MONTEREY PENINSULA WATER SUPPLY PROJECT

Monitoring Network
Quarterly Monitoring Report No. 174
11-March-21 - 3-June-21

June 8, 2021

PREPARED FOR:
California American Water

CALIFORNIA AMERICAN WATER

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THIS REPORT HAS BEEN PREPARED BY OR UNDER THE DIRECTION OF THE FOLLOWING DESIGN PROFESSIONAL LICENSED BY THE STATE OF CALIFORNIA AND BASED ON THE MOST RECENT AVAILABLE INFORMATION.

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1	General Technical Description of Monitoring Wells
2	Summary of Test Slant Well Laboratory Water Quality Results
3	Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

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	Description
A-1	Coastal Development Permit #A-3-MRA-14-0050
A-2	Coastal Development Permit Amendment No. A-3-MRA-14-0050-A1
B	Groundwater Level and Salinity Instrument Data for the Period 11-March-21 through 3-June-21
C	Conversion of Transducer Pressure Measurements to Groundwater Elevations
D	Estimating Total Dissolved Solids from Electrical Conductivity (EC) Measurements

Note: As they become available additional data will be added to Appendices with each subsequent report

www.watersupplyproject.org

MONTEREY PENINSULA
WATER SUPPLY PROJECT

MONITORING NETWORK QUARTERLY MONITORING REPORT NO. 174
11-MARCH-21 - 3-JUNE-21

1.0 GENERAL

1.1 Purpose and Scope

Coastal Development Permit #A-3-MRA-14-0050 dated 8-Dec-14 granted California American Water Company (CalAm) permission for development consisting of: Construction, operation and decommissioning of a test slant well at the CEMEX sand mining facility in the City of Marina and beneath Monterey Bay in the County of Monterey. Special condition 11, "Protection of Nearby Wells", of that permit required that groundwater monitoring of a minimum of four wells on the CEMEX site within 2,000 ft of the test well and one or more offsite wells to record water and salinity levels (see Appendix A-1). Monitoring was conducted for permit compliance from April of 2015 through February 2018.

On February 28, 2018 the Coastal Development Permit (CDP) expired and pumping ceased at the Test Slant Well. California American Water has elected to continue with the monitoring program for the purpose of collecting additional data of aquifer conditions during the extended non-pumping period. Monitoring of water levels and salinity will continue at the Test Slant Well and monitoring well sites during this new stage of non-pumping. The purpose of this report is to present data that reflects aquifer conditions during both Test Slant Well pumping (April 2015 through February 2018) and the on-going non-pumping periods for comparative purposes. Monitoring Report 169 is the first quarterly report presenting twelve weeks of data. Report 169 and each subsequent quarterly report will be provided in two parts with the first part consisting of the Text, Figures, and Tables and the second part providing the Appendices.

1.2 Monitoring Well Construction

During the period from December 2014 to March 2015, four monitoring well clusters were constructed (MW-1, MW-3, MW-4, and MW-5) with each cluster consisting of three monitoring wells completed at different depth intervals. In addition, four monitoring well clusters (MW-6, MW-8, MW-9, and MW-7) were completed on 5-Apr-15, 29-May-15, 30-Jun-15, and 9-Aug-15. An additional cluster had been

planned for construction (MW-10), however, due to inaccessibility the proposed cluster was removed from the proposed monitoring network. The naming convention for the monitoring wells in each cluster is as follows: MW-1S, MW-1M and MW-1D refer to shallow, middle and deep monitoring zones, respectively, for monitoring well cluster MW-1. In addition, there are several existing wells that were monitored for water level and salinity for several months in 2015: one well at the Monterey Regional Water Pollution Control Agency Plant (MRWPCA Well 1); and one existing well on the CEMEX property (CEMEX North Well). In addition to the constructed and existing groundwater monitoring wells, a stilling well was installed at the north end of CEMEX's dredge pond (CP-1) and was also monitored. However, the transducer installed in the dredge pond was buried in sand due to winter storms surges in December 2015. Transducer data from MRWPCA Well 1, CEMEX North Well and CP-1 are not included in this report as these locations are no longer being monitored due to environmental or access issues. Previous data and figures for these sites can be found in Test Slant Well Long Term Pumping Report No. 145 or earlier.

Table 1 summarizes general technical details of the monitoring wells and Figure 1-1 shows the monitoring well locations.

2.0 BACKGROUND OF MONITORING PROGRAM

2.1 Baseline Water Level and Water Quality Weekly Monitoring Reports

As part of the long term pumping program weekly reports containing baseline water levels and water quality data were completed. A total of seven weekly reports were produced providing data for the period: February 19, 2015 through April 22, 2015. These initial Monitoring Reports (Nos. 1 through 7), providing baseline data collected prior to the initiation of the long term pumping test, can be found on the CalAm project website.

2.2 Test Slant Well Baseline Water Level and Quality Data

A report entitled "TECHNICAL MEMORANDUM - Monterey Peninsula Water Supply Project Baseline Water and Total Dissolved Solids Levels Test Slant Well Area" was prepared on April 20, 2015 and submitted to the Hydrogeologic Working Group (HWG) for review and concurrence. The report provided observations of the trends in water levels and water quality from the data provided weekly in the monitoring reports and included recommendations for a methodology to evaluate changes in water level and water quality trends at MW-4 series in order to comply with the conditions of Coastal Development Permit #A-3-MRA-14-0050. The report is available at: www.watersupplyproject.org

2.3 Test Slant Well Long Term Pumping Test Monitoring Reports

The long term pumping test of the Test Slant Well commenced on April 22, 2015. In adherence with the Coastal Development Permit #A-3-MRA-14-0050 for the Test Slant Well project a second set of weekly monitoring reports were required during the pumping period from April 22, 2015 to February 28, 2018, providing water level and water quality data from the project monitoring wells. Figure 1-1 shows the location of the monitoring wells.

On June 5, 2015, the Test Slant Well was voluntarily shut off so that the HWG could evaluate regional trends in water levels and salinity. During the shut off period, the California Coastal Commission allowed for weekly maintenance pumping of 6-hours per week to maintain the Test Slant Well (TSW) in an operational condition. Long term pumping of the Test Slant Well resumed on October 27, 2015 under Coastal Development Permit Amendment No. A-3-MRA-14-0050-A1 dated 13-Oct-15 (Appendix A-2).

In addition to the weekly reports, monthly reports were prepared by the HWG for submittal to the California Coastal Commission. The focus of the reports was water level and conductivity responses in MW-4 (permit threshold well) to comply with the CDP. However, the reports summarized water level and water quality data from the Test Slant Well and entire monitoring network in addition to MW-4. Twenty-eight (28) monthly reports were prepared during the TSW pumping period, which concluded on February 28, 2018. These monthly reports are available on the CalAm project website.

The last effective date of the coastal development permit was February 28, 2018. On February 28, 2018 5:47 pm the TSW pump was turned off, concluding the MPWSP Test Slant Well Long Term Pumping Test and the required reporting period set forth by the CCC. Report No. 1 through Report No. 145 provide the weekly results of monitoring during the baseline and long term pumping test. The reports are available on the CalAm project website. Report Nos. 146 through 174 have been issued since the TSW has been shut off. This report summarizes monitoring performed for the period March 11, 2021 through June 3, 2021 during the post-pumping period but is presented with data collected since the start of the long term pumping test. This report is the sixth quarterly report prepared after completion of the long term pumping test following twenty-one monthly reports and biweekly Report Nos. 146 and 147. Twelve weeks of transducer data has been included in Appendix B.

3.0 MONITORING PROGRAM DURING CURRENT NON-PUMPING PERIOD

Since turning off the Test Slant Well pump at the end of February 2018 and ending the Long Term Test, CalAm has voluntarily elected to continue the monitoring program and issuing monitoring reports to compare water level and water quality trends during pumping and non-pumping periods. The March 2018 monitoring reports were issued as biweekly (every two weeks) and provided an additional 14 days of data. Report No. 148 through No. 168 were issued as monthly reports and provided

four-week periods of data. Going forward, beginning with Report No. 169, twelve weeks of data will be presented in each quarterly report. This report covers the twelve-week period from March 11, 2021 through June 3, 2021. The post pumping reports will be available on the project website.

3.1 Water Levels

All downloaded pressure transducer data as well as specific conductivity (EC) during the monitoring period are included in Appendix B. Appendix B data is cumulative and only the appended data will be printed in this report or in subsequent quarterly monitoring reports. Figures 2-1 to 2-8 show graphical plots of groundwater elevations for the eight monitoring well clusters (MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, and MW-9). Figures 3-1 through 3-8 show corresponding graphical plots of the specific conductivity for the above-mentioned wells. Figures 2-9a and 3-9a show the water level and conductivity for the TSW respectively since the TSW was shut-off. For comparison of water levels and conductivity during long term testing and the current non-pumping period, Figures 2-9b and 3-9b show water levels and specific conductivity, respectively, from April 2015. A summary of the method used to convert transducer pressure measurements to groundwater elevations can be found in Appendix C.

3.2 Test Slant Well Water Quality

Groundwater quality samples were collected from the Test Slant Well on April 8, 2015, prior to initiation of the long term pumping operations, on April 29, 2015, weekly during the month of May and on June 3, 2015. A summary of the water quality laboratory results from the Test Slant Well are included in Table 2. Since October 27, 2015, water quality data had been collected weekly on average while the well was in operation and the data are presented in Table 2. TSW water quality samples will not be collected during the current non-pumping period (after February 28, 2018) since the well is off. However, electrical conductivity measurements from a downhole transducer in the TSW will be reported in this and subsequent reports.

3.2.1 Specific Conductivity in the Test Slant Well

During Test Slant Well pumping periods between the start of the Long Term Pumping Test on April 22, 2015 until the completion of the test on February 28, 2018 specific conductivity of the well discharge was monitored for analytical and permit compliance purposes using water quality field instruments (Horiba U-50 or YSI Pro Plus) installed along the TSW discharge line. These EC readings represent a mixed water sample from the TSW screens which span both the shallow Dune Sand Aquifer and 180 FTE. Specific conductance during non-pumping periods has been continuously recorded using a data logger (In Situ Aqua TROLL 200) installed inside the TSW at a lineal depth of 305 ft bgs MD (lineal

feet at 19 degrees from ground surface) above the submersible pump. The EC data recorded by this instrument represents a depth specific sample of water column during non-pumping conditions. Beginning in Monitoring Report No. 146 conductivity during pumping and non-pumping periods is presented in Figure 3-9a and 3-9b. Figure 3-9a provides a plot of conductivity with primary focus during the current non-pumping period while Figure 3-9b, for comparison provides a plot of conductivity for the entire study period beginning in April 2015. A summary of the method used to estimate total dissolved solids from electrical conductivity (EC) measurements can be found in Appendix D.

3.3 Monitoring Well Water Quality

Groundwater quality samples were collected from the MPWSP monitoring wells in April 2018, following the completion of the Test Slant Well Long Term Pumping Test on February 28, 2018. Semiannual (twice a year) samples are planned to be collected from the monitoring wells through 2021 during the period of TSW non-pumping. The most recent set of semiannual samples was collected from April 12 to 15, 2021. Previous semiannual sample sets were collected from April 23 to 26, 2018, October 8 to 12, 2018, April 8 to 10, 2019, October 14 to 17, 2019, April 6 to 8, 2020, and October 12 to 15, 2020. A summary of the water quality laboratory results was first reported as part of Table 3 in Monitoring Report No. 149. Subsequent Monitoring Reports will continue to show the laboratory results in Table 3 along with the addition of monitoring well water quality results as samples are collected in the future.

Samples were collected from the MW-4 monitoring wells following the completion of the Test Slant Well Long Term Pumping Test on February 28, 2018. Samples were collected quarterly through October 2020 and then semiannually through April 2021. A summary of the water quality laboratory results for the MW-4 monitoring wells sampling events, since the conclusion of the Long Term Pumping Test, are reported in Table 3. MW-4 samples were collected on April 27, 2018, July 25, 2018, October 11 to 12, 2018, January 23, 2019, April 11, 2019, July 24 to 25, 2019, October 16, 2019, January 15, 2020, April 8, 2020, June 30, 2020, October 15, 2020, and April 15, 2021. Specific conductivity and TDS results from quarterly sampling of the MW-4 monitoring wells taken during the Long Term Pumping Test were reported in Table 2 of the MPWSP Test Slant Well Long Term Pumping Monthly Monitoring Reports. Table 2 in the final Monthly Monitoring Report 28 contains the full record of specific conductance and TDS for the MW-4 monitoring wells sampling for the duration of the Long Term Pumping Test, from April 22, 2015 to February 28, 2018.

Laboratory water quality results will be posted in future monitoring reports as they become available.

3.4 Periodic Pumping for Well Maintenance

On February 28, 2018 the Test Slant Well pump was turned off, concluding the Long Term Pumping Test. Going forward maintenance pumping of the Test Slant Well will be performed on an approximately monthly basis. The purpose of this short-term pumping is to preserve the pump and to circulate water through the well screen to help prevent biological growth and encrustation that may form during stagnant conditions. These periods of temporary pumping are summarized in the table in Figure 2-9a and Figure 3-9a.

FIGURES

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Pacific Ocean

Stilling Well

CEMEX Site

MW-1

MW-3

MW-4

Test Slant Well

CEMEX Wells

MW-7

MW-9

MW-8

MW-5

Monte Rd

Nashua Rd

Del Monte Blvd

Charles Benson Rd

Lapis Rd

Monterey Peninsula Landfill

MRWPCA Wells

Salinas River

Alisal Slough

McFadden Rd

Cooper Rd

W Blanco Rd

MW-6

Reservation Rd

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

CEMEX Inset

Stilling Well

CEMEX Dredge Pond

MW-1D

MW-1M

MW-1S

Test Slant Well

MW-3S

MW-3M

MW-3D

MW-4D

MW-4M

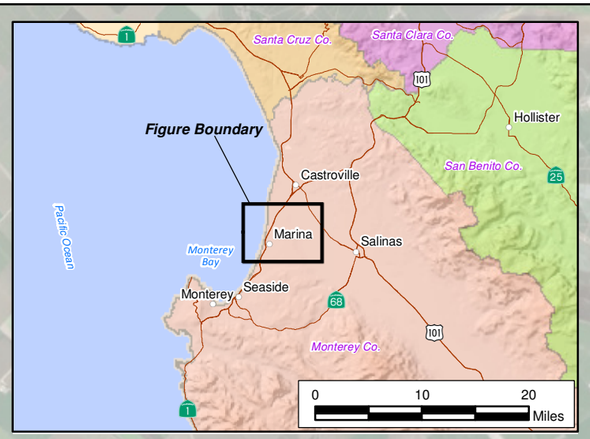
MW-4S

CEMEX North Well

CEMEX South Well

0 500 1,000 Feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



EXPLANATION

- Monitoring Well Cluster
- Compliance Monitoring Well Cluster
- Inactive Production Well
- CEMEX Well - Inactive
- CEMEX Well - Active
- Stilling Well
- Test Slant Well

N

0 3,000 6,000 Feet

MPWSP GROUNDWATER MONITORING NETWORK

W:\GIS_proj\mcwsp_cal_am\dtl_wl_monitoring\Long-Term_Rpt_No149_5-22-18\1_Fig_1-1_MonWells_5-22-18.mxd

8-Jun-21

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FIGURE 1-1

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Groundwater Elevation in MPWSP MW-1

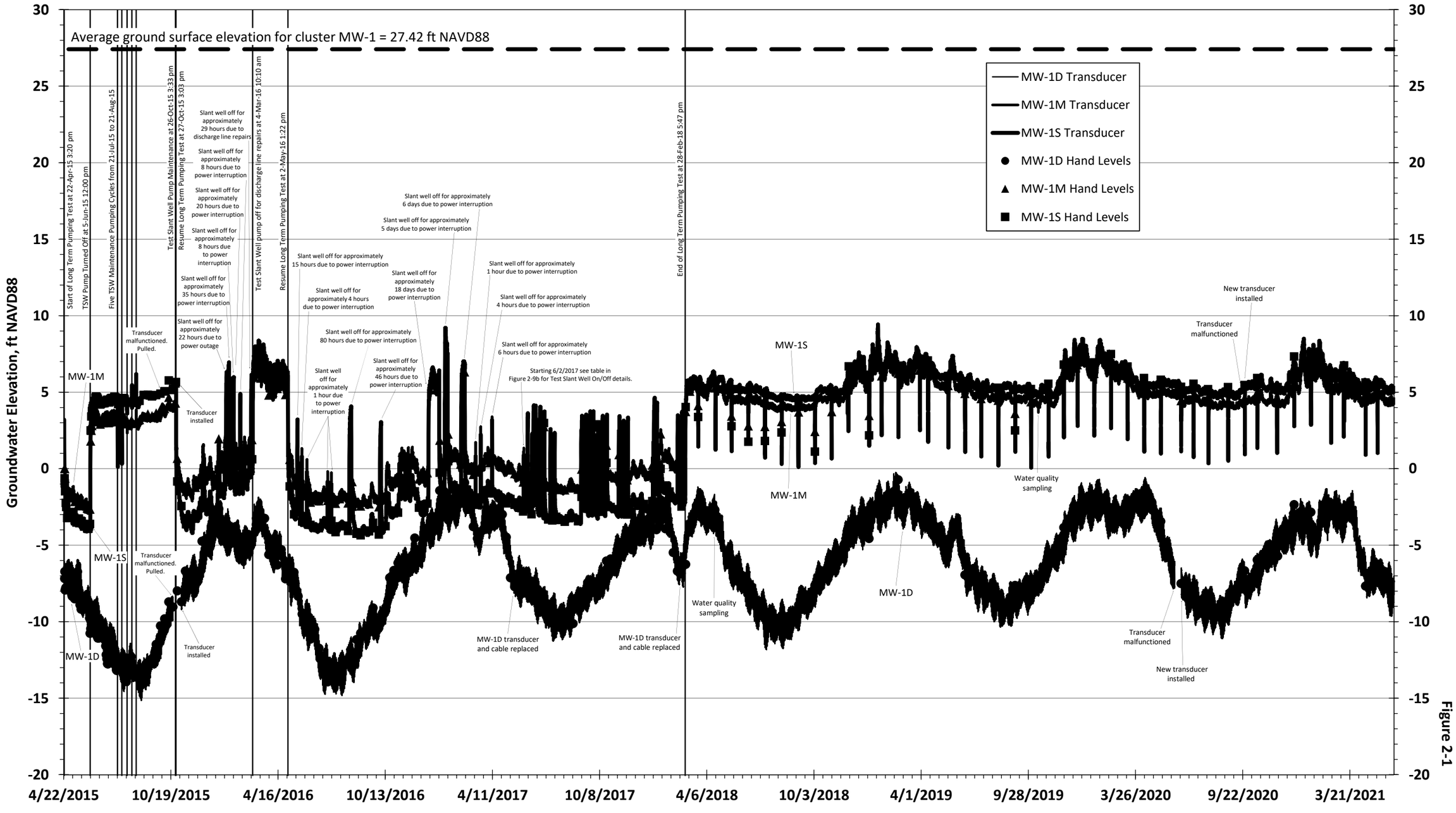


Figure 2-1

Groundwater Elevation in MPWSP MW-3

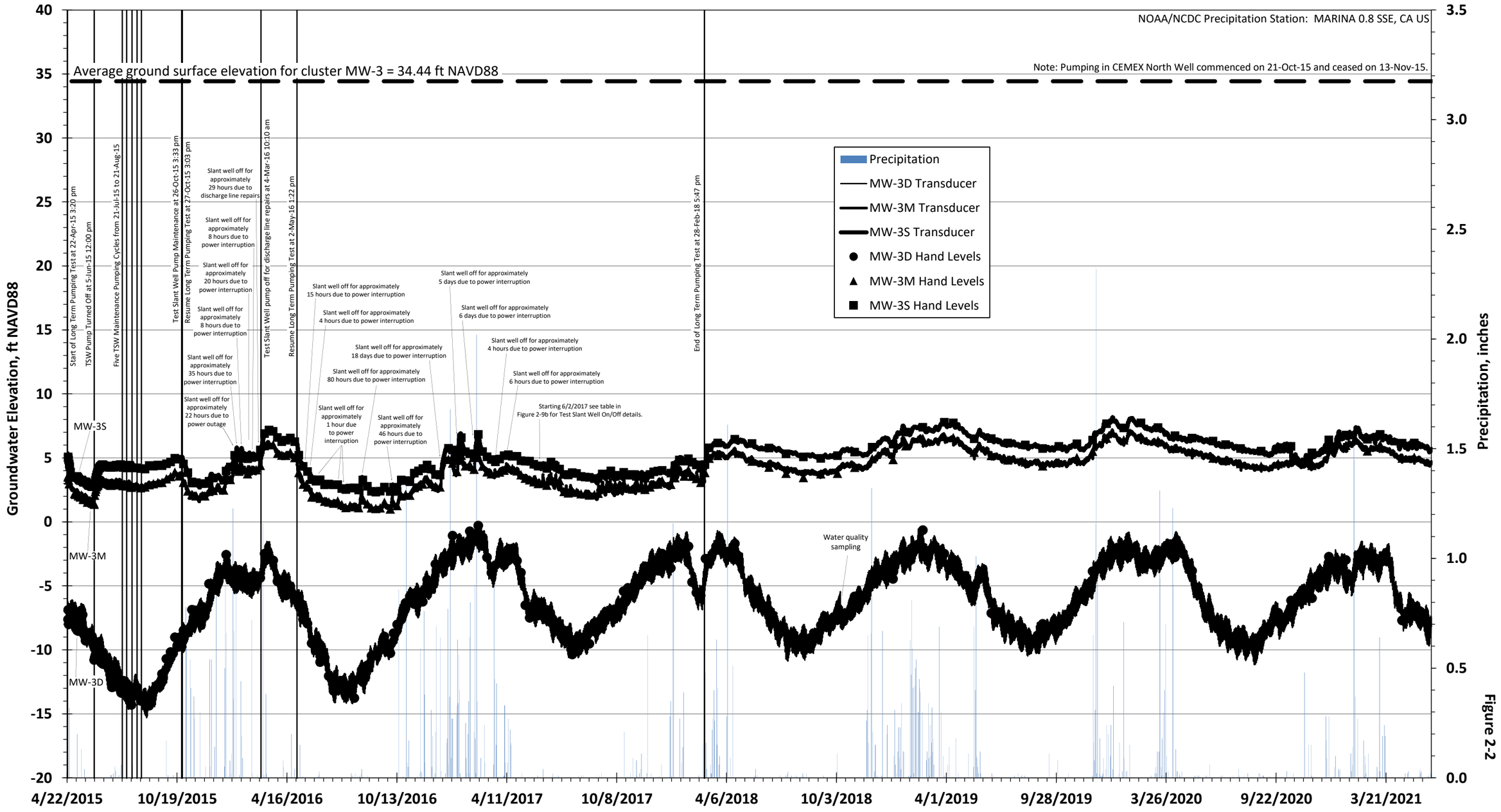


Figure 2-2

Groundwater Elevation in MPWSP MW-4

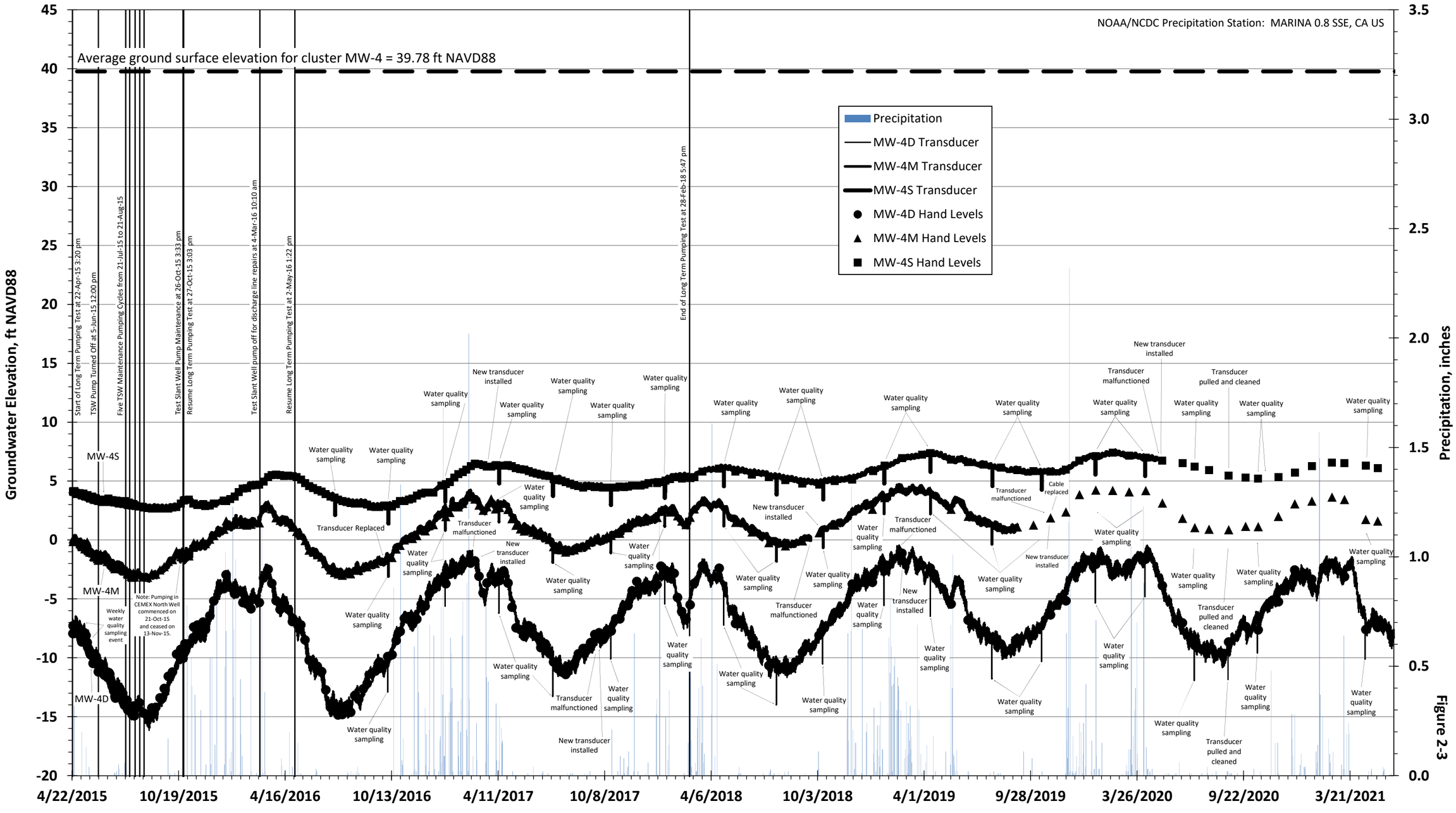


Figure 2-3

Groundwater Elevation in MPWSP MW-5

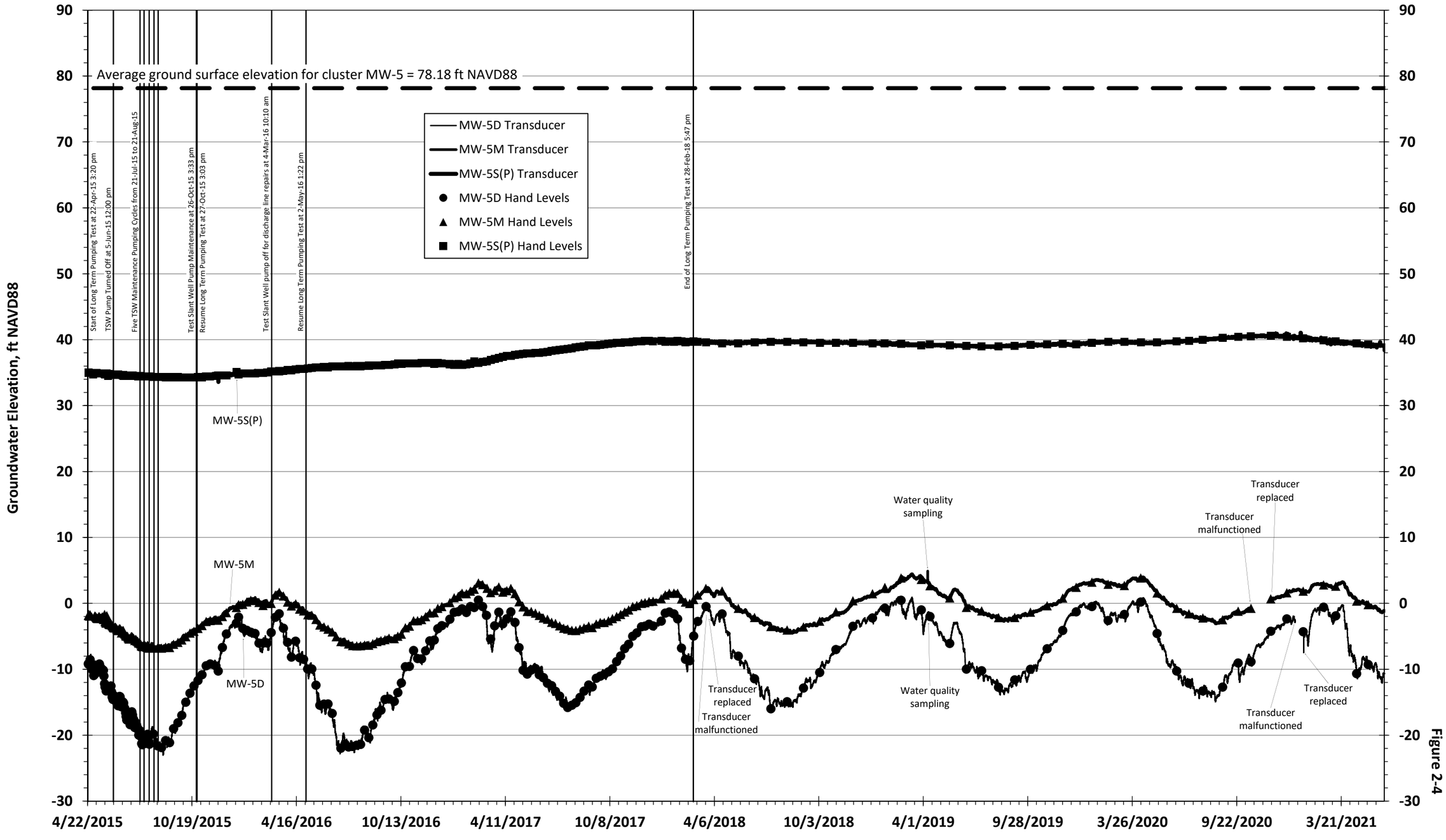


Figure 2-4

Groundwater Elevation in MPWSP MW-6

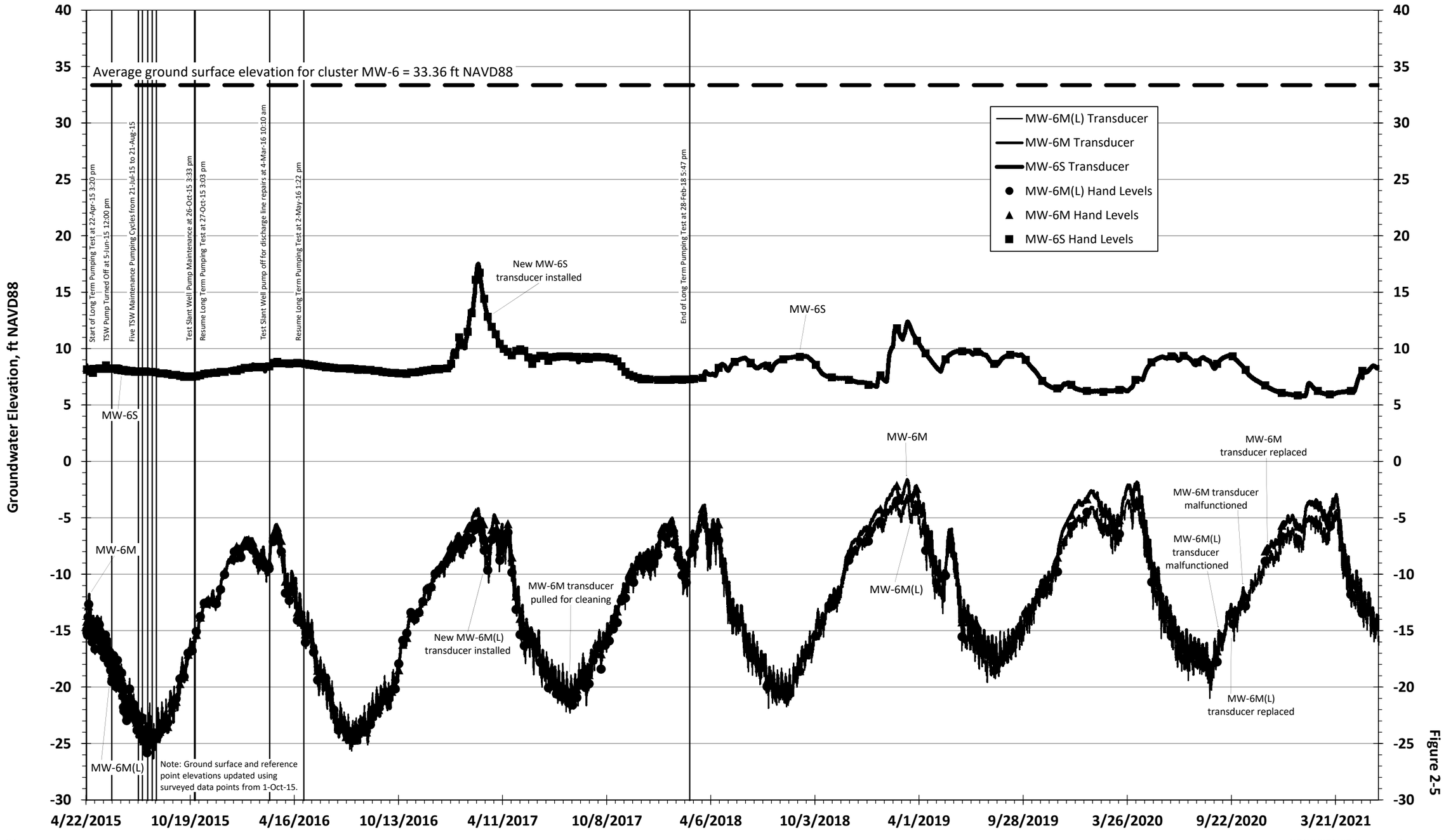


Figure 2-5

Groundwater Elevation in MPWSP MW-7

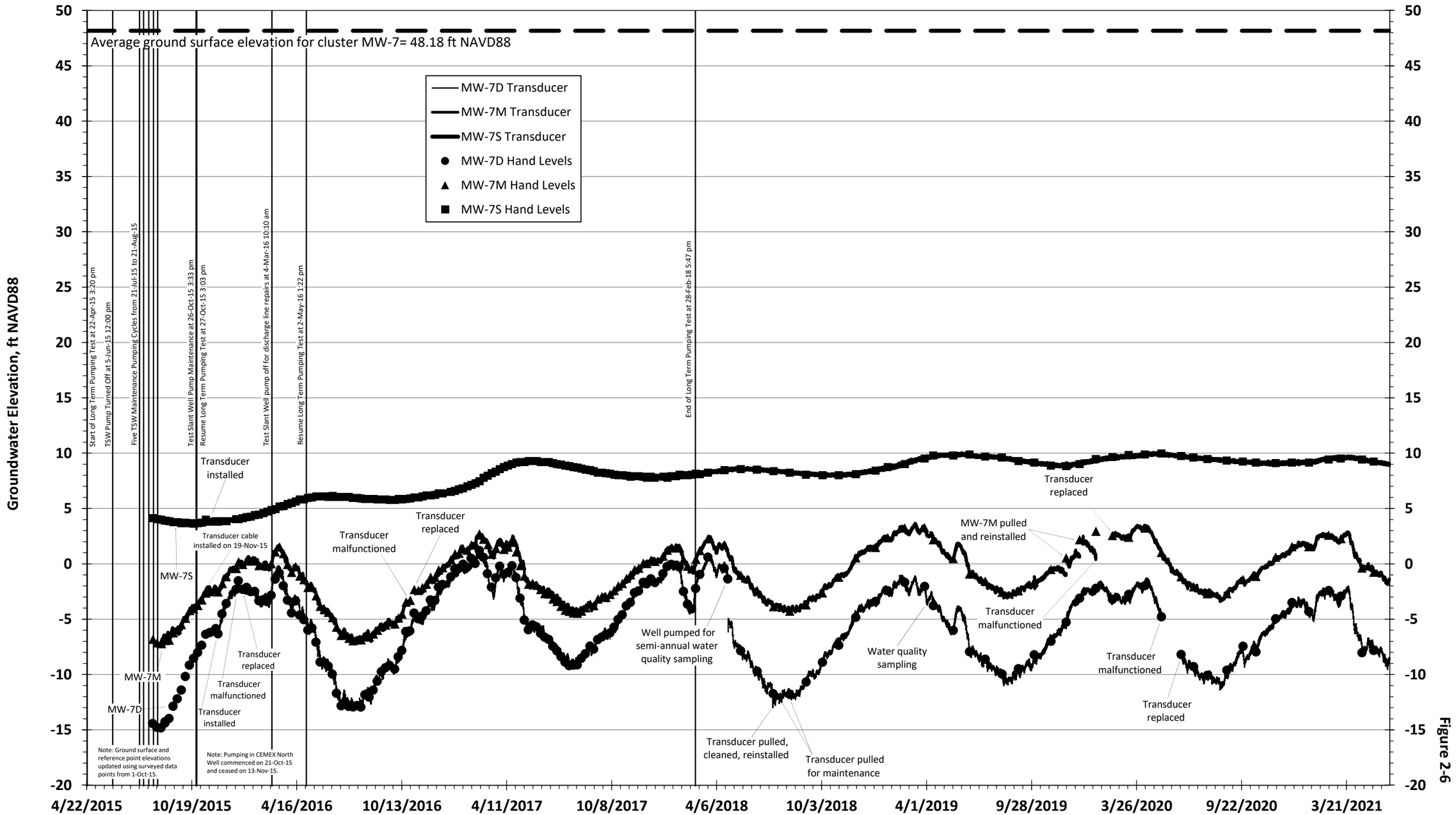


Figure 2-6

Groundwater Elevation in MPWSP MW-8

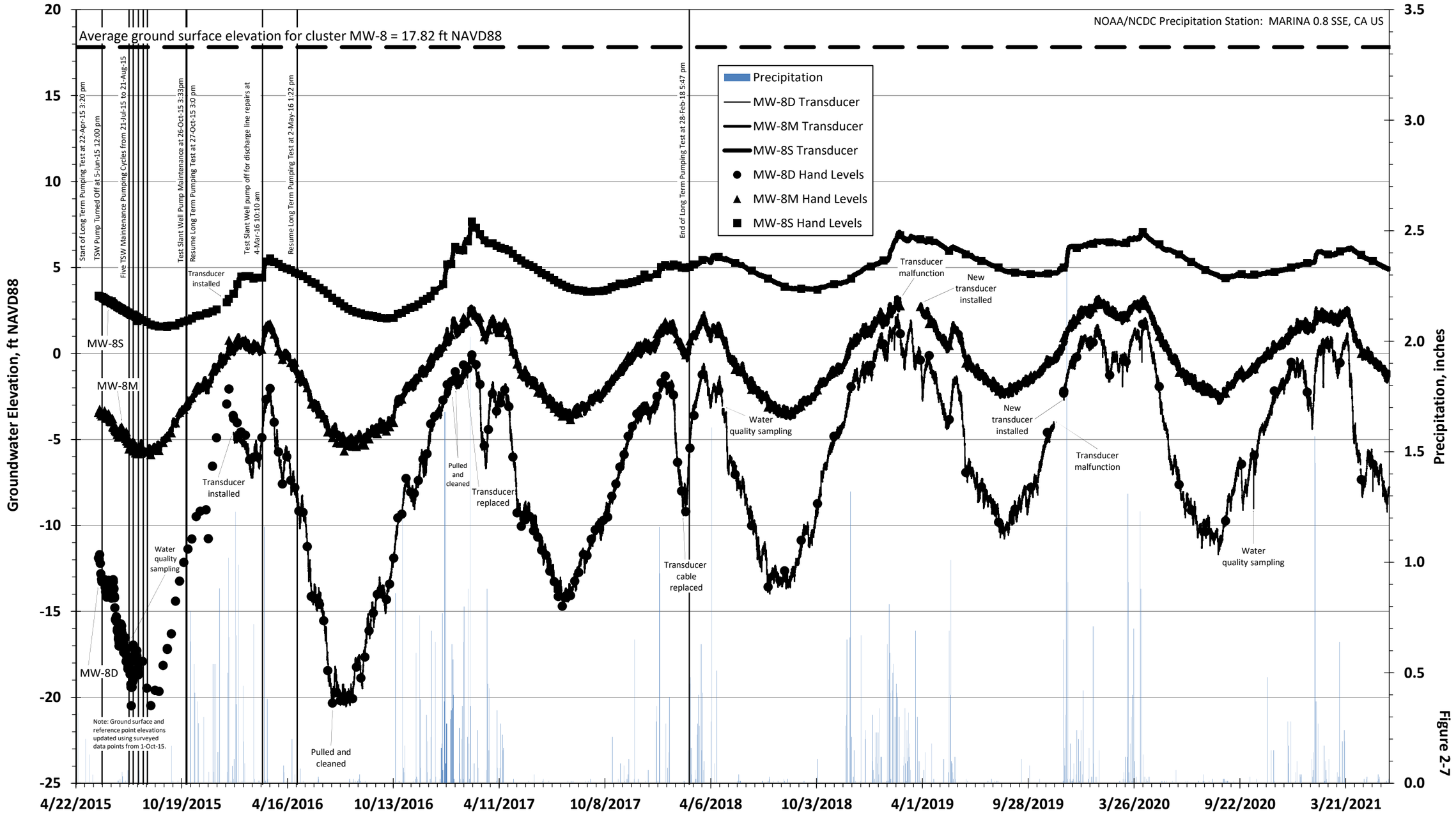


Figure 2-7

Groundwater Elevation in MPWSP MW-9

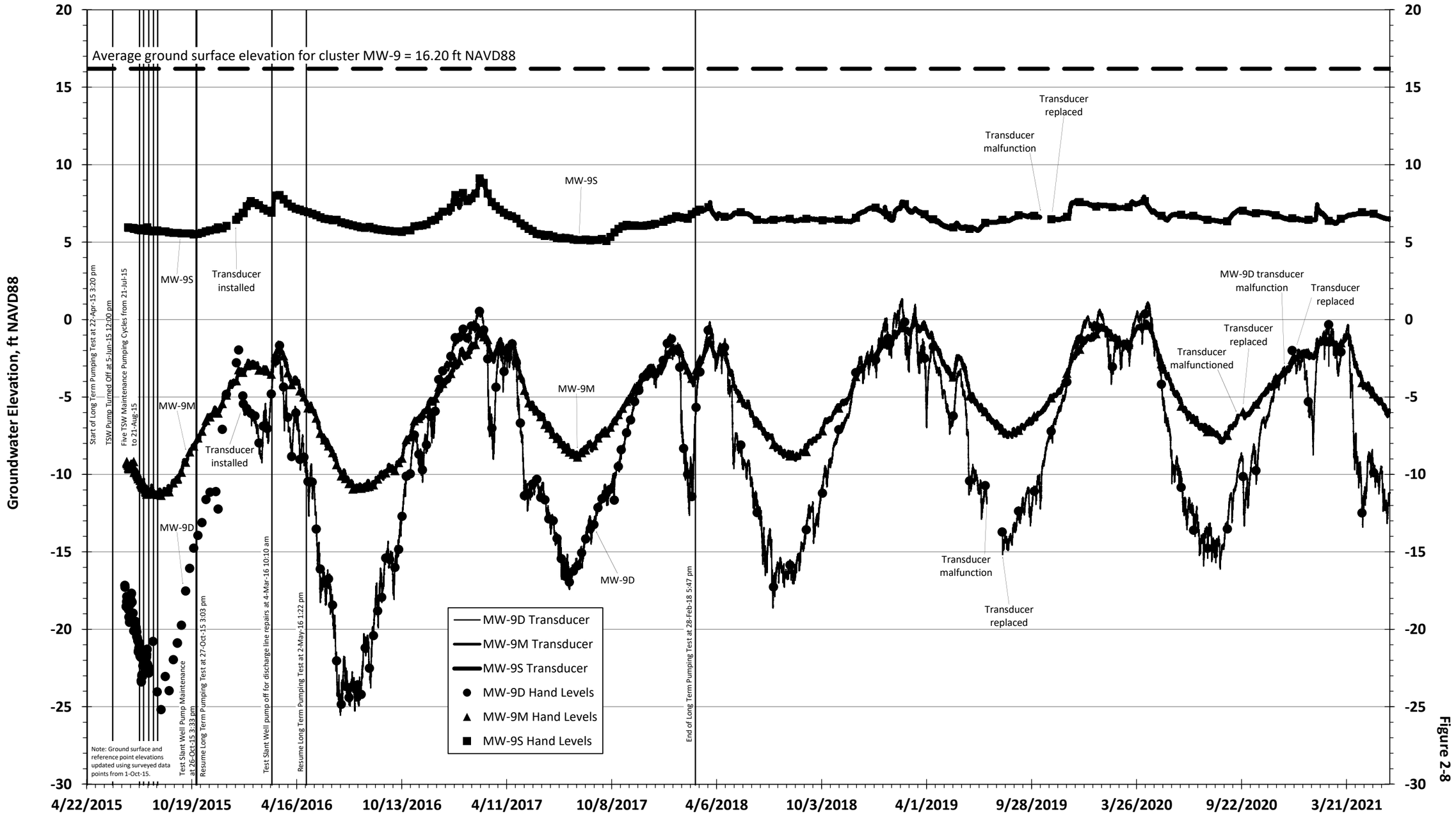
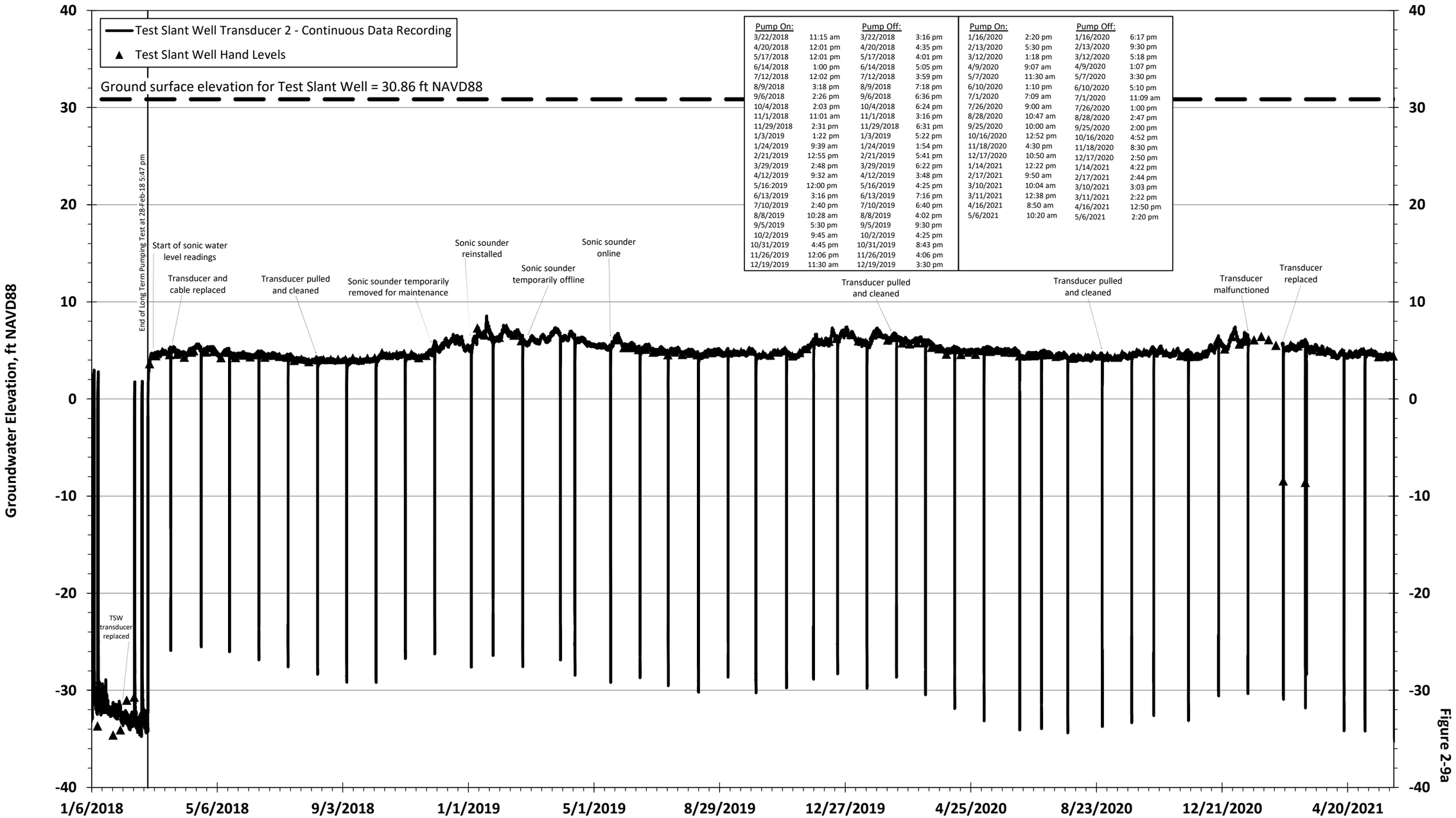


Figure 2-8

Groundwater Elevation in MPWSP Test Slant Well

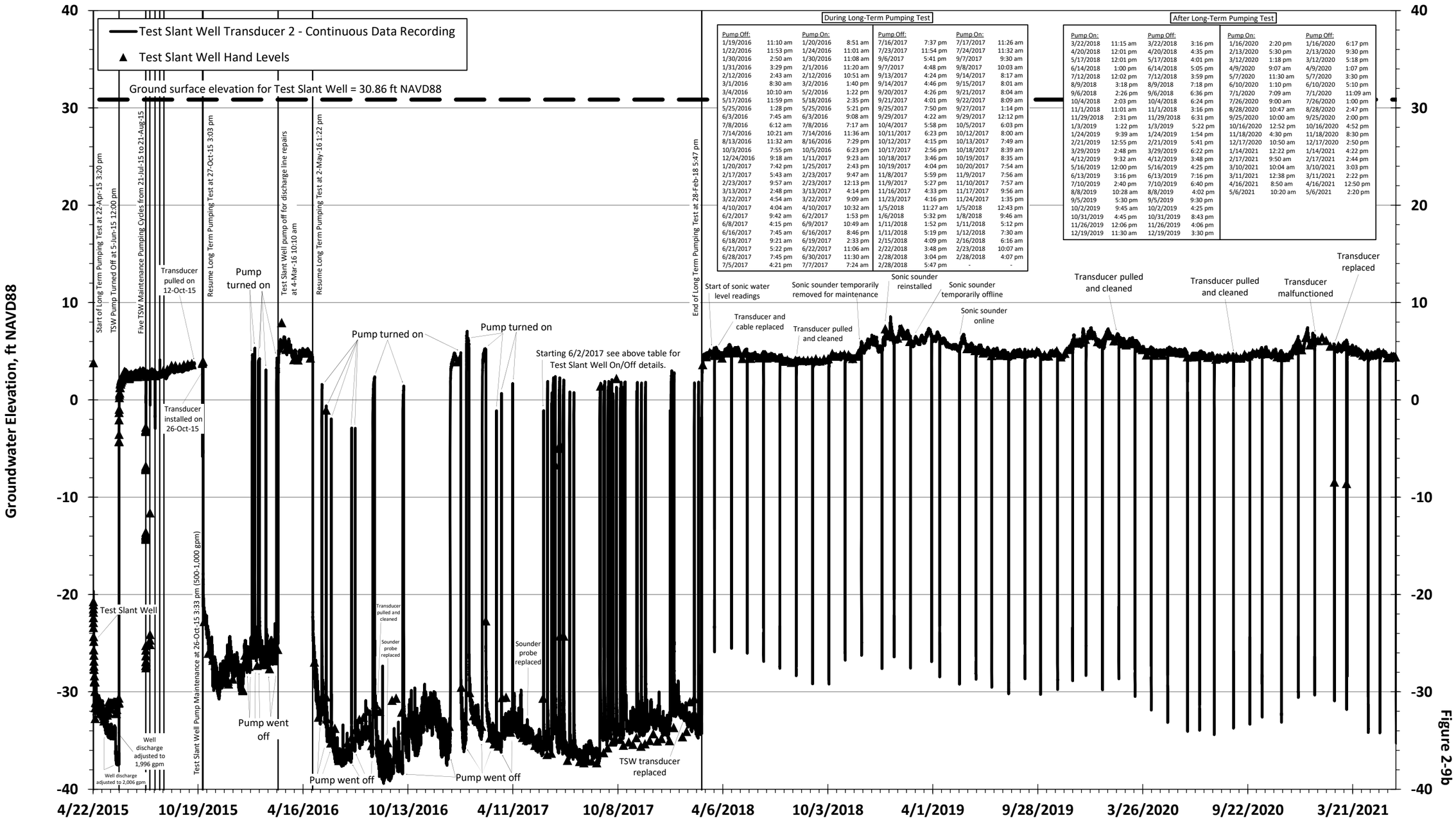


Pump On:		Pump Off:	
3/22/2018	11:15 am	3/22/2018	3:16 pm
4/20/2018	12:01 pm	4/20/2018	4:35 pm
5/17/2018	12:01 pm	5/17/2018	4:01 pm
6/14/2018	1:00 pm	6/14/2018	5:05 pm
7/12/2018	12:02 pm	7/12/2018	3:59 pm
8/9/2018	3:18 pm	8/9/2018	7:18 pm
9/6/2018	2:26 pm	9/6/2018	6:36 pm
10/4/2018	2:03 pm	10/4/2018	6:24 pm
11/1/2018	11:01 am	11/1/2018	3:16 pm
11/29/2018	2:31 pm	11/29/2018	6:31 pm
1/3/2019	1:22 pm	1/3/2019	5:22 pm
1/24/2019	9:39 am	1/24/2019	1:54 pm
2/21/2019	12:55 pm	2/21/2019	5:41 pm
3/29/2019	2:48 pm	3/29/2019	6:22 pm
4/12/2019	9:32 am	4/12/2019	3:48 pm
5/16:2019	12:00 pm	5/16/2019	4:25 pm
6/13/2019	3:16 pm	6/13/2019	7:16 pm
7/10/2019	2:40 pm	7/10/2019	6:40 pm
8/8/2019	10:28 am	8/8/2019	4:02 pm
9/5/2019	5:30 pm	9/5/2019	9:30 pm
10/2/2019	9:45 am	10/2/2019	4:25 pm
10/31/2019	4:45 pm	10/31/2019	8:43 pm
11/26/2019	12:06 pm	11/26/2019	4:06 pm
12/19/2019	11:30 am	12/19/2019	3:30 pm

Pump On:		Pump Off:	
1/16/2020	2:20 pm	1/16/2020	6:17 pm
2/13/2020	5:30 pm	2/13/2020	9:30 pm
3/12/2020	1:18 pm	3/12/2020	5:18 pm
4/9/2020	9:07 am	4/9/2020	1:07 pm
5/7/2020	11:30 am	5/7/2020	3:30 pm
6/10/2020	1:10 pm	6/10/2020	5:10 pm
7/1/2020	7:09 am	7/1/2020	11:09 am
7/26/2020	9:00 am	7/26/2020	1:00 pm
8/28/2020	10:47 am	8/28/2020	2:47 pm
9/25/2020	10:00 am	9/25/2020	2:00 pm
10/16/2020	12:52 pm	10/16/2020	4:52 pm
11/18/2020	4:30 pm	11/18/2020	8:30 pm
12/17/2020	10:50 am	12/17/2020	2:50 pm
1/14/2021	12:22 pm	1/14/2021	4:22 pm
2/17/2021	9:50 am	2/17/2021	2:44 pm
3/10/2021	10:04 am	3/10/2021	3:03 pm
3/11/2021	12:38 pm	3/11/2021	2:22 pm
4/16/2021	8:50 am	4/16/2021	12:50 pm
5/6/2021	10:20 am	5/6/2021	2:20 pm

Figure 2-9a

Groundwater Elevation in MPWSP Test Slant Well During and After Long-Term Pumping Test



During Long-Term Pumping Test

Pump Off:		Pump On:	
1/19/2016	11:10 am	1/20/2016	8:51 am
1/22/2016	11:53 pm	1/24/2016	11:01 am
1/30/2016	2:50 am	1/30/2016	11:08 am
1/31/2016	3:29 pm	2/1/2016	11:20 am
2/12/2016	2:43 am	2/12/2016	10:51 am
3/1/2016	8:30 am	3/2/2016	1:40 pm
3/4/2016	10:10 am	5/2/2016	1:22 pm
5/17/2016	11:59 pm	5/18/2016	2:35 pm
5/25/2016	1:28 pm	5/25/2016	5:21 pm
6/3/2016	7:45 am	6/3/2016	9:08 am
7/8/2016	6:12 am	7/8/2016	7:17 am
7/14/2016	10:21 am	7/14/2016	11:36 am
8/13/2016	11:32 am	8/16/2016	7:29 pm
10/3/2016	7:55 pm	10/5/2016	6:23 pm
12/24/2016	9:18 am	1/11/2017	9:23 am
1/20/2017	7:42 pm	1/25/2017	2:43 pm
2/17/2017	5:43 am	2/23/2017	9:47 am
2/23/2017	9:57 am	2/23/2017	12:13 pm
3/13/2017	2:48 pm	3/13/2017	4:14 pm
3/22/2017	4:54 am	3/22/2017	9:09 am
4/10/2017	4:04 am	4/10/2017	10:32 am
6/2/2017	9:42 am	6/2/2017	1:53 pm
6/8/2017	4:15 pm	6/9/2017	10:49 am
6/16/2017	7:45 am	6/16/2017	8:46 pm
6/18/2017	9:21 am	6/19/2017	2:33 pm
6/21/2017	5:22 pm	6/22/2017	11:06 am
6/28/2017	7:45 pm	6/30/2017	11:30 am
7/5/2017	4:21 pm	7/7/2017	7:24 am
7/16/2017	7:37 pm	7/17/2017	11:26 am
7/23/2017	11:54 pm	7/24/2017	11:32 am
9/6/2017	5:41 pm	9/7/2017	9:30 am
9/7/2017	4:48 pm	9/8/2017	10:03 am
9/13/2017	4:24 pm	9/14/2017	8:17 am
9/14/2017	4:46 pm	9/15/2017	8:01 am
9/20/2017	4:26 pm	9/21/2017	8:04 am
9/21/2017	4:01 pm	9/22/2017	8:09 am
9/25/2017	7:50 pm	9/27/2017	1:14 pm
9/29/2017	4:22 am	9/29/2017	12:12 pm
10/4/2017	5:58 pm	10/5/2017	6:03 pm
10/11/2017	6:23 pm	10/12/2017	8:00 am
10/12/2017	4:15 pm	10/13/2017	7:49 am
10/17/2017	2:56 pm	10/18/2017	8:39 am
10/18/2017	3:46 pm	10/19/2017	8:35 am
10/19/2017	4:04 pm	10/20/2017	7:54 am
11/8/2017	5:59 pm	11/9/2017	7:56 am
11/9/2017	5:27 pm	11/10/2017	7:57 am
11/16/2017	4:33 pm	11/17/2017	9:56 am
11/23/2017	4:16 pm	11/24/2017	1:35 pm
1/5/2018	11:27 am	1/5/2018	12:43 pm
1/6/2018	5:32 pm	1/8/2018	9:46 am
1/11/2018	1:52 pm	1/11/2018	5:12 pm
1/11/2018	5:19 pm	1/12/2018	7:30 am
2/15/2018	4:09 pm	2/16/2018	6:16 am
2/22/2018	3:48 pm	2/23/2018	10:07 am
2/28/2018	3:04 pm	2/28/2018	4:07 pm
2/28/2018	5:47 pm	-	-

After Long-Term Pumping Test

Pump On:		Pump Off:		Pump On:		Pump Off:	
3/22/2018	11:15 am	3/22/2018	3:16 pm	1/16/2020	2:20 pm	1/16/2020	6:17 pm
4/20/2018	12:01 pm	4/20/2018	4:35 pm	2/13/2020	5:30 pm	2/13/2020	9:30 pm
5/17/2018	12:01 pm	5/17/2018	4:01 pm	3/12/2020	1:18 pm	3/12/2020	5:18 pm
6/14/2018	1:00 pm	6/14/2018	5:05 pm	4/9/2020	9:07 am	4/9/2020	1:07 pm
7/12/2018	12:02 pm	7/12/2018	3:59 pm	5/7/2020	11:30 am	5/7/2020	3:30 pm
8/9/2018	3:18 pm	8/9/2018	7:18 pm	6/10/2020	1:10 pm	6/10/2020	5:10 pm
9/6/2018	2:26 pm	9/6/2018	6:36 pm	7/1/2020	7:09 am	7/1/2020	11:09 am
10/4/2018	2:03 pm	10/4/2018	6:24 pm	7/26/2020	9:00 am	7/26/2020	1:00 pm
11/1/2018	11:01 am	11/1/2018	3:16 pm	8/28/2020	10:47 am	8/28/2020	2:47 pm
11/29/2018	2:31 pm	11/29/2018	6:31 pm	9/25/2020	10:00 am	9/25/2020	2:00 pm
1/3/2019	1:22 pm	1/3/2019	5:22 pm	10/16/2020	12:52 pm	10/16/2020	4:52 pm
1/24/2019	9:39 am	1/24/2019	1:54 pm	11/18/2020	4:30 pm	11/18/2020	8:30 pm
2/21/2019	12:55 pm	2/21/2019	5:41 pm	12/17/2020	10:50 am	12/17/2020	2:50 pm
3/29/2019	2:48 pm	3/29/2019	6:22 pm	1/14/2021	12:22 pm	1/14/2021	4:22 pm
4/12/2019	9:32 am	4/12/2019	3:48 pm	2/17/2021	9:50 am	2/17/2021	2:44 pm
5/16/2019	12:00 pm	5/16/2019	4:25 pm	3/10/2021	10:04 am	3/10/2021	3:03 pm
6/13/2019	3:16 pm	6/13/2019	7:16 pm	3/11/2021	12:38 pm	3/11/2021	2:22 pm
7/10/2019	2:40 pm	7/10/2019	6:40 pm	4/16/2021	8:50 am	4/16/2021	12:50 pm
8/8/2019	10:28 am	8/8/2019	4:02 pm	5/6/2021	10:20 am	5/6/2021	2:20 pm
9/5/2019	5:30 pm	9/5/2019	9:30 pm				
10/2/2019	9:45 am	10/2/2019	4:25 pm				
10/31/2019	4:45 pm	10/31/2019	8:43 pm				
11/26/2019	12:06 pm	11/26/2019	4:06 pm				
12/19/2019	11:30 am	12/19/2019	3:30 pm				

Figure 2-9b

Specific Conductivity in MPWSP MW-1

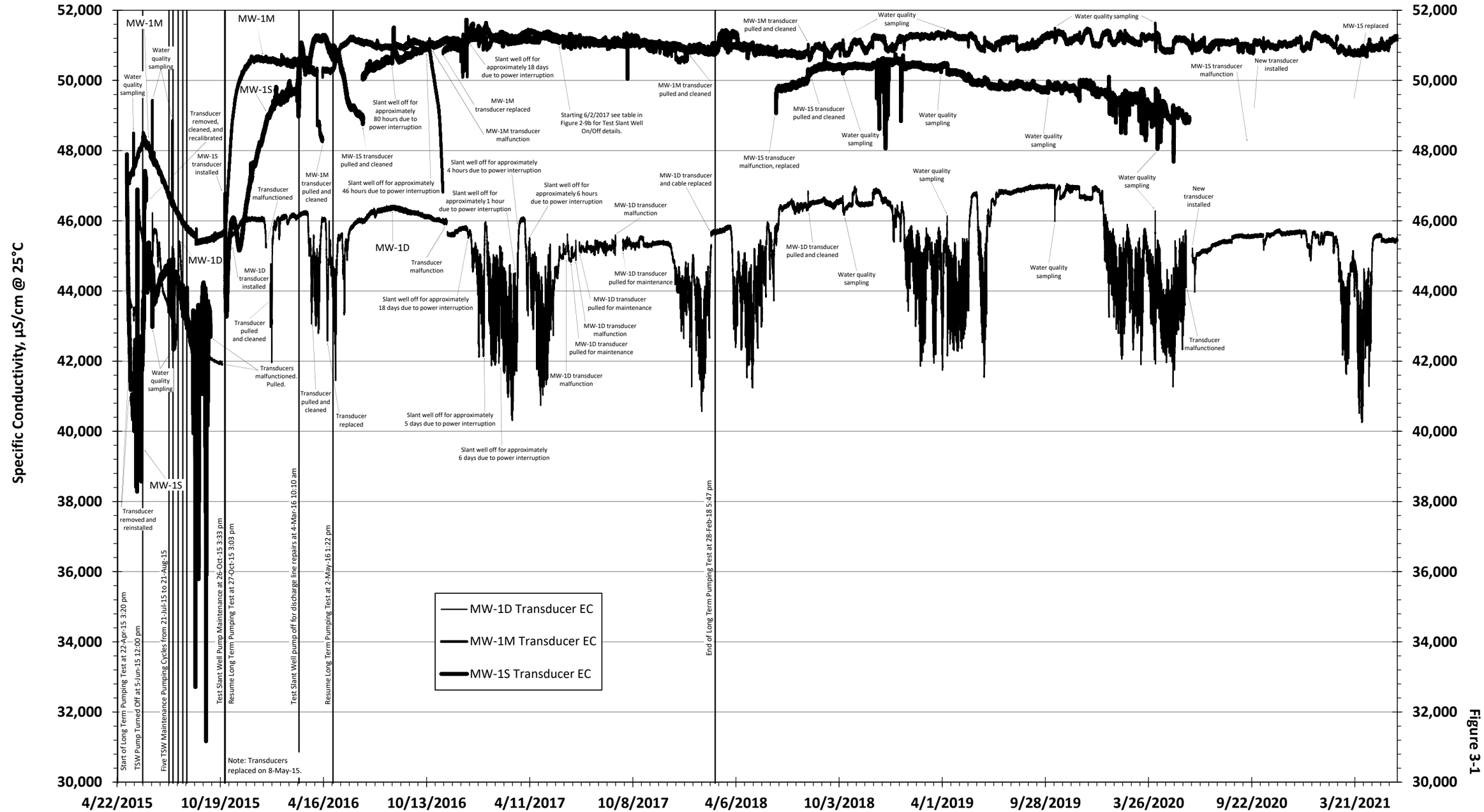


Figure 3-1

Specific Conductivity in MPWSP MW-3

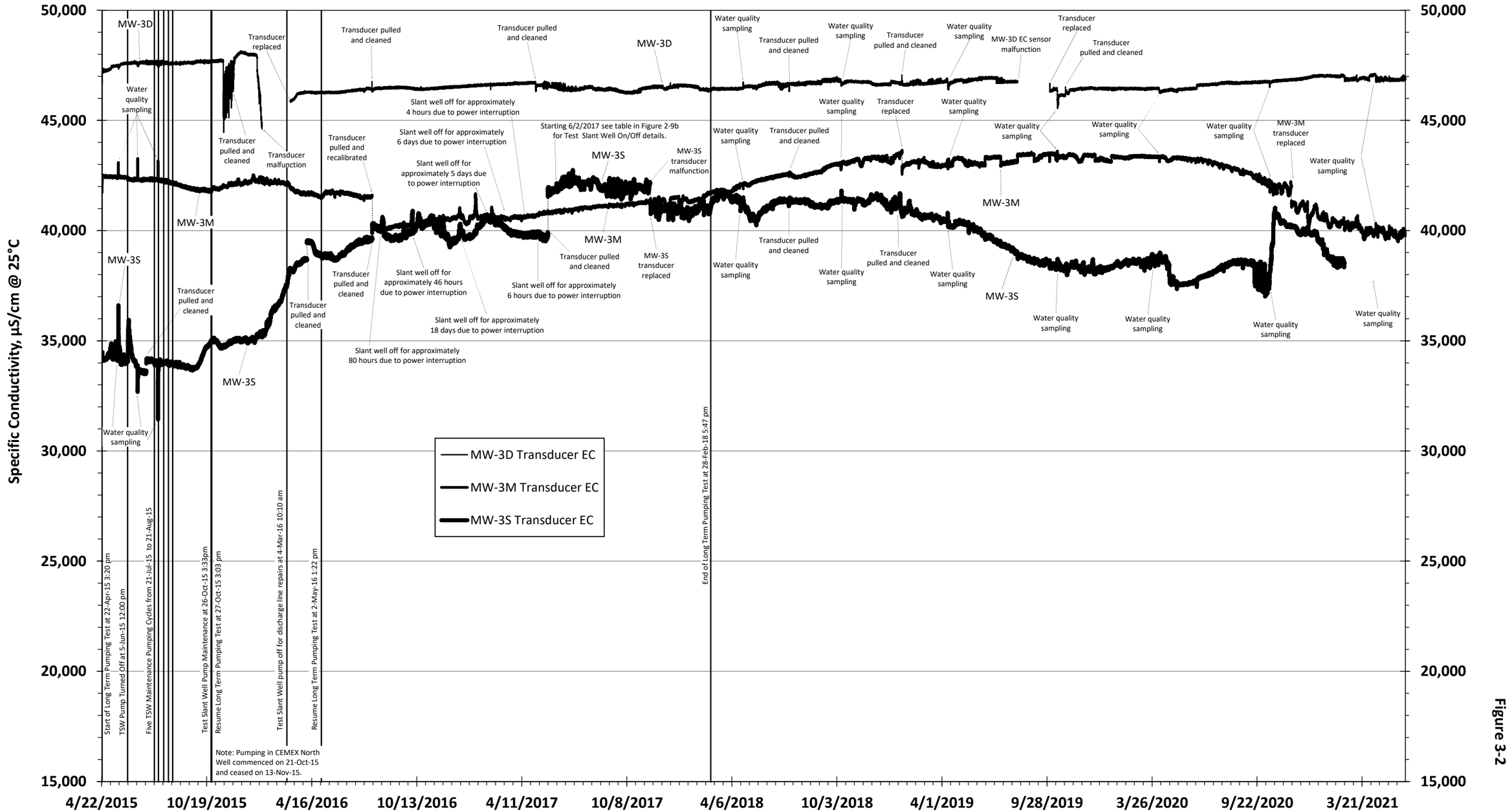
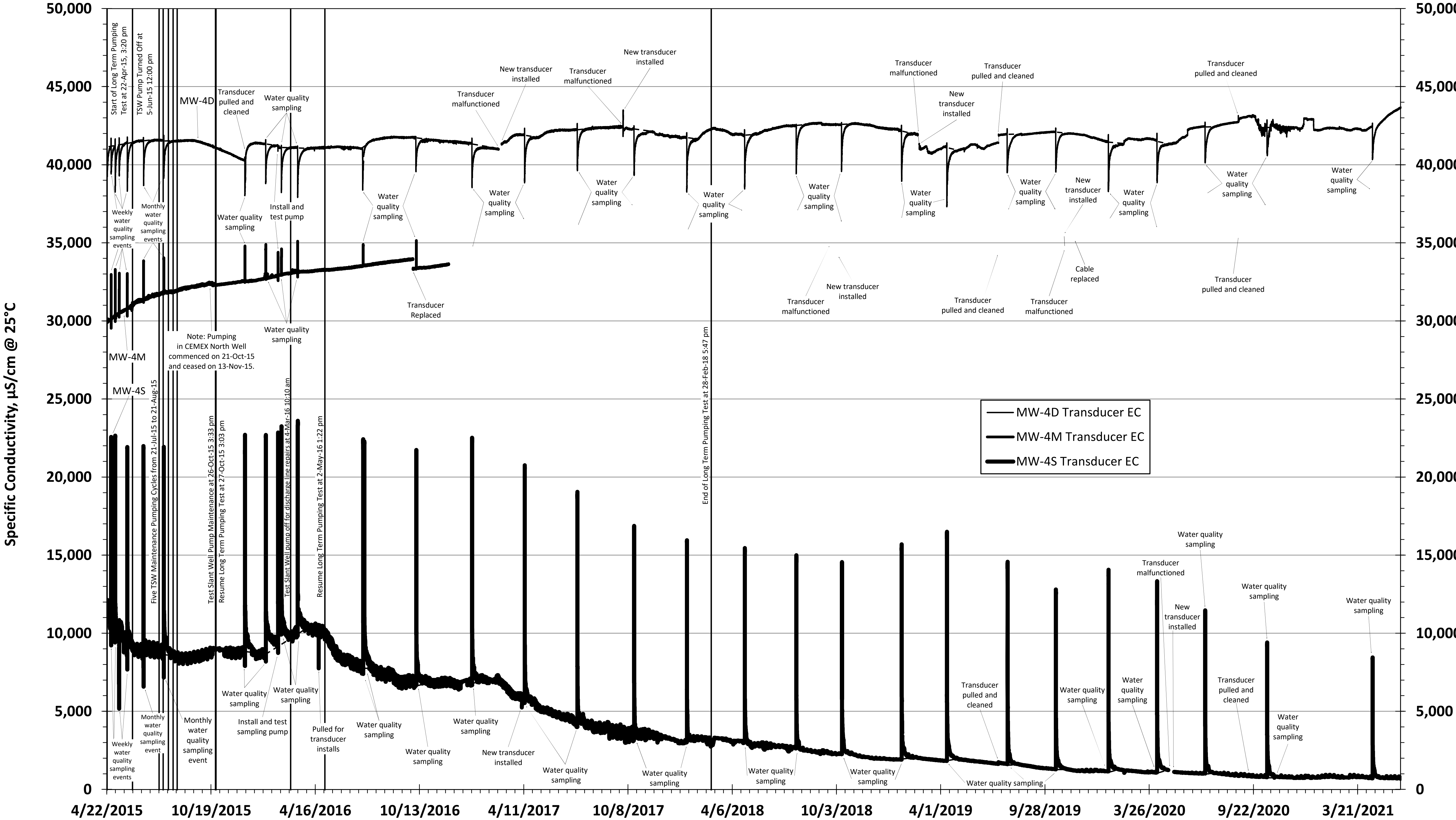


Figure 3-2

Specific Conductivity in MPWSP MW-4



Specific Conductivity in MPWSP MW-5

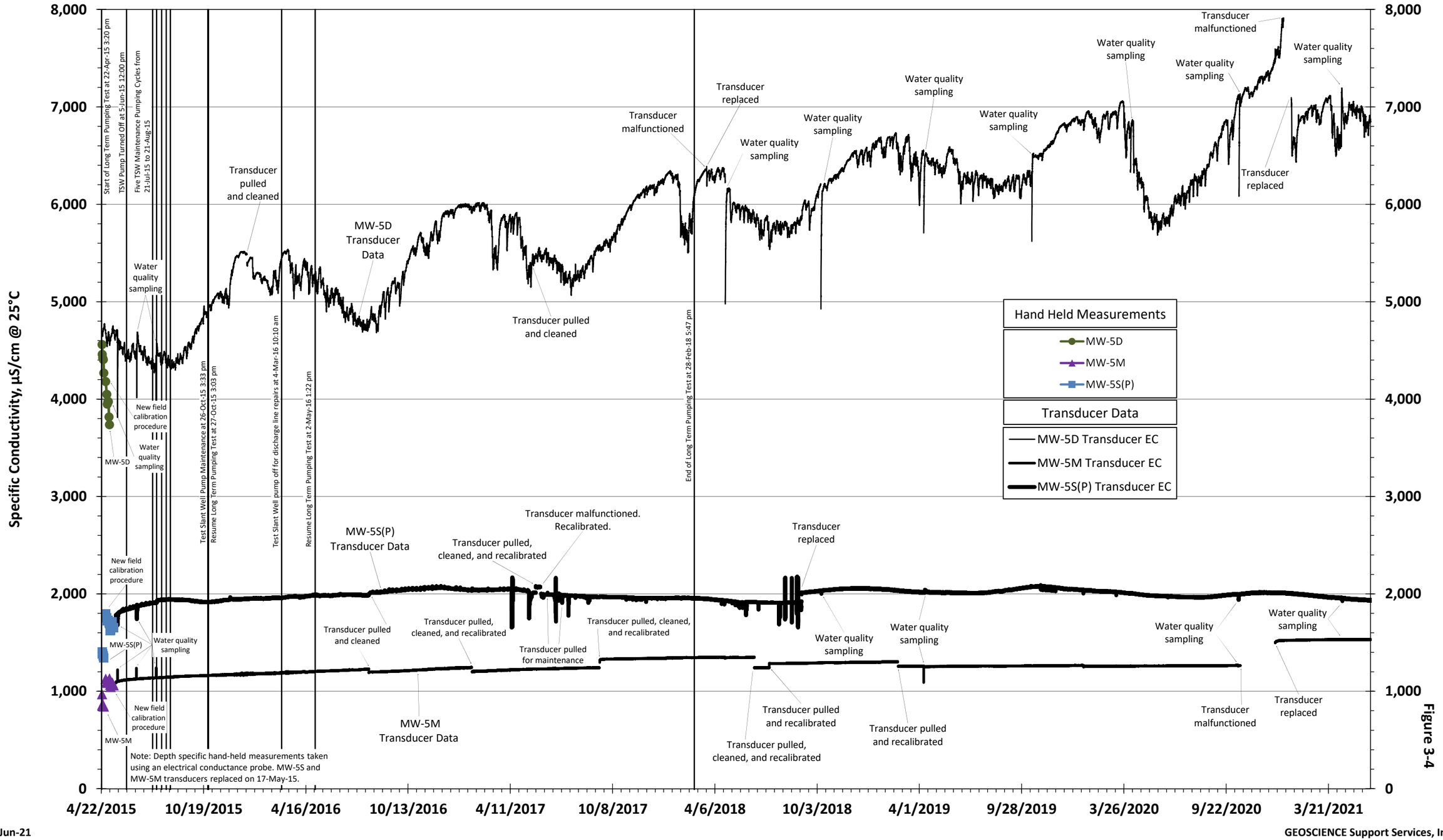


Figure 3-4

Specific Conductivity in MPWSP MW-6

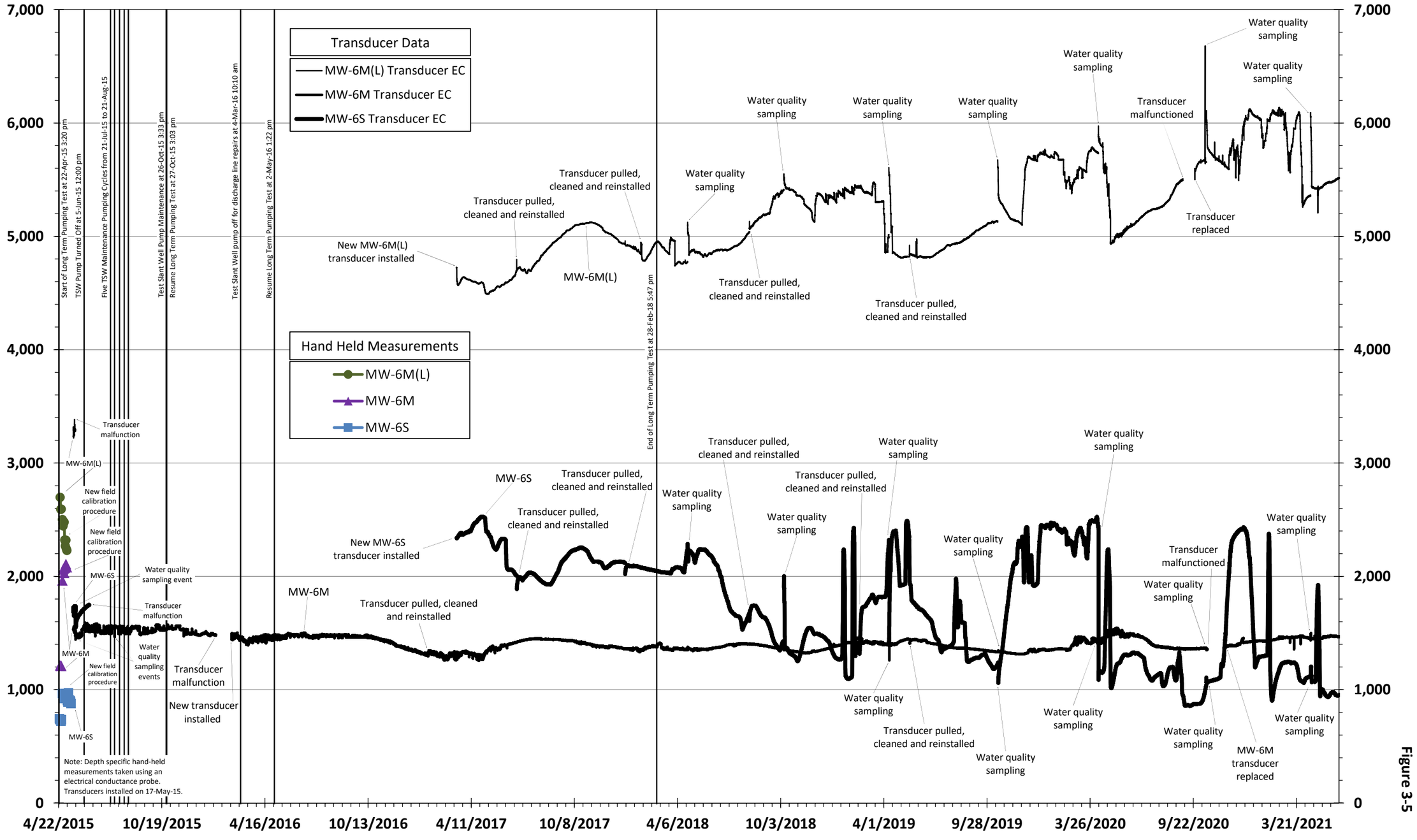


Figure 3-5

Specific Conductivity in MPWSP MW-7

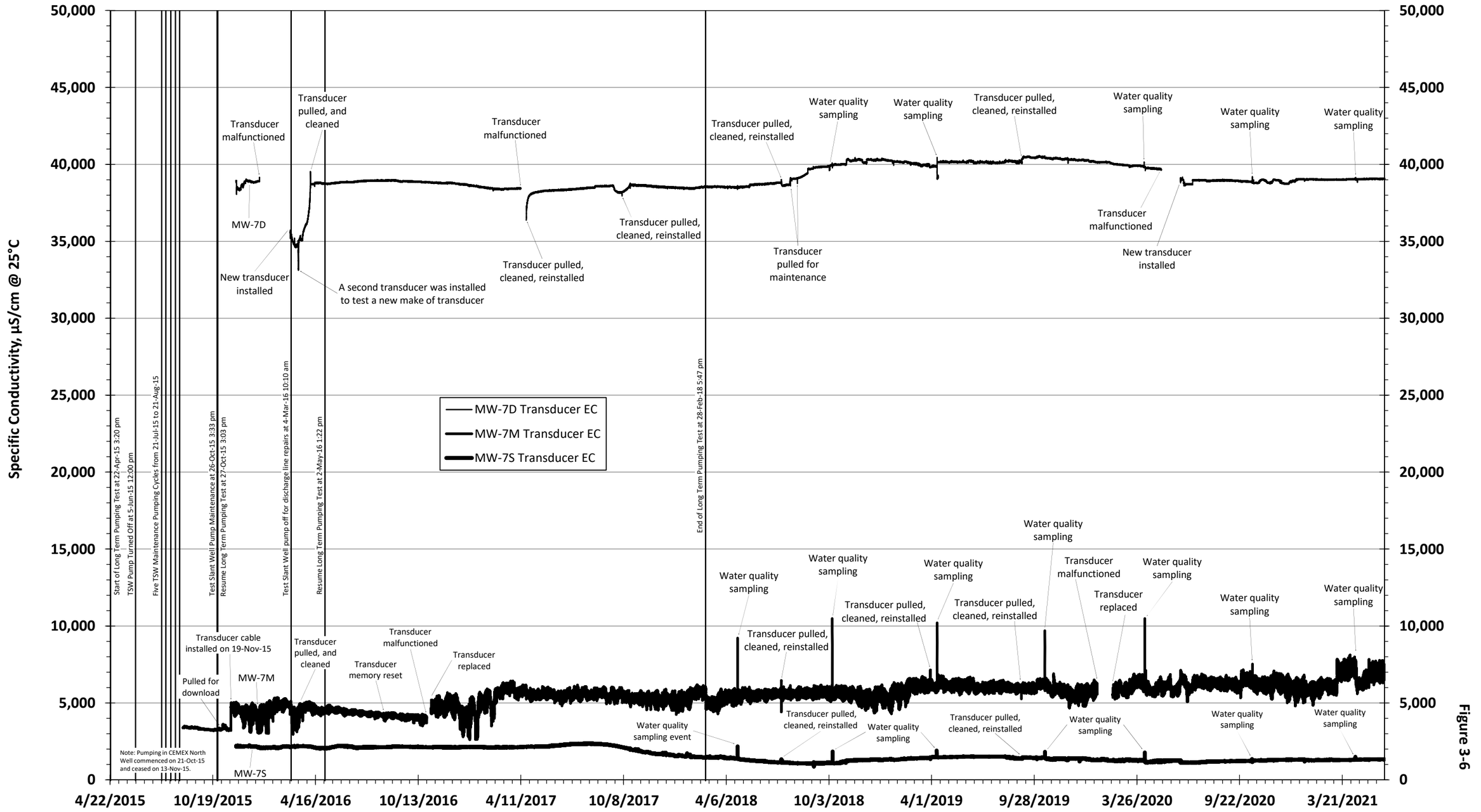


Figure 3-6

Specific Conductivity in MPWSP MW-8

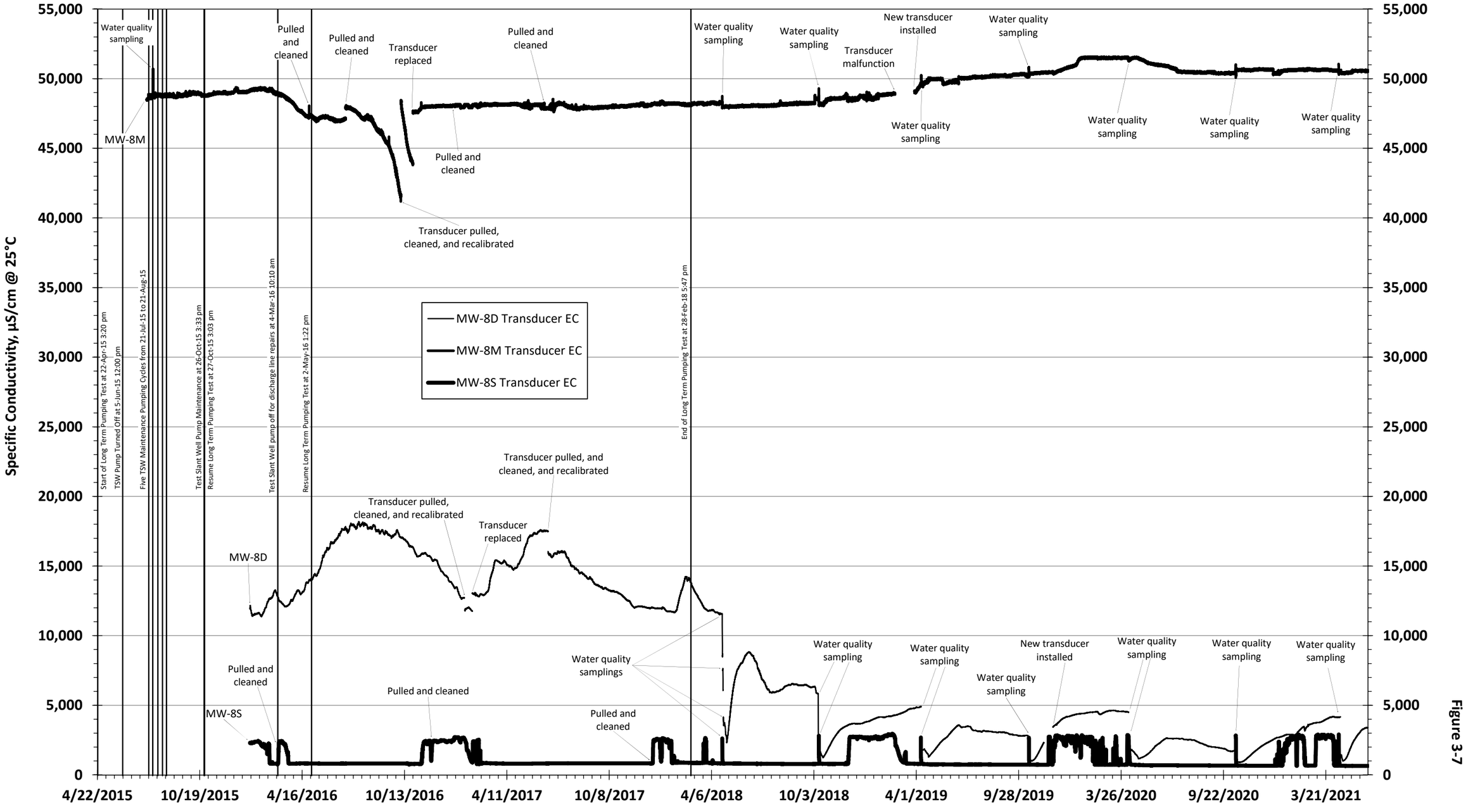


Figure 3-7

Specific Conductivity in MPWSP MW-9

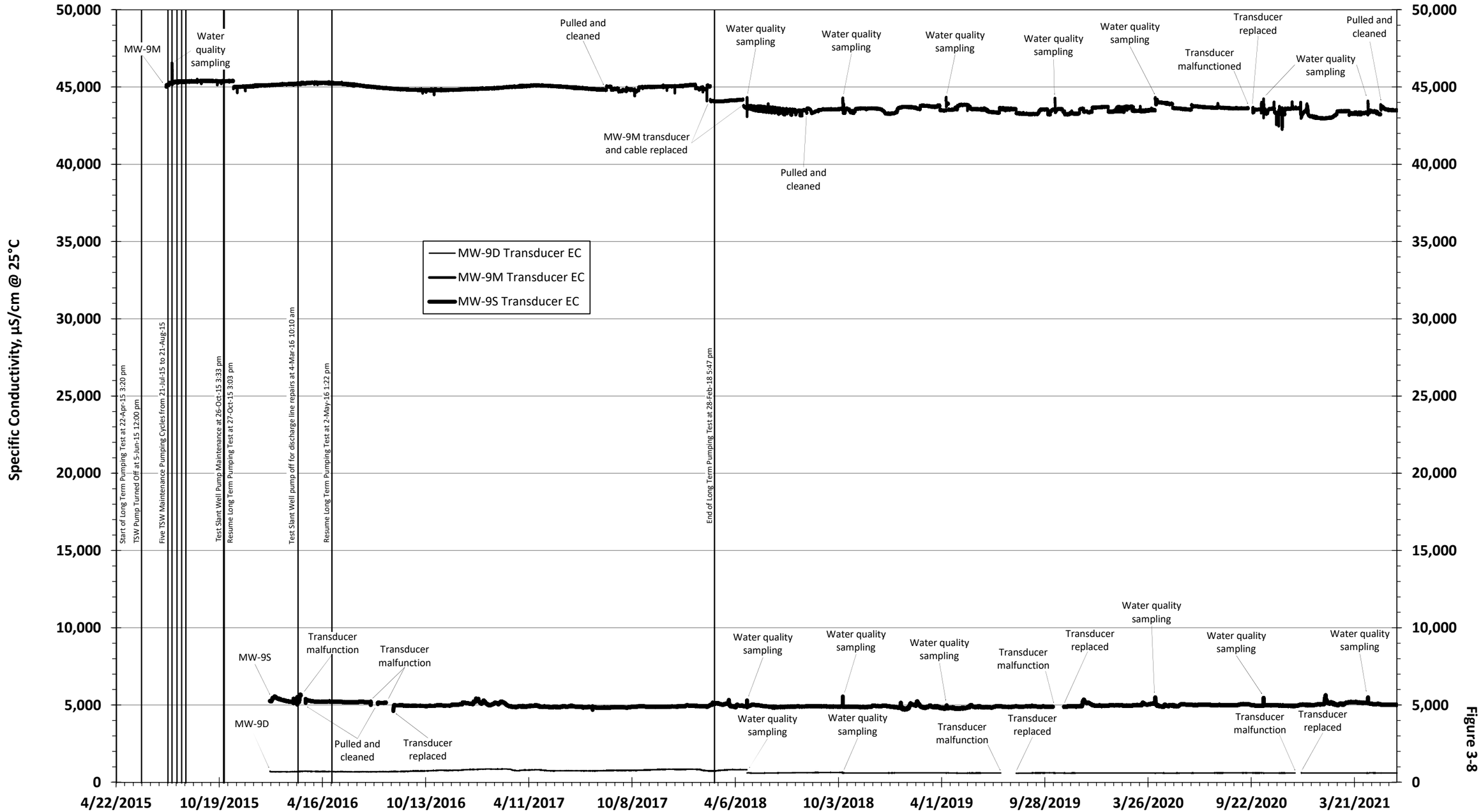
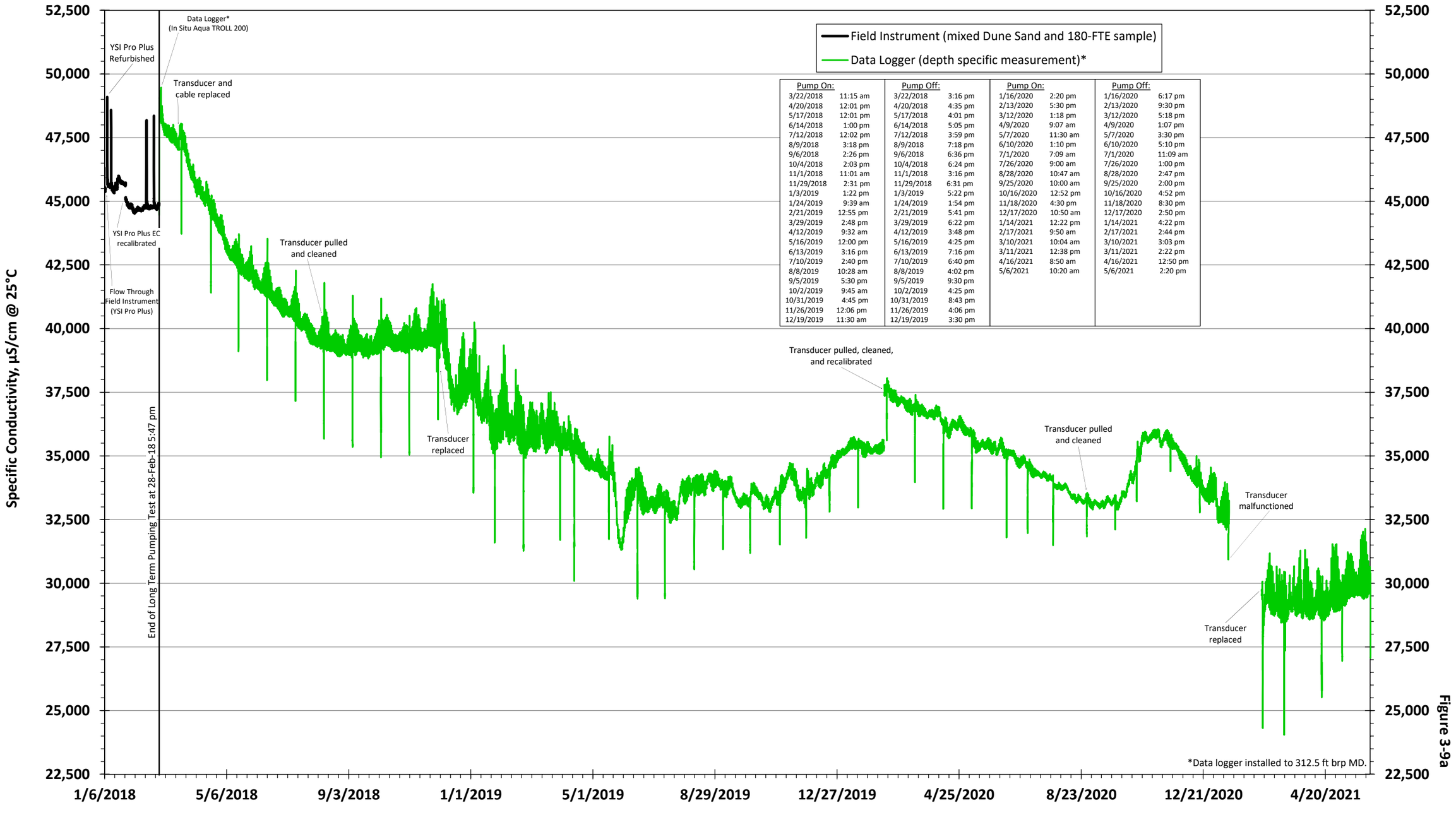


Figure 3-8

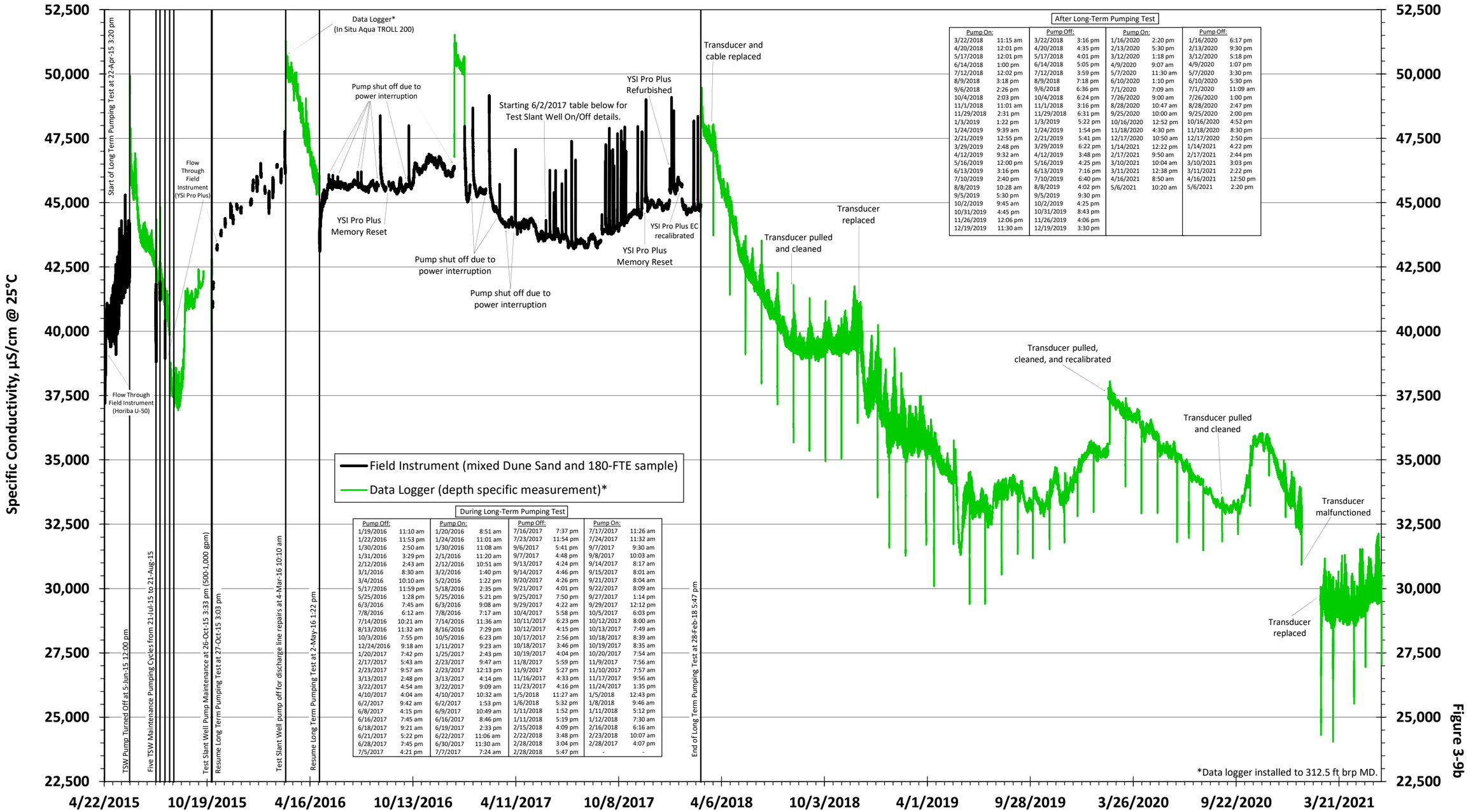
Specific Conductivity in MPWSP Test Slant Well



Pump On:		Pump Off:		Pump On:		Pump Off:	
3/22/2018	11:15 am	3/22/2018	3:16 pm	1/16/2020	2:20 pm	1/16/2020	6:17 pm
4/20/2018	12:01 pm	4/20/2018	4:35 pm	2/13/2020	5:30 pm	2/13/2020	9:30 pm
5/17/2018	12:01 pm	5/17/2018	4:01 pm	3/12/2020	1:18 pm	3/12/2020	5:18 pm
6/14/2018	1:00 pm	6/14/2018	5:05 pm	4/9/2020	9:07 am	4/9/2020	1:07 pm
7/12/2018	12:02 pm	7/12/2018	3:59 pm	5/7/2020	11:30 am	5/7/2020	3:30 pm
8/9/2018	3:18 pm	8/9/2018	7:18 pm	6/10/2020	1:10 pm	6/10/2020	5:10 pm
9/6/2018	2:26 pm	9/6/2018	6:36 pm	7/1/2020	7:09 am	7/1/2020	11:09 am
10/4/2018	2:03 pm	10/4/2018	6:24 pm	7/26/2020	9:00 am	7/26/2020	1:00 pm
11/1/2018	11:01 am	11/1/2018	3:16 pm	8/28/2020	10:47 am	8/28/2020	2:47 pm
11/29/2018	2:31 pm	11/29/2018	6:31 pm	9/25/2020	10:00 am	9/25/2020	2:00 pm
1/3/2019	1:22 pm	1/3/2019	5:22 pm	10/16/2020	12:52 pm	10/16/2020	4:52 pm
1/24/2019	9:39 am	1/24/2019	1:54 pm	11/18/2020	4:30 pm	11/18/2020	8:30 pm
2/21/2019	12:55 pm	2/21/2019	5:41 pm	12/17/2020	10:50 am	12/17/2020	2:50 pm
3/29/2019	2:48 pm	3/29/2019	6:22 pm	1/14/2021	12:22 pm	1/14/2021	4:22 pm
4/12/2019	9:32 am	4/12/2019	3:48 pm	2/17/2021	9:50 am	2/17/2021	2:44 pm
5/16/2019	12:00 pm	5/16/2019	4:25 pm	3/10/2021	10:04 am	3/10/2021	3:03 pm
6/13/2019	3:16 pm	6/13/2019	7:16 pm	3/11/2021	12:38 pm	3/11/2021	2:22 pm
7/10/2019	2:40 pm	7/10/2019	6:40 pm	4/16/2021	8:50 am	4/16/2021	12:50 pm
8/8/2019	10:28 am	8/8/2019	4:02 pm	5/6/2021	10:20 am	5/6/2021	2:20 pm
9/5/2019	5:30 pm	9/5/2019	9:30 pm				
10/2/2019	9:45 am	10/2/2019	4:25 pm				
10/31/2019	4:45 pm	10/31/2019	8:43 pm				
11/26/2019	12:06 pm	11/26/2019	4:06 pm				
12/19/2019	11:30 am	12/19/2019	3:30 pm				

Figure 3-9a

Specific Conductivity in MPWSP Test Slant Well During and After Long-Term Pumping Test



After Long-Term Pumping Test

Pump On:		Pump Off:		Pump On:		Pump Off:	
3/22/2018	11:15 am	3/22/2018	3:16 pm	1/16/2020	2:20 pm	1/16/2020	6:17 pm
4/20/2018	12:01 pm	4/20/2018	4:35 pm	2/13/2020	5:30 pm	2/13/2020	9:30 pm
5/17/2018	12:01 pm	5/17/2018	4:01 pm	3/12/2020	1:18 pm	3/12/2020	5:18 pm
6/14/2018	1:00 pm	6/14/2018	5:05 pm	4/9/2020	9:07 am	4/9/2020	1:07 pm
7/12/2018	12:02 pm	7/12/2018	3:59 pm	5/7/2020	11:30 am	5/7/2020	3:30 pm
8/9/2018	3:18 pm	8/9/2018	7:18 pm	6/10/2020	1:10 pm	6/10/2020	5:30 pm
9/6/2018	2:26 pm	9/6/2018	6:36 pm	7/1/2020	7:09 am	7/1/2020	11:09 am
10/4/2018	2:03 pm	10/4/2018	6:24 pm	7/26/2020	9:00 am	7/26/2020	1:00 pm
11/1/2018	11:01 am	11/1/2018	3:16 pm	8/28/2020	10:47 am	8/28/2020	2:47 pm
11/29/2018	2:31 pm	11/29/2018	6:31 pm	9/25/2020	10:00 am	9/25/2020	2:00 pm
1/3/2019	1:22 pm	1/3/2019	5:22 pm	10/16/2020	12:52 pm	10/16/2020	4:52 pm
1/24/2019	9:39 am	1/24/2019	1:54 pm	11/18/2020	4:30 pm	11/18/2020	8:30 pm
2/21/2019	12:55 pm	2/21/2019	5:41 pm	12/17/2020	10:50 am	12/17/2020	2:50 pm
3/29/2019	2:48 pm	3/29/2019	6:22 pm	1/14/2021	12:22 pm	1/14/2021	4:22 pm
4/12/2019	9:32 am	4/12/2019	3:48 pm	2/17/2021	9:50 am	2/17/2021	2:44 pm
5/16/2019	12:00 pm	5/16/2019	4:25 pm	3/10/2021	10:04 am	3/10/2021	3:03 pm
6/13/2019	3:16 pm	6/13/2019	7:16 pm	3/11/2021	12:38 pm	3/11/2021	2:22 pm
7/10/2019	2:40 pm	7/10/2019	6:40 pm	4/16/2021	8:50 am	4/16/2021	12:50 pm
8/8/2019	10:28 am	8/8/2019	4:02 pm	5/6/2021	10:20 am	5/6/2021	2:20 pm
9/5/2019	5:30 pm	9/5/2019	9:30 pm				
10/2/2019	9:45 am	10/2/2019	4:25 pm				
10/31/2019	4:45 pm	10/31/2019	8:43 pm				
11/26/2019	12:06 pm	11/26/2019	4:06 pm				
12/19/2019	11:30 am	12/19/2019	3:30 pm				

During Long-Term Pumping Test

Pump Off:		Pump On:		Pump Off:		Pump On:	
1/19/2016	11:10 am	1/20/2016	8:51 am	7/16/2017	7:37 pm	7/17/2017	11:26 am
1/22/2016	11:53 pm	1/24/2016	11:01 am	7/23/2017	11:54 pm	7/24/2017	11:32 am
1/30/2016	2:50 am	1/30/2016	11:08 am	9/6/2017	5:41 pm	9/7/2017	9:30 am
1/31/2016	3:29 pm	2/1/2016	11:20 am	9/7/2017	4:48 pm	9/8/2017	10:03 am
2/12/2016	2:43 am	2/12/2016	10:51 am	9/13/2017	4:24 pm	9/14/2017	8:17 am
3/1/2016	8:30 am	3/2/2016	1:40 pm	9/14/2017	4:46 pm	9/15/2017	8:01 am
3/4/2016	10:10 am	5/2/2016	1:22 pm	9/20/2017	4:26 pm	9/21/2017	8:04 am
5/17/2016	11:59 pm	5/18/2016	2:35 pm	9/21/2017	4:01 pm	9/22/2017	8:09 am
5/25/2016	1:28 pm	5/25/2016	5:21 pm	9/25/2017	7:50 pm	9/27/2017	1:14 pm
6/3/2016	7:45 am	6/3/2016	9:08 am	9/29/2017	4:22 am	9/29/2017	12:12 pm
7/8/2016	6:12 am	7/8/2016	7:17 am	10/4/2017	5:58 pm	10/5/2017	6:03 pm
7/14/2016	10:21 am	7/14/2016	11:36 am	10/11/2017	6:23 pm	10/12/2017	8:00 am
8/13/2016	11:32 am	8/16/2016	7:29 pm	10/12/2017	4:15 pm	10/13/2017	7:49 am
10/3/2016	7:55 pm	10/5/2016	6:23 pm	10/17/2017	2:56 pm	10/18/2017	8:39 am
12/24/2016	9:18 am	1/11/2017	9:23 am	10/18/2017	3:46 pm	10/19/2017	8:35 am
1/20/2017	7:42 pm	1/25/2017	2:43 pm	10/19/2017	4:04 pm	10/20/2017	7:54 am
2/17/2017	5:43 am	2/23/2017	9:47 am	11/8/2017	5:59 pm	11/9/2017	7:56 am
2/23/2017	9:57 am	2/23/2017	12:13 pm	11/9/2017	5:27 pm	11/10/2017	7:57 am
3/13/2017	2:48 pm	3/13/2017	4:14 pm	11/16/2017	4:33 pm	11/17/2017	9:56 am
3/22/2017	4:54 am	3/22/2017	9:09 am	11/23/2017	4:16 pm	11/24/2017	1:35 pm
4/10/2017	4:04 am	4/10/2017	10:32 am	1/5/2018	11:27 am	1/5/2018	12:43 pm
6/2/2017	9:42 am	6/2/2017	1:53 pm	1/6/2018	5:32 pm	1/8/2018	9:46 am
6/8/2017	4:15 pm	6/9/2017	10:49 am	1/11/2018	1:52 pm	1/11/2018	5:12 pm
6/16/2017	7:45 am	6/16/2017	8:46 pm	1/11/2018	5:19 pm	1/12/2018	7:30 am
6/18/2017	9:21 am	6/19/2017	2:33 pm	2/15/2018	4:09 pm	2/16/2018	6:16 am
6/21/2017	5:22 pm	6/22/2017	11:06 am	2/22/2018	3:48 pm	2/23/2018	10:07 am
6/28/2017	7:45 pm	6/30/2017	11:30 am	2/28/2018	3:04 pm	2/28/2017	4:07 pm
7/5/2017	4:21 pm	7/7/2017	7:24 am	2/28/2018	5:47 pm	-	-

Figure 3-9b

TABLES

GEOSCIENCE

Table 1: Well Information Table

			State Plane Coordinates										
Well Name	Cluster	Reference Point (RP)	Northing	Easting	RP Elevation ft NAVD88	RP Height (ft above GS)	Distance of RP from Slant Well Head (ft)	Top of Screen Interval (ft below GS)	Bottom of Screen Interval (ft below GS)	Transducer Installed Depth (ft below RP)	Survey Date	Data Logging Start Date	Data Collected
MW-1S	MW-1	Top of ABS Transducer Mount	2,154,745.35	5,739,355.82	30.51 [1]	2.65 [1]	211	55	95	76	26-Mar-15	19-Feb-15	Level, Conductivity
MW-1M	MW-1	Top of ABS Transducer Mount	2,154,751.93	5,739,347.94	29.86	2.48	220	115	225	182	26-Mar-15	19-Feb-15	Level, Conductivity
MW-1D	MW-1	Top of ABS Transducer Mount	2,154,753.60	5,739,337.98	29.68 [1]	2.65 [1]	230	277	327	309	26-Mar-15	19-Feb-15	Level, Conductivity
MW-3S	MW-3	Top of ABS Transducer Mount	2,154,599.85	5,739,977.02	37.16	2.66	428	50	90	76	26-Mar-15	4-Mar-15	Level, Conductivity
MW-3M	MW-3	Top of ABS Transducer Mount	2,154,592.96	5,739,988.54	37.35	2.73	441	105	215	182	26-Mar-15	4-Mar-15	Level, Conductivity
MW-3D	MW-3	Top of ABS Transducer Mount	2,154,589.81	5,739,998.68	36.93	2.74	451	285	330	321	26-Mar-15	4-Mar-15	Level, Conductivity
MW-4S	MW-4	Top of ABS Transducer Mount	2,154,170.90	5,741,427.62	41.96	2.26	1,940	60	100	66	26-Mar-15	9-Mar-15	Level, Conductivity
MW-4M	MW-4	Top of ABS Transducer Mount	2,154,172.79	5,741,416.78	41.99	2.15	1,929	130	260	208	26-Mar-15	9-Mar-15	Level, Conductivity
MW-4D	MW-4	Top of ABS Transducer Mount	2,154,174.30	5,741,406.08	41.95	2.15	1,918	290	330	317	26-Mar-15	20-Feb-15	Level, Conductivity
MW-5S(P)	MW-5	Top of ABS Transducer Mount	2,156,239.19	5,748,566.86	80.25 [1]	2.20 [1]	9,135	43	83	71	26-Mar-15	10-Mar-15	Level, Conductivity
MW-5M	MW-5	Top of ABS Transducer Mount	2,156,230.38	5,748,564.26	80.48 [1]	2.31 [1]	9,131	100	310	171	26-Mar-15	10-Mar-15	Level, Conductivity
MW-5D	MW-5	Top of ABS Transducer Mount	2,156,220.77	5,748,560.95	80.06	1.97	9,126	395	435	417	26-Mar-15	19-Feb-15	Level, Conductivity
MW-6S	MW-6	Top of ABS Transducer Mount	2,141,142.87	5,756,164.01	35.89	2.45 [1]	21,436	30	60	54	1-Oct-15	22-Apr-15	Level, Conductivity
MW-6M	MW-6	Top of ABS Transducer Mount	2,141,138.40	5,756,154.35	35.68	2.44 [1]	21,431	150	210	184	1-Oct-15	22-Apr-15	Level, Conductivity
MW-6M(L)	MW-6	Top of ABS Transducer Mount	2,141,133.06	5,756,144.94	35.82	2.42 [1]	21,427	255	325	315	1-Oct-15	22-Apr-15	Level, Conductivity
MW-7S	MW-7	Top of ABS Transducer Mount	2,152,099.25	5,744,148.10	50.64	2.06	5,274	60	80	72	1-Oct-15	13-Aug-15	Level, Conductivity
MW-7M	MW-7	Top of ABS Transducer Mount	2,152,110.46	5,744,146.08	50.29	2.09	5,266	130	220	187	1-Oct-15	13-Aug-15	Level, Conductivity
MW-7D	MW-7	Top of ABS Transducer Mount	2,152,120.50	5,744,144.38	50.24	2.24	5,260	295	345	322	1-Oct-15	13-Aug-15	Level, Conductivity
MW-8S	MW-8	Top of ABS Transducer Mount	2,159,440.33	5,744,871.52	19.96	2.14 [3]	7,116	40	80	61	1-Oct-15	30-May-15	Level, Conductivity
MW-8M	MW-8	Top of ABS Transducer Mount	2,159,430.86	5,744,866.05	19.99	2.17 [2]	7,106	125	215	181	1-Oct-15	30-May-15	Level, Conductivity
MW-8D	MW-8	Top of ABS Transducer Mount	2,159,421.47	5,744,861.04	20.08	2.10 [3]	7,096	300	350	326	1-Oct-15	30-May-15	Level, Conductivity
MW-9S	MW-9	Top of ABS Transducer Mount	2,162,010.77	5,747,345.03	18.42	2.16 [3]	10,677	30	110	71	1-Oct-15	1-Jul-15	Level, Conductivity
MW-9M	MW-9	Top of ABS Transducer Mount	2,162,016.58	5,747,353.64	18.32	2.13 [2]	10,687	145	225	182	1-Oct-15	29-Jun-15	Level, Conductivity
MW-9D	MW-9	Top of ABS Transducer Mount	2,162,022.89	5,747,362.25	18.32	2.15 [3]	10,697	353	393	377	1-Oct-15	26-Jun-15	Level, Conductivity
Well No. 1 [4]	MRWPCA	Well Cover	2,151,622.14	5,750,015.59	114 ft amsl (GS)	1.60	10,898	260	340	299	-	19-Feb-15	Level, Conductivity
Well No. 2 [4]	MRWPCA	Well Cover	2,151,550.18	5,749,987.41	115 ft amsl (GS)	1.65	10,892	260	340	319	-	19-Feb-15	Level, Conductivity
CEMEX Dredge Pond	CEMEX	Top of ABS Transducer Mount	2,155,912.41	5,739,497.26	14.14	8.92*	1,212	-	-	-	26-Mar-15	8-Mar-15	Level, Conductivity
Test Slant Well	CEMEX	Near Ground Surface	2,154,702.56	5,739,561.92	30.86	0	0	46**	231**	305MD	26-Mar-15	1-Apr-15	Level, Conductivity
CEMEX North Well	CEMEX	Well Cover	2,154,284.48	5,741,032.07	39.20	0.25	1,529	244	481	150	1-Oct-15	1-Apr-15	Level, Conductivity
CEMEX South Well [4]	CEMEX	Ground Surface	2,154,213.90	5,740,998.57	31 ft amsl (GS)	0	1,518	400	506	-	-	-	-

Horizontal Datum: NAD83 State Plane Zone 4
Vertical Datum: NAVD88
* RP height above pond water level 5.22 ft NAVD88 (8-11 am 26-Mar-15)
** Top of 18 in. screen = 140 ft x Sin(19) = 46 ft TVD, Bottom of 14 in. screen = 710 x Sin(19) = 231 ft TVD

[1] RP/elevation change on May 17, 2015 - New caps
[2] RP/elevation change on July 17, 2015 - New caps
[3] RP/elevation change on September 24, 2015 - New caps
[4] Estimated - not surveyed.

MD: Measured Depth - lineal feet along the angle of the slant well
GS: Ground Surface - approximate ground surface elevation based on Google Earth

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

		Sample Collection Date:	8-Apr-15	29-Apr-15	6-May-15	13-May-15	20-May-15	27-May-15	3-Jun-15	28-Oct-15	12-Nov-15	19-Nov-15
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	117	-	121	120	121	118	124	-	-	117
Aluminum, Total	EPA 200.8	µg/L	ND	-	70	ND	ND	321	ND	-	-	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	-	ND	ND	ND	ND	ND	ND	-	ND
Arsenic, Total [1]	EPA 200.8	µg/L	33	-	31	31	38	38	37	-	-	38
Arsenic, Total	EPA 1640	µg/L	-	-	-	-	-	-	-	-	-	-
Barium, Dissolved	EPA 200.8	µg/L	95	-	106	106	100	110	87	-	-	88
Bicarbonate (as HCO3-)	SM2320B	mg/L	143	-	148	146	148	144	151	-	-	143
Boron, Dissolved	EPA 200.7	mg/L	2.6	-	2.51	3.10	2.88	2.71	2.86	-	-	3.37
Bromide, Dissolved	EPA 300.0	mg/L	37.0	-	45	45	48.7	48	47.4	-	-	53.6
Calcium	EPA 200.7	mg/L	349	-	621	606	607	587	598	-	-	541
Calcium, Dissolved	EPA 200.7	mg/L	371	-	581	660	595	584	583	-	-	551
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	ND	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	-	ND	ND	ND	ND	ND	-	-	ND
Chloride, Dissolved	EPA 300.0	mg/L	13,830	-	14,476	14,344	15,724	15,721	15,869	-	-	14,186
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	ND	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	4	-	4	ND	ND	ND	ND	6	-	4
Copper	EPA 200.7	µg/L	-	-	-	-	-	ND	ND	-	-	ND
Copper, Total	EPA 200.8	µg/L	44	-	75	74	40	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	ND	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	ND	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	ND	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	431.33	-	453.50	451.38	491.70	491.97	496.41	-	-	447.47
Total Anions	Calculation	Meq/L	431.33	-	453.50	451.38	491.70	491.97	496.41	-	-	447.47
Dissolved Cations	Calculation	Meq/L	455.09	-	435.45	479.03	508.91	458.32	460.38	-	-	494.88
Total Cations	Calculation	Meq/L	430.99	-	477.91	445.16	524.66	458.67	465.32	-	-	483.86
Fluoride, Dissolved	EPA 300.0	mg/L	0.2	-	0.7	ND	ND	0.7	ND	-	-	0.8
Hardness (as CaCO3)	SM2340B/Calc	mg/L	4,751	-	5,879	5,796	6,066	5,748	5,924	-	-	5,798
Hydroxide	SM2320B	mg/L	ND	-	ND	ND	ND	ND	ND	-	-	ND
Iodide	EPA 9056M	µg/L	ND	-	ND	ND	ND	ND	ND	-	-	ND
Iron	EPA 200.7	µg/L	69	-	99	ND	ND	ND	ND	-	-	ND
Iron, Dissolved	EPA 200.7	µg/L	65	-	ND	ND	ND	ND	ND	-	-	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	-	ND	ND	ND	ND	ND	-	-	ND
Lead, Total	EPA 200.8	µg/L	ND	-	ND	ND	ND	ND	ND	-	-	ND
Lithium	EPA 200.8	µg/L	152	-	169	144	165	250	212	-	-	106
Magnesium	EPA 200.7	mg/L	942	-	1,050	1,040	1,100	1,040	1,080	-	-	1,080
Magnesium, Dissolved	EPA 200.7	mg/L	989	-	970	1,110	1,080	1,040	1,060	-	-	1,110
Manganese, Dissolved	EPA 200.7	µg/L	26	-	ND	ND	ND	ND	ND	-	-	ND
Manganese, Total	EPA 200.7	µg/L	26	-	ND	ND	ND	ND	ND	-	-	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	-	ND	ND	ND	ND	ND	-	-	ND
Nitrate as N	EPA 300.0	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate as NO3	EPA 300.0	mg/L	5	-	7	8	ND	6	8	-	-	6
Nitrate+Nitrite as N	EPA 300.0	mg/L	1.0	-	1.9	1.8	1.8	1.8	1.7	-	-	1.4
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	-	0.2	ND	ND	0.3	ND	-	-	ND
Odor Threshold at 60 C	SM2150B	TON	2	-	1	1	1	1	1	-	-	2
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.10	-	0.12	0.13	0.12	0.11	0.13	-	-	0.14
pH (Field Test)	SM4500-H+B	pH	7.03	6.86	6.84	6.85	6.94	6.91	6.94	7.01	7.05	7.04
pH (Laboratory)	SM4500-H+B	pH (H)	7.2	-	7.4	7.4	7.4	7.4	7.4	7.2	-	7.1
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	ND	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.09	-	0.10	0.13	0.13	0.07	0.14	-	-	0.10
Potassium	EPA 200.7	mg/L	203	-	212	209	231	220	226	-	-	256
Potassium, Dissolved	EPA 200.7	mg/L	213	-	185	230	227	219	220	-	-	263
QC Ratio TDS/SEC	Calculation	-	0.67	0.66	0.64	0.66	0.67	0.67	0.68	0.67	0.67	0.68
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	ND	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	-	-	-	-	-	-	-	-	-	-
Silica as SiO2, Dissolved	EPA 200.7	mg/L	20	-	16	22	19	17	20	-	-	19
Sodium	EPA 200.7	mg/L	7,606	-	8,163	7,448	9,148	7,774	7,835	-	-	8,309
Sodium, Dissolved	EPA 200.7	mg/L	8,040	-	7,400	8,020	8,840	7,770	7,780	-	-	8,490
Specific Conductance (E.C)	SM2510B	µmhos/cm	37,860	39,500	41,110	41,800	42,100	42,410	42,950	41,400	43,940	43,730
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	38,097	40,100	40,600	42,400	41,900	42,400	43,300	40,915	43,940	44,222
Strontium, Dissolved	EPA 200.8	µg/L	7,440	-	7,820	8,008	8,349	7,734	7,900	-	-	7,670
Sulfate, Dissolved	EPA 300.0	mg/L	1,840	-	2,018	2,096	2,160	2,181	2,188	-	-	1,973
Temperature (Field)	SM2550	° C	17.20	16.79	16.71	16.86	16.63	16.35	16.68	18.4	17.1	17.1
Total Diss. Solids	SM2540C	mg/L	25,400	26,000	26,300	27,600	28,400	28,500	29,100	27,700	29,400	29,800
Turbidity	EPA 180.1	NTU	0.40	-	0.30	0.30	0.25	0.25	0.15	0.5	-	0.30
Turbidity (Field)	EPA 180.1	NTU	0.74	0.84	0.69	0.76	0.30	0.29	0.353	0.59	0.98	0.61
Volatile Org. Compounds (524)	EPA 524	µg/L	ND	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	-	-	-	-	-	142	ND	-	-	ND
Zinc, Total	EPA 200.8	µg/L	ND	-	158	ND	209	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	ND	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	7.68	-	ND	12.2	0.766	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL). See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

		Sample Collection Date:	30-Nov-15	3-Dec-15	10-Dec-15	17-Dec-15	4-Jan-16	14-Jan-16	21-Jan-16	28-Jan-16	4-Feb-16	11-Feb-16
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	114	111	113	112	111	110	111	110	109	110
Aluminum, Total	EPA 200.8	µg/L	ND	ND	53	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	45	42	42	40	47	ND	48	50	46	42
Arsenic, Total	EPA 1640	µg/L	-	-	-	-	-	-	-	-	-	0.39
Barium, Dissolved	EPA 200.8	µg/L	81	88	82	78	78	74	82	74	69	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	139	135	138	137	135	134	135	134	133	134
Boron, Dissolved	EPA 200.7	mg/L	3.38	3.16	3.14	3.97	3.21	3.71	3.48	3.35	3.33	3.41
Bromide, Dissolved	EPA 300.0	mg/L	53	52.6	50.2	50.2	50.0	52.4	48.2	51.3	50.1	51.8
Calcium	EPA 200.7	mg/L	582	538	511	657	515	531	493	523	522	523
Calcium, Dissolved	EPA 200.7	mg/L	577	532	518	686	511	537	532	523	526	533
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	ND	-	-	-	-	-	-	ND	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	16,111	16,383	16,257	16,579	16,510	16,972	15,685	16,798	17,195	16,980
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	ND	-	-	-	-	-	-	ND	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	7	4	ND	ND	3	5	ND	ND	ND	5
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	ND	-	-	-	-	-	-	ND	-	-
Dioxin	EPA 1613	pg/L	ND	-	-	-	-	-	-	ND	-	-
Diquat (EPA 549)	EPA 549	µg/L	ND	-	-	-	-	-	-	ND	-	-
Dissolved Anions	Calculation	Meq/L	503.06	503.06	507.53	516.55	514.28	529.53	493.46	524.48	535.83	529.87
Total Anions	Calculation	Meq/L	503.06	510.47	507.53	516.55	514.28	529.53	493.46	524.48	535.83	529.87
Dissolved Cations	Calculation	Meq/L	526.37	498.07	506.84	484.86	457.70	533.96	514.92	523.20	521.97	537.19
Total Cations	Calculation	Meq/L	544.39	500.67	500.01	510.72	466.00	526.46	484.44	516.68	524.71	526.05
Fluoride, Dissolved	EPA 300.0	mg/L	0.8	0.8	ND	ND	ND	ND	ND	ND	ND	ND
Hardness (as CaCO3)	SM2340B/Calc	mg/L	6,383	5,890	5,756	6,710	5,651	5,938	5,909	5,918	5,940	5,972
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	96	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	126	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	135	131	142	149	133	160	129	128	117	170
Magnesium	EPA 200.7	mg/L	1,200	1,100	1,090	1,230	1,060	1,120	1,140	1,120	1,130	1,130
Magnesium, Dissolved	EPA 200.7	mg/L	1,170	1,090	1,100	1,310	1,050	1,150	1,190	1,130	1,130	1,150
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate as NO3	EPA 300.0	mg/L	6	6	2	9	8	8	8	8	8	8
Nitrate+Nitrite as N	EPA 300.0	mg/L	1.4	1.3	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	2	2	3	1	2	2	1	1	2	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.15	0.15	0.14	0.13	0.13	0.12	0.11	0.12	0.12	0.13
pH (Field Test)	SM4500-H+B	pH	7.06	8.14	7.10	7.08	7.11	7.07	7.08	7.06	7.04	7.05
pH (Laboratory)	SM4500-H+B	pH (H)	7.1	7.1	7.1	7.1	7.1	7.3	7.2	7.2	7.1	7.2
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	ND	-	-	-	-	-	-	ND	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.14	0.13	0.13	0.13	0.10	0.10	0.10	0.11	0.09	0.10
Potassium	EPA 200.7	mg/L	284	268	266	293	256	275	271	267	270	268
Potassium, Dissolved	EPA 200.7	mg/L	281	268.0	266	308	254	278	282	272	269	276
QC Ratio TDS/SEC	Calculation	-	0.68	0.69	0.68	0.67	0.66	0.69	0.67	0.67	0.67	0.69
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	ND	-	-	-	-	-	-	ND	-	-
Salinity	SM2520B	psu	-	-	-	-	-	-	-	-	-	-
Silica as SiO2, Dissolved	EPA 200.7	mg/L	18	16	16	20	16	20	17	15	14	14
Sodium	EPA 200.7	mg/L	9,410	8,654	8,691	8,488	7,966	9,213	8,255	9,002	9,167	9,198
Sodium, Dissolved	EPA 200.7	mg/L	9,060	8,620	8,820	7,700	7,800	9,320	8,810	9,130	9,100	9,400
Specific Conductance (E.C)	SM2510B	µmhos/cm	44,110	44,470	44,380	44,870	45,370	45,720	46,900	45,720	45,790	45,650
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	44,835	44,246	44,834	44,649	45,090	45,937	46,026	45,487	45,392	45,697
Strontium, Dissolved	EPA 200.8	µg/L	7,767	7,668	7,444	7,194	7,306	7,800	7,481	7,503	5,865	5,796
Sulfate, Dissolved	EPA 300.0	mg/L	2,187	2,177	2,204	2,202	2,188	2,294	2,307	2,288	2,297	2,300
Temperature (Field)	SM2550	° C	16.3	16.9	16.9	16.7	15.6	15.2	15.5	15.3	15.5	15.9
Total Diss. Solids	SM2540C	mg/L	29,800	30,900	30,200	30,200	30,100	31,700	31,400	30,600	30,500	31,400
Turbidity	EPA 180.1	NTU	0.30	0.15	0.40	0.25	0.30	0.35	0.30	0.10	0.15	0.25
Turbidity (Field)	EPA 180.1	NTU	1.15	0.64	0.67	0.36	0.31	0.37	0.09	0.11	0.64	0.35
Volatile Org. Compounds (524)	EPA 524	µg/L	ND	-	-	-	-	-	-	ND	-	-
Zinc	EPA 200.7	µg/L	ND	ND	204	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	ND	-	-	-	-	-	-	ND	-	-
Total PCB	EPA 1668C	pg/L	25.8	-	-	-	-	-	-	7.73	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL). See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

		Sample Collection Date:	18-Feb-16	25-Feb-16	3-Mar-16	3-May-16	12-May-16	19-May-16	26-May-16	2-Jun-16	9-Jun-16	16-Jun-16
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	110	110	110	108	110	114	112	111	110	112
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.28	0.30	0.28	0.32	0.26	0.24	0.29	0.28	0.27	0.30
Barium, Dissolved	EPA 200.8	µg/L	ND	71	75	ND	ND	74	ND	ND	62	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	134	134	134	132	134	139	137	135	134	137
Boron, Dissolved	EPA 200.7	mg/L	3.19	3.31	3.43	3.62	3.30	3.54	3.11	3.18	3.47	3.38
Bromide, Dissolved	EPA 300.0	mg/L	52.6	52.6	52.3	50.3	43.2	59.4	59.6	50.5	40.1	35.4
Calcium	EPA 200.7	mg/L	497	510	493	458	489	542	430	469	506	498
Calcium, Dissolved	EPA 200.7	mg/L	503	510	502	456	496	528	396	479	506	499
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	17,243	17,186	17,337	15,946	15,872	16,965	16,326	16,326	16,807	16,547
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	538.01	536.27	541.32	499.99	499.14	530.65	509.47	510.34	528.27	520.48
Total Anions	Calculation	Meq/L	538.01	536.27	541.32	499.99	499.14	530.65	509.47	510.34	528.27	520.48
Dissolved Cations	Calculation	Meq/L	522.84	541.86	557.28	520.85	514.63	529.51	491.98	515.26	496.63	479.25
Total Cations	Calculation	Meq/L	520.40	544.60	540.75	516.58	507.73	540.16	497.14	507.81	493.75	481.32
Fluoride, Dissolved	EPA 300.0	mg/L	ND	ND	1.1	1.0	ND	ND	ND	ND	ND	ND
Hardness (as CaCO3)	SM2340B/Calc	mg/L	5,870	6,112	5,901	5,739	5,776	6,316	5,492	5,656	5,822	5,732
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	4	ND	ND	5	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	154	164	166	153	149	145	164	159	177	132
Magnesium	EPA 200.7	mg/L	1,120	1,180	1,130	1,120	1,110	1,200	1,070	1,090	1,110	1,090
Magnesium, Dissolved	EPA 200.7	mg/L	1,120	1,170	1,180	1,120	1,120	1,180	1,040	1,100	1,110	1,090
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate as NO3	EPA 300.0	mg/L	8	8	8	6	6	3	ND	ND	1	ND
Nitrate+Nitrite as N	EPA 300.0	mg/L	1.8	1.8	1.8	1.4	1.3	0.7	ND	ND	0.2	ND
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.11	0.12	0.11	0.11	0.12	0.12	0.12	0.11	0.11	0.11
pH (Field Test)	SM4500-H+B	pH	7.11	7.12	7.14	7.25	7.10	7.07	7.16	7.04	7.17	7.07
pH (Laboratory)	SM4500-H+B	pH (H)	7.3	6.8	7.3	7.3	7.2	7.2	7.2	7.3	7.3	7.4
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.11	0.10	0.10	0.13	0.11	0.10	0.12	0.11	0.09	0.09
Potassium	EPA 200.7	mg/L	261	271	273	310	276	287	257	258	264	261
Potassium, Dissolved	EPA 200.7	mg/L	261	271	280	309	277	280	252	263	266	260
QC Ratio TDS/SEC	Calculation	-	0.67	0.67	0.69	0.68	0.68	0.70	0.70	0.68	0.69	0.68
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	-	-	-	28.8	29.1	29.4	29.6	29.7	29.7	29.3
Silica as SiO2, Dissolved	EPA 200.7	mg/L	12	12	14	ND	13	10	12	13	17	16
Sodium	EPA 200.7	mg/L	9,121	9,543	9,401	9,049	8,849	9,357	8,760	8,922	8,515	8,278
Sodium, Dissolved	EPA 200.7	mg/L	9,170	9,480	9,680	9,150	8,980	9,170	8,740	9,060	8,580	8,230
Specific Conductance (E.C)	SM2510B	µmhos/cm	45,560	46,190	46,380	44,530	45,030	45,430	45,730	45,880	45,800	45,340
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	46,403	46,259	46,381	44,112	45,258	45,810	45,693	45,759	45,762	45,685
Strontium, Dissolved	EPA 200.8	µg/L	7,671	7,823	7,910	7,601	7,910	7,976	7,515	7,735	7,600	7,377
Sulfate, Dissolved	EPA 300.0	mg/L	2,334	2,328	2,366	2,270	2,332	2,353	2,206	2,254	2,470	2,450
Temperature (Field)	SM2550	° C	15.1	15.0	15.0	15.1	15.4	15.5	15.4	15.6	15.8	15.9
Total Diss. Solids	SM2540C	mg/L	30,700	30,800	31,800	30,200	30,800	31,900	32,200	31,300	31,600	30,900
Turbidity	EPA 180.1	NTU	0.10	0.10	0.30	1.6	0.35	0.30	0.35	0.20	0.25	0.25
Turbidity (Field)	EPA 180.1	NTU	0.33	0.15	0.08	0.29	0.37	0.10	0.30	0.12	0.19	0.31
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL). See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

		Sample Collection Date:	23-Jun-16	30-Jun-16	7-Jul-16	15-Jul-16	21-Jul-16	28-Jul-16	4-Aug-16	10-Aug-16	18-Aug-16	25-Aug-16
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	113	114	113	114	113	114	115	114	113	116
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.33	0.30	0.27	0.27	0.28	0.18	0.27	0.23	0.22	0.24
Barium, Dissolved	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	138	139	138	139	138	139	140	139	138	142
Boron, Dissolved	EPA 200.7	mg/L	3.46	3.58	3.21	3.18	3.53	3.40	3.54	3.18	3.61	3.37
Bromide, Dissolved	EPA 300.0	mg/L	37.3	40.2	50.8	39.8	44.6	52.9	31.2	27.8	31.3	48.9
Calcium	EPA 200.7	mg/L	489	510	482	471	559	495	486	520	505	490
Calcium, Dissolved	EPA 200.7	mg/L	494	515	467	481	531	493	506	504	510	470
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	17,230	17,425	17,982	16,795	17,100	18,028	18,231	18,374	17,490	17,636
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	ND	ND	3	ND	ND	ND	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	536.91	541.24	558.08	524.21	532.46	563.12	564.83	568.56	545.43	546.73
Total Anions	Calculation	Meq/L	536.91	541.24	558.08	524.21	532.46	563.12	564.83	568.56	545.43	546.73
Dissolved Cations	Calculation	Meq/L	505.36	544.69	514.15	518.34	556.30	517.87	529.65	512.33	531.64	494.71
Total Cations	Calculation	Meq/L	495.32	523.17	511.63	499.31	583.22	514.08	509.12	523.03	528.35	527.38
Fluoride, Dissolved	EPA 300.0	mg/L	ND	1.2	ND	1	1.1	0.5	1.2	1.1	1.3	ND
Hardness (as CaCO3)	SM2340B/Calc	mg/L	5,907	6,009	5,799	5,611	6,531	5,918	5,785	6,038	6,310	5,671
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	145	162	128	142	150	135	145	142	152	162
Magnesium	EPA 200.7	mg/L	1,140	1,150	1,120	1,080	1,250	1,140	1,110	1,150	1,230	1,080
Magnesium, Dissolved	EPA 200.7	mg/L	1,150	1,160	1,100	1,090	1,200	1,140	1,160	1,150	1,200	1,010
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate as NO3	EPA 300.0	mg/L	3	3	3	3	3	4	3	3	3	2
Nitrate+Nitrite as N	EPA 300.0	mg/L	0.7	0.7	0.7	0.7	0.7	0.8	0.6	0.6	0.6	0.4
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.11	0.11	0.10	0.11	0.10	0.10	0.10	0.11	0.11	0.10
pH (Field Test)	SM4500-H+B	pH	7.17	7.11	7.14	7.65	7.10	7.10	7.15	7.15	7.08	7.05
pH (Laboratory)	SM4500-H+B	pH (H)	7.3	7.2	7.3	7.2	7.2	7.3	7.2	7.2	7.2	7.3
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.10	0.09	0.09	0.09	0.05	0.14	0.09	0.11	0.10	0.10
Potassium	EPA 200.7	mg/L	262	276	262	279	317	273	285	285	306	285
Potassium, Dissolved	EPA 200.7	mg/L	264	282.9	260.2	276	305	277.1	291	279	300	277
QC Ratio TDS/SEC	Calculation	-	0.69	0.65	0.68	0.66	0.68	0.69	0.69	0.68	0.67	0.67
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	29.3	29.4	29.7	29.3	29.1	29.1	28.6	29.4	29.8	29.2
Silica as SiO2, Dissolved	EPA 200.7	mg/L	10	16	14	12	14	9.0	12	14	12	11
Sodium	EPA 200.7	mg/L	8,515	9,104	8,936	8,731	10,215	8,933	8,879	9,084	9,060	9,351
Sodium, Dissolved	EPA 200.7	mg/L	8,720	9,570	9,050	9,140	9,730	9,020	9,230	8,860	9,190	8,760
Specific Conductance (E.C)	SM2510B	µmhos/cm	45,330	45,380	45,800	45,240	45,000	45,070	44,370	45,360	46,050	45,200
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	45,663	45,769	45,763	45,620	45,544	45,613	45,770	45,632	46,081	45,509
Strontium, Dissolved	EPA 200.8	µg/L	7,438	7,460	7,791	7,147	7,366	7,164	7,552	7,884	7,620	7,785
Sulfate, Dissolved	EPA 300.0	mg/L	2,309	2,250	2,299	2,286	2,267	2,476	2,296	2,282	2,370	2,221
Temperature (Field)	SM2550	° C	15.9	15.8	15.9	15.9	16.2	16.1	15.9	16.0	15.9	15.9
Total Diss. Solids	SM2540C	mg/L	31,300	29,700	31,000	29,800	30,700	30,900	30,800	30,800	30,800	30,200
Turbidity	EPA 180.1	NTU	0.15	0.30	0.20	.10	0.30	0.25	0.40	0.10	0.30	0.05
Turbidity (Field)	EPA 180.1	NTU	0.34	0.26	0.21	0.16	0.17	0.33	0.27	0.14	0.12	0.24
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
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TON = Threshold Odor Number
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ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL). See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

Sample Collection Date:			1-Sep-16	8-Sep-16	15-Sep-16	22-Sep-16	30-Sep-16	7-Oct-16	13-Oct-16	20-Oct-16	27-Oct-16	3-Nov-16
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	116	117	116	115	117	115	113	118	116	114
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.27	0.23	0.22	0.22	0.22	0.21	0.25	0.27	0.23	0.46
Barium, Dissolved	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	142	143	142	140	143	140	138	144	142	139
Boron, Dissolved	EPA 200.7	mg/L	3.20	3.23	3.20	3.17	3.41	3.36	3.40	3.34	3.33	3.19
Bromide, Dissolved	EPA 300.0	mg/L	56.4	51.8	47.2	54.0	50	50.0	50.4	50.9	51.2	50.6
Calcium	EPA 200.7	mg/L	461	461	460	494	492	508	510	471	493	488
Calcium, Dissolved	EPA 200.7	mg/L	467	457	454	488	495	458	473	472	492	488
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	16,683	16,820	15,643	16,179	16,705	16,568	16,897	17,065	17,350	16,949
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	521.27	526.22	493.31	508.70	523.28	519.14	532.46	535.53	543.47	532.28
Total Anions	Calculation	Meq/L	521.27	526.22	493.31	508.70	523.28	519.14	532.46	535.53	543.47	532.28
Dissolved Cations	Calculation	Meq/L	501.83	487.61	466.60	537.27	528.58	521.64	545.47	503.68	542.16	496.51
Total Cations	Calculation	Meq/L	512.46	489.96	483.65	530.53	543.94	537.38	544.72	516.26	549.54	534.35
Fluoride, Dissolved	EPA 300.0	mg/L	0.8	1.1	0.9	1.0	0.9	1.1	0.9	1.0	0.9	0.8
Hardness (as CaCO3)	SM2340B/Calc	mg/L	5,286	5,619	5,534	5,924	5,874	5,918	5,964	5,764	5,781	5,728
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	6	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	166	156	153	132	138	124	141	149	140	141
Magnesium	EPA 200.7	mg/L	1,000	1,080	1,060	1,140	1,130	1,130	1,140	1,110	1,100	1,100
Magnesium, Dissolved	EPA 200.7	mg/L	968	1,060	1,040	1,060	1,130	1,090	1,120	1,110	1,090	1,100
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate as NO3	EPA 300.0	mg/L	3	5	4	4	5	4	4	4	4	4
Nitrate+Nitrite as N	EPA 300.0	mg/L	0.6	1.1	1.1	1.0	1.1	1.0	1.2	1.1	1.3	1.1
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.11	0.10	0.10	0.10	0.10	0.09	0.08	0.09	0.09	0.09
pH (Field Test)	SM4500-H+B	pH	7.06	7.06	7.08	7.09	7.09	7.10	7.02	7.02	7.03	7.04
pH (Laboratory)	SM4500-H+B	pH (H)	7.2	7.2	7.1	7.2	7.0	7.2	7.2	7.2	7.2	7.2
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.10	0.07	0.11	0.08	0.07	0.10	0.06	0.09	0.11	0.11
Potassium	EPA 200.7	mg/L	269	273	273	271	283	286	285	328	304	308
Potassium, Dissolved	EPA 200.7	mg/L	271.0	272	269	278	282	276	286	321	301	292
QC Ratio TDS/SEC	Calculation	-	0.69	0.66	0.67	0.66	0.68	0.69	0.67	0.66	0.66	0.69
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	29.4	29.3	29.3	29.6	29.4	29.4	29.5	29.8	29.7	29.8
Silica as SiO2, Dissolved	EPA 200.7	mg/L	12	12	13	12	13	11	14	12	15	15
Sodium	EPA 200.7	mg/L	9,202	8,531	8,425	9,567	9,636	9,467	9,613	9,035	9,808	9,462
Sodium, Dissolved	EPA 200.7	mg/L	9,010	8,520	8,080	9,680	9,280	9,240	9,710	8,750	9,660	8,590
Specific Conductance (E.C)	SM2510B	µmhos/cm	45,450	45,260	45,250	45,680	45,380	45,420	45,610	46,000	45,800	45,980
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	45,669	45,720	45,362	45,682	45,648	45,682	45,775	46,308	46,223	46,352
Strontium, Dissolved	EPA 200.8	µg/L	7,458	7,875	7,415	7,158	7,293	7,430	7,259	7,542	7,275	7,302
Sulfate, Dissolved	EPA 300.0	mg/L	2,285	2,337	2,355	2,365	2,353	2,342	2,537	2,452	2,448	2,457
Temperature (Field)	SM2550	° C	16.1	16.2	16.1	16.1	16.1	16.4	16.3	16.2	16.3	16.3
Total Diss. Solids	SM2540C	mg/L	31,200	30,000	30,200	30,300	30,800	31,400	30,500	30,500	30,400	31,700
Turbidity	EPA 180.1	NTU	0.25	0.15	0.25	0.20	0.15	0.10	0.20	0.10	0.20	0.10
Turbidity (Field)	EPA 180.1	NTU	0.34	0.21	0.11	0.13	0.09	0.25	0.27	0.08	0.10	0.29
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL). See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

		Sample Collection Date:	10-Nov-16	17-Nov-16	23-Nov-16	1-Dec-16	8-Dec-16	15-Dec-16	21-Dec-16	12-Jan-17	19-Jan-17	26-Jan-17
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	113	115	114	112	106	111	112	107	112	117
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	55	160	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.25	0.27	0.27	0.26	0.21	0.22	0.26	0.20	0.21	0.28
Barium, Dissolved	EPA 200.8	µg/L	ND	ND	ND	ND	69	ND	65	66	ND	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	138	140	139	137	129	135	137	131	137	143
Boron, Dissolved	EPA 200.7	mg/L	3.73	3.84	3.29	3.42	3.09	3.10	3.73	3.2	3.30	3.42
Bromide, Dissolved	EPA 300.0	mg/L	53.0	50	52	54	51	54	57	56.7	55.8	58.6
Calcium	EPA 200.7	mg/L	493	517	462	532	540	549	542	407	481	467
Calcium, Dissolved	EPA 200.7	mg/L	503	531	453	536	539	529	543	401	485	466
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	17,651	17,082	17,145	17,215	17,283	18,271	16,460	16,984	16,509	17,164
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	540.88	527.60	533.74	528.40	541.73	569.71	518.18	532.63	523.58	537.43
Total Anions	Calculation	Meq/L	540.88	527.60	533.74	528.40	541.73	569.71	518.18	532.63	523.58	537.43
Dissolved Cations	Calculation	Meq/L	545.78	565.18	540.61	582.47	562.53	557.54	555.00	506.56	514.77	517.04
Total Cations	Calculation	Meq/L	536.10	570.96	527.00	558.83	559.45	569.62	580.06	509.59	505.75	518.85
Fluoride, Dissolved	EPA 300.0	mg/L	0.5	0.8	0.9	0.5	1.0	0.9	1.2	0.9	ND	1.0
Hardness (as CaCO3)	SM2340B/Calc	mg/L	6,185	6,401	5,601	6,344	6,451	6,452	6,542	5,678	5,961	6,050
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	4	ND	ND	-	ND	ND	ND
Lithium	EPA 200.8	µg/L	146	162	139	141	146	148	ND	ND	161	165
Magnesium	EPA 200.7	mg/L	1,200	1,240	1,080	1,220	1,240	1,230	1,260	1,130	1,160	1,190
Magnesium, Dissolved	EPA 200.7	mg/L	1,220	1,250	1,070	1,260	1,240	1,210	1,240	1,140	1,150	1,170
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate as NO3	EPA 300.0	mg/L	ND	4	4	4	5	4	4	3	2	2
Nitrate+Nitrite as N	EPA 300.0	mg/L	0.7	1.0	0.8	0.8	1.1	1.0	0.9	0.6	0.6	0.4
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.09	0.10	0.09	0.09	0.09	0.10	0.09	0.09	0.09	0.09
pH (Field Test)	SM4500-H+B	pH	7.05	7.05	7.05	7.07	7.07	7.07	7.07	7.37	6.94	7.23
pH (Laboratory)	SM4500-H+B	pH (H)	7.2	7.2	7.2	7.2	7.3	7.1	7.2	7.3	7.2	7.3
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.09	0.08	0.09
Potassium	EPA 200.7	mg/L	314	331	284	317	316	313	322	334	286	304
Potassium, Dissolved	EPA 200.7	mg/L	326	338	279	326	319	308	323	331	285	303
QC Ratio TDS/SEC	Calculation	-	0.67	0.67	0.69	0.68	0.68	0.66	0.66	0.66	0.70	0.67
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	30.0	30.1	30.0	30.2	30.0	29.7	29.7	29.9	29.3	29.6
Silica as SiO2, Dissolved	EPA 200.7	mg/L	16	17	12	20	11	ND	13	ND	11	9.0
Sodium	EPA 200.7	mg/L	9,304	9,992	9,375	9,742	9,710	9,954	10,140	8,910	8,712	8,962
Sodium, Dissolved	EPA 200.7	mg/L	9,470	9,820	9,720	10,200	9,780	9,740	9,600	8,830	8,770	8,960
Specific Conductance (E.C)	SM2510B	µmhos/cm	46,230	46,370	46,270	46,540	46,330	45,810	45,840	46,060	45,310	45,700
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	46,803	46,648	46,445	46,511	46,179	46,097	46,063	46,477	45,300	46,236
Strontium, Dissolved	EPA 200.8	µg/L	7,700	7,183	7,212	7,624	7,583	7,530	6,800	6,700	7,229	7,372
Sulfate, Dissolved	EPA 300.0	mg/L	1,920	2,052	2,262	1,911	2,466	2,465	2,441	2,431	2,363	2,408
Temperature (Field)	SM2550	° C	16.4	16.1	16.1	15.9	15.6	15.6	15.4	15.3	15.3	15.1
Total Diss. Solids	SM2540C	mg/L	30,900	31,000	31,800	31,500	31,600	30,400	30,200	30,500	31,700	30,800
Turbidity	EPA 180.1	NTU	0.25	0.10	0.20	0.35	0.15	0.10	0.40	0.45	0.15	0.20
Turbidity (Field)	EPA 180.1	NTU	1.06	0.18	0.24	0.41	0.17	0.12	0.14	0.25	0.29	0.16
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
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ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL). See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

		Sample Collection Date:	2-Feb-17	9-Feb-17	15-Feb-17	24-Feb-17	1-Mar-17	8-Mar-17	15-Mar-17	23-Mar-17	29-Mar-17	5-Apr-17
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	114	117	113	110	113	112	110	109	107	108
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.26	0.20	0.24	0.30	0.30	0.29	0.26	0.28	0.29	0.30
Barium, Dissolved	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	68	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	139	143	138	134	138	137	134	133	131	132
Boron, Dissolved	EPA 200.7	mg/L	3.36	3.37	3.31	3.51	3.56	3.25	3.27	3.11	3.44	3.21
Bromide, Dissolved	EPA 300.0	mg/L	55.4	55.2	55.6	56.1	55.7	55.1	53.7	52.3	54.1	52.2
Calcium	EPA 200.7	mg/L	486	497	467	492	464	459	478	405	398	415
Calcium, Dissolved	EPA 200.7	mg/L	487	484	466	481	473	477	464	420	420	406
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	16,638	16,746	16,794	17,028	16,860	16,522	16,264	16,086	16,048	16,370
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	521.35	524.61	526.53	532.85	525.63	516.22	508.39	502.66	503.45	512.21
Total Anions	Calculation	Meq/L	521.35	524.61	526.53	532.85	525.63	516.22	508.39	502.66	503.45	512.21
Dissolved Cations	Calculation	Meq/L	516.21	512.58	496.59	497.38	492.63	488.89	494.69	495.32	500.18	483.86
Total Cations	Calculation	Meq/L	530.41	541.45	489.87	501.11	490.19	489.96	488.39	485.02	462.87	492.88
Fluoride, Dissolved	EPA 300.0	mg/L	0.7	0.9	0.9	0.8	0.8	0.9	0.8	0.9	ND	0.7
Hardness (as CaCO3)	SM2340B/Calc	mg/L	6,258	6,273	5,609	5,927	5,903	5,692	5,843	5,327	5,515	5,714
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	188	97	155	146	144	151	155	224	182	186
Magnesium	EPA 200.7	mg/L	1,220	1,220	1,080	1,140	1,150	1,100	1,130	1,050	1,100	1,140
Magnesium, Dissolved	EPA 200.7	mg/L	1,210	1,190	1,090	1,130	1,180	1,120	1,130	1,090	1,150	1,120
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate as NO3	EPA 300.0	mg/L	3	3	2	3	5	4	5	5	3	3
Nitrate+Nitrite as N	EPA 300.0	mg/L	0.7	0.8	0.8	0.8	1.1	1.0	1.0	1.0	0.7	0.7
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.09	0.08	0.08	0.10	0.10	0.10	0.09	0.09	0.11	0.08
pH (Field Test)	SM4500-H+B	pH	7.07	7.01	7.00	7.13	7.09	7.08	7.00	7.22	7.22	7.07
pH (Laboratory)	SM4500-H+B	pH (H)	7.2	7.3	7.2	7.3	7.2	7.2	7.2	7.3	7.3	7.2
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.09	0.09	0.10	0.08	0.08	0.08	0.08	0.08	0.09	0.09
Potassium	EPA 200.7	mg/L	306	301	285	299	284	272	278	272	276	289
Potassium, Dissolved	EPA 200.7	mg/L	305	301	288	297	289	277	276	277	291	287
QC Ratio TDS/SEC	Calculation	-	0.66	0.65	0.66	0.69	0.65	0.67	0.65	0.67	0.69	0.66
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	29.3	29.7	29.4	29.3	29.0	28.8	28.9	28.4	28.5	28.5
Silica as SiO2, Dissolved	EPA 200.7	mg/L	12	13	14	13	13	10	ND	12	13	12
Sodium	EPA 200.7	mg/L	9,148	9,392	8,515	8,623	8,394	8,496	8,378	8,539	7,941	8,528
Sodium, Dissolved	EPA 200.7	mg/L	8,840	8,800	8,650	8,570	8,380	8,410	8,540	8,680	8,670	8,370
Specific Conductance (E.C)	SM2510B	µmhos/cm	45,270	45,820	45,460	45,310	44,910	44,540	44,710	44,060	44,140	44,200
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	45,256	45414	45,429	45,816	44,951	44,725	44,351	44,064	44,279	44,184
Strontium, Dissolved	EPA 200.8	µg/L	7,066	7,254	7,194	7,238	7,093	7,271	7,197	8,222	7,208	7,922
Sulfate, Dissolved	EPA 300.0	mg/L	2,352	2,359	2,390	2,379	2,256	2,264	2,240	2,208	2,298	2,284
Temperature (Field)	SM2550	° C	15.3	15.2	15.3	15.0	15	15.1	15.0	15.2	15.2	15.0
Total Diss. Solids	SM2540C	mg/L	29,900	29,800	30,000	31,100	29,100	29,700	29,100	29,400	30,600	29,000
Turbidity	EPA 180.1	NTU	0.30	0.25	0.15	0.10	0.20	0.25	0.25	0.50	0.35	0.15
Turbidity (Field)	EPA 180.1	NTU	0.41	0.08	0.15	0.17	0.10	0.37	0.14	0.17	0.44	0.09
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL). See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

Sample Collection Date:			13-Apr-17	19-Apr-17	26-Apr-17	3-May-17	10-May-17	18-May-17	24-May-17	31-May-17	8-Jun-17	14-Jun-17
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	107	108	108	109	108	108	108	111	113	113
Aluminum, Total	EPA 200.8	µg/L	ND	116	106	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.29	0.29	0.30	0.33	0.34	0.29	0.32	0.32	0.30	0.30
Barium, Dissolved	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	72	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	131	132	132	133	132	132	132	135	138	138
Boron, Dissolved	EPA 200.7	mg/L	2.87	3.06	2.86	3.2	3.13	3.34	3.33	2.77	3.55	2.84
Bromide, Dissolved	EPA 300.0	mg/L	51.9	55.3	54.5	54.1	55.9	55.7	56.6	53.9	62.2	57
Calcium	EPA 200.7	mg/L	442	460	439	439	464	462	456	521	500	494
Calcium, Dissolved	EPA 200.7	mg/L	450	418	429	433	464	469	478	526	496	490
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	16,528	16,171	15,973	15,733	16,016	15,903	15,975	15,393	16,064	15,908
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	516.78	506.03	500.60	493.11	501.27	498.04	499.89	482.94	502.84	498.13
Total Anions	Calculation	Meq/L	516.78	506.03	500.60	493.11	501.27	498.04	499.89	482.94	502.84	498.13
Dissolved Cations	Calculation	Meq/L	496.81	518.02	487.93	457.64	483.41	511.09	529.98	511.80	539.35	538.05
Total Cations	Calculation	Meq/L	479.82	531.51	486.29	470.10	483.80	499.09	514.21	502.48	540.68	555.31
Fluoride, Dissolved	EPA 300.0	mg/L	ND	0.8	0.9	0.7	0.8	0.8	0.8	0.8	0.8	0.8
Hardness (as CaCO3)	SM2340B/Calc	mg/L	5,403	5,378	5,268	5,255	5,503	5,675	5,796	5,790	5,745	5,916
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
Lithium	EPA 200.8	µg/L	184	177	187	154	158	160	145	134	175	173
Magnesium	EPA 200.7	mg/L	1,040	1,030	1,010	1,010	1,060	1,100	1,130	1,090	1,090	1,140
Magnesium, Dissolved	EPA 200.7	mg/L	1,080	1,150	921	973	1,051	1,130	1,120	1,120	1,120	1,120
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate as NO3	EPA 300.0	mg/L	3	7	7	4	4	4	4	4	4	4
Nitrate+Nitrite as N	EPA 300.0	mg/L	0.8	1.5	1.5	1.1	0.9	1.0	0.9	0.9	0.9	0.9
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	1	1	1	1	2	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.09	0.08	0.08	0.08	0.08	0.09	0.08	0.08	0.08	0.08
pH (Field Test)	SM4500-H+B	pH	7.08	7.08	7.08	7.08	7.08	7.01	7.02	7.02	6.98	7.16
pH (Laboratory)	SM4500-H+B	pH (H)	6.8	7.1	7.2	7.3	7.3	7.3	7.2	7.1	7.3	7.2
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.08	0.08	0.09	0.08	0.06	0.09	0.07	0.08	0.09	0.06
Potassium	EPA 200.7	mg/L	272	273	272	314	276	288	291	324	384	319
Potassium, Dissolved	EPA 200.7	mg/L	275	278	259	264	276	295	300	295	325	320
QC Ratio TDS/SEC	Calculation	-	0.65	0.67	0.67	0.68	0.67	0.68	0.68	0.67	0.67	0.68
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	28.4	28.4	28.4	28.5	28.7	28.2	28.2	28.2	28.5	28.3
Silica as SiO2, Dissolved	EPA 200.7	mg/L	ND	14	11	ND	13	15	15	20	17	ND
Sodium	EPA 200.7	mg/L	8,396	9,582	8,605	8,208	8,422	8,693	8,989	8,701	9,568	9,855
Sodium, Dissolved	EPA 200.7	mg/L	8,700	9,090	8,830	8,270	8,430	8,900	9,340	8,870	9,520	9,500
Specific Conductance (E.C)	SM2510B	µmhos/cm	44,010	44,100	44,020	44,120	44,420	43,820	43,730	43,740	44,180	43,840
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	44,004	44,144	44,093	44,202	44,254	43,823	43,689	43,626	43,677	43,625
Strontium, Dissolved	EPA 200.8	µg/L	7,948	7,160	7,098	7,256	6,858	6,773	6,865	6,810	7,575	7,244
Sulfate, Dissolved	EPA 300.0	mg/L	2,290	2,252	2,260	2,226	2,235	2,233	2,224	2,197	2,237	2,225
Temperature (Field)	SM2550	° C	15.0	15.3	15.3	15.4	15.2	15.2	15.3	15.4	15.3	15.4
Total Diss. Solids	SM2540C	mg/L	28,800	29,600	29,400	29,900	29,800	29,600	29,600	29,300	29,600	30,000
Turbidity	EPA 180.1	NTU	0.20	0.20	0.25	0.25	1.5	0.60	0.25	0.20	0.15	0.15
Turbidity (Field)	EPA 180.1	NTU	0.12	0.15	0.22	0.25	0.21	0.21	0.13	0.14	0.18	0.21
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
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ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL). See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

		Sample Collection Date:	21-Jun-17	28-Jun-17	5-Jul-17	12-Jul-17	19-Jul-17	26-Jul-17	2-Aug-17	9-Aug-17	16-Aug-17	23-Aug-17
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	112	114	114	115	114	114	113	114	113	114
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.29	0.36	0.36	0.23	0.28	0.22	0.21	0.23	0.22	0.28
Barium, Dissolved	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	137	139	139	140	139	139	138	139	138	139
Boron, Dissolved	EPA 200.7	mg/L	3.77	3.33	3.3	2.44	3.33	3.40	2.92	3.28	3.45	3.74
Bromide, Dissolved	EPA 300.0	mg/L	51.9	51.0	52.2	55.3	56.5	57.9	59.1	55.8	54.9	39.8
Calcium	EPA 200.7	mg/L	559	490	561	523	486	504	407	489	504	738
Calcium, Dissolved	EPA 200.7	mg/L	580	482	508	541	488	506	427	483	485	740
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	15,110	15,550	15,817	15,996	16,292	16,572	17,007	16,452	16,738	15,992
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	475.36	488.10	495.48	496.86	509.36	518.74	531.54	514.72	524.04	500.45
Total Anions	Calculation	Meq/L	475.36	488.10	495.48	496.86	509.36	518.74	531.54	514.72	524.04	500.45
Dissolved Cations	Calculation	Meq/L	526.04	508.51	529.93	502.41	499.74	499.71	497.53	499.13	487.85	520.31
Total Cations	Calculation	Meq/L	520.58	511.83	549.43	514.48	488.40	490.03	489.71	506.68	504.92	525.08
Fluoride, Dissolved	EPA 300.0	mg/L	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.6
Hardness (as CaCO3)	SM2340B/Calc	mg/L	6,255	5,622	6,095	5,473	5,212	5,607	4,702	5,594	5,681	6,447
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	152	166	163	182	219	116	191	177	177	192
Magnesium	EPA 200.7	mg/L	1,180	1,070	1,140	1,010	971	1,060	895	1,060	1,070	1,120
Magnesium, Dissolved	EPA 200.7	mg/L	1,200	1,070	1,140	960	975	1,080	937	1,060	1,040	1,110
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate as NO3	EPA 300.0	mg/L	4	4	4	5	6	5	6	6	6	5
Nitrate+Nitrite as N	EPA 300.0	mg/L	1.1	0.9	0.9	1.2	1.3	1.2	1.3	1.3	1.3	1.0
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.06	0.08	0.08	0.07	0.07	0.08	0.10	0.09	0.08	0.08
pH (Field Test)	SM4500-H+B	pH	7.12	7.18	7.18	7.18	7.18	7.01	7.00	7.00	7.00	7.00
pH (Laboratory)	SM4500-H+B	pH (H)	7.2	7.3	6.9	7.2	7.3	7.2	7.3	7.2	7.4	7.2
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.06	0.08	0.08	0.07	0.07	0.08	0.08	0.09	0.08	0.08
Potassium	EPA 200.7	mg/L	328	277	295	249	259	275	231	277	278	288
Potassium, Dissolved	EPA 200.7	mg/L	336	277	294	260	262	279	245	273	270	284
QC Ratio TDS/SEC	Calculation	-	0.64	0.67	0.66	0.67	0.66	0.68	0.67	0.69	0.68	0.70
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	28.3	28.1	28.3	28.0	27.9	28.1	28.4	28.0	28.7	28.5
Silica as SiO2, Dissolved	EPA 200.7	mg/L	18	12	10	11	14	17	10	13	17	15
Sodium	EPA 200.7	mg/L	8,901	9,017	9,657	9,170	8,681	8,520	8,962	8,915	8,834	8,940
Sodium, Dissolved	EPA 200.7	mg/L	8,960	8,950	9,270	8,960	8,930	8,700	9,030	8,760	8,540	8,850
Specific Conductance (E.C)	SM2510B	µmhos/cm	43,900	43,570	43,840	43,480	43,360	43,600	44,000	43,430	44,420	44,180
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	43,687	43,633	43,501	43,353	43,305	43,451	43,437	43,266	43,408	43,583
Strontium, Dissolved	EPA 200.8	µg/L	7,297	7,718	7,210	6,593	7,967	6,799	6,348	7,320	7,406	6,853
Sulfate, Dissolved	EPA 300.0	mg/L	2,216	2,231	2,223	2,043	2,242	2,313	2,338	2,267	2,329	2,218
Temperature (Field)	SM2550	° C	15.6	15.4	16.3	15.5	15.5	15.7	15.8	15.7	15.9	15.9
Total Diss. Solids	SM2540C	mg/L	28,100	29,400	29,000	29,000	28,500	29,600	29,600	30,000	30,400	30,800
Turbidity	EPA 180.1	NTU	0.15	0.60	0.10	0.05	0.20	0.10	0.25	0.25	0.30	0.15
Turbidity (Field)	EPA 180.1	NTU	0.13	0.26	0.34	0.24	0.17	0.18	0.15	0.15	0.13	0.08
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL). See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

		Sample Collection Date:	31-Aug-17	6-Sep-17	13-Sep-17	20-Sep-17	28-Sep-17	4-Oct-17	11-Oct-17	17-Oct-17	25-Oct-17	1-Nov-17
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	114	115	114	114	112	113	114	113	112	113
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.23	0.22	0.22	0.24	0.24	0.21	0.20	0.20	0.23	0.24
Barium, Dissolved	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	139	140	139	139	137	138	139	138	137	138
Boron, Dissolved	EPA 200.7	mg/L	3.39	3.68	3.80	2.67	3.20	3.00	3.30	3.00	3.00	2.52
Bromide, Dissolved	EPA 300.0	mg/L	53.2	56.1	56.1	53.7	56.0	56.0	57.7	57.8	55.5	55.3
Calcium	EPA 200.7	mg/L	759	404	535	535	520	440	476	580	447	392
Calcium, Dissolved	EPA 200.7	mg/L	824	456	499	515	450	410	502	458	447	400
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	16,661	16,432	16,200	16,100	16,500	16,100	16,500	17,100	17,000	16,400
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	ND	ND	ND	3	ND	ND	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	520.32	512.79	506.32	503.25	515.78	504.91	515.40	532.93	531.32	513.36
Total Anions	Calculation	Meq/L	520.32	512.79	506.32	503.25	515.78	504.91	515.40	532.93	531.32	513.36
Dissolved Cations	Calculation	Meq/L	497.84	515.38	516.67	517.83	447.57	458.17	512.27	482.68	473.64	506.73
Total Cations	Calculation	Meq/L	508.00	529.94	548.05	516.68	521.57	460.18	488.57	506.41	459.71	496.32
Fluoride, Dissolved	EPA 300.0	mg/L	0.6	0.5	0.6	0.7	0.5	0.7	0.7	0.7	0.7	0.6
Hardness (as CaCO3)	SM2340B/Calc	mg/L	6,200	5,750	6,210	5,980	6,240	5,220	5,260	5,780	4,870	4,770
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	214	226	170	153	200	169	172	171	192	227
Magnesium	EPA 200.7	mg/L	1,068	1,030	1,180	1,130	1,200	1,000	988	1,050	1,020	921
Magnesium, Dissolved	EPA 200.7	mg/L	1,024	918	1,120	1,110	990	1,000	1,050	1,020	1,030	932
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	1.2	1.3	1.6	1.4	1.5	1.2	1.2	1.2	1.3	1.2
Nitrate as NO3	EPA 300.0	mg/L	5	6	7	6	7	5	6	5	6	5
Nitrate+Nitrite as N	EPA 300.0	mg/L	1.2	1.3	1.6	1.4	1.5	1.2	1.2	1.2	1.3	1.2
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	2	1	1	1	2	4	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.08	0.07	0.08	0.08	0.07	0.07	0.08	0.08	0.07	0.07
pH (Field Test)	SM4500-H+B	pH	7.00	7.01	7.17	7.17	7.06	7.04	7.04	7.30	7.05	7.04
pH (Laboratory)	SM4500-H+B	pH (H)	7.4	7.2	7.2	7.2	7.2	6.7	7.2	7.2	7.1	7.1
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.08	0.08	0.09	0.08	0.07	0.07	0.08	0.08	0.08	0.08
Potassium	EPA 200.7	mg/L	279	290	311	283	380	310	266	340	251.0	285
Potassium, Dissolved	EPA 200.7	mg/L	269	269	283	295	510	460	279	274	254.0	284
QC Ratio TDS/SEC	Calculation	-	0.67	0.68	0.68	0.66	0.67	0.66	0.69	0.70	0.70	0.68
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	28.2	28.2	28.4	28.4	28.4	28.4	28.5	28.4	28.6	28.8
Silica as SiO2, Dissolved	EPA 200.7	mg/L	14	12	10	13	13	13	9	ND	ND	19
Sodium	EPA 200.7	mg/L	8,623	9,600	9,570	8,960	8,900	8,000	8,660	8,790	7,980	9,050
Sodium, Dissolved	EPA 200.7	mg/L	8,404	9,430	9,020	9,040	7,600	7,900	9,050	8,480	8,270	9,260
Specific Conductance (E.C)	SM2510B	µmhos/cm	43,710	43,810	44,080	44,030	44,080	44,100	44,130	44,080	44,350	44,590
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	43,261	43,510	43,920	43,820	43,860	44,050	44,170	44,160	44,510	44,590
Strontium, Dissolved	EPA 200.8	µg/L	6,822	7,060	6,510	5,900	7,770	8,280	7,700	7,770	7,180	7,120
Sulfate, Dissolved	EPA 300.0	mg/L	2,271	2,262	2,220	2,210	2,270	2,290	2,250	2,280	2,340	2,290
Temperature (Field)	SM2550	° C	15.9	16.0	16.1	16.3	16.2	16.1	16.1	16.2	16.2	16.2
Total Diss. Solids	SM2540C	mg/L	29,400	29,700	29,800	29,100	29,700	29,300	30,600	30,900	31,100	30,300
Turbidity	EPA 180.1	NTU	0.10	0.20	0.15	0.35	0.15	0.15	0.30	0.10	0.15	0.05
Turbidity (Field)	EPA 180.1	NTU	0.20	0.18	0.05	0.07	0.14	0.28	0.08	0.08	0.35	0.20
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
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ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL). See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

		Sample Collection Date:	8-Nov-17	15-Nov-17	22-Nov-17	30-Nov-17	6-Dec-17	13-Dec-17	20-Dec-17	4-Jan-18	10-Jan-18	17-Jan-18
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	112	112	113	112	111	112	112	112	104	111
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.25	0.26	0.28	0.25	0.25	0.26	0.25	0.24	0.24	0.27
Barium, Dissolved	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	137	137	138	137	135	137	137	137	127	135
Boron, Dissolved	EPA 200.7	mg/L	3.50	3.60	3.10	3.60	3.1	3.3	3.4	3.7	3.8	3.82
Bromide, Dissolved	EPA 300.0	mg/L	56.2	53.2	52.3	52.8	53.2	58.9	59.9	58.0	55.9	54.4
Calcium	EPA 200.7	mg/L	565	509	484	746	479	414	447	730	442	473
Calcium, Dissolved	EPA 200.7	mg/L	542	496	496	710	466	478	485	745	496	466
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	16,400	16,200	17,200	16,800	16,400	16,400	17,100	17,100	16,500	16,500
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	513.14	508.09	541.29	525.62	513.69	513.37	533.76	537.72	515.79	516.32
Total Anions	Calculation	Meq/L	513.14	508.09	541.29	525.62	513.69	513.37	533.76	537.72	515.79	516.32
Dissolved Cations	Calculation	Meq/L	512.96	491.61	467.56	510.36	490.44	510.03	522.47	517.31	498.00	509.74
Total Cations	Calculation	Meq/L	548.24	458.49	463.09	507.82	494.33	480.40	478.29	536.73	510.55	520.15
Fluoride, Dissolved	EPA 300.0	mg/L	0.7	0.9	0.7	0.5	0.6	0.9	0.7	0.4	0.8	0.5
Hardness (as CaCO3)	SM2340B/Calc	mg/L	6,250	5,440	5,060	6,290	4,820	5,030	5,180	6,510	5,370	5,930
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	160	176	162	136	177	118	199	174	176	252
Magnesium	EPA 200.7	mg/L	1,180	969	936	1,070	1,050	972	987	1,140	1,040	1,150
Magnesium, Dissolved	EPA 200.7	mg/L	1,110	1,080	942	1,100	1,040	1,020	1,050	1,200	1,070	1,170
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	1.1	1.2	1.0	1.0	0.9	1.1	1.2	1.4	1.1	1.0
Nitrate as NO3	EPA 300.0	mg/L	5	5	ND	4.3	4	5	5	6	5	4
Nitrate+Nitrite as N	EPA 300.0	mg/L	1.1	1.2	1.0	1.0	0.9	1.1	1.2	1.4	1.1	1.0
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	2	1	1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.08	0.07	0.08	0.08	0.08	0.08	0.08	0.07	0.07	0.07
pH (Field Test)	SM4500-H+B	pH	7.05	7.05	7.05	7.01	7.03	7.02	7.02	7.02	7.23	7.05
pH (Laboratory)	SM4500-H+B	pH (H)	7.2	7.1	7.2	7.6	7.0	7.2	7.2	7.1	7.2	7.2
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.08	0.08	0.09	0.08	0.08	0.08	0.08	0.07	0.08	0.08
Potassium	EPA 200.7	mg/L	328	262	238	275	282	272	264	297	293	322.0
Potassium, Dissolved	EPA 200.7	mg/L	307	288	251	282.0	281	284	286	319	298	322.0
QC Ratio TDS/SEC	Calculation	-	0.67	0.68	0.68	0.69	0.68	0.68	0.67	0.66	0.69	0.67
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	28.8	28.5	28.5	28.7	28.8	28.8	28.7	28.7	28.8	28.9
Silica as SiO2, Dissolved	EPA 200.7	mg/L	16	22	13	11	12	16	15	15	17	29
Sodium	EPA 200.7	mg/L	9,530	7,970	8,180	8,630	8,670	8,570	8,460	9,170	9,090	9,050
Sodium, Dissolved	EPA 200.7	mg/L	8,890	8,520	8,250	8,680	8,610	9,080	9,300	8,580	8,680	8,970
Specific Conductance (E.C)	SM2510B	µmhos/cm	44,530	44,190	44,130	44,420	44,600	44,610	44,460	44,450	44,530	44,680
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	44,580	44,520	44,490	44,790	45,010	44,930	44,980	45,050	45,660	45,600
Strontium, Dissolved	EPA 200.8	µg/L	6,200	7,130	7,900	8,250	8,110	8,970	8,830	7,480	7,740	7,060
Sulfate, Dissolved	EPA 300.0	mg/L	2,280	2,310	2,550	2,300	2,310	2,290	2,320	2,510	2,280	2,300
Temperature (Field)	SM2550	° C	16.3	16.2	16.1	16.0	15.7	15.7	15.6	15.5	15.5	15.3
Total Diss. Solids	SM2540C	mg/L	29,900	30,100	30,100	30,500	30,500	30,400	29,600	29,500	30,700	29,800
Turbidity	EPA 180.1	NTU	0.10	0.15	0.15	0.10	0.10	0.10	0.15	0.15	0.10	0.30
Turbidity (Field)	EPA 180.1	NTU	0.07	0.11	0.08	0.07	0.17	0.20	0.21	0.10	0.17	0.17
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
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[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 2: Summary of Test Slant Well Laboratory Water Quality Results

		Sample Collection Date:	25-Jan-18	31-Jan-18	7-Feb-18	14-Feb-18	21-Feb-18	28-Feb-18
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	111	112	110	109	109	110
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.23	0.23	0.26	0.26	0.25	0.20
Barium, Dissolved	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	135	137	134	133	133	134
Boron, Dissolved	EPA 200.7	mg/L	3.5	3.4	3.4	3.3	3.2	3.5
Bromide, Dissolved	EPA 300.0	mg/L	52.1	49.4	55.3	48.4	56.4	55.2
Calcium	EPA 200.7	mg/L	484	465	516	485	491	549
Calcium, Dissolved	EPA 200.7	mg/L	464	487	496	490	465	553
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	16,800	16,600	16,700	16,400	16,800	16,500
Chlorinated Pesticides and PCB (EPA 508	EPA 508	µg/L	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	ND	3	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	526.03	519.31	522.37	512.05	523.30	517.56
Total Anions	Calculation	Meq/L	526.03	519.31	522.37	512.05	523.30	517.56
Dissolved Cations	Calculation	Meq/L	509.32	509.73	529.93	534.21	506.57	524.34
Total Cations	Calculation	Meq/L	489.40	477.11	542.33	518.66	533.73	525.01
Fluoride, Dissolved	EPA 300.0	mg/L	0.5	0.5	0.5	0.7	0.7	0.7
Hardness (as CaCO3)	SM2340B/Calc	mg/L	5,600	5,560	5,980	5,530	5,580	6,070
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M	µg/L	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	M4500-NH3 B,C.E & EPA 351	mg/L	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	87	179	170	180	163	157
Magnesium	EPA 200.7	mg/L	1,070	1,070	1,140	1,050	1,060	1,140
Magnesium, Dissolved	EPA 200.7	mg/L	1,120	1,120	1,120	1,060	1,010	1,130
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	1.3	1.0	1.0	0.8	0.8	0.9
Nitrate as NO3	EPA 300.0	mg/L	5.6	4	4	3.6	4	4
Nitrate+Nitrite as N	EPA 300.0	mg/L	1.3	1.0	1.0	0.8	0.8	0.9
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.07	0.07	0.07	0.07	0.07	0.07
pH (Field Test)	SM4500-H+B	pH	7.06	7.09	7.08	7.09	7.10	7.10
pH (Laboratory)	SM4500-H+B	pH (H)	7.4	7.2	7.3	7.2	7.1	7.3
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.08	0.08	0.07	0.07	0.08	0.08
Potassium	EPA 200.7	mg/L	274	273	304	290	291	294
Potassium, Dissolved	EPA 200.7	mg/L	285	290	297	295	274	292
QC Ratio TDS/SEC	Calculation	-	0.67	0.69	0.67	0.67	0.71	0.69
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-
Salinity	SM2520B	psu	28.8	28.8	28.8	28.8	28.5	28.8
Silica as SiO2, Dissolved	EPA 200.7	mg/L	16	15	17	15	14	18
Sodium	EPA 200.7	mg/L	8,510	8,250	9,540	9,210	9,530	9,110
Sodium, Dissolved	EPA 200.7	mg/L	8,890	8,870	9,320	9,540	9,040	9,100
Specific Conductance (E.C)	SM2510B	µmhos/cm	44,640	44,570	44,560	44,520	44,120	44,520
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	45,680	44,890	44,750	44,840	44,770	44,930
Strontium, Dissolved	EPA 200.8	µg/L	7,280	7,440	7,520	7,390	7,130	7,180
Sulfate, Dissolved	EPA 300.0	mg/L	2,360	2,310	2,320	2,250	2,230	2,360
Temperature (Field)	SM2550	° C	15.1	15.1	15.3	15.2	15.1	15.1
Total Diss. Solids	SM2540C	mg/L	29,900	30,600	30,000	29,900	31,300	30,600
Turbidity	EPA 180.1	NTU	0.20	0.05	0.15	0.25	0.15	0.15
Turbidity (Field)	EPA 180.1	NTU	0.13	0.14	0.08	0.09	0.11	0.08
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL). See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			MW-1S							MW-1M					
Monitoring Well Name:															
Sample Collection Date:			24-Apr-18	9-Oct-18	9-Apr-19	14-Oct-19	7-Apr-20	12-Oct-20	14-Apr-21	24-Apr-18	9-Oct-18	9-Apr-19	14-Oct-19	6-Apr-20	12-Oct-20
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	103	106	110	108	120	110	112	106	103	103	96	86	107
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.13	0.13	0.17	0.14	0.14	0.17	0.16	0.13	0.12	0.14	0.18	0.12	0.13
Barium, Dissolved	EPA 200.8	µg/L	ND	53.0	51.3	63	57	52	55.9	ND	65.0	58.2	74	56	53
Bicarbonate (as HCO3-)	SM2320B	mg/L	126	129	134	132	139	134	137	129	126	126	117	105	131
Boron, Dissolved	EPA 200.7	mg/L	4.01	3.87	4.0	3.5	3.10	3	2.77	3.91	3.71	3.95	3.8	3.7	3.9
Bromide, Dissolved	EPA 300.0	mg/L	47.6	59.1	65.1	58.2	51.9	53.8	63.8	54.4	62.8	64.8	70.4	78.9	59.8
Calcium	EPA 200.7	mg/L	411	376	410	382	357	384	299	445	510	419	404	409	416
Calcium, Dissolved	EPA 200.7	mg/L	390	379	408	382	372	377	306	442	501	420	404	392	402
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	17,200	18,100	19,200	15,800	15,900	15,300	15,300	19,400	19,200	18,800	18,900	18,600	18,400
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	3	ND	-	-	ND	ND	ND	ND	ND	-	-
Color, True [2]	SM2120C	Color Units	-	-	-	-	3	ND	-	-	-	-	-	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	8	ND	ND	ND	ND	ND	ND	11	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	571.07	566.33	601.52	495.34	498.09	480.61	478.43	605.32	600.48	591.74	591.37	581.23	576.50
Total Anions	Calculation	Meq/L	571.07	566.33	601.52	495.34	498.09	480.61	478.43	605.32	600.48	591.74	591.37	581.23	576.50
Dissolved Cations	Calculation	Meq/L	552.35	529.36	568.66	494.77	489.55	474.91	409.62	650.58	572.23	594.23	582.86	555.71	629.95
Total Cations	Calculation	Meq/L	557.83	541.00	571.37	486.66	468.29	539.77	402.54	659.35	583.20	598.66	574.95	538.75	645.63
Fluoride, Dissolved	EPA 300.0	mg/L	0.2	0.8	0.5	1.0	0.5	1.1	1.9	0.1	0.4	0.4	0.2	0.3	0.4
Hardness (as CaCO3)	SM2340B/Calc	mg/L	6,690	5,680	5,880	5,310	5,020	5,480	4,120	6,600	6,260	6,150	6,130	5,900	6,390
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	ND	ND	ND	ND	15	3.9	5.0	ND	ND	ND	ND	14	1.2
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	532	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	27	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	193	201	222	241	172	201	137	197	215	236	302	262	271
Magnesium	EPA 200.7	mg/L	1,380	1,150	1,180	1,060	1,000	976	820	1,330	1,210	1,240	1,240	1,190	1,150
Magnesium, Dissolved	EPA 200.7	mg/L	1,310	1,120	1,200	1,000	1,030	967	835	1,330	1,190	1,240	1,230	1,190	1,130
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	42	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	0.14	0.06	ND	ND	ND	ND	ND	0.14
Nitrate as N	EPA 300.0	mg/L	1.0	0.7	0.5	1.3	1.0	1.5	1.2	1.0	0.2	0.2	0.3	0.3	ND
Nitrate as NO3	EPA 300.0	mg/L	4.4	3.1	2.2	5.7	4.4	6.9	5.2	4.3	0.9	ND	1.3	1.3	ND
Nitrate+Nitrite as N	EPA 300.0	mg/L	1.0	0.7	0.5	1.3	1.0	1.5	1.2	1.0	0.2	0.2	0.3	0.3	ND
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	ND	1	1	1	1	1	ND	ND	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.04	0.03	0.05	0.05	0.05	0.04	0.04	0.05	0.04	0.05	0.05	0.05	0.04
pH (Field Test)	SM4500-H+B	pH	6.96	7.00	7.28	7.21	7.07	7.41	7.03	6.64	6.84	7.05	6.94	6.81	7.41
pH (Laboratory)	SM4500-H+B	pH (H)	7.1	7.3	7.3	7.6	7.3	7.2	7.5	7.1	7.1	7.1	7.4	7.1	7.2
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.03	0.04	0.05	0.06	0.06	0.03	0.03	0.04	0.05	0.05	0.06	0.06	0.03
Potassium	EPA 200.7	mg/L	428	391	395	313	279	394	244	393	396.0	401	354	314	492
Potassium, Dissolved	EPA 200.7	mg/L	400	367	399	313	287	367	248	396	389	396	355	313	481
QC Ratio TDS/SEC	Calculation	-	0.67	0.68	0.72	0.70	0.67	0.68	0.69	0.68	0.70	0.72	0.71	0.70	0.74
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	36.4	31.3	35.1	32.0	27.8	26.4	26.0	36.2	32.9	36.1	37.4	31.4	31.9
Silica as SiO2, Dissolved	EPA 200.7	mg/L	13	12	12	15	12	15.4	11.1	19	17	17	19	18	19.5
Sodium	EPA 200.7	mg/L	9,490	9,600	10,200	8,560	8,300	9,890	7,220	11,900	10,300	10,700	10,200	9,480	11,900
Sodium, Dissolved	EPA 200.7	mg/L	9,540	9,400	10,100	8,860	8,710	8,440	7,340	11,700	10,100	10,600	10,400	9,890	11,600
Specific Conductance (E.C)	SM2510B	µmhos/cm	49,600	48,000	48,000	43,700	43,200	41,200	40,700	49,430	50,200	49,300	50,200	48,200	48,800
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	50,930	50,160	49,800	44,600	45,840	41,770	43,920	50,580	51,860	50,990	51,070	49,960	49,520
Strontium, Dissolved	EPA 200.8	µg/L	6,600	6,050	7,620	6,910	6,910	6,180	6,900	7,010	6,590	7,490	7,900	7,370	7,060
Sulfate, Dissolved	EPA 300.0	mg/L	2,700	2,540	2,730	2,240	2,230	2,210	2,160	2,650	2,690	2,810	2,660	2,570	2,620
Temperature (Field)	SM2550	° C	14.5	15.5	15.7	16.7	15.1	18.3	16.9	16.0	15.9	15.7	16.0	15.4	17.5
Total Diss. Solids	SM2540C	mg/L	33,200	32,600	34,400	30,400	29,100	28,100	28,000	33,600	34,900	35,300	35,600	33,500	35,900
Turbidity	EPA 180.1	NTU	0.60	0.10	0.05	ND	0.10	0.05	ND	0.10	0.05	0.10	0.30	0.10	0.05
Turbidity (Field)	EPA 180.1	NTU	0.19	0.39	0.29	0.41	0.53	0.87	0.4	0.21	0.42	0.26	0.97	0.47	0.76
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

[3] The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

Monitoring Well Name:			MW-1M	MW-1D							MW-3S				
Sample Collection Date:			14-Apr-21	24-Apr-18	9-Oct-18	9-Apr-19	14-Oct-19	6-Apr-20	12-Oct-20	14-Apr-21	25-Apr-18	10-Oct-18	10-Apr-19	15-Oct-19	7-Apr-20
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	102	119	118	120	114	119	118	115	98	98	96	98	102
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.14	0.67	0.50	0.76	0.57	1.8	0.62	0.56	0.27	0.23	0.24	0.28	0.25
Barium, Dissolved	EPA 200.8	µg/L	60.0	ND	123	108	108	111	100	104	ND	94.0	70	76	70
Bicarbonate (as HCO3-)	SM2320B	mg/L	124	145	144	146	139	145	144	141	120	120	117	120	118
Boron, Dissolved	EPA 200.7	mg/L	3.27	1.33	1.38	1.49	1.5	1.3	1.4	1.3	2.50	2.64	2.6	3.1	2.50
Bromide, Dissolved	EPA 300.0	mg/L	67.6	46.8	55.5	50.3	65.6	58.8	61.0	61.1	42.7	47.0	52.3	45.5	43.8
Calcium	EPA 200.7	mg/L	320	2,400	2,430	2,300	2,330	2,260	2,190	1,920	614	640	388	360	350
Calcium, Dissolved	EPA 200.7	mg/L	311	2,460	2,390	2,260	2,320	2,240	2,230	1,940	608	613	390	348	348
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	17,900	16,900	17,100	16,400	17,500	16,800	17,100	16,400	13,300	14,500	14,800	13,400	13,400
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	4	5	6	ND	-	-	7	ND	ND	5	ND	-
Color, True [2]	SM2120C	Color Units	-	-	-	-	-	ND	ND	-	-	-	-	-	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	35	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	561.99	528.28	533.96	516.48	546.56	525.20	533.42	513.39	417.18	452.90	464.36	420.82	419.90
Total Anions	Calculation	Meq/L	561.99	528.28	533.96	516.48	546.56	525.20	533.42	513.39	417.18	452.90	464.36	420.82	419.90
Dissolved Cations	Calculation	Meq/L	494.23	533.55	536.30	514.56	530.01	500.13	528.68	461.17	413.94	408.39	466.15	402.59	386.88
Total Cations	Calculation	Meq/L	504.08	529.97	538.36	528.42	541.27	504.93	530.35	465.90	419.19	413.34	463.42	419.92	392.53
Fluoride, Dissolved	EPA 300.0	mg/L	0.7	0.2	0.1	0.1	0.5	0.1	1.3	0.2	0.9	0.4	0.3	0.7	0.5
Hardness (as CaCO3)	SM2340B/Calc	mg/L	5,080	11,300	11,100	10,800	11,100	10,600	10,300	9,260	5,230	5,240	4,190	4,650	4,300
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	4.1	ND	ND	ND	3.8	5.5	0.65	5.5	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	261	219	205	215	104	ND	ND	ND	ND	ND	7	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	189	194	123	130	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7	ND	0.6	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	176	273	316	322	438	335	317	252	114	133	111	137	115
Magnesium	EPA 200.7	mg/L	1,040	1,290	1,220	1,230	1,270	1,190	1,170	1,080	897	885	936	911	832
Magnesium, Dissolved	EPA 200.7	mg/L	1,010	1,380	1,220	1,220	1,250	1,160	1,220	1,010	910	878	931	879	833
Manganese, Dissolved	EPA 200.7	µg/L	43	ND	49	ND	114	79	85	69	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	68	51	64	113	77	137	58	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	0.06	ND	ND	ND	ND	ND	0.16	0.06	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	0.2	0.8	0.05	ND	0.3	1.0	0.2	ND	2.0	2.1	1.9	2.4	2.2
Nitrate as NO3	EPA 300.0	mg/L	ND	3.6	0.2	ND	1.3	4.4	0.9	ND	8.9	9.3	8.5	11	9.8
Nitrate+Nitrite as N	EPA 300.0	mg/L	0.2	0.8	0.05	ND	0.3	1.0	0.2	ND	2.0	2.1	1.9	2.4	2.2
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	ND	2	1	1	3	1	2	ND	ND	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.04	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.11	0.10	0.11	0.11	0.10
pH (Field Test)	SM4500-H+B	pH	6.87	6.16	6.28	6.59	6.35	6.30	6.69	6.40	6.62	6.55	6.88	6.90	6.80
pH (Laboratory)	SM4500-H+B	pH (H)	7.3	6.7	6.7	6.7	7.0	6.9	6.9	7.0	7.0	7.0	7.0	7.4	7.2
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.04	ND	0.03	0.03	0.04	0.05	ND	ND	0.10	0.11	0.10	0.10	0.10
Potassium	EPA 200.7	mg/L	312	67.5	86.2	72	64.2	58	113	59.0	213	227	234	267	235
Potassium, Dissolved	EPA 200.7	mg/L	307	73.3	83.4	66	64.9	57	115	57.8	216	228	234	260	236
QC Ratio TDS/SEC	Calculation	-	0.73	0.70	0.69	0.72	0.71	0.70	0.76	0.87	0.65	0.65	0.65	0.67	0.70
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	31.2	31.5	28.9	31.2	36.2	27.3	28.2	27.2	25.7	24.1	29.8	26.2	25.5
Silica as SiO2, Dissolved	EPA 200.7	mg/L	13.5	34	33	40	35	33	33.3	28.3	16	16	12	16	12
Sodium	EPA 200.7	mg/L	9,070	6,950	7,230	7,140	7,330	6,730	7,400	6,350	7,110	6,960	8,300	7,360	6,910
Sodium, Dissolved	EPA 200.7	mg/L	8,910	6,790	7,230	6,890	7,120	6,700	7,220	6,430	6,970	6,890	8,370	7,040	6,780
Specific Conductance (E.C)	SM2510B	µmhos/cm	47,900	43,640	44,660	43,220	44,800	42,500	43,700	42,400	36,260	37,980	41,530	37,400	36,100
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	51,650	44,580	46,290	43,710	45,560	43,750	44,760	45,660	36,940	38,960	39,800	38,180	36,610
Strontium, Dissolved	EPA 200.8	µg/L	7,790	14,300	13,500	15,200	16,000	15,500	14,700	15,700	7,280	5,910	5,860	5,690	5,870
Sulfate, Dissolved	EPA 300.0	mg/L	2,600	2,330	2,330	2,440	2,390	2,250	2,300	2,290	1,890	1,980	2,120	1,910	1,880
Temperature (Field)	SM2550	° C	15.7	19.3	18.0	19.2	19.1	18.5	20.8	18.2	17.3	17.6	17.8	17.8	17.5
Total Diss. Solids	SM2540C	mg/L	35,100	30,700	30,800	31,000	31,700	29,600	33,100	36,700	23,500	24,600	26,900	25,100	25,400
Turbidity	EPA 180.1	NTU	ND	0.35	1.10	0.85	0.30	0.35	1.3	3.8	0.10	0.10	0.10	ND	0.10
Turbidity (Field)	EPA 180.1	NTU	0.04	0.77	0.51	0.870	0.7	0.98	0.61	0.83	0.31	0.25	0.38	0.36	0.59
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

[3] The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

Monitoring Well Name:			MW-3S		MW-3M							MW-3D			
Sample Collection Date:			13-Oct-20	13-Apr-21	25-Apr-18	9-Oct-18	10-Apr-19	15-Oct-19	7-Apr-20	13-Oct-20	13-Apr-21	25-Apr-18	9-Oct-18	10-Apr-19	15-Oct-19
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	91	85	91	94	98	97	94	101	100	118	118	117	101
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.29	0.19	0.15	0.17	0.17	0.18	0.15	0.19	0.17	0.49	0.48	0.58	0.52
Barium, Dissolved	EPA 200.8	µg/L	68	83.1	ND	72.0	58	76	64	57	59.0	118	135.0	112	140
Bicarbonate (as HCO3-)	SM2320B	mg/L	111	103	111	115	120	118	115	123	122	144	144	143	123
Boron, Dissolved	EPA 200.7	mg/L	2.9	2.39	2.7	2.6	2.7	3.1	2.80	2.8	2.85	1.21	1.29	1.3	1.5
Bromide, Dissolved	EPA 300.0	mg/L	49.0	43.6	48.0	53.4	56.2	53.8	51.9	53.3	52.3	53.6	58.1	54.4	59.3
Calcium	EPA 200.7	mg/L	375	305	753	829	605	630	611	468	431	2,370	2,400	2,030	2,110
Calcium, Dissolved	EPA 200.7	mg/L	375	306	728	819	629	625	580	534	424	2,260	2,260	2,010	2,130
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	13,700	12,500	15,200	14,900	16,000	15,700	15,700	15,000	14,900	16,600	17,700	15,400	17,300
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	-	ND	ND	ND	ND	ND	-	-	ND	ND	5	5	5
Color, True [2]	SM2120C	Color Units	ND	-	-	-	-	-	ND	ND	-	-	-	-	-
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	119	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	429.20	392.69	475.69	465.49	500.85	491.34	491.10	471.13	468.07	519.48	552.18	487.10	540.42
Total Anions	Calculation	Meq/L	429.20	392.69	475.69	465.49	500.85	491.34	491.10	471.13	468.07	519.48	552.18	487.10	540.42
Dissolved Cations	Calculation	Meq/L	473.73	359.22	481.52	444.78	482.84	489.58	461.40	489.33	434.96	565.93	497.36	478.71	511.11
Total Cations	Calculation	Meq/L	433.53	358.74	496.84	439.03	461.47	481.15	486.07	485.74	439.69	578.90	522.62	486.55	502.09
Fluoride, Dissolved	EPA 300.0	mg/L	1.1	0.3	0.3	0.3	0.2	0.3	0.2	1.1	0.4	0.6	1.2	ND	0.1
Hardness (as CaCO3)	SM2340B/Calc	mg/L	4,840	3,910	6,140	5,930	5,100	6,020	5,780	5,010	4,800	11,800	11,100	9,930	10,400
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2	ND	2.5
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	244	313	193	141
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	244	267	166	132
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	ND	ND	ND	ND	0.6	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	154	54.9	151	178	172	220	169	206	142	265	313	301	434
Magnesium	EPA 200.7	mg/L	837	764	1,040	938	944	1,080	1,030	933	906	1,420	1,250	1,180	1,240
Magnesium, Dissolved	EPA 200.7	mg/L	812	759	1,100	948	982	1,020	995	981	896	1,340	1,210	1,150	1,270
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	51	ND	ND	ND	33
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30
MBAS (Surfactants)	SM5540C	mg/L	ND	0.06	ND	ND	ND	ND	ND	ND	0.06	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	1.5	1.8	1.8	1.1	0.9	1.4	1.1	1.5	1.6	1.0	0.2	ND	0.2
Nitrate as NO3	EPA 300.0	mg/L	6.7	8.0	7.9	4.4	4.1	6.1	4.9	6.7	7.0	4.4	0.9	ND	0.8
Nitrate+Nitrite as N	EPA 300.0	mg/L	1.5	1.8	1.8	1.1	0.9	1.4	1.1	1.5	1.6	1.0	0.2	0.0	0.2
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	ND	ND	1	1	1	1	1	ND	2	1	2	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.10	0.08	0.05	0.05	0.05	0.05	0.04	0.05	0.06	0.03	0.01	0.03	0.03
pH (Field Test)	SM4500-H+B	pH	7.49	6.51	6.55	6.69	6.90	6.77	6.58	7.40	6.78	6.47	6.36	6.16	6.37
pH (Laboratory)	SM4500-H+B	pH (H)	7.4	7.0	7.0	7.0	7.0	7.3	7.0	7.3	7.3	6.8	6.8	6.7	7.1
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.09	0.07	0.06	0.05	0.05	0.06	0.05	0.04	0.04	ND	ND	0.04	0.05
Potassium	EPA 200.7	mg/L	315	224	239	216.0	219	247	229	280	222	73.4	78.7	75	61.3
Potassium, Dissolved	EPA 200.7	mg/L	313	223	244	224	222	252	220	307	217	72.2	71.2	74	61.6
QC Ratio TDS/SEC	Calculation	-	0.70	0.65	0.65	0.69	0.68	0.64	0.69	0.72	0.68	0.73	0.69	0.71	0.69
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	23.5	21.7	29.1	26.2	29.8	30.5	29.9	26.3	25.7	31.6	28.6	31.5	32.4
Silica as SiO2, Dissolved	EPA 200.7	mg/L	15.0	15.4	22	18	18	22	20	21.4	18.5	31	32	32	34
Sodium	EPA 200.7	mg/L	7,750	6,320	8,450	7,240	8,000	8,150	8,390	8,700	7,770	7,860	6,850	6,580	6,740
Sodium, Dissolved	EPA 200.7	mg/L	7,790	6,340	8,010	7,360	8,390	8,460	7,930	8,600	7,690	7,840	6,510	6,480	6,860
Specific Conductance (E.C)	SM2510B	µmhos/cm	37,100	34,500	40,570	40,930	41,530	42,200	41,600	41,100	40,200	43,750	44,280	43,620	44,400
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	37,090	36,360	41,510	44,320	42,300	43,250	42,020	41,600	42,440	44,700	47,030	44,100	45,440
Strontium, Dissolved	EPA 200.8	µg/L	5,830	6,550	8,700	7,750	7,740	7,950	8,020	6,820	7,550	15,200	13,700	14,900	15,200
Sulfate, Dissolved	EPA 300.0	mg/L	1,930	1,810	2,130	2,050	2,280	2,180	2,190	2,170	2,160	2,310	2,390	2,410	2,370
Temperature (Field)	SM2550	° C	18.1	17.2	17.7	17.7	17.9	18.0	17.9	19.1	17.4	19.4	19.5	19.5	18.2
Total Diss. Solids	SM2540C	mg/L	26,000	22,300	26,400	28,400	28,400	26,900	28,900	29,700	27,500	31,800	30,600	31,100	30,700
Turbidity	EPA 180.1	NTU	0.15	0.10	0.20	0.05	0.10	ND	0.05	0.10	ND	0.35	1.90	0.25	0.40
Turbidity (Field)	EPA 180.1	NTU	0.44	0.52	0.18	0.3	0.23	0.68	0.42	0.87	0.35	0.37	0.37	0.28	0.58
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

[3] The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			MW-3D			MW-4S						
Monitoring Well Name:												
Sample Collection Date:			7-Apr-20	13-Oct-20	13-Apr-21	27-Apr-18 13:04	27-Apr-18 13:19	27-Apr-18 13:34	25-Jul-18 13:40	25-Jul-18 13:55	25-Jul-18 14:10	12-Oct-18 11:35
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	117	121	117	70	70	68	68	68	68	71
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.53	0.55	0.53	0.2	0.18	0.18	0.22	0.20	0.19	0.24
Barium, Dissolved	EPA 200.8	µg/L	117	113	119	ND	ND	ND	ND	ND	ND	42.0
Bicarbonate (as HCO3-)	SM2320B	mg/L	143	148	143	85	85	83	83	83	83	87
Boron, Dissolved	EPA 200.7	mg/L	1.30	1.4	1.56	0.73	0.74	0.75	0.69	0.61	0.61	0.54
Bromide, Dissolved	EPA 300.0	mg/L	49.6	59.9	59.2	12.9	13.0	12.7	12.7	12.5	12.5	11.7
Calcium	EPA 200.7	mg/L	2,040	2,130	1,960	427	432	443	419	389	401	410
Calcium, Dissolved	EPA 200.7	mg/L	2,020	1,960	1,990	429	434	444	388	343	351	407
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	15,000	16,900	16,800	4,290	4,340	4,300	4,150	4,130	4,090	3,890
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Color, True [2]	SM2120C	Color Units	ND	ND	-	-	-	-	-	-	-	-
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	474.83	531.57	524.67	135.18	136.36	135.19	130.73	130.60	129.01	122.84
Total Anions	Calculation	Meq/L	474.83	531.57	524.67	135.18	136.36	135.19	130.73	130.60	129.01	122.84
Dissolved Cations	Calculation	Meq/L	514.48	532.28	519.70	139.50	136.36	142.77	127.80	113.22	118.93	123.07
Total Cations	Calculation	Meq/L	510.75	572.53	510.87	139.55	140.52	141.91	126.22	109.34	115.47	117.74
Fluoride, Dissolved	EPA 300.0	mg/L	0.1	1.2	0.4	0.1	ND	ND	ND	ND	ND	ND
Hardness (as CaCO3)	SM2340B/Calc	mg/L	10,100	10,800	9,940	2,420	2,420	2,490	2,050	1,850	1,910	1,720
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	3.0	2.0	2.8	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	145	84	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	108	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.50
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	300	371	274	15	15	14	17	17	17	17
Magnesium	EPA 200.7	mg/L	1,220	1,320	1,220	328	326	336	244	212	221	222
Magnesium, Dissolved	EPA 200.7	mg/L	1,240	1,190	1,140	326	327	335	314	287	293	262
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	66	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	74	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	0.09	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	ND	0.3	0.1	5.0	5.0	5.0	5.3	5.2	5.2	5.3
Nitrate as NO3	EPA 300.0	mg/L	4.4	ND	0.5	22	22	22	23	23	23	23
Nitrate+Nitrite as N	EPA 300.0	mg/L	ND	0.3	0.1	5.0	5.0	5.0	5.3	5.2	5.2	5.3
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	ND	ND	ND	ND	ND	ND	ND	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.03	0.03	0.03	0.07	0.07	0.07	0.07	0.08	0.08	0.08
pH (Field Test)	SM4500-H+B	pH	6.26	7.00	6.37	6.92	6.90	6.90	6.98	6.96	6.96	7.02
pH (Laboratory)	SM4500-H+B	pH (H)	6.8	7.1	7.1	7.1	7.1	7.2	7.1	7.1	7.1	7.1
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.04	ND	ND	0.06	0.06	0.06	0.06	0.06	0.06	0.08
Potassium	EPA 200.7	mg/L	56.8	109	64.5	30.2	30.7	31.6	32.8	27.6	27.8	28.0
Potassium, Dissolved	EPA 200.7	mg/L	58.0	97	65.3	30.8	31.1	32.4	31.9	27.8	29.0	28.2
QC Ratio TDS/SEC	Calculation	-	0.73	0.75	0.86	0.72	0.71	0.65	0.65	0.69	0.67	0.63
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	31.3	28.2	28.2	8.3	8.2	8.2	7.9	7.8	7.9	6.7
Silica as SiO2, Dissolved	EPA 200.7	mg/L	31	32.9	31.4	28	29	30	23	20	20	26
Sodium	EPA 200.7	mg/L	7,060	8,160	7,140	2,080	2,100	2,100	1,940	1,650	1,760	1,800
Sodium, Dissolved	EPA 200.7	mg/L	7,130	7,680	7,480	2,080	2,000	2,120	1,880	1,650	1,760	1,850
Specific Conductance (E.C)	SM2510B	µmhos/cm	43,300	43,800	43,700	12,910	12,770	12,760	12,350	12,230	12,300	11,780
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	44,460	44,490	46,170	13,020	13,000	12,990	12,510	12,490	12,480	11,940
Strontium, Dissolved	EPA 200.8	µg/L	14,700	13,700	16,200	3,380	3,260	3,250	2,830	2,870	2,820	3,110
Sulfate, Dissolved	EPA 300.0	mg/L	2,340	2,480	2,350	588	577	577	565	586	564	536
Temperature (Field)	SM2550	° C	19.1	19.8	18.8	17.8	17.8	17.8	17.9	17.9	17.9	17.8
Total Diss. Solids	SM2540C	mg/L	31,500	32,800	37,800 [3]	9,300	9,100	8,300	8,000	8,400	8,200	7,400
Turbidity	EPA 180.1	NTU	0.20	0.30	0.10	0.10	0.10	0.10	0.05	0.05	0.05	0.10
Turbidity (Field)	EPA 180.1	NTU	0.53	0.81	0.4	0.08	0.07	0.09	0.26	0.33	0.10	0.07
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

[3] The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			Monitoring Well Name:	MW-4S							
			Sample Collection Date:	12-Oct-18 11:50	12-Oct-18 12:05	23-Jan-19 12:46	23-Jan-19 13:01	23-Jan-19 13:16	11-Apr-19 12:34	11-Apr-19 12:49	11-Apr-19 13:08
Constituent	**Method**	**Units**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L		68	68	68	67	66	65	64	65
Aluminum, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L		0.21	0.20	0.24	0.21	0.21	0.27	0.23	0.19
Barium, Dissolved	EPA 200.8	µg/L		40.0	43.5	98.0	51.4	46.8	33.8	34.4	34.2
Bicarbonate (as HCO3-)	SM2320B	mg/L		83	83	83	82	80	79	78	79
Boron, Dissolved	EPA 200.7	mg/L		0.51	0.50	0.71	0.72	0.69	0.54	0.56	0.56
Bromide, Dissolved	EPA 300.0	mg/L		12.1	11.4	11.1	11.3	10.5	80.9	82.2	78.9
Calcium	EPA 200.7	mg/L		411	413	428	430	427	413	442	405
Calcium, Dissolved	EPA 200.7	mg/L		412	411	421	434	405	375	409	400
Carbamates by HPLC (EPA 531)	EPA 531	µg/L		-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L		4,090	3,980	4,050	4,030	3,800	4,330	4,350	4,360
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L		-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units		ND	ND	ND	ND	ND	ND	ND	ND
Color, True [2]	SM2120C	Color Units		-	-	-	-	-	-	-	-
Copper	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L		-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L		-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L		-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L		128.42	125.32	127.90	127.28	120.61	137.67	138.34	138.39
Total Anions	Calculation	Meq/L		128.42	125.32	127.90	127.28	120.61	137.67	138.34	138.39
Dissolved Cations	Calculation	Meq/L		119.56	124.44	131.43	125.88	124.34	119.71	125.66	125.87
Total Cations	Calculation	Meq/L		123.40	121.55	129.04	132.23	128.26	124.72	134.57	126.41
Fluoride, Dissolved	EPA 300.0	mg/L		ND	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Hardness (as CaCO3)	SM2340B/Calc	mg/L		2,000	1,940	2,360	2,380	2,370	2,350	2,540	2,300
Hydroxide	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L		1.31	1.28	ND	ND	ND	0.8	0.8	1.00
Lead, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L		18	18	12.6	11.6	11.2	13	12	11
Magnesium	EPA 200.7	mg/L		274	266	315	316	317	321	348	312
Magnesium, Dissolved	EPA 200.7	mg/L		269	271	317	326	310	297	317	319
Manganese, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L		5.4	5.4	5.1	5.1	5.1	4.4	4.6	4.5
Nitrate as NO3	EPA 300.0	mg/L		24	24	23	23	22	19.5	20.4	19.5
Nitrate+Nitrite as N	EPA 300.0	mg/L		5.4	5.4	5.1	5.1	5.1	4.4	4.6	4.5
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON		1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L		0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.09
pH (Field Test)	SM4500-H+B	pH		7.01	7.00	7.01	6.99	6.98	7.04	7.03	7.03
pH (Laboratory)	SM4500-H+B	pH (H)		7.0	7.1	7.0	7.0	7.0	7.0	7.0	7.0
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L		-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L		0.09	0.09	0.08	0.07	0.08	0.08	0.08	0.08
Potassium	EPA 200.7	mg/L		28.7	29.4	33.3	31.7	32.3	27.3	31.0	27.5
Potassium, Dissolved	EPA 200.7	mg/L		28.8	28.1	32.0	32.8	29.4	27.1	27.0	27.8
QC Ratio TDS/SEC	Calculation	-		0.55	0.53	0.57	0.59	0.56	0.59	0.64	0.60
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L		-	-	-	-	-	-	-	-
Salinity	SM2520B	psu		6.7	6.7	7.0	7.0	7.0	8.3	8.2	8.2
Silica as SiO2, Dissolved	EPA 200.7	mg/L		27	26	28	28	28	22	24	26
Sodium	EPA 200.7	mg/L		1,830	1,800	1,860	1,930	1,840	1,770	1,910	1,840
Sodium, Dissolved	EPA 200.7	mg/L		1,750	1,860	1,920	1,760	1,790	1,740	1,800	1,820
Specific Conductance (E.C)	SM2510B	µmhos/cm		11,740	11,730	12,300	12,300	12,300	12,890	12,800	12,740
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm		11,960	11,930	12,430	12,380	12,380	13,070	13,000	12,940
Strontium, Dissolved	EPA 200.8	µg/L		3,100	3,210	3,540	3,560	3,610	3,560	3,530	3,480
Sulfate, Dissolved	EPA 300.0	mg/L		535	536	566	564	557	619	624	614
Temperature (Field)	SM2550	° C		17.8	17.8	17.9	17.9	17.9	17.8	17.8	17.8
Total Diss. Solids	SM2540C	mg/L		6,500	6,200	6,950	7,200	6,900	7,600	8,200	7,700
Turbidity	EPA 180.1	NTU		0.10	0.10	0.05	0.05	0.05	0.10	0.25	0.15
Turbidity (Field)	EPA 180.1	NTU		0.06	0.06	0.1	0.14	0.13	0.1	0.07	0.08
Volatile Org. Compounds (524)	EPA 524	µg/L		-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L		ND	ND	ND	33	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L		-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L		-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

3 The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			Monitoring Well Name:	MW-4S						
			Sample Collection Date:	25-Jul-19 09:02	25-Jul-19 09:17	25-Jul-19 09:32	17-Oct-19 15:34	17-Oct-19 15:49	17-Oct-19 16:04	15-Jan-20 13:48
Constituent	**Method**	**Units**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L		65	65	64	58	59	59	59
Aluminum, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L		ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L		-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L		0.28	0.25	0.26	0.34	0.31	0.27	0.35
Barium, Dissolved	EPA 200.8	µg/L		31.2	31.5	31.6	31	30	27	48.1
Bicarbonate (as HCO3-)	SM2320B	mg/L		79	79	78	71	72	72	72
Boron, Dissolved	EPA 200.7	mg/L		0.47	0.47	0.48	0.62	0.12	0.13	0.60
Bromide, Dissolved	EPA 300.0	mg/L		13.7	13.3	13.1	10.9	11.2	11.1	9.0
Calcium	EPA 200.7	mg/L		319	327	344	298	287	289	386
Calcium, Dissolved	EPA 200.7	mg/L		313	319	333	294	287	289	385
Carbamates by HPLC (EPA 531)	EPA 531	µg/L		-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L		3,780	3,670	3,600	3,070	3,120	3,100	3,370
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L		-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units		ND	ND	ND	ND	ND	ND	ND
Color, True [2]	SM2120C	Color Units		-	-	-	-	-	-	-
Copper	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L		-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L		-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L		-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L		119.04	115.55	113.40	100.69	99.11	98.45	105.90
Total Anions	Calculation	Meq/L		119.04	115.55	113.40	100.69	99.11	98.45	105.90
Dissolved Cations	Calculation	Meq/L		106.64	109.63	115.08	102.11	102.07	100.19	116.01
Total Cations	Calculation	Meq/L		110.40	112.34	120.21	104.73	100.52	98.97	116.58
Fluoride, Dissolved	EPA 300.0	mg/L		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Hardness (as CaCO3)	SM2340B/Calc	mg/L		1,860	1,910	2,020	1,970	1,940	1,920	2,170
Hydroxide	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L		ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L		0.9	1.0	1.13	ND	ND	ND	1.0
Lead, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L		12.6	13.0	12.8	13.0	12.4	12.2	9.3
Magnesium	EPA 200.7	mg/L		258	266	282	247	241	241	292
Magnesium, Dissolved	EPA 200.7	mg/L		248	254	269	241	252	239	291
Manganese, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L		ND	ND	ND	ND	ND	ND	0.06
Nitrate as N	EPA 300.0	mg/L		5.0	4.9	4.8	5.2	5.3	5.2	5.2
Nitrate as NO3	EPA 300.0	mg/L		22	22	21	23	23	23	23
Nitrate+Nitrite as N	EPA 300.0	mg/L		5.0	4.9	4.8	5.2	5.3	5.2	5.2
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L		ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON		1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L		0.09	0.09	0.09	0.13	0.14	0.12	0.12
pH (Field Test)	SM4500-H+B	pH		6.95	6.94	6.94	7.02	7.00	7.00	6.99
pH (Laboratory)	SM4500-H+B	pH (H)		7.2	7.2	7.2	7.1	7.1	7.1	7.1
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L		-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L		0.09	0.09	0.09	0.13	0.13	0.13	0.11
Potassium	EPA 200.7	mg/L		23.7	24.3	26.0	24.7	23.2	23.2	25.2
Potassium, Dissolved	EPA 200.7	mg/L		22.6	23.6	25.1	24.1	27.9	23.0	25.2
QC Ratio TDS/SEC	Calculation	-		0.71	0.66	0.72	0.52	0.50	0.53	0.63
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L		-	-	-	-	-	-	-
Salinity	SM2520B	psu		6.4	6.4	6.3	6.4	6.3	6.3	6.7
Silica as SiO2, Dissolved	EPA 200.7	mg/L		23	24	25	29	29	28	30
Sodium	EPA 200.7	mg/L		1,670	1,690	1,820	1,580	1,510	1,470	1,670
Sodium, Dissolved	EPA 200.7	mg/L		1,610	1,660	1,740	1,540	1,520	1,510	1,660
Specific Conductance (E.C)	SM2510B	µmhos/cm		11,200	11,190	11,140	9,840	9,750	9,760	10,540
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm		11,320	11,280	11,250	9,661	9,677	9,706	10,730
Strontium, Dissolved	EPA 200.8	µg/L		2,990	3,100	3,110	2,350	2,450	2,620	3,050
Sulfate, Dissolved	EPA 300.0	mg/L		508	490	483	443	450	446	440
Temperature (Field)	SM2550	° C		17.8	17.8	17.8	17.7	17.7	17.7	17.8
Total Diss. Solids	SM2540C	mg/L		7,900	7,400	8,000	5,100	4,900	5,200	6,620
Turbidity	EPA 180.1	NTU		0.15	0.15	0.15	ND	ND	ND	0.05
Turbidity (Field)	EPA 180.1	NTU		0.11	0.09	0.07	0.15	0.07	0.07	0.07
Volatile Org. Compounds (524)	EPA 524	µg/L		-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L		-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L		-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

3 The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			MW-4S						MW-4M	
		Sample Collection Date:	15-Jan-20 14:03	15-Jan-20 14:18	08-Apr-20 14:38	30-Jun-20 15:02	15-Oct-20 14:34	15-Apr-21 14:35	27-Apr-18 11:47	27-Apr-18 12:02
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	58	58	56	59	58	57	97	96
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	0.02	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.31	0.30	0.30	0.35	0.49	0.45	0.089	0.094
Barium, Dissolved	EPA 200.8	µg/L	52.4	53.5	38	21	20.0	19.2	ND	ND
Bicarbonate (as HCO3-)	SM2320B	mg/L	71	71	68	72	71	70	118	117
Boron, Dissolved	EPA 200.7	mg/L	0.59	0.59	0.50	0.46	0.42	0.36	1.6	1.6
Bromide, Dissolved	EPA 300.0	mg/L	9.9	10.0	11.1	9.4	8.6	7.1	36.7	35.1
Calcium	EPA 200.7	mg/L	388	396	342	269	234	189	1,220	1,240
Calcium, Dissolved	EPA 200.7	mg/L	389	392	334	274	211	189	1,240	1,230
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	3,620	3,650	3,280	3,060	2,350	1,940	12,800	12,300
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	-	-	-	3	ND	ND
Color, True [2]	SM2120C	Color Units	-	-	ND	ND	ND	-	-	-
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	113.69	114.61	103.81	96.64	75.51	62.20	398.57	384.42
Total Anions	Calculation	Meq/L	113.69	114.61	103.81	96.64	75.51	62.20	398.57	384.42
Dissolved Cations	Calculation	Meq/L	115.36	116.01	105.72	89.86	72.66	58.47	406.67	404.78
Total Cations	Calculation	Meq/L	114.94	116.03	107.77	87.90	76.18	59.65	403.52	409.19
Fluoride, Dissolved	EPA 300.0	mg/L	0.1	0.1	0.1	0.1	0.5	0.2	ND	ND
Hardness (as CaCO3)	SM2340B/Calc	mg/L	2,170	2,200	1,950	1,520	1,140	1,020	7,120	7,220
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	1.1	1.6	ND	ND	1.1	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	8.9	8.6	12.2	17.6	14.7	8	42	40
Magnesium	EPA 200.7	mg/L	292	295	265	206	136	133	986	1,000
Magnesium, Dissolved	EPA 200.7	mg/L	286	292	261	211	170	123	996	1,000
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	6	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	11	ND	7	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	0.07	0.06	ND	ND	ND	0.05	ND	ND
Nitrate as N	EPA 300.0	mg/L	5.2	5.3	4.9	5.2	5.0	5.6	1.4	1.4
Nitrate as NO3	EPA 300.0	mg/L	23	23	22	23	22	25	6.4	6.4
Nitrate+Nitrite as N	EPA 300.0	mg/L	5.2	5.3	4.9	5.2	5.0	5.6	1.4	1.4
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	1	1	ND	ND	2
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.12	0.12	0.12	0.15	0.20	0.18	0.04	0.04
pH (Field Test)	SM4500-H+B	pH	6.97	6.95	7.11	7.08	7.15	7.17	6.64	6.64
pH (Laboratory)	SM4500-H+B	pH (H)	7.1	7.2	7.1	7.4	7.1	7.3	6.9	6.9
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.12	0.11	0.12	0.14	0.19	0.19	0.03	0.03
Potassium	EPA 200.7	mg/L	25.3	25.6	23.4	21.0	21.5	17.0	70.8	72.1
Potassium, Dissolved	EPA 200.7	mg/L	24.8	25.2	22.9	21.4	23.3	16.9	71.6	72.4
QC Ratio TDS/SEC	Calculation	-	0.65	0.50	0.61	0.59	0.50	0.64	0.68	0.68
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	6.7	6.7	6.0	5.4	4.1	3.4	23.5	23.9
Silica as SiO2, Dissolved	EPA 200.7	mg/L	30	30	27	26.0	26.8	26.0	30	30
Sodium	EPA 200.7	mg/L	1,630	1,640	1,570	1,310	1,210	909	5,970	6,050
Sodium, Dissolved	EPA 200.7	mg/L	1,650	1,650	1,540	1,340	1,090	902	6,000	5,960
Specific Conductance (E.C)	SM2510B	µmhos/cm	10,740	10,750	10,590	9,250	7,370	6,240	33,510	34,050
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	10,870	10,870	10,640	9,412	7,544	6,400	34,850	34,860
Strontium, Dissolved	EPA 200.8	µg/L	3,050	2,980	3,160	2,320	1,820	1,610	10,400	10,300
Sulfate, Dissolved	EPA 300.0	mg/L	476	479	447	415	318	275	1,680	1,680
Temperature (Field)	SM2550	° C	17.8	17.7	17.7	17.8	17.8	17.7	18.0	18.0
Total Diss. Solids	SM2540C	mg/L	7,000	5,400	6,500	5,500	3,700	4,000	22,700	23,100
Turbidity	EPA 180.1	NTU	0.05	0.05	0.05	0.05	0.10	ND	0.10	0.05
Turbidity (Field)	EPA 180.1	NTU	0.08	0.09	0.07	0.1	0	0.08	0.07	0.06
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

3 The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			Monitoring Well Name:	MW-4M						
			Sample Collection Date:	27-Apr-18 12:17	25-Jul-18 12:22	25-Jul-18 12:37	25-Jul-18 12:52	12-Oct-18 10:04	12-Oct-18 10:19	12-Oct-18 10:34	23-Jan-19 11:40
Constituent	**Method**	**Units**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L		97	96	97	96	97	97	97	97
Aluminum, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L		0.090	0.09	0.09	0.09	0.088	0.087	0.088	0.10
Barium, Dissolved	EPA 200.8	µg/L		ND	101	103	103	104	100	104	87.0
Bicarbonate (as HCO3-)	SM2320B	mg/L		118	117	118	117	118	118	118	118
Boron, Dissolved	EPA 200.7	mg/L		1.6	1.45	1.46	1.47	1.17	1.29	1.26	1.54
Bromide, Dissolved	EPA 300.0	mg/L		36.4	39.4	43.7	41.3	40.0	40.6	40.0	42.1
Calcium	EPA 200.7	mg/L		1,240	1,330	1,310	1,310	1,290	1,330	1,310	1,170
Calcium, Dissolved	EPA 200.7	mg/L		1,230	1,270	1,290	1,240	1,290	1,320	1,320	1,160
Carbamates by HPLC (EPA 531)	EPA 531	µg/L		-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L		12,700	12,200	14,000	12,600	12,500	12,800	12,600	12,800
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L		-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units		ND	ND	ND	ND	ND	ND	ND	ND
Color, True [2]	SM2120C	Color Units		-	-	-	-	-	-	-	-
Copper	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L		-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L		-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L		-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L		395.55	379.94	435.79	392.30	389.68	398.15	392.30	398.80
Total Anions	Calculation	Meq/L		395.55	379.94	435.79	392.30	389.68	398.15	392.30	398.80
Dissolved Cations	Calculation	Meq/L		401.27	395.61	385.43	379.71	371.77	369.16	365.16	380.26
Total Cations	Calculation	Meq/L		404.41	407.29	379.78	383.80	375.13	370.13	379.00	393.79
Fluoride, Dissolved	EPA 300.0	mg/L		ND	ND	ND	ND	0.1	ND	ND	0.1
Hardness (as CaCO3)	SM2340B/Calc	mg/L		7,240	7,220	7,040	7,080	6,370	6,340	6,410	6,790
Hydroxide	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L		ND	ND	ND	ND	0.5	ND	0.5	ND
Lead, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L		41	47	47	47	55	54	54	39.0
Magnesium	EPA 200.7	mg/L		1,000	947	916	922	858	848	862	940
Magnesium, Dissolved	EPA 200.7	mg/L		984	957	949	936	855	869	874	908
Manganese, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L		1.6	0.8	0.8	0.9	0.8	0.8	0.8	0.8
Nitrate as NO3	EPA 300.0	mg/L		6.9	3.5	3.5	4	3.5	3.5	ND	3.5
Nitrate+Nitrite as N	EPA 300.0	mg/L		1.6	0.8	0.8	0.9	0.8	0.8	0.8	0.8
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON		ND	ND	ND	ND	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L		0.04	0.04	0.04	0.04	0.03	0.03	0.03	0.03
pH (Field Test)	SM4500-H+B	pH		6.64	6.68	6.68	6.68	6.72	6.72	6.72	6.69
pH (Laboratory)	SM4500-H+B	pH (H)		6.8	6.8	6.8	6.9	6.8	6.8	7.0	6.8
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L		-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L		0.02	0.03	0.02	0.03	0.04	0.04	0.04	0.04
Potassium	EPA 200.7	mg/L		72.5	78.0	76.7	78.2	86.2	83.2	83.8	89.0
Potassium, Dissolved	EPA 200.7	mg/L		71.7	80.2	77.1	78.1	83.8	82.0	79.6	90.4
QC Ratio TDS/SEC	Calculation	-		0.67	0.74	0.74	0.70	0.67	0.70	0.64	0.66
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L		-	-	-	-	-	-	-	-
Salinity	SM2520B	psu		23.9	23.1	23.2	22.8	21.2	20.0	21.1	21.9
Silica as SiO2, Dissolved	EPA 200.7	mg/L		29	26	24	26	30	32	30	29
Sodium	EPA 200.7	mg/L		5,940	6,000	5,450	5,530	5,470	5,330	5,530	5,880
Sodium, Dissolved	EPA 200.7	mg/L		5,910	5,780	5,540	5,490	5,400	5,280	5,180	5,640
Specific Conductance (E.C)	SM2510B	µmhos/cm		34,030	32,950	33,130	32,650	33,760	32,090	33,720	34,850
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm		34,830	33,790	33,810	33,810	34,600	34,620	34,640	35,150
Strontium, Dissolved	EPA 200.8	µg/L		10,300	9,450	9,530	9,330	11,100	10,800	10,800	10,400
Sulfate, Dissolved	EPA 300.0	mg/L		1,670	1,600	1,840	1,650	1,660	1,660	1,650	1,690
Temperature (Field)	SM2550	° C		18.0	18.0	18.0	18.0	18.1	18.1	18.1	18.0
Total Diss. Solids	SM2540C	mg/L		22,800	24,400	24,400	22,900	22,500	22,400	21,700	23,100
Turbidity	EPA 180.1	NTU		0.10	0.10	0.10	0.10	0.05	0.05	0.05	0.05
Turbidity (Field)	EPA 180.1	NTU		0.06	0.08	0.11	0.09	0.07	0.05	0.05	0.09
Volatile Org. Compounds (524)	EPA 524	µg/L		-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L		-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L		-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

3 The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			Monitoring Well Name:	MW-4M							
			Sample Collection Date:	23-Jan-19 11:55	23-Jan-19 12:10	11-Apr-19 11:34	11-Apr-19 11:49	11-Apr-19 12:04	24-Jul-19 14:48	24-Jul-19 15:03	24-Jul-19 15:18
Constituent	**Method**	**Units**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L		97	97	96	97	98	98	97	94
Aluminum, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L		0.098	0.094	0.11	0.11	0.11	0.097	0.10	0.10
Barium, Dissolved	EPA 200.8	µg/L		88.0	86.0	78	78	77	94	94	93
Bicarbonate (as HCO3-)	SM2320B	mg/L		118	118	117	118	120	120	118	115
Boron, Dissolved	EPA 200.7	mg/L		1.77	1.69	1.4	1.3	1.3	1.1	1.1	1.1
Bromide, Dissolved	EPA 300.0	mg/L		42.5	42.0	45.4	36.2	46.2	39.6	44.3	41.3
Calcium	EPA 200.7	mg/L		1,140	1,140	1,090	1,090	1,100	1,060	1,060	1,120
Calcium, Dissolved	EPA 200.7	mg/L		1,170	1,160	1,110	1,130	1,080	1,060	1,050	1,090
Carbamates by HPLC (EPA 531)	EPA 531	µg/L		-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L		12,800	12,600	12,900	13,000	12,700	11,700	12,500	12,000
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L		-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units		ND	ND	ND	ND	3	ND	ND	ND
Color, True [2]	SM2120C	Color Units		-	-	-	-	-	-	-	-
Copper	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L		-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L		-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L		-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L		397.97	392.53	403.09	405.82	397.50	363.16	387.59	372.40
Total Anions	Calculation	Meq/L		397.97	392.53	403.09	405.82	397.50	363.16	387.59	372.40
Dissolved Cations	Calculation	Meq/L		385.93	401.46	373.83	384.55	367.03	356.15	350.51	356.08
Total Cations	Calculation	Meq/L		376.29	381.20	370.56	367.20	371.37	357.48	349.51	370.92
Fluoride, Dissolved	EPA 300.0	mg/L		0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
Hardness (as CaCO3)	SM2340B/Calc	mg/L		6,590	6,710	5,820	5,740	5,780	6,140	6,090	6,450
Hydroxide	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L		39.0	37.0	41.2	38.8	40.0	40	38	37
Magnesium	EPA 200.7	mg/L		909	937	869	882	872	847	835	883
Magnesium, Dissolved	EPA 200.7	mg/L		934	938	875	894	859	847	832	854
Manganese, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L		0.8	0.8	0.7	0.7	0.7	0.6	0.8	0.6
Nitrate as NO3	EPA 300.0	mg/L		3.5	3.5	3.1	3.0	3.0	2.7	3.5	2.7
Nitrate+Nitrite as N	EPA 300.0	mg/L		0.8	0.8	0.7	0.7	0.7	0.6	0.8	0.6
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON		1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L		0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04
pH (Field Test)	SM4500-H+B	pH		6.70	6.71	6.77	6.78	6.78	6.70	6.70	6.70
pH (Laboratory)	SM4500-H+B	pH (H)		6.8	6.8	6.7	6.8	6.7	7.0	7.0	7.0
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L		-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L		0.04	0.04	0.04	0.04	0.06	0.04	0.04	0.04
Potassium	EPA 200.7	mg/L		90.2	90.2	75.3	72.2	78.1	67.6	66.5	71.0
Potassium, Dissolved	EPA 200.7	mg/L		89.9	91.5	76.9	72.8	74.3	66.7	66.7	67.9
QC Ratio TDS/SEC	Calculation	-		0.65	0.65	0.68	0.68	0.66	0.60	0.63	0.60
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L		-	-	-	-	-	-	-	-
Salinity	SM2520B	psu		21.9	21.9	23.7	23.7	23.8	20.7	20.7	20.5
Silica as SiO2, Dissolved	EPA 200.7	mg/L		26	31	26	23	22	25	24	26
Sodium	EPA 200.7	mg/L		5,570	5,630	5,580	5,480	5,580	5,360	5,200	5,530
Sodium, Dissolved	EPA 200.7	mg/L		5,710	6,070	5,620	5,810	5,530	5,330	5,240	5,280
Specific Conductance (E.C)	SM2510B	µmhos/cm		34,780	34,810	33,760	33,760	33,860	33,100	33,100	32,800
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm		35,130	35,150	34,650	34,520	34,580	33,660	33,660	33,650
Strontium, Dissolved	EPA 200.8	µg/L		10,700	10,400	10,300	10,300	10,100	10,700	11,000	10,900
Sulfate, Dissolved	EPA 300.0	mg/L		1,650	1,660	1,760	1,760	1,760	1,470	1,550	1,510
Temperature (Field)	SM2550	° C		18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Total Diss. Solids	SM2540C	mg/L		22,500	22,800	22,800	22,900	22,200	19,900	20,700	19,600
Turbidity	EPA 180.1	NTU		0.05	0.05	0.15	0.15	0.10	0.20	0.20	0.20
Turbidity (Field)	EPA 180.1	NTU		0.15	0.06	0.08	0.11	0.06	0.1	0.16	0.07
Volatile Org. Compounds (524)	EPA 524	µg/L		-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L		-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L		-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
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[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

3 The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			Monitoring Well Name:	MW-4M						
			Sample Collection Date:	16-Oct-19 14:01	16-Oct-19 14:16	16-Oct-19 14:36	15-Jan-20 12:40	15-Jan-20 12:55	15-Jan-20 13:10	08-Apr-20 13:18	30-Jun-20 14:04
Constituent	**Method**	**Units**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L		96	92	92	91	90	92	90	93
Aluminum, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L		0.14	0.16	0.14	0.088	0.089	0.10	0.097	0.090
Barium, Dissolved	EPA 200.8	µg/L		90	99	102	87.9	84.6	84.6	91	73
Bicarbonate (as HCO3-)	SM2320B	mg/L		117	112	112	111	110	112	110	113
Boron, Dissolved	EPA 200.7	mg/L		1.50	1.54	1.51	1.86	1.78	2.0	1.5	1.5
Bromide, Dissolved	EPA 300.0	mg/L		40.1	40.9	40.4	41.3	42.7	41.0	40.1	36.2
Calcium	EPA 200.7	mg/L		1,120	1,120	1,170	1,230	1,250	1,030	1,140	1,190
Calcium, Dissolved	EPA 200.7	mg/L		1,080	1,130	1,130	1,240	1,250	985	1,150	1,190
Carbamates by HPLC (EPA 531)	EPA 531	µg/L		-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L		11,900	12,100	12,100	13,100	13,400	13,000	12,300	12,700
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L		-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units		ND	ND	ND	ND	ND	ND	-	-
Color, True [2]	SM2120C	Color Units		-	-	-	-	-	-	ND	ND
Copper	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L		-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L		-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L		-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L		371.91	378.31	379.99	407.75	417.04	407.75	384.12	394.56
Total Anions	Calculation	Meq/L		371.91	378.31	379.99	407.75	417.04	407.75	384.12	394.56
Dissolved Cations	Calculation	Meq/L		361.59	382.12	366.62	411.96	423.26	431.81	409.65	383.75
Total Cations	Calculation	Meq/L		357.69	383.72	375.04	417.54	419.81	470.99	408.49	386.26
Fluoride, Dissolved	EPA 300.0	mg/L		ND	ND	ND	0.1	ND	ND	0.0	ND
Hardness (as CaCO3)	SM2340B/Calc	mg/L		8,470	8,500	7,890	7,210	7,290	8,780	6,920	6,740
Hydroxide	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L		ND	22	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L		ND	ND	ND	ND	0.5	0.6	ND	ND
Lead, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L		52	51	52	33.4	32.3	32.4	43	54.2
Magnesium	EPA 200.7	mg/L		888	942	924	1,000	1,010	1,190	987	915
Magnesium, Dissolved	EPA 200.7	mg/L		895	940	905	1,000	1,020	1,110	1,000	900
Manganese, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L		0.12	0.13	0.13	0.15	0.12	0.10	0.05	ND
Nitrate as N	EPA 300.0	mg/L		0.9	0.8	1.1	0.7	0.6	0.6	0.9	0.6
Nitrate as NO3	EPA 300.0	mg/L		4	3.5	4.9	3.1	2.7	2.7	4	2.7
Nitrate+Nitrite as N	EPA 300.0	mg/L		0.9	0.8	1.1	0.7	0.6	0.6	0.9	0.6
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON		1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L		0.04	0.04	0.04	0.03	0.03	0.03	0.03	0.04
pH (Field Test)	SM4500-H+B	pH		6.64	6.64	6.64	6.65	6.65	6.65	6.74	6.66
pH (Laboratory)	SM4500-H+B	pH (H)		6.8	6.8	6.8	7.2	7.2	7.2	6.8	7.2
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L		-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L		0.04	0.04	0.04	0.03	0.03	0.03	0.04	0.03
Potassium	EPA 200.7	mg/L		67.4	72.5	71.0	78.3	78.7	95.3	77.6	74.2
Potassium, Dissolved	EPA 200.7	mg/L		68.8	72.0	69.5	78.5	79.3	86.5	78.9	74.7
QC Ratio TDS/SEC	Calculation	-		0.63	0.67	0.66	0.64	0.70	0.66	0.66	0.71
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L		-	-	-	-	-	-	-	-
Salinity	SM2520B	psu		23.2	23.3	23.3	24.0	23.8	23.7	21.8	21.6
Silica as SiO2, Dissolved	EPA 200.7	mg/L		28	29	28	30	31	36	28	29.8
Sodium	EPA 200.7	mg/L		5,220	5,710	5,490	6,250	6,260	6,164	6,170	5,740
Sodium, Dissolved	EPA 200.7	mg/L		5,340	5,670	5,380	6,110	6,320	6,650	6,160	5,710
Specific Conductance (E.C)	SM2510B	µmhos/cm		33,400	33,800	33,400	34,100	33,900	33,800	34,700	33,000
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm		34,030	34,020	34,030	35,290	35,260	35,270	35,510	34,160
Strontium, Dissolved	EPA 200.8	µg/L		10,300	10,300	10,600	9,980	9,970	10,300	10,600	10,400
Sulfate, Dissolved	EPA 300.0	mg/L		1,620	1,660	1,740	1,720	1,760	1,710	1,670	1,630
Temperature (Field)	SM2550	° C		17.9	17.9	17.9	17.9	18.0	18.0	17.9	18.0
Total Diss. Solids	SM2540C	mg/L		21,200	22,800	21,900	21,700	23,600	22,400	23,000	23,400
Turbidity	EPA 180.1	NTU		ND	ND	ND	0.05	0.05	0.05	0.05	0.05
Turbidity (Field)	EPA 180.1	NTU		0.060	0.070	0.070	0.19	0.16	0.12	0.06	0.09
Volatile Org. Compounds (524)	EPA 524	µg/L		-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L		-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L		-	-	-	-	-	-	-	-

Notes:

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[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

3 The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			Monitoring Well Name:	MW-4M	MW-4D					
			Sample Collection Date:	15-Oct-20 13:33	15-Apr-21 13:34	27-Apr-18 09:32	27-Apr-18 09:47	27-Apr-18 10:02	25-Jul-18 10:12	25-Jul-18 10:27	25-Jul-18 10:42
Constituent	**Method**	**Units**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L		106	94	118	116	116	114	114	114
Aluminum, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L		0.02	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L		0.11	0.10	0.36	0.36	0.35	0.36	0.35	0.35
Barium, Dissolved	EPA 200.8	µg/L		77	90.0	117	114	122	139	136	147
Bicarbonate (as HCO3-)	SM2320B	mg/L		129	115	144	142	142	139	139	139
Boron, Dissolved	EPA 200.7	mg/L		1.6	1.4	1.1	1.0	1.0	0.87	0.82	0.88
Bromide, Dissolved	EPA 300.0	mg/L		47.4	40.3	43.0	43.5	44.1	52.6	52.5	50.9
Calcium	EPA 200.7	mg/L		1,160	1,000	3,020	2,930	2,990	2,790	2,900	2,940
Calcium, Dissolved	EPA 200.7	mg/L		1,080	876	2,960	2,980	3,030	2,800	2,890	2,990
Carbamates by HPLC (EPA 531)	EPA 531	µg/L		-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L		12,400	11,600	14,900	14,900	15,100	15,700	15,500	15,500
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L		-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units		-	3	3	ND	ND	3	3	3
Color, True [2]	SM2120C	Color Units		ND	-	-	-	-	-	-	-
Copper	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L		-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L		-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L		-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L		388.38	365.30	463.47	464.07	469.71	487.90	481.63	481.61
Total Anions	Calculation	Meq/L		388.38	365.30	463.47	464.07	469.71	487.90	481.63	481.61
Dissolved Cations	Calculation	Meq/L		391.52	352.05	482.35	492.48	490.08	449.04	460.90	467.89
Total Cations	Calculation	Meq/L		403.51	361.39	493.30	477.42	488.52	439.94	475.13	465.53
Fluoride, Dissolved	EPA 300.0	mg/L		0.3	0.1	0.1	ND	ND	ND	ND	ND
Hardness (as CaCO3)	SM2340B/Calc	mg/L		5,900	5,830	7,770	11,800	12,000	11,300	11,800	11,800
Hydroxide	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L		ND	ND	ND	ND	ND	ND	3.6	3
Iron	EPA 200.7	µg/L		ND	ND	ND	33	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L		ND	0.1	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L		54	30	226	218	226	307	298	308
Magnesium	EPA 200.7	mg/L		727	808	1,110	1,080	1,110	1,040	1,100	1,080
Magnesium, Dissolved	EPA 200.7	mg/L		888	752	1,090	1,090	1,120	1,040	1,070	1,100
Manganese, Dissolved	EPA 200.7	µg/L		ND	32	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L		0.05	0.05	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L		0.7	0.7	0.9	0.9	0.9	0.1	0.1	0.1
Nitrate as NO3	EPA 300.0	mg/L		ND	3.1	3.9	3.9	3.9	ND	ND	ND
Nitrate+Nitrite as N	EPA 300.0	mg/L		0.7	0.7	0.9	0.9	0.9	0.1	0.1	0.1
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON		1	ND	ND	ND	2	ND	ND	ND
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L		0.04	0.03	0.02	0.02	0.02	0.02	0.02	0.02
pH (Field Test)	SM4500-H+B	pH		6.75	6.67	6.55	6.55	6.55	6.58	6.58	6.58
pH (Laboratory)	SM4500-H+B	pH (H)		6.8	7.0	6.8	6.8	6.8	6.7	6.8	6.8
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L		-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L		0.02	0.04	ND	ND	ND	ND	ND	ND
Potassium	EPA 200.7	mg/L		90.6	69.1	54.9	52.8	52.2	60.8	59.4	61.6
Potassium, Dissolved	EPA 200.7	mg/L		105	67.2	52.7	52.8	53.9	56.9	61.2	59.9
QC Ratio TDS/SEC	Calculation	-		0.66	0.67	0.75	0.72	0.74	0.81	0.80	0.81
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L		-	-	-	-	-	-	-	-
Salinity	SM2520B	psu		21.3	21.0	27.9	27.8	28.0	28.0	28.1	28.1
Silica as SiO2, Dissolved	EPA 200.7	mg/L		28.1	23.8	36	34	37	31	30	32
Sodium	EPA 200.7	mg/L		6,510	5,590	5,740	5,540	5,670	4,910	5,480	5,250
Sodium, Dissolved	EPA 200.7	mg/L		6,020	5,620	5,600	5,810	5,640	5,110	5,220	5,210
Specific Conductance (E.C)	SM2510B	µmhos/cm		33,900	33,500	39,050	38,940	39,220	39,290	39,300	39,330
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm		35,000	34,760	40,180	40,160	40,140	40,280	40,270	40,300
Strontium, Dissolved	EPA 200.8	µg/L		10,000	12,500	15,800	15,400	15,700	15,300	14,900	15,000
Sulfate, Dissolved	EPA 300.0	mg/L		1,720	1,720	1,930	1,960	1,960	2,020	1,990	1,990
Temperature (Field)	SM2550	° C		18.0	17.9	19.9	20.0	20.0	20.0	20.0	20.0
Total Diss. Solids	SM2540C	mg/L		22,300	22,600	29,400	28,200	28,900	32,900	32,400	32,400
Turbidity	EPA 180.1	NTU		0.15	ND	0.25	0.35	0.15	0.30	0.25	0.30
Turbidity (Field)	EPA 180.1	NTU		0	0.09	0.07	0.1	0.14	0.13	0.130	0.09
Volatile Org. Compounds (524)	EPA 524	µg/L		-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L		-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L		-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
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Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			Monitoring Well Name:	MW-4D							
			Sample Collection Date:	11-Oct-18 15:16	11-Oct-18 15:31	11-Oct-18 15:46	23-Jan-19 09:36	23-Jan-19 09:51	23-Jan-19 10:06	11-Apr-19 09:40	11-Apr-19 09:55
Constituent	**Method**	**Units**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L		114	113	113	116	116	116	117	117
Aluminum, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L		0.34	0.32	0.35	0.40	0.48	0.37	0.52	0.52
Barium, Dissolved	EPA 200.8	µg/L		155	152.0	156.0	148	149	149	116	116
Bicarbonate (as HCO3-)	SM2320B	mg/L		139	138	138	142	142	142	143	143
Boron, Dissolved	EPA 200.7	mg/L		0.38	0.42	0.43	1.00	0.77	0.98	0.76	0.77
Bromide, Dissolved	EPA 300.0	mg/L		50.2	52.9	49.8	52.2	52.7	51.7	52.3	56.0
Calcium	EPA 200.7	mg/L		2,890	2,870	2,890	3,000	2,960	2,930	2,740	2,680
Calcium, Dissolved	EPA 200.7	mg/L		2,850	2,850	2,880	3,000	2,880	2,900	2,680	2,660
Carbamates by HPLC (EPA 531)	EPA 531	µg/L		-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L		15,300	16,100	15,100	15,200	15,100	15,000	15,700	15,600
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L		-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units		3	3	ND	ND	ND	ND	ND	ND
Color, True [2]	SM2120C	Color Units		-	-	-	-	-	-	-	-
Copper	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L		-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L		-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L		-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L		475.13	497.92	469.45	471.53	469.76	466.92	485.44	483.19
Total Anions	Calculation	Meq/L		475.13	497.92	469.45	471.53	469.76	466.92	485.44	483.19
Dissolved Cations	Calculation	Meq/L		436.94	456.63	439.64	463.19	443.04	449.59	452.50	432.62
Total Cations	Calculation	Meq/L		453.22	454.81	438.24	474.23	465.62	462.56	445.36	433.33
Fluoride, Dissolved	EPA 300.0	mg/L		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Hardness (as CaCO3)	SM2340B/Calc	mg/L		10,400	10,600	10,800	11,700	11,500	11,400	6,340	9,330
Hydroxide	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L		356	342	333	293	267	268	250	257
Magnesium	EPA 200.7	mg/L		936	950	953	1,020	1,010	996	967	949
Magnesium, Dissolved	EPA 200.7	mg/L		915	948	919	1,050	980	973	949	935
Manganese, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L		0.1	0.2	0.1	ND	ND	ND	ND	ND
Nitrate as NO3	EPA 300.0	mg/L		0.4	0.9	0.4	ND	ND	ND	ND	ND
Nitrate+Nitrite as N	EPA 300.0	mg/L		0.1	0.2	0.1	ND	ND	ND	ND	ND
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON		1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L		0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02
pH (Field Test)	SM4500-H+B	pH		6.61	6.61	6.61	6.60	6.60	6.60	6.65	6.65
pH (Laboratory)	SM4500-H+B	pH (H)		6.8	6.7	6.7	6.8	6.8	6.7	6.7	6.7
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L		-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L		0.03	0.03	0.03	0.02	0.02	0.02	0.03	0.03
Potassium	EPA 200.7	mg/L		56.2	61.4	61.9	69.4	64.3	65.1	57.0	54.4
Potassium, Dissolved	EPA 200.7	mg/L		58.6	58.7	58.5	68.6	63.3	64.8	59.6	56.6
QC Ratio TDS/SEC	Calculation	-		0.68	0.70	0.68	0.69	0.67	0.69	0.70	0.69
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L		-	-	-	-	-	-	-	-
Salinity	SM2520B	psu		25.3	23.6	24.6	25.2	25.2	25.3	27.8	27.8
Silica as SiO2, Dissolved	EPA 200.7	mg/L		33	34	33	34	32	31	27	27
Sodium	EPA 200.7	mg/L		5,300	5,330	4,920	5,490	5,360	5,350	5,240	5,060
Sodium, Dissolved	EPA 200.7	mg/L		5,010	5,400	5,030	5,180	4,990	5,130	5,500	5,090
Specific Conductance (E.C)	SM2510B	µmhos/cm		39,650	37,230	38,630	39,580	39,590	39,680	39,040	38,940
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm		40,610	40,630	40,650	40,070	40,060	40,070	40,080	40,090
Strontium, Dissolved	EPA 200.8	µg/L		17,200	16,600	17,300	16,500	16,500	16,700	15,700	15,612
Sulfate, Dissolved	EPA 300.0	mg/L		1,950	1,960	1,950	1,910	1,960	1,960	1,960	1,920
Temperature (Field)	SM2550	° C		19.9	19.9	20.0	19.9	19.9	19.9	19.9	19.9
Total Diss. Solids	SM2540C	mg/L		26,900	26,000	26,100	27,200	26,700	27,500	27,500	27,000
Turbidity	EPA 180.1	NTU		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.10
Turbidity (Field)	EPA 180.1	NTU		0.10	0.11	0.15	0.1	0.12	0.1	0.18	0.08
Volatile Org. Compounds (524)	EPA 524	µg/L		-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L		-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L		-	-	-	-	-	-	-	-

Notes:

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Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			Monitoring Well Name:	MW-4D							
			Sample Collection Date:	11-Apr-19 10:10	24-Jul-19 12:40	24-Jul-19 12:55	24-Jul-19 13:10	16-Oct-19 11:27	16-Oct-19 11:42	16-Oct-19 11:57	15-Jan-20 10:38
Constituent	**Method**	**Units**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L		117	112	106	113	96	110	108	111
Aluminum, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L		0.55	0.39	0.41	0.45	0.44	0.52	0.50	0.38
Barium, Dissolved	EPA 200.8	µg/L		115	133	137	137	157	146	141	133
Bicarbonate (as HCO3-)	SM2320B	mg/L		143	137	129	138	117	134	132	135
Boron, Dissolved	EPA 200.7	mg/L		0.80	0.71	0.69	0.65	0.9	0.9	0.9	1.10
Bromide, Dissolved	EPA 300.0	mg/L		50.7	52.7	52.6	52.1	55.8	51.8	50.3	50.1
Calcium	EPA 200.7	mg/L		2,640	3,160	3,120	3,100	2,940	2,850	2,690	3,060
Calcium, Dissolved	EPA 200.7	mg/L		2,610	3,160	3,100	3,090	2,720	2,740	2,650	3,060
Carbamates by HPLC (EPA 531)	EPA 531	µg/L		-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L		15,600	15,900	15,500	15,200	15,300	14,800	15,100	15,600
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L		-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units		ND	ND	ND	ND	ND	ND	ND	ND
Color, True [2]	SM2120C	Color Units		-	-	-	-	-	-	-	-
Copper	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L		-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L		-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L		-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L		483.91	492.88	479.59	470.44	475.93	463.27	469.99	483.95
Total Anions	Calculation	Meq/L		483.91	492.88	479.59	470.44	475.93	463.27	469.99	483.95
Dissolved Cations	Calculation	Meq/L		412.51	474.55	467.11	457.18	441.25	435.26	434.12	506.33
Total Cations	Calculation	Meq/L		417.09	488.37	475.29	459.64	462.83	454.92	442.56	502.50
Fluoride, Dissolved	EPA 300.0	mg/L		0.1	0.1	ND	ND	0.1	0.1	0.1	0.2
Hardness (as CaCO3)	SM2340B/Calc	mg/L		9,750	10,800	10,600	10,500	11,800	11,500	10,900	12,200
Hydroxide	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L		281	236	230	226	382	377	189	215
Magnesium	EPA 200.7	mg/L		913	1,010	973	967	1,080	1,060	1,010	1,120
Magnesium, Dissolved	EPA 200.7	mg/L		897	982	966	961	984	1,010	981	1,140
Manganese, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L		ND	0.11	0.11	0.10	0.16	0.16	0.19	0.09
Nitrate as N	EPA 300.0	mg/L		ND	0.2	ND	0.2	1.1	0.3	0.1	0.1
Nitrate as NO3	EPA 300.0	mg/L		ND	1.0	ND	1.0	5.1	1.3	0.4	0.4
Nitrate+Nitrite as N	EPA 300.0	mg/L		ND	0.2	ND	0.2	1.1	0.3	0.1	0.1
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L		ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON		1	1	1	1	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L		0.02	0.03	0.02	0.02	0.03	0.03	0.03	0.03
pH (Field Test)	SM4500-H+B	pH		6.65	6.58	6.58	6.58	6.53	6.53	6.53	6.58
pH (Laboratory)	SM4500-H+B	pH (H)		6.7	6.9	6.9	6.9	6.7	6.7	6.7	7.2
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L		-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L		0.03	0.02	0.02	0.02	0.05	0.03	0.04	0.02
Potassium	EPA 200.7	mg/L		52.3	51.4	49.0	48.8	58.2	56.8	52.7	55.6
Potassium, Dissolved	EPA 200.7	mg/L		55.8	51.0	49.6	48.6	54.4	54.6	52.0	56.3
QC Ratio TDS/SEC	Calculation	-		0.70	0.75	0.74	0.79	0.62	0.66	0.65	0.75
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L		-	-	-	-	-	-	-	-
Salinity	SM2520B	psu		27.8	24.8	24.7	25	28.0	28.1	28.1	28.2
Silica as SiO2, Dissolved	EPA 200.7	mg/L		26	29	28	28	32	34	32	37
Sodium	EPA 200.7	mg/L		4,800	5,660	5,480	5,150	5,190	5,150	5,150	5,890
Sodium, Dissolved	EPA 200.7	mg/L		4,760	5,400	5,330	5,120	5,130	4,920	5,050	5,940
Specific Conductance (E.C)	SM2510B	µmhos/cm		38,940	39,000	38,900	39,300	39,900	40,100	39,800	39,480
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm		40,080	40,200	40,240	40,260	40,370	40,420	40,430	40,350
Strontium, Dissolved	EPA 200.8	µg/L		15,800	16,800	16,900	16,900	18,900	16,900	18,700	16,200
Sulfate, Dissolved	EPA 300.0	mg/L		1,980	1,990	1,900	1,860	2,000	2,060	1,980	1,970
Temperature (Field)	SM2550	° C		20.0	20.0	20.0	20.0	19.9	19.9	19.9	19.8
Total Diss. Solids	SM2540C	mg/L		27,400	29,400	28,800	30,900	24,600	26,400	25,900	29,500
Turbidity	EPA 180.1	NTU		0.15	0.20	0.20	0.20	0.10	0.15	0.25	0.15
Turbidity (Field)	EPA 180.1	NTU		0.15	0.14	0.21	0.11	0.16	0.12	0.15	0.09
Volatile Org. Compounds (524)	EPA 524	µg/L		-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L		-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L		-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

3 The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			MW-4D						MW-5S(P)		
		Monitoring Well Name:									
		Sample Collection Date:	15-Jan-20 10:53	15-Jan-20 11:08	08-Apr-20 11:24	30-Jun-20 12:12	15-Oct-20 11:03	15-Apr-21 11:39	23-Apr-18	10-Oct-18	10-Apr-19
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	112	98	116	115	116	114	66	66	59
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	40	11	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	0.02	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.39	0.41	0.46	0.41	0.47	1.1	0.2	0.16	0.16
Barium, Dissolved	EPA 200.8	µg/L	132	136	136	106	118	133	113	118.0	101
Bicarbonate (as HCO3-)	SM2320B	mg/L	137	120	142	140	142	139	80	80	72
Boron, Dissolved	EPA 200.7	mg/L	1.10	1.10	0.9	1	0.9	0.94	0.06	0.05	0.05
Bromide, Dissolved	EPA 300.0	mg/L	49.3	56.8	51.6	45.7	57.1	49.3	3.3	4.0	4.5
Calcium	EPA 200.7	mg/L	3,110	3,110	2,760	2,800	2,830	2,270	154	147	151
Calcium, Dissolved	EPA 200.7	mg/L	3,060	3,110	2,750	2,880	2,790	2,260	148	147	150
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	15,300	15,200	15,100	15,500	15,000	14,000	299	306	299
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	-	-	-	3	ND	8	3
Color, True [2]	SM2120C	Color Units	-	-	ND	ND	ND	-	-	-	-
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	474.90	536.73	467.89	480.52	467.84	439.27	18.98	19.26	18.71
Total Anions	Calculation	Meq/L	474.90	536.73	467.89	480.52	467.84	439.27	18.98	19.26	18.71
Dissolved Cations	Calculation	Meq/L	502.50	511.44	481.42	481.07	479.03	396.38	19.40	18.43	18.27
Total Cations	Calculation	Meq/L	512.74	507.12	477.17	470.65	465.53	396.20	19.56	18.00	18.58
Fluoride, Dissolved	EPA 300.0	mg/L	0.1	0.1	0.1	ND	0.5	1.1	ND	ND	ND
Hardness (as CaCO3)	SM2340B/Calc	mg/L	12,500	12,400	11,400	11,300	10,600	9,350	668	616	563
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	90	19	10
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	ND	ND	ND	0.1	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	0.3	ND
Lithium	EPA 200.8	µg/L	206	207	234	350	313	182	10	10	10.1
Magnesium	EPA 200.7	mg/L	1,140	1,130	1,090	1,050	852	897	69	61	60
Magnesium, Dissolved	EPA 200.7	mg/L	1,120	1,140	1,100	1,070	920	887	67	62	59
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	34	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	77	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	0.12	0.10	0.05	ND	0.03	0.05	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	0.5	0.2	0.3	ND	0.2	0.1	61.5	63.5	58.9
Nitrate as NO3	EPA 300.0	mg/L	2.2	0.9	1.3	ND	ND	0.4	270	280	260
Nitrate+Nitrite as N	EPA 300.0	mg/L	0.5	0.2	0.3	ND	ND	ND	61.5	63.5	58.9
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	0.1	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	1	1	ND	2	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.03	0.03	0.03	0.02	0.03	0.03	0.06	0.05	ND
pH (Field Test)	SM4500-H+B	pH	6.58	6.58	6.66	6.55	6.62	6.57	6.32	6.22	6.52
pH (Laboratory)	SM4500-H+B	pH (H)	7.1	7.0	6.7	7.2	6.7	7.0	6.5	6.6	6.5
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.02	0.02	0.03	ND	ND	0.03	0.05	0.06	0.06
Potassium	EPA 200.7	mg/L	56.1	55.6	53.2	52.6	96.9	46.3	4.3	4.3	4.0
Potassium, Dissolved	EPA 200.7	mg/L	55.6	56.3	53.8	53.4	66.2	48.0	4.2	4.4	4.03
QC Ratio TDS/SEC	Calculation	-	0.75	0.66	0.77	0.58	0.80	0.93	0.70	0.63	0.69
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	28.4	28.8	25.4	26.1	24.0	24.7	NA	ND	ND
Silica as SiO2, Dissolved	EPA 200.7	mg/L	37	38	34	35.7	30.3	27.8	42	42	38
Sodium	EPA 200.7	mg/L	6,030	5,920	5,710	5,590	5,790	4,780	140	127	138
Sodium, Dissolved	EPA 200.7	mg/L	5,890	6,000	5,800	5,700	6,030	4,810	147	135	134
Specific Conductance (E.C)	SM2510B	µmhos/cm	39,800	40,300	39,800	39,200	40,000	38,900	1,941	1,898	1,898
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	40,340	40,340	40,420	40,440	40,800	40,440	2,544	1,914	1,834
Strontium, Dissolved	EPA 200.8	µg/L	16,900	15,800	16,600	16,100	15,800	18,700	1,390	1,180	1,220
Sulfate, Dissolved	EPA 300.0	mg/L	1,940	2,210	1,870	1,940	2,000	1,990	230	227	232
Temperature (Field)	SM2550	° C	19.9	19.9	19.9	19.9	20.0	19.9	17.0	17.5	17.3
Total Diss. Solids	SM2540C	mg/L	29,800	26,400	30,500	22,700	32,000	36,000 [3]	1,350	1,200	1,300
Turbidity	EPA 180.1	NTU	0.15	0.15	0.15	0.10	0.20	0.10	1.80	0.35	0.25
Turbidity (Field)	EPA 180.1	NTU	0.14	0.13	0.15	0.08	0	0.07	4.8	ND	0.690
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

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3 The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

Monitoring Well Name:			MW-5S(P)				MW-5M							MW-5D
Sample Collection Date:			14-Oct-19	6-Apr-20	13-Oct-20	12-Apr-21	23-Apr-18	9-Oct-18	8-Apr-19	14-Oct-19	6-Apr-20	12-Oct-20	12-Apr-21	24-Apr-18
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	62	54	47	43	166	165	195	168	194	184	185	114
Aluminum, Total	EPA 200.8	µg/L	8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.16	0.11	0.13	7.1	1.5	1.60	1.3	1.7	1.4	2.4	1.5	0.4
Barium, Dissolved	EPA 200.8	µg/L	104	106	94.8	103	78	87	97.9	82.6	108	86.7	102	392
Bicarbonate (as HCO3-)	SM2320B	mg/L	76	66	57	53	203	201	238	205	237	224	225	139
Boron, Dissolved	EPA 200.7	mg/L	0.05	0.04	0.06	ND	0.12	0.11	0.13	0.12	0.13	0.14	0.12	ND
Bromide, Dissolved	EPA 300.0	mg/L	4.9	4.4	4.8	3.8	0.3	0.3	0.4	0.4	0.4	0.4	0.4	4.9
Calcium	EPA 200.7	mg/L	144	146	135	141	83	81	92	79	102	87	91	520
Calcium, Dissolved	EPA 200.7	mg/L	144	148	141	143	82	80	94	77	103	85	88	524
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	283	284	282	284	108	106	111	104	117	107	106	1,640
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	-	-	ND	ND	ND	ND	ND	-	-	ND	ND
Color, True [2]	SM2120C	Color Units	-	ND	ND	-	-	-	-	-	ND	ND	-	-
Copper	EPA 200.7	µg/L	ND	ND	ND	9	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	17.72	17.61	17.54	17.94	9.26	9.11	10.02	9.17	10.50	9.62	9.70	50.53
Total Anions	Calculation	Meq/L	17.72	17.61	17.54	17.94	9.26	9.11	10.02	9.17	10.50	9.62	9.70	50.53
Dissolved Cations	Calculation	Meq/L	17.20	17.23	18.10	18.06	8.99	8.77	10.58	8.65	10.76	9.58	9.92	48.62
Total Cations	Calculation	Meq/L	17.33	17.09	16.81	17.88	9.25	9.08	10.21	8.66	10.72	9.71	9.73	48.21
Fluoride, Dissolved	EPA 300.0	mg/L	0.0	ND	0.0	ND	0.2	ND	0.1	0.1	0.1	0.1	0.1	0.1
Hardness (as CaCO3)	SM2340B/Calc	mg/L	592	592	570	512	313	306	350	299	377	331	341	2,070
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	ND	ND	0.89	1.9	ND	ND	ND	ND	ND	0.56	1.4	ND
Iron	EPA 200.7	µg/L	25	16	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	12	ND	8	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	ND	ND	ND	1.40	1.70	1.4	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	0.3	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	10.7	9.3	11.2	9.9	6	6	7.0	6.8	6.4	6.6	7.0	65
Magnesium	EPA 200.7	mg/L	56.1	55	56	57	26	25	29	24	30	28	28	188
Magnesium, Dissolved	EPA 200.7	mg/L	56	55	60	57	25	25	30	24	29	26	28	190
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	0.06	ND	ND	ND	ND	ND	ND	0.04	ND
Nitrate as N	EPA 300.0	mg/L	57.8	57.3	57.5	59.8	15.4	15.0	14.6	15.4	16.4	15.2	15.8	1.3
Nitrate as NO3	EPA 300.0	mg/L	260	250	250	270	68	67	65	68	72	68	70	5.8
Nitrate+Nitrite as N	EPA 300.0	mg/L	57.8	57.3	57.5	59.8	15.4	15	14.6	15.4	16.4	15.2	15.8	1.3
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	0.1	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	ND	ND	1	2	1	1	1	ND	2
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.05	0.05	0.05	0.04	0.12	0.12	0.10	0.11	0.09	0.11	0.11	ND
pH (Field Test)	SM4500-H+B	pH	7.10	6.28	6.32	6.70	7.23	7.10	7.30	7.43	6.83	7.34	7.22	7.10
pH (Laboratory)	SM4500-H+B	pH (H)	6.9	6.7	7.1	6.7	7.4	7.4	7.5	7.7	7.4	7.9	7.4	7.2
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.06	0.05	0.05	0.04	0.12	0.12	0.09	0.11	0.10	0.11	0.09	ND
Potassium	EPA 200.7	mg/L	3.9	3.8	4.5	4.1	3.7	3.9	4.1	3.6	3.9	4.2	4.0	12.3
Potassium, Dissolved	EPA 200.7	mg/L	3.96	3.8	4.9	4.06	3.9	3.9	4.4	3.7	4	4.3	3.7	12.2
QC Ratio TDS/SEC	Calculation	-	0.61	0.61	0.64	0.66	0.61	0.67	0.62	0.55	0.64	0.58	0.63	0.74
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	ND	NA	0.9	NA	NA	ND	NA	NA	ND	0.5	NA	3.0
Silica as SiO2, Dissolved	EPA 200.7	mg/L	38	41	41.5	43.9	33	34	35	32	36	34.0	36.3	45
Sodium	EPA 200.7	mg/L	125	119	123	139	66	66	72	61	71	68	64	149
Sodium, Dissolved	EPA 200.7	mg/L	122	120	138	141	63	60	76	63	72	71	72	150
Specific Conductance (E.C)	SM2510B	µmhos/cm	1,846	1,913	1,838	1,819	924	892	1,035	941	1,055	965	971	4,993
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	2,095	1,802	1,819	1,811	946	975	1,036	942	1,058	974	998	6,503
Strontium, Dissolved	EPA 200.8	µg/L	1,200	1,300	1,160	1,380	508	444	598	482	639	528	633	3,660
Sulfate, Dissolved	EPA 300.0	mg/L	207	209	215	228	86	84	93	85	103	88	90	88
Temperature (Field)	SM2550	° C	16.9	16.8	17.0	16.8	17.3	17.3	17.7	17.1	17.1	17.7	17.2	21.8
Total Diss. Solids	SM2540C	mg/L	1,130	1,170	1,180	1,190	566	600	642	518	676	564	612	3,700
Turbidity	EPA 180.1	NTU	0.30	0.55	0.25	0.45	0.10	0.25	0.10	ND	0.05	ND	ND	0.65
Turbidity (Field)	EPA 180.1	NTU	0.78	0.68	0.65	0.79	0.87	ND	0.25	0.3	0.39	0.7	0.34	2.7
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

[3] The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

Monitoring Well Name:			MW-5D						MW-6S						
Sample Collection Date:			9-Oct-18	8-Apr-19	15-Oct-19	6-Apr-20	14-Oct-20	12-Apr-21	23-Apr-18	8-Oct-18	9-Apr-19	17-Oct-19	9-Apr-20	14-Oct-20	14-Apr-21
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	115	114	116	114	118	114	456	362	302	292	325	386	426
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	8	ND	ND	13	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	0.02	ND	0.6	0.5	ND	0.40	0.49	0.41	0.43
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.47	0.51	0.49	0.46	0.59	0.47	8.70	9.40	8.6	8.60	9.1	11	9.6
Barium, Dissolved	EPA 200.8	µg/L	465	539	467	516	452	623	219	132	134	104	105	102	123
Bicarbonate (as HCO3-)	SM2320B	mg/L	140	140	142	135	144	140	556	442	368	356	390	471	519
Boron, Dissolved	EPA 200.7	mg/L	0.08	0.56	0.10	0.06	0.08	0.09	0.28	0.27	0.28	0.22	0.18	0.24	0.22
Bromide, Dissolved	EPA 300.0	mg/L	5.3	5.0	6.2	7.1	7.3	7.8	0.9	0.4	0.5	0.2	0.2	0.2	0.2
Calcium	EPA 200.7	mg/L	502	602	618	693	764	779	180	96	107	96	86	85	103
Calcium, Dissolved	EPA 200.7	mg/L	504	589	639	685	762	785	183	98	107	86	85	80	104
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	1,610	1,740	1,860	1,980	1,960	2,110	185	115	112	68	55	55	44
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	ND	ND	ND	-	-	ND	7	22	15	15	-	-	ND
Color, True [2]	SM2120C	Color Units	-	-	-	4	ND	-	-	-	-	-	11	12	-
Copper	EPA 200.7	µg/L	ND	33	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	49.78	53.30	57.63	60.84	60.37	64.87	22.62	14.69	14.87	11.16	11.02	11.93	11.97
Total Anions	Calculation	Meq/L	49.78	53.30	57.63	60.84	60.37	64.87	22.62	14.69	14.87	11.16	11.02	11.93	11.97
Dissolved Cations	Calculation	Meq/L	47.69	52.62	55.17	59.49	60.49	65.19	23.18	14.74	14.61	11.26	11.03	10.77	12.12
Total Cations	Calculation	Meq/L	47.26	54.17	54.88	60.43	61.52	67.62	23.08	14.25	14.57	12.27	11.35	10.95	11.94
Fluoride, Dissolved	EPA 300.0	mg/L	ND	0.1	0.2	0.1	0.1	0.1	0.2	ND	0.2	0.3	0.2	0.2	0.2
Hardness (as CaCO3)	SM2340B/Calc	mg/L	2,000	2,370	2,420	2,700	2,320	3,020	751	402	451	390	352	358	420
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	ND	ND	ND	ND	0.52	ND	1,030	14	12	12	18	30	26
Iron	EPA 200.7	µg/L	ND	242	14	ND	ND	ND	233	123	190	183	206	174	206
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	19	119	171	163	176	130	208
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	0.3	ND	ND	ND	0.8	0.7	0.5	ND	0.5	ND	0.7
Lead, Total	EPA 200.8	µg/L	0.3	3.9	ND	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	79	80.1	95.4	82.4	95.1	104	7	6	6.5	4.7	4.1	6.3	4.6
Magnesium	EPA 200.7	mg/L	182	210	214	236	204	261	73	40	44	37	33	35.4	39
Magnesium, Dissolved	EPA 200.7	mg/L	186	200	202	231	198	232	75	41	45	35	33	32	39
Manganese, Dissolved	EPA 200.7	µg/L	8	ND	6	4	ND	11	3,140	1,830	2,040	1,750	1,600	1,640	2,070
Manganese, Total	EPA 200.7	µg/L	7	14	12	4	10	12	3,090	1,770	2,030	1,850	1,630	1,830	2,070
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	0.04	ND	ND	ND	ND	ND	0.05	0.04
Nitrate as N	EPA 300.0	mg/L	0.8	0.6	0.9	0.7	0.7	0.8	0.2	ND	ND	ND	ND	ND	ND
Nitrate as NO3	EPA 300.0	mg/L	3.4	2.5	4.2	3.1	3.3	3.5	1	ND	ND	ND	ND	ND	ND
Nitrate+Nitrite as N	EPA 300.0	mg/L	0.8	0.6	0.9	0.7	0.7	0.8	0.2	ND	ND	ND	ND	ND	ND
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	1	1	ND	ND	1	2	1	1	1	ND
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.01	0.01	0.01	0.01	ND	0.03	1.26	1.41	1.55	1.33	1.38	0.75	1.36
pH (Field Test)	SM4500-H+B	pH	6.65	6.70	6.73	6.66	6.71	7.16	6.94	7.01	7.04	7.00	6.92	7.11	6.93
pH (Laboratory)	SM4500-H+B	pH (H)	7.1	7.0	7.1	7.1	7.2	7.3	7.2	7.3	7.3	7.3	8.3	7.6	7.3
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	ND	0.02	0.02	ND	ND	ND	1.24	1.42	1.20	1.37	1.48	1.52	1.22
Potassium	EPA 200.7	mg/L	8.6	9.4	8.2	8.3	8.5	8.8	10.4	8.3	8.5	7.4	6.5	7.2	6.6
Potassium, Dissolved	EPA 200.7	mg/L	8.7	9.5	8.6	8	8.40	8.9	10.5	8.5	8.50	7.21	6.34	6.9	6.49
QC Ratio TDS/SEC	Calculation	-	0.68	0.63	0.59	0.61	0.83	0.83	0.69	0.63	0.67	0.56	0.64	0.69	0.64
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	2.6	3.4	3.3	3.7	3.2	3.6	NA	ND	ND	ND	ND	0.5	ND
Silica as SiO2, Dissolved	EPA 200.7	mg/L	45	75	45	40	37.7	41.9	31	31	32	32	30	30.5	32.6
Sodium	EPA 200.7	mg/L	161	152	143	143	133	162	179	136	124	97	96	83	78
Sodium, Dissolved	EPA 200.7	mg/L	161	150	148	140	134	154	174	143	123	89	90	91	81
Specific Conductance (E.C)	SM2510B	µmhos/cm	4,856	5,690	5,550	6,170	5,930	6,530	1,970	1,341	1,340	1,101	1,031	1,046	1,054
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	5,217	5,114	5,974	6,163	5,898	6,480	2,026	1,385	1,373	1,044	1,033	1,234	1,096
Strontium, Dissolved	EPA 200.8	µg/L	3,210	4,380	4,000	4,910	4,500	5,180	1,120	528	688	646	539	519	704
Sulfate, Dissolved	EPA 300.0	mg/L	93	88	118	123	124	140	396	201	270	161	140	125	104
Temperature (Field)	SM2550	° C	21.0	21.6	21.1	20.7	21.2	20.6	17.8	17.7	17.3	17.1	17.4	17.5	17.2
Total Diss. Solids	SM2540C	mg/L	3,300	3,560	3,260	3,780	4,900	5,400	1,360	840	896	612	658	718	678
Turbidity	EPA 180.1	NTU	0.30	0.25	ND	0.15	0.05	ND	1.30	1.00	1.40	1.10	1.6	1.4	1.5
Turbidity (Field)	EPA 180.1	NTU	ND	0.67	0.25	0.49	0.49	0.77	1.6	0.68	0.55	0.65	0.85	0.96	0.89
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
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[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			MW-6M [4]							MW-6M(L) [4]					
Monitoring Well Name:															
Sample Collection Date:			23-Apr-18	8-Oct-18	10-Apr-19	17-Oct-19	9-Apr-20	14-Oct-20	14-Apr-21	23-Apr-18	8-Oct-18	9-Apr-19	16-Oct-19	9-Apr-20	14-Oct-20
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	386	391	391	379	377	390	387	108	109	107	107	102	110
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	0.1	0.1	0.11	0.17	0.21	0.27	ND	ND	ND	ND	ND	0.02
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	1.50	1.90	1.8	1.8	2.0	2.6	2.3	0.49	0.48	0.54	0.46	0.59	0.59
Barium, Dissolved	EPA 200.8	µg/L	133	149	146	110	162	140	175	264	301	260	233	272	261
Bicarbonate (as HCO3-)	SM2320B	mg/L	471	477	477	462	447	476	472	132	133	131	131	124	134
Boron, Dissolved	EPA 200.7	mg/L	0.26	0.26	0.25	0.29	0.23	0.26	0.26	ND	0.08	0.09	0.09	0.07	0.09
Bromide, Dissolved	EPA 300.0	mg/L	0.4	0.3	0.8	0.4	0.6	0.2	0.7	3.7	4.4	4.8	4.9	4.4	5.2
Calcium	EPA 200.7	mg/L	118	112	119	125	130	117	137	507	523	514	655	574	643
Calcium, Dissolved	EPA 200.7	mg/L	119	112	121	117	129	109	135	500	522	531	640	558	576
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	142	138	144	149	153	142	152	1,210	1,350	1,280	1,280	1,290	1,440
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	4	3	4	3	-	-	15	ND	ND	1	ND	-	-
Color, True [2]	SM2120C	Color Units	-	-	-	-	3	3	-	-	-	-	-	ND	ND
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-		-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	14.74	14.65	15.33	14.71	15.49	15.05	16.08	38.47	42.76	40.89	40.79	40.74	45.24
Total Anions	Calculation	Meq/L	14.74	14.65	15.33	14.71	15.49	15.05	16.08	38.47	42.76	40.89	40.79	40.74	45.24
Dissolved Cations	Calculation	Meq/L	14.75	14.55	14.72	15.16	15.20	13.61	15.93	37.91	43.17	40.67	47.52	41.98	44.17
Total Cations	Calculation	Meq/L	15.35	14.12	14.53	15.56	15.31	14.39	16.19	38.90	41.52	39.70	50.06	43.21	48.07
Fluoride, Dissolved	EPA 300.0	mg/L	0.1	ND	0.2	0.2	0.2	0.2	0.2	ND	ND	0.1	0.1	0.1	0.1
Hardness (as CaCO3)	SM2340B/Calc	mg/L	466	441	470	484	503	458	531	1,760	1,840	1,800	2,270	1,970	2,200
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	ND	39	42	31	44	48	54	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	ND	5	12	ND	6	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	12	8	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	ND	ND	ND	ND	0.5	ND	0.6	ND	ND	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6	ND	ND	ND
Lithium	EPA 200.8	µg/L	20	22	20.4	18.9	16.9	23.4	16.2	40	42	47	45.4	33.3	55.5
Magnesium	EPA 200.7	mg/L	42	39	42	42	43	40.5	46	121	131	124	154	131	143
Magnesium, Dissolved	EPA 200.7	mg/L	41	40	42	42	43	38	46	119	130	125	134	127	138
Manganese, Dissolved	EPA 200.7	µg/L	308	332	352	394	394	393	464	104	67	81	50	44	32
Manganese, Total	EPA 200.7	µg/L	314	327	358	401	398	427	469	104	69	77	56	47	38
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	ND	0.04	0.06	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	0.2	ND	ND	0.0	ND	ND	ND	1.2	0.7	0.6	0.7	0.6	0.7
Nitrate as NO3	EPA 300.0	mg/L	1	ND	ND	ND	ND	ND	ND	5.5	ND	ND	3.1	2.6	3.0
Nitrate+Nitrite as N	EPA 300.0	mg/L	0.2	ND	ND	ND	ND	ND	ND	1.2	0.7	0.6	0.7	0.6	0.7
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	ND	1	1	1	1	1	ND	2	1	1	2	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.15	0.14	0.15	0.16	0.17	0.21	0.21	ND	ND	0.01	0.02	0.01	0.01
pH (Field Test)	SM4500-H+B	pH	7.08	7.09	6.97	6.98	7.01	7.34	7.13	6.99	6.92	6.96	6.96	6.83	7.13
pH (Laboratory)	SM4500-H+B	pH (H)	7.2	7.3	7.3	7.3	8.4	7.7	7.5	7.2	7.1	7.2	7.3	8.0	7.3
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.16	0.16	0.13	0.18	0.18	0.20	0.21	ND	ND	0.02	0.02	0.02	ND
Potassium	EPA 200.7	mg/L	7.0	7.3	6.9	7.9	7.1	8.1	7.8	9.7	9.6	9.1	10.2	8.6	10.1
Potassium, Dissolved	EPA 200.7	mg/L	7	7.2	7.20	7.92	7.13	7.7	7.89	9.8	9.3	9	9.9	8.21	9.40
QC Ratio TDS/SEC	Calculation	-	0.64	0.61	0.63	0.55	0.63	0.58	0.48	0.72	0.63	0.65	0.57	0.66	0.79
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	NA	ND	ND	ND	ND	0.7	ND	2.3	2.3	2.4	2.6	2.6	2.4
Silica as SiO2, Dissolved	EPA 200.7	mg/L	39	39	38	42	38	38.3	39.1	40	41	41	44	38	40.2
Sodium	EPA 200.7	mg/L	134	118	114	130	117	114	123	78	101	83	102	82	91
Sodium, Dissolved	EPA 200.7	mg/L	121	126	116	130	116	110	121	67	93	84	99	80	88
Specific Conductance (E.C)	SM2510B	µmhos/cm	1,357	1,368	1,394	1,372	1,444	1,353	1,462	3,959	4,296	4,086	4,420	4,260	4,580
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	1,390	1,418	1,418	1,339	1,440	1,590	1,530	4,037	4,392	4,061	4,338	4,173	5,009
Strontium, Dissolved	EPA 200.8	µg/L	682	586	725	645	769	684	889	2,680	2,500	2,930	2,670	2,900	2,950
Sulfate, Dissolved	EPA 300.0	mg/L	144	141	165	140	174	151	194	98	115	122	119	106	116
Temperature (Field)	SM2550	° C	17.2	14.0	17.0	17.2	17.1	17.6	17.3	19.5	16.4	19.0	19.3	19.3	20.1
Total Diss. Solids	SM2540C	mg/L	871	828	872	748	914	784	700	2,860	2,700	2,660	2,500	2,800	3,600
Turbidity	EPA 180.1	NTU	0.10	0.15	0.15	ND	0.15	0.30	0.10	0.20	0.15	0.15	0.10	0.10	0.10
Turbidity (Field)	EPA 180.1	NTU	0.76	0.23	0.15	0.31	0.42	0.51	0.5	0.93	0.73	0.59	0.470	0.46	0.82
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

[3] The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			Monitoring Well Name:	MW-6M(L) [4]	MW-7S							MW-7M				
			Sample Collection Date:	14-Apr-21	25-Apr-18	9-Oct-18	9-Apr-19	16-Oct-19	8-Apr-20	13-Oct-20	12-Apr-21	25-Apr-18	8-Oct-18	10-Apr-19	16-Oct-19	8-Apr-20
Constituent	**Method**	**Units**		**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L		105	20	22	20	22	22	25	23	82	83	83	78	78
Aluminum, Total	EPA 200.8	µg/L		ND	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L		0.12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L		0.50	0.12	0.11	0.12	0.10	0.11	0.13	0.11	0.09	0.094	0.11	0.11	0.091
Barium, Dissolved	EPA 200.8	µg/L		274	249	270	276	238	246	209	222.0	377	459	390	403	410
Bicarbonate (as HCO3-)	SM2320B	mg/L		128	24	27	24	27	27	30	28	100	101	101	95	95
Boron, Dissolved	EPA 200.7	mg/L		0.08	ND	0.03	0.03	0.03	0.02	0.04	ND	ND	0.08	0.08	ND	0.06
Bromide, Dissolved	EPA 300.0	mg/L		5.1	1.2	1.1	1.6	1.4	1.1	1.1	1.1	8.7	8.0	10.3	10.1	5.8
Calcium	EPA 200.7	mg/L		609	134	115	136	121	120	101	107	823	882	864	882	930
Calcium, Dissolved	EPA 200.7	mg/L		610	134	120	135	118	119	98	105	811	860	866	889	902
Carbamates by HPLC (EPA 531)	EPA 531	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L		1,390	431	409	431	394	345	340	346	2,560	2,780	2,750	2,820	2,570
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units		5	5	4	1	ND	-	-	ND	ND	ND	ND	ND	-
Color, True [2]	SM2120C	Color Units		-	-	-	-	-	ND	ND	-	-	-	-	-	ND
Copper	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L		43.98	17.18	16.60	16.98	17.18	14.73	14.36	14.22	78.33	84.88	84.98	86.34	79.71
Total Anions	Calculation	Meq/L		43.98	17.18	16.60	16.98	17.18	14.73	14.36	14.22	78.33	84.88	84.98	86.34	79.71
Dissolved Cations	Calculation	Meq/L		44.35	17.30	16.39	16.89	14.86	15.38	13.06	13.91	77.15	78.67	79.75	82.74	85.83
Total Cations	Calculation	Meq/L		45.76	17.53	15.75	17.07	15.19	15.64	13.60	14.27	79.35	80.19	79.50	81.15	88.80
Fluoride, Dissolved	EPA 300.0	mg/L		0.2	0.4	ND	ND	ND	0.0	ND	ND	0.3	0.0	0.1	ND	ND
Hardness (as CaCO3)	SM2340B/Calc	mg/L		2,090	609	518	608	527	540	447	471	3,110	3,240	3,190	3,260	3,490
Hydroxide	SM2320B	mg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L		1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L		ND	33	17	16	ND	9	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L		0.1	ND	ND	ND	0.1	ND	ND	ND	ND	0.8	1.0	0.6	ND
Lead, Total	EPA 200.8	µg/L		ND	ND	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L		28.7	3	3	4.1	3.6	2.6	3.9	3.2	26	32	35.1	42.7	26.7
Magnesium	EPA 200.7	mg/L		137	66	56	65	60.0	59	50.0	50	255	252	250	256	284
Magnesium, Dissolved	EPA 200.7	mg/L		122	67	58	64	52	57	48	49	251	249	253	261	274
Manganese, Dissolved	EPA 200.7	µg/L		36	ND	ND	ND	ND	ND	ND	4	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L		35	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L		0.02	0.06	ND	ND	ND	ND	ND	0.04	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L		0.6	45.3	42.4	40.7	41.8	42.6	39.7	37.8	4.5	4.7	4.4	4.9	5.8
Nitrate as NO3	EPA 300.0	mg/L		2.9	200	190	180	190	189	180	170	20	21	19	22	26
Nitrate+Nitrite as N	EPA 300.0	mg/L		0.6	45.3	42.4	40.7	41.8	42.6	39.7	37.8	4.5	4.7	4.4	4.9	5.8
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON		ND	ND	1	1	1	1	1	ND	ND	1	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L		0.03	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.03	0.03	0.03	0.03	0.03
pH (Field Test)	SM4500-H+B	pH		7.00	6.84	6.20	6.59	7.05	7.18	6.78	6.66	6.86	7.06	6.79	7.13	6.95
pH (Laboratory)	SM4500-H+B	pH (H)		7.2	6.6	6.7	6.7	6.7	7.3	7.2	6.6	7.1	7.1	7.1	7.2	7.9
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L		0.02	0.04	0.06	0.05	0.06	0.06	0.04	0.04	ND	0.04	0.03	0.04	0.04
Potassium	EPA 200.7	mg/L		8.7	4.0	3.8	4.0	3.6	3.6	3.9	3.4	11.4	12.0	11.0	11.0	10.7
Potassium, Dissolved	EPA 200.7	mg/L		8.5	4	3.9	4	3.57	3.6	3.62	3.3	11	11.9	10.8	11.2	10.2
QC Ratio TDS/SEC	Calculation	-		0.83	0.71	0.61	0.64	0.56	0.58	0.91	0.65	0.71	0.60	0.67	0.58	0.58
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu		2.3	NA	ND	ND	ND	ND	0.8	ND	4.7	4.4	5.0	5.3	5.5
Silica as SiO2, Dissolved	EPA 200.7	mg/L		38.8	42	41	41	36	41	38.0	39.6	31	32	31	29	30
Sodium	EPA 200.7	mg/L		89	122	122	111	108	109	100	105	391	348	357	363	431
Sodium, Dissolved	EPA 200.7	mg/L		84	115	127	110	102	107	96	100	362	344	355	382	414
Specific Conductance (E.C)	SM2510B	µmhos/cm		4,360	1,843	1,691	1,828	1,787	1,684	1,766	1,574	7,610	8,030	8,109	8,610	8,680
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm		4,583	1,891	1,882	1,877	1,772	1,636	1,636	1,611	7,686	8,106	8,271	8,583	8,495
Strontium, Dissolved	EPA 200.8	µg/L		3,350	1,330	1,130	1,530	1,330	1,290	1,130	1,200	5,080	4,570	5,530	5,280	5,930
Sulfate, Dissolved	EPA 300.0	mg/L		116	66	76	72	72	72	68	62	194	211	231	228	248
Temperature (Field)	SM2550	° C		19.5	17.9	17.9	17.6	17.6	17.7	17.5	17.3	18.2	18.3	18.2	18.1	18.0
Total Diss. Solids	SM2540C	mg/L		3,600	1,310	1,030	1,170	994	982	1,600	1,020	5,440	4,850	5,450	4,980	5,070
Turbidity	EPA 180.1	NTU		ND	0.45	0.30	0.25	0.10	0.30	0.10	ND	0.15	0.15	0.20	0.10	0.20
Turbidity (Field)	EPA 180.1	NTU		0.83	0.81	0	0.69	0.46	0.75	0.41	0.6	0.39	0.49	0.27	0.49	0.94
Volatile Org. Compounds (524)	EPA 524	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L		-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L		-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
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See laboratory water quality reports for RL and PQL values.

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[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

Monitoring Well Name:			MW-7M		MW-7D							MW-8S			
Sample Collection Date:			14-Oct-20	13-Apr-21	25-Apr-18	8-Oct-18	10-Apr-19	16-Oct-19	7-Apr-20	14-Oct-20	13-Apr-21	24-Apr-18	11-Oct-18	8-Apr-19	15-Oct-19
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	79	79	103	104	104	100	103	115	102	330	341	331	337
Aluminum, Total	EPA 200.8	µg/L	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.11	0.087	0.50	0.45	0.58	0.56	0.59	0.59	0.57	0.26	0.25	0.21	0.25
Barium, Dissolved	EPA 200.8	µg/L	442	398	ND	104.0	88	99.7	90	78	92	107	138.0	522	101
Bicarbonate (as HCO3-)	SM2320B	mg/L	96	97	126	127	127	122	121	140	125	403	416	403	411
Boron, Dissolved	EPA 200.7	mg/L	0.08	0.07	1.95	2.11	1.9	1.9	1.7	1.90	1.7	0.25	0.26	0.28	0.30
Bromide, Dissolved	EPA 300.0	mg/L	11.3	10.9	43.2	45.1	53.8	45.6	50.5	51.6	48.9	1.0	1.2	0.6	1.1
Calcium	EPA 200.7	mg/L	983	943	1,490	1,410	1,360	1,300	1,310	1,160	1,090	133	143	138	143
Calcium, Dissolved	EPA 200.7	mg/L	980	965	1,500	1,430	1,360	1,370	1,340	1,180	1,110	135	138	137	138
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	3,060	3,010	13,700	14,300	14,800	14,500	14,700	13,900	13,900	313	347	307	304
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	-	ND	ND	ND	ND	ND	-	-	ND	3	ND	1	3
Color, True [2]	SM2120C	Color Units	ND	-	-	-	-	-	ND	ND	-	-	-	-	-
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	93.41	91.96	430.44	449.85	461.92	453.33	447.01	435.94	437.34	23.12	24.94	23.23	23.30
Total Anions	Calculation	Meq/L	93.41	91.96	430.44	449.85	461.92	453.33	447.01	435.94	437.34	23.12	24.94	23.23	23.30
Dissolved Cations	Calculation	Meq/L	91.28	87.50	435.37	433.86	422.35	428.41	426.73	427.59	375.51	23.34	22.98	23.08	23.00
Total Cations	Calculation	Meq/L	92.09	88.34	442.68	447.57	421.31	424.17	418.77	437.07	372.12	22.72	23.11	23.47	23.77
Fluoride, Dissolved	EPA 300.0	mg/L	ND	0.1	0.8	0.1	0.1	0.1	ND	0.2	0.4	0.3	ND	ND	ND
Hardness (as CaCO3)	SM2340B/Calc	mg/L	3,660	3,510	7,530	7,320	6,960	6,790	6,820	6,320	5,850	567	587	580	699
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	0.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.3	4.6	4.0
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	ND	0.6	ND	ND	ND	ND	0.3	ND	ND	ND	0.7
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4	0.3	ND
Lithium	EPA 200.8	µg/L	50	29.0	179	186	202	253	184	226	173	4	5	4.2	37.5
Magnesium	EPA 200.7	mg/L	294	279	925	920	863	860	864	834	762	57	56	57	57
Magnesium, Dissolved	EPA 200.7	mg/L	298	249	941	910	862	852	884	860	717	58	56	56	56
Manganese, Dissolved	EPA 200.7	µg/L	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	0.03	0.07	ND	ND	ND	ND	ND	0.03	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	5.1	5.0	1.9	1.1	0.9	1.0	0.9	0.9	1.4	27.6	28.4	23.7	23.0
Nitrate as NO3	EPA 300.0	mg/L	23	22	8.3	4.9	ND	4.3	4	4	6.0	120	126	100	102
Nitrate+Nitrite as N	EPA 300.0	mg/L	5.1	5.0	1.9	1.1	0.9	1.0	0.9	0.9	1.4	27.6	28.4	23.7	23.0
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	ND	ND	1	1	1	1	1	ND	ND	1	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.03	0.04	0.03	0.02	0.02	0.03	0.03	0.03	0.06	0.08	0.06	0.08	0.09
pH (Field Test)	SM4500-H+B	pH	7.66	6.93	6.73	6.59	6.51	6.65	6.64	7.13	6.63	6.61	6.68	6.72	7.05
pH (Laboratory)	SM4500-H+B	pH (H)	7.1	7.3	6.9	6.8	6.8	7.0	6.9	6.9	7.0	7.1	7.1	7.0	7.1
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	ND	ND	ND	0.03	0.04	0.05	0.04	0.02	ND	0.07	0.08	0.10	0.08
Potassium	EPA 200.7	mg/L	12.4	10.7	63.6	69.6	69	56.1	50.6	83.8	55.3	5.1	5.4	5.7	4.3
Potassium, Dissolved	EPA 200.7	mg/L	12.7	11.1	64.0	71.0	65.3	59.7	51.7	83.7	55.6	5	5.3	5.8	4.20
QC Ratio TDS/SEC	Calculation	-	0.80	0.63	0.72	0.67	0.71	0.68	0.70	0.71	0.82	0.66	0.65	0.65	0.56
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	5.1	4.9	27.2	24.7	27.0	27.3	24.0	23.9	23.8	NA	ND	NA	ND
Silica as SiO2, Dissolved	EPA 200.7	mg/L	31.3	28.8	33	34	30	36	32	31.9	27.2	37	34	38	36
Sodium	EPA 200.7	mg/L	426	415	6,680	6,890	6,450	6,600	6,460	7,090	5,830	259	258	270	272
Sodium, Dissolved	EPA 200.7	mg/L	403	427	6,470	6,570	6,480	6,630	6,570	6,800	5,970	269	261	264	262
Specific Conductance (E.C)	SM2510B	µmhos/cm	9,710	8,880	38,240	38,900	37,940	38,600	37,800	37,700	37,500	2,240	2,274	2,249	2,300
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	10,090	9,271	38,970	38,540	39,360	38,930	37,980	41,250	39,610	2,229	2,344	2,228	2,217
Strontium, Dissolved	EPA 200.8	µg/L	5,950	6,180	10,000	9,130	10,300	10,500	9,860	11,700	10,500	989	1,020	985	864
Sulfate, Dissolved	EPA 300.0	mg/L	236	239	1,980	2,100	2,010	2,000	1,420	1,960	2,040	274	302	300	304
Temperature (Field)	SM2550	° C	18.2	17.9	19.4	16.1	19.3	19.2	19.1	19.5	18.9	16.6	16.7	16.9	16.5
Total Diss. Solids	SM2540C	mg/L	7,800	5,600	27,700	25,900	27,000	26,100	26,600	26,700	30,600	1,480	1,470	1,460	1,290
Turbidity	EPA 180.1	NTU	0.85	0.10	0.15	0.15	0.10	0.15	0.20	0.10	0.10	0.15	0.10	0.15	ND
Turbidity (Field)	EPA 180.1	NTU	0.94	0.55	0.4	0.61	0.22	0.47	0.68	0.53	0.41	0.35	0	0.36	0.59
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

[3] The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

Monitoring Well Name:			MW-8S			MW-8M							MW-8D		
Sample Collection Date:			7-Apr-20	13-Oct-20	12-Apr-21	24-Apr-18	11-Oct-18	9-Apr-19	15-Oct-19	7-Apr-20	13-Oct-20	12-Apr-21	26-Apr-18	10-Oct-18	9-Apr-19
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	353	360	345	144	142	141	134	133	141	135	149	156	155
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	0.03	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.23	0.27	0.24	0.34	0.32	0.43	0.44	0.45	0.43	0.37	0.78	1.0	0.95
Barium, Dissolved	EPA 200.8	µg/L	95.0	108	96.2	ND	111	98.8	96	97	85	97	40	50.8	52.7
Bicarbonate (as HCO3-)	SM2320B	mg/L	417	439	421	176	173	172	163	161	172	164	182	190	190
Boron, Dissolved	EPA 200.7	mg/L	0.31	0.34	0.33	1.3	1.2	1.49	1.69	1.7	1.9	1.8	ND	0.08	ND
Bromide, Dissolved	EPA 300.0	mg/L	1.1	1.2	1.2	35.5	38.6	37.7	43.0	38.4	37.6	38.7	1.9	0.9	0.8
Calcium	EPA 200.7	mg/L	143	142	134	1,420	1,440	925	1,000	844	929	1,000	67	48	50
Calcium, Dissolved	EPA 200.7	mg/L	142	133	134	1,310	1,420	992	994	838	878	996	67	47	46
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	320	309	315	11,300	12,100	11,600	12,400	11,600	11,900	11,300	692	306	246
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	-	-	ND	ND	ND	5	ND	-	-	ND	4	3	5
Color, True [2]	SM2120C	Color Units	ND	ND	-	-	-	-	-	ND	ND	-	-	-	-
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	24.45	23.94	24.11	354.47	377.60	364.91	387.12	363.11	373.48	355.76	24.47	12.67	12.56
Total Anions	Calculation	Meq/L	24.45	23.94	24.11	354.47	377.60	364.91	387.12	363.11	373.48	355.76	24.47	12.67	12.56
Dissolved Cations	Calculation	Meq/L	25.96	25.05	24.56	386.44	356.42	383.16	390.19	358.15	379.23	370.86	22.73	12.10	11.72
Total Cations	Calculation	Meq/L	25.75	26.64	24.38	382.44	375.79	342.76	401.23	360.66	372.65	381.44	23.00	11.51	12.81
Fluoride, Dissolved	EPA 300.0	mg/L	0.1	0.1	0.06	0.5	ND	0.1	0.1	ND	ND	0.1	0.2	0.3	0.3
Hardness (as CaCO3)	SM2340B/Calc	mg/L	616	610	576	6,360	6,270	4,520	5,220	4,890	4,910	5,290	359	219	279
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	6.7	5.6	4.8	ND	ND	ND	ND	ND	ND	0.48	ND	1.2	ND
Iron	EPA 200.7	µg/L	ND	ND	ND	ND	36	ND	ND	ND	ND	ND	ND	6	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	0.6	ND	ND	ND	ND	ND	ND	ND	ND	0.7	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	0.9	ND	ND	ND	ND	ND	0.2	ND
Lithium	EPA 200.8	µg/L	3.7	4.8	3.9	106	144	157.0	145	122	144	123	30	36	43.9
Magnesium	EPA 200.7	mg/L	63.0	62	59	683	648	536	659	675	629	677	47	24	24
Magnesium, Dissolved	EPA 200.7	mg/L	64	58	55	703	632	584	586	670	623	675	46	24	24
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	3	ND	ND	8	8	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	ND	5	ND	ND	ND	9	8	ND	35	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	0.05	ND	ND	ND	ND	ND	ND	0.10	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	24.2	21.4	19.8	1.4	0.6	0.4	0.6	0.6	1.3	0.7	1.1	0.4	0.5
Nitrate as NO3	EPA 300.0	mg/L	107	95	88	6.0	2.7	1.8	2.7	2.7	5.6	3.1	4.9	ND	2.2
Nitrate+Nitrite as N	EPA 300.0	mg/L	24.2	21.4	19.8	1.4	0.6	0.4	0.6	0.6	1.3	0.7	1.1	0.4	0.5
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	ND	ND	1	1	1	1	1	ND	ND	1	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.07	0.08	0.09	0.03	0.03	0.03	0.04	0.04	0.04	0.03	0.02	0.02	0.02
pH (Field Test)	SM4500-H+B	pH	6.69	7.05	7.07	6.46	6.41	6.62	6.81	6.73	6.98	6.77	7.12	7.31	7.19
pH (Laboratory)	SM4500-H+B	pH (H)	7.3	7.1	7.4	6.9	6.9	6.9	7.1	7.1	7.0	7.0	7.4	7.5	7.5
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.08	0.08	0.06	ND	0.04	0.05	0.06	0.05	0.03	0.04	ND	0.02	0.02
Potassium	EPA 200.7	mg/L	4.8	6.2	4.8	69.3	86.8	113.0	102	95	104	74.3	6.4	5.4	7.7
Potassium, Dissolved	EPA 200.7	mg/L	4.75	6	4.8	69.8	83.5	130	104	93	104	74.7	6.1	4.97	7.1
QC Ratio TDS/SEC	Calculation	-	0.64	0.68	0.64	0.73	0.70	0.70	0.65	0.65	0.71	0.69	0.57	0.57	0.52
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	NA	1.2	ND	21.4	19.9	22.7	22.3	19.7	20.1	24.1	NA	ND	ND
Silica as SiO2, Dissolved	EPA 200.7	mg/L	36	37.4	35.0	30	31	28	29	28	29.7	30.1	41	40	41
Sodium	EPA 200.7	mg/L	306	329	293	5,830	5,710	5,738	6,770	5,990	6,250	6,300	361	161	187
Sodium, Dissolved	EPA 200.7	mg/L	310	310	304	6,010	5,320	6,489	6,660	5,950	6,470	6,060	355	176	167
Specific Conductance (E.C)	SM2510B	µmhos/cm	2,380	2,340	2,320	30,770	31,930	32,450	32,400	31,700	32,200	31,800	2,544	1,287	1,171
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	2,372	2,232	2,375	31,970	32,990	32,300	33,060	33,550	32,150	33,460	2,592	1,345	1,023
Strontium, Dissolved	EPA 200.8	µg/L	1,030	996	1,050	8,760	8,030	7,330	7,840	6,990	6,880	8,330	529	350	348
Sulfate, Dissolved	EPA 300.0	mg/L	318	311	331	1,550	1,580	1,650	1,610	1,570	1,610	1,580	90	42	36
Temperature (Field)	SM2550	° C	17.0	16.6	16.4	16.9	16.7	17.1	16.7	17.2	16.7	16.6	20.5	21.0	20.4
Total Diss. Solids	SM2540C	mg/L	1,530	1,600	1,490	22,600	22,200	22,600	21,200	20,600	23,000	21,800	1,440	735	610
Turbidity	EPA 180.1	NTU	0.10	0.15	0.10	0.25	0.05	0.10	0.10	0.05	0.10	0.10	0.55	0.40	0.35
Turbidity (Field)	EPA 180.1	NTU	0.64	0.58	0.64	0.64	0	0.28	0.43	0.48	0.54	0.46	0.68	0	0.53
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

[3] The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

Monitoring Well Name:			MW-8D				MW-9S							MW-9M	
Sample Collection Date:			14-Oct-19	8-Apr-20	15-Oct-20	15-Apr-21	26-Apr-18	10-Oct-18	9-Apr-19	15-Oct-19	7-Apr-20	13-Oct-20	13-Apr-21	26-Apr-18	10-Oct-18
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	148	154	177	153	964	961	945	915	934	958	938	116	118
Aluminum, Total	EPA 200.8	µg/L	9	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	0.02	ND	3.1	3.0	3.3	2.99	3.20	3.03	3.02	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	1.1	0.94	1.1	0.26	6.3	6.30	6.2	5.5	5.9	7.0	6.3	0.54	0.54
Barium, Dissolved	EPA 200.8	µg/L	68.0	61.7	53.9	73.6	308	314	262	182	305	255	305	ND	83
Bicarbonate (as HCO3-)	SM2320B	mg/L	181	188	216	187	1,180	1,170	1,150	1,120	1,140	1,170	1,140	142	144
Boron, Dissolved	EPA 200.7	mg/L	0.08	0.07	0.07	0.07	0.64	0.63	0.62	0.62	0.62	0.69	0.67	2.33	1.87
Bromide, Dissolved	EPA 300.0	mg/L	0.6	0.8	0.6	0.8	3.0	3.2	3.6	3.1	3.3	3.6	3.7	49.3	57.0
Calcium	EPA 200.7	mg/L	49	49	56	48	213	217	215	198	210	202	213	1,370	1,680
Calcium, Dissolved	EPA 200.7	mg/L	48	48	45	51	219	213	215	200	207	198	139	1,390	1,450
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	177	242	170	227	1,000	980	950	913	981	975	947	16,800	17,300
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	3	-	-	5	28	20	100	100	-	-	100	4	3
Color, True [2]	SM2120C	Color Units	-	ND	ND	-	-	-	-	-	18	20	-	-	-
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L		-	-	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	8.51	10.72	8.83	10.13	53.30	54.06	51.61	51.18	53.16	54.02	52.22	526.28	540.24
Total Anions	Calculation	Meq/L	8.51	10.72	8.83	10.13	53.30	54.06	51.61	51.18	53.16	54.02	52.22	526.28	540.24
Dissolved Cations	Calculation	Meq/L	8.61	10.30	8.01	10.50	50.98	52.21	49.73	49.18	52.36	53.87	49.77	477.51	489.73
Total Cations	Calculation	Meq/L	8.75	10.37	9.09	9.65	50.93	52.62	52.09	49.27	52.59	58.27	54.65	477.83	491.20
Fluoride, Dissolved	EPA 300.0	mg/L	0.3	0.2	0.2	0.2	ND	0.2	0.2	0.2	0.2	0.2	0.2	ND	ND
Hardness (as CaCO3)	SM2340B/Calc	mg/L	207	222	234	220	1,110	1,090	1,070	997	1,080	1,070	1,100	7,860	8,350
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	ND	ND	ND	ND	180	300	180	250	290	680	360	ND	ND
Iron	EPA 200.7	µg/L	35	16	8	21	5,570	5,170	5,490	5,250	5,420	5,600	5,390	37	140
Iron, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	5,580	5,140	4,950	859	5,050	5,220	5,350	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	ND	0.2	3.6	4	4	3.5	3.9	3.6	4.0	ND	ND
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	25.0	23.6	30.3	19.7	14	22	39.7	21.0	16.6	25.3	14.0	209	286
Magnesium	EPA 200.7	mg/L	20.4	24	23	24	140	133	130	122	136	137	138	1,080	1,010
Magnesium, Dissolved	EPA 200.7	mg/L	21	24	21	25	140	132	120	122	134	133	125	1,100	1,020
Manganese, Dissolved	EPA 200.7	µg/L	ND	ND	ND	ND	4,120	3,730	3,730	3,810	3,730	3,770	3,900	ND	218
Manganese, Total	EPA 200.7	µg/L	7	ND	ND	ND	4,100	3,720	4,050	3,970	3,760	3,940	3,880	96	234
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	0.06	ND	ND	ND	ND	ND	0.06	ND	ND
Nitrate as N	EPA 300.0	mg/L	0.4	0.7	0.4	0.4	0.8	ND	ND	ND	ND	ND	0.0	1.0	0.3
Nitrate as NO3	EPA 300.0	mg/L	1.8	3.1	1.7	1.6	3.5	ND	ND	ND	ND	ND	ND	4.6	1.3
Nitrate+Nitrite as N	EPA 300.0	mg/L	0.4	0.7	0.4	0.4	0.8	ND	ND	ND	ND	ND	ND	1.0	0.3
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	ND	ND	0.0	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	1	ND	2	2	3	2	4	2	2	ND	1
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.02	0.02	0.03	0.04	1.38	1.04	0.39	0.50	0.44	0.61	0.45	0.04	0.03
pH (Field Test)	SM4500-H+B	pH	7.33	7.17	7.67	7.16	6.65	6.97	7.06	7.00	6.88	6.89	7.46	6.34	6.48
pH (Laboratory)	SM4500-H+B	pH (H)	7.8	7.6	7.8	7.7	7.1	7.2	7.1	7.5	7.2	7.6	7.5	6.8	6.9
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.03	0.03	ND	ND	1.26	1.04	0.39	0.82	0.57	0.63	0.54	0.02	0.04
Potassium	EPA 200.7	mg/L	3.6	4.1	5.4	4.0	14.6	15.7	14.3	13.4	13	16.5	13.6	170.0	177.0
Potassium, Dissolved	EPA 200.7	mg/L	3.6	3.9	4.6	4.39	15.0	15.8	15.6	12.8	13	16.5	13.9	173	179
QC Ratio TDS/SEC	Calculation	-	0.51	0.57	0.61	0.57	0.57	0.63	0.65	0.60	0.61	0.79	0.59	0.78	0.67
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	ND	NA	0.4	NA	3.0	2.6	2.7	2.9	2.6	2.7	2.6	32.1	28.6
Silica as SiO2, Dissolved	EPA 200.7	mg/L	43	43	47.2	45.5	41	37	38	39	38	39.4	38.7	30	33
Sodium	EPA 200.7	mg/L	105	134	98	119	648	695	691	662	698	839	738	7,270	7,350
Sodium, Dissolved	EPA 200.7	mg/L	101	134	90	133	642	692	655	658	700	750	735	7,200	7,560
Specific Conductance (E.C)	SM2510B	µmhos/cm	1,010	1,146	836	1,071	4,963	4,778	4,588	4,880	4,860	4,950	4,930	44,400	44,280
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	1,092	1,139	822	1,091	4,920	4,987	4,404	5,043	4,930	4,939	4,892	45,130	45,780
Strontium, Dissolved	EPA 200.8	µg/L	383	400	366	481	1,930	1,600	1,660	1,790	1,720	1,170	1,830	9,180	9,330
Sulfate, Dissolved	EPA 300.0	mg/L	25	36	22	30	274	343	281	339	324	350	321	2,370	2,360
Temperature (Field)	SM2550	° C	20.4	20.3	20.2	19.8	17.6	17.5	17.4	17.0	17.3	17.4	17.3	17.6	17.8
Total Diss. Solids	SM2540C	mg/L	518	652	512	606	2,820	2,990	3,000	2,910	2,960	3,895	2,900	34,600	29,600
Turbidity	EPA 180.1	NTU	2.00	0.90	0.40	1.7	60.0	55	42.0	8.00	60	65	60	0.45	0.25
Turbidity (Field)	EPA 180.1	NTU	2.95	3.8	0.95	2.15	0.29	0.44	0.680	0.800	0.36	0.47	0.84	0.44	0.72
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
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ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

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[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).

Table 3: Summary of Quarterly and Semiannual Monitoring Well Laboratory Water Quality Results Following Long-Term Pumping Test

			MW-9M					MW-9D						
Monitoring Well Name:														
Sample Collection Date:			8-Apr-19	15-Oct-19	7-Apr-20	13-Oct-20	13-Apr-21	26-Apr-18	10-Oct-18	8-Apr-19	15-Oct-19	7-Apr-20	13-Oct-20	13-Apr-21
Constituent	**Method**	**Units**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
Alkalinity, Total (as CaCO3)	SM2320B	mg/L	117	112	107	118	115	168	168	168	162	159	172	170
Aluminum, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ammonia-N, Dissolved	SM4500NH3 D & EPA 350.1	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total [1]	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	EPA 1640	µg/L	0.60	0.58	0.59	0.59	0.52	0.9	1.10	1.2	1.3	1.0	1.6	1.5
Barium, Dissolved	EPA 200.8	µg/L	72.4	82.9	72	66	70.3	54	62.0	54.6	47.2	58	56.4	57.6
Bicarbonate (as HCO3-)	SM2320B	mg/L	142	137	131	144	140	205	205	205	198	194	210	207
Boron, Dissolved	EPA 200.7	mg/L	2.20	2.12	2.00	2.30	2.22	0.07	0.05	0.07	0.07	0.06	0.07	0.08
Bromide, Dissolved	EPA 300.0	mg/L	55.5	55.8	61.5	59.1	58.6	0.1	0.2	0.2	0.2	0.2	0.2	0.2
Calcium	EPA 200.7	mg/L	1,550	1,480	1,550	1,300	1,480	32	32	35	35	32	36	38
Calcium, Dissolved	EPA 200.7	mg/L	1,540	1,510	1,580	1,290	1,020	31	32	36	35	34	34	37
Carbamates by HPLC (EPA 531)	EPA 531	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Carbonate as CaCO3	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride, Dissolved	EPA 300.0	mg/L	17,000	17,200	16,200	16,300	16,300	66	68	64	68	63	64	62.3
Chlorinated Pesticides and PCB (EPA 508)	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Color, Apparent (Unfiltered)	SM2120B	Color Units	8	4	-	-	ND	4	ND	2	4	-	-	ND
Color, True [2]	SM2120C	Color Units	-	-	ND	ND	-	-	-	-	-	ND	ND	-
Copper	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
DBCP & EDB	EPA 504.1	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Dioxin	EPA 1613	pg/L	-	-	-	-	-	-	-	-	-	-	-	-
Diquat (EPA 549)	EPA 549	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Anions	Calculation	Meq/L	531.14	539.67	510.40	511.46	509.91	5.72	5.79	5.69	5.70	5.45	5.74	5.65
Total Anions	Calculation	Meq/L	531.14	539.67	510.40	511.46	509.91	5.72	5.79	5.69	5.70	5.45	5.74	5.65
Dissolved Cations	Calculation	Meq/L	528.95	484.55	511.05	559.44	504.91	5.73	5.20	5.78	5.38	5.45	5.41	5.95
Total Cations	Calculation	Meq/L	520.95	494.36	503.46	562.12	500.81	5.73	5.16	5.59	5.55	5.23	5.69	6.03
Fluoride, Dissolved	EPA 300.0	mg/L	ND	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2
Hardness (as CaCO3)	SM2340B/Calc	mg/L	8,110	8,090	8,200	8,770	7,990	134	136	143	141	132	148	154
Hydroxide	SM2320B	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	EPA 9056M, 314.0, 331.0M, & 332.0M	µg/L	13	7.2	4.3	4.1	4.7	ND	ND	ND	ND	ND	ND	ND
Iron	EPA 200.7	µg/L	142	86	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Dissolved	EPA 200.7	µg/L	ND	85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen, Dissolved	SM4500-NH3 B,C.E & EPA 351.2	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2
Lead, Total	EPA 200.8	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lithium	EPA 200.8	µg/L	235	338	238	280	211	26	34	28.0	22.5	25.5	26.8	25.6
Magnesium	EPA 200.7	mg/L	1,030	1,060	1,050	1,130	1,040	13	14	14	13.2	13	14	14
Magnesium, Dissolved	EPA 200.7	mg/L	1,030	986	1,060	1,150	968	13	14	14	13	13	13	14
Manganese, Dissolved	EPA 200.7	µg/L	213	298	165	195	224	ND	ND	ND	ND	ND	ND	ND
Manganese, Total	EPA 200.7	µg/L	203	306	168	253	188	ND	ND	ND	ND	ND	ND	ND
MBAS (Surfactants)	SM5540C	mg/L	ND	ND	ND	ND	0.08	ND	ND	ND	ND	ND	ND	ND
Nitrate as N	EPA 300.0	mg/L	0.3	0.4	0.4	0.3	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.5
Nitrate as NO3	EPA 300.0	mg/L	1.2	1.8	1.7	1.3	ND	2.8	2.2	2.7	2.7	2.4	2.2	2.2
Nitrate+Nitrite as N	EPA 300.0	mg/L	0.3	0.4	0.4	0.3	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5
Nitrite as NO2-N, Dissolved	EPA 300.0	mg/L	ND	ND	ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND
Odor Threshold at 60 C	SM2150B	TON	1	1	2	1	ND	ND	1	1	1	3	1	ND
o-Phosphate-P	Hach 8048 & EPA 365.1	mg/L	0.03	0.04	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	ND	0.04
pH (Field Test)	SM4500-H+B	pH	6.72	6.55	6.51	6.55	6.91	7.09	7.27	7.34	7.12	7.19	7.24	7.69
pH (Laboratory)	SM4500-H+B	pH (H)	6.9	7.2	6.6	7.2	7.2	7.5	7.5	7.4	7.7	7.6	7.7	7.6
Phenoxy Acid Herbicides (515.3)	EPA 515.3	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Dissolved Total	HACH 8190 & EPA 365.1	mg/L	0.04	0.05	0.04	0.02	ND	ND	0.03	0.03	0.03	0.03	ND	ND
Potassium	EPA 200.7	mg/L	186	156	135	223	149	7.6	4.0	3.3	3.3	2.9	3.6	3.3
Potassium, Dissolved	EPA 200.7	mg/L	178	158	137	225	150	7.56	4.08	3.7	3.05	3.0	3.06	3.2
QC Ratio TDS/SEC	Calculation	-	0.74	0.63	0.79	0.72	0.77	0.65	0.64	0.59	0.58	0.62	0.52	0.58
Reg. Org. Compounds (EPA 525)	EPA 525	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Salinity	SM2520B	psu	32.3	32.0	27.7	28.0	27.9	NA	ND	ND	ND	NA	0.3	ND
Silica as SiO2, Dissolved	EPA 200.7	mg/L	29	31	29	35.4	30.3	46	42	46	43	45	44.9	48.1
Sodium	EPA 200.7	mg/L	8,140	7,570	7,730	9,160	7,760	66	53	60	61	58	61	66
Sodium, Dissolved	EPA 200.7	mg/L	8,340	7,450	7,850	9,070	7,990	67	54	63	57	60	59	66
Specific Conductance (E.C)	SM2510B	µmhos/cm	44,630	44,200	43,000	43,500	43,300	571	518	565	574	572	606	569
Specific Conductance (E.C) (Field)	SM2510B	µmhos/cm	44,650	45,160	46,340	46,600	43,540	587	593	510	613	599	267	565
Strontium, Dissolved	EPA 200.8	µg/L	9,680	10,700	10,200	9,450	10,800	267	260	268	218	267	267	271
Sulfate, Dissolved	EPA 300.0	mg/L	2,330	2,460	2,440	2,330	2,260	22	23	23	24	22	22	22
Temperature (Field)	SM2550	° C	17.4	17.2	17.3	17.6	17.1	21.1	21.3	21.4	20.8	21.1	21.2	21.0
Total Diss. Solids	SM2540C	mg/L	32,900	27,700	33,900	31,300	33,400	371	334	334	334	352	360	330
Turbidity	EPA 180.1	NTU	0.15	0.35	0.15	0.75	0.20	0.40	0.20	0.10	ND	0.10	0.15	0.10
Turbidity (Field)	EPA 180.1	NTU	0.35	0.450	0.21	0.45	0.26	0.6	0.46	0.46	0.240	0.37	0.99	0.71
Volatile Org. Compounds (524)	EPA 524	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	EPA 200.7	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	EPA 200.8	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
PCBs, Total	EPA 508	µg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total PCB	EPA 1668C	pg/L	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

°C = Degrees Celsius
CU = Color Units
Meq/L = Milliequivalents per Liter
mg/L = Milligrams per Liter
NTU = Nephelometric Turbidity Units
pg/L = Picograms per Liter
TON = Threshold Odor Number
µg/L = Micorgrams per Liter
µmhos/cm = Micromhos per Centimeter

ND = NOT DETECTED at or above the Reporting Limit (RL) or Practical Quantitation Limit (PQL).
See laboratory water quality reports for RL and PQL values.

[1] Using EPA Method 200.8, Arsenic values are overstated due to matrix interference caused by high chloride levels. The overstated values are in laboratory reports through February 11, 2016. Going forward, EPA Method 1640 will be used for Arsenic analysis only.

[2] EPA Methods 2120B and C are both applicable to measure color caused primarily by natural organic matter. Both methods are suitable for true color measurements but for apparent color measurements only Method 2120B is used.

[3] The reported gravimetric method TDS result exceeds the calculated TDS using ion summation. The laboratory attributes the elevated level to the possibility of water trapped in salt crystals. MBAS calculated values: MW-3D (4/13/21) = 29,600 mg/L; MW-4D (4/15/21) = 24,000 mg/L

[4] MW-6 headers were corrected in Report No. 174. Header previously labeled MW-6M(L) was corrected to MW-6M and header previously labeled MW-6D was corrected to MW-6M(L).