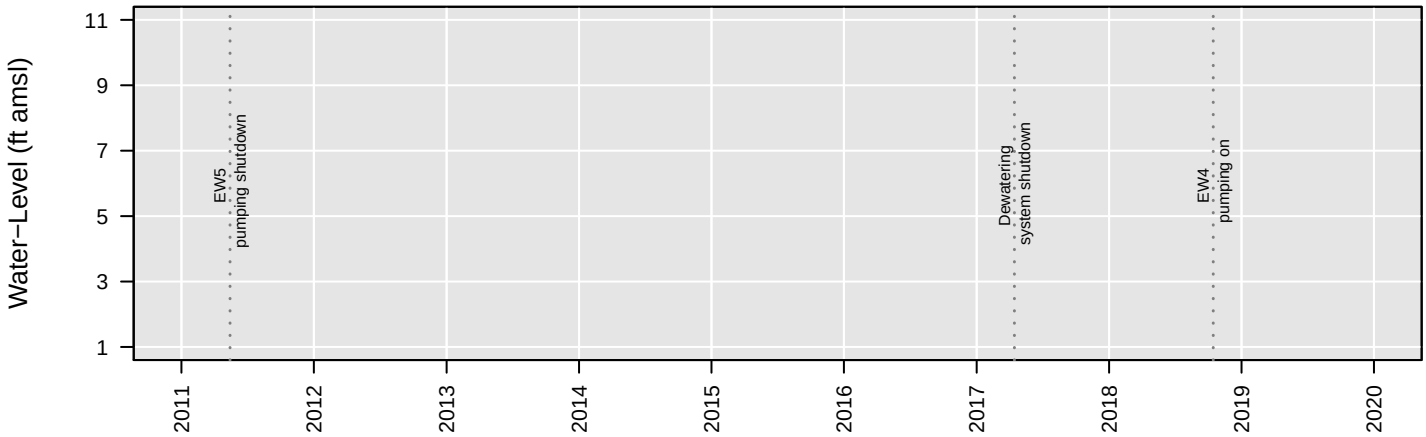
GW109

Vinyl chloride

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



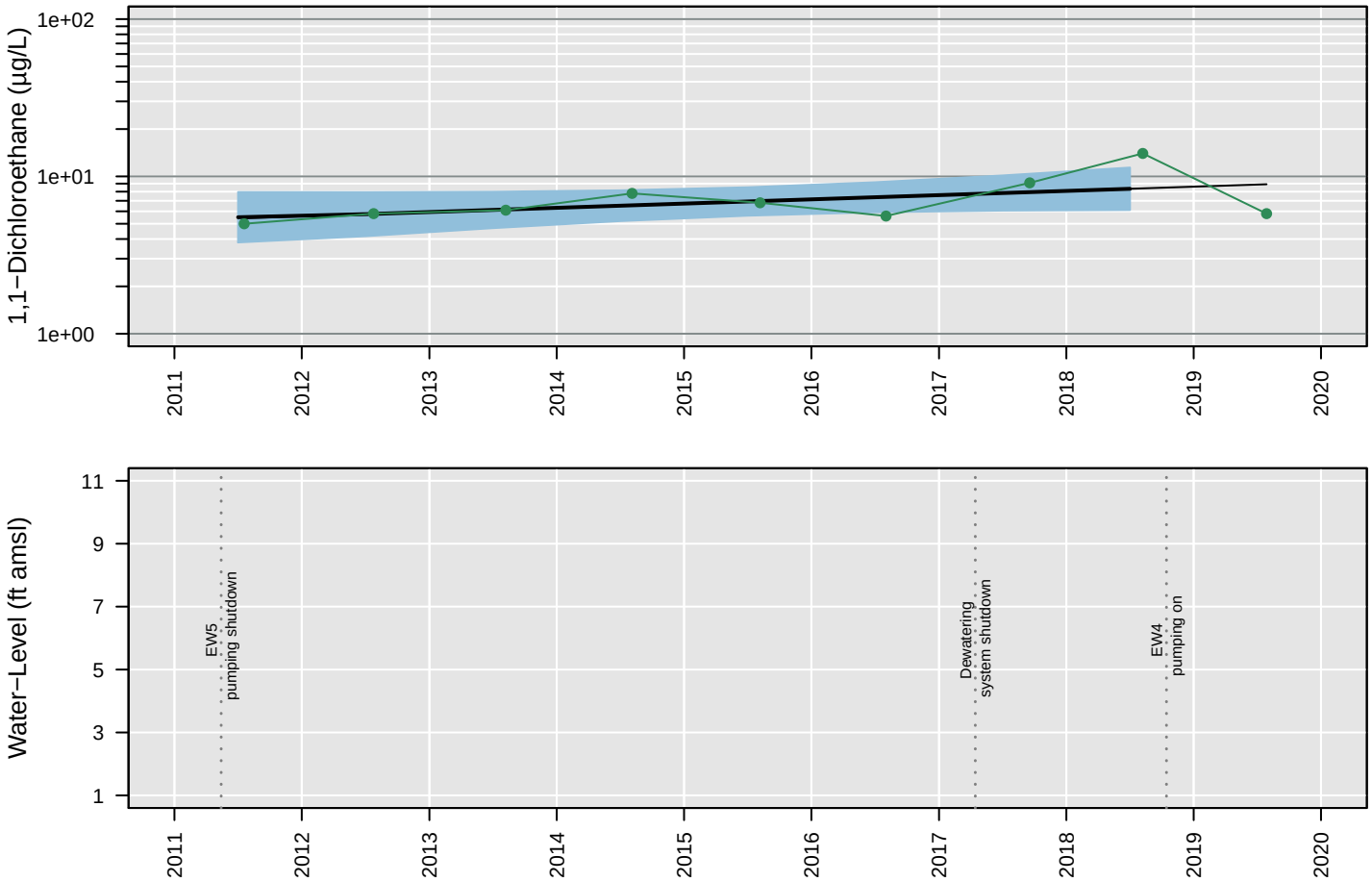


No Analysis Performed

GW50

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

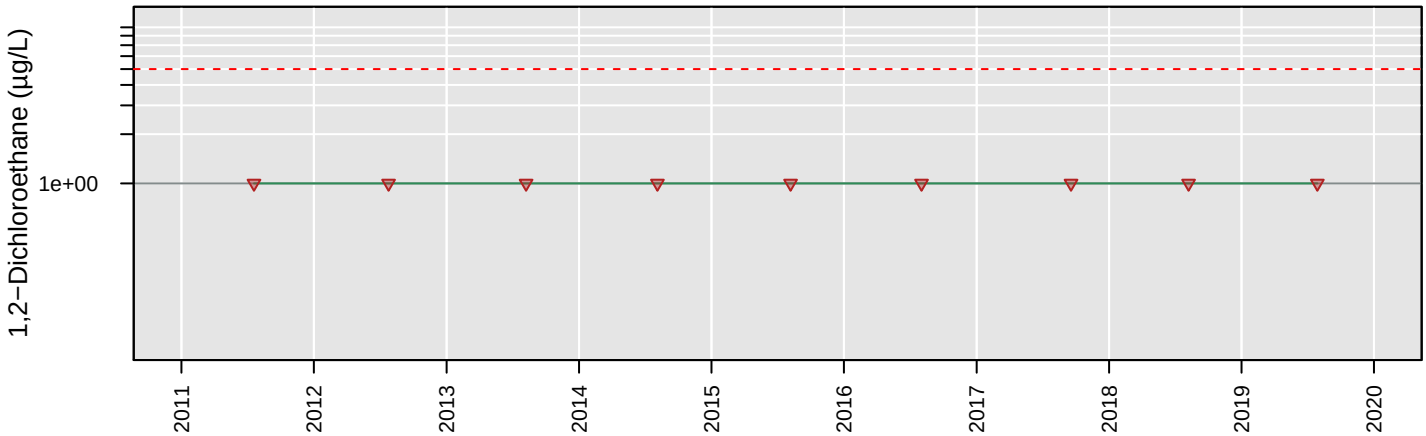
Regression Statistics for January 2018 to January 2019
Geometric Mean: 8.3 µg/L
UCL: 11 µg/L
LCL: 6.1 µg/L

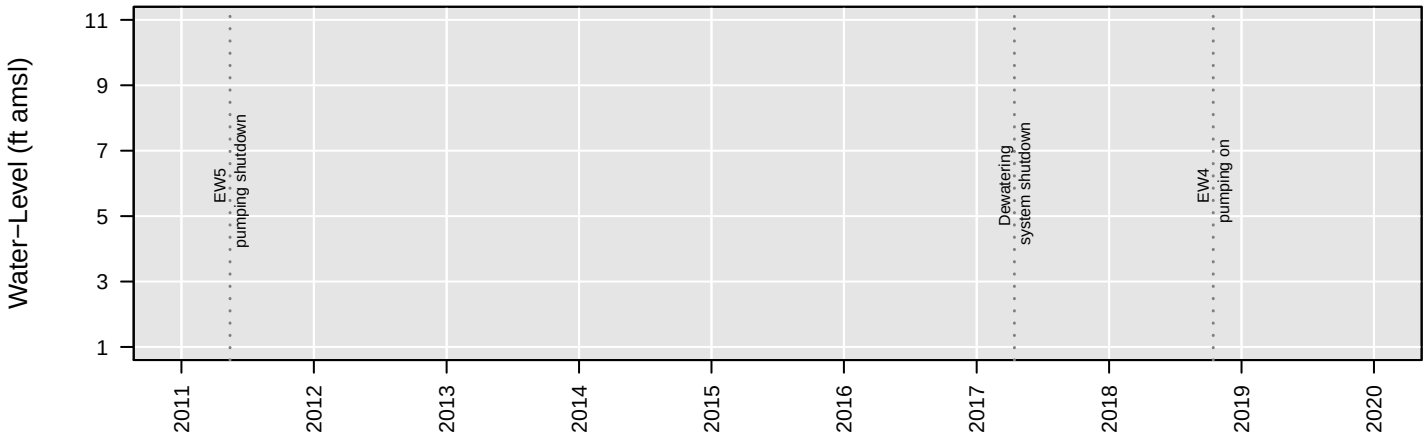
GW50

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





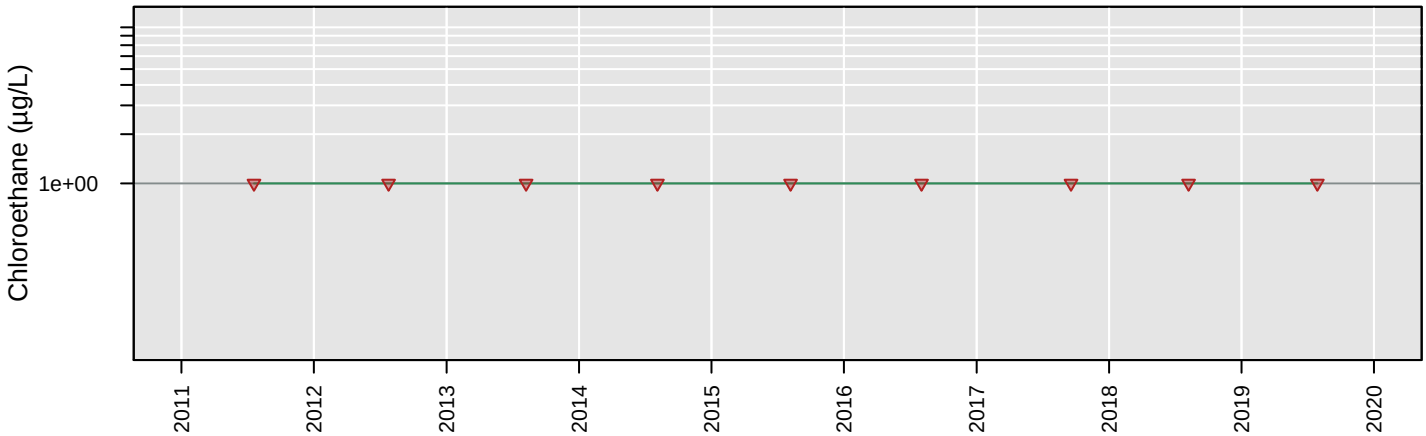
No Analysis Performed

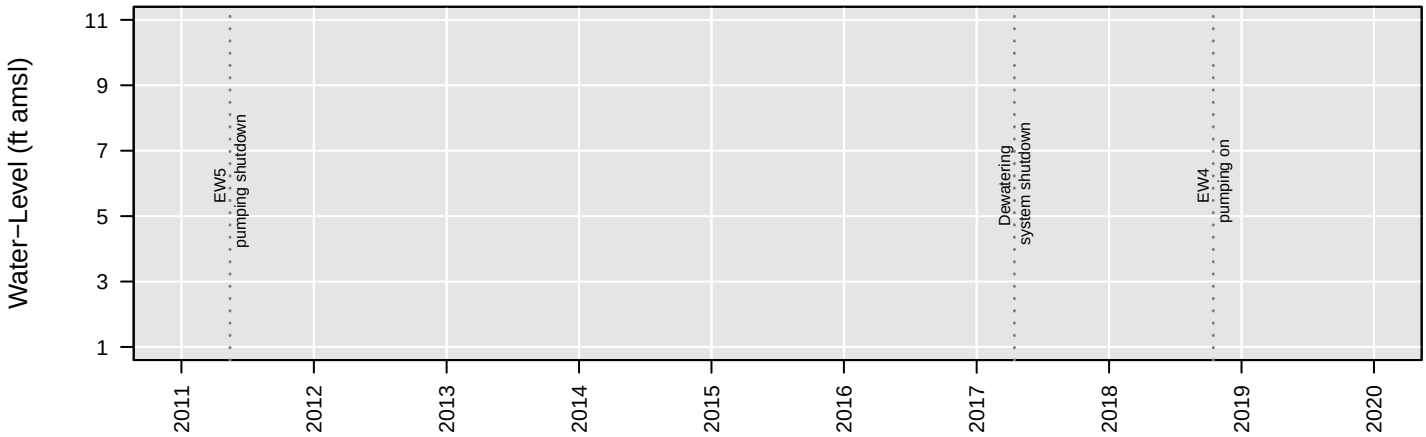
GW50

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



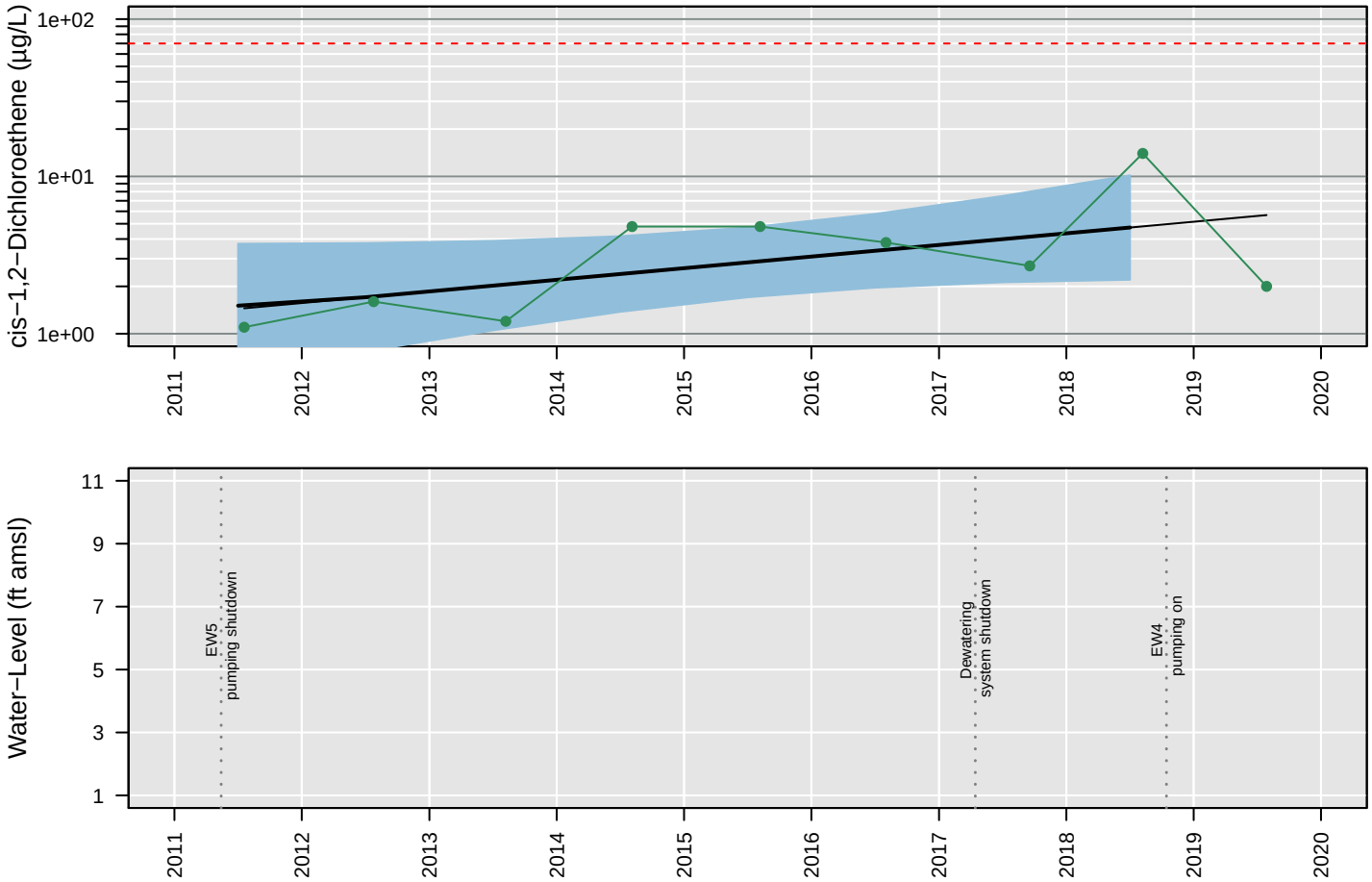


No Analysis Performed

GW50

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

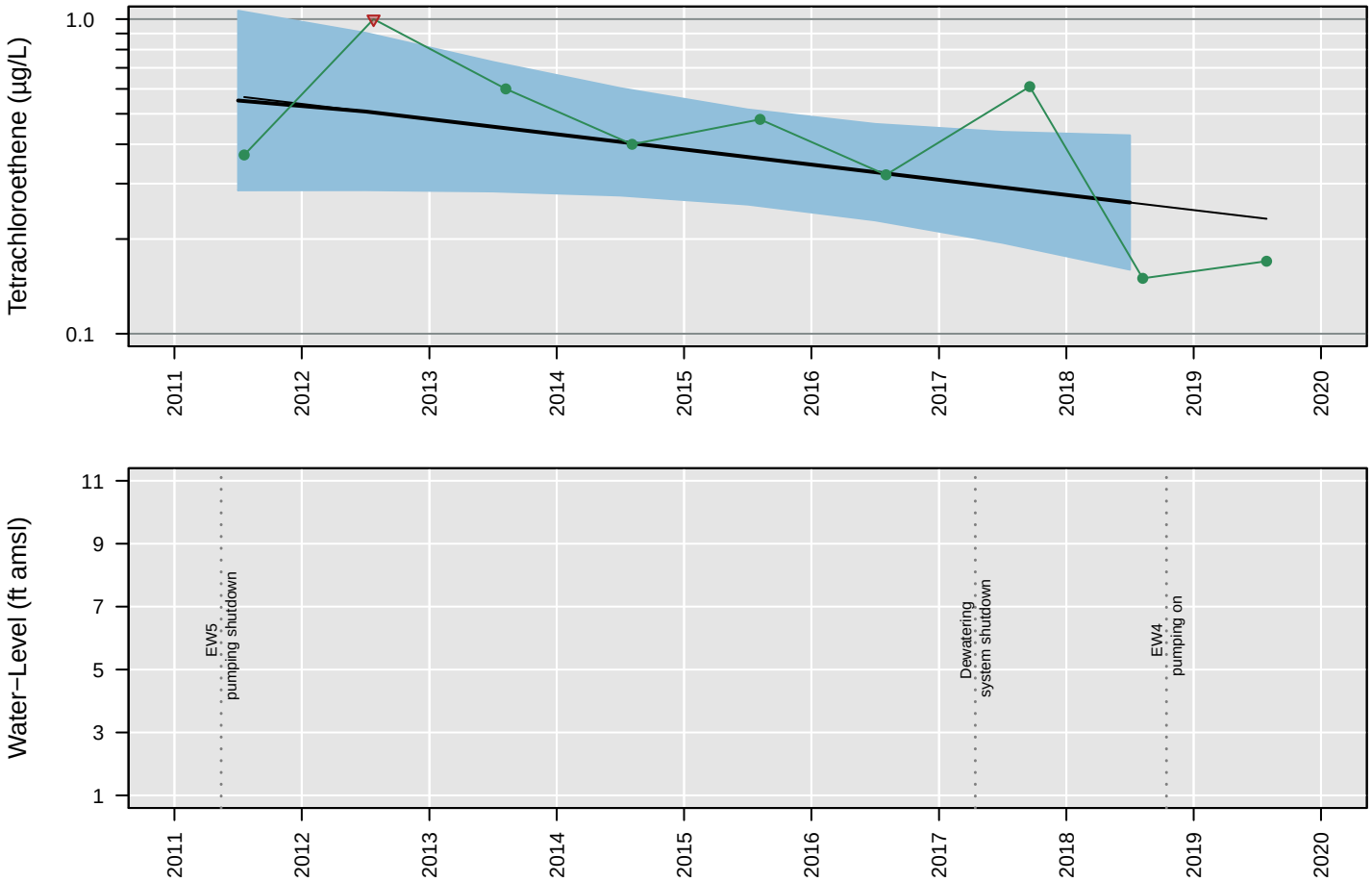
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.7 µg/L
UCL: 10 µg/L
LCL: 2.2 µg/L

GW50

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 11%



Censored Regression (Tobit) Model

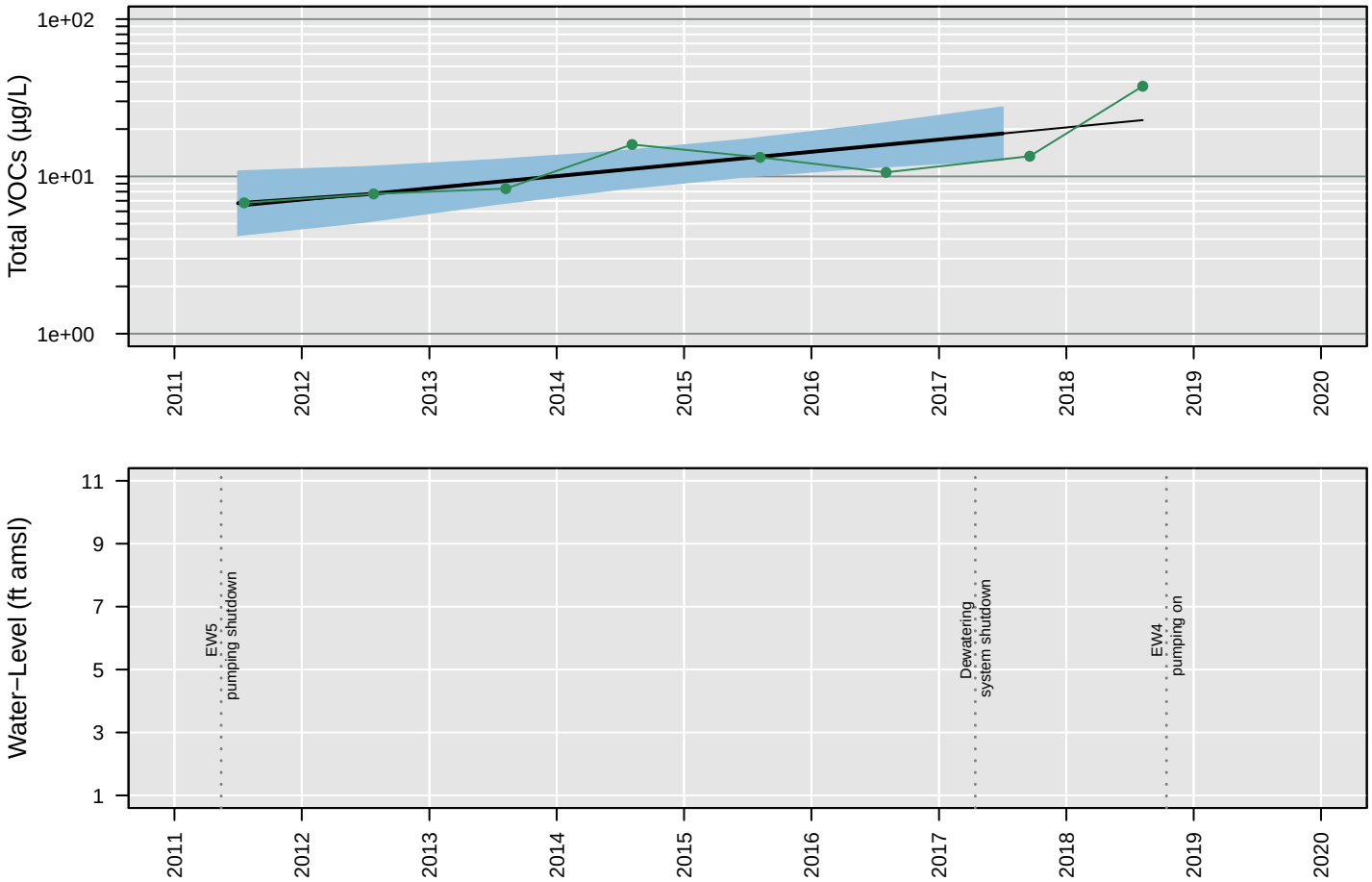
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.26 µg/L
UCL: 0.43 µg/L
LCL: 0.16 µg/L

GW50

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = 0.00049 (+/− 0.00012)*Date + −5.5 (+/− 2)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 19 µg/L
UCL: 28 µg/L
LCL: 13 µg/L

GW50

Trichloroethene

Number of Comparisons: 9
Percent NDs: 44%

Censored Regression (Tobit) Model

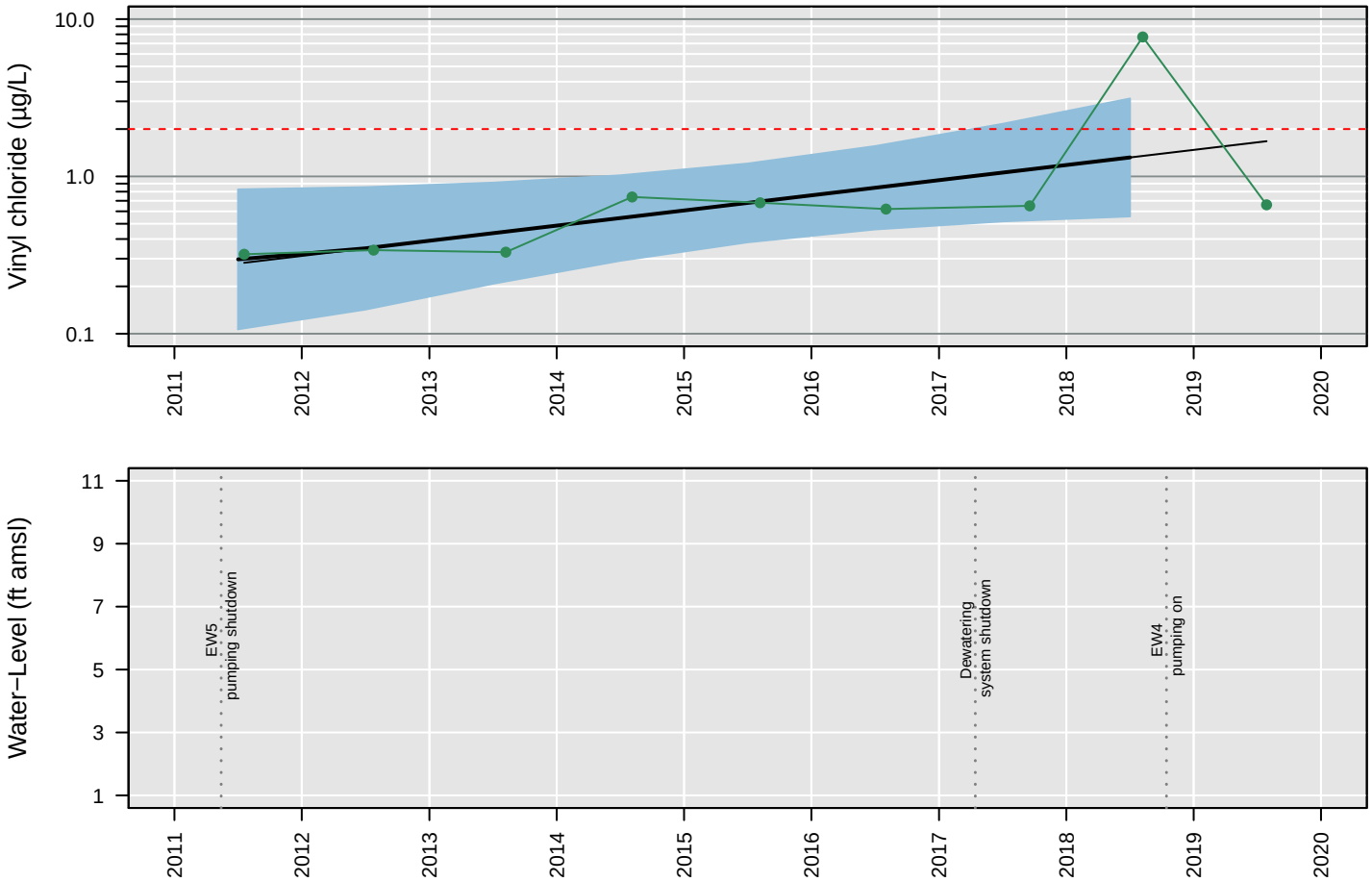
ln Conc. = −0.0003 (+/− 0.00011)*Date + 4.2 (+/− 1.9)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.3 µg/L
UCL: 0.39 µg/L
LCL: 0.23 µg/L

GW50

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

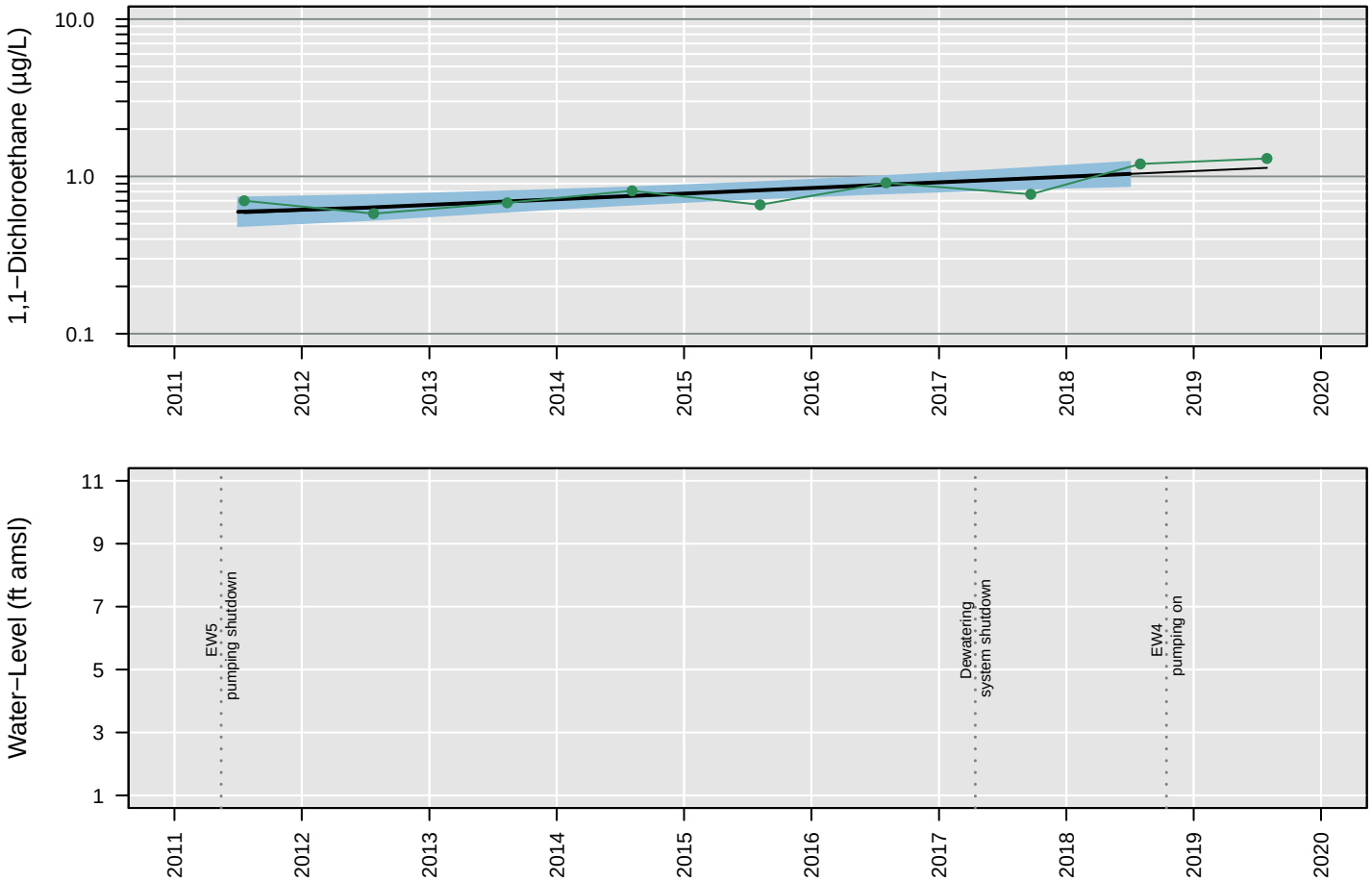
ln Conc. = 0.00061 (+/− 0.00025)*Date + −10 (+/− 4.1)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.3 µg/L
UCL: 3.1 µg/L
LCL: 0.56 µg/L

GW53

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

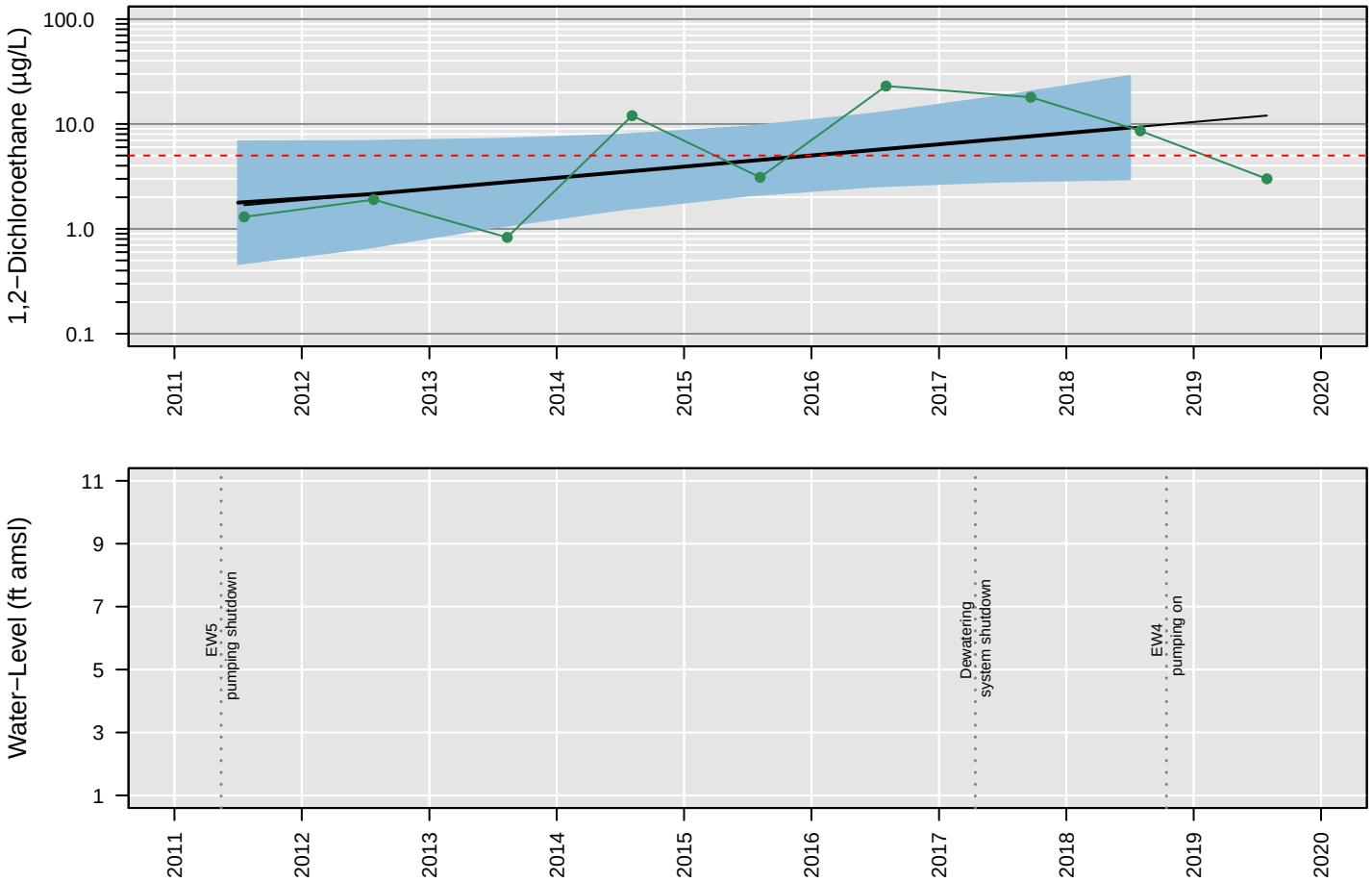
ln Conc. = 0.00023 (+/− 0.00005)*Date + −4 (+/− 0.84)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1 µg/L
UCL: 1.2 µg/L
LCL: 0.87 µg/L

GW53

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

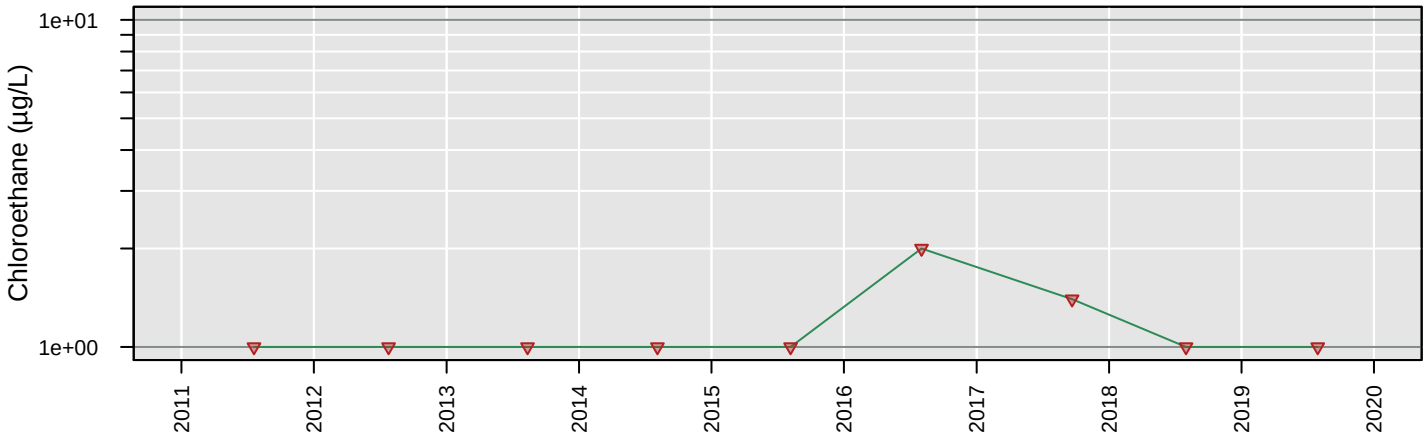
Regression Statistics for January 2018 to January 2019
Geometric Mean: 9.2 µg/L
UCL: 29 µg/L
LCL: 3 µg/L

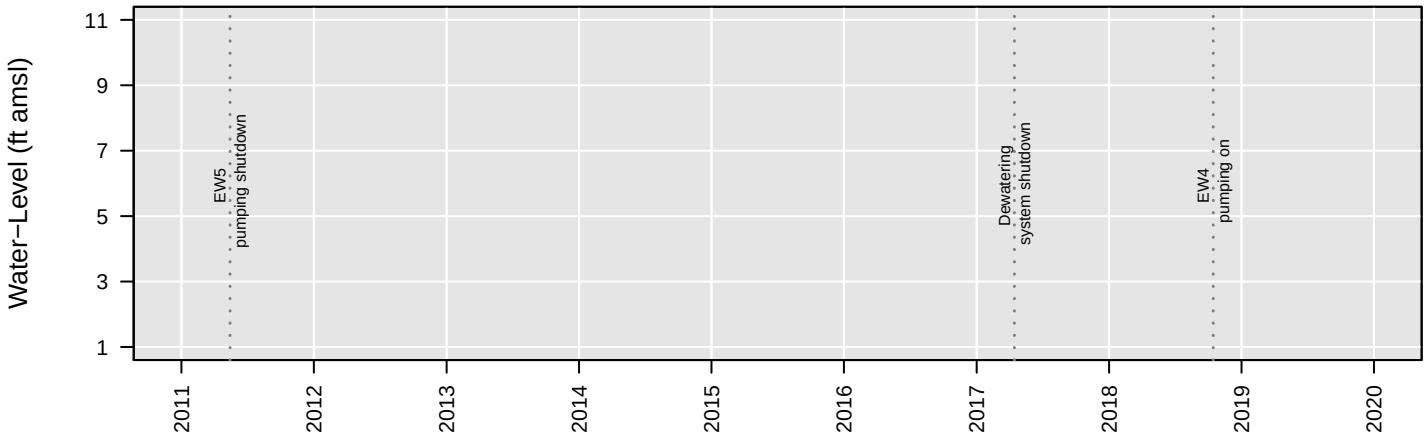
GW53

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



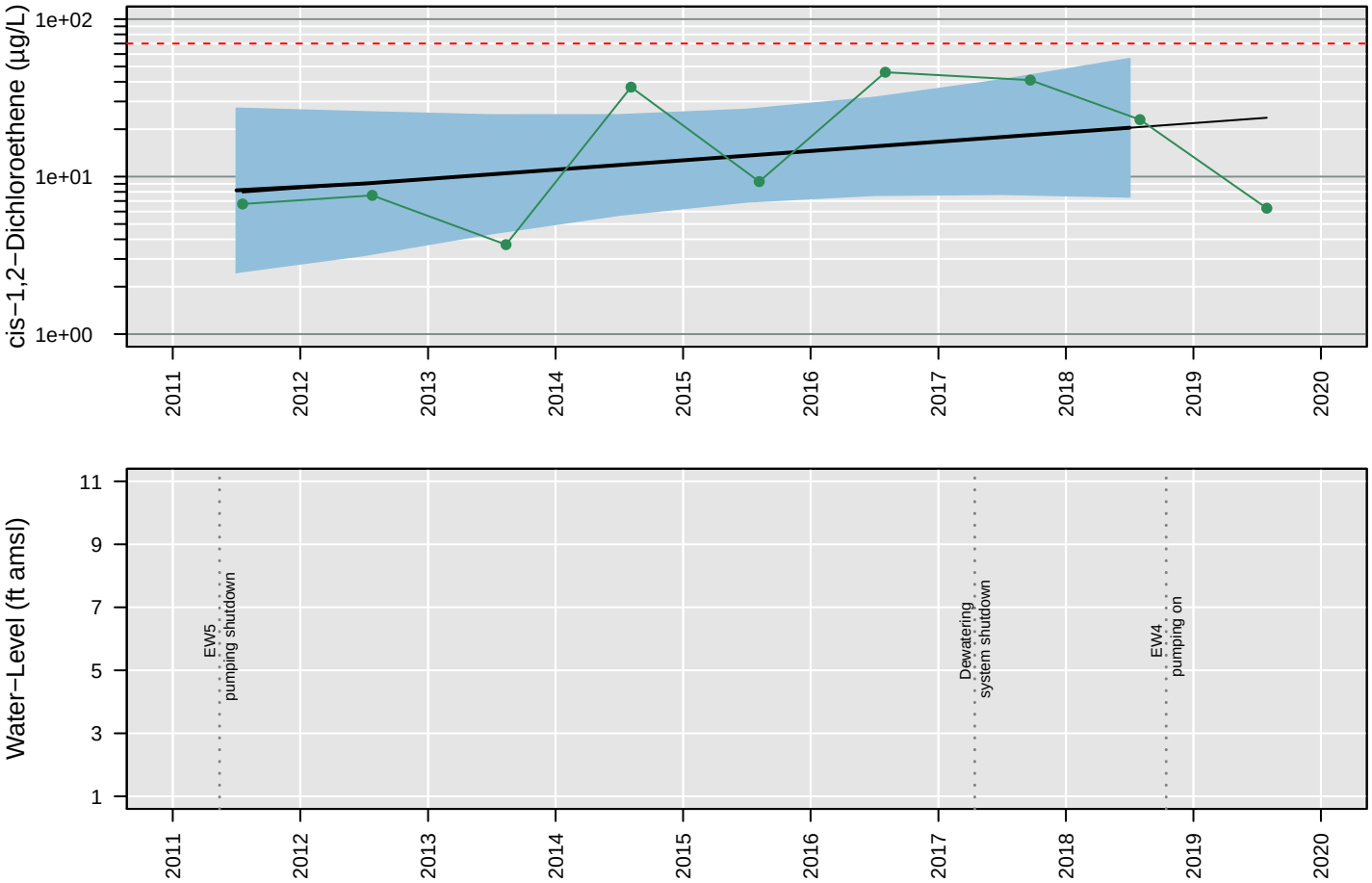


No Analysis Performed

GW53

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

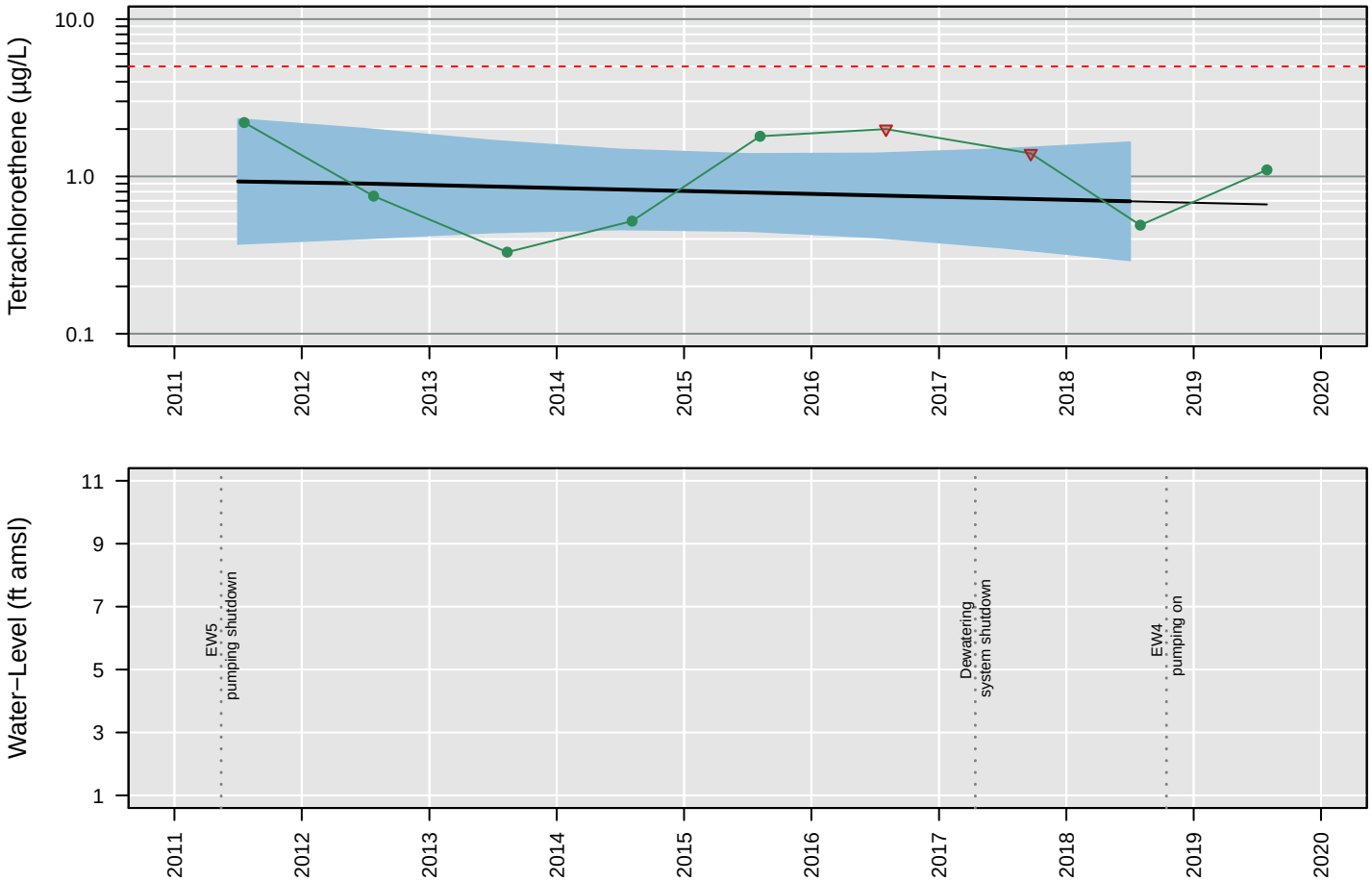
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 20 µg/L
UCL: 56 µg/L
LCL: 7.4 µg/L

GW53

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 22%



Censored Regression (Tobit) Model

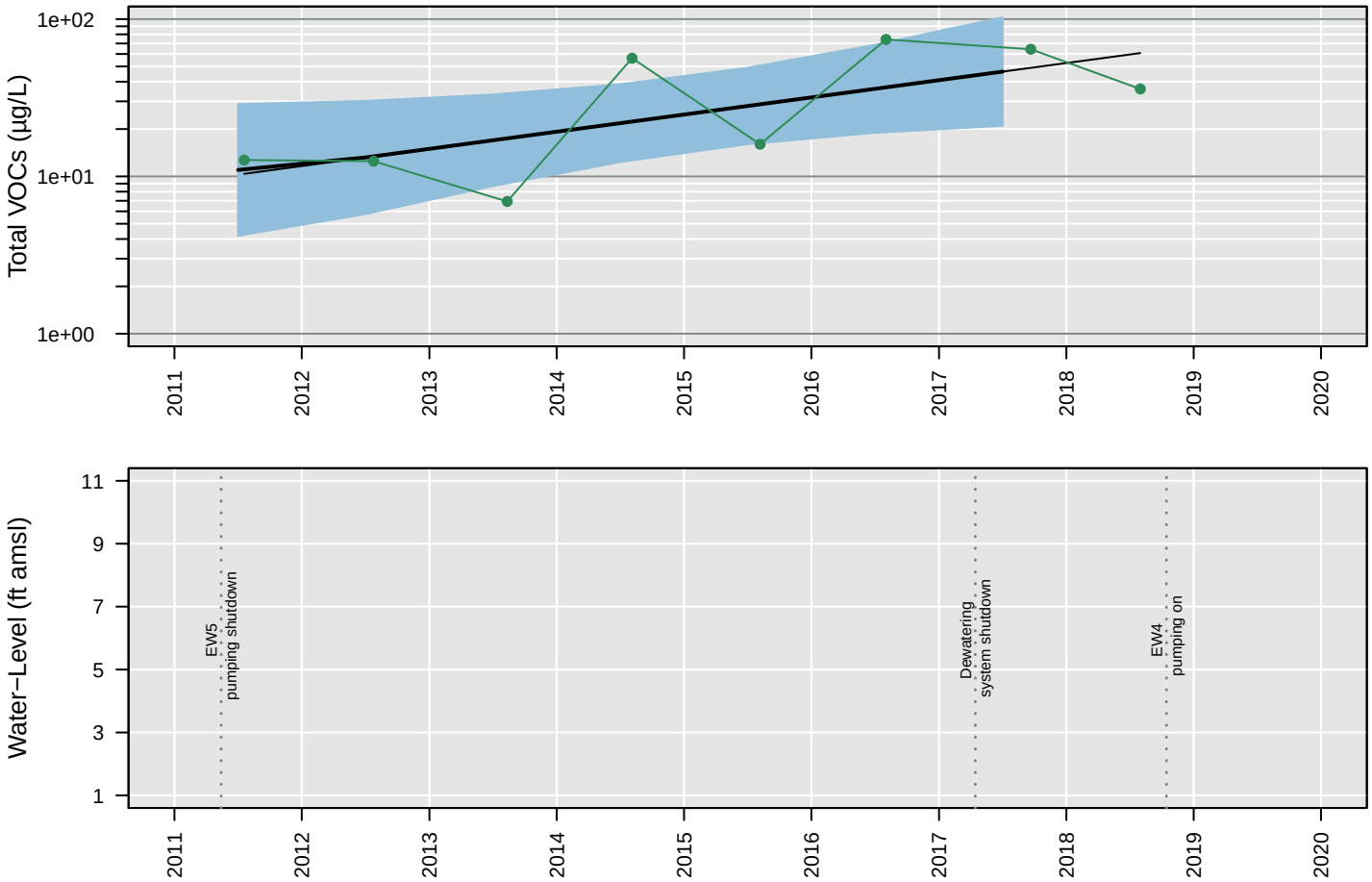
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.69 µg/L
UCL: 1.6 µg/L
LCL: 0.29 µg/L

GW53

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

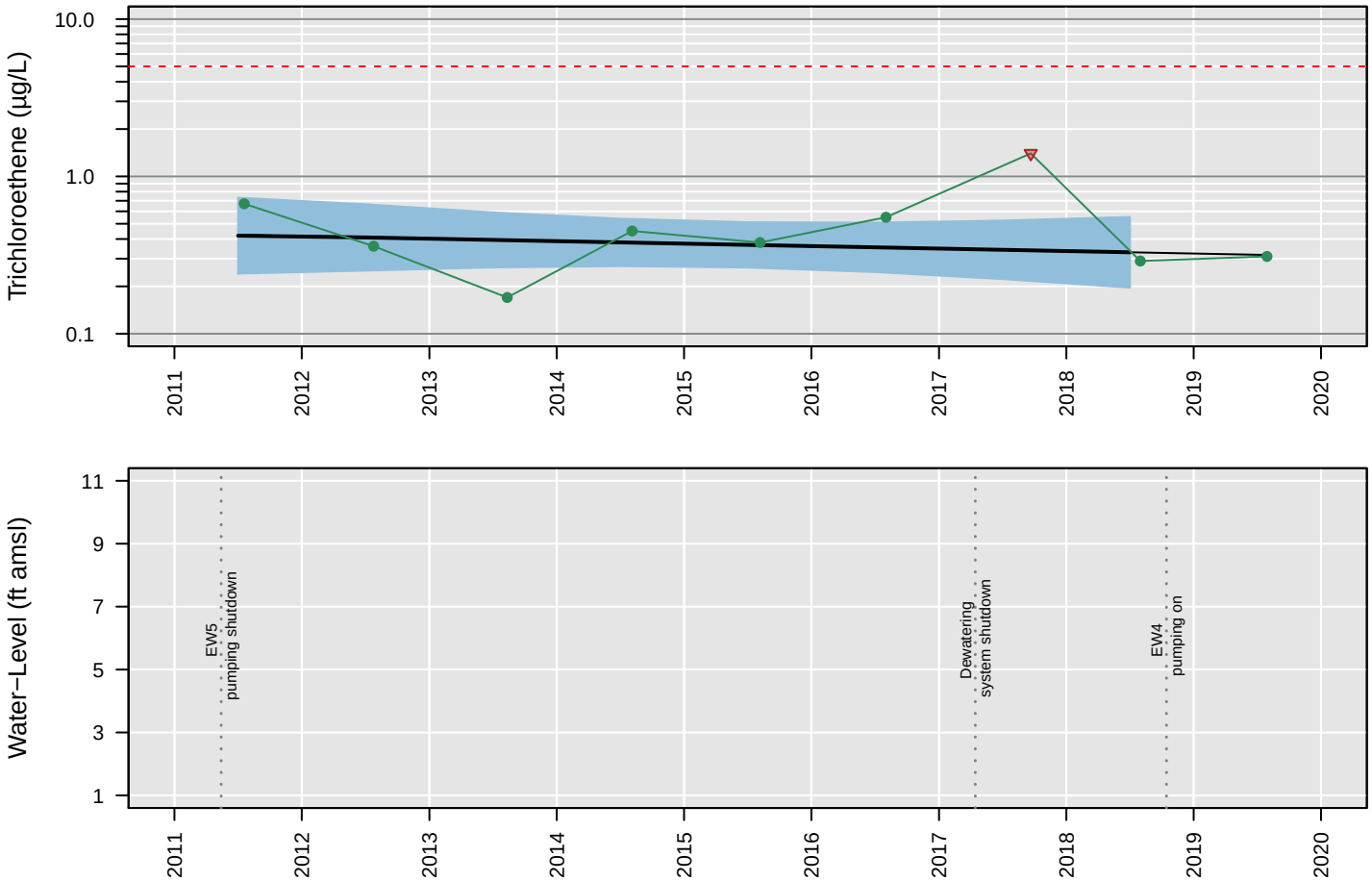
ln Conc. = 0.00069 (+/− 0.00025)*Date + −8.1 (+/− 4.2)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 46 µg/L
UCL: 100 µg/L
LCL: 21 µg/L

GW53

Trichloroethene

Number of Comparisons: 9
Percent NDs: 11%



Censored Regression (Tobit) Model

Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.33 µg/L
UCL: 0.55 µg/L
LCL: 0.2 µg/L

GW53

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 11%

Censored Regression (Tobit) Model

Trend Not Significant

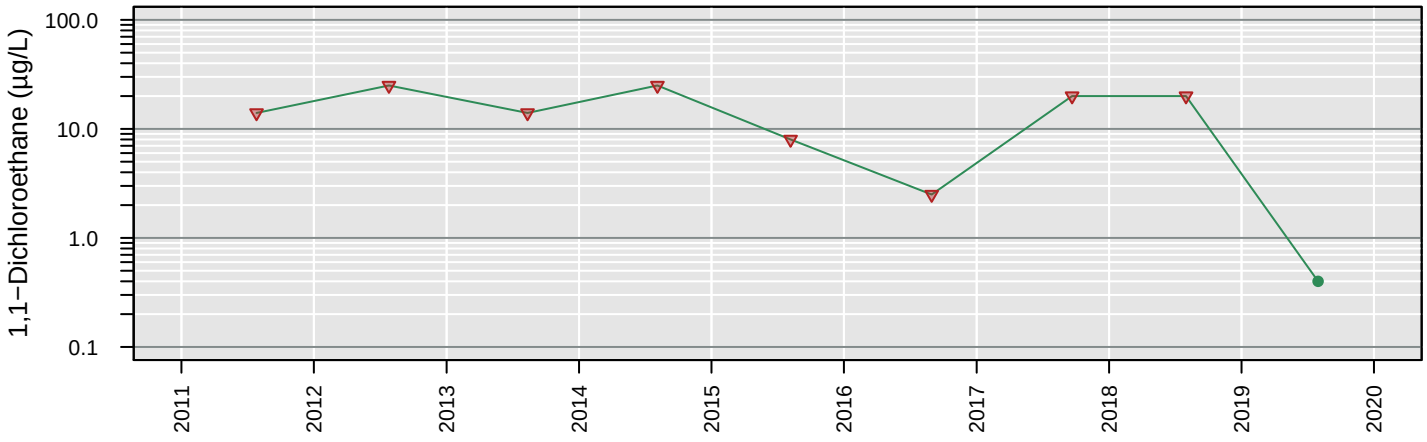
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.2 µg/L
UCL: 3.6 µg/L
LCL: 0.4 µg/L

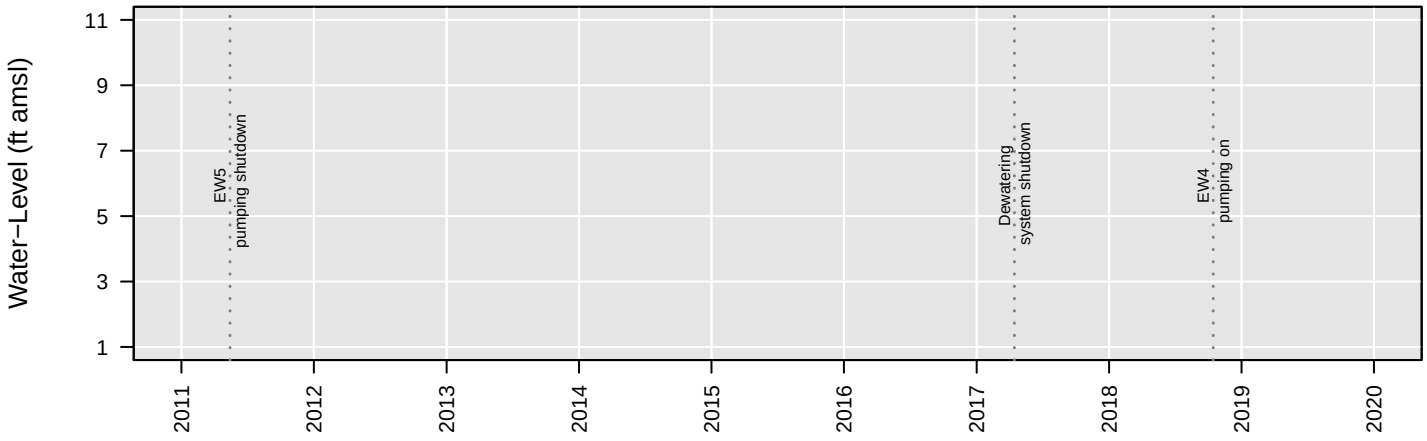
GW63

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 89%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





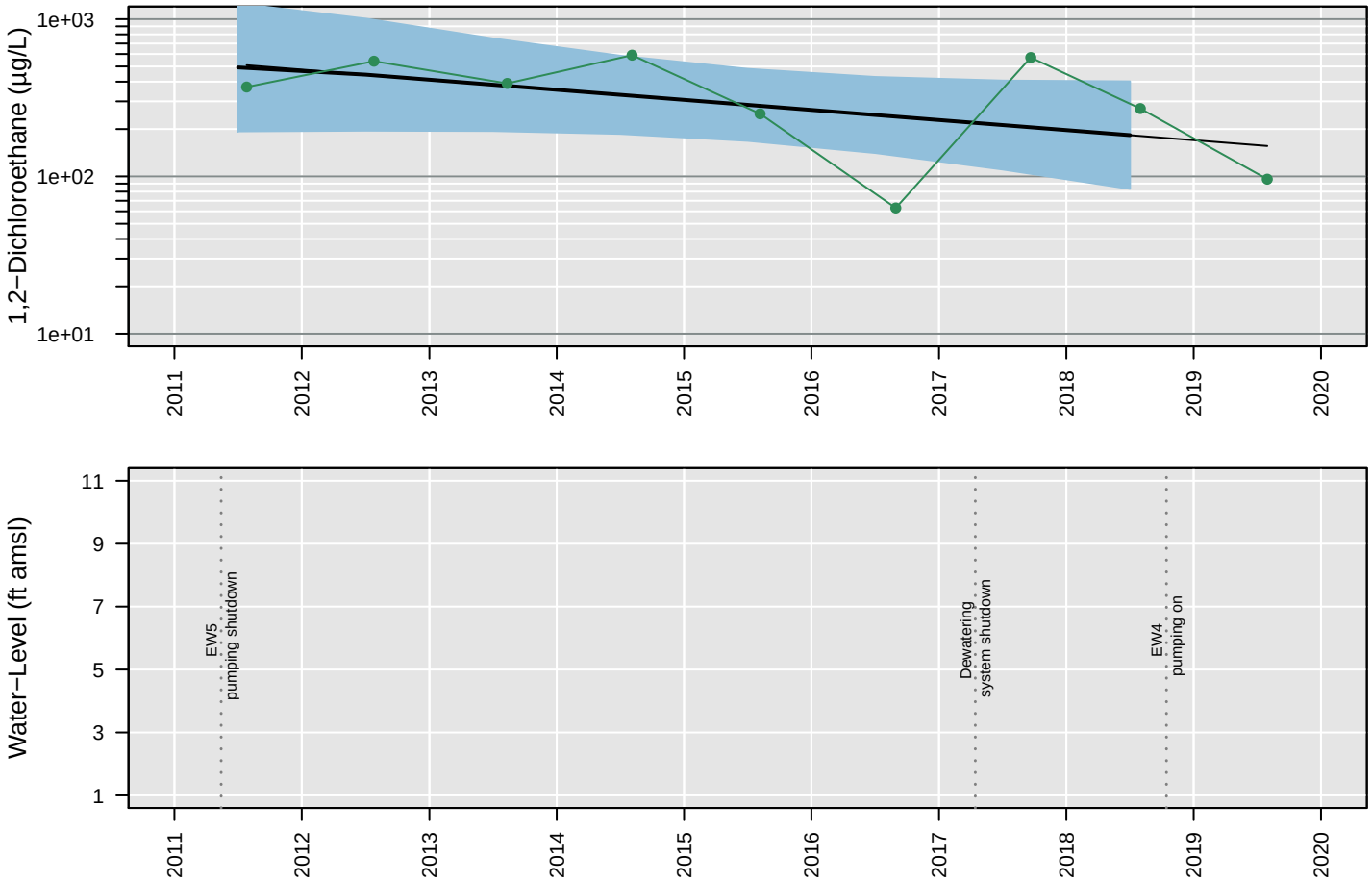
No Analysis Performed

GW63

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

Trend Not Significant

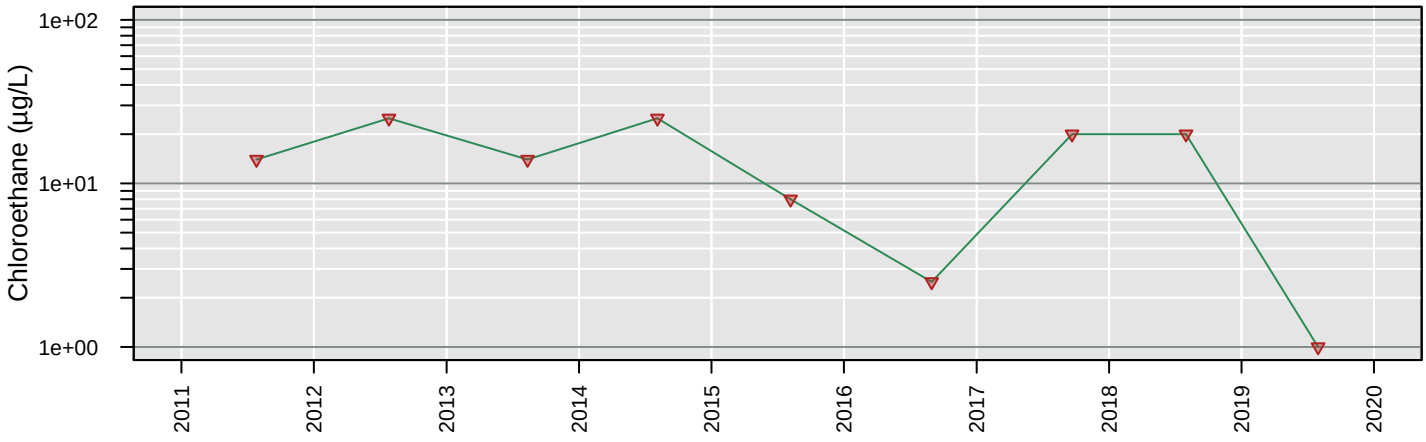
Regression Statistics for January 2018 to January 2019
Geometric Mean: 180 µg/L
UCL: 400 µg/L
LCL: 83 µg/L

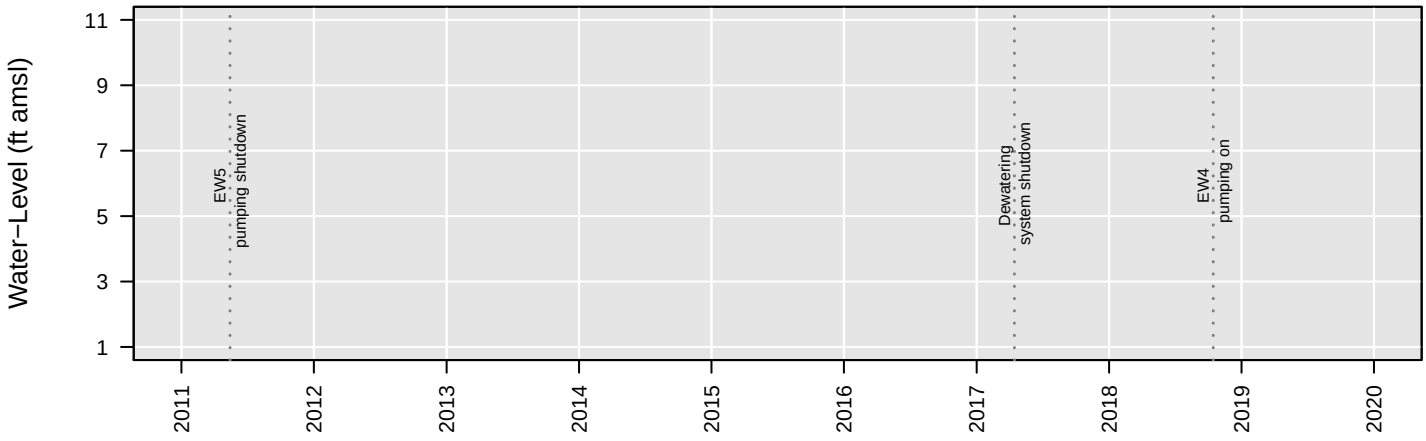
GW63

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





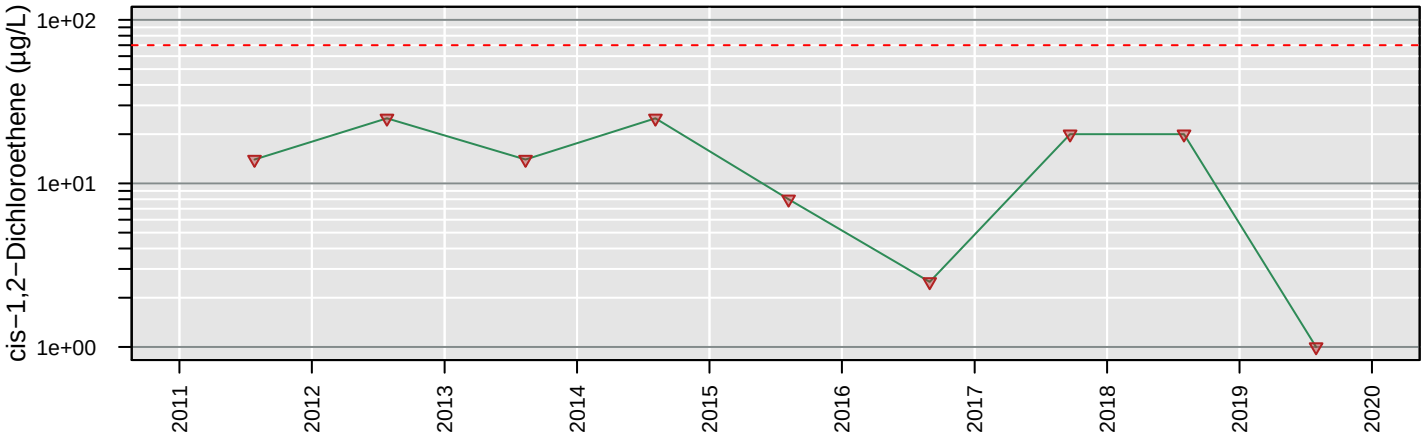
No Analysis Performed

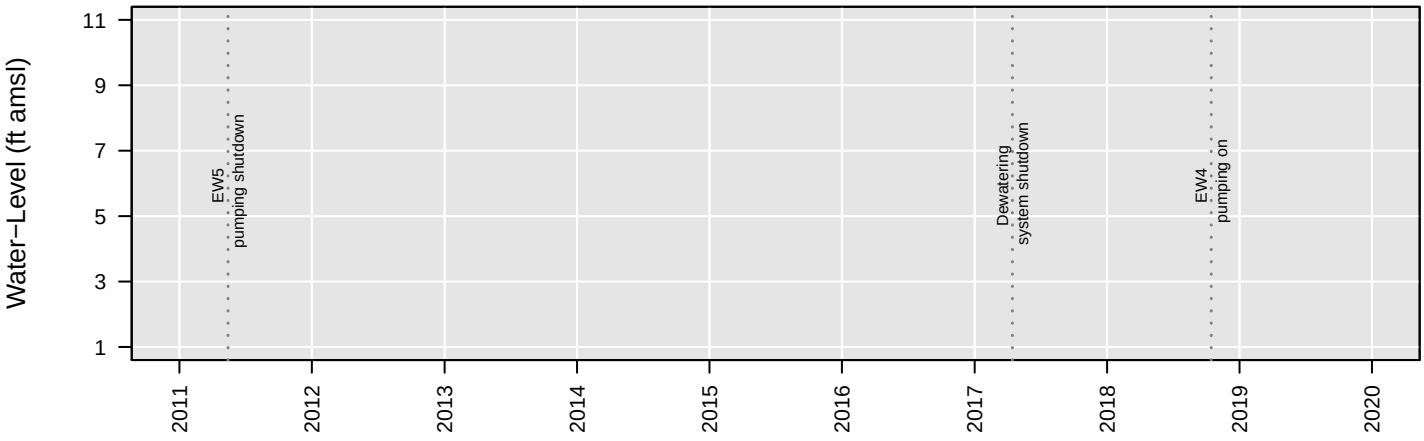
GW63

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



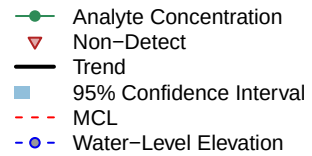


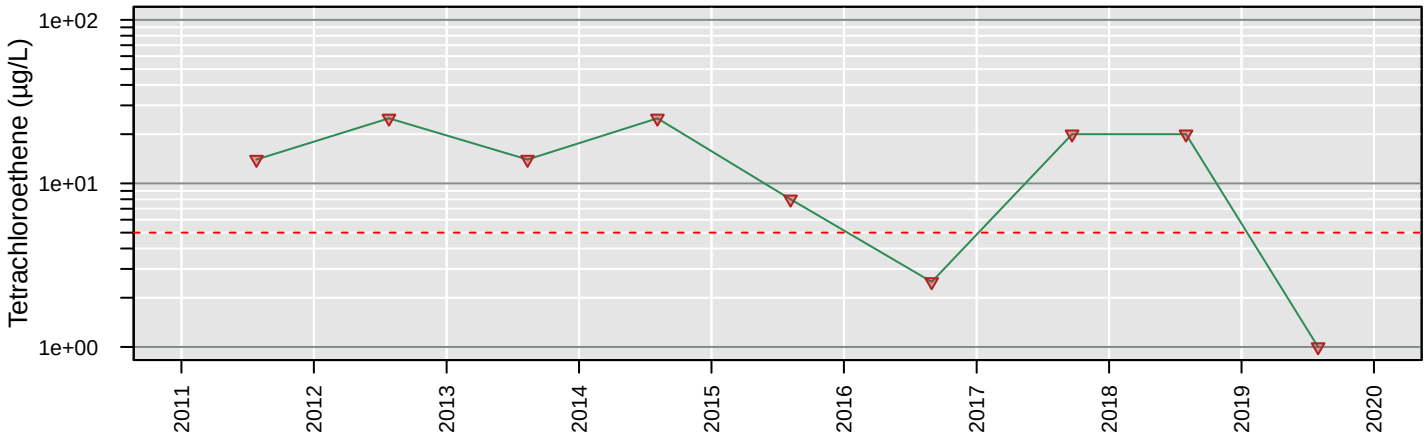
No Analysis Performed

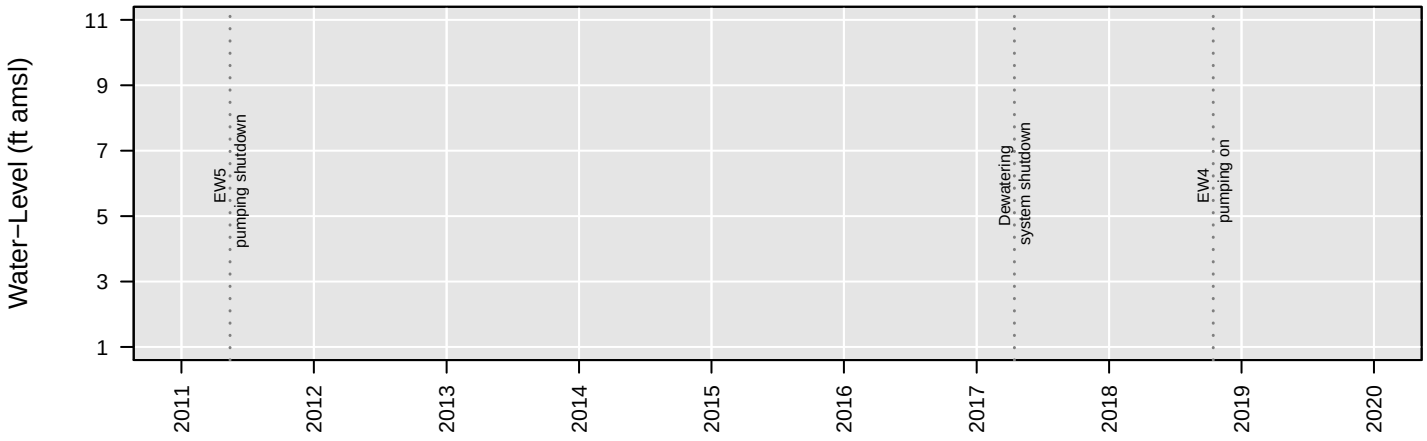
GW63

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%





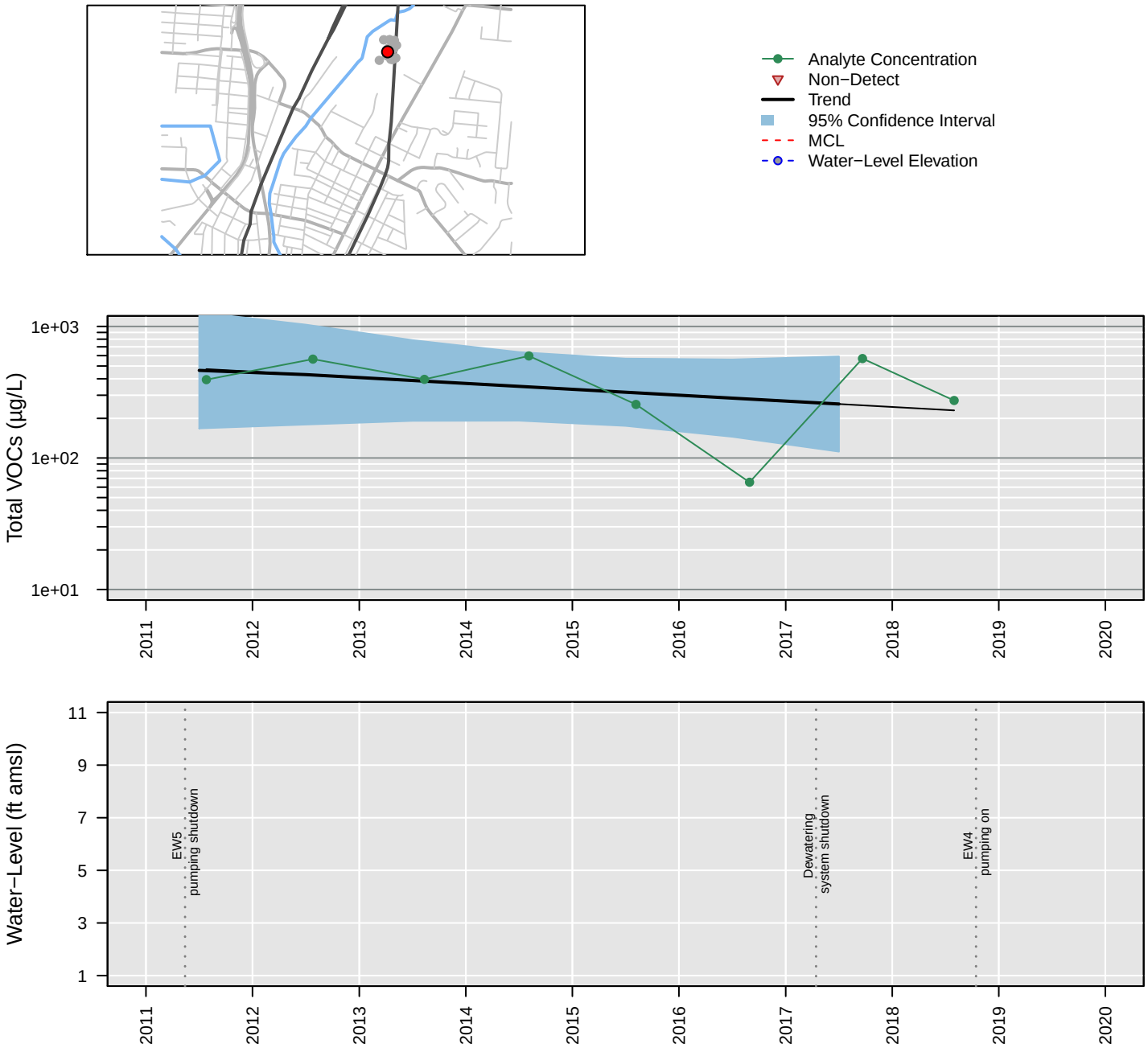


No Analysis Performed

GW63

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

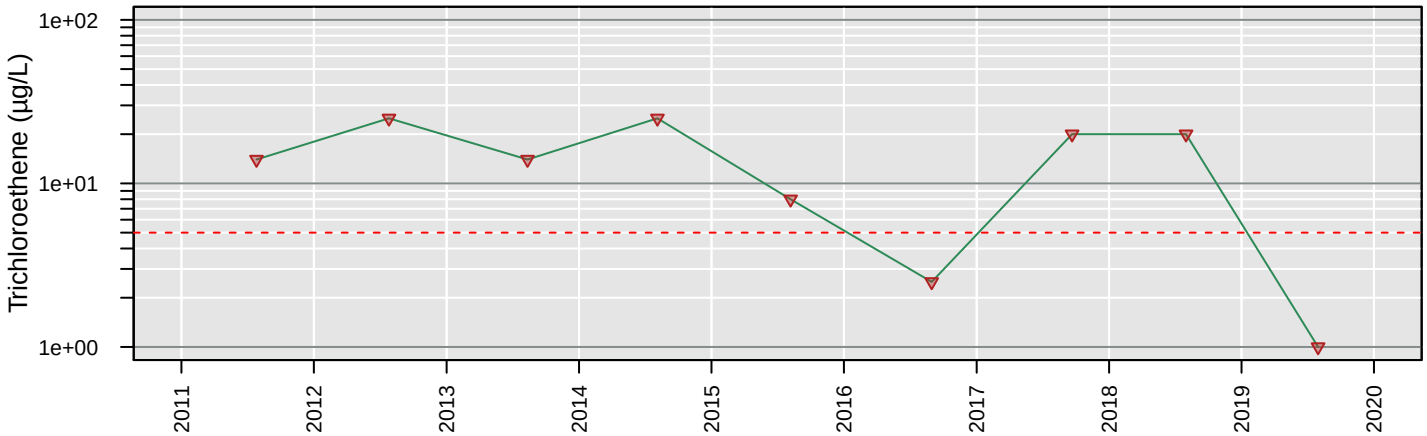
Trend Not Significant

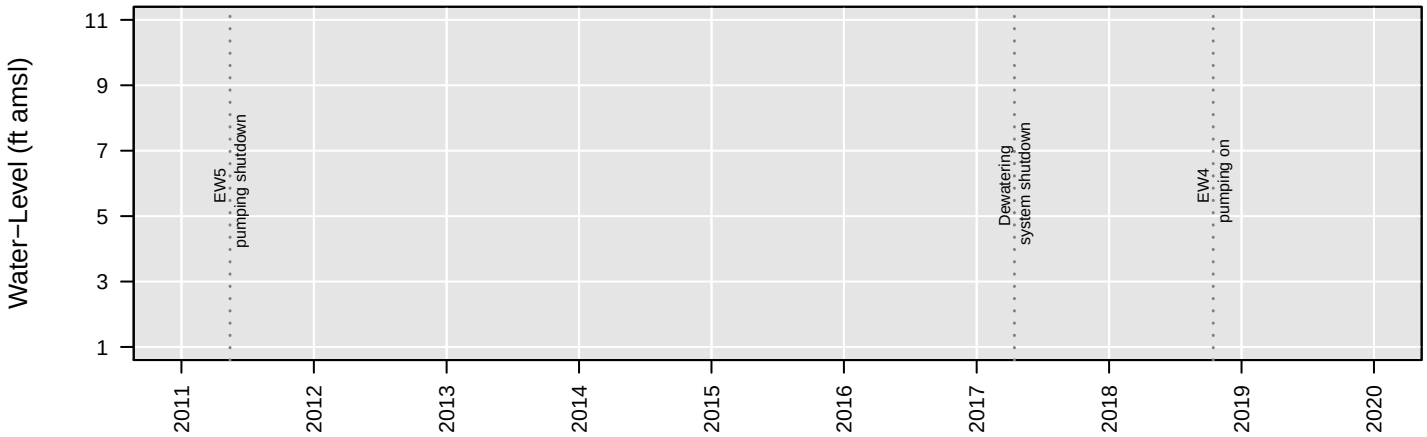
Regression Statistics for January 2017 to January 2018
Geometric Mean: 260 µg/L
UCL: 590 µg/L
LCL: 110 µg/L

GW63

Trichloroethene

Number of Comparisons: 9
Percent NDs: 100%



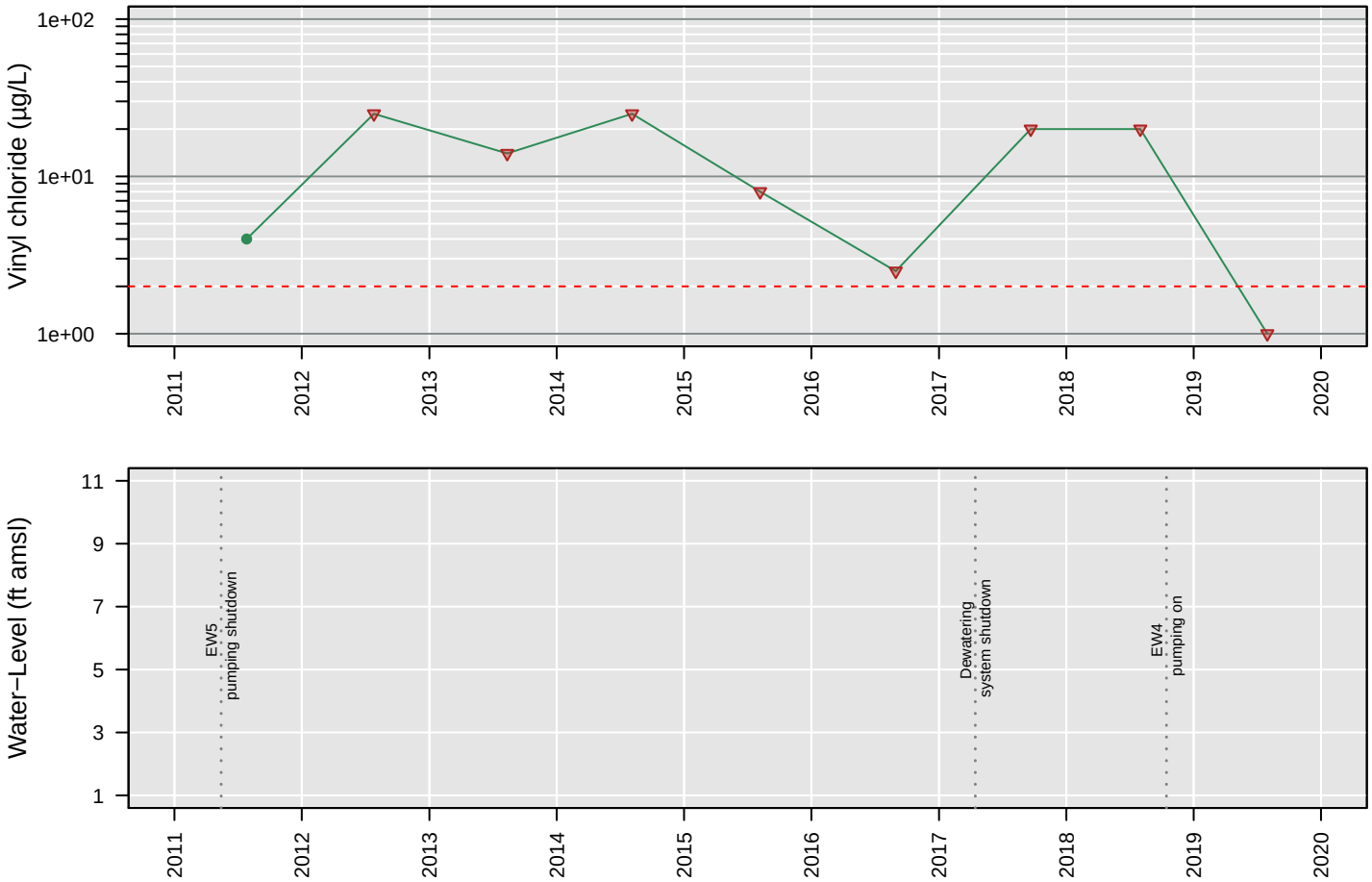


No Analysis Performed

GW63

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 89%



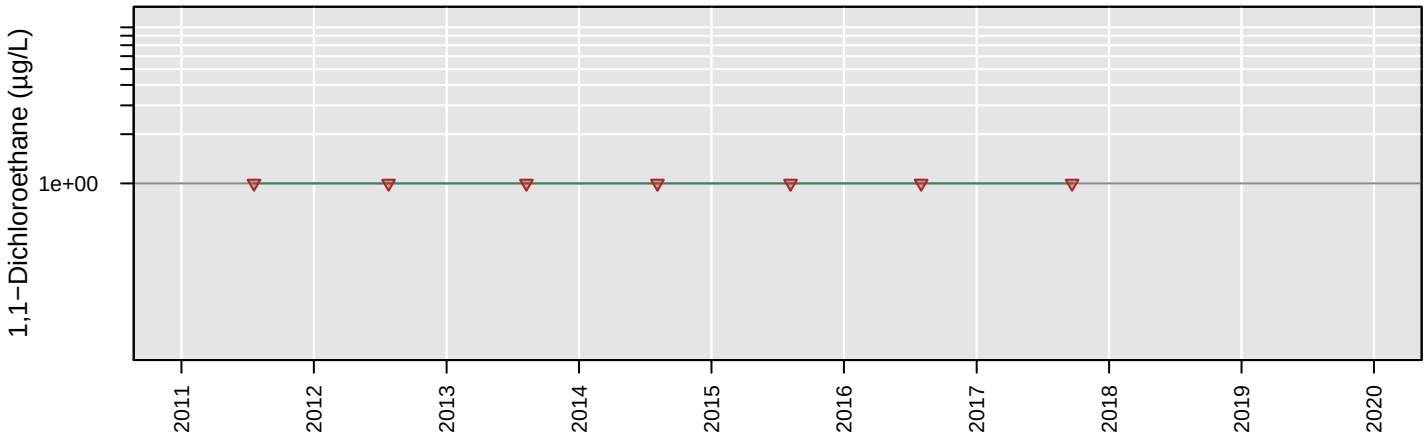
No Analysis Performed

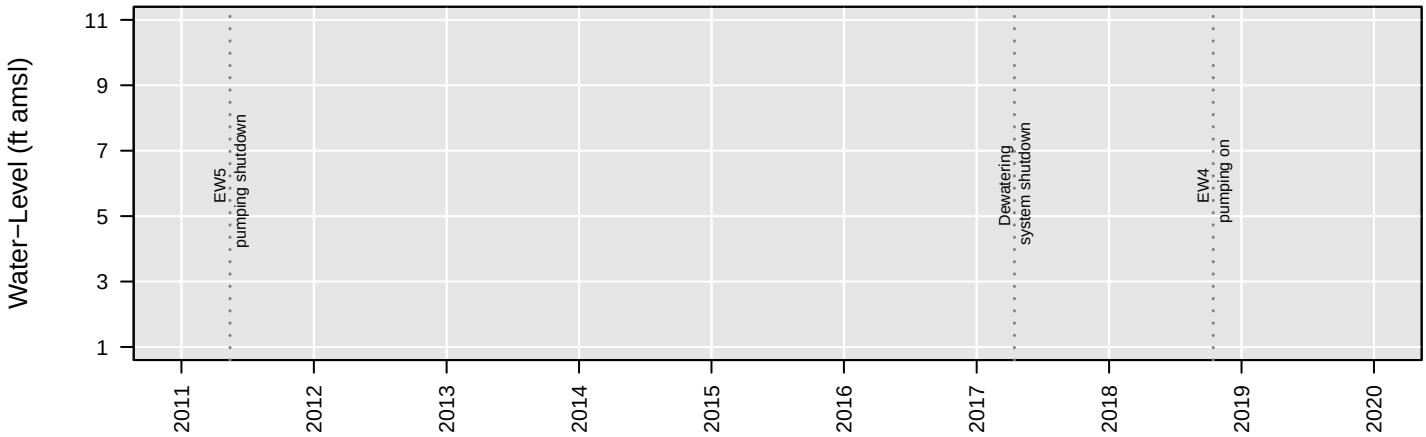
GW64

1,1−Dichloroethane

Number of Comparisons: 7
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



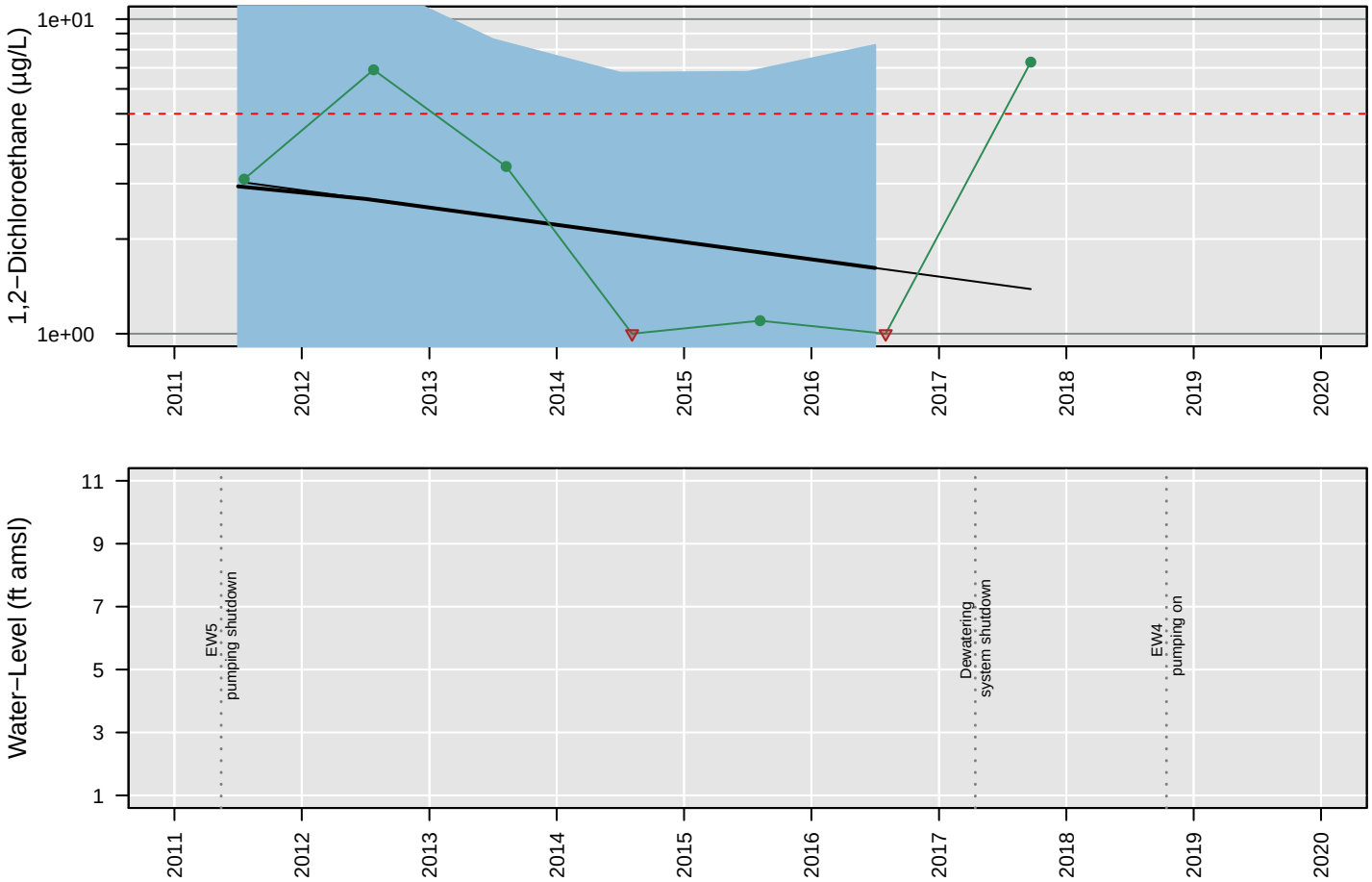


No Analysis Performed

GW64

1,2−Dichloroethane

Number of Comparisons: 7
Percent NDs: 29%



Censored Regression (Tobit) Model

Trend Not Significant

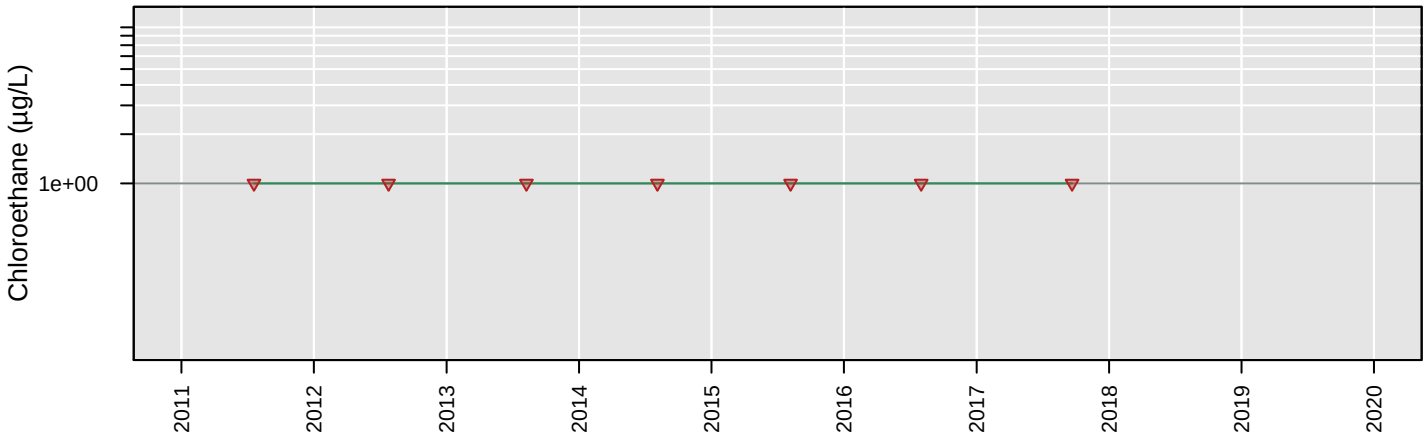
Regression Statistics for January 2016 to January 2017
Geometric Mean: 1.6 µg/L
UCL: 8.3 µg/L
LCL: 0.32 µg/L

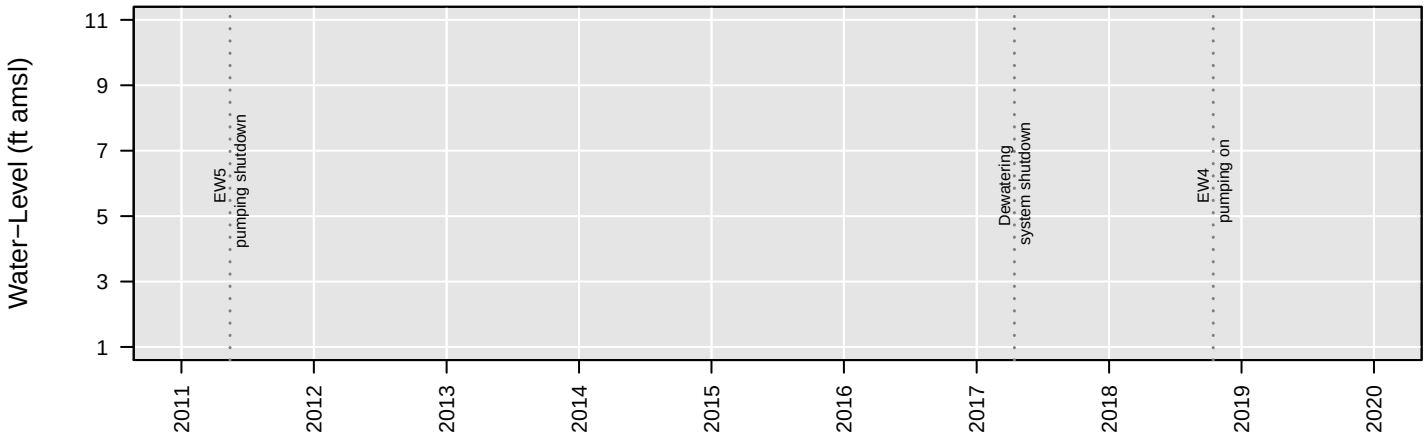
GW64

Chloroethane

Number of Comparisons: 7
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



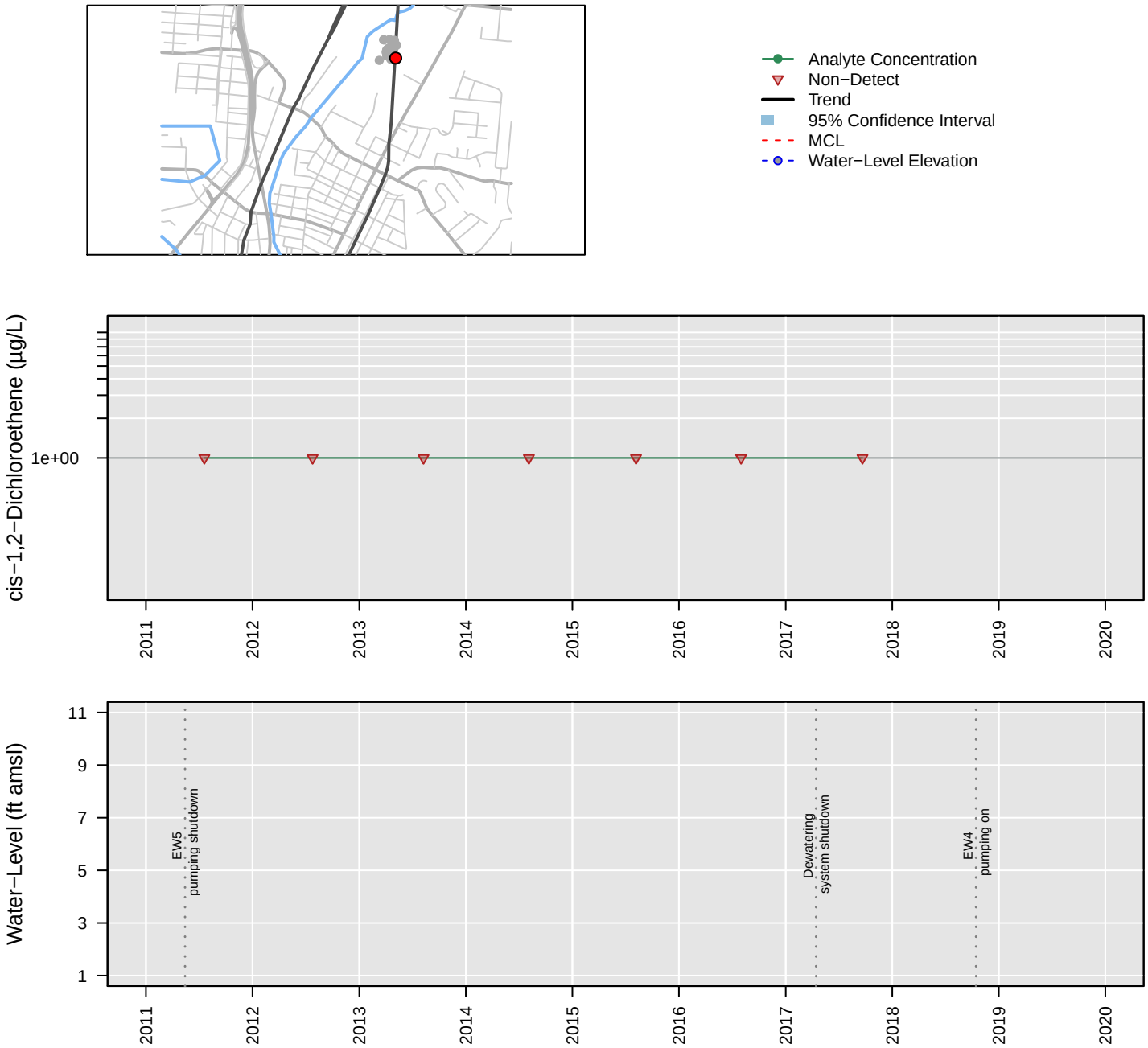


No Analysis Performed

GW64

cis−1,2−Dichloroethene

Number of Comparisons: 7
Percent NDs: 100%



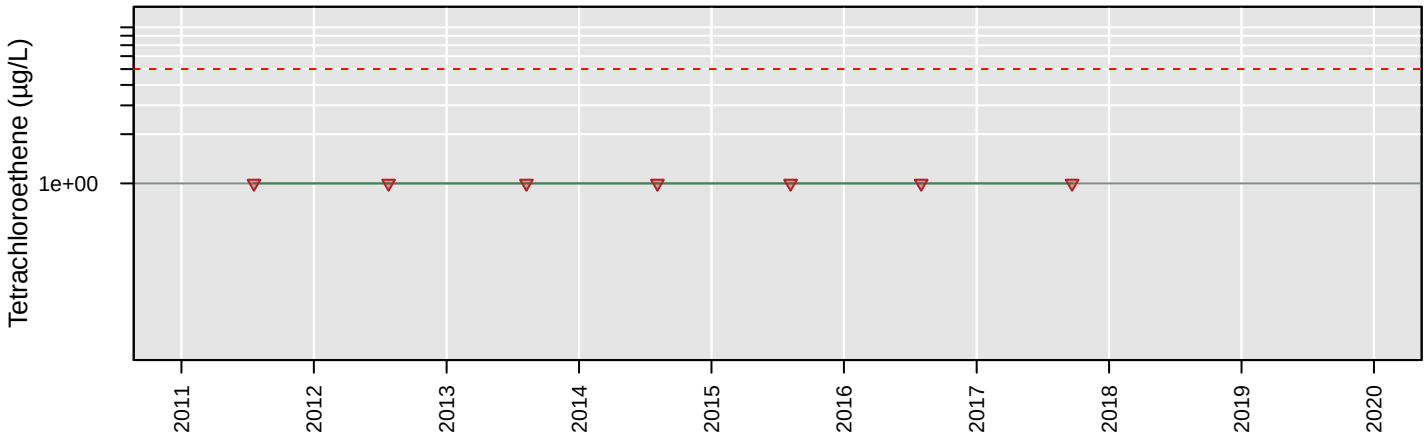
No Analysis Performed

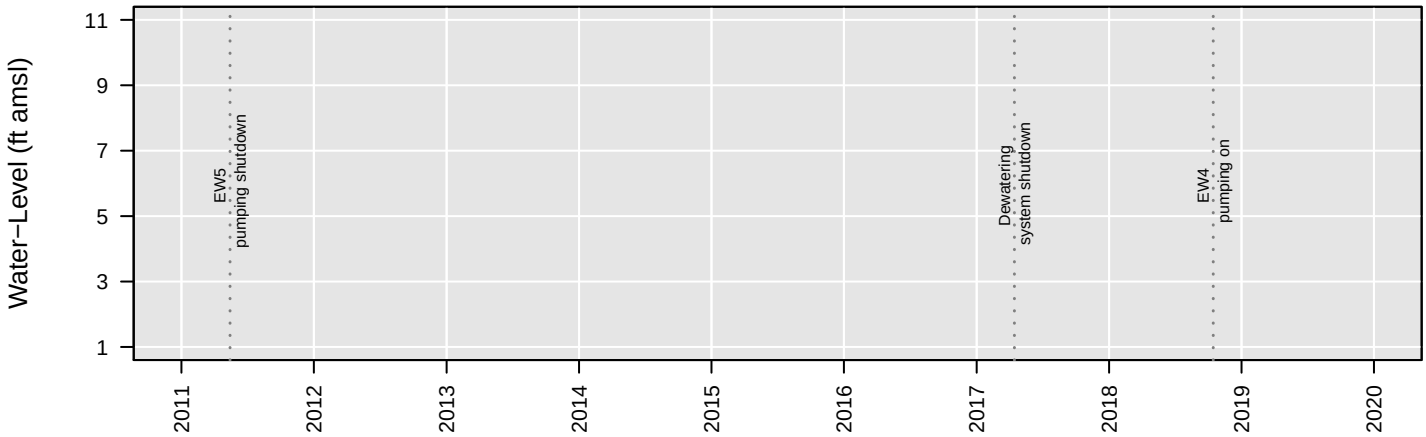
GW64

Tetrachloroethene

Number of Comparisons: 7
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





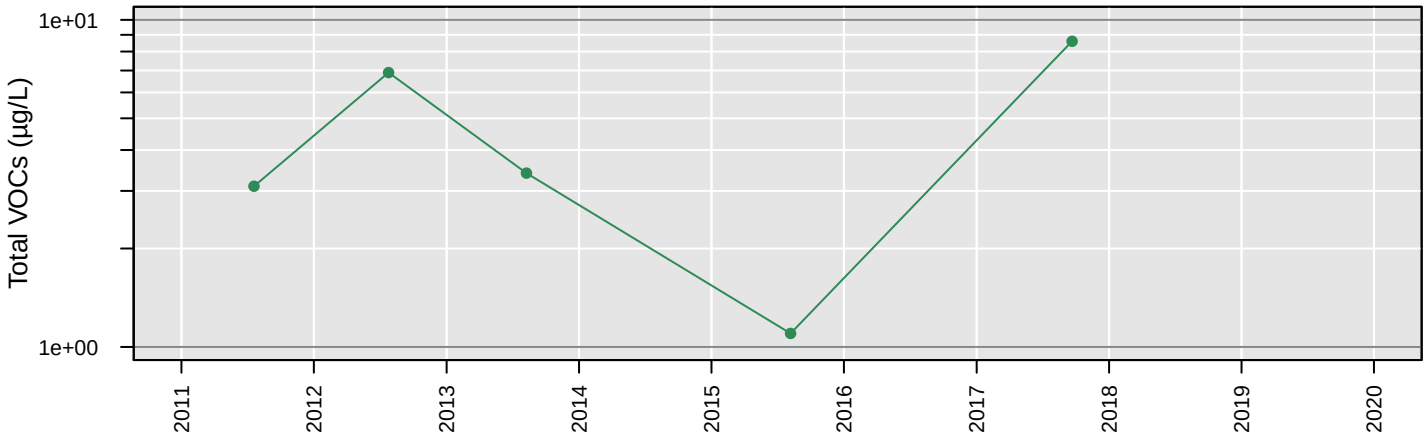
No Analysis Performed

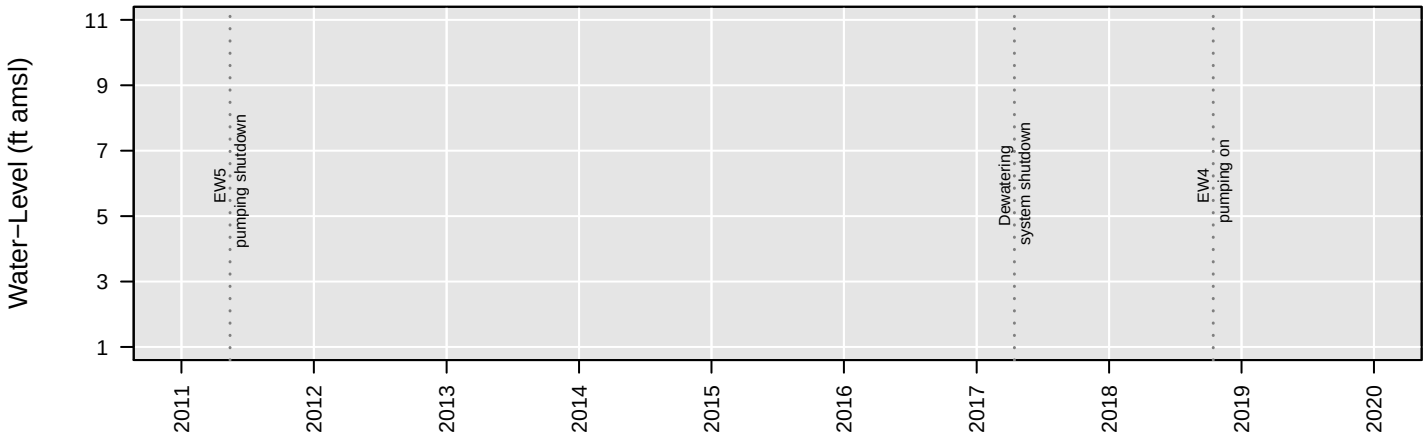
GW64

Total VOCs

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





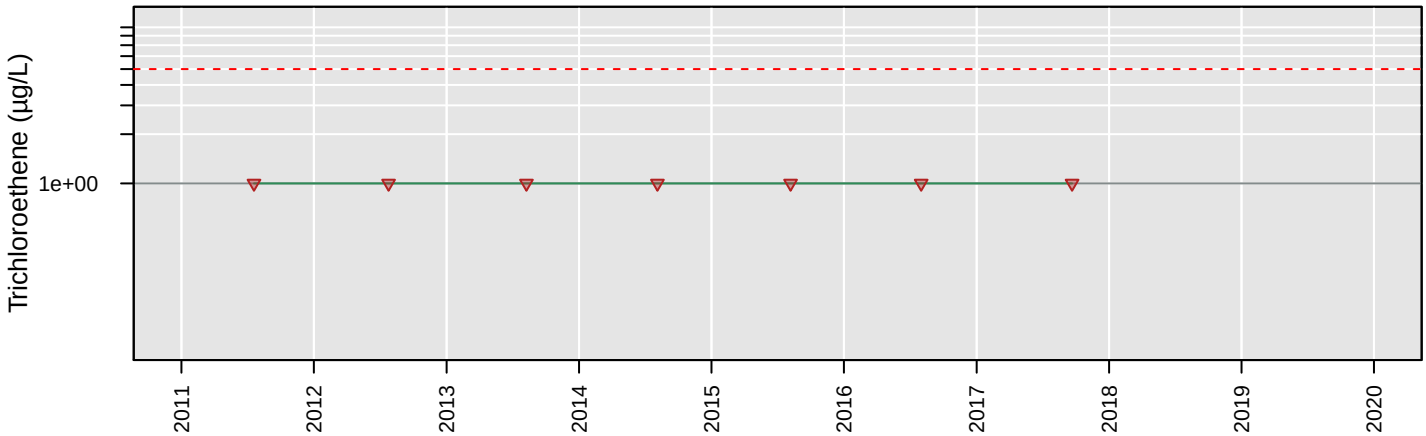
No Analysis Performed

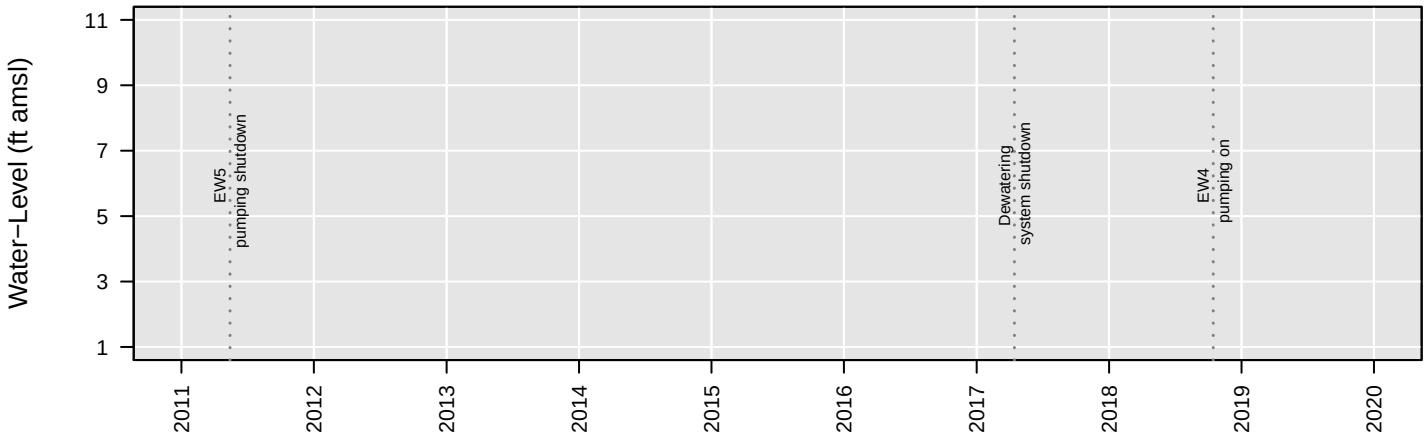
GW64

Trichloroethene

Number of Comparisons: 7
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





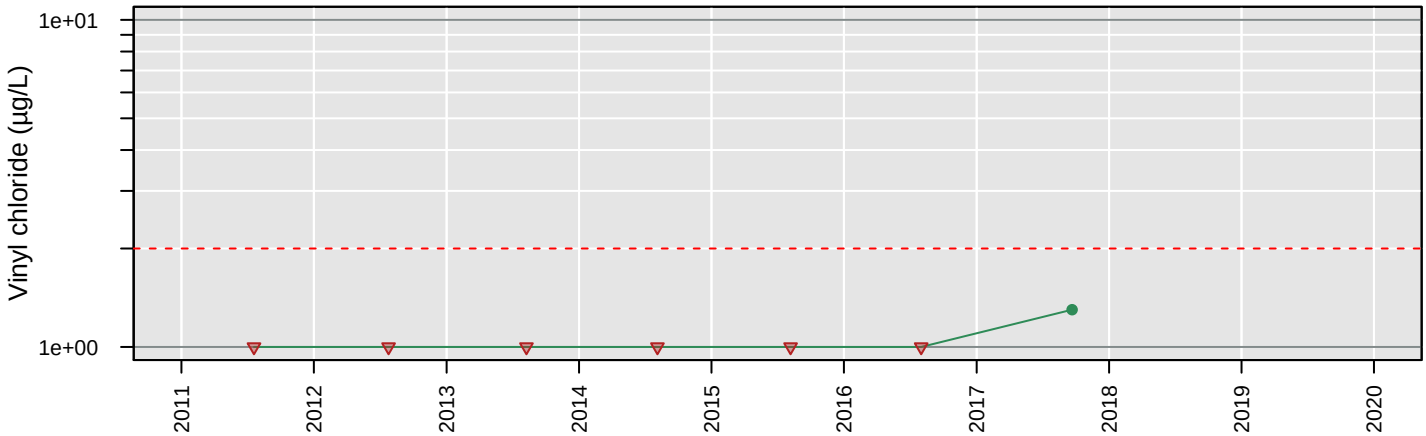
No Analysis Performed

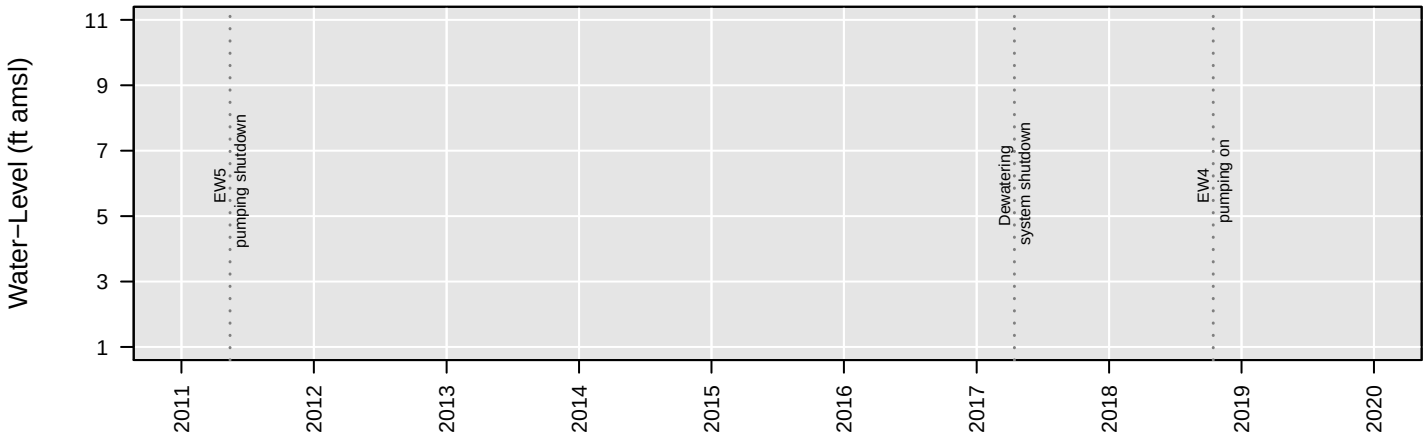
GW64

Vinyl chloride

Number of Comparisons: 7
Percent NDs: 86%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



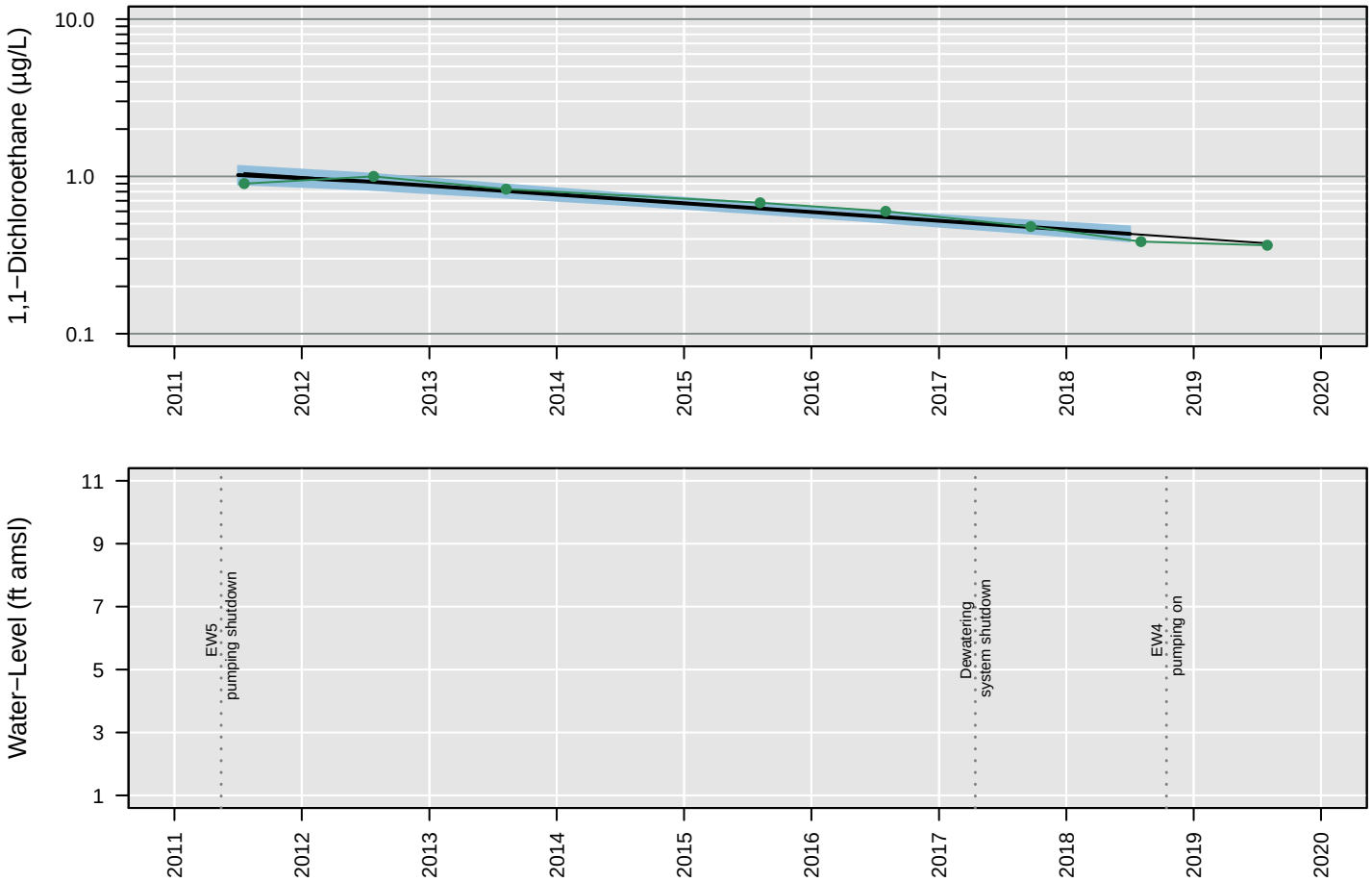


No Analysis Performed

GW65

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

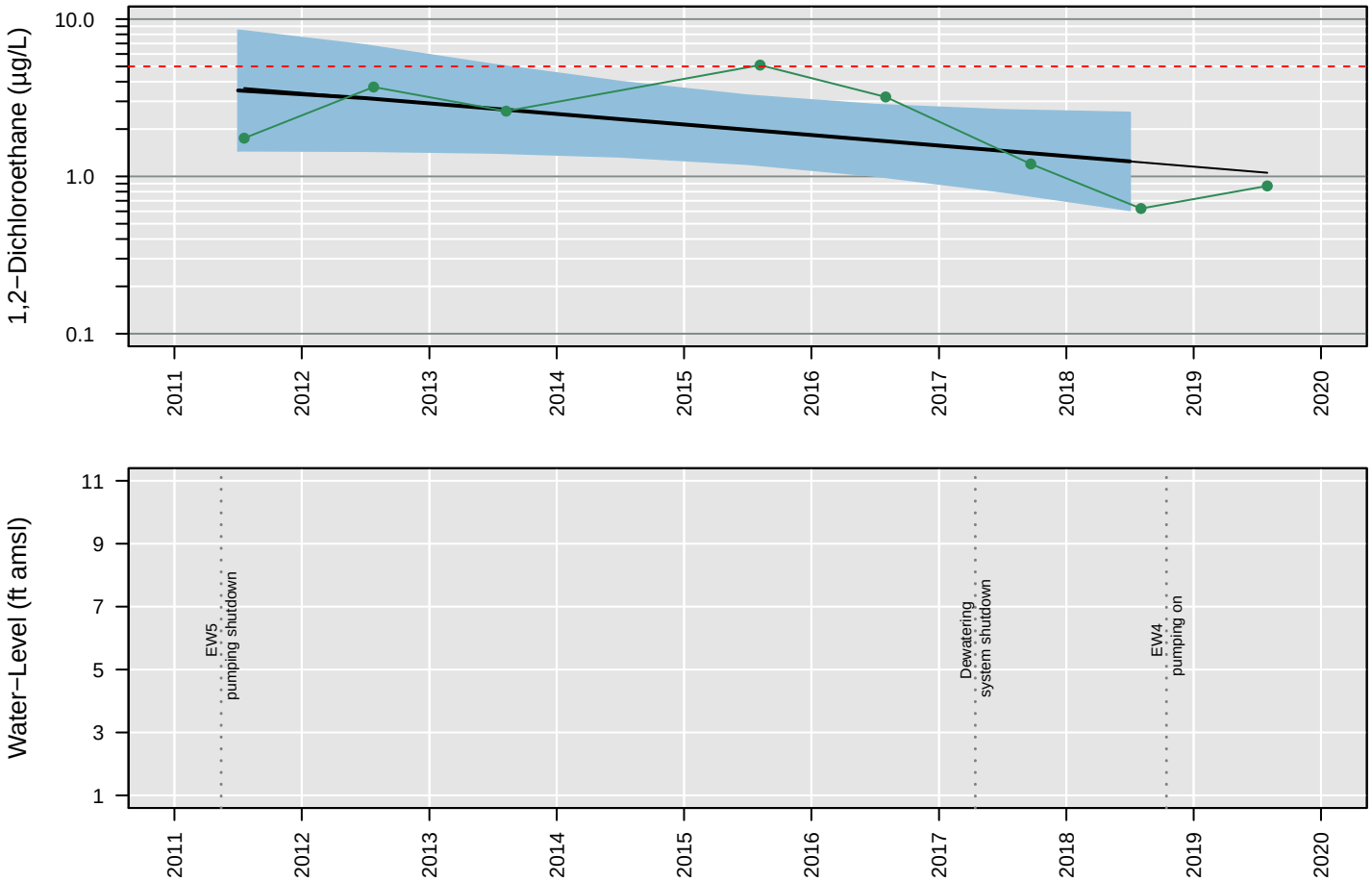
ln Conc. = −0.00035 (+/− 0.00003)*Date + 5.4 (+/− 0.5)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.43 µg/L
UCL: 0.48 µg/L
LCL: 0.39 µg/L

GW65

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

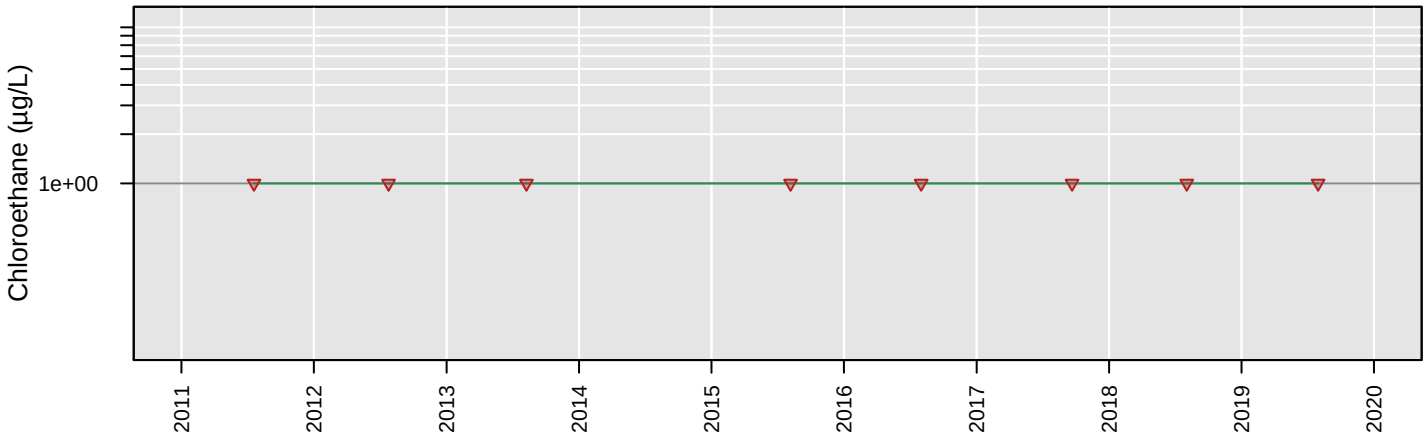
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.2 µg/L
UCL: 2.5 µg/L
LCL: 0.61 µg/L

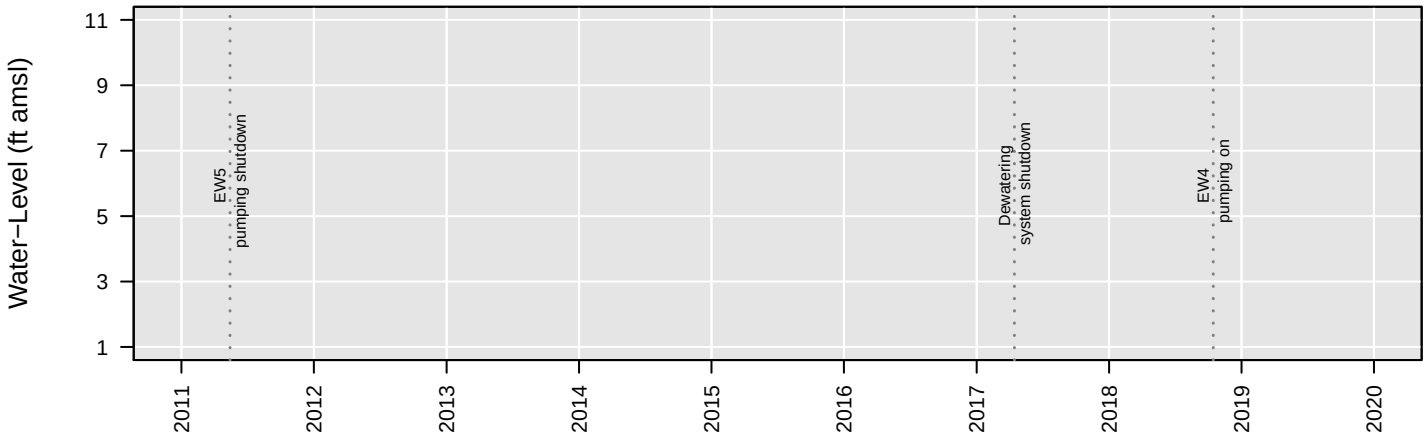
GW65

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



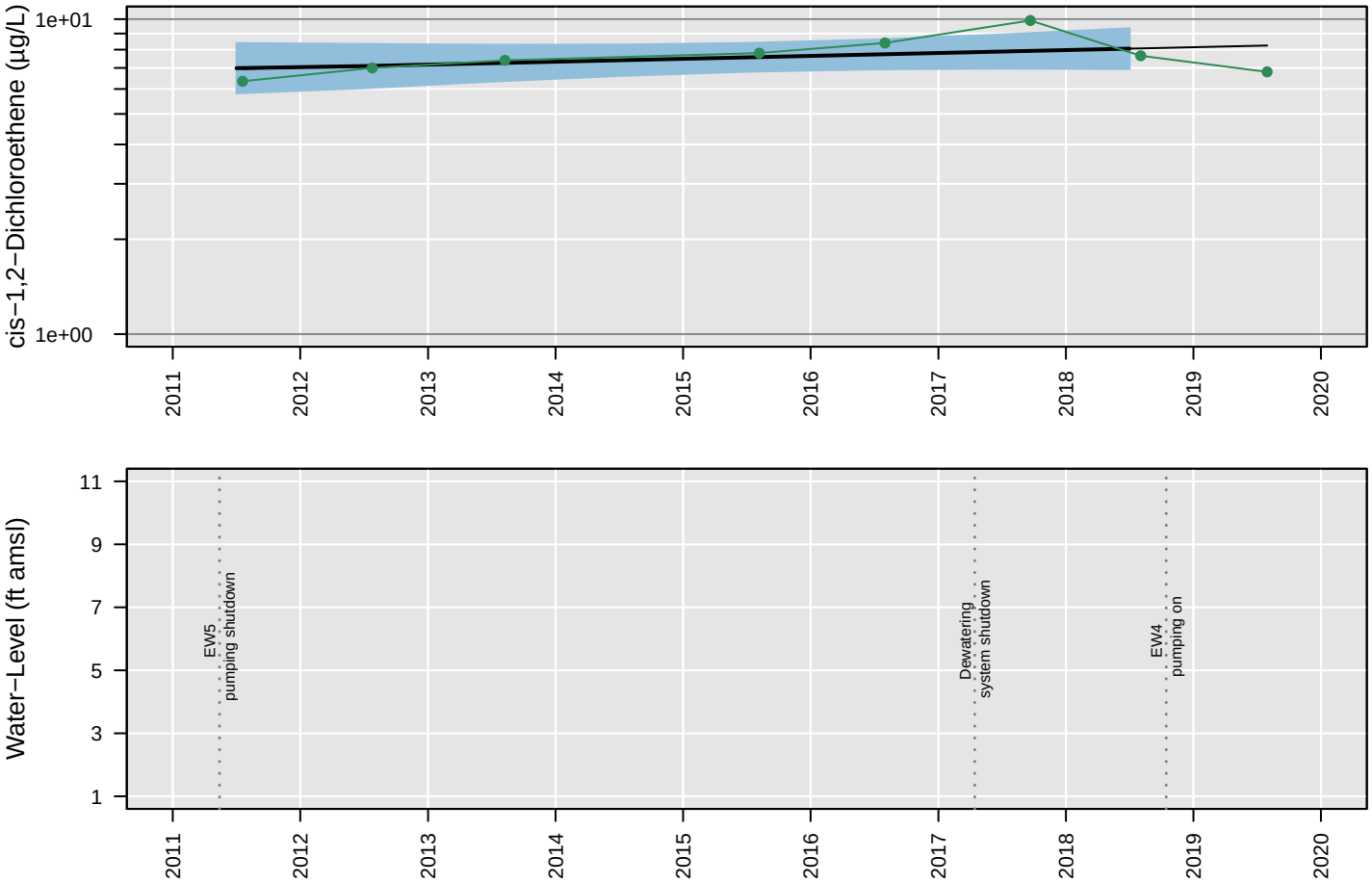


No Analysis Performed

GW65

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

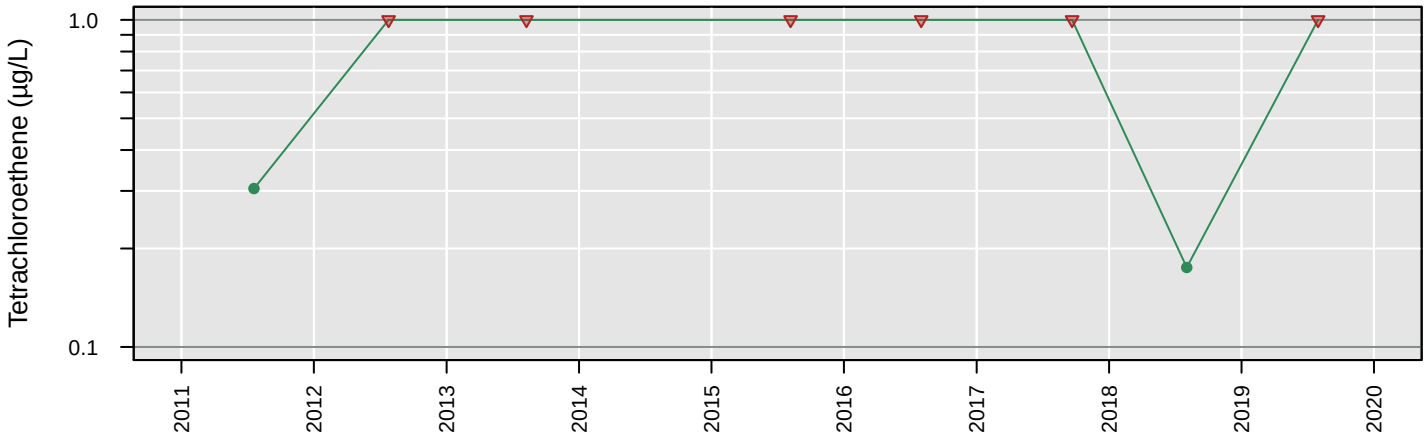
Regression Statistics for January 2018 to January 2019
Geometric Mean: 8.1 µg/L
UCL: 9.4 µg/L
LCL: 6.9 µg/L

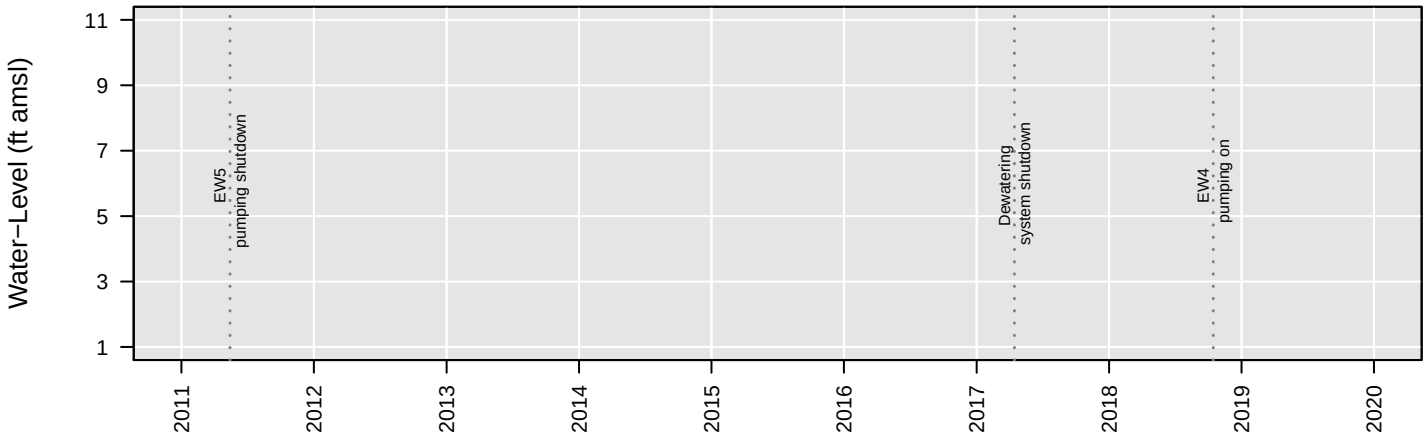
GW65

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 75%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



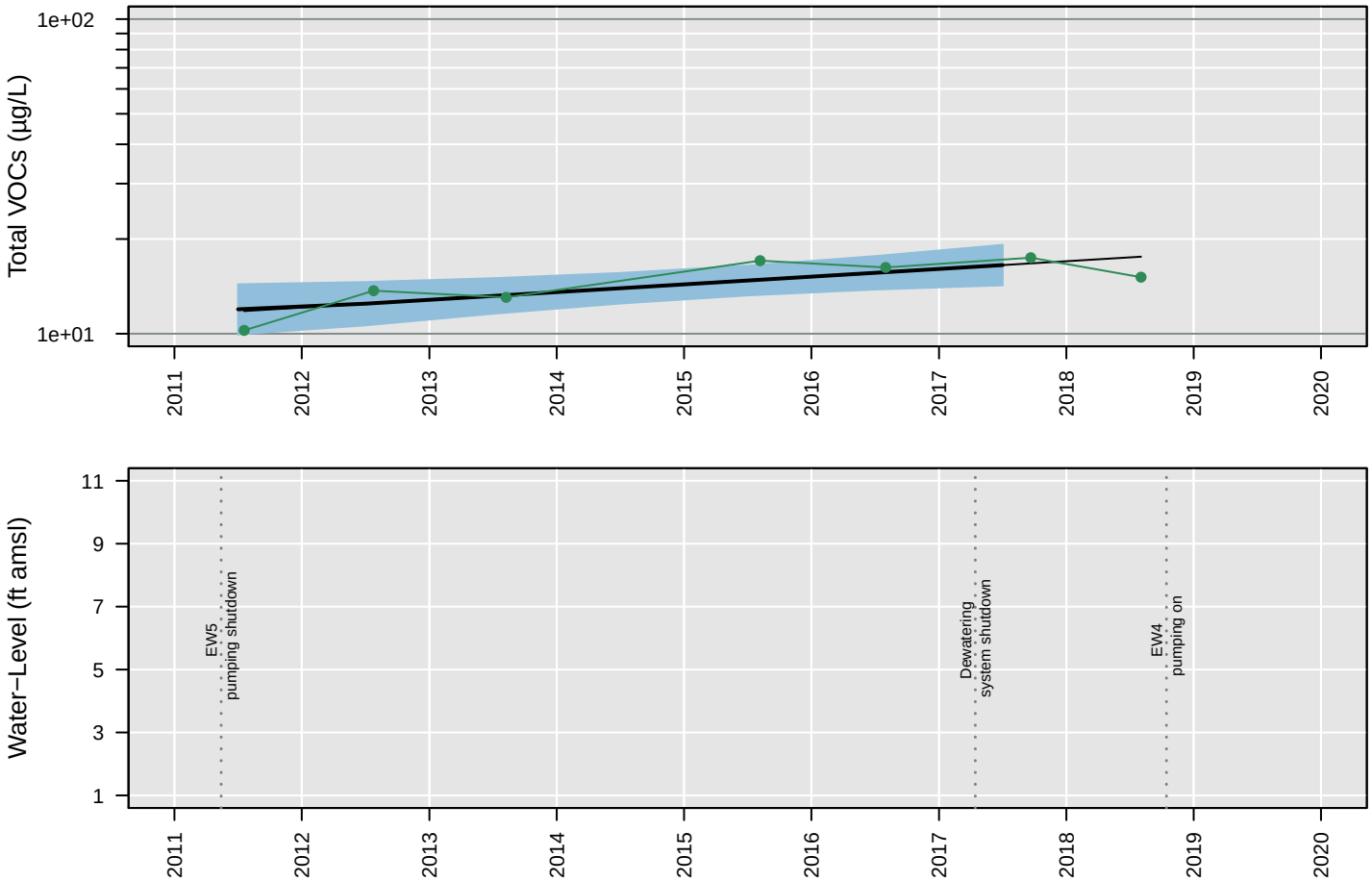


No Analysis Performed

GW65

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

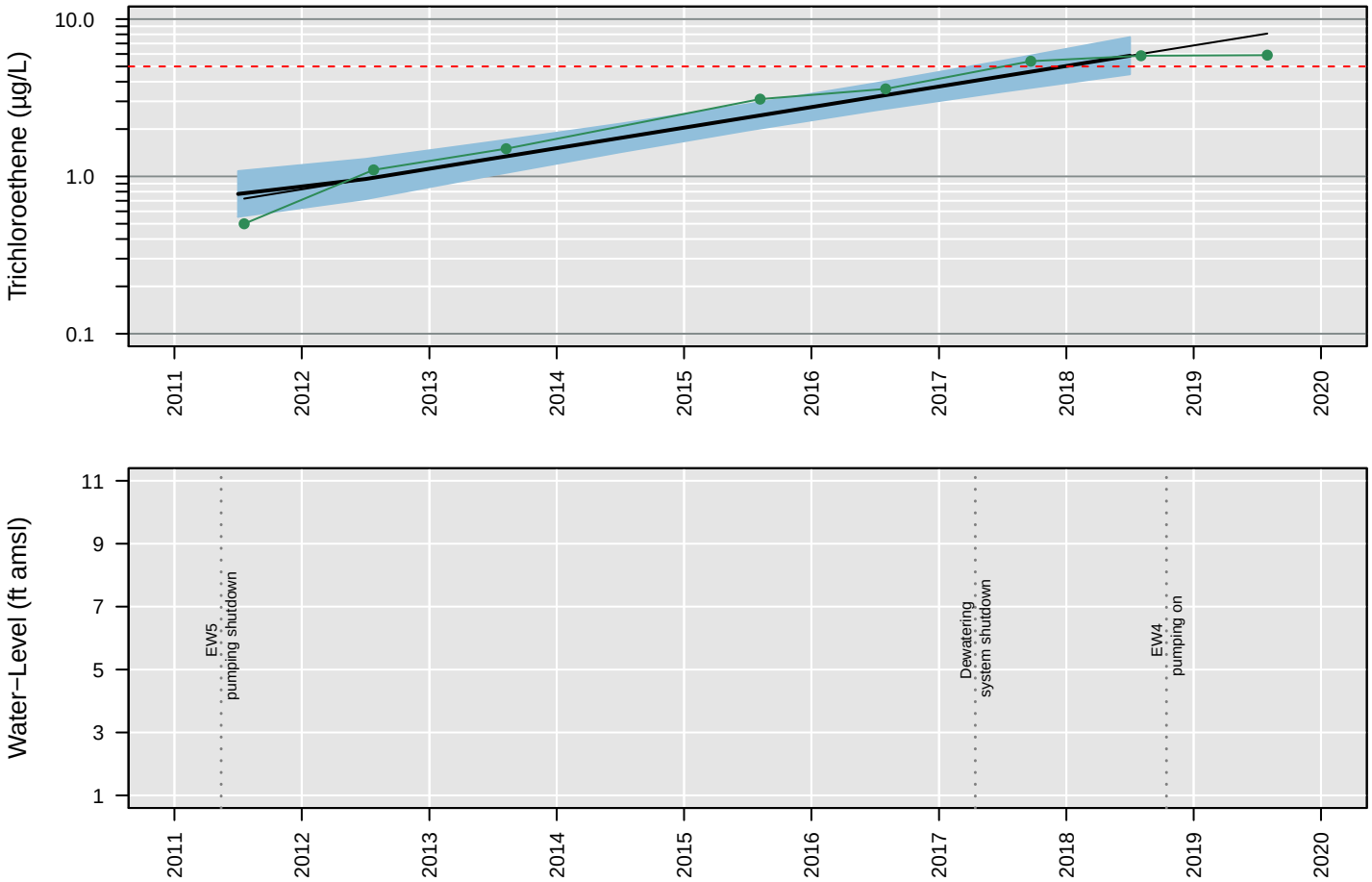
ln Conc. = 0.00015 (+/− 0.000043)*Date + 0.12 (+/− 0.71)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 17 µg/L
UCL: 19 µg/L
LCL: 14 µg/L

GW65

Trichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = 0.00082 (+/− 0.000074)*Date + −13 (+/− 1.2)

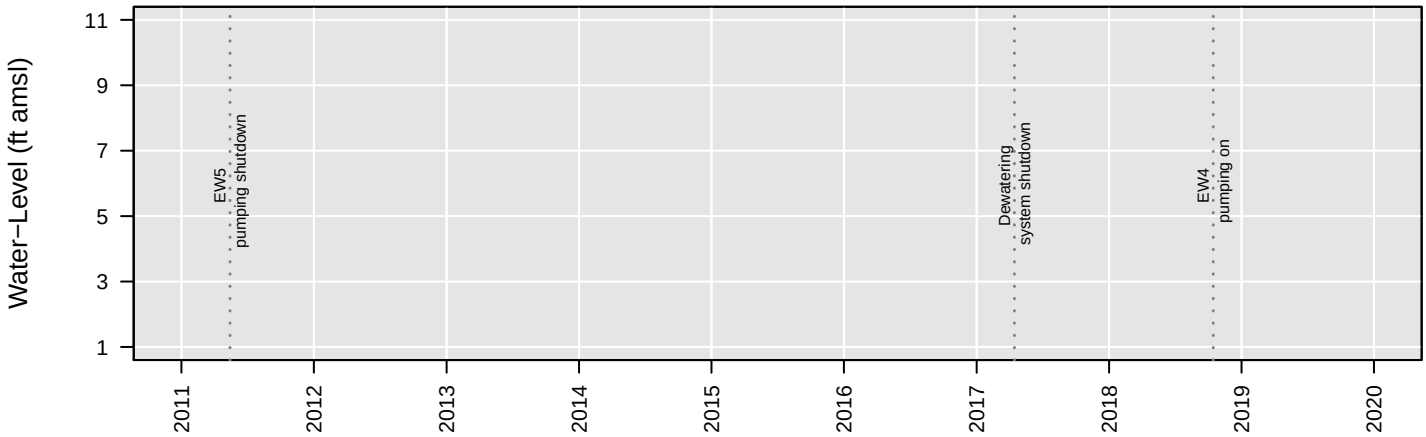
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.9 µg/L
UCL: 7.7 µg/L
LCL: 4.5 µg/L

GW65

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



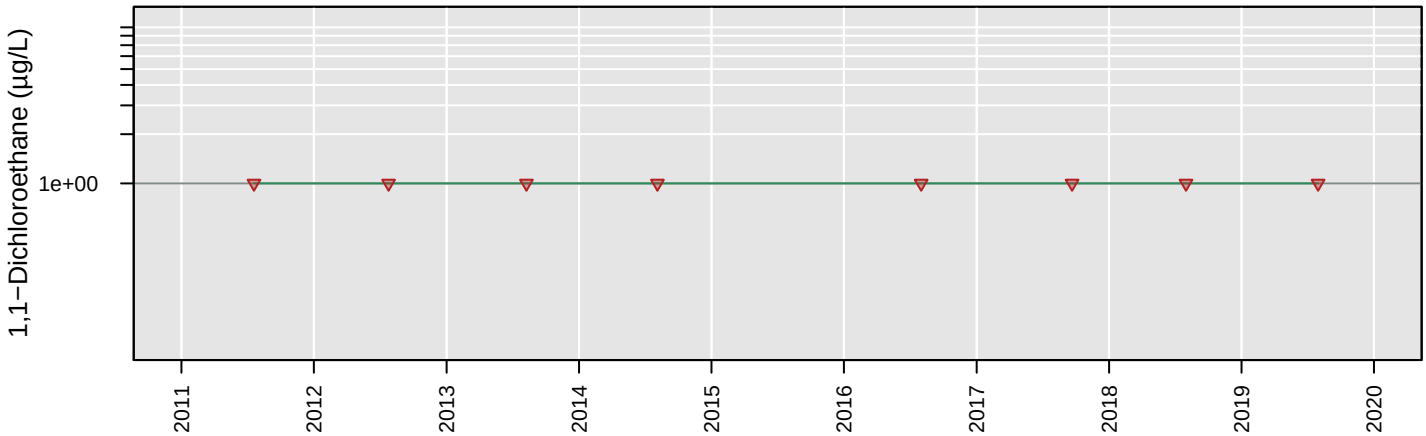
No Analysis Performed

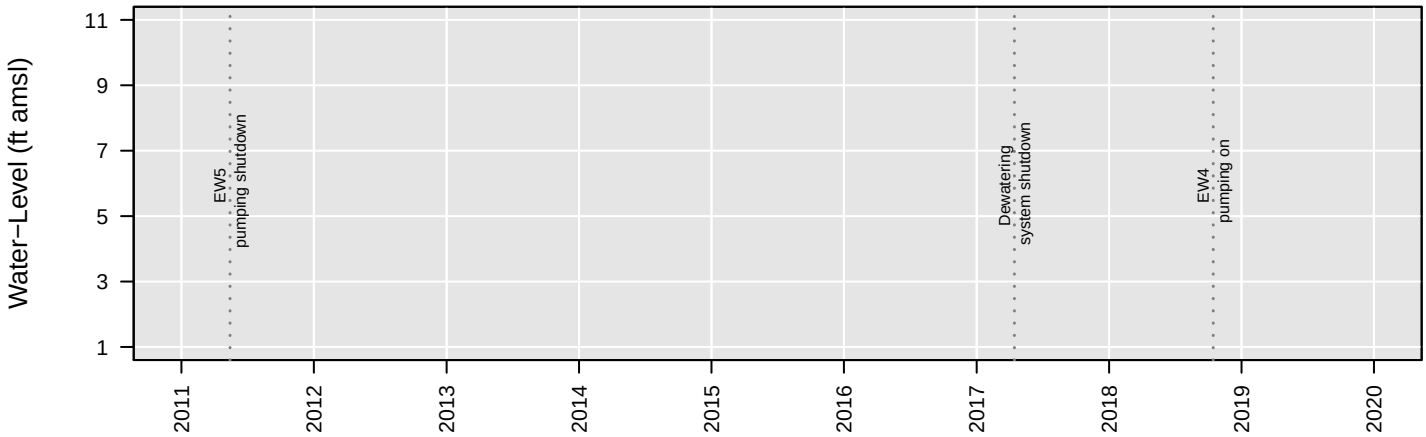
GW66

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





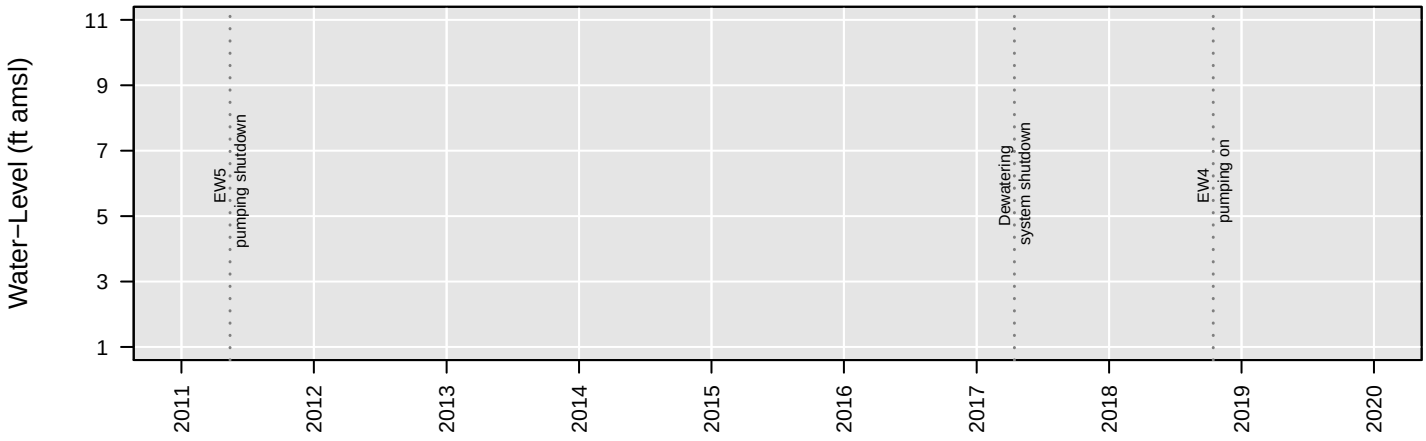
No Analysis Performed

GW66

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 75%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

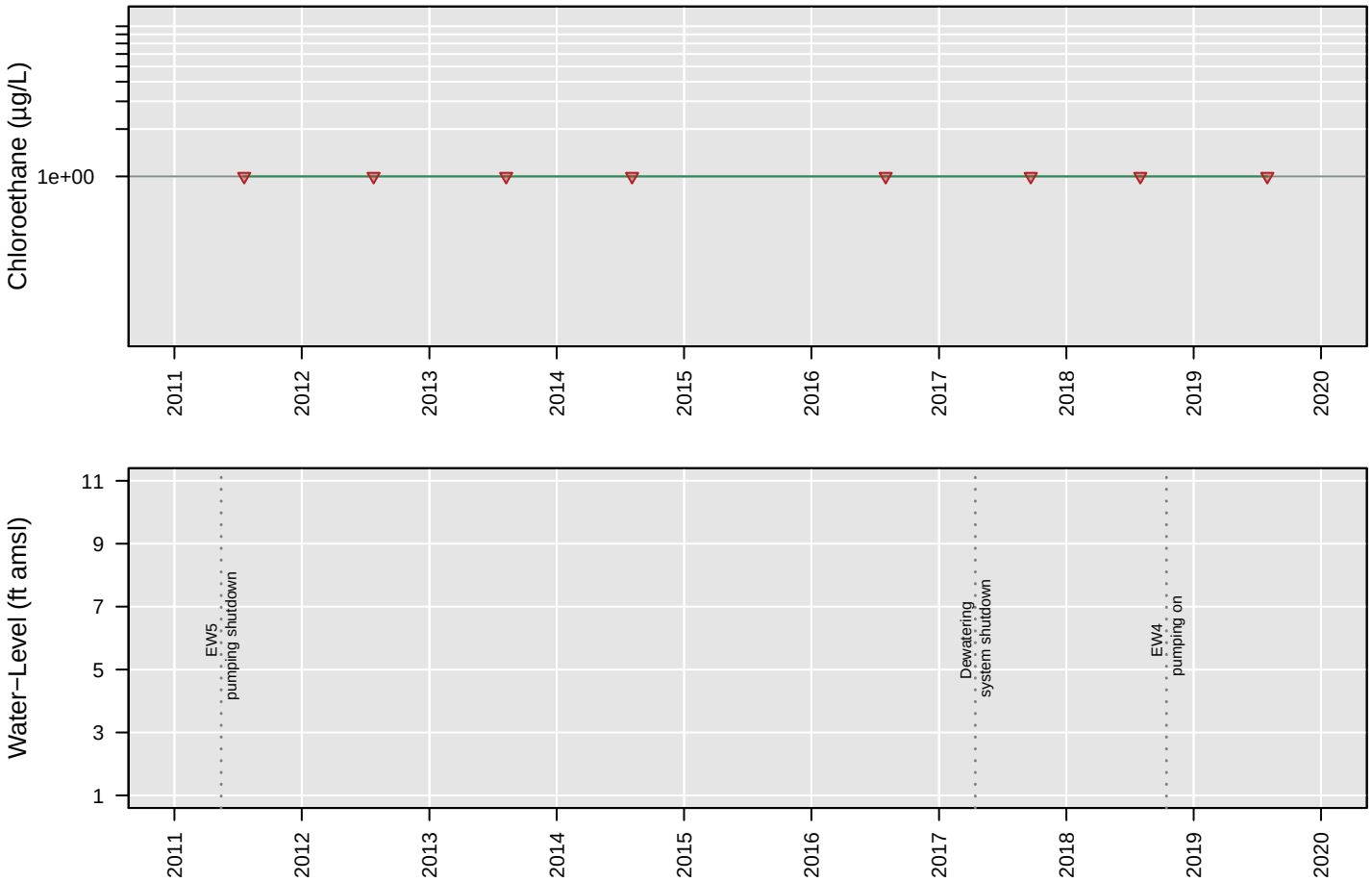


No Analysis Performed

GW66

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%



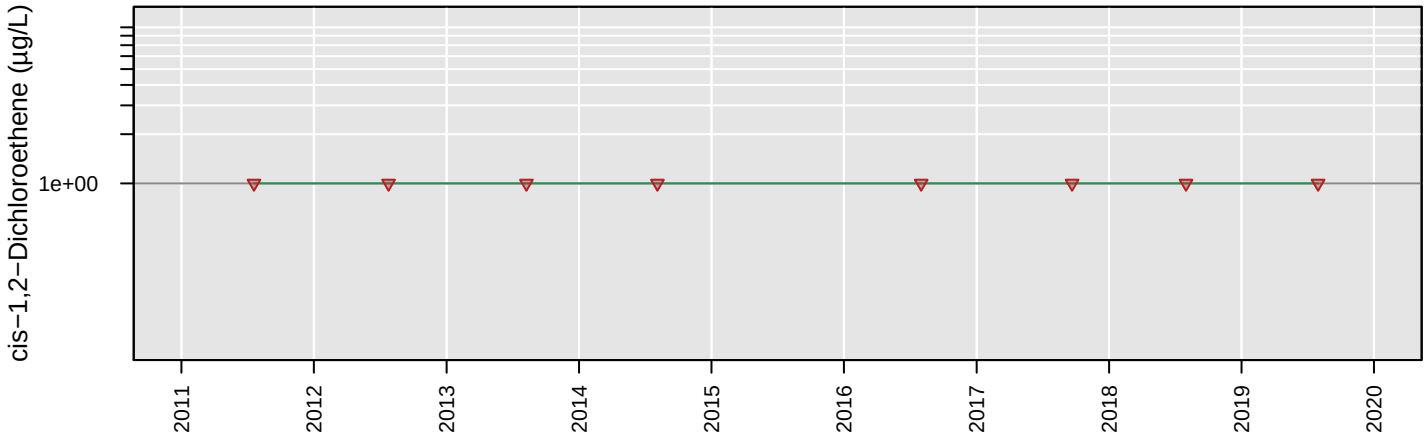
No Analysis Performed

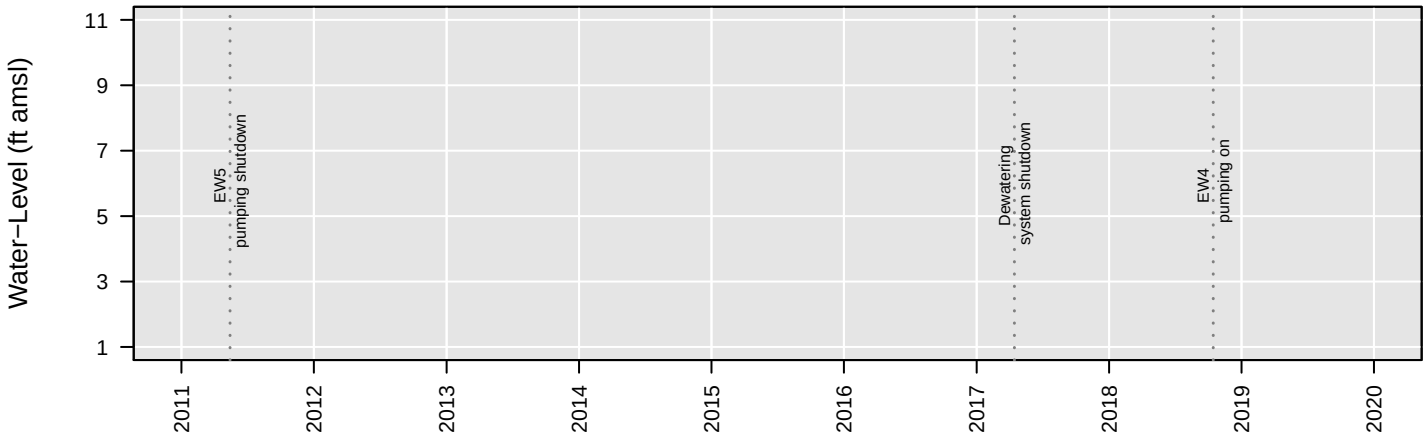
GW66

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





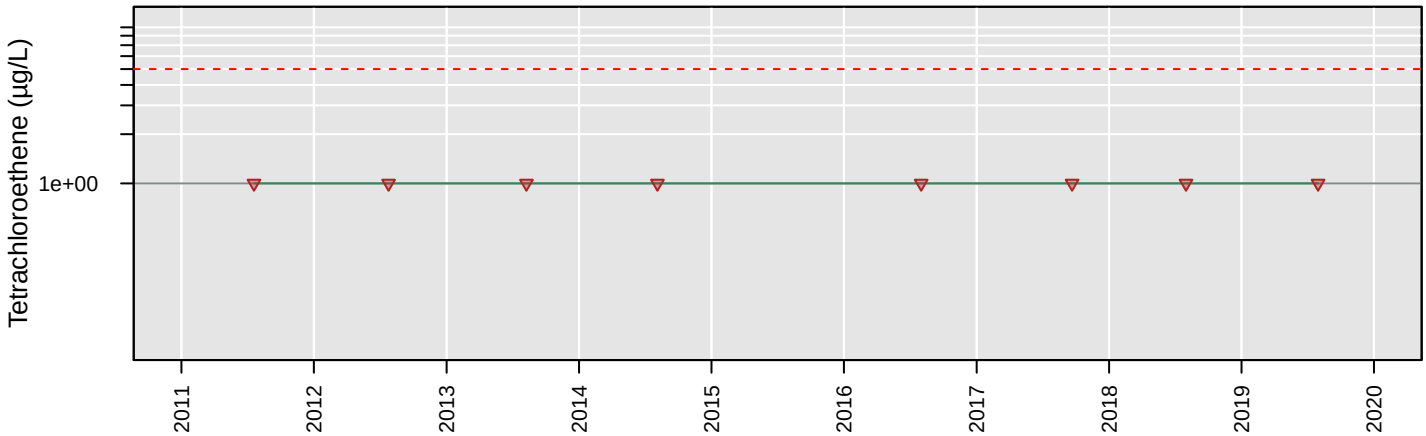
No Analysis Performed

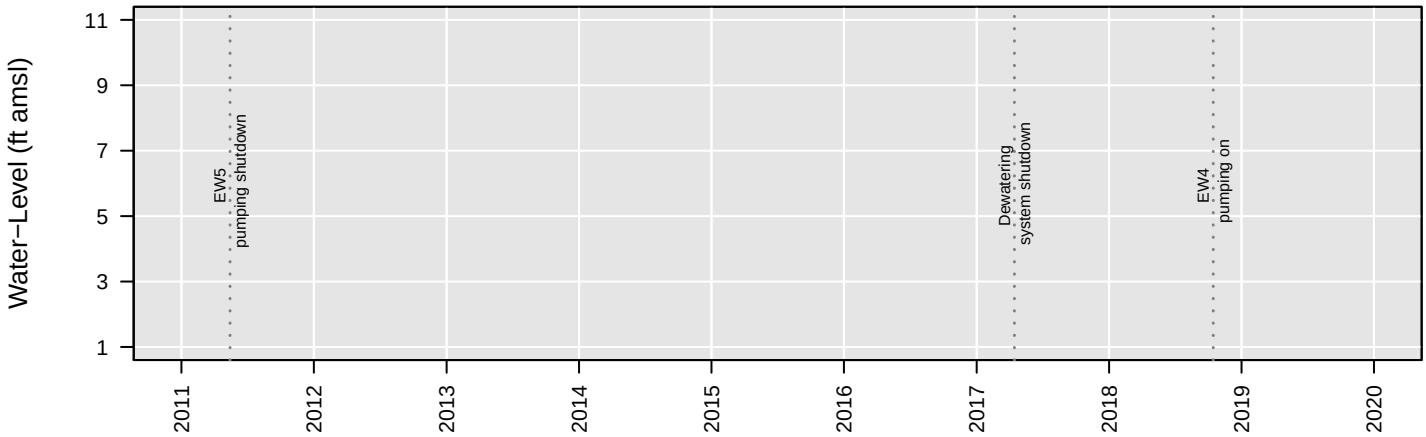
GW66

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





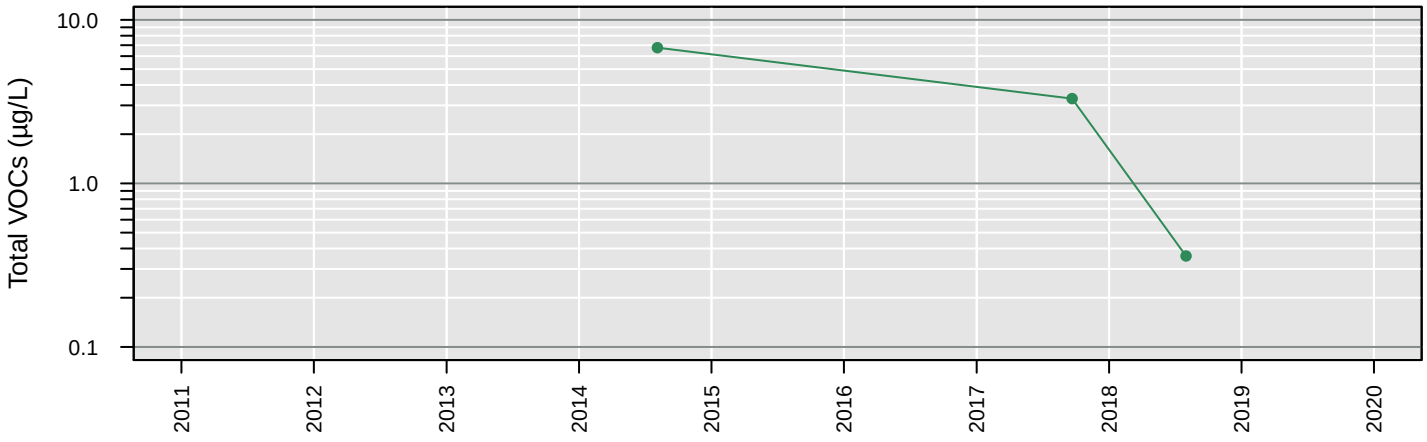
No Analysis Performed

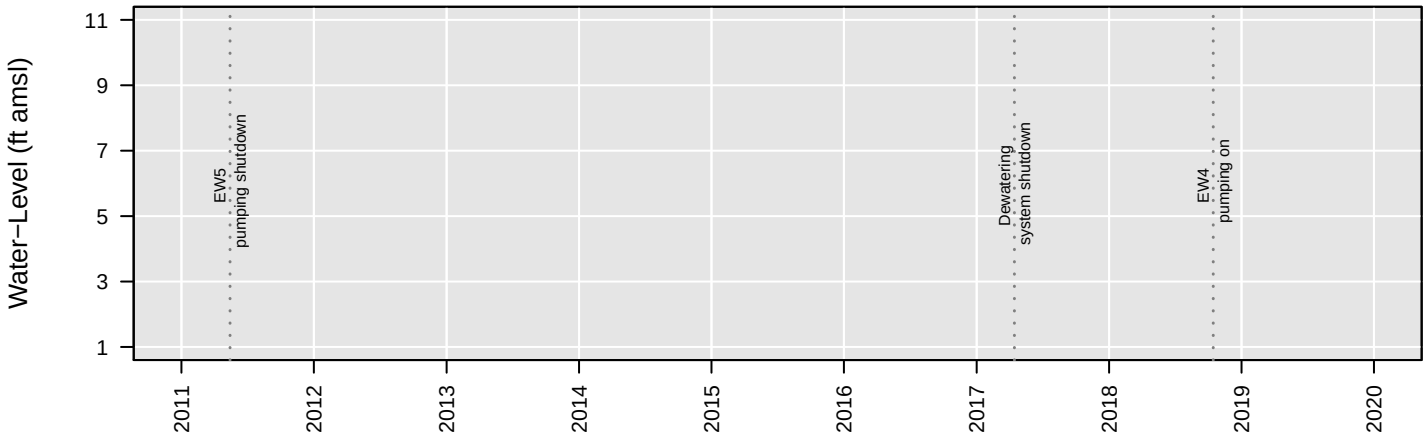
GW66

Total VOCs

Number of Comparisons: 3
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





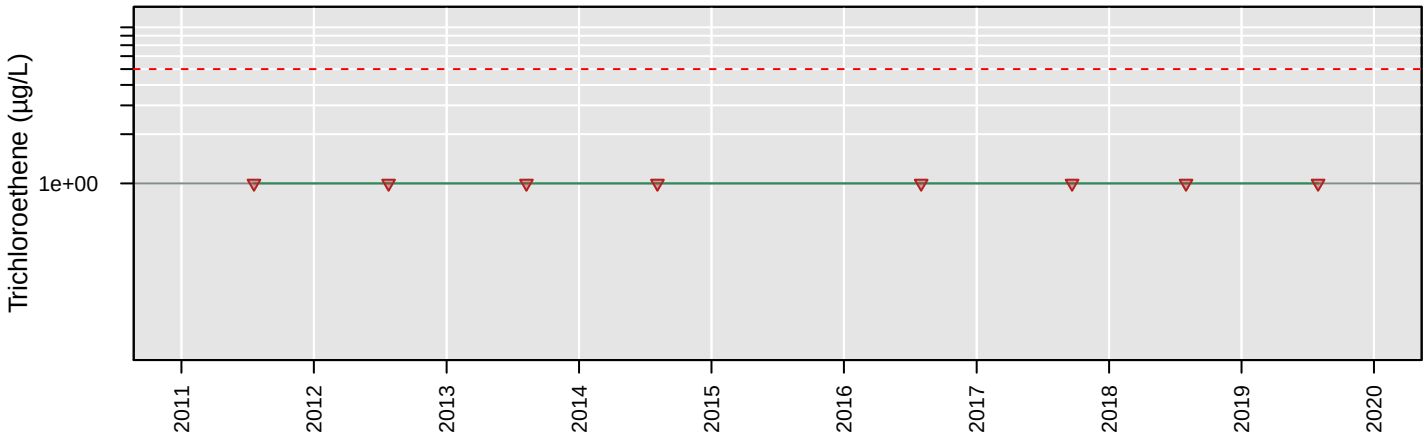
No Analysis Performed

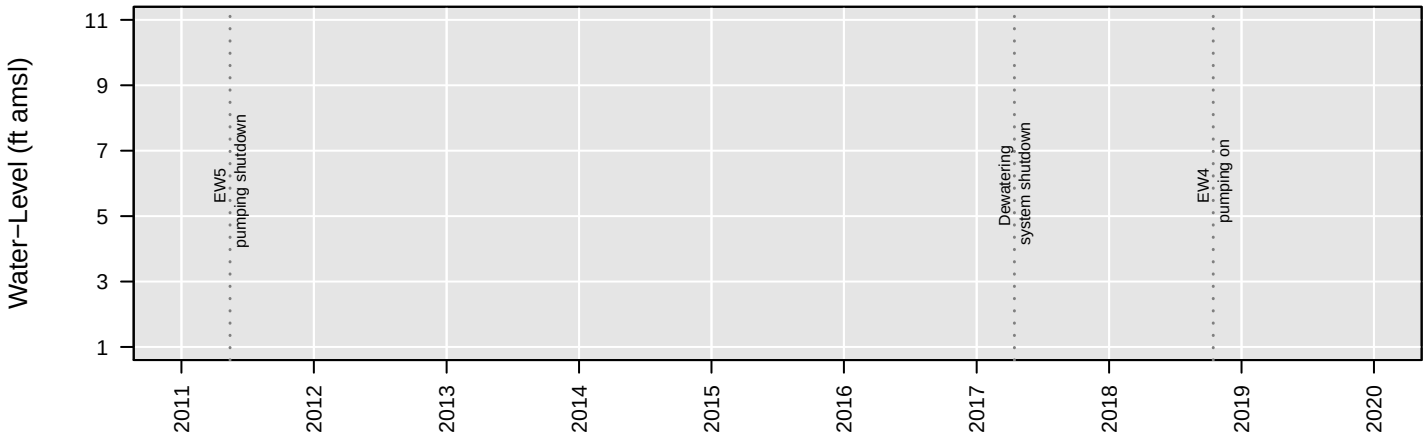
GW66

Trichloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



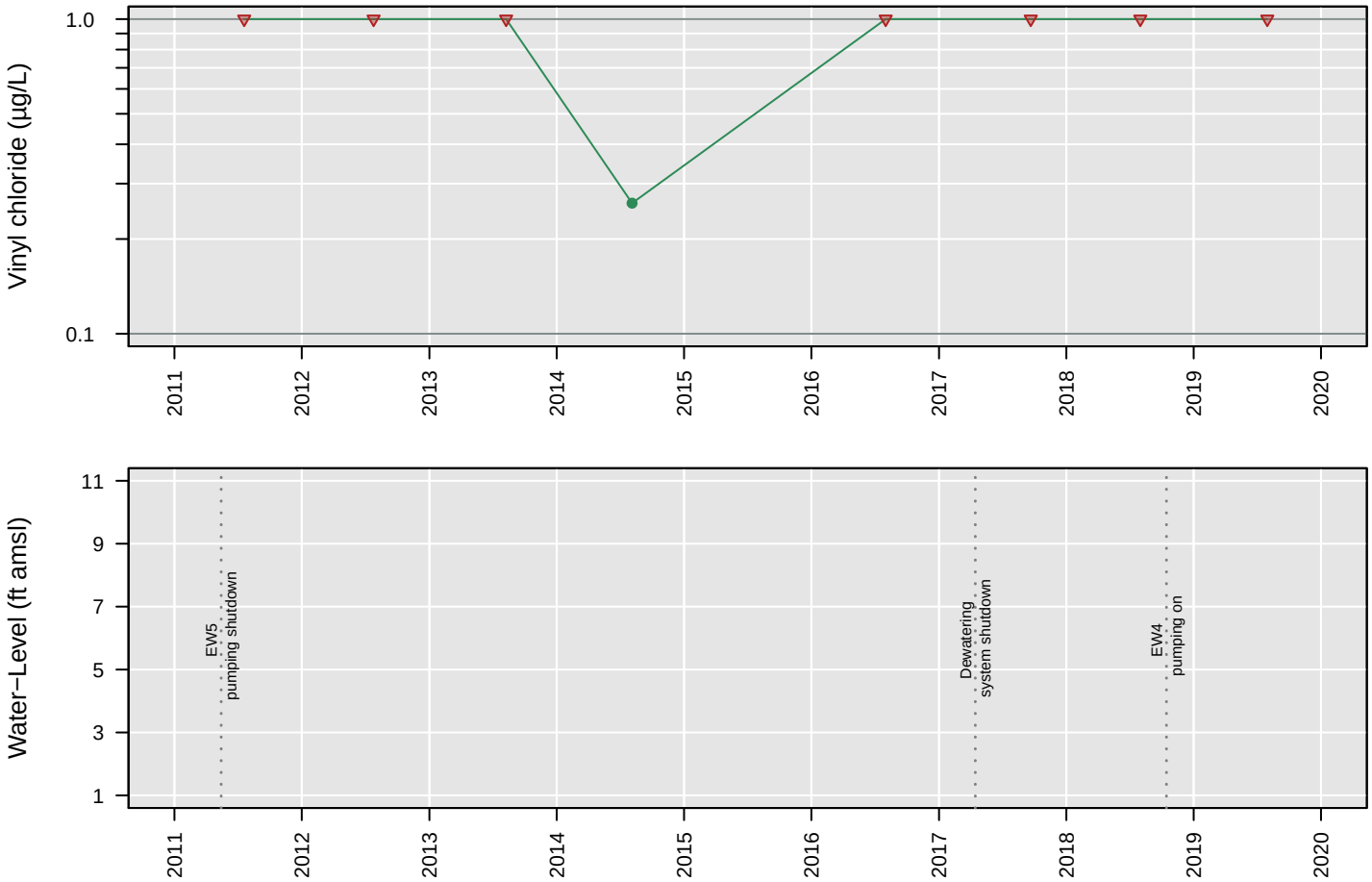


No Analysis Performed

GW66

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 88%



No Analysis Performed

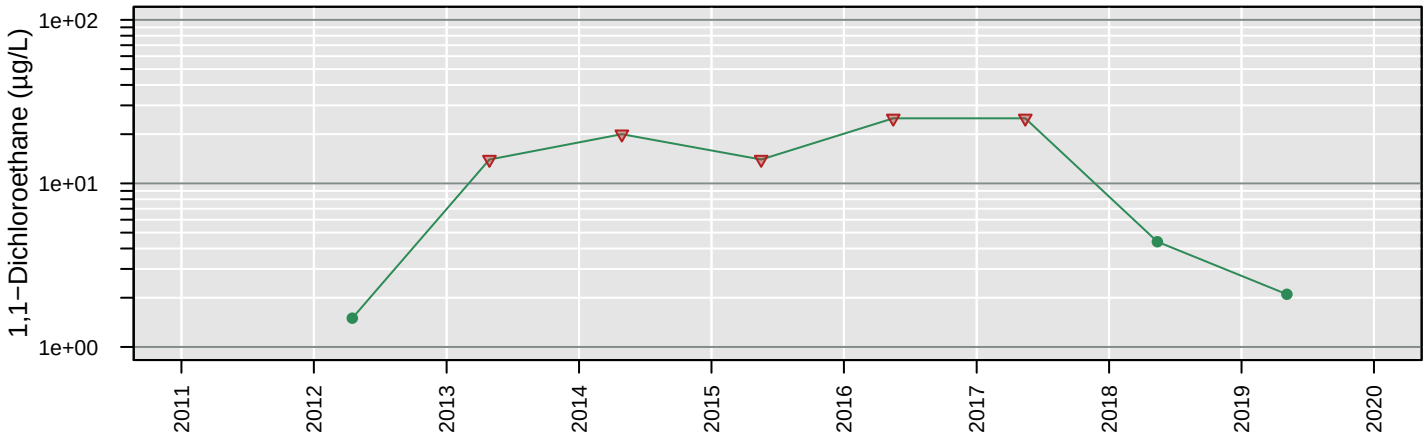
Trend Calculations (Post-May 2011 Data) - Lower Aquifer

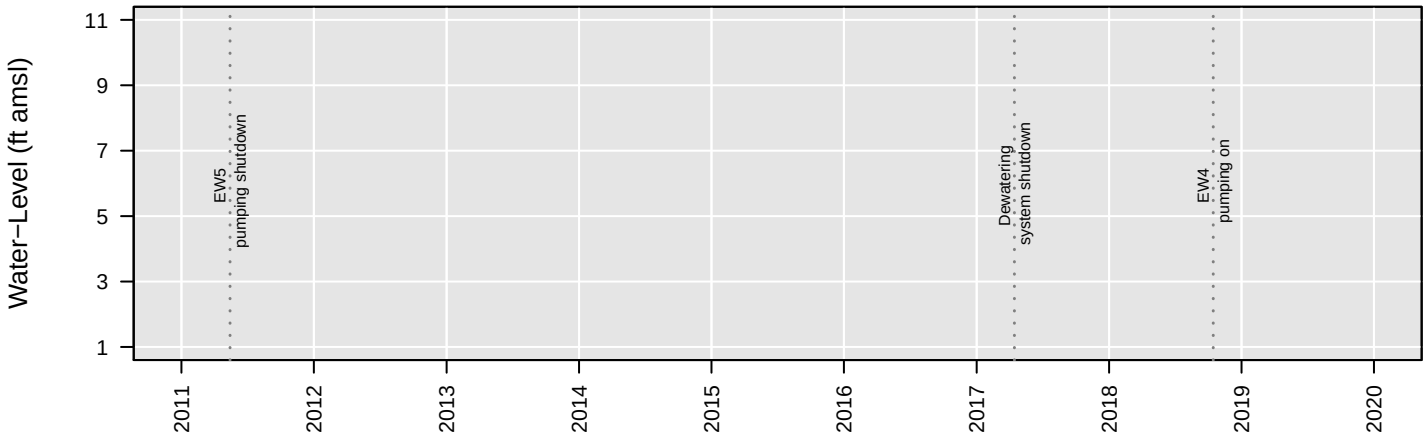
EW1

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 62%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





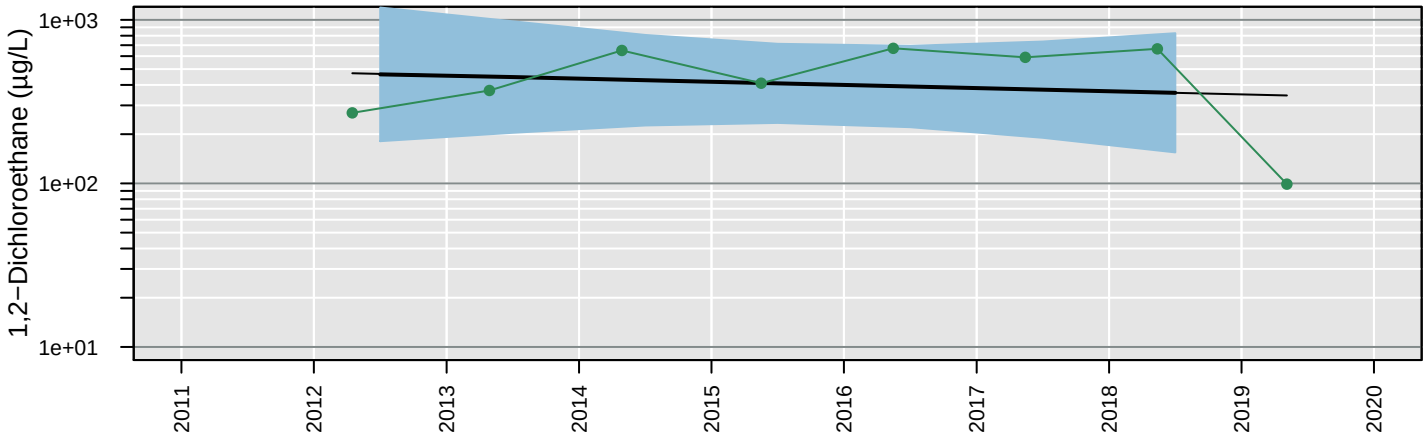
No Analysis Performed

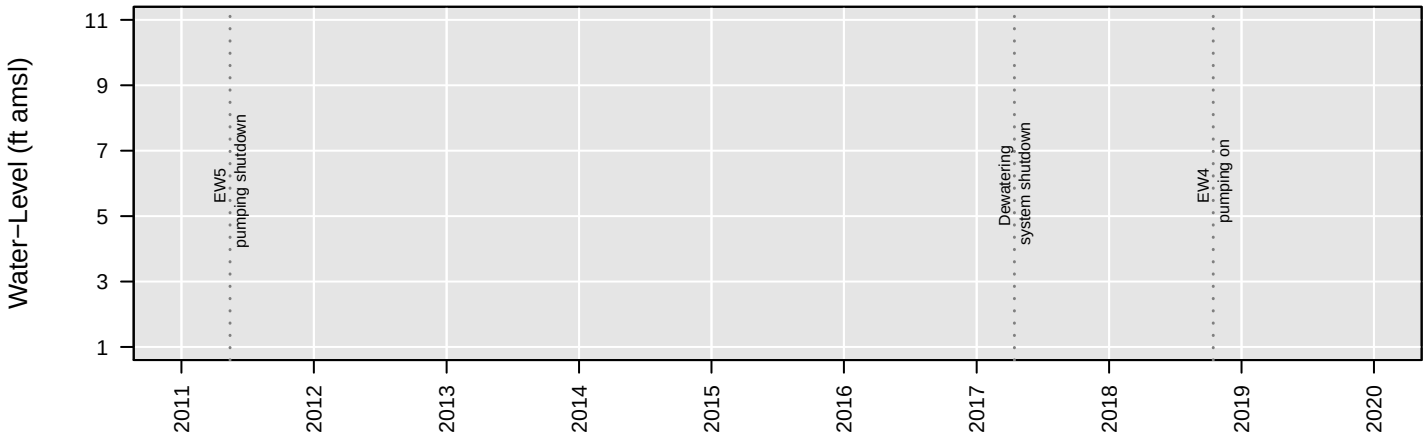
EW1

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

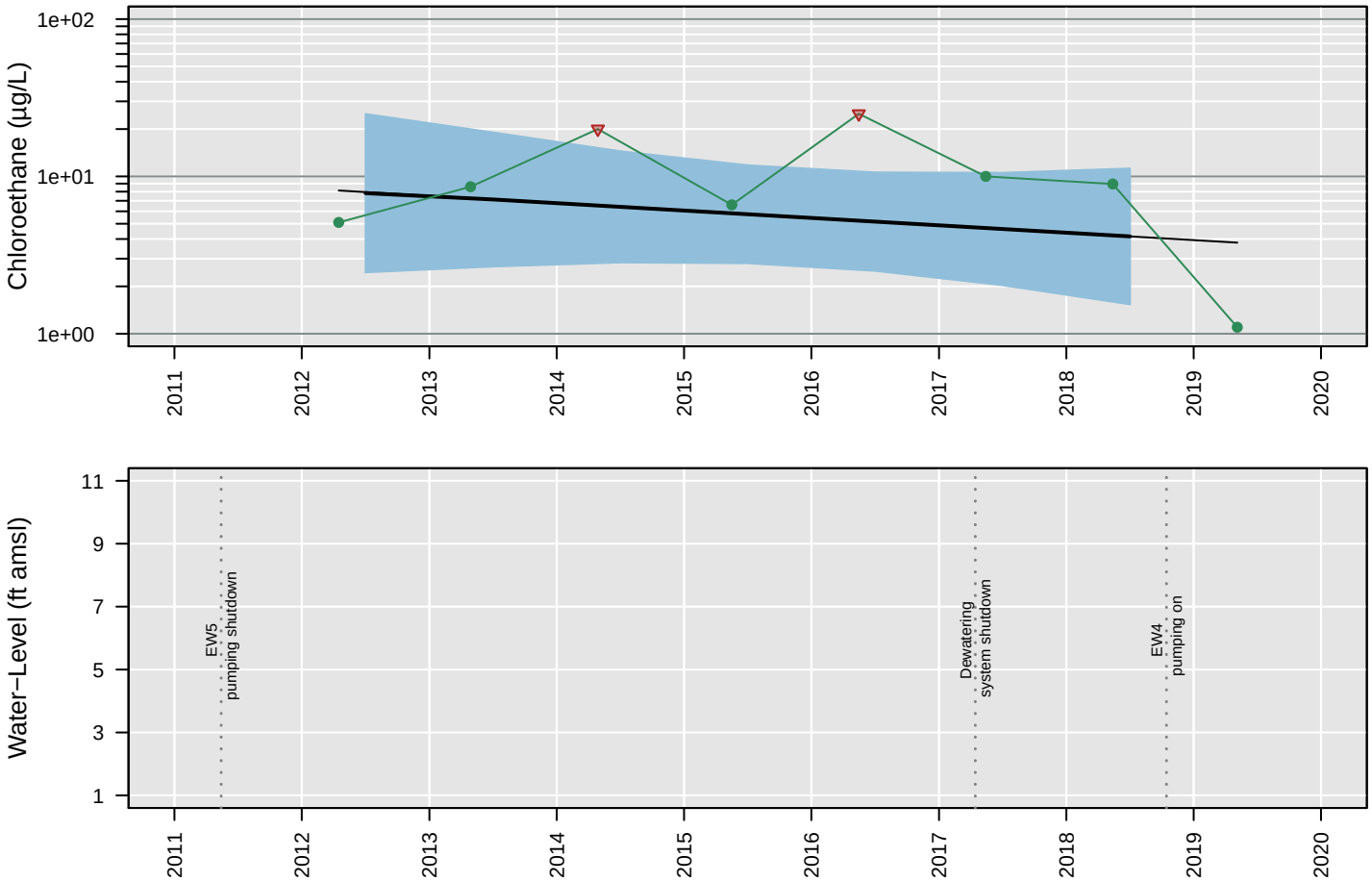
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 360 µg/L
UCL: 830 µg/L
LCL: 150 µg/L

EW1

Chloroethane

Number of Comparisons: 8
Percent NDs: 25%



Censored Regression (Tobit) Model

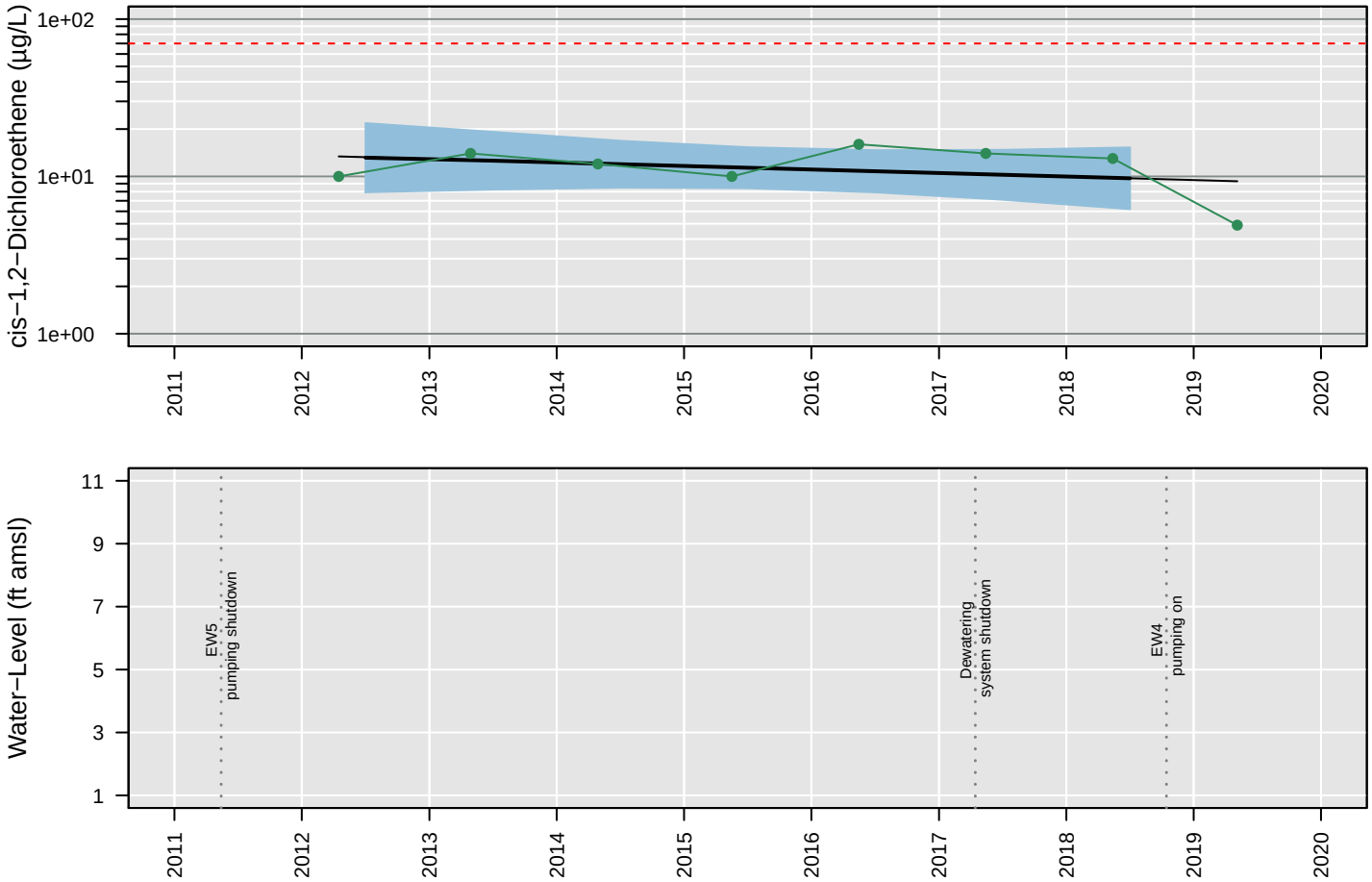
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.2 µg/L
UCL: 11 µg/L
LCL: 1.5 µg/L

EW1

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

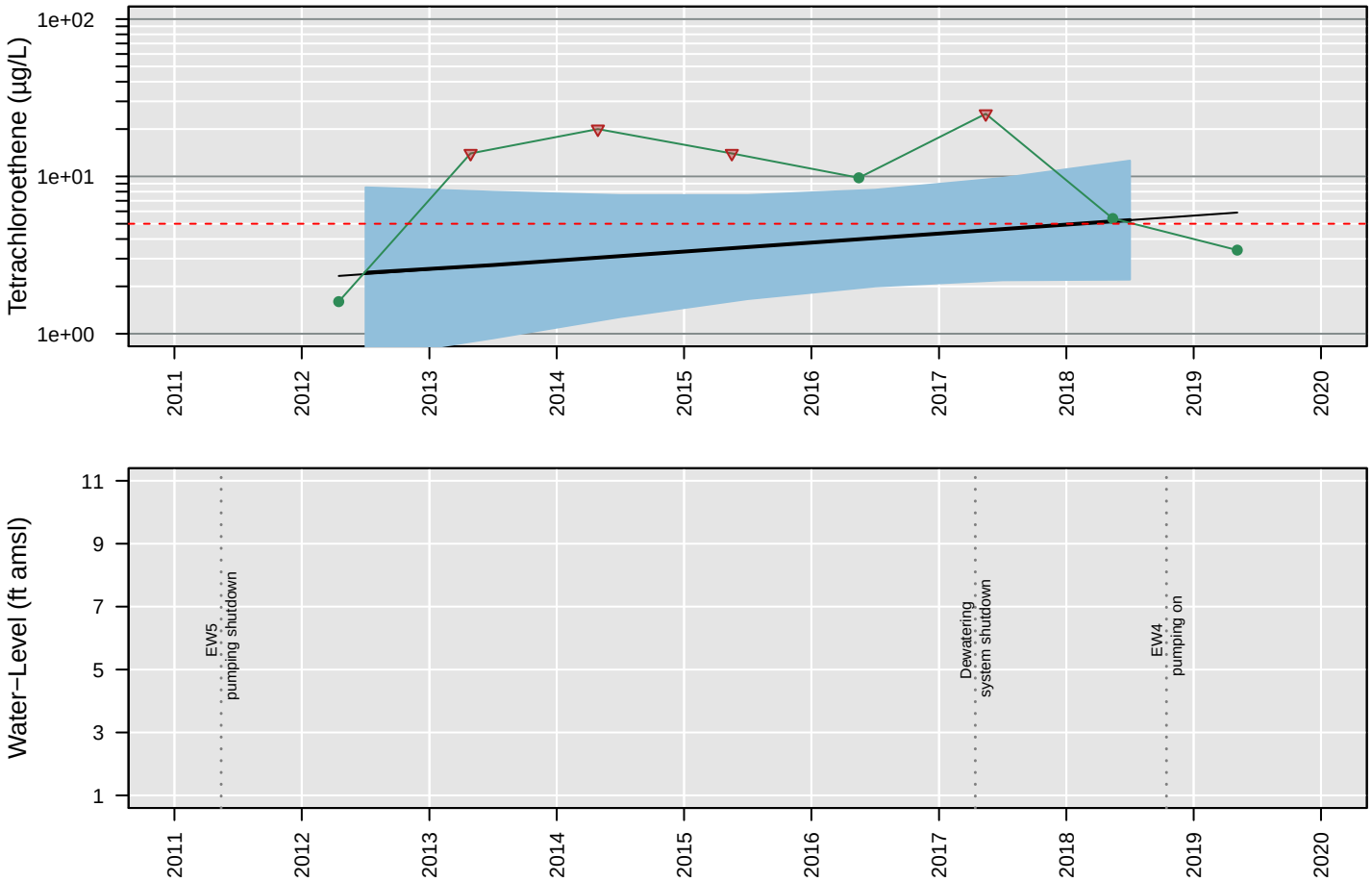
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 9.7 µg/L
UCL: 15 µg/L
LCL: 6.2 µg/L

EW1

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 50%



Censored Regression (Tobit) Model

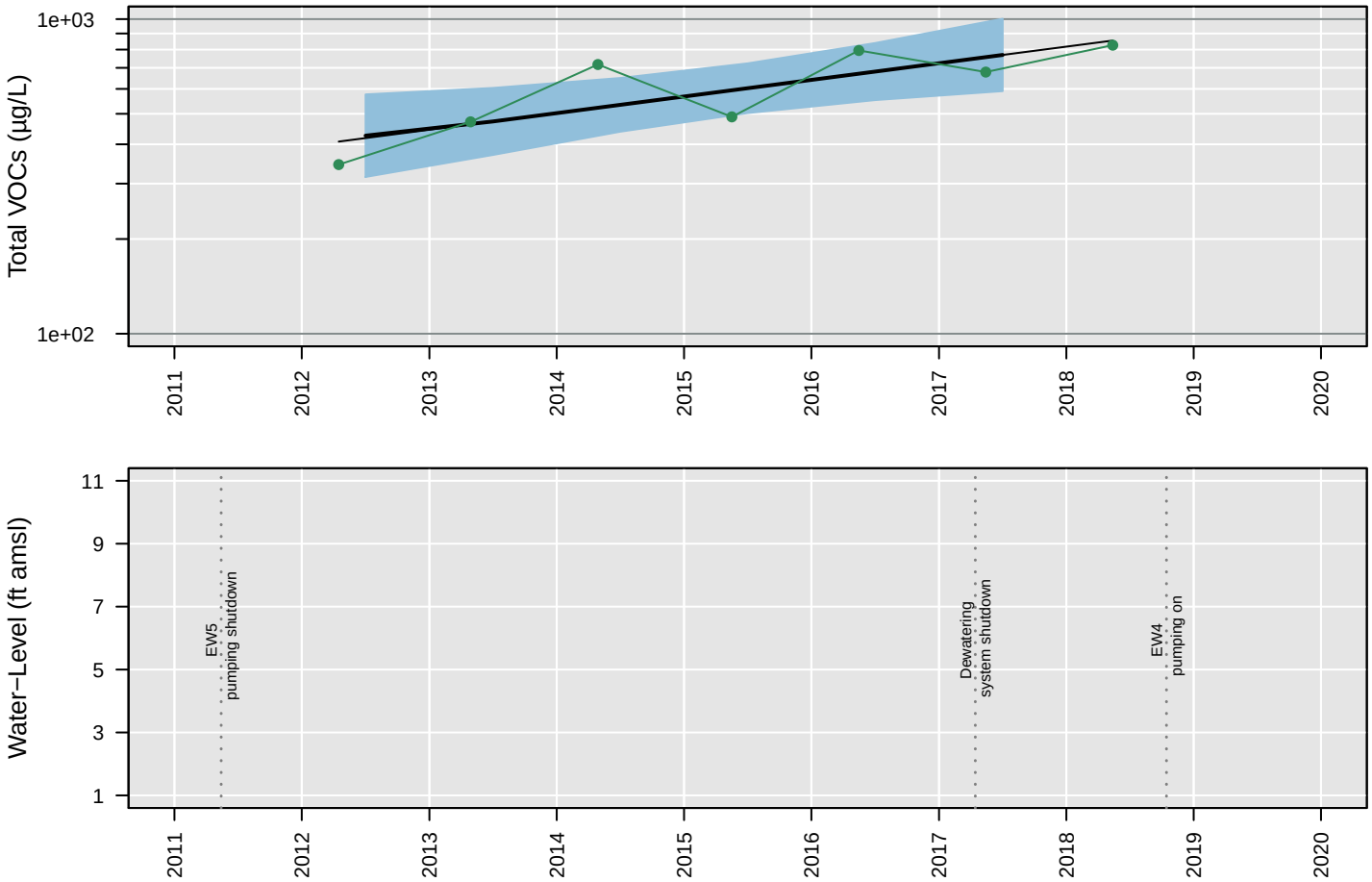
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.3 µg/L
UCL: 13 µg/L
LCL: 2.2 µg/L

EW1

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

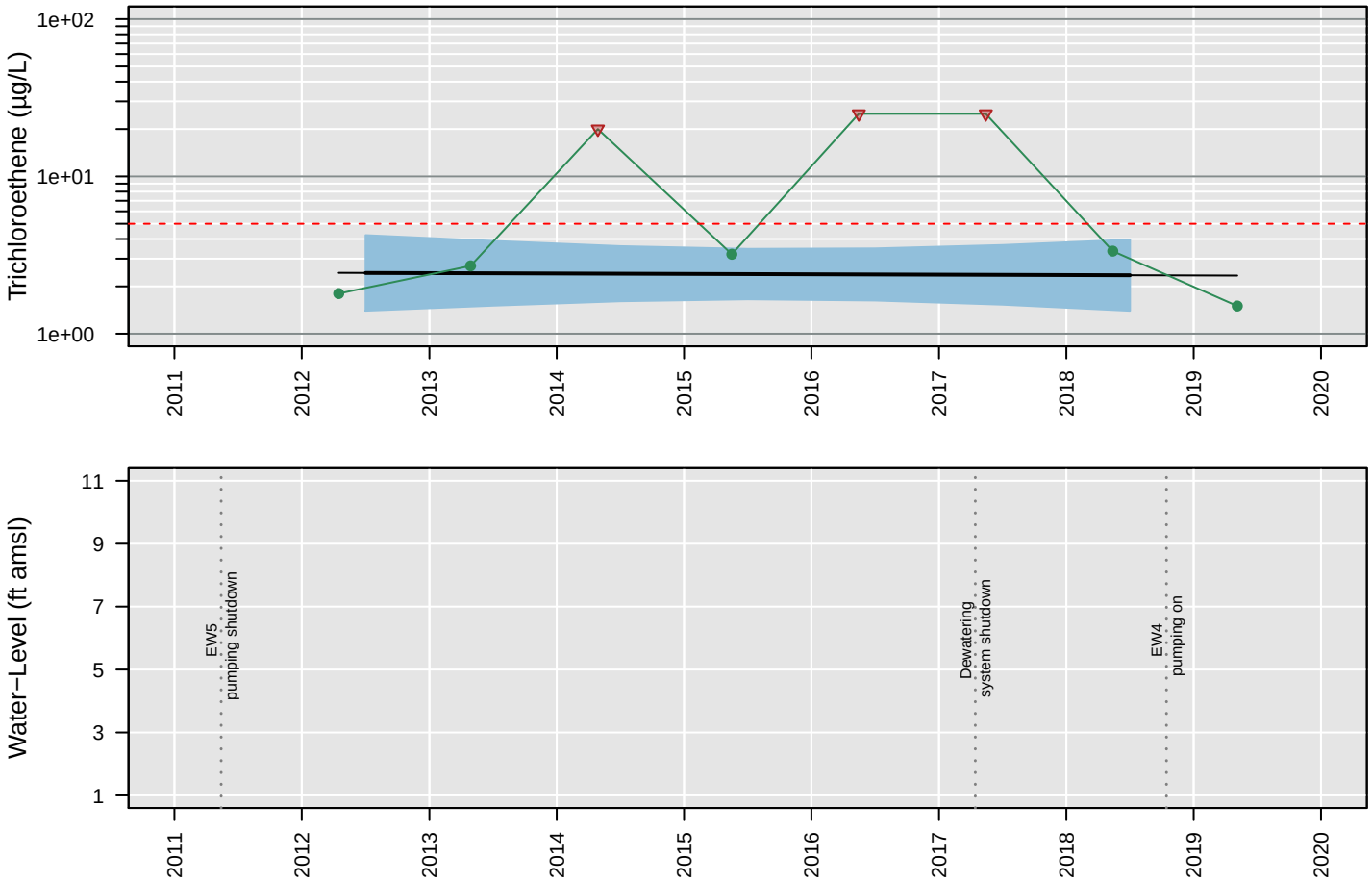
ln Conc. = 0.00033 (+/− 0.000088)*Date + 0.87 (+/− 1.5)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 770 µg/L
UCL: 1,000 µg/L
LCL: 590 µg/L

EW1

Trichloroethene

Number of Comparisons: 8
Percent NDs: 38%



Censored Regression (Tobit) Model

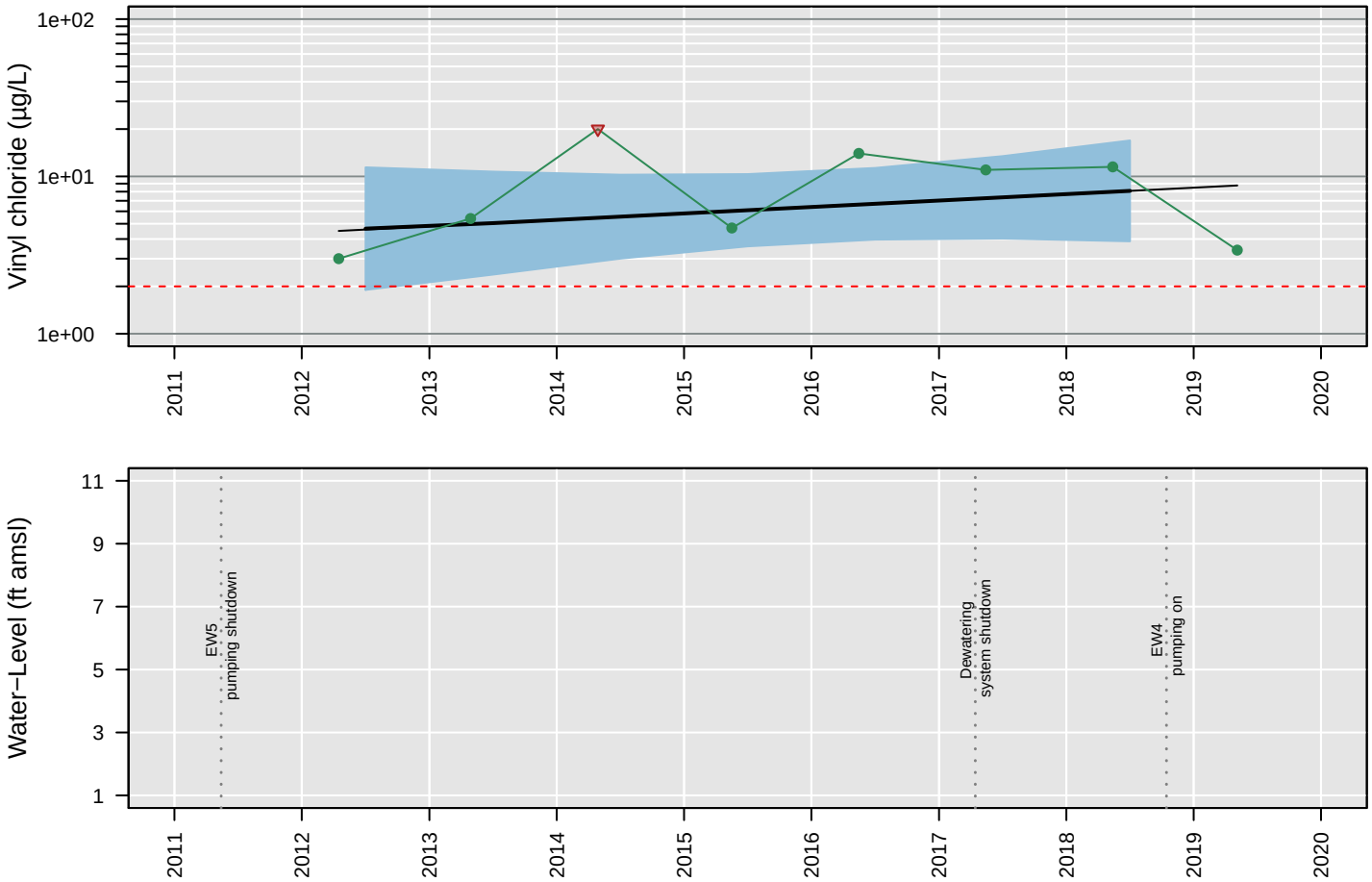
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.4 µg/L
UCL: 4 µg/L
LCL: 1.4 µg/L

EW1

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 12%



Censored Regression (Tobit) Model

Trend Not Significant

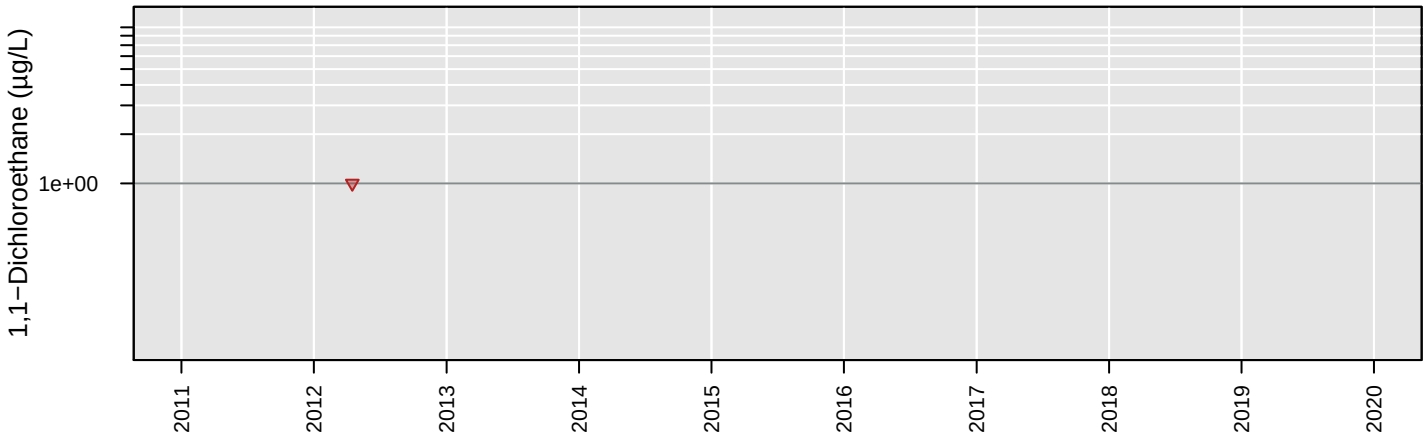
Regression Statistics for January 2018 to January 2019
Geometric Mean: 8.1 µg/L
UCL: 17 µg/L
LCL: 3.9 µg/L

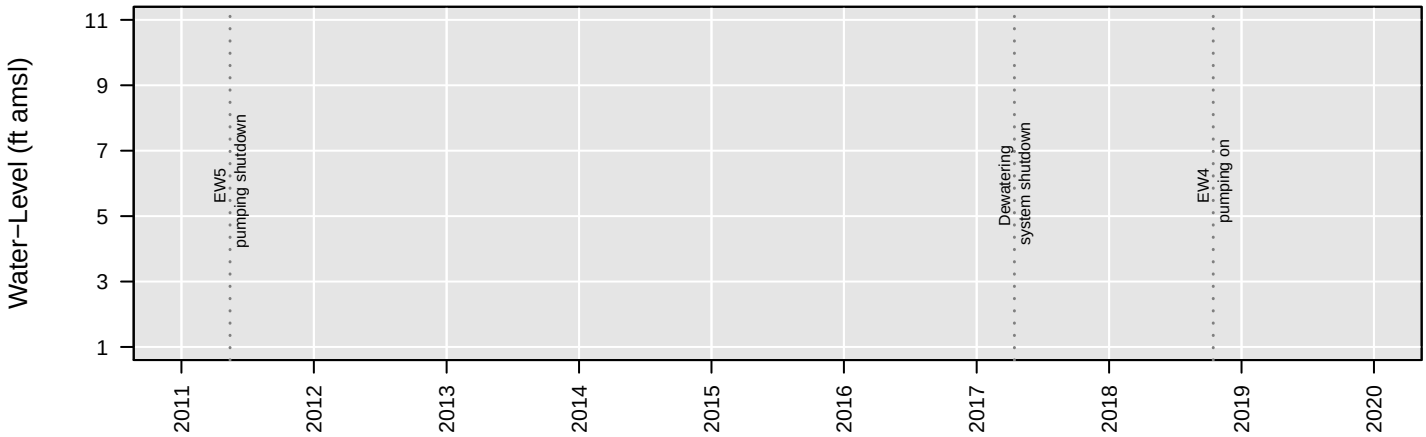
EW2

1,1−Dichloroethane

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





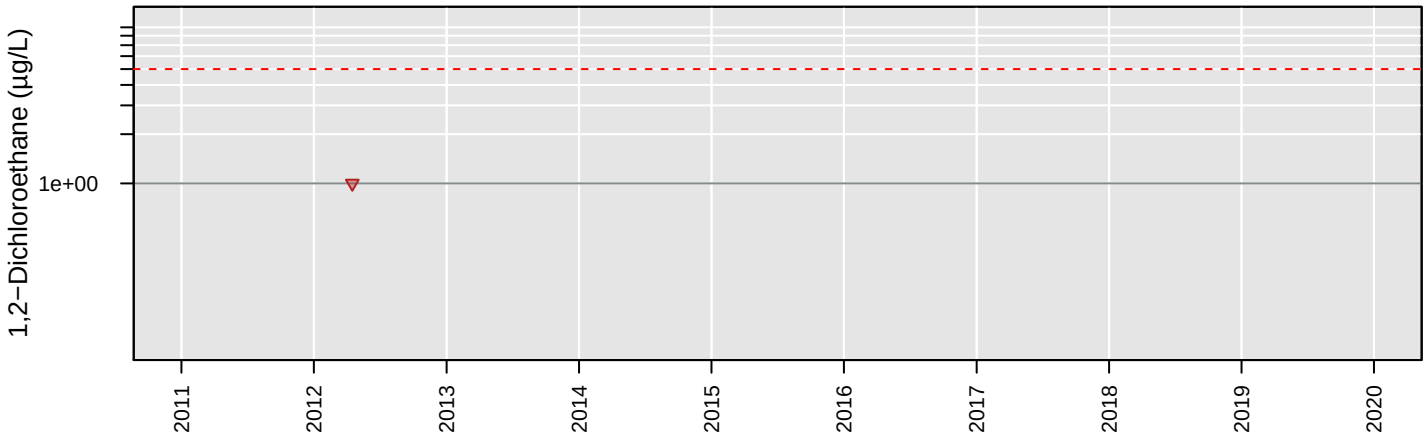
No Analysis Performed

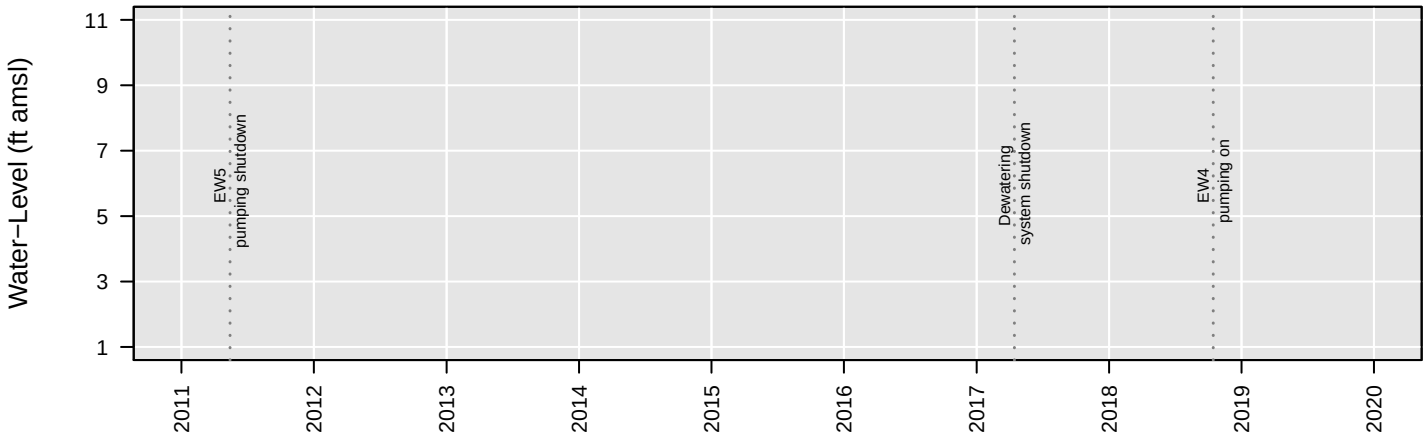
EW2

1,2−Dichloroethane

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





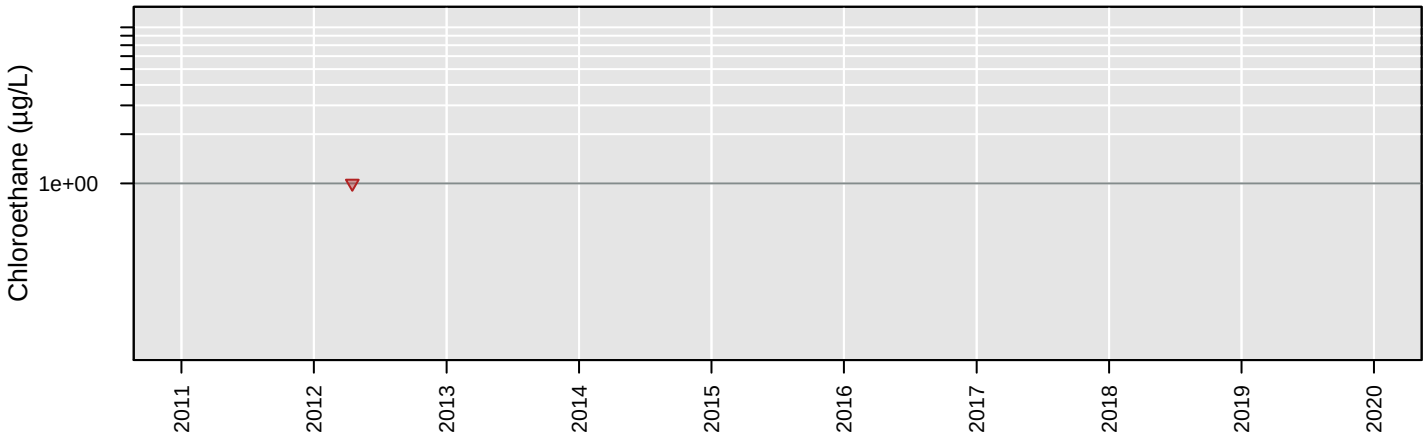
No Analysis Performed

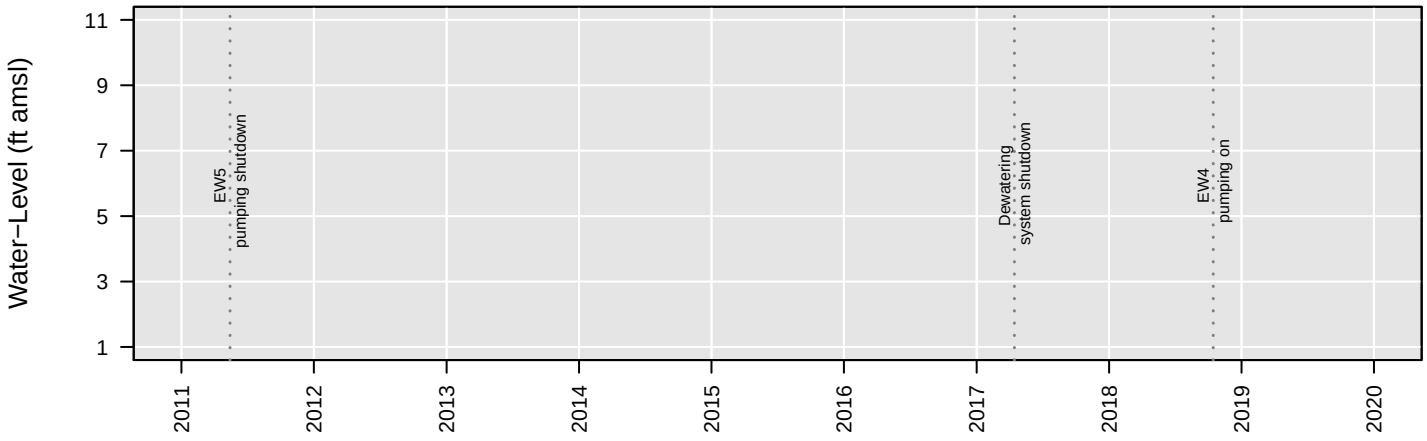
EW2

Chloroethane

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





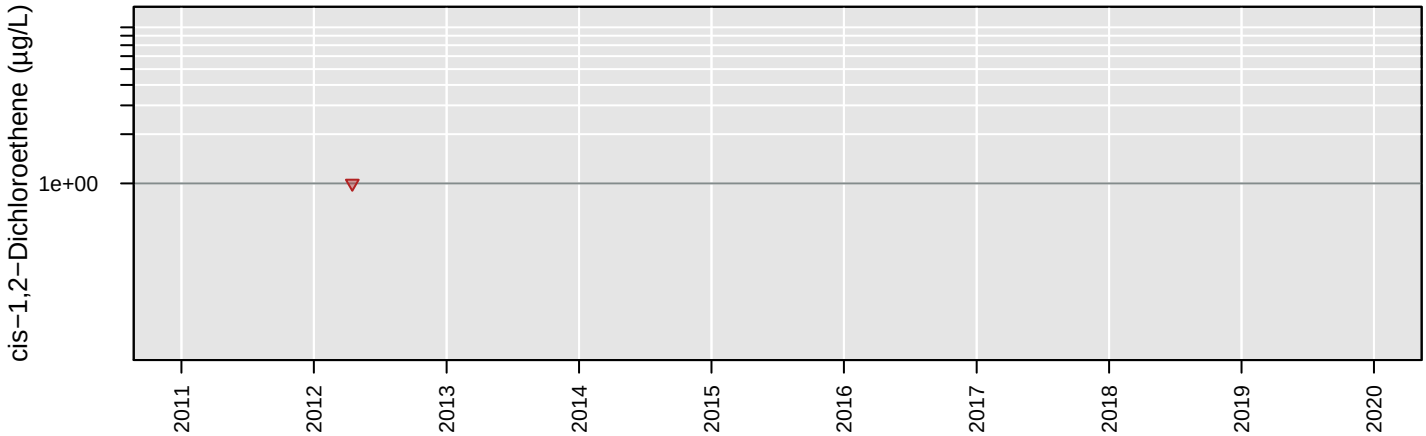
No Analysis Performed

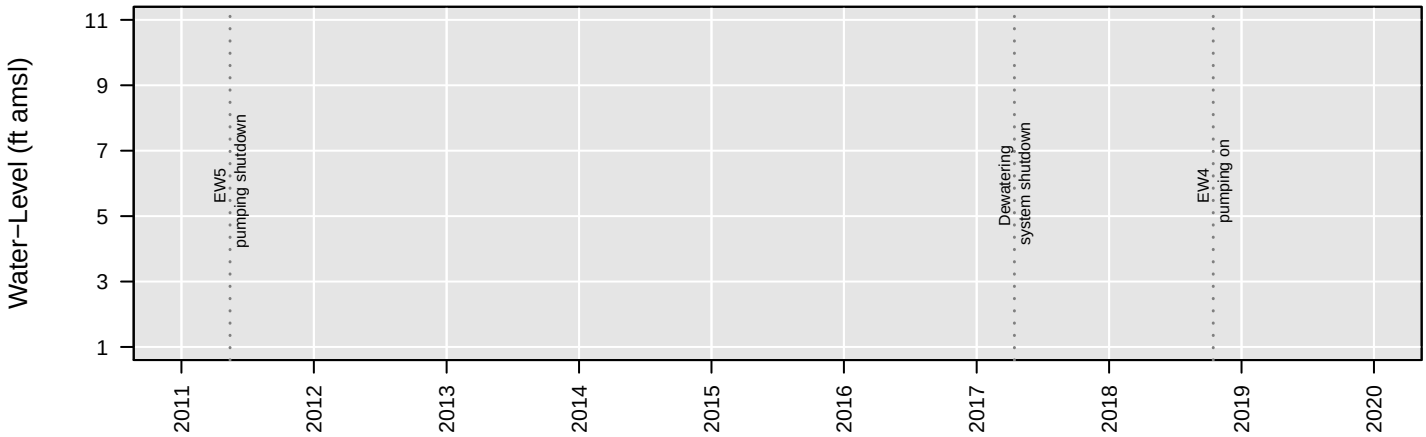
EW2

cis−1,2−Dichloroethene

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





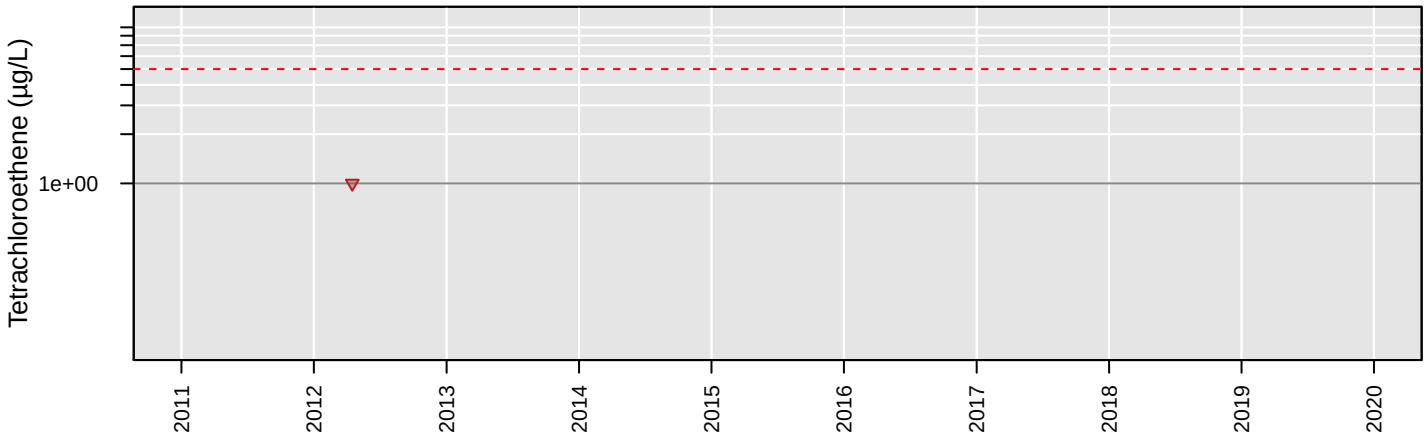
No Analysis Performed

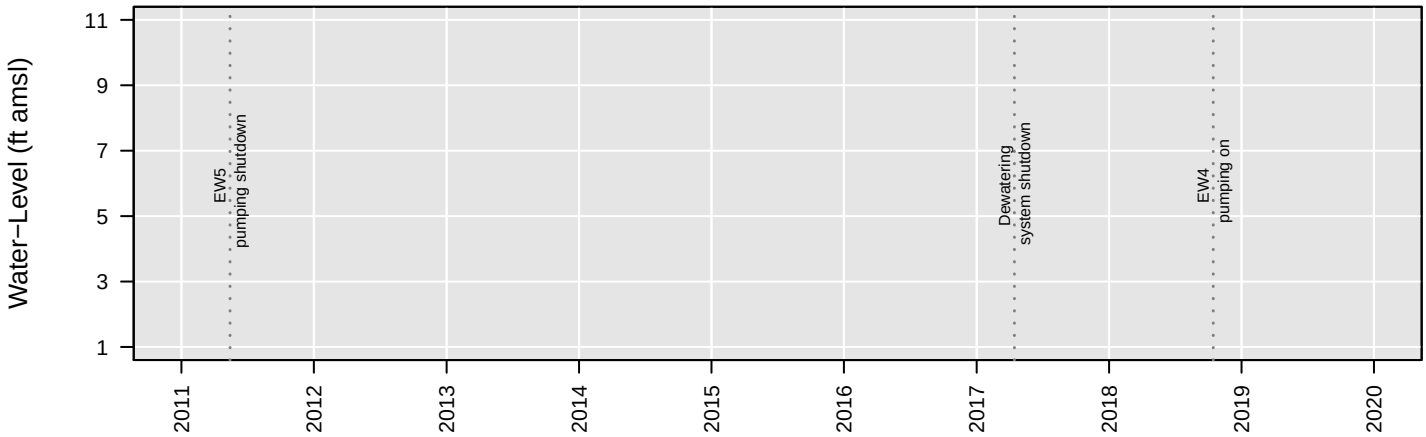
EW2

Tetrachloroethene

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





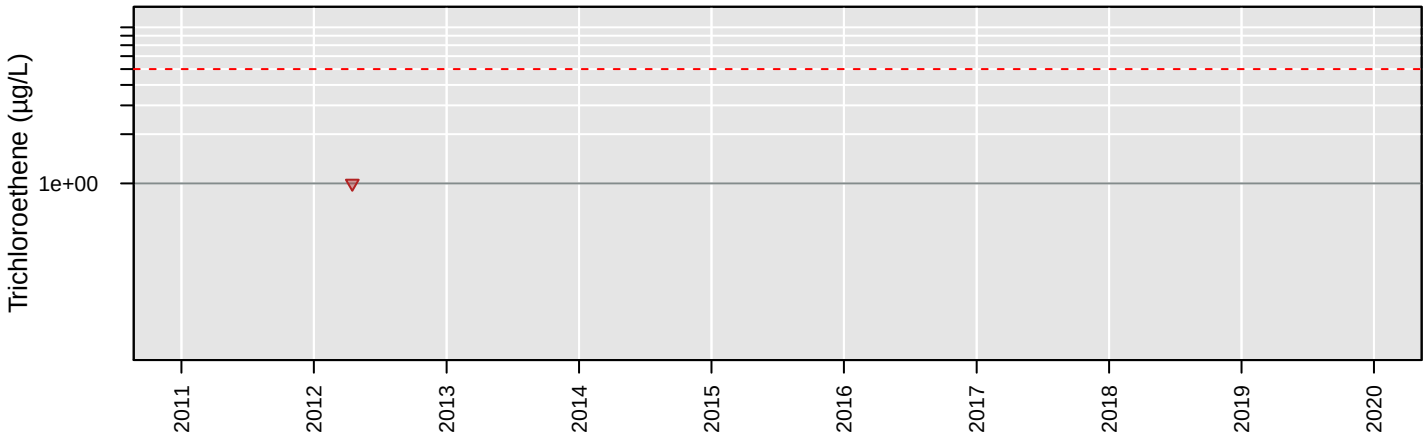
No Analysis Performed

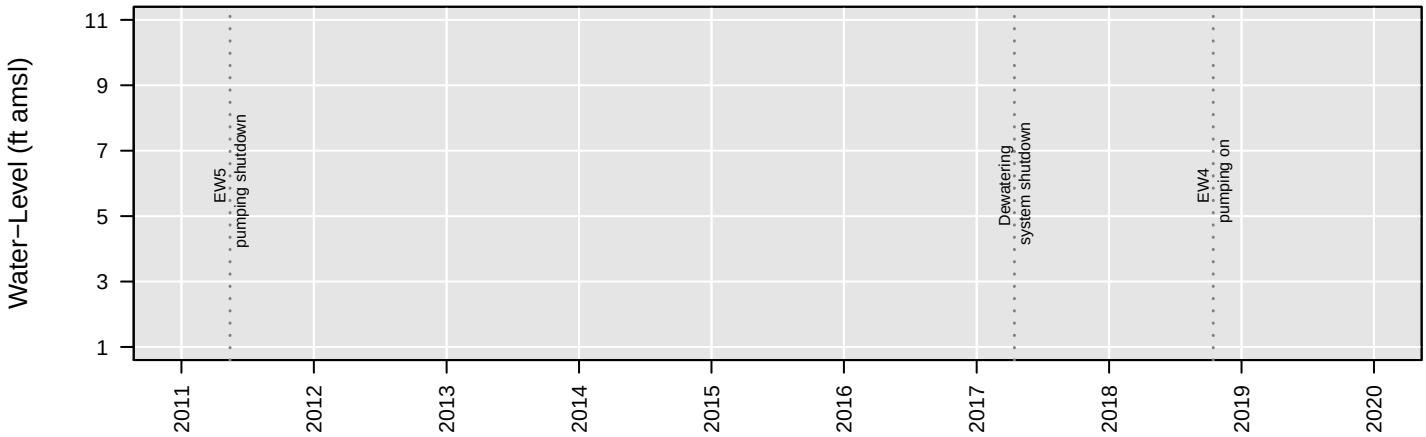
EW2

Trichloroethene

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





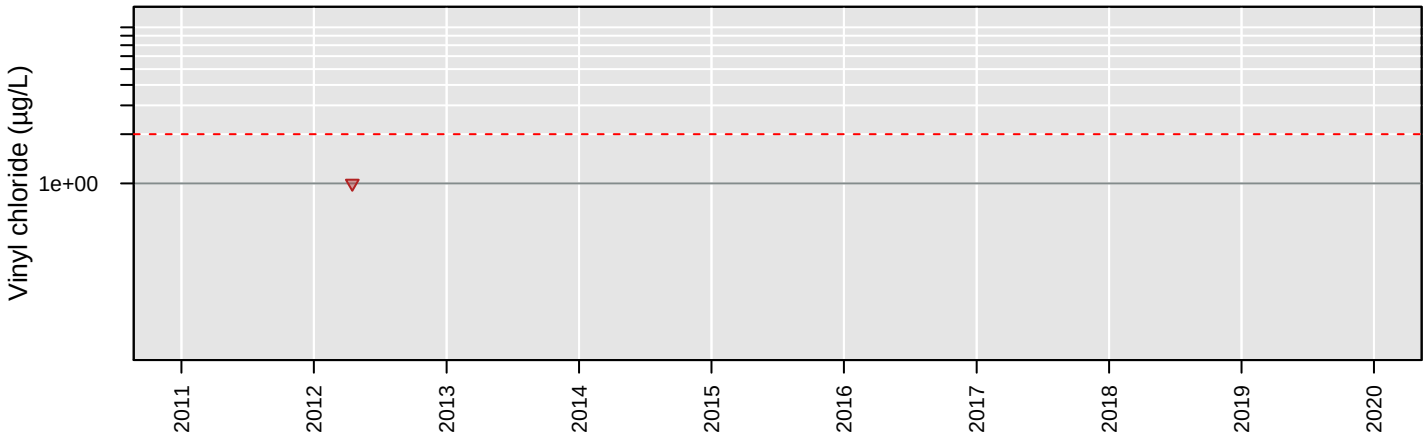
No Analysis Performed

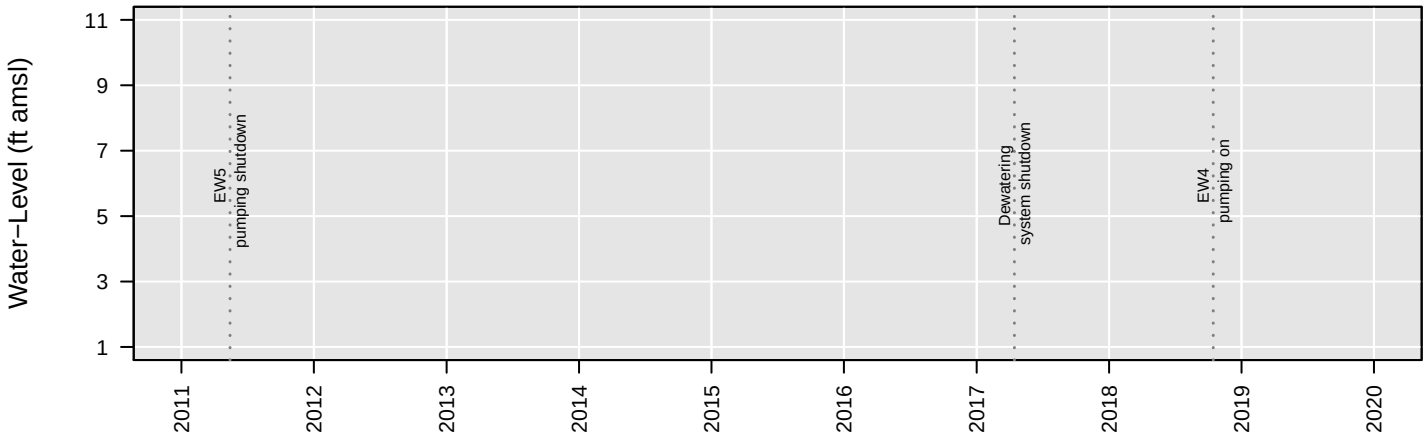
EW2

Vinyl chloride

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





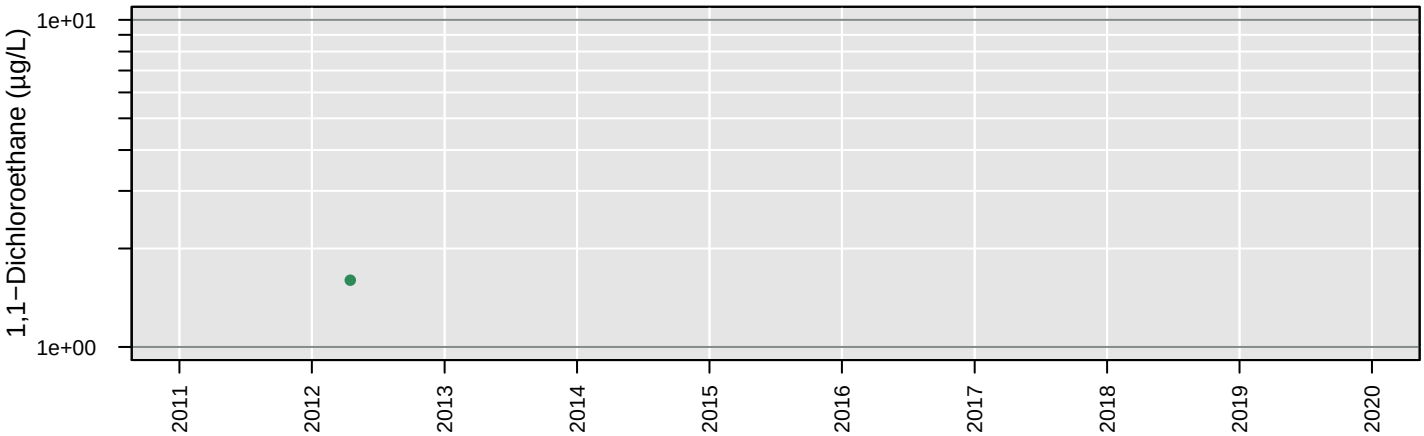
No Analysis Performed

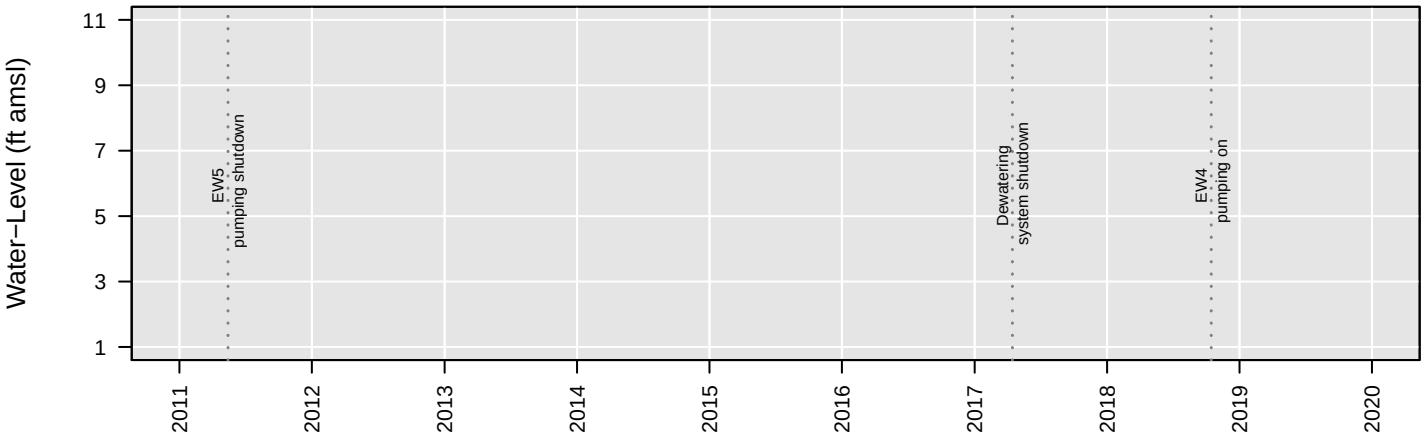
EW3

1,1−Dichloroethane

Number of Comparisons: 1
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





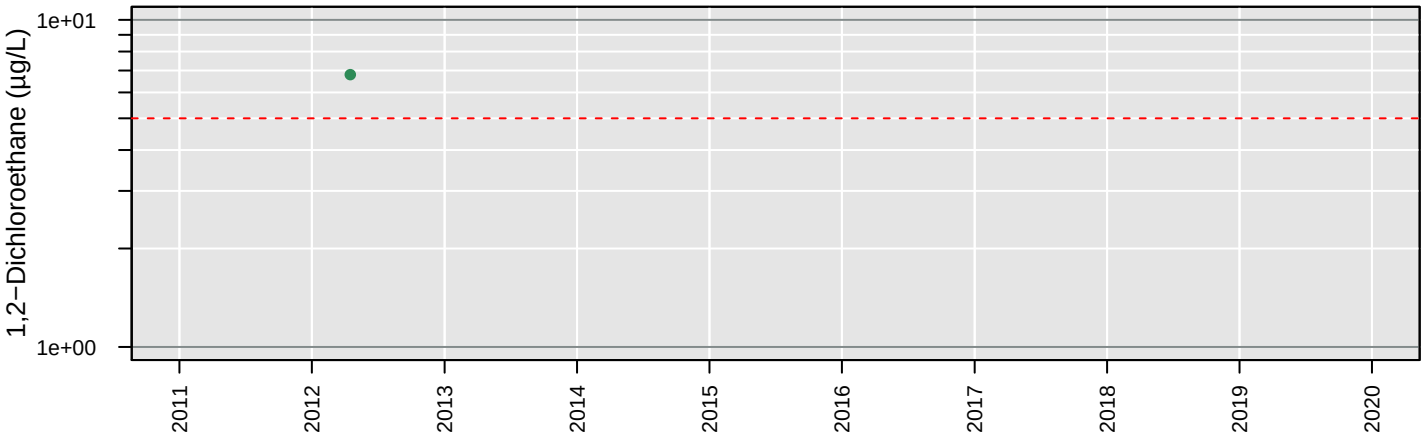
No Analysis Performed

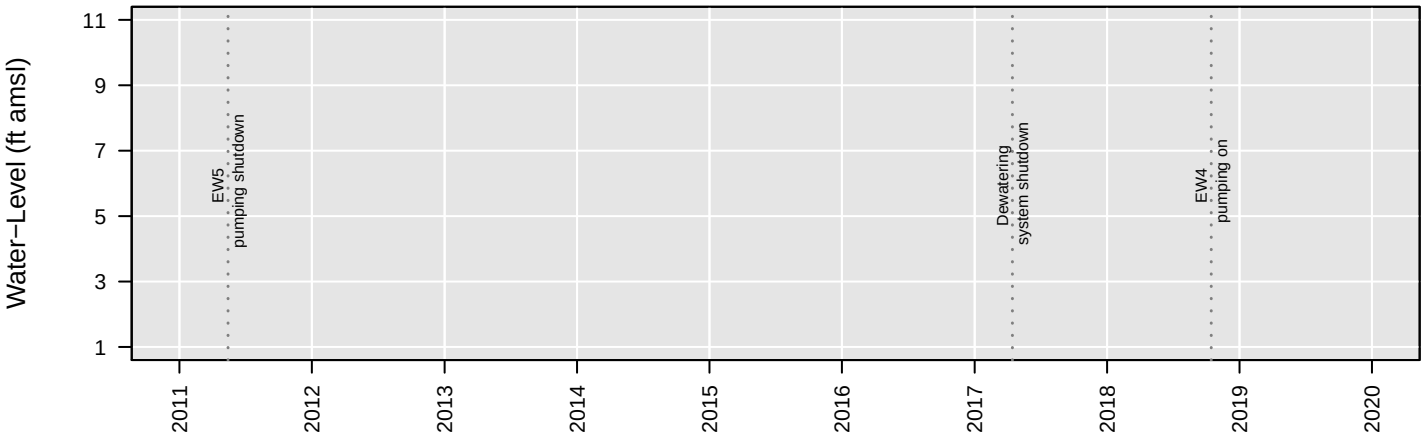
EW3

1,2−Dichloroethane

Number of Comparisons: 1
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





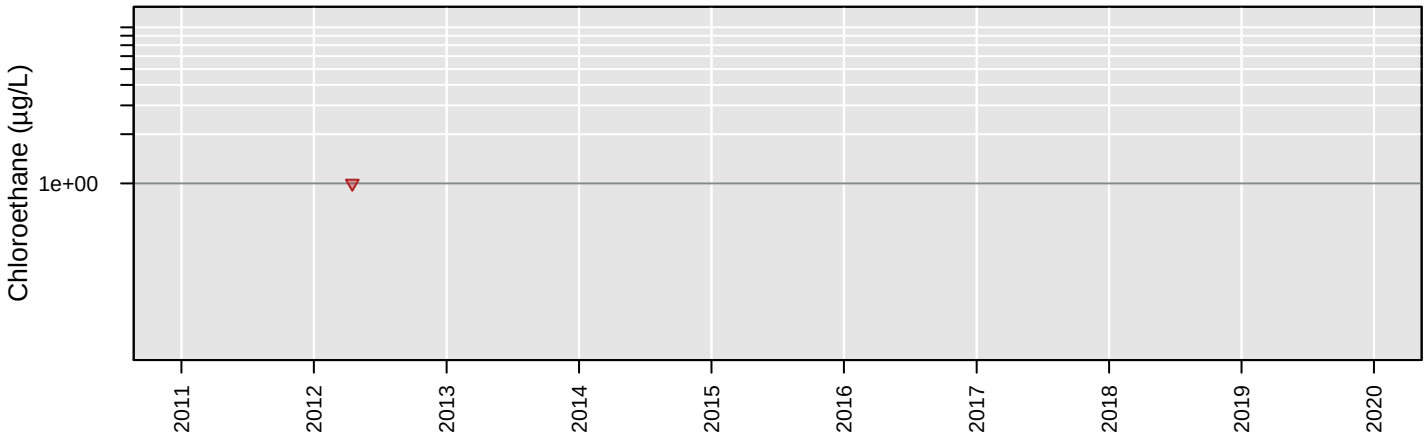
No Analysis Performed

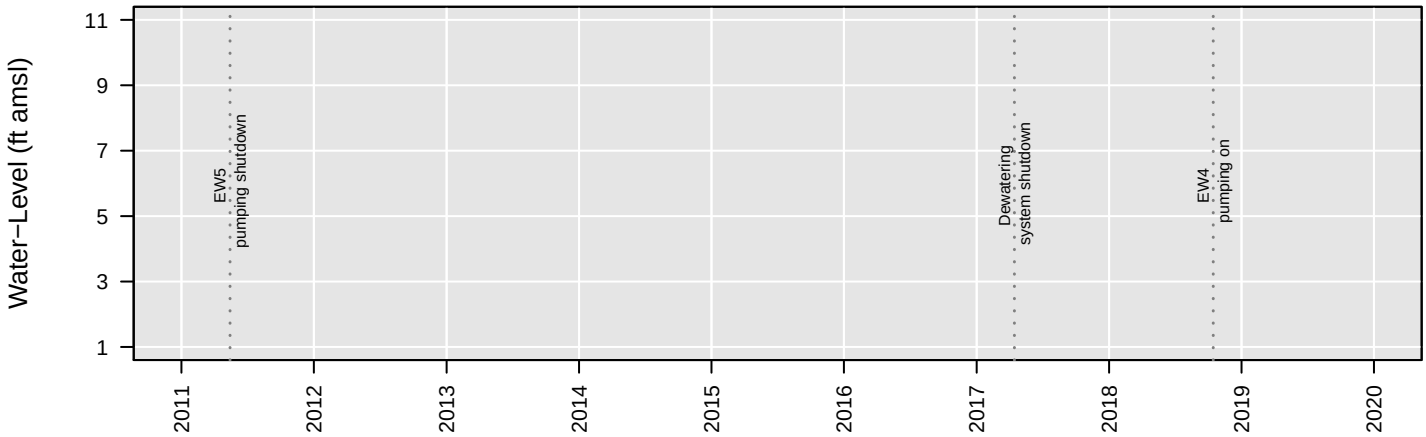
EW3

Chloroethane

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





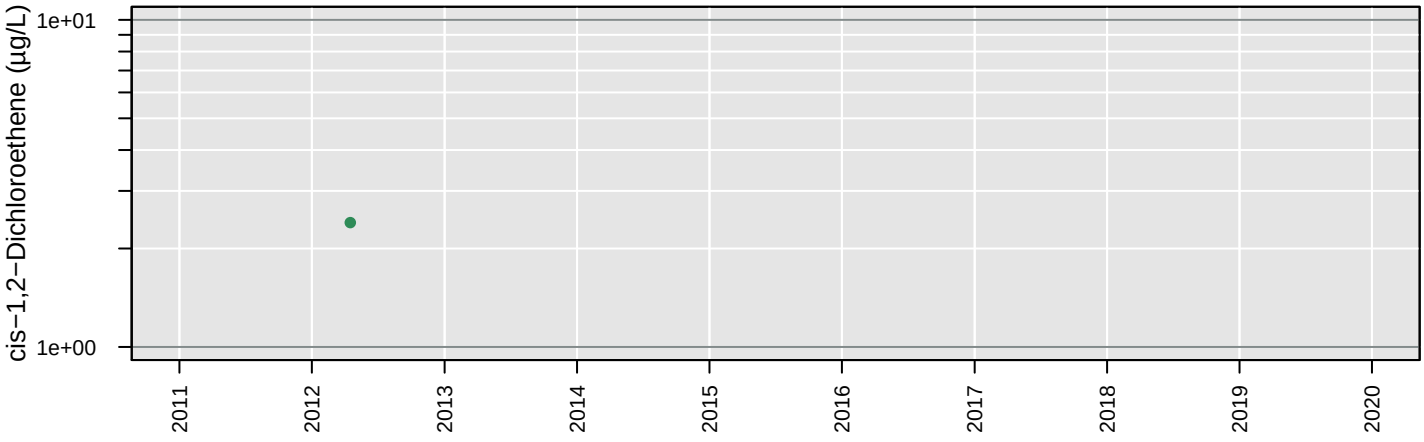
No Analysis Performed

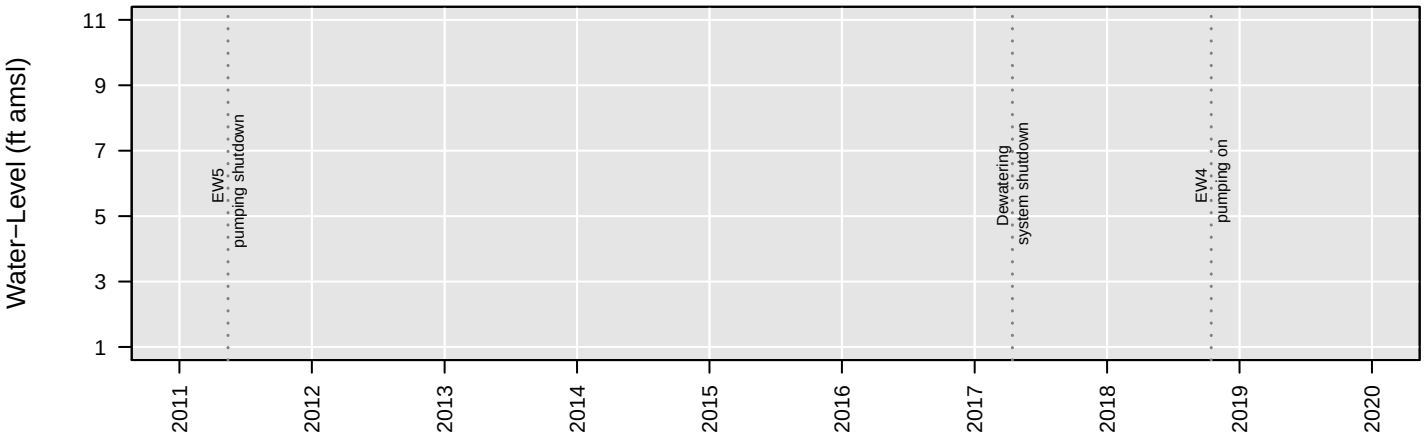
EW3

cis−1,2−Dichloroethene

Number of Comparisons: 1
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





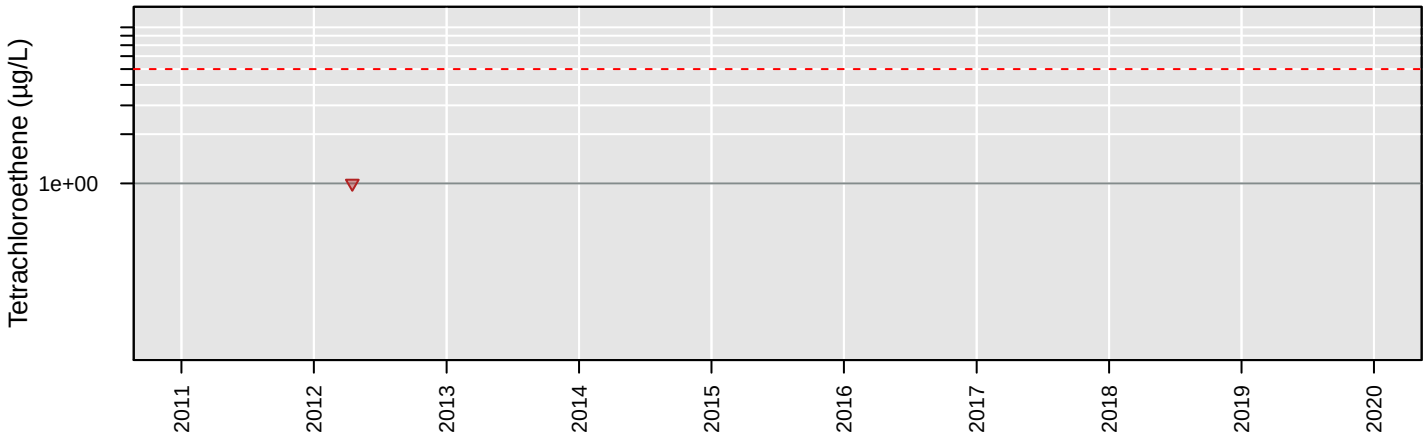
No Analysis Performed

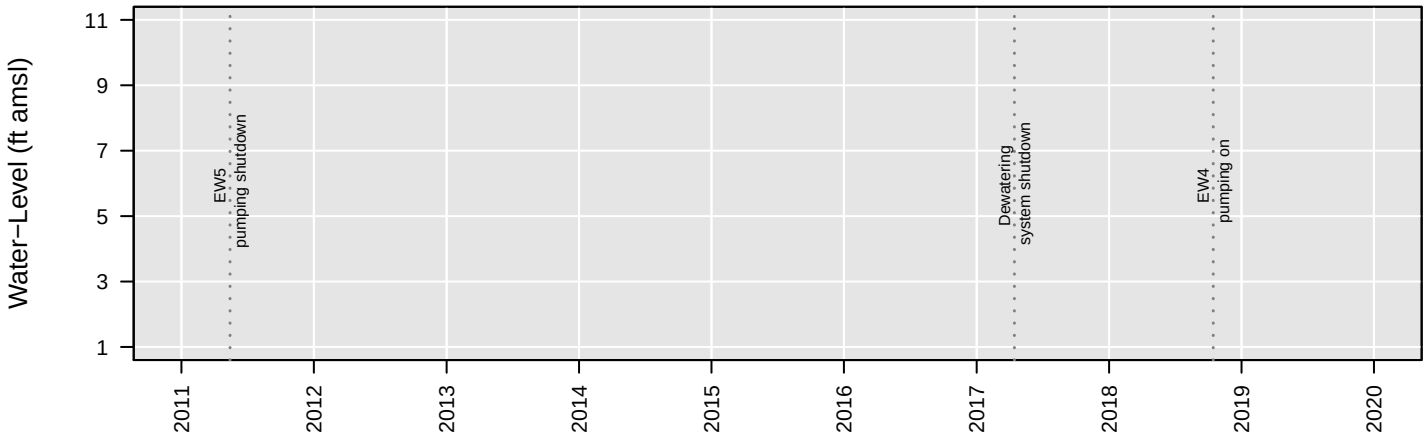
EW3

Tetrachloroethene

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





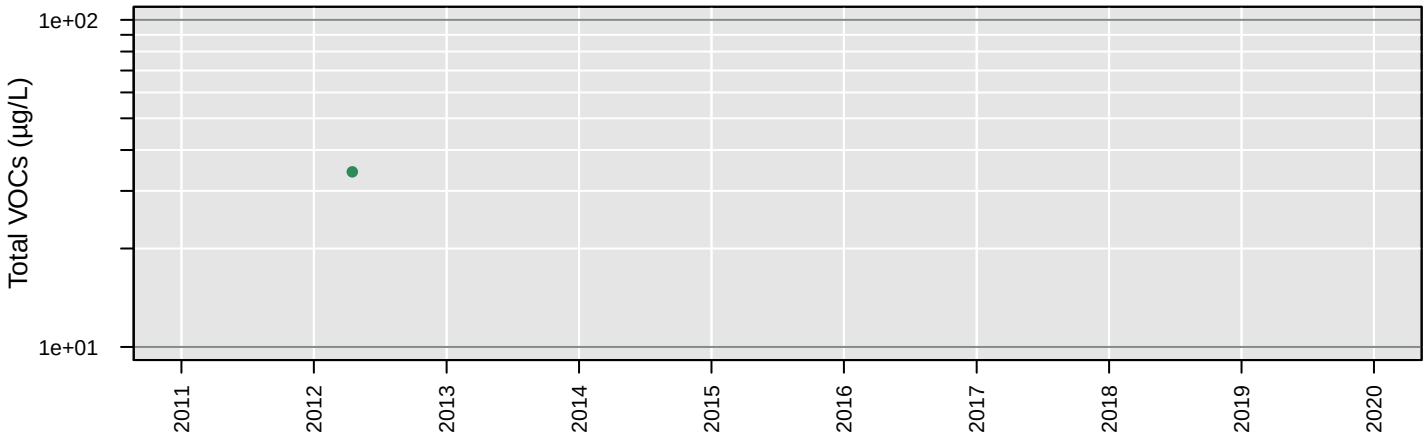
No Analysis Performed

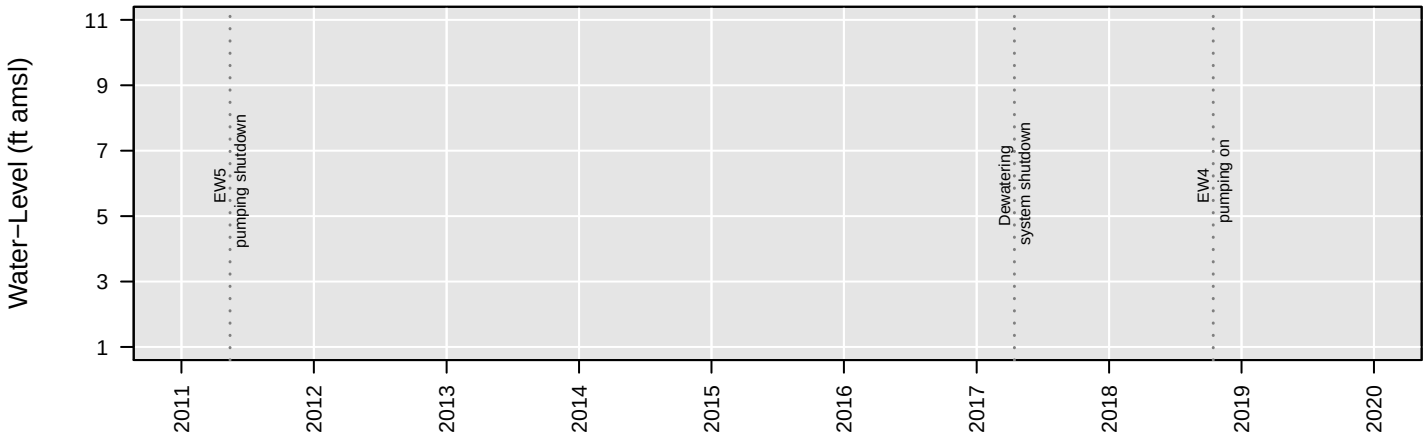
EW3

Total VOCs

Number of Comparisons: 1
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





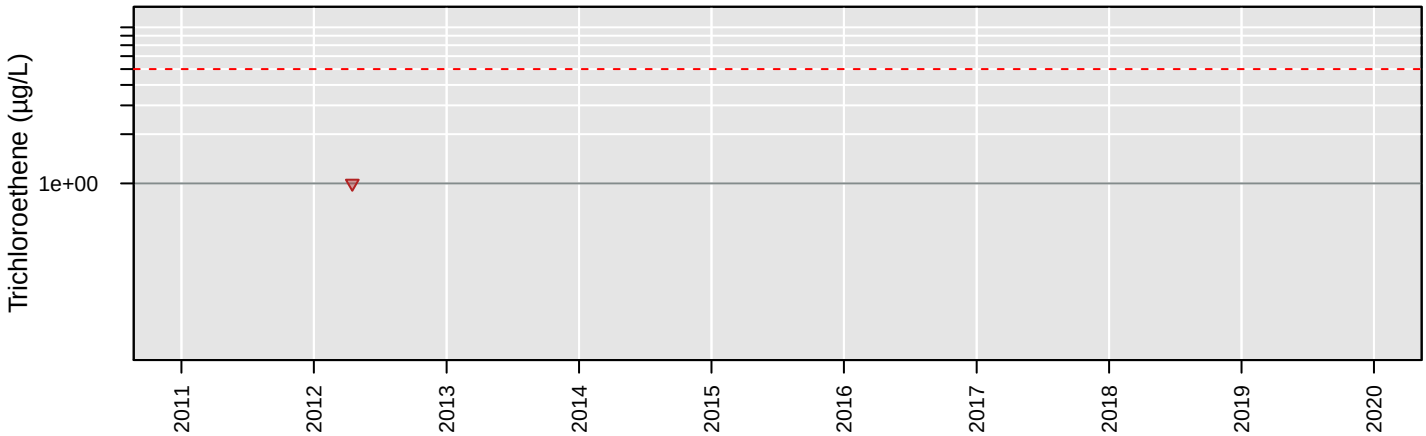
No Analysis Performed

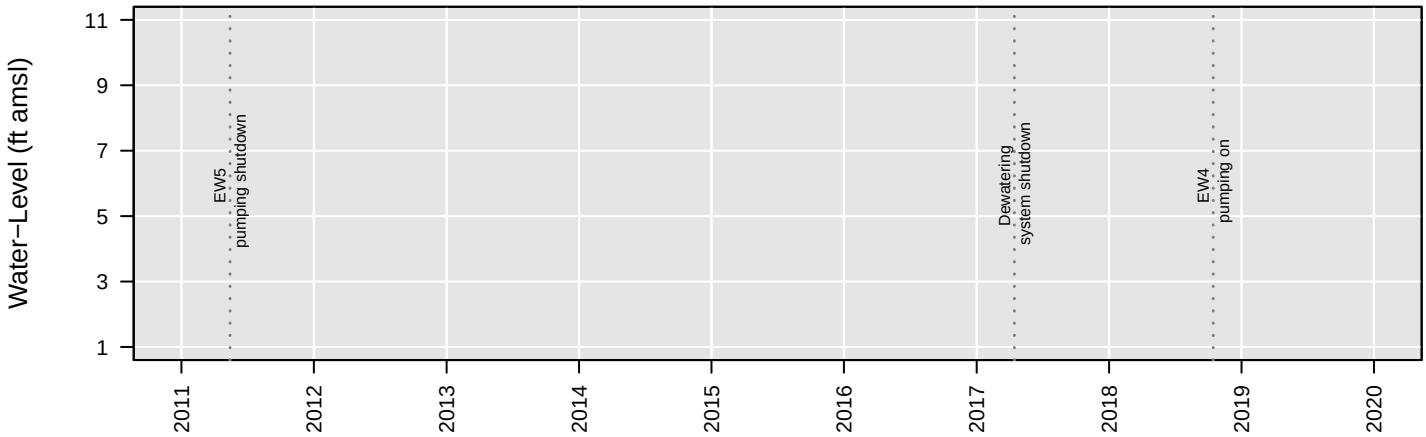
EW3

Trichloroethene

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





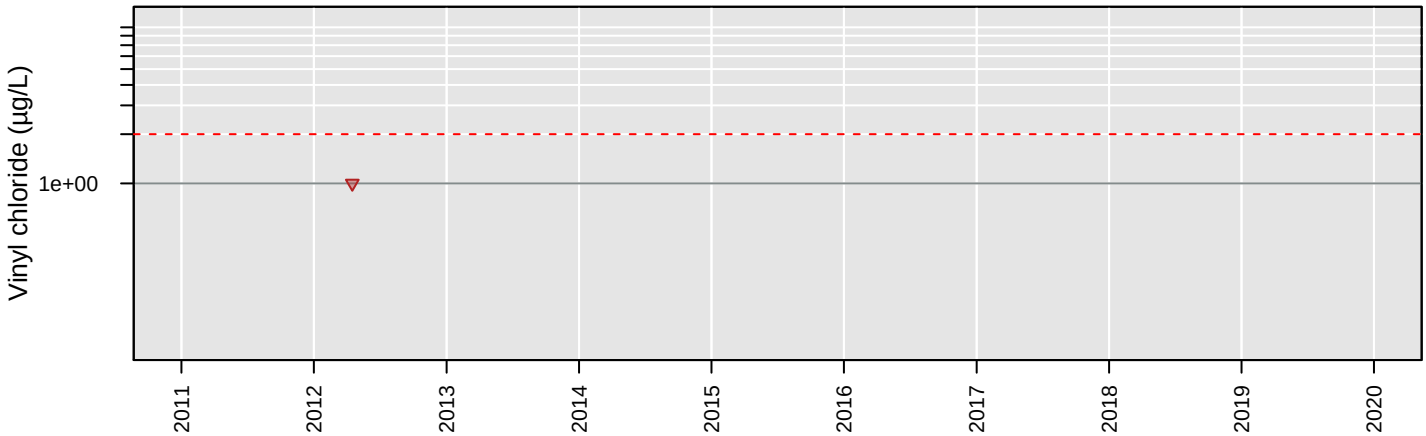
No Analysis Performed

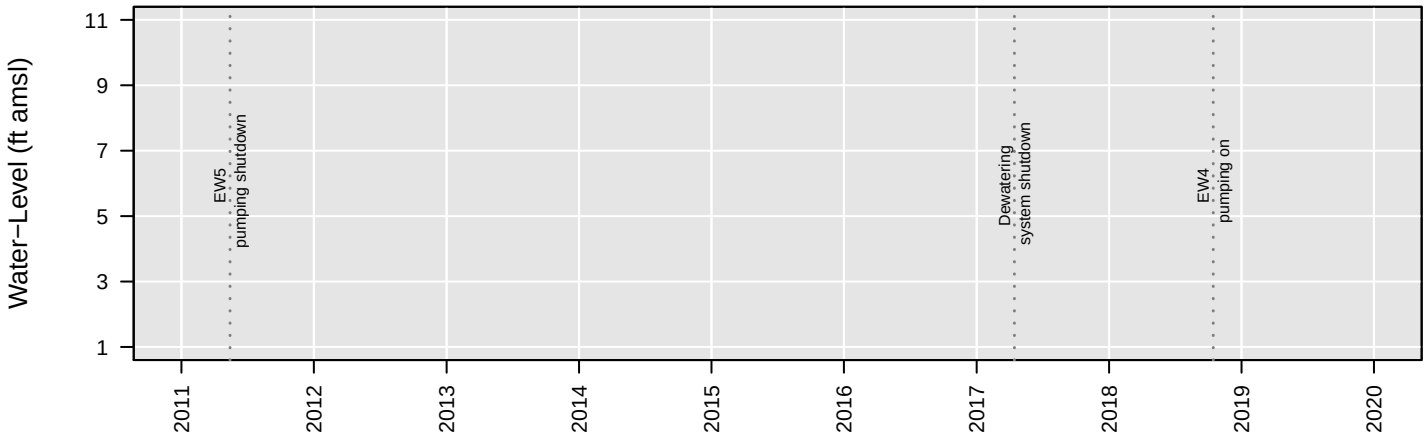
EW3

Vinyl chloride

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





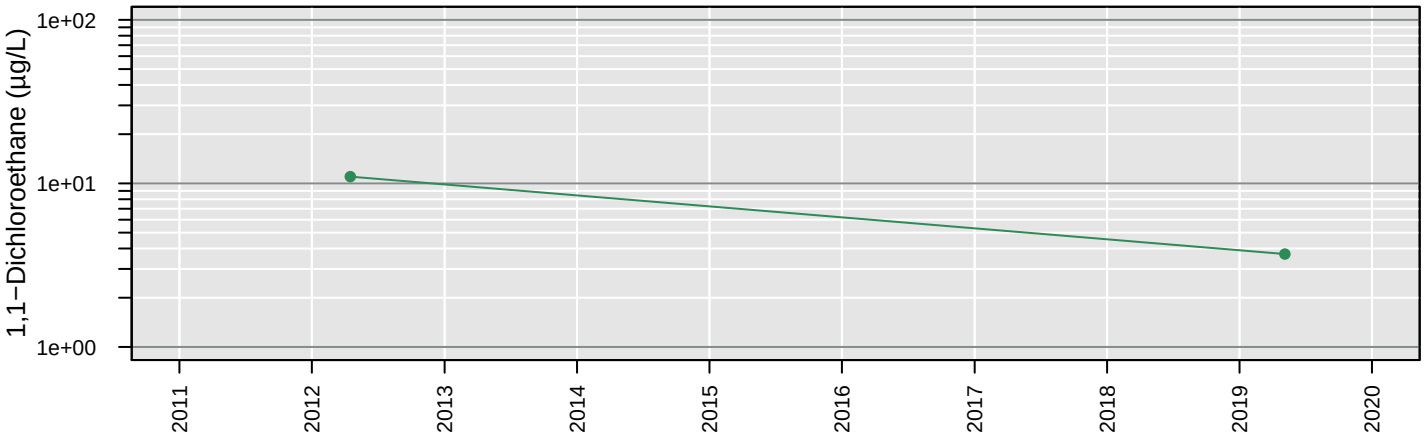
No Analysis Performed

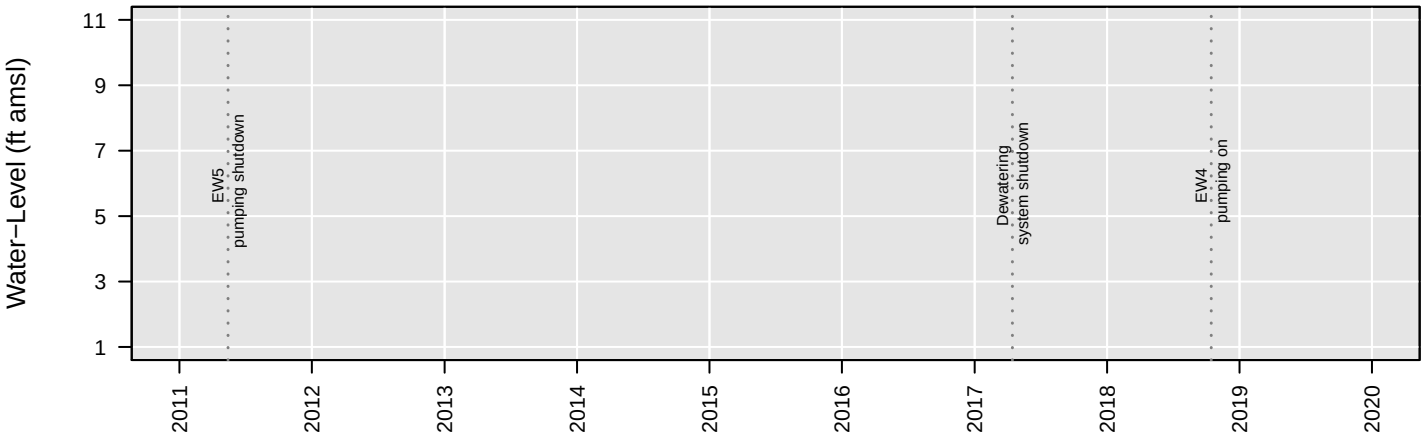
EW4

1,1−Dichloroethane

Number of Comparisons: 2
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



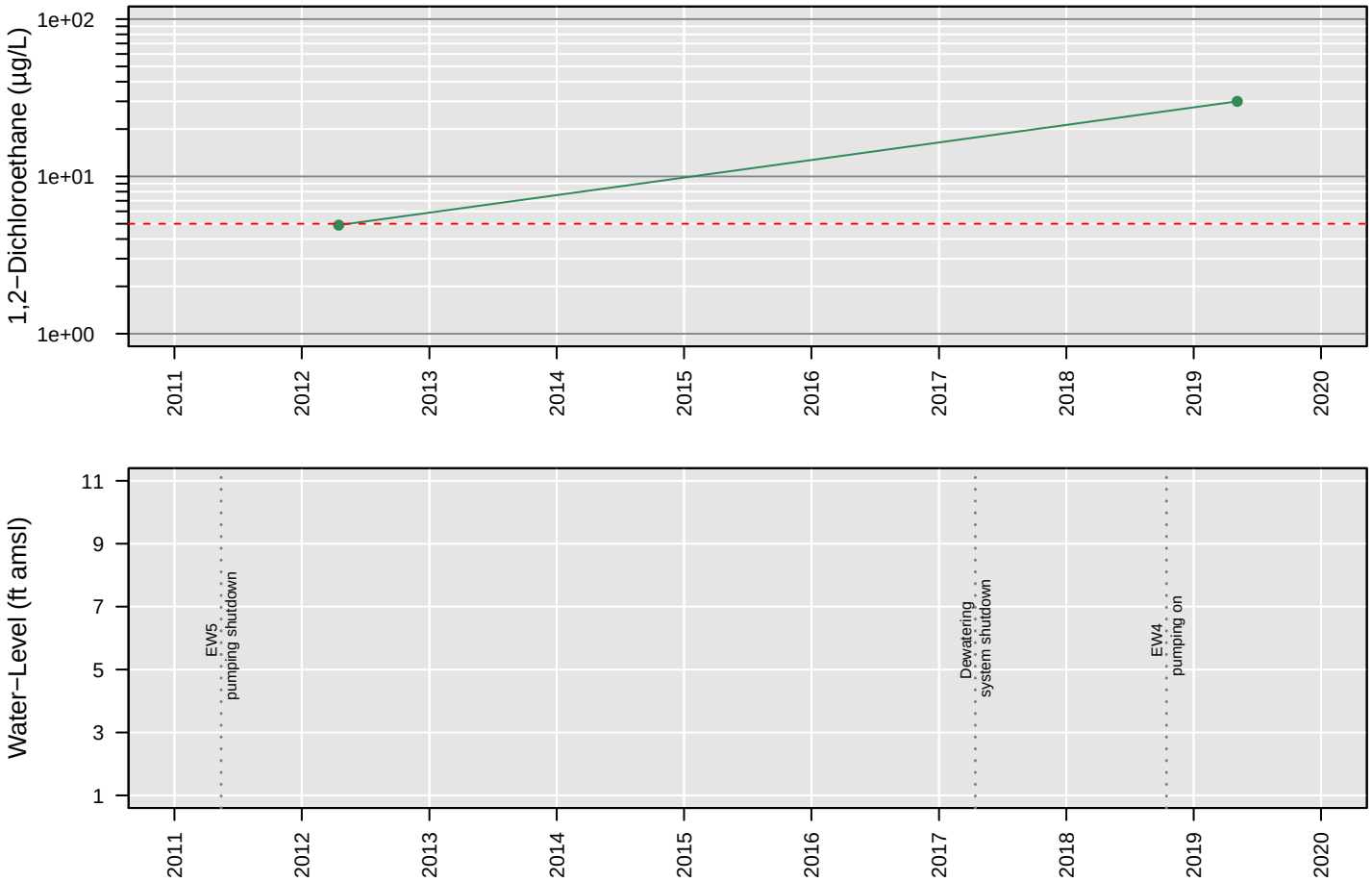


No Analysis Performed

EW4

1,2−Dichloroethane

Number of Comparisons: 2
Percent NDs: 0%



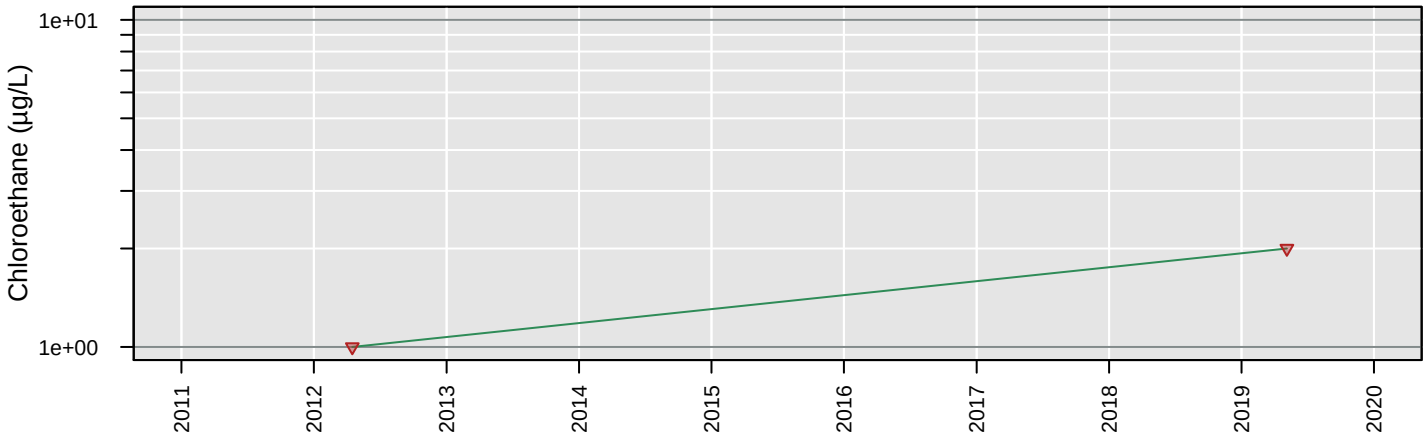
No Analysis Performed

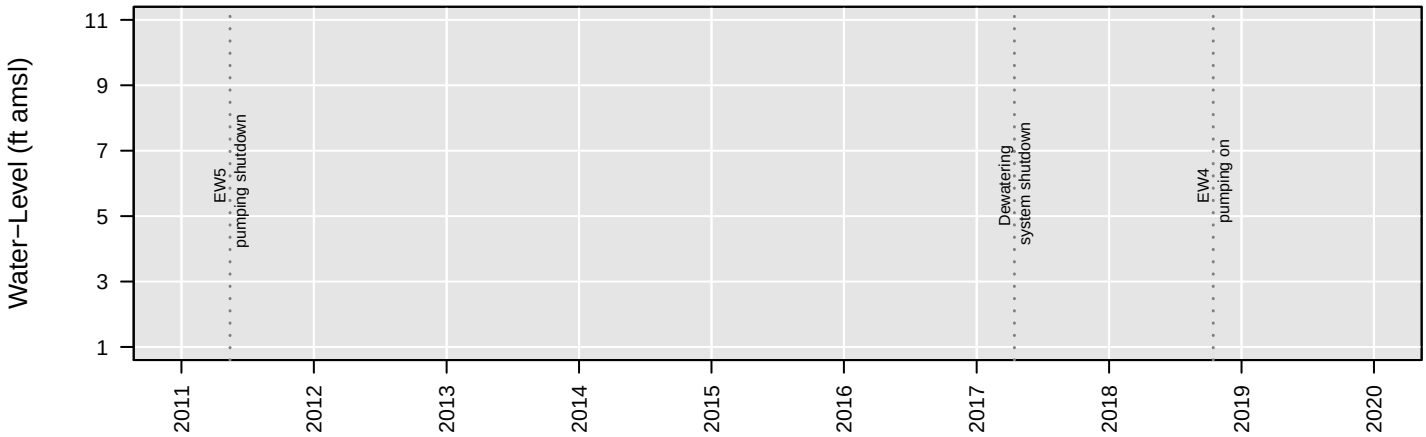
EW4

Chloroethane

Number of Comparisons: 2
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





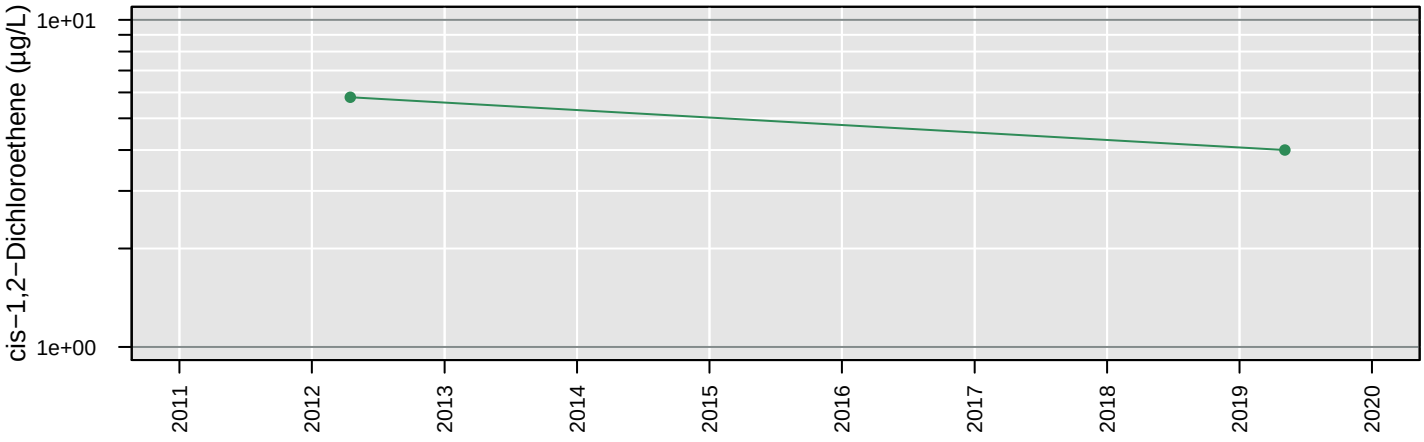
No Analysis Performed

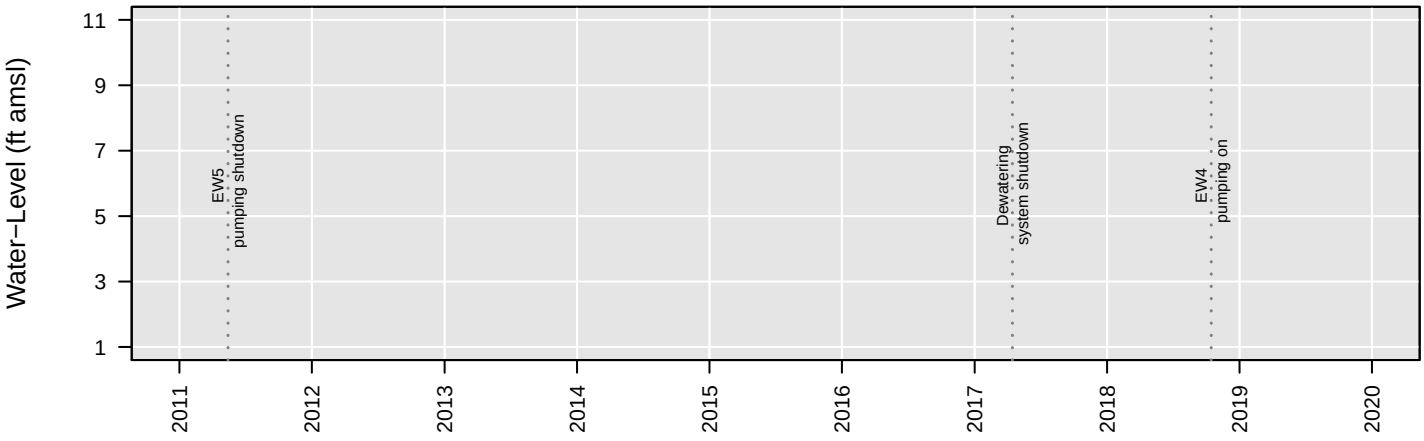
EW4

cis−1,2−Dichloroethene

Number of Comparisons: 2
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





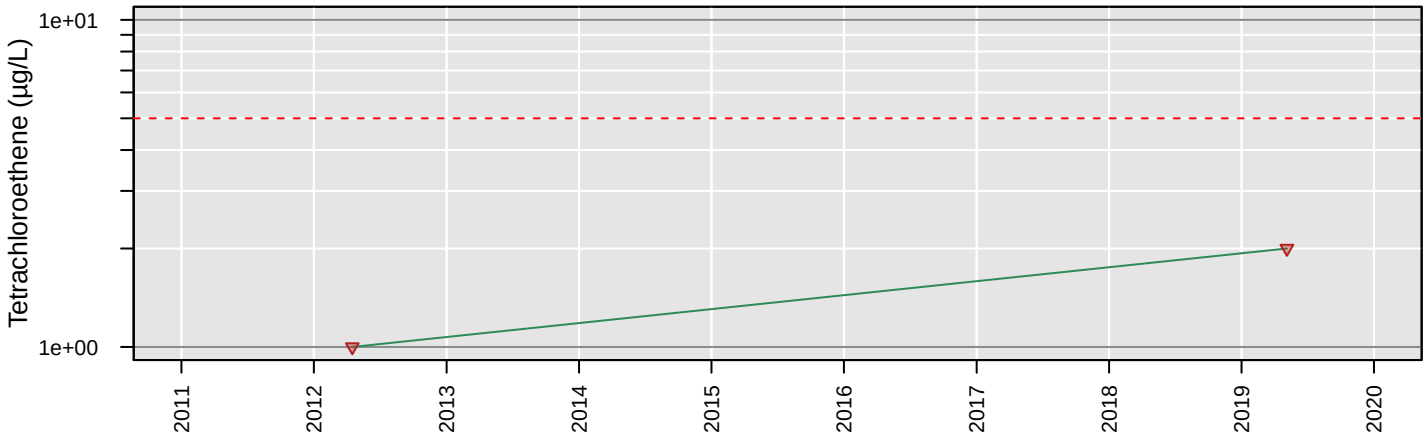
No Analysis Performed

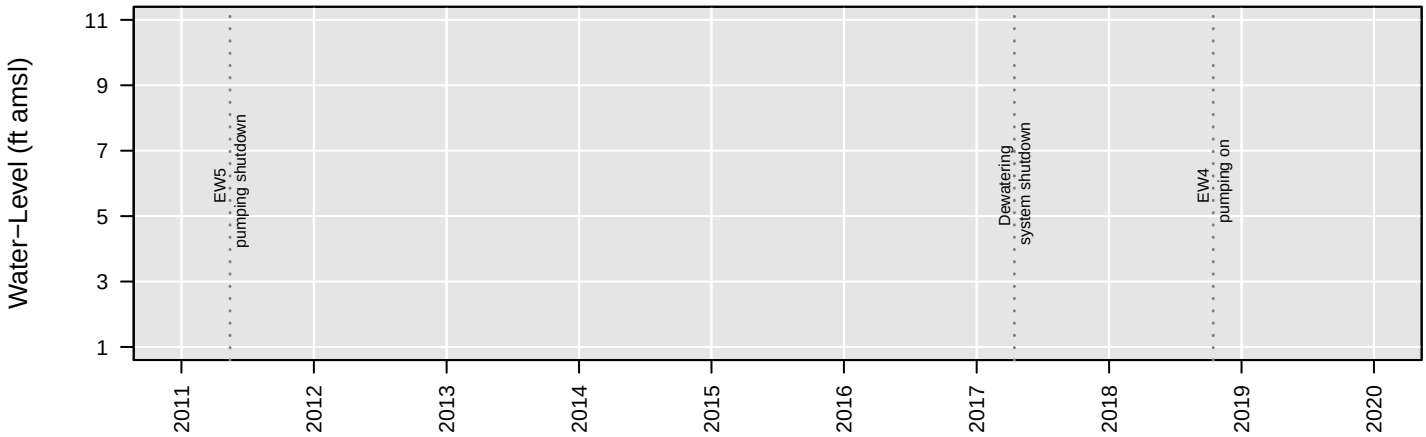
EW4

Tetrachloroethene

Number of Comparisons: 2
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





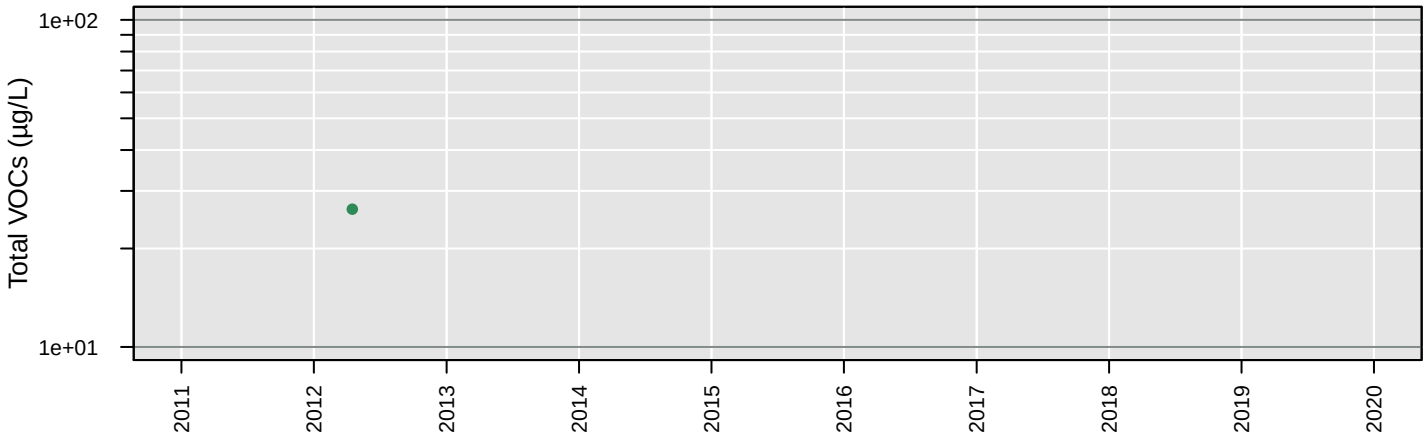
No Analysis Performed

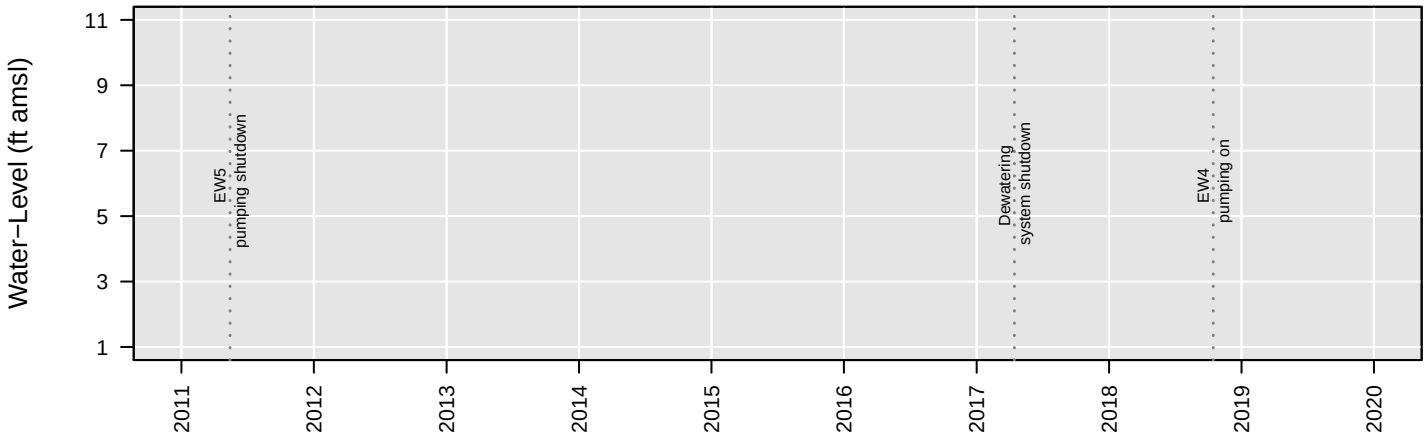
EW4

Total VOCs

Number of Comparisons: 1
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



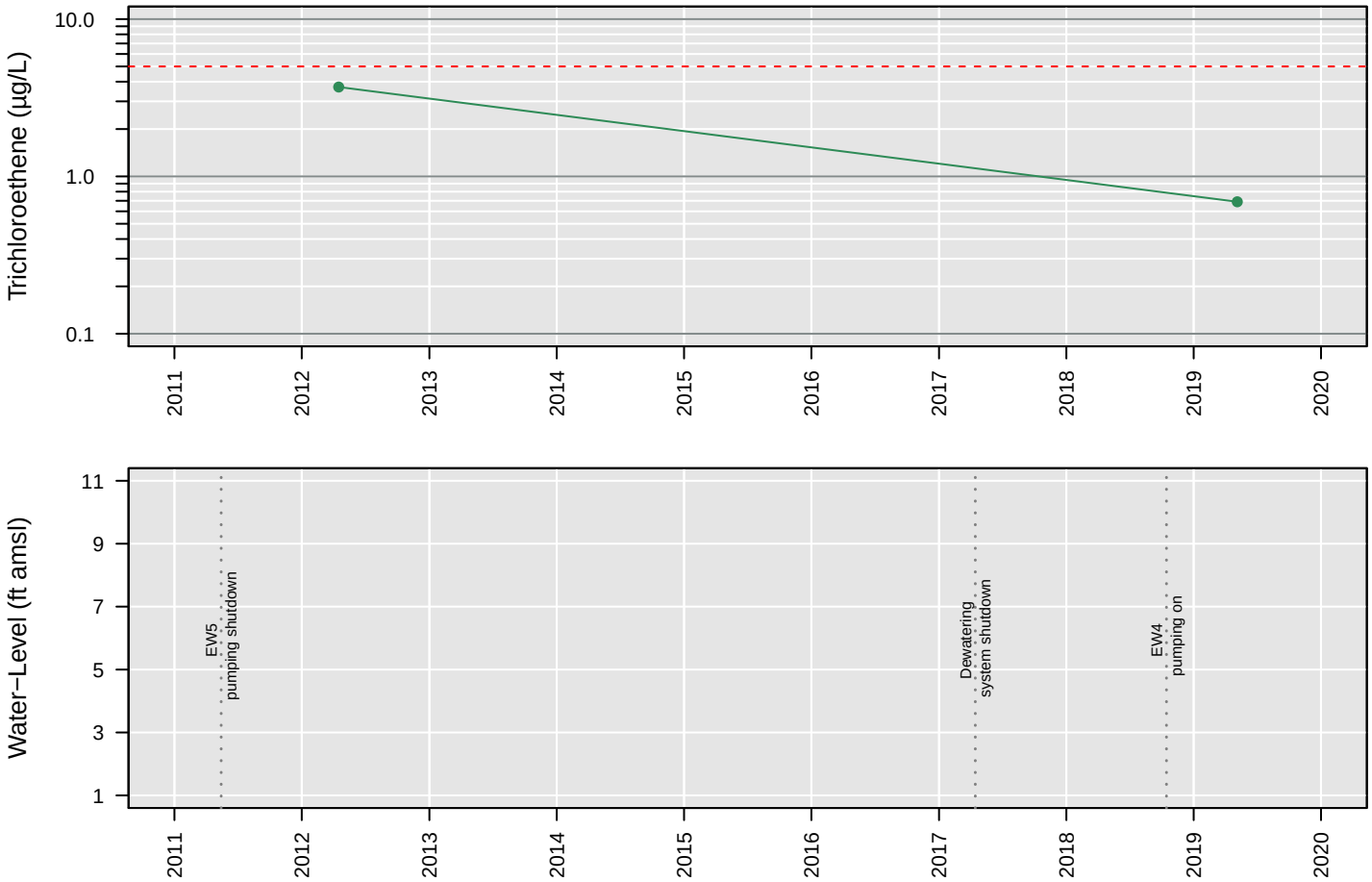


No Analysis Performed

EW4

Trichloroethene

Number of Comparisons: 2
Percent NDs: 0%

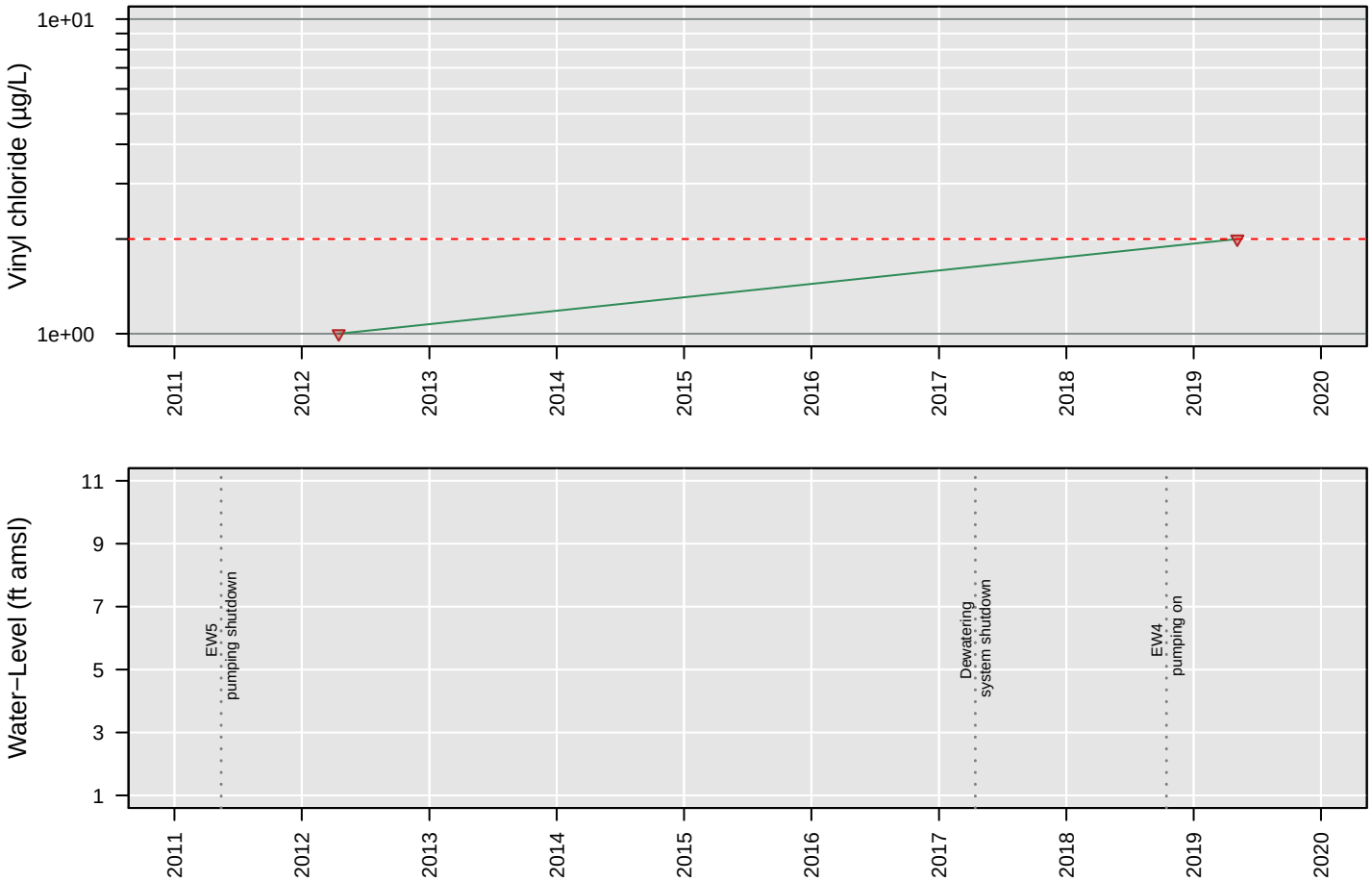


No Analysis Performed

EW4

Vinyl chloride

Number of Comparisons: 2
Percent NDs: 100%



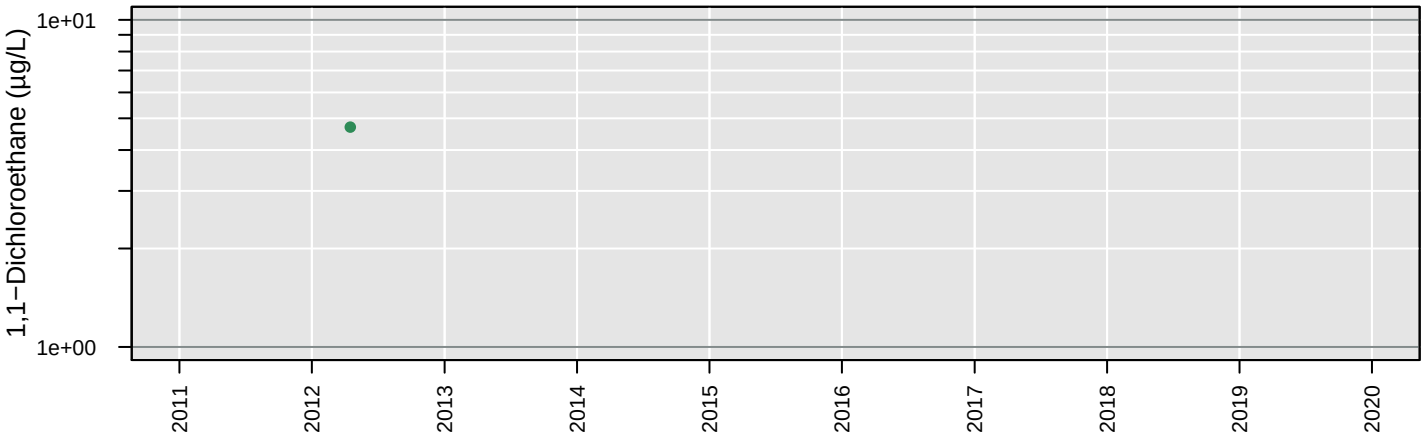
No Analysis Performed

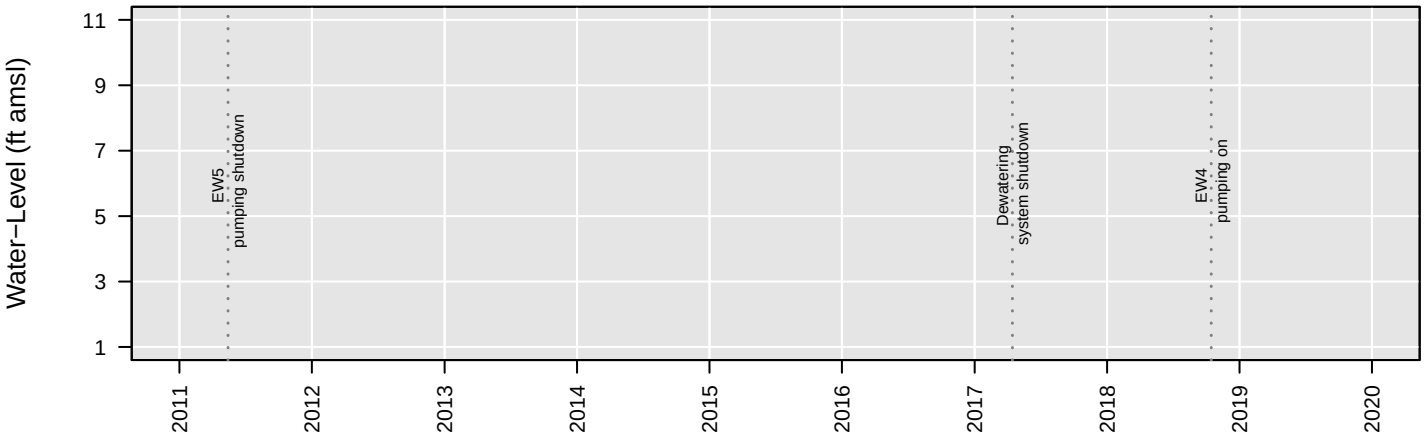
EW5

1,1−Dichloroethane

Number of Comparisons: 1
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





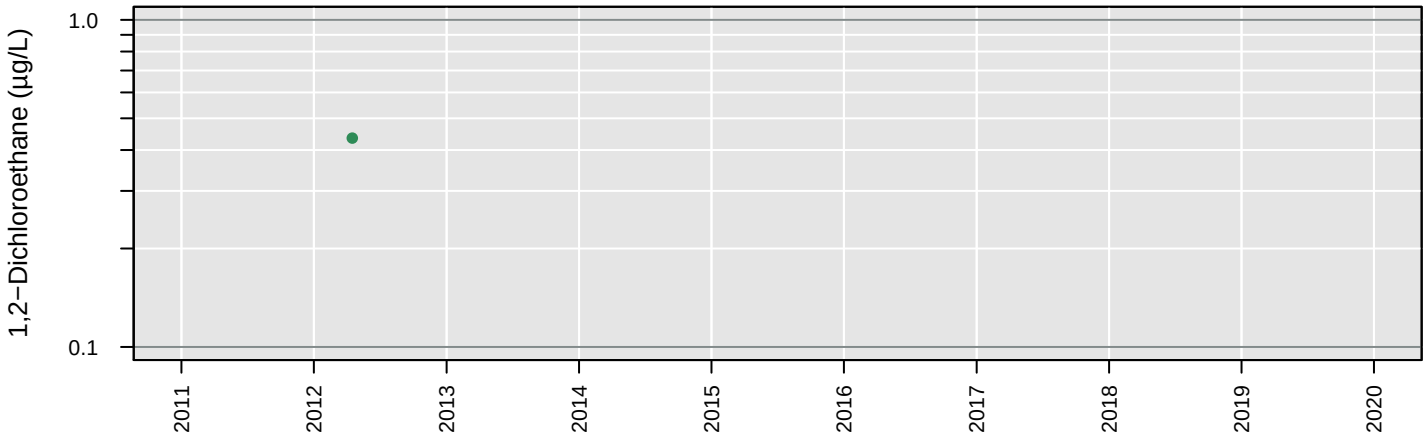
No Analysis Performed

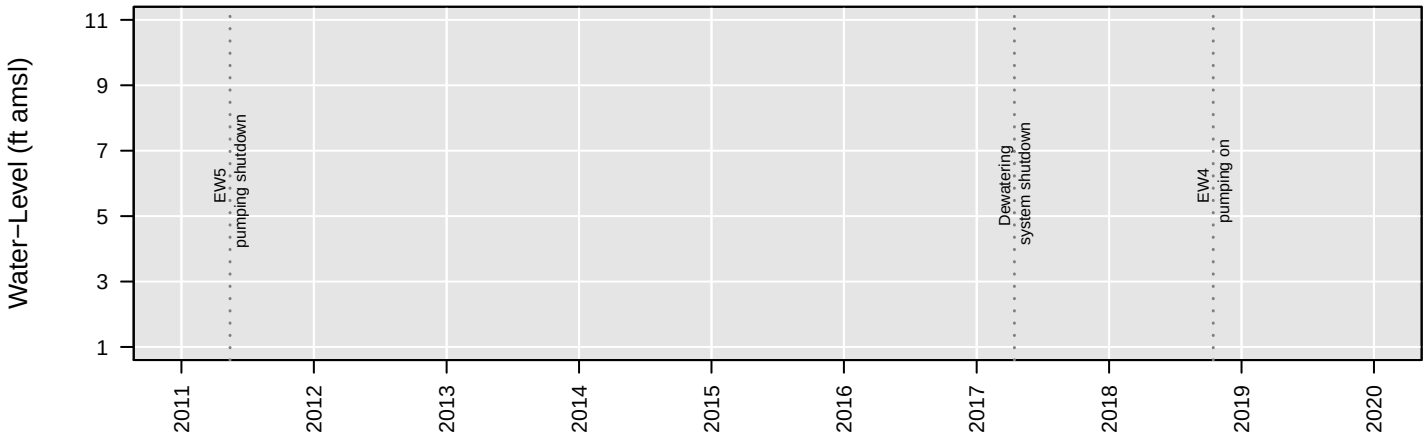
EW5

1,2−Dichloroethane

Number of Comparisons: 1
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





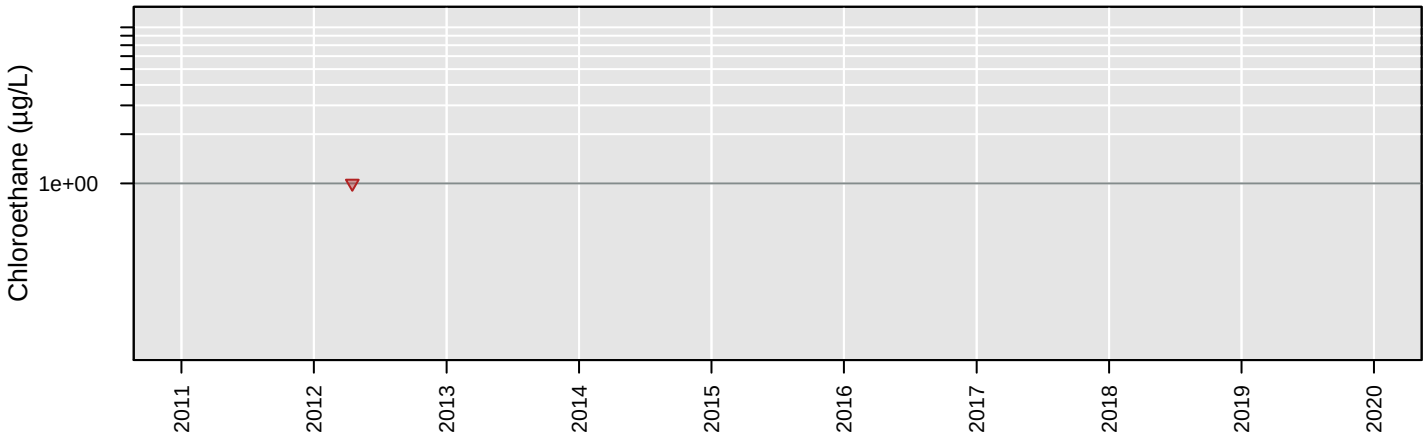
No Analysis Performed

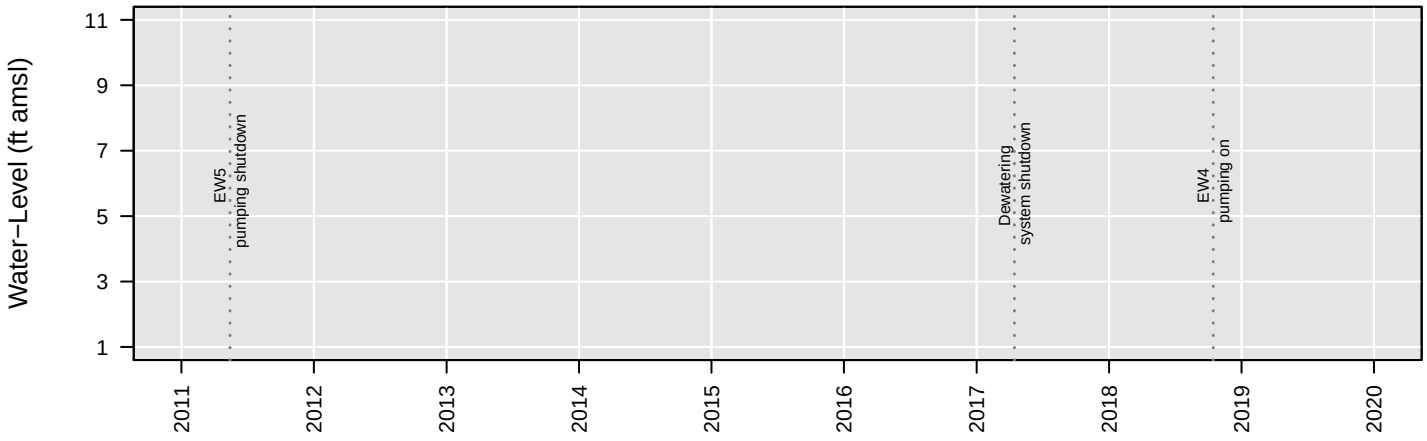
EW5

Chloroethane

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





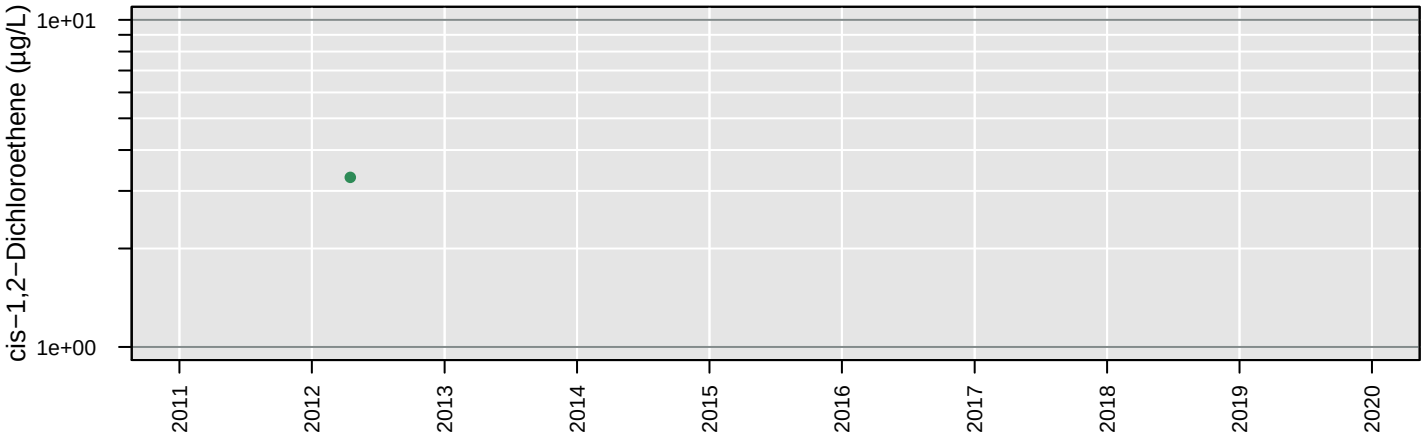
No Analysis Performed

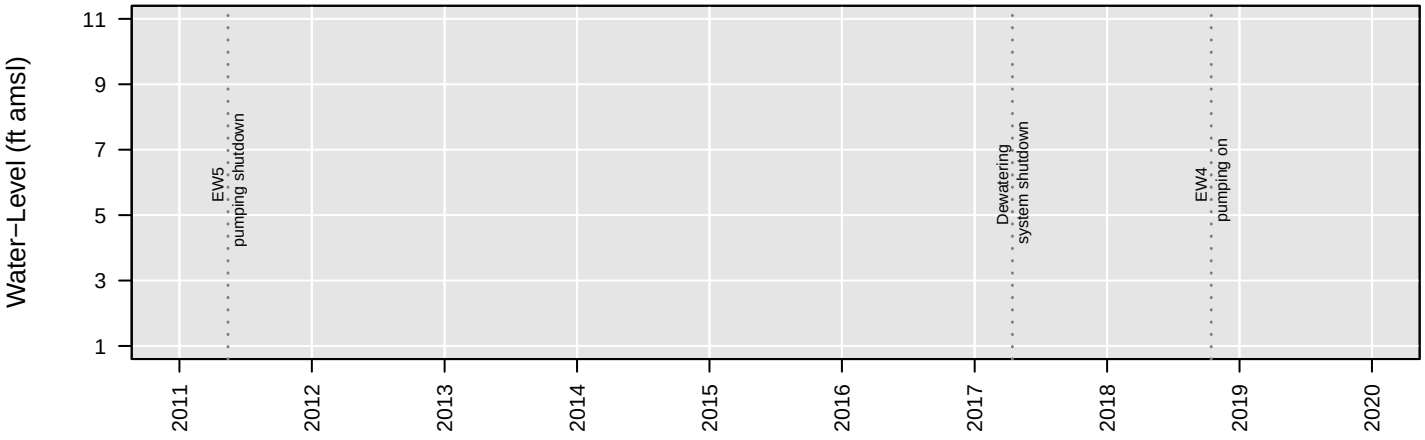
EW5

cis−1,2−Dichloroethene

Number of Comparisons: 1
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





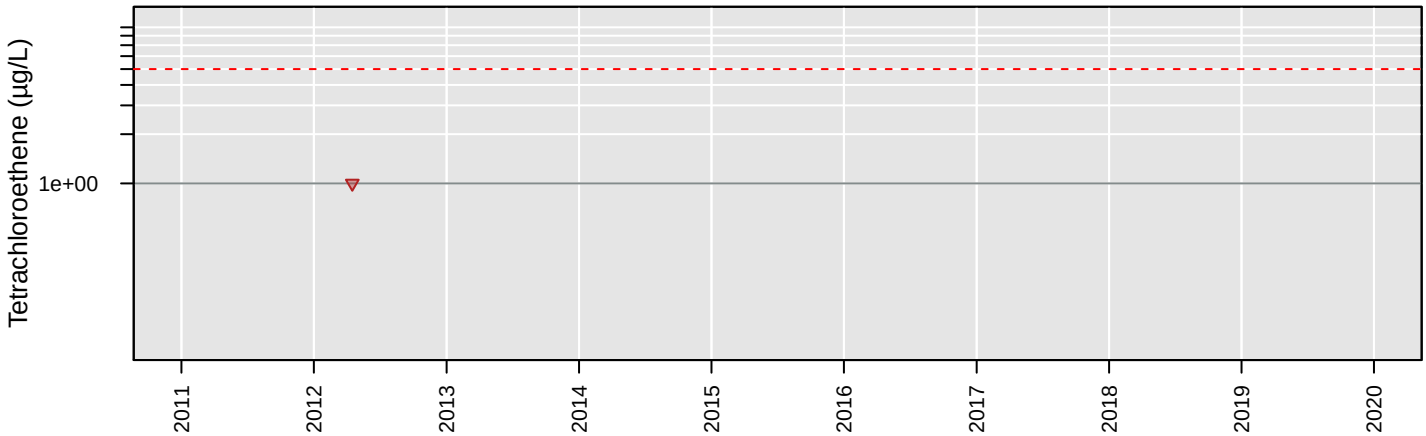
No Analysis Performed

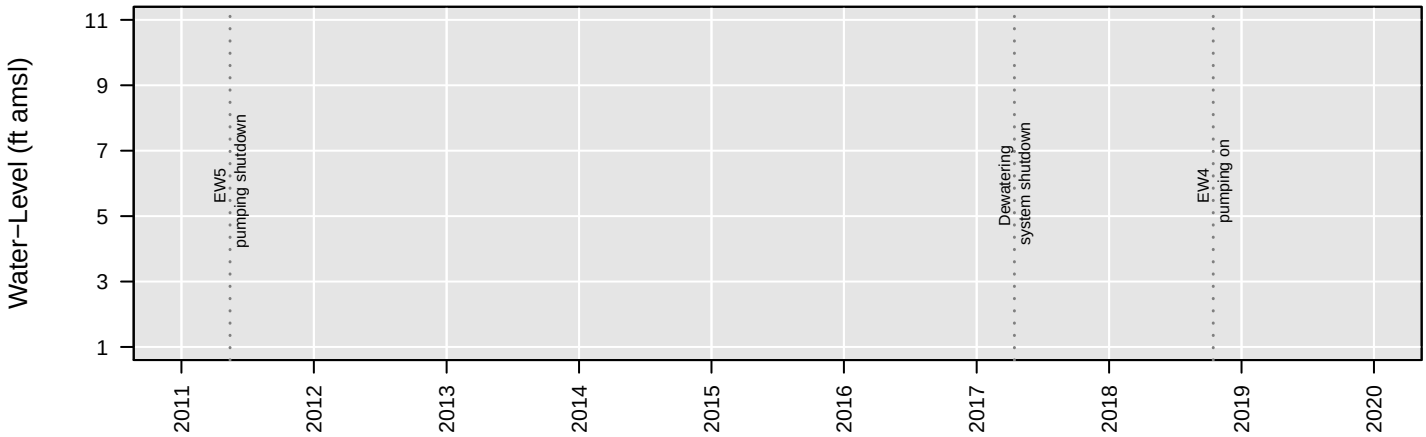
EW5

Tetrachloroethene

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





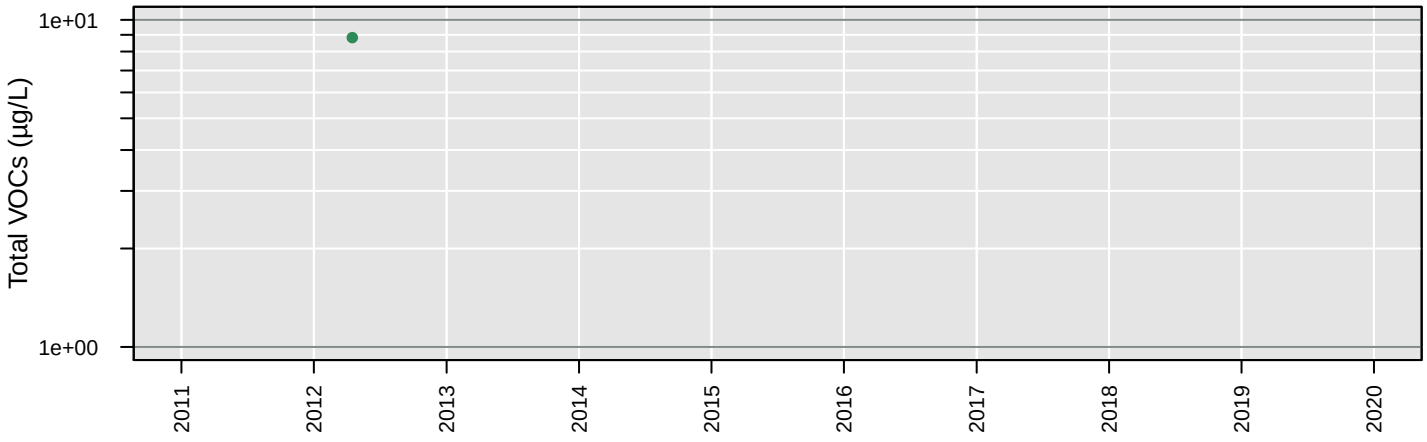
No Analysis Performed

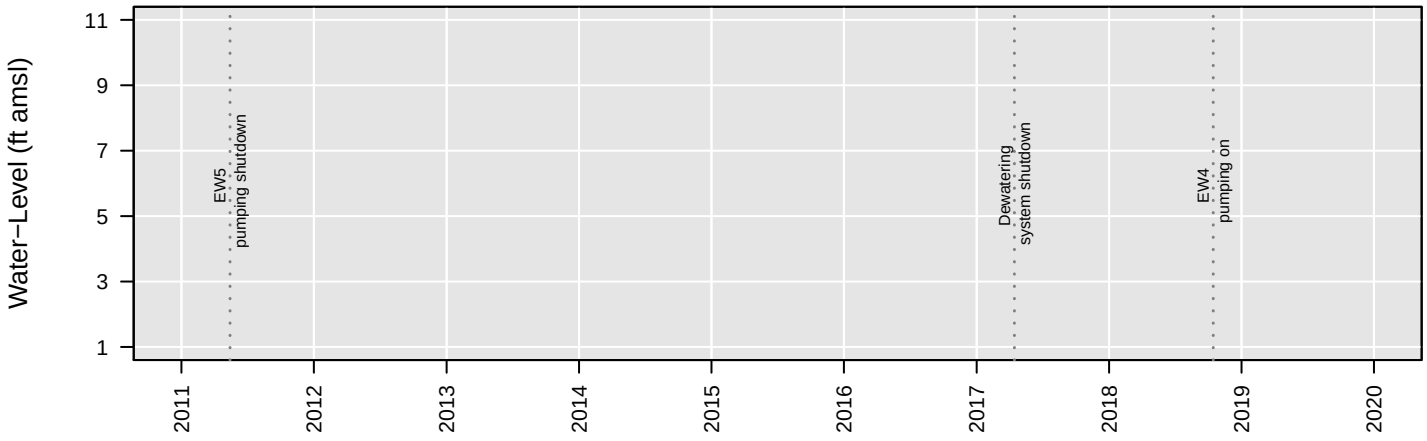
EW5

Total VOCs

Number of Comparisons: 1
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





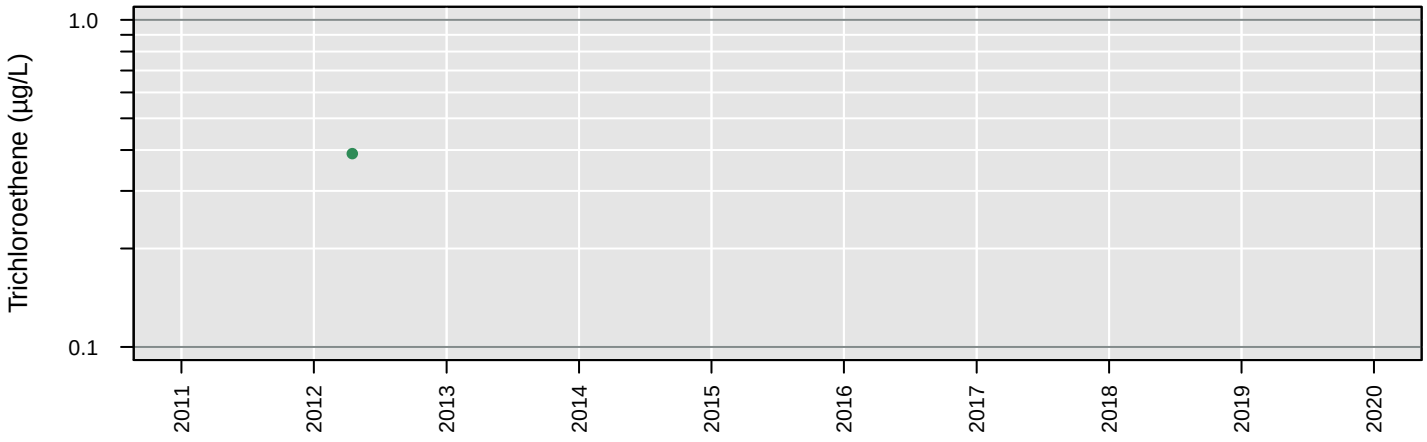
No Analysis Performed

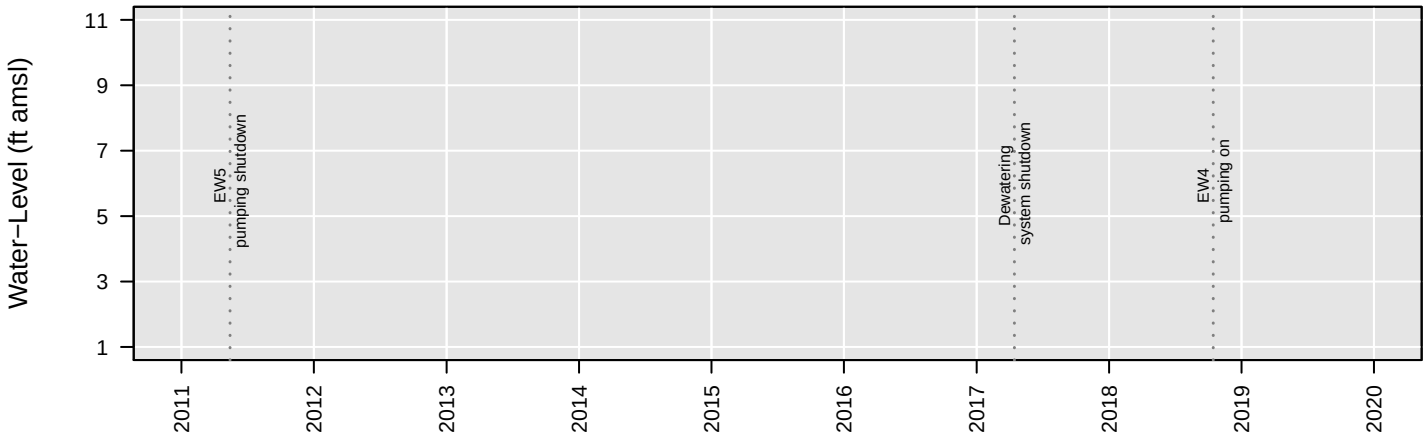
EW5

Trichloroethene

Number of Comparisons: 1
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





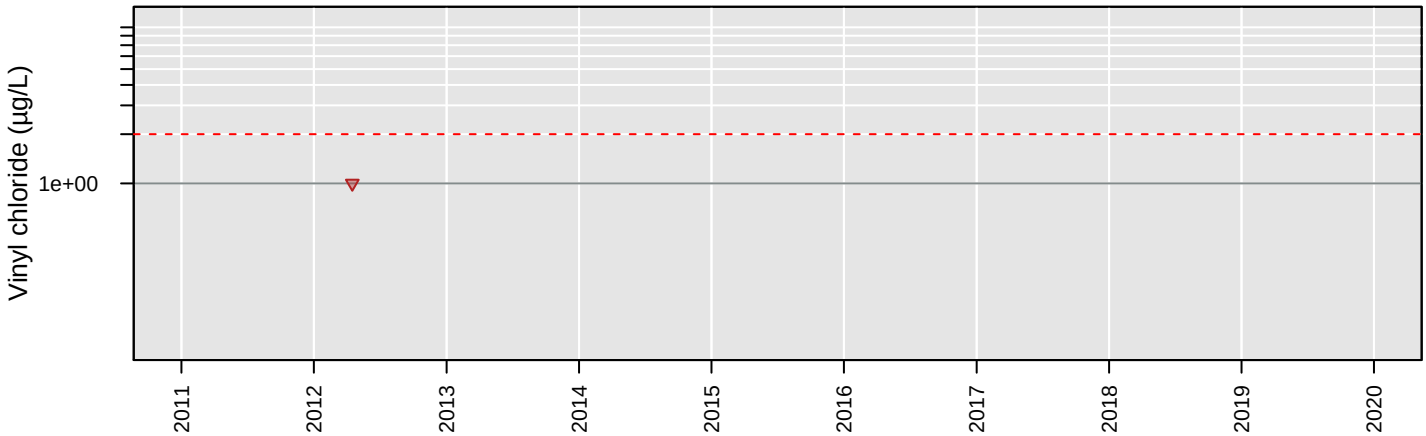
No Analysis Performed

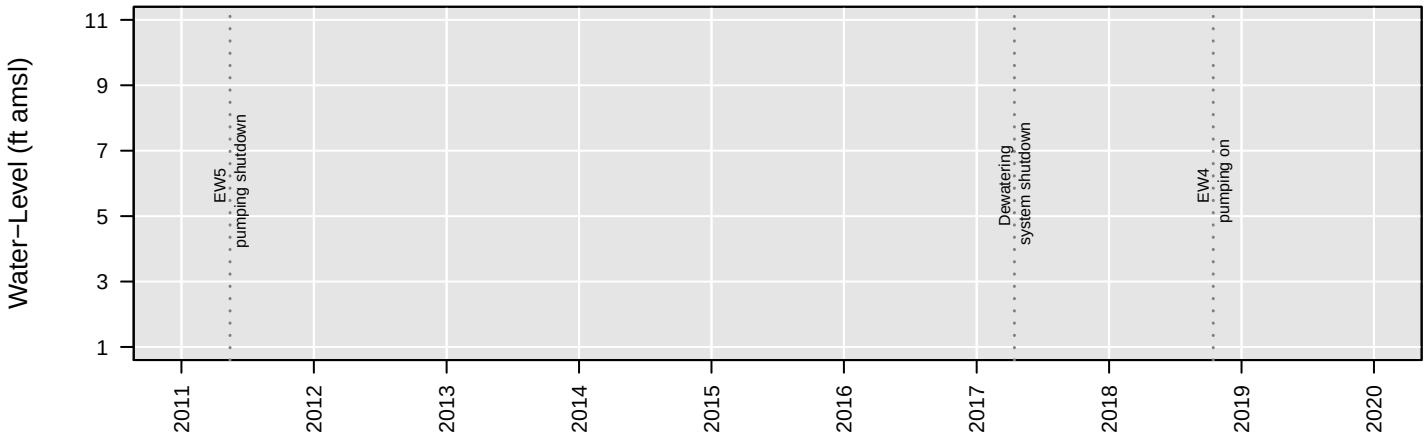
EW5

Vinyl chloride

Number of Comparisons: 1
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



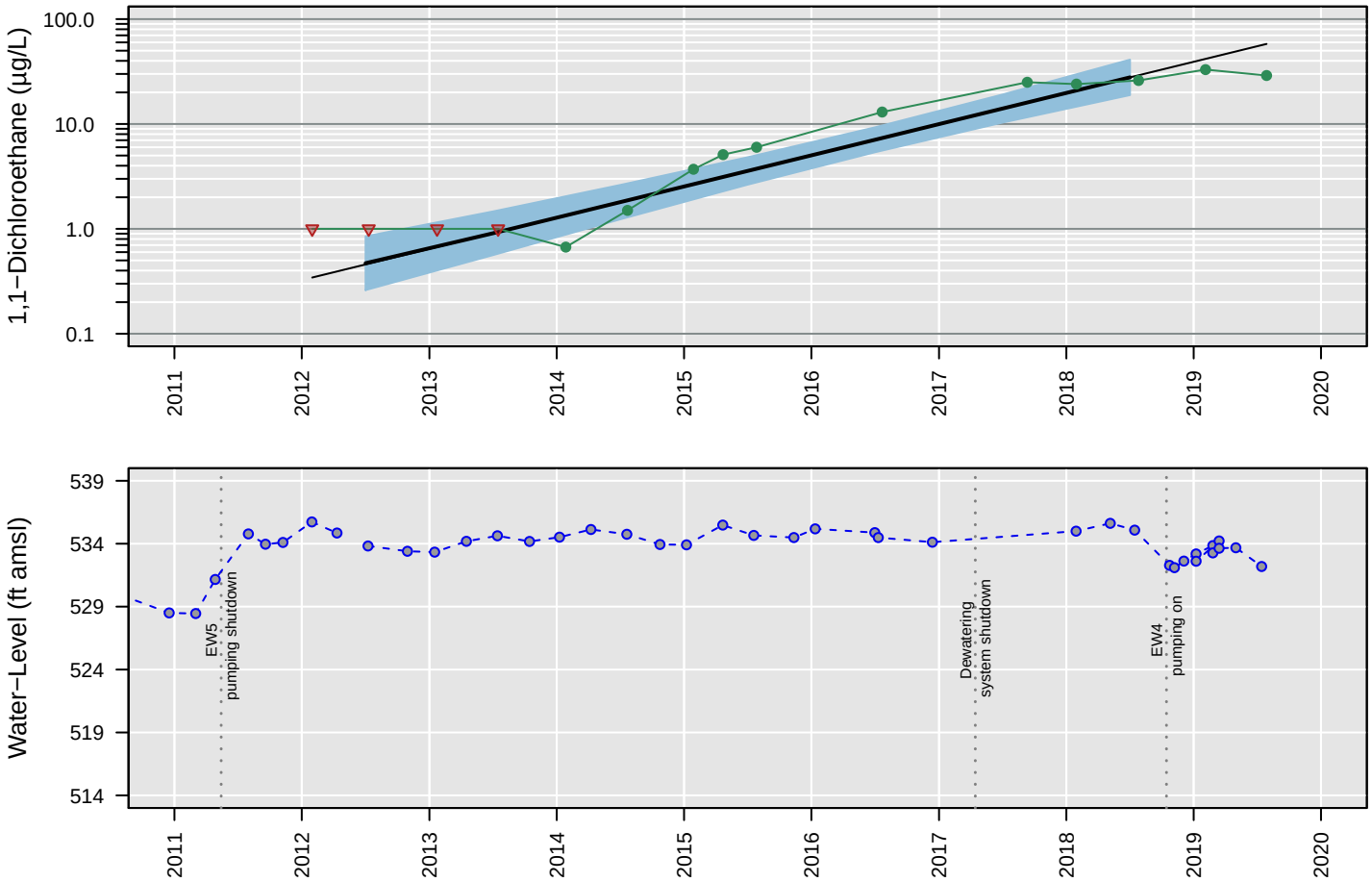


No Analysis Performed

MW100

1,1−Dichloroethane

Number of Comparisons: 15
Percent NDs: 27%



Censored Regression (Tobit) Model

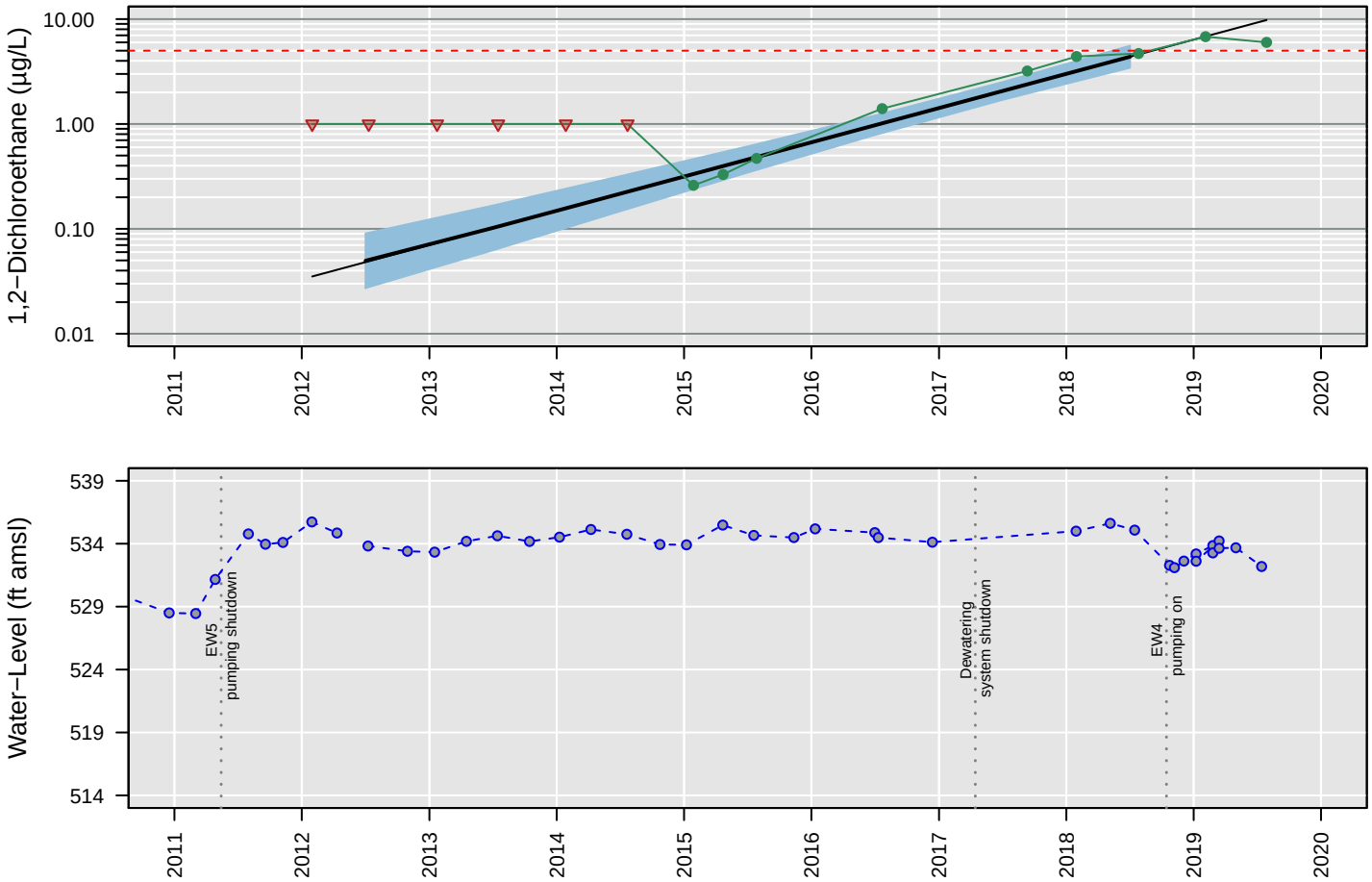
ln Conc. = 0.0019 (+/− 0.00017)*Date + −30 (+/− 2.9)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 28 µg/L
UCL: 41 µg/L
LCL: 19 µg/L

MW100

1,2−Dichloroethane

Number of Comparisons: 15
Percent NDs: 40%



Censored Regression (Tobit) Model

ln Conc. = 0.0021 (+/− 0.00015)*Date + −35 (+/− 2.6)

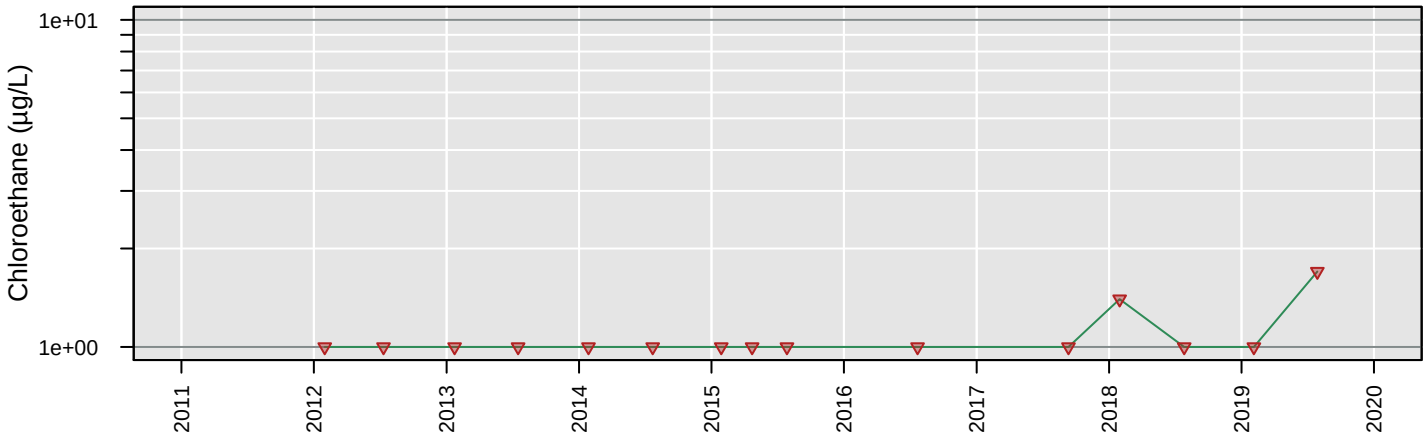
Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.4 µg/L
UCL: 5.6 µg/L
LCL: 3.4 µg/L

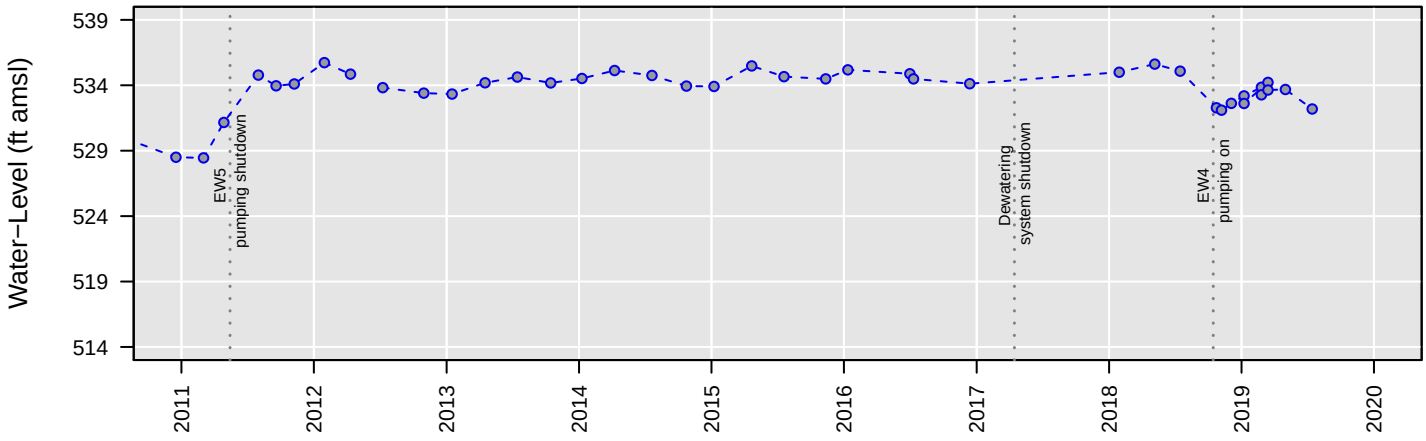
MW100

Chloroethane

Number of Comparisons: 15
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





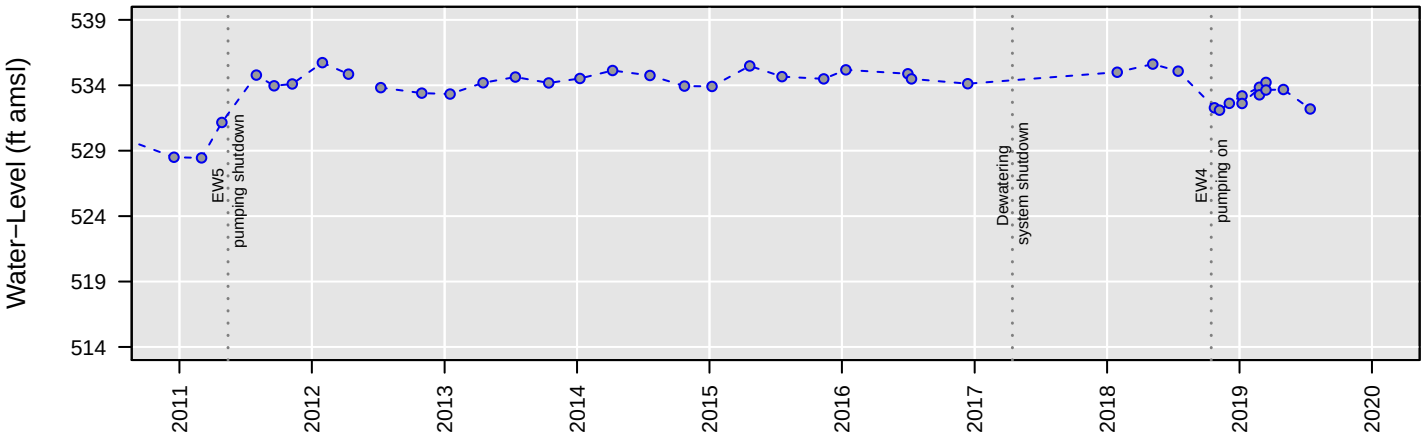
No Analysis Performed

MW100

cis−1,2−Dichloroethene

Number of Comparisons: 15
Percent NDs: 20%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

ln Conc. = 0.0019 (+/− 0.00018)*Date + −31 (+/− 3)

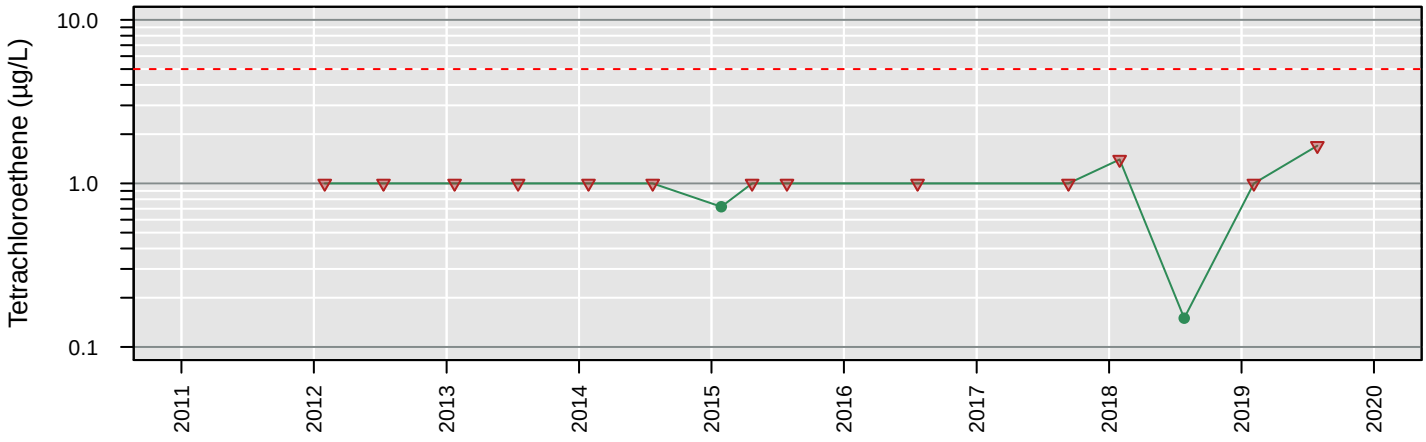
Regression Statistics for January 2018 to January 2019
Geometric Mean: 17 µg/L
UCL: 27 µg/L
LCL: 12 µg/L

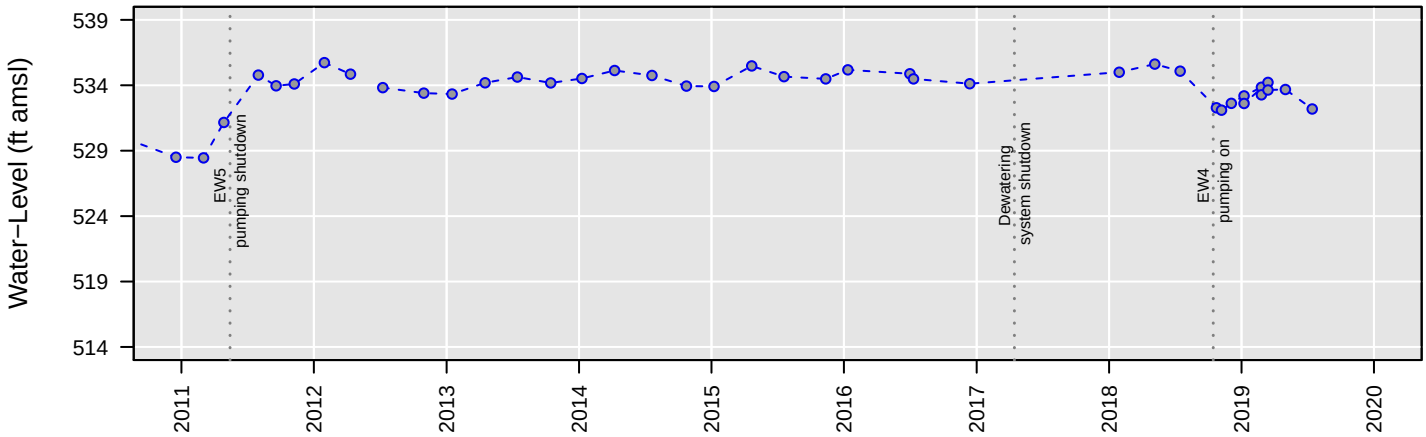
MW100

Tetrachloroethene

Number of Comparisons: 15
Percent NDs: 87%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



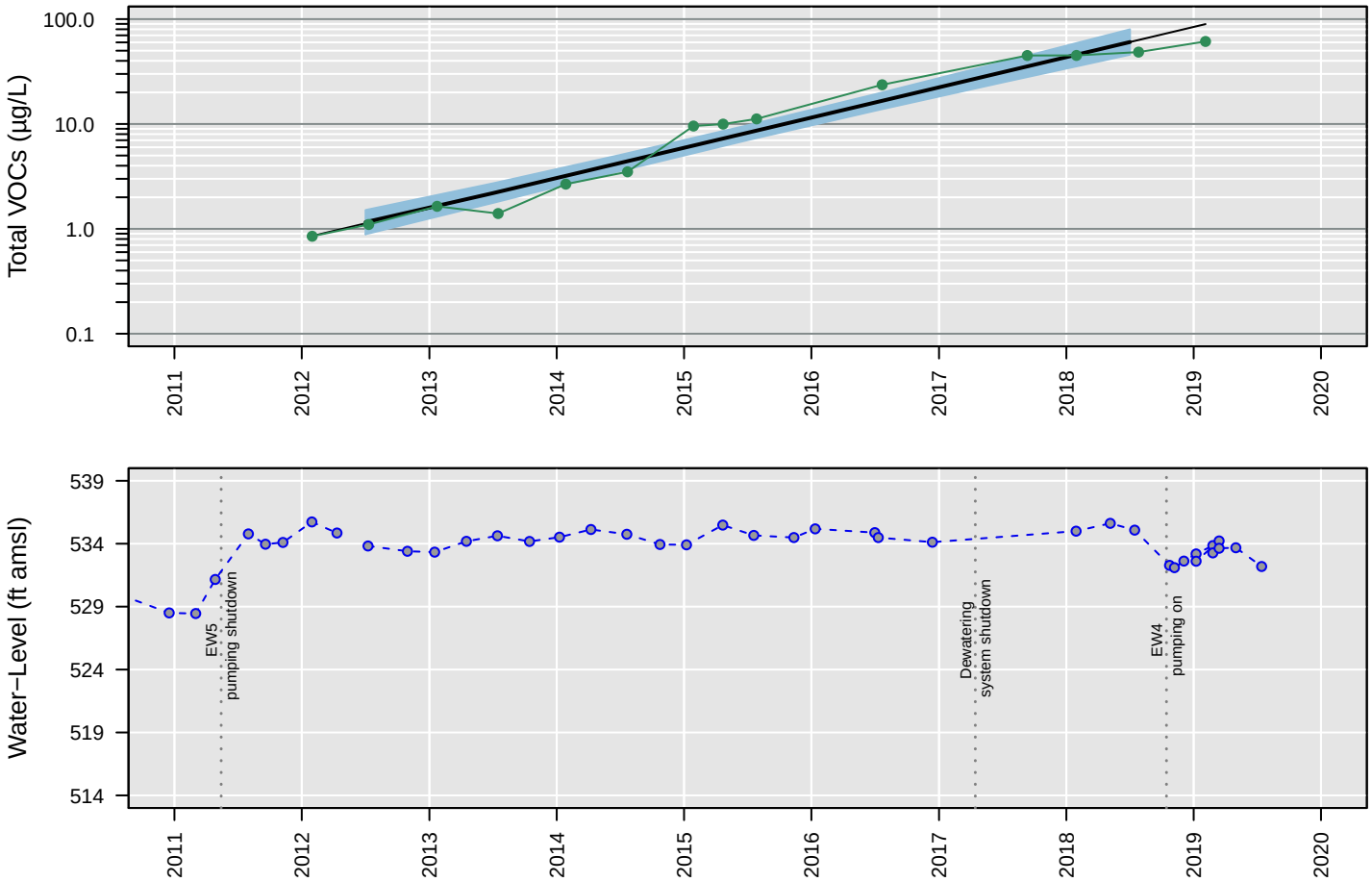


No Analysis Performed

MW100

Total VOCs

Number of Comparisons: 14
Percent NDs: 0%



Censored Regression (Tobit) Model

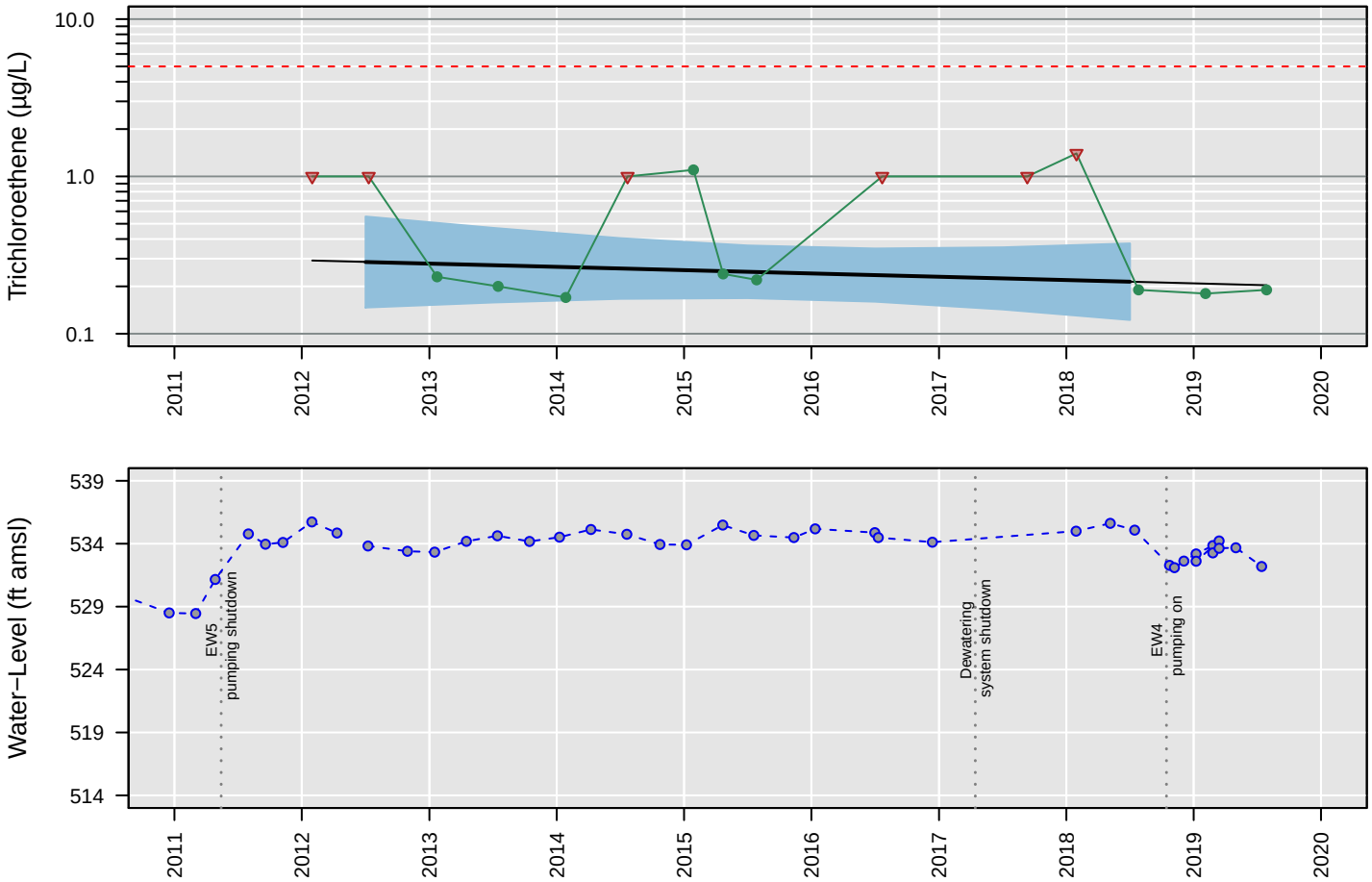
ln Conc. = 0.0018 (+/− 0.000091)*Date + −28 (+/− 1.5)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 60 µg/L
UCL: 80 µg/L
LCL: 46 µg/L

MW100

Trichloroethene

Number of Comparisons: 15
Percent NDs: 40%



Censored Regression (Tobit) Model

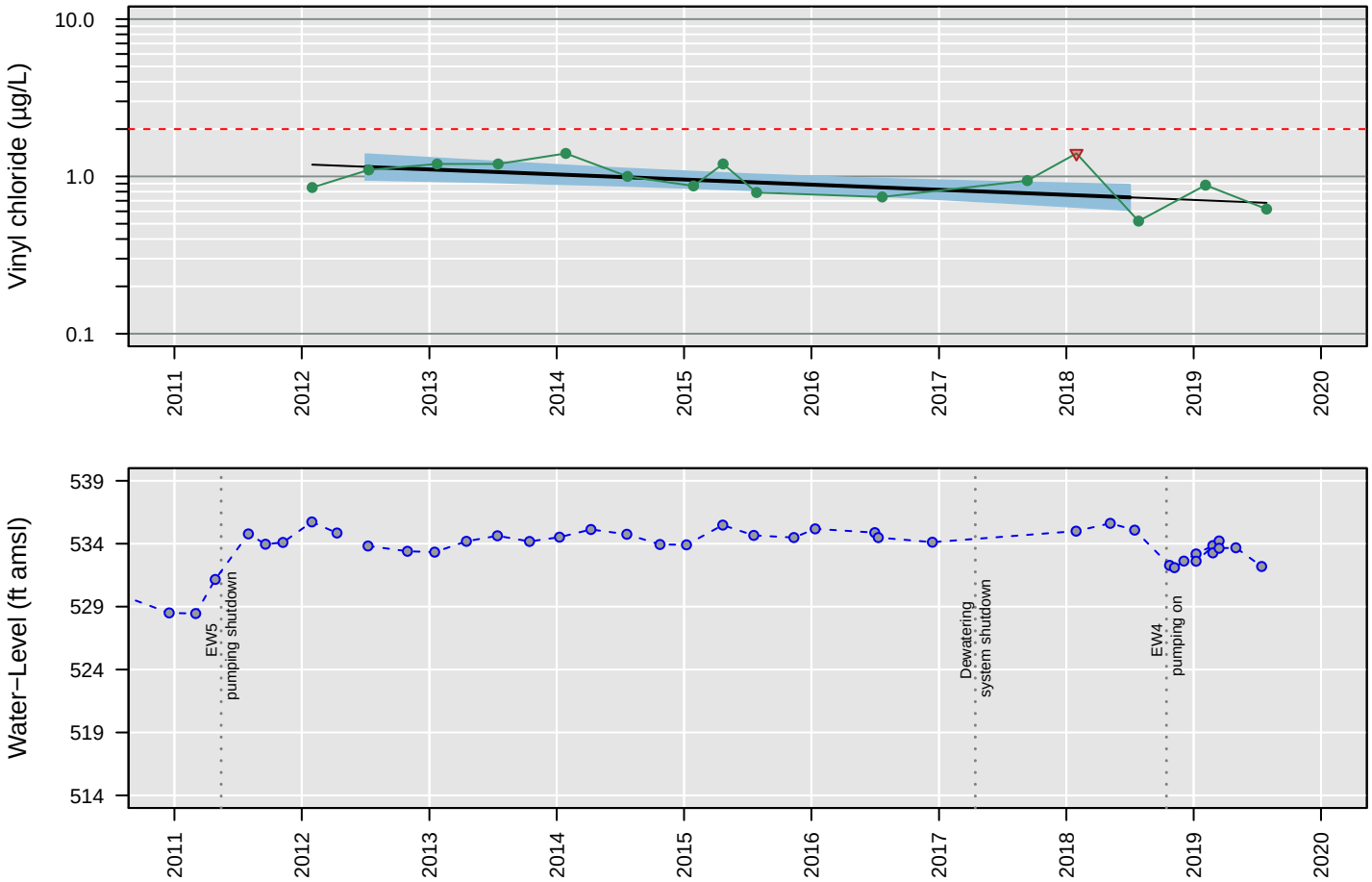
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.21 µg/L
UCL: 0.37 µg/L
LCL: 0.12 µg/L

MW100

Vinyl chloride

Number of Comparisons: 15
Percent NDs: 7%



Censored Regression (Tobit) Model

ln Conc. = −0.0002 (+/− 0.000062)*Date + 3.3 (+/− 1)

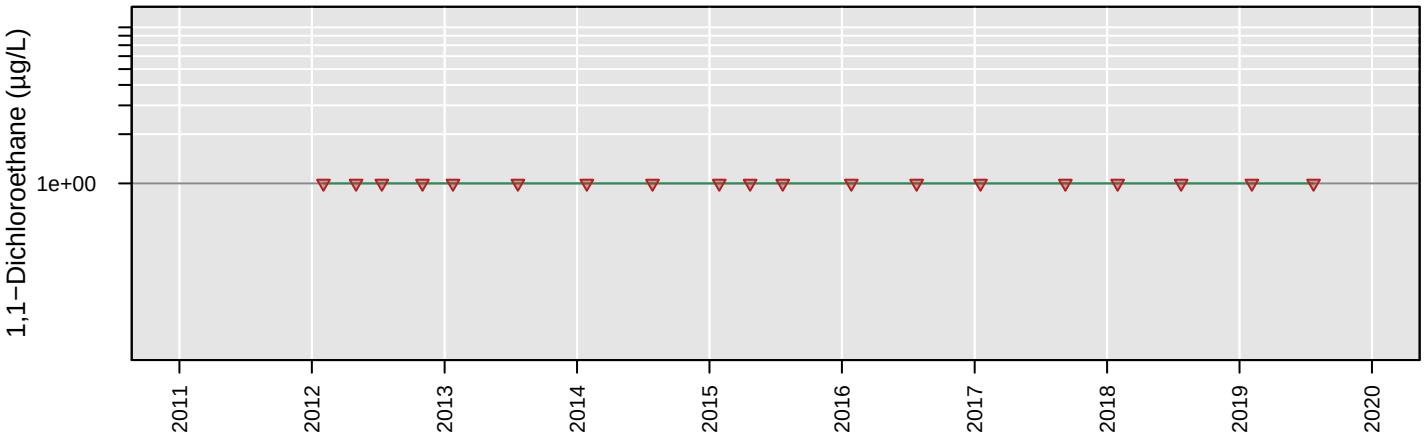
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.74 µg/L
UCL: 0.89 µg/L
LCL: 0.61 µg/L

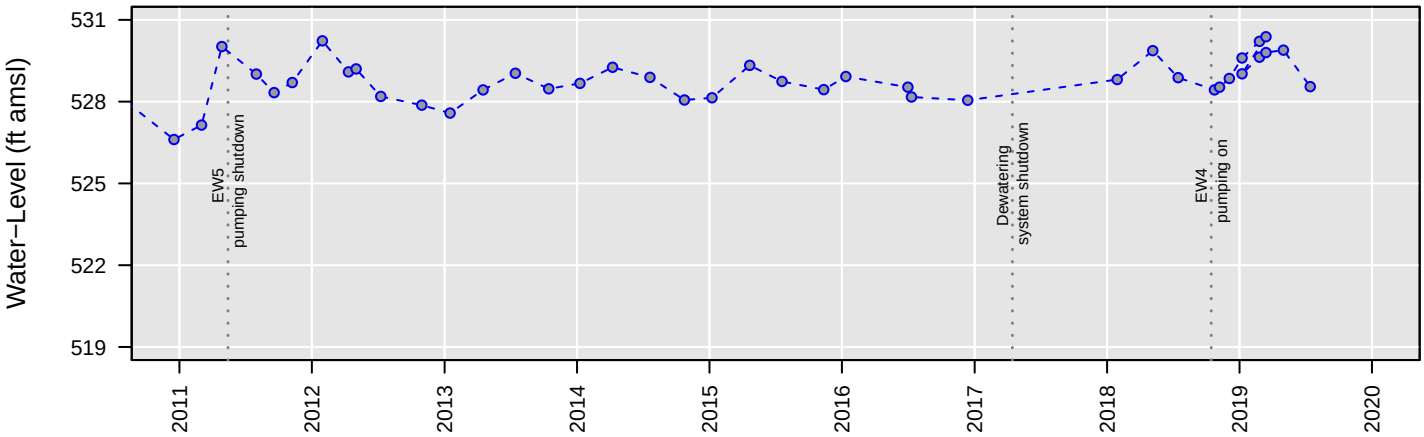
MW101

1,1−Dichloroethane

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



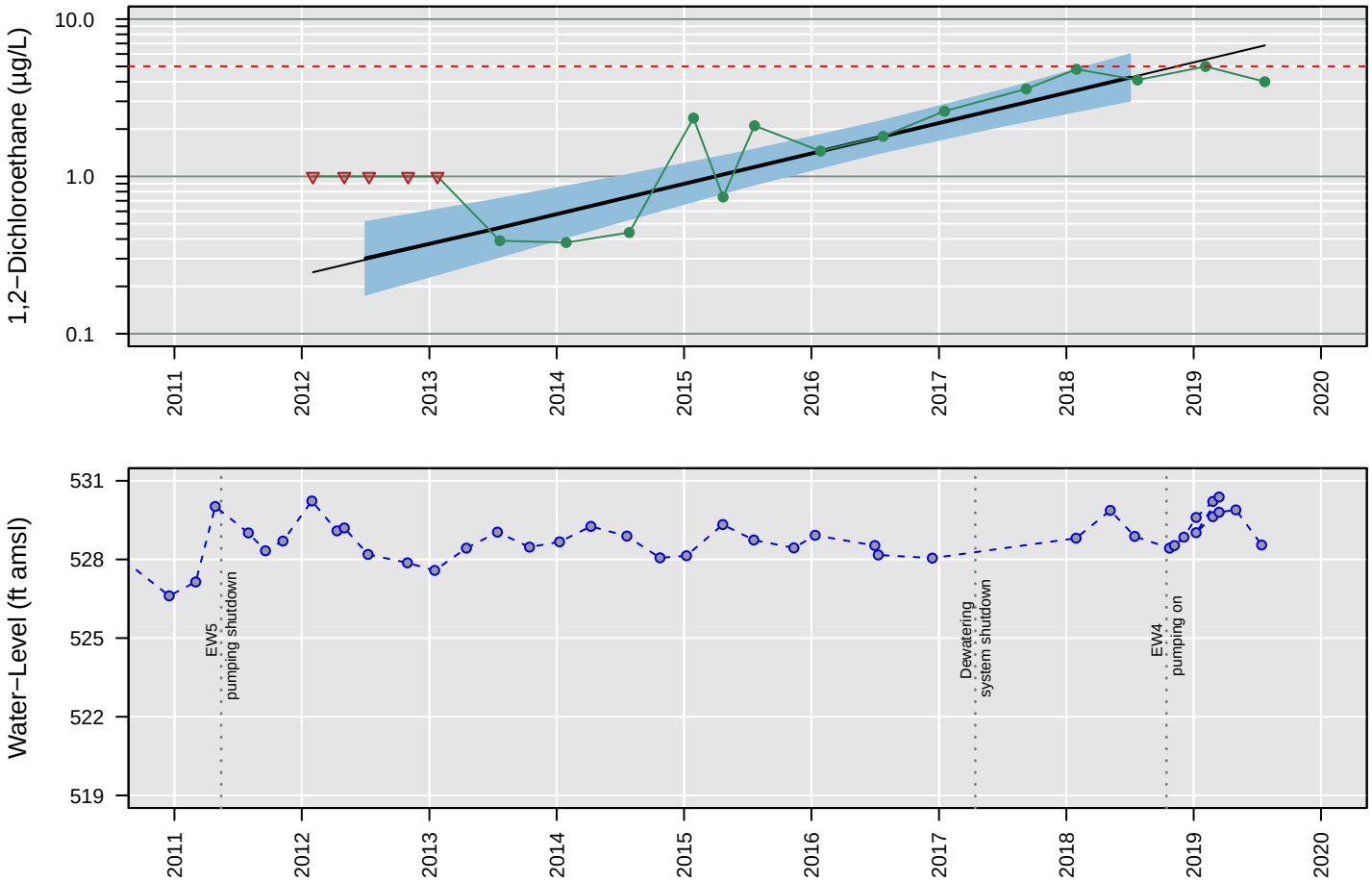


No Analysis Performed

MW101

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 26%



Censored Regression (Tobit) Model

ln Conc. = 0.0012 (+/− 0.00016)*Date + −20 (+/− 2.7)

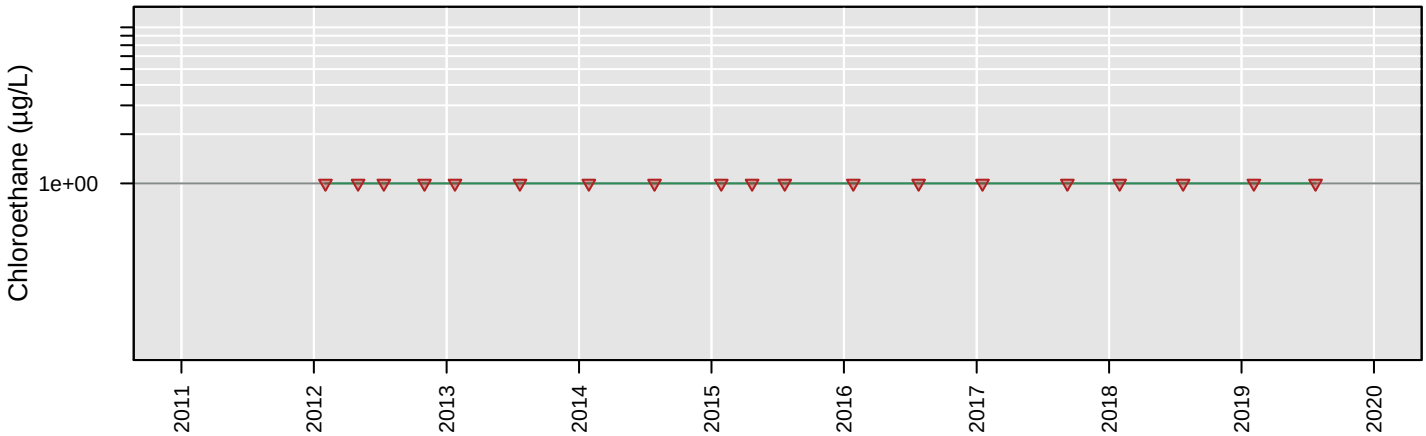
Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.3 µg/L
UCL: 6 µg/L
LCL: 3 µg/L

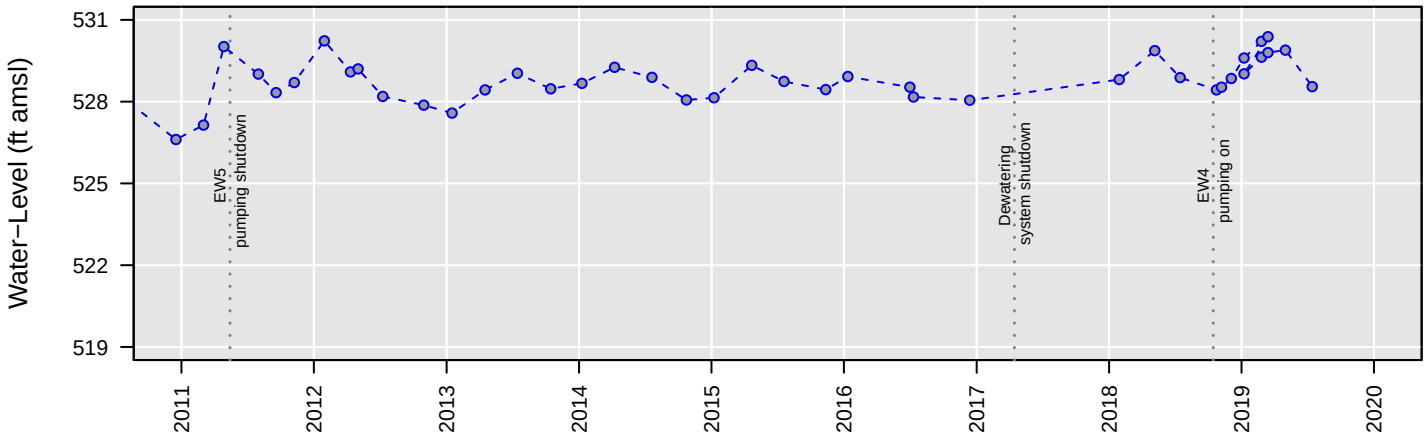
MW101

Chloroethane

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





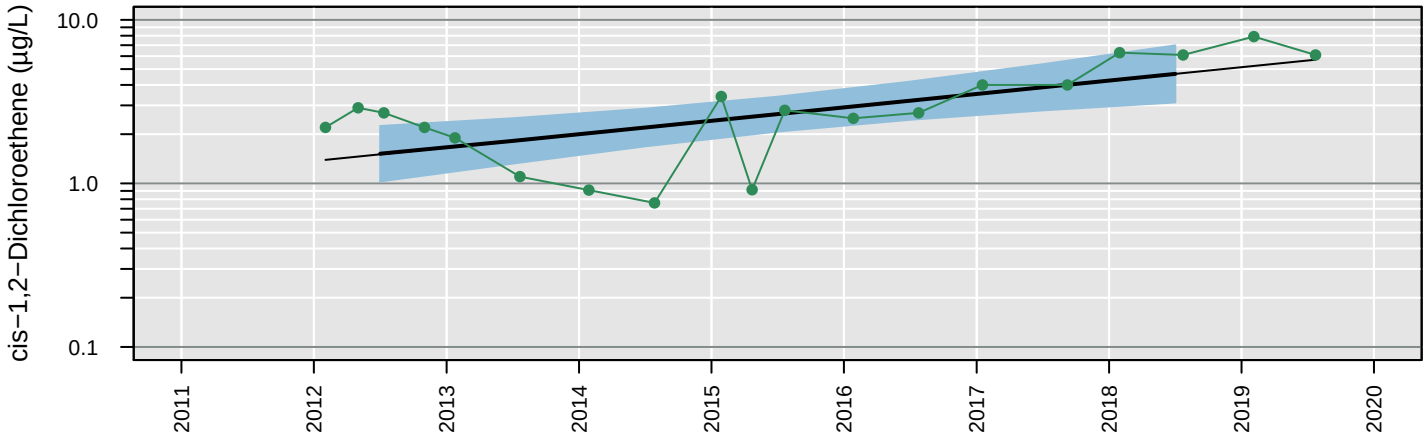
No Analysis Performed

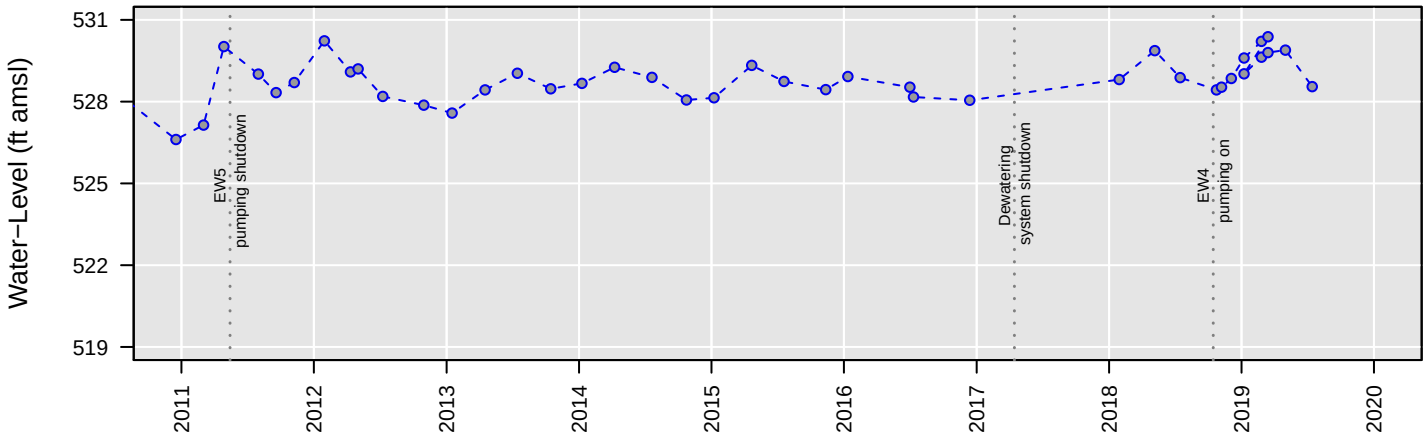
MW101

cis−1,2−Dichloroethene

Number of Comparisons: 19
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

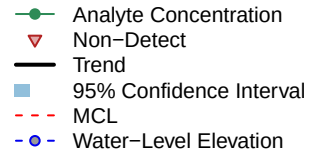
ln Conc. = 0.00052 (+/− 0.00013)*Date + −7.6 (+/− 2.2)

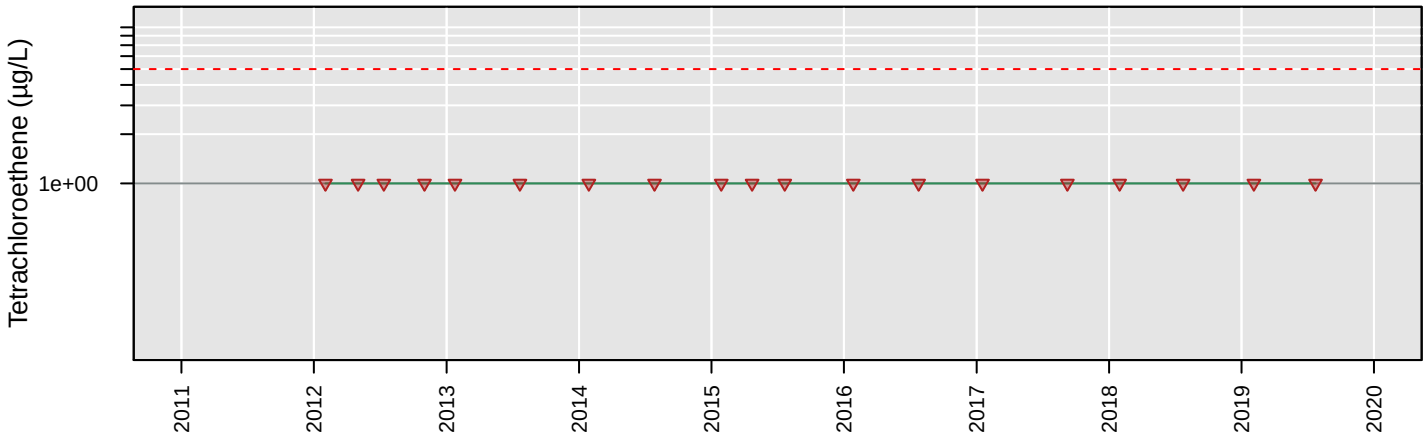
Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.7 µg/L
UCL: 7 µg/L
LCL: 3.1 µg/L

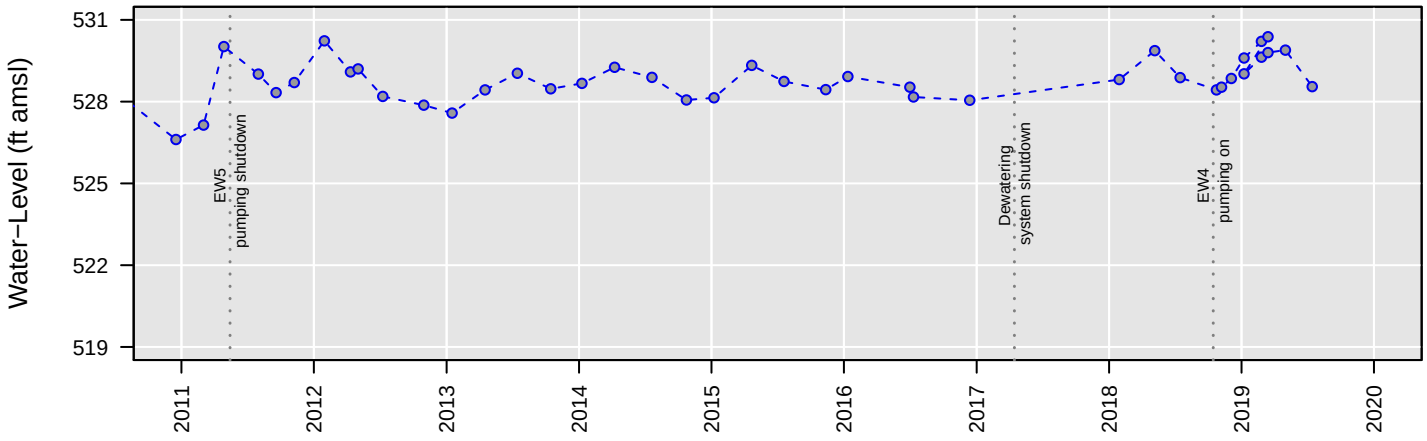
MW101

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 100%





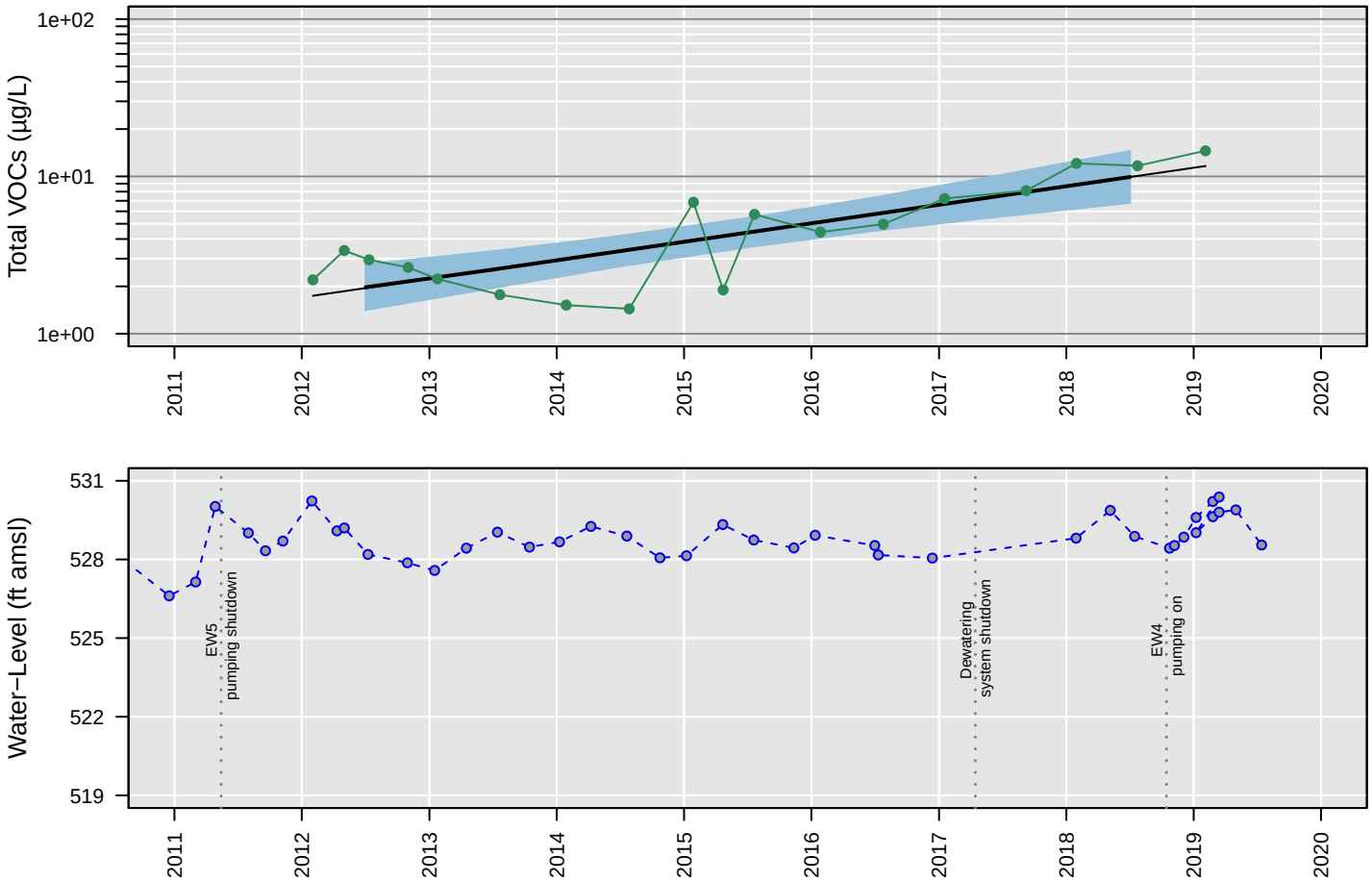


No Analysis Performed

MW101

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%



Censored Regression (Tobit) Model

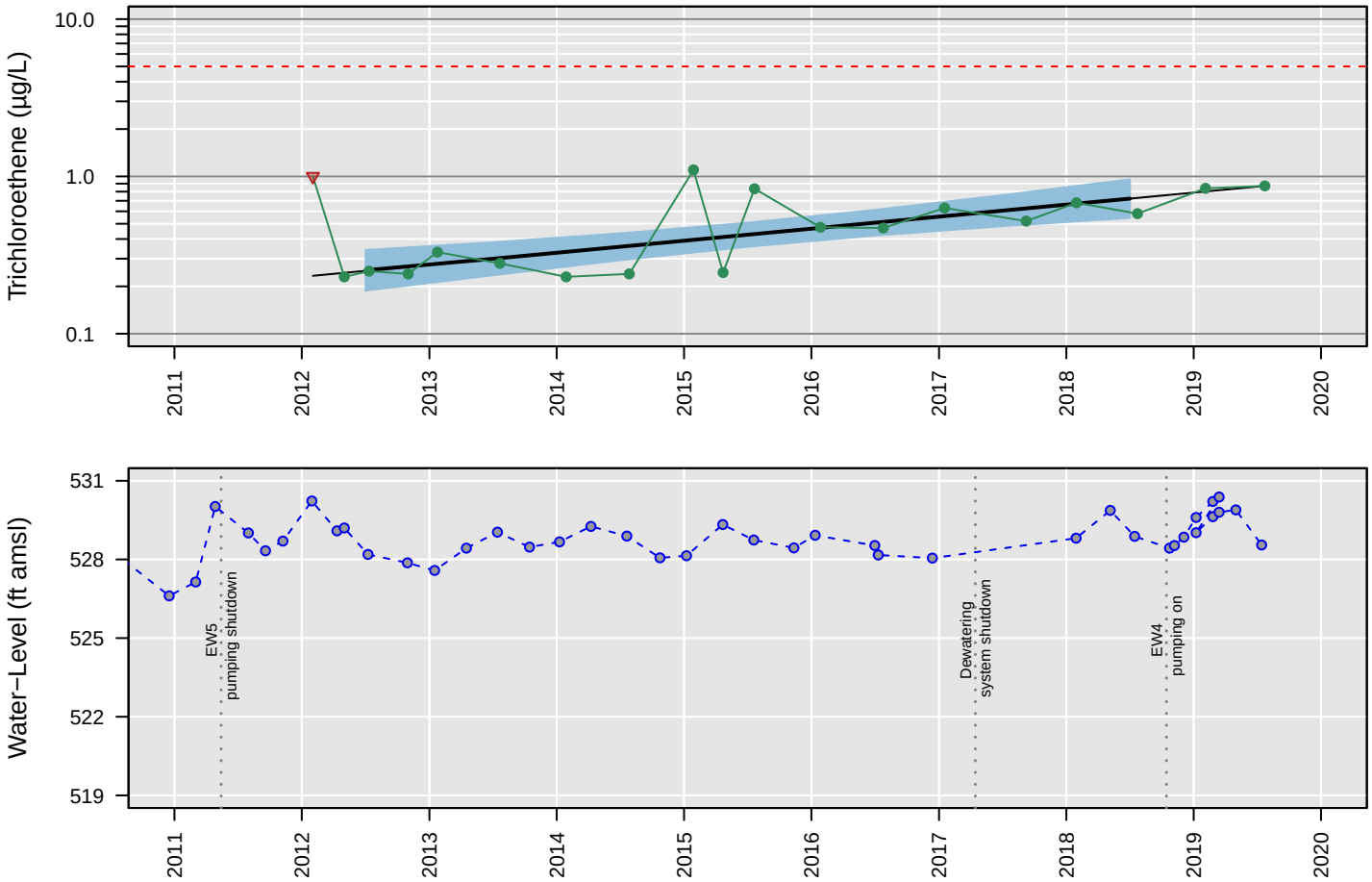
ln Conc. = 0.00074 (+/− 0.00012)*Date + −11 (+/− 2)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 9.9 µg/L
UCL: 14 µg/L
LCL: 6.8 µg/L

MW101

Trichloroethene

Number of Comparisons: 19
Percent NDs: 5%



Censored Regression (Tobit) Model

ln Conc. = 0.00048 (+/− 0.0001)*Date + −8.9 (+/− 1.7)

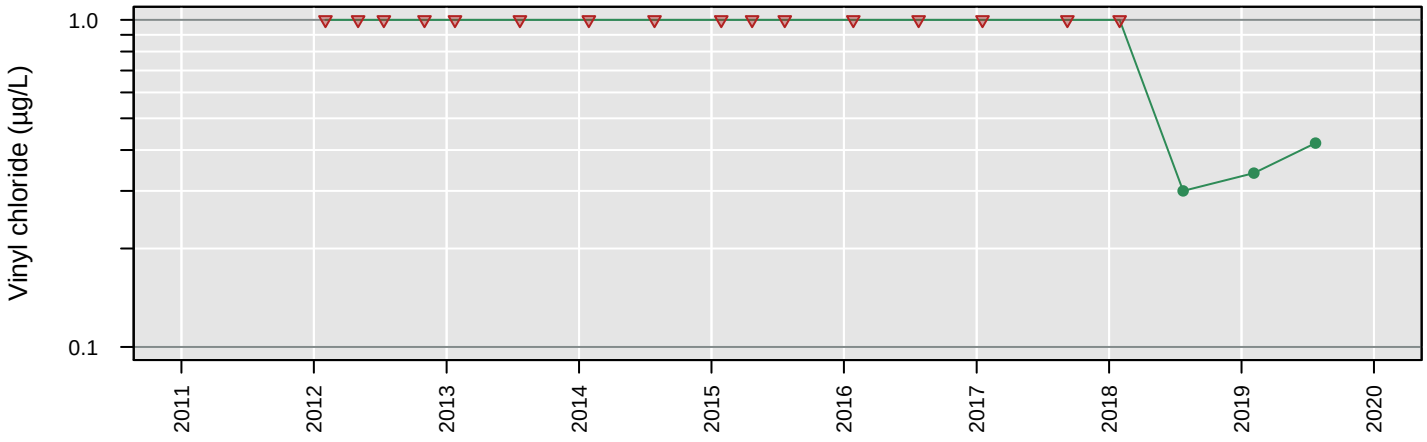
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.72 µg/L
UCL: 0.96 µg/L
LCL: 0.54 µg/L

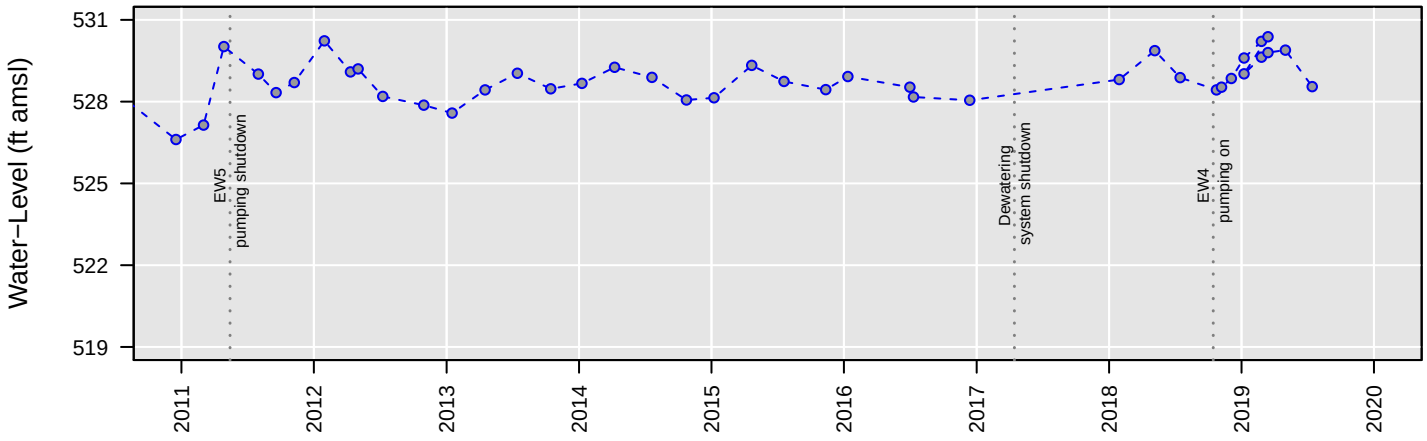
MW101

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 84%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





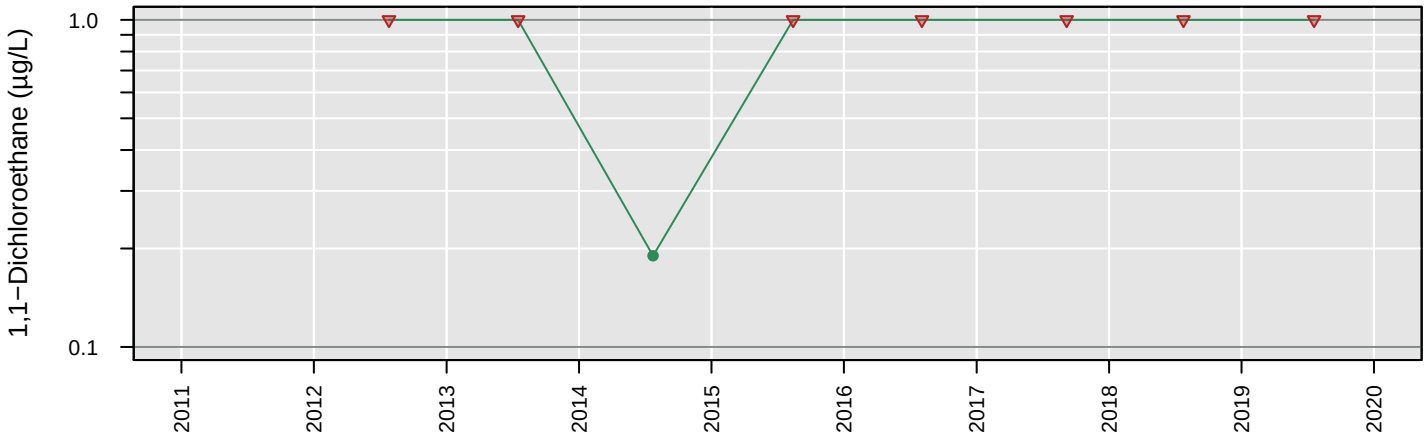
No Analysis Performed

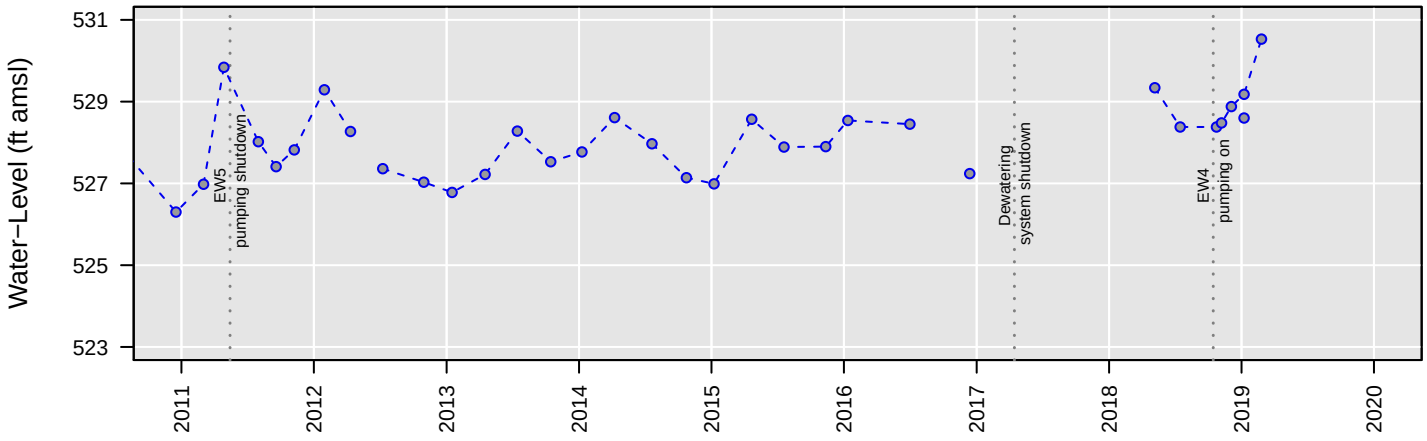
MW102

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 88%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





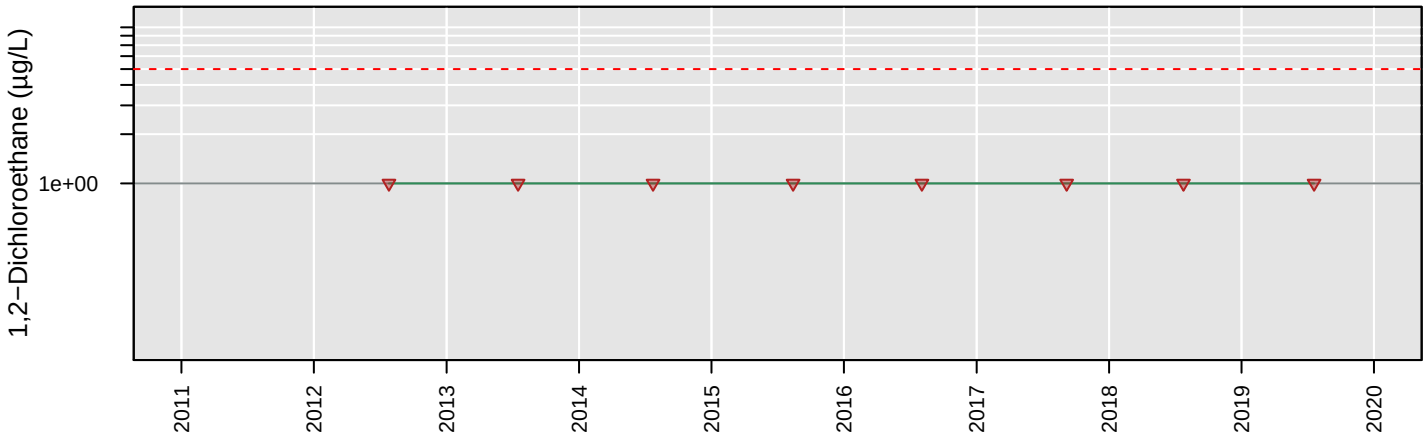
No Analysis Performed

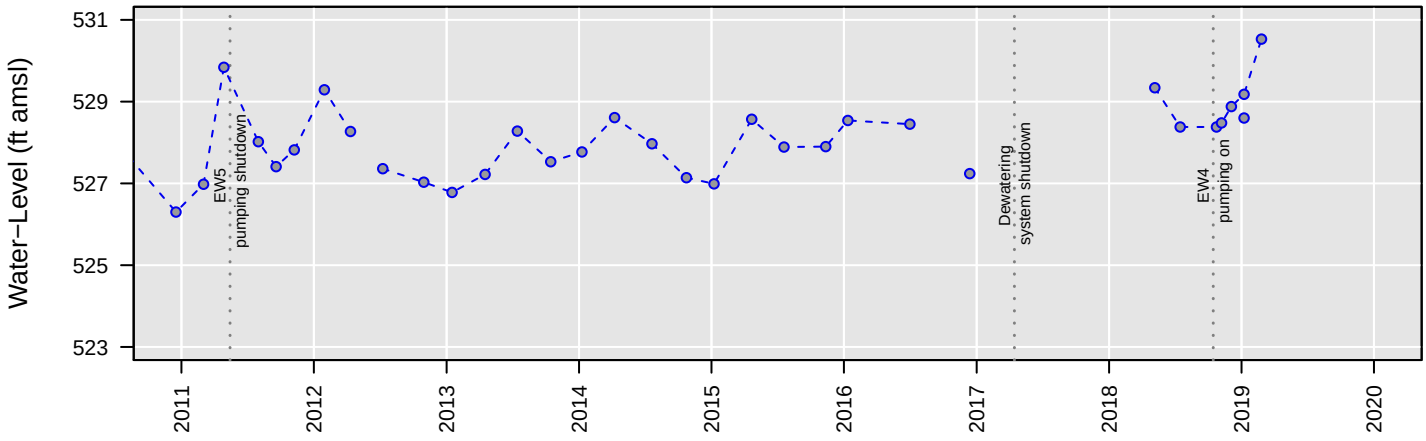
MW102

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



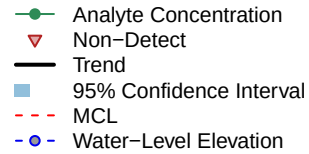


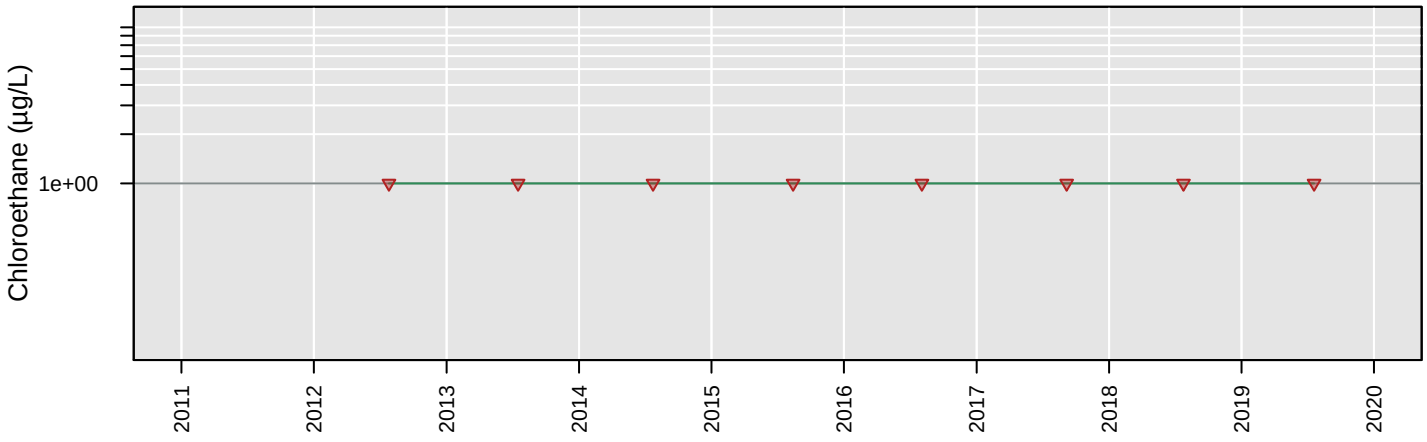
No Analysis Performed

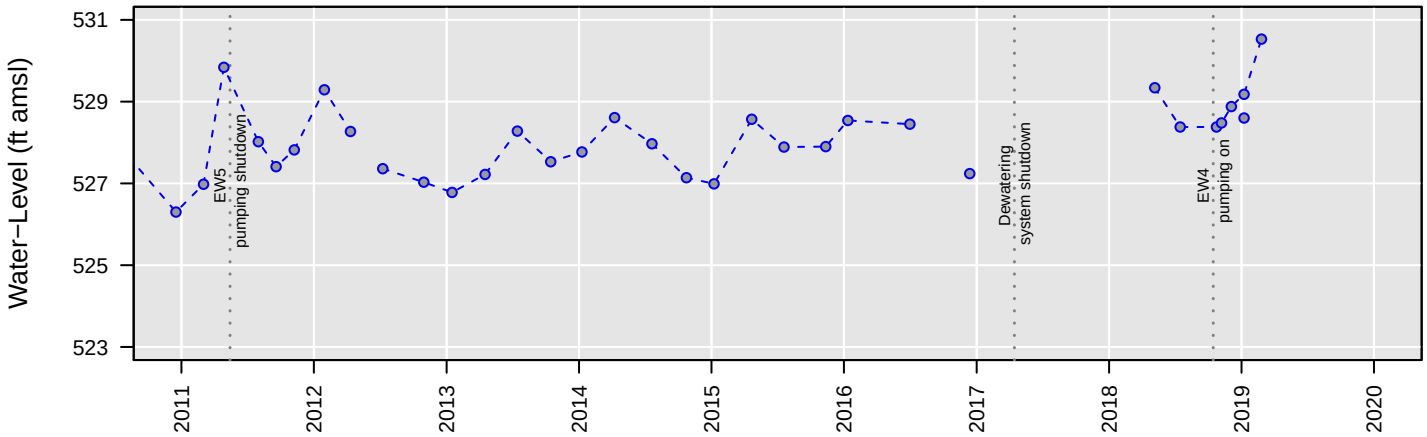
MW102

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%





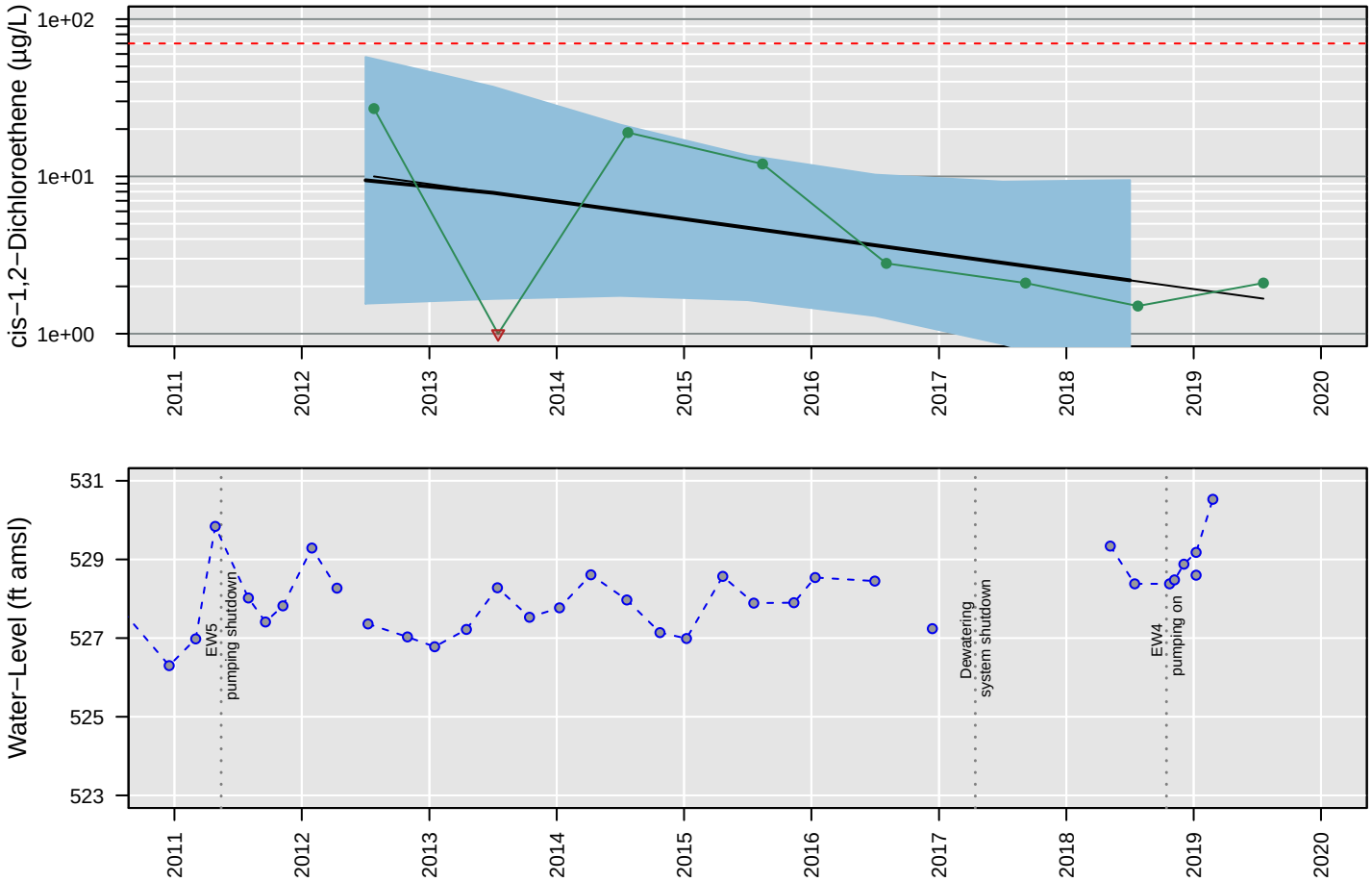


No Analysis Performed

MW102

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 12%



Censored Regression (Tobit) Model

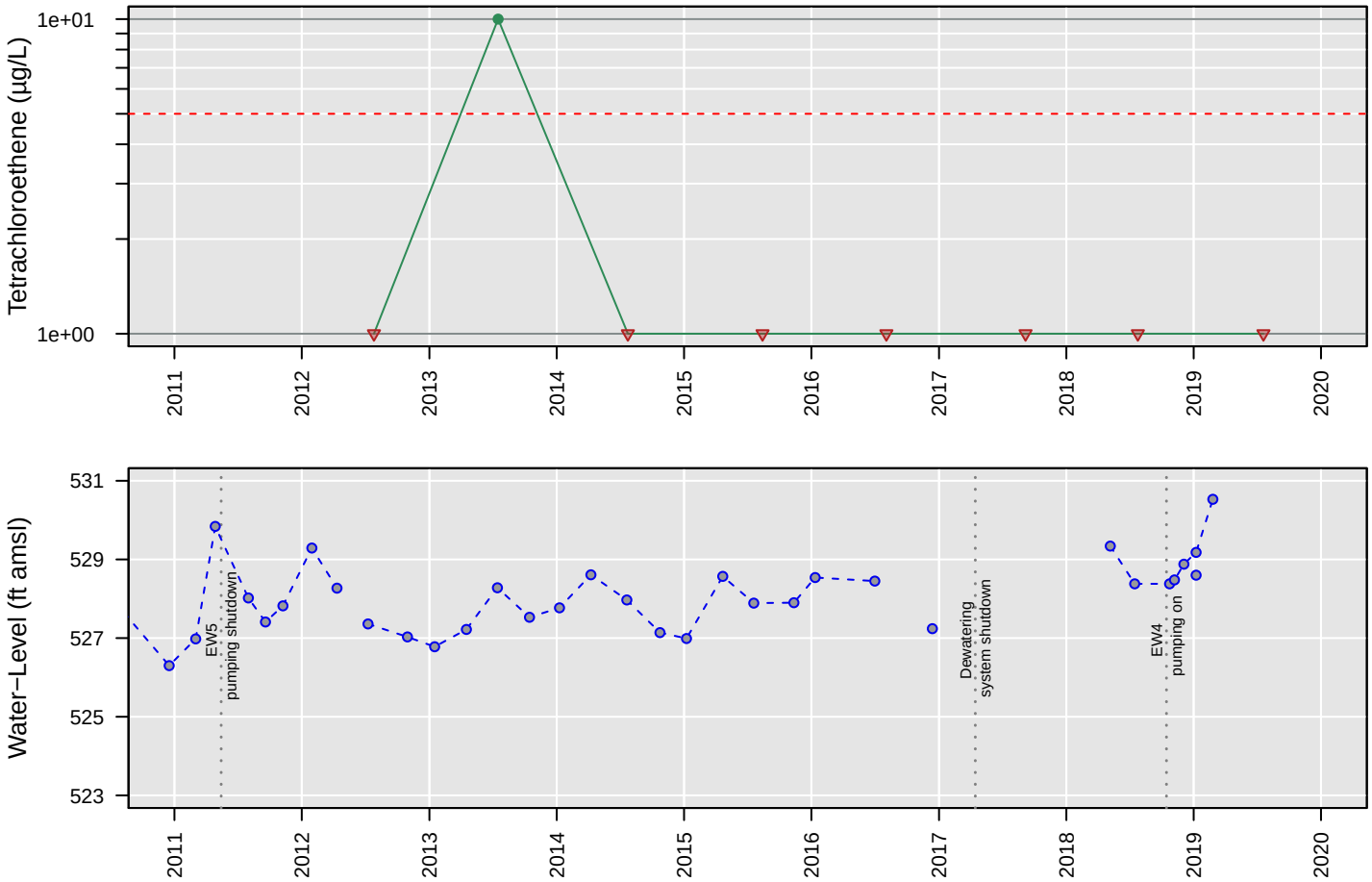
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.2 µg/L
UCL: 9.5 µg/L
LCL: 0.5 µg/L

MW102

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 88%

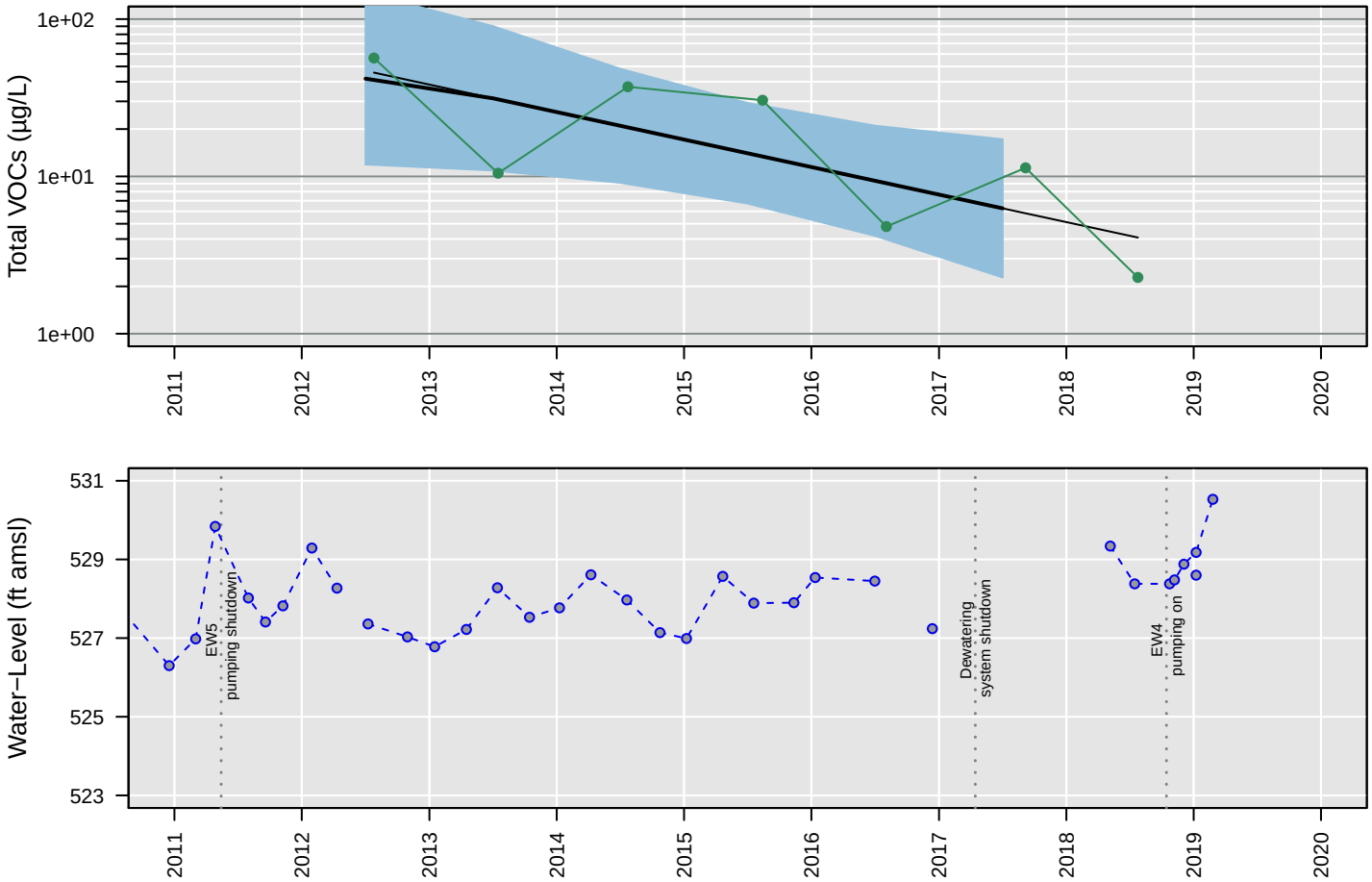


No Analysis Performed

MW102

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

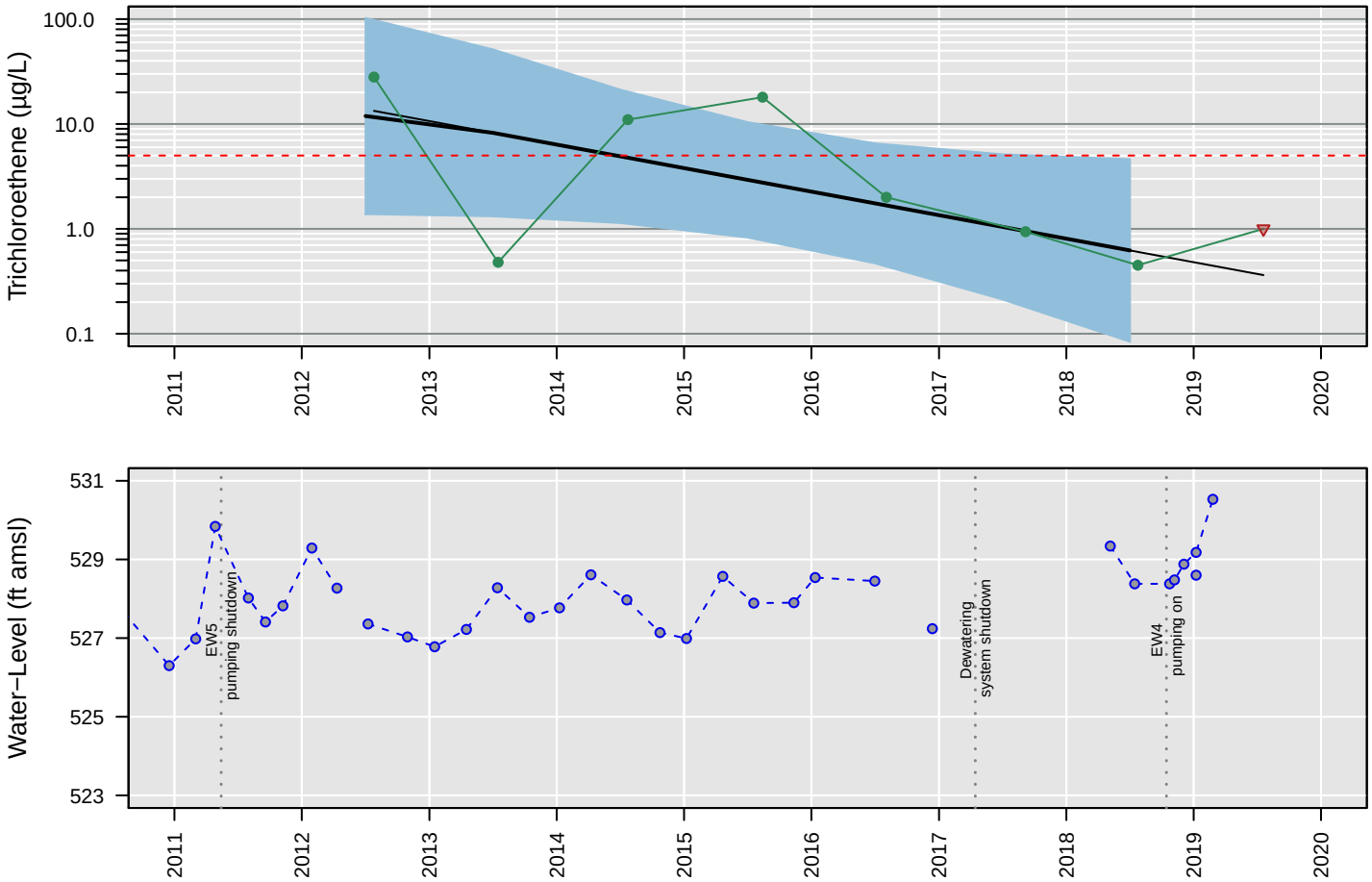
ln Conc. = −0.0011 (+/− 0.00036)*Date + 21 (+/− 6)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 6.3 µg/L
UCL: 17 µg/L
LCL: 2.3 µg/L

MW102

Trichloroethene

Number of Comparisons: 8
Percent NDs: 12%



Censored Regression (Tobit) Model

ln Conc. = −0.0014 (+/− 0.00062)*Date + 25 (+/− 10)

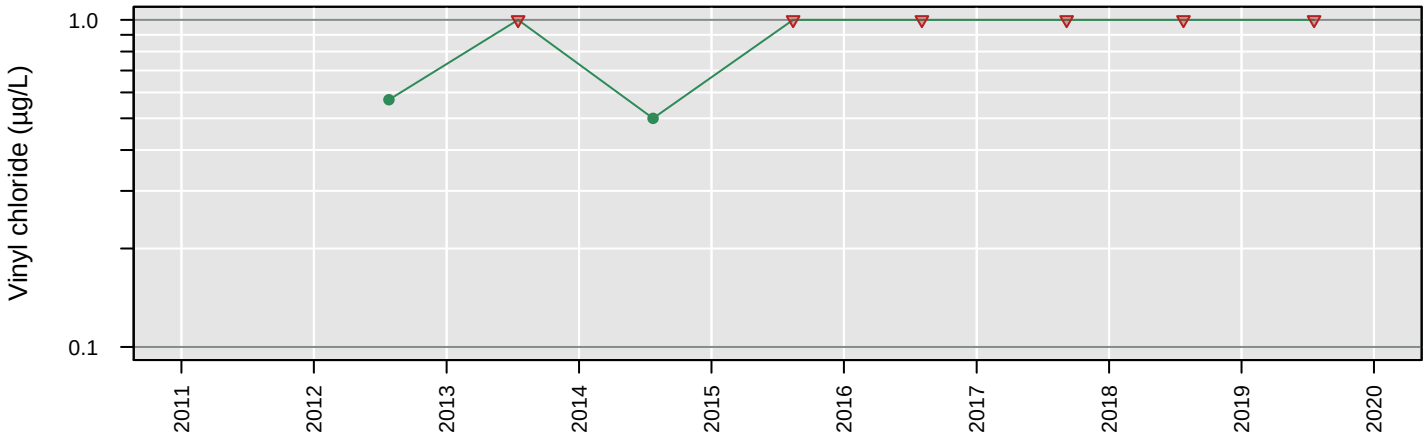
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.62 µg/L
UCL: 4.6 µg/L
LCL: 0.084 µg/L

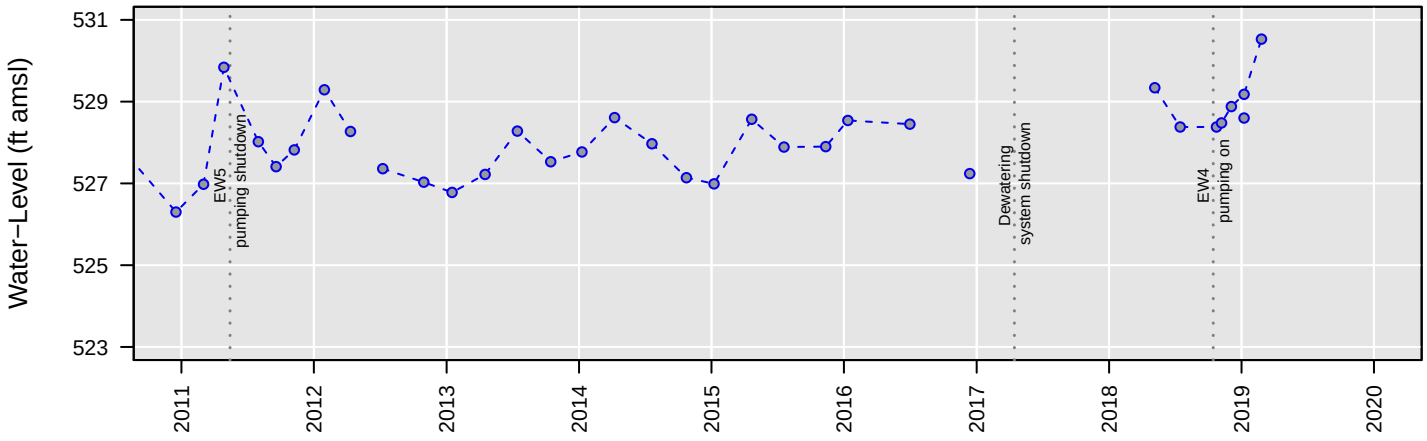
MW102

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 75%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





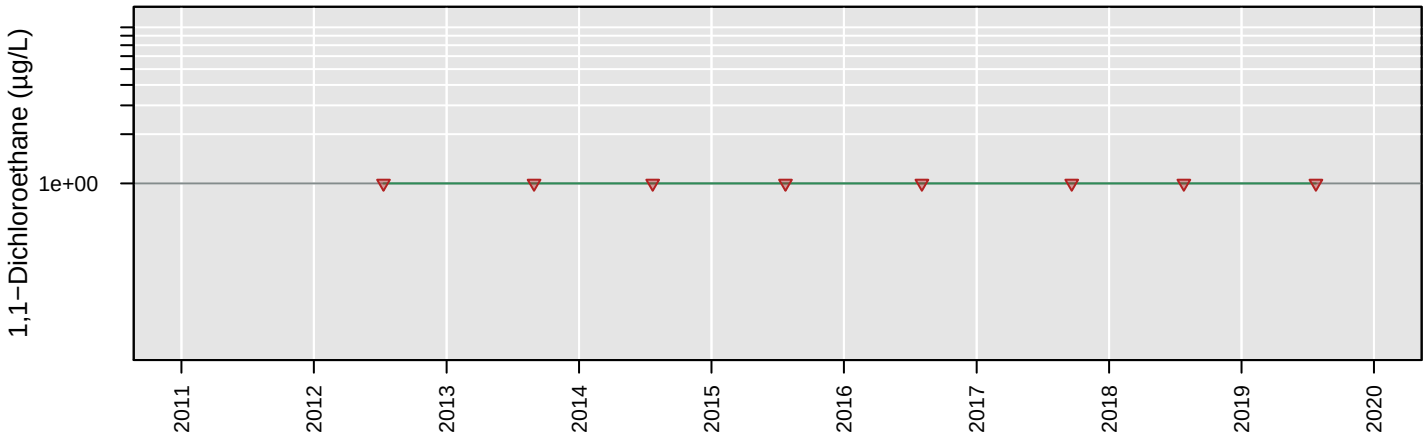
No Analysis Performed

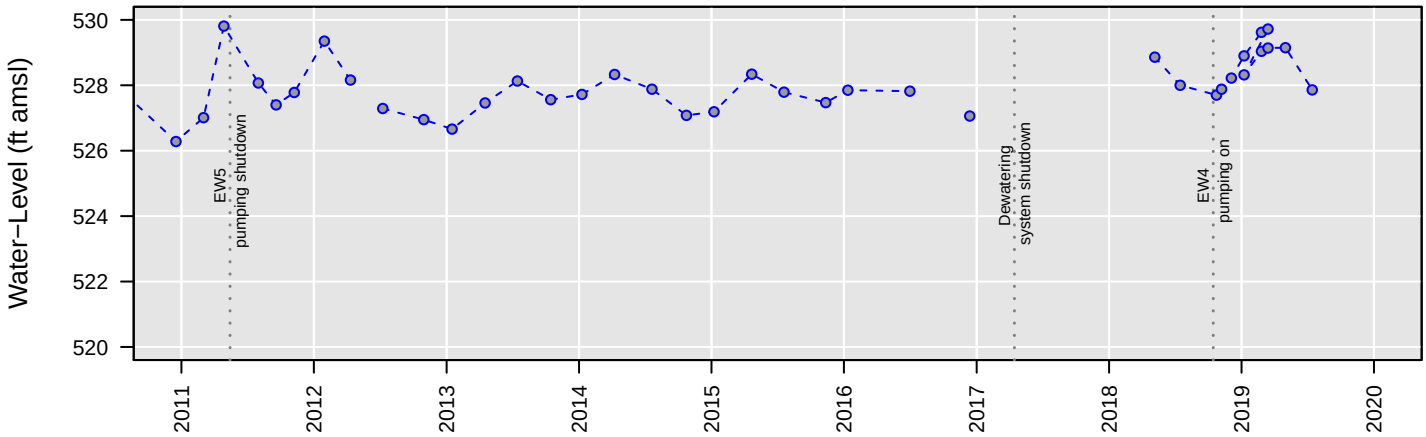
MW103

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





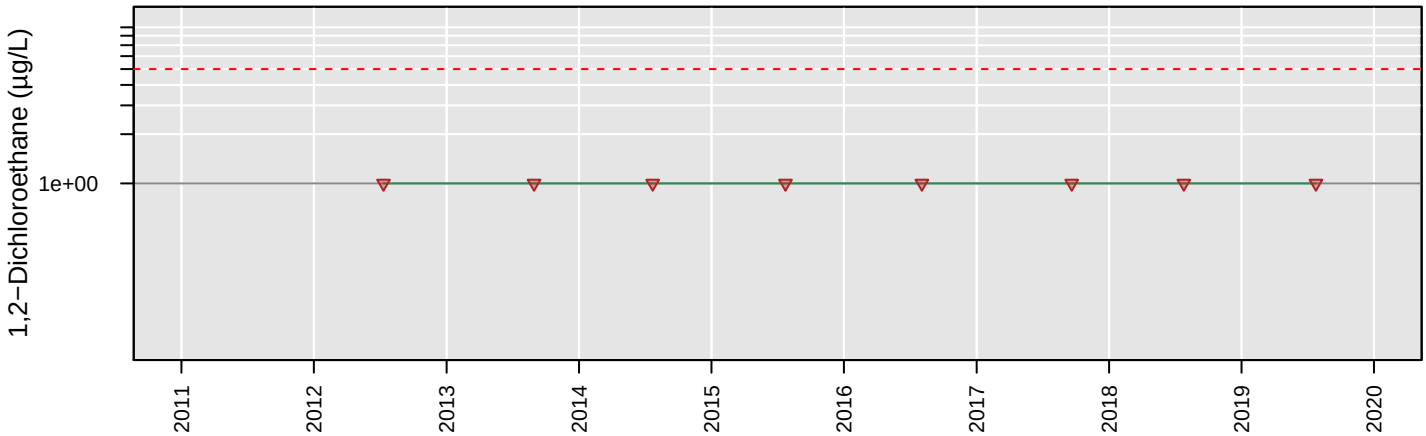
No Analysis Performed

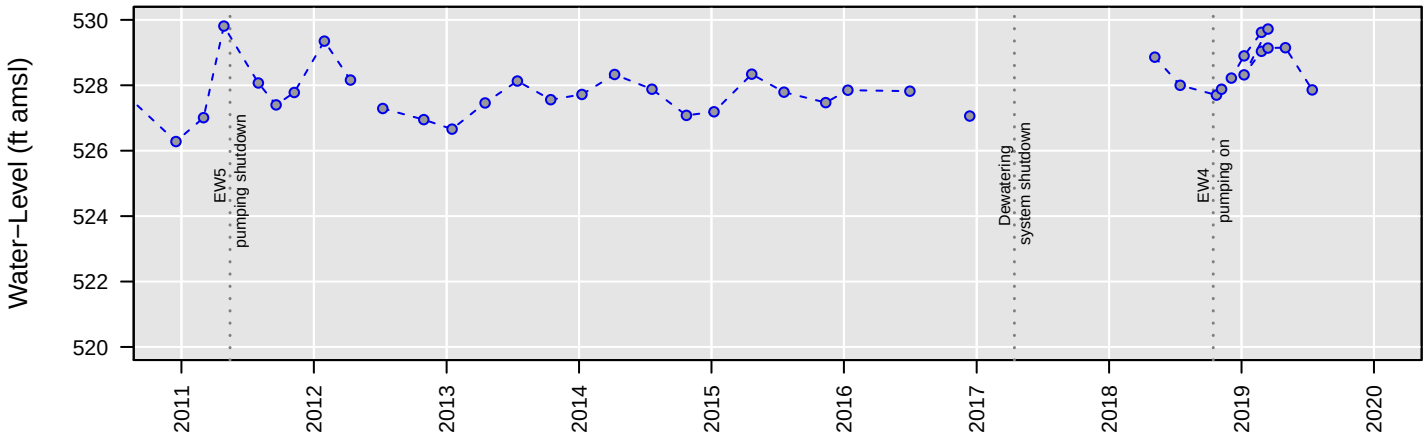
MW103

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





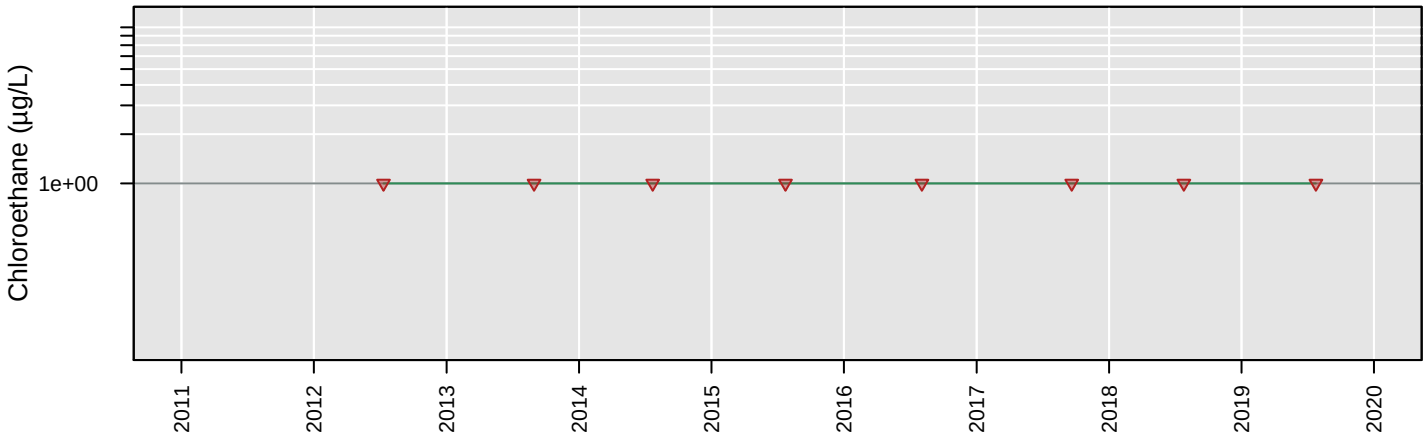
No Analysis Performed

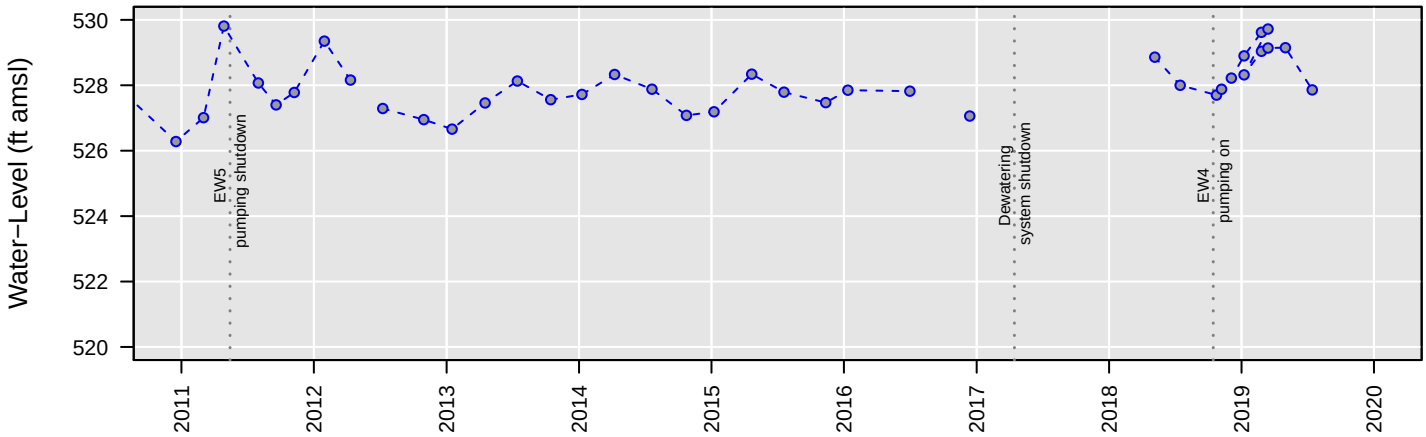
MW103

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



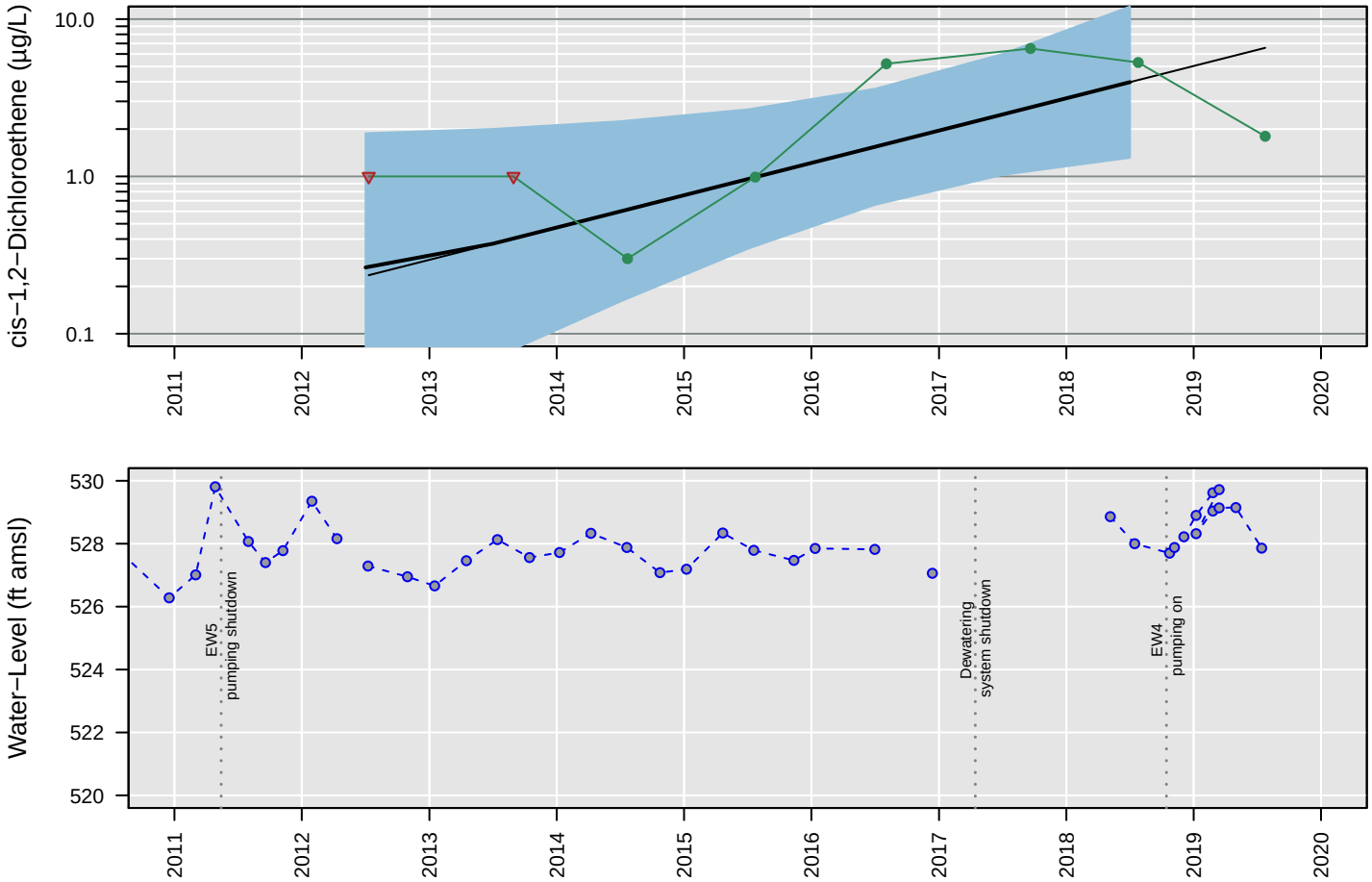


No Analysis Performed

MW103

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 25%



Censored Regression (Tobit) Model

ln Conc. = 0.0013 (+/− 0.00046)*Date + −22 (+/− 8)

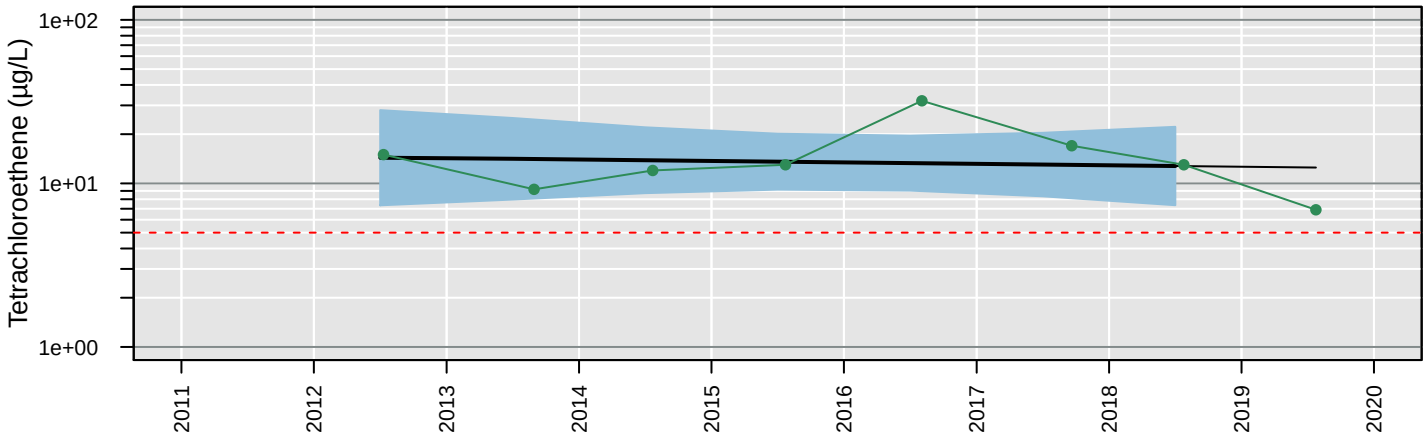
Regression Statistics for January 2018 to January 2019
Geometric Mean: 4 µg/L
UCL: 12 µg/L
LCL: 1.3 µg/L

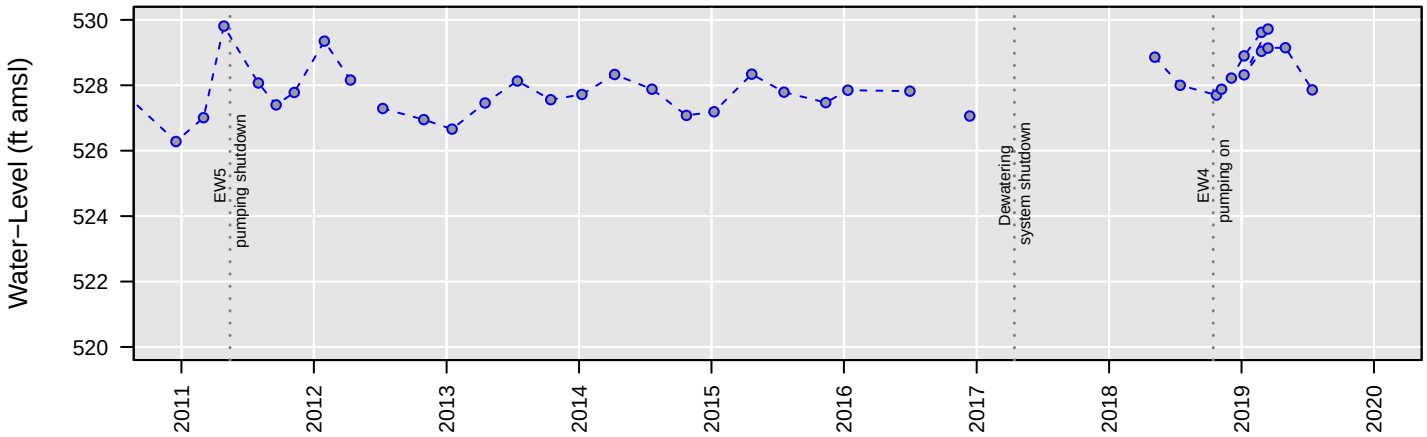
MW103

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

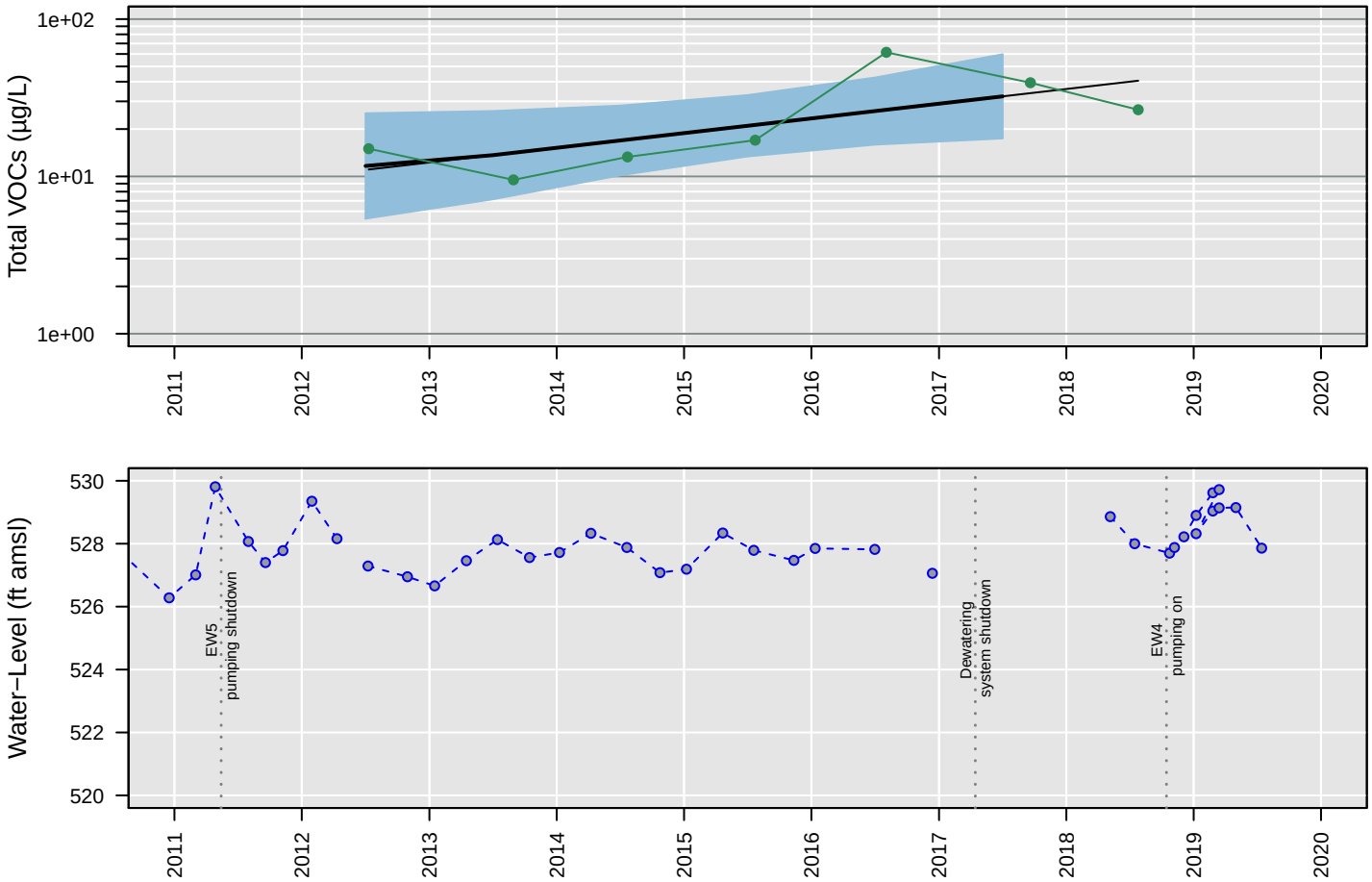
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 13 µg/L
UCL: 22 µg/L
LCL: 7.4 µg/L

MW103

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

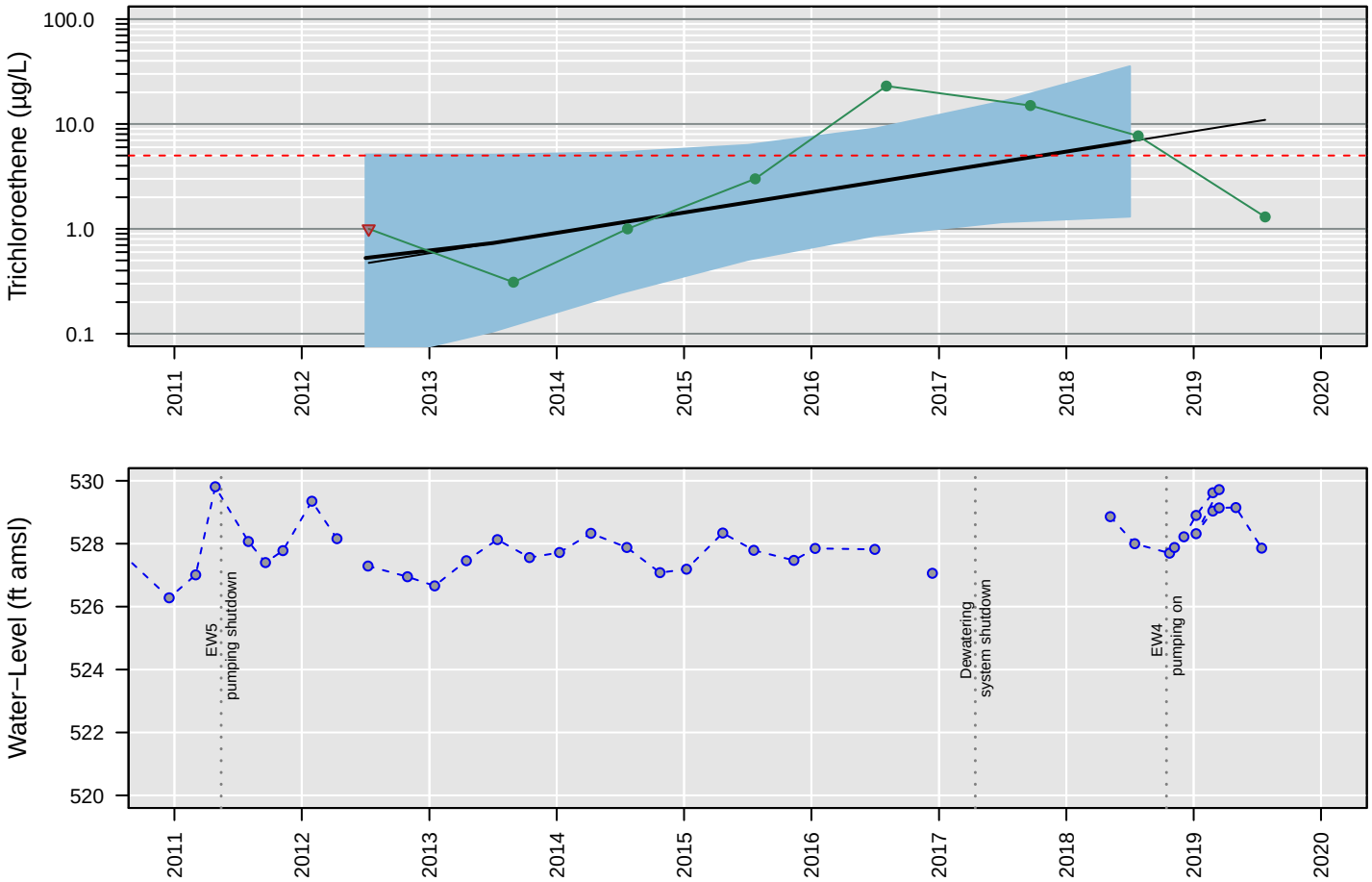
ln Conc. = 0.00059 (+/− 0.00022)*Date + −6.7 (+/− 3.6)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 32 µg/L
UCL: 60 µg/L
LCL: 17 µg/L

MW103

Trichloroethene

Number of Comparisons: 8
Percent NDs: 12%



Censored Regression (Tobit) Model

ln Conc. = 0.0012 (+/− 0.00058)*Date + −20 (+/− 9.8)

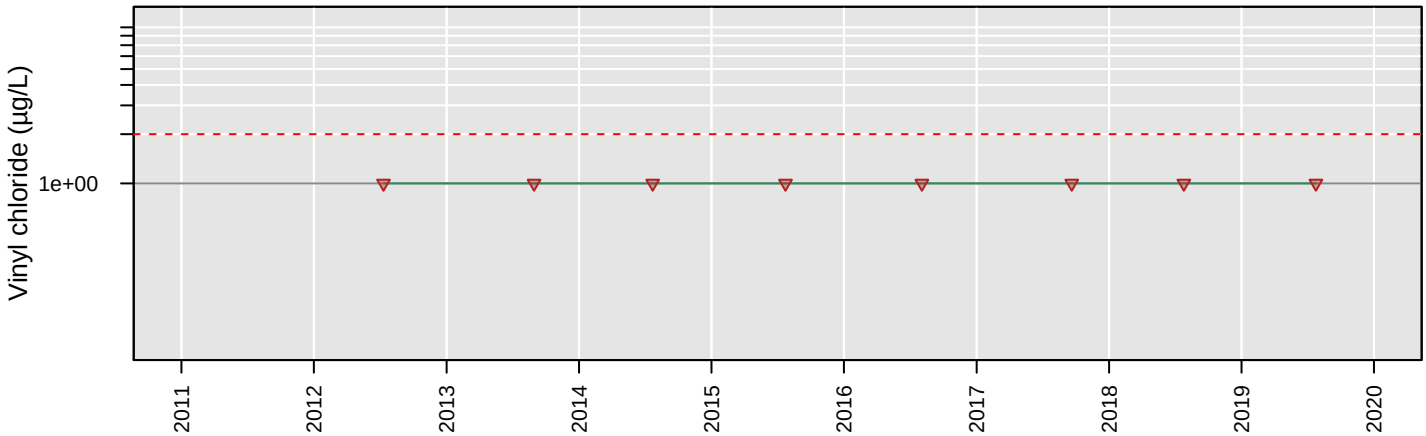
Regression Statistics for January 2018 to January 2019
Geometric Mean: 6.8 µg/L
UCL: 36 µg/L
LCL: 1.3 µg/L

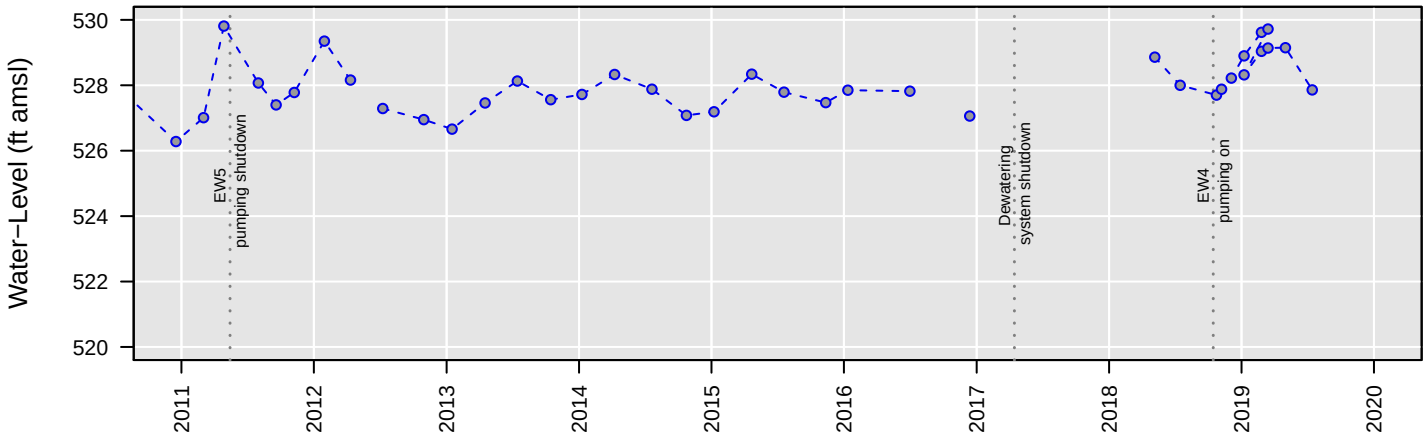
MW103

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



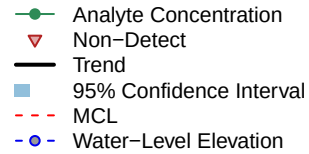


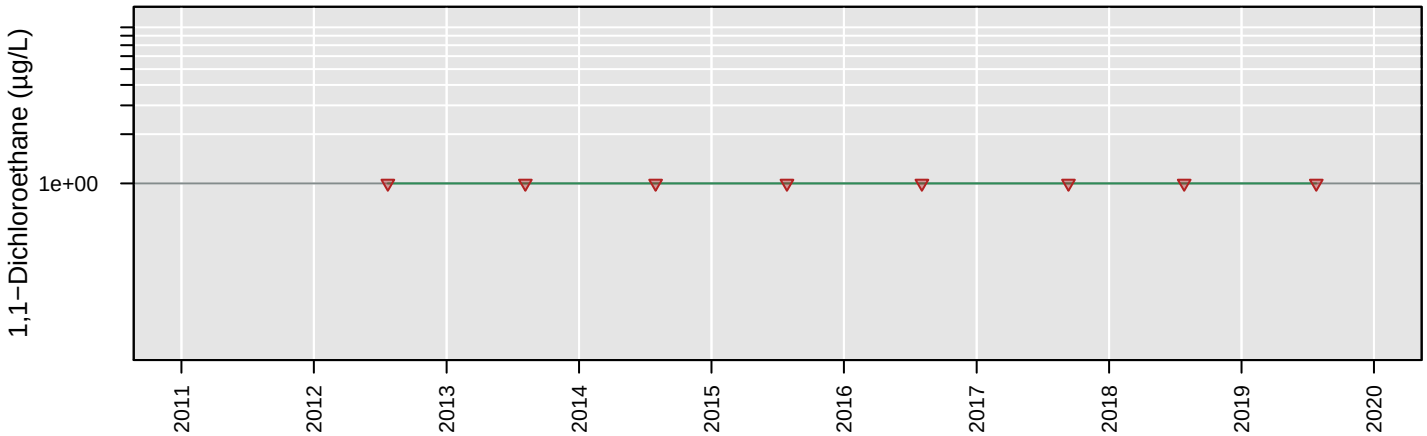
No Analysis Performed

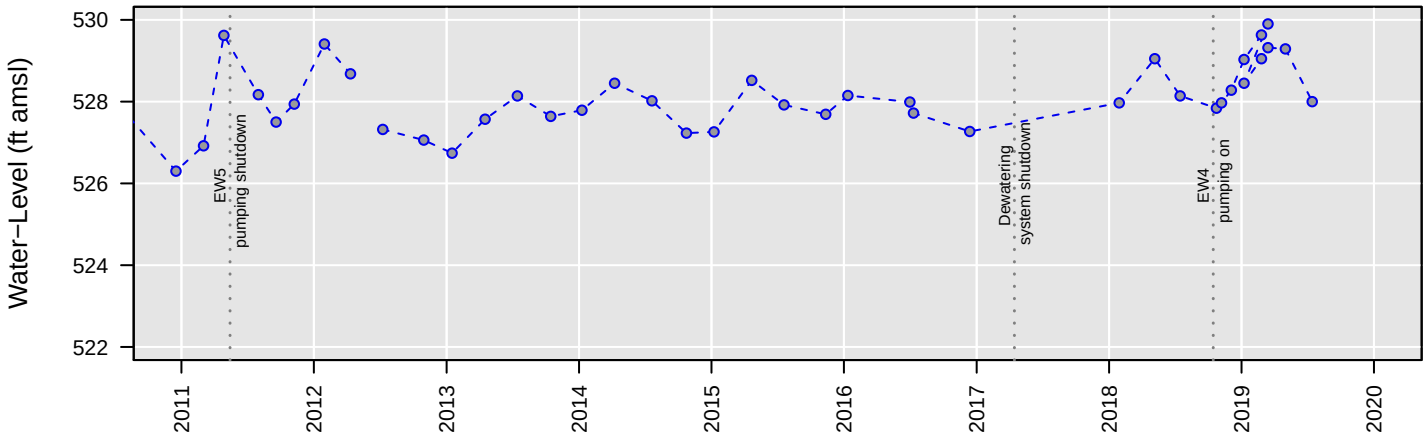
MW104

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%





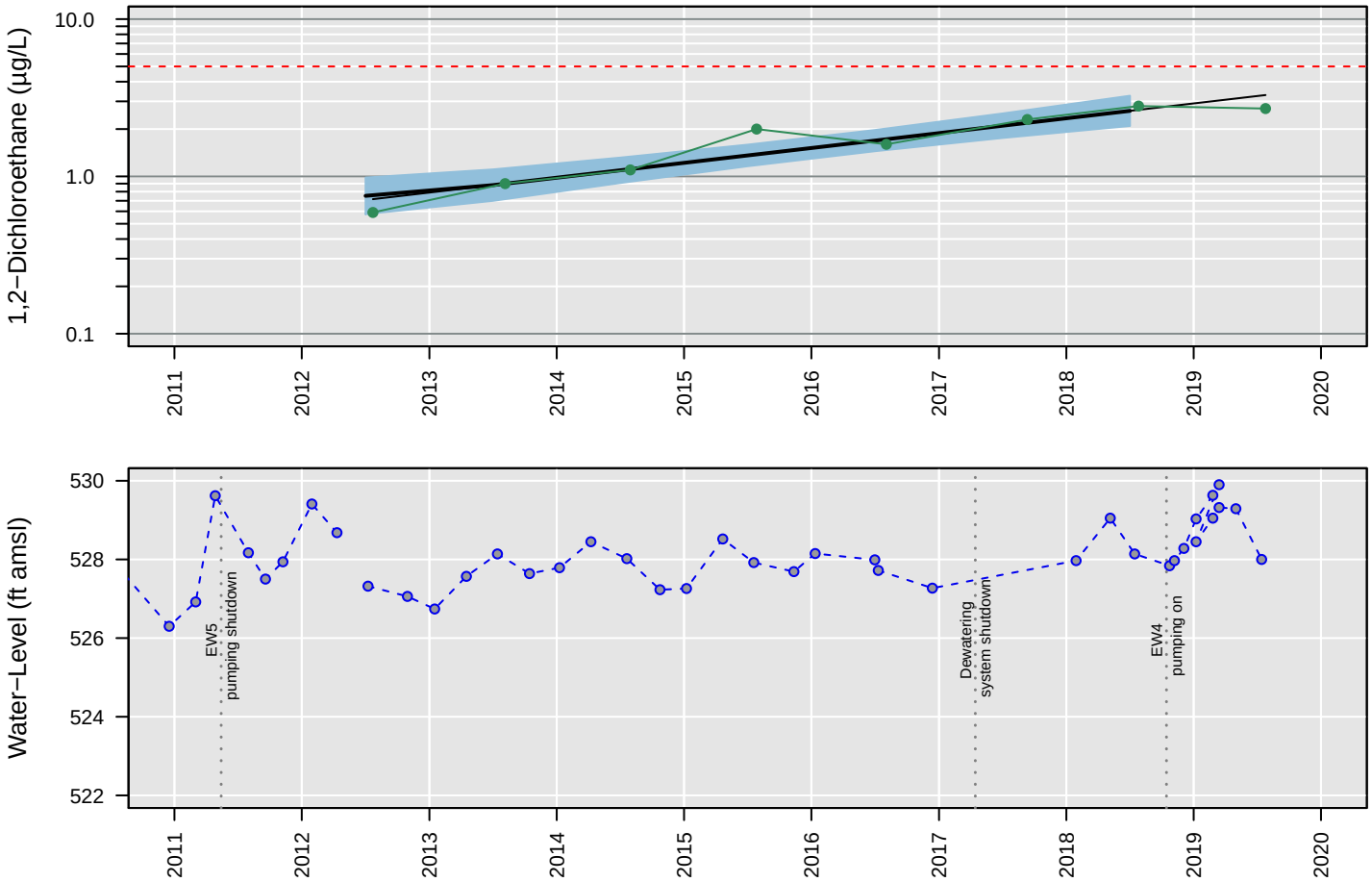


No Analysis Performed

MW104

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = 0.0006 (+/− 0.000071)*Date + −9.6 (+/− 1.2)

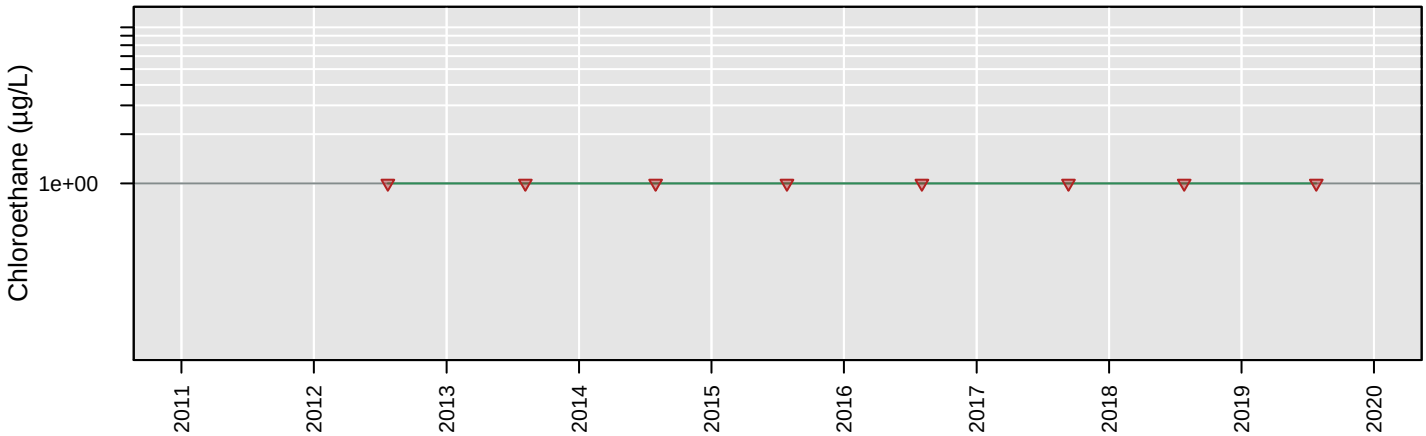
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.6 µg/L
UCL: 3.3 µg/L
LCL: 2.1 µg/L

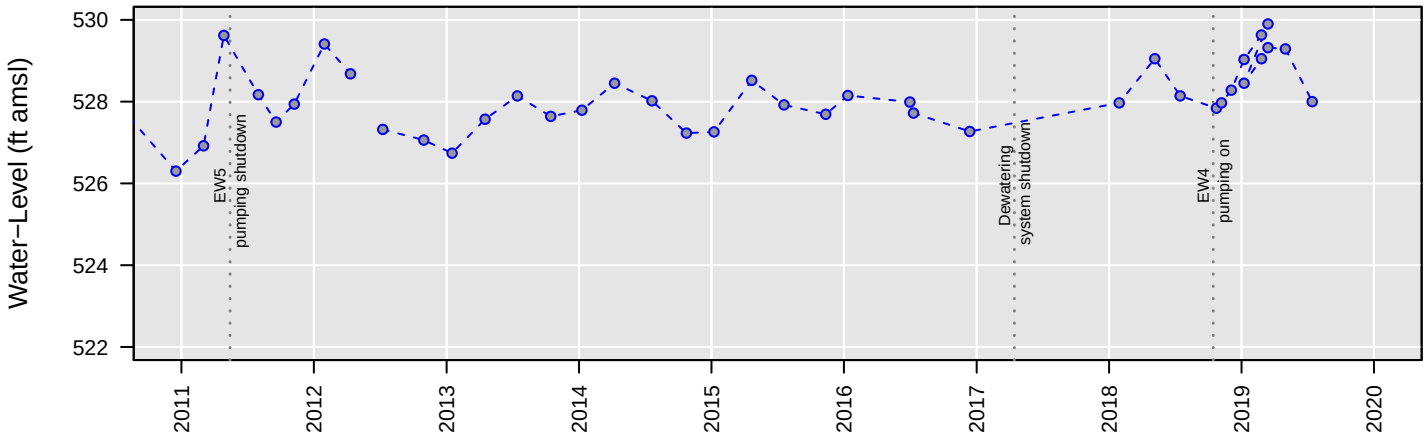
MW104

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





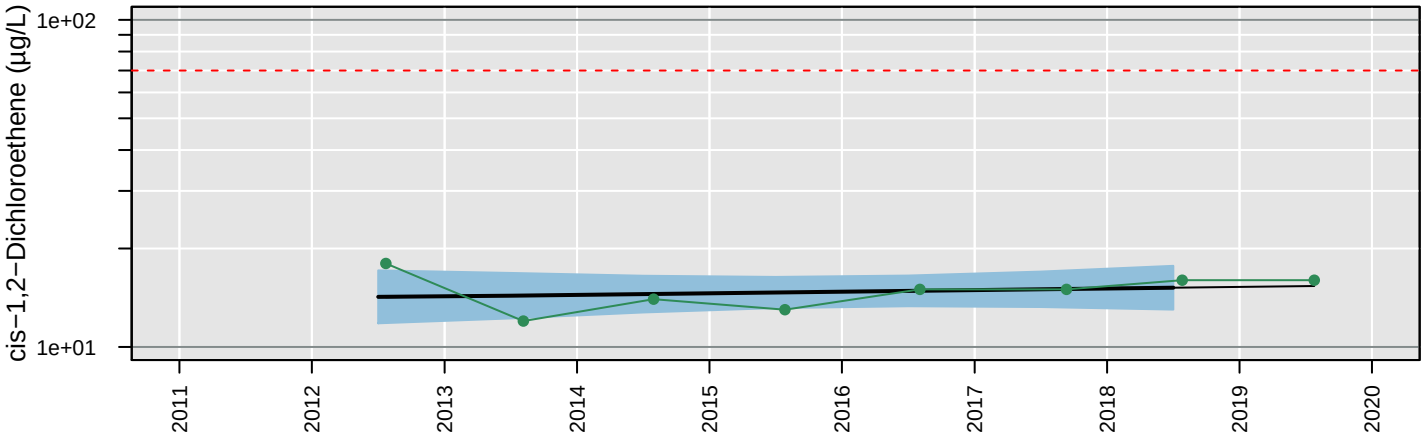
No Analysis Performed

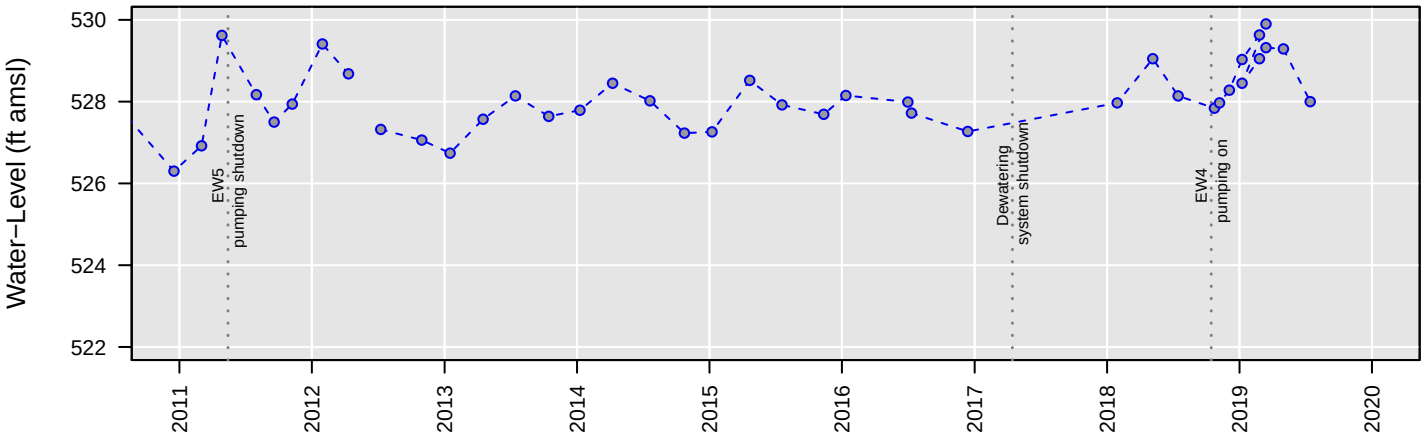
MW104

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

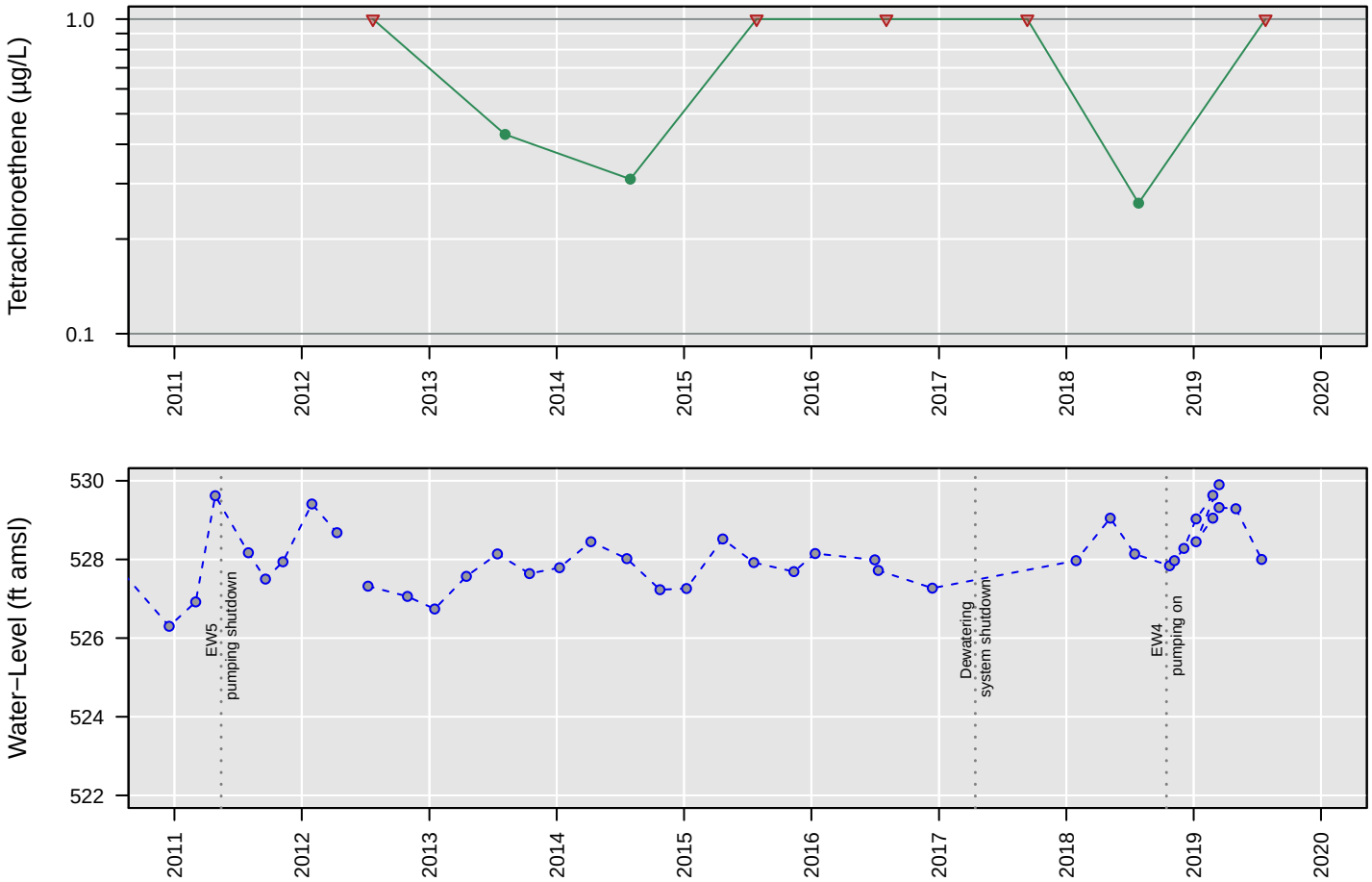
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 15 µg/L
UCL: 18 µg/L
LCL: 13 µg/L

MW104

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 62%

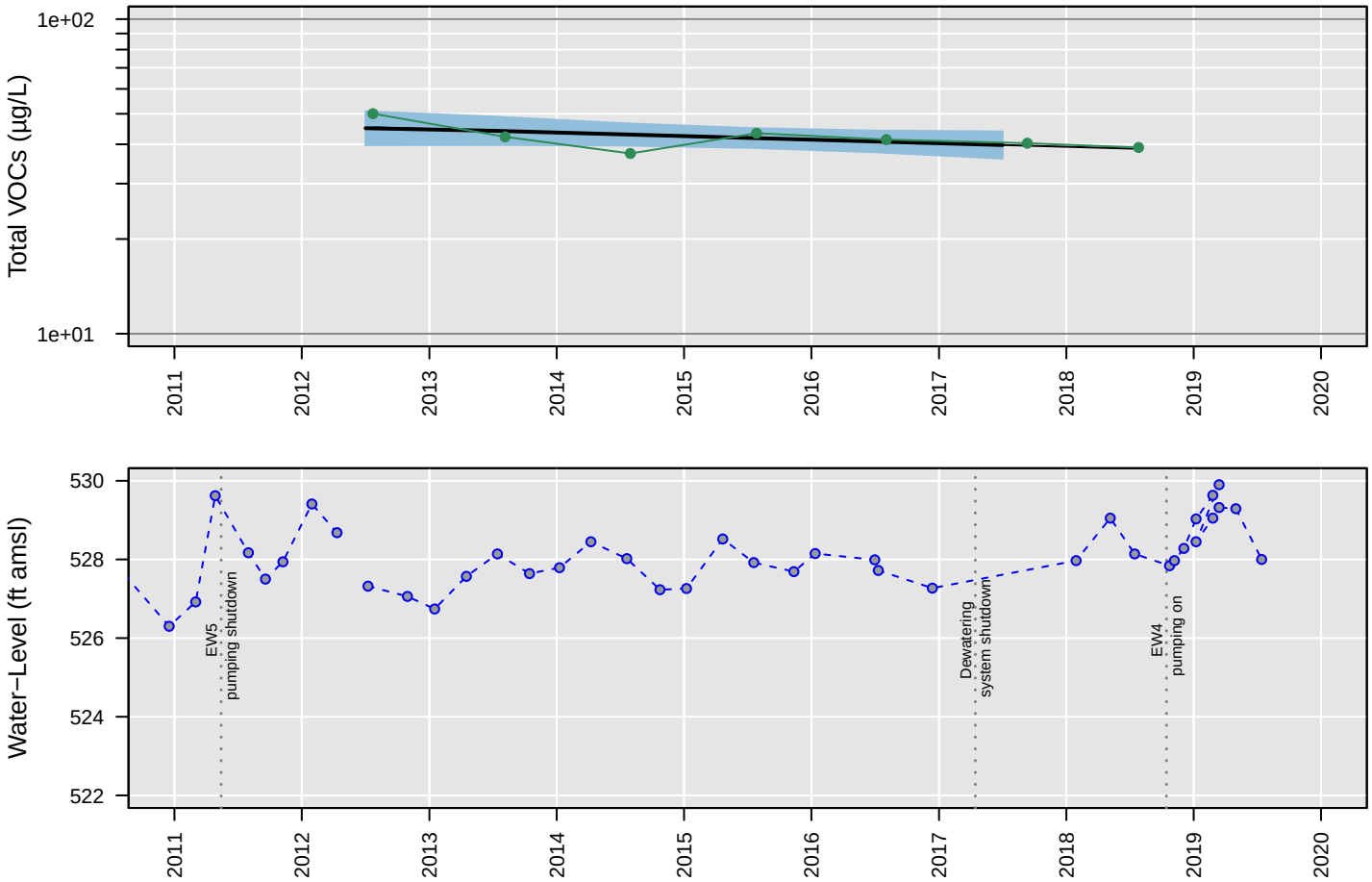


No Analysis Performed

MW104

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

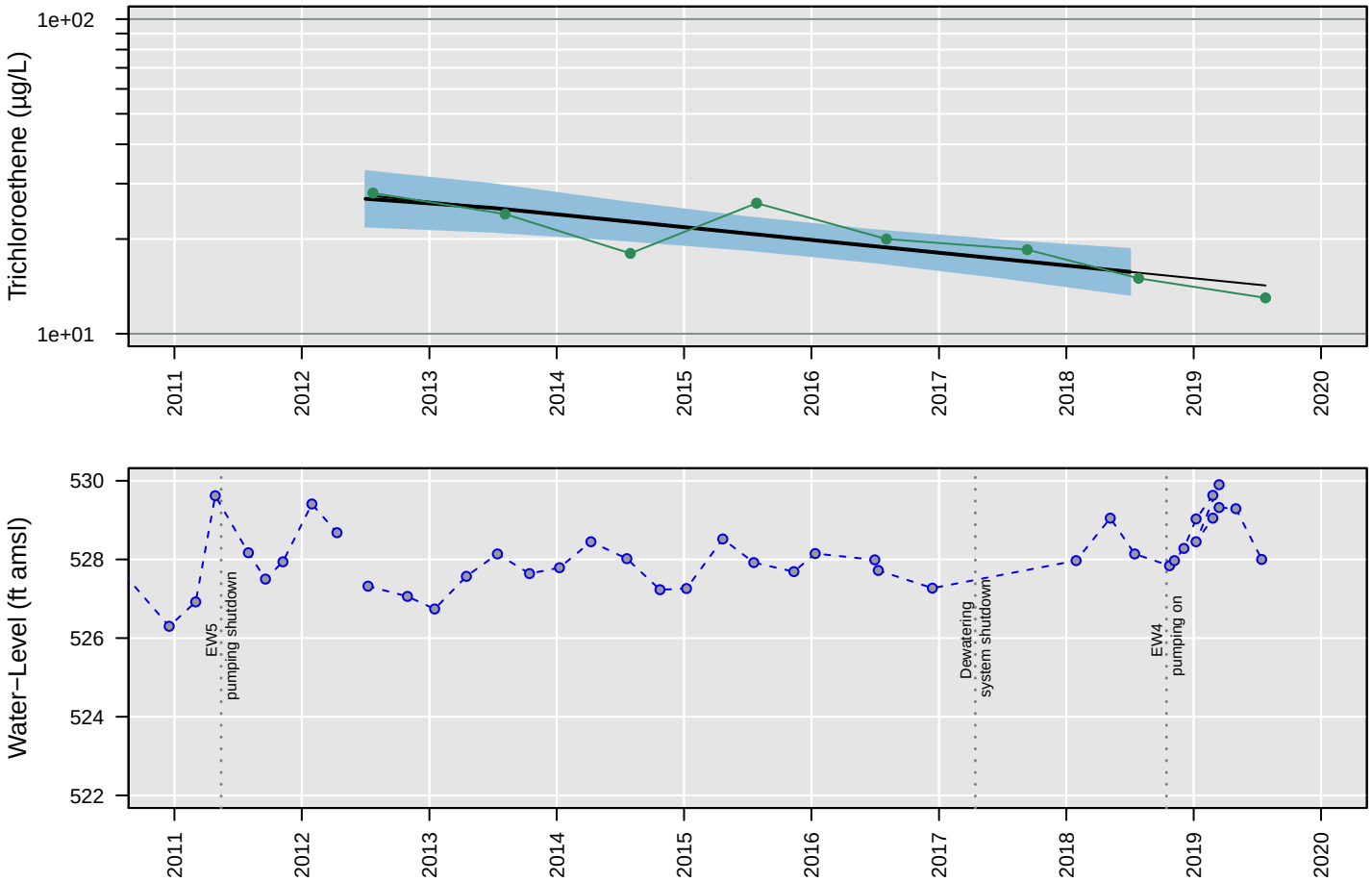
Trend Not Significant

Regression Statistics for January 2017 to January 2018
Geometric Mean: 40 µg/L
UCL: 44 µg/L
LCL: 36 µg/L

MW104

Trichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

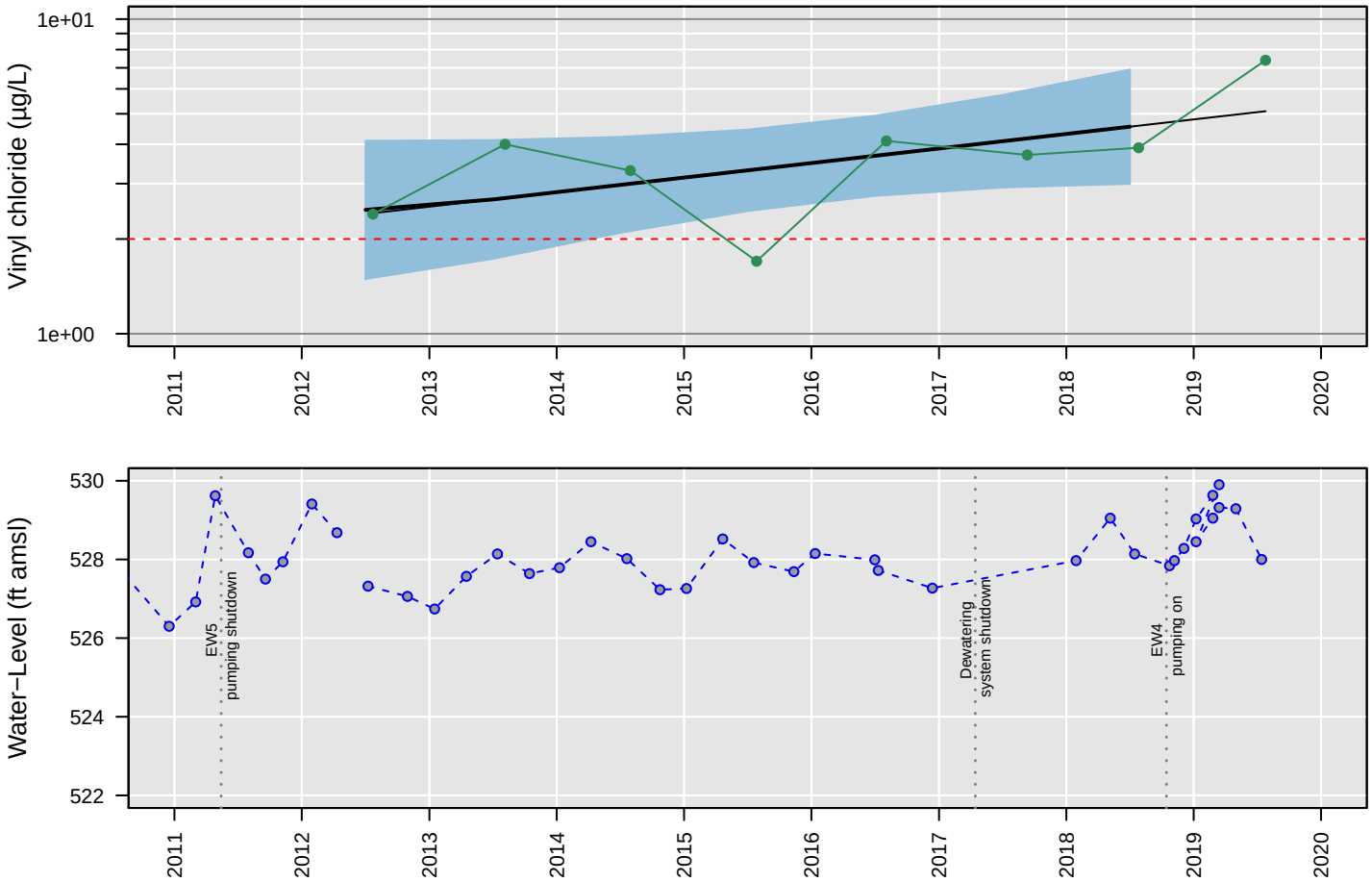
ln Conc. = −0.00026 (+/− 0.000053)*Date + 7.3 (+/− 0.9)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 16 µg/L
UCL: 19 µg/L
LCL: 13 µg/L

MW104

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

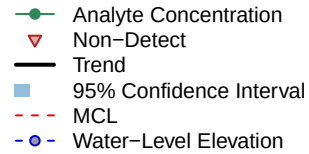
Trend Not Significant

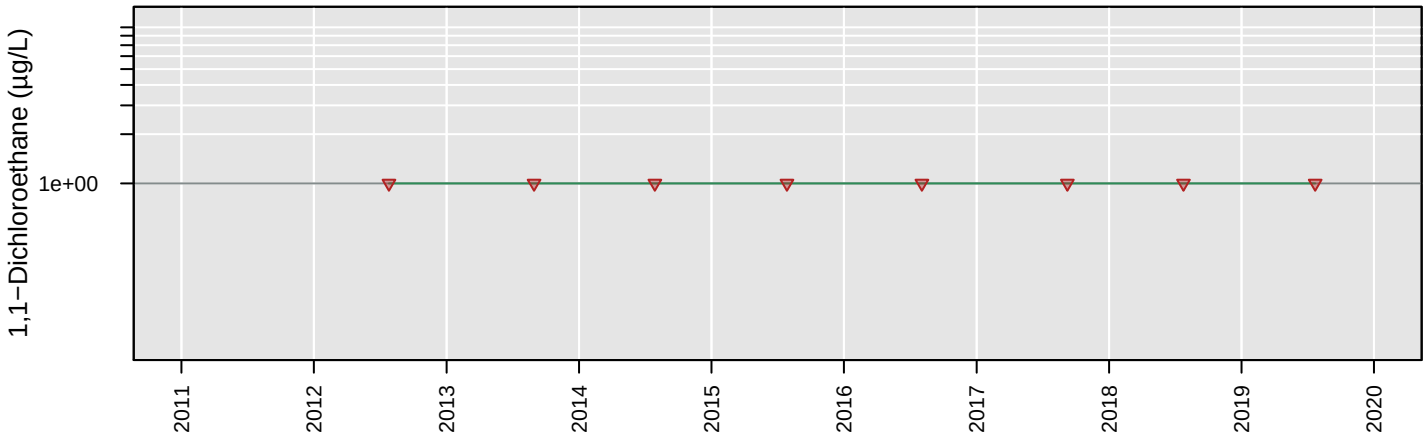
Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.6 µg/L
UCL: 6.9 µg/L
LCL: 3 µg/L

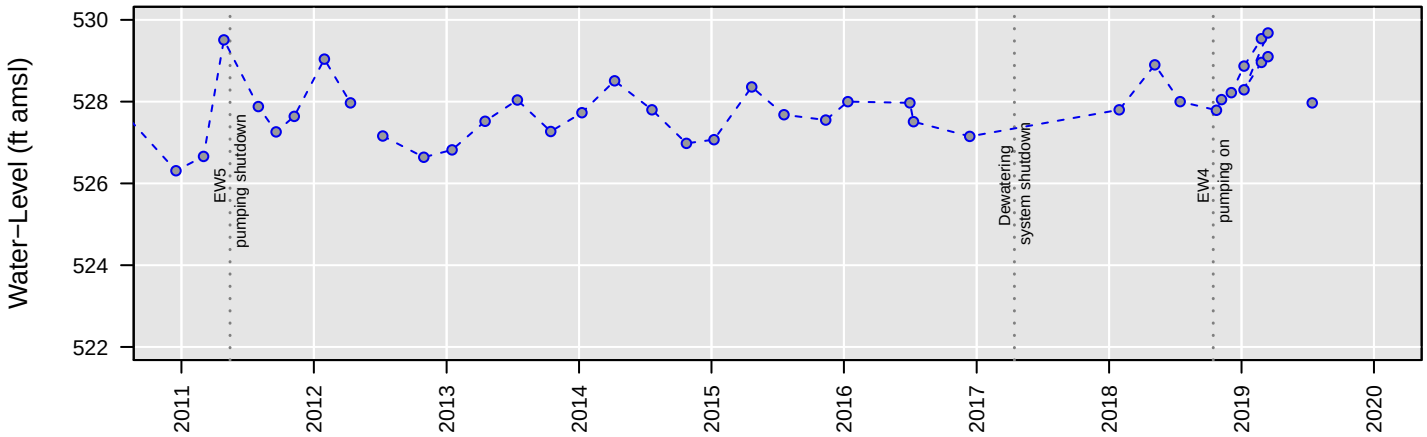
MW105

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%







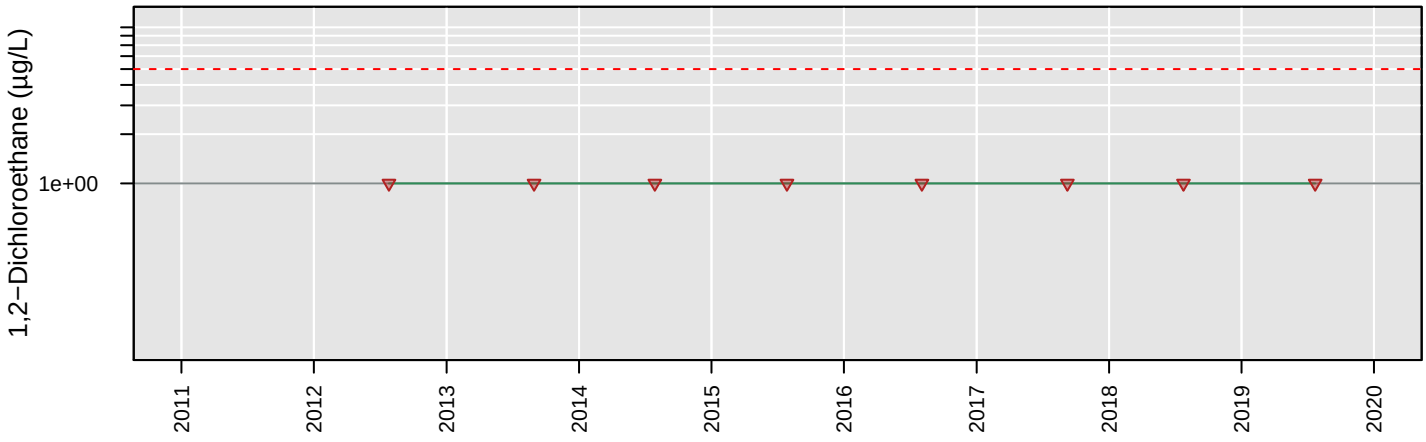
No Analysis Performed

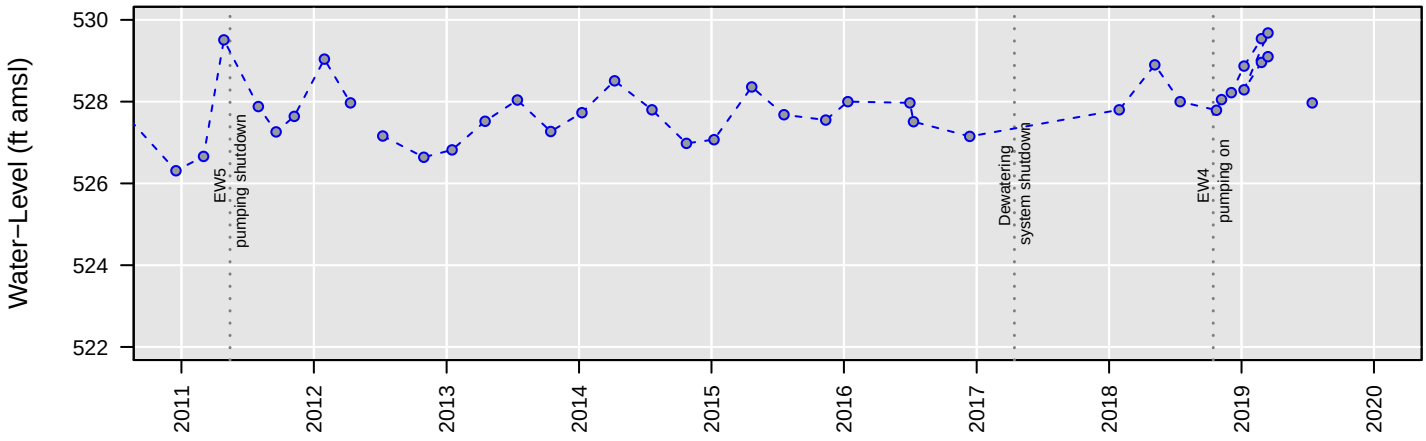
MW105

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





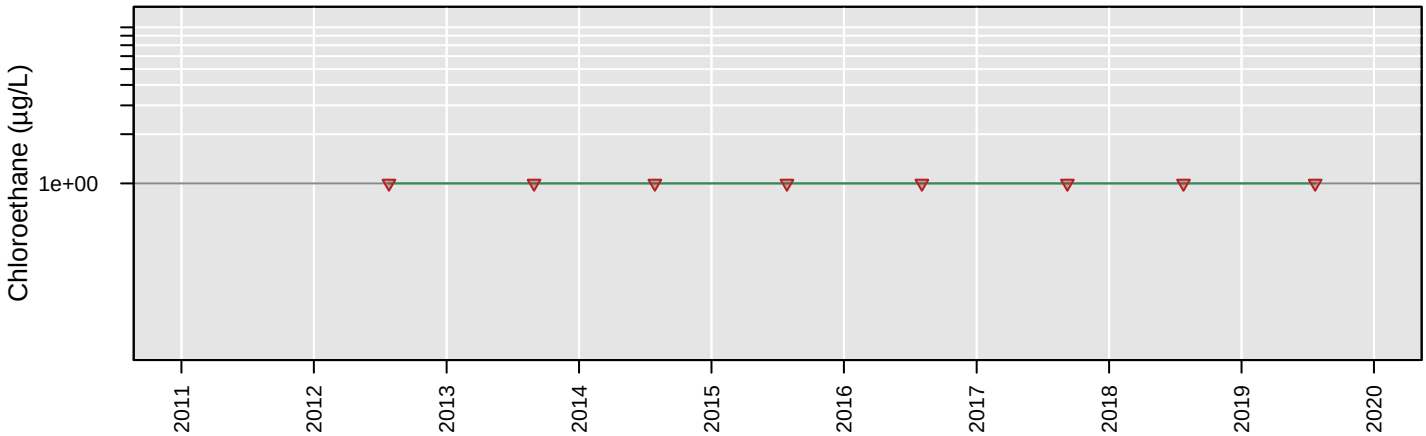
No Analysis Performed

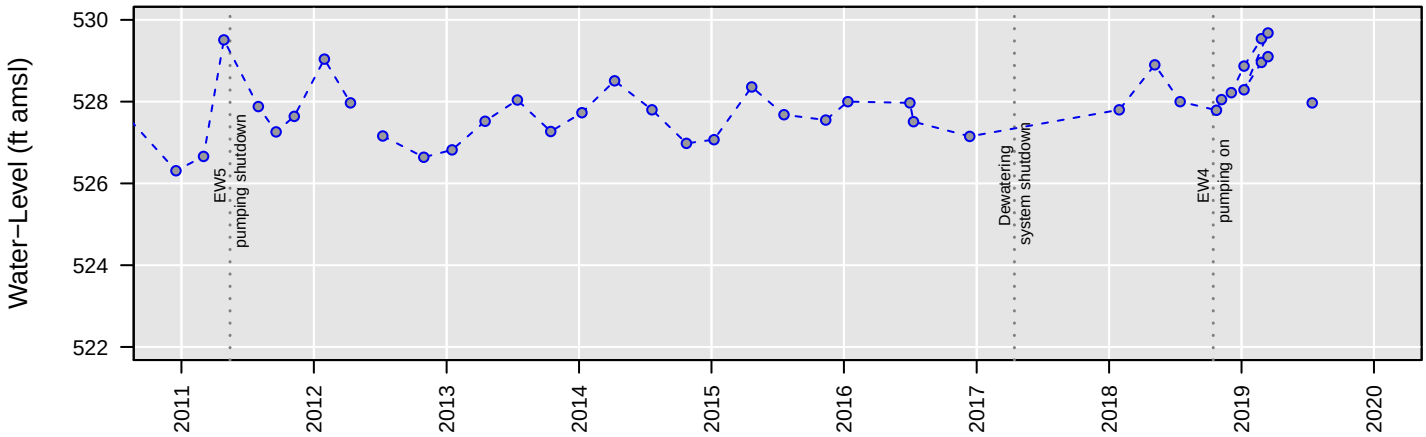
MW105

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





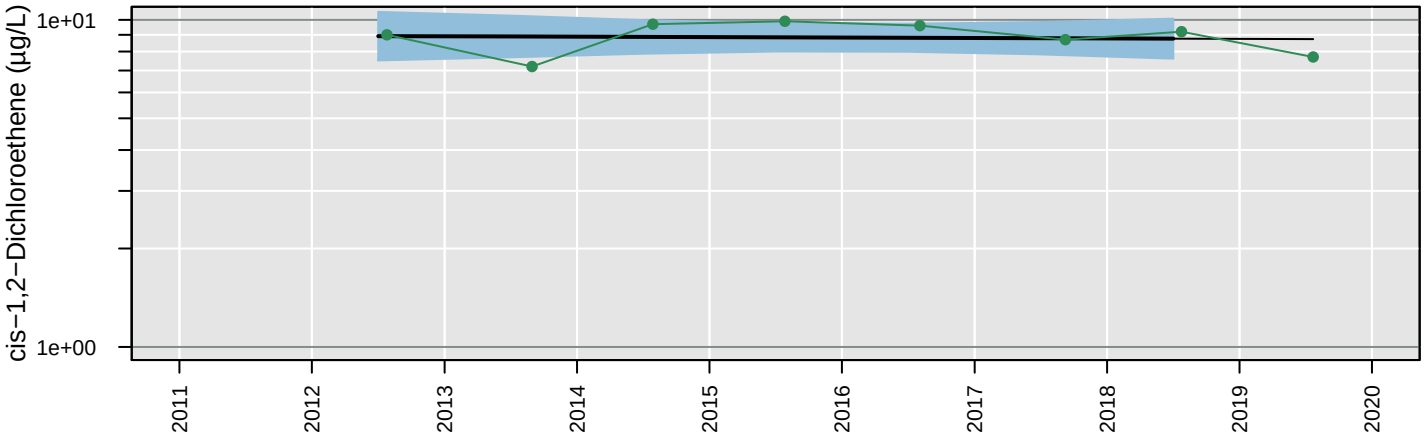
No Analysis Performed

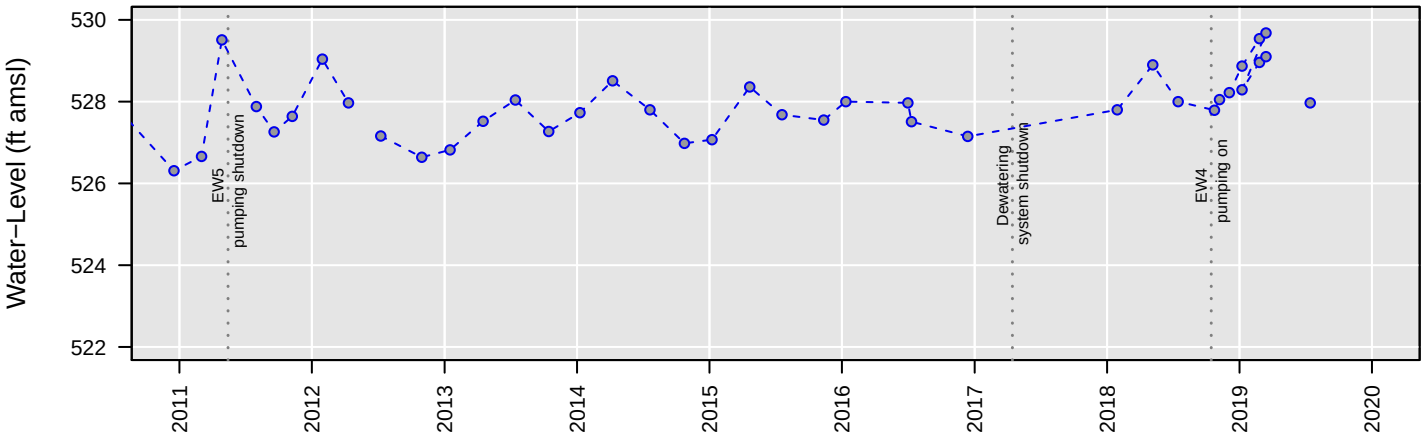
MW105

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

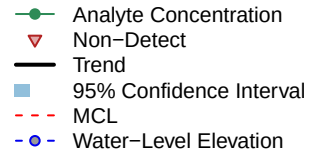
Trend Not Significant

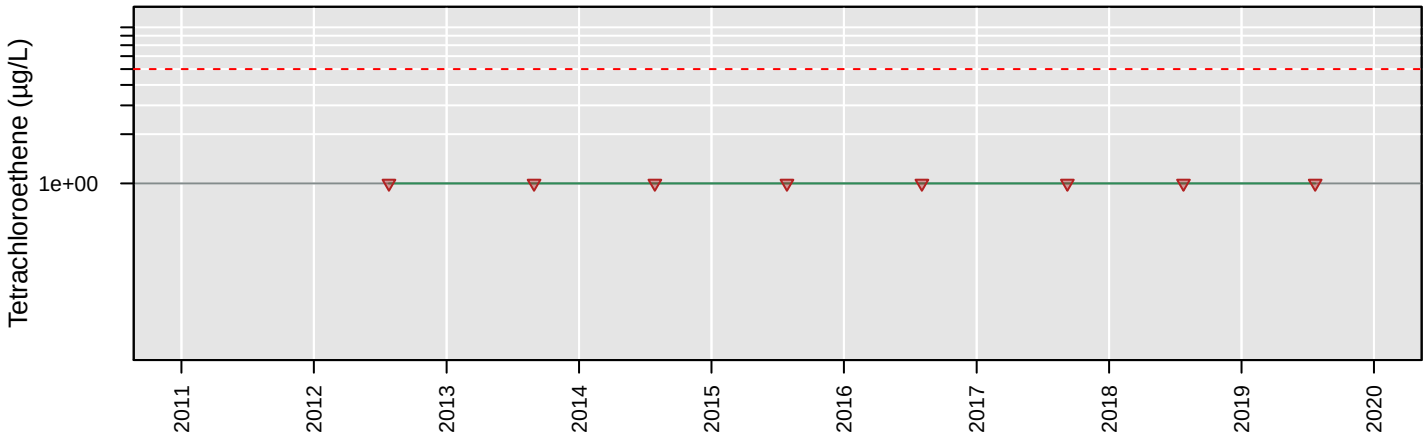
Regression Statistics for January 2018 to January 2019
Geometric Mean: 8.8 µg/L
UCL: 10 µg/L
LCL: 7.6 µg/L

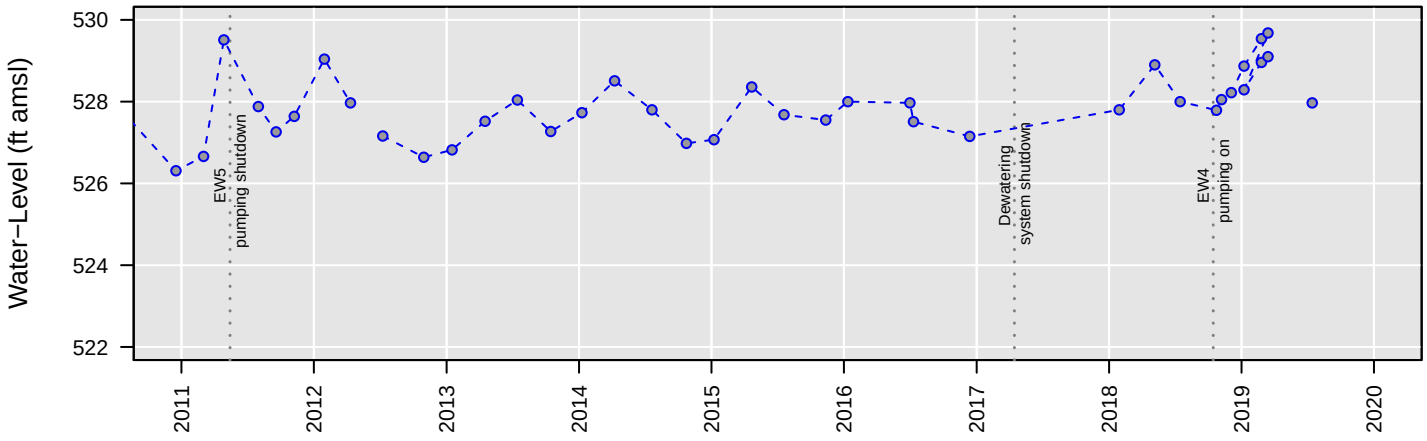
MW105

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 100%







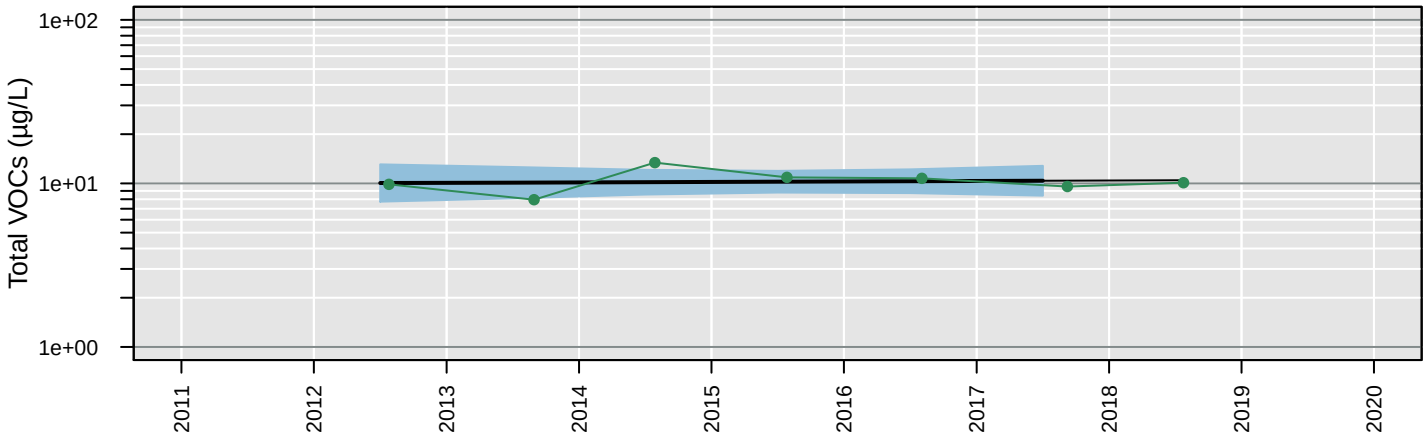
No Analysis Performed

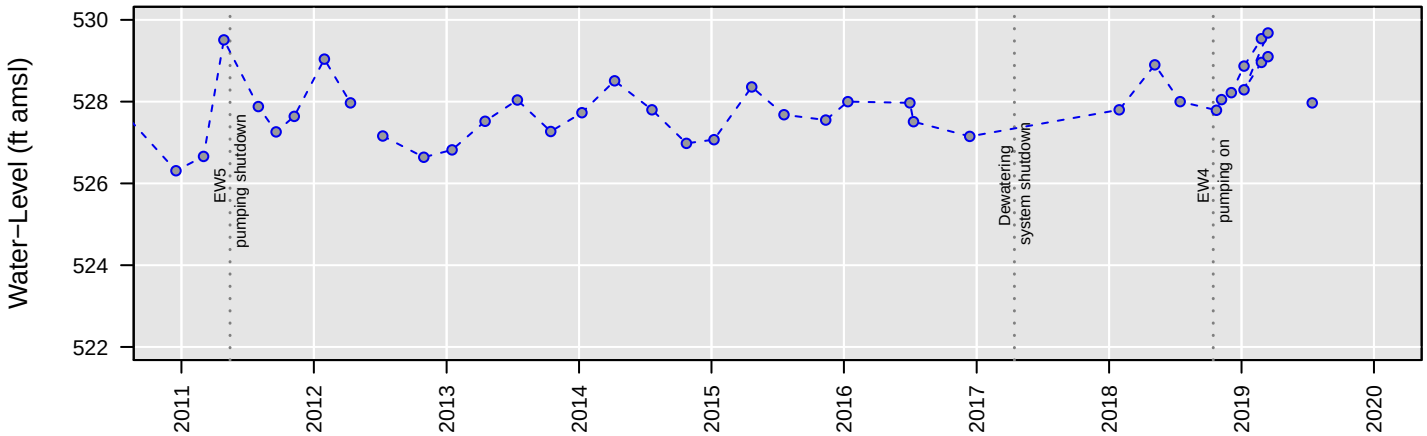
MW105

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

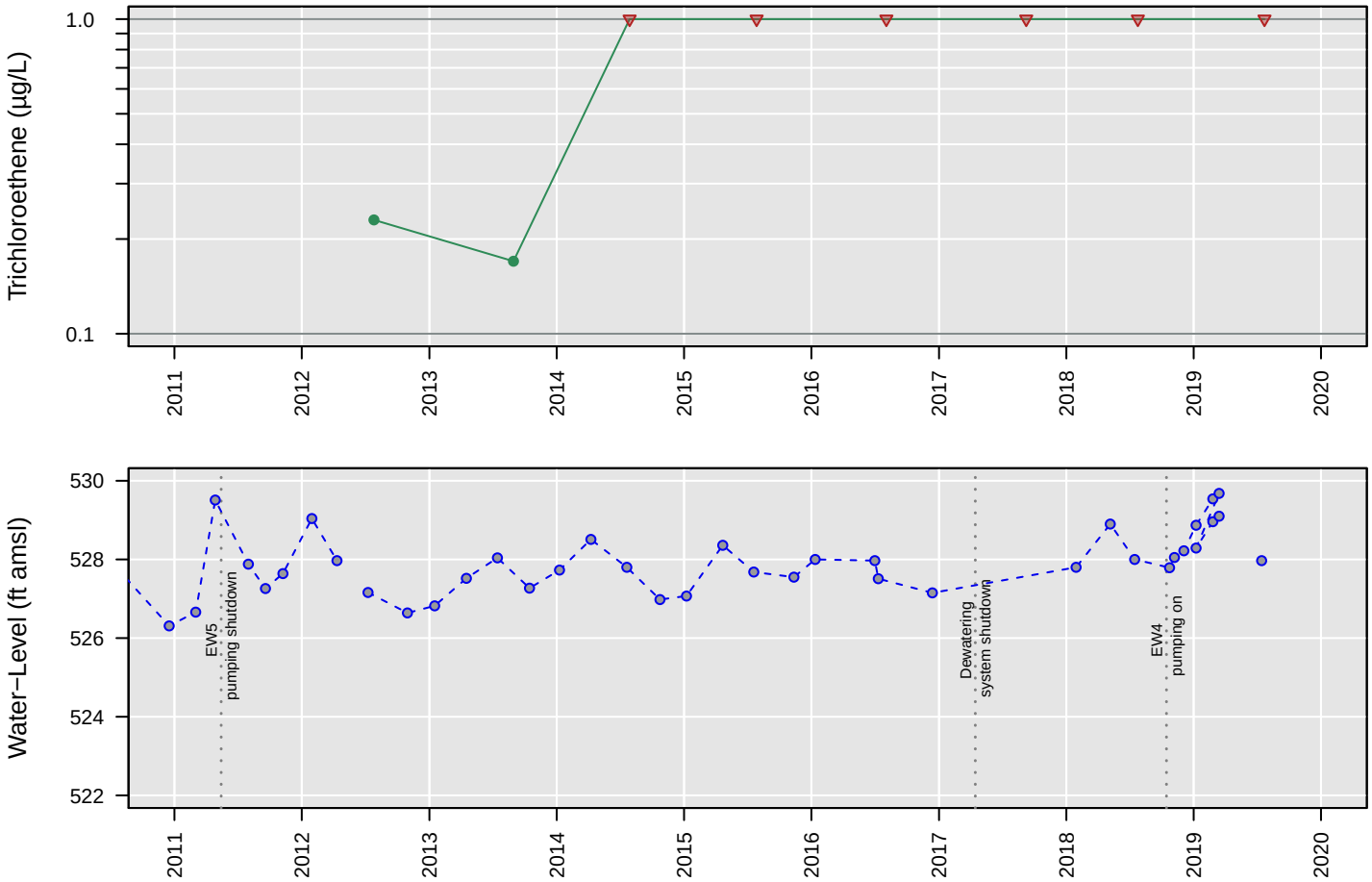
Trend Not Significant

Regression Statistics for January 2017 to January 2018
Geometric Mean: 10 µg/L
UCL: 13 µg/L
LCL: 8.4 µg/L

MW105

Trichloroethene

Number of Comparisons: 8
Percent NDs: 75%

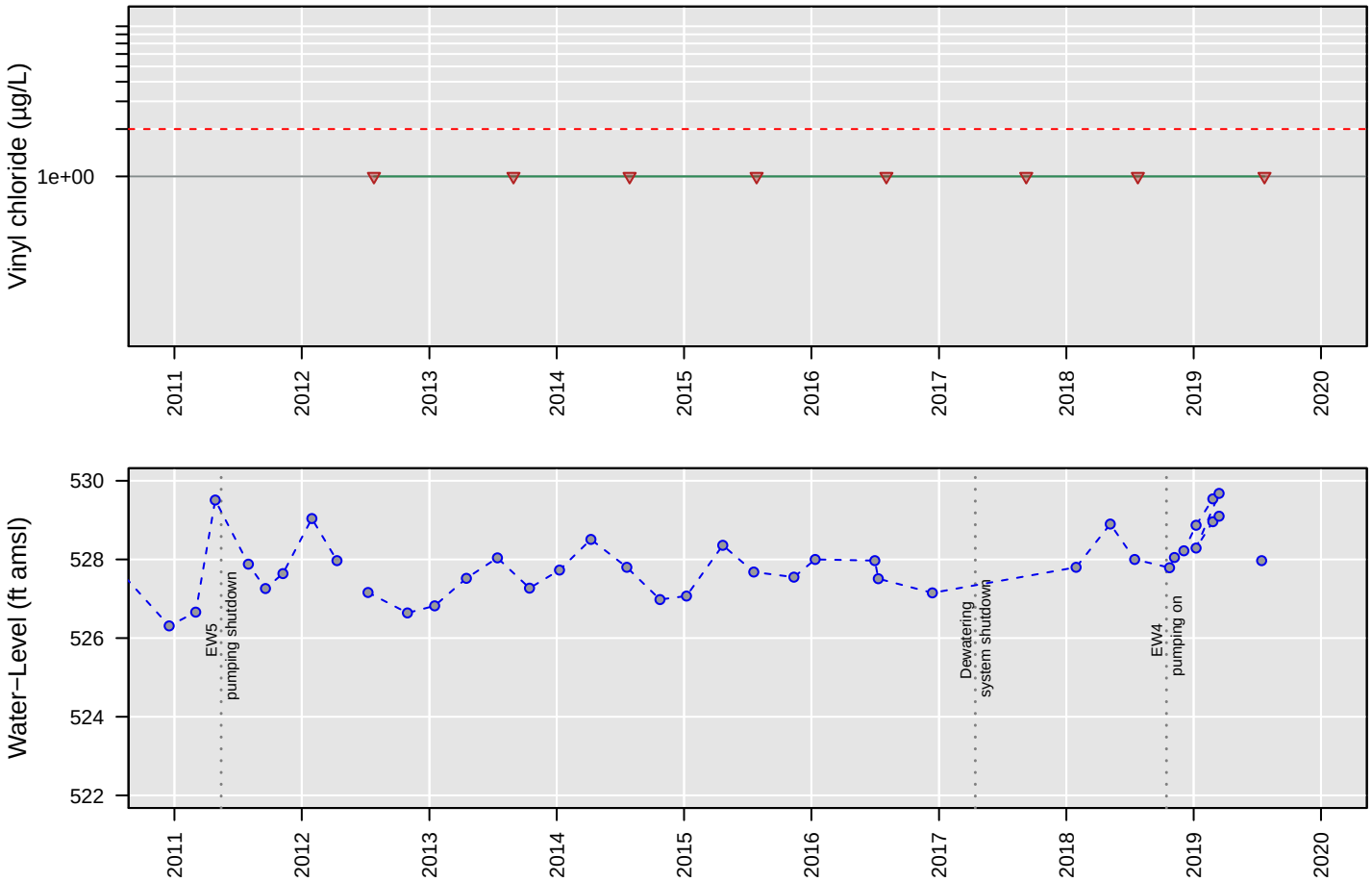


No Analysis Performed

MW105

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 100%



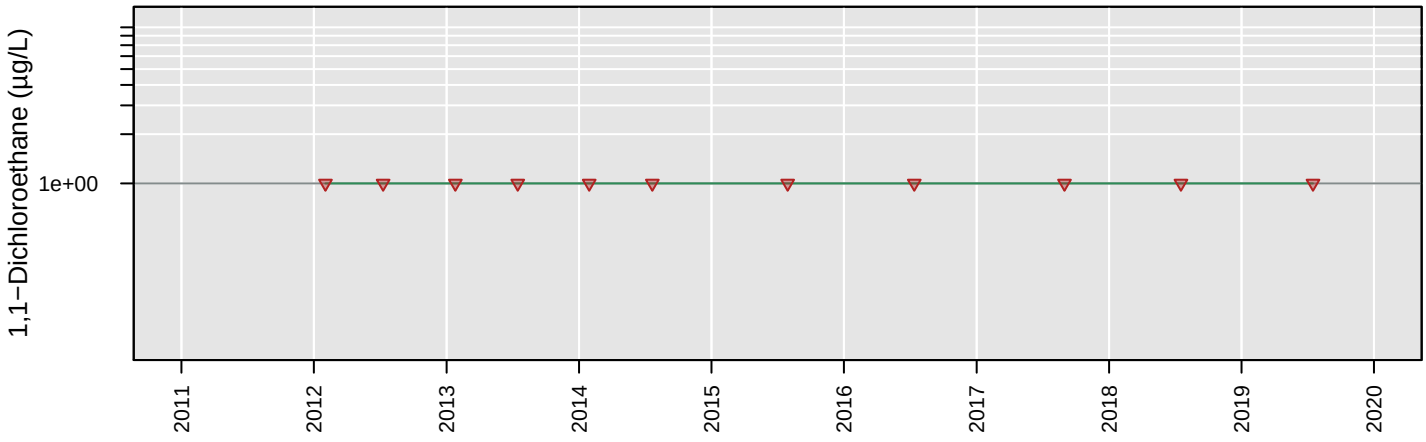
No Analysis Performed

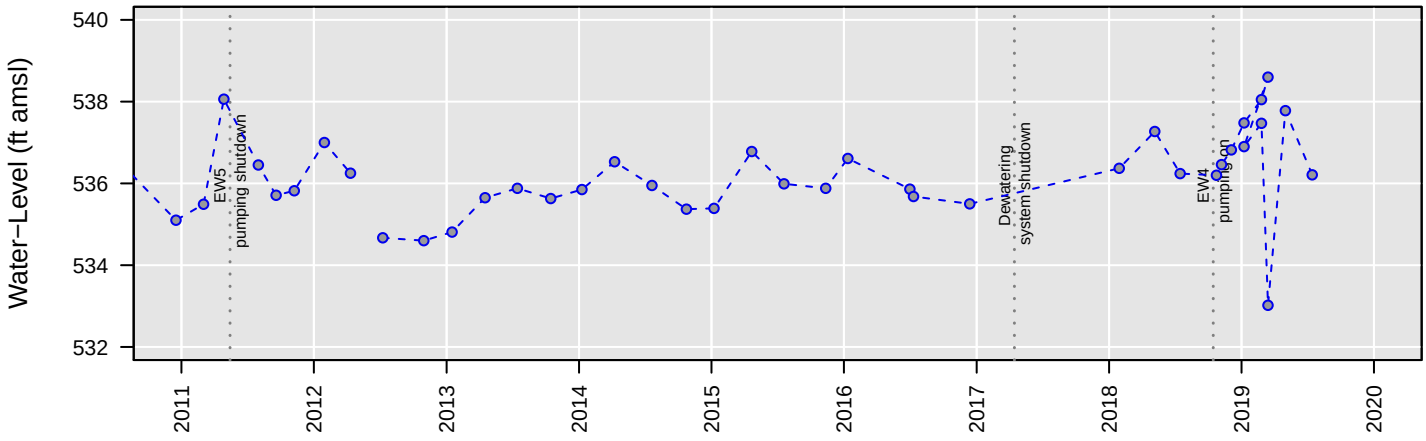
MW106

1,1−Dichloroethane

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





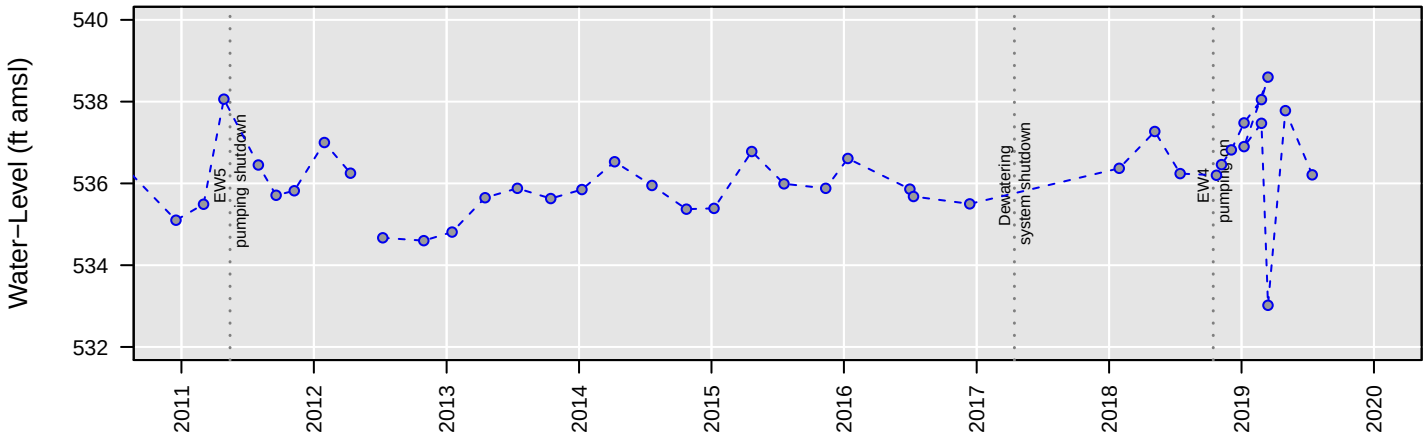
No Analysis Performed

MW106

1,2−Dichloroethane

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



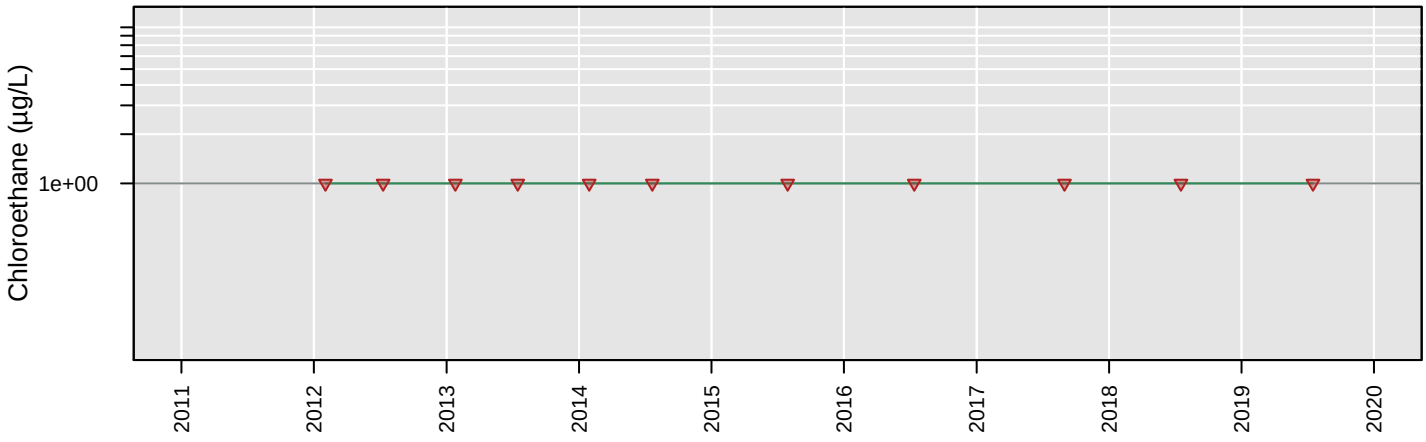
No Analysis Performed

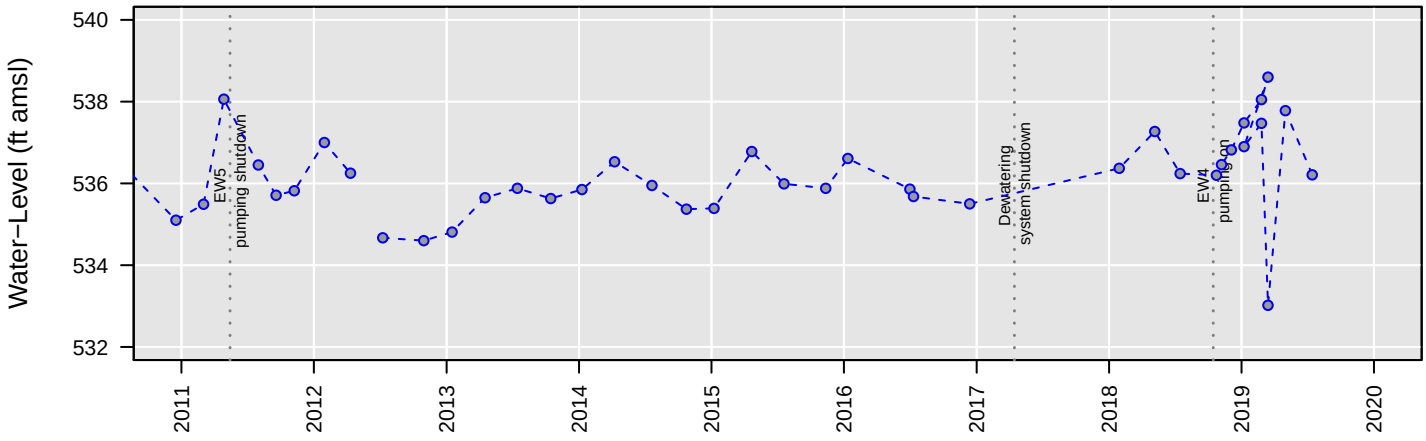
MW106

Chloroethane

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





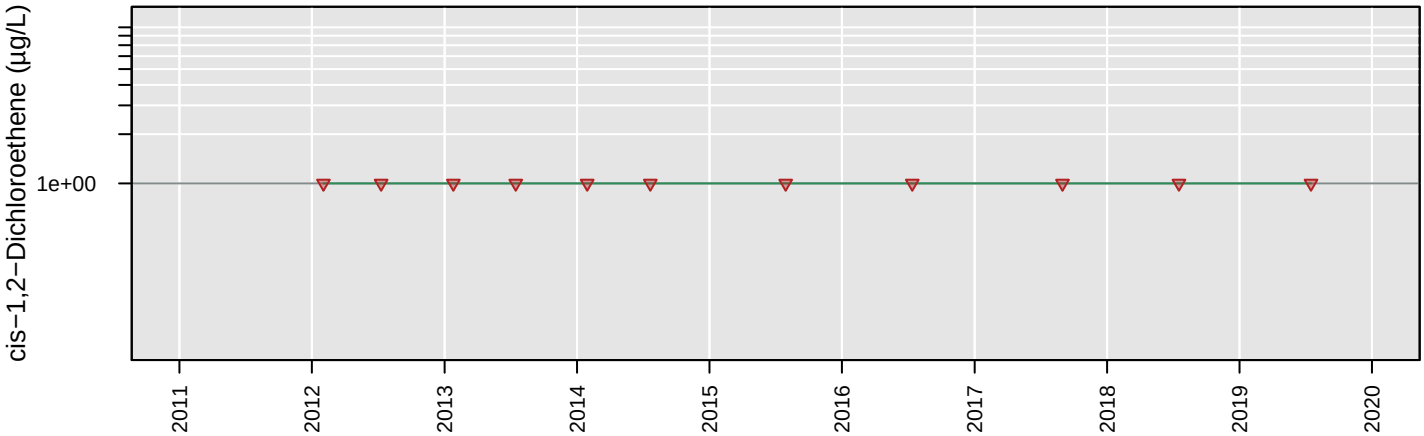
No Analysis Performed

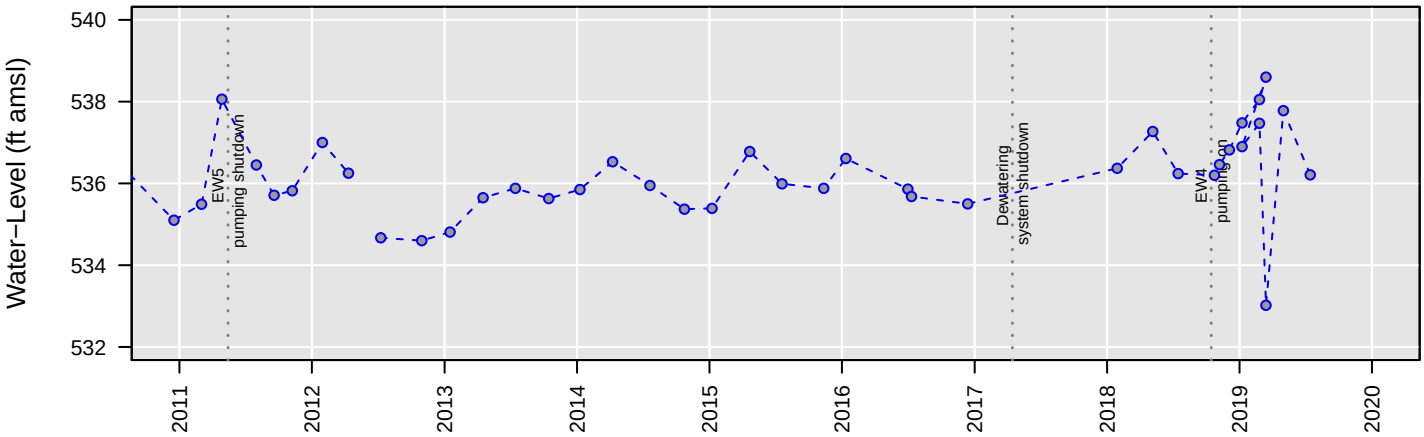
MW106

cis−1,2−Dichloroethene

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





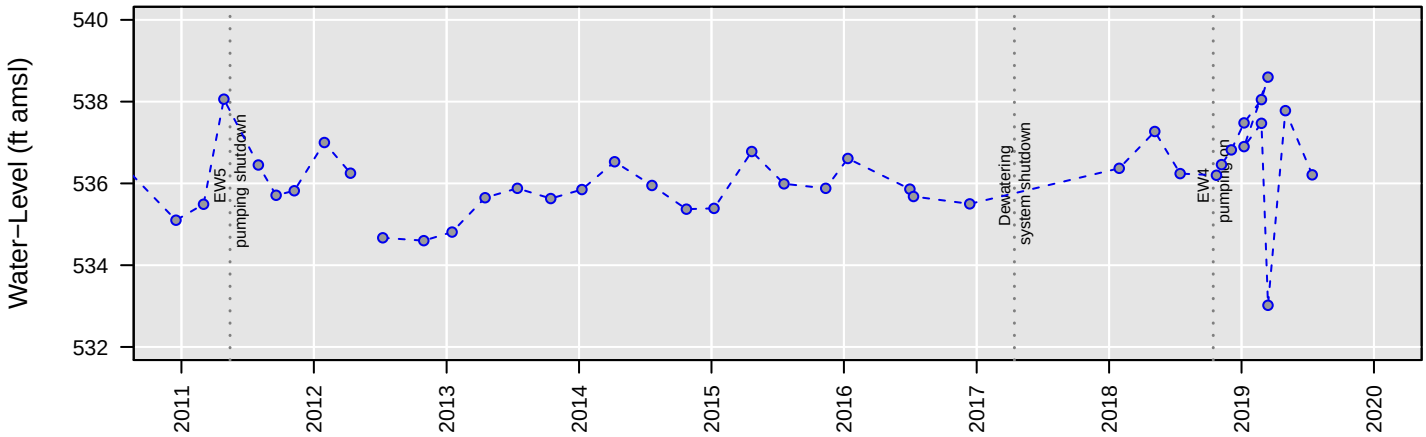
No Analysis Performed

MW106

Tetrachloroethene

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

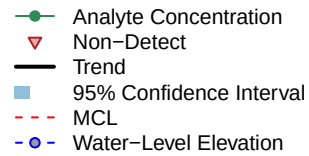


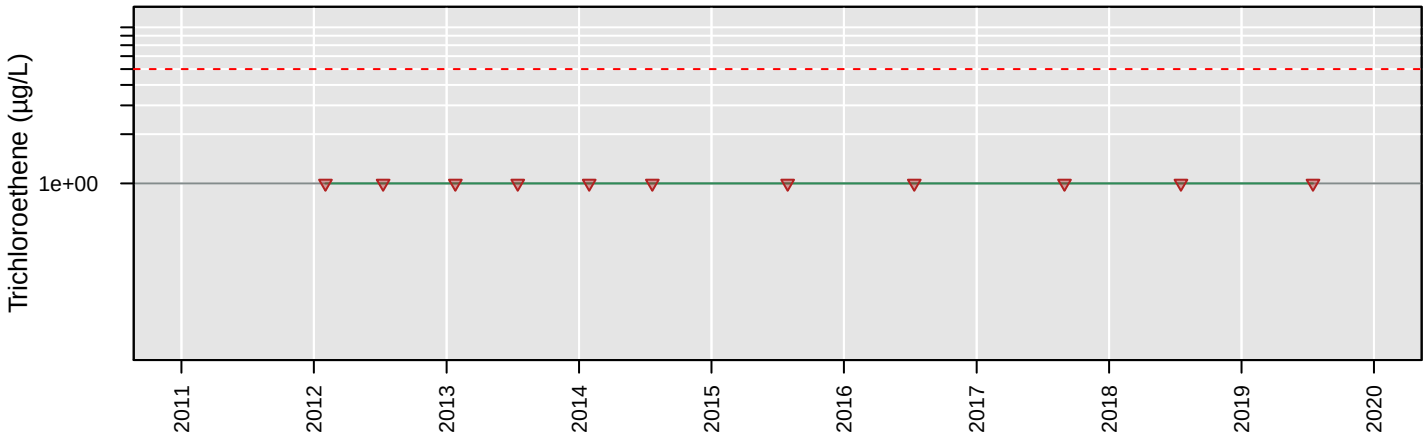
No Analysis Performed

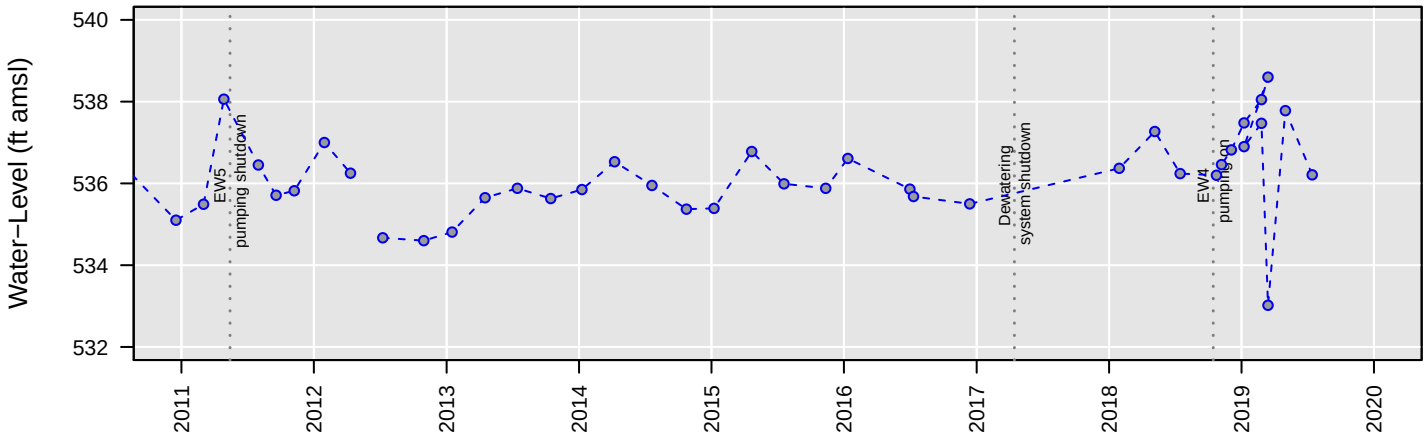
MW106

Trichloroethene

Number of Comparisons: 11
Percent NDs: 100%







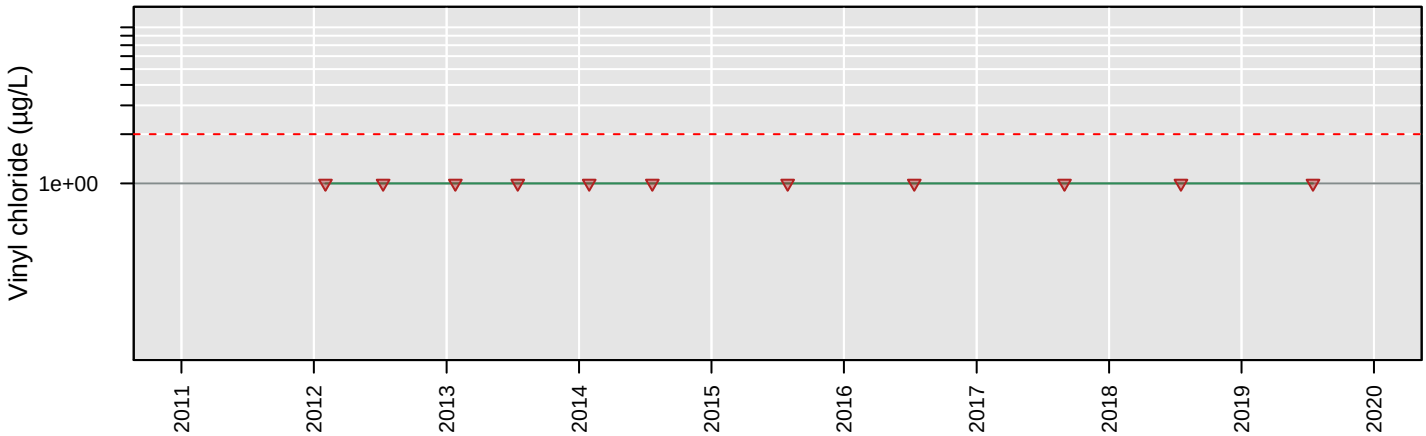
No Analysis Performed

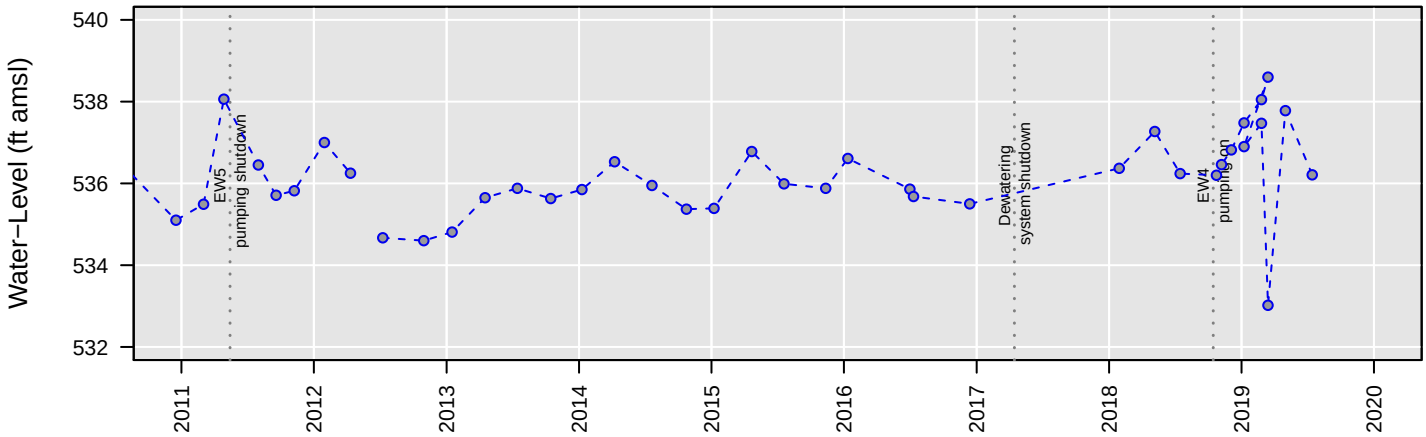
MW106

Vinyl chloride

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



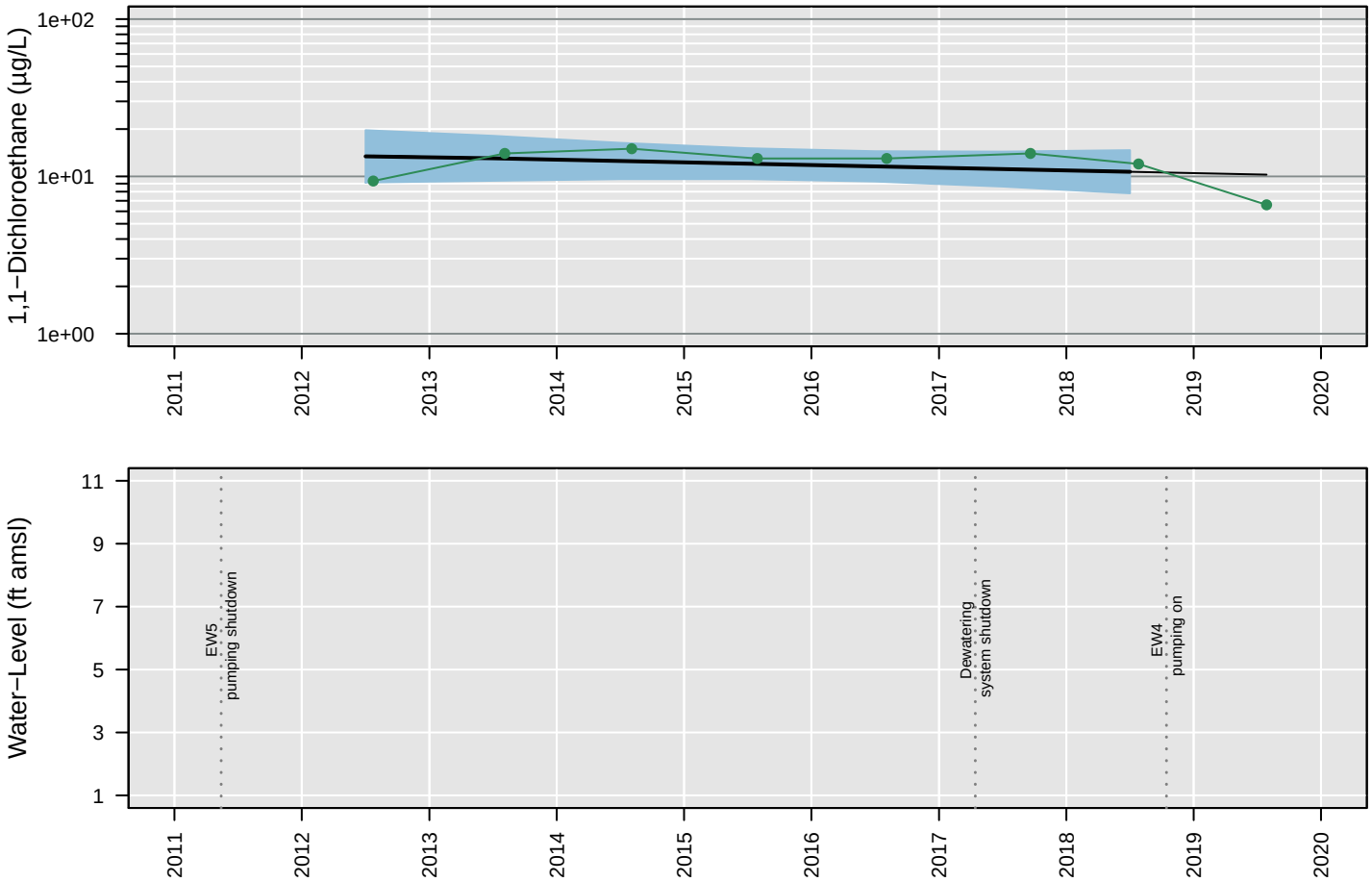


No Analysis Performed

MW107

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

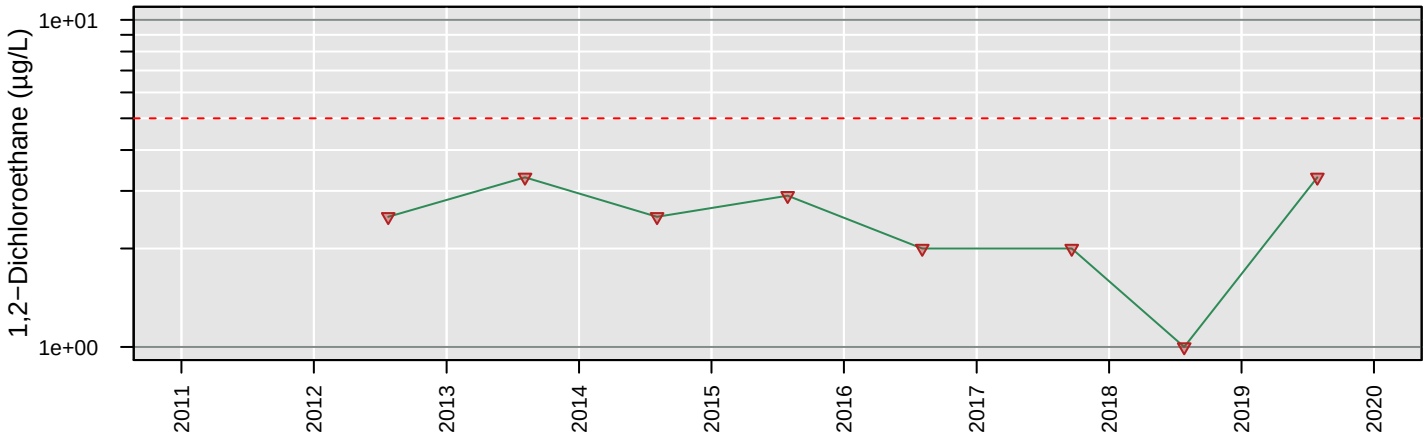
Regression Statistics for January 2018 to January 2019
Geometric Mean: 11 µg/L
UCL: 15 µg/L
LCL: 7.8 µg/L

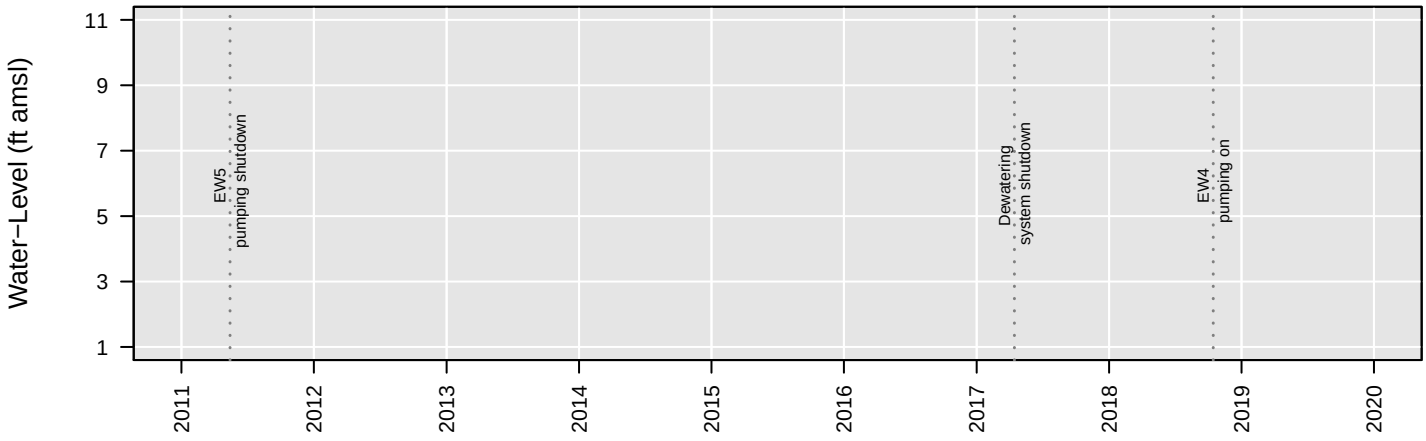
MW107

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





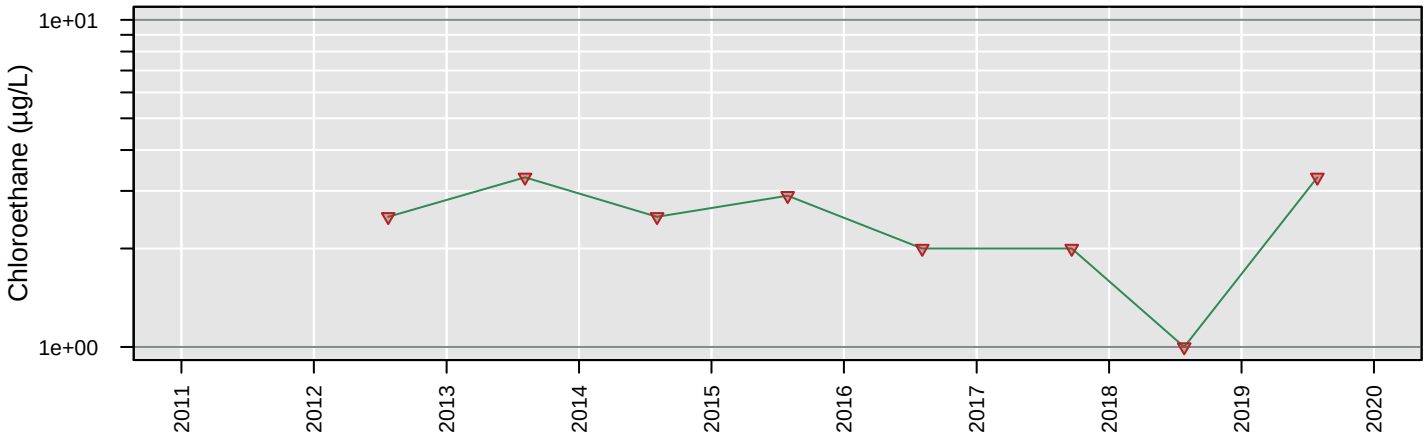
No Analysis Performed

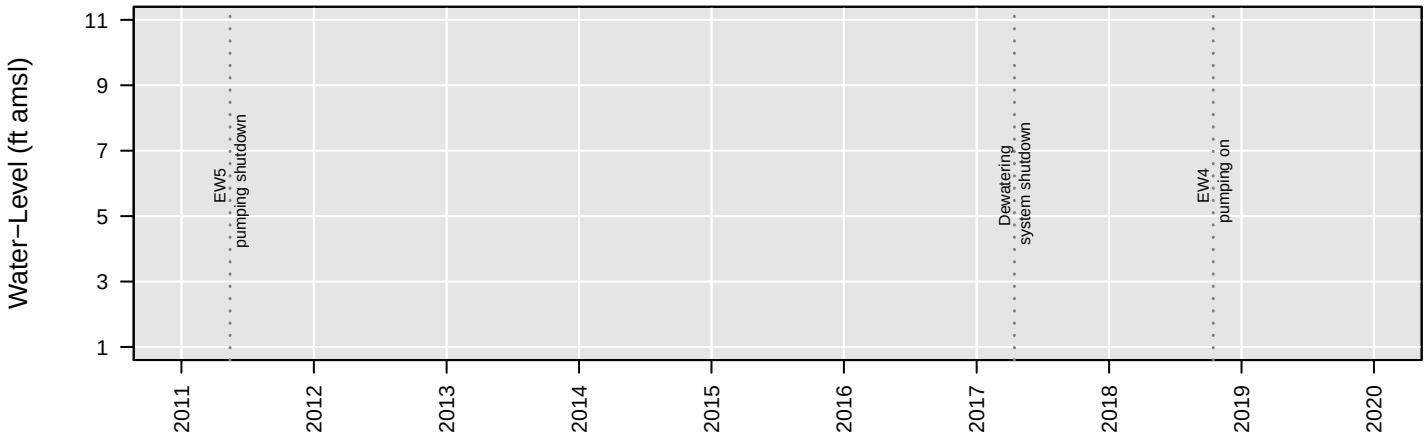
MW107

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





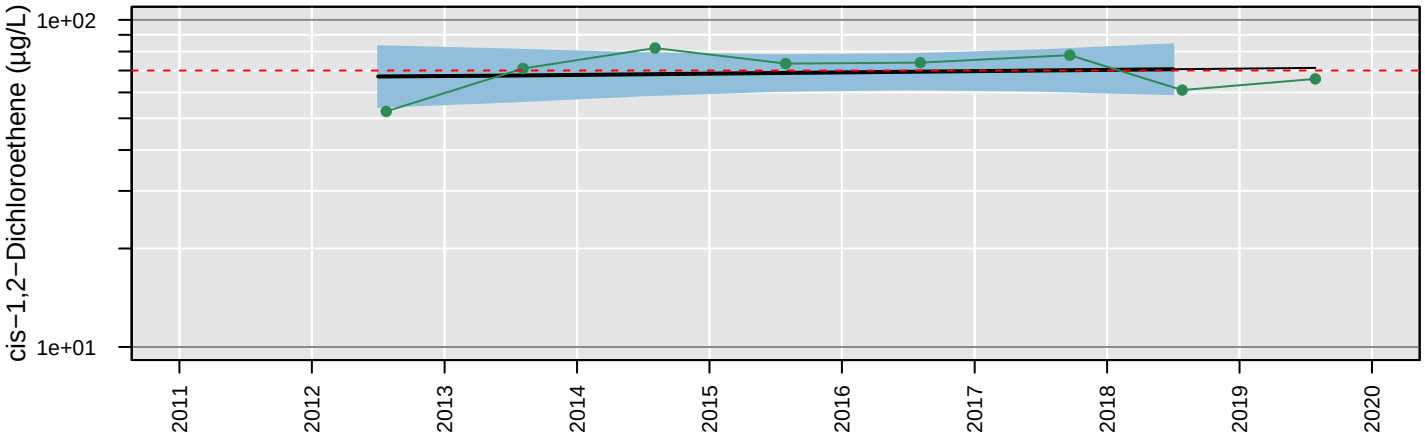
No Analysis Performed

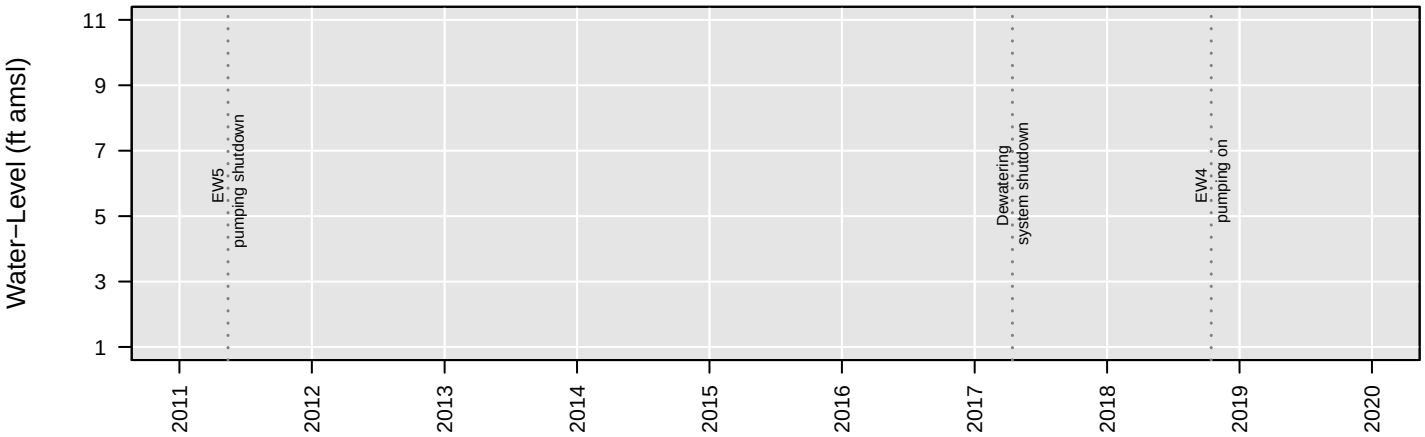
MW107

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

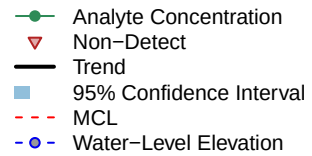
Trend Not Significant

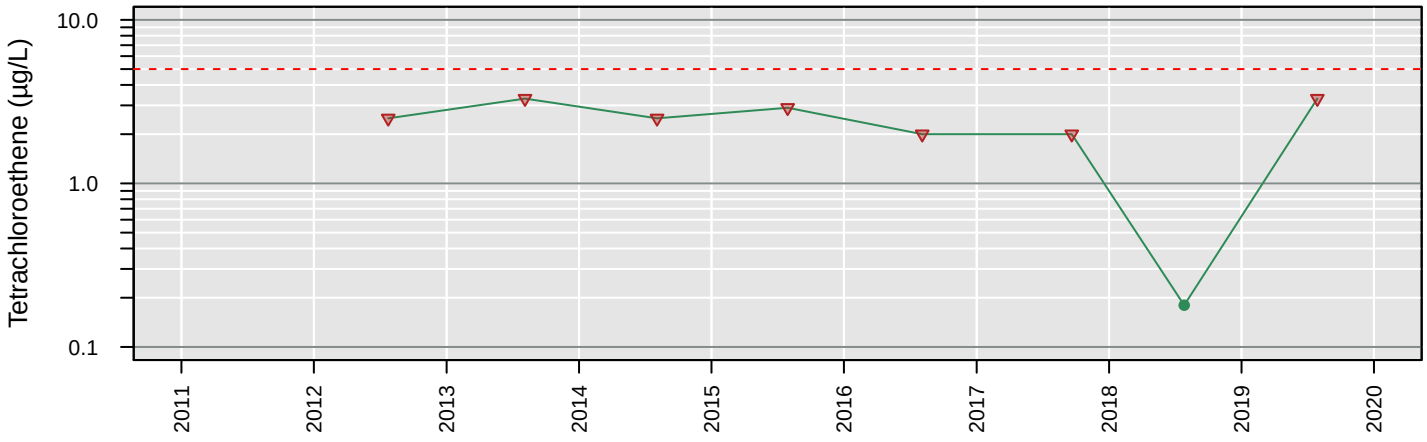
Regression Statistics for January 2018 to January 2019
Geometric Mean: 71 µg/L
UCL: 84 µg/L
LCL: 59 µg/L

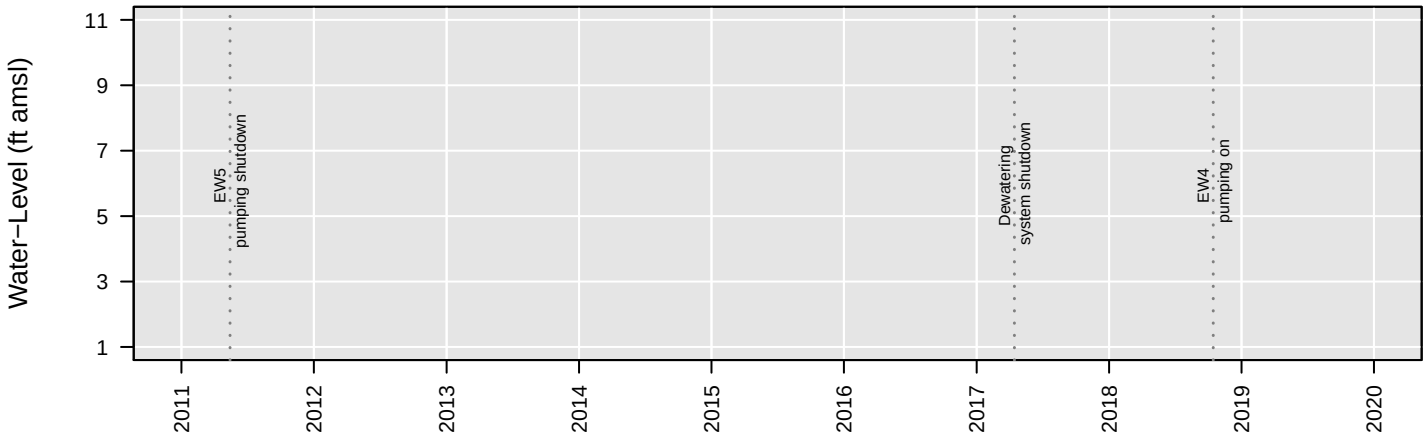
MW107

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 88%







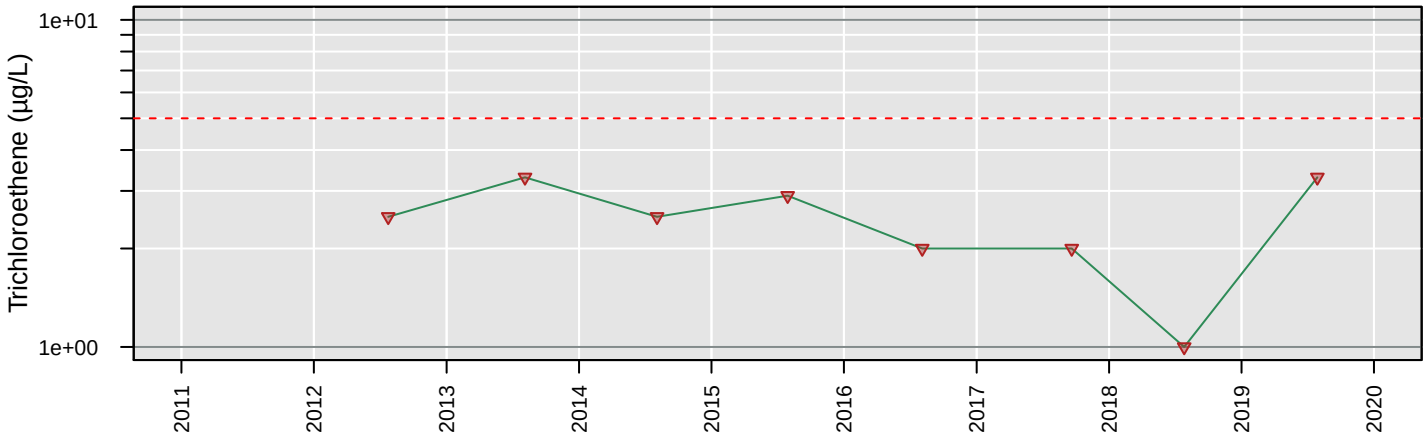
No Analysis Performed

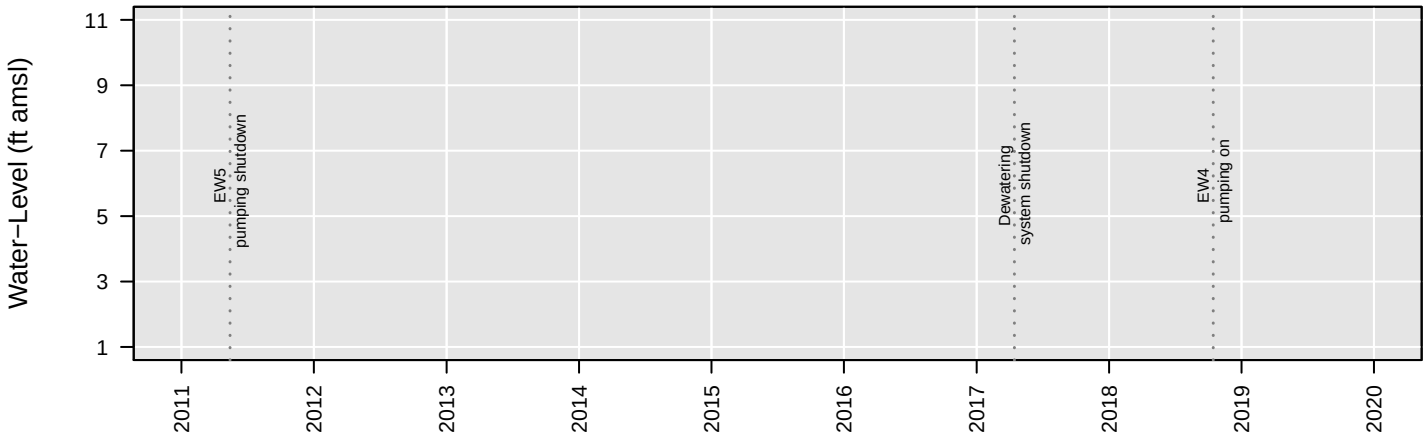
MW107

Trichloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





No Analysis Performed

MW107

Vinyl chloride

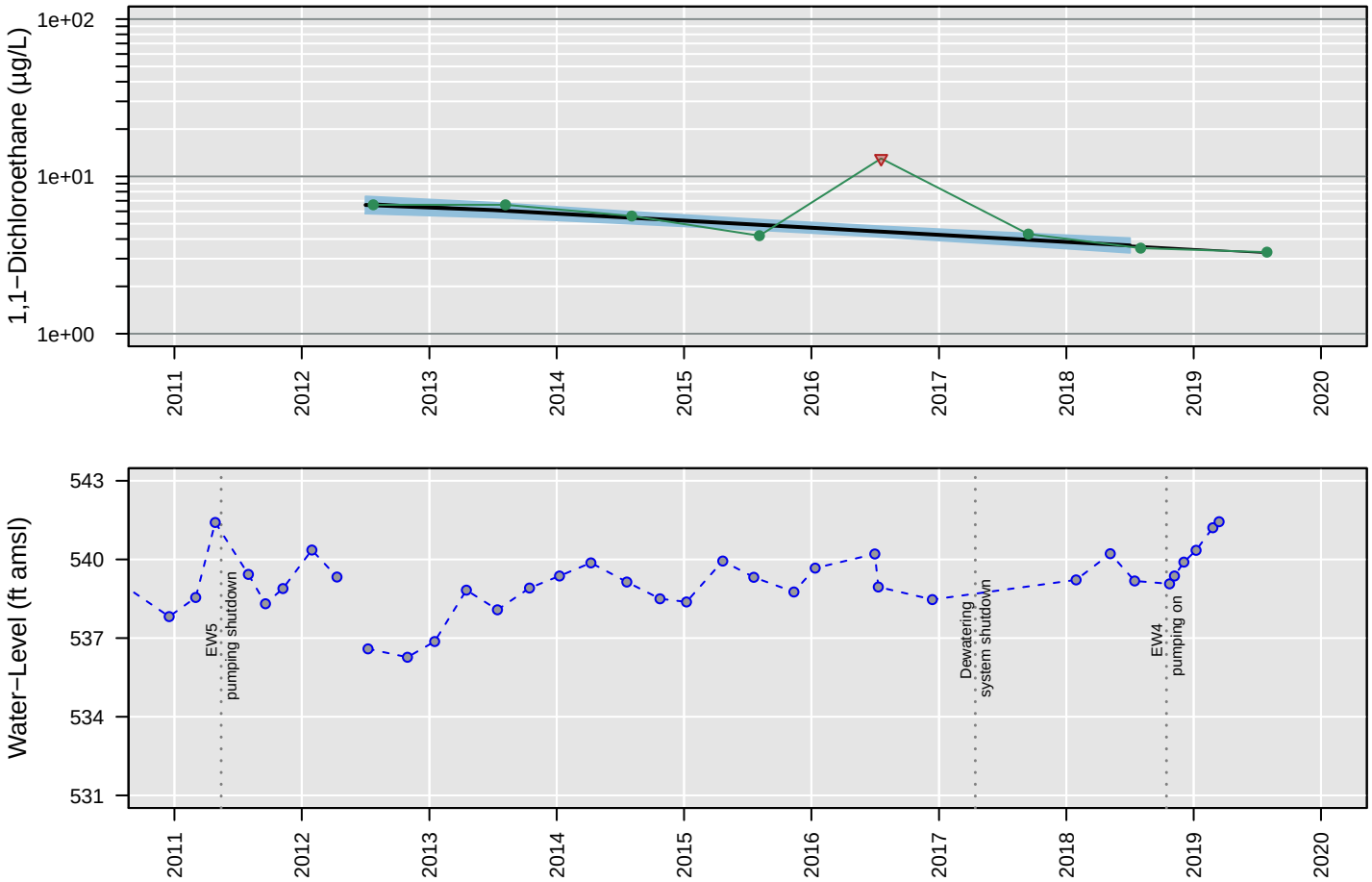
Number of Comparisons: 8
Percent NDs: 88%

No Analysis Performed

MW68

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 12%



Censored Regression (Tobit) Model

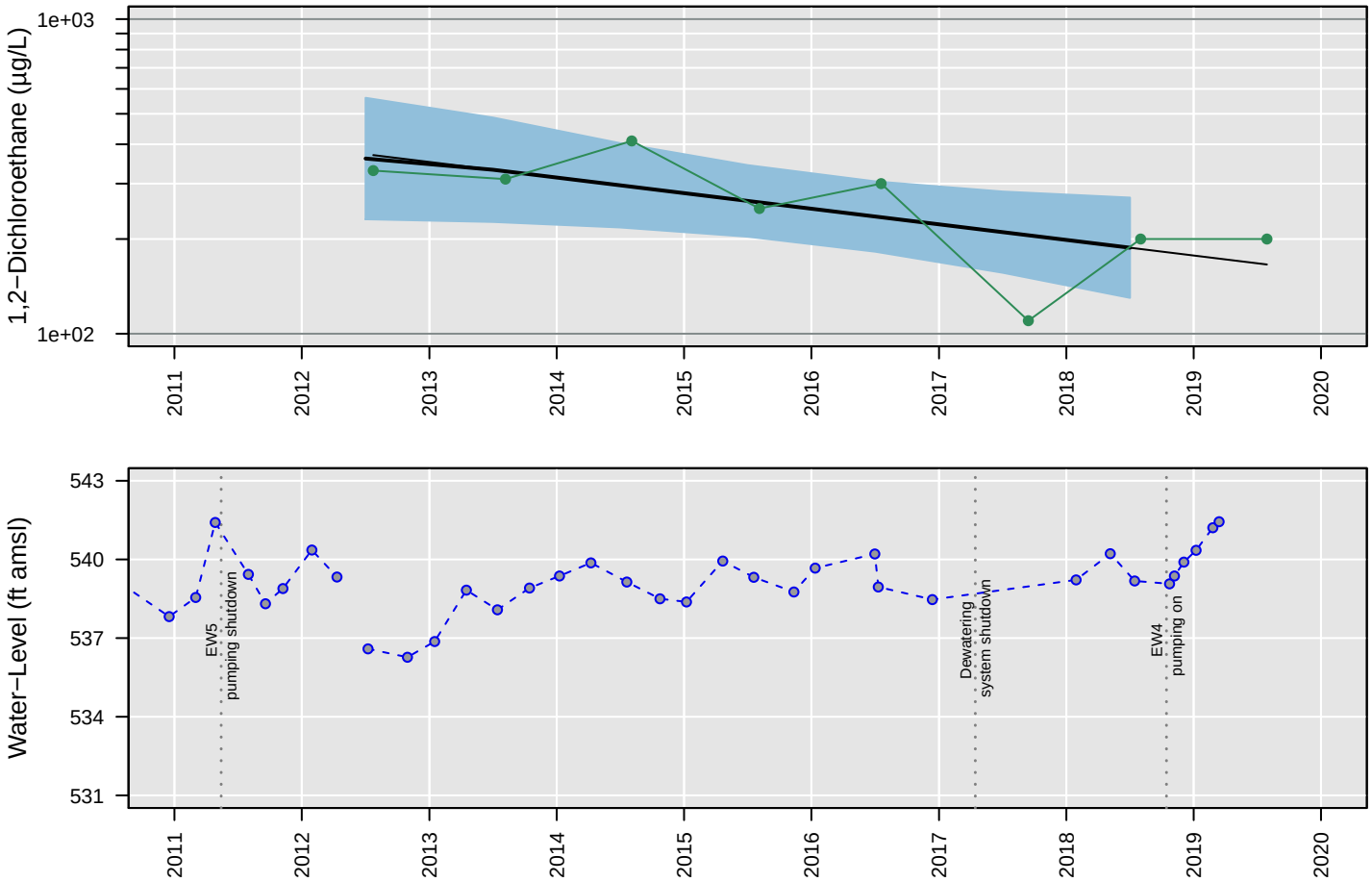
ln Conc. = −0.00028 (+/− 0.000033)*Date + 6.3 (+/− 0.55)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.6 µg/L
UCL: 4.1 µg/L
LCL: 3.3 µg/L

MW68

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

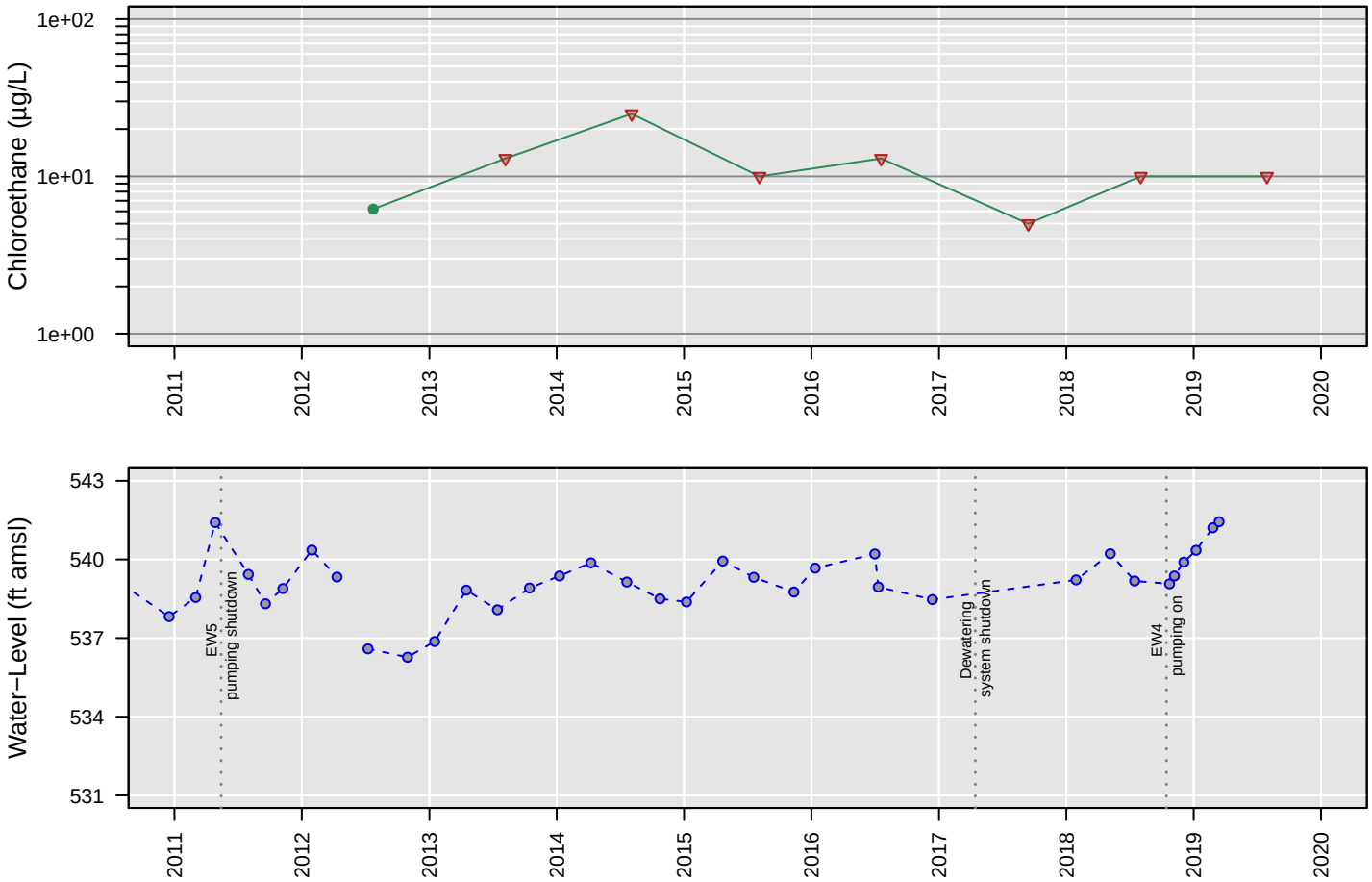
ln Conc. = −0.00031 (+/− 0.00012)*Date + 11 (+/− 2)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 190 µg/L
UCL: 270 µg/L
LCL: 130 µg/L

MW68

Chloroethane

Number of Comparisons: 8
Percent NDs: 88%

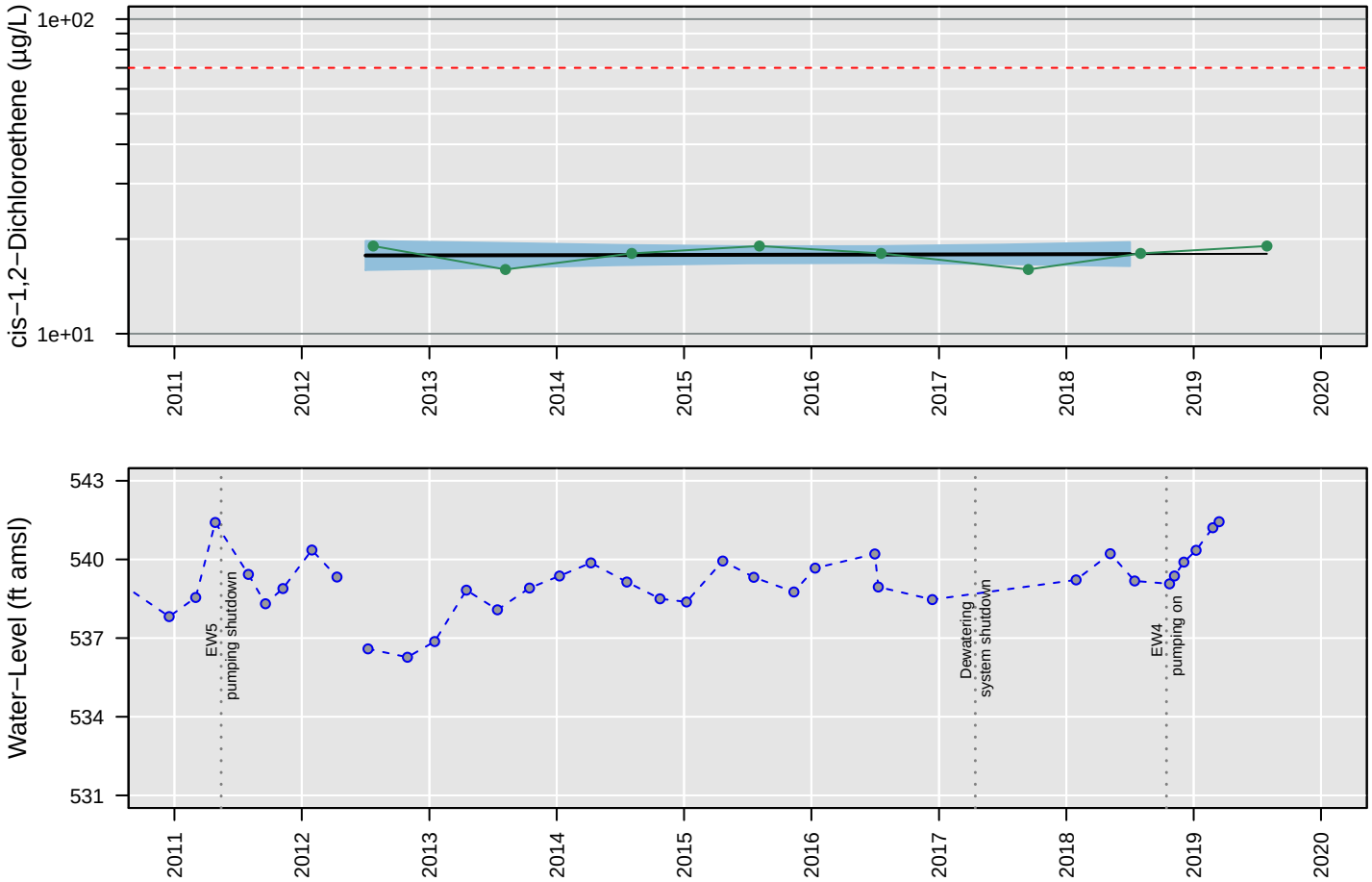


No Analysis Performed

MW68

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

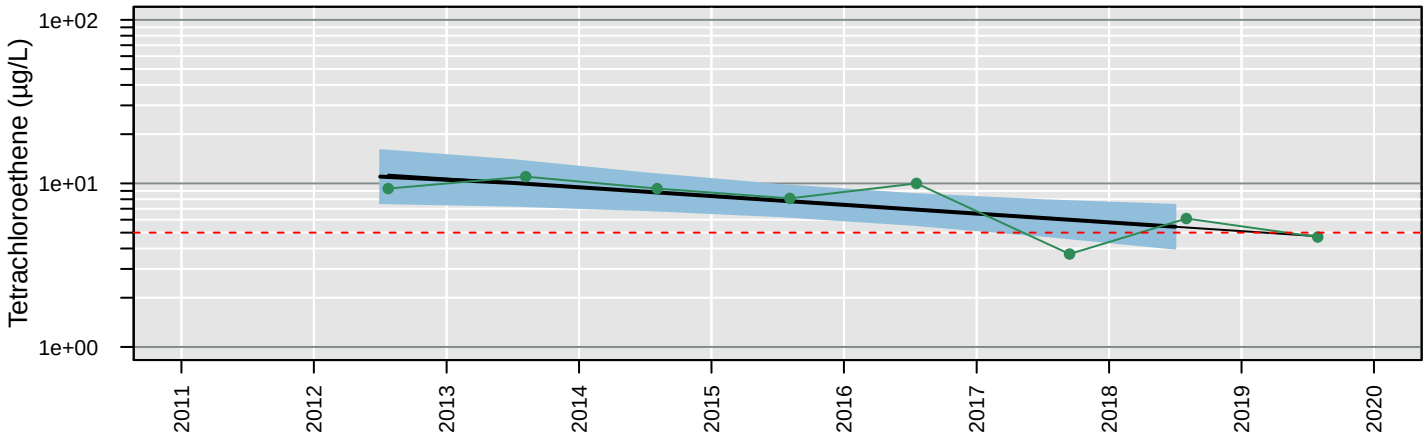
Regression Statistics for January 2018 to January 2019
Geometric Mean: 18 µg/L
UCL: 20 µg/L
LCL: 16 µg/L

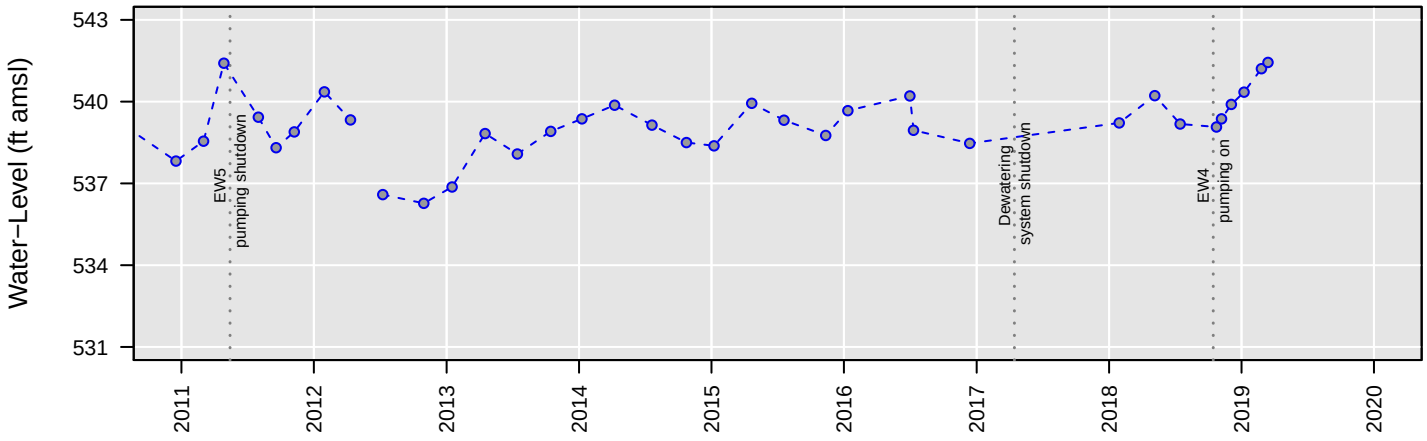
MW68

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

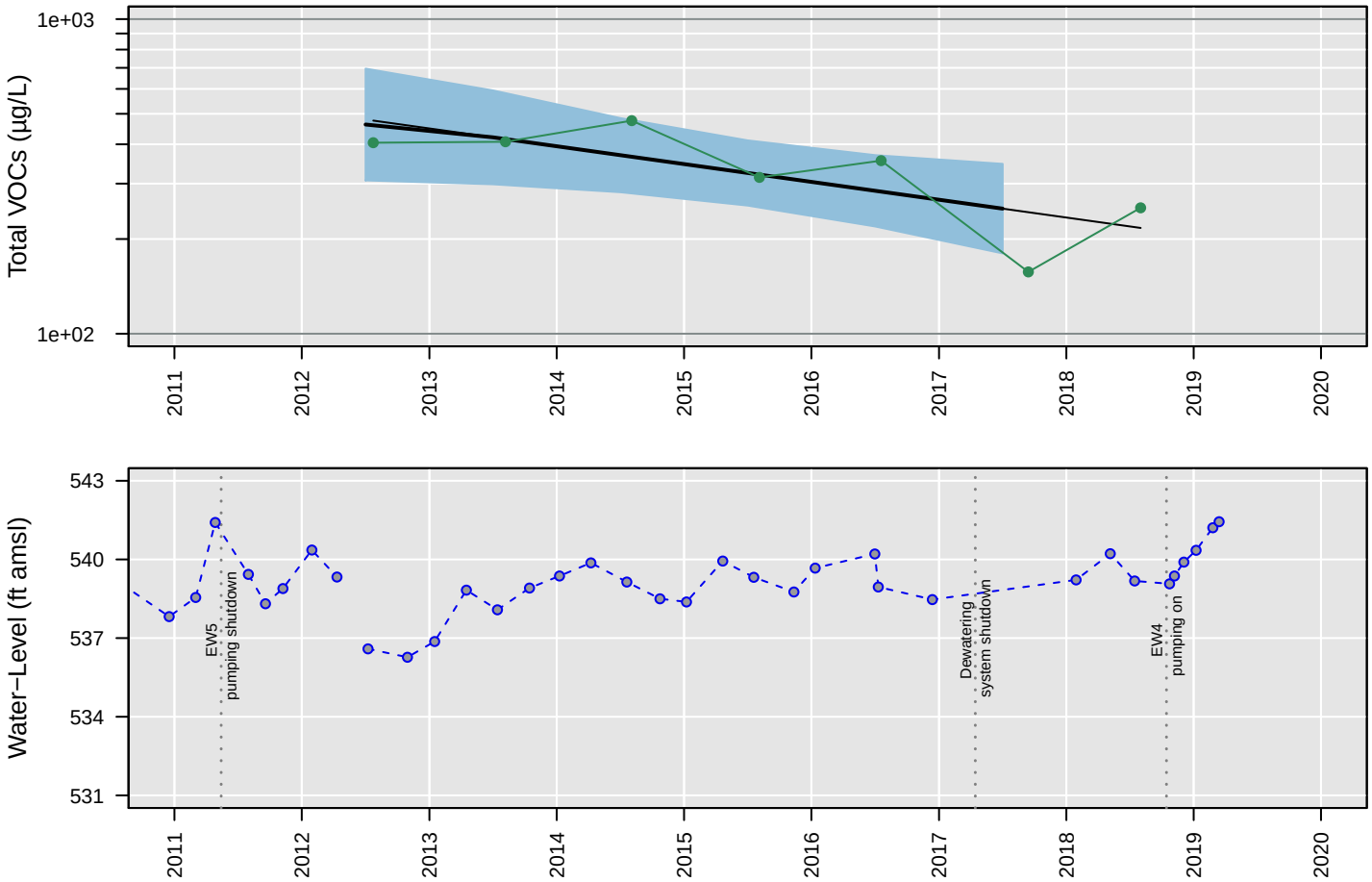
ln Conc. = −0.00034 (+/− 0.000098)*Date + 7.7 (+/− 1.7)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.4 µg/L
UCL: 7.4 µg/L
LCL: 4 µg/L

MW68

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

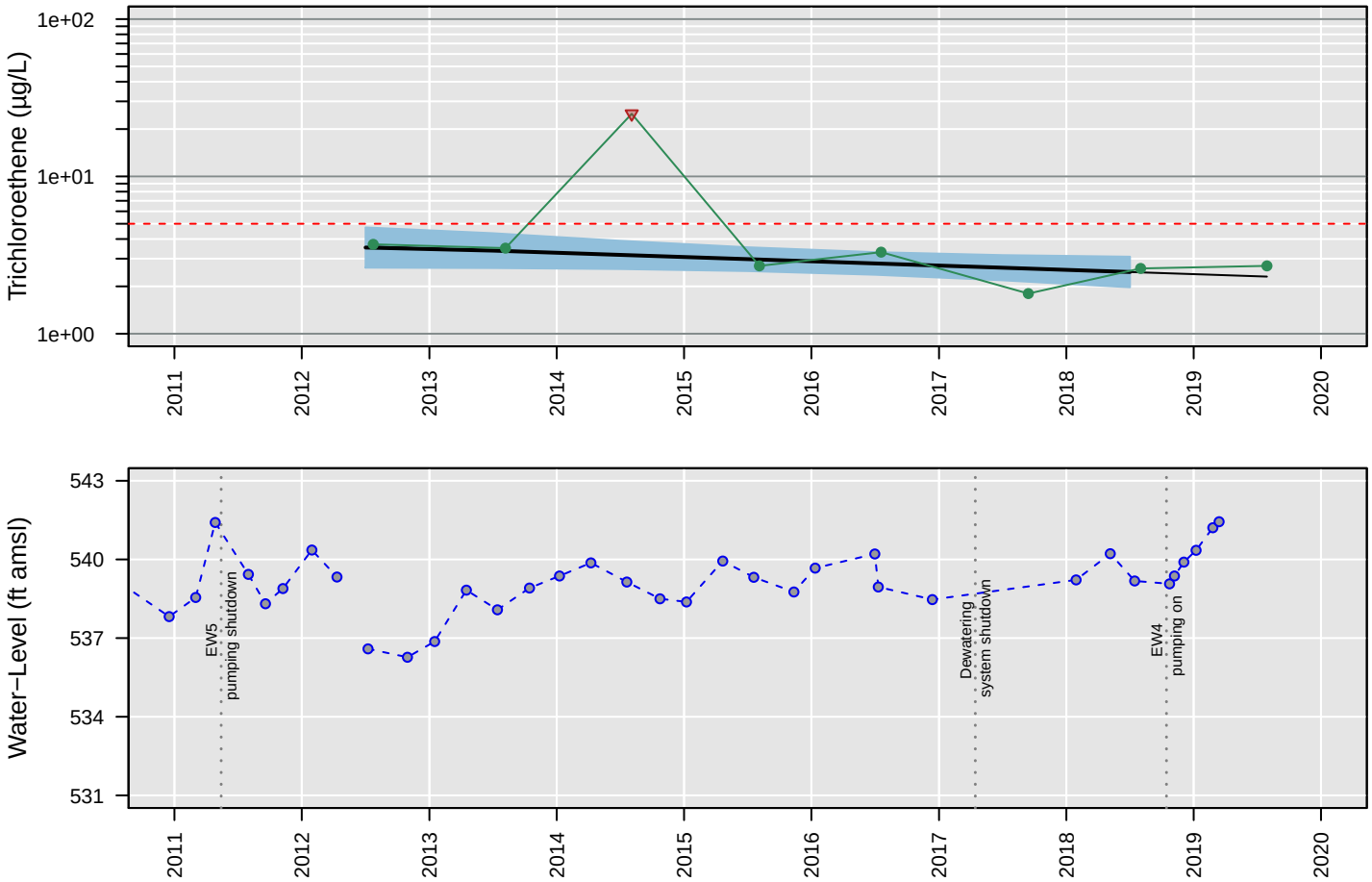
ln Conc. = −0.00036 (+/− 0.00012)*Date + 12 (+/− 1.9)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 250 µg/L
UCL: 350 µg/L
LCL: 180 µg/L

MW68

Trichloroethene

Number of Comparisons: 8
Percent NDs: 12%



Censored Regression (Tobit) Model

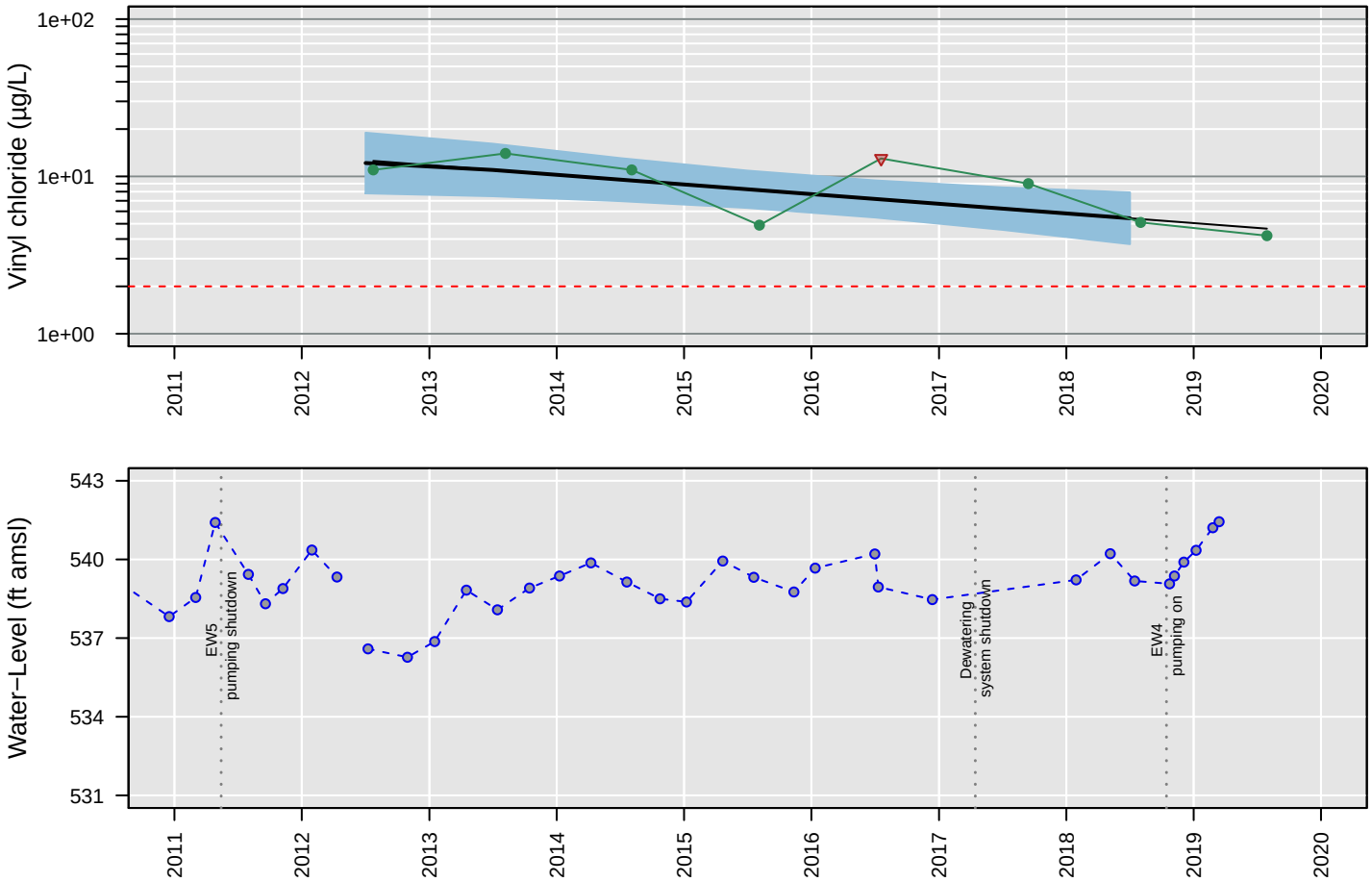
ln Conc. = −0.00017 (+/− 0.000074)*Date + 3.9 (+/− 1.2)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.5 µg/L
UCL: 3.1 µg/L
LCL: 2 µg/L

MW68

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 12%



Censored Regression (Tobit) Model

ln Conc. = −0.00039 (+/− 0.00012)*Date + 8.5 (+/− 2)

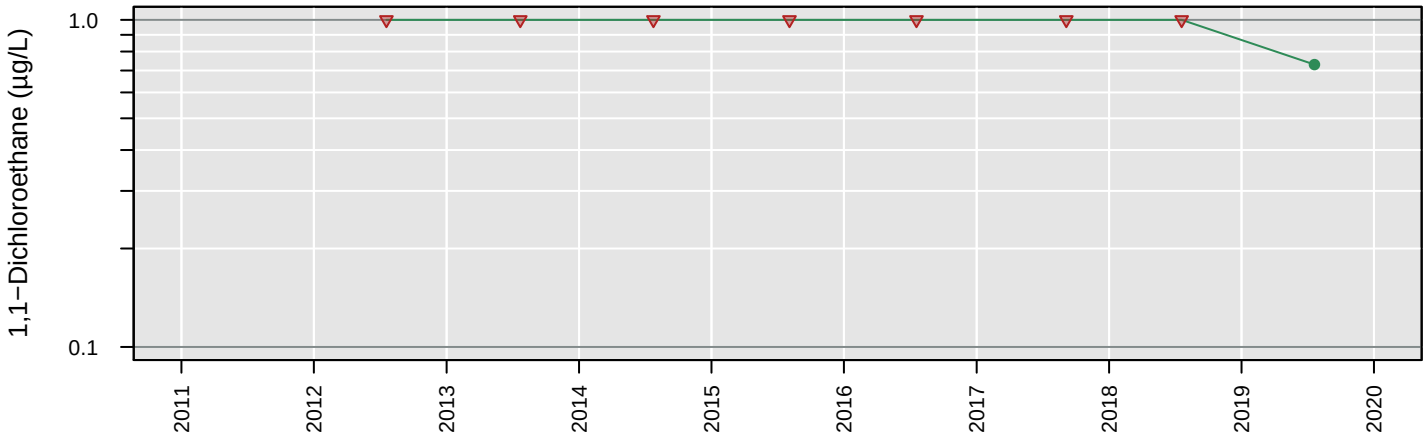
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.4 µg/L
UCL: 7.9 µg/L
LCL: 3.7 µg/L

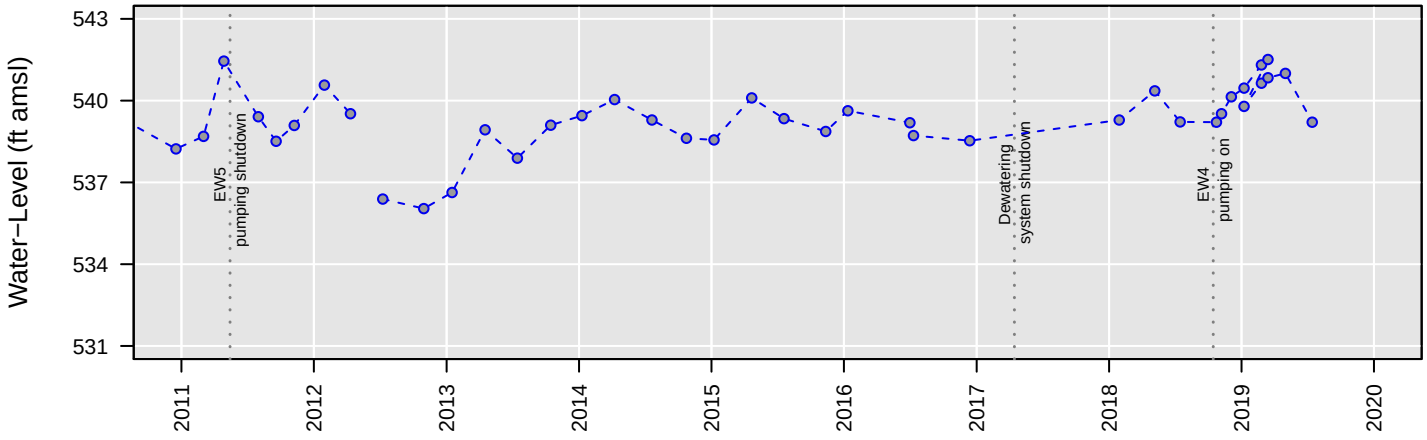
MW69

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 88%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



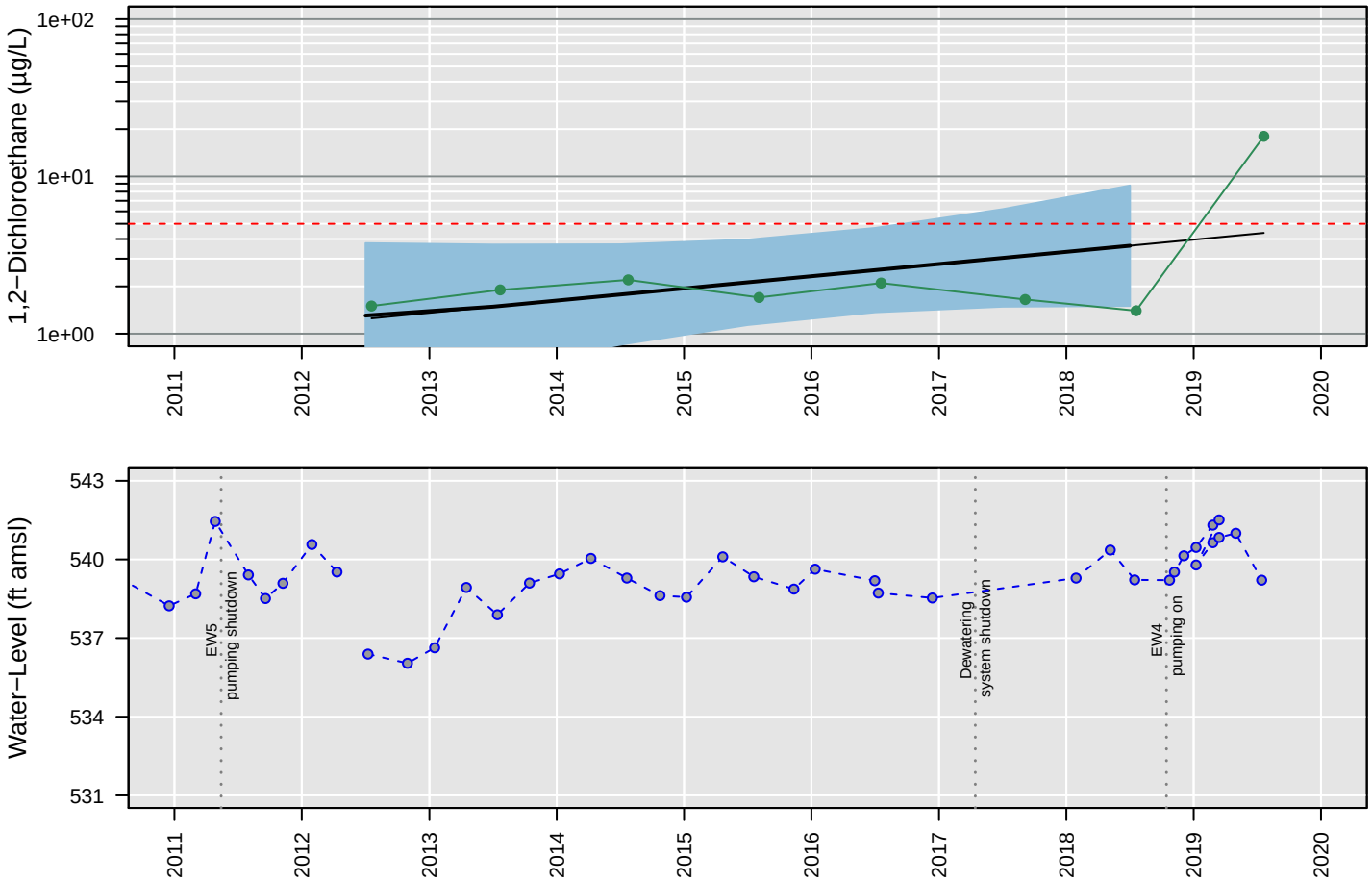


No Analysis Performed

MW69

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

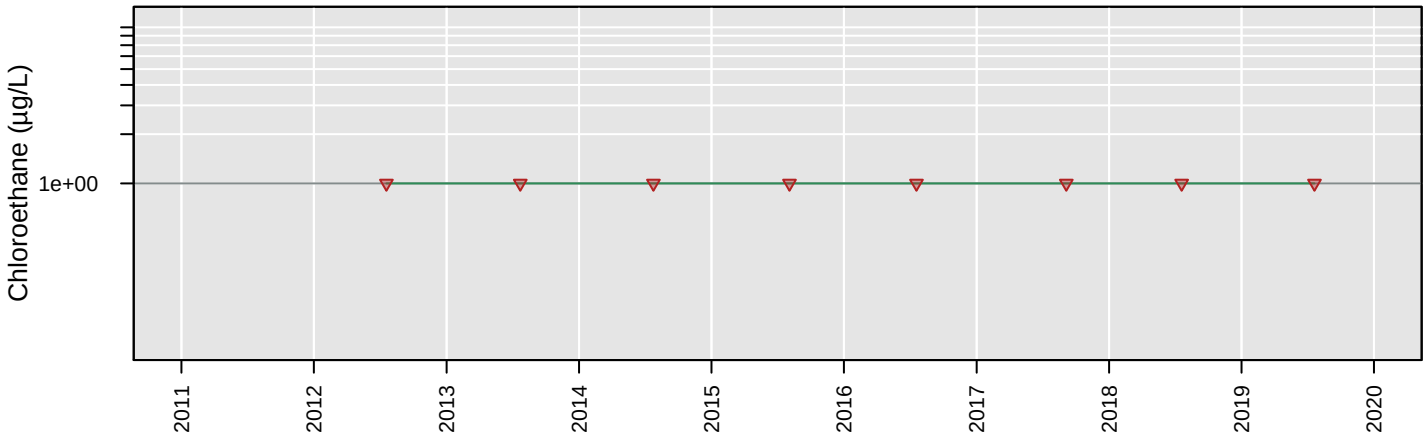
Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.6 µg/L
UCL: 8.8 µg/L
LCL: 1.5 µg/L

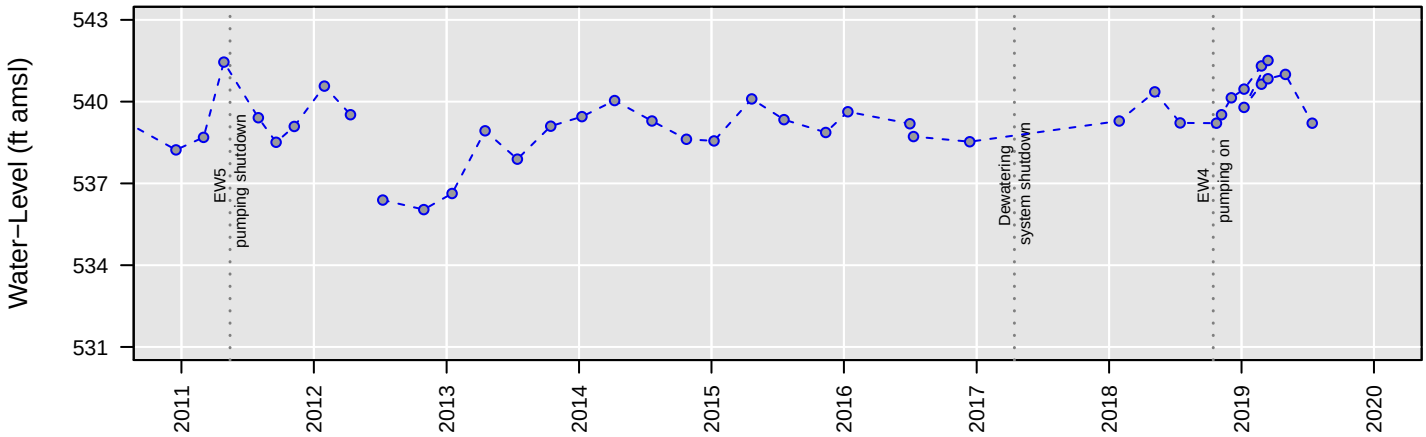
MW69

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



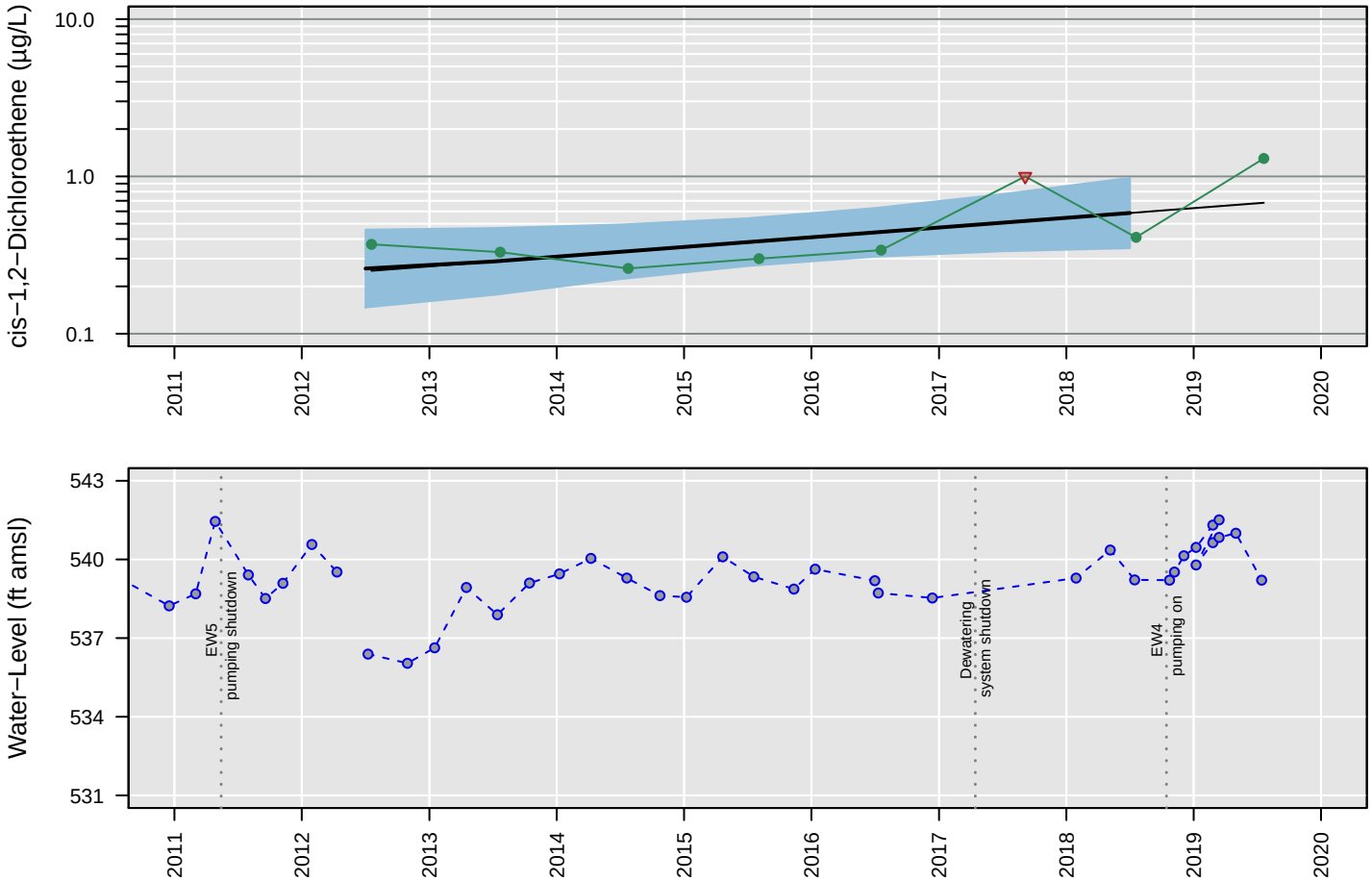


No Analysis Performed

MW69

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 12%



Censored Regression (Tobit) Model

ln Conc. = 0.00039 (+/− 0.00016)*Date + −7.4 (+/− 2.6)

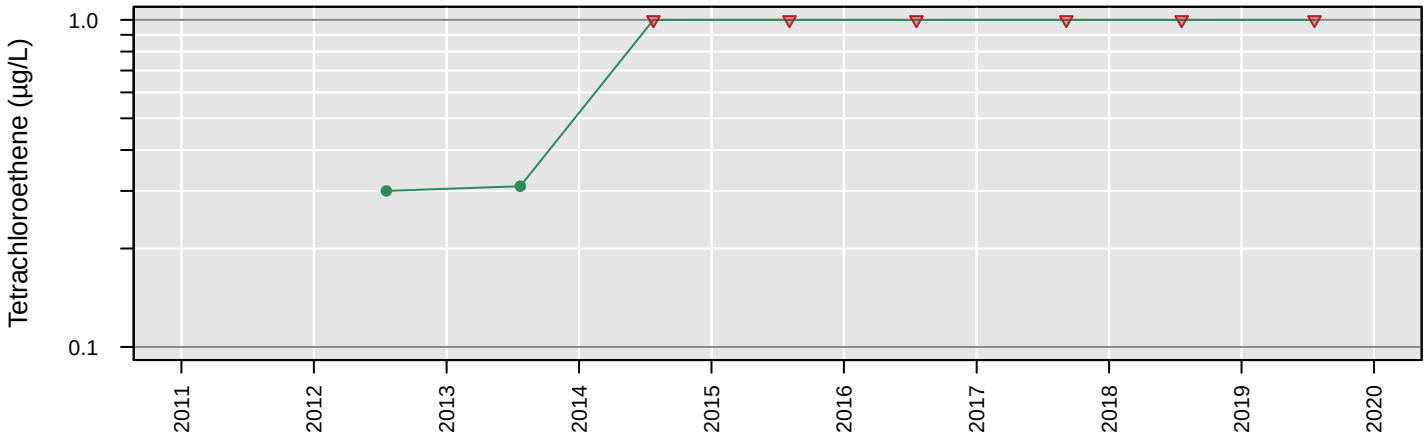
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.59 µg/L
UCL: 0.98 µg/L
LCL: 0.35 µg/L

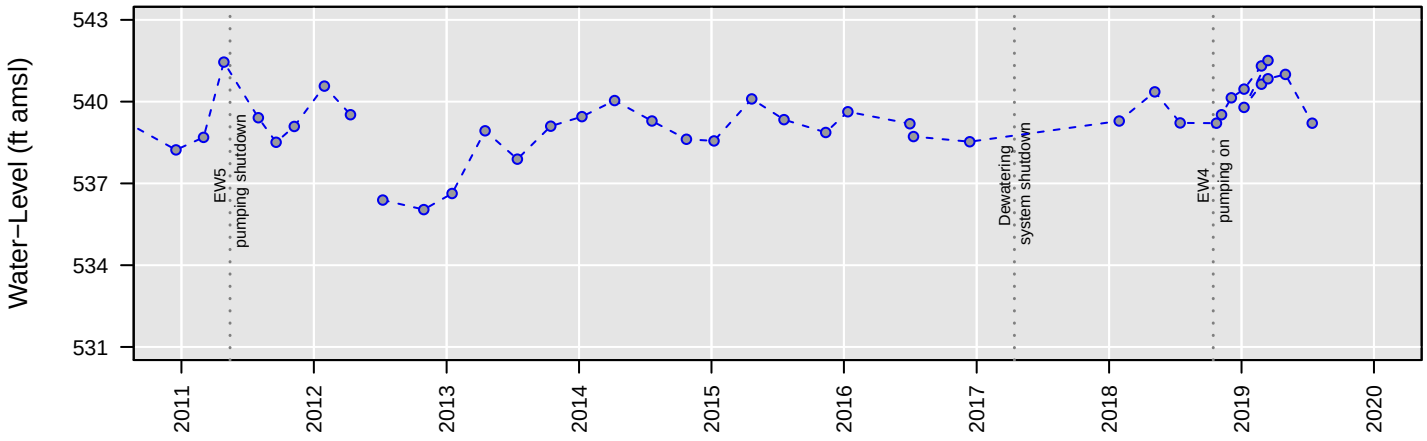
MW69

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 75%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



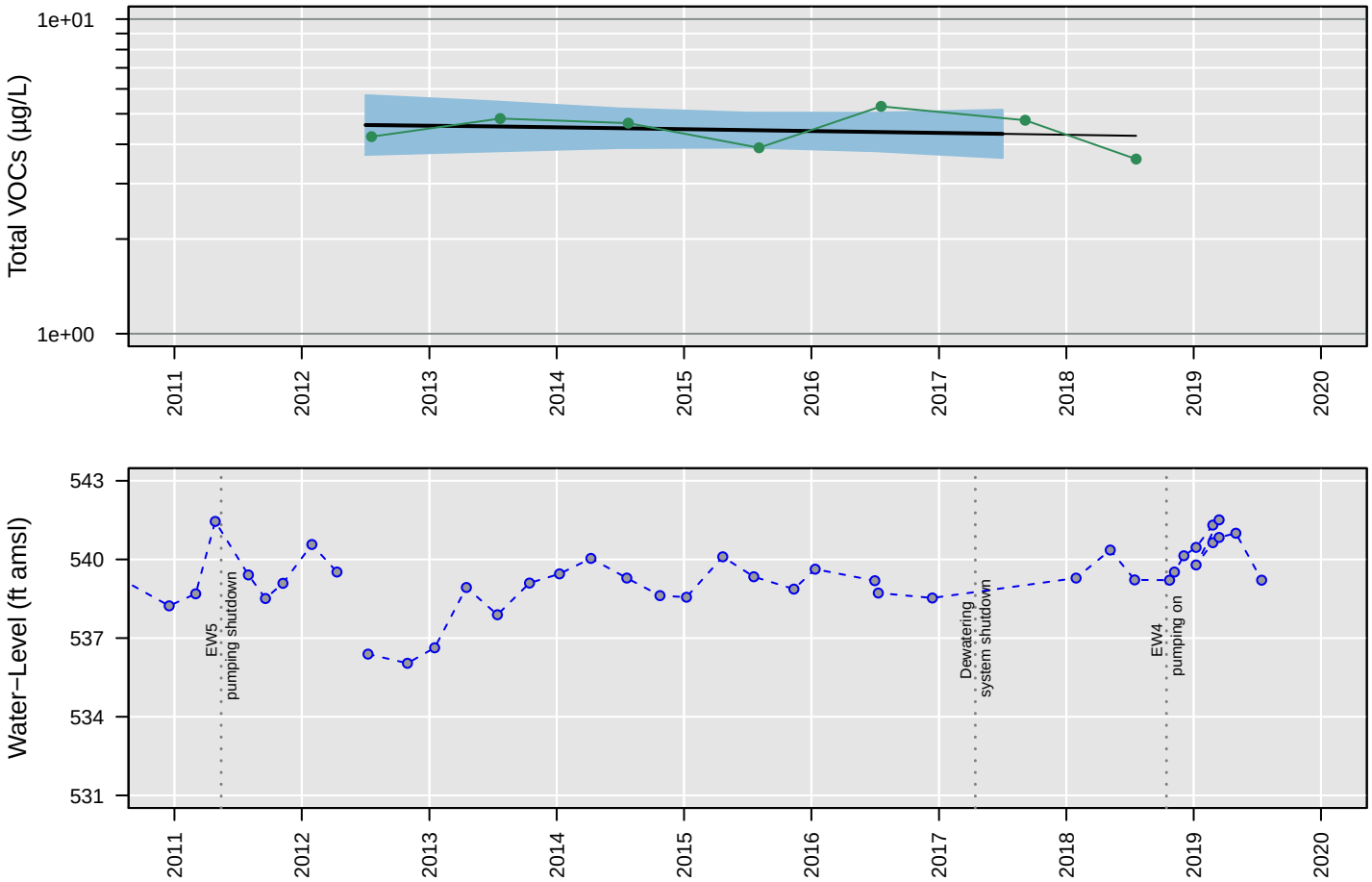


No Analysis Performed

MW69

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

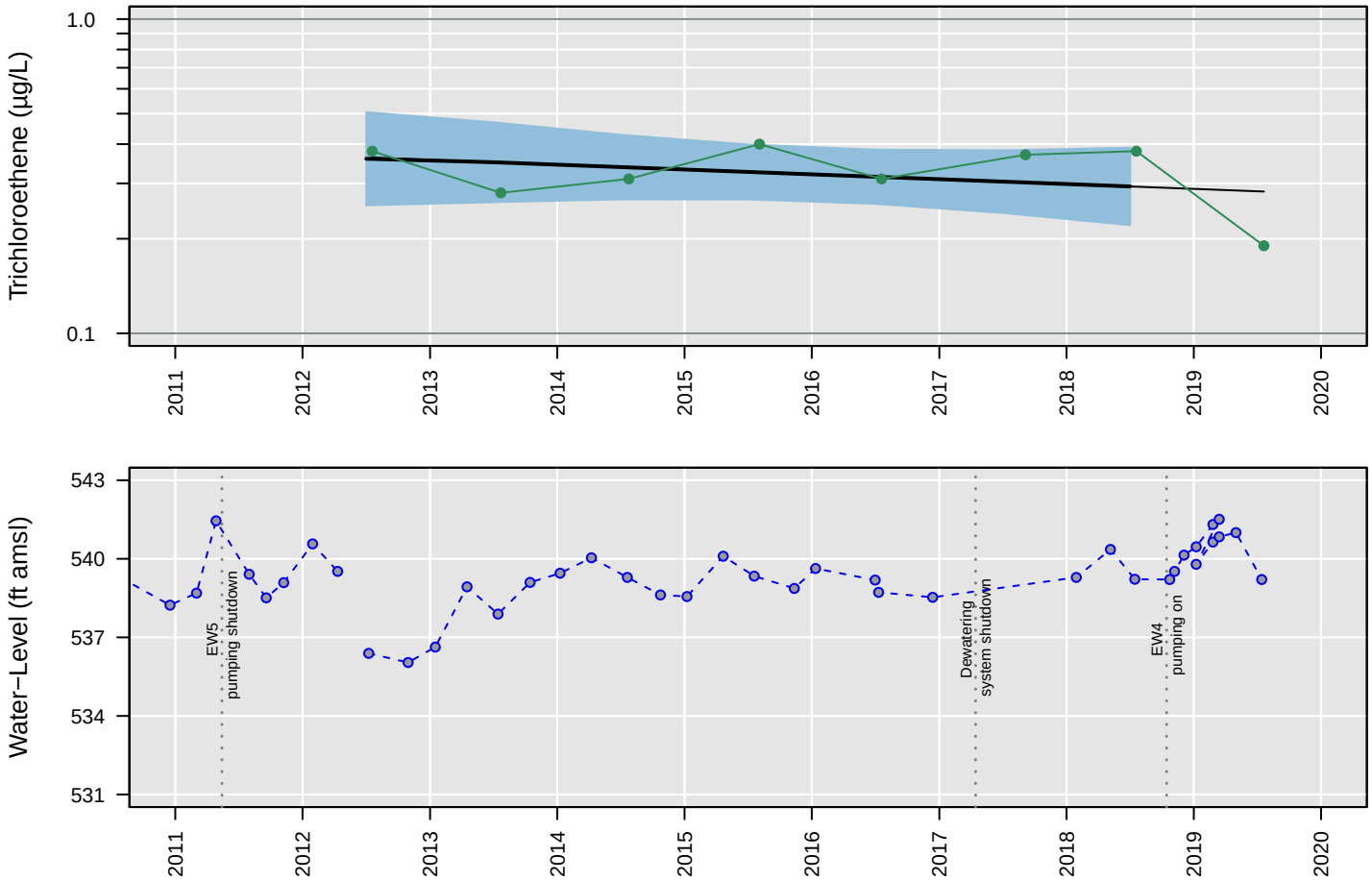
Trend Not Significant

Regression Statistics for January 2017 to January 2018
Geometric Mean: 4.3 µg/L
UCL: 5.2 µg/L
LCL: 3.6 µg/L

MW69

Trichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

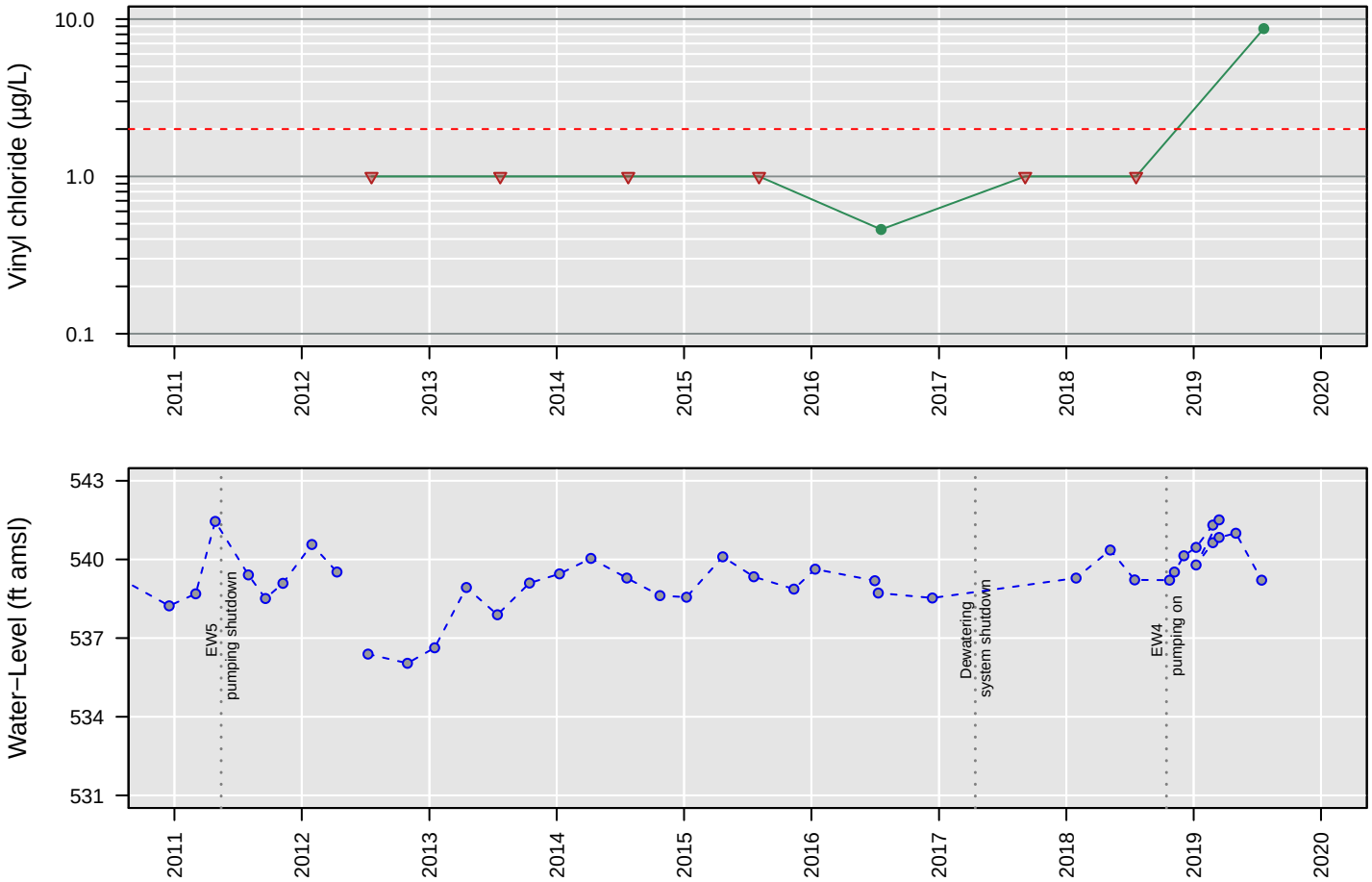
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.29 µg/L
UCL: 0.39 µg/L
LCL: 0.22 µg/L

MW69

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 75%



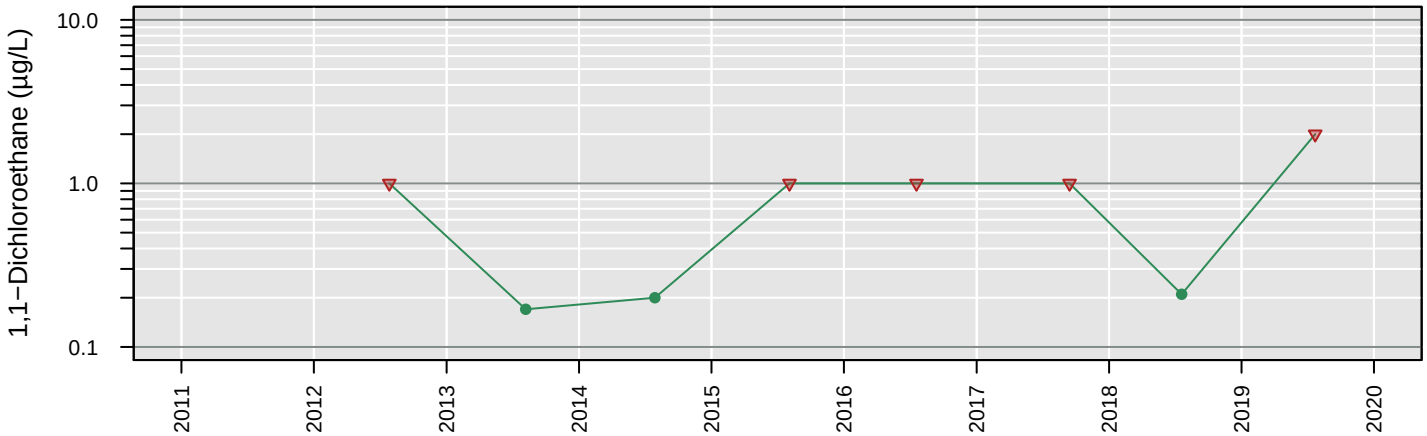
No Analysis Performed

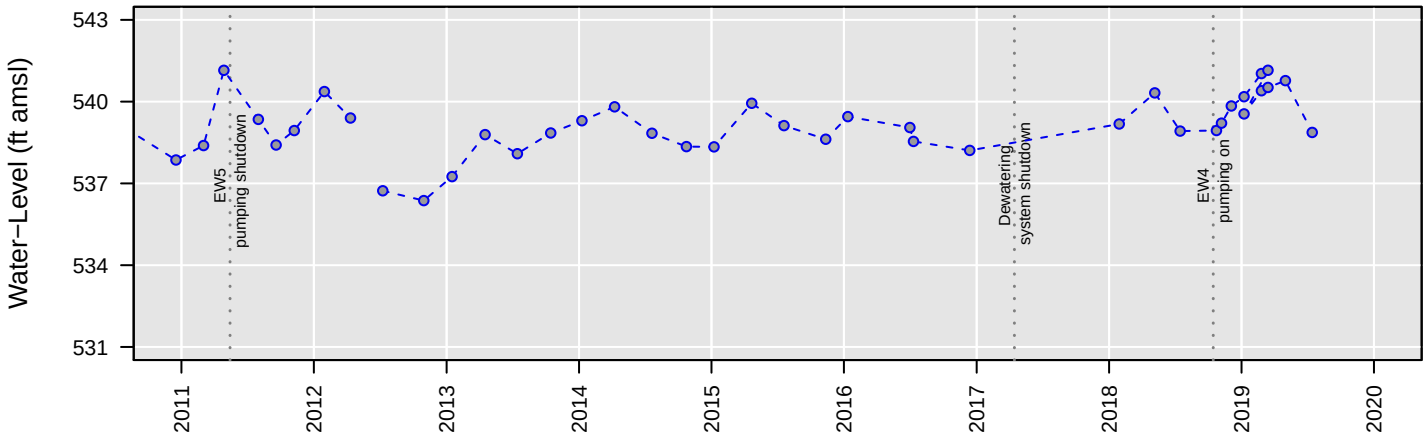
MW70

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 62%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



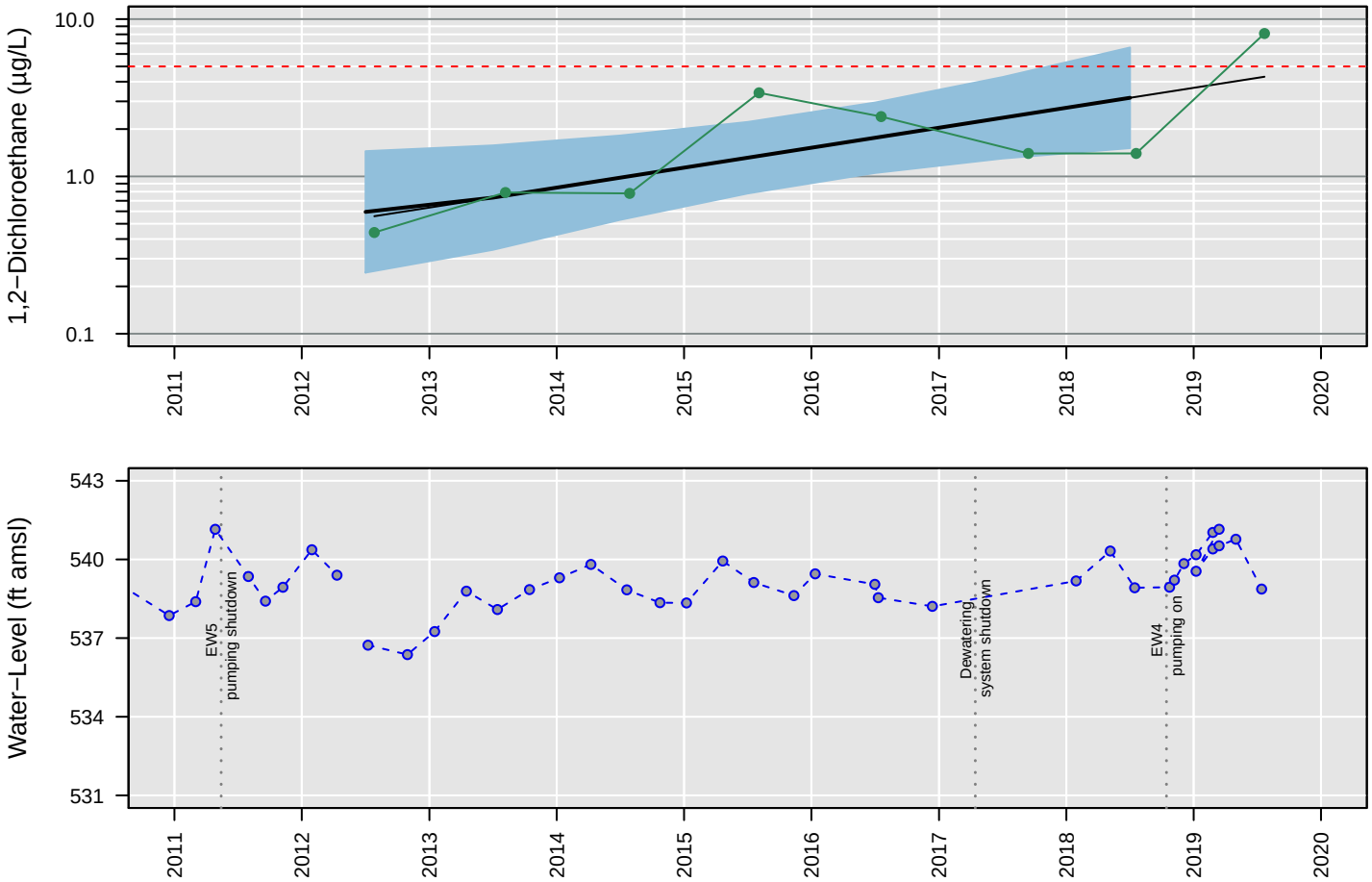


No Analysis Performed

MW70

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

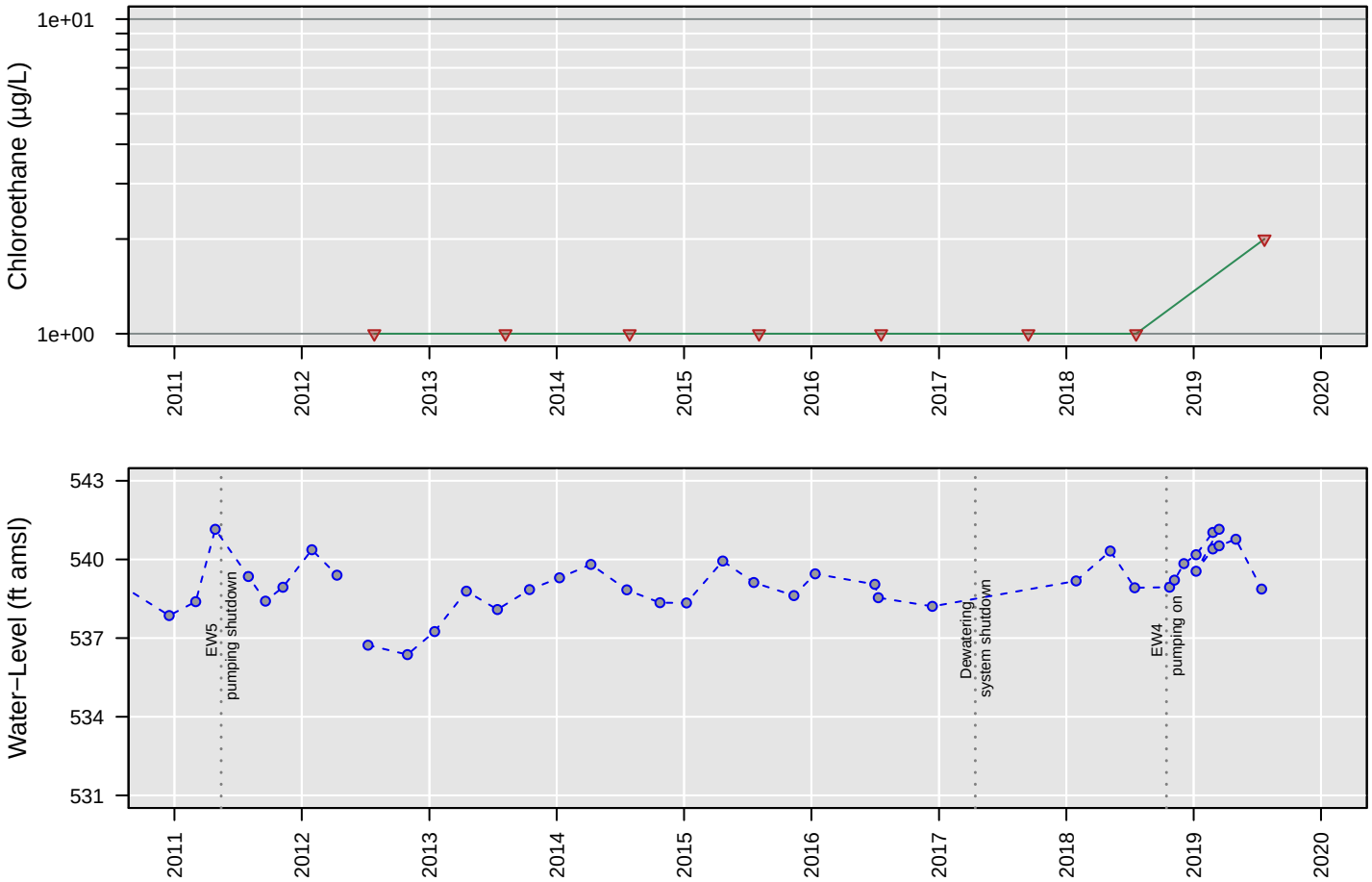
ln Conc. = 0.0008 (+/− 0.00024)*Date + −13 (+/− 4)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.2 µg/L
UCL: 6.6 µg/L
LCL: 1.5 µg/L

MW70

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

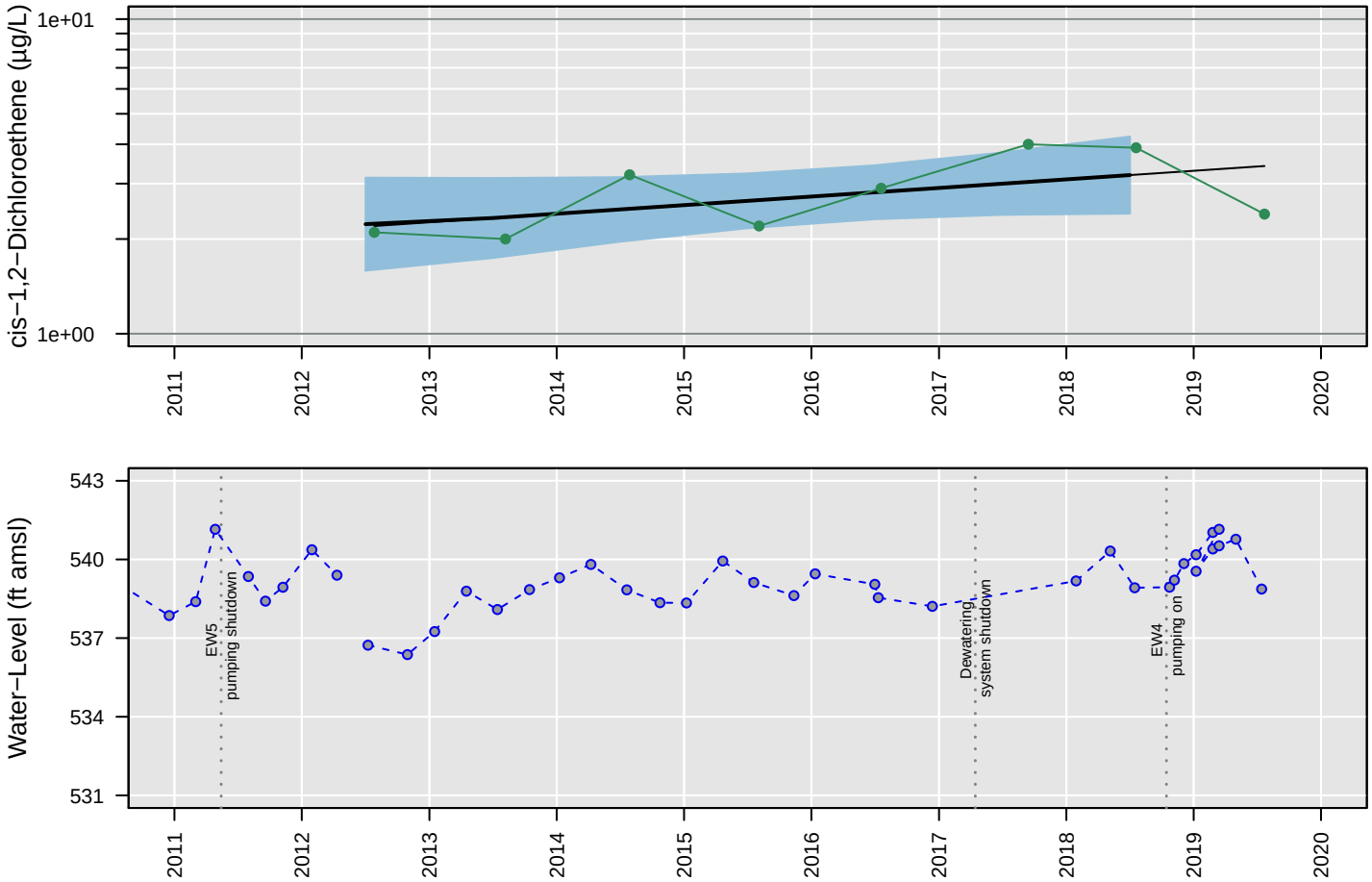


No Analysis Performed

MW70

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

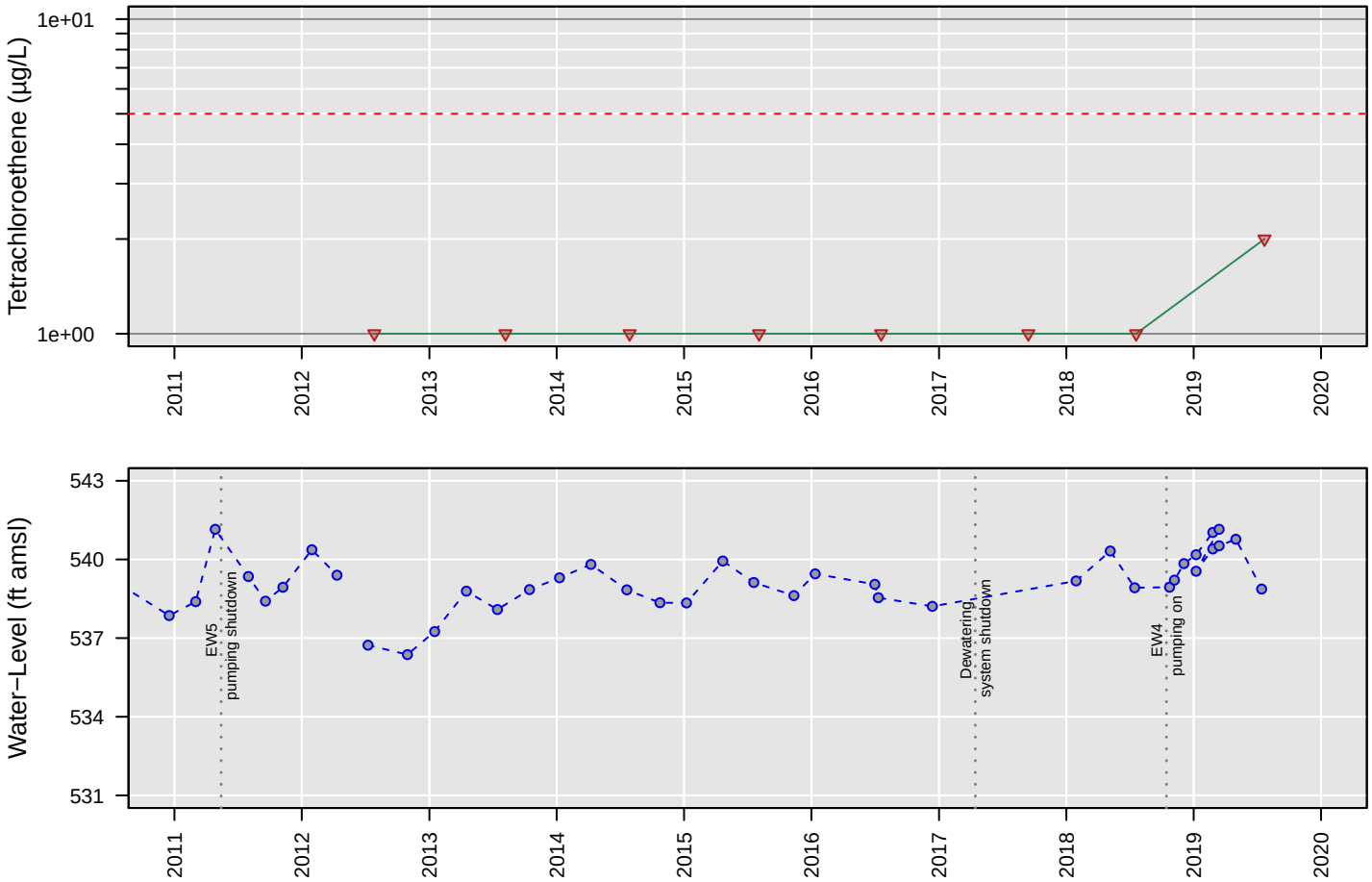
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.2 µg/L
UCL: 4.2 µg/L
LCL: 2.4 µg/L

MW70

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 100%

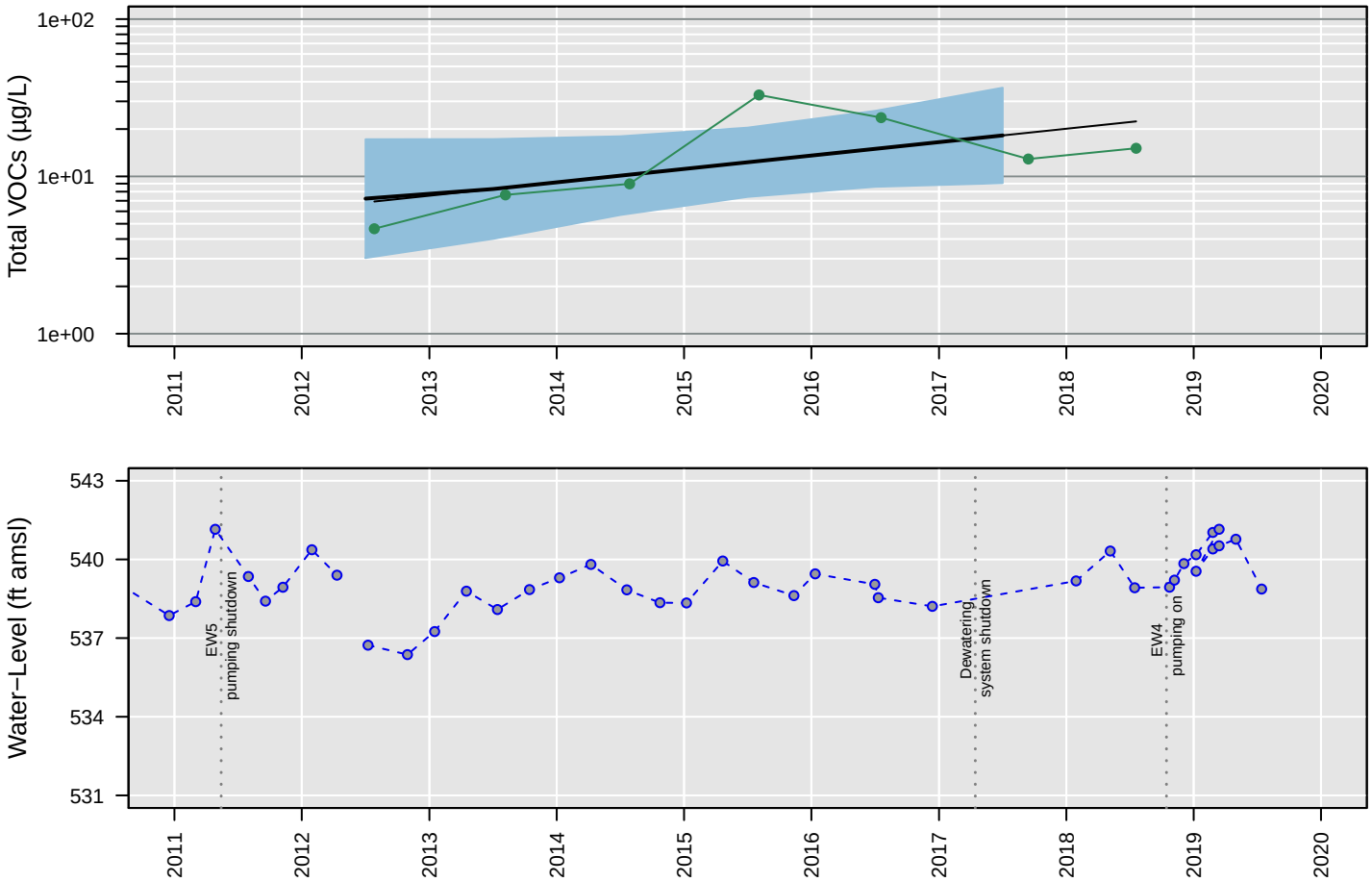


No Analysis Performed

MW70

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

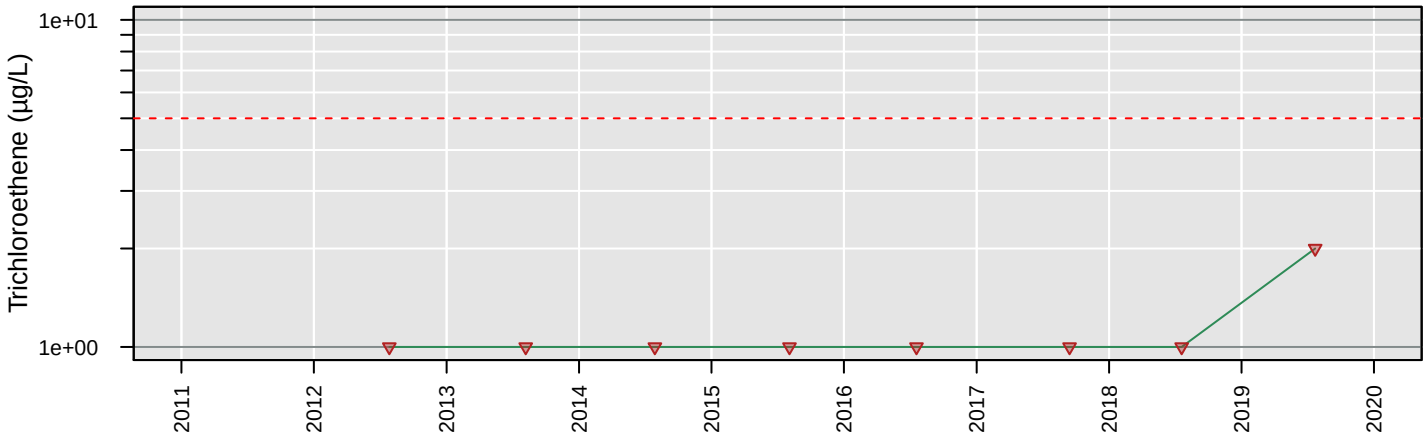
Regression Statistics for January 2017 to January 2018
Geometric Mean: 18 µg/L
UCL: 37 µg/L
LCL: 9.1 µg/L

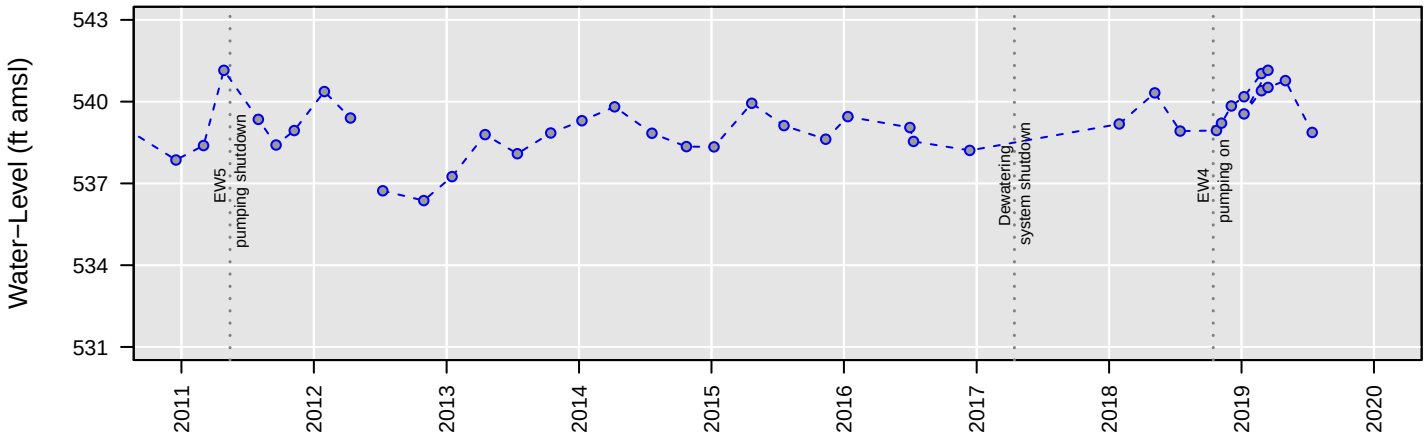
MW70

Trichloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



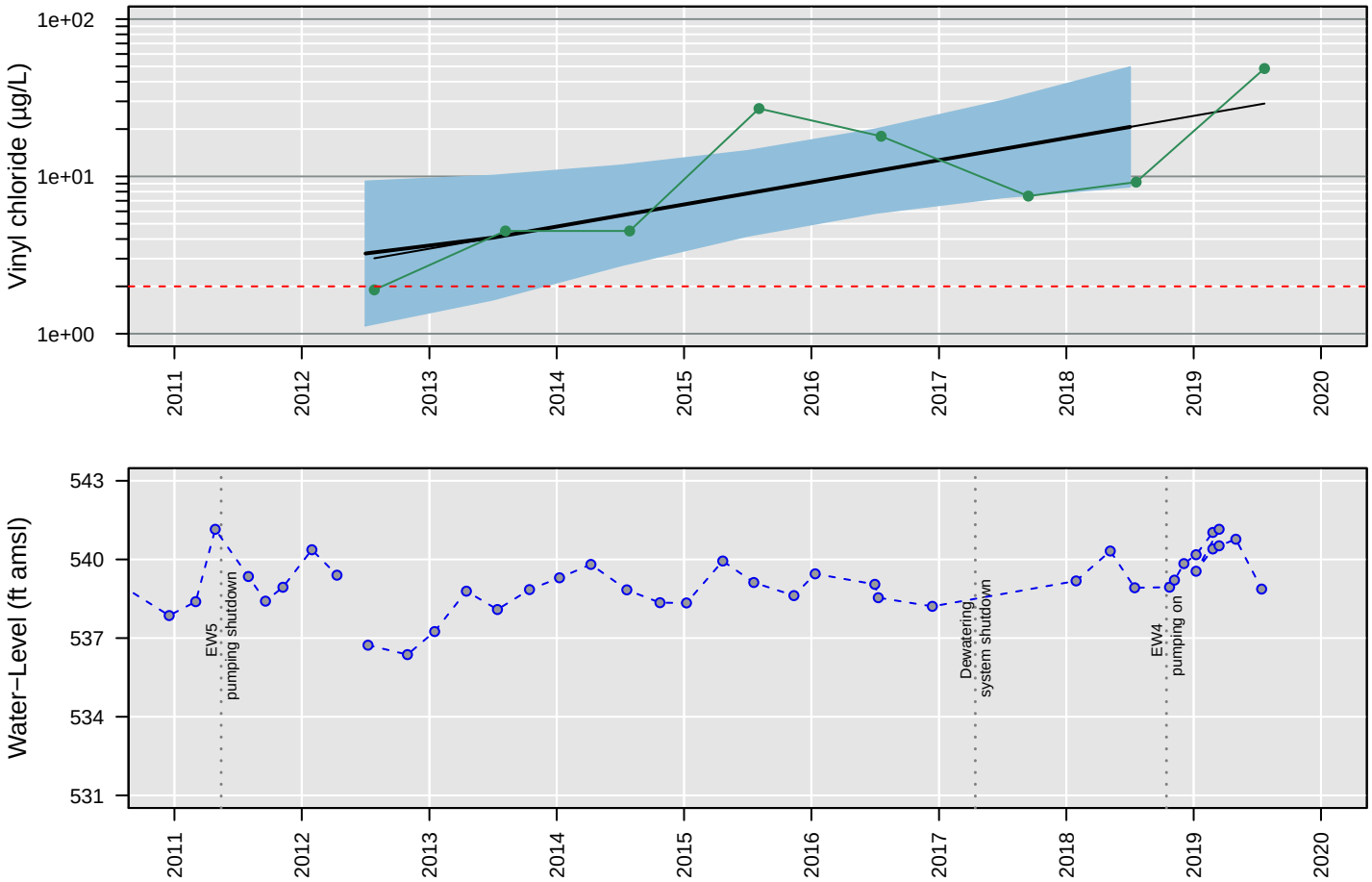


No Analysis Performed

MW70

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = 0.00089 (+/− 0.00028)*Date + −13 (+/− 4.7)

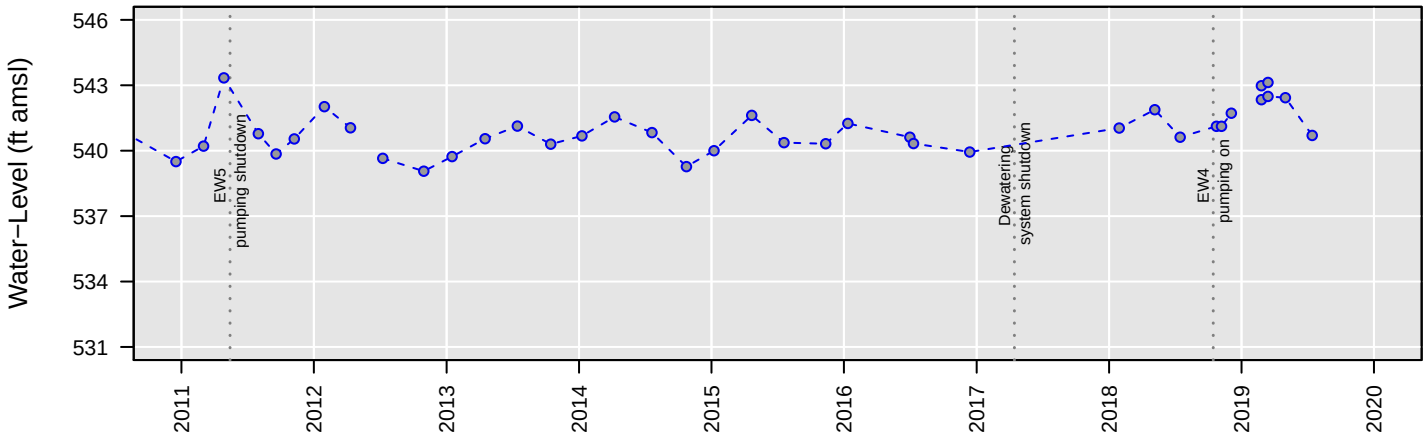
Regression Statistics for January 2018 to January 2019
Geometric Mean: 21 µg/L
UCL: 49 µg/L
LCL: 8.6 µg/L

MW71

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

ln Conc. = −0.00013 (+/− 0.00005)*Date + 1.5 (+/− 0.84)

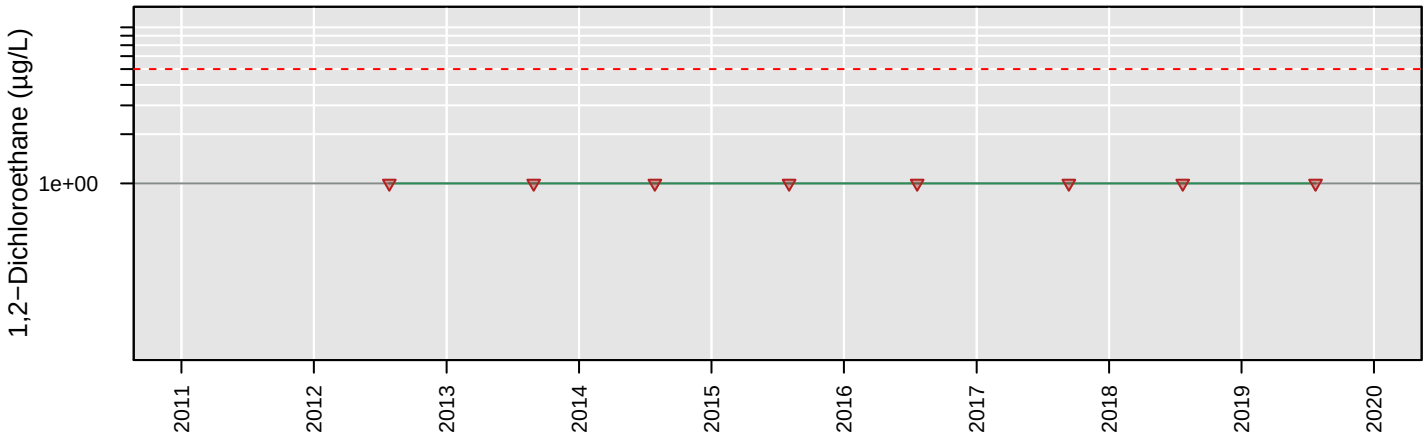
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.47 µg/L
UCL: 0.55 µg/L
LCL: 0.4 µg/L

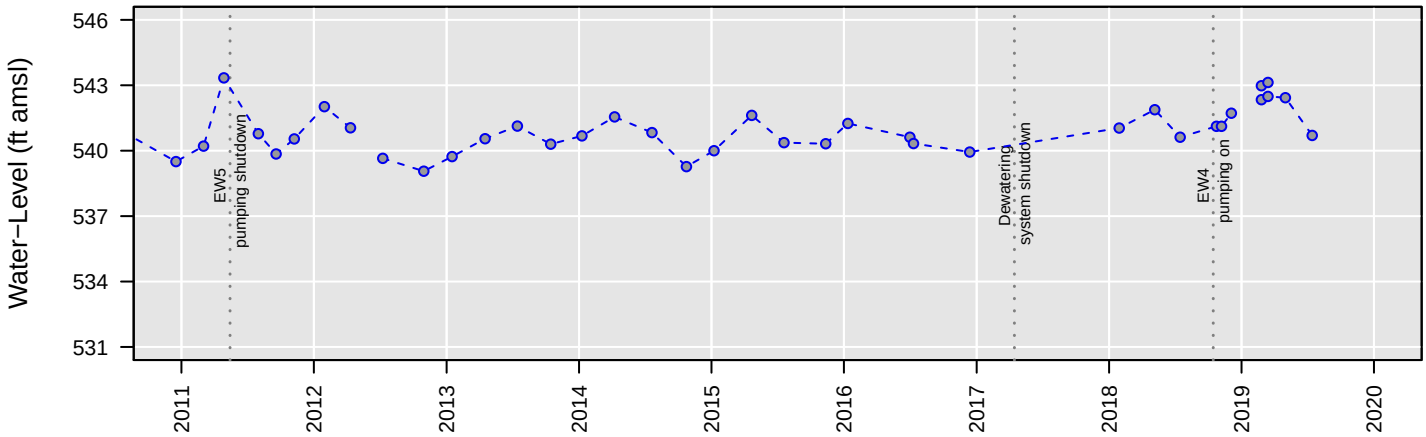
MW71

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





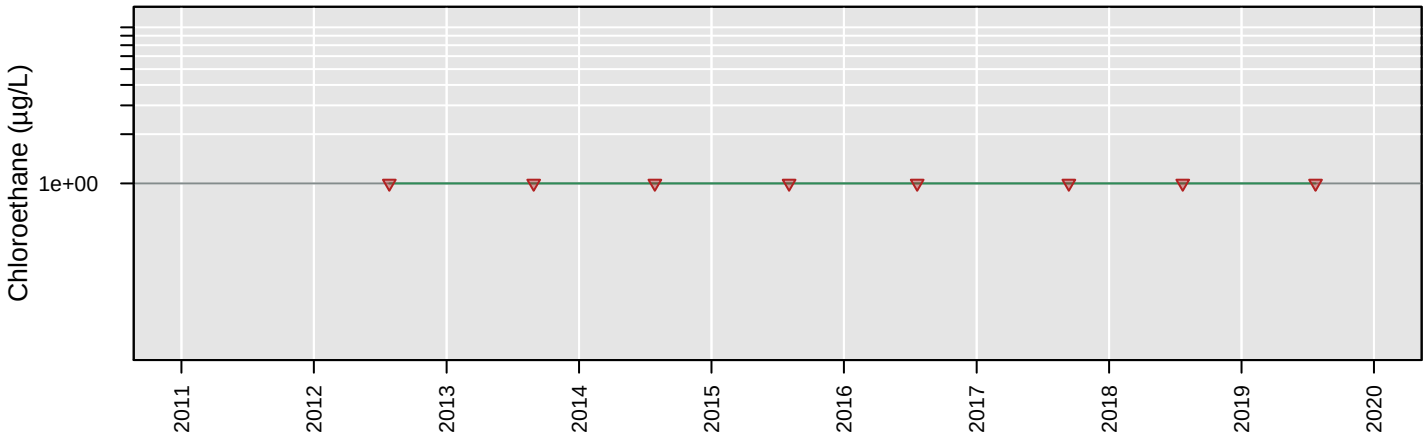
No Analysis Performed

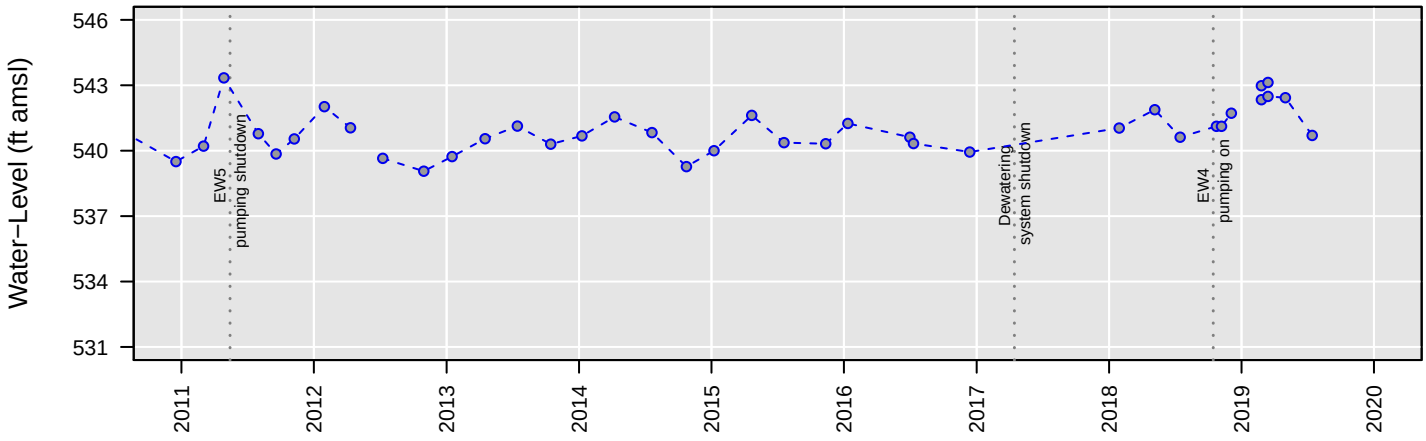
MW71

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





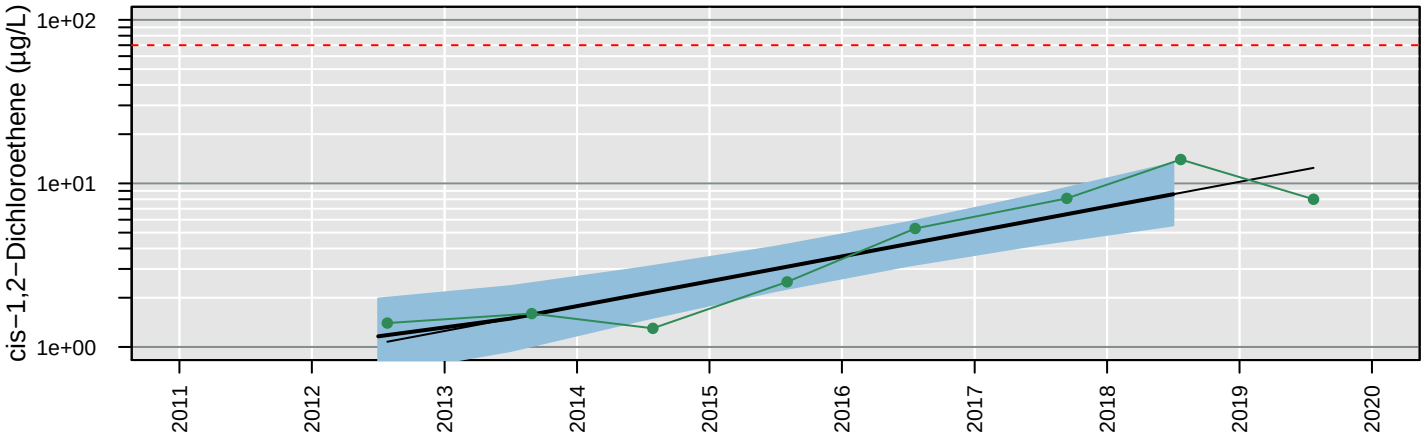
No Analysis Performed

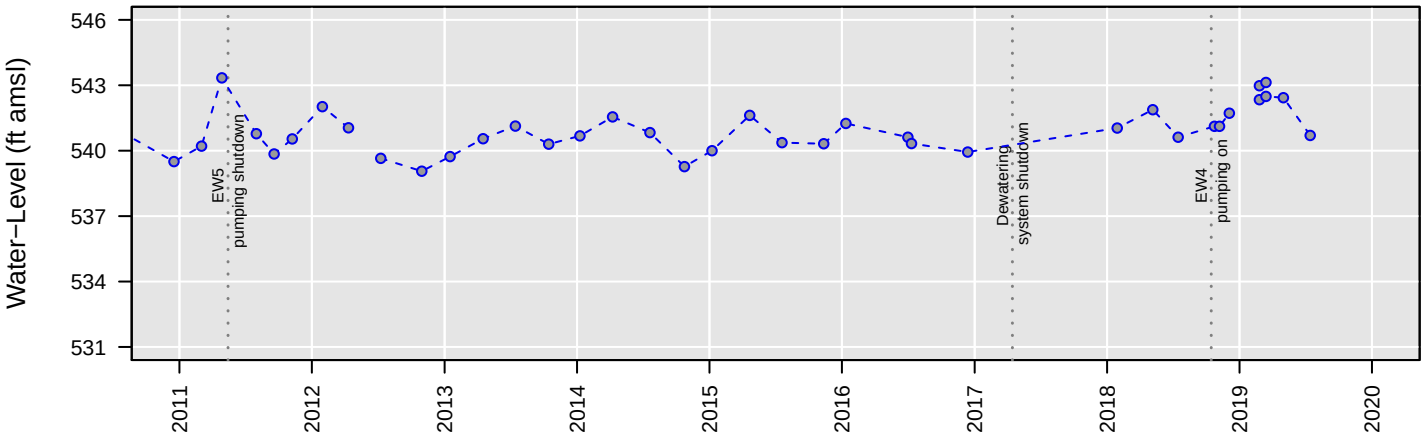
MW71

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = 0.00096 (+/− 0.00014)*Date + −15 (+/− 2.4)

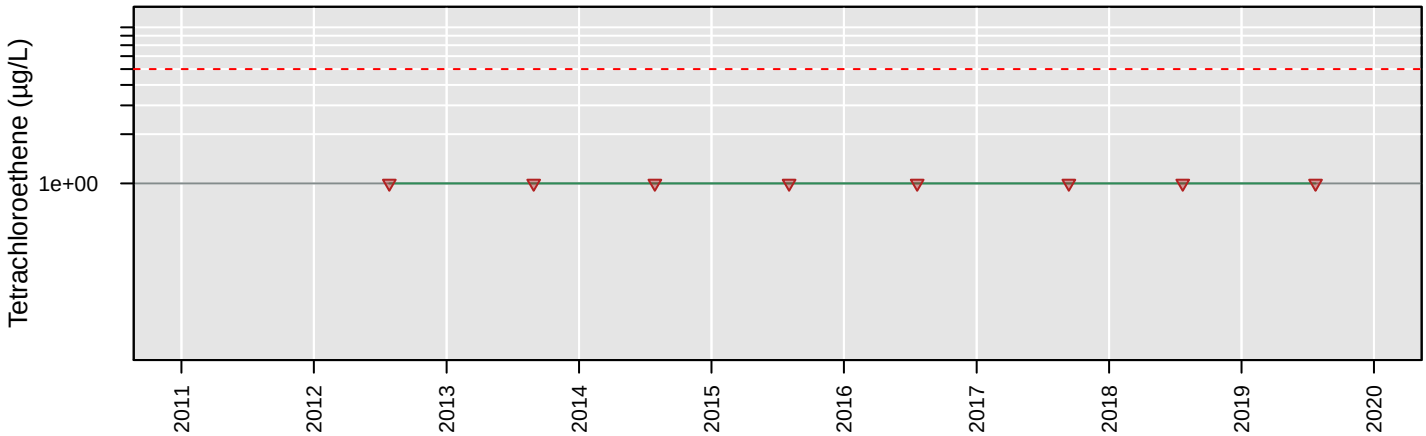
Regression Statistics for January 2018 to January 2019
Geometric Mean: 8.6 µg/L
UCL: 13 µg/L
LCL: 5.5 µg/L

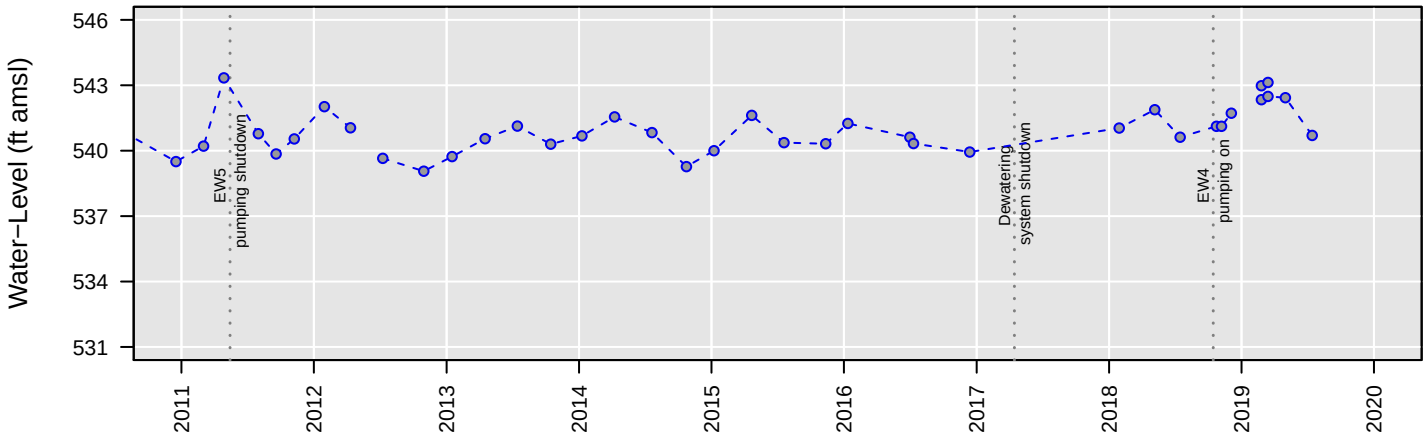
MW71

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





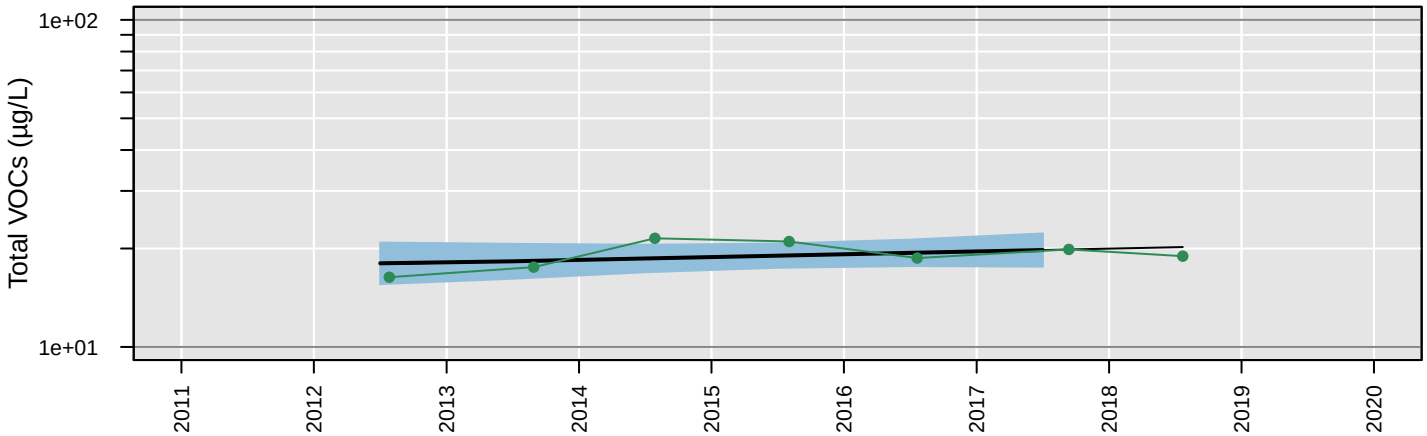
No Analysis Performed

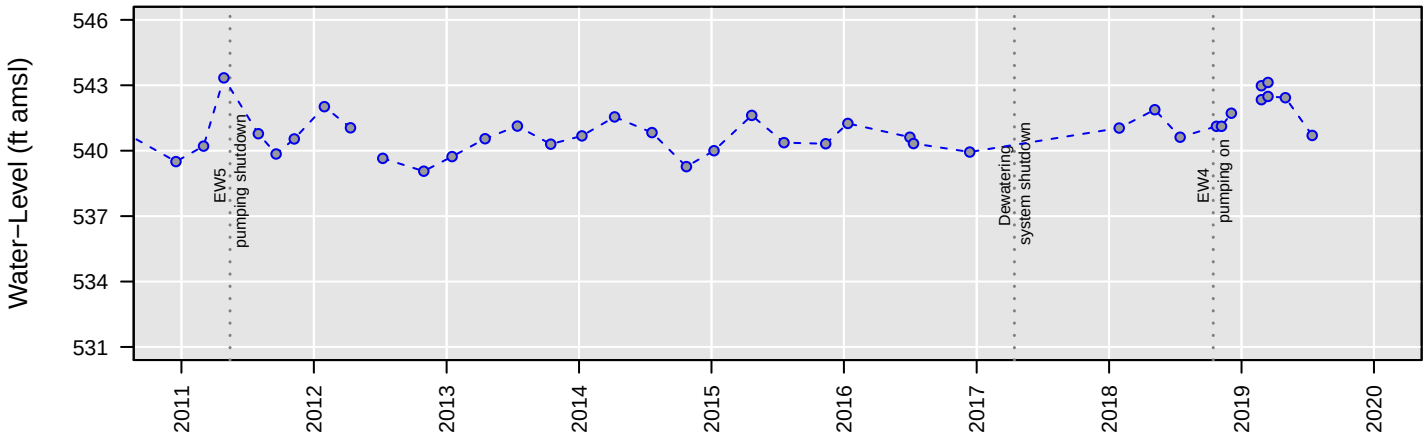
MW71

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

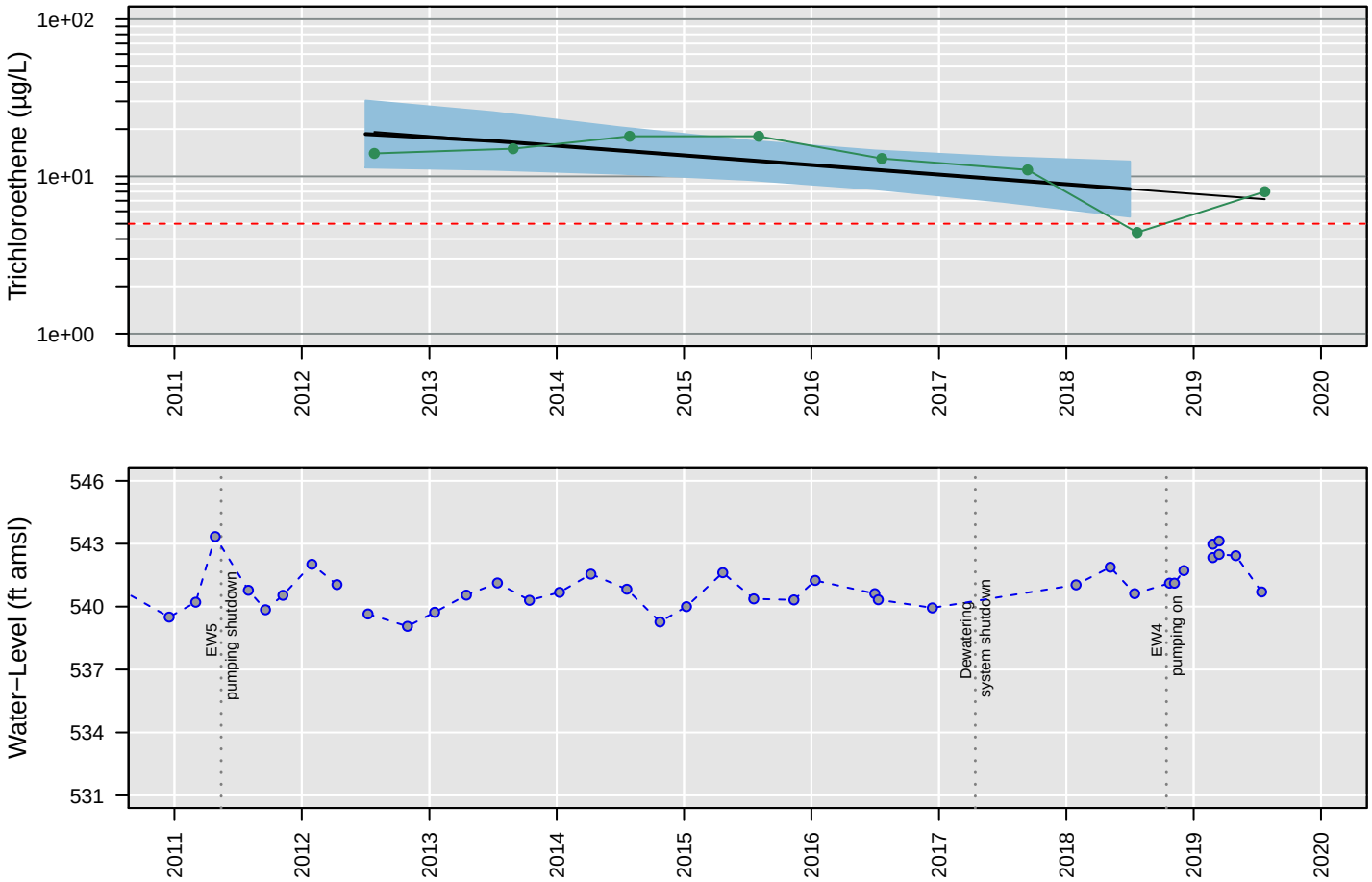
Trend Not Significant

Regression Statistics for January 2017 to January 2018
Geometric Mean: 20 µg/L
UCL: 22 µg/L
LCL: 18 µg/L

MW71

Trichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.00039 (+/− 0.00013)*Date + 9 (+/− 2.2)

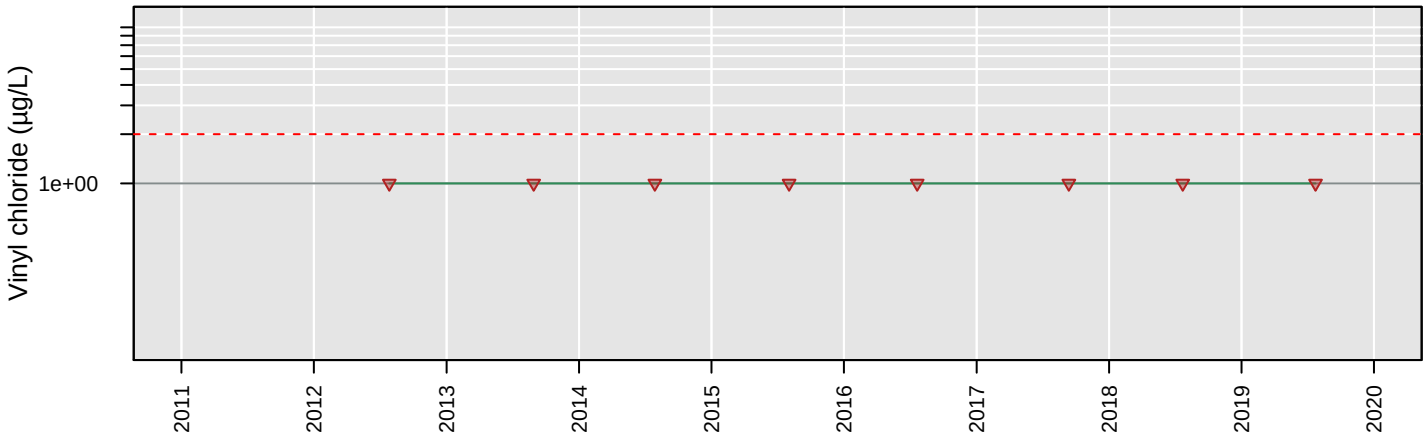
Regression Statistics for January 2018 to January 2019
Geometric Mean: 8.3 µg/L
UCL: 12 µg/L
LCL: 5.5 µg/L

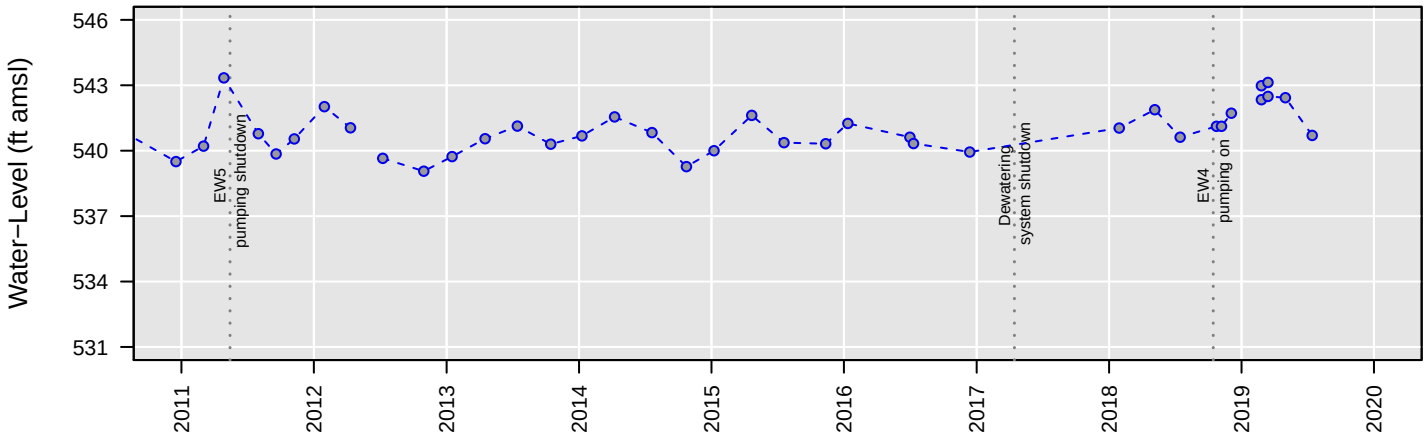
MW71

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





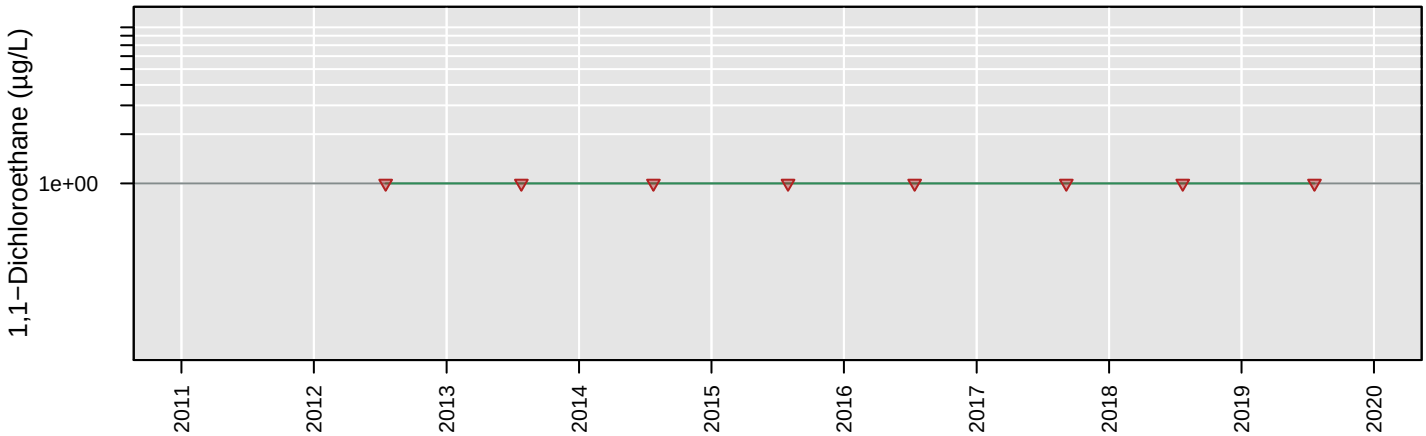
No Analysis Performed

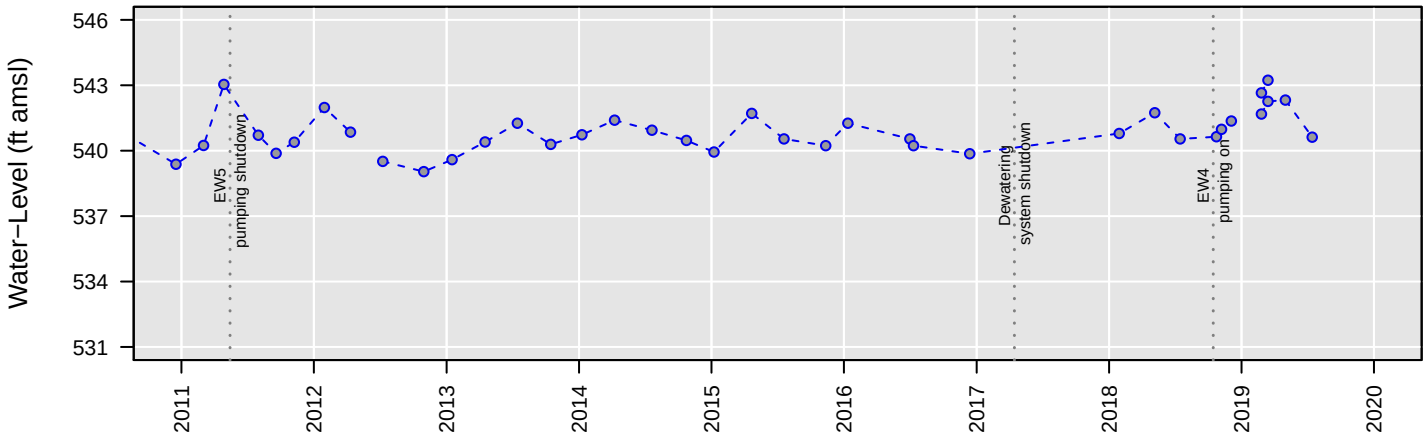
MW72

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





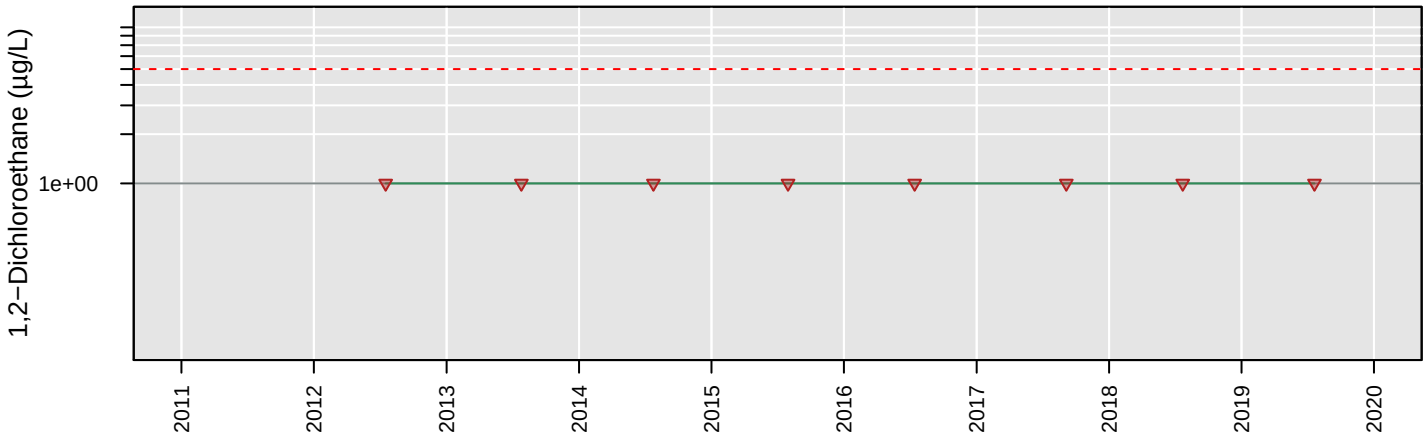
No Analysis Performed

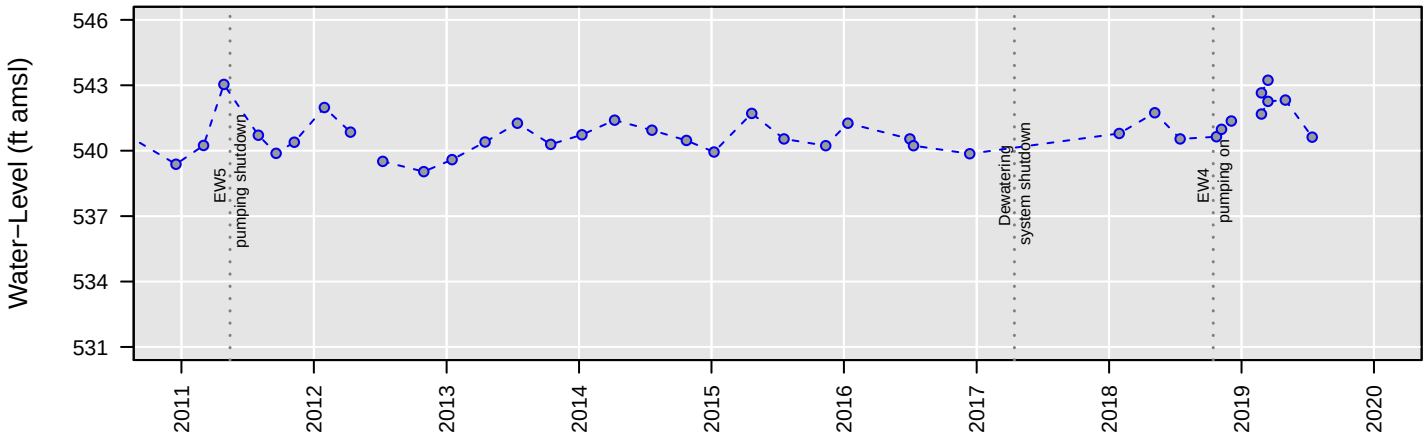
MW72

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





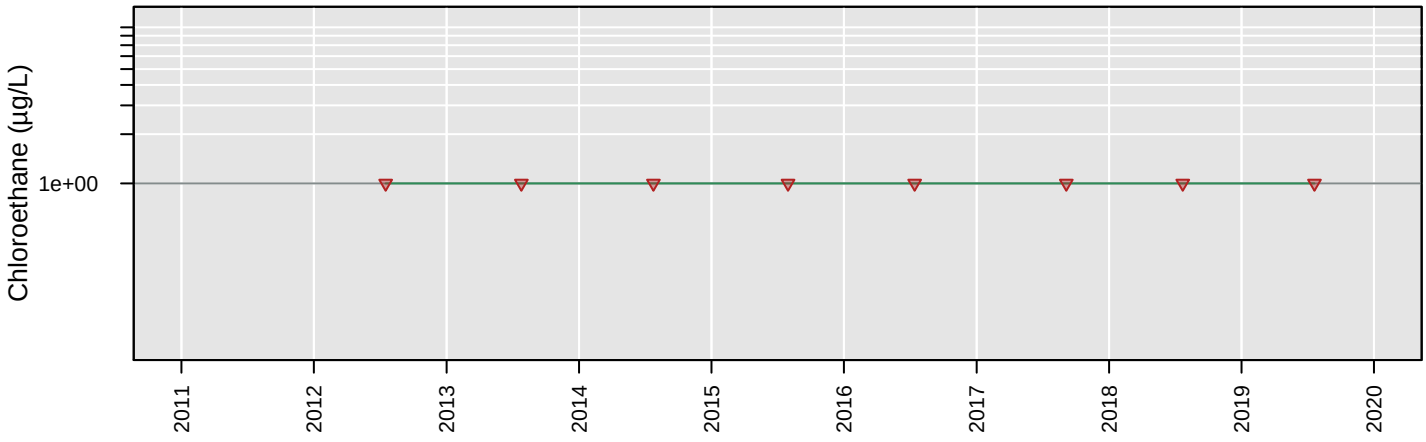
No Analysis Performed

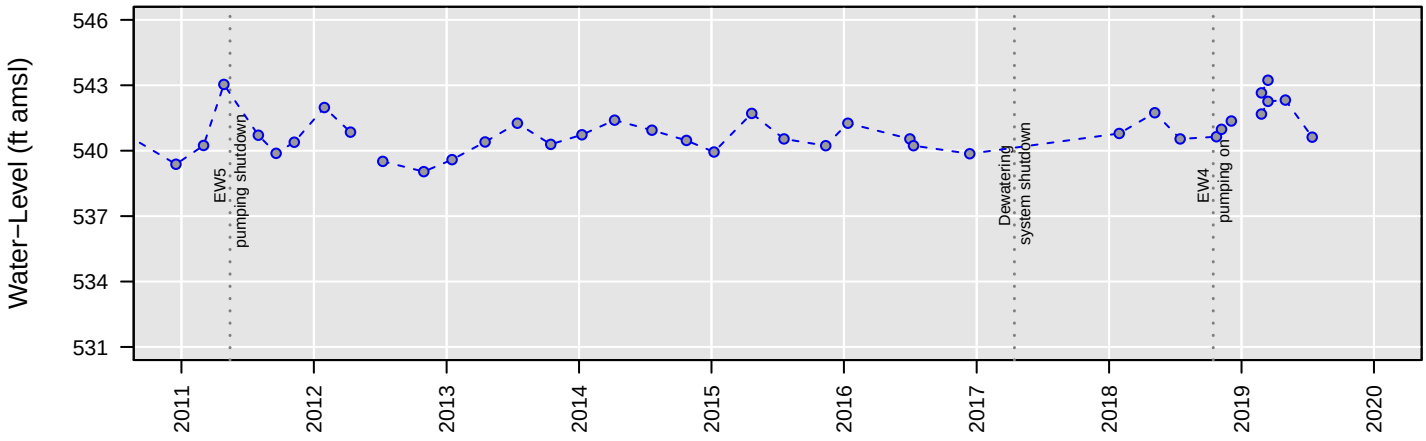
MW72

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





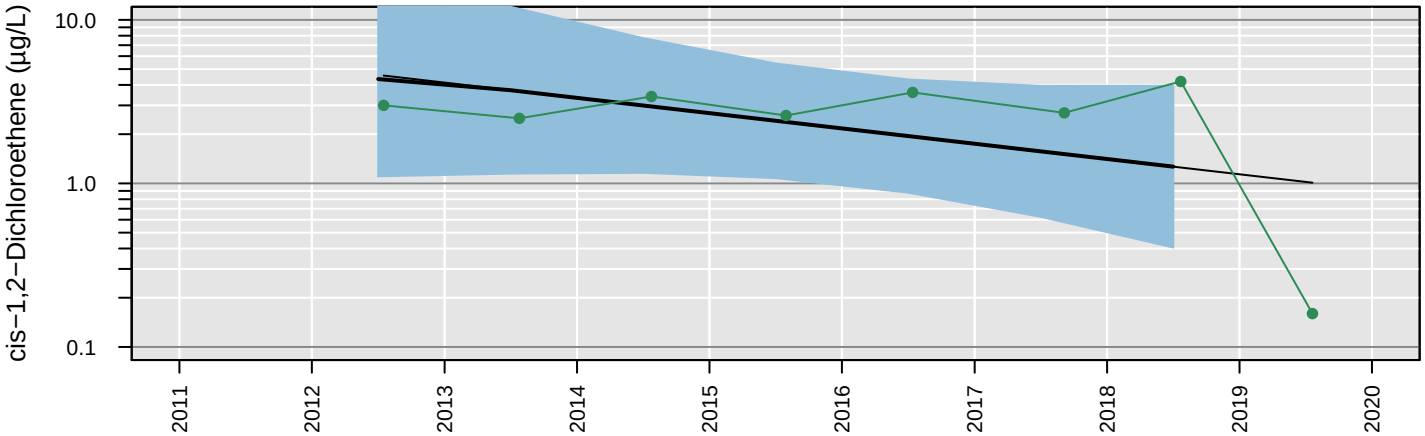
No Analysis Performed

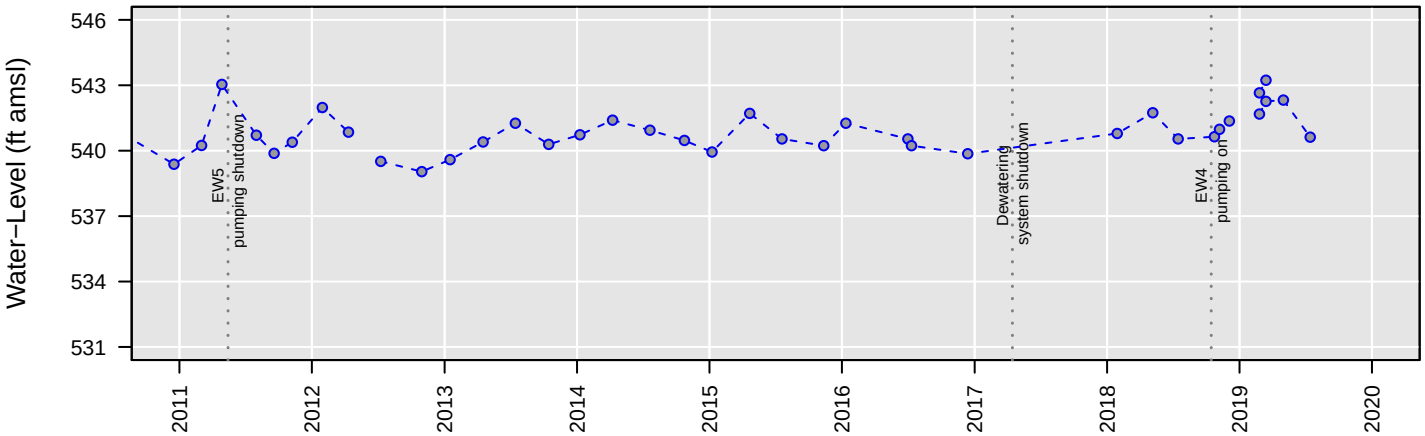
MW72

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

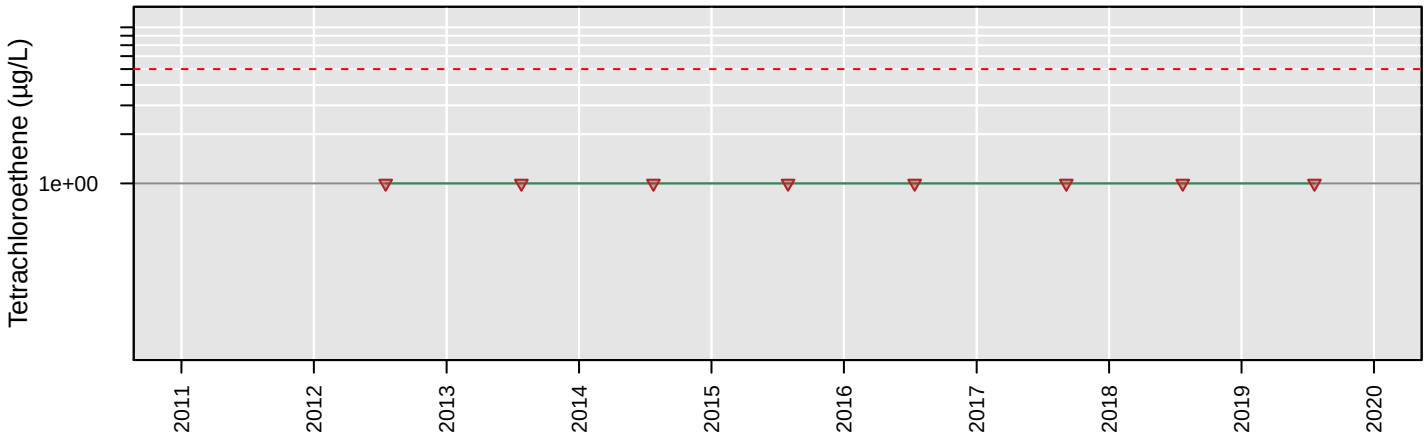
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.3 µg/L
UCL: 4 µg/L
LCL: 0.41 µg/L

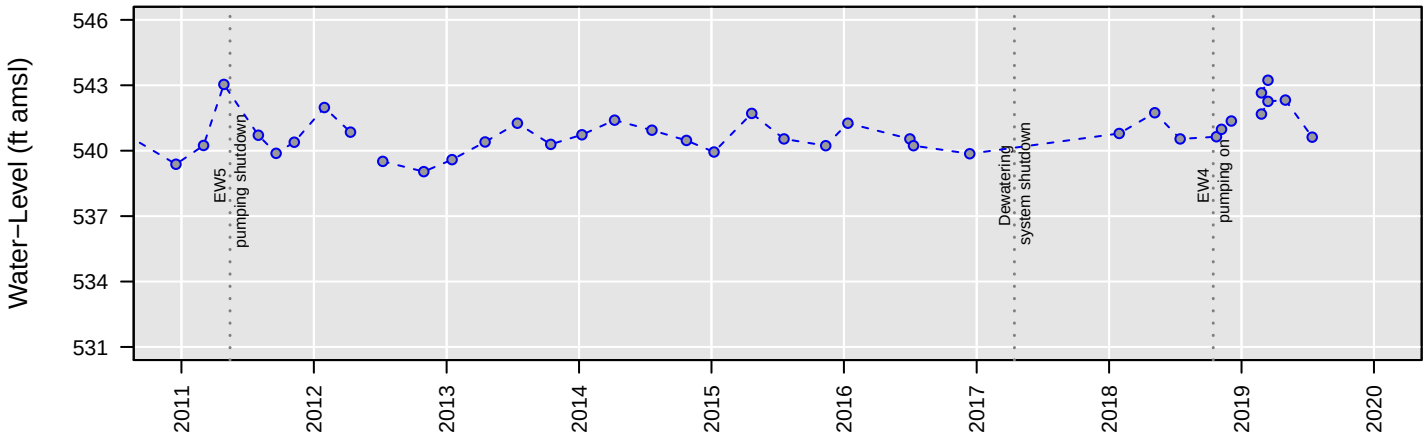
MW72

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



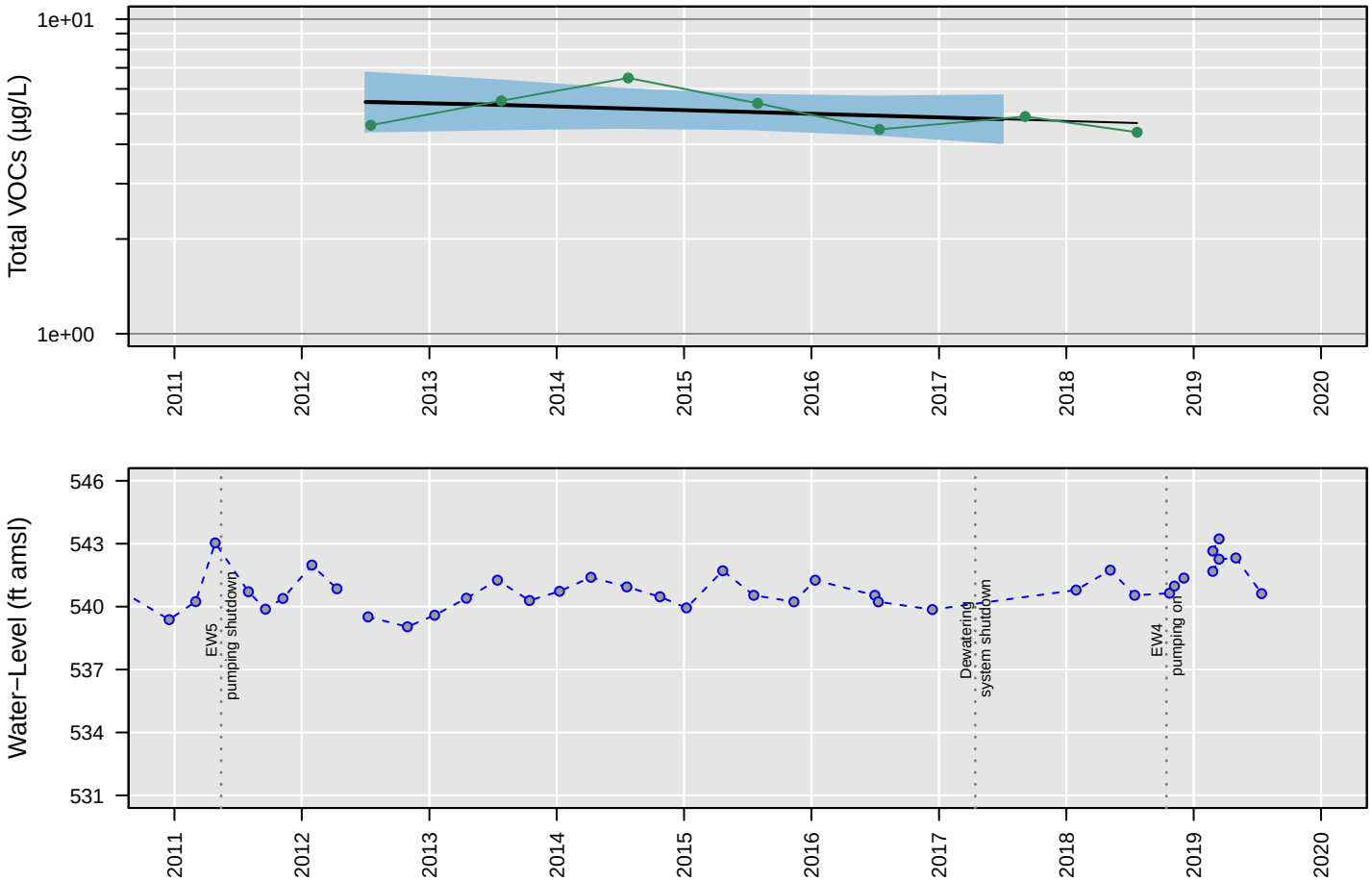


No Analysis Performed

MW72

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

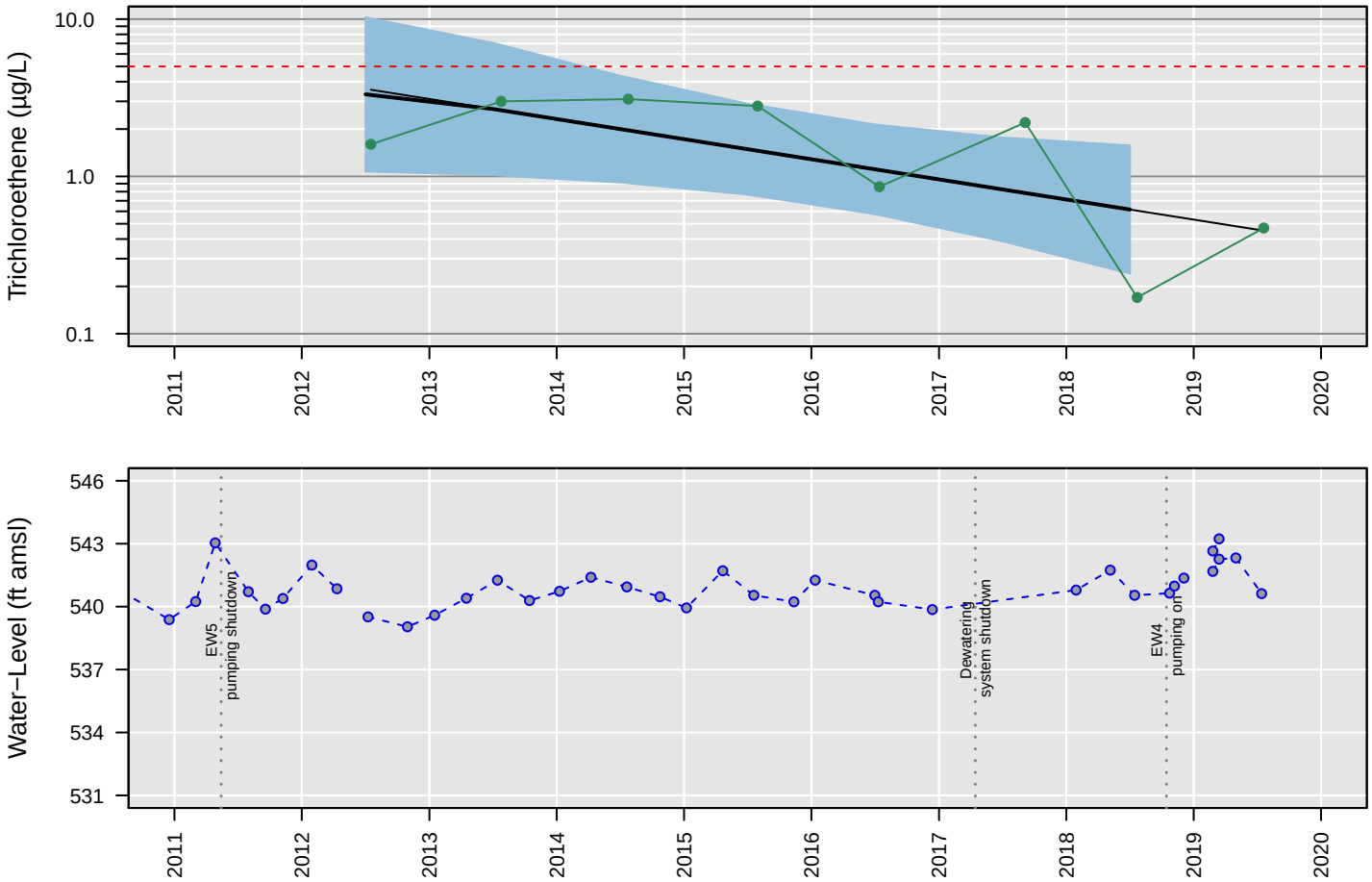
Trend Not Significant

Regression Statistics for January 2017 to January 2018
Geometric Mean: 4.8 µg/L
UCL: 5.7 µg/L
LCL: 4 µg/L

MW72

Trichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.00081 (+/− 0.0003)*Date + 14 (+/− 5)

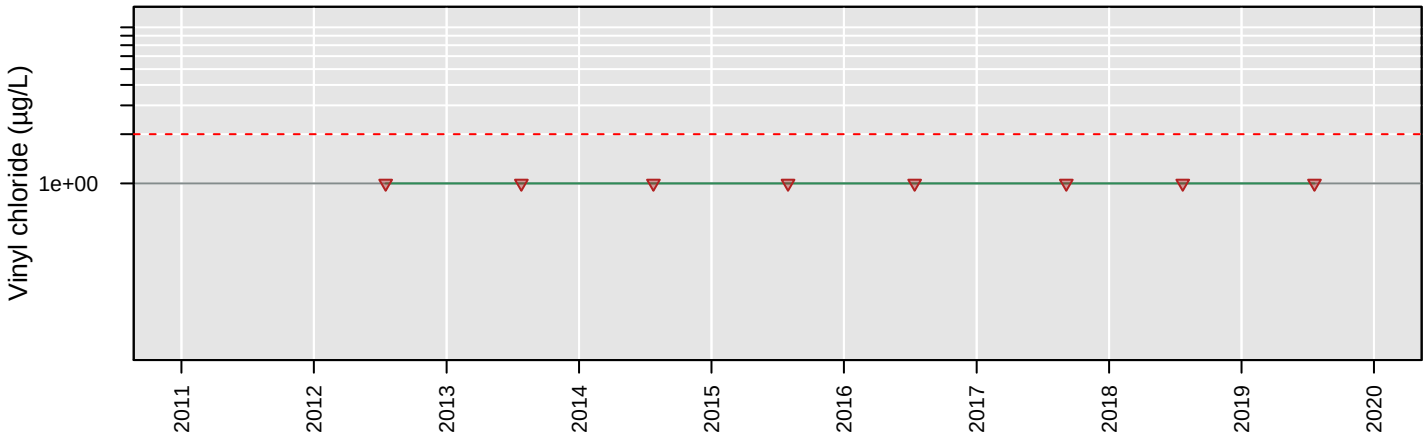
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.62 µg/L
UCL: 1.6 µg/L
LCL: 0.24 µg/L

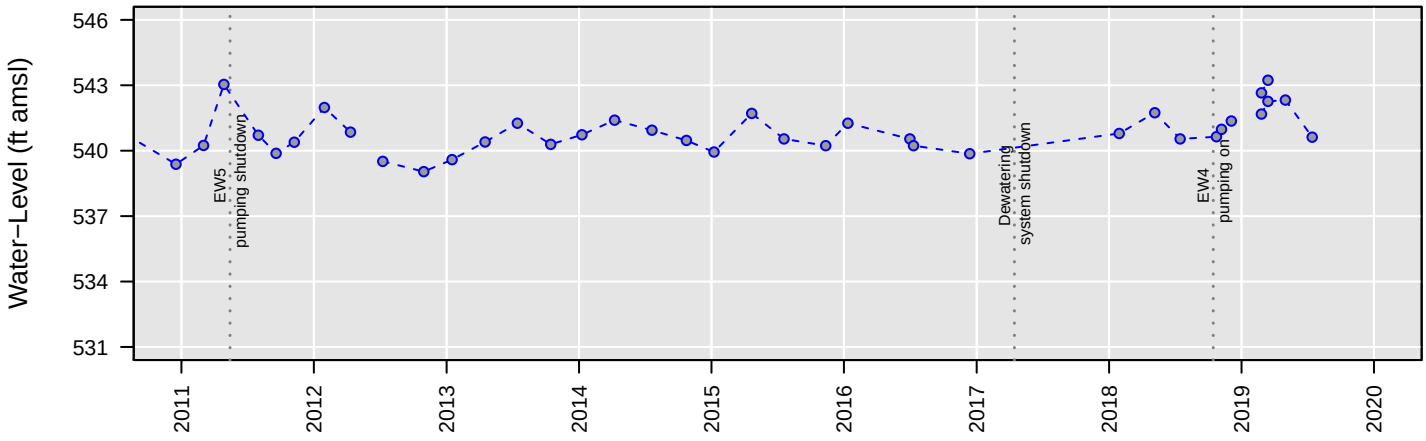
MW72

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



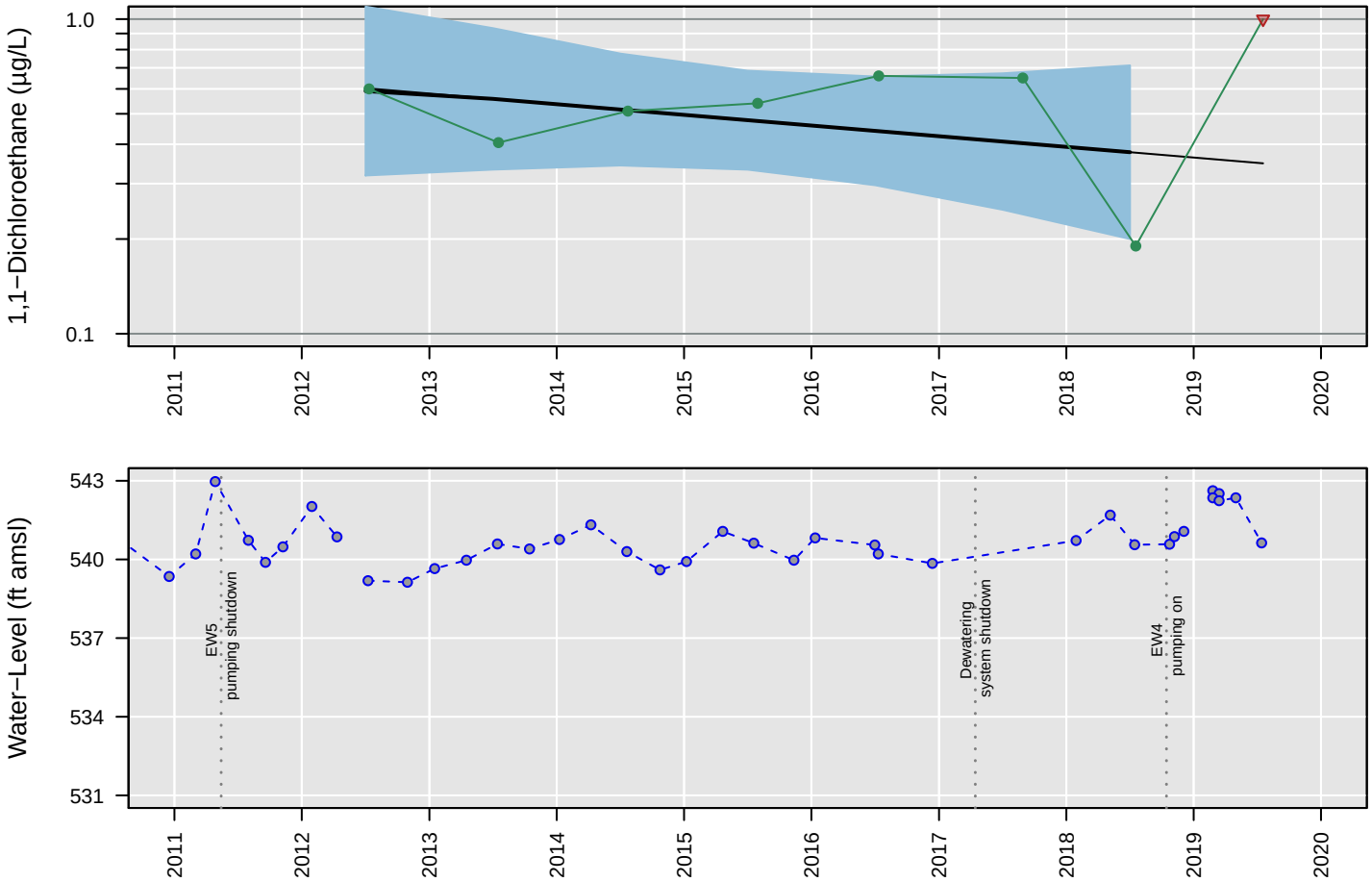


No Analysis Performed

MW73

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 12%



Censored Regression (Tobit) Model

Trend Not Significant

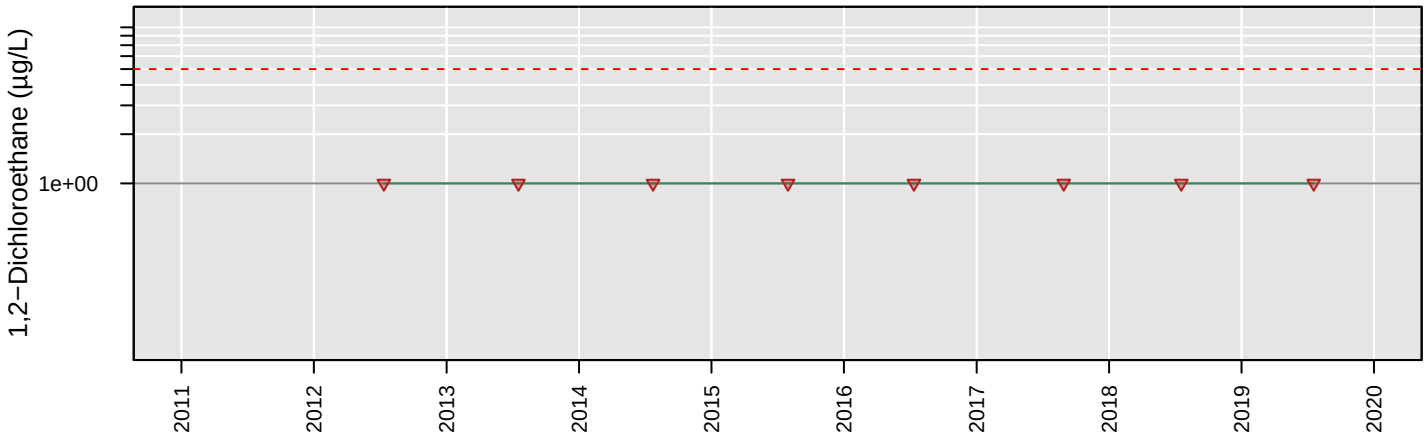
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.38 µg/L
UCL: 0.71 µg/L
LCL: 0.2 µg/L

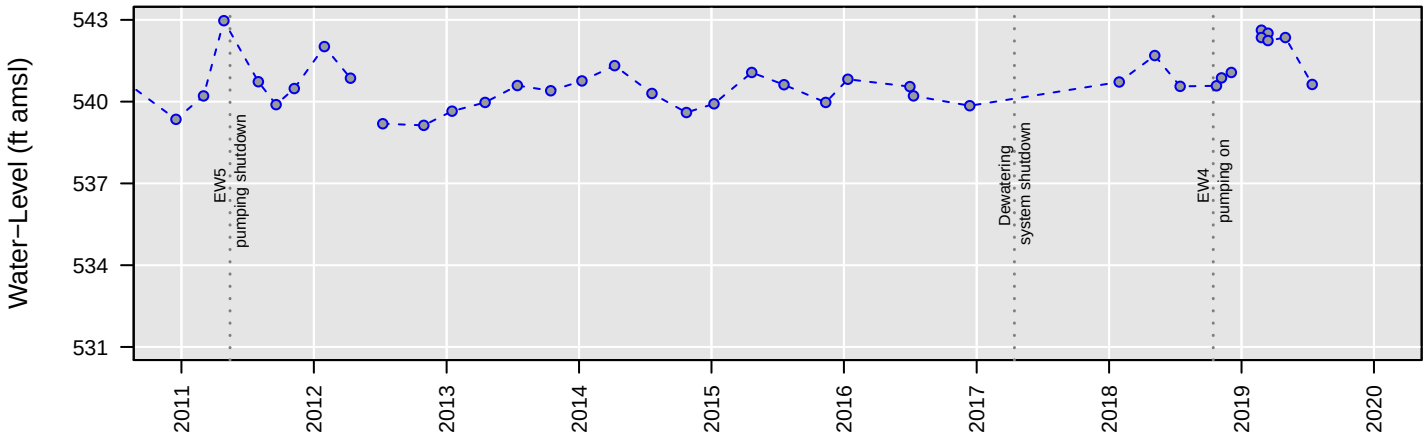
MW73

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





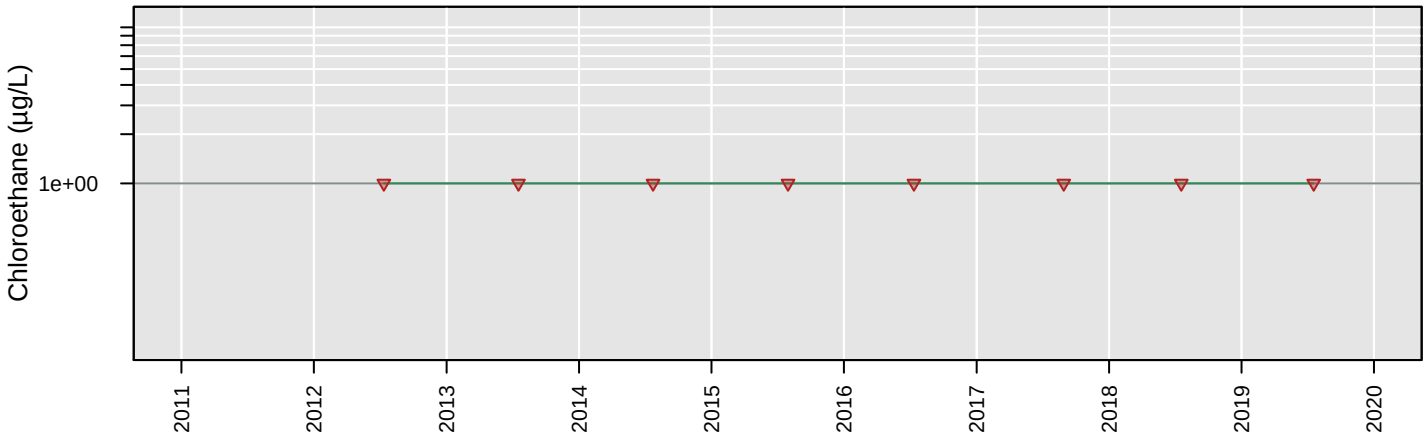
No Analysis Performed

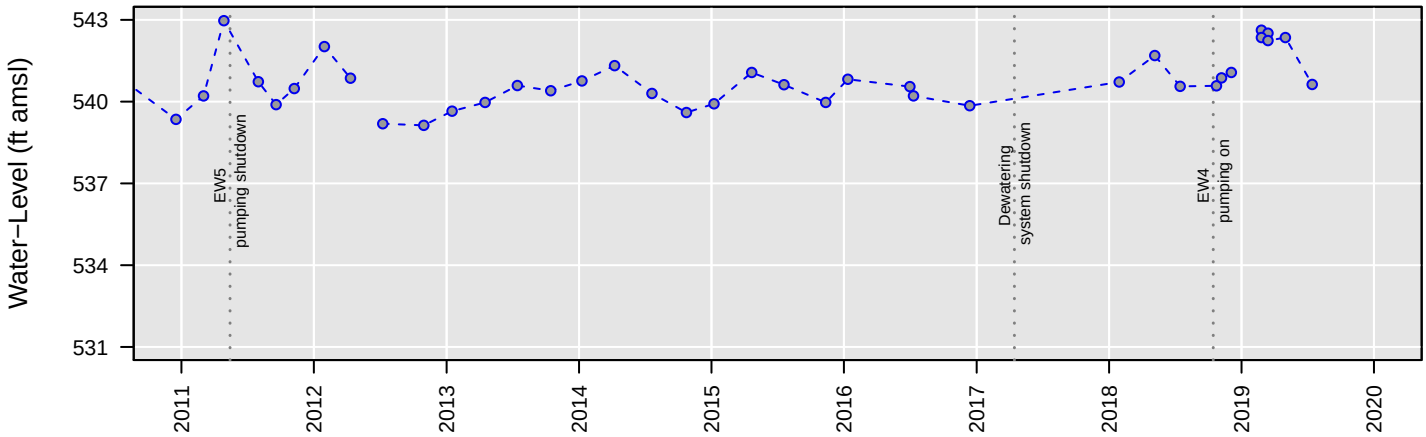
MW73

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





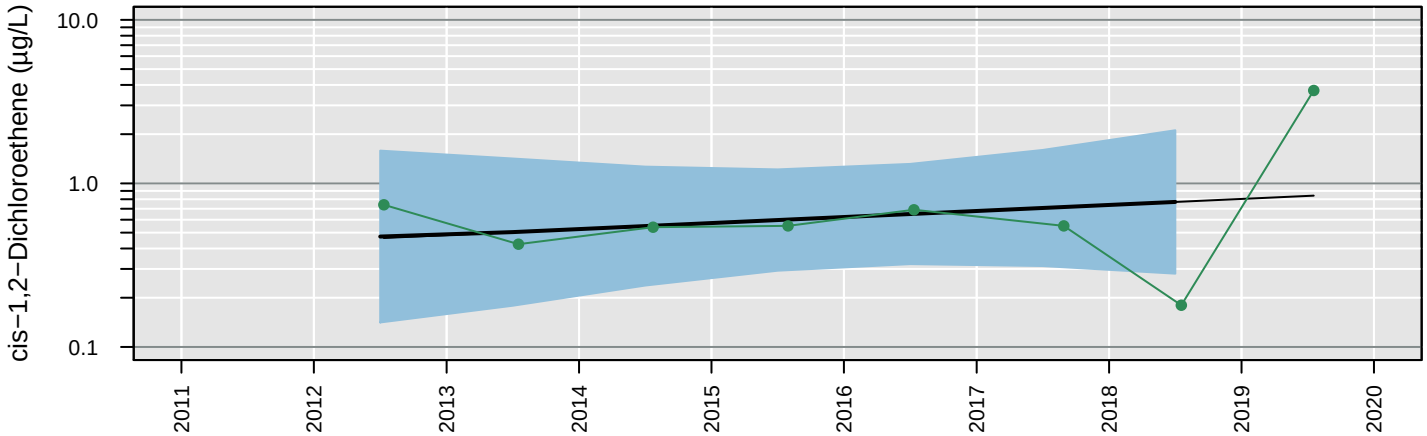
No Analysis Performed

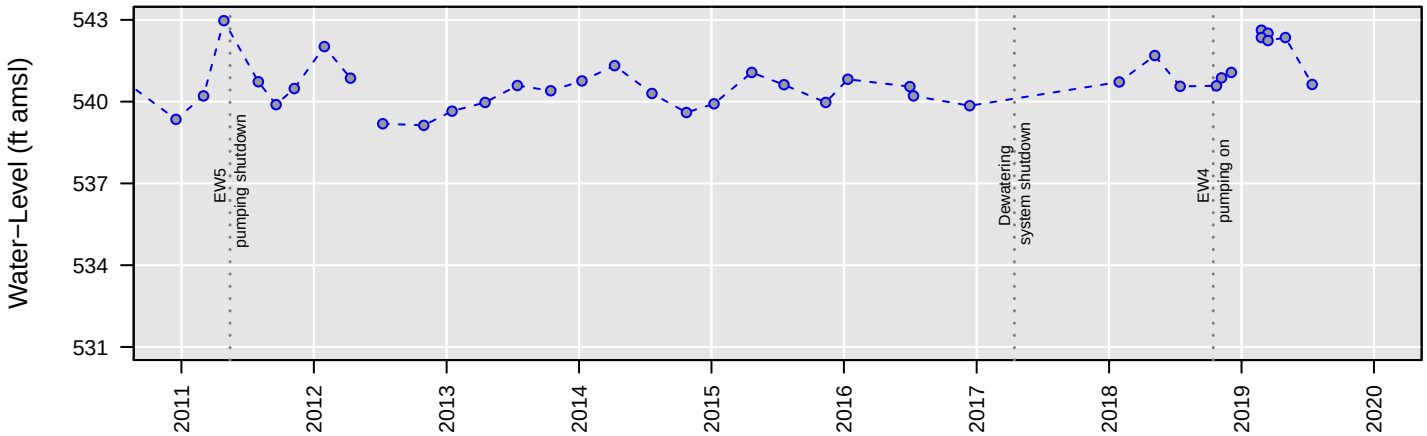
MW73

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

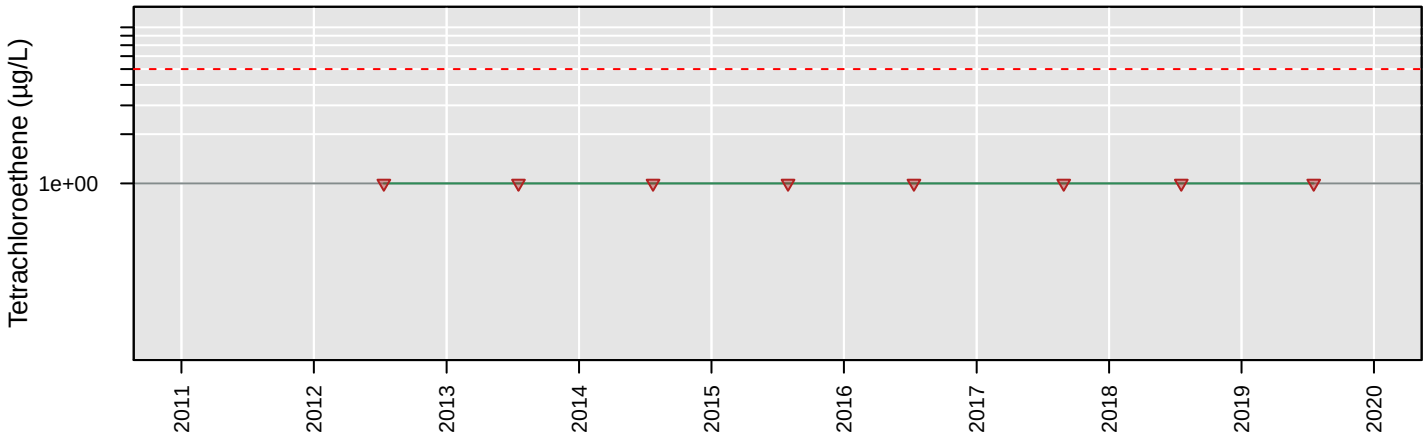
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.77 µg/L
UCL: 2.1 µg/L
LCL: 0.28 µg/L

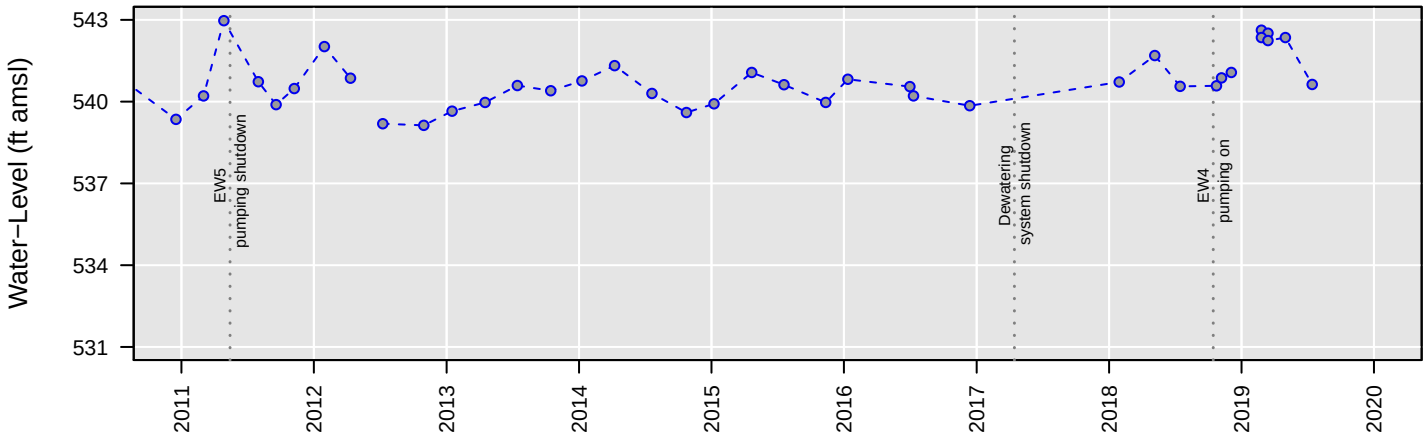
MW73

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



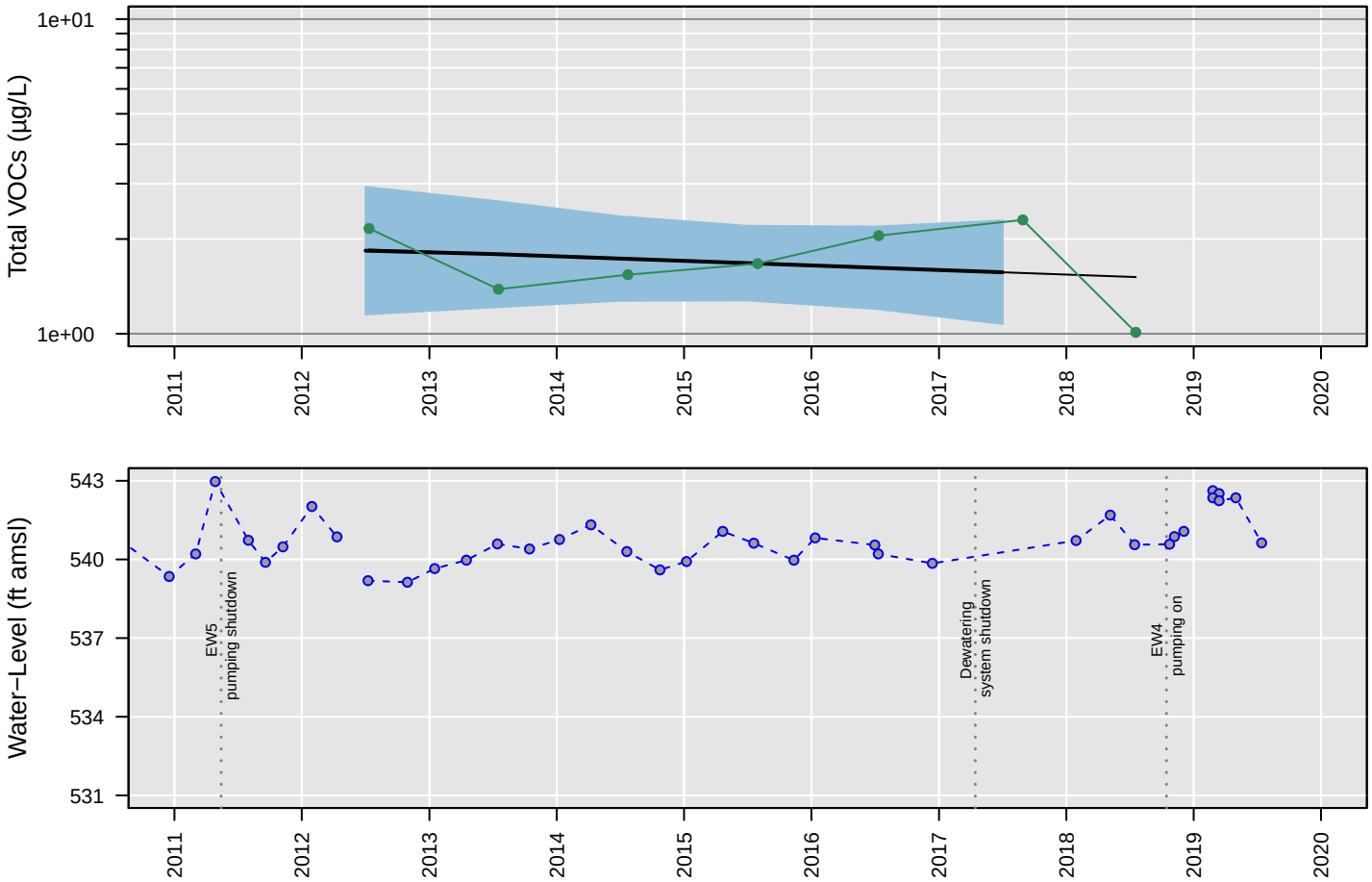


No Analysis Performed

MW73

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

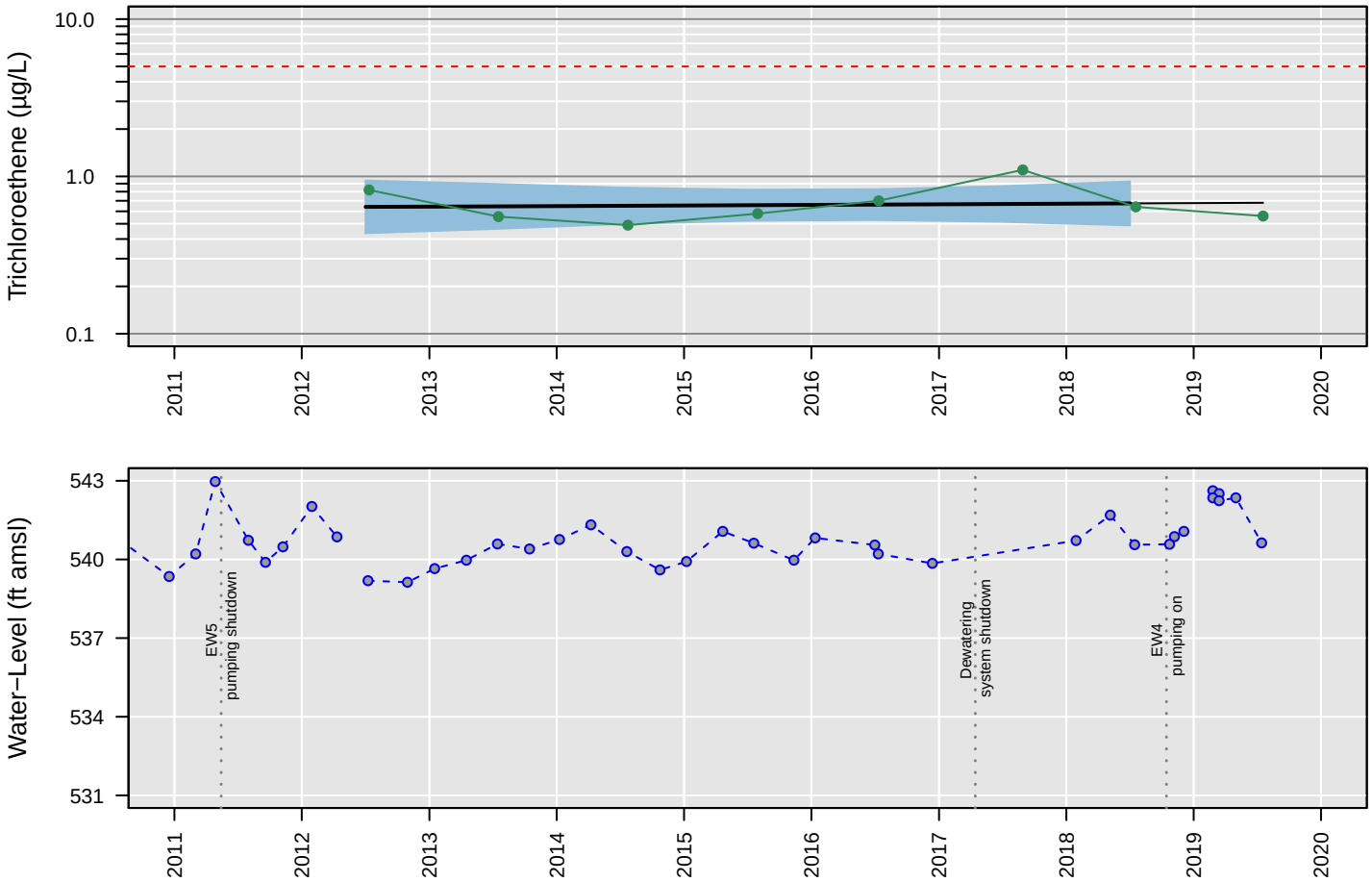
Trend Not Significant

Regression Statistics for January 2017 to January 2018
Geometric Mean: 1.6 µg/L
UCL: 2.3 µg/L
LCL: 1.1 µg/L

MW73

Trichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

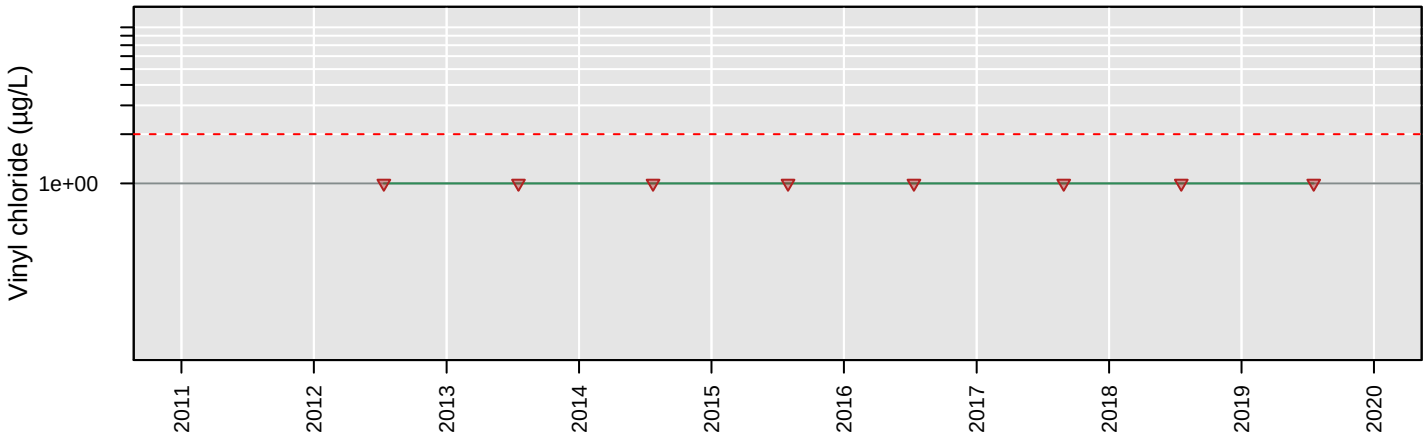
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.67 µg/L
UCL: 0.93 µg/L
LCL: 0.49 µg/L

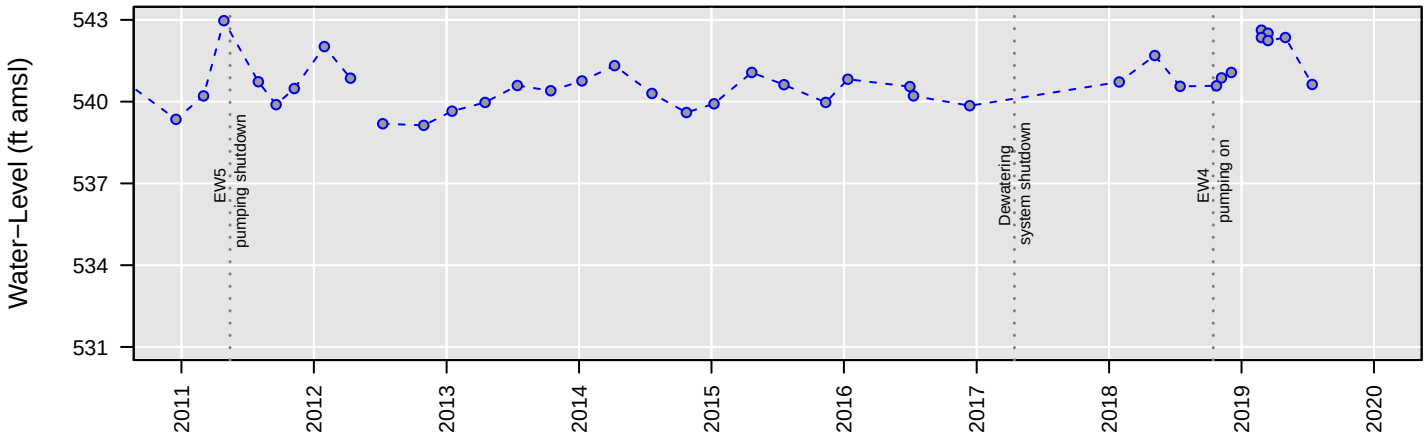
MW73

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





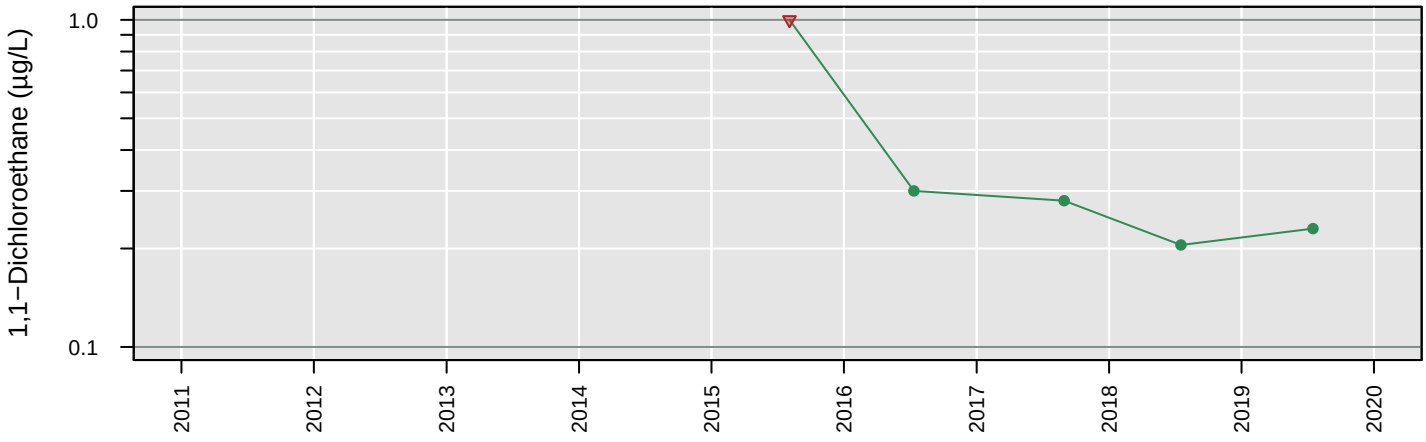
No Analysis Performed

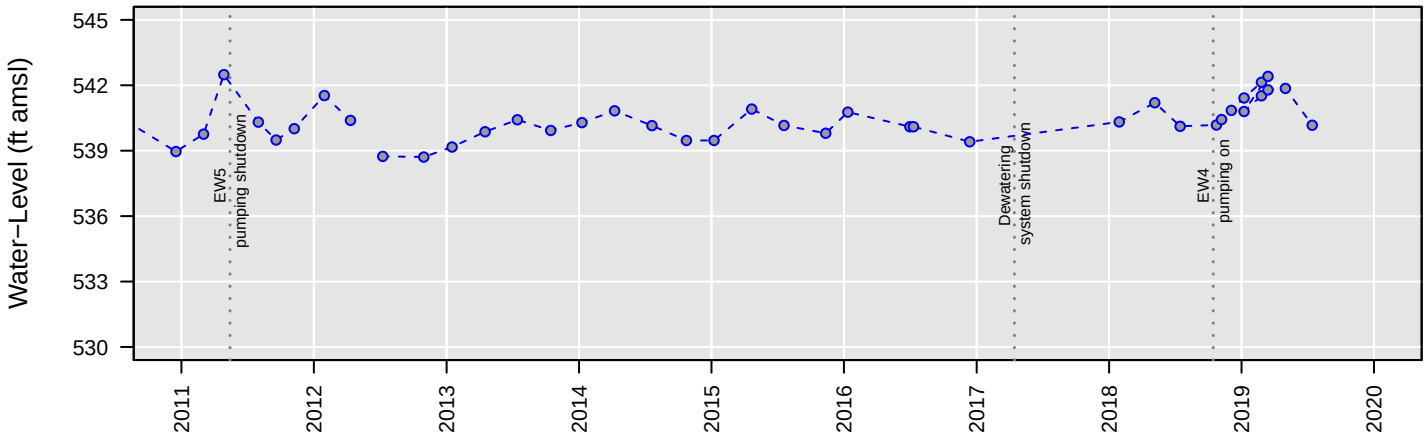
MW74

1,1−Dichloroethane

Number of Comparisons: 5
Percent NDs: 20%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





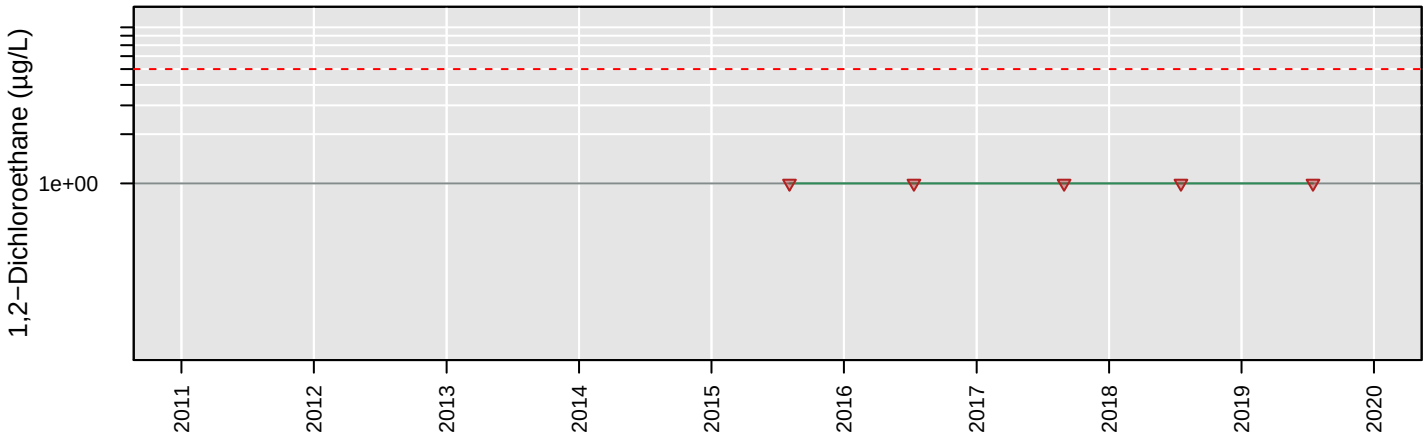
No Analysis Performed

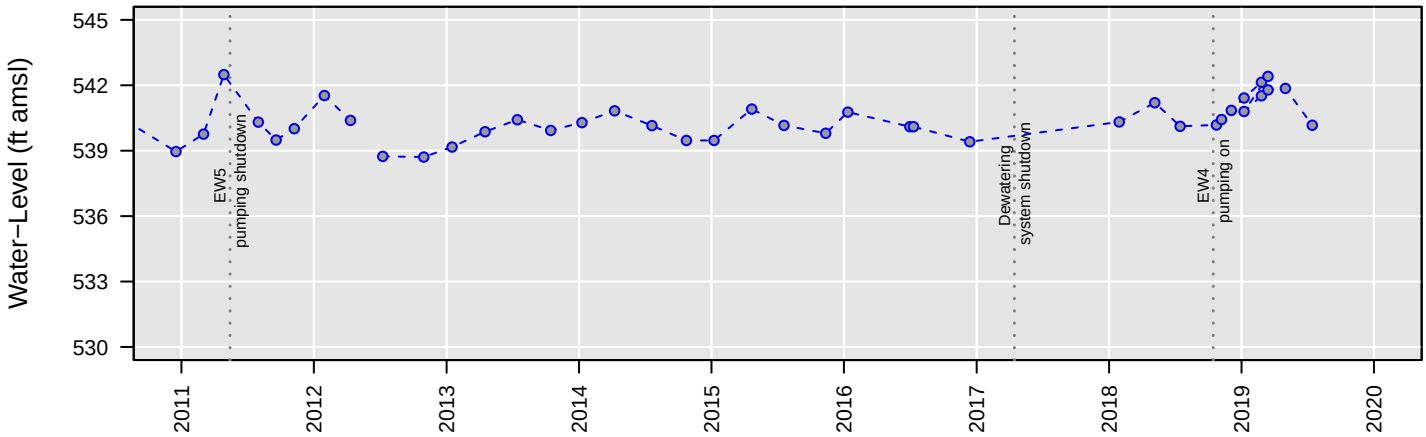
MW74

1,2−Dichloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





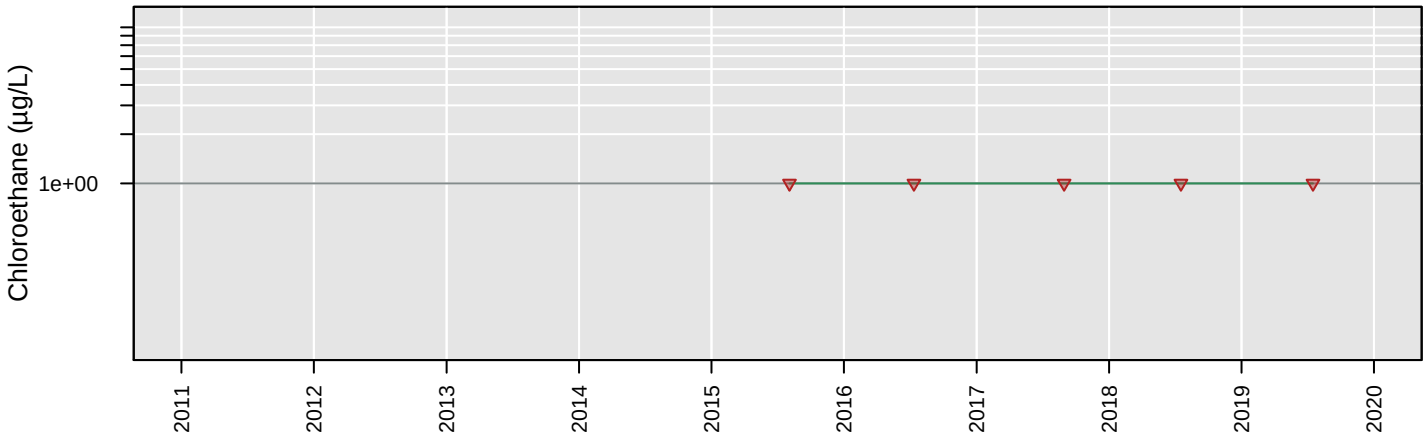
No Analysis Performed

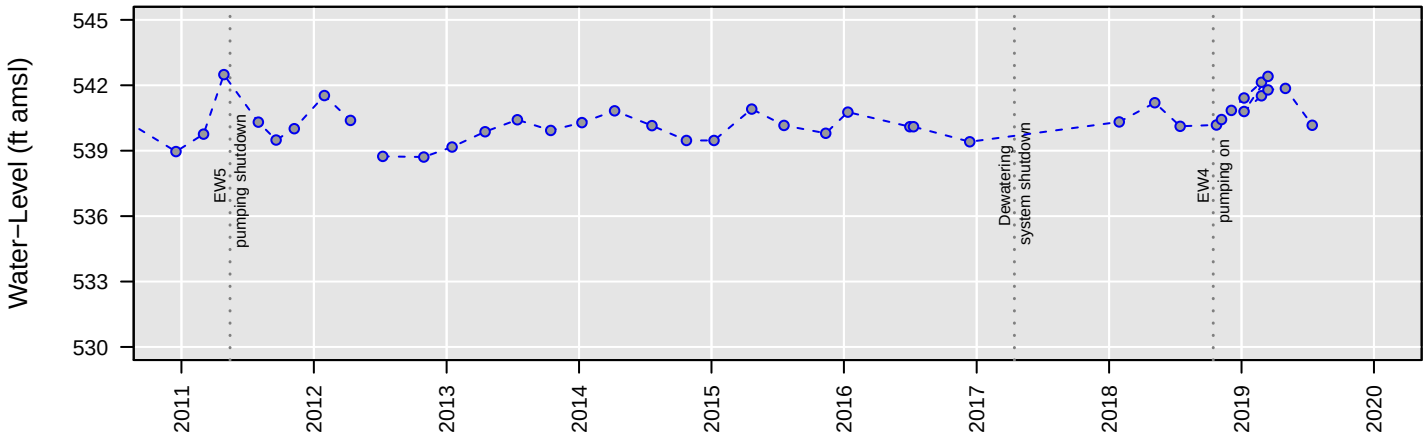
MW74

Chloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



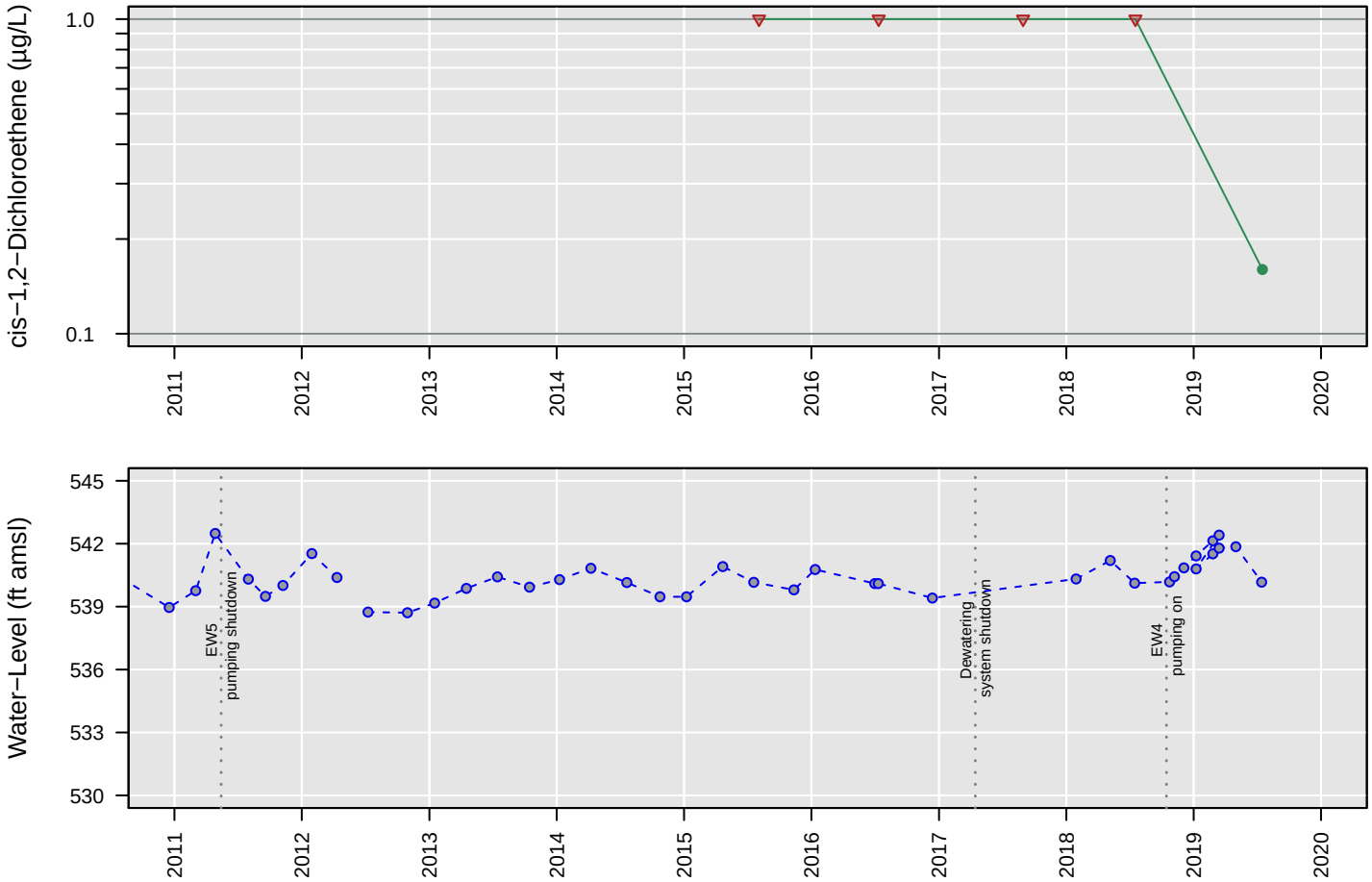


No Analysis Performed

MW74

cis−1,2−Dichloroethene

Number of Comparisons: 5
Percent NDs: 80%



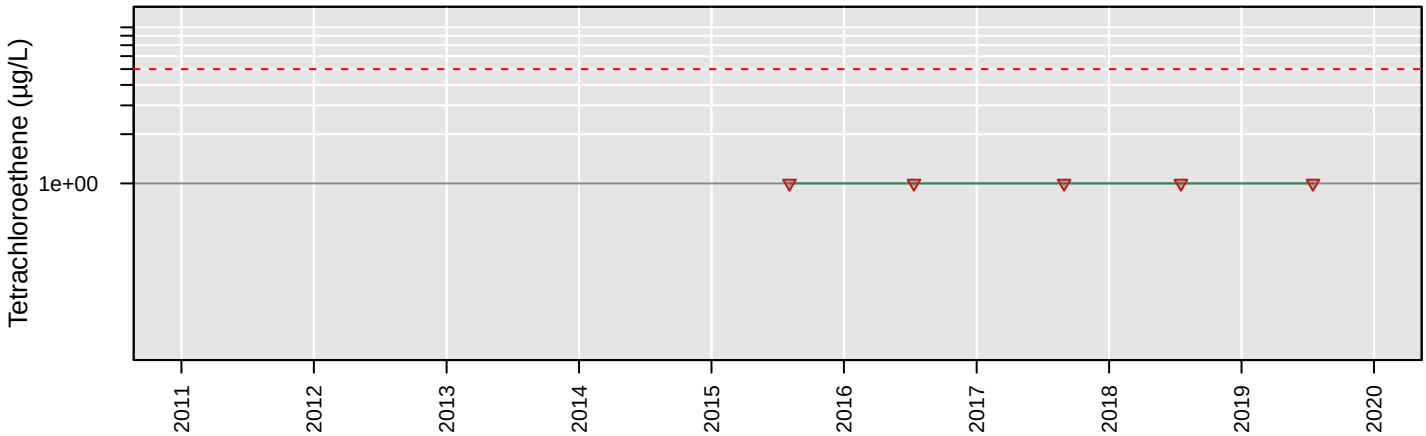
No Analysis Performed

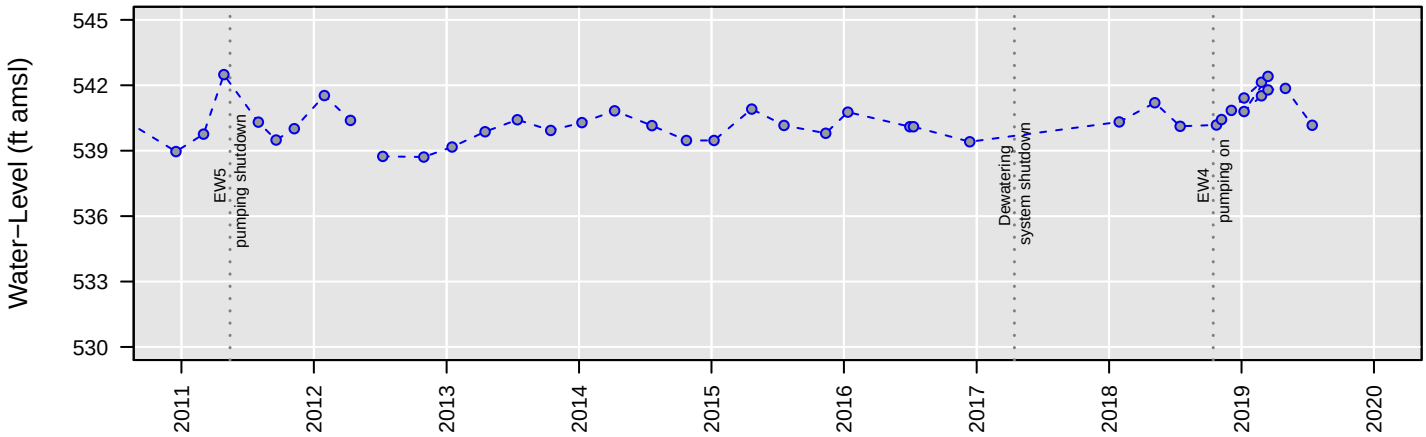
MW74

Tetrachloroethene

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





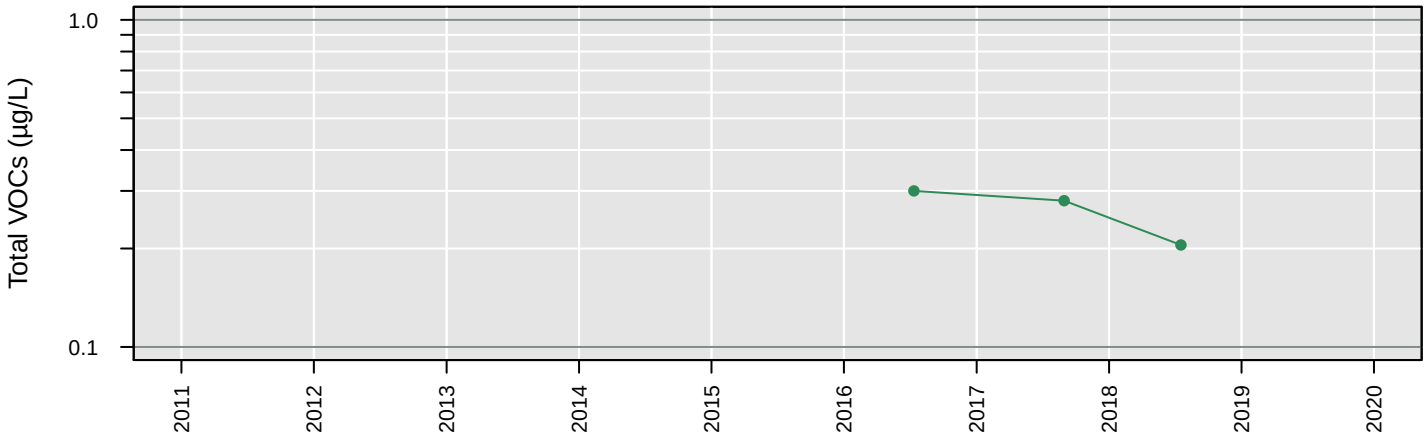
No Analysis Performed

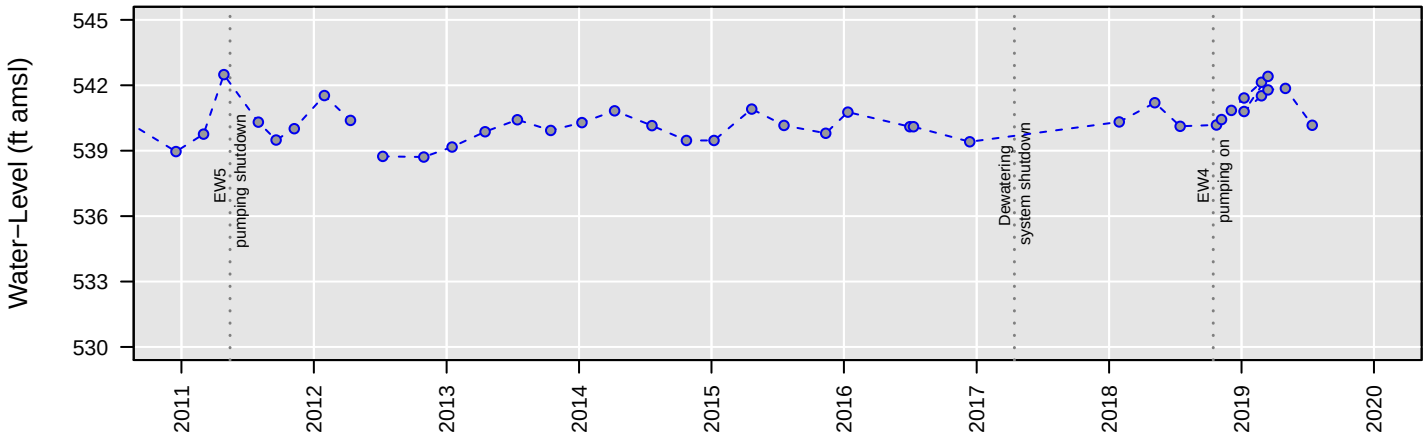
MW74

Total VOCs

Number of Comparisons: 3
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





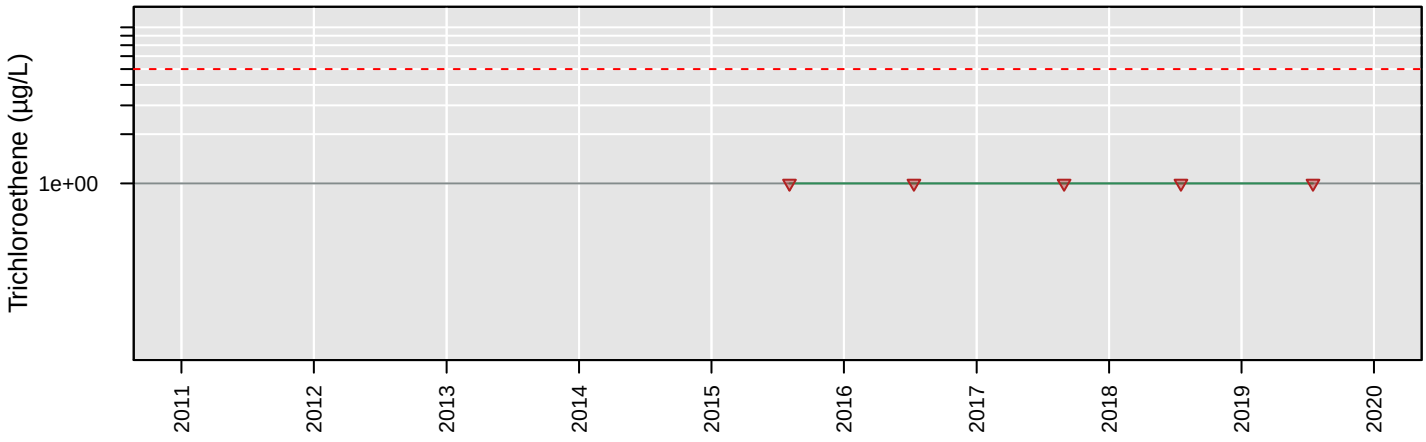
No Analysis Performed

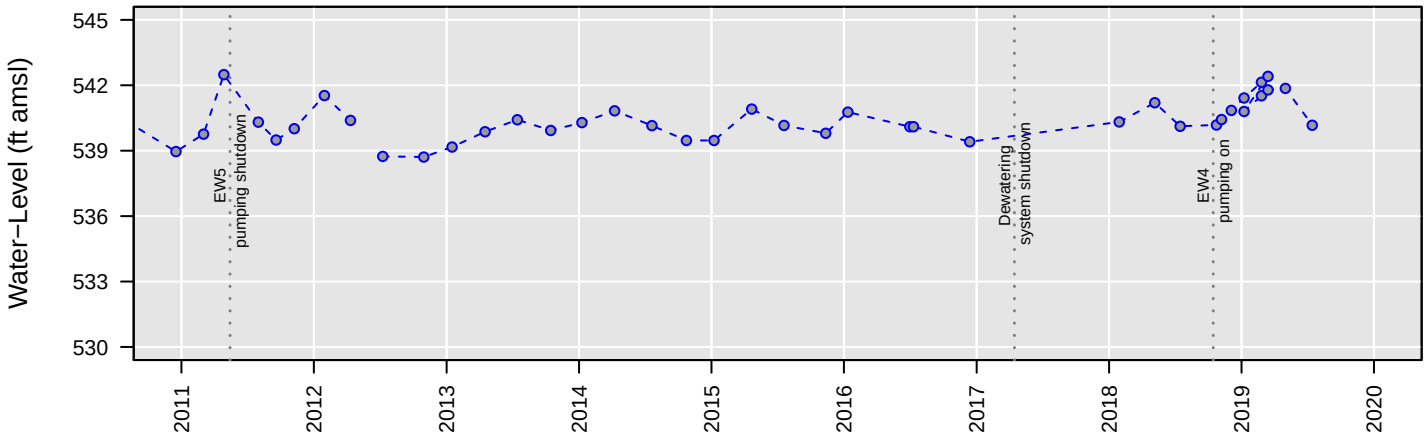
MW74

Trichloroethene

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





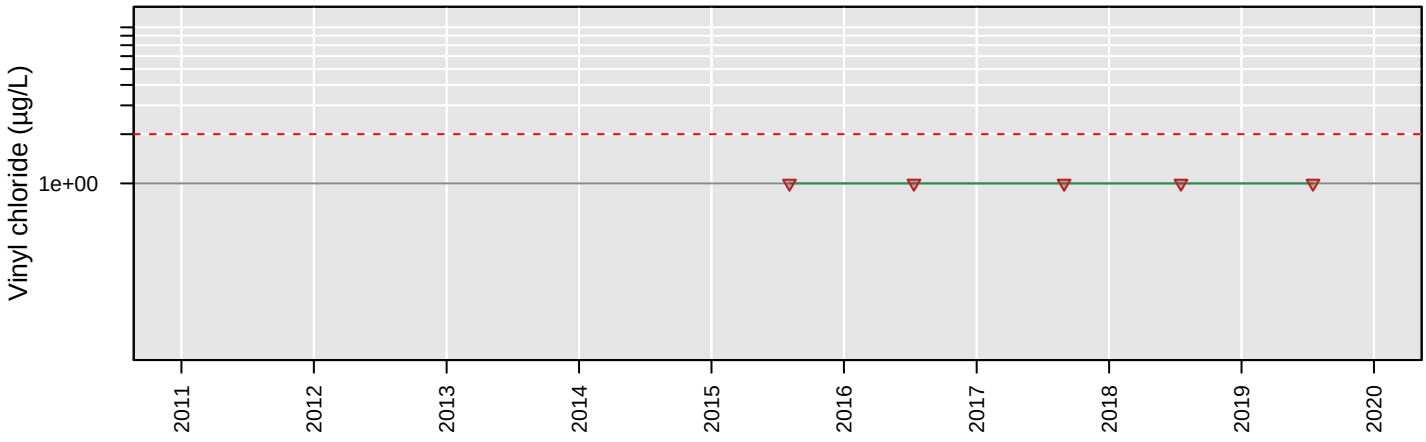
No Analysis Performed

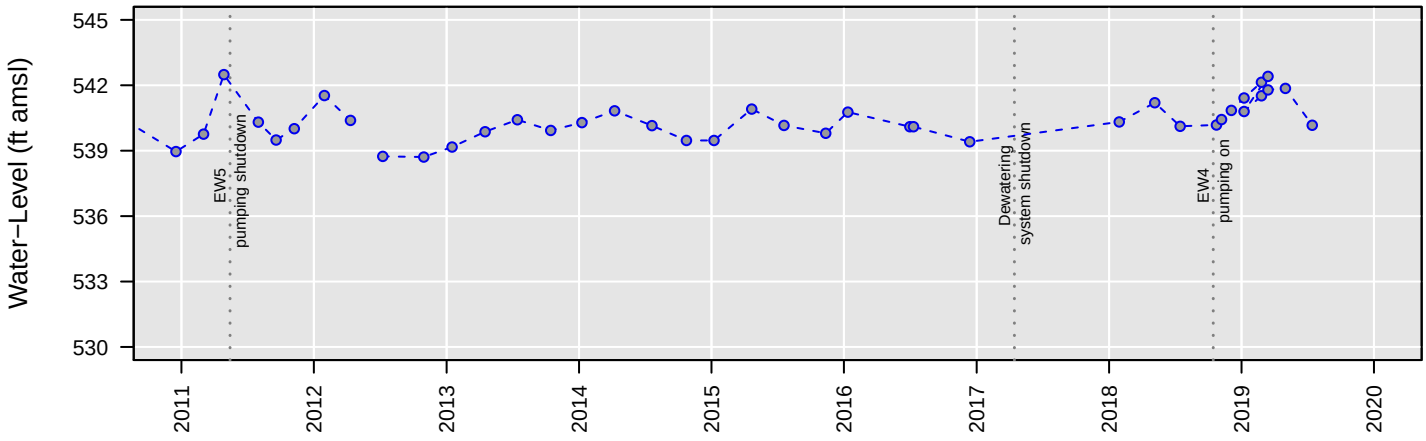
MW74

Vinyl chloride

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



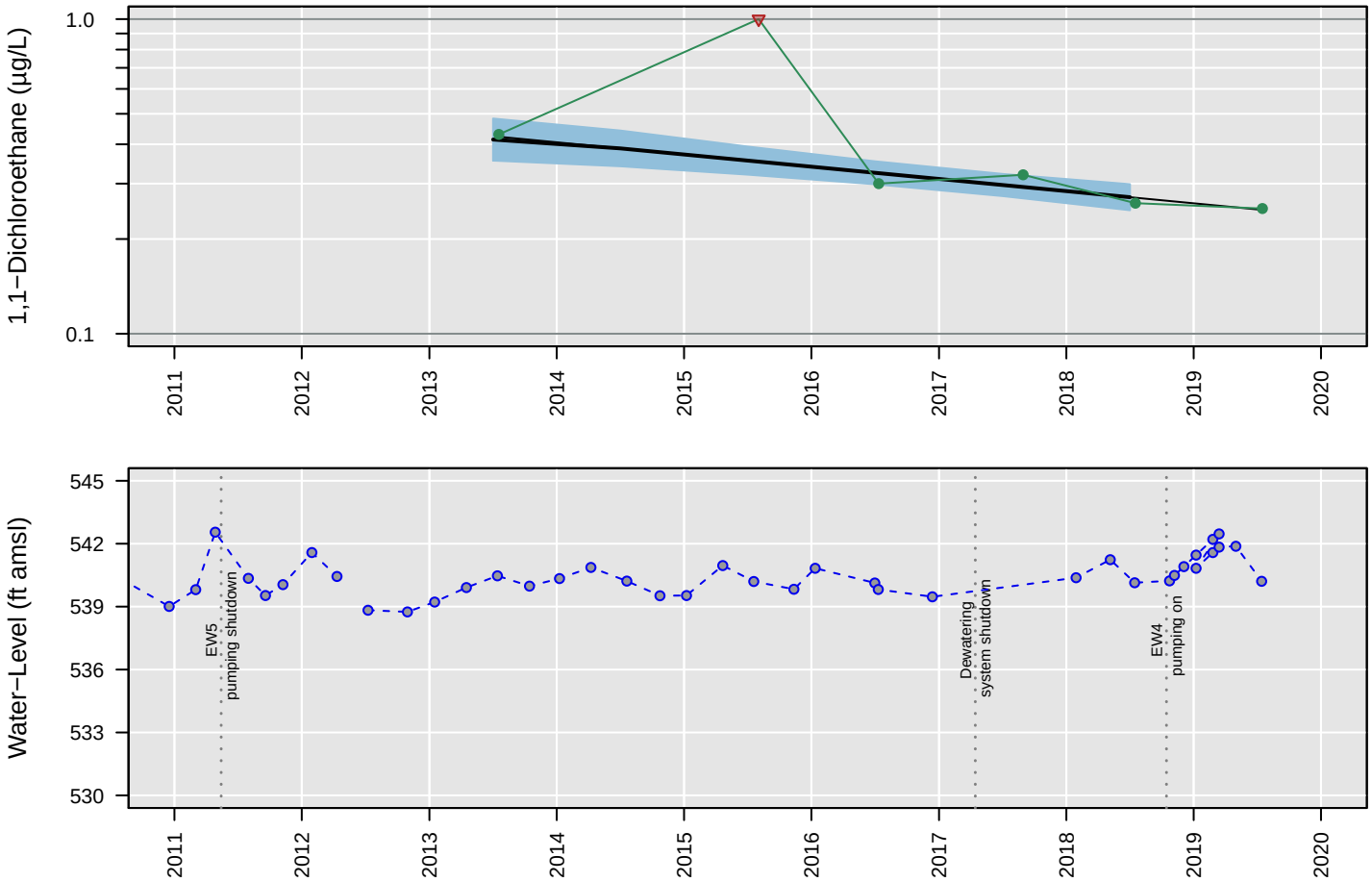


No Analysis Performed

MW75

1,1−Dichloroethane

Number of Comparisons: 6
Percent NDs: 17%



Censored Regression (Tobit) Model

ln Conc. = −0.00024 (+/− 0.000033)*Date + 3 (+/− 0.58)

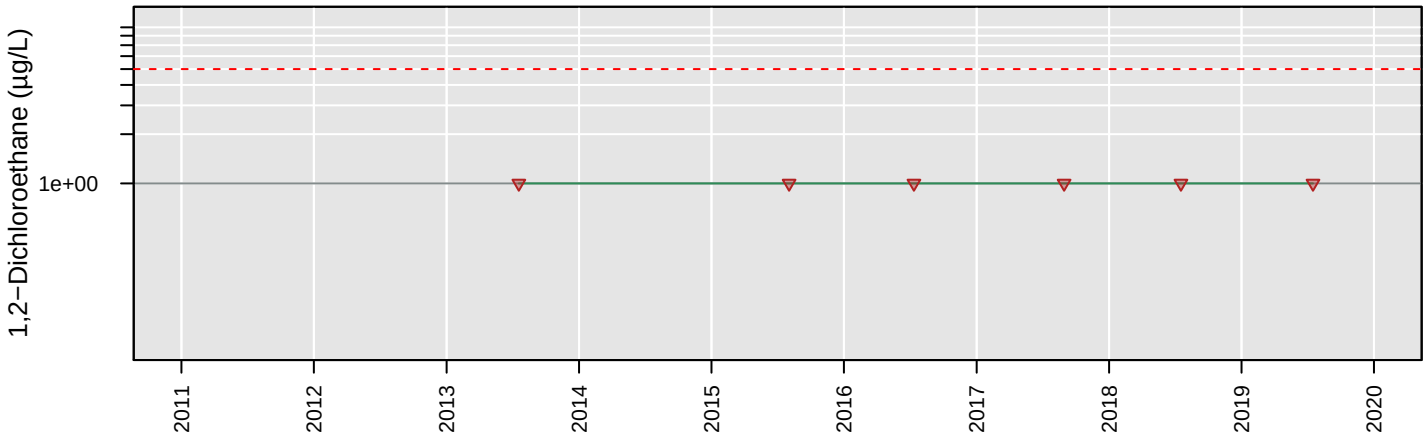
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.27 µg/L
UCL: 0.3 µg/L
LCL: 0.25 µg/L

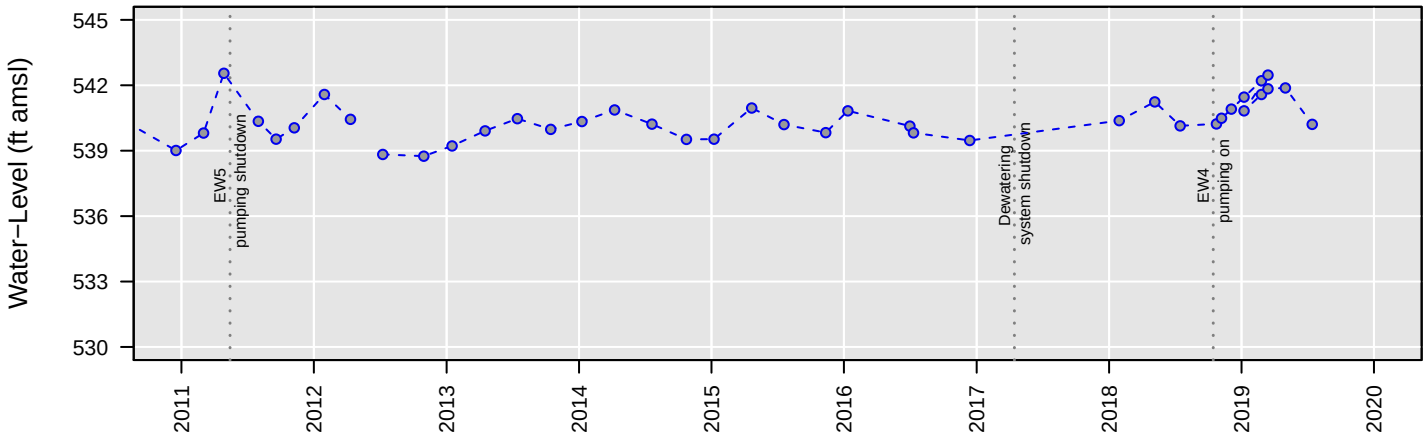
MW75

1,2−Dichloroethane

Number of Comparisons: 6
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





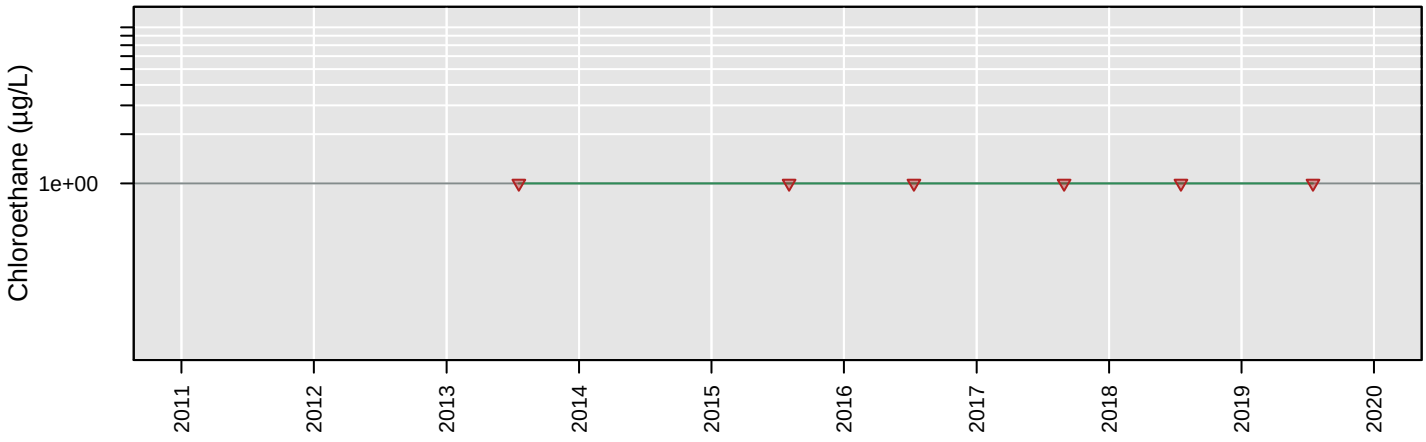
No Analysis Performed

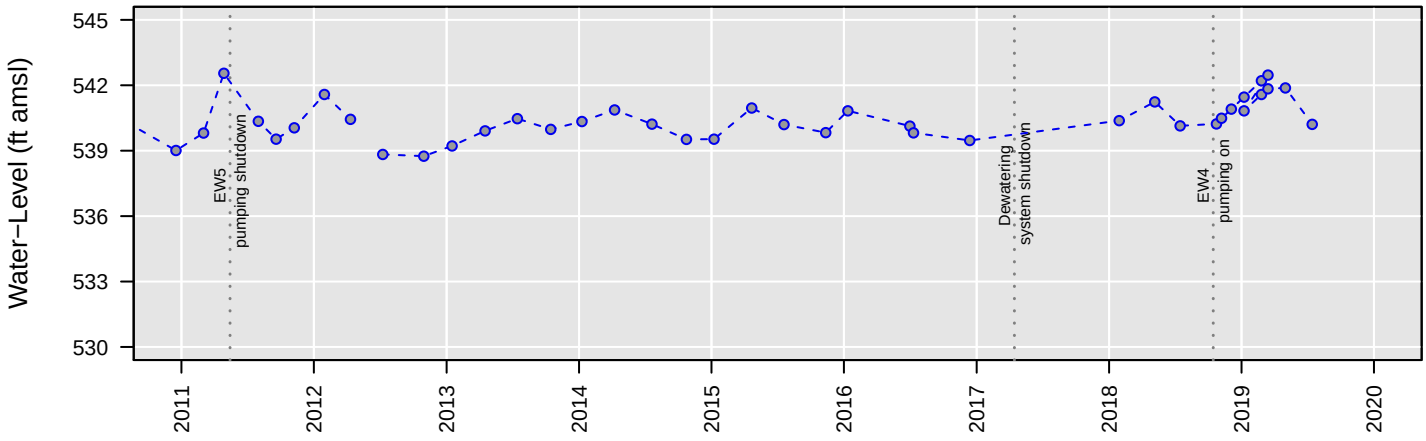
MW75

Chloroethane

Number of Comparisons: 6
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



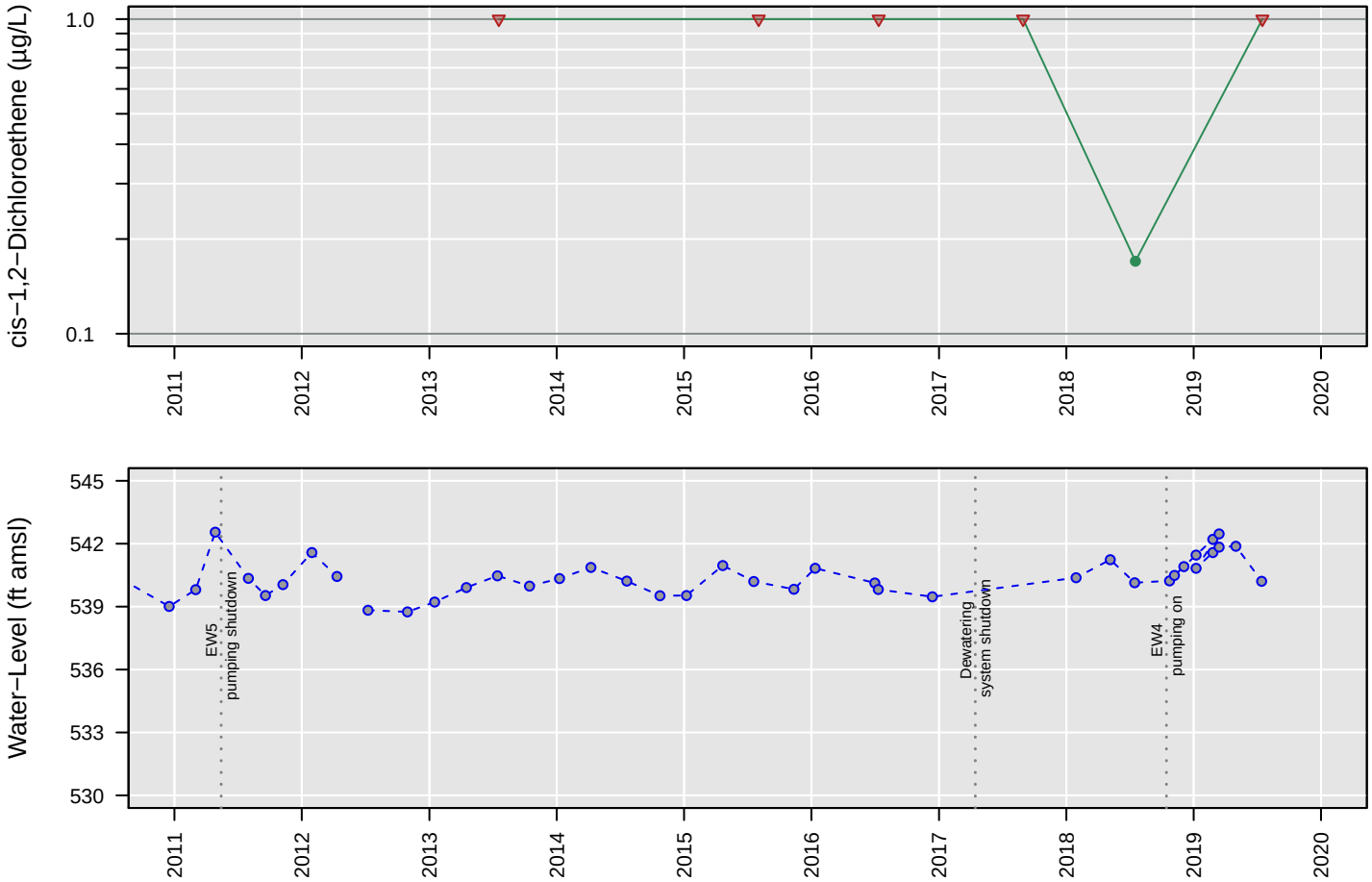


No Analysis Performed

MW75

cis−1,2−Dichloroethene

Number of Comparisons: 6
Percent NDs: 83%



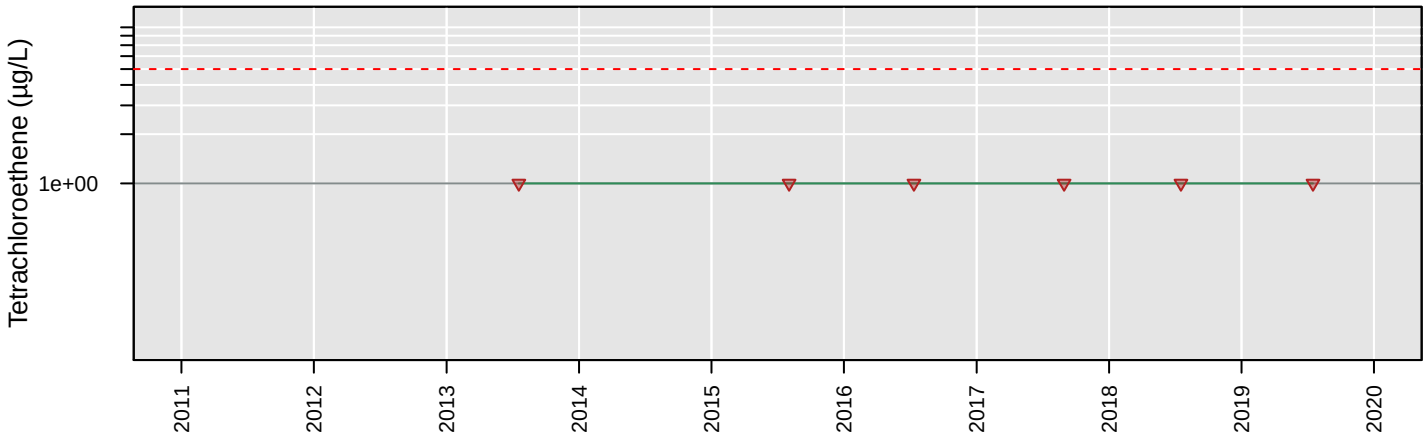
No Analysis Performed

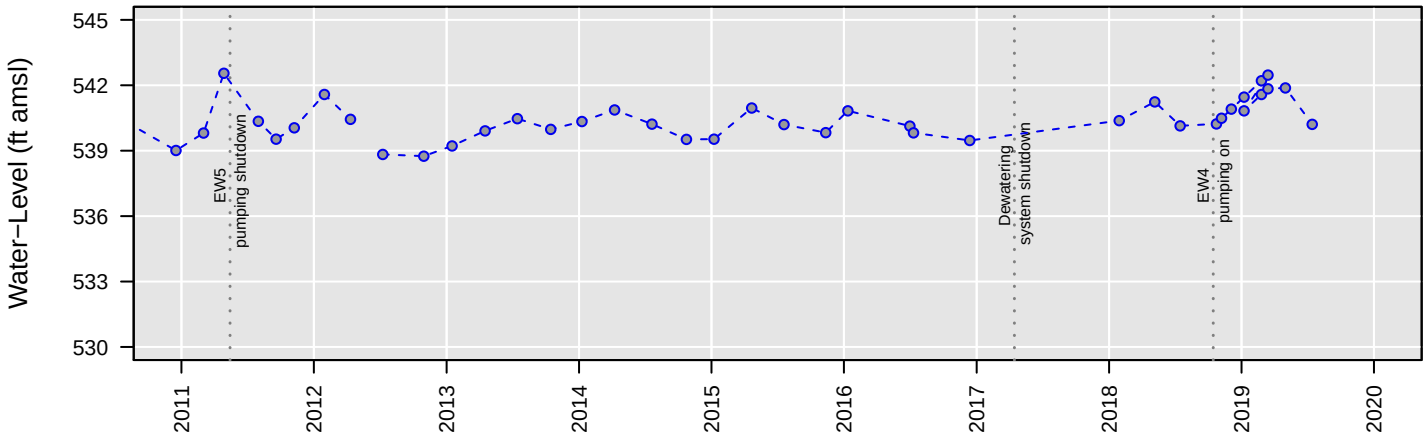
MW75

Tetrachloroethene

Number of Comparisons: 6
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





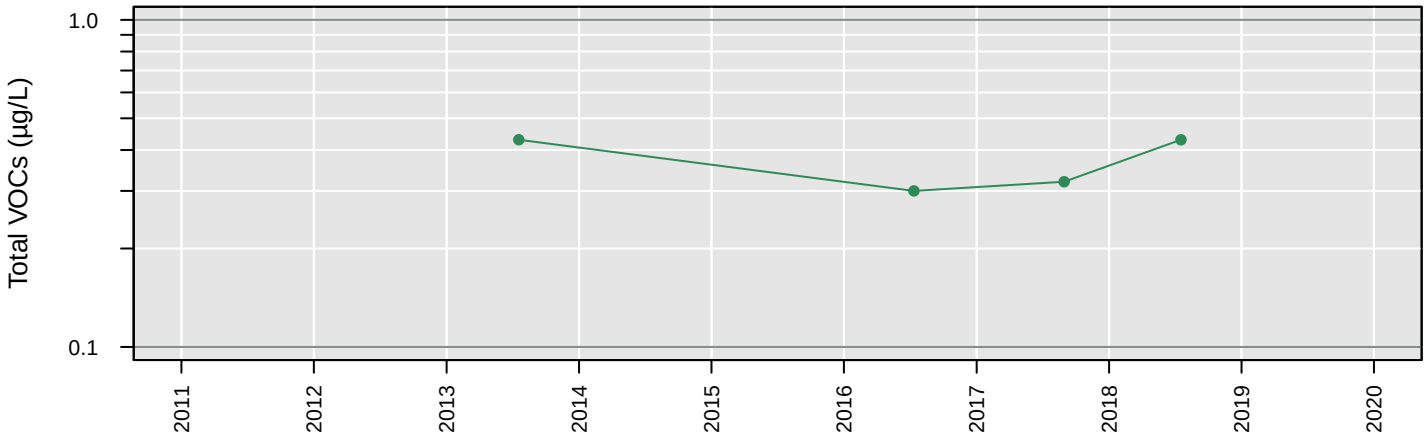
No Analysis Performed

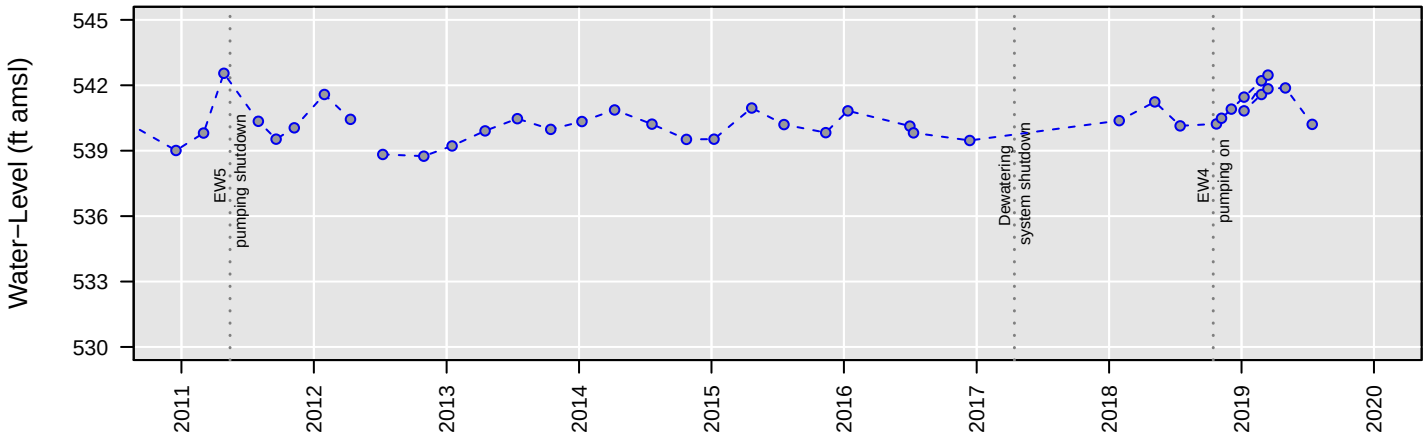
MW75

Total VOCs

Number of Comparisons: 4
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



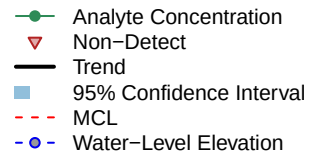


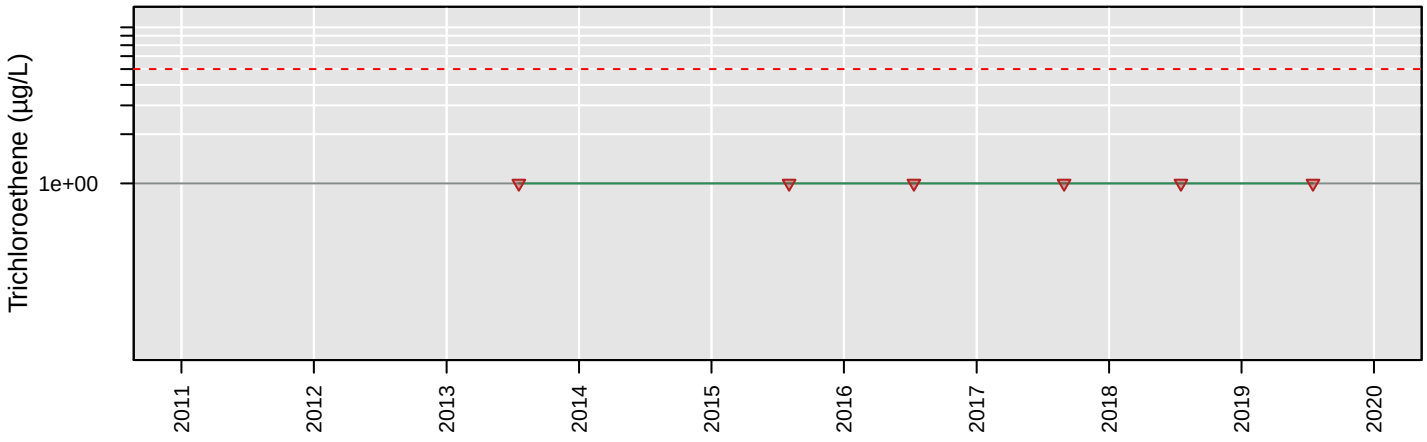
No Analysis Performed

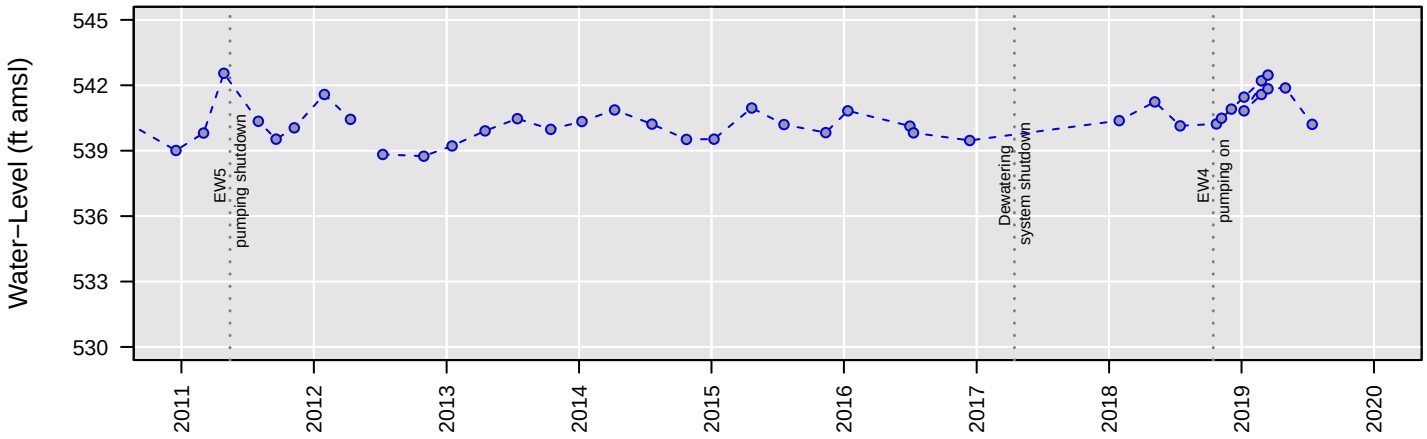
MW75

Trichloroethene

Number of Comparisons: 6
Percent NDs: 100%







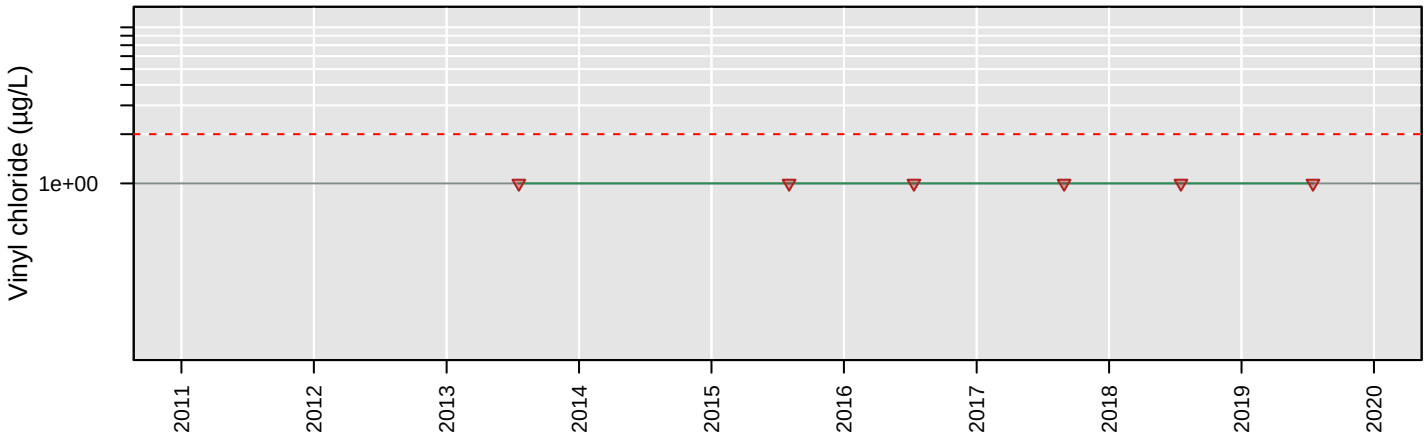
No Analysis Performed

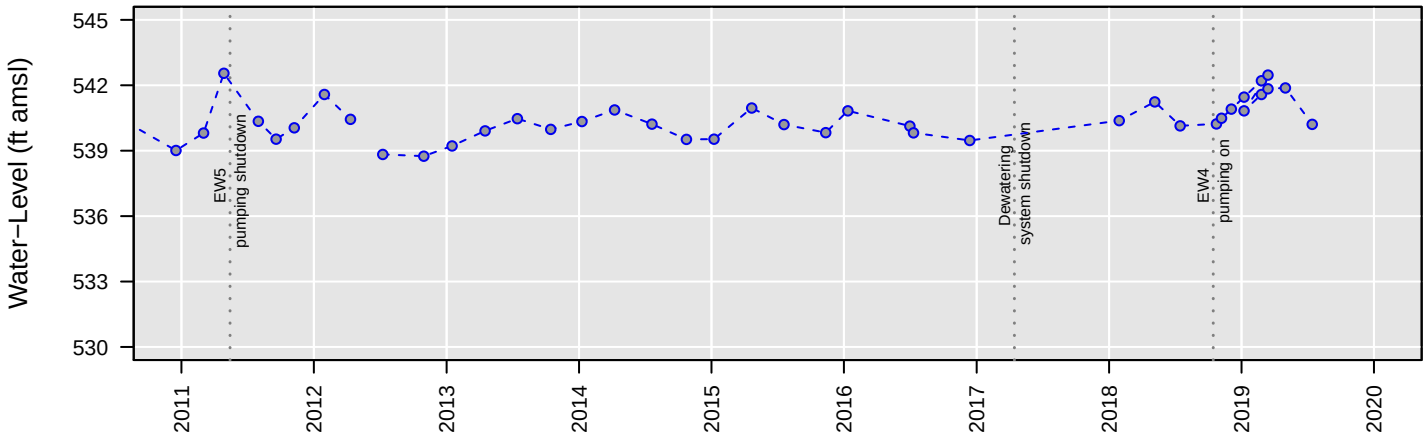
MW75

Vinyl chloride

Number of Comparisons: 6
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





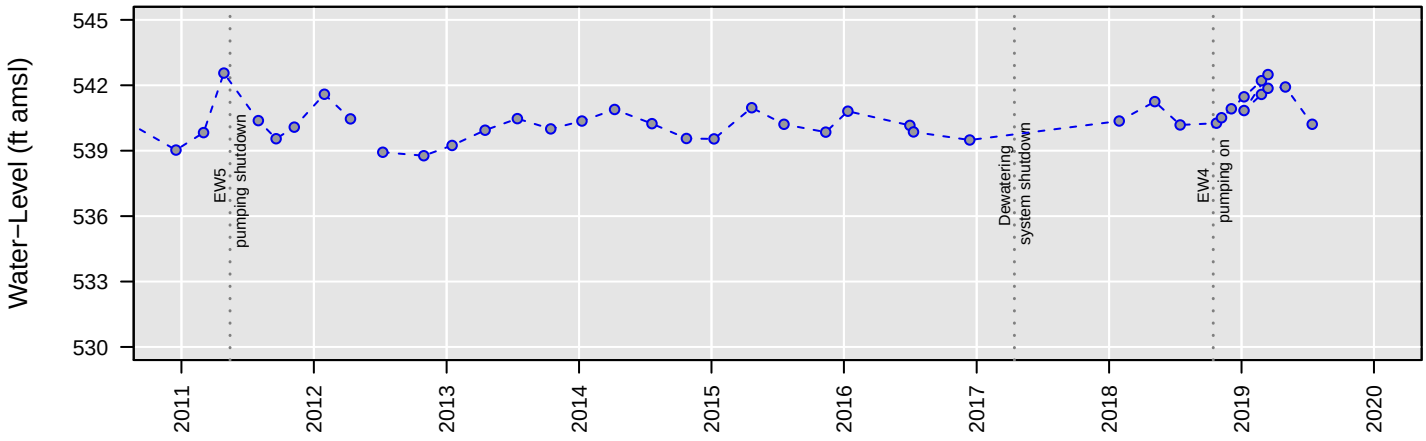
No Analysis Performed

MW76

1,1−Dichloroethane

Number of Comparisons: 6
Percent NDs: 83%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

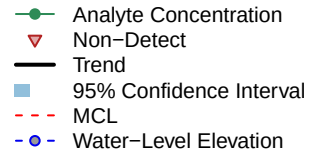


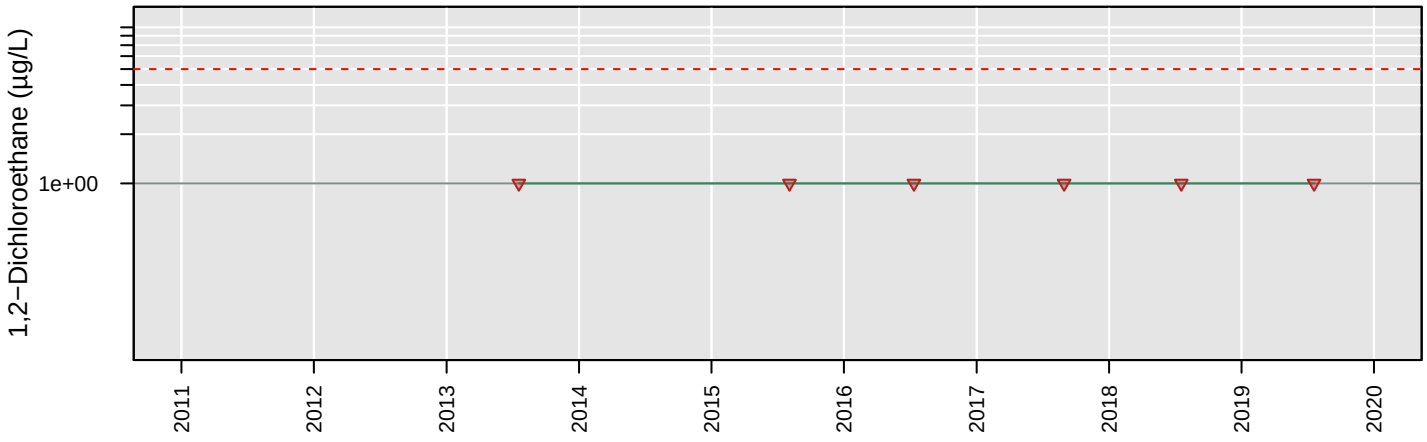
No Analysis Performed

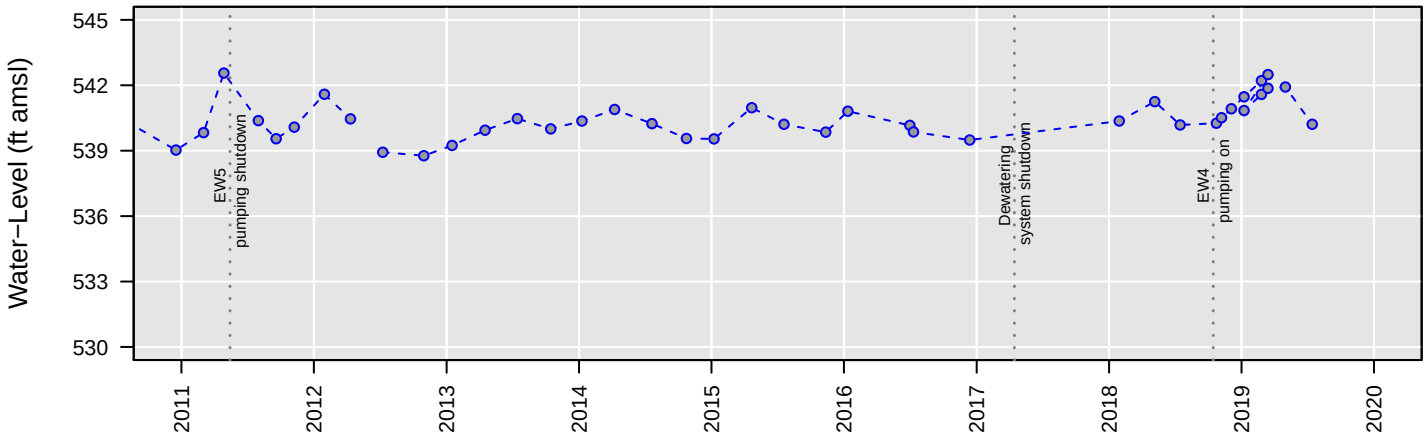
MW76

1,2−Dichloroethane

Number of Comparisons: 6
Percent NDs: 100%







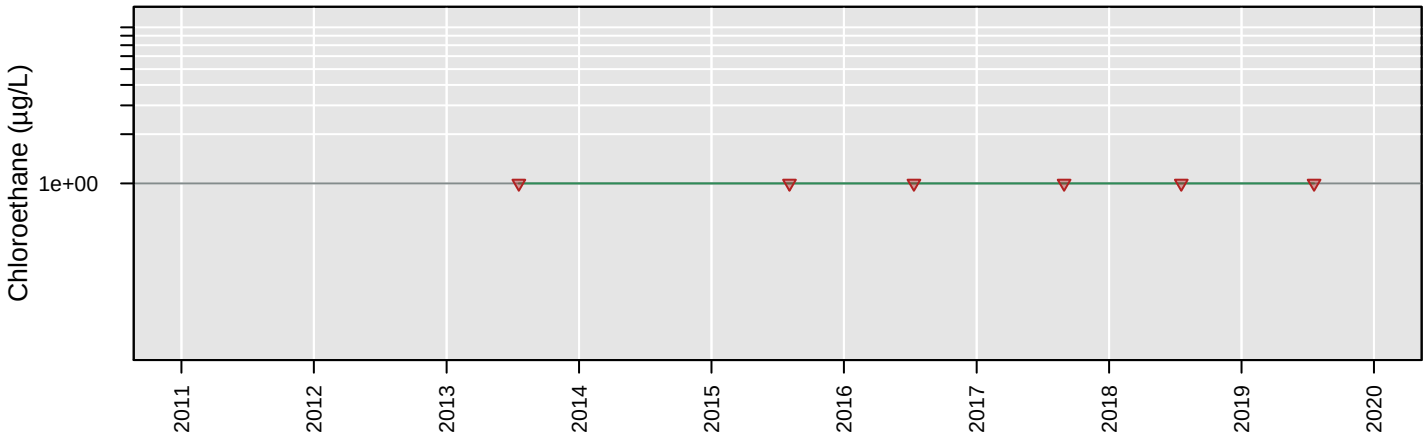
No Analysis Performed

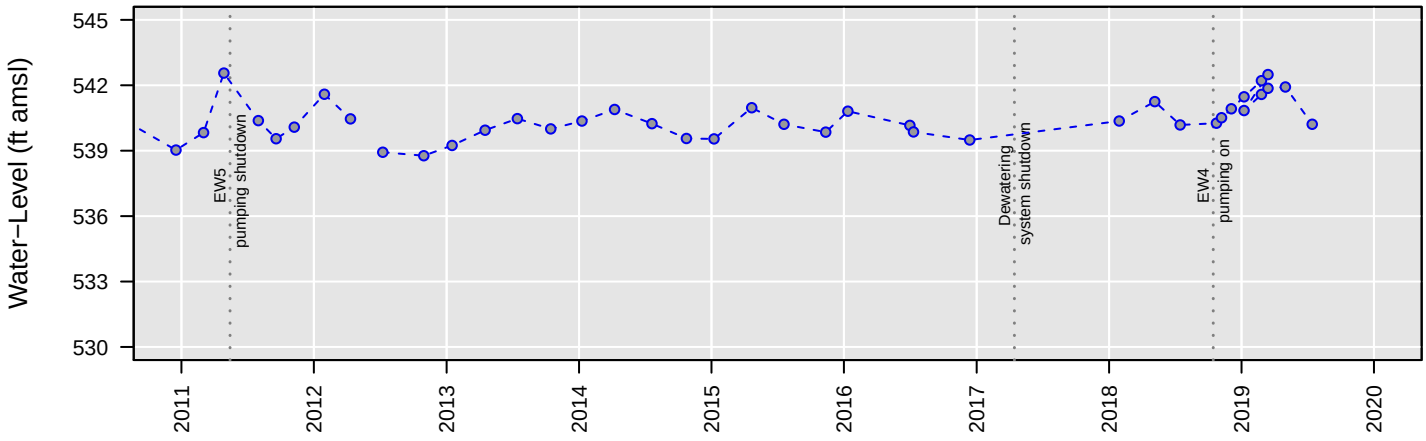
MW76

Chloroethane

Number of Comparisons: 6
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





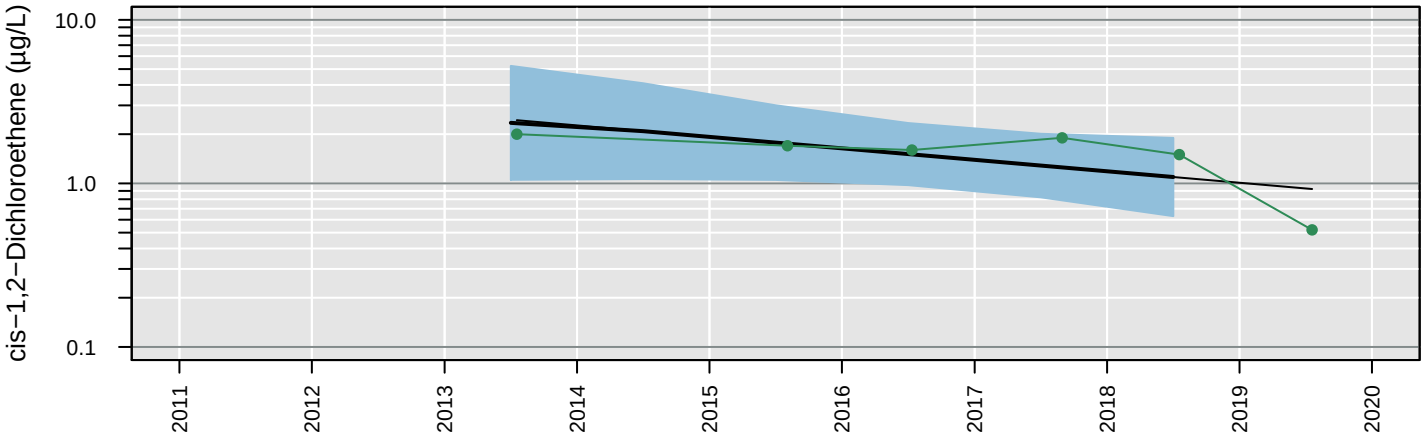
No Analysis Performed

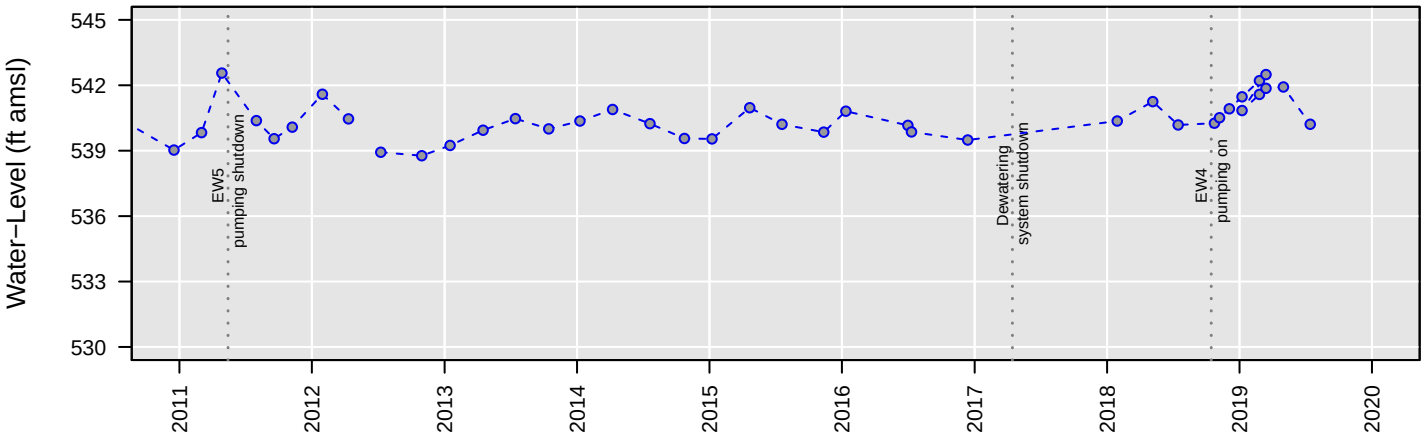
MW76

cis−1,2−Dichloroethene

Number of Comparisons: 6
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

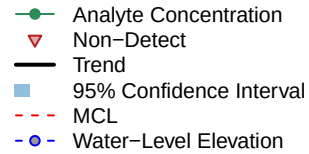
ln Conc. = −0.00044 (+/− 0.00019)*Date + 7.9 (+/− 3.2)

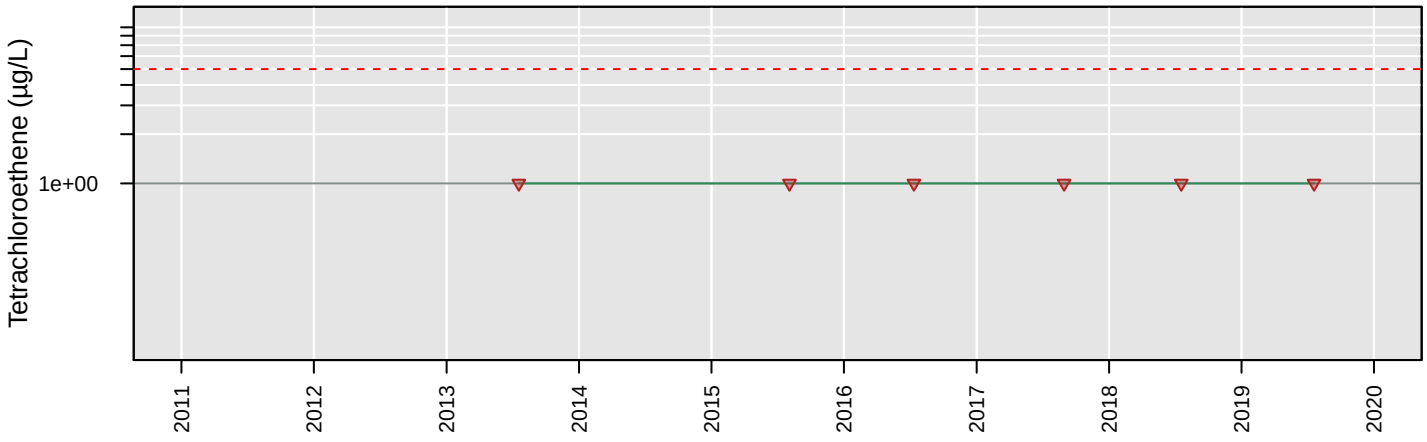
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.1 µg/L
UCL: 1.9 µg/L
LCL: 0.63 µg/L

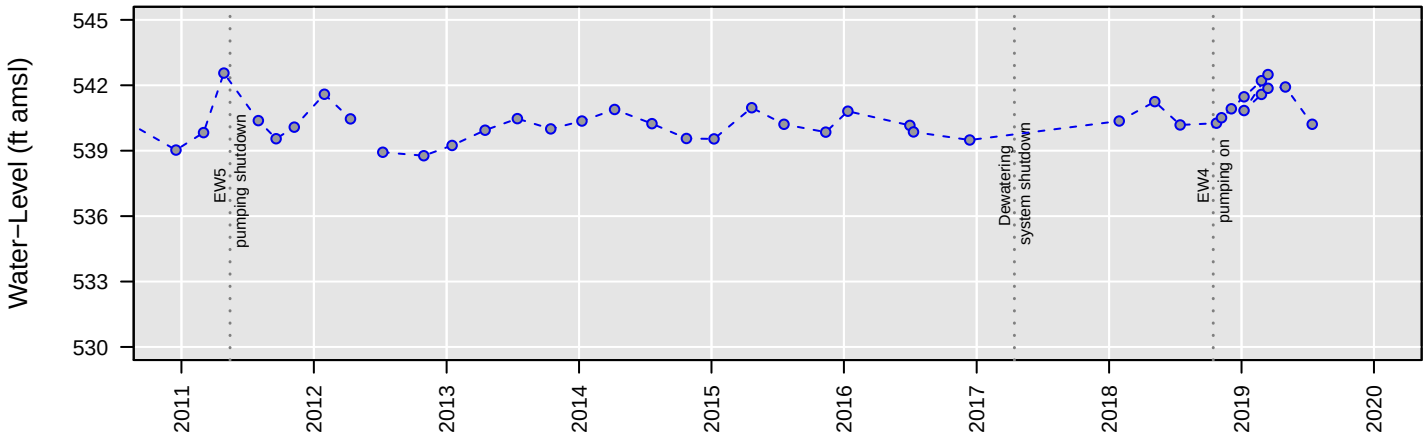
MW76

Tetrachloroethene

Number of Comparisons: 6
Percent NDs: 100%







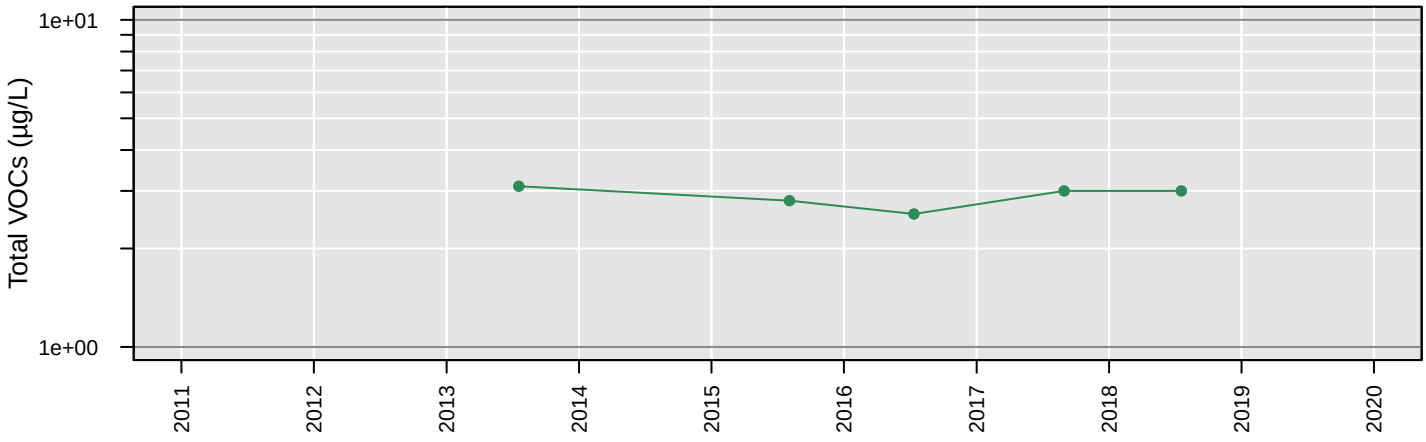
No Analysis Performed

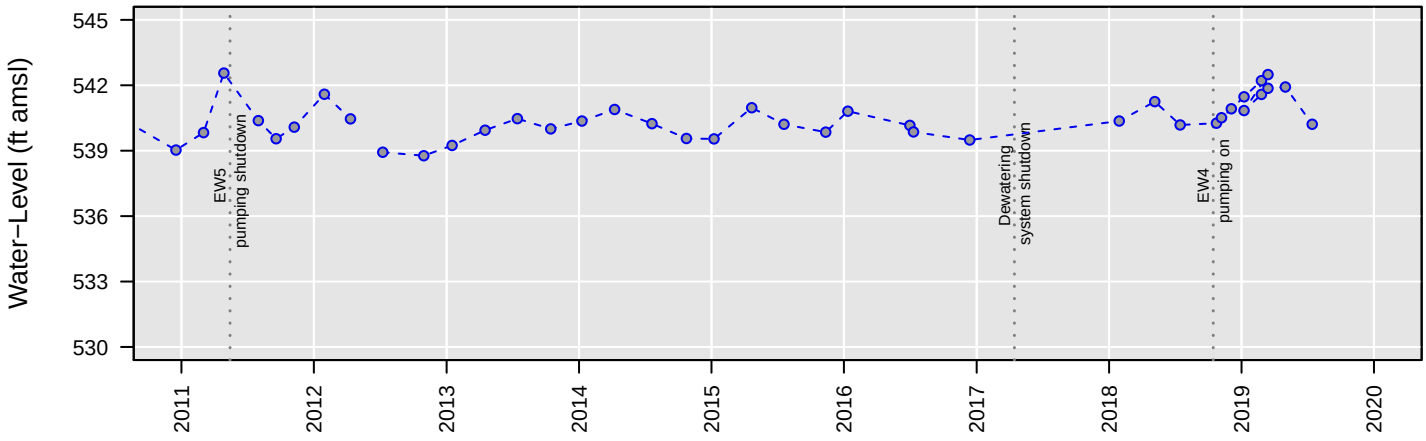
MW76

Total VOCs

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



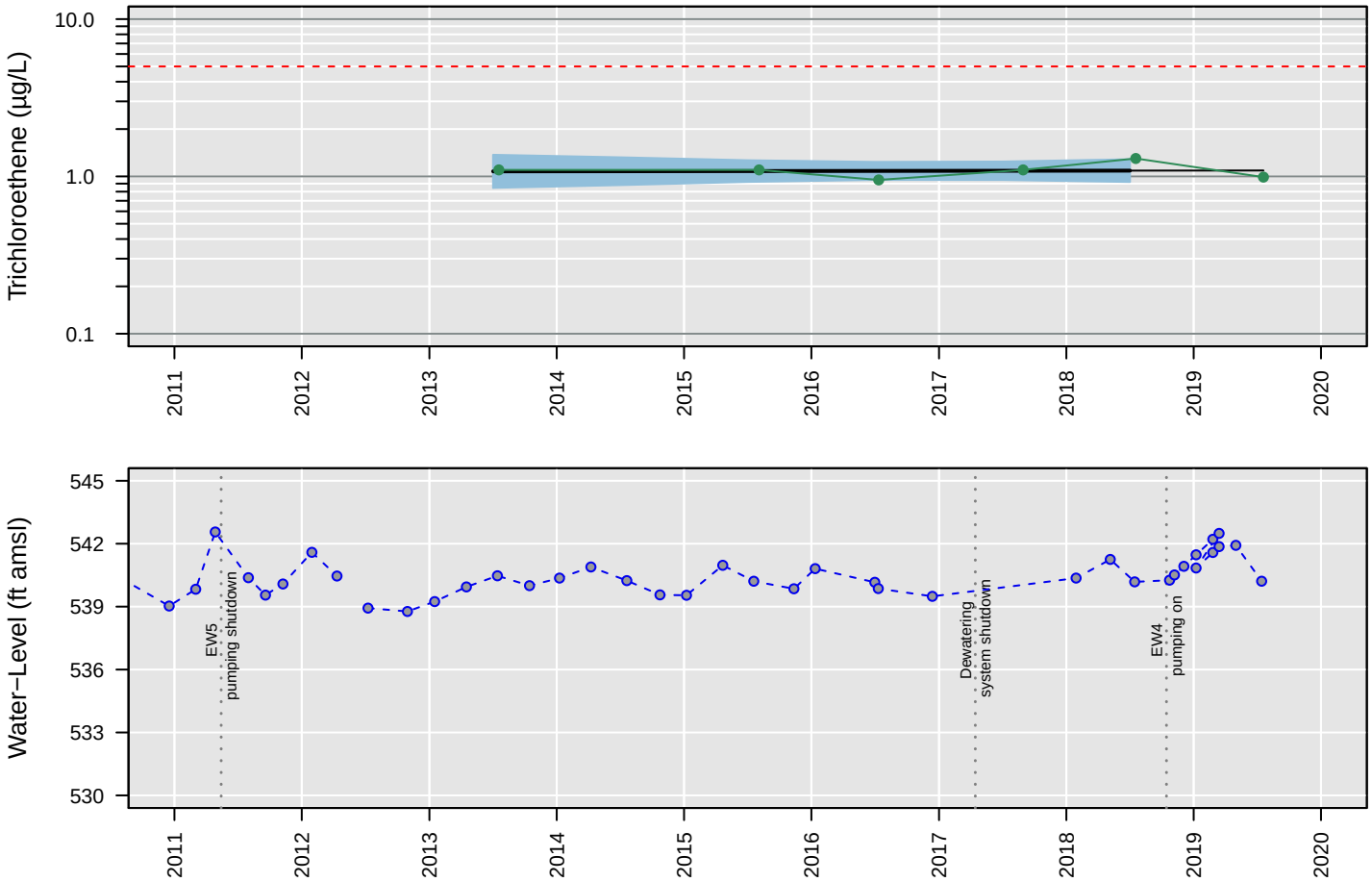


No Analysis Performed

MW76

Trichloroethene

Number of Comparisons: 6
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

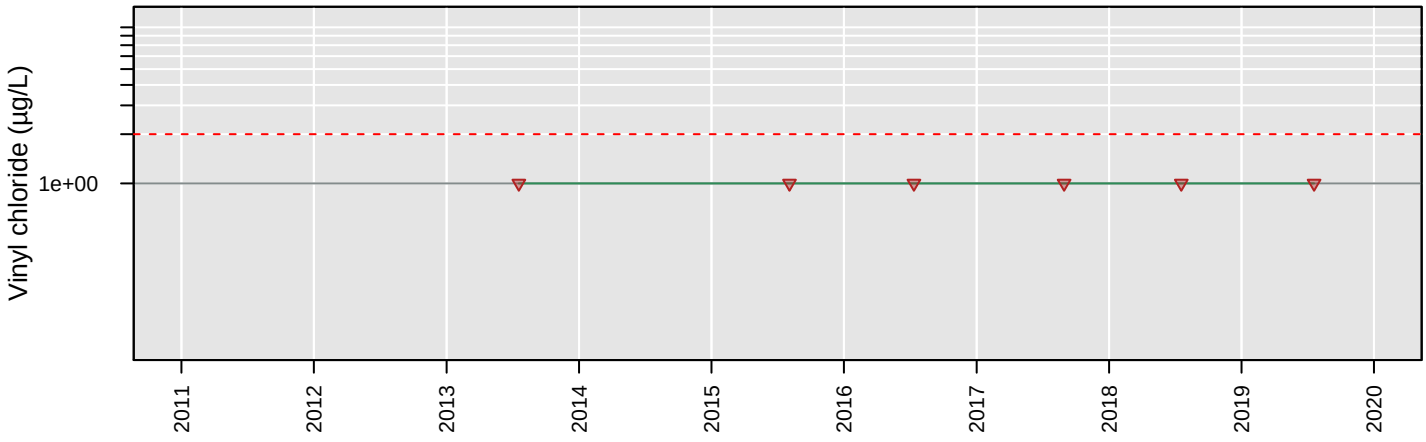
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.1 µg/L
UCL: 1.3 µg/L
LCL: 0.92 µg/L

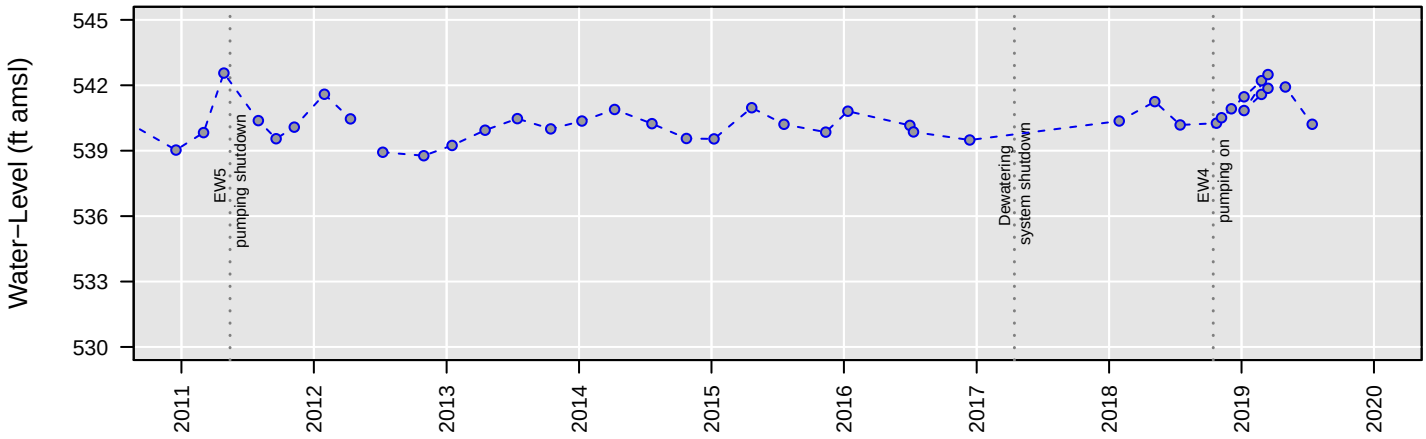
MW76

Vinyl chloride

Number of Comparisons: 6
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





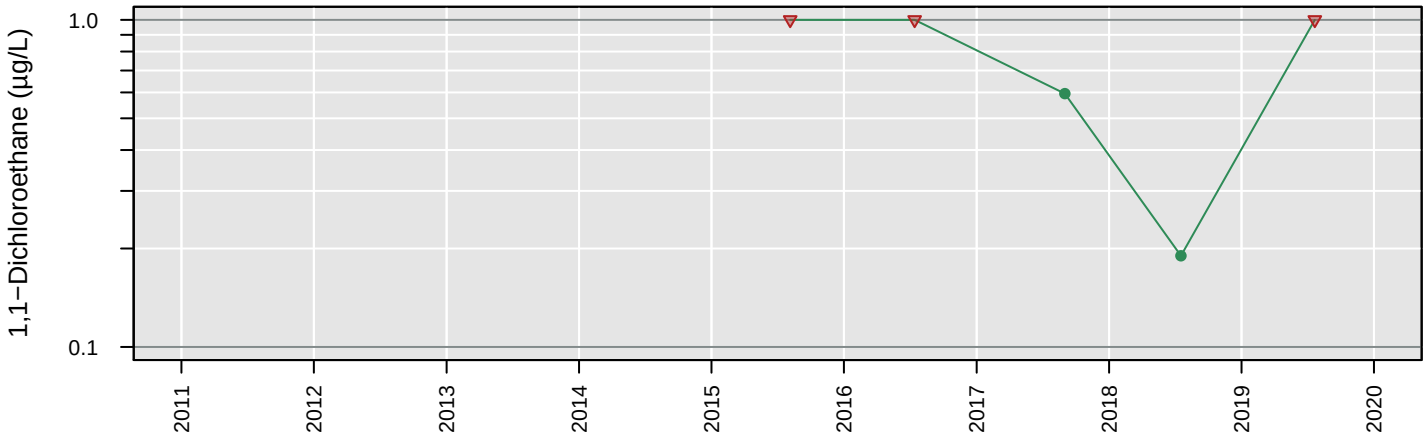
No Analysis Performed

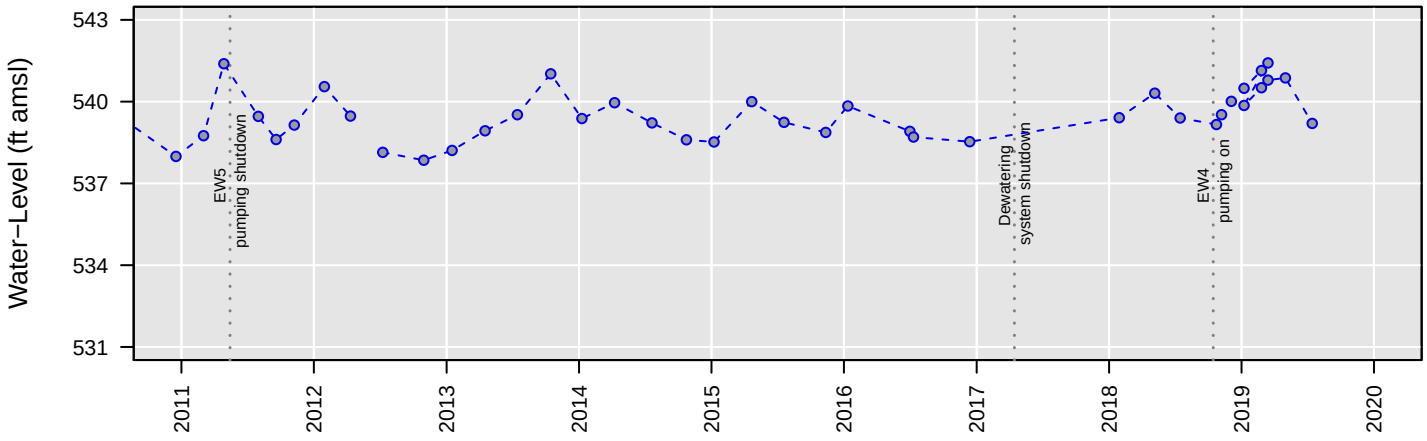
MW77

1,1−Dichloroethane

Number of Comparisons: 5
Percent NDs: 60%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





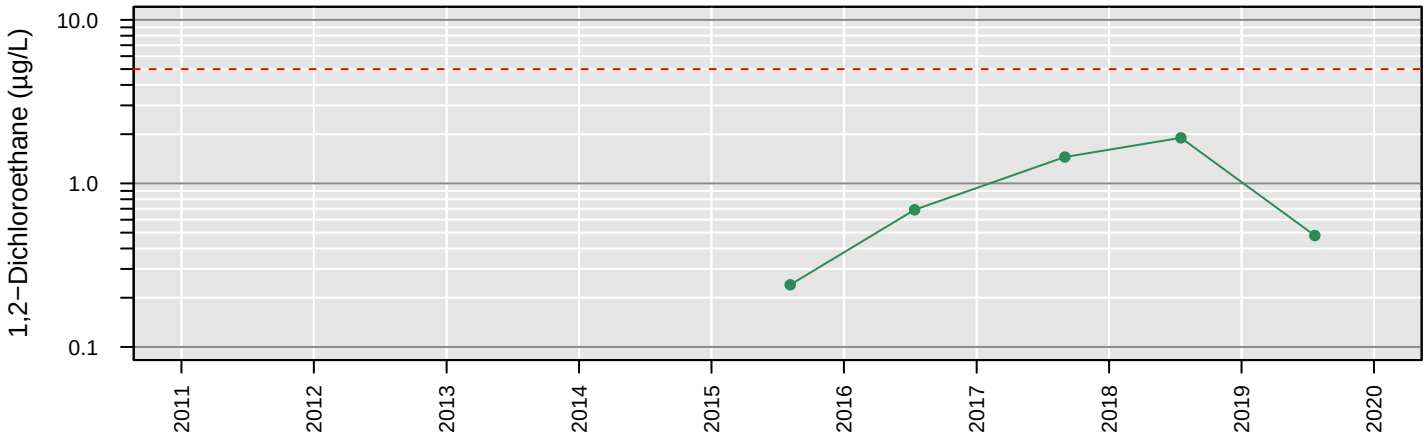
No Analysis Performed

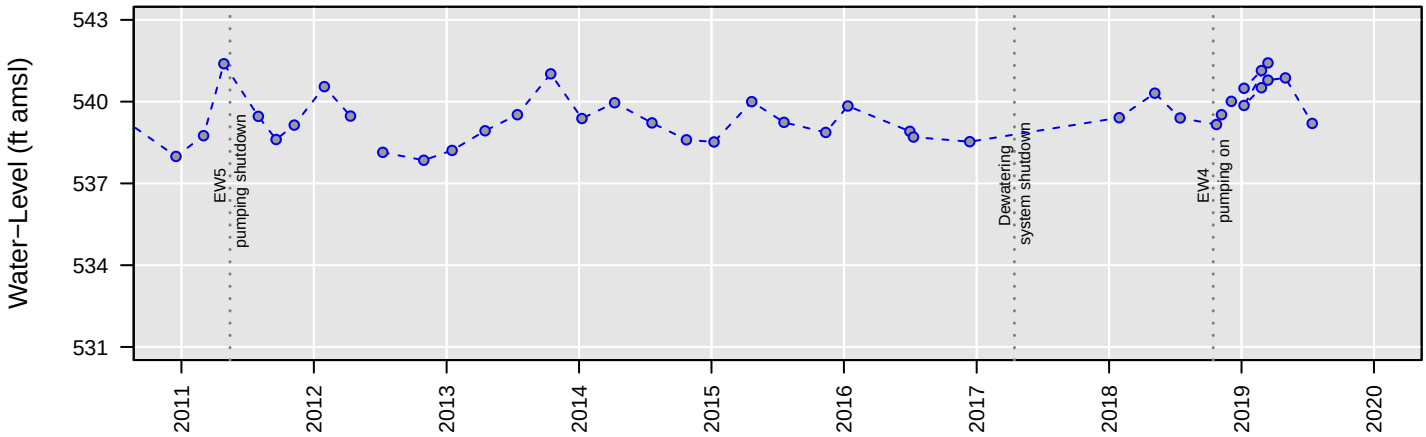
MW77

1,2−Dichloroethane

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





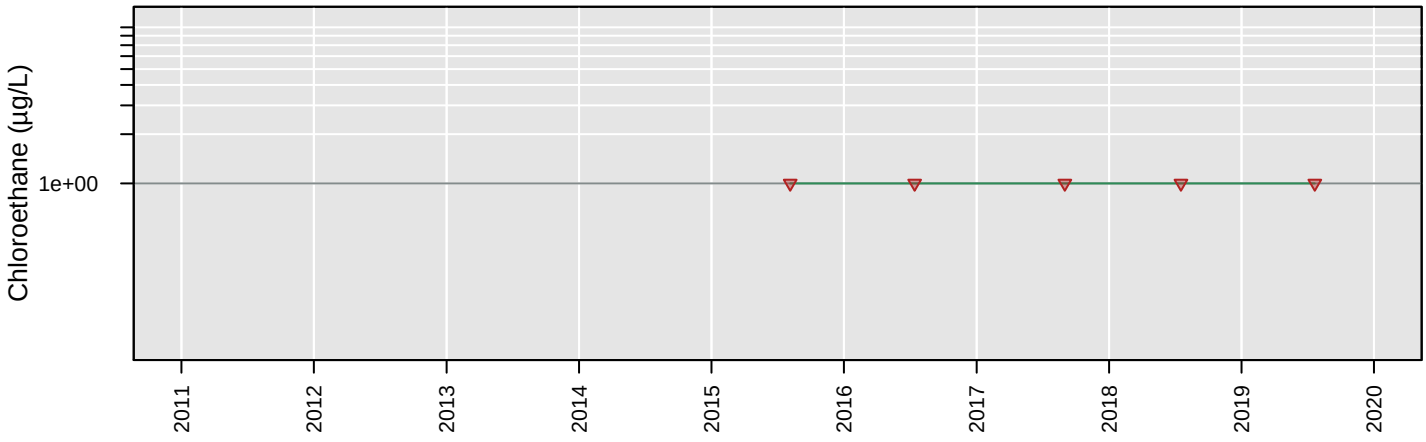
No Analysis Performed

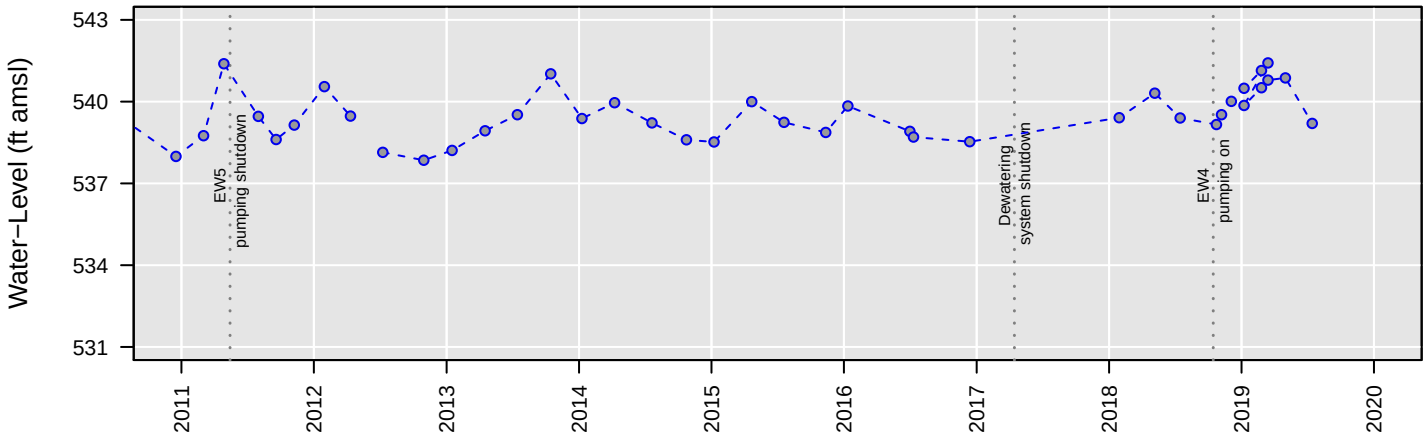
MW77

Chloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





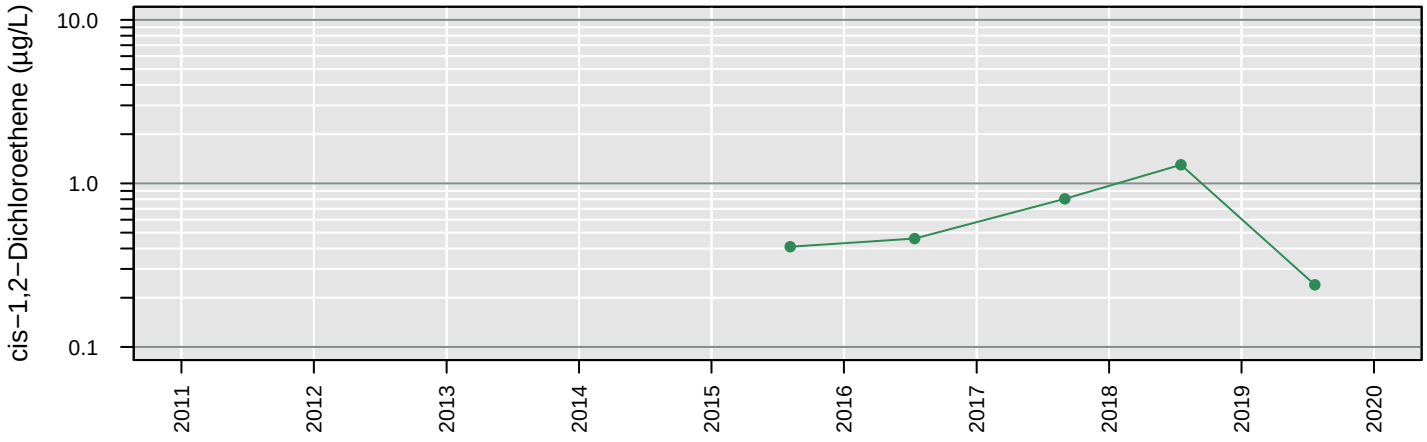
No Analysis Performed

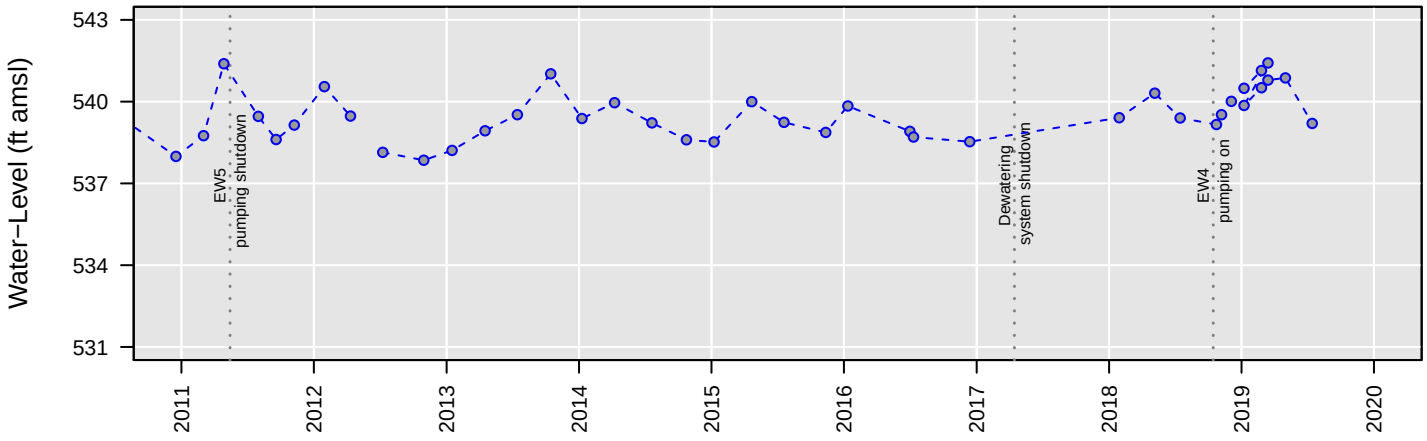
MW77

cis−1,2−Dichloroethene

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





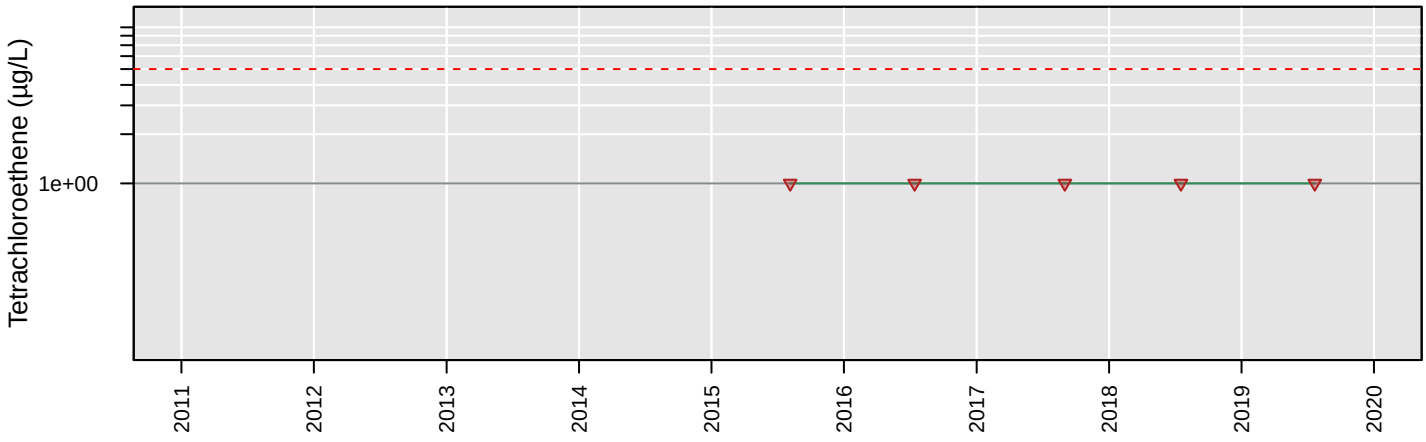
No Analysis Performed

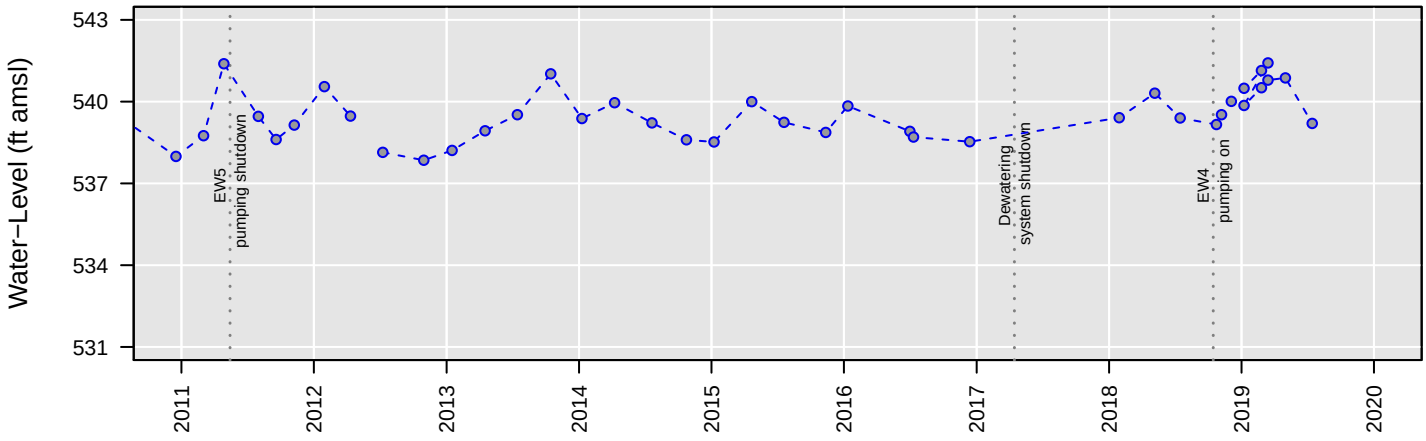
MW77

Tetrachloroethene

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





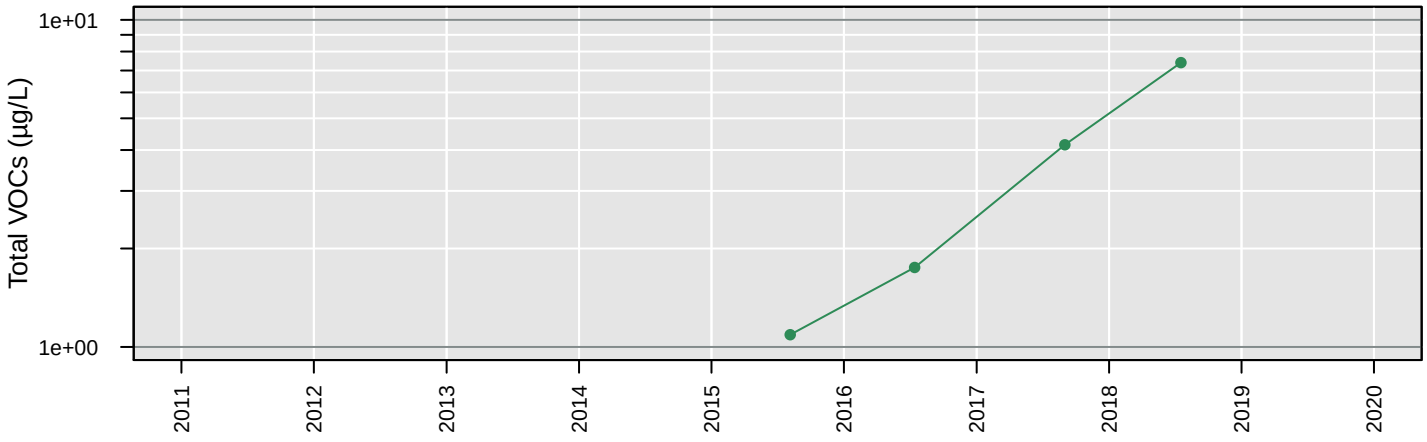
No Analysis Performed

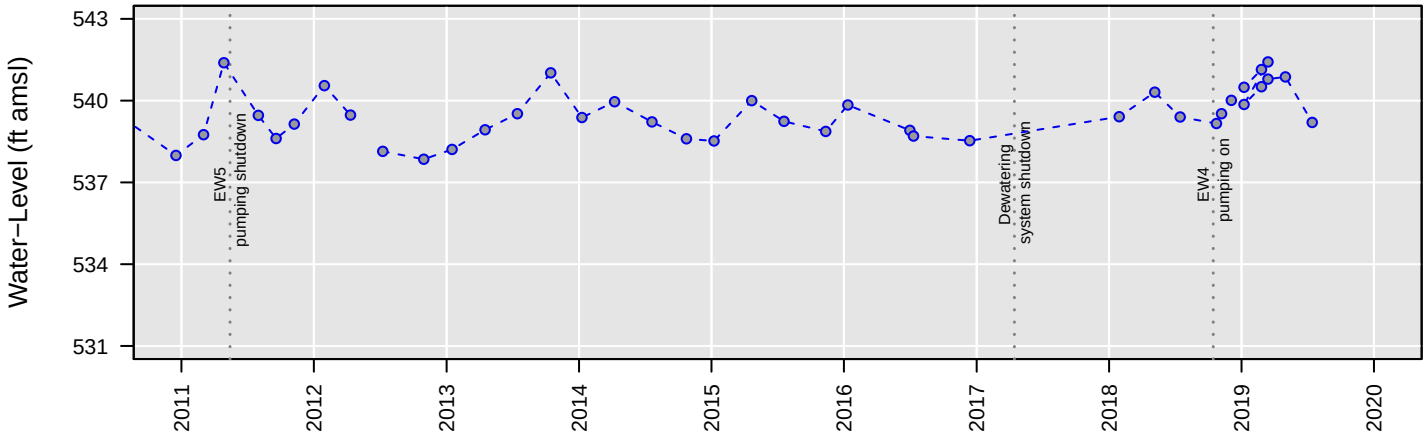
MW77

Total VOCs

Number of Comparisons: 4
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



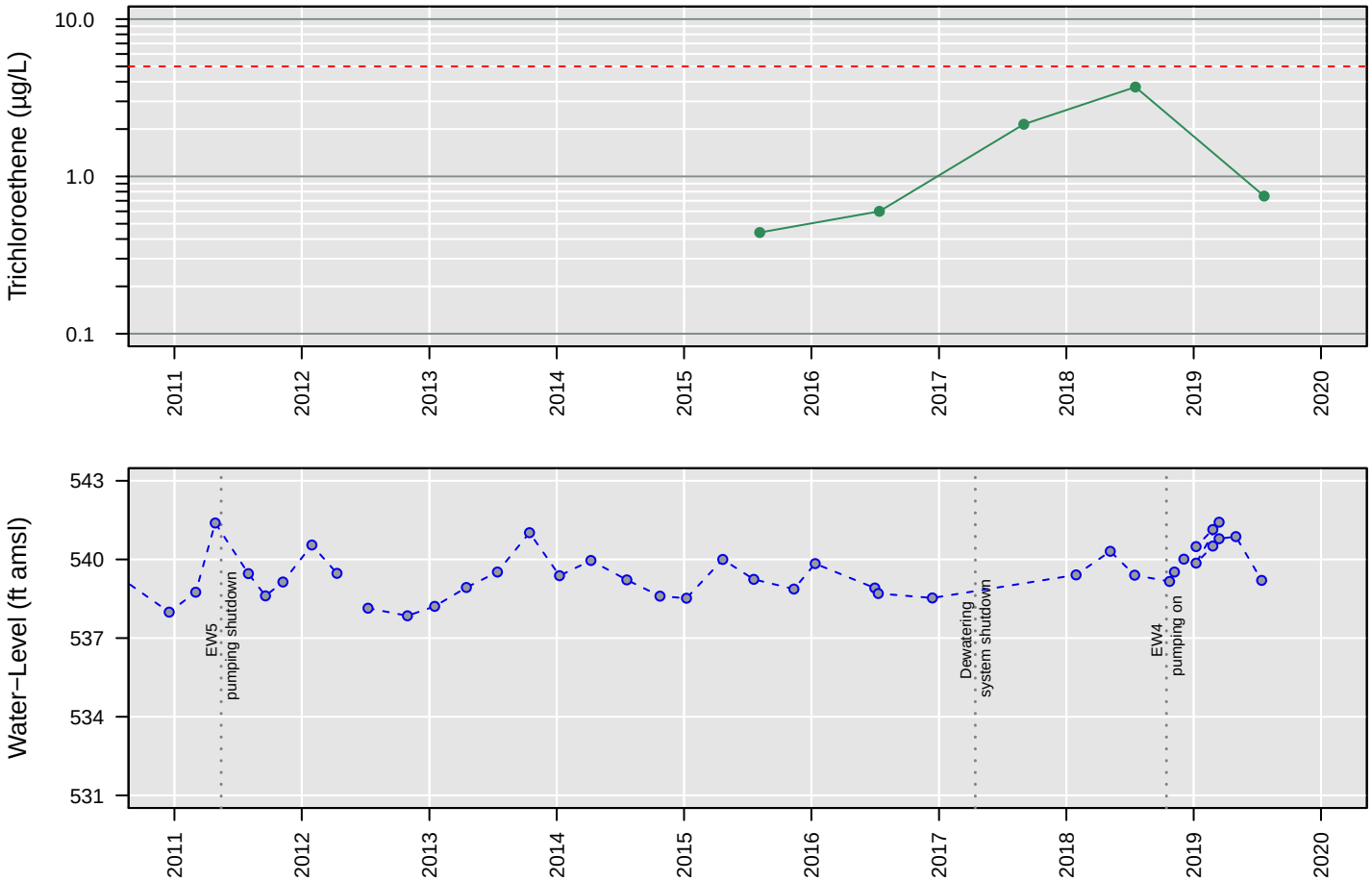


No Analysis Performed

MW77

Trichloroethene

Number of Comparisons: 5
Percent NDs: 0%

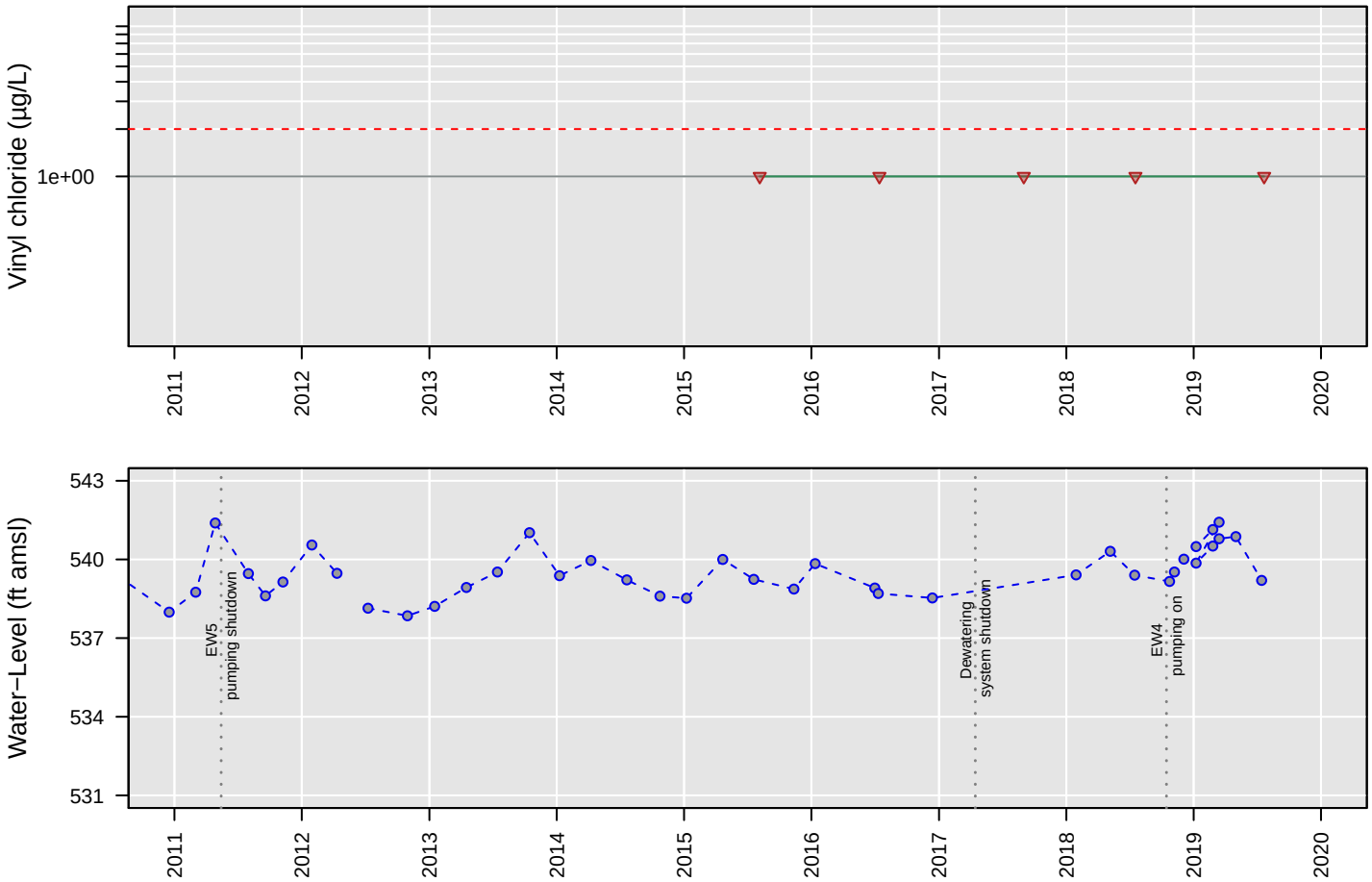


No Analysis Performed

MW77

Vinyl chloride

Number of Comparisons: 5
Percent NDs: 100%



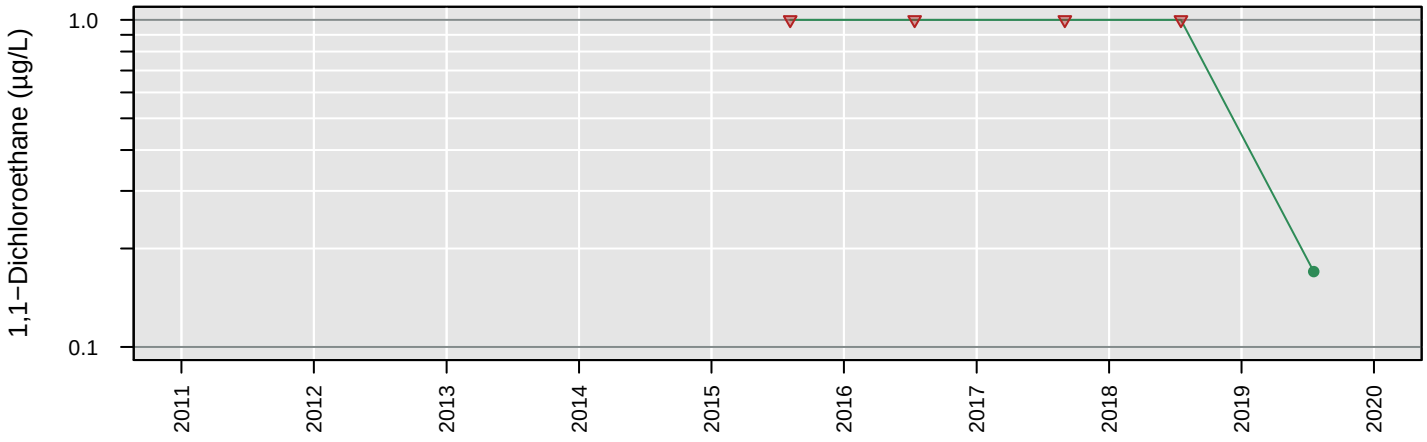
No Analysis Performed

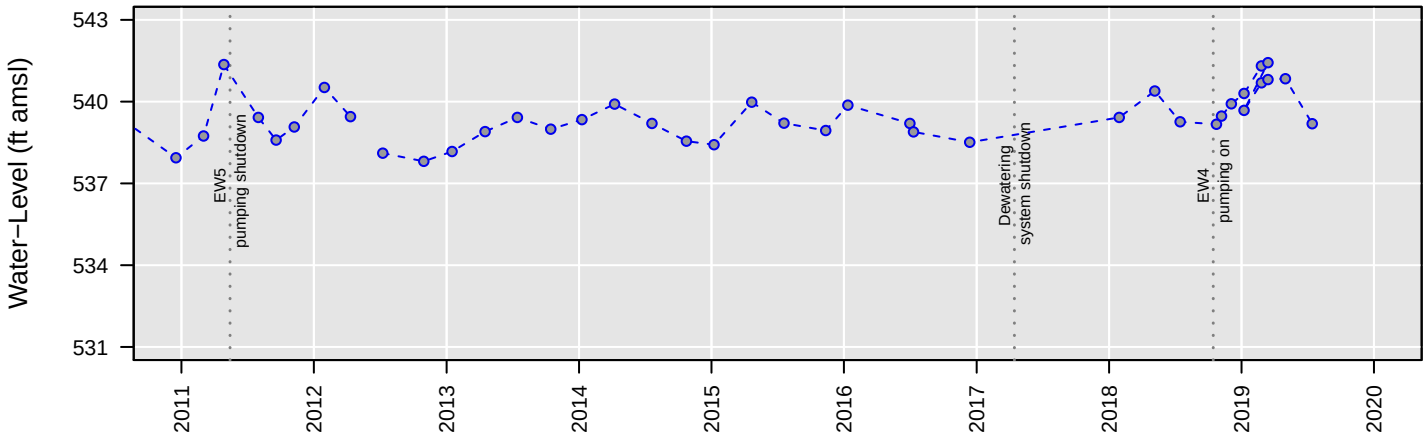
MW78

1,1−Dichloroethane

Number of Comparisons: 5
Percent NDs: 80%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





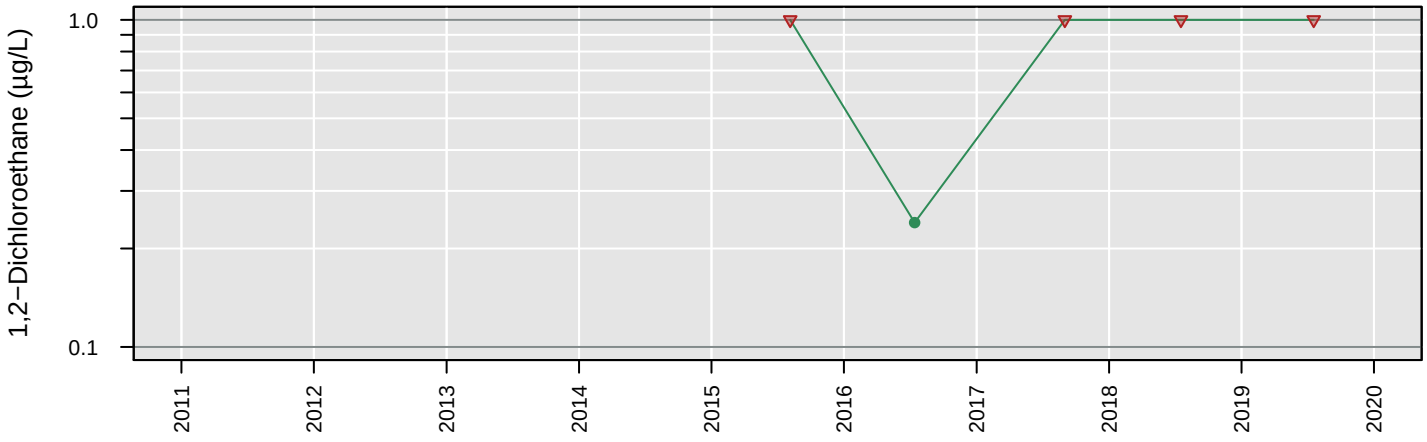
No Analysis Performed

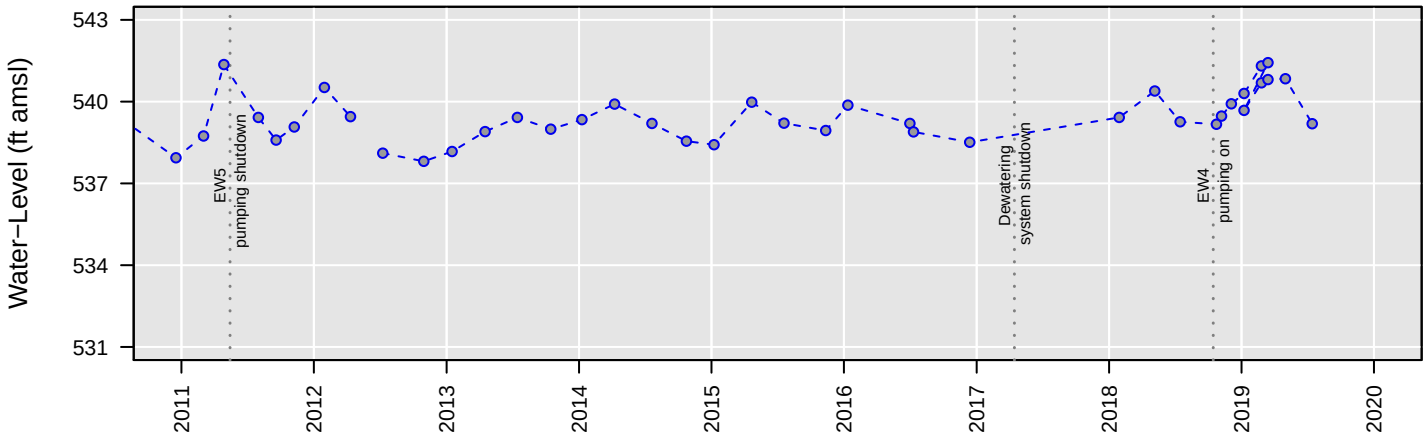
MW78

1,2−Dichloroethane

Number of Comparisons: 5
Percent NDs: 80%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





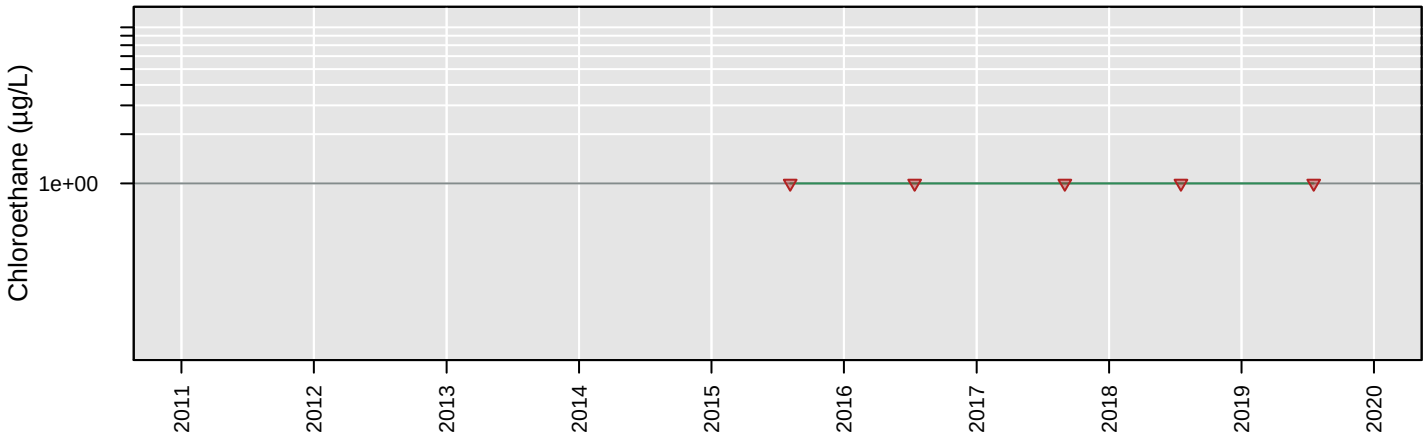
No Analysis Performed

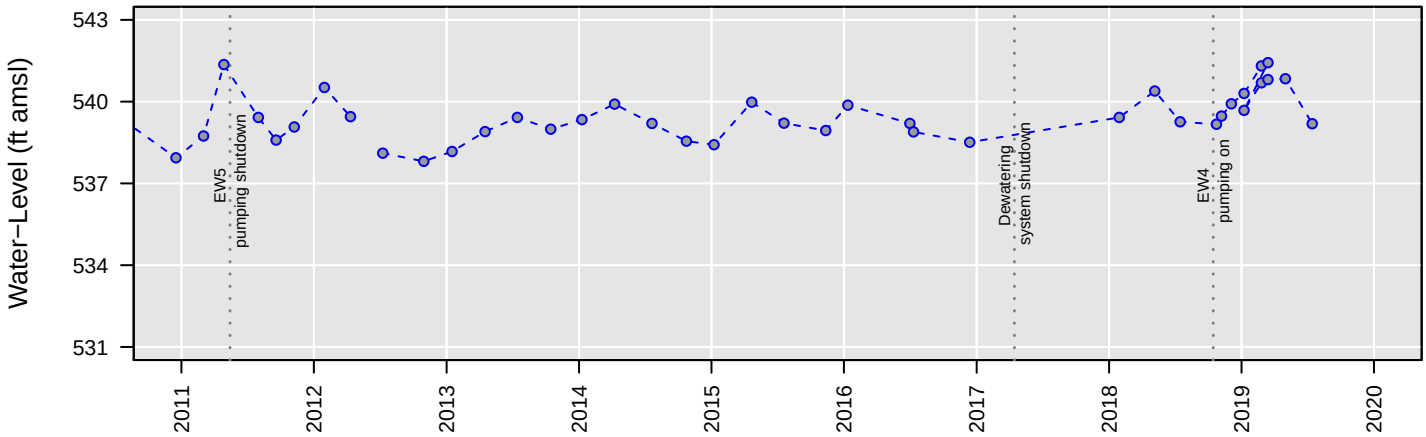
MW78

Chloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





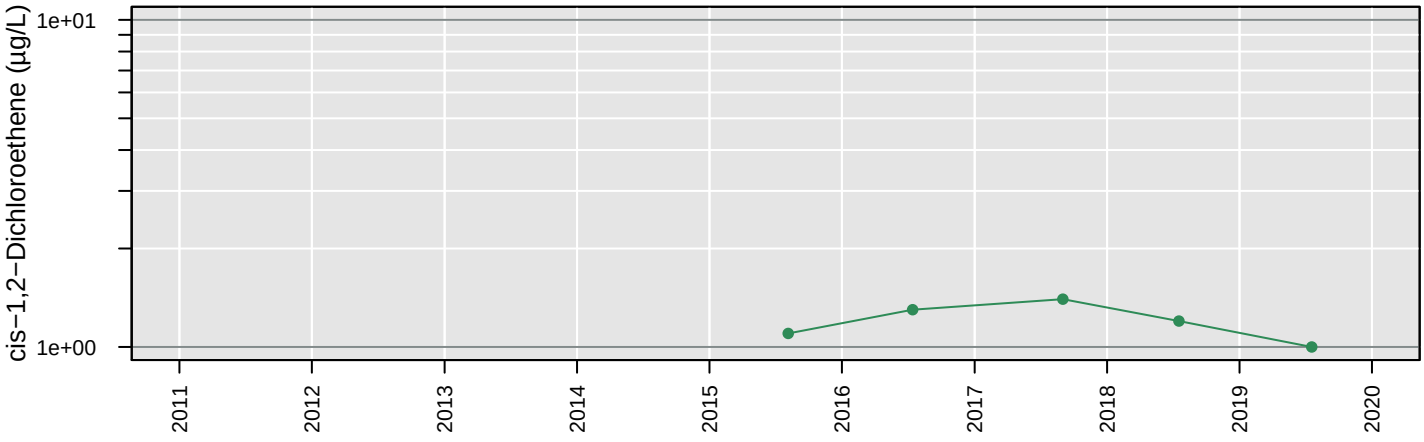
No Analysis Performed

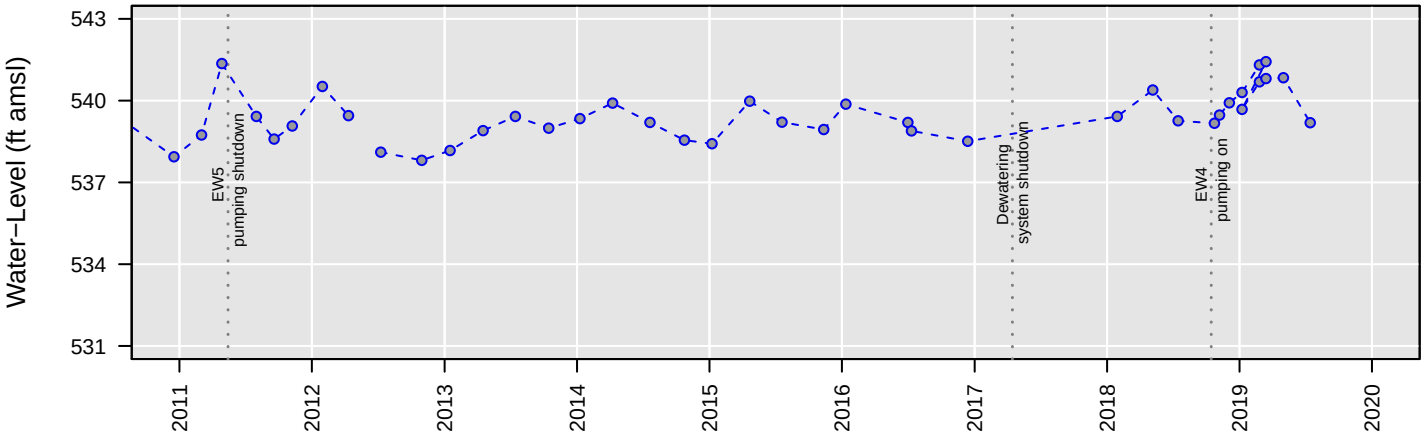
MW78

cis−1,2−Dichloroethene

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





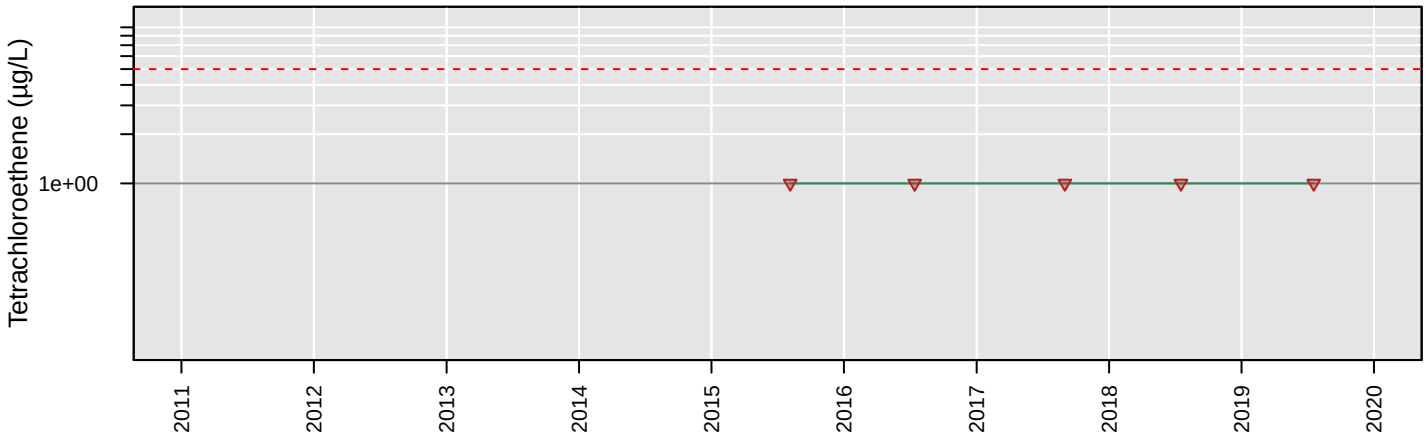
No Analysis Performed

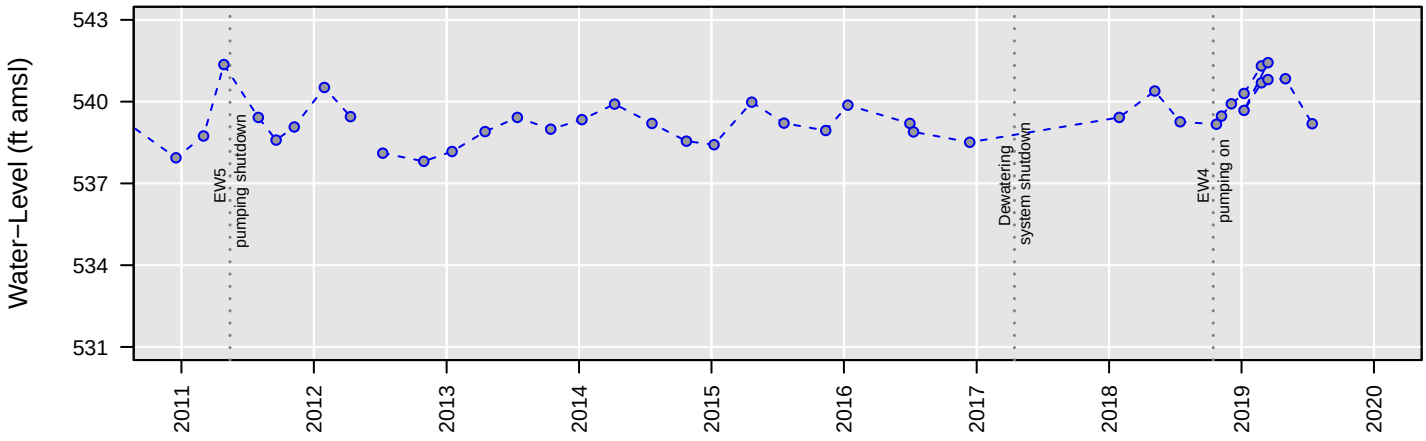
MW78

Tetrachloroethene

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





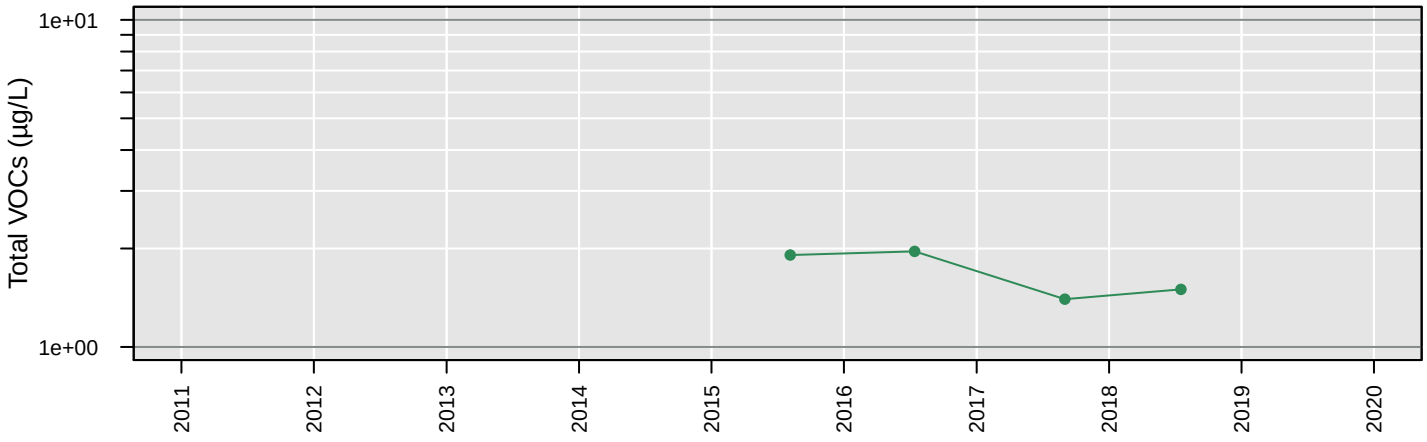
No Analysis Performed

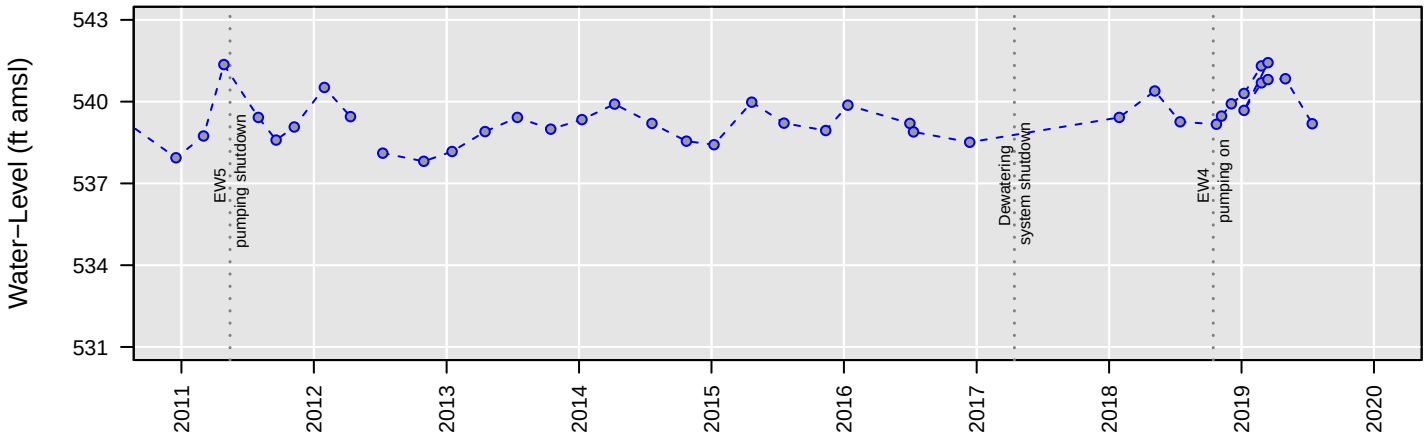
MW78

Total VOCs

Number of Comparisons: 4
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





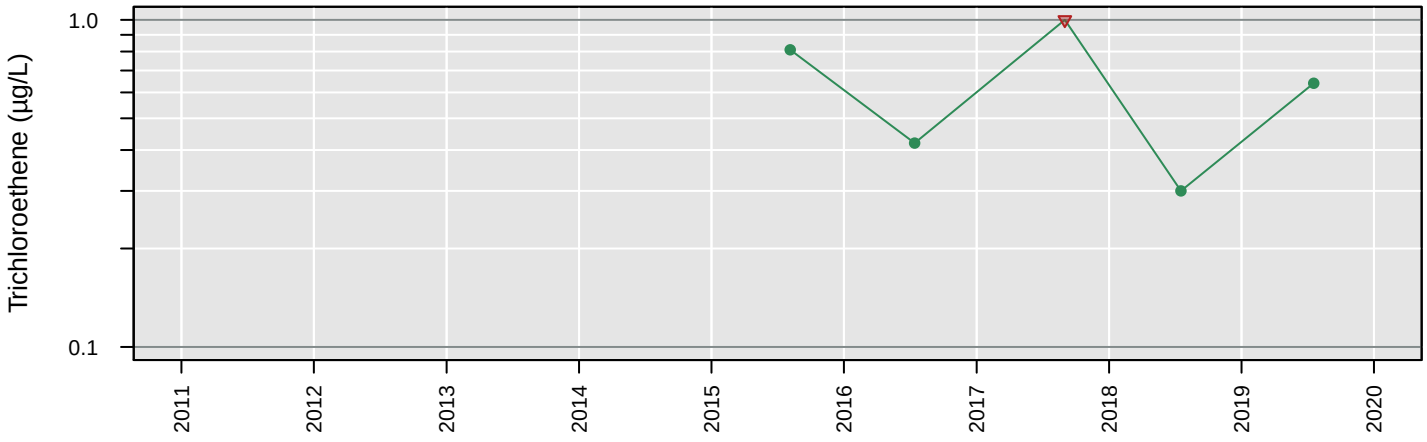
No Analysis Performed

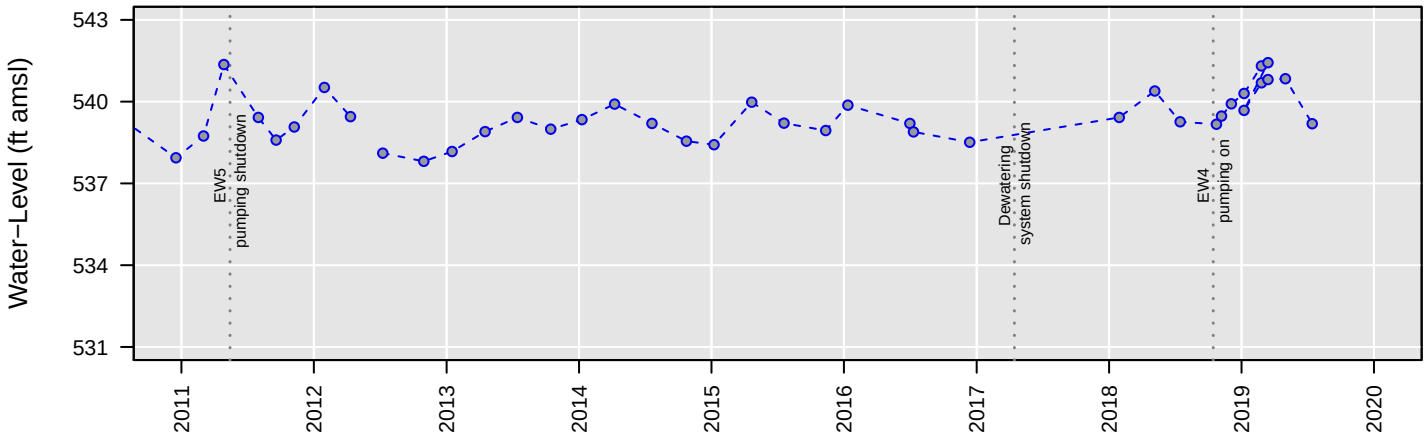
MW78

Trichloroethene

Number of Comparisons: 5
Percent NDs: 20%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





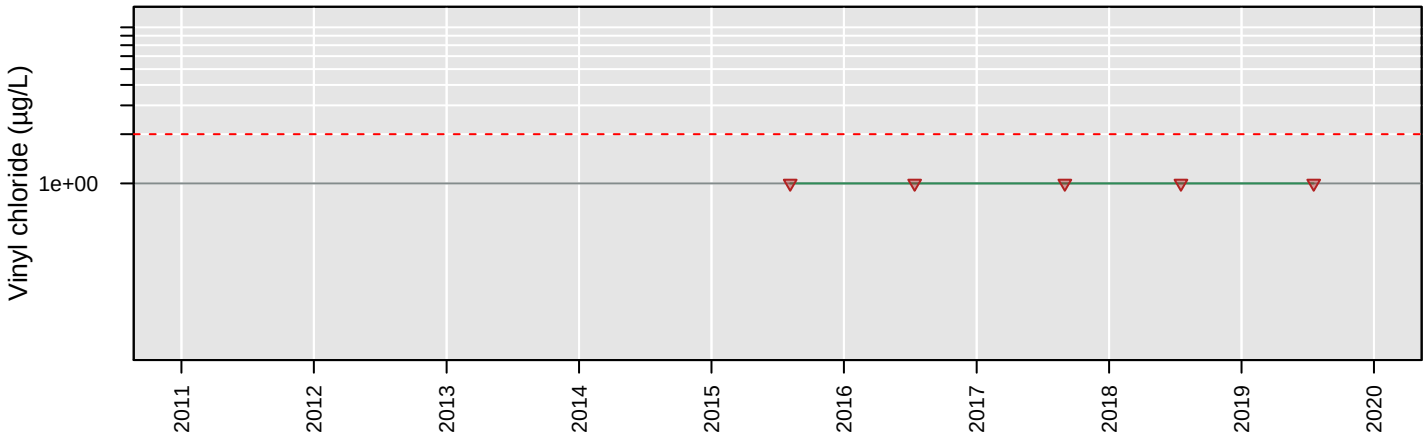
No Analysis Performed

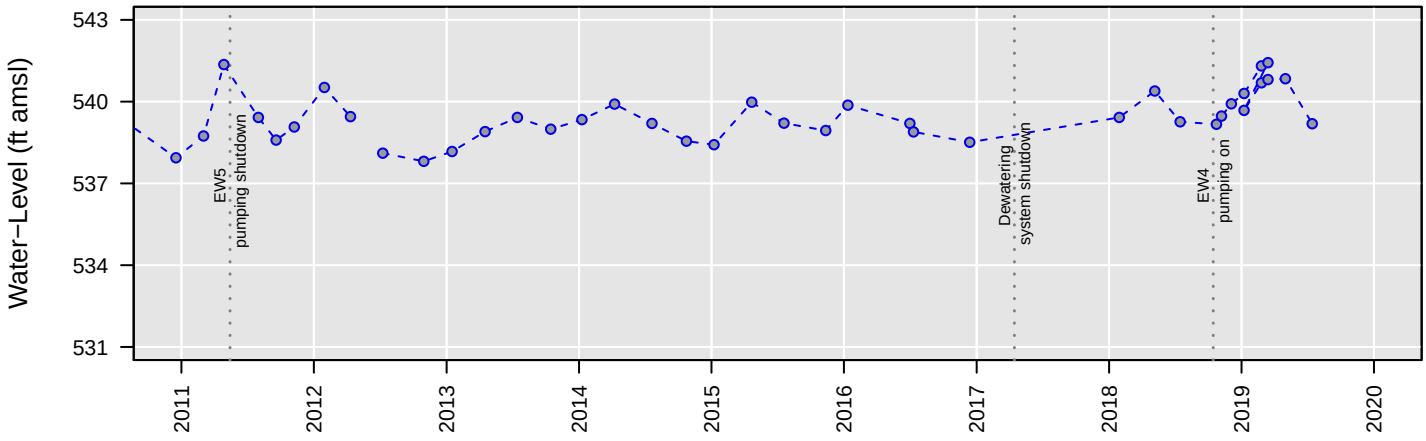
MW78

Vinyl chloride

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





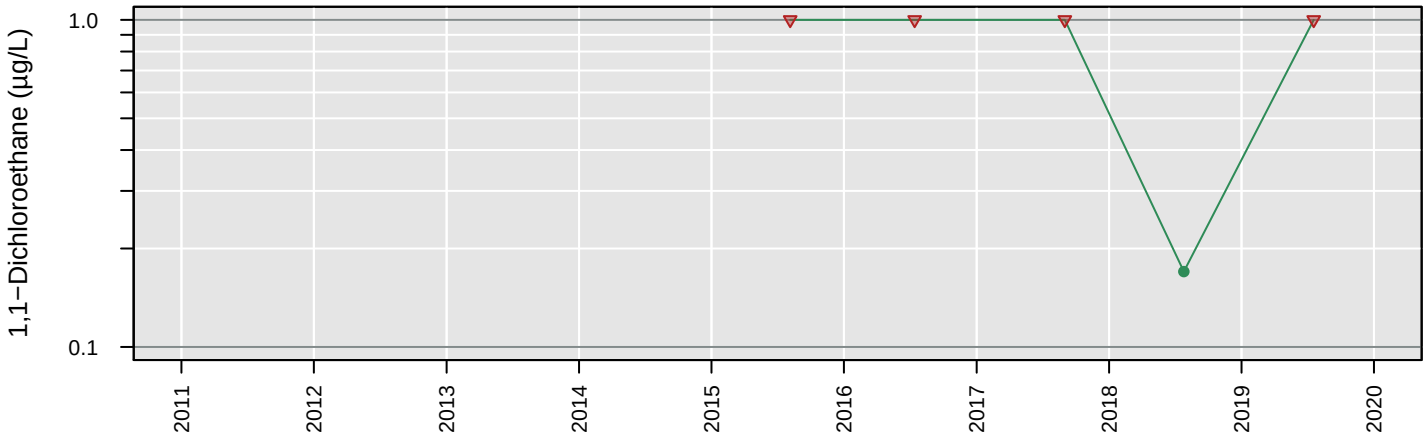
No Analysis Performed

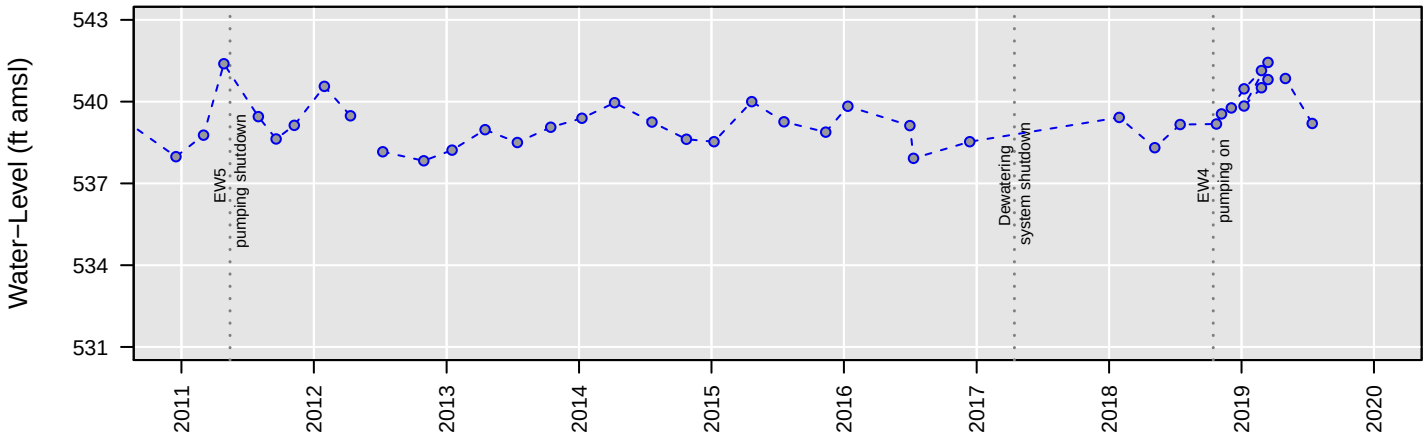
MW79

1,1−Dichloroethane

Number of Comparisons: 5
Percent NDs: 80%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





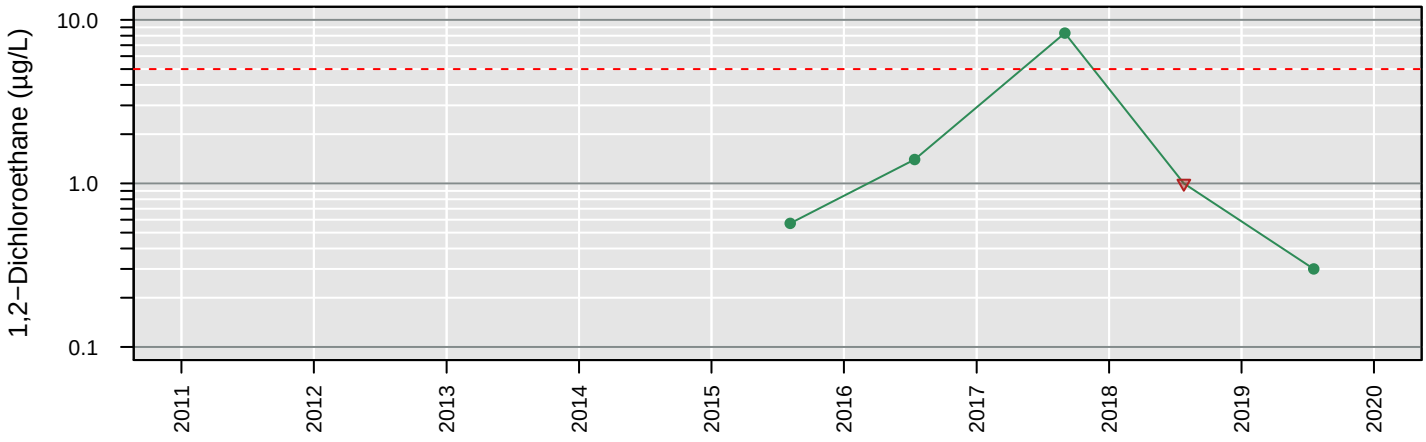
No Analysis Performed

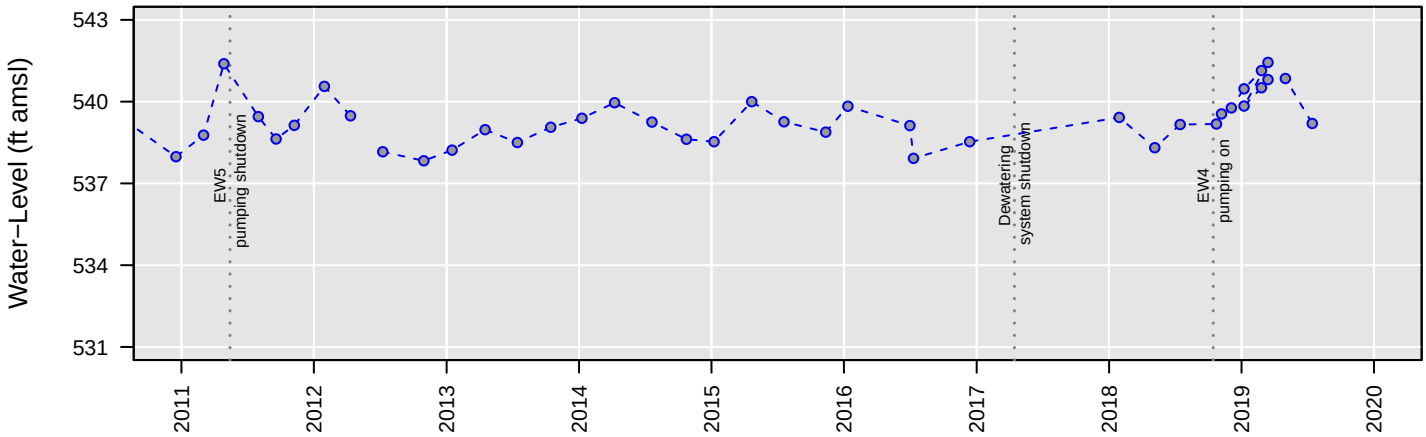
MW79

1,2−Dichloroethane

Number of Comparisons: 5
Percent NDs: 20%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





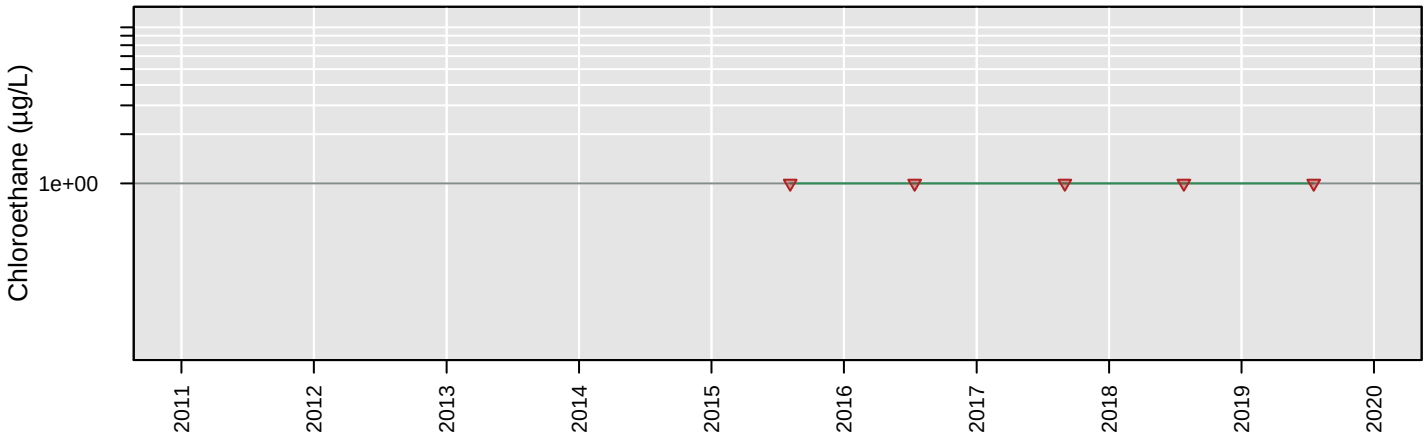
No Analysis Performed

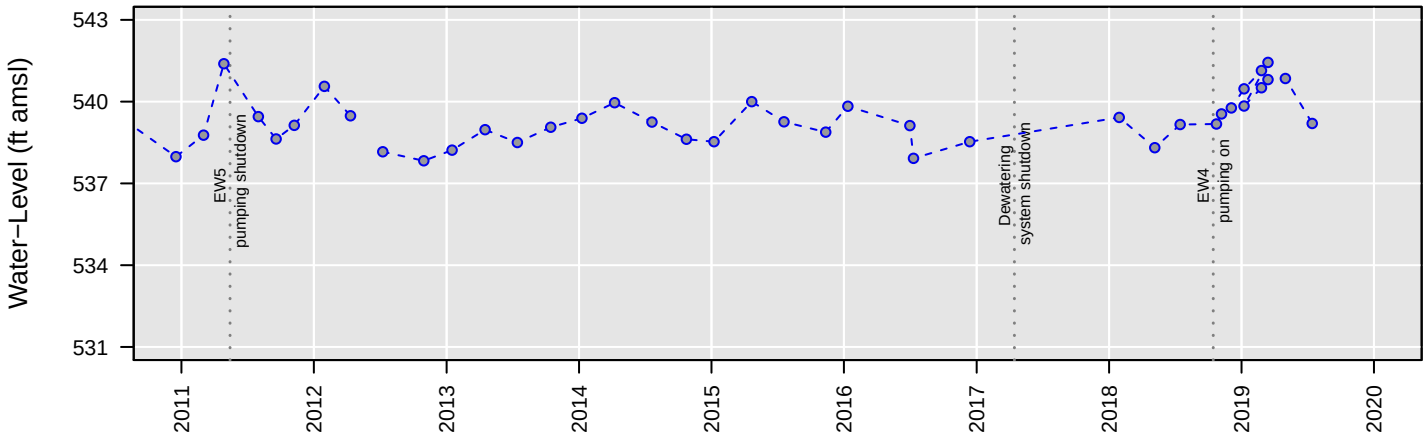
MW79

Chloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





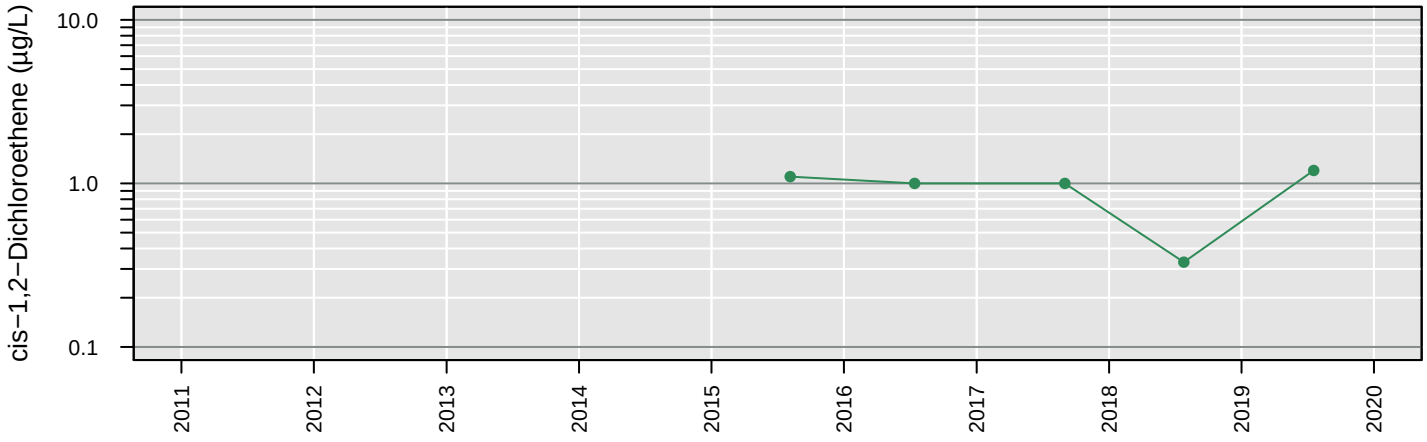
No Analysis Performed

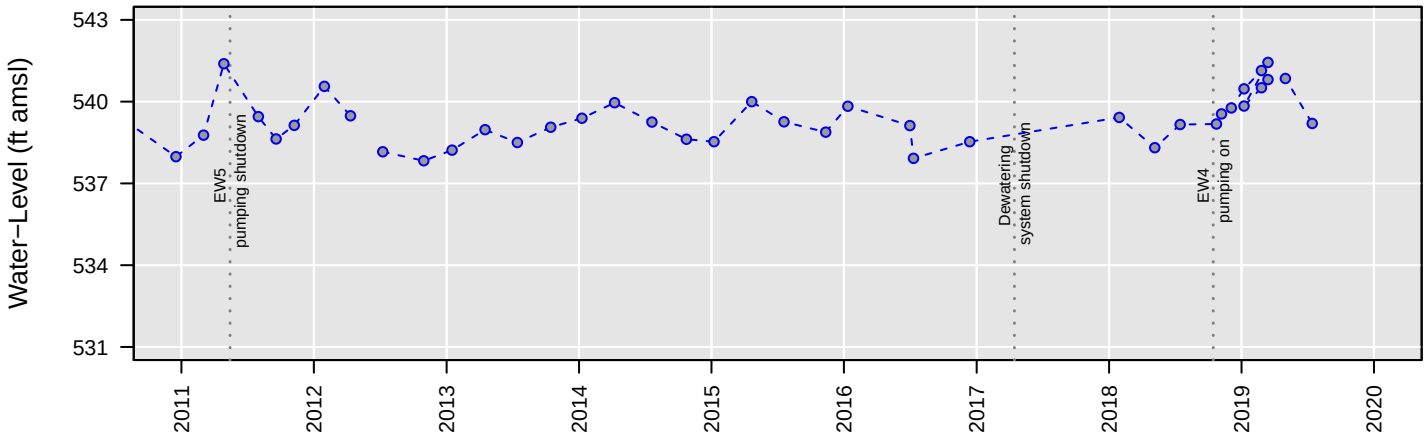
MW79

cis−1,2−Dichloroethene

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





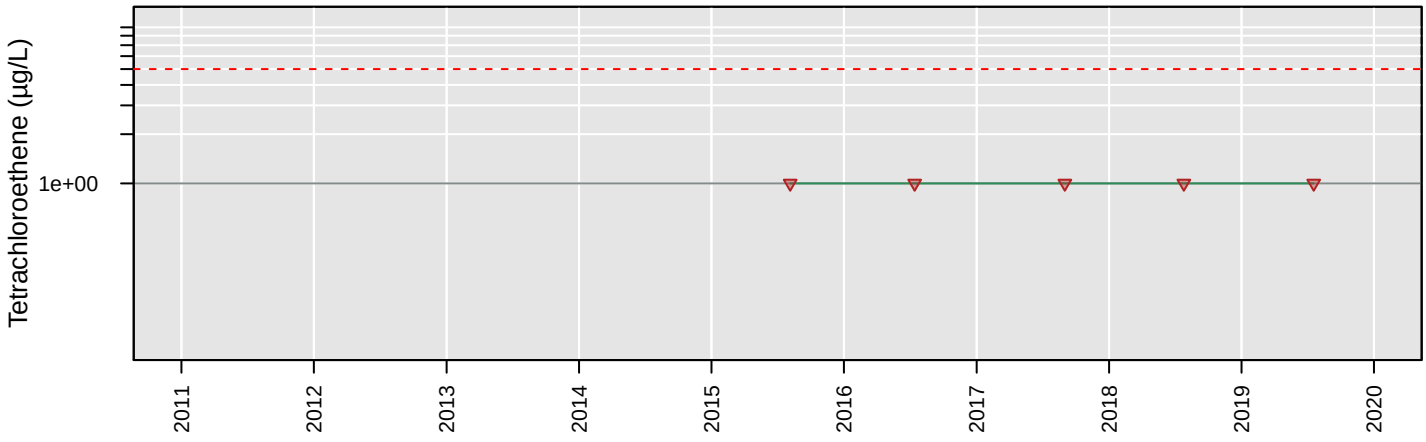
No Analysis Performed

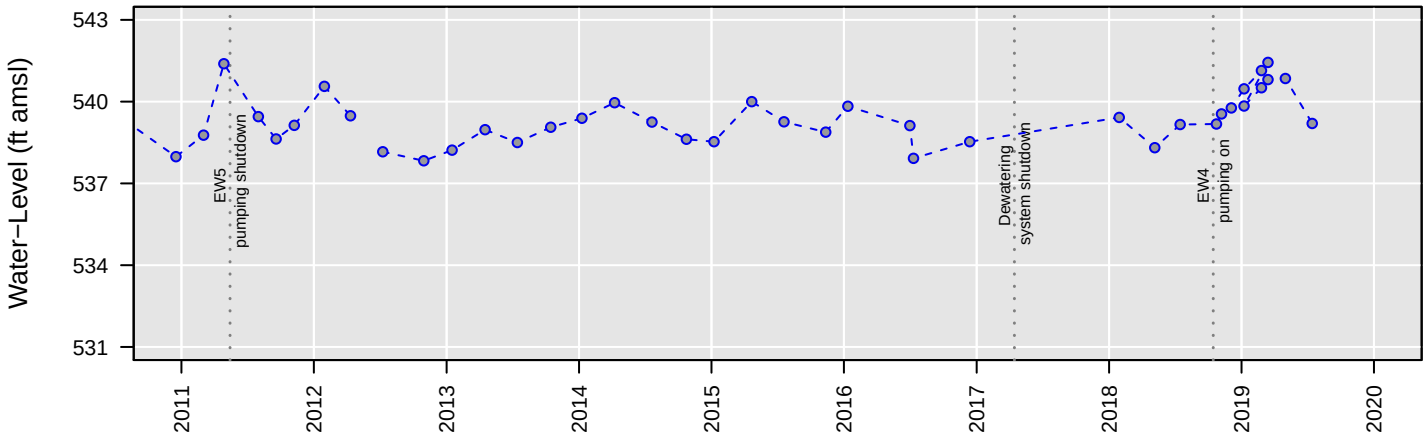
MW79

Tetrachloroethene

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





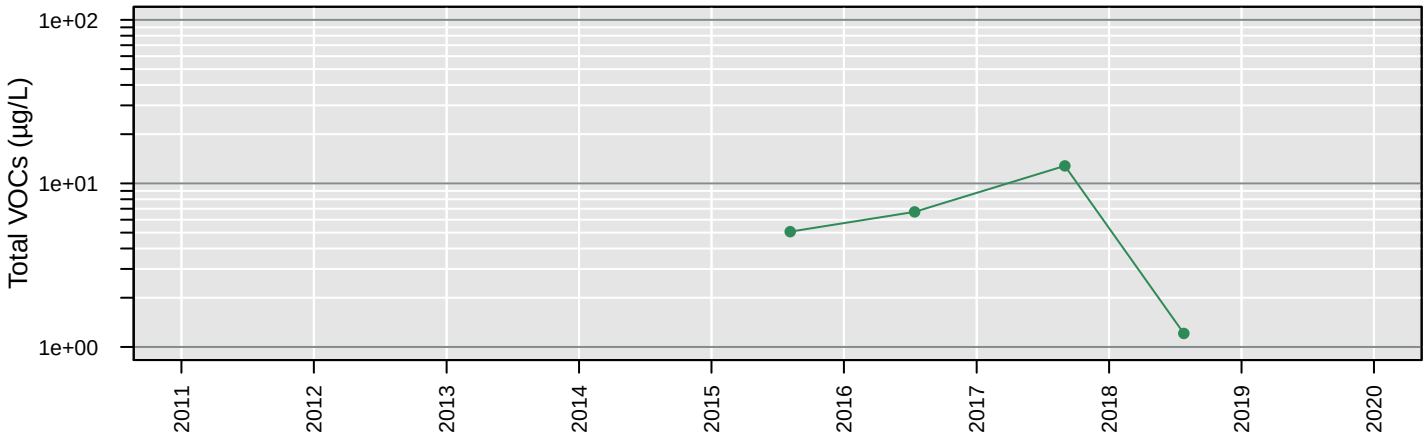
No Analysis Performed

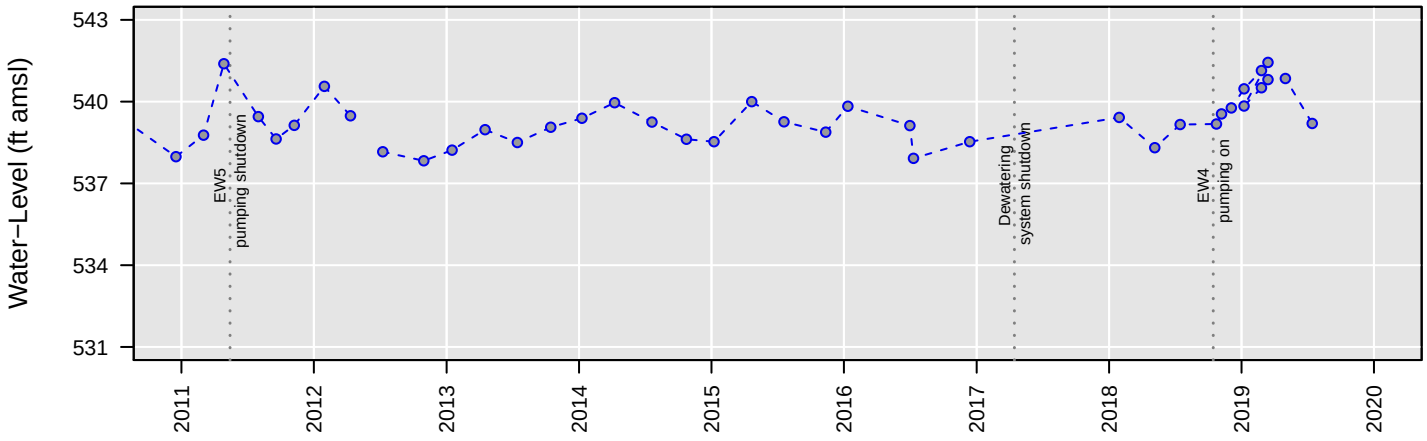
MW79

Total VOCs

Number of Comparisons: 4
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



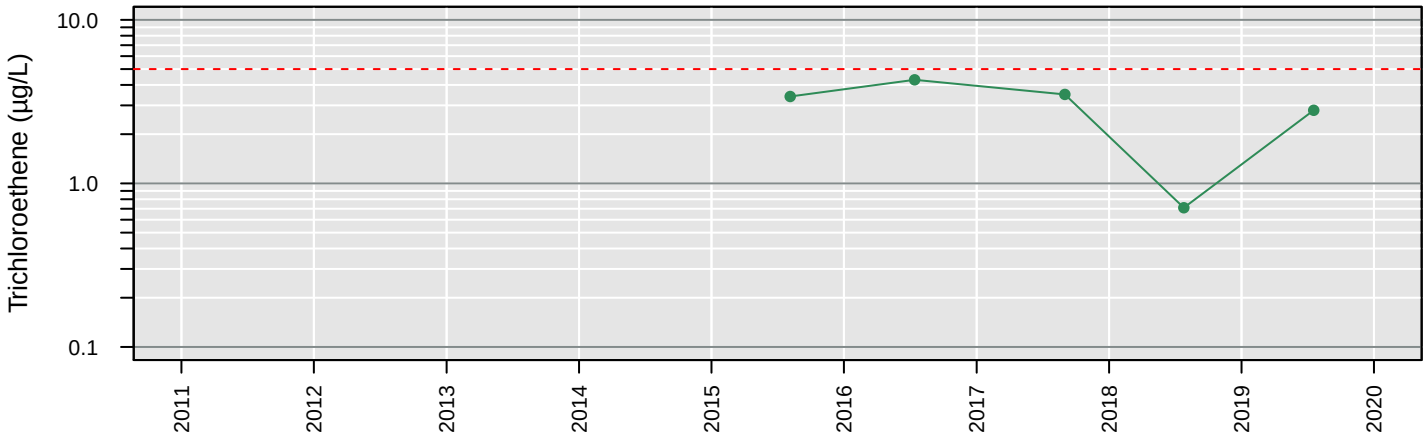


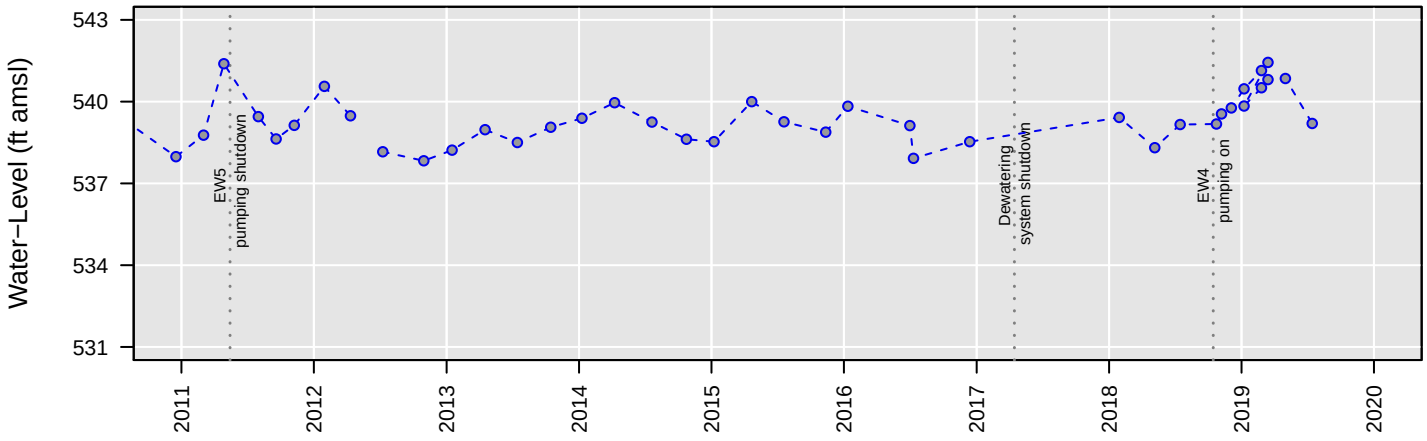
No Analysis Performed

MW79

Trichloroethene

Number of Comparisons: 5
Percent NDs: 0%





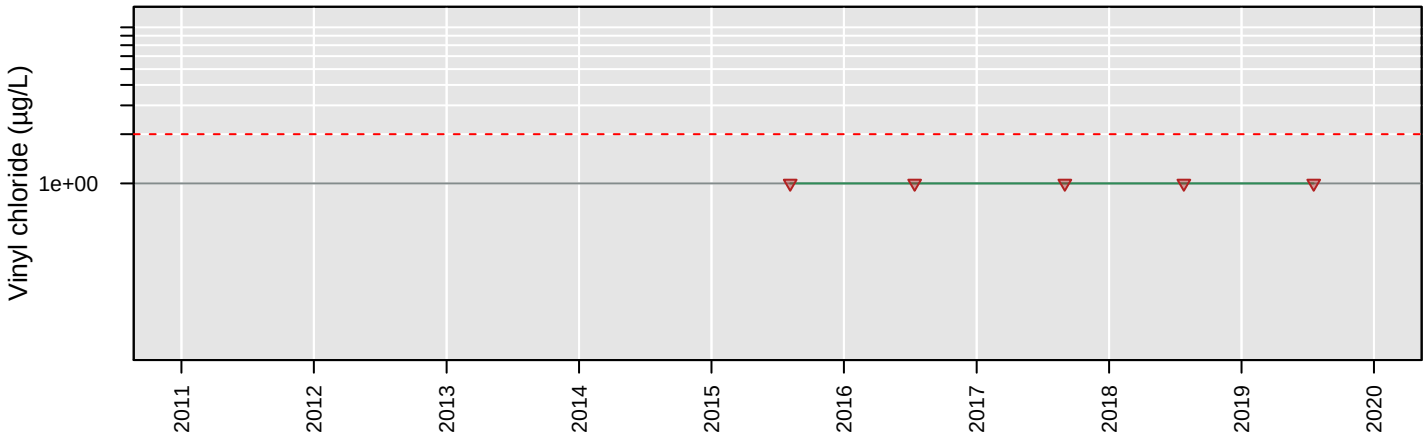
No Analysis Performed

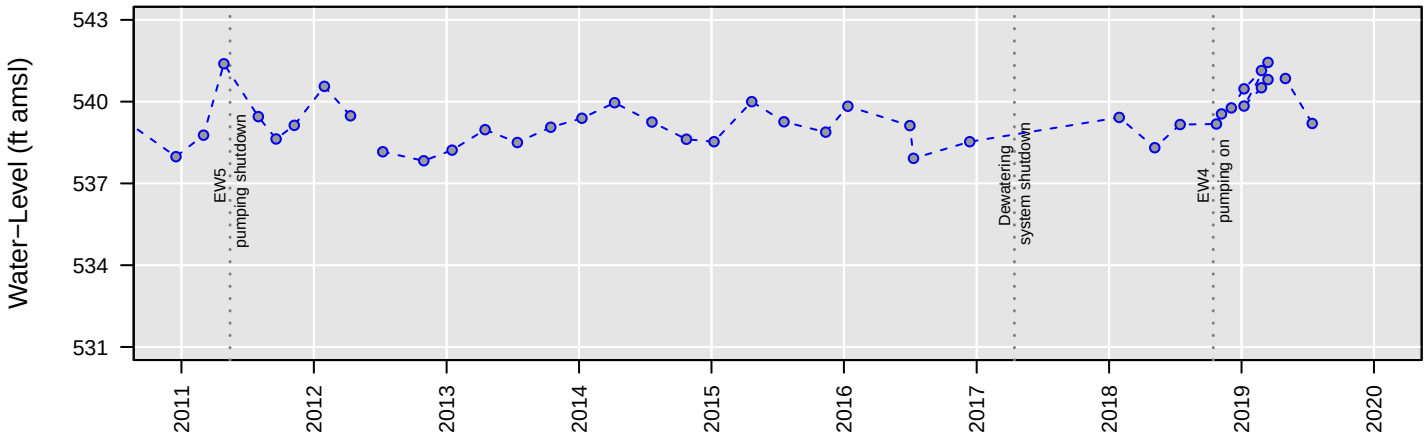
MW79

Vinyl chloride

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





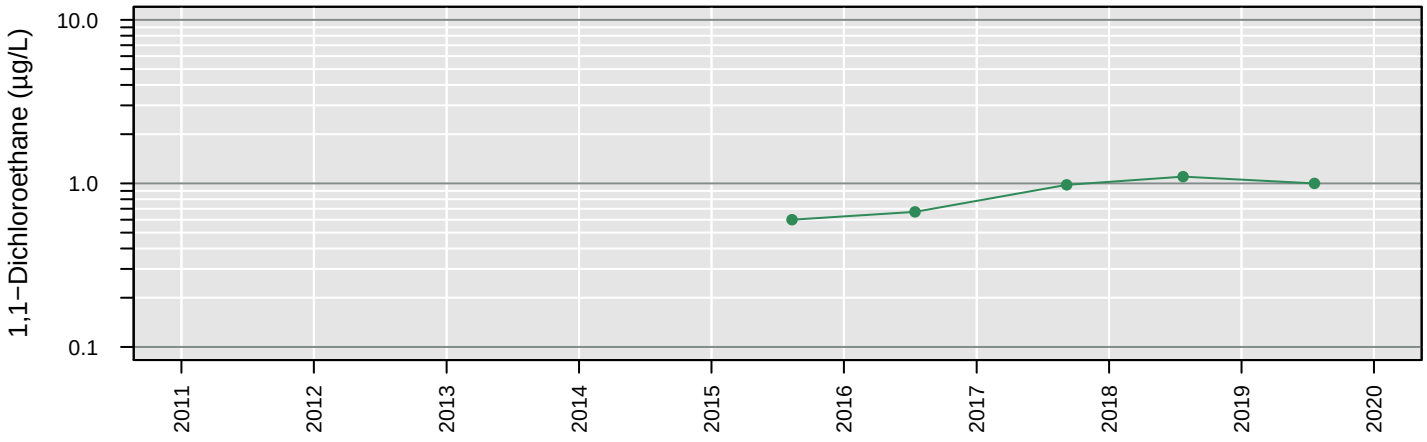
No Analysis Performed

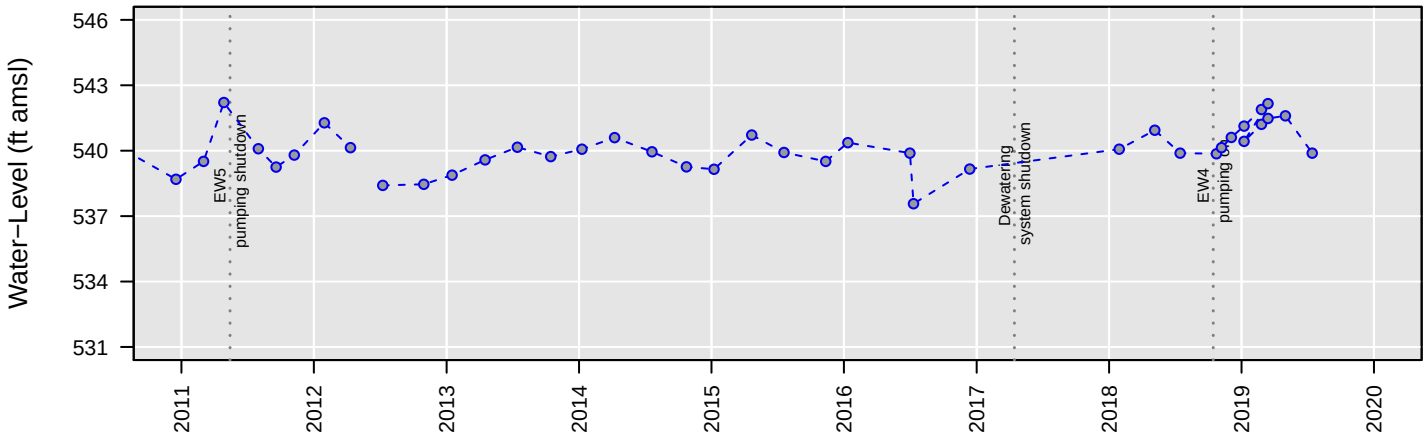
MW80

1,1−Dichloroethane

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





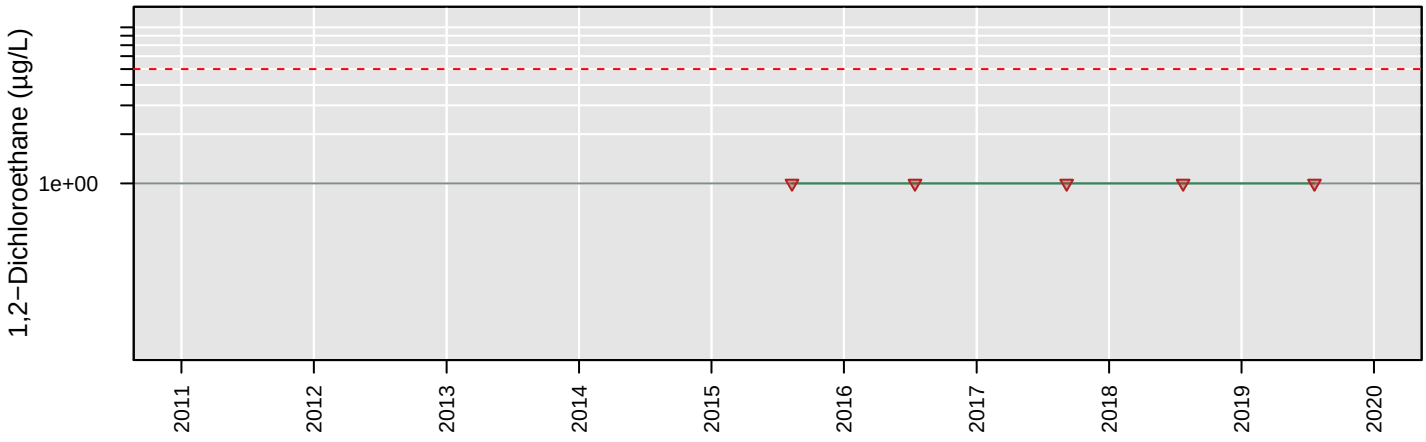
No Analysis Performed

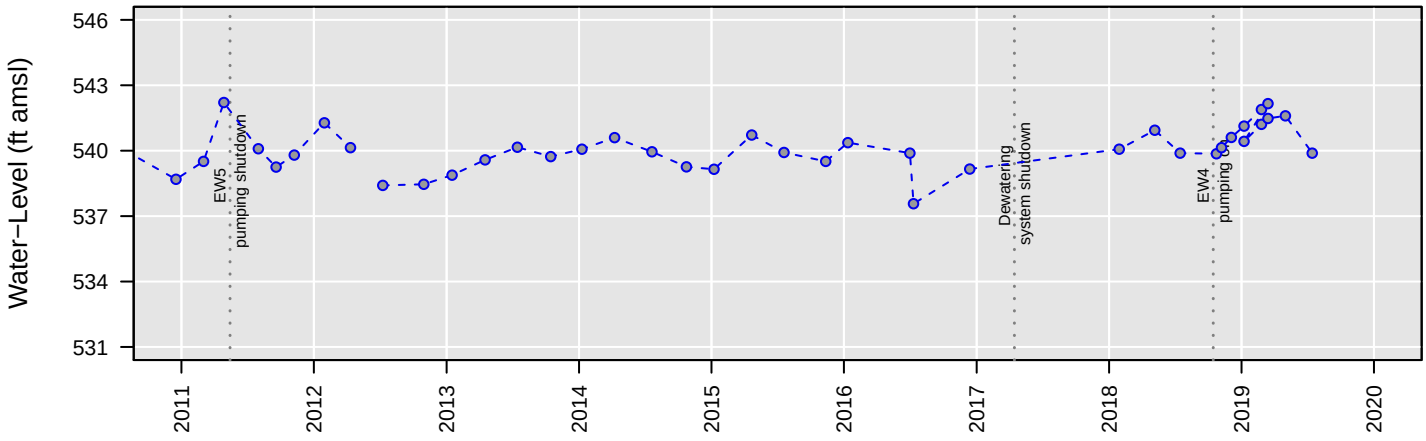
MW80

1,2−Dichloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





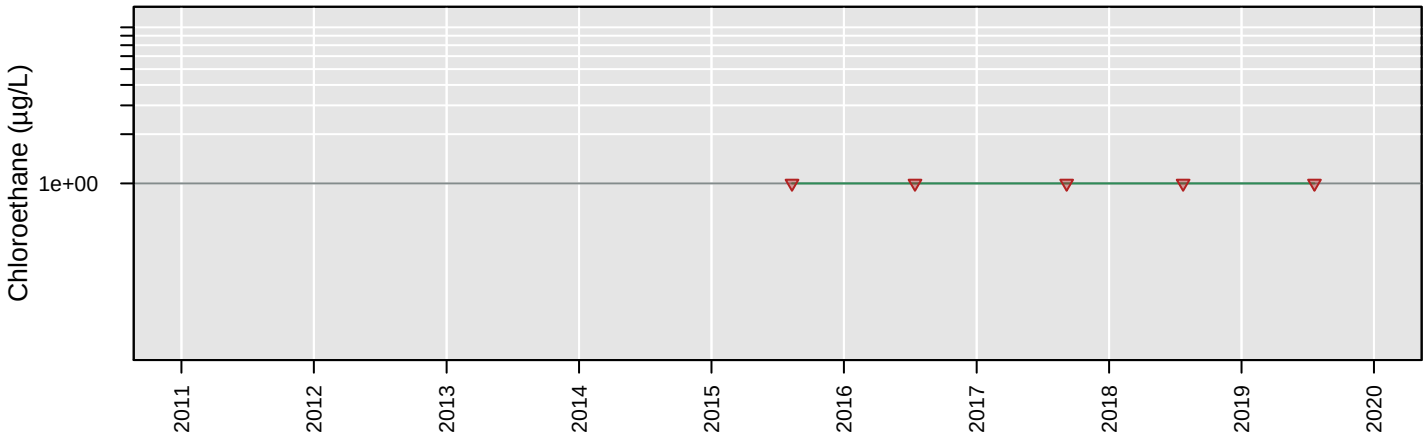
No Analysis Performed

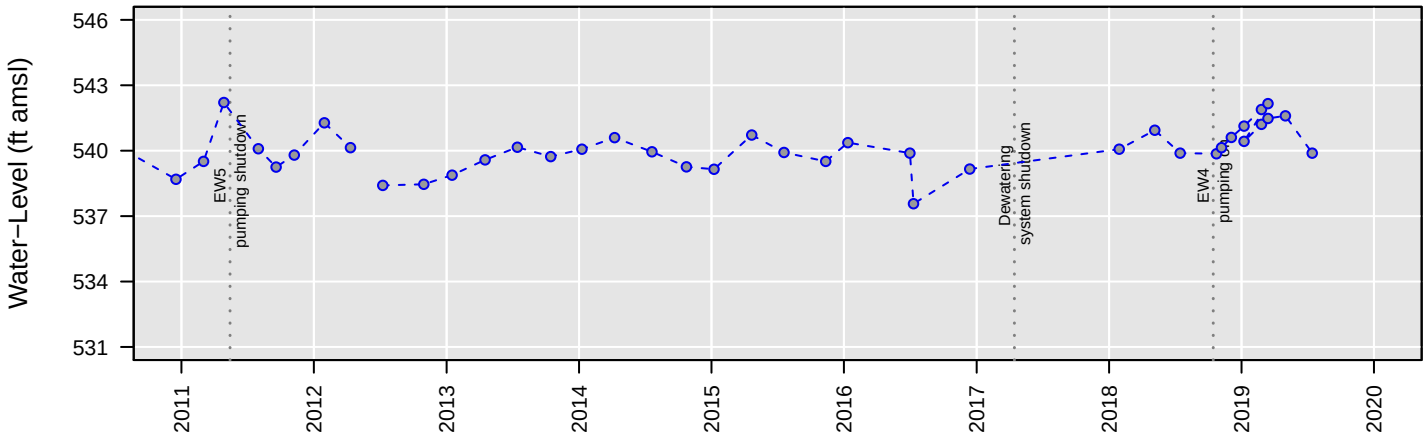
MW80

Chloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





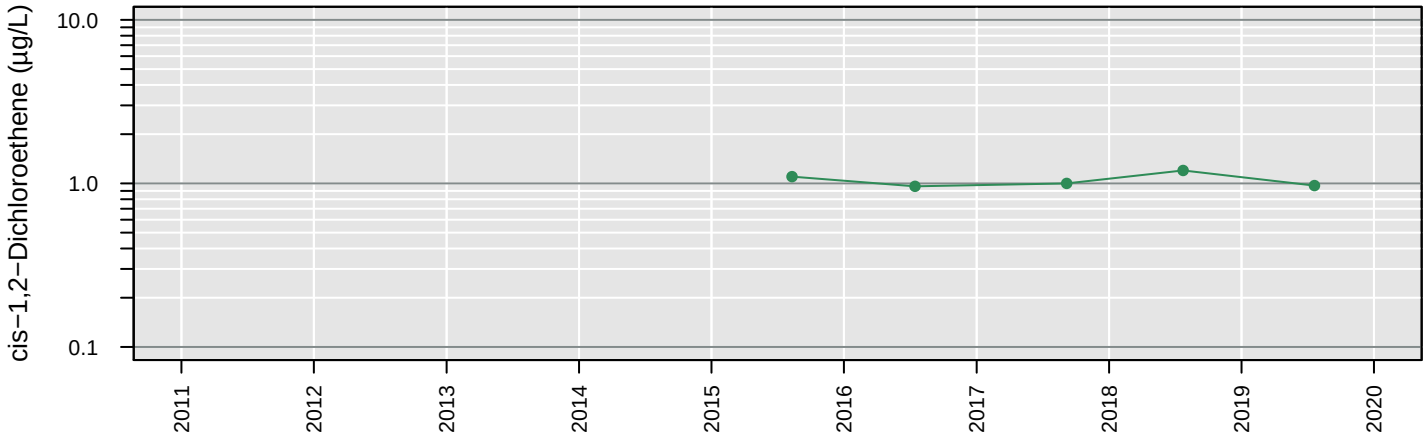
No Analysis Performed

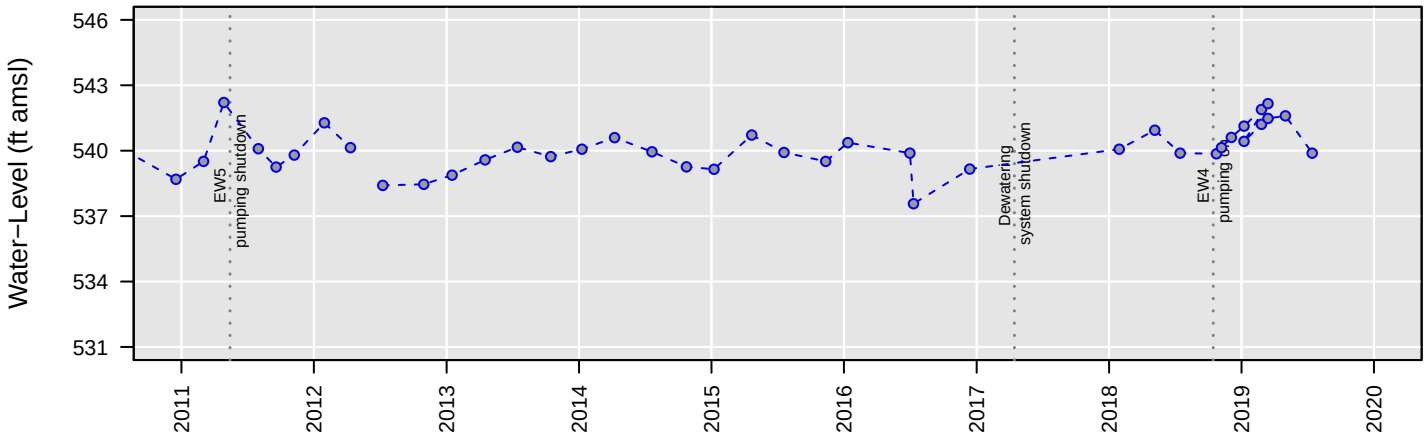
MW80

cis−1,2−Dichloroethene

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





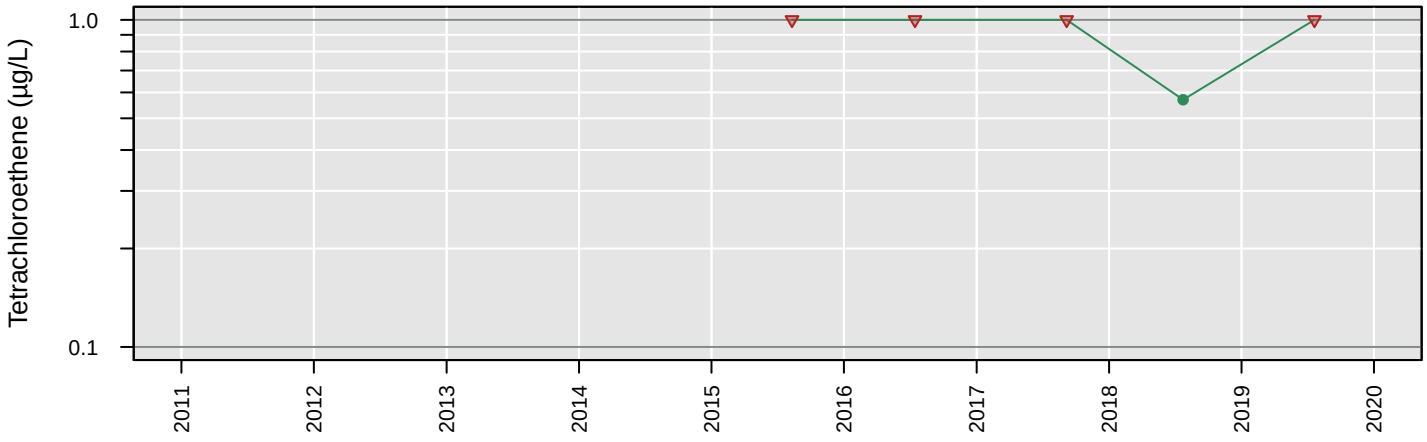
No Analysis Performed

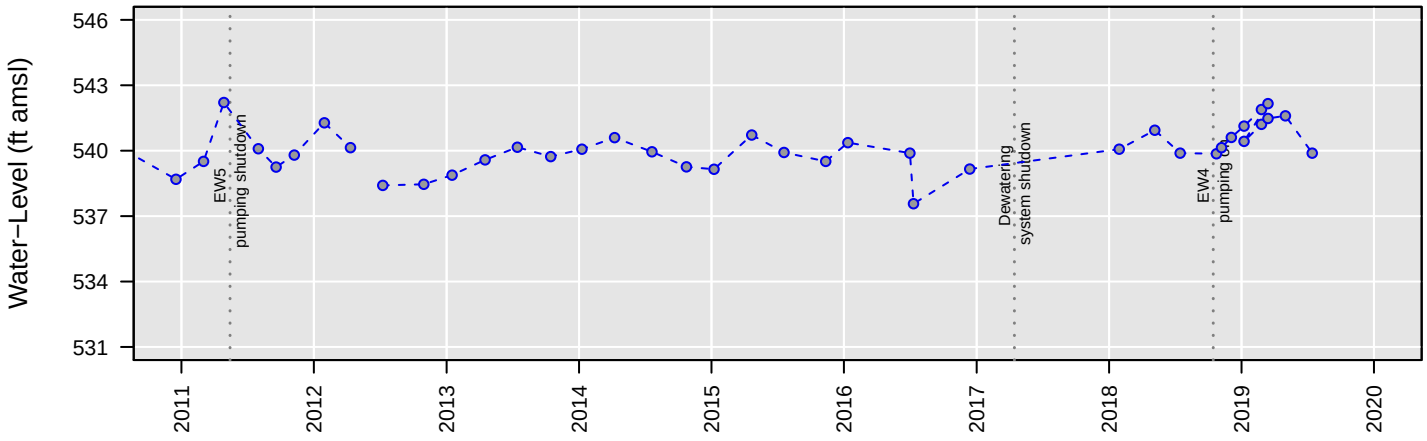
MW80

Tetrachloroethene

Number of Comparisons: 5
Percent NDs: 80%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





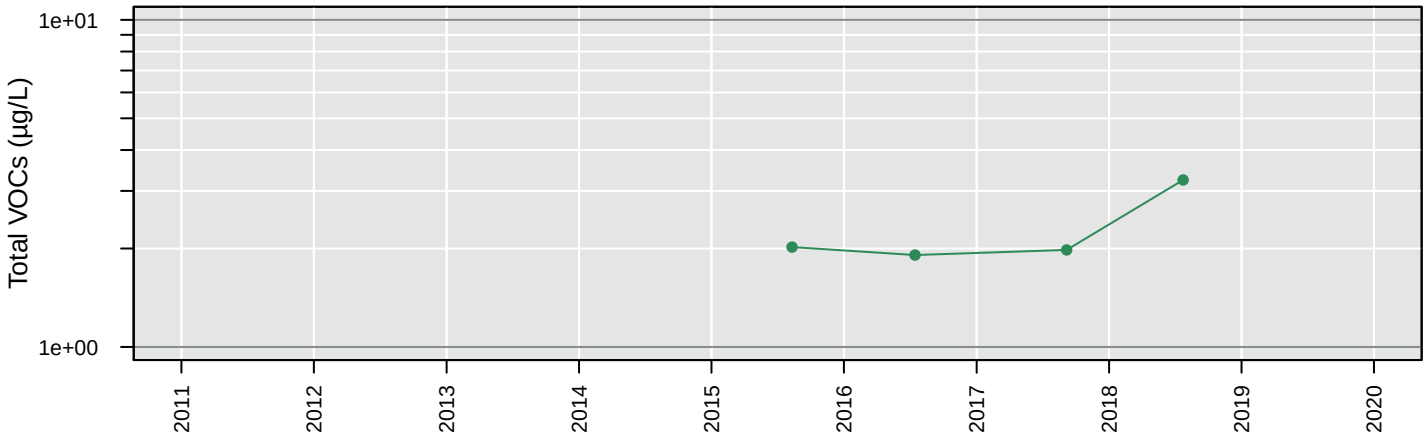
No Analysis Performed

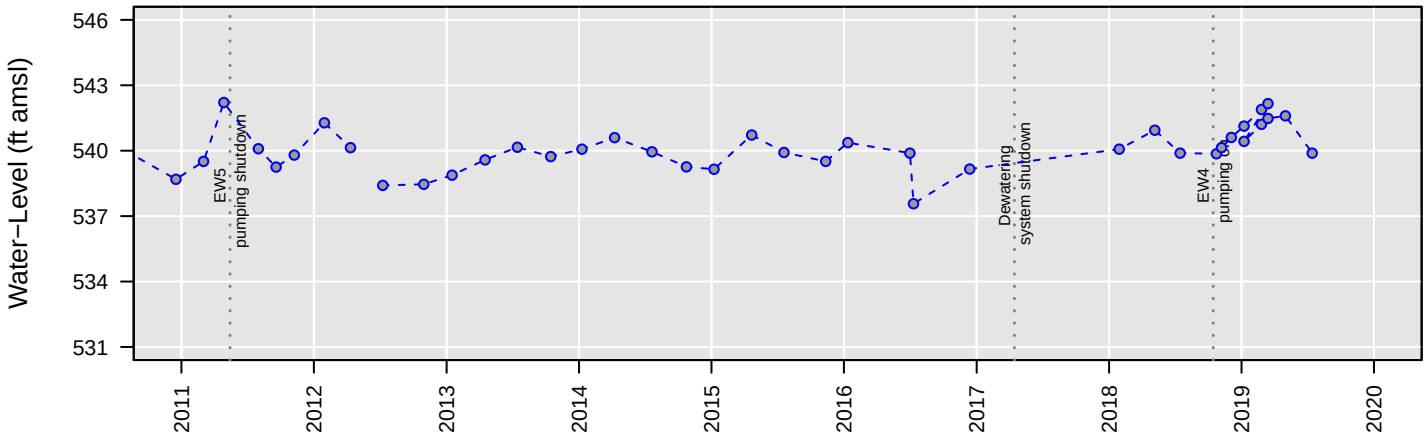
MW80

Total VOCs

Number of Comparisons: 4
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





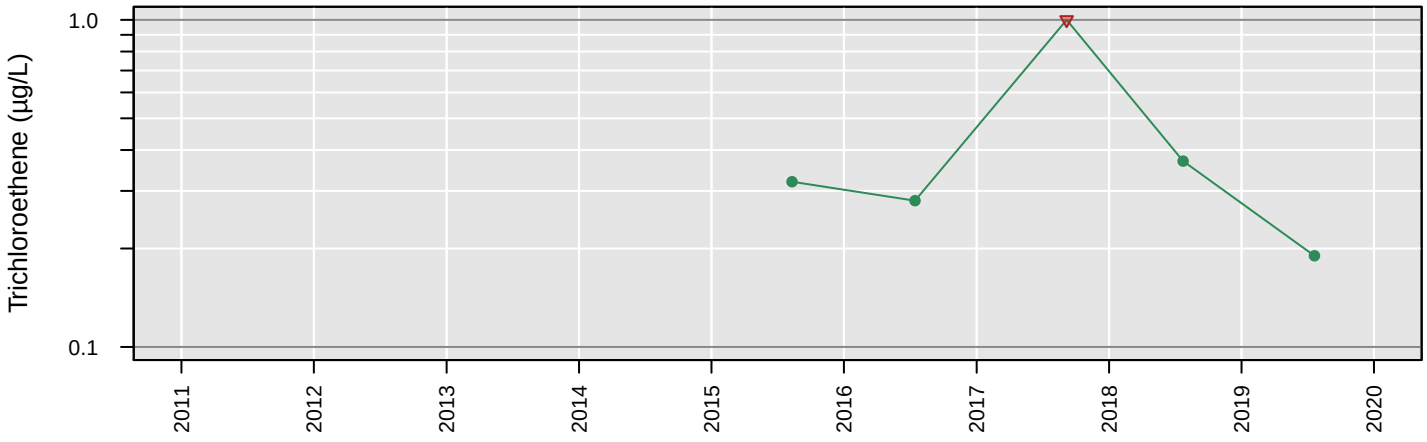
No Analysis Performed

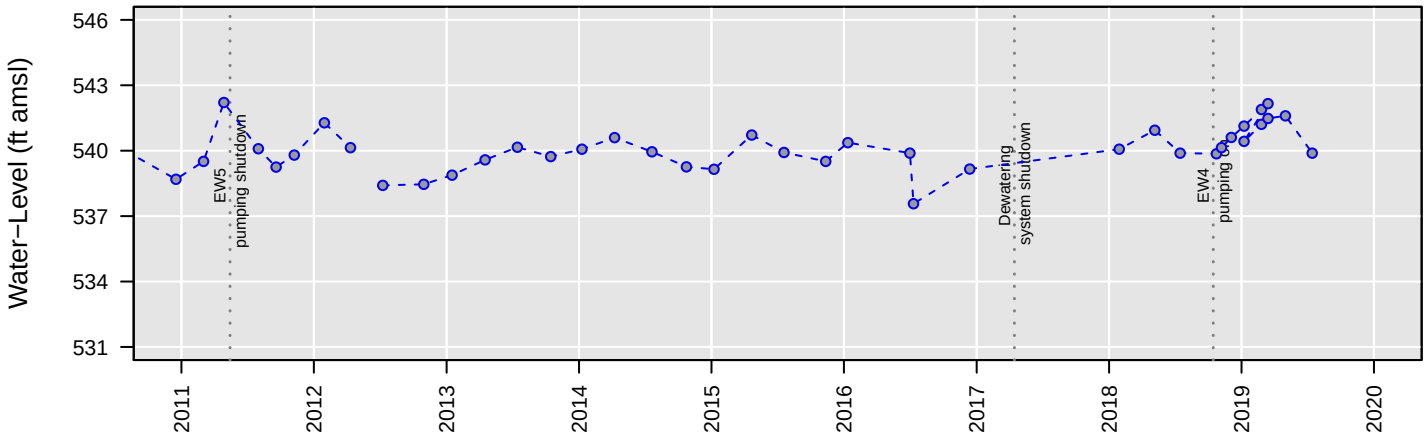
MW80

Trichloroethene

Number of Comparisons: 5
Percent NDs: 20%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





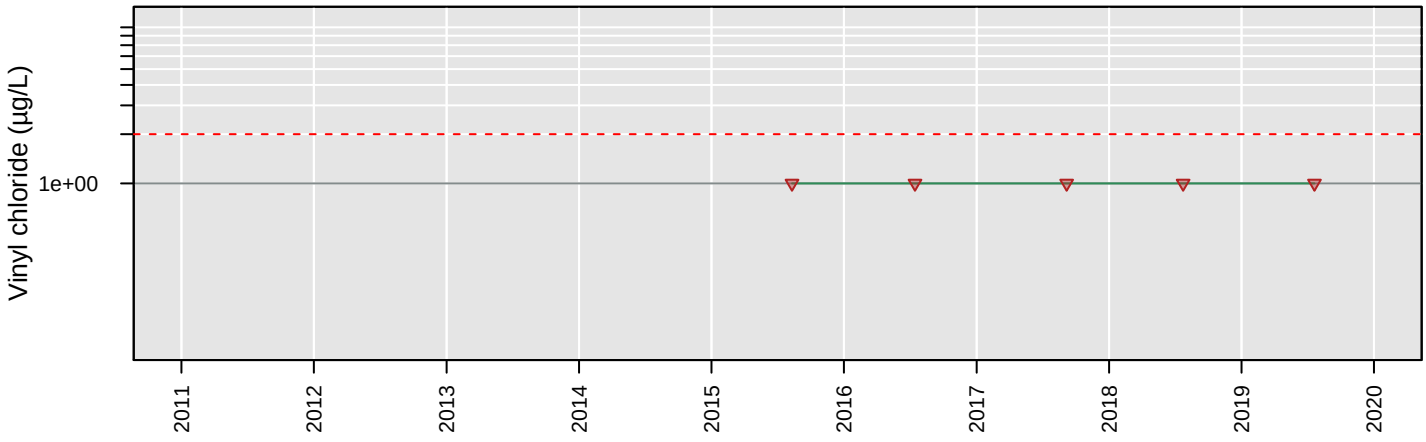
No Analysis Performed

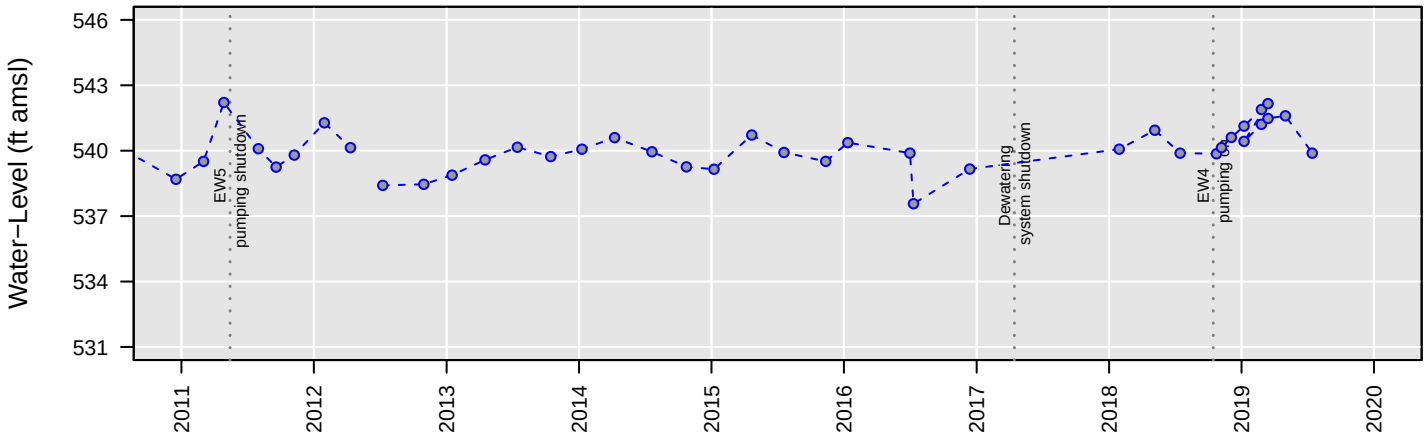
MW80

Vinyl chloride

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





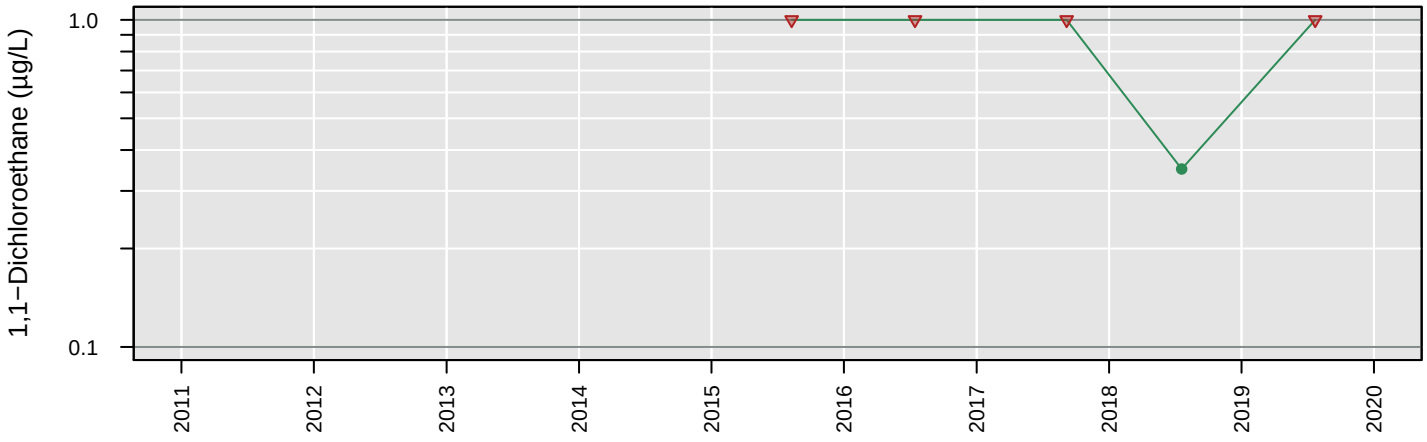
No Analysis Performed

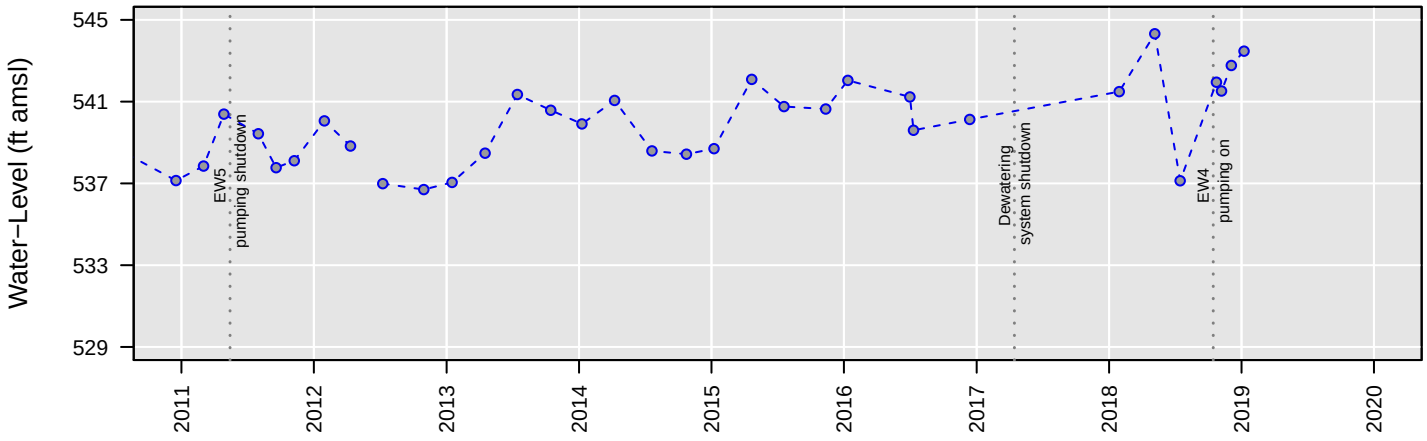
MW81

1,1−Dichloroethane

Number of Comparisons: 5
Percent NDs: 80%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





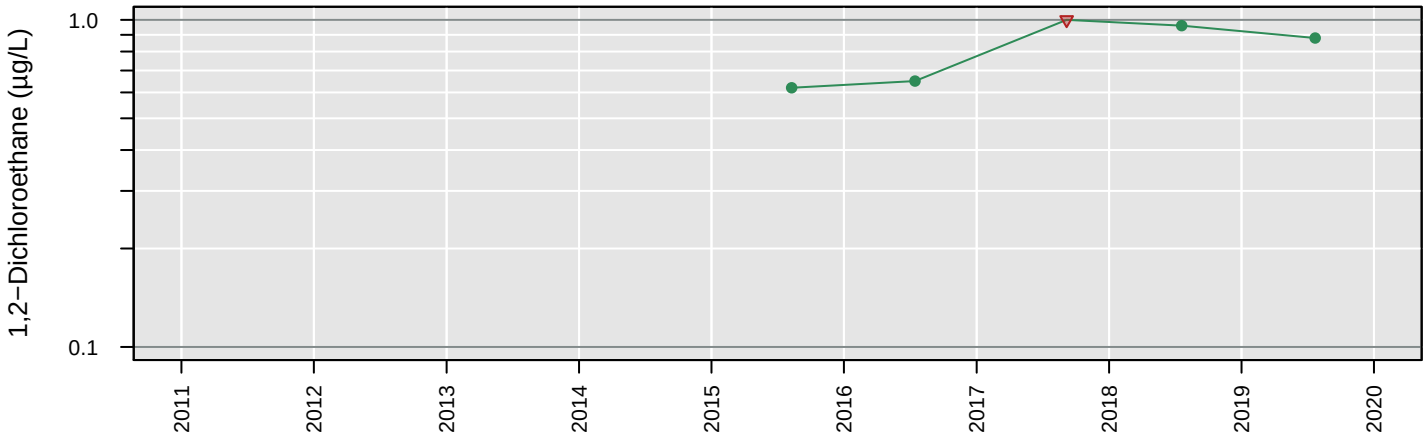
No Analysis Performed

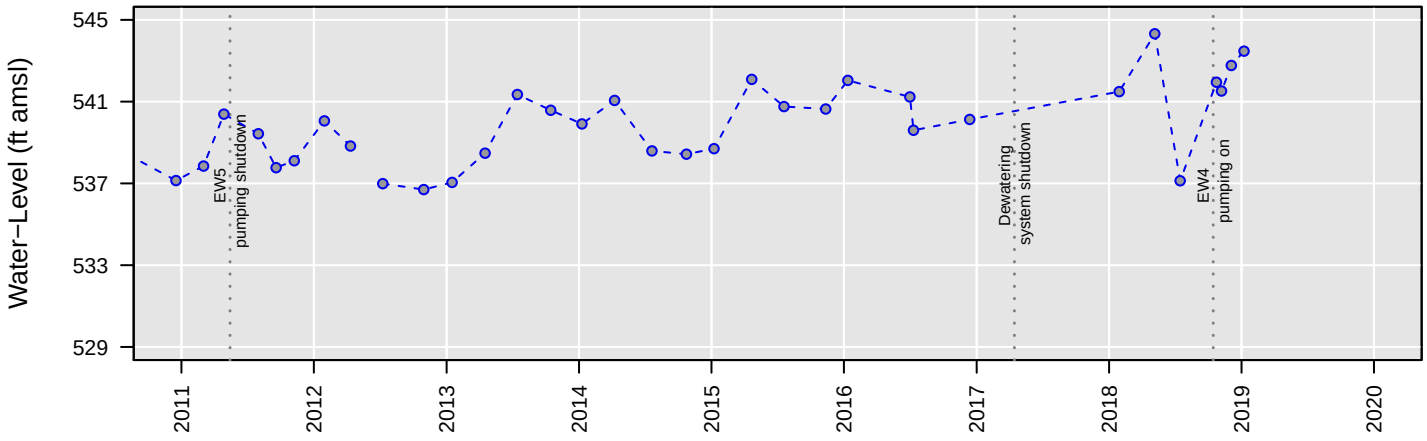
MW81

1,2−Dichloroethane

Number of Comparisons: 5
Percent NDs: 20%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





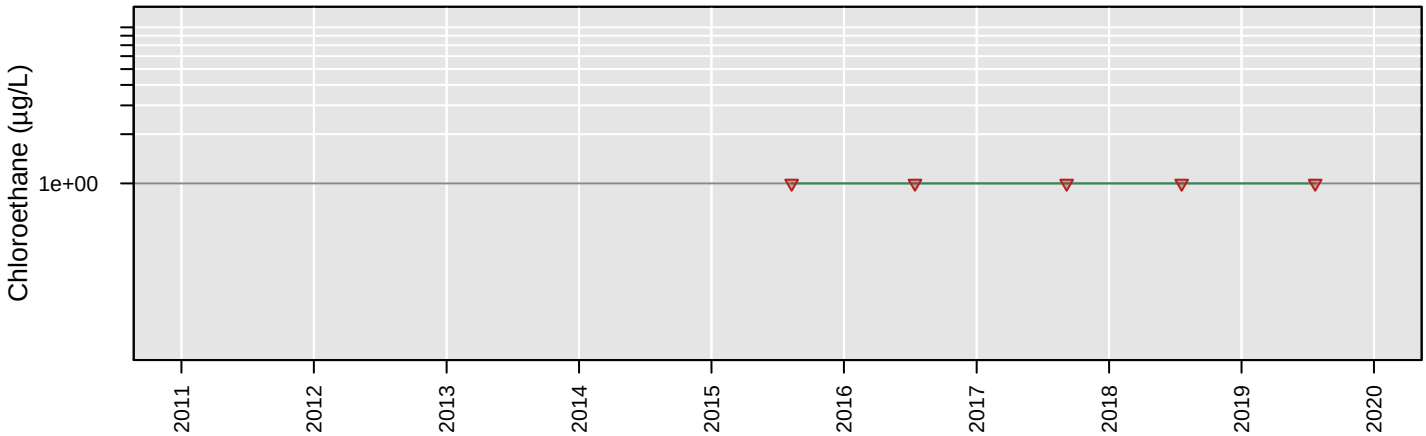
No Analysis Performed

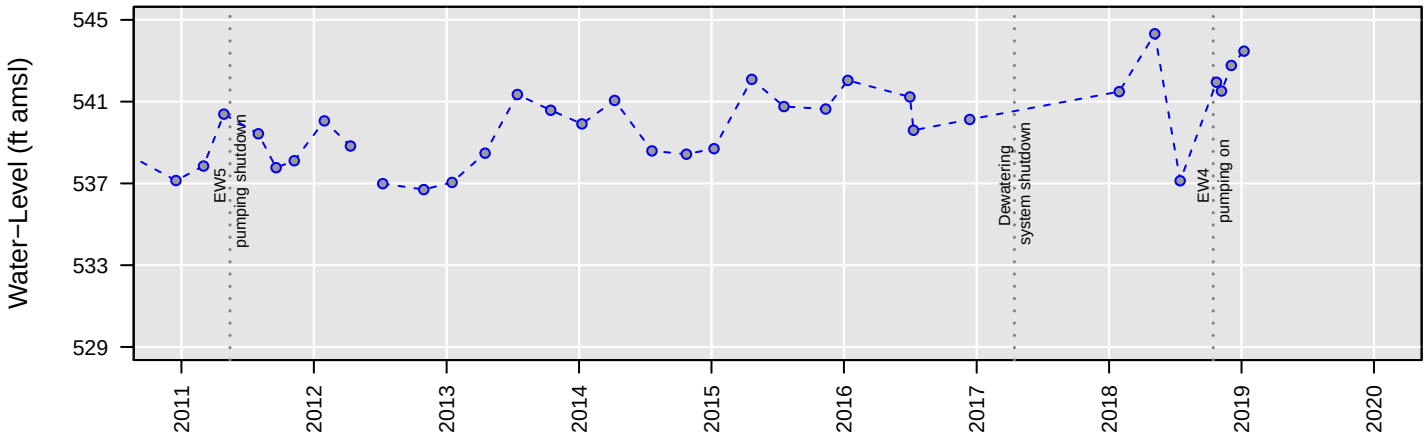
MW81

Chloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





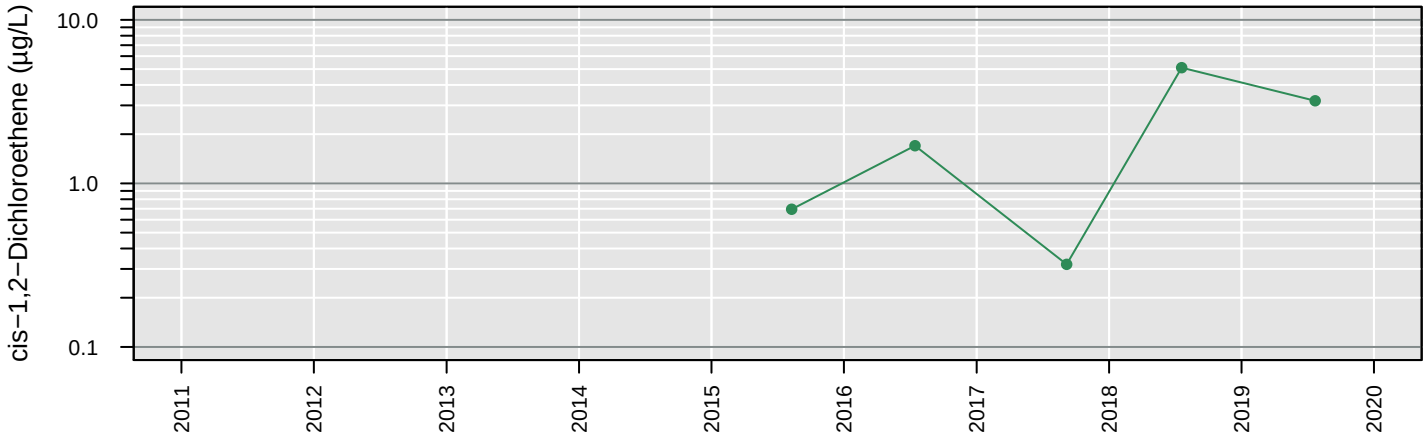
No Analysis Performed

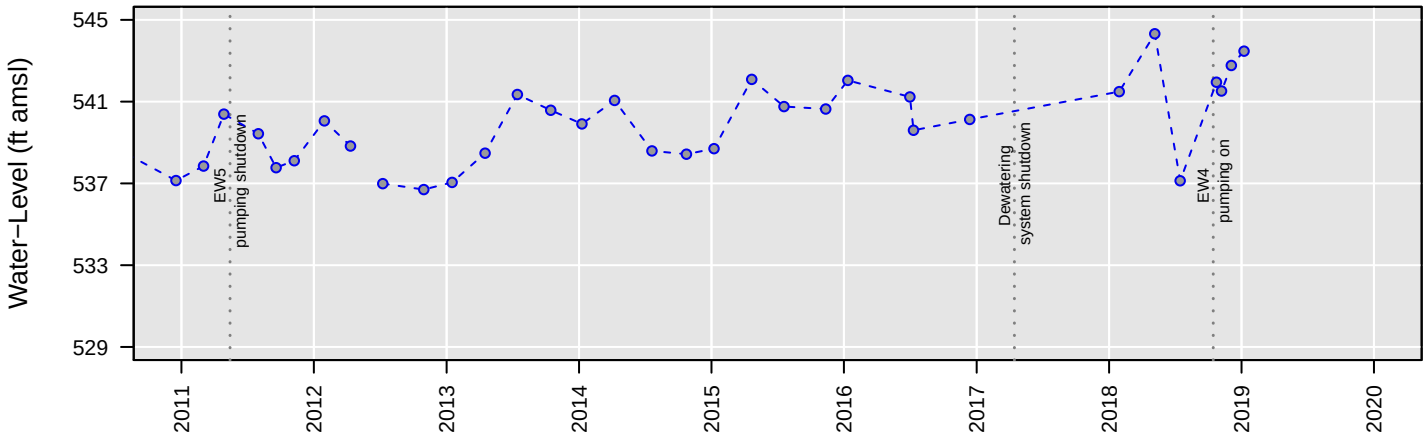
MW81

cis−1,2−Dichloroethene

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





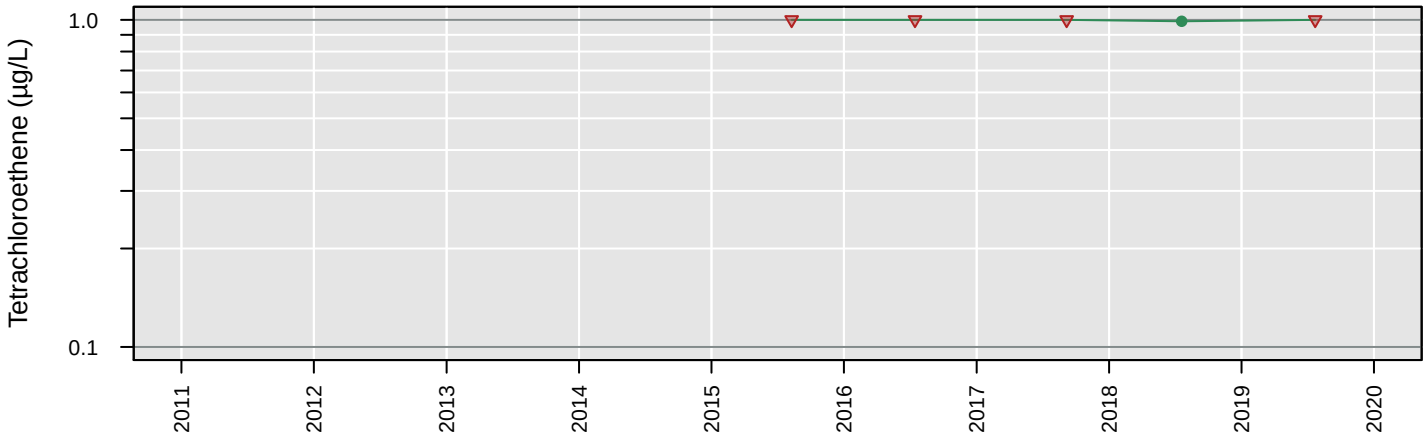
No Analysis Performed

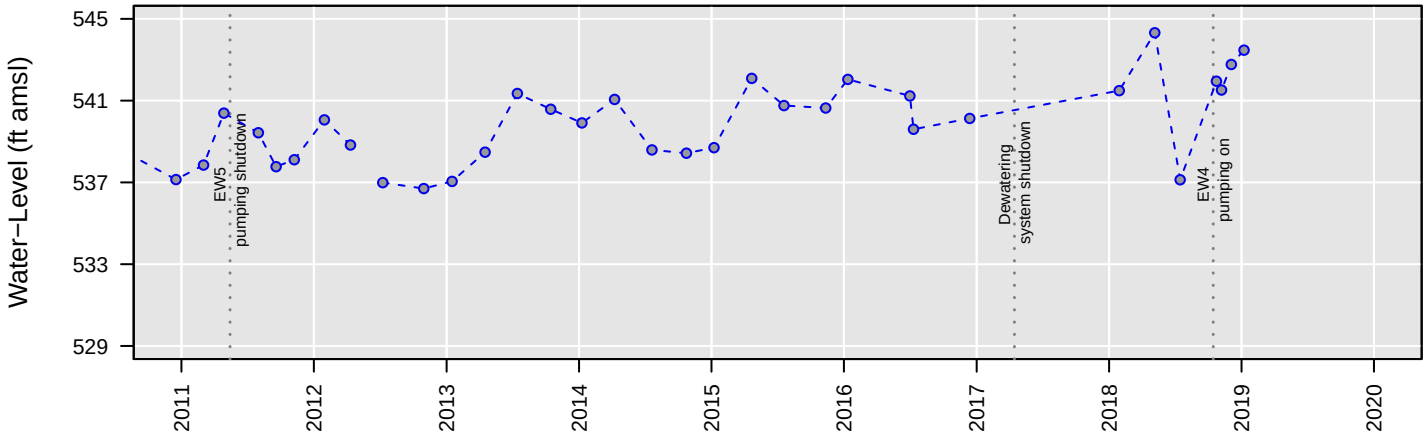
MW81

Tetrachloroethene

Number of Comparisons: 5
Percent NDs: 80%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





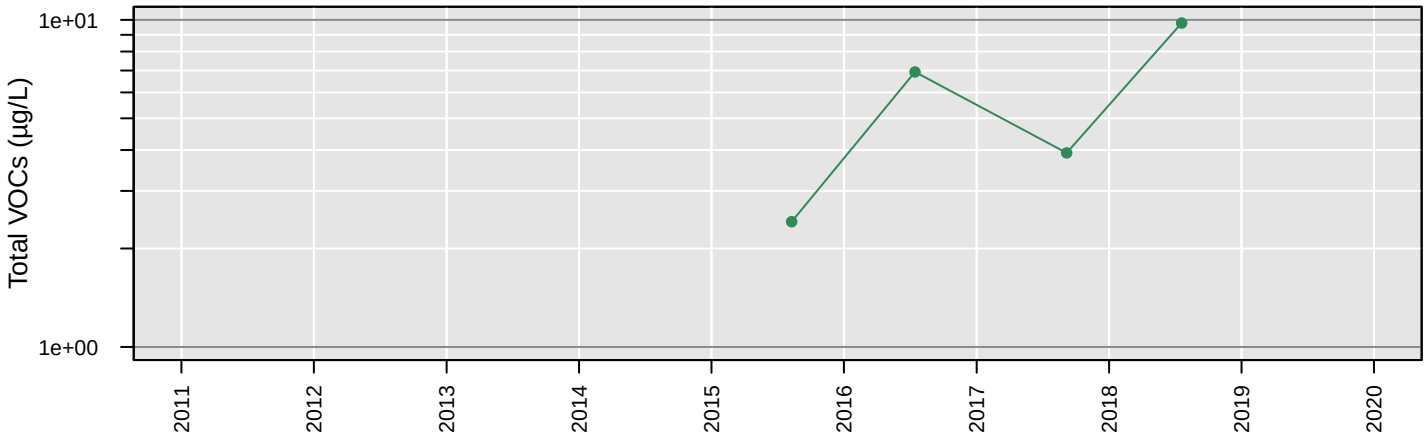
No Analysis Performed

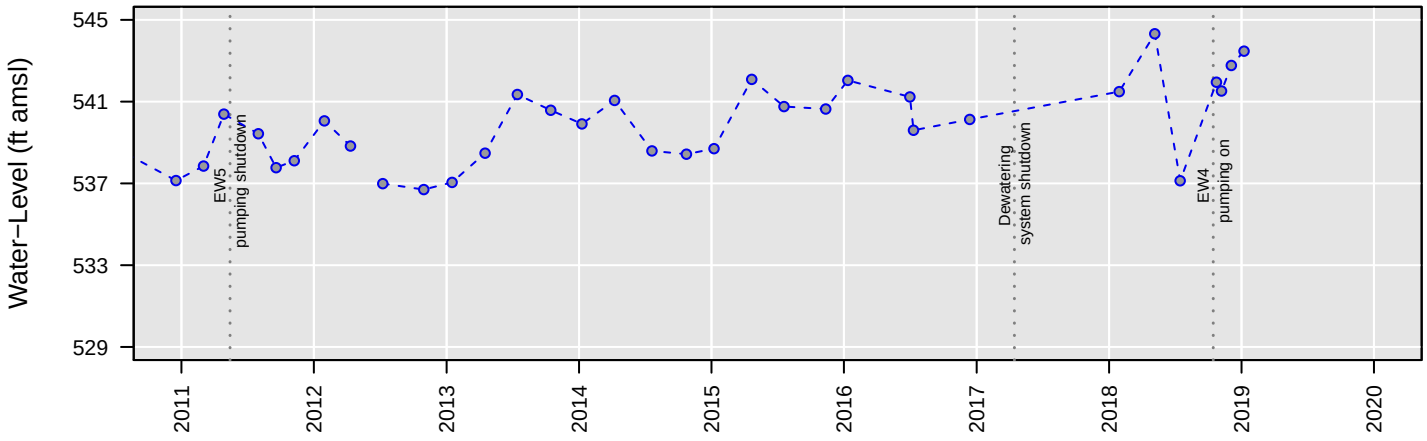
MW81

Total VOCs

Number of Comparisons: 4
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



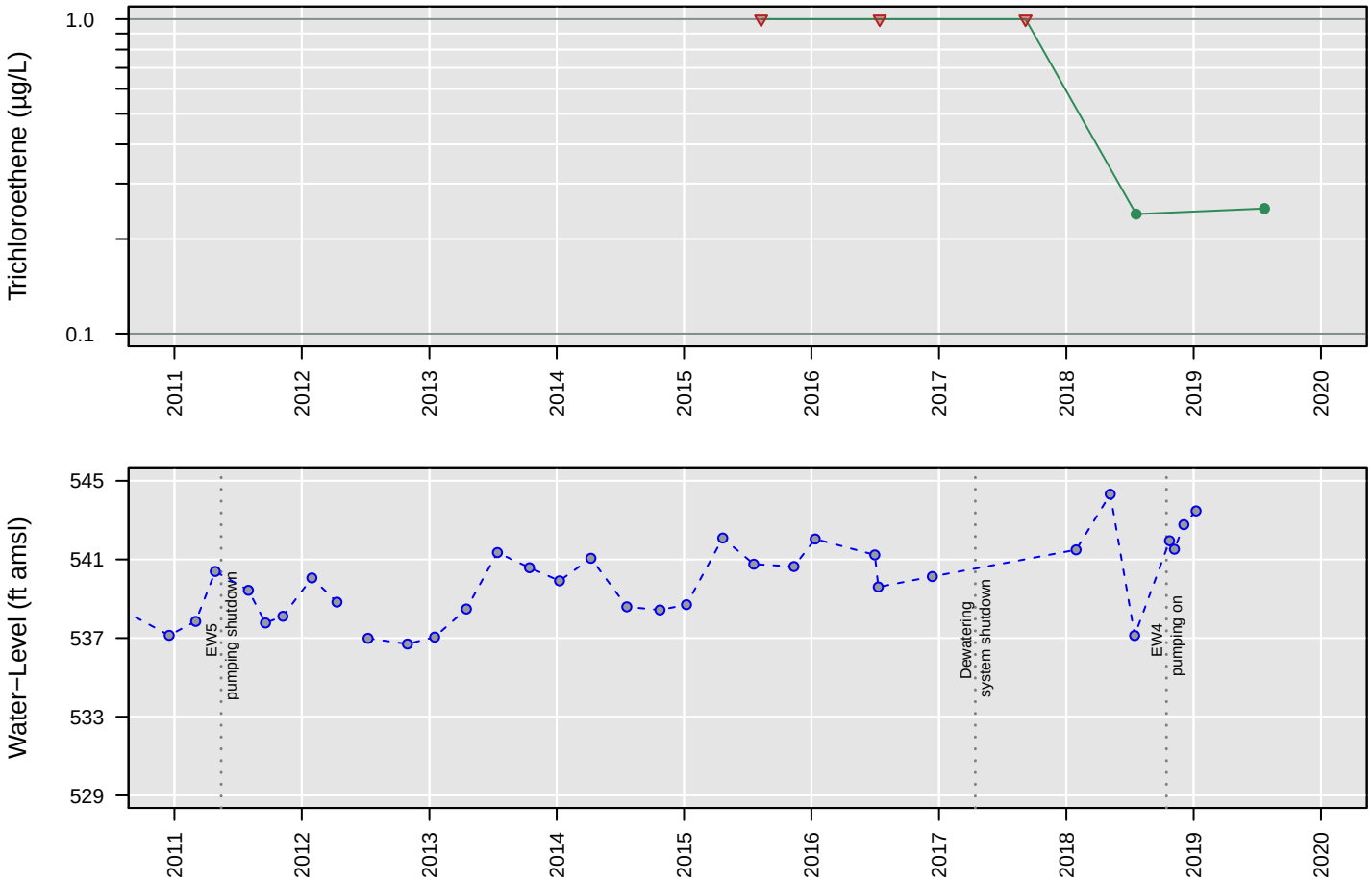


No Analysis Performed

MW81

Trichloroethene

Number of Comparisons: 5
Percent NDs: 60%

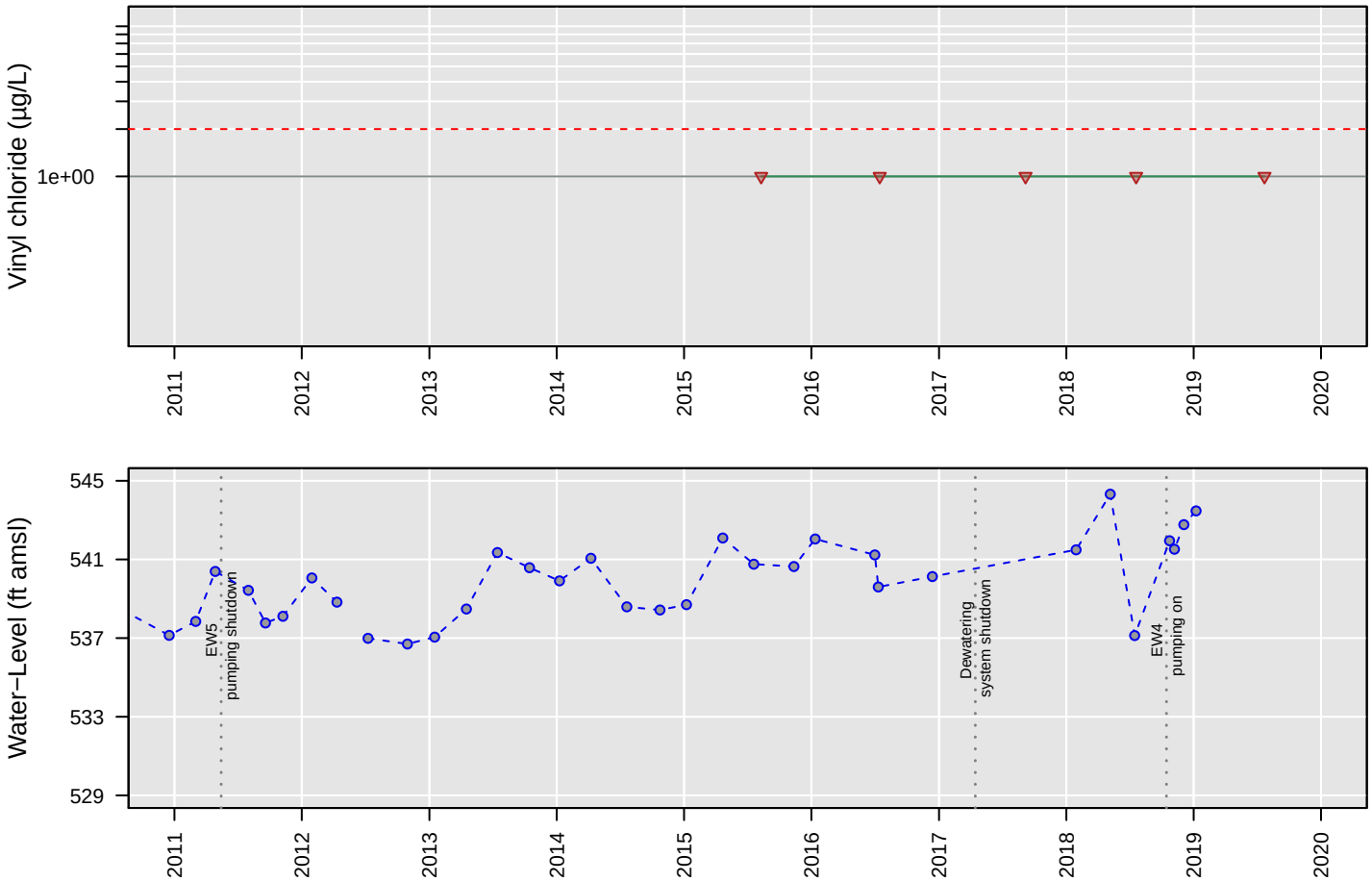


No Analysis Performed

MW81

Vinyl chloride

Number of Comparisons: 5
Percent NDs: 100%



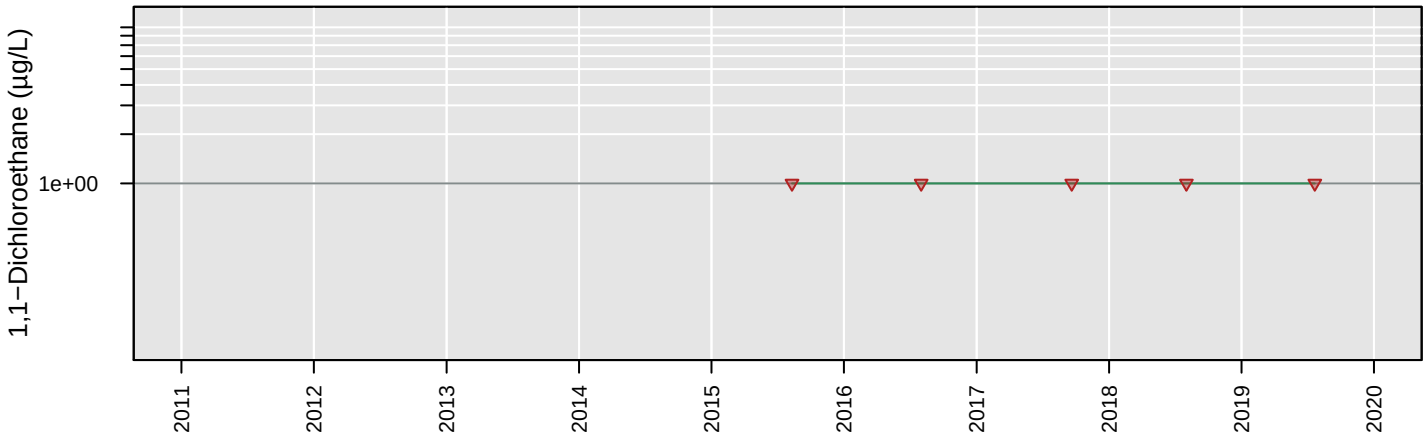
No Analysis Performed

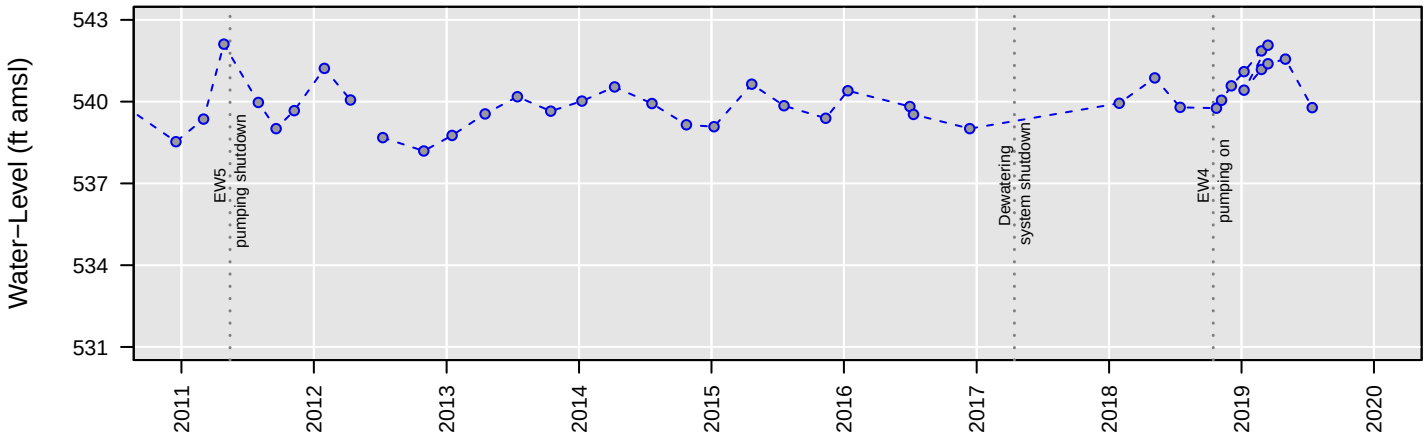
MW82

1,1−Dichloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





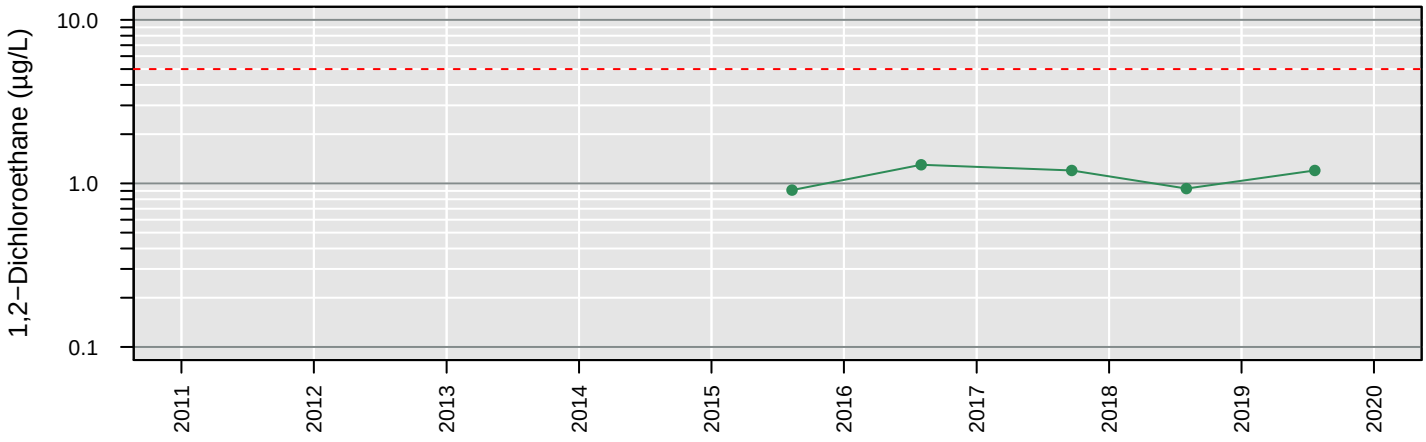
No Analysis Performed

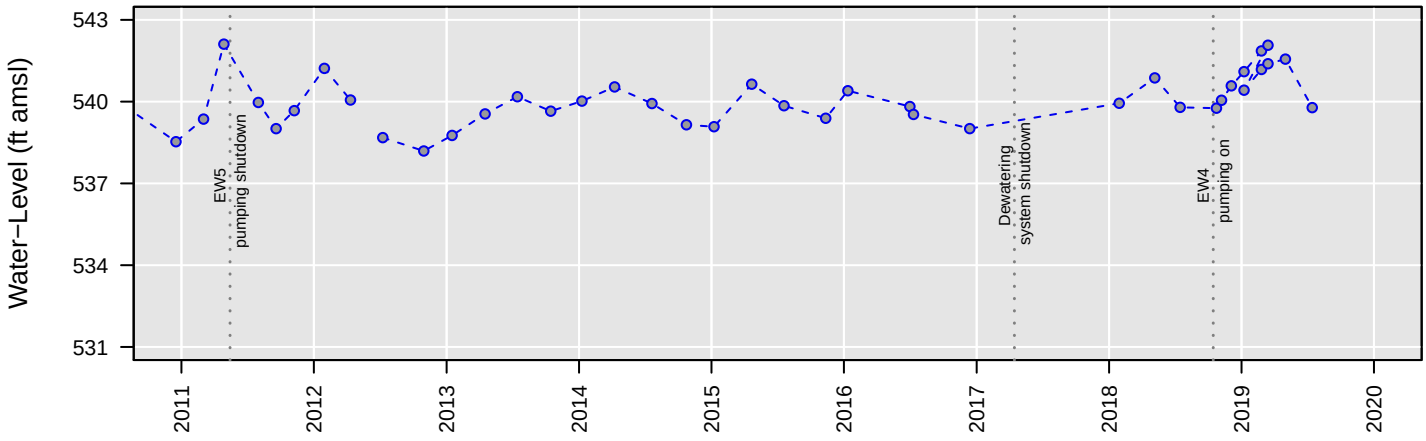
MW82

1,2−Dichloroethane

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





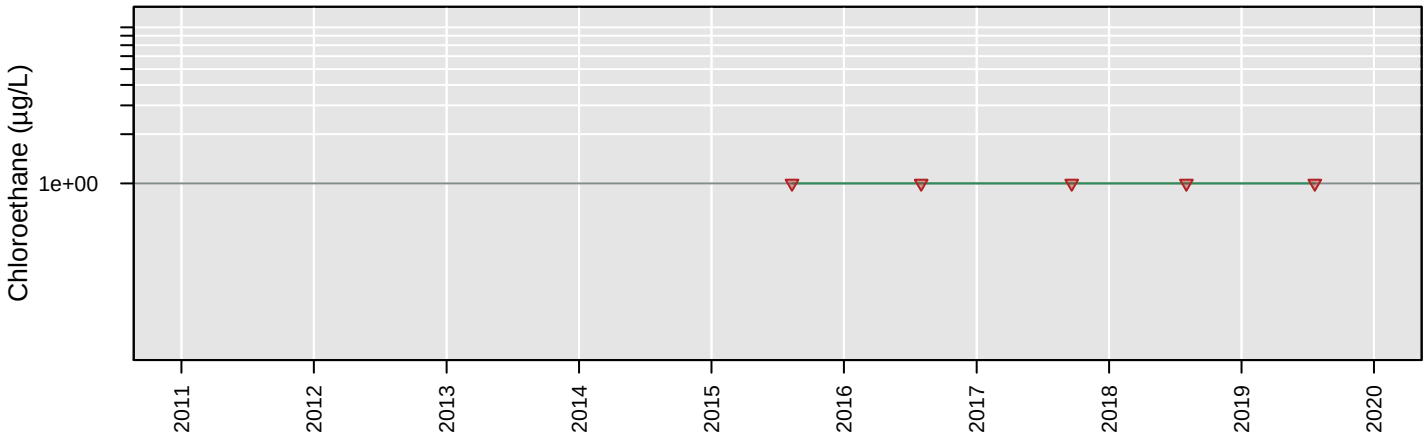
No Analysis Performed

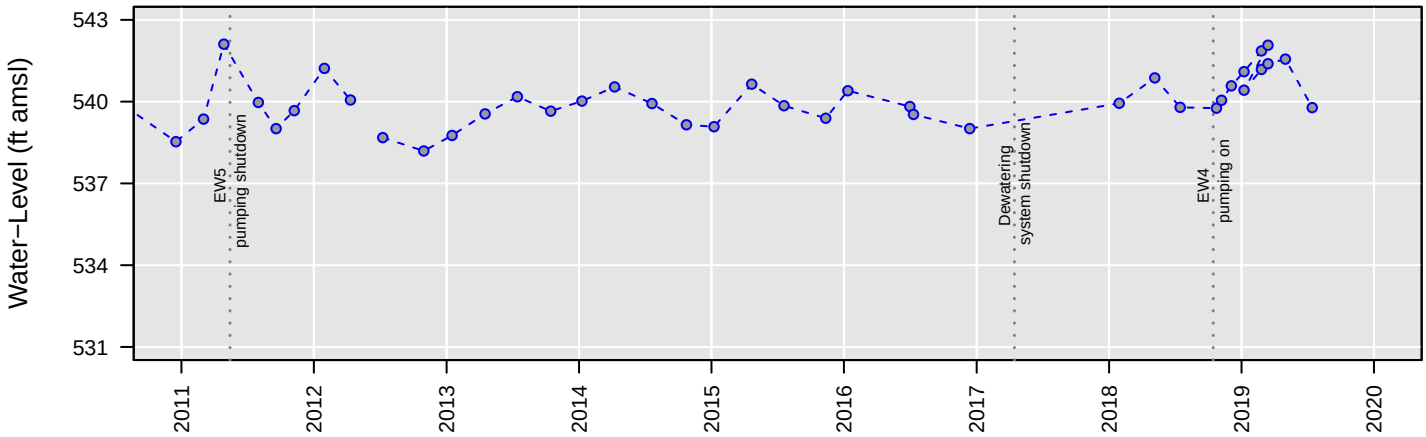
MW82

Chloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





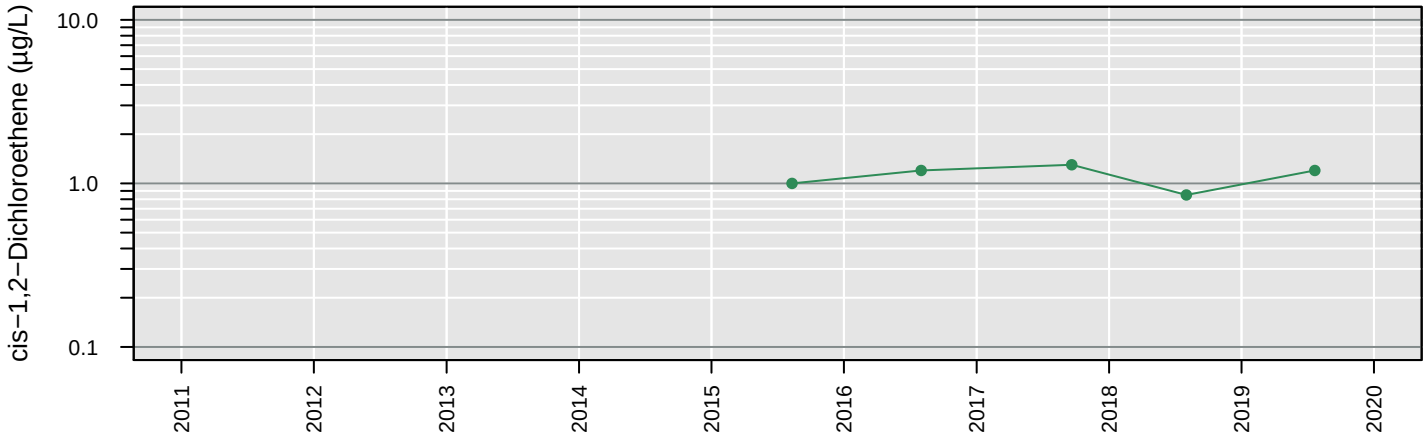
No Analysis Performed

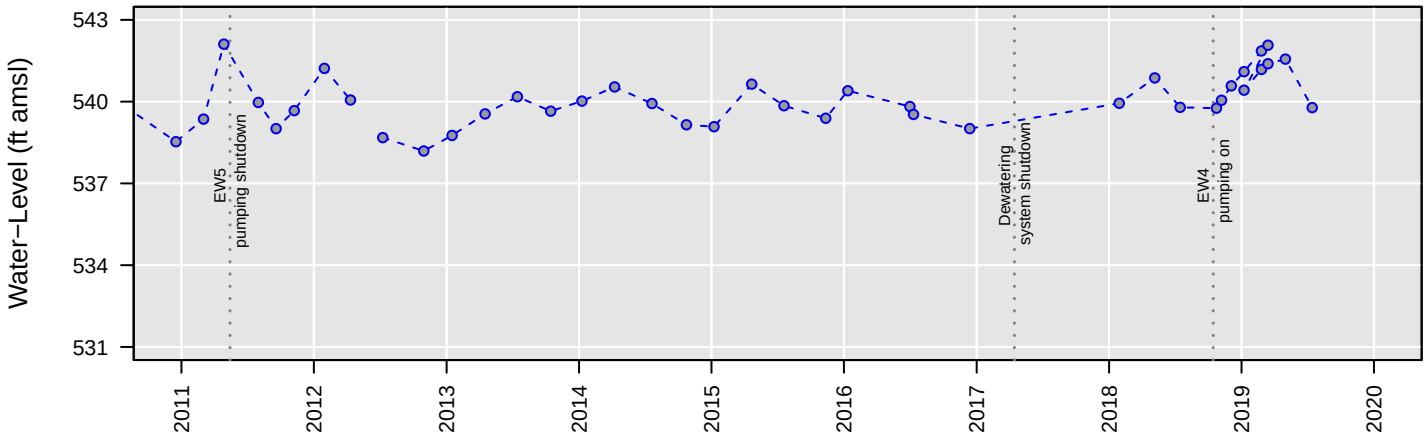
MW82

cis−1,2−Dichloroethene

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





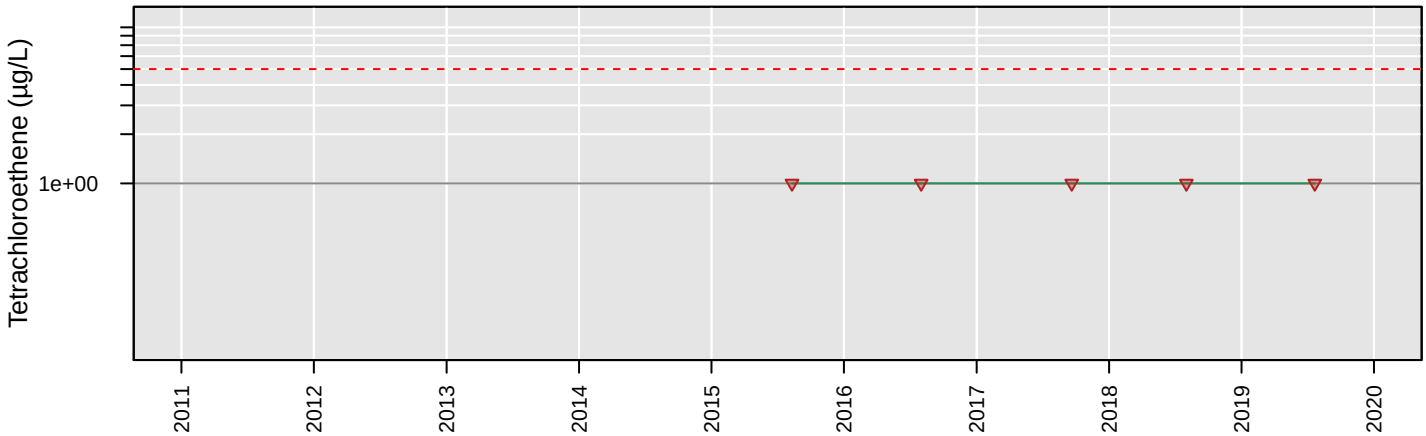
No Analysis Performed

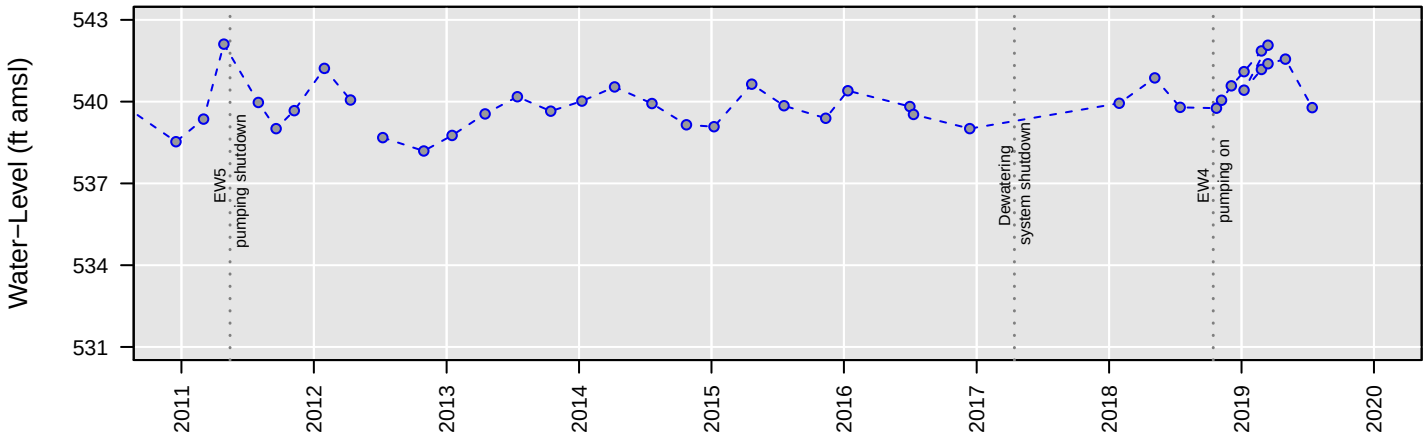
MW82

Tetrachloroethene

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





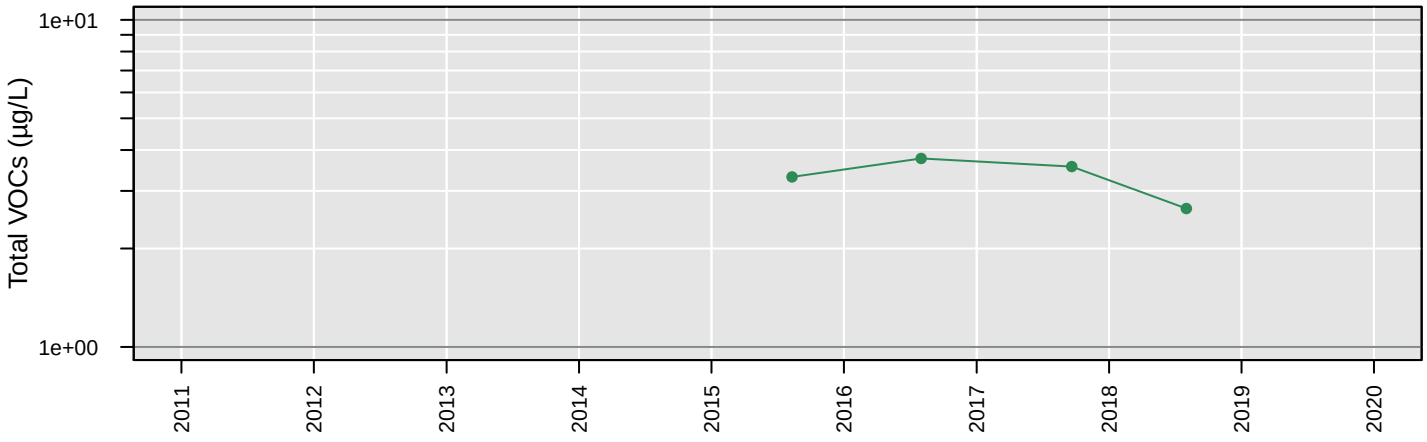
No Analysis Performed

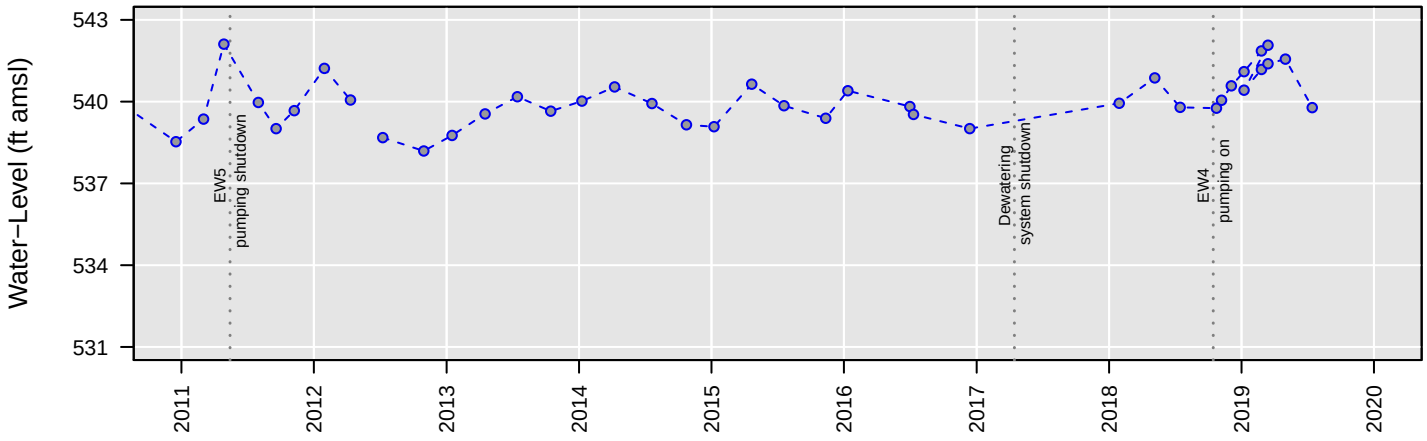
MW82

Total VOCs

Number of Comparisons: 4
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



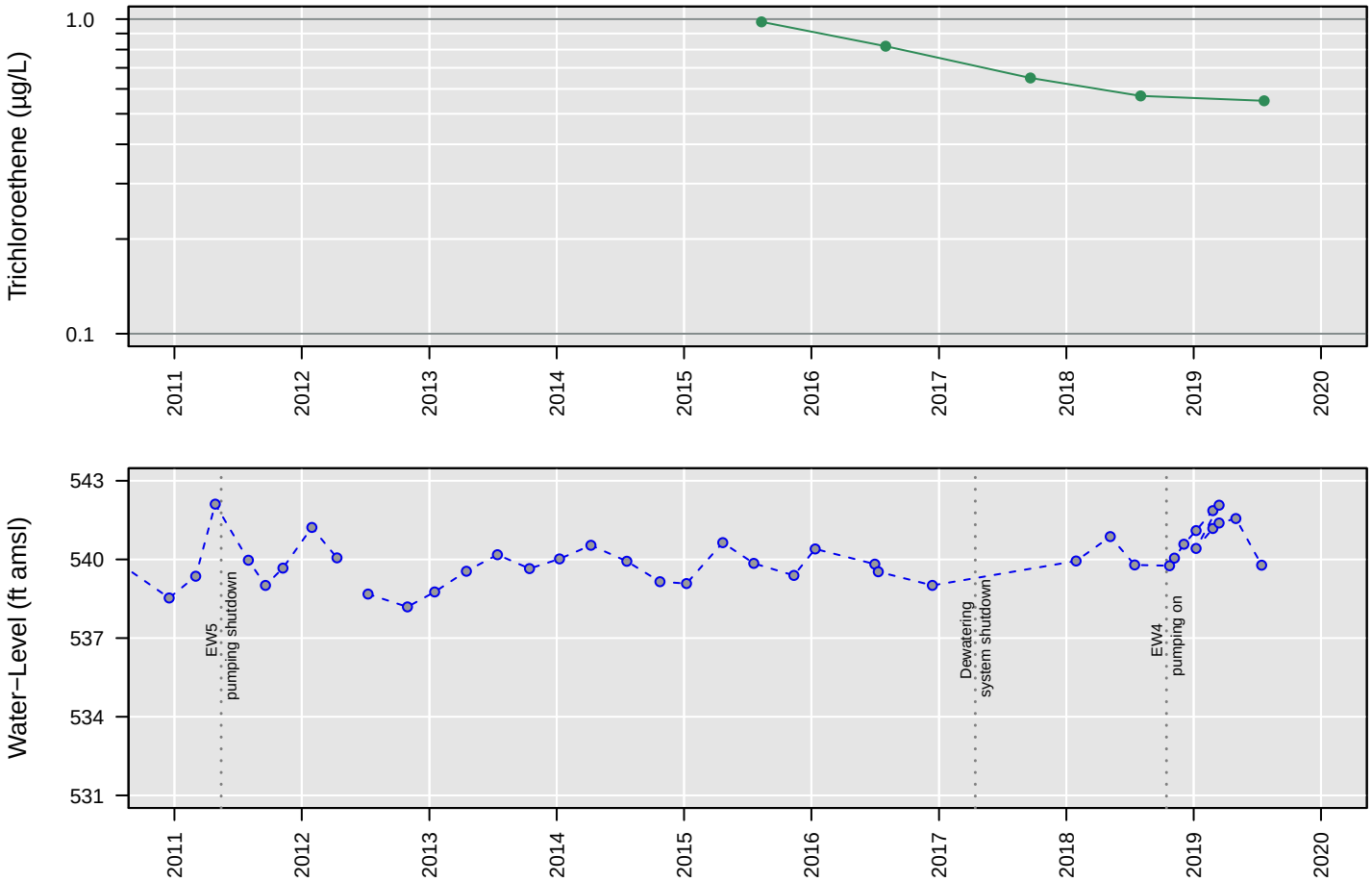


No Analysis Performed

MW82

Trichloroethene

Number of Comparisons: 5
Percent NDs: 0%

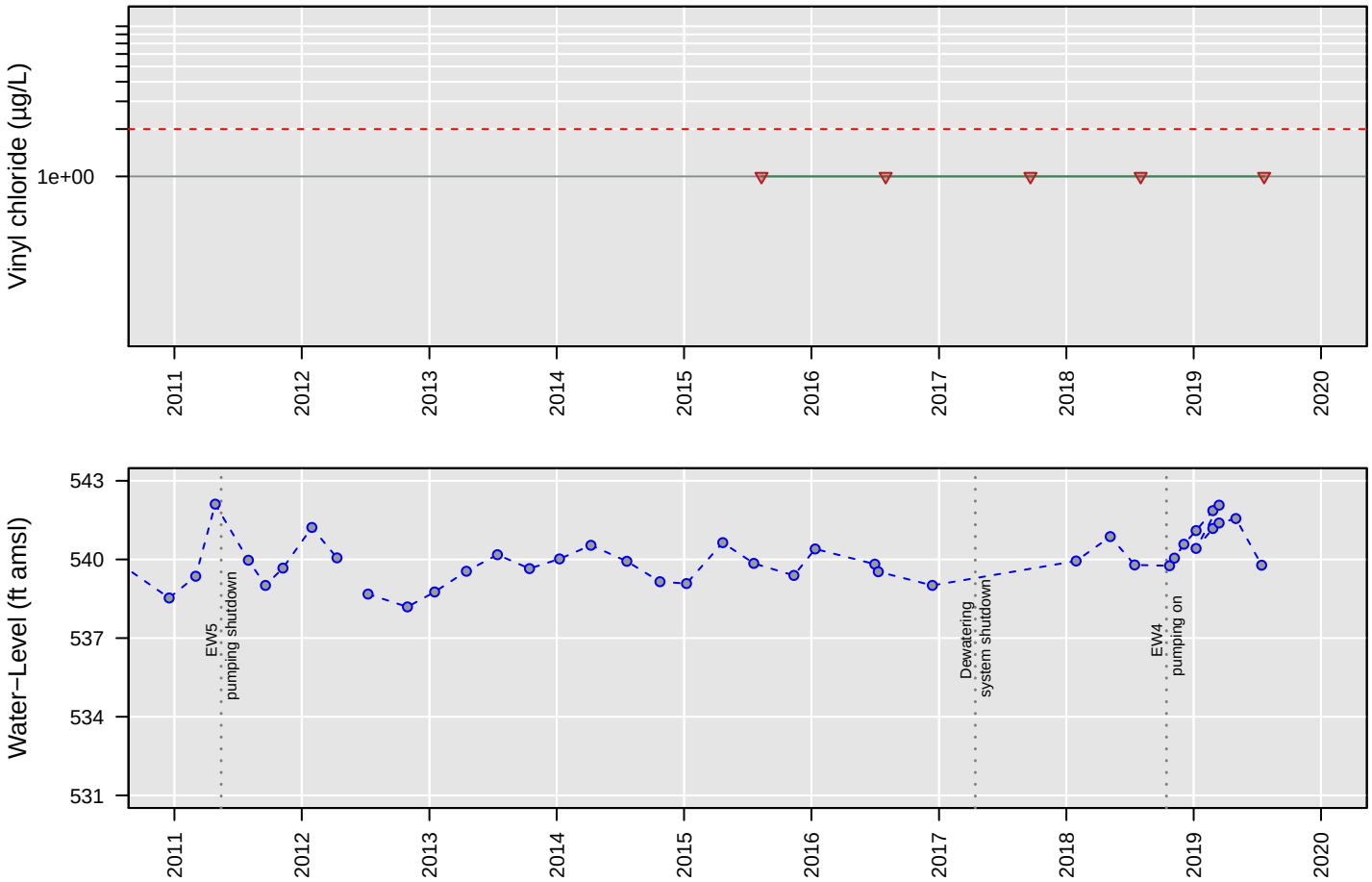


No Analysis Performed

MW82

Vinyl chloride

Number of Comparisons: 5
Percent NDs: 100%



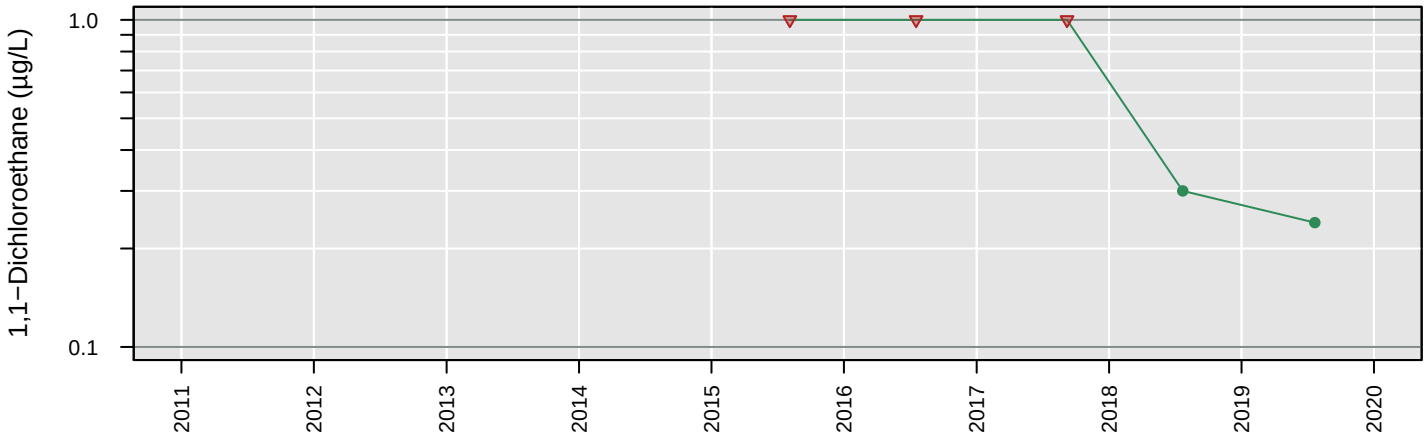
No Analysis Performed

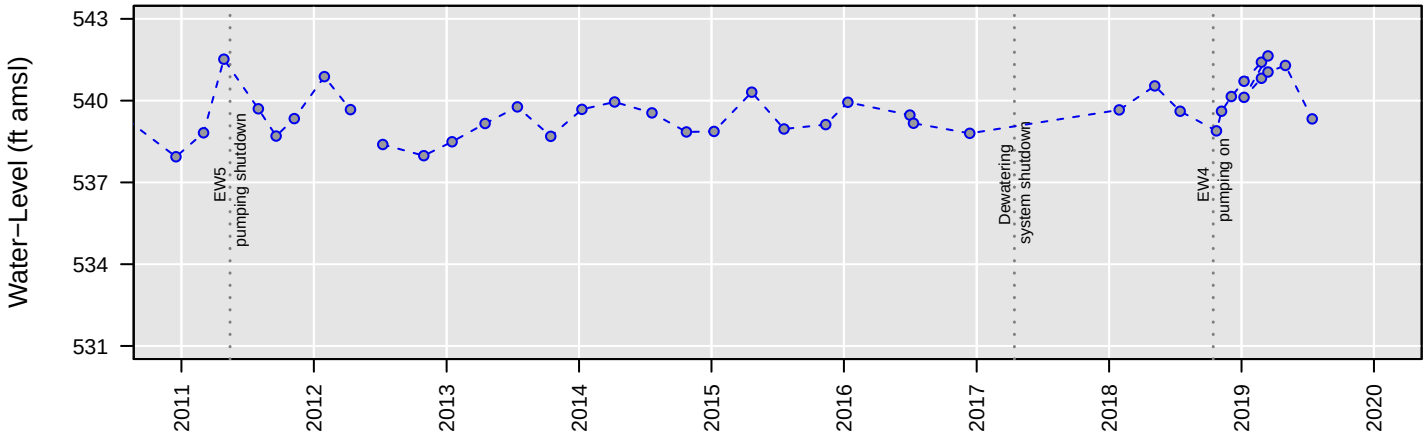
MW83

1,1−Dichloroethane

Number of Comparisons: 5
Percent NDs: 60%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





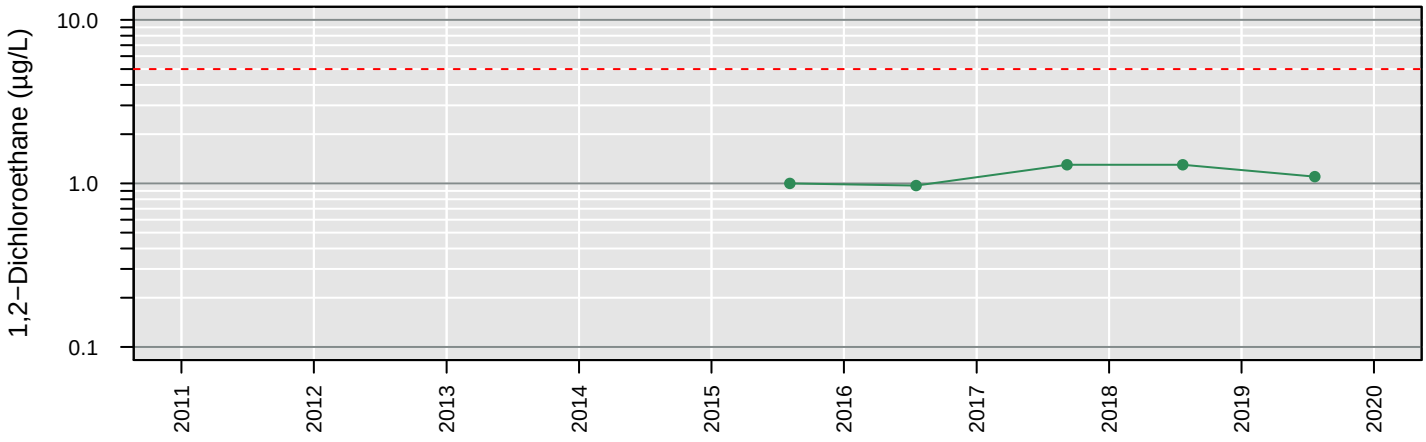
No Analysis Performed

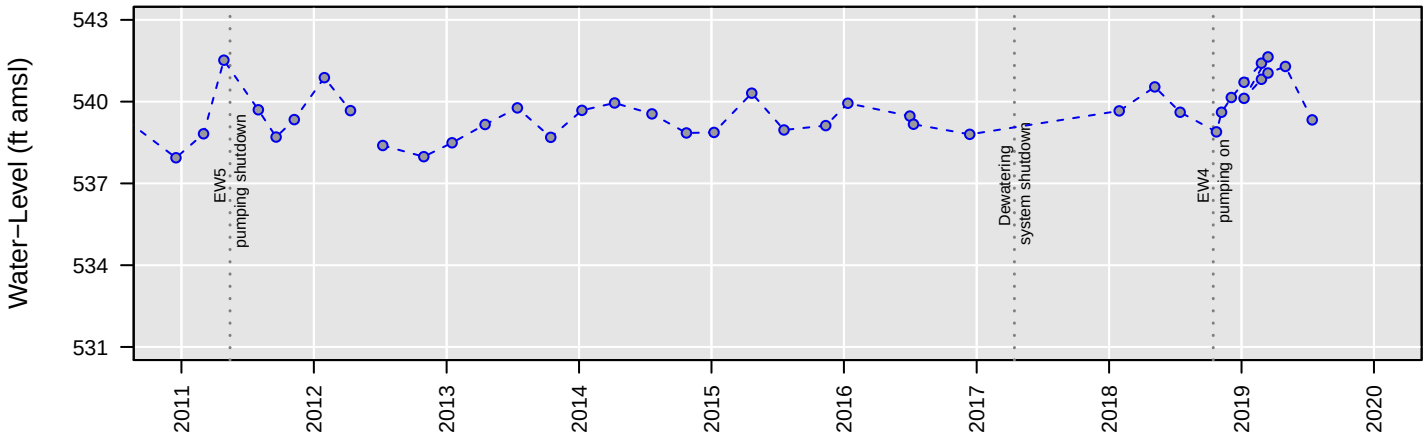
MW83

1,2−Dichloroethane

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





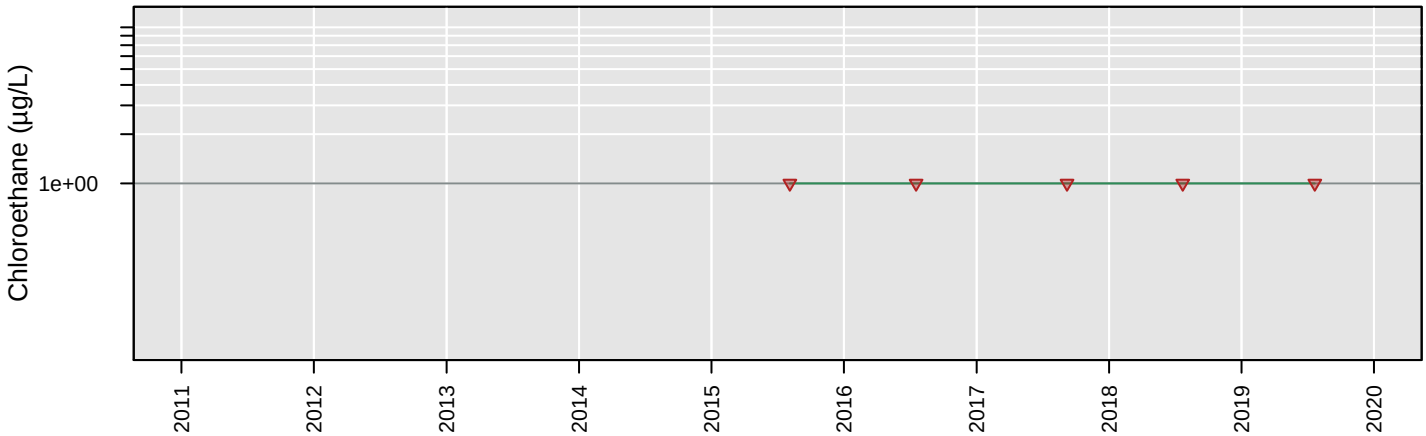
No Analysis Performed

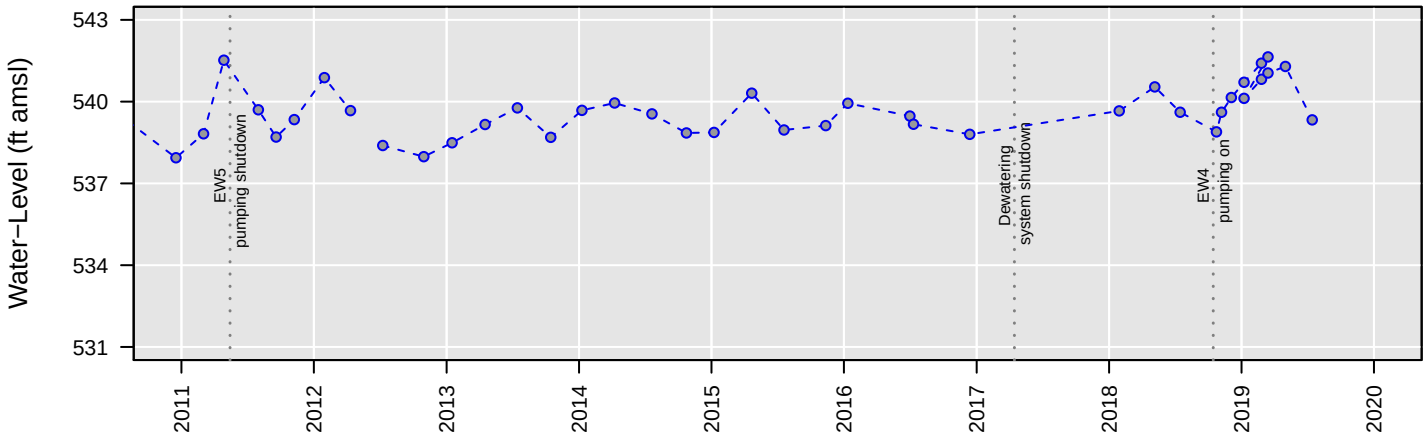
MW83

Chloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



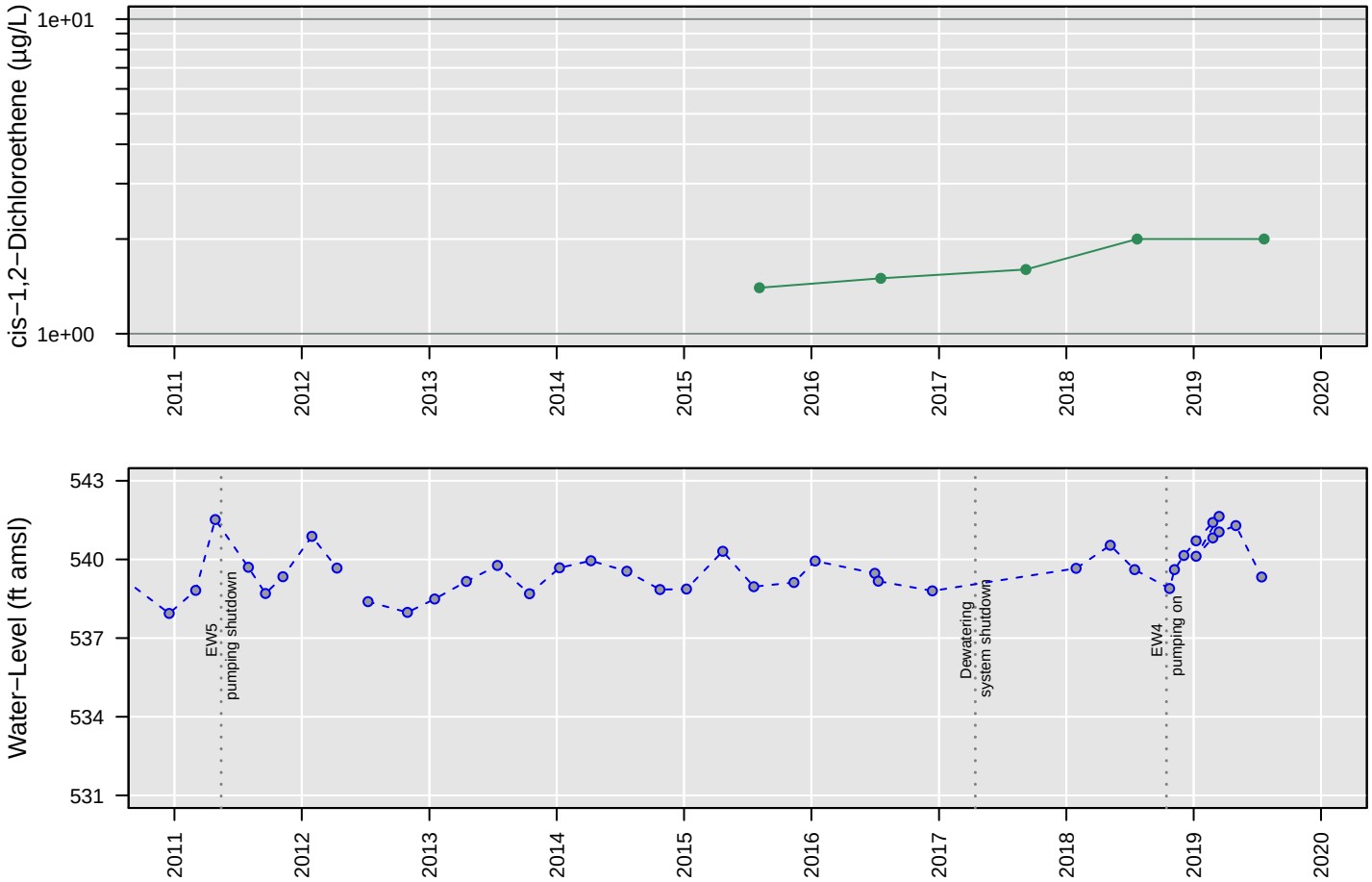


No Analysis Performed

MW83

cis−1,2−Dichloroethene

Number of Comparisons: 5
Percent NDs: 0%



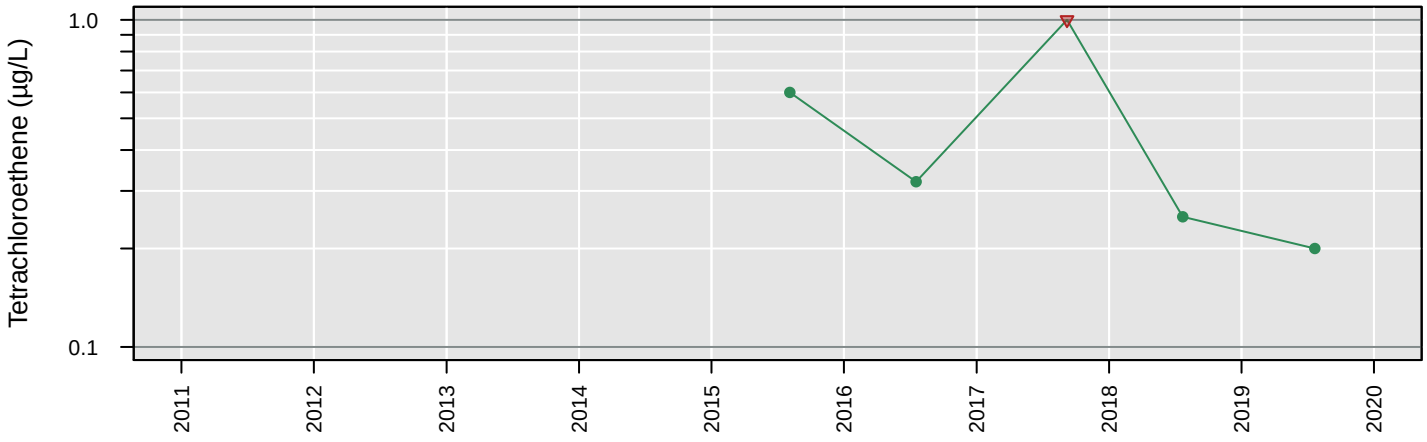
No Analysis Performed

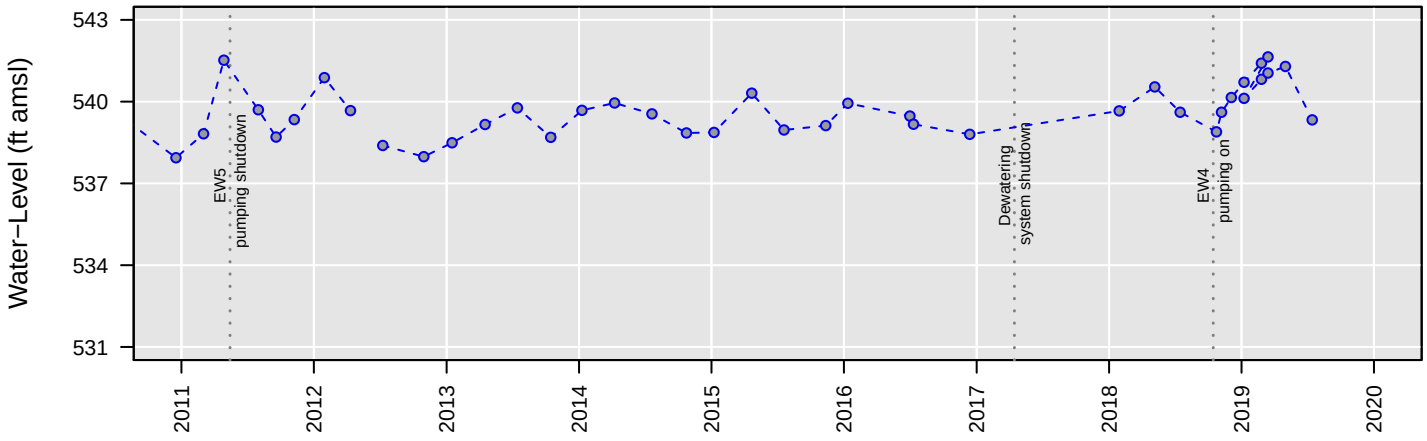
MW83

Tetrachloroethene

Number of Comparisons: 5
Percent NDs: 20%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





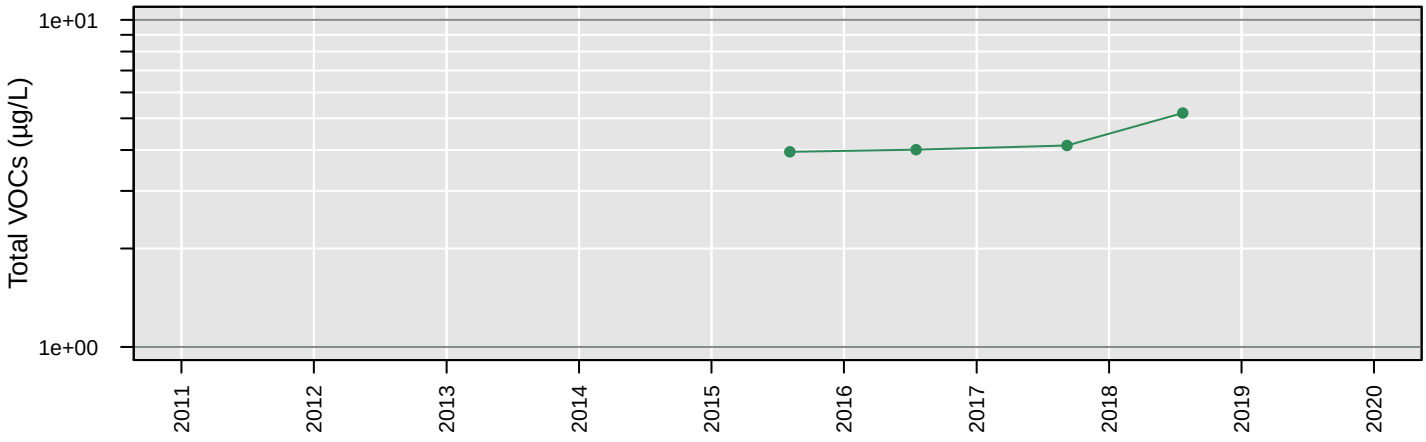
No Analysis Performed

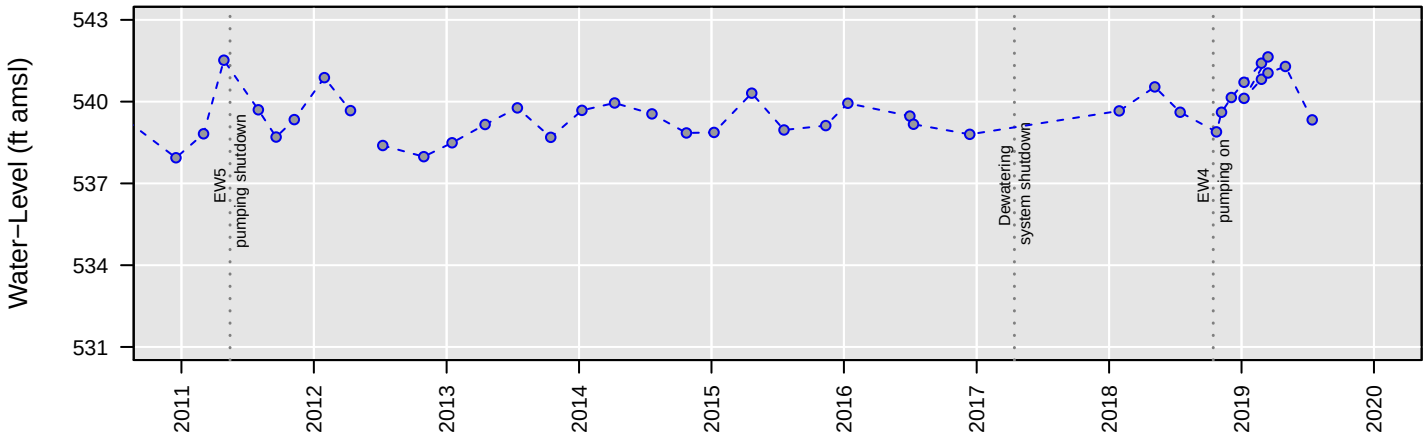
MW83

Total VOCs

Number of Comparisons: 4
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





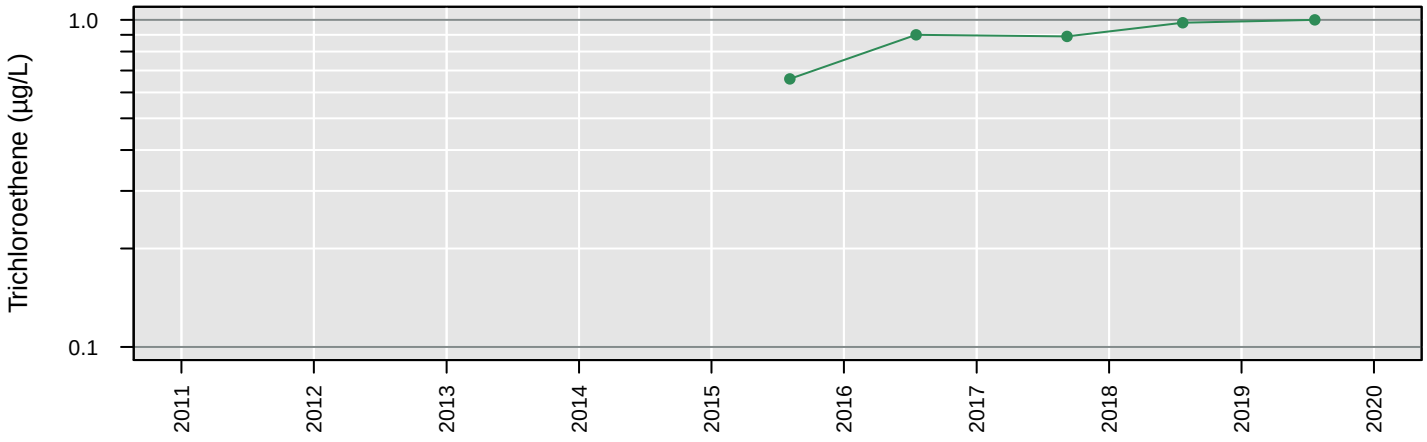
No Analysis Performed

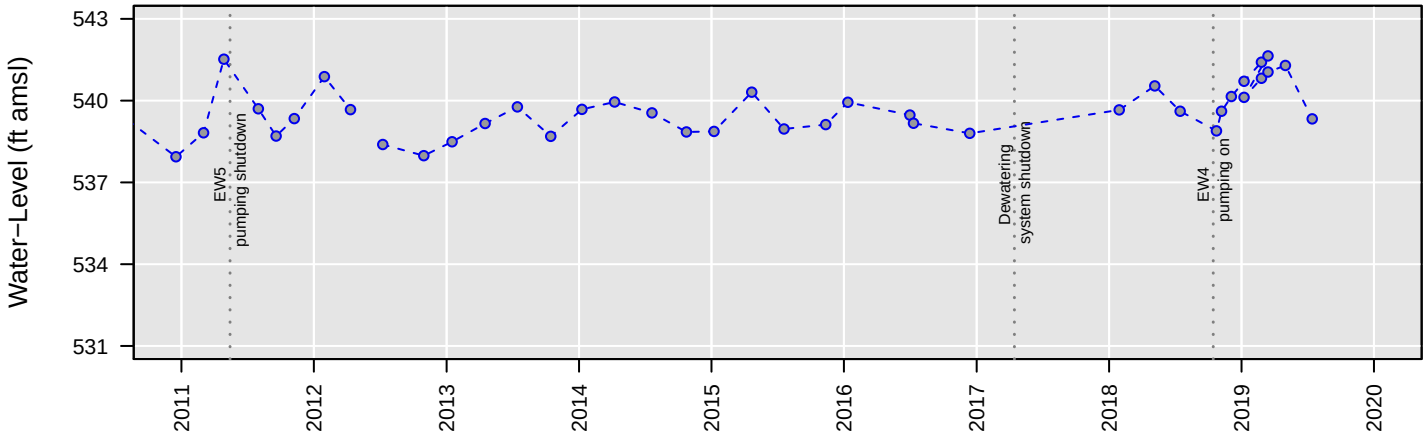
MW83

Trichloroethene

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



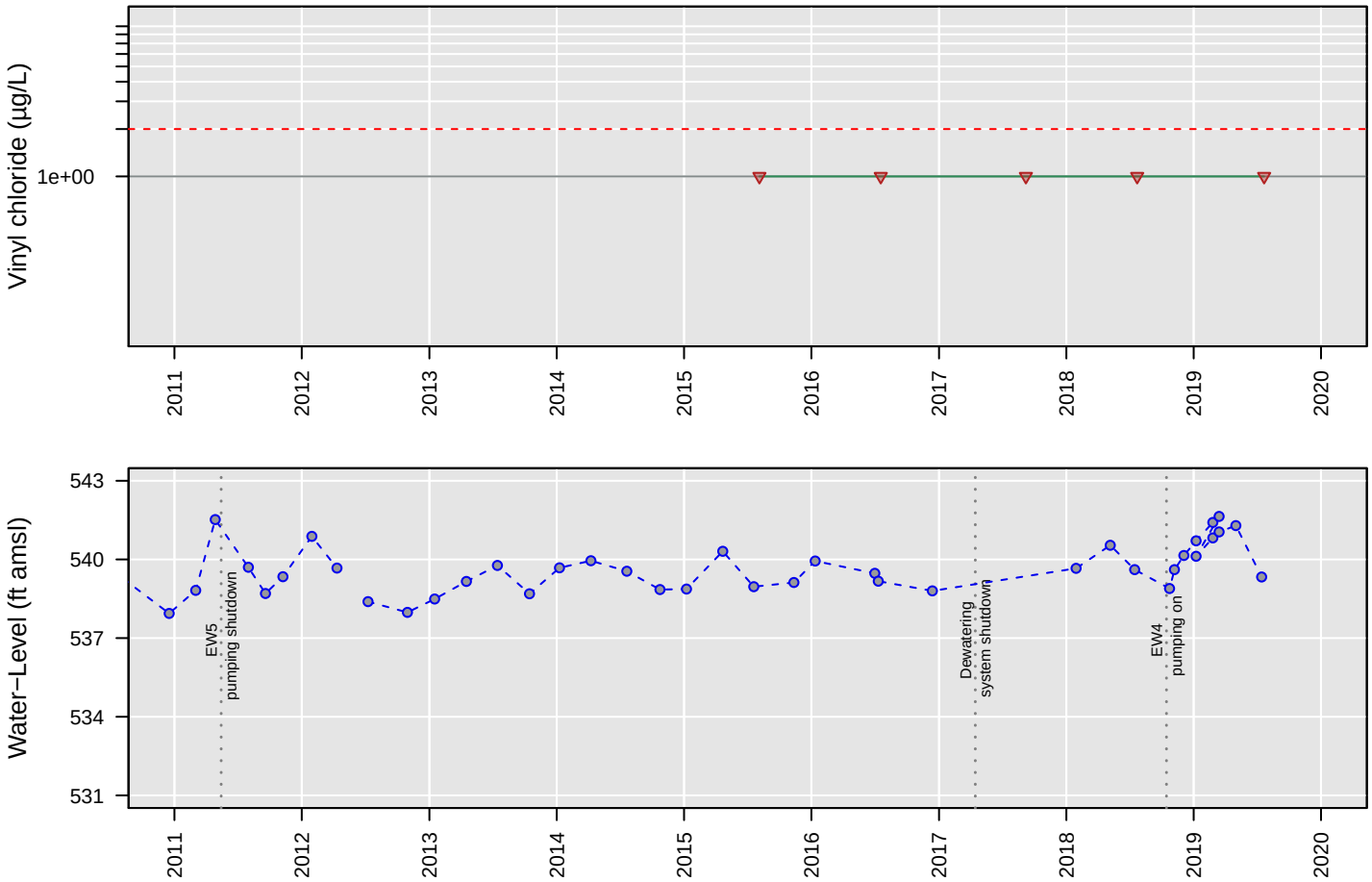


No Analysis Performed

MW83

Vinyl chloride

Number of Comparisons: 5
Percent NDs: 100%



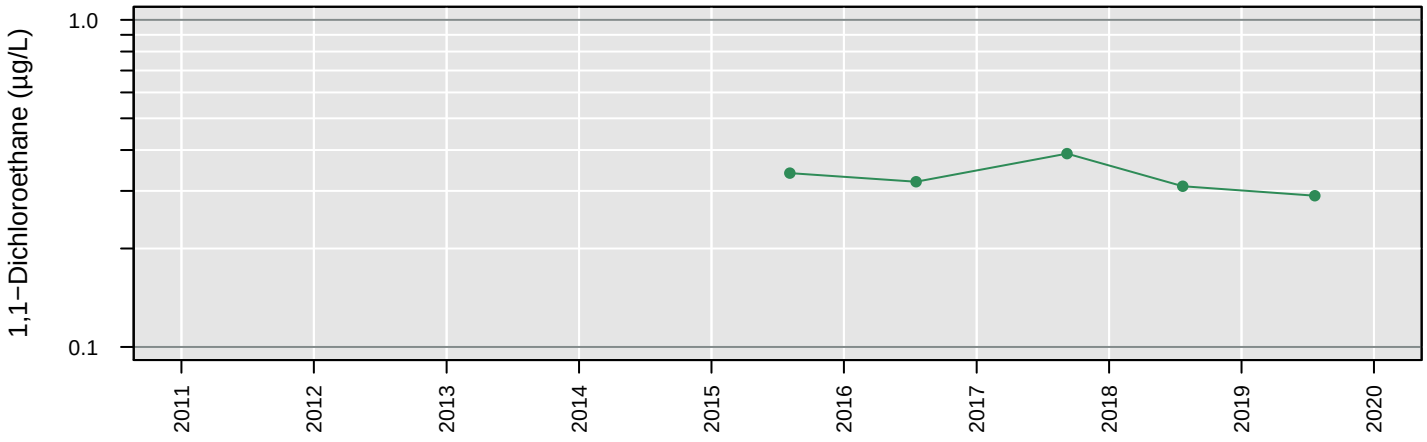
No Analysis Performed

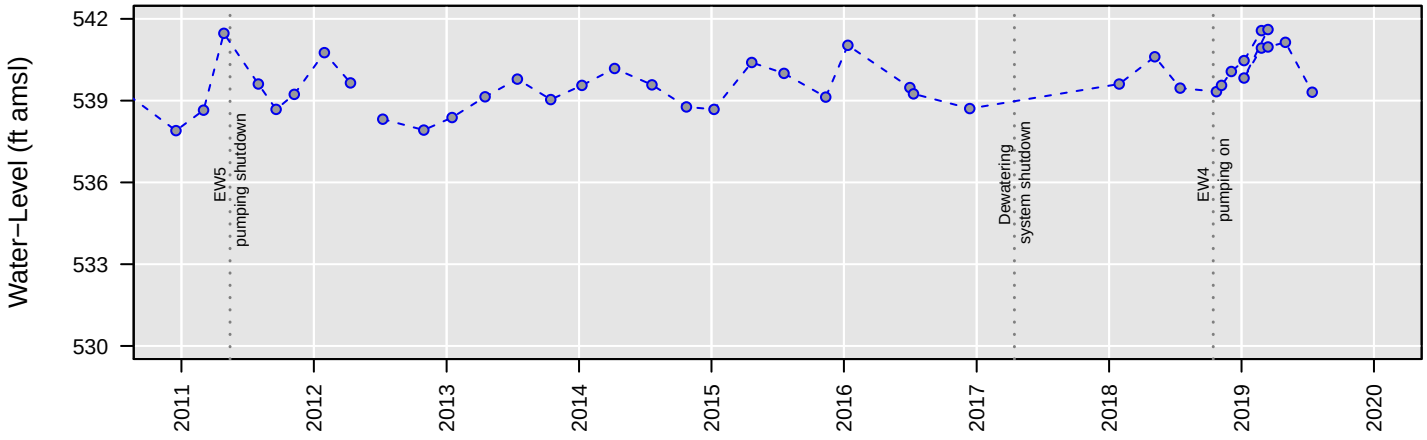
MW84

1,1−Dichloroethane

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





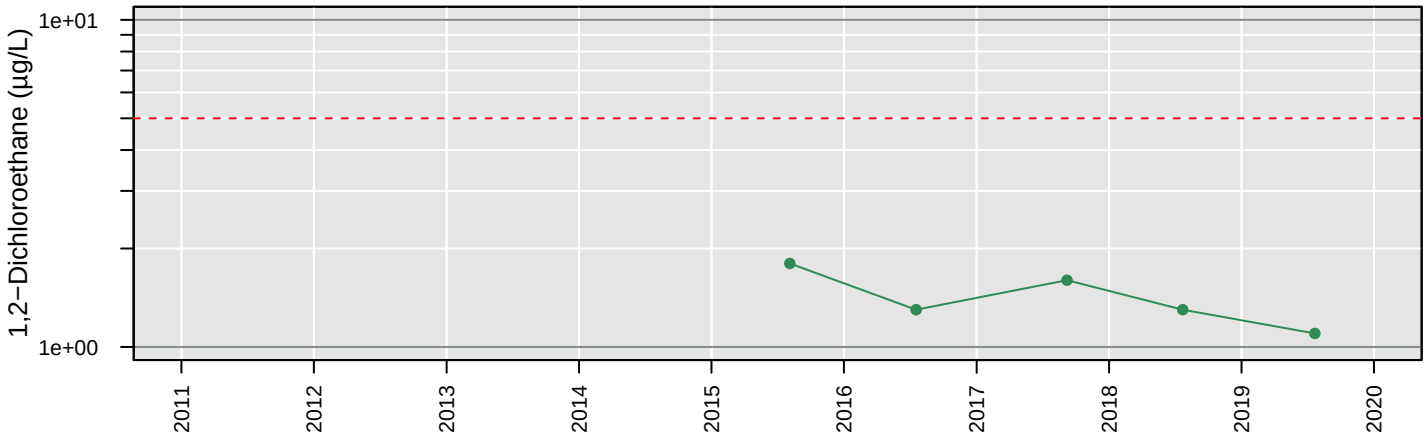
No Analysis Performed

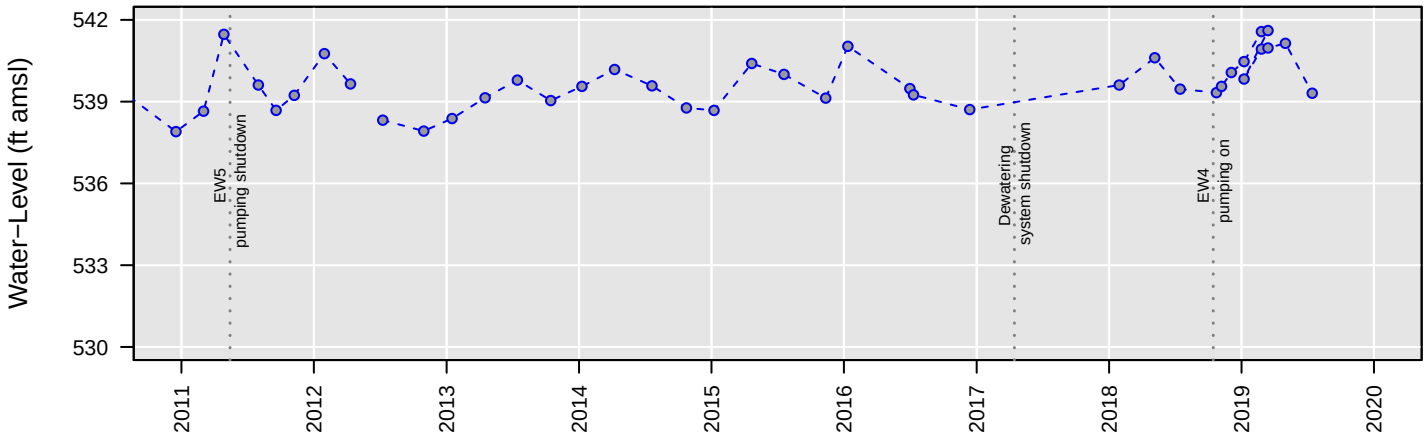
MW84

1,2−Dichloroethane

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





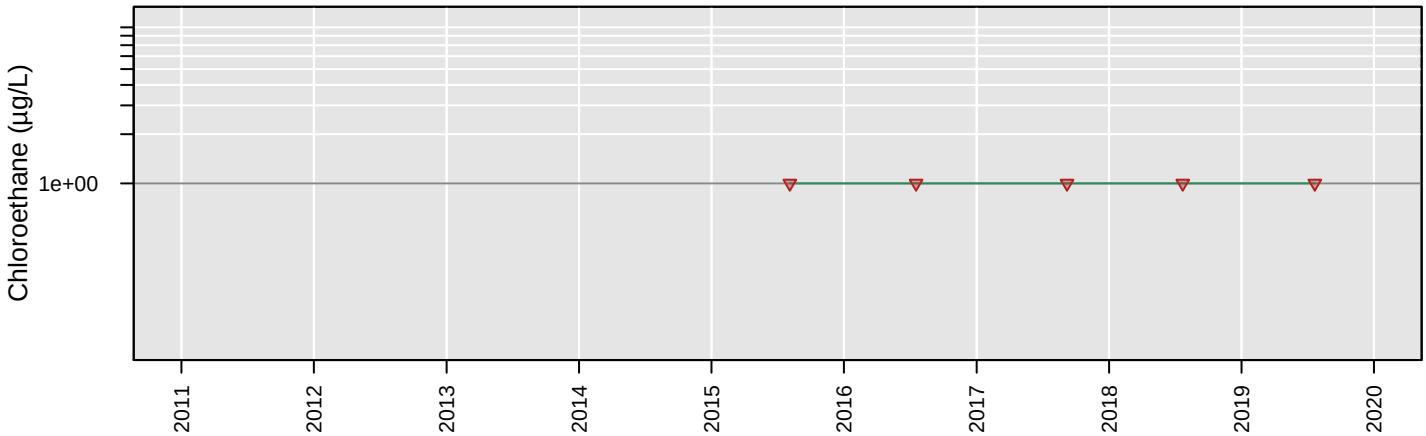
No Analysis Performed

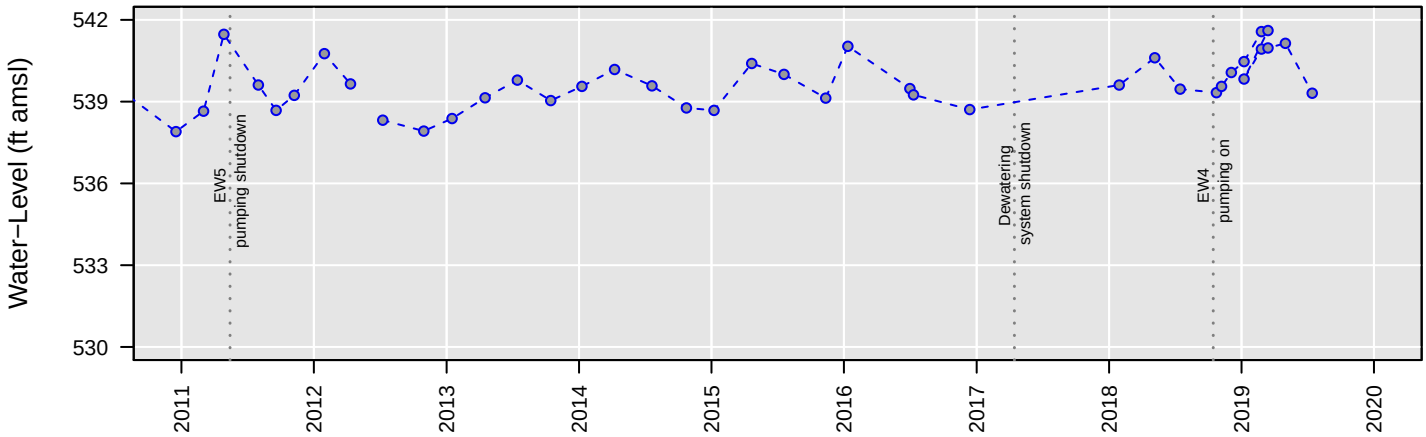
MW84

Chloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





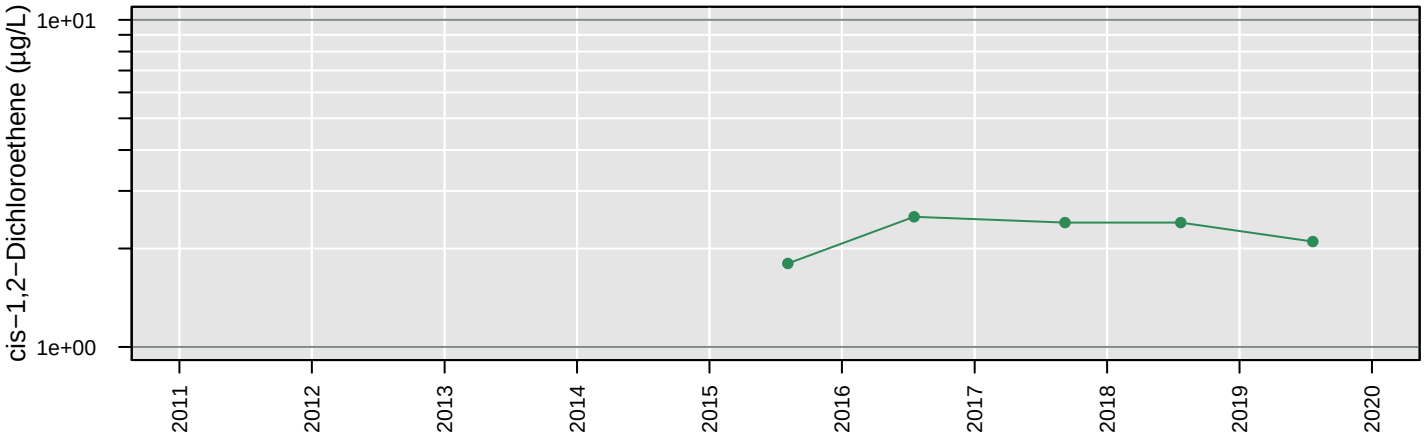
No Analysis Performed

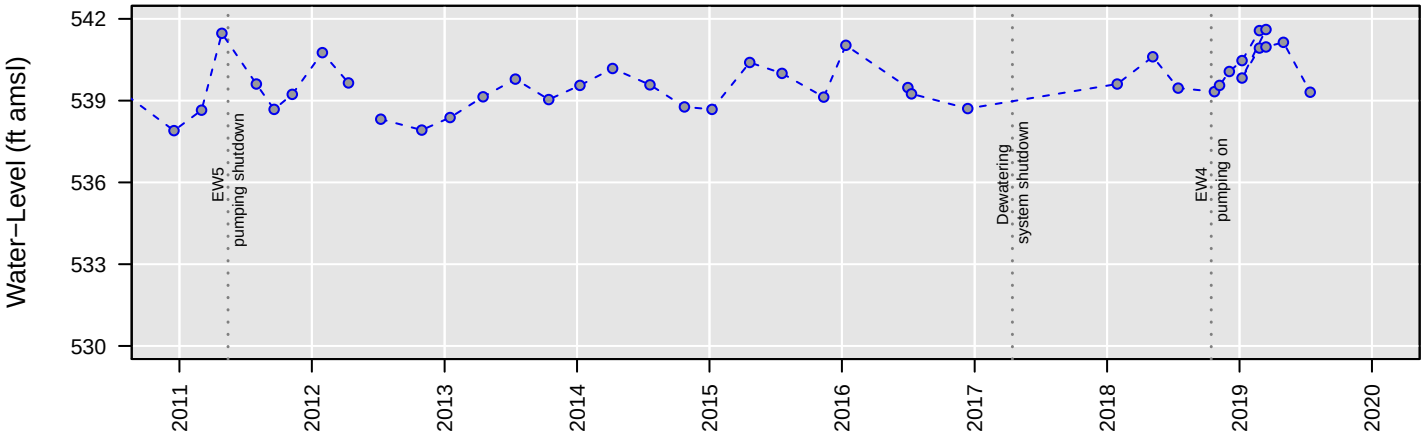
MW84

cis−1,2−Dichloroethene

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





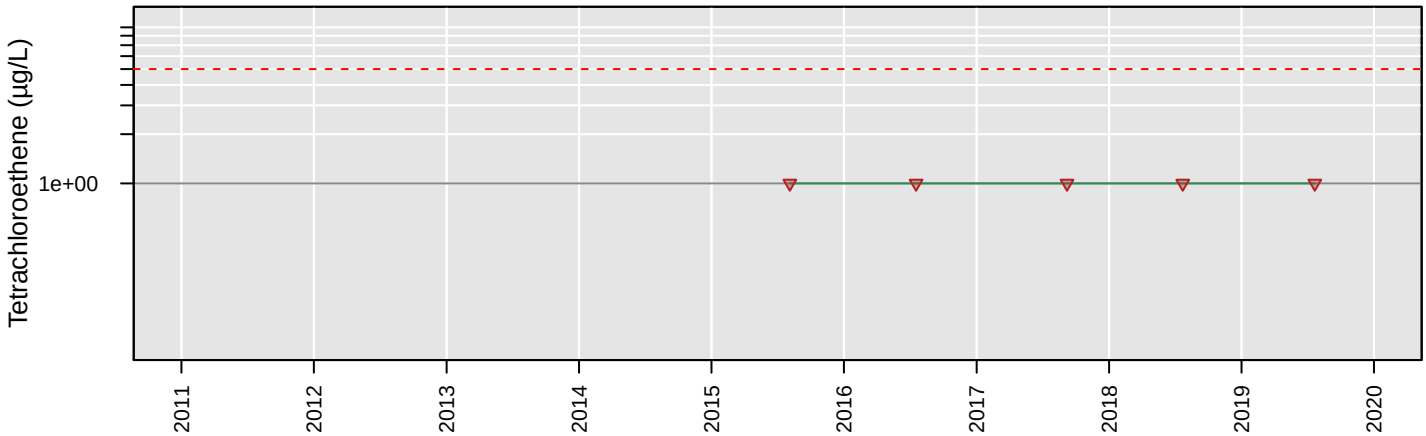
No Analysis Performed

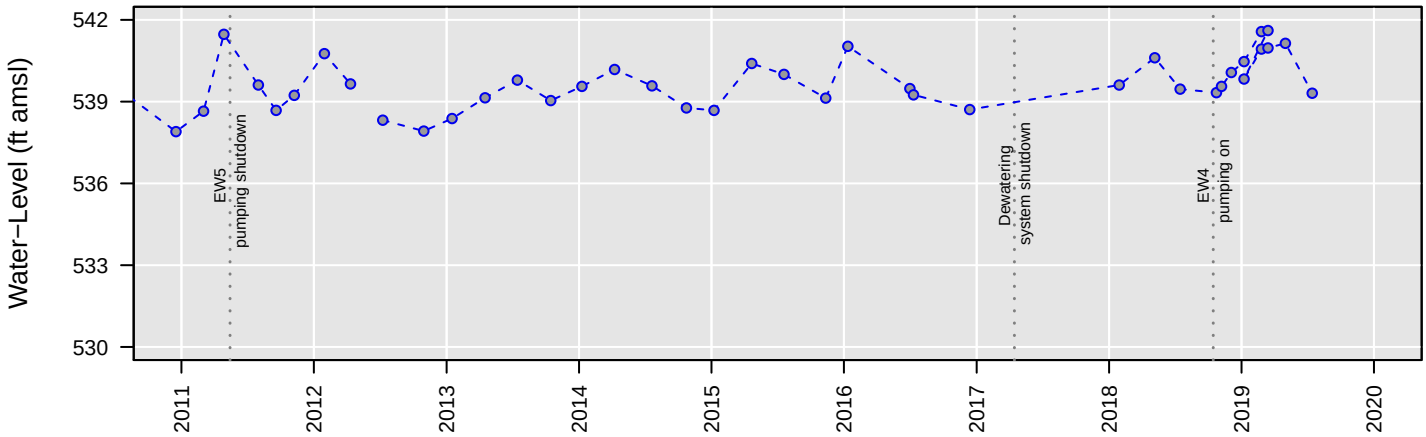
MW84

Tetrachloroethene

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





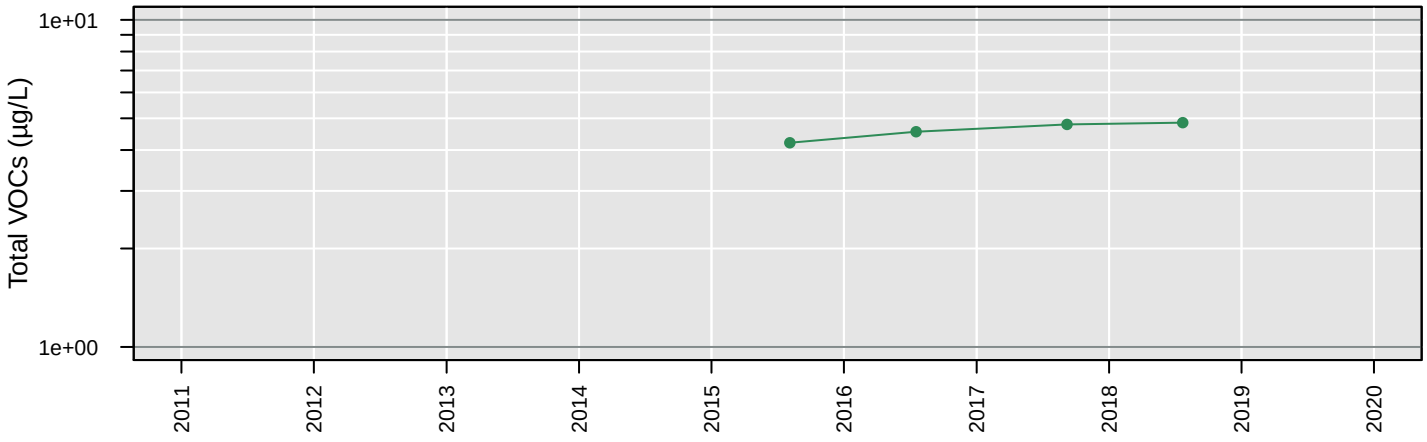
No Analysis Performed

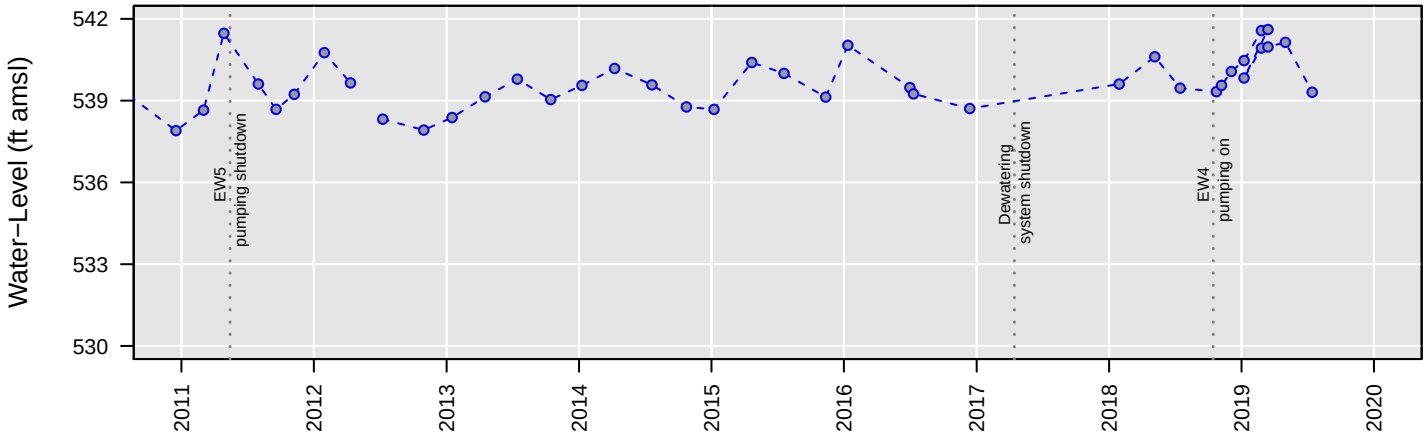
MW84

Total VOCs

Number of Comparisons: 4
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



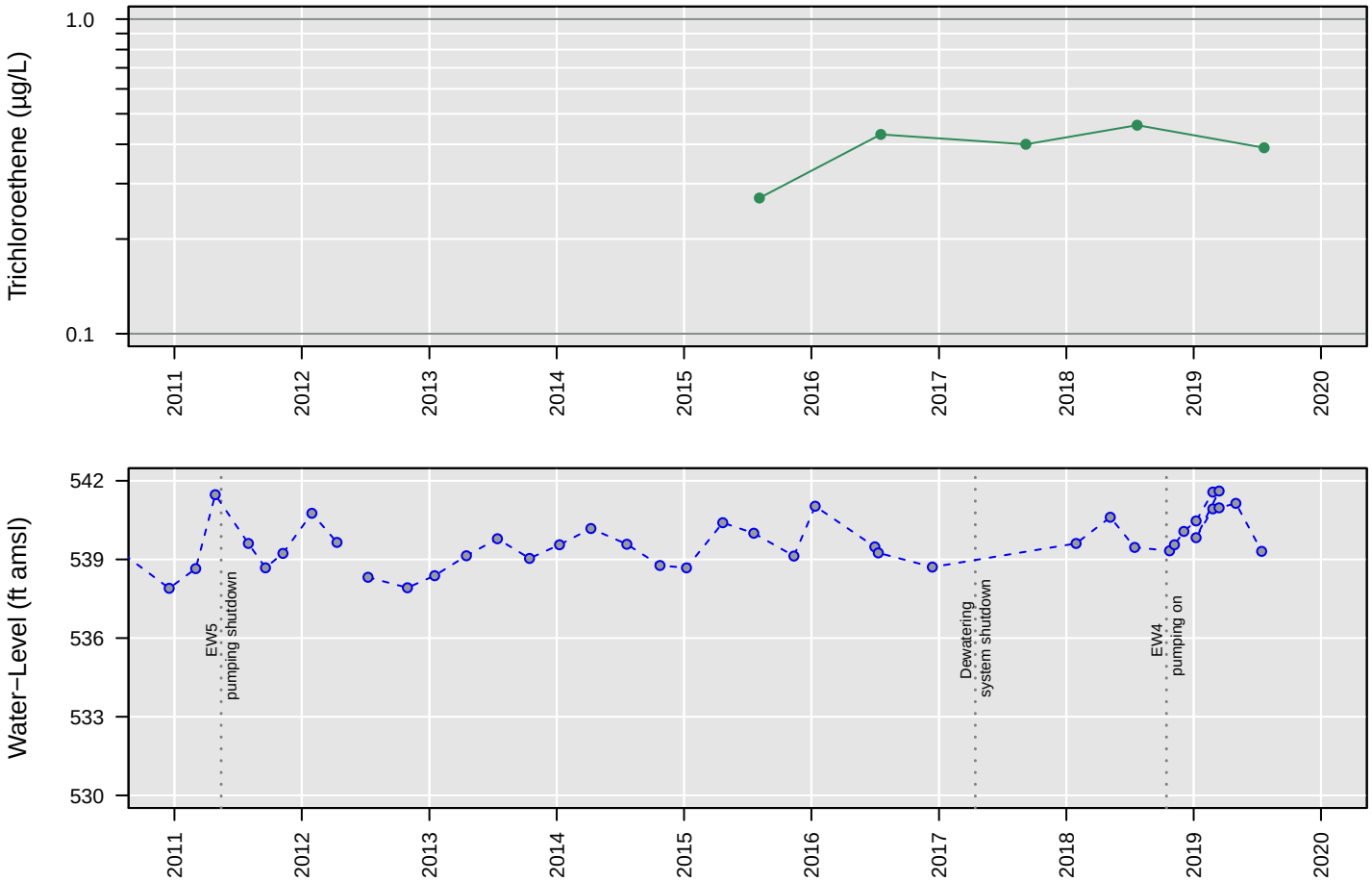


No Analysis Performed

MW84

Trichloroethene

Number of Comparisons: 5
Percent NDs: 0%

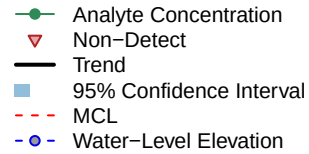


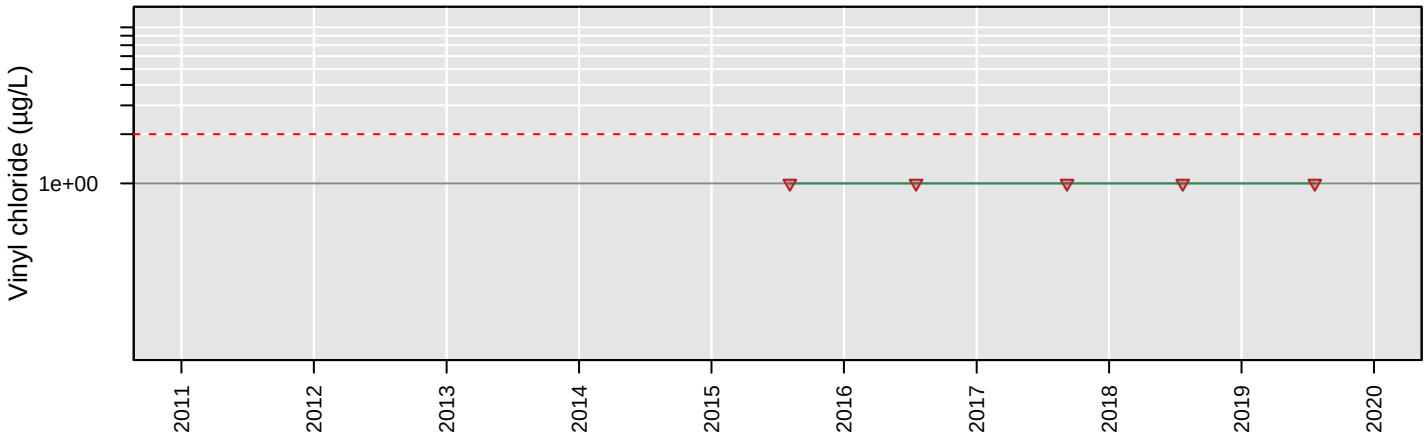
No Analysis Performed

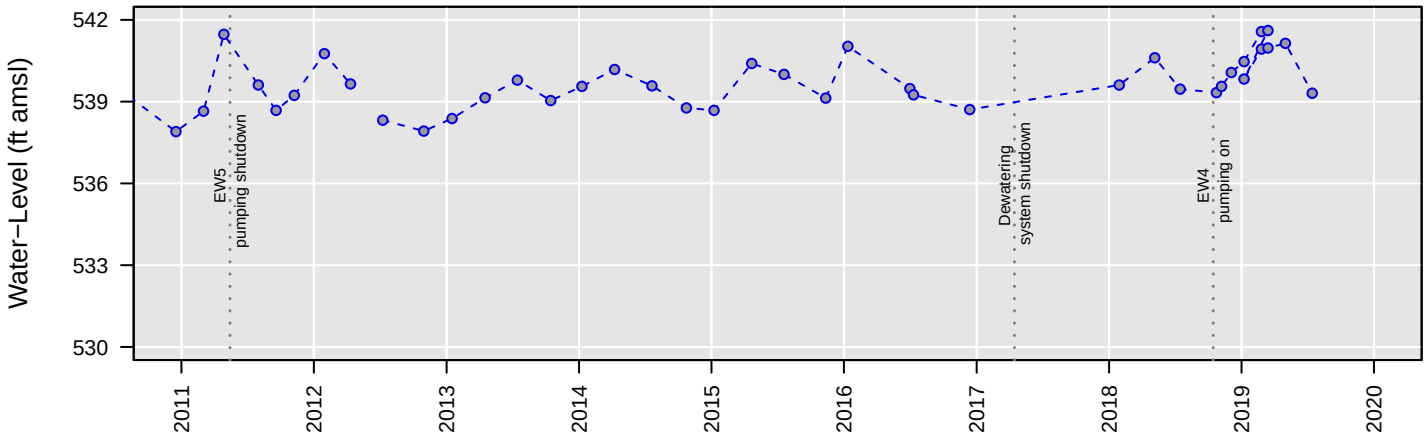
MW84

Vinyl chloride

Number of Comparisons: 5
Percent NDs: 100%







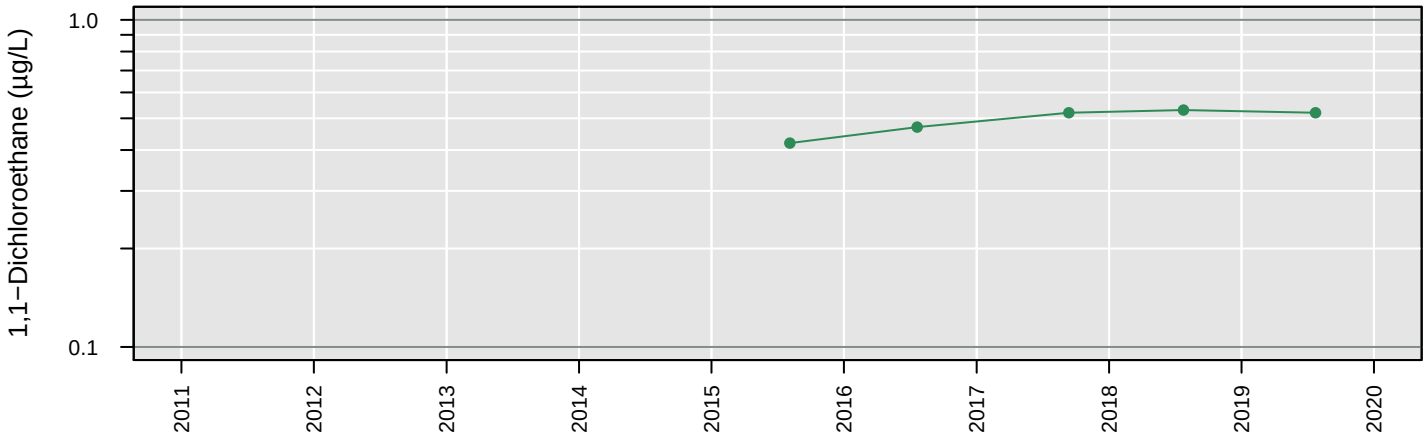
No Analysis Performed

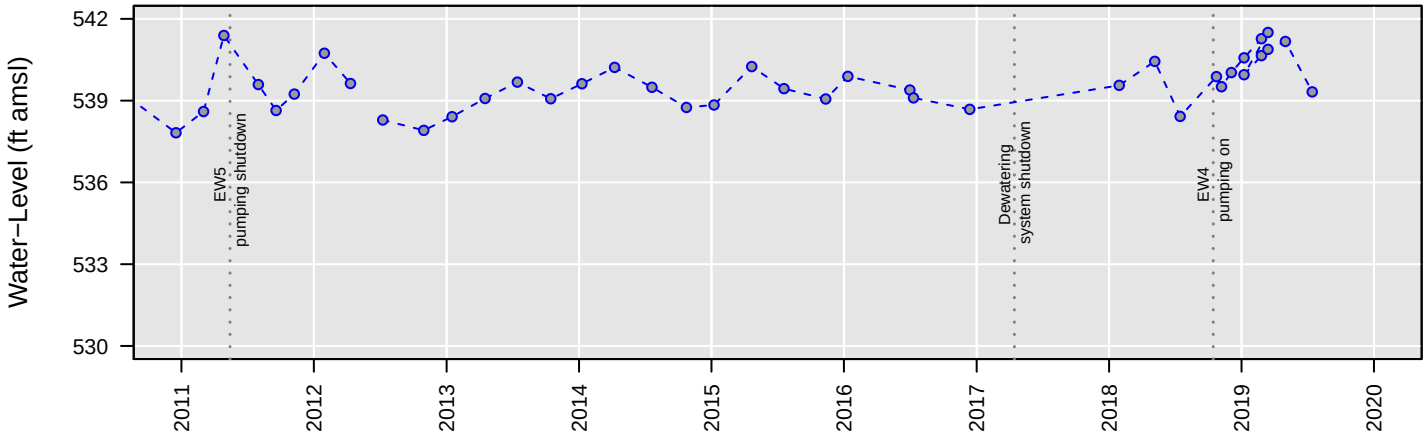
MW85

1,1−Dichloroethane

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





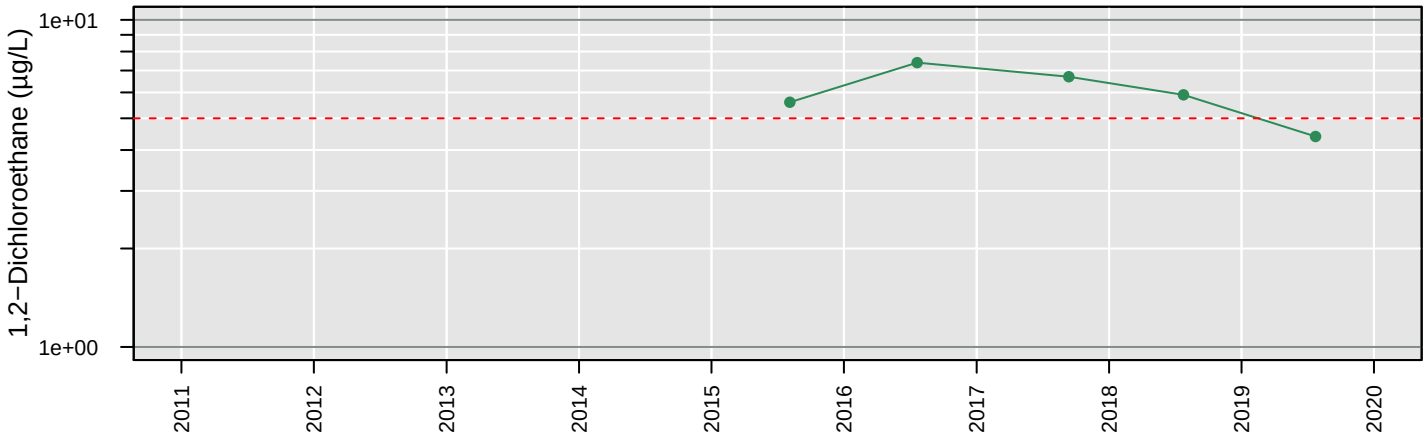
No Analysis Performed

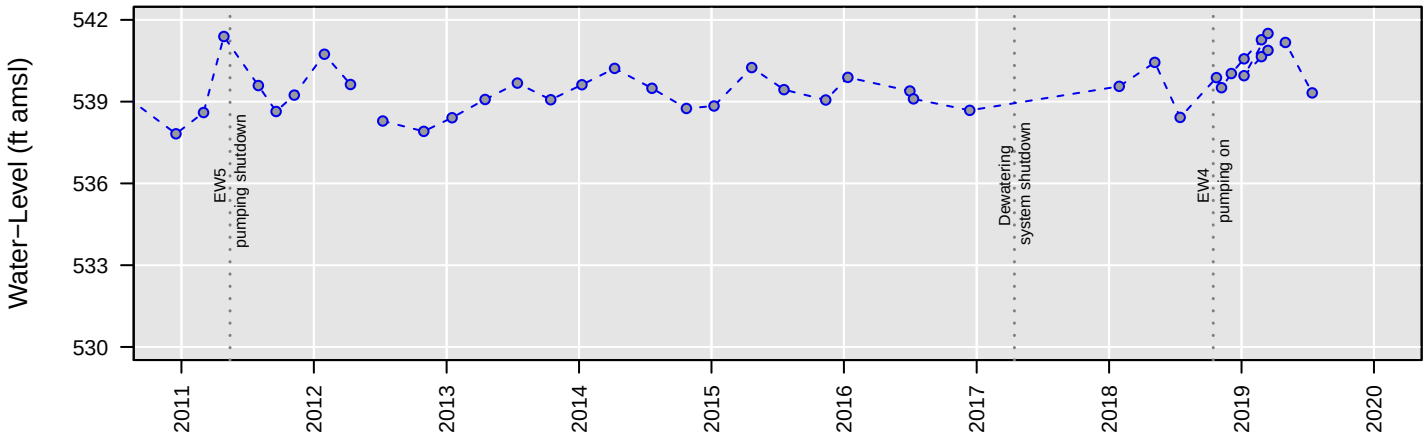
MW85

1,2−Dichloroethane

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





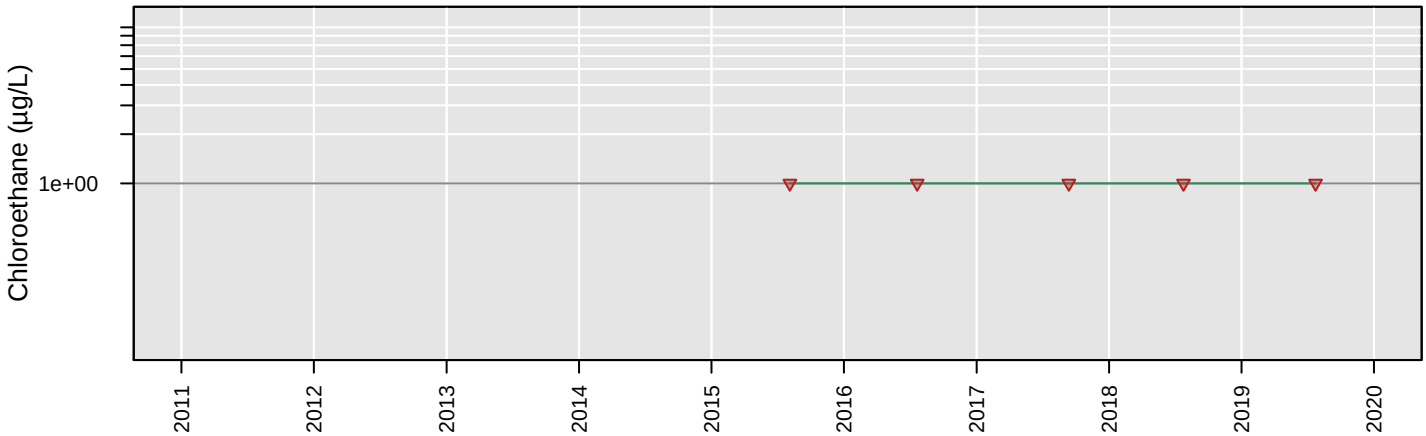
No Analysis Performed

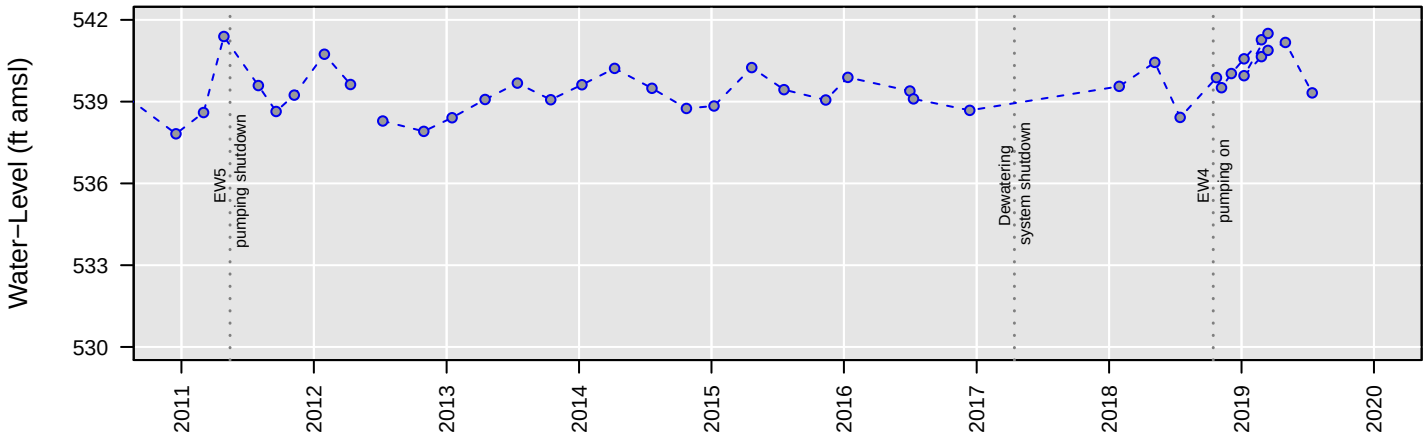
MW85

Chloroethane

Number of Comparisons: 5
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





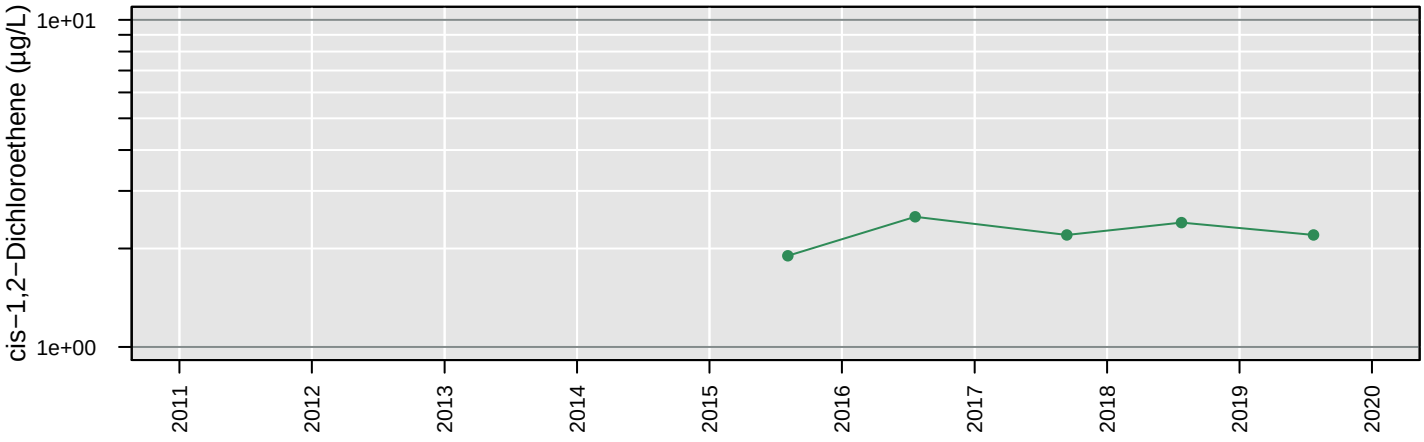
No Analysis Performed

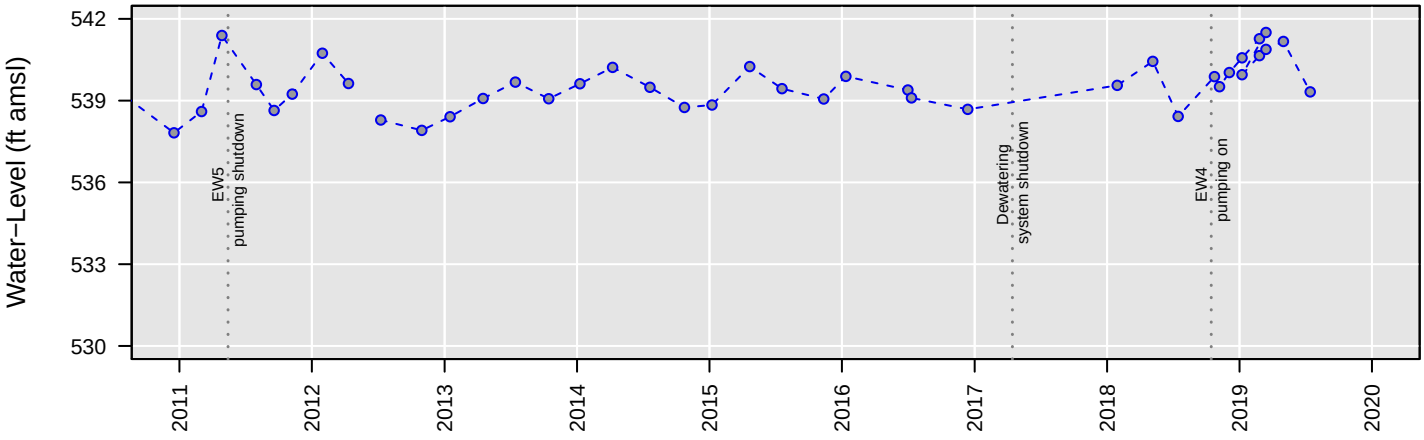
MW85

cis−1,2−Dichloroethene

Number of Comparisons: 5
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



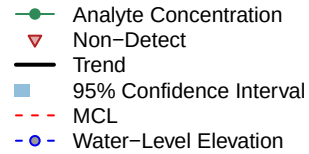


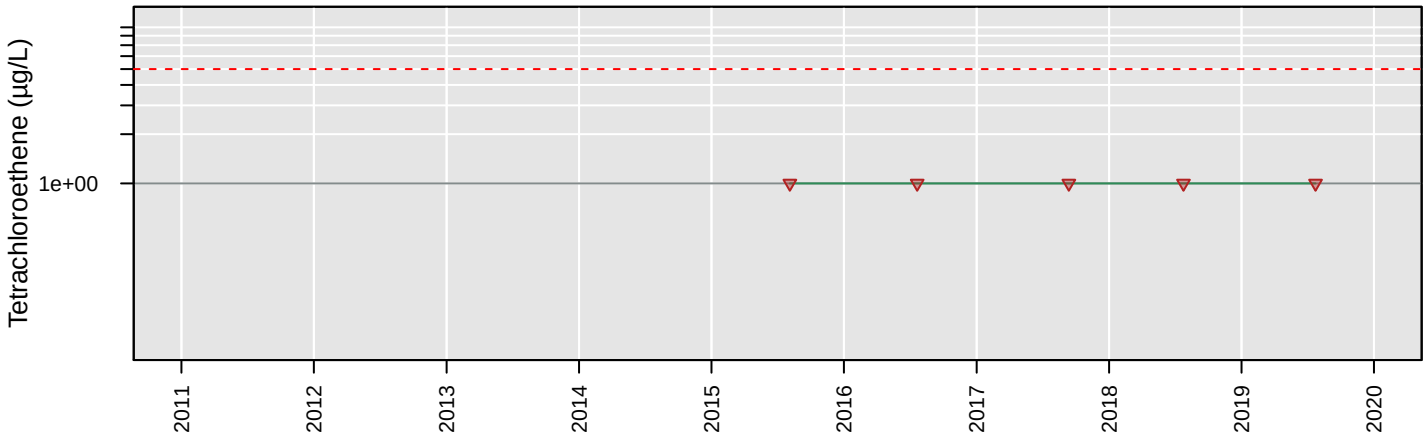
No Analysis Performed

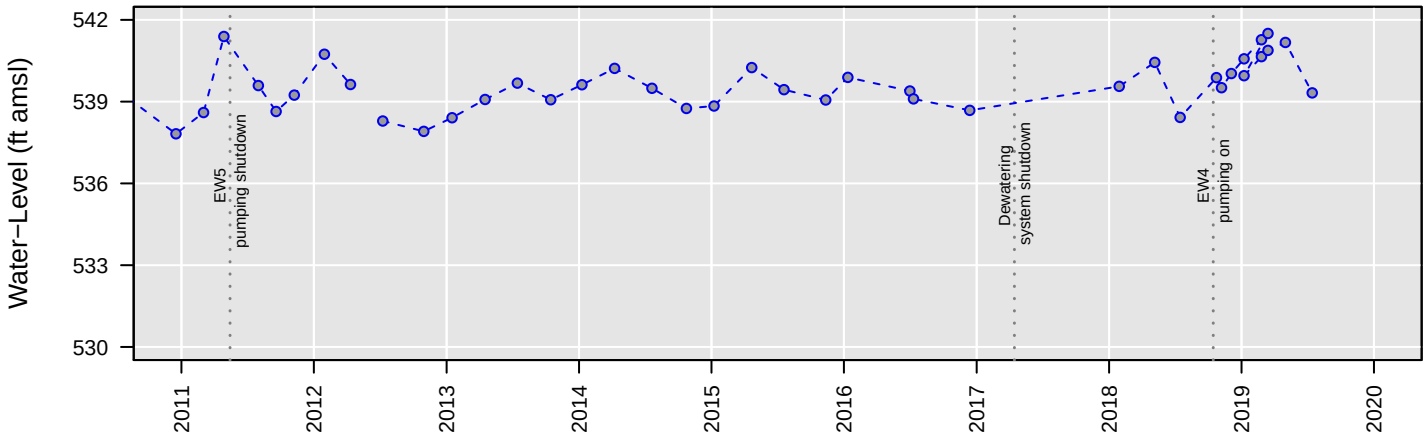
MW85

Tetrachloroethene

Number of Comparisons: 5
Percent NDs: 100%







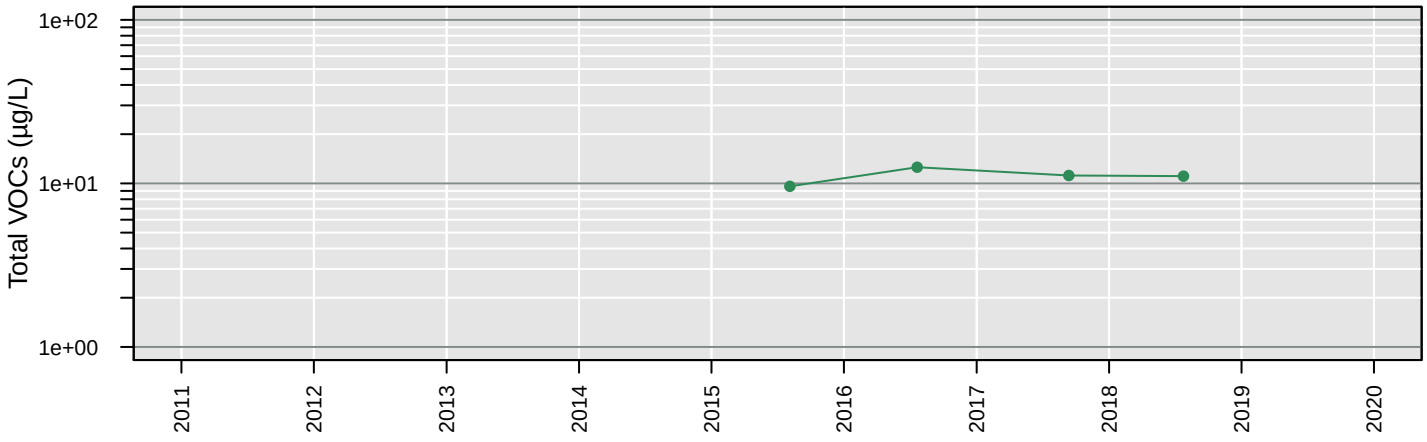
No Analysis Performed

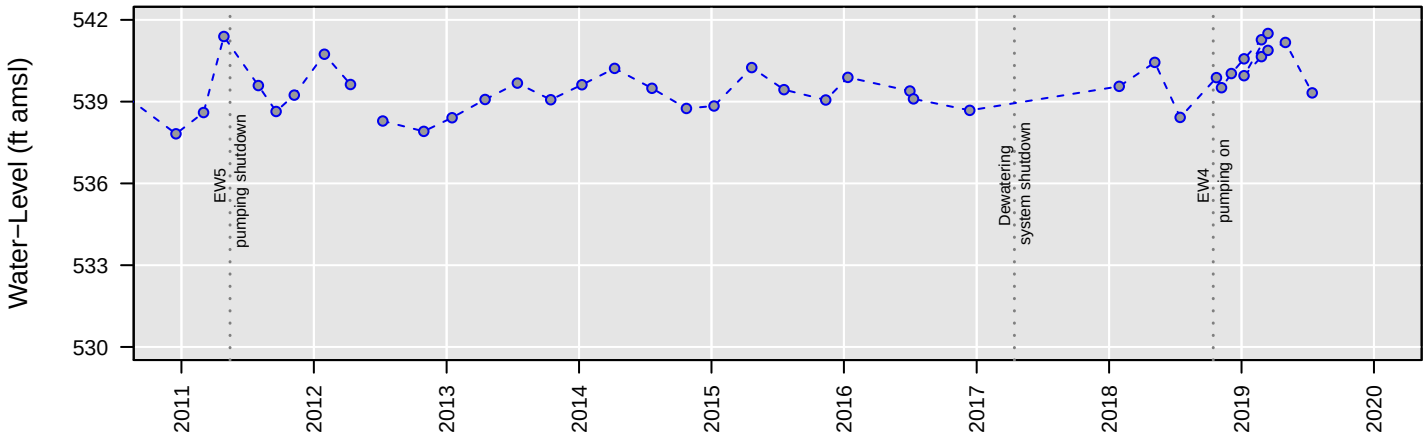
MW85

Total VOCs

Number of Comparisons: 4
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



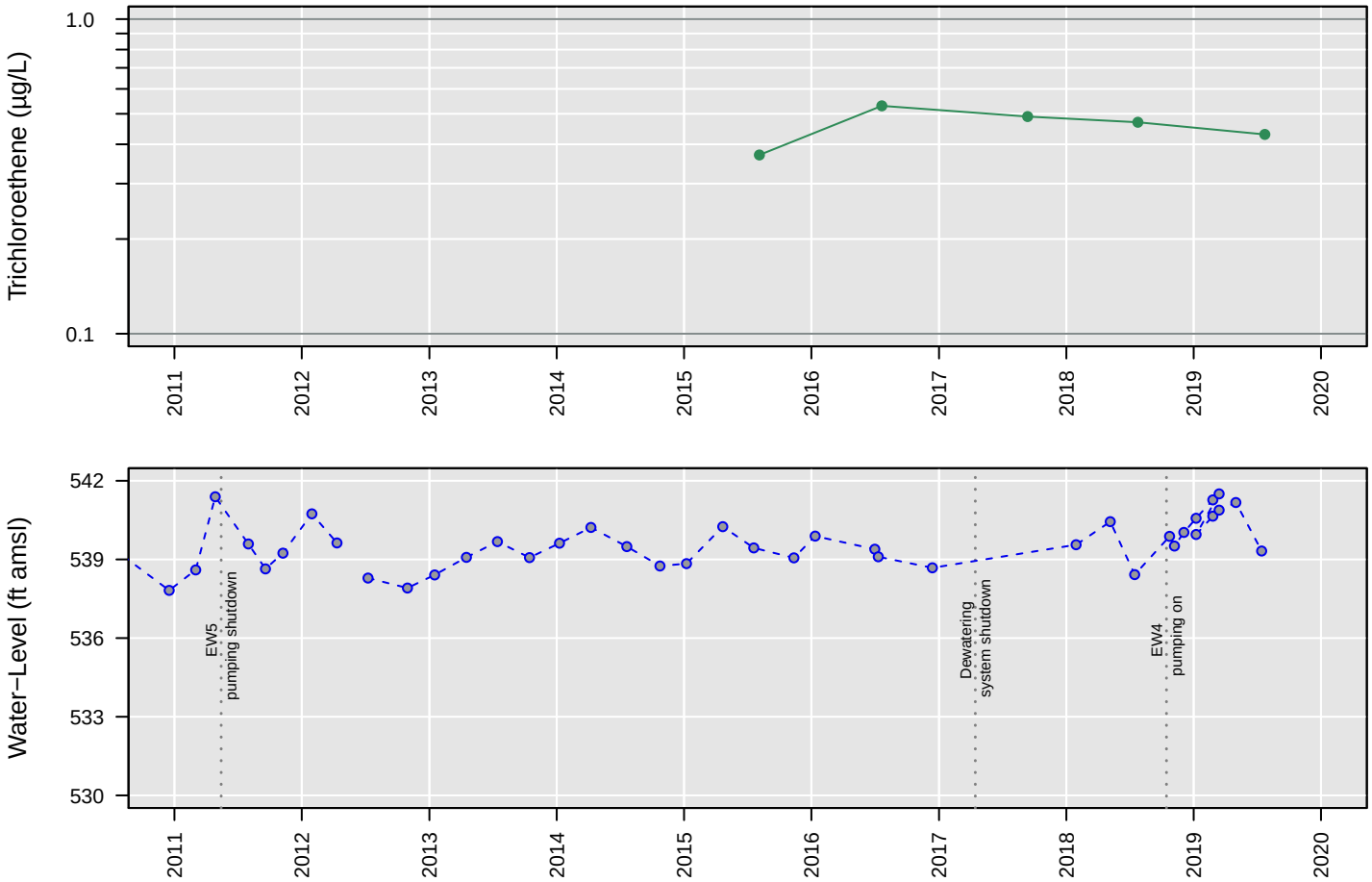


No Analysis Performed

MW85

Trichloroethene

Number of Comparisons: 5
Percent NDs: 0%

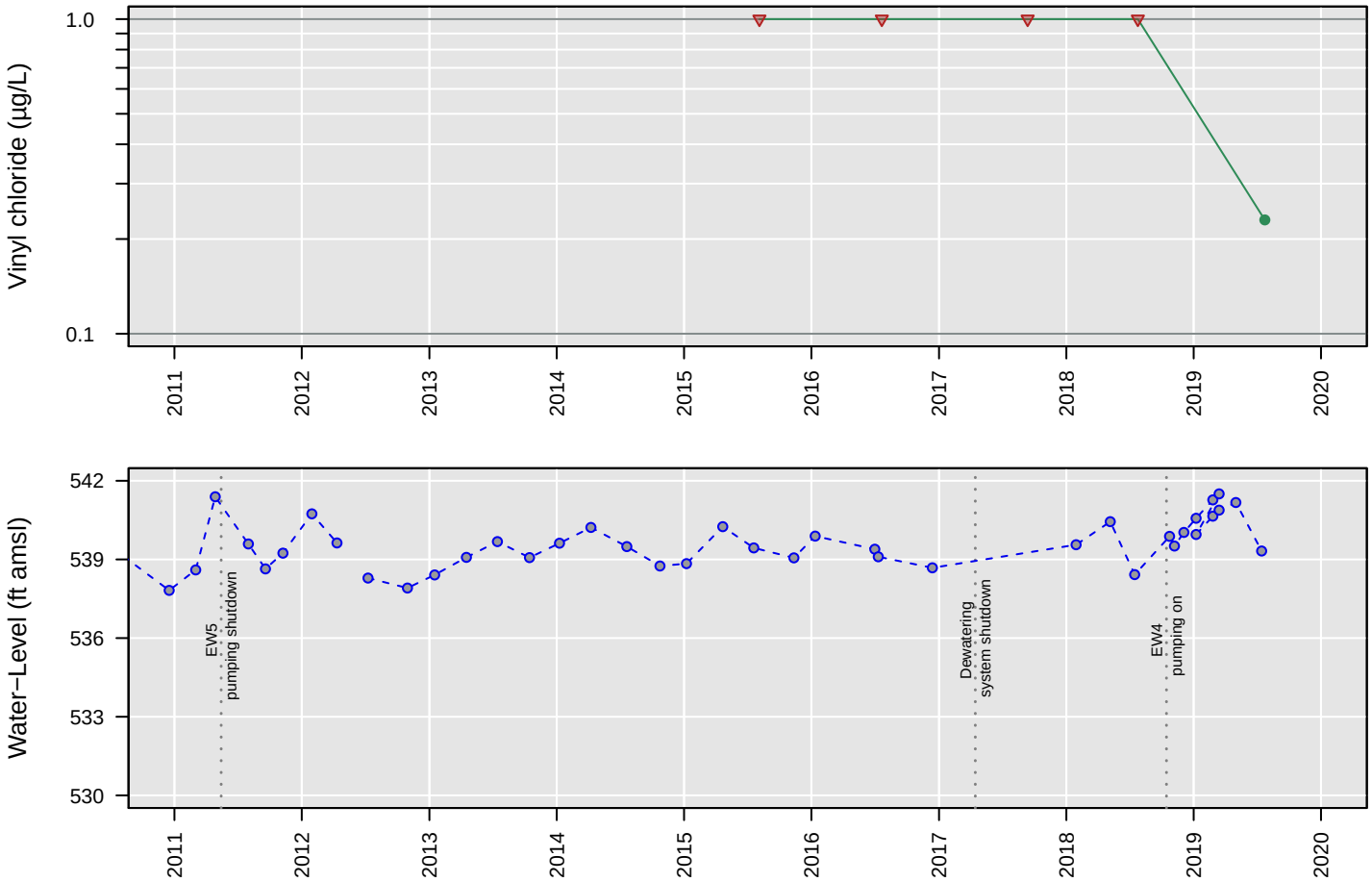


No Analysis Performed

MW85

Vinyl chloride

Number of Comparisons: 5
Percent NDs: 80%

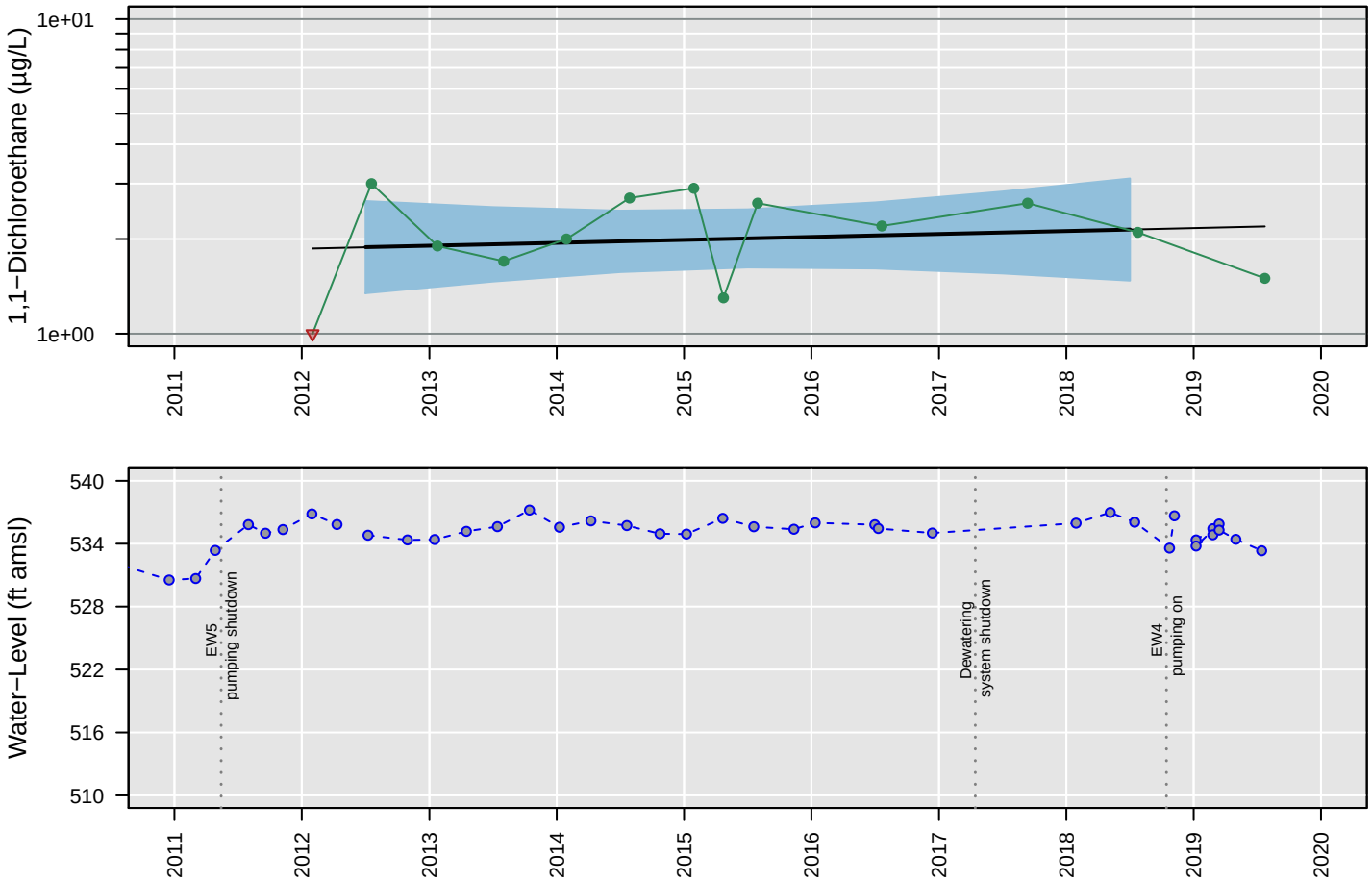


No Analysis Performed

MW86

1,1−Dichloroethane

Number of Comparisons: 13
Percent NDs: 8%



Censored Regression (Tobit) Model

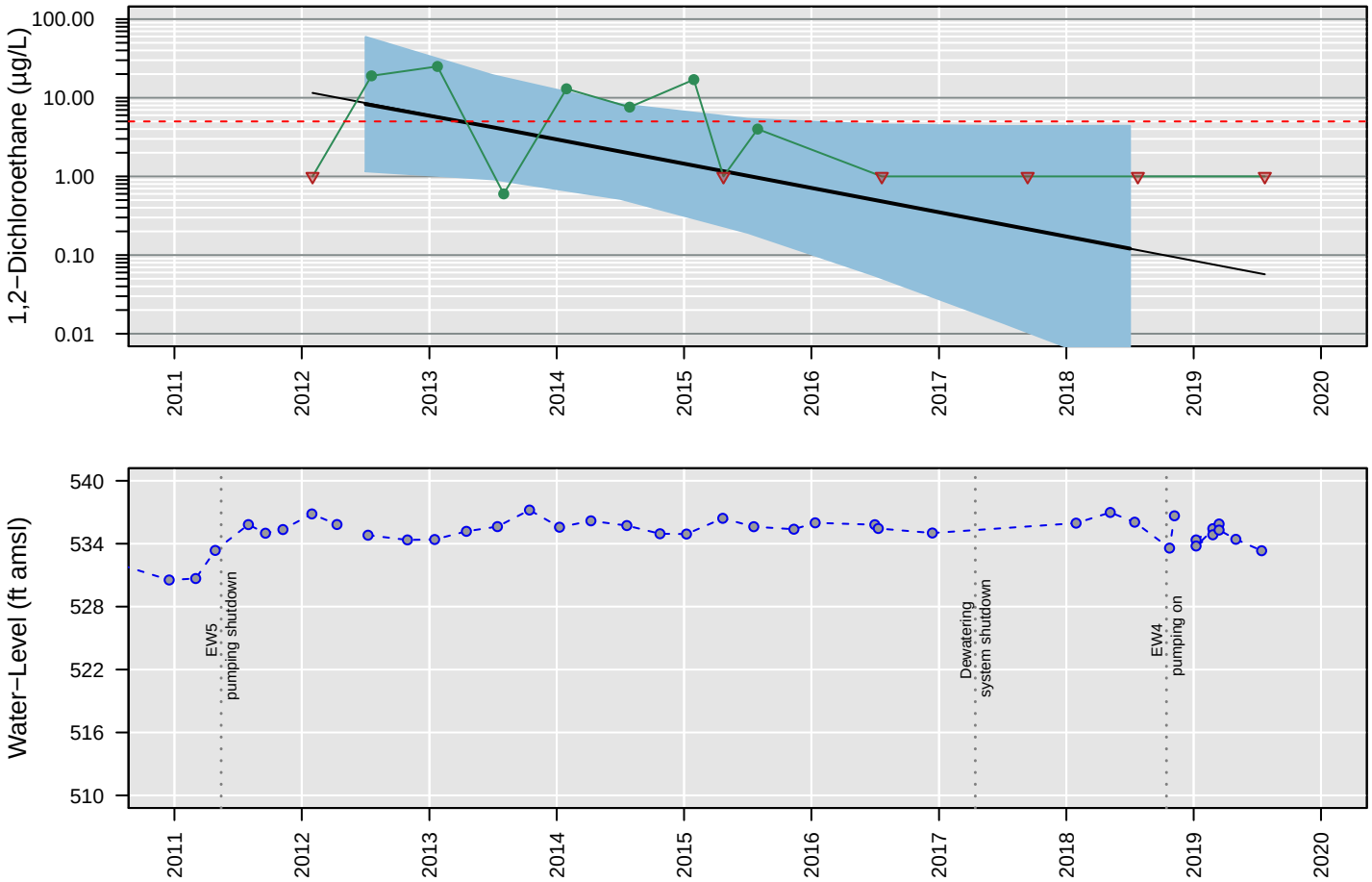
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.1 µg/L
UCL: 3.1 µg/L
LCL: 1.5 µg/L

MW86

1,2−Dichloroethane

Number of Comparisons: 13
Percent NDs: 46%



Censored Regression (Tobit) Model

ln Conc. = −0.0019 (+/− 0.00097)*Date + 32 (+/− 16)

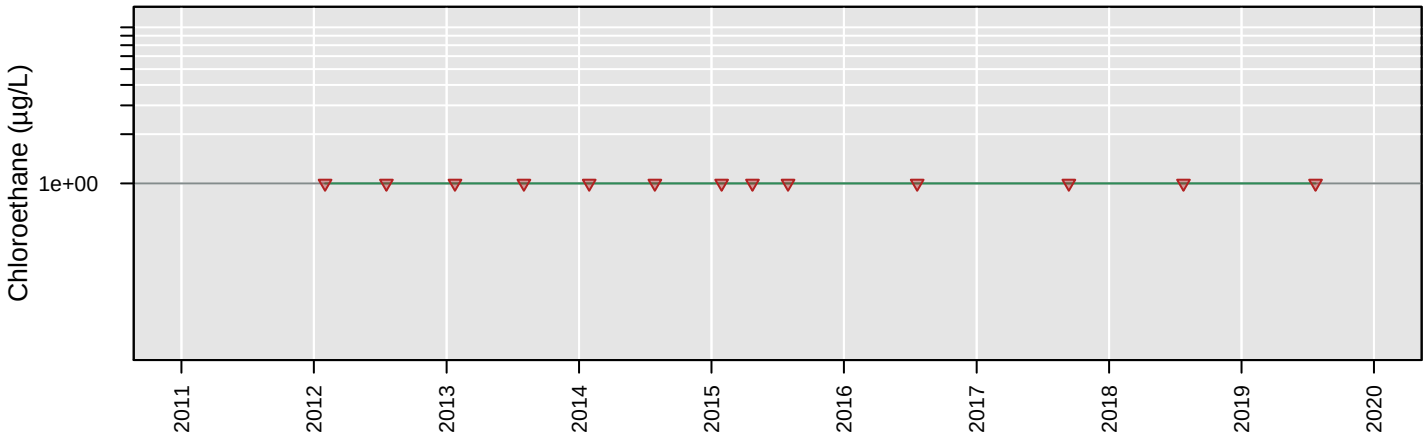
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.12 µg/L
UCL: 4.4 µg/L
LCL: 0.0033 µg/L

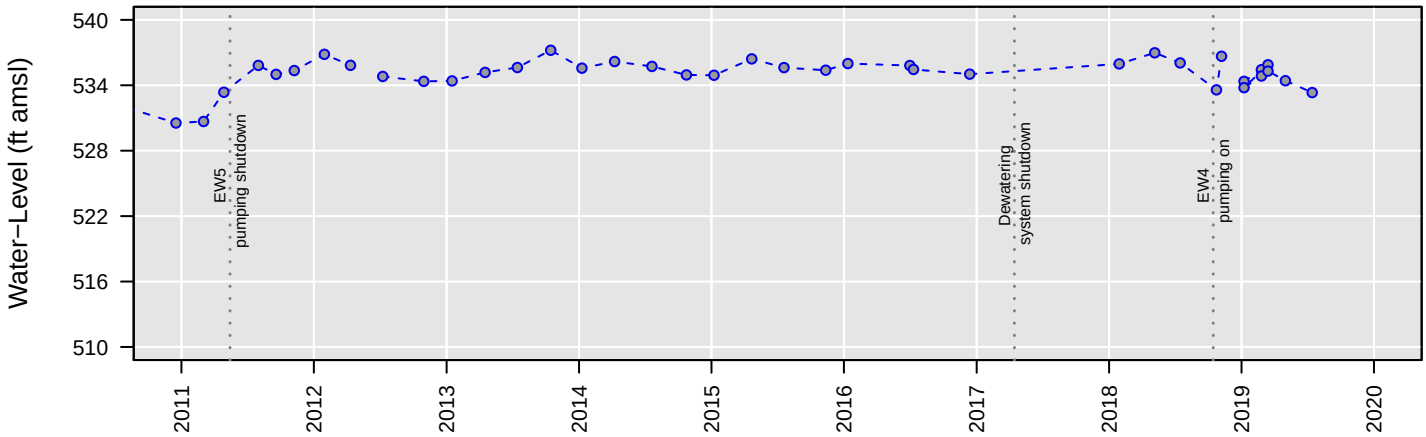
MW86

Chloroethane

Number of Comparisons: 13
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



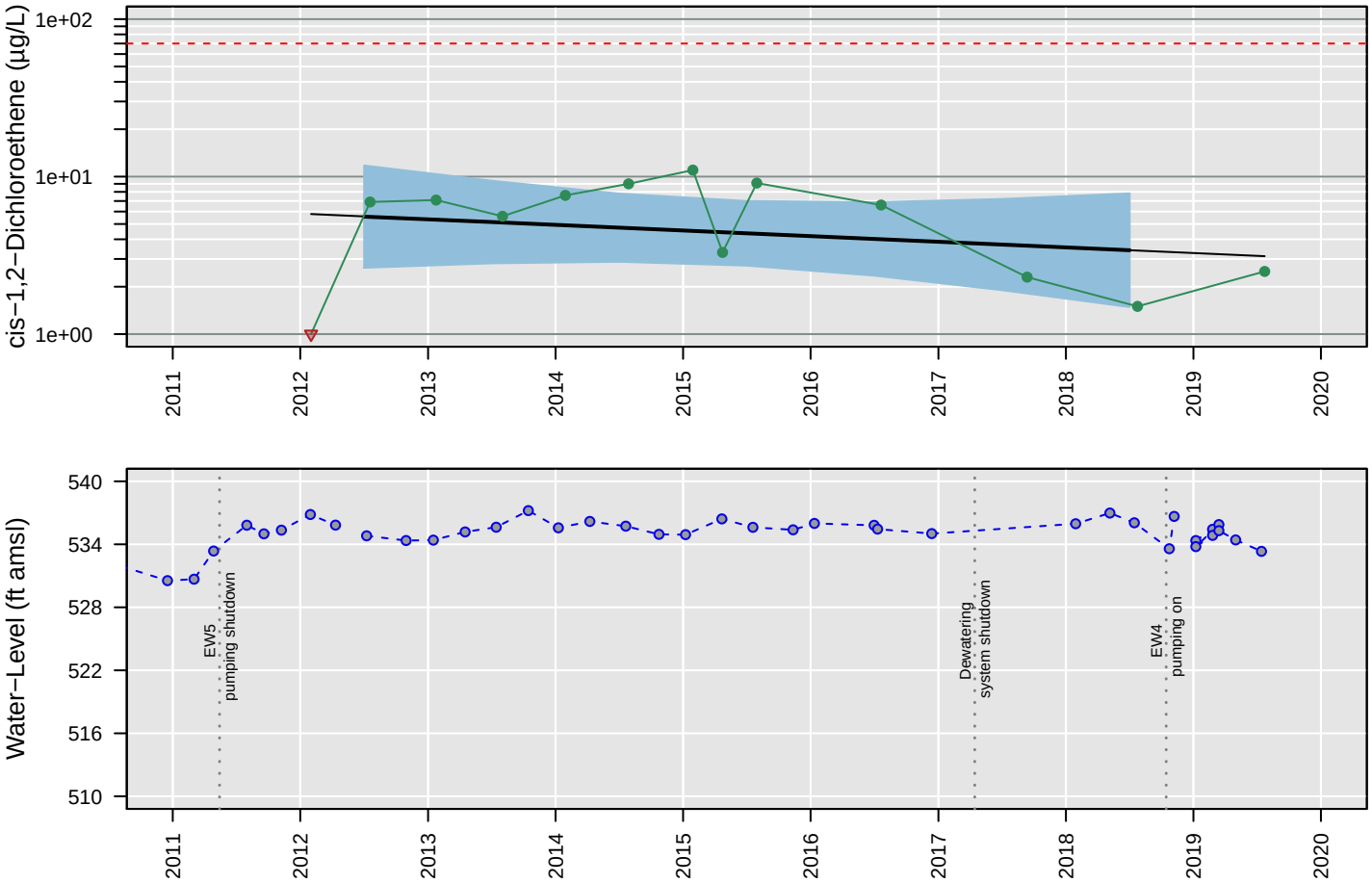


No Analysis Performed

MW86

cis−1,2−Dichloroethene

Number of Comparisons: 13
Percent NDs: 8%



Censored Regression (Tobit) Model

Trend Not Significant

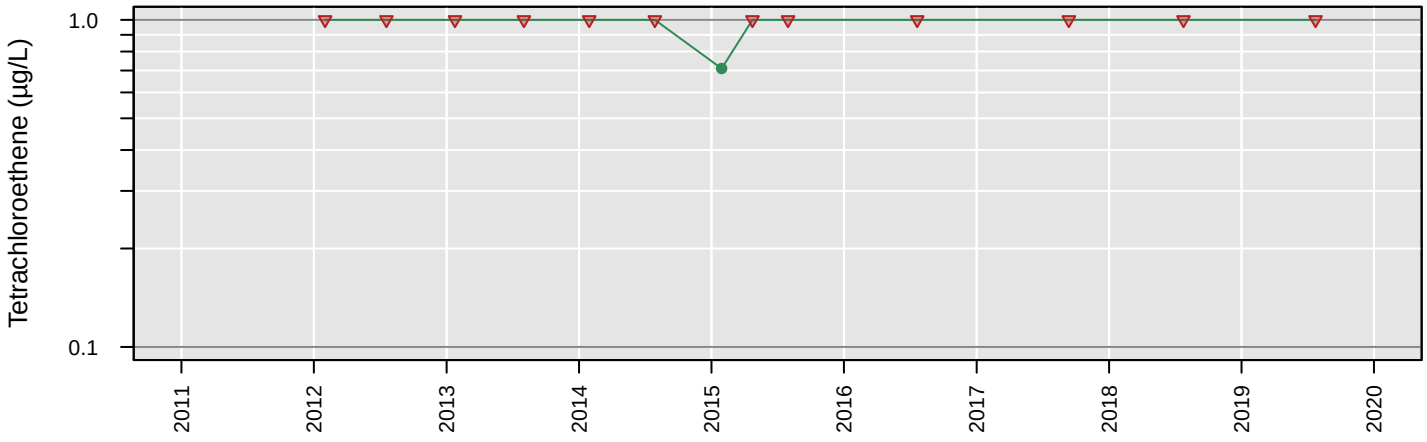
Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.4 µg/L
UCL: 7.8 µg/L
LCL: 1.5 µg/L

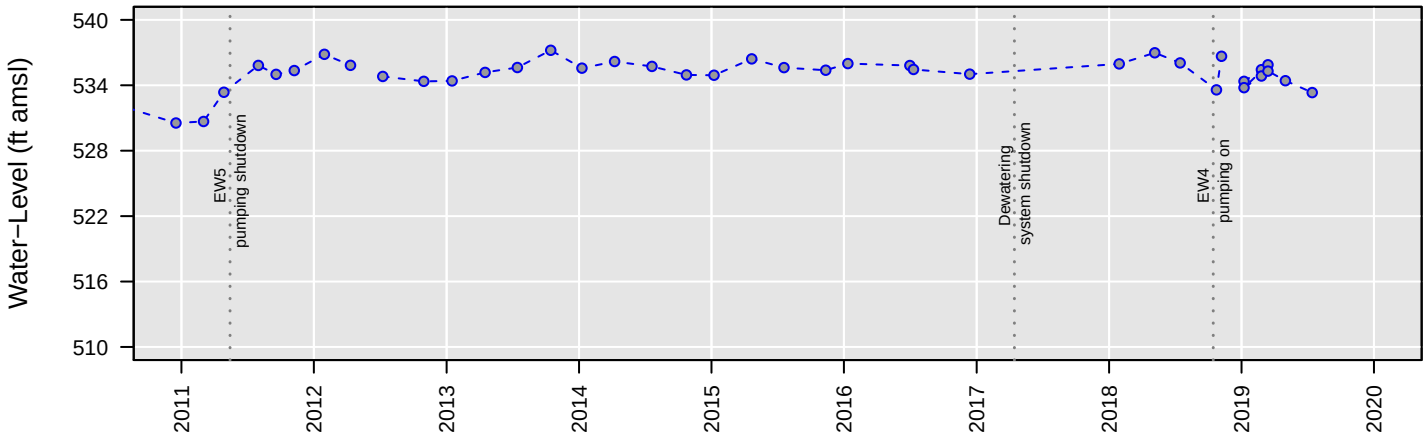
MW86

Tetrachloroethene

Number of Comparisons: 13
Percent NDs: 92%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



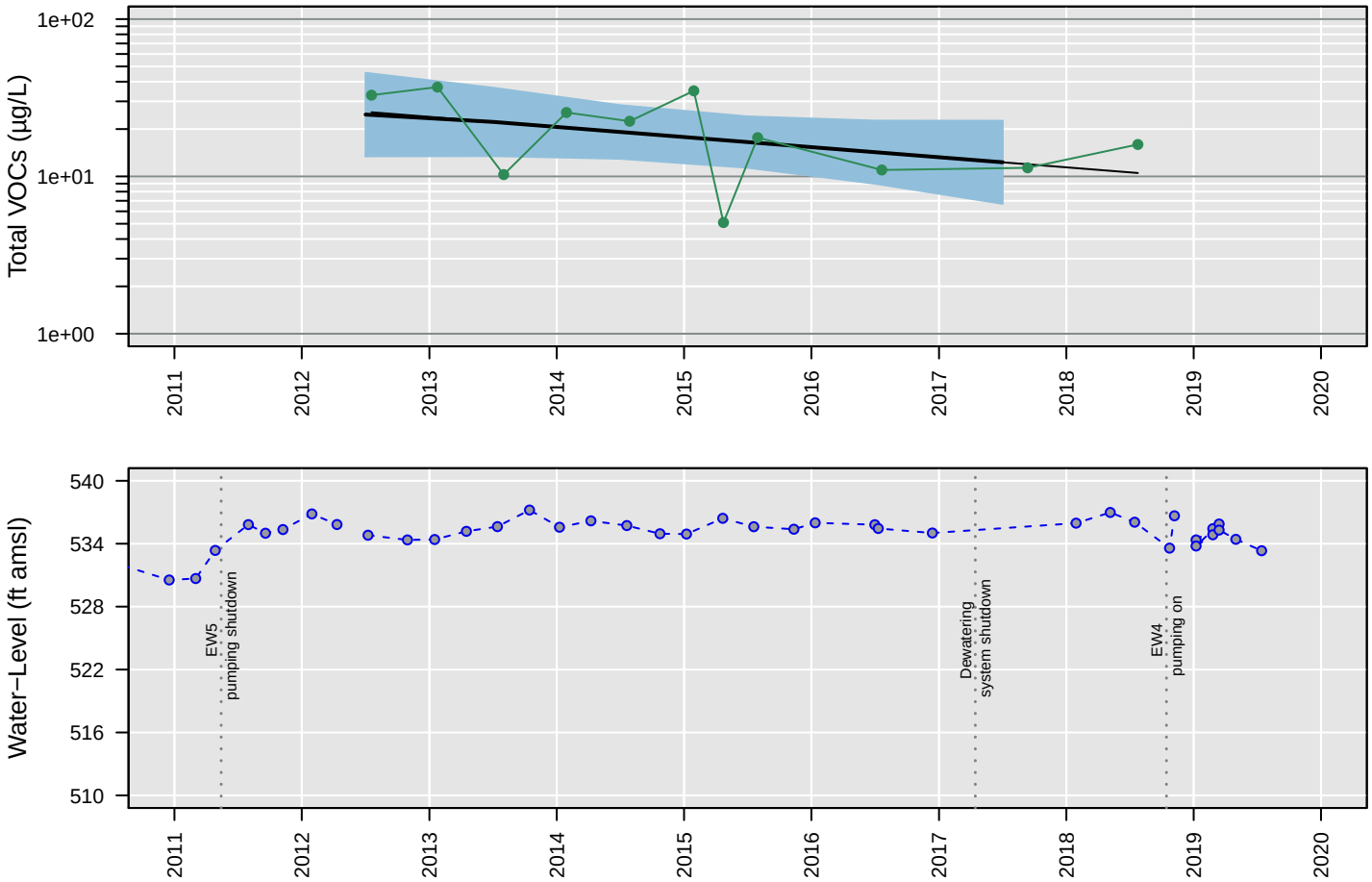


No Analysis Performed

MW86

Total VOCs

Number of Comparisons: 11
Percent NDs: 0%



Censored Regression (Tobit) Model

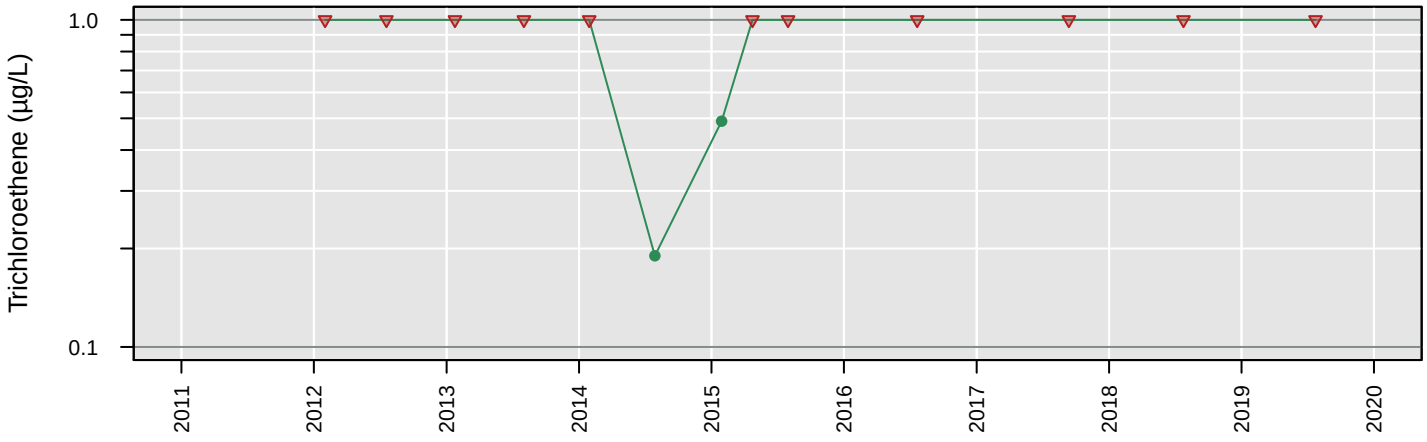
Trend Not Significant

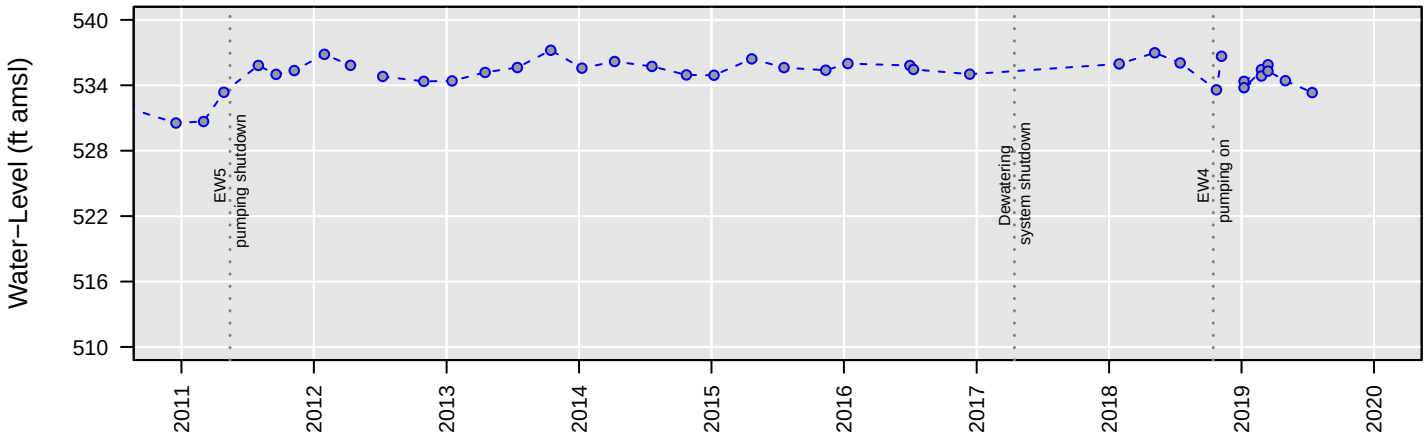
Regression Statistics for January 2017 to January 2018
Geometric Mean: 12 µg/L
UCL: 23 µg/L
LCL: 6.7 µg/L

MW86

Trichloroethene

Number of Comparisons: 13
Percent NDs: 85%





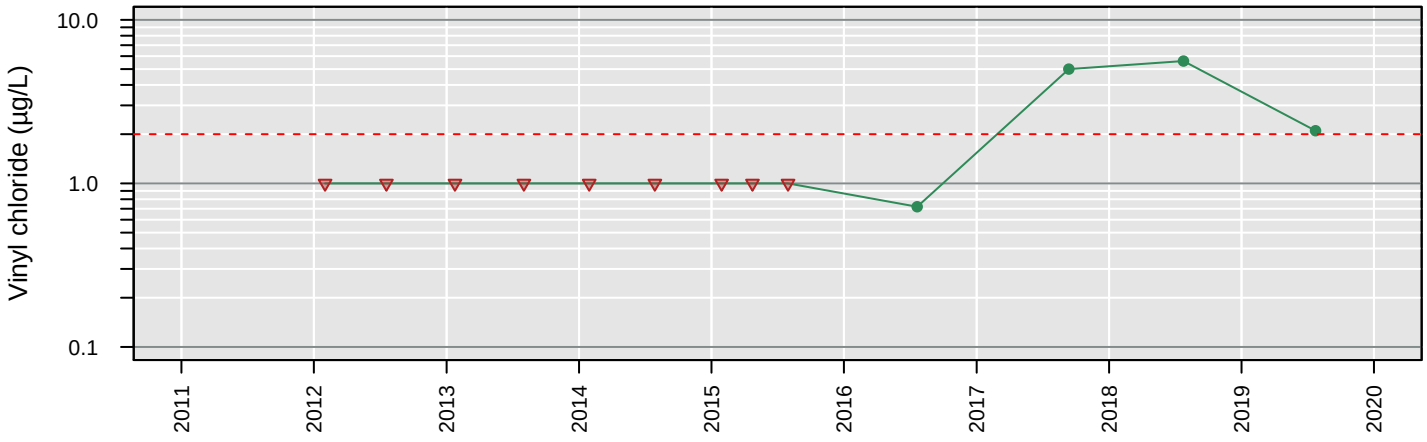
No Analysis Performed

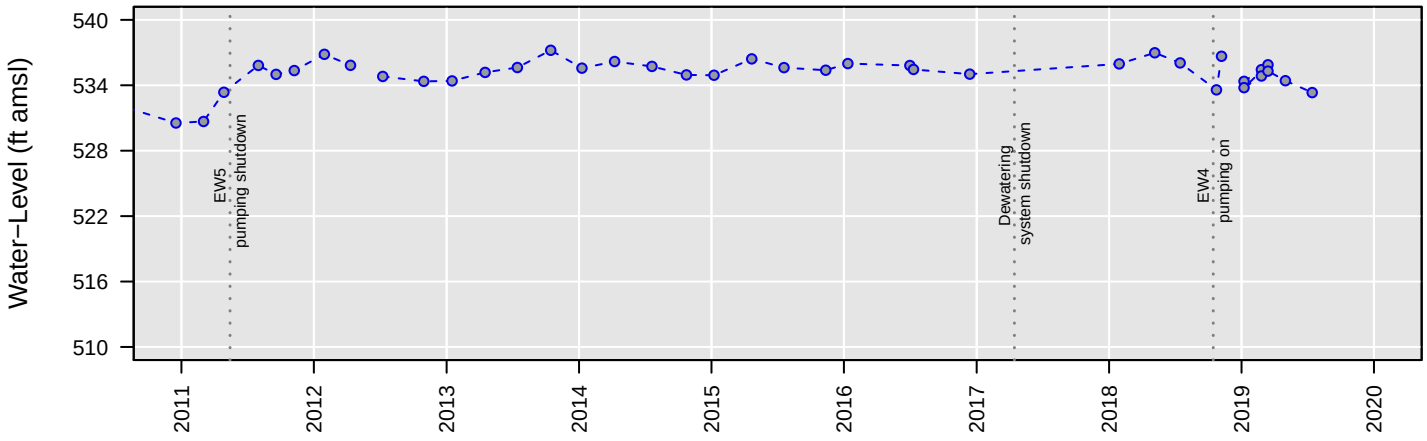
MW86

Vinyl chloride

Number of Comparisons: 13
Percent NDs: 69%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





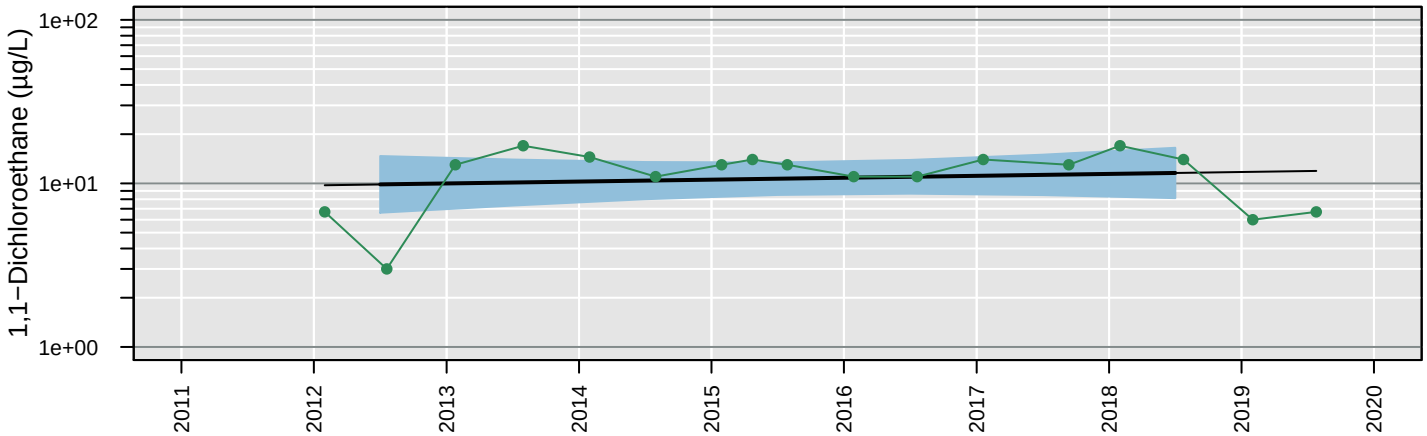
No Analysis Performed

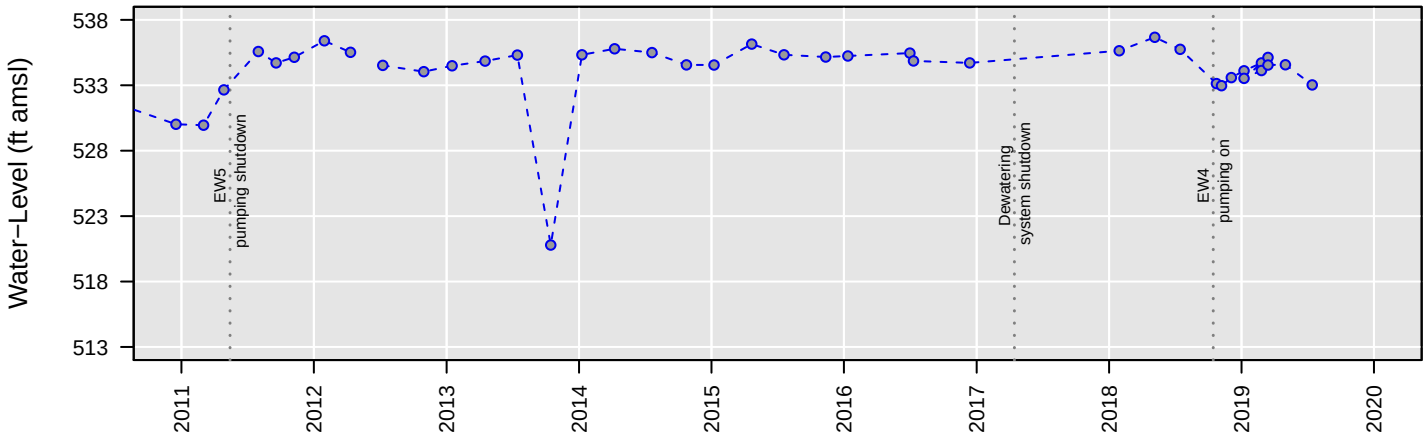
MW87

1,1−Dichloroethane

Number of Comparisons: 17
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

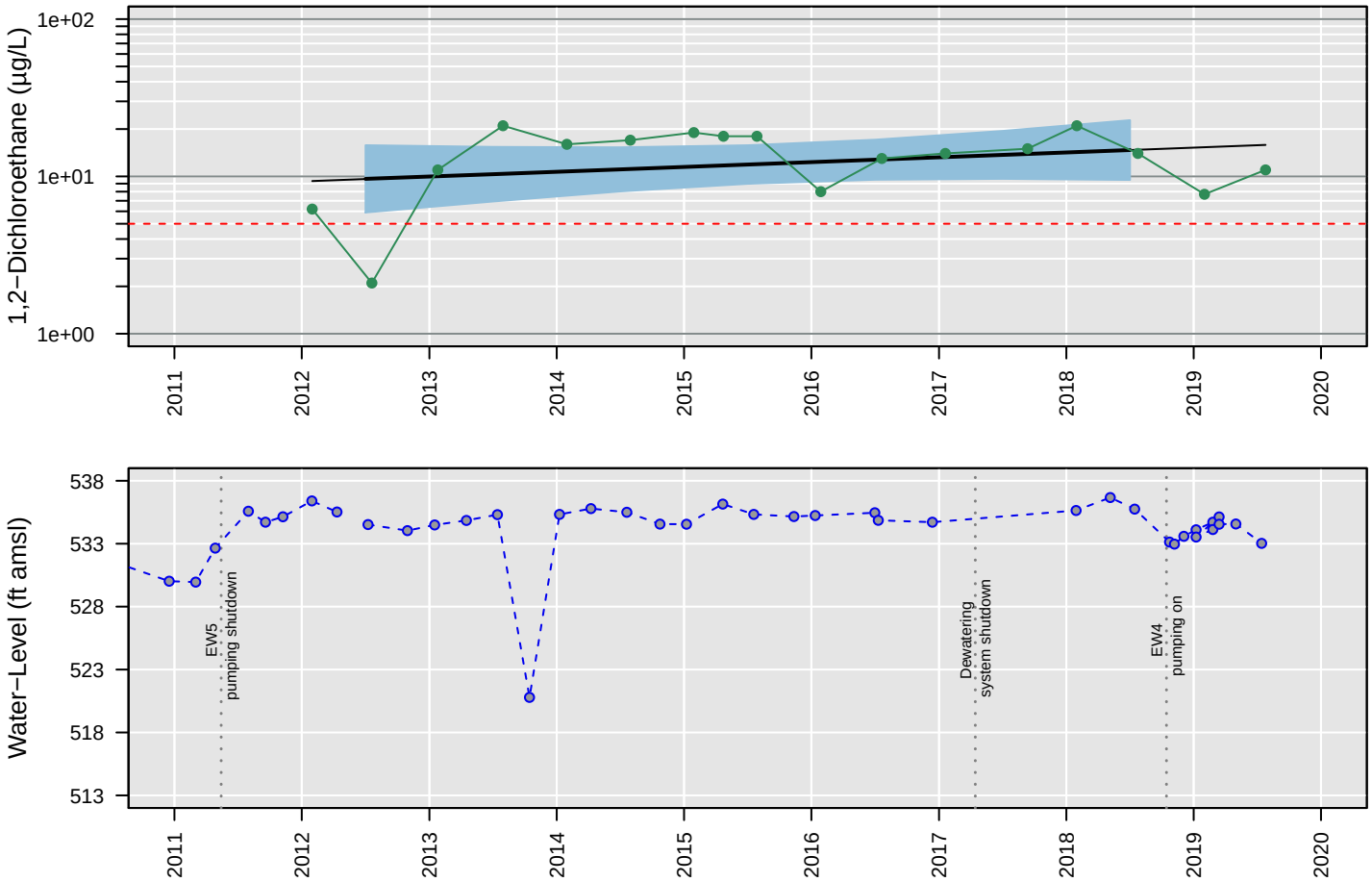
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 12 µg/L
UCL: 17 µg/L
LCL: 8.1 µg/L

MW87

1,2−Dichloroethane

Number of Comparisons: 17
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

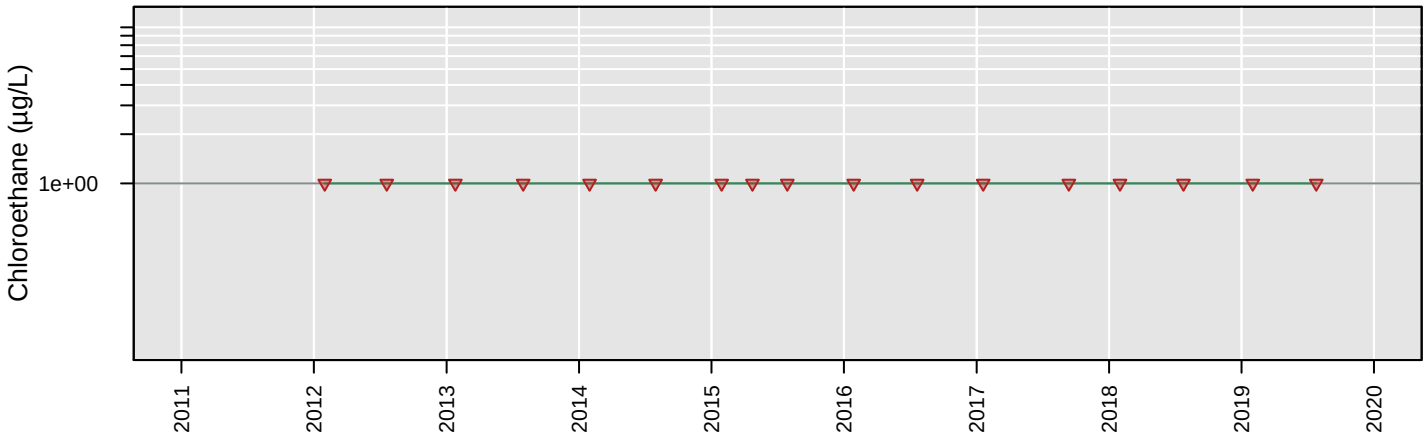
Regression Statistics for January 2018 to January 2019
Geometric Mean: 15 µg/L
UCL: 23 µg/L
LCL: 9.5 µg/L

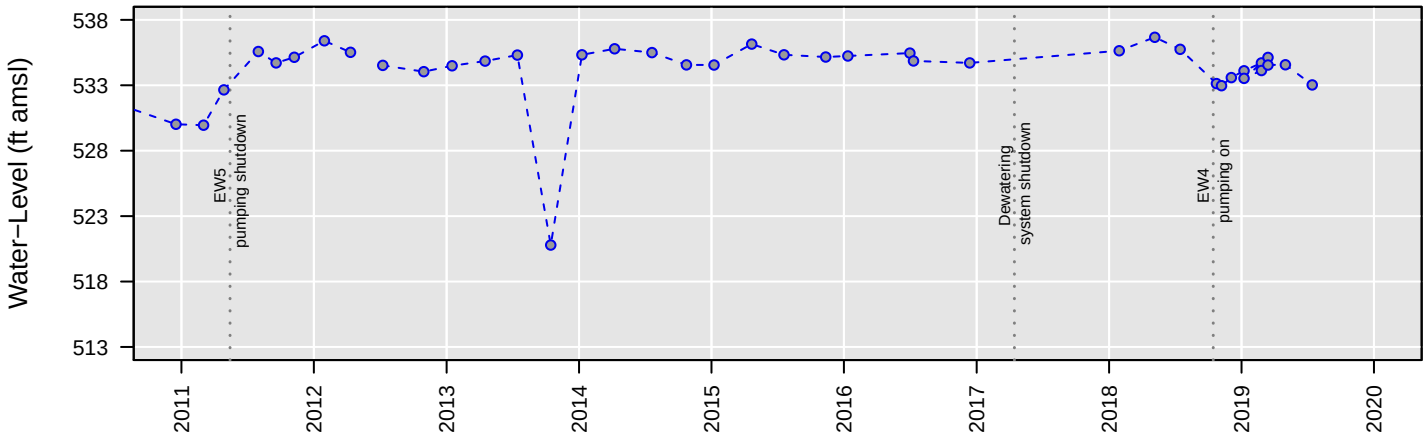
MW87

Chloroethane

Number of Comparisons: 17
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





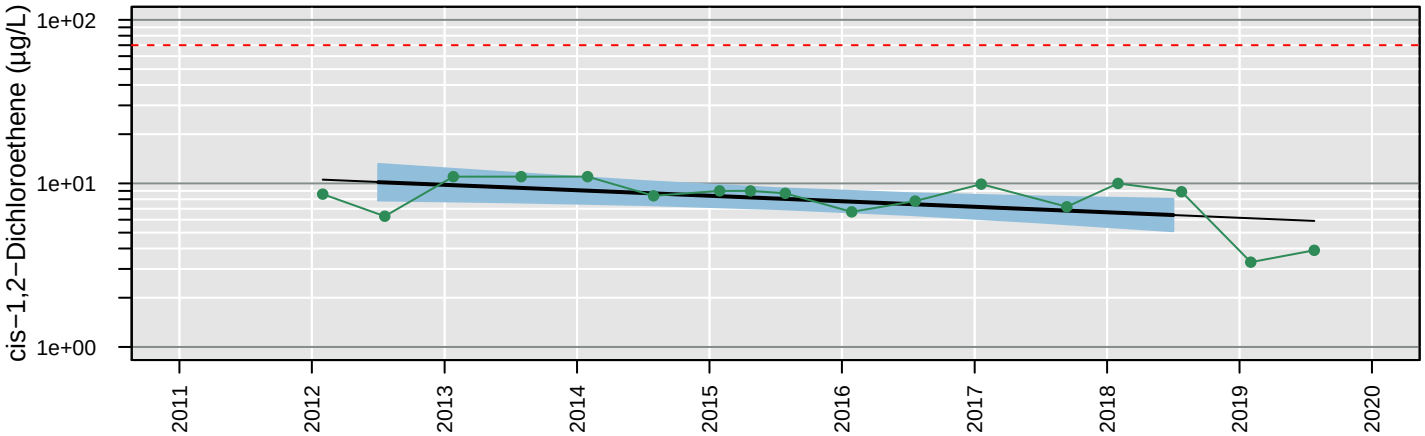
No Analysis Performed

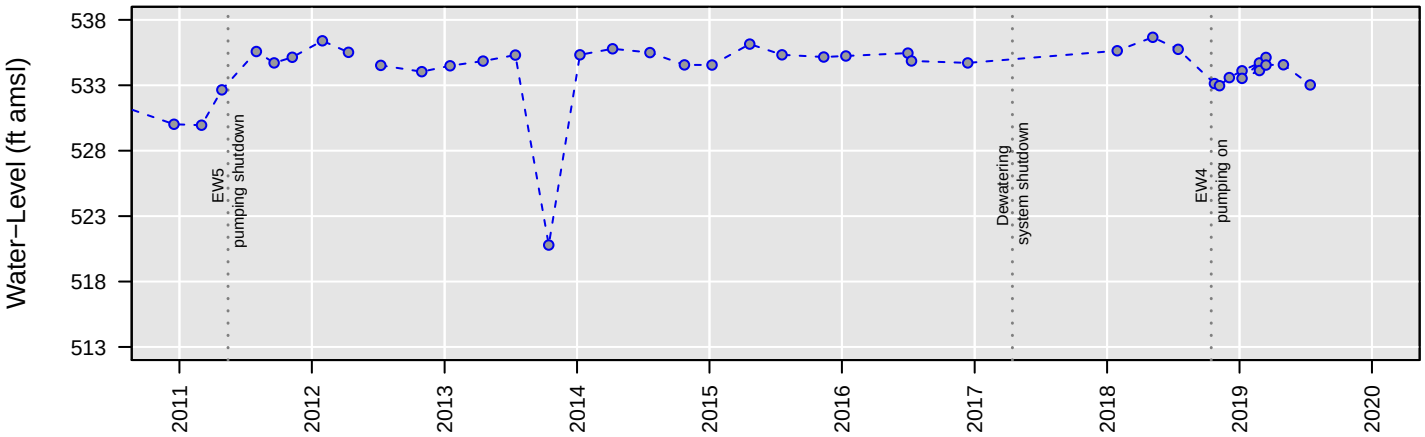
MW87

cis−1,2−Dichloroethene

Number of Comparisons: 17
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00021 (+/− 0.000083)*Date + 5.6 (+/− 1.4)

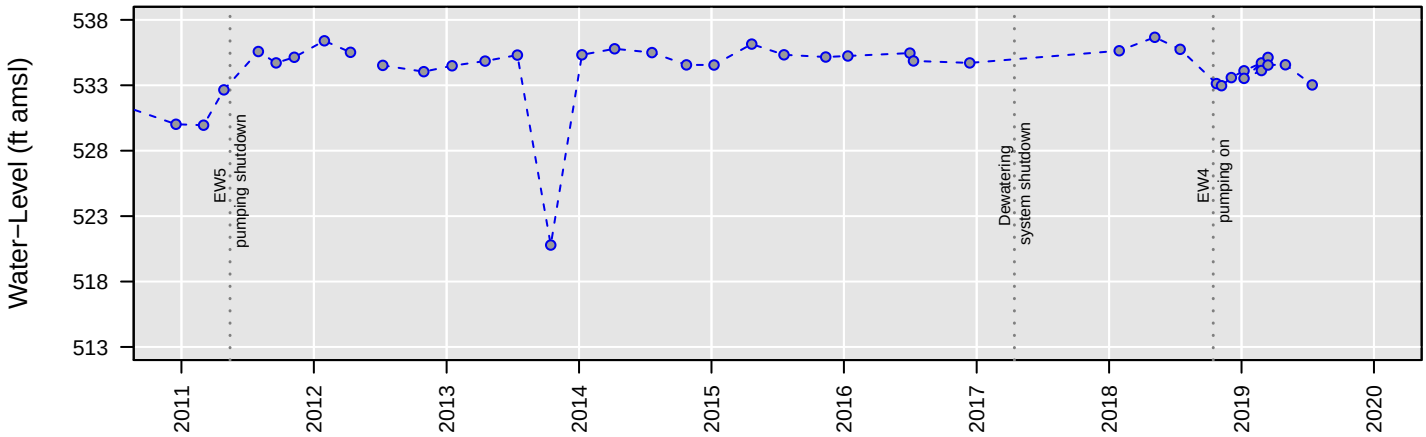
Regression Statistics for January 2018 to January 2019
Geometric Mean: 6.4 µg/L
UCL: 8 µg/L
LCL: 5.1 µg/L

MW87

Tetrachloroethene

Number of Comparisons: 17
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

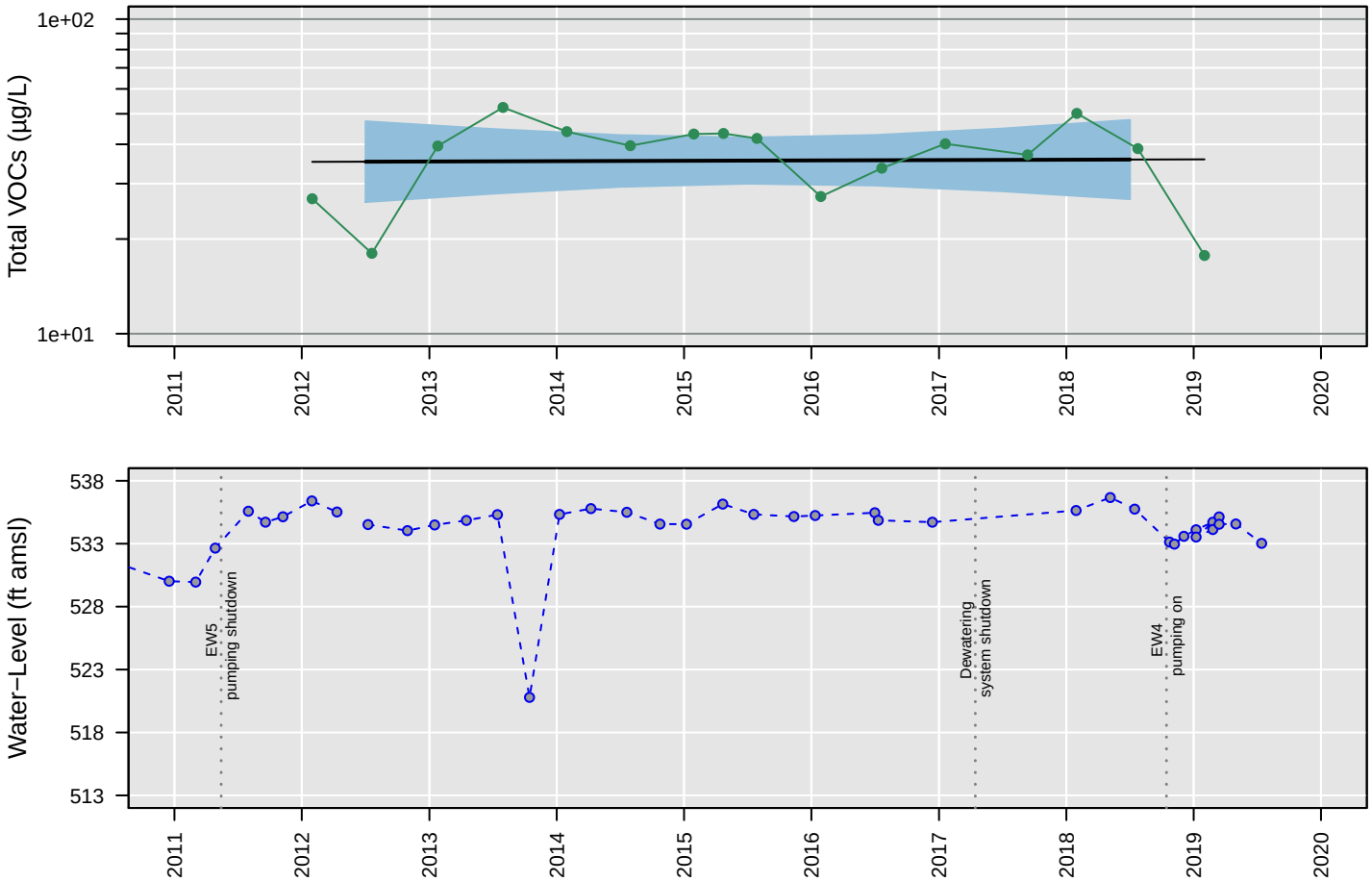


No Analysis Performed

MW87

Total VOCs

Number of Comparisons: 16
Percent NDs: 0%



Censored Regression (Tobit) Model

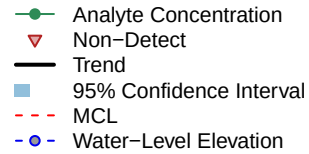
Trend Not Significant

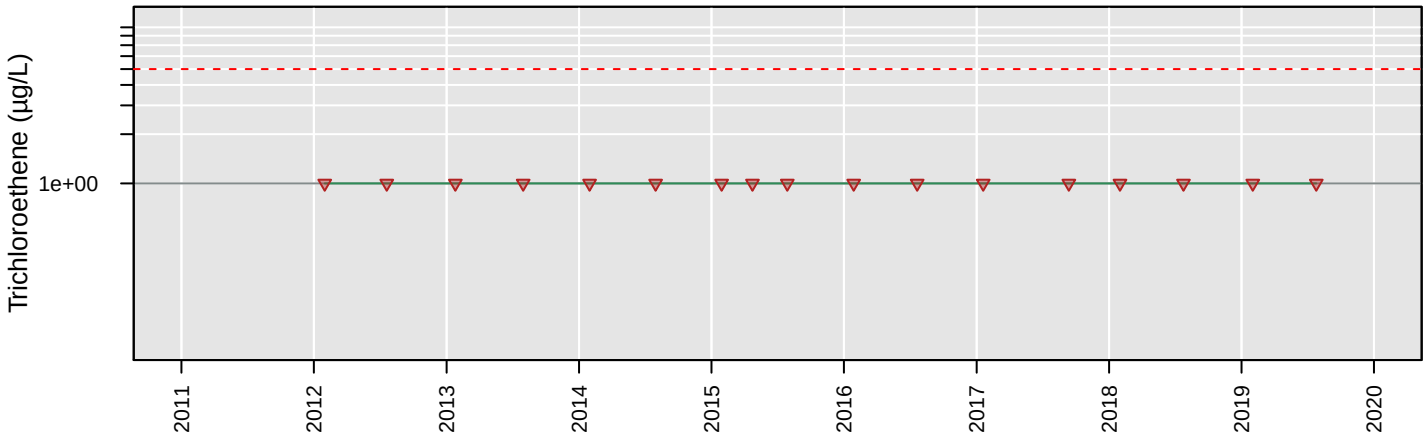
Regression Statistics for January 2018 to January 2019
Geometric Mean: 36 µg/L
UCL: 48 µg/L
LCL: 27 µg/L

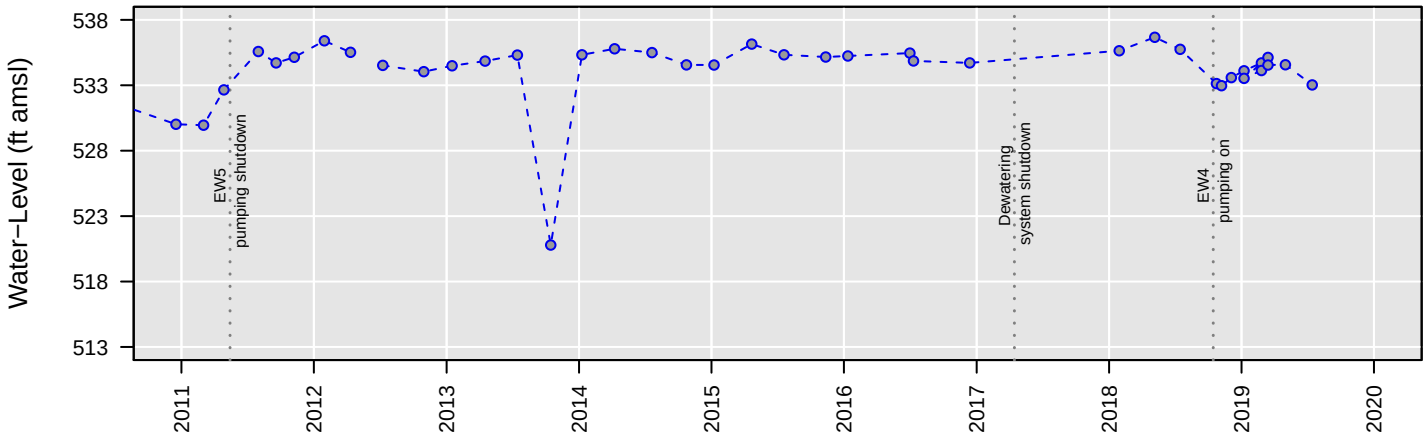
MW87

Trichloroethene

Number of Comparisons: 17
Percent NDs: 100%





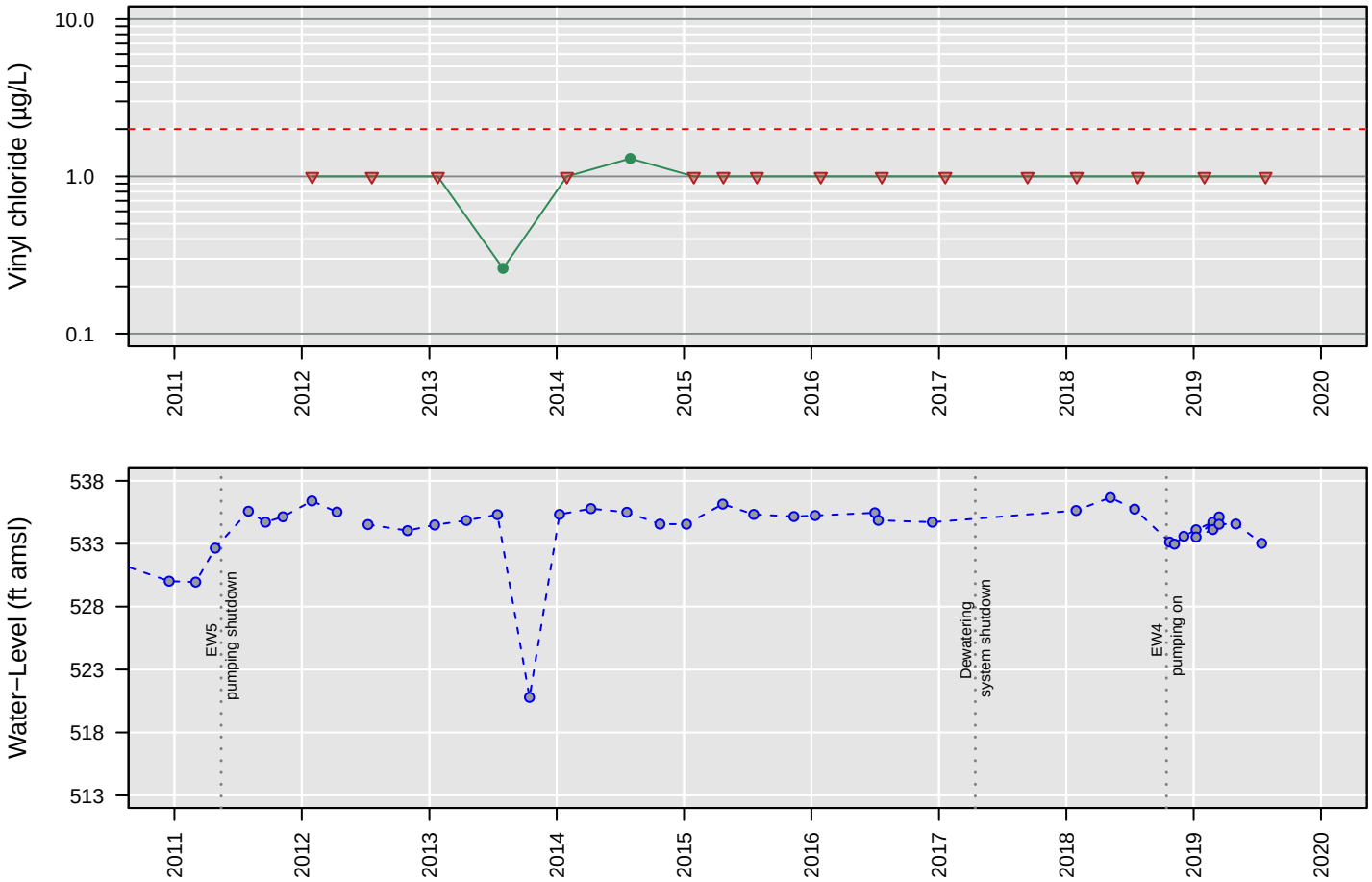


No Analysis Performed

MW87

Vinyl chloride

Number of Comparisons: 17
Percent NDs: 88%

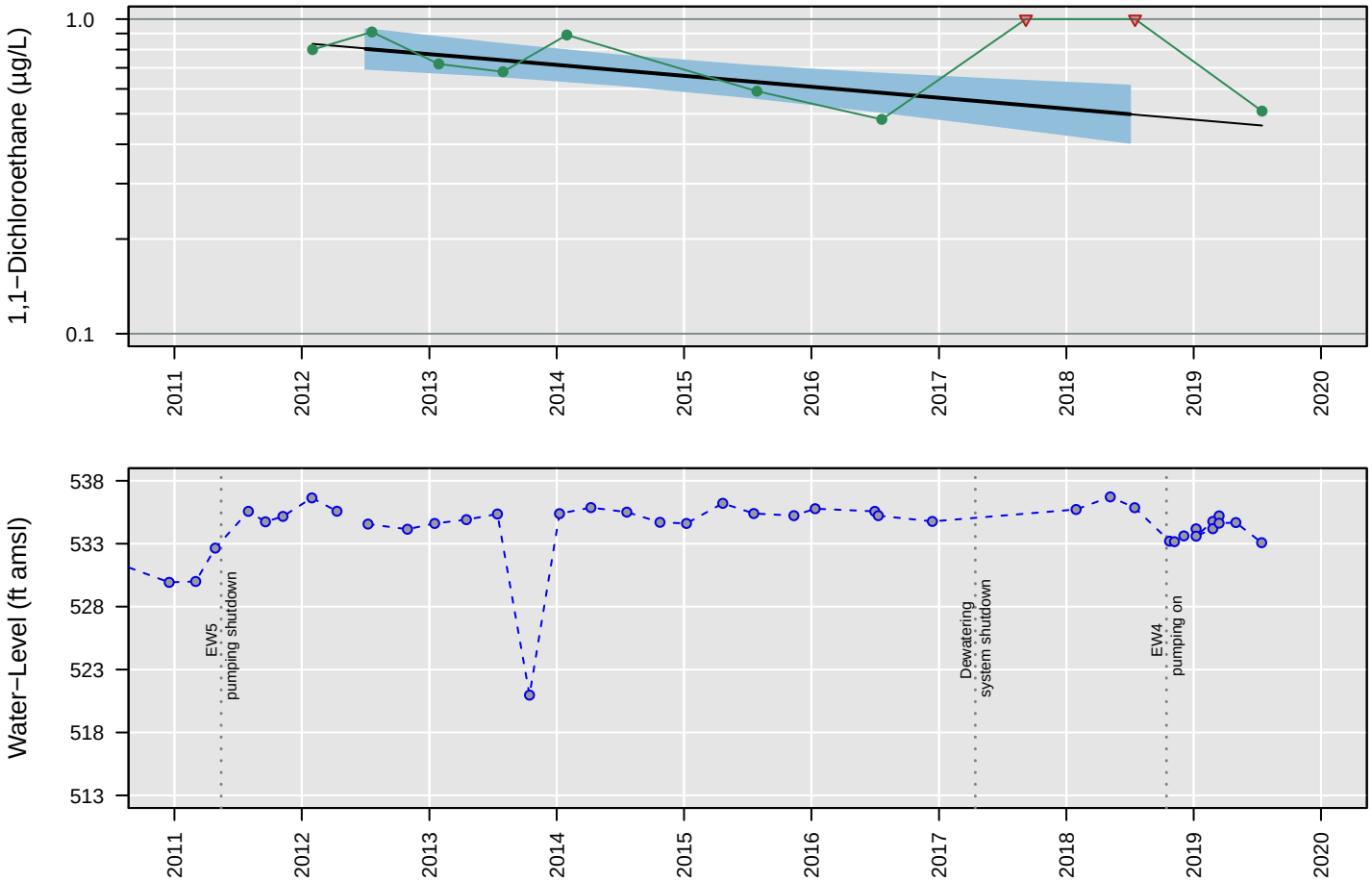


No Analysis Performed

MW88

1,1−Dichloroethane

Number of Comparisons: 10
Percent NDs: 20%



Censored Regression (Tobit) Model

ln Conc. = −0.00022 (+/− 0.000054)*Date + 3.2 (+/− 0.88)

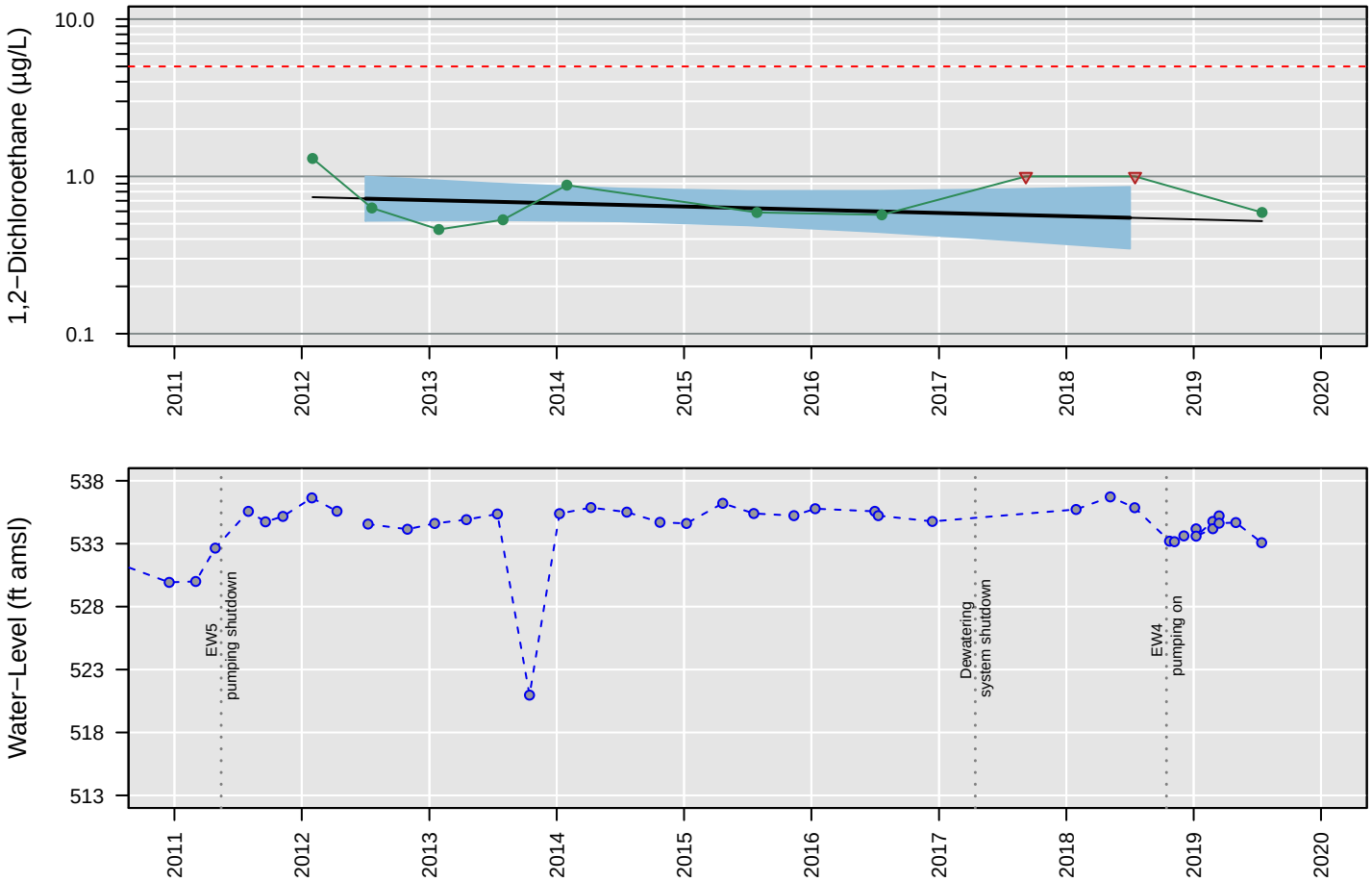
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.5 µg/L
UCL: 0.61 µg/L
LCL: 0.4 µg/L

MW88

1,2−Dichloroethane

Number of Comparisons: 10
Percent NDs: 20%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

Trend Not Significant

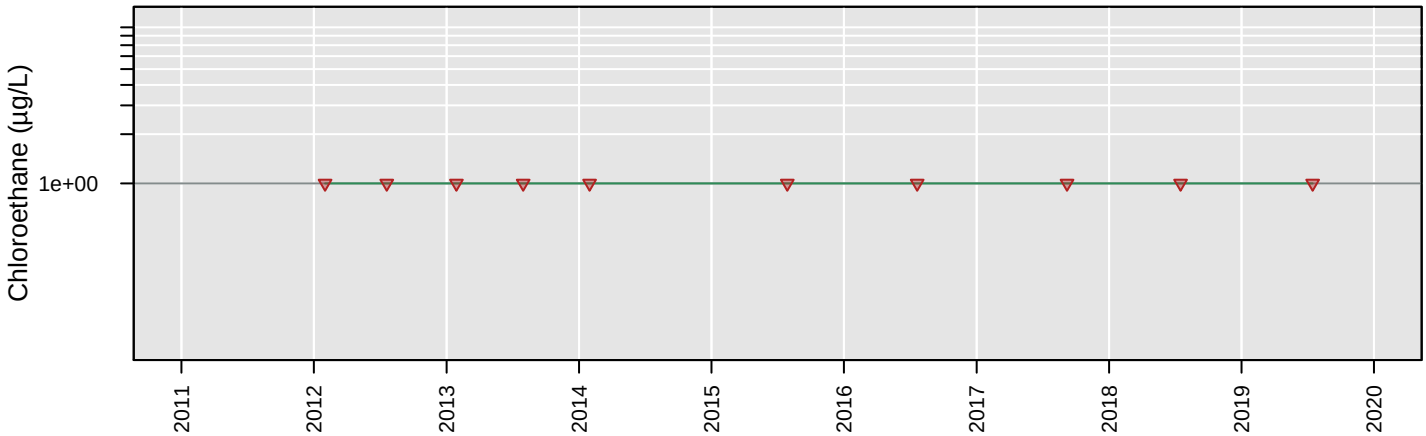
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.55 µg/L
UCL: 0.86 µg/L
LCL: 0.35 µg/L

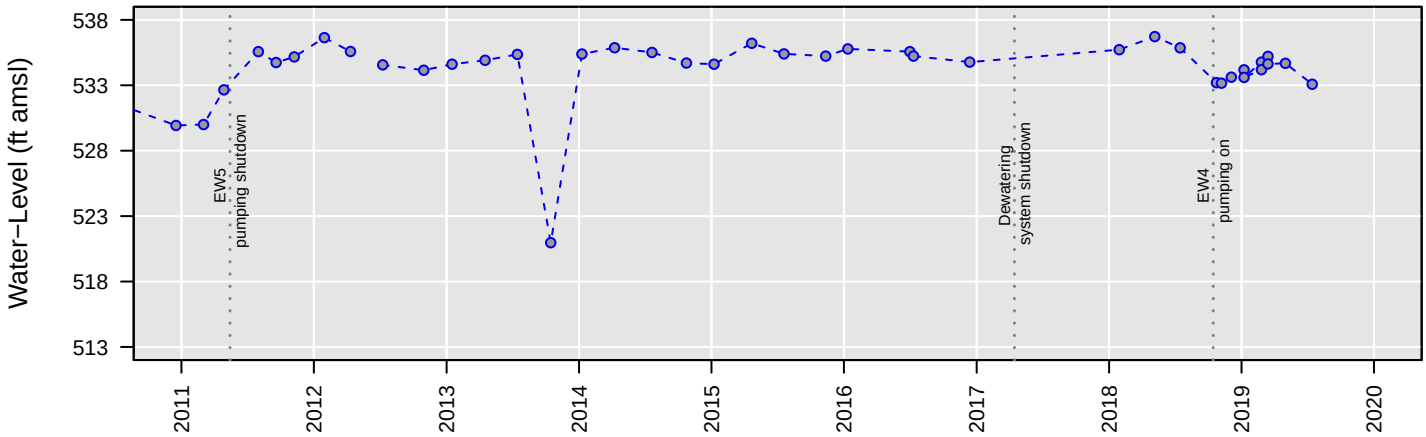
MW88

Chloroethane

Number of Comparisons: 10
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





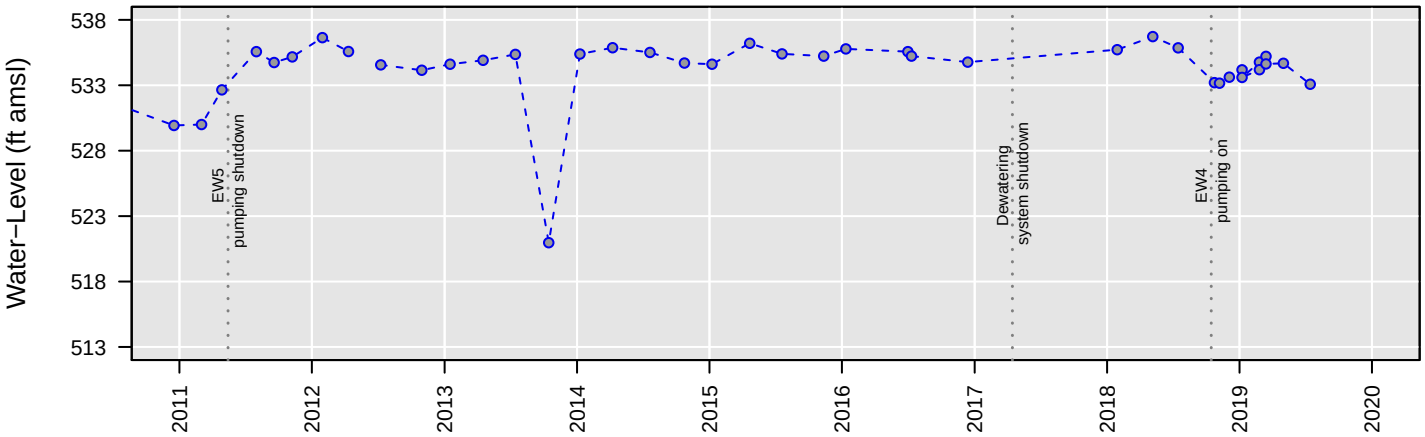
No Analysis Performed

MW88

cis−1,2−Dichloroethene

Number of Comparisons: 10
Percent NDs: 20%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

ln Conc. = −0.00065 (+/− 0.00015)*Date + 11 (+/− 2.4)

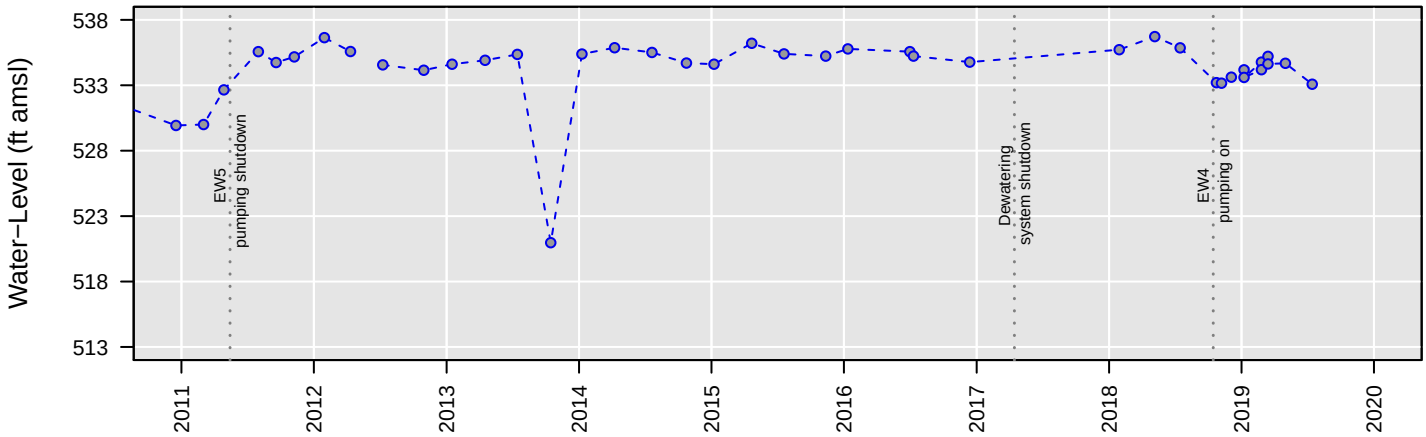
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.7 µg/L
UCL: 1.2 µg/L
LCL: 0.4 µg/L

MW88

Tetrachloroethene

Number of Comparisons: 10
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



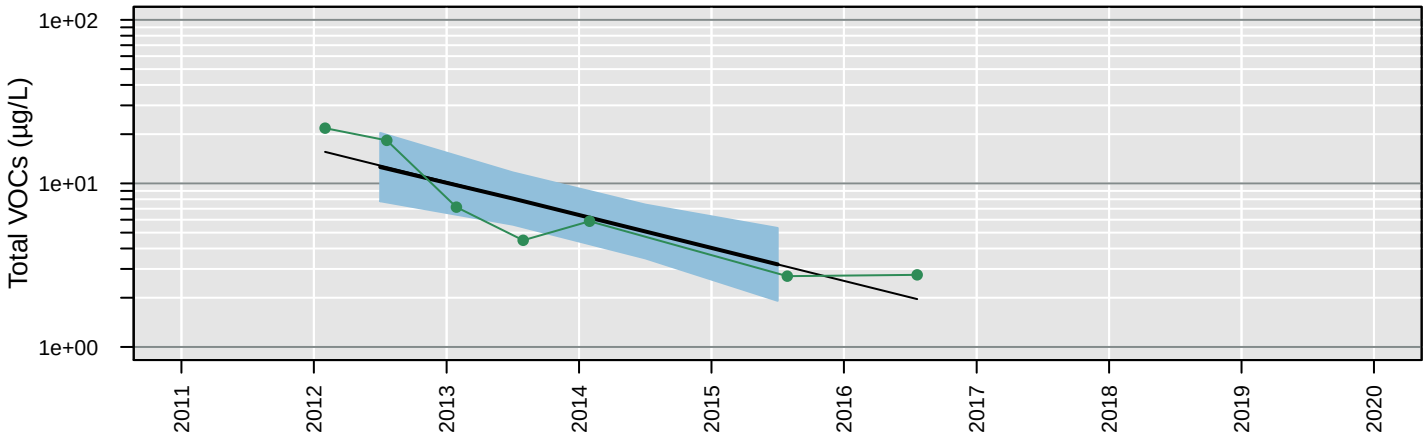
No Analysis Performed

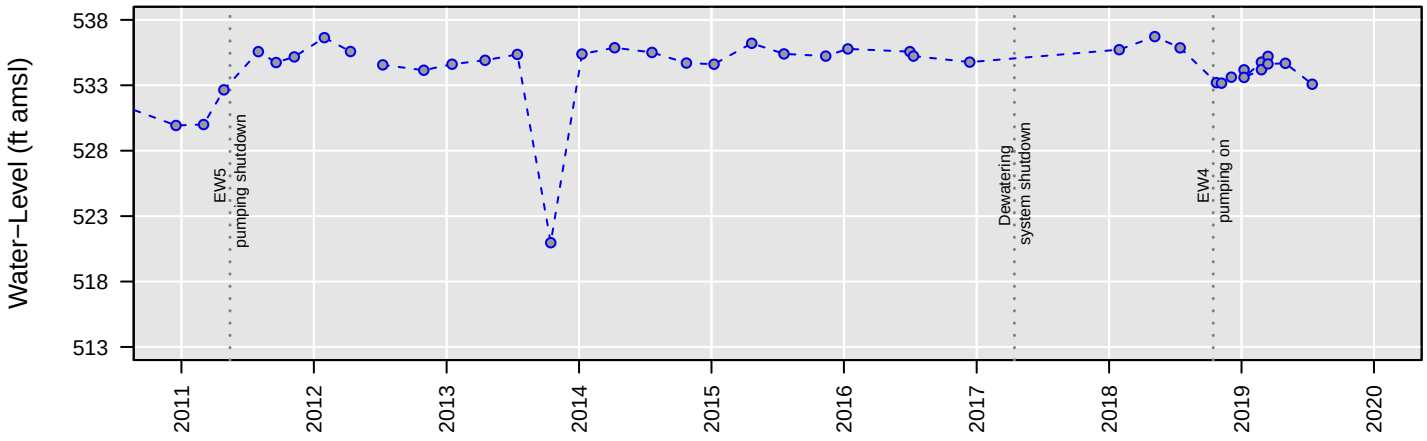
MW88

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

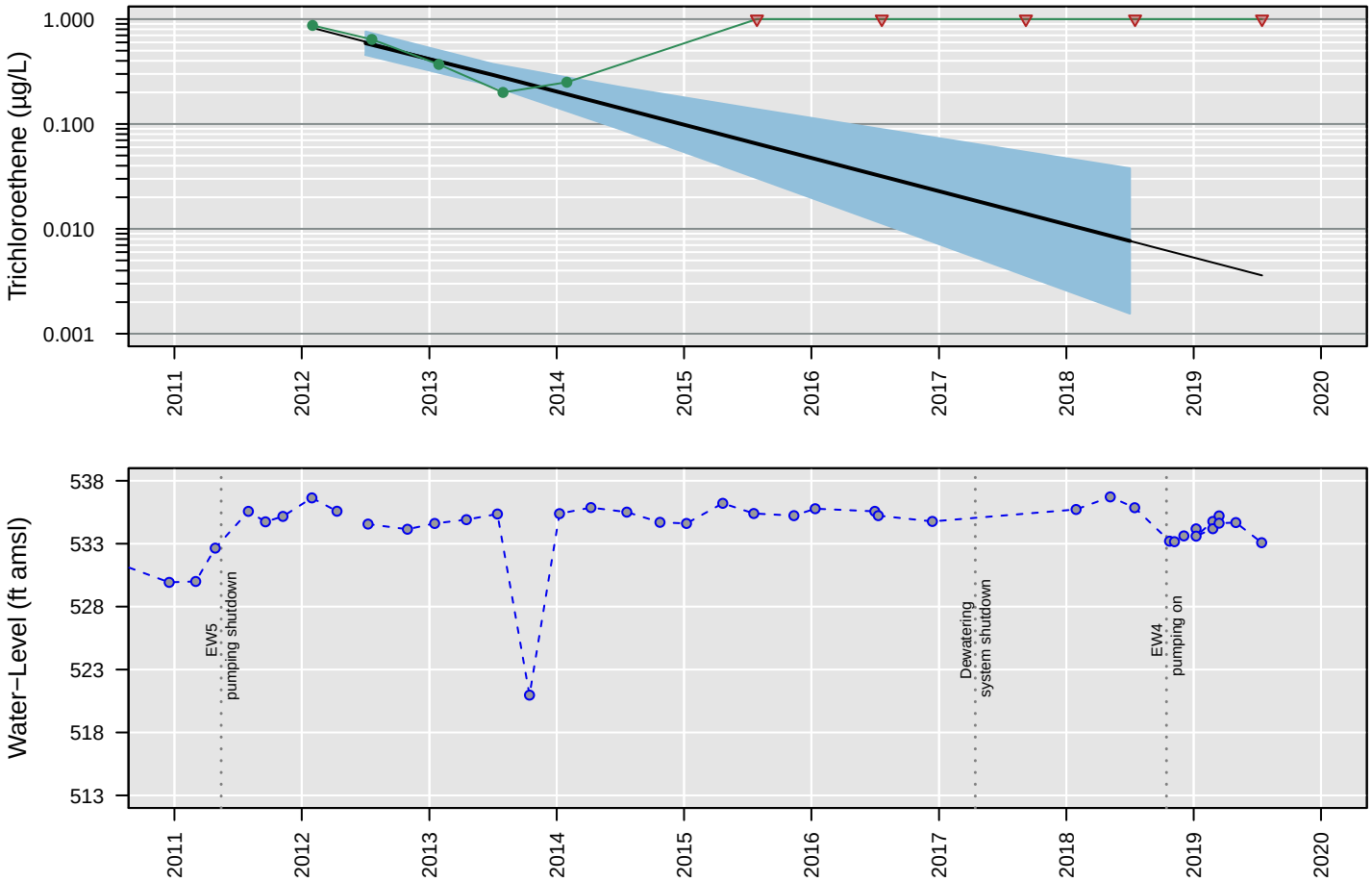
ln Conc. = −0.0013 (+/− 0.00023)*Date + 22 (+/− 3.7)

Regression Statistics for January 2015 to January 2016
Geometric Mean: 3.2 µg/L
UCL: 5.3 µg/L
LCL: 1.9 µg/L

MW88

Trichloroethene

Number of Comparisons: 10
Percent NDs: 50%



Censored Regression (Tobit) Model

ln Conc. = −0.002 (+/− 0.00034)*Date + 30 (+/− 5.3)

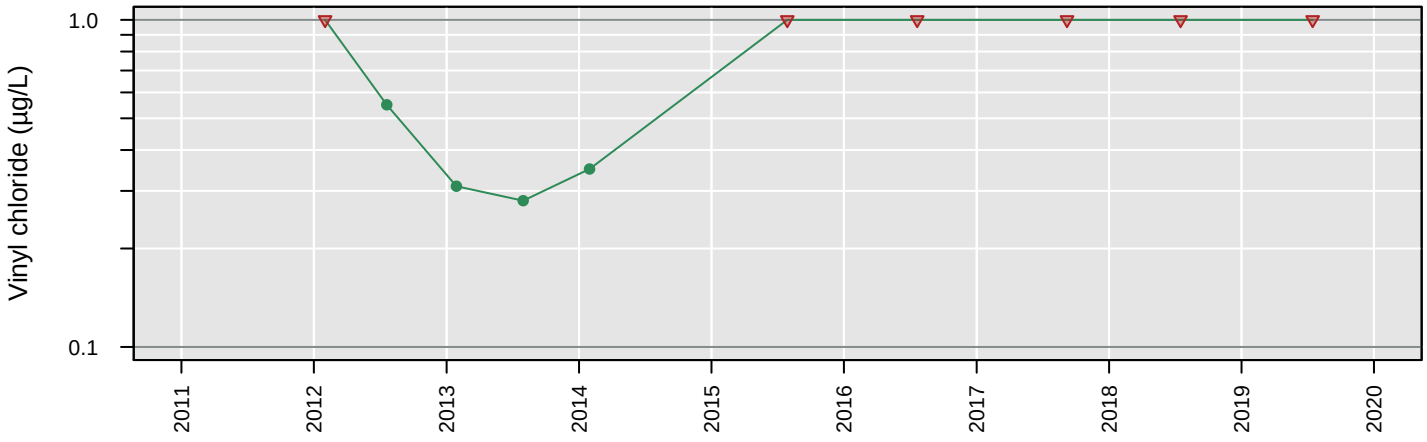
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.0077 µg/L
UCL: 0.038 µg/L
LCL: 0.0016 µg/L

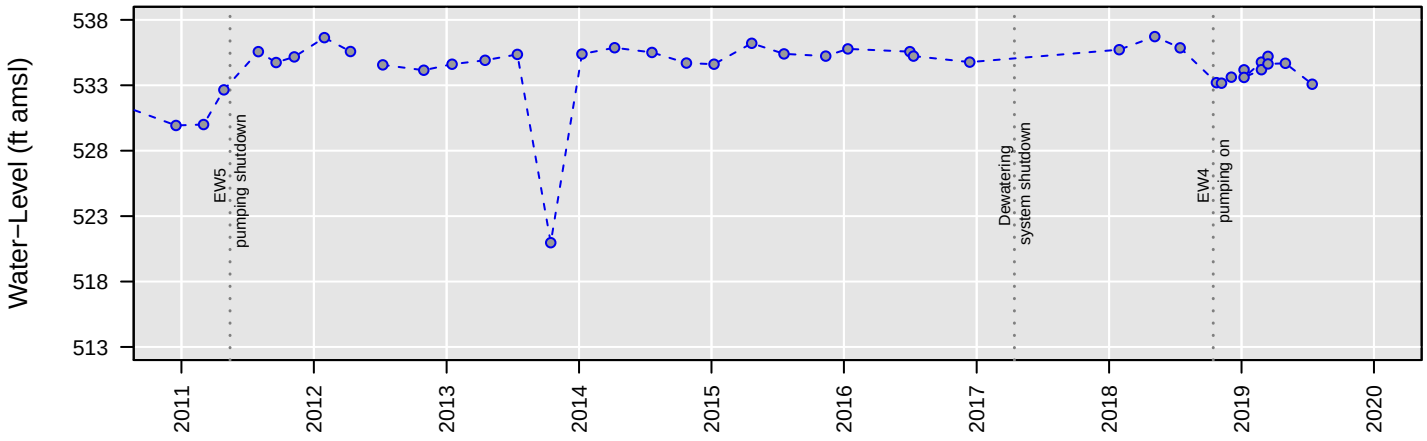
MW88

Vinyl chloride

Number of Comparisons: 10
Percent NDs: 60%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





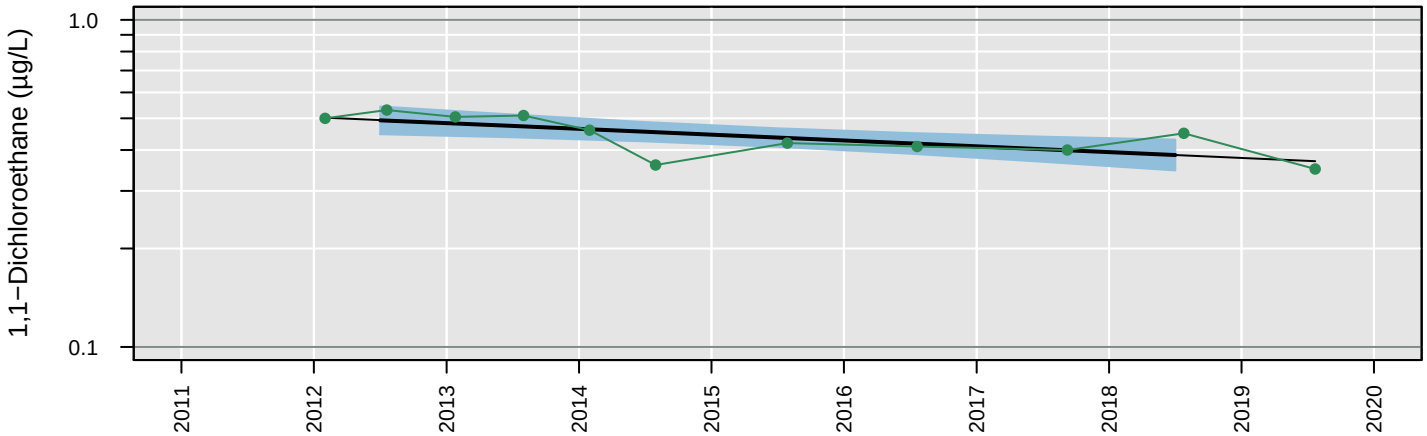
No Analysis Performed

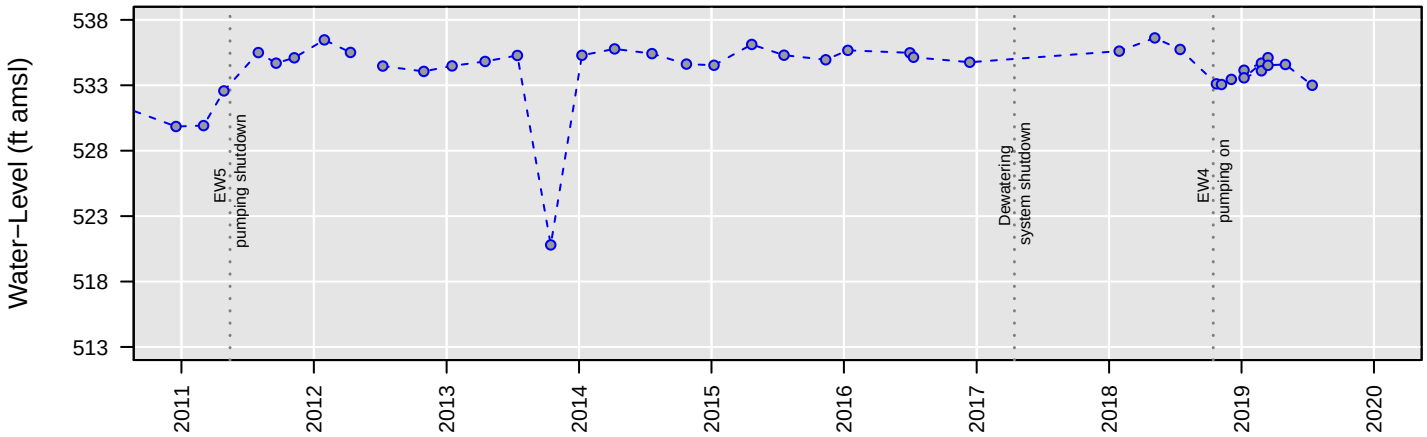
MW89

1,1−Dichloroethane

Number of Comparisons: 11
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.00011 (+/− 0.000032)*Date + 1 (+/− 0.53)

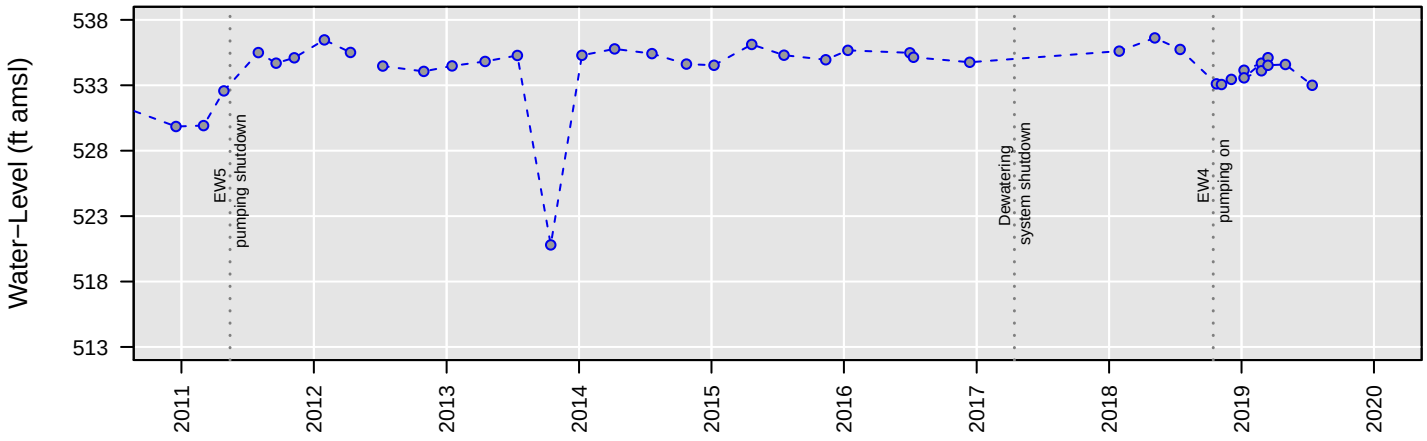
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.39 µg/L
UCL: 0.43 µg/L
LCL: 0.35 µg/L

MW89

1,2−Dichloroethane

Number of Comparisons: 11
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

ln Conc. = −0.00038 (+/− 0.00017)*Date + 6.6 (+/− 2.8)

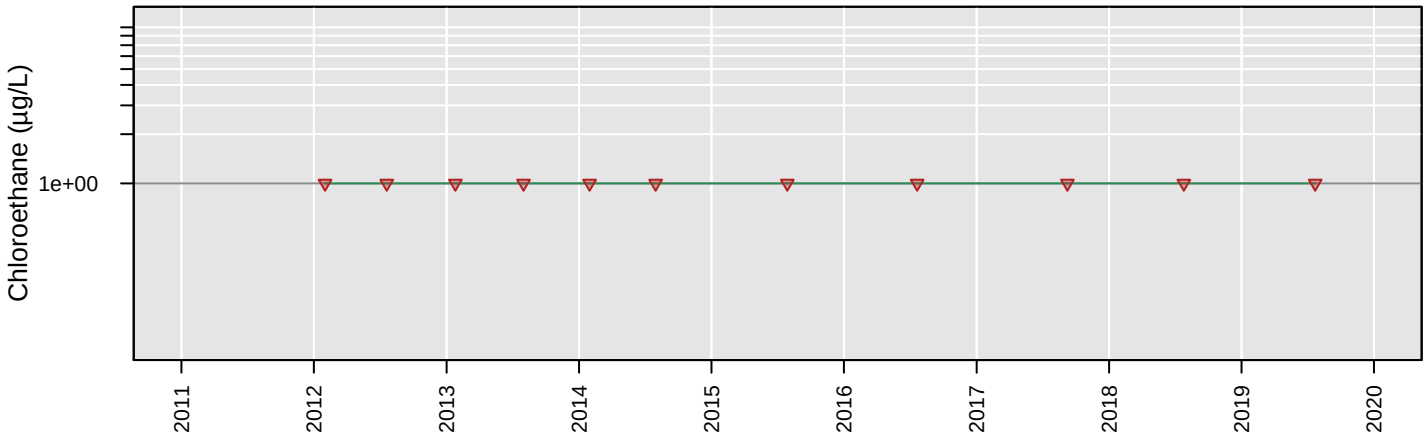
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.92 µg/L
UCL: 1.6 µg/L
LCL: 0.52 µg/L

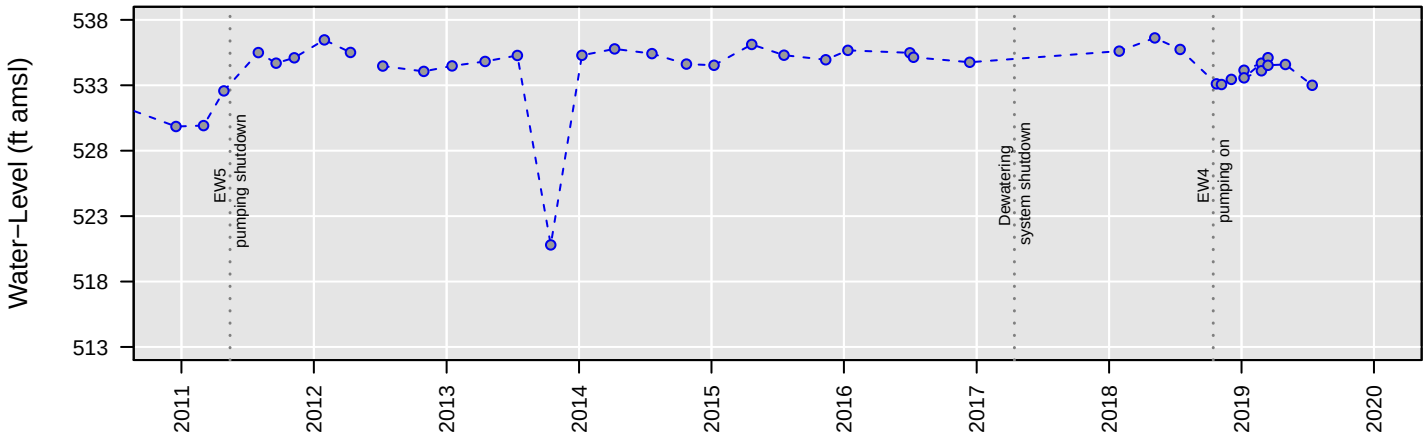
MW89

Chloroethane

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





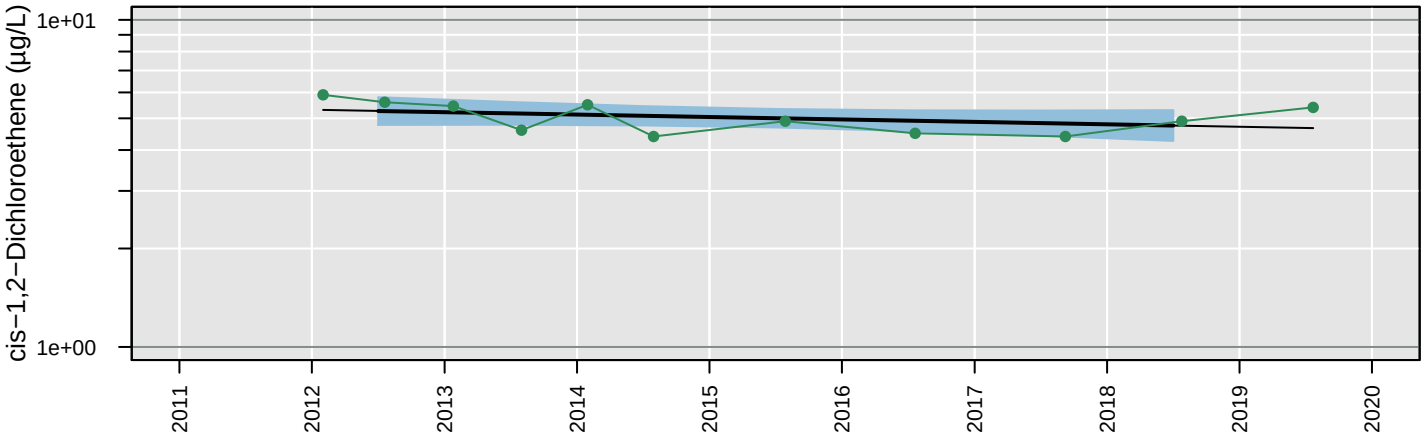
No Analysis Performed

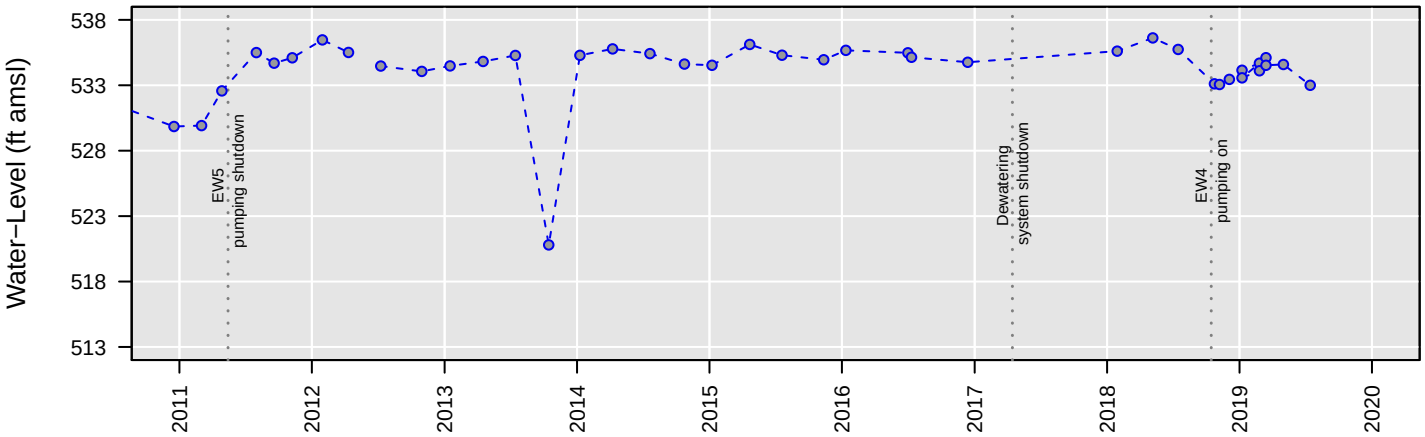
MW89

cis−1,2−Dichloroethene

Number of Comparisons: 11
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

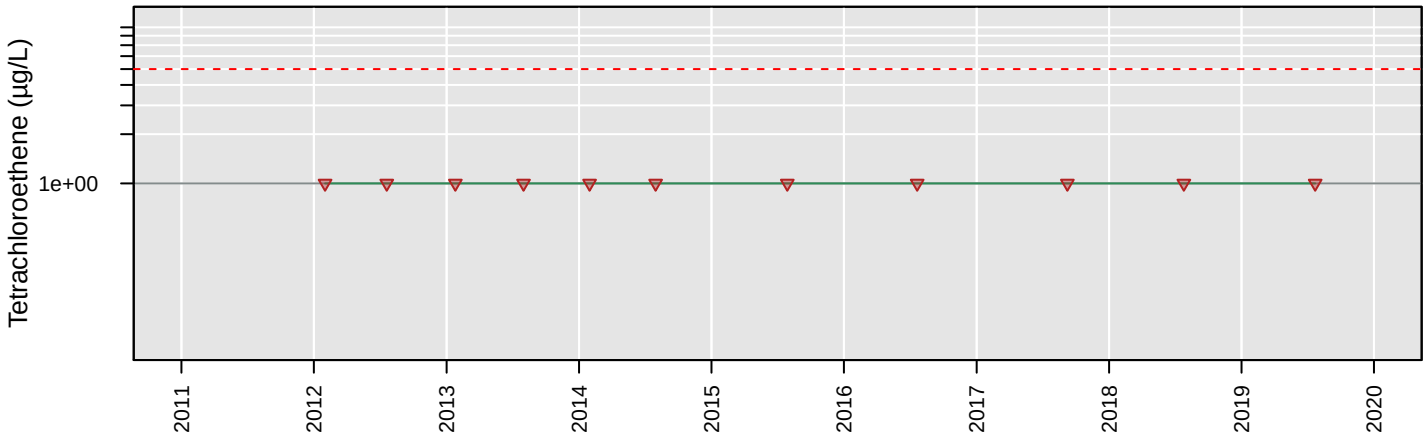
Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.8 µg/L
UCL: 5.3 µg/L
LCL: 4.3 µg/L

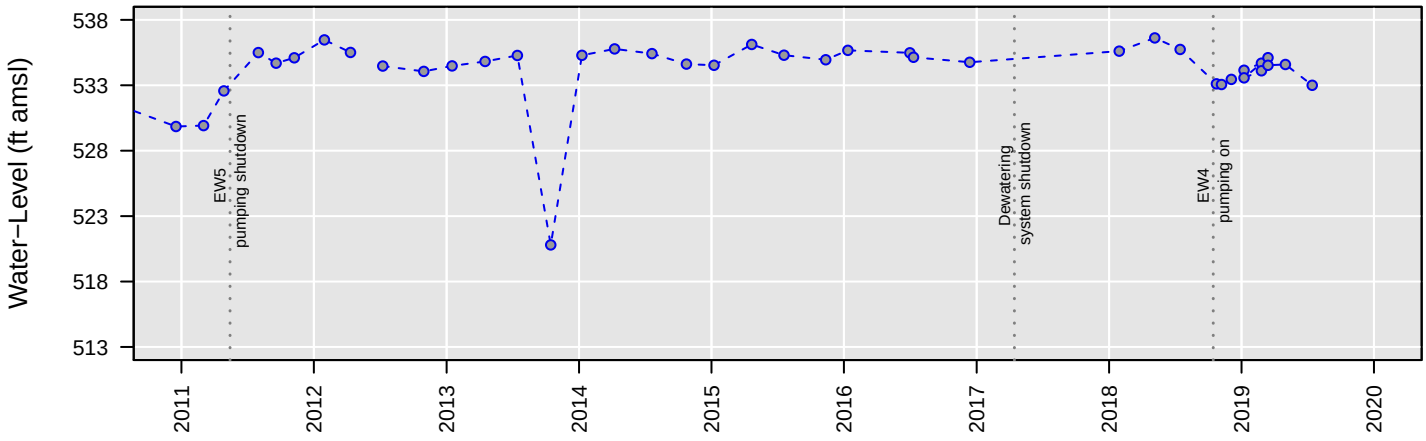
MW89

Tetrachloroethene

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





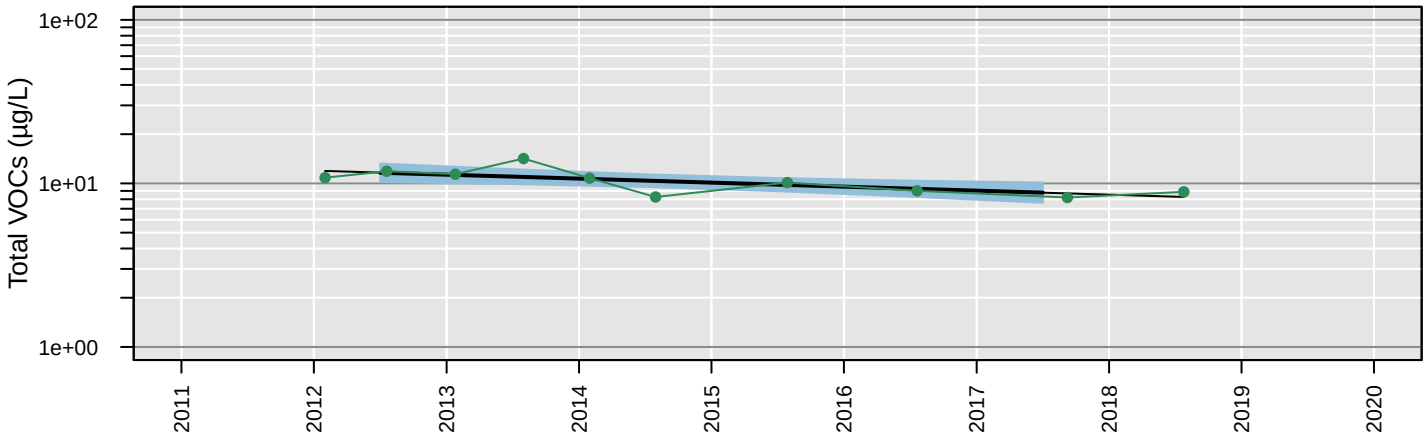
No Analysis Performed

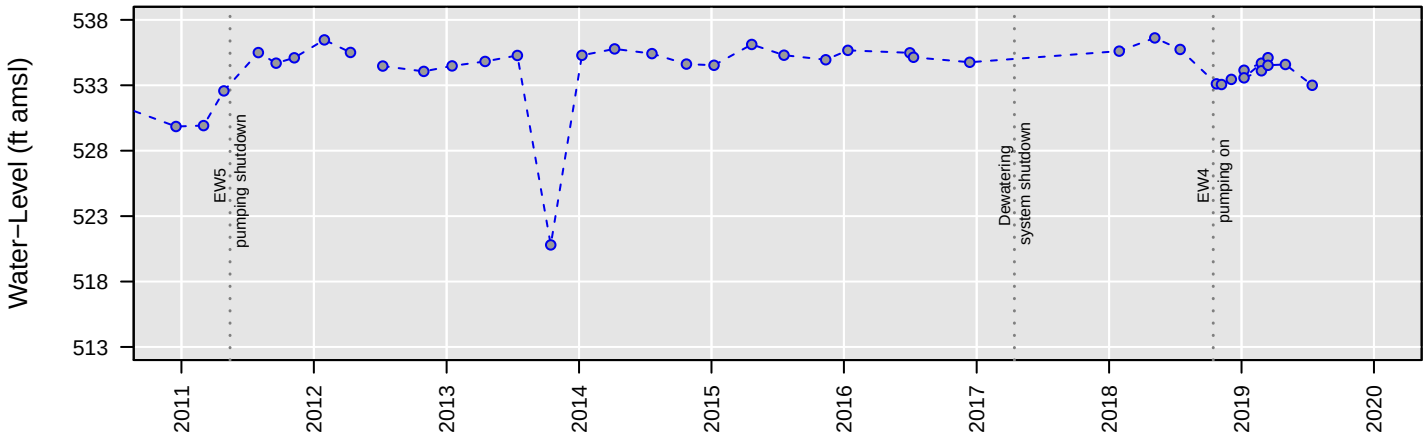
MW89

Total VOCs

Number of Comparisons: 10
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

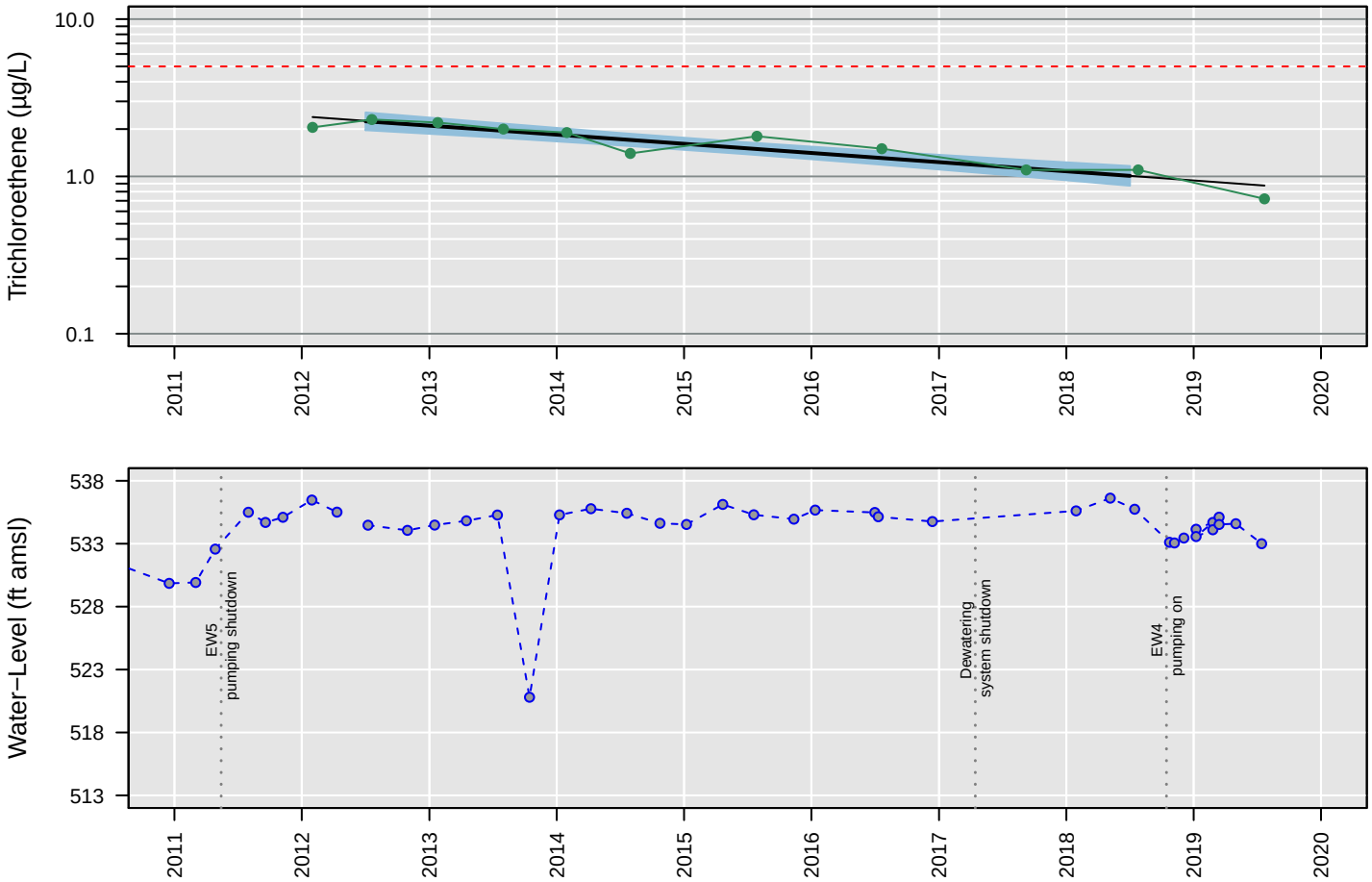
ln Conc. = −0.00015 (+/− 0.000049)*Date + 4.9 (+/− 0.8)

Regression Statistics for January 2017 to January 2018
Geometric Mean: 8.8 µg/L
UCL: 10 µg/L
LCL: 7.6 µg/L

MW89

Trichloroethene

Number of Comparisons: 11
Percent NDs: 0%



Censored Regression (Tobit) Model

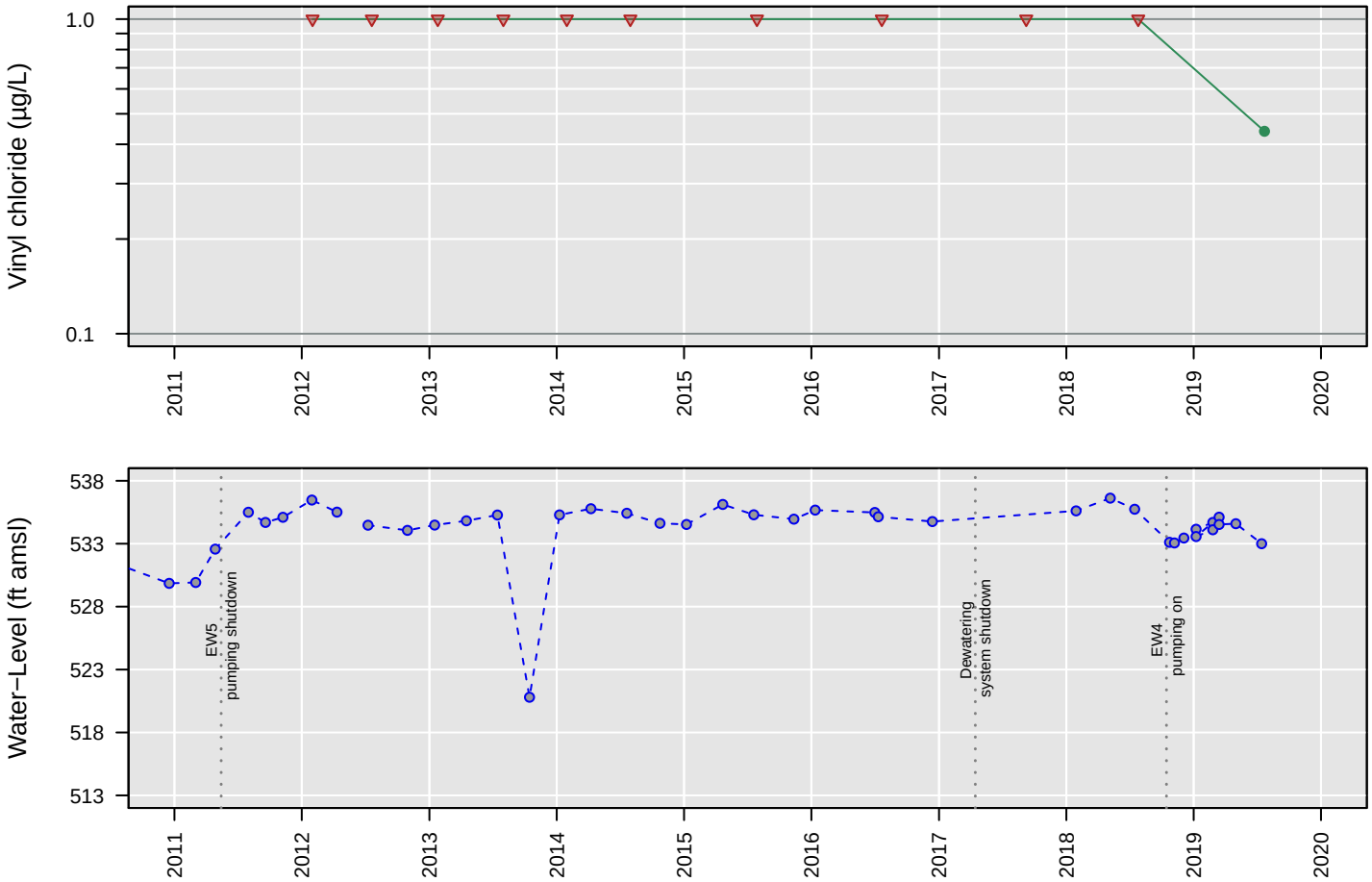
ln Conc. = −0.00037 (+/− 0.000042)*Date + 6.5 (+/− 0.7)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1 µg/L
UCL: 1.2 µg/L
LCL: 0.87 µg/L

MW89

Vinyl chloride

Number of Comparisons: 11
Percent NDs: 91%

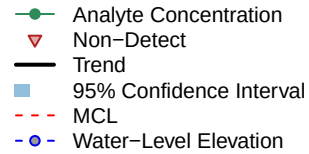


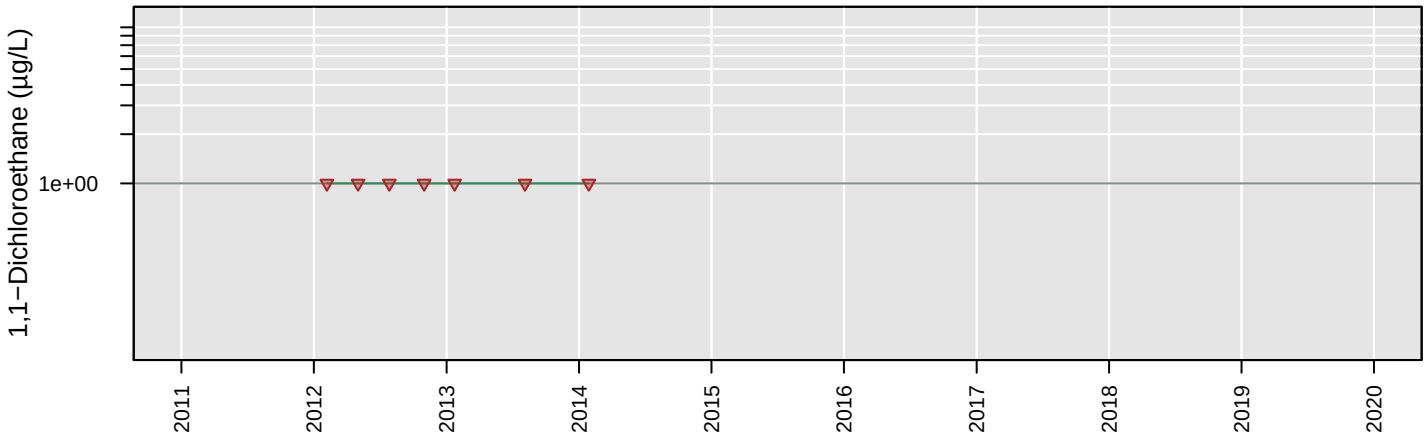
No Analysis Performed

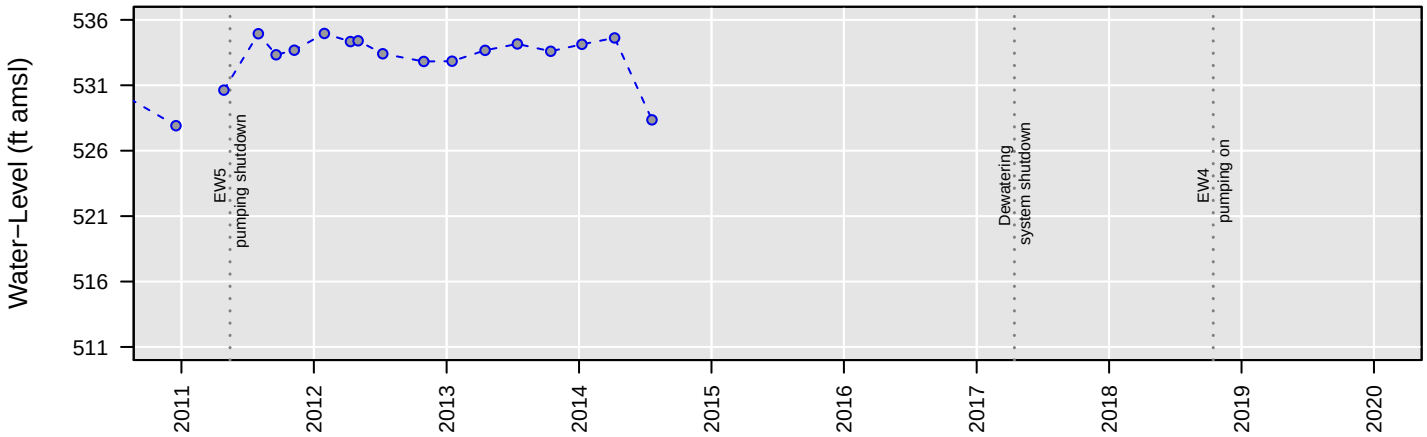
MW90

1,1−Dichloroethane

Number of Comparisons: 7
Percent NDs: 100%







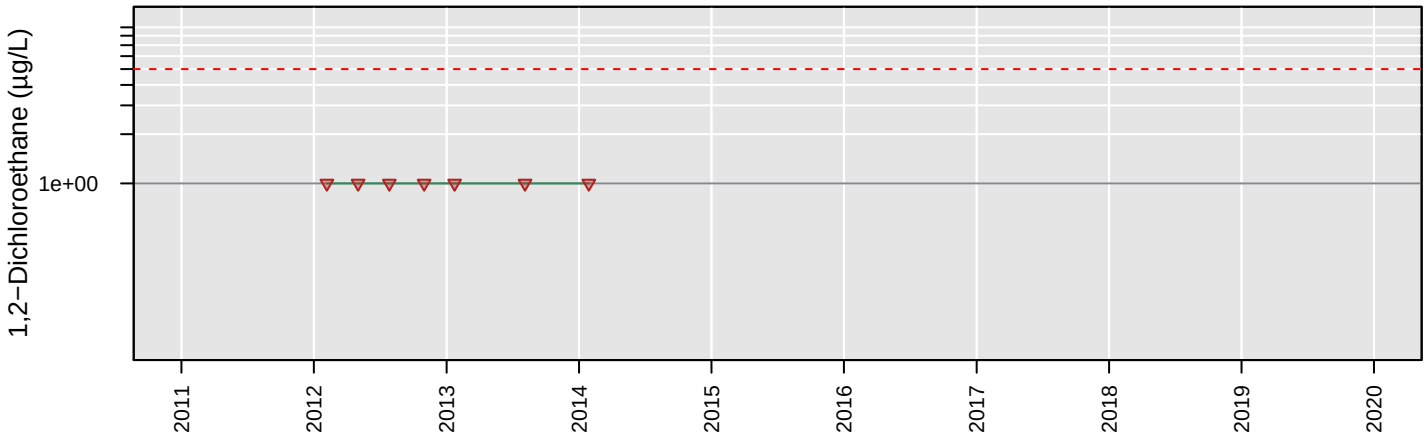
No Analysis Performed

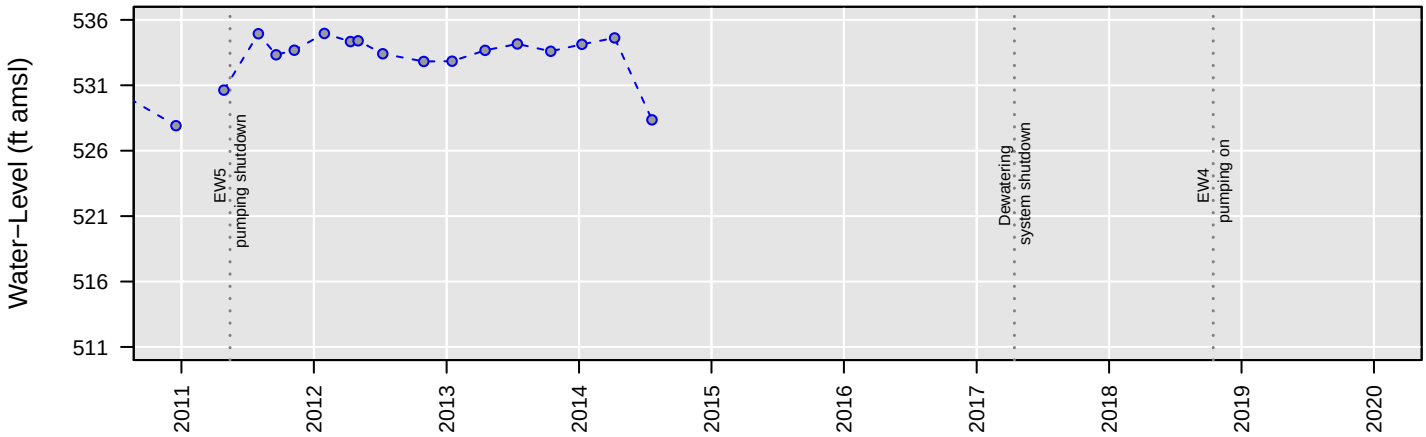
MW90

1,2−Dichloroethane

Number of Comparisons: 7
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



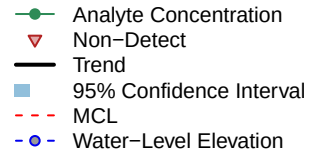


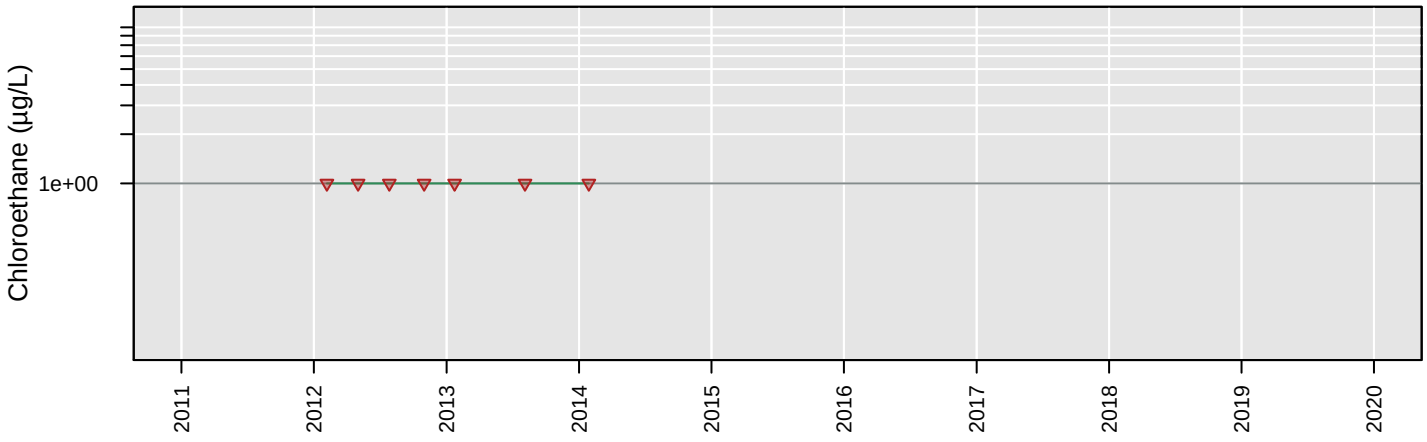
No Analysis Performed

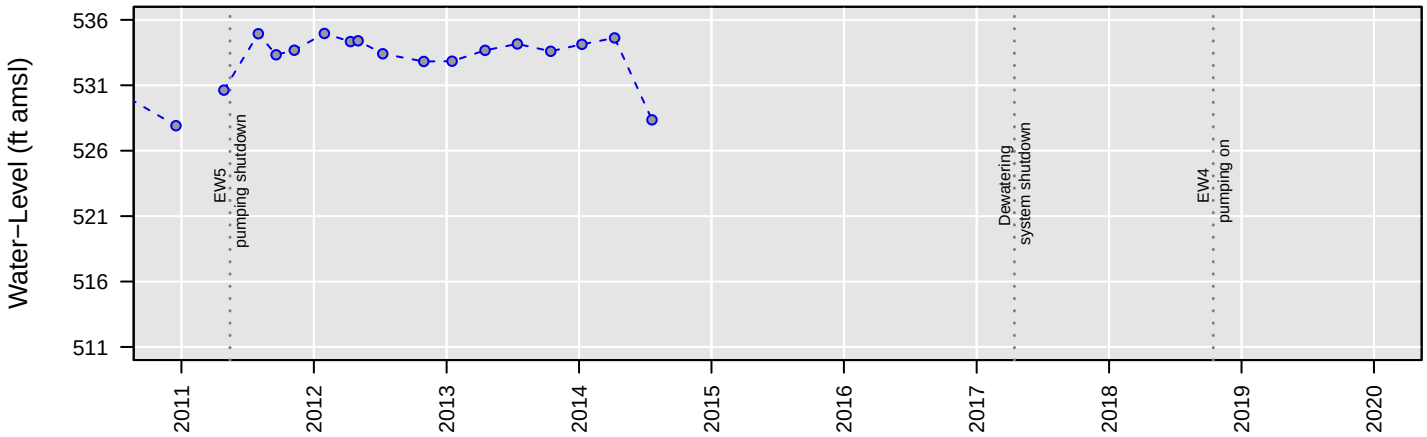
MW90

Chloroethane

Number of Comparisons: 7
Percent NDs: 100%







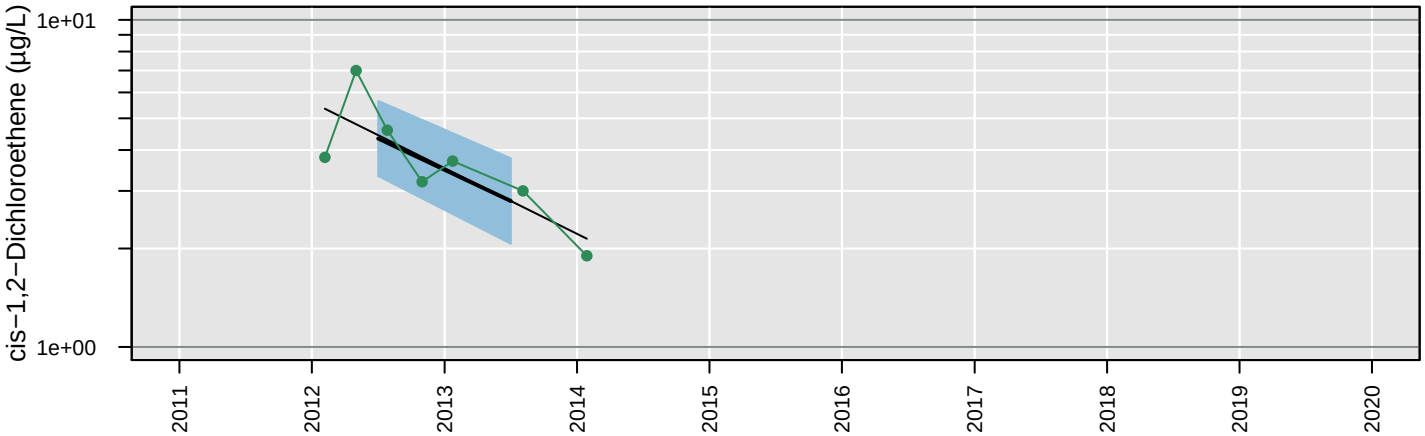
No Analysis Performed

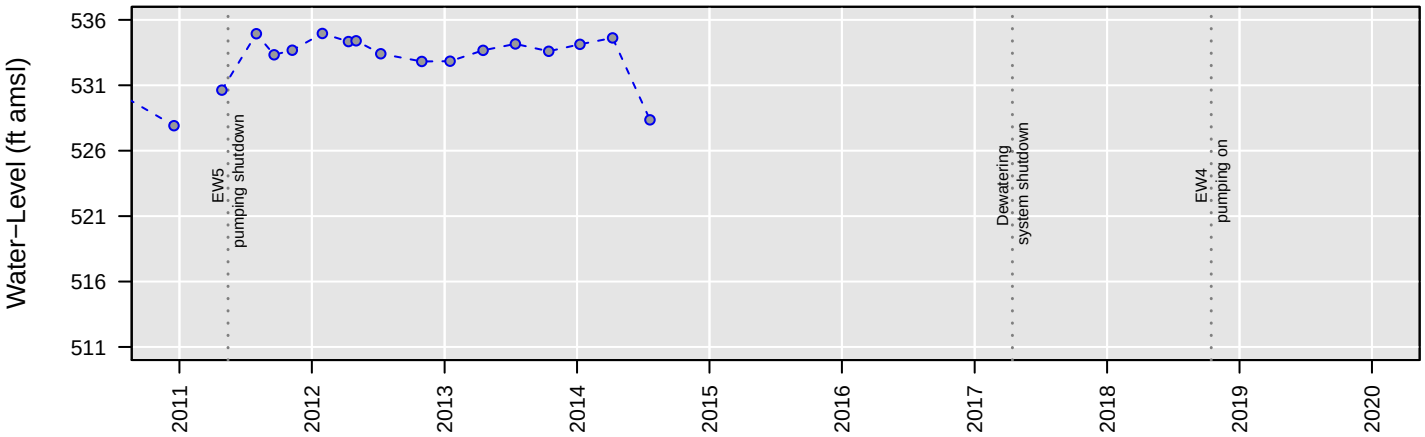
MW90

cis−1,2−Dichloroethene

Number of Comparisons: 7
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

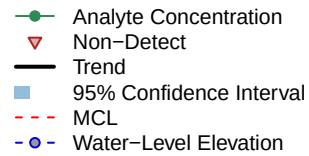
ln Conc. = −0.0013 (+/− 0.00034)*Date + 21 (+/− 5.4)

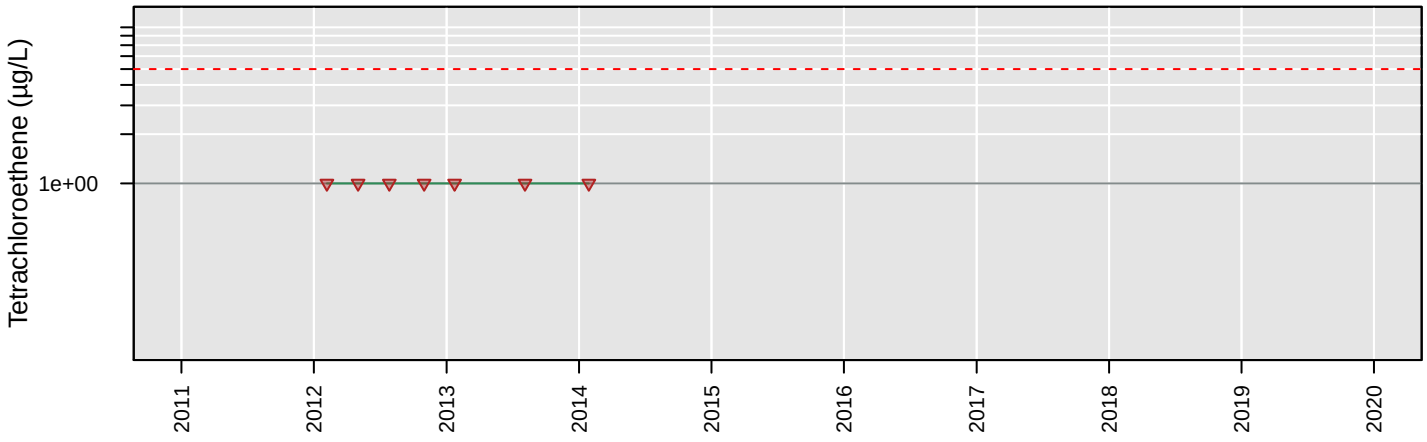
Regression Statistics for January 2013 to January 2014
Geometric Mean: 2.8 µg/L
UCL: 3.8 µg/L
LCL: 2.1 µg/L

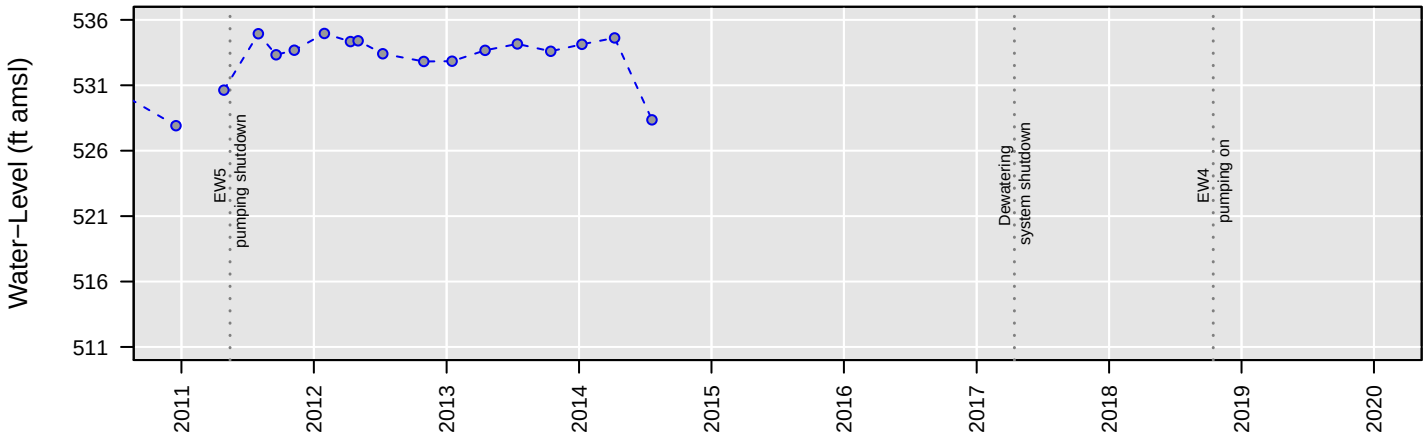
MW90

Tetrachloroethene

Number of Comparisons: 7
Percent NDs: 100%







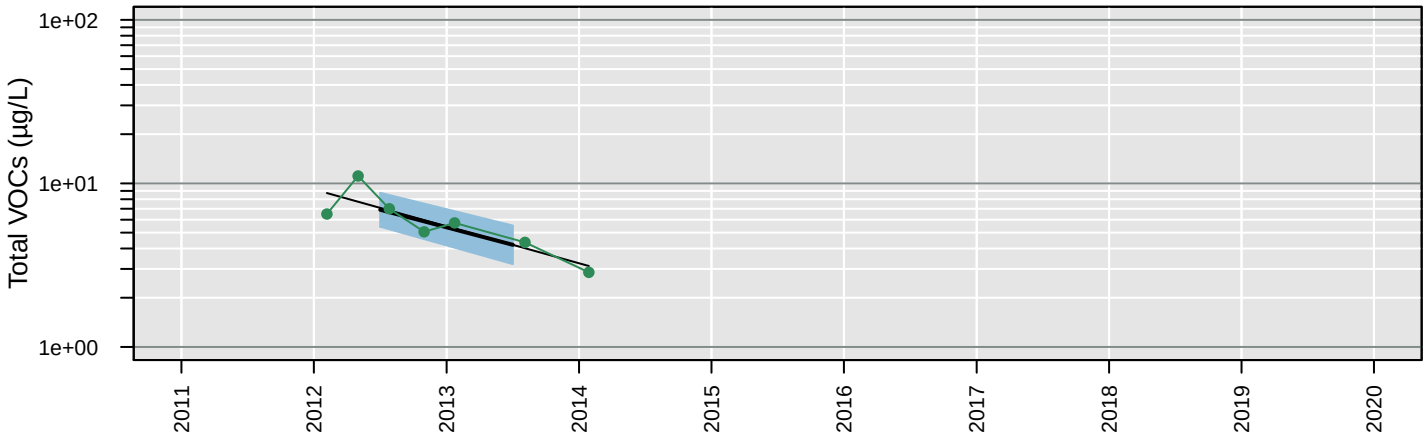
No Analysis Performed

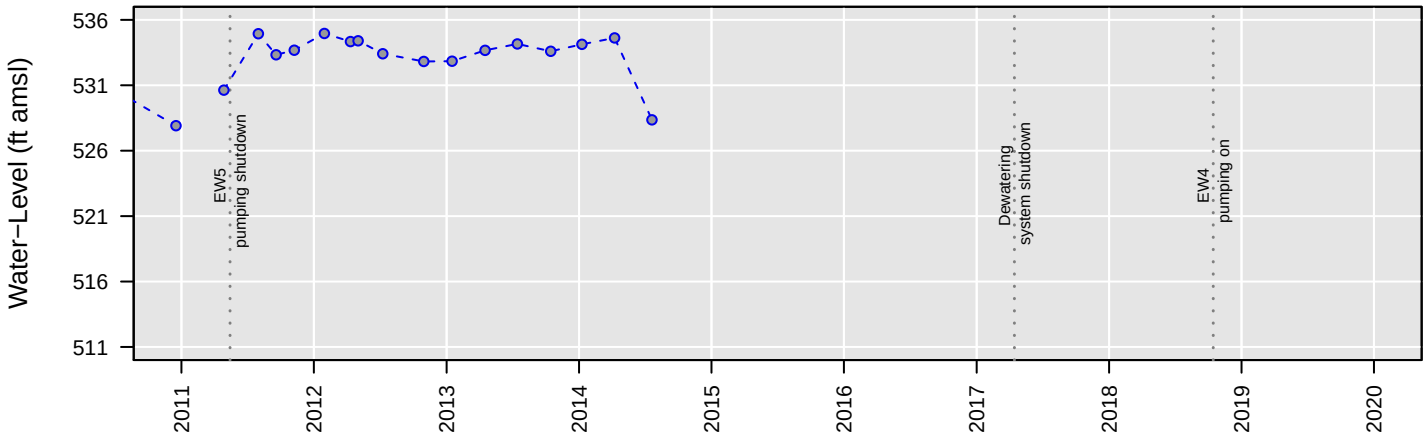
MW90

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

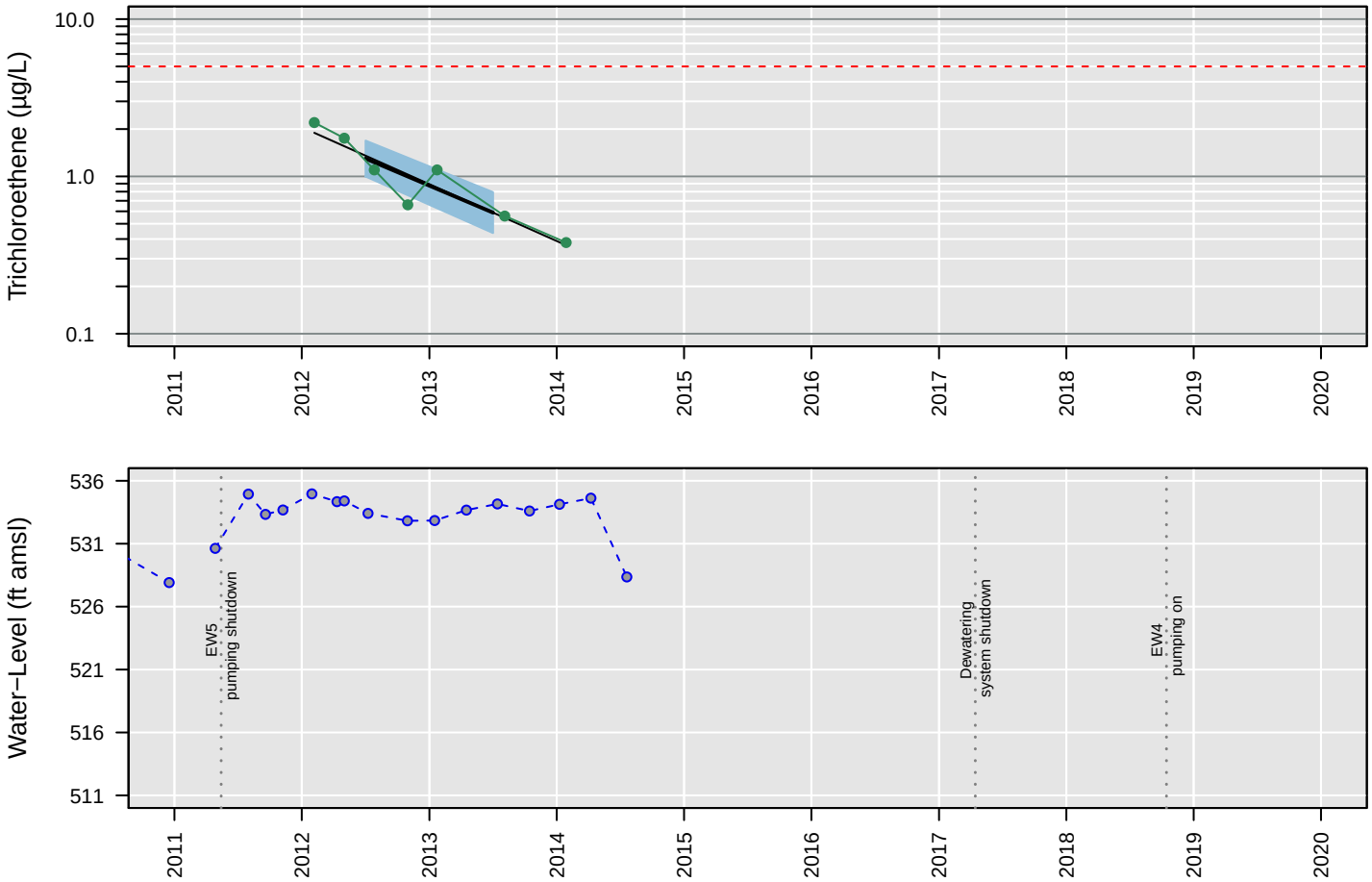
ln Conc. = −0.0014 (+/− 0.00031)*Date + 24 (+/− 4.9)

Regression Statistics for January 2013 to January 2014
Geometric Mean: 4.2 µg/L
UCL: 5.5 µg/L
LCL: 3.2 µg/L

MW90

Trichloroethene

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

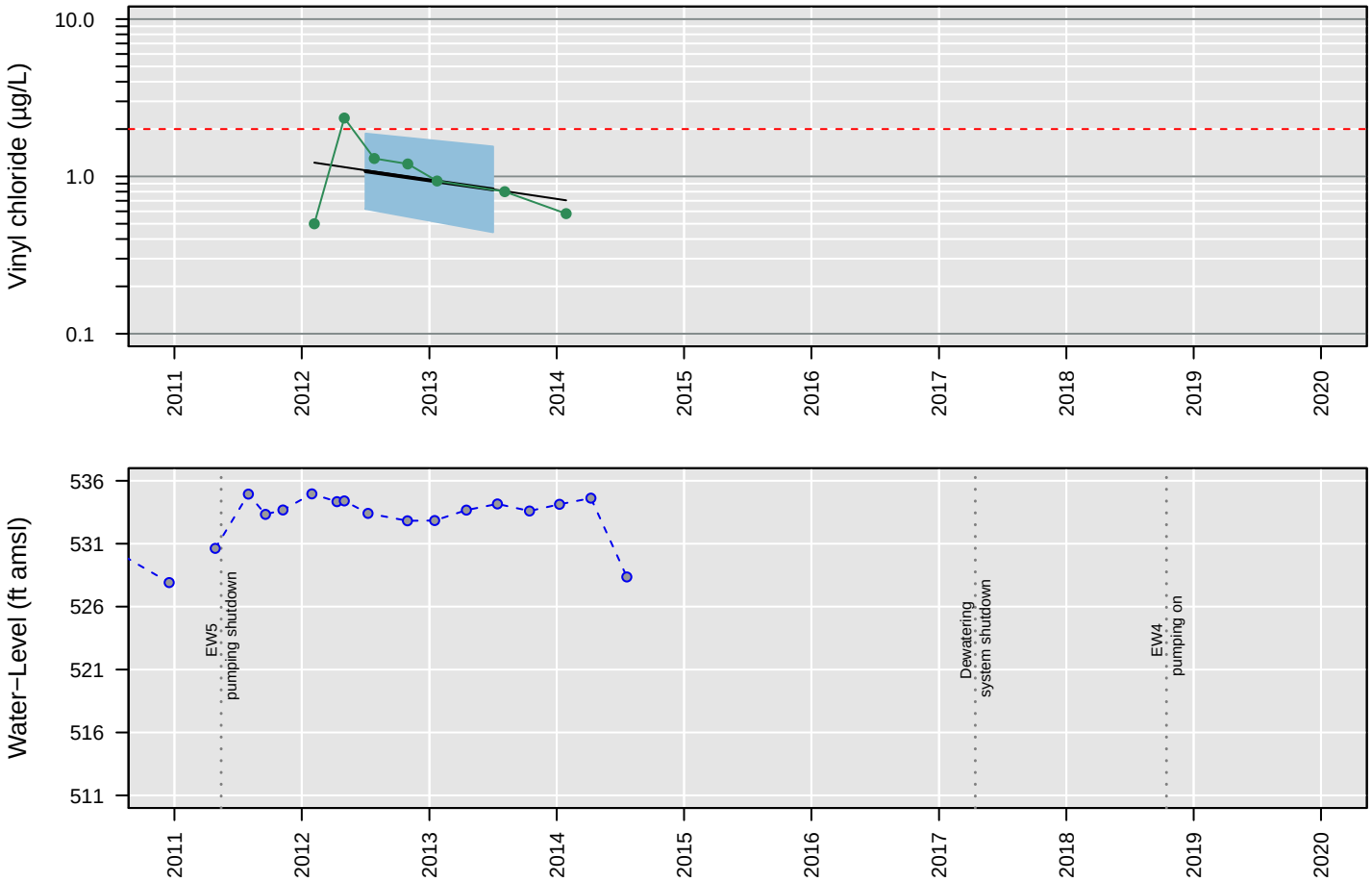
ln Conc. = −0.0023 (+/− 0.00034)*Date + 36 (+/− 5.4)

Regression Statistics for January 2013 to January 2014
Geometric Mean: 0.59 µg/L
UCL: 0.79 µg/L
LCL: 0.44 µg/L

MW90

Vinyl chloride

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

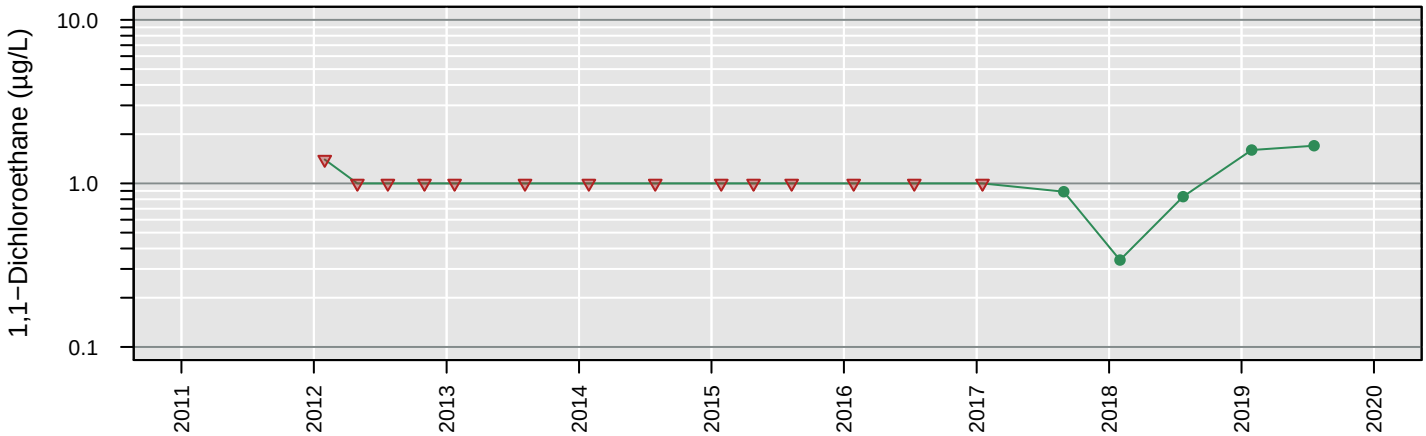
Regression Statistics for January 2013 to January 2014
Geometric Mean: 0.83 µg/L
UCL: 1.5 µg/L
LCL: 0.44 µg/L

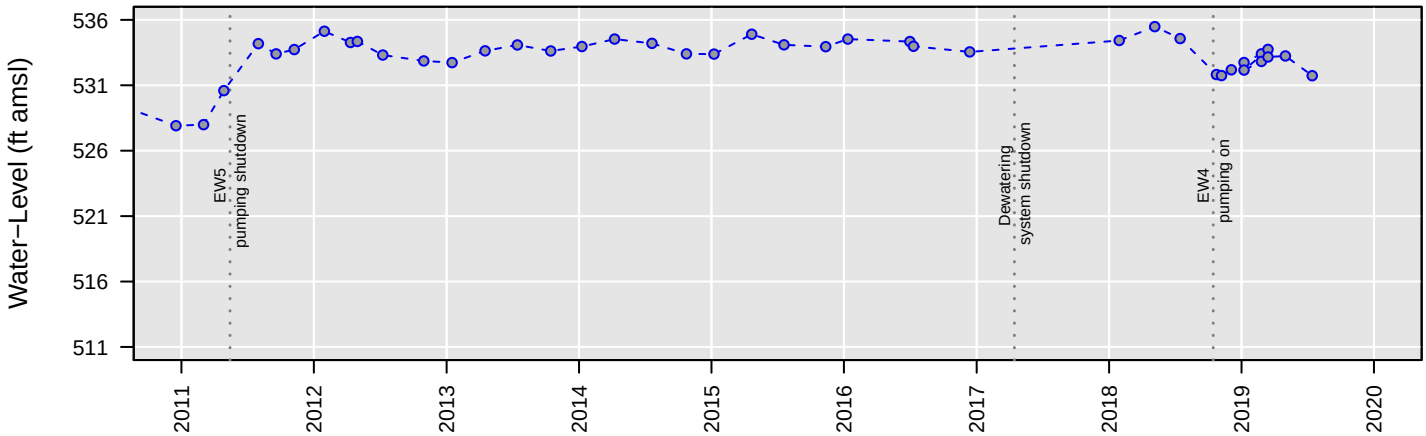
MW91

1,1−Dichloroethane

Number of Comparisons: 19
Percent NDs: 74%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





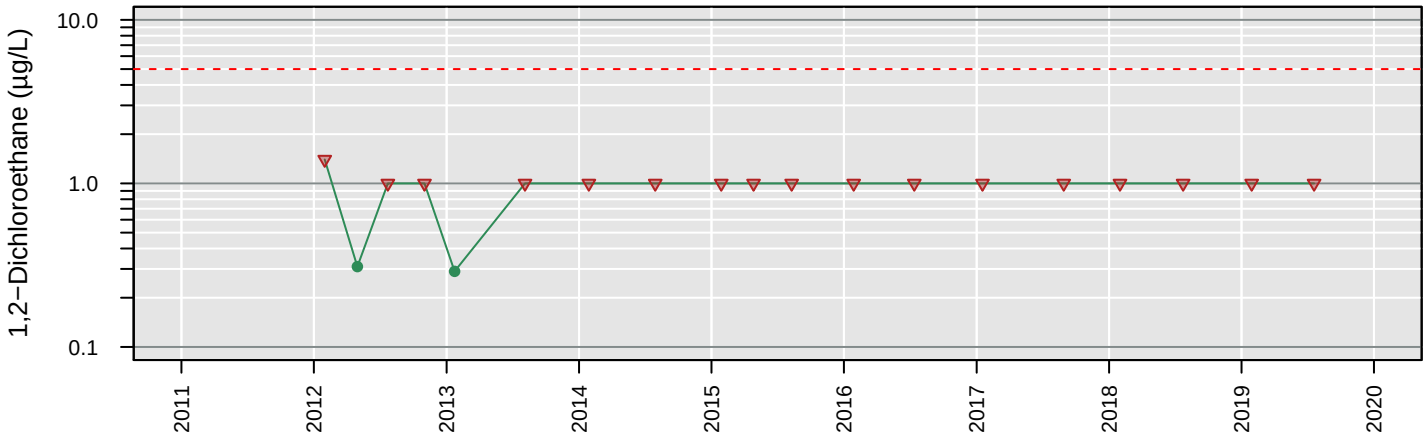
No Analysis Performed

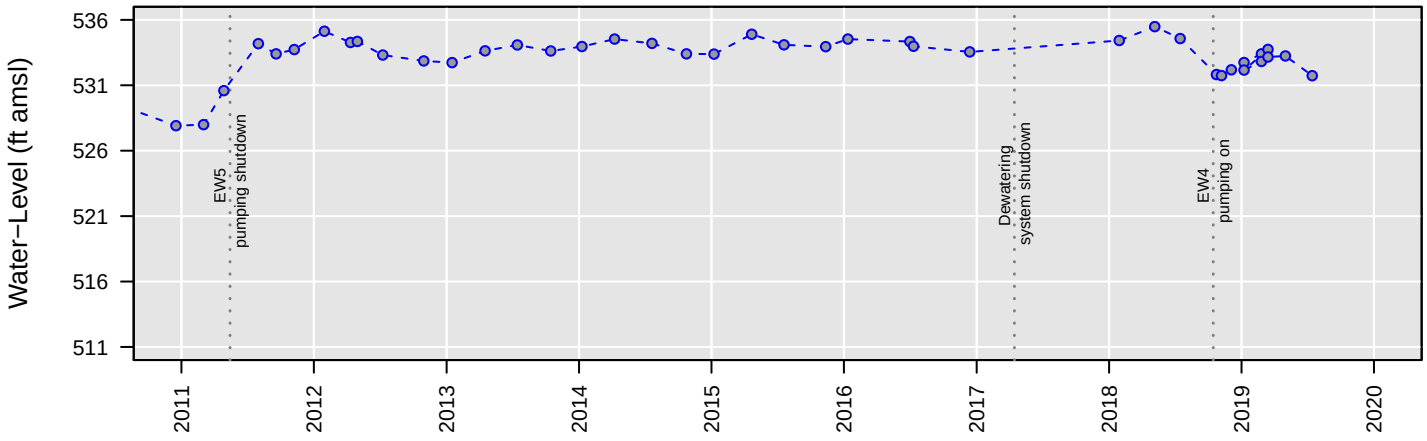
MW91

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 89%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





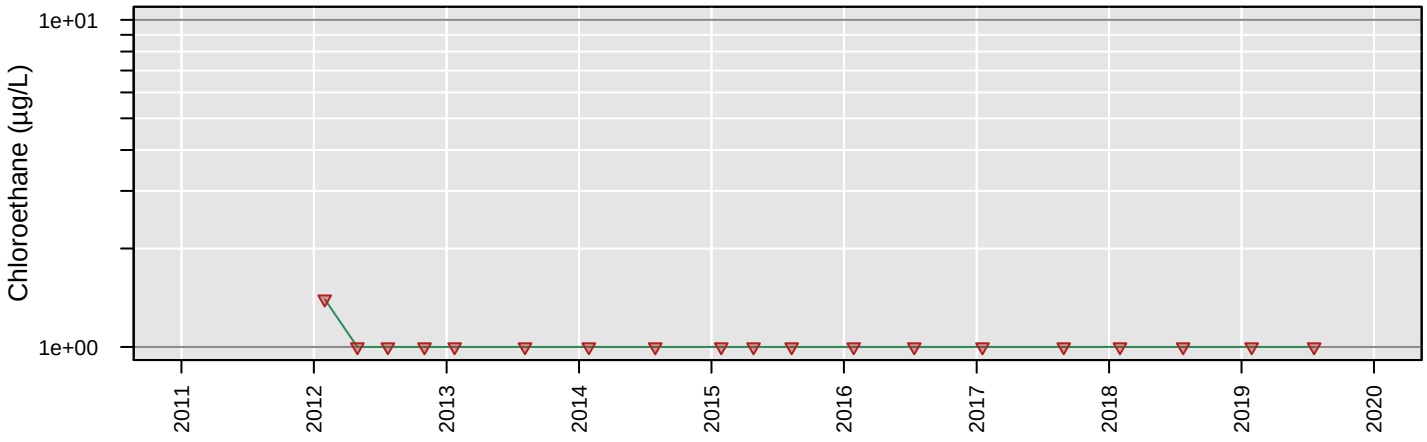
No Analysis Performed

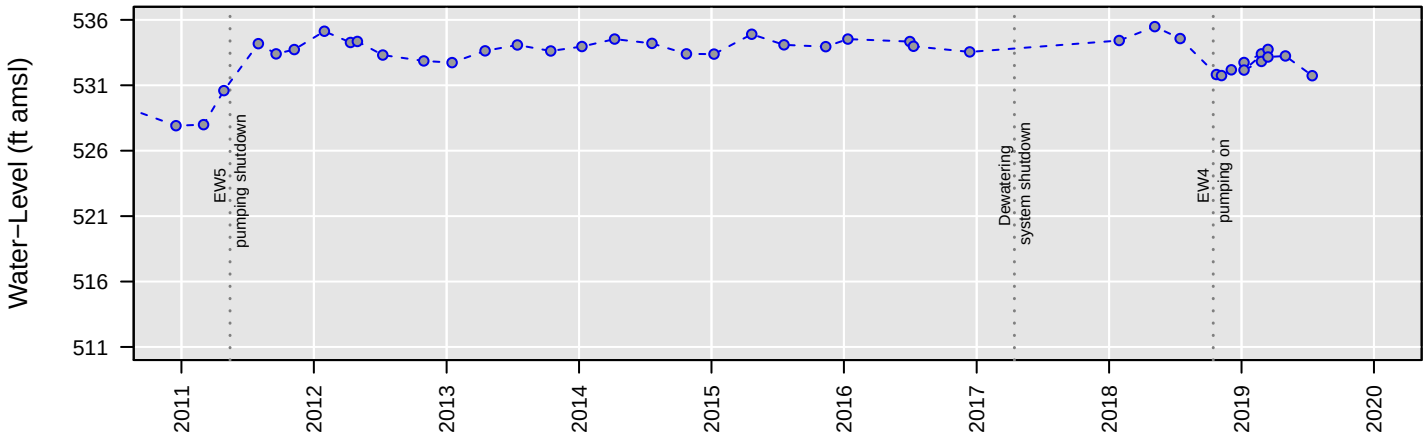
MW91

Chloroethane

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



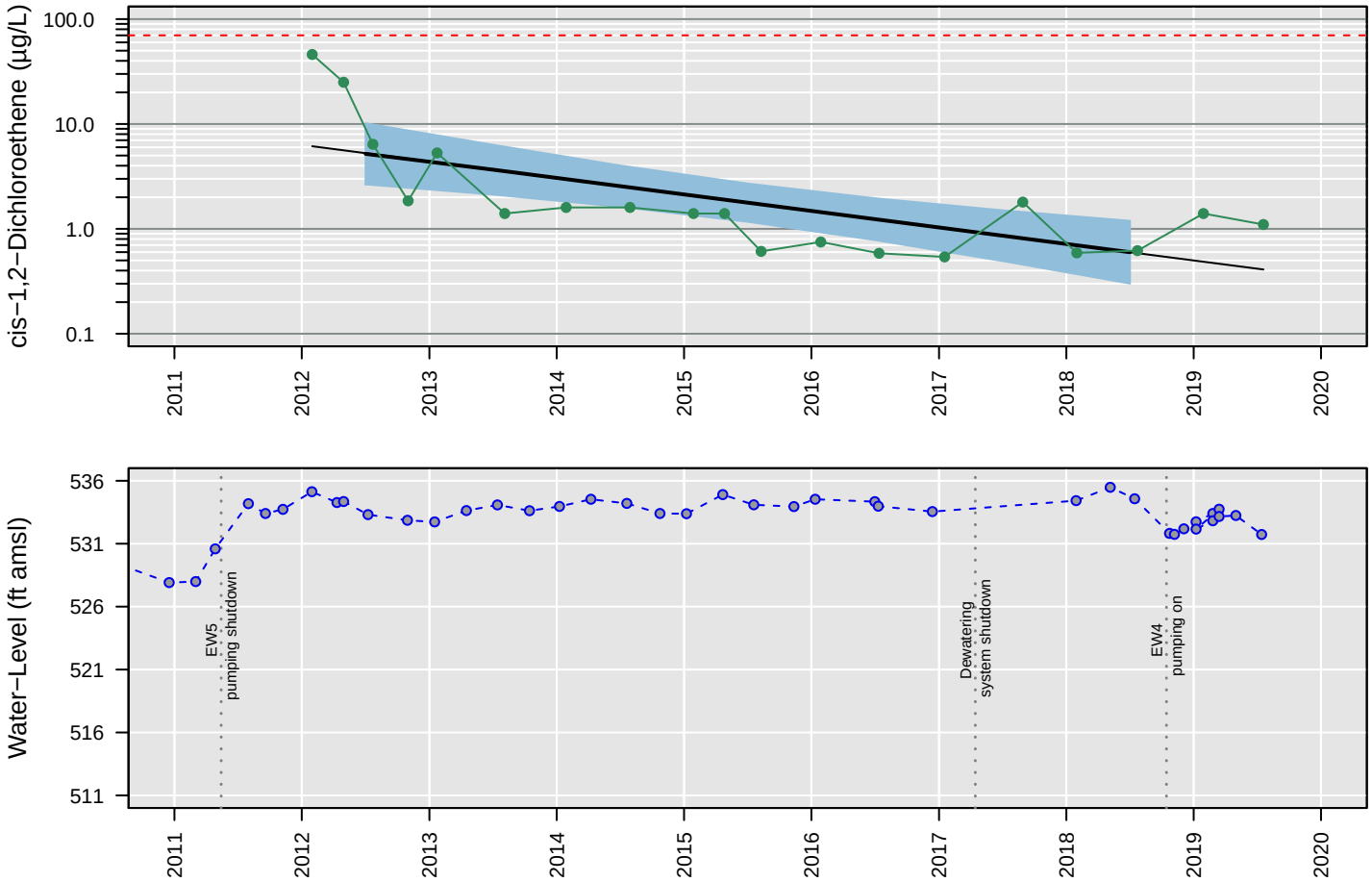


No Analysis Performed

MW91

cis−1,2−Dichloroethene

Number of Comparisons: 19
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.00099 (+/− 0.00023)*Date + 17 (+/− 3.9)

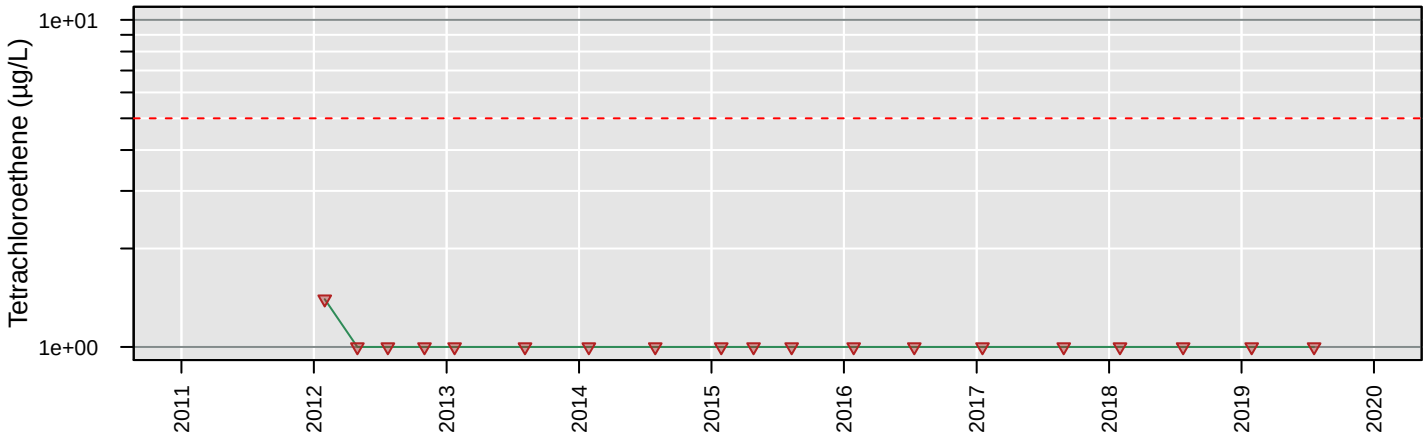
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.6 µg/L
UCL: 1.2 µg/L
LCL: 0.3 µg/L

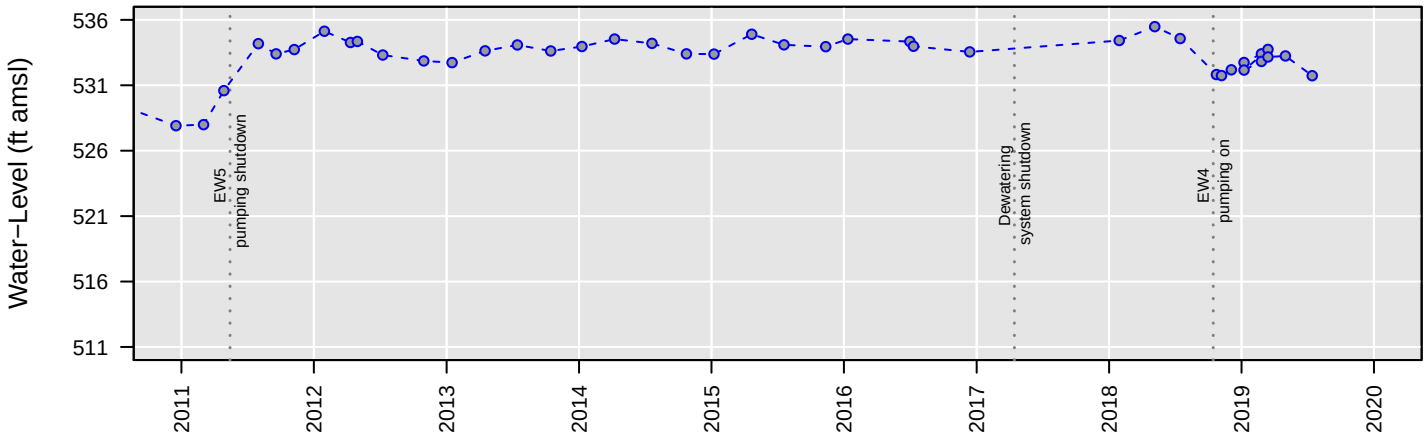
MW91

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



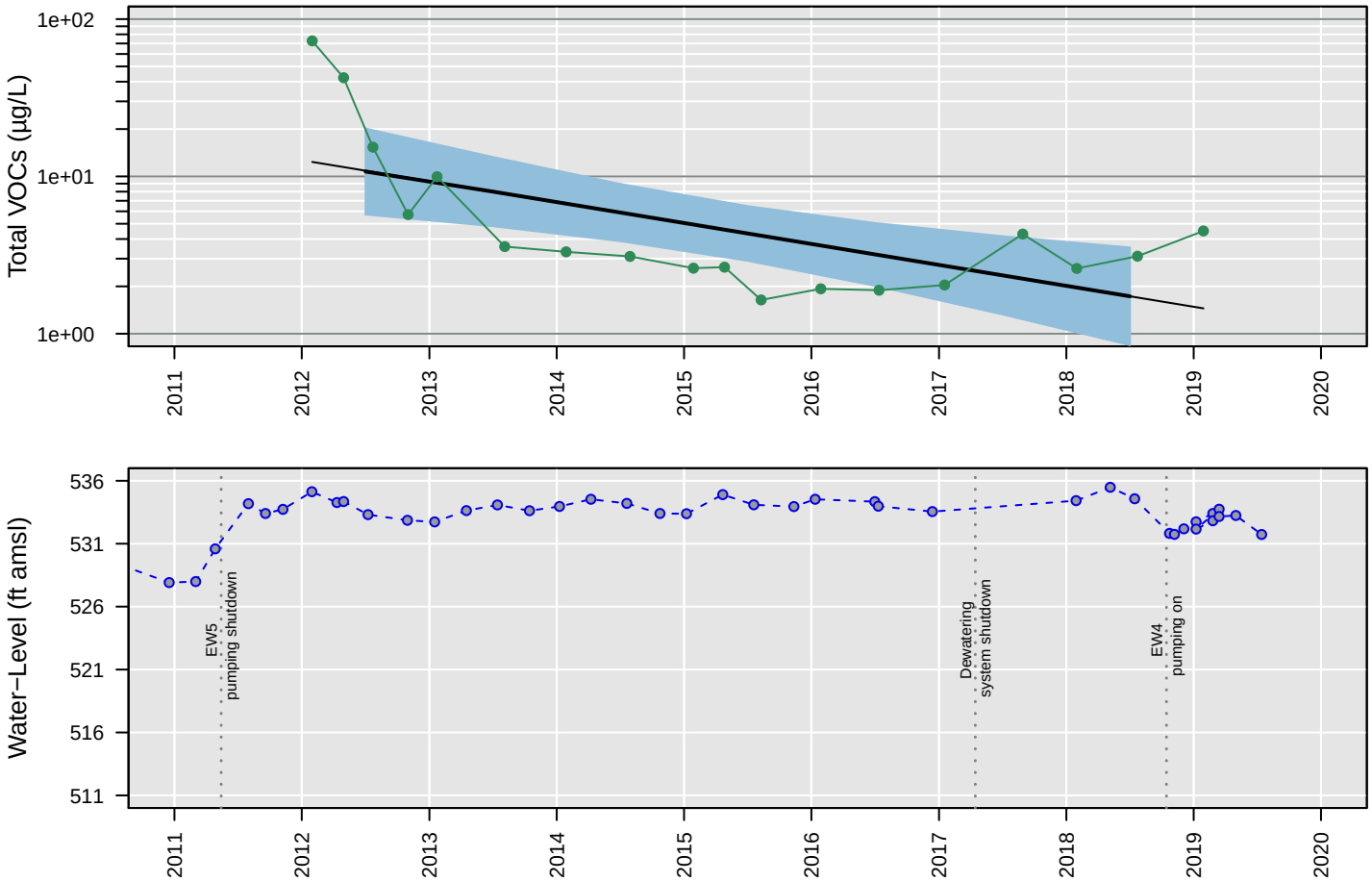


No Analysis Performed

MW91

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%



Censored Regression (Tobit) Model

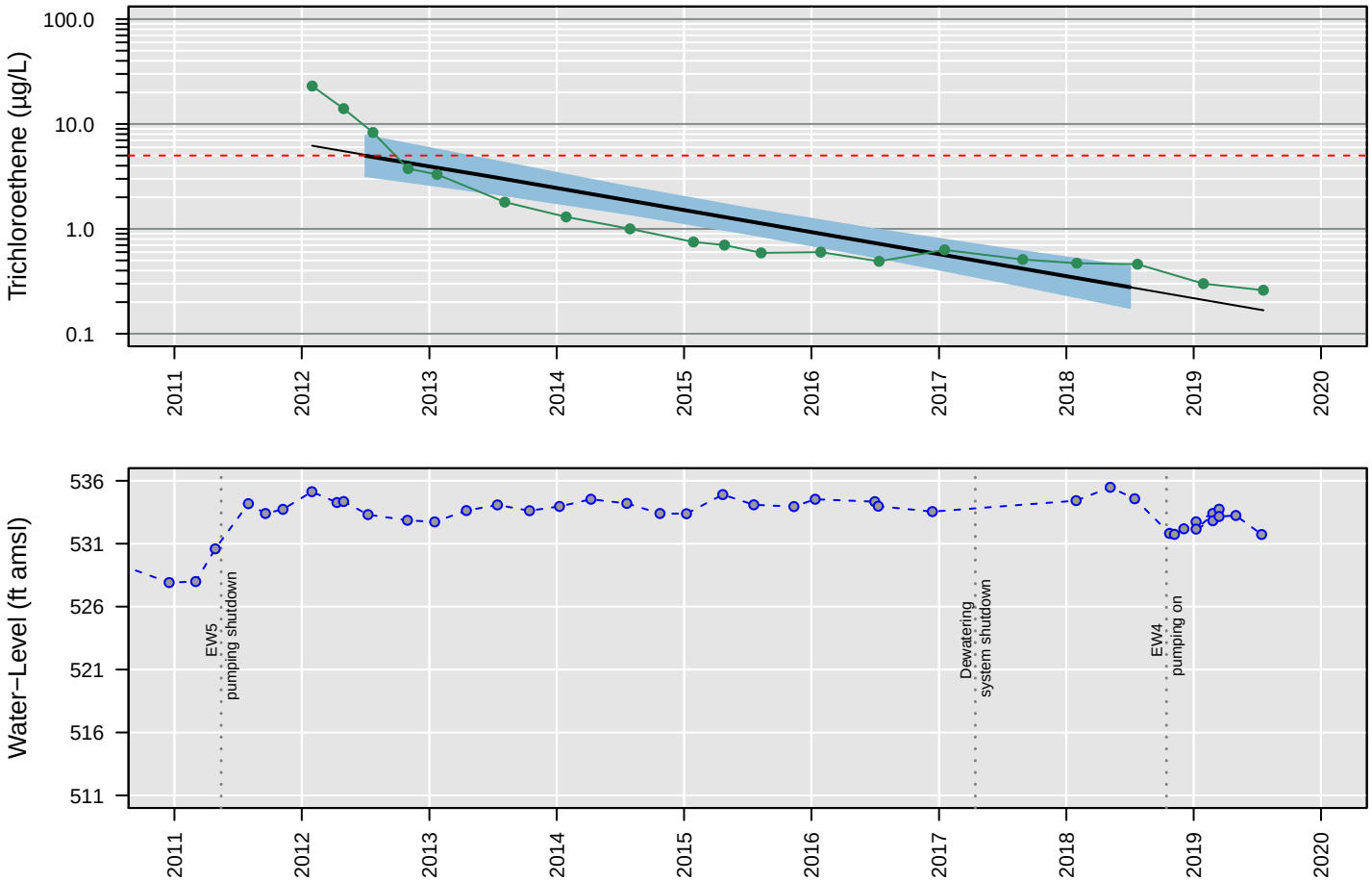
ln Conc. = −0.00084 (+/− 0.00023)*Date + 15 (+/− 3.9)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.7 µg/L
UCL: 3.5 µg/L
LCL: 0.85 µg/L

MW91

Trichloroethene

Number of Comparisons: 19
Percent NDs: 0%



Censored Regression (Tobit) Model

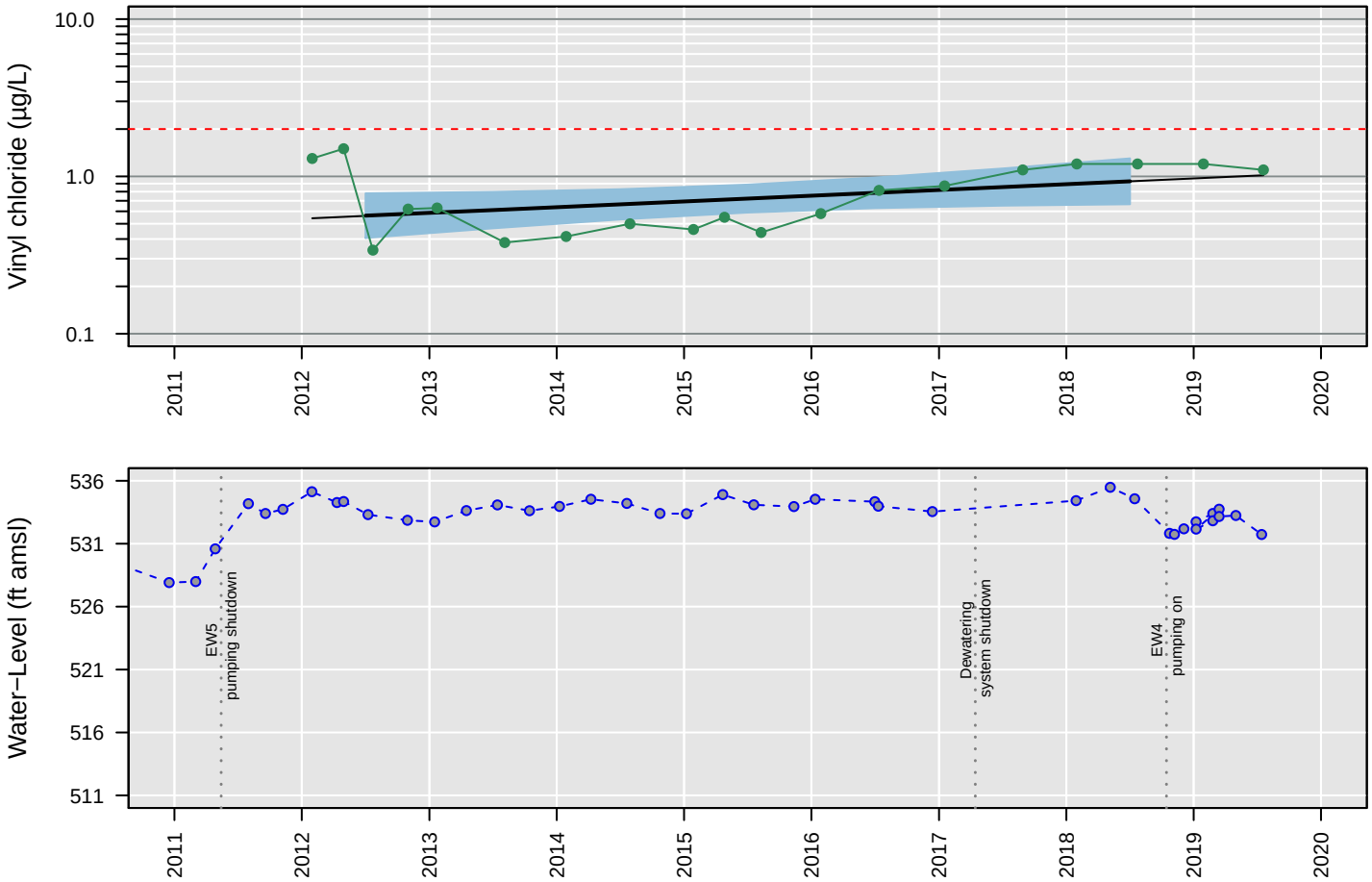
ln Conc. = −0.0013 (+/− 0.00015)*Date + 22 (+/− 2.6)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.28 µg/L
UCL: 0.44 µg/L
LCL: 0.18 µg/L

MW91

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

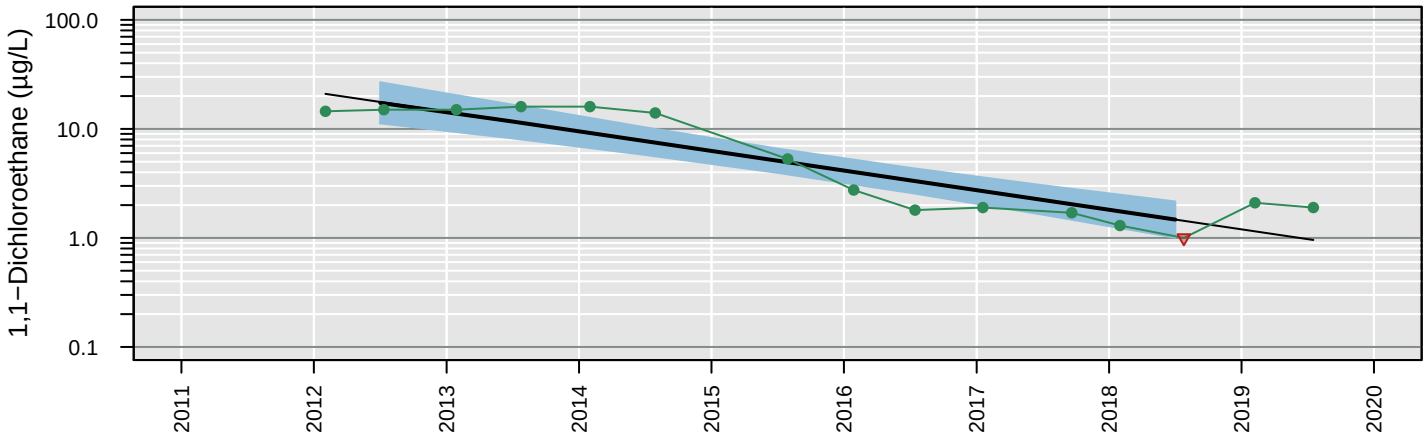
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.93 µg/L
UCL: 1.3 µg/L
LCL: 0.67 µg/L

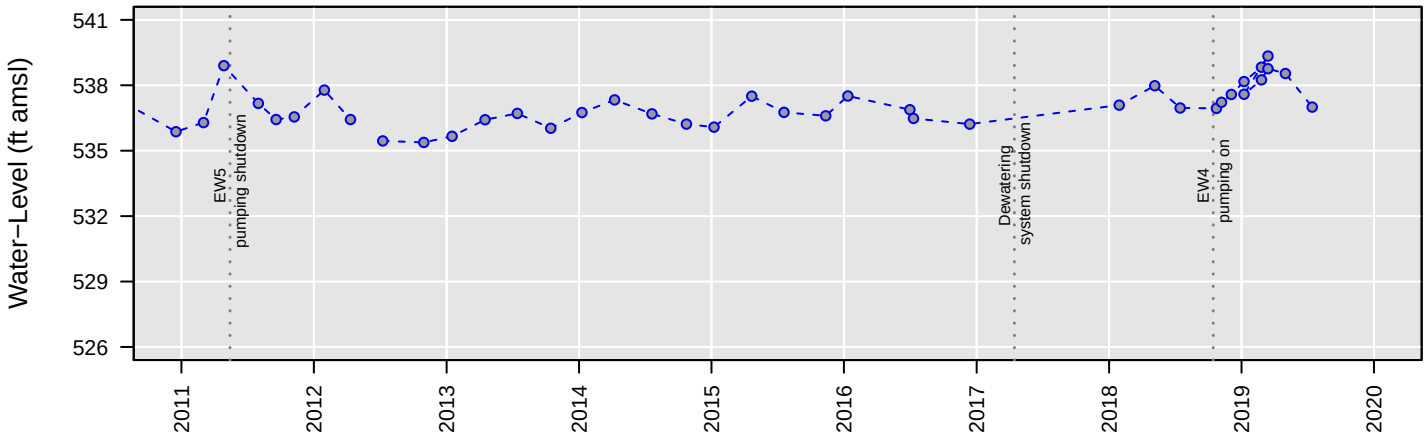
MW92

1,1−Dichloroethane

Number of Comparisons: 15
Percent NDs: 7%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

ln Conc. = −0.0011 (+/− 0.00013)*Date + 20 (+/− 2.3)

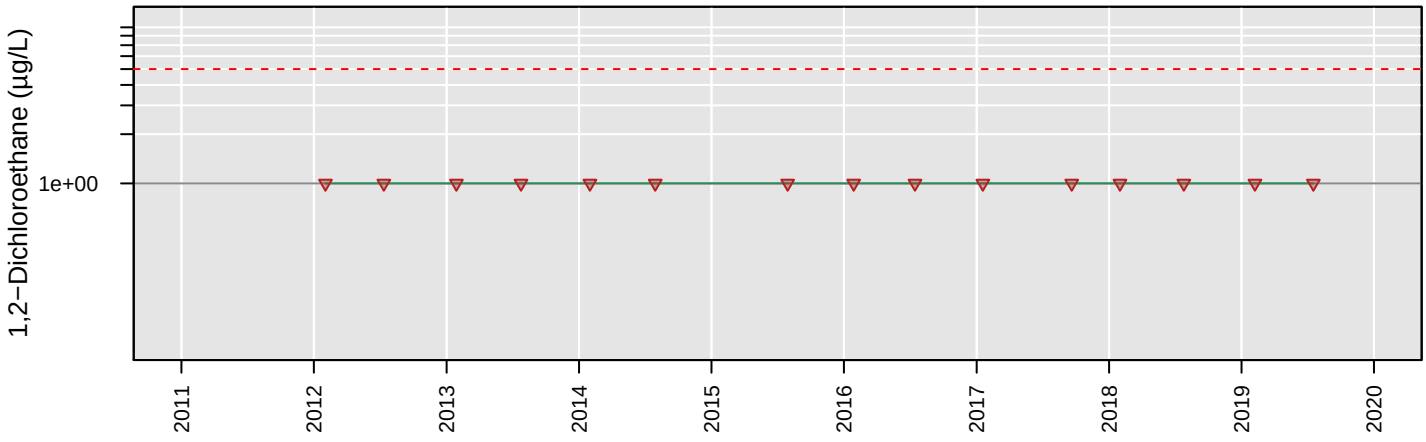
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.5 µg/L
UCL: 2.2 µg/L
LCL: 1 µg/L

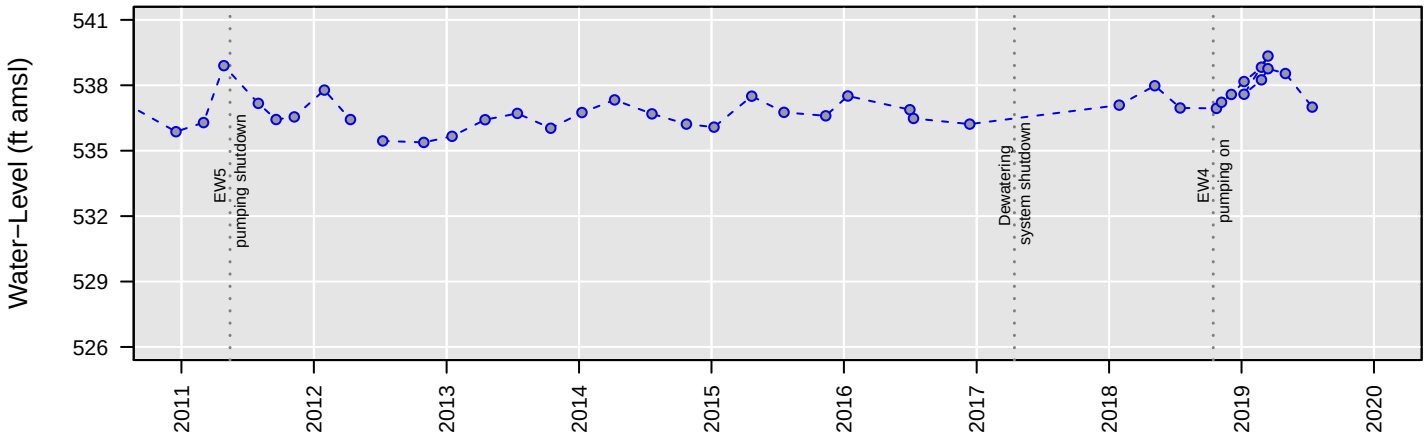
MW92

1,2−Dichloroethane

Number of Comparisons: 15
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





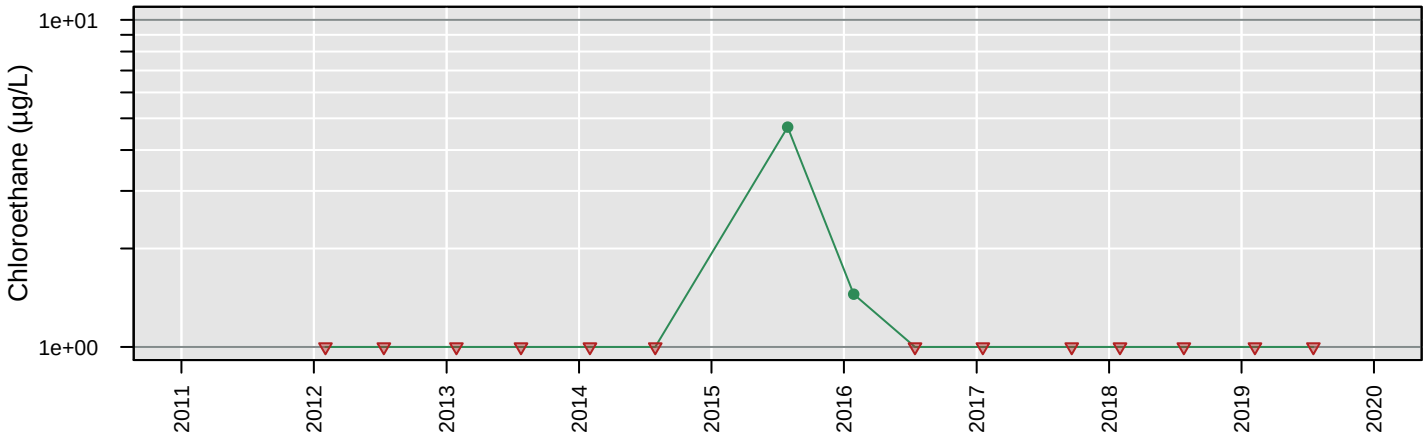
No Analysis Performed

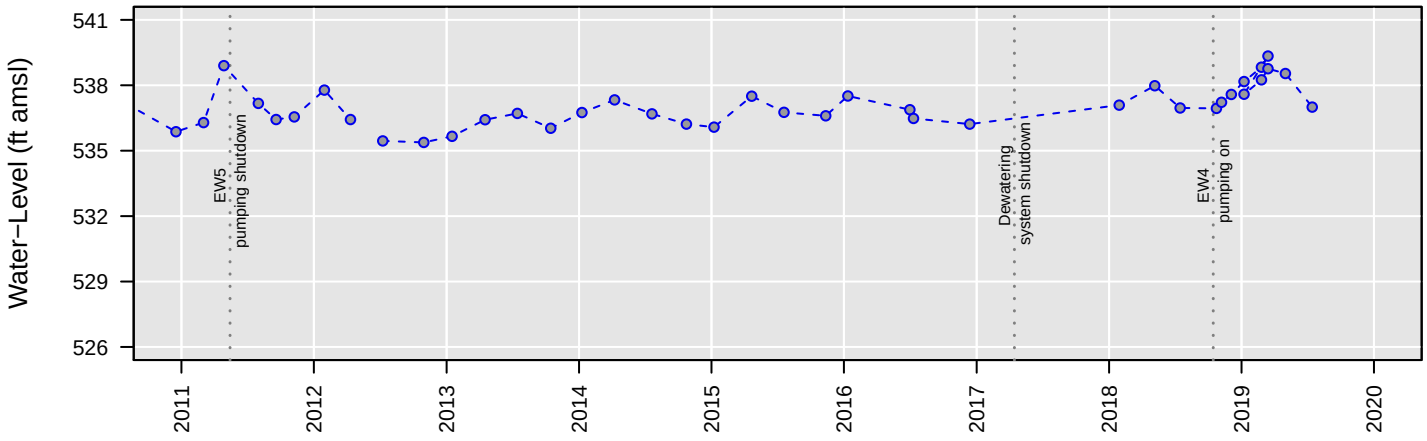
MW92

Chloroethane

Number of Comparisons: 15
Percent NDs: 87%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



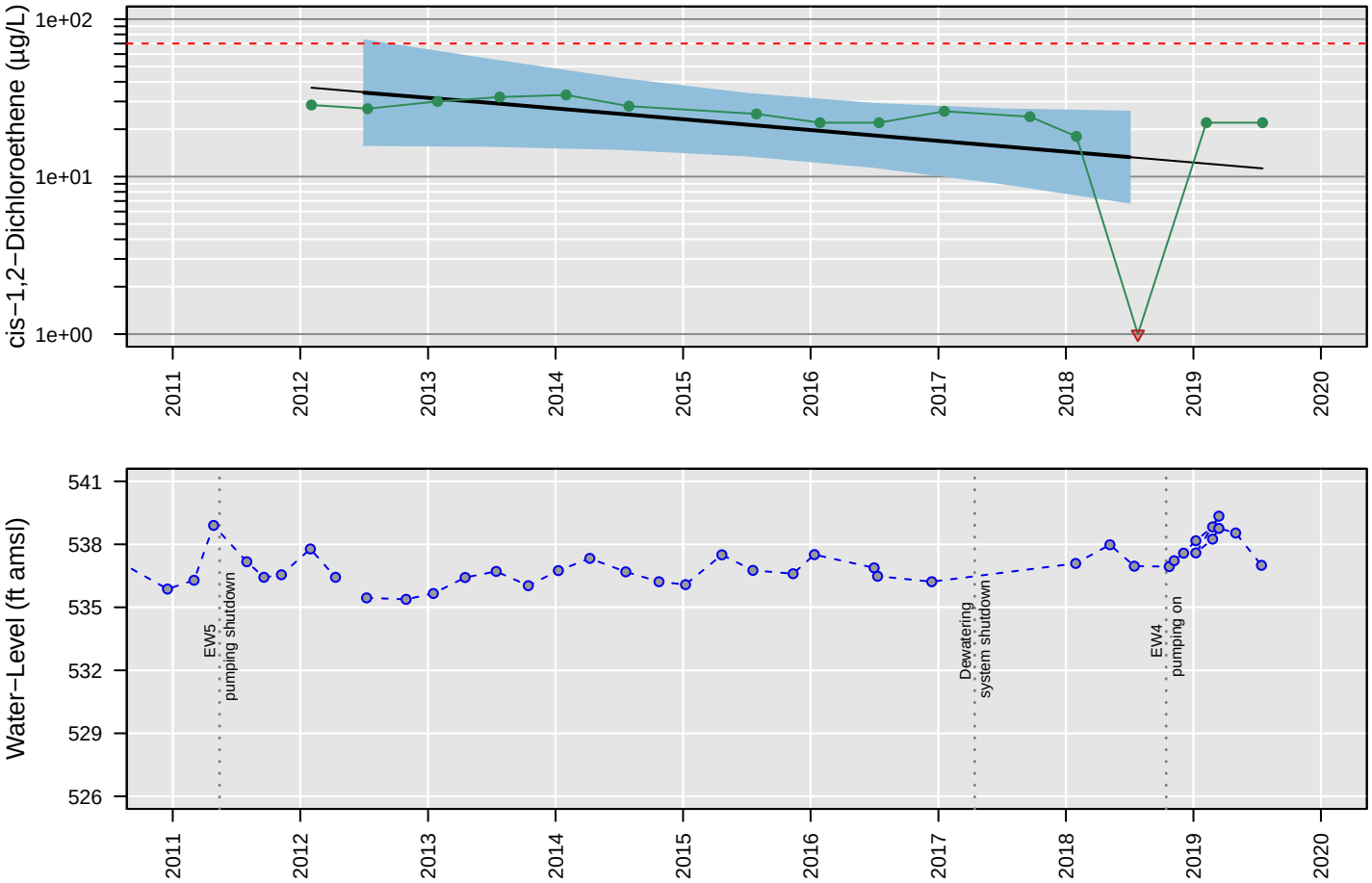


No Analysis Performed

MW92

cis−1,2−Dichloroethene

Number of Comparisons: 15
Percent NDs: 7%



Censored Regression (Tobit) Model

Trend Not Significant

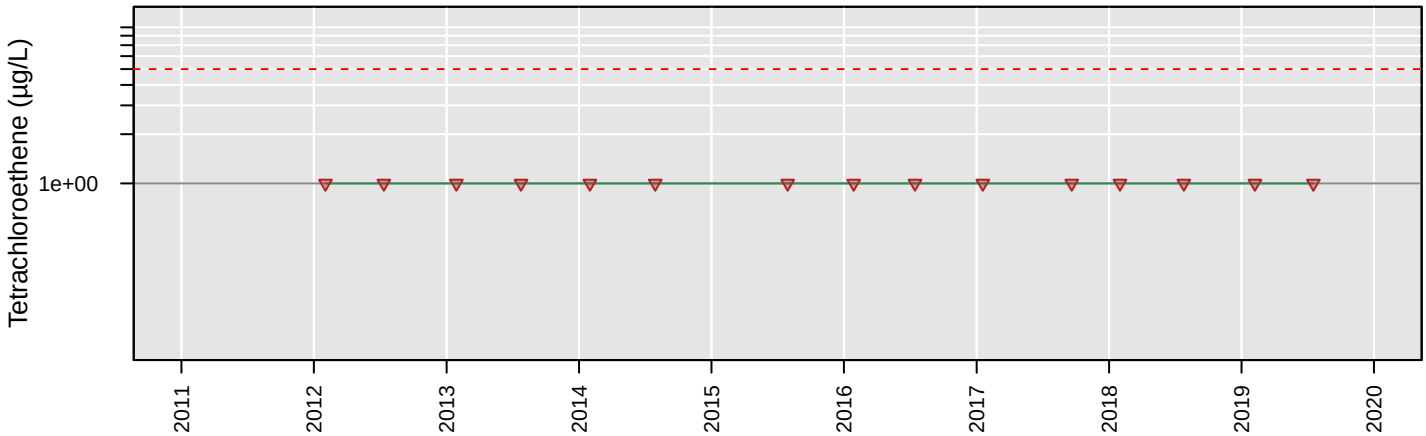
Regression Statistics for January 2018 to January 2019
Geometric Mean: 13 µg/L
UCL: 26 µg/L
LCL: 6.8 µg/L

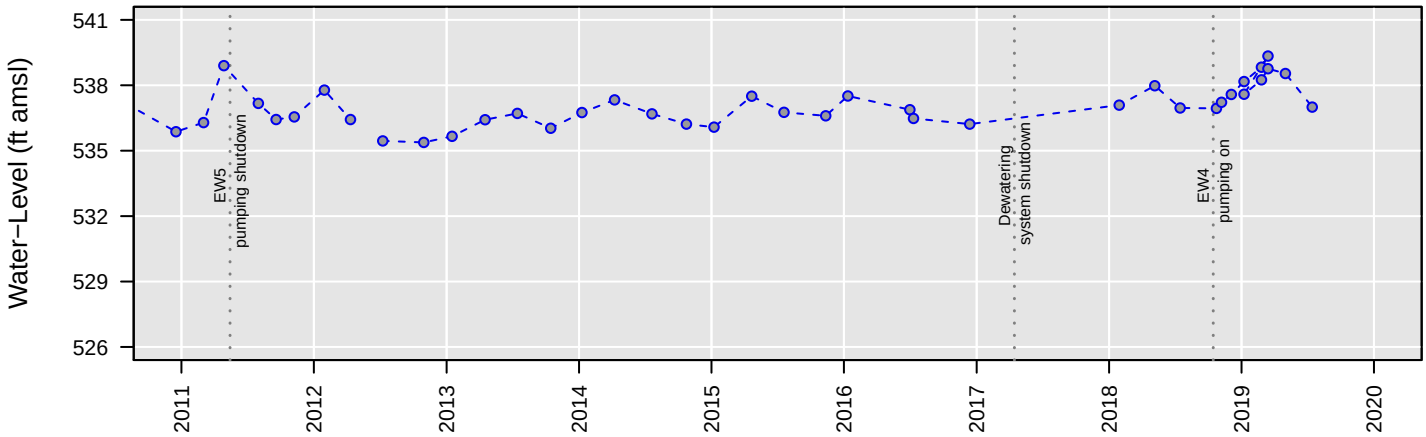
MW92

Tetrachloroethene

Number of Comparisons: 15
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



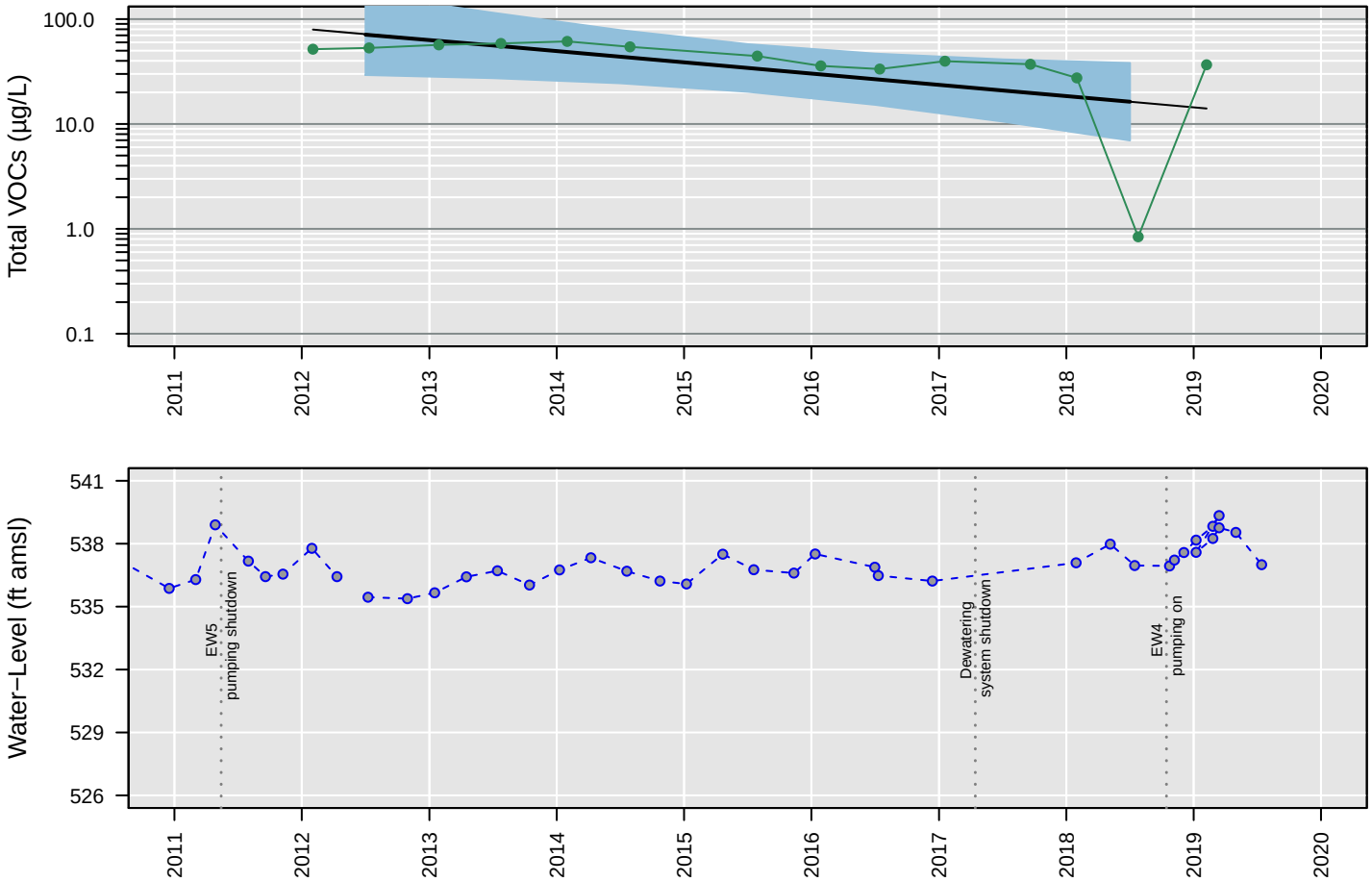


No Analysis Performed

MW92

Total VOCs

Number of Comparisons: 14
Percent NDs: 0%



Censored Regression (Tobit) Model

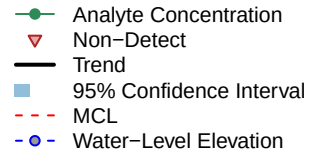
ln Conc. = −0.00068 (+/− 0.00029)*Date + 15 (+/− 4.8)

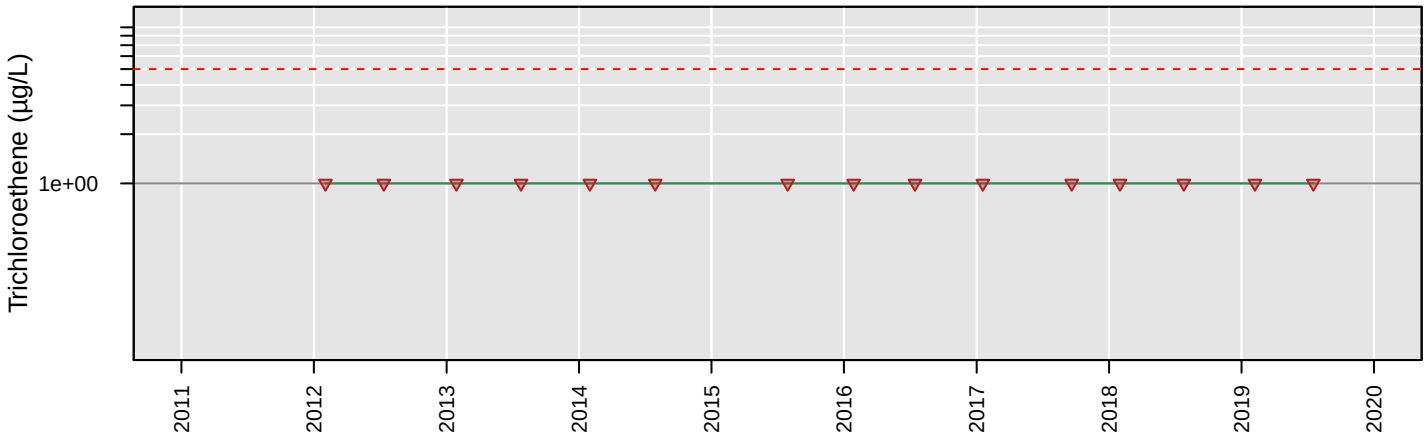
Regression Statistics for January 2018 to January 2019
Geometric Mean: 16 µg/L
UCL: 38 µg/L
LCL: 7 µg/L

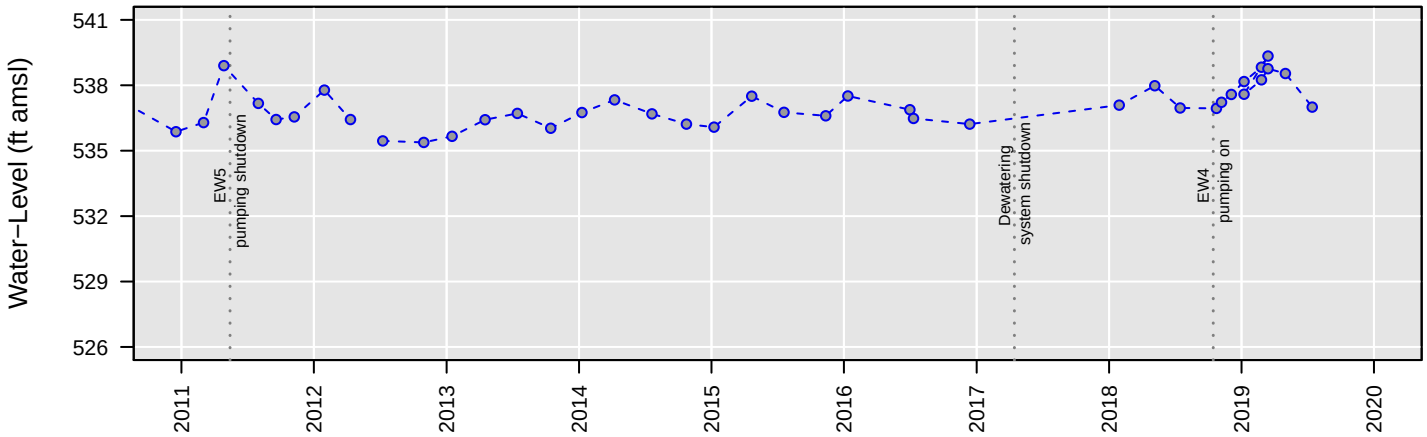
MW92

Trichloroethene

Number of Comparisons: 15
Percent NDs: 100%





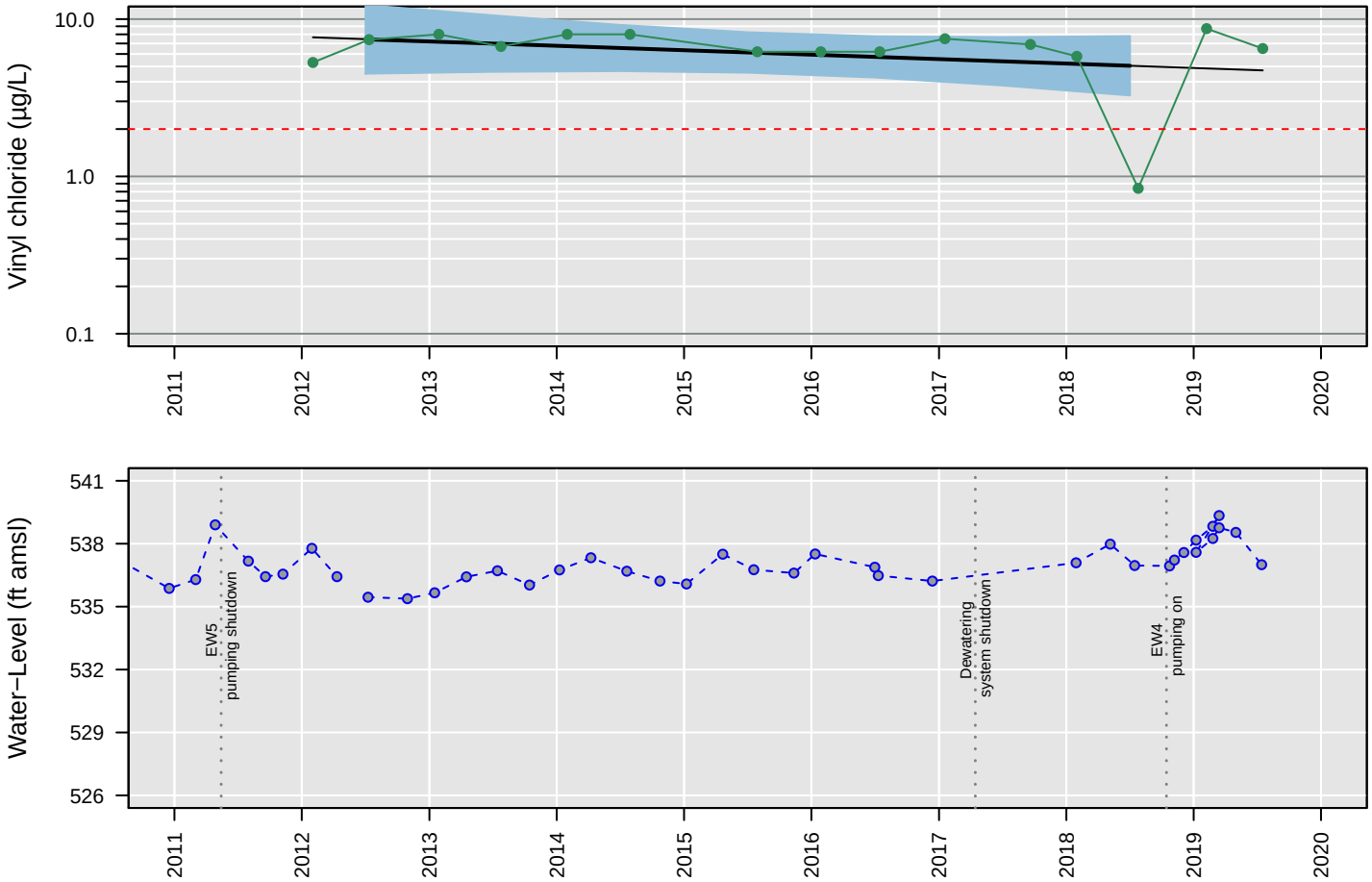


No Analysis Performed

MW92

Vinyl chloride

Number of Comparisons: 15
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

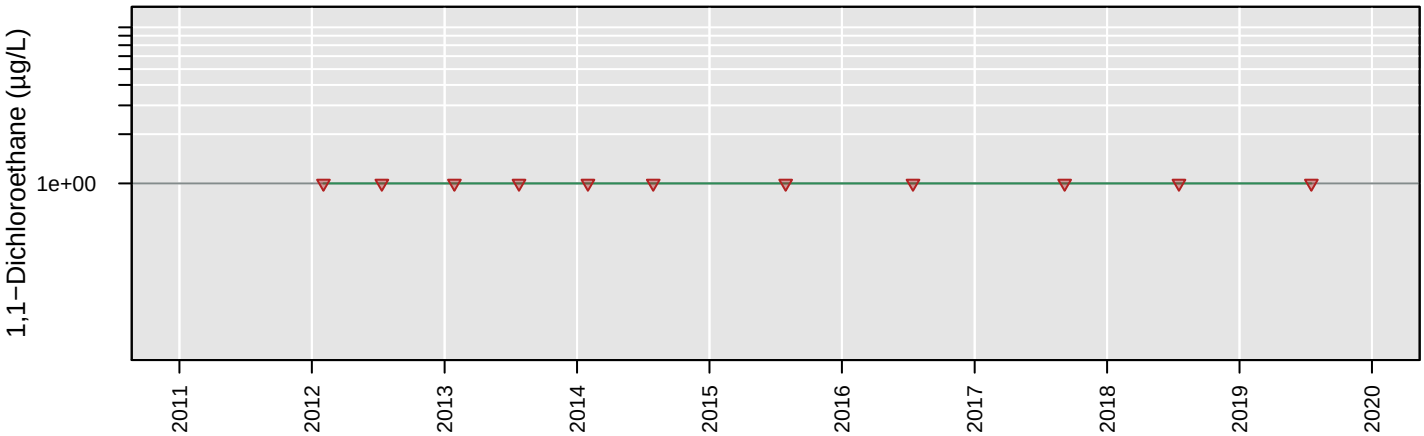
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.1 µg/L
UCL: 7.8 µg/L
LCL: 3.3 µg/L

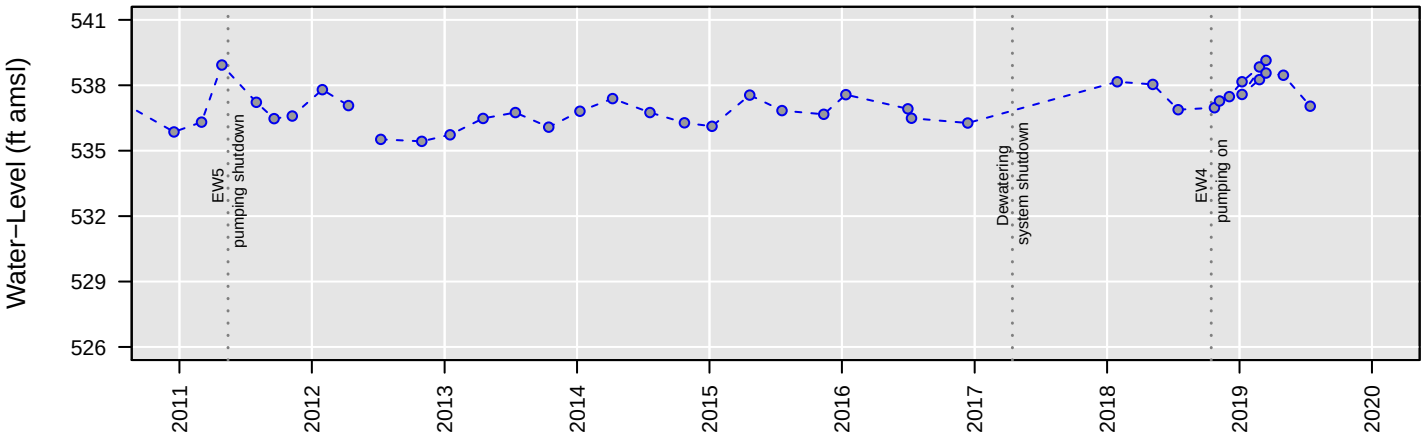
MW93

1,1−Dichloroethane

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





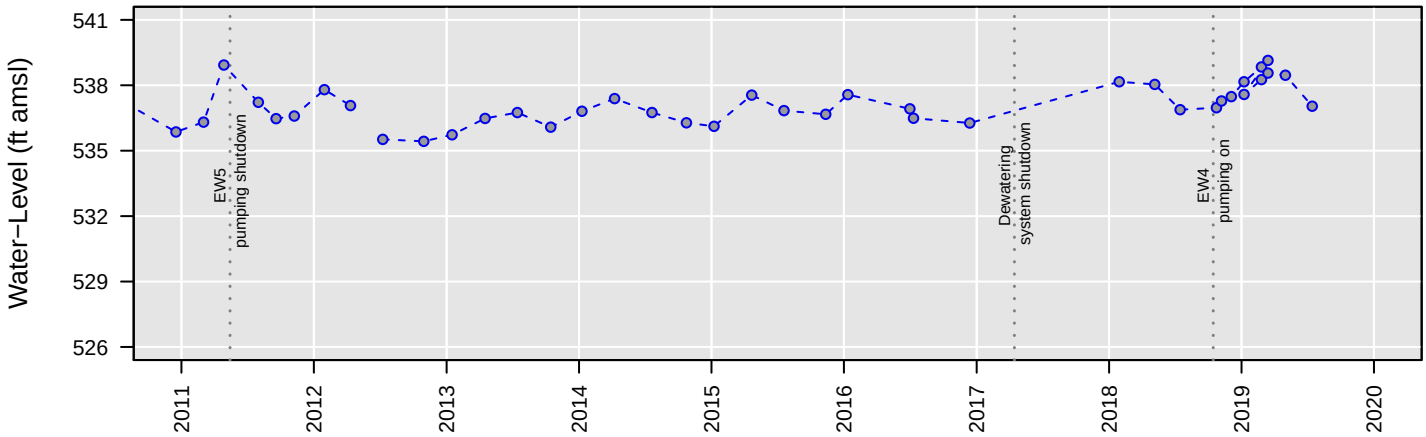
No Analysis Performed

MW93

1,2−Dichloroethane

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



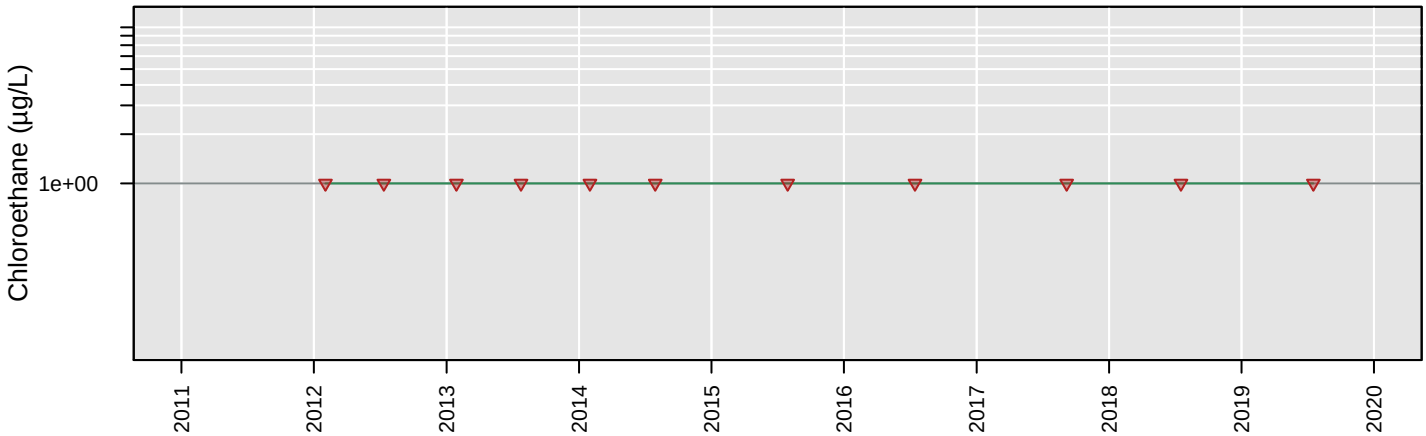
No Analysis Performed

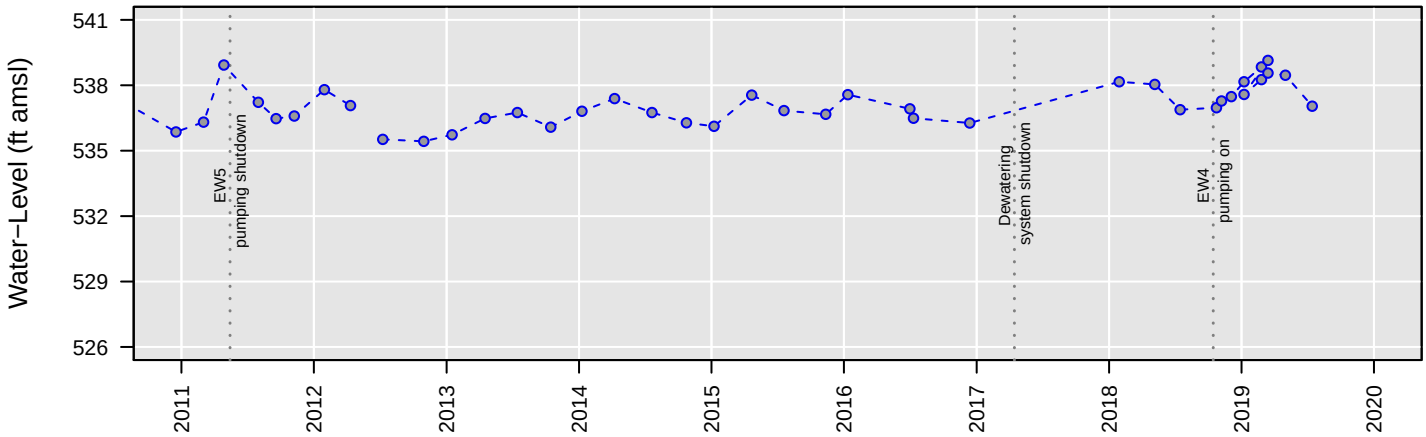
MW93

Chloroethane

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





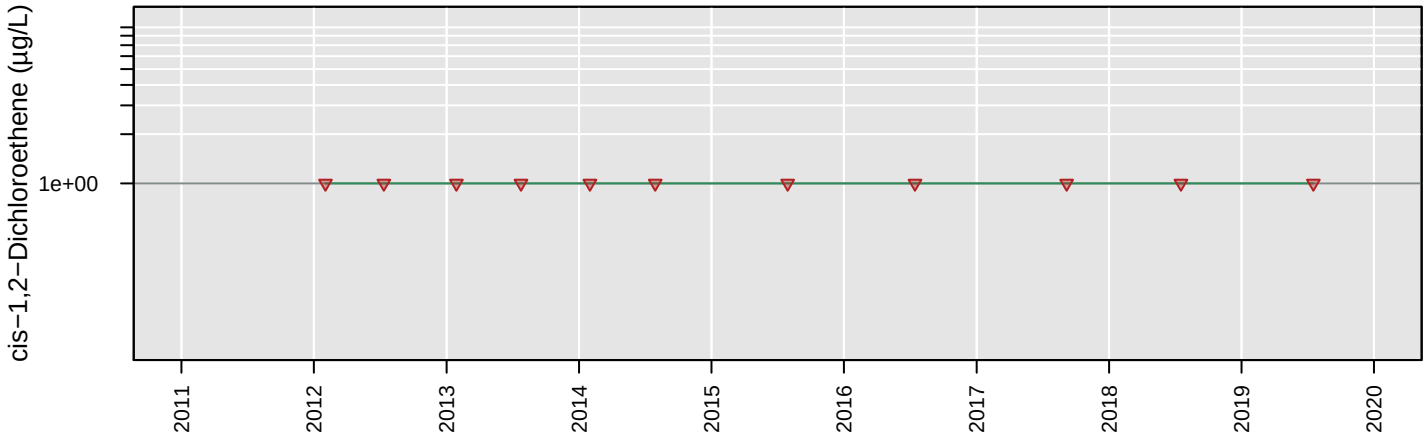
No Analysis Performed

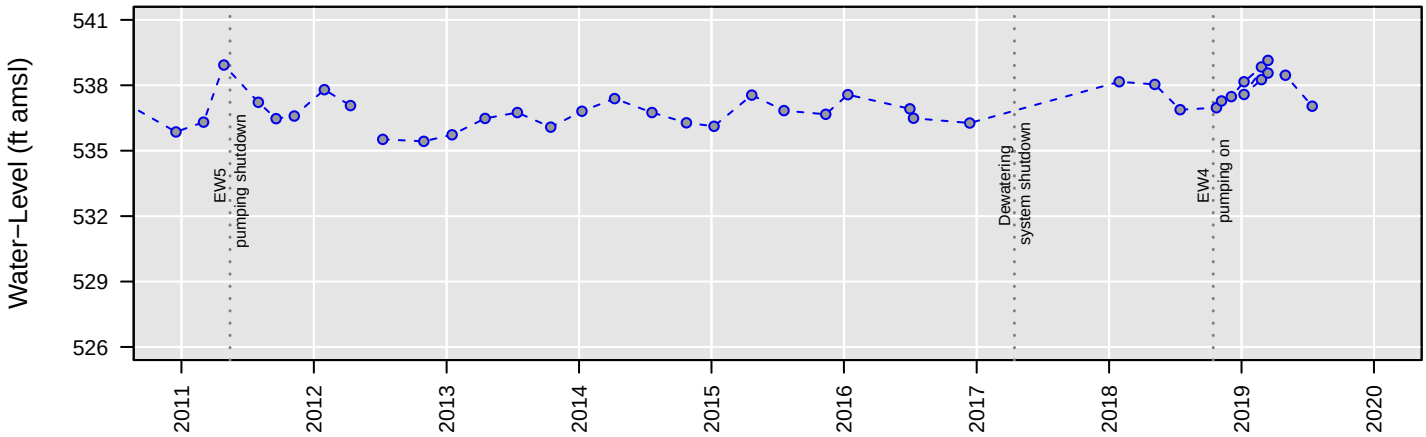
MW93

cis−1,2−Dichloroethene

Number of Comparisons: 11
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



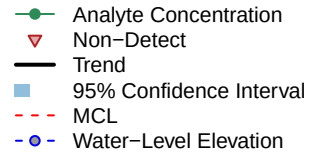


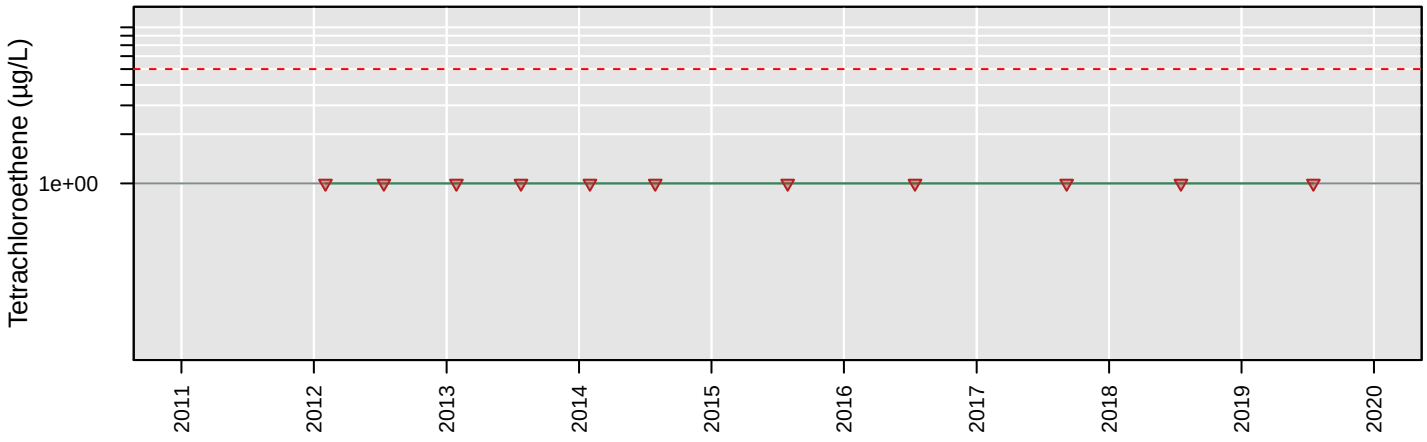
No Analysis Performed

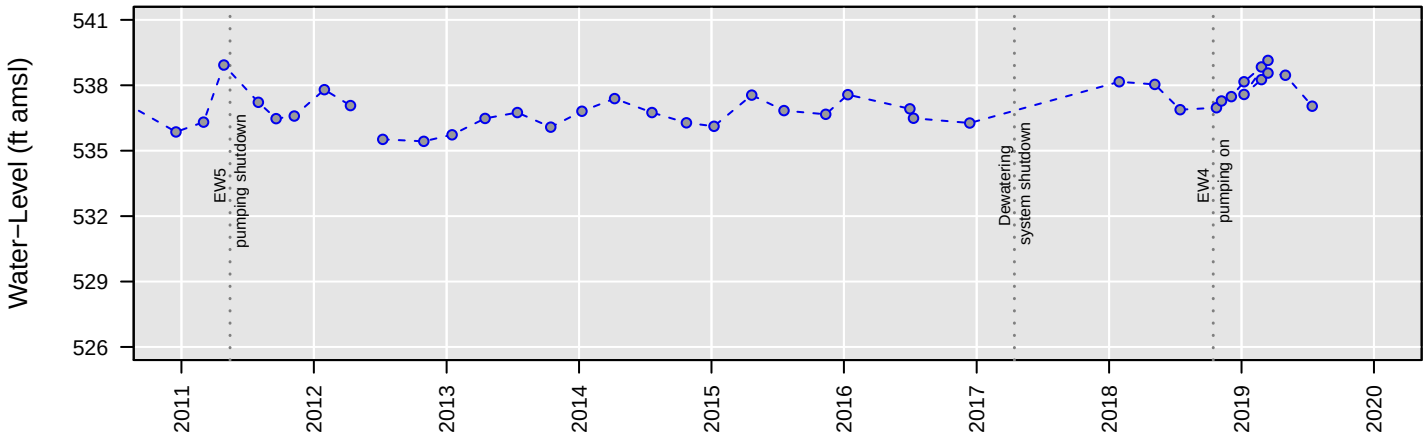
MW93

Tetrachloroethene

Number of Comparisons: 11
Percent NDs: 100%





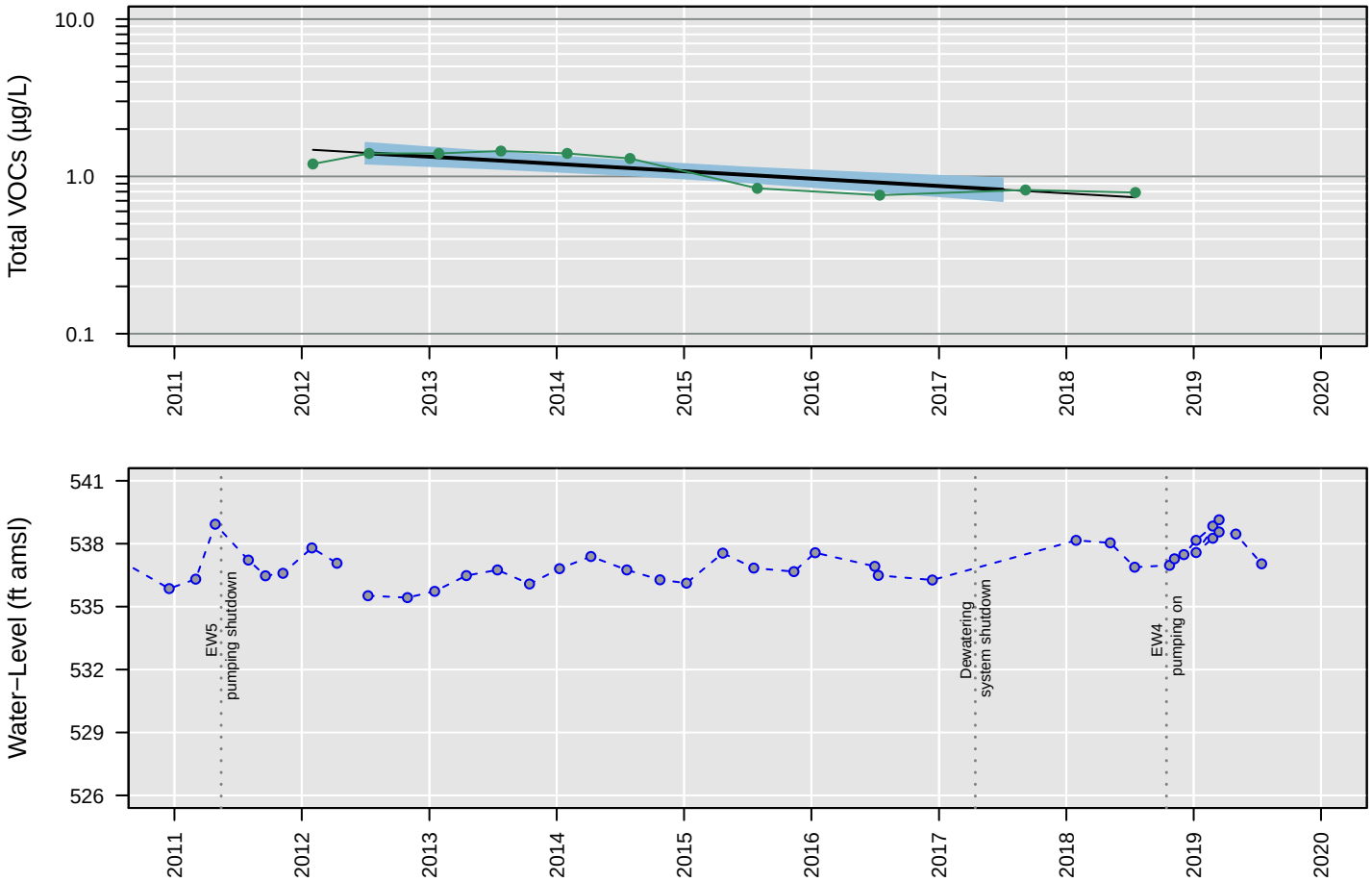


No Analysis Performed

MW93

Total VOCs

Number of Comparisons: 10
Percent NDs: 0%



Censored Regression (Tobit) Model

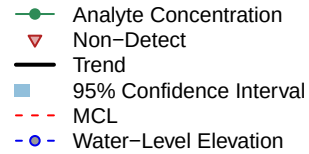
ln Conc. = −0.0003 (+/− 0.000057)*Date + 4.9 (+/− 0.93)

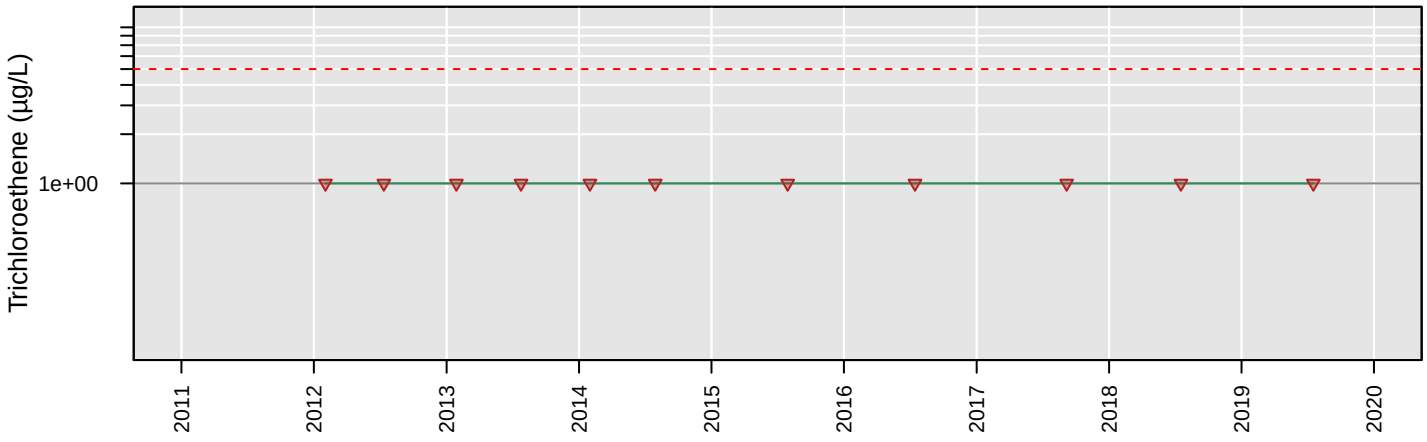
Regression Statistics for January 2017 to January 2018
Geometric Mean: 0.82 µg/L
UCL: 0.97 µg/L
LCL: 0.7 µg/L

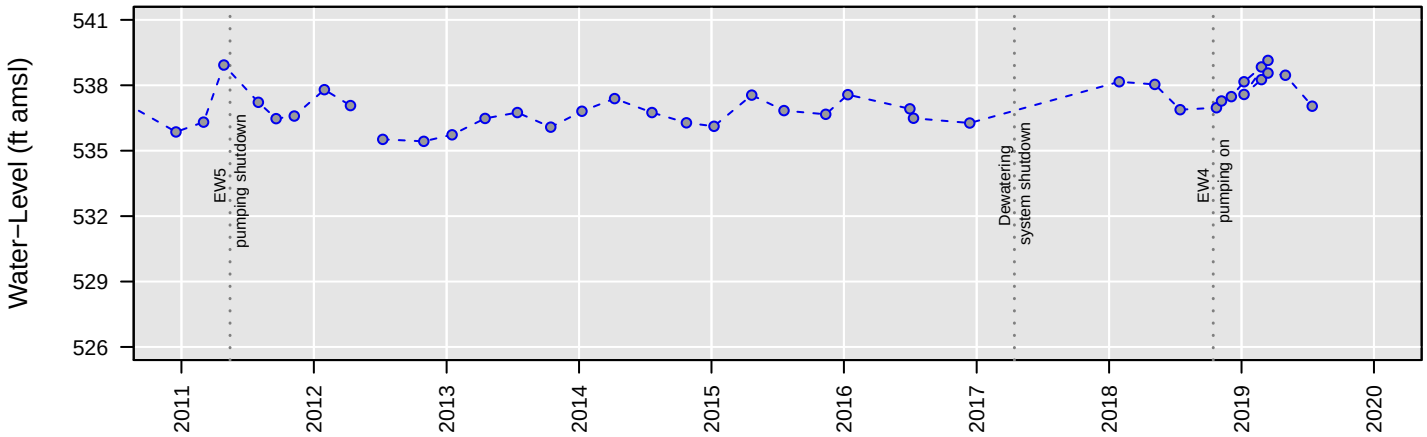
MW93

Trichloroethene

Number of Comparisons: 11
Percent NDs: 100%







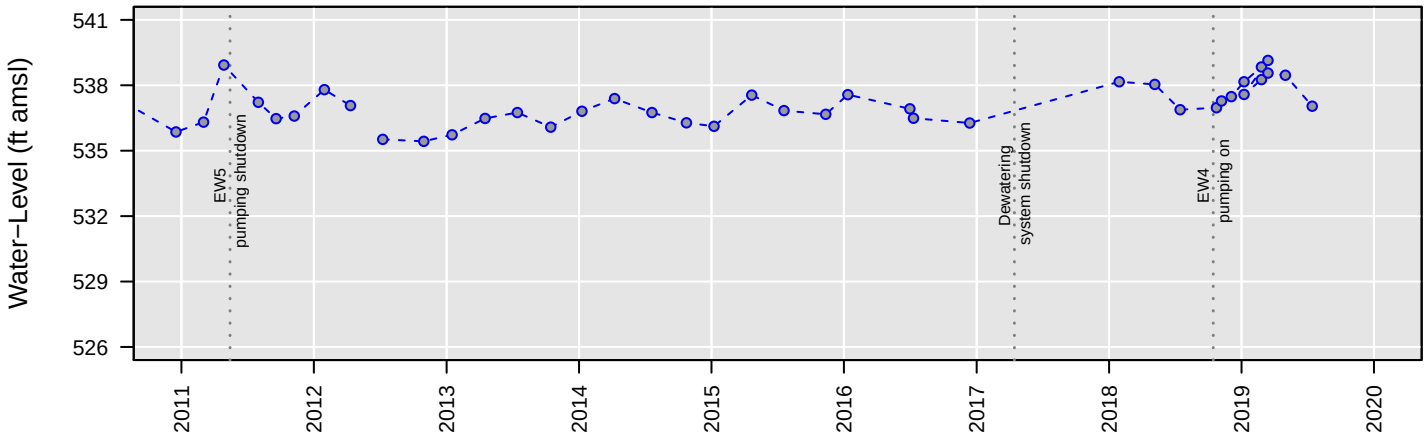
No Analysis Performed

MW93

Vinyl chloride

Number of Comparisons: 11
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



Censored Regression (Tobit) Model

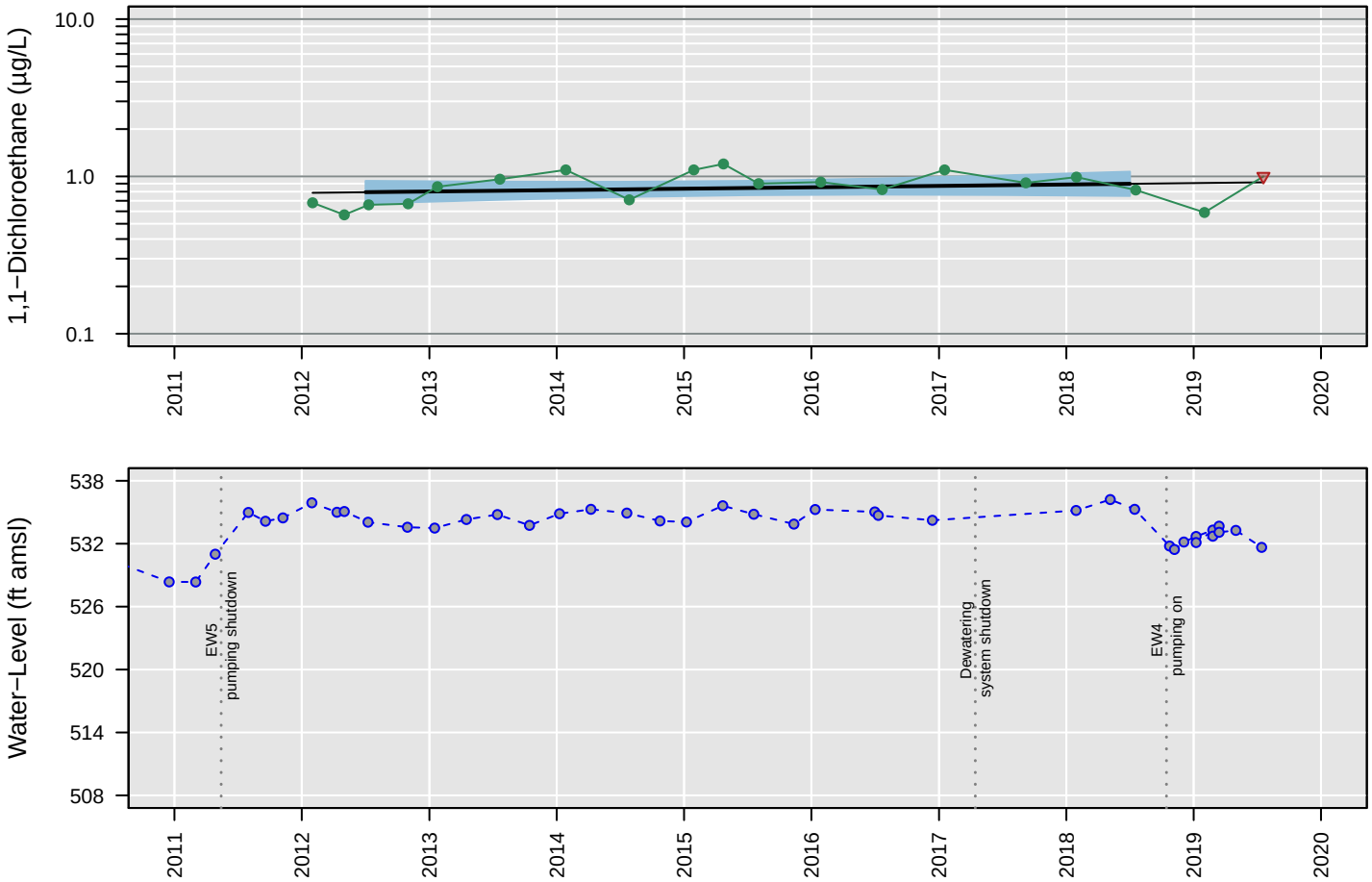
ln Conc. = −0.00028 (+/− 0.000042)*Date + 4.7 (+/− 0.7)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.75 µg/L
UCL: 0.86 µg/L
LCL: 0.65 µg/L

MW94

1,1−Dichloroethane

Number of Comparisons: 19
Percent NDs: 5%



Censored Regression (Tobit) Model

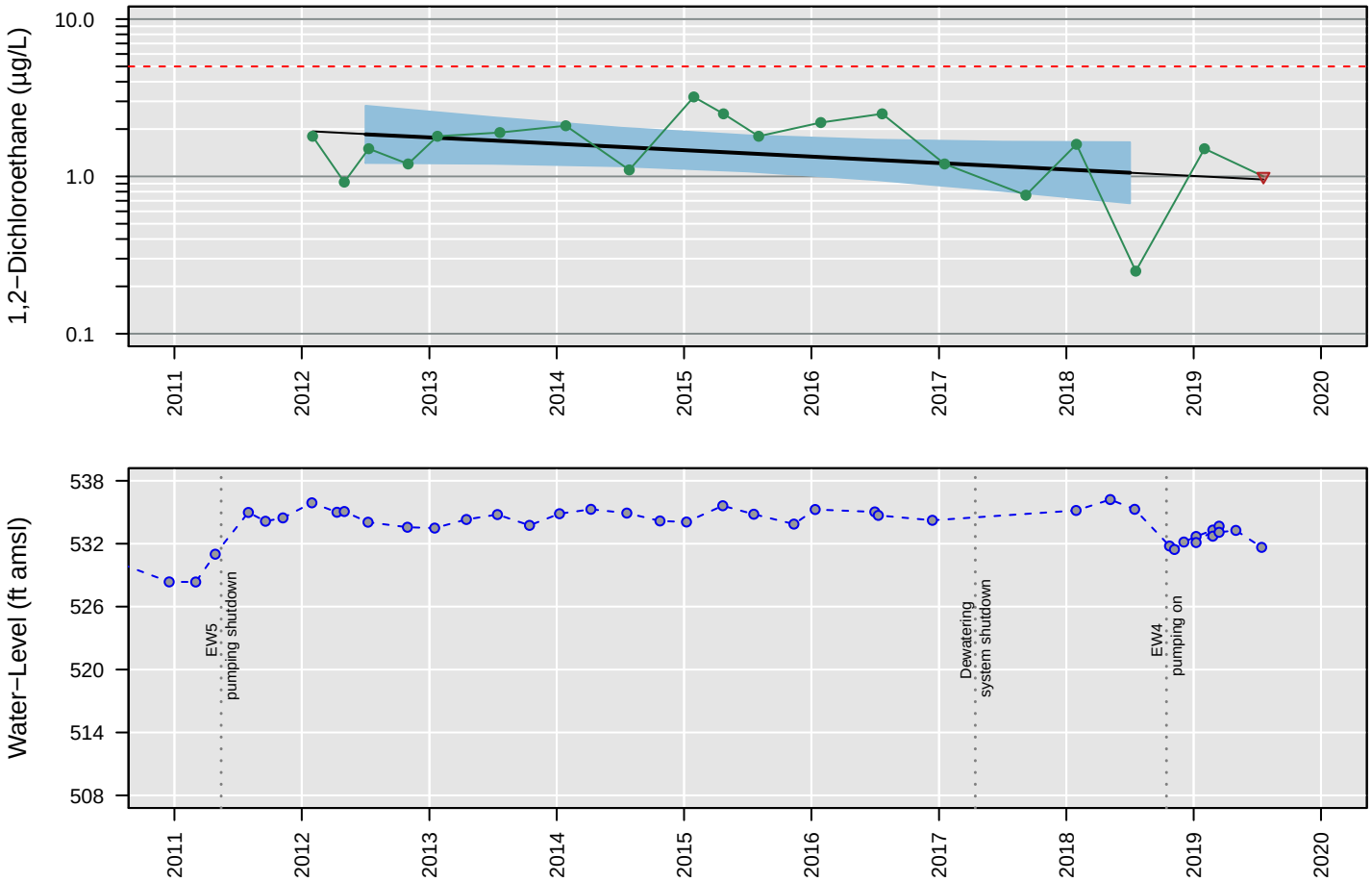
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.9 µg/L
UCL: 1.1 µg/L
LCL: 0.75 µg/L

MW94

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 5%



Censored Regression (Tobit) Model

Trend Not Significant

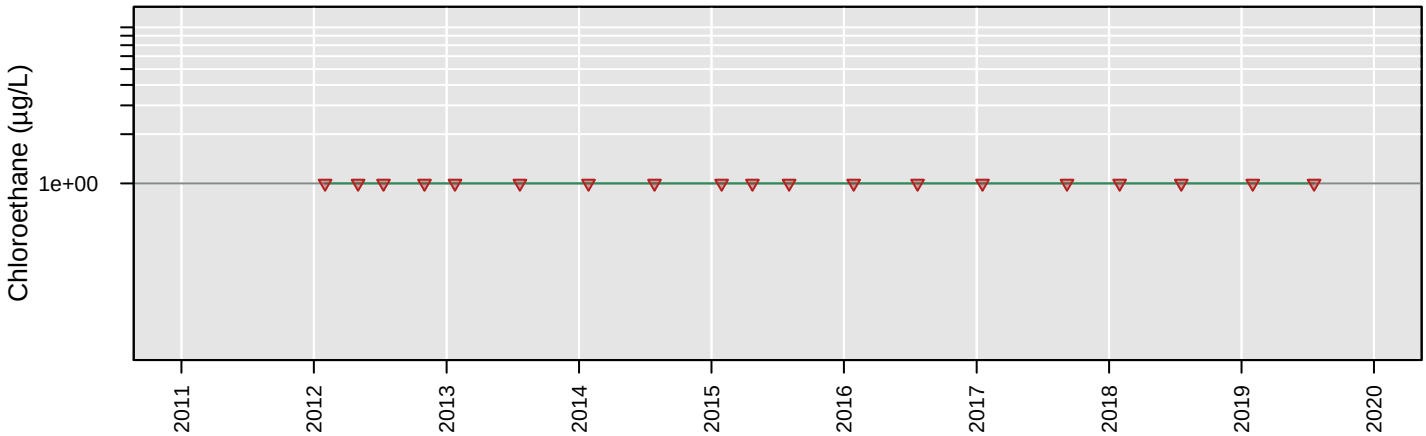
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.1 µg/L
UCL: 1.6 µg/L
LCL: 0.68 µg/L

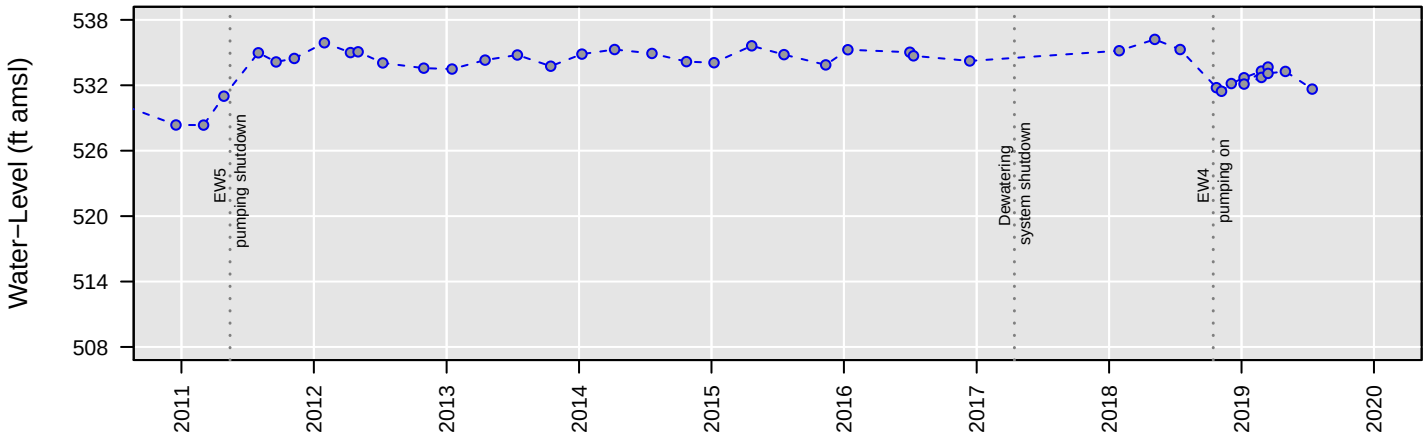
MW94

Chloroethane

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



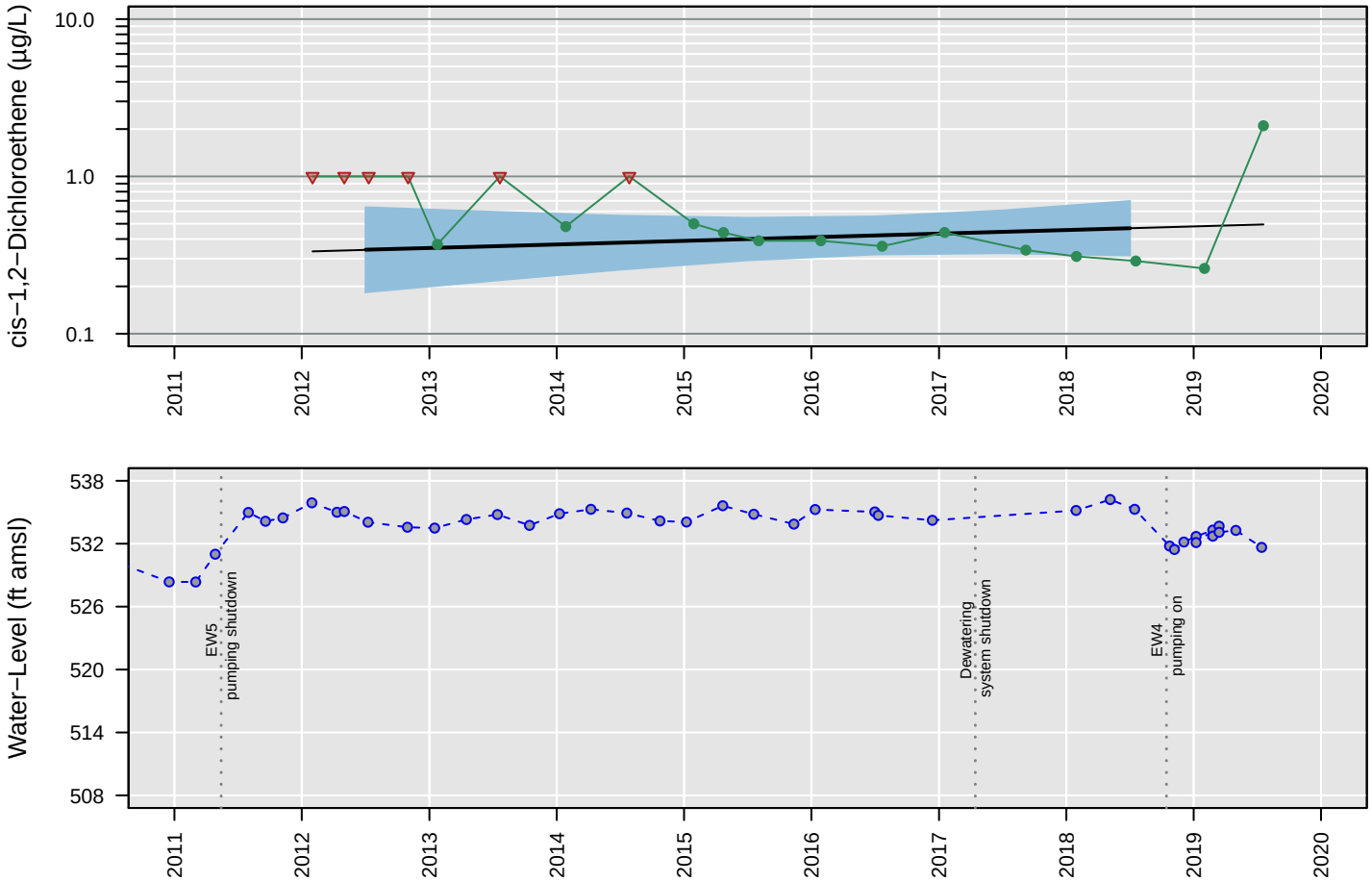


No Analysis Performed

MW94

cis−1,2−Dichloroethene

Number of Comparisons: 19
Percent NDs: 32%



Censored Regression (Tobit) Model

Trend Not Significant

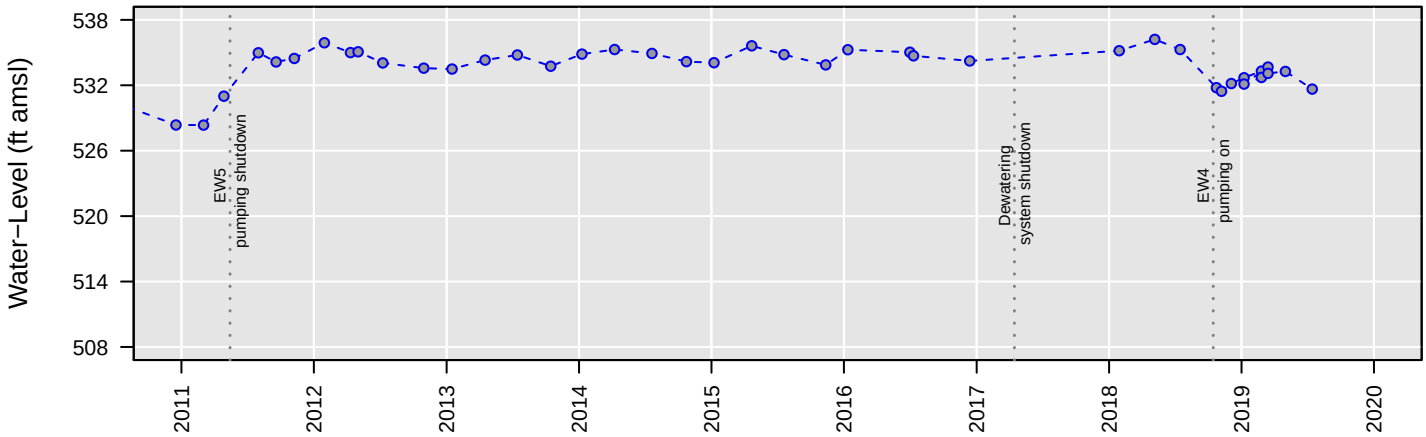
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.47 µg/L
UCL: 0.7 µg/L
LCL: 0.31 µg/L

MW94

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation

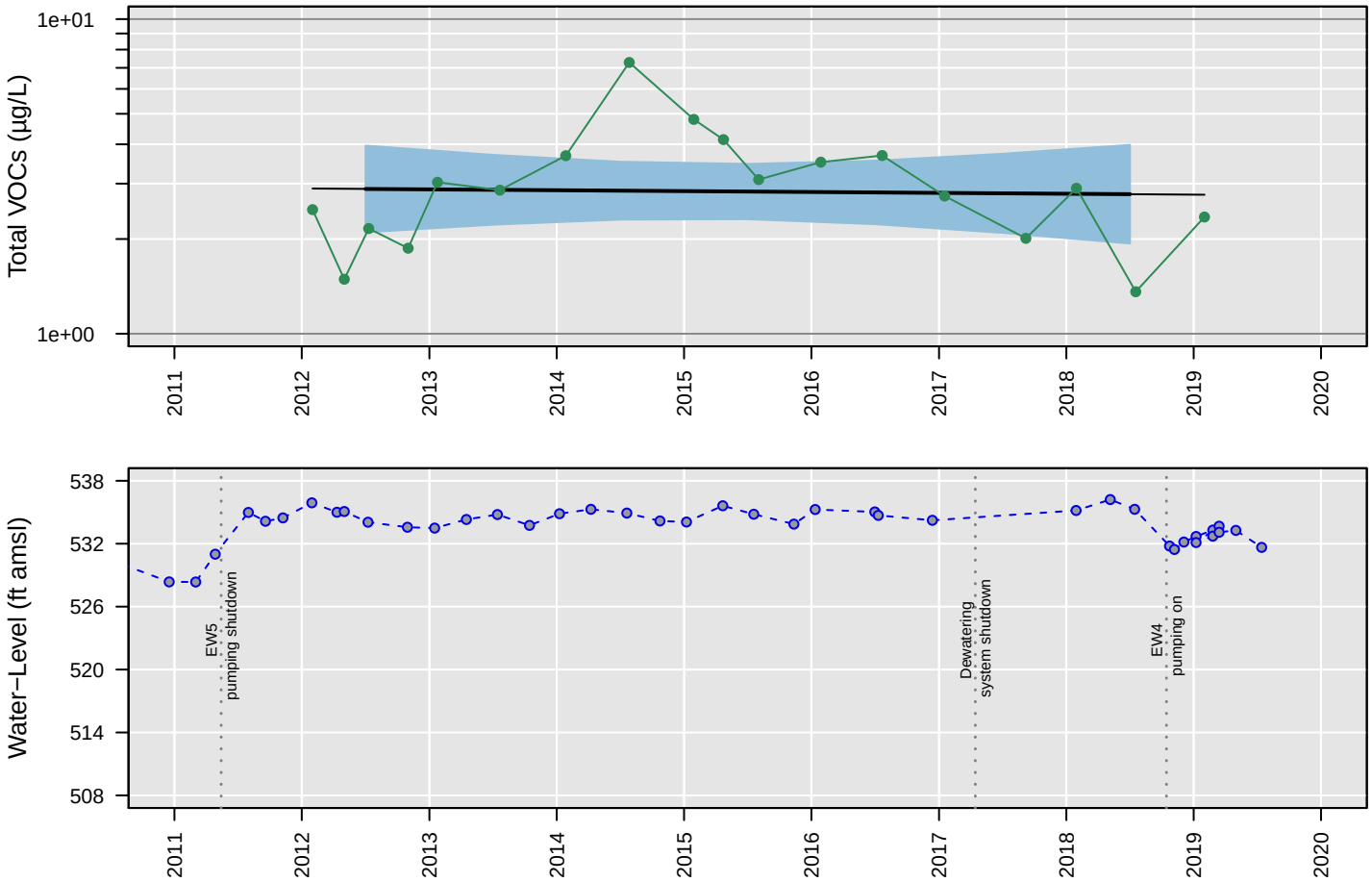


No Analysis Performed

MW94

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%



Censored Regression (Tobit) Model

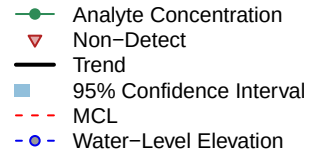
Trend Not Significant

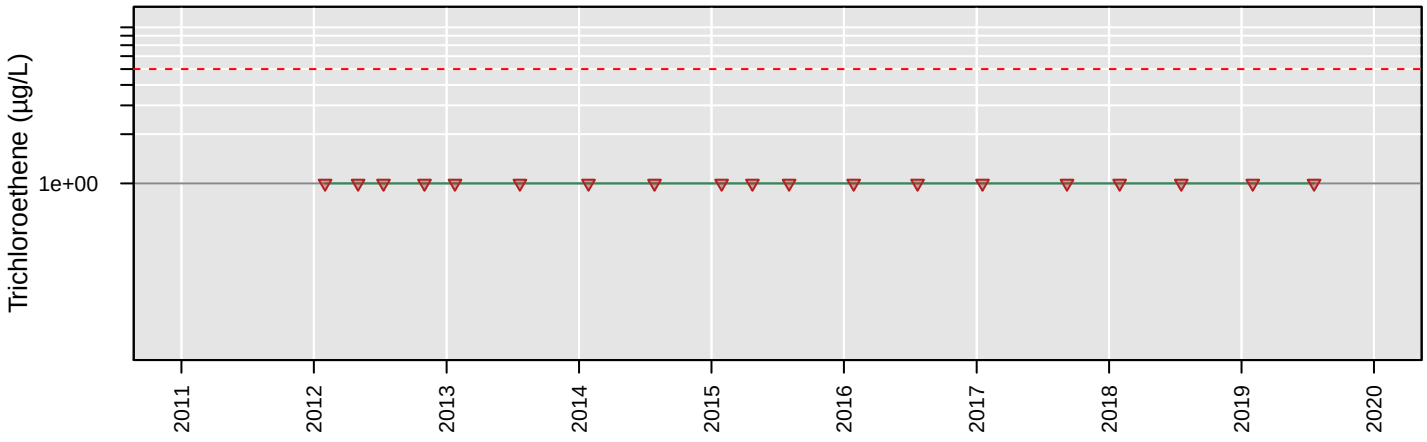
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.8 µg/L
UCL: 4 µg/L
LCL: 1.9 µg/L

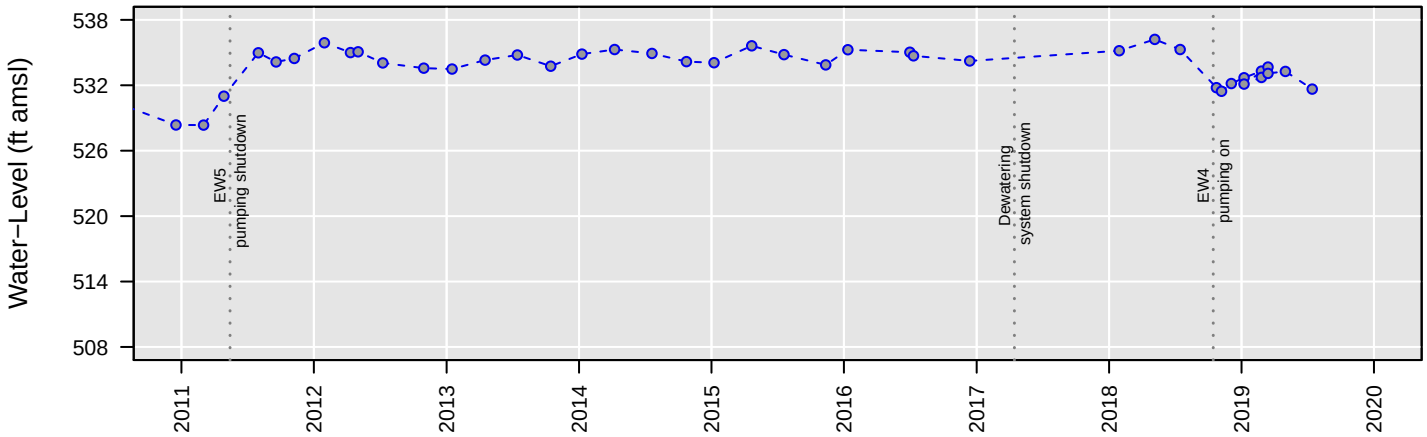
MW94

Trichloroethene

Number of Comparisons: 19
Percent NDs: 100%





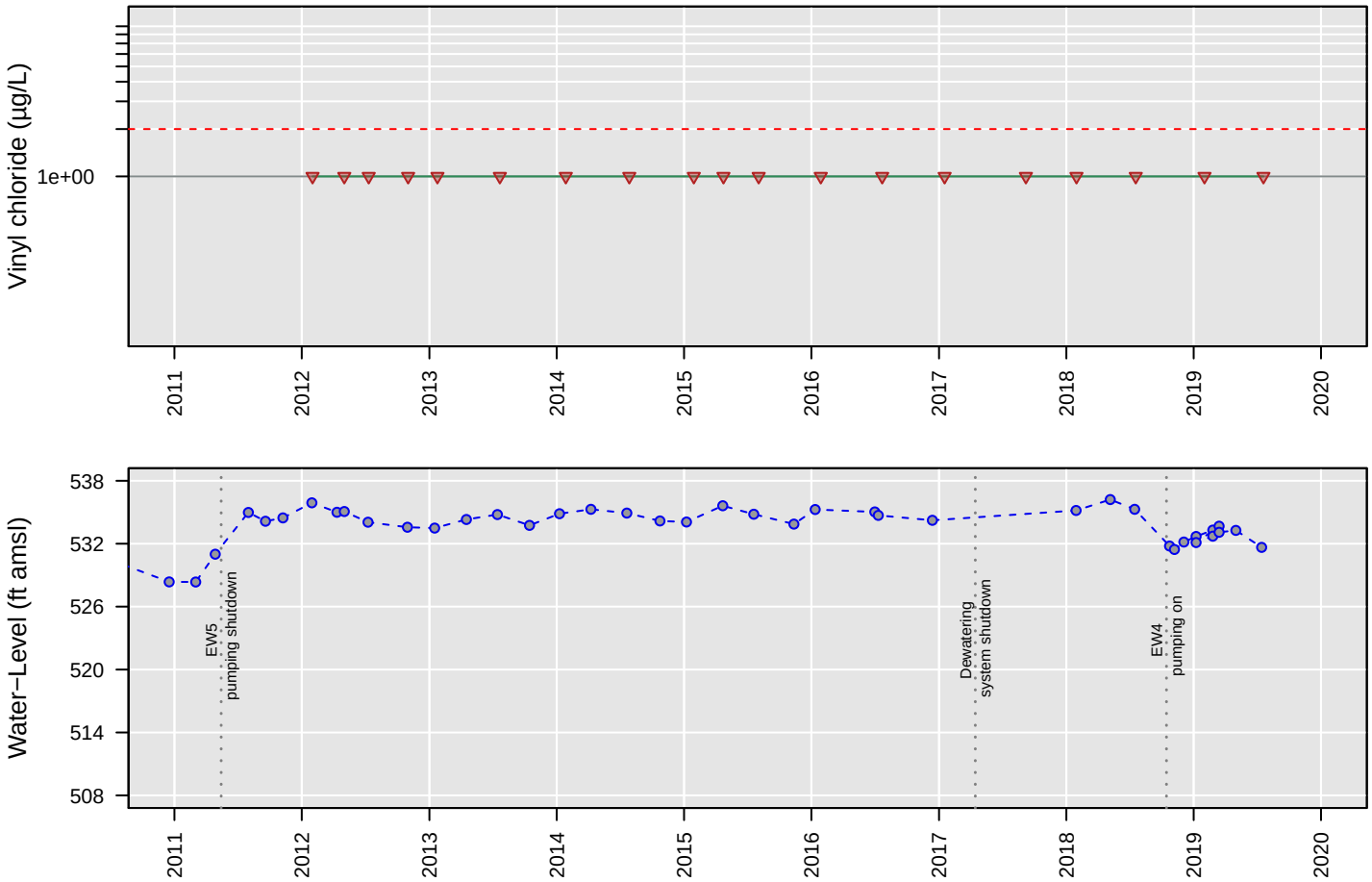


No Analysis Performed

MW94

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 100%

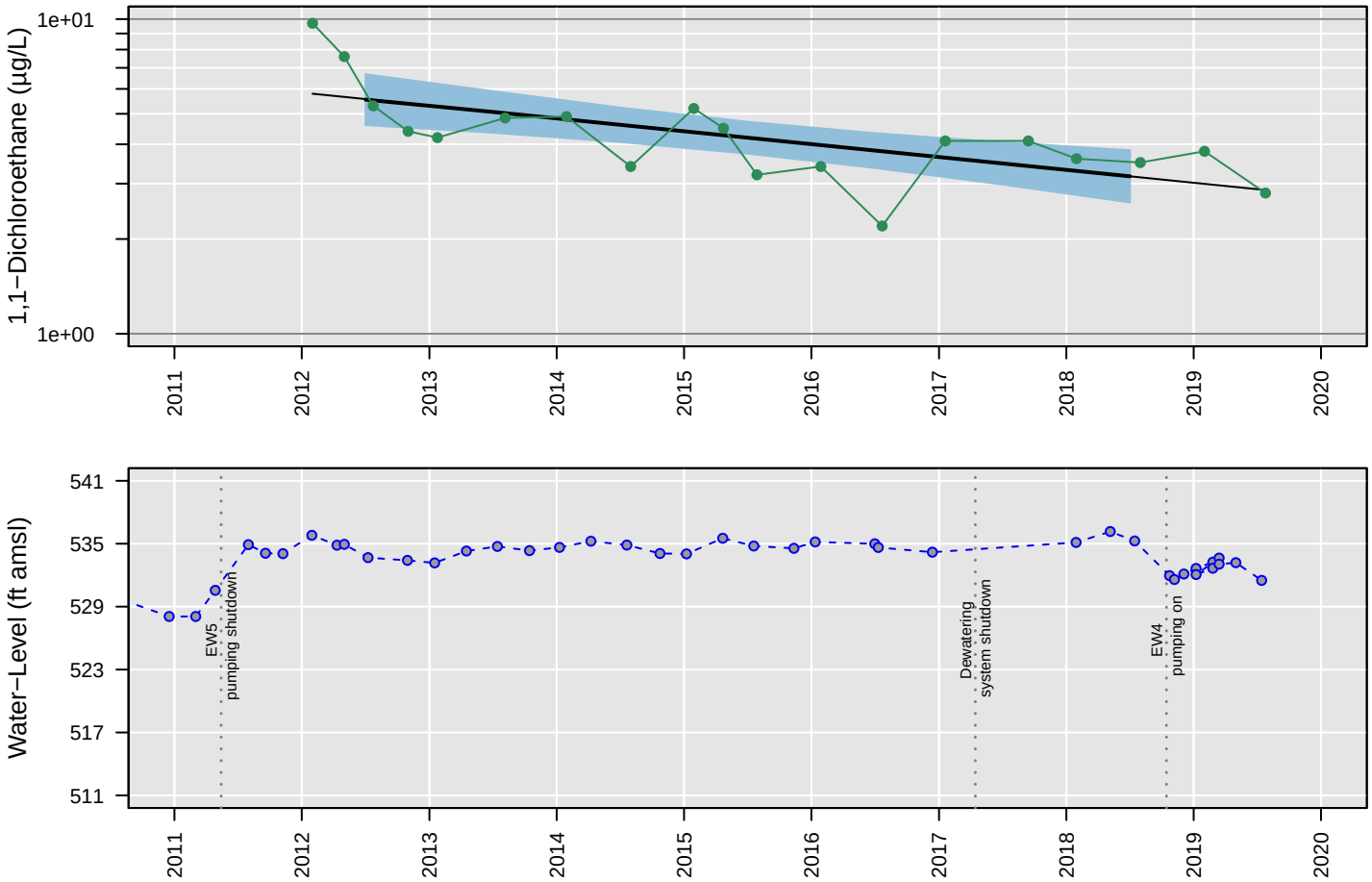


No Analysis Performed

MW95

1,1−Dichloroethane

Number of Comparisons: 19
Percent NDs: 0%



Censored Regression (Tobit) Model

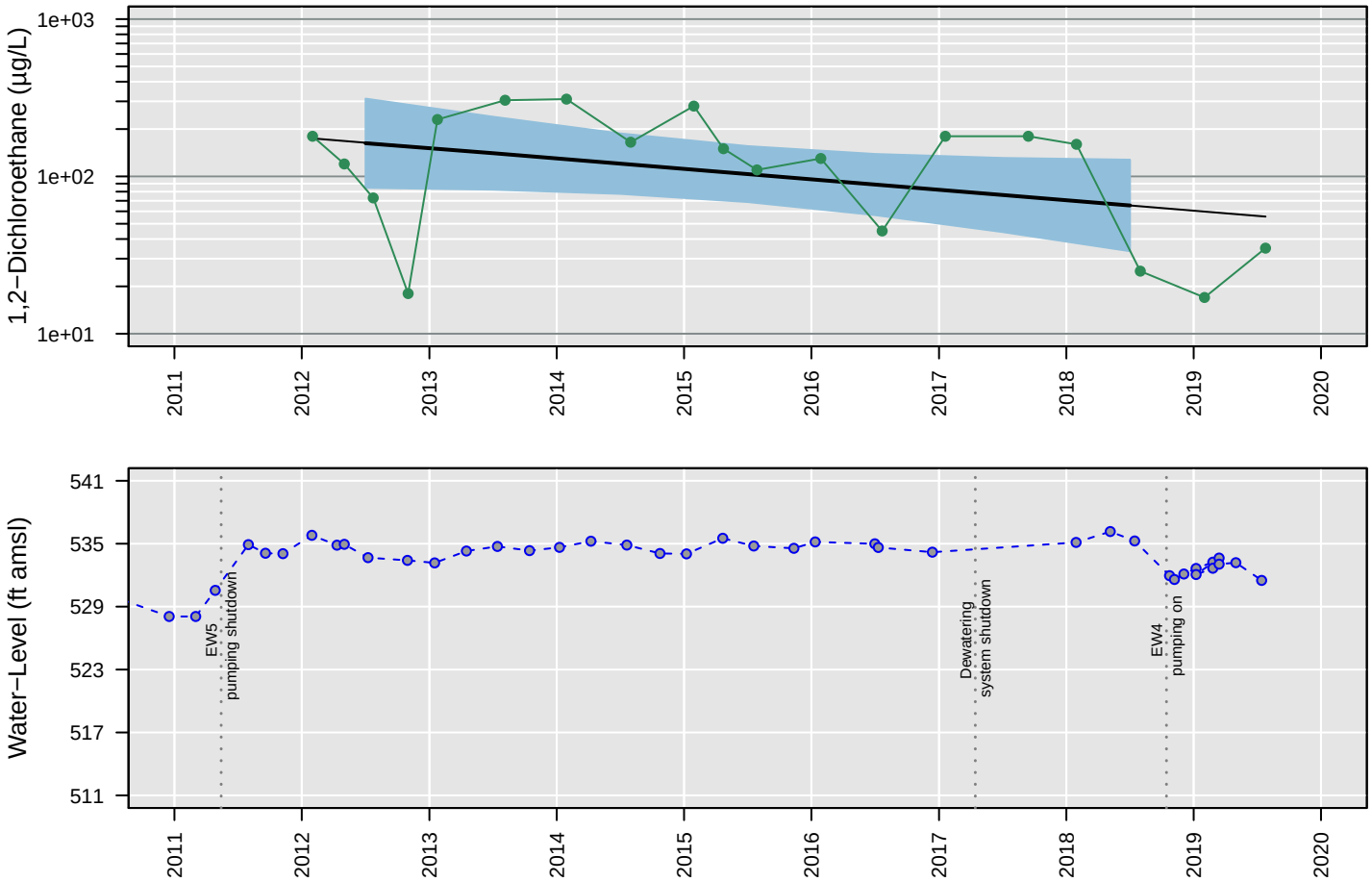
ln Conc. = −0.00026 (+/− 0.000064)*Date + 5.7 (+/− 1.1)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.2 µg/L
UCL: 3.8 µg/L
LCL: 2.6 µg/L

MW95

1,2−Dichloroethane

Number of Comparisons: 19
Percent NDs: 0%



Censored Regression (Tobit) Model

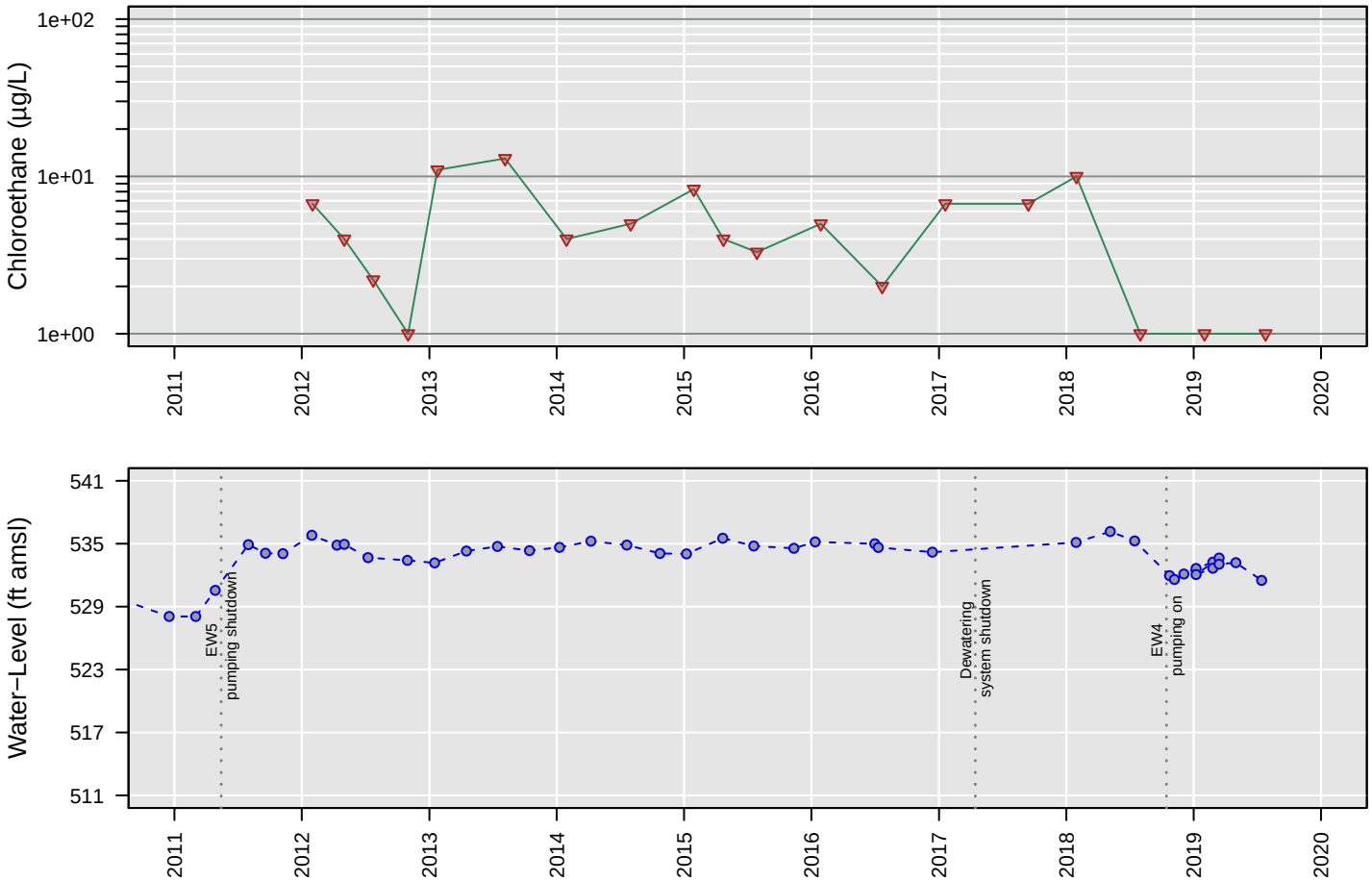
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 65 µg/L
UCL: 130 µg/L
LCL: 33 µg/L

MW95

Chloroethane

Number of Comparisons: 19
Percent NDs: 100%

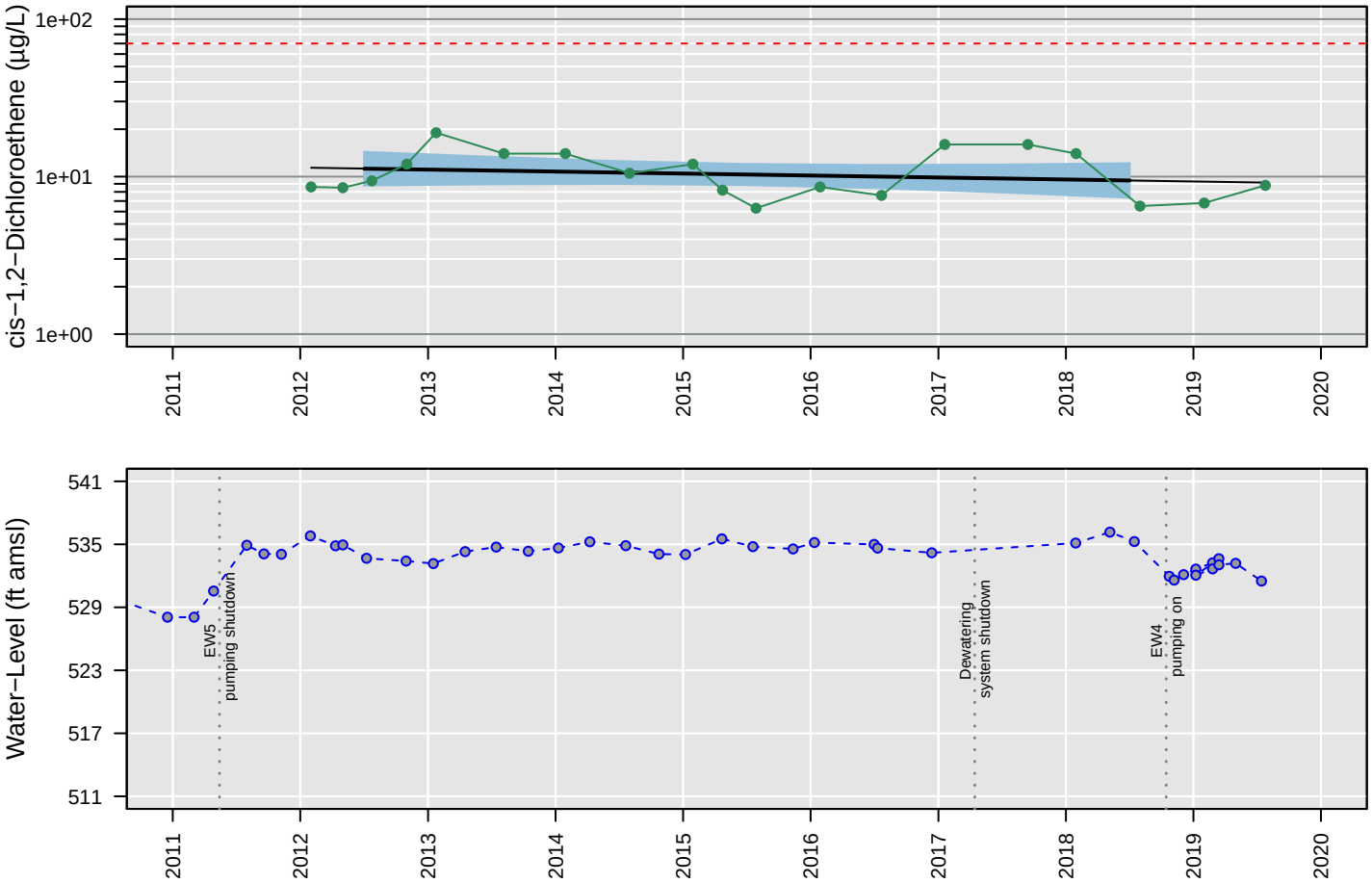


No Analysis Performed

MW95

cis−1,2−Dichloroethene

Number of Comparisons: 19
Percent NDs: 0%



Censored Regression (Tobit) Model

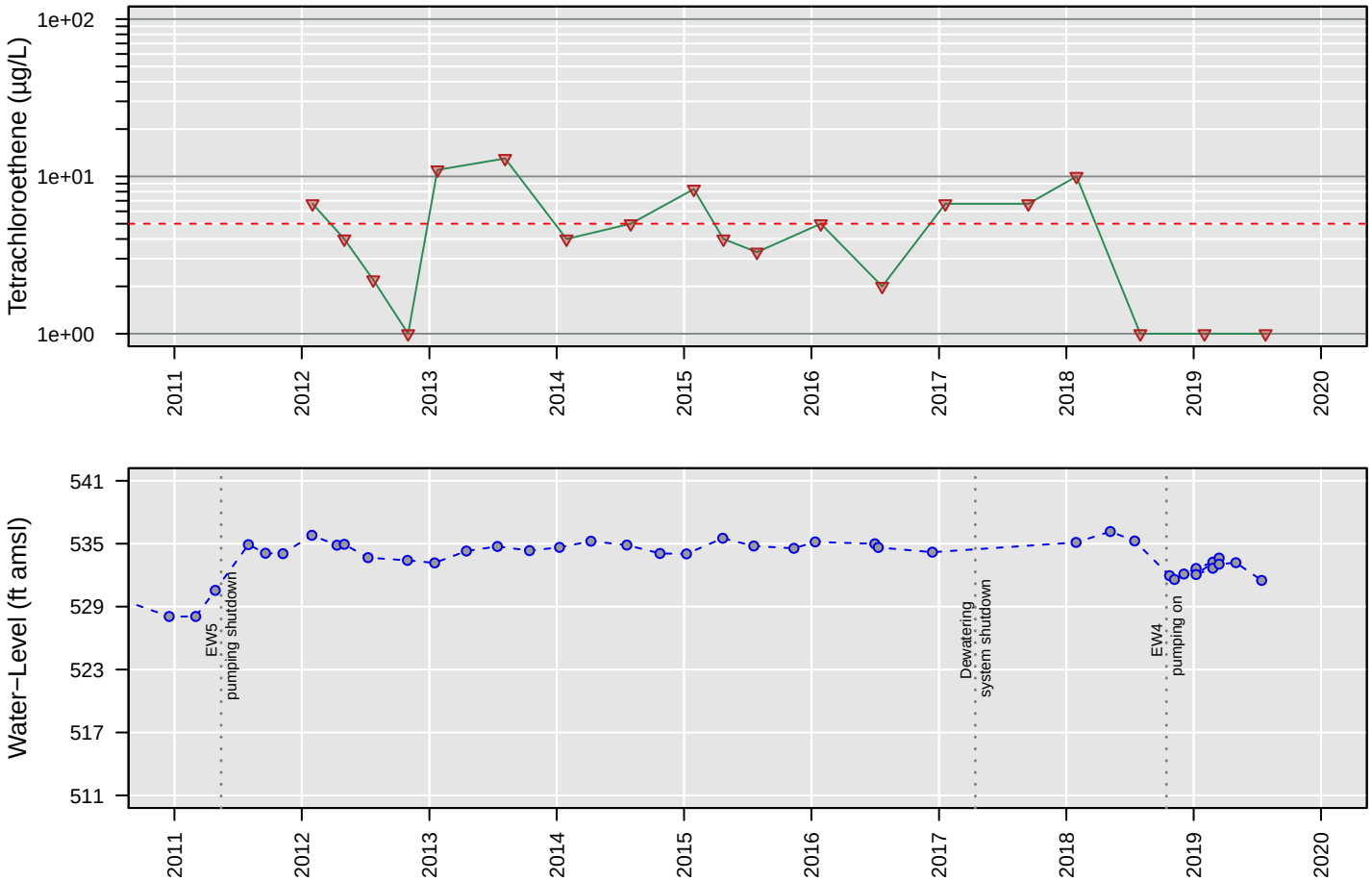
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 9.4 µg/L
UCL: 12 µg/L
LCL: 7.3 µg/L

MW95

Tetrachloroethene

Number of Comparisons: 19
Percent NDs: 100%

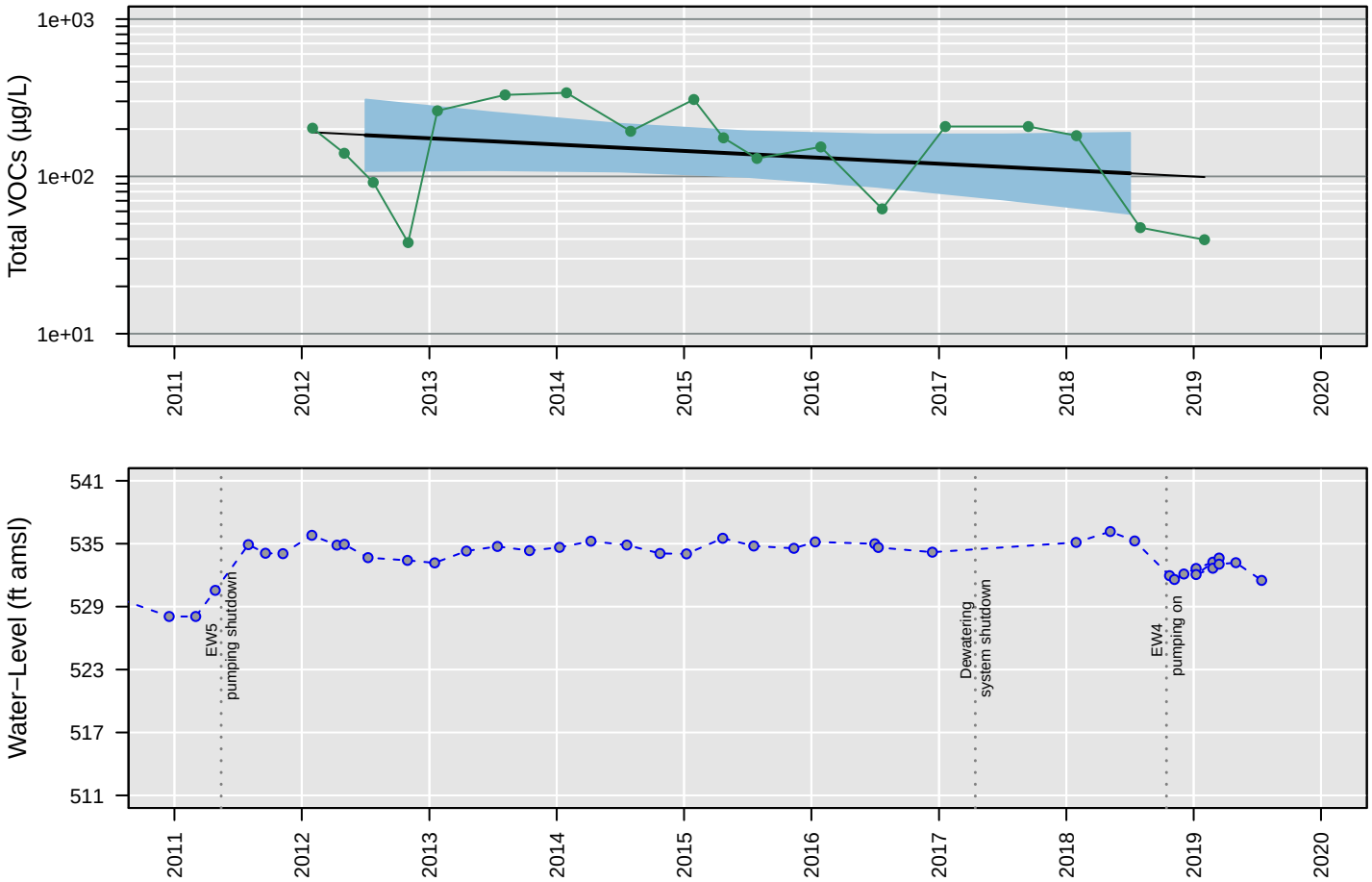


No Analysis Performed

MW95

Total VOCs

Number of Comparisons: 18
Percent NDs: 0%



Censored Regression (Tobit) Model

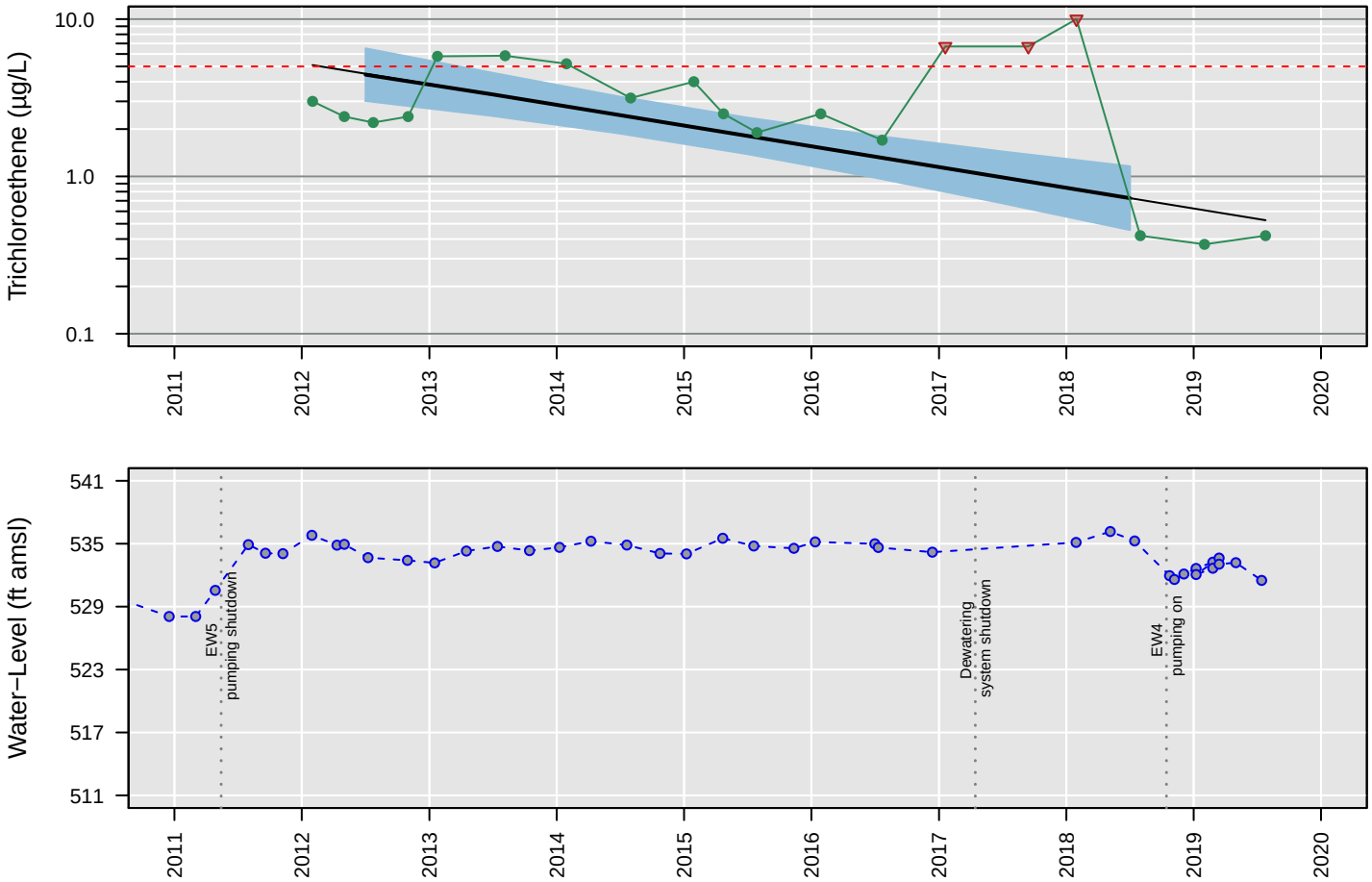
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 100 µg/L
UCL: 190 µg/L
LCL: 58 µg/L

MW95

Trichloroethene

Number of Comparisons: 19
Percent NDs: 16%



Censored Regression (Tobit) Model

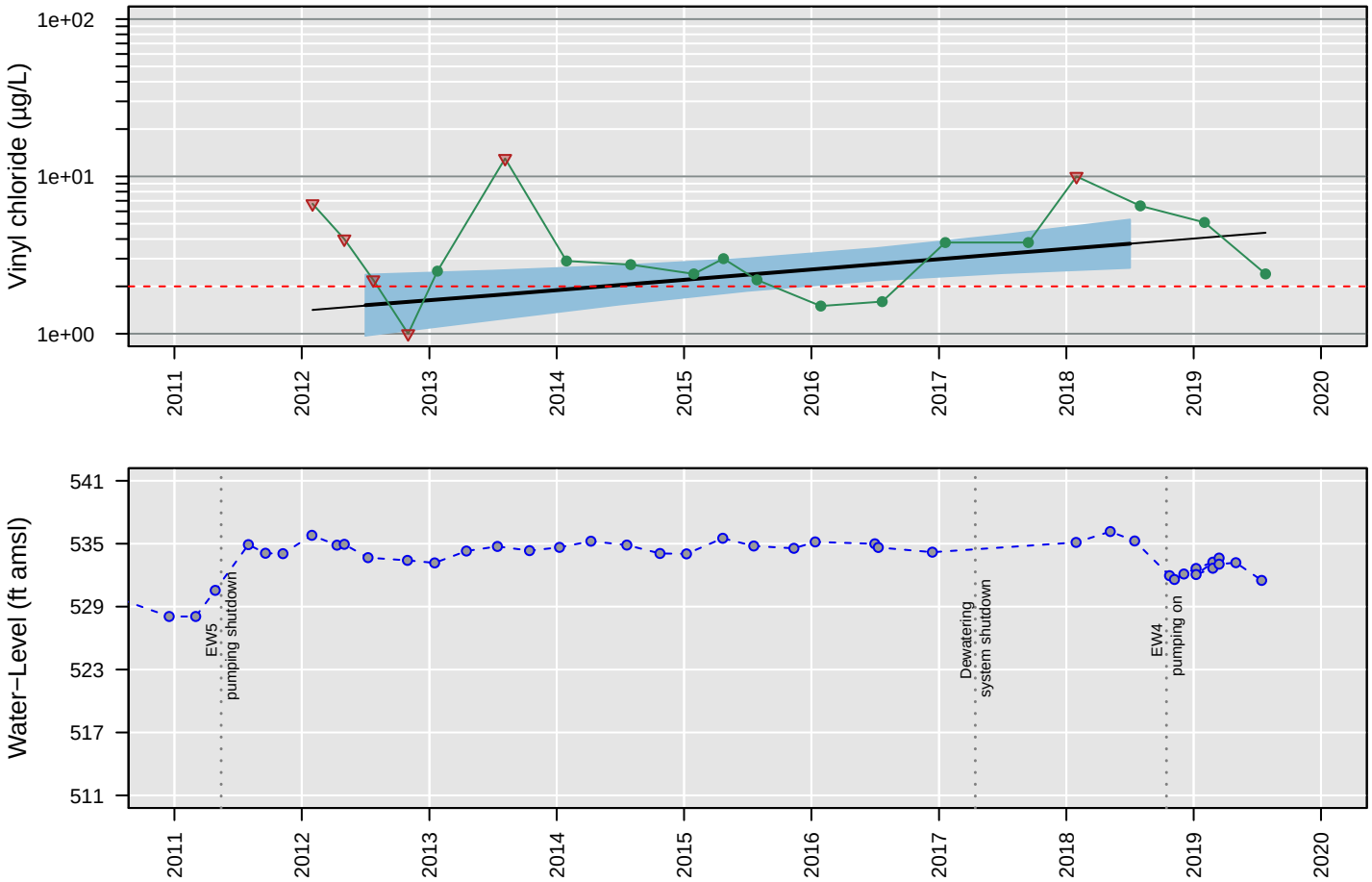
ln Conc. = −0.00083 (+/− 0.00014)*Date + 14 (+/− 2.4)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.73 µg/L
UCL: 1.2 µg/L
LCL: 0.46 µg/L

MW95

Vinyl chloride

Number of Comparisons: 19
Percent NDs: 32%



Censored Regression (Tobit) Model

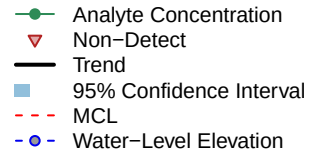
ln Conc. = 0.00041 (+/− 0.00014)*Date + −6 (+/− 2.4)

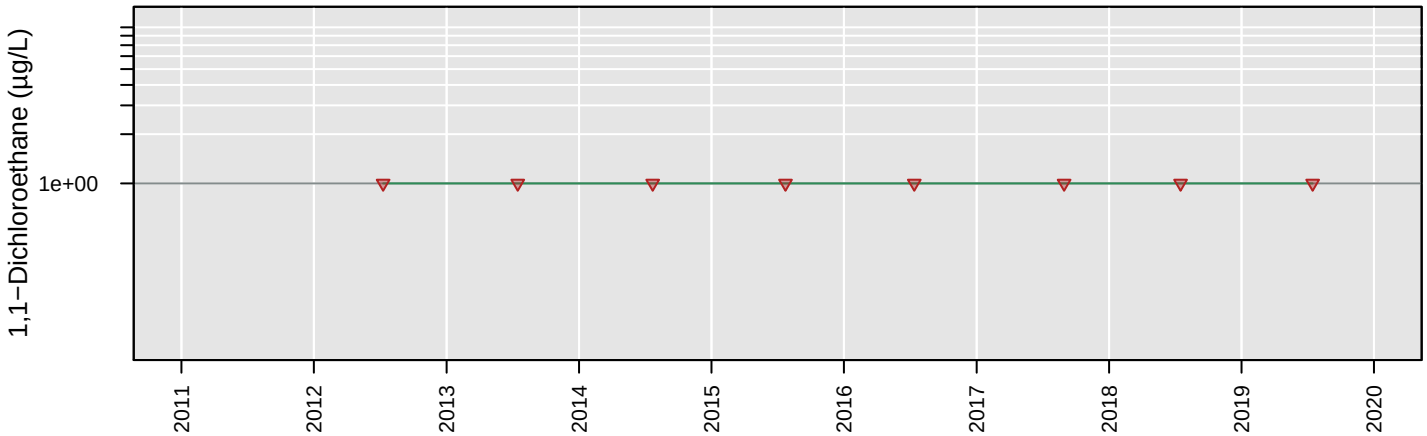
Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.7 µg/L
UCL: 5.3 µg/L
LCL: 2.6 µg/L

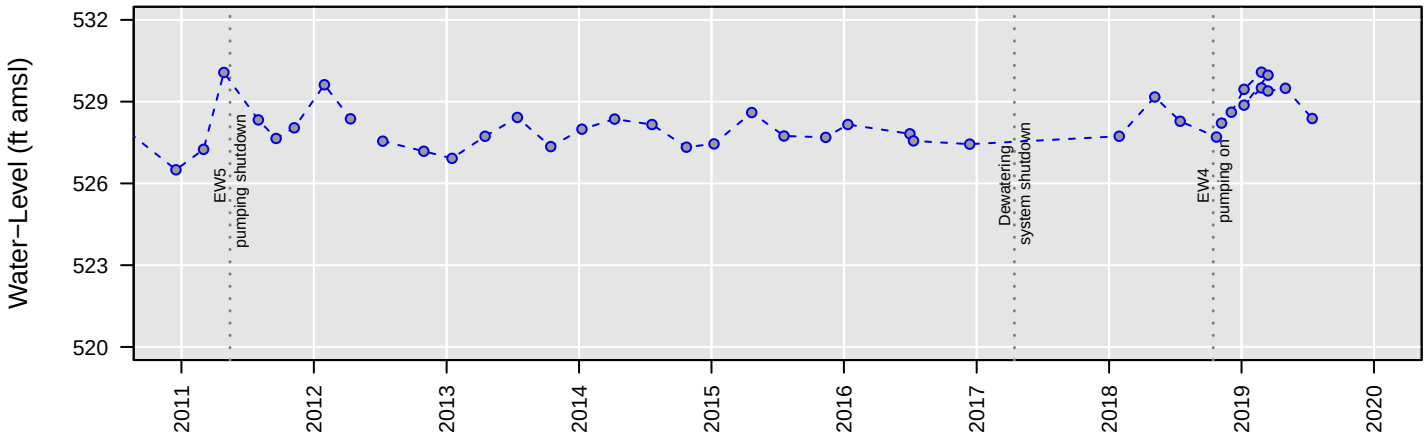
MW96

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%







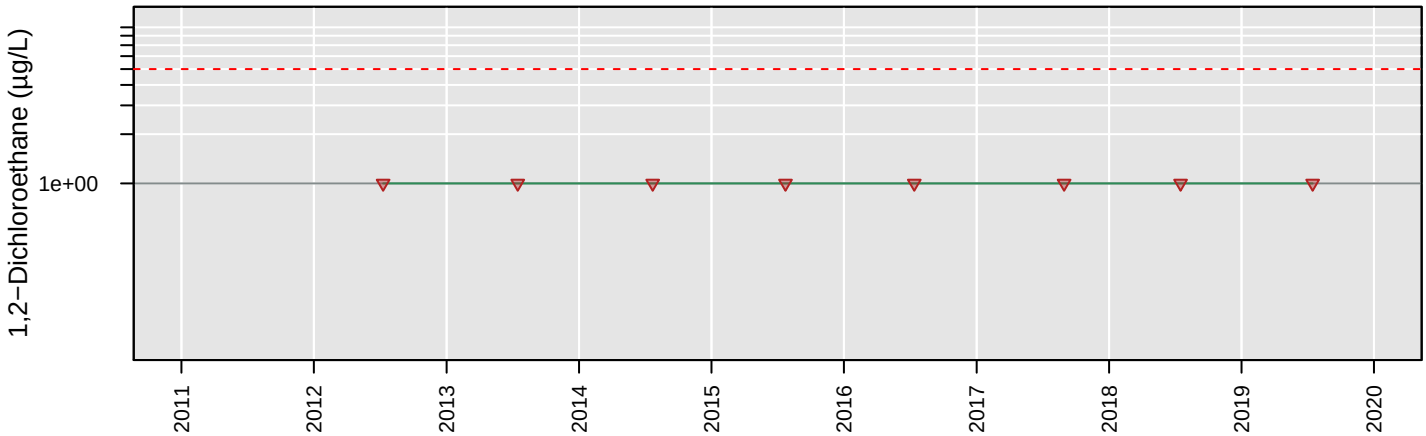
No Analysis Performed

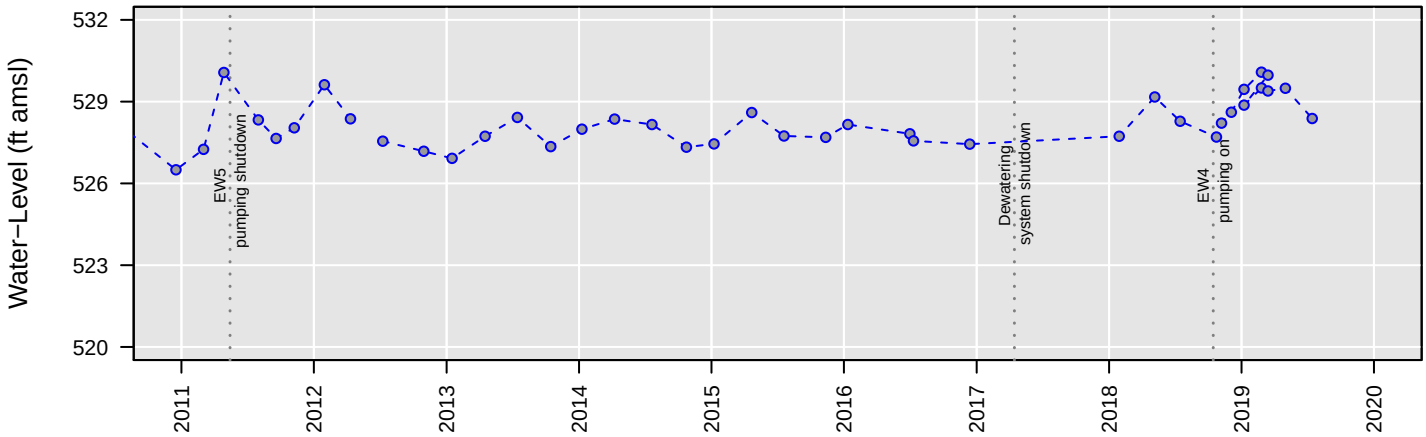
MW96

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



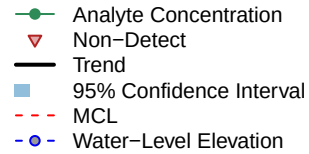


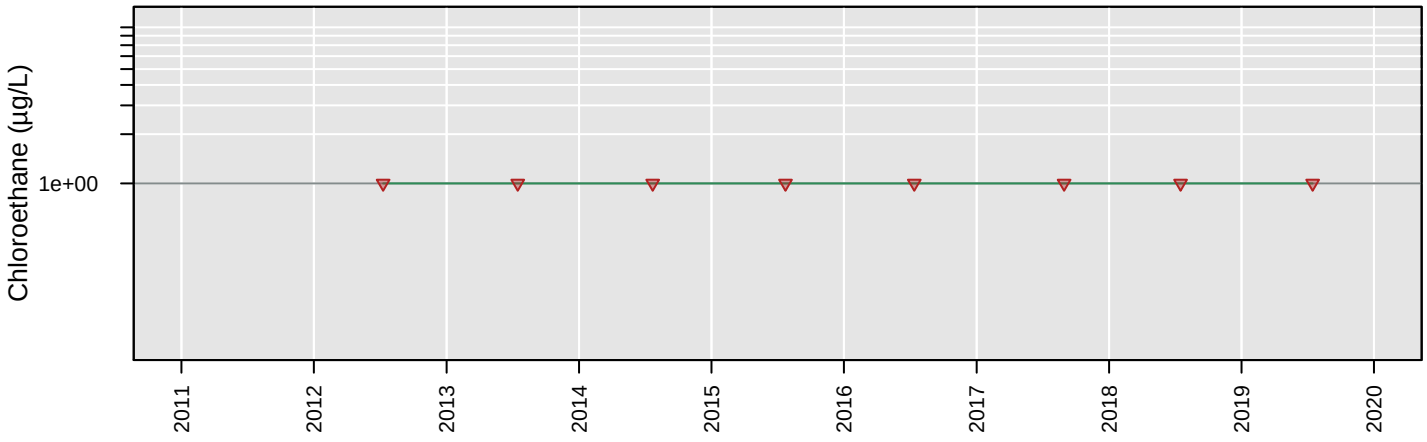
No Analysis Performed

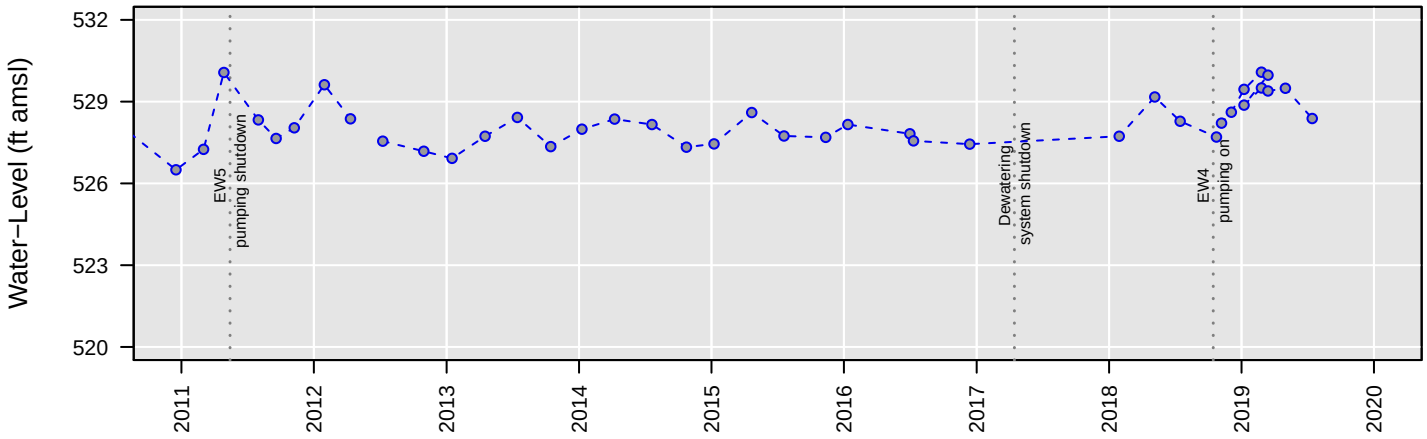
MW96

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%





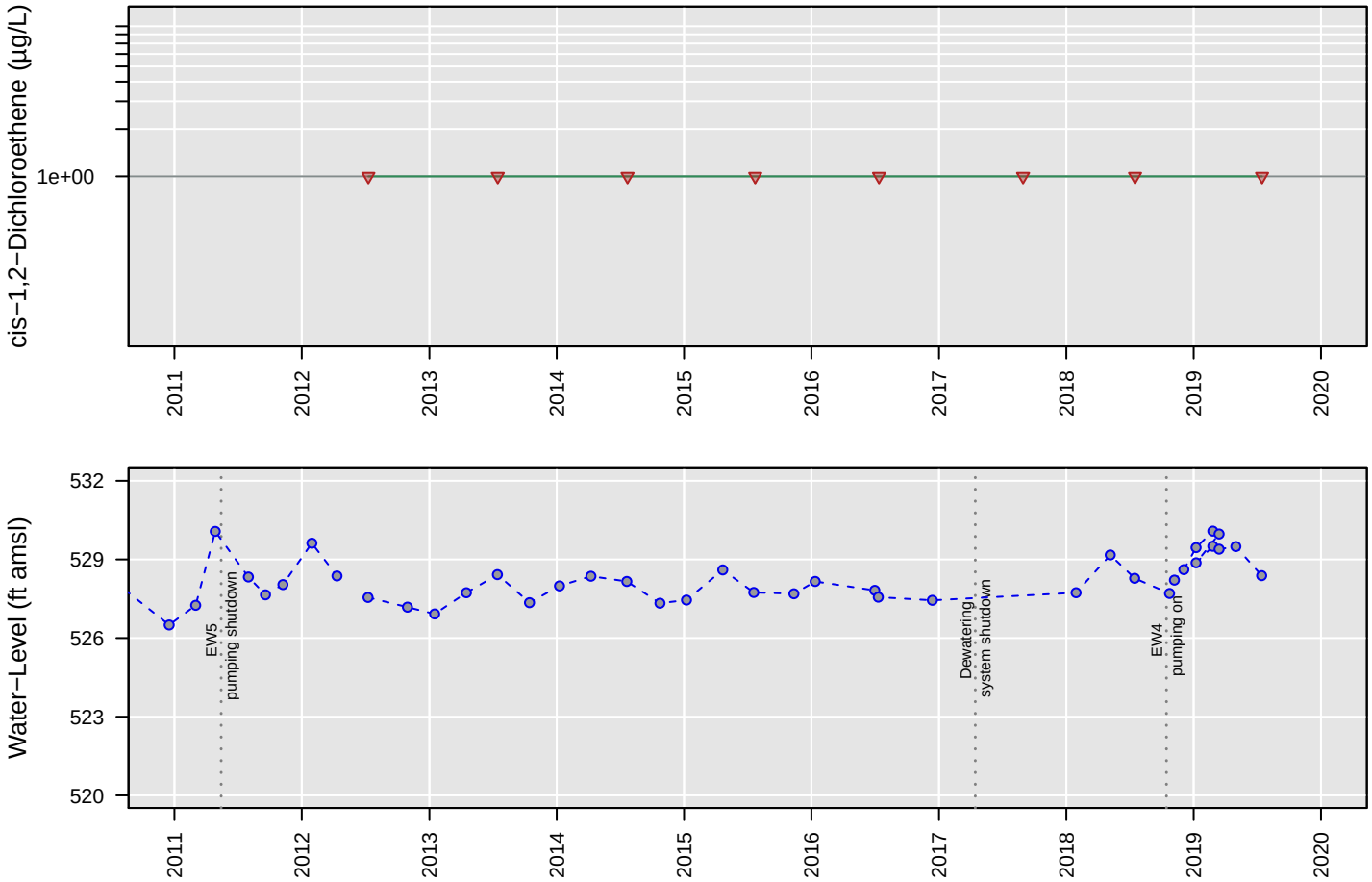


No Analysis Performed

MW96

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 100%



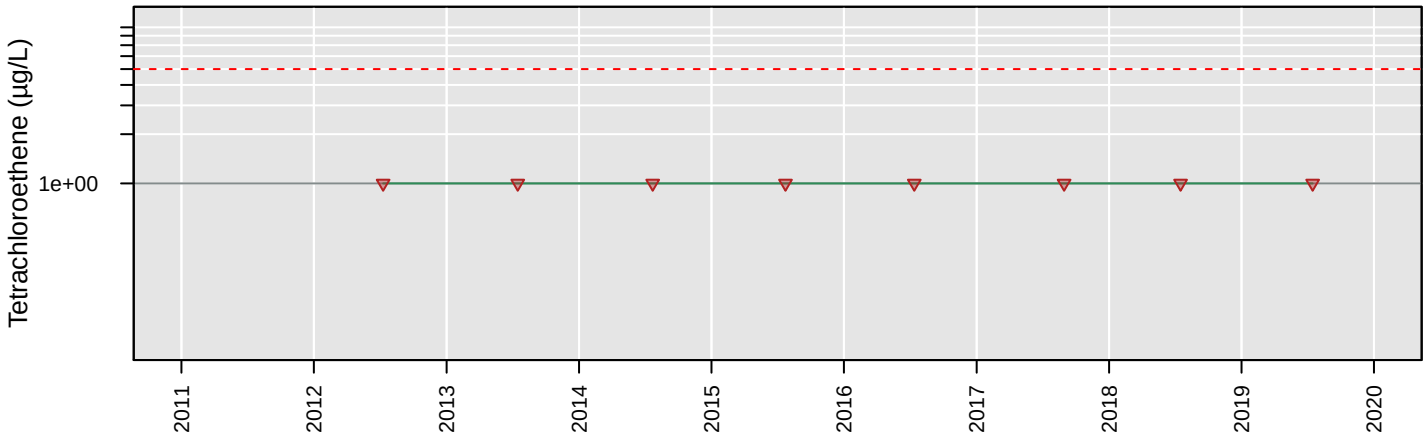
No Analysis Performed

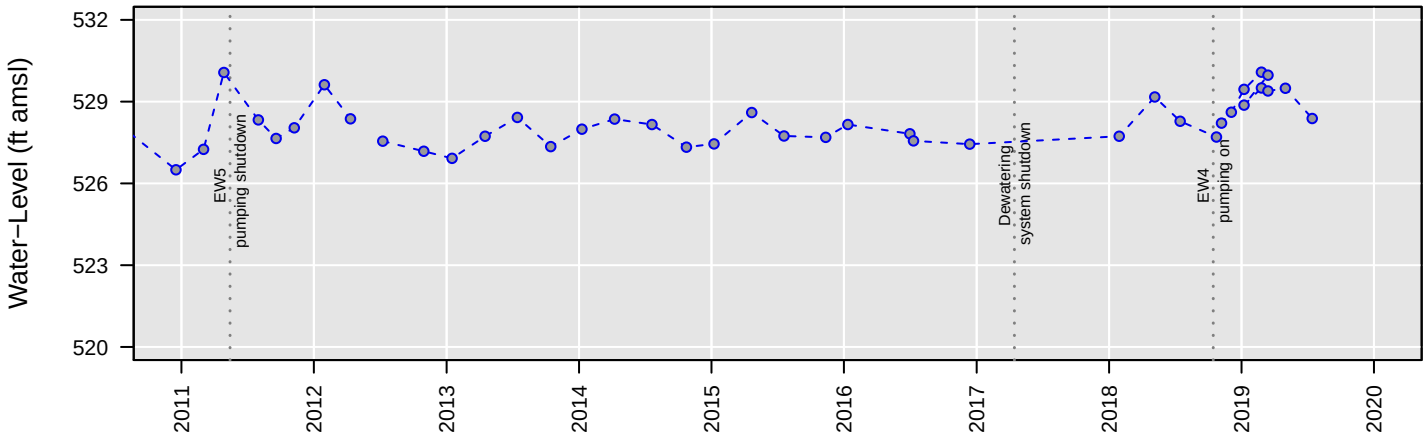
MW96

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



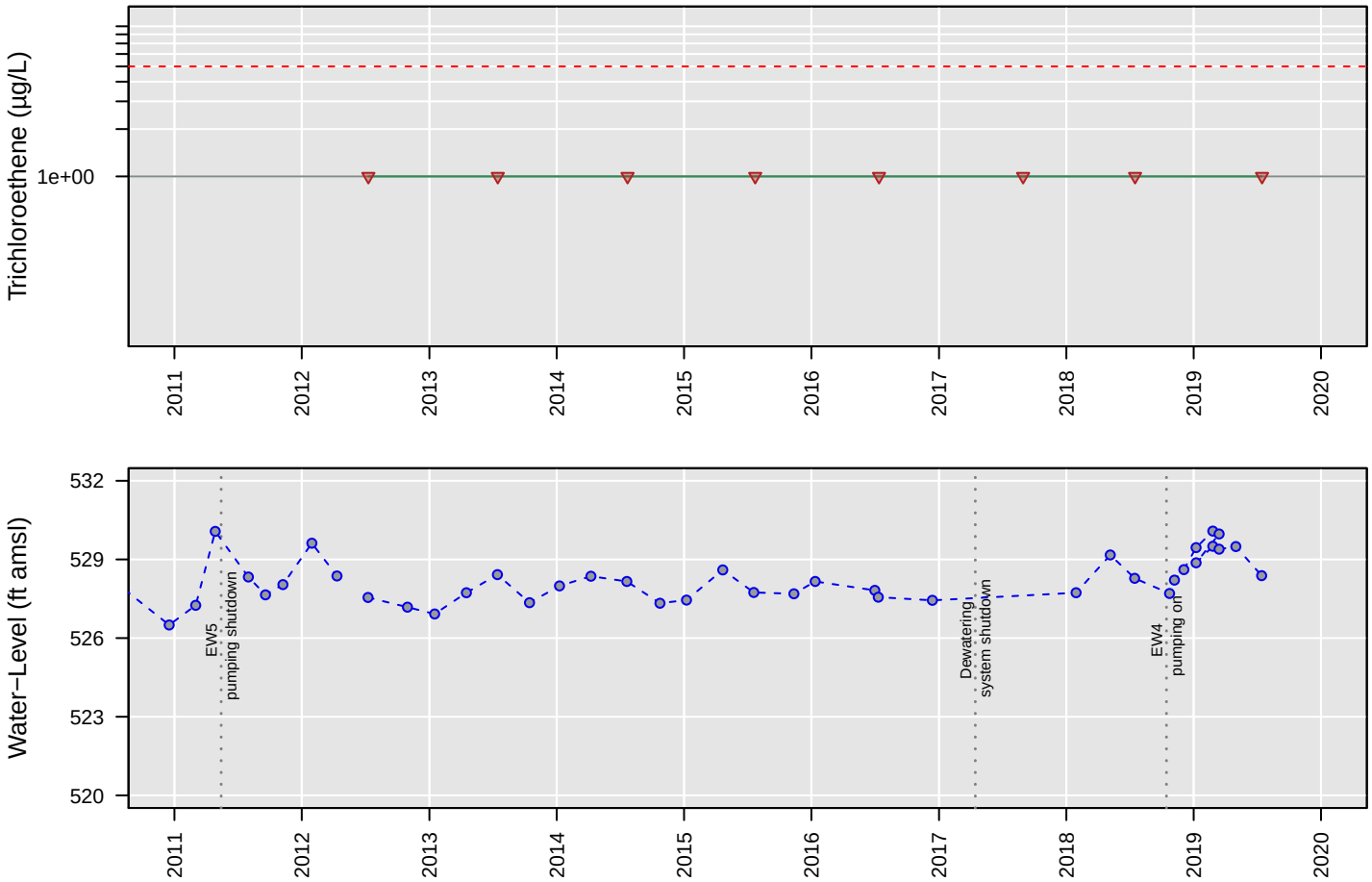


No Analysis Performed

MW96

Trichloroethene

Number of Comparisons: 8
Percent NDs: 100%

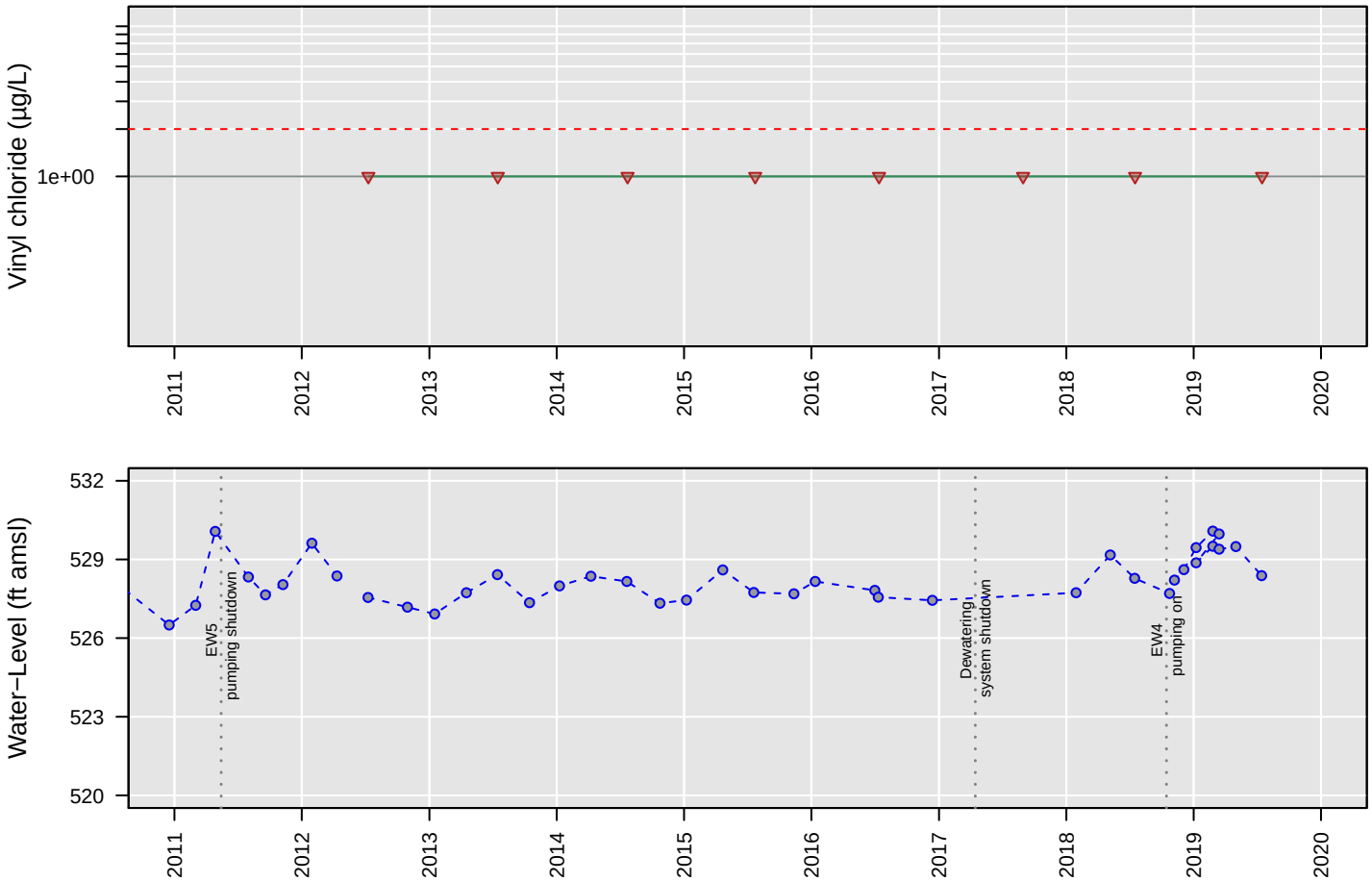


No Analysis Performed

MW96

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 100%

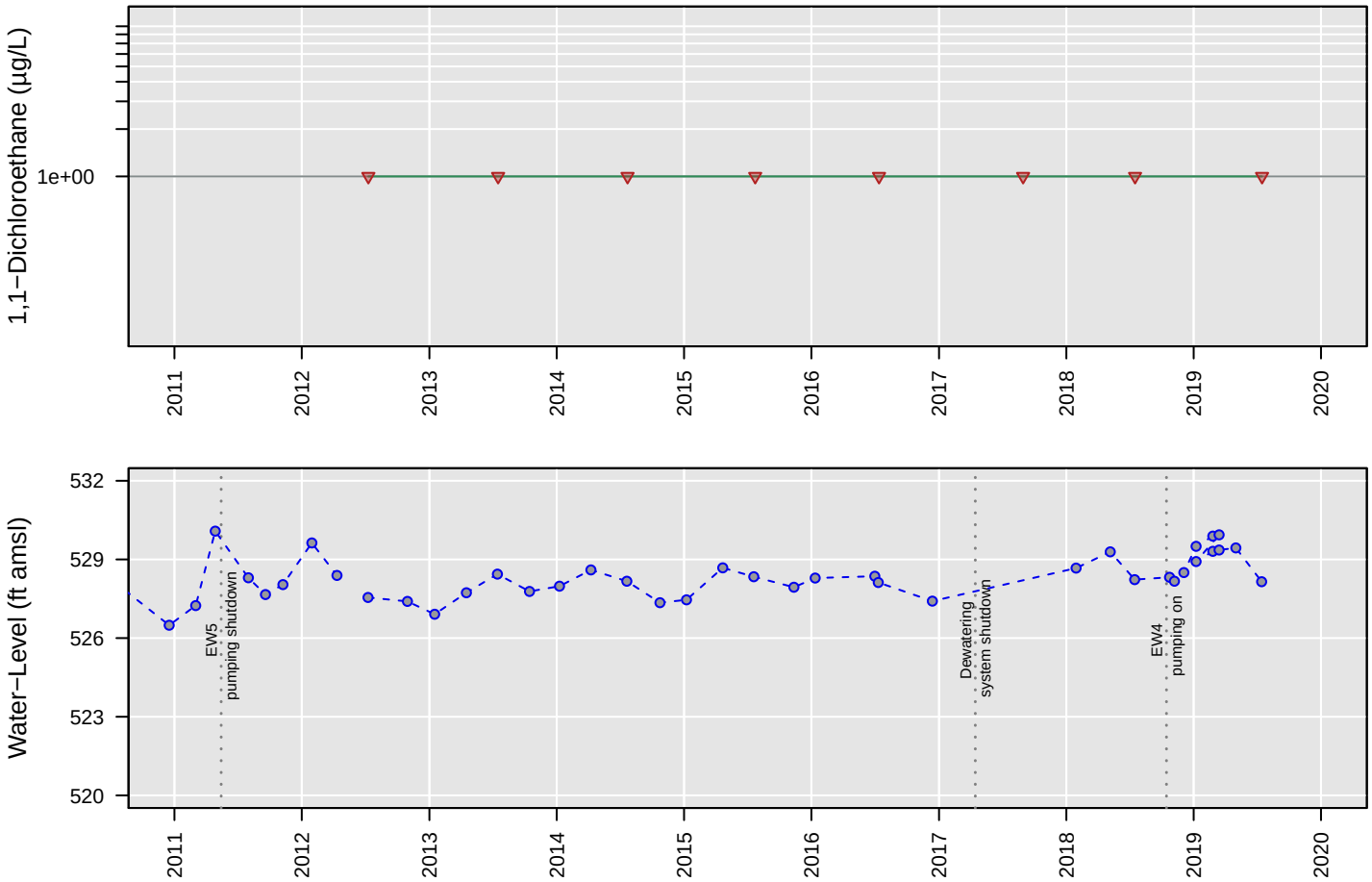


No Analysis Performed

MW97

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%



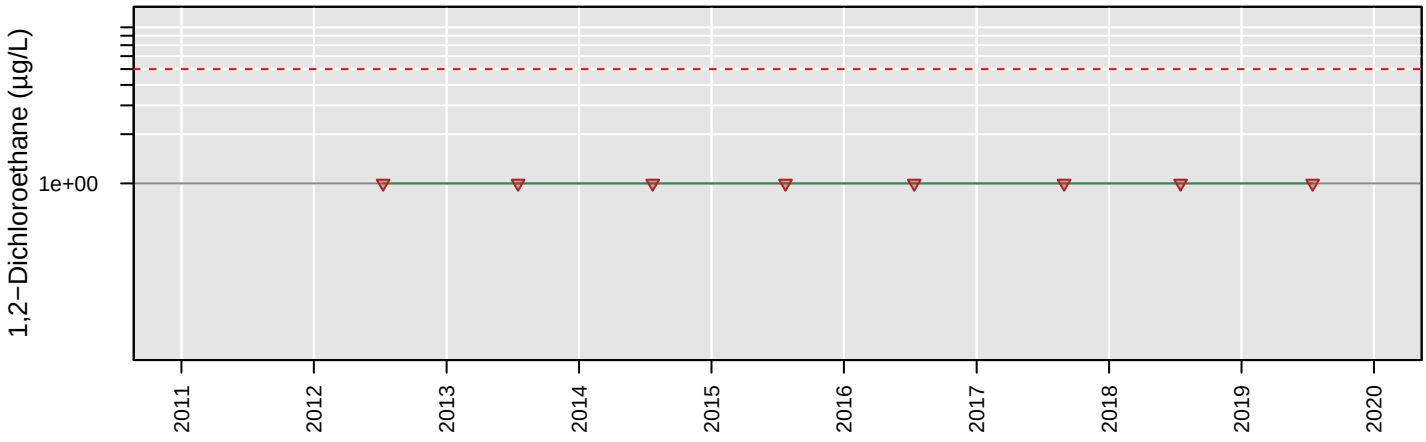
No Analysis Performed

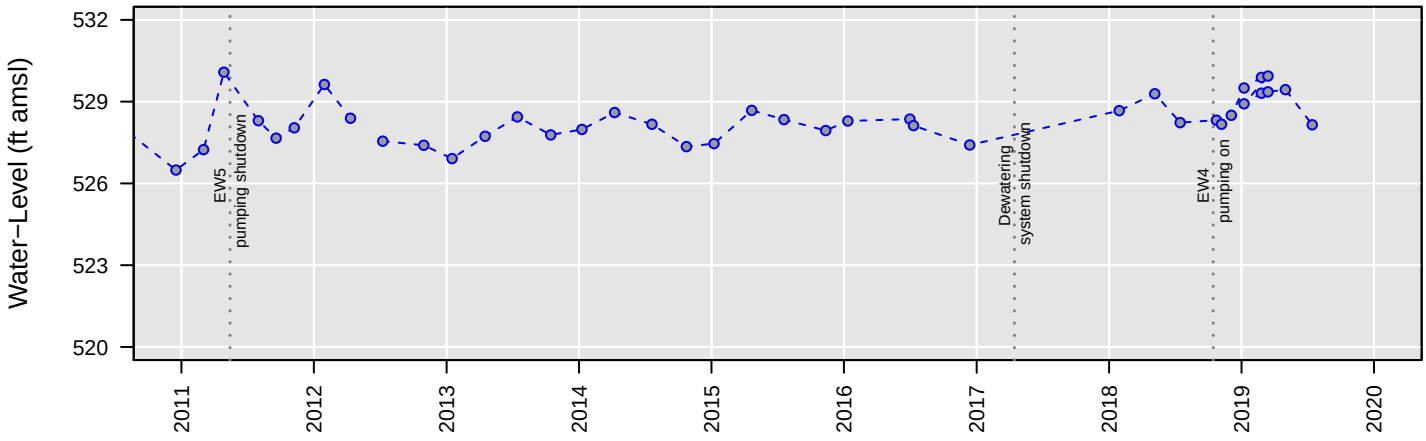
MW97

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





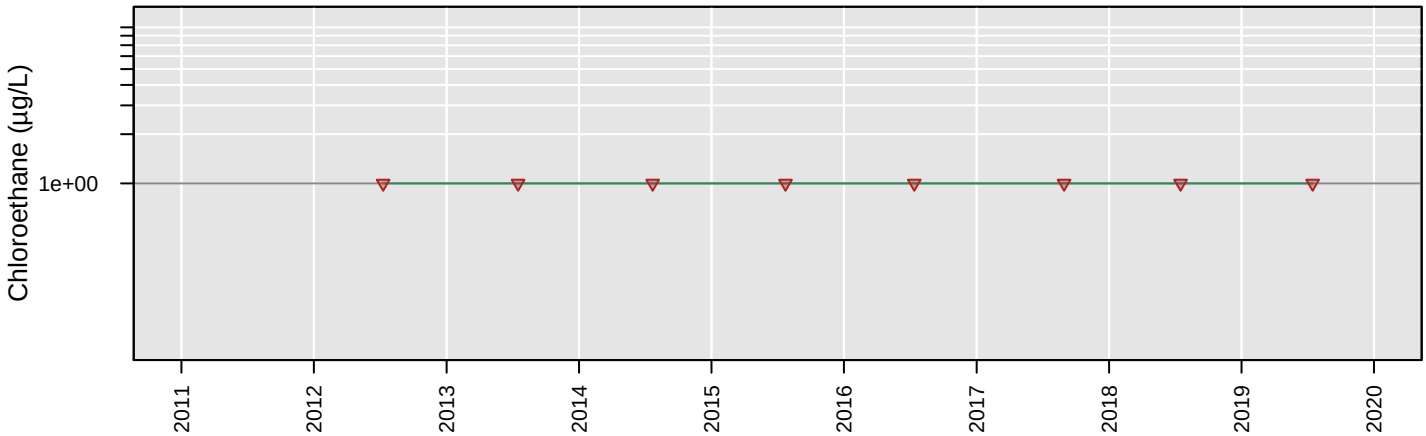
No Analysis Performed

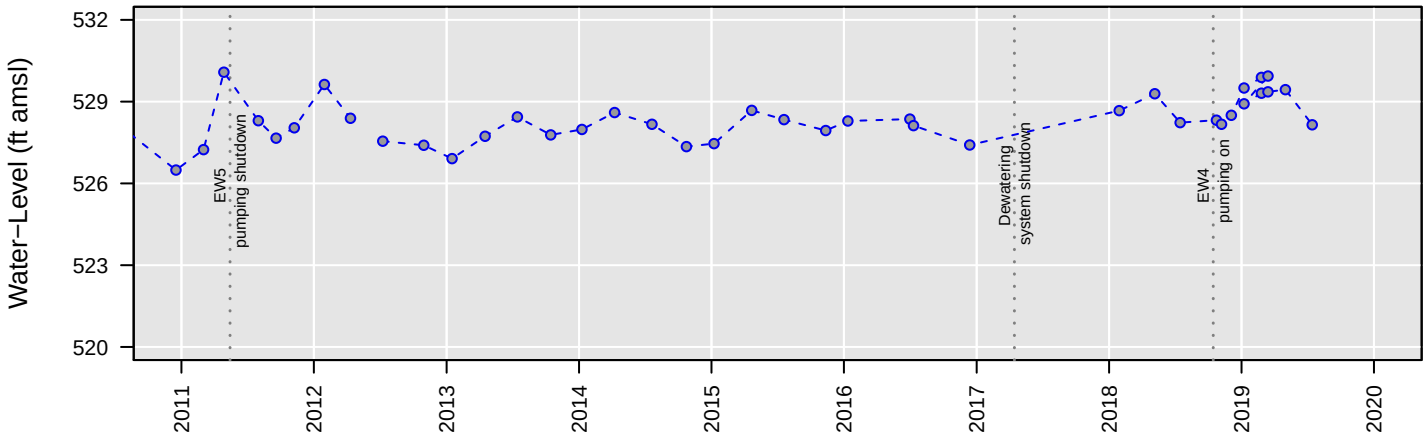
MW97

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





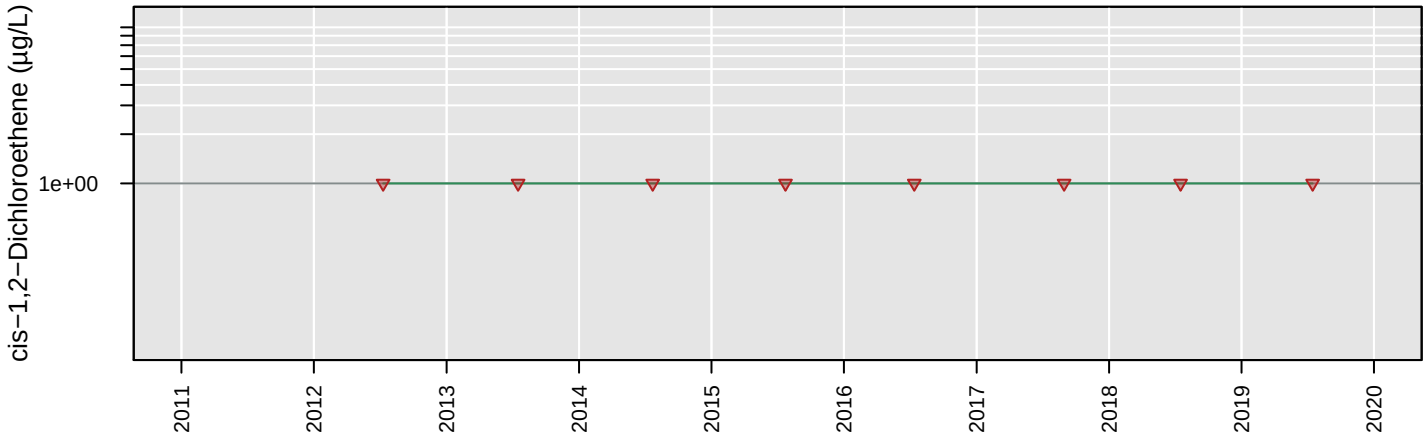
No Analysis Performed

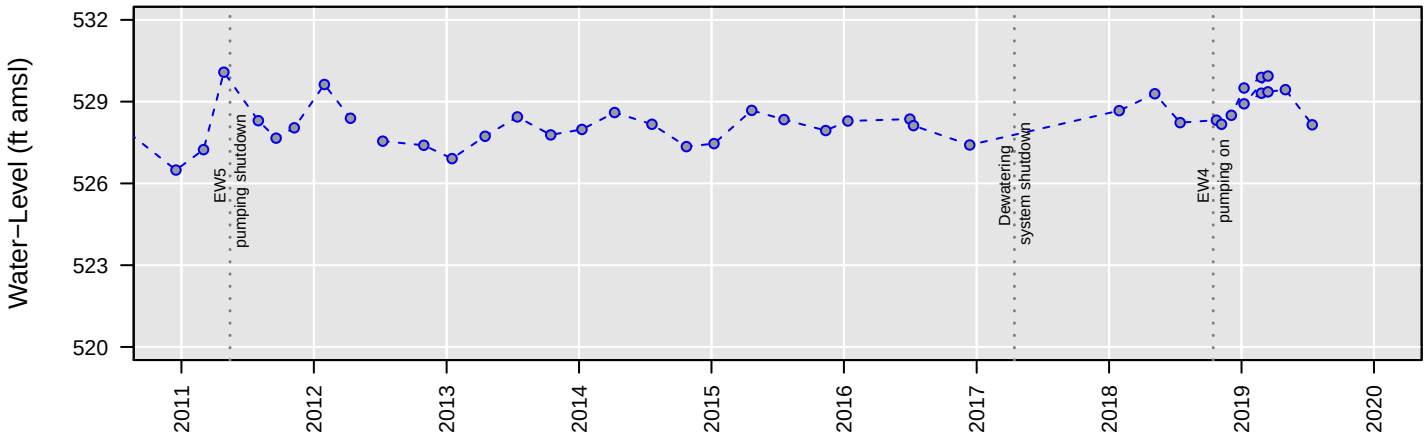
MW97

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





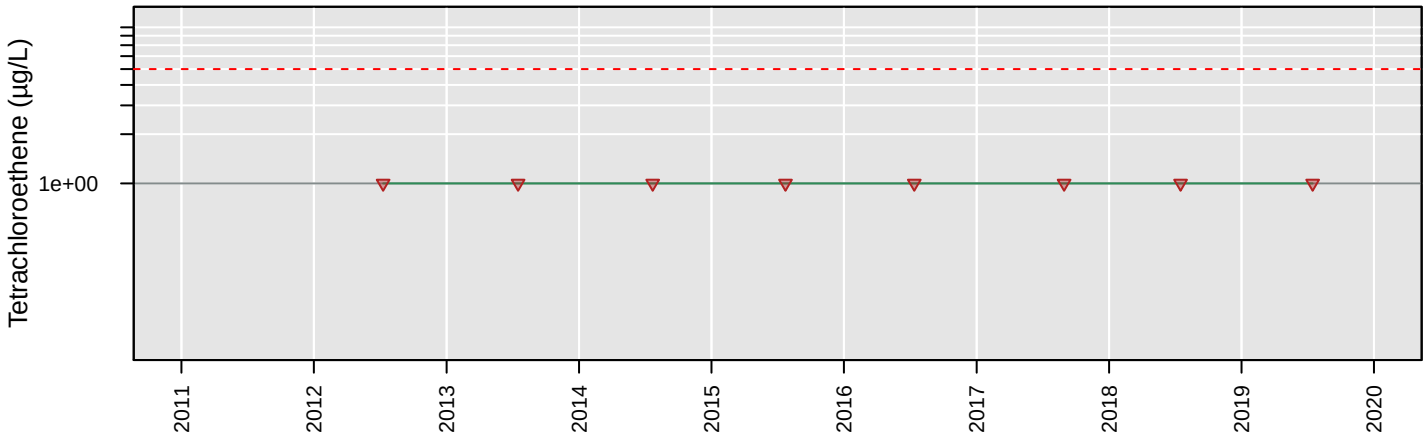
No Analysis Performed

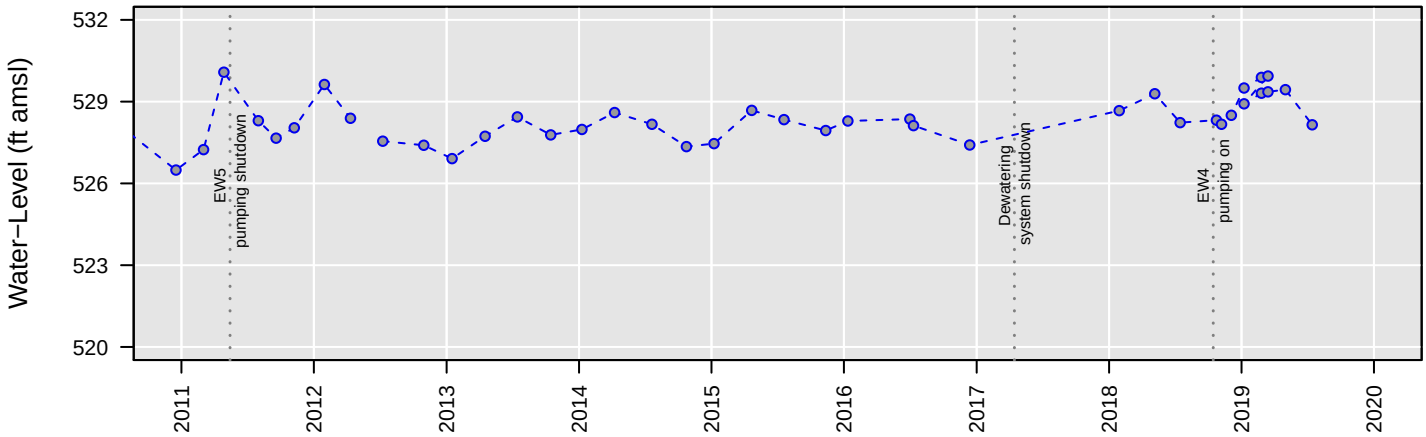
MW97

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





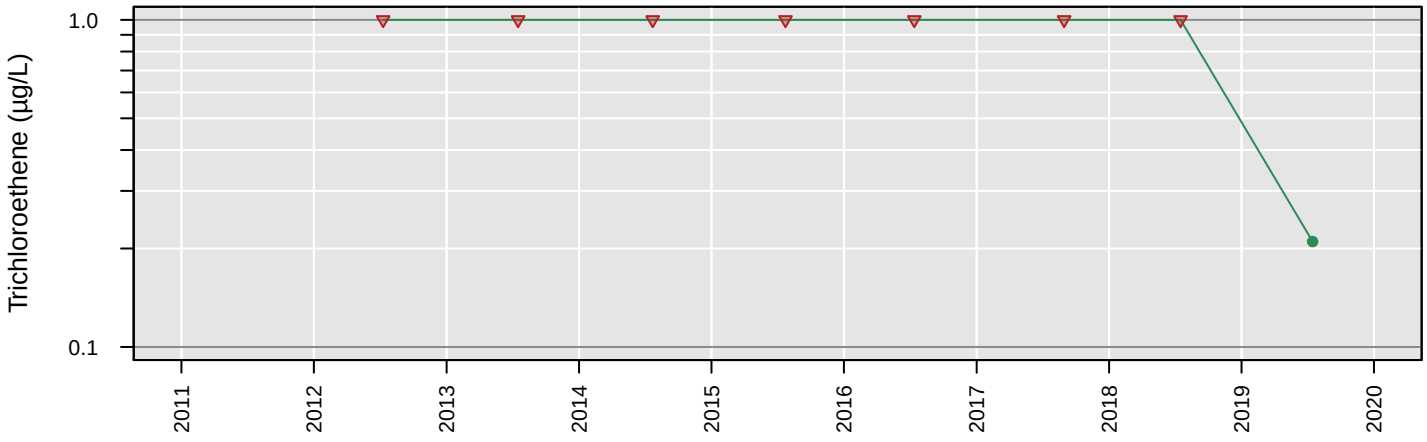
No Analysis Performed

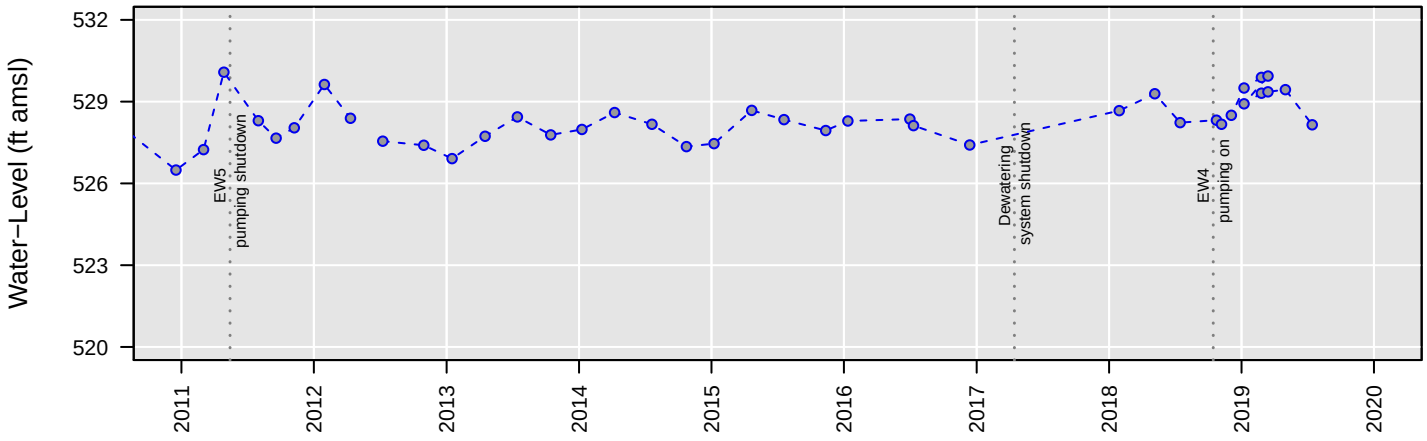
MW97

Trichloroethene

Number of Comparisons: 8
Percent NDs: 88%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



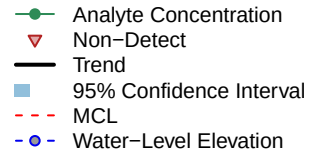


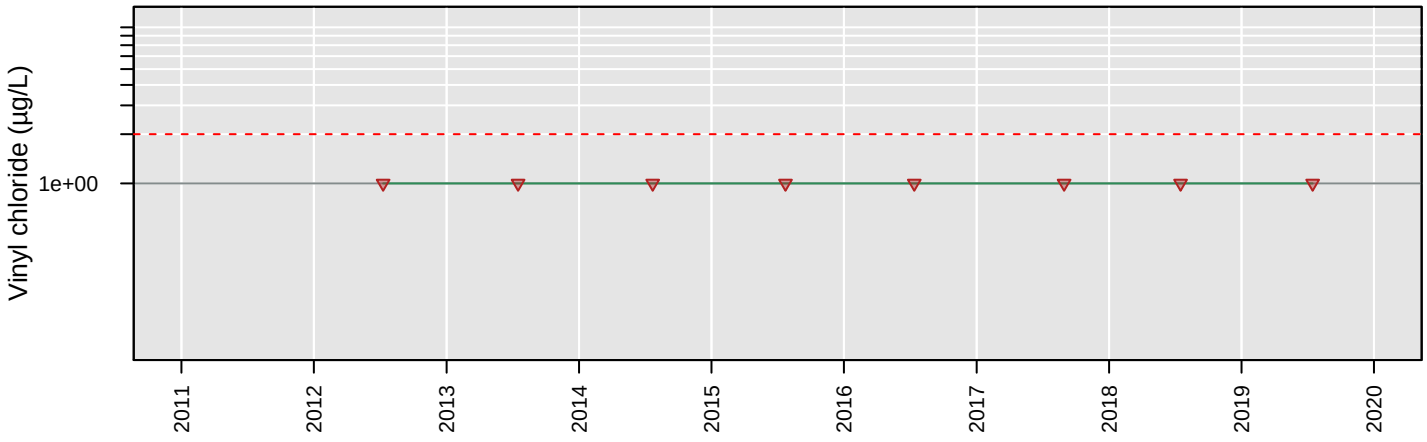
No Analysis Performed

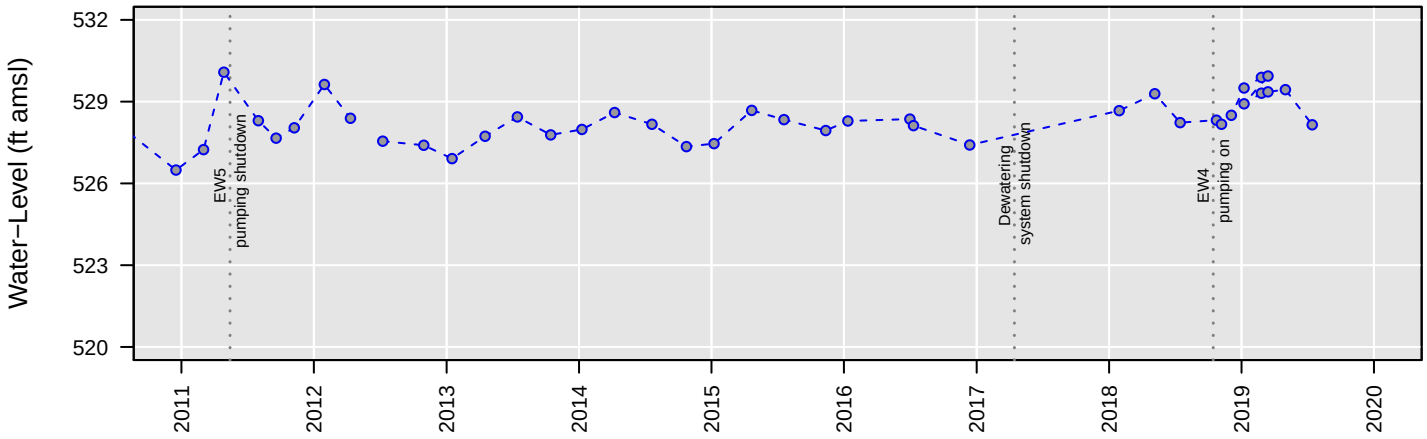
MW97

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 100%





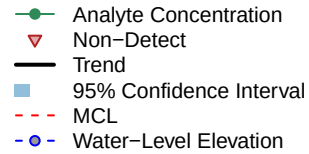


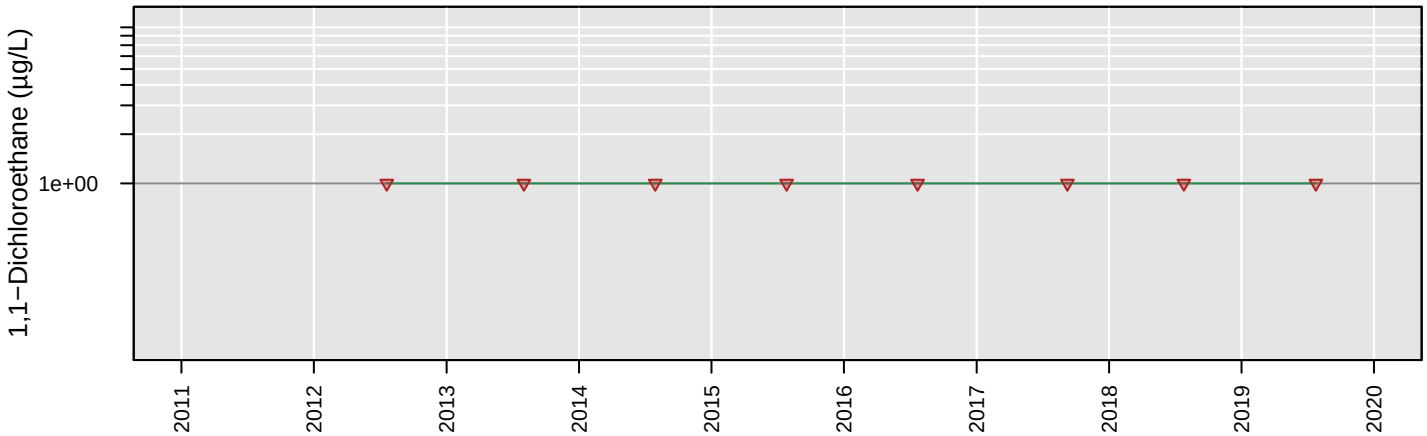
No Analysis Performed

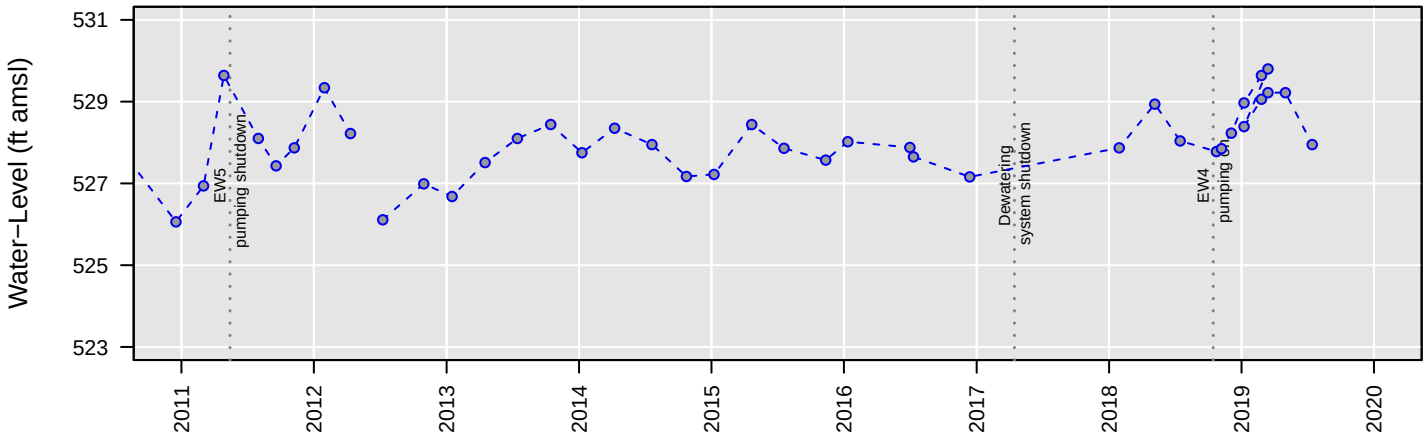
MW98

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%







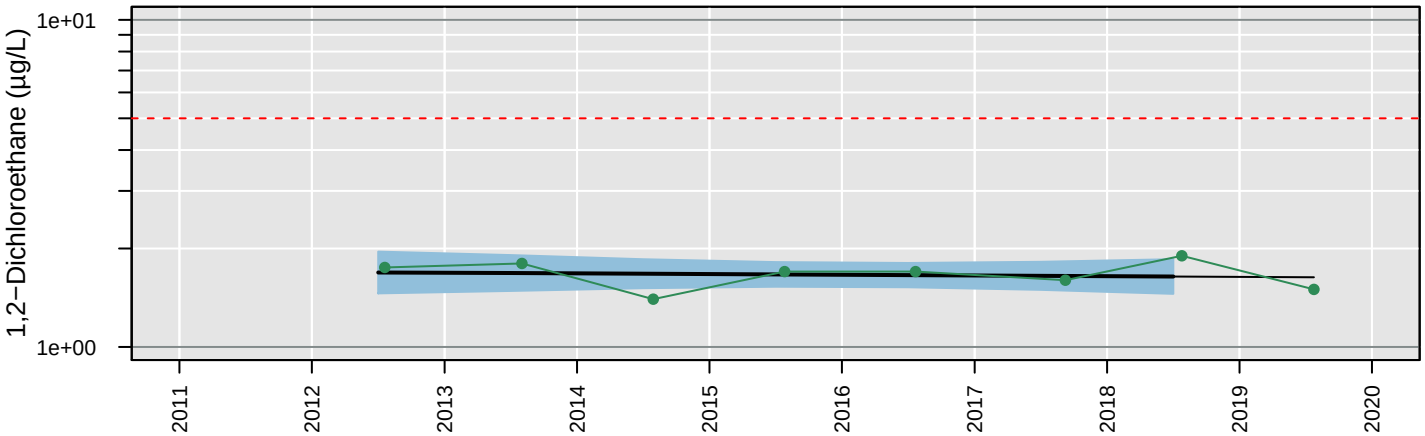
No Analysis Performed

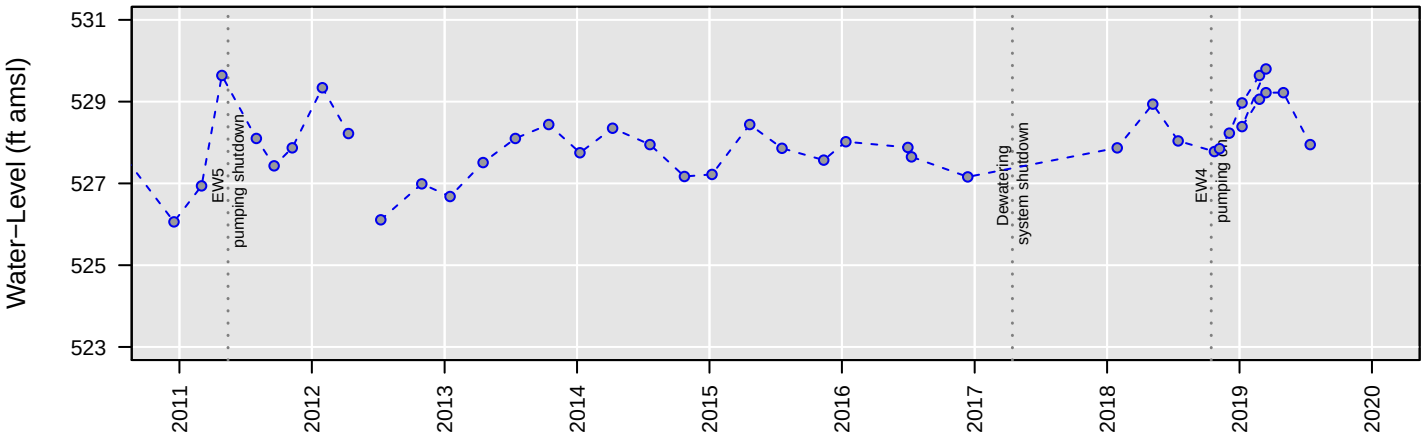
MW98

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

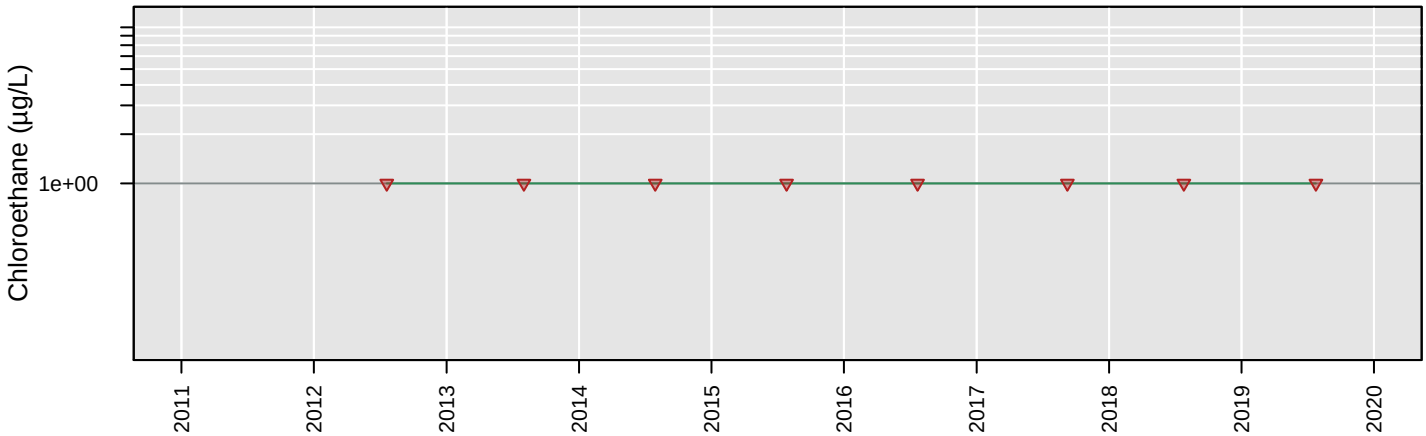
Regression Statistics for January 2018 to January 2019
Geometric Mean: 1.6 µg/L
UCL: 1.9 µg/L
LCL: 1.5 µg/L

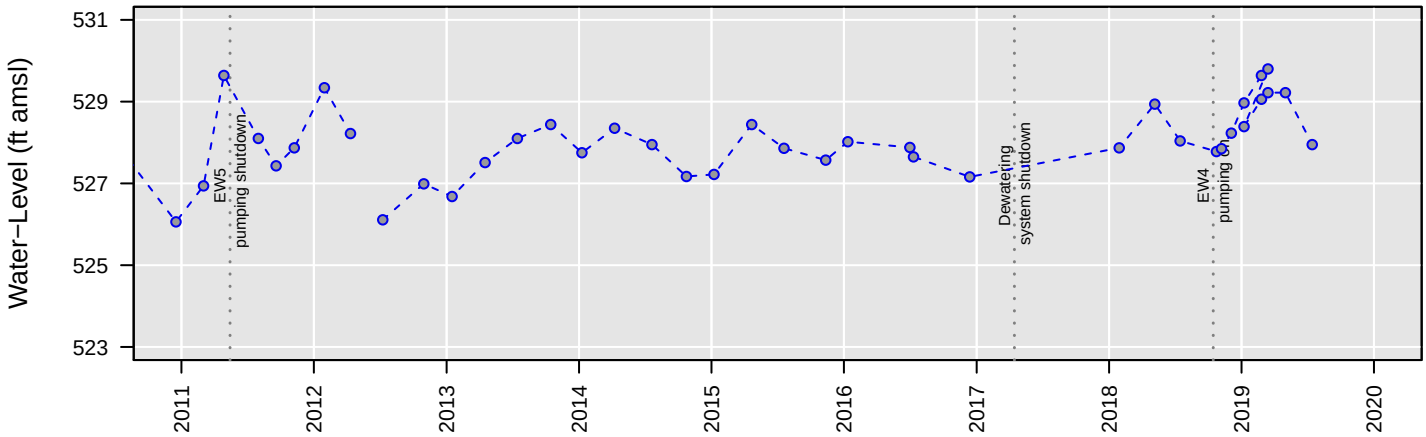
MW98

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





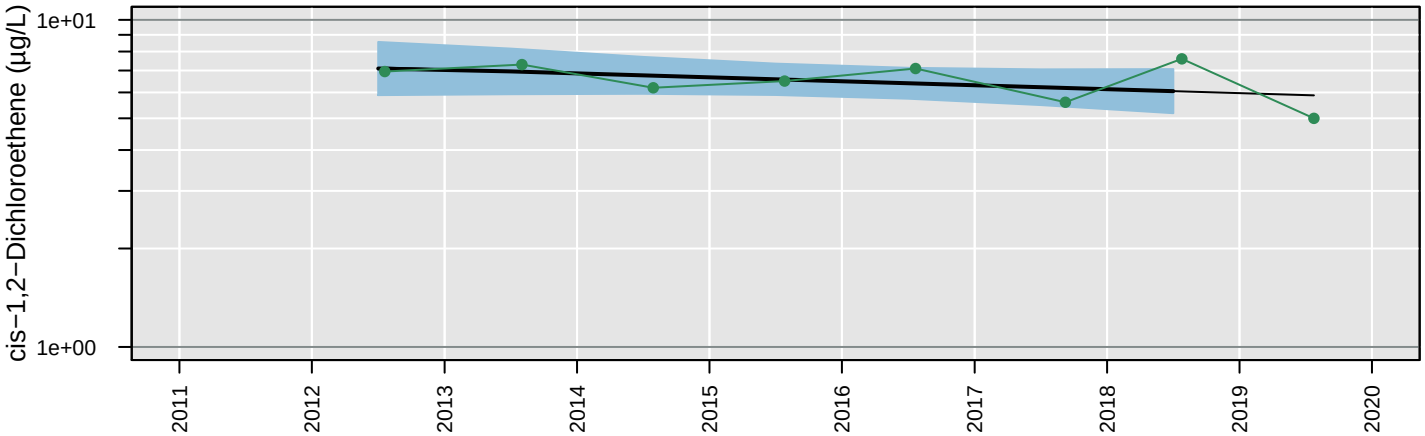
No Analysis Performed

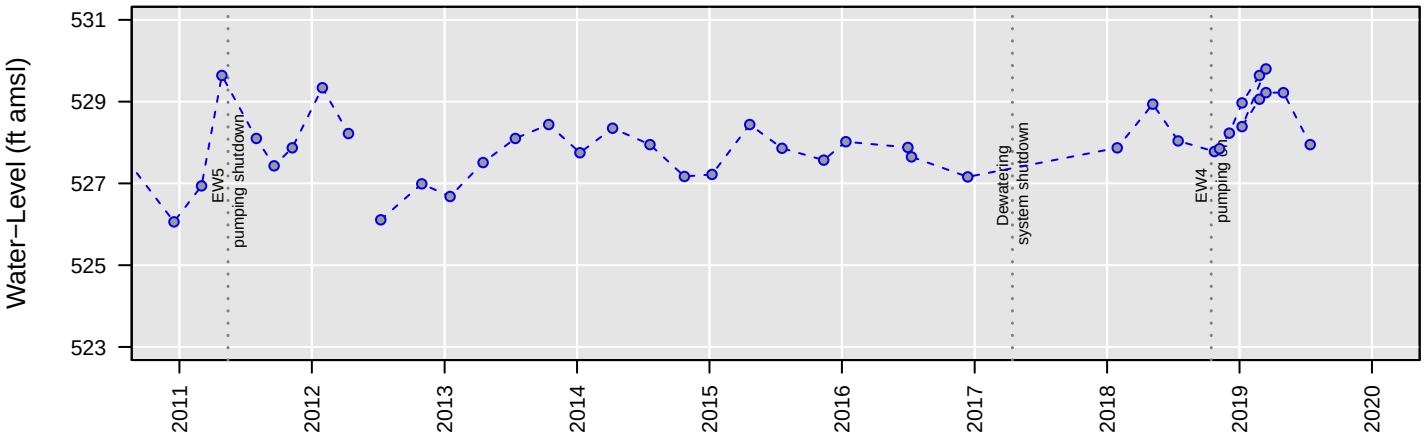
MW98

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

Trend Not Significant

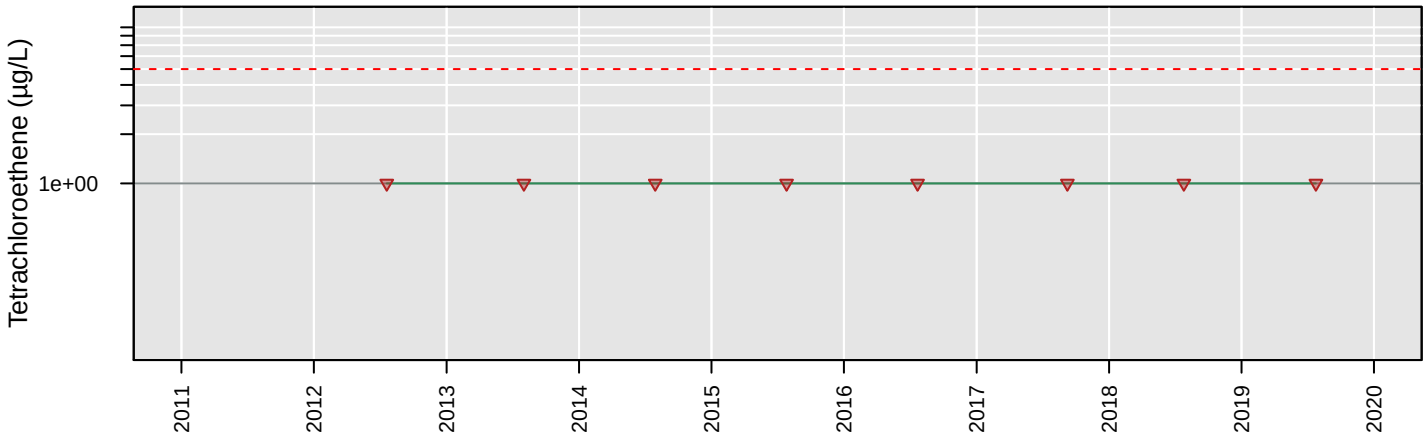
Regression Statistics for January 2018 to January 2019
Geometric Mean: 6.1 µg/L
UCL: 7.1 µg/L
LCL: 5.2 µg/L

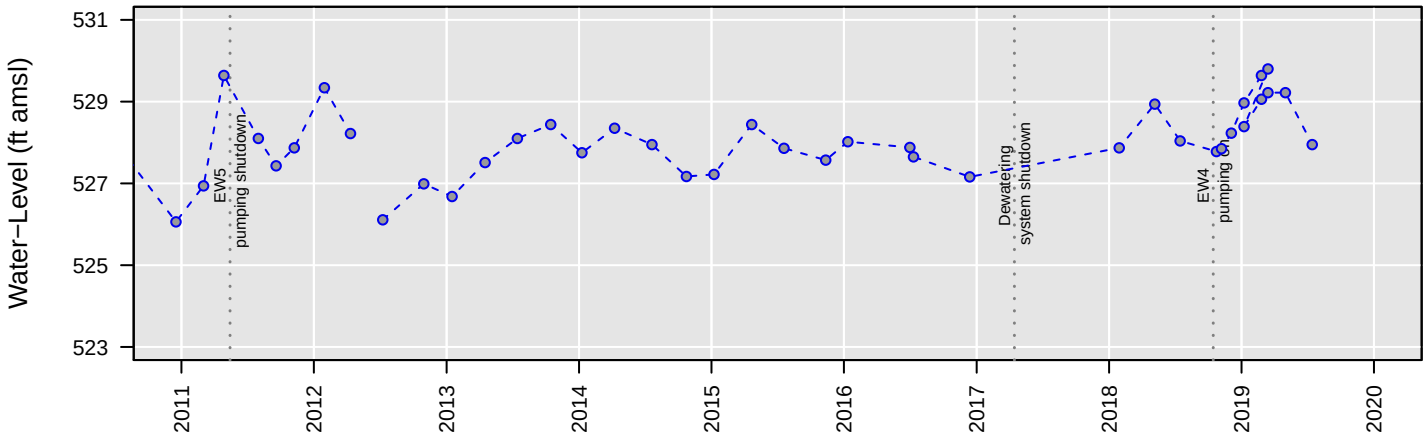
MW98

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



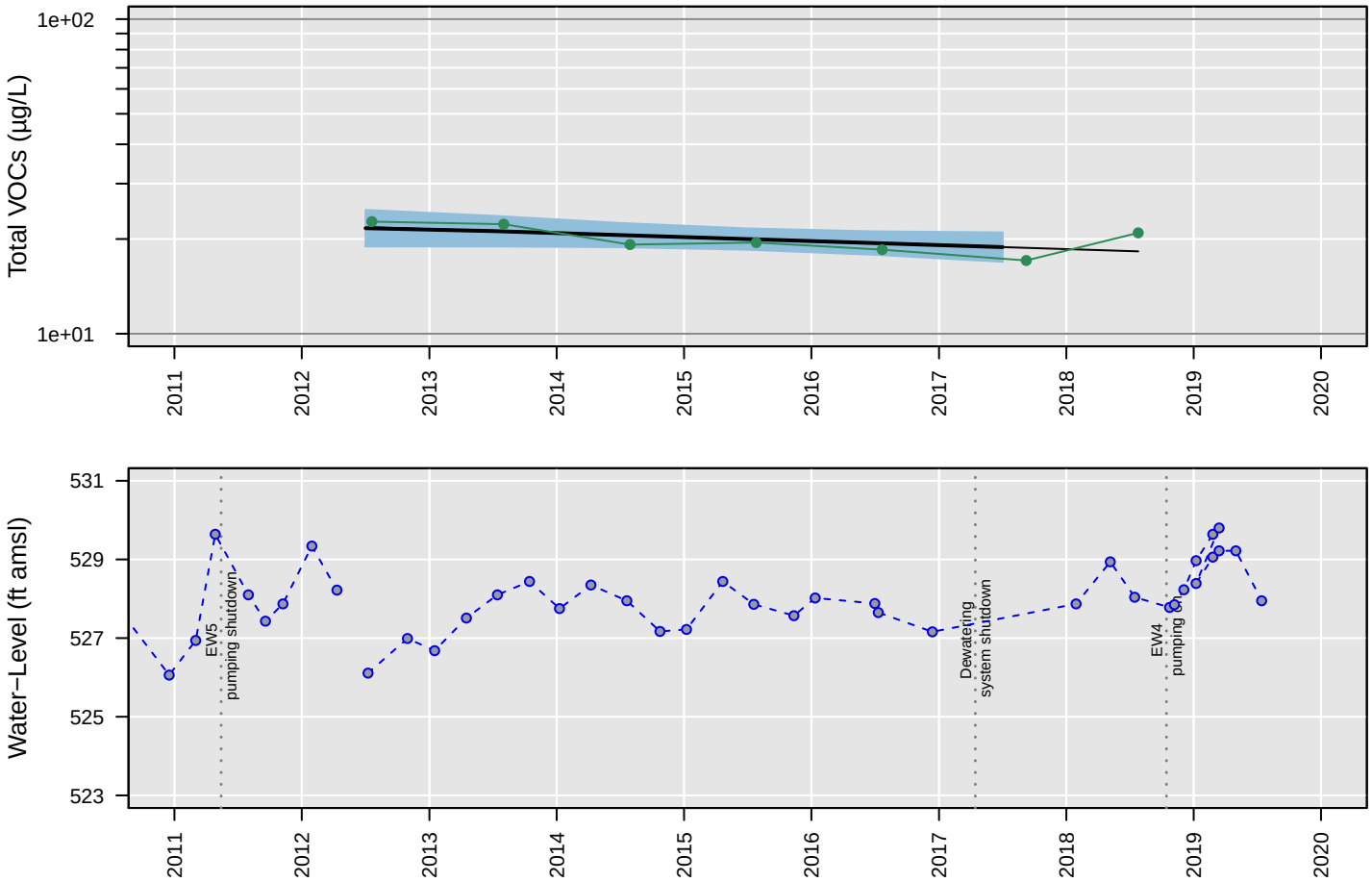


No Analysis Performed

MW98

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

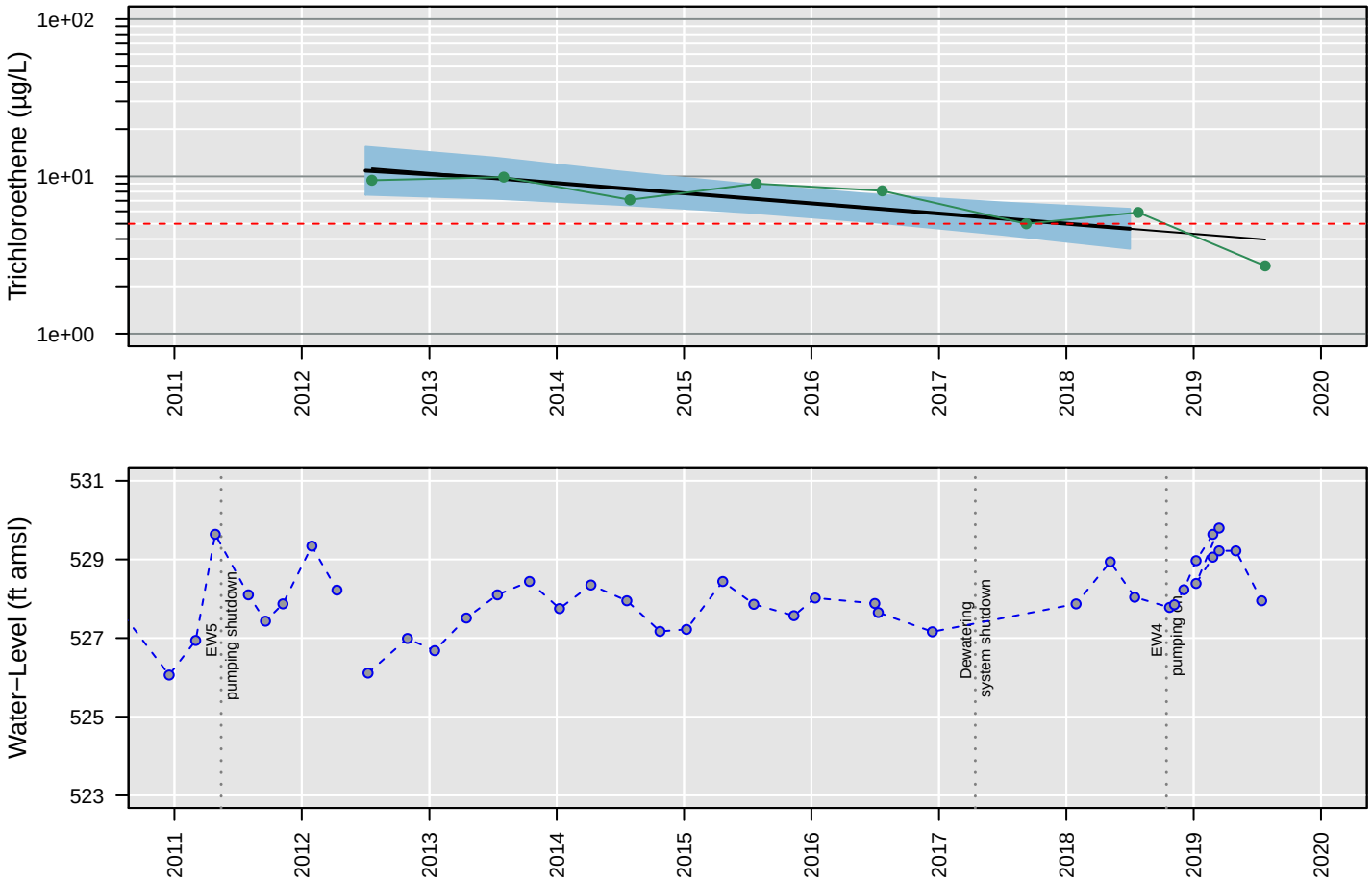
Trend Not Significant

Regression Statistics for January 2017 to January 2018
Geometric Mean: 19 µg/L
UCL: 21 µg/L
LCL: 17 µg/L

MW98

Trichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

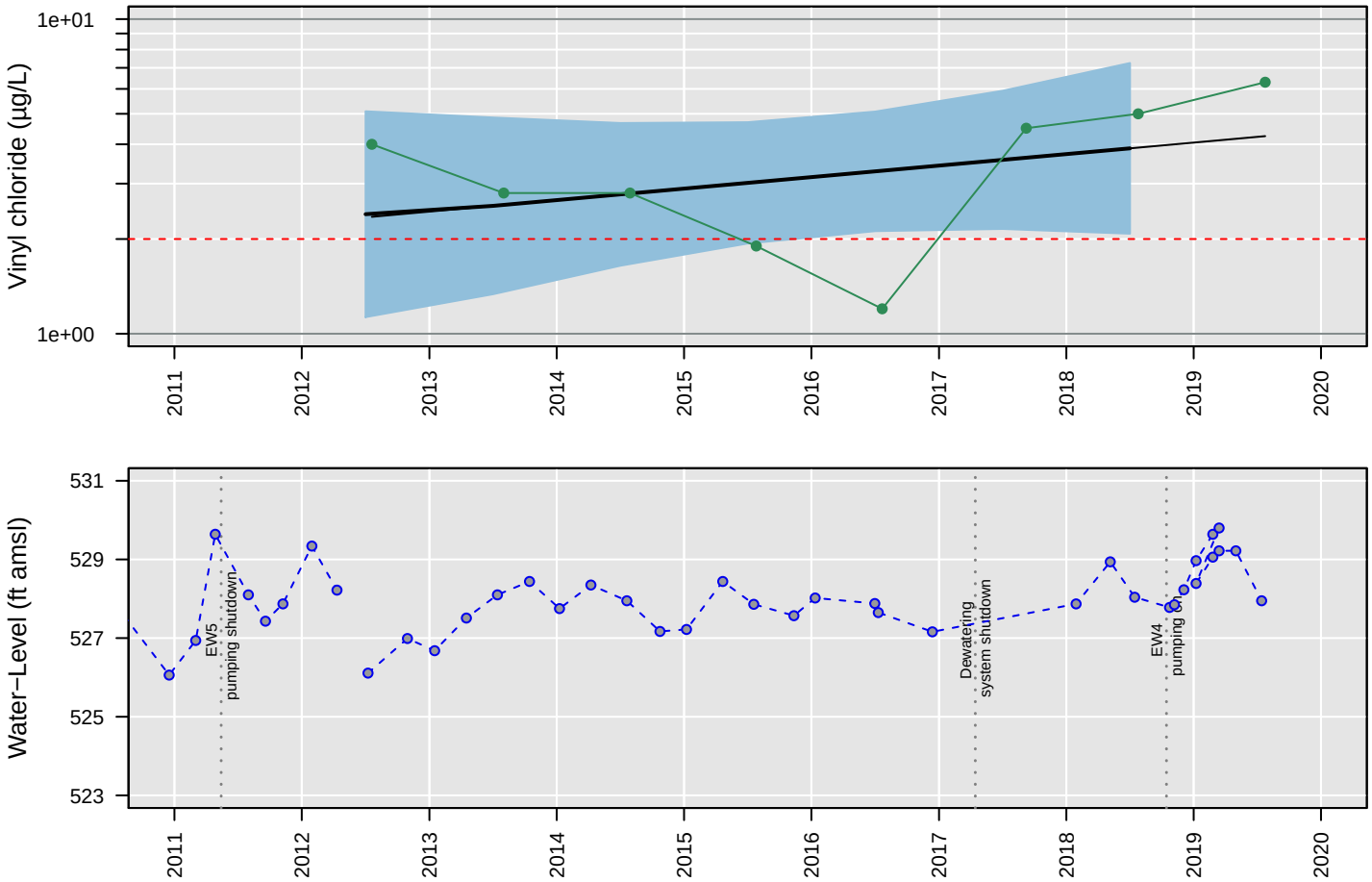
ln Conc. = −0.00041 (+/− 0.000093)*Date + 8.7 (+/− 1.6)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.6 µg/L
UCL: 6.2 µg/L
LCL: 3.5 µg/L

MW98

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

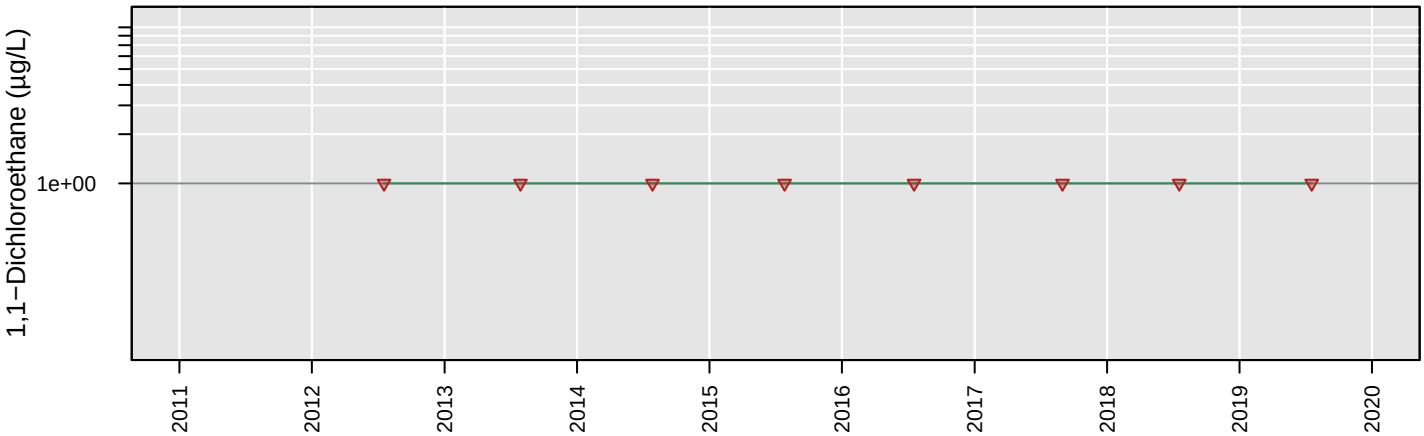
Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.9 µg/L
UCL: 7.3 µg/L
LCL: 2.1 µg/L

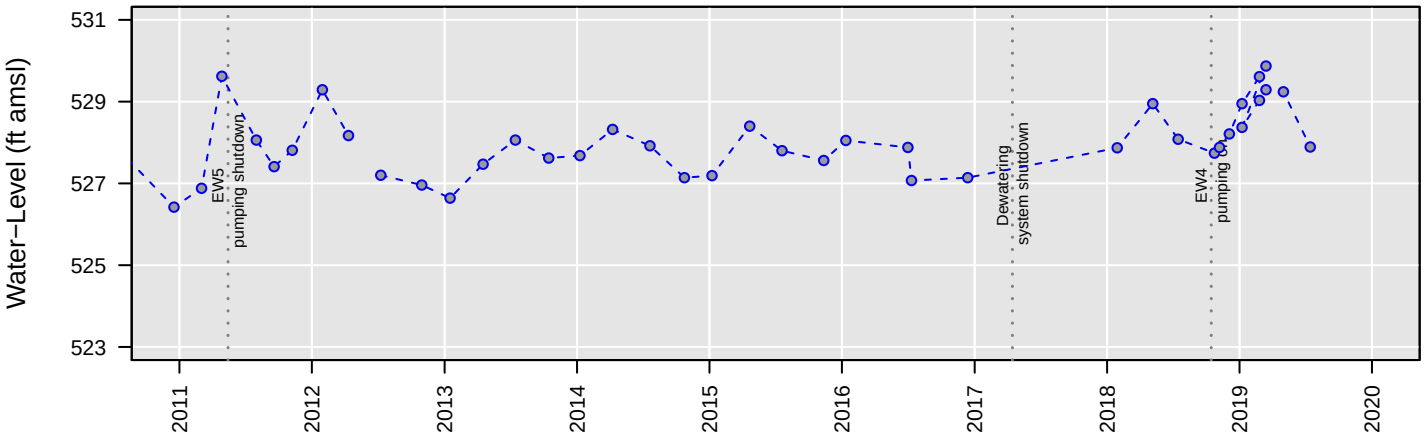
MW99

1,1−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





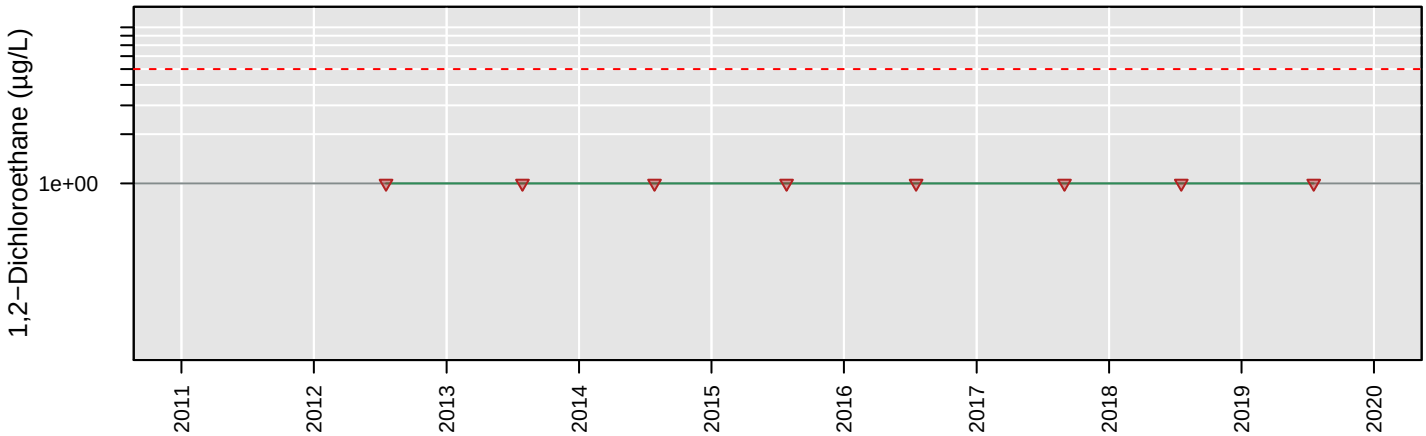
No Analysis Performed

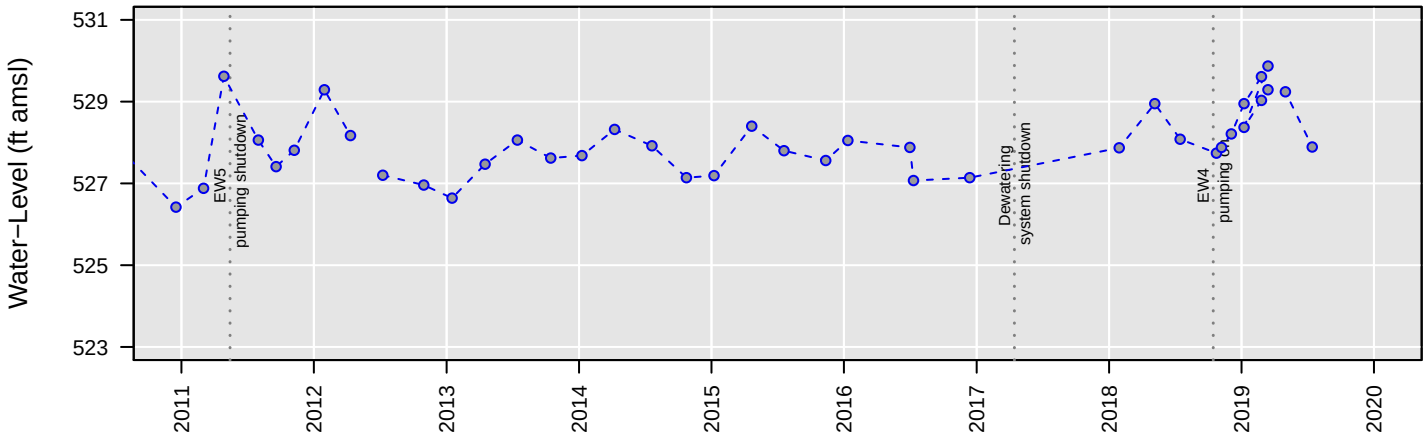
MW99

1,2−Dichloroethane

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



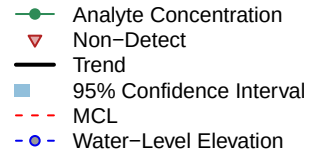


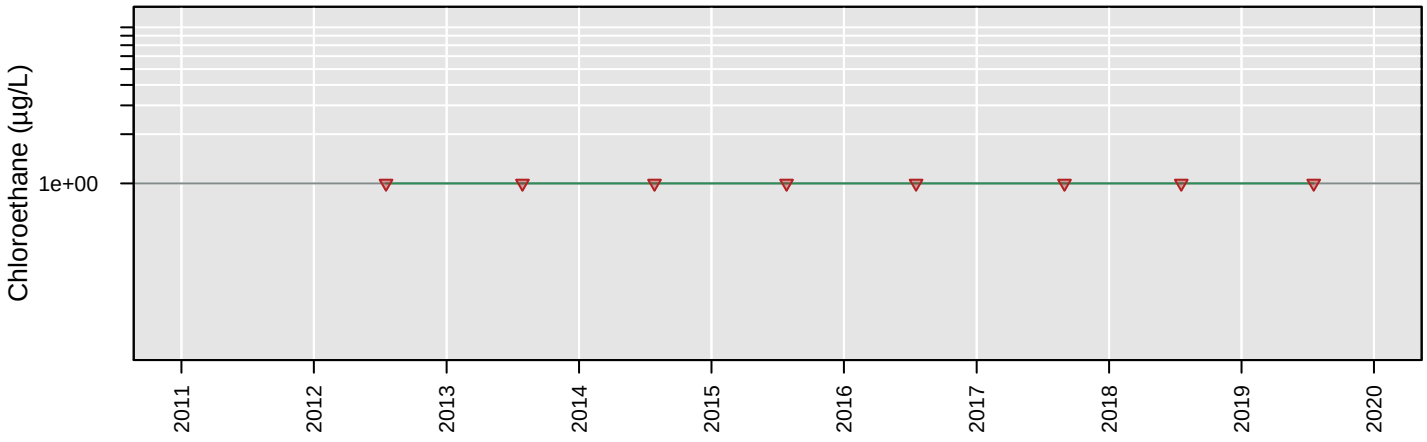
No Analysis Performed

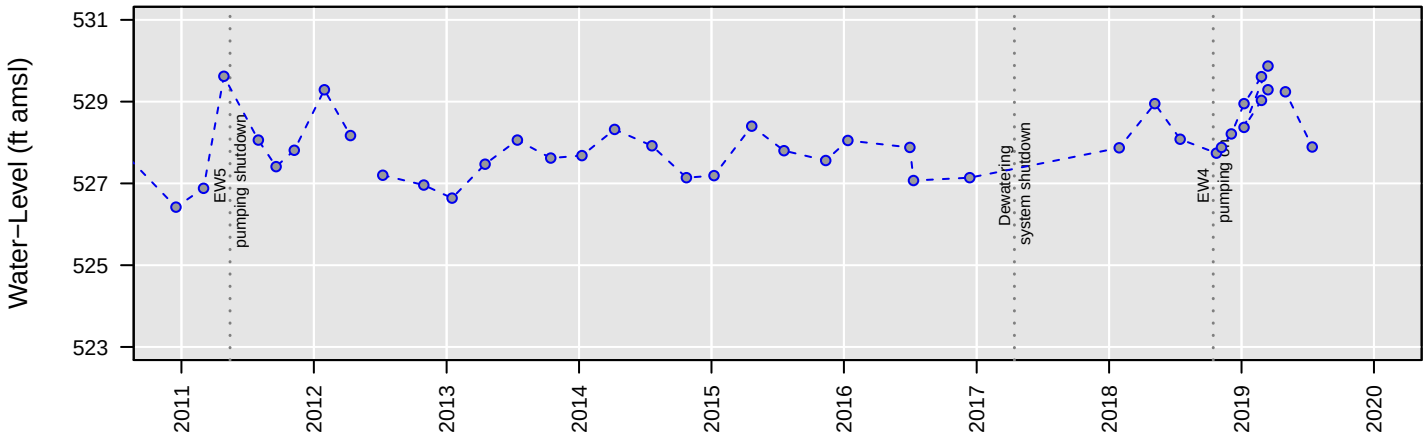
MW99

Chloroethane

Number of Comparisons: 8
Percent NDs: 100%





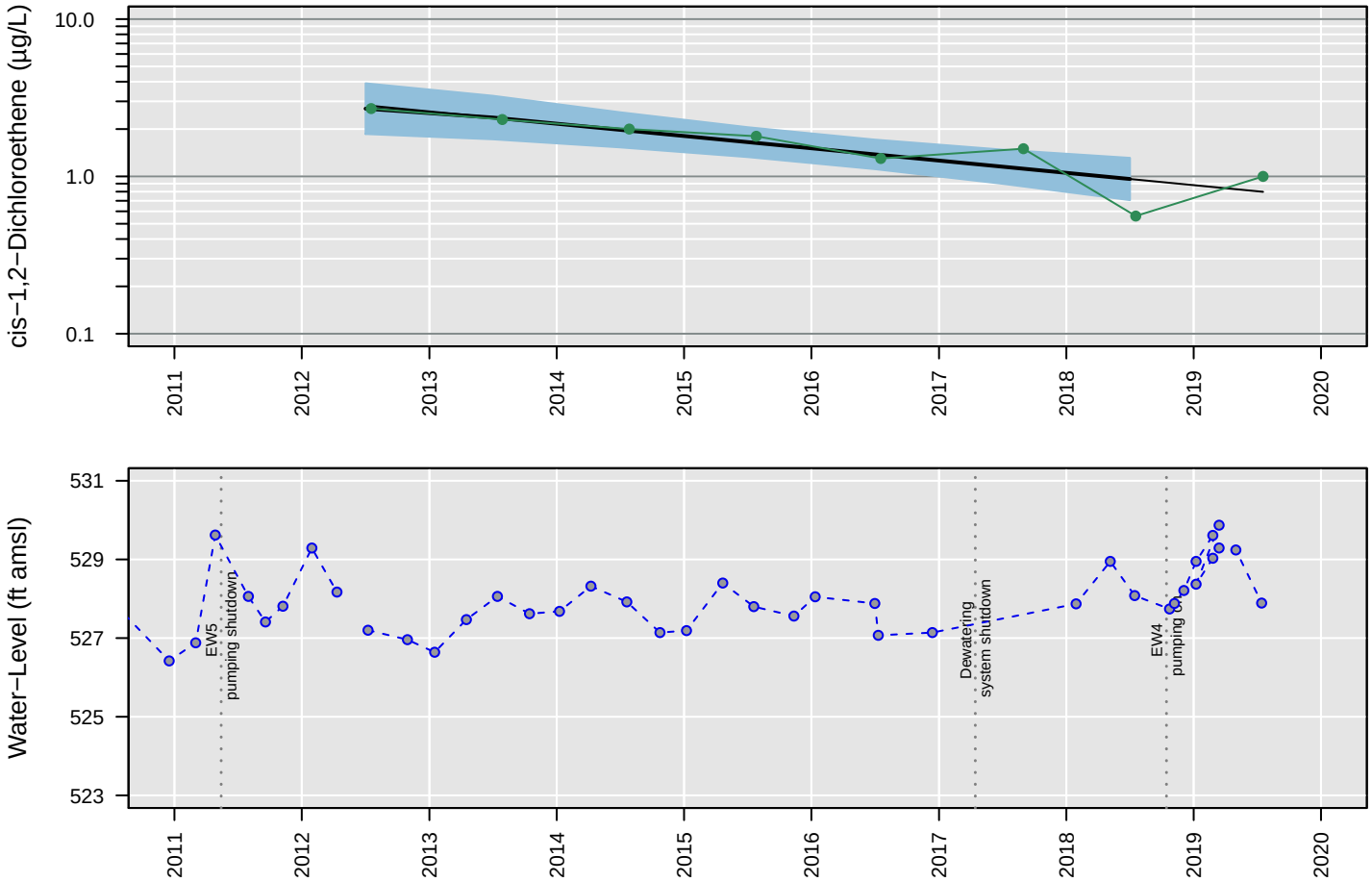


No Analysis Performed

MW99

cis−1,2−Dichloroethene

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.00049 (+/− 0.000099)*Date + 8.7 (+/− 1.7)

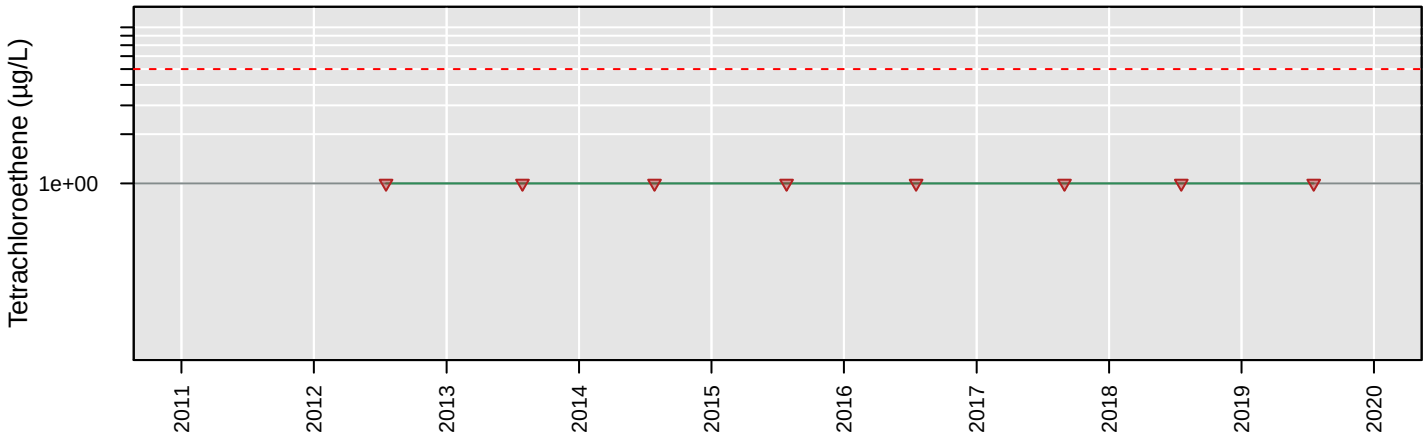
Regression Statistics for January 2018 to January 2019
Geometric Mean: 0.96 µg/L
UCL: 1.3 µg/L
LCL: 0.71 µg/L

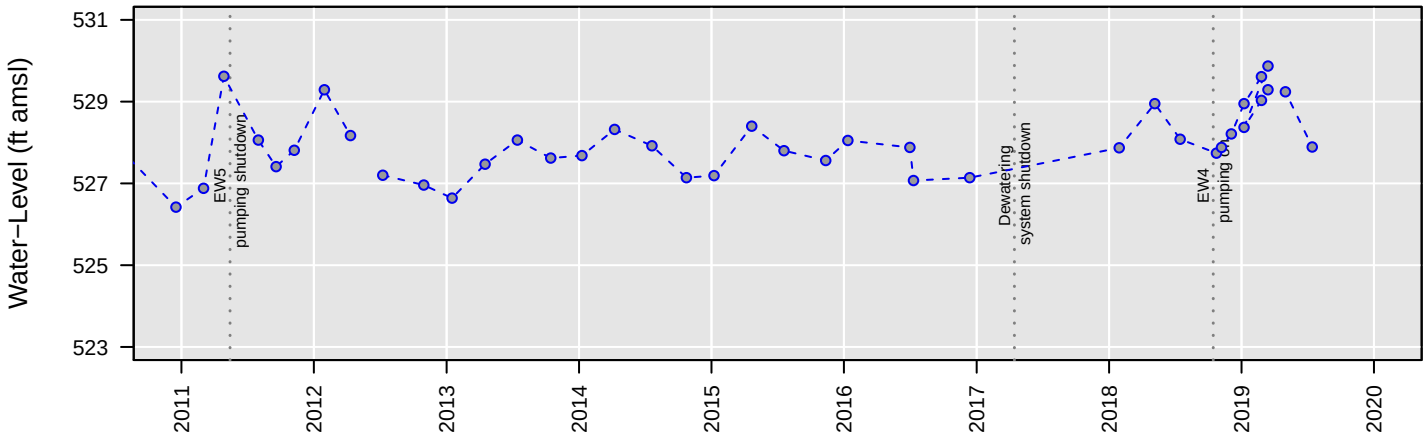
MW99

Tetrachloroethene

Number of Comparisons: 8
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



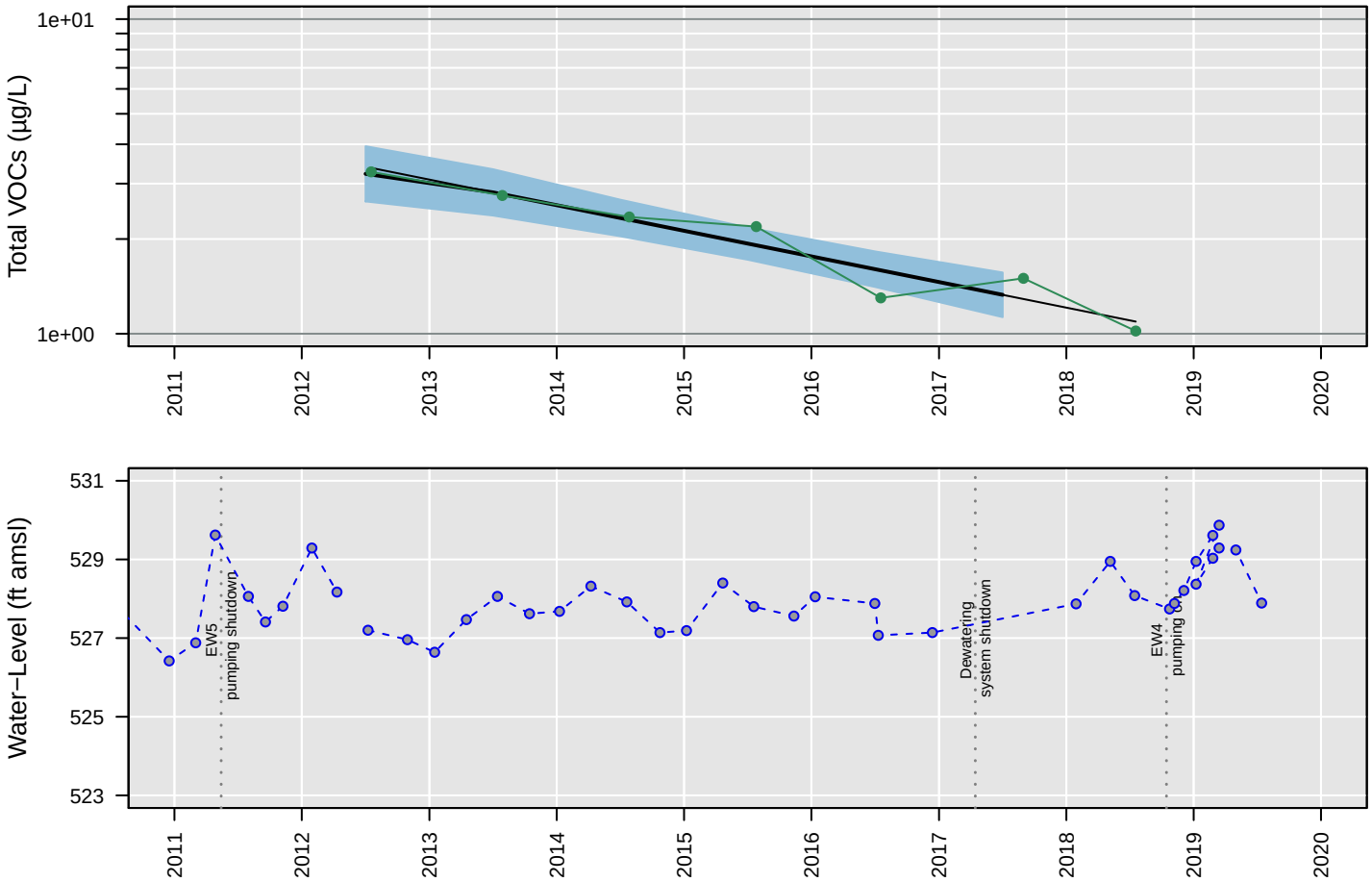


No Analysis Performed

MW99

Total VOCs

Number of Comparisons: 7
Percent NDs: 0%



Censored Regression (Tobit) Model

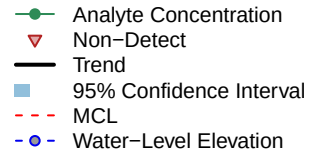
ln Conc. = −0.00051 (+/− 0.000058)*Date + 9.2 (+/− 0.96)

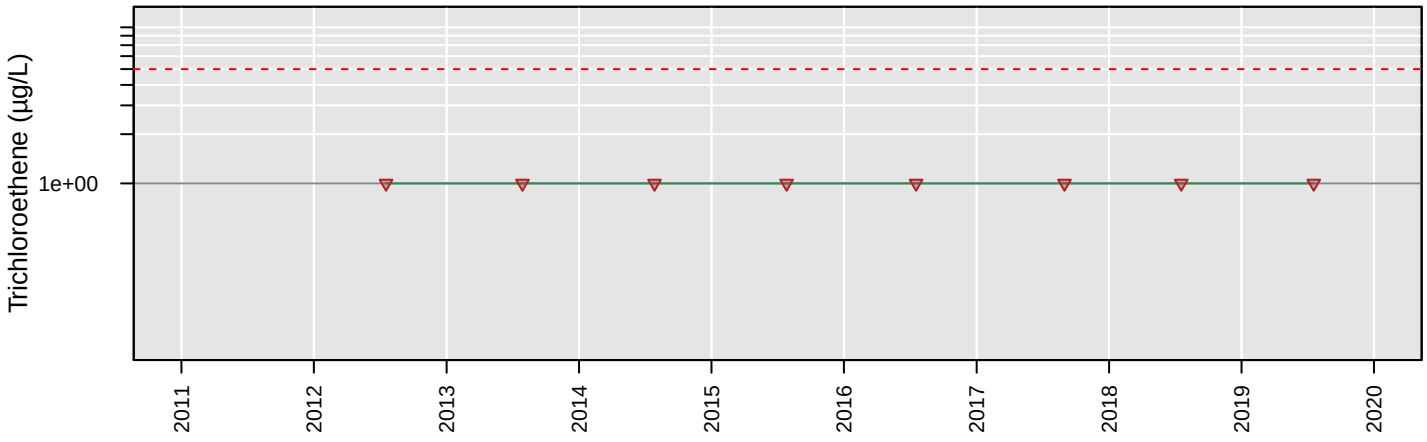
Regression Statistics for January 2017 to January 2018
Geometric Mean: 1.3 µg/L
UCL: 1.6 µg/L
LCL: 1.1 µg/L

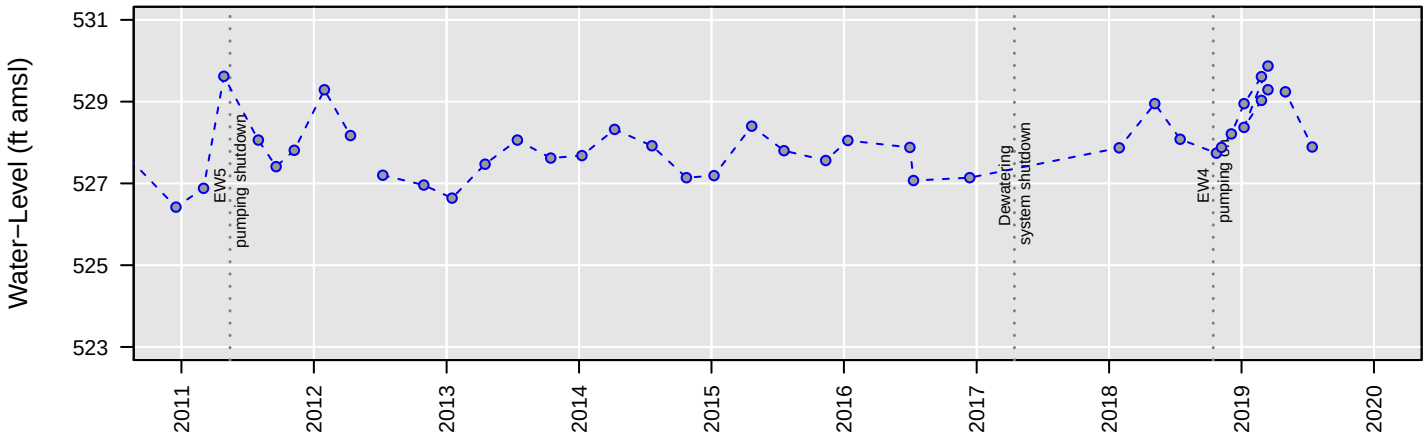
MW99

Trichloroethene

Number of Comparisons: 8
Percent NDs: 100%





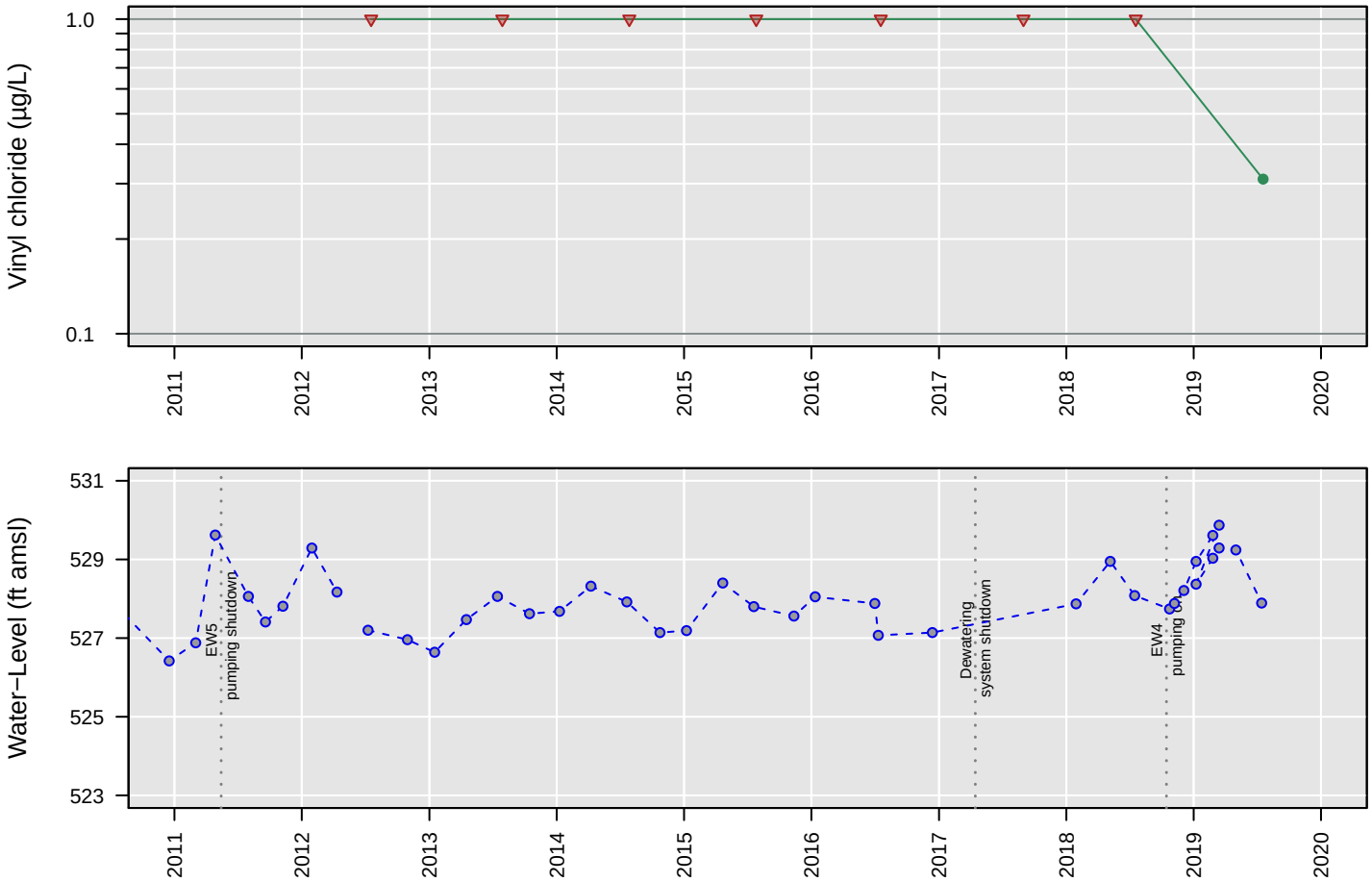


No Analysis Performed

MW99

Vinyl chloride

Number of Comparisons: 8
Percent NDs: 88%

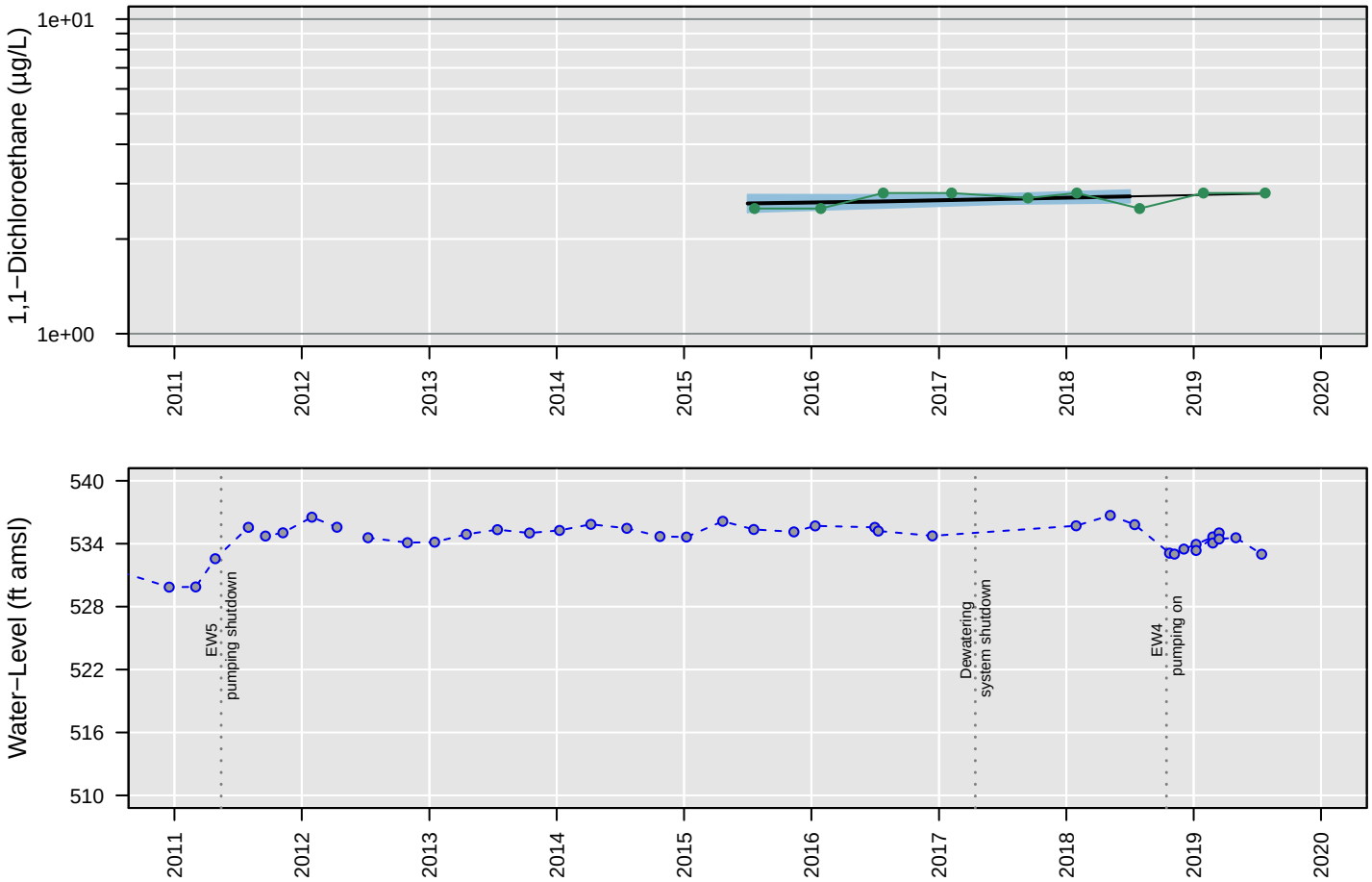


No Analysis Performed

PZ3

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

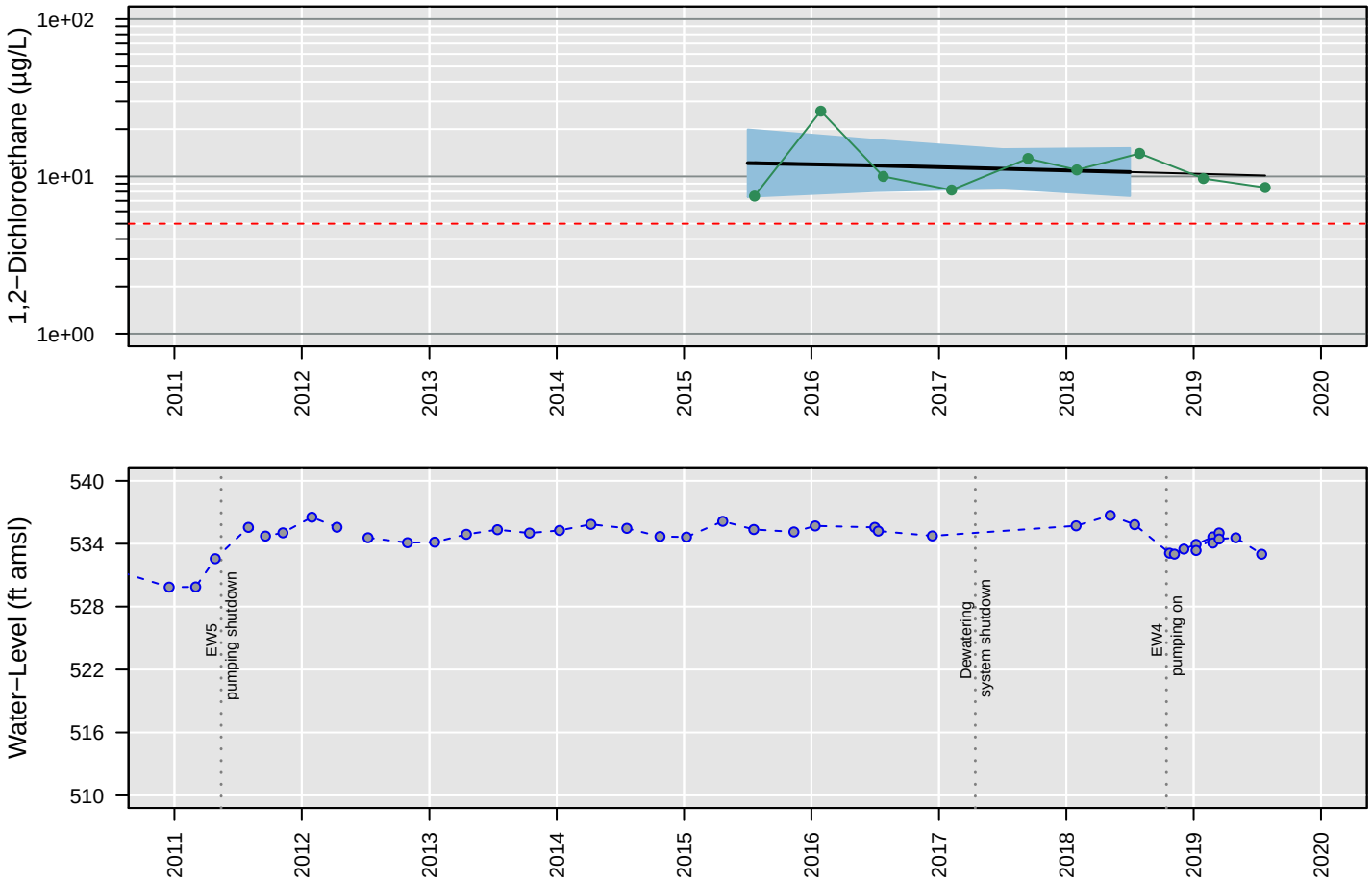
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.7 µg/L
UCL: 2.9 µg/L
LCL: 2.6 µg/L

PZ3

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

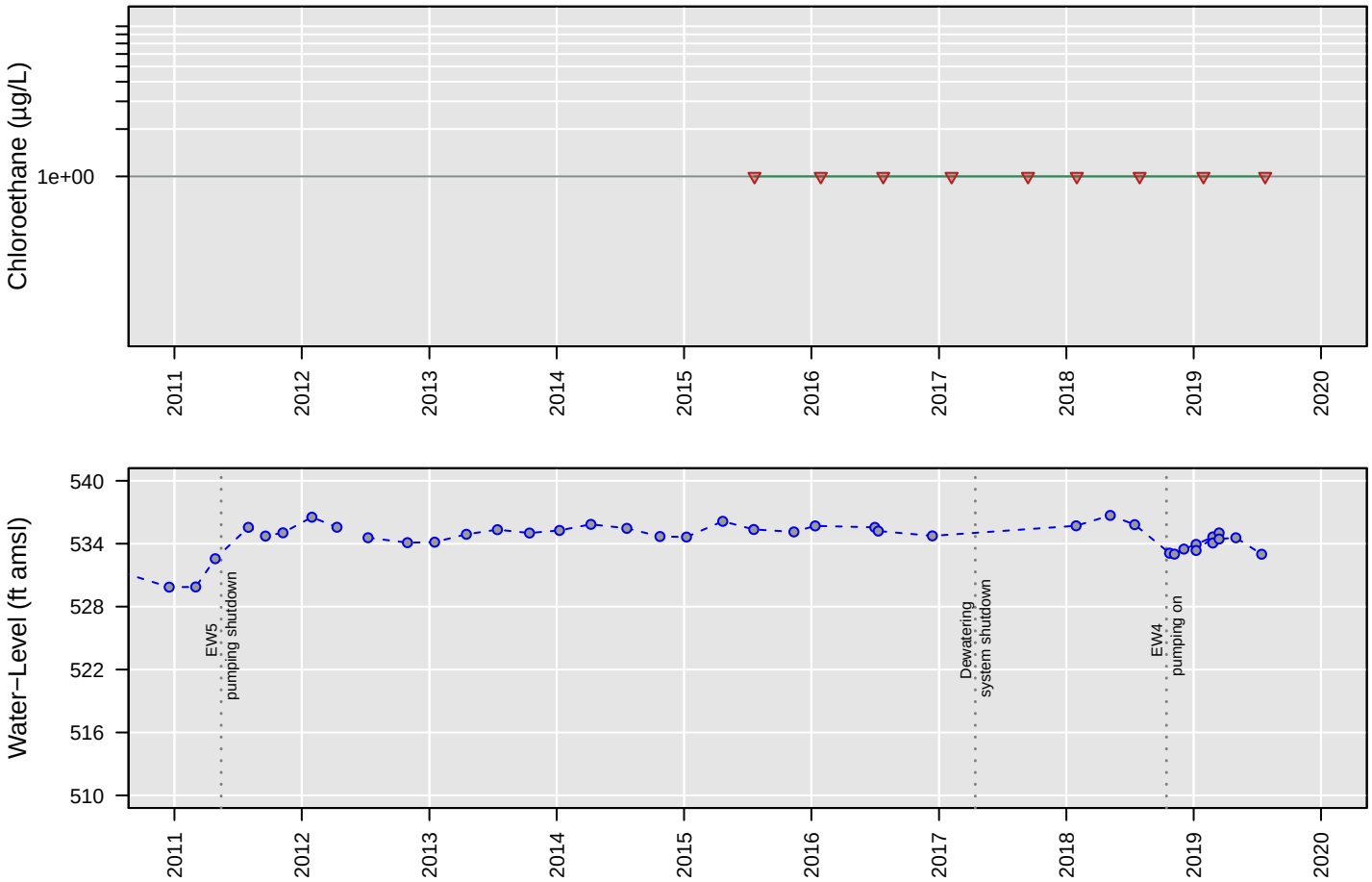
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 11 µg/L
UCL: 15 µg/L
LCL: 7.5 µg/L

PZ3

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%

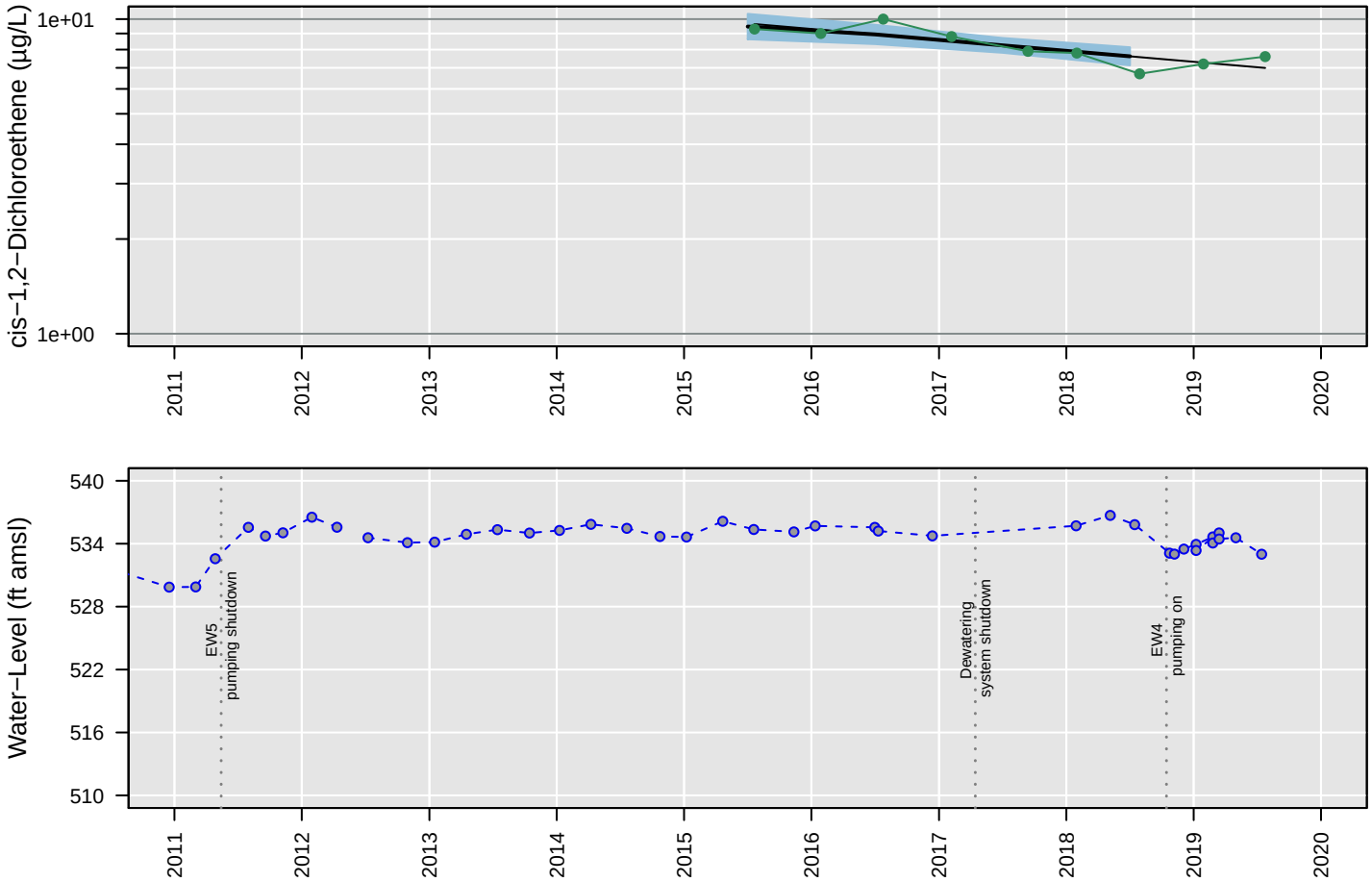


No Analysis Performed

PZ3

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

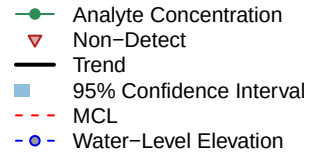
ln Conc. = −0.00022 (+/− 0.000047)*Date + 5.9 (+/− 0.81)

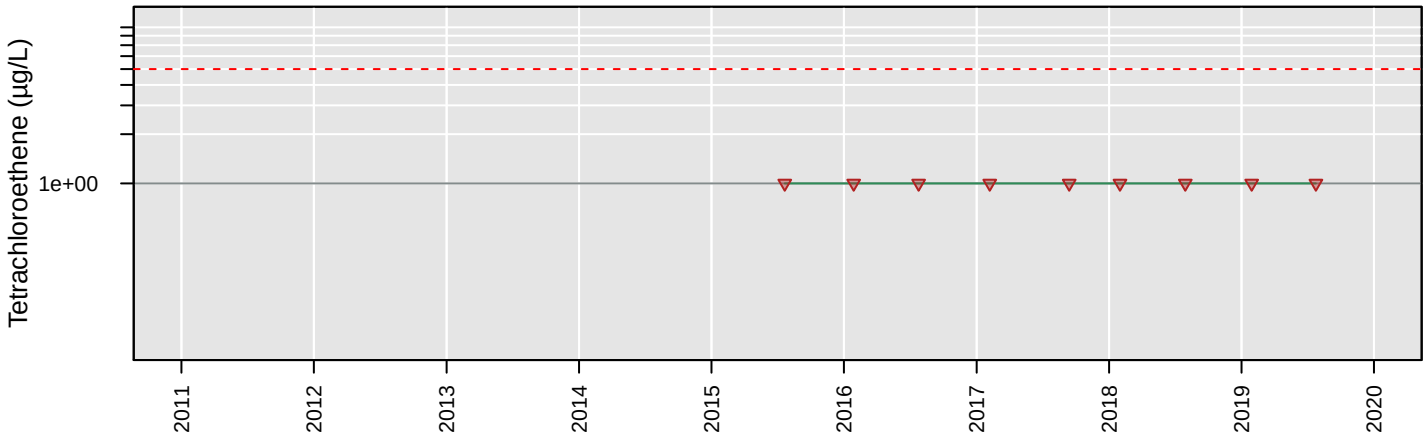
Regression Statistics for January 2018 to January 2019
Geometric Mean: 7.6 µg/L
UCL: 8.1 µg/L
LCL: 7.1 µg/L

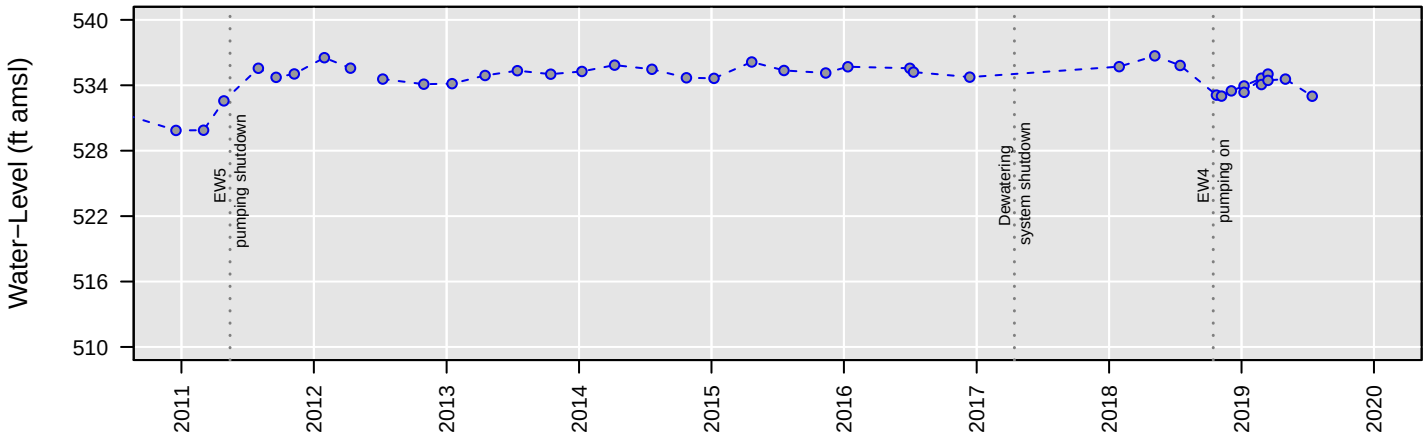
PZ3

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%





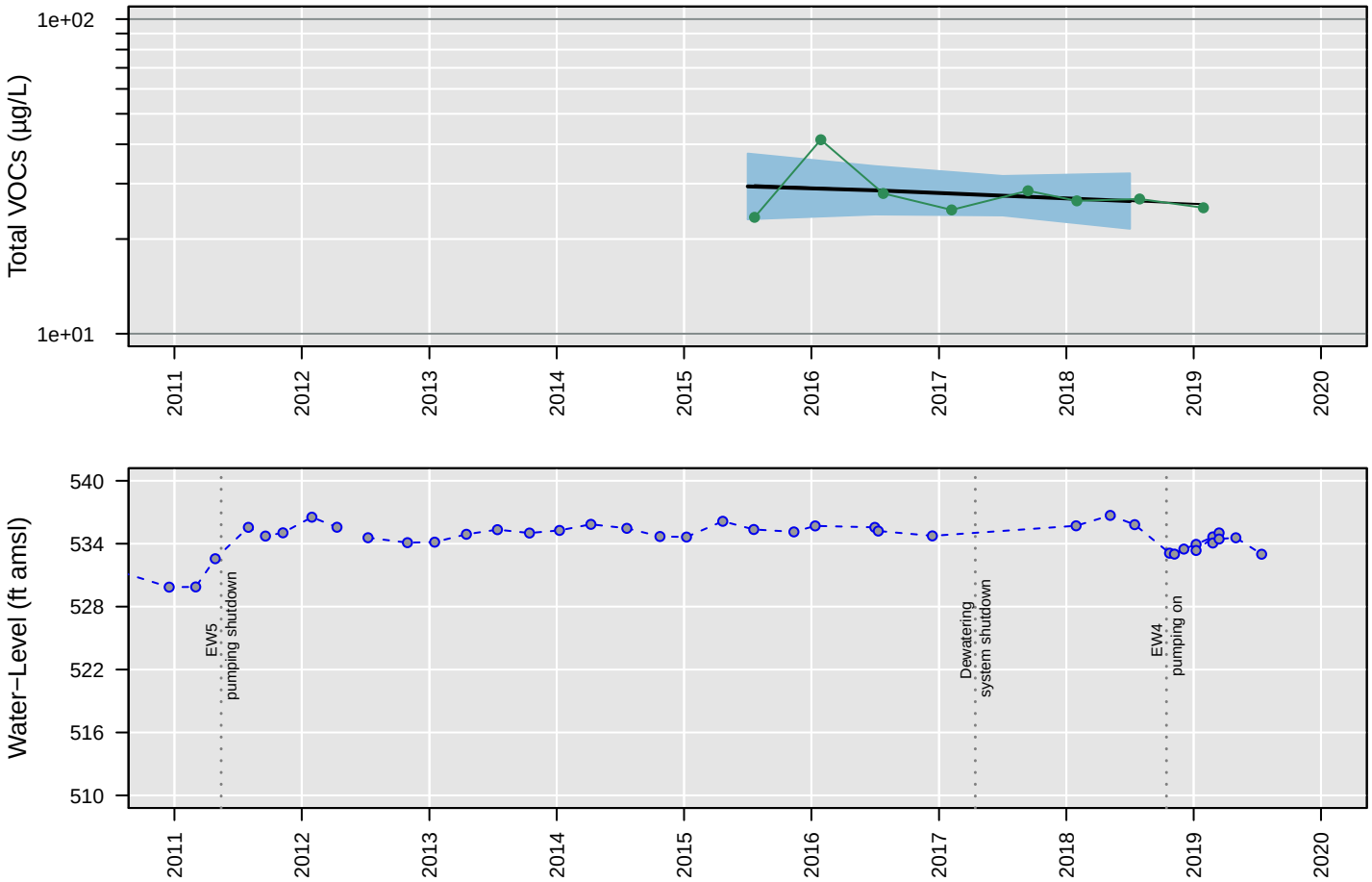


No Analysis Performed

PZ3

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

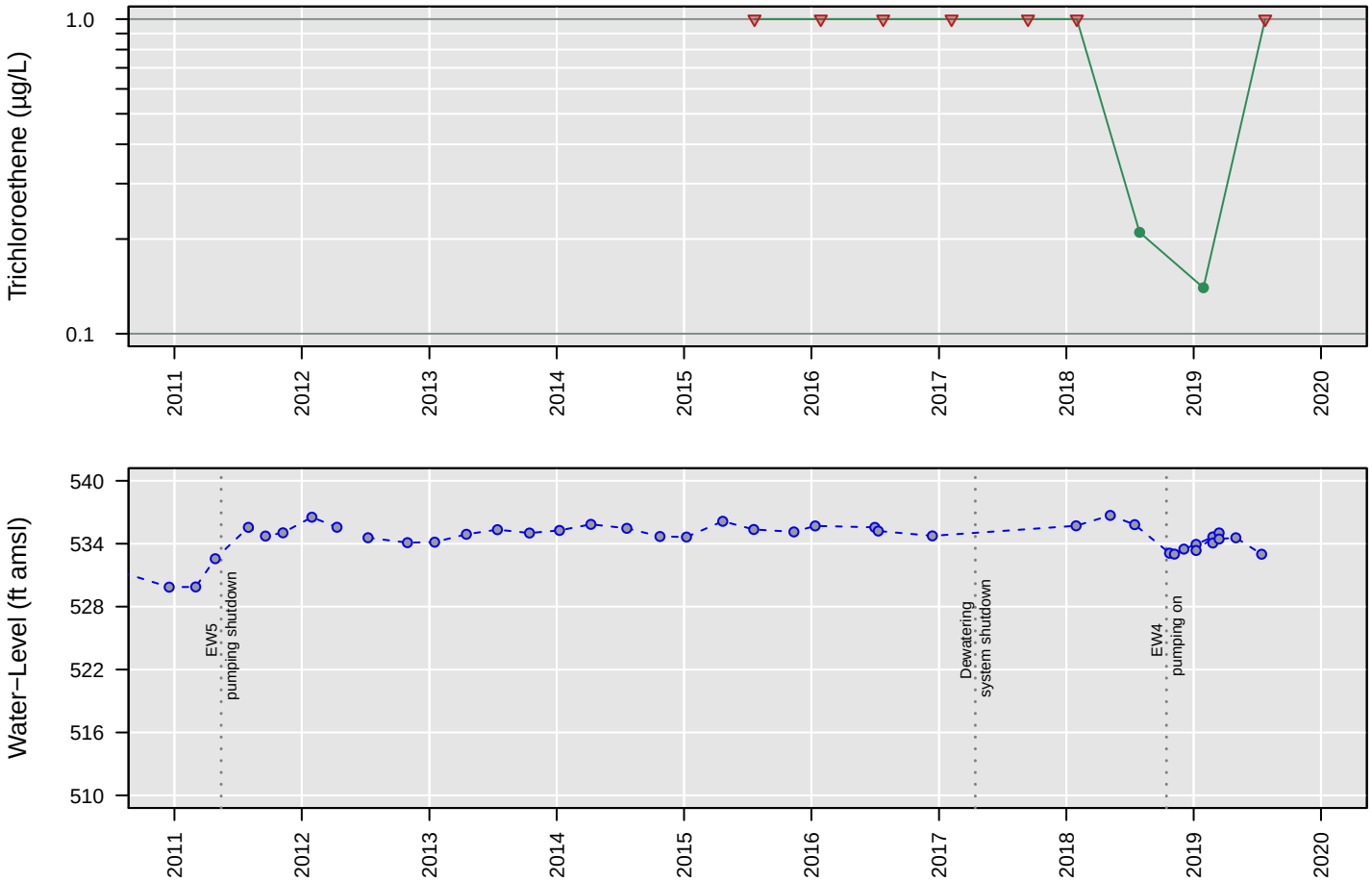
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 26 µg/L
UCL: 32 µg/L
LCL: 22 µg/L

PZ3

Trichloroethene

Number of Comparisons: 9
Percent NDs: 78%



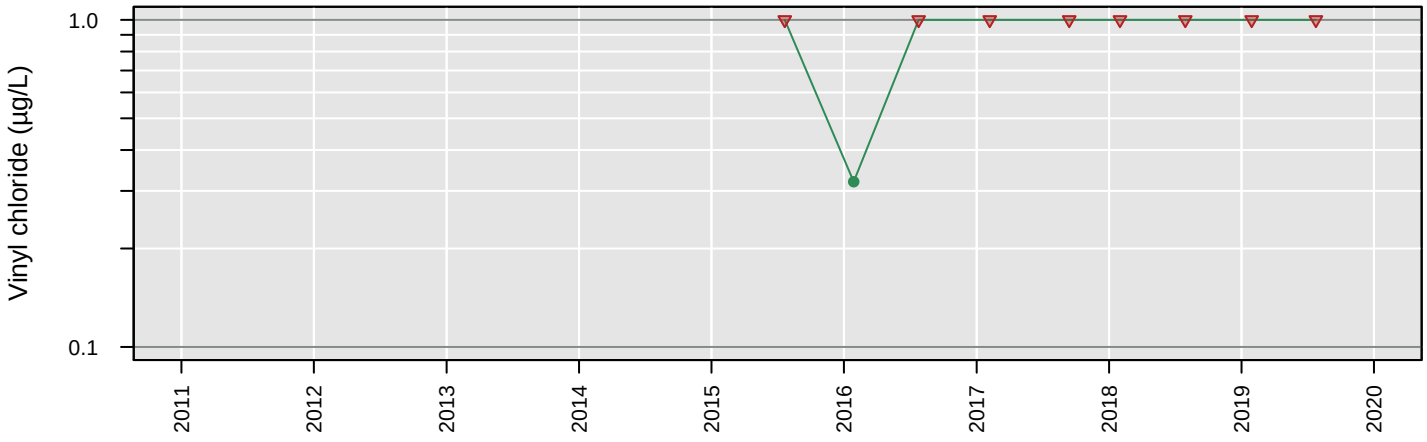
No Analysis Performed

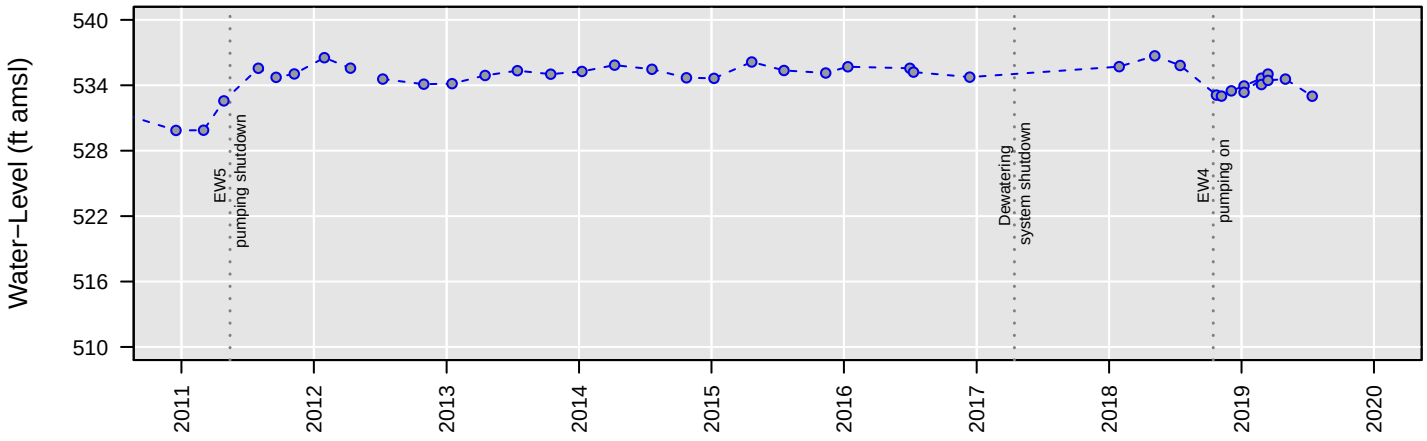
PZ3

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 89%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



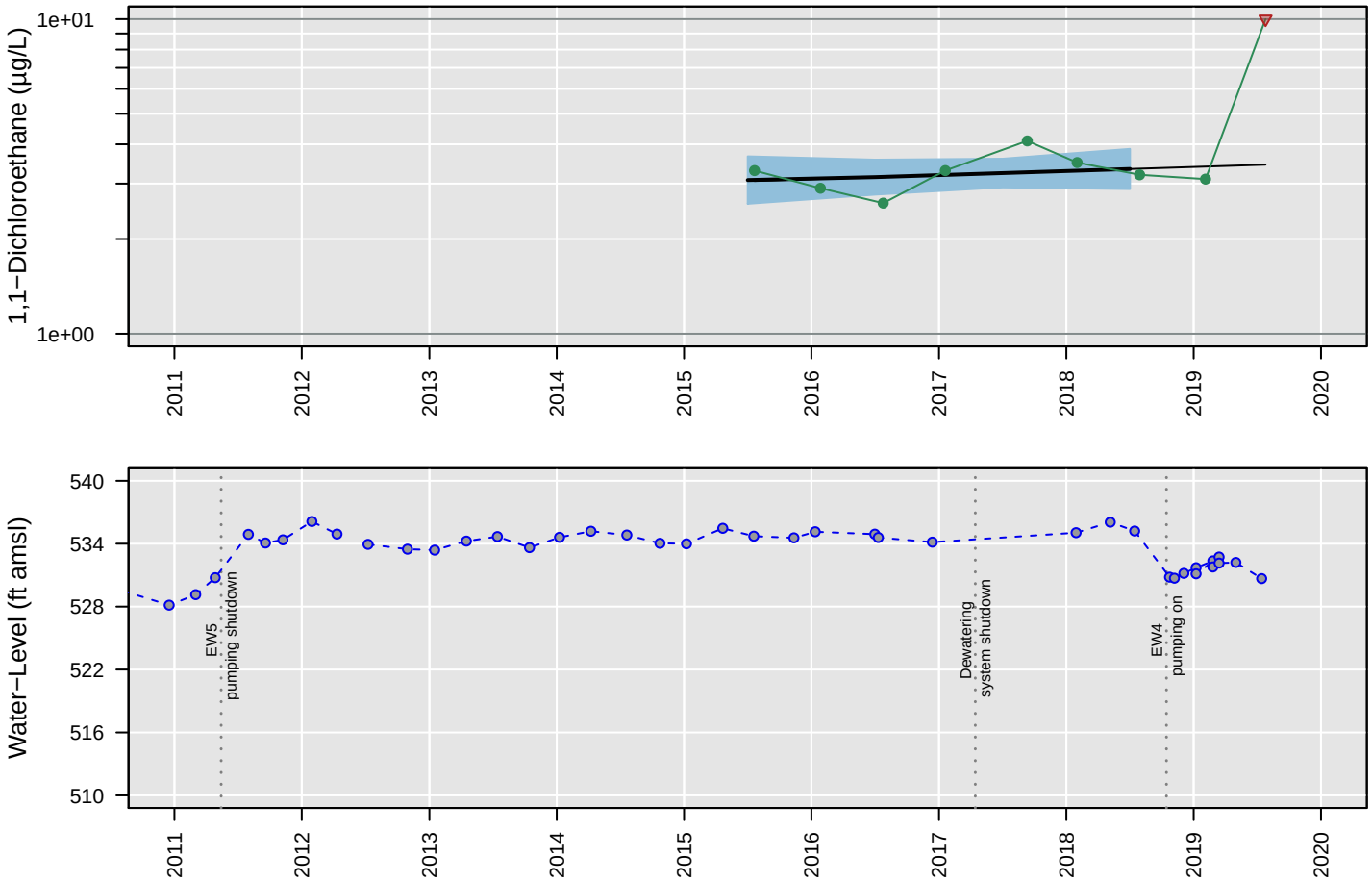


No Analysis Performed

PZ4

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 11%



Censored Regression (Tobit) Model

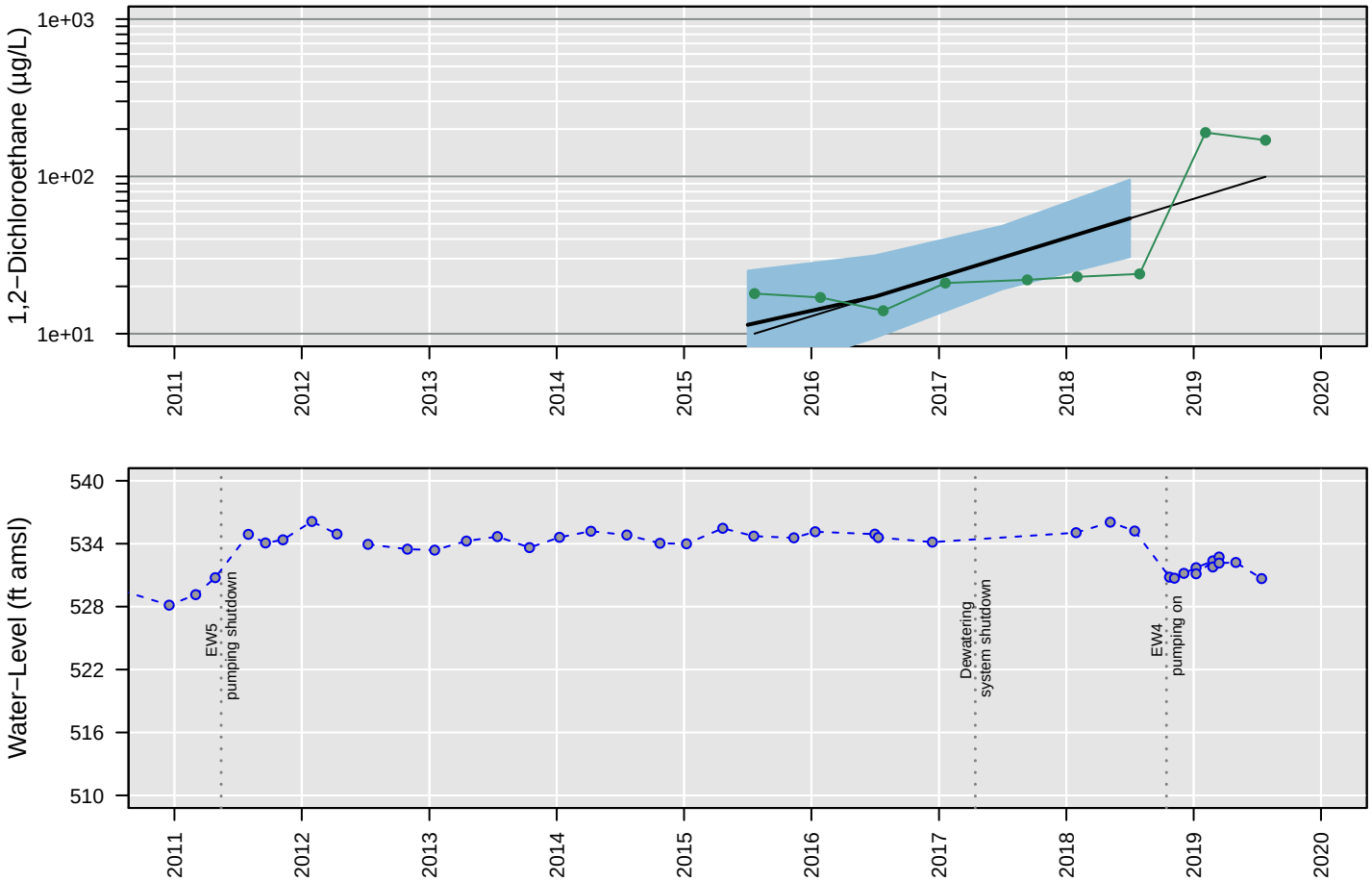
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 3.3 µg/L
UCL: 3.9 µg/L
LCL: 2.9 µg/L

PZ4

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

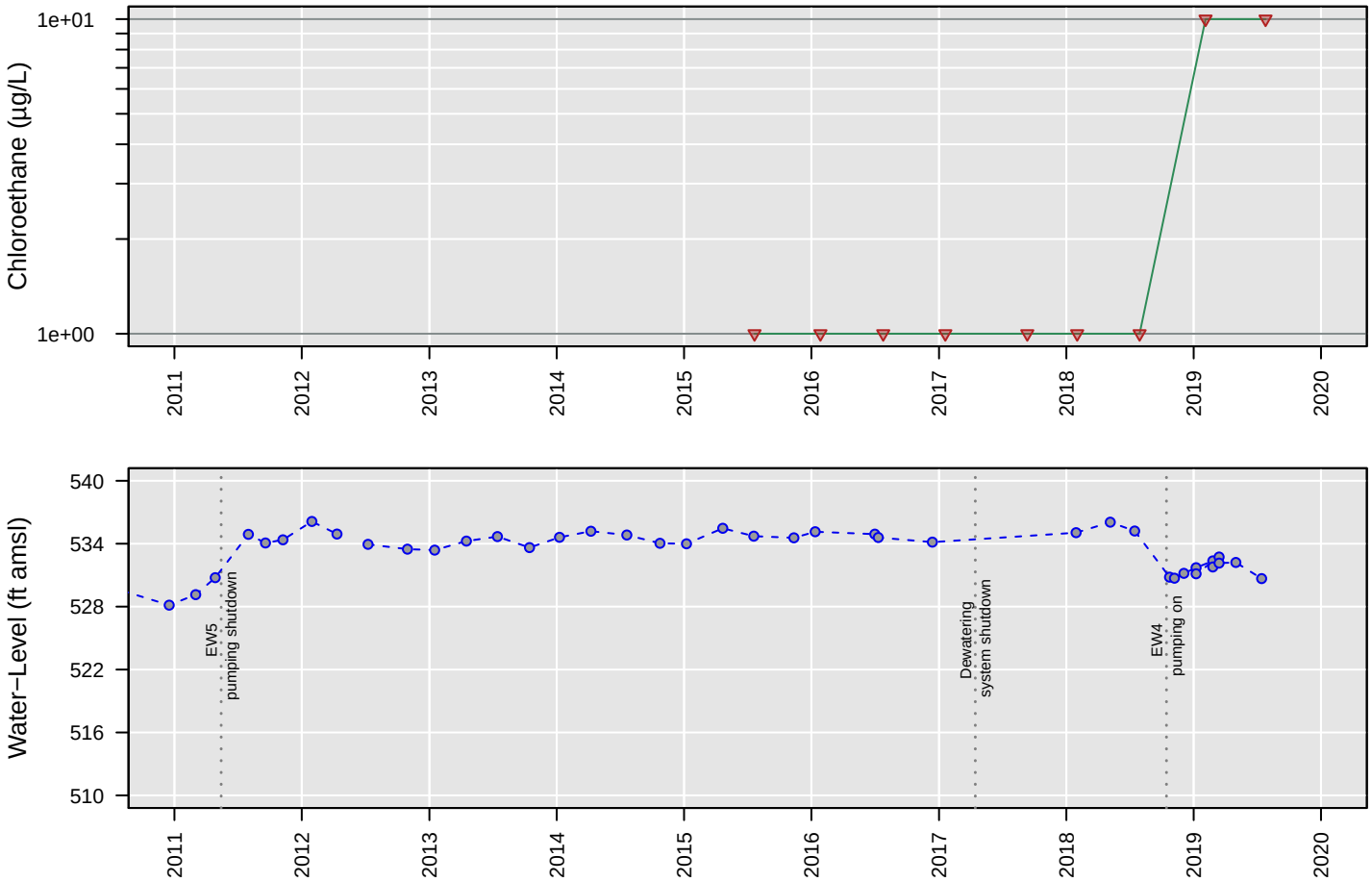
ln Conc. = 0.0016 (+/− 0.0004)*Date + −24 (+/− 6.9)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 54 µg/L
UCL: 95 µg/L
LCL: 31 µg/L

PZ4

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%



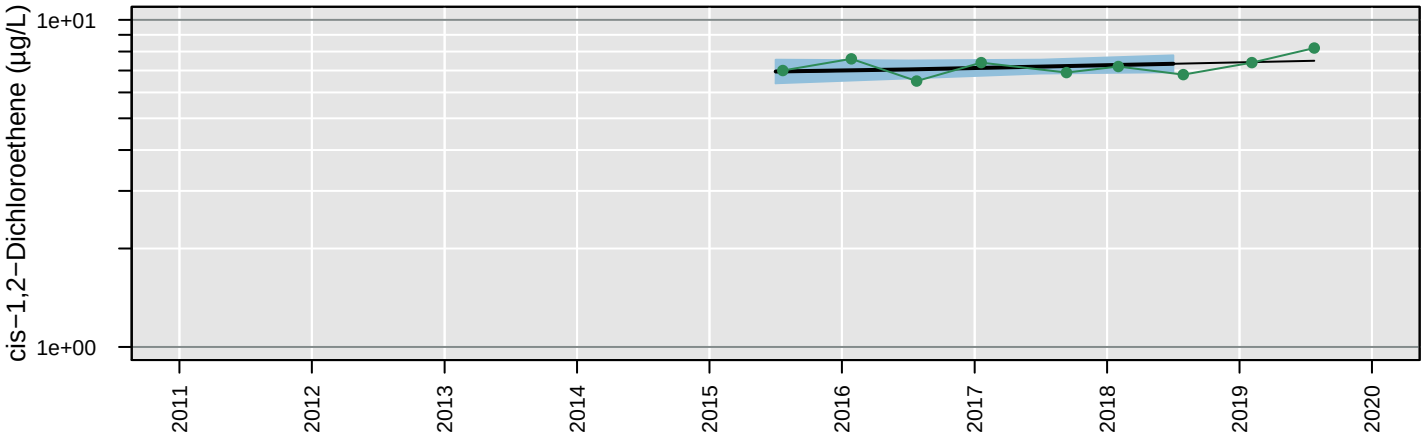
No Analysis Performed

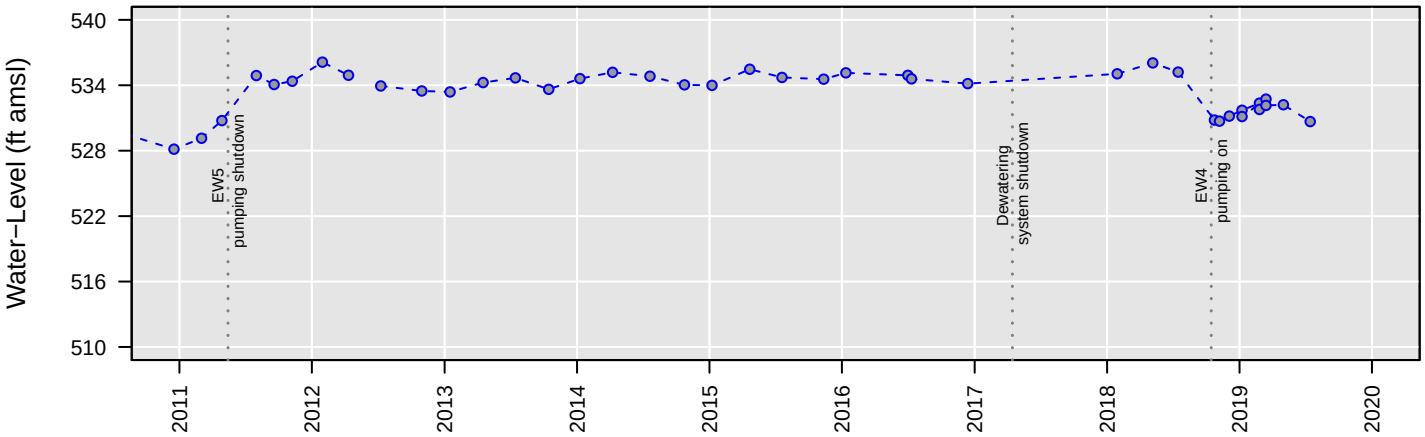
PZ4

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

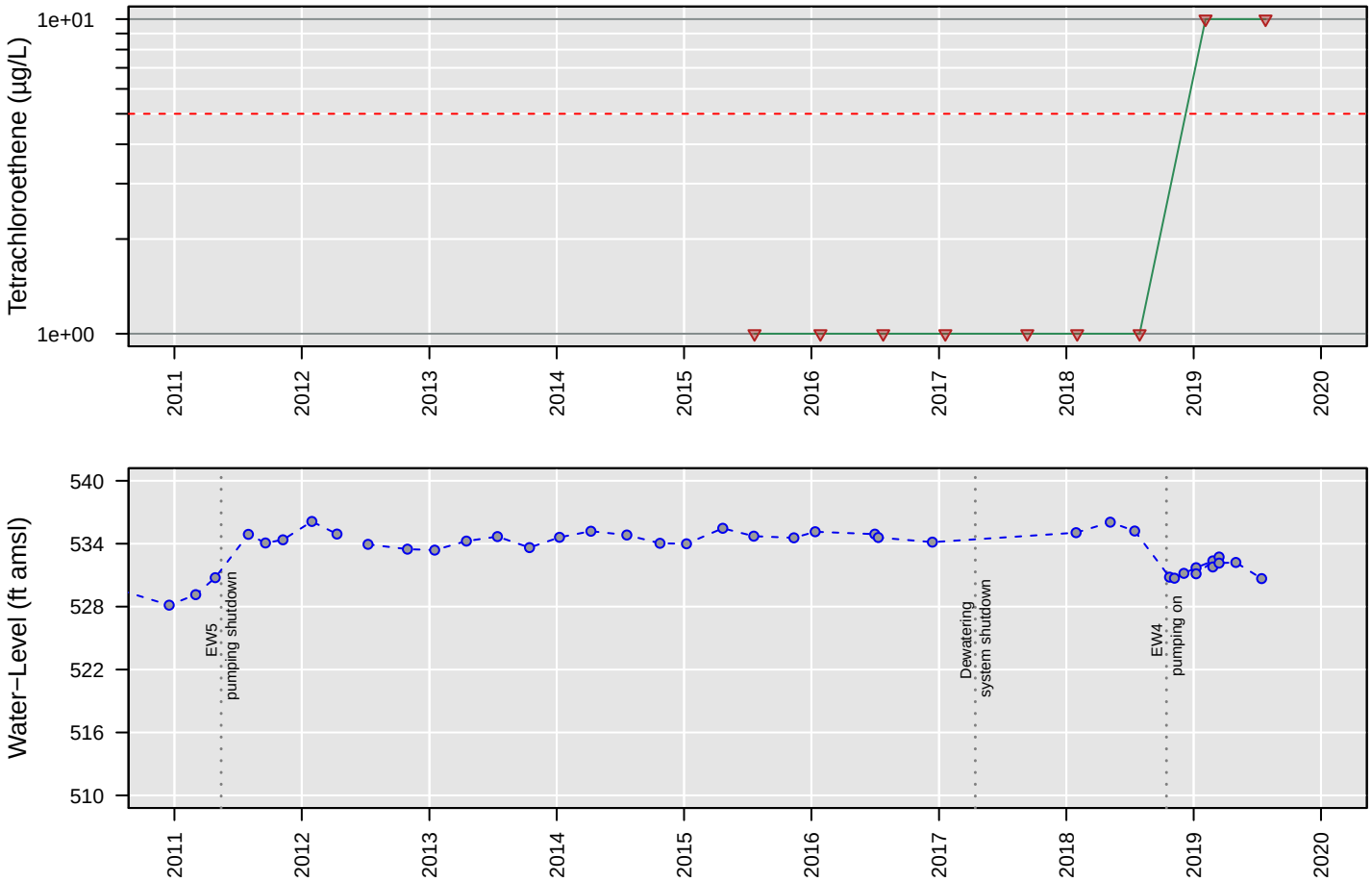
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 7.3 µg/L
UCL: 7.8 µg/L
LCL: 6.9 µg/L

PZ4

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%

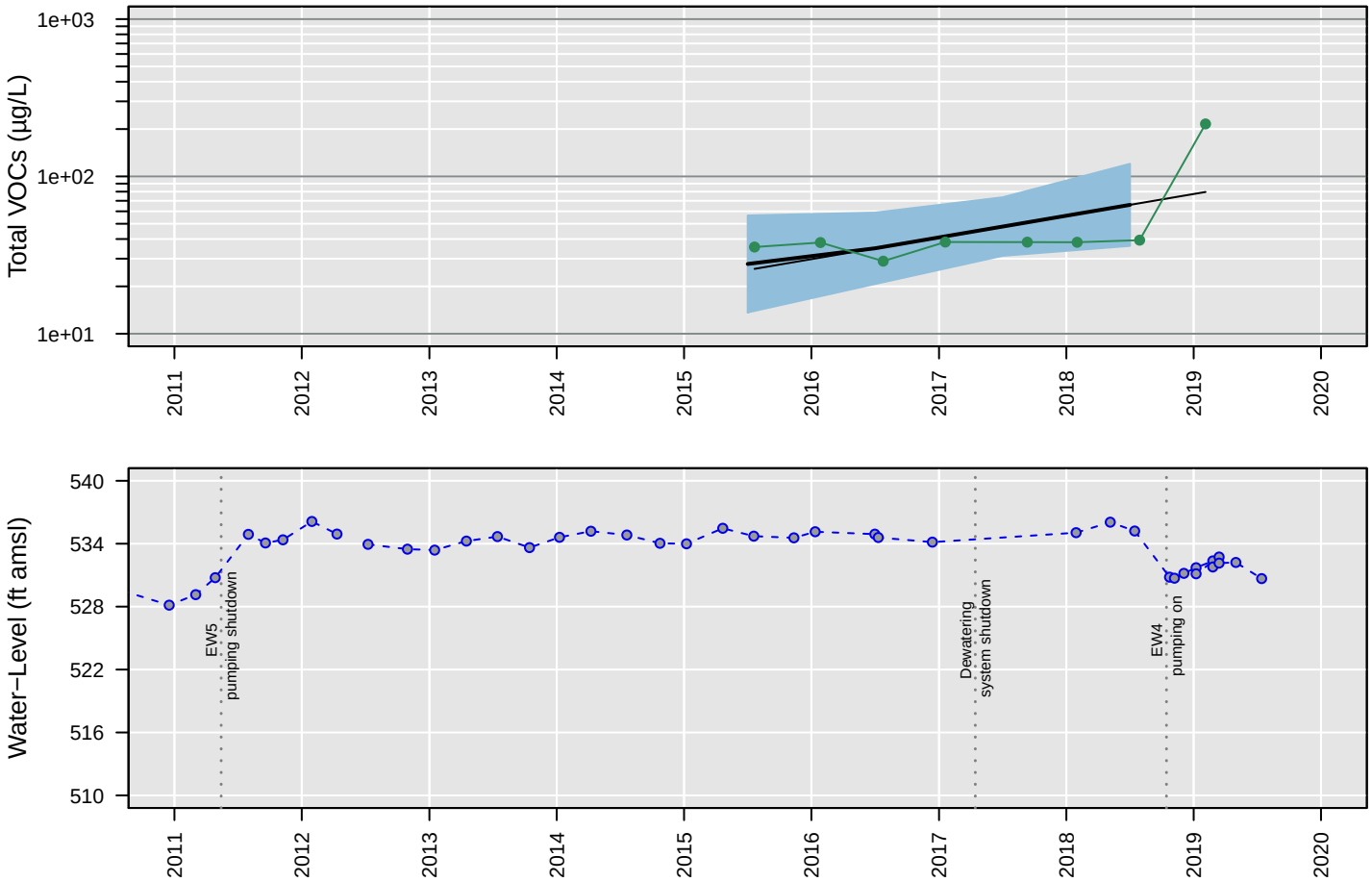


No Analysis Performed

PZ4

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

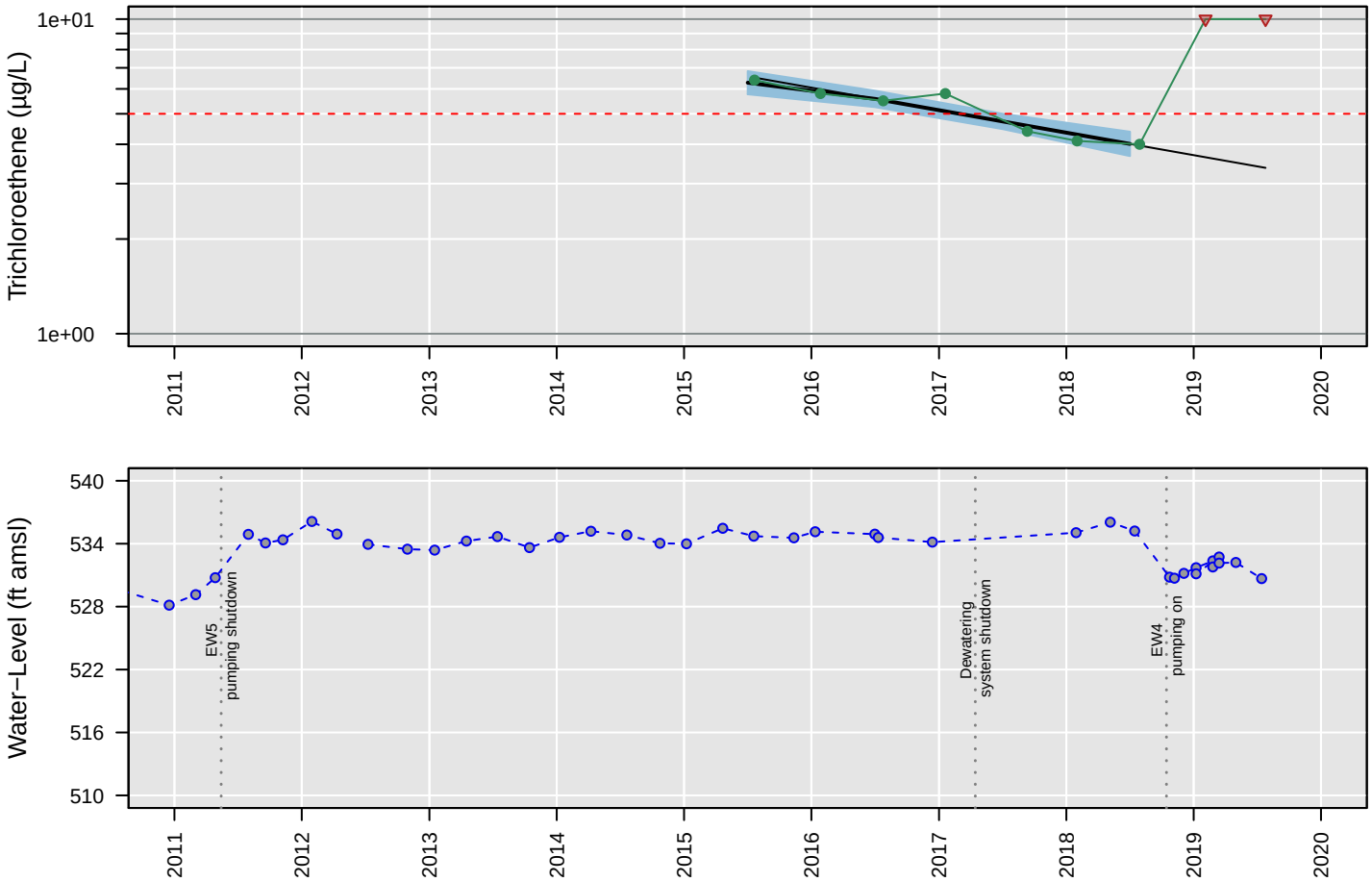
ln Conc. = 0.00087 (+/− 0.00039)*Date + −11 (+/− 6.7)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 66 µg/L
UCL: 120 µg/L
LCL: 36 µg/L

PZ4

Trichloroethene

Number of Comparisons: 9
Percent NDs: 22%



Censored Regression (Tobit) Model

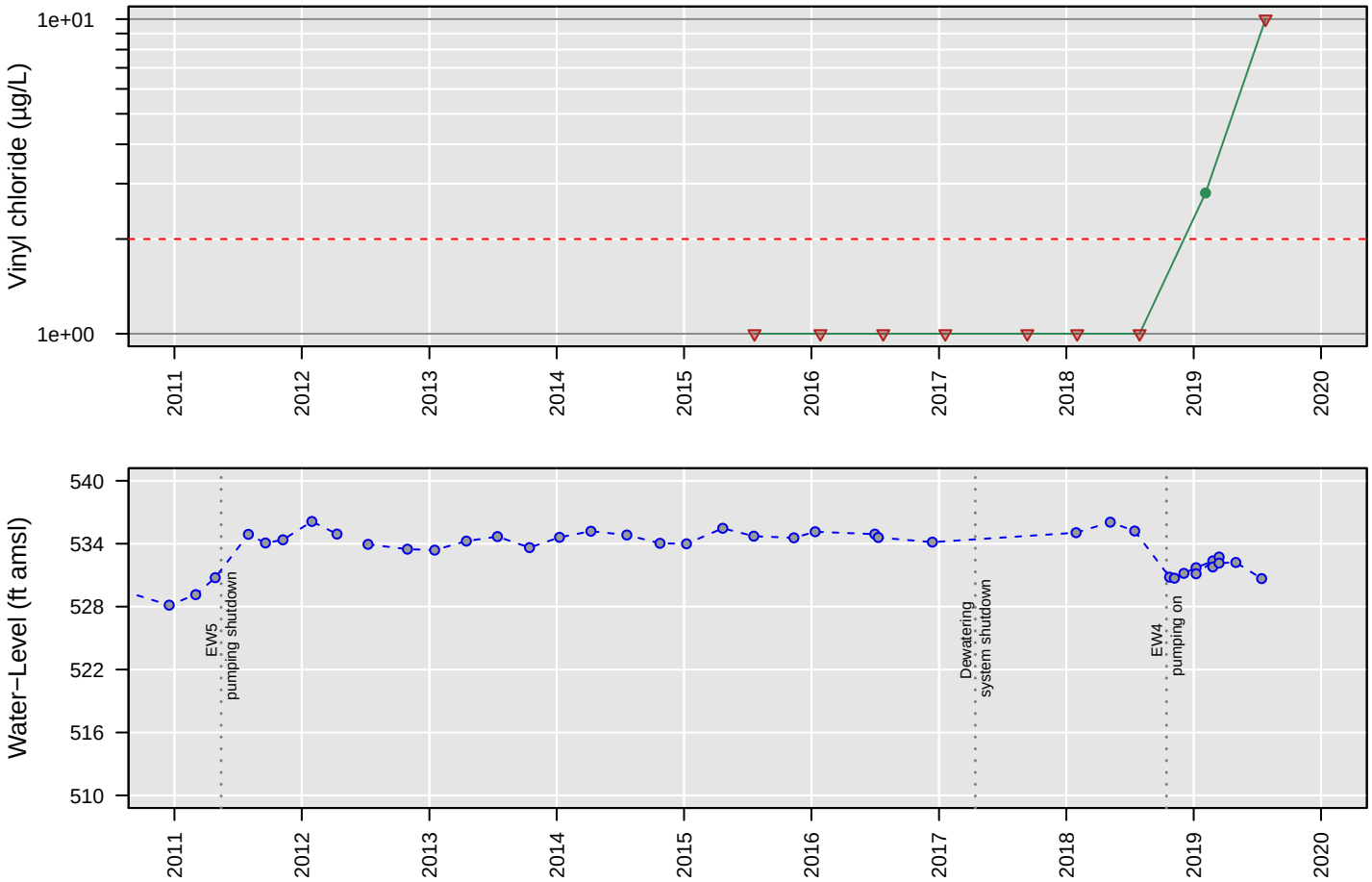
ln Conc. = −0.00045 (+/− 0.000057)*Date + 9.4 (+/− 0.98)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 4 µg/L
UCL: 4.4 µg/L
LCL: 3.7 µg/L

PZ4

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 89%

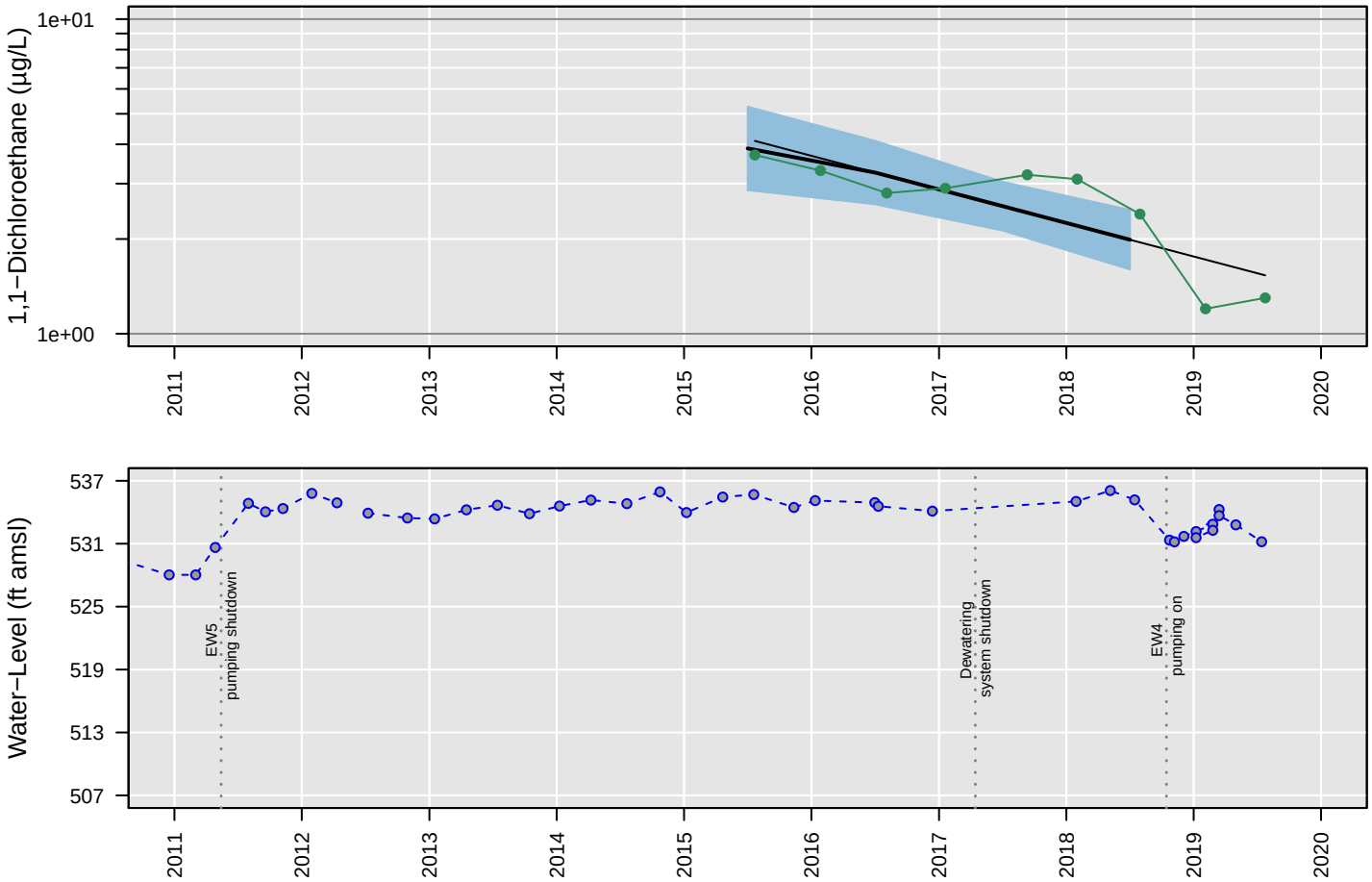


No Analysis Performed

PZ5

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

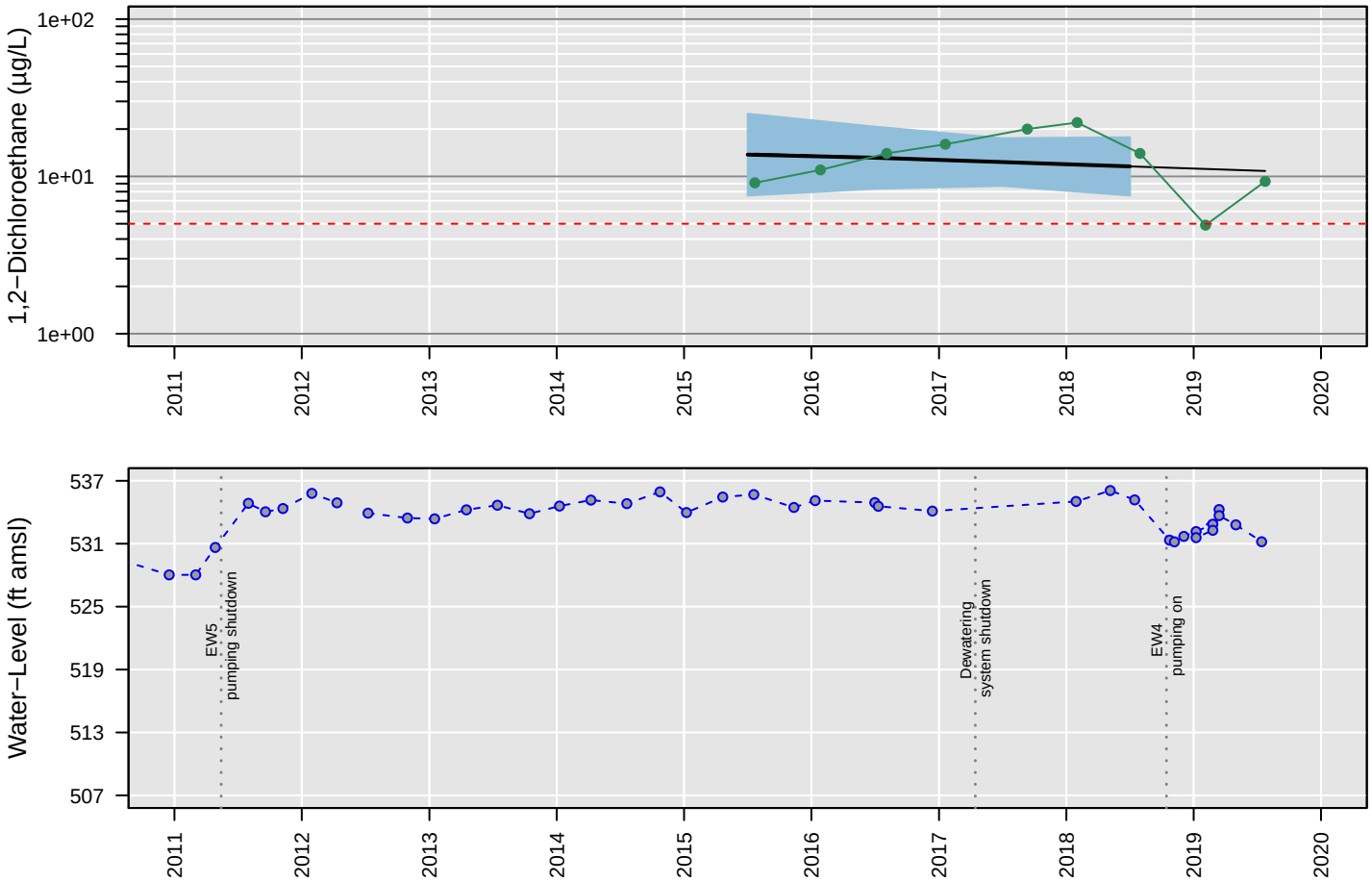
ln Conc. = −0.00067 (+/− 0.00015)*Date + 13 (+/− 2.7)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 2 µg/L
UCL: 2.5 µg/L
LCL: 1.6 µg/L

PZ5

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

Trend Not Significant

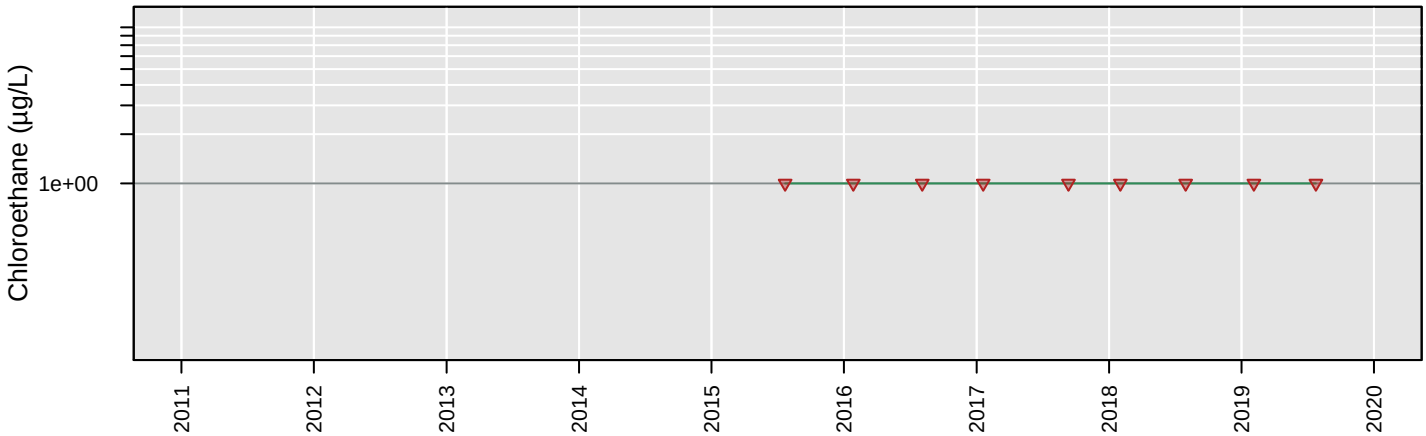
Regression Statistics for January 2018 to January 2019
Geometric Mean: 12 µg/L
UCL: 18 µg/L
LCL: 7.6 µg/L

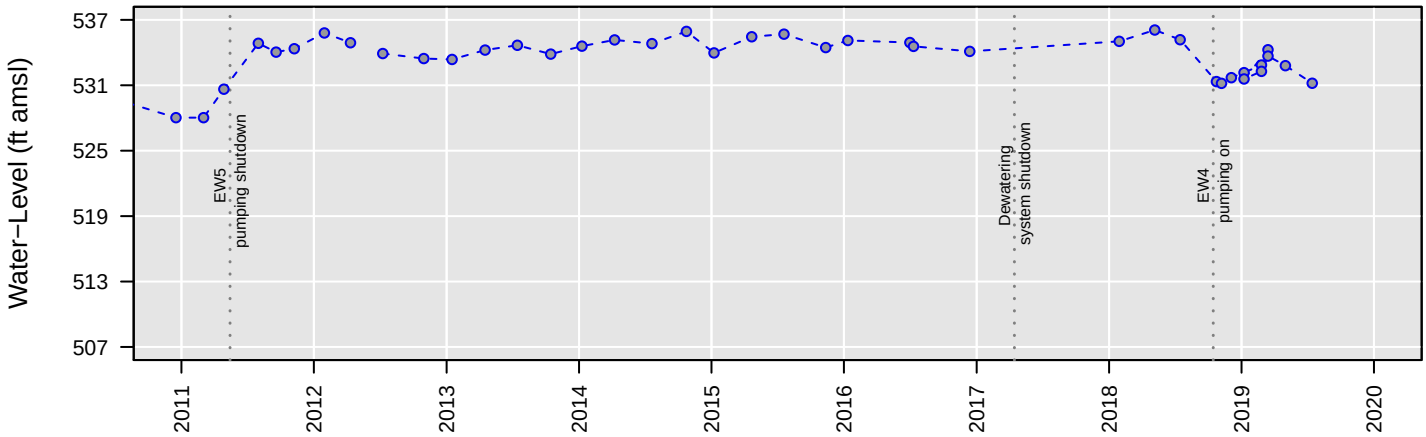
PZ5

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



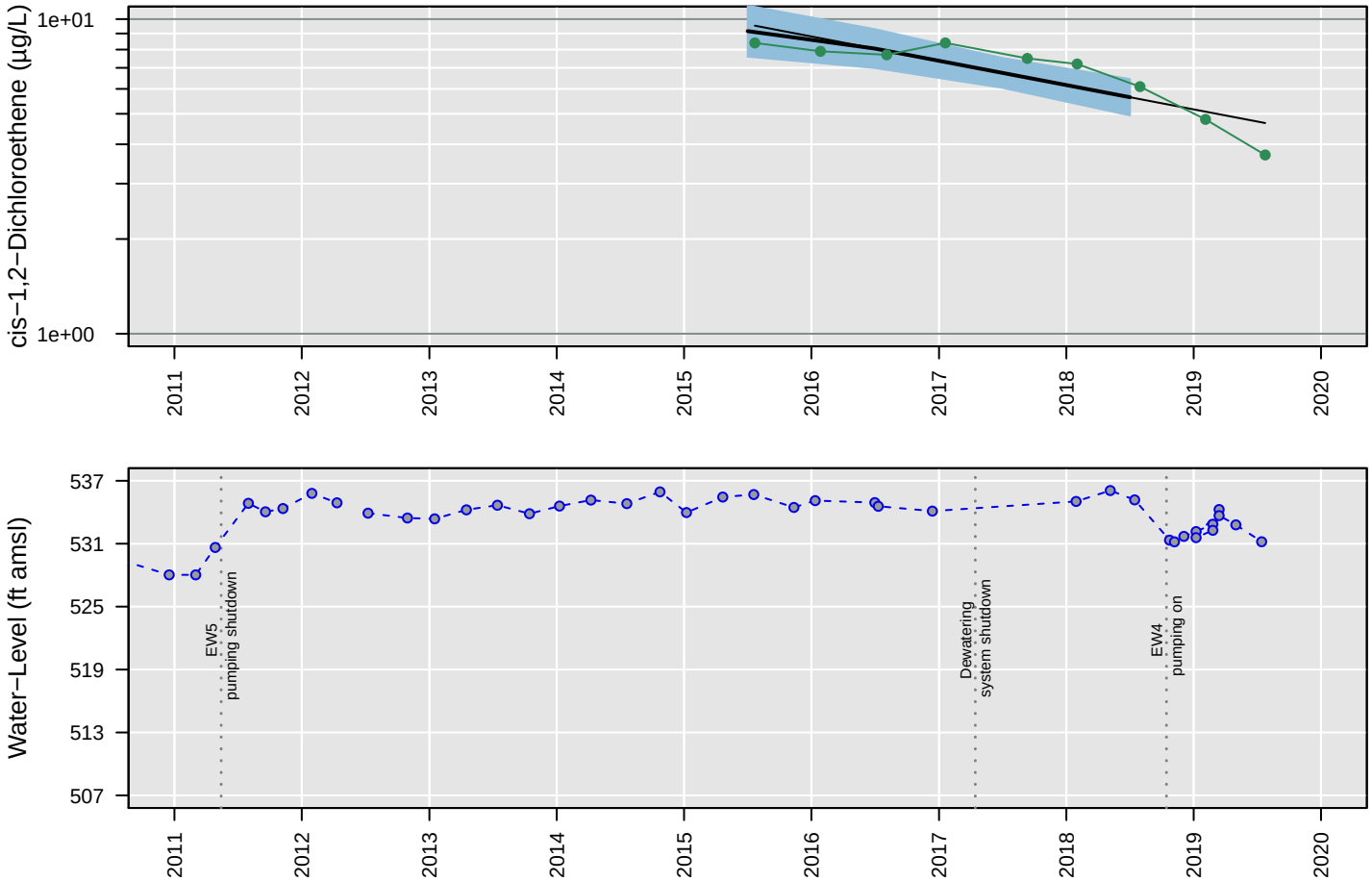


No Analysis Performed

PZ5

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.00049 (+/− 0.000094)*Date + 10 (+/− 1.6)

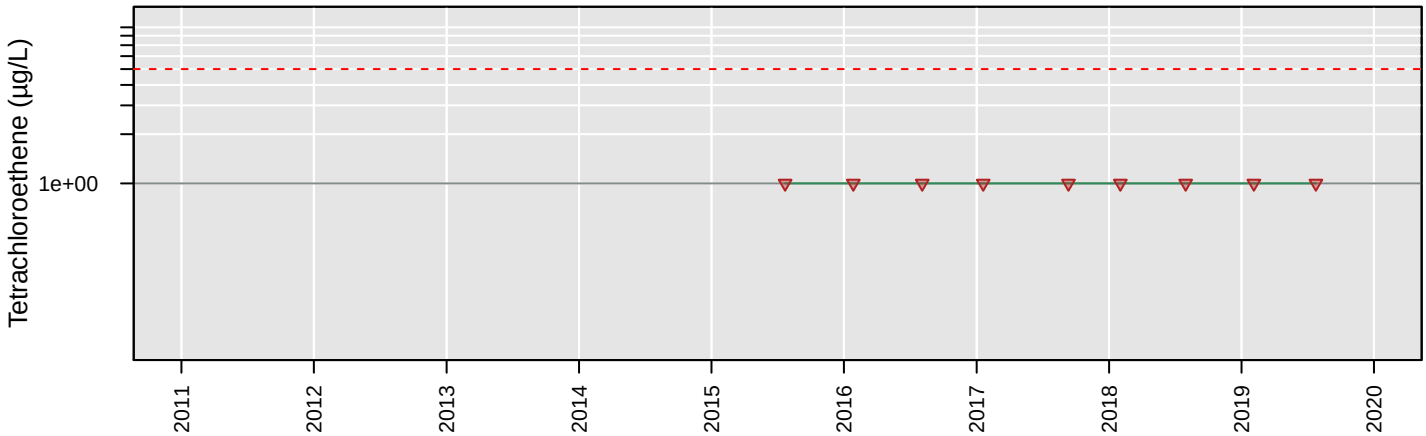
Regression Statistics for January 2018 to January 2019
Geometric Mean: 5.6 µg/L
UCL: 6.4 µg/L
LCL: 4.9 µg/L

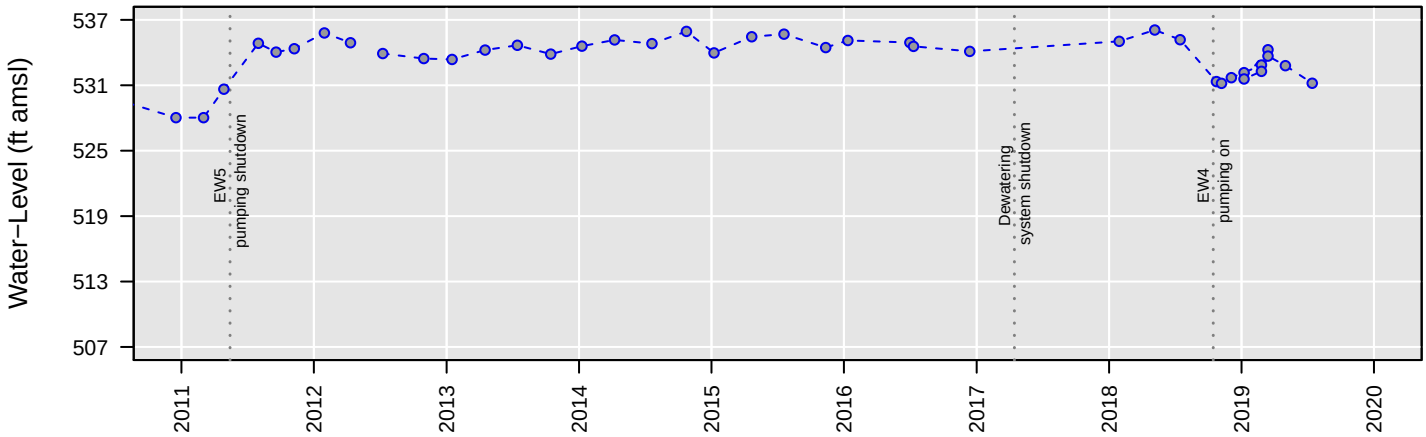
PZ5

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



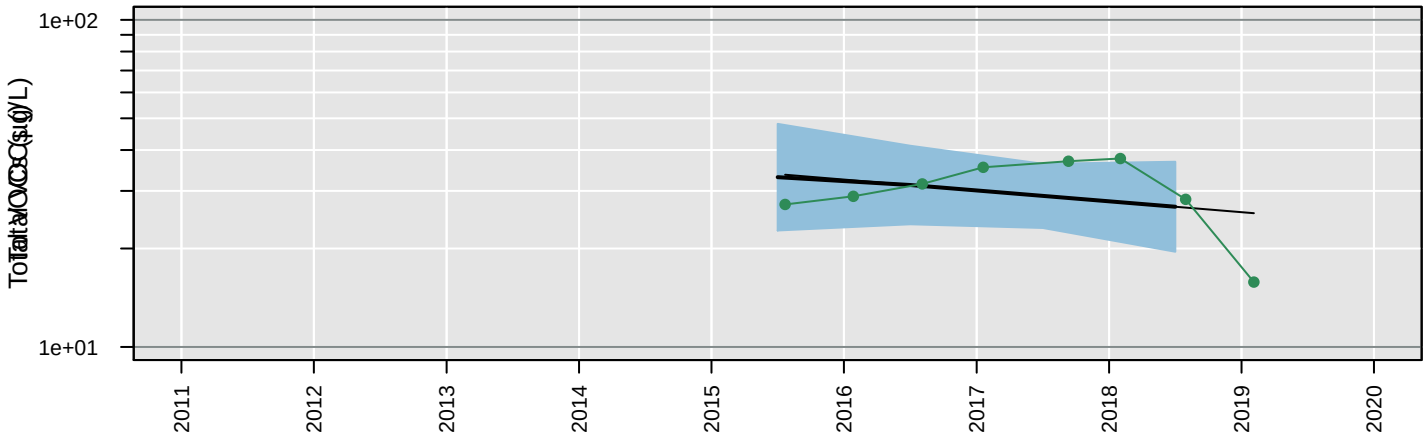


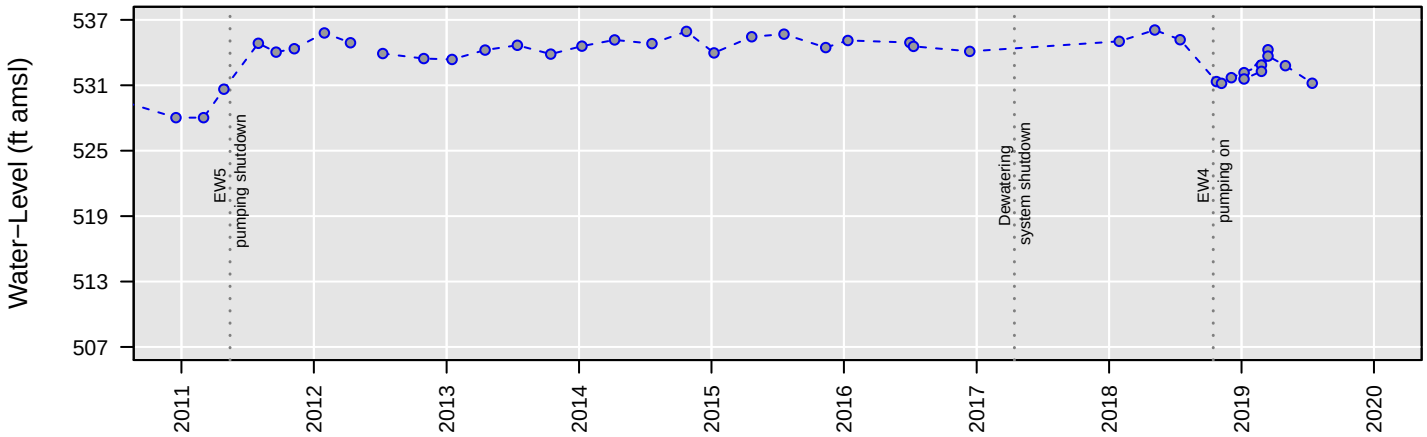
No Analysis Performed

PZ5

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%





Censored Regression (Tobit) Model

Trend Not Significant

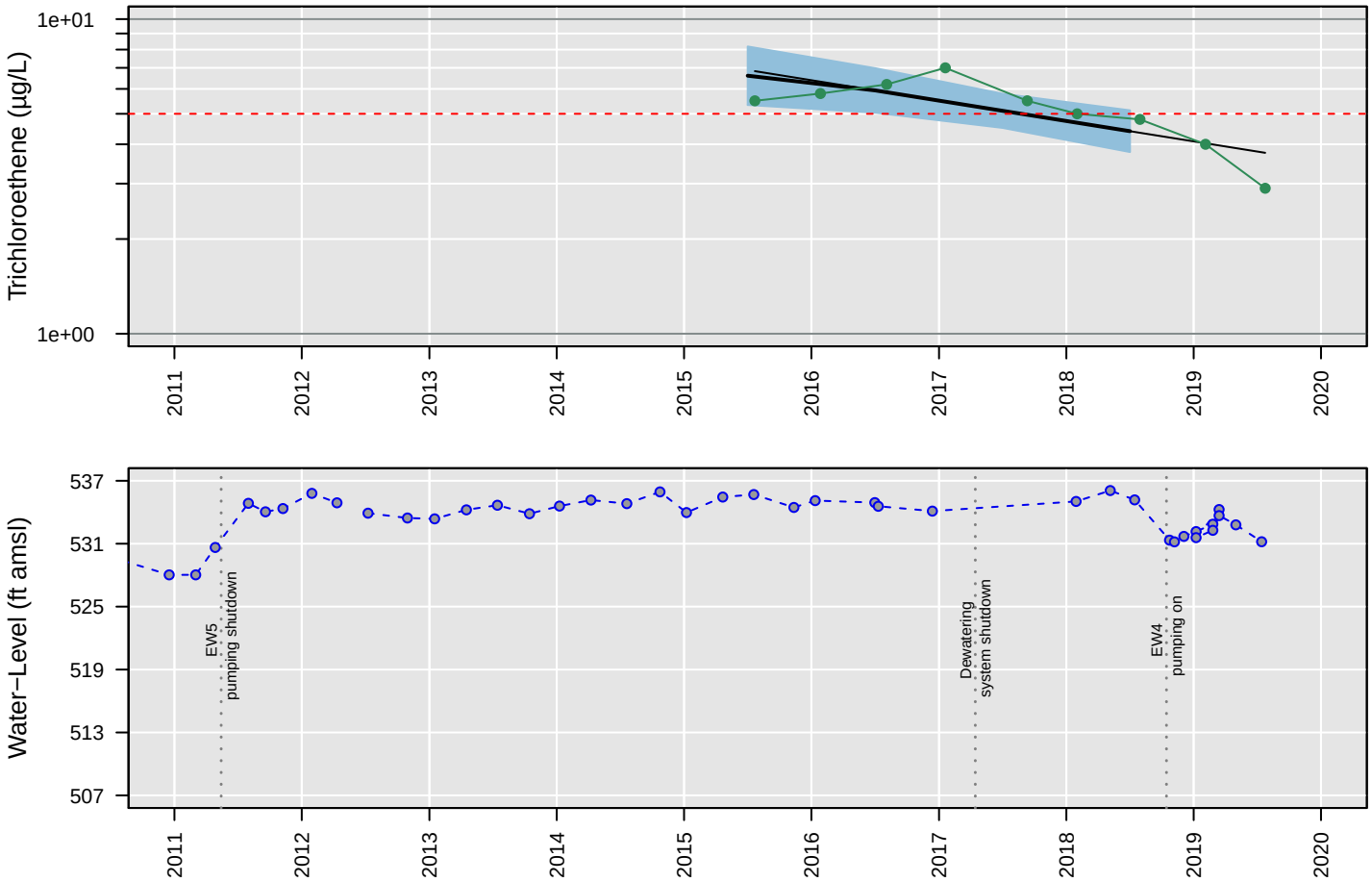
Regression Statistics for January 2018 to January 2019

Geometric Mean: 27 µg/L
UCL: 37 µg/L
LCL: 20 µg/L

PZ5

Trichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.00041 (+/− 0.00011)*Date + 8.7 (+/− 1.9)

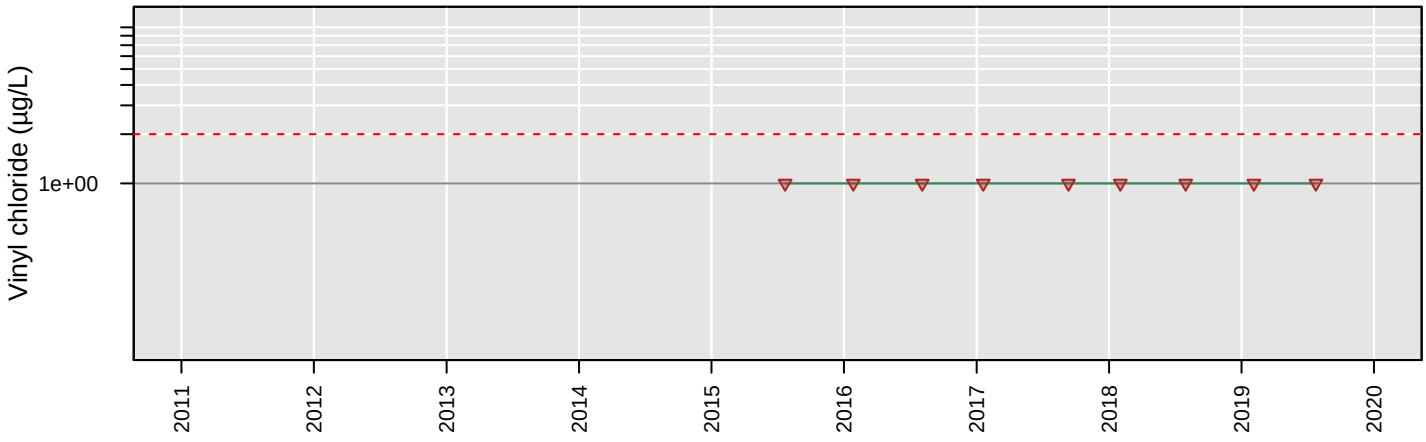
Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.4 µg/L
UCL: 5.1 µg/L
LCL: 3.8 µg/L

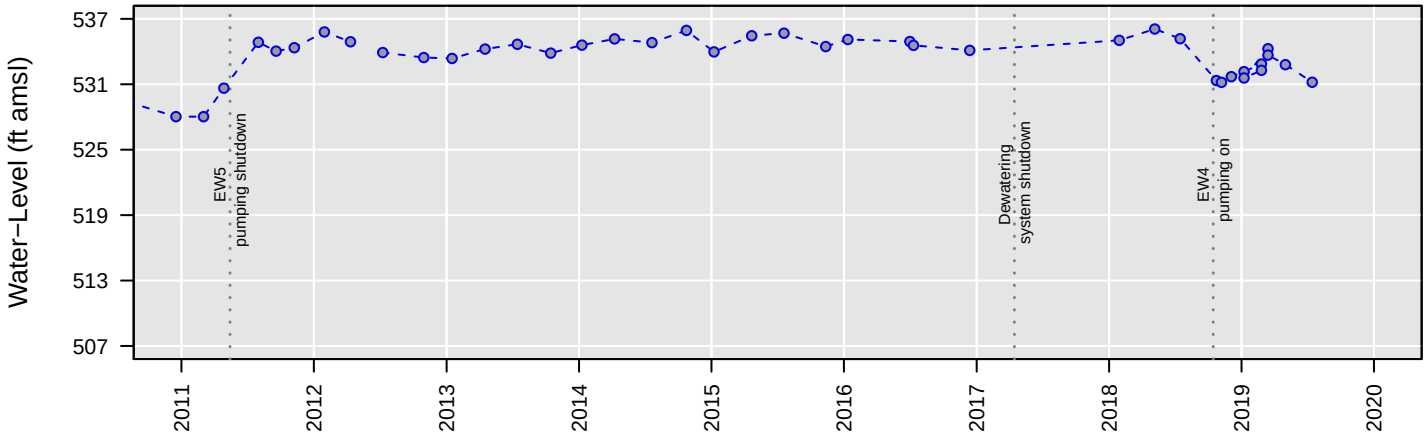
PZ5

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



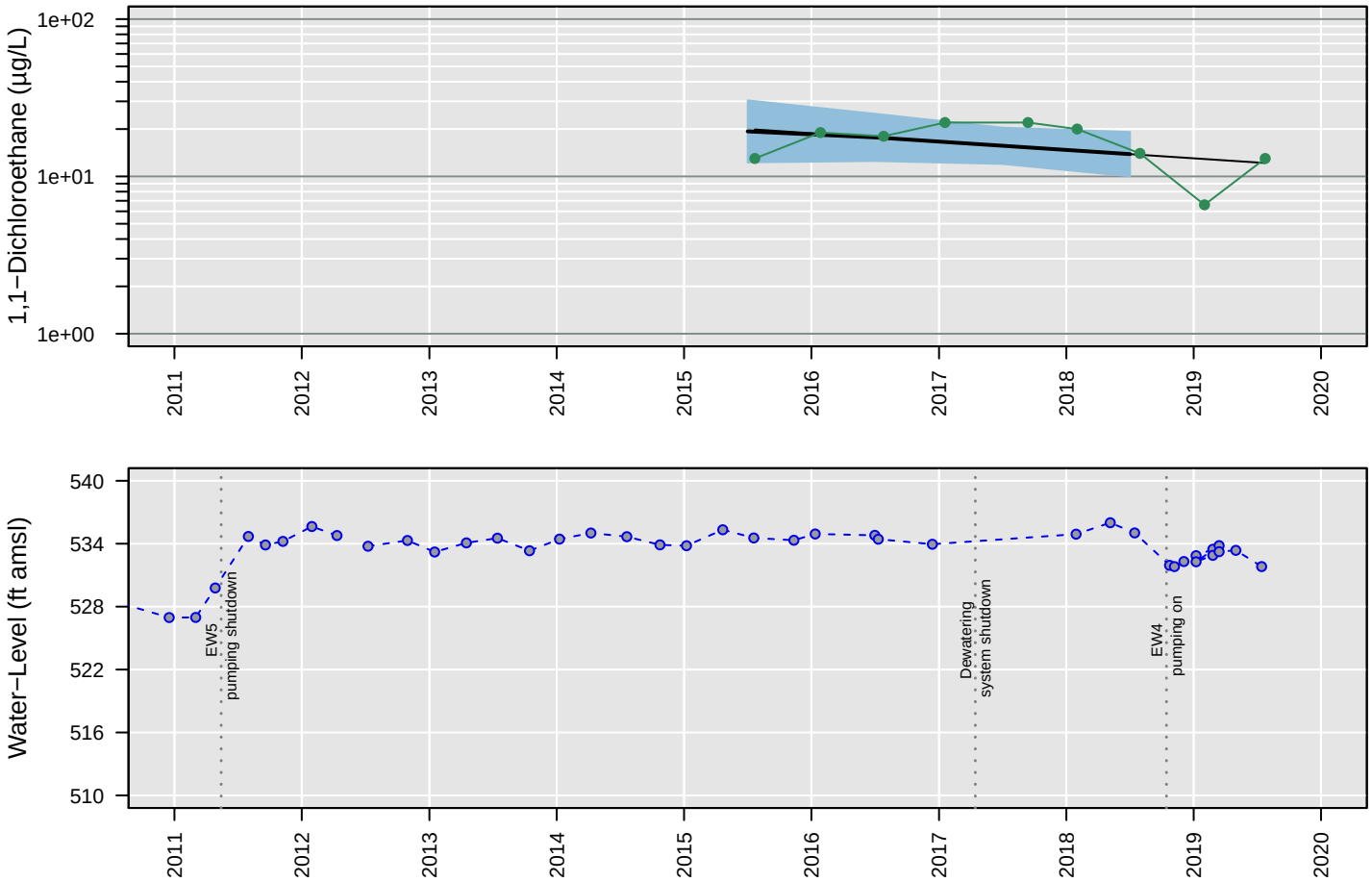


No Analysis Performed

PZ6

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

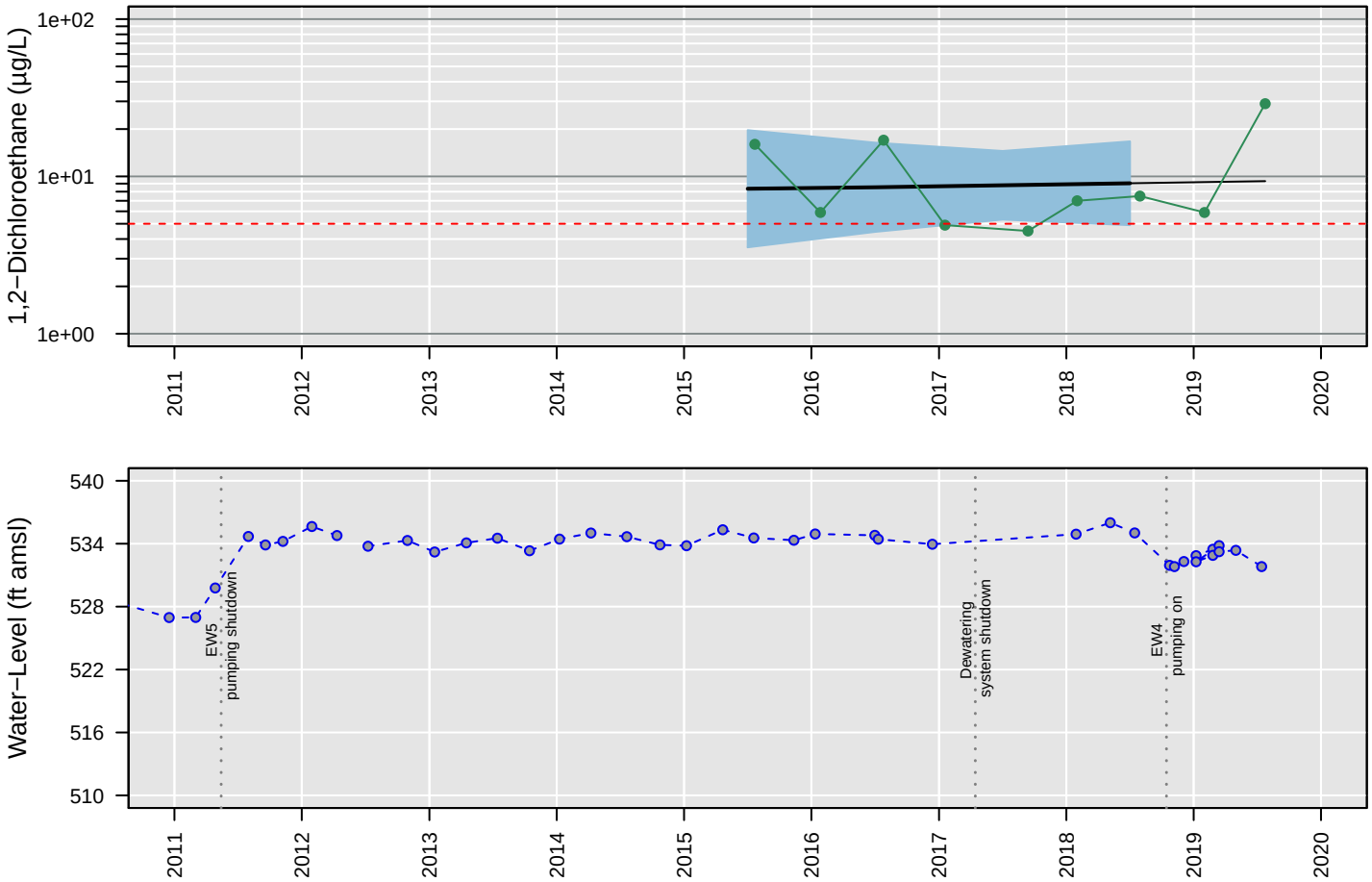
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 14 µg/L
UCL: 19 µg/L
LCL: 10 µg/L

PZ6

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

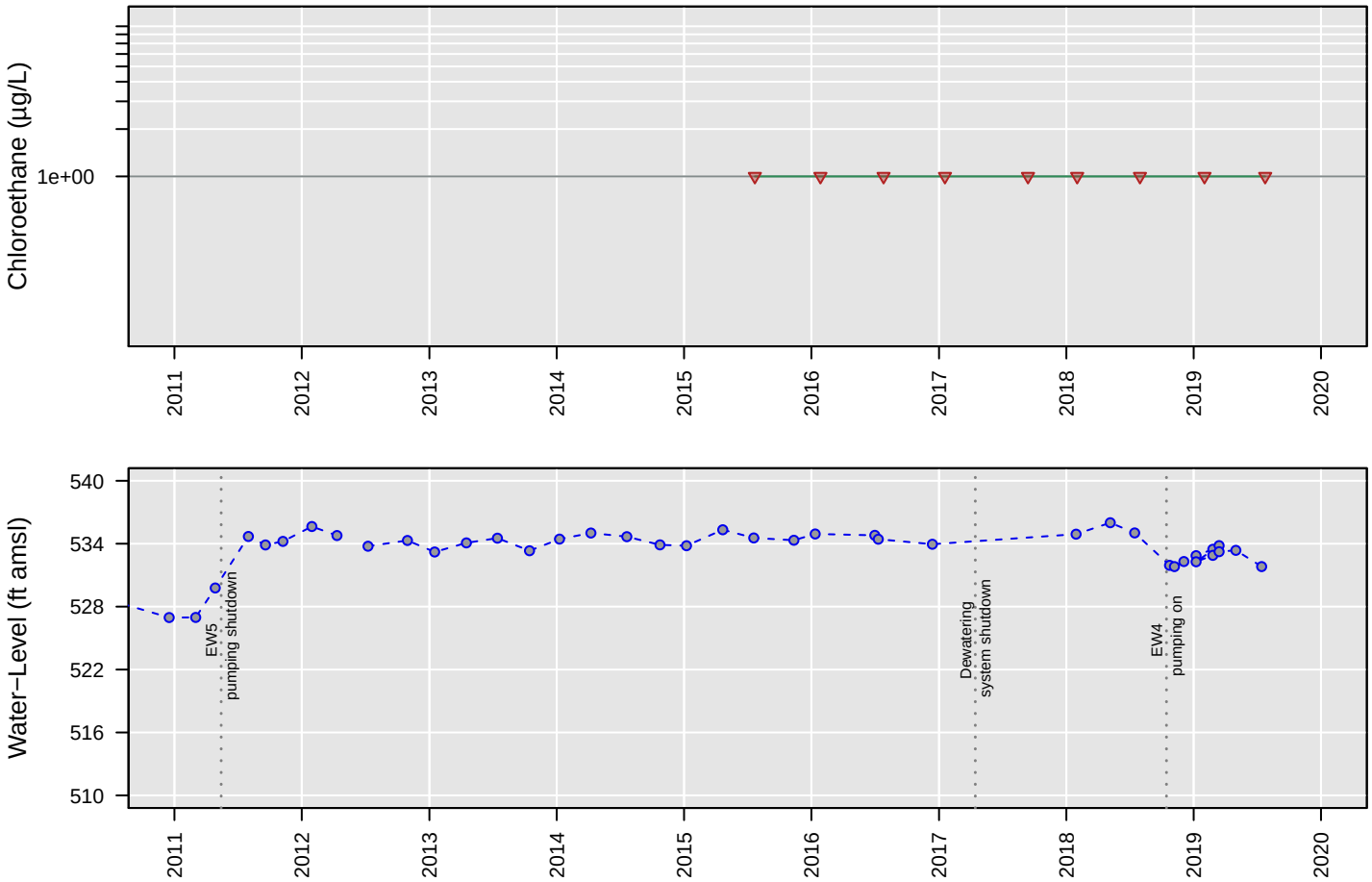
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 9 µg/L
UCL: 17 µg/L
LCL: 4.9 µg/L

PZ6

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%



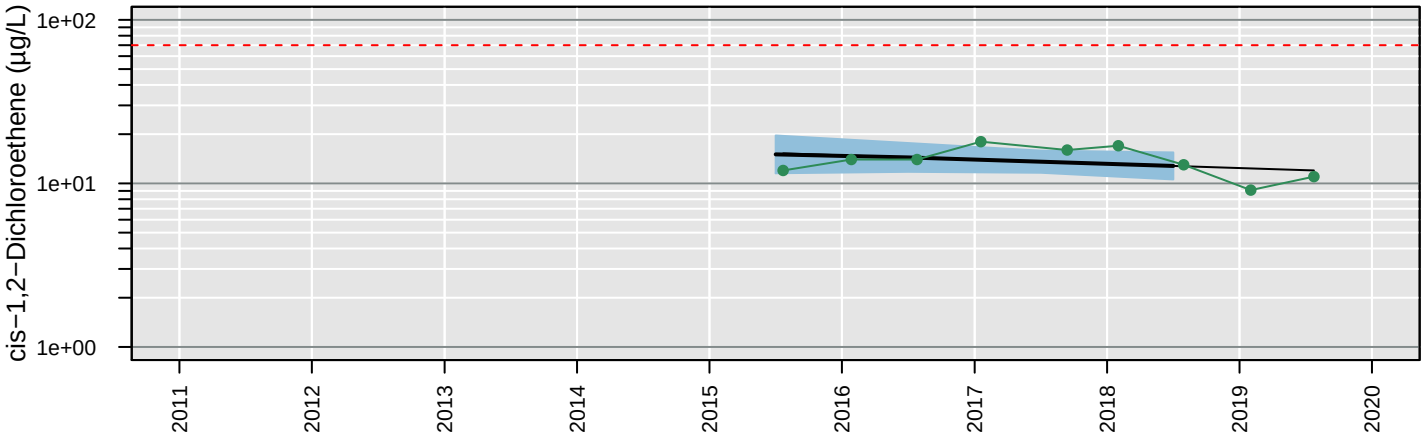
No Analysis Performed

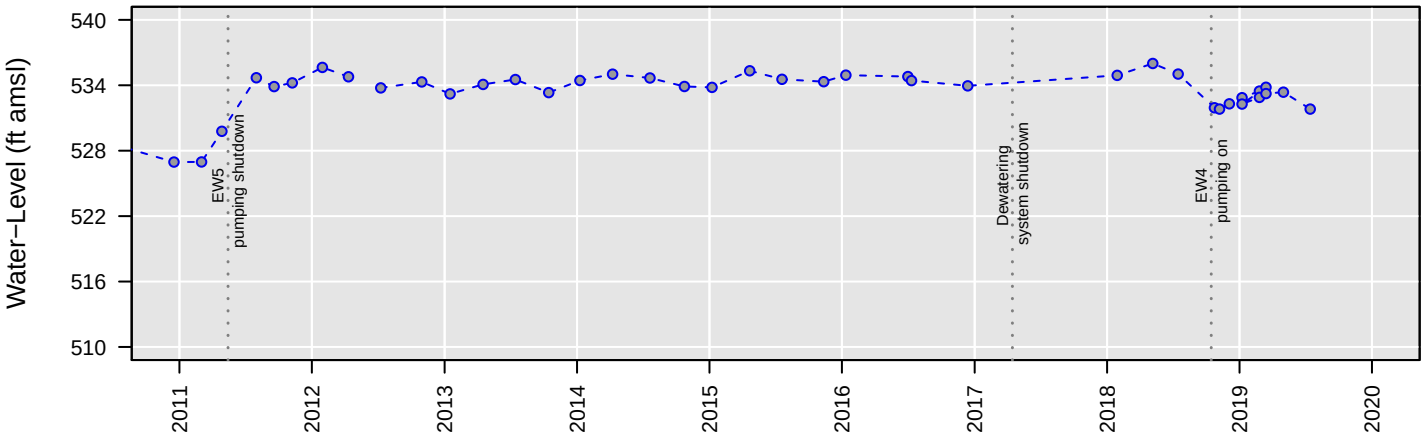
PZ6

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation





Censored Regression (Tobit) Model

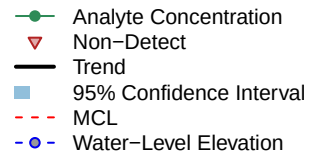
Trend Not Significant

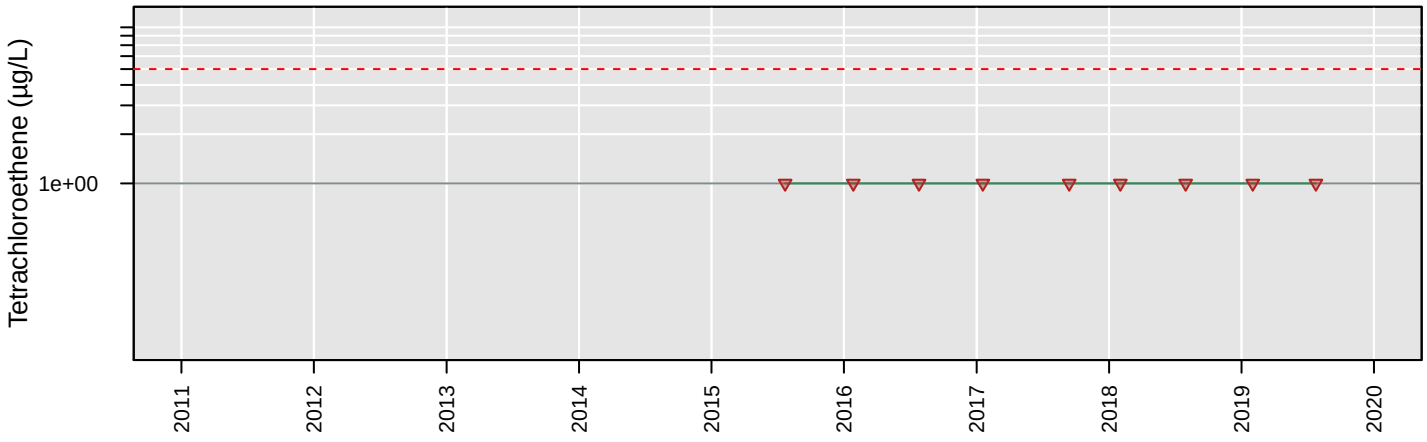
Regression Statistics for January 2018 to January 2019
Geometric Mean: 13 µg/L
UCL: 15 µg/L
LCL: 11 µg/L

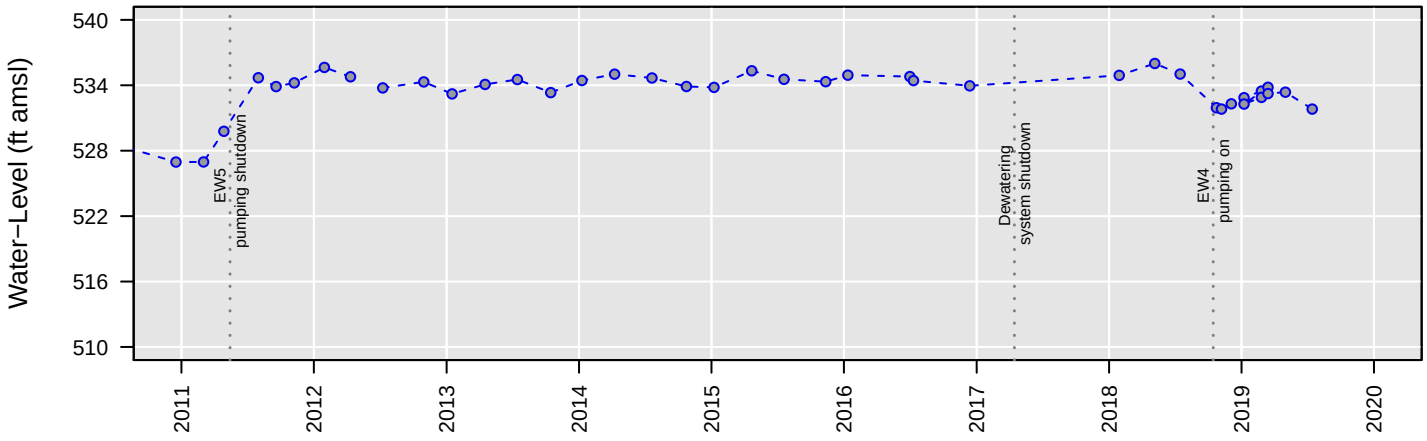
PZ6

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%





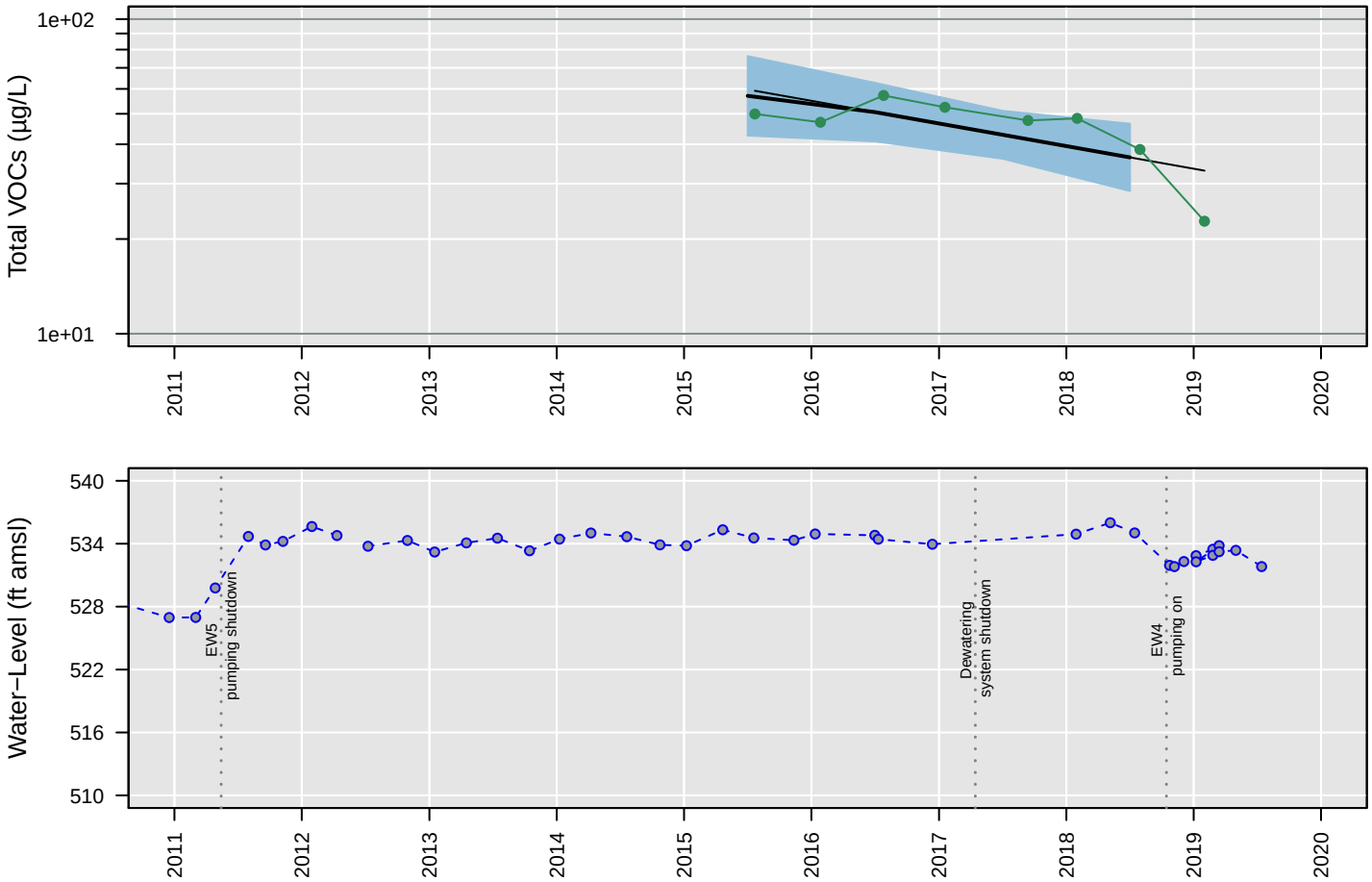


No Analysis Performed

PZ6

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

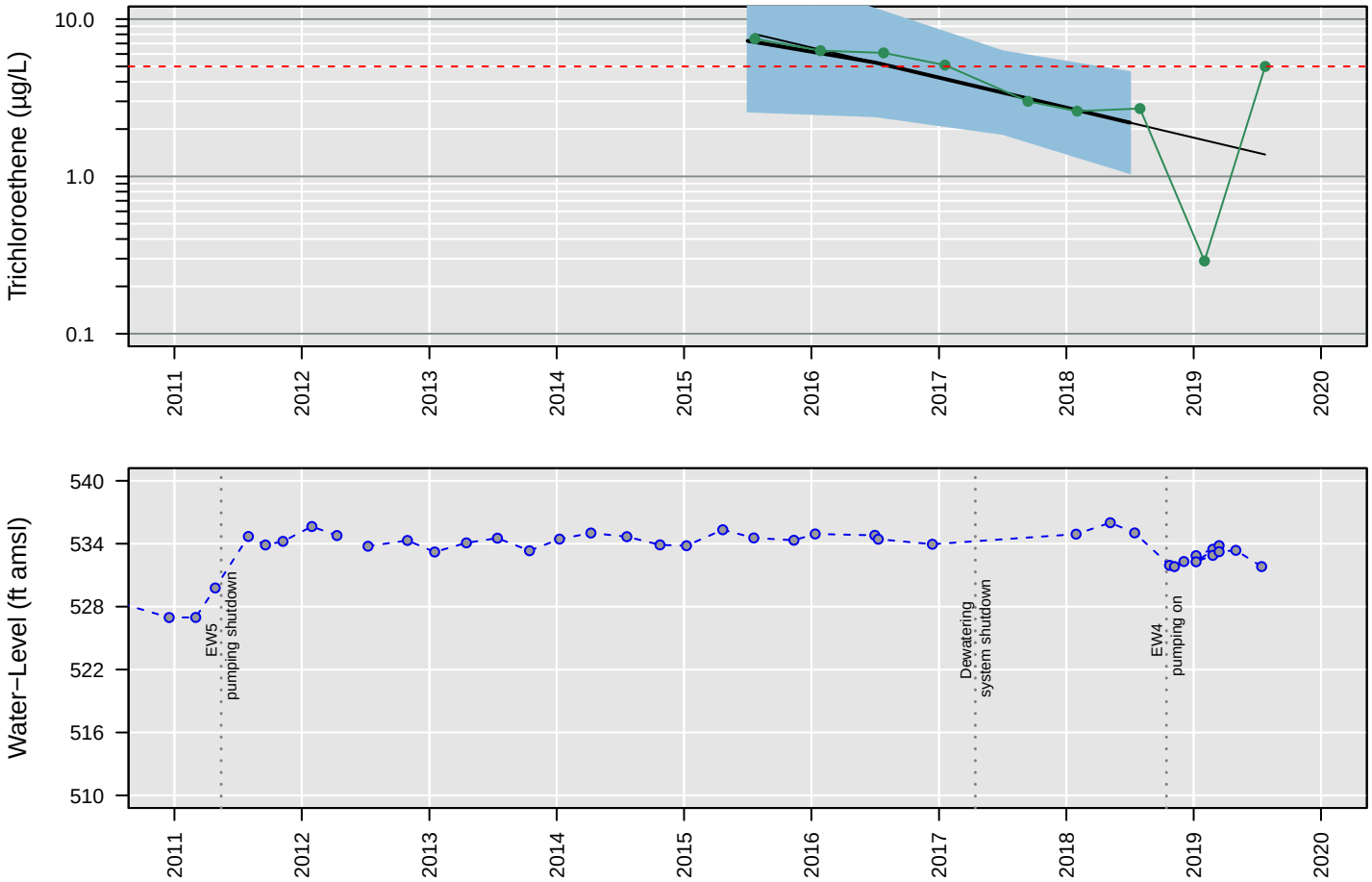
ln Conc. = −0.00045 (+/− 0.00016)*Date + 12 (+/− 2.8)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 36 µg/L
UCL: 46 µg/L
LCL: 28 µg/L

PZ6

Trichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

ln Conc. = −0.0012 (+/− 0.00052)*Date + 22 (+/− 9)

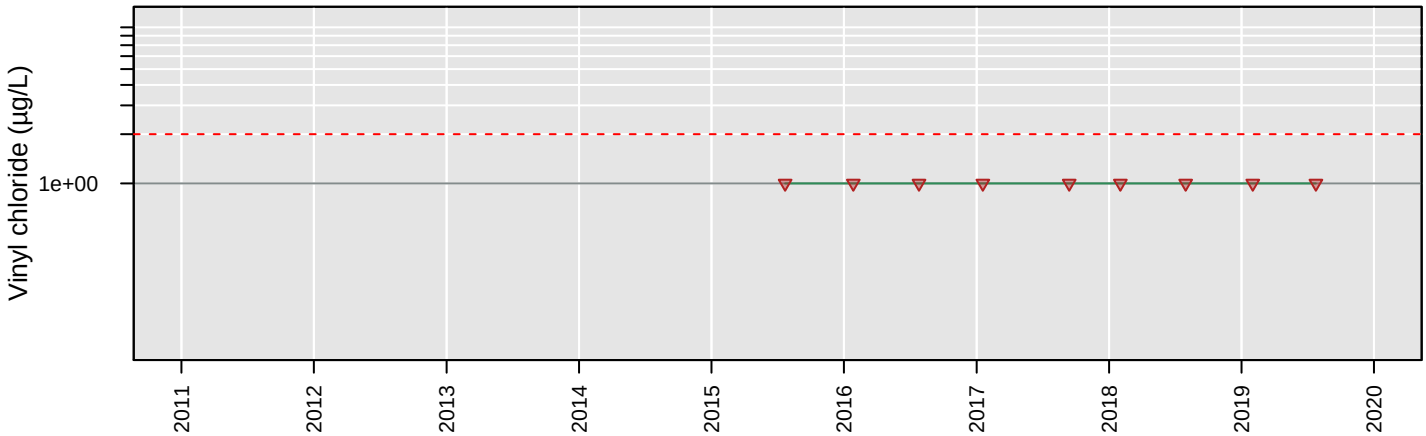
Regression Statistics for January 2018 to January 2019
Geometric Mean: 2.2 µg/L
UCL: 4.6 µg/L
LCL: 1 µg/L

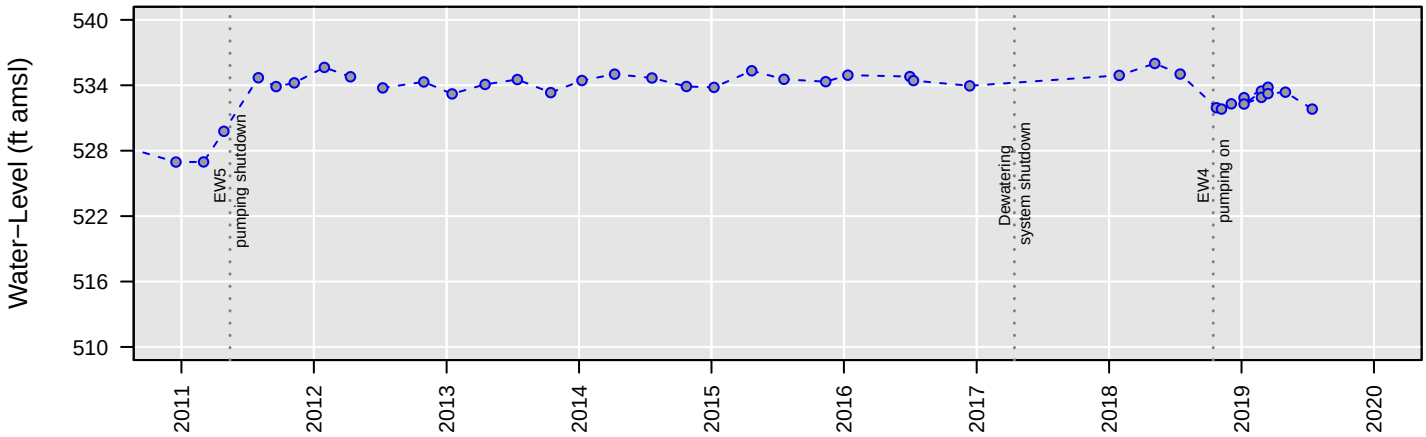
PZ6

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 100%

Analyte Concentration
Non−Detect
Trend
95% Confidence Interval
MCL
Water−Level Elevation



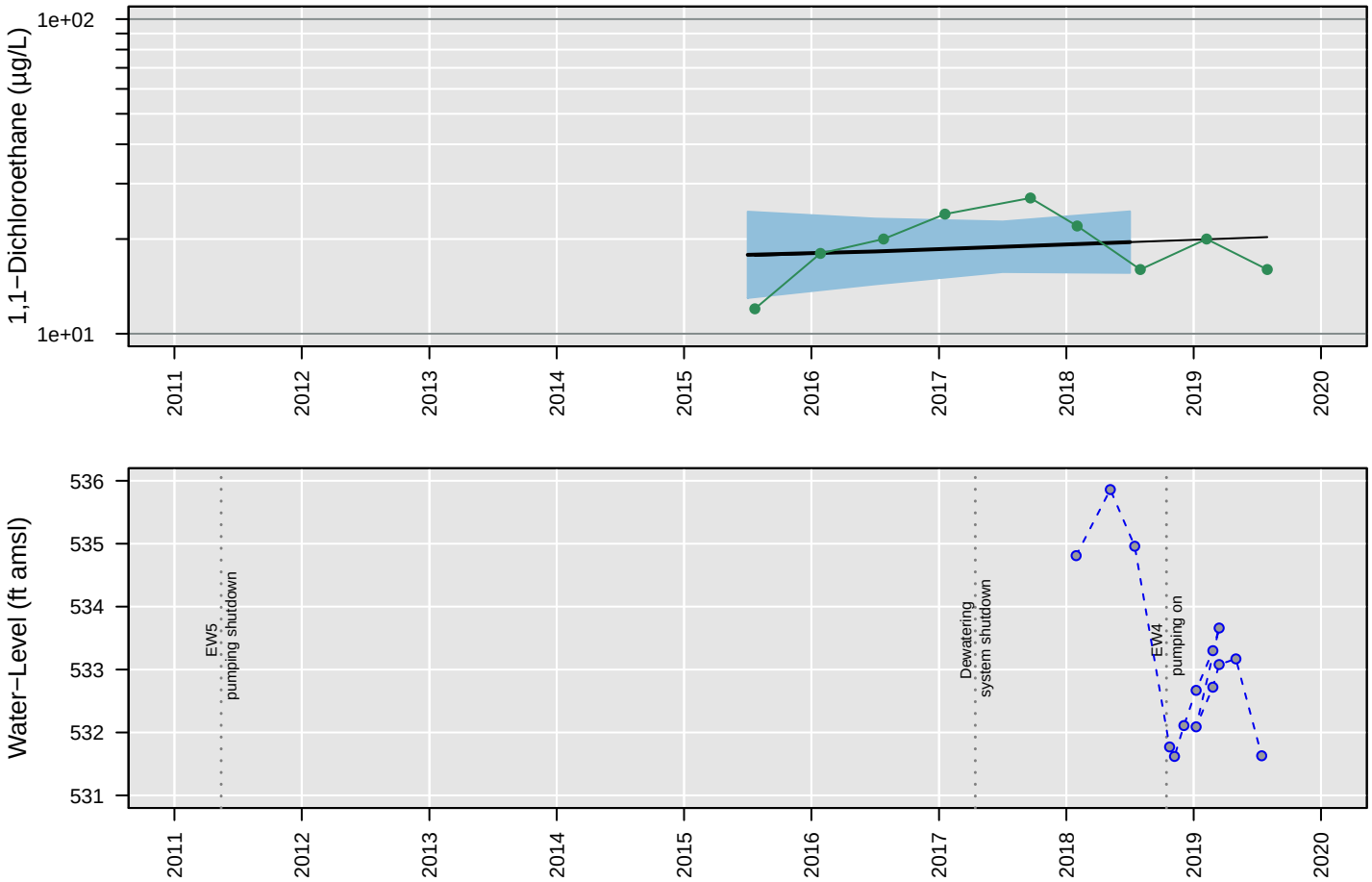


No Analysis Performed

PZ7D

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

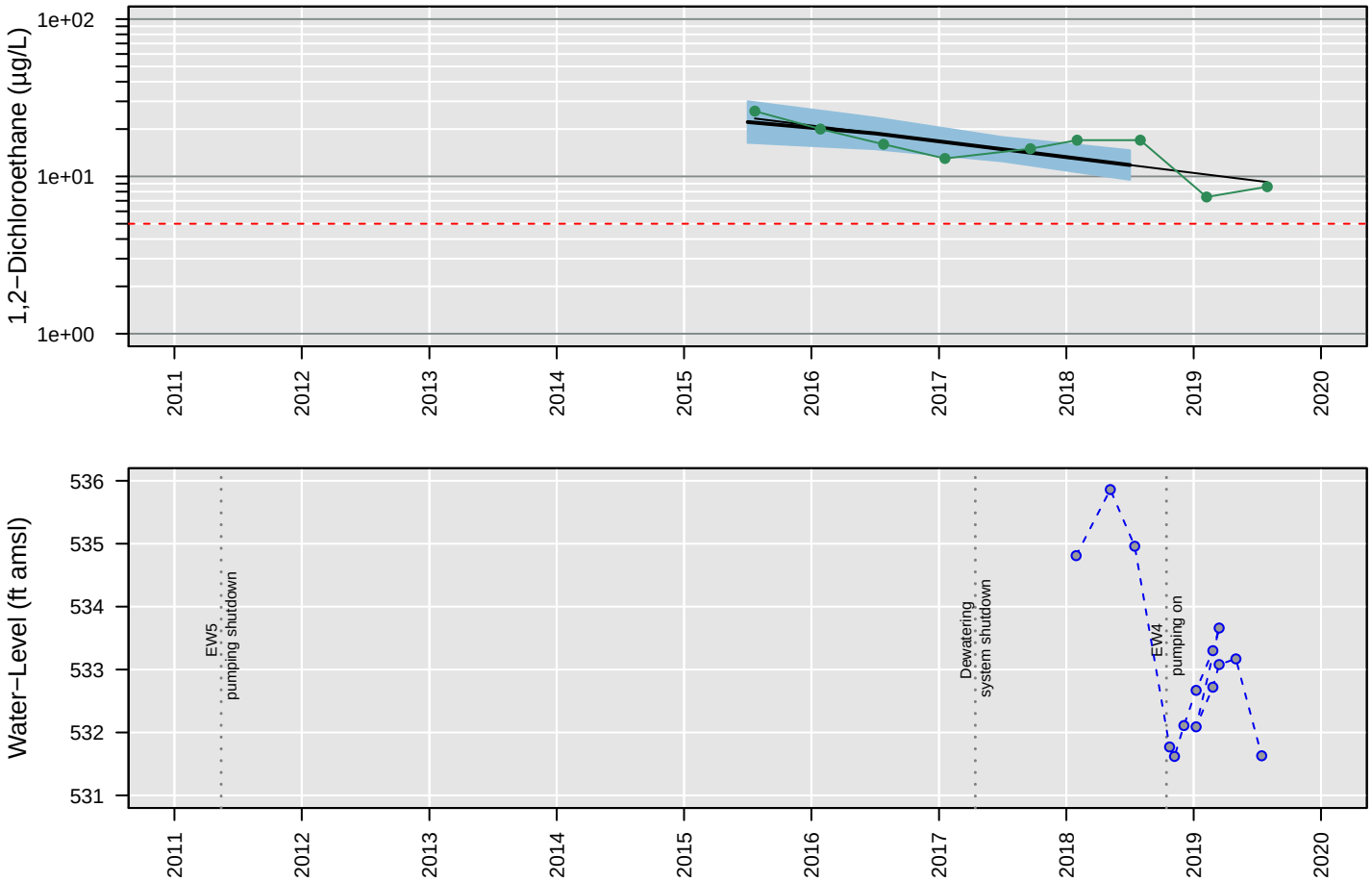
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 20 µg/L
UCL: 24 µg/L
LCL: 16 µg/L

PZ7D

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

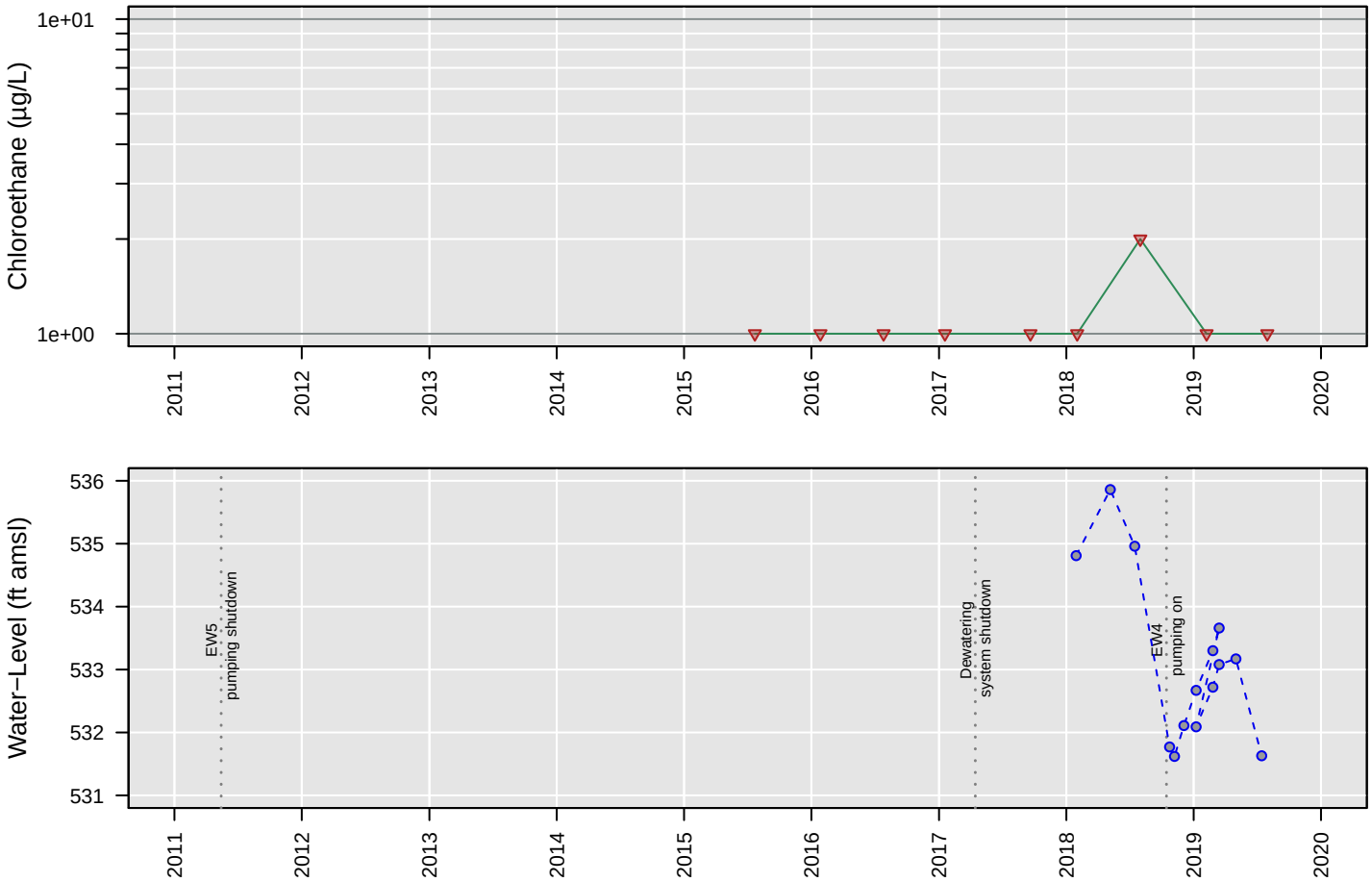
ln Conc. = −0.00063 (+/− 0.00015)*Date + 14 (+/− 2.6)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 12 µg/L
UCL: 15 µg/L
LCL: 9.5 µg/L

PZ7D

Chloroethane

Number of Comparisons: 9
Percent NDs: 100%

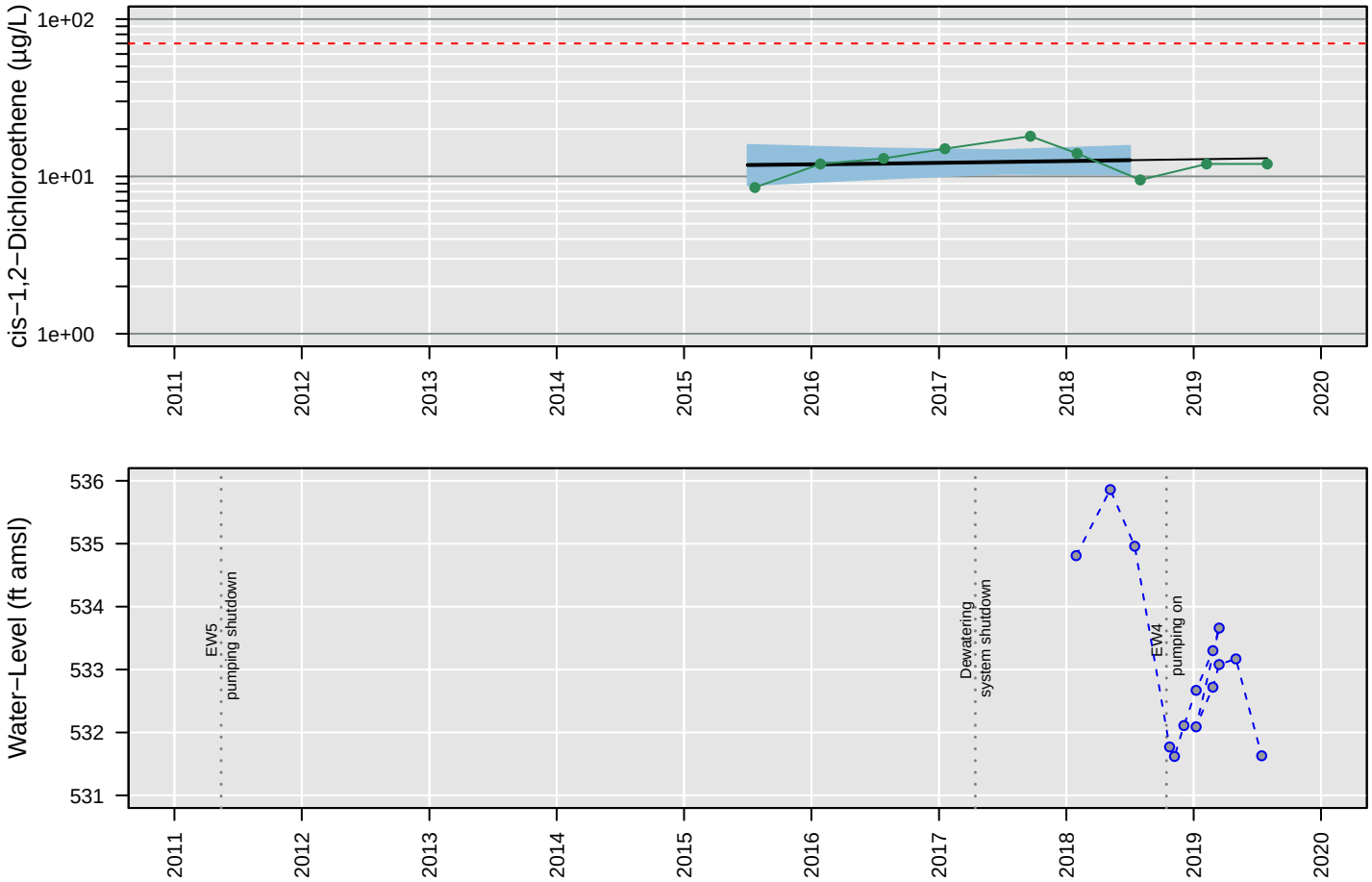


No Analysis Performed

PZ7D

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

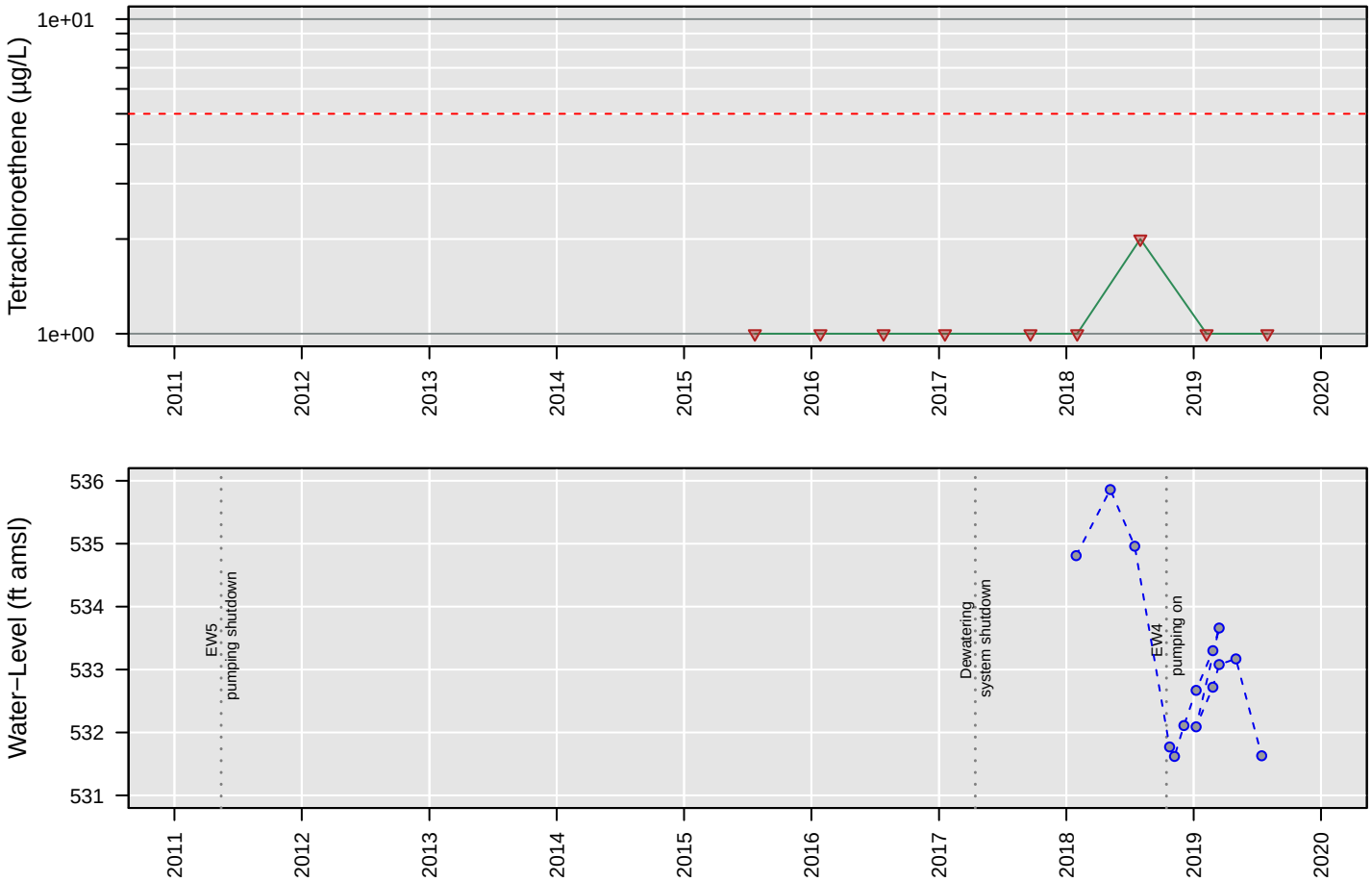
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 13 µg/L
UCL: 16 µg/L
LCL: 10 µg/L

PZ7D

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%

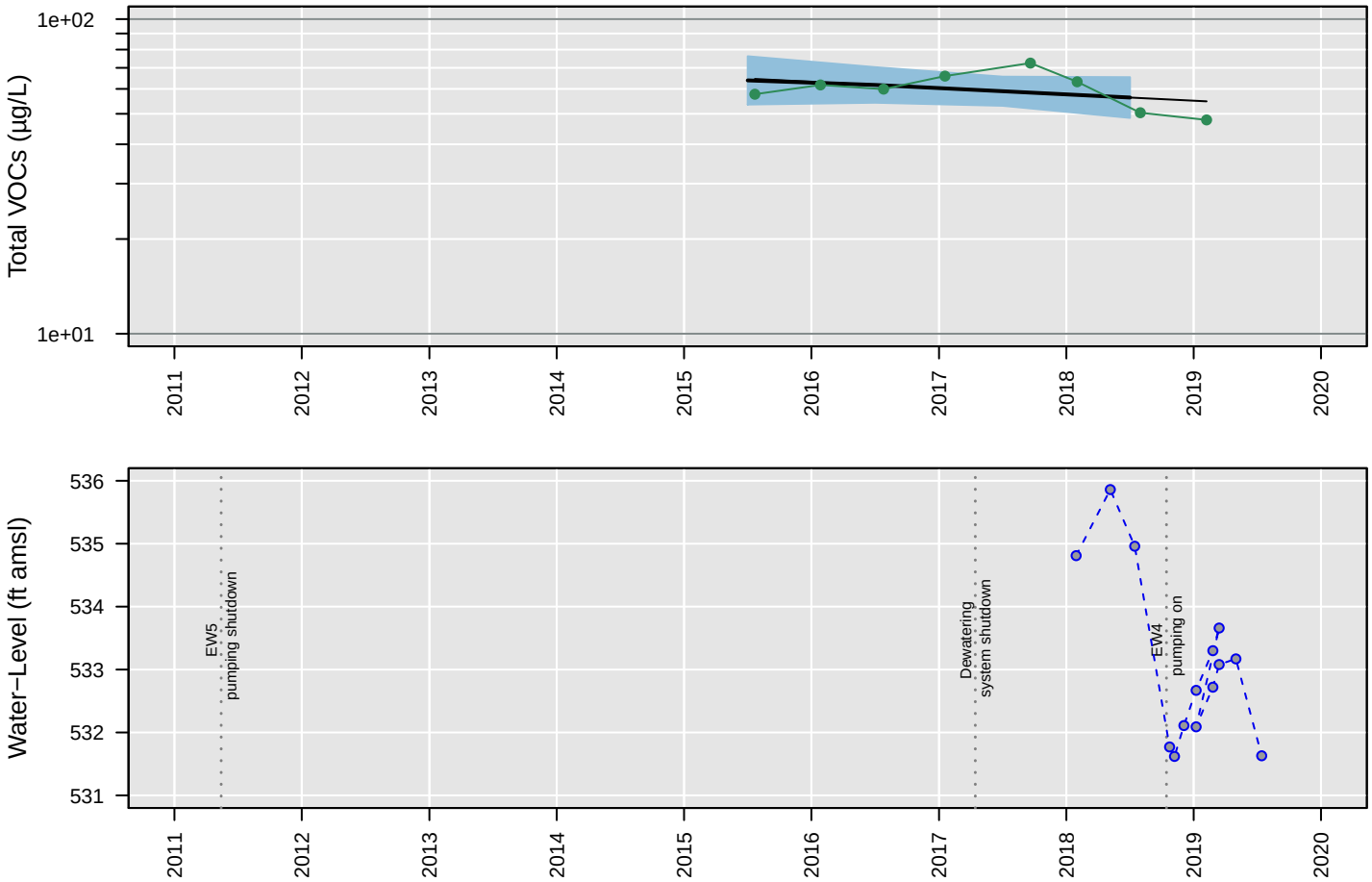


No Analysis Performed

PZ7D

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

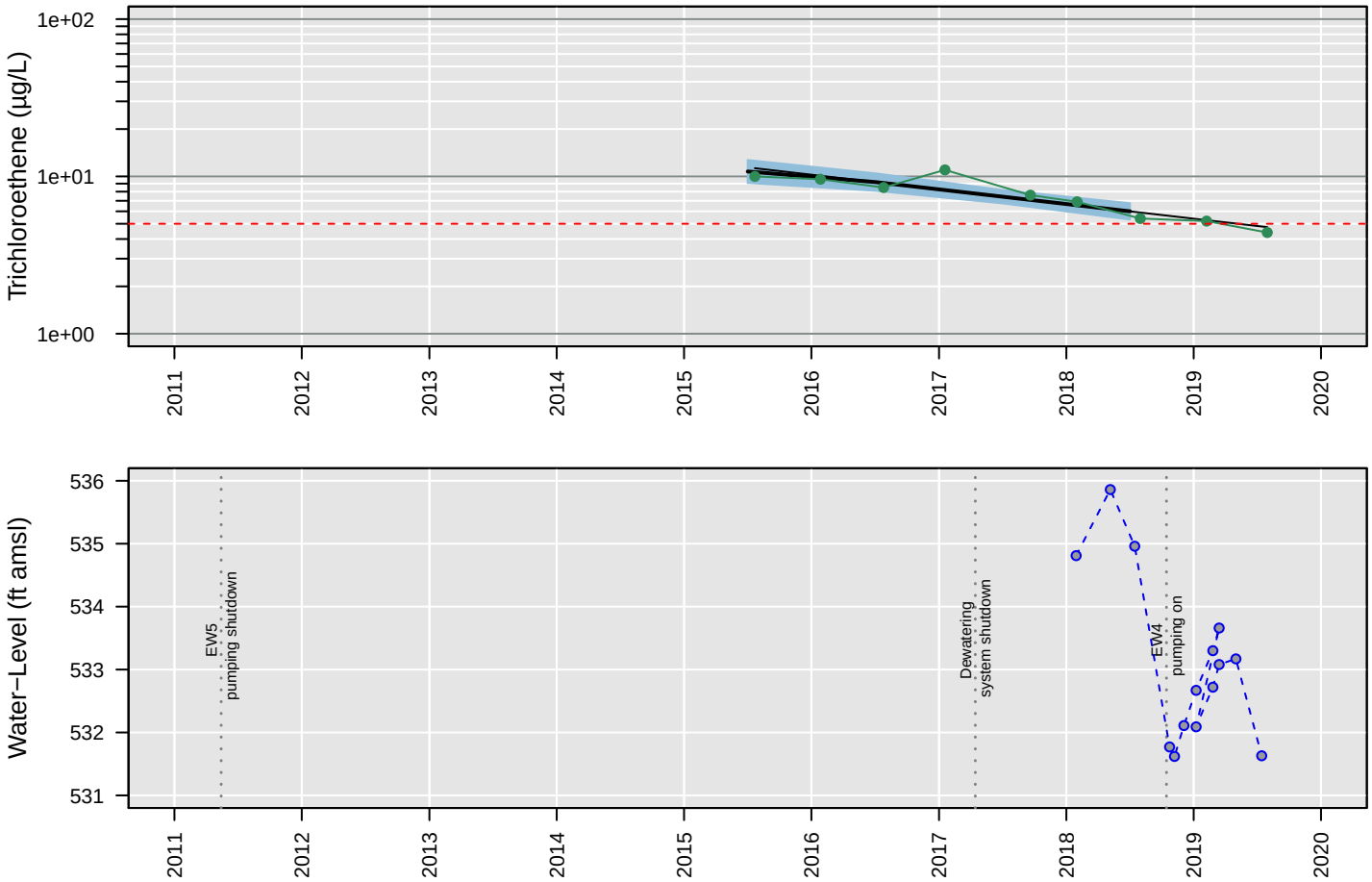
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 56 µg/L
UCL: 65 µg/L
LCL: 49 µg/L

PZ7D

Trichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

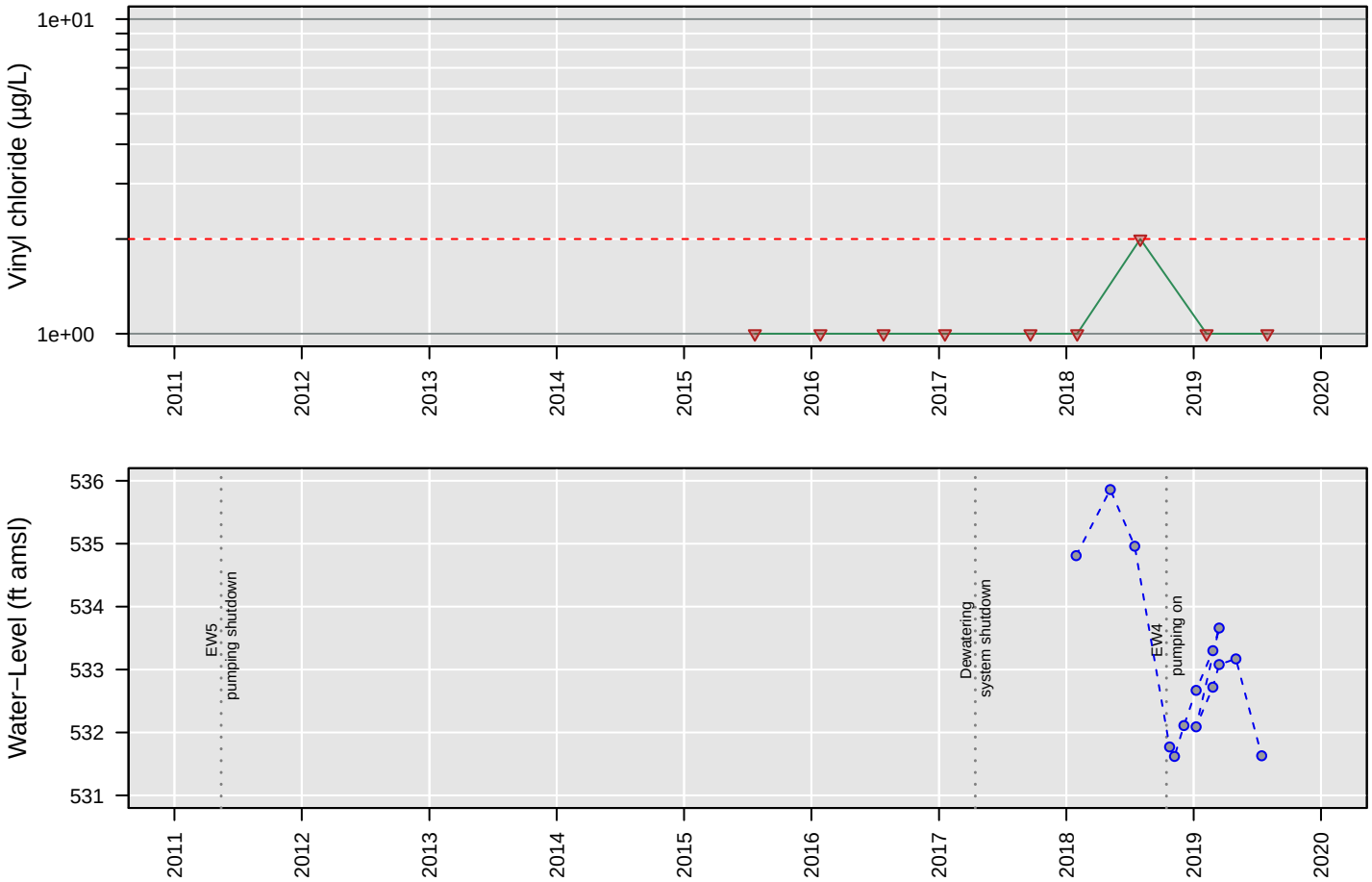
ln Conc. = −0.00059 (+/− 0.000084)*Date + 12 (+/− 1.5)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 6 µg/L
UCL: 6.8 µg/L
LCL: 5.3 µg/L

PZ7D

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 100%

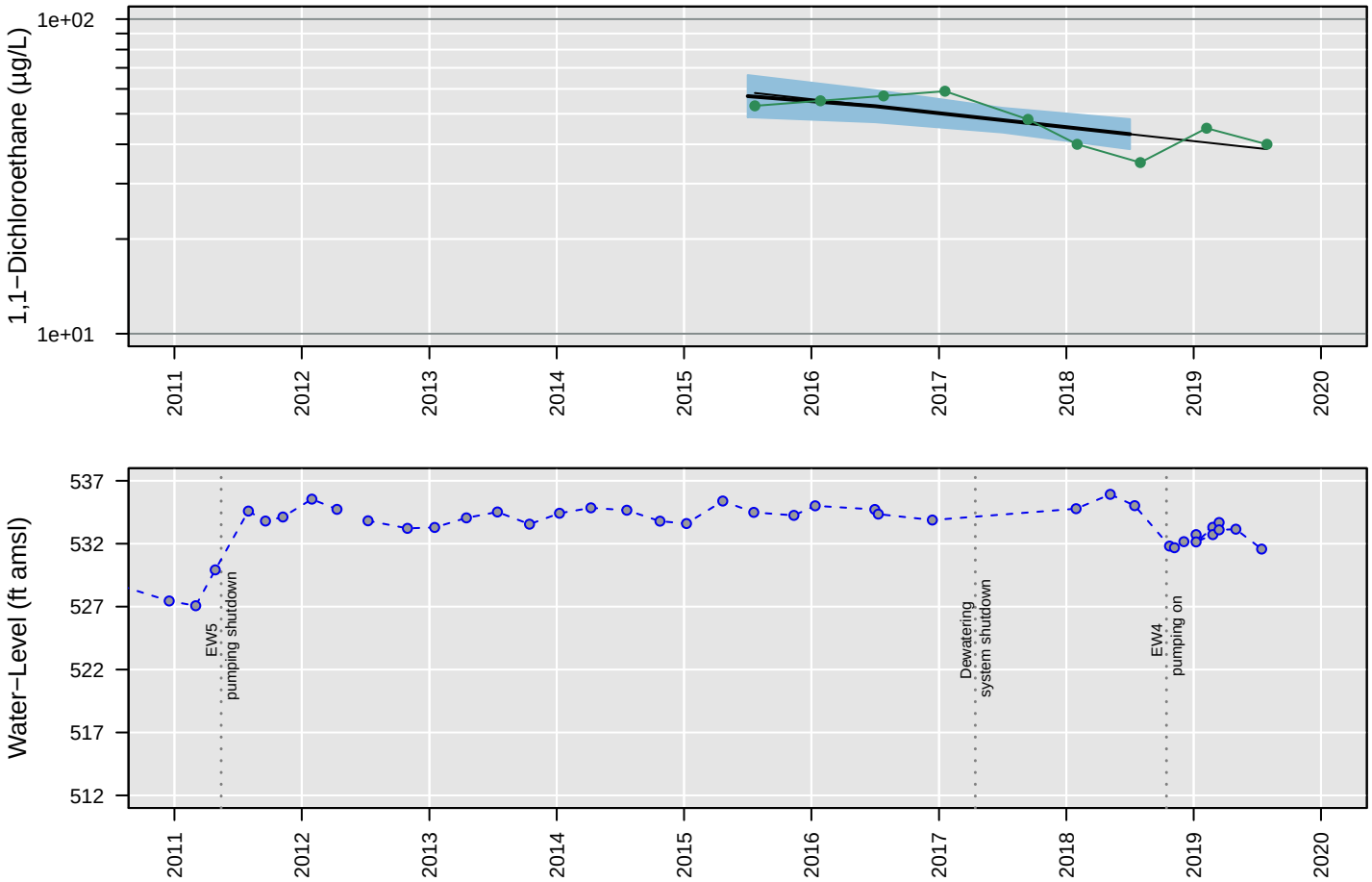


No Analysis Performed

PZ7S

1,1−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

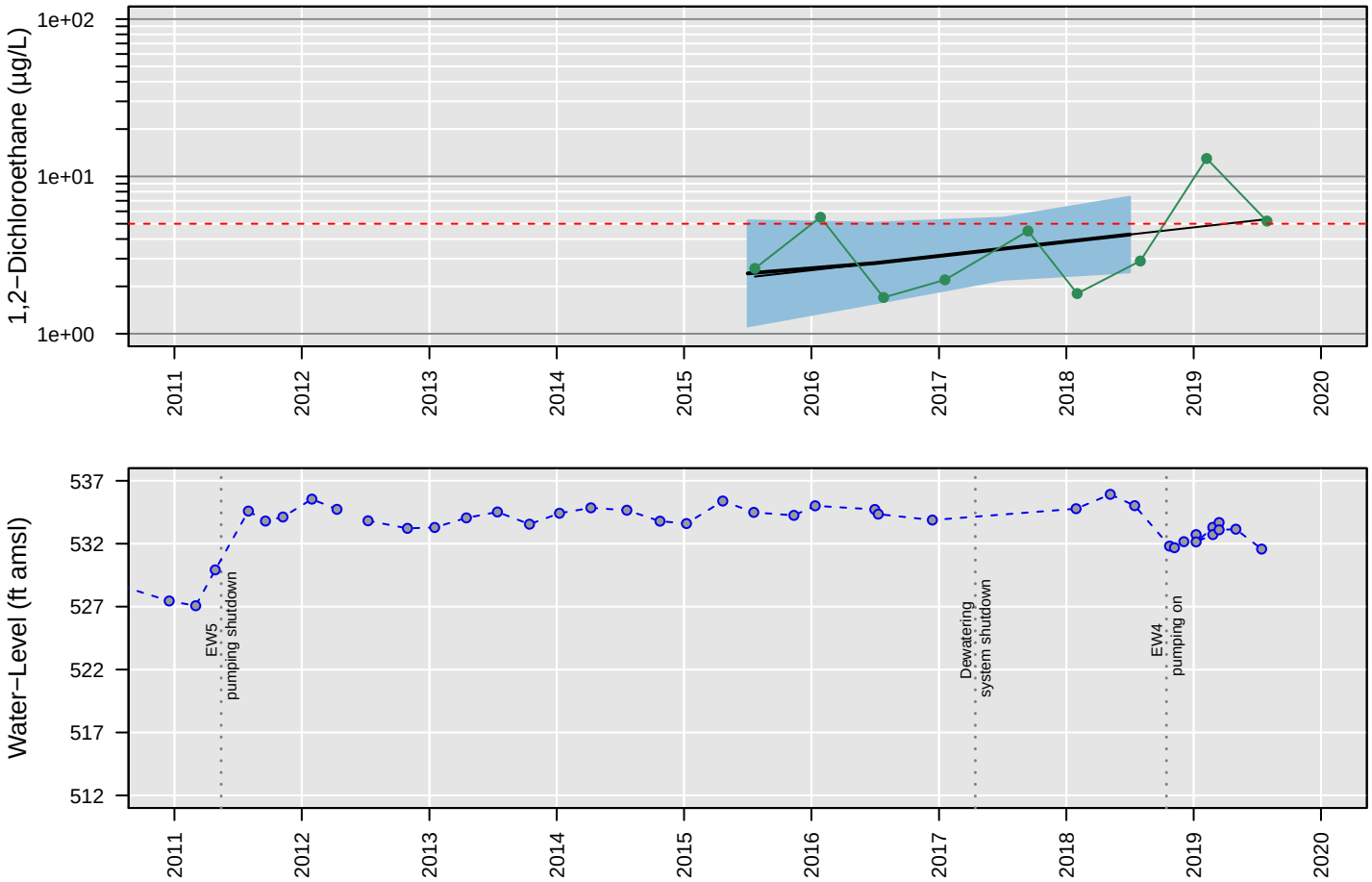
ln Conc. = −0.00028 (+/− 0.000077)*Date + 8.7 (+/− 1.3)

Regression Statistics for January 2018 to January 2019
Geometric Mean: 43 µg/L
UCL: 48 µg/L
LCL: 39 µg/L

PZ7S

1,2−Dichloroethane

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

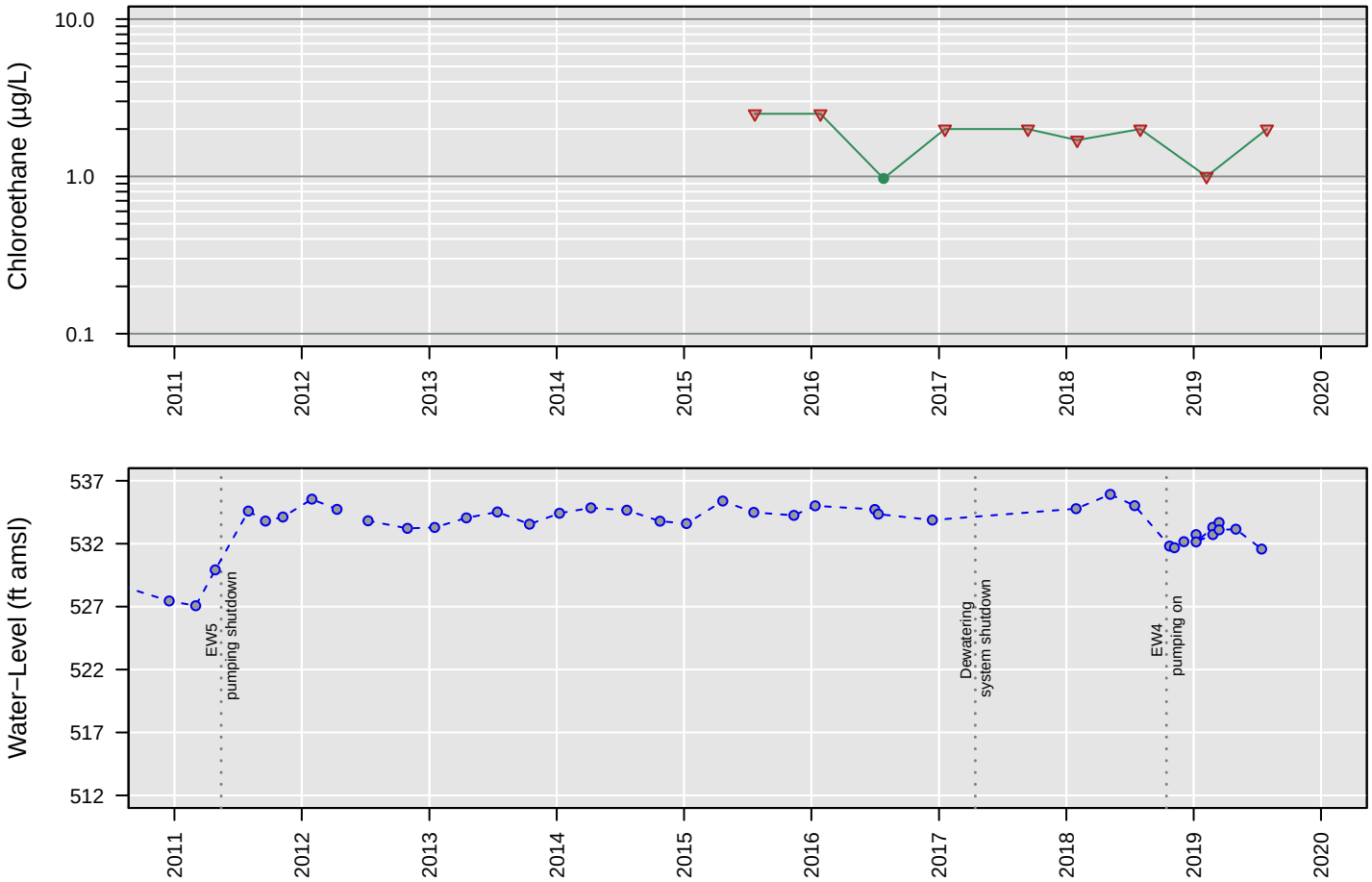
Trend Not Significant

Regression Statistics for January 2018 to January 2019
Geometric Mean: 4.3 µg/L
UCL: 7.4 µg/L
LCL: 2.5 µg/L

PZ7S

Chloroethane

Number of Comparisons: 9
Percent NDs: 89%

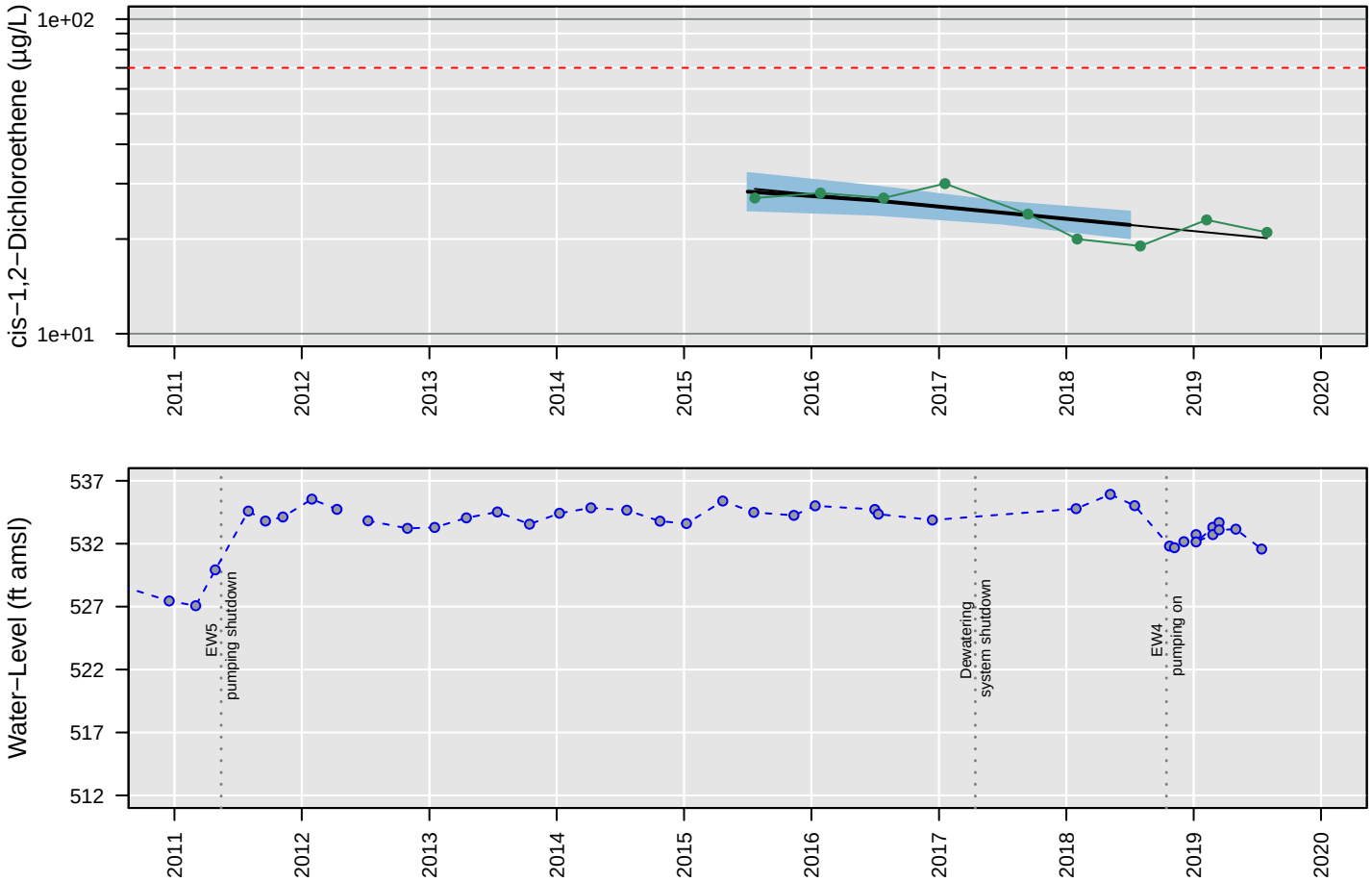


No Analysis Performed

PZ7S

cis−1,2−Dichloroethene

Number of Comparisons: 9
Percent NDs: 0%



Censored Regression (Tobit) Model

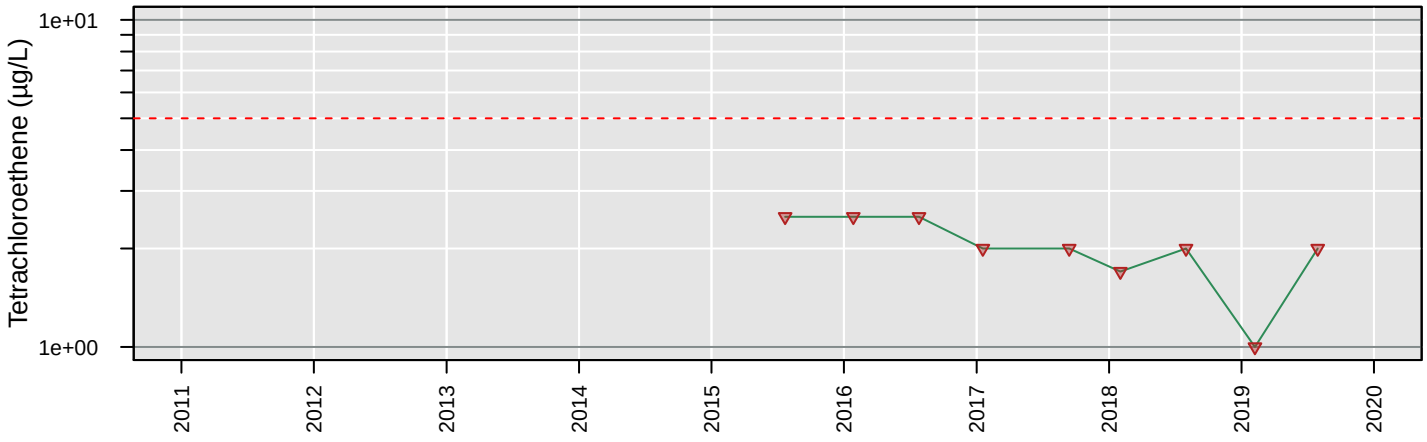
ln Conc. = −0.00025 (+/− 0.000069)*Date + 7.4 (+/− 1.2)

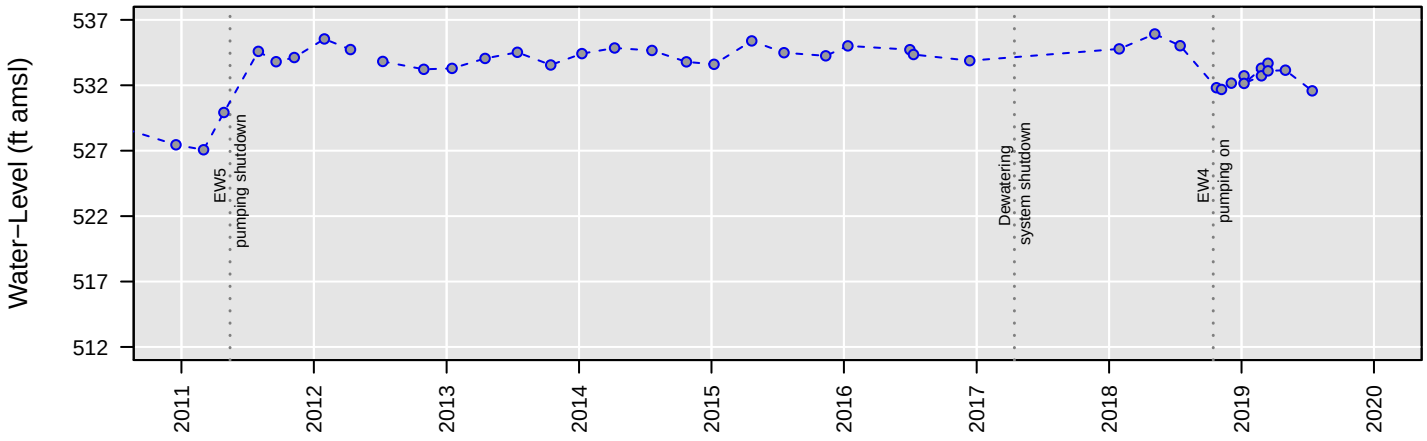
Regression Statistics for January 2018 to January 2019
Geometric Mean: 22 µg/L
UCL: 24 µg/L
LCL: 20 µg/L

PZ7S

Tetrachloroethene

Number of Comparisons: 9
Percent NDs: 100%



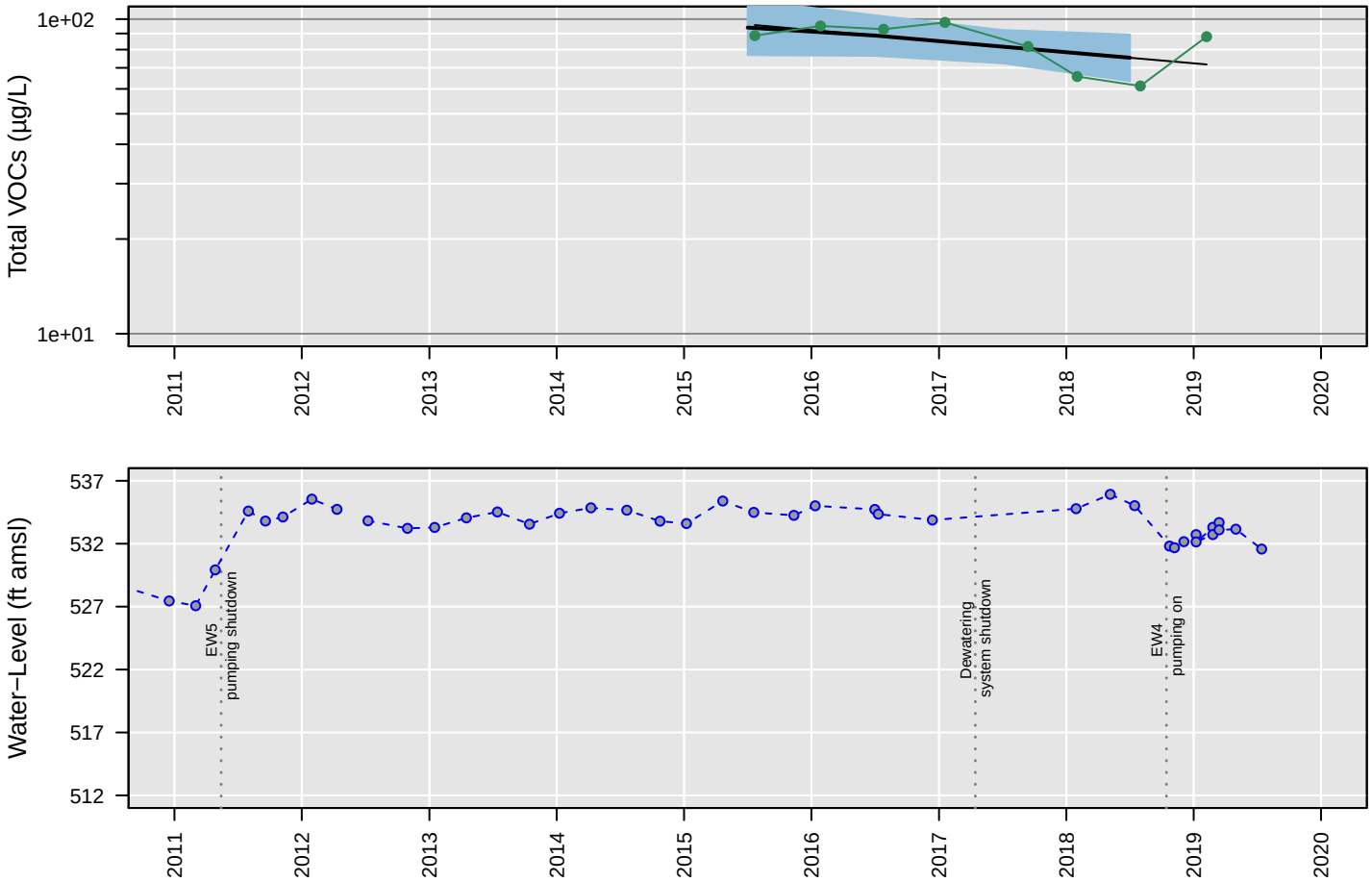


No Analysis Performed

PZ7S

Total VOCs

Number of Comparisons: 8
Percent NDs: 0%



Censored Regression (Tobit) Model

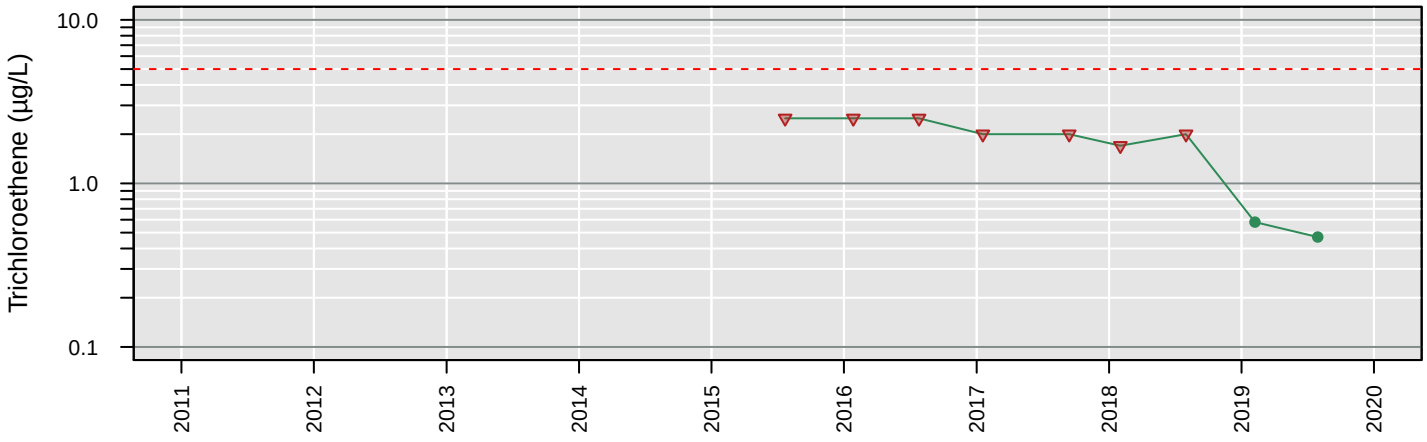
Trend Not Significant

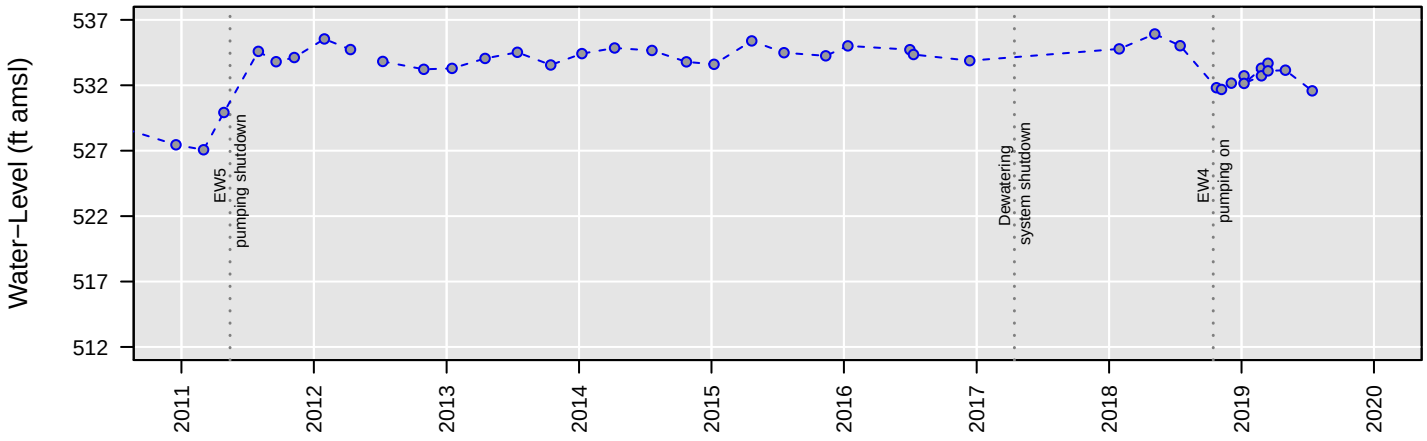
Regression Statistics for January 2018 to January 2019
Geometric Mean: 75 µg/L
UCL: 89 µg/L
LCL: 64 µg/L

PZ7S

Trichloroethene

Number of Comparisons: 9
Percent NDs: 78%



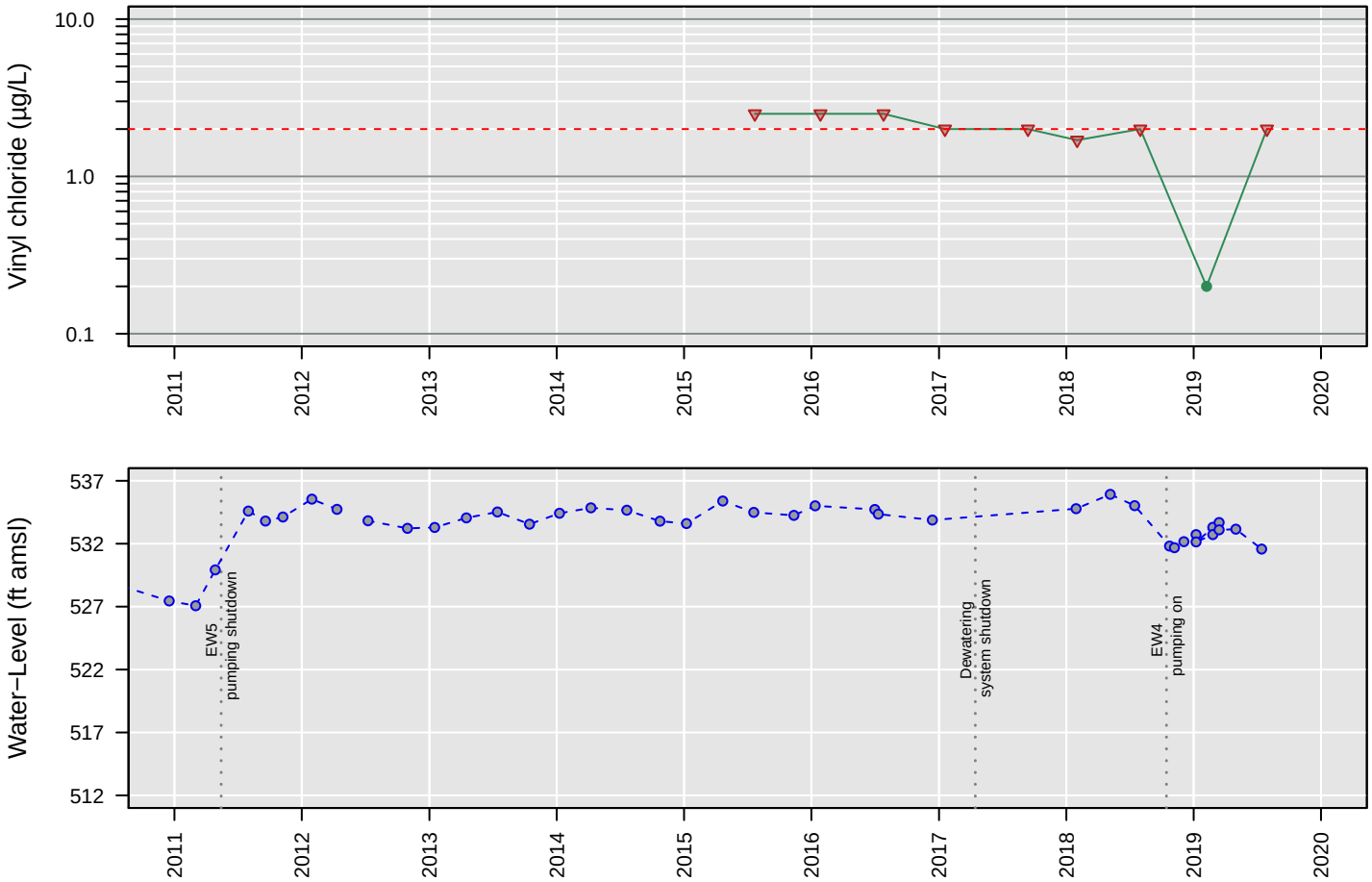


No Analysis Performed

PZ7S

Vinyl chloride

Number of Comparisons: 9
Percent NDs: 89%



No Analysis Performed