

Annual Surveillance Report January 2021 to December 2021 for San Joaquin Dam DSOD Dam No. 1029

Irvine, California

Submitted to:
Irvine Water District
Dams & Storage
15600 Sand Canyon Avenue
Irvine, CA 92618



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September 29, 2022
GEI Project No. 1901888

Consulting September 29, 2022
Engineers and GEI Project No. 1901888
Scientists

Ms. Danielle Drake,
Assistant Engineer – Dams & Storage
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

**Re: San Joaquin Reservoir Dam, DSOD Dam No. 1029-000
Annual Surveillance Report from January 2021 to December 2021**

Dear Ms. Drake:

GEI Consultants, Inc. (GEI) is pleased to submit this Annual Surveillance Report for San Joaquin Reservoir Dam covering the period from January 2021 to December 2021. This report is part of the scope of work described under our Professional Service Agreement between Irvine Ranch Water District (District) and GEI Consultants Inc. (GEI) dated February 11, 2019.

We appreciate this opportunity to provide the District with our services. Please contact Emerson Revolorio at erevolorio@geiconsultants.com or Rich Sanchez at rsanchez@geiconsultants.com with any questions.

Sincerely,

GEI CONSULTANTS, INC.



Richard Sanchez, P.E.
Principal Engineer



Emerson Revolorio, P.E.
Project Engineer

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April 18, 2022

Reservoir Dam Valve Exercising Table

CNC Survey Report

Acronyms and Abbreviations

AC	asphalt concrete
AF	acre-feet
CML&C	cement-mortar-lined and coated
District	Irvine Ranch Water District
DSOD	State of California, Department of Water Resources, Division of Safety of Dams
El, EL, Elev	elevation
ft	feet
GEI	GEI Consultants, Inc.
gpm	gallons per minute
gal/min	gallons per minute
H:V	Horizontal to Vertical
ID	identification
in.	inches
liter/min	liters per min
MW	monitoring well
NGVD 29	National Geodetic Vertical Datum of 1929
No.	number
NOAA	National Oceanic and Atmospheric Administration
P.E.	Professional Engineer
P or Piez	Piezometer
RCP	reinforced concrete pipe
Res.	Reservoir
VW or VB	Vibrating Wire
W.S.	water surface
YR	year

1.0 Introduction and Background

1.1 General

This report presents the results of the dam safety monitoring and surveillance program for San Joaquin Reservoir Dam conducted by the Irvine Ranch Water District (District) and GEI Consultants, Inc. (GEI) for the period between January 2021 through December 2021. It includes a review of previous surveillance reports, a compilation of the field measurements, observations, and conclusions related to the general condition and safety of the dam. In addition, recommendations are provided for continued operation, surveillance and monitoring of the dam. This report is submitted as part of the jurisdictional requirements of the State of California, Department of Water Resources, Division of Safety of Dams (DSOD).

This report includes graphical summaries of the field measurements of water levels in the piezometers and monitoring wells, seepage flows, and dam movement measurements. It also contains tabulated data of the field measurements of water levels in the piezometers and monitoring wells, seepage flow rates, and field survey measurements.

Figure 1 is a plan view of the dam and reservoir with a representative cross section of San Joaquin Reservoir Dam. Figure 2 is a site plan of the dam and reservoir. Figures 3 through 6 are plans showing locations of piezometers, monitoring wells, and survey monuments. As used in this report, the left and right designations are as viewed looking downstream.

The vertical datum indicated on the as-built plans and project documents for San Joaquin Dam and Reservoir is the National Geodetic Vertical Datum of 1929 (NGVD 29). The reservoir water surface elevation and instrumentation data are currently being read based on the vertical datum of North American Vertical Datum of 1988 (NAVD 88). The height difference between datums is 2.375 ft and this same amount is to be added to elevations in NGVD 29 to obtain elevations in NAVD 88 for the San Joaquin Dam and Reservoir.

1.2 Dam and Reservoir

San Joaquin Dam and Reservoir were constructed in 1966 by the Irvine Ranch Water District (District) as a potable water storage facility. The facility was owned by a consortium of nine local water agencies including the District and the Metropolitan Water District of Southern California (MWD). The District subsequently acquired complete ownership of the dam and reservoir and converted it in 2004 from a potable facility to a recycled water facility. The conversion project components are detailed in as-built drawings approved by DSOD.

San Joaquin Reservoir Dam is a zoned earthfill embankment located in Orange County, California. As-built plans show the dam crest is at Elevation of 476.0 ft (NGVD 29), with a crest

length of 873 ft and a crest width of 30 ft. The height of the dam is 224 ft excluding 3 ft of camber at the center of the dam. The dam crest and upstream face are lined with asphalt concrete (AC). The reservoir is lined with compacted impervious earthen material which is overlaid by the AC. The upstream face of the dam has a slope gradient of 3H:1V with a bench at Elevation 420.0 ft (NGVD 29). The downstream face has a slope gradient of 2.25H:1V with three benches at Elevations 420.0 ft, 360.0 ft, and 300.0 ft (NGVD 29).

The watershed contributing to the reservoir has a drainage area of only 0.3 square miles, with water mostly diverted into the reservoir. The reservoir area is 50 acres, and the reservoir storage capacity is 3,036 acre-feet.

1.3 Spillway

The spillway consists of two rectangular overpour drop inlets located near each abutment. The inlets are comprised of reinforced concrete structures with the control at Elevation 470.5 ft, providing 5.5 ft of total freeboard. Each drop inlet is connected to a 48-inch reinforced concrete pipe. The reinforced concrete pipe transports the flow of water which converge into a combined energy dissipation reinforced concrete box located in the stream channel downstream of the toe of the dam.

1.4 Outlet Works

The outlet works intake structure consists of an inclined 60-inch-diameter mortar-lined and coated, welded steel pipe located beneath the reservoir slope (southeast) near the right end of the dam. There are four multi-level screened intake valves: a 24-inch butterfly valve at Elevation 370 ft, and three 48-inch-diameter valves at Elevations 380, 415, and 450 ft. A 60-inch butterfly valve is also located at the transition from the 60-inch-diameter steel intake pipe to the 60-inch-diameter outlet conduit near the right upstream groin toe area of the dam. The outlet conduit is a mortar-lined and coated, welded steel pipe that is concrete-encased and extends under the dam to a concrete blowoff structure near the downstream toe of the dam. The blowoff structure contains two 12-inch-diameter emergency blowoff valves located in series to minimize water waste when exercised. Water released from the blowoff valves drains into the east storm drain.

All five outlet valves and the two downstream blowoff valves were exercised during the 2021 review period. The District provided a Reservoir Dam Valve Exercising summary table which states that April 27, 2021, was the last time the valves were exercised.

2.0 Instrumentation Measurements

2.1 General

The District normally operates the reservoir below Elevation 470.0 ft (NGVD 29) which is 0.5 foot below the spillways' crest. The reservoir is considered full by the District at this elevation. The crest of the dam is at Elevation 476.0 ft (NGVD 29) or 478.38 ft (NAVD 88), and the crest elevation of each of the two spillway inlets is at 470.5 ft (NGVD 29) or 472.88 ft (NAVD 88). An annual cycle of seasonal lowering of the reservoir during the spring and summer, and then refilling during the winter is the typical pattern of the District's operation at this reservoir.

Throughout this report, instrumentation measurements and readings that remained within historical limits and followed historical trends will be classified as normal. Historical limit is classified as the range between maximum and minimum water levels within the past ten years.

The elevation of the water surface in the reservoir is recorded each time a field visit is made to collect instrumentation data. Based on the ten-year historical data from January 2011 through December 2021, the reservoir water surface elevation varied from a minimum Elevation of 395 ft to a maximum Elevation of 472.05 ft. The exception was on July 5, 2019, where the reservoir level was recorded as 39.40 ft. This reading was an error and most likely should have been 394 ft. During this review period (2021), the reservoir water surface elevation varied from a minimum Elevation of 398 ft to a maximum Elevation of 465.9 ft. The reservoir elevations that were recorded on the same dates as instrumentation data was taken are shown in Tables 4 through 9, (NAVD 88). The reservoir water surface elevations during the 2021 review period remained within historical limits.

2.2 Instrumentation

Several types of instrumentation are being monitored at the dam and reservoir, including vibrating wire piezometers, pneumatic piezometers, open-well piezometers/monitoring wells, seepage monitoring flow points, and survey monuments. Instrumentation measurements and readings are typically made by District personnel on a monthly basis except for surveys which have been performed annually in past years. The District has been having problems with the data logger associated with the vibrating wire piezometers (VB-1 through VB-8) located on the upstream side of the dam starting in 2018. The District is currently working with the manufacturer, Geokon to resolve. Based on the conversion formula the digital readings starting in 2018 are not resulting in reliable piezometer levels and are considered erroneous when

compared to historical readings. In addition, during several months in 2021 (Table 5) error digital readings of -9999.00 were recorded.

The following is a summary of the instrumentation at San Joaquin Dam and Reservoir:

1. Eight vibrating wire piezometers, identified as VB-1 through VB-8, were installed in 2004. The locations of these piezometers are on the upstream side of the dam and are shown on Figure 3.
2. Twenty pneumatic piezometers were installed in 1965. These pneumatic piezometers are located in the dam embankment and abutments. They are grouped into sets of piezometers, identified as the C, LA, LR, RA, and RR series. Their locations are also shown on Figure 3.
3. Six open-well piezometers, identified as CP-1A and-1B, CP-2A and-2B, and CP-3A and- 3B, were installed in 1977 on the upstream perimeter end of the reservoir. The locations of the piezometers are shown on Figure 4.
4. Eight monitoring wells, identified as MW-1 through MW-8, were installed also around the perimeter of the reservoir in 2004. The locations of these wells are shown on Figures 4 and 5.
5. Flow rates are obtained at eight seepage monitoring stations. The flow points, which consist of V-notch weirs, are located as shown on Figure 2. They are identified as the East Drain, West Drain, Filter Drain, Upstream Collector Drain No. 1, Upstream Collector Drain No. 2, Downstream Toe Drain, and Floor Drain. An eighth seepage monitoring location is noted as the right groin drain (6/16/08 drain).
6. There were originally 36 survey monuments installed at the dam in 2004 as part of the reservoir conversion project. The original survey monuments are grouped into sets, identified as the SA, SB, SC, SD, SE, and SF sets. The SF series monuments (SF-1, SF-2 and SF-3) are located along the upstream toe of the dam and there is no data available for this series because they are submerged under the water. The SE series monuments (SE-1, SE-2, SE-3, SE-4, SE-5, SE-6 and SE-7) are located inside the reservoir and cannot be surveyed while the water surface elevation is above 423.0 ft (NAVD 88). SA-4, SE-1, and SE-4 are no longer being surveyed because they were destroyed. Because eight of the 33 active monuments are usually under water, there are currently 25 survey monuments being surveyed by the District typically on an annual basis. The locations of the survey monuments are shown on Figure 6.

2.3 Piezometers and Monitoring wells

Tabulated data since 2007 for piezometer and monitoring well measurements are presented in Table 4. Table 5 presents the vibrating water piezometer measurements since 2007. Table 6 contains the pneumatic piezometer measurements since 2007 as well.

Figures 7 through 11 present graphs of measured water levels in the reservoir, piezometers, and monitoring wells during the 2-year period from January 2020 through December 2021. Figures 12 through 16 present graphs of historical measured water levels in the reservoir, piezometers, and monitoring wells since 2011.

Figures 17 and 18 normally would be graphs of piezometer elevation levels based on the readings obtained from the vibrating wire piezometers, but due to problems with the data logger associated with these piezometers these Figures are only showing reservoir level measurements. As previously discussed, the digital readings starting in 2018 that were recorded are not resulting in reliable piezometer levels and not comparing well with previous levels. It is believed the digital readings are not correct. In addition, during several months in 2021 (Table 5) error digital readings were recorded. The District is working with the manufacturer on resolving. Based on a preliminary review, these vibrating wire piezometers should be replaced if they cannot be repaired as they help monitor the saturation level through the upstream embankment zones 1, 2 and 3. Figures 19 and 20 are graphs of historical piezometer levels based on the readings obtained from the vibrating wire piezometers since 2011.

Figures 21 through 25 present graphs of piezometer levels based on the readings obtained from the pneumatic piezometers during the 2-year period from January 2020 through December 2021. Figures 26 through 30 present the historical water levels based on readings obtained from the pneumatic piezometers since 2011.

2.3.1 Open-Well Piezometers (CP-1A & CP-1B Through CP-3A & CP-3B)

Data from the open-well piezometers (CP-1A, CP-1B, CP-2A, CP-2B, CP-3A and CP-3B) are collected monthly by the District. Table 4 presents the piezometer level data collected from these piezometers since 2007. Figures 7 and 12 are presentations of the piezometer levels in Piezometers CP-1A, CP-1B, CP-3A, and CP-3B, while Figures 8 and 13 are presentations of the piezometer levels in Piezometers CP-2A and CP-2B.

Table 1 provides the ranges between maximum and minimum water levels in each piezometer (CP-1A, CP-1B, CP-2A, CP-2B, CP-3A and CP-3B) based on trends from the ten-year historical data from January 2011 through December 2021 and the ranges between maximum and minimum water levels during the 2021 review period. Outlier readings with isolated spikes or drops were omitted and were not included in the maximum and minimum water level range.

Table 1. Open-Well Piezometers – Maximum and Minimum Water Level Ranges

Piezometer	Last 10-year Maximum and Minimum Range (ft)	2021 Review Period Maximum and Minimum Range (ft)	Comment
CP-1A	8.7	3.1	Readings from 8/21/2013 and 11/26/2019 omitted due to isolated drop. Water level returned back to trend and historic range values.
CP-1B	1.2	0.3	Reading from 7/5/2019 omitted due to isolated spike. Water level returned back to trend and historic range values. Reading from 8/27/2019 omitted because piezometer was reported dry
CP-2A	8.3	5.1	Readings from 12/19/2018 and 7/5/2019 omitted due to isolated drops. Water level returned back to trend and historic range values.
CP-2B	3.2	1.9	Readings from 2/27/2019 and 7/5/2019 omitted due to isolated spikes. Water level returned back to trend and historic range values.
CP-3A	7.0	2.3	Readings from 1/30/2019 and 7/5/2019 omitted due to isolated drops. Water level returned back to trend and historic range values.
CP-3B	5.3	1.4	Readings from 1/30/2019 and 7/5/2019 omitted due to isolated drops. Water level returned back to trend and historic range values.

Piezometer levels in all six open-well piezometers continue to follow past trends throughout the 2021 review period and historically with changes due to reservoir level changes. The exception was during the Ridgecrest July 2019 Earthquake activity where the levels of these piezometers exceeded their normal range but returned back to normal after the earthquake activity. All levels in the open-well piezometers remained within historical limits except for the July 2019 readings that were influenced by the Ridgecrest Earthquake activity.

2.3.2 Monitoring Wells (MW-1 Through MW-8)

The water levels in the eight Monitoring Wells MW-1 through MW-8 were measured once per month throughout the 2021 review period. Table 4 presents the historical water-level data obtained for these monitoring wells since 2007. Graphs of the water levels for the 2-year period from January 2020 through December 2021 are shown on Figures 9, 10 and 11. The historical water levels since 2011 are presented on Figures 14, 15, and 16.

Table 2 provides the ranges between maximum and minimum water levels in each monitoring well (MW-1 through MW-8) based on trends from the ten-year historical data from January 2011 through December 2021 and the ranges between maximum and minimum water levels during the 2021 review period. Outlier readings with isolated spikes or drops were not included in the maximum and minimum water level range.

Table 2. Monitoring Wells – Maximum and Minimum Water Level Ranges

Monitoring Well	Last 10-year Maximum and Minimum Range (ft)	2021 Review Maximum and Minimum Range (ft)	Comment
MW-1	4.8	1.3	Reading from 7/29/2021 omitted due to isolated spike. Water level returned back to trend and historic range values.
MW-2	6.0	1.0	Readings from 11/26/2013 and 3/30/2016 omitted due to isolated spike. Water level returned back to trend and historic range values.
MW-3	5.3	2.3	Reading from 7/25/2018 omitted due to isolated spike. Water level returned back to trend and historic range values.
MW-4	2.3	0.8	
MW-5	18.6	11.2	
MW-6	6.3	6.1	
MW-7	9.2	1.0	
MW-8	11.3	1.5	

During this 2021 review period the water levels in all monitoring wells followed historic trends. The exception was on July 2021, where the reading in MW-1 rose approximately 20 ft beyond its normal range but returned to normal levels for the rest of the year. We believe this rise in reading was caused by error and doesn't affect the overall water level within the reservoir. During the inspection, GEI measured the water level in MW-1 and verified that it was similar to past readings. All water levels in the open-well piezometers remained within historical limits. Monitoring Well MW-5 was the most responsive to reservoir water level changes. Monitoring well MW-6 had a few measurements below the recorded depth of the well. The depth of MW-6 needs to be confirmed. Monitoring Well MW-8 levels continued to be above the reservoir water surface elevation because it is located in the subdivision above the reservoir and could be influenced by landscape runoff.

2.3.3 Vibrating Wire Piezometers (VB-1 Through VB-8)

There are eight vibrating wire piezometers within the upstream side of the dam embankment, and they are read at a terminal station located on the crest of the dam. Data from the vibrating wire piezometers normally is collected by the District approximately once per month. Graphs of piezometer level elevations based on readings obtained from Vibrating Wire Piezometers VB-1, VB-2, VB-5, and VB-6 would typically be shown on Figures 17 and 19 while graphs of piezometer levels in Vibrating Wire Piezometers VB-3, VB-4, VB-7, and VB-8 would be typically shown in Figures 18 and 20. As previously noted Figures 17 and 18 are only noting reservoir levels due to the data logger problems starting in 2018.

The digital readings for all vibrating wire piezometers starting in 2018 are resulting in unreliable piezometer levels and not comparing well with previous levels. It is believed the digital readings, or their conversion are not correct. In addition, during several months in 2021 (Table 5) error digital readings were noted by the District. The District will be contacting the manufacturer on resolving the erroneous digital readings.

2.3.4 Pneumatic Piezometers (C, LA, RA, and RR Series)

The pneumatic piezometers within the dam embankment and in the abutments are read at terminal stations located on the downstream face of the dam. Pneumatic piezometers are read by the District approximately once per month. The pneumatic piezometer levels are provided in Table 6 for the historical period since 2007. Plots representing the water-level elevations based on readings obtained from Pneumatic Piezometers C-1 through C-4 are shown on Figures 21 and 26, while plots representing the piezometer level elevations for Pneumatic Piezometers C-5 through C-8 are shown on Figures 22 and 27. Plots representing the piezometer level elevations based on readings obtained from Pneumatic Piezometers C-9, RR-2, LR-1, LR-2, LR-3, and LR-4 are shown on Figures 23 and 28, while plots representing the piezometer level elevations for Pneumatic Piezometers LA-1 and LA-2 are shown on Figures 24 and 29. Plots representing the piezometer level elevations based on readings obtained from Pneumatic Piezometers RA-1, RA-2, RA-3, and RA-4 are shown on Figures 25 and 30.

Table 3 provides the ranges between maximum and minimum water levels in each Pneumatic Piezometer based on trends from the ten-year historical data from January 2011 through December 2021 and the ranges between maximum and minimum water levels during the 2021 review period. Outlier readings with isolated spikes or drops were not included in the maximum and minimum water level range.

Table 3. Pneumatic Piezometers – Maximum and Minimum Water Level Ranges

Pneumatic Piezometer	Last 10-year Maximum and Minimum Range (ft)	2021 Review Period Maximum and Minimum Range (ft)	Comment
C-1	34.0	7.0	
C-2	7.0	2.0	
C-3	5.0	3.0	Reading from 9/29/2021 omitted due to isolated spike. Water level returned back to trend and historic range values.
C-4	74.0	62.0	
C-5	8.0	2.0	
C-6	22.0	15.0	
C-7	4.0	2.0	
C-8	20.0	10.0	
C-9	11.0	1.0	Readings from 2/28/2012, 3/26/2012, 5/25/2016 and 3/27/2019 omitted due to isolated drops. Water level returned back to trend and historic range values.
RR-2	81.0	70.0	
LA-1	80.0	70.0	
LA-2	33.0	24.0	
RA-1	48.0	42.0	
RA-2	29.0	23.0	
RA-3	66.0	58.0	Reading from 3/27/2019 omitted due to isolated drop. Water level returned back to trend and historic range values.
RA-4	18.0	18.0	
LR-1	7.0	4.0	
LR-2	6.0	4.0	Reading from 7/30/2020 omitted due to isolated drop. Water level returned back to trend and historic range values.
LR-3	84.0	72.0	
LR-4	44.0	35.0	

Pneumatic Piezometers C-1, C-2, C-3, C-5, C-7, C-9, LR-1 and LR-2 showed little or no response to changes in reservoir levels during the 2021 report period and historically. Piezometer C-1 historic levels from 2010 to 2017 do show a steady 20 foot drop but then stabilized from 2018 to 2021. Piezometer C-1 is at the floor of the reservoir and levels appear to have stabilized. Pneumatic Piezometer RA-4 showed an 18 ft fluctuation due to reservoir water level changes. Pneumatic Piezometers C-4, C-6, C-8, LR-3, LR-4, RR-2, RA-1, RA-2, RA-3, LA-1, and LA-2 responded to changes in the reservoir water surface elevation during the 2021 report period and historically, see Figures 26 through 30. The exception of the March 27, 2019, RA-3 reading which appears to be in error due to no significant reservoir level changes and water level readings returned to following the historic trend, see Figure 30.

All levels in the pneumatic piezometers remained within historical limits.

2.4 Subdrain Flow Rates

Subdrain flows are measured by the District at eight seepage monitoring stations. The flows from the East Drain, West Drain, and Filter Drain are measured at three separate V-notch weirs in the blow-off structure near the downstream toe of the dam. The flows from the Upstream Collector

Drain Nos. 1 and 2 are measured at two V-notch weirs at the downstream toe of the dam. The flows from the Downstream Toe Drain and the Floor Drain are measured in two separate V-notch weirs adjacent to the energy dissipator structure. An eighth seepage monitoring location is also measured near the outlet structure referred to as the right groin drain (6/16/08 drain). The locations of the seepage monitoring weirs are shown on Figure 2. The flow data from the weirs is collected monthly by the District.

Tabulated data for the historical period since 2007 is presented in Table 7. Figures 31 and 32 are graphs representing the seepage flow rates for the 2-year period from January 2020 through December 2021. Figures 33 and 34 are graphs representing the seepage flow rates for the historical ten years' period from 2011 to 2021.

The following is the range of minimum and maximum flow rates from each drain based on trends from the ten-year historical data from January 2011 through December 2021:

East Drain: 8.14 to 63.9 gpm

West Drain: 13.7 to 74.9 gpm

Filter Drain: 3.0 to 12.9 gpm

Upstream Collector Drain #1: 0.0 to 0.70 gpm

Upstream Collector Drain #2: 0.0 to 0.2 gpm

Downstream Toe Drain: 1.1 to 4.1 gpm

Floor Drain: 2.2 to 10.6 gpm

Right Groin Drain: 0 to 2.3 gpm

During the 2020-21 report period, the flows discharged from the East Drain and the West Drain tracked the reservoir closely, while the flows discharged from the Downstream Toe Drain and the Floor Drain also responded to the reservoir water level changes and rainfall. Discharges from the Upstream Collector Drains #1 and #2 did not show any response to the reservoir water surface elevation changes and remained at zero. In addition, the Filter and Right Groin Drains showed slight responses to the reservoir water level changes. The following is the range of minimum and maximum flow rates from each drain during 2021:

East Drain: 10.2 to 44.4 gpm

West Drain: 16.7 to 44.2 gpm

Filter Drain: 3.0 to 7.5 gpm

Upstream Collector Drain #1: dry

Upstream Collector Drain #2: dry

Downstream Toe Drain: 1.1 to 2.5 gpm

Floor Drain: 2.2 to 5.3 gpm

Right Groin Drain: 0.14 to 0.39 gpm

Based on GEI's review of the seepage flow data, the flow rates and the flow patterns are within historical limits and patterns, and there are no indications of any adverse conditions at the dam due to the monitored seepage amounts.

2.4.1 Sediment Collection (East, West, and Filter Drains)

During the 2021 review period, the District provided sediment accumulation data for the West Drain for September, October, and November. The sediment weight in the September reading measured 4.24 lbs. but then returned to approximately 2.0 lbs. for the next two readings. The total sediment accumulation for the 3 months during the review period was 8.5 lbs. which compares to the total amount removed in the 3 months in 2020 (9.0 lbs.). Monthly readings are required to provide a more thorough review of the impact of sedimentation accumulation at the West drain. It was reported sediment amounts have not been collected and measured on a regular basis. During the 2021 inspection, the District reported that they had been removing sedimentation in the past from the East, West and Filter drains monthly. Based on a visual examination of the sedimentation material being collected during the inspection, it consisted of a low to non-plastic silt with some fine sand, see Photo 21. Table 8 provides the sedimentation measurements that have been recorded but are not being taken on a consistent interval, gaps in the measurements exist as noted in Table 8. The last set of sedimentation measurements during 2021 were on November 22, 2021. See conclusions and recommendations for further discussion on observed sedimentation.

2.5 Movement Surveys

The District performed an initial survey of the horizontal and vertical movements at the dam in 2004 using the NGVD 29 vertical datum. Beginning in 2005, all surveys were referenced to the NAVD 88 vertical datum. Surveys are normally performed annually with the exceptions in 2017 and 2021. No surveys were conducted in calendar year 2017 and 2021. A survey was conducted during May 2022 that has been included in this report. The survey report is provided in the Appendix of this report.

Tabulated data for the surveying of horizontal and vertical movement since 2004 are presented in Table 9. Figures 35 and 39 are graphs representing the horizontal and vertical movements for survey monuments SA-1 through SA-3. Figures 36 and 40 are graphs representing the horizontal and vertical movements for survey monuments SB-1 through SB-7. Figures 37 and 41 are graphs representing the horizontal and vertical movements for survey monuments SC-1 through SC-8. Figures 38 and 42 are graphs representing the horizontal and vertical movements for survey monuments SD-1 through SD-7. The SE-series and SF-series survey monuments are not shown

in the tables or graphs because these monuments are located on the lower upstream face of the dam and are normally submerged under the water in the reservoir.

No surveys were performed in 2017 and 2021. As noted above, a survey was performed in May 2022 that has been included in this report. The survey data for the 2021 review period has been evaluated and followed historic trends. Measurements during the review period vary from zero to less than ½-inch. Based on GEI's review of the historical data and the inspection, there was no significant or unusual movement occurring at the dam.

3.0 Field Evaluations

3.1 Field Evaluation of April 18, 2022

A field evaluation and inspection were performed by Richard Sanchez, Lorena Manriquez and Emerson Revolorio of GEI, Bill Wesson, Danielle Drake and Harry Cho of the District on April 18, 2022. The reservoir level was noted at Elevation 467 ft. Weather conditions were clear and sunny. Photos taken by GEI are included in the Appendix of this report.

3.1.1 Dam

The upstream slope asphalt concrete lining above the reservoir water level showed signs of minor deterioration along with localized areas with fatigue cracking and large potholes, see Photos 1-4. The crest of the dam was walked and based on the inspection observations; the asphalt concrete crest surface, curbs, and guard rail had no unusual signs of movement or distress, see Photo 5. The AC paving did have some areas where there is noticeable shrinkage-expansion temperature type cracking that was longstanding based on previous inspections of the dam, see Photo 6. The curbs on the upstream side of the crest had some areas with minor cracks and spalling at joints due to expansion/contraction, see Photos 7 and 8. These areas will need to be repaired but not considered a problem to the safety of the dam. No signs of slope instability were seen on the dam surfaces or abutment areas. The downstream embankment slope, abutments, and groin areas were inspected, and no unusual conditions related to instability, seepage, or movement were found, see Photos 9-11. Significant corrosion was observed on safety handrails and the pneumatic piezometer gauge boxes throughout the dam, see Photo 23. These items are not considered a problem to the safety of the dam. Minor erosion was detected at the top of the downstream side groins, see Photo 10 and 11. No active rodent activity was seen on the dam. During the inspection, GEI discovered that most of the rodent control feeder boxes on the dam were empty. The downstream slope had no signs of instability or distress areas, see Photos 9-11. The downstream toe area of the dam was also inspected, and no unusual signs were seen. During the inspection, GEI observed a small amount of seepage exiting the toe area of the dam and trickling into the stilling basin, which has been observed on previous inspections, see Photo 22. Overall, the dam was well maintained with no signs of instability or distress.

3.1.2 Spillway

The two drop box inlet spillways were inspected on each end of the upstream slope of the dam and were clear and fully functional, see Photos 12 and 13. The concrete surfaces were examined and found in good condition. The entrances to the two 48-inch RCP conduits were clear. The exit at the dissipator structure was also clear, see Photos 14 and 15. During the inspection, GEI observed overgrown vegetation downstream of the dissipator structure at the exit channel, that

the District is monitoring and cutting back when necessary. The dissipator concrete structure had no visual signs of structural deficiencies and was clear for water flow.

3.1.3 Outlet Works

The upstream outlet controls and 24-inch, 60-inch, and three 48-inch butterfly valves located on the slope of the reservoir at various levels, with pneumatic controls were not exercised during the inspection. During the inspection, evidence of hydraulic line leakage was observed inside and underneath the valve control panel. The District stated that all the valves are functional and can be fully opened and closed. The District also mentioned that the hydraulic lines associated with valves # 2, 3 and 5 leak when operated, see Photo 16, and had a work order to fix all leaks in the hydraulic lines.

The downstream blowoff valves were not exercised during the inspection but the District reported they were fully exercised on April 27, 2021.

3.1.4 Seepage

There were no signs of abnormal seepage observed on the downstream slope, along the groins, or along the toe of the dam. The following seepage or dry conditions were observed and noted during the inspection, see Photos 17-20:

East = 41.44 gpm	U/S Collector Drains #1 and #2 = Dry
West = 43.6 gpm	Right Groin Drain = 0.5 gpm (seepage was approximated)
Filter = 7.09 gpm	D/S Toe = 1.79 gpm Floor Drain = 11.58 gpm

Above seepage amount are considered within historic levels. During the inspection, the District mentioned that they have been removing approximately 0.5 lbs. of sediment deposits from the East, West and Filter drains monthly, see Photo 21. Historic and recent sedimentation measurements data was requested during the inspection and received after the inspection (see Table 8). It is noted the sedimentation measurements received from the District only included sedimentation measurements associated with the East Drain. The seepage water observed at the Floor, Toe and Right Groin (6/16/08 drain) drains was clear.

4.0 Conclusions and Recommendations

4.1 Conclusions

- 1) Based on the review of available instrumentation data and the field inspection, the dam does not appear to have signs of structural deficiencies, seepage, and instability.
- 2) The piezometer level fluctuations and seepage flow rates were found to be within historical ranges. It was noted that Piezometer C-1 levels from 2010 to 2017 dropped 20 ft but then stabilized from 2018 to 2020. Piezometer C-1 is at the floor of the reservoir.
- 3) The data logger associated with the vibrating wire piezometers needs to be repaired or recalibrated. It is noted the District is working with the manufacturer to resolve.
- 4) The four of the upstream outlet valves and two blowoff valves were not exercised during the April 18, 2022, inspection. The District reported they would be exercised during DSOD's inspection later in the year. Based on inspection discussions, the hydraulic lines associated with Valves # 2, 3 and 5 leak when the valves are exercised. The District is in the process of fixing these leaky hydraulic lines.
- 5) The 2022 survey data was reviewed, and the horizontal and vertical survey movement measurements were found normal within historical values and trends.
- 6) The AC on the upstream slope and crest of the dam continues to slowly deteriorate.
- 7) The overgrown vegetation downstream and adjacent to the energy dissipator structure has increased since the last inspection.
- 8) There are localized potholes along the AC-lined upstream face that require repair.
- 9) There was a lack of poison at most rodent control feeder boxes.
- 10) Minor sedimentation being removed from the drains has not been measured in the past at regular intervals.
- 11) The concrete curbs on the upstream crest have minor temperature expansion and contraction related cracking and spalling at some joints.
- 12) Significant corrosion was observed on safety handrails and the pneumatic piezometer gauge boxes.

4.2 Recommendations

- 1) The District needs to work with the manufacture to resolve the problems associated with the vibrating wire piezometers' data logger and digital readings.
- 2) Surveyor needs to provide reservoir elevation, reservoir water temperature, air temperature and weather conditions with future surveys.
- 3) Complete repairs to the leaky hydraulic fluid line associated with outlet Valves # 2, 3 and 5.
- 4) Repair AC at localized deteriorated areas on the upstream slope and crest of the dam. This includes large potholes and cracks, see photos.
- 5) Spillway approaches, control structures and entrances and exit were clear with no structural deficiencies seen. GEI recommends a camera inspection of both spillway conduits be performed at 10 year intervals.
- 6) Repair the minor concrete spalling observed at concrete curb joints.
- 7) The District to continue to measure and record sedimentation being removed from the drains monthly. It also recommended a soil gradation analysis of the sedimentation material being collected be performed and the results compared to materials used in the construction of the dam.
- 8) Continue exercising the outlet control valves and emergency blowoffs annually.
- 9) Measure and confirm depth of Monitoring Well MW-6.
- 10) Fill rodent abatement traps with poison and maintain.
- 11) Repair corroded metal equipment, for example piezometer gauge boxes and safety handrails near outlet facilities.
- 12) During normal operations at the reservoir, District personnel shall continue observing the condition of the dam and appurtenances, looking for signs of distress or movement, increased seepage, or other unusual conditions Any unusual observations should be reported immediately to the engineer.
- 13) GEI recommends an inspection of the dam immediately after any earthquake with a Magnitude of 4.0 or greater within a 50-mile radius of the dam. Any unusual signs found during post-earthquake inspections are to be reported to the engineer for further evaluation.

San Joaquin Reservoir Dam Action Item Summary

Item	Location	Maintenance	Measures
Vibrating Wire Piezometers (VWP)	Dam upstream face	Error readings	Coordinate with manufacture to repair data logger. If the District is unable to resolve issues, District should replace VWP piezometer to monitor the saturation level through the upstream embankment zones 1, 2, and 3.
Movement Surveys	Throughout dam	Need additional information	Provide reservoir elevation, reservoir water temperature, air temperature and weather conditions for each survey
Monitoring Well – MW-6	Northeast section of reservoir	N/A	Measure and confirm depth
Outlet valves # 2, 3 and 5	Control house	Hydraulic fluid lines for valves leak when operated	Repair leakage
AC pavement	Dam crest	Shrinkage-expansion temperature cracking	Repair AC pavement by filling in cracks and creating a smooth surface
Spillway Conduits	Right and Left Spillway Inlets	General Inspection	Conduct a camera inspection of conduits
AC Liner	Upstream face	Localized cracks and potholes along the AC liner	Repair cracks and potholes by filling in and creating a smooth surface
Rodent control feeder boxes	Throughout dam	Lack of poison in rodent control feeder boxes	Fill and maintain rodent control feeder boxes with poison
Filter Drain	V-notch weirs at blowoff structure	Minor sedimentation has been measured in the past	Continue to monitor and record amount of sedimentation monthly. Conduct soil gradation analysis on the sedimentation material and compare to materials used in the construction of the dam.
Concrete curbs	Upstream side of crest	Curbs have minor cracks and spalling at joints.	Repair concrete spalling at curbs
Handrails and vault boxes for pneumatic piezometers	Above the energy dissipation structure and along benches	Significant corrosion was observed along safety handrails near the dissipation structure and at vault boxes for the pneumatic piezometers	Repair corroded equipment boxes and handrails.

5.0 Limitations

This report presents observations made, conclusions drawn, and opinions formed from (1) a visual inspection of the San Joaquin Reservoir Dam and its appurtenant structures, and (2) a review of instrumentation data, including piezometer levels, survey data and seepage rates, collected by the District. The purpose of the inspection and review is to assess the safety of the structure for continuing operation. Reuse of this report for any other purposes, in part or in whole, is at the sole risk of the user.

In the context intended above, the term “safety” is interpreted to be restricted specifically to major structural and control features of the project in regard to their adequacy against possible catastrophic failure due to natural or operational events. No consideration is given herein to those public safety aspects related to voluntary occupancy or use of project features in such manner as to result in personal mishaps.

The undersigned who performed the inspection and reviewed the instrumentation data and prepared this report, desire that it be clearly understood that the conclusions regarding the condition and safety of the dam and related facilities are not guaranteed but do represent our best judgment. Inevitably, such judgment must be recognized to be affected to an uncertain degree by the practical limitations that affect all dam evaluations, relative principally to approximate knowledge of the existing properties of the structures and their foundations, the potential for storm or seismic damage, and the uncertainties that are known to exist in estimating margins of this report represents the results of our surveillance program for San Joaquin Reservoir Dam, covering safety.

The conclusions and professional opinions presented herein were developed by GEI Consultants, Inc. for the Irvine Ranch Water District in accordance with generally accepted engineering principles and practices. We make no other warranty, either expressed or implied.

6.0 References

California Department of Water Resources, Division of Safety of Dams (DSOD),
Inspection of Dam and Reservoir in Certified Status, October 19, 2020.

Genterra, 2018, Annual Surveillance Report January 2017 through December 2017 San Joaquin Dam DSOD Dam No. 1029-000, Newport Beach, CA, by Genterra Consultants Inc., November 26, 2018.

Tables

**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		88.70	399.10		66.20	422.80	
2/27/2007	426.80		88.70	399.10		63.00	426.00	
3/28/2007	438.80		88.80	399.00		66.80	422.20	
4/26/2007	450.90		88.20	399.60		66.60	422.40	
5/23/2007	461.40		88.00	399.80		66.90	422.10	
6/27/2007	457.20		87.10	400.70		66.10	422.90	
7/26/2007	445.50		87.30	400.50		65.80	423.20	
8/28/2007	434.60		86.90	400.90		65.50	423.50	
9/25/2007	416.80		86.90	400.90		65.40	423.60	
10/24/2007	404.50		86.70	401.10		65.00	424.00	
11/27/2007	422.20		86.70	401.10		65.60	423.40	
1/3/2008	443.20		86.40	401.40		65.40	423.60	
1/29/2008	452.20		86.50	401.30		65.04	423.96	
2/27/2008	460.80		85.90	401.90		64.70	424.30	
3/26/2008	468.00		85.70	402.10		63.90	425.10	
4/29/2008	468.60		83.70	404.10		62.90	426.10	
5/29/2008	464.70		84.70	403.10		62.60	426.40	
6/26/2008	455.70		84.20	403.60		61.90	427.10	
7/29/2008	447.30	0.00	84.00	403.80		61.20	427.80	
8/28/2008	438.80	0.00	83.50	404.30		58.20	430.80	
9/26/2008	430.70	0.00	83.30	404.50		60.90	428.10	
10/29/2008	412.50	0.00	83.40	404.40		61.10	427.90	
11/25/2008	404.70	2.60	83.30	404.50		60.70	428.30	
12/30/2008	440.90	3.42	83.40	404.40		61.00	428.00	
1/28/2009	463.70	0.17	83.00	404.80		61.00	428.00	
2/25/2009	470.10	3.35	82.60	405.20		60.80	428.20	
3/26/2009	469.40	0.19	82.20	405.60		60.60	428.40	
4/29/2009	466.90	0.07	82.20	405.60		60.70	428.30	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

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Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
5/18/2009	466.70	0.00	81.90	405.90		60.70	428.30	
5/29/2009	465.00	0.00	81.80	406.00		60.60	428.40	
6/30/2009	460.20	0.00	81.30	406.50		60.60	428.40	
7/30/2009	451.10	0.00	81.20	406.60		60.10	428.90	
8/25/2009	440.10	0.00	81.00	406.80		59.90	429.10	
9/30/2009	432.20	0.00	81.10	406.70		59.85	429.15	
10/29/2009	431.40	0.53	81.20	406.60		60.30	428.70	
12/1/2009	427.40	0.00	81.10	406.70		60.90	428.10	
12/29/2009	448.10	2.06	81.36	406.40		61.30	427.70	
1/27/2010	465.60	4.62	80.90	406.90		61.50	427.50	
2/25/2010	470.20	2.51	81.40	406.40		61.50	427.50	
3/29/2010	465.70	0.99	80.60	407.20		61.40	427.60	
4/4/2010	465.00		80.50	407.30		61.40	427.60	
4/27/2010	468.40	1.23	80.50	407.30		61.20	427.80	
5/27/2010	463.30	0.05	80.70	407.10		61.60	427.40	
6/30/2010	454.70	0.00	80.50	407.30		61.60	427.40	
7/28/2010	445.60	0.00	80.60	407.20		61.60	427.40	
8/31/2010	437.10	0.00	80.80	407.00		62.20	426.80	
9/29/2010	422.70	0.00	80.60	407.20		62.30	426.70	
10/27/2010	426.40	2.38	81.00	406.80		62.80	426.20	
11/29/2010	439.80	0.97	81.50	406.30		63.40	425.60	
12/30/2010	456.60	8.62	80.90	406.90		63.10	425.90	
2/1/2011	468.90	0.92	80.60	407.20		62.90	426.10	
2/23/2011	469.00	0.99	80.60	407.20		62.80	426.20	
3/29/2011	470.30	2.93	80.50	407.30		62.50	426.50	
4/27/2011	464.80	0.19	80.25	407.60		62.55	426.45	
5/26/2011	457.30	0.48	80.10	407.70		62.60	426.40	
6/28/2011	443.50	0.05	79.90	407.90		62.70	426.30	

Notes:

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Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/29/2011	425.10	0.00	80.25	407.60		62.80	426.20	
8/24/2011	418.00	0.00	80.40	407.40		62.90	426.10	
9/27/2011	400.90	0.12	80.60	407.20		63.30	425.70	
10/26/2011	402.20	1.25	81.20	406.60		63.90	425.10	
11/30/2011	425.10	1.38	81.30	406.50		63.80	425.20	
12/21/2011	435.70	0.32	81.50	406.30		64.20	424.80	
1/24/2012	441.40	0.53	81.70	406.10		64.70	424.30	
2/28/2012	448.40	0.42	82.10	405.70		65.20	423.80	
3/26/2012	452.70	1.06	81.80	406.00		64.90	424.10	
4/23/2012	463.40	1.32	81.40	406.40		64.80	424.20	
5/30/2012	457.30	0.02	81.50	406.30		64.70	424.30	
6/13/2012	452.90	0.02	81.30	406.50		64.70	424.30	
6/26/2012	450.20	0.00	81.40	406.40		64.90	424.10	
7/24/2012	439.80	0.00	81.60	406.20		65.10	423.90	
8/8/2012	437.60	0.12	81.50	406.30		64.30	424.70	
8/22/2012	433.40	0.00	81.55	406.30		65.20	423.80	
8/29/2012	431.30	0.00	81.50	406.30		65.10	423.90	
9/25/2012	420.80	0.00	81.75	406.10		65.30	423.70	
10/31/2012	412.30	0.26	82.30	405.50		65.50	423.50	
11/27/2012	420.80	0.58	82.90	404.90		65.70	423.30	
12/18/2012	448.00	1.44	82.30	405.50		65.30	423.70	
1/29/2013	468.60	1.18	82.40	405.40		65.50	423.50	
2/28/2013	469.20	0.30	81.90	405.90		64.80	424.20	
3/27/2013	468.30	0.50	81.35	406.50		64.70	424.30	
4/25/2013	462.70	0.00	81.20	406.60		64.60	424.40	
5/21/2013	454.20	0.00	81.10	406.70		64.60	424.40	
6/25/2013	439.30	0.00	81.20	406.60		64.75	424.25	
7/23/2013	431.50	0.00	81.40	406.40		64.80	424.20	

Notes:

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Bottom of Well Elevation -->			363.20			409.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
8/21/2013	418.00	0.00	81.70	406.10		64.90	424.10	
9/24/2013	404.00	0.00	82.00	405.80		65.00	424.00	
10/29/2013	400.60	0.00	82.50	405.30		65.40	423.60	
11/26/2013	407.90	0.44	83.00	404.80		69.70	419.30	Omitted
12/19/2013	425.80	0.54	82.50	405.30		66.40	422.60	
1/28/2014	439.70	0.00	83.20	404.60		66.50	422.50	
2/25/2014	449.70	0.83	83.20	404.60		66.70	422.30	
3/26/2014	465.10		83.00	404.80		66.80	422.20	
3/28/2014	465.70	1.15	83.20	404.60		66.90	422.10	
4/29/2014	465.30	0.43	82.90	404.90		66.90	422.10	
5/28/2014	450.60	0.00	82.90	404.90		66.90	422.10	
6/25/2014	440.10	0.00	82.80	405.00		67.90	421.10	
7/29/2014	431.20	0.00	83.00	404.80		67.00	422.00	
8/26/2014	419.50	0.02	83.20	404.60		67.20	421.80	
9/23/2014	405.30	0.00	83.30	404.50		67.00	422.00	
10/29/2014	400.90	0.00	83.60	404.20		66.80	422.20	
11/25/2014	410.90	0.25	84.20	403.60		67.30	421.70	
12/30/2014	430.60	2.94	83.80	404.00		66.90	422.10	
1/27/2015	466.70	0.83	83.70	404.10		67.10	421.90	
2/25/2015	468.90	0.69	83.40	404.40		67.10	421.90	
3/26/2015	465.90	0.61	83.10	404.70		66.80	422.20	
4/28/2015	465.70	0.20	82.50	405.30		66.50	422.50	
5/28/2015	466.40	1.08	82.50	405.30		66.30	422.70	
6/30/2015	454.50	0.00	82.00	405.80		66.10	422.90	
7/28/2015	445.60	0.00	82.20	405.60		65.90	423.10	
8/28/2015	437.60	0.00	82.20	405.60		66.00	423.00	
9/24/2015	426.90	1.51	82.40	405.40		65.80	423.20	
10/27/2015	415.40	0.49	82.70	405.10		66.00	423.00	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/19/2015	412.90	0.09	83.00	404.80		66.70	422.30	
12/22/2015	425.50	0.69	83.10	404.70		66.90	422.10	
1/27/2016	463.60	2.86	83.10	404.70		67.50	421.50	
2/25/2016	468.90	0.25	83.50	404.30		67.30	421.70	
3/30/2016	468.00	1.44	82.80	405.00		62.20	426.80	Omitted
4/28/2016	461.30	0.30	82.70	405.10		67.20	421.80	
5/25/2016	451.30	0.18	82.85	405.00		67.30	421.70	
6/28/2016	414.10	0.00	82.80	405.00		67.30	421.70	
7/27/2016	434.20	0.00	82.80	405.00		67.40	421.60	
8/23/2016	418.60	0.00	83.30	404.50		67.50	421.50	
9/27/2016	406.40	0.00	83.40	404.40		67.30	421.70	
10/26/2016	404.00	0.48	84.00	403.80		67.40	421.60	
11/22/2016	413.60	1.13	84.40	403.40		67.70	421.30	
12/20/2016	441.10	3.48	84.60	403.20		67.65	421.35	
1/26/2017	471.60	5.67	84.50	403.30		67.70	421.30	
2/24/2017	472.05	3.95	84.10	403.70		67.50	421.50	
2/25/2017	472.00		84.05	403.80		67.45	421.55	
2/26/2017	472.00		84.10	403.70		67.40	421.60	
2/27/2017	472.00		83.90	403.90		67.50	421.50	
2/28/2017	471.90		83.90	403.90		68.21	420.79	
3/1/2017	471.90		84.20	403.60		67.60	421.40	
3/2/2017	471.90		84.00	403.80		67.36	421.64	
3/29/2017	467.90	0.10	83.70	404.10		67.30	421.70	
4/27/2017	457.60	0.04	83.30	404.50		67.10	421.90	
5/23/2017	453.50	0.43	83.40	404.40		67.10	421.90	
6/21/2017	447.40	0.00	83.20	404.60		66.80	422.20	
7/26/2017	435.10	0.00	83.40	404.40		66.80	422.20	
8/25/2017	420.10	0.00	83.40	404.40		66.10	422.90	

Notes:

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TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
9/27/2017	407.10	0.00	83.60	404.20		65.60	423.40	
10/26/2017	395.00	0.00	83.80	404.00		66.30	422.70	
11/28/2017	409.00	0.09	84.00	403.80		66.20	422.80	
12/20/2017	416.80	0.00	84.50	403.30		66.60	422.40	
1/24/2018	434.50	1.31	84.40	403.40		65.90	423.10	
2/21/2018	443.10	0.29	84.20	403.60		67.10	421.90	
3/29/2018	453.00	1.28	84.10	403.70		67.40	421.60	
4/26/2018	449.10	0.05	84.00	403.80		67.30	421.70	
5/31/2018	453.10	0.20	83.80	404.00		67.40	421.60	
6/28/2018	448.20	0.00	83.70	404.10		67.30	421.70	
7/25/2018	440.40	0.00	83.60	404.20		66.00	423.00	
8/22/2018	427.10	0.00	83.70	404.10		66.90	422.10	
9/27/2018	439.60	0.00	84.30	403.50		67.10	421.90	
10/18/2018	405.30	0.90	84.20	403.60		67.30	421.70	
11/28/2018	408.60	1.19	84.50	403.30		67.80	421.20	
12/19/2018	436.00	1.99	84.70	403.10		67.50	421.50	
1/30/2019	463.80	4.71	84.40	403.40		67.40	421.60	
2/27/2019	466.20	6.55	84.30	403.50		67.30	421.70	
3/27/2019	463.30	1.34	84.00	403.80		66.60	422.40	
4/29/2019	453.00	0.13	83.40	404.40		66.80	422.20	
5/30/2019	451.80	0.64	83.40	404.40		66.50	422.50	
6/26/2019	446.20	0.01	83.30	404.50		66.30	422.70	
7/5/2019	39.40	0.00	83.40	404.40		66.30	422.70	
7/30/2019	434.80	0.00	82.80	405.00		66.10	422.90	
8/27/2019	424.40	0.00	82.60	405.20		66.20	422.80	
9/26/2019	405.60	0.00	82.80	405.00		66.50	422.50	
10/22/2019	400.50	0.00	83.00	404.80		66.40	422.60	
11/26/2019	412.80	3.13	83.00	404.80		66.70	422.30	

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/18/2019	447.40	4.44	83.30	404.50		66.80	422.20	
1/28/2020	465.40	0.20	82.90	404.90		66.80	422.20	
2/26/2020	459.60	0.14	82.70	405.10		66.40	422.60	
3/24/2020	470.70	3.49	82.60	405.20		66.70	422.30	
4/29/2020	467.60	3.65	81.80	406.00		66.10	422.90	
5/27/2020	459.10	0.02	81.60	406.20		65.80	423.20	
6/23/2020	447.00	0.00	81.70	406.10		65.30	423.70	
7/30/2020	434.00	0.00	81.70	406.10		68.50	420.50	
8/26/2020	417.70	0.00	81.70	406.10		66.00	423.00	
9/29/2020	403.60	0.00	82.40	405.40		66.40	422.60	
10/28/2020	404.50	0.00	82.50	405.30		67.60	421.40	
11/24/2020	413.50	0.42	82.80	405.00		67.00	422.00	
12/22/2020	408.00	1.13	83.00	404.80		67.00	422.00	
1/27/2021	435.60	2.25	83.30	404.50		67.20	421.80	
2/25/2021	457.30	0.05	82.90	404.90		66.70	422.30	
3/23/2021	465.90	1.36	82.70	405.10		67.60	421.40	
4/27/2021	462.10	0.04	82.50	405.30		67.00	422.00	
5/26/2021	455.00	0.03	82.50	405.30		66.80	422.20	
6/30/2021	437.90	0.00	82.20	405.60		66.60	422.40	
7/29/2021	423.60	0.07	62.50	425.30	Omitted	66.90	422.10	
8/24/2021	408.00	0.00	82.30	405.50		67.00	422.00	
9/29/2021	398.00	0.04	82.90	404.90		67.10	421.90	
10/26/2021	417.00	0.87	83.40	404.40		67.20	421.80	
11/25/2021	427.90	0.00	83.20	404.60		67.20	421.80	
12/21/2021	427.90	4.77	83.50	404.30		67.20	421.80	

Notes:

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TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		86.50	422.50		43.40	446.50	
2/27/2007	426.80		87.50	421.50		45.50	444.40	
3/28/2007	438.80		86.90	422.10				
4/26/2007	450.90		87.60	421.40		45.30	444.60	
5/23/2007	461.40		86.90	422.10		45.70	444.20	
6/27/2007	457.20		86.90	422.10		45.70	444.20	
7/26/2007	445.50		86.60	422.40		45.70	444.20	
8/28/2007	434.60		86.90	422.10		45.20	444.70	
9/25/2007	416.80		87.00	422.00		45.30	444.60	
10/24/2007	404.50		86.90	422.10		45.70	444.20	
11/27/2007	422.20		86.90	422.10		45.20	444.70	
1/3/2008	443.20		86.90	422.10		45.20	444.50	
1/29/2008	452.20		86.90	422.10		45.25	444.70	
2/27/2008	460.80		86.60	422.40		45.40	444.40	
3/26/2008	468.00		86.90	422.10		45.20	444.60	
4/29/2008	468.60		88.00	421.00		45.50	444.70	
5/29/2008	464.70		87.00	422.00		45.30	444.50	
6/26/2008	455.70		86.30	422.70		45.20	444.70	
7/29/2008	447.30	0.00	87.00	422.00		45.40	444.70	
8/28/2008	438.80	0.00	89.30	419.70		45.20	444.70	
9/26/2008	430.70	0.00	89.60	419.40		45.20	444.70	
10/29/2008	412.50	0.00	87.50	421.50		45.20	444.70	
11/25/2008	404.70	2.60	86.90	422.10		45.20	444.70	
12/30/2008	440.90	3.42	86.90	422.10		45.20	444.70	
1/28/2009	463.70	0.17	86.70	422.30		45.20	444.70	
2/25/2009	470.10	3.35	85.40	423.60		45.10	444.80	
3/26/2009	469.40	0.19	86.50	422.50		45.20	444.70	
4/29/2009	466.90	0.07	86.80	422.20		45.40	444.50	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
5/18/2009	466.70	0.00	87.20	421.80		45.20	444.70	
5/29/2009	465.00	0.00	85.30	423.70		45.30	444.60	
6/30/2009	460.20	0.00	87.00	422.00		45.40	444.50	
7/30/2009	451.10	0.00	87.00	422.00		45.20	444.70	
8/25/2009	440.10	0.00	86.40	422.60		45.20	444.70	
9/30/2009	432.20	0.00	87.00	422.00		45.20	444.70	
10/29/2009	431.40	0.53	87.04	422.00		45.25	444.70	
12/1/2009	427.40	0.00	88.60	420.40		45.70	444.20	
12/29/2009	448.10	2.06	87.00	422.00		45.25	444.70	
1/27/2010	465.60	4.62	88.60	420.40		45.00	444.90	
2/25/2010	470.20	2.51	87.00	422.00		45.20	444.70	
3/29/2010	465.70	0.99	87.20	421.80		45.20	444.70	
4/4/2010	465.00		87.10	421.90		45.30	444.60	
4/27/2010	468.40	1.23	88.60	420.40		45.30	444.60	
5/27/2010	463.30	0.05	86.90	422.10		45.30	444.60	
6/30/2010	454.70	0.00	87.00	422.00		45.00	444.90	
7/28/2010	445.60	0.00	87.10	421.90		45.20	444.70	
8/31/2010	437.10	0.00	87.10	421.90		45.30	444.60	
9/29/2010	422.70	0.00	87.00	422.00		45.30	444.60	
10/27/2010	426.40	2.38	86.90	422.10		45.30	444.60	
11/29/2010	439.80	0.97	88.50	422.10		45.20	444.70	
12/30/2010	456.60	8.62	87.40	421.60		45.40	444.50	
2/1/2011	468.90	0.92	87.00	422.00		45.20	444.70	
2/23/2011	469.00	0.99	87.10	421.90		45.25	444.70	
3/29/2011	470.30	2.93	87.30	421.70		45.20	444.70	
4/27/2011	464.80	0.19	87.00	422.00		45.25	444.70	
5/26/2011	457.30	0.48	88.20	420.80		45.30	444.60	
6/28/2011	443.50	0.05	88.00	421.00		45.30	444.60	

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TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/29/2011	425.10	0.00	88.30	420.70		45.25	444.70	
8/24/2011	418.00	0.00	87.00	422.00		45.20	444.70	
9/27/2011	400.90	0.12	87.30	421.70		45.25	444.70	
10/26/2011	402.20	1.25	88.50	420.50		45.80	444.10	
11/30/2011	425.10	1.38	87.00	422.00		45.20	444.70	
12/21/2011	435.70	0.32	88.30	420.70		45.60	444.30	
1/24/2012	441.40	0.53	87.00	422.00		45.20	444.70	
2/28/2012	448.40	0.42	88.20	420.80		45.60	444.30	
3/26/2012	452.70	1.06	86.90	422.10		45.20	444.70	
4/23/2012	463.40	1.32	86.30	422.70		45.80	444.10	
5/30/2012	457.30	0.02	86.60	422.40		46.40	443.50	
6/13/2012	452.90	0.02	86.60	422.40		45.25	444.70	
6/26/2012	450.20	0.00	89.50	419.50		45.30	444.60	
7/24/2012	439.80	0.00	88.80	420.20		46.50	443.40	
8/8/2012	437.60	0.12	88.80	420.20		46.20	443.70	
8/22/2012	433.40	0.00	86.90	422.10		45.20	444.70	
8/29/2012	431.30	0.00	86.10	422.90		45.30	444.60	
9/25/2012	420.80	0.00	87.00	422.00		45.20	444.70	
10/31/2012	412.30	0.26	89.40	419.60		46.40	443.50	
11/27/2012	420.80	0.58	86.90	422.10		45.10	444.80	
12/18/2012	448.00	1.44	86.80	422.20		45.30	444.60	
1/29/2013	468.60	1.18	88.80	420.20		46.50	443.40	
2/28/2013	469.20	0.30	86.90	422.10		46.70	443.20	
3/27/2013	468.30	0.50	87.10	421.90		45.20	444.70	
4/25/2013	462.70	0.00	87.00	422.00		45.25	444.70	
5/21/2013	454.20	0.00	86.90	422.10		45.20	444.70	
6/25/2013	439.30	0.00	87.00	422.00		45.20	444.70	
7/23/2013	431.50	0.00	87.10	421.90		45.30	444.60	

Notes:

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TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
8/21/2013	418.00	0.00	86.90	422.10		45.20	444.70	
9/24/2013	404.00	0.00	86.90	422.10		45.00	444.90	
10/29/2013	400.60	0.00	87.30	421.70		45.30	444.60	
11/26/2013	407.90	0.44	87.30	421.70		45.20	444.70	
12/19/2013	425.80	0.54	86.70	422.30		45.20	444.70	
1/28/2014	439.70	0.00	86.70	422.30		45.20	444.70	
2/25/2014	449.70	0.83	86.70	422.30		45.30	444.60	
3/26/2014	465.10		88.70	420.30		45.40	444.50	
3/28/2014	465.70	1.15	87.00	422.00		45.20	444.70	
4/29/2014	465.30	0.43	89.10	419.90		45.10	444.80	
5/28/2014	450.60	0.00	86.80	422.20		45.20	444.70	
6/25/2014	440.10	0.00	86.90	422.10		45.10	444.80	
7/29/2014	431.20	0.00	88.30	420.70		45.30	444.60	
8/26/2014	419.50	0.02	86.90	422.10		45.20	444.70	
9/23/2014	405.30	0.00	86.80	422.20		44.60	445.30	
10/29/2014	400.90	0.00	88.10	420.90		45.30	444.60	
11/25/2014	410.90	0.25	86.80	422.20		45.20	444.70	
12/30/2014	430.60	2.94	86.80	422.20		45.20	444.70	
1/27/2015	466.70	0.83	88.30	420.70		45.30	444.60	
2/25/2015	468.90	0.69	86.80	422.20		45.20	444.70	
3/26/2015	465.90	0.61	86.90	422.10		45.10	444.80	
4/28/2015	465.70	0.20	87.00	422.00		45.20	444.70	
5/28/2015	466.40	1.08	88.30	420.70		45.50	444.40	
6/30/2015	454.50	0.00	87.00	422.00		45.20	444.70	
7/28/2015	445.60	0.00	86.90	422.10		45.20	444.70	
8/28/2015	437.60	0.00	86.90	422.10		45.00	444.90	
9/24/2015	426.90	1.51	86.90	422.10		45.20	444.70	
10/27/2015	415.40	0.49	87.30	421.70		45.30	444.60	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/19/2015	412.90	0.09	87.00	422.00		45.20	444.70	
12/22/2015	425.50	0.69	87.80	421.20		45.50	444.40	
1/27/2016	463.60	2.86	87.00	422.00		45.30	444.60	
2/25/2016	468.90	0.25	87.20	421.80		44.80	445.10	
3/30/2016	468.00	1.44	87.10	421.90		45.30	444.60	
4/28/2016	461.30	0.30	88.30	420.70		44.40	445.50	
5/25/2016	451.30	0.18	87.00	422.00		45.30	444.60	
6/28/2016	414.10	0.00	87.10	421.90		45.20	444.70	
7/27/2016	434.20	0.00	87.20	421.80		45.40	444.50	
8/23/2016	418.60	0.00	86.80	422.20		45.20	444.70	
9/27/2016	406.40	0.00	87.20	421.80		45.40	444.50	
10/26/2016	404.00	0.48	86.30	422.70		45.30	444.60	
11/22/2016	413.60	1.13	88.30	420.70		45.40	444.50	
12/20/2016	441.10	3.48	88.30	420.70		45.30	444.60	
1/26/2017	471.60	5.67	84.40	424.60		45.20	444.70	
2/24/2017	472.05	3.95	88.30	420.70		45.30	444.60	
2/25/2017	472.00		88.30	420.70		45.20	444.70	
2/26/2017	472.00		88.30	420.70		45.20	444.70	
2/27/2017	472.00		88.30	420.70		45.20	444.70	
2/28/2017	471.90		88.00	421.00		45.30	444.60	
3/1/2017	471.90		87.00	422.00		45.20	444.70	
3/2/2017	471.90		86.90	422.10		45.30	444.60	
3/29/2017	467.90	0.10	87.20	421.80		45.10	444.80	
4/27/2017	457.60	0.04	86.90	422.10		45.10	444.80	
5/23/2017	453.50	0.43	88.30	420.70		45.30	444.60	
6/21/2017	447.40	0.00	87.10	421.90		45.20	444.70	
7/26/2017	435.10	0.00	87.70	421.30		45.30	444.60	
8/25/2017	420.10	0.00	86.90	422.10		45.20	444.70	

Notes:

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TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
9/27/2017	407.10	0.00	86.70	422.30		45.30	444.60	
10/26/2017	395.00	0.00	86.80	422.20		45.40	444.50	
11/28/2017	409.00	0.09	86.90	422.10		45.30	444.60	
12/20/2017	416.80	0.00	87.20	421.80		45.00	444.90	
1/24/2018	434.50	1.31	88.50	420.50		45.70	444.20	
2/21/2018	443.10	0.29	84.20	424.80		45.50	444.40	
3/29/2018	453.00	1.28	86.50	422.50		45.00	444.90	
4/26/2018	449.10	0.05	88.30	420.70		45.30	444.60	
5/31/2018	453.10	0.20	87.20	421.80		45.20	444.70	
6/28/2018	448.20	0.00	86.90	422.10		45.10	444.80	
7/25/2018	440.40	0.00	70.60	438.40	Omitted	45.40	444.50	
8/22/2018	427.10	0.00	87.00	422.00		45.30	444.60	
9/27/2018	439.60	0.00	87.00	422.00		45.30	444.60	
10/18/2018	405.30	0.90	87.00	422.00		45.30	444.60	
11/28/2018	408.60	1.19	86.90	422.10		45.50	444.40	
12/19/2018	436.00	1.99	88.30	420.70		45.20	444.70	
1/30/2019	463.80	4.71	88.7	420.30	Dry	45.3	444.60	Dry
2/27/2019	466.20	6.55	87.8	421.20	Dry	45.5	444.40	Dry
3/27/2019	463.30	1.34	86.9	422.10	Dry	45.2	444.70	Dry
4/29/2019	453.00	0.13	88.7	420.30	Dry	45.3	444.60	Dry
5/30/2019	451.80	0.64	87.8	421.20	Dry	45.4	444.50	Dry
6/26/2019	446.20	0.01	88	421.00	Dry	45.4	444.50	Dry
7/5/2019	39.40	0.00	87.1	421.90	Dry	45.3	444.60	Dry
7/30/2019	434.80	0.00	87.2	421.80		45.3	444.60	Dry
8/27/2019	424.40	0.00	88.70	420.30		45.30	444.60	Dry
9/26/2019	405.60	0.00	87.00	422.00	Dry	45.30	444.60	Dry
10/22/2019	400.50	0.00	88.30	420.70	Dry	45.20	444.70	Dry
11/26/2019	412.80	3.13	87.90	421.10	Dry	45.40	444.50	Dry

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TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/18/2019	447.40	4.44	86.70	422.30		45.40	444.50	Dry
1/28/2020	465.40	0.20	88.70	420.30	Dry	45.10	444.80	Dry
2/26/2020	459.60	0.14	87.00	422.00		46.02	443.88	
3/24/2020	470.70	3.49	86.90	422.10		45.30	444.60	
4/29/2020	467.60	3.65	88.20	420.80		45.70	444.20	
5/27/2020	459.10	0.02	88.60	420.40		45.20	444.70	
6/23/2020	447.00	0.00	87.10	421.90		45.30	444.60	
7/30/2020	434.00	0.00	88.50	420.50		45.60	444.30	
8/26/2020	417.70	0.00	86.70	422.30		45.10	444.80	
9/29/2020	403.60	0.00	88.30	420.70		45.30	444.60	
10/28/2020	404.50	0.00	87.70	421.30		45.50	444.40	
11/24/2020	413.50	0.42	87.00	422.00		45.10	444.80	
12/22/2020	408.00	1.13	87.00	422.00		45.40	444.50	
1/27/2021	435.60	2.25	88.30	420.70		45.60	444.30	
2/25/2021	457.30	0.05	88.30	420.70		45.70	444.20	
3/23/2021	465.90	1.36	86.90	422.10		45.20	444.70	
4/27/2021	462.10	0.04	89.10	419.90		45.60	444.30	
5/26/2021	455.00	0.03	88.20	420.80		45.30	444.60	
6/30/2021	437.90	0.00	86.80	422.20		45.40	444.50	
7/29/2021	423.60	0.07	87.10	421.90		44.90	445.00	
8/24/2021	408.00	0.00	87.10	421.90		45.70	444.20	
9/29/2021	398.00	0.04	87.00	422.00		45.40	444.50	
10/26/2021	417.00	0.87	86.90	422.10		45.30	444.60	
11/25/2021	427.90	0.00	87.50	421.50		45.10	444.80	
12/21/2021	427.90	4.77	88.90	420.10		44.90	445.00	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		74.50	414.90		78.60	402.80	
2/27/2007	426.80		75.00	414.40		82.50	398.90	
3/28/2007	438.80		73.50	415.90				
4/26/2007	450.90		71.20	418.20		83.20	398.20	
5/23/2007	461.40		67.50	421.90		84.00	397.40	
6/27/2007	457.20		64.80	424.60		76.40	405.00	
7/26/2007	445.50		66.20	423.20		79.80	401.60	
8/28/2007	434.60		68.80	420.60		76.20	405.20	
9/25/2007	416.80		71.10	418.30		76.40	405.00	
10/24/2007	404.50		73.50	415.90		78.00	403.40	
11/27/2007	422.20		75.00	414.40		76.33	405.07	
1/3/2008	443.20		73.60	415.80		76.33	398.90	
1/29/2008	452.20		70.71	418.70		76.33	404.90	
2/27/2008	460.80		67.40	422.00		76.33	404.70	
3/26/2008	468.00		64.40	425.00		76.33	404.90	
4/29/2008	468.60		60.50	428.90		76.33	400.00	
5/29/2008	464.70		61.60	427.80		76.33	404.40	
6/26/2008	455.70		62.50	426.90		76.33	404.90	
7/29/2008	447.30	0.00	65.40	424.00		76.33	398.10	
8/28/2008	438.80	0.00	66.90	422.50		76.33	394.90	
9/26/2008	430.70	0.00	68.50	420.90		76.33	396.80	
10/29/2008	412.50	0.00	70.70	418.70		76.33	405.00	
11/25/2008	404.70	2.60	71.50	417.90		76.33	405.00	
12/30/2008	440.90	3.42	73.70	415.70		76.33	405.00	
1/28/2009	463.70	0.17	67.80	420.00		76.33	405.00	
2/25/2009	470.10	3.35	63.40	421.60		76.33	405.00	
3/26/2009	469.40	0.19	60.90	426.00		76.33	405.00	
4/29/2009	466.90	0.07	60.50	428.50		76.33	405.00	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
5/18/2009	466.70	0.00	60.70	428.90		76.33	404.90	
5/29/2009	465.00	0.00	60.80	428.70		76.33	405.10	
6/30/2009	460.20	0.00	62.20	428.60		76.33	405.00	
7/30/2009	451.10	0.00	63.70	427.20		76.33	405.10	
8/25/2009	440.10	0.00	65.80	425.70		76.33	405.10	
9/30/2009	432.20	0.00	68.00	423.60		76.33	405.10	
10/29/2009	431.40	0.53	69.62	421.40		76.33	404.90	
12/1/2009	427.40	0.00	71.00	429.80		76.33	405.00	
12/29/2009	448.10	2.06	71.36	428.40		76.33	405.00	
1/27/2010	465.60	4.62	67.20	427.00		76.33	405.00	
2/25/2010	470.20	2.51	62.60	428.00		76.33	405.10	
3/29/2010	465.70	0.99	61.50	426.80		76.33	405.10	
4/4/2010	465.00		61.50	427.90		76.33	405.10	
4/27/2010	468.40	1.23	61.70	427.90		76.33	405.10	
5/27/2010	463.30	0.05	61.40	427.70		76.33	405.10	
6/30/2010	454.70	0.00	62.80	428.00		76.33	405.10	
7/28/2010	445.60	0.00	64.90	426.60		76.33	405.10	
8/31/2010	437.10	0.00	67.20	424.50		76.33	405.10	
9/29/2010	422.70	0.00	68.60	422.20		76.33	405.10	
10/27/2010	426.40	2.38	70.50	418.90		76.33	405.10	
11/29/2010	439.80	0.97	71.70	417.70		76.33	405.10	
12/30/2010	456.60	8.62	68.80	420.60		76.33	397.50	
2/1/2011	468.90	0.92	63.40	426.00		76.33	405.00	
2/23/2011	469.00	0.99	62.18	427.20		76.33	405.10	
3/29/2011	470.30	2.93	60.90	428.50		76.30	405.10	
4/27/2011	464.80	0.19	60.95	428.50		76.30	405.10	
5/26/2011	457.30	0.48	62.50	426.90		76.30	405.10	
6/28/2011	443.50	0.05	64.60	424.80		76.30	405.10	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/29/2011	425.10	0.00	67.20	422.20		76.20	405.20	
8/24/2011	418.00	0.00	69.00	420.40		76.30	405.10	
9/27/2011	400.90	0.12	71.45	418.00		76.30	405.10	
10/26/2011	402.20	1.25	73.20	416.20		76.30	404.90	
11/30/2011	425.10	1.38	73.00	416.40		76.30	405.10	
12/21/2011	435.70	0.32	73.60	415.80		76.30	405.10	
1/24/2012	441.40	0.53	70.10	419.30		76.30	405.10	
2/28/2012	448.40	0.42	68.40	421.00		76.30	405.10	
3/26/2012	452.70	1.06	67.50	421.90		76.30	405.10	
4/23/2012	463.40	1.32	64.40	425.00		76.30	405.10	
5/30/2012	457.30	0.02	62.70	426.70		76.30	405.10	
6/13/2012	452.90	0.02	63.00	426.40		76.30	405.10	
6/26/2012	450.20	0.00	63.80	425.60		76.30	405.10	
7/24/2012	439.80	0.00	65.90	423.50		76.30	405.10	
8/8/2012	437.60	0.12	66.80	422.60		76.30	405.10	
8/22/2012	433.40	0.00	67.70	421.70		76.30	405.10	
8/29/2012	431.30	0.00	67.90	421.50		76.30	405.10	
9/25/2012	420.80	0.00	68.00	421.40		76.30	405.10	
10/31/2012	412.30	0.26	72.10	417.30		76.30	405.10	
11/27/2012	420.80	0.58	73.40	416.00		76.30	405.10	
12/18/2012	448.00	1.44	72.40	417.00		76.30	405.10	
1/29/2013	468.60	1.18	63.20	426.20		76.30	405.10	
2/28/2013	469.20	0.30	60.70	428.70		76.30	405.10	
3/27/2013	468.30	0.50	59.85	429.60		76.30	405.10	
4/25/2013	462.70	0.00	60.00	429.40		76.60	404.80	
5/21/2013	454.20	0.00	61.40	428.00		76.60	404.80	
6/25/2013	439.30	0.00	64.50	424.90		76.6	404.80	
7/23/2013	431.50	0.00	66.80	422.60		76.60	404.80	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
8/21/2013	418.00	0.00	68.50	420.90		76.30	405.10	
9/24/2013	404.00	0.00	71.20	418.20		76.50	404.90	
10/29/2013	400.60	0.00	72.90	416.50		76.60	404.80	
11/26/2013	407.90	0.44	74.80	414.60		76.30	405.10	
12/19/2013	425.80	0.54	73.20	416.20		76.30	405.10	
1/28/2014	439.70	0.00	71.60	417.80		76.30	405.10	
2/25/2014	449.70	0.83	69.10	420.30		76.60	404.80	
3/26/2014	465.10		64.20	425.20		76.60	404.80	
3/28/2014	465.70	1.15	64.00	425.40		76.30	405.10	
4/29/2014	465.30	0.43	61.30	428.10		76.40	405.00	
5/28/2014	450.60	0.00	62.60	426.80		76.50	404.90	
6/25/2014	440.10	0.00	65.00	424.40		76.30	405.10	
7/29/2014	431.20	0.00	67.40	422.00		76.50	404.90	
8/26/2014	419.50	0.02	69.10	420.30		76.30	405.10	
9/23/2014	405.30	0.00	71.20	418.20		76.30	405.10	
10/29/2014	400.90	0.00	73.30	416.10		76.60	404.80	
11/25/2014	410.90	0.25	75.50	413.90		76.40	405.00	
12/30/2014	430.60	2.94	74.50	414.90		76.30	405.10	
1/27/2015	466.70	0.83	64.80	424.60		76.60	404.80	
2/25/2015	468.90	0.69	60.50	428.90		76.50	404.90	
3/26/2015	465.90	0.61	59.10	430.30		76.30	405.10	
4/28/2015	465.70	0.20	59.00	430.40		76.30	405.10	
5/28/2015	466.40	1.08	58.50	430.90		76.60	404.80	
6/30/2015	454.50	0.00	59.70	429.70		76.30	405.10	
7/28/2015	445.60	0.00	62.60	426.80		76.40	405.00	
8/28/2015	437.60	0.00	64.90	424.50		76.30	405.10	
9/24/2015	426.90	1.51	66.90	422.50		76.20	405.20	
10/27/2015	415.40	0.49	69.10	420.30		76.30	405.10	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/19/2015	412.90	0.09	70.60	418.80		76.30	405.10	
12/22/2015	425.50	0.69	71.60	417.80		76.50	404.90	
1/27/2016	463.60	2.86	67.60	421.80		76.20	405.20	
2/25/2016	468.90	0.25	61.10	428.30		76.60	404.80	
3/30/2016	468.00	1.44	58.80	430.60		76.30	405.10	
4/28/2016	461.30	0.30	58.90	430.50		76.60	404.80	
5/25/2016	451.30	0.18	61.30	428.10		76.30	405.10	
6/28/2016	414.10	0.00	63.40	426.00		76.40	405.00	
7/27/2016	434.20	0.00	65.50	423.90		76.20	405.20	
8/23/2016	418.60	0.00	67.90	421.50		76.20	405.20	
9/27/2016	406.40	0.00	69.80	419.60		76.50	404.90	
10/26/2016	404.00	0.48	72.00	417.40		76.30	405.10	
11/22/2016	413.60	1.13	73.20	416.20		76.60	404.80	
12/20/2016	441.10	3.48	72.40	417.00		76.60	404.80	
1/26/2017	471.60	5.67	61.80	427.60		76.30	405.10	
2/24/2017	472.05	3.95	57.60	431.80		76.60	404.80	
2/25/2017	472.00		57.50	431.90		76.60	404.80	
2/26/2017	472.00		57.25	432.20		76.60	404.80	
2/27/2017	472.00		57.10	432.30		76.40	405.00	
2/28/2017	471.90		57.25	432.20		76.70	404.70	
3/1/2017	471.90		57.30	432.10		76.50	404.90	
3/2/2017	471.90		57.20	432.20		76.30	405.10	
3/29/2017	467.90	0.10	56.90	432.50		76.30	405.10	
4/27/2017	457.60	0.04	58.30	431.10		76.30	405.10	
5/23/2017	453.50	0.43	60.50	428.90		76.60	404.80	
6/21/2017	447.40	0.00	61.60	427.80		76.30	405.10	
7/26/2017	435.10	0.00	64.50	424.90		76.30	405.10	
8/25/2017	420.10	0.00	66.70	422.70		76.30	405.10	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
9/27/2017	407.10	0.00	69.20	420.20		76.40	405.00	
10/26/2017	395.00	0.00	71.00	418.40		76.30	405.10	
11/28/2017	409.00	0.09	72.50	416.90		76.60	404.80	
12/20/2017	416.80	0.00	73.40	416.00		76.20	405.20	
1/24/2018	434.50	1.31	72.30	417.60		78.50	402.90	
2/21/2018	443.10	0.29	69.60	420.30		76.30	405.10	
3/29/2018	453.00	1.28	66.10	423.30		76.60	404.80	
4/26/2018	449.10	0.05	65.30	424.10		76.60	404.80	
5/31/2018	453.10	0.20	64.80	424.60		76.30	405.10	
6/28/2018	448.20	0.00	64.60	424.80		76.10	405.30	
7/25/2018	440.40	0.00	65.60	423.80		77.70	403.70	
8/22/2018	427.10	0.00	67.70	421.70		76.60	404.80	
9/27/2018	439.60	0.00	70.70	418.70		76.30	405.10	
10/18/2018	405.30	0.90	72.50	416.90		76.30	405.10	
11/28/2018	408.60	1.19	73.90	415.50		76.40	405.00	
12/19/2018	436.00	1.99	74.60	414.80		76.30	405.10	
1/30/2019	463.80	4.71	66.20	423.20		76.60	404.80	Dry
2/27/2019	466.20	6.55	61.80	427.60		78.60	402.80	Dry
3/27/2019	463.30	1.34	60.60	428.80		76.30	405.10	Dry
4/29/2019	453.00	0.13	61.65	427.75		76.60	404.80	Dry
5/30/2019	451.80	0.64	62.90	426.50		76.40	405.00	Dry
6/26/2019	446.20	0.01	63.80	425.60		76.30	405.10	Dry
7/5/2019	39.40	0.00	64.30	425.10		76.00	405.40	Dry
7/30/2019	434.80	0.00	65.80	423.60		79.00	402.40	Dry
8/27/2019	424.40	0.00	67.70	421.70		76.60	404.80	Dry
9/26/2019	405.60	0.00	69.90	419.50		76.30	405.10	Dry
10/22/2019	400.50	0.00	72.20	417.20		78.60	402.80	Dry
11/26/2019	412.80	3.13	72.70	416.70		78.50	402.90	Dry

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TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/18/2019	447.40	4.44	72.30	417.10		76.40	405.00	
1/28/2020	465.40	0.20	62.90	426.50		79.60	401.80	Dry
2/26/2020	459.60	0.14	61.70	427.70		81.20	400.20	
3/24/2020	470.70	3.49	60.60	428.80		76.50	404.90	
4/29/2020	467.60	3.65	58.10	431.30		82.00	399.40	
5/27/2020	459.10	0.02	59.20	430.20		80.20	401.20	
6/23/2020	447.00	0.00	61.70	427.70		76.40	405.00	
7/30/2020	434.00	0.00	64.70	424.70		79.30	402.10	
8/26/2020	417.70	0.00	66.70	422.70		76.30	405.10	
9/29/2020	403.60	0.00	69.40	420.00		76.60	404.80	
10/28/2020	404.50	0.00	71.20	418.20		77.00	404.40	
11/24/2020	413.50	0.42	72.00	417.40		76.00	405.40	
12/22/2020	408.00	1.13	72.40	417.00		76.30	405.10	
1/27/2021	435.60	2.25	72.80	416.60		81.20	400.20	
2/25/2021	457.30	0.05	66.60	422.80		79.80	401.60	
3/23/2021	465.90	1.36	63.90	425.50		76.40	405.00	
4/27/2021	462.10	0.04	62.00	427.40		76.30	405.10	
5/26/2021	455.00	0.03	62.80	426.60		82.30	399.10	
6/30/2021	437.90	0.00	64.70	424.70		76.40	405.00	
7/29/2021	423.60	0.07	67.30	422.10		76.30	405.10	
8/24/2021	408.00	0.00	69.00	420.40		78.60	402.80	
9/29/2021	398.00	0.04	71.40	418.00		76.30	405.10	
10/26/2021	417.00	0.87	73.20	416.20		76.50	404.90	
11/25/2021	427.90	0.00	71.60	417.80		78.40	403.00	
12/21/2021	427.90	4.77	71.20	418.20		76.20	405.20	

Notes:

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TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		20.00	443.30		17.80	495.00	
2/27/2007	426.80		21.10	442.20		19.20	493.60	
3/28/2007	438.80		20.30	443.00		20.40	492.40	
4/26/2007	450.90		20.20	443.10		19.90	492.90	
5/23/2007	461.40		20.50	442.80		20.00	492.80	
6/27/2007	457.20		20.80	442.50		19.80	493.00	
7/26/2007	445.50		20.60	442.70		19.00	493.80	
8/28/2007	434.60		20.20	443.10		18.60	494.20	
9/25/2007	416.80		20.40	442.90		18.40	494.40	
10/24/2007	404.50		20.20	443.10		18.70	494.10	
11/27/2007	422.20		20.40	442.90		18.90	493.90	
1/3/2008	443.20		19.20	444.10		18.60	494.20	
1/29/2008	452.20		19.87	443.40		18.46	494.30	
2/27/2008	460.80		19.00	444.30		18.10	494.70	
3/26/2008	468.00		18.40	444.90		18.00	494.80	
4/29/2008	468.60		17.90	445.40		18.00	494.80	
5/29/2008	464.70		18.30	445.00		19.00	493.80	
6/26/2008	455.70		18.10	445.20		18.70	494.10	
7/29/2008	447.30	0.00	18.40	444.90		18.40	494.40	
8/28/2008	438.80	0.00	18.40	444.90		18.70	494.10	
9/26/2008	430.70	0.00	18.60	444.70		18.30	494.50	
10/29/2008	412.50	0.00	18.50	444.80		19.20	493.60	
11/25/2008	404.70	2.60	18.70	444.60		19.10	493.70	
12/30/2008	440.90	3.42	18.40	444.90		18.50	494.30	
1/28/2009	463.70	0.17	17.50	445.80		18.20	494.60	
2/25/2009	470.10	3.35	17.00	446.30		17.80	495.00	
3/26/2009	469.40	0.19	16.40	446.90		17.80	495.00	
4/29/2009	466.90	0.07	17.20	446.10		18.30	494.50	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
5/18/2009	466.70	0.00	17.50	445.80		18.50	494.30	
5/29/2009	465.00	0.00	17.70	445.60		18.60	494.20	
6/30/2009	460.20	0.00	17.90	445.40		18.60	494.20	
7/30/2009	451.10	0.00	18.10	445.20		19.50	493.30	
8/25/2009	440.10	0.00	18.00	445.30		19.80	493.00	
9/30/2009	432.20	0.00	18.50	444.80		19.80	493.00	
10/29/2009	431.40	0.53	19.20	444.10		19.50	493.30	
12/1/2009	427.40	0.00	19.40	443.90		19.80	493.00	
12/29/2009	448.10	2.06	19.80	443.50		19.81	493.00	
1/27/2010	465.60	4.62	19.80	443.50		19.80	493.00	
2/25/2010	470.20	2.51	19.70	443.60		18.30	494.50	
3/29/2010	465.70	0.99	19.00	444.30		18.30	494.50	
4/4/2010	465.00		18.80	444.50		17.90	494.90	
4/27/2010	468.40	1.23	18.80	444.50		18.00	494.80	
5/27/2010	463.30	0.05	18.90	444.40		19.40	493.40	
6/30/2010	454.70	0.00	19.00	444.30		18.80	494.00	
7/28/2010	445.60	0.00	19.50	443.80		19.10	493.70	
8/31/2010	437.10	0.00	19.60	443.70		19.40	493.40	
9/29/2010	422.70	0.00	19.70	443.60		20.00	492.80	
10/27/2010	426.40	2.38	20.00	443.30		20.10	492.70	
11/29/2010	439.80	0.97	20.70	442.60		20.10	492.70	
12/30/2010	456.60	8.62	19.00	444.30		19.40	493.40	
2/1/2011	468.90	0.92	18.30	445.00		18.30	494.50	
2/23/2011	469.00	0.99	17.55	445.80		18.18	494.60	
3/29/2011	470.30	2.93	17.10	446.20		17.60	495.20	
4/27/2011	464.80	0.19	16.65	446.70		17.72	495.10	
5/26/2011	457.30	0.48	16.70	446.60		18.10	494.70	
6/28/2011	443.50	0.05	16.90	446.40		18.40	494.40	

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/29/2011	425.10	0.00	17.40	445.90		18.60	494.20	
8/24/2011	418.00	0.00	17.70	445.60		19.20	493.60	
9/27/2011	400.90	0.12	17.90	445.40		19.65	493.20	
10/26/2011	402.20	1.25	18.30	445.00		19.90	492.90	
11/30/2011	425.10	1.38	17.70	445.60		19.30	493.50	
12/21/2011	435.70	0.32	18.00	445.30		19.40	493.40	
1/24/2012	441.40	0.53	18.70	444.60		19.50	493.30	
2/28/2012	448.40	0.42	19.40	443.90		20.00	492.80	
3/26/2012	452.70	1.06	19.40	443.90		19.90	492.90	
4/23/2012	463.40	1.32	19.20	444.10		19.70	493.10	
5/30/2012	457.30	0.02	19.30	444.00		19.50	493.30	
6/13/2012	452.90	0.02	19.20	444.10		19.30	493.50	
6/26/2012	450.20	0.00	19.20	444.10		19.30	493.50	
7/24/2012	439.80	0.00	19.40	443.90		19.70	493.10	
8/8/2012	437.60	0.12	19.30	444.00		19.60	493.20	
8/22/2012	433.40	0.00	19.30	444.00		19.40	493.40	
8/29/2012	431.30	0.00	19.10	444.20		19.20	493.60	
9/25/2012	420.80	0.00	19.10	444.20		19.30	493.50	
10/31/2012	412.30	0.26	19.40	443.90		20.10	492.70	
11/27/2012	420.80	0.58	19.40	443.90		20.40	492.40	
12/18/2012	448.00	1.44	19.20	444.10		20.45	492.40	
1/29/2013	468.60	1.18	19.80	443.50		21.10	491.70	
2/28/2013	469.20	0.30	19.80	443.50		21.40	491.40	
3/27/2013	468.30	0.50	19.75	443.60		21.55	491.30	
4/25/2013	462.70	0.00	19.60	443.70		21.60	491.20	
5/21/2013	454.20	0.00	19.80	443.50		21.70	491.10	
6/25/2013	439.30	0.00	20.00	443.30		22.25	490.60	
7/23/2013	431.50	0.00	20.10	443.20		22.35	490.50	

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
8/21/2013	418.00	0.00	20.10	443.20		22.40	490.40	
9/24/2013	404.00	0.00	20.20	443.10		22.40	490.40	
10/29/2013	400.60	0.00	20.40	442.90		22.65	490.20	
11/26/2013	407.90	0.44	20.50	442.80		23.40	489.40	
12/19/2013	425.80	0.54	20.30	443.00		23.60	489.20	
1/28/2014	439.70	0.00	20.60	442.70		23.60	489.20	
2/25/2014	449.70	0.83	20.60	442.70		23.50	489.30	
3/26/2014	465.10		20.55	442.80		22.95	489.90	
3/28/2014	465.70	1.15	20.70	442.60		23.20	489.60	
4/29/2014	465.30	0.43	20.50	442.80		22.90	489.90	
5/28/2014	450.60	0.00	20.70	442.60		23.30	489.50	
6/25/2014	440.10	0.00	20.80	442.50		23.80	489.00	
7/29/2014	431.20	0.00	21.00	442.30		23.50	489.30	
8/26/2014	419.50	0.02	20.90	442.40		24.20	488.60	
9/23/2014	405.30	0.00	20.90	442.40		24.50	488.30	
10/29/2014	400.90	0.00	21.30	442.00		24.85	488.00	
11/25/2014	410.90	0.25	21.50	441.80		25.20	487.60	
12/30/2014	430.60	2.94	21.35	442.00		24.10	488.70	
1/27/2015	466.70	0.83	21.55	441.80		25.00	487.80	
2/25/2015	468.90	0.69	21.30	442.00		25.20	487.60	
3/26/2015	465.90	0.61	21.40	441.90		25.60	487.20	
4/28/2015	465.70	0.20	21.00	442.30		26.00	486.80	
5/28/2015	466.40	1.08	21.10	442.20		25.80	487.00	
6/30/2015	454.50	0.00	21.90	441.40		26.30	486.50	
7/28/2015	445.60	0.00	22.30	441.00		26.70	486.10	
8/28/2015	437.60	0.00	22.80	440.50		27.20	485.60	
9/24/2015	426.90	1.51	23.60	439.70		27.40	485.40	
10/27/2015	415.40	0.49	23.90	439.40		27.60	485.20	

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SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/19/2015	412.90	0.09	24.20	439.10		27.90	484.90	
12/22/2015	425.50	0.69	24.80	438.50		28.30	484.50	
1/27/2016	463.60	2.86	25.80	437.50		28.50	484.30	
2/25/2016	468.90	0.25	25.10	438.20		25.90	486.90	
3/30/2016	468.00	1.44	24.90	438.40		27.60	485.20	
4/28/2016	461.30	0.30	25.00	438.30		28.00	484.80	
5/25/2016	451.30	0.18	24.80	438.50		28.35	484.50	
6/28/2016	414.10	0.00	24.40	438.90		28.50	484.30	
7/27/2016	434.20	0.00	24.30	439.00		28.90	483.90	
8/23/2016	418.60	0.00	24.50	438.80		28.20	484.60	
9/27/2016	406.40	0.00	24.80	438.50		27.20	485.60	
10/26/2016	404.00	0.48	25.40	437.90		28.20	484.60	
11/22/2016	413.60	1.13	25.70	437.60		28.05	484.80	
12/20/2016	441.10	3.48	25.65	437.70		27.20	485.60	
1/26/2017	471.60	5.67	25.20	438.10		25.10	487.70	
2/24/2017	472.05	3.95	24.20	439.10		24.10	488.70	
2/25/2017	472.00		24.05	439.30		24.15	488.70	
2/26/2017	472.00		23.85	439.50		24.20	488.60	
2/27/2017	472.00		23.90	439.40		24.30	488.50	
2/28/2017	471.90		23.90	439.40		24.10	488.70	
3/1/2017	471.90		23.90	439.40		24.10	488.70	
3/2/2017	471.90		23.90	439.40		24.00	488.80	
3/29/2017	467.90	0.10	22.70	440.60		23.10	489.70	
4/27/2017	457.60	0.04	22.00	441.30		23.10	489.70	
5/23/2017	453.50	0.43	22.00	441.30		23.30	489.50	
6/21/2017	447.40	0.00	21.70	441.60		23.30	489.50	
7/26/2017	435.10	0.00	21.80	441.50		23.30	489.50	
8/25/2017	420.10	0.00	21.70	441.60		23.10	489.70	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
9/27/2017	407.10	0.00	21.90	441.40		23.30	489.50	
10/26/2017	395.00	0.00	21.70	441.60		23.50	489.30	
11/28/2017	409.00	0.09	22.00	441.30		23.30	489.50	
12/20/2017	416.80	0.00	22.30	441.00		23.40	489.40	
1/24/2018	434.50	1.31	22.10	441.20		22.50	490.30	
2/21/2018	443.10	0.29	22.20	441.10		22.40	490.40	
3/29/2018	453.00	1.28	22.20	441.10		22.60	490.20	
4/26/2018	449.10	0.05	22.20	441.10		22.80	490.00	
5/31/2018	453.10	0.20	22.10	441.20		22.70	490.10	
6/28/2018	448.20	0.00	22.20	441.10		22.90	489.90	
7/25/2018	440.40	0.00	22.00	441.30		22.60	490.20	
8/22/2018	427.10	0.00	22.20	441.10		22.50	490.30	
9/27/2018	439.60	0.00	22.20	441.10		22.10	490.70	
10/18/2018	405.30	0.90	22.20	441.10		21.40	491.40	
11/28/2018	408.60	1.19	22.30	441.00		21.30	491.50	
12/19/2018	436.00	1.99	22.30	441.00		20.80	492.00	
1/30/2019	463.80	4.71	21.60	441.70		20.40	492.40	
2/27/2019	466.20	6.55	20.80	442.50		19.40	493.40	
3/27/2019	463.30	1.34	18.10	445.20		19.40	493.40	
4/29/2019	453.00	0.13	17.70	445.60		18.25	494.55	
5/30/2019	451.80	0.64	17.60	445.70		18.40	494.40	
6/26/2019	446.20	0.01	17.80	445.50		18.80	494.00	
7/5/2019	39.40	0.00	18.00	445.30		19.10	493.70	
7/30/2019	434.80	0.00	18.20	445.10		18.90	493.90	
8/27/2019	424.40	0.00	18.50	444.80		18.90	493.90	
9/26/2019	405.60	0.00	19.10	444.20		19.60	493.20	
10/22/2019	400.50	0.00	19.80	443.50		20.30	492.50	
11/26/2019	412.80	3.13	19.70	443.60		21.30	491.50	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/18/2019	447.40	4.44	20.20	443.10		21.20	491.60	
1/28/2020	465.40	0.20	20.80	442.50		19.20	493.60	
2/26/2020	459.60	0.14	19.00	444.30		20.60	492.20	
3/24/2020	470.70	3.49	19.10	444.20		20.20	492.60	
4/29/2020	467.60	3.65	19.30	444.00		19.20	493.60	
5/27/2020	459.10	0.02	17.50	445.80		19.00	493.80	
6/23/2020	447.00	0.00	17.50	445.80		19.50	493.30	
7/30/2020	434.00	0.00	17.90	445.40		19.30	493.50	
8/26/2020	417.70	0.00	18.20	445.10		19.40	493.40	
9/29/2020	403.60	0.00	19.00	444.30		20.50	492.30	
10/28/2020	404.50	0.00	19.50	443.80		21.30	491.50	
11/24/2020	413.50	0.42	19.80	443.50		21.20	491.60	
12/22/2020	408.00	1.13	20.20	443.10		21.90	490.90	
1/27/2021	435.60	2.25	20.60	442.70		21.70	491.10	
2/25/2021	457.30	0.05	20.20	443.10		22.00	490.80	
3/23/2021	465.90	1.36	20.30	443.00		22.00	490.80	
4/27/2021	462.10	0.04	20.50	442.80		22.00	490.80	
5/26/2021	455.00	0.03	20.80	442.50		21.90	490.90	
6/30/2021	437.90	0.00	20.80	442.50		21.60	491.20	
7/29/2021	423.60	0.07	21.00	442.30		21.20	491.60	
8/24/2021	408.00	0.00	20.50	442.80		21.10	491.70	
9/29/2021	398.00	0.04	20.60	442.70		21.50	491.30	
10/26/2021	417.00	0.87	20.90	442.40		21.80	491.00	
11/25/2021	427.90	0.00	20.90	442.40		22.20	490.60	
12/21/2021	427.90	4.77	21.20	442.10		22.60	490.20	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		38.40	446.00		37.30	447.00	
2/27/2007	426.80		38.30	446.10		37.50	446.80	
3/28/2007	438.80		38.30	446.10				
4/26/2007	450.90		38.00	446.40		37.00	447.30	
5/23/2007	461.40		37.90	446.50		37.30	447.00	
6/27/2007	457.20		38.00	446.40		37.30	447.00	
7/26/2007	445.50		38.20	446.20		37.30	447.00	
8/28/2007	434.60		38.50	445.90		37.30	447.00	
9/25/2007	416.80		38.90	445.50		37.30	447.00	
10/24/2007	404.50		39.20	445.20		37.20	447.10	
11/27/2007	422.20		39.40	445.00		37.20	447.10	
1/3/2008	443.20		39.30	445.10		37.40	446.90	
1/29/2008	452.20		39.00	445.40		37.24	447.10	
2/27/2008	460.80		38.50	445.90		37.30	447.00	
3/26/2008	468.00		38.20	446.20		37.20	447.10	
4/29/2008	468.60		37.70	446.70		37.30	447.00	
5/29/2008	464.70		37.90	446.50		37.00	447.30	
6/26/2008	455.70		37.90	446.50		37.10	447.20	
7/29/2008	447.30	0.00	38.20	446.20		37.30	447.00	
8/28/2008	438.80	0.00	38.30	446.10		33.50	450.80	
9/26/2008	430.70	0.00	38.50	445.90		37.60	446.70	
10/29/2008	412.50	0.00	38.90	445.50		37.20	447.10	
11/25/2008	404.70	2.60	39.00	445.40		37.30	447.00	
12/30/2008	440.90	3.42	39.00	445.40		37.20	447.10	
1/28/2009	463.70	0.17	38.20	446.20		37.30	447.00	
2/25/2009	470.10	3.35	38.00	446.40		37.00	447.30	
3/26/2009	469.40	0.19	38.00	446.40		37.30	447.00	
4/29/2009	466.90	0.07	38.10	446.30		37.30	447.00	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
5/18/2009	466.70	0.00	37.90	446.50		37.20	447.10	
5/29/2009	465.00	0.00	37.90	446.50		37.20	447.10	
6/30/2009	460.20	0.00	37.90	446.50		37.40	446.90	
7/30/2009	451.10	0.00	38.00	446.40		37.20	447.10	
8/25/2009	440.10	0.00	38.10	446.30		37.20	447.10	
9/30/2009	432.20	0.00	38.60	445.80		37.20	447.10	
10/29/2009	431.40	0.53	38.95	445.50		37.25	447.10	
12/1/2009	427.40	0.00	39.20	445.20		37.30	447.00	
12/29/2009	448.10	2.06	39.21	445.20		37.25	447.10	
1/27/2010	465.60	4.62	38.70	445.70		37.20	447.10	
2/25/2010	470.20	2.51	38.20	446.20		37.30	447.00	
3/29/2010	465.70	0.99	38.30	446.10		37.10	447.20	
4/4/2010	465.00		38.10	446.30		37.30	447.00	
4/27/2010	468.40	1.23	38.00	446.40		37.30	447.00	
5/27/2010	463.30	0.05	38.00	446.40		37.20	447.10	
6/30/2010	454.70	0.00	38.10	446.30		37.30	447.00	
7/28/2010	445.60	0.00	38.50	445.90		37.30	447.00	
8/31/2010	437.10	0.00	38.90	445.50		37.30	447.00	
9/29/2010	422.70	0.00	39.20	445.20		37.40	446.90	
10/27/2010	426.40	2.38	39.50	444.90		37.30	447.00	
11/29/2010	439.80	0.97	39.70	444.70		37.20	447.10	
12/30/2010	456.60	8.62	38.80	445.60		35.70	448.60	
2/1/2011	468.90	0.92	38.30	446.10		37.20	447.10	
2/23/2011	469.00	0.99	38.00	446.40		37.25	447.10	
3/29/2011	470.30	2.93	37.70	446.70		36.80	447.50	
4/27/2011	464.80	0.19	37.52	446.90		37.23	447.10	
5/26/2011	457.30	0.48	37.60	446.80		37.30	447.00	
6/28/2011	443.50	0.05	37.80	446.60		37.20	447.10	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/29/2011	425.10	0.00	38.15	446.30		36.60	447.10	
8/24/2011	418.00	0.00	38.40	446.00		37.20	447.10	
9/27/2011	400.90	0.12	38.80	445.60		37.30	447.00	
10/26/2011	402.20	1.25	38.80	445.60		36.80	447.50	
11/30/2011	425.10	1.38	39.10	445.30		36.60	447.70	
12/21/2011	435.70	0.32	39.50	444.90		37.20	447.10	
1/24/2012	441.40	0.53	39.00	445.40		37.20	447.10	
2/28/2012	448.40	0.42	39.20	445.20		37.30	447.00	
3/26/2012	452.70	1.06	39.00	445.40		37.20	447.10	
4/23/2012	463.40	1.32	38.60	445.80		37.50	446.80	
5/30/2012	457.30	0.02	38.50	445.90		37.30	447.00	
6/13/2012	452.90	0.02	38.40	446.00		37.30	447.00	
6/26/2012	450.20	0.00	38.50	445.90		37.40	446.90	
7/24/2012	439.80	0.00	38.90	445.50		37.40	446.90	
8/8/2012	437.60	0.12	38.90	445.30		37.40	446.90	
8/22/2012	433.40	0.00	39.10	445.50		36.70	447.60	
8/29/2012	431.30	0.00	39.00	445.40		37.20	447.10	
9/25/2012	420.80	0.00	39.10	445.30		37.20	447.10	
10/31/2012	412.30	0.26	39.60	444.80		37.40	446.90	
11/27/2012	420.80	0.58	39.90	444.50		37.30	447.00	
12/18/2012	448.00	1.44	39.35	445.10		37.00	447.30	
1/29/2013	468.60	1.18	38.40	446.00		37.40	446.90	
2/28/2013	469.20	0.30	38.00	446.40		37.40	446.90	
3/27/2013	468.30	0.50	38.10	446.30		37.25	447.10	
4/25/2013	462.70	0.00	38.40	446.00		37.30	447.00	
5/21/2013	454.20	0.00	38.80	445.60		37.30	447.00	
6/25/2013	439.30	0.00	39.30	445.10		37.10	447.20	
7/23/2013	431.50	0.00	39.80	444.60		36.60	447.70	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
8/21/2013	418.00	0.00	64.10	420.30	Omitted	37.50	446.80	
9/24/2013	404.00	0.00	40.70	443.70		37.20	447.10	
10/29/2013	400.60	0.00	41.00	443.40		37.20	447.10	
11/26/2013	407.90	0.44	41.30	443.10		37.20	447.10	
12/19/2013	425.80	0.54	41.00	443.40		37.40	446.90	
1/28/2014	439.70	0.00	40.90	443.50		37.40	446.90	
2/25/2014	449.70	0.83	40.60	443.80		37.25	447.10	
3/26/2014	465.10		39.90	444.50		37.30	447.00	
3/28/2014	465.70	1.15	39.90	444.50		37.20	447.10	
4/29/2014	465.30	0.43	39.70	444.70		37.30	447.00	
5/28/2014	450.60	0.00	39.80	444.60		37.20	447.10	
6/25/2014	440.10	0.00	39.90	444.50		37.10	447.20	
7/29/2014	431.20	0.00	40.30	444.10		37.20	447.10	
8/26/2014	419.50	0.02	40.50	443.90		37.30	447.00	
9/23/2014	405.30	0.00	40.60	443.80		37.20	447.10	
10/29/2014	400.90	0.00	41.30	443.10		37.30	447.10	
11/25/2014	410.90	0.25	41.60	442.80		37.20	447.20	
12/30/2014	430.60	2.94	41.10	443.30		37.10	447.10	
1/27/2015	466.70	0.83	39.55	444.90		37.20	447.00	
2/25/2015	468.90	0.69	39.10	445.30		37.30	447.00	
3/26/2015	465.90	0.61	39.20	445.20		37.30	447.10	
4/28/2015	465.70	0.20	39.00	445.40		34.20	447.00	
5/28/2015	466.40	1.08	39.20	445.20		37.30	447.00	
6/30/2015	454.50	0.00	39.30	445.10		37.20	447.00	
7/28/2015	445.60	0.00	39.70	444.70		37.30	447.10	
8/28/2015	437.60	0.00	40.20	444.20		37.30	447.00	
9/24/2015	426.90	1.51	40.70	443.70		37.20	447.00	
10/27/2015	415.40	0.49	41.30	443.10		37.20	447.10	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/19/2015	412.90	0.09	41.50	442.90		37.30	447.10	
12/22/2015	425.50	0.69	41.65	442.80		37.30	447.00	
1/27/2016	463.60	2.86	40.50	443.90		37.30	447.00	
2/25/2016	468.90	0.25	39.80	444.60		37.30	447.00	
3/30/2016	468.00	1.44	39.70	444.70		37.20	447.00	
4/28/2016	461.30	0.30	39.90	444.50		37.30	447.10	
5/25/2016	451.30	0.18	40.28	444.10		37.25	447.00	
6/28/2016	414.10	0.00	40.60	443.80		37.20	447.10	
7/27/2016	434.20	0.00	41.20	443.20		37.30	447.10	
8/23/2016	418.60	0.00	41.80	442.60		37.30	447.00	
9/27/2016	406.40	0.00	42.50	441.90		37.20	447.00	
10/26/2016	404.00	0.48	42.80	441.60		37.20	447.10	
11/22/2016	413.60	1.13	43.40	441.00		37.20	447.10	
12/20/2016	441.10	3.48	42.95	441.50		37.30	447.10	
1/26/2017	471.60	5.67	40.80	443.60		37.20	447.10	
2/24/2017	472.05	3.95	40.20	444.20		37.20	447.10	
2/25/2017	472.00		40.15	444.30		37.20	447.10	
2/26/2017	472.00		40.10	444.30		37.20	447.10	
2/27/2017	472.00		40.10	444.30		37.30	447.00	
2/28/2017	471.90		40.20	444.20		37.30	447.00	
3/1/2017	471.90		40.20	444.20		37.30	447.00	
3/2/2017	471.90		40.10	444.30		37.20	447.10	
3/29/2017	467.90	0.10	40.00	444.40		37.20	447.10	
4/27/2017	457.60	0.04	40.10	444.30		37.20	447.10	
5/23/2017	453.50	0.43	40.30	444.10		37.20	447.10	
6/21/2017	447.40	0.00	40.50	443.90		37.20	447.10	
7/26/2017	435.10	0.00	40.70	443.70		37.20	447.10	
8/25/2017	420.10	0.00	40.90	443.50		37.10	447.20	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
9/27/2017	407.10	0.00	41.50	442.90		37.30	447.00	
10/26/2017	395.00	0.00	42.20	442.20		37.20	447.10	
11/28/2017	409.00	0.09	42.30	442.10		37.20	447.10	
12/20/2017	416.80	0.00	42.10	442.30		37.30	447.00	
1/24/2018	434.50	1.31	41.70	442.70		37.80	446.50	
2/21/2018	443.10	0.29	41.00	443.40		37.20	447.10	
3/29/2018	453.00	1.28	40.40	444.00		37.20	447.10	
4/26/2018	449.10	0.05	40.60	443.80		37.30	447.00	
5/31/2018	453.10	0.20	40.70	443.70		37.20	447.10	
6/28/2018	448.20	0.00	40.70	443.70		37.30	447.00	
7/25/2018	440.40	0.00	40.60	443.80		37.40	446.90	
8/22/2018	427.10	0.00	41.60	442.80		37.30	447.00	
9/27/2018	439.60	0.00	42.50	441.90		37.20	447.10	
10/18/2018	405.30	0.90	43.00	441.40		37.30	447.00	
11/28/2018	408.60	1.19	43.20	441.20		37.40	446.90	
12/19/2018	436.00	1.99	43.10	441.30		37.10	447.20	
1/30/2019	463.80	4.71	40.75	443.65		37.30	447.00	Dry
2/27/2019	466.20	6.55	39.90	444.50		37.20	447.10	Dry
3/27/2019	463.30	1.34	39.50	444.90		37.40	446.90	Dry
4/29/2019	453.00	0.13	39.40	445.00		37.20	447.10	Dry
5/30/2019	451.80	0.64	39.20	445.20		37.20	447.10	Dry
6/26/2019	446.20	0.01	39.20	445.20		37.20	447.10	Dry
7/5/2019	39.40	0.00	37.30	447.10		26.50	457.80	Omitted
7/30/2019	434.80	0.00	39.20	445.20		37.20	447.10	Dry
8/27/2019	424.40	0.00	39.40	445.00		34.20	450.10	Dry, Omitted
9/26/2019	405.60	0.00	39.90	444.50		37.10	447.20	Dry
10/22/2019	400.50	0.00	40.40	444.00		37.20	447.10	Dry
11/26/2019	412.80	3.13	46.00	438.40	Omitted	37.20	447.10	Dry

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/18/2019	447.40	4.44	40.00	444.40		37.20	447.10	Dry
1/28/2020	465.40	0.20	38.60	445.80		37.10	447.20	
2/26/2020	459.60	0.14	38.60	445.80		37.20	447.10	
3/24/2020	470.70	3.49	38.40	446.00		37.10	447.20	
4/29/2020	467.60	3.65	37.90	446.50		37.20	447.10	
5/27/2020	459.10	0.02	38.20	446.20		37.20	447.10	
6/23/2020	447.00	0.00	38.70	445.70		37.40	446.90	
7/30/2020	434.00	0.00	39.20	445.20		37.30	447.00	
8/26/2020	417.70	0.00	39.50	444.90		37.10	447.20	
9/29/2020	403.60	0.00	40.10	444.30		37.30	447.00	
10/28/2020	404.50	0.00	40.50	443.90		37.20	447.10	
11/24/2020	413.50	0.42	40.40	444.00		37.00	447.30	
12/22/2020	408.00	1.13	40.40	444.00		37.10	447.20	
1/27/2021	435.60	2.25	40.10	444.30		37.20	447.10	
2/25/2021	457.30	0.05	39.00	445.40		37.10	447.20	
3/23/2021	465.90	1.36	38.90	445.50		37.30	447.00	
4/27/2021	462.10	0.04	38.50	445.90		37.20	447.10	
5/26/2021	455.00	0.03	38.80	445.60		37.20	447.10	
6/30/2021	437.90	0.00	39.30	445.10		37.30	447.00	
7/29/2021	423.60	0.07	39.80	444.60		37.40	446.90	
8/24/2021	408.00	0.00	40.20	444.20		37.30	447.00	
9/29/2021	398.00	0.04	40.90	443.50		37.10	447.20	
10/26/2021	417.00	0.87	41.60	442.80		37.30	447.00	
11/25/2021	427.90	0.00	40.60	443.80		37.20	447.10	
12/21/2021	427.90	4.77	40.30	444.10		37.20	447.10	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		38.20	449.50		39.70	448.00	
2/27/2007	426.80		37.40	450.30		39.70	448.00	
3/28/2007	438.80		36.40	451.30		39.40	448.30	
4/26/2007	450.90		35.10	452.60		38.90	448.80	
5/23/2007	461.40		34.20	453.50		38.50	449.20	
6/27/2007	457.20		35.30	452.40		38.50	449.20	
7/26/2007	445.50		36.60	451.10		38.80	448.90	
8/28/2007	434.60		37.00	450.70		39.00	448.70	
9/25/2007	416.80		37.80	449.90		39.40	448.30	
10/24/2007	404.50		38.00	449.70		39.30	448.40	
11/27/2007	422.20		37.40	450.30		39.20	448.50	
1/3/2008	443.20		35.40	452.30		38.60	449.10	
1/29/2008	452.20		34.25	453.50		38.42	449.20	
2/27/2008	460.80		33.10	454.60		37.90	449.80	
3/26/2008	468.00		32.30	455.40		37.50	450.20	
4/29/2008	468.60		32.20	455.50		37.00	450.70	
5/29/2008	464.70		33.90	453.80		37.40	450.30	
6/26/2008	455.70		34.70	453.00		37.60	450.10	
7/29/2008	447.30	0.00	35.40	452.30		38.20	449.50	
8/28/2008	438.80	0.00	35.80	451.90		38.40	449.30	
9/26/2008	430.70	0.00	36.00	451.70		38.30	449.40	
10/29/2008	412.50	0.00	36.30	451.40		38.30	449.40	
11/25/2008	404.70	2.60	36.00	451.70		38.30	449.40	
12/30/2008	440.90	3.42	33.60	454.10		37.90	449.80	
1/28/2009	463.70	0.17	30.80	456.90		37.00	450.70	
2/25/2009	470.10	3.35	30.20	457.50		36.00	451.70	
3/26/2009	469.40	0.19	30.70	457.00		36.20	451.50	
4/29/2009	466.90	0.07	31.30	456.40		36.60	451.10	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
5/18/2009	466.70	0.00	31.20	456.50		36.60	451.10	
5/29/2009	465.00	0.00	31.50	456.20		36.60	451.10	
6/30/2009	460.20	0.00	32.10	455.60		37.10	450.60	
7/30/2009	451.10	0.00	32.70	455.00		37.30	450.40	
8/25/2009	440.10	0.00	33.20	454.50		37.40	450.30	
9/30/2009	432.20	0.00	33.15	454.60		37.60	450.10	
10/29/2009	431.40	0.53	32.74	455.00		37.62	450.00	
12/1/2009	427.40	0.00	32.60	455.10		37.70	450.00	
12/29/2009	448.10	2.06	30.66	457.00		37.31	450.30	
1/27/2010	465.60	4.62	27.40	460.30		36.60	451.10	
2/25/2010	470.20	2.51	27.70	460.00		36.10	451.60	
3/29/2010	465.70	0.99	29.40	458.30		36.50	451.20	
4/4/2010	465.00		29.20	458.50		36.40	451.30	
4/27/2010	468.40	1.23	28.60	459.10		36.20	451.50	
5/27/2010	463.30	0.05	29.80	457.90		36.40	451.30	
6/30/2010	454.70	0.00	30.50	457.20		36.70	451.00	
7/28/2010	445.60	0.00	31.00	456.70		37.00	450.70	
8/31/2010	437.10	0.00	31.30	456.40		37.20	450.50	
9/29/2010	422.70	0.00	31.30	456.40		37.20	450.50	
10/27/2010	426.40	2.38	31.20	456.50		37.20	450.50	
11/29/2010	439.80	0.97	30.00	457.70		37.10	450.60	
12/30/2010	456.60	8.62	25.70	462.00		35.50	452.20	
2/1/2011	468.90	0.92	26.00	461.70		35.30	452.40	
2/23/2011	469.00	0.99	26.48	461.20		35.58	452.10	
3/29/2011	470.30	2.93	26.50	461.20		35.40	452.30	
4/27/2011	464.80	0.19	27.87	459.80		35.67	452.00	
5/26/2011	457.30	0.48	28.60	459.10		36.00	451.70	
6/28/2011	443.50	0.05	29.80	457.90		36.30	451.40	

Notes:

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TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/29/2011	425.10	0.00	30.35	457.40		36.60	451.10	
8/24/2011	418.00	0.00	30.60	457.10		36.70	451.00	
9/27/2011	400.90	0.12	30.60	457.10		36.70	451.00	
10/26/2011	402.20	1.25	30.80	456.90		36.90	450.80	
11/30/2011	425.10	1.38	29.50	458.20		36.40	451.30	
12/21/2011	435.70	0.32	29.10	458.60		36.60	451.10	
1/24/2012	441.40	0.53	28.50	459.20		36.40	451.30	
2/28/2012	448.40	0.42	28.50	459.20		36.60	451.10	
3/26/2012	452.70	1.06	27.80	459.90		36.60	451.10	
4/23/2012	463.40	1.32	26.70	461.00		35.70	452.00	
5/30/2012	457.30	0.02	28.30	459.40		36.00	451.70	
6/13/2012	452.90	0.02	28.80	458.90		36.00	451.70	
6/26/2012	450.20	0.00	29.10	458.60		36.10	451.60	
7/24/2012	439.80	0.00	30.00	457.70		36.70	451.00	
8/8/2012	437.60	0.12	29.80	457.90		36.60	451.10	
8/22/2012	433.40	0.00	29.95	457.80		36.50	451.20	
8/29/2012	431.30	0.00	30.00	457.70		36.40	451.30	
9/25/2012	420.80	0.00	30.10	457.60		36.40	451.30	
10/31/2012	412.30	0.26	30.60	457.10		36.80	450.90	
11/27/2012	420.80	0.58	30.30	457.40		36.80	450.90	
12/18/2012	448.00	1.44	27.90	459.80		36.00	451.70	
1/29/2013	468.60	1.18	26.20	461.50		35.80	451.90	
2/28/2013	469.20	0.30	26.90	460.80		35.50	452.20	
3/27/2013	468.30	0.50	27.50	460.20		35.40	452.30	
4/25/2013	462.70	0.00	28.90	458.80		35.80	451.90	
5/21/2013	454.20	0.00	29.70	458.00		36.20	451.50	
6/25/2013	439.30	0.00	30.60	457.10		36.50	451.20	
7/23/2013	431.50	0.00	30.70	457.00		36.70	451.00	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
8/21/2013	418.00	0.00	31.30	456.40		36.80	450.90	
9/24/2013	404.00	0.00	31.20	456.50		36.90	450.80	
10/29/2013	400.60	0.00	31.00	456.70		36.70	451.00	
11/26/2013	407.90	0.44	30.90	456.80		37.00	450.70	
12/19/2013	425.80	0.54	29.90	457.80		36.50	451.20	
1/28/2014	439.70	0.00	29.00	458.70		36.50	451.20	
2/25/2014	449.70	0.83	28.25	459.50		36.20	451.50	
3/26/2014	465.10		26.75	461.00		35.70	452.00	
3/28/2014	465.70	1.15	26.80	460.90		35.80	451.90	
4/29/2014	465.30	0.43	27.60	460.10		35.80	451.90	
5/28/2014	450.60	0.00	29.80	457.90		36.30	451.40	
6/25/2014	440.10	0.00	30.40	457.30		36.50	451.20	
7/29/2014	431.20	0.00	30.70	457.00		36.70	451.00	
8/26/2014	419.50	0.02	31.10	456.60		36.80	450.90	
9/23/2014	405.30	0.00	31.30	456.40		36.80	450.90	
10/29/2014	400.90	0.00	31.30	456.40		36.90	450.80	
11/25/2014	410.90	0.25	31.20	456.50		37.10	450.60	
12/30/2014	430.60	2.94	26.20	461.50		36.65	451.00	
1/27/2015	466.70	0.83	26.50	461.20		35.70	452.00	
2/25/2015	468.90	0.69	27.00	460.70		35.50	452.20	
3/26/2015	465.90	0.61	28.10	459.60		35.60	452.10	
4/28/2015	465.70	0.20	28.00	459.70		35.70	452.00	
5/28/2015	466.40	1.08	20.10	457.60		35.70	452.00	
6/30/2015	454.50	0.00	29.80	457.90		36.10	451.60	
7/28/2015	445.60	0.00	30.20	457.50		36.30	451.40	
8/28/2015	437.60	0.00	30.50	457.20		36.60	451.10	
9/24/2015	426.90	1.51	30.80	456.90		36.70	451.00	
10/27/2015	415.40	0.49	30.90	456.80		36.80	450.90	

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TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/19/2015	412.90	0.09	30.80	456.90		36.80	450.90	
12/22/2015	425.50	0.69	29.90	457.80		36.50	451.20	
1/27/2016	463.60	2.86	26.25	461.50		36.15	451.50	
2/25/2016	468.90	0.25	26.70	461.00		35.50	452.20	
3/30/2016	468.00	1.44	26.75	461.00		35.10	452.60	
4/28/2016	461.30	0.30	28.20	459.50		35.70	452.00	
5/25/2016	451.30	0.18	29.05	458.70		36.20	451.50	
6/28/2016	414.10	0.00	29.30	458.40		36.20	451.50	
7/27/2016	434.20	0.00	29.70	458.00		36.40	451.30	
8/23/2016	418.60	0.00	30.30	457.40		36.65	451.00	
9/27/2016	406.40	0.00	30.40	457.30		36.70	451.00	
10/26/2016	404.00	0.48	30.30	457.40		36.70	451.00	
11/22/2016	413.60	1.13	29.95	457.80		36.80	450.90	
12/20/2016	441.10	3.48	28.10	459.60		36.45	451.20	
1/26/2017	471.60	5.67	24.10	463.60		35.20	452.50	
2/24/2017	472.05	3.95	24.80	462.90		34.60	453.10	
2/25/2017	472.00		24.80	462.90		34.45	453.20	
2/26/2017	472.00		24.85	462.90		34.40	453.30	
2/27/2017	472.00		25.40	462.30		34.40	453.30	
2/28/2017	471.90		24.90	462.80		34.50	453.20	
3/1/2017	471.90		24.90	462.80		34.40	453.30	
3/2/2017	471.90		25.14	462.60		34.70	453.00	
3/29/2017	467.90	0.10	26.30	461.40		35.00	452.70	
4/27/2017	457.60	0.04	27.60	460.10		35.70	452.00	
5/23/2017	453.50	0.43	27.80	459.90		35.90	451.80	
6/21/2017	447.40	0.00	28.10	459.60		35.90	451.80	
7/26/2017	435.10	0.00	28.70	459.00		36.20	451.50	
8/25/2017	420.10	0.00	28.00	459.70		36.20	451.50	

Notes:

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TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
9/27/2017	407.10	0.00	29.10	458.60		36.40	451.30	
10/26/2017	395.00	0.00	29.20	458.50		36.30	451.40	
11/28/2017	409.00	0.09	28.60	459.10		36.30	451.40	
12/20/2017	416.80	0.00	28.50	459.20		36.40	451.30	
1/24/2018	434.50	1.31	27.10	460.60		36.00	451.70	
2/21/2018	443.10	0.29	26.50	461.20		35.90	451.80	
3/29/2018	453.00	1.28	25.90	461.80		35.60	452.10	
4/26/2018	449.10	0.05	26.20	461.50		35.80	451.90	
5/31/2018	453.10	0.20	26.40	461.30		35.80	451.90	
6/28/2018	448.20	0.00	27.40	460.30		35.90	451.80	
7/25/2018	440.40	0.00	28.00	459.70		35.90	451.80	
8/22/2018	427.10	0.00	28.80	458.90		36.20	451.50	
9/27/2018	439.60	0.00	29.40	458.30		36.40	451.30	
10/18/2018	405.30	0.90	29.50	458.20		36.40	451.30	
11/28/2018	408.60	1.19	29.30	458.40		36.50	451.20	
12/19/2018	436.00	1.99	37.80	449.90	Omitted	36.10	451.60	
1/30/2019	463.80	4.71	24.10	463.60		37.00	450.70	
2/27/2019	466.20	6.55	24.00	463.70		24.30	463.40	Omitted
3/27/2019	463.30	1.34	25.10	462.60		35.30	452.40	
4/29/2019	453.00	0.13	26.10	461.60		35.40	452.30	
5/30/2019	451.80	0.64	25.70	462.00		35.40	452.30	
6/26/2019	446.20	0.01	25.90	461.80		35.50	452.20	
7/5/2019	39.40	0.00	36.00	451.70	Omitted	11.10	476.60	Omitted
7/30/2019	434.80	0.00	26.50	461.20		35.60	452.10	
8/27/2019	424.40	0.00	26.80	460.90		35.60	452.10	
9/26/2019	405.60	0.00	27.30	460.40		36.10	451.60	
10/22/2019	400.50	0.00	27.40	460.30		35.90	451.80	
11/26/2019	412.80	3.13	27.20	460.50		35.60	452.10	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/18/2019	447.40	4.44	24.80	462.90		35.20	452.50	
1/28/2020	465.40	0.20	23.30	464.40		34.70	453.00	
2/26/2020	459.60	0.14	24.90	462.80		35.00	452.70	
3/24/2020	470.70	3.49	23.00	464.70		34.90	452.80	
4/29/2020	467.60	3.65	23.40	464.30		33.90	453.80	
5/27/2020	459.10	0.02	25.10	462.60		34.60	453.10	
6/23/2020	447.00	0.00	26.20	461.50		35.20	452.50	
7/30/2020	434.00	0.00	26.80	460.90		35.30	452.40	
8/26/2020	417.70	0.00	27.30	460.40		35.30	452.40	
9/29/2020	403.60	0.00	27.60	460.10		35.60	452.10	
10/28/2020	404.50	0.00	27.50	460.20		35.80	451.90	
11/24/2020	413.50	0.42	27.10	460.60		35.50	452.20	
12/22/2020	408.00	1.13	27.20	460.50		35.50	452.20	
1/27/2021	435.60	2.25	25.80	461.90		35.50	452.20	
2/25/2021	457.30	0.05	24.00	463.70		34.80	452.90	
3/23/2021	465.90	1.36	23.40	464.30		35.70	452.00	
4/27/2021	462.10	0.04	24.80	462.90		34.80	452.90	
5/26/2021	455.00	0.03	25.90	461.80		35.10	452.60	
6/30/2021	437.90	0.00	27.40	460.30		35.50	452.20	
7/29/2021	423.60	0.07	28.20	459.50		35.70	452.00	
8/24/2021	408.00	0.00	28.30	459.40		35.80	451.90	
9/29/2021	398.00	0.04	28.50	459.20		35.80	451.90	
10/26/2021	417.00	0.87	28.30	459.40		36.70	451.00	
11/25/2021	427.90	0.00	27.30	460.40		35.80	451.90	
12/21/2021	427.90	4.77	25.70	462.00		35.50	452.20	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		15.50	470.50		19.90	466.10	
2/27/2007	426.80		15.50	470.50		20.30	465.70	
3/28/2007	438.80		15.60	470.40		20.30	465.70	
4/26/2007	450.90		15.10	470.90		20.20	465.80	
5/23/2007	461.40		15.20	470.80		20.40	465.60	
6/27/2007	457.20		15.50	470.50		20.50	465.50	
7/26/2007	445.50		15.90	470.10		20.50	465.50	
8/28/2007	434.60		16.00	470.00		20.60	465.40	
9/25/2007	416.80		16.40	469.60		20.80	465.20	
10/24/2007	404.50		16.70	469.30		20.80	465.20	
11/27/2007	422.20		16.70	469.30		21.10	464.90	
1/3/2008	443.20		16.60	469.40		20.90	465.10	
1/29/2008	452.20		16.21	469.80		21.11	464.90	
2/27/2008	460.80		15.90	470.10		20.60	465.40	
3/26/2008	468.00		15.60	470.40		20.60	465.40	
4/29/2008	468.60		15.40	470.60		20.00	466.00	
5/29/2008	464.70		15.50	470.50		20.30	465.70	
6/26/2008	455.70		15.40	470.60		20.20	465.80	
7/29/2008	447.30	0.00	15.60	470.40		20.20	465.80	
8/28/2008	438.80	0.00	15.90	470.10		20.30	465.70	
9/26/2008	430.70	0.00	15.90	470.10		20.30	465.70	
10/29/2008	412.50	0.00	16.00	470.00		20.20	465.80	
11/25/2008	404.70	2.60	16.10	469.90		20.20	465.80	
12/30/2008	440.90	3.42	15.90	470.10		20.40	465.60	
1/28/2009	463.70	0.17	15.30	470.70		20.10	465.90	
2/25/2009	470.10	3.35	14.90	471.10		19.00	467.00	
3/26/2009	469.40	0.19	14.60	471.40		19.50	466.50	
4/29/2009	466.90	0.07	14.60	471.40		19.70	466.30	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
5/18/2009	466.70	0.00	14.40	471.60		19.40	466.60	
5/29/2009	465.00	0.00	14.40	471.60		19.40	466.60	
6/30/2009	460.20	0.00	14.50	471.50		19.30	466.70	
7/30/2009	451.10	0.00	14.50	471.50		19.30	466.70	
8/25/2009	440.10	0.00	14.50	471.50		19.20	466.80	
9/30/2009	432.20	0.00	14.60	471.40		19.30	466.70	
10/29/2009	431.40	0.53	14.69	471.30		19.48	466.50	
12/1/2009	427.40	0.00	14.90	471.10		19.80	466.20	
12/29/2009	448.10	2.06	14.72	471.30		19.65	466.40	
1/27/2010	465.60	4.62	14.20	471.80		19.40	466.60	
2/25/2010	470.20	2.51	13.80	472.20		19.20	466.80	
3/29/2010	465.70	0.99	13.70	472.30		18.00	468.00	
4/4/2010	465.00		13.70	472.30		18.40	467.60	
4/27/2010	468.40	1.23	13.60	472.40		18.90	467.10	
5/27/2010	463.30	0.05	13.60	472.40		18.80	467.20	
6/30/2010	454.70	0.00	13.60	472.40		18.70	467.30	
7/28/2010	445.60	0.00	13.70	472.30		18.90	467.10	
8/31/2010	437.10	0.00	14.00	472.00		19.00	467.00	
9/29/2010	422.70	0.00	13.80	472.20		18.90	467.10	
10/27/2010	426.40	2.38	13.90	472.10		19.00	467.00	
11/29/2010	439.80	0.97	13.70	472.30		19.20	466.80	
12/30/2010	456.60	8.62	12.60	473.40		18.20	467.80	
2/1/2011	468.90	0.92	11.90	474.10		17.90	468.10	
2/23/2011	469.00	0.99	11.64	474.40		17.81	468.20	
3/29/2011	470.30	2.93	11.10	474.90		17.40	468.60	
4/27/2011	464.80	0.19	10.85	475.20		17.00	469.00	
5/26/2011	457.30	0.48	10.80	475.20		16.90	469.10	
6/28/2011	443.50	0.05	10.70	475.30		16.70	469.30	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/29/2011	425.10	0.00	10.80	475.20		16.70	469.30	
8/24/2011	418.00	0.00	10.80	475.20		16.70	469.30	
9/27/2011	400.90	0.12	11.00	475.00		16.70	469.30	
10/26/2011	402.20	1.25	11.10	474.90		17.20	468.80	
11/30/2011	425.10	1.38	10.80	475.20		16.70	469.30	
12/21/2011	435.70	0.32	10.90	475.10		16.90	469.10	
1/24/2012	441.40	0.53	10.50	475.50		17.00	469.00	
2/28/2012	448.40	0.42	10.60	475.40		17.40	468.60	
3/26/2012	452.70	1.06	10.50	475.50		17.30	468.70	
4/23/2012	463.40	1.32	10.50	475.50		17.40	468.60	
5/30/2012	457.30	0.02	10.40	475.60		17.10	468.90	
6/13/2012	452.90	0.02	10.50	475.50		17.00	469.00	
6/26/2012	450.20	0.00	10.60	475.40		17.10	468.90	
7/24/2012	439.80	0.00	11.00	475.00		17.80	468.20	
8/8/2012	437.60	0.12	11.10	474.90		17.50	468.50	
8/22/2012	433.40	0.00	11.15	474.90		17.55	468.50	
8/29/2012	431.30	0.00	11.20	474.80		17.50	468.50	
9/25/2012	420.80	0.00	11.30	474.70		17.60	468.40	
10/31/2012	412.30	0.26	11.80	474.20		18.10	467.90	
11/27/2012	420.80	0.58	11.80	474.20		18.20	467.80	
12/18/2012	448.00	1.44	11.65	474.40		18.00	468.00	
1/29/2013	468.60	1.18	11.30	474.70		18.30	467.70	
2/28/2013	469.20	0.30	11.20	474.80		18.20	467.80	
3/27/2013	468.30	0.50	11.20	474.80		18.00	468.00	
4/25/2013	462.70	0.00	11.40	474.60		18.20	467.80	
5/21/2013	454.20	0.00	11.90	474.10		18.40	467.60	
6/25/2013	439.30	0.00	12.00	474.00		18.65	467.40	
7/23/2013	431.50	0.00	12.40	473.60		18.80	467.20	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
8/21/2013	418.00	0.00	13.00	473.00		19.10	466.90	
9/24/2013	404.00	0.00	13.00	473.00		19.20	466.80	
10/29/2013	400.60	0.00	13.10	472.90		19.40	466.60	
11/26/2013	407.90	0.44	13.20	472.80		19.50	466.50	
12/19/2013	425.80	0.54	12.90	473.10		19.20	466.80	
1/28/2014	439.70	0.00	12.70	473.30		19.50	466.50	
2/25/2014	449.70	0.83	12.70	473.30		19.60	466.40	
3/26/2014	465.10		12.55	473.50		19.60	466.40	
3/28/2014	465.70	1.15	12.60	473.40		19.70	466.30	
4/29/2014	465.30	0.43	12.80	473.20		19.60	466.40	
5/28/2014	450.60	0.00	13.10	472.90		19.60	466.40	
6/25/2014	440.10	0.00	13.20	472.80		19.80	466.20	
7/29/2014	431.20	0.00	13.50	472.50		20.10	465.90	
8/26/2014	419.50	0.02	13.70	472.30		20.30	465.70	
9/23/2014	405.30	0.00	13.80	472.20		20.20	465.80	
10/29/2014	400.90	0.00	14.10	471.90		20.50	465.50	
11/25/2014	410.90	0.25	14.30	471.70		20.90	465.10	
12/30/2014	430.60	2.94	14.00	472.00		20.50	465.50	
1/27/2015	466.70	0.83	13.10	472.90		20.30	465.70	
2/25/2015	468.90	0.69	12.70	473.30		20.10	465.90	
3/26/2015	465.90	0.61	12.70	473.30		19.90	466.10	
4/28/2015	465.70	0.20	12.80	473.20		19.80	466.20	
5/28/2015	466.40	1.08	12.90	473.10		20.00	466.00	
6/30/2015	454.50	0.00	13.10	472.90		20.00	466.00	
7/28/2015	445.60	0.00	13.30	472.70		20.10	465.90	
8/28/2015	437.60	0.00	13.60	472.40		20.20	465.80	
9/24/2015	426.90	1.51	13.80	472.20		20.50	465.50	
10/27/2015	415.40	0.49	14.10	471.90		20.70	465.30	

Notes:

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**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/19/2015	412.90	0.09	14.20	471.80		20.80	465.20	
12/22/2015	425.50	0.69	14.40	471.60		20.80	465.20	
1/27/2016	463.60	2.86	14.10	471.90		21.10	464.90	
2/25/2016	468.90	0.25	14.20	471.80		20.90	465.10	
3/30/2016	468.00	1.44	13.60	472.40		20.80	465.20	
4/28/2016	461.30	0.30	13.80	472.20		20.80	465.20	
5/25/2016	451.30	0.18	14.15	471.90		21.05	465.00	
6/28/2016	414.10	0.00	14.40	471.60		21.10	464.90	
7/27/2016	434.20	0.00	14.60	471.40		21.30	464.70	
8/23/2016	418.60	0.00	14.90	471.10		21.40	464.60	
9/27/2016	406.40	0.00	15.20	470.80		21.50	464.50	
10/26/2016	404.00	0.48	15.50	470.50		21.80	464.20	
11/22/2016	413.60	1.13	15.45	470.60		21.95	464.10	
12/20/2016	441.10	3.48	15.35	470.70		22.05	464.00	
1/26/2017	471.60	5.67	14.20	471.80		21.70	464.30	
2/24/2017	472.05	3.95	13.65	472.40		21.10	464.90	
2/25/2017	472.00		13.55	472.50		21.00	465.00	
2/26/2017	472.00		13.50	472.50		20.90	465.10	
2/27/2017	472.00		20.40	472.10		13.90	465.60	
2/28/2017	471.90		13.50	472.50		21.00	465.00	
3/1/2017	471.90		13.60	472.40		21.20	464.80	
3/2/2017	471.90		13.60	472.40		21.10	464.90	
3/29/2017	467.90	0.10	13.40	472.60		20.70	465.30	
4/27/2017	457.60	0.04	13.30	472.70		20.30	465.70	
5/23/2017	453.50	0.43	13.40	472.60		20.50	465.50	
6/21/2017	447.40	0.00	13.30	472.70		20.40	465.60	
7/26/2017	435.10	0.00	13.50	472.50		20.50	465.50	
8/25/2017	420.10	0.00	13.60	472.40		20.40	465.60	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
9/27/2017	407.10	0.00	13.80	472.20		20.60	465.40	
10/26/2017	395.00	0.00	14.10	471.90		20.60	465.40	
11/28/2017	409.00	0.09	13.70	472.30		20.70	465.30	
12/20/2017	416.80	0.00	13.80	472.20		20.90	465.10	
1/24/2018	434.50	1.31	13.30	472.70		20.50	465.50	
2/21/2018	443.10	0.29	13.00	473.00		20.40	465.60	
3/29/2018	453.00	1.28	12.50	473.50		20.20	465.80	
4/26/2018	449.10	0.05	12.50	473.50		20.10	465.90	
5/31/2018	453.10	0.20	12.30	473.70		20.00	466.00	
6/28/2018	448.20	0.00	12.50	473.50		20.00	466.00	
7/25/2018	440.40	0.00	12.60	473.40		19.20	466.80	
8/22/2018	427.10	0.00	13.10	472.90		20.10	465.90	
9/27/2018	439.60	0.00	13.40	472.60		20.50	465.50	
10/18/2018	405.30	0.90	13.50	472.50		20.70	465.30	
11/28/2018	408.60	1.19	13.80	472.20		21.40	464.60	
12/19/2018	436.00	1.99	13.60	472.40		21.00	465.00	
1/30/2019	463.80	4.71	22.30	463.70	Omitted	12.40	473.60	Omitted
2/27/2019	466.20	6.55	11.50	474.50		19.40	466.60	
3/27/2019	463.30	1.34	11.20	474.80		19.50	466.50	
4/29/2019	453.00	0.13	11.10	474.90		18.90	467.10	
5/30/2019	451.80	0.64	11.00	475.00		19.60	466.40	
6/26/2019	446.20	0.01	10.80	475.20		18.70	467.30	
7/5/2019	39.40	0.00	18.80	467.20	Omitted	83.40	402.60	Omitted
7/30/2019	434.80	0.00	10.90	475.10		18.60	467.40	
8/27/2019	424.40	0.00	10.90	475.10		18.50	467.50	
9/26/2019	405.60	0.00	11.10	474.90		18.50	467.50	
10/22/2019	400.50	0.00	11.00	475.00		18.60	467.40	
11/26/2019	412.80	3.13	11.00	475.00		18.50	467.50	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 4
SAN JOAQUIN RESERVOIR DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->								
Depth of Well								
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/18/2019	447.40	4.44	10.70	475.30		18.70	467.30	
1/28/2020	465.40	0.20	9.80	476.20		18.20	467.80	
2/26/2020	459.60	0.14	9.60	476.40		17.80	468.20	
3/24/2020	470.70	3.49	9.50	476.50		18.20	467.80	
4/29/2020	467.60	3.65	8.60	477.40		17.00	469.00	
5/27/2020	459.10	0.02	8.60	477.40		16.90	469.10	
6/23/2020	447.00	0.00	8.90	477.10		17.20	468.80	
7/30/2020	434.00	0.00	8.90	477.10		17.10	468.90	
8/26/2020	417.70	0.00	9.00	477.00		17.10	468.90	
9/29/2020	403.60	0.00	9.35	476.65		17.40	468.60	
10/28/2020	404.50	0.00	9.50	476.50		17.70	468.30	
11/24/2020	413.50	0.42	9.30	476.70		17.60	468.40	
12/22/2020	408.00	1.13	9.40	476.60		17.70	468.30	
1/27/2021	435.60	2.25	9.20	476.80		17.80	468.20	
2/25/2021	457.30	0.05	8.80	477.20		17.40	468.60	
3/23/2021	465.90	1.36	8.70	477.30		17.70	468.30	
4/27/2021	462.10	0.04	8.50	477.50		17.20	468.80	
5/26/2021	455.00	0.03	8.80	477.20		17.40	468.60	
6/30/2021	437.90	0.00	9.20	476.80		17.70	468.30	
7/29/2021	423.60	0.07	9.50	476.50		17.80	468.20	
8/24/2021	408.00	0.00	9.70	476.30		17.90	468.10	
9/29/2021	398.00	0.04	10.10	475.90		18.10	467.90	
10/26/2021	417.00	0.87	10.80	475.20		18.60	467.40	
11/25/2021	427.90	0.00	9.70	476.30		18.40	467.60	
12/21/2021	427.90	4.77	10.00	476.00		18.40	467.60	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Vibrating Wire Piezo. -->			VB-1			VB-2		
Top of AC Elevation -->			371.00			407.00		
Piezo. Tip Elevation -->			357.00			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
1/31/2007	405.80		3067.70			3050.60		
2/27/2007	426.80		3059.10			3041.10		
3/28/2007	438.80		3050.60			3019.50		
4/26/2007	450.90		3040.70			2984.20		
5/23/2007	461.40		3029.00			2946.80		
6/27/2007	457.20		3024.40			2946.90		
7/26/2007	445.50		3025.30			2951.10		
8/28/2007	434.60		3031.40			2972.40		
9/25/2007	416.80		3043.10			3001.00		
10/24/2007	404.50		3055.70			3076.40		
11/27/2007	422.20		3052.20			3027.40		
1/3/2008	443.20		3004.50	392.04		2994.10	430.26	
1/29/2008	452.20		3032.10	385.04		2967.30	431.79	
2/27/2008	460.80		3016.60	389.00		2941.00	432.68	
3/26/2008	468.00		3083.50	371.98		2918.80	431.40	
4/29/2008	468.60		3005.20	391.87		2908.00	428.35	
5/29/2008	464.70		3003.80	392.22		2910.90	423.03	
6/26/2008	455.70		3007.50	391.20		2924.80	416.38	
7/29/2008	447.30	0.00	3013.80	389.59		2943.30	409.55	
8/28/2008	438.80	0.00	3020.30	388.07		2960.80	417.52	
9/26/2008	430.70	0.00	3026.00	386.64		2975.90	414.16	
10/29/2008	412.50	0.00	3041.50	382.71		3007.20	407.15	
11/25/2008	404.70	2.60	3051.80	380.10		3024.60	403.22	
12/30/2008	440.90	3.42	3037.00	383.86		3008.40	406.88	
1/28/2009	463.70	0.17	3010.10	390.64		2951.70	419.54	
2/25/2009	470.10	3.35	2988.80	395.96		2912.40	428.20	
3/26/2009	469.40	0.19	2973.50	399.76		2903.20	430.21	
4/29/2009	466.90	0.07	2938.80	408.30		2903.10	430.24	
5/18/2009	466.70	0.00	2938.00	408.41		2904.00	430.04	
5/29/2009	465.00	0.00	2941.80	407.57		2907.10	429.36	
6/30/2009	460.20	0.00	2947.30	406.22		2914.70	427.70	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-1			VB-2		
Top of AC Elevation -->			371.00			407.00		
Piezo. Tip Elevation -->			357.00			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	2960.50	402.89		2929.70	424.40	
8/25/2009	440.10	0.00	2979.90	398.08		2950.40	419.83	
9/30/2009	432.20	0.00	2996.20	394.12		2970.30	415.41	
10/29/2009	431.40	0.53	3003.20	392.29		2979.70	413.31	
12/1/2009	427.40	0.00	3014.10	389.58		2990.70	410.85	
12/29/2009	448.10	2.06	3000.70	392.99		2971.40	415.16	
1/27/2010	465.60	4.62	2978.90	398.42		2927.90	424.79	
2/25/2010	470.20	2.51	2957.30	403.76		2899.70	430.98	
3/29/2010	465.70	0.99	2963.60	402.13		2901.20	430.65	
4/4/2010	465.00		2965.40	401.76		2902.50	430.37	
4/27/2010	468.40	1.23	2964.60	401.96		2899.00	431.13	
5/27/2010	463.30	0.05	2972.00	400.13		2903.00	430.26	
6/30/2010	454.70	0.00	2988.10	396.14		2923.60	425.74	
7/28/2010	445.60	0.00	2996.90	393.86		2936.90	422.81	
8/31/2010	437.10	0.00	3008.70	390.99		2957.90	418.16	
9/29/2010	422.70	0.00	3024.50	387.01		2983.40	412.48	
10/27/2010	426.40	2.38	3027.60	386.23		2995.00	409.89	
11/29/2010	439.80	0.97	3021.40	387.80		2982.50	412.68	
12/30/2010	456.60	8.62	3003.30	392.34		2948.30	420.29	
2/1/2011	468.90	0.92	2964.00	402.11		2903.00	430.26	
2/23/2011	469.00	0.99	2960.70	402.92		2896.00	431.79	
3/29/2011	470.30	2.93	2956.90	403.12		2891.90	432.68	
4/27/2011	464.80	0.19	2967.20	401.22		2897.80	431.40	
5/26/2011	457.30	0.48	2983.40	397.21		2911.70	428.35	
6/28/2011	443.50	0.05	3003.20	392.37		2935.90	423.03	
7/29/2011	425.10	0.00	3020.90	387.92		2965.90	416.38	
8/24/2011	418.00	0.00	3037.00	383.77		2996.50	409.55	
9/27/2011	400.90	0.12	3051.40	380.22		3021.30	403.97	
10/26/2011	402.20	1.25	3054.30	379.46		3031.70	401.62	
11/30/2011	425.10	1.38	3044.00	382.08		3023.20	403.54	
12/21/2011	435.70	0.32	3037.90	383.63		3009.50	406.63	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-1			VB-2		
Top of AC Elevation -->			371.00			407.00		
Piezo. Tip Elevation -->			357.00			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	3033.00	384.87		2985.60	411.99	
2/28/2012	448.40	0.42	3024.00	387.14		2957.40	418.27	
3/26/2012	452.70	1.06	3020.60	388.00		2947.20	420.53	
4/23/2012	463.40	1.32	2997.40	393.82		2919.70	426.60	
5/30/2012	457.30	0.02	2993.10	394.89		2915.50	427.52	
6/13/2012	452.90	0.02	2990.80	395.46		2934.00	410.36	
6/26/2012	450.20	0.00	3001.00	392.92		2928.70	424.62	
7/24/2012	439.80	0.00	3013.40	389.81		2947.10	420.56	
8/8/2012	437.60	0.12	3016.90	388.93		2954.90	418.83	
8/22/2012	433.40	0.00	3021.00	387.90		2963.10	417.01	
8/29/2012	431.30	0.00	3023.40	387.29		2967.60	416.01	
9/25/2012	420.80	0.00	3025.20	386.84		2971.50	415.14	
10/31/2012	412.30	0.26	3042.30	382.51		3006.10	407.39	
11/27/2012	420.80	0.58	3041.20	382.79		3010.60	406.38	
12/18/2012	448.00	1.44	3025.00	386.89		2985.80	411.95	
1/29/2013	468.60	1.18	2956.00	401.40		2909.30	427.96	
2/28/2013	469.20	0.30	2943.50	404.47		2893.60	431.39	
3/27/2013	468.30	0.50	2944.50	404.22		2891.40	431.87	
4/25/2013	462.70	0.00	2960.30	400.34		2894.70	431.15	
5/21/2013	454.20	0.00	2982.70	394.82		2909.30	427.96	
6/25/2013	439.30	0.00	3008.30	388.42		2936.10	422.07	
7/23/2013	431.50	0.00	3018.50	385.84		2951.40	418.86	
8/21/2013	418.00	0.00	3032.20	382.40		2973.60	413.75	
9/24/2013	404.00	0.00	3047.20	378.59		2997.00	408.52	
10/29/2013	400.60	0.00	3052.30	377.29		3005.50	406.61	
11/26/2013	407.90	0.44			Wires unplugged	3010.30	405.53	
12/19/2013	425.80	0.54			Wires unplugged	3007.70	406.11	
1/28/2014	439.70	0.00	3035.60	384.14		2970.70	415.29	
2/25/2014	449.70	0.83	3027.90	386.08		2944.10	421.19	
3/26/2014	465.10		2989.60	395.68		2898.30	431.25	
3/28/2014	465.70	1.15	2985.70	396.66		2894.60	432.06	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Vibrating Wire Piezo. -->			VB-1			VB-2		
Top of AC Elevation -->			371.00			407.00		
Piezo. Tip Elevation -->			357.00			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	2972.90	399.83		2878.70	435.52	
5/28/2014	450.60	0.00	3001.50	392.71		2900.40	430.79	
6/25/2014	440.10	0.00	3015.30	389.25		2921.90	426.08	
7/29/2014	431.20	0.00	3024.20	387.02		2942.30	421.59	
8/26/2014	419.50	0.02	3034.00	384.56		2964.10	416.76	
9/23/2014	405.30	0.00	3046.60	381.36		2988.60	411.30	
10/29/2014	400.90	0.00	3052.40	379.91		3001.90	408.32	
11/25/2014	410.90	0.25	3050.00	380.52		3007.00	407.18	
12/30/2014	430.60	2.94	3039.70	383.18		2997.90	409.23	
1/27/2015	466.70	0.83	3006.70	391.45		2913.00	428.05	
2/25/2015	468.90	0.69	2998.80	393.42		2878.80	435.51	
3/26/2015	465.90	0.61	2988.70	395.94		2874.00	436.55	
4/28/2015	465.70	0.20	2995.50	394.23		2874.30	436.49	
5/28/2015	466.40	1.08	2996.10	394.11		2871.30	437.14	
6/30/2015	454.50	0.00	3005.00	391.86		2889.10	433.27	
7/28/2015	445.60	0.00	3012.70	389.93		2910.80	428.53	
8/28/2015	437.60	0.00	3018.60	388.48		2928.90	424.56	
9/24/2015	426.90	1.51	3027.00	386.40		2951.00	419.69	
10/27/2015	415.40	0.49	3036.60	383.93		2974.20	414.52	
11/19/2015	412.90	0.09	3040.70	382.90		2986.30	411.82	
12/22/2015	425.50	0.69	3038.60	383.43		2987.07	411.66	
1/27/2016	463.60	2.86	3017.96	388.63		2931.15	424.06	
2/25/2016	468.90	0.25	3009.78	390.67		2885.40	434.08	
3/30/2016	468.00	1.44	3005.78	391.67		2870.78	437.25	
4/28/2016	461.30	0.30	3007.99	391.11		2878.68	435.53	
5/25/2016	451.30	0.18	3013.12	389.82		2898.47	431.22	
6/28/2016	414.10	0.00	3017.70	388.67		2917.70	427.01	
7/27/2016	434.20	0.00	3024.70	386.91		2936.50	422.87	
8/23/2016	418.60	0.00	3035.41	384.20		2964.24	416.73	
9/27/2016	406.40	0.00	3047.11	381.25		2990.48	410.88	
10/26/2016	404.00	0.48	3051.02	380.26		3003.23	408.03	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-1			VB-2		
Top of AC Elevation -->			371.00			407.00		
Piezo. Tip Elevation -->			357.00			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	3048.07	381.02		3006.57	407.28	
12/20/2016	441.10	3.48	3033.41	384.73		2981.77	412.84	
1/26/2017	471.60	5.67	3011.61	390.22		2900.67	430.76	
2/24/2017	472.05	3.95	3007.20	391.32		2872.81	436.82	
2/25/2017	472.00		3007.04	391.36		2872.45	436.90	
2/26/2017	472.00		3007.17	391.33		2872.02	436.99	
2/27/2017	472.00		3007.06	391.36		2872.13	436.96	
2/28/2017	471.90		3007.02	391.37		2871.54	437.09	
3/1/2017	471.90		3007.11	391.34		2871.54	437.09	
3/2/2017	471.90		3006.69	391.45		2870.57	437.30	
3/29/2017	467.90	0.10	3007.03	391.35		2871.74	437.04	
4/27/2017	457.60	0.04	3011.00	390.35		2888.70	433.35	
5/23/2017	453.50	0.43	3013.77	389.65		2901.51	430.56	
6/21/2017	447.40	0.00	3016.94	388.85		2913.05	428.03	
7/26/2017	435.10	0.00	3024.22	387.02		2937.66	422.62	
8/25/2017	420.10	0.00	3035.09	384.28		2966.31	416.27	
9/27/2017	407.10	0.00	3044.81	381.83		2988.98	411.22	
10/26/2017	395.00	0.00	3058.99	378.23		3004.20	407.81	
11/28/2017	409.00	0.09	3053.41	379.66		3013.87	405.64	
12/20/2017	416.80	0.00	3046.72	381.36		3010.17	406.47	
1/24/2018	434.50	1.31	3039.95			2997.62		
2/21/2018	443.10	0.29	3034.97			2971.51		
3/29/2018	453.00	1.28	3027.73			2943.47		
4/26/2018	449.10	0.05	3027.18			2931.40		
5/31/2018	453.10	0.20	3072.64			2922.64		
6/28/2018	448.20	0.00	3022.94			2922.72		
7/25/2018	440.40	0.00	3025.51			2934.39		
8/22/2018	427.10	0.00	3031.31			2953.63		
9/27/2018	439.60	0.00	3044.77			2986.66		
10/18/2018	405.30	0.90	3049.15			3003.92		
11/28/2018	408.60	1.19	3049.77			3010.53		

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Vibrating Wire Piezo. -->			VB-1			VB-2		
Top of AC Elevation -->			371.00			407.00		
Piezo. Tip Elevation -->			357.00			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	3036.44			2997.81		
1/30/2019	463.80	4.71	3019.03			2933.26		
2/27/2019	466.20	6.55	3013.81			2898.84		
3/27/2019	463.30	1.34	3013.30			2894.43		
4/29/2019	453.00	0.13	3016.61			2909.16		
5/30/2019	451.80	0.64	3015.23			2917.35		
6/26/2019	446.20	0.01	3019.03			2933.26		
7/5/2019	39.40	0.00	3020.90					
7/30/2019	434.80	0.00	3025.58					
8/27/2019	424.40	0.00	3032.59					VBW data logger is crashing. Repairs are in planning.
9/26/2019	405.60	0.00	3046.87					
10/22/2019	400.50	0.00	3052.86					
11/26/2019	412.80	3.13	3049.20					
12/18/2019	447.40	4.44	336.44			2997.81		
1/28/2020	465.40	0.20	3019.02			2933.24		
2/26/2020	459.60	0.14	3015.40			2908.90		
3/24/2020	470.70	3.49	3009.80			2891.30		
4/29/2020	467.60	3.65	3007.33			2882.64		
5/27/2020	459.10	0.02	3009.61			2896.45		
6/23/2020	447.00	0.00	3015.28			2918.67		
7/30/2020	434.00	0.00	3023.85			2947.81		
8/26/2020	417.70	0.00	3036.09			2977.84		
9/29/2020	403.60	0.00	3049.41			3004.49		
10/28/2020	404.50	0.00	3052.71			3015.75		
11/24/2020	413.50	0.42	3047.38			3017.40		
12/22/2020	408.00	1.13	3051.32			3022.66		
1/27/2021	435.60	2.25	3037.99			3011.14		
2/25/2021	457.30	0.05	3024.04			2916.15		
3/23/2021	465.90	1.36	3016.72			2925.72		
4/27/2021	462.10	0.04	3014.33			2908.33		
5/26/2021	455.00	0.03	3016.59			2919.42		

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Vibrating Wire Piezo. -->			VB-1			VB-2		
Top of AC Elevation -->			371.00			407.00		
Piezo. Tip Elevation -->			357.00			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	3024.05			2948.87		
7/29/2021	423.60	0.07	3032.39			2969.69		
8/24/2021	408.00	0.00	3044.82			2997.61		
9/29/2021	398.00	0.04	3054.47			3015.75		
10/26/2021	417.00	0.87	3053.11			3017.21		
11/25/2021	427.90	0.00	-9999.00		VB wire data logger malfunction.	-9999.00		VB wire data logger malfunction.
12/21/2021	427.90	4.77	-9999.00		VB wire data logger parts on order.	-9999.00		VB wire data logger parts on order.

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-3			VB-4		
Top of AC Elevation -->			421.50			448.00		
Piezo. Tip Elevation -->			399.50			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
1/31/2007	405.80		3162.20			3081.10		
2/27/2007	426.80		3163.00			3079.90		
3/28/2007	438.80		3162.80			3078.60		
4/26/2007	450.90		3163.60			3036.60		
5/23/2007	461.40		3163.40			3014.00		
6/27/2007	457.20		3163.80			3049.40		
7/26/2007	445.50		3163.60			3054.40		
8/28/2007	434.60		3163.90			3067.20		
9/25/2007	416.80		3163.20			3073.10		
10/24/2007	404.50		3163.00			3077.00		
11/27/2007	422.20		3163.00			3078.60		
1/3/2008	443.20		3163.00	398.37		3083.30	438.77	
1/29/2008	452.20		3162.70	398.45		3058.40	444.72	
2/27/2008	460.80		3163.10	398.34		3016.10	454.77	
3/26/2008	468.00		3163.10	398.34		2480.10	569.87	
4/29/2008	468.60		3163.90	398.11		2974.80	464.42	
5/29/2008	464.70		3163.30	398.24		2990.00	460.84	
6/26/2008	455.70		3163.60	398.18		3022.60	453.23	
7/29/2008	447.30	0.00	3163.20	398.29		3051.20	446.45	
8/28/2008	438.80	0.00	3164.20	398.02		3062.90	443.81	
9/26/2008	430.70	0.00	3163.50	398.22		3067.40	442.65	
10/29/2008	412.50	0.00	3163.20	398.31		3071.10	441.78	
11/25/2008	404.70	2.60	3163.10	398.34		3073.50	441.18	
12/30/2008	440.90	3.42	3163.30	398.29		3078.50	439.92	
1/28/2009	463.70	0.17	3162.40	398.53		3003.20	457.82	
2/25/2009	470.10	3.35	3162.90	398.39		2965.70	466.56	
3/26/2009	469.40	0.19	3163.70	398.17		2967.20	466.19	
4/29/2009	466.90	0.07	3163.10	398.33		2975.50	464.27	
5/18/2009	466.70	0.00	3163.00	398.35		2977.00	463.92	
5/29/2009	465.00	0.00	3163.60	398.19		2987.80	461.41	
6/30/2009	460.20	0.00	3163.80	398.13		3004.30	457.54	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-3			VB-4		
Top of AC Elevation -->			421.50			448.00		
Piezo. Tip Elevation -->			399.50			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	3163.60	398.18		3034.00	450.55	
8/25/2009	440.10	0.00	3163.50	398.21		3056.30	445.25	
9/30/2009	432.20	0.00	3163.80	398.14		3063.20	443.65	
10/29/2009	431.40	0.53	3163.40	398.25		3067.90	442.52	
12/1/2009	427.40	0.00	3163.60	398.20		3072.10	441.57	
12/29/2009	448.10	2.06	3163.30	398.28		3069.10	442.18	
1/27/2010	465.60	4.62	3163.90	398.12		2989.70	460.98	
2/25/2010	470.20	2.51	3162.80	398.42		2961.30	467.57	
3/29/2010	465.70	0.99	3163.50	398.22		2977.80	463.73	
4/4/2010	465.00		3163.40	398.25		2980.60	463.07	
4/27/2010	468.40	1.23	3163.50	398.27		2968.40	465.99	
5/27/2010	463.30	0.05	3163.00	398.35		2986.00	461.81	
6/30/2010	454.70	0.00	3163.50	398.21		3028.10	451.92	
7/28/2010	445.60	0.00	3163.30	398.26		3045.70	447.76	
8/31/2010	437.10	0.00	3163.50	398.21		3057.70	444.93	
9/29/2010	422.70	0.00	3163.80	398.13		3062.10	443.87	
10/27/2010	426.40	2.38	3163.40	398.24		3067.00	442.70	
11/29/2010	439.80	0.97	3162.20	398.57		3068.60	442.31	
12/30/2010	456.60	8.62	3164.10	398.06		3032.30	450.94	
2/1/2011	468.90	0.92	3163.00	398.36		2968.00	466.01	
2/23/2011	469.00	0.99	3162.80	398.41		2964.10	466.90	
3/29/2011	470.30	2.93	3162.90	398.37		2957.70	468.40	
4/27/2011	464.80	0.19	3163.10	398.32		2979.30	463.35	
5/26/2011	457.30	0.48	3162.80	398.39		3007.40	456.79	
6/28/2011	443.50	0.05	3163.60	398.17		3045.90	447.68	
7/29/2011	425.10	0.00	3163.10	398.31		3055.70	445.38	
8/24/2011	418.00	0.00	3163.40	398.23		3059.30	444.57	
9/27/2011	400.90	0.12	3163.10	398.32		3064.10	443.48	
10/26/2011	402.20	1.25	3163.40	398.24		3066.60	442.76	
11/30/2011	425.10	1.38	3163.60	398.19		3068.80	442.26	
12/21/2011	435.70	0.32	3163.00	398.36		3071.70	441.54	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-3			VB-4		
Top of AC Elevation -->			421.50			448.00		
Piezo. Tip Elevation -->			399.50			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	3162.70	398.44		3071.10	441.68	
2/28/2012	448.40	0.42	3162.70	398.43		3053.20	445.95	
3/26/2012	452.70	1.06	3162.50	398.48		3042.10	448.59	
4/23/2012	463.40	1.32	3162.80	398.39		2991.30	460.56	
5/30/2012	457.30	0.02	3162.60	398.44		3009.00	456.42	
6/13/2012	452.90	0.02	3163.40	398.23		3022.80	453.16	
6/26/2012	450.20	0.00	3163.10	398.31		3031.80	451.04	
7/24/2012	439.80	0.00	3162.60	398.47		3050.90	446.52	
8/8/2012	437.60	0.12	3163.10	398.33		3051.90	446.32	
8/22/2012	433.40	0.00	3162.90	398.36		3056.50	445.32	
8/29/2012	431.30	0.00	3163.30	398.26		3058.20	444.92	
9/25/2012	420.80	0.00	3163.60	398.19		3062.20	443.84	
10/31/2012	412.30	0.26	3162.30	398.54		3066.70	442.96	
11/27/2012	420.80	0.58	3161.80	398.73		3070.00	442.02	
12/18/2012	448.00	1.44	3162.70	398.44		3068.10	442.37	
1/29/2013	468.60	1.18	3161.70	398.71		2966.90	466.27	
2/28/2013	469.20	0.30	3162.30	398.55		2960.20	467.79	
3/27/2013	468.30	0.50	3162.40	398.52		2963.50	467.03	
4/25/2013	462.70	0.00	3162.20	398.57		2981.10	462.92	
5/21/2013	454.20	0.00	3162.40	398.50		3016.70	454.60	
6/25/2013	439.30	0.00	3162.20	398.55		3053.00	446.02	
7/23/2013	431.50	0.00	3162.00	398.61		3057.70	444.93	
8/21/2013	418.00	0.00	3162.30	398.53		3060.90	444.21	
9/24/2013	404.00	0.00	3162.50	398.48		3064.50	443.38	
10/29/2013	400.60	0.00	3162.10	398.60		3069.00	442.37	
11/26/2013	407.90	0.44	3161.50	398.77		3072.60	441.37	
12/19/2013	425.80	0.54	3162.90	398.42		3075.30	440.73	
1/28/2014	439.70	0.00	3161.80	398.67		3074.00	440.99	
2/25/2014	449.70	0.83	3162.00	398.62		3058.30	444.74	
3/26/2014	465.10		3161.80	398.66		2984.10	462.26	
3/28/2014	465.70	1.15	3161.20	398.82		2980.00	463.22	

Notes:

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TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-3			VB-4		
Top of AC Elevation -->			421.50			448.00		
Piezo. Tip Elevation -->			399.50			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	3161.90	398.63		2977.00	463.92	
5/28/2014	450.60	0.00	3162.00	398.60		3030.60	451.32	
6/25/2014	440.10	0.00	3162.00	398.61		3052.60	446.10	
7/29/2014	431.20	0.00	3161.50	398.75		3058.40	444.75	
8/26/2014	419.50	0.02	3161.80	398.68		3061.80	444.16	
9/23/2014	405.30	0.00	3161.60	398.73		3064.50	443.56	
10/29/2014	400.90	0.00	3161.50	398.77		3070.50	442.11	
11/25/2014	410.90	0.25	3160.20	399.13		3074.80	440.85	
12/30/2014	430.60	2.94	3161.60	398.80		3078.60	440.03	
1/27/2015	466.70	0.83	3161.10	398.88		2978.20	463.69	
2/25/2015	468.90	0.69	3160.90	398.93		2963.50	467.09	
3/26/2015	465.90	0.61	3161.10	398.88		2974.10	464.63	
4/28/2015	465.70	0.20	3161.60	398.75		2976.20	464.14	
5/28/2015	466.40	1.08	3161.40	398.80		2973.70	464.73	
6/30/2015	454.50	0.00	3161.60	398.74		3017.10	454.59	
7/28/2015	445.60	0.00	3161.40	398.79		3047.50	447.36	
8/28/2015	437.60	0.00	3161.10	398.88		3057.60	444.96	
9/24/2015	426.90	1.51	3161.00	398.96		3061.00	444.31	
10/27/2015	415.40	0.49	3161.30	398.84		3086.60	438.24	
11/19/2015	412.90	0.09	3160.50	399.06		3090.70	437.02	
12/22/2015	425.50	0.69	3161.68	398.74		3094.29	436.21	
1/27/2016	463.60	2.86	3160.29	399.11		3018.88	454.14	
2/25/2016	468.90	0.25	3160.87	398.95		2985.15	462.03	
3/30/2016	468.00	1.44	3161.26	398.84		2984.84	462.10	
4/28/2016	461.30	0.30	3161.56	398.76		3012.59	455.59	
5/25/2016	451.30	0.18	3160.43	399.06		3049.04	446.97	
6/28/2016	414.10	0.00	3161.03	398.89		3070.88	441.79	
7/27/2016	434.20	0.00	3160.80	398.95		3078.30	440.12	
8/23/2016	418.60	0.00	3160.65	398.99		3082.53	439.17	
9/27/2016	406.40	0.00	3160.63	399.00		3087.44	437.99	
10/26/2016	404.00	0.48	3160.50	399.05		3090.40	437.27	

Notes:

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TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-3			VB-4		
Top of AC Elevation -->			421.50			448.00		
Piezo. Tip Elevation -->			399.50			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	3160.67	399.01		3092.04	436.84	
12/20/2016	441.10	3.48	3159.80	399.24		3093.59	436.37	
1/26/2017	471.60	5.67	3159.30	399.38		2976.99	463.98	
2/24/2017	472.05	3.95	3160.02	399.19		2971.88	465.12	
2/25/2017	472.00		3159.68	399.27		2971.58	465.19	
2/26/2017	472.00		3160.09	399.16		2971.99	465.09	
2/27/2017	472.00		3160.10	399.16		2971.99	465.06	
2/28/2017	471.90		3160.84	398.96		2972.98	464.86	
3/1/2017	471.90		3160.24	399.12		2971.86	465.09	
3/2/2017	471.90		3159.45	399.34		2971.67	465.16	
3/29/2017	467.90	0.10	3160.28	399.11		2987.31	461.49	
4/27/2017	457.60	0.04	3160.50	399.04		3026.10	452.38	
5/23/2017	453.50	0.43	3160.48	399.04		3117.73	430.38	
6/21/2017	447.40	0.00	3161.03	398.89		3063.65	443.49	
7/26/2017	435.10	0.00	3159.94	399.18		3078.88	439.96	
8/25/2017	420.10	0.00	3160.80	398.95		3083.07	439.01	
9/27/2017	407.10	0.00	3161.46	398.78		3088.29	437.79	
10/26/2017	395.00	0.00	3161.31	398.83		3090.24	437.31	
11/28/2017	409.00	0.09	3161.01	398.92		3096.24	435.80	
12/20/2017	416.80	0.00	3160.51	399.06		3099.02	435.07	
1/24/2018	434.50	1.31	3160.37			3099.64		
2/21/2018	443.10	0.29	3160.56			3096.22		
3/29/2018	453.00	1.28	3160.64			3066.36		
4/26/2018	449.10	0.05	3160.65			3066.28		
5/31/2018	453.10	0.20	3161.37			3055.75		
6/28/2018	448.20	0.00	3136.14			3066.57		
7/25/2018	440.40	0.00	3160.88			3076.99		
8/22/2018	427.10	0.00	3160.67			3082.41		
9/27/2018	439.60	0.00	3161.01			3087.28		
10/18/2018	405.30	0.90	3161.04			3092.63		
11/28/2018	408.60	1.19	3160.58			3096.07		

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-3			VB-4		
Top of AC Elevation -->			421.50			448.00		
Piezo. Tip Elevation -->			399.50			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	3160.04			3097.94		
1/30/2019	463.80	4.71	3161.13			3016.30		
2/27/2019	466.20	6.55	3160.52			2990.35		
3/27/2019	463.30	1.34	3161.04			3013.16		
4/29/2019	453.00	0.13	3161.38		VBW data logger is crashing. Repairs are in planning.	3046.09		VBW data logger is crashing. Repairs are in planning.
5/30/2019	451.80	0.64	3161.42			3034.07		
6/26/2019	446.20	0.01	3161.13			3016.30		
7/5/2019	39.40	0.00						
7/30/2019	434.80	0.00						
8/27/2019	424.40	0.00						
9/26/2019	405.60	0.00						
10/22/2019	400.50	0.00						
11/26/2019	412.80	3.13						
12/18/2019	447.40	4.44	3160.04			3097.94		
1/28/2020	465.40	0.20	3161.12			3016.29		
2/26/2020	459.60	0.14	3161.80			3024.40		
3/24/2020	470.70	3.49	3162.40			2978.40		
4/29/2020	467.60	3.65	3162.43			2987.75		
5/27/2020	459.10	0.02	3162.77		3021.61			
6/23/2020	447.00	0.00	3162.53		3061.70			
7/30/2020	434.00	0.00	3162.58		3079.59			
8/26/2020	417.70	0.00	3163.26		3081.89			
9/29/2020	403.60	0.00	3162.43		3086.43			
10/28/2020	404.50	0.00	3162.21		3089.52			
11/24/2020	413.50	0.42	3162.43		3093.25			
12/22/2020	408.00	1.13	3162.34		3096.11			
1/27/2021	435.60	2.25	3162.44		3096.57			
2/25/2021	457.30	0.05	3162.81		3043.00			
3/23/2021	465.90	1.36	3163.02		3000.12			
4/27/2021	462.10	0.04	3162.85		3012.43			
5/26/2021	455.00	0.03	3162.31		3046.19			

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Vibrating Wire Piezo. -->			VB-3			VB-4		
Top of AC Elevation -->			421.50			448.00		
Piezo. Tip Elevation -->			399.50			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	3162.96			3076.31		
7/29/2021	423.60	0.07	3162.28			3079.16		
8/24/2021	408.00	0.00	3162.40			3083.40		
9/29/2021	398.00	0.04	3162.23			3087.10		
10/26/2021	417.00	0.87	3162.31			3087.71		
11/25/2021	427.90	0.00	-9999.00			-9999.00		VB wire data logger malfunction.
12/21/2021	427.90	4.77	-9999.00			-9999.00		VB wire data logger parts on order.

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Vibrating Wire Piezo. -->			VB-5			VB-6		
Top of AC Elevation -->			402.00			408.00		
Piezo. Tip Elevation -->			392.80			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
1/31/2007	405.80		3052.90					
2/27/2007	426.80		2975.00					
3/28/2007	438.80		2916.50					
4/26/2007	450.90		2864.50					
5/23/2007	461.40		2817.40					
6/27/2007	457.20		2866.60					
7/26/2007	445.50		2875.60					
8/28/2007	434.60		2919.20					
9/25/2007	416.80		2986.00					
10/24/2007	404.50		3036.40					
11/27/2007	422.20		2992.00					
1/3/2008	443.20		2894.90	438.34				
1/29/2008	452.20		2854.10	447.17		3005.00	420.64	
2/27/2008	460.80		2818.20	454.82		2976.70	427.06	
3/26/2008	468.00		2784.90	461.83				
4/29/2008	468.60		2780.60	462.73				
5/29/2008	464.70		2795.90	459.50		2944.40	434.31	
6/26/2008	455.70		2831.80	451.93		2960.10	430.80	
7/29/2008	447.30	0.00	2866.80	444.44		2980.50	426.21	
8/28/2008	438.80	0.00	2904.30	436.34		2999.10	421.99	
9/26/2008	430.70	0.00	2935.00	429.58		3014.60	418.45	
10/29/2008	412.50	0.00	3002.50	414.43		3044.50	411.56	
11/25/2008	404.70	2.60	3035.00	406.98		3060.70	407.80	
12/30/2008	440.90	3.42	2916.70	433.55		3047.30	410.91	
1/28/2009	463.70	0.17	2807.60	457.09		2990.00	424.05	
2/25/2009	470.10	3.35	2774.50	464.02		2946.10	433.93	
3/26/2009	469.40	0.19	2776.20	463.63		2936.10	436.16	
4/29/2009	466.90	0.07	2784.60	461.90		2936.30	436.12	
5/18/2009	466.70	0.00	2786.00	461.61		2937.00	435.96	
5/29/2009	465.00	0.00	2797.20	459.26		2941.10	435.05	
6/30/2009	460.20	0.00	2814.40	455.64		2949.90	433.09	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-5			VB-6		
Top of AC Elevation -->			402.00			408.00		
Piezo. Tip Elevation -->			392.80			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	2851.00	447.85		2966.50	429.36	
8/25/2009	440.10	0.00	2895.60	438.21		2988.20	424.46	
9/30/2009	432.20	0.00	2929.20	430.86		3008.60	419.82	
10/29/2009	431.40	0.53	2935.00	429.57		3018.70	417.50	
12/1/2009	427.40	0.00	2953.90	425.32		3029.40	415.04	
12/29/2009	448.10	2.06	2873.30	443.04		3012.70	418.88	
1/27/2010	465.60	4.62	2796.20	459.49		2966.40	429.39	
2/25/2010	470.20	2.51	2772.60	464.41		2936.00	436.16	
3/29/2010	465.70	0.99	2790.40	460.65		2938.20	435.67	
4/4/2010	465.00		2792.60	460.18		2939.80	435.34	
4/27/2010	468.40	1.23	2779.20	463.11		2936.10	436.13	
5/27/2010	463.30	0.05	2800.00	458.66		2940.00	435.27	
6/30/2010	454.70	0.00	2847.10	448.65		2963.10	430.10	
7/28/2010	445.60	0.00	2873.20	443.04		2977.10	426.96	
8/31/2010	437.10	0.00	2910.10	435.04		2998.30	422.16	
9/29/2010	422.70	0.00	2967.70	422.28		3023.70	416.36	
10/27/2010	426.40	2.38	2962.60	423.38		3035.00	413.75	
11/29/2010	439.80	0.97	2908.50	435.37		3025.20	416.01	
12/30/2010	456.60	8.62	2836.60	450.92		2991.90	423.61	
2/1/2011	468.90	0.92	2782.00	462.45		2942.50	434.71	
2/23/2011	469.00	0.99	2776.70	463.54		2936.80	435.98	
3/29/2011	470.30	2.93	2770.70	464.79		2931.60	437.13	
4/27/2011	464.80	0.19	2794.60	459.77		2938.10	435.68	
5/26/2011	457.30	0.48	2824.80	453.40		2953.30	432.30	
6/28/2011	443.50	0.05	2881.70	441.17		2977.90	426.77	
7/29/2011	425.10	0.00	2941.90	427.98		3008.30	419.87	
8/24/2011	418.00	0.00	3001.00	414.71		3037.90	413.08	
9/27/2011	400.90	0.12	3048.20	403.97		3060.70	407.81	
10/26/2011	402.20	1.25	3053.40	402.70		3069.60	405.72	
11/30/2011	425.10	1.38	2982.10	418.98		3064.70	406.86	
12/21/2011	435.70	0.32	2933.30	429.86		3056.20	408.83	

Notes:

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TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-5			VB-6		
Top of AC Elevation -->			402.00			408.00		
Piezo. Tip Elevation -->			392.80			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	2900.60	437.07		3030.10	414.87	
2/28/2012	448.40	0.42	2866.20	444.53		2999.00	421.98	
3/26/2012	452.70	1.06	2849.60	448.10		2988.80	424.30	
4/23/2012	463.40	1.32	2804.70	457.65		2959.30	430.95	
5/30/2012	457.30	0.02	2825.80	453.20		2955.20	431.87	
6/13/2012	452.90	0.02	2845.10	449.08		2963.40	430.03	
6/26/2012	450.20	0.00	2856.30	446.67		2969.40	428.68	
7/24/2012	439.80	0.00	2898.30	437.58		2988.60	424.36	
8/8/2012	437.60	0.12	2909.30	435.19		2996.40	422.59	
8/22/2012	433.40	0.00	2925.70	431.61		3004.60	420.73	
8/29/2012	431.30	0.00	2934.70	429.64		3009.00	419.72	
9/25/2012	420.80	0.00	2982.10	418.98		3021.40	416.88	
10/31/2012	412.30	0.26	3008.40	413.08		3046.60	411.08	
11/27/2012	420.80	0.58	2991.70	416.82		3051.30	410.00	
12/18/2012	448.00	1.44	2883.10	440.91		3030.40	414.81	
1/29/2013	468.60	1.18	2781.70	462.53		2949.20	433.22	
2/28/2013	469.20	0.30	2777.10	463.46		2933.30	436.76	
3/27/2013	468.30	0.50	2780.30	462.76		2931.00	437.26	
4/25/2013	462.70	0.00	2798.30	458.99		2938.70	435.55	
5/21/2013	454.20	0.00	2836.60	450.90		2954.90	431.94	
6/25/2013	439.30	0.00	2894.60	438.35		2986.00	424.93	
7/23/2013	431.50	0.00	2926.20	431.47		3004.70	420.70	
8/21/2013	418.00	0.00	2978.40	419.85		3029.70	414.98	
9/24/2013	404.00	0.00	3033.80	407.26		3055.10	409.11	
10/29/2013	400.60	0.00	3047.90	404.04		3066.20	406.53	
11/26/2013	407.90	0.44	3036.10	406.70		3071.80	405.21	
12/19/2013	425.80	0.54	2973.50	420.95		3063.50	407.15	
1/28/2014	439.70	0.00	2904.80	436.16		3039.50	412.70	
2/25/2014	449.70	0.83	2860.40	445.80		3009.40	419.62	
3/26/2014	465.10		2793.50	460.04		2960.10	430.78	
3/28/2014	465.70	1.15	2789.00	460.99		2956.20	431.65	

Notes:

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**TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Vibrating Wire Piezo. -->			VB-5			VB-6		
Top of AC Elevation -->			402.00			408.00		
Piezo. Tip Elevation -->			392.80			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	2788.40	461.10		2939.20	435.45	
5/28/2014	450.60	0.00	2850.30	447.97		2962.10	430.33	
6/25/2014	440.10	0.00	2893.50	438.62		2983.70	425.46	
7/29/2014	431.20	0.00	2929.30	430.79		3003.60	420.95	
8/26/2014	419.50	0.02	2974.50	420.81		3024.40	416.21	
9/23/2014	405.30	0.00	3028.00	408.78		3048.00	410.74	
10/29/2014	400.90	0.00	3049.10	403.76		3060.90	407.76	
11/25/2014	410.90	0.25	3027.90	408.60		3065.70	406.64	
12/30/2014	430.60	2.94	2960.20	423.97		3055.70	408.98	
1/27/2015	466.70	0.83	2789.20	460.99		2971.80	428.16	
2/25/2015	468.90	0.69	2775.60	463.83		2937.10	435.93	
3/26/2015	465.90	0.61	2787.40	461.35		2932.70	436.90	
4/28/2015	465.70	0.20	2788.70	461.05		2932.70	436.90	
5/28/2015	466.40	1.08	2786.70	461.51		2929.00	437.73	
6/30/2015	454.50	0.00	2836.10	451.07		2947.30	433.65	
7/28/2015	445.60	0.00	2873.70	442.97		2969.60	428.66	
8/28/2015	437.60	0.00	2905.10	436.13		2987.30	424.66	
9/24/2015	426.90	1.51	2950.00	426.23		3009.00	419.72	
10/27/2015	415.40	0.49	2995.10	416.23		3030.80	414.75	
11/19/2015	412.90	0.09	3012.80	412.06		3043.80	411.73	
12/22/2015	425.50	0.69	2973.77	420.86		3043.85	411.71	
1/27/2016	463.60	2.86	2810.16	456.54		2992.70	423.44	
2/25/2016	468.90	0.25	2778.86	463.10		2941.28	435.00	
3/30/2016	468.00	1.44	2778.46	463.18		2925.94	438.41	
4/28/2016	461.30	0.30	2809.03	456.75		2934.25	436.56	
5/25/2016	451.30	0.18	2850.06	448.01		2954.44	432.05	
6/28/2016	414.10	0.00	2884.16	440.65		2973.70	427.72	
7/27/2016	434.20	0.00	2922.10	432.36		2992.17	423.55	
8/23/2016	418.60	0.00	2980.42	419.38		3018.64	417.51	
9/27/2016	406.40	0.00	3033.58	407.30		3044.78	411.49	
10/26/2016	404.00	0.48	3048.70	403.81		3055.10	409.10	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-5			VB-6		
Top of AC Elevation -->			402.00			408.00		
Piezo. Tip Elevation -->			392.80			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	3023.53	409.59		3058.41	408.38	
12/20/2016	441.10	3.48	2918.66	433.15		3040.23	412.55	
1/26/2017	471.60	5.67	2771.84	464.60		2953.45	432.29	
2/24/2017	472.05	3.95	2767.24	465.54		2925.06	438.60	
2/25/2017	472.00		2767.01	465.58		2924.57	438.71	
2/26/2017	472.00		2767.46	465.49		2924.16	438.80	
2/27/2017	472.00		2767.31	465.52		2924.02	438.83	
2/28/2017	471.90		2768.30	465.31		2923.73	438.90	
3/1/2017	471.90		2767.52	465.47		2924.67	438.69	
3/2/2017	471.90		2767.23	465.53		2922.65	439.14	
3/29/2017	467.90	0.10	2784.31	461.95		2924.16	438.80	
4/27/2017	457.60	0.04	2826.30	453.07		2941.70	434.90	
5/23/2017	453.50	0.43	2846.14	448.84		2954.91	431.95	
6/21/2017	447.40	0.00	2872.23	443.23		2966.15	429.42	
7/26/2017	435.10	0.00	2922.05	432.37		2990.05	424.03	
8/25/2017	420.10	0.00	2981.67	419.09		3012.74	418.86	
9/27/2017	407.10	0.00	3027.11	408.78		3040.78	412.41	
10/26/2017	395.00	0.00	3063.05	400.49		3054.84	409.16	
11/28/2017	409.00	0.09	2828.52	452.72		3060.62	407.81	
12/20/2017	416.80	0.00	2998.56	415.27		3055.46	409.02	
1/24/2018	434.50	1.31	2943.98			3046.11		
2/21/2018	443.10	0.29	2901.14			3030.22		
3/29/2018	453.00	1.28	2855.13			2995.99		
4/26/2018	449.10	0.05	2828.01			2881.36		
5/31/2018	453.10	0.20	2852.89			2973.27		
6/28/2018	448.20	0.00	2872.28			2972.82		
7/25/2018	440.40	0.00	2904.83			2983.70		
8/22/2018	427.10	0.00	2950.76			3002.00		
9/27/2018	439.60	0.00	3023.87			3035.05		
10/18/2018	405.30	0.90	3046.04			3051.05		
11/28/2018	408.60	1.19	3039.88			3055.58		

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Vibrating Wire Piezo. -->			VB-5			VB-6			
Top of AC Elevation -->			402.00			408.00			
Piezo. Tip Elevation -->			392.80			392.00			
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment	
12/19/2018	436.00	1.99	2951.35			3042.36			
1/30/2019	463.80	4.71	2815.04			2982.42			
2/27/2019	466.20	6.55	2797.92			2945.39			
3/27/2019	463.30	1.34	2816.66			2940.82			
4/29/2019	453.00	0.13	2953.17		VBW data logger is crashing. Repairs are in planning.	2955.81		VBW data logger is crashing. Repairs are in planning.	
5/30/2019	451.80	0.64	2928.10			2952.61			
6/26/2019	446.20	0.01	2815.13			2982.42			
7/5/2019	39.40	0.00							
7/30/2019	434.80	0.00							
8/27/2019	424.40	0.00							
9/26/2019	405.60	0.00							
10/22/2019	400.50	0.00							
11/26/2019	412.80	3.13							
12/18/2019	447.40	4.44	2951.35				3042.46		
1/28/2020	465.40	0.20	2815.12				2982.40		
2/26/2020	459.60	0.14	2830.70				2951.70		
3/24/2020	470.70	3.49	2782.80				2934.80		
4/29/2020	467.60	3.65	2792.97				2923.33		
5/27/2020	459.10	0.02	2829.34			2937.04			
6/23/2020	447.00	0.00	2878.14			2959.04			
7/30/2020	434.00	0.00	2934.11			2987.26			
8/26/2020	417.70	0.00	2997.42			3016.35			
9/29/2020	403.60	0.00	3054.08			3042.87			
10/28/2020	404.50	0.00	3067.82			3051.49			
11/24/2020	413.50	0.42	3030.96			3055.34			
12/22/2020	408.00	1.13	3045.74			3060.14			
1/27/2021	435.60	2.25	2952.21			3050.64			
2/25/2021	457.30	0.05	2849.80			3009.37			
3/23/2021	465.90	1.36	2808.74			2968.95			
4/27/2021	462.10	0.04	2822.62			2948.82			
5/26/2021	455.00	0.03	2861.60			2957.07			

Notes:

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**TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Vibrating Wire Piezo. -->			VB-5			VB-6		
Top of AC Elevation -->			402.00			408.00		
Piezo. Tip Elevation -->			392.80			392.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	2926.26			2985.40		
7/29/2021	423.60	0.07	2974.84			3005.63		
8/24/2021	408.00	0.00	3036.59			3034.54		
9/29/2021	398.00	0.04	3076.13			3051.09		
10/26/2021	417.00	0.87	3072.10			3052.24		
11/25/2021	427.90	0.00	-9999.00		VB wire data logger malfunction.	-9999.00		VB wire data logger malfunction.
12/21/2021	427.90	4.77	-9999.00		VB wire data logger parts on order.	-9999.00		VB wire data logger parts on order.

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-7			VB-8		
Top of AC Elevation -->			422.00			452.50		
Piezo. Tip Elevation -->			402.00			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
1/31/2007	405.80		3083.20			3060.10		
2/27/2007	426.80		3083.20			3062.20		
3/28/2007	438.80					3062.80		
4/26/2007	450.90		3083.30			3062.40		
5/23/2007	461.40		3083.40			3057.40		
6/27/2007	457.20		3083.80			3048.30		
7/26/2007	445.50		3083.60			3048.50		
8/28/2007	434.60					3049.70		
9/25/2007	416.80		3083.80			3050.30		
10/24/2007	404.50					3053.40		
11/27/2007	422.20		3083.90			3056.80		
1/3/2008	443.20		3083.60	400.84		3061.00	440.94	
1/29/2008	452.20		3083.40	400.88		3063.40	440.32	
2/27/2008	460.80		3083.60	400.84		3060.50	440.96	
3/26/2008	468.00		3083.60	400.84		3043.50	444.94	
4/29/2008	468.60		3083.70	400.81		3026.80	448.86	
5/29/2008	464.70		3083.90	400.76		3024.30	449.44	
6/26/2008	455.70		3084.00	400.74		3031.20	447.84	
7/29/2008	447.30	0.00	3084.10	400.72		3038.50	446.16	
8/28/2008	438.80	0.00	3084.20	400.69		3042.10	445.38	
9/26/2008	430.70	0.00	3084.20	400.69		3044.90	444.78	
10/29/2008	412.50	0.00	3084.00	400.74		3048.20	444.04	
11/25/2008	404.70	2.60	3083.90	400.75		3051.30	443.19	
12/30/2008	440.90	3.42	3083.40	400.88		3056.10	442.13	
1/28/2009	463.70	0.17	3083.20	400.93		3055.40	442.22	
2/25/2009	470.10	3.35	3083.30	400.91		3035.40	446.91	
3/26/2009	469.40	0.19	3083.50	400.86		3024.60	449.41	
4/29/2009	466.90	0.07	3083.50	400.86		3020.60	450.33	
5/18/2009	466.70	0.00	3082.00	401.22		3021.00	450.23	
5/29/2009	465.00	0.00	3083.70	400.81		3022.20	449.95	
6/30/2009	460.20	0.00	3083.90	400.74		3027.00	448.83	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-7			VB-8		
Top of AC Elevation -->			422.00			452.50		
Piezo. Tip Elevation -->			402.00			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	3083.90	400.74		3034.20	447.14	
8/25/2009	440.10	0.00	3084.00	400.73		3038.40	446.19	
9/30/2009	432.20	0.00	3084.10	400.72		3042.30	445.32	
10/29/2009	431.40	0.53	3083.90	400.75		3045.90	444.44	
12/1/2009	427.40	0.00	3083.70	400.80		3050.20	443.54	
12/29/2009	448.10	2.06	3083.40	400.87		3054.20	442.50	
1/27/2010	465.60	4.62	3083.40	400.87		3050.60	443.32	
2/25/2010	470.20	2.51	3083.30	400.89		3029.40	448.31	
3/29/2010	465.70	0.99	3083.40	400.86		3023.50	449.63	
4/4/2010	465.00		3083.40	400.87		3023.80	449.58	
4/27/2010	468.40	1.23	3083.30	400.88		3021.30	450.13	
5/27/2010	463.30	0.05	3083.00	400.95		3021.00	450.20	
6/30/2010	454.70	0.00	3083.60	400.81		3031.70	447.71	
7/28/2010	445.60	0.00	3083.60	400.82		3036.30	446.64	
8/31/2010	437.10	0.00	3083.70	400.80		3040.50	445.70	
9/29/2010	422.70	0.00	3083.90	400.76		3043.30	445.08	
10/27/2010	426.40	2.38	3083.70	400.80		3045.80	444.46	
11/29/2010	439.80	0.97	3083.10	400.95		3049.00	443.70	
12/30/2010	456.60	8.62	3083.10	400.94		3050.30	443.36	
2/1/2011	468.90	0.92	3083.00	400.96		3032.00	447.64	
2/23/2011	469.00	0.99	3082.80	401.00		3023.60	449.60	
3/29/2011	470.30	2.93	3082.90	400.97		3014.70	451.66	
4/27/2011	464.80	0.19	3088.20	399.69		3014.30	451.74	
5/26/2011	457.30	0.48	3083.10	400.92		3020.80	450.23	
6/28/2011	443.50	0.05	3083.40	400.85		3027.90	448.58	
7/29/2011	425.10	0.00	3083.70	400.79		3029.60	448.22	
8/24/2011	418.00	0.00	3083.60	400.82		3029.10	448.37	
9/27/2011	400.90	0.12	3083.40	400.89		3027.20	448.89	
10/26/2011	402.20	1.25	3083.10	400.95		3028.20	448.61	
11/30/2011	425.10	1.38	3082.70	401.04		3031.00	447.94	
12/21/2011	435.70	0.32	3082.60	401.06		3033.70	447.28	

Notes:

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TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-7			VB-8		
Top of AC Elevation -->			422.00			452.50		
Piezo. Tip Elevation -->			402.00			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	3083.20	400.91		3036.90	446.51	
2/28/2012	448.40	0.42	3083.30	400.81		3038.60	446.08	
3/26/2012	452.70	1.06	3083.70	400.79		3038.20	446.21	
4/23/2012	463.40	1.32	3083.80	400.75		3030.70	447.91	
5/30/2012	457.30	0.02	3083.90	400.73		3020.20	450.39	
6/13/2012	452.90	0.02	3084.10	400.69		3021.50	450.09	
6/26/2012	450.20	0.00	3084.20	400.66		3022.40	449.87	
7/24/2012	439.80	0.00	3084.10	400.70		3024.10	449.57	
8/8/2012	437.60	0.12	3084.20	400.67		3025.00	449.33	
8/22/2012	433.40	0.00	3084.30	400.66		3025.40	449.27	
8/29/2012	431.30	0.00	3084.40	400.64		3025.50	449.25	
9/25/2012	420.80	0.00	3084.00	400.73		3027.00	448.92	
10/31/2012	412.30	0.26	3084.10	400.72		3028.30	448.61	
11/27/2012	420.80	0.58	3083.60	400.86		3031.10	448.08	
12/18/2012	448.00	1.44	3083.40	400.87		3033.90	447.25	
1/29/2013	468.60	1.18	3083.00	400.96		3018.10	450.93	
2/28/2013	469.20	0.30	3093.10	398.52		3004.30	454.12	
3/27/2013	468.30	0.50	3083.40	400.85		2998.80	455.34	
4/25/2013	462.70	0.00	3083.60	400.80		2699.30	521.34	Omitted
5/21/2013	454.20	0.00	3083.60	400.81		3007.80	453.30	
6/25/2013	439.30	0.00	3084.10	400.69		3015.90	451.40	
7/23/2013	431.50	0.00	3084.10	400.70		3019.20	450.69	
8/21/2013	418.00	0.00	3084.10	400.69		3021.60	450.15	
9/24/2013	404.00	0.00	3084.00	400.73		3023.50	449.73	
10/29/2013	400.60	0.00	3083.80	400.80		3026.40	449.09	
11/26/2013	407.90	0.44	3083.30	400.90		3029.70	448.27	
12/19/2013	425.80	0.54	3083.30	400.92		3032.80	447.62	
1/28/2014	439.70	0.00	3083.10	400.94		3036.90	446.52	
2/25/2014	449.70	0.83	3083.10	400.94		3038.00	446.25	
3/26/2014	465.10		3082.90	400.98		3027.30	448.75	
3/28/2014	465.70	1.15	3083.00	400.96		3024.90	449.31	

Notes:

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TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-7			VB-8		
Top of AC Elevation -->			422.00			452.50		
Piezo. Tip Elevation -->			402.00			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	3083.20	400.91		3010.20	452.74	
5/28/2014	450.60	0.00	3083.20	400.91		3016.20	451.35	
6/25/2014	440.10	0.00	3083.40	400.86		3019.70	450.54	
7/29/2014	431.20	0.00	3083.40	400.87		3022.20	450.01	
8/26/2014	419.50	0.02	3083.40	400.89		3023.40	449.78	
9/23/2014	405.30	0.00	3083.40	400.87		3024.50	449.65	
10/29/2014	400.90	0.00	3083.10	400.97		3026.50	449.08	
11/25/2014	410.90	0.25	3082.70	401.05		3029.40	448.37	
12/30/2014	430.60	2.94	3082.70	401.08		3032.20	447.85	
1/27/2015	466.70	0.83	3082.20	401.17		3025.20	449.32	
2/25/2015	468.90	0.69	3082.40	401.11		3008.20	453.28	
3/26/2015	465.90	0.61	3082.50	401.09		3001.40	454.84	
4/28/2015	465.70	0.20	3082.70	401.04		2999.60	455.28	
5/28/2015	466.40	1.08	3082.70	401.05		2996.90	455.92	
6/30/2015	454.50	0.00	3082.70	401.04		3005.20	453.99	
7/28/2015	445.60	0.00	3082.00	401.21		3012.30	452.32	
8/28/2015	437.60	0.00	3082.70	401.05		3015.80	451.53	
9/24/2015	426.90	1.51	3082.00	401.23		3018.00	451.16	
10/27/2015	415.40	0.49	3082.70	401.07		3021.20	450.36	
11/19/2015	412.90	0.09	3082.70	401.06		3023.70	449.72	
12/22/2015	425.50	0.69	3082.21	401.17		3029.19	448.53	
1/27/2016	463.60	2.86	3081.63	401.31		3030.50	448.14	
2/25/2016	468.90	0.25	3081.70	401.29		3012.31	452.36	
3/30/2016	468.00	1.44	3081.96	401.22		2999.64	455.28	
4/28/2016	461.30	0.30	3082.13	401.18		3001.02	454.94	
5/25/2016	451.30	0.18	3082.16	401.17		3009.91	452.87	
6/28/2016	414.10	0.00	3081.49	401.33		3016.37	451.38	
7/27/2016	434.20	0.00	3082.40	401.11		3018.40	450.97	
8/23/2016	418.60	0.00	3082.90	400.99		3019.75	450.72	
9/27/2016	406.40	0.00	3082.08	401.19		3022.43	450.14	
10/26/2016	404.00	0.48	3081.90	401.24		3025.10	449.52	

Notes:

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TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Vibrating Wire Piezo. -->			VB-7			VB-8		
Top of AC Elevation -->			422.00			452.50		
Piezo. Tip Elevation -->			402.00			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	3081.70	401.29		3028.17	448.80	
12/20/2016	441.10	3.48	3081.55	401.33		3031.56	447.97	
1/26/2017	471.60	5.67	3081.10	401.44		3014.56	451.88	
2/24/2017	472.05	3.95	3081.04	401.45		2999.46	455.35	
2/25/2017	472.00		3081.08	401.44		2998.95	455.47	
2/26/2017	472.00		3081.09	401.44		2992.11	457.05	
2/27/2017	472.00		3081.09	401.44		2992.67	456.92	
2/28/2017	471.90		3081.21	401.41		2998.07	455.67	
3/1/2017	471.90		3081.14	401.42		2996.94	455.94	
3/2/2017	471.90		3080.93	401.47		2997.18	455.87	
3/29/2017	467.90	0.10	3080.93	401.47		2995.28	456.28	
4/27/2017	457.60	0.04	3081.00	401.45		3003.50	454.35	
5/23/2017	453.50	0.43	3081.02	401.44		3010.76	452.65	
6/21/2017	447.40	0.00	3081.04	401.44		3015.40	451.59	
7/26/2017	435.10	0.00	3080.91	401.47		3018.38	450.96	
8/25/2017	420.10	0.00	3080.63	401.54		3019.85	450.68	
9/27/2017	407.10	0.00	3081.57	401.31		3019.85	450.73	
10/26/2017	395.00	0.00	3080.57	401.56		3025.12	449.51	
11/28/2017	409.00	0.09	3080.87	401.49		3028.84	448.63	
12/20/2017	416.80	0.00	3079.92	401.72		3031.95	447.87	
1/24/2018	434.50	1.31	3079.20			3035.62		
2/21/2018	443.10	0.29	3079.49			3037.59		
3/29/2018	453.00	1.28	3079.41			3038.89		
4/26/2018	449.10	0.05	3079.56			3039.02		
5/31/2018	453.10	0.20	3079.88			3036.50		
6/28/2018	448.20	0.00	3066.95			3036.75		
7/25/2018	440.40	0.00	2080.05			3033.11		
8/22/2018	427.10	0.00	3080.07			3031.48		
9/27/2018	439.60	0.00	3080.05			3031.53		
10/18/2018	405.30	0.90	3162.28			3033.61		
11/28/2018	408.60	1.19	3162.26			3036.07		

Notes:

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**TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Vibrating Wire Piezo. -->			VB-7			VB-8		
Top of AC Elevation -->			422.00			452.50		
Piezo. Tip Elevation -->			402.00			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	3162.26			3037.87		
1/30/2019	463.80	4.71	3162.28			3037.78		
2/27/2019	466.20	6.55	3162.28			3021.12		
3/27/2019	463.30	1.34	3162.28			3114.76		
4/29/2019	453.00	0.13	-999999.00		VBW data logger is crashing. Repairs are in planning.	3019.45		VBW data logger is crashing. Repairs are in planning.
5/30/2019	451.80	0.64	-999999.00			3134.62		
6/26/2019	446.20	0.01	-999999.00			3037.78		
7/5/2019	39.40	0.00						
7/30/2019	434.80	0.00						
8/27/2019	424.40	0.00						
9/26/2019	405.60	0.00						
10/22/2019	400.50	0.00						
11/26/2019	412.80	3.13						
12/18/2019	447.40	4.44	-999999.00			3037.88		
1/28/2020	465.40	0.20	-999999.00			3037.76		
2/26/2020	459.60	0.14	-999999.00			3021.00		
3/24/2020	470.70	3.49	-999999.00			3009.90		
4/29/2020	467.60	3.65	0.00			2998.05		
5/27/2020	459.10	0.02	0.00		3004.15			
6/23/2020	447.00	0.00	0.00		3012.75			
7/30/2020	434.00	0.00	0.00		3018.14			
8/26/2020	417.70	0.00	0.00		3020.66			
9/29/2020	403.60	0.00	0.00		3023.01			
10/28/2020	404.50	0.00	0.00		3025.18			
11/24/2020	413.50	0.42	0.00		3028.78			
12/22/2020	408.00	1.13	0.00		3032.10			
1/27/2021	435.60	2.25	-999999.00		3036.57			
2/25/2021	457.30	0.05	-999999.00		3037.04			
3/23/2021	465.90	1.36	-999999.00		3027.79			
4/27/2021	462.10	0.04	-999999.00		3017.07			
5/26/2021	455.00	0.03	3082.56		3019.55			

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 5
SAN JOAQUIN RESERVOIR DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Vibrating Wire Piezo. -->			VB-7			VB-8		
Top of AC Elevation -->			422.00			452.50		
Piezo. Tip Elevation -->			402.00			441.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (Hz)	Elevation (ft)	Comment	Reading (Hz)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	-999999.00			3023.19		
7/29/2021	423.60	0.07	3082.78			3024.28		
8/24/2021	408.00	0.00	-999999.00			3025.29		
9/29/2021	398.00	0.04	3082.63			3027.93		
10/26/2021	417.00	0.87	3740.84			3027.63		
11/25/2021	427.90	0.00	3740.84		VB wire data logger malfunction.	-9999.00		VB wire data logger malfunction.
12/21/2021	427.90	4.77	3804.40		VB wire data logger parts on order.	3552.86		VB wire data logger parts on order.

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-1			C-2		
Piezo. Tip Elevation -->			357.10			339.80		
Zero Gage Reading -->			52.00			35.30		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		48.00	353.10		34.00	338.50	
2/27/2007	426.80		48.00	353.10		32.00	336.50	
3/28/2007	438.80		48.00	353.10		34.00	338.50	
4/26/2007	450.90		48.00	353.10		34.00	338.50	
5/23/2007	461.40		50.00	355.10		36.00	340.50	
6/27/2007	457.20		50.00	355.10		35.00	339.50	
7/26/2007	445.50		52.00	357.10		36.00	340.50	
8/28/2007	434.60		52.00	357.10		36.00	340.50	
9/25/2007	416.80		50.00	355.10		35.00	339.50	
10/24/2007	404.50		50.00	355.10		36.00	340.50	
11/27/2007	422.20		48.00	353.10		35.00	339.50	
1/3/2008	443.20		50.00	355.10		37.00	341.50	
1/29/2008	452.20		51.00	356.10		36.00	340.50	
2/27/2008	460.80		52.00	357.10		38.00	342.50	
3/26/2008	468.00		52.00	357.10		38.00	342.50	
4/29/2008	468.60		52.00	357.10		38.00	342.50	
5/29/2008	464.70		52.00	357.10		36.00	340.50	
6/26/2008	455.70		52.00	357.10		37.00	341.50	
7/29/2008	447.30	0.00	53.00	358.10		38.00	342.50	
8/28/2008	438.80	0.00	54.00	359.10		38.00	342.50	
9/26/2008	430.70	0.00	53.00	358.10		36.00	340.50	
10/29/2008	412.50	0.00	52.00	357.10		38.00	342.50	
11/25/2008	404.70	2.60	50.50	355.60		36.00	340.50	
12/30/2008	440.90	3.42	51.00	356.10		38.00	342.50	
1/28/2009	463.70	0.17	52.00	357.10		38.00	342.50	
2/25/2009	470.10	3.35	52.00	357.10		37.00	341.50	
3/26/2009	469.40	0.19	54.00	359.10		40.00	344.50	
4/29/2009	466.90	0.07	54.00	359.10		40.00	344.50	
5/18/2009	466.70	0.00	54.00	359.10		40.00	344.50	
5/29/2009	465.00	0.00	52.00	357.10		36.00	340.50	
6/30/2009	460.20	0.00	54.00	359.10		40.00	344.50	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-1			C-2		
Piezo. Tip Elevation -->			357.10			339.80		
Zero Gage Reading -->			52.00			35.30		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	55.00	360.10		40.00	344.50	
8/25/2009	440.10	0.00	54.00	359.10		40.00	344.50	
9/30/2009	432.20	0.00	54.00	359.10		38.00	342.50	
10/29/2009	431.40	0.53	52.00	357.10		40.00	344.50	
12/1/2009	427.40	0.00	53.00	358.10		39.00	343.50	
12/29/2009	448.10	2.06	54.00	359.10		39.00	343.50	
1/27/2010	465.60	4.62	52.00	357.10		39.00	343.50	
2/25/2010	470.20	2.51	56.00	361.10		40.00	344.50	
3/29/2010	465.70	0.99	54.00	359.10		40.00	344.50	
4/4/2010	465.00		55.00	360.10		40.00	344.50	
4/27/2010	468.40	1.23	55.00	360.10		40.00	344.50	
5/27/2010	463.30	0.05	56.00	361.10		40.00	344.50	
6/30/2010	454.70	0.00	56.00	361.10		40.00	344.50	
7/28/2010	445.60	0.00	56.00	361.10		40.00	344.50	
8/31/2010	437.10	0.00	56.00	361.10		41.00	345.50	
9/29/2010	422.70	0.00	55.00	360.10		40.00	344.50	
10/27/2010	426.40	2.38	56.00	361.10		40.00	344.50	
11/29/2010	439.80	0.97	55.00	360.10		41.00	345.50	
12/30/2010	456.60	8.62	56.00	361.10		40.00	344.50	
2/1/2011	468.90	0.92	56.00	361.10		41.00	345.50	
2/23/2011	469.00	0.99	56.00	361.10		41.00	345.50	
3/29/2011	470.30	2.93	55.00	360.10		40.00	344.50	
4/27/2011	464.80	0.19	56.00	361.10		41.00	345.50	
5/26/2011	457.30	0.48	54.00	359.10		42.00	346.50	
6/28/2011	443.50	0.05	54.00	359.10		41.00	345.50	
7/29/2011	425.10	0.00	54.00	359.10		40.00	344.50	
8/24/2011	418.00	0.00	52.00	357.10		41.00	345.50	
9/27/2011	400.90	0.12	51.00	356.10		40.00	344.50	
10/26/2011	402.20	1.25	50.00	355.10		38.00	342.50	
11/30/2011	425.10	1.38	51.00	356.10		40.00	344.50	
12/21/2011	435.70	0.32	51.00	356.10		40.00	344.50	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-1			C-2		
Piezo. Tip Elevation -->			357.10			339.80		
Zero Gage Reading -->			52.00			35.30		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	50.00	355.10		39.00	343.50	
2/28/2012	448.40	0.42	44.00	349.10		39.00	343.50	
3/26/2012	452.70	1.06	49.00	354.10		40.00	344.50	
4/23/2012	463.40	1.32	48.00	353.10		40.00	344.50	
5/30/2012	457.30	0.02	49.00	354.10		40.00	344.50	
6/13/2012	452.90	0.02	48.00	353.10		40.00	344.50	
6/26/2012	450.20	0.00	50.00	355.10		40.00	344.50	
7/24/2012	439.80	0.00	48.00	353.10		40.00	344.50	
8/8/2012	437.60	0.12	48.00	353.10		40.00	344.50	
8/22/2012	433.40	0.00	48.00	353.10		40.00	344.50	
8/29/2012	431.30	0.00	49.00	354.10		40.00	344.50	
9/25/2012	420.80	0.00	49.00	354.10		40.00	344.50	
10/31/2012	412.30	0.26	47.00	352.10		40.00	344.50	
11/27/2012	420.80	0.58	48.00	353.10		40.00	344.50	
12/18/2012	448.00	1.44	48.00	353.10		40.00	344.50	
1/29/2013	468.60	1.18	49.00	354.10		40.00	344.50	
2/28/2013	469.20	0.30	50.00	355.10		40.00	344.50	
3/27/2013	468.30	0.50	50.00	355.10		41.00	345.50	
4/25/2013	462.70	0.00	49.00	354.10		38.00	342.50	
5/21/2013	454.20	0.00	49.00	354.10		40.00	344.50	
6/25/2013	439.30	0.00	49.00	354.10		40.00	344.50	
7/23/2013	431.50	0.00	49.00	354.10		40.00	344.50	
8/21/2013	418.00	0.00	49.00	354.10		40.00	344.50	
9/24/2013	404.00	0.00	48.00	353.10		41.00	345.50	
10/29/2013	400.60	0.00	45.00	350.10		40.00	344.50	
11/26/2013	407.90	0.44	44.00	349.10		39.00	343.50	
12/19/2013	425.80	0.54	45.00	350.10		40.00	344.50	
1/28/2014	439.70	0.00	45.00	350.10		39.00	343.50	
2/25/2014	449.70	0.83	45.00	350.10		40.00	344.50	
3/26/2014	465.10		46.00	351.10		40.00	344.50	
3/28/2014	465.70	1.15	45.00	350.10		40.00	344.50	

Notes:

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TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-1			C-2		
Piezo. Tip Elevation -->			357.10			339.80		
Zero Gage Reading -->			52.00			35.30		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	46.00	351.10		40.00	344.50	
5/28/2014	450.60	0.00	44.00	349.10		40.00	344.50	
6/25/2014	440.10	0.00	45.00	350.10		41.00	345.50	
7/29/2014	431.20	0.00	44.00	349.10		40.00	344.50	
8/26/2014	419.50	0.02	44.00	349.10		40.00	344.50	
9/23/2014	405.30	0.00	42.00	347.10		37.00	341.50	
10/29/2014	400.90	0.00	42.00	347.10		40.00	344.50	
11/25/2014	410.90	0.25	41.00	346.10		39.00	343.50	
12/30/2014	430.60	2.94	41.00	346.10		38.00	342.50	
1/27/2015	466.70	0.83	43.00	348.10		40.00	344.50	
2/25/2015	468.90	0.69	43.00	348.10		40.00	344.50	
3/26/2015	465.90	0.61	44.00	349.10		42.00	346.50	
4/28/2015	465.70	0.20	43.00	348.10		41.00	345.50	
5/28/2015	466.40	1.08	42.00	347.10		41.00	345.50	
6/30/2015	454.50	0.00	43.00	348.10		42.00	346.50	
7/28/2015	445.60	0.00	42.00	347.10		41.00	345.50	
8/28/2015	437.60	0.00	43.00	348.10		42.00	346.50	
9/24/2015	426.90	1.51	42.00	347.10		41.00	345.50	
10/27/2015	415.40	0.49	42.00	347.10		41.00	345.50	
11/19/2015	412.90	0.09	39.00	344.10		40.00	344.50	
12/22/2015	425.50	0.69	37.00	342.10		41.00	345.50	
1/27/2016	463.60	2.86	39.00	344.10		41.00	345.50	
2/25/2016	468.90	0.25	39.00	344.10		42.00	346.50	
3/30/2016	468.00	1.44	38.00	343.10		43.00	347.50	
4/28/2016	461.30	0.30	39.00	344.10		42.00	346.50	
5/25/2016	451.30	0.18	38.00	343.10		42.00	346.50	
6/28/2016	414.10	0.00	38.00	343.10		42.00	346.50	
7/27/2016	434.20	0.00	38.00	343.10		42.00	346.50	
8/23/2016	418.60	0.00	36.00	341.10		42.00	346.50	
9/27/2016	406.40	0.00	36.00	341.10		42.00	346.50	
10/26/2016	404.00	0.48	34.00	339.10		41.00	345.50	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-1			C-2		
Piezo. Tip Elevation -->			357.10			339.80		
Zero Gage Reading -->			52.00			35.30		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	32.00	337.10		41.00	345.50	
12/20/2016	441.10	3.48	35.00	340.10		40.00	344.50	
1/26/2017	471.60	5.67	38.00	343.10		41.00	345.50	
2/24/2017	472.05	3.95	37.00	342.10		42.00	346.50	
2/25/2017	472.00							
2/26/2017	472.00							
2/27/2017	472.00		37.00	342.10		42.00	346.50	
2/28/2017	471.90		39.00	344.10		43.00	347.50	
3/1/2017	471.90		37.00	342.10		42.00	346.50	
3/2/2017	471.90		37.00	342.10		43.00	347.50	
3/29/2017	467.90	0.10	38.00	343.10		44.00	348.50	
4/27/2017	457.60	0.04	37.00	342.10		43.00	347.50	
5/23/2017	453.50	0.43	36.00	341.10		42.00	346.50	
6/21/2017	447.40	0.00	38.00	343.10		44.00	348.50	
7/26/2017	435.10	0.00	36.00	341.10		43.00	347.50	
8/25/2017	420.10	0.00	35.00	340.10		42.00	346.50	
9/27/2017	407.10	0.00	34.00	339.10		42.00	346.50	
10/26/2017	395.00	0.00	33.00	338.10		41.00	345.50	
11/28/2017	409.00	0.09	32.00	337.10		41.00	345.50	
12/20/2017	416.80	0.00	32.00	337.10		40.00	344.50	
1/24/2018	434.50	1.31	36.00	341.10		42.00	346.50	
2/21/2018	443.10	0.29	22.00	327.10		42.00	346.50	
3/29/2018	453.00	1.28	34.00	339.10		42.00	346.50	
4/26/2018	449.10	0.05	31.00	336.10		42.00	346.50	
5/31/2018	453.10	0.20	32.00	337.10		42.00	346.50	
6/28/2018	448.20	0.00	32.00	337.10		42.00	346.50	
7/25/2018	440.40	0.00	32.00	337.10		42.00	346.50	
8/22/2018	427.10	0.00	32.00	337.10		41.00	345.50	
9/27/2018	439.60	0.00	32.00	337.10		42.00	346.50	
10/18/2018	405.30	0.90	30.00	335.10		42.00	346.50	
11/28/2018	408.60	1.19	30.00	335.10		42.00	346.50	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-1			C-2		
Piezo. Tip Elevation -->			357.10			339.80		
Zero Gage Reading -->			52.00			35.30		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	33.00	338.10		44.00	348.50	
1/30/2019	463.80	4.71	34.00	339.10		44.00	348.50	
2/27/2019	466.20	6.55	31.00	336.10		41.00	345.50	
3/27/2019	463.30	1.34	32.00	337.10		42.00	346.50	
4/29/2019	453.00	0.13	34.00	339.10		43.00	347.50	
5/30/2019	451.80	0.64	33.00	338.10		43.00	347.50	
6/26/2019	446.20	0.01	34.00	339.10		43.00	347.50	
7/5/2019	39.40	0.00	32.00	337.10		42.00	346.50	
7/30/2019	434.80	0.00	23.00	328.10		44.00	348.50	
8/27/2019	424.40	0.00	32.00	337.10		43.00	347.50	
9/26/2019	405.60	0.00	30.00	335.10		42.00	346.50	
10/22/2019	400.50	0.00	30.00	335.10		40.00	344.50	
11/26/2019	412.80	3.13	31.00	336.10		42.00	346.50	
12/18/2019	447.40	4.44	31.00	336.10		42.00	346.50	
1/28/2020	465.40	0.20	34.00	339.10		42.00	346.50	
2/26/2020	459.60	0.14	34.00	339.10		44.00	348.50	
3/24/2020	470.70	3.49	34.00	339.10		44.00	348.50	
4/29/2020	467.60	3.65	33.00	338.10		44.00	348.50	
5/27/2020	459.10	0.02	34.00	339.10		44.00	348.50	
6/23/2020	447.00	0.00	34.00	339.10		44.00	348.50	
7/30/2020	434.00	0.00	23.00	328.10		44.00	348.50	
8/26/2020	417.70	0.00	33.00	338.10		44.00	348.50	
9/29/2020	403.60	0.00	30.00	335.10		42.00	346.50	
10/28/2020	404.50	0.00	30.00	335.10		42.00	346.50	
11/24/2020	413.50	0.42	31.00	336.10		42.00	346.50	
12/22/2020	408.00	1.13	30.00	335.10		42.00	346.50	
1/27/2021	435.60	2.25	30.00	335.10		42.00	346.50	
2/25/2021	457.30	0.05	32.00	337.10		42.00	346.50	
3/23/2021	465.90	1.36	33.00	338.10		44.00	348.50	
4/27/2021	462.10	0.04	36.00	341.10		43.00	347.50	
5/26/2021	455.00	0.03	32.00	337.10		44.00	348.50	

Notes:

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-1			C-2		
Piezo. Tip Elevation -->			357.10			339.80		
Zero Gage Reading -->			52.00			35.30		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	32.00	337.10		42.00	346.50	
7/29/2021	423.60	0.07	31.00	336.10		43.00	347.50	
8/24/2021	408.00	0.00	30.00	335.10		42.00	346.50	
9/29/2021	398.00	0.04	30.00	335.10		42.00	346.50	
10/26/2021	417.00	0.87	29.00	334.10		42.00	346.50	
11/25/2021	427.90	0.00	30.00	335.10		42.00	346.50	
12/21/2021	427.90	4.77	32.00	337.10		42.00	346.50	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-3			C-4		
Piezo. Tip Elevation -->			363.30			392.80		
Zero Gage Reading -->			58.80			27.70		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		57.00	361.50		34.00	399.10	
2/27/2007	426.80		56.00	360.50		58.60	423.70	
3/28/2007	438.80		57.00	361.50		68.00	433.10	
4/26/2007	450.90		58.00	362.50		80.00	445.10	
5/23/2007	461.40		58.00	362.50		92.00	457.10	
6/27/2007	457.20		58.00	362.50		88.00	453.10	
7/26/2007	445.50		59.00	363.50		77.00	442.10	
8/28/2007	434.60		59.00	363.50		67.00	432.10	
9/25/2007	416.80		58.00	362.50		50.00	415.10	
10/24/2007	404.50		58.00	362.50		38.00	403.10	
11/27/2007	422.20		56.00	360.50		50.00	415.10	
1/3/2008	443.20		57.00	361.50		73.00	438.10	
1/29/2008	452.20		58.00	362.50		82.00	447.10	
2/27/2008	460.80		59.00	363.50		91.00	456.10	
3/26/2008	468.00		59.00	363.50		98.00	463.10	
4/29/2008	468.60		58.20	362.70		99.90	465.00	
5/29/2008	464.70		58.00	362.50		95.00	460.10	
6/26/2008	455.70		59.00	363.50		87.00	452.10	
7/29/2008	447.30	0.00	59.50	364.00		79.00	444.10	
8/28/2008	438.80	0.00	60.00	364.50		72.00	437.10	
9/26/2008	430.70	0.00	59.00	363.50		64.00	429.10	
10/29/2008	412.50	0.00	58.00	362.50		44.00	409.10	
11/25/2008	404.70	2.60	58.00	362.50		37.00	402.10	
12/30/2008	440.90	3.42	58.00	362.50		70.00	435.10	
1/28/2009	463.70	0.17	58.00	362.50		93.00	458.10	
2/25/2009	470.10	3.35	58.00	362.50		100.00	465.10	
3/26/2009	469.40	0.19	60.00	364.50		100.00	465.10	
4/29/2009	466.90	0.07	60.00	364.50		98.00	463.10	
5/18/2009	466.70	0.00	59.00	363.50		97.00	462.10	
5/29/2009	465.00	0.00	59.00	363.50		95.00	460.10	
6/30/2009	460.20	0.00	59.00	363.50		90.00	455.10	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-3			C-4		
Piezo. Tip Elevation -->			363.30			392.80		
Zero Gage Reading -->			58.80			27.70		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	60.00	364.50		82.00	447.10	
8/25/2009	440.10	0.00	59.00	363.50		71.00	436.10	
9/30/2009	432.20	0.00	58.00	362.50		63.00	428.10	
10/29/2009	431.40	0.53	59.00	363.50		63.00	428.10	
12/1/2009	427.40	0.00	58.00	362.50		59.00	424.10	
12/29/2009	448.10	2.06	58.00	362.50		78.00	443.10	
1/27/2010	465.60	4.62	58.00	362.50		95.00	460.10	
2/25/2010	470.20	2.51	59.00	363.50		100.00	465.10	
3/29/2010	465.70	0.99	58.00	362.50		96.00	461.10	
4/4/2010	465.00		60.00	364.50		96.00	461.10	
4/27/2010	468.40	1.23	59.00	363.50		99.00	464.10	
5/27/2010	463.30	0.05	60.00	364.50		94.00	459.10	
6/30/2010	454.70	0.00	59.00	363.50		86.00	451.10	
7/28/2010	445.60	0.00	60.00	364.50		78.00	443.10	
8/31/2010	437.10	0.00	59.00	363.50		68.00	433.10	
9/29/2010	422.70	0.00	58.00	362.50		56.00	421.10	
10/27/2010	426.40	2.38	60.00	364.50		56.00	421.10	
11/29/2010	439.80	0.97	59.00	363.50		70.00	435.10	
12/30/2010	456.60	8.62	59.00	363.50		85.00	450.10	
2/1/2011	468.90	0.92	60.00	364.50		99.00	464.10	
2/23/2011	469.00	0.99	60.00	364.50		100.00	465.10	
3/29/2011	470.30	2.93	60.00	364.50		100.00	465.10	
4/27/2011	464.80	0.19	60.00	364.50		96.00	461.10	
5/26/2011	457.30	0.48	60.00	364.50		89.00	454.10	
6/28/2011	443.50	0.05	60.00	364.50		75.00	440.10	
7/29/2011	425.10	0.00	60.00	364.50		60.00	425.10	
8/24/2011	418.00	0.00	59.00	363.50		46.00	411.10	
9/27/2011	400.90	0.12	58.00	362.50		34.00	399.10	
10/26/2011	402.20	1.25	59.00	363.50		32.00	397.10	
11/30/2011	425.10	1.38	58.00	362.50		55.00	420.10	
12/21/2011	435.70	0.32	58.00	362.50		66.00	431.10	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-3			C-4		
Piezo. Tip Elevation -->			363.30			392.80		
Zero Gage Reading -->			58.80			27.70		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	58.00	362.50		51.00	416.10	
2/28/2012	448.40	0.42	59.00	363.50		80.00	445.10	
3/26/2012	452.70	1.06	58.00	362.50		82.00	447.10	
4/23/2012	463.40	1.32	58.00	362.50		92.00	457.10	
5/30/2012	457.30	0.02	59.00	363.50		88.00	453.10	
6/13/2012	452.90	0.02	58.00	362.50		84.00	449.10	
6/26/2012	450.20	0.00	60.00	364.50		80.00	445.10	
7/24/2012	439.80	0.00	59.00	363.50		70.00	435.10	
8/8/2012	437.60	0.12	58.00	362.50		70.00	435.10	
8/22/2012	433.40	0.00	59.00	363.50		66.00	431.10	
8/29/2012	431.30	0.00	60.00	364.50		63.00	428.10	
9/25/2012	420.80	0.00	58.00	362.50		55.00	420.10	
10/31/2012	412.30	0.26	58.00	362.50		44.00	409.10	
11/27/2012	420.80	0.58	59.00	363.50		50.00	415.10	
12/18/2012	448.00	1.44	60.00	364.50		76.00	441.10	
1/29/2013	468.60	1.18	59.00	363.50		98.00	463.10	
2/28/2013	469.20	0.30	60.00	364.50		100.00	465.10	
3/27/2013	468.30	0.50	60.00	364.50		99.00	464.10	
4/25/2013	462.70	0.00	58.00	362.50		94.00	459.10	
5/21/2013	454.20	0.00	59.00	363.50		86.00	451.10	
6/25/2013	439.30	0.00	59.00	363.50		70.00	435.10	
7/23/2013	431.50	0.00	60.00	364.50		62.00	427.10	
8/21/2013	418.00	0.00	59.00	363.50		50.00	415.10	
9/24/2013	404.00	0.00	59.00	363.50		37.00	402.10	
10/29/2013	400.60	0.00	57.00	361.50		33.00	398.10	
11/26/2013	407.90	0.44	56.00	360.50		36.00	401.10	
12/19/2013	425.80	0.54	56.00	360.50		55.00	420.10	
1/28/2014	439.70	0.00	57.00	361.50		70.00	435.10	
2/25/2014	449.70	0.83	57.00	361.50		80.00	445.10	
3/26/2014	465.10		58.00	362.50		95.00	460.10	
3/28/2014	465.70	1.15	58.00	362.50		96.00	461.10	

Notes:

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-3			C-4		
Piezo. Tip Elevation -->			363.30			392.80		
Zero Gage Reading -->			58.80			27.70		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	58.00	362.50		96.00	461.10	
5/28/2014	450.60	0.00	57.00	361.50		82.00	447.10	
6/25/2014	440.10	0.00	58.00	362.50		72.00	437.10	
7/29/2014	431.20	0.00	57.00	361.50		63.00	428.10	
8/26/2014	419.50	0.02	58.00	362.50		52.00	417.10	
9/23/2014	405.30	0.00	56.00	360.50		38.00	403.10	
10/29/2014	400.90	0.00	56.00	360.50		33.00	398.10	
11/25/2014	410.90	0.25	56.00	360.50		40.00	405.10	
12/30/2014	430.60	2.94	57.00	361.50		59.00	424.10	
1/27/2015	466.70	0.83	57.00	361.50		96.00	461.10	
2/25/2015	468.90	0.69	57.00	361.50		99.00	464.10	
3/26/2015	465.90	0.61	58.00	362.50		97.00	462.10	
4/28/2015	465.70	0.20	57.00	361.50		97.00	462.10	
5/28/2015	466.40	1.08	57.00	361.50		97.00	462.10	
6/30/2015	454.50	0.00	58.00	362.50		86.00	451.10	
7/28/2015	445.60	0.00	57.00	361.50		78.00	443.10	
8/28/2015	437.60	0.00	57.00	361.50		70.00	435.10	
9/24/2015	426.90	1.51	57.00	361.50		59.00	424.10	
10/27/2015	415.40	0.49	57.00	361.50		48.00	413.10	
11/19/2015	412.90	0.09	56.00	360.50		43.00	408.10	
12/22/2015	425.50	0.69	57.00	361.50		55.00	420.10	
1/27/2016	463.60	2.86	57.00	361.50		93.00	458.10	
2/25/2016	468.90	0.25	57.00	361.50		100.00	465.10	
3/30/2016	468.00	1.44	58.00	362.50		100.00	465.10	
4/28/2016	461.30	0.30	58.00	362.50		92.00	457.10	
5/25/2016	451.30	0.18	58.00	362.50		84.00	449.10	
6/28/2016	414.10	0.00	57.00	361.50		76.00	441.10	
7/27/2016	434.20	0.00	57.00	361.50		66.00	431.10	
8/23/2016	418.60	0.00	57.00	361.50		51.00	416.10	
9/27/2016	406.40	0.00	57.00	361.50		40.00	405.10	
10/26/2016	404.00	0.48	57.00	361.50		36.00	401.10	

Notes:

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-3			C-4		
Piezo. Tip Elevation -->			363.30			392.80		
Zero Gage Reading -->			58.80			27.70		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	56.00	360.50		42.00	407.10	
12/20/2016	441.10	3.48	56.00	360.50		70.00	435.10	
1/26/2017	471.60	5.67	57.00	361.50		101.00	466.10	
2/24/2017	472.05	3.95	58.00	362.50		103.00	468.10	
2/25/2017	472.00							
2/26/2017	472.00							
2/27/2017	472.00		58.00	362.50		102.00	467.10	
2/28/2017	471.90		58.00	362.50		103.00	468.10	
3/1/2017	471.90		58.00	362.50		103.00	468.10	
3/2/2017	471.90		58.00	362.50		102.00	467.10	
3/29/2017	467.90	0.10	58.00	362.50		100.00	465.10	
4/27/2017	457.60	0.04	58.00	362.50		89.00	454.10	
5/23/2017	453.50	0.43	58.00	362.50		85.00	450.10	
6/21/2017	447.40	0.00	58.00	362.50		80.00	445.10	
7/26/2017	435.10	0.00	58.00	362.50		67.00	432.10	
8/25/2017	420.10	0.00	57.00	361.50		51.00	416.10	
9/27/2017	407.10	0.00	57.00	361.50		40.00	405.10	
10/26/2017	395.00	0.00	56.00	360.50		29.00	394.10	
11/28/2017	409.00	0.09	57.00	361.50		39.00	404.10	
12/20/2017	416.80	0.00	55.00	359.50		46.00	411.10	
1/24/2018	434.50	1.31	58.00	362.50		64.00	429.10	
2/21/2018	443.10	0.29	56.00	360.50		73.00	438.10	
3/29/2018	453.00	1.28	56.00	360.50		84.00	449.10	
4/26/2018	449.10	0.05	57.00	361.50		80.00	445.10	
5/31/2018	453.10	0.20	57.00	361.50		84.00	449.10	
6/28/2018	448.20	0.00	57.00	361.50		80.00	445.10	
7/25/2018	440.40	0.00	57.00	361.50		71.00	436.10	
8/22/2018	427.10	0.00	57.00	361.50		60.00	425.10	
9/27/2018	439.60	0.00	57.00	361.50		42.00	407.10	
10/18/2018	405.30	0.90	57.00	361.50		37.00	402.10	
11/28/2018	408.60	1.19	56.00	360.50		40.00	405.10	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-3			C-4		
Piezo. Tip Elevation -->			363.30			392.80		
Zero Gage Reading -->			58.80			27.70		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	57.00	361.50		66.00	431.10	
1/30/2019	463.80	4.71	58.00	362.50		94.00	459.10	
2/27/2019	466.20	6.55	59.00	363.50		98.00	463.10	
3/27/2019	463.30	1.34	58.00	362.50		94.00	459.10	
4/29/2019	453.00	0.13	58.00	362.50		88.00	453.10	
5/30/2019	451.80	0.64	58.00	362.50		82.00	447.10	
6/26/2019	446.20	0.01	58.00	362.50		78.00	443.10	
7/5/2019	39.40	0.00	57.00	361.50		75.00	440.10	
7/30/2019	434.80	0.00	58.00	362.50		67.00	432.10	
8/27/2019	424.40	0.00	58.00	362.50		57.00	422.10	
9/26/2019	405.60	0.00	57.00	361.50		38.00	403.10	
10/22/2019	400.50	0.00	56.00	360.50		34.00	399.10	
11/26/2019	412.80	3.13	56.00	360.50		42.00	407.10	
12/18/2019	447.40	4.44	58.00	362.50		95.00	460.10	
1/28/2020	465.40	0.20	58.00	362.50		94.00	459.10	
2/26/2020	459.60	0.14	58.00	362.50		91.00	456.10	
3/24/2020	470.70	3.49	58.00	362.50		100.00	465.10	
4/29/2020	467.60	3.65	59.00	363.50		98.00	463.10	
5/27/2020	459.10	0.02	59.00	363.50		90.00	455.10	
6/23/2020	447.00	0.00	58.00	362.50		80.00	445.10	
7/30/2020	434.00	0.00	58.00	362.50		66.00	431.10	
8/26/2020	417.70	0.00	58.00	362.50		52.00	417.10	
9/29/2020	403.60	0.00	57.00	361.50		36.00	401.10	
10/28/2020	404.50	0.00	57.00	361.50		34.00	399.10	
11/24/2020	413.50	0.42	57.00	361.50		46.00	411.10	
12/22/2020	408.00	1.13	56.00	360.50		41.00	406.10	
1/27/2021	435.60	2.25	58.00	362.50		66.00	431.10	
2/25/2021	457.30	0.05	58.00	362.50		88.00	453.10	
3/23/2021	465.90	1.36	58.00	362.50		96.00	461.10	
4/27/2021	462.10	0.04	59.00	363.50		92.00	457.10	
5/26/2021	455.00	0.03	59.00	363.50		85.00	450.10	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-3			C-4		
Piezo. Tip Elevation -->			363.30			392.80		
Zero Gage Reading -->			58.80			27.70		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	58.00	362.50		70.00	435.10	
7/29/2021	423.60	0.07	58.00	362.50		55.00	420.10	
8/24/2021	408.00	0.00	58.00	362.50		40.00	405.10	
9/29/2021	398.00	0.04	67.00	371.50	Omitted	34.00	399.10	
10/26/2021	417.00	0.87	56.00	360.50		46.00	411.10	
11/25/2021	427.90	0.00	58.00	362.50		59.00	424.10	
12/21/2021	427.90	4.77	58.00	362.50		78.00	443.10	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-5			C-6		
Piezo. Tip Elevation -->			379.40			392.00		
Zero Gage Reading -->			14.90			27.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		11.00	375.50		32.00	396.50	
2/27/2007	426.80		12.00	376.50		34.00	398.50	
3/28/2007	438.80		12.00	376.50		34.00	398.50	
4/26/2007	450.90		12.00	376.50		37.00	401.50	
5/23/2007	461.40		12.00	376.50		42.00	406.50	
6/27/2007	457.20		12.00	376.50		48.00	412.50	
7/26/2007	445.50		12.00	376.50		48.00	412.50	
8/28/2007	434.60		13.00	377.50		46.00	410.50	
9/25/2007	416.80		12.00	376.50		40.00	404.50	
10/24/2007	404.50		11.00	375.50		37.00	401.50	
11/27/2007	422.20		11.00	375.50		36.00	400.50	
1/3/2008	443.20		12.00	376.50		39.00	403.50	
1/29/2008	452.20		12.00	376.50		42.00	406.50	
2/27/2008	460.80		12.00	376.50		46.00	410.50	
3/26/2008	468.00		12.00	376.50		51.00	415.50	
4/29/2008	468.60		12.50	377.00		55.00	419.50	
5/29/2008	464.70		12.00	376.50		55.00	419.50	
6/26/2008	455.70		12.00	376.50		54.00	418.50	
7/29/2008	447.30	0.00	16.00	380.50		50.00	414.50	
8/28/2008	438.80	0.00	12.00	376.50		48.00	412.50	
9/26/2008	430.70	0.00	12.00	376.50		46.00	410.50	
10/29/2008	412.50	0.00	14.00	378.50		40.00	404.50	
11/25/2008	404.70	2.60	12.00	376.50		38.00	402.50	
12/30/2008	440.90	3.42	12.00	376.50		40.00	404.50	
1/28/2009	463.70	0.17	12.00	376.50		43.00	407.50	
2/25/2009	470.10	3.35	12.00	376.50		50.00	414.50	
3/26/2009	469.40	0.19	12.50	377.00		55.00	419.50	
4/29/2009	466.90	0.07	12.00	376.50		56.00	420.50	
5/18/2009	466.70	0.00	13.00	377.50		56.00	420.50	
5/29/2009	465.00	0.00	12.00	376.50		55.00	419.50	
6/30/2009	460.20	0.00	13.00	377.50		55.00	419.50	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-5			C-6		
Piezo. Tip Elevation -->			379.40			392.00		
Zero Gage Reading -->			14.90			27.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	14.00	378.50		53.00	417.50	
8/25/2009	440.10	0.00	12.00	376.50		48.00	412.50	
9/30/2009	432.20	0.00	12.00	376.50		45.00	409.50	
10/29/2009	431.40	0.53	13.00	377.50		44.00	408.50	
12/1/2009	427.40	0.00	13.00	377.50		41.00	405.50	
12/29/2009	448.10	2.06	13.00	377.50		43.00	407.50	
1/27/2010	465.60	4.62	14.00	378.50		47.00	411.50	
2/25/2010	470.20	2.51	14.00	378.50		54.00	418.50	
3/29/2010	465.70	0.99	13.00	377.50		55.00	419.50	
4/4/2010	465.00		14.00	378.50		56.00	420.50	
4/27/2010	468.40	1.23	14.00	378.50		55.00	419.50	
5/27/2010	463.30	0.05	15.00	379.50		56.00	420.50	
6/30/2010	454.70	0.00	14.00	378.50		53.00	417.50	
7/28/2010	445.60	0.00	14.00	378.50		51.00	415.50	
8/31/2010	437.10	0.00	14.00	378.50		47.00	411.50	
9/29/2010	422.70	0.00	14.00	378.50		42.00	406.50	
10/27/2010	426.40	2.38	14.00	378.50		42.00	406.50	
11/29/2010	439.80	0.97	14.00	378.50		42.00	406.50	
12/30/2010	456.60	8.62	16.00	380.50		45.00	409.50	
2/1/2011	468.90	0.92	15.00	379.50		51.00	415.50	
2/23/2011	469.00	0.99	17.00	381.50		55.00	419.50	
3/29/2011	470.30	2.93	16.00	380.50		56.00	420.50	
4/27/2011	464.80	0.19	17.00	381.50		56.00	420.50	
5/26/2011	457.30	0.48	17.00	381.50		54.00	418.50	
6/28/2011	443.50	0.05	17.00	381.50		51.00	415.50	
7/29/2011	425.10	0.00	16.00	380.50		46.00	410.50	
8/24/2011	418.00	0.00	16.00	380.50		42.00	406.50	
9/27/2011	400.90	0.12	16.00	380.50		38.00	402.50	
10/26/2011	402.20	1.25	14.00	378.50		36.00	400.50	
11/30/2011	425.10	1.38	16.00	380.50		36.00	400.50	
12/21/2011	435.70	0.32	18.00	382.50		38.00	402.50	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-5			C-6		
Piezo. Tip Elevation -->			379.40			392.00		
Zero Gage Reading -->			14.90			27.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	17.00	381.50		39.00	403.50	
2/28/2012	448.40	0.42	14.00	378.50		40.00	404.50	
3/26/2012	452.70	1.06	17.00	381.50		44.00	408.50	
4/23/2012	463.40	1.32	18.00	382.50		50.00	414.50	
5/30/2012	457.30	0.02	18.00	382.50		52.00	416.50	
6/13/2012	452.90	0.02	17.00	381.50		51.00	415.50	
6/26/2012	450.20	0.00	18.00	382.50		52.00	416.50	
7/24/2012	439.80	0.00	18.00	382.50		50.00	414.50	
8/8/2012	437.60	0.12	18.00	382.50		48.00	412.50	
8/22/2012	433.40	0.00	18.00	382.50		47.00	411.50	
8/29/2012	431.30	0.00	18.00	382.50		46.00	410.50	
9/25/2012	420.80	0.00	17.00	381.50		46.00	410.50	
10/31/2012	412.30	0.26	17.00	381.50		40.00	404.50	
11/27/2012	420.80	0.58	17.00	381.50		39.00	403.50	
12/18/2012	448.00	1.44	17.00	381.50		42.00	406.50	
1/29/2013	468.60	1.18	18.00	382.50		50.00	414.50	
2/28/2013	469.20	0.30	19.00	383.50		55.00	419.50	
3/27/2013	468.30	0.50	18.00	382.50		57.00	421.50	
4/25/2013	462.70	0.00	18.00	382.50		56.00	420.50	
5/21/2013	454.20	0.00	18.00	382.50		55.00	419.50	
6/25/2013	439.30	0.00	18.00	382.50		50.00	414.50	
7/23/2013	431.50	0.00	18.00	382.50		46.00	410.50	
8/21/2013	418.00	0.00	18.00	382.50		42.00	406.50	
9/24/2013	404.00	0.00	18.00	382.50		39.00	403.50	
10/29/2013	400.60	0.00	18.00	382.50		36.00	400.50	
11/26/2013	407.90	0.44	18.00	382.50		35.00	399.50	
12/19/2013	425.80	0.54	18.00	382.50		36.00	400.50	
1/28/2014	439.70	0.00	18.00	382.50		38.00	402.50	
2/25/2014	449.70	0.83	18.00	382.50		40.00	404.50	
3/26/2014	465.10		19.00	383.50		47.00	411.50	
3/28/2014	465.70	1.15	19.00	383.50		47.00	411.50	

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-5			C-6		
Piezo. Tip Elevation -->			379.40			392.00		
Zero Gage Reading -->			14.90			27.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	20.00	384.50		54.00	418.50	
5/28/2014	450.60	0.00	19.00	383.50		52.00	416.50	
6/25/2014	440.10	0.00	19.00	383.50		50.00	414.50	
7/29/2014	431.20	0.00	19.00	383.50		46.00	410.50	
8/26/2014	419.50	0.02	18.00	382.50		43.00	407.50	
9/23/2014	405.30	0.00	18.00	382.50		39.00	403.50	
10/29/2014	400.90	0.00	18.00	382.50		37.00	401.50	
11/25/2014	410.90	0.25	18.00	382.50		36.00	400.50	
12/30/2014	430.60	2.94	18.00	382.50		37.00	401.50	
1/27/2015	466.70	0.83	20.00	384.50		44.00	408.50	
2/25/2015	468.90	0.69	19.00	383.50		52.00	416.50	
3/26/2015	465.90	0.61	20.00	384.50		55.00	419.50	
4/28/2015	465.70	0.20	20.00	384.50		57.00	421.50	
5/28/2015	466.40	1.08	19.00	383.50		56.00	420.50	
6/30/2015	454.50	0.00	19.00	383.50		55.00	419.50	
7/28/2015	445.60	0.00	19.00	383.50		51.00	415.50	
8/28/2015	437.60	0.00	18.00	382.50		48.00	412.50	
9/24/2015	426.90	1.51	19.00	383.50		44.00	408.50	
10/27/2015	415.40	0.49	19.00	383.50		42.00	406.50	
11/19/2015	412.90	0.09	18.00	382.50		39.00	403.50	
12/22/2015	425.50	0.69	18.00	382.50		39.00	403.50	
1/27/2016	463.60	2.86	19.00	383.50		44.00	408.50	
2/25/2016	468.90	0.25	20.00	384.50		50.00	414.50	
3/30/2016	468.00	1.44	20.00	384.50		55.00	419.50	
4/28/2016	461.30	0.30	20.00	384.50		56.00	420.50	
5/25/2016	451.30	0.18	20.00	384.50		54.00	418.50	
6/28/2016	414.10	0.00	18.00	382.50		50.00	414.50	
7/27/2016	434.20	0.00	20.00	384.50		48.00	412.50	
8/23/2016	418.60	0.00	20.00	384.50		44.00	408.50	
9/27/2016	406.40	0.00	20.00	384.50		40.00	404.50	
10/26/2016	404.00	0.48	19.00	383.50		37.00	401.50	

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-5			C-6		
Piezo. Tip Elevation -->			379.40			392.00		
Zero Gage Reading -->			14.90			27.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	19.00	383.50		36.00	400.50	
12/20/2016	441.10	3.48	19.00	383.50		39.00	403.50	
1/26/2017	471.60	5.67	20.00	384.50		45.00	409.50	
2/24/2017	472.05	3.95	20.00	384.50		54.00	418.50	
2/25/2017	472.00							
2/26/2017	472.00							
2/27/2017	472.00		20.00	384.50		54.00	418.50	
2/28/2017	471.90		20.00	384.50		55.00	419.50	
3/1/2017	471.90		20.00	384.50		55.00	419.50	
3/2/2017	471.90		20.00	384.50		55.00	419.50	
3/29/2017	467.90	0.10	20.00	384.50		57.00	421.50	
4/27/2017	457.60	0.04	20.00	384.50		56.00	420.50	
5/23/2017	453.50	0.43	20.00	384.50		53.00	417.50	
6/21/2017	447.40	0.00	20.00	384.50		53.00	417.50	
7/26/2017	435.10	0.00	20.00	384.50		49.00	413.50	
8/25/2017	420.10	0.00	19.00	383.50		43.00	407.50	
9/27/2017	407.10	0.00	20.00	384.50		42.00	406.50	
10/26/2017	395.00	0.00	19.00	383.50		36.00	400.50	
11/28/2017	409.00	0.09	19.00	383.50		36.00	400.50	
12/20/2017	416.80	0.00	18.00	382.50		35.00	399.50	
1/24/2018	434.50	1.31	18.00	382.50		36.00	400.50	
2/21/2018	443.10	0.29	20.00	384.50		38.00	402.50	
3/29/2018	453.00	1.28	20.00	384.50		42.00	406.50	
4/26/2018	449.10	0.05	20.00	384.50		44.00	408.50	
5/31/2018	453.10	0.20	20.00	384.50		48.00	412.50	
6/28/2018	448.20	0.00	20.00	384.50		48.00	412.50	
7/25/2018	440.40	0.00	20.00	384.50		48.00	412.50	
8/22/2018	427.10	0.00	20.00	384.50		45.00	409.50	
9/27/2018	439.60	0.00	20.00	384.50		40.00	404.50	
10/18/2018	405.30	0.90	19.00	383.50		38.00	402.50	
11/28/2018	408.60	1.19	19.00	383.50		38.00	402.50	

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TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-5			C-6		
Piezo. Tip Elevation -->			379.40			392.00		
Zero Gage Reading -->			14.90			27.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	20.00	384.50		38.00	402.50	
1/30/2019	463.80	4.71	20.00	384.50		44.00	408.50	
2/27/2019	466.20	6.55	21.00	385.50		50.00	414.50	
3/27/2019	463.30	1.34	20.00	384.50		52.00	416.50	
4/29/2019	453.00	0.13	20.00	384.50		53.00	417.50	
5/30/2019	451.80	0.64	20.00	384.50		52.00	416.50	
6/26/2019	446.20	0.01	20.00	384.50		50.00	414.50	
7/5/2019	39.40	0.00	19.00	383.50		49.00	413.50	
7/30/2019	434.80	0.00	20.00	384.50		48.00	412.50	
8/27/2019	424.40	0.00	20.00	384.50		44.00	408.50	
9/26/2019	405.60	0.00	18.00	382.50		39.00	403.50	
10/22/2019	400.50	0.00	18.00	382.50		38.00	402.50	
11/26/2019	412.80	3.13	19.00	383.50		36.00	400.50	
12/18/2019	447.40	4.44	20.00	384.50		40.00	404.50	
1/28/2020	465.40	0.20	20.00	384.50		47.00	411.50	
2/26/2020	459.60	0.14	20.00	384.50		50.00	414.50	
3/24/2020	470.70	3.49	20.00	384.50		54.00	418.50	
4/29/2020	467.60	3.65	20.00	384.50		57.00	421.50	
5/27/2020	459.10	0.02	20.00	384.50		56.00	420.50	
6/23/2020	447.00	0.00	20.00	384.50		52.00	416.50	
7/30/2020	434.00	0.00	20.00	384.50		48.00	412.50	
8/26/2020	417.70	0.00	20.00	384.50		44.00	408.50	
9/29/2020	403.60	0.00	19.00	383.50		39.00	403.50	
10/28/2020	404.50	0.00	19.00	383.50		37.00	401.50	
11/24/2020	413.50	0.42	20.00	384.50		37.00	401.50	
12/22/2020	408.00	1.13	22.00	386.50		35.00	399.50	
1/27/2021	435.60	2.25	18.00	382.50		37.00	401.50	
2/25/2021	457.30	0.05	20.00	384.50		41.00	405.50	
3/23/2021	465.90	1.36	20.00	384.50		45.00	409.50	
4/27/2021	462.10	0.04	20.00	384.50		51.00	415.50	
5/26/2021	455.00	0.03	20.00	384.50		52.00	416.50	

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-5			C-6		
Piezo. Tip Elevation -->			379.40			392.00		
Zero Gage Reading -->			14.90			27.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	20.00	384.50		49.00	413.50	
7/29/2021	423.60	0.07	19.00	383.50		45.00	409.50	
8/24/2021	408.00	0.00	19.00	383.50		40.00	404.50	
9/29/2021	398.00	0.04	20.00	384.50		38.00	402.50	
10/26/2021	417.00	0.87	19.00	383.50		37.00	401.50	
11/25/2021	427.90	0.00	19.00	383.50		38.00	402.50	
12/21/2021	427.90	4.77	20.00	384.50		40.00	404.50	

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TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-7			C-8		
Piezo. Tip Elevation -->			324.90			440.60		
Zero Gage Reading -->			21.00			17.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		18.00	321.90		17.00	440.10	
2/27/2007	426.80		20.00	323.90		18.00	441.10	
3/28/2007	438.80		19.00	322.90		16.00	439.10	
4/26/2007	450.90		18.00	321.90		16.00	439.10	
5/23/2007	461.40		19.00	322.90		20.00	443.10	
6/27/2007	457.20		18.00	321.90		22.00	445.10	
7/26/2007	445.50		18.00	321.90		22.00	445.10	
8/28/2007	434.60		19.00	322.90		22.00	445.10	
9/25/2007	416.80		18.00	321.90		21.00	444.10	
10/24/2007	404.50		19.00	322.90		20.00	443.10	
11/27/2007	422.20		18.00	321.90		18.00	441.10	
1/3/2008	443.20		18.00	321.90		16.00	439.10	
1/29/2008	452.20		18.00	321.90		17.00	440.10	
2/27/2008	460.80		19.00	322.90		19.00	442.10	
3/26/2008	468.00		19.00	322.90		26.00	449.10	
4/29/2008	468.60		18.00	321.90		31.00	454.10	
5/29/2008	464.70		18.00	321.90		32.00	455.10	
6/26/2008	455.70		18.00	321.90		28.00	451.10	
7/29/2008	447.30	0.00	18.50	322.40		26.00	449.10	
8/28/2008	438.80	0.00	18.00	321.90		25.00	448.10	
9/26/2008	430.70	0.00	19.00	322.90		23.00	446.10	
10/29/2008	412.50	0.00	18.00	321.90		22.00	445.10	
11/25/2008	404.70	2.60	18.00	321.90		20.00	443.10	
12/30/2008	440.90	3.42	19.00	322.90		20.00	443.10	
1/28/2009	463.70	0.17	18.00	321.90		20.00	443.10	
2/25/2009	470.10	3.35	18.00	321.90		27.00	450.10	
3/26/2009	469.40	0.19	19.00	322.90		31.00	454.10	
4/29/2009	466.90	0.07	19.00	322.90		32.00	455.10	
5/18/2009	466.70	0.00	19.00	322.90		32.00	455.10	
5/29/2009	465.00	0.00	20.00	323.90		30.00	453.10	
6/30/2009	460.20	0.00	19.00	322.90		30.00	453.10	

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SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-7			C-8		
Piezo. Tip Elevation -->			324.90			440.60		
Zero Gage Reading -->			21.00			17.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	19.00	322.90		28.00	451.10	
8/25/2009	440.10	0.00	18.00	321.90		25.00	448.10	
9/30/2009	432.20	0.00	18.00	321.90		22.00	445.10	
10/29/2009	431.40	0.53	19.00	322.90		22.00	445.10	
12/1/2009	427.40	0.00	19.00	322.90		20.00	443.10	
12/29/2009	448.10	2.06	19.00	322.90		20.00	443.10	
1/27/2010	465.60	4.62	18.00	321.90		22.00	445.10	
2/25/2010	470.20	2.51	19.00	322.90		30.00	453.10	
3/29/2010	465.70	0.99	18.00	321.90		31.00	454.10	
4/4/2010	465.00		18.00	321.90		32.00	455.10	
4/27/2010	468.40	1.23	19.00	322.90		31.00	454.10	
5/27/2010	463.30	0.05	18.00	321.90		32.00	455.10	
6/30/2010	454.70	0.00	18.00	321.90		28.00	451.10	
7/28/2010	445.60	0.00	18.00	321.90		26.00	449.10	
8/31/2010	437.10	0.00	19.00	322.90		24.00	447.10	
9/29/2010	422.70	0.00	19.00	322.90		22.00	445.10	
10/27/2010	426.40	2.38	19.00	322.90		21.00	444.10	
11/29/2010	439.80	0.97	19.00	322.90		22.00	445.10	
12/30/2010	456.60	8.62	20.00	323.90		21.00	444.10	
2/1/2011	468.90	0.92	19.00	322.90		28.00	451.10	
2/23/2011	469.00	0.99	19.00	322.90		30.00	453.10	
3/29/2011	470.30	2.93	18.00	321.90		34.00	457.10	
4/27/2011	464.80	0.19	20.00	323.90		33.00	456.10	
5/26/2011	457.30	0.48	19.00	322.90		30.00	453.10	
6/28/2011	443.50	0.05	19.00	322.90		26.00	449.10	
7/29/2011	425.10	0.00	18.00	321.90		25.00	448.10	
8/24/2011	418.00	0.00	19.00	322.90		25.00	448.10	
9/27/2011	400.90	0.12	20.00	323.90		24.00	447.10	
10/26/2011	402.20	1.25	18.00	321.90		21.00	444.10	
11/30/2011	425.10	1.38	19.00	322.90		20.00	443.10	
12/21/2011	435.70	0.32	19.00	322.90		20.00	443.10	

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2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-7			C-8		
Piezo. Tip Elevation -->			324.90			440.60		
Zero Gage Reading -->			21.00			17.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	19.00	322.90		20.00	443.10	
2/28/2012	448.40	0.42	19.00	322.90		18.00	441.10	
3/26/2012	452.70	1.06	19.00	322.90		19.00	442.10	
4/23/2012	463.40	1.32	18.00	321.90		22.00	445.10	
5/30/2012	457.30	0.02	19.00	322.90		27.00	450.10	
6/13/2012	452.90	0.02	18.00	321.90		25.00	448.10	
6/26/2012	450.20	0.00	19.00	322.90		25.00	448.10	
7/24/2012	439.80	0.00	20.00	323.90		24.00	447.10	
8/8/2012	437.60	0.12	19.00	322.90		24.00	447.10	
8/22/2012	433.40	0.00	19.00	322.90		24.00	447.10	
8/29/2012	431.30	0.00	20.00	323.90		24.00	447.10	
9/25/2012	420.80	0.00	19.00	322.90		22.00	445.10	
10/31/2012	412.30	0.26	20.00	323.90		22.00	445.10	
11/27/2012	420.80	0.58	18.00	321.90		20.00	443.10	
12/18/2012	448.00	1.44	20.00	323.90		20.00	443.10	
1/29/2013	468.60	1.18	20.00	323.90		27.00	450.10	
2/28/2013	469.20	0.30	20.00	323.90		32.00	455.10	
3/27/2013	468.30	0.50	20.00	323.90		33.00	456.10	
4/25/2013	462.70	0.00	18.00	321.90		32.00	455.10	
5/21/2013	454.20	0.00	19.00	322.90		29.00	452.10	
6/25/2013	439.30	0.00	19.00	322.90		26.00	449.10	
7/23/2013	431.50	0.00	19.00	322.90		24.00	447.10	
8/21/2013	418.00	0.00	20.00	323.90		24.00	447.10	
9/24/2013	404.00	0.00	19.00	322.90		24.00	447.10	
10/29/2013	400.60	0.00	19.00	322.90		22.00	445.10	
11/26/2013	407.90	0.44	18.00	321.90		21.00	444.10	
12/19/2013	425.80	0.54	19.00	322.90		21.00	444.10	
1/28/2014	439.70	0.00	19.00	322.90		20.00	443.10	
2/25/2014	449.70	0.83	20.00	323.90		20.00	443.10	
3/26/2014	465.10		20.00	323.90		24.00	447.10	
3/28/2014	465.70	1.15	19.00	322.90		24.00	447.10	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-7			C-8		
Piezo. Tip Elevation -->			324.90			440.60		
Zero Gage Reading -->			21.00			17.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	19.00	322.90		30.00	453.10	
5/28/2014	450.60	0.00	19.00	322.90		26.00	449.10	
6/25/2014	440.10	0.00	19.00	322.90		25.00	448.10	
7/29/2014	431.20	0.00	19.00	322.90		24.00	447.10	
8/26/2014	419.50	0.02	19.00	322.90		24.00	447.10	
9/23/2014	405.30	0.00	19.00	322.90		24.00	447.10	
10/29/2014	400.90	0.00	20.00	323.90		23.00	446.10	
11/25/2014	410.90	0.25	19.00	322.90		21.00	444.10	
12/30/2014	430.60	2.94	19.00	322.90		20.00	443.10	
1/27/2015	466.70	0.83	20.00	323.90		24.00	447.10	
2/25/2015	468.90	0.69	19.00	322.90		31.00	454.10	
3/26/2015	465.90	0.61	20.00	323.90		32.00	455.10	
4/28/2015	465.70	0.20	19.00	322.90		32.00	455.10	
5/28/2015	466.40	1.08	19.00	322.90		32.00	455.10	
6/30/2015	454.50	0.00	19.00	322.90		31.00	454.10	
7/28/2015	445.60	0.00	19.00	322.90		26.00	449.10	
8/28/2015	437.60	0.00	19.00	322.90		25.00	448.10	
9/24/2015	426.90	1.51	19.00	322.90		25.00	448.10	
10/27/2015	415.40	0.49	19.00	322.90		24.00	447.10	
11/19/2015	412.90	0.09	19.00	322.90		23.00	446.10	
12/22/2015	425.50	0.69	19.00	322.90		21.00	444.10	
1/27/2016	463.60	2.86	20.00	323.90		20.00	443.10	
2/25/2016	468.90	0.25	19.00	322.90		30.00	453.10	
3/30/2016	468.00	1.44	18.00	321.90		34.00	457.10	
4/28/2016	461.30	0.30	18.00	321.90		32.00	455.10	
5/25/2016	451.30	0.18	20.00	323.90		28.00	451.10	
6/28/2016	414.10	0.00	18.00	321.90		25.00	448.10	
7/27/2016	434.20	0.00	18.00	321.90		25.00	448.10	
8/23/2016	418.60	0.00	20.00	323.90		24.00	447.10	
9/27/2016	406.40	0.00	20.00	323.90		24.00	447.10	
10/26/2016	404.00	0.48	19.00	322.90		22.00	445.10	

Notes:

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-7			C-8		
Piezo. Tip Elevation -->			324.90			440.60		
Zero Gage Reading -->			21.00			17.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	19.00	322.90		22.00	445.10	
12/20/2016	441.10	3.48	20.00	323.90		21.00	444.10	
1/26/2017	471.60	5.67	19.00	322.90		29.00	452.10	
2/24/2017	472.05	3.95	18.00	321.90		34.00	457.10	
2/25/2017	472.00							
2/26/2017	472.00							
2/27/2017	472.00		19.00	322.90		34.00	457.10	
2/28/2017	471.90		19.00	322.90		34.00	457.10	
3/1/2017	471.90		19.00	322.90		34.00	457.10	
3/2/2017	471.90		18.00	321.90		38.00	461.10	
3/29/2017	467.90	0.10	19.00	322.90		36.00	459.10	
4/27/2017	457.60	0.04	19.00	322.90		32.00	455.10	
5/23/2017	453.50	0.43	18.00	321.90		28.00	451.10	
6/21/2017	447.40	0.00	18.00	321.90		28.00	451.10	
7/26/2017	435.10	0.00	19.00	322.90		26.00	449.10	
8/25/2017	420.10	0.00	19.00	322.90		24.00	447.10	
9/27/2017	407.10	0.00	20.00	323.90		24.00	447.10	
10/26/2017	395.00	0.00	19.00	322.90		24.00	447.10	
11/28/2017	409.00	0.09	19.00	322.90		21.00	444.10	
12/20/2017	416.80	0.00	18.00	321.90		21.00	444.10	
1/24/2018	434.50	1.31	20.00	323.90		20.00	443.10	
2/21/2018	443.10	0.29	19.00	322.90		20.00	443.10	
3/29/2018	453.00	1.28	18.00	321.90		20.00	443.10	
4/26/2018	449.10	0.05	18.00	321.90		19.00	442.10	
5/31/2018	453.10	0.20	20.00	323.90		20.00	443.10	
6/28/2018	448.20	0.00	20.00	323.90		21.00	444.10	
7/25/2018	440.40	0.00	18.00	321.90		21.00	444.10	
8/22/2018	427.10	0.00	19.00	322.90		20.00	443.10	
9/27/2018	439.60	0.00	18.00	321.90		22.00	445.10	
10/18/2018	405.30	0.90	19.00	322.90		21.00	444.10	
11/28/2018	408.60	1.19	20.00	323.90		20.00	443.10	

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-7			C-8		
Piezo. Tip Elevation -->			324.90			440.60		
Zero Gage Reading -->			21.00			17.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	20.00	323.90		22.00	445.10	
1/30/2019	463.80	4.71	20.00	323.90		20.00	443.10	
2/27/2019	466.20	6.55	19.00	322.90		28.00	451.10	
3/27/2019	463.30	1.34	18.00	321.90		30.00	453.10	
4/29/2019	453.00	0.13	19.00	322.90		28.00	451.10	
5/30/2019	451.80	0.64	19.00	322.90		26.00	449.10	
6/26/2019	446.20	0.01	19.00	322.90		25.00	448.10	
7/5/2019	39.40	0.00	18.00	321.90		24.00	447.10	
7/30/2019	434.80	0.00	19.00	322.90		24.00	447.10	
8/27/2019	424.40	0.00	20.00	323.90		23.00	446.10	
9/26/2019	405.60	0.00	19.00	322.90		23.00	446.10	
10/22/2019	400.50	0.00	18.00	321.90		22.00	445.10	
11/26/2019	412.80	3.13	19.00	322.90		21.00	444.10	
12/18/2019	447.40	4.44	19.00	322.90		21.00	444.10	
1/28/2020	465.40	0.20	22.00	325.90		26.00	449.10	
2/26/2020	459.60	0.14	19.00	322.90		27.00	450.10	
3/24/2020	470.70	3.49	20.00	323.90		30.00	453.10	
4/29/2020	467.60	3.65	20.00	323.90		35.00	458.10	
5/27/2020	459.10	0.02	19.00	322.90		33.00	456.10	
6/23/2020	447.00	0.00	18.00	321.90		28.00	451.10	
7/30/2020	434.00	0.00	20.00	323.90		26.00	449.10	
8/26/2020	417.70	0.00	18.00	321.90		26.00	449.10	
9/29/2020	403.60	0.00	19.00	322.90		24.00	447.10	
10/28/2020	404.50	0.00	19.00	322.90		23.00	446.10	
11/24/2020	413.50	0.42	18.00	321.90		22.00	445.10	
12/22/2020	408.00	1.13	18.00	321.90		22.00	445.10	
1/27/2021	435.60	2.25	18.00	321.90		20.00	443.10	
2/25/2021	457.30	0.05	19.00	322.90		20.00	443.10	
3/23/2021	465.90	1.36	20.00	323.90		25.00	448.10	
4/27/2021	462.10	0.04	18.00	321.90		30.00	453.10	
5/26/2021	455.00	0.03	19.00	322.90		28.00	451.10	

Notes:

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-7			C-8		
Piezo. Tip Elevation -->			324.90			440.60		
Zero Gage Reading -->			21.00			17.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	18.00	321.90		24.00	447.10	
7/29/2021	423.60	0.07	19.00	322.90		24.00	447.10	
8/24/2021	408.00	0.00	19.00	322.90		24.00	447.10	
9/29/2021	398.00	0.04	18.00	321.90		24.00	447.10	
10/26/2021	417.00	0.87	19.00	322.90		22.00	445.10	
11/25/2021	427.90	0.00	19.00	322.90		21.00	444.10	
12/21/2021	427.90	4.77	18.00	321.90		22.00	445.10	

Notes:

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TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-9			RR-2		
Piezo. Tip Elevation -->			357.00			393.20		
Zero Gage Reading -->			53.10			29.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		59.00	362.90		33.00	396.30	
2/27/2007	426.80					52.00	415.30	
3/28/2007	438.80		20.00	323.90		62.00	425.30	
4/26/2007	450.90		59.00	362.90		74.00	437.30	
5/23/2007	461.40		60.00	363.90		84.00	447.30	
6/27/2007	457.20		60.00	363.90		81.00	444.30	
7/26/2007	445.50		60.00	363.90		74.00	437.30	
8/28/2007	434.60		60.00	363.90		65.00	428.30	
9/25/2007	416.80		60.00	363.90		48.00	411.30	
10/24/2007	404.50		60.00	363.90		35.00	398.30	
11/27/2007	422.20		58.00	361.90		46.00	409.30	
1/3/2008	443.20		60.00	363.90		67.00	430.30	
1/29/2008	452.20		60.00	363.90		76.00	439.30	
2/27/2008	460.80		60.00	363.90		84.00	447.30	
3/26/2008	468.00		60.00	363.90		91.00	454.30	
4/29/2008	468.60		60.00	363.90		92.00	455.30	
5/29/2008	464.70		60.00	363.90		90.00	453.30	
6/26/2008	455.70		60.00	363.90		82.00	445.30	
7/29/2008	447.30	0.00	61.00	364.90		75.00	438.30	
8/28/2008	438.80	0.00	60.00	363.90		68.00	431.30	
9/26/2008	430.70	0.00	61.00	364.90		60.00	423.30	
10/29/2008	412.50	0.00	60.00	363.90		44.00	407.30	
11/25/2008	404.70	2.60	60.00	363.90		36.00	399.30	
12/30/2008	440.90	3.42	60.00	363.90		65.00	428.30	
1/28/2009	463.70	0.17	58.00	361.90		86.00	449.30	
2/25/2009	470.10	3.35	58.00	361.90		90.00	453.30	
3/26/2009	469.40	0.19	60.00	363.90		92.00	455.30	
4/29/2009	466.90	0.07	59.00	362.90		91.00	454.30	
5/18/2009	466.70	0.00	59.00	362.90		92.00	455.30	
5/29/2009	465.00	0.00	59.00	362.90		90.00	453.30	
6/30/2009	460.20	0.00	60.00	363.90		85.00	448.30	

Notes:

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SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-9			RR-2		
Piezo. Tip Elevation -->			357.00			393.20		
Zero Gage Reading -->			53.10			29.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	60.00	363.90		79.00	442.30	
8/25/2009	440.10	0.00	59.00	362.90		69.00	432.30	
9/30/2009	432.20	0.00	58.00	361.90		61.00	424.30	
10/29/2009	431.40	0.53	59.00	362.90		60.00	423.30	
12/1/2009	427.40	0.00	58.00	361.90		56.00	419.30	
12/29/2009	448.10	2.06	58.00	361.90		74.00	437.30	
1/27/2010	465.60	4.62	58.00	361.90		90.00	453.30	
2/25/2010	470.20	2.51	58.00	361.90		94.00	457.30	
3/29/2010	465.70	0.99	58.00	361.90		91.00	454.30	
4/4/2010	465.00		58.00	361.90		90.00	453.30	
4/27/2010	468.40	1.23	59.00	362.90		93.00	456.30	
5/27/2010	463.30	0.05	58.00	361.90		90.00	453.30	
6/30/2010	454.70	0.00	58.00	361.90		82.00	445.30	
7/28/2010	445.60	0.00	58.00	361.90		74.00	437.30	
8/31/2010	437.10	0.00	59.00	362.90		67.00	430.30	
9/29/2010	422.70	0.00	53.00	356.90		52.00	415.30	
10/27/2010	426.40	2.38	58.00	361.90		56.00	419.30	
11/29/2010	439.80	0.97	58.00	361.90		66.00	429.30	
12/30/2010	456.60	8.62	58.00	361.90		80.00	443.30	
2/1/2011	468.90	0.92	57.00	360.90		91.00	454.30	
2/23/2011	469.00	0.99	58.00	361.90		93.00	456.30	
3/29/2011	470.30	2.93	56.00	359.90		94.00	457.30	
4/27/2011	464.80	0.19	58.00	361.90		90.00	453.30	
5/26/2011	457.30	0.48	58.00	361.90		84.00	447.30	
6/28/2011	443.50	0.05	58.00	361.90		73.00	436.30	
7/29/2011	425.10	0.00	57.00	360.90		58.00	421.30	
8/24/2011	418.00	0.00	58.00	361.90		46.00	409.30	
9/27/2011	400.90	0.12	58.00	361.90		34.00	397.30	
10/26/2011	402.20	1.25	57.00	360.90		32.00	395.30	
11/30/2011	425.10	1.38	58.00	361.90		52.00	415.30	
12/21/2011	435.70	0.32	57.00	360.90		62.00	425.30	

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SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-9			RR-2		
Piezo. Tip Elevation -->			357.00			393.20		
Zero Gage Reading -->			53.10			29.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	56.00	359.90		67.00	430.30	
2/28/2012	448.40	0.42	47.00	350.90	Omitted	72.00	435.30	
3/26/2012	452.70	1.06	46.00	349.90	Omitted	76.00	439.30	
4/23/2012	463.40	1.32	55.00	358.90		87.00	450.30	
5/30/2012	457.30	0.02	56.00	359.90		82.00	445.30	
6/13/2012	452.90	0.02	55.00	358.90		78.00	441.30	
6/26/2012	450.20	0.00	56.00	359.90		78.00	441.30	
7/24/2012	439.80	0.00	55.00	358.90		69.00	432.30	
8/8/2012	437.60	0.12	56.00	359.90		67.00	430.30	
8/22/2012	433.40	0.00	56.00	359.90		63.00	426.30	
8/29/2012	431.30	0.00	56.00	359.90		61.00	424.30	
9/25/2012	420.80	0.00	56.00	359.90		61.00	424.30	
10/31/2012	412.30	0.26	56.00	359.90		44.00	407.30	
11/27/2012	420.80	0.58	56.00	359.90		49.00	412.30	
12/18/2012	448.00	1.44	57.00	360.90		79.00	442.30	
1/29/2013	468.60	1.18	56.00	359.90		91.00	454.30	
2/28/2013	469.20	0.30	56.00	359.90		92.00	455.30	
3/27/2013	468.30	0.50	55.00	358.90		92.00	455.30	
4/25/2013	462.70	0.00	54.00	357.90		88.00	451.30	
5/21/2013	454.20	0.00	56.00	359.90		80.00	443.30	
6/25/2013	439.30	0.00	55.00	358.90		68.00	431.30	
7/23/2013	431.50	0.00	55.00	358.90		61.00	424.30	
8/21/2013	418.00	0.00	56.00	359.90		50.00	413.30	
9/24/2013	404.00	0.00	55.00	358.90		38.00	401.30	
10/29/2013	400.60	0.00	52.00	355.90		33.00	396.30	
11/26/2013	407.90	0.44	51.00	354.90		38.00	401.30	
12/19/2013	425.80	0.54	52.00	355.90		53.00	416.30	
1/28/2014	439.70	0.00	52.00	355.90		66.00	429.30	
2/25/2014	449.70	0.83	52.00	355.90		75.00	438.30	
3/26/2014	465.10		52.00	355.90		88.00	451.30	
3/28/2014	465.70	1.15	51.00	354.90		89.00	452.30	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-9			RR-2		
Piezo. Tip Elevation -->			357.00			393.20		
Zero Gage Reading -->			53.10			29.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	52.00	355.90		90.00	453.30	
5/28/2014	450.60	0.00	51.00	354.90		76.00	439.30	
6/25/2014	440.10	0.00	52.00	355.90		68.00	431.30	
7/29/2014	431.20	0.00	52.00	355.90		60.00	423.30	
8/26/2014	419.50	0.02	52.00	355.90		50.00	413.30	
9/23/2014	405.30	0.00	52.00	355.90		38.00	401.30	
10/29/2014	400.90	0.00	52.00	355.90		33.00	396.30	
11/25/2014	410.90	0.25	51.00	354.90		40.00	403.30	
12/30/2014	430.60	2.94	51.00	354.90		57.00	420.30	
1/27/2015	466.70	0.83	51.00	354.90		88.00	451.30	
2/25/2015	468.90	0.69	50.00	353.90		90.00	453.30	
3/26/2015	465.90	0.61	51.00	354.90		99.00	462.30	
4/28/2015	465.70	0.20	51.00	354.90		90.00	453.30	
5/28/2015	466.40	1.08	50.00	353.90		90.00	453.30	
6/30/2015	454.50	0.00	51.00	354.90		80.00	443.30	
7/28/2015	445.60	0.00	50.00	353.90		72.00	435.30	
8/28/2015	437.60	0.00	50.00	353.90		66.00	429.30	
9/24/2015	426.90	1.51	50.00	353.90		57.00	420.30	
10/27/2015	415.40	0.49	51.00	354.90		46.00	409.30	
11/19/2015	412.90	0.09	50.00	353.90		43.00	406.30	
12/22/2015	425.50	0.69	50.00	353.90		54.00	417.30	
1/27/2016	463.60	2.86	49.00	352.90		86.00	449.30	
2/25/2016	468.90	0.25	50.00	353.90		91.00	454.30	
3/30/2016	468.00	1.44	49.00	352.90		92.00	455.30	
4/28/2016	461.30	0.30	49.00	352.90		86.00	449.30	
5/25/2016	451.30	0.18	30.00	333.90	Omitted	76.00	439.30	
6/28/2016	414.10	0.00	48.00	351.90		71.00	434.30	
7/27/2016	434.20	0.00	50.00	353.90		62.00	425.30	
8/23/2016	418.60	0.00	49.00	352.90		50.00	413.30	
9/27/2016	406.40	0.00	50.00	353.90		38.00	401.30	
10/26/2016	404.00	0.48	49.00	352.90		35.00	398.30	

Notes:

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TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-9			RR-2		
Piezo. Tip Elevation -->			357.00			393.20		
Zero Gage Reading -->			53.10			29.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	48.00	351.90		43.00	406.30	
12/20/2016	441.10	3.48	49.00	352.90		67.00	430.30	
1/26/2017	471.60	5.67	49.00	352.90		91.00	454.30	
2/24/2017	472.05	3.95	49.00	352.90		92.00	455.30	
2/25/2017	472.00							
2/26/2017	472.00							
2/27/2017	472.00		49.00	352.90		92.00	455.30	
2/28/2017	471.90		50.00	353.90		93.00	456.30	
3/1/2017	471.90		50.00	353.90		93.00	456.30	
3/2/2017	471.90		49.00	352.90		92.00	455.30	
3/29/2017	467.90	0.10	50.00	353.90		89.00	452.30	
4/27/2017	457.60	0.04	50.00	353.90		82.00	445.30	
5/23/2017	453.50	0.43	49.00	352.90		77.00	440.30	
6/21/2017	447.40	0.00	49.00	352.90		70.00	433.30	
7/26/2017	435.10	0.00	50.00	353.90		63.00	426.30	
8/25/2017	420.10	0.00	49.00	352.90		50.00	413.30	
9/27/2017	407.10	0.00	50.00	353.90		38.00	401.30	
10/26/2017	395.00	0.00	49.00	352.90		30.00	393.30	
11/28/2017	409.00	0.09	49.00	352.90		38.00	401.30	
12/20/2017	416.80	0.00	48.00	351.90		44.00	407.30	
1/24/2018	434.50	1.31	48.00	351.90		56.00	419.30	
2/21/2018	443.10	0.29	49.00	352.90		68.00	431.30	
3/29/2018	453.00	1.28	48.00	351.90		74.00	437.30	
4/26/2018	449.10	0.05	48.00	351.90		74.00	437.30	
5/31/2018	453.10	0.20	49.00	352.90		77.00	440.30	
6/28/2018	448.20	0.00	49.00	352.90		74.00	437.30	
7/25/2018	440.40	0.00	48.00	351.90		68.00	431.30	
8/22/2018	427.10	0.00	48.00	351.90		56.00	419.30	
9/27/2018	439.60	0.00	48.00	351.90		36.00	399.30	
10/18/2018	405.30	0.90	49.00	352.90		36.00	399.30	
11/28/2018	408.60	1.19	48.00	351.90		38.00	401.30	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			C-9			RR-2		
Piezo. Tip Elevation -->			357.00			393.20		
Zero Gage Reading -->			53.10			29.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	48.00	351.90		60.00	423.30	
1/30/2019	463.80	4.71	50.00	353.90		86.00	449.30	
2/27/2019	466.20	6.55	50.00	353.90		88.00	451.30	
3/27/2019	463.30	1.34	38.00	341.90	Omitted	86.00	449.30	
4/29/2019	453.00	0.13	48.00	351.90		78.00	441.30	
5/30/2019	451.80	0.64	48.00	351.90		76.00	439.30	
6/26/2019	446.20	0.01	49.00	352.90		73.00	436.30	
7/5/2019	39.40	0.00	48.00	351.90		69.00	432.30	
7/30/2019	434.80	0.00	49.00	352.90		64.00	427.30	
8/27/2019	424.40	0.00	49.00	352.90		52.00	415.30	
9/26/2019	405.60	0.00	49.00	352.90		37.00	400.30	
10/22/2019	400.50	0.00	48.00	351.90		32.00	395.30	
11/26/2019	412.80	3.13	48.00	351.90		40.00	403.30	
12/18/2019	447.40	4.44	49.00	352.90		71.00	434.30	
1/28/2020	465.40	0.20	50.00	353.90		84.00	447.30	
2/26/2020	459.60	0.14	48.00	351.90		84.00	447.30	
3/24/2020	470.70	3.49	48.00	351.90		91.00	454.30	
4/29/2020	467.60	3.65	49.00	352.90		90.00	453.30	
5/27/2020	459.10	0.02	49.00	352.90		82.00	445.30	
6/23/2020	447.00	0.00	48.00	351.90		72.00	435.30	
7/30/2020	434.00	0.00	49.00	352.90		62.00	425.30	
8/26/2020	417.70	0.00	48.00	351.90		44.00	407.30	
9/29/2020	403.60	0.00	48.00	351.90		34.00	397.30	
10/28/2020	404.50	0.00	48.00	351.90		32.00	395.30	
11/24/2020	413.50	0.42	47.00	350.90		40.00	403.30	
12/22/2020	408.00	1.13	47.00	350.90		34.00	397.30	
1/27/2021	435.60	2.25	48.00	351.90		62.00	425.30	
2/25/2021	457.30	0.05	48.00	351.90		80.00	443.30	
3/23/2021	465.90	1.36	48.00	351.90		88.00	451.30	
4/27/2021	462.10	0.04	47.00	350.90		82.00	445.30	
5/26/2021	455.00	0.03	48.00	351.90		80.00	443.30	

Notes:

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			C-9			RR-2		
Piezo. Tip Elevation -->			357.00			393.20		
Zero Gage Reading -->			53.10			29.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	47.00	350.90		64.00	427.30	
7/29/2021	423.60	0.07	48.00	351.90		53.00	416.30	
8/24/2021	408.00	0.00	48.00	351.90		40.00	403.30	
9/29/2021	398.00	0.04	47.00	350.90		18.00	381.30	
10/26/2021	417.00	0.87	47.00	350.90		45.00	408.30	
11/25/2021	427.90	0.00	48.00	351.90		56.00	419.30	
12/21/2021	427.90	4.77	48.00	351.90		70.00	433.30	

Notes:

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TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			LA-1			LA-2		
Piezo. Tip Elevation -->			391.20			440.30		
Zero Gage Reading -->			27.30			17.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		36.00	399.90		11.00	433.70	
2/27/2007	426.80		58.00	421.90		52.00	474.70	
3/28/2007	438.80		59.00	422.90		11.00	433.70	
4/26/2007	450.90		81.00	444.90		14.00	436.70	
5/23/2007	461.40		92.00	455.90		28.00	450.70	
6/27/2007	457.20		88.00	451.90		25.00	447.70	
7/26/2007	445.50		76.00	439.90		17.00	439.70	
8/28/2007	434.60		66.00	429.90		15.00	437.70	
9/25/2007	416.80		47.00	410.90		14.00	436.70	
10/24/2007	404.50		33.00	396.90		14.00	436.70	
11/27/2007	422.20		51.00	414.90		13.00	435.70	
1/3/2008	443.20		72.00	435.90		11.00	433.70	
1/29/2008	452.20		82.00	445.90		18.00	440.70	
2/27/2008	460.80		90.00	453.90		27.00	449.70	
3/26/2008	468.00		98.00	461.90		36.00	458.70	
4/29/2008	468.60		99.50	463.40		38.00	460.70	
5/29/2008	464.70		95.00	458.90		35.00	457.70	
6/26/2008	455.70		86.00	449.90		27.00	449.70	
7/29/2008	447.30	0.00	78.00	441.90		20.00	442.70	
8/28/2008	438.80	0.00	70.00	433.90		14.00	436.70	
9/26/2008	430.70	0.00	62.00	425.90		15.00	437.70	
10/29/2008	412.50	0.00	42.00	405.90		14.00	436.70	
11/25/2008	404.70	2.60	36.00	399.90		14.00	436.70	
12/30/2008	440.90	3.42	61.00	424.90		14.00	436.70	
1/28/2009	463.70	0.17	94.00	457.90		31.00	453.70	
2/25/2009	470.10	3.35	100.00	463.90		39.00	461.70	
3/26/2009	469.40	0.19	100.00	463.90		40.00	462.70	
4/29/2009	466.90	0.07	98.00	461.90		36.00	458.70	
5/18/2009	466.70	0.00	97.00	460.90		37.00	459.70	
5/29/2009	465.00	0.00	95.00	458.90		32.00	454.70	
6/30/2009	460.20	0.00	91.00	454.90		31.00	453.70	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			LA-1			LA-2		
Piezo. Tip Elevation -->			391.20			440.30		
Zero Gage Reading -->			27.30			17.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	81.00	444.90		22.00	444.70	
8/25/2009	440.10	0.00	70.00	433.90		16.00	438.70	
9/30/2009	432.20	0.00	61.00	424.90		14.00	436.70	
10/29/2009	431.40	0.53	62.00	425.90		15.00	437.70	
12/1/2009	427.40	0.00	57.00	420.90		15.00	437.70	
12/29/2009	448.10	2.06	79.00	442.90		16.00	438.70	
1/27/2010	465.60	4.62	96.00	459.90		34.00	456.70	
2/25/2010	470.20	2.51	101.00	464.90		40.00	462.70	
3/29/2010	465.70	0.99	96.00	459.90		37.00	459.70	
4/4/2010	465.00		96.00	459.90		36.00	458.70	
4/27/2010	468.40	1.23	98.00	461.90		38.00	460.70	
5/27/2010	463.30	0.05	94.00	457.90		34.00	456.70	
6/30/2010	454.70	0.00	84.00	447.90		26.00	448.70	
7/28/2010	445.60	0.00	78.00	441.90		19.00	441.70	
8/31/2010	437.10	0.00	67.00	430.90		16.00	438.70	
9/29/2010	422.70	0.00	54.00	417.90		16.00	438.70	
10/27/2010	426.40	2.38	57.50	421.40		15.50	438.20	
11/29/2010	439.80	0.97	70.00	433.90		13.00	435.70	
12/30/2010	456.60	8.62	84.00	447.90		25.00	447.70	
2/1/2011	468.90	0.92	98.00	461.90		39.00	461.70	
2/23/2011	469.00	0.99	99.00	462.90		39.00	461.70	
3/29/2011	470.30	2.93	100.00	463.90		40.00	462.70	
4/27/2011	464.80	0.19	96.00	459.90		36.00	458.70	
5/26/2011	457.30	0.48	88.00	451.90		29.00	451.70	
6/28/2011	443.50	0.05	74.00	437.90		18.00	440.70	
7/29/2011	425.10	0.00	59.00	422.90		16.00	438.70	
8/24/2011	418.00	0.00	44.00	407.90		16.00	438.70	
9/27/2011	400.90	0.12	31.00	394.90		15.00	437.70	
10/26/2011	402.20	1.25	32.00	395.90		13.00	435.70	
11/30/2011	425.10	1.38	55.00	418.90		15.00	437.70	
12/21/2011	435.70	0.32	66.00	429.90		16.00	438.70	

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			LA-1			LA-2		
Piezo. Tip Elevation -->			391.20			440.30		
Zero Gage Reading -->			27.30			17.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	72.00	435.90		15.00	437.70	
2/28/2012	448.40	0.42	78.00	441.90		16.00	438.70	
3/26/2012	452.70	1.06	82.00	445.90		21.00	443.70	
4/23/2012	463.40	1.32	95.00	458.90		32.00	454.70	
5/30/2012	457.30	0.02	89.00	452.90		29.00	451.70	
6/13/2012	452.90	0.02	84.00	447.90		24.00	446.70	
6/26/2012	450.20	0.00	80.00	443.90		22.00	444.70	
7/24/2012	439.80	0.00	70.00	433.90		16.00	438.70	
8/8/2012	437.60	0.12	68.00	431.90		16.00	438.70	
8/22/2012	433.40	0.00	69.00	432.90		16.00	438.70	
8/29/2012	431.30	0.00	62.00	425.90		16.00	438.70	
9/25/2012	420.80	0.00	60.00	423.90		15.00	437.70	
10/31/2012	412.30	0.26	44.00	407.90		16.00	438.70	
11/27/2012	420.80	0.58	51.00	414.90		15.00	437.70	
12/18/2012	448.00	1.44	80.00	443.90		16.00	438.70	
1/29/2013	468.60	1.18	100.00	463.90		38.00	460.70	
2/28/2013	469.20	0.30	100.00	463.90		40.00	462.70	
3/27/2013	468.30	0.50	98.00	461.90		39.00	461.70	
4/25/2013	462.70	0.00	94.00	457.90		34.00	456.70	
5/21/2013	454.20	0.00	84.00	447.90		25.00	447.70	
6/25/2013	439.30	0.00	69.00	432.90		16.00	438.70	
7/23/2013	431.50	0.00	63.00	426.90		16.00	438.70	
8/21/2013	418.00	0.00	49.00	412.90		16.00	438.70	
9/24/2013	404.00	0.00	35.00	398.90		15.00	437.70	
10/29/2013	400.60	0.00	32.00	395.90		14.00	436.70	
11/26/2013	407.90	0.44	39.00	402.90		14.00	436.70	
12/19/2013	425.80	0.54	56.00	419.90		14.00	436.70	
1/28/2014	439.70	0.00	70.00	433.90		14.00	436.70	
2/25/2014	449.70	0.83	80.00	443.90		18.00	440.70	
3/26/2014	465.10		95.00	458.90		24.00	446.70	
3/28/2014	465.70	1.15	96.00	459.90		34.00	456.70	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			LA-1			LA-2		
Piezo. Tip Elevation -->			391.20			440.30		
Zero Gage Reading -->			27.30			17.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	96.00	459.90		36.00	458.70	
5/28/2014	450.60	0.00	80.00	443.90		23.00	445.70	
6/25/2014	440.10	0.00	70.00	433.90		15.00	437.70	
7/29/2014	431.20	0.00	62.00	425.90		15.00	437.70	
8/26/2014	419.50	0.02	50.00	413.90		15.00	437.70	
9/23/2014	405.30	0.00	36.00	399.90		15.00	437.70	
10/29/2014	400.90	0.00	31.00	394.90		14.00	436.70	
11/25/2014	410.90	0.25	41.00	404.90		14.00	436.70	
12/30/2014	430.60	2.94	59.00	422.90		15.00	437.70	
1/27/2015	466.70	0.83	97.00	460.90		36.00	458.70	
2/25/2015	468.90	0.69	100.00	463.90		38.00	460.70	
3/26/2015	465.90	0.61	97.00	460.90		37.00	459.70	
4/28/2015	465.70	0.20	97.00	460.90		36.00	458.70	
5/28/2015	466.40	1.08	97.00	460.90		36.00	458.70	
6/30/2015	454.50	0.00	85.00	448.90		27.00	449.70	
7/28/2015	445.60	0.00	77.00	440.90		18.00	440.70	
8/28/2015	437.60	0.00	69.00	432.90		16.00	438.70	
9/24/2015	426.90	1.51	58.00	421.90		17.00	439.70	
10/27/2015	415.40	0.49	48.00	411.90		15.00	437.70	
11/19/2015	412.90	0.09	42.00	405.90		14.00	436.70	
12/22/2015	425.50	0.69	56.00	419.90		14.00	436.70	
1/27/2016	463.60	2.86	94.00	457.90		32.00	454.70	
2/25/2016	468.90	0.25	100.00	463.90		38.00	460.70	
3/30/2016	468.00	1.44	100.00	463.90		39.00	461.70	
4/28/2016	461.30	0.30	92.00	455.90		33.00	455.70	
5/25/2016	451.30	0.18	80.00	443.90		23.00	445.70	
6/28/2016	414.10	0.00	73.00	436.90		17.00	439.70	
7/27/2016	434.20	0.00	66.00	429.90		16.00	438.70	
8/23/2016	418.60	0.00	50.00	413.90		15.00	437.70	
9/27/2016	406.40	0.00	36.00	399.90		16.00	438.70	
10/26/2016	404.00	0.48	33.00	396.90		16.00	438.70	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			LA-1			LA-2		
Piezo. Tip Elevation -->			391.20			440.30		
Zero Gage Reading -->			27.30			17.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	44.00	407.90		14.00	436.70	
12/20/2016	441.10	3.48	71.00	434.90		14.00	436.70	
1/26/2017	471.60	5.67	102.00	465.90		41.00	463.70	
2/24/2017	472.05	3.95	104.00	467.90		42.00	464.70	
2/25/2017	472.00							
2/26/2017	472.00							
2/27/2017	472.00		103.00	466.90		42.00	464.70	
2/28/2017	471.90		104.00	467.90		42.00	464.70	
3/1/2017	471.90		104.00	467.90		42.00	464.70	
3/2/2017	471.90		104.00	467.90		40.00	462.70	
3/29/2017	467.90	0.10	100.00	463.90		38.00	460.70	
4/27/2017	457.60	0.04	89.00	452.90		29.00	451.70	
5/23/2017	453.50	0.43	85.00	448.90		25.00	447.70	
6/21/2017	447.40	0.00	80.00	443.90		17.00	439.70	
7/26/2017	435.10	0.00	67.00	430.90		16.00	438.70	
8/25/2017	420.10	0.00	50.00	413.90		15.00	437.70	
9/27/2017	407.10	0.00	40.00	403.90		15.00	437.70	
10/26/2017	395.00	0.00	24.00	387.90		15.00	437.70	
11/28/2017	409.00	0.09	39.00	402.90		13.00	435.70	
12/20/2017	416.80	0.00	47.00	410.90		14.00	436.70	
1/24/2018	434.50	1.31	64.00	427.90		12.00	434.70	
2/21/2018	443.10	0.29	75.00	438.90		13.00	435.70	
3/29/2018	453.00	1.28	84.00	447.90		20.00	442.70	
4/26/2018	449.10	0.05	81.00	444.90		20.00	442.70	
5/31/2018	453.10	0.20	86.00	449.90		22.00	444.70	
6/28/2018	448.20	0.00	80.00	443.90		20.00	442.70	
7/25/2018	440.40	0.00	71.00	434.90		17.00	439.70	
8/22/2018	427.10	0.00	59.00	422.90		14.00	436.70	
9/27/2018	439.60	0.00	38.00	401.90		12.00	434.70	
10/18/2018	405.30	0.90	36.00	399.90		14.00	436.70	
11/28/2018	408.60	1.19	40.00	403.90		14.00	436.70	

Notes:

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			LA-1			LA-2		
Piezo. Tip Elevation -->			391.20			440.30		
Zero Gage Reading -->			27.30			17.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	66.00	429.90		10.00	432.70	
1/30/2019	463.80	4.71	96.00	459.90		32.00	454.70	
2/27/2019	466.20	6.55	99.00	462.90		36.00	458.70	
3/27/2019	463.30	1.34	94.00	457.90		32.00	454.70	
4/29/2019	453.00	0.13	86.00	449.90		25.00	447.70	
5/30/2019	451.80	0.64	84.00	447.90		22.00	444.70	
6/26/2019	446.20	0.01	78.00	441.90		19.00	441.70	
7/5/2019	39.40	0.00	73.00	436.90		16.00	438.70	
7/30/2019	434.80	0.00	66.00	429.90		16.00	438.70	
8/27/2019	424.40	0.00	56.00	419.90		15.00	437.70	
9/26/2019	405.60	0.00	37.00	400.90		14.00	436.70	
10/22/2019	400.50	0.00	32.00	395.90		12.00	434.70	
11/26/2019	412.80	3.13	44.00	407.90		14.00	436.70	
12/18/2019	447.40	4.44	79.00	442.90		15.00	437.70	
1/28/2020	465.40	0.20	98.00	461.90		32.00	454.70	
2/26/2020	459.60	0.14	92.00	455.90		30.00	452.70	
3/24/2020	470.70	3.49	102.00	465.90		40.00	462.70	
4/29/2020	467.60	3.65	99.00	462.90		39.00	461.70	
5/27/2020	459.10	0.02	90.00	453.90		32.00	454.70	
6/23/2020	447.00	0.00	79.00	442.90		20.00	442.70	
7/30/2020	434.00	0.00	66.00	429.90		16.00	438.70	
8/26/2020	417.70	0.00	48.00	411.90		14.00	436.70	
9/29/2020	403.60	0.00	34.00	397.90		14.00	436.70	
10/28/2020	404.50	0.00	32.00	395.90		15.00	437.70	
11/24/2020	413.50	0.42	44.00	407.90		10.00	432.70	
12/22/2020	408.00	1.13	38.00	401.90		9.00	431.70	
1/27/2021	435.60	2.25	79.00	442.90		10.00	432.70	
2/25/2021	457.30	0.05	89.00	452.90		25.00	447.70	
3/23/2021	465.90	1.36	98.00	461.90		34.00	456.70	
4/27/2021	462.10	0.04	94.00	457.90		31.00	453.70	
5/26/2021	455.00	0.03	86.00	449.90		26.00	448.70	

Notes:

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			LA-1			LA-2		
Piezo. Tip Elevation -->			391.20			440.30		
Zero Gage Reading -->			27.30			17.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	70.00	433.90		15.00	437.70	
7/29/2021	423.60	0.07	54.00	417.90		15.00	437.70	
8/24/2021	408.00	0.00	40.00	403.90		16.00	438.70	
9/29/2021	398.00	0.04	28.00	391.90		12.00	434.70	
10/26/2021	417.00	0.87	48.00	411.90		14.00	436.70	
11/25/2021	427.90	0.00	59.00	422.90		14.00	436.70	
12/21/2021	427.90	4.77	76.00	439.90		10.00	432.70	

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TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			RA-1			RA-2		
Piezo. Tip Elevation -->			364.50			354.30		
Zero Gage Reading -->			61.00			51.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		80.00	383.50		81.00	384.30	
2/27/2007	426.80		90.00	393.50		86.00	389.30	
3/28/2007	438.80		97.00	400.50		92.00	395.30	
4/26/2007	450.90		104.00	407.50		98.00	401.30	
5/23/2007	461.40		110.00	413.50		104.00	407.30	
6/27/2007	457.20		113.00	416.50		105.00	408.30	
7/26/2007	445.50		109.00	412.50		103.00	406.30	
8/28/2007	434.60		103.00	406.50		96.00	399.30	
9/25/2007	416.80		93.00	396.50		94.00	397.30	
10/24/2007	404.50		86.00	389.50		88.00	391.30	
11/27/2007	422.20		86.00	389.50		88.00	391.30	
1/3/2008	443.20		97.00	400.50		96.00	399.30	
1/29/2008	452.20		102.00	405.50		98.00	401.30	
2/27/2008	460.80		110.00	413.50		103.00	406.30	
3/26/2008	468.00		116.00	419.50		106.00	409.30	
4/29/2008	468.60		119.50	423.00		108.00	411.30	
5/29/2008	464.70		116.00	419.50		108.00	411.30	
6/26/2008	455.70		116.00	419.50		106.00	409.30	
7/29/2008	447.30	0.00	111.00	414.50		104.00	407.30	
8/28/2008	438.80	0.00	106.00	409.50		100.00	403.30	
9/26/2008	430.70	0.00	101.00	404.50		99.00	402.30	
10/29/2008	412.50	0.00	90.00	393.50		90.00	393.30	
11/25/2008	404.70	2.60	86.00	389.50		88.00	391.30	
12/30/2008	440.90	3.42	99.00	402.50		94.00	397.30	
1/28/2009	463.70	0.17	112.00	415.50		102.00	405.30	
2/25/2009	470.10	3.35	118.00	421.50		106.00	409.30	
3/26/2009	469.40	0.19	118.00	421.50		108.00	411.30	
4/29/2009	466.90	0.07	118.00	421.50		108.00	411.30	
5/18/2009	466.70	0.00	118.00	421.50		108.00	411.30	
5/29/2009	465.00	0.00	119.00	422.50		108.00	411.30	
6/30/2009	460.20	0.00	116.00	419.50		108.00	411.30	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			RA-1			RA-2		
Piezo. Tip Elevation -->			364.50			354.30		
Zero Gage Reading -->			61.00			51.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	113.00	416.50		106.00	409.30	
8/25/2009	440.10	0.00	106.00	409.50		101.00	404.30	
9/30/2009	432.20	0.00	102.00	405.50		99.00	402.30	
10/29/2009	431.40	0.53	99.00	402.50		97.00	400.30	
12/1/2009	427.40	0.00	96.00	399.50		94.00	397.30	
12/29/2009	448.10	2.06	102.00	405.50		98.00	401.30	
1/27/2010	465.60	4.62	113.00	416.50		104.00	407.30	
2/25/2010	470.20	2.51	119.00	422.50		108.00	411.30	
3/29/2010	465.70	0.99	117.00	420.50		107.00	410.30	
4/4/2010	465.00		117.00	420.50		116.00	419.30	
4/27/2010	468.40	1.23	119.00	422.50		107.00	410.30	
5/27/2010	463.30	0.05	117.00	420.50		107.00	410.30	
6/30/2010	454.70	0.00	114.00	417.50		106.00	409.30	
7/28/2010	445.60	0.00	109.00	412.50		102.00	405.30	
8/31/2010	437.10	0.00	104.00	407.50		100.00	403.30	
9/29/2010	422.70	0.00	98.00	401.50		97.00	400.30	
10/27/2010	426.40	2.38	94.00	397.50		94.00	397.30	
11/29/2010	439.80	0.97	99.00	402.50		96.00	399.30	
12/30/2010	456.60	8.62	106.00	409.50		100.00	403.30	
2/1/2011	468.90	0.92	115.00	418.50		106.00	409.30	
2/23/2011	469.00	0.99	118.00	421.50		107.00	410.30	
3/29/2011	470.30	2.93	118.00	421.50		107.00	410.30	
4/27/2011	464.80	0.19	120.00	423.50		108.00	411.30	
5/26/2011	457.30	0.48	117.00	420.50		106.00	409.30	
6/28/2011	443.50	0.05	108.00	411.50		101.00	404.30	
7/29/2011	425.10	0.00	99.00	402.50		96.00	399.30	
8/24/2011	418.00	0.00	90.00	393.50		90.00	393.30	
9/27/2011	400.90	0.12	84.00	387.50		86.00	389.30	
10/26/2011	402.20	1.25	82.00	385.50		84.00	387.30	
11/30/2011	425.10	1.38	91.00	394.50		88.00	391.30	
12/21/2011	435.70	0.32	97.00	400.50		92.00	395.30	

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PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			RA-1			RA-2		
Piezo. Tip Elevation -->			364.50			354.30		
Zero Gage Reading -->			61.00			51.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	97.00	400.50		93.00	396.30	
2/28/2012	448.40	0.42	102.00	405.50		96.00	399.30	
3/26/2012	452.70	1.06	104.00	407.50		98.00	401.30	
4/23/2012	463.40	1.32	113.00	416.50		102.00	405.30	
5/30/2012	457.30	0.02	114.00	417.50		104.00	407.30	
6/13/2012	452.90	0.02	111.00	414.50		102.00	405.30	
6/26/2012	450.20	0.00	110.00	413.50		102.00	405.30	
7/24/2012	439.80	0.00	104.00	407.50		98.00	401.30	
8/8/2012	437.60	0.12	103.00	406.50		98.00	401.30	
8/22/2012	433.40	0.00	101.00	404.50		96.00	399.30	
8/29/2012	431.30	0.00	100.00	403.50		96.00	399.30	
9/25/2012	420.80	0.00	91.00	394.50		88.00	391.30	
10/31/2012	412.30	0.26	88.00	391.50		90.00	393.30	
11/27/2012	420.80	0.58	89.00	392.50		89.00	392.30	
12/18/2012	448.00	1.44	104.00	407.50		97.00	400.30	
1/29/2013	468.60	1.18	118.00	421.50		105.00	408.30	
2/28/2013	469.20	0.30	120.00	423.50		106.00	409.30	
3/27/2013	468.30	0.50	120.00	423.50		107.00	410.30	
4/25/2013	462.70	0.00	118.00	421.50		106.00	409.30	
5/21/2013	454.20	0.00	113.00	416.50		104.00	407.30	
6/25/2013	439.30	0.00	103.00	406.50		99.00	402.30	
7/23/2013	431.50	0.00	100.00	403.50		96.00	399.30	
8/21/2013	418.00	0.00	92.00	395.50		92.00	395.30	
9/24/2013	404.00	0.00	84.00	387.50		85.00	388.30	
10/29/2013	400.60	0.00	81.00	384.50		84.00	387.30	
11/26/2013	407.90	0.44	81.00	384.50		84.00	387.30	
12/19/2013	425.80	0.54	90.00	393.50		88.00	391.30	
1/28/2014	439.70	0.00	97.00	400.50		91.00	394.30	
2/25/2014	449.70	0.83	104.00	407.50		96.00	399.30	
3/26/2014	465.10		115.00	418.50		103.00	406.30	
3/28/2014	465.70	1.15	116.00	419.50		103.00	406.30	

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SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			RA-1			RA-2		
Piezo. Tip Elevation -->			364.50			354.30		
Zero Gage Reading -->			61.00			51.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	119.00	422.50		106.00	409.30	
5/28/2014	450.60	0.00	111.00	414.50		102.00	405.30	
6/25/2014	440.10	0.00	104.00	407.50		98.00	401.30	
7/29/2014	431.20	0.00	100.00	403.50		96.00	399.30	
8/26/2014	419.50	0.02	93.00	396.50		92.00	395.30	
9/23/2014	405.30	0.00	84.00	387.50		86.00	389.30	
10/29/2014	400.90	0.00	82.00	385.50		85.00	388.30	
11/25/2014	410.90	0.25	82.00	385.50		85.00	388.30	
12/30/2014	430.60	2.94	94.00	397.50		89.00	392.30	
1/27/2015	466.70	0.83	117.00	420.50		104.00	407.30	
2/25/2015	468.90	0.69	120.00	423.50		105.00	408.30	
3/26/2015	465.90	0.61	119.00	422.50		105.00	408.30	
4/28/2015	465.70	0.20	120.00	423.50		106.00	409.30	
5/28/2015	466.40	1.08	118.00	421.50		106.00	409.30	
6/30/2015	454.50	0.00	116.00	419.50		105.00	408.30	
7/28/2015	445.60	0.00	109.00	412.50		101.00	404.30	
8/28/2015	437.60	0.00	105.00	408.50		99.00	402.30	
9/24/2015	426.90	1.51	98.00	401.50		94.00	397.30	
10/27/2015	415.40	0.49	91.00	394.50		91.00	394.30	
11/19/2015	412.90	0.09	87.00	390.50		88.00	391.30	
12/22/2015	425.50	0.69	92.00	395.50		90.00	393.30	
1/27/2016	463.60	2.86	116.00	419.50		102.00	405.30	
2/25/2016	468.90	0.25	122.00	425.50		105.00	408.30	
3/30/2016	468.00	1.44	122.00	425.50		106.00	409.30	
4/28/2016	461.30	0.30	120.00	423.50		104.00	407.30	
5/25/2016	451.30	0.18	114.00	417.50		102.00	405.30	
6/28/2016	414.10	0.00	108.00	411.50		100.00	403.30	
7/27/2016	434.20	0.00	103.00	406.50		97.00	400.30	
8/23/2016	418.60	0.00	83.00	386.50		91.00	394.30	
9/27/2016	406.40	0.00	86.00	389.50		86.00	389.30	
10/26/2016	404.00	0.48	82.00	385.50		83.00	386.30	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			RA-1			RA-2		
Piezo. Tip Elevation -->			364.50			354.30		
Zero Gage Reading -->			61.00			51.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	86.00	389.50		85.00	388.30	
12/20/2016	441.10	3.48	102.00	405.50		93.00	396.30	
1/26/2017	471.60	5.67	123.00	426.50		104.00	407.30	
2/24/2017	472.05	3.95	125.00	428.50		106.00	409.30	
2/25/2017	472.00							
2/26/2017	472.00							
2/27/2017	472.00		125.00	428.50		106.00	409.30	
2/28/2017	471.90		125.00	428.50		106.00	409.30	
3/1/2017	471.90		126.00	429.50		106.00	409.30	
3/2/2017	471.90		126.00	429.50		106.00	409.30	
3/29/2017	467.90	0.10	124.00	427.50		106.00	409.30	
4/27/2017	457.60	0.04	118.00	421.50		104.00	407.30	
5/23/2017	453.50	0.43	105.00	408.50		102.00	405.30	
6/21/2017	447.40	0.00	111.00	414.50		102.00	405.30	
7/26/2017	435.10	0.00	103.00	406.50		97.00	400.30	
8/25/2017	420.10	0.00	93.00	396.50		91.00	394.30	
9/27/2017	407.10	0.00	86.00	389.50		87.00	390.30	
10/26/2017	395.00	0.00	77.00	380.50		80.00	383.30	
11/28/2017	409.00	0.09	82.00	385.50		82.00	385.30	
12/20/2017	416.80	0.00	87.00	390.50		84.00	387.30	
1/24/2018	434.50	1.31	98.00	401.50		90.00	393.30	
2/21/2018	443.10	0.29	103.00	406.50		92.00	395.30	
3/29/2018	453.00	1.28	110.00	413.50		96.00	399.30	
4/26/2018	449.10	0.05	110.00	413.50		97.00	400.30	
5/31/2018	453.10	0.20	112.00	415.50		99.00	402.30	
6/28/2018	448.20	0.00	110.00	413.50		98.00	401.30	
7/25/2018	440.40	0.00	106.00	409.50		97.00	400.30	
8/22/2018	427.10	0.00	99.00	402.50		93.00	396.30	
9/27/2018	439.60	0.00	85.00	388.50		87.00	390.30	
10/18/2018	405.30	0.90	83.00	386.50		85.00	388.30	
11/28/2018	408.60	1.19	82.00	385.50		85.00	388.30	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			RA-1			RA-2		
Piezo. Tip Elevation -->			364.50			354.30		
Zero Gage Reading -->			61.00			51.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	100.00	403.50		92.00	395.30	
1/30/2019	463.80	4.71	123.00	426.50		102.00	405.30	
2/27/2019	466.20	6.55	121.00	424.50		102.00	405.30	
3/27/2019	463.30	1.34	120.00	423.50		102.00	405.30	
4/29/2019	453.00	0.13	114.00	417.50		100.00	403.30	
5/30/2019	451.80	0.64	114.00	417.50		100.00	403.30	
6/26/2019	446.20	0.01	111.00	414.50		99.00	402.30	
7/5/2019	39.40	0.00	108.00	411.50		98.00	401.30	
7/30/2019	434.80	0.00	103.00	406.50		96.00	399.30	
8/27/2019	424.40	0.00	98.00	401.50		92.00	395.30	
9/26/2019	405.60	0.00	85.00	388.50		85.00	388.30	
10/22/2019	400.50	0.00	80.00	383.50		82.00	385.30	
11/26/2019	412.80	3.13	86.00	389.50		84.00	387.30	
12/18/2019	447.40	4.44	109.00	412.50		95.00	398.30	
1/28/2020	465.40	0.20	122.00	425.50		103.00	406.30	
2/26/2020	459.60	0.14	118.00	421.50		102.00	405.30	
3/24/2020	470.70	3.49	126.00	429.50		104.00	407.30	
4/29/2020	467.60	3.65	125.00	428.50		105.00	408.30	
5/27/2020	459.10	0.02	120.00	423.50		104.00	407.30	
6/23/2020	447.00	0.00	112.00	415.50		100.00	403.30	
7/30/2020	434.00	0.00	103.00	406.50		95.00	398.30	
8/26/2020	417.70	0.00	92.00	395.50		90.00	393.30	
9/29/2020	403.60	0.00	82.00	385.50		82.00	385.30	
10/28/2020	404.50	0.00	82.00	385.50		83.00	386.30	
11/24/2020	413.50	0.42	86.00	389.50		84.00	387.30	
12/22/2020	408.00	1.13	82.00	385.50		82.00	385.30	
1/27/2021	435.60	2.25	100.00	403.50		79.00	382.30	
2/25/2021	457.30	0.05	118.00	421.50		98.00	401.30	
3/23/2021	465.90	1.36	122.00	425.50		102.00	405.30	
4/27/2021	462.10	0.04	121.00	424.50		102.00	405.30	
5/26/2021	455.00	0.03	118.00	421.50		101.00	404.30	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			RA-1			RA-2		
Piezo. Tip Elevation -->			364.50			354.30		
Zero Gage Reading -->			61.00			51.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	106.00	409.50		95.00	398.30	
7/29/2021	423.60	0.07	97.00	400.50		91.00	394.30	
8/24/2021	408.00	0.00	88.00	391.50		86.00	389.30	
9/29/2021	398.00	0.04	80.00	383.50		80.00	383.30	
10/26/2021	417.00	0.87	91.00	394.50		85.00	388.30	
11/25/2021	427.90	0.00	98.00	401.50		89.00	392.30	
12/21/2021	427.90	4.77	111.00	414.50		95.00	398.30	

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1. Readings in red are classified as erroneous.
 2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			RA-3			RA-4		
Piezo. Tip Elevation -->			390.80			441.00		
Zero Gage Reading -->			26.90			18.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		32.00	395.90		15.00	438.00	
2/27/2007	426.80		50.00	413.90		16.00	439.00	
3/28/2007	438.80		61.00	424.90		14.00	437.00	
4/26/2007	450.90		73.00	436.90		16.00	439.00	
5/23/2007	461.40		82.00	445.90		25.00	448.00	
6/27/2007	457.20		79.00	442.90		25.00	448.00	
7/26/2007	445.50		71.00	434.90		22.00	445.00	
8/28/2007	434.60		62.00	425.90		20.00	443.00	
9/25/2007	416.80		46.00	409.90		19.00	442.00	
10/24/2007	404.50		34.00	397.90		17.00	440.00	
11/27/2007	422.20		46.00	409.90		14.00	437.00	
1/3/2008	443.20		66.00	429.90		14.00	437.00	
1/29/2008	452.20		74.00	437.90		16.00	439.00	
2/27/2008	460.80		81.00	444.90				
3/26/2008	468.00		88.00	451.90				
4/29/2008	468.60		90.00	453.90				
5/29/2008	464.70		87.00	450.90				
6/26/2008	455.70		80.00	443.90				
7/29/2008	447.30	0.00	72.00	435.90				
8/28/2008	438.80	0.00	66.00	429.90				
9/26/2008	430.70	0.00	58.00	421.90				
10/29/2008	412.50	0.00	42.00	405.90				
11/25/2008	404.70	2.60	36.00	399.90				
12/30/2008	440.90	3.42	63.00	426.90				
1/28/2009	463.70	0.17	84.50	448.40				
2/25/2009	470.10	3.35	90.00	453.90				
3/26/2009	469.40	0.19	90.00	453.90				
4/29/2009	466.90	0.07	89.00	452.90				
5/18/2009	466.70	0.00	89.00	452.90				
5/29/2009	465.00	0.00	88.00	451.90				
6/30/2009	460.20	0.00	84.00	447.90				

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			RA-3			RA-4		
Piezo. Tip Elevation -->			390.80			441.00		
Zero Gage Reading -->			26.90			18.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	78.00	441.90				
8/25/2009	440.10	0.00	67.00	430.90				
9/30/2009	432.20	0.00	59.00	422.90				
10/29/2009	431.40	0.53	59.00	422.90				
12/1/2009	427.40	0.00	54.00	417.90				
12/29/2009	448.10	2.06	72.00	435.90				
1/27/2010	465.60	4.62	84.00	447.90				
2/25/2010	470.20	2.51	92.00	455.90				
3/29/2010	465.70	0.99	88.00	451.90				
4/4/2010	465.00		88.00	451.90				
4/27/2010	468.40	1.23	90.00	453.90				
5/27/2010	463.30	0.05	87.00	450.90				
6/30/2010	454.70	0.00	79.00	442.90				
7/28/2010	445.60	0.00	72.00	435.90				
8/31/2010	437.10	0.00	65.00	428.90				
9/29/2010	422.70	0.00	52.00	415.90				
10/27/2010	426.40	2.38	54.00	417.90				
11/29/2010	439.80	0.97	65.00	428.90				
12/30/2010	456.60	8.62	80.00	443.90				
2/1/2011	468.90	0.92	89.00	452.90				
2/23/2011	469.00	0.99	91.00	454.90				
3/29/2011	470.30	2.93	92.00	455.90				
4/27/2011	464.80	0.19	88.00	451.90				
5/26/2011	457.30	0.48	82.00	445.90				
6/28/2011	443.50	0.05	71.00	434.90				
7/29/2011	425.10	0.00	57.00	420.90				
8/24/2011	418.00	0.00	44.00	407.90				
9/27/2011	400.90	0.12	34.00	397.90		16.00	439.00	
10/26/2011	402.20	1.25	32.00	395.90		10.00	433.00	
11/30/2011	425.10	1.38	52.00	415.90		11.00	434.00	
12/21/2011	435.70	0.32	60.00	423.90		13.00	436.00	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			RA-3			RA-4		
Piezo. Tip Elevation -->			390.80			441.00		
Zero Gage Reading -->			26.90			18.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	66.00	429.90		10.00	433.00	
2/28/2012	448.40	0.42	70.00	433.90		14.00	437.00	
3/26/2012	452.70	1.06	76.00	439.90		15.00	438.00	
4/23/2012	463.40	1.32	86.00	449.90		0.00	423.00	
5/30/2012	457.30	0.02	82.00	445.90		0.00	423.00	
6/13/2012	452.90	0.02	78.00	441.90		0.00	423.00	
6/26/2012	450.20	0.00	78.00	441.90		0.00	423.00	
7/24/2012	439.80	0.00	68.00	431.90		0.00	423.00	
8/8/2012	437.60	0.12	66.00	429.90		0.00	423.00	
8/22/2012	433.40	0.00	62.00	425.90		0.00	423.00	
8/29/2012	431.30	0.00	60.00	423.90		0.00	423.00	
9/25/2012	420.80	0.00	52.00	415.90		11.00	434.00	
10/31/2012	412.30	0.26	43.00	406.90		14.00	437.00	
11/27/2012	420.80	0.58	49.00	412.90		15.00	438.00	
12/18/2012	448.00	1.44	72.00	435.90		11.00	434.00	
1/29/2013	468.60	1.18	90.00	453.90		0.00	423.00	
2/28/2013	469.20	0.30	91.00	454.90		0.00	423.00	
3/27/2013	468.30	0.50	90.00	453.90		0.00	423.00	
4/25/2013	462.70	0.00	86.00	449.90		0.00	423.00	
5/21/2013	454.20	0.00	79.00	442.90		0.00	423.00	
6/25/2013	439.30	0.00	66.00	429.90		0.00	423.00	
7/23/2013	431.50	0.00	60.00	423.90		0.00	423.00	
8/21/2013	418.00	0.00	49.00	412.90		0.00	423.00	
9/24/2013	404.00	0.00	37.00	400.90		17.00	440.00	
10/29/2013	400.60	0.00	34.00	397.90		16.00	439.00	
11/26/2013	407.90	0.44	38.00	401.90		14.00	437.00	
12/19/2013	425.80	0.54	53.00	416.90		11.00	434.00	
1/28/2014	439.70	0.00	65.00	428.90		12.00	435.00	
2/25/2014	449.70	0.83	74.00	437.90		16.00	439.00	
3/26/2014	465.10		87.00	450.90		0.00	423.00	
3/28/2014	465.70	1.15	88.00	451.90		0.00	423.00	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			RA-3			RA-4		
Piezo. Tip Elevation -->			390.80			441.00		
Zero Gage Reading -->			26.90			18.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	88.00	451.90		0.00	423.00	
5/28/2014	450.60	0.00	78.00	441.90		0.00	423.00	
6/25/2014	440.10	0.00	67.00	430.90		0.00	423.00	
7/29/2014	431.20	0.00	60.00	423.90		0.00	423.00	
8/26/2014	419.50	0.02	50.00	413.90		0.00	423.00	
9/23/2014	405.30	0.00	38.00	401.90		15.00	438.00	
10/29/2014	400.90	0.00	44.00	407.90		16.00	439.00	
11/25/2014	410.90	0.25	40.00	403.90		18.00	441.00	
12/30/2014	430.60	2.94	56.00	419.90		11.00	434.00	
1/27/2015	466.70	0.83	88.00	451.90		0.00	423.00	
2/25/2015	468.90	0.69	90.00	453.90		0.00	423.00	
3/26/2015	465.90	0.61	88.00	451.90		0.00	423.00	
4/28/2015	465.70	0.20	89.00	452.90		0.00	423.00	
5/28/2015	466.40	1.08	88.00	451.90		0.00	423.00	
6/30/2015	454.50	0.00	80.00	443.90		0.00	423.00	
7/28/2015	445.60	0.00	71.00	434.90		0.00	423.00	
8/28/2015	437.60	0.00	65.00	428.90		0.00	423.00	
9/24/2015	426.90	1.51	56.00	419.90		0.00	423.00	
10/27/2015	415.40	0.49	46.00	409.90		0.00	423.00	
11/19/2015	412.90	0.09	43.00	406.90		17.00	440.00	
12/22/2015	425.50	0.69	54.00	417.90		12.00	435.00	
1/27/2016	463.60	2.86	85.00	448.90		0.00	423.00	
2/25/2016	468.90	0.25	91.00	454.90		0.00	423.00	
3/30/2016	468.00	1.44	90.00	453.90		0.00	423.00	
4/28/2016	461.30	0.30	84.00	447.90		0.00	423.00	
5/25/2016	451.30	0.18	76.00	439.90		0.00	423.00	
6/28/2016	414.10	0.00	70.00	433.90		0.00	423.00	
7/27/2016	434.20	0.00	62.00	425.90		0.00	423.00	
8/23/2016	418.60	0.00	49.00	412.90		0.00	423.00	
9/27/2016	406.40	0.00	38.00	401.90		12.00	435.00	
10/26/2016	404.00	0.48	34.00	397.90		14.00	437.00	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			RA-3			RA-4		
Piezo. Tip Elevation -->			390.80			441.00		
Zero Gage Reading -->			26.90			18.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	42.00	405.90		14.00	437.00	
12/20/2016	441.10	3.48	66.00	429.90		16.00	439.00	
1/26/2017	471.60	5.67	91.00	454.90		0.00	423.00	
2/24/2017	472.05	3.95	92.00	455.90		0.00	423.00	
2/25/2017	472.00							
2/26/2017	472.00							
2/27/2017	472.00		92.00	455.90		0.00	423.00	
2/28/2017	471.90		92.00	455.90		0.00	423.00	
3/1/2017	471.90		93.00	456.90		0.00	423.00	
3/2/2017	471.90		92.00	455.90		0.00	423.00	
3/29/2017	467.90	0.10	90.00	453.90		0.00	423.00	
4/27/2017	457.60	0.04	82.00	445.90		0.00	423.00	
5/23/2017	453.50	0.43	78.00	441.90		0.00	423.00	
6/21/2017	447.40	0.00	70.00	433.90		0.00	423.00	
7/26/2017	435.10	0.00	63.00	426.90		0.00	423.00	
8/25/2017	420.10	0.00	49.00	412.90		0.00	423.00	
9/27/2017	407.10	0.00	38.00	401.90		0.00	423.00	
10/26/2017	395.00	0.00	27.00	390.90		14.00	437.00	
11/28/2017	409.00	0.09	38.00	401.90		12.00	435.00	
12/20/2017	416.80	0.00	44.00	407.90		13.00	436.00	
1/24/2018	434.50	1.31	56.00	419.90		12.00	435.00	
2/21/2018	443.10	0.29	68.00	431.90		13.00	436.00	
3/29/2018	453.00	1.28	75.00	438.90		0.00	423.00	
4/26/2018	449.10	0.05	73.00	436.90		0.00	423.00	
5/31/2018	453.10	0.20	77.00	440.90		0.00	423.00	
6/28/2018	448.20	0.00	74.00	437.90		0.00	423.00	
7/25/2018	440.40	0.00	67.00	430.90		0.00	423.00	
8/22/2018	427.10	0.00	56.00	419.90		0.00	423.00	
9/27/2018	439.60	0.00	38.00	401.90		14.00	437.00	
10/18/2018	405.30	0.90	36.00	399.90		13.00	436.00	
11/28/2018	408.60	1.19	38.00	401.90		12.00	435.00	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			RA-3			RA-4		
Piezo. Tip Elevation -->			390.80			441.00		
Zero Gage Reading -->			26.90			18.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	60.00	423.90		14.00	437.00	
1/30/2019	463.80	4.71	86.00	449.90		0.00	423.00	
2/27/2019	466.20	6.55	88.00	451.90		0.00	423.00	
3/27/2019	463.30	1.34	0.00	363.90	Omitted	0.00	423.00	
4/29/2019	453.00	0.13	78.00	441.90		0.00	423.00	
5/30/2019	451.80	0.64	76.00	439.90		0.00	423.00	
6/26/2019	446.20	0.01	72.00	435.90		0.00	423.00	
7/5/2019	39.40	0.00	68.00	431.90		0.00	423.00	
7/30/2019	434.80	0.00	63.00	426.90		0.00	423.00	
8/27/2019	424.40	0.00	54.00	417.90		18.00	441.00	
9/26/2019	405.60	0.00	36.00	399.90		17.00	440.00	
10/22/2019	400.50	0.00	32.00	395.90		18.00	441.00	
11/26/2019	412.80	3.13	40.00	403.90		16.00	439.00	
12/18/2019	447.40	4.44	71.00	434.90		12.00	435.00	
1/28/2020	465.40	0.20	85.00	448.90		0.00	423.00	
2/26/2020	459.60	0.14	84.00	447.90		0.00	423.00	
3/24/2020	470.70	3.49	91.00	454.90		0.00	423.00	
4/29/2020	467.60	3.65	89.00	452.90		0.00	423.00	
5/27/2020	459.10	0.02	82.00	445.90		0.00	423.00	
6/23/2020	447.00	0.00	72.00	435.90		0.00	423.00	
7/30/2020	434.00	0.00	62.00	425.90		0.00	423.00	
8/26/2020	417.70	0.00	45.00	408.90		0.00	423.00	
9/29/2020	403.60	0.00	37.00	400.90		18.00	441.00	
10/28/2020	404.50	0.00	32.00	395.90		15.00	438.00	
11/24/2020	413.50	0.42	40.00	403.90		18.00	441.00	
12/22/2020	408.00	1.13	36.00	399.90		14.00	437.00	
1/27/2021	435.60	2.25	62.00	425.90		14.00	437.00	
2/25/2021	457.30	0.05	80.00	443.90		0.00	423.00	
3/23/2021	465.90	1.36	87.00	450.90		0.00	423.00	
4/27/2021	462.10	0.04	83.00	446.90		0.00	423.00	
5/26/2021	455.00	0.03	79.00	442.90		0.00	423.00	

Notes:

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			RA-3			RA-4		
Piezo. Tip Elevation -->			390.80			441.00		
Zero Gage Reading -->			26.90			18.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	64.00	427.90		0.00	423.00	
7/29/2021	423.60	0.07	52.00	415.90		0.00	423.00	
8/24/2021	408.00	0.00	39.00	402.90		0.00	423.00	
9/29/2021	398.00	0.04	29.00	392.90		17.00	440.00	
10/26/2021	417.00	0.87	45.00	408.90		17.00	440.00	
11/25/2021	427.90	0.00	56.00	419.90		18.00	441.00	
12/21/2021	427.90	4.77	70.00	433.90		14.00	437.00	

Notes:

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			LR-1			LR-2		
Piezo. Tip Elevation -->			356.30			340.30		
Zero Gage Reading -->			53.60			37.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		57.00	359.70		43.00	345.70	
2/27/2007	426.80		58.00	360.70		44.00	346.70	
3/28/2007	438.80		58.00	360.70		44.00	346.70	
4/26/2007	450.90		57.00	359.70		44.00	346.70	
5/23/2007	461.40		58.00	360.70		45.00	347.70	
6/27/2007	457.20		59.00	361.70		46.00	348.70	
7/26/2007	445.50		59.00	361.70		45.00	347.70	
8/28/2007	434.60		59.00	361.70		46.00	348.70	
9/25/2007	416.80		58.00	360.70		46.00	348.70	
10/24/2007	404.50		58.00	360.70		45.00	347.70	
11/27/2007	422.20		58.00	360.70		44.00	346.70	
1/3/2008	443.20		59.00	361.70		46.00	348.70	
1/29/2008	452.20		59.00	361.70		46.00	348.70	
2/27/2008	460.80		59.00	361.70		47.00	349.70	
3/26/2008	468.00		59.00	361.70		47.00	349.70	
4/29/2008	468.60		59.50	362.20		47.80	350.50	
5/29/2008	464.70		59.00	361.70		47.00	349.70	
6/26/2008	455.70		59.00	361.70		48.00	350.70	
7/29/2008	447.30	0.00	59.00	361.70		48.00	350.70	
8/28/2008	438.80	0.00	60.00	362.70		50.00	352.70	
9/26/2008	430.70	0.00	62.00	364.70		49.00	351.70	
10/29/2008	412.50	0.00	60.00	362.70		48.00	350.70	
11/25/2008	404.70	2.60	60.00	362.70		48.00	350.70	
12/30/2008	440.90	3.42	60.00	362.70		48.00	350.70	
1/28/2009	463.70	0.17	60.50	363.20		48.00	350.70	
2/25/2009	470.10	3.35	61.00	363.70		49.00	351.70	
3/26/2009	469.40	0.19	62.00	364.70		50.00	352.70	
4/29/2009	466.90	0.07	62.00	364.70		49.00	351.70	
5/18/2009	466.70	0.00	63.00	365.70		50.00	352.70	
5/29/2009	465.00	0.00	60.00	362.70		50.00	352.70	
6/30/2009	460.20	0.00	62.00	364.70		50.00	352.70	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			LR-1			LR-2		
Piezo. Tip Elevation -->			356.30			340.30		
Zero Gage Reading -->			53.60			37.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	63.00	365.70		51.00	353.70	
8/25/2009	440.10	0.00	62.00	364.70		51.00	353.70	
9/30/2009	432.20	0.00	62.00	364.70		50.00	352.70	
10/29/2009	431.40	0.53	64.00	366.70		51.00	353.70	
12/1/2009	427.40	0.00	63.00	365.70		50.00	352.70	
12/29/2009	448.10	2.06	64.00	366.70		50.00	352.70	
1/27/2010	465.60	4.62	64.00	366.70		51.00	353.70	
2/25/2010	470.20	2.51	64.00	366.70		51.00	353.70	
3/29/2010	465.70	0.99	65.00	367.70		51.00	353.70	
4/4/2010	465.00		65.00	367.70		52.00	354.70	
4/27/2010	468.40	1.23	64.00	366.70		51.00	353.70	
5/27/2010	463.30	0.05	64.00	366.70		52.00	354.70	
6/30/2010	454.70	0.00	64.00	366.70		52.00	354.70	
7/28/2010	445.60	0.00	65.00	367.70		52.00	354.70	
8/31/2010	437.10	0.00	65.00	367.70		52.00	354.70	
9/29/2010	422.70	0.00	65.00	367.70		51.00	353.70	
10/27/2010	426.40	2.38	65.00	367.70		52.00	354.70	
11/29/2010	439.80	0.97	64.00	366.70		51.00	353.70	
12/30/2010	456.60	8.62	65.00	367.70		52.00	354.70	
2/1/2011	468.90	0.92	67.00	369.70		52.00	354.70	
2/23/2011	469.00	0.99	67.00	369.70		52.00	354.70	
3/29/2011	470.30	2.93	66.00	368.70		52.00	354.70	
4/27/2011	464.80	0.19	67.00	369.70		52.00	354.70	
5/26/2011	457.30	0.48	67.00	369.70		53.00	355.70	
6/28/2011	443.50	0.05	67.00	369.70		53.00	355.70	
7/29/2011	425.10	0.00	66.00	368.70		52.00	354.70	
8/24/2011	418.00	0.00	66.00	368.70		51.00	353.70	
9/27/2011	400.90	0.12	64.00	366.70		50.00	352.70	
10/26/2011	402.20	1.25	64.00	366.70		50.00	352.70	
11/30/2011	425.10	1.38	63.00	365.70		51.00	353.70	
12/21/2011	435.70	0.32	64.00	366.70		51.00	353.70	

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			LR-1			LR-2		
Piezo. Tip Elevation -->			356.30			340.30		
Zero Gage Reading -->			53.60			37.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	64.00	366.70		50.00	352.70	
2/28/2012	448.40	0.42	62.00	364.70		50.00	352.70	
3/26/2012	452.70	1.06	64.00	366.70		50.00	352.70	
4/23/2012	463.40	1.32	64.00	366.70		50.00	352.70	
5/30/2012	457.30	0.02	65.00	367.70		51.00	353.70	
6/13/2012	452.90	0.02	65.00	367.70		50.00	352.70	
6/26/2012	450.20	0.00	64.00	366.70		50.00	352.70	
7/24/2012	439.80	0.00	64.00	366.70		50.00	352.70	
8/8/2012	437.60	0.12	64.00	366.70		51.00	353.70	
8/22/2012	433.40	0.00	65.00	367.70		50.00	352.70	
8/29/2012	431.30	0.00	65.00	367.70		50.00	352.70	
9/25/2012	420.80	0.00	63.00	365.70		51.00	353.70	
10/31/2012	412.30	0.26	64.00	366.70		50.00	352.70	
11/27/2012	420.80	0.58	62.00	364.70		50.00	352.70	
12/18/2012	448.00	1.44	64.00	366.70		50.00	352.70	
1/29/2013	468.60	1.18	66.00	368.70		50.00	352.70	
2/28/2013	469.20	0.30	67.00	369.70		52.00	354.70	
3/27/2013	468.30	0.50	66.00	368.70		51.00	353.70	
4/25/2013	462.70	0.00	64.00	366.70		50.00	352.70	
5/21/2013	454.20	0.00	66.00	368.70		52.00	354.70	
6/25/2013	439.30	0.00	66.00	368.70		51.00	353.70	
7/23/2013	431.50	0.00	66.00	368.70		51.00	353.70	
8/21/2013	418.00	0.00	66.00	368.70		51.00	353.70	
9/24/2013	404.00	0.00	64.00	366.70		50.00	352.70	
10/29/2013	400.60	0.00	64.00	366.70		50.00	352.70	
11/26/2013	407.90	0.44	63.00	365.70		48.00	350.70	
12/19/2013	425.80	0.54	63.00	365.70		50.00	352.70	
1/28/2014	439.70	0.00	64.00	366.70		50.00	352.70	
2/25/2014	449.70	0.83	63.00	365.70		50.00	352.70	
3/26/2014	465.10		65.00	367.70		51.00	353.70	
3/28/2014	465.70	1.15	65.00	367.70		50.00	352.70	

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			LR-1			LR-2		
Piezo. Tip Elevation -->			356.30			340.30		
Zero Gage Reading -->			53.60			37.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	66.00	368.70		51.00	353.70	
5/28/2014	450.60	0.00	65.00	367.70		51.00	353.70	
6/25/2014	440.10	0.00	65.00	367.70		50.00	352.70	
7/29/2014	431.20	0.00	65.00	367.70		50.00	352.70	
8/26/2014	419.50	0.02	66.00	368.70		50.00	352.70	
9/23/2014	405.30	0.00	65.00	367.70		49.00	351.70	
10/29/2014	400.90	0.00	64.00	366.70		50.00	352.70	
11/25/2014	410.90	0.25	63.00	365.70		49.00	351.70	
12/30/2014	430.60	2.94	63.00	365.70		49.00	351.70	
1/27/2015	466.70	0.83	65.00	367.70		50.00	352.70	
2/25/2015	468.90	0.69	66.00	368.70		50.00	352.70	
3/26/2015	465.90	0.61	66.00	368.70		51.00	353.70	
4/28/2015	465.70	0.20	66.00	368.70		51.00	353.70	
5/28/2015	466.40	1.08	66.00	368.70		52.00	354.70	
6/30/2015	454.50	0.00	67.00	369.70		52.00	354.70	
7/28/2015	445.60	0.00	65.00	367.70		51.00	353.70	
8/28/2015	437.60	0.00	67.00	369.70		52.00	354.70	
9/24/2015	426.90	1.51	65.00	367.70		51.00	353.70	
10/27/2015	415.40	0.49	66.00	368.70		52.00	354.70	
11/19/2015	412.90	0.09	65.00	367.70		51.00	353.70	
12/22/2015	425.50	0.69	65.00	367.70		51.00	353.70	
1/27/2016	463.60	2.86	66.00	368.70		52.00	354.70	
2/25/2016	468.90	0.25	66.00	368.70		52.00	354.70	
3/30/2016	468.00	1.44	66.00	368.70		52.00	354.70	
4/28/2016	461.30	0.30	66.00	368.70		52.00	354.70	
5/25/2016	451.30	0.18	66.00	368.70		52.00	354.70	
6/28/2016	414.10	0.00	66.00	368.70		52.00	354.70	
7/27/2016	434.20	0.00	65.00	367.70		52.00	354.70	
8/23/2016	418.60	0.00	66.00	368.70		52.00	354.70	
9/27/2016	406.40	0.00	66.00	368.70		51.00	353.70	
10/26/2016	404.00	0.48	64.00	366.70		54.00	356.70	

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**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			LR-1			LR-2		
Piezo. Tip Elevation -->			356.30			340.30		
Zero Gage Reading -->			53.60			37.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	64.00	366.70		50.00	352.70	
12/20/2016	441.10	3.48	64.00	366.70		51.00	353.70	
1/26/2017	471.60	5.67	66.00	368.70		51.00	353.70	
2/24/2017	472.05	3.95	66.00	368.70		52.00	354.70	
2/25/2017	472.00							
2/26/2017	472.00							
2/27/2017	472.00		67.00	369.70		52.00	354.70	
2/28/2017	471.90		67.00	369.70		53.00	355.70	
3/1/2017	471.90		67.00	369.70		52.00	354.70	
3/2/2017	471.90		67.00	369.70		52.00	354.70	
3/29/2017	467.90	0.10	67.00	369.70		53.00	355.70	
4/27/2017	457.60	0.04	67.00	369.70		53.00	355.70	
5/23/2017	453.50	0.43	66.00	368.70		52.00	354.70	
6/21/2017	447.40	0.00	64.00	366.70		52.00	354.70	
7/26/2017	435.10	0.00	67.00	369.70		52.00	354.70	
8/25/2017	420.10	0.00	66.00	368.70		52.00	354.70	
9/27/2017	407.10	0.00	66.00	368.70		52.00	354.70	
10/26/2017	395.00	0.00	65.00	367.70		51.00	353.70	
11/28/2017	409.00	0.09	62.00	364.70		50.00	352.70	
12/20/2017	416.80	0.00	64.00	366.70		50.00	352.70	
1/24/2018	434.50	1.31	60.00	362.70		50.00	352.70	
2/21/2018	443.10	0.29	64.00	366.70		51.00	353.70	
3/29/2018	453.00	1.28	62.00	364.70		50.00	352.70	
4/26/2018	449.10	0.05	64.00	366.70		51.00	353.70	
5/31/2018	453.10	0.20	65.00	367.70		51.00	353.70	
6/28/2018	448.20	0.00	65.00	367.70		52.00	354.70	
7/25/2018	440.40	0.00	64.00	366.70		51.00	353.70	
8/22/2018	427.10	0.00	65.00	367.70		51.00	353.70	
9/27/2018	439.60	0.00	62.00	364.70		49.00	351.70	
10/18/2018	405.30	0.90	65.00	367.70		50.00	352.70	
11/28/2018	408.60	1.19	65.00	367.70		50.00	352.70	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021

Pneumatic Piezo. -->			LR-1			LR-2		
Piezo. Tip Elevation -->			356.30			340.30		
Zero Gage Reading -->			53.60			37.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	62.00	364.70		50.00	352.70	
1/30/2019	463.80	4.71	66.00	368.70		52.00	354.70	
2/27/2019	466.20	6.55	66.00	368.70		52.00	354.70	
3/27/2019	463.30	1.34	64.00	366.70		50.00	352.70	
4/29/2019	453.00	0.13	66.00	368.70		52.00	354.70	
5/30/2019	451.80	0.64	66.00	368.70		52.00	354.70	
6/26/2019	446.20	0.01	66.00	368.70		52.00	354.70	
7/5/2019	39.40	0.00	65.00	367.70		50.00	352.70	
7/30/2019	434.80	0.00	66.00	368.70		52.00	354.70	
8/27/2019	424.40	0.00	66.00	368.70		52.00	354.70	
9/26/2019	405.60	0.00	65.00	367.70		51.00	353.70	
10/22/2019	400.50	0.00	62.00	364.70		52.00	354.70	
11/26/2019	412.80	3.13	64.00	366.70		50.00	352.70	
12/18/2019	447.40	4.44	65.00	367.70		51.00	353.70	
1/28/2020	465.40	0.20	64.00	366.70		52.00	354.70	
2/26/2020	459.60	0.14	66.00	368.70		52.00	354.70	
3/24/2020	470.70	3.49	65.00	367.70		52.00	354.70	
4/29/2020	467.60	3.65	67.00	369.70		53.00	355.70	
5/27/2020	459.10	0.02	65.00	367.70		53.00	355.70	
6/23/2020	447.00	0.00	65.00	367.70		52.00	354.70	
7/30/2020	434.00	0.00	67.00	369.70		43.00	345.70	Omitted
8/26/2020	417.70	0.00	64.00	366.70		50.00	352.70	
9/29/2020	403.60	0.00	65.00	367.70		51.00	353.70	
10/28/2020	404.50	0.00	65.00	367.70		51.00	353.70	
11/24/2020	413.50	0.42	61.00	363.70		50.00	352.70	
12/22/2020	408.00	1.13	65.00	367.70		50.00	352.70	
1/27/2021	435.60	2.25	64.00	366.70		50.00	352.70	
2/25/2021	457.30	0.05	65.00	367.70		52.00	354.70	
3/23/2021	465.90	1.36	65.00	367.70		51.00	353.70	
4/27/2021	462.10	0.04	63.00	365.70		50.00	352.70	
5/26/2021	455.00	0.03	66.00	368.70		52.00	354.70	

- Notes:
1. Readings in red are classified as erroneous.
 2. Piezometer data based on NAVD 88 datum.

**TABLE 6
SAN JOAQUIN RESERVOIR DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2021**

Pneumatic Piezo. -->			LR-1			LR-2		
Piezo. Tip Elevation -->			356.30			340.30		
Zero Gage Reading -->			53.60			37.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	65.00	367.70		50.00	352.70	
7/29/2021	423.60	0.07	66.00	368.70		51.00	353.70	
8/24/2021	408.00	0.00	66.00	368.70		51.00	353.70	
9/29/2021	398.00	0.04	62.00	364.70		48.00	350.70	
10/26/2021	417.00	0.87	64.00	366.70		49.00	351.70	
11/25/2021	427.90	0.00	65.00	367.70		50.00	352.70	
12/21/2021	427.90	4.77	62.00	364.70		50.00	352.70	

Notes:

1. Readings in red are classified as erroneous.
2. Piezometer data based on NAVD 88 datum.

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			East Drain			West Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
1/31/2007	405.80			1.80			0.18	
2/27/2007	426.80			2.50			0.24	
3/28/2007	438.80			2.50			0.28	
4/26/2007	450.90			3.20			0.31	
5/23/2007	461.40			3.70			0.34	
6/27/2007	457.20			3.80			0.34	
7/26/2007	445.50			3.60			0.33	
8/28/2007	434.60			3.10			0.30	
9/25/2007	416.80			2.50			0.26	
10/24/2007	404.50			2.00			0.20	
11/27/2007	422.20			2.40			0.22	
1/3/2008	443.20		3.20	15.37		0.28	48.75	
1/29/2008	452.20		3.80	23.29		0.30	57.80	
2/27/2008	460.80		4.20	29.68		0.34	78.74	
3/26/2008	468.00		4.60	36.99		0.40	117.64	
4/29/2008	468.60			57.00			69.70	
5/29/2008	464.70			50.00			68.10	
6/26/2008	455.70			43.50			60.00	
7/29/2008	447.30	0.00		39.60			35.27	
8/28/2008	438.80	0.00		29.00			46.00	
9/26/2008	430.70	0.00		23.93			38.58	
10/29/2008	412.50	0.00		11.00			25.26	
11/25/2008	404.70	2.60		10.40			28.50	
12/30/2008	440.90	3.42		36.00			42.79	
1/28/2009	463.70	0.17		105.70			79.30	
2/25/2009	470.10	3.35		52.30			53.63	
3/26/2009	469.40	0.19		63.40			79.30	
4/29/2009	466.90	0.07		46.09			81.12	
5/18/2009	466.70	0.00		60.00			75.00	
5/29/2009	465.00	0.00		61.30			72.30	
6/30/2009	460.20	0.00		55.10			69.60	
7/30/2009	451.10	0.00		44.95			59.40	
8/25/2009	440.10	0.00		34.11			50.70	
9/30/2009	432.20	0.00		26.10			41.20	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			East Drain			West Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
10/29/2009	431.40	0.53		22.36			37.12	
12/1/2009	427.40	0.00		19.67			32.43	
12/29/2009	448.10	2.06		32.52			43.41	
1/27/2010	465.60	4.62		54.82			67.12	
2/25/2010	470.20	2.51		61.60			76.90	
3/29/2010	465.70	0.99		56.91			71.73	
4/4/2010	465.00			55.00			69.40	
4/27/2010	468.40	1.23		62.10			70.70	
5/27/2010	463.30	0.05		47.80			65.00	
6/30/2010	454.70	0.00		54.37			63.75	
7/28/2010	445.60	0.00		44.00			55.00	
8/31/2010	437.10	0.00		38.94			47.95	
9/29/2010	422.70	0.00		28.10			38.00	
10/27/2010	426.40	2.38		26.50			37.00	
11/29/2010	439.80	0.97		34.27			41.64	
12/30/2010	456.60	8.62		34.00			46.00	
2/1/2011	468.90	0.92		58.00			71.00	
2/23/2011	469.00	0.99		60.03			71.80	
3/29/2011	470.30	2.93		61.50			74.90	
4/27/2011	464.80	0.19		39.94			58.62	
5/26/2011	457.30	0.48		34.00			51.20	
6/28/2011	443.50	0.05		26.50			43.91	
7/29/2011	425.10	0.00		18.96			35.15	
8/24/2011	418.00	0.00		13.42			27.08	
9/27/2011	400.90	0.12		9.18			20.55	
10/26/2011	402.20	1.25		8.14			18.73	
11/30/2011	425.10	1.38		13.11			26.33	
12/21/2011	435.70	0.32		18.45			32.30	
1/24/2012	441.40	0.53		19.51			37.32	
2/28/2012	448.40	0.42		21.40			40.90	
3/26/2012	452.70	1.06		23.14			43.41	
4/23/2012	463.40	1.32		39.54			56.48	
5/30/2012	457.30	0.02		35.45			55.39	
6/13/2012	452.90	0.02		31.31			51.82	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			East Drain			West Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
6/26/2012	450.20	0.00		29.30			49.60	
7/24/2012	439.80	0.00		22.25			42.76	
8/8/2012	437.60	0.12		20.94			40.38	
8/22/2012	433.40	0.00		19.79			35.01	
8/29/2012	431.30	0.00		19.10			32.62	
9/25/2012	420.80	0.00		15.38			26.33	
10/31/2012	412.30	0.26		10.48			21.63	
11/27/2012	420.80	0.58		12.00			24.50	
12/18/2012	448.00	1.44		31.81			27.29	
1/29/2013	468.60	1.18		60.00			56.70	
2/28/2013	469.20	0.30		62.57			60.52	
3/27/2013	468.30	0.50		56.89			67.68	
4/25/2013	462.70	0.00		51.59			59.13	
5/21/2013	454.20	0.00		40.10			46.50	
6/25/2013	439.30	0.00		27.97			36.61	
7/23/2013	431.50	0.00		22.44			30.45	
8/21/2013	418.00	0.00		15.80			23.60	
9/24/2013	404.00	0.00		11.15			19.46	
10/29/2013	400.60	0.00		8.70			16.17	
11/26/2013	407.90	0.44		8.19			15.80	
12/19/2013	425.80	0.54		16.15			22.45	
1/28/2014	439.70	0.00		24.89			31.46	
2/25/2014	449.70	0.83		30.84			38.79	
3/26/2014	465.10			48.97			55.26	
3/28/2014	465.70	1.15		48.66			55.41	
4/29/2014	465.30	0.43		50.10			57.60	
5/28/2014	450.60	0.00		34.05			46.03	
6/25/2014	440.10	0.00		30.19			39.64	
7/29/2014	431.20	0.00		24.97			33.85	
8/26/2014	419.50	0.02		19.12			27.02	
9/23/2014	405.30	0.00		13.04			21.32	
10/29/2014	400.90	0.00		10.06			18.54	
11/25/2014	410.90	0.25		10.75			18.60	
12/30/2014	430.60	2.94		23.26			26.64	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			East Drain			West Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
1/27/2015	466.70	0.83		61.45			60.49	
2/25/2015	468.90	0.69		63.90			64.50	
3/26/2015	465.90	0.61		62.14			63.40	
4/28/2015	465.70	0.20		60.10			59.60	
5/28/2015	466.40	1.08		54.04			49.61	
6/30/2015	454.50	0.00		44.81			43.46	
7/28/2015	445.60	0.00		35.40			35.90	
8/28/2015	437.60	0.00		29.20			30.40	
9/24/2015	426.90	1.51		23.50			25.10	
10/27/2015	415.40	0.49		16.90			18.70	
11/19/2015	412.90	0.09		14.23			16.38	
12/22/2015	425.50	0.69		19.50			19.40	
1/27/2016	463.60	2.86		53.20			42.08	
2/25/2016	468.90	0.25		59.37			50.05	
3/30/2016	468.00	1.44		56.40			50.90	
4/28/2016	461.30	0.30		50.83			46.75	
5/25/2016	451.30	0.18		43.06			40.29	
6/28/2016	414.10	0.00		34.98			34.83	
7/27/2016	434.20	0.00		28.20			29.30	
8/23/2016	418.60	0.00		18.96			20.95	
9/27/2016	406.40	0.00		13.04			15.91	
10/26/2016	404.00	0.48		10.92			13.95	
11/22/2016	413.60	1.13		12.01			14.80	
12/20/2016	441.10	3.48		29.72			25.63	
1/26/2017	471.60	5.67		58.70			51.40	
2/24/2017	472.05	3.95		57.36			60.38	
2/25/2017	472.00			57.55				
2/26/2017	472.00			56.81				
2/27/2017	472.00			56.90			60.40	
2/28/2017	471.90			56.32			60.15	
3/1/2017	471.90			55.80			59.70	
3/2/2017	471.90			56.34			59.71	
3/29/2017	467.90	0.10		51.95			56.32	
4/27/2017	457.60	0.04		44.35			47.55	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			East Drain			West Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
5/23/2017	453.50	0.43		38.22			41.80	
6/21/2017	447.40	0.00		34.25			39.20	
7/26/2017	435.10	0.00		29.68			32.46	
8/25/2017	420.10	0.00		22.90			24.30	
9/27/2017	407.10	0.00		16.00			18.94	
10/26/2017	395.00	0.00		10.73			14.80	
11/28/2017	409.00	0.09		13.48			16.68	
12/20/2017	416.80	0.00		15.28			18.42	
1/24/2018	434.50	1.31		27.22			26.47	
2/21/2018	443.10	0.29		32.75			32.39	
3/29/2018	453.00	1.28		39.88			42.15	
4/26/2018	449.10	0.05		36.60			39.21	
5/31/2018	453.10	0.20		39.70			40.77	
6/28/2018	448.20	0.00		36.70			38.50	
7/25/2018	440.40	0.00		33.48			35.20	
8/22/2018	427.10	0.00		23.07			28.26	
9/27/2018	439.60	0.00		13.85			19.09	
10/18/2018	405.30	0.90		10.95			15.38	
11/28/2018	408.60	1.19		10.60			14.80	
12/19/2018	436.00	1.99		24.80			23.10	
1/30/2019	463.80	4.71		49.09			45.60	
2/27/2019	466.20	6.55		50.80			49.50	
3/27/2019	463.30	1.34		47.06			48.88	
4/29/2019	453.00	0.13		38.70			42.48	
5/30/2019	451.80	0.64		38.10			40.80	
6/26/2019	446.20	0.01		36.33			38.07	
7/5/2019	39.40	0.00		35.69			36.21	
7/30/2019	434.80	0.00		31.49			32.54	
8/27/2019	424.40	0.00		23.74			26.39	
9/26/2019	405.60	0.00		15.51			19.42	
10/22/2019	400.50	0.00		12.42			16.33	
11/26/2019	412.80	3.13		13.27			17.34	
12/18/2019	447.40	4.44		32.88			30.36	
1/28/2020	465.40	0.20		49.22			47.62	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			East Drain			West Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
2/26/2020	459.60	0.14		42.43			43.84	
3/24/2020	470.70	3.49		49.77			50.87	
4/29/2020	467.60	3.65		46.09			51.62	
5/27/2020	459.10	0.02		37.52			46.35	
6/23/2020	447.00	0.00		26.50			38.60	
7/30/2020	434.00	0.00		18.19			31.84	
8/26/2020	417.70	0.00		12.73			24.35	
9/29/2020	403.60	0.00		9.93			19.08	
10/28/2020	404.50	0.00		8.78			17.05	
11/24/2020	413.50	0.42		10.39			14.46	
12/22/2020	408.00	1.13		9.86			13.71	
1/27/2021	435.60	2.25		19.94			19.13	
2/25/2021	457.30	0.05		35.30			37.80	
3/23/2021	465.90	1.36		44.40			44.20	
4/27/2021	462.10	0.04		39.60			42.30	
5/26/2021	455.00	0.03		33.95			38.73	
6/30/2021	437.90	0.00		24.80			31.60	
7/29/2021	423.60	0.07		17.60			25.85	
8/24/2021	408.00	0.00		12.75			20.30	
9/29/2021	398.00	0.04		10.20			16.70	
10/26/2021	417.00	0.87		12.19			18.96	
11/25/2021	427.90	0.00		18.55			24.67	
12/21/2021	427.90	4.77		28.00			30.00	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Filter Drain			U/S Collector Drain #1		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
1/31/2007	405.80			2.20			0.00	
2/27/2007	426.80			2.30			0.00	
3/28/2007	438.80			2.00			0.00	
4/26/2007	450.90			2.00			0.00	
5/23/2007	461.40			2.00			0.00	
6/27/2007	457.20			2.00			0.00	
7/26/2007	445.50			2.00			0.00	
8/28/2007	434.60			2.00			0.00	
9/25/2007	416.80			2.20			0.00	
10/24/2007	404.50			2.10			0.00	
11/27/2007	422.20			2.10			0.00	
1/3/2008	443.20			2.00	dry		0.00	
1/29/2008	452.20			2.20	dry		0.00	
2/27/2008	460.80			2.20	dry		0.00	
3/26/2008	468.00			2.00	dry		0.00	
4/29/2008	468.60			2.00	dry		0.00	
5/29/2008	464.70			0.18	dry		0.00	
6/26/2008	455.70			1.12	dry		0.00	
7/29/2008	447.30	0.00		1.00	dry		0.00	
8/28/2008	438.80	0.00		0.37	dry		0.00	
9/26/2008	430.70	0.00		10.27	dry		0.00	
10/29/2008	412.50	0.00		9.94	dry		0.00	
11/25/2008	404.70	2.60		9.20	dry		0.00	
12/30/2008	440.90	3.42		11.56	dry		0.00	
1/28/2009	463.70	0.17		9.90	dry		0.00	
2/25/2009	470.10	3.35		10.10	dry		0.00	
3/26/2009	469.40	0.19		12.29	dry		0.00	
4/29/2009	466.90	0.07		11.03	dry		0.00	
5/18/2009	466.70	0.00		12.00	dry		0.00	
5/29/2009	465.00	0.00		12.30	dry		0.00	
6/30/2009	460.20	0.00		12.50	dry		0.00	
7/30/2009	451.10	0.00		12.75			0.13	
8/25/2009	440.10	0.00		13.19	dry		0.00	
9/30/2009	432.20	0.00		12.20	dry		0.00	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Filter Drain			U/S Collector Drain #1		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
10/29/2009	431.40	0.53		11.05	dry		0.00	
12/1/2009	427.40	0.00		11.31	dry		0.00	
12/29/2009	448.10	2.06		10.38	dry		0.00	
1/27/2010	465.60	4.62		11.55	dry		0.00	
2/25/2010	470.20	2.51		12.20	dry		0.00	
3/29/2010	465.70	0.99		12.14	dry		0.00	
4/4/2010	465.00			11.20			0.26	
4/27/2010	468.40	1.23		11.90	dry		0.00	
5/27/2010	463.30	0.05		11.90			0.55	
6/30/2010	454.70	0.00		12.25			0.50	
7/28/2010	445.60	0.00		13.00			0.40	
8/31/2010	437.10	0.00		12.49			0.27	
9/29/2010	422.70	0.00		11.40			0.23	
10/27/2010	426.40	2.38		11.40			0.15	
11/29/2010	439.80	0.97		10.67			0.00	
12/30/2010	456.60	8.62		11.00			0.00	
2/1/2011	468.90	0.92		11.50			0.26	
2/23/2011	469.00	0.99		12.66			0.26	
3/29/2011	470.30	2.93		12.90			0.53	
4/27/2011	464.80	0.19		9.98			0.70	
5/26/2011	457.30	0.48		9.93			0.61	
6/28/2011	443.50	0.05		10.35			0.52	
7/29/2011	425.10	0.00		10.34			0.40	
8/24/2011	418.00	0.00		10.37			0.00	
9/27/2011	400.90	0.12		10.18			0.00	
10/26/2011	402.20	1.25		9.58			0.00	
11/30/2011	425.10	1.38		9.28			0.00	
12/21/2011	435.70	0.32		9.09			0.00	
1/24/2012	441.40	0.53		8.90			0.00	
2/28/2012	448.40	0.42		8.60			0.00	
3/26/2012	452.70	1.06		8.65			0.00	
4/23/2012	463.40	1.32		8.34			0.00	
5/30/2012	457.30	0.02		8.72			0.00	
6/13/2012	452.90	0.02		8.53			0.00	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Filter Drain			U/S Collector Drain #1		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
6/26/2012	450.20	0.00		8.90			0.00	
7/24/2012	439.80	0.00		8.79			0.00	
8/8/2012	437.60	0.12		8.91			0.00	
8/22/2012	433.40	0.00		9.23			0.00	
8/29/2012	431.30	0.00		8.10			0.00	
9/25/2012	420.80	0.00		7.90			0.00	
10/31/2012	412.30	0.26		7.77			0.00	
11/27/2012	420.80	0.58		8.00			0.00	
12/18/2012	448.00	1.44		8.07			0.00	
1/29/2013	468.60	1.18		8.00			0.00	
2/28/2013	469.20	0.30		8.46			0.00	
3/27/2013	468.30	0.50		8.54			0.00	
4/25/2013	462.70	0.00		8.57			0.00	
5/21/2013	454.20	0.00		8.70			0.00	
6/25/2013	439.30	0.00		8.66			0.00	
7/23/2013	431.50	0.00		9.56			0.00	
8/21/2013	418.00	0.00		9.15			0.00	
9/24/2013	404.00	0.00		7.81			0.00	
10/29/2013	400.60	0.00		7.81			0.00	
11/26/2013	407.90	0.44		7.34			0.00	
12/19/2013	425.80	0.54		7.70			0.00	
1/28/2014	439.70	0.00		7.76			0.00	
2/25/2014	449.70	0.83		7.73			0.00	
3/26/2014	465.10			8.10			0.00	
3/28/2014	465.70	1.15		7.70			0.00	
4/29/2014	465.30	0.43		9.04			0.00	
5/28/2014	450.60	0.00		8.18			0.00	
6/25/2014	440.10	0.00		8.80			0.00	
7/29/2014	431.20	0.00		8.16			0.00	
8/26/2014	419.50	0.02		8.02			0.00	
9/23/2014	405.30	0.00		8.00			0.00	
10/29/2014	400.90	0.00		7.85			0.00	
11/25/2014	410.90	0.25		7.00			0.00	
12/30/2014	430.60	2.94		7.54			0.00	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Filter Drain			U/S Collector Drain #1		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
1/27/2015	466.70	0.83		8.24			0.00	
2/25/2015	468.90	0.69		8.33			0.00	
3/26/2015	465.90	0.61		9.04			0.00	
4/28/2015	465.70	0.20		9.85			0.00	
5/28/2015	466.40	1.08		7.35			0.00	
6/30/2015	454.50	0.00		8.25			0.00	
7/28/2015	445.60	0.00		6.70			0.00	
8/28/2015	437.60	0.00		7.09			0.00	
9/24/2015	426.90	1.51		7.10			0.00	
10/27/2015	415.40	0.49		6.90			0.00	
11/19/2015	412.90	0.09		6.42			0.00	
12/22/2015	425.50	0.69		6.68			0.00	
1/27/2016	463.60	2.86		6.77			0.00	
2/25/2016	468.90	0.25		6.58			0.00	
3/30/2016	468.00	1.44		6.20			0.00	
4/28/2016	461.30	0.30		6.73			0.00	
5/25/2016	451.30	0.18		7.17			0.00	
6/28/2016	414.10	0.00		6.68			0.00	
7/27/2016	434.20	0.00		6.60			0.00	
8/23/2016	418.60	0.00		6.53			0.00	
9/27/2016	406.40	0.00		5.90			0.00	
10/26/2016	404.00	0.48		5.85			0.00	
11/22/2016	413.60	1.13		6.17			0.00	
12/20/2016	441.10	3.48		6.15			0.00	
1/26/2017	471.60	5.67		6.50			0.00	
2/24/2017	472.05	3.95		7.41			0.00	
2/25/2017	472.00			7.44			0.00	
2/26/2017	472.00			7.39			0.00	
2/27/2017	472.00			7.34			0.00	
2/28/2017	471.90			7.14			0.00	
3/1/2017	471.90			7.02			0.00	
3/2/2017	471.90			7.04			0.00	
3/29/2017	467.90	0.10		7.34			0.00	
4/27/2017	457.60	0.04		7.65			0.00	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Filter Drain			U/S Collector Drain #1		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
5/23/2017	453.50	0.43		7.76			0.00	
6/21/2017	447.40	0.00		7.61			0.00	
7/26/2017	435.10	0.00		7.54			0.00	
8/25/2017	420.10	0.00		7.70			0.00	
9/27/2017	407.10	0.00		7.44			0.00	
10/26/2017	395.00	0.00		7.19			0.00	
11/28/2017	409.00	0.09		7.45			0.00	
12/20/2017	416.80	0.00		7.17			0.00	
1/24/2018	434.50	1.31		7.11			0.00	
2/21/2018	443.10	0.29		6.80			0.00	
3/29/2018	453.00	1.28		7.01			0.00	
4/26/2018	449.10	0.05		6.97			0.00	
5/31/2018	453.10	0.20		7.66			0.00	
6/28/2018	448.20	0.00		8.04			0.00	
7/25/2018	440.40	0.00		7.76			0.00	
8/22/2018	427.10	0.00		7.82			0.00	
9/27/2018	439.60	0.00		7.53			0.00	
10/18/2018	405.30	0.90		6.79			0.00	
11/28/2018	408.60	1.19		5.90			0.00	
12/19/2018	436.00	1.99		5.80			0.00	
1/30/2019	463.80	4.71		6.45			0.00	
2/27/2019	466.20	6.55		7.80			0.00	
3/27/2019	463.30	1.34		7.16			0.00	
4/29/2019	453.00	0.13		7.35			0.00	
5/30/2019	451.80	0.64		7.80			0.00	
6/26/2019	446.20	0.01		7.19			0.00	
7/5/2019	39.40	0.00		7.22			0.00	
7/30/2019	434.80	0.00		7.80			0.00	
8/27/2019	424.40	0.00		8.19			0.00	
9/26/2019	405.60	0.00		7.57			0.00	
10/22/2019	400.50	0.00		7.02			0.00	
11/26/2019	412.80	3.13		6.67			0.00	
12/18/2019	447.40	4.44		6.52			0.00	
1/28/2020	465.40	0.20		6.67			0.00	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Filter Drain			U/S Collector Drain #1		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
2/26/2020	459.60	0.14		6.77			0.00	
3/24/2020	470.70	3.49		7.23			0.00	
4/29/2020	467.60	3.65		8.72			0.00	
5/27/2020	459.10	0.02		8.43			0.00	
6/23/2020	447.00	0.00		8.40			0.00	
7/30/2020	434.00	0.00		7.48			0.00	
8/26/2020	417.70	0.00		7.79			0.00	
9/29/2020	403.60	0.00		7.42			0.00	
10/28/2020	404.50	0.00		6.76			0.00	
11/24/2020	413.50	0.42		6.67			0.00	
12/22/2020	408.00	1.13		6.81			0.00	
1/27/2021	435.60	2.25		7.46			0.00	
2/25/2021	457.30	0.05		6.62			0.00	
3/23/2021	465.90	1.36		6.70			0.00	
4/27/2021	462.10	0.04		6.50			0.00	
5/26/2021	455.00	0.03		6.78			0.00	
6/30/2021	437.90	0.00		7.10			0.00	
7/29/2021	423.60	0.07		6.90			0.00	
8/24/2021	408.00	0.00		6.77			0.00	
9/29/2021	398.00	0.04		6.00			0.00	
10/26/2021	417.00	0.87		5.72			0.00	
11/25/2021	427.90	0.00		3.02			0.00	
12/21/2021	427.90	4.77		5.80			0.00	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			U/S Collector Drain #2			D/S Toe Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
1/31/2007	405.80			0.00			1.40	
2/27/2007	426.80			0.00			1.75	
3/28/2007	438.80			0.00			1.66	
4/26/2007	450.90			0.00			1.78	
5/23/2007	461.40			0.00			1.52	
6/27/2007	457.20			0.00			2.10	
7/26/2007	445.50			0.00			1.61	
8/28/2007	434.60			0.00			1.66	
9/25/2007	416.80			0.00			1.66	
10/24/2007	404.50			0.00			1.59	
11/27/2007	422.20			0.00			1.65	
1/3/2008	443.20			0.00	dry		2.20	
1/29/2008	452.20			0.00	dry		1.96	
2/27/2008	460.80			0.00	dry		1.86	
3/26/2008	468.00			0.00	dry		1.86	
4/29/2008	468.60			0.00	dry		1.88	
5/29/2008	464.70			0.00	dry		2.16	
6/26/2008	455.70			0.00	dry		2.50	
7/29/2008	447.30	0.00		0.00	dry		2.30	
8/28/2008	438.80	0.00		0.00	dry		2.11	
9/26/2008	430.70	0.00		0.00	dry		1.56	
10/29/2008	412.50	0.00		0.00	dry		1.98	
11/25/2008	404.70	2.60		0.00	dry		2.00	
12/30/2008	440.90	3.42		0.00	dry		2.00	
1/28/2009	463.70	0.17		0.00	dry		2.00	
2/25/2009	470.10	3.35		0.00	dry		2.12	
3/26/2009	469.40	0.19		0.00	dry		2.19	
4/29/2009	466.90	0.07		0.00	dry		1.98	
5/18/2009	466.70	0.00		0.00	dry		1.00	
5/29/2009	465.00	0.00		0.00	dry			
6/30/2009	460.20	0.00		0.00	dry		1.90	
7/30/2009	451.10	0.00		0.00	dry		1.93	
8/25/2009	440.10	0.00		0.00	dry		2.09	
9/30/2009	432.20	0.00		0.00	dry		1.52	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			U/S Collector Drain #2			D/S Toe Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
10/29/2009	431.40	0.53		0.00	dry			
12/1/2009	427.40	0.00		0.00	dry			
12/29/2009	448.10	2.06		0.00	dry			
1/27/2010	465.60	4.62		0.00	dry		2.43	
2/25/2010	470.20	2.51		0.00	dry		2.94	
3/29/2010	465.70	0.99		0.20			2.40	
4/4/2010	465.00			0.00	dry		1.00	
4/27/2010	468.40	1.23		0.00	dry		2.40	
5/27/2010	463.30	0.05		0.00	dry		2.50	
6/30/2010	454.70	0.00		0.00	dry		2.11	
7/28/2010	445.60	0.00		0.00	dry		2.40	
8/31/2010	437.10	0.00		0.00	dry		2.08	
9/29/2010	422.70	0.00		0.00	dry		2.11	
10/27/2010	426.40	2.38		0.00	dry		2.20	
11/29/2010	439.80	0.97		0.00	dry		2.26	
12/30/2010	456.60	8.62		0.00	dry		4.00	
2/1/2011	468.90	0.92		0.00	dry		4.00	
2/23/2011	469.00	0.99		0.00	dry		3.51	
3/29/2011	470.30	2.93		0.00	dry		3.17	
4/27/2011	464.80	0.19		0.00	dry		2.60	
5/26/2011	457.30	0.48		0.00	dry		2.70	
6/28/2011	443.50	0.05		0.00	dry		2.50	
7/29/2011	425.10	0.00		0.00	dry		2.43	
8/24/2011	418.00	0.00		0.20			2.43	
9/27/2011	400.90	0.12		0.00			2.26	
10/26/2011	402.20	1.25		0.00			2.26	
11/30/2011	425.10	1.38		0.00			2.56	
12/21/2011	435.70	0.32		0.00			2.26	
1/24/2012	441.40	0.53		0.00			2.38	
2/28/2012	448.40	0.42		0.00			2.11	
3/26/2012	452.70	1.06		0.00			2.29	
4/23/2012	463.40	1.32		0.00			2.43	
5/30/2012	457.30	0.02		0.00			2.11	
6/13/2012	452.90	0.02		0.00			2.26	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			U/S Collector Drain #2			D/S Toe Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
6/26/2012	450.20	0.00		0.00			1.58	
7/24/2012	439.80	0.00		0.00			1.58	
8/8/2012	437.60	0.12		0.00			1.58	
8/22/2012	433.40	0.00		0.00			1.98	
8/29/2012	431.30	0.00		0.00			1.58	
9/25/2012	420.80	0.00		0.00			2.56	
10/31/2012	412.30	0.26		0.00			2.11	
11/27/2012	420.80	0.58		0.00			2.11	
12/18/2012	448.00	1.44		0.00			2.28	
1/29/2013	468.60	1.18		0.00			2.11	
2/28/2013	469.20	0.30		0.00			2.11	
3/27/2013	468.30	0.50		0.00			2.26	
4/25/2013	462.70	0.00		0.00			2.16	
5/21/2013	454.20	0.00		0.00			2.26	
6/25/2013	439.30	0.00		0.00			2.34	
7/23/2013	431.50	0.00		0.00			2.12	
8/21/2013	418.00	0.00		0.00			2.11	
9/24/2013	404.00	0.00		0.00			1.98	
10/29/2013	400.60	0.00		0.00			2.13	
11/26/2013	407.90	0.44		0.00			2.16	
12/19/2013	425.80	0.54		0.00			2.26	
1/28/2014	439.70	0.00		0.00			2.11	
2/25/2014	449.70	0.83		0.00			2.17	
3/26/2014	465.10			0.00			1.66	
3/28/2014	465.70	1.15		0.00			2.09	
4/29/2014	465.30	0.43		0.00			2.16	
5/28/2014	450.60	0.00		0.00			1.90	
6/25/2014	440.10	0.00		0.00			2.26	
7/29/2014	431.20	0.00		0.00			2.03	
8/26/2014	419.50	0.02		0.00			1.98	
9/23/2014	405.30	0.00		0.00			2.11	
10/29/2014	400.90	0.00		0.00			2.07	
11/25/2014	410.90	0.25		0.00			1.90	
12/30/2014	430.60	2.94		0.00			1.80	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			U/S Collector Drain #2			D/S Toe Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
1/27/2015	466.70	0.83		0.00			2.26	
2/25/2015	468.90	0.69		0.00			2.11	
3/26/2015	465.90	0.61		0.00			2.12	
4/28/2015	465.70	0.20		0.00			2.29	
5/28/2015	466.40	1.08		0.00			1.90	
6/30/2015	454.50	0.00		0.00			1.50	
7/28/2015	445.60	0.00		0.00			1.90	
8/28/2015	437.60	0.00		0.00			2.10	
9/24/2015	426.90	1.51		0.00			2.10	
10/27/2015	415.40	0.49		0.00			2.00	
11/19/2015	412.90	0.09		0.00			2.21	
12/22/2015	425.50	0.69		0.00			2.53	
1/27/2016	463.60	2.86		0.00			2.43	
2/25/2016	468.90	0.25		0.00			2.53	
3/30/2016	468.00	1.44		0.00			2.29	
4/28/2016	461.30	0.30		0.00			2.10	
5/25/2016	451.30	0.18		0.00			1.90	
6/28/2016	414.10	0.00		0.00			1.70	
7/27/2016	434.20	0.00		0.00			1.90	
8/23/2016	418.60	0.00		0.00			2.06	
9/27/2016	406.40	0.00		0.00			1.53	
10/26/2016	404.00	0.48		0.00			2.21	
11/22/2016	413.60	1.13		0.00			2.17	
12/20/2016	441.10	3.48		0.00			2.23	
1/26/2017	471.60	5.67		0.00			3.50	
2/24/2017	472.05	3.95		0.00			3.15	
2/25/2017	472.00			0.00			3.15	
2/26/2017	472.00			0.00			3.15	
2/27/2017	472.00			0.00			3.17	
2/28/2017	471.90			0.00			3.15	
3/1/2017	471.90			0.00			3.17	
3/2/2017	471.90			0.00			3.36	
3/29/2017	467.90	0.10		0.00			3.18	
4/27/2017	457.60	0.04		0.02			2.50	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			U/S Collector Drain #2			D/S Toe Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
5/23/2017	453.50	0.43		0.00			2.50	
6/21/2017	447.40	0.00		0.00			2.50	
7/26/2017	435.10	0.00		0.00			2.50	
8/25/2017	420.10	0.00		0.00			2.50	
9/27/2017	407.10	0.00		0.00			2.50	
10/26/2017	395.00	0.00		0.00			2.50	
11/28/2017	409.00	0.09		0.00			2.50	
12/20/2017	416.80	0.00		0.00			2.50	
1/24/2018	434.50	1.31		0.00			1.86	
2/21/2018	443.10	0.29		0.00			2.40	
3/29/2018	453.00	1.28		0.00			3.85	
4/26/2018	449.10	0.05		0.00			2.26	
5/31/2018	453.10	0.20		0.00			2.54	
6/28/2018	448.20	0.00		0.00			2.11	
7/25/2018	440.40	0.00		0.00			2.21	
8/22/2018	427.10	0.00		0.00			2.21	
9/27/2018	439.60	0.00		0.00			2.24	
10/18/2018	405.30	0.90		0.00			2.37	
11/28/2018	408.60	1.19		0.00			2.26	
12/19/2018	436.00	1.99		0.00			2.56	
1/30/2019	463.80	4.71		0.00			2.80	
2/27/2019	466.20	6.55		0.00			3.90	
3/27/2019	463.30	1.34		0.00			3.10	
4/29/2019	453.00	0.13		0.00			3.10	
5/30/2019	451.80	0.64		0.00			2.80	
6/26/2019	446.20	0.01		0.00			2.80	
7/5/2019	39.40	0.00		0.00			2.80	
7/30/2019	434.80	0.00		0.00			3.78	
8/27/2019	424.40	0.00		0.00			2.43	
9/26/2019	405.60	0.00		0.00			1.90	
10/22/2019	400.50	0.00		0.00			2.40	
11/26/2019	412.80	3.13		0.00			2.40	
12/18/2019	447.40	4.44		0.00			3.00	
1/28/2020	465.40	0.20		0.00			2.43	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			U/S Collector Drain #2			D/S Toe Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
2/26/2020	459.60	0.14		0.00			2.90	
3/24/2020	470.70	3.49		0.00			3.17	
4/29/2020	467.60	3.65		0.00			4.12	
5/27/2020	459.10	0.02		0.00			3.33	
6/23/2020	447.00	0.00		0.00			2.80	
7/30/2020	434.00	0.00		0.00			2.69	
8/26/2020	417.70	0.00		0.00			2.70	
9/29/2020	403.60	0.00		0.00			2.60	
10/28/2020	404.50	0.00		0.00			3.77	
11/24/2020	413.50	0.42		0.00			2.80	
12/22/2020	408.00	1.13		0.00			2.60	
1/27/2021	435.60	2.25		0.00			2.53	
2/25/2021	457.30	0.05		0.00			2.28	
3/23/2021	465.90	1.36		0.00			2.43	
4/27/2021	462.10	0.04		0.00			2.43	
5/26/2021	455.00	0.03		0.00			2.10	
6/30/2021	437.90	0.00		0.00			2.40	
7/29/2021	423.60	0.07		0.00			2.06	
8/24/2021	408.00	0.00		0.00			1.10	
9/29/2021	398.00	0.04		0.00			2.30	
10/26/2021	417.00	0.87		0.00			2.40	
11/25/2021	427.90	0.00		0.00			2.40	
12/21/2021	427.90	4.77		0.00			2.00	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Floor Drain			Right Groin Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
1/31/2007	405.80			12.00				
2/27/2007	426.80			7.05				
3/28/2007	438.80			9.32				
4/26/2007	450.90			9.44				
5/23/2007	461.40			14.00				
6/27/2007	457.20			10.50				
7/26/2007	445.50			8.79				
8/28/2007	434.60			10.22				
9/25/2007	416.80			9.95				
10/24/2007	404.50			8.17				
11/27/2007	422.20			9.05				
1/3/2008	443.20			10.50				
1/29/2008	452.20			7.92				
2/27/2008	460.80			14.00				
3/26/2008	468.00			10.56				
4/29/2008	468.60			10.74				
5/29/2008	464.70			8.11				
6/26/2008	455.70			8.80				
7/29/2008	447.30	0.00		8.10				
8/28/2008	438.80	0.00		8.33			0.11	
9/26/2008	430.70	0.00		16.00			0.39	
10/29/2008	412.50	0.00		3.75			0.40	
11/25/2008	404.70	2.60		8.80			0.00	
12/30/2008	440.90	3.42		10.56			0.00	
1/28/2009	463.70	0.17		10.60			0.00	
2/25/2009	470.10	3.35		9.46			0.00	
3/26/2009	469.40	0.19		9.30			0.05	
4/29/2009	466.90	0.07		9.84			0.23	
5/18/2009	466.70	0.00		10.00			0.13	
5/29/2009	465.00	0.00					0.16	
6/30/2009	460.20	0.00		10.30			0.10	
7/30/2009	451.10	0.00		10.56			0.00	
8/25/2009	440.10	0.00		7.90			0.00	
9/30/2009	432.20	0.00		16.00			0.13	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Floor Drain			Right Groin Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
10/29/2009	431.40	0.53					0.14	
12/1/2009	427.40	0.00					0.00	
12/29/2009	448.10	2.06					0.17	
1/27/2010	465.60	4.62		9.34			0.62	
2/25/2010	470.20	2.51		10.56			0.61	
3/29/2010	465.70	0.99		16.00			0.00	
4/4/2010	465.00			16.00				
4/27/2010	468.40	1.23		10.56			0.00	
5/27/2010	463.30	0.05		10.00			1.50	
6/30/2010	454.70	0.00		9.18			1.10	
7/28/2010	445.60	0.00		10.56			0.99	
8/31/2010	437.10	0.00		9.51			1.07	
9/29/2010	422.70	0.00		6.34			0.72	
10/27/2010	426.40	2.38		7.80			0.11	
11/29/2010	439.80	0.97		7.92			0.27	
12/30/2010	456.60	8.62		16.00			2.00	
2/1/2011	468.90	0.92		8.00			2.30	
2/23/2011	469.00	0.99		7.92			0.95	
3/29/2011	470.30	2.93		7.90			0.38	
4/27/2011	464.80	0.19		5.20			0.71	
5/26/2011	457.30	0.48		9.50			0.00	
6/28/2011	443.50	0.05		8.90			0.00	
7/29/2011	425.10	0.00		6.34			0.00	
8/24/2011	418.00	0.00		7.92			0.25	
9/27/2011	400.90	0.12		7.92			0.20	
10/26/2011	402.20	1.25		7.05			0.27	
11/30/2011	425.10	1.38		7.93			0.31	
12/21/2011	435.70	0.32		7.93			0.29	
1/24/2012	441.40	0.53		7.92			0.36	
2/28/2012	448.40	0.42		6.34			0.34	
3/26/2012	452.70	1.06		7.79			0.35	
4/23/2012	463.40	1.32		7.92			0.31	
5/30/2012	457.30	0.02		6.34			0.26	
6/13/2012	452.90	0.02		7.92			0.31	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Floor Drain			Right Groin Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
6/26/2012	450.20	0.00		10.56			0.21	
7/24/2012	439.80	0.00		10.56			0.21	
8/8/2012	437.60	0.12		10.56			0.15	
8/22/2012	433.40	0.00		7.92			0.24	
8/29/2012	431.30	0.00		10.56			0.13	
9/25/2012	420.80	0.00		7.93			0.10	
10/31/2012	412.30	0.26		6.34			0.14	
11/27/2012	420.80	0.58		7.92			0.16	
12/18/2012	448.00	1.44		7.37			0.19	
1/29/2013	468.60	1.18		7.90			0.26	
2/28/2013	469.20	0.30		7.92			0.24	
3/27/2013	468.30	0.50		7.92			0.25	
4/25/2013	462.70	0.00		7.92			0.25	
5/21/2013	454.20	0.00		7.92			0.26	
6/25/2013	439.30	0.00		7.51			0.21	
7/23/2013	431.50	0.00		7.04			0.19	
8/21/2013	418.00	0.00		6.34			0.17	
9/24/2013	404.00	0.00		6.34			0.16	
10/29/2013	400.60	0.00		6.89			0.19	
11/26/2013	407.90	0.44		6.34			0.20	
12/19/2013	425.80	0.54		5.28			0.22	
1/28/2014	439.70	0.00		7.90			0.16	
2/25/2014	449.70	0.83		7.20			0.19	
3/26/2014	465.10			7.92			0.52	
3/28/2014	465.70	1.15		6.44			0.18	
4/29/2014	465.30	0.43		7.51			0.21	
5/28/2014	450.60	0.00		7.08			0.21	
6/25/2014	440.10	0.00		6.34			0.17	
7/29/2014	431.20	0.00		6.49			0.15	
8/26/2014	419.50	0.02		10.56			0.16	
9/23/2014	405.30	0.00		6.30			0.13	
10/29/2014	400.90	0.00		6.15			0.14	
11/25/2014	410.90	0.25		6.34			0.14	
12/30/2014	430.60	2.94		6.34			0.23	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Floor Drain			Right Groin Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
1/27/2015	466.70	0.83		7.04			0.96	
2/25/2015	468.90	0.69		6.30			0.15	
3/26/2015	465.90	0.61		7.20			0.24	
4/28/2015	465.70	0.20		5.70			0.15	
5/28/2015	466.40	1.08		5.34			0.14	
6/30/2015	454.50	0.00		4.30			0.52	
7/28/2015	445.60	0.00		6.30			0.19	
8/28/2015	437.60	0.00		6.30			0.15	
9/24/2015	426.90	1.51		6.34			0.19	
10/27/2015	415.40	0.49		6.30			0.16	
11/19/2015	412.90	0.09		6.56			0.17	
12/22/2015	425.50	0.69		5.89			0.19	
1/27/2016	463.60	2.86		6.34			0.25	
2/25/2016	468.90	0.25		7.33			0.22	
3/30/2016	468.00	1.44		5.38			0.23	
4/28/2016	461.30	0.30		7.30			0.23	
5/25/2016	451.30	0.18		5.60			0.20	
6/28/2016	414.10	0.00		6.00			0.15	
7/27/2016	434.20	0.00		6.30			0.13	
8/23/2016	418.60	0.00		6.40			0.09	
9/27/2016	406.40	0.00		4.61			0.10	
10/26/2016	404.00	0.48		6.34			0.17	
11/22/2016	413.60	1.13		5.77			0.15	
12/20/2016	441.10	3.48		6.16			0.15	
1/26/2017	471.60	5.67		6.30			0.15	
2/24/2017	472.05	3.95		6.30			0.15	
2/25/2017	472.00			6.30				
2/26/2017	472.00			6.30				
2/27/2017	472.00			6.30			0.15	
2/28/2017	471.90			6.40			0.16	
3/1/2017	471.90			6.30			0.16	
3/2/2017	471.90			7.90			0.15	
3/29/2017	467.90	0.10		6.70			0.15	
4/27/2017	457.60	0.04		6.30			0.39	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Floor Drain			Right Groin Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
5/23/2017	453.50	0.43		6.30			0.41	
6/21/2017	447.40	0.00		5.60			0.20	
7/26/2017	435.10	0.00		6.30			0.25	
8/25/2017	420.10	0.00		5.20			0.24	
9/27/2017	407.10	0.00		5.20			0.19	
10/26/2017	395.00	0.00		5.80			0.22	
11/28/2017	409.00	0.09		4.20			0.39	
12/20/2017	416.80	0.00		4.51			0.17	
1/24/2018	434.50	1.31		4.81			0.15	
2/21/2018	443.10	0.29		5.70			0.08	
3/29/2018	453.00	1.28		9.30			0.22	
4/26/2018	449.10	0.05		6.34			0.20	
5/31/2018	453.10	0.20		6.34			0.11	
6/28/2018	448.20	0.00		5.28			0.21	
7/25/2018	440.40	0.00		6.30			0.17	
8/22/2018	427.10	0.00		6.10			0.13	
9/27/2018	439.60	0.00		5.70			0.12	
10/18/2018	405.30	0.90		5.46			0.18	
11/28/2018	408.60	1.19		4.80			0.15	
12/19/2018	436.00	1.99		5.10			0.28	
1/30/2019	463.80	4.71		6.30			0.82	
2/27/2019	466.20	6.55		5.70			1.50	
3/27/2019	463.30	1.34		4.50			0.80	
4/29/2019	453.00	0.13		6.30			0.79	
5/30/2019	451.80	0.64		6.30			0.60	
6/26/2019	446.20	0.01		5.07			0.40	
7/5/2019	39.40	0.00		4.70			0.23	
7/30/2019	434.80	0.00		5.38			0.34	
8/27/2019	424.40	0.00		6.30			0.25	
9/26/2019	405.60	0.00		5.30			0.22	
10/22/2019	400.50	0.00		4.50			0.19	
11/26/2019	412.80	3.13		5.80			0.24	
12/18/2019	447.40	4.44		6.30			0.39	
1/28/2020	465.40	0.20		5.01			0.76	

**TABLE 7
SAN JOAQUIN RESERVOIR DAM
SEEPAGE WEIR MEASUREMENTS
2007 THROUGH 2021**

Seepage Weir -->			Floor Drain			Right Groin Drain		
Date	Reservoir Elevation (ft)	Monthly Rainfall	Reading (ft)	Flow (gpm)	Comment	Reading (ft)	Flow (gpm)	Comment
2/26/2020	459.60	0.14		5.20			0.55	
3/24/2020	470.70	3.49		6.30			0.79	
4/29/2020	467.60	3.65		6.02			1.42	
5/27/2020	459.10	0.02		4.59			0.95	
6/23/2020	447.00	0.00		5.20			0.60	
7/30/2020	434.00	0.00		5.11			0.40	
8/26/2020	417.70	0.00		4.50			0.38	
9/29/2020	403.60	0.00		4.80			0.25	
10/28/2020	404.50	0.00		5.23			0.26	
11/24/2020	413.50	0.42		4.70			0.25	
12/22/2020	408.00	1.13		4.50			0.20	
1/27/2021	435.60	2.25		4.75			0.33	
2/25/2021	457.30	0.05		4.37			0.36	
3/23/2021	465.90	1.36		5.28			0.39	
4/27/2021	462.10	0.04		4.38			0.27	
5/26/2021	455.00	0.03		5.00			0.22	
6/30/2021	437.90	0.00		4.50			0.32	
7/29/2021	423.60	0.07		4.12			0.15	
8/24/2021	408.00	0.00		2.20			0.14	
9/29/2021	398.00	0.04		3.90			0.22	
10/26/2021	417.00	0.87		4.40			0.21	
11/25/2021	427.90	0.00		5.20			0.36	
12/21/2021	427.90	4.77		3.20			0.32	

**TABLE 8
SAN JOAQUIN RESERVOIR DAM
SEDIMENT COLLECTION AND SEEPAGE
APRIL 2014 THROUGH MARCH 2020**

Date	Reservoir Elevation (feet)	West Drain				East Drain			
		Silt Depth (in.)	Slit Volume (lbs)	Flow (gpm)	Comments	Silt Depth (in.)	Slit Volume (lbs)	Flow (gpm)	Comments
4/30/2014	465.3	1.5	6.47	57.00	CK/MD	0.0	0.0	50.0	
5/28/2014	450.6	0.5	1.85	46.03	BW/MC	0.0	0.0	34.1	
7/17/2014	436.4	1.6	5.14	36.19	10 day hold 7/1/14 to 7/11/14@ 438' CK/MC	0.0	0.0	27.4	
7/29/2014	431.2	0.5	2.69	33.88	SH/MD	0.0	0.0	25.0	
8/28/2014	419.5	0.1	3.54	27.02	CK/MD	0.0	0.0	19.1	
9/23/2014	405.3	0.3	3.14	21.32	BW/MD	0.0	0.0	13.0	
10/30/2014	400.9	0.1	3.21	18.50	West Drain Has a lot of Foam. TC/SH	0.0	0.0	10.1	
11/25/2014	410.9	0.1	3.88	18.60	CK/TC	0.0	0.0	10.8	
12/30/2014	430.6	0.3	3.61	26.64	SH	0.0	0.0	23.3	
1/27/2015	466.7	0.5	8.71	60.49	SH/MC	0.0	0.0	61.5	
3/5/2015	470.1	0.3	4.30	64.10	MD/CK	0.0	0.0	64.2	
3/26/2015	465.9	0.1	2.73	63.40	SH/MC	0.0	0.0	62.1	
4/28/2015	465.7	0.1	2.41	59.60	MD/MC	0.0	0.0	60.1	
5/28/2015	466.4	0.1	2.33	49.61	SH/CK	0.0	0.0	54.0	
6/30/2015	454.5	0.3	2.47	43.46	MD/TC	0.0	0.0	44.8	
7/28/2015	445.6	0.1	2.08	35.90	MC/BW	0.0	0.0	35.4	
8/28/2015	473.6	0.3	2.13	30.40	CK/MC	0.0	0.0	29.2	
9/24/2015	426.9	0.1	2.04	25.10	MC/JG	0.0	0.0	23.5	
10/27/2015	415.4	0.3	2.11	18.70	JG/CK	0.0	0.0	16.9	
11/19/2015	412.9	0.1	2.02	16.38	JG/MD	0.0	0.0	14.2	
12/22/2015	425.5	0.1	2.04	19.40	CK/MD	0.0	0.0	19.5	
1/27/2016	463.6	0.3	2.47	42.08	SH	0.0	0.0	53.2	
2/25/2016	468.9	0.5	3.72	50.05	MD	0.0	0.0	53.4	
3/30/2016	468.0	0.3	2.61	50.90	CC	0.0	0.0	56.4	
4/28/2016	461.3	0.3	2.43	46.75	SH	0.0	0.0	50.8	
5/25/2016	451.3	0.1	2.09	40.29	MD	0.0	0.0	43.1	
6/28/2016	414.1	0.1	2.11	34.83	AW	0.0	0.0	35.0	
7/27/2016	434.2	0.1	2.27	29.30	CK	0.0	0.0	28.2	
8/23/2016	418.6	0.1	2.04	20.95	JM	0.0	0.0	19.0	

**TABLE 8
SAN JOAQUIN RESERVOIR DAM
SEDIMENT COLLECTION AND SEEPAGE
APRIL 2014 THROUGH MARCH 2020**

Date	Reservoir Elevation (feet)	West Drain				East Drain			
		Silt Depth (in.)	Slit Volume (lbs)	Flow (gpm)	Comments	Silt Depth (in.)	Slit Volume (lbs)	Flow (gpm)	Comments
9/27/2016	406.4	0.1	2.06	15.91	JM	0.0	0.0	13.0	
10/26/2016	404.0	0.3	2.07	13.95	MC	0.0	0.0	10.9	
11/22/2016	413.6	0.3	2.13	14.80	SH	0.0	0.0	12.0	
12/20/2016	441.10			6.15 gpm				29.72 gpm	
1/26/2017	471.60			51.40 gpm				58.70 gpm	
2/24/2017	472.05			60.38 gpm				57.36 gpm	
2/25/2017	472.00			60.35 gpm				57.55 gpm	
2/26/2017	472.00			60.38 gpm				56.81 gpm	
2/27/2017	472.00			60.40 gpm				56.90 gpm	
2/28/2017	471.90			60.15 gpm				56.32 gpm	
3/1/2017	471.90			59.70 gpm				55.80 gpm	
3/2/2017	471.90			59.71 gpm				56.34 gpm	
3/29/2017	467.90			56.32 gpm				51.95 gpm	
4/27/2017	457.60			47.55 gpm				44.35 gpm	
5/23/2017	453.50			41.80 gpm				38.22 gpm	
6/21/2017	447.40			39.20 gpm				34.25 gpm	
7/26/2017	435.10			32.46 gpm				29.68 gpm	
8/25/2017	420.10			24.30 gpm				22.90 gpm	
9/27/2017	407.10			18.94 gpm				16.00 gpm	
10/26/2017	395.00			14.80 gpm				10.73 gpm	
11/28/2017	409.00			16.68 gpm				13.48 gpm	
12/20/2017	416.80			18.42 gpm				15.28 gpm	
1/24/2018	434.50			26.47 gpm				27.22 gpm	
2/21/2018	443.10			32.39 gpm				32.75 gpm	
3/29/2018	453.00			42.15 gpm				39.88 gpm	
4/26/2018	449.10			39.21 gpm				36.60 gpm	
5/31/2018	453.10			40.77 gpm				39.70 gpm	
6/28/2018	448.20			38.50 gpm				36.70 gpm	
7/25/2018	440.40			35.20 gpm				33.48 gpm	

**TABLE 8
SAN JOAQUIN RESERVOIR DAM
SEDIMENT COLLECTION AND SEEPAGE
APRIL 2014 THROUGH MARCH 2020**

Date	Reservoir Elevation (feet)	West Drain				East Drain			
		Silt Depth (in.)	Slit Volume (lbs)	Flow (gpm)	Comments	Silt Depth (in.)	Slit Volume (lbs)	Flow (gpm)	Comments
8/22/2018	427.10			28.26 gpm			23.07 gpm		
9/27/2018	439.60			19.09 gpm			13.85 gpm		
10/18/2018	405.30			15.38 gpm			10.95 gpm		
11/28/2018	408.60			14.80 gpm			10.60 gpm		
12/19/2018	436.00			23.10 gpm			24.80 gpm		
1/30/2019	463.80			45.60 gpm			49.09 gpm		
2/3/2019	471.60	0.25	3.04	51.40 gpm			50.80 gpm		
3/27/2019	463.30	0.25	3.66	48.88 gpm			47.06 gpm		
4/29/2019	453.00	0.125	2.12	42.48 gpm			38.70 gpm		
5/30/2019	451.80	0.25	2.04	40.80 gpm			38.10 gpm		
6/26/2019	446.20	0.125	2.08	38.07 gpm			36.33 gpm		
7/30/2019	434.80	0.125	2.21	32.54 gpm			31.49 gpm		
8/27/2019	424.40	0.25	2.13	26.39 gpm			23.74 gpm		
9/26/2019	405.60	0.25	1.97	19.42 gpm			15.51 gpm		
10/22/2019	400.50	0.25	1.81	16.33 gpm			12.42 gpm		
11/26/2019	412.80	0.25	1.96	17.34 gpm			13.27 gpm		
12/18/2019	447.40	0.125	2.03	30.36 gpm			32.88 gpm		
1/28/2020	465.40	0.50	3.42	47.62 gpm			49.22 gpm		
2/26/2020	459.60	0.50	2.61	43.84 gpm			42.43 gpm		
3/24/2020	470.70	0.25	2.93	50.87 gpm			49.77 gpm		
9/1/2021	404.70	0.75	4.24	20.8 gpm			12.62 gpm		
10/28/2021	419.80	0.13	2.16	18.86 gpm			12.15 gpm		
11/22/2021	427.80	0.13	2.08	24.56 gpm			18.62 gpm		

**TABLE 8
SAN JOAQUIN RESERVOIR DAM
SEDIMENT COLLECTION AND SEEPAGE
APRIL 2014 THROUGH MARCH 2020**

Date	Reservoir Elevation (feet)	Filter Drain			Comments
		Silt Depth (in.)	Slit Volume (lbs)	Flow (gpm)	
4/30/2014	465.3	0.0		9.0	
5/28/2014	450.6	0.0		8.2	
7/17/2014	436.4	0.0		7.9	
7/29/2014	431.2	0.0		8.2	
8/28/2014	419.5	0.0		8.0	
9/23/2014	405.3	0.0		8.0	
10/30/2014	400.9	0.0		7.9	
11/25/2014	410.9	0.0		7.0	
12/30/2014	430.6	0.0		7.5	
1/27/2015	466.7	0.0		8.2	
3/5/2015	470.1	0.0		8.0	
3/26/2015	465.9	0.0		9.0	
4/28/2015	465.7	0.0		9.9	
5/28/2015	466.4	0.0		7.4	
6/30/2015	454.5	0.0		8.3	
7/28/2015	445.6	0.0		6.7	
8/28/2015	473.6	0.0		7.1	
9/24/2015	426.9	0.0		7.1	
10/27/2015	415.4	0.0		6.9	
11/19/2015	412.9	0.0		6.4	
12/22/2015	425.5	0.0		6.7	
1/27/2016	463.6	0.0		6.5	
2/25/2016	468.9	0.0		6.6	
3/30/2016	468.0	0.0		6.2	
4/28/2016	461.3	0.0		6.7	
5/25/2016	451.3	0.0		7.2	
6/28/2016	414.1	0.0		6.7	
7/27/2016	434.2	0.0		6.6	10 day hold 7/11-7/21/16
8/23/2016	418.6	0.0		6.5	5 day hold 8/23-8/28/16

TABLE 8
SAN JOAQUIN RESERVOIR DAM
SEDIMENT COLLECTION AND SEEPAGE
APRIL 2014 THROUGH MARCH 2020

Date	Reservoir Elevation (feet)	Filter Drain			Comments
		Silt Depth (in.)	Slit Volume (lbs)	Flow (gpm)	
9/27/2016	406.4	0.0		5.7	10 day hold 9/30-
10/26/2016	404.0	0.0		5.9	
11/22/2016	413.6	0.0		6.2	
12/20/2016	441.10			25.63 gpm	
1/26/2017	471.60			6.50 gpm	
2/24/2017	472.05			7.41 gpm	
2/25/2017	472.00			7.44 gpm	
2/26/2017	472.00			7.39 gpm	
2/27/2017	472.00			7.34 gpm	
2/28/2017	471.90			7.14 gpm	
3/1/2017	471.90			7.02 gpm	
3/2/2017	471.90			7.04 gpm	
3/29/2017	467.90			7.34 gpm	
4/27/2017	457.60			7.65 gpm	
5/23/2017	453.50			7.76 gpm	
6/21/2017	447.40			7.61 gpm	
7/26/2017	435.10			7.54 gpm	Reservoir 5 day hold at 438' from 7/7 to 7/16.
8/25/2017	420.10			7.70 gpm	
9/27/2017	407.10			7.44 gpm	
10/26/2017	395.00			7.19 gpm	
11/28/2017	409.00			7.45 gpm	
12/20/2017	416.80			7.17 gpm	
1/24/2018	434.50			7.11 gpm	
2/21/2018	443.10			6.80 gpm	
3/29/2018	453.00			7.01 gpm	
4/26/2018	449.10			6.97 gpm	
5/31/2018	453.10			7.66 gpm	
6/28/2018	448.20			8.04 gpm	
7/25/2018	440.40			7.76 gpm	Reservoir 10 day hold at 438' from 7/30 to 8/8

**TABLE 8
SAN JOAQUIN RESERVOIR DAM
SEDIMENT COLLECTION AND SEEPAGE
APRIL 2014 THROUGH MARCH 2020**

Date	Reservoir Elevation (feet)	Filter Drain			Comments
		Silt Depth (in.)	Slit Volume (lbs)	Flow (gpm)	
8/22/2018	427.10			7.82 gpm	
9/27/2018	439.60			7.53 gpm	Reservoir 5 day hold at 418.6' from 9/6 to 9/11.
10/18/2018	405.30			6.79 gpm	
11/28/2018	408.60			5.90 gpm	
12/19/2018	436.00			5.80 gpm	
1/30/2019	463.80			6.45 gpm	
2/3/2019	471.60			7.80 gpm	
3/27/2019	463.30			7.16 gpm	
4/29/2019	453.00			7.35 gpm	
5/30/2019	451.80			7.80 gpm	
6/26/2019	446.20			7.19 gpm	
7/30/2019	434.80			7.80 gpm	
8/27/2019	424.40			8.19 gpm	
9/26/2019	405.60			7.57 gpm	
10/22/2019	400.50			7.02 gpm	
11/26/2019	412.80			6.67 gpm	
12/18/2019	447.40			6.52 gpm	
1/28/2020	465.40			6.67 gpm	
2/26/2020	459.60			6.77 gpm	
3/24/2020	470.70			7.73 gpm	
9/1/2021	404.70			6.64 gpm	
10/28/2021	419.80			5.86 gpm	
11/22/2021	427.80			3.13 gpm	

**TABLE 9
SAN JOAQUIN RESERVOIR DAM
HORIZONTAL AND VERTICAL MOVEMENT SURVEY DATA
2004 THROUGH 2022**

Date	Reservoir Elevation (feet)	Horizontal Movement Since Initial Survey (Feet) Positive=North(Downstream);Negative=South(Upstream)																	
		SA-1	SA-2	SA-3	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SC-1	SC-2	SC-3	SC-4	SC-5	SC-6	SC-7	SC-8
12/20/2004	370.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9/27/2005	422.80	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10/26/2005	411.70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11/4/2005	411.70	-0.020	0.000	-0.030	-0.005	0.005	0.020	0.020	0.015	0.000	0.005	-0.035	-0.045	-0.050	-0.070	-0.085	-0.105	-0.125	-0.120
6/1/2006	467.10	-0.020	0.000	-0.040	-0.005	0.010	0.030	0.030	0.025	0.000	0.010	-0.035	-0.045	-0.045	-0.070	-0.085	-0.105	-0.125	-0.120
5/25/2007	461.40	-0.020	0.000	-0.035	-0.005	0.010	0.025	0.025	0.020	-0.005	0.010	-0.065	-0.050	-0.050	-0.080	-0.095	-0.105	-0.130	-0.125
6/9/2008	460.00	-0.020	0.000	-0.025	0.005	0.020	0.030	0.030	0.025	0.000	0.020	-0.065	-0.040	-0.045	-0.070	-0.090	-0.110	-0.120	-0.120
6/10/2009	460.00	-0.035	-0.005	-0.035	-0.005	0.010	0.025	0.025	0.020	0.000	0.015	-0.065	-0.060	-0.055	-0.080	-0.095	-0.110	-0.130	-0.125
5/27/2010	463.30	-0.035	-0.005	-0.040	-0.005	0.005	0.025	0.025	0.020	0.000	0.015	-0.065	-0.050	-0.050	-0.080	-0.095	-0.105	-0.130	-0.125
5/26/2011	457.20	-0.040	-0.005	-0.040	-0.005	0.005	0.020	0.025	0.025	0.000	0.015	-0.065	-0.050	-0.050	-0.075	-0.095	-0.105	-0.130	-0.130
5/24/2012	457.20	-0.030	-0.005	-0.035	0.000	0.010	0.020	0.020	0.020	-0.005	0.010	-0.065	-0.050	-0.050	-0.080	-0.105	-0.110	-0.135	-0.135
6/20/2013	441.40	-0.035	-0.010	-0.040	-0.010	0.005	0.015	0.020	0.015	-0.005	0.015	-0.060	-0.055	-0.055	-0.080	-0.105	-0.115	-0.135	-0.135
5/2/2014	465.10	-0.040	-0.015	-0.040	-0.015	0.005	0.015	0.020	0.020	-0.005	0.010	-0.050	-0.050	-0.050	-0.080	-0.090	-0.115	-0.135	-0.130
6/10/2015	463.20	-0.035	-0.010	-0.035	-0.015	0.010	0.015	0.020	0.020	-0.005	0.010	-0.060	-0.055	-0.045	-0.075	-0.095	-0.115	-0.130	-0.130
8/1/2016	430.80	-0.030	-0.005	-0.035	-0.015	0.010	0.020	0.020	0.025	0.000	0.020	-0.065	-0.055	-0.050	-0.075	-0.095	-0.115	-0.125	-0.125
6/1/2017		No Survey Data			No Survey Data							No Survey Data							
6/27/2018		-0.040	-0.010	-0.040	-0.025	0.005	0.015	0.020	0.025	0.000	0.020	-0.070	-0.060	-0.050	-0.070	-0.100	-0.115	-0.135	-0.140
6/17/2019		-0.040	-0.015	-0.035	-0.010	0.020	0.030	0.030	0.035	0.005	0.020	-0.070	-0.055	-0.060	-0.085	-0.105	-0.125	-0.145	-0.135
11/25/2020		-0.030	-0.030	-0.050	0.000	0.020	0.020	0.020	0.020	0.000	0.020	-0.070	-0.080	-0.065	-0.085	-0.105	-0.130	-0.135	-0.145
6/30/2021		No Survey Data			No Survey Data							No							
5/10/2022		-0.040	-0.020	-0.050	-0.010	0.000	0.015	0.020	0.015	0.000	0.010	-0.060	-0.065	-0.060	-0.085	-0.105	-0.115	-0.130	-0.150
Date	Reservoir Elevation (feet)	Vertical Movement Since Initial Survey(Feet)																	
SA-1	SA-2	SA-3	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SC-1	SC-2	SC-3	SC-4	SC-5	SC-6	SC-7	SC-8		
12/20/2004	370.00	300.242	300.137	300.170	360.119	360.627	360.443	360.504	360.256	360.177	360.926	420.056	419.748	419.955	419.516	419.467	419.526	419.768	420.402
9/27/2005	422.80	302.379	302.263	302.294	362.253	362.760	362.573	362.631	362.393	362.291	363.060	422.200	421.876	422.082	421.643	421.593	421.655	421.897	422.525
10/26/2005	411.70	No Survey Data			No Survey Data							No Survey Data							
11/4/2005	411.70	No Survey Data			No Survey Data							No Survey Data							
6/1/2006	467.10	302.374	302.264	302.294	362.264	362.769	362.584	362.639	362.404	362.299	363.069	422.225	421.900	422.105	421.665	421.615	421.675	421.915	422.504
5/25/2007	461.40	302.362	302.258	302.291	362.244	362.751	362.564	362.619	362.383	362.283	363.054	422.197	421.875	422.081	421.641	421.592	421.654	421.895	422.524
6/9/2008	460.00	302.359	302.254	302.288	362.246	362.756	362.571	362.626	362.391	362.291	363.061	422.198	421.888	422.093	421.653	421.608	421.668	421.908	422.538
6/10/2009	460.00	302.353	302.246	302.281	362.254	362.764	362.574	362.629	362.394	362.294	363.064	422.194	421.884	422.089	421.649	421.599	421.664	421.909	422.539
5/27/2010	463.30	302.355	302.250	302.283	362.254	362.759	362.569	362.624	362.389	362.289	363.059	422.209	421.894	422.099	421.659	421.609	421.674	421.919	422.549
5/26/2011	457.20	302.351	302.248	302.280	362.259	362.764	362.574	362.629	362.394	362.294	363.064	422.209	421.889	422.094	421.654	421.604	421.669	421.914	422.544
5/24/2012	457.20	302.348	302.242	302.277	362.244	362.754	362.564	362.624	362.389	362.289	363.059	422.204	421.884	422.089	421.649	421.599	421.664	421.909	422.539
6/20/2013	441.40	302.345	302.238	302.275	362.254	362.764	362.579	362.634	362.399	362.299	363.069	422.189	421.884	422.089	421.649	421.599	421.664	421.914	422.534
5/2/2014	465.10	302.342	302.235	302.272	362.254	362.759	362.564	362.629	362.394	362.294	363.064	422.184	421.889	422.094	421.654	421.604	421.669	421.919	422.534
6/10/2015	463.20	302.343	302.237	302.274	362.249	362.754	362.564	362.624	362.389	362.289	363.059	422.169	421.884	422.089	421.649	421.599	421.664	421.909	422.524
8/1/2016	430.80	302.344	302.239	302.278	362.244	362.754	362.564	362.624	362.389	362.294	363.064	422.159	421.874	422.079	421.639	421.594	421.659	421.904	422.519
6/1/2017		No Survey Data			No Survey Data							No Survey Data							
6/27/2018		302.339	302.339	302.234	362.254	362.764	362.574	362.629	362.394	362.299	363.069	422.184	421.904	422.109	421.669	421.619	421.684	421.934	422.559
6/17/2019		302.339	302.234	302.264	362.269	362.779	362.589	362.649	362.414	362.314	363.084	422.234	421.929	422.129	421.694	421.639	421.714	421.959	422.589
11/25/2020		302.330	302.223	302.263	362.241	362.742	362.559	362.617	362.383	362.285	363.056	422.212	421.899	422.105	421.663	421.612	421.680	421.930	422.56
6/30/2021		No Survey Data			No Survey Data							No							
5/10/2022		302.319	302.214	302.252	362.237	362.744	362.561	362.616	362.382	362.29	363.068	422.214	421.906	422.11	421.668	421.615	421.684	421.935	422.568

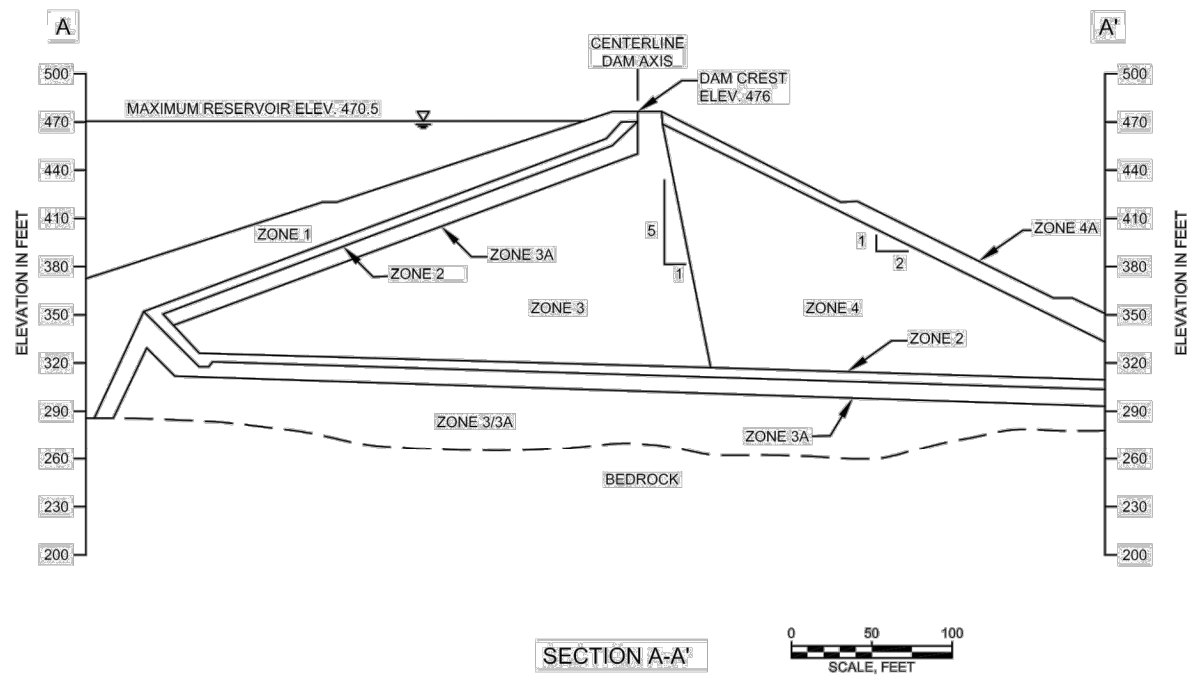
Note:
1. Vertical data is referenced in NAVD 88 datum.

**TABLE 9
SAN JOAQUIN RESERVOIR DAM
HORIZONTAL AND VERTICAL MOVEMENT SURVEY DATA
2004 THROUGH 2022**

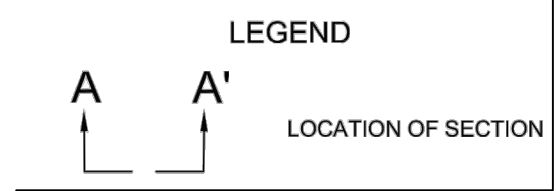
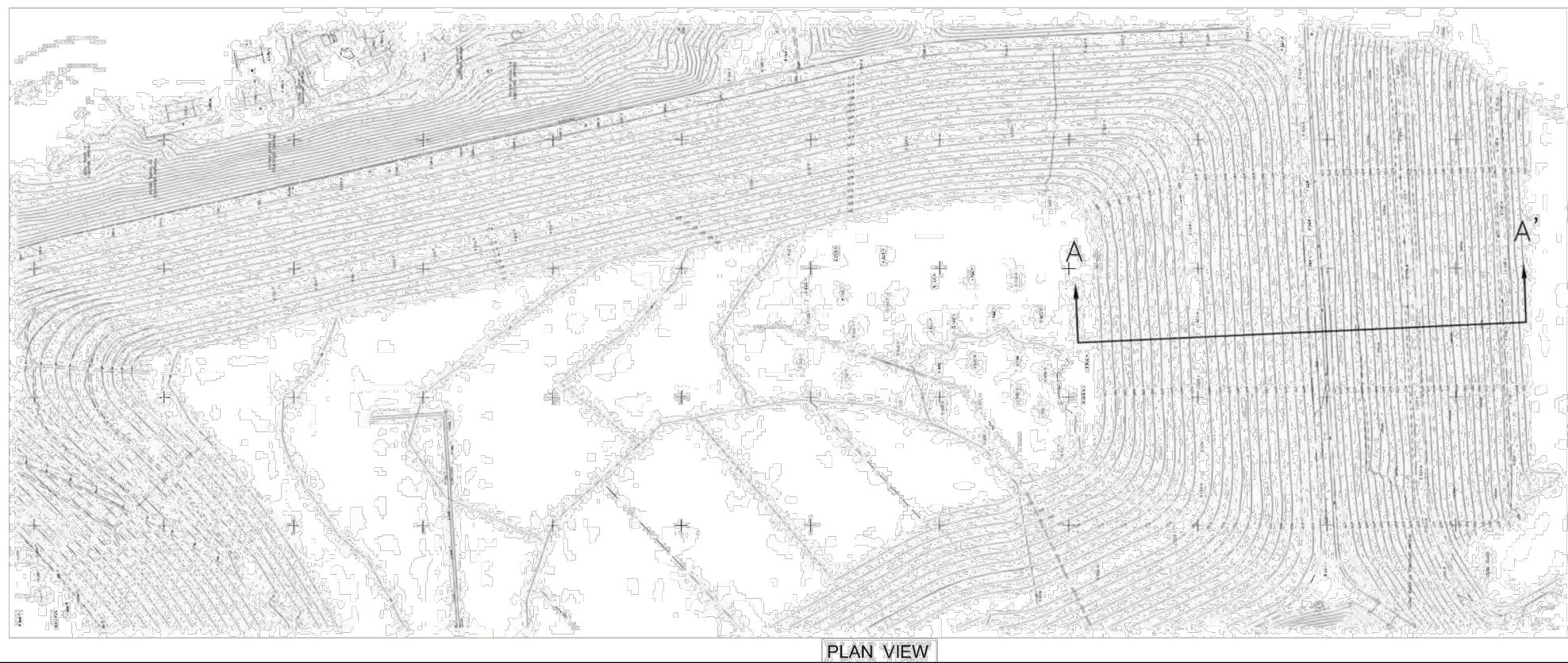
Date	Reservoir Elevation (feet)	Horizontal Movement Since Initial Survey (Feet) Positive=North(Downstream);Negative=South(Upstream)													
		SD-1	SD-2	SD-3	SD-4	SD-5	SD-6	SD-7	SE-2	SE-3	SE-5	SE-6	SE-7		
12/20/2004	370.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
9/27/2005	422.80	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
10/26/2005	411.70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
11/4/2005	411.70	0.000	0.000	0.000	0.065	0.045	-0.010	-0.005	0.025	0.040	0.055	0.025	-25.340		
6/1/2006	467.10	0.000	0.000	0.000	0.075	0.045	-0.015	-0.005							
5/25/2007	461.40	No Survey Data													
6/9/2008	460.00	-0.005	0.000	0.000	0.080	0.045	-0.015	0.000							
6/10/2009	460.00	-0.010	0.000	0.000	0.085	0.040	-0.015	-0.005							
5/27/2010	463.30	-0.010	0.000	0.000	0.080	0.045	-0.020	-0.005							
5/26/2011	457.20	-0.010	0.005	0.010	0.090	0.055	-0.015	-0.005							
5/24/2012	457.20	-0.010	0.005	0.010	0.090	0.055	-0.015	-0.005							
6/20/2013	441.40	-0.010	0.015	0.015	0.095	0.060	-0.010	-0.005							
5/2/2014	465.10	-0.015	0.000	0.015	0.080	0.040	-0.015	-0.005							
6/10/2015	463.20	-0.005	0.010	0.015	0.090	0.055	-0.010	-0.005							
8/1/2016	430.80	-0.010	0.010	0.015	0.080	0.055	-0.010	-0.005							
6/1/2017		No Survey Data													
6/27/2018		-0.010	0.010	0.020	0.085	0.055	-0.010	0.000							
6/17/2019		0.010	0.010	0.015	0.100	0.060	-0.005	0.000							
11/25/2020		0.000	0.000	0.020	0.080	0.040	-0.015	0.000							
6/30/2021		No Survey Data													
5/10/2022		-0.010	0.000	0.010	0.075	0.040	-0.025	-0.005							
Date	Reservoir Elevation (feet)	Vertical Movement Since Initial Survey(Feet)													
		SD-1	SD-2	SD-3	SD-4	SD-5	SD-6	SD-7	SE-2	SE-3	SE-5	SE-6	SE-7		
12/20/2004	370.00	476.015	476.636	477.565	478.427	477.546	476.917	476.307	420.061	419.949	420.021	420.319	420.670		
9/27/2005	422.80	478.151	478.767	479.699	480.556	479.664	479.038	478.418	422.181	422.069	422.130	422.452	422.807		
10/26/2005	411.70	No Survey Data													
11/4/2005	411.70	No Survey Data													
6/1/2006	467.10	478.158	478.773	479.698	480.553	479.663	479.033	478.408							
5/25/2007	461.40	478.144	478.758	479.688	480.540	479.650	479.023	478.405							
6/9/2008	460.00	478.156	478.771	479.701	480.556	479.661	479.036	478.421							
6/10/2009	460.00	478.164	478.779	479.709	480.564	479.674	479.049	478.434							
5/27/2010	463.30	478.174	478.784	479.714	480.569	479.679	479.054	478.439							
5/26/2011	457.20	478.174	478.784	479.714	480.569	479.679	479.054	478.439							
5/24/2012	457.20	478.164	478.774	479.699	480.554	479.664	479.039	478.424							
6/20/2013	441.40	478.164	478.774	479.704	480.554	479.659	479.034	478.424							
5/2/2014	465.10	478.159	478.774	479.699	480.549	479.654	479.034	478.429							
6/10/2015	463.20	478.164	478.774	479.699	480.549	479.654	479.034	478.429							
8/1/2016	430.80	478.169	478.779	479.704	480.554	479.659	479.039	478.429							
6/1/2017		No Survey Data													
6/27/2018		478.199	478.809	479.739	480.594	479.689	479.074	478.479							
6/17/2019		478.204	478.814	479.739	480.594	479.689	479.074	478.474							
11/25/2020		478.190	478.798	479.724	480.570	479.679	479.064	478.453							
6/30/2021		No Survey Data													
5/10/2022		478.199	478.807	479.732	480.584	479.693	479.078	478.467							

Note:
1. Vertical data is referenced in NAVD 88 datum.

Figures



ZONE NO.	MATERIAL	FUNCTION
1	TERRACE SOIL	IMPERVIOUS BLANKET AND RESERVOIR LINING
2	IMPORTED SAND	FILTER DRAIN
3	IMPORTED GRAVEL	ROCK CORE (MAX. SIZE 6")
3A	SANDSTONE	ROCK CORE TRANSITION (MAX. SIZE 3")
4	SANDSTONE	DOWNSTREAM RANDOM SHELL (MAX. SIZE 12")
4A	SANDSTONE	DOWNSTREAM SLOPE PROTECTION (MAX. SIZE 30")



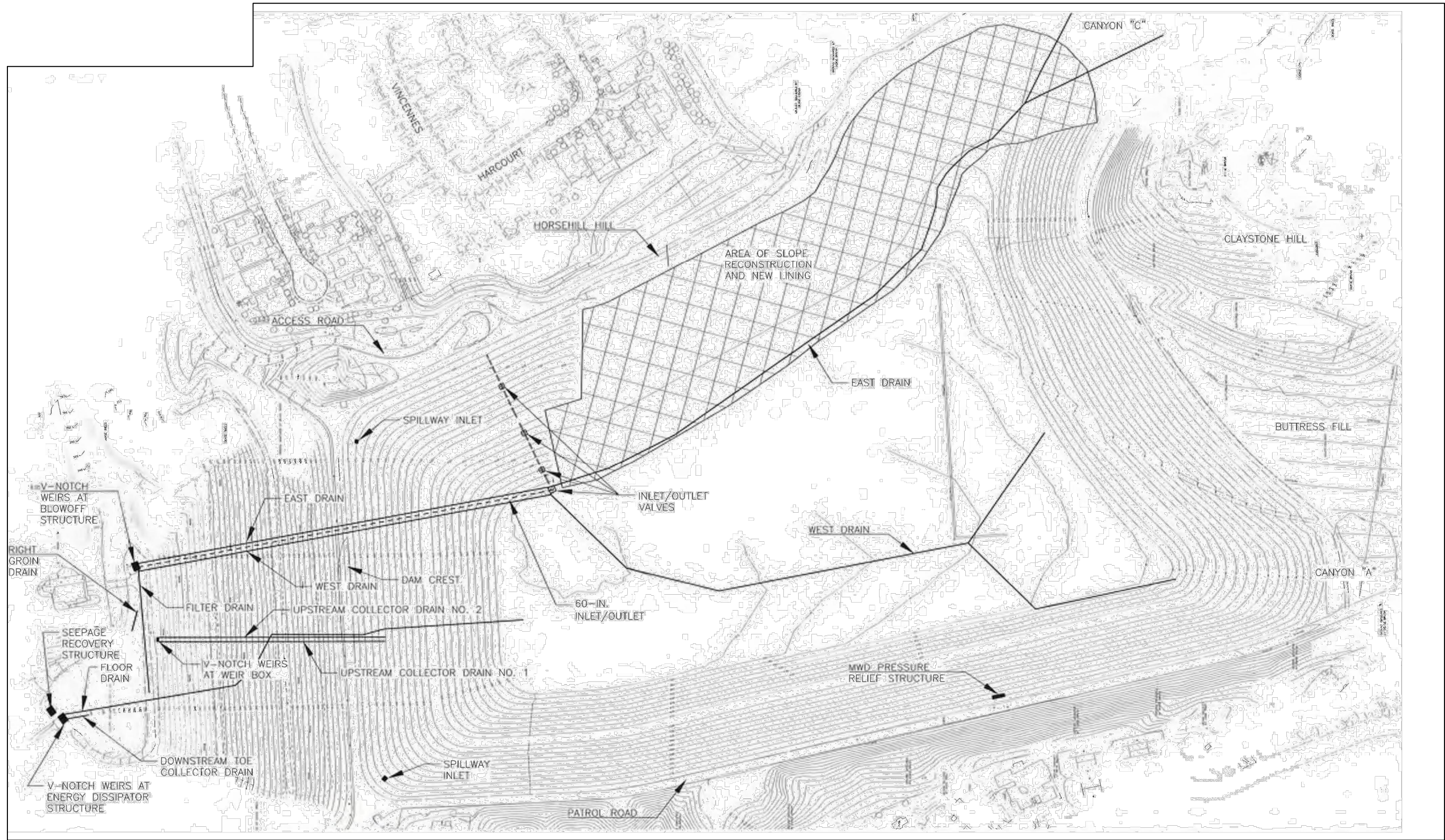
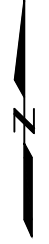
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 San Joaquin Dam and Reservoir
 Irvine, CA
 Irvine Ranch Water District
 Irvine, CA




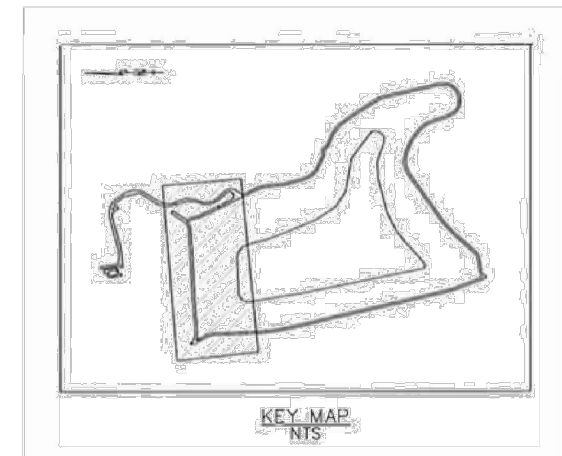
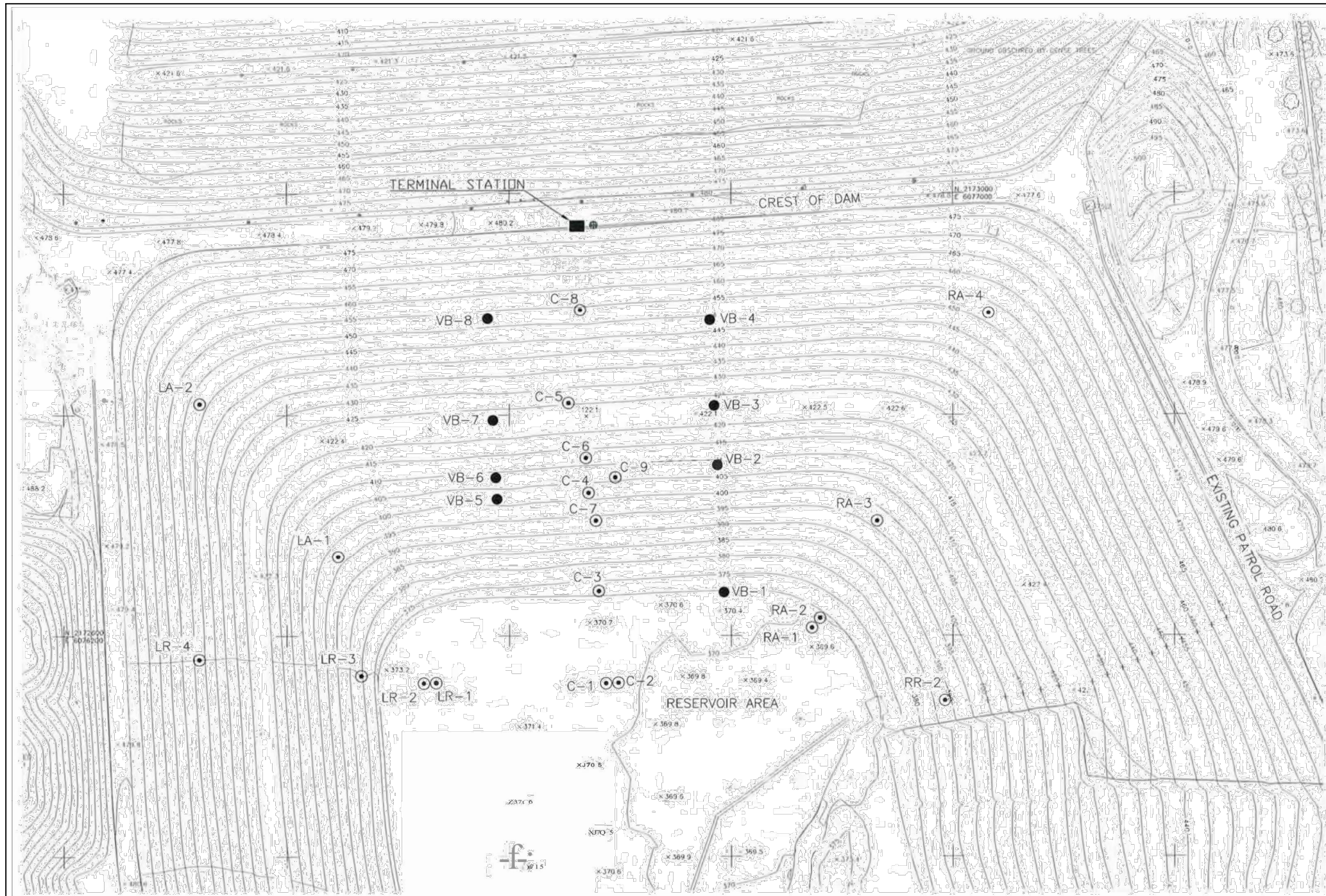
PLAN VIEW AND SECTION A-A'

Project 1901888 September 2022 Fig. 1

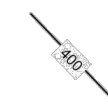




NOT TO SCALE

Annual Surveillance Report from Jan. 2021 to Dec. 2021 San Joaquin Dam and Reservoir Irvine, CA		DAM AND RESERVOIR SITE PLAN
Irvine Ranch Water District Irvine, CA	Project 1901888	September 2022 Fig. 2



LEGEND

-  3' CONTOUR LINES
-  VIBRATING WIRE PIEZOMETER
-  PNEUMATIC PIEZOMETER

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 San Joaquin Dam and Reservoir
 Irvine, CA
 Irvine Ranch Water District
 Irvine, CA

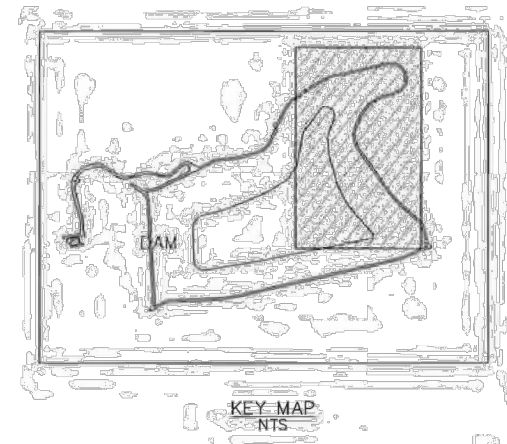


DAM EMBANKMENT AND
 ABUTMENT LOCATIONS



Project 1901888

September 2022

Fig. 3



LEGEND

-  OPEN-WELL PIEZOMETER
-  MONITORING WELLS

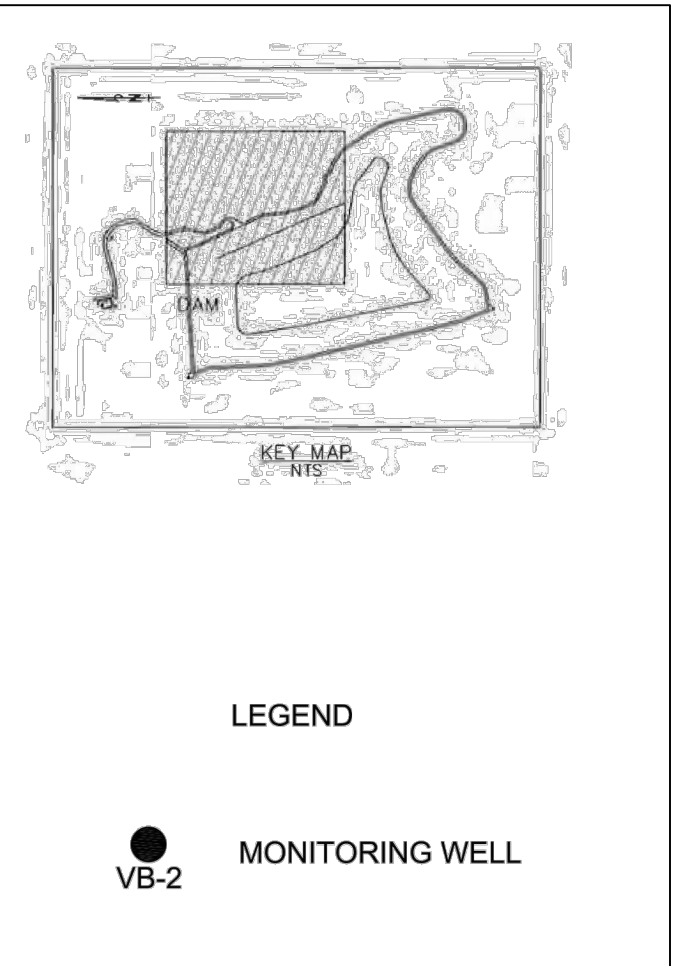
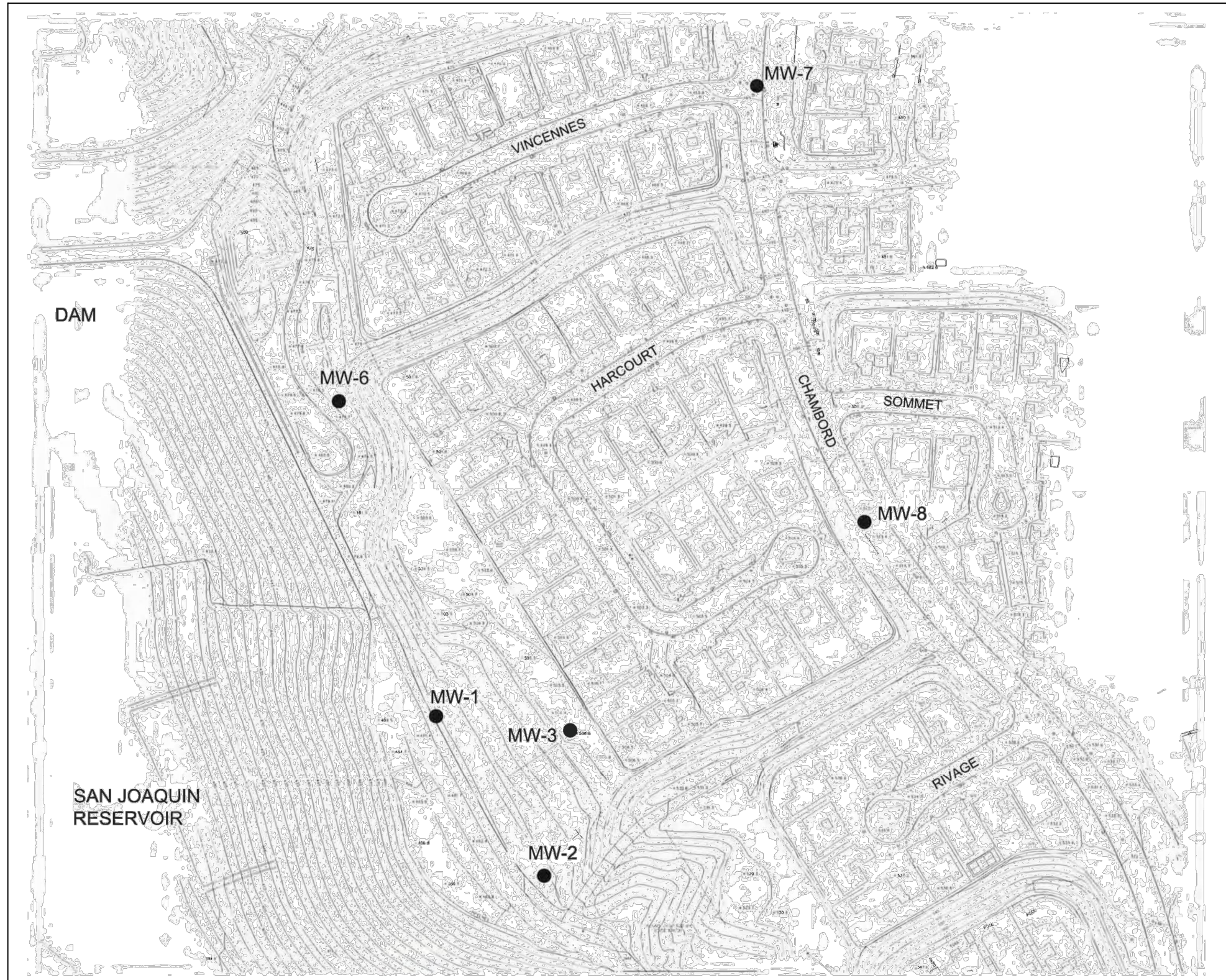
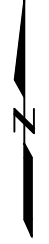


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 San Joaquin Dam and Reservoir
 Irvine, CA
 Irvine Ranch Water District
 Irvine, CA



LOCATIONS OF OPEN-WELL
 PIEZOMETERS AND MW-4 AND
 MW-5
 Project 1901888 September 2022 Fig. 4



SAN JOAQUIN
RESERVOIR

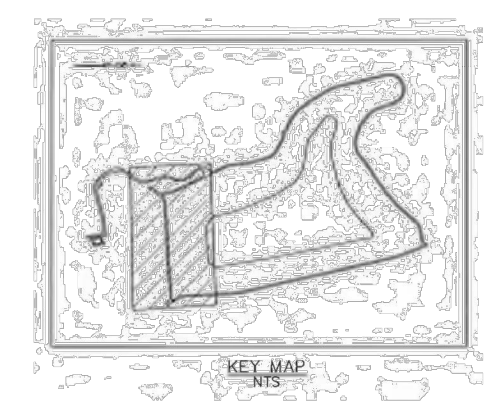
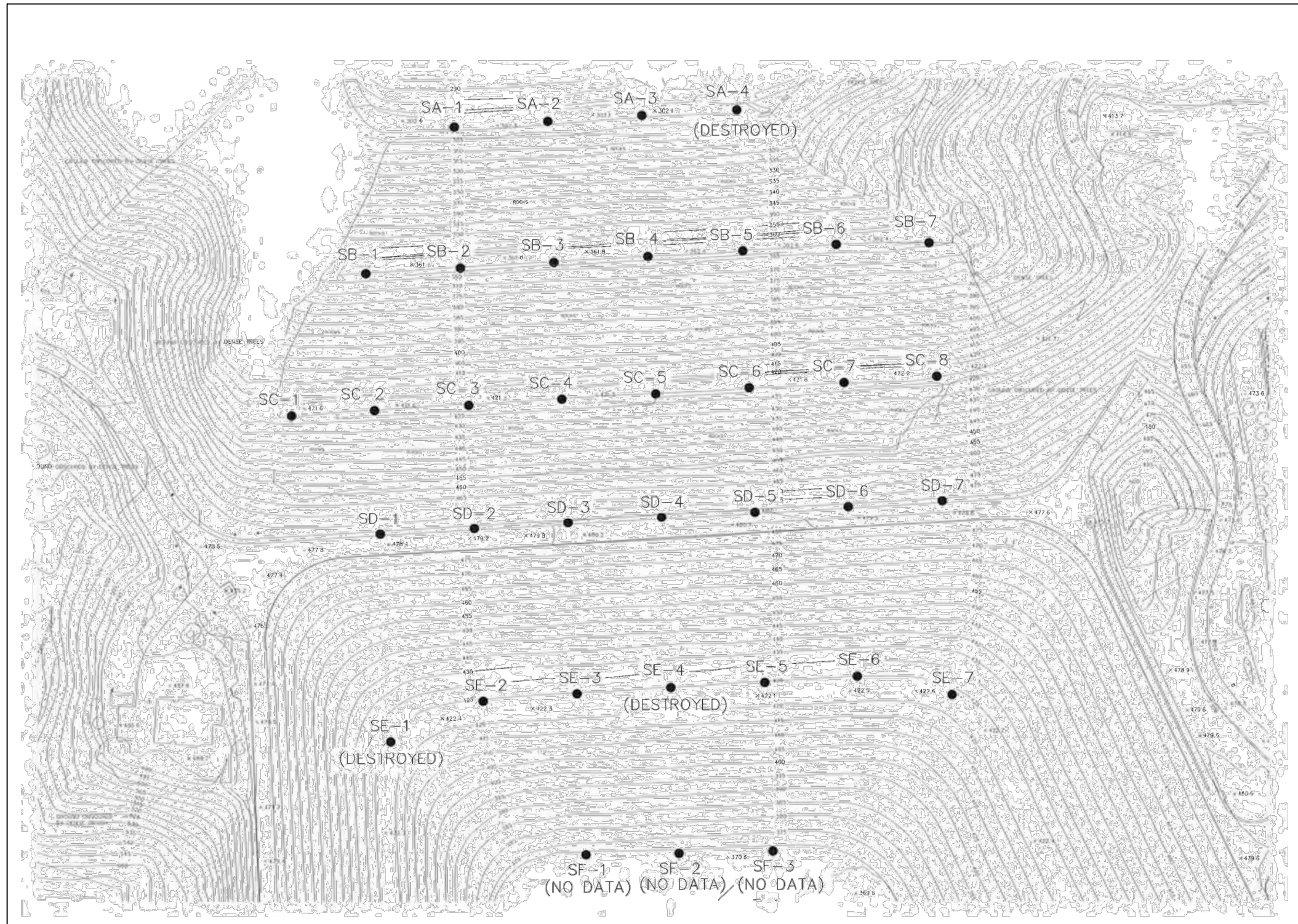
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San Joaquin Dam and Reservoir
Irvine, CA
Irvine Ranch Water District
Irvine, CA



LOCATIONS OF MW-1, MW-2,
MW-3, MW-6, MW-7, AND MW-8
September 2022

Fig. 5



LEGEND

● SURVEY MONUMENT
SD-2

- NOTES:**
- SF-1, SF-2 AND SF-3 SURVEY MONUMENTS ARE SUBMERGED UNDER WATER WHEN RESERVOIR WATER LEVEL IS ABOVE 371 FT.
 - SE-2, SE-3, SE-5, SE-6 AND SE-7 SURVEY MONUMENTS ARE SUBMERGED UNDER WATER WHEN RESERVOIR WATER LEVEL IS ABOVE 423 FT.

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 San Joaquin Dam and Reservoir
 Irvine, CA
 Irvine Ranch Water District
 Irvine, CA



LOCATION OF SURVEY MONUMENT POINTS
 Project 1901888
 September 2022
 Fig. 6

Figure 7
 SAN JOAQUIN RESERVOIR DAM
 2-YR OPEN WELL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 OPEN WELL PIEZOMETERS CP-1A, CP-1B, CP-3A, and CP-3B
 JANUARY 2020 THROUGH DECEMBER 2021

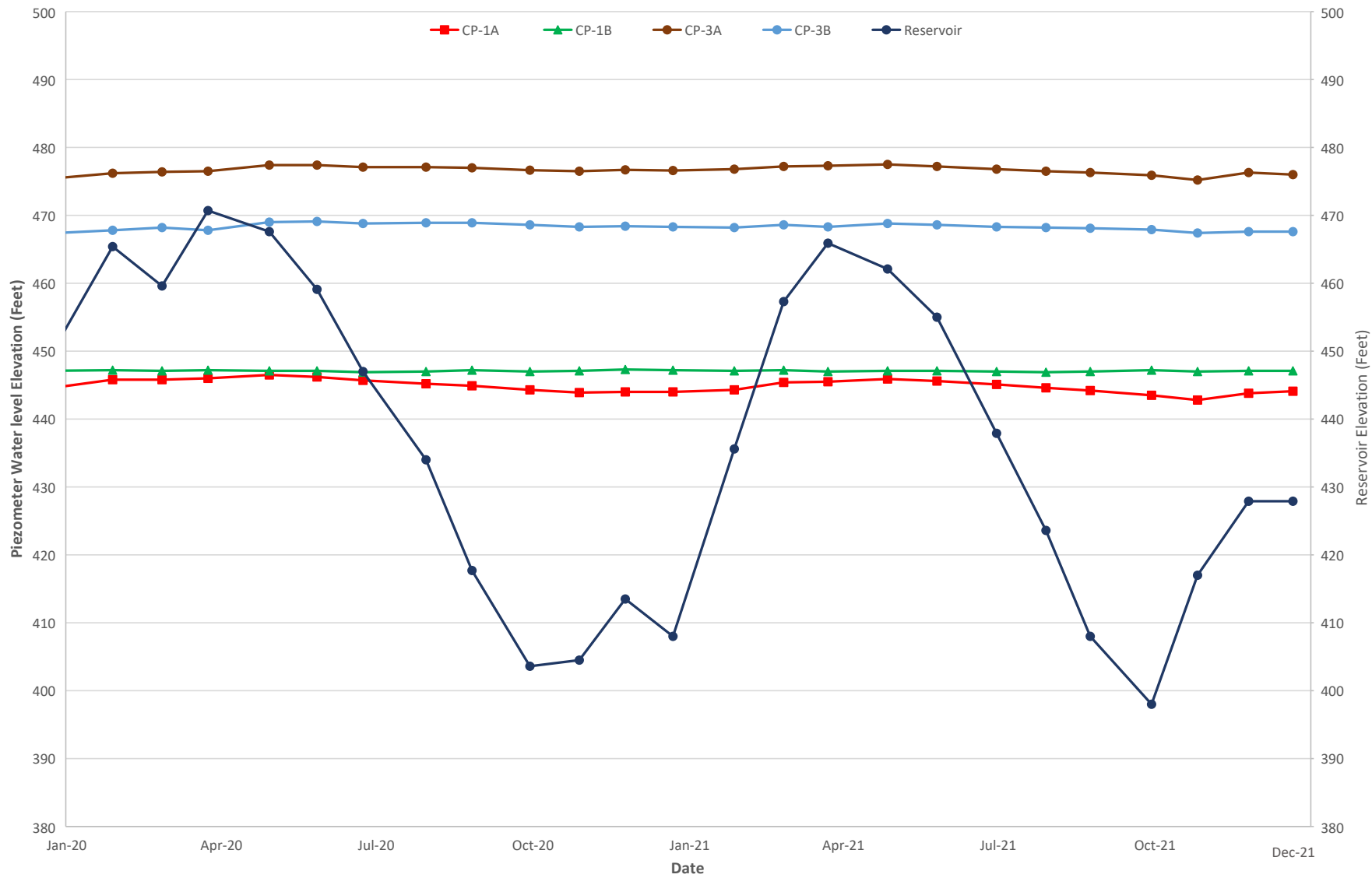


Figure 8
 SAN JOAQUIN RESERVOIR DAM
 2-YR OPEN WELL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 OPEN WELL PIEZOMETERS CP-2A, and CP-2B
 JANUARY 2020 THROUGH DECEMBER 2021

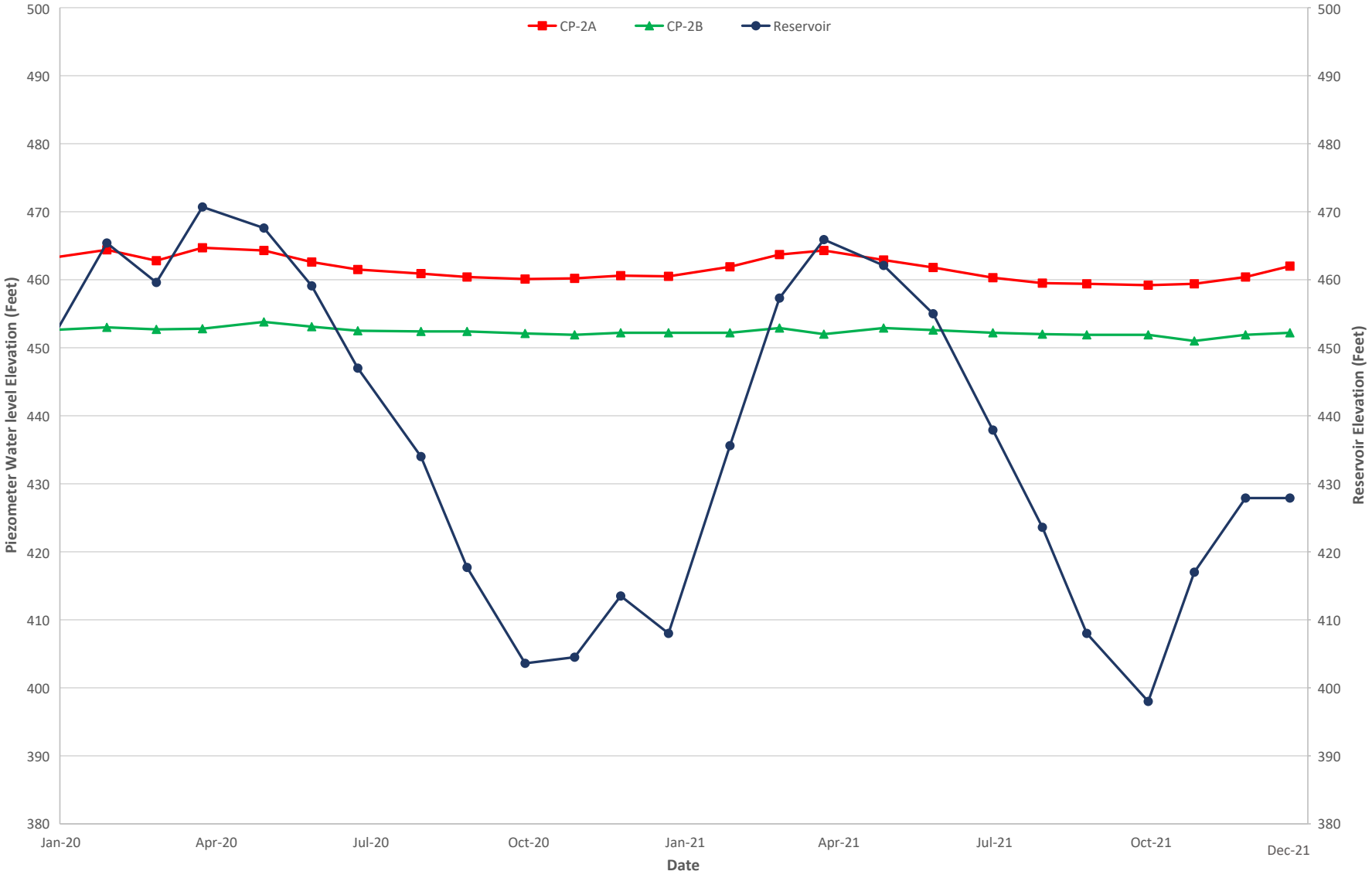


Figure 9
 SAN JOAQUIN RESERVOIR DAM
 2-YR MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
 MONITORING WELLS MW-1, MW-2, MW-3, and MW-6
 JANUARY 2020 THROUGH DECEMBER 2021

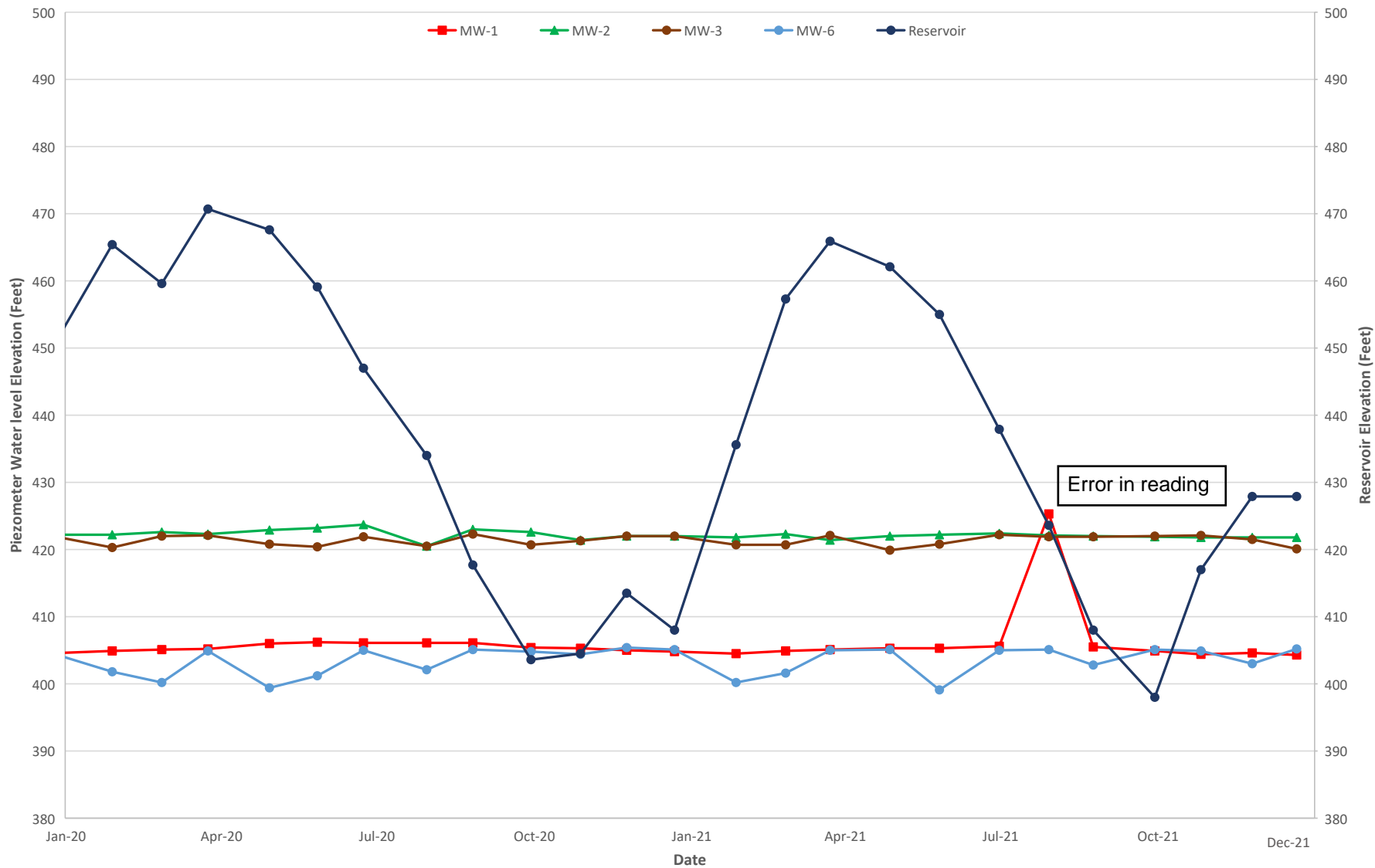


Figure 10
 SAN JOAQUIN RESERVOIR DAM
 2-YR MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
 MONITORING WELLS MW-4, and MW-5
 JANUARY 2020 THROUGH DECEMBER 2021

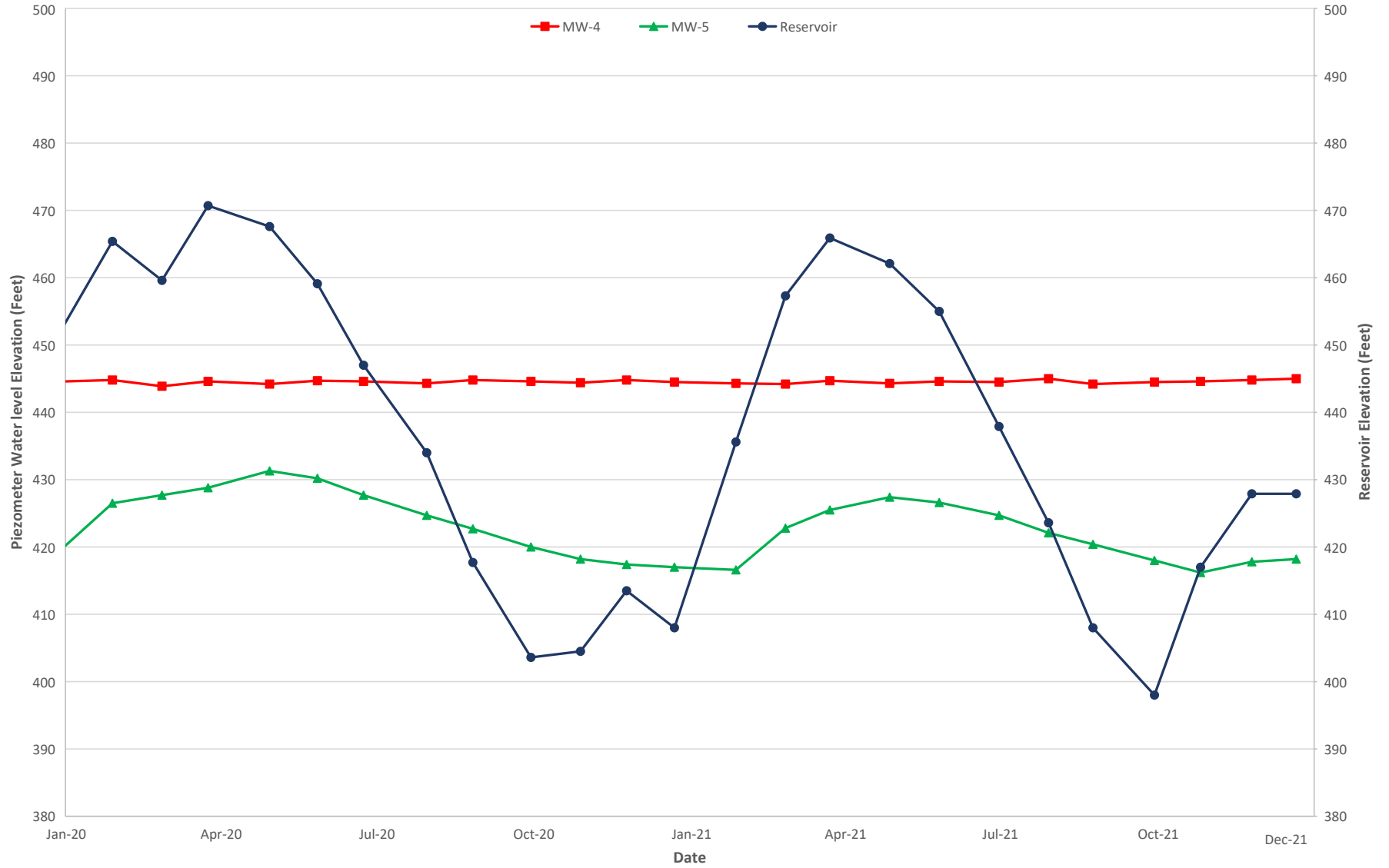


Figure 11
 SAN JOAQUIN RESERVOIR DAM
 2-YR MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
 MONITORING WELLS MW-7, and MW-8
 JANUARY 2020 THROUGH DECEMBER 2021

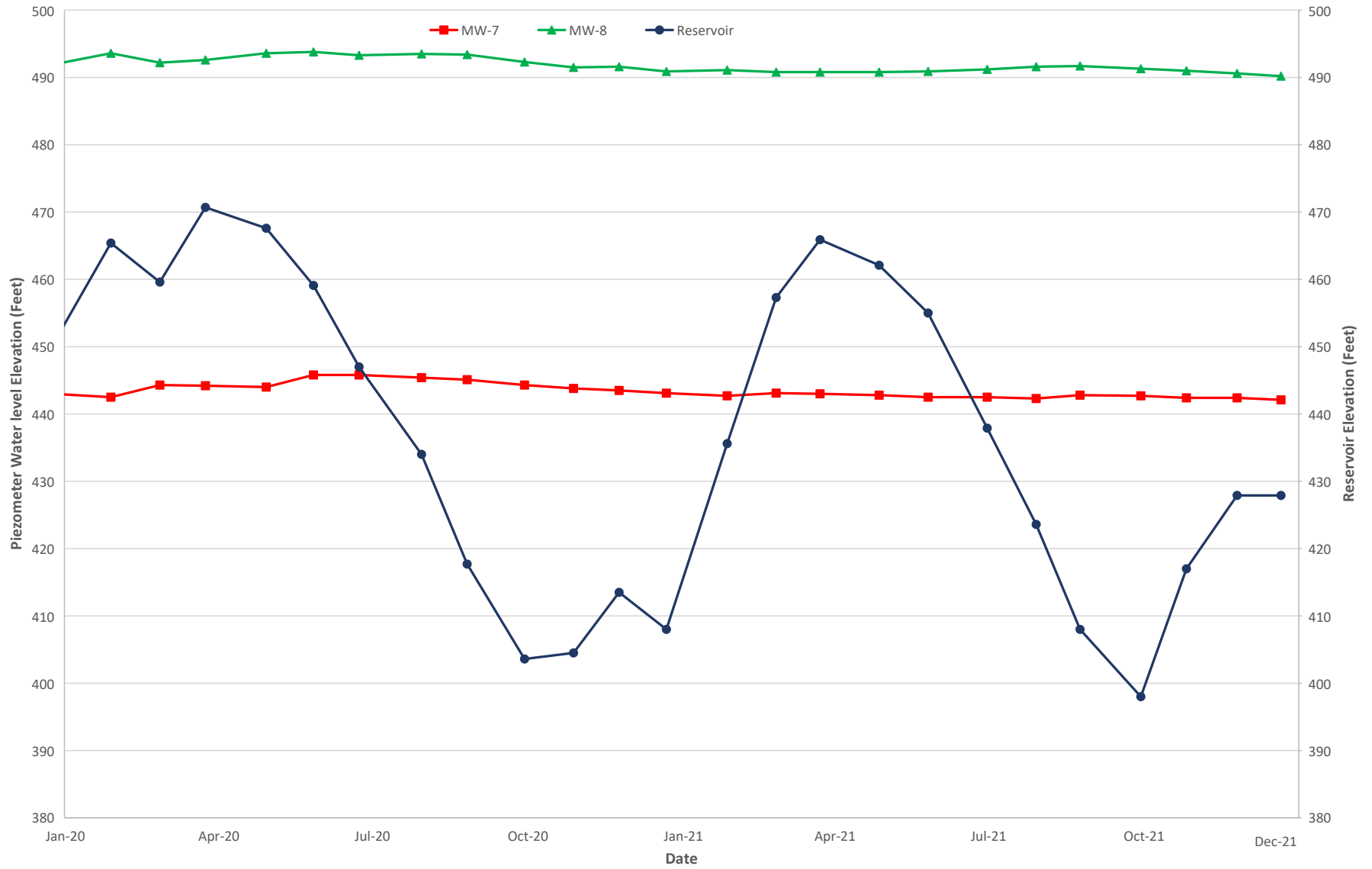


Figure 12
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL OPEN WELL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 OPEN WELL PIEZOMETERS CP-1A, CP-1B, CP-3A, and CP-3B
 JANUARY 2011 THROUGH DECEMBER 2021

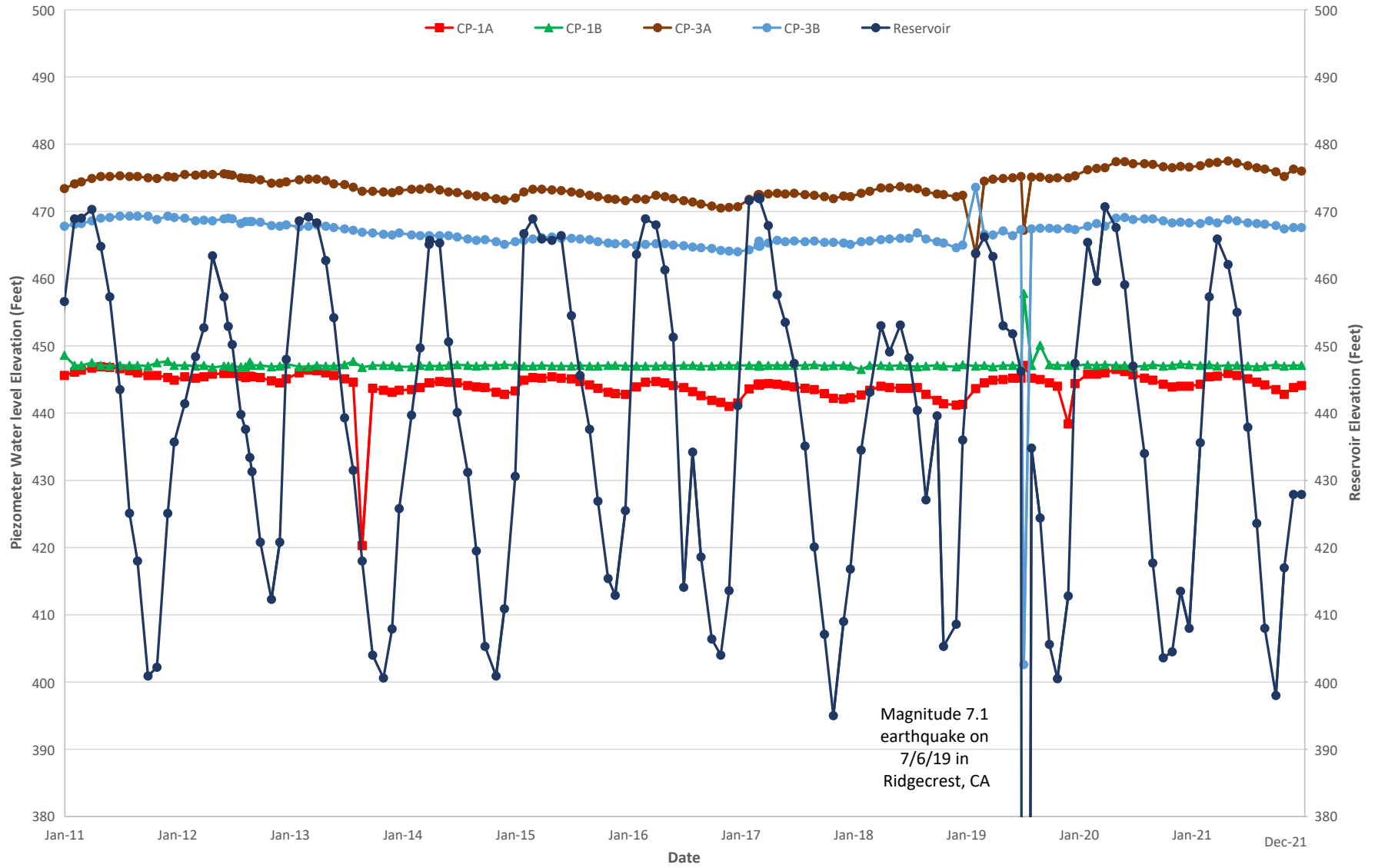


Figure 13
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL OPEN WELL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 OPEN WELL PIEZOMETERS CP-2A, and CP-2B
 JANUARY 2011 THROUGH DECEMBER 2021

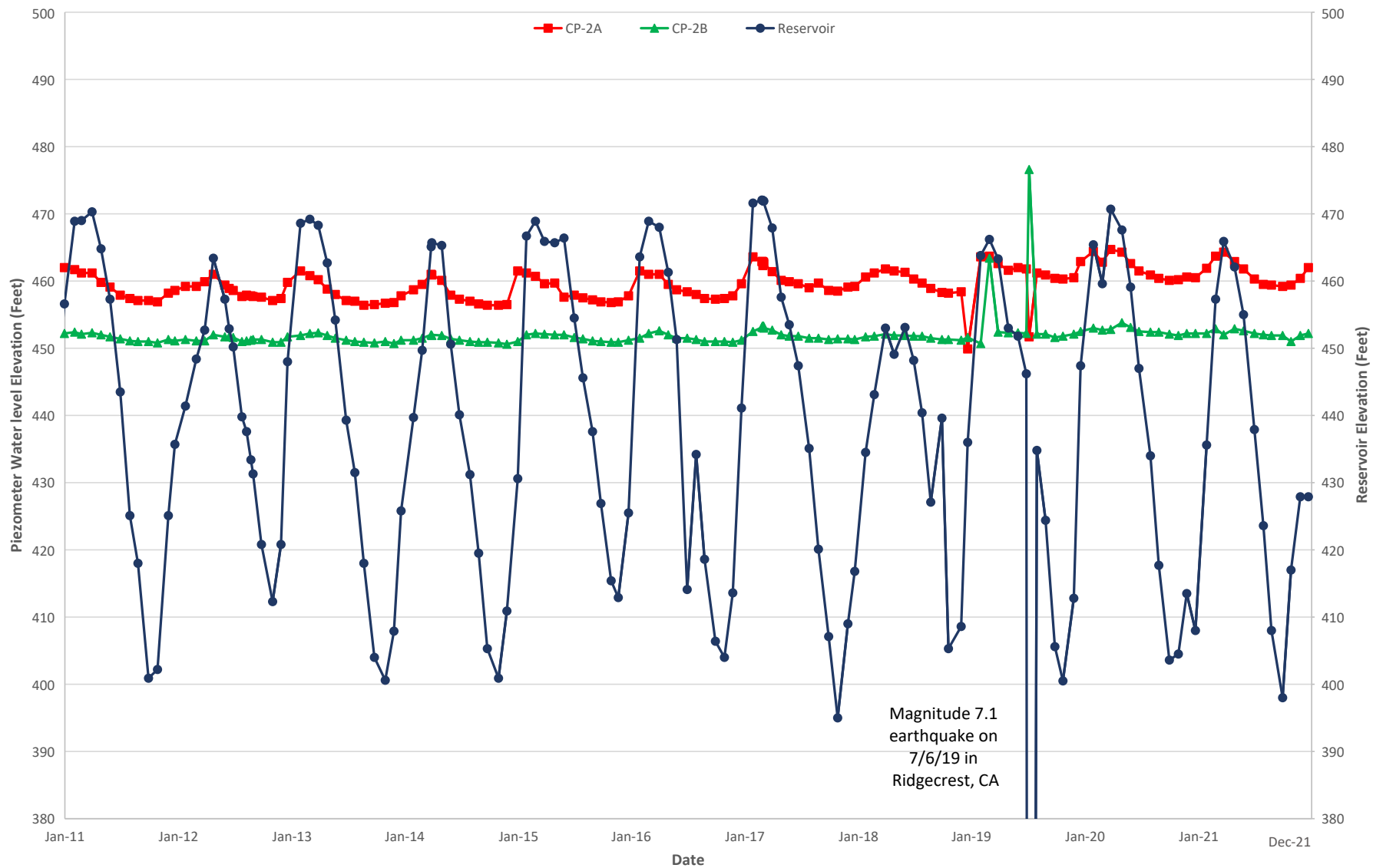


Figure 14
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
 MONITORING WELLS MW-1, MW-2, MW-3, and MW-6
 JANUARY 2011 THROUGH DECEMBER 2021

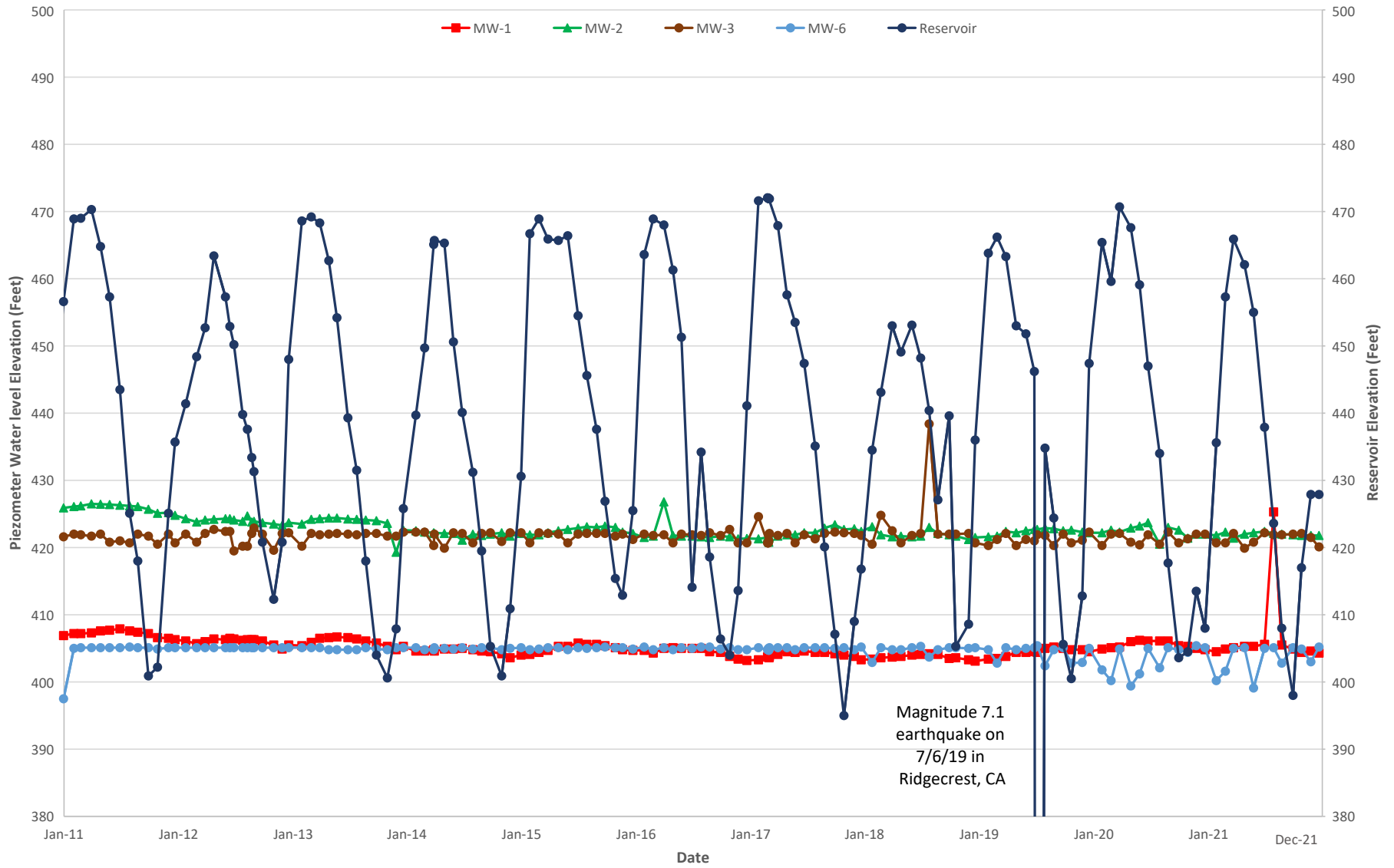


Figure 15
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
 MONITORING WELLS MW-4, and MW-5
 JANUARY 2011 THROUGH DECEMBER 2021

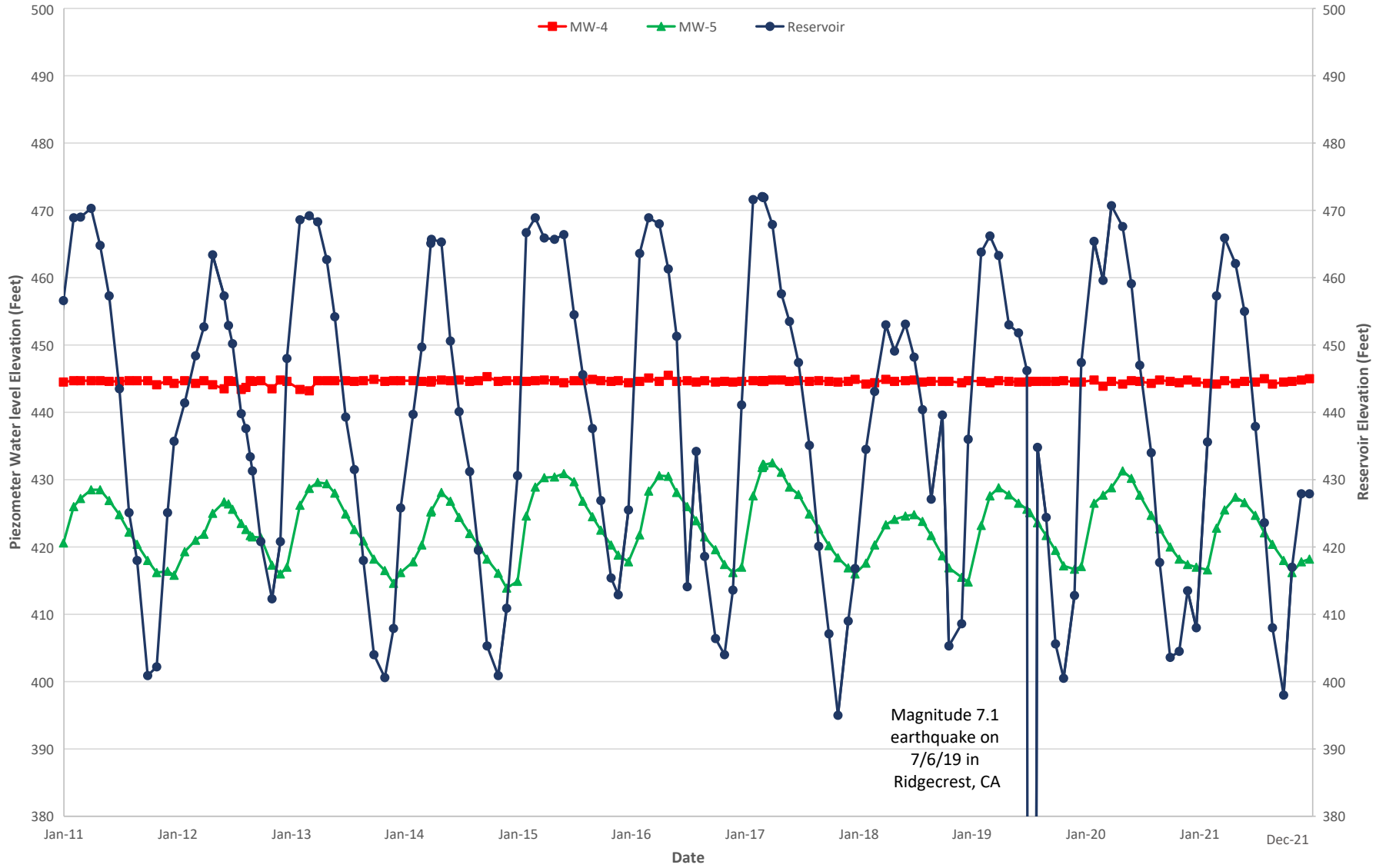


Figure 16
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
 MONITORING WELLS MW-7, and MW-8
 JANUARY 2011 THROUGH DECEMBER 2021

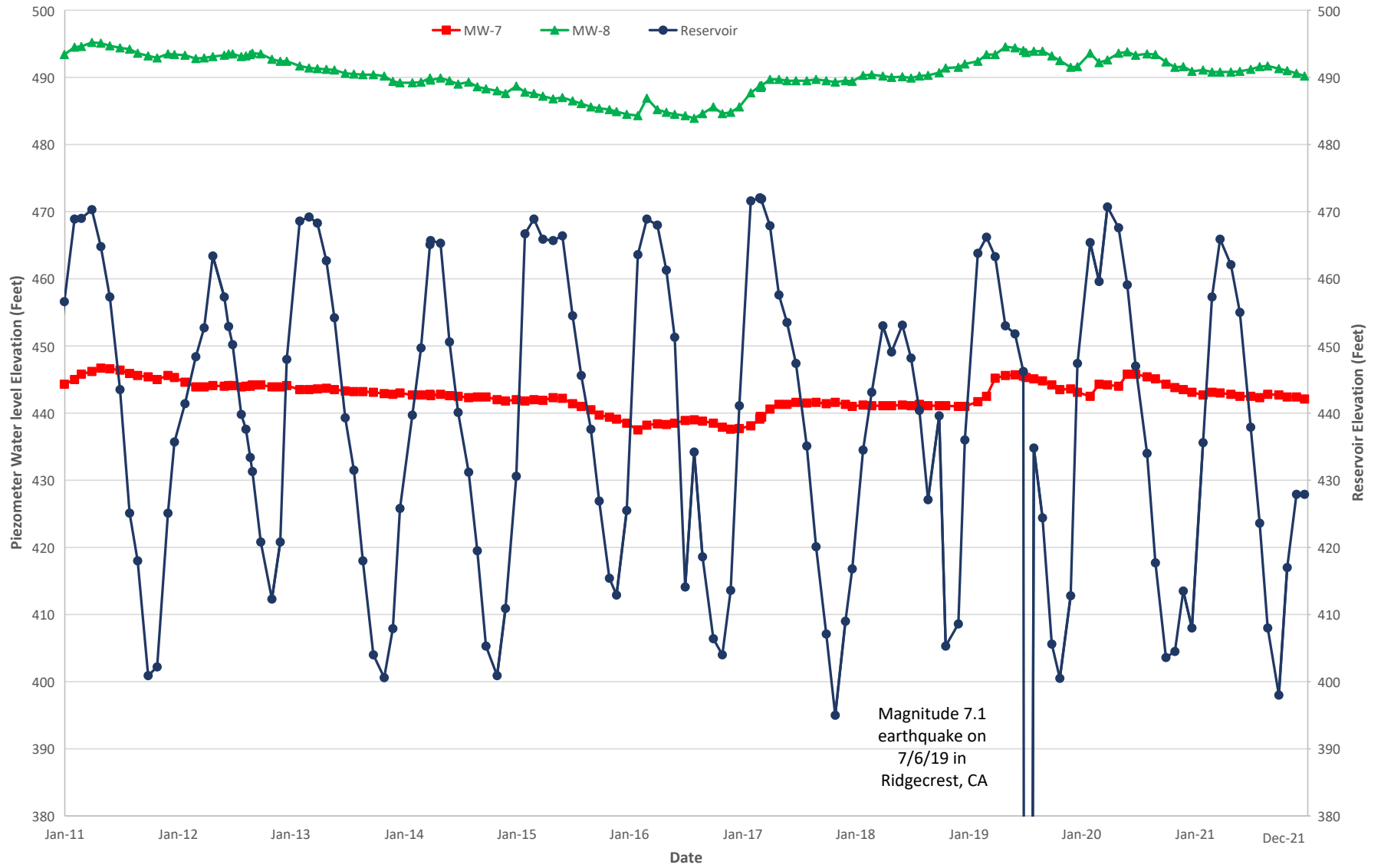


Figure 17
 SAN JOAQUIN RESERVOIR DAM
 2-YR VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 VIBRATING WIRE PIEZOMETERS VB-1, VB-2, VB-5, and VB-6
 JANUARY 2020 THROUGH DECEMBER 2021

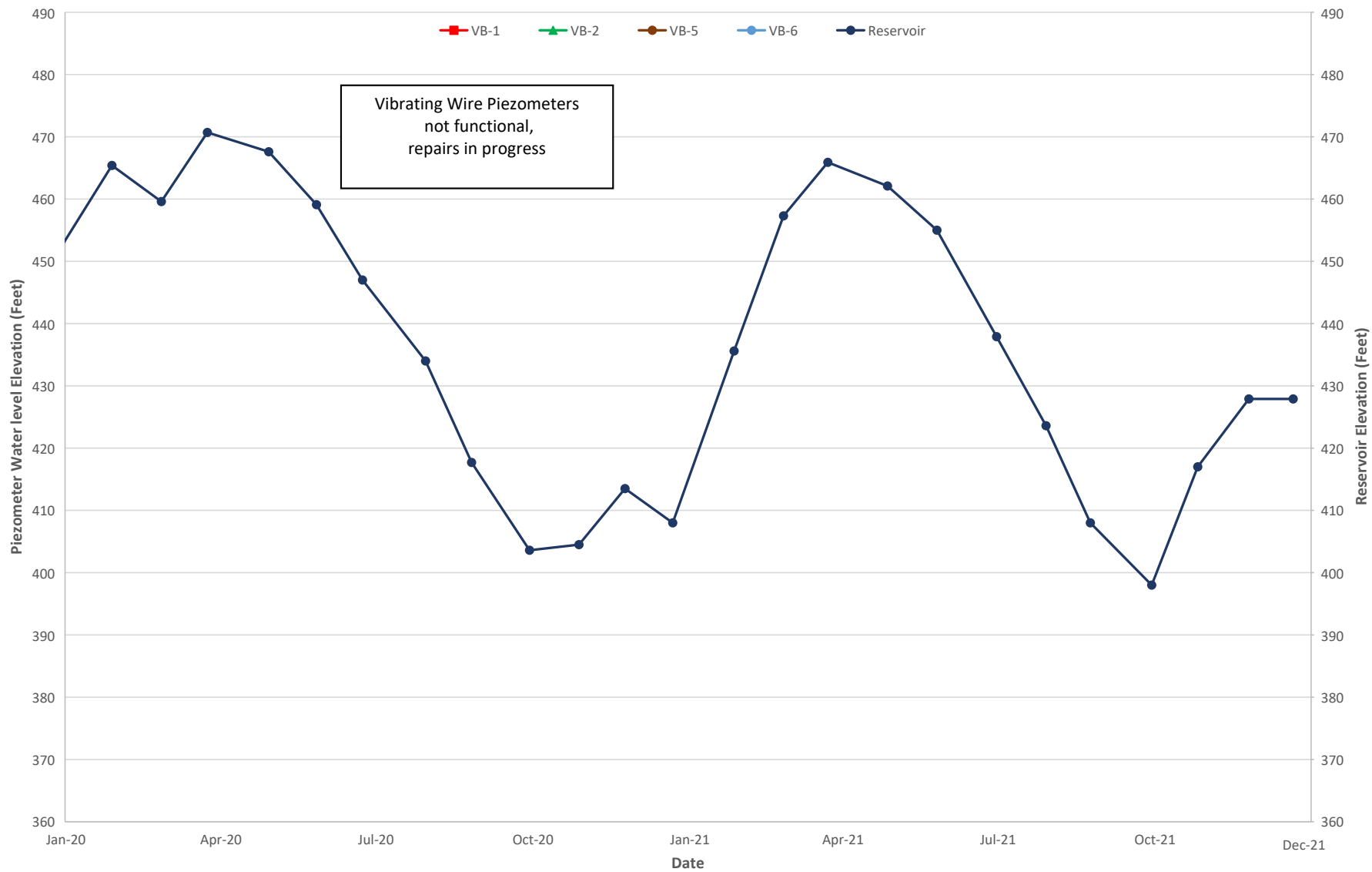


Figure 18
 SAN JOAQUIN RESERVOIR DAM
 2-YR VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 VIBRATING WIRE PIEZOMETERS VB-3, VB-4, VB-7, and VB-8
 JANUARY 2020 THROUGH DECEMBER 2021

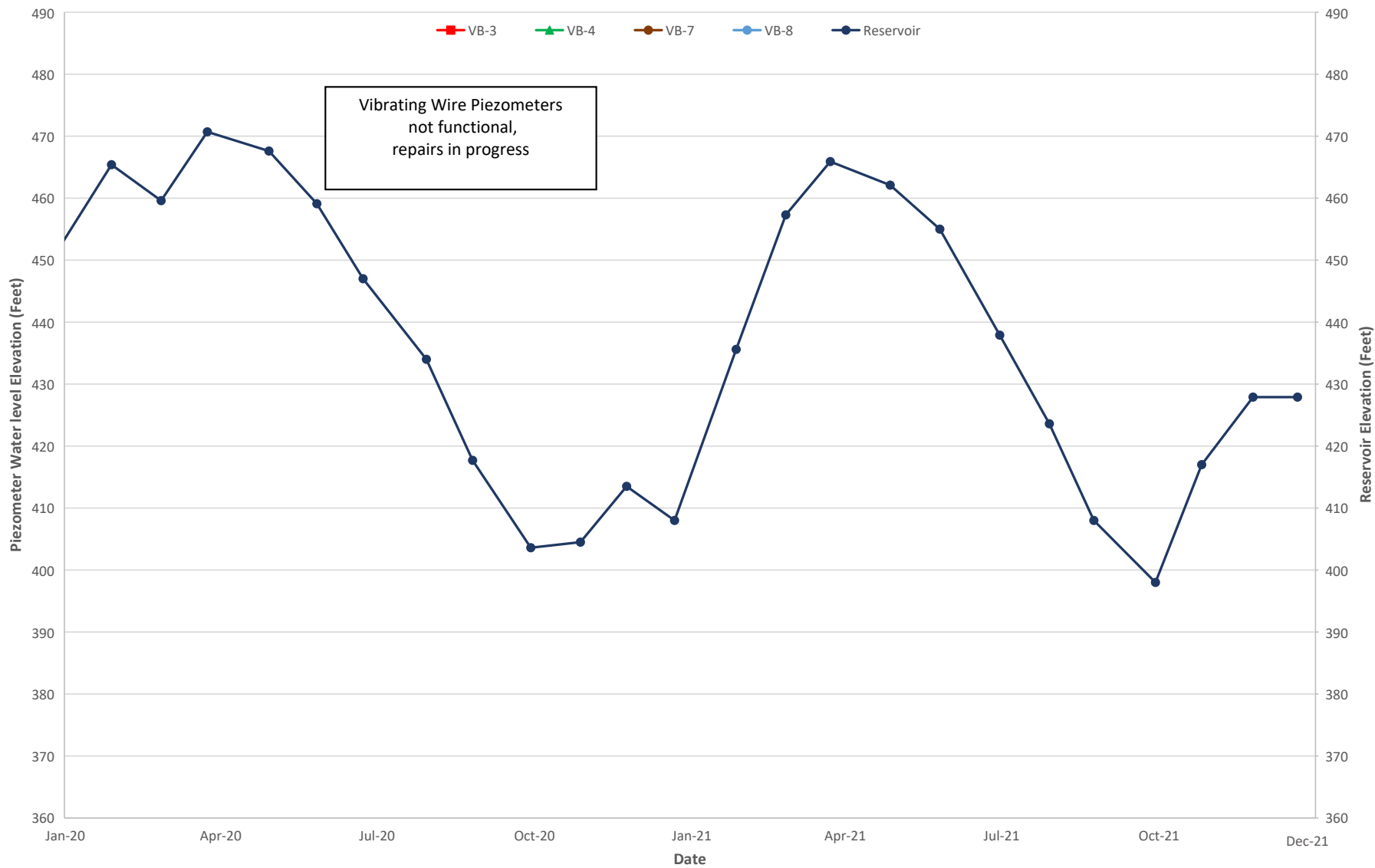


Figure 19
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 VIBRATING WIRE PIEZOMETERS VB-1, VB-2, VB-5, and VB-6
 JANUARY 2011 THROUGH DECEMBER 2021

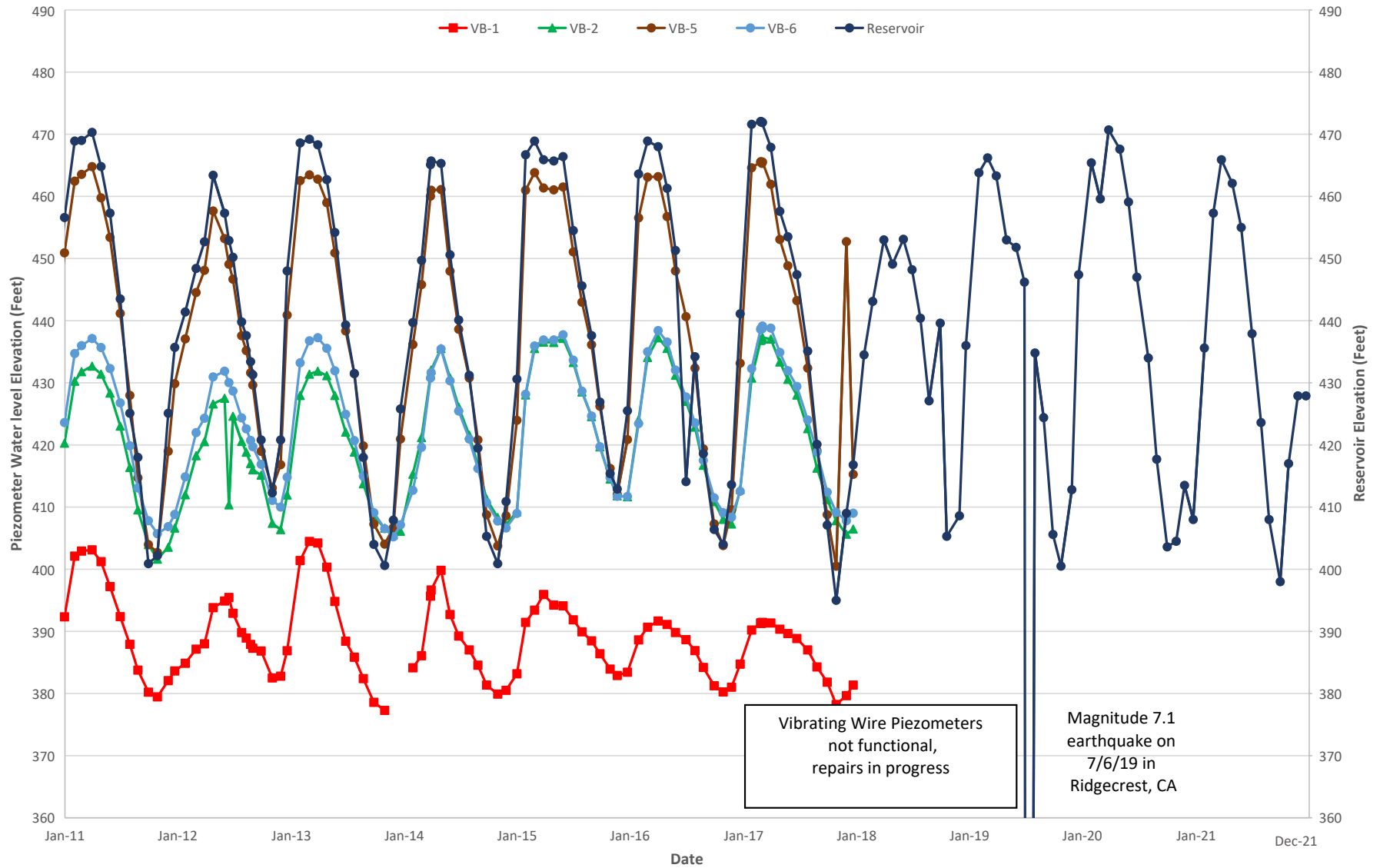


Figure 20
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 VIBRATING WIRE PIEZOMETERS VB-3, VB-4, VB-7, and VB-8
 JANUARY 2011 THROUGH DECEMBER 2021

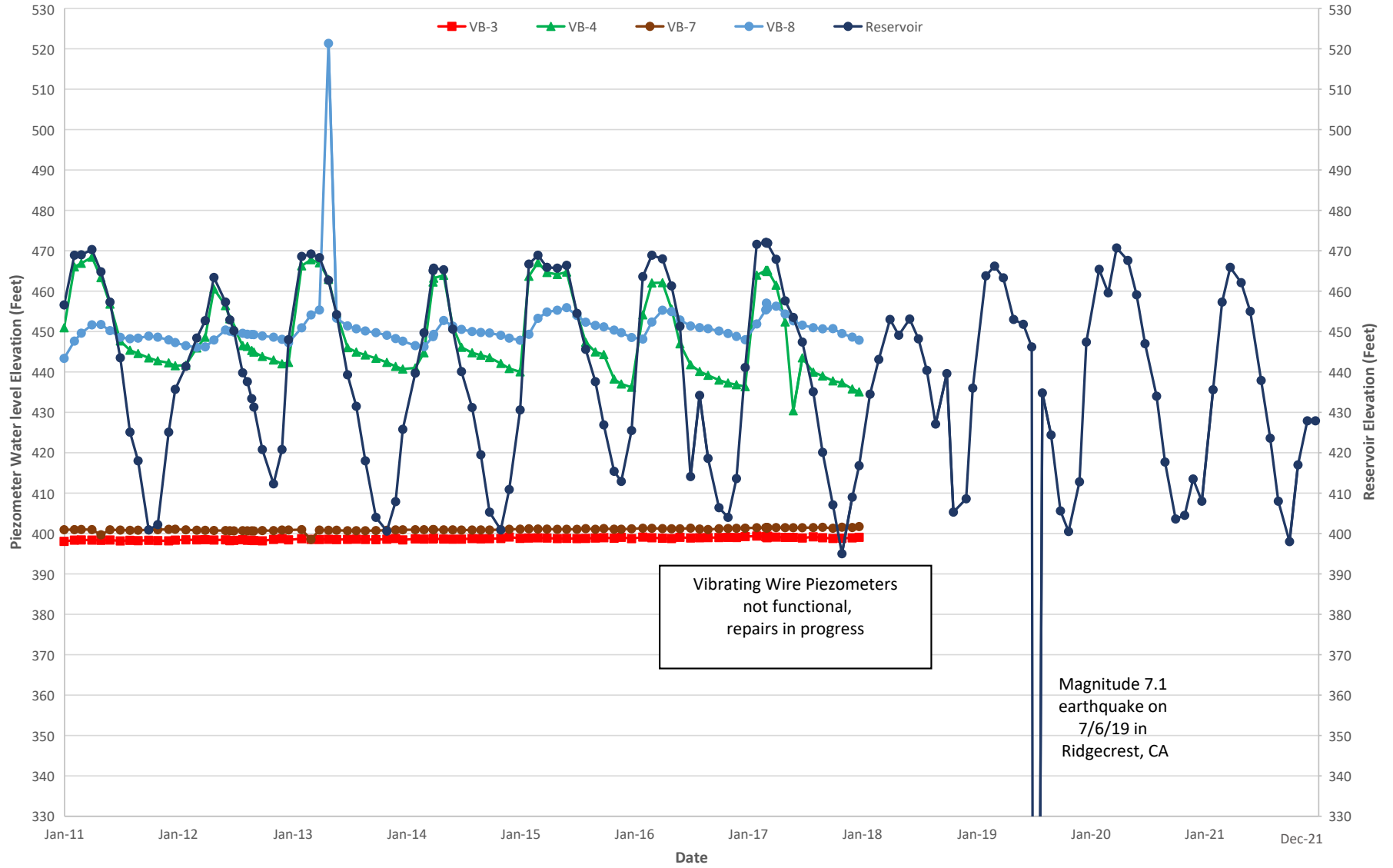


Figure 21
 SAN JOAQUIN RESERVOIR DAM
 2-YR PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 PNEUMATIC PIEZOMETERS C-1, C-2, C-3, and C-4
 JANUARY 2020 THROUGH DECEMBER 2021

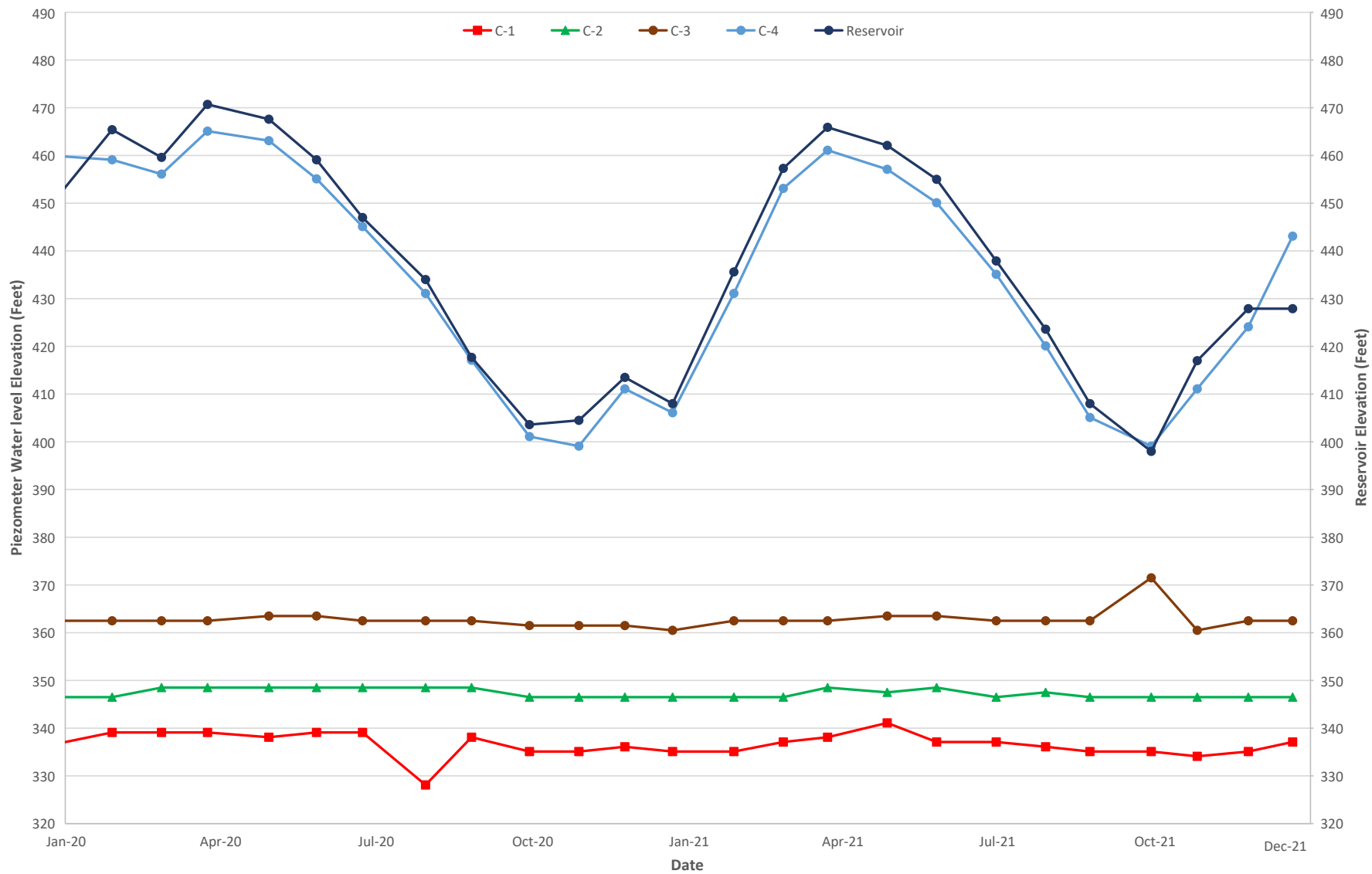


Figure 22
 SAN JOAQUIN RESERVOIR DAM
 2-YR PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 PNEUMATIC PIEZOMETERS C-5, C-6, C-7, and C-8
 JANUARY 2020 THROUGH DECEMBER 2021

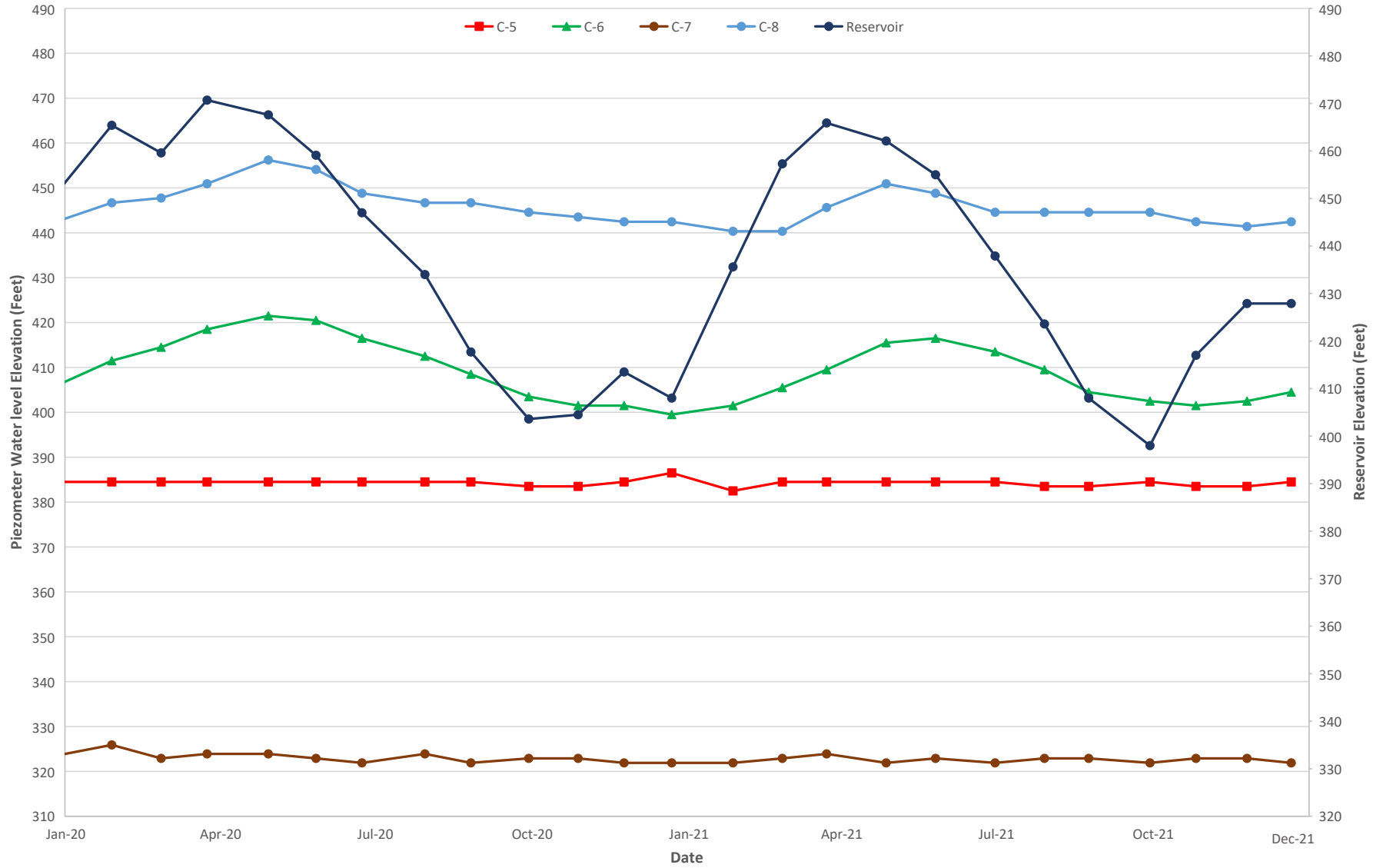


Figure 23
 SAN JOAQUIN RESERVOIR DAM
 2-YR PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 PNEUMATIC PIEZOMETERS C-9, RR-2, LR-1,LR-2,LR-3, and LR-4
 JANUARY 2020 THROUGH DECEMBER 2021

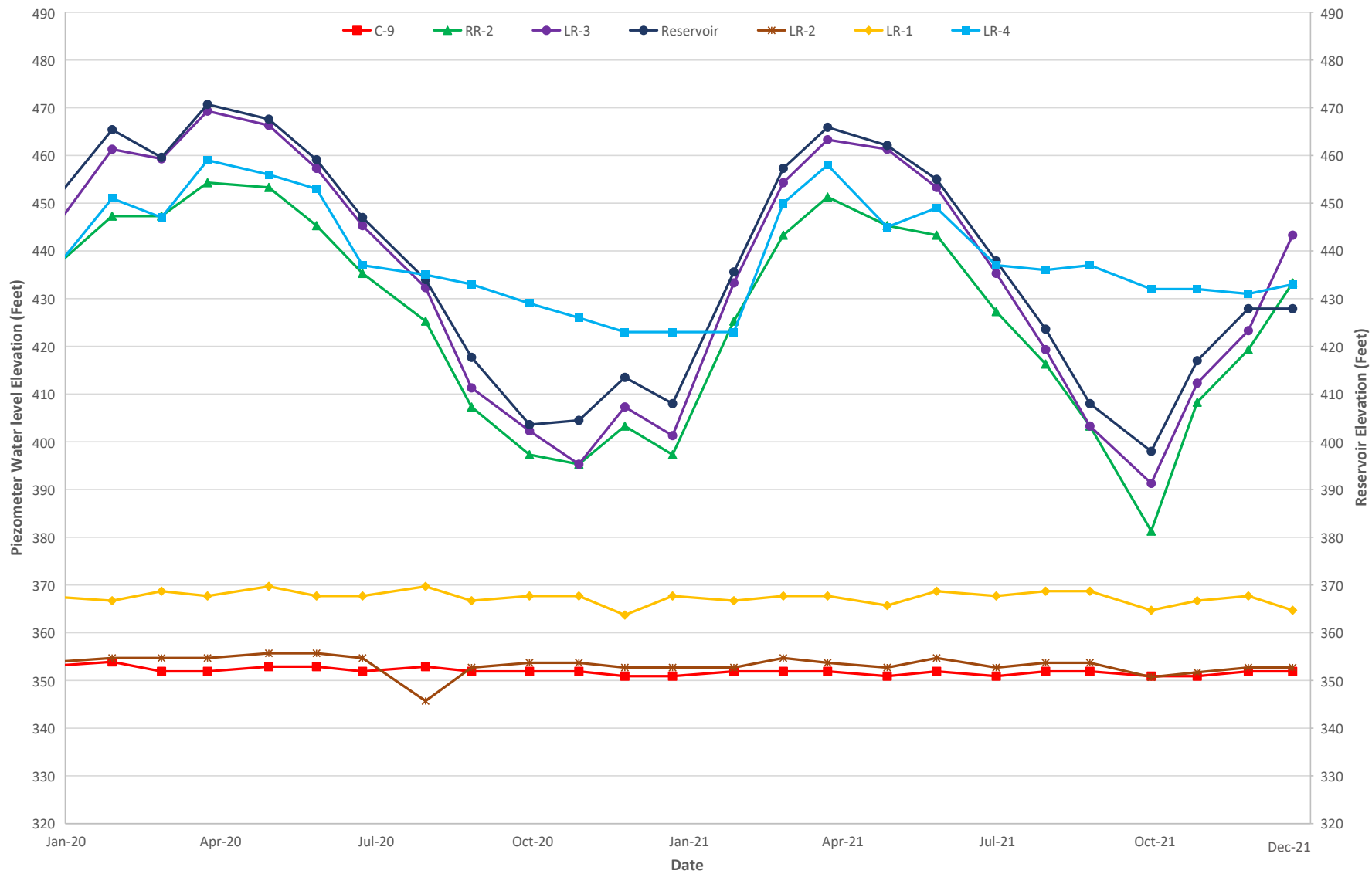


Figure 24
 SAN JOAQUIN RESERVOIR DAM
 2-YR PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 PNEUMATIC PIEZOMETERS LA-1 and LA-2
 JANUARY 2020 THROUGH DECEMBER 2021

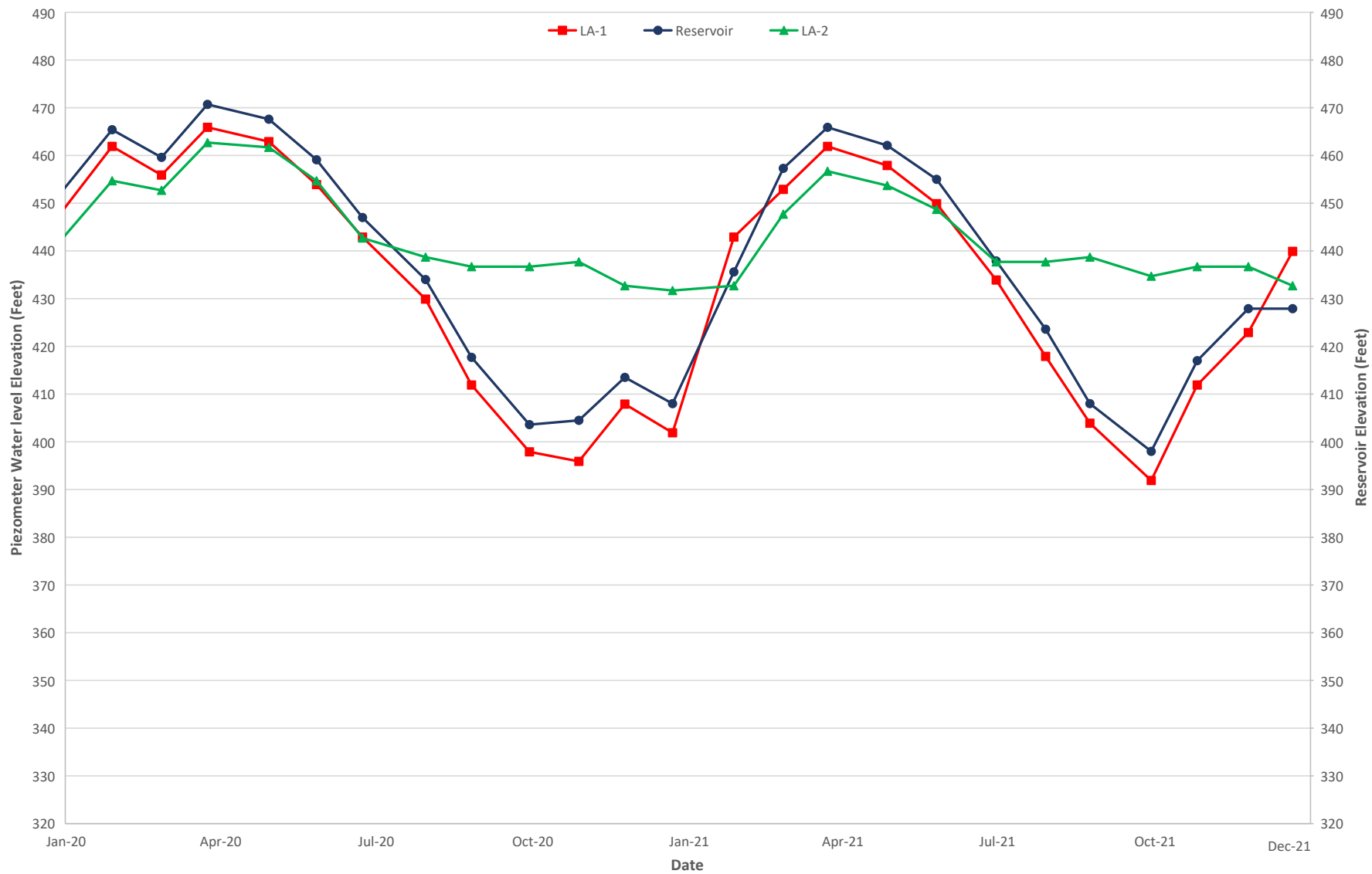


Figure 25
 SAN JOAQUIN RESERVOIR DAM
 2-YR PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 PNEUMATIC PIEZOMETERS RA-1, RA-2, RA-3, and RA-4
 JANUARY 2020 THROUGH DECEMBER 2021

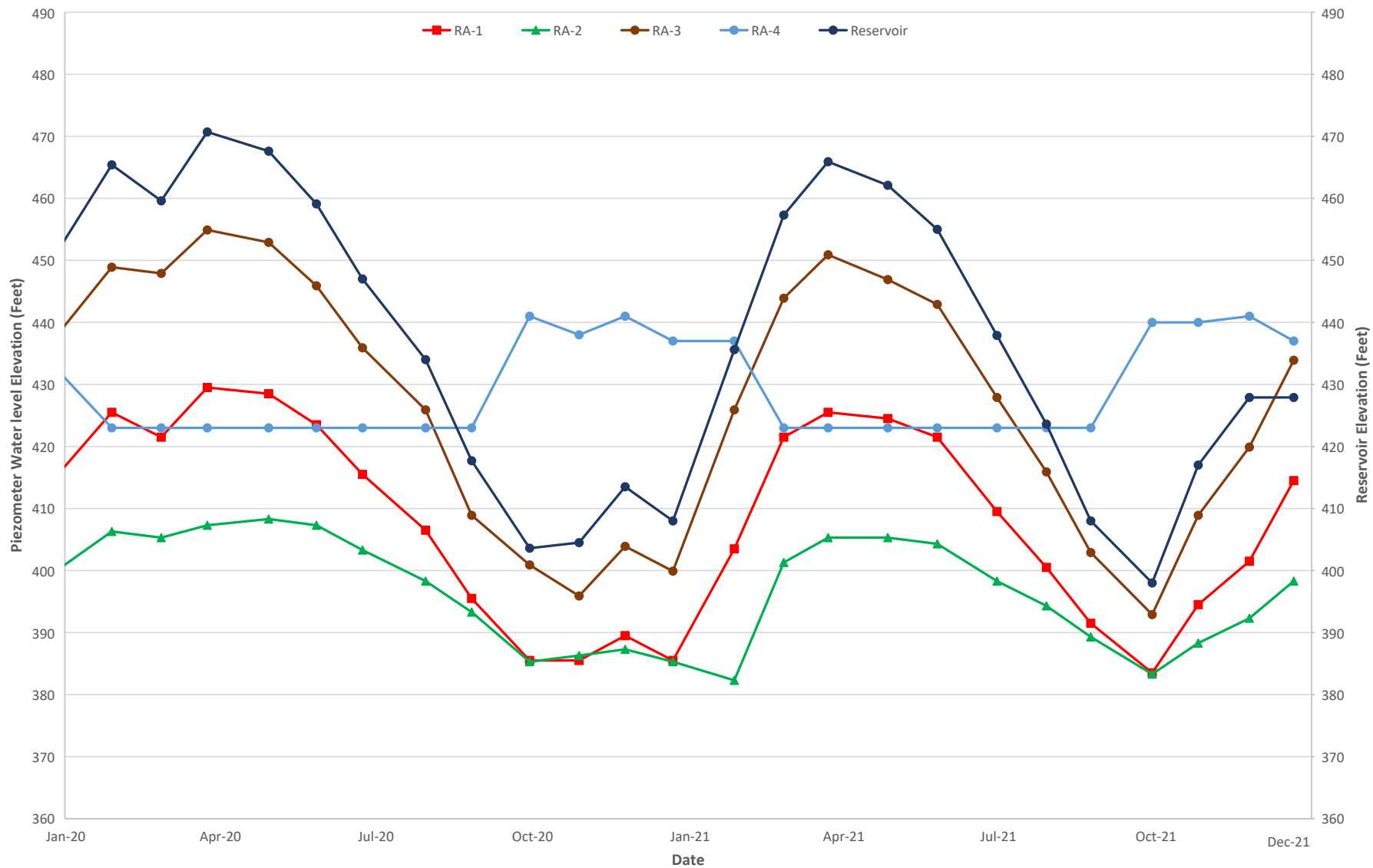


Figure 26
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 PNEUMATIC PIEZOMETERS C-1, C-2, C-3, and C-4
 JANUARY 2011 THROUGH DECEMBER 2021

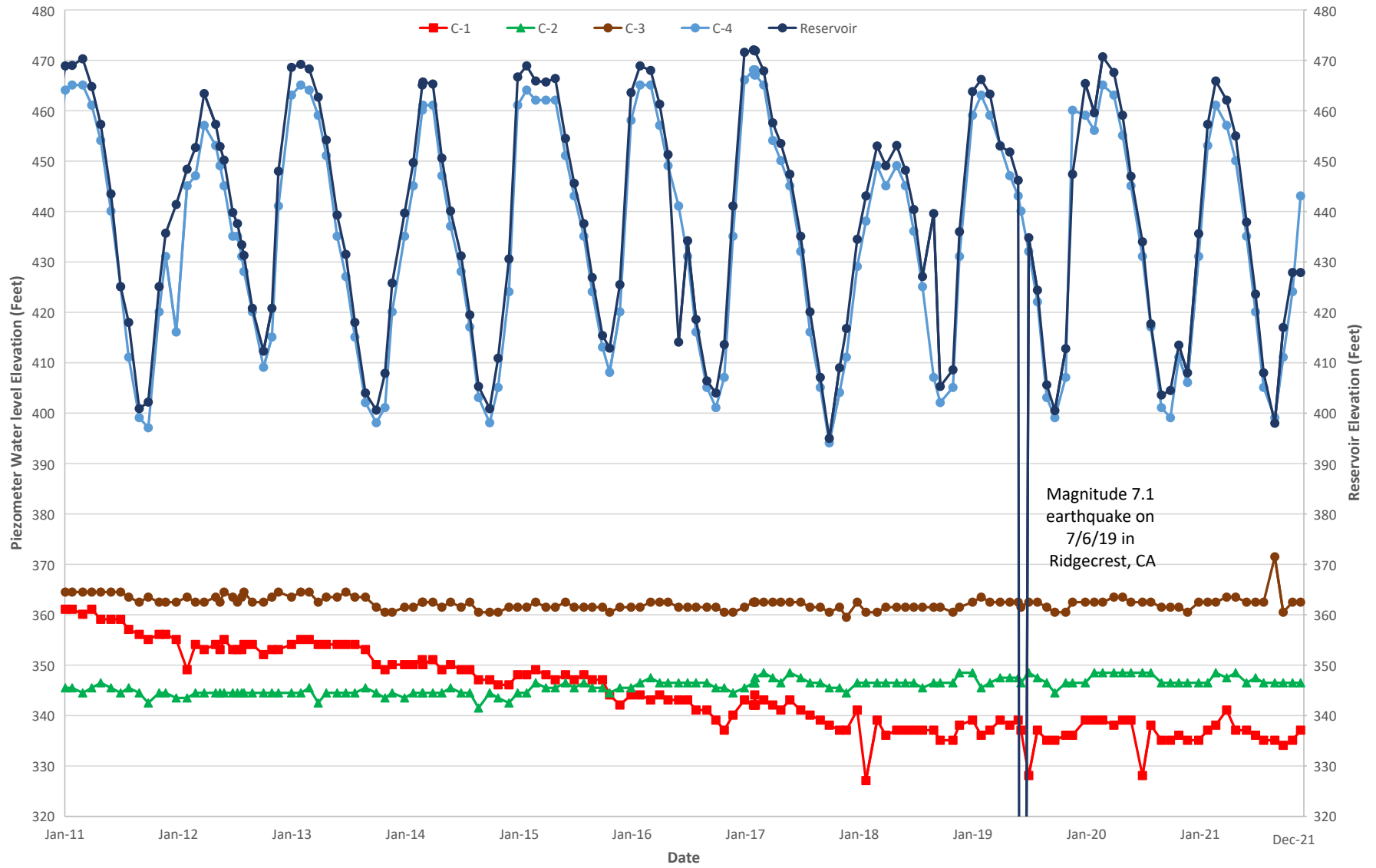


Figure 27
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 PNEUMATIC PIEZOMETERS C-5, C-6, C-7, and C-8
 JANUARY 2011 THROUGH DECEMBER 2021

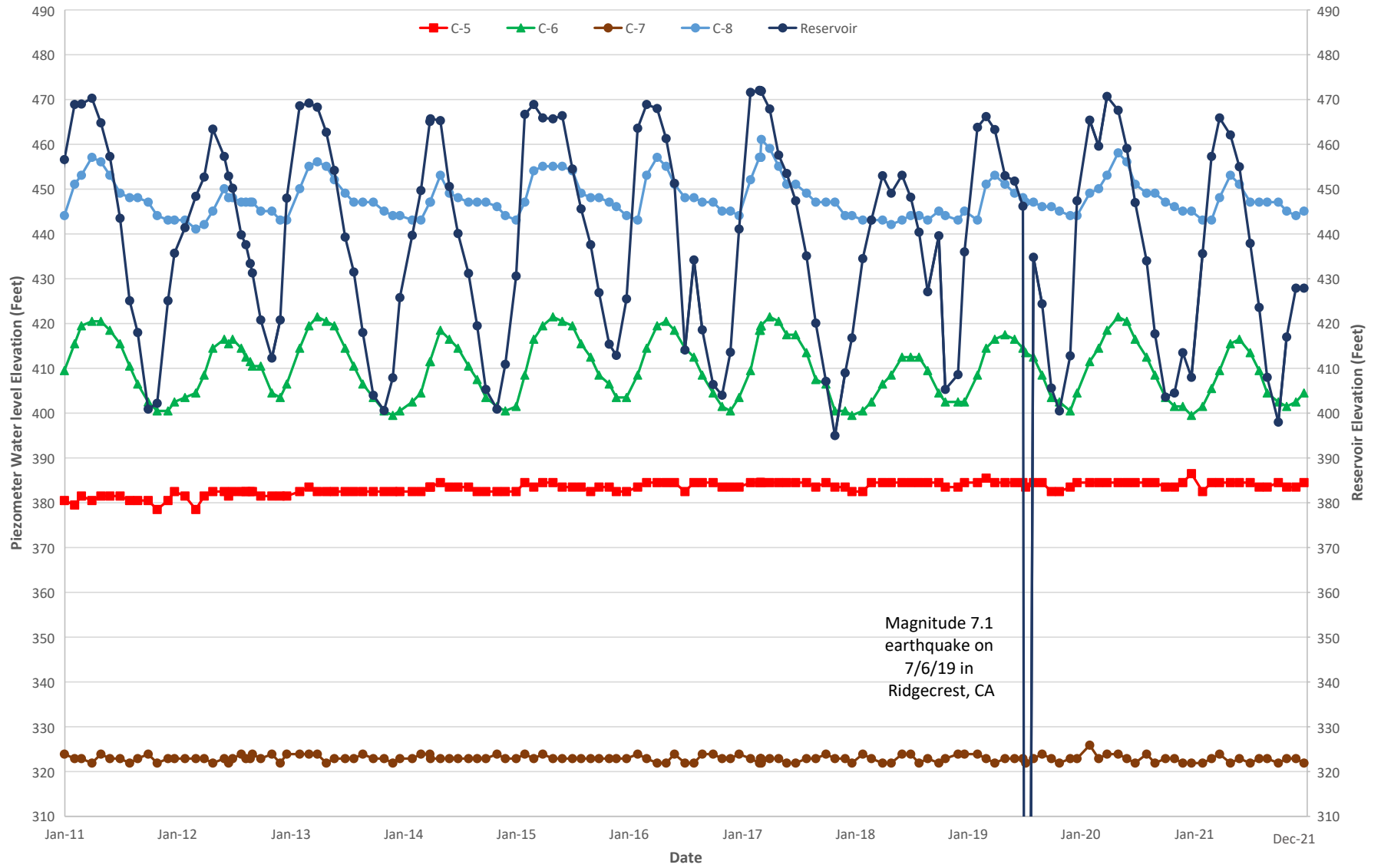


Figure 28
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 PNEUMATIC PIEZOMETERS C-9, RR-2, LR-1,LR-2,LR-3, and LR-4
 JANUARY 2011 THROUGH DECEMBER 2021

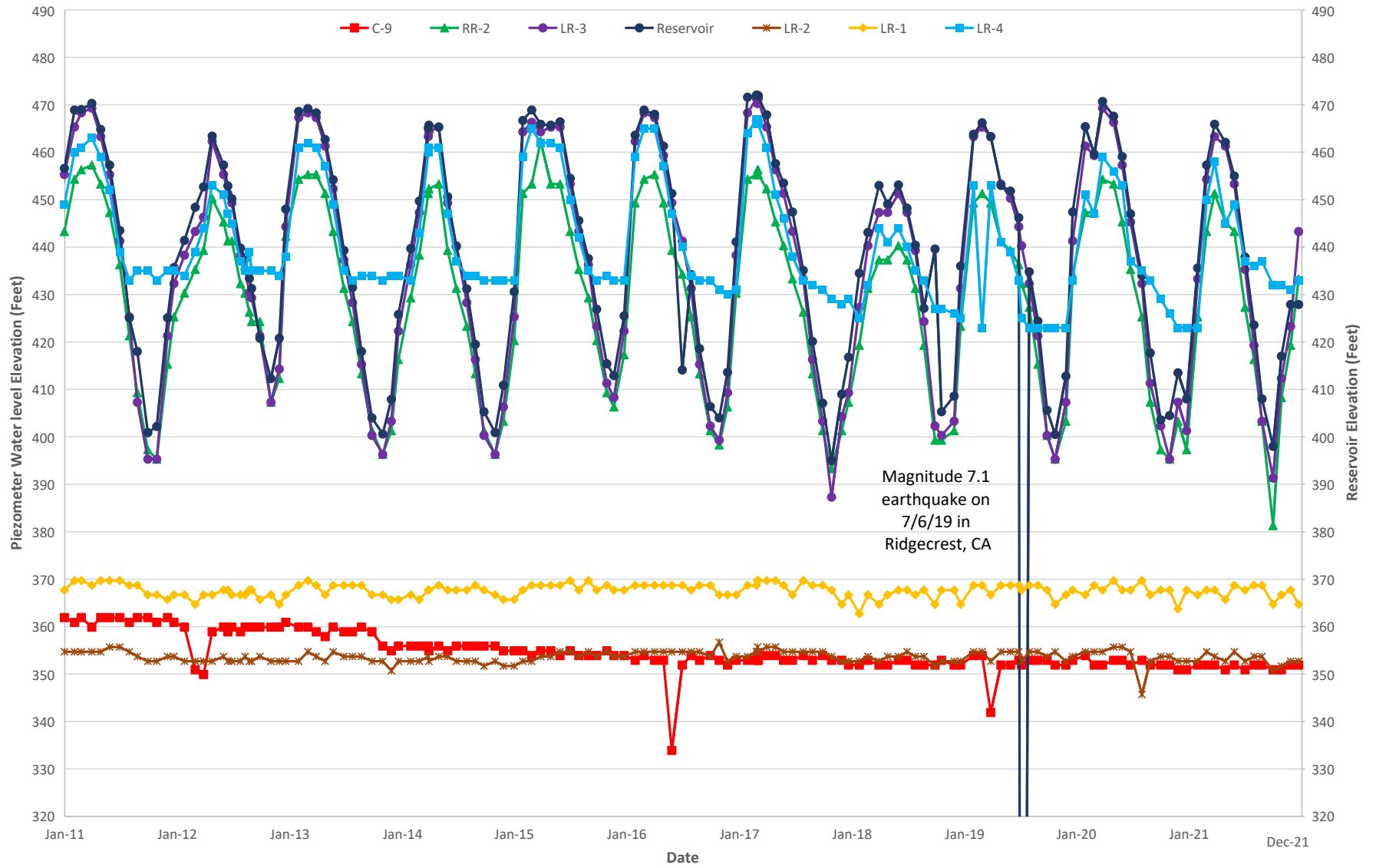


Figure 29
SAN JOAQUIN RESERVOIR DAM
HISTORICAL PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
PNEUMATIC PIEZOMETERS LA-1, and LA-2
JANUARY 2011 THROUGH DECEMBER 2021

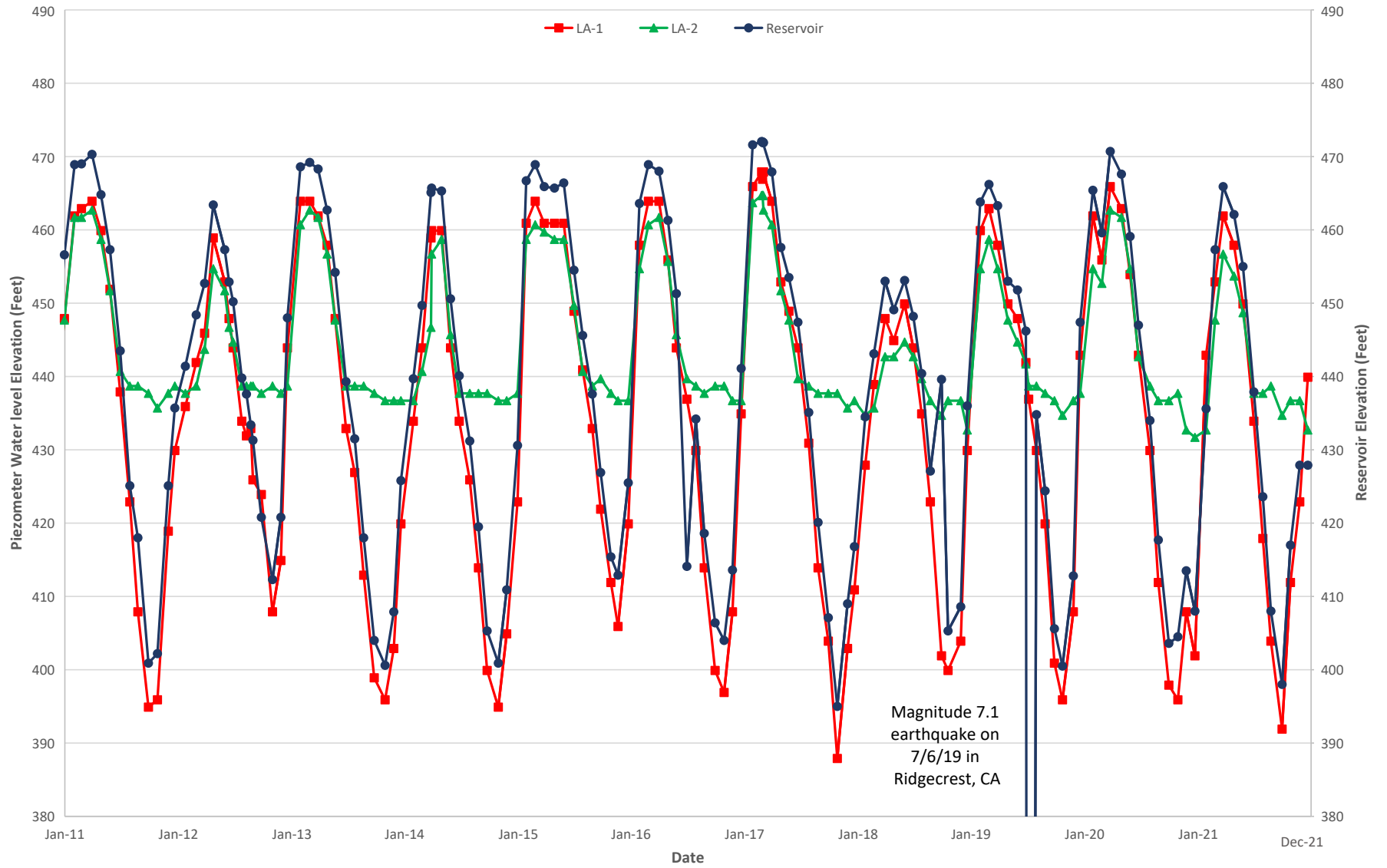


Figure 30
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 PNEUMATIC PIEZOMETERS RA-1, RA-2, RA-3, and RA-4
 JANUARY 2011 THROUGH DECEMBER 2021

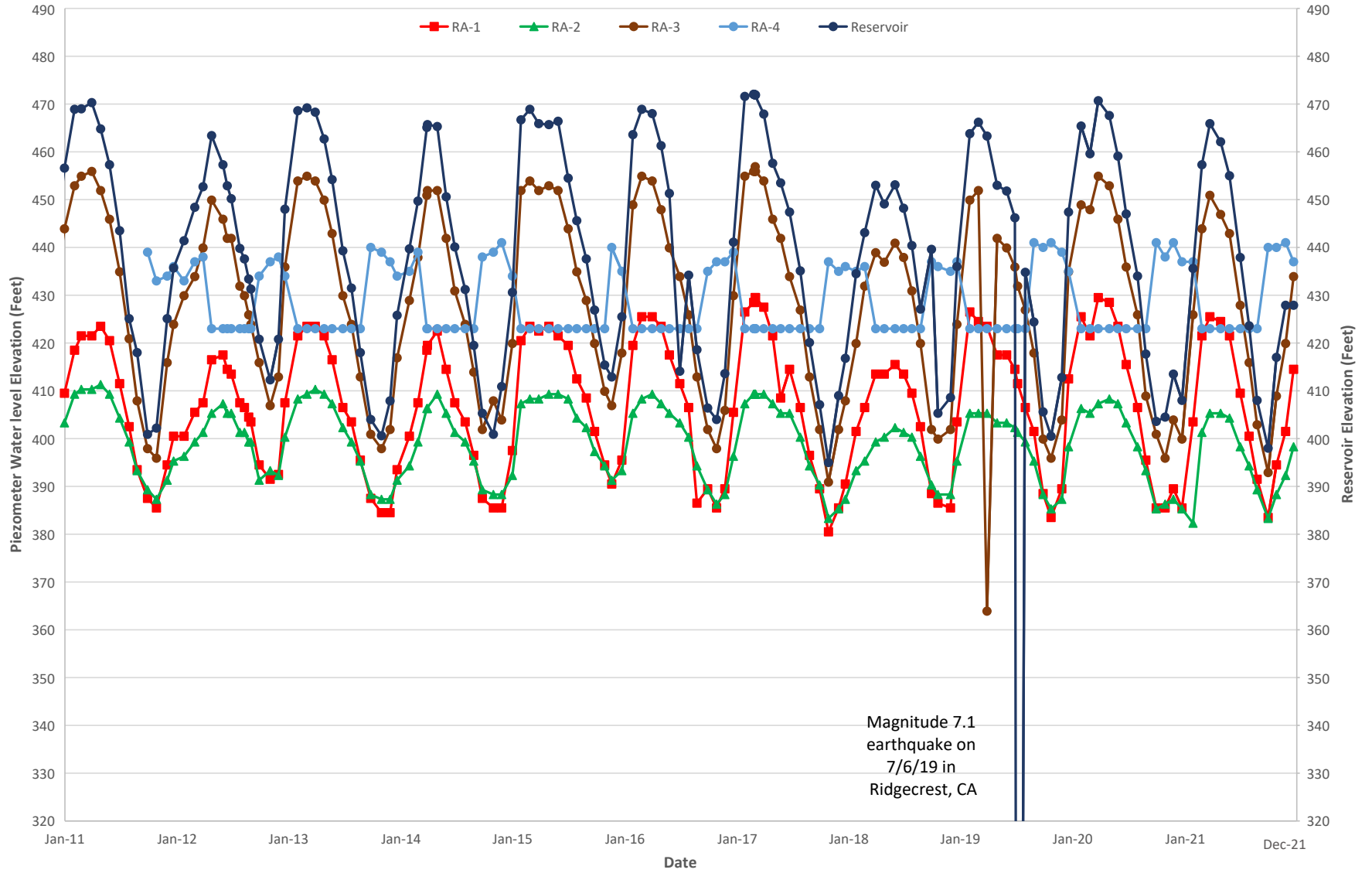


Figure 31
SAN JOAQUIN RESERVOIR DAM
2-YR SEEPAGE, RESERVOIR WATER SURFACE ELEVATIONS, AND RAINFALL
EAST DRAIN, WEST DRAIN, FILTER DRAIN, RIGHT GROIN DRAIN
JANUARY 2020 THROUGH DECEMBER 2021

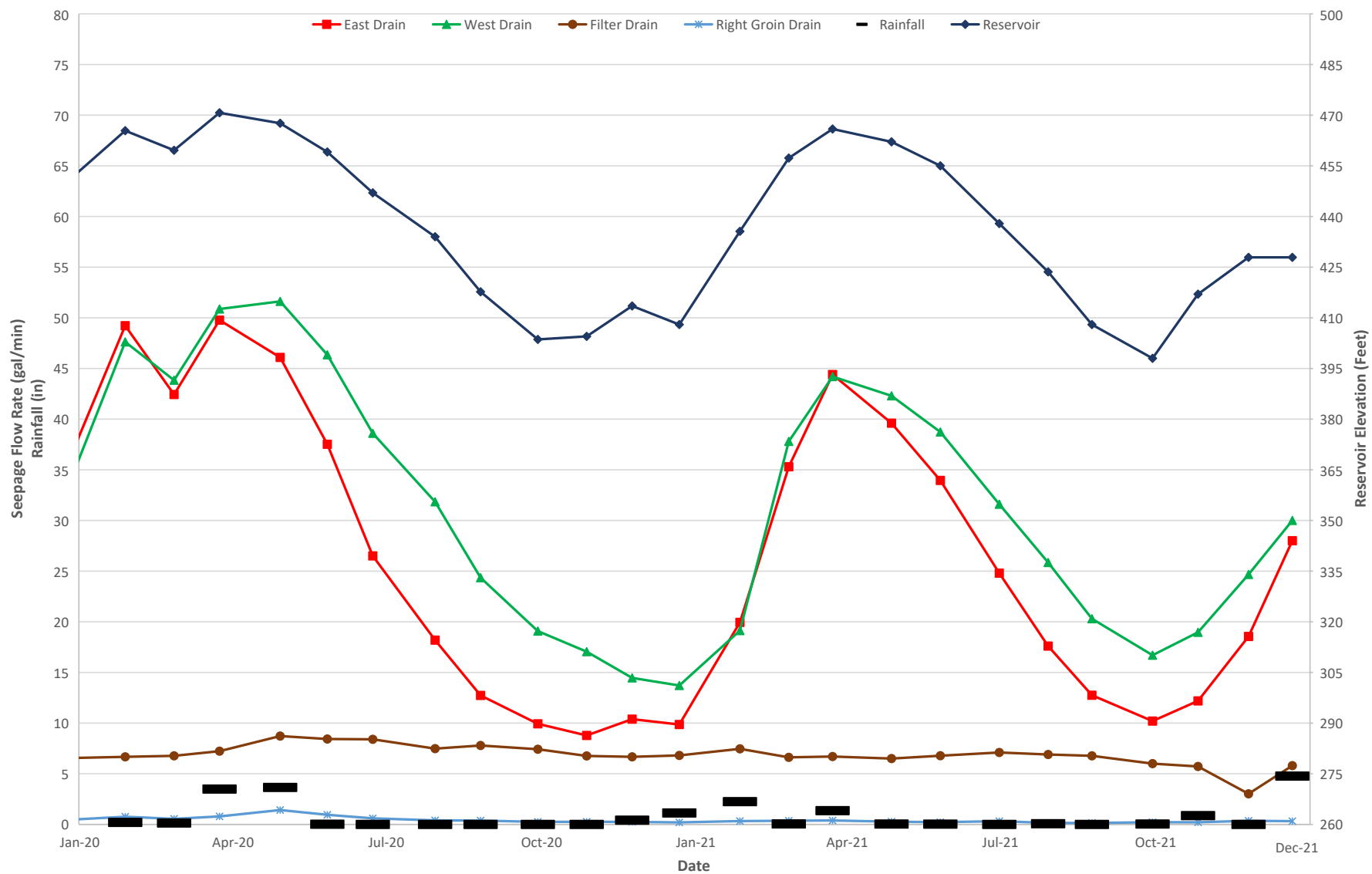


Figure 32
SAN JOAQUIN RESERVOIR DAM
2-YR SEEPAGE, RESERVOIR WATER SURFACE ELEVATIONS, AND RAINFALL
UPSTREAM COLLECTOR DRAINS, DOWNSTREAM TOE DRAIN, FLOOR DRAIN
JANUARY 2020 THROUGH DECEMBER 2021

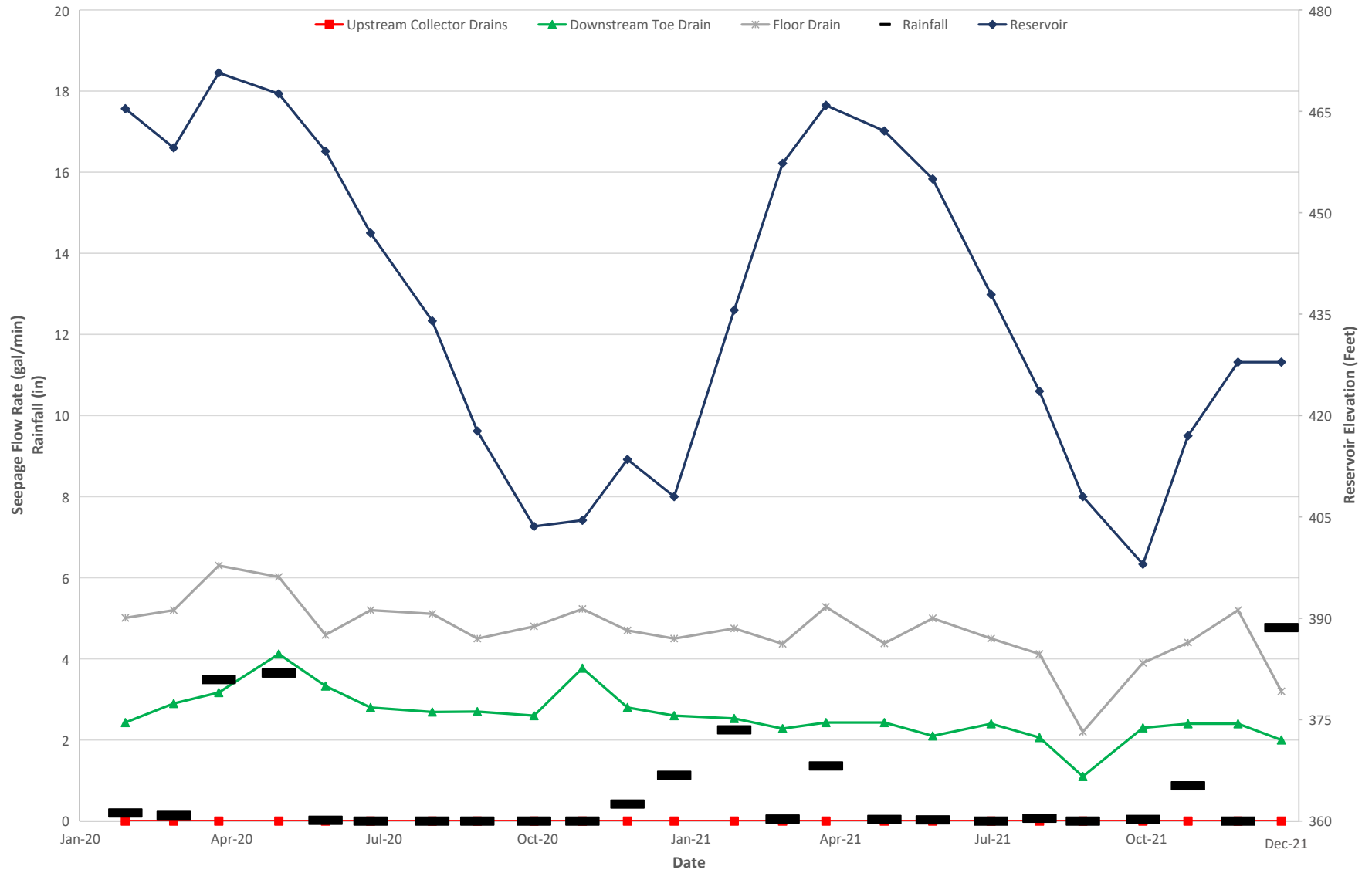


Figure 33
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL SEEPAGE AND RESERVOIR WATER SURFACE ELEVATIONS
 EAST DRAIN, WEST DRAIN, FILTER DRAIN, AND RIGHT GROIN DRAIN
 JANUARY 2011 THROUGH DECEMBER 2021

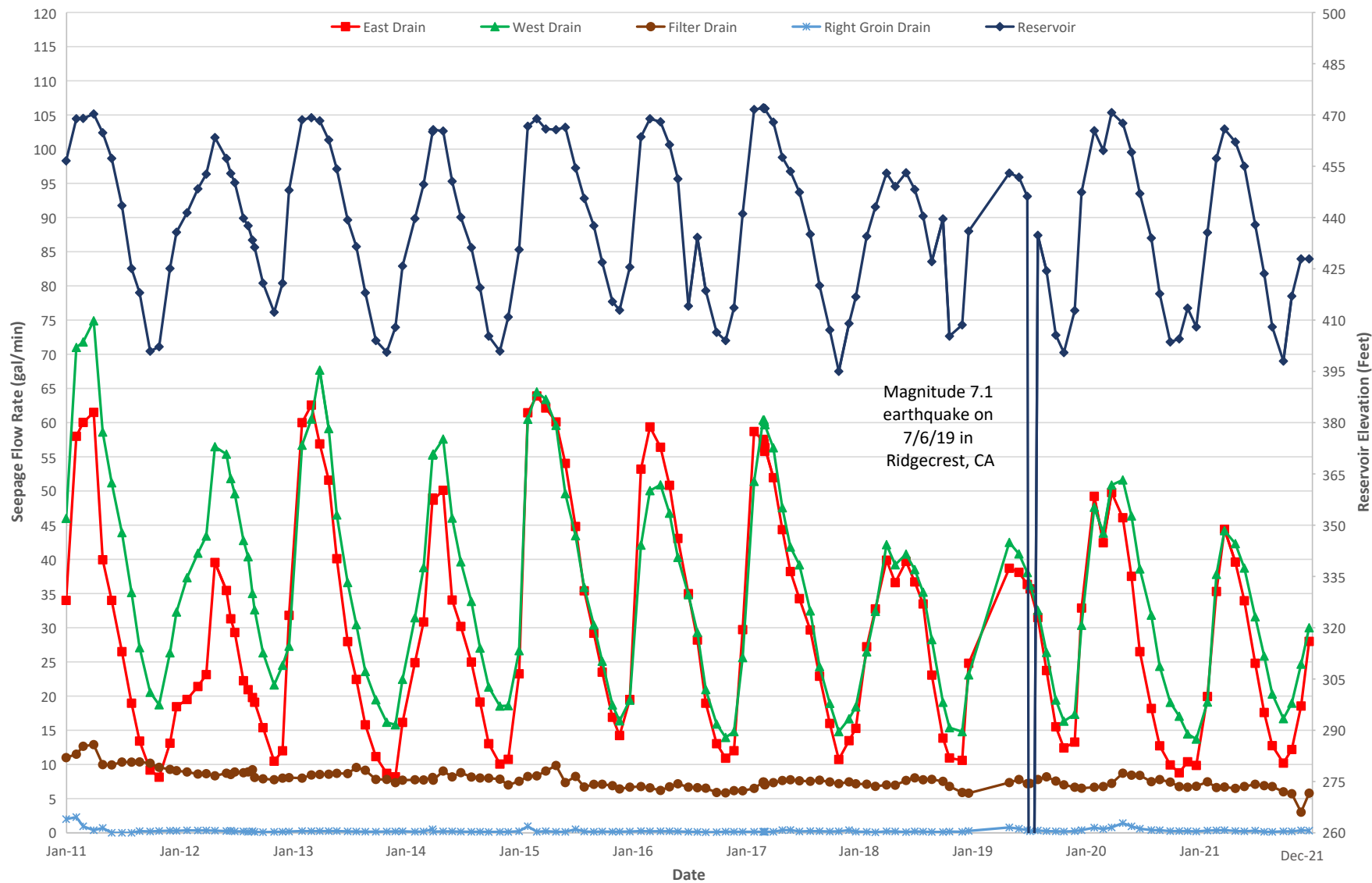


Figure 34
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL SEEPAGE AND RESERVOIR WATER SURFACE ELEVATIONS
 UPSTREAM COLLECTOR DRAINS, DOWNSTREAM TOE DRAIN, AND FLOOR DRAIN
 JANUARY 2011 THROUGH DECEMBER 2021

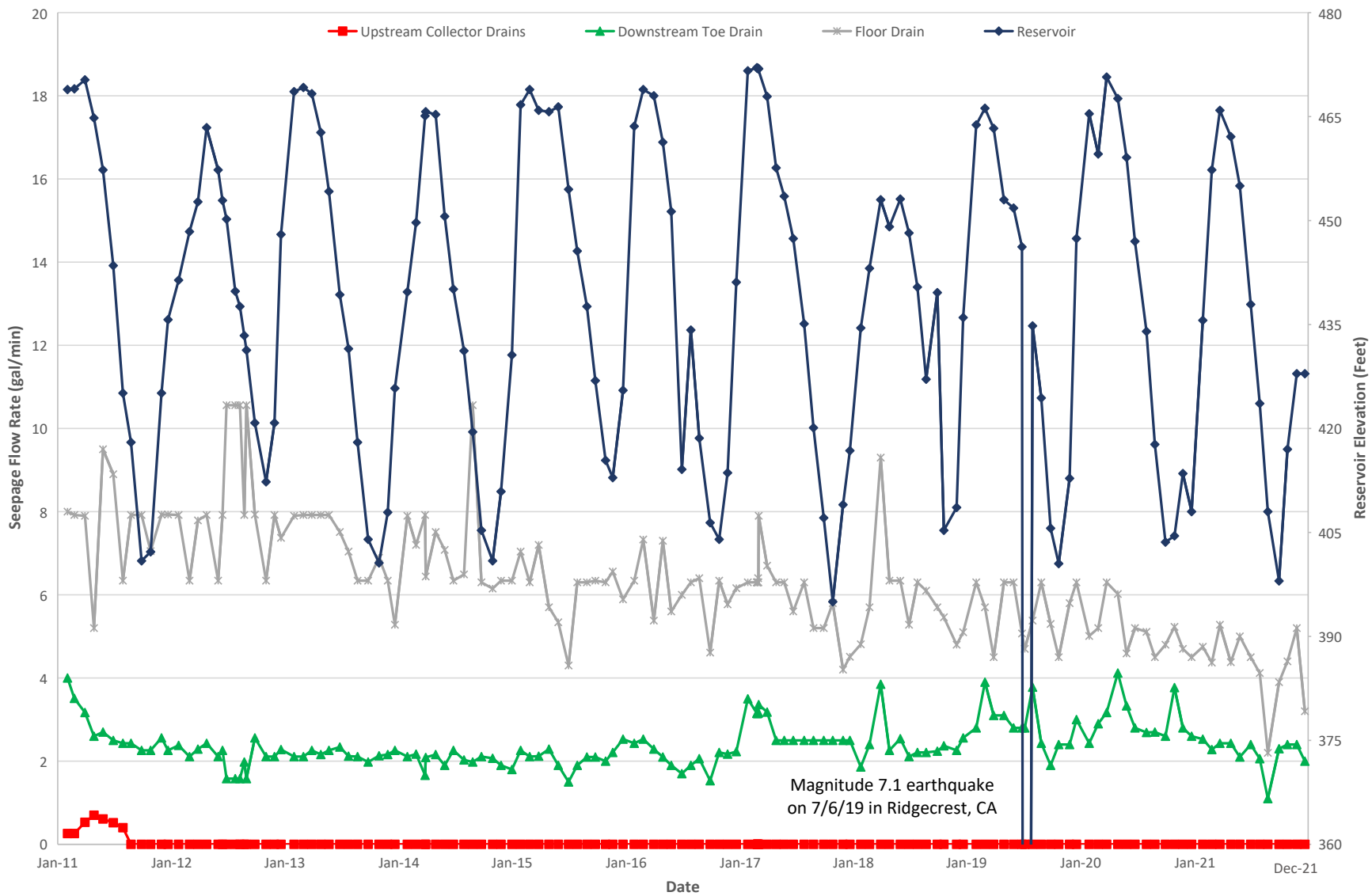


Figure 35
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL HORIZONTAL MOVEMENT
 SURVEY MONUMENTS SA-1, SA-2, AND SA-3
 2006 THROUGH 2022

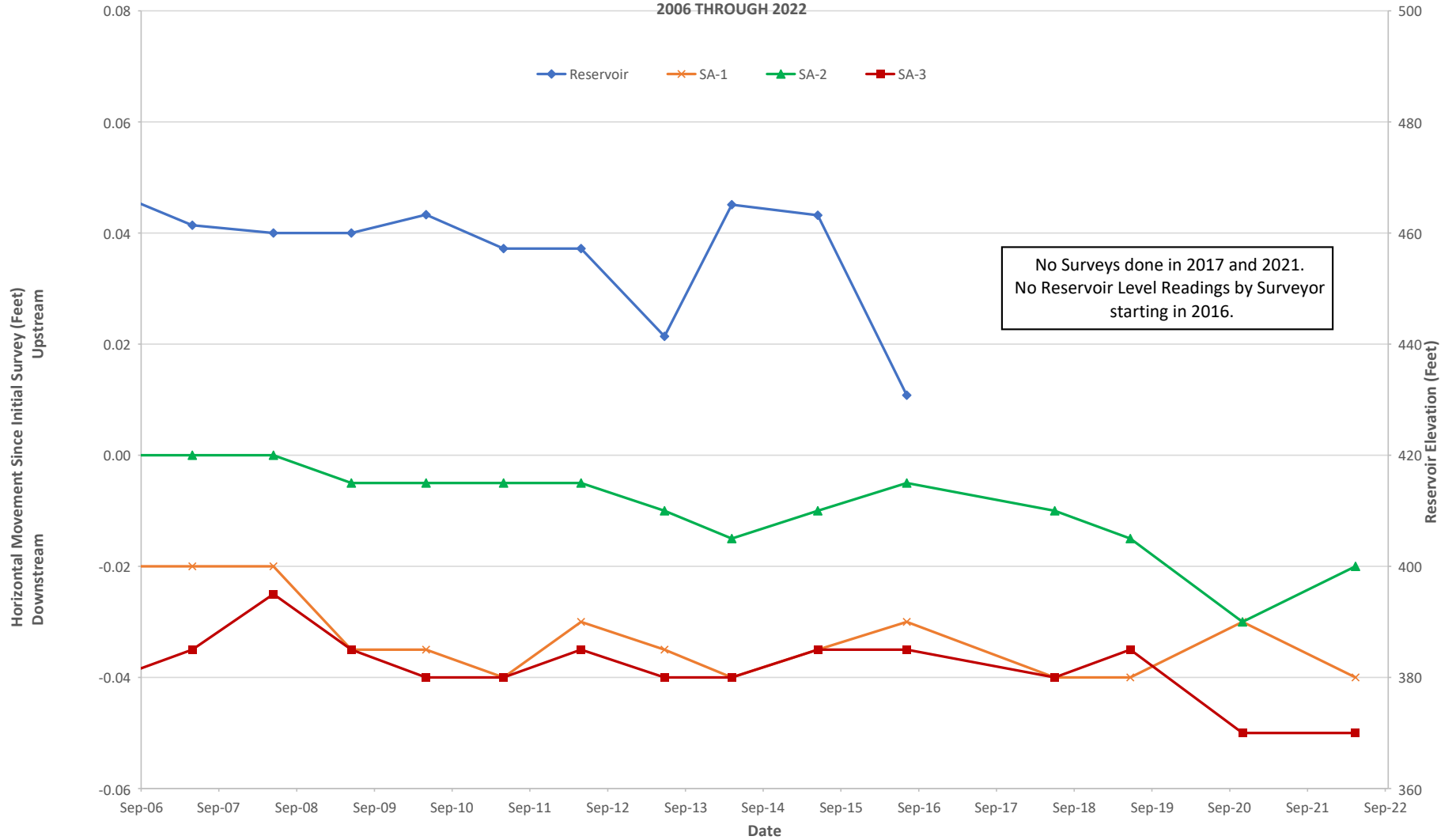


Figure 36
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL HORIZONTAL MOVEMENT
 SURVEY MONUMENTS SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, AND SB-7
 2006 THROUGH 2022

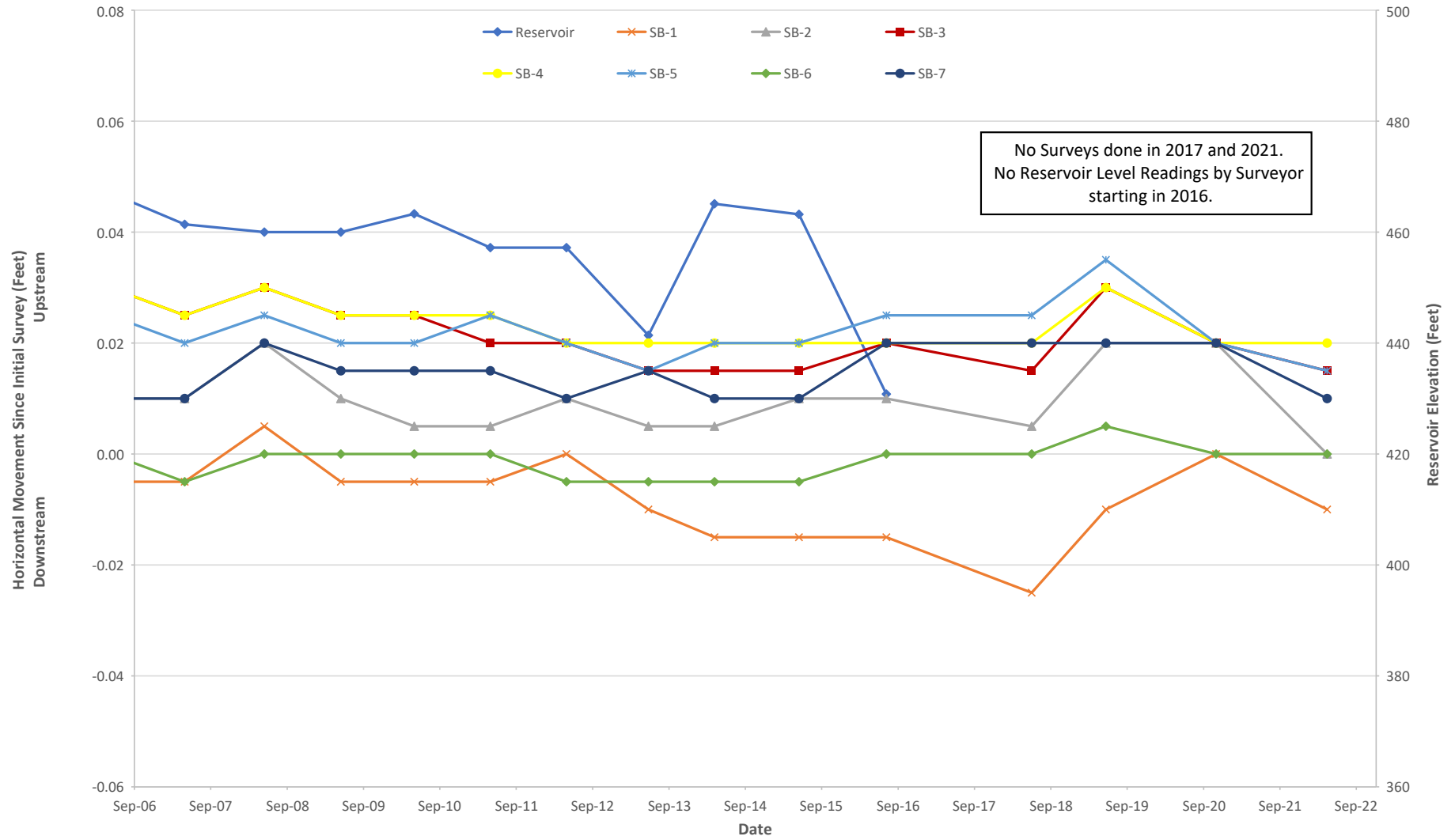


Figure 37
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL HORIZONTAL MOVEMENT
 SURVEY MONUMENTS SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-7, AND SC-8
 2006 THROUGH 2022

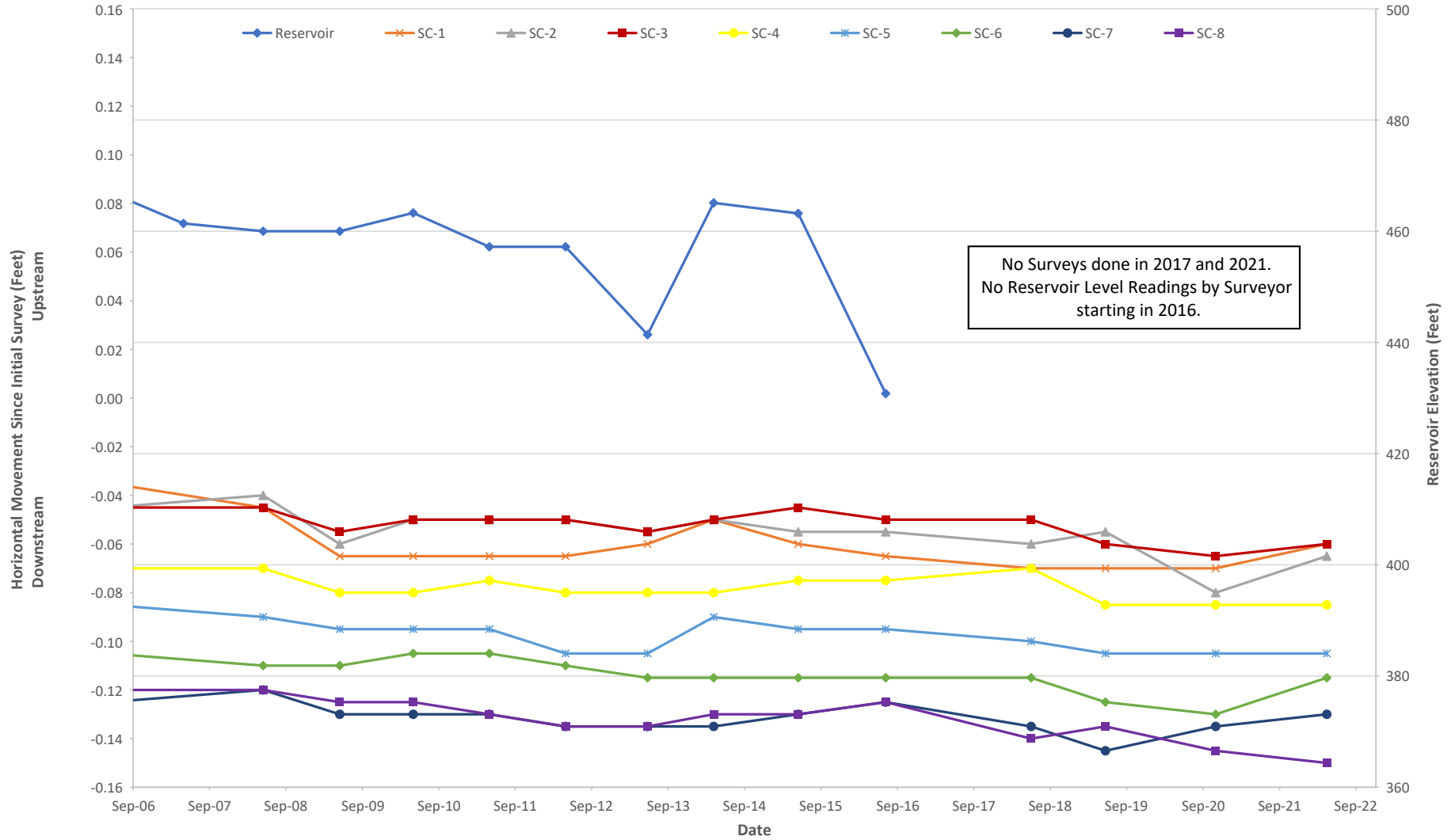


Figure 38
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL HORIZONTAL MOVEMENT
 SURVEY MONUMENTS SD-1, SD-2, SD-3, SD-4, SD-5, SD-6, AND SD-7
 2006 THROUGH 2022

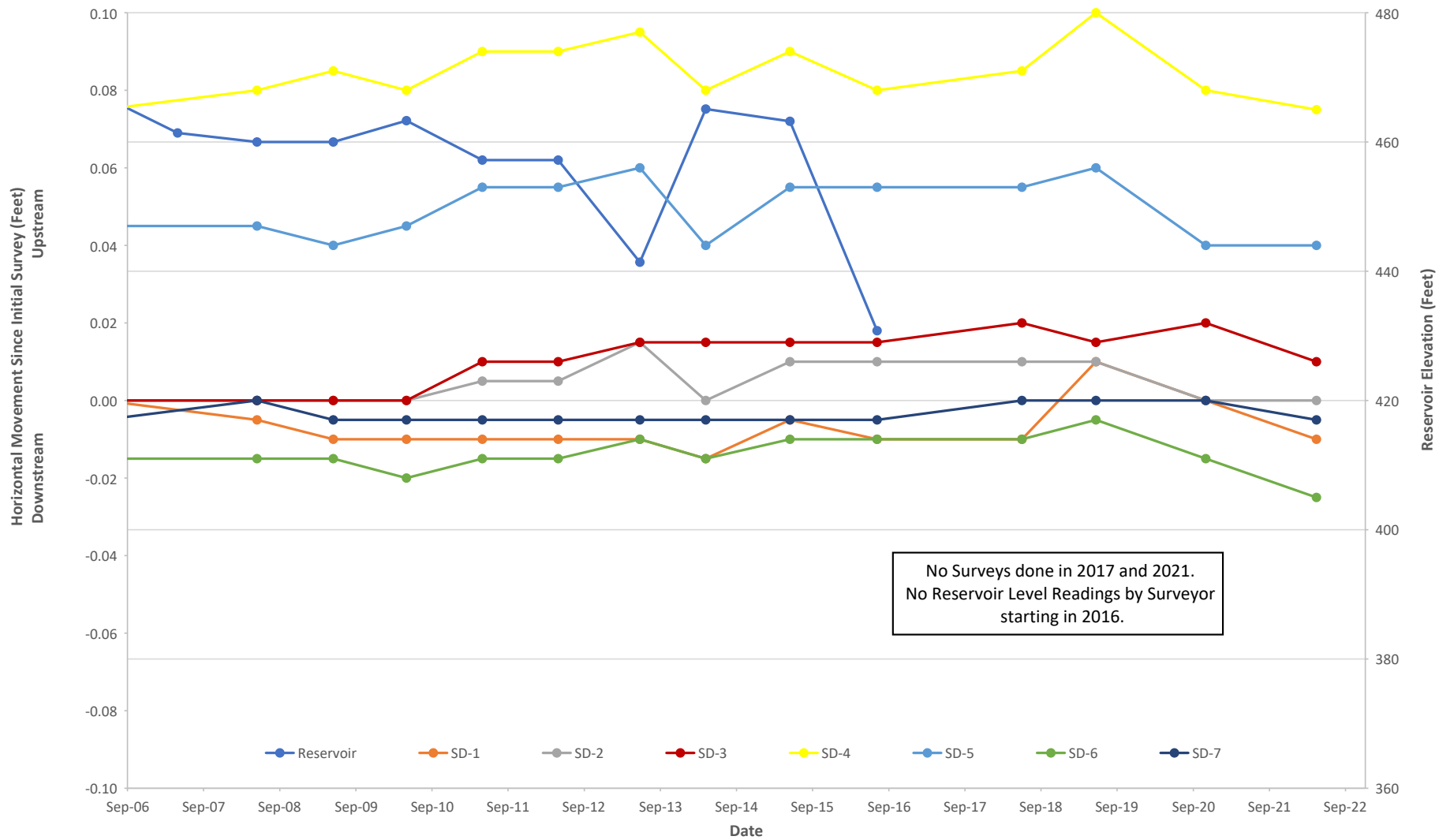


Figure 39
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL VERTICAL MOVEMENT
 SURVEY MONUMENTS SA-1, SA-2, AND SA-3
 2006 THROUGH 2022

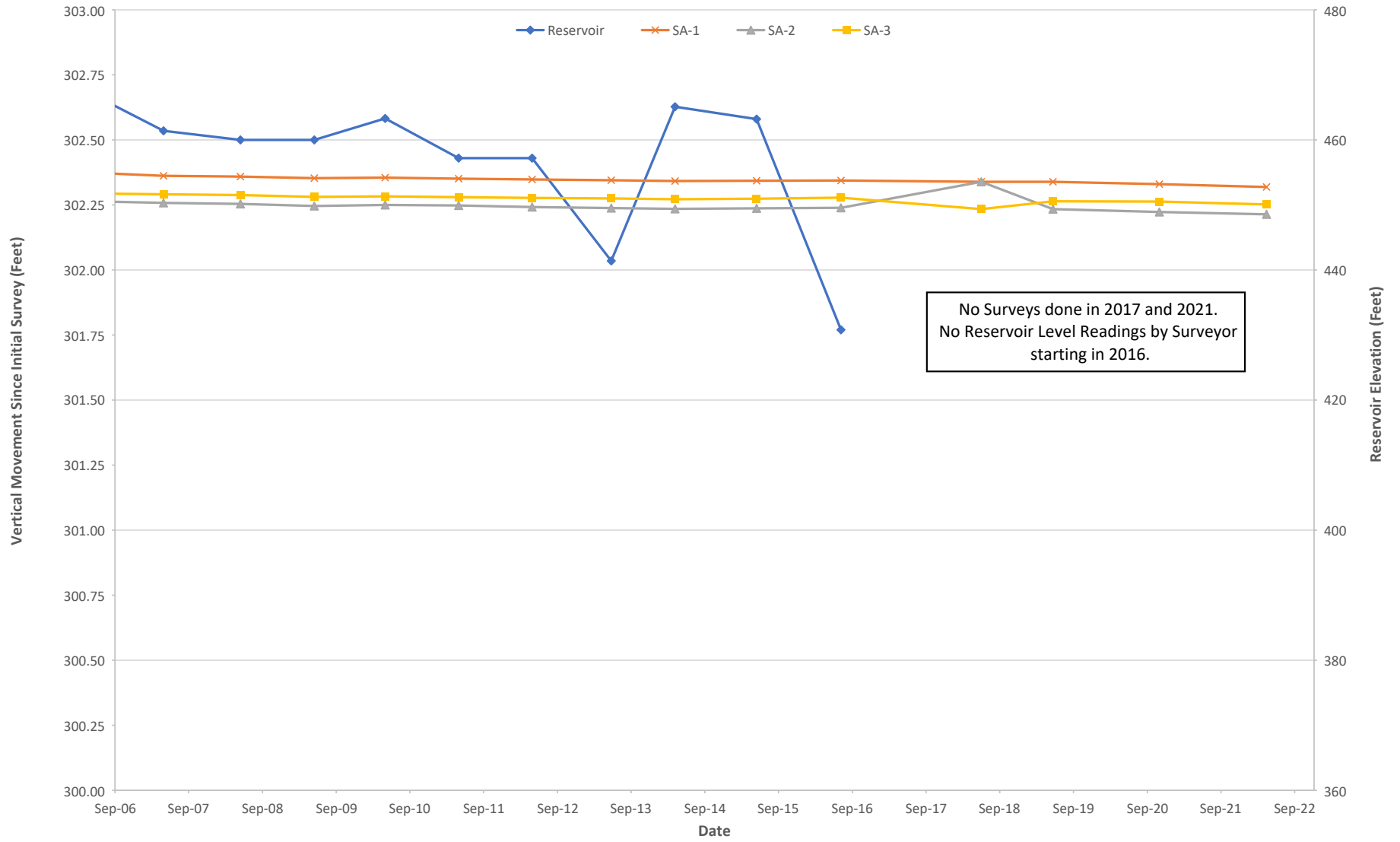


Figure 40
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL VERTICAL MOVEMENT
 SURVEY MONUMENTS SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, AND SB-7
 2006 THROUGH 2022

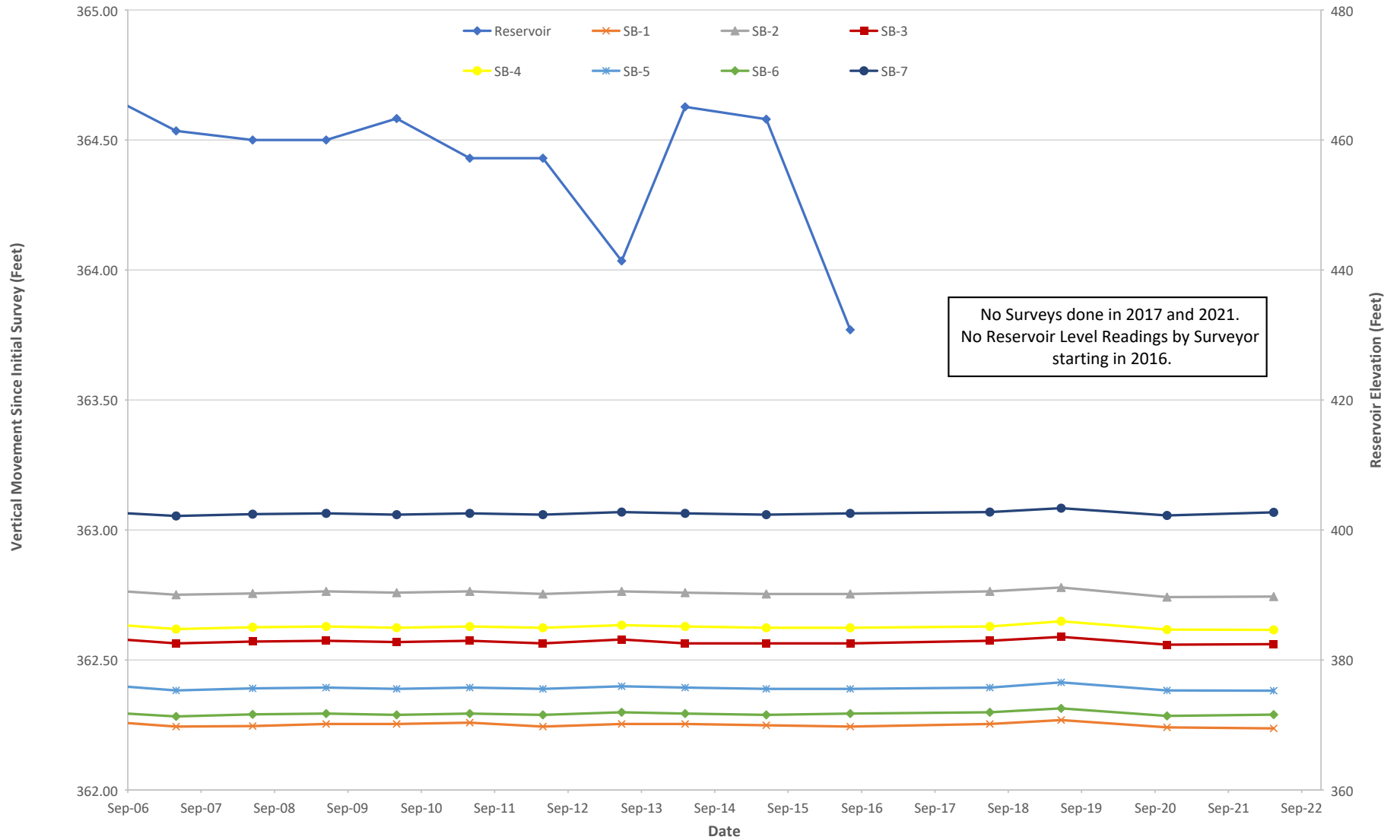


Figure 41
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL VERTICAL MOVEMENT
 SURVEY MONUMENTS SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-7, AND SC-8
 2006 THROUGH 2022

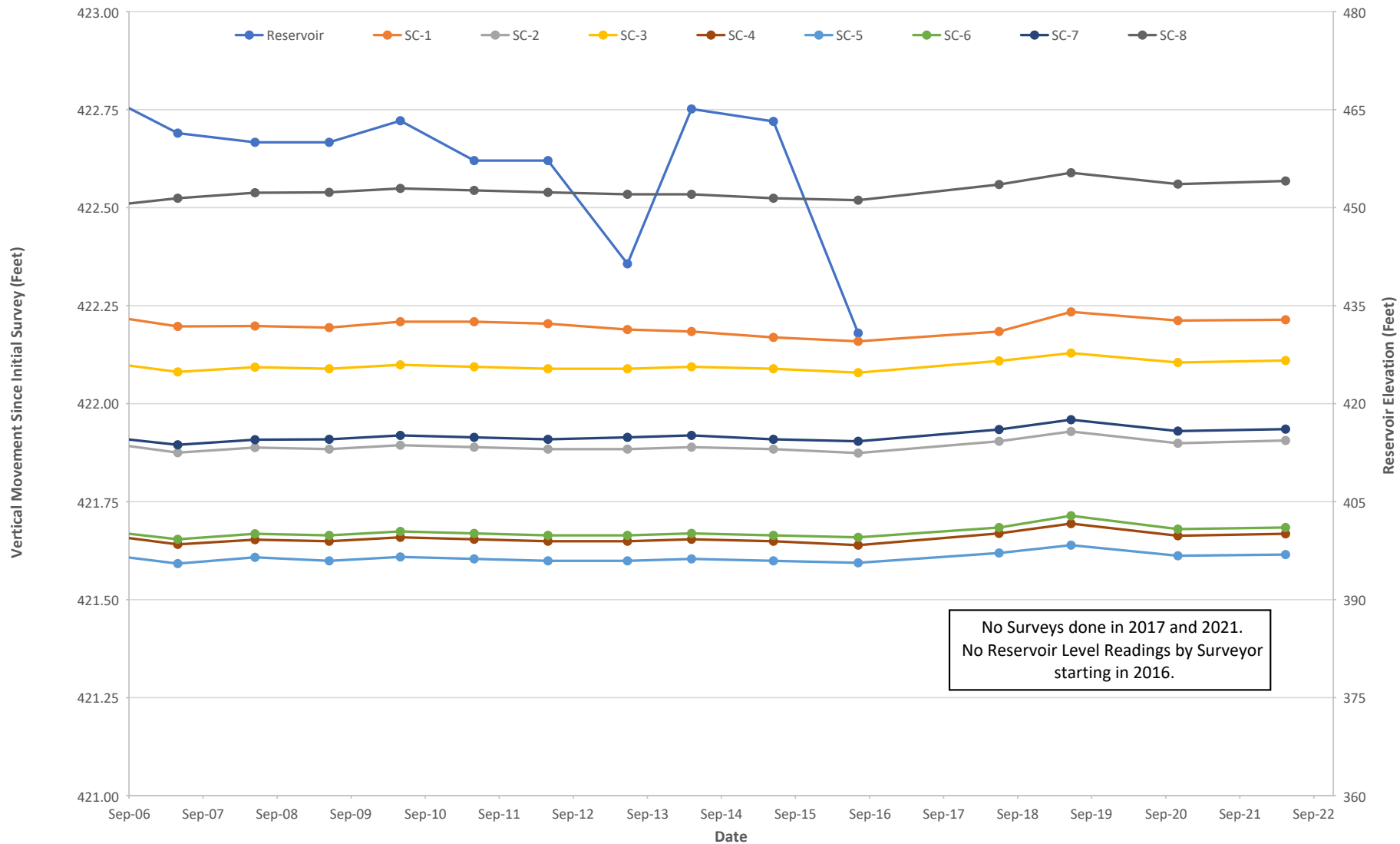
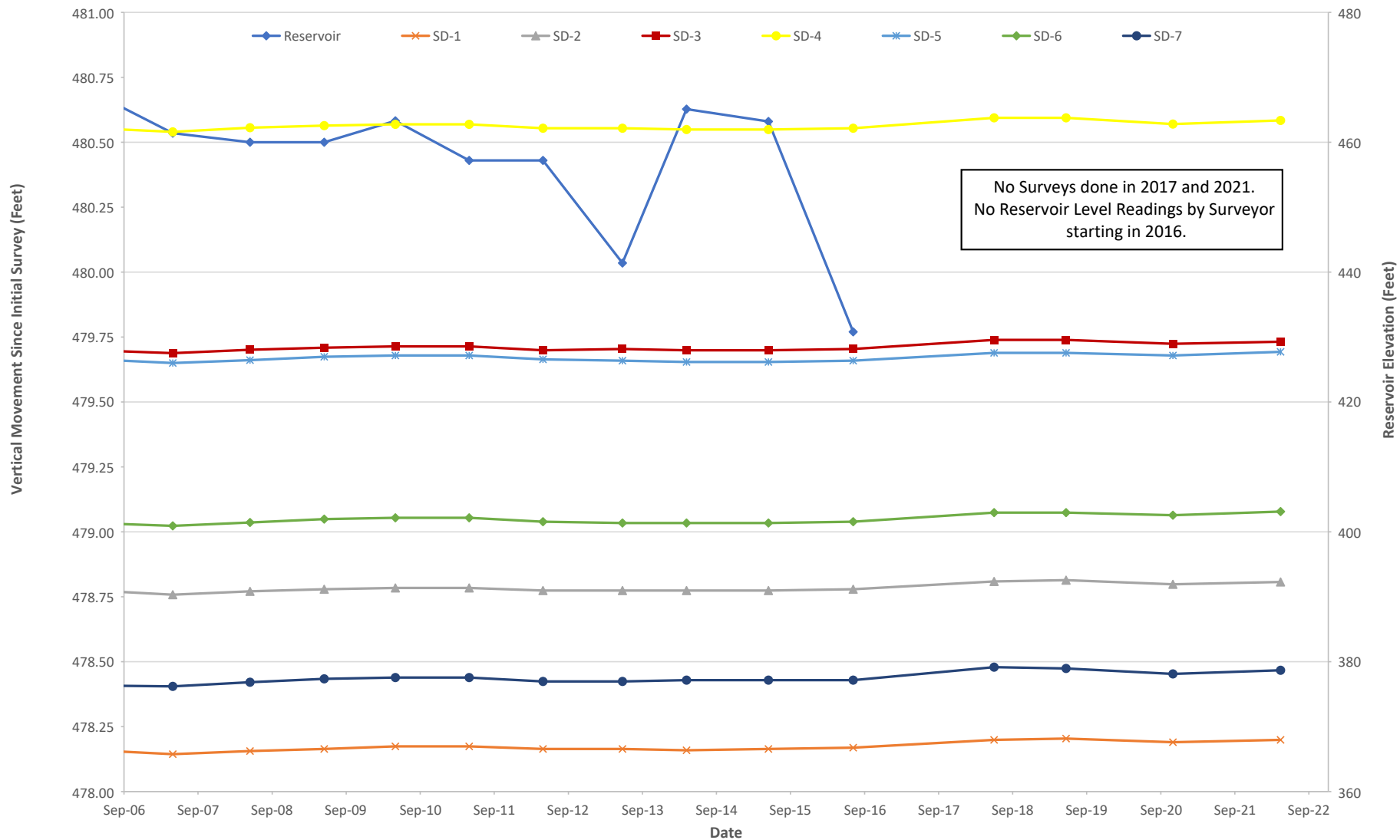


Figure 42
 SAN JOAQUIN RESERVOIR DAM
 HISTORICAL VERTICAL MOVEMENT
 SURVEY MONUMENTS SD-1, SD-2, SD-3, SD-4, SD-5, SD-6, AND SD-7
 2006 THROUGH 2022



Appendix

**Inspection Photographs of
San Joaquin Reservoir Dam
April 18, 2022**

**Reservoir Dam Valve
Exercising Table**

CNC Survey Report

Inspection Photographs of San Joaquin Reservoir Dam
April 18, 2022



Photo 1) AC-lined upstream face looking towards left abutment. Note two spillways drop inlets.



Photo 2) View of eastern slope of AC-lined reservoir.



Photo 3) View of upstream AC liner cracking and edge of right spillway drop inlet



Photo 4) Significant AC liner pothole at left side of upstream face. Note left spillway drop inlet.



Photo 5) AC paved crest looking towards the left abutment.



Photo 6) AC paving cracking near left abutment area.



Photo 7) Cracking and spalling at joints of concrete crest curb on upstream side.



Photo 8) Cracking and spalling at joints of concrete crest curb on upstream side.



Photo 9) Downstream face looking towards the left abutment and the right abutment, respectively.



Photo 10) Looking up and down left groin area, respectively.



Photo 11) Looking down right groin and lower bench looking toward right abutment, respectively.



Photo 12) Close up of one (right) of the two spillways drop inlet structures located at upstream side of dam.



Photo 13) Bottom of right spillway drop inlet structure leads to a 48-inch spillway pipe that discharge at the dissipator structure located at the downstream toe of the dam.



Photo 14) Energy dissipator structure with minor normal seepage coming from dam toe.



Photo 15) Looking downstream at the energy dissipator structure and exit channel, note vegetation encroachment.



Photo 16) Outlet valve control panel door at the reservoir control room.



Photo 17) V-notch weirs located near the energy dissipator structure, measuring seepage from the Toe and Floor Drains.



Photo 18) V-notch weirs measuring seepage flows from the Upstream Collector Drains #1 and #2.



Photo 19) Right Groin Drain pipe (6/16/08 Drain pipe).



Photo 20) Inside view of East, West, Filter drains seepage collection vault.



Photo 21) Typical sedimentation sample (after drying) taken from seepage collection drain.



Photo 22) Toe and Floor Seepage Concrete Vault with wet toe area.



Photo 23) Corroded pneumatic piezometer gauge box.

Reservoir Dam Valve Exercising Table

CNC Survey Report

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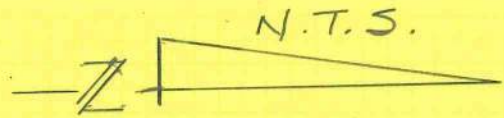
JOB NAME SAN JOAQUIN RESERVOIR
IRWID

JOB NO. 22-006 SRN _____

CREW A. MORENO

C. HADLEY

DATE: 5-10-22 SHEET 1 OF 11



RP502
10,000.000
8,997.827
(BOT SLOPE)

TOP
RESERVOIR CREST
LINE D

RP5C2
10,300.00
9,022.414
(SLOPE)

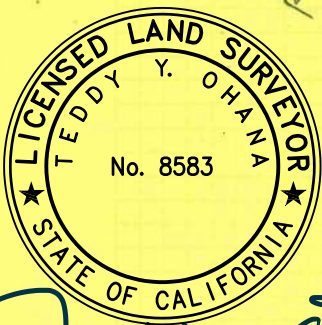
LINE C

RP5B2
10,600.000
9,043.001
(OUTSIDE FENCE AREA)

LINE B

RP5A2
10,900.000
9,473.726
(SLOPE)

LINE A
BOTTOM



Teddy Ohana

RP5D1
10,000.000
10,000.000



RP5C1
10,300.000
10,000.000



RP5B1
10,600.000
10,000.000



RP5A1
10,900.000
10,000.000



(HOLD OCCUPIED)

Prepared by:

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IRWD



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CREW A. MORENO

C. HADLY

DATE: 5-10-22 SHEET 2 OF 11

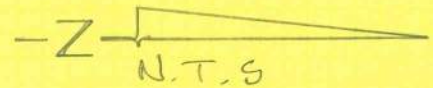
POINT	STA.	OFFSET	DESC
-------	------	--------	------

RPSA 5+26.274

HOLD FOR LINE

RPSA
1 3/4" BRASS DISK/PUNCH
IN CONC. HELD FOR LINE

SA 1 3+80.764 0.040



SA 2 2+80.656 0.020

ALL "A" POINTS ARE 1 3/4" BRASS DISK W/ PUNCHMARK SET IN CONCRETE AT F.S., 1.0' SOUTH OF YELLOW POST

SA 3 1+80.645 0.050

SA 4R 0+84.837 0.005

RPSA
H/ 0+00
HOLD

RPSA
1 3/4" BRASS DISK/PUNCH IN CONC.
HELD FOR LINE 1/4" STA.

HOLD FOR LINE

ALL SA POINTS ARE 1 3/4" BRASS DISK/PUNCH SET IN CONC.

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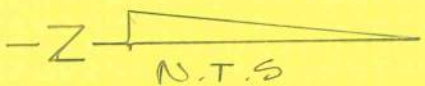
JOB NAME SAN JOAQUIN RESERVOIR
IRWD

JOB NO. 22-006 SRN _____

CREW A. MORENO

C HEADLY

DATE: 5-11-2022 SHEET 3 OF 11

POINT	STA.	OFFSET	DESC
RPSB	9+56.999		HOLD FOR LINE RPSB - AT TOP OF SLOPE THRU GATES 1 3/4" BRASS DISK/PUNCH IN CONC. HELD FOR LINE 
SB 1	7+10.662	0.010	
SB 2	6+10.673		ON LINE ALL "B" POINTS ARE 1 3/4" BRASS DISK IN CONCRETE
SB 3	5+10.694	0.015	AT F.S, 1.0' SOUTH OF YELLOW POST
SB 4	4+10.651	0.020	
SB 5	3+10.668	0.015	
SB 6	2+10.538		ON LINE
SB 7	1+10.575	0.010	
RPSB	0+00		RPSB 1 3/4" BRASS DISK/PUNCH SET IN CONC. HELD FOR LINE & STA

ALL "SB" POINTS ARE 1 3/4" BRASS DISK/PUNCH IN CONC. FLUSH

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JOB NO. 22-006 SRN _____
CREW A. MORENO
C. HEADLY
DATE: 5-10-2022 SHEET 4 OF 11

PT	STA.	OFFSET	DESC.
RPSC	9+77.586		HOLD FOR LINE RPSC 2.5' EAST OF PADDLEBOARD 1 3/4" BRASS DISK/PUNCH IN CONC. HELD FOR LINE
SC 1	8+72.413	0.060	 N.T.S. ALL "C" POINTS ARE 1 3/4" BRASS DISK IN CONCRETE AT F.S., 1.0 SOUTH OF YELLOW POST
SC 2	7+72.123	0.065	
SC 3	6+72.129	0.060	
SC 4	5+72.160	0.085	
SC 5	4+72.134	0.105	
SC 6	3+72.123	0.115	
SC 7	2+71.604	0.130	
SC 8	1+72.184	0.150	
RPSC	0+00.00 HOLD		RPSC 3.1' WEST OF PADDLEBOARD 1 3/4" BRASS DISK/PUNCH IN CONC. HELD FOR LINE 1/4 STA. HOLD FOR LINE

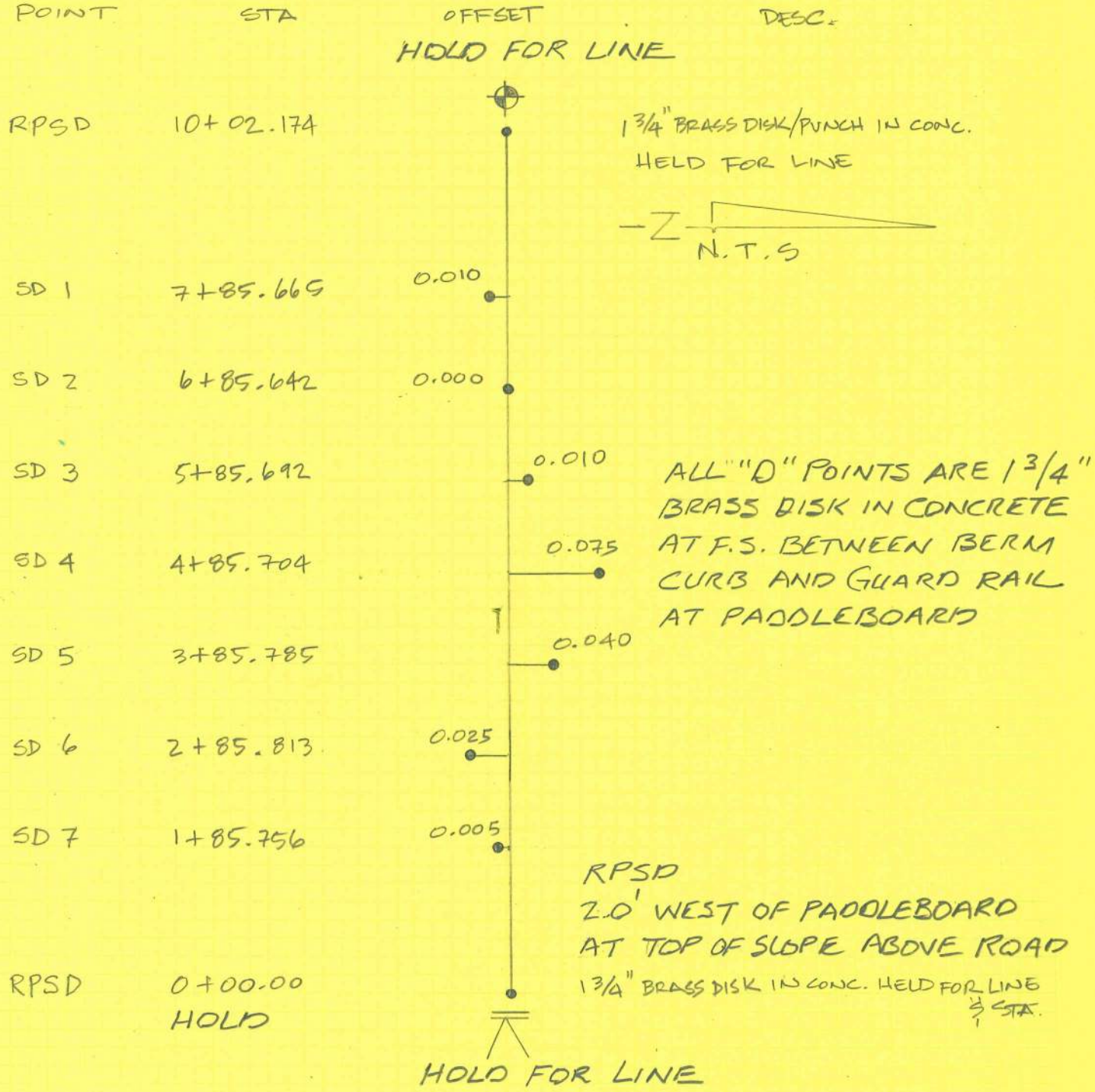
ALL "SC" POINTS ARE BRASS DISK/PUNCH SET FLUSH IN CONC.

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JOB NAME IRWD
SAN JOAQUIN RESERVOIR
JOB NO. 22-006 SRN _____
CREW A. MORENO
C. HEADLY
DATE: 5-10-2022 SHEET 5 OF 11



ALL "SD" POINTS ARE BRASS DISK/PUNCH SET FLUSH IN CONC.



Date: 5/10/2022

Sheet 6 of 11
SURVEY LEVELING NOTES

PROJECT: IRWD / San Joaquin Reservoir – AC Road LEVELING from SJR21 to MWD-Disc (East)

STATION	B.S.	HI	F.S.	ELEVATION	SURVEY LEVELING NOTES
SJR21				315.824	MWD SJR21 BM (1994)
	9.449	325.273			1 3/4" Brass Disc Near Restroom
TP1			0.169	325.105	
	15.952	341.057			
TP2			0.409	340.648	BEGIN "SB" BENCH RUN LINE
	16.225	356.873			
TP3			0.214	356.661	
	16.096	372.755			
TP4			0.201	372.553	
	15.937	388.492			
TP5			0.379	388.110	
	16.351	404.463			
TP6			0.061	404.399	
	16.328	420.730			
TP7			0.247	420.481	BEGIN "SC" BENCH RUN LINE
	16.200	436.683			
TP8			0.132	436.549	
	12.687	449.238			
TP9			0.085	449.154	
	11.509	460.662			
TP10			0.843	459.818	
	9.826	469.645			
TP11			1.907	467.737	
	14.316	482.054			
MWD E			2.818	479.235	END RUN TO RETURN DR BEGIN "SD" BENCH RUN LINE
	2.592	481.828			
TP11			14.089	467.737	
	1.389	469.127			
TP10			9.308	459.818	



Date: 5/10/2022

Sheet 9 of 11
SURVEY LEVELING NOTES

PROJECT: IRWD / San Joaquin Reservoir – “B” LINE (Slope Bench)

STATION	B.S.	HI	F.S.	ELEVATION	SURVEY LEVELING NOTES
TP2				340.648	BM from AC Road Level RUN
	11.696	352.344			
TURN1			1.492	350.848	Mag Nail Edge Gutter
	14.766	365.617			
SB7			2.544	363.068	
	4.391	367.464			
SB6			5.168	362.290	
	5.058	367.354			
SB5			4.964	362.382	
	4.857	367.247			
SB4			4.623	362.616	
	4.358	366.982			
SB3			4.414	362.561	
	4.587	367.155			
SB2			4.404	362.744	
	4.279	367.029			
SB1			4.786	362.237	
	4.806	367.049			
SB5			4.662	362.382	
	4.242	366.628			
TURN1			15.773	350.848	Mag Nail Edge Gutter
	0.404	351.260			
TP2			10.601	340.648	BM from AC Road Level RUN
					ALL ELEVATIONS ARE ADJUSTED



Date: 5/10/2022

 Sheet 10 of 11
SURVEY LEVELING NOTES
PROJECT: IRWD / San Joaquin Reservoir – “C” LINE (Slope Bench)

STATION	B.S.	HI	F.S.	ELEVATION	SURVEY LEVELING NOTES
TP7				420.481	BM from AC Road Level RUN
	12.166	432.647			
TURN1			15.863	416.779	
	9.963	426.746			
SC8			4.178	422.568	
	4.607	427.176			
SC7			5.241	421.935	
	4.816	426.751			
SC6			5.068	421.684	
	4.812	426.496			
SC5			4.880	421.615	
	4.569	426.184			
SC4			4.517	421.668	
	4.651	426.319			
SC3			4.210	422.110	
	4.328	426.437			
SC2			4.533	421.906	
	4.743	426.647			
SC1			4.436	422.214	
	4.196	426.407			
SC5			4.796	421.615	
	5.115	426.726			
SC8			4.162	422.568	
	4.236	426.800			
TURN1			10.029	416.779	
	15.708	432.479			
TP7			11.992	420.491	BM from AC Road Level RUN
					ALL ELEVATIONS ARE ADJUSTED



Date: 5/10/2022

Sheet 11 of 11
SURVEY LEVELING NOTES

PROJECT: IRWD / San Joaquin Reservoir – “D” LINE (Slope Bench)

STATION	B.S.	HI	F.S.	ELEVATION	SURVEY LEVELING NOTES
MWD E				479.235	MWD 1 3/4" Brass Disc (East)
	4.254	483.489			
SD7			5.021	478.467	
	5.714	484.182			
SD6			5.103	479.078	
	5.899	484.978			
SD5			5.284	479.693	
	6.073	485.776			
SD4			5.182	480.584	
	5.104	485.689			
SD3			5.956	479.732	
	5.099	484.832			
SD2			6.023	478.807	
	5.194	484.002			
SD1			5.802	478.199	
	5.265	483.464			
MWD W			5.286	478.178	MWD 1 3/4" Brass Disc (West)
	6.488	484.666			
RPSD			4.023	480.643	
	2.586	483.230			
SD3			3.498	479.732	
	5.673	485.405			
SD7			6.936	478.467	
	5.001	483.469			
MWD E			4.233	479.235	MWD 1 3/4" Brass Disc (East)
					ALL ELEVATIONS ARE ADJUSTED