

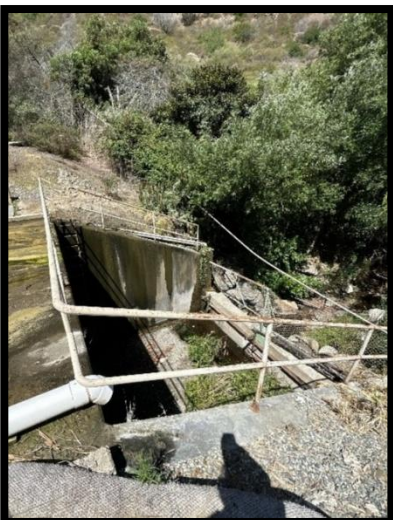


Annual Surveillance Report January 2025 to December 2025 for San Joaquin Dam DSOD Dam No. 1029-000

Newport Beach, California



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



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May 1, 2026
GEI Project No. 2305575

Consulting May 1, 2026
Engineers and GEI Project No. 2305575
Scientists

Mr. Jacob Moeder,
Engineering Manager – Dams & Storage
Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

**Re: San Joaquin Dam, DSOD Dam No. 1029-000
Annual Surveillance Report from January 2025 to December 2025**

Dear Mr. Moeder:

GEI Consultants, Inc. (GEI) is pleased to submit this Annual Surveillance Report for San Joaquin Dam covering the period from January 2025 to December 2025. 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 October 25, 2023.

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

Sincerely,

GEI CONSULTANTS, INC.



Richard Sanchez, P.E.
Principal Engineer



Nichole Tollefson, P.M.P.
Senior Engineer

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Acronyms and Abbreviations

AC	asphalt concrete
CCTV	closed-circuit television
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
MWD	Metropolitan Water District
MW	monitoring well
NAVD 88	North American Vertical Datum of 1988
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
ROV	remote operated vehicle
U/S	upstream
VW, VWP or VB	Vibrating Wire Piezometer

Annual Surveillance Report
January 2025 to December 2025
San Joaquin Dam, DSOD Dam No. 1029-000

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 Dam (labeled as San Joaquin Reservoir Dam in the Division of Safety of Dams [DSOD] jurisdiction list) conducted by the Irvine Ranch Water District (District) and GEI Consultants, Inc. (GEI) for the period between January 2025 through December 2025. It includes a review of previous surveillance reports, a compilation of field measurements, maintenance reports, 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 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, silt and field survey measurements.

Figure 1 is a plan view of the dam and reservoir with a representative cross section of San Joaquin 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.

In July 2023, IRWD developed a Dam Safety Program (IRWD, 2023) that includes principles and guidelines for Risk Informed Decision Making (RIDM) for its portfolio of dams. This report has been updated to follow the guidelines in the Dam Safety Program.

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 reclaimed water facility. The conversion project components are detailed in as-built drawings approved by DSOD.

San Joaquin Dam is a zoned earthfill embankment located in Orange County, California. As-built plans show the dam crest is at Elevation 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 overlain by 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 comprise reinforced concrete box structures with the control at Elevation 470.5 ft (NGVD 29), 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 spillway flow of water which converges into a combined energy dissipation reinforced concrete box located in the stream channel downstream of the toe of the dam. The District contracted PipeLogix Inc. to perform a CCTV inspection of the spillway conduits at the site in March 2024. It is recommended that the District perform these inspections every ten years; the District should re-inspect the spillway in 2034.

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 (northeast) near the right end of the dam. There are four multi-level screened intake valves: a 24-inch butterfly valve at Elevation 360 ft (Outlet Valve #4), and three 48-inch-diameter valves at Elevations 380, 415, and 450 ft (Outlet Valves #3, 2, and 1, respectively) (NGVD 29). A 60-inch butterfly valve (Outlet Valve #5) 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 and 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 18-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.

No valves were cycled during the inspection on June 16, 2025. During the previous year's inspection, Valve #2 (48-inch) and Valve #5 (60-inch) leaked hydraulic fluid when operated and were fixed in the open position. The District provided a Dam Outlet Valve Exercising Log which noted the valves were not exercised in 2025. The log is provided in Appendix B of this report.

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 spillway crests. 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.

IRWD contracted Genterra Consultants to establish thresholds and action levels for piezometer readings, seepage flows, and movement monitoring (Genterra, 2023). These thresholds and action levels are based on a review of historical performance data and previous reports, and a statistical analysis of piezometer readings in relation to reservoir water levels. Genterra developed four alarm levels based on an expected instrument reading range per instrument set by an upper and lower band for each alarm level. If an instrument reading falls outside its expected range, it moves into the next alarm level. Alarm Levels are designated as Alarm Level I (Green Alarm), II (Yellow Alarm), III (Orange Alarm), and IV (Red Alarm). The lower and upper bands for each alarm level and the required response for each alarm level are shown in Table 2 of Guideline No. 4 (Seepage & Piezometer Monitoring) and Table 2 of Guideline No. 6 (Movement Monitoring) in IRWD's Dam Safety Program. The piezometers, seepages, and movement surveys were assessed using these alarm levels. Tables 1 through 7 summarize the readings for the 2025 review period.

Currently IRWD has contracted GHD (previously Genterra Consultants) to update the thresholds and action levels based on historical data. This will be updated in the 2027 Dam Safety Program.

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 2015 through December 2025, the reservoir water surface elevation varied from a minimum Elevation of 395 ft to a maximum Elevation of 472.0 ft. During this review period (2025), the reservoir water surface elevation varied from a minimum Elevation of 420.6 ft to a maximum Elevation of 467.9

ft. The reservoir elevations that were recorded on the same dates as instrumentation data was taken are shown in Tables 8 through 13 (NAVD 88). The reservoir water surface elevations during the 2025 review period remained within historical limits. Rainfall data is included in Tables 8 through 11 and Figures 7 through 34.

2.2 Instrumentation

Several types of instrumentation are being monitored at the dam and reservoir, including vibrating wire piezometers (VWP), 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 collection system associated with the VWP (VB-1 through VB-8) located on the upstream side of the dam starting in 2019. In addition, during several months in 2021 (Table 9) error digital readings of -9999.00 were recorded. During the 2022 review period the readings provided by the District did not result in reliable piezometers levels when applying the conversion formulas to estimate pressure head. The values provided were considered erroneous based on comparison to historical readings. In 2023, IRWD contracted GeoPentech to perform an inspection and maintenance of their VWP system to help address the data collection problem. Further details of the maintenance work are described below in Section 2.3.5. Based on review of the data, piezometers VB-2 through VB-4 appear to be functioning correctly since November 2022. Piezometers VB-5 through VB-8 appear to be functioning correctly since May 2023. VB-1 produced error readings between April and September 2024 but has been functioning properly during the 2025 review period other than an erroneous reading on August 21 and October 22, 2025. However, the levels recorded in VB-1 do not match historical records, and the piezometer may still be providing entirely erroneous readings. Further evaluation details are provided in section 2.3.3.

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

- 1) 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 in Figure 3. These VWPs were placed in the dam, drilled to depth, grouted to the surface, covered with asphalt, and are considered permanent installations. The cabling from the sensors extends through a conduit up to the dam crest where it is gathered into two junction boxes and then directed to a single, main collection box near the center of the dam.
- 2) Twenty pneumatic piezometers were installed in 1965. These pneumatic piezometers are located in the dam embankment and abutments and are also considered permanent installation. They are grouped into sets of piezometers, identified as the C, LA, LR, RA, and RR series. Their locations are also shown in 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 in 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 in 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 in Figure 2. They are identified as the East Drain, West Drain, Filter Drain, Upstream (U/S) Collector Drain No. 1, U/S Collector Drain No. 2, Downstream Toe Drain, and Floor Drain. An eighth seepage monitoring location was installed to collect seepage at 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 underwater. 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. SA-4R was established on November 25, 2020, to replace SA-4. Because eight of the 33 active monuments are usually underwater, there are currently 25 survey monuments being surveyed by the District typically on an annual basis. The locations of the survey monuments are shown in Figure 6.

2.3 Piezometers and Monitoring wells

Tabulated data since 2007 for piezometer and monitoring well measurements are presented in Table 8. Table 9 presents the VWP measurements since 2007. Table 10 contains the pneumatic piezometer measurements since 2007 as well.

Figures 7 through 11 present graphs of measured water levels in the reservoir, piezometers, monitoring wells, and rainfall during the 2-year period from January 2024 through December 2025. Figures 12 through 16 present graphs of historical measured water levels in the reservoir, piezometers, monitoring wells, and rainfall since 2015.

The piezometers at the site were most recently cleaned in June 2023, when IRWD contracted Genterra Consultants, Inc. A copy of the cleaning report is included as Appendix I.

Based on review of the data, piezometers VB-1 through VB-4 appear to be functioning correctly since November 2022, with the exception of VB-1 between April and September 2024 and once in October 2025. Piezometers VB-5 through VB-8 appear to be functioning correctly since May 2023. Since most of the VWP's appear to be functioning, we have included Figures 17 and 18, which present graphs of measured water levels in the reservoir, VWP's, and rainfall during the 2-year period from January 2024 through December 2025. Figures 19 and 20 are graphs of historical piezometer levels based on the readings obtained from the VWP's since 2015.

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 2024 through December 2025. Figures 26 through 30 present the historical levels based on readings obtained from the pneumatic piezometers since 2015.

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 8 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 a summary of the open-well piezometers during the current review period (CP-1A, CP-1B, CP-2A, CP-2B, CP-3A, and CP-3B). 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	Tip Elevation (ft)	2015-2025 10-Year Range (ft)	2025 Range (ft)	2025 Maximum Alarm Level	Comment
CP-1A	363.2	441.0 – 447.7	443.6 – 446.3	Level I	
CP-1B	447.1	446.5 – 447.7	447.0 – 447.3	Level I	
CP-2A	363.2	456.8 – 467.2	462.0 – 466.9	Level III	Continue monitoring. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
CP-2B	423.1	450.7 – 454.8	452.6 – 453.7	Level I	
CP-3A	363.2	470.5 – 482.2	480.1 – 482.0	Level IV	Continue monitoring. Perform Alarm Level IV response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
CP-3B	452.6	464.0 – 472.2	470.7 – 472.0	Level III	Continue monitoring. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).

Piezometer levels in CP-1A, CP-1B, and CP-2B continued to follow past historic trends and remained within historical limits throughout the 2025 review period with changes due to reservoir level changes. Piezometers CP-2A, CP3-A, and CP-3B responded to the reservoir changes and increases in rainfall producing readings that went above the historical maximum reading throughout 2025. Piezometer levels in CP-2A, CP-2B, CP-3A and CP-3B continue to follow a gradual upward trend since 2017 and should be monitored per Table 2 of Dam Safety Program Guideline No.4 (Seepage & Piezometer Monitoring). Open-well piezometers CP-3A and 3B were cleaned in June 2023 though they continue to follow a gradual upward trend. These open-well piezometers are not located near the dam but in the perimeter of the reservoir. Additionally, irrigation for housing developments uphill from these piezometers may be increasing the local groundwater conditions. Currently, IRWD is re-evaluating the methodology used to establish the levels and corresponding appropriate response for these piezometers.

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 2025 review period. Table 8 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 2024 through December 2025 are shown in Figures 9, 10, and 11. The historical water levels since 2015 are presented in Figures 14, 15, and 16.

Table 2 provides a summary of the monitoring wells during the current review period (MW-1 through MW-8). Readings with isolated spikes or drops were not included in the maximum and minimum monitoring well water level range.

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

Monitoring Well	Tip Elevation (ft)	2015-2025 10-Year Range (ft)	2025 Range (ft)	2025 Maximum Alarm Level	Comment
MW-1	363.2	403.1 – 407.1	404.3 – 405.8	Level I	
MW-2	409.9	420.5 – 424.0	421.6 – 422.0	Level I	
MW-3	423.0	419.8 – 424.8	420.3 – 422.2	Level I	Dry.
MW-4	444.5	443.7 – 445.5	443.7 – 444.8	Level I	Dry.
MW-5	406.5	414.8 – 432.5	420.3 – 430.5	Level II	Continue monitoring. Perform Alarm Level II response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
MW-6	404.9	396.9 – 405.5	397.1 – 405.5	Level I	Mostly dry. New historical high, but no change in Alarm Level.
MW-7	397.3	437.5 – 445.8	442.5 – 443.6	Level I	
MW-8	419.8	483.9 – 494.6	487.5 – 489.6	Level I	

During this 2025 review period the water levels in all monitoring wells followed historic trends other than MW-6 that reached a new historical maximum (with no change in alarm level). It was

observed that water levels reported at MW-3, MW-4, and MW-6 were either below the bottom of well elevation or near it. GEI considers the wells to be dry based on review of the data, conversations with IRWD staff, and measurements performed during previous annual inspections. Monitoring Well MW-5 was the most responsive to reservoir water level changes and reached Alarm Level II when the reservoir level was being filled. 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 VWP's within the upstream side of the dam embankment. Readings are taken at a main collection box which contains a datalogger/multiplexer located on the crest of the dam. Data from the VWP's is normally collected by the District approximately once per month. Graphs of piezometer level elevations based on readings obtained from VWP's VB-1, VB-2, VB-5, and VB-6 are shown in Figures 17 and 19 while graphs of piezometer levels in VWP's VB-3, VB-4, VB-7, and VB-8 are shown in Figures 18 and 20.

As noted in previous reports, all VWP's starting in 2019 were providing unreliable piezometer levels and were not comparing well with previous levels. In addition, during several months in 2021 (Table 9), error digital readings were noted by the District. During the 2022 review period, the readings provided by the District were not resulting in reliable piezometers levels when applying the conversion formulas to estimate pressure head. The values provided were considered erroneous based on a comparison to historical readings. In 2023, maintenance work was performed at both junction boxes and appears to have temporarily fixed the data recording issues. Based on review of 2025 data, piezometers VB-2 and VB-4 appear to be functioning correctly since November 2022, while VB-1 started producing error readings after July 2023, between April and September 2024, and in August and October 2025. However, currently the levels recorded in VB-1 do not match historical records, and the piezometer may still be providing entirely erroneous readings. Piezometers VB-5, VB-6, and VB-8 appear to be functioning correctly since May 2023. VB-3 and VB-7 do not have established thresholds as readings have historically been below the piezometer tip elevations. All VWP's (other than VB-1, VB-3, and VB-7) are responding to the reservoir water level and are following the historical trends shown in the data before 2019, see Figures 19 and 20. Table 3 provides a summary for each VWP (VB-1 through VB-8). Readings with isolated spikes or drops were not included in the maximum and minimum piezometer water level range. Figures 19 and 20 are graphs of historical piezometer levels based on the readings obtained from the VWP's since 2015.

VB-2 reached Alarm Level III and VB-6 reached Alarm Level IV in February 2025, likely due to a rapid reservoir raise and a delayed response within the piezometer. In January 2025 the Reservoir was at Elevation 427.3 ft (NAVD 88) which rose rapidly to Elevation 465.4 ft (NAVD 88) in February. Once reservoir levels stabilized, VB-2 and VB-6 returned to Alarm Level I.

Table 3. Vibrating Wire Piezometers – Maximum and Minimum Water Level Ranges

Piezometer	Tip Elevation (ft)	2015-2025 10-Year Range (ft)	2025 Range (ft)	2025 Maximum Alarm Level	Comment
VB-1	357.0	372.9 – 408.6	377.0 – 408.6	Level IV	Historically provided erroneous data. Continue monitoring. Perform Alarm Level IV response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
VB-2	392.0	403.4 – 437.3	409.3 – 428.8	Level III	Returned to Alarm Level I for the rest of the review period. Continue monitoring. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring)
VB-3	399.5	396.7 – 405.0	396.8 – 397.1	N/A	Alarm levels were not established for this piezometer.
VB-4	441.0	430.4 – 467.1	434.0 – 458.6	Level IV	Historically been in Alarm Level III-IV. Continue monitoring. Perform Alarm Level IV response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
VB-5	392.8	397.5 – 465.6	412.1 -455.2	Level IV	Historically been in Alarm Level III-IV. Continue monitoring. Perform Alarm Level IV response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
VB-6	392.0	407.8 – 448.2	412.2 – 436.0	Level IV	Returned to Alarm Level I for the rest of the review period. Continue monitoring. Perform Alarm Level IV response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
VB-7	402.0	381.7 – 404.8	401.3 – 401.5	N/A	Alarm levels were not established for this piezometer. Levels were reported below tip elevation.
VB-8	441.0	423.1 – 457.2	446.6 – 453.0	Level I	

2.3.3.1 Maintenance

GeoPentech inspected the VWPs, the two junction boxes, and the main datalogger/multiplexer on March 27, 2023. GeoPentech provided the following conclusions:

- All eight VWP sensors were still operational.
- Measured values at the datalogger terminal indicate potential problems with the connections to sensors VB-5 through VB-8.
- The transient protection modules in the two junction boxes may not be protecting the datalogger due to lack of grounding.
- There does not appear to be lightning protection or a grounding rod for the datalogger box.

On May 31, 2023, GeoPentech replaced the transient protection modules at each junction box with Geokon 4999-12L/LE (LAB3) Surge Modules. All eight instruments were reconnected to

the new surge modules and the surge modules were connected to an earth ground. GeoPentech took readings from each sensor and concluded that they were functioning properly.

Details of the inspection and instrumentation system repair work are provided in the Memorandums in Appendix D.

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 10 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 in Figures 21 and 26, while plots representing the piezometer level elevations for pneumatic piezometers C-5 through C-8 are shown in 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 in Figures 23 and 28, while plots representing the piezometer level elevations for pneumatic piezometers LA-1 and LA-2 are shown in 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 in Figures 25 and 30.

Table 4 provides a summary of the pneumatic piezometers during the current review period. Readings with isolated spikes or drops were not included in the maximum and minimum piezometer level range.

Table 4. Pneumatic Piezometers – Maximum and Minimum Water Level Ranges

Pneumatic Piezometer	Tip Elevation (ft)	2015-2025 10-Year Range (ft)	2025 Range (ft)	2025 Maximum Alarm Level	Comment
C-1	357.1	327.1 – 349.1	337.1 – 342.1	N/A	This piezometer provides unreliable readings and Alarms Levels were not developed.
C-2	339.8	344.5 – 350.5	347.5 – 350.5	Level IV	Has historically been at Alarm Level IV. Continue monitoring. Perform Alarm Level IV response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
C-3	363.3	344.5 – 364.5	346.5 – 349.5	Level I	
C-4	392.8	394.1 – 468.1	417.1 – 464.1	Level I	
C-5	379.4	382.5 – 386.5	384.5 – 385.5	Level I	
C-6	392.0	399.5 – 424.5	402.5 – 419.5	Level I	
C-7	324.9	321.9 – 325.9	321.9 – 322.9	Level I	
C-8	440.6	442.1 – 461.1	443.1 – 455.1	Level IV	Continue monitoring. Perform Alarm Level IV response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
C-9	357.0	350.9 – 362.9	350.9 – 362.9	N/A	New historical max. This piezometer provides unreliable readings and Alarms Levels were not developed.
RR-2	393.2	381.3 – 462.3	413.3 – 453.3	Level I	
LA-1	391.2	387.9 – 467.9	414.9 – 463.9	Level I	
LA-2	440.3	429.7 – 464.7	434.7 – 461.7	N/A	This piezometer provides unreliable readings and Alarms Levels were not developed.
RA-1	364.5	380.5 – 433.5	400.5 – 431.5	Level III	Continue monitoring. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
RA-2	354.3	382.3 – 410.3	390.3 – 407.3	Level I	
RA-3	390.8	390.9 – 460.9	413.9 – 460.9	Level IV	New historical max. Returned to Alarm Level I for rest of review period. Continue monitoring. Perform Alarm Level IV response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
RA-4	441.0	423.0 – 441.0	423.0 – 437.0	N/A	This piezometer provides unreliable readings and Alarms Levels were not developed.
LR-1	356.3	362.7 – 380.7	367.7 – 371.7	Level II	Returned to Level Alarm I for rest of review period. Continue monitoring. Perform Alarm Level II response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
LR-2	340.3	350.7 – 358.7	354.7 – 358.7	Level IV	Has historically been at Alarm Level IV. Continue monitoring. Perform Alarm Level IV response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
LR-3	390.1	387.3 – 471.3	416.3 – 467.3	Level I	
LR-4	440.0	423.0 – 467.0	432.0 – 462.0	N/A	This piezometer provides unreliable readings and Alarms Levels were not developed.

Multiple pneumatic piezometers were reporting piezometer levels below the bottom of piezometer tip elevations, and zero readings. Based on our assessment, IRWD operation’s team, and interactions with DSOD, the pneumatic piezometers are believed to be damaged and do not provide accurate data and are past their service life. It is also recommended that IRWD follows the appropriate response for alarm level changes per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring). GEI will continue to assist the District and closely monitor the water levels in each piezometer.

2.4 Subdrain Flow Rates

Subdrain flows are measured by the District at nine 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 U/S 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 and ninth seepage monitoring locations are also measured near the outlet structure referred to as the right groin drain (6/16/08 drain) and the new flow drain. The new flow drain was added in September 2025 following the discovery of a wet spot near the 6/16/08 drain. The new flow drain is a perforated drainpipe that was installed to collect water and discharge it to the drainage at the toe of the dam. The locations of the seepage monitoring weirs are shown in 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 11. Figures 31 and 32 are graphs representing the seepage flow rates for the 2-year period from January 2024 through December 2025. Figures 33 and 34 are graphs representing the seepage flow rates for the historical ten years’ period from 2015 to 2025.

Table 5 provides a summary of the flow rates recorded during the current review period, as well as the historical range for each drain.

Table 5. Subdrain Flow Rates – Maximum and Minimum Flow Rate Ranges

Subdrain	2015-2025 10-Year Range (gpm)	2025 Range (gpm)	2025 Maximum Alarm Level	Comment
East Drain	8.78 – 63.9	12.1 – 40.5	Level III	Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
West Drain	13.5 – 64.5	13.5 – 37.6	Level III	New historical minimum. Continue monitoring. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).
Filter Drain	3.02 – 10.72	6.19 – 8.44	N/A	Alarm levels were not established for this subdrain.
U/S Collector Drain #1	0.00 – 0.02	0.00 – 0.00	N/A	Alarm levels were not established for this subdrain.

Subdrain	2015-2025 10-Year Range (gpm)	2025 Range (gpm)	2025 Maximum Alarm Level	Comment
U/S Collector Drain #2	0.00 – 1.10	0.00 – 0.25	N/A	Alarm levels were not established for this subdrain.
Downstream Toe Drain	0.66 – 35.2	1.80 – 2.88	N/A	Alarm levels were not established for this subdrain.
Floor Drain	1.17 – 66.0	3.57 – 6.89	N/A	Alarm levels were not established for this subdrain.
Right Groin Drain	0.08 – 2.40	0.19 – 1.03	N/A	Alarm levels were not established for this subdrain.
New Drain Flow	1.40 – 1.70	1.40 – 1.70	N/A	Alarm levels were not established for this seepage point.

During the 2024 period the Toe and Floor drains had elevated flows because the seepage return pumps were offline due to the abandonment of the pipeline and construction of a new seepage return line. IRWD abandoned the existing seepage return pipeline by filling it in with Cell-Crete in May 2024. The Existing Seepage Return Pipeline Abandonment Plan is provided in the appendix of this report. Construction for a new seepage return pipeline along the dam access road was completed in January 2025.

U/S Collector Drain #1 has minor flows and was dry during the review period. U/S Collector Drain #2 continued to flow and responded to changes in the reservoir level and rainfall. Prior to 2023 the U/S Collector Drains #1 and #2 did not record seepage since 2017, the change in seepage could be in response to the higher reservoir level and increase rainfall during 2023. The Filter and Right Groin Drains showed slight responses to the reservoir water level changes. Seepage should continue to be monitored and compared to fluctuations in reservoir water level and rainfall. It is also recommended that IRWD follows the appropriate response for alarm level changes per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring).

As part of the District’s maintenance program, a condition assessment of the 6-inch toe drain, 6-inch foot drain, 6-inch upstream No. 1 drain, 6-inch upstream No. 2 drain, 36-inch spillway drain, and the 3-inch V-ditch drain was performed by V&A Consulting Engineers, Inc. (V&A) on May 29, and June 2024.

V&A provided the following recommendations:

Foot drain, Toe Drain, V-Ditch Drain, and Spillway Drain:

- Perform CCTV and Vactor clean pipes every two years to ensure the integrity of the subdrain system. (next year recommended is 2026)

U/S Collector Drains No. 1 and No. 2:

- Repair internal cement mortar lining at failed liner locations in both drains. Repair can be performed by remote spin casting system or other remote technologies.

- a) In U/S Collector Drain No. 1 the internal mortar lining has failed at Sta. 0+00.
- b) In U/S Collector Drain No. 2, the liner is damaged in several locations and there is evidence of pipe corrosion between Sta. 1+29 and Sta. 2+49.
- Perform CCTV and Vactor clean pipes every two years to ensure the integrity of the subdrain system. (next year recommended is 2026)

A copy of the subdrain condition assessment report is provided in Appendix E of this report.

The District reported to GEI that on August 6, 2025, their operations staff noticed a wet spot along the riprap swale near the toe of the dam and started excavating the area as they thought it may have been a pipe leak. The District excavated three exploratory holes upstream of the wet spot to determine the source of the seepage. The source of the seepage remains unclear, but is likely from improper construction of the filter and transition zone ending at the lowest bench. After discussions with GEI and DSOD, in September and October the District moved forward with installing a 10-ft long 6-inch diameter perforated pipe with gravel backfill on the downstream face of the lower bench. The perforated pipe then connects to a 6-inch diameter solid pipe that extends to the existing armored channel. The District has begun monitoring and measuring seepage at this new location and has included it as part of their dam surveillance program. Information on this new seepage pipe is included in Appendix H.

2.4.1 Sediment Collection (East and West Drains)

The East and West Drains are concrete-encased 6-inch mortar-lined steel pipes and are located underneath the 60-inch outlet pipe. Both pipes are concrete encased through the dam foundation and connect to 4-inch Vitrified Clay Pipe (VCP) reservoir slope underdrain lines near the sloping intake structure. During the 2025 review period, the District provided sediment accumulation data for the West Drain for the months of February, May, August, and December. The sediment weight ranged between 28 to 57.88 lbs. Continued monitoring of the sediment accumulation will provide a review of the impact of sediment accumulation at the West drain. The District has reported that samples are typically thrown away or stored in their storage yard. District staff have also stated that the material type is always consistent. Table 12 provides the recorded sedimentation measurements. The measurements are not being taken on a consistent interval and gaps exist.

Ninyo & Moore performed a hydrometer analysis on the sediment material collected in January 2023. The sediment material was classified as a low plasticity sandy silt and is within the gradation limits of the compacted impervious earth lining Zone 1 material (Reservoir liner material) shown in the project as-built plans. The original reservoir liner was built using Zone 1 impervious material. Based on review of the as-built plans and hydrometer analysis, it is unlikely that the sedimentation is coming from the dam embankment since the east and west drainpipes are encased in concrete across the embankment. The sedimentation could be coming from the reservoir liner Zone 1 material where the drains are not concrete encased and are 4-inch diameter

perforated VCP underdrains. The results of the hydrometer analysis are shown in the appendix of this report. 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 of 2017 and 2021. No surveys were conducted in calendar year 2017 nor 2021. A survey was conducted October 24, 2025, and 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 13. Figures 35 and 39 are graphs representing the horizontal and vertical movements for survey monuments SA-1 through SA-4R. 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.

Table 6. Horizontal Movement Survey – Cumulative Horizontal Displacement

Monument ID	Historical Cumulative Horizontal Displacement Range (in)	2025 Cumulative Horizontal Displacement (in)	2025 Alarm Level	Comment
SA-1	-0.64 to 0.00	-0.57	Level I	
SA-2	-0.36 to 0.00	-0.28	Level I	
SA-3	-0.70 to 0.00	-0.70	Level I	New historical max
SA-4R	-0.12 to 0.00	-0.10	N/A	Not included in reservoir alarm level analysis.
SB-1	-0.30 to 0.11	-0.17	Level I	
SB-2	0.00 to 0.24	0.04	Level I	
SB-3	0.00 to 0.36	0.24	Level I	
SB-4	0.00 to 0.41	0.24	Level I	
SB-5	0.00 to 0.42	0.14	Level I	
SB-6	-0.16 to 0.07	-0.16	Level I	New historical max
SB-7	0.00 to 0.24	0.04	Level I	
SC-1	-1.33 to 0.0	-0.96	Level I	
SC-2	-1.00 to 0.0	-1.00	Level I	New historical max
SC-3	-1.08 to 0.00	-1.6	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SC-4	-1.27 to 0.00	-1.27	Level I	New historical max

Monument ID	Historical Cumulative Horizontal Displacement Range (in)	2025 Cumulative Horizontal Displacement (in)	2025 Alarm Level	Comment
SC-5	-1.58 to 0.00	-1.58	Level II	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level II response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SC-6	-1.81 to 0.00	-1.81	Level II	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level II response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SC-7	-2.04 to 0.00	-2.04	Level II	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level II response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SC-8	-1.80 to 0.00	-1.55	Level I	
SD-1	-1.52 to 0.12	-1.52	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SD-2	-0.04 to 0.18	0.08	Level I	
SD-3	0.00 to 0.36	0.14	Level I	
SD-4	0.00 to 1.20	1.06	Level I	
SD-5	0.00 to 0.72	0.64	Level I	
SD-6	-0.30 to 0.00	-0.16	Level I	
SD-7	-0.12 to 0.12	0.01	Level I	

Notes:

1. Negative displacements are in the upstream direction and positive displacements are in the downstream direction.

Table 7. Vertical Movement Survey – Cumulative Vertical Displacement

Monument ID	Historical Elevation Range (ft)	2025 Elevation (ft)	2025 Alarm Level	Comment
SA-1	300.24 – 302.71	302.33	Level I	
SA-2	300.14 – 302.60	302.23	Level I	
SA-3	300.17 – 302.61	302.26	Level I	
SA-4R	303.01 – 303.02	303.02	N/A	Not included in reservoir alarm level analysis.
SB-1	360.12 – 362.55	362.20	Level II	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level II response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SB-2	360.63 – 363.10	362.70	Level II	Perform visual inspection of surrounding area. Continue to monitor changes. Perform

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Monument ID	Historical Elevation Range (ft)	2025 Elevation (ft)	2025 Alarm Level	Comment
				Alarm Level II response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SB-3	360.44 – 362.92	362.51	Level II	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level II response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SB-4	360.50 – 362.96	362.57	Level II	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level II response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SB-5	360.26 – 362.71	362.34	Level I	
SB-6	360.18 – 362.57	362.24	Level I	
SB-7	360.93 – 363.32	363.02	Level I	
SC-1	420.06 – 422.47	422.11	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SC-2	419.75 – 422.16	421.81	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SC-3	419.96 – 422.41	422.02	Level II	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level II response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SC-4	419.52 – 422.04	421.57	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SC-5	419.47 – 422.01	421.53	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SC-6	419.53 – 422.03	421.59	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform

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Monument ID	Historical Elevation Range (ft)	2025 Elevation (ft)	2025 Alarm Level	Comment
				Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SC-7	419.77 – 422.19	421.85	Level II	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level II response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SC-8	420.40 – 422.75	422.48	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SD-1	476.02 – 478.54	478.07	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SD-2	476.64 – 479.22	478.68	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SD-3	477.57 – 480.19	479.60	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SD-4	478.43 – 481.10	480.45	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SD-5	477.55 – 480.18	479.56	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).
SD-6	476.92 – 479.45	478.95	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety

Monument ID	Historical Elevation Range (ft)	2025 Elevation (ft)	2025 Alarm Level	Comment
				Program Guideline No. 6 (Movement Monitoring).
SD-7	476.31 – 478.72	478.34	Level III	Perform visual inspection of surrounding area. Continue to monitor changes. Perform Alarm Level III response per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).

The survey of monuments at the crest (SD-1 to SD-7) showed settlement, and both upstream and downstream horizontal movement. The horizontal movement varied from -1.52 to 1.20 inches. SD-1 showed a horizontal movement of -1.52 inches in 2025 and is potentially an erroneous reading. The maximum settlement along the crest was approximately 0.47 inches. All of survey monuments on the crest are in Alarm Level III for vertical movement. It is recommended that IRWD follows the appropriate response for alarm level changes in Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).

The survey monuments at the first downstream bench (SC-1 to SC-8) showed settlement and upstream horizontal movement. The horizontal movement varied from -2.04 to -0.96 inches. Settlement varied from 0.16 to 0.41 inches.

The survey monuments at the second downstream bench (SB-1 to SB-7) showed settlement, and both upstream and downstream horizontal movement. The horizontal movement varied from -0.17 to 0.24 inches. Settlement varied from -0.12 to -0.10 inches.

The survey monuments at the downstream toe (SA-1 to SA-4R) showed upwards vertical movement and upstream horizontal movement. The horizontal movement varied from -0.10 to -0.70 inches. The upwards vertical movement varied from 0.04 to 0.10 inches.

The data show continuing settlement of the survey monuments at the crest, top bench, and middle bench since May 2019. Since 2019 the crest has settled a maximum of 0.14 feet (1.70 inches) with an increase in settlement rate beginning in 2023. This is consistent along the crest of the dam. Most of the survey monuments on the crest and top bench are in Alarm Level III in the vertical direction. This amount of movement might be attributed to reservoir water level changes and temperature changes. In 2024, GEI recommended conducting another survey when the reservoir levels and temperatures are higher to compare changes in movements to surveys conducted during the winter, as well as to include measurements of the top of the spillway crest elevation as part of this survey. Despite conducting the annual survey under differing conditions, a downward trend is still observed in all SB, SC, and SD survey monuments. IRWD should continue completing annual surveys and it is recommended that IRWD follow the appropriate response for alarm level changes per Table 2 of Dam Safety Program Guideline No. 6 (Movement Monitoring).

3.0 Field Evaluations

3.1 Field Evaluation of June 16, 2025

A field evaluation and inspection were performed by Emerson Revolorio, Santiago Martinez-Granata, and Adam Snyder of GEI, and Christian Wimenta, Anthony Zaragoza, Nick Pizanie, and Steve Habiger of the District on June 16, 2025. The reservoir level was reported at Elevation 457.6 ft (NAVD 88). Construction activities for the new water filter station were ongoing. Weather conditions were sunny, with temperature in the mid-80s. Photos taken by GEI are included in the Appendix of this report.

3.1.1 Dam

The upstream slope asphalt concrete (AC) lining above the reservoir water level was unchanged from the conditions observed during the March 2024 inspection, see Photos 1-2. The condition of the crest appeared to be in similar conditions to what was observed during the March 2024 inspection. 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 Photos 3 and 4. Cracking of the AC pavement near the left abutment that was previously identified had been repaired, see Photo 4. The curbs on the upstream side of the crest continued to have some areas with minor cracks and spalling at joints due to expansion/contraction, see Photo 5. These areas will need to be repaired but are not considered a problem for 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 6-8. However, a new wet spot has been identified at the toe of the dam. The District stated that they have been monitoring the wet spot since May 2025. Minor rill erosion was observed at the left groin and downstream face, see Photos 9-11. The vegetation along the concrete v-ditch along the left groin had been recently trimmed, see Photos 9, 12 and 13. Minor rill erosion was observed on the downstream face of the dam near the toe, see Photo 14. Significant corrosion was observed on the safety handrails and ladders at the energy dissipator structure, see Photo 15.

The pneumatic piezometers terminal boxes were in similar conditions that were observed during the March 2024 inspection, see Photos 16-18. According to the District, the gauge readings have not been measured utilizing the proper pneumatic piezometer reading procedures. The District also mentioned that the pneumatic piezometers have not been maintained. According to DSOD, the pneumatic piezometers have passed their operational lifetime.

GEI inspected Piezometers CP-2A/B and CP-3A/B and found no signs of distress in the area surrounding the piezometers. GEI did note that there was increased vegetation above the piezometers along the slope leading up to the adjacent neighborhood. Irrigation piping was identified throughout the entire area upslope of these piezometers.

Currently, IRWD is utilizing carbon monoxide as an effective treatment for ground squirrel control. IRWD still has black feeder control stations for rats and mice near the dam caretaker houses and other IRWD facilities. No active rodent activity was seen on the dam.

Overall, the condition of the dam remains largely unchanged from the conditions observed during the March 2024 inspection. Overall, the dam was well maintained with no signs of instability or distress and no visual signs of movement were observed.

3.1.2 Reservoir Liner

GEI performed a visual inspection of the reservoir liner on June 16, 2025. The upstream end of the liner continues to move but multiple cracks and openings were recently filled with cold patch asphalt, see Photos 20-22. Based on our observations, not all the cracks were filled with cold patch and multiple cracks were not sealed properly. In addition, some of the existing cracks were starting to propagate, see Photos 21-22. It is recommended that the cracks be completely sealed to prevent any rainfall water infiltration that might exacerbate the cracks. The District should also continue assessing and implementing repairs, as needed, to the cracking and liner movement. The District should also consider adding 2 or 3 additional survey monuments along the reservoir perimeter road above the areas of the reservoir slope having the most prominent cracking to more closely monitor any slope movement. Since the reservoir liner cracking and movement is at the left south end of the reservoir, it does not impact the safety of the dam but could impact the integrity of reservoir slope and reservoir operations. Continued maintenance/repair (sealing of cracks) and monitoring of these cracks is recommended.

3.1.3 Spillway

During the inspection the reservoir level was below the spillway drop inlet. The two drop box inlet spillways on each end of the upstream slope of the dam were inspected and were clear of debris and fully functional, see Photos 23-24. The concrete surfaces were examined and found in good condition. The entrances to the two 48-inch reinforced concrete pipe (RCP) conduits were clear. The left spillway box inlet continued to have a water stain near the bottom of the southeast corner, indicating evidence of minor seepage in the past, see Photos 24. The exit at the dissipator structure was clear, see Photo 15. During the inspection, GEI observed overgrown vegetation downstream of the dissipator structure at the exit channel. The dissipator concrete structure had no visual signs of structural deficiencies but had water flow falling in from above coming from the right groin seepage drain. Overall, the condition of the spillway and dissipator

structure remains largely unchanged from the conditions observed during the March 2024 inspection. GEI did not observe signs of movement at either of the spillway intakes.

3.1.4 Outlet Works

The upstream outlet controls a 24-inch, 60-inch, and three 48-inch butterfly valves located on the slope of the reservoir at various levels with pneumatic controls. No valves were cycled during this inspection. Valve #2 (48-inch) and Valve #5 (60-inch) leak hydraulic fluid when operated and are fixed in the open position. The District stated that they have ordered new actuators and were planning to replace the old equipment in December of 2025.

Overall, the condition of the outlet works remains largely unchanged from the conditions observed during the previous year inspections.

3.1.5 Seepage

There were no additional signs of abnormal seepage observed on the downstream slope, along the groins, or along the toe of the dam except for the wet spot shown in Photos 19 and 28, described in Section 2.4, and in Appendix H. The new flow drain had not been installed at the time of the inspection, and the flow was not recorded. The following seepage conditions were observed and noted during the inspection, see Photos 25-27:

East = 33.32 gpm	U/S Collector Drain #1 = Water in Vault	Floor Drain = Not measured
West = 32.78 gpm	U/S Collector Drain #2 = Trickling	Right Groin Drain = 0.375 gpm
Filter = 8.29 gpm	D/S Toe = 2.02	

The above seepage amounts are considered within historic levels. The U/S Collector Drains continue to flow, with the U/S Collector Drain #1 only providing trickles, see Photo 25. A leak was observed within the U/S Collector Drain weir box which prevented water from filling up to the v-notch weirs, see Photo 25. The weir box was also covered with debris which can impede the v-notch readings.

The seepage water observed at the Floor, Toe, Right Groin (6/16/08 drain), and U/S Collector Drains was clear.

A new wet spot was observed on the downstream face of the dam near the lower bench, see Photos 19 and 24. The wet spot is directly downstream of the V-notch weir box for the U/S and D/S Collector Drains and near the Right Groin Drain. District personnel marked out the boundary of the wet spot with stakes. The District reported that they've been monitoring the wet spot since May 2025. As previously stated in Section 2.4, the District installed a seepage

collection pipe that they will monitor and measure seepage at as part of their dam surveillance program.

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, or instability. The exception is the upstream reservoir liner that continues to move and has significant cracks in the A.C. liner.
- 2) GEI did not entirely inspect the reservoir liner during the 2025 review period. The District stated that the liner continues to move at its upstream end. Since the reservoir liner cracking and movement is at the left south end of the reservoir it does not impact the safety of the dam but could impact the integrity of reservoir slope and reservoir operations.
- 3) Piezometer levels in CP-2A, CP-2B, CP-3A and CP-3B continue to follow a gradual upward trend. This trend may be due to the nearby construction of the seepage return system, and potentially from increased irrigation from the housing development directly uphill from the instruments.
- 4) Spillway approaches, control structures and entrances and exit were clear with no structural deficiencies seen during the inspection.
- 5) A water stain was observed near the bottom of the southeast corner of the right spillway box inlet, indicating evidence of minor seepage in the past. During the inspection the reservoir level was below the spillway inlet box.
- 6) The vibrating wire piezometers at the site are all functioning with the exception of VB-1 that continues to provide erroneous readings.
- 7) It was reported there is no lightning protection or grounding rod for the datalogger box.
- 8) Multiple pneumatic piezometers were reporting piezometer levels below the bottom of piezometer tip elevations, and zero readings.
- 9) The pneumatic piezometer gauge boxes are heavily corroded.
- 10) The pneumatic piezometers' readings could not be checked during the inspection due to poor maintenance of the piezometer read-out equipment. The control valves and relief valves could not be turned because they have not been maintained. The gauge readings have not been fluctuating. Based on our assessment, IRWD operation's team, and

interactions with DSOD, the pneumatic piezometers are believed to be damaged and provide unreliable data and are past their service life. IRWD currently plans to replace the pneumatic piezometers in 2028.

- 11) The District has planned to replace the actuators of all five upstream butterfly valves; current plans are for replacement in late 2026.
- 12) There has been continued minor settlement of the survey monuments at the crest, top bench, and middle bench since 2019. Most of the survey monuments on the crest and top bench are in Alarm Level III in the vertical direction.
- 13) The AC pavement on the dam crest was previously repaired and appears to not have worsened.
- 14) The concrete curbs on the upstream crest were previously repaired and appear to not have worsened.
- 15) IRWD is continuing with rodent control measures. IRWD is currently utilizing carbon monoxide as an effective treatment for ground squirrel control. IRWD still has black feeder control stations for rats and mice near the dam caretaker houses and other IRWD facilities.
- 16) The West Drain continues to flow with sediment and is accumulated at the blow-off structure near the downstream toe of the dam. Sediment is cleaned out and measured throughout the year when staff can. The District has reported that the sediment material type is always consistent. More accurate and consistent reading of sediment collected is recommended.
- 17) Based on review of the as-built plans and hydrometer analysis, it is unlikely that the sedimentation from the West Drain is coming from the dam embankment since the West Drain pipe is encased in concrete along the embankment. It is believed to be coming from drain backfill around the reservoir.
- 18) The handrails and ladders at the energy dissipation structure are heavily corroded and need to be replaced to facilitate inspection of the structure. These repairs are needed for safety purposes and facilitate the inspection of the energy dissipation structure.
- 19) Minor rill erosion was observed at the left groin and downstream toe area.
- 20) The overgrown vegetation encroaching the v-ditch along the left groin has mostly been trimmed.
- 21) The overgrown vegetation downstream and adjacent to the energy dissipator structure appeared unchanged since the July 2023 inspection.

- 22) The downstream elbow of the U/S Collector Drain #2 had recently been removed.
- 23) A leak was observed within the U/S collector drains weir box which prevented water from filling up to the v-notch weirs.
- 24) The internal lining at the outflow of U/S Collector Drain #1 has failed and the piping is corroded.
- 25) There are several locations within U/S Collector Drain #2 where the internal cement mortar lining is damaged and there is visible corrosion.
- 26) GEI recorded seepage readings at all seepage locations. The seepage amounts were within past historical levels and clear of sediment.
- 27) The seepage return pipeline project has been completed and seepage readings at the D/S Toe and Floor Drain have returned back to historical patterns.
- 28) The District reported to GEI that on August 6, 2025, their operations staff noticed a wet spot along the riprap swale near the toe of the dam and started excavating the area as they thought it may have been a pipe leak. The District excavated three exploratory holes upstream of the wet spot to determine the source of the seepage. After discussions with GEI and DSOD, the District moved forward with installing a 10-ft long 6-inch diameter perforated pipe with gravel backfill on the downstream face of the lower bench. The perforated pipe then connects to a 6-inch diameter solid pipe that extends to the existing armored channel. The District will monitor and measure seepage at this new location and include it as part of their dam surveillance program.

4.2 Recommendations

- 1) The District should replace the pneumatic piezometers with new equipment as they have reached the end of their service life; the District currently plans to replace all piezometers in the dam in 2028.
- 2) Recommend re-evaluating the threshold action levels for piezometers CP-3A, CP-3B, and CP-2A and continue to monitor monthly.
- 3) Continue to perform appropriate instrument alarm level response per Table 2 of Dam Safety Program Guideline No. 4 (Seepage & Piezometer Monitoring) and Table 2 Guideline No. 6 (Movement Monitoring).
- 4) We recommend verifying the top of the spillway crest elevation during the annual survey to confirm the amount of freeboard.
- 5) Survey accuracy should be added as a note on the survey data results.

- 6) The District should take a reading of VB-1 at the junction box with a separate read-out instrument instead of at the main control box to determine if the sensor is working correctly or if the datalogger is not accurately reading the instrument. The District plans to replace all piezometers at the site in 2028.
- 7) Install a ground rod for the main datalogger for lightning protection.
- 8) Repair cement mortar lining at failed internal liner locations in U/S Collector Drain No. 1 and No. 2. Repair can be performed by remote spin casting system or other remote technologies.
- 9) Vactor clean and perform CCTV inspection of all subdrains every two years.
- 10) The District needs to continue monitoring the reservoir liner cracking and movement at the south left end of the reservoir. The District should consider installing 2 or 3 additional survey monuments above the reservoir slope area with the most prominent cracks to monitor the slope movement more accurately.
- 11) It is recommended that the AC liner cracks be sealed with flexible joint sealant to prevent any rainfall water infiltration that might exacerbate the cracks and eventually fail the reservoir slope.
- 12) The District should make a comment in their piezometer data report indicating when a well and/or piezometer is dry.
- 13) The District should continue to monitor the minor seepage within the south-east corner of the right spillway concrete box inlet.
- 14) The District should continue to measure and record sedimentation being removed from the west drain monthly. GEI recommends performing a ROV inspection of the west drain to determine the source of the sediment.
- 15) The reservoir liner should be inspected during low reservoir water levels for signs of settlement and depression along the reservoir underdrains.
- 16) Continue to make visual observations of the dam and monitor any movement.
- 17) Continue exercising the outlet control valves and emergency blowoffs annually and keep a log showing dates of exercising that can be reviewed during inspections.
- 18) The four upstream outlet valves and two blowoff valves need to be repaired and actuators should be replaced.
- 19) The District should continue collaborating with pest management companies to determine

most effective treatment options in controlling rodent activity. In addition, the District should continue collapsing, backfilling, and compacting rodent holes with surrounding material as an ongoing maintenance item throughout the dam.

- 20) Backfill and compact erosion rills as they appear. Cover repaired surface with an erosion control blanket.
- 21) Remove vegetation encroaching v-ditch along the left groin. Per DSOD recommendation, remove all vegetation within 10 feet of the v-ditch.
- 22) Remove vegetation within 10 feet of the spillway stilling basin.
- 23) Repair corroded metal equipment like ladders and safety handrails near outlet facilities.
- 24) Repair broken and corroded collector drains and the leakage within the collector drain weir box.
- 25) Continue monitoring the new seepage location and incorporate into existing dam surveillance monitoring program.
- 26) During normal operations at the reservoir, District personnel should 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 Dam Safety Engineer.
- 27) GEI recommends following IRWD's 2026 Dam Safety Program Guideline No. 3 (Seismic Monitoring) post-earthquake.

San Joaquin Dam Action Item Summary

Item	Location	Maintenance	Measures
Pneumatic Piezometers	Dam upstream face	Unreliable readings	Recommend evaluating the overall instrumentation and monitoring program to determine if the pneumatic piezometers need to be replaced.
Open-Well Piezometers CP-3A, CP-3B, and CP-2A	Northeast corner of reservoir	Increasing upwards trend	Recommend re-evaluating the threshold action levels for piezometers CP-3A, and CP-3B, and CP-2A and continue to monitor monthly.
Vibrating Wire Piezometer (VWP)	Junction Box containing VB-1	Erroneous readings	The District should take a reading of VB-1 at the junction box with a read-out device instead of at the main control box to determine if the sensor is working correctly.
VWP Datalogger	Dam Crest	Does not have lightning protection	Install grounding rod.
Movement Surveys	Throughout dam	N/A	Continue performing annual surveys. Continue to make visual observations of the dam and monitor the movement.
Reservoir Liner Cracking	Left south end of the reservoir	Reservoir liner cracking and movement	The District should continue monitoring the liner cracking and movement. Liner cracks should be sealed with flexible joint sealant. The addition of 2 or 3 additional survey monuments should be considered to assist in measuring slope movement more accurately.
Piezometer Data	Throughout dam and reservoir	N/A	Make a comment in the piezometer data report indicating when a well or piezometer is dry.
Spillway Concrete Box Inlet	Right Concrete Box Inlet	N/A	The District should continue to monitor the minor seepage within the south-east corner of the right spillway concrete box inlet.
Outlet valves	Control house	Outlet valves are not working and leaking at hydraulic control lines	Repair valves and replace actuators.
Subdrains	Foot drain, toe drain, V-Ditch drain, Upstream Drain No. 1 & 2, and Spillway drain	Inspections and cleaning	Repair internal cement mortar lining at failed liner locations in U/S Collector Drain No. 1 and No. 2. Repair can be performed by remote spin casting system or other remote technologies. Vactor clean and perform CCTV inspection of all subdrains every two years.
Rodent control feeder boxes	Throughout dam	Lack of poison in rodent control feeder boxes	The District should continue collaborating with pest management companies to determine most effective treatment options in controlling rodent activity. In addition, the District should continue collapsing, backfilling, and compacting rodent holes with surrounding material as an ongoing maintenance item throughout the dam.
West Drain	V-notch weirs at blowoff structure and reservoir liner	Minor sedimentation has been measured in the past	Monitor and record amount of sedimentation monthly and evaluate collected information. The reservoir liner should be inspected during low reservoir water level for signs of settlement and depression along the reservoir underdrains. GEI recommends performing a ROV inspection of the downstream and upstream end of the west drain to determine the source of the sediment.

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 San Joaquin Dam, DSOD Dam No. 1029-000

Item	Location	Maintenance	Measures
Erosion	Left groin and downstream toe area	Erosion rill	Backfill and compact erosion rills as they appear.
Overgrown vegetation	V-ditch along the left groin, downstream and adjacent to the energy dissipator structure.	Trim vegetation	Remove vegetation within 10 feet of v-ditch and spillway stilling basin.
Handrails and ladders.	Above and around the energy dissipation structure a	Significant corrosion was observed along safety handrails and ladder near the dissipation structure and at vault boxes for the pneumatic piezometers	Repair corroded handrails and ladders.
U/S Collector drains	Lower bench at the downstream toe of the dam	The drains are heavily corroded and dry, and the weir box is leaking	Repair corroded drains and weir box leakage areas.
New Seepage Location	Downstream Toe	N/A	Continue monitoring the new seepage location and incorporate into existing dam surveillance monitoring program

5.0 Limitations

This report presents observations made, conclusions drawn, and opinions formed from (1) a visual inspection of the San Joaquin 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 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

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Tables

TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
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	
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	

Notes:

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

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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

TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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2. Piezometer data based on NAVD 88 datum.

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
1/27/2022	467.80	0.07	83.20	404.60		67.10	421.90	
2/23/2022	464.80	0.29	82.90	404.90		67.20	421.80	
3/23/2022	464.40	1.08	82.70	405.10		67.10	421.90	
4/26/2022	467.10	0.03	82.40	405.40		67.00	422.00	
5/26/2022	464.80	0.08	82.30	405.50		66.90	422.10	
6/28/2022	457.30	0.00	82.40	405.40		67.00	422.00	
7/26/2022	440.70	0.00	82.50	405.30		67.10	421.90	
8/25/2022	429.50	0.05	82.50	405.30		67.10	421.90	
9/28/2022	410.80	0.35	82.70	405.10		67.20	421.80	
10/25/2022	407.30	0.35	83.30	404.50		67.30	421.70	
11/23/2022	427.00	0.80	83.10	404.70		67.40	421.60	
12/20/2022	441.90	2.14	83.90	403.90		67.50	421.50	
1/26/2023	470.30	5.64	83.70	404.10		67.30	421.70	
2/23/2023	471.00	3.33	59.10	428.70	Omitted	67.30	421.70	
3/28/2023	471.20	5.72	83.30	404.50		67.20	421.80	
4/25/2023	469.40	0.16	83.00	404.80		67.00	422.00	
5/23/2023	471.00	1.35	82.80	405.00		66.90	422.10	
6/28/2023	468.80	0.10	82.59	405.21		66.71	422.29	
7/27/2023	455.90	0.00	82.60	405.20		66.60	422.40	
8/29/2023	453.80	2.28	82.50	405.30		66.80	422.20	
9/26/2023	445.00	0.00	82.70	405.10		66.80	422.20	
10/26/2023	437.40	0.21	82.60	405.20		66.80	422.20	
11/29/2023	425.00	0.78	82.50	405.30		66.10	422.90	
12/21/2023	421.00	1.60	82.50	405.30		67.00	422.00	

Notes:

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TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			MW-1			MW-2		
Top of Well Elevation -->			487.80			489.00		
Bottom of Well Elevation -->			363.20			409.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	82.60	405.20		67.30	421.70	
2/27/2024	468.70	8.89	82.60	405.20		67.00	422.00	
3/26/2024	467.60	3.06	82.15	405.65		66.55	422.45	
4/24/2024	469.60	1.49	82.00	405.80		66.10	422.90	
5/1/2024	469.60	0.00	81.70	406.10		66.00	423.00	
5/23/2024	468.20	0.08	81.70	406.10		65.70	423.30	
6/20/2024	464.20	0.00	80.70	407.10		65.00	424.00	
7/25/2024	447.90	0.00	81.60	406.20		65.50	423.50	
8/27/2024	430.40	0.00	81.60	406.20		65.80	423.20	
9/24/2024	418.60	0.00	81.70	406.10		66.40	422.60	
10/29/2024	407.70	0.00	82.00	405.80		66.80	422.20	
11/21/2024	407.00	0.11	82.30	405.50		66.60	422.40	
12/17/2024	415.80	0.10	82.60	405.20		67.20	421.80	
1/28/2025	427.30	1.00	82.80	405.00		67.20	421.80	
2/25/2025	465.40	2.02	82.70	405.10		67.20	421.80	
3/20/2025	467.90	2.20	82.90	404.90		67.00	422.00	
4/14/2025	464.20	#N/A	82.60	405.20		67.00	422.00	
4/24/2025	463.50	0.44	82.50	405.30		67.10	421.90	
5/22/2025	463.55	0.07	82.30	405.50		66.90	422.10	
6/19/2025	456.20	0.11	82.00	405.80		66.80	422.20	
7/29/2025	443.60	0.00	82.26	405.54		66.92	422.08	
8/21/2025	437.20	0.00	82.20	405.60		67.00	422.00	
9/23/2025	420.60	0.08	82.40	405.40		67.10	421.90	
10/22/2025	425.30	0.79	83.00	404.80		67.20	421.80	
11/20/2025	426.60	4.59	83.20	404.60		67.30	421.70	
12/16/2025	432.80	2.20	83.50	404.30		67.40	421.60	

Notes:

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TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
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	Dry
2/27/2007	426.80		87.50	421.50		45.50	444.40	Dry
3/28/2007	438.80		86.90	422.10				Dry
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	Dry
6/27/2007	457.20		86.90	422.10		45.70	444.20	Dry
7/26/2007	445.50		86.60	422.40		45.70	444.20	Dry
8/28/2007	434.60		86.90	422.10		45.20	444.70	Dry
9/25/2007	416.80		87.00	422.00		45.30	444.60	Dry
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	Dry
1/3/2008	443.20		86.90	422.10		45.20	444.50	Dry
1/29/2008	452.20		86.90	422.10		45.25	444.70	Dry
2/27/2008	460.80		86.60	422.40		45.40	444.40	Dry
3/26/2008	468.00		86.90	422.10		45.20	444.60	Dry
4/29/2008	468.60		88.00	421.00		45.50	444.70	Dry
5/29/2008	464.70		87.00	422.00		45.30	444.50	Dry
6/26/2008	455.70		86.30	422.70		45.20	444.70	Dry
7/29/2008	447.30	0.00	87.00	422.00		45.40	444.70	Dry
8/28/2008	438.80	0.00	89.30	419.70		45.20	444.70	Dry
9/26/2008	430.70	0.00	89.60	419.40		45.20	444.70	Dry
10/29/2008	412.50	0.00	87.50	421.50		45.20	444.70	Dry
11/25/2008	404.70	2.60	86.90	422.10		45.20	444.70	Dry
12/30/2008	440.90	3.42	86.90	422.10		45.20	444.70	Dry
1/28/2009	463.70	0.17	86.70	422.30		45.20	444.70	Dry
2/25/2009	470.10	3.35	85.40	423.60		45.10	444.80	Dry
3/26/2009	469.40	0.19	86.50	422.50		45.20	444.70	Dry
4/29/2009	466.90	0.07	86.80	422.20		45.40	444.50	Dry
5/18/2009	466.70	0.00	87.20	421.80		45.20	444.70	Dry
5/29/2009	465.00	0.00	85.30	423.70		45.30	444.60	Dry
6/30/2009	460.20	0.00	87.00	422.00		45.40	444.50	Dry

Notes:

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

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	87.00	422.00		45.20	444.70	Dry
8/25/2009	440.10	0.00	86.40	422.60		45.20	444.70	Dry
9/30/2009	432.20	0.00	87.00	422.00		45.20	444.70	Dry
10/29/2009	431.40	0.53	87.04	421.96		45.25	444.70	Dry
12/1/2009	427.40	0.00	88.60	420.40		45.70	444.20	Dry
12/29/2009	448.10	2.06	87.00	422.00		45.25	444.70	Dry
1/27/2010	465.60	4.62	88.60	420.40		45.00	444.90	Dry
2/25/2010	470.20	2.51	87.00	422.00		45.20	444.70	Dry
3/29/2010	465.70	0.99	87.20	421.80		45.20	444.70	Dry
4/4/2010	465.00		87.10	421.90		45.30	444.60	Dry
4/27/2010	468.40	1.23	88.60	420.40		45.30	444.60	Dry
5/27/2010	463.30	0.05	86.90	422.10		45.30	444.60	Dry
6/30/2010	454.70	0.00	87.00	422.00		45.00	444.90	Dry
7/28/2010	445.60	0.00	87.10	421.90		45.20	444.70	Dry
8/31/2010	437.10	0.00	87.10	421.90		45.30	444.60	Dry
9/29/2010	422.70	0.00	87.00	422.00		45.30	444.60	Dry
10/27/2010	426.40	2.38	86.90	422.10		45.30	444.60	Dry
11/29/2010	439.80	0.97	88.50	420.50		45.20	444.70	Dry
12/30/2010	456.60	8.62	87.40	421.60		45.40	444.50	Dry
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	Dry
3/29/2011	470.30	2.93	87.30	421.70		45.20	444.70	Dry
4/27/2011	464.80	0.19	87.00	422.00		45.25	444.70	Dry
5/26/2011	457.30	0.48	88.20	420.80		45.30	444.60	Dry
6/28/2011	443.50	0.05	88.00	421.00		45.30	444.60	Dry
7/29/2011	425.10	0.00	88.30	420.70		45.25	444.70	Dry
8/24/2011	418.00	0.00	87.00	422.00		45.20	444.70	Dry
9/27/2011	400.90	0.12	87.30	421.70		45.25	444.70	Dry
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	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	Dry
8/21/2013	418.00	0.00	86.90	422.10		45.20	444.70	Dry
9/24/2013	404.00	0.00	86.90	422.10		45.00	444.90	Dry
10/29/2013	400.60	0.00	87.30	421.70		45.30	444.60	Dry
11/26/2013	407.90	0.44	87.30	421.70		45.20	444.70	Dry
12/19/2013	425.80	0.54	86.70	422.30		45.20	444.70	Dry
1/28/2014	439.70	0.00	86.70	422.30		45.20	444.70	Dry
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	Dry
3/28/2014	465.70	1.15	87.00	422.00		45.20	444.70	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	89.10	419.90		45.10	444.80	Dry
5/28/2014	450.60	0.00	86.80	422.20		45.20	444.70	Dry
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	Dry
8/26/2014	419.50	0.02	86.90	422.10		45.20	444.70	Dry
9/23/2014	405.30	0.00	86.80	422.20		44.60	445.30	Dry
10/29/2014	400.90	0.00	88.10	420.90		45.30	444.60	Dry
11/25/2014	410.90	0.25	86.80	422.20		45.20	444.70	Dry
12/30/2014	430.60	2.94	86.80	422.20		45.20	444.70	Dry
1/27/2015	466.70	0.83	88.30	420.70		45.30	444.60	Dry
2/25/2015	468.90	0.69	86.80	422.20		45.20	444.70	Dry
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	Dry
5/28/2015	466.40	1.08	88.30	420.70		45.50	444.40	Dry
6/30/2015	454.50	0.00	87.00	422.00		45.20	444.70	Dry
7/28/2015	445.60	0.00	86.90	422.10		45.20	444.70	Dry
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	Dry
10/27/2015	415.40	0.49	87.30	421.70		45.30	444.60	Dry
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	Dry
1/27/2016	463.60	2.86	87.00	422.00		45.30	444.60	Dry
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	Dry
4/28/2016	461.30	0.30	88.30	420.70		44.40	445.50	Dry
5/25/2016	451.30	0.18	87.00	422.00		45.30	444.60	Dry
6/28/2016	414.10	0.00	87.10	421.90		45.20	444.70	Dry
7/27/2016	434.20	0.00	87.20	421.80		45.40	444.50	Dry
8/23/2016	418.60	0.00	86.80	422.20		45.20	444.70	Dry
9/27/2016	406.40	0.00	87.20	421.80		45.40	444.50	Dry
10/26/2016	404.00	0.48	86.30	422.70		45.30	444.60	Dry

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	88.30	420.70		45.40	444.50	Dry
12/20/2016	441.10	3.48	88.30	420.70		45.30	444.60	Dry
1/26/2017	471.60	5.67	84.40	424.60		45.20	444.70	Dry
2/24/2017	472.05	3.95	88.30	420.70		45.30	444.60	Dry
2/25/2017	472.00		88.30	420.70		45.20	444.70	Dry
2/26/2017	472.00		88.30	420.70		45.20	444.70	Dry
2/27/2017	472.00		88.30	420.70		45.20	444.70	Dry
2/28/2017	471.90		88.00	421.00		45.30	444.60	Dry
3/1/2017	471.90		87.00	422.00		45.20	444.70	Dry
3/2/2017	471.90		86.90	422.10		45.30	444.60	Dry
3/29/2017	467.90	0.10	87.20	421.80		45.10	444.80	Dry
4/27/2017	457.60	0.04	86.90	422.10		45.10	444.80	Dry
5/23/2017	453.50	0.43	88.30	420.70		45.30	444.60	Dry
6/21/2017	447.40	0.00	87.10	421.90		45.20	444.70	Dry
7/26/2017	435.10	0.00	87.70	421.30		45.30	444.60	Dry
8/25/2017	420.10	0.00	86.90	422.10		45.20	444.70	Dry
9/27/2017	407.10	0.00	86.70	422.30		45.30	444.60	Dry
10/26/2017	395.00	0.00	86.80	422.20		45.40	444.50	Dry
11/28/2017	409.00	0.09	86.90	422.10		45.30	444.60	Dry
12/20/2017	416.80	0.00	87.20	421.80		45.00	444.90	Dry
1/24/2018	434.50	1.31	88.50	420.50		45.70	444.20	Dry
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	Dry
4/26/2018	449.10	0.05	88.30	420.70		45.30	444.60	Dry
5/31/2018	453.10	0.20	87.20	421.80		45.20	444.70	Dry
6/28/2018	448.20	0.00	86.90	422.10		45.10	444.80	Dry
7/25/2018	440.40	0.00	70.60	438.40	Omitted	45.40	444.50	Dry
8/22/2018	427.10	0.00	87.00	422.00		45.30	444.60	Dry
9/27/2018	439.60	0.00	87.00	422.00		45.30	444.60	Dry
10/18/2018	405.30	0.90	87.00	422.00		45.30	444.60	Dry
11/28/2018	408.60	1.19	86.90	422.10		45.50	444.40	Dry

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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
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	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
1/27/2022	467.80	0.07	86.90	422.10	Dry	45.10	444.80	
2/23/2022	464.80	0.29	88.30	420.70	Dry	45.30	444.60	
3/23/2022	464.40	1.08	86.90	422.10	Dry	45.10	444.80	
4/26/2022	467.10	0.03	87.30	421.70	Dry	45.30	444.60	
5/26/2022	464.80	0.08	87.80	421.20	Dry	45.70	444.20	Dry
6/28/2022	457.30	0.00	86.70	422.30	Dry	45.20	444.70	
7/26/2022	440.70	0.00	88.70	420.30	Dry	45.30	444.60	
8/25/2022	429.50	0.05	88.70	420.30	Dry	45.30	444.60	
9/28/2022	410.80	0.35	88.80	420.20	Dry	46.20	443.70	Dry
10/25/2022	407.30	0.35	86.90	422.10	Dry	45.20	444.70	
11/23/2022	427.00	0.80	87.30	421.70	Dry	45.20	444.70	
12/20/2022	441.90	2.14	88.40	420.60	Dry	45.40	444.50	Dry
1/26/2023	470.30	5.64	87.20	421.80	Dry	45.30	444.60	
2/23/2023	471.00	3.33	87.30	421.70	Dry	45.10	444.80	
3/28/2023	471.20	5.72	80.00	429.00	Omitted	45.60	444.30	Dry
4/25/2023	469.40	0.16	86.90	422.10	Dry	45.10	444.80	
5/23/2023	471.00	1.35	87.10	421.90	Dry	45.10	444.80	
6/28/2023	468.80	0.10	86.95	422.05	Dry	45.15	444.75	
7/27/2023	455.90	0.00	88.50	420.50	Dry	45.30	444.60	
8/29/2023	453.80	2.28	88.70	420.30	Dry	45.00	444.90	
9/26/2023	445.00	0.00	89.20	419.80	Dry	46.10	443.80	
10/26/2023	437.40	0.21	88.40	420.60	Dry	45.80	444.10	Dry
11/29/2023	425.00	0.78	87.20	421.80	Dry	45.00	444.90	
12/21/2023	421.00	1.60	87.30	421.70	Dry	45.20	444.70	

Notes:

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

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-3			MW-4		
Top of Well Elevation -->			509.00			489.90		
Bottom of Well Elevation -->			423.00			444.50		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	87.70	421.30		45.80	444.10	
2/27/2024	468.70	8.89	87.10	421.90		45.30	444.60	
3/26/2024	467.60	3.06	87.20	421.80		45.35	444.55	
4/24/2024	469.60	1.49	87.00	422.00		45.36	444.54	
5/1/2024	469.60	0.00	87.05	421.95		45.28	444.62	
5/23/2024	468.20	0.08	87.00	422.00		45.20	444.70	
6/20/2024	464.20	0.00	87.20	421.80		45.20	444.70	
7/25/2024	447.90	0.00	88.30	420.70		46.10	443.80	
8/27/2024	430.40	0.00	83.30	425.70	Omitted	45.30	444.60	
9/24/2024	418.60	0.00	87.00	422.00		45.30	444.60	
10/29/2024	407.70	0.00	88.50	420.50		45.60	444.30	
11/21/2024	407.00	0.11	87.00	422.00		45.30	444.60	
12/17/2024	415.80	0.10	88.70	420.30		45.30	444.60	
1/28/2025	427.30	1.00	88.30	420.70		45.20	444.70	
2/25/2025	465.40	2.02	88.70	420.30		45.20	444.70	
3/20/2025	467.90	2.20	87.00	422.00		45.20	444.70	
4/14/2025	464.20	#N/A	88.60	420.40		45.10	444.80	
4/24/2025	463.50	0.44	88.80	420.20		46.10	443.80	
5/22/2025	463.55	0.07	88.00	421.00		45.30	444.60	
6/19/2025	456.20	0.11	87.20	421.80		45.30	444.60	
7/29/2025	443.60	0.00	86.85	422.15		45.28	444.62	
8/21/2025	437.20	0.00	88.30	420.70		46.00	443.90	
9/23/2025	420.60	0.08	88.60	420.40		46.20	443.70	
10/22/2025	425.30	0.79	86.90	422.10		45.20	444.70	
11/20/2025	426.60	4.59	87.00	422.00		45.20	444.70	
12/16/2025	432.80	2.20	87.20	421.80		45.40	444.50	

Notes:

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

TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
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	
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	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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
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	

Notes:

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

TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
1/27/2022	467.80	0.07	62.60	426.80		76.30	405.10	
2/23/2022	464.80	0.29	61.85	427.55		76.60	404.80	Dry
3/23/2022	464.40	1.08	62.10	427.30		76.30	405.10	
4/26/2022	467.10	0.03	60.60	428.80		76.30	405.10	
5/26/2022	464.80	0.08	60.30	429.10		76.00	405.40	
6/28/2022	457.30	0.00	60.60	428.80		79.30	402.10	Dry
7/26/2022	440.70	0.00	62.70	426.70		76.60	404.80	Dry
8/25/2022	429.50	0.05	65.30	424.10		76.60	404.80	Dry
9/28/2022	410.80	0.35	67.80	421.60		76.90	404.50	Dry
10/25/2022	407.30	0.35	69.80	419.60		76.30	405.10	
11/23/2022	427.00	0.80	66.10	423.30		76.10	405.30	
12/20/2022	441.90	2.14	69.70	419.70		81.00	400.40	Dry
1/26/2023	470.30	5.64	63.20	426.20		76.30	405.10	
2/23/2023	471.00	3.33	59.40	430.00		76.30	405.10	
3/28/2023	471.20	5.72	58.90	430.50		84.50	396.90	Dry
4/25/2023	469.40	0.16	58.60	430.80		76.30	405.10	
5/23/2023	471.00	1.35	58.20	431.20		76.70	404.70	Dry
6/28/2023	468.80	0.10	57.18	432.22		76.50	404.90	Dry
7/27/2023	455.90	0.00	58.50	430.90		81.00	400.40	Dry
8/29/2023	453.80	2.28	61.40	428.00		76.30	405.10	
9/26/2023	445.00	0.00	62.10	427.30		76.30	405.10	
10/26/2023	437.40	0.21	64.20	425.20		79.00	402.40	Dry
11/29/2023	425.00	0.78	66.20	423.20		77.20	404.20	Dry
12/21/2023	421.00	1.60	67.10	422.30		78.60	402.80	Dry

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-5			MW-6		
Top of Well Elevation -->			489.40			481.40		
Bottom of Well Elevation -->			406.50			404.90		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	66.20	423.20		77.30	404.10	
2/27/2024	468.70	8.89	60.40	429.00		76.40	405.00	
3/26/2024	467.60	3.06	59.00	430.40		76.60	404.80	
4/24/2024	469.60	1.49	58.17	431.23		76.55	404.85	
5/1/2024	469.60	0.00	57.80	431.60		76.90	404.50	
5/23/2024	468.20	0.08	57.80	431.60		78.20	403.20	
6/20/2024	464.20	0.00	58.10	431.30		76.40	405.00	
7/25/2024	447.90	0.00	60.60	428.80		82.40	399.00	
8/27/2024	430.40	0.00	63.40	426.00		76.40	405.00	
9/24/2024	418.60	0.00	65.80	423.60		76.30	405.10	
10/29/2024	407.70	0.00	67.90	421.50		83.30	398.10	
11/21/2024	407.00	0.11	69.10	420.30		76.30	405.10	
12/17/2024	415.80	0.10	69.60	419.80		83.20	398.20	
1/28/2025	427.30	1.00	69.10	420.30		76.60	404.80	
2/25/2025	465.40	2.02	65.50	423.90		83.20	398.20	
3/20/2025	467.90	2.20	60.60	428.80		76.30	405.10	
4/14/2025	464.20	#N/A	59.50	429.90		76.30	405.10	
4/24/2025	463.50	0.44	59.60	429.80		79.60	401.80	
5/22/2025	463.55	0.07	58.95	430.45		76.50	404.90	
6/19/2025	456.20	0.11	60.00	429.40		76.50	404.90	
7/29/2025	443.60	0.00	62.82	426.58		75.88	405.52	New hist. max
8/21/2025	437.20	0.00	63.90	425.50		79.30	402.10	
9/23/2025	420.60	0.08	66.50	422.90		84.30	397.10	
10/22/2025	425.30	0.79	68.40	421.00		76.30	405.10	
11/20/2025	426.60	4.59	69.00	420.40		76.30	405.10	
12/16/2025	432.80	2.20	68.70	420.70		78.30	403.10	

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
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	
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	

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
1/27/2022	467.80	0.07	20.80	442.50		22.50	490.30	
2/23/2022	464.80	0.29	20.60	442.70		22.80	490.00	
3/23/2022	464.40	1.08	20.90	442.40		23.00	489.80	
4/26/2022	467.10	0.03	20.30	443.00		22.80	490.00	
5/26/2022	464.80	0.08	20.60	442.70		22.60	490.20	
6/28/2022	457.30	0.00	21.10	442.20		22.50	490.30	
7/26/2022	440.70	0.00	21.30	442.00		22.90	489.90	
8/25/2022	429.50	0.05	21.50	441.80		23.20	489.60	
9/28/2022	410.80	0.35	21.70	441.60		23.60	489.20	
10/25/2022	407.30	0.35	22.00	441.30		24.10	488.70	
11/23/2022	427.00	0.80	22.00	441.30		24.20	488.60	
12/20/2022	441.90	2.14	22.30	441.00		24.30	488.50	
1/26/2023	470.30	5.64	22.10	441.20		23.20	489.60	
2/23/2023	471.00	3.33	21.00	442.30		22.40	490.40	
3/28/2023	471.20	5.72	20.00	443.30		20.50	492.30	
4/25/2023	469.40	0.16	18.50	444.80		19.90	492.90	
5/23/2023	471.00	1.35	18.20	445.10		20.10	492.70	
6/28/2023	468.80	0.10	18.18	445.12		20.33	492.47	
7/27/2023	455.90	0.00	18.60	444.70		21.10	491.70	
8/29/2023	453.80	2.28	19.00	444.30		21.10	491.70	
9/26/2023	445.00	0.00	19.20	444.10		21.00	491.80	
10/26/2023	437.40	0.21	19.50	443.80		21.30	491.50	
11/29/2023	425.00	0.78	20.20	443.10		22.10	490.70	
12/21/2023	421.00	1.60	20.30	443.00		22.10	490.70	

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			MW-7			MW-8		
Top of Well Elevation -->			463.30			512.80		
Bottom of Well Elevation -->			397.30			419.80		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	20.80	442.50		21.80	491.00	
2/27/2024	468.70	8.89	20.20	443.10		20.80	492.00	
3/26/2024	467.60	3.06	19.05	444.25		20.00	492.80	
4/24/2024	469.60	1.49	18.40	444.90		19.50	493.30	
5/1/2024	469.60	0.00	17.97	445.33		19.25	493.55	
5/23/2024	468.20	0.08	18.00	445.30		19.30	493.50	
6/20/2024	464.20	0.00	18.40	444.90		19.80	493.00	
7/25/2024	447.90	0.00	18.90	444.40		20.60	492.20	
8/27/2024	430.40	0.00	19.00	444.30		21.40	491.40	
9/24/2024	418.60	0.00	19.20	444.10		22.00	490.80	
10/29/2024	407.70	0.00	19.40	443.90		22.80	490.00	
11/21/2024	407.00	0.11	19.50	443.80		23.70	489.10	
12/17/2024	415.80	0.10	19.80	443.50		23.80	489.00	
1/28/2025	427.30	1.00	20.30	443.00		24.10	488.70	
2/25/2025	465.40	2.02	20.60	442.70		24.00	488.80	
3/20/2025	467.90	2.20	20.80	442.50		23.40	489.40	
4/14/2025	464.20	#N/A	20.50	442.80		23.20	489.60	
4/24/2025	463.50	0.44	20.60	442.70		23.30	489.50	
5/22/2025	463.55	0.07	20.55	442.75		23.50	489.30	
6/19/2025	456.20	0.11	20.60	442.70		24.00	488.80	
7/29/2025	443.60	0.00	20.63	442.67		24.50	488.30	
8/21/2025	437.20	0.00	20.60	442.70		25.00	487.80	
9/23/2025	420.60	0.08	20.50	442.80		25.30	487.50	
10/22/2025	425.30	0.79	20.30	443.00		25.30	487.50	
11/20/2025	426.60	4.59	20.00	443.30		24.80	488.00	
12/16/2025	432.80	2.20	19.70	443.60		24.85	487.95	

Notes:

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TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->			363.20			447.10		
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	
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	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->			363.20			447.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->			363.20			447.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->			363.20			447.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->			363.20			447.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->			363.20			447.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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
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	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->			363.20			447.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
1/27/2022	467.80	0.07	39.00	445.40		31.10	453.20	Omitted
2/23/2022	464.80	0.29	39.00	445.40		37.20	447.10	Dry
3/23/2022	464.40	1.08	39.30	445.10		37.20	447.10	Dry
4/26/2022	467.10	0.03	39.30	445.10		37.00	447.30	
5/26/2022	464.80	0.08	39.50	444.90		37.20	447.10	Dry
6/28/2022	457.30	0.00	39.90	444.50		37.30	447.00	Dry
7/26/2022	440.70	0.00	40.40	444.00		37.20	447.10	Dry
8/25/2022	429.50	0.05	40.95	443.45		37.20	447.10	Dry
9/28/2022	410.80	0.35	41.70	442.70		37.30	447.00	Dry
10/25/2022	407.30	0.35	42.20	442.20		37.10	447.20	Dry
11/23/2022	427.00	0.80	42.30	442.10		37.20	447.10	Dry
12/20/2022	441.90	2.14	42.00	442.40		37.30	447.00	Dry
1/26/2023	470.30	5.64	40.40	444.00		37.20	447.10	Dry
2/23/2023	471.00	3.33	37.70	446.70		36.80	447.50	
3/28/2023	471.20	5.72	39.40	445.00		36.80	447.50	
4/25/2023	469.40	0.16	39.00	445.40		37.00	447.30	
5/23/2023	471.00	1.35	38.70	445.70		37.00	447.30	
6/28/2023	468.80	0.10	38.42	445.98		37.05	447.25	
7/27/2023	455.90	0.00	38.60	445.80		37.20	447.10	Dry
8/29/2023	453.80	2.28	38.20	446.20		37.00	447.30	
9/26/2023	445.00	0.00	38.00	446.40		37.30	447.00	Dry
10/26/2023	437.40	0.21	38.30	446.10		37.30	447.00	Dry
11/29/2023	425.00	0.78	38.80	445.60		37.10	447.20	
12/21/2023	421.00	1.60	38.80	445.60		37.10	447.20	

Notes:

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-1A			CP-1B		
Top of Well Elevation -->			484.40			484.30		
Bottom of Well Elevation -->			363.20			447.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	38.20	446.20		37.30	447.00	
2/27/2024	468.70	8.89	37.20	447.20		36.70	447.60	
3/26/2024	467.60	3.06	37.00	447.40		36.60	447.70	
4/24/2024	469.60	1.49	36.80	447.60		37.30	447.00	
5/1/2024	469.60	0.00	36.66	447.74		37.20	447.10	
5/23/2024	468.20	0.08	36.70	447.70		36.60	447.70	
6/20/2024	464.20	0.00	36.90	447.50		37.20	447.10	
7/25/2024	447.90	0.00	37.60	446.80		36.60	447.70	
8/27/2024	430.40	0.00	38.20	446.20		37.20	447.10	
9/24/2024	418.60	0.00	38.50	445.90		36.70	447.60	
10/29/2024	407.70	0.00	39.10	445.30		37.20	447.10	
11/21/2024	407.00	0.11	39.30	445.10		36.70	447.60	
12/17/2024	415.80	0.10	39.40	445.00		37.30	447.00	
1/28/2025	427.30	1.00	39.20	445.20		37.30	447.00	
2/25/2025	465.40	2.02	38.50	445.90		37.30	447.00	
3/20/2025	467.90	2.20	38.10	446.30		37.30	447.00	
4/14/2025	464.20	#N/A	38.20	446.20		37.00	447.30	
4/24/2025	463.50	0.44	38.20	446.20		37.30	447.00	
5/22/2025	463.55	0.07	38.35	446.05		37.30	447.00	
6/19/2025	456.20	0.11	38.70	445.70		37.10	447.20	
7/29/2025	443.60	0.00	39.39	445.01		37.24	447.06	
8/21/2025	437.20	0.00	39.70	444.70		37.30	447.00	
9/23/2025	420.60	0.08	40.20	444.20		37.30	447.00	
10/22/2025	425.30	0.79	40.60	443.80		37.30	447.00	
11/20/2025	426.60	4.59	40.80	443.60		37.20	447.10	
12/16/2025	432.80	2.20	40.70	443.70		37.30	447.00	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->			363.20			423.10		
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	
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	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->			363.20			423.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->			363.20			423.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->			363.20			423.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->			363.20			423.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->			363.20			423.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->			363.20			423.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
1/27/2022	467.80	0.07	24.20	463.50		34.70	453.00	
2/23/2022	464.80	0.29	25.30	462.40		35.00	452.70	
3/23/2022	464.40	1.08	25.30	462.40		35.20	452.50	
4/26/2022	467.10	0.03	25.30	462.40		34.90	452.80	
5/26/2022	464.80	0.08	35.10	452.60	Omitted	25.80	461.90	Omitted
6/28/2022	457.30	0.00	26.90	460.80		35.50	452.20	
7/26/2022	440.70	0.00	28.20	459.50		35.90	451.80	
8/25/2022	429.50	0.05	28.40	459.30		36.00	451.70	
9/28/2022	410.80	0.35	28.80	458.90		36.10	451.60	
10/25/2022	407.30	0.35	28.70	459.00		36.20	451.50	
11/23/2022	427.00	0.80	27.50	460.20		36.00	451.70	
12/20/2022	441.90	2.14	26.40	461.30		36.00	451.70	
1/26/2023	470.30	5.64	21.70	466.00	New hist. max	34.60	453.10	
2/23/2023	471.00	3.33	23.30	464.40		34.50	453.20	
3/28/2023	471.20	5.72	21.80	465.90		33.20	454.50	New hist. max
4/25/2023	469.40	0.16	22.80	464.90		33.90	453.80	
5/23/2023	471.00	1.35	22.60	465.10		33.90	453.80	
6/28/2023	468.80	0.10	23.24	464.46		33.98	453.72	
7/27/2023	455.90	0.00	25.00	462.70		34.90	452.80	
8/29/2023	453.80	2.28	24.20	463.50		34.90	452.80	
9/26/2023	445.00	0.00	25.20	462.50		35.20	452.50	
10/26/2023	437.40	0.21	25.70	462.00		35.30	452.40	
11/29/2023	425.00	0.78	26.40	461.30		35.60	452.10	
12/21/2023	421.00	1.60	26.30	461.40		35.40	452.30	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-2A			CP-2B		
Top of Well Elevation -->			487.70			487.70		
Bottom of Well Elevation -->			363.20			423.10		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	22.50	465.20		35.00	452.70	
2/27/2024	468.70	8.89	20.50	467.20	New hist. max	32.90	454.80	New hist. max
3/26/2024	467.60	3.06	21.90	465.80		33.60	454.10	
4/24/2024	469.60	1.49	21.60	466.10		33.40	454.30	
5/1/2024	469.60	0.00	21.60	466.10		33.20	454.50	
5/23/2024	468.20	0.08	22.20	465.50		33.50	454.20	
6/20/2024	464.20	0.00	22.90	464.80		33.80	453.90	
7/25/2024	447.90	0.00	24.70	463.00		34.40	453.30	
8/27/2024	430.40	0.00	25.60	462.10		34.70	453.00	
9/24/2024	418.60	0.00	25.80	461.90		34.80	452.90	
10/29/2024	407.70	0.00	26.00	461.70		35.00	452.70	
11/21/2024	407.00	0.11	26.00	461.70		35.05	452.65	
12/17/2024	415.80	0.10	25.80	461.90		35.20	452.50	
1/28/2025	427.30	1.00	25.20	462.50		35.10	452.60	
2/25/2025	465.40	2.02	20.80	466.90		34.20	453.50	
3/20/2025	467.90	2.20	22.30	465.40		34.00	453.70	
4/14/2025	464.20	#N/A	23.10	464.60		34.30	453.40	
4/24/2025	463.50	0.44	23.10	464.60		34.40	453.30	
5/22/2025	463.55	0.07	23.30	464.40		34.35	453.35	
6/19/2025	456.20	0.11	24.00	463.70		34.50	453.20	
7/29/2025	443.60	0.00	24.76	462.94		34.78	452.92	
8/21/2025	437.20	0.00	25.00	462.70		34.75	452.95	
9/23/2025	420.60	0.08	25.70	462.00		35.00	452.70	
10/22/2025	425.30	0.79	25.20	462.50		35.10	452.60	
11/20/2025	426.60	4.59	24.70	463.00		34.90	452.80	
12/16/2025	432.80	2.20	24.40	463.30		34.85	452.85	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->			363.20			452.60		
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	
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	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->			363.20			452.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

Notes:

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TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->			363.20			452.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->			363.20			452.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->			363.20			452.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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**TABLE 8
SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->			363.20			452.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
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	

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SAN JOAQUIN DAM
PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->			363.20			452.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
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	
1/27/2022	467.80	0.07	9.20	476.80		18.10	467.90	
2/23/2022	464.80	0.29	9.20	476.80		18.00	468.00	
3/23/2022	464.40	1.08	9.20	476.80		18.00	468.00	
4/26/2022	467.10	0.03	9.20	476.80		17.90	468.10	
5/26/2022	464.80	0.08	9.20	476.80		18.00	468.00	
6/28/2022	457.30	0.00	9.40	476.60		18.10	467.90	
7/26/2022	440.70	0.00	9.80	476.20		18.30	467.70	
8/25/2022	429.50	0.05	10.00	476.00		18.50	467.50	
9/28/2022	410.80	0.35	10.40	475.60		18.60	467.40	
10/25/2022	407.30	0.35	10.60	475.40		10.80	475.20	Omitted
11/23/2022	427.00	0.80	10.50	475.50		18.80	467.20	
12/20/2022	441.90	2.14	10.30	475.70		19.00	467.00	
1/26/2023	470.30	5.64	8.80	477.20		18.10	467.90	
2/23/2023	471.00	3.33	8.40	477.60		17.80	468.20	
3/28/2023	471.20	5.72	7.10	478.90		16.70	469.30	
4/25/2023	469.40	0.16	6.80	479.20		16.40	469.60	
5/23/2023	471.00	1.35	6.70	479.30		16.20	469.80	
6/28/2023	468.80	0.10	6.46	479.54		15.94	470.06	
7/27/2023	455.90	0.00	6.50	479.50		15.90	470.10	
8/29/2023	453.80	2.28	6.40	479.60	New hist. max	15.70	470.30	
9/26/2023	445.00	0.00	6.40	479.60	New hist. max	15.70	470.30	
10/26/2023	437.40	0.21	6.60	479.40		15.70	470.30	
11/29/2023	425.00	0.78	6.70	479.30		15.80	470.20	
12/21/2023	421.00	1.60	6.50	479.50		15.60	470.40	New hist. max

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PIEZOMETER AND MONITORING WELL WATER LEVEL MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Monitoring Well -->			CP-3A			CP-3B		
Top of Well Elevation -->			486.00			486.00		
Bottom of Well Elevation -->			363.20			452.60		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	5.90	480.10		15.60	470.40	
2/27/2024	468.70	8.89	5.00	481.00		14.60	471.40	
3/26/2024	467.60	3.06	4.35	481.65		14.40	471.60	
4/24/2024	469.60	1.49	3.95	482.05		14.05	471.95	
5/1/2024	469.60	0.00	3.80	482.20	New hist. max	13.80	472.20	New hist. max
5/23/2024	468.20	0.08	3.90	482.10		13.80	472.20	
6/20/2024	464.20	0.00	4.20	481.80		13.80	472.20	
7/25/2024	447.90	0.00	4.10	481.90		14.00	472.00	
8/27/2024	430.40	0.00	4.50	481.50		14.10	471.90	
9/24/2024	418.60	0.00	4.70	481.30		14.20	471.80	
10/29/2024	407.70	0.00	5.00	481.00		14.40	471.60	
11/21/2024	407.00	0.11	5.10	480.90		14.70	471.30	
12/17/2024	415.80	0.10	5.20	480.80		14.80	471.20	
1/28/2025	427.30	1.00	5.00	481.00		14.80	471.20	
2/25/2025	465.40	2.02	4.50	481.50		14.50	471.50	
3/20/2025	467.90	2.20	4.00	482.00		14.00	472.00	
4/14/2025	464.20	#N/A	4.40	481.60		14.20	471.80	
4/24/2025	463.50	0.44	4.10	481.90		14.20	471.80	
5/22/2025	463.55	0.07	4.20	481.80		14.25	471.75	
6/19/2025	456.20	0.11	4.50	481.50		14.40	471.60	
7/29/2025	443.60	0.00	5.21	480.79		14.77	471.23	
8/21/2025	437.20	0.00	5.50	480.50		15.00	471.00	
9/23/2025	420.60	0.08	5.70	480.30		15.20	470.80	
10/22/2025	425.30	0.79	5.90	480.10		15.30	470.70	
11/20/2025	426.60	4.59	5.60	480.40		15.20	470.80	
12/16/2025	432.80	2.20	5.50	480.50		15.30	470.70	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Digital Reading	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
1/31/2007	405.80		3067.70		20.60			3050.60			
2/27/2007	426.80		3059.10		20.20			3041.10			
3/28/2007	438.80		3050.60		19.70			3019.50			
4/26/2007	450.90		3040.70		19.60			2984.20			
5/23/2007	461.40		3029.00		19.60			2946.80			
6/27/2007	457.20		3024.40		19.90			2946.90			
7/26/2007	445.50		3025.30		20.00			2951.10			
8/28/2007	434.60		3031.40		20.30			2972.40			
9/25/2007	416.80		3043.10		20.70			3001.00			
10/24/2007	404.50		3055.70		20.90			3076.40			
11/27/2007	422.20		3052.20		21.00			3027.40			
1/3/2008	443.20		3004.50		22.30	392.04		2994.10	23.00	430.26	
1/29/2008	452.20		3032.10		20.80	385.04		2967.30	23.00	431.79	
2/27/2008	460.80		3016.60		22.30	389.00		2941.00	23.00	432.68	
3/26/2008	468.00		3083.50		22.30	371.98		2918.80	23.00	431.40	
4/29/2008	468.60		3005.20		22.30	391.87		2908.00	23.00	428.35	
5/29/2008	464.70		3003.80		22.30	392.22		2910.90	23.00	423.03	
6/26/2008	455.70		3007.50		19.80	391.20		2924.80	23.00	416.38	
7/29/2008	447.30	0.00	3013.80		19.00	389.59		2943.30	23.00	409.55	
8/28/2008	438.80	0.00	3020.30		22.30	388.07		2960.80	23.00	417.52	
9/26/2008	430.70	0.00	3026.00		22.30	386.64		2975.90	23.00	414.16	
10/29/2008	412.50	0.00	3041.50		22.30	382.71		3007.20	23.00	407.15	
11/25/2008	404.70	2.60	3051.80		22.30	380.10		3024.60	23.00	403.22	
12/30/2008	440.90	3.42	3037.00		22.30	383.86		3008.40	23.00	406.88	
1/28/2009	463.70	0.17	3010.10		22.30	390.64		2951.70	23.00	419.54	
2/25/2009	470.10	3.35	2988.80		22.30	395.96		2912.40	23.00	428.20	
3/26/2009	469.40	0.19	2973.50		22.30	399.76		2903.20	23.00	430.21	
4/29/2009	466.90	0.07	2938.80		22.30	408.30		2903.10	23.00	430.24	
5/18/2009	466.70	0.00	2938.00		19.90	408.41		2904.00	23.00	430.04	
5/29/2009	465.00	0.00	2941.80		22.30	407.57		2907.10	23.00	429.36	
6/30/2009	460.20	0.00	2947.30		22.30	406.22		2914.70	23.00	427.70	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Digital Reading	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	2960.50		20.00	402.89		2929.70	23.00	424.40	
8/25/2009	440.10	0.00	2979.90		19.80	398.08		2950.40	23.00	419.83	
9/30/2009	432.20	0.00	2996.20		22.30	394.12		2970.30	23.00	415.41	
10/29/2009	431.40	0.53	3003.20		20.10	392.29		2979.70	23.00	413.31	
12/1/2009	427.40	0.00	3014.10		20.90	389.58		2990.70	23.00	410.85	
12/29/2009	448.10	2.06	3000.70		22.30	392.99		2971.40	23.00	415.16	
1/27/2010	465.60	4.62	2978.90		22.30	398.42		2927.90	23.00	424.79	
2/25/2010	470.20	2.51	2957.30		22.30	403.76		2899.70	23.00	430.98	
3/29/2010	465.70	0.99	2963.60		20.10	402.13		2901.20	23.00	430.65	
4/4/2010	465.00		2965.40		22.30	401.76		2902.50	23.00	430.37	
4/27/2010	468.40	1.23	2964.60		22.30	401.96		2899.00	23.00	431.13	
5/27/2010	463.30	0.05	2972.00		22.30	400.13		2903.00	23.00	430.26	
6/30/2010	454.70	0.00	2988.10		22.30	396.14		2923.60	23.00	425.74	
7/28/2010	445.60	0.00	2996.90		20.00	393.86		2936.90	23.00	422.81	
8/31/2010	437.10	0.00	3008.70		22.30	390.99		2957.90	23.00	418.16	
9/29/2010	422.70	0.00	3024.50		22.30	387.01		2983.40	23.00	412.48	
10/27/2010	426.40	2.38	3027.60		22.30	386.23		2995.00	23.00	409.89	
11/29/2010	439.80	0.97	3021.40		22.30	387.80		2982.50	23.00	412.68	
12/30/2010	456.60	8.62	3003.30		22.30	392.34		2948.30	23.00	420.29	
2/1/2011	468.90	0.92	2964.00		22.30	402.11		2903.00	23.00	430.26	
2/23/2011	469.00	0.99	2960.70		22.30	402.92		2896.00	23.00	431.79	
3/29/2011	470.30	2.93	2956.90		22.30	403.12		2891.90	23.00	432.68	
4/27/2011	464.80	0.19	2967.20		19.60	401.22		2897.80	23.00	431.40	
5/26/2011	457.30	0.48	2983.40		19.60	397.21		2911.70	23.00	428.35	
6/28/2011	443.50	0.05	3003.20		22.30	392.37		2935.90	23.00	423.03	
7/29/2011	425.10	0.00	3020.90		22.30	387.92		2965.90	23.00	416.38	
8/24/2011	418.00	0.00	3037.00		19.90	383.77		2996.50	23.00	409.55	
9/27/2011	400.90	0.12	3051.40		20.10	380.22		3021.30	23.00	403.97	
10/26/2011	402.20	1.25	3054.30		22.30	379.46		3031.70	23.00	401.62	
11/30/2011	425.10	1.38	3044.00		22.30	382.08		3023.20	23.00	403.54	
12/21/2011	435.70	0.32	3037.90		22.30	383.63		3009.50	23.00	406.63	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Digital Reading	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	3033.00		22.30	384.87		2985.60	23.00	411.99	
2/28/2012	448.40	0.42	3024.00		22.30	387.14		2957.40	23.00	418.27	
3/26/2012	452.70	1.06	3020.60		22.30	388.00		2947.20	23.00	420.53	
4/23/2012	463.40	1.32	2997.40		22.30	393.82		2919.70	23.00	426.60	
5/30/2012	457.30	0.02	2993.10		22.30	394.89		2915.50	23.00	427.52	
6/13/2012	452.90	0.02	2990.80		22.30	395.46		2934.00	23.00	410.36	
6/26/2012	450.20	0.00	3001.00		22.30	392.92		2928.70	23.00	424.62	
7/24/2012	439.80	0.00	3013.40		22.30	389.81		2947.10	23.00	420.56	
8/8/2012	437.60	0.12	3016.90		22.30	388.93		2954.90	23.00	418.83	
8/22/2012	433.40	0.00	3021.00		22.30	387.90		2963.10	23.00	417.01	
8/29/2012	431.30	0.00	3023.40		22.30	387.29		2967.60	23.00	416.01	
9/25/2012	420.80	0.00	3025.20		22.30	386.84		2971.50	23.00	415.14	
10/31/2012	412.30	0.26	3042.30		22.30	382.51		3006.10	23.00	407.39	
11/27/2012	420.80	0.58	3041.20		22.30	382.79		3010.60	23.00	406.38	
12/18/2012	448.00	1.44	3025.00		22.30	386.89		2985.80	23.00	411.95	
1/29/2013	468.60	1.18	2956.00		-51.10	401.40		2909.30	-50.80	427.96	
2/28/2013	469.20	0.30	2943.50		-51.10	404.47		2893.60	-50.80	431.39	
3/27/2013	468.30	0.50	2944.50		-51.20	404.22		2891.40	-50.90	431.87	
4/25/2013	462.70	0.00	2960.30		-51.20	400.34		2894.70	-50.60	431.15	
5/21/2013	454.20	0.00	2982.70		-50.70	394.82		2909.30	-50.50	427.96	
6/25/2013	439.30	0.00	3008.30		-51.00	388.42		2936.10	-50.50	422.07	
7/23/2013	431.50	0.00	3018.50		-51.30	385.84		2951.40	-51.00	418.86	
8/21/2013	418.00	0.00	3032.20		-51.00	382.40		2973.60	-50.90	413.75	
9/24/2013	404.00	0.00	3047.20		-51.00	378.59		2997.00	-50.90	408.52	
10/29/2013	400.60	0.00	3052.30		-51.10	377.29		3005.50	-50.80	406.61	
11/26/2013	407.90	0.44					Wires unplugged	3010.30	-50.40	405.53	
12/19/2013	425.80	0.54					Wires unplugged	3007.70	-51.00	406.11	
1/28/2014	439.70	0.00	3035.60		20.50	384.14		2970.70	20.80	415.29	
2/25/2014	449.70	0.83	3027.90		20.30	386.08		2944.10	20.40	421.19	
3/26/2014	465.10		2989.60		20.10	395.68		2898.30	20.30	431.25	
3/28/2014	465.70	1.15	2985.70		20.30	396.66		2894.60	20.30	432.06	

Notes:

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

TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	Reading (Hz)	Digital Reading	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	2972.90		20.00	399.83		2878.70	20.10	435.52	
5/28/2014	450.60	0.00	3001.50		20.00	392.71		2900.40	20.10	430.79	
6/25/2014	440.10	0.00	3015.30		20.10	389.25		2921.90	20.20	426.08	
7/29/2014	431.20	0.00	3024.20		20.30	387.02		2942.30	20.50	421.59	
8/26/2014	419.50	0.02	3034.00		20.70	384.56		2964.10	20.80	416.76	
9/23/2014	405.30	0.00	3046.60		20.80	381.36		2988.60	21.60	411.30	
10/29/2014	400.90	0.00	3052.40		21.30	379.91		3001.90	21.50	408.32	
11/25/2014	410.90	0.25	3050.00		21.50	380.52		3007.00	21.70	407.18	
12/30/2014	430.60	2.94	3039.70		22.60	383.18		2997.90	22.90	409.23	
1/27/2015	466.70	0.83	3006.70		21.30	391.45		2913.00	21.50	428.05	
2/25/2015	468.90	0.69	2998.80		21.10	393.42		2878.80	21.20	435.51	
3/26/2015	465.90	0.61	2988.70		21.00	395.94		2874.00	21.10	436.55	
4/28/2015	465.70	0.20	2995.50		20.70	394.23		2874.30	21.10	436.49	
5/28/2015	466.40	1.08	2996.10		21.30	394.11		2871.30	21.50	437.14	
6/30/2015	454.50	0.00	3005.00		20.70	391.86		2889.10	21.10	433.27	
7/28/2015	445.60	0.00	3012.70		20.80	389.93		2910.80	21.00	428.53	
8/28/2015	437.60	0.00	3018.60		21.80	388.48		2928.90	21.70	424.56	
9/24/2015	426.90	1.51	3027.00		22.80	386.40		2951.00	23.20	419.69	
10/27/2015	415.40	0.49	3036.60		21.70	383.93		2974.20	21.80	414.52	
11/19/2015	412.90	0.09	3040.70		21.90	382.90		2986.30	22.00	411.82	
12/22/2015	425.50	0.69	3038.60		21.80	383.43		2987.07	22.80	411.66	
1/27/2016	463.60	2.86	3017.96		21.40	388.63		2931.15	21.80	424.06	
2/25/2016	468.90	0.25	3009.78		21.10	390.67		2885.40	21.40	434.08	
3/30/2016	468.00	1.44	3005.78		20.80	391.67		2870.78	21.00	437.25	
4/28/2016	461.30	0.30	3007.99		20.70	391.11		2878.68	20.90	435.53	
5/25/2016	451.30	0.18	3013.12		20.60	389.82		2898.47	20.80	431.22	
6/28/2016	414.10	0.00	3017.70		20.60	388.67		2917.70	20.80	427.01	
7/27/2016	434.20	0.00	3024.70		20.70	386.91		2936.50	21.00	422.87	
8/23/2016	418.60	0.00	3035.41		20.80	384.20		2964.24	21.30	416.73	
9/27/2016	406.40	0.00	3047.11		21.10	381.25		2990.48	21.80	410.88	
10/26/2016	404.00	0.48	3051.02		21.40	380.26		3003.23	22.10	408.03	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Digital Reading	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	3048.07		21.50	381.02		3006.57	22.30	407.28	
12/20/2016	441.10	3.48	3033.41		21.50	384.73		2981.77	22.30	412.84	
1/26/2017	471.60	5.67	3011.61		21.30	390.22		2900.67	22.00	430.76	
2/24/2017	472.05	3.95	3007.20		21.10	391.32		2872.81	21.60	436.82	
2/25/2017	472.00		3007.04		21.10	391.36		2872.45	21.70	436.90	
2/26/2017	472.00		3007.17		21.10	391.33		2872.02	21.60	436.99	
2/27/2017	472.00		3007.06		21.10	391.36		2872.13	21.60	436.96	
2/28/2017	471.90		3007.02		21.10	391.37		2871.54	21.60	437.09	
3/1/2017	471.90		3007.11		21.10	391.34		2871.54	21.60	437.09	
3/2/2017	471.90		3006.69		21.10	391.45		2870.57	21.60	437.30	
3/29/2017	467.90	0.10	3007.03		20.80	391.35		2871.74	21.20	437.04	
4/27/2017	457.60	0.04	3011.00		20.60	390.35		2888.70	20.90	433.35	
5/23/2017	453.50	0.43	3013.77		20.50	389.65		2901.51	20.80	430.56	
6/21/2017	447.40	0.00	3016.94		20.50	388.85		2913.05	20.80	428.03	
7/26/2017	435.10	0.00	3024.22		20.60	387.02		2937.66	21.00	422.62	
8/25/2017	420.10	0.00	3035.09		20.70	384.28		2966.31	21.30	416.27	
9/27/2017	407.10	0.00	3044.81		21.00	381.83		2988.98	21.70	411.22	
10/26/2017	395.00	0.00	3058.99		21.30	378.23		3004.20	22.00	407.81	
11/28/2017	409.00	0.09	3053.41		21.50	379.66		3013.87	22.50	405.64	
12/20/2017	416.80	0.00	3046.72		21.40	381.36		3010.17	22.50	406.47	
1/24/2018	434.50	1.31	3039.95		21.30	383.10		2997.62	22.20	409.30	
2/21/2018	443.10	0.29	3034.97		21.00	384.35		2971.51	21.80	415.14	
3/29/2018	453.00	1.28	3027.73		20.80	386.17		2943.47	21.30	421.36	
4/26/2018	449.10	0.05	3027.18		20.60	386.31		2931.40	21.10	424.03	
5/31/2018	453.10	0.20	3072.64		20.50	374.72		2922.64	20.90	425.95	
6/28/2018	448.20	0.00	3022.94		20.50	387.37		2922.72	21.00	425.94	
7/25/2018	440.40	0.00	3025.51		20.70	386.73		2934.39	21.10	423.37	
8/22/2018	427.10	0.00	3031.31		20.80	385.27		2953.63	21.40	419.11	
9/27/2018	439.60	0.00	3044.77		21.10	381.86		2986.66	21.90	411.75	
10/18/2018	405.30	0.90	3049.15		21.40	380.76		3003.92	22.20	407.88	
11/28/2018	408.60	1.19	3049.77		21.60	380.61		3010.53	22.40	406.40	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Digital Reading	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	3036.44		21.60	384.00		2997.81	22.40	409.26	
1/30/2019	463.80	4.71	3019.03		21.30	388.39		2933.26	22.00	423.63	
2/27/2019	466.20	6.55	3013.81		21.10	389.69		2898.84	21.70	431.18	
3/27/2019	463.30	1.34	3013.30		20.80	389.81		2894.43	21.10	432.14	
4/29/2019	453.00	0.13	3016.61		20.60	388.97		2909.16	20.80	428.91	
5/30/2019	451.80	0.64	3015.23		20.50	389.32		2917.35	21.10	427.12	
6/26/2019	446.20	0.01	3019.03		21.30	388.39		2933.26	22.00	423.63	
7/5/2019	39.40	0.00	3020.90		20.40	387.88					VWP data logger is crashing. Repairs are in planning.
7/30/2019	434.80	0.00	3025.58		20.50	386.71					
8/27/2019	424.40	0.00	3032.59		20.70	384.94					
9/26/2019	405.60	0.00	3046.87		21.98	381.36					
10/22/2019	400.50	0.00	3052.86		21.30	379.81					
11/26/2019	412.80	3.13	3049.20		21.40	380.75					
12/18/2019	447.40	4.44	336.44		21.60			2997.81	22.40	409.26	
1/28/2020	465.40	0.20	3019.02		21.30	388.39		2933.24	22.00	423.63	
2/26/2020	459.60	0.14	3015.40		21.30	389.30		2908.90	22.00	428.99	
3/24/2020	470.70	3.49	3009.80		20.80	390.69		2891.30	21.20	432.83	
4/29/2020	467.60	3.65	3007.33		20.50	391.30		2882.64	20.80	434.71	
5/27/2020	459.10	0.02	3009.61		20.40	390.72		2896.45	20.70	431.70	
6/23/2020	447.00	0.00	3015.28		20.30	389.29		2918.67	20.70	426.82	
7/30/2020	434.00	0.00	3023.85		20.40	387.14		2947.81	21.00	420.40	
8/26/2020	417.70	0.00	3036.09		20.50	384.05		2977.84	21.30	413.72	
9/29/2020	403.60	0.00	3049.41		20.70	380.67		3004.49	21.60	407.75	
10/28/2020	404.50	0.00	3052.71		21.00	379.84		3015.75	22.10	405.22	
11/24/2020	413.50	0.42	3047.38		21.10	381.20		3017.40	22.50	404.85	
12/22/2020	408.00	1.13	3051.32		21.20	380.20		3022.66	22.50	403.66	
1/27/2021	435.60	2.25	3037.99		21.00	383.58		3011.14	21.90	406.25	
2/25/2021	457.30	0.05	3024.04		20.70	387.10		2916.15	21.40	427.39	
3/23/2021	465.90	1.36	3016.72		20.50	388.94		2925.72	21.10	425.28	
4/27/2021	462.10	0.04	3014.33		20.40	389.54		2908.33	20.80	429.10	
5/26/2021	455.00	0.03	3016.59		20.30	388.97		2919.42	20.70	426.66	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Digital Reading	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	3024.05		20.30	387.09		2948.87	20.80	420.16	
7/29/2021	423.60	0.07	3032.39		20.40	384.98		2969.69	20.90	415.53	
8/24/2021	408.00	0.00	3044.82		20.50	381.83		2997.61	21.10	409.29	
9/29/2021	398.00	0.04	3054.47		20.90	379.39		3015.75	21.70	405.21	
10/26/2021	417.00	0.87	3053.11		15.20	379.52		3017.21	15.60	404.81	
11/25/2021	427.90	0.00	-9999.00		16.60		VB wire data logger malfunction.	-9999.00			VB wire data logger malfunction.
12/21/2021	427.90	4.77	-9999.00		16.80		VB wire data logger parts on order.	-9999.00			VB wire data logger parts on order.
1/27/2022	467.80	0.07	4488.51		16.90			4101.78	17.30		
2/23/2022	464.80	0.29	4350.72		17.50			4228.05	17.80		
3/23/2022	464.40	1.08	4329.53		12.60			4632.68	13.60		
4/26/2022	467.10	0.03	4718.21		12.90			4717.12	13.10		
5/26/2022	464.80	0.08	4762.81		12.50			4756.93	12.90		
6/28/2022	457.30	0.00	4797.74		12.80			4801.47	13.00		
7/26/2022	440.70	0.00	4908.53		12.10			4909.66	12.30		
8/25/2022	429.50	0.05	5138.78		10.30			5117.02	10.80		
9/28/2022	410.80	0.35	4185.80		30.40			4522.47	32.30		
10/25/2022	407.30	0.35	4167.43		29.80			4212.84	30.20		
11/23/2022	427.30	0.80	3033.54		16.10	384.53		3004.46	16.30	407.69	
12/20/2022	441.90	2.14	3025.24		12.10	386.49		2984.25	12.20	412.17	
1/26/2023	470.30	5.64	3002.23		3.40	391.96		2924.53	3.45	425.32	
2/23/2023	471.00	3.33	2985.57		1.77	396.06		2895.42	1.94	431.69	
3/28/2023	471.20	5.72	2971.92		2.69	399.48		2887.20	2.89	433.49	
4/25/2023	469.40	0.16	2967.73		11.40	400.83		2887.91	11.70	433.45	
5/23/2023	471.00	1.35	2951.51		4.05	404.57		2884.89	4.21	434.01	
6/28/2023	468.80	0.1	2945.44	2945.44	2.89	406.02		2884.18	3.15	434.15	
7/27/2023	455.90	0	3031.53	3031.53	1.86	384.52		2906.25	2.11	429.32	
8/29/2023	453.80	2.28	-9999.00	-99.00	2.13		Omitted	2924.00	2.30	425.42	

Notes:

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**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Digital Reading	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
9/26/2023	445.00	0	-9999.00	-99.99	2.55		Omitted	2936.23	2.67	422.73	
10/26/2023	437.40	0.21	-9999.00		1.28		Omitted	2952.88	1.21	419.02	
11/29/2023	425.00	0.78	3077.17		1.77	372.87		2975.74	1.99	413.95	
12/21/2023	421.00	1.60	3028.10		2.59	385.42		2989.10	2.35	410.96	
1/24/2024	459.70	2.17	3009.57		0.80	390.02		2953.02	1.16	418.99	
2/27/2024	468.70	8.89	2939.54		1.23	407.40		2903.93	0.89	429.81	
3/26/2024	467.60	3.06	2934.70		0.72	408.57		2895.80	0.97	431.59	
4/24/2024	469.60	1.49	-999999.00		0.72		Omitted	3028.10	1.01		Omitted
5/1/2024	469.60	0.00	-999999.00		0.68		Omitted	2888.88	1.04	433.10	
5/23/2024	468.20	0.08	-999999.00		0.53		Omitted	2889.26	0.89	433.02	
6/20/2024	464.20	0.00	-999999.00		0.43		Omitted	2895.50	0.70	431.65	
7/25/2024	447.90	0.00	-999999.00		0.40		Omitted	2931.25	0.38	423.80	
8/27/2024	430.40	0.00	-999999.00		0.00		Omitted	2960.40	0.31	417.34	
9/24/2024	418.60	0.00	-999999.00		0.75		Omitted	2986.80	1.09	411.46	
10/29/2024	407.70	0.00	3038.20		0.48	382.78		3013.52	0.87	405.46	
11/21/2024	407.00	0.11	3040.61		0.84	382.18		3022.21	0.60	403.49	
12/17/2024	415.80	0.10	3038.63		0.26	382.66		3022.54	0.60	403.42	
1/28/2025	427.30	1.00	3032.38		0.51	384.26		3010.40	0.29	406.15	
2/25/2025	465.40	2.02	2998.31		0.51	392.83		2957.66	0.21	417.95	
3/20/2025	467.90	2.20	2934.31		0.00	408.64		2917.94	0.00	426.73	
4/14/2025	464.20	#N/A	2939.94		0.26	407.27		2912.85	0.00	427.84	
4/24/2025	463.50	0.44	2940.80		0.26	407.06		2910.20	0.02	428.43	
5/22/2025	463.55	0.07	2949.37		0.19	404.95		2908.50	0.00	428.80	
6/19/2025	456.20	0.11	3026.89		0.00	385.63		2930.03	0.00	424.06	
7/29/2025	443.60	0.00	3026.89		0.02	385.63		2943.47	0.00	421.09	
8/21/2025	437.20	0.00	3060.94		0.00		Omitted	2961.42	0.00	417.11	
9/23/2025	420.60	0.08	3025.13		0.00	386.07		2990.25	0.00	410.68	
10/22/2025	425.30	0.79	3162.27		0.00		Omitted	2995.45	0.00	409.51	
11/20/2025	426.60	4.59	3021.34		0.00	387.03		2996.32	0.00	409.31	
12/16/2025	432.80	2.20	3016.88		0.00	388.15		2982.10	0.00	412.50	

Notes:

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TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	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	21.60	398.37		3083.30	21.70	438.77	
1/29/2008	452.20		3162.70	21.60	398.45		3058.40	21.00	444.72	
2/27/2008	460.80		3163.10	21.40	398.34		3016.10	20.90	454.77	
3/26/2008	468.00		3163.10	21.20	398.34		2480.10	20.80	569.87	
4/29/2008	468.60		3163.90	21.00	398.11		2974.80	20.40	464.42	
5/29/2008	464.70		3163.30	19.70	398.24		2990.00	19.50	460.84	
6/26/2008	455.70		3163.60	20.60	398.18		3022.60	20.70	453.23	
7/29/2008	447.30	0.00	3163.20	20.60	398.29		3051.20	21.20	446.45	
8/28/2008	438.80	0.00	3164.20	20.60	398.02		3062.90	24.50	443.81	
9/26/2008	430.70	0.00	3163.50	20.90	398.22		3067.40	22.80	442.65	
10/29/2008	412.50	0.00	3163.20	21.10	398.31		3071.10	23.30	441.78	
11/25/2008	404.70	2.60	3163.10	21.20	398.34		3073.50	22.80	441.18	
12/30/2008	440.90	3.42	3163.30	21.40	398.29		3078.50	21.50	439.92	
1/28/2009	463.70	0.17	3162.40	21.40	398.53		3003.20	21.20	457.82	
2/25/2009	470.10	3.35	3162.90	21.30	398.39		2965.70	20.30	466.56	
3/26/2009	469.40	0.19	3163.70	21.10	398.17		2967.20	20.50	466.19	
4/29/2009	466.90	0.07	3163.10	20.90	398.33		2975.50	20.60	464.27	
5/18/2009	466.70	0.00	3163.00	20.80	398.35		2977.00	20.60	463.92	
5/29/2009	465.00	0.00	3163.60	20.80	398.19		2987.80	20.70	461.41	
6/30/2009	460.20	0.00	3163.80	20.70	398.13		3004.30	20.80	457.54	

Notes:

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**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	3163.60	20.60	398.18		3034.00	21.30	450.55	
8/25/2009	440.10	0.00	3163.50	20.70	398.21		3056.30	21.60	445.25	
9/30/2009	432.20	0.00	3163.80	20.80	398.14		3063.20	22.70	443.65	
10/29/2009	431.40	0.53	3163.40	21.00	398.25		3067.90	22.70	442.52	
12/1/2009	427.40	0.00	3163.60	21.20	398.20		3072.10	23.90	441.57	
12/29/2009	448.10	2.06	3163.30	21.30	398.28		3069.10	21.50	442.18	
1/27/2010	465.60	4.62	3163.90	21.30	398.12		2989.70	21.00	460.98	
2/25/2010	470.20	2.51	3162.80	21.20	398.42		2961.30	20.60	467.57	
3/29/2010	465.70	0.99	3163.50	21.00	398.22		2977.80	20.40	463.73	
4/4/2010	465.00		3163.40	20.90	398.25		2980.60	20.40	463.07	
4/27/2010	468.40	1.23	3163.50	22.60	398.27		2968.40	22.20	465.99	
5/27/2010	463.30	0.05	3163.00	20.60	398.35		2986.00	20.30	461.81	
6/30/2010	454.70	0.00	3163.50	20.50	398.21		3028.10	20.60	451.92	
7/28/2010	445.60	0.00	3163.30	20.50	398.26		3045.70	21.00	447.76	
8/31/2010	437.10	0.00	3163.50	20.60	398.21		3057.70	21.80	444.93	
9/29/2010	422.70	0.00	3163.80	20.70	398.13		3062.10	21.80	443.87	
10/27/2010	426.40	2.38	3163.40	20.80	398.24		3067.00	21.80	442.70	
11/29/2010	439.80	0.97	3162.20	20.90	398.57		3068.60	21.70	442.31	
12/30/2010	456.60	8.62	3164.10	21.00	398.06		3032.30	21.00	450.94	
2/1/2011	468.90	0.92	3163.00	21.00	398.36		2968.00	20.50	466.01	
2/23/2011	469.00	0.99	3162.80	20.90	398.41		2964.10	20.10	466.90	
3/29/2011	470.30	2.93	3162.90	20.70	398.37		2957.70	20.60	468.40	
4/27/2011	464.80	0.19	3163.10	20.50	398.32		2979.30	19.80	463.35	
5/26/2011	457.30	0.48	3162.80	20.30	398.39		3007.40	20.20	456.79	
6/28/2011	443.50	0.05	3163.60	20.20	398.17		3045.90	20.40	447.68	
7/29/2011	425.10	0.00	3163.10	20.20	398.31		3055.70	21.30	445.38	
8/24/2011	418.00	0.00	3163.40	20.30	398.23		3059.30	22.30	444.57	
9/27/2011	400.90	0.12	3163.10	20.50	398.32		3064.10	23.60	443.48	
10/26/2011	402.20	1.25	3163.40	20.80	398.24		3066.60	21.10	442.76	
11/30/2011	425.10	1.38	3163.60	20.90	398.19		3068.80	21.60	442.26	
12/21/2011	435.70	0.32	3163.00	21.00	398.36		3071.70	21.20	441.54	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	3162.70	21.10	398.44		3071.10	21.00	441.68	
2/28/2012	448.40	0.42	3162.70	20.80	398.43		3053.20	20.60	445.95	
3/26/2012	452.70	1.06	3162.50	20.70	398.48		3042.10	20.40	448.59	
4/23/2012	463.40	1.32	3162.80	20.40	398.39		2991.30	20.00	460.56	
5/30/2012	457.30	0.02	3162.60	20.30	398.44		3009.00	20.40	456.42	
6/13/2012	452.90	0.02	3163.40	20.30	398.23		3022.80	20.40	453.16	
6/26/2012	450.20	0.00	3163.10	20.20	398.31		3031.80	20.60	451.04	
7/24/2012	439.80	0.00	3162.60	21.10	398.47		3050.90	21.10	446.52	
8/8/2012	437.60	0.12	3163.10	21.10	398.33		3051.90	21.90	446.32	
8/22/2012	433.40	0.00	3162.90	20.30	398.36		3056.50	24.10	445.32	
8/29/2012	431.30	0.00	3163.30	20.30	398.26		3058.20	24.20	444.92	
9/25/2012	420.80	0.00	3163.60	20.90	398.19		3062.20	21.60	443.84	
10/31/2012	412.30	0.26	3162.30	20.70	398.54		3066.70	25.90	442.96	
11/27/2012	420.80	0.58	3161.80	22.70	398.73		3070.00	22.80	442.02	
12/18/2012	448.00	1.44	3162.70	21.10	398.44		3068.10	20.40	442.37	
1/29/2013	468.60	1.18	3161.70	21.10	398.71		2966.90	20.70	466.27	
2/28/2013	469.20	0.30	3162.30	21.10	398.55		2960.20	19.90	467.79	
3/27/2013	468.30	0.50	3162.40	21.00	398.52		2963.50	19.90	467.03	
4/25/2013	462.70	0.00	3162.20	20.80	398.57		2981.10	19.60	462.92	
5/21/2013	454.20	0.00	3162.40	20.30	398.50		3016.70	20.20	454.60	
6/25/2013	439.30	0.00	3162.20	20.40	398.55		3053.00	21.10	446.02	
7/23/2013	431.50	0.00	3162.00	20.40	398.61		3057.70	21.80	444.93	
8/21/2013	418.00	0.00	3162.30	20.50	398.53		3060.90	22.90	444.21	
9/24/2013	404.00	0.00	3162.50	20.70	398.48		3064.50	23.60	443.38	
10/29/2013	400.60	0.00	3162.10	21.00	398.60		3069.00	25.10	442.37	
11/26/2013	407.90	0.44	3161.50	21.20	398.77		3072.60	22.20	441.37	
12/19/2013	425.80	0.54	3162.90	22.30	398.42		3075.30	22.40	440.73	
1/28/2014	439.70	0.00	3161.80	20.80	398.67		3074.00	21.10	440.99	
2/25/2014	449.70	0.83	3162.00	20.70	398.62		3058.30	20.80	444.74	
3/26/2014	465.10		3161.80	20.40	398.66		2984.10	20.50	462.26	
3/28/2014	465.70	1.15	3161.20	20.40	398.82		2980.00	20.50	463.22	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	3161.90	20.30	398.63		2977.00	20.50	463.92	
5/28/2014	450.60	0.00	3162.00	20.20	398.60		3030.60	20.40	451.32	
6/25/2014	440.10	0.00	3162.00	20.30	398.61		3052.60	20.70	446.10	
7/29/2014	431.20	0.00	3161.50	20.50	398.75		3058.40	21.60	444.75	
8/26/2014	419.50	0.02	3161.80	20.90	398.68		3061.80	26.40	444.16	
9/23/2014	405.30	0.00	3161.60	21.00	398.73		3064.50	27.60	443.56	
10/29/2014	400.90	0.00	3161.50	21.50	398.77		3070.50	27.30	442.11	
11/25/2014	410.90	0.25	3160.20	21.80	399.13		3074.80	22.40	440.85	
12/30/2014	430.60	2.94	3161.60	23.40	398.80		3078.60	24.50	440.03	
1/27/2015	466.70	0.83	3161.10	21.60	398.88		2978.20	21.70	463.69	
2/25/2015	468.90	0.69	3160.90	21.40	398.93		2963.50	21.40	467.09	
3/26/2015	465.90	0.61	3161.10	21.30	398.88		2974.10	21.30	464.63	
4/28/2015	465.70	0.20	3161.60	21.50	398.75		2976.20	21.40	464.14	
5/28/2015	466.40	1.08	3161.40	21.50	398.80		2973.70	21.50	464.73	
6/30/2015	454.50	0.00	3161.60	21.30	398.74		3017.10	22.20	454.59	
7/28/2015	445.60	0.00	3161.40	21.10	398.79		3047.50	21.70	447.36	
8/28/2015	437.60	0.00	3161.10	21.60	398.88		3057.60	21.90	444.96	
9/24/2015	426.90	1.51	3161.00	23.50	398.96		3061.00	25.60	444.31	
10/27/2015	415.40	0.49	3161.30	21.80	398.84		3086.60	27.60	438.24	
11/19/2015	412.90	0.09	3160.50	22.00	399.06		3090.70	22.50	437.02	
12/22/2015	425.50	0.69	3161.68	21.90	398.74		3094.29	23.70	436.21	
1/27/2016	463.60	2.86	3160.29	21.90	399.11		3018.88	21.50	454.14	
2/25/2016	468.90	0.25	3160.87	21.90	398.95		2985.15	20.80	462.03	
3/30/2016	468.00	1.44	3161.26	21.60	398.84		2984.84	20.70	462.10	
4/28/2016	461.30	0.30	3161.56	21.50	398.76		3012.59	20.80	455.59	
5/25/2016	451.30	0.18	3160.43	21.30	399.06		3049.04	21.20	446.97	
6/28/2016	414.10	0.00	3161.03	21.20	398.89		3070.88	22.30	441.79	
7/27/2016	434.20	0.00	3160.80	21.20	398.95		3078.30	24.90	440.12	
8/23/2016	418.60	0.00	3160.65	21.20	398.99		3082.53	26.40	439.17	
9/27/2016	406.40	0.00	3160.63	21.40	399.00		3087.44	26.50	437.99	
10/26/2016	404.00	0.48	3160.50	21.60	399.05		3090.40	26.40	437.27	

Notes:

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

TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	3160.67	21.80	399.01		3092.04	25.70	436.84	
12/20/2016	441.10	3.48	3159.80	22.00	399.24		3093.59	23.50	436.37	
1/26/2017	471.60	5.67	3159.30	22.00	399.38		2976.99	21.80	463.98	
2/24/2017	472.05	3.95	3160.02	22.00	399.19		2971.88	20.70	465.12	
2/25/2017	472.00		3159.68	21.90	399.27		2971.58	20.70	465.19	
2/26/2017	472.00		3160.09	21.90	399.16		2971.99	20.70	465.09	
2/27/2017	472.00		3160.10	21.90	399.16		2971.99	20.07	465.06	
2/28/2017	471.90		3160.84	21.90	398.96		2972.98	20.60	464.86	
3/1/2017	471.90		3160.24	21.90	399.12		2971.86	20.07	465.09	
3/2/2017	471.90		3159.45	21.90	399.34		2971.67	20.50	465.16	
3/29/2017	467.90	0.10	3160.28	21.80	399.11		2987.31	20.10	461.49	
4/27/2017	457.60	0.04	3160.50	21.50	399.04		3026.10	20.30	452.38	
5/23/2017	453.50	0.43	3160.48	21.40	399.04		3117.73	20.90	430.38	
6/21/2017	447.40	0.00	3161.03	21.30	398.89		3063.65	21.60	443.49	
7/26/2017	435.10	0.00	3159.94	21.20	399.18		3078.88	24.30	439.96	
8/25/2017	420.10	0.00	3160.80	21.20	398.95		3083.07	25.80	439.01	
9/27/2017	407.10	0.00	3161.46	21.40	398.78		3088.29	26.60	437.79	
10/26/2017	395.00	0.00	3161.31	21.60	398.83		3090.24	26.30	437.31	
11/28/2017	409.00	0.09	3161.01	21.90	398.92		3096.24	25.10	435.80	
12/20/2017	416.80	0.00	3160.51	22.10	399.06		3099.02	23.80	435.07	
1/24/2018	434.50	1.31	3160.37	22.10	398.47		3099.64	22.70	433.82	
2/21/2018	443.10	0.29	3160.56	22.10	398.42		3096.22	22.90	434.65	
3/29/2018	453.00	1.28	3160.64	21.90	398.40		3066.36	22.10	441.85	
4/26/2018	449.10	0.05	3160.65	21.70	398.40		3066.28	21.60	441.87	
5/31/2018	453.10	0.20	3161.37	21.50	398.21		3055.75	21.90	444.40	
6/28/2018	448.20	0.00	3136.14	21.40	404.96		3066.57	22.50	441.80	
7/25/2018	440.40	0.00	3160.88	24.40	398.34		3076.99	21.30	439.30	
8/22/2018	427.10	0.00	3160.67	21.40	398.39		3082.41	26.40	437.99	
9/27/2018	439.60	0.00	3161.01	21.50	398.30		3087.28	27.00	436.81	
10/18/2018	405.30	0.90	3161.04	21.80	398.29		3092.63	26.20	435.52	
11/28/2018	408.60	1.19	3160.58	21.90	398.42		3096.07	25.20	434.68	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	
12/19/2018	436.00	1.99	3160.04	22.10	398.56		3097.94	23.60	434.23		
1/30/2019	463.80	4.71	3161.13	22.10	398.27		3016.30	21.50	453.77		
2/27/2019	466.20	6.55	3160.52	22.00	398.43		2990.35	20.60	459.88		
3/27/2019	463.30	1.34	3161.04	21.80	398.29		3013.16	19.80	454.52		
4/29/2019	453.00	0.13	3161.38	21.60	398.20		3046.09	20.10	446.70		
5/30/2019	451.80	0.64	3161.42	21.40	398.19		3034.07	20.30	449.57		
6/26/2019	446.20	0.01	3161.13	22.10	398.27		3016.30	21.50	453.77		
7/5/2019	39.40	0.00									
7/30/2019	434.80	0.00				VWP data logger is crashing. Repairs are in planning.				VWP data logger is crashing. Repairs are in planning.	
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	22.10	398.56		3097.94	23.60	434.23		
1/28/2020	465.40	0.20	3161.12	21.10	398.27		3016.29	21.50	453.78		
2/26/2020	459.60	0.14	3161.80	22.10	398.09		3024.40	21.50	451.86		
3/24/2020	470.70	3.49	3162.40	21.70	397.93		2978.40	19.90	462.67		
4/29/2020	467.60	3.65	3162.43	21.50	397.92		2987.75	20.00	460.49		
5/27/2020	459.10	0.02	3162.77	21.30	397.83		3021.61	20.80	452.52		
6/23/2020	447.00	0.00	3162.53	21.20	397.89		3061.70	21.70	442.97		
7/30/2020	434.00	0.00	3162.58	21.10	397.88		3079.59	24.20	438.67		
8/26/2020	417.70	0.00	3163.26	21.20	397.70		3081.89	25.60	438.11		
9/29/2020	403.60	0.00	3162.43	21.40	397.92		3086.43	26.40	437.02		
10/28/2020	404.50	0.00	3162.21	21.60	397.98		3089.52	26.60	436.27		
11/24/2020	413.50	0.42	3162.43	21.80	397.92		3093.25	24.80	435.37		
12/22/2020	408.00	1.13	3162.34	22.00	397.94		3096.11	23.00	434.67		
1/27/2021	435.60	2.25	3162.44	22.00	397.92		3096.57	22.00	434.56		
2/25/2021	457.30	0.05	3162.81	21.90	397.82		3043.00	20.90	447.44		
3/23/2021	465.90	1.36	3163.02	21.70	397.76		3000.12	20.40	457.59		
4/27/2021	462.10	0.04	3162.85	21.50	397.81		3012.43	20.40	454.69		
5/26/2021	455.00	0.03	3162.31	21.30	397.95		3046.19	21.00	446.68		

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	3162.96	21.20	397.78		3076.31	22.90	439.46	
7/29/2021	423.60	0.07	3162.28	21.20	397.96		3079.16	24.30	438.77	
8/24/2021	408.00	0.00	3162.40	21.20	397.93		3083.40	25.20	437.75	
9/29/2021	398.00	0.04	3162.23	21.40	397.97		3087.10	26.10	436.86	
10/26/2021	417.00	0.87	3162.31	15.80	397.95		3087.71	15.80	436.71	
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.
1/27/2022	467.80	0.07	3982.00	17.70			4019.21	17.70		
2/23/2022	464.80	0.29	4052.62	18.00			4047.55	18.10		
3/23/2022	464.40	1.08	4634.63	13.30			4619.47	13.70		
4/26/2022	467.10	0.03	4720.41	12.70			4719.51	13.20		
5/26/2022	464.80	0.08	4758.99	13.10			4748.99	13.20		
6/28/2022	457.30	0.00	4798.77	13.20			4790.42	13.30		
7/26/2022	440.70	0.00	4933.42	11.70			5003.15	11.80		
8/25/2022	429.50	0.05	5123.76	11.10			3080.27	11.10	439.01	
9/28/2022	410.80	0.35	4421.30	32.70			4846.71	32.20		
10/25/2022	407.30	0.35	4223.26	30.30			4216.24	30.40		
11/23/2022	427.30	0.80	3161.78	15.80	398.53		3089.30	16.00	437.05	
12/20/2022	441.90	2.14	3161.13	12.20	398.61		3090.44	12.20	436.60	
1/26/2023	470.30	5.64	3161.13	3.59	398.37		2984.76	3.66	461.35	
2/23/2023	471.00	3.33	3162.80	2.13	397.88		2976.47	2.47	463.23	
3/28/2023	471.20	5.72	3162.26	3.13	398.05		2973.45	3.20	463.97	
4/25/2023	469.40	0.16	3162.82	11.80	398.14		2981.00	11.80	462.60	
5/23/2023	471.00	1.35	3166.90	4.47	396.84		2974.31	4.52	463.83	
6/28/2023	468.80	0.1	3166.81	3.25	396.83		2982.09	3.35	461.96	
7/27/2023	455.90	0	3166.86	2.18	396.79		3031.32	2.30	450.32	
8/29/2023	453.80	2.28	3167.03	2.37	396.75		3049.57	2.50	445.99	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
9/26/2023	445.00	0	3166.27	2.74	396.96		3072.61	2.76	440.48	
10/26/2023	437.40	0.21	3167.08	1.55	396.71		3081.97	1.45	438.16	
11/29/2023	425.00	0.78	3165.91	2.18	397.04		3085.77	2.25	437.28	
12/21/2023	421.00	1.60	3166.93	2.45	396.78		3087.47	2.52	436.88	
1/24/2024	459.70	2.17	3166.78	1.28	396.78		3040.23	1.45	448.17	
2/27/2024	468.70	8.89	3166.52	1.01	396.85		2987.00	1.06	460.71	
3/26/2024	467.60	3.06	3166.61	1.18	396.83		2989.73	1.28	460.08	
4/24/2024	469.60	1.49	3166.13	1.11	396.95		2979.98	1.21	462.36	
5/1/2024	469.60	0.00	3166.93	1.16	396.74		2981.43	1.18	462.02	
5/23/2024	468.20	0.08	3166.38	1.01	396.88		2986.44	1.06	460.84	
6/20/2024	464.20	0.00	3166.92	0.87	396.73		3003.78	1.04	456.77	
7/25/2024	447.90	0.00	3166.42	0.51	396.86		3068.23	0.60	441.43	
8/27/2024	430.40	0.00	3166.17	0.46	396.93		3079.92	0.53	438.61	
9/24/2024	418.60	0.00	3166.94	1.18	396.74		3084.95	1.28	437.43	
10/29/2024	407.70	0.00	3165.70	0.99	397.07		3088.90	1.04	436.47	
11/21/2024	407.00	0.11	3165.75	0.70	397.05		3091.12	0.72	435.92	
12/17/2024	415.80	0.10	3165.99	0.72	396.98		3095.91	0.72	434.75	
1/28/2025	427.30	1.00	3165.69	0.36	397.05		3098.98	0.41	434.00	
2/25/2025	465.40	2.02	3166.62	0.34	396.80		3012.81	0.38	454.62	
3/20/2025	467.90	2.20	3166.03	0.09	396.95		2996.02	0.17	458.56	
4/14/2025	464.20	#N/A	3166.37	0.09	396.86		3006.41	0.17	456.11	
4/24/2025	463.50	0.44	3165.98	0.14	396.97		3004.44	0.21	456.58	
5/22/2025	463.55	0.07	3165.98	0.07	396.97		3014.26	0.09	454.26	
6/19/2025	456.20	0.11	3166.09	0.00	396.93		3060.06	0.00	443.36	
7/29/2025	443.60	0.00	3165.75	0.00	397.03		3073.75	0.00	440.08	
8/21/2025	437.20	0.00	3166.04	0.00	396.95		3080.40	0.00	438.47	
9/23/2025	420.60	0.08	3165.71	0.00	397.04		3086.17	0.00	437.08	
10/22/2025	425.30	0.79	3165.89	0.00	396.99		3089.32	0.00	436.32	
11/20/2025	426.60	4.59	3165.66	0.00	397.05		3092.36	0.00	435.58	
12/16/2025	432.80	2.20	3165.48	0.00	397.10		3092.57	0.00	435.53	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	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	21.40	438.34					
1/29/2008	452.20		2854.10	20.90	447.17		3005.00	22.40	420.64	
2/27/2008	460.80		2818.20	20.40	454.82		2976.70	22.40	427.06	
3/26/2008	468.00		2784.90	20.20	461.83					
4/29/2008	468.60		2780.60	20.00	462.73					
5/29/2008	464.70		2795.90	19.50	459.50		2944.40	22.40	434.31	
6/26/2008	455.70		2831.80	20.50	451.93		2960.10	22.40	430.80	
7/29/2008	447.30	0.00	2866.80	21.30	444.44		2980.50	22.40	426.21	
8/28/2008	438.80	0.00	2904.30	22.80	436.34		2999.10	22.40	421.99	
9/26/2008	430.70	0.00	2935.00	23.10	429.58		3014.60	22.60	418.45	
10/29/2008	412.50	0.00	3002.50	23.30	414.43		3044.50	22.40	411.56	
11/25/2008	404.70	2.60	3035.00	22.90	406.98		3060.70	22.40	407.80	
12/30/2008	440.90	3.42	2916.70	21.40	433.55		3047.30	22.40	410.91	
1/28/2009	463.70	0.17	2807.60	20.90	457.09		2990.00	22.40	424.05	
2/25/2009	470.10	3.35	2774.50	20.50	464.02		2946.10	22.40	433.93	
3/26/2009	469.40	0.19	2776.20	19.50	463.63		2936.10	22.40	436.16	
4/29/2009	466.90	0.07	2784.60	20.20	461.90		2936.30	22.40	436.12	
5/18/2009	466.70	0.00	2786.00	20.40	461.61		2937.00	22.40	435.96	
5/29/2009	465.00	0.00	2797.20	20.50	459.26		2941.10	22.40	435.05	
6/30/2009	460.20	0.00	2814.40	20.70	455.64		2949.90	22.40	433.09	

Notes:

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

TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	2851.00	21.20	447.85		2966.50	22.40	429.36	
8/25/2009	440.10	0.00	2895.60	22.00	438.21		2988.20	21.80	424.46	
9/30/2009	432.20	0.00	2929.20	23.00	430.86		3008.60	22.70	419.82	
10/29/2009	431.40	0.53	2935.00	23.00	429.57		3018.70	21.50	417.50	
12/1/2009	427.40	0.00	2953.90	21.80	425.32		3029.40	21.70	415.04	
12/29/2009	448.10	2.06	2873.30	21.50	443.04		3012.70	22.40	418.88	
1/27/2010	465.60	4.62	2796.20	20.80	459.49		2966.40	22.40	429.39	
2/25/2010	470.20	2.51	2772.60	20.40	464.41		2936.00	20.50	436.16	
3/29/2010	465.70	0.99	2790.40	19.40	460.65		2938.20	20.00	435.67	
4/4/2010	465.00		2792.60	19.30	460.18		2939.80	22.40	435.34	
4/27/2010	468.40	1.23	2779.20	22.10	463.11		2936.10	20.00	436.13	
5/27/2010	463.30	0.05	2800.00	20.10	458.66		2940.00	20.10	435.27	
6/30/2010	454.70	0.00	2847.10	20.50	448.65		2963.10	20.30	430.10	
7/28/2010	445.60	0.00	2873.20	21.00	443.04		2977.10	20.80	426.96	
8/31/2010	437.10	0.00	2910.10	22.20	435.04		2998.30	21.80	422.16	
9/29/2010	422.70	0.00	2967.70	23.10	422.28		3023.70	22.70	416.36	
10/27/2010	426.40	2.38	2962.60	22.10	423.38		3035.00	21.80	413.75	
11/29/2010	439.80	0.97	2908.50	21.80	435.37		3025.20	21.70	416.01	
12/30/2010	456.60	8.62	2836.60	20.90	450.92		2991.90	21.00	423.61	
2/1/2011	468.90	0.92	2782.00	20.30	462.45		2942.50	20.40	434.71	
2/23/2011	469.00	0.99	2776.70	19.90	463.54		2936.80	20.00	435.98	
3/29/2011	470.30	2.93	2770.70	19.80	464.79		2931.60	19.80	437.13	
4/27/2011	464.80	0.19	2794.60	19.50	459.77		2938.10	19.50	435.68	
5/26/2011	457.30	0.48	2824.80	20.00	453.40		2953.30	20.00	432.30	
6/28/2011	443.50	0.05	2881.70	20.20	441.17		2977.90	20.00	426.77	
7/29/2011	425.10	0.00	2941.90	21.40	427.98		3008.30	21.10	419.87	
8/24/2011	418.00	0.00	3001.00	22.00	414.71		3037.90	21.60	413.08	
9/27/2011	400.90	0.12	3048.20	23.70	403.97		3060.70	23.30	407.81	
10/26/2011	402.20	1.25	3053.40	22.20	402.70		3069.60	22.00	405.72	
11/30/2011	425.10	1.38	2982.10	21.60	418.98		3064.70	21.60	406.86	
12/21/2011	435.70	0.32	2933.30	20.90	429.86		3056.20	21.00	408.83	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	2900.60	20.80	437.07		3030.10	20.70	414.87	
2/28/2012	448.40	0.42	2866.20	20.20	444.53		2999.00	20.10	421.98	
3/26/2012	452.70	1.06	2849.60	20.00	448.10		2988.80	19.90	424.30	
4/23/2012	463.40	1.32	2804.70	19.70	457.65		2959.30	19.60	430.95	
5/30/2012	457.30	0.02	2825.80	20.20	453.20		2955.20	20.10	431.87	
6/13/2012	452.90	0.02	2845.10	20.30	449.08		2963.40	20.10	430.03	
6/26/2012	450.20	0.00	2856.30	20.40	446.67		2969.40	20.20	428.68	
7/24/2012	439.80	0.00	2898.30	21.00	437.58		2988.60	21.10	424.36	
8/8/2012	437.60	0.12	2909.30	21.70	435.19		2996.40	21.30	422.59	
8/22/2012	433.40	0.00	2925.70	22.40	431.61		3004.60	22.10	420.73	
8/29/2012	431.30	0.00	2934.70	22.90	429.64		3009.00	22.10	419.72	
9/25/2012	420.80	0.00	2982.10	21.60	418.98		3021.40	21.60	416.88	
10/31/2012	412.30	0.26	3008.40	23.20	413.08		3046.60	22.50	411.08	
11/27/2012	420.80	0.58	2991.70	21.90	416.82		3051.30	23.40	410.00	
12/18/2012	448.00	1.44	2883.10	21.40	440.91		3030.40	21.40	414.81	
1/29/2013	468.60	1.18	2781.70	20.80	462.53		2949.20	20.90	433.22	
2/28/2013	469.20	0.30	2777.10	20.10	463.46		2933.30	20.30	436.76	
3/27/2013	468.30	0.50	2780.30	19.30	462.76		2931.00	19.30	437.26	
4/25/2013	462.70	0.00	2798.30	19.40	458.99		2938.70	19.60	435.55	
5/21/2013	454.20	0.00	2836.60	20.30	450.90		2954.90	20.50	431.94	
6/25/2013	439.30	0.00	2894.60	20.00	438.35		2986.00	20.00	424.93	
7/23/2013	431.50	0.00	2926.20	21.70	431.47		3004.70	21.40	420.70	
8/21/2013	418.00	0.00	2978.40	22.60	419.85		3029.70	22.30	414.98	
9/24/2013	404.00	0.00	3033.80	23.10	407.26		3055.10	22.70	409.11	
10/29/2013	400.60	0.00	3047.90	23.70	404.04		3066.20	23.30	406.53	
11/26/2013	407.90	0.44	3036.10	22.40	406.70		3071.80	22.20	405.21	
12/19/2013	425.80	0.54	2973.50	22.40	420.95		3063.50	22.60	407.15	
1/28/2014	439.70	0.00	2904.80	21.10	436.16		3039.50	21.10	412.70	
2/25/2014	449.70	0.83	2860.40	20.70	445.80		3009.40	20.70	419.62	
3/26/2014	465.10		2793.50	20.50	460.04		2960.10	20.40	430.78	
3/28/2014	465.70	1.15	2789.00	20.50	460.99		2956.20	20.50	431.65	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	2788.40	20.30	461.10		2939.20	20.30	435.45	
5/28/2014	450.60	0.00	2850.30	20.50	447.97		2962.10	20.50	430.33	
6/25/2014	440.10	0.00	2893.50	20.80	438.62		2983.70	20.80	425.46	
7/29/2014	431.20	0.00	2929.30	21.80	430.79		3003.60	21.70	420.95	
8/26/2014	419.50	0.02	2974.50	24.60	420.81		3024.40	23.40	416.21	
9/23/2014	405.30	0.00	3028.00	27.70	408.78		3048.00	21.40	410.74	
10/29/2014	400.90	0.00	3049.10	23.70	403.76		3060.90	23.40	407.76	
11/25/2014	410.90	0.25	3027.90	22.70	408.60		3065.70	22.60	406.64	
12/30/2014	430.60	2.94	2960.20	23.20	423.97		3055.70	23.50	408.98	
1/27/2015	466.70	0.83	2789.20	21.70	460.99		2971.80	21.70	428.16	
2/25/2015	468.90	0.69	2775.60	21.40	463.83		2937.10	21.40	435.93	
3/26/2015	465.90	0.61	2787.40	21.20	461.35		2932.70	21.20	436.90	
4/28/2015	465.70	0.20	2788.70	20.40	461.05		2932.70	21.30	436.90	
5/28/2015	466.40	1.08	2786.70	21.50	461.51		2929.00	21.70	437.73	
6/30/2015	454.50	0.00	2836.10	22.00	451.07		2947.30	21.10	433.65	
7/28/2015	445.60	0.00	2873.70	21.70	442.97		2969.60	21.70	428.66	
8/28/2015	437.60	0.00	2905.10	22.10	436.13		2987.30	22.10	424.66	
9/24/2015	426.90	1.51	2950.00	22.90	426.23		3009.00	22.20	419.72	
10/27/2015	415.40	0.49	2995.10	26.30	416.23		3030.80	24.80	414.75	
11/19/2015	412.90	0.09	3012.80	22.90	412.06		3043.80	22.80	411.73	
12/22/2015	425.50	0.69	2973.77	21.80	420.86		3043.85	22.20	411.71	
1/27/2016	463.60	2.86	2810.16	20.80	456.54		2992.70	21.90	423.44	
2/25/2016	468.90	0.25	2778.86	20.30	463.10		2941.28	21.60	435.00	
3/30/2016	468.00	1.44	2778.46	20.10	463.18		2925.94	21.60	438.41	
4/28/2016	461.30	0.30	2809.03	20.10	456.75		2934.25	21.00	436.56	
5/25/2016	451.30	0.18	2850.06	20.30	448.01		2954.44	20.90	432.05	
6/28/2016	414.10	0.00	2884.16	20.70	440.65		2973.70	20.90	427.72	
7/27/2016	434.20	0.00	2922.10	21.30	432.36		2992.17	21.00	423.55	
8/23/2016	418.60	0.00	2980.42	22.10	419.38		3018.64	21.20	417.51	
9/27/2016	406.40	0.00	3033.58	22.70	407.30		3044.78	21.60	411.49	
10/26/2016	404.00	0.48	3048.70	22.70	403.81		3055.10	21.90	409.10	

Notes:

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**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	3023.53	22.50	409.59		3058.41	26.20	408.38	
12/20/2016	441.10	3.48	2918.66	22.00	433.15		3040.23	22.30	412.55	
1/26/2017	471.60	5.67	2771.84	21.10	464.60		2953.45	22.00	432.29	
2/24/2017	472.05	3.95	2767.24	20.50	465.54		2925.06	21.70	438.60	
2/25/2017	472.00		2767.01	20.50	465.58		2924.57	21.80	438.71	
2/26/2017	472.00		2767.46	20.40	465.49		2924.16	21.70	438.80	
2/27/2017	472.00		2767.31	20.40	465.52		2924.02	21.80	438.83	
2/28/2017	471.90		2768.30	20.40	465.31		2923.73	21.70	438.90	
3/1/2017	471.90		2767.52	20.40	465.47		2924.67	21.80	438.69	
3/2/2017	471.90		2767.23	20.40	465.53		2922.65	21.70	439.14	
3/29/2017	467.90	0.10	2784.31	19.90	461.95		2924.16	21.40	438.80	
4/27/2017	457.60	0.04	2826.30	19.80	453.07		2941.70	21.10	434.90	
5/23/2017	453.50	0.43	2846.14	20.10	448.84		2954.91	20.90	431.95	
6/21/2017	447.40	0.00	2872.23	20.50	443.23		2966.15	20.80	429.42	
7/26/2017	435.10	0.00	2922.05	21.20	432.37		2990.05	20.90	424.03	
8/25/2017	420.10	0.00	2981.67	22.10	419.09		3012.74	21.20	418.86	
9/27/2017	407.10	0.00	3027.11	22.70	408.78		3040.78	21.50	412.41	
10/26/2017	395.00	0.00	3063.05	22.80	400.49		3054.84	21.90	409.16	
11/28/2017	409.00	0.09	2828.52	22.80	452.72		3060.62	22.20	407.81	
12/20/2017	416.80	0.00	2998.56	22.10	415.27		3055.46	22.40	409.02	
1/24/2018	434.50	1.31	2943.98	21.10	427.54		3046.11	22.20	411.19	
2/21/2018	443.10	0.29	2901.14	20.60	436.99		3030.22	21.90	414.87	
3/29/2018	453.00	1.28	2855.13	20.10	446.97		2995.99	21.50	422.70	
4/26/2018	449.10	0.05	2828.01	20.10	452.79		2881.36	21.20	448.24	
5/31/2018	453.10	0.20	2852.89	20.40	447.47		2973.27	21.00	427.85	
6/28/2018	448.20	0.00	2872.28	20.00	443.26		2972.82	21.90	427.96	
7/25/2018	440.40	0.00	2904.83	21.10	436.20		2983.70	21.10	425.49	
8/22/2018	427.10	0.00	2950.76	22.10	426.07		3002.00	21.30	421.33	
9/27/2018	439.60	0.00	3023.87	22.90	409.56		3035.05	21.70	413.75	
10/18/2018	405.30	0.90	3046.04	22.90	404.45		3051.05	22.00	410.05	
11/28/2018	408.60	1.19	3039.88	22.50	405.86		3055.58	22.30	409.00	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	
12/19/2018	436.00	1.99	2951.35	21.90	425.93		3042.36	22.30	412.06		
1/30/2019	463.80	4.71	2815.04	21.00	455.58		2982.42	22.00	425.79		
2/27/2019	466.20	6.55	2797.92	20.40	459.18		2945.39	21.70	434.12		
3/27/2019	463.30	1.34	2816.66	19.70	455.19		2940.82	21.30	435.13		
4/29/2019	453.00	0.13	2953.17	19.60	425.43		2955.81	21.00	431.78		
5/30/2019	451.80	0.64	2928.10	20.70	431.05		2952.61	21.20	432.50		
6/26/2019	446.20	0.01	2815.13	21.00	455.56		2982.42	22.00	425.79		
7/5/2019	39.40	0.00									
7/30/2019	434.80	0.00				VWP data logger is crashing. Repairs are in planning.				VWP data logger is crashing. Repairs are in planning.	
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	21.90	425.93		3042.46	22.30	412.04		
1/28/2020	465.40	0.20	2815.12	21.00	455.57		2982.40	22.00	425.80		
2/26/2020	459.60	0.14	2830.70	21.00	452.25		2951.70	22.00	432.71		
3/24/2020	470.70	3.49	2782.80	19.80	462.33		2934.80	21.30	436.47		
4/29/2020	467.60	3.65	2792.97	19.70	460.19		2923.33	21.00	439.01		
5/27/2020	459.10	0.02	2829.34	20.00	452.50		2937.04	20.80	435.97		
6/23/2020	447.00	0.00	2878.14	20.50	442.01		2959.04	20.70	431.05		
7/30/2020	434.00	0.00	2934.11	21.20	429.74		2987.26	20.90	424.68		
8/26/2020	417.70	0.00	2997.42	21.90	415.55		3016.35	21.10	418.05		
9/29/2020	403.60	0.00	3054.08	22.50	402.57		3042.87	21.40	411.94		
10/28/2020	404.50	0.00	3067.82	23.00	399.40		3051.49	21.80	409.94		
11/24/2020	413.50	0.42	3030.96	22.80	407.92		3055.34	22.20	409.05		
12/22/2020	408.00	1.13	3045.74	21.80	404.48		3060.14	22.30	407.93		
1/27/2021	435.60	2.25	2952.21	20.50	425.68		3050.64	21.90	410.14		
2/25/2021	457.30	0.05	2849.80	20.10	448.12		3009.37	21.50	419.65		
3/23/2021	465.90	1.36	2808.74	19.80	456.87		2968.95	21.20	428.82		
4/27/2021	462.10	0.04	2822.62	19.80	453.92		2948.82	20.90	433.34		
5/26/2021	455.00	0.03	2861.60	20.00	445.57		2957.07	20.70	431.49		

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	2926.26	20.60	431.46		2985.40	20.70	425.10	
7/29/2021	423.60	0.07	2974.84	21.10	420.63		3005.63	20.80	420.50	
8/24/2021	408.00	0.00	3036.59	21.80	406.59		3034.54	21.00	413.86	
9/29/2021	398.00	0.04	3076.13	22.60	397.45		3051.09	21.50	410.03	
10/26/2021	417.00	0.87	3072.10	16.00	398.12		3052.24	15.98	409.70	
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.
1/27/2022	467.80	0.07	-9999.00	17.80			3804.51	17.80		
2/23/2022	464.80	0.29	3918.35	18.10			3940.32	18.20		
3/23/2022	464.40	1.08	4847.81	13.60			4625.22	13.00		
4/26/2022	467.10	0.03	4848.72	13.20			4711.65	13.70		
5/26/2022	464.80	0.08	4853.04	13.00			4742.93	13.40		
6/28/2022	457.30	0.00	4884.42	13.40			4789.00	13.30		
7/26/2022	440.70	0.00	5104.71	11.50			5010.67	11.40		
8/25/2022	429.50	0.05	4962.90	11.50			5104.14	11.30		
9/28/2022	410.80	0.35	4183.48	32.60			3785.33	32.60		
10/25/2022	407.30	0.35	-999999	30.30			4212.16	30.40		
11/23/2022	427.30	0.80	5405.46	16.10			5262.61	15.90		
12/20/2022	441.90	2.14	5395.47	12.10			5295.36	12.30		
1/26/2023	470.30	5.64	5873.66	3.25			-999999.00	3.54		
2/23/2023	471.00	3.33	5839.17	2.35			-999999.00	2.35		
3/28/2023	471.20	5.72	5938.91	3.10			-999999.00	3.25		
4/25/2023	469.40	0.16	5685.45	11.80			5472.85	12.00		
5/23/2023	471.00	1.35	2789.64	4.45	460.27		2912.61	4.59	441.19	
6/28/2023	468.80	0.1	2799.42	3.49	458.17		2911.65	3.49	441.39	
7/27/2023	455.90	0	2853.30	2.40	446.64		2933.72	2.50	436.49	
8/29/2023	453.80	2.28	2869.22	2.57	443.21		2953.98	2.57	431.97	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
9/26/2023	445.00	0	2903.68	2.79	435.70		2964.22	2.79	429.67	
10/26/2023	437.40	0.21	2932.68	1.52	429.25		2981.07	1.67	425.86	
11/29/2023	425.00	0.78	2982.45	2.25	418.14		3004.50	2.30	420.54	
12/21/2023	421.00	1.60	3002.98	2.55	413.49		3017.83	2.57	417.49	
1/24/2024	459.70	2.17	2852.30	1.48	446.82		2992.29	1.50	423.31	
2/27/2024	468.70	8.89	2803.80	1.14	457.15		2937.35	1.14	435.67	
3/26/2024	467.60	3.06	2806.44	1.43	456.60		2927.40	1.60	437.88	
4/24/2024	469.60	1.49	2796.05	1.23	458.79		2920.38	1.26	439.44	
5/1/2024	469.60	0.00	2797.27	1.26	458.53		2412.63	1.28		Omitted
5/23/2024	468.20	0.08	2802.45	1.11	457.43		2916.99	1.16	440.18	
6/20/2024	464.20	0.00	2820.64	0.89	453.57		2920.92	0.80	439.31	
7/25/2024	447.90	0.00	2902.81	0.60	435.80		2955.72	0.68	431.56	
8/27/2024	430.40	0.00	2959.51	0.55	423.23		2984.47	0.65	425.07	
9/24/2024	418.60	0.00	3008.70	1.31	412.14		3011.32	1.26	418.97	
10/29/2024	407.70	0.00	3053.64	1.04	401.79		3037.77	1.09	412.88	
11/21/2024	407.00	0.11	3058.00	0.77	400.77		3044.03	0.72	411.42	
12/17/2024	415.80	0.10	3031.28	0.75	406.94		3045.11	0.80	411.17	
1/28/2025	427.30	1.00	2974.51	0.46	419.85		3040.61	0.48	412.21	
2/25/2025	465.40	2.02	2825.22	0.38	452.57		2998.64	0.43	421.85	
3/20/2025	467.90	2.20	2812.64	0.21	455.24		2948.93	0.21	433.07	
4/14/2025	464.20	#N/A	2823.36	0.21	452.96		2942.66	0.24	434.47	
4/24/2025	463.50	0.44	2819.79	0.19	453.72		2940.16	0.26	435.03	
5/22/2025	463.55	0.07	2831.45	0.19	451.23		2935.64	0.19	436.04	
6/19/2025	456.20	0.11	2885.58	0.00	439.55		2954.96	0.00	431.72	
7/29/2025	443.60	0.00	2908.03	0.02	434.63		2968.15	0.00	428.76	
8/21/2025	437.20	0.00	2948.06	0.00	425.76		2985.77	0.00	424.77	
9/23/2025	420.60	0.08	3008.74	0.00	412.07		3015.59	0.00	417.97	
10/22/2025	425.30	0.79	2994.77	0.00	415.25		3021.50	0.00	416.62	
11/20/2025	426.60	4.59	2966.91	0.00	421.54		3027.18	0.00	415.31	
12/16/2025	432.80	2.20	2935.65	0.00	428.53		3021.52	0.00	416.61	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	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	22.40	400.84		3061.00	23.30	440.94	
1/29/2008	452.20		3083.40	22.40	400.88		3063.40	22.40	440.32	
2/27/2008	460.80		3083.60	22.40	400.84		3060.50	21.50	440.96	
3/26/2008	468.00		3083.60	22.40	400.84		3043.50	20.80	444.94	
4/29/2008	468.60		3083.70	22.40	400.81		3026.80	20.50	448.86	
5/29/2008	464.70		3083.90	22.40	400.76		3024.30	20.50	449.44	
6/26/2008	455.70		3084.00	22.40	400.74		3031.20	20.80	447.84	
7/29/2008	447.30	0.00	3084.10	22.40	400.72		3038.50	21.50	446.16	
8/28/2008	438.80	0.00	3084.20	22.40	400.69		3042.10	22.70	445.38	
9/26/2008	430.70	0.00	3084.20	22.40	400.69		3044.90	23.70	444.78	
10/29/2008	412.50	0.00	3084.00	22.40	400.74		3048.20	24.40	444.04	
11/25/2008	404.70	2.60	3083.90	21.30	400.75		3051.30	22.40	443.19	
12/30/2008	440.90	3.42	3083.40	22.40	400.88		3056.10	23.70	442.13	
1/28/2009	463.70	0.17	3083.20	22.40	400.93		3055.40	22.50	442.22	
2/25/2009	470.10	3.35	3083.30	22.40	400.91		3035.40	21.80	446.91	
3/26/2009	469.40	0.19	3083.50	22.40	400.86		3024.60	21.20	449.41	
4/29/2009	466.90	0.07	3083.50	22.40	400.86		3020.60	20.80	450.33	
5/18/2009	466.70	0.00	3082.00	22.40	401.22		3021.00	20.70	450.23	
5/29/2009	465.00	0.00	3083.70	22.40	400.81		3022.20	20.80	449.95	
6/30/2009	460.20	0.00	3083.90	20.70	400.74		3027.00	20.80	448.83	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	3083.90	20.70	400.74		3034.20	20.90	447.14	
8/25/2009	440.10	0.00	3084.00	21.60	400.73		3038.40	21.60	446.19	
9/30/2009	432.20	0.00	3084.10	22.30	400.72		3042.30	22.40	445.32	
10/29/2009	431.40	0.53	3083.90	21.40	400.75		3045.90	22.00	444.44	
12/1/2009	427.40	0.00	3083.70	21.60	400.80		3050.20	23.90	443.54	
12/29/2009	448.10	2.06	3083.40	21.60	400.87		3054.20	22.40	442.50	
1/27/2010	465.60	4.62	3083.40	21.50	400.87		3050.60	21.80	443.32	
2/25/2010	470.20	2.51	3083.30	20.70	400.89		3029.40	21.60	448.31	
3/29/2010	465.70	0.99	3083.40	20.30	400.86		3023.50	20.50	449.63	
4/4/2010	465.00		3083.40	21.00	400.87		3023.80	20.90	449.58	
4/27/2010	468.40	1.23	3083.30	20.10	400.88		3021.30	20.20	450.13	
5/27/2010	463.30	0.05	3083.00	20.20	400.95		3021.00	20.20	450.20	
6/30/2010	454.70	0.00	3083.60	20.40	400.81		3031.70	20.50	447.71	
7/28/2010	445.60	0.00	3083.60	20.60	400.82		3036.30	20.80	446.64	
8/31/2010	437.10	0.00	3083.70	21.60	400.80		3040.50	21.60	445.70	
9/29/2010	422.70	0.00	3083.90	22.40	400.76		3043.30	22.40	445.08	
10/27/2010	426.40	2.38	3083.70	21.70	400.80		3045.80	21.80	444.46	
11/29/2010	439.80	0.97	3083.10	21.60	400.95		3049.00	21.70	443.70	
12/30/2010	456.60	8.62	3083.10	21.00	400.94		3050.30	21.20	443.36	
2/1/2011	468.90	0.92	3083.00	20.50	400.96		3032.00	20.60	447.64	
2/23/2011	469.00	0.99	3082.80	20.20	401.00		3023.60	20.30	449.60	
3/29/2011	470.30	2.93	3082.90	19.80	400.97		3014.70	19.90	451.66	
4/27/2011	464.80	0.19	3088.20	19.60	399.69		3014.30	19.70	451.74	
5/26/2011	457.30	0.48	3083.10	19.90	400.92		3020.80	19.90	450.23	
6/28/2011	443.50	0.05	3083.40	20.10	400.85		3027.90	20.10	448.58	
7/29/2011	425.10	0.00	3083.70	20.90	400.79		3029.60	20.90	448.22	
8/24/2011	418.00	0.00	3083.60	21.40	400.82		3029.10	21.40	448.37	
9/27/2011	400.90	0.12	3083.40	22.90	400.89		3027.20	22.80	448.89	
10/26/2011	402.20	1.25	3083.10	21.80	400.95		3028.20	22.00	448.61	
11/30/2011	425.10	1.38	3082.70	21.50	401.04		3031.00	21.70	447.94	
12/21/2011	435.70	0.32	3082.60	21.20	401.06		3033.70	21.20	447.28	

Notes:

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**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	3083.20	20.80	400.91		3036.90	21.00	446.51	
2/28/2012	448.40	0.42	3083.30	20.30	400.81		3038.60	20.40	446.08	
3/26/2012	452.70	1.06	3083.70	20.90	400.79		3038.20	21.00	446.21	
4/23/2012	463.40	1.32	3083.80	19.80	400.75		3030.70	19.90	447.91	
5/30/2012	457.30	0.02	3083.90	20.10	400.73		3020.20	20.20	450.39	
6/13/2012	452.90	0.02	3084.10	20.10	400.69		3021.50	20.30	450.09	
6/26/2012	450.20	0.00	3084.20	20.10	400.66		3022.40	20.20	449.87	
7/24/2012	439.80	0.00	3084.10	21.50	400.70		3024.10	21.80	449.57	
8/8/2012	437.60	0.12	3084.20	20.40	400.67		3025.00	21.40	449.33	
8/22/2012	433.40	0.00	3084.30	22.00	400.66		3025.40	22.00	449.27	
8/29/2012	431.30	0.00	3084.40	21.90	400.64		3025.50	22.00	449.25	
9/25/2012	420.80	0.00	3084.00	21.50	400.73		3027.00	22.40	448.92	
10/31/2012	412.30	0.26	3084.10	22.30	400.72		3028.30	22.40	448.61	
11/27/2012	420.80	0.58	3083.60	23.80	400.86		3031.10	24.50	448.08	
12/18/2012	448.00	1.44	3083.40	21.40	400.87		3033.90	21.50	447.25	
1/29/2013	468.60	1.18	3083.00	20.90	400.96		3018.10	21.00	450.93	
2/28/2013	469.20	0.30	3093.10	20.40	398.52		3004.30	20.50	454.12	
3/27/2013	468.30	0.50	3083.40	19.40	400.85		2998.80	19.50	455.34	
4/25/2013	462.70	0.00	3083.60	19.80	400.80		2699.30	19.90		Omit
5/21/2013	454.20	0.00	3083.60	20.50	400.81		3007.80	20.40	453.30	
6/25/2013	439.30	0.00	3084.10	20.10	400.69		3015.90	20.30	451.40	
7/23/2013	431.50	0.00	3084.10	21.20	400.70		3019.20	21.30	450.69	
8/21/2013	418.00	0.00	3084.10	20.60	400.69		3021.60	21.70	450.15	
9/24/2013	404.00	0.00	3084.00	21.40	400.73		3023.50	22.20	449.73	
10/29/2013	400.60	0.00	3083.80	22.90	400.80		3026.40	23.00	449.09	
11/26/2013	407.90	0.44	3083.30	22.10	400.90		3029.70	22.20	448.27	
12/19/2013	425.80	0.54	3083.30	23.10	400.92		3032.80	23.50	447.62	
1/28/2014	439.70	0.00	3083.10	21.10	400.94		3036.90	21.20	446.52	
2/25/2014	449.70	0.83	3083.10	20.80	400.94		3038.00	20.90	446.25	
3/26/2014	465.10		3082.90	20.50	400.98		3027.30	20.60	448.75	
3/28/2014	465.70	1.15	3083.00	20.50	400.96		3024.90	20.60	449.31	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	3083.20	20.40	400.91		3010.20	20.50	452.74	
5/28/2014	450.60	0.00	3083.20	20.50	400.91		3016.20	20.60	451.35	
6/25/2014	440.10	0.00	3083.40	20.80	400.86		3019.70	20.80	450.54	
7/29/2014	431.20	0.00	3083.40	21.60	400.87		3022.20	21.70	450.01	
8/26/2014	419.50	0.02	3083.40	22.70	400.89		3023.40	22.70	449.78	
9/23/2014	405.30	0.00	3083.40	21.10	400.87		3024.50	25.00	449.65	
10/29/2014	400.90	0.00	3083.10	23.10	400.97		3026.50	23.20	449.08	
11/25/2014	410.90	0.25	3082.70	22.50	401.05		3029.40	22.70	448.37	
12/30/2014	430.60	2.94	3082.70	24.10	401.08		3032.20	25.10	447.85	
1/27/2015	466.70	0.83	3082.20	21.80	401.17		3025.20	22.00	449.32	
2/25/2015	468.90	0.69	3082.40	21.50	401.11		3008.20	21.70	453.28	
3/26/2015	465.90	0.61	3082.50	21.20	401.09		3001.40	21.30	454.84	
4/28/2015	465.70	0.20	3082.70	21.50	401.04		2999.60	21.60	455.28	
5/28/2015	466.40	1.08	3082.70	21.80	401.05		2996.90	21.90	455.92	
6/30/2015	454.50	0.00	3082.70	21.50	401.04		3005.20	22.00	453.99	
7/28/2015	445.60	0.00	3082.00	21.70	401.21		3012.30	21.70	452.32	
8/28/2015	437.60	0.00	3082.70	22.00	401.05		3015.80	22.10	451.53	
9/24/2015	426.90	1.51	3082.00	22.70	401.23		3018.00	24.70	451.16	
10/27/2015	415.40	0.49	3082.70	23.90	401.07		3021.20	23.90	450.36	
11/19/2015	412.90	0.09	3082.70	22.70	401.06		3023.70	22.80	449.72	
12/22/2015	425.50	0.69	3082.21	22.20	401.17		3029.19	24.60	448.53	
1/27/2016	463.60	2.86	3081.63	22.20	401.31		3030.50	23.20	448.14	
2/25/2016	468.90	0.25	3081.70	22.00	401.29		3012.31	22.40	452.36	
3/30/2016	468.00	1.44	3081.96	21.70	401.22		2999.64	21.80	455.28	
4/28/2016	461.30	0.30	3082.13	21.50	401.18		3001.02	21.50	454.94	
5/25/2016	451.30	0.18	3082.16	21.40	401.17		3009.91	21.50	452.87	
6/28/2016	414.10	0.00	3081.49	21.30	401.33		3016.37	21.90	451.38	
7/27/2016	434.20	0.00	3082.40	21.30	401.11		3018.40	23.00	450.97	
8/23/2016	418.60	0.00	3082.90	21.30	400.99		3019.75	24.10	450.72	
9/27/2016	406.40	0.00	3082.08	21.60	401.19		3022.43	25.00	450.14	
10/26/2016	404.00	0.48	3081.90	21.90	401.24		3025.10	26.20	449.52	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	3081.70	22.10	401.29		3028.17	25.10	448.80	
12/20/2016	441.10	3.48	3081.55	22.30	401.33		3031.56	24.50	447.97	
1/26/2017	471.60	5.67	3081.10	22.30	401.44		3014.56	23.20	451.88	
2/24/2017	472.05	3.95	3081.04	22.10	401.45		2999.46	22.40	455.35	
2/25/2017	472.00		3081.08	22.10	401.44		2998.95	22.40	455.47	
2/26/2017	472.00		3081.09	22.10	401.44		2992.11	22.30	457.05	
2/27/2017	472.00		3081.09	22.10	401.44		2992.67	22.30	456.92	
2/28/2017	471.90		3081.21	22.10	401.41		2998.07	22.30	455.67	
3/1/2017	471.90		3081.14	22.10	401.42		2996.94	22.40	455.94	
3/2/2017	471.90		3080.93	22.10	401.47		2997.18	22.20	455.87	
3/29/2017	467.90	0.10	3080.93	21.80	401.47		2995.28	21.60	456.28	
4/27/2017	457.60	0.04	3081.00	21.60	401.45		3003.50	21.20	454.35	
5/23/2017	453.50	0.43	3081.02	21.40	401.44		3010.76	21.20	452.65	
6/21/2017	447.40	0.00	3081.04	21.30	401.44		3015.40	21.50	451.59	
7/26/2017	435.10	0.00	3080.91	21.20	401.47		3018.38	22.70	450.96	
8/25/2017	420.10	0.00	3080.63	21.30	401.54		3019.85	23.80	450.68	
9/27/2017	407.10	0.00	3081.57	21.50	401.31		3019.85	24.70	450.73	
10/26/2017	395.00	0.00	3080.57	21.80	401.56		3025.12	25.00	449.51	
11/28/2017	409.00	0.09	3080.87	22.20	401.49		3028.84	24.90	448.63	
12/20/2017	416.80	0.00	3079.92	22.30	401.72		3031.95	24.40	447.87	
1/24/2018	434.50	1.31	3079.20	22.40	401.90		3035.62	23.60	446.95	
2/21/2018	443.10	0.29	3079.49	22.30	401.83		3037.59	23.20	446.46	
3/29/2018	453.00	1.28	3079.41	22.00	401.85		3038.89	22.80	446.13	
4/26/2018	449.10	0.05	3079.56	21.80	401.81		3039.02	22.50	446.08	
5/31/2018	453.10	0.20	3079.88	21.50	401.73		3036.50	22.70	446.69	
6/28/2018	448.20	0.00	3066.95	21.40	404.83		3036.75	22.00	446.59	
7/25/2018	440.40	0.00	3080.05	21.40	401.69		3033.11	23.40	447.53	
8/22/2018	427.10	0.00	3080.07	21.50	401.68		3031.48	24.40	447.97	
9/27/2018	439.60	0.00	3080.05	21.70	401.69		3031.53	25.30	448.01	
10/18/2018	405.30	0.90	3162.28	22.00	381.68		3033.61	22.50	447.36	
11/28/2018	408.60	1.19	3162.26	22.20	381.69		3036.07	25.20	446.93	

Notes:

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

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	
12/19/2018	436.00	1.99	3162.26	22.30	381.69		3037.87	24.70	446.48		
1/30/2019	463.80	4.71	3162.28	22.30	381.68		3037.78	23.20	446.42		
2/27/2019	466.20	6.55	3162.28	22.10	381.68		3021.12	22.40	450.29		
3/27/2019	463.30	1.34	3162.28	21.18	381.67		3114.76	21.50	427.92		
4/29/2019	453.00	0.13	-999999.0				3019.45	21.10	450.61		
5/30/2019	451.80	0.64	-999999.0				3134.62	21.20	423.08		
6/26/2019	446.20	0.01	-999999.0				3037.78	23.20	446.42		
7/5/2019	39.40	0.00									
7/30/2019	434.80	0.00				VWP data logger is crashing. Repairs are in planning.				VWP data logger is crashing. Repairs are in planning.	
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	-999999.0				3037.88	24.70	446.48		
1/28/2020	465.40	0.20	-999999.0				3037.76	23.20	446.42		
2/26/2020	459.60	0.14	-999999.0				3021.00	23.20	450.36		
3/24/2020	470.70	3.49	-999999.0				3009.90	21.30	452.85		
4/29/2020	467.60	3.65	0.00				2998.05	21.00	455.60		
5/27/2020	459.10	0.02	0.00				3004.15	21.00	454.18		
6/23/2020	447.00	0.00	0.00				3012.75	21.30	452.19		
7/30/2020	434.00	0.00	0.00				3018.14	22.40	450.99		
8/26/2020	417.70	0.00	0.00				3020.66	23.30	450.45		
9/29/2020	403.60	0.00	0.00				3023.01	24.30	449.95		
10/28/2020	404.50	0.00	0.00				3025.18	24.90	449.48		
11/24/2020	413.50	0.42	0.00				3028.78	24.70	448.62		
12/22/2020	408.00	1.13	0.00				3032.10	24.00	447.80		
1/27/2021	435.60	2.25	-999999.00				3036.57	22.90	446.68		
2/25/2021	457.30	0.05	-999999.00				3037.04	22.20	446.53		
3/23/2021	465.90	1.36	-999999.00				3027.79	21.80	448.69		
4/27/2021	462.10	0.04	-999999.00				3017.07	21.30	451.18		
5/26/2021	455.00	0.03	3082.56				3019.55	21.30	450.59		

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	-999999.00				3023.19	21.80	449.77	
7/29/2021	423.60	0.07	3082.78				3024.28	22.50	449.55	
8/24/2021	408.00	0.00	-999999.00				3025.29	23.40	449.37	
9/29/2021	398.00	0.04	3082.63				3027.93	24.20	448.79	
10/26/2021	417.00	0.87	3740.84	17.40			3027.63	16.00	448.40	
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.
1/27/2022	467.80	0.07	3964.17	18.80			3826.72	17.90		
2/23/2022	464.80	0.29	4040.18	19.10			3920.62	18.20		
3/23/2022	464.40	1.08	4627.66	13.10			4634.76	13.00		
4/26/2022	467.10	0.03	4705.83	13.40			4726.53	12.90		
5/26/2022	464.80	0.08	4752.22	13.10			4769.15	13.10		
6/28/2022	457.30	0.00	4796.95	13.10			4769.14	13.40		
7/26/2022	440.70	0.00	4983.95	11.90			5003.18	12.00		
8/25/2022	429.50	0.05	5103.58	11.20			5116.59	11.30		
9/28/2022	410.80	0.35	3941.89	34.10			3801.66	32.70		
10/25/2022	407.30	0.35	4230.67	31.10			4224.50	30.50		
11/23/2022	427.30	0.80	5265.90	16.90			-999999.00	17.30		
12/20/2022	441.90	2.14	5294.72	12.40			-999999.00	12.60		
1/26/2023	470.30	5.64	-999999.00	3.42			-999999.00	3.40		
2/23/2023	471.00	3.33	-999999.00	2.33			-999999.00	2.50		
3/28/2023	471.20	5.72	-999999.00	3.13			-999999.00	3.15		
4/25/2023	469.40	0.16	5473.69	11.90			5478.46	12.00		
5/23/2023	471.00	1.35	3081.58	4.45	401.09		2987.62	4.52	457.08	
6/28/2023	468.80	0.1	3081.55	3.37	401.09		2987.06	3.45	457.15	New hist. max
7/27/2023	455.90	0	3081.64	2.20	401.05		2998.92	2.30	454.33	
8/29/2023	453.80	2.28	3081.62	2.40	401.06		3008.06	2.64	452.22	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 9
SAN JOAQUIN DAM
VIBRATING WIRE PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment	Reading (Hz)	Temp (C°)	Elevation (ft)	Comment
9/26/2023	445.00	0	3081.51	2.79	401.09		3011.96	2.96	451.33	
10/26/2023	437.40	0.21	3081.62	1.55	401.05		3016.21	1.74	450.27	
11/29/2023	425.00	0.78	3081.23	2.20	401.15		3020.76	2.30	449.23	
12/21/2023	421.00	1.60	3081.28	2.47	401.14		3023.67	2.64	448.57	
1/24/2024	459.70	2.17	3080.84	1.52	401.23		3026.04	1.69	447.96	
2/27/2024	468.70	8.89	3080.56	1.01	401.29		3007.61	1.16	452.24	
3/26/2024	467.60	3.06	3080.70	1.31	401.26		3000.00	1.48	454.04	
4/24/2024	469.60	1.49	3080.65	1.16	401.27		2992.96	1.28	455.66	
5/1/2024	469.60	0.00	3080.95	1.21	401.20		2992.21	1.33	455.84	
5/23/2024	468.20	0.08	3080.84	1.06	401.23		2990.95	1.18	456.12	
6/20/2024	464.20	0.00	3081.02	0.51	401.18		2993.78	0.75	455.44	
7/25/2024	447.90	0.00	3080.96	0.65	401.19		3007.83	0.68	452.16	
8/27/2024	430.40	0.00	3081.34	0.51	401.10		3011.97	0.65	451.20	
9/24/2024	418.60	0.00	3080.97	1.16	401.20		3014.82	1.71	450.59	
10/29/2024	407.70	0.00	3080.61	0.92	401.28		3019.24	1.09	449.52	
11/21/2024	407.00	0.11	3080.43	0.70	401.32		3022.79	0.92	448.68	
12/17/2024	415.80	0.10	3080.15	0.60	401.39		3025.84	0.77	447.95	
1/28/2025	427.30	1.00	3080.40	0.38	401.32		3031.43	0.53	446.62	
2/25/2025	465.40	2.02	3079.85	0.36	401.46		3028.51	0.46	447.31	
3/20/2025	467.90	2.20	3079.90	0.09	401.44		3011.92	0.24	451.18	
4/14/2025	464.20	#N/A	3079.97	0.09	401.42		3009.04	0.24	451.86	
4/24/2025	463.50	0.44	3079.84	0.12	401.46		3006.96	0.24	452.34	
5/22/2025	463.55	0.07	3080.11	0.07	401.39		3004.01	0.21	453.03	
6/19/2025	456.20	0.11	3080.33	0.00	401.34		3012.19	0.00	451.11	
7/29/2025	443.60	0.00	3080.25	0.00	401.36		3014.90	0.02	450.47	
8/21/2025	437.20	0.00	3080.37	0.00	401.33		3016.69	0.00	450.05	
9/23/2025	420.60	0.08	3080.34	0.00	401.33		3019.03	0.00	449.51	
10/22/2025	425.30	0.79	3080.13	0.00	401.38		3021.89	0.00	448.84	
11/20/2025	426.60	4.59	3079.95	0.00	401.43		3025.31	0.00	448.03	
12/16/2025	432.80	2.20	3079.79	0.00	401.47		3028.92	0.00	447.18	

Notes:

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

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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:

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

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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	
1/27/2022	467.80	0.07	36.00	341.10	Below Tip	44.00	348.50	At hist max
2/23/2022	464.80	0.29	34.00	339.10	Below Tip	43.00	347.50	
3/23/2022	464.40	1.08	35.00	340.10	Below Tip	43.00	347.50	
4/26/2022	467.10	0.03	34.00	339.10	Below Tip	44.00	348.50	At hist max
5/26/2022	464.80	0.08	34.00	339.10	Below Tip	44.00	348.50	At hist max
6/28/2022	457.30	0.00	34.00	339.10	Below Tip	44.00	348.50	At hist max
7/26/2022	440.70	0.00	34.00	339.10	Below Tip	43.00	347.50	
8/25/2022	429.50	0.05	34.00	339.10	Below Tip	43.00	347.50	
9/28/2022	410.80	0.35	33.00	338.10	Below Tip	44.00	348.50	At hist max
10/25/2022	407.30	0.35	32.00	337.10	Below Tip	42.00	346.50	
11/23/2022	427.30	0.80	31.00	336.10	Below Tip	42.00	346.50	
12/20/2022	441.90	2.14	35.00	340.10	Below Tip	42.00	346.50	
1/26/2023	470.30	5.64	37.00	342.10	Below Tip	43.00	347.50	
2/23/2023	471.00	3.33	34.00	339.10	Below Tip	44.00	348.50	At hist max
3/28/2023	471.20	5.72	35.00	340.10	Below Tip	44.00	348.50	At hist max
4/25/2023	469.40	0.16	37.00	342.10	Below Tip	44.00	348.50	At hist max
5/23/2023	471.00	1.35	36.00	341.10	Below Tip	44.00	348.50	At hist max
6/28/2023	468.80	0.1	34.00	339.10	Below Tip	44.00	348.50	
7/27/2023	455.90	0	35.00	340.10	Below Tip	45.00	349.50	New hist max
8/29/2023	453.80	2.28	36.00	341.10	Below Tip	45.00	349.50	New hist max
9/26/2023	445.00	0	34.00	339.10	Below Tip	44.00	348.50	
10/26/2023	437.40	0.21	34.00	339.10	Below Tip	44.00	348.50	
11/29/2023	425.00	0.78	33.00	338.10	Below Tip	43.00	347.50	
12/21/2023	421.00	1.60	33.00	338.10	Below Tip	44.00	348.50	

Notes:

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

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	34.00	339.10		44.00	348.50	
2/27/2024	468.70	8.89	34.00	339.10		44.00	348.50	
3/26/2024	467.60	3.06	34.00	339.10		44.00	348.50	
4/24/2024	469.60	1.49	34.00	339.10		46.00	350.50	
5/1/2024	469.60	0.00	36.00	341.10		45.00	349.50	
5/23/2024	468.20	0.08	35.00	340.10		44.00	348.50	
6/20/2024	464.20	0.00	37.00	342.10		44.00	348.50	
7/25/2024	447.90	0.00	35.00	340.10		46.00	350.50	
8/27/2024	430.40	0.00	34.00	339.10		44.00	348.50	
9/24/2024	418.60	0.00	34.00	339.10		45.00	349.50	
10/29/2024	407.70	0.00	32.00	337.10		44.00	348.50	
11/21/2024	407.00	0.11	32.00	337.10		43.00	347.50	
12/17/2024	415.80	0.10	32.00	337.10		44.00	348.50	
1/28/2025	427.30	1.00	32.00	337.10		44.00	348.50	
2/25/2025	465.40	2.02	34.00	339.10		44.00	348.50	
3/20/2025	467.90	2.20	35.00	340.10		45.00	349.50	
4/14/2025	464.20	#N/A	36.00	341.10		44.00	348.50	
4/24/2025	463.50	0.44	34.00	339.10		45.00	349.50	
5/22/2025	463.55	0.07	35.00	340.10		46.00	350.50	
6/19/2025	456.20	0.11	35.00	340.10		43.00	347.50	
7/29/2025	443.60	0.00	34.00	339.10		46.00	350.50	
8/21/2025	437.20	0.00	35.00	340.10		45.00	349.50	
9/23/2025	420.60	0.08	34.00	339.10		44.00	348.50	
10/22/2025	425.30	0.79	32.00	337.10		44.00	348.50	
11/20/2025	426.60	4.59	32.00	337.10		44.00	348.50	
12/16/2025	432.80	2.20	33.00	338.10		44.00	348.50	

Notes:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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:

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

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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	

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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	

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	
1/27/2022	467.80	0.07	60.00	364.50	At hist max	98.00	463.10	
2/23/2022	464.80	0.29	59.00	363.50		96.00	461.10	
3/23/2022	464.40	1.08	60.00	364.50	At hist max	94.00	459.10	
4/26/2022	467.10	0.03	60.00	364.50	At hist max	98.00	463.10	
5/26/2022	464.80	0.08	59.00	363.50		96.00	461.10	
6/28/2022	457.30	0.00	60.00	364.50	At hist max	89.00	454.10	
7/26/2022	440.70	0.00	60.00	364.50	At hist max	73.00	438.10	
8/25/2022	429.50	0.05	59.00	363.50		62.00	427.10	
9/28/2022	410.80	0.35	58.00	362.50	Below Tip	44.00	409.10	
10/25/2022	407.30	0.35	58.00	362.50	Below Tip	40.00	405.10	
11/23/2022	427.30	0.80	59.00	363.50	Almost Dry	57.00	422.10	
12/20/2022	441.90	2.14	51.00	355.50	Below Tip	72.00	437.10	
1/26/2023	470.30	5.64	46.00	350.50	Below Tip	100.00	465.10	
2/23/2023	471.00	3.33	52.00	356.50	Below Tip	100.00	465.10	
3/28/2023	471.20	5.72	52.00	356.50	Below Tip	102.00	467.10	
4/25/2023	469.40	0.16	52.00	356.50	Below Tip	100.00	465.10	
5/23/2023	471.00	1.35	52.00	356.50	Below Tip	102.00	467.10	
6/28/2023	468.80	0.1	40.00	344.50	Below Tip	100.00	465.10	
7/27/2023	455.90	0	45.00	349.50	Below Tip	89.00	454.10	
8/29/2023	453.80	2.28	45.00	349.50	Below Tip	86.00	451.10	
9/26/2023	445.00	0	44.00	348.50	Below Tip	78.00	443.10	
10/26/2023	437.40	0.21	45.00	349.50	Below Tip	70.00	435.10	
11/29/2023	425.00	0.78	44.00	348.50	Below Tip	56.00	421.10	
12/21/2023	421.00	1.60	44.00	348.50	Below Tip	52.00	417.10	

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PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	44.00	348.50		90.00	455.10	
2/27/2024	468.70	8.89	44.00	348.50		100.00	465.10	
3/26/2024	467.60	3.06	44.00	348.50		98.00	463.10	
4/24/2024	469.60	1.49	44.00	348.50		102.00	467.10	
5/1/2024	469.60	0.00	45.00	349.50		100.00	465.10	
5/23/2024	468.20	0.08	44.00	348.50		95.00	460.10	
6/20/2024	464.20	0.00	45.00	349.50		95.00	460.10	
7/25/2024	447.90	0.00	44.00	348.50		80.00	445.10	
8/27/2024	430.40	0.00	44.00	348.50		62.00	427.10	
9/24/2024	418.60	0.00	44.00	348.50		50.00	415.10	
10/29/2024	407.70	0.00	43.00	347.50		39.00	404.10	
11/21/2024	407.00	0.11	43.00	347.50		39.00	404.10	
12/17/2024	415.80	0.10	43.00	347.50		46.00	411.10	
1/28/2025	427.30	1.00	43.00	347.50		58.00	423.10	
2/25/2025	465.40	2.02	44.00	348.50		95.00	460.10	
3/20/2025	467.90	2.20	44.00	348.50		99.00	464.10	
4/14/2025	464.20	#N/A	45.00	349.50		94.00	459.10	
4/24/2025	463.50	0.44	44.00	348.50		94.00	459.10	
5/22/2025	463.55	0.07	44.00	348.50		95.00	460.10	
6/19/2025	456.20	0.11	45.00	349.50		88.00	453.10	
7/29/2025	443.60	0.00	44.00	348.50		75.00	440.10	
8/21/2025	437.20	0.00	44.00	348.50		69.00	434.10	
9/23/2025	420.60	0.08	43.00	347.50		52.00	417.10	
10/22/2025	425.30	0.79	42.00	346.50		56.00	421.10	
11/20/2025	426.60	4.59	42.00	346.50		57.00	422.10	
12/16/2025	432.80	2.20	42.00	346.50		63.00	428.10	

Notes:

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

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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:

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2. Piezometer data based on NAVD 88 datum.

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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:

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2. Piezometer data based on NAVD 88 datum.

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	

Notes:

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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	

Notes:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	

Notes:

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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	

Notes:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	
1/27/2022	467.80	0.07	20.00	384.50		48.00	412.50	
2/23/2022	464.80	0.29	20.00	384.50		52.00	416.50	
3/23/2022	464.40	1.08	20.00	384.50		55.00	419.50	
4/26/2022	467.10	0.03	20.00	384.50		57.00	421.50	At hist max
5/26/2022	464.80	0.08	20.00	384.50		56.00	420.50	
6/28/2022	457.30	0.00	20.00	384.50		46.00	410.50	
7/26/2022	440.70	0.00	20.00	384.50		51.00	415.50	
8/25/2022	429.50	0.05	20.00	384.50		48.00	412.50	
9/28/2022	410.80	0.35	20.00	384.50		42.00	406.50	
10/25/2022	407.30	0.35	20.00	384.50		40.00	404.50	
11/23/2022	427.30	0.80	19.00	383.50		40.00	404.50	
12/20/2022	441.90	2.14	20.00	384.50		42.00	406.50	
1/26/2023	470.30	5.64	20.00	384.50		48.00	412.50	
2/23/2023	471.00	3.33	20.00	384.50		54.00	418.50	
3/28/2023	471.20	5.72	20.00	384.50		58.00	422.50	
4/25/2023	469.40	0.16	20.00	384.50		58.00	422.50	
5/23/2023	471.00	1.35	20.00	384.50		60.00	424.50	New hist max
6/28/2023	468.80	0.1	20.00	384.50		60.00	424.50	New hist max
7/27/2023	455.90	0	20.00	384.50		58.00	422.50	
8/29/2023	453.80	2.28	20.00	384.50		54.00	418.50	
9/26/2023	445.00	0	20.00	384.50		52.00	416.50	
10/26/2023	437.40	0.21	20.00	384.50		50.00	414.50	
11/29/2023	425.00	0.78	20.00	384.50		44.00	408.50	
12/21/2023	421.00	1.60	20.00	384.50		43.00	407.50	

Notes:

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

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	20.00	384.50		46.00	410.50	
2/27/2024	468.70	8.89	20.00	384.50		52.00	416.50	
3/26/2024	467.60	3.06	20.00	384.50		56.00	420.50	
4/24/2024	469.60	1.49	20.00	384.50		58.00	422.50	
5/1/2024	469.60	0.00	20.00	384.50		58.00	422.50	
5/23/2024	468.20	0.08	20.00	384.50		54.00	418.50	
6/20/2024	464.20	0.00	20.00	384.50		58.00	422.50	
7/25/2024	447.90	0.00	20.00	384.50		54.00	418.50	
8/27/2024	430.40	0.00	20.00	384.50		49.00	413.50	
9/24/2024	418.60	0.00	19.00	383.50		44.00	408.50	
10/29/2024	407.70	0.00	20.00	384.50		40.00	404.50	
11/21/2024	407.00	0.11	20.00	384.50		39.00	403.50	
12/17/2024	415.80	0.10	20.00	384.50		38.00	402.50	
1/28/2025	427.30	1.00	20.00	384.50		38.00	402.50	
2/25/2025	465.40	2.02	20.00	384.50		44.00	408.50	
3/20/2025	467.90	2.20	20.00	384.50		48.00	412.50	
4/14/2025	464.20	#N/A	21.00	385.50		52.00	416.50	
4/24/2025	463.50	0.44	20.00	384.50		43.00	407.50	
5/22/2025	463.55	0.07	21.00	385.50		55.00	419.50	
6/19/2025	456.20	0.11	21.00	385.50		55.00	419.50	
7/29/2025	443.60	0.00	20.00	384.50		52.00	416.50	
8/21/2025	437.20	0.00	20.00	384.50		49.00	413.50	
9/23/2025	420.60	0.08	20.00	384.50		44.00	408.50	
10/22/2025	425.30	0.79	20.00	384.50		42.00	406.50	
11/20/2025	426.60	4.59	20.00	384.50		42.00	406.50	
12/16/2025	432.80	2.20	20.00	384.50		42.00	406.50	

Notes:

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

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	

Notes:

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

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	

Notes:

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

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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:

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

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	

Notes:

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

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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:

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

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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	
1/27/2022	467.80	0.07	18.00	321.90	Below Tip	30.00	453.10	
2/23/2022	464.80	0.29	18.00	321.90	Below Tip	30.00	453.10	
3/23/2022	464.40	1.08	18.00	321.90	Below Tip	31.00	454.10	
4/26/2022	467.10	0.03	18.00	321.90	Below Tip	34.00	457.10	
5/26/2022	464.80	0.08	19.00	322.90	Below Tip	33.00	456.10	
6/28/2022	457.30	0.00	19.00	322.90	Below Tip	21.00	444.10	Dropped 12'
7/26/2022	440.70	0.00	18.00	321.90	Below Tip	37.00	460.10	increased 16'
8/25/2022	429.50	0.05	19.00	322.90	Below Tip	28.00	451.10	Dropped 9'
9/28/2022	410.80	0.35	20.00	323.90	Below Tip	25.00	448.10	
10/25/2022	407.30	0.35	18.00	321.90	Below Tip	24.00	447.10	
11/23/2022	427.30	0.80	19.00	322.90	Below Tip	22.00	445.10	
12/20/2022	441.90	2.14	20.00	323.90	Below Tip	24.00	447.10	
1/26/2023	470.30	5.64	18.00	321.90	Below Tip	28.00	451.10	
2/23/2023	471.00	3.33	34.00	337.90	Omitted	34.00	457.10	
3/28/2023	471.20	5.72	20.00	323.90	Below Tip	36.00	459.10	
4/25/2023	469.40	0.16	18.00	321.90	Below Tip	36.00	459.10	
5/23/2023	471.00	1.35	18.00	321.90	Below Tip	37.00	460.10	
6/28/2023	468.80	0.1	20.00	323.90	Below Tip	38.00	461.10	At hist max
7/27/2023	455.90	0	20.00	323.90	Below Tip	33.00	456.10	
8/29/2023	453.80	2.28	20.00	323.90	Below Tip	30.00	453.10	
9/26/2023	445.00	0	19.00	322.90	Below Tip	27.00	450.10	
10/26/2023	437.40	0.21	19.00	322.90	Below Tip	26.00	449.10	
11/29/2023	425.00	0.78	18.00	321.90	Below Tip	24.00	447.10	
12/21/2023	421.00	1.60	20.00	323.90	Below Tip	23.00	446.10	

Notes:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	19.00	322.90		22.00	445.10	
2/27/2024	468.70	8.89	20.00	323.90		32.00	455.10	
3/26/2024	467.60	3.06	19.00	322.90		33.00	456.10	
4/24/2024	469.60	1.49	18.00	321.90		36.00	459.10	
5/1/2024	469.60	0.00	19.00	322.90		36.00	459.10	
5/23/2024	468.20	0.08	19.00	322.90		35.00	458.10	
6/20/2024	464.20	0.00	18.00	321.90		36.00	459.10	
7/25/2024	447.90	0.00	18.00	321.90		29.00	452.10	
8/27/2024	430.40	0.00	18.00	321.90		28.00	451.10	
9/24/2024	418.60	0.00	18.00	321.90		26.00	449.10	
10/29/2024	407.70	0.00	18.00	321.90		24.00	447.10	
11/21/2024	407.00	0.11	19.00	322.90		23.00	446.10	
12/17/2024	415.80	0.10	18.00	321.90		22.00	445.10	
1/28/2025	427.30	1.00	18.00	321.90		20.00	443.10	
2/25/2025	465.40	2.02	19.00	322.90		22.00	445.10	
3/20/2025	467.90	2.20	19.00	322.90		30.00	453.10	
4/14/2025	464.20	#N/A	18.00	321.90		32.00	455.10	
4/24/2025	463.50	0.44	18.00	321.90		31.00	454.10	
5/22/2025	463.55	0.07	19.00	322.90		32.00	455.10	
6/19/2025	456.20	0.11	19.00	322.90		30.00	453.10	
7/29/2025	443.60	0.00	19.00	322.90		26.00	449.10	
8/21/2025	437.20	0.00	19.00	322.90		26.00	449.10	
9/23/2025	420.60	0.08	19.00	322.90		24.00	447.10	
10/22/2025	425.30	0.79	19.00	322.90		23.00	446.10	
11/20/2025	426.60	4.59	19.00	322.90		22.00	445.10	
12/16/2025	432.80	2.20	19.00	322.90		22.00	445.10	

Notes:

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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:

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PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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:

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

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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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2. Piezometer data based on NAVD 88 datum.

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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	
1/27/2022	467.80	0.07	47.00	350.90	Below Tip	86.00	449.30	
2/23/2022	464.80	0.29	47.00	350.90	Below Tip	0.00		Error
3/23/2022	464.40	1.08	47.00	350.90	Below Tip	84.00	447.30	
4/26/2022	467.10	0.03	47.00	350.90	Below Tip	88.00	451.30	
5/26/2022	464.80	0.08	48.00	351.90	Below Tip	88.00	451.30	
6/28/2022	457.30	0.00	48.00	351.90	Below Tip	82.00	445.30	
7/26/2022	440.70	0.00	48.00	351.90	Below Tip	68.00	431.30	
8/25/2022	429.50	0.05	48.00	351.90	Below Tip	57.00	420.30	
9/28/2022	410.80	0.35	49.00	352.90	Below Tip	42.00	405.30	
10/25/2022	407.30	0.35	48.00	351.90	Below Tip	34.00	397.30	
11/23/2022	427.30	0.80	48.00	351.90	Below Tip	54.00	417.30	
12/20/2022	441.90	2.14	49.00	352.90	Below Tip	54.00	417.30	
1/26/2023	470.30	5.64	48.00	351.90	Below Tip	90.00	453.30	
2/23/2023	471.00	3.33	48.00	351.90	Below Tip	92.00	455.30	
3/28/2023	471.20	5.72	49.00	352.90	Below Tip	93.00	456.30	
4/25/2023	469.40	0.16	48.00	351.90	Below Tip	90.00	453.30	
5/23/2023	471.00	1.35	48.00	351.90	Below Tip	92.00	455.30	
6/28/2023	468.80	0.1	48.00	351.90	Below Tip	92.00	455.30	
7/27/2023	455.90	0	50.00	353.90	Below Tip	82.00	445.30	
8/29/2023	453.80	2.28	59.00	362.90	Omitted	76.00	439.30	
9/26/2023	445.00	0	48.00	351.90	Below Tip	72.00	435.30	
10/26/2023	437.40	0.21	49.00	352.90	Below Tip	66.00	429.30	
11/29/2023	425.00	0.78	48.00	351.90	Below Tip	54.00	417.30	
12/21/2023	421.00	1.60	49.00	352.90	Below Tip	50.00	413.30	

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	48.00	351.90		84.00	447.30	
2/27/2024	468.70	8.89	49.00	352.90		90.00	453.30	
3/26/2024	467.60	3.06	48.00	351.90		91.00	454.30	
4/24/2024	469.60	1.49	48.00	351.90		92.00	455.30	
5/1/2024	469.60	0.00	48.00	351.90		92.00	455.30	
5/23/2024	468.20	0.08	49.00	352.90		91.00	454.30	
6/20/2024	464.20	0.00	48.00	351.90		86.00	449.30	
7/25/2024	447.90	0.00	48.00	351.90		74.00	437.30	
8/27/2024	430.40	0.00	48.00	351.90		60.00	423.30	
9/24/2024	418.60	0.00	58.00	361.90		49.00	412.30	
10/29/2024	407.70	0.00	48.00	351.90		38.00	401.30	
11/21/2024	407.00	0.11	48.00	351.90		37.00	400.30	
12/17/2024	415.80	0.10	48.00	351.90		45.00	408.30	
1/28/2025	427.30	1.00	48.00	351.90		56.00	419.30	
2/25/2025	465.40	2.02	48.00	351.90		88.00	451.30	
3/20/2025	467.90	2.20	48.00	351.90		90.00	453.30	
4/14/2025	464.20	#N/A	47.00	350.90		84.00	447.30	
4/24/2025	463.50	0.44	48.00	351.90		87.00	450.30	
5/22/2025	463.55	0.07	49.00	352.90		87.00	450.30	
6/19/2025	456.20	0.11	49.00	352.90		81.00	444.30	
7/29/2025	443.60	0.00	48.00	351.90		71.00	434.30	
8/21/2025	437.20	0.00	59.00	362.90		65.00	428.30	
9/23/2025	420.60	0.08	48.00	351.90		50.00	413.30	
10/22/2025	425.30	0.79	48.00	351.90		54.00	417.30	
11/20/2025	426.60	4.59	48.00	351.90		55.00	418.30	
12/16/2025	432.80	2.20	48.00	351.90		60.00	423.30	

Notes:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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:

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

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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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2. Piezometer data based on NAVD 88 datum.

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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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2. Piezometer data based on NAVD 88 datum.

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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	
1/27/2022	467.80	0.07	100.00	463.90		36.00	458.70	
2/23/2022	464.80	0.29	96.00	459.90		34.00	456.70	
3/23/2022	464.40	1.08	96.00	459.90		31.00	453.70	
4/26/2022	467.10	0.03	98.00	461.90		35.00	457.70	
5/26/2022	464.80	0.08	96.00	459.90		34.00	456.70	
6/28/2022	457.30	0.00	89.00	452.90		29.00	451.70	
7/26/2022	440.70	0.00	71.00	434.90		15.00	437.70	Below Tip
8/25/2022	429.50	0.05	60.00	423.90		15.00	437.70	Below Tip
9/28/2022	410.80	0.35	42.00	405.90		15.00	437.70	Below Tip
10/25/2022	407.30	0.35	36.00	399.90		12.00	434.70	Below Tip
11/23/2022	427.30	0.80	59.00	422.90		13.00	435.70	Below Tip
12/20/2022	441.90	2.14	73.00	436.90		10.00	432.70	Below Tip
1/26/2023	470.30	5.64	102.00	465.90		38.00	460.70	
2/23/2023	471.00	3.33	102.00	465.90		40.00	462.70	
3/28/2023	471.20	5.72	102.00	465.90		42.00	464.70	At hist. max
4/25/2023	469.40	0.16	101.00	464.90		38.00	460.70	
5/23/2023	471.00	1.35	102.00	465.90		40.00	462.70	
6/28/2023	468.80	0.1	100.00	463.90		40.00	462.70	
7/27/2023	455.90	0	87.00	450.90		28.00	450.70	
8/29/2023	453.80	2.28	84.00	447.90		22.00	444.70	
9/26/2023	445.00	0	78.00	441.90		18.00	440.70	
10/26/2023	437.40	0.21	70.00	433.90		16.00	438.70	Below Tip
11/29/2023	425.00	0.78	55.00	418.90		14.00	436.70	Below Tip
12/21/2023	421.00	1.60	51.00	414.90		15.00	437.70	Below Tip

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	90.00	453.90		28.00	450.70	
2/27/2024	468.70	8.89	99.00	462.90		38.00	460.70	
3/26/2024	467.60	3.06	98.00	461.90		37.00	459.70	
4/24/2024	469.60	1.49	100.00	463.90		40.00	462.70	
5/1/2024	469.60	0.00	100.00	463.90		40.00	462.70	
5/23/2024	468.20	0.08	99.00	462.90		39.00	461.70	
6/20/2024	464.20	0.00	95.00	458.90		34.00	456.70	
7/25/2024	447.90	0.00	80.00	443.90		18.00	440.70	
8/27/2024	430.40	0.00	62.00	425.90		14.00	436.70	
9/24/2024	418.60	0.00	45.00	408.90		13.00	435.70	
10/29/2024	407.70	0.00	39.00	402.90		13.00	435.70	
11/21/2024	407.00	0.11	37.00	400.90		7.00	429.70	
12/17/2024	415.80	0.10	46.00	409.90		12.00	434.70	
1/28/2025	427.30	1.00	58.00	421.90		12.00	434.70	
2/25/2025	465.40	2.02	96.00	459.90		35.00	457.70	
3/20/2025	467.90	2.20	100.00	463.90		39.00	461.70	
4/14/2025	464.20	#N/A	95.00	458.90		33.00	455.70	
4/24/2025	463.50	0.44	95.00	458.90		34.00	456.70	
5/22/2025	463.55	0.07	95.00	458.90		35.00	457.70	
6/19/2025	456.20	0.11	87.00	450.90		28.00	450.70	
7/29/2025	443.60	0.00	74.00	437.90		16.00	438.70	
8/21/2025	437.20	0.00	69.00	432.90		16.00	438.70	
9/23/2025	420.60	0.08	51.00	414.90		14.00	436.70	
10/22/2025	425.30	0.79	54.00	417.90		14.00	436.70	
11/20/2025	426.60	4.59	56.00	419.90		12.00	434.70	
12/16/2025	432.80	2.20	62.00	425.90		14.00	436.70	

Notes:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	

Notes:

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

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	

Notes:

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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:

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2. Piezometer data based on NAVD 88 datum.

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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	
1/27/2022	467.80	0.07	126.00	429.50	at Max	104.00	407.30	
2/23/2022	464.80	0.29	124.00	427.50		103.00	406.30	
3/23/2022	464.40	1.08	124.00	427.50		103.00	406.30	
4/26/2022	467.10	0.03	126.00	429.50		105.00	408.30	
5/26/2022	464.80	0.08	126.00	429.50		105.00	408.30	
6/28/2022	457.30	0.00	121.00	424.50		103.00	406.30	
7/26/2022	440.70	0.00	110.00	413.50		97.00	400.30	
8/25/2022	429.50	0.05	103.00	406.50		94.00	397.30	
9/28/2022	410.80	0.35	90.00	393.50		87.00	390.30	
10/25/2022	407.30	0.35	86.00	389.50		84.00	387.30	
11/23/2022	427.30	0.80	98.00	401.50		88.00	391.30	
12/20/2022	441.90	2.14	108.00	411.50		94.00	397.30	
1/26/2023	470.30	5.64	129.00	432.50		105.00	408.30	
2/23/2023	471.00	3.33	128.00	431.50		105.00	408.30	
3/28/2023	471.20	5.72	130.00	433.50		106.00	409.30	
4/25/2023	469.40	0.16	128.00	431.50		106.00	409.30	
5/23/2023	471.00	1.35	130.00	433.50	New hist. max	107.00	410.30	At hist. max
6/28/2023	468.80	0.1	130.00	433.50	New hist. max	107.00	410.30	At hist. max
7/27/2023	455.90	0	122.00	425.50		104.00	407.30	
8/29/2023	453.80	2.28	120.00	423.50		102.00	405.30	
9/26/2023	445.00	0	114.00	417.50		100.00	403.30	
10/26/2023	437.40	0.21	109.00	412.50		97.00	400.30	
11/29/2023	425.00	0.78	100.00	403.50		90.00	393.30	
12/21/2023	421.00	1.60	96.00	399.50		90.00	393.30	

Notes:

1. Readings in red are classified as erroneous.
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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	122.00	425.50		100.00	403.30	
2/27/2024	468.70	8.89	130.00	433.50		104.00	407.30	
3/26/2024	467.60	3.06	129.00	432.50		105.00	408.30	
4/24/2024	469.60	1.49	122.00	425.50		106.00	409.30	
5/1/2024	469.60	0.00	130.00	433.50		106.00	409.30	
5/23/2024	468.20	0.08	130.00	433.50		106.00	409.30	
6/20/2024	464.20	0.00	128.00	431.50		106.00	409.30	
7/25/2024	447.90	0.00	116.00	419.50		101.00	404.30	
8/27/2024	430.40	0.00	104.00	407.50		94.00	397.30	
9/24/2024	418.60	0.00	96.00	399.50		89.00	392.30	
10/29/2024	407.70	0.00	88.00	391.50		84.00	387.30	
11/21/2024	407.00	0.11	88.00	391.50		83.00	386.30	
12/17/2024	415.80	0.10	92.00	395.50		84.00	387.30	
1/28/2025	427.30	1.00	100.00	403.50		87.00	390.30	
2/25/2025	465.40	2.02	126.00	429.50		102.00	405.30	
3/20/2025	467.90	2.20	128.00	431.50		104.00	407.30	
4/14/2025	464.20	#N/A	126.00	429.50		103.00	406.30	
4/24/2025	463.50	0.44	126.00	429.50		103.00	406.30	
5/22/2025	463.55	0.07	126.00	429.50		104.00	407.30	
6/19/2025	456.20	0.11	122.00	425.50		102.00	405.30	
7/29/2025	443.60	0.00	113.00	416.50		98.00	401.30	
8/21/2025	437.20	0.00	109.00	412.50		96.00	399.30	
9/23/2025	420.60	0.08	97.00	400.50		90.00	393.30	
10/22/2025	425.30	0.79	100.00	403.50		90.00	393.30	
11/20/2025	426.60	4.59	100.00	403.50		90.00	393.30	
12/16/2025	432.80	2.20	104.00	407.50		91.00	394.30	

Notes:

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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	
1/27/2022	467.80	0.07	88.00	451.90		0.00		Zero reading
2/23/2022	464.80	0.29	86.00	449.90		0.00		Zero reading
3/23/2022	464.40	1.08	84.00	447.90		0.00		Zero reading
4/26/2022	467.10	0.03	88.00	451.90		0.00		Zero reading
5/26/2022	464.80	0.08	88.00	451.90		0.00		Zero reading
6/28/2022	457.30	0.00	82.00	445.90		0.00		Zero reading
7/26/2022	440.70	0.00	67.00	430.90		0.00		Zero reading
8/25/2022	429.50	0.05	58.00	421.90		0.00		Zero reading
9/28/2022	410.80	0.35	42.00	405.90		0.00		Zero reading
10/25/2022	407.30	0.35	36.00	399.90		0.00		Zero reading
11/23/2022	427.30	0.80	54.00	417.90		0.00		Zero reading
12/20/2022	441.90	2.14	64.00	427.90		0.00		Zero reading
1/26/2023	470.30	5.64	90.00	453.90		0.00		Zero reading
2/23/2023	471.00	3.33	90.00	453.90		0.00		Zero reading
3/28/2023	471.20	5.72	93.00	456.90	At hist.max	0.00		Zero reading
4/25/2023	469.40	0.16	90.00	453.90		0.00		Zero reading
5/23/2023	471.00	1.35	92.00	455.90		0.00		Zero reading
6/28/2023	468.80	0.1	90.00	453.90		0.00		Zero reading
7/27/2023	455.90	0	82.00	445.90		0.00		Zero reading
8/29/2023	453.80	2.28	76.00	439.90		0.00		Zero reading
9/26/2023	445.00	0	72.00	435.90		0.00		Zero reading
10/26/2023	437.40	0.21	68.00	431.90		0.00		Zero reading
11/29/2023	425.00	0.78	52.00	415.90		0.00		Zero reading
12/21/2023	421.00	1.60	50.00	413.90		0.00		Zero reading

Notes:

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	82.00	445.90		0.00	423.00	
2/27/2024	468.70	8.89	90.00	453.90		0.00	423.00	
3/26/2024	467.60	3.06	90.00	453.90		0.00	423.00	
4/24/2024	469.60	1.49	92.00	455.90		0.00	423.00	
5/1/2024	469.60	0.00	92.00	455.90		0.00	423.00	
5/23/2024	468.20	0.08	91.00	454.90		0.00	423.00	
6/20/2024	464.20	0.00	86.00	449.90		0.00	423.00	
7/25/2024	447.90	0.00	74.00	437.90		0.00	423.00	
8/27/2024	430.40	0.00	60.00	423.90		0.00	423.00	
9/24/2024	418.60	0.00	48.00	411.90		0.00	423.00	
10/29/2024	407.70	0.00	38.00	401.90		0.00	423.00	
11/21/2024	407.00	0.11	38.00	401.90		11.00	434.00	
12/17/2024	415.80	0.10	45.00	408.90		14.00	437.00	
1/28/2025	427.30	1.00	55.00	418.90		14.00	437.00	
2/25/2025	465.40	2.02	97.00	460.90		0.00	423.00	
3/20/2025	467.90	2.20	90.00	453.90		0.00	423.00	
4/14/2025	464.20	#N/A	85.00	448.90		0.00	423.00	
4/24/2025	463.50	0.44	86.00	449.90		0.00	423.00	
5/22/2025	463.55	0.07	87.00	450.90		0.00	423.00	
6/19/2025	456.20	0.11	81.00	444.90		0.00	423.00	
7/29/2025	443.60	0.00	70.00	433.90		0.00	423.00	
8/21/2025	437.20	0.00	58.00	421.90		0.00	423.00	
9/23/2025	420.60	0.08	50.00	413.90		2.00	425.00	
10/22/2025	425.30	0.79	54.00	417.90		0.00	423.00	
11/20/2025	426.60	4.59	55.00	418.90		0.00	423.00	
12/16/2025	432.80	2.20	59.00	422.90		0.00	423.00	

Notes:

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

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	

Notes:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	

Notes:

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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	

Notes:

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

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 (in.)	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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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	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	
1/27/2022	467.80	0.07	64.00	366.70		50.00	352.70	
2/23/2022	464.80	0.29	66.00	368.70		52.00	354.70	
3/23/2022	464.40	1.08	64.00	366.70		50.00	352.70	
4/26/2022	467.10	0.03	64.00	366.70		51.00	353.70	
5/26/2022	464.80	0.08	66.00	368.70		52.00	354.70	
6/28/2022	457.30	0.00	67.00	369.70	at Hist max	53.00	355.70	
7/26/2022	440.70	0.00	66.00	368.70		52.00	354.70	
8/25/2022	429.50	0.05	66.00	368.70		52.00	354.70	
9/28/2022	410.80	0.35	68.00	370.70	New hist max	52.00	354.70	
10/25/2022	407.30	0.35	64.00	366.70		50.00	352.70	
11/23/2022	427.30	0.80	65.00	367.70		51.00	353.70	
12/20/2022	441.90	2.14	64.00	366.70		51.00	353.70	
1/26/2023	470.30	5.64	64.00	366.70		41.00	343.70	Omitted
2/23/2023	471.00	3.33	66.00	368.70		52.00	354.70	
3/28/2023	471.20	5.72	68.00	370.70	At hist max	54.00	356.70	At hist. max
4/25/2023	469.40	0.16	64.00	366.70		52.00	354.70	
5/23/2023	471.00	1.35	66.00	368.70		52.00	354.70	
6/28/2023	468.80	0.1	68.00	370.70	At hist max	55.00	357.70	New hist. max
7/27/2023	455.90	0	68.00	370.70	At hist max	55.00	357.70	New hist. max
8/29/2023	453.80	2.28	66.00	368.70		54.00	356.70	
9/26/2023	445.00	0	78.00	380.70	Omitted	55.00	357.70	New hist. max
10/26/2023	437.40	0.21	68.00	370.70	At hist max	54.00	356.70	
11/29/2023	425.00	0.78	68.00	370.70	At hist max	54.00	356.70	
12/21/2023	421.00	1.60	68.00	370.70	At hist max	54.00	356.70	

Notes:

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

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

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 (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	68.00	370.70		54.00	356.70	
2/27/2024	468.70	8.89	68.00	370.70		54.00	356.70	
3/26/2024	467.60	3.06	68.00	370.70		55.00	357.70	
4/24/2024	469.60	1.49	68.00	370.70		56.00	358.70	
5/1/2024	469.60	0.00	68.00	370.70		56.00	358.70	
5/23/2024	468.20	0.08	68.00	370.70		56.00	358.70	
6/20/2024	464.20	0.00	66.00	368.70		54.00	356.70	
7/25/2024	447.90	0.00	68.00	370.70		56.00	358.70	
8/27/2024	430.40	0.00	68.00	370.70		55.00	357.70	
9/24/2024	418.60	0.00	78.00	380.70		55.00	357.70	
10/29/2024	407.70	0.00	68.00	370.70		54.00	356.70	
11/21/2024	407.00	0.11	68.00	370.70		54.00	356.70	
12/17/2024	415.80	0.10	68.00	370.70		54.00	356.70	
1/28/2025	427.30	1.00	68.00	370.70		53.00	355.70	
2/25/2025	465.40	2.02	68.00	370.70		54.00	356.70	
3/20/2025	467.90	2.20	68.00	370.70		56.00	358.70	
4/14/2025	464.20	#N/A	65.00	367.70		53.00	355.70	
4/24/2025	463.50	0.44	68.00	370.70		54.00	356.70	
5/22/2025	463.55	0.07	68.00	370.70		55.00	357.70	
6/19/2025	456.20	0.11	69.00	371.70		55.00	357.70	
7/29/2025	443.60	0.00	68.00	370.70		54.00	356.70	
8/21/2025	437.20	0.00	69.00	371.70		55.00	357.70	
9/23/2025	420.60	0.08	68.00	370.70		54.00	356.70	
10/22/2025	425.30	0.79	68.00	370.70		52.00	354.70	
11/20/2025	426.60	4.59	68.00	370.70		52.00	354.70	
12/16/2025	432.80	2.20	68.00	370.70		53.00	355.70	

Notes:

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

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Pneumatic Piezo. -->			LR-3			LR-4		
Piezo. Tip Elevation -->			390.10			440.00		
Zero Gage Reading -->			26.80			17.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/31/2007	405.80		37.00	400.30		12.00	435.00	
2/27/2007	426.80		50.00	413.30		12.00	435.00	
3/28/2007	438.80		72.00	435.30		12.00	435.00	
4/26/2007	450.90		85.00	448.30		20.00	443.00	
5/23/2007	461.40		96.00	459.30		32.00	455.00	
6/27/2007	457.20		92.00	455.30		26.00	449.00	
7/26/2007	445.50		80.00	443.30		17.00	440.00	
8/28/2007	434.60		69.00	432.30		13.00	436.00	
9/25/2007	416.80		50.00	413.30		12.00	435.00	
10/24/2007	404.50		35.00	398.30		13.00	436.00	
11/27/2007	422.20		54.00	417.30		12.00	435.00	
1/3/2008	443.20		78.00	441.30		12.00	435.00	
1/29/2008	452.20		86.00	449.30		22.00	445.00	
2/27/2008	460.80		96.00	459.30		31.00	454.00	
3/26/2008	468.00		102.00	465.30		36.00	459.00	
4/29/2008	468.60		104.00	467.30		40.00	463.00	
5/29/2008	464.70		100.00	463.30		36.00	459.00	
6/26/2008	455.70		90.00	453.30		26.00	449.00	
7/29/2008	447.30	0.00	81.00	444.30		19.00	442.00	
8/28/2008	438.80	0.00	74.00	437.30		12.00	435.00	
9/26/2008	430.70	0.00	65.00	428.30		13.00	436.00	
10/29/2008	412.50	0.00	44.00	407.30		12.00	435.00	
11/25/2008	404.70	2.60	36.00	399.30		12.00	435.00	
12/30/2008	440.90	3.42	75.00	438.30		12.00	435.00	
1/28/2009	463.70	0.17	98.00	461.30		34.00	457.00	
2/25/2009	470.10	3.35	105.00	468.30		36.00	459.00	
3/26/2009	469.40	0.19	105.00	468.30		40.50	463.50	
4/29/2009	466.90	0.07	102.00	465.30		38.00	461.00	
5/18/2009	466.70	0.00	102.00	465.30		38.00	461.00	
5/29/2009	465.00	0.00	100.00	463.30		35.00	458.00	
6/30/2009	460.20	0.00	95.00	458.30		31.00	454.00	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Pneumatic Piezo. -->			LR-3			LR-4		
Piezo. Tip Elevation -->			390.10			440.00		
Zero Gage Reading -->			26.80			17.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
7/30/2009	451.10	0.00	86.00	449.30		22.00	445.00	
8/25/2009	440.10	0.00	74.00	437.30		14.00	437.00	
9/30/2009	432.20	0.00	64.00	427.30		11.00	434.00	
10/29/2009	431.40	0.53	65.00	428.30		12.00	435.00	
12/1/2009	427.40	0.00	60.00	423.30		11.00	434.00	
12/29/2009	448.10	2.06	82.00	445.30		16.00	439.00	
1/27/2010	465.60	4.62	102.00	465.30		36.00	459.00	
2/25/2010	470.20	2.51	106.00	469.30		37.00	460.00	
3/29/2010	465.70	0.99	101.00	464.30		37.00	460.00	
4/4/2010	465.00		100.00	463.30		36.00	459.00	
4/27/2010	468.40	1.23	103.00	466.30		36.00	459.00	
5/27/2010	463.30	0.05	99.00	462.30		34.00	457.00	
6/30/2010	454.70	0.00	89.00	452.30		24.00	447.00	
7/28/2010	445.60	0.00	80.00	443.30		16.00	439.00	
8/31/2010	437.10	0.00	71.00	434.30		12.00	435.00	
9/29/2010	422.70	0.00	56.00	419.30		12.00	435.00	
10/27/2010	426.40	2.38	60.00	423.30		12.00	435.00	
11/29/2010	439.80	0.97	74.00	437.30		10.00	433.00	
12/30/2010	456.60	8.62	92.00	455.30		26.00	449.00	
2/1/2011	468.90	0.92	102.00	465.30		37.00	460.00	
2/23/2011	469.00	0.99	105.00	468.30		38.00	461.00	
3/29/2011	470.30	2.93	106.00	469.30		40.00	463.00	
4/27/2011	464.80	0.19	100.00	463.30		36.00	459.00	
5/26/2011	457.30	0.48	92.00	455.30		29.00	452.00	
6/28/2011	443.50	0.05	78.00	441.30		16.00	439.00	
7/29/2011	425.10	0.00	62.00	425.30		10.00	433.00	
8/24/2011	418.00	0.00	44.00	407.30		12.00	435.00	
9/27/2011	400.90	0.12	32.00	395.30		12.00	435.00	
10/26/2011	402.20	1.25	32.00	395.30		10.00	433.00	
11/30/2011	425.10	1.38	58.00	421.30		12.00	435.00	
12/21/2011	435.70	0.32	69.00	432.30		12.00	435.00	

Notes:

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2. Piezometer data based on NAVD 88 datum.

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Pneumatic Piezo. -->			LR-3			LR-4		
Piezo. Tip Elevation -->			390.10			440.00		
Zero Gage Reading -->			26.80			17.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2012	441.40	0.53	75.00	438.30		11.00	434.00	
2/28/2012	448.40	0.42	80.00	443.30		16.00	439.00	
3/26/2012	452.70	1.06	83.00	446.30		21.00	444.00	
4/23/2012	463.40	1.32	99.00	462.30		30.00	453.00	
5/30/2012	457.30	0.02	92.00	455.30		28.00	451.00	
6/13/2012	452.90	0.02	88.00	451.30		24.00	447.00	
6/26/2012	450.20	0.00	86.00	449.30		22.00	445.00	
7/24/2012	439.80	0.00	75.00	438.30		14.00	437.00	
8/8/2012	437.60	0.12	72.00	435.30		12.00	435.00	
8/22/2012	433.40	0.00	67.00	430.30		16.00	439.00	
8/29/2012	431.30	0.00	66.00	429.30		12.00	435.00	
9/25/2012	420.80	0.00	58.00	421.30		12.00	435.00	
10/31/2012	412.30	0.26	44.00	407.30		12.00	435.00	
11/27/2012	420.80	0.58	51.00	414.30		11.00	434.00	
12/18/2012	448.00	1.44	81.00	444.30		15.00	438.00	
1/29/2013	468.60	1.18	104.00	467.30		38.00	461.00	
2/28/2013	469.20	0.30	105.00	468.30		39.00	462.00	
3/27/2013	468.30	0.50	104.00	467.30		38.00	461.00	
4/25/2013	462.70	0.00	98.00	461.30		34.00	457.00	
5/21/2013	454.20	0.00	89.00	452.30		26.00	449.00	
6/25/2013	439.30	0.00	74.00	437.30		12.00	435.00	
7/23/2013	431.50	0.00	65.00	428.30		10.00	433.00	
8/21/2013	418.00	0.00	52.00	415.30		11.00	434.00	
9/24/2013	404.00	0.00	37.00	400.30		11.00	434.00	
10/29/2013	400.60	0.00	33.00	396.30		10.00	433.00	
11/26/2013	407.90	0.44	40.00	403.30		11.00	434.00	
12/19/2013	425.80	0.54	59.00	422.30		11.00	434.00	
1/28/2014	439.70	0.00	73.00	436.30		10.00	433.00	
2/25/2014	449.70	0.83	84.00	447.30		20.00	443.00	
3/26/2014	465.10		100.00	463.30		37.00	460.00	
3/28/2014	465.70	1.15	101.00	464.30		38.00	461.00	

Notes:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Pneumatic Piezo. -->			LR-3			LR-4		
Piezo. Tip Elevation -->			390.10			440.00		
Zero Gage Reading -->			26.80			17.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
4/29/2014	465.30	0.43	102.00	465.30		38.00	461.00	
5/28/2014	450.60	0.00	86.00	449.30		24.00	447.00	
6/25/2014	440.10	0.00	77.00	440.30		14.00	437.00	
7/29/2014	431.20	0.00	65.00	428.30		11.00	434.00	
8/26/2014	419.50	0.02	53.00	416.30		11.00	434.00	
9/23/2014	405.30	0.00	37.00	400.30		10.00	433.00	
10/29/2014	400.90	0.00	33.00	396.30		10.00	433.00	
11/25/2014	410.90	0.25	43.00	406.30		10.00	433.00	
12/30/2014	430.60	2.94	62.00	425.30		10.00	433.00	
1/27/2015	466.70	0.83	101.00	464.30		36.00	459.00	
2/25/2015	468.90	0.69	103.00	466.30		42.00	465.00	
3/26/2015	465.90	0.61	101.00	464.30		39.00	462.00	
4/28/2015	465.70	0.20	102.00	465.30		39.00	462.00	
5/28/2015	466.40	1.08	102.00	465.30		38.00	461.00	
6/30/2015	454.50	0.00	90.00	453.30		27.00	450.00	
7/28/2015	445.60	0.00	80.00	443.30		19.00	442.00	
8/28/2015	437.60	0.00	73.00	436.30		12.00	435.00	
9/24/2015	426.90	1.51	60.00	423.30		10.00	433.00	
10/27/2015	415.40	0.49	48.00	411.30		11.00	434.00	
11/19/2015	412.90	0.09	45.00	408.30		10.00	433.00	
12/22/2015	425.50	0.69	59.00	422.30		10.00	433.00	
1/27/2016	463.60	2.86	99.00	462.30		36.00	459.00	
2/25/2016	468.90	0.25	105.00	468.30		42.00	465.00	
3/30/2016	468.00	1.44	104.00	467.30		42.00	465.00	
4/28/2016	461.30	0.30	96.00	459.30		34.00	457.00	
5/25/2016	451.30	0.18	86.00	449.30		24.00	447.00	
6/28/2016	414.10	0.00	78.00	441.30		17.00	440.00	
7/27/2016	434.20	0.00	68.00	431.30		11.00	434.00	
8/23/2016	418.60	0.00	52.00	415.30		10.00	433.00	
9/27/2016	406.40	0.00	39.00	402.30		10.00	433.00	
10/26/2016	404.00	0.48	36.00	399.30		8.00	431.00	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Pneumatic Piezo. -->			LR-3			LR-4		
Piezo. Tip Elevation -->			390.10			440.00		
Zero Gage Reading -->			26.80			17.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
11/22/2016	413.60	1.13	46.00	409.30		7.00	430.00	
12/20/2016	441.10	3.48	75.00	438.30		8.00	431.00	
1/26/2017	471.60	5.67	105.00	468.30		41.00	464.00	
2/24/2017	472.05	3.95	108.00	471.30		44.00	467.00	
2/25/2017	472.00							
2/26/2017	472.00							
2/27/2017	472.00		107.00	470.30		43.00	466.00	
2/28/2017	471.90		107.00	470.30		44.00	467.00	
3/1/2017	471.90		108.00	471.30		43.00	466.00	
3/2/2017	471.90		108.00	471.30		43.00	466.00	
3/29/2017	467.90	0.10	102.00	465.30		38.00	461.00	
4/27/2017	457.60	0.04	93.00	456.30		28.00	451.00	
5/23/2017	453.50	0.43	88.00	451.30		23.00	446.00	
6/21/2017	447.40	0.00	80.00	443.30		15.00	438.00	
7/26/2017	435.10	0.00	70.00	433.30		10.00	433.00	
8/25/2017	420.10	0.00	53.00	416.30		9.00	432.00	
9/27/2017	407.10	0.00	40.00	403.30		8.00	431.00	
10/26/2017	395.00	0.00	24.00	387.30		6.00	429.00	
11/28/2017	409.00	0.09	41.00	404.30		5.00	428.00	
12/20/2017	416.80	0.00	46.00	409.30		6.00	429.00	
1/24/2018	434.50	1.31	64.00	427.30		2.00	425.00	
2/21/2018	443.10	0.29	77.00	440.30		9.00	432.00	
3/29/2018	453.00	1.28	84.00	447.30		21.00	444.00	
4/26/2018	449.10	0.05	84.00	447.30		18.00	441.00	
5/31/2018	453.10	0.20	88.00	451.30		21.00	444.00	
6/28/2018	448.20	0.00	84.00	447.30		17.00	440.00	
7/25/2018	440.40	0.00	76.00	439.30		12.00	435.00	
8/22/2018	427.10	0.00	61.00	424.30		10.00	433.00	
9/27/2018	439.60	0.00	39.00	402.30		4.00	427.00	
10/18/2018	405.30	0.90	37.00	400.30		4.00	427.00	
11/28/2018	408.60	1.19	40.00	403.30		3.00	426.00	

Notes:

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TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Pneumatic Piezo. -->			LR-3			LR-4		
Piezo. Tip Elevation -->			390.10			440.00		
Zero Gage Reading -->			26.80			17.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
12/19/2018	436.00	1.99	68.00	431.30		2.00	425.00	
1/30/2019	463.80	4.71	100.00	463.30		30.00	453.00	
2/27/2019	466.20	6.55	102.00	465.30		0.00	423.00	
3/27/2019	463.30	1.34	100.00	463.30		30.00	453.00	
4/29/2019	453.00	0.13	90.00	453.30		18.00	441.00	
5/30/2019	451.80	0.64	87.00	450.30		16.00	439.00	
6/26/2019	446.20	0.01	81.00	444.30		10.00	433.00	
7/5/2019	39.40	0.00	77.00	440.30		2.00	425.00	
7/30/2019	434.80	0.00	69.00	432.30		0.00	423.00	
8/27/2019	424.40	0.00	58.00	421.30		0.00	423.00	
9/26/2019	405.60	0.00	37.00	400.30		0.00	423.00	
10/22/2019	400.50	0.00	32.00	395.30		0.00	423.00	
11/26/2019	412.80	3.13	44.00	407.30		0.00	423.00	
12/18/2019	447.40	4.44	78.00	441.30		10.00	433.00	
1/28/2020	465.40	0.20	98.00	461.30		28.00	451.00	
2/26/2020	459.60	0.14	96.00	459.30		24.00	447.00	
3/24/2020	470.70	3.49	106.00	469.30		36.00	459.00	
4/29/2020	467.60	3.65	103.00	466.30		33.00	456.00	
5/27/2020	459.10	0.02	94.00	457.30		30.00	453.00	
6/23/2020	447.00	0.00	82.00	445.30		14.00	437.00	
7/30/2020	434.00	0.00	69.00	432.30		12.00	435.00	
8/26/2020	417.70	0.00	48.00	411.30		10.00	433.00	
9/29/2020	403.60	0.00	39.00	402.30		6.00	429.00	
10/28/2020	404.50	0.00	32.00	395.30		3.00	426.00	
11/24/2020	413.50	0.42	44.00	407.30		0.00	423.00	
12/22/2020	408.00	1.13	38.00	401.30		0.00	423.00	
1/27/2021	435.60	2.25	70.00	433.30		0.00	423.00	
2/25/2021	457.30	0.05	91.00	454.30		27.00	450.00	
3/23/2021	465.90	1.36	100.00	463.30		35.00	458.00	
4/27/2021	462.10	0.04	98.00	461.30		22.00	445.00	
5/26/2021	455.00	0.03	90.00	453.30		26.00	449.00	

Notes:

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

**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Pneumatic Piezo. -->			LR-3			LR-4		
Piezo. Tip Elevation -->			390.10			440.00		
Zero Gage Reading -->			26.80			17.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
6/30/2021	437.90	0.00	72.00	435.30		14.00	437.00	
7/29/2021	423.60	0.07	56.00	419.30		13.00	436.00	
8/24/2021	408.00	0.00	40.00	403.30		14.00	437.00	
9/29/2021	398.00	0.04	28.00	391.30		9.00	432.00	
10/26/2021	417.00	0.87	49.00	412.30		9.00	432.00	
11/25/2021	427.90	0.00	60.00	423.30		8.00	431.00	
12/21/2021	427.90	4.77	80.00	443.30		10.00	433.00	
1/27/2022	467.80	0.07	104.00	467.30		37.00	460.00	
2/23/2022	464.80	0.29	100.00	463.30		36.00	459.00	
3/23/2022	464.40	1.08	100.00	463.30		35.00	458.00	
4/26/2022	467.10	0.03	103.00	466.30		39.00	462.00	
5/26/2022	464.80	0.08	100.00	463.30		36.00	459.00	
6/28/2022	457.30	0.00	92.00	455.30		30.00	453.00	
7/26/2022	440.70	0.00	75.00	438.30		14.00	437.00	Below Tip
8/25/2022	429.50	0.05	64.00	427.30		12.00	435.00	Below Tip
9/28/2022	410.80	0.35	43.00	406.30		12.00	435.00	Below Tip
10/25/2022	407.30	0.35	36.00	399.30		8.00	431.00	Below Tip
11/23/2022	427.30	0.80	60.00	423.30		10.00	433.00	Below Tip
12/20/2022	441.90	2.14	0.00		Zero reading	10.00	433.00	Below Tip
1/26/2023	470.30	5.64	106.00	469.30		41.00	464.00	
2/23/2023	471.00	3.33	106.00	469.30		42.00	465.00	
3/28/2023	471.20	5.72	107.00	470.30		44.00	467.00	At hist. max
4/25/2023	469.40	0.16	106.00	469.30		41.00	464.00	
5/23/2023	471.00	1.35	106.00	469.30		42.00	465.00	
6/28/2023	468.80	0.1	104.00	467.30		42.00	465.00	
7/27/2023	455.90	0	92.00	455.30		29.00	452.00	
8/29/2023	453.80	2.28	88.00	451.30		22.00	445.00	
9/26/2023	445.00	0	80.00	443.30		16.00	439.00	Below Tip
10/26/2023	437.40	0.21	72.00	435.30		11.00	434.00	Below Tip
11/29/2023	425.00	0.78	58.00	421.30		10.00	433.00	Below Tip
12/21/2023	421.00	1.60	54.00	417.30		11.00	434.00	Below Tip

Notes:

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**TABLE 10
SAN JOAQUIN DAM
PNEUMATIC PIEZOMETER MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Pneumatic Piezo. -->			LR-3			LR-4		
Piezo. Tip Elevation -->			390.10			440.00		
Zero Gage Reading -->			26.80			17.00		
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Reading (ft)	Elevation (ft)	Comment	Reading (ft)	Elevation (ft)	Comment
1/24/2024	459.70	2.17	94.00	457.30		28.00	451.00	
2/27/2024	468.70	8.89	104.00	467.30		40.00	463.00	
3/26/2024	467.60	3.06	102.00	465.30		39.00	462.00	
4/24/2024	469.60	1.49	106.00	469.30		42.00	465.00	
5/1/2024	469.60	0.00	106.00	469.30		42.00	465.00	
5/23/2024	468.20	0.08	104.00	467.30		40.00	463.00	
6/20/2024	464.20	0.00	100.00	463.30		36.00	459.00	
7/25/2024	447.90	0.00	82.00	445.30		19.00	442.00	
8/27/2024	430.40	0.00	64.00	427.30		12.00	435.00	
9/24/2024	418.60	0.00	51.00	414.30		10.00	433.00	
10/29/2024	407.70	0.00	39.00	402.30		10.00	433.00	
11/21/2024	407.00	0.11	39.00	402.30		5.00	428.00	
12/17/2024	415.80	0.10	47.00	410.30		9.00	432.00	
1/28/2025	427.30	1.00	60.00	423.30		9.00	432.00	
2/25/2025	465.40	2.02	100.00	463.30		35.00	458.00	
3/20/2025	467.90	2.20	104.00	467.30		39.00	462.00	
4/14/2025	464.20	#N/A	100.00	463.30		34.00	457.00	
4/24/2025	463.50	0.44	98.00	461.30		34.00	457.00	
5/22/2025	463.55	0.07	99.00	462.30		35.00	458.00	
6/19/2025	456.20	0.11	91.00	454.30		28.00	451.00	
7/29/2025	443.60	0.00	78.00	441.30		15.00	438.00	
8/21/2025	437.20	0.00	72.00	435.30		12.00	435.00	
9/23/2025	420.60	0.08	53.00	416.30		11.00	434.00	
10/22/2025	425.30	0.79	58.00	421.30		10.00	433.00	
11/20/2025	426.60	4.59	60.00	423.30		10.00	433.00	
12/16/2025	432.80	2.20	65.00	428.30		10.00	433.00	

Notes:

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

TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			East Drain		West Drain		Filter Drain		U/S Collector Drain #1	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
1/31/2007	405.80		1.80		0.18		2.20		0.00	
2/27/2007	426.80		2.50		0.24		2.30		0.00	
3/28/2007	438.80		2.50		0.28		2.00		0.00	
4/26/2007	450.90		3.20		0.31		2.00		0.00	
5/23/2007	461.40		3.70		0.34		2.00		0.00	
6/27/2007	457.20		3.80		0.34		2.00		0.00	
7/26/2007	445.50		3.60		0.33		2.00		0.00	
8/28/2007	434.60		3.10		0.30		2.00		0.00	
9/25/2007	416.80		2.50		0.26		2.20		0.00	
10/24/2007	404.50		2.00		0.20		2.10		0.00	
11/27/2007	422.20		2.40		0.22		2.10		0.00	
1/3/2008	443.20		3.20		0.28		2.00	dry	0.00	
1/29/2008	452.20		3.80		0.30		2.20	dry	0.00	
2/27/2008	460.80		4.20		0.34		2.20	dry	0.00	
3/26/2008	468.00		4.60		0.40		2.00	dry	0.00	
4/29/2008	468.60		57.00		69.70		2.00	dry	0.00	
5/29/2008	464.70		50.00		68.10		0.18	dry	0.00	
6/26/2008	455.70		43.50		60.00		1.12	dry	0.00	
7/29/2008	447.30	0.00	39.60		35.27		1.00	dry	0.00	
8/28/2008	438.80	0.00	29.00		46.00		0.37	dry	0.00	
9/26/2008	430.70	0.00	23.93		38.58		10.27	dry	0.00	
10/29/2008	412.50	0.00	11.00		25.26		9.94	dry	0.00	
11/25/2008	404.70	2.60	10.40		28.50		9.20	dry	0.00	
12/30/2008	440.90	3.42	36.00		42.79		11.56	dry	0.00	
1/28/2009	463.70	0.17	105.70		79.30		9.90	dry	0.00	
2/25/2009	470.10	3.35	52.30		53.63		10.10	dry	0.00	
3/26/2009	469.40	0.19	63.40		79.30		12.29	dry	0.00	
4/29/2009	466.90	0.07	46.09		81.12		11.03	dry	0.00	
5/18/2009	466.70	0.00	60.00		75.00		12.00	dry	0.00	
5/29/2009	465.00	0.00	61.30		72.30		12.30	dry	0.00	
6/30/2009	460.20	0.00	55.10		69.60		12.50	dry	0.00	
7/30/2009	451.10	0.00	44.95		59.40		12.75		0.13	
8/25/2009	440.10	0.00	34.11		50.70		13.19	dry	0.00	
9/30/2009	432.20	0.00	26.10		41.20		12.20	dry	0.00	
10/29/2009	431.40	0.53	22.36		37.12		11.05	dry	0.00	

Notes:

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TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			East Drain		West Drain		Filter Drain		U/S Collector Drain #1	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
12/1/2009	427.40	0.00	19.67		32.43		11.31	dry	0.00	
12/29/2009	448.10	2.06	32.52		43.41		10.38	dry	0.00	
1/27/2010	465.60	4.62	54.82		67.12		11.55	dry	0.00	
2/25/2010	470.20	2.51	61.60		76.90		12.20	dry	0.00	
3/29/2010	465.70	0.99	56.91		71.73		12.14	dry	0.00	
4/4/2010	465.00		55.00		69.40		11.20		0.26	
4/27/2010	468.40	1.23	62.10		70.70		11.90	dry	0.00	
5/27/2010	463.30	0.05	47.80		65.00		11.90		0.55	
6/30/2010	454.70	0.00	54.37		63.75		12.25		0.50	
7/28/2010	445.60	0.00	44.00		55.00		13.00		0.40	
8/31/2010	437.10	0.00	38.94		47.95		12.49		0.27	
9/29/2010	422.70	0.00	28.10		38.00		11.40		0.23	
10/27/2010	426.40	2.38	26.50		37.00		11.40		0.15	
11/29/2010	439.80	0.97	34.27		41.64		10.67		0.00	
12/30/2010	456.60	8.62	34.00		46.00		11.00		0.00	
2/1/2011	468.90	0.92	58.00		71.00		11.50		0.26	
2/23/2011	469.00	0.99	60.03		71.80		12.66		0.26	
3/29/2011	470.30	2.93	61.50		74.90		12.90		0.53	
4/27/2011	464.80	0.19	39.94		58.62		9.98		0.70	
5/26/2011	457.30	0.48	34.00		51.20		9.93		0.61	
6/28/2011	443.50	0.05	26.50		43.91		10.35		0.52	
7/29/2011	425.10	0.00	18.96		35.15		10.34		0.40	
8/24/2011	418.00	0.00	13.42		27.08		10.37		0.00	
9/27/2011	400.90	0.12	9.18		20.55		10.18		0.00	
10/26/2011	402.20	1.25	8.14		18.73		9.58		0.00	
11/30/2011	425.10	1.38	13.11		26.33		9.28		0.00	
12/21/2011	435.70	0.32	18.45		32.30		9.09		0.00	
1/24/2012	441.40	0.53	19.51		37.32		8.90		0.00	
2/28/2012	448.40	0.42	21.40		40.90		8.60		0.00	
3/26/2012	452.70	1.06	23.14		43.41		8.65		0.00	
4/23/2012	463.40	1.32	39.54		56.48		8.34		0.00	
5/30/2012	457.30	0.02	35.45		55.39		8.72		0.00	
6/13/2012	452.90	0.02	31.31		51.82		8.53		0.00	
6/26/2012	450.20	0.00	29.30		49.60		8.90		0.00	
7/24/2012	439.80	0.00	22.25		42.76		8.79		0.00	

Notes:

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TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			East Drain		West Drain		Filter Drain		U/S Collector Drain #1	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
8/8/2012	437.60	0.12	20.94		40.38		8.91		0.00	
8/22/2012	433.40	0.00	19.79		35.01		9.23		0.00	
8/29/2012	431.30	0.00	19.10		32.62		8.10		0.00	
9/25/2012	420.80	0.00	15.38		26.33		7.90		0.00	
10/31/2012	412.30	0.26	10.48		21.63		7.77		0.00	
11/27/2012	420.80	0.58	12.00		24.50		8.00		0.00	
12/18/2012	448.00	1.44	31.81		27.29		8.07		0.00	
1/29/2013	468.60	1.18	60.00		56.70		8.00		0.00	
2/28/2013	469.20	0.30	62.57		60.52		8.46		0.00	
3/27/2013	468.30	0.50	56.89		67.68		8.54		0.00	
4/25/2013	462.70	0.00	51.59		59.13		8.57		0.00	
5/21/2013	454.20	0.00	40.10		46.50		8.70		0.00	
6/25/2013	439.30	0.00	27.97		36.61		8.66		0.00	
7/23/2013	431.50	0.00	22.44		30.45		9.56		0.00	
8/21/2013	418.00	0.00	15.80		23.60		9.15		0.00	
9/24/2013	404.00	0.00	11.15		19.46		7.81		0.00	
10/29/2013	400.60	0.00	8.70		16.17		7.81		0.00	
11/26/2013	407.90	0.44	8.19		15.80		7.34		0.00	
12/19/2013	425.80	0.54	16.15		22.45		7.70		0.00	
1/28/2014	439.70	0.00	24.89		31.46		7.76		0.00	
2/25/2014	449.70	0.83	30.84		38.79		7.73		0.00	
3/26/2014	465.10		48.97		55.26		8.10		0.00	
3/28/2014	465.70	1.15	48.66		55.41		7.70		0.00	
4/29/2014	465.30	0.43	50.10		57.60		9.04		0.00	
5/28/2014	450.60	0.00	34.05		46.03		8.18		0.00	
6/25/2014	440.10	0.00	30.19		39.64		8.80		0.00	
7/29/2014	431.20	0.00	24.97		33.85		8.16		0.00	
8/26/2014	419.50	0.02	19.12		27.02		8.02		0.00	
9/23/2014	405.30	0.00	13.04		21.32		8.00		0.00	
10/29/2014	400.90	0.00	10.06		18.54		7.85		0.00	
11/25/2014	410.90	0.25	10.75		18.60		7.00		0.00	
12/30/2014	430.60	2.94	23.26		26.64		7.54		0.00	
1/27/2015	466.70	0.83	61.45		60.49		8.24		0.00	
2/25/2015	468.90	0.69	63.90		64.50		8.33		0.00	
3/26/2015	465.90	0.61	62.14		63.40		9.04		0.00	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			East Drain		West Drain		Filter Drain		U/S Collector Drain #1	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
4/28/2015	465.70	0.20	60.10		59.60		9.85		0.00	
5/28/2015	466.40	1.08	54.04		49.61		7.35		0.00	
6/30/2015	454.50	0.00	44.81		43.46		8.25		0.00	
7/28/2015	445.60	0.00	35.40		35.90		6.70		0.00	
8/28/2015	437.60	0.00	29.20		30.40		7.09		0.00	
9/24/2015	426.90	1.51	23.50		25.10		7.10		0.00	
10/27/2015	415.40	0.49	16.90		18.70		6.90		0.00	
11/19/2015	412.90	0.09	14.23		16.38		6.42		0.00	
12/22/2015	425.50	0.69	19.50		19.40		6.68		0.00	
1/27/2016	463.60	2.86	53.20		42.08		6.77		0.00	
2/25/2016	468.90	0.25	59.37		50.05		6.58		0.00	
3/30/2016	468.00	1.44	56.40		50.90		6.20		0.00	
4/28/2016	461.30	0.30	50.83		46.75		6.73		0.00	
5/25/2016	451.30	0.18	43.06		40.29		7.17		0.00	
6/28/2016	414.10	0.00	34.98		34.83		6.68		0.00	
7/27/2016	434.20	0.00	28.20		29.30		6.60		0.00	
8/23/2016	418.60	0.00	18.96		20.95		6.53		0.00	
9/27/2016	406.40	0.00	13.04		15.91		5.90		0.00	
10/26/2016	404.00	0.48	10.92		13.95		5.85		0.00	
11/22/2016	413.60	1.13	12.01		14.80		6.17		0.00	
12/20/2016	441.10	3.48	29.72		25.63		6.15		0.00	
1/26/2017	471.60	5.67	58.70		51.40		6.50		0.00	
2/24/2017	472.05	3.95	57.36		60.38		7.41		0.00	
2/25/2017	472.00		57.55		60.35		7.44		0.00	
2/26/2017	472.00		56.81		60.38		7.39		0.00	
2/27/2017	472.00		56.90		60.40		7.34		0.00	
2/28/2017	471.90		56.32		60.15		7.14		0.00	
3/1/2017	471.90		55.80		59.70		7.02		0.00	
3/2/2017	471.90		56.34		59.71		7.04		0.00	
3/29/2017	467.90	0.10	51.95		56.32		7.34		0.00	
4/27/2017	457.60	0.04	44.35		47.55		7.65		0.00	
5/23/2017	453.50	0.43	38.22		41.80		7.76		0.00	
6/21/2017	447.40	0.00	34.25		39.20		7.61		0.00	
7/26/2017	435.10	0.00	29.68		32.46		7.54		0.00	
8/25/2017	420.10	0.00	22.90		24.30		7.70		0.00	

Notes:

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**TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Seepage Weir -->			East Drain		West Drain		Filter Drain		U/S Collector Drain #1	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
9/27/2017	407.10	0.00	16.00		18.94		7.44		0.00	
10/26/2017	395.00	0.00	10.73		14.80		7.19		0.00	
11/28/2017	409.00	0.09	13.48		16.68		7.45		0.00	
12/20/2017	416.80	0.00	15.28		18.42		7.17		0.00	
1/24/2018	434.50	1.31	27.22		26.47		7.11		0.00	
2/21/2018	443.10	0.29	32.75		32.39		6.80		0.00	
3/29/2018	453.00	1.28	39.88		42.15		7.01		0.00	
4/26/2018	449.10	0.05	36.60		39.21		6.97		0.00	
5/31/2018	453.10	0.20	39.70		40.77		7.66		0.00	
6/28/2018	448.20	0.00	36.70		38.50		8.04		0.00	
7/25/2018	440.40	0.00	33.48		35.20		7.76		0.00	
8/22/2018	427.10	0.00	23.07		28.26		7.82		0.00	
9/27/2018	439.60	0.00	13.85		19.09		7.53		0.00	
10/18/2018	405.30	0.90	10.95		15.38		6.79		0.00	
11/28/2018	408.60	1.19	10.60		14.80		5.90		0.00	
12/19/2018	436.00	1.99	24.80		23.10		5.80		0.00	
1/30/2019	463.80	4.71	49.09		45.60		6.45		0.00	
2/27/2019	466.20	6.55	50.80		49.50		7.80		0.00	
3/27/2019	463.30	1.34	47.06		48.88		7.16		0.00	
4/29/2019	453.00	0.13	38.70		42.48		7.35		0.00	
5/30/2019	451.80	0.64	38.10		40.80		7.80		0.00	
6/26/2019	446.20	0.01	36.33		38.07		7.19		0.00	
7/5/2019	39.40	0.00	35.69		36.21		7.22		0.00	
7/30/2019	434.80	0.00	31.49		32.54		7.80		0.00	
8/27/2019	424.40	0.00	23.74		26.39		8.19		0.00	
9/26/2019	405.60	0.00	15.51		19.42		7.57		0.00	
10/22/2019	400.50	0.00	12.42		16.33		7.02		0.00	
11/26/2019	412.80	3.13	13.27		17.34		6.67		0.00	
12/18/2019	447.40	4.44	32.88		30.36		6.52		0.00	
1/28/2020	465.40	0.20	49.22		47.62		6.67		0.00	
2/26/2020	459.60	0.14	42.43		43.84		6.77		0.00	
3/24/2020	470.70	3.49	49.77		50.87		7.23		0.00	
4/29/2020	467.60	3.65	46.09		51.62		8.72		0.00	
5/27/2020	459.10	0.02	37.52		46.35		8.43		0.00	
6/23/2020	447.00	0.00	26.50		38.60		8.40		0.00	

Notes:

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TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			East Drain		West Drain		Filter Drain		U/S Collector Drain #1	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
7/30/2020	434.00	0.00	18.19		31.84		7.48		0.00	
8/26/2020	417.70	0.00	12.73		24.35		7.79		0.00	
9/29/2020	403.60	0.00	9.93		19.08		7.42		0.00	
10/28/2020	404.50	0.00	8.78		17.05		6.76		0.00	
11/24/2020	413.50	0.42	10.39		14.46		6.67		0.00	
12/22/2020	408.00	1.13	9.86		13.71		6.81		0.00	
1/27/2021	435.60	2.25	19.94		19.13		7.46		0.00	
2/25/2021	457.30	0.05	35.30		37.80		6.62		0.00	
3/23/2021	465.90	1.36	44.40		44.20		6.70		0.00	
4/27/2021	462.10	0.04	39.60		42.30		6.50		0.00	
5/26/2021	455.00	0.03	33.95		38.73		6.78		0.00	
6/30/2021	437.90	0.00	24.80		31.60		7.10		0.00	
7/29/2021	423.60	0.07	17.60		25.85		6.90		0.00	
8/24/2021	408.00	0.00	12.75		20.30		6.77		0.00	
9/29/2021	398.00	0.04	10.20		16.70		6.00		0.00	
10/26/2021	417.00	0.87	12.19		18.96		5.72		0.00	
11/25/2021	427.90	0.00	18.55		24.67		3.02		0.00	
12/21/2021	427.90	4.77	28.00		30.00		5.80		0.00	
1/27/2022	467.80	0.07	45.81		43.02		6.18		0.00	
2/23/2022	464.80	0.29	41.08		39.43		6.20		0.00	
3/23/2022	464.40	1.08	39.70		38.20		6.70		0.00	
4/26/2022	467.10	0.03	40.26		43.23		6.97		0.00	
5/26/2022	464.80	0.08	37.36		41.89		7.12		0.00	
6/28/2022	457.30	0.00	31.70		40.15		7.57		0.00	
7/26/2022	440.70	0.00	22.85		33.21		7.94		0.00	
8/25/2022	429.50	0.05	17.50		27.89		7.86		0.00	
9/28/2022	410.80	0.35	12.35		19.20		7.82		0.00	
10/25/2022	407.30	0.35	10.18		14.65		7.29		0.00	
11/23/2022	427.30	0.80	13.80		19.65		7.22		0.00	
12/20/2022	441.90	2.14	19.84		23.40		5.91		0.00	
1/26/2023	470.30	5.64	42.16		40.15		6.99		0.00	
2/23/2023	471.00	3.33	38.96		42.07		6.62		0.00	
3/28/2023	471.20	5.72	36.47		36.15		9.95		0.00	
4/25/2023	469.40	0.16	36.14		35.23		8.53		0.00	
5/23/2023	471.00	1.35	38.13		40.51		8.81		0.00	

Notes:

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**TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025**

Seepage Weir -->			East Drain		West Drain		Filter Drain		U/S Collector Drain #1	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
6/28/2023	468.8	0.1	37.47		44.75		8.82		0.00	
7/27/2023	455.9	0	30.23		41.33		8.69		0.02	
8/29/2023	453.8	2.28	27.7		39.03		9		0.01	
9/26/2023	445	0	24.9		31.8		9.22		0.0023	
10/26/2023	437.40	0.21	22.33		27.95		9.19		0.00	
11/29/2023	425.00	0.78	16.90		21.30		8.40		0.00	
12/21/2023	421.00	1.60	15.16		19.51		8.36		0.00	
1/24/2024	459.70	2.17	34.38		30.15		7.98		0.00	
2/27/2024	468.70	8.89	47.90		39.20		10.72		0.00	
3/26/2024	467.60	3.06	44.06		38.58		8.85		0.00	
4/24/2024	469.60	1.49	43.98		40.40		8.65		0.00	
5/1/2024	469.60	0.00	44.36		40.65		8.70		0.00	
5/23/2024	468.20	0.08	44.09		40.08		8.76		0.00	
6/20/2024	464.20	0.00	40.31		38.19		9.05		0.01	
7/25/2024	447.90	0.00	28.08		30.69		9.30		0.00	
8/27/2024	430.40	0.00	19.40		24.80		9.26		0.00	
9/24/2024	418.60	0.00	15.03		20.31		9.11		0.00	
10/29/2024	407.70	0.00	11.98		16.91		9.04		0.00	
11/21/2024	407.00	0.11	10.33		15.95		8.41		0.00	
12/17/2024	415.80	0.10	10.83		16.32		8.42		0.00	
1/28/2025	427.30	1.00	13.12		13.45		8.24		0.00	
2/25/2025	465.40	2.02	40.11		33.31		8.30		0.00	
3/20/2025	467.90	2.20	40.46		37.39		8.05		0.00	
4/14/2025	464.20	#N/A	35.21		37.56		8.17		0.00	
4/24/2025	463.50	0.44	34.25		35.90		8.08		0.00	
5/22/2025	463.55	0.07	38.67		35.40		8.07		0.00	
6/19/2025	456.20	0.11	32.81		32.52		8.31		0.00	
7/29/2025	443.60	0.00	21.57		27.71		8.44		0.00	
8/21/2025	437.20	0.00	16.48		25.20		7.63		0.00	
9/23/2025	420.60	0.08	13.95		20.56		7.94		0.00	
10/22/2025	425.30	0.79	13.16		17.69		6.70		0.00	
11/20/2025	426.60	4.59	12.14		13.67		6.21		0.00	
12/16/2025	432.80	2.20	13.26		17.90		6.19		0.00	

Notes:

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TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			U/S Collector Drain #2		D/S Toe Drain		Floor Drain		Right Groin Drain	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
1/31/2007	405.80		0.00		1.40		12.00			
2/27/2007	426.80		0.00		1.75		7.05			
3/28/2007	438.80		0.00		1.66		9.32			
4/26/2007	450.90		0.00		1.78		9.44			
5/23/2007	461.40		0.00		1.52		14.00			
6/27/2007	457.20		0.00		2.10		10.50			
7/26/2007	445.50		0.00		1.61		8.79			
8/28/2007	434.60		0.00		1.66		10.22			
9/25/2007	416.80		0.00		1.66		9.95			
10/24/2007	404.50		0.00		1.59		8.17			
11/27/2007	422.20		0.00		1.65		9.05			
1/3/2008	443.20		0.00	dry	2.20		10.50			
1/29/2008	452.20		0.00	dry	1.96		7.92			
2/27/2008	460.80		0.00	dry	1.86		14.00			
3/26/2008	468.00		0.00	dry	1.86		10.56			
4/29/2008	468.60		0.00	dry	1.88		10.74			
5/29/2008	464.70		0.00	dry	2.16		8.11			
6/26/2008	455.70		0.00	dry	2.50		8.80			
7/29/2008	447.30	0.00	0.00	dry	2.30		8.10			
8/28/2008	438.80	0.00	0.00	dry	2.11		8.33		0.11	
9/26/2008	430.70	0.00	0.00	dry	1.56		16.00		0.39	
10/29/2008	412.50	0.00	0.00	dry	1.98		3.75		0.40	
11/25/2008	404.70	2.60	0.00	dry	2.00		8.80		0.00	
12/30/2008	440.90	3.42	0.00	dry	2.00		10.56		0.00	
1/28/2009	463.70	0.17	0.00	dry	2.00		10.60		0.00	
2/25/2009	470.10	3.35	0.00	dry	2.12		9.46		0.00	
3/26/2009	469.40	0.19	0.00	dry	2.19		9.30		0.05	
4/29/2009	466.90	0.07	0.00	dry	1.98		9.84		0.23	
5/18/2009	466.70	0.00	0.00	dry	1.00		10.00		0.13	
5/29/2009	465.00	0.00	0.00	dry					0.16	
6/30/2009	460.20	0.00	0.00	dry	1.90		10.30		0.10	
7/30/2009	451.10	0.00	0.00	dry	1.93		10.56		0.00	
8/25/2009	440.10	0.00	0.00	dry	2.09		7.90		0.00	
9/30/2009	432.20	0.00	0.00	dry	1.52		16.00		0.13	
10/29/2009	431.40	0.53	0.00	dry					0.14	

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TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			U/S Collector Drain #2		D/S Toe Drain		Floor Drain		Right Groin Drain	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
12/1/2009	427.40	0.00	0.00	dry					0.00	
12/29/2009	448.10	2.06	0.00	dry					0.17	
1/27/2010	465.60	4.62	0.00	dry	2.43		9.34		0.62	
2/25/2010	470.20	2.51	0.00	dry	2.94		10.56		0.61	
3/29/2010	465.70	0.99	0.20		2.40		16.00		0.00	
4/4/2010	465.00		0.00	dry	1.00		16.00			
4/27/2010	468.40	1.23	0.00	dry	2.40		10.56		0.00	
5/27/2010	463.30	0.05	0.00	dry	2.50		10.00		1.50	
6/30/2010	454.70	0.00	0.00	dry	2.11		9.18		1.10	
7/28/2010	445.60	0.00	0.00	dry	2.40		10.56		0.99	
8/31/2010	437.10	0.00	0.00	dry	2.08		9.51		1.07	
9/29/2010	422.70	0.00	0.00	dry	2.11		6.34		0.72	
10/27/2010	426.40	2.38	0.00	dry	2.20		7.80		0.11	
11/29/2010	439.80	0.97	0.00	dry	2.26		7.92		0.27	
12/30/2010	456.60	8.62	0.00	dry	4.00		16.00		2.00	
2/1/2011	468.90	0.92	0.00	dry	4.00		8.00		2.30	
2/23/2011	469.00	0.99	0.00	dry	3.51		7.92		0.95	
3/29/2011	470.30	2.93	0.00	dry	3.17		7.90		0.38	
4/27/2011	464.80	0.19	0.00	dry	2.60		5.20		0.71	
5/26/2011	457.30	0.48	0.00	dry	2.70		9.50		0.00	
6/28/2011	443.50	0.05	0.00	dry	2.50		8.90		0.00	
7/29/2011	425.10	0.00	0.00	dry	2.43		6.34		0.00	
8/24/2011	418.00	0.00	0.20		2.43		7.92		0.25	
9/27/2011	400.90	0.12	0.00		2.26		7.92		0.20	
10/26/2011	402.20	1.25	0.00		2.26		7.05		0.27	
11/30/2011	425.10	1.38	0.00		2.56		7.93		0.31	
12/21/2011	435.70	0.32	0.00		2.26		7.93		0.29	
1/24/2012	441.40	0.53	0.00		2.38		7.92		0.36	
2/28/2012	448.40	0.42	0.00		2.11		6.34		0.34	
3/26/2012	452.70	1.06	0.00		2.29		7.79		0.35	
4/23/2012	463.40	1.32	0.00		2.43		7.92		0.31	
5/30/2012	457.30	0.02	0.00		2.11		6.34		0.26	
6/13/2012	452.90	0.02	0.00		2.26		7.92		0.31	
6/26/2012	450.20	0.00	0.00		1.58		10.56		0.21	
7/24/2012	439.80	0.00	0.00		1.58		10.56		0.21	

Notes:

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TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			U/S Collector Drain #2		D/S Toe Drain		Floor Drain		Right Groin Drain	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
8/8/2012	437.60	0.12	0.00		1.58		10.56		0.15	
8/22/2012	433.40	0.00	0.00		1.98		7.92		0.24	
8/29/2012	431.30	0.00	0.00		1.58		10.56		0.13	
9/25/2012	420.80	0.00	0.00		2.56		7.93		0.10	
10/31/2012	412.30	0.26	0.00		2.11		6.34		0.14	
11/27/2012	420.80	0.58	0.00		2.11		7.92		0.16	
12/18/2012	448.00	1.44	0.00		2.28		7.37		0.19	
1/29/2013	468.60	1.18	0.00		2.11		7.90		0.26	
2/28/2013	469.20	0.30	0.00		2.11		7.92		0.24	
3/27/2013	468.30	0.50	0.00		2.26		7.92		0.25	
4/25/2013	462.70	0.00	0.00		2.16		7.92		0.25	
5/21/2013	454.20	0.00	0.00		2.26		7.92		0.26	
6/25/2013	439.30	0.00	0.00		2.34		7.51		0.21	
7/23/2013	431.50	0.00	0.00		2.12		7.04		0.19	
8/21/2013	418.00	0.00	0.00		2.11		6.34		0.17	
9/24/2013	404.00	0.00	0.00		1.98		6.34		0.16	
10/29/2013	400.60	0.00	0.00		2.13		6.89		0.19	
11/26/2013	407.90	0.44	0.00		2.16		6.34		0.20	
12/19/2013	425.80	0.54	0.00		2.26		5.28		0.22	
1/28/2014	439.70	0.00	0.00		2.11		7.90		0.16	
2/25/2014	449.70	0.83	0.00		2.17		7.20		0.19	
3/26/2014	465.10		0.00		1.66		7.92		0.52	
3/28/2014	465.70	1.15	0.00		2.09		6.44		0.18	
4/29/2014	465.30	0.43	0.00		2.16		7.51		0.21	
5/28/2014	450.60	0.00	0.00		1.90		7.08		0.21	
6/25/2014	440.10	0.00	0.00		2.26		6.34		0.17	
7/29/2014	431.20	0.00	0.00		2.03		6.49		0.15	
8/26/2014	419.50	0.02	0.00		1.98		10.56		0.16	
9/23/2014	405.30	0.00	0.00		2.11		6.30		0.13	
10/29/2014	400.90	0.00	0.00		2.07		6.15		0.14	
11/25/2014	410.90	0.25	0.00		1.90		6.34		0.14	
12/30/2014	430.60	2.94	0.00		1.80		6.34		0.23	
1/27/2015	466.70	0.83	0.00		2.26		7.04		0.96	
2/25/2015	468.90	0.69	0.00		2.11		6.30		0.15	
3/26/2015	465.90	0.61	0.00		2.12		7.20		0.24	

Notes:

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TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			U/S Collector Drain #2		D/S Toe Drain		Floor Drain		Right Groin Drain	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
4/28/2015	465.70	0.20	0.00		2.29		5.70		0.15	
5/28/2015	466.40	1.08	0.00		1.90		5.34		0.14	
6/30/2015	454.50	0.00	0.00		1.50		4.30		0.52	
7/28/2015	445.60	0.00	0.00		1.90		6.30		0.19	
8/28/2015	437.60	0.00	0.00		2.10		6.30		0.15	
9/24/2015	426.90	1.51	0.00		2.10		6.34		0.19	
10/27/2015	415.40	0.49	0.00		2.00		6.30		0.16	
11/19/2015	412.90	0.09	0.00		2.21		6.56		0.17	
12/22/2015	425.50	0.69	0.00		2.53		5.89		0.19	
1/27/2016	463.60	2.86	0.00		2.43		6.34		0.25	
2/25/2016	468.90	0.25	0.00		2.53		7.33		0.22	
3/30/2016	468.00	1.44	0.00		2.29		5.38		0.23	
4/28/2016	461.30	0.30	0.00		2.10		7.30		0.23	
5/25/2016	451.30	0.18	0.00		1.90		5.60		0.20	
6/28/2016	414.10	0.00	0.00		1.70		6.00		0.15	
7/27/2016	434.20	0.00	0.00		1.90		6.30		0.13	
8/23/2016	418.60	0.00	0.00		2.06		6.40		0.09	
9/27/2016	406.40	0.00	0.00		1.53		4.61		0.10	
10/26/2016	404.00	0.48	0.00		2.21		6.34		0.17	
11/22/2016	413.60	1.13	0.00		2.17		5.77		0.15	
12/20/2016	441.10	3.48	0.00		2.23		6.16		0.15	
1/26/2017	471.60	5.67	0.00		3.50		6.30		0.15	
2/24/2017	472.05	3.95	0.00		3.15		6.30		0.15	
2/25/2017	472.00		0.00		3.15		6.30			
2/26/2017	472.00		0.00		3.15		6.30			
2/27/2017	472.00		0.00		3.17		6.30		0.15	
2/28/2017	471.90		0.00		3.15		6.40		0.16	
3/1/2017	471.90		0.00		3.17		6.30		0.16	
3/2/2017	471.90		0.00		3.36		7.90		0.15	
3/29/2017	467.90	0.10	0.00		3.18		6.70		0.15	
4/27/2017	457.60	0.04	0.02		2.50		6.30		0.39	
5/23/2017	453.50	0.43	0.00		2.50		6.30		0.41	
6/21/2017	447.40	0.00	0.00		2.50		5.60		0.20	
7/26/2017	435.10	0.00	0.00		2.50		6.30		0.25	
8/25/2017	420.10	0.00	0.00		2.50		5.20		0.24	

Notes:

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2. Piezometer data based on NAVD 88 datum.

TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			U/S Collector Drain #2		D/S Toe Drain		Floor Drain		Right Groin Drain	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
9/27/2017	407.10	0.00	0.00		2.50		5.20		0.19	
10/26/2017	395.00	0.00	0.00		2.50		5.80		0.22	
11/28/2017	409.00	0.09	0.00		2.50		4.20		0.39	
12/20/2017	416.80	0.00	0.00		2.50		4.51		0.17	
1/24/2018	434.50	1.31	0.00		1.86		4.81		0.15	
2/21/2018	443.10	0.29	0.00		2.40		5.70		0.08	
3/29/2018	453.00	1.28	0.00		3.85		9.30		0.22	
4/26/2018	449.10	0.05	0.00		2.26		6.34		0.20	
5/31/2018	453.10	0.20	0.00		2.54		6.34		0.11	
6/28/2018	448.20	0.00	0.00		2.11		5.28		0.21	
7/25/2018	440.40	0.00	0.00		2.21		6.30		0.17	
8/22/2018	427.10	0.00	0.00		2.21		6.10		0.13	
9/27/2018	439.60	0.00	0.00		2.24		5.70		0.12	
10/18/2018	405.30	0.90	0.00		2.37		5.46		0.18	
11/28/2018	408.60	1.19	0.00		2.26		4.80		0.15	
12/19/2018	436.00	1.99	0.00		2.56		5.10		0.28	
1/30/2019	463.80	4.71	0.00		2.80		6.30		0.82	
2/27/2019	466.20	6.55	0.00		3.90		5.70		1.50	
3/27/2019	463.30	1.34	0.00		3.10		4.50		0.80	
4/29/2019	453.00	0.13	0.00		3.10		6.30		0.79	
5/30/2019	451.80	0.64	0.00		2.80		6.30		0.60	
6/26/2019	446.20	0.01	0.00		2.80		5.07		0.40	
7/5/2019	39.40	0.00	0.00		2.80		4.70		0.23	
7/30/2019	434.80	0.00	0.00		3.78		5.38		0.34	
8/27/2019	424.40	0.00	0.00		2.43		6.30		0.25	
9/26/2019	405.60	0.00	0.00		1.90		5.30		0.22	
10/22/2019	400.50	0.00	0.00		2.40		4.50		0.19	
11/26/2019	412.80	3.13	0.00		2.40		5.80		0.24	
12/18/2019	447.40	4.44	0.00		3.00		6.30		0.39	
1/28/2020	465.40	0.20	0.00		2.43		5.01		0.76	
2/26/2020	459.60	0.14	0.00		2.90		5.20		0.55	
3/24/2020	470.70	3.49	0.00		3.17		6.30		0.79	
4/29/2020	467.60	3.65	0.00		4.12		6.02		1.42	
5/27/2020	459.10	0.02	0.00		3.33		4.59		0.95	
6/23/2020	447.00	0.00	0.00		2.80		5.20		0.60	

Notes:

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TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			U/S Collector Drain #2		D/S Toe Drain		Floor Drain		Right Groin Drain	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
7/30/2020	434.00	0.00	0.00		2.69		5.11		0.40	
8/26/2020	417.70	0.00	0.00		2.70		4.50		0.38	
9/29/2020	403.60	0.00	0.00		2.60		4.80		0.25	
10/28/2020	404.50	0.00	0.00		3.77		5.23		0.26	
11/24/2020	413.50	0.42	0.00		2.80		4.70		0.25	
12/22/2020	408.00	1.13	0.00		2.60		4.50		0.20	
1/27/2021	435.60	2.25	0.00		2.53		4.75		0.33	
2/25/2021	457.30	0.05	0.00		2.28		4.37		0.36	
3/23/2021	465.90	1.36	0.00		2.43		5.28		0.39	
4/27/2021	462.10	0.04	0.00		2.43		4.38		0.27	
5/26/2021	455.00	0.03	0.00		2.10		5.00		0.22	
6/30/2021	437.90	0.00	0.00		2.40		4.50		0.32	
7/29/2021	423.60	0.07	0.00		2.06		4.12		0.15	
8/24/2021	408.00	0.00	0.00		1.10		2.20		0.14	
9/29/2021	398.00	0.04	0.00		2.30		3.90		0.22	
10/26/2021	417.00	0.87	0.00		2.40		4.40		0.21	
11/25/2021	427.90	0.00	0.00		2.40		5.20		0.36	
12/21/2021	427.90	4.77	0.00		2.00		3.20		0.32	
1/27/2022	467.80	0.07	0.00		0.66		1.17		0.50	
2/23/2022	464.80	0.29	0.00		2.60		5.20		0.43	
3/23/2022	464.40	1.08	0.00		2.40		4.50		0.38	
4/26/2022	467.10	0.03	0.00		1.09		2.20		0.39	
5/26/2022	464.80	0.08	0.00		8.00	above hist max	4.40		0.23	
6/28/2022	457.30	0.00	0.00		2.43		3.96		0.17	
7/26/2022	440.70	0.00	0.00		2.43		4.52		0.20	
8/25/2022	429.50	0.05	0.00		2.44		5.28		0.19	
9/28/2022	410.80	0.35	0.00		2.18		3.80		0.16	
10/25/2022	407.30	0.35	0.00		1.76		3.59		0.19	
11/23/2022	427.30	0.80	0.00		3.17		3.59		0.22	
12/20/2022	441.90	2.14	0.00		2.60		3.60		0.34	
1/26/2023	470.30	5.64	0.00		3.50		3.70		1.10	
2/23/2023	471.00	3.33	0.00		2.19		3.88		0.63	
3/28/2023	471.20	5.72	0.00		7.90		4.90		2.40	
4/25/2023	469.40	0.16	0.14		3.36		4.12		2.06	
5/23/2023	471.00	1.35	0.43		2.69		3.70		1.17	

Notes:

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

TABLE 11
SAN JOAQUIN DAM
SEEPAGE WEIR MEASUREMENTS
JANUARY 2007 THROUGH DECEMBER 2025

Seepage Weir -->			U/S Collector Drain #2		D/S Toe Drain		Floor Drain		Right Groin Drain	
Historical Readings			Historical		Historical		Historical		Historical	
Date	Reservoir Elevation (ft)	Monthly Rainfall (in.)	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment	Flow (gpm)	Comment
6/28/2023	468.8	0.1	1.00		3.17		6.34		0.78	
7/27/2023	455.9	0	1.10		2.90		5.2		0.58	
8/29/2023	453.8	2.28	1.06		2.43		4.29		0.48	
9/26/2023	445	0	0.93		3.17		6.34		0.49	
10/26/2023	437.40	0.21	0.60		2.90		5.70		0.42	
11/29/2023	425.00	0.78	0.42			Cannot be read, vault overflow		Cannot be read, vault overflow	0.44	
12/21/2023	421.00	1.60	0.27			Cannot be read, vault overflow		Cannot be read, vault overflow	0.32	
1/24/2024	459.70	2.17	0.00		34.00		66.00		0.75	
2/27/2024	468.70	8.89	0.00		35.23		62.62		1.85	
3/26/2024	467.60	3.06	0.47		31.43		63.80		1.26	
4/24/2024	469.60	1.49	0.67		34.00		66.00		1.01	
5/1/2024	469.60	0.00	0.58		34.00		66.00		1.27	
5/23/2024	468.20	0.08	0.81		34.00		66.00		0.81	
6/20/2024	464.20	0.00	0.97		34.00		66.00		0.86	
7/25/2024	447.90	0.00	0.81		34.00		66.00		0.53	
8/27/2024	430.40	0.00	0.90		28.50		57.00		0.38	
9/24/2024	418.60	0.00	0.68		20.25		48.75		0.40	
10/29/2024	407.70	0.00	0.55		12.90		25.03		0.15	
11/21/2024	407.00	0.11	0.35		22.66		44.00		0.44	
12/17/2024	415.80	0.10	0.15		12.24		23.76		0.33	
1/28/2025	427.30	1.00	0.04		2.64		5.28		0.39	
2/25/2025	465.40	2.02	0.00		2.60		3.90		0.45	
3/20/2025	467.90	2.20	0.02		2.88		5.23		1.03	
4/14/2025	464.20	#N/A	0.12		2.00		3.57		0.46	
4/24/2025	463.50	0.44	0.15		2.40		4.10		0.38	
5/22/2025	463.55	0.07	0.19		2.71		5.40		0.36	
6/19/2025	456.20	0.11	0.20		2.20		3.90		0.37	
7/29/2025	443.60	0.00	0.25		1.80		4.00		1.00	
8/21/2025	437.20	0.00	0.08		2.43		5.28		0.23	
9/23/2025	420.60	0.08	0.00		1.98		3.82		0.19	
10/22/2025	425.30	0.79	0.00		2.43		4.55		0.29	
11/20/2025	426.60	4.59	0.00		2.73		6.89		0.71	
12/16/2025	432.80	2.20	0.00		2.80		4.63		0.54	

Notes:

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2. Piezometer data based on NAVD 88 datum.

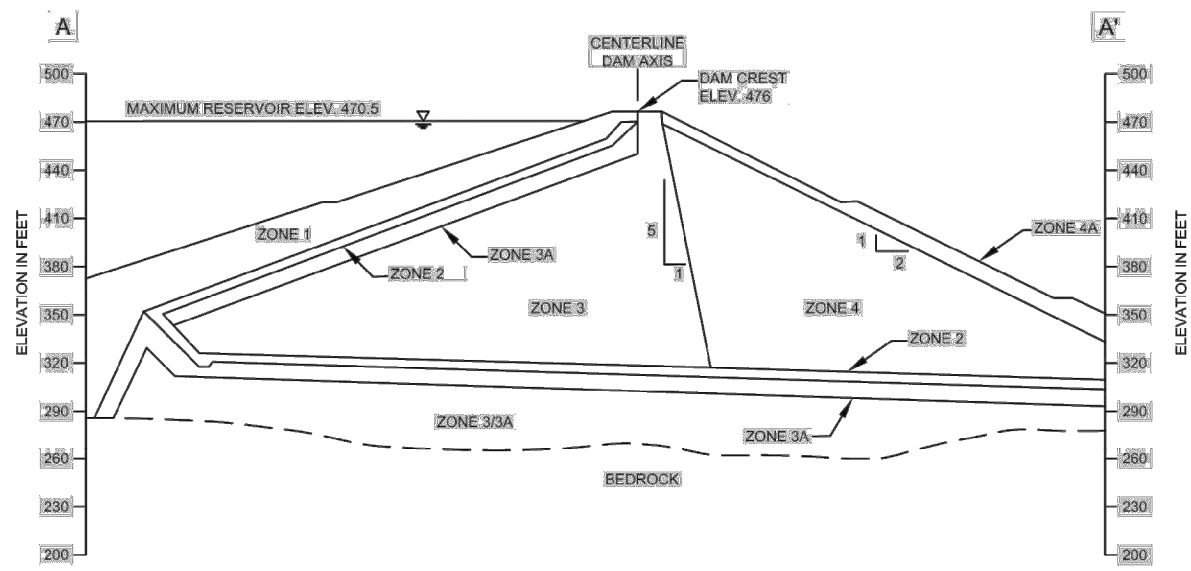
**TABLE 13
SAN JOAQUIN DAM
HORIZONTAL MOVEMENT AND ELEVATION SURVEY DATA
DECEMBER 2004 THROUGH DECEMBER 2025**

Date	Reservoir Elevation (feet)	Temperature (C°)	Horizontal Movement Since Initial Survey (feet) Positive=North (Downstream); Negative=South (Upstream)																		
			SA-1	SA-2	SA-3	SA-4R	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
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
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							
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							
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							
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							
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							
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							
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							
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							
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							
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							
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							
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							
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							
6/17/2019			-0.040	-0.015	-0.035			-0.010	0.020	0.030	0.030	0.035	0.005	0.020							
11/25/2020			-0.030	-0.030	-0.050	0.000		0.000	0.020	0.020	0.020	0.020	0.000	0.020							
6/30/2021			No Survey Data				No Survey Data							No Survey Data							
5/10/2022			-0.040	-0.020	-0.050	-0.005		-0.010	0.000	0.015	0.020	0.015	0.000	0.010							
11/16/2022	415.30	18.33	-0.040	-0.020	-0.045	-0.005		-0.005	0.000	0.020	0.020	0.020	-0.010	0.010							
12/4/2023	423.20	23.89	-0.050	-0.030	-0.050	-0.010		-0.005	0.010	0.015	0.030	0.020	0.005	0.010							
6/10/2024	466.20	18.33	-0.053	-0.028	-0.055	-0.010		0.009	0.014	0.025	0.034	0.022	0.006	0.013							
10/24/2025	423.38	21.1	-0.048	-0.023	-0.058	-0.008		-0.014	0.003	0.020	0.020	0.012	-0.013	0.003							
Date	Reservoir Elevation (feet)	Temperature (C°)	Elevation Since Initial Survey (feet)																		
			SA-1	SA-2	SA-3	SA-4R	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
8/15/1962			302.705	302.595	302.605		362.545	363.095	362.915	362.955	362.705	362.565	363.315	422.465	422.155	422.405	422.035	422.005	422.025	422.185	422.745
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	303.022	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 Survey Data							
5/10/2022			302.319	302.214	302.252	303.012	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
11/16/2022	415.30	18.33	302.322	302.218	302.257	303.016	362.228	362.736	362.549	362.606	362.373	362.278	363.050	422.172	421.873	422.077	421.64	421.59	421.658	421.908	422.534
12/4/2023	423.20	23.89	302.324	302.221	302.257	303.018	362.205	362.712	362.525	362.583	362.351	362.255	363.026	422.159	421.849	422.052	421.612	421.563	421.631	421.884	422.516
6/10/2024	466.20	18.33	302.323	302.218	302.258	303.020	362.204	362.710	362.521	362.582	362.348	362.253	363.027	422.140	421.831	422.033	421.593	421.540	421.613	421.860	422.498
10/24/2025	423.38	21.10	302.330	302.226	302.264	303.023	362.195	362.702	362.513	362.573	362.339	362.243	363.018	422.106	421.813	422.016	421.573	421.526	421.594	421.847	422.478

**TABLE 13
SAN JOAQUIN DAM
HORIZONTAL MOVEMENT AND ELEVATION SURVEY DATA
DECEMBER 2004 THROUGH DECEMBER 2025**

Date	Reservoir Elevation (feet)	Temperature (C°)	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
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
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
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					
11/16/2022	415.30	18.33	0.000	0.020	0.020	0.090	0.050	-0.010	0.010					
12/4/2023	423.20	23.89	0.000	0.010	0.030	0.090	0.040	-0.010	-0.010					
6/10/2024	466.20	18.33	-0.024	-0.003	0.009	0.084	0.053	-0.023	-0.002					
10/24/2025	423.38	21.1	-0.127	0.007	0.012	0.088	0.053	-0.013	0.001					
Date	Reservoir Elevation (feet)	Temperature (C°)	Elevation 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
8/15/1962			478.535	479.215	480.185	481.095	480.175	479.445	478.715					
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					
11/16/2022	415.30	18.33	478.172	478.782	479.711	480.565	479.673	479.052	478.444					
12/4/2023	423.20	23.89	478.131	478.739	479.667	480.521	479.629	479.011	478.402					
6/10/2024	466.20	18.33	478.103	478.707	479.638	480.475	479.599	478.976	478.372					
10/24/2025	423.38	21.10	478.068	478.676	479.600	480.453	479.563	478.947	478.339					

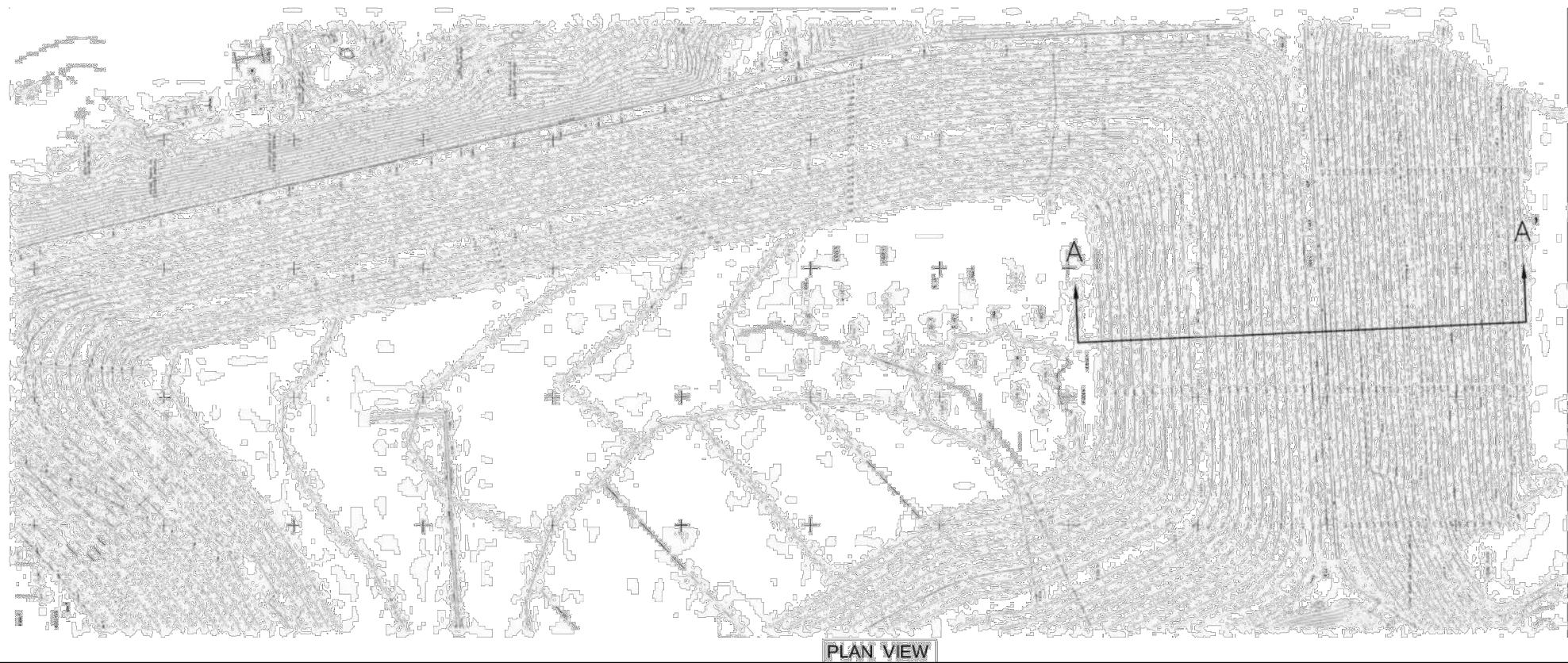
Figures



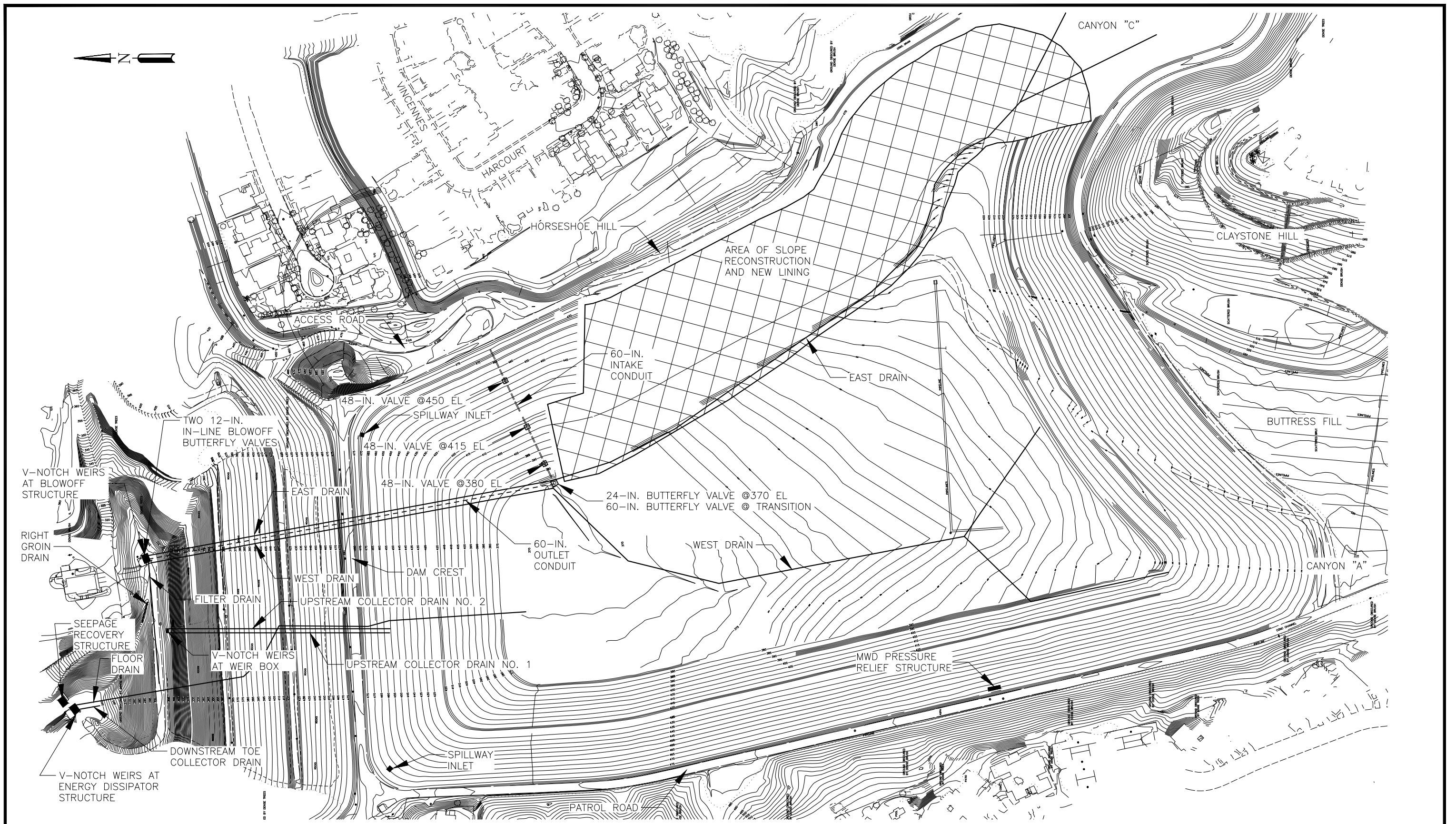
ZONE NO.	MATERIAL	FUNCTION
1	TERRACE SOIL	IMPERVIOUS BLANKET AND RESERVOIR LINING
2	IMPORTED SAND	FILTER DRAIN
3	IMPORTED GRAVEL	ROCK CORE (MAX. SIZE 6")
3A	SANDSTONE	ROCK CORE TRANSITION (MAX. SIZE 3")
4	SANDSTONE	DOWNSTREAM RANDOM SHELL (MAX. SIZE 12")
4A	SANDSTONE	DOWNSTREAM SLOPE PROTECTION (MAX.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

SECTION A-A'

0 50 100
SCALE, FEET



NOT TO SCALE

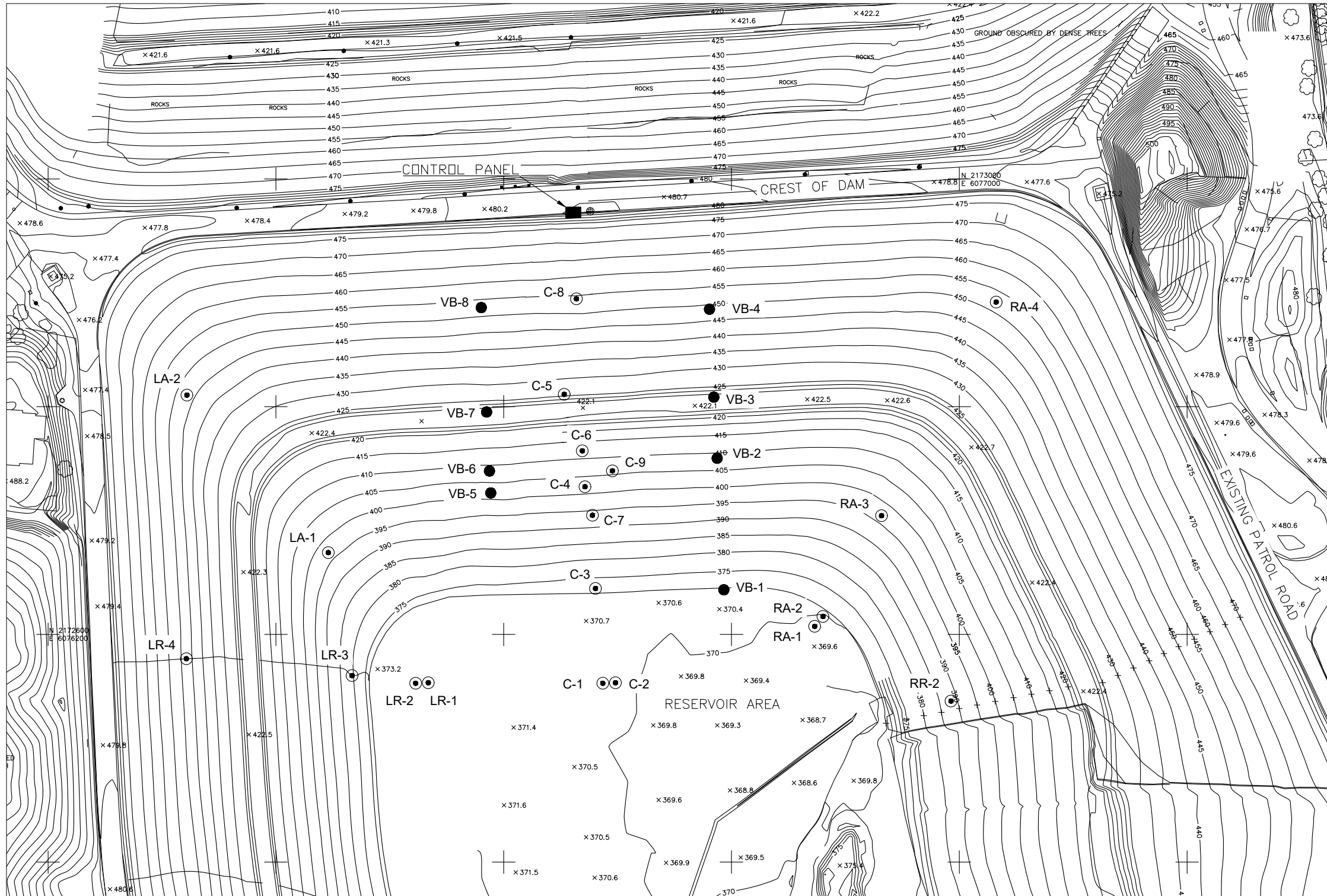


NOT TO SCALE

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

GEI Consultants
 Project 2305575

DAM AND RESERVOIR SITE PLAN
 May 2026
 Fig. 2

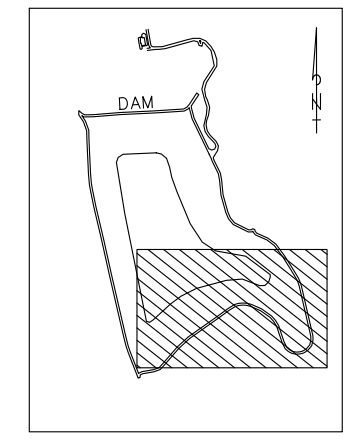
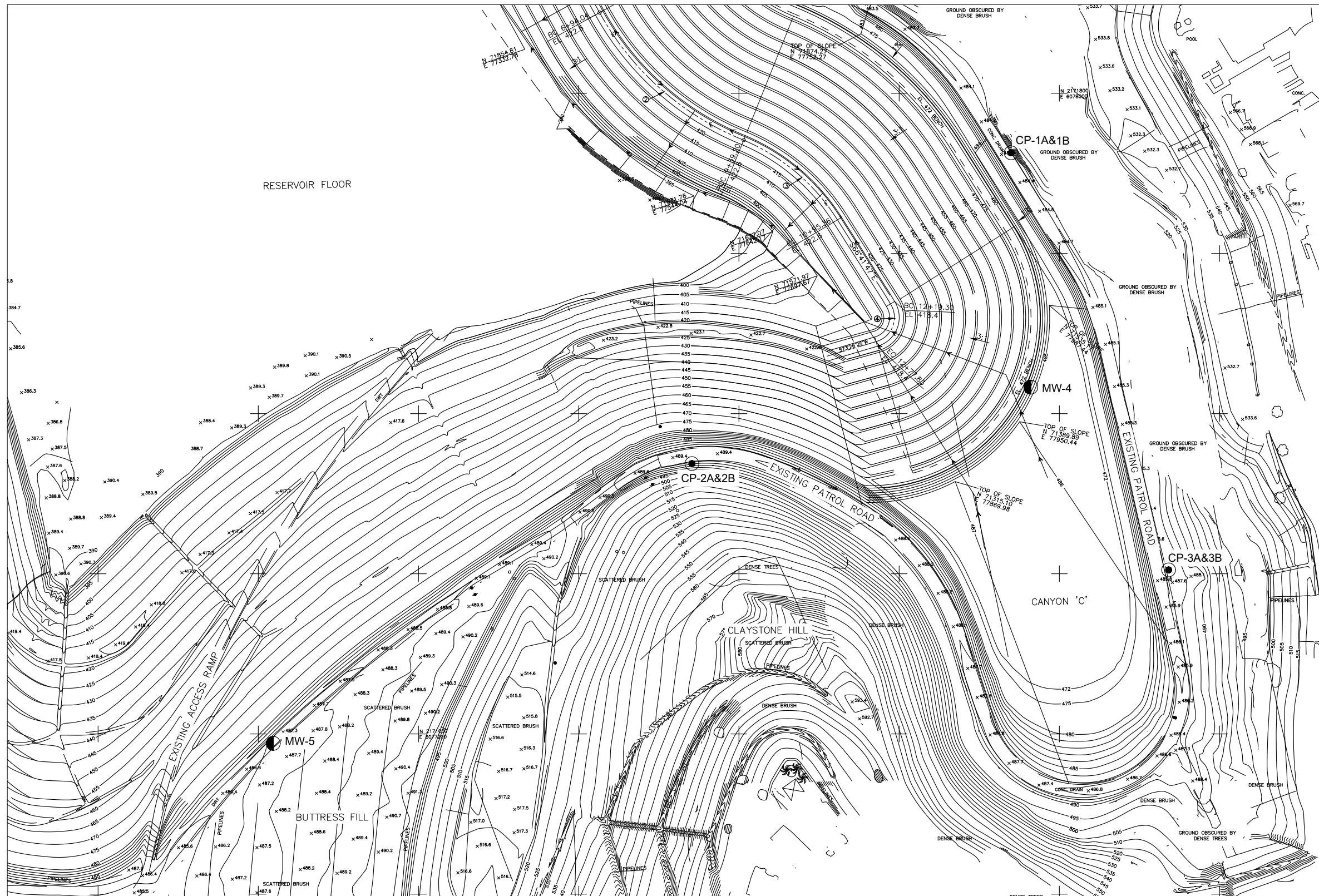


- ### LEGEND
- 380 — 5-FOOT CONTOUR
 - VB-2 VIBRATING WIRE PIEZOMETER
 - ⊙ C-3 PNEUMATIC PIEZOMETER

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



DAM EMBANKMENT AND
 ABUTMENT LOCATIONS
 May 2026



KEY MAP
NTS

LEGEND

- 
 CP-1A&1B OPEN-WELL PIEZOMETER
- 
 MW-4 MONITORING WELL

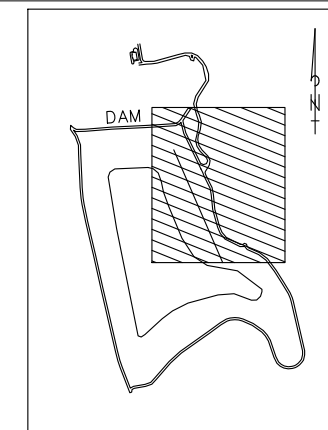


NOT TO SCALE

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 Irvine Ranch Water District
 Irvine, CA



LOCATIONS OF OPEN-WELL
 PIEZOMETERS AND MW-4 AND
 MW-5
 Project 2305575 May 2026 Fig. 4



KEY MAP
NTS

LEGEND

- MW-1 ● MONITORING WELL

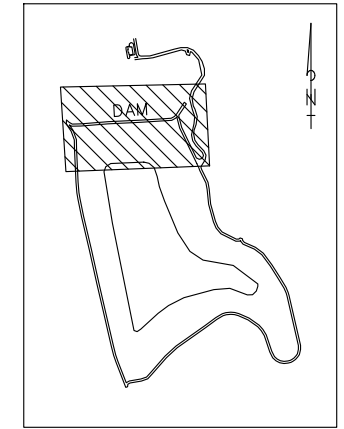
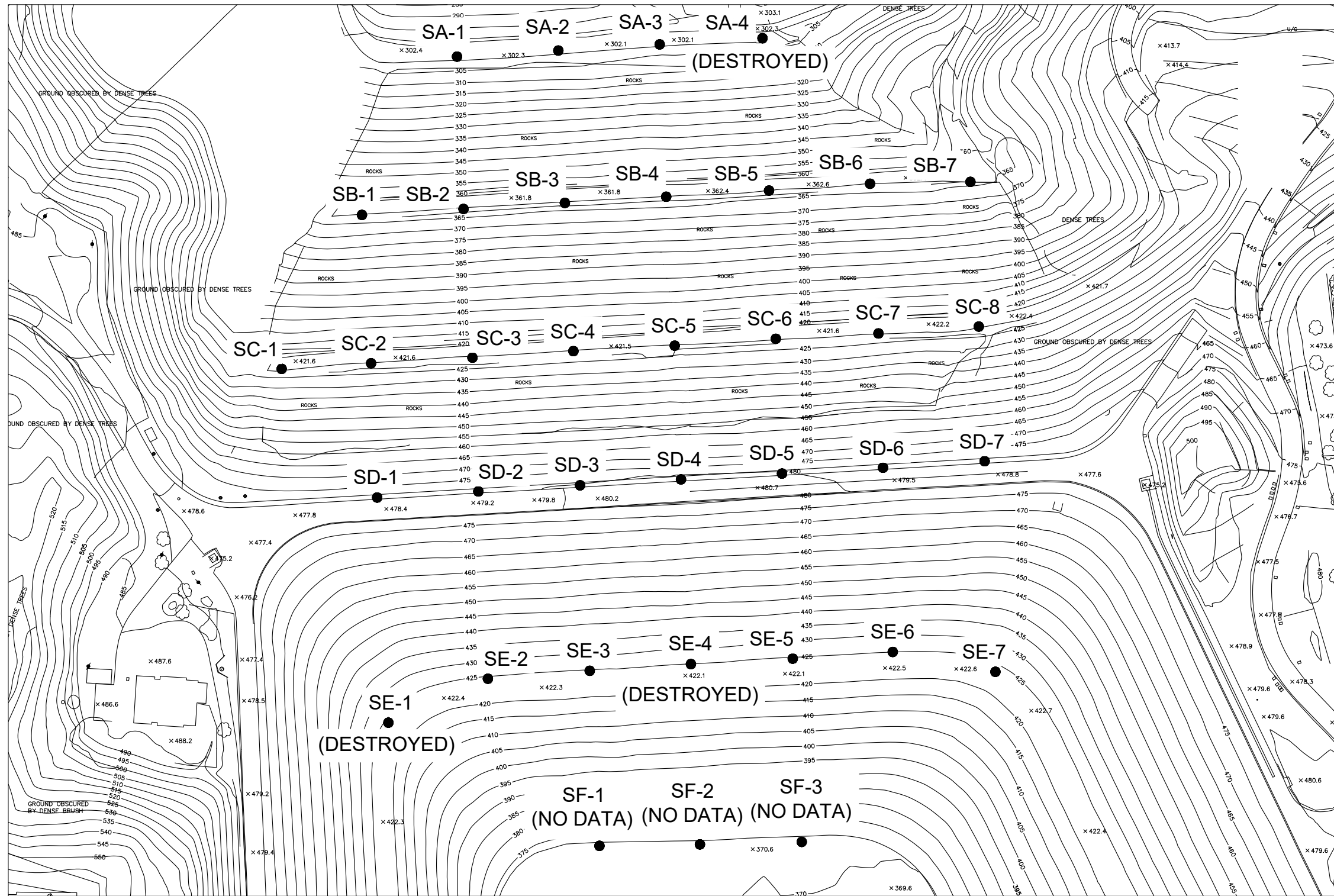


Annual Surveillance Report from Jan. 2025 to Dec. 2025
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 Irvine, CA
 Irvine Ranch Water District
 Irvine, CA

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LOCATIONS OF MW-1, MW-2,
 MW-3, MW-6, MW-7, AND MW-8
 May 2026

Fig. 5



KEY MAP
NTS

LEGEND

SD-3 ● SURVEY MONUMENT



80' 0' 80'
1 INCH = 80 FEET

NOTES:

1. SF-1, SF-2 AND SF-3 SURVEY MONUMENTS ARE SUBMERGED UNDER WATER WHEN RESERVOIR WATER LEVEL IS ABOVE 371 FT.
2. 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.

Annual Surveillance Report from Jan. 2025 to Dec. 2025
 San Joaquin Dam and Reservoir
 Irvine, CA
 Irvine Ranch Water District
 Irvine, CA



Project 2305575

LOCATION OF SURVEY
 MONUMENT POINTS

May 2026

Fig. 6

Figure 7
SAN JOAQUIN DAM
2-YR OPEN WELL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
OPEN WELL PIEZOMETERS CP-1A, CP-1B, CP-3A, AND CP-3B
JANUARY 2024 THROUGH DECEMBER 2025

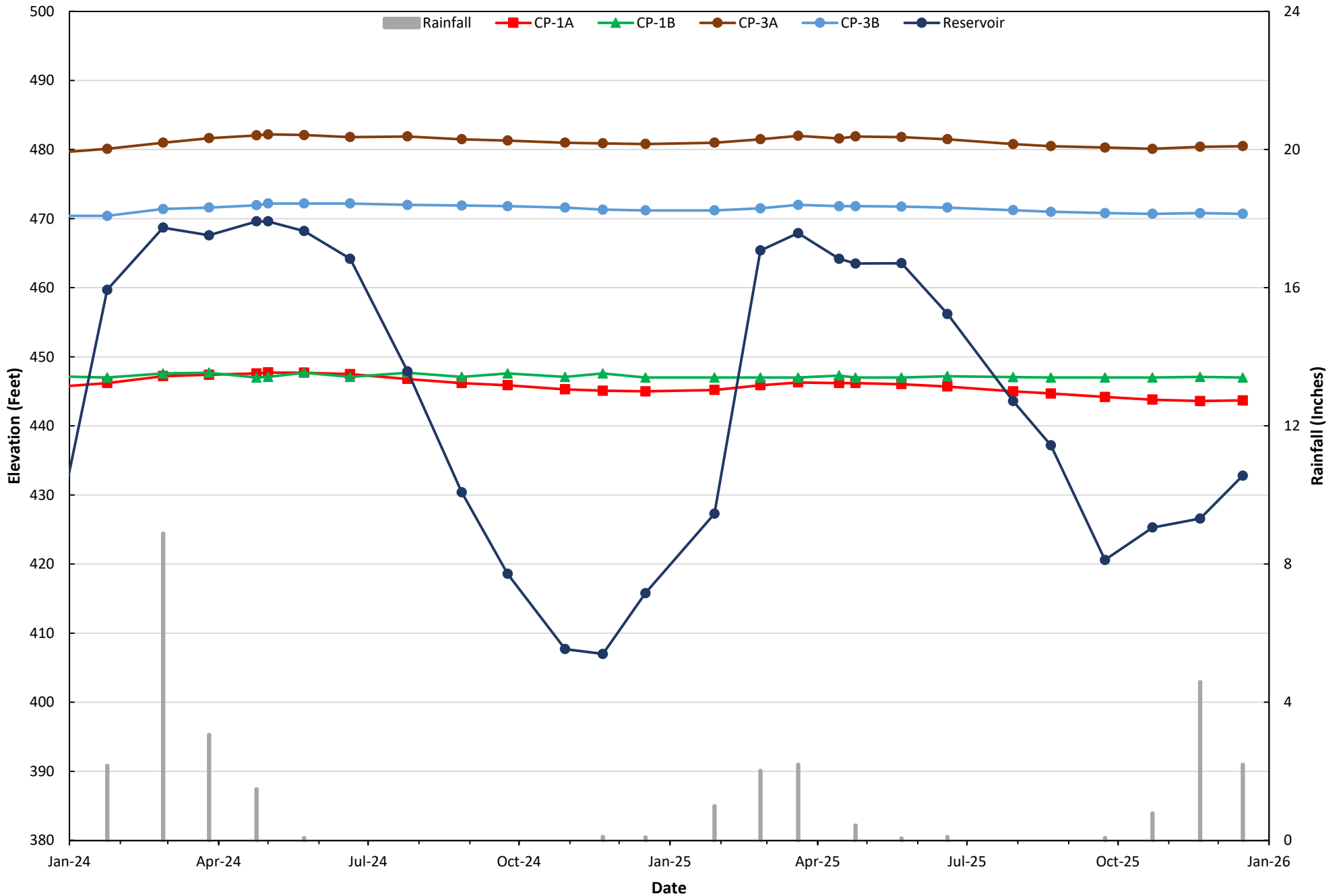


Figure 8
SAN JOAQUIN DAM
2-YR OPEN WELL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
OPEN WELL PIEZOMETERS CP-2A, AND CP-2B
JANUARY 2024 THROUGH DECEMBER 2025

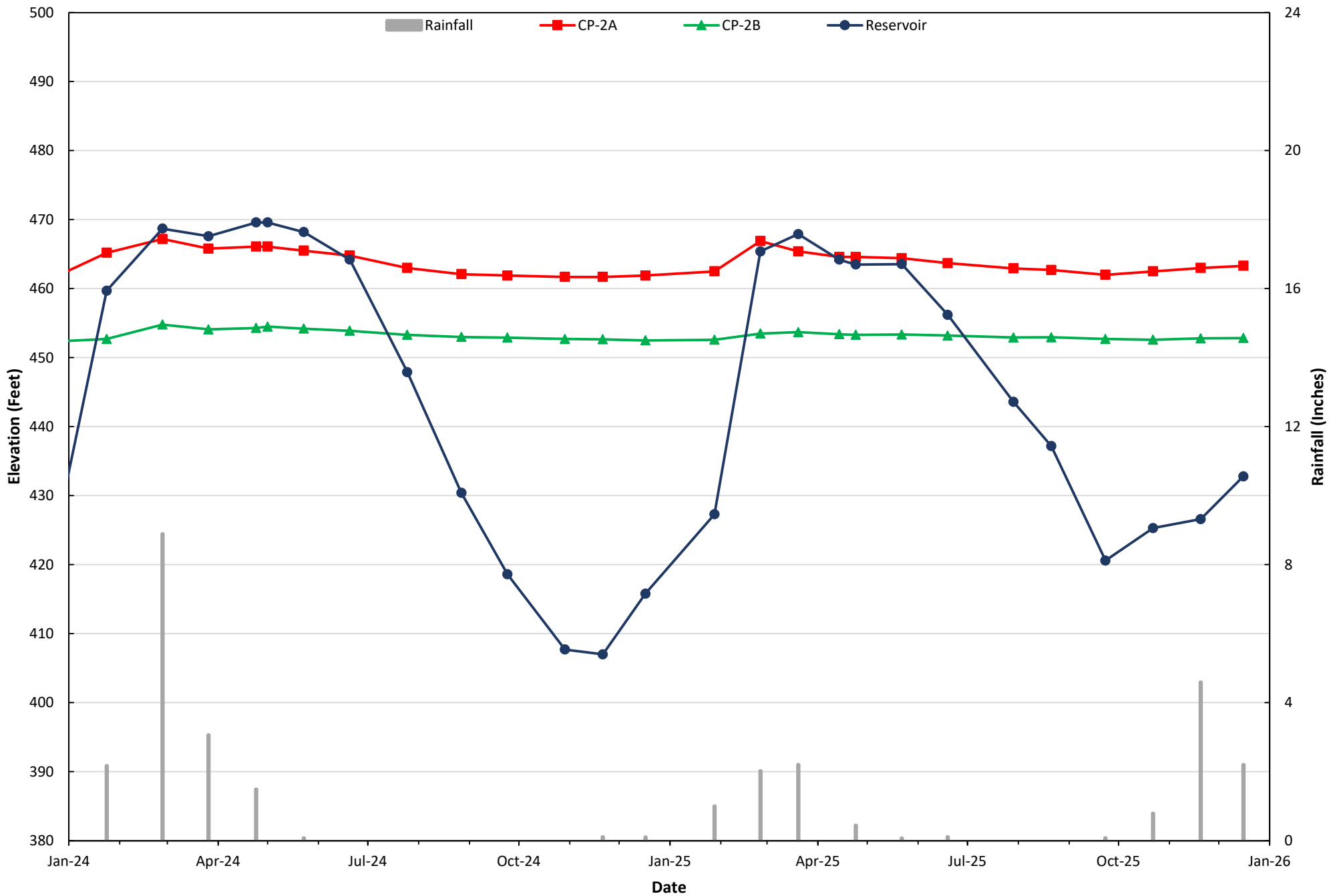


Figure 9
SAN JOAQUIN DAM
2-YR MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
MONITORING WELLS MW-1, MW-2, MW-3, AND MW-6
JANUARY 2024 THROUGH DECEMBER 2025

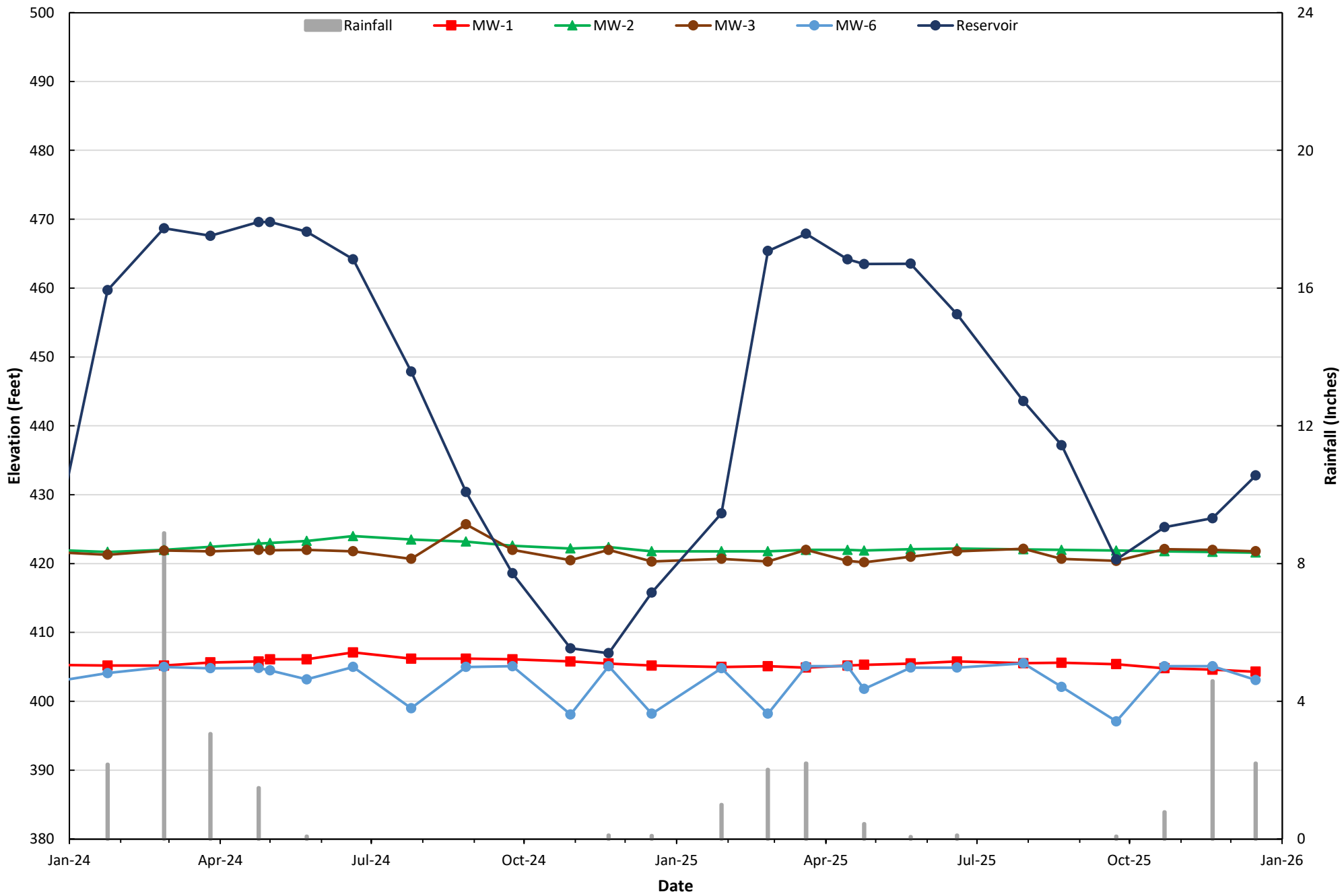


Figure 10
SAN JOAQUIN DAM
2-YR MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
MONITORING WELLS MW-4 AND MW-5
JANUARY 2024 THROUGH DECEMBER 2025

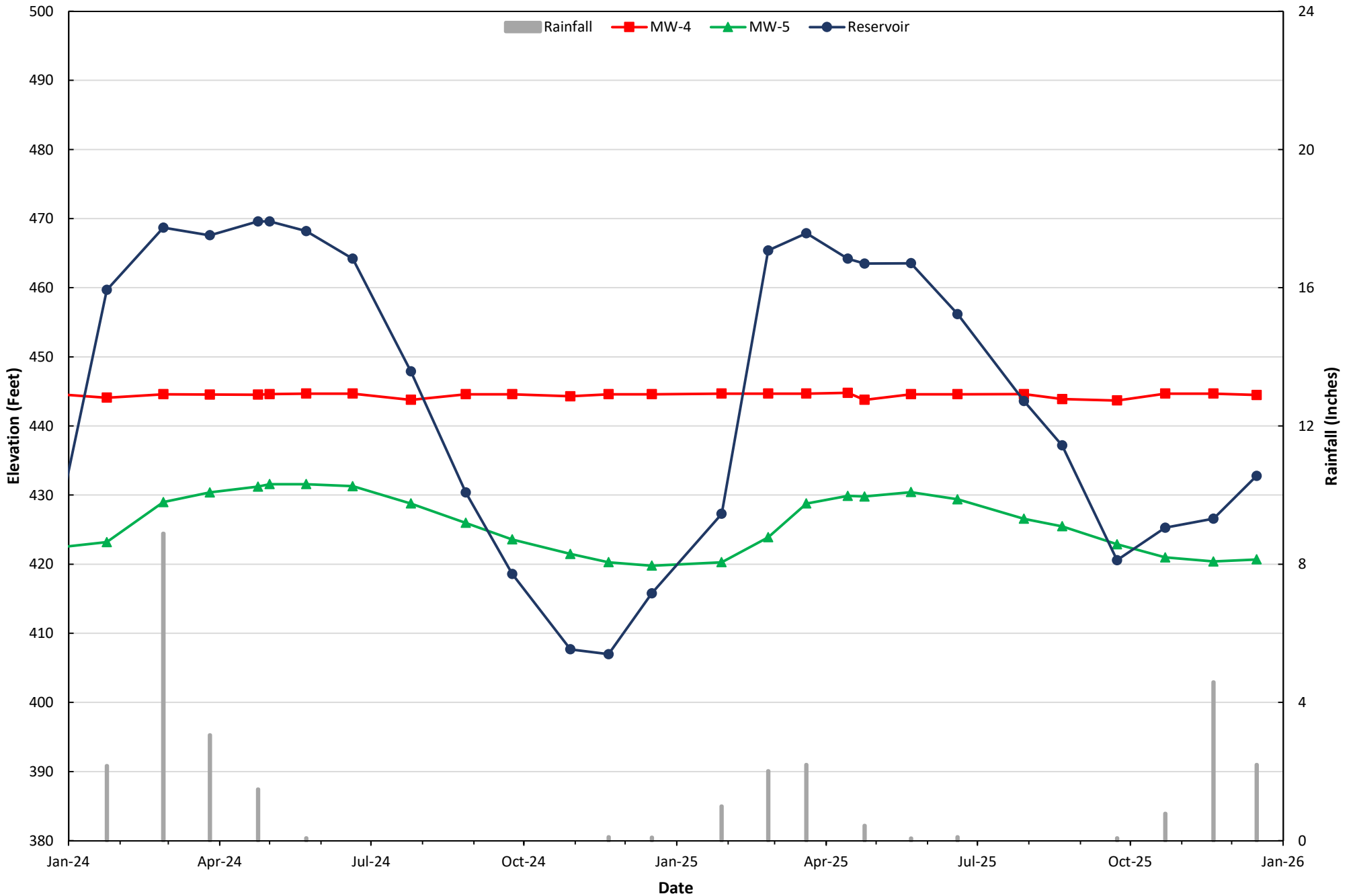


Figure 11
SAN JOAQUIN DAM
2-YR MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
MONITORING WELLS MW-7 AND MW-8
JANUARY 2024 THROUGH DECEMBER 2025

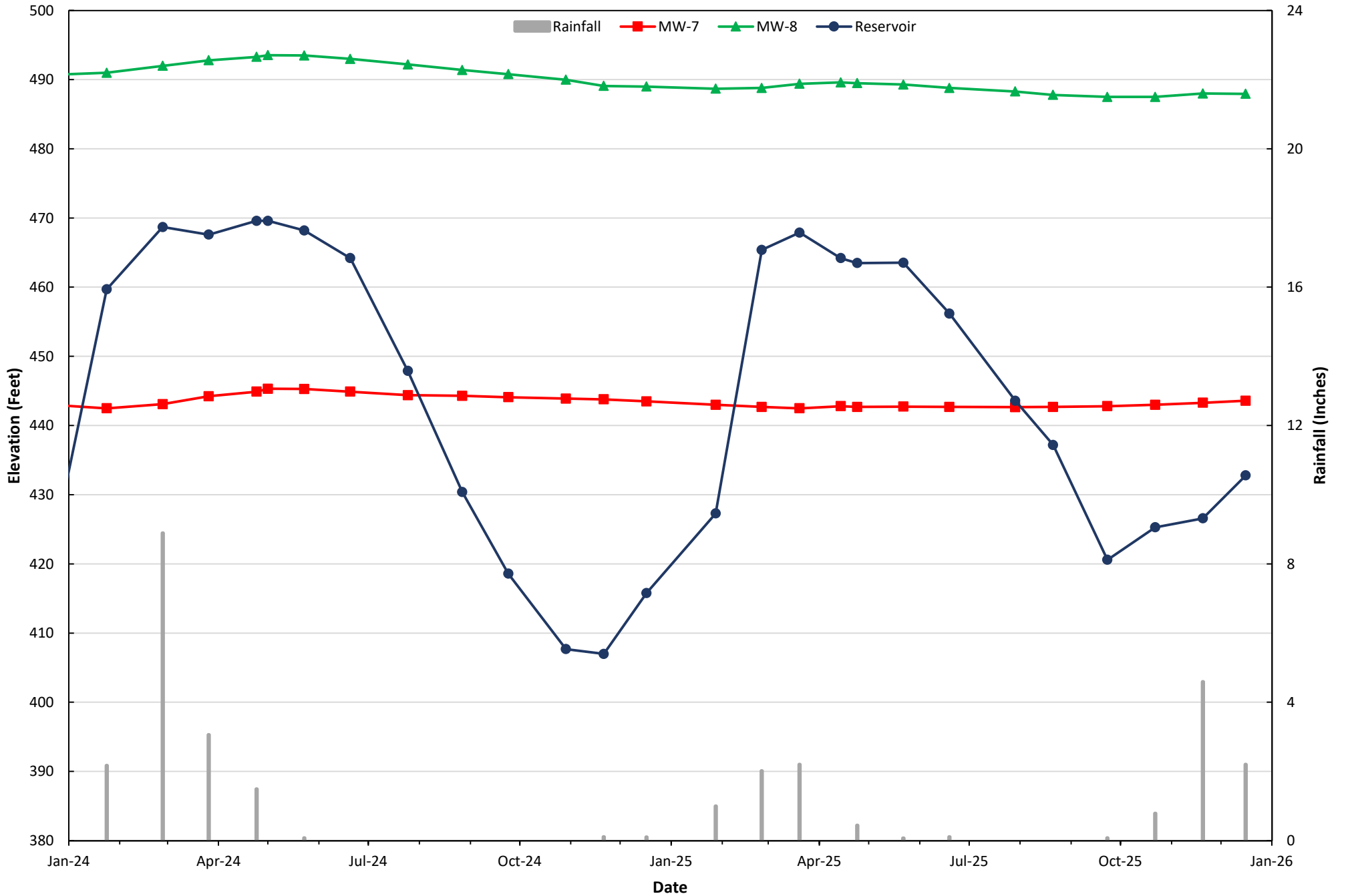


Figure 12
SAN JOAQUIN DAM
HISTORICAL OPEN WELL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
OPEN WELL PIEZOMETERS CP-1A, CP-1B, CP-3A, AND CP-3B
JANUARY 2015 THROUGH DECEMBER 2025

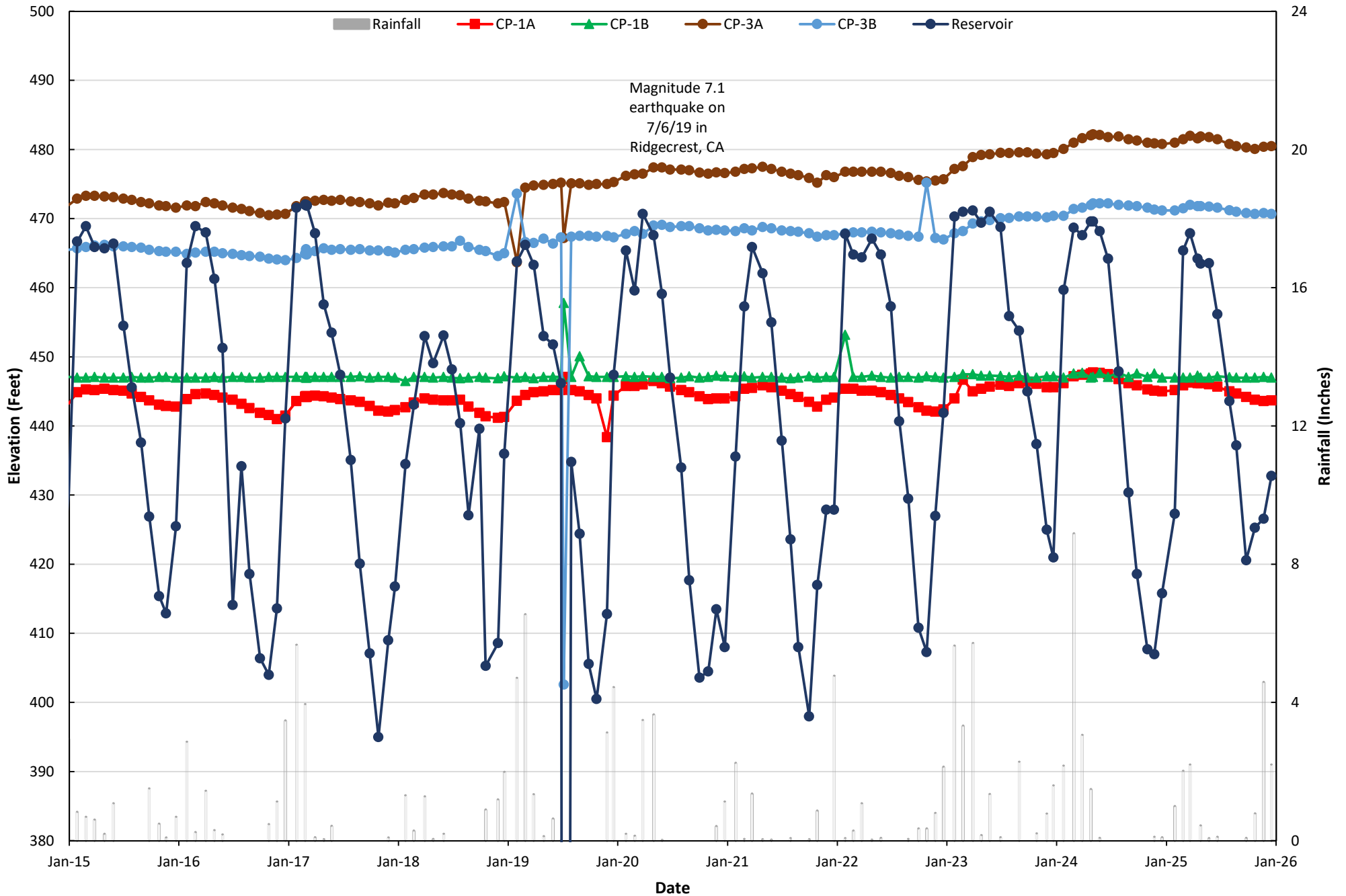


Figure 13
 SAN JOAQUIN DAM
 HISTORICAL OPEN WELL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 OPEN WELL PIEZOMETERS CP-2A AND CP-2B
 JANUARY 2015 THROUGH DECEMBER 2025

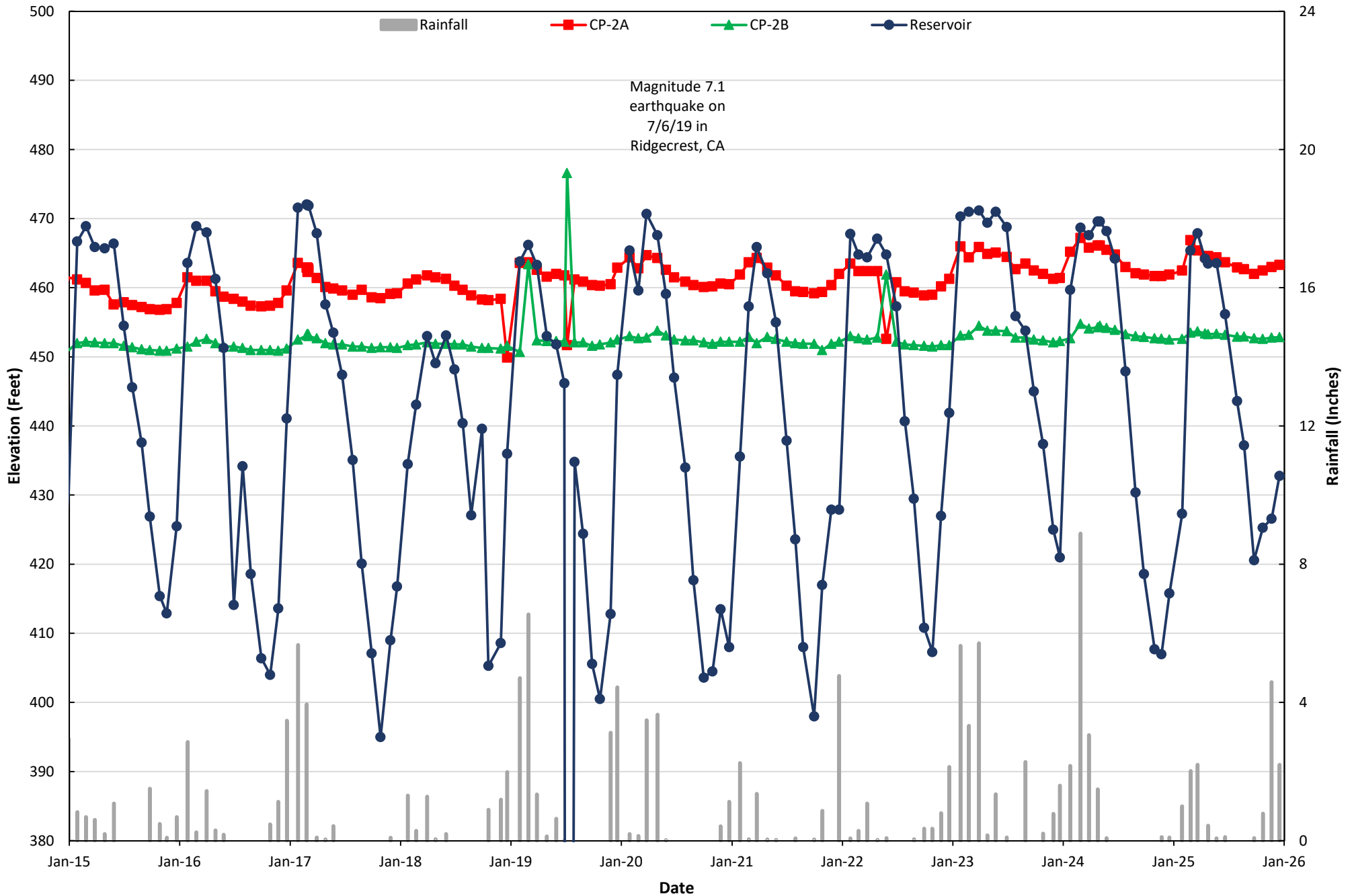


Figure 14
SAN JOAQUIN DAM
HISTORICAL MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
MONITORING WELLS MW-1, MW-2, MW-3, AND MW-6
JANUARY 2015 THROUGH DECEMBER 2025

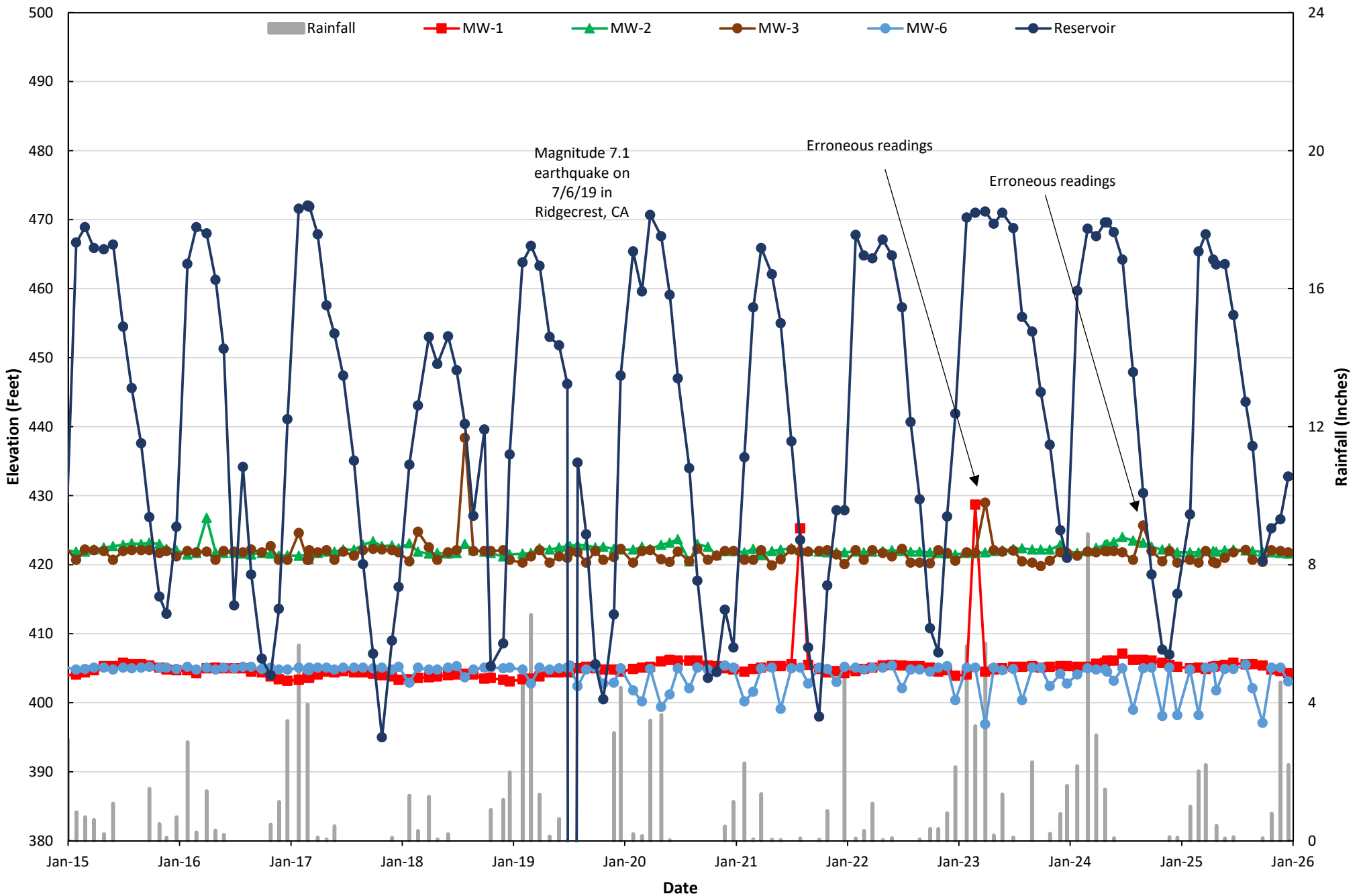


Figure 15
 SAN JOAQUIN DAM
 HISTORICAL MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
 MONITORING WELLS MW-4 AND MW-5
 JANUARY 2015 THROUGH DECEMBER 2025

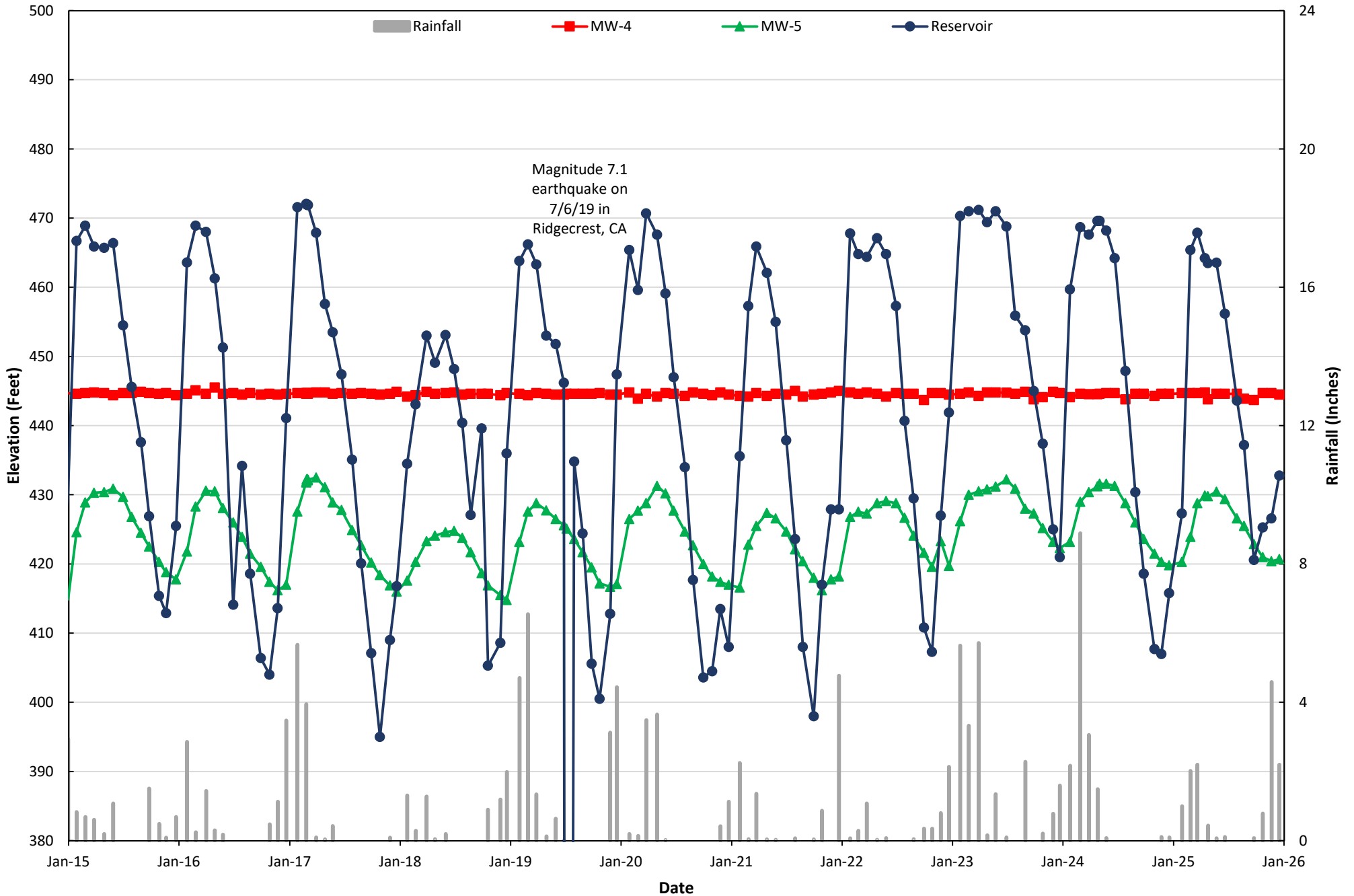


Figure 16
 SAN JOAQUIN DAM
 HISTORICAL MONITORING WELL AND RESERVOIR WATER SURFACE ELEVATIONS
 MONITORING WELLS MW-7 AND MW-8
 JANUARY 2015 THROUGH DECEMBER 2025

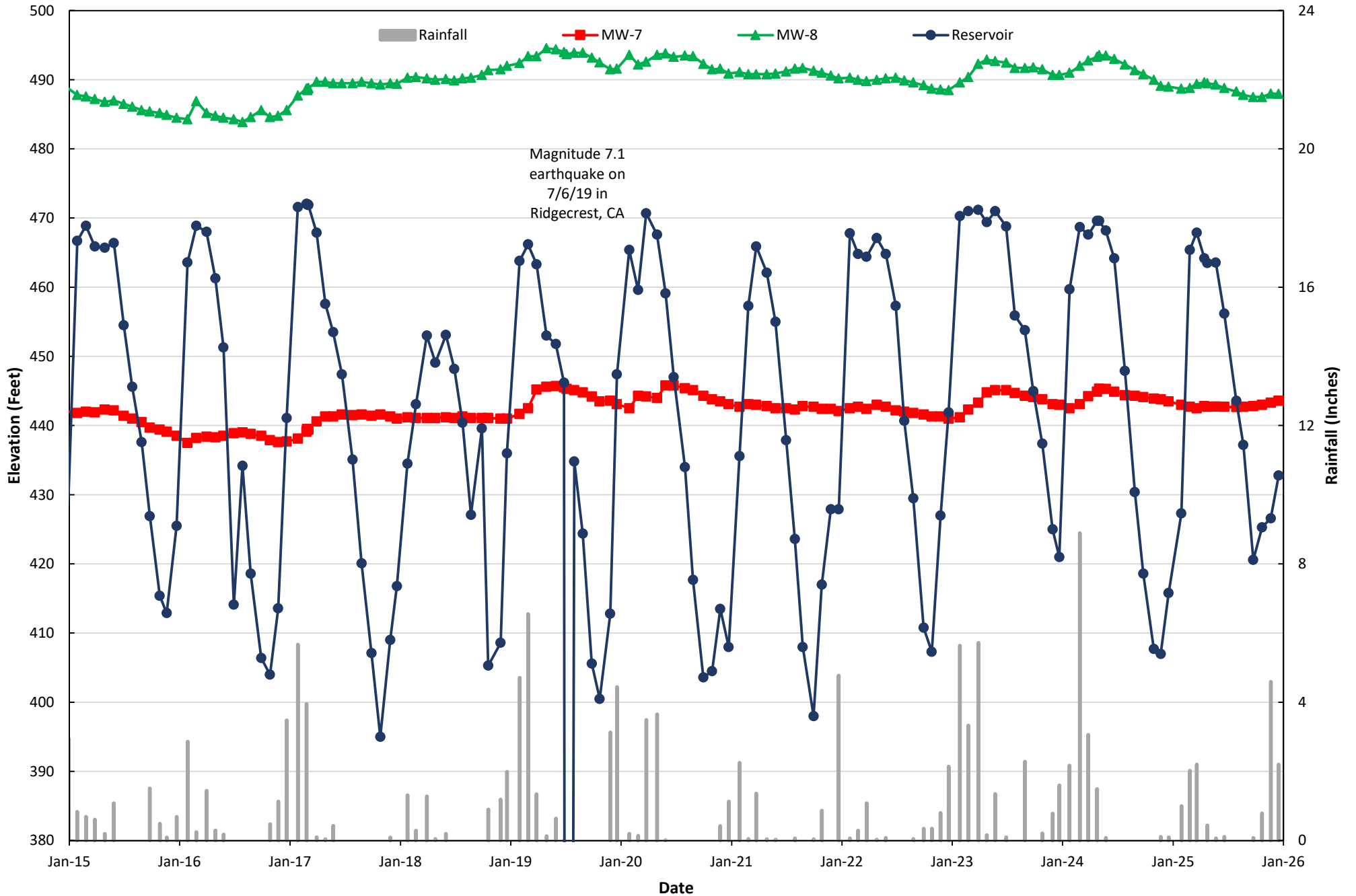


Figure 17
SAN JOAQUIN DAM
2-YR VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
VIBRATING WIRE PIEZOMETERS VB-1, VB-2, VB-5, AND VB-6
JANUARY 2024 THROUGH DECEMBER 2025

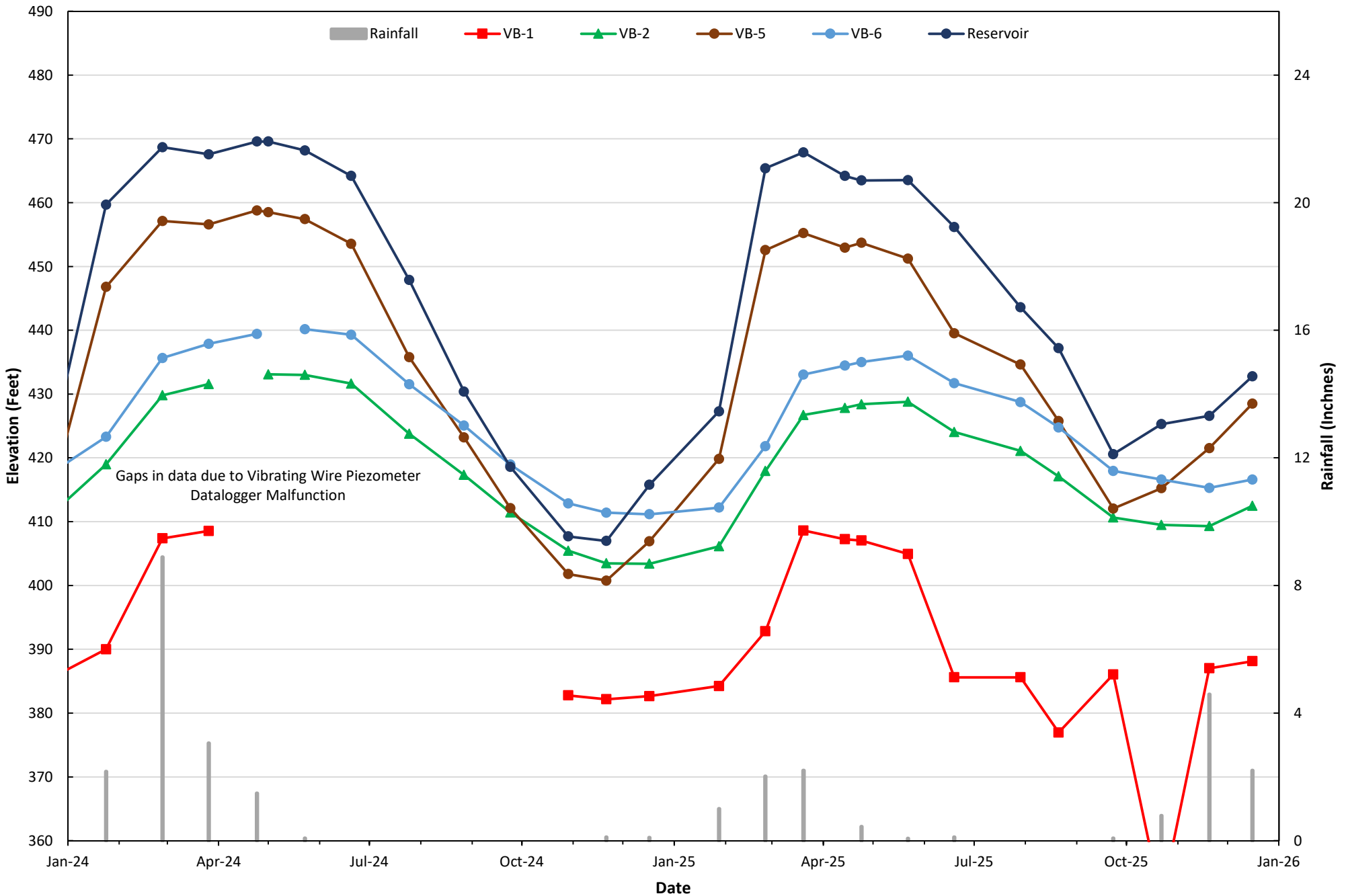


Figure 18
SAN JOAQUIN DAM
2-YR VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
VIBRATING WIRE PIEZOMETERS VB-3, VB-4, VB-7, AND VB-8
JANUARY 2024 THROUGH DECEMBER 2025

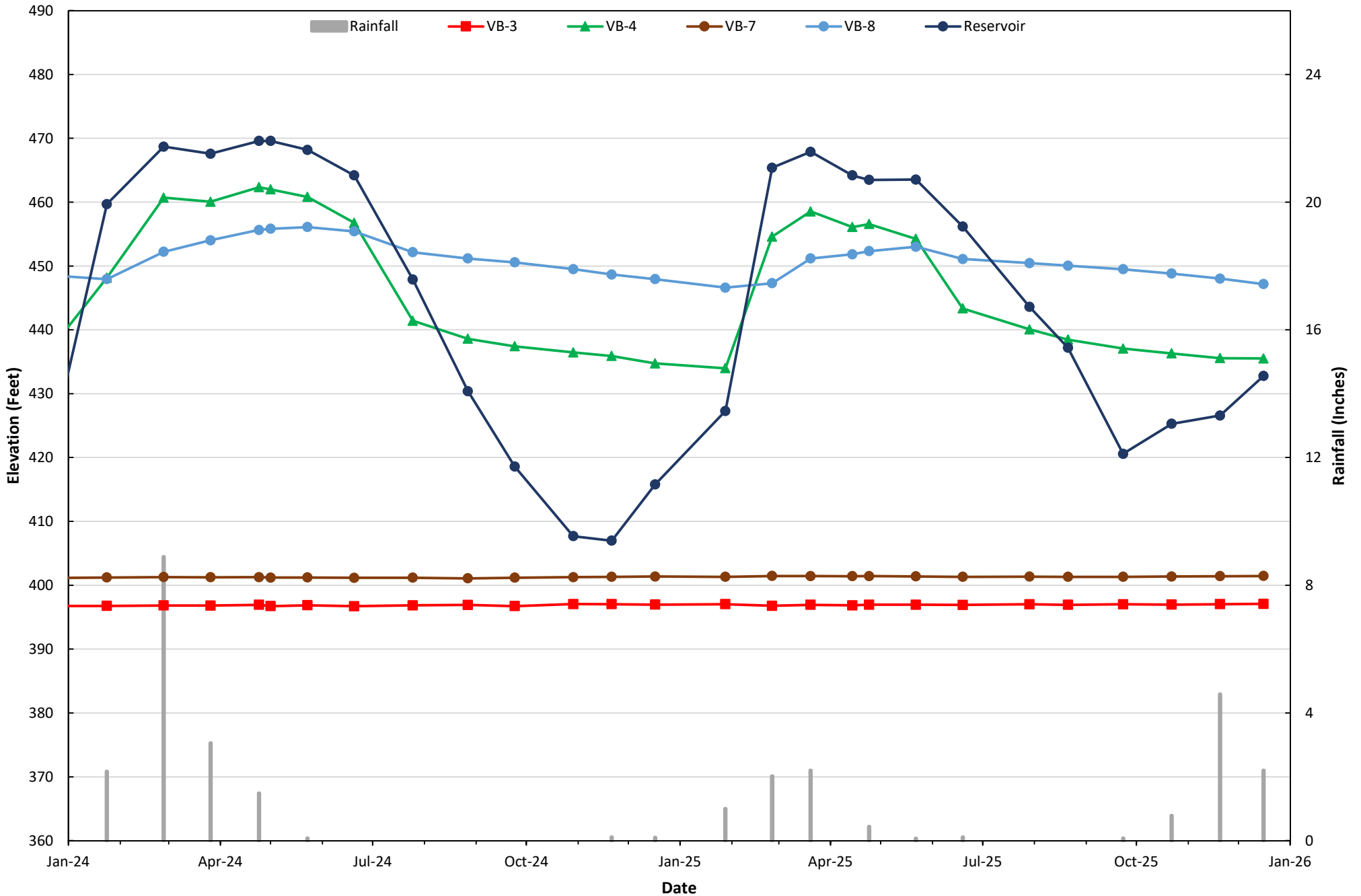


Figure 19
SAN JOAQUIN DAM
HISTORICAL VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
VIBRATING WIRE PIEZOMETERS VB-1, VB-2, VB-5, AND VB-6
JANUARY 2015 THROUGH DECEMBER 2025

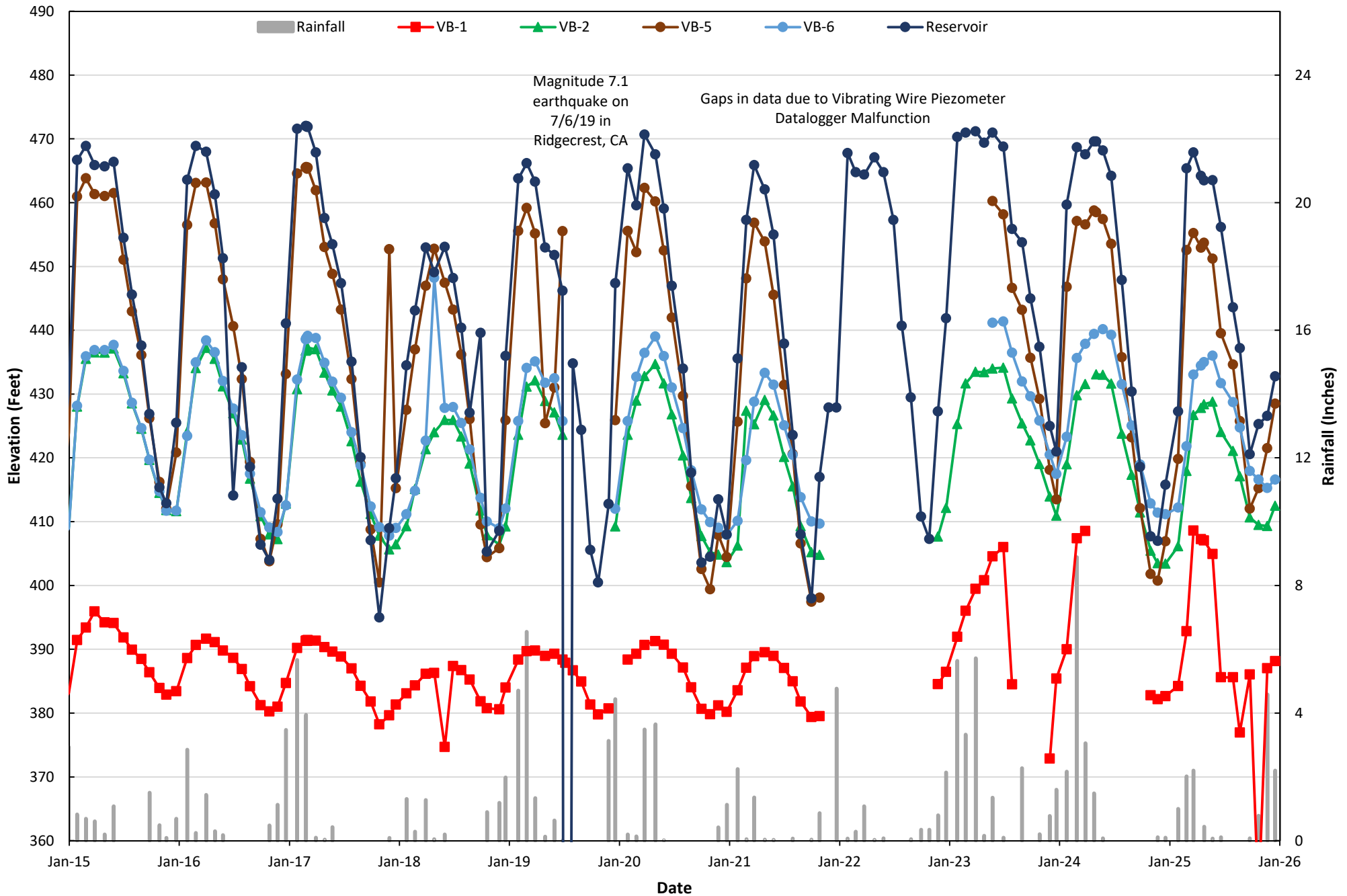


Figure 20
 SAN JOAQUIN DAM
 HISTORICAL VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 VIBRATING WIRE PIEZOMETERS VB-3, VB-4, VB-7, AND VB-8
 JANUARY 2015 THROUGH DECEMBER 2025

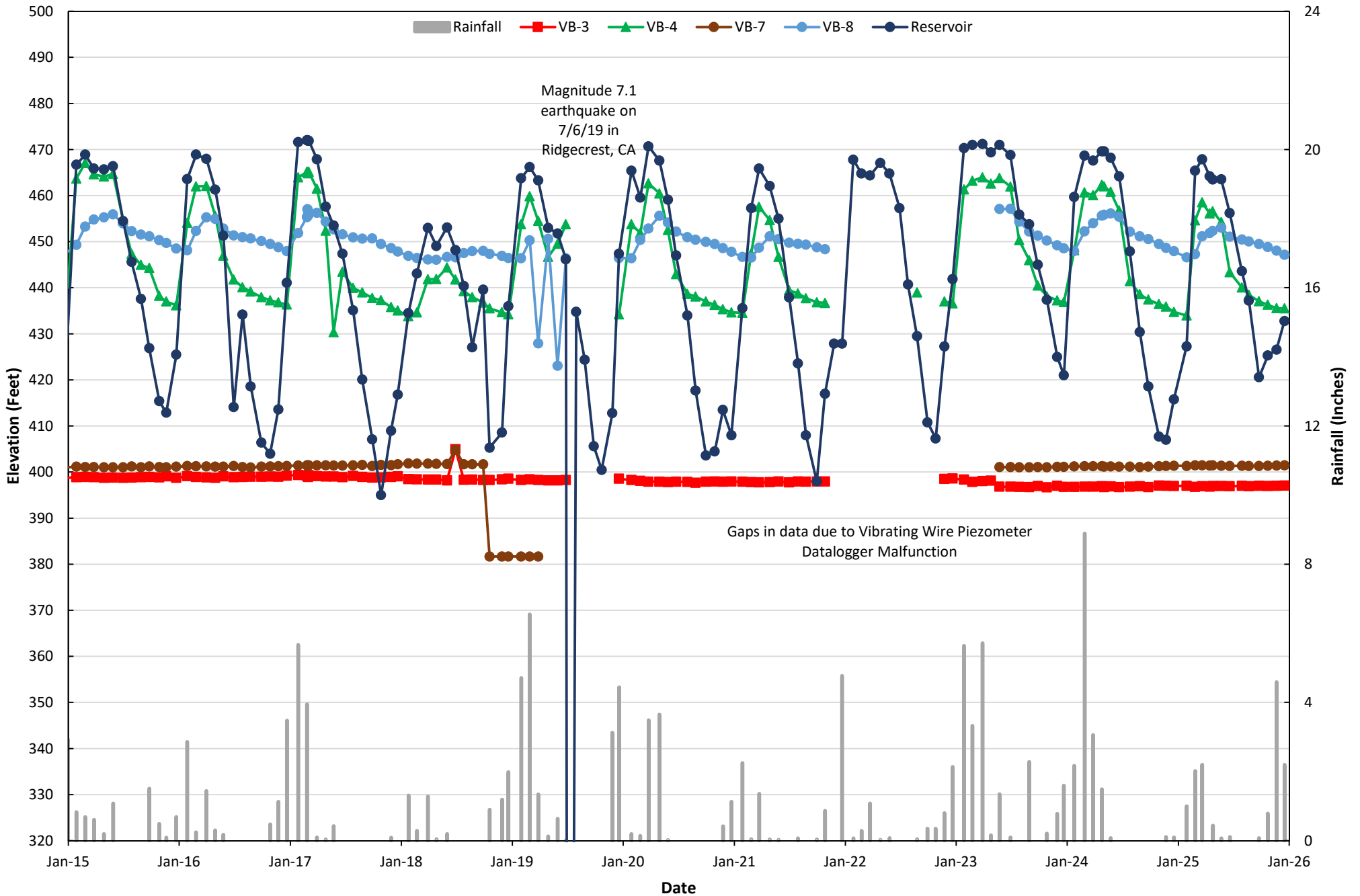


Figure 21
SAN JOAQUIN DAM
2-YR PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
PNEUMATIC PIEZOMETERS C-1, C-2, C-3, AND C-4
JANUARY 2024 THROUGH DECEMBER 2025

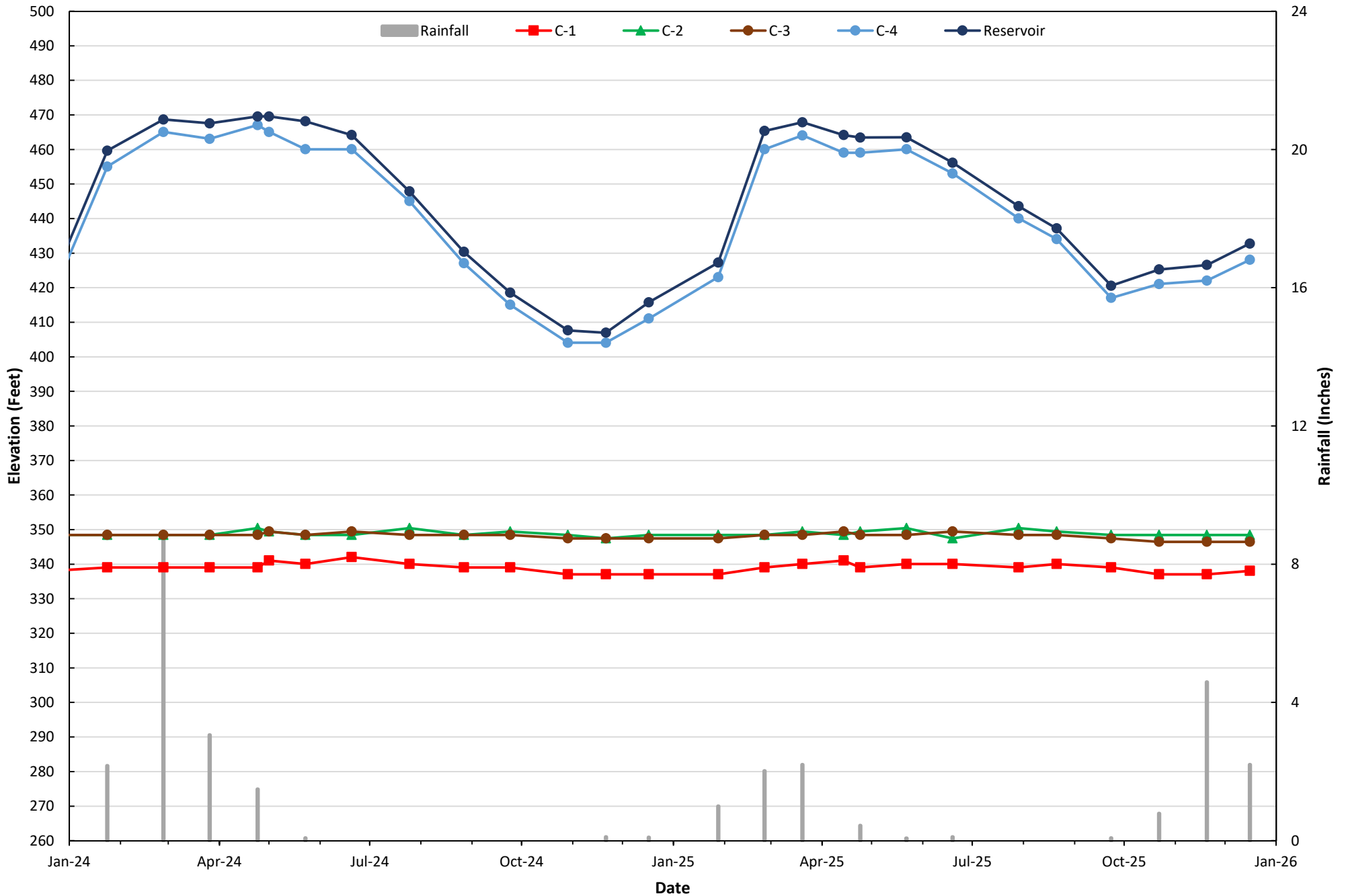


Figure 22
SAN JOAQUIN DAM
2-YR PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
PNEUMATIC PIEZOMETERS C-5, C-6, C-7, AND C-8
JANUARY 2024 THROUGH DECEMBER 2025

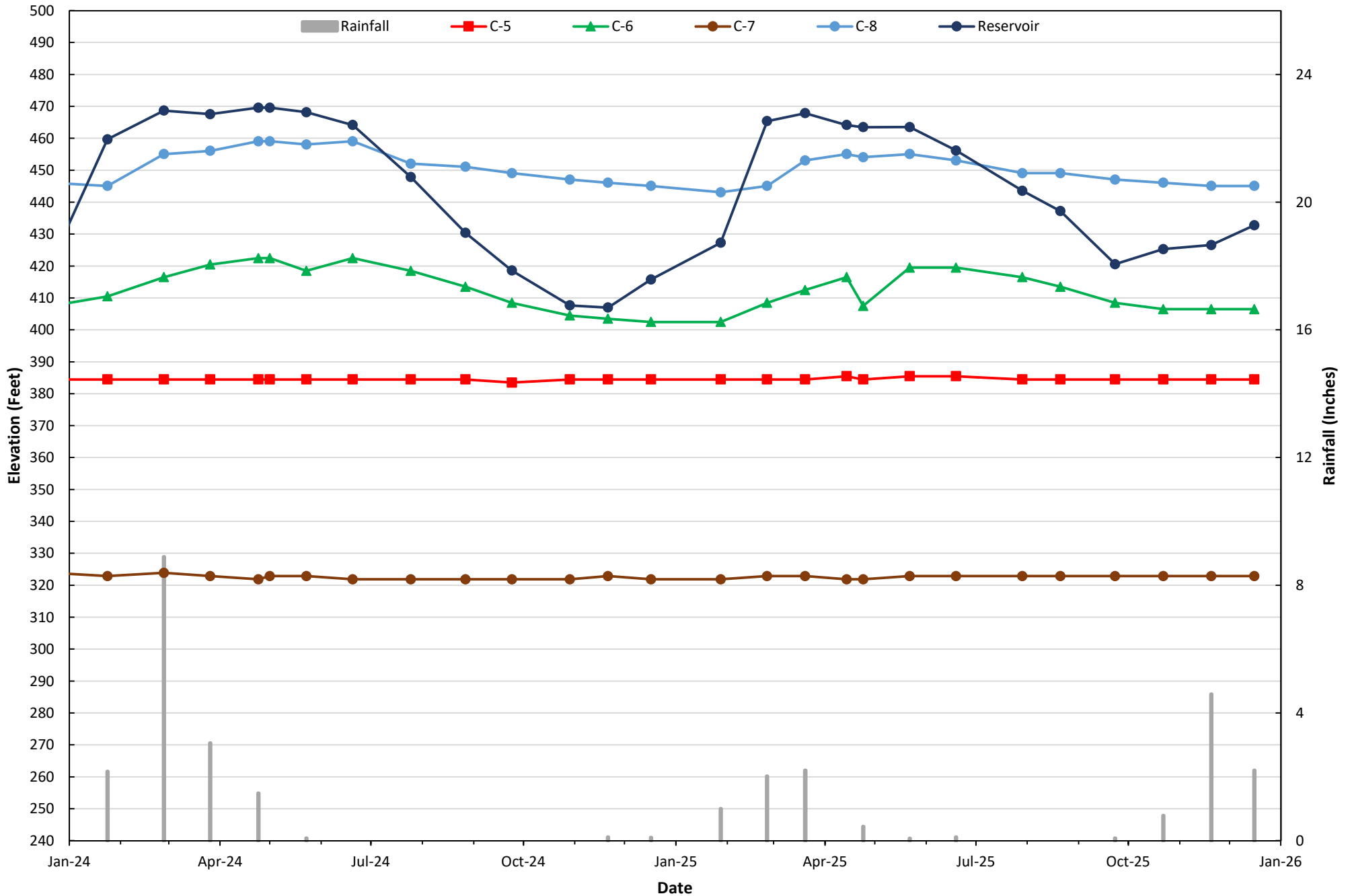


Figure 23
SAN JOAQUIN DAM
2-YR PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
PNEUMATIC PIEZOMETERS C-9, RR-2, LR-1, LR-2, LR-3, AND LR-4
JANUARY 2024 THROUGH DECEMBER 2025

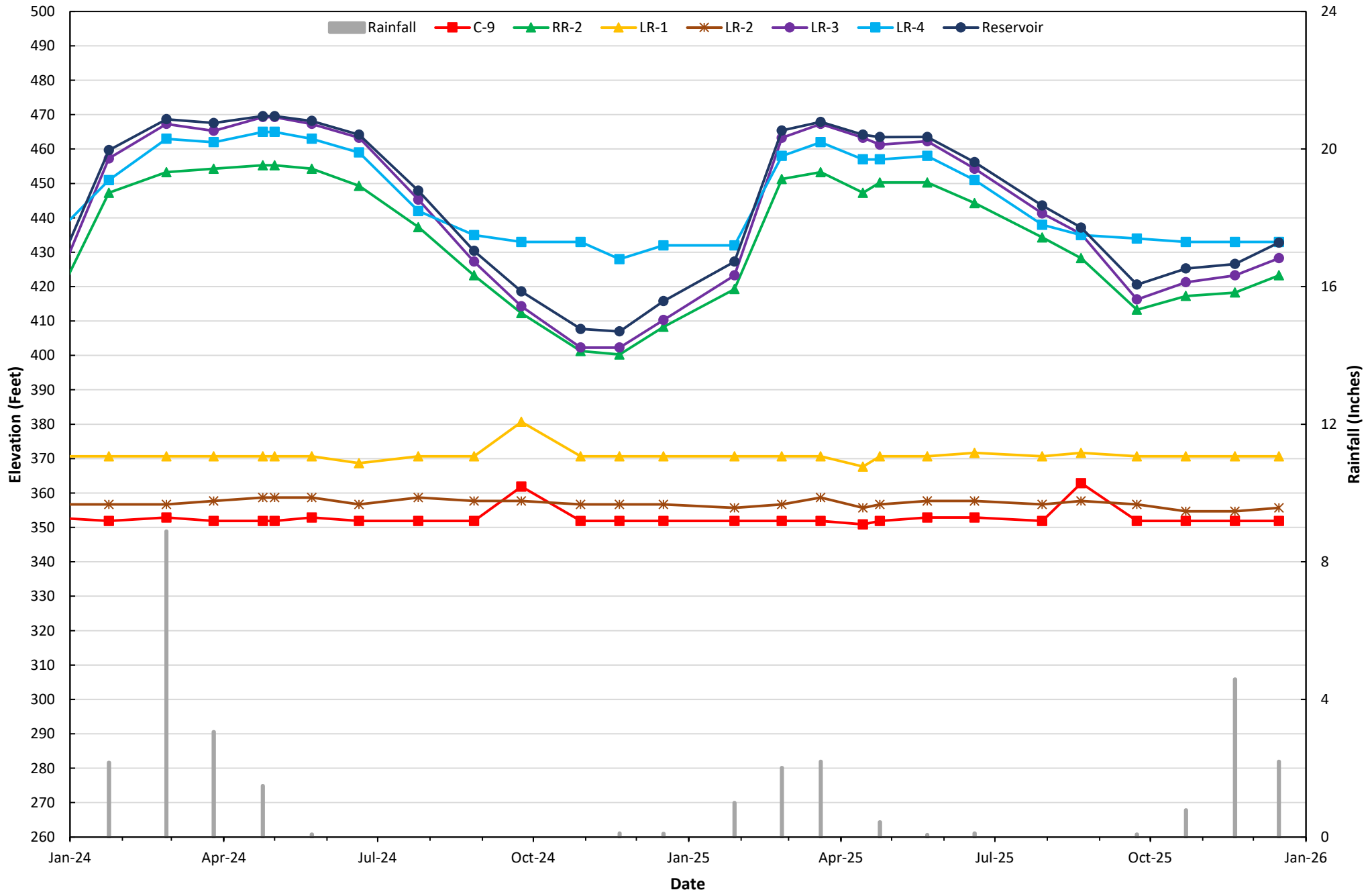


Figure 24
SAN JOAQUIN DAM
2-YR PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
PNEUMATIC PIEZOMETERS LA-1 AND LA-2
JANUARY 2024 THROUGH DECEMBER 2025

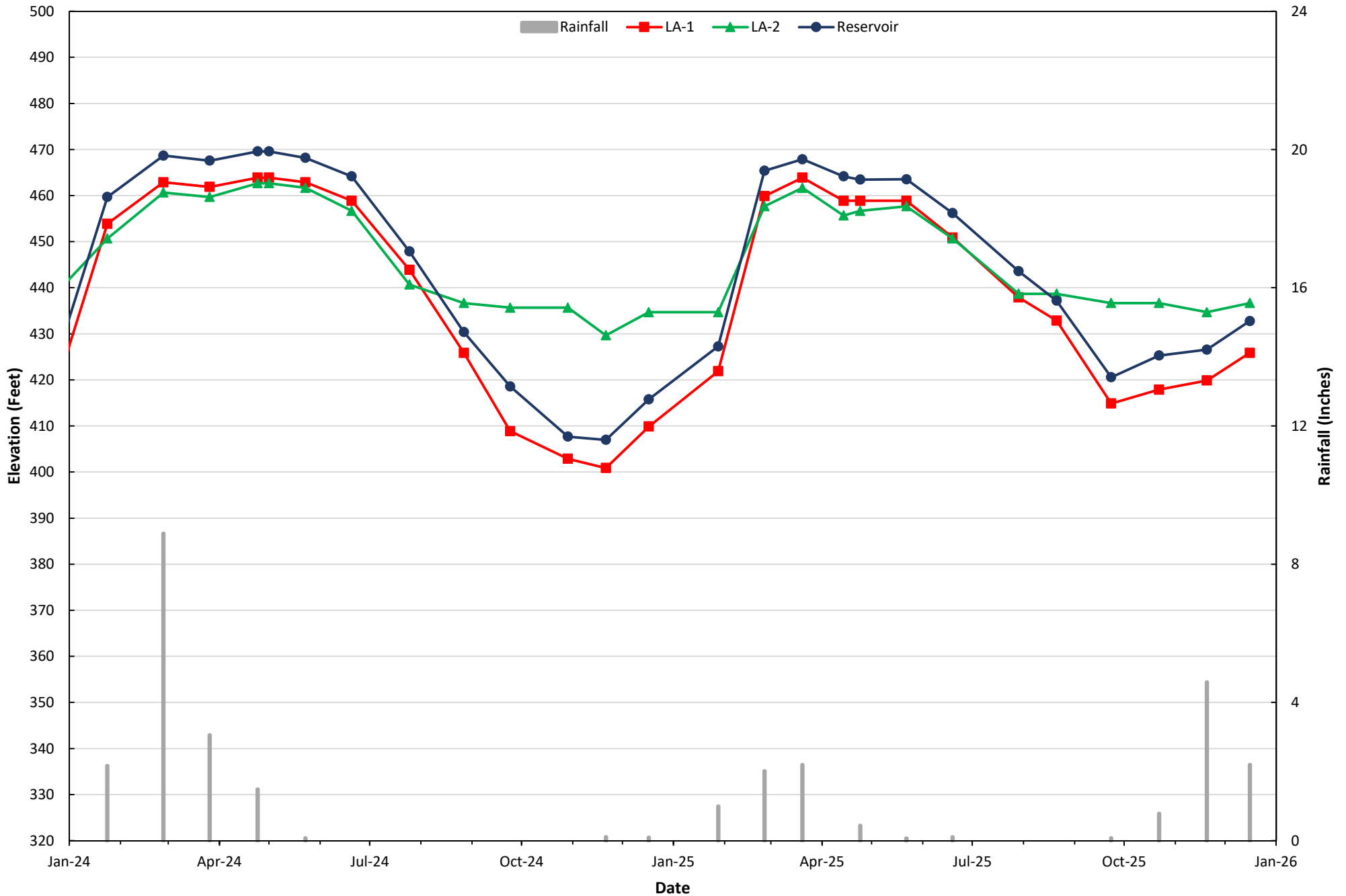


Figure 25
SAN JOAQUIN DAM
2-YR PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
PNEUMATIC PIEZOMETERS RA-1, RA-2, RA-3, AND RA-4
JANUARY 2024 THROUGH DECEMBER 2025

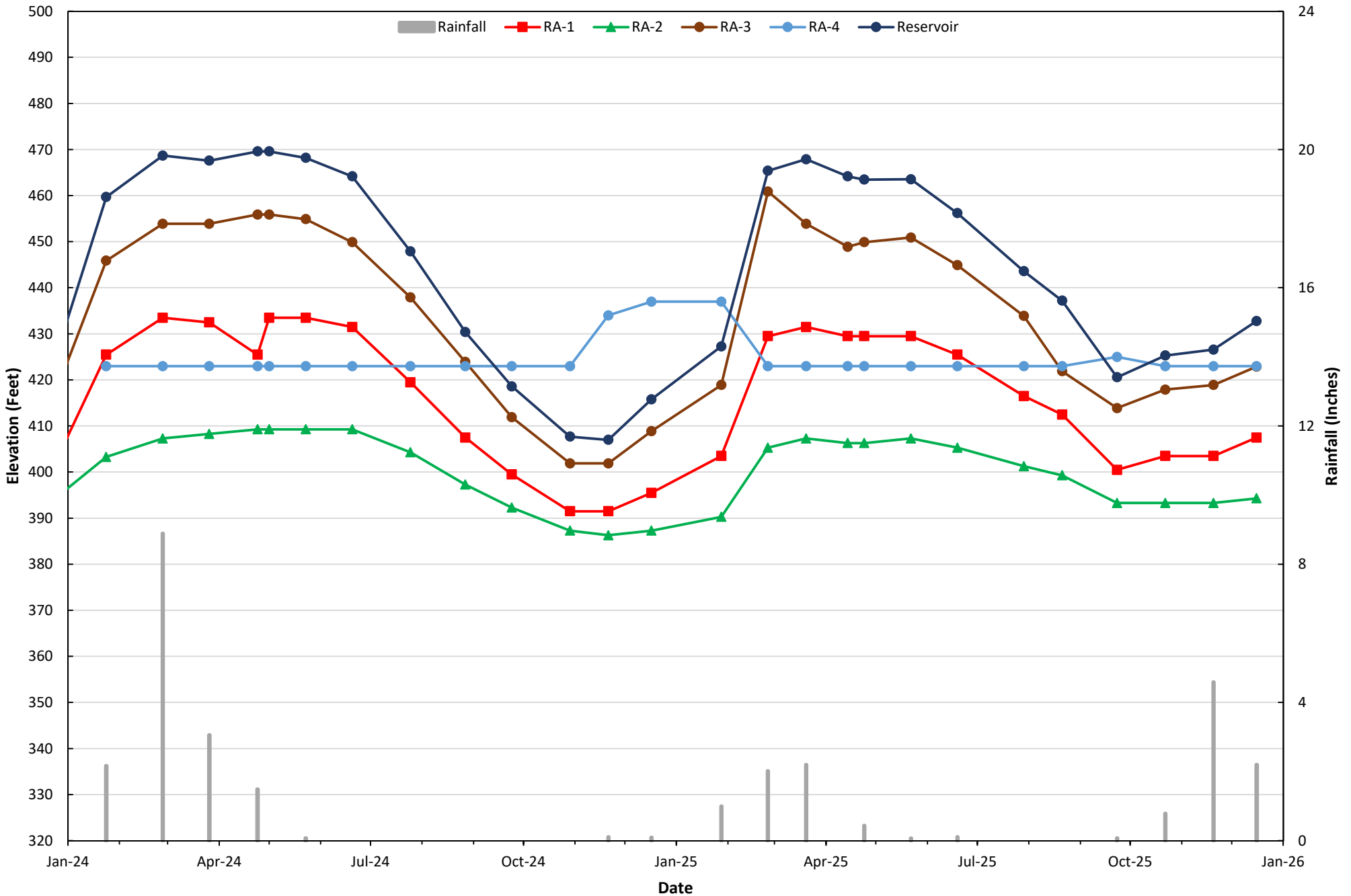


Figure 26
SAN JOAQUIN DAM
HISTORICAL PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
PNEUMATIC PIEZOMETERS C-1, C-2, C-3, AND C-4
JANUARY 2015 THROUGH DECEMBER 2025

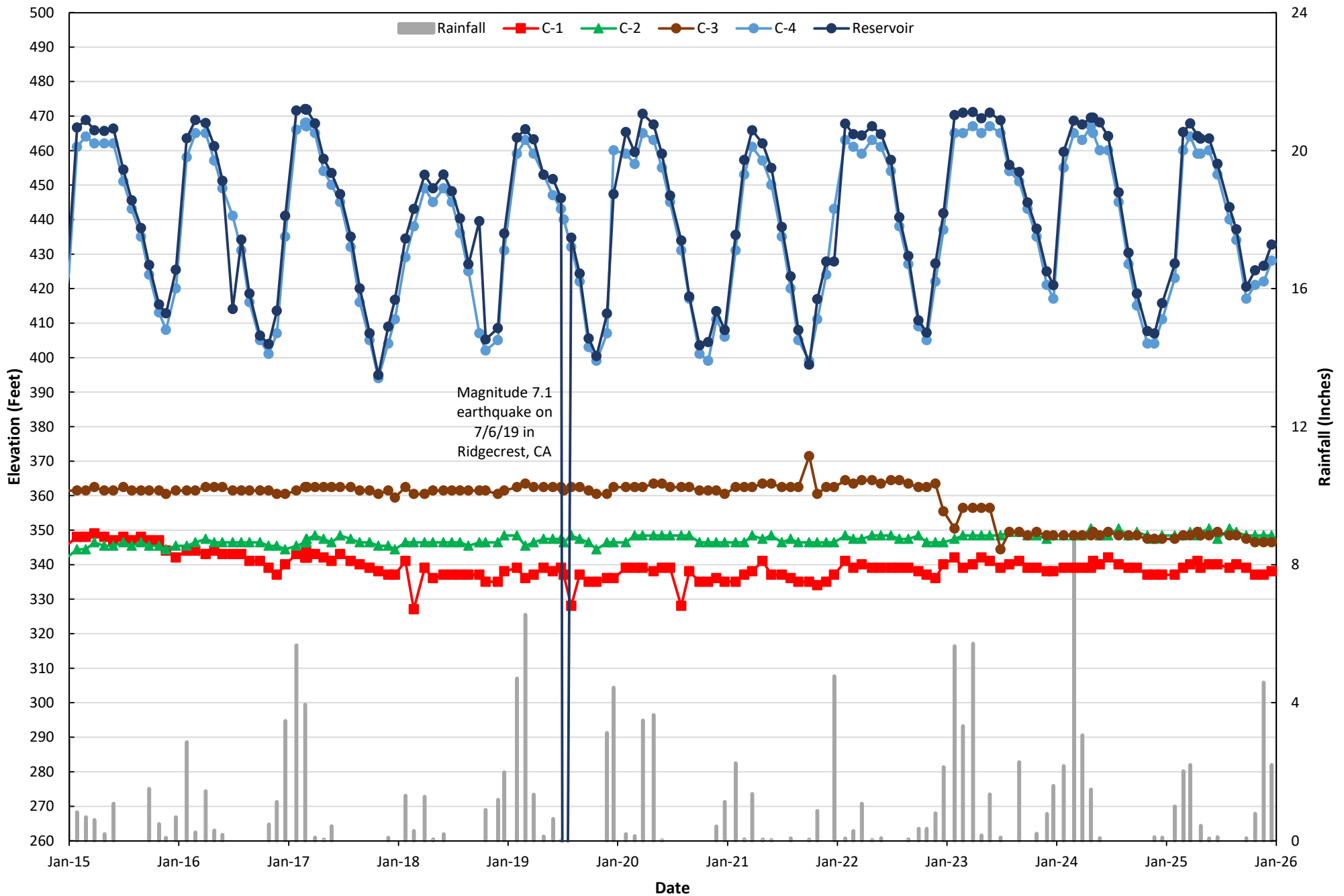


Figure 27
SAN JOAQUIN DAM
HISTORICAL PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
PNEUMATIC PIEZOMETERS C-5, C-6, C-7, AND C-8
JANUARY 2015 THROUGH DECEMBER 2025

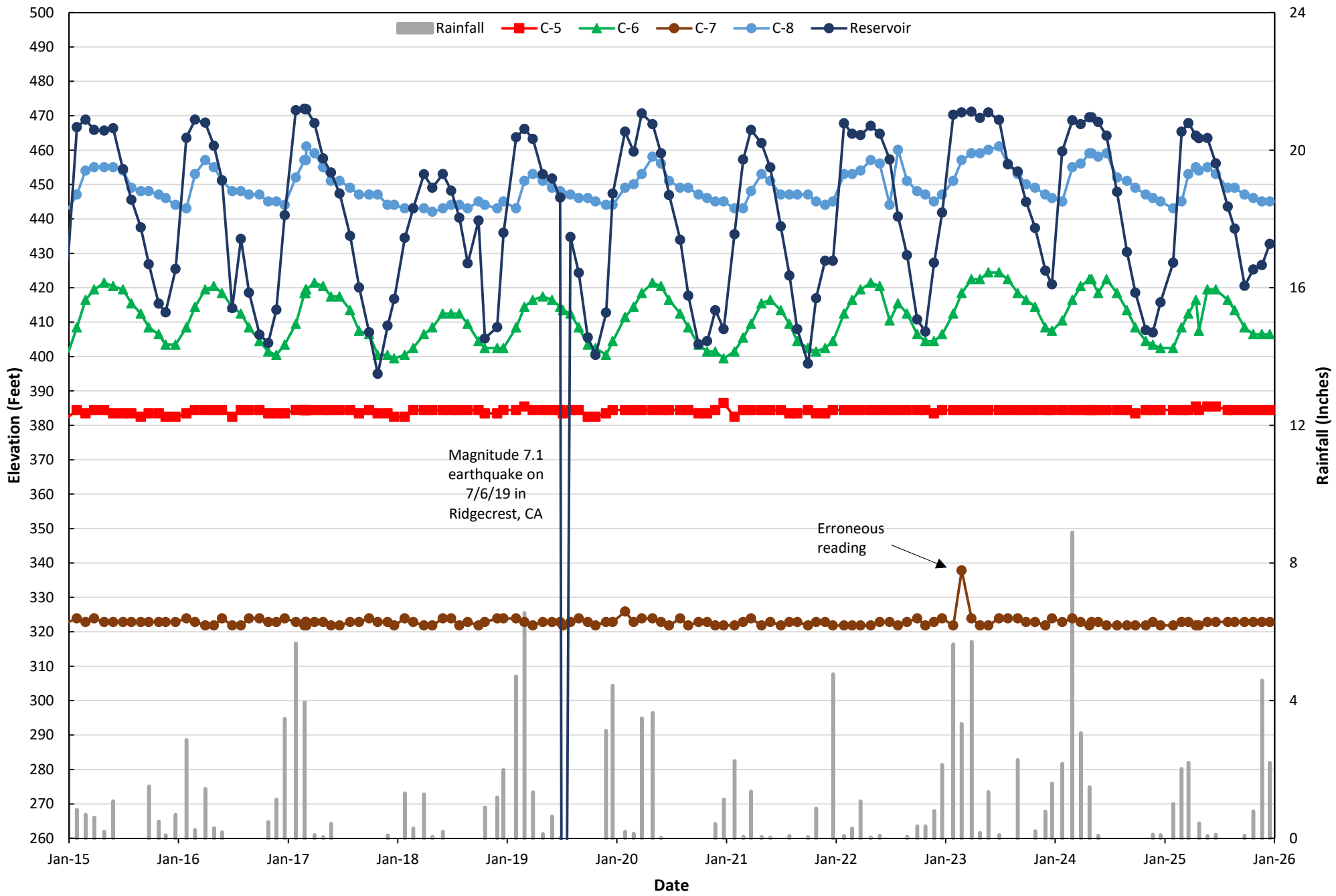


Figure 28
SAN JOAQUIN DAM
HISTORICAL PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
PNEUMATIC PIEZOMETERS C-9, RR-2, LR-1, LR-2, LR-3, AND LR-4
JANUARY 2015 THROUGH DECEMBER 2025

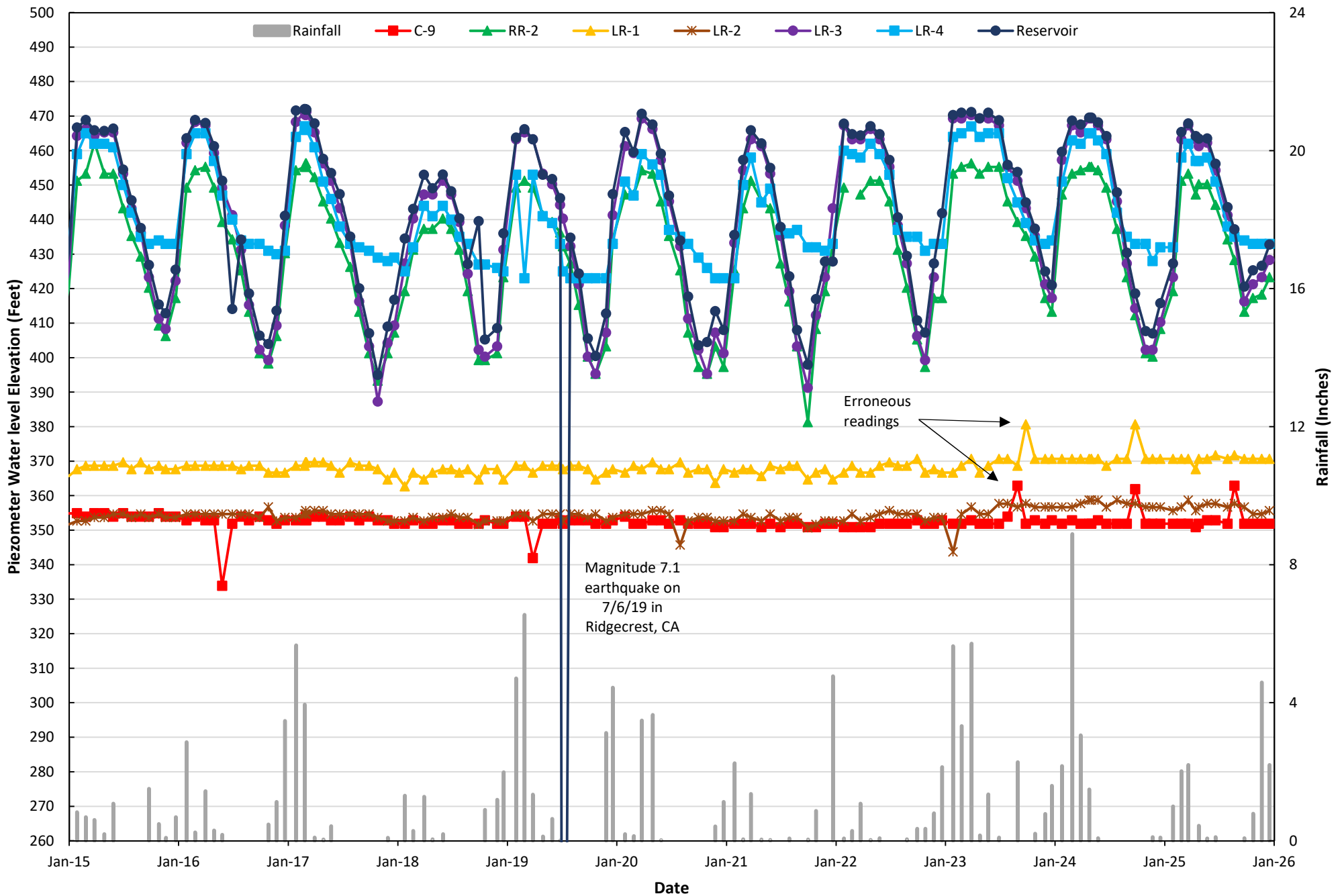


Figure 29
SAN JOAQUIN DAM
HISTORICAL PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
PNEUMATIC PIEZOMETERS LA-1 AND LA-2
JANUARY 2015 THROUGH DECEMBER 2025

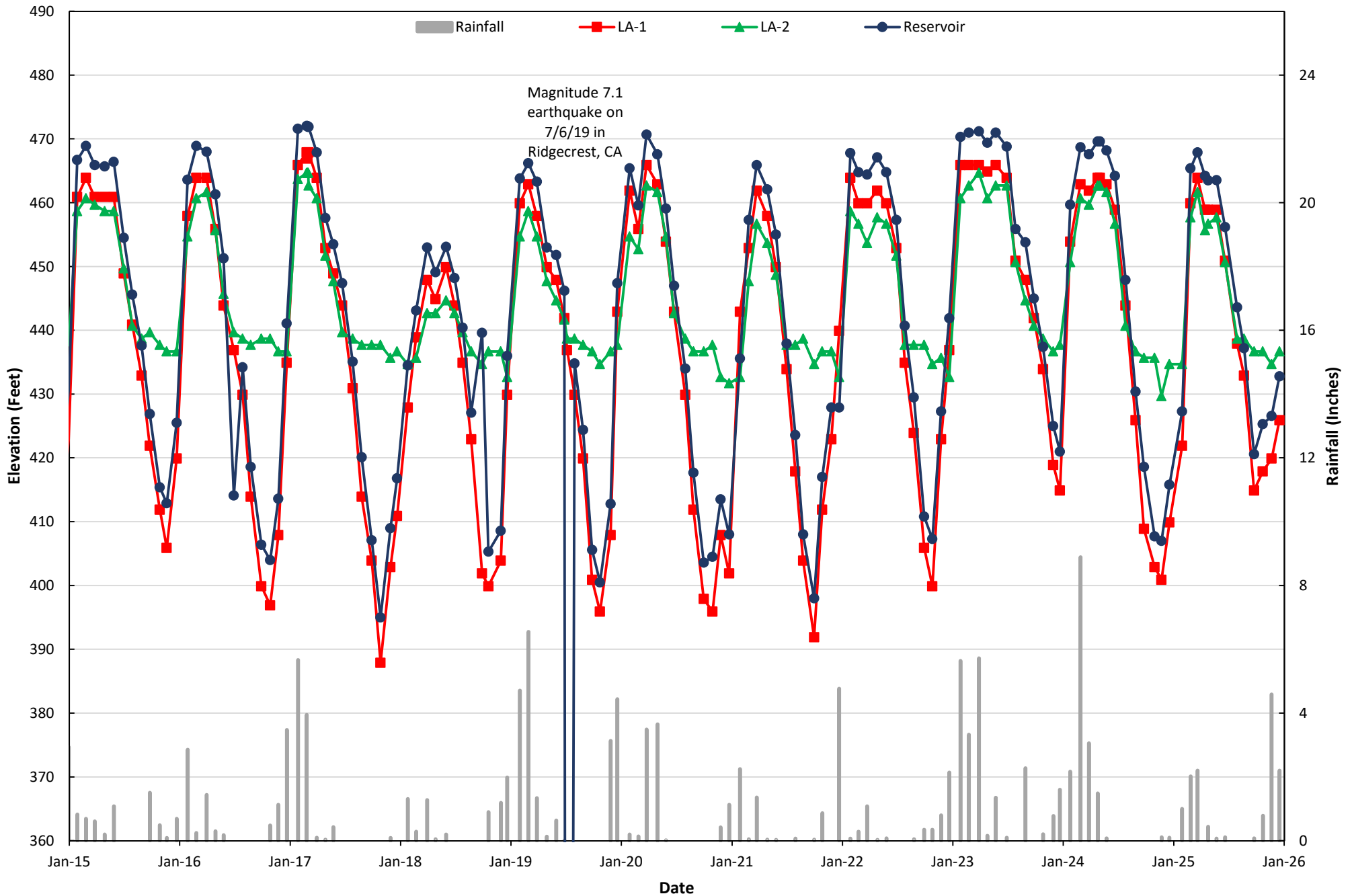


Figure 30
 SAN JOAQUIN DAM
 HISTORICAL PNEUMATIC PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 PNEUMATIC PIEZOMETERS RA-1, RA-2, RA-3, AND RA-4
 JANUARY 2015 THROUGH DECEMBER 2025

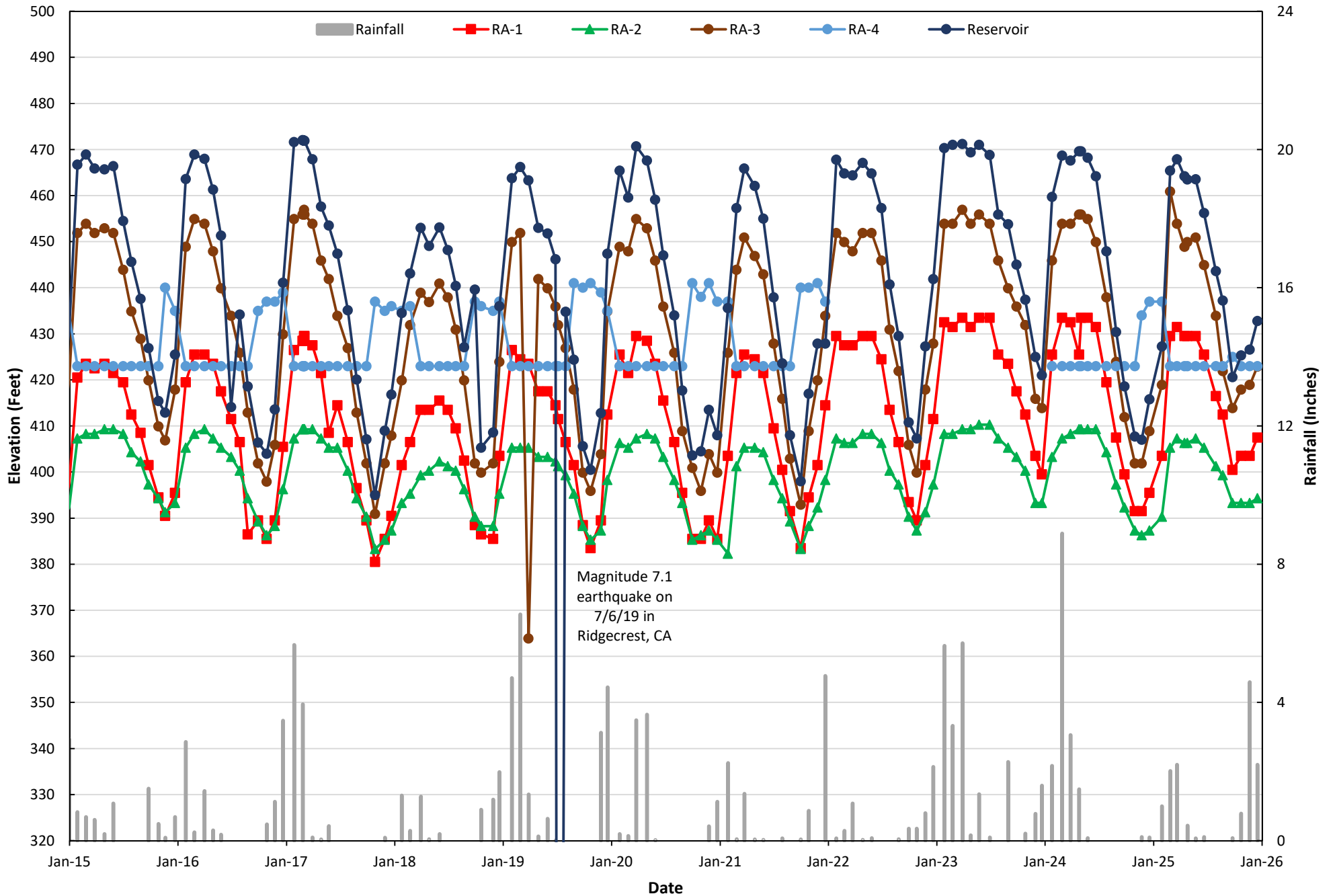


Figure 31
SAN JOAQUIN DAM
2-YR SEEPAGE, RESERVOIR WATER SURFACE ELEVATIONS, AND RAINFALL
EAST DRAIN, WEST DRAIN, FILTER DRAIN, AND RIGHT GROIN DRAIN
JANUARY 2024 THROUGH DECEMBER 2025

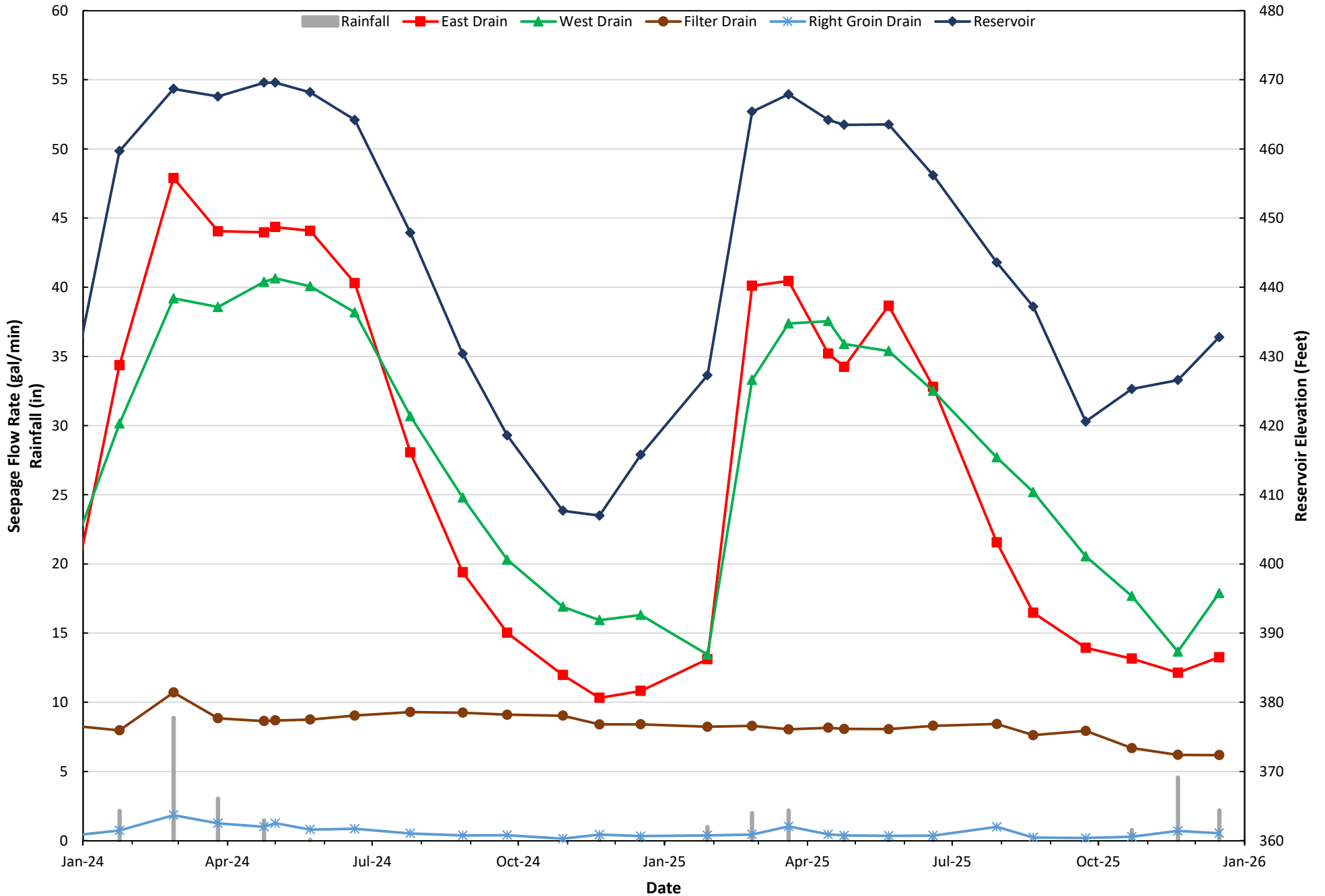


Figure 32
SAN JOAQUIN DAM
 2-YR SEEPAGE, RESERVOIR WATER SURFACE ELEVATIONS, AND RAINFALL
 UPSTREAM COLLECTOR DRAINS, DOWNSTREAM TOE DRAIN, AND FLOOR DRAIN
 JANUARY 2024 THROUGH DECEMBER 2025

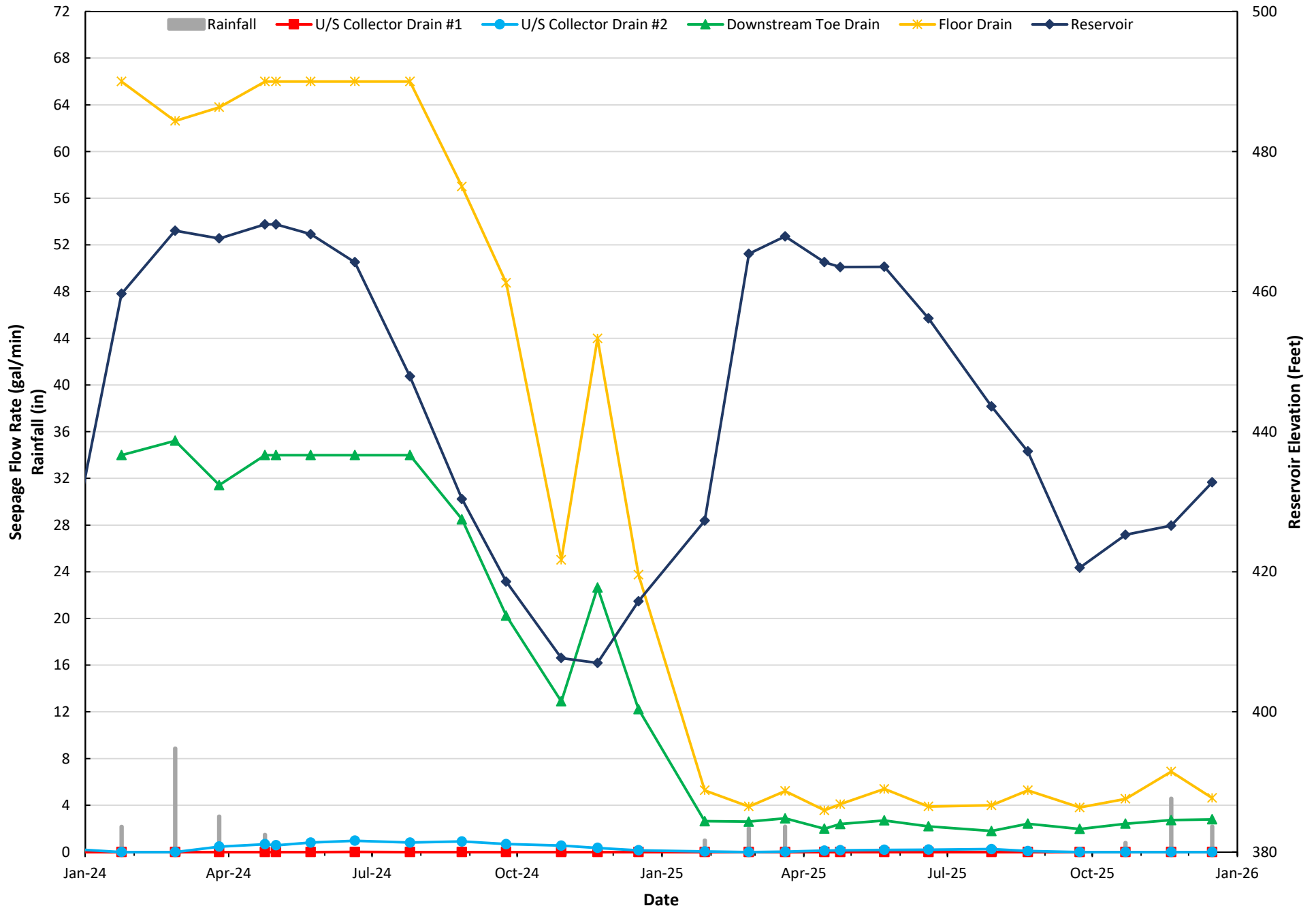


Figure 33
SAN JOAQUIN DAM
HISTORICAL SEEPAGE AND RESERVOIR WATER SURFACE ELEVATIONS
EAST DRAIN, WEST DRAIN, FILTER DRAIN, AND RIGHT GROIN DRAIN
JANUARY 2015 THROUGH DECEMBER 2025

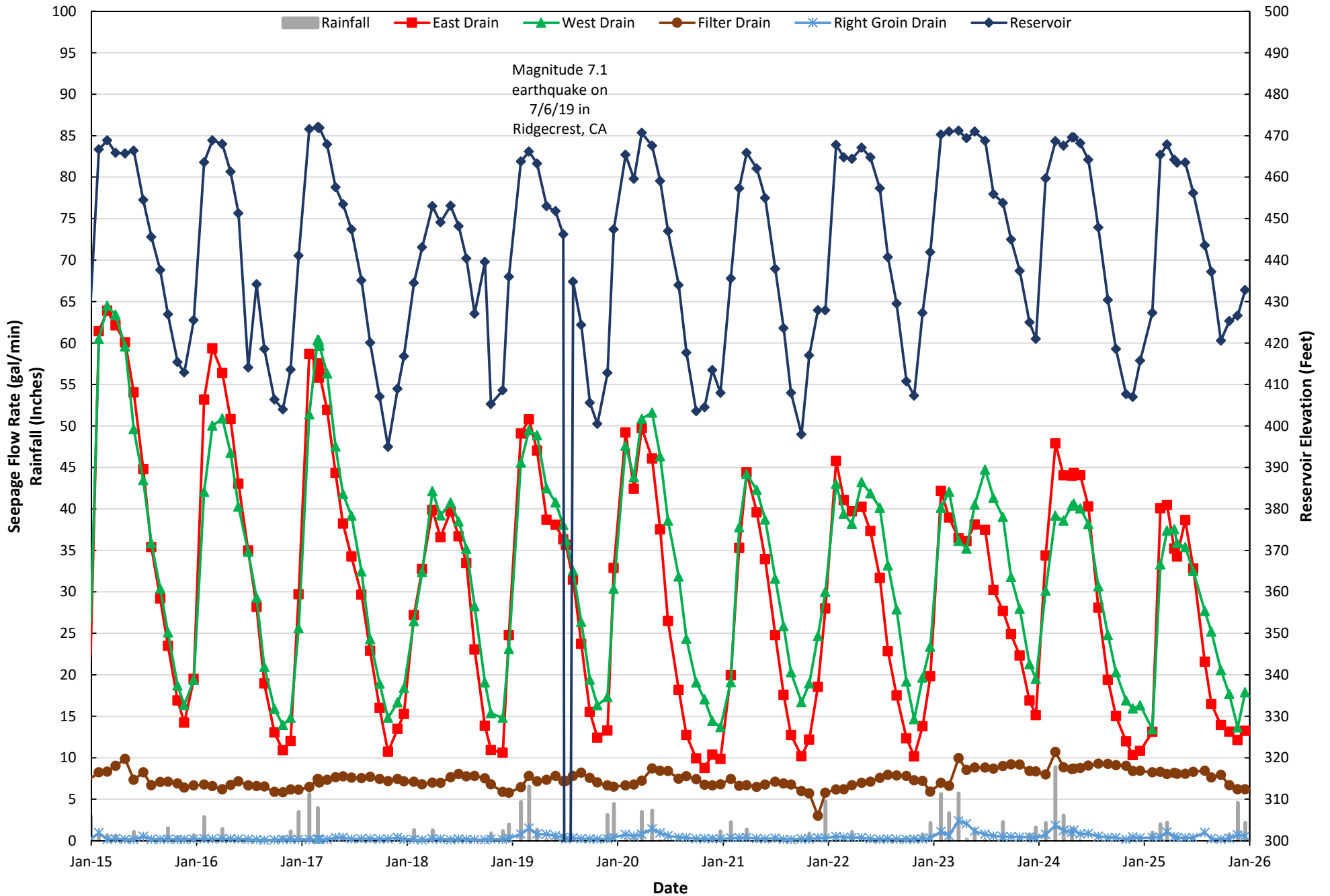


Figure 34
SAN JOAQUIN DAM
 HISTORICAL SEEPAGE AND RESERVOIR WATER SURFACE ELEVATIONS
 UPSTREAM COLLECTOR DRAINS, DOWNSTREAM TOE DRAIN, AND FLOOR DRAIN
 JANUARY 2015 THROUGH DECEMBER 2025

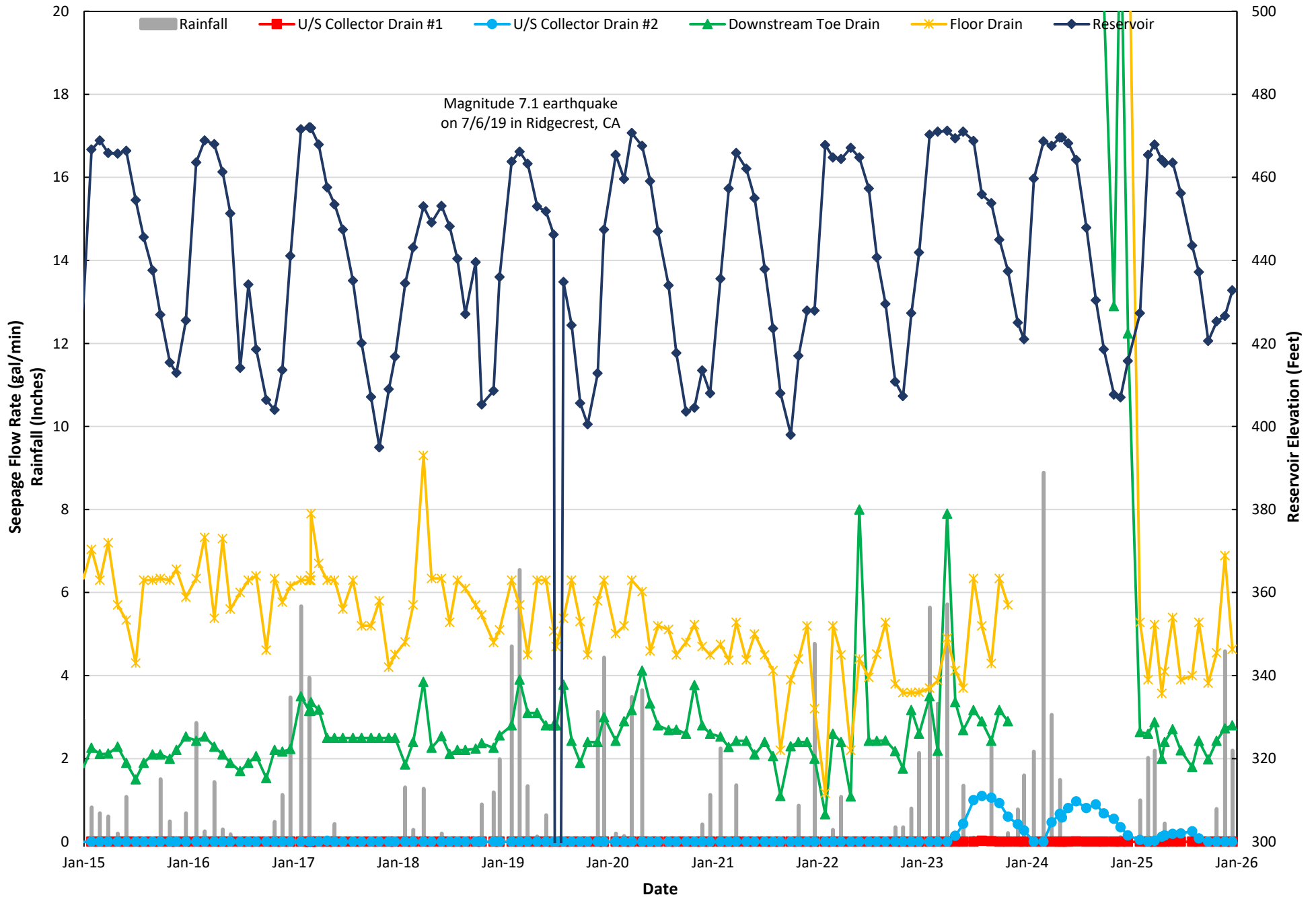


Figure 35
SAN JOAQUIN DAM
HISTORICAL HORIZONTAL MOVEMENT
SURVEY MONUMENTS SA-1, SA-2, SA-3, AND SA-4R
2006 THROUGH 2025

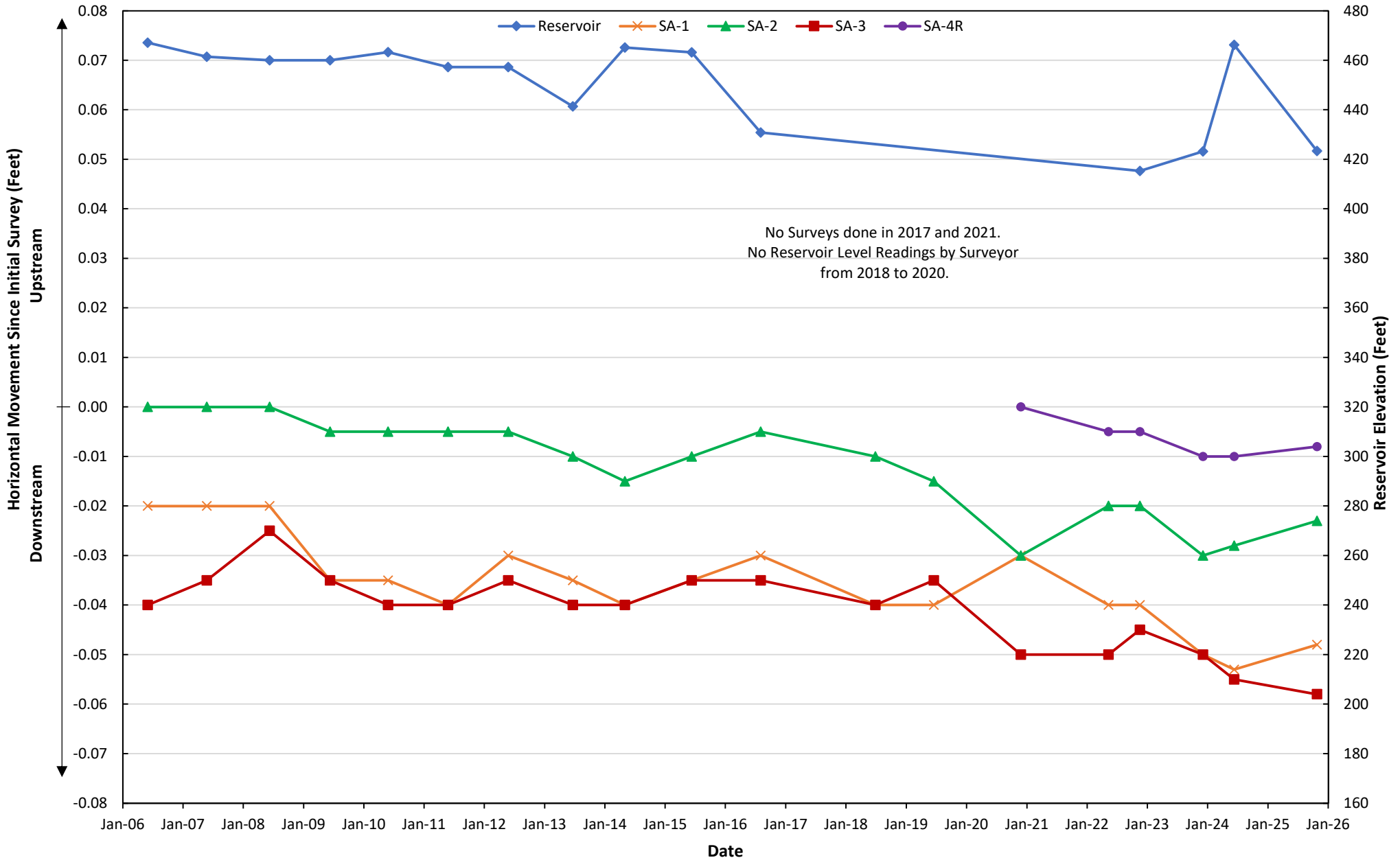


Figure 36
SAN JOAQUIN DAM
HISTORICAL HORIZONTAL MOVEMENT
SURVEY MONUMENTS SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, AND SB-7
2006 THROUGH 2025

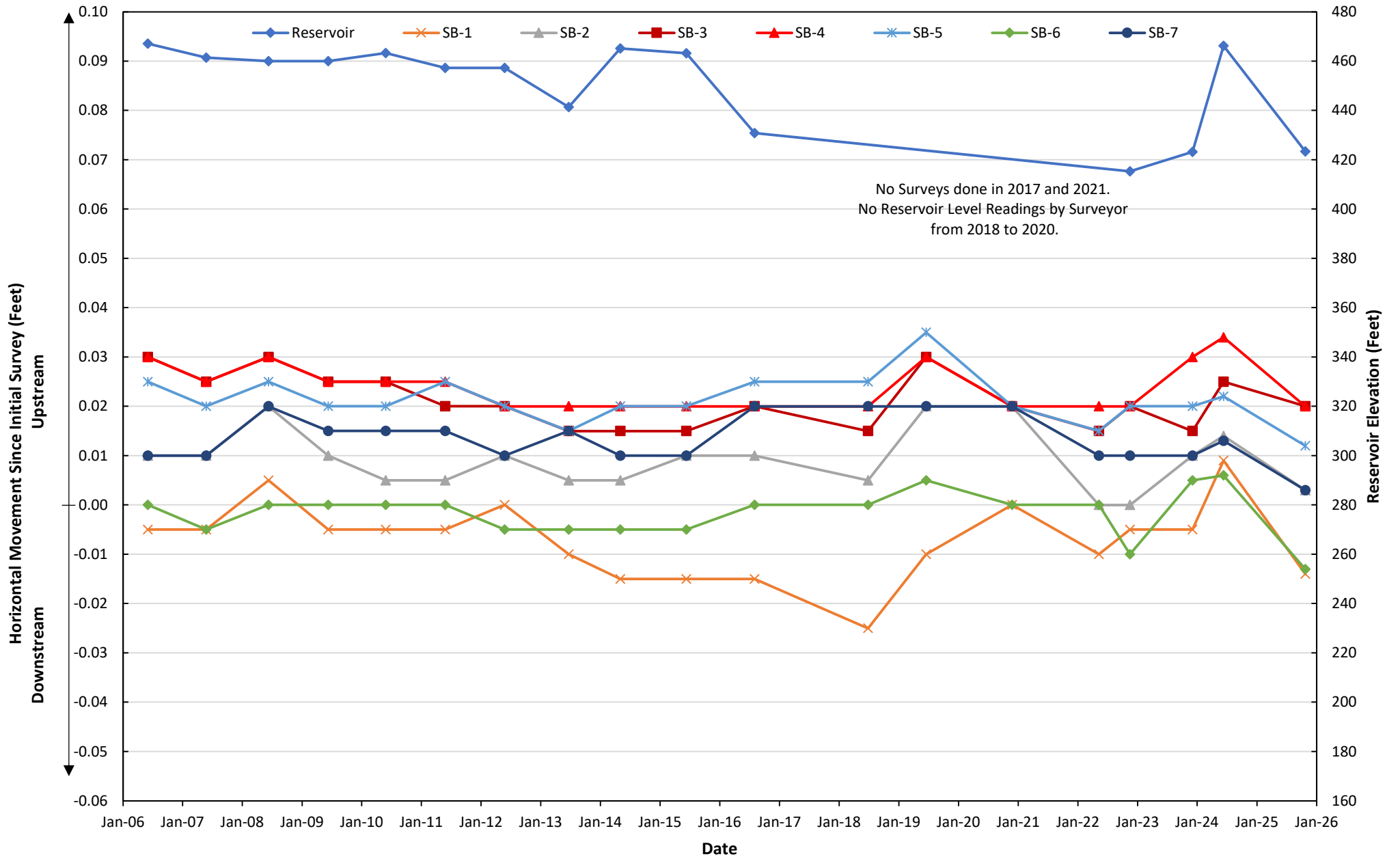


Figure 37
SAN JOAQUIN DAM
HISTORICAL HORIZONTAL MOVEMENT
SURVEY MONUMENTS SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-7, AND SC-8
2006 THROUGH 2025

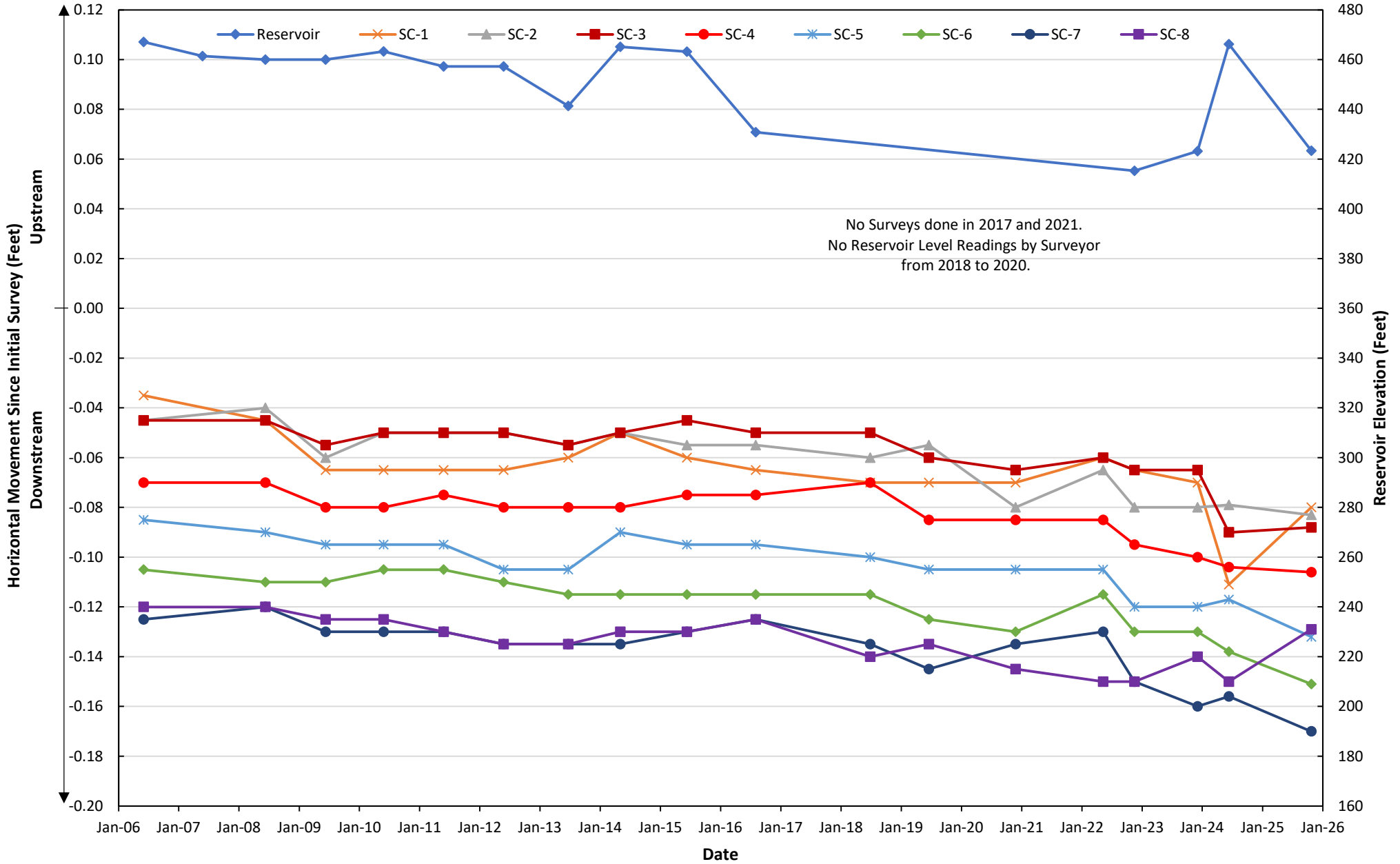


Figure 38
 SAN JOAQUIN DAM
 HISTORICAL HORIZONTAL MOVEMENT
 SURVEY MONUMENTS SD-1, SD-2, SD-3, SD-4, SD-5, SD-6, AND SD-7
 2006 THROUGH 2025

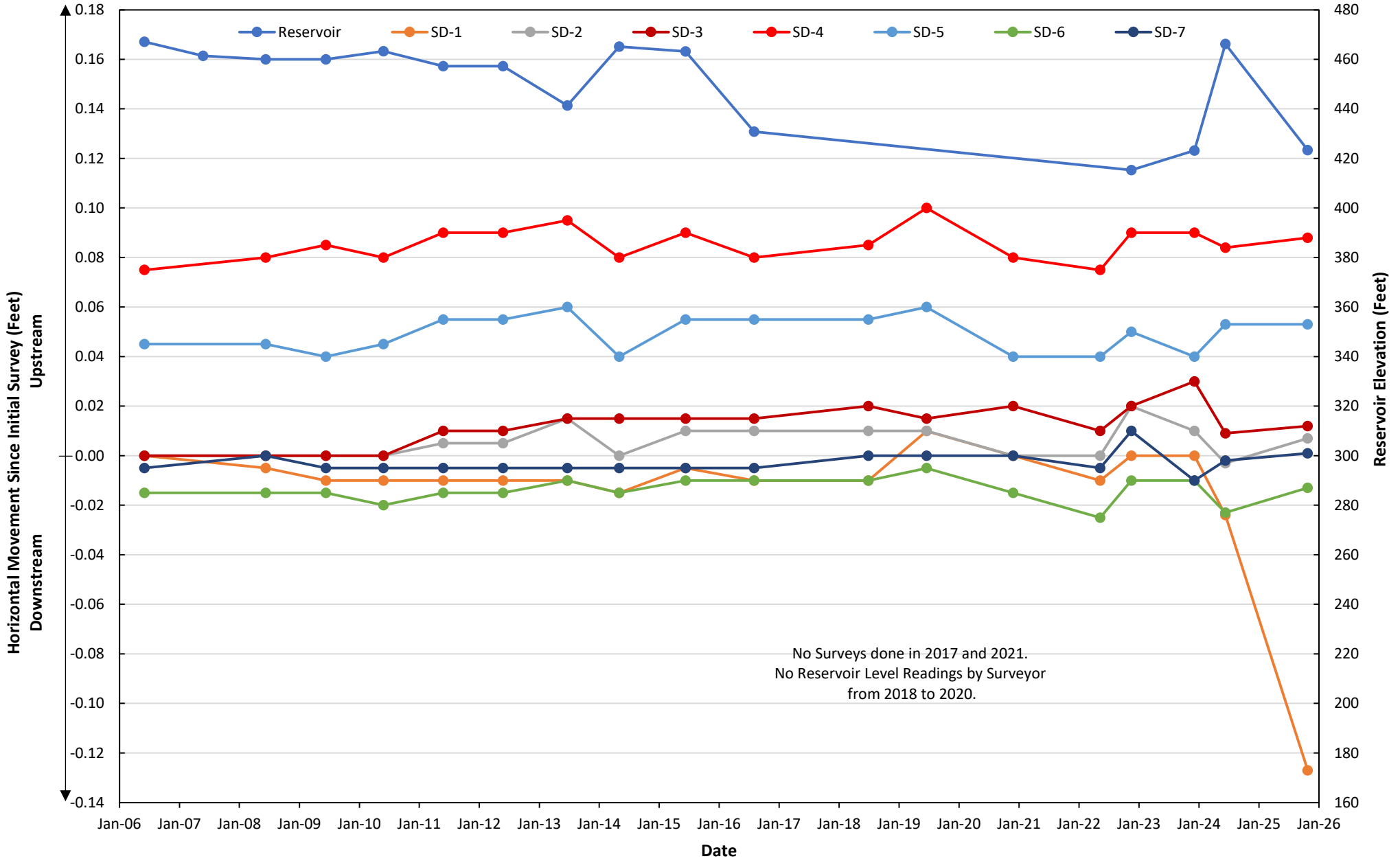


Figure 39
 SAN JOAQUIN DAM
 HISTORICAL ELEVATIONS
 SURVEY MONUMENTS SA-1, SA-2, SA-3, AND SA-4R
 2006 THROUGH 2025

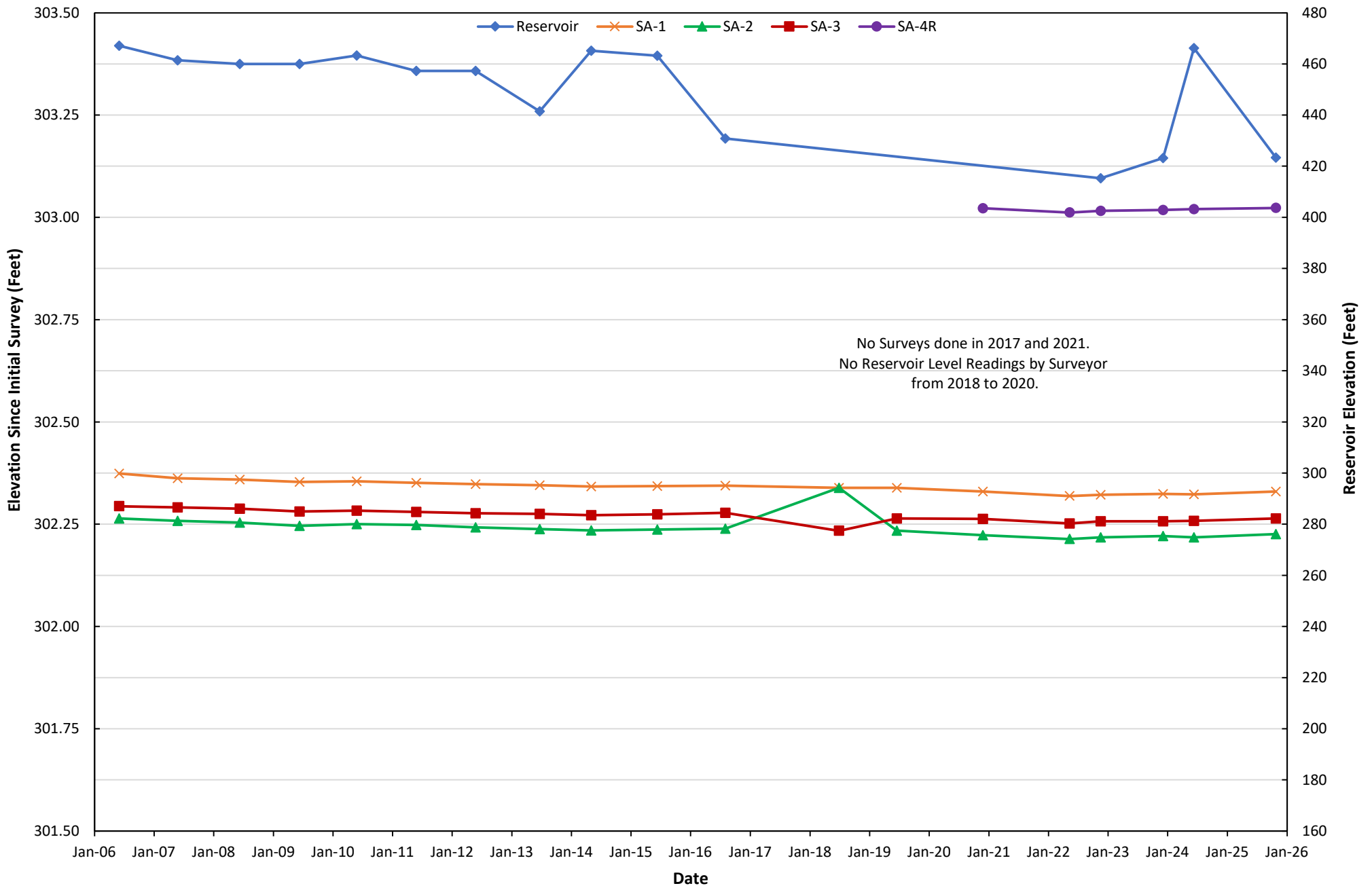


Figure 40
SAN JOAQUIN DAM
HISTORICAL ELEVATIONS
SURVEY MONUMENTS SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, AND SB-7
2006 THROUGH 2025

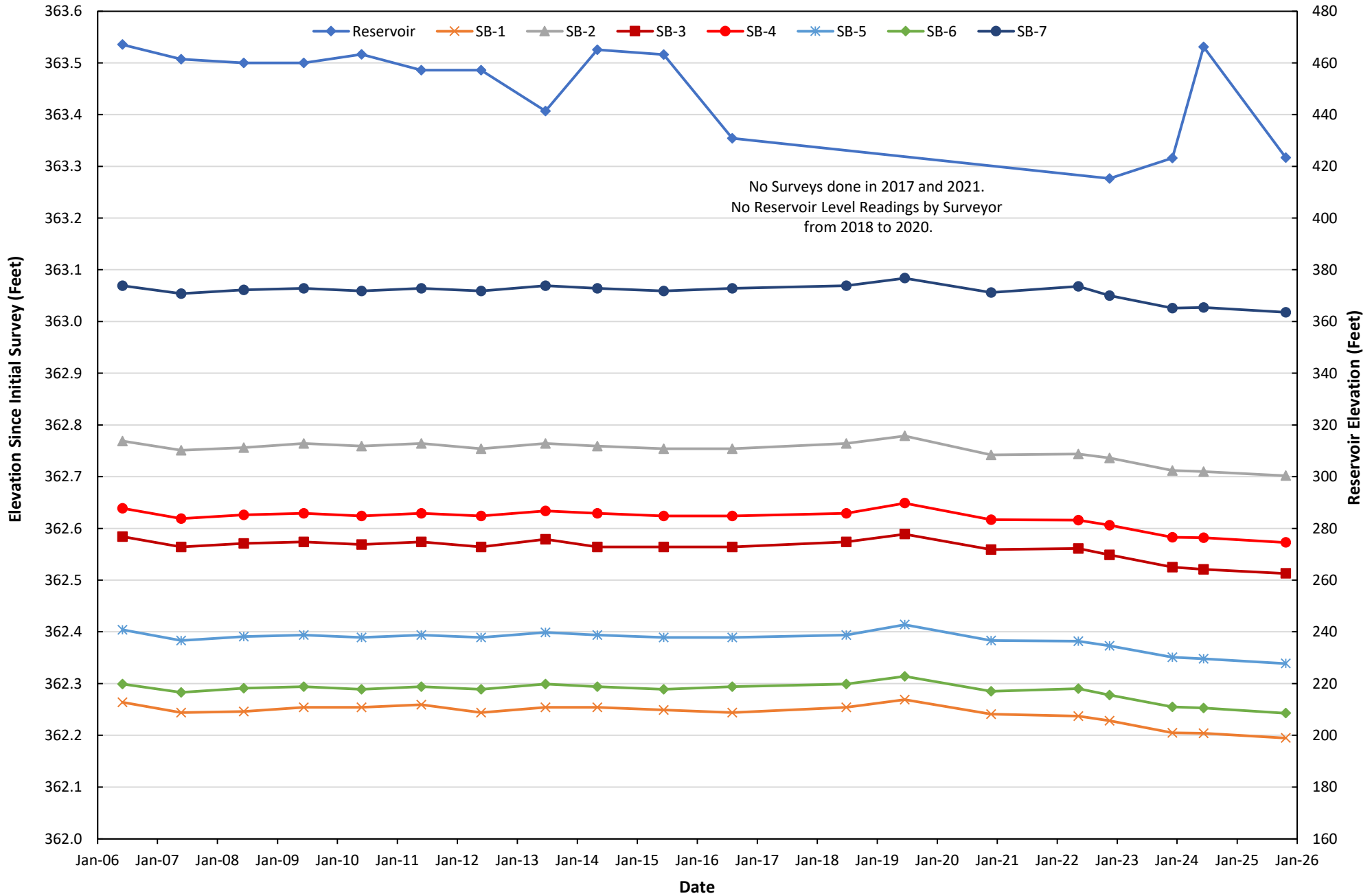


Figure 41
 SAN JOAQUIN DAM
 HISTORICAL ELEVATIONS
 SURVEY MONUMENTS SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-7, AND SC-8
 2006 THROUGH 2025

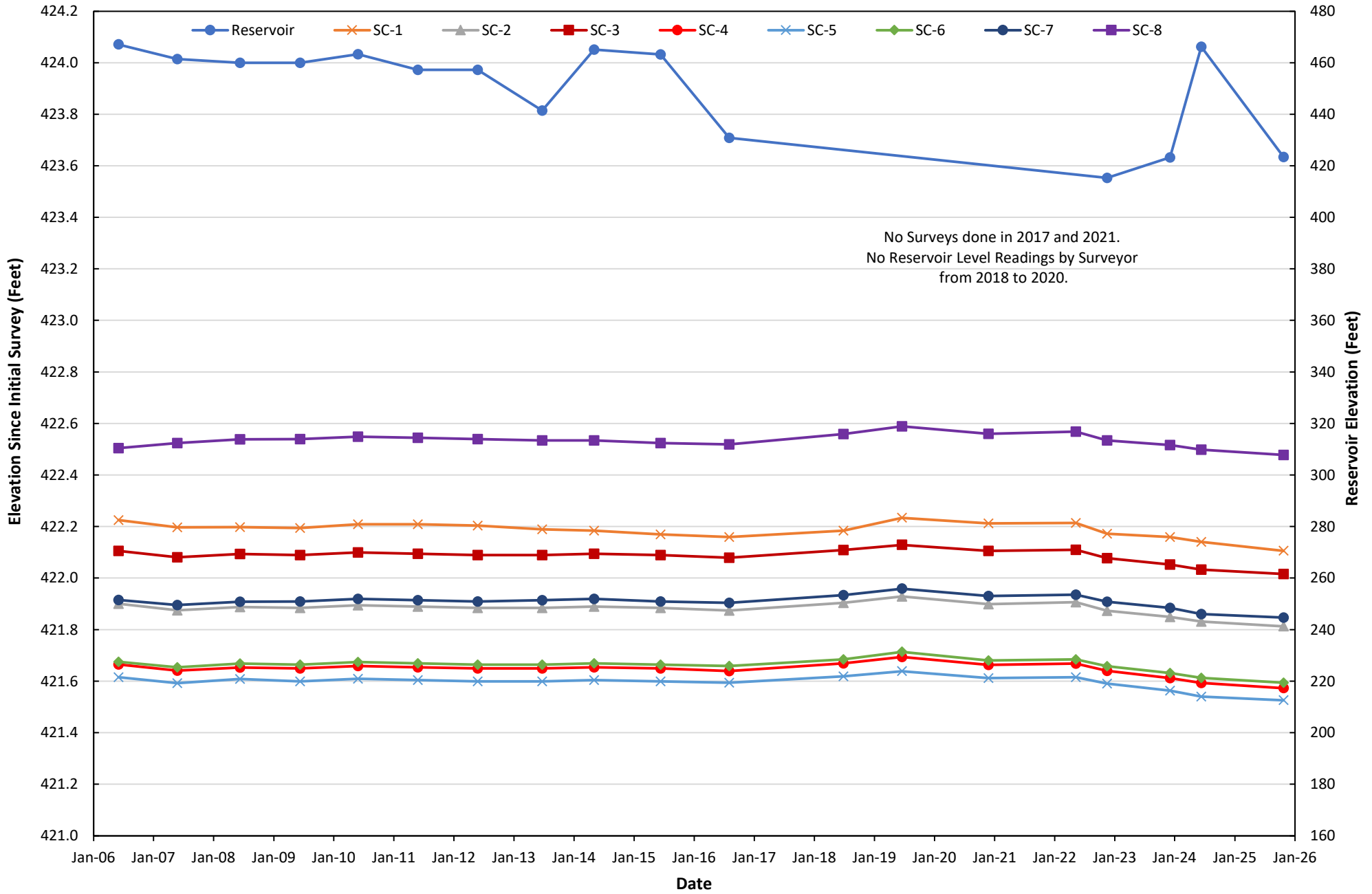


Figure 42
 SAN JOAQUIN DAM
 HISTORICAL ELEVATIONS
 SURVEY MONUMENTS SD-1, SD-2, SD-3, SD-4, SD-5, SD-6, AND SD-7
 2006 THROUGH 2025

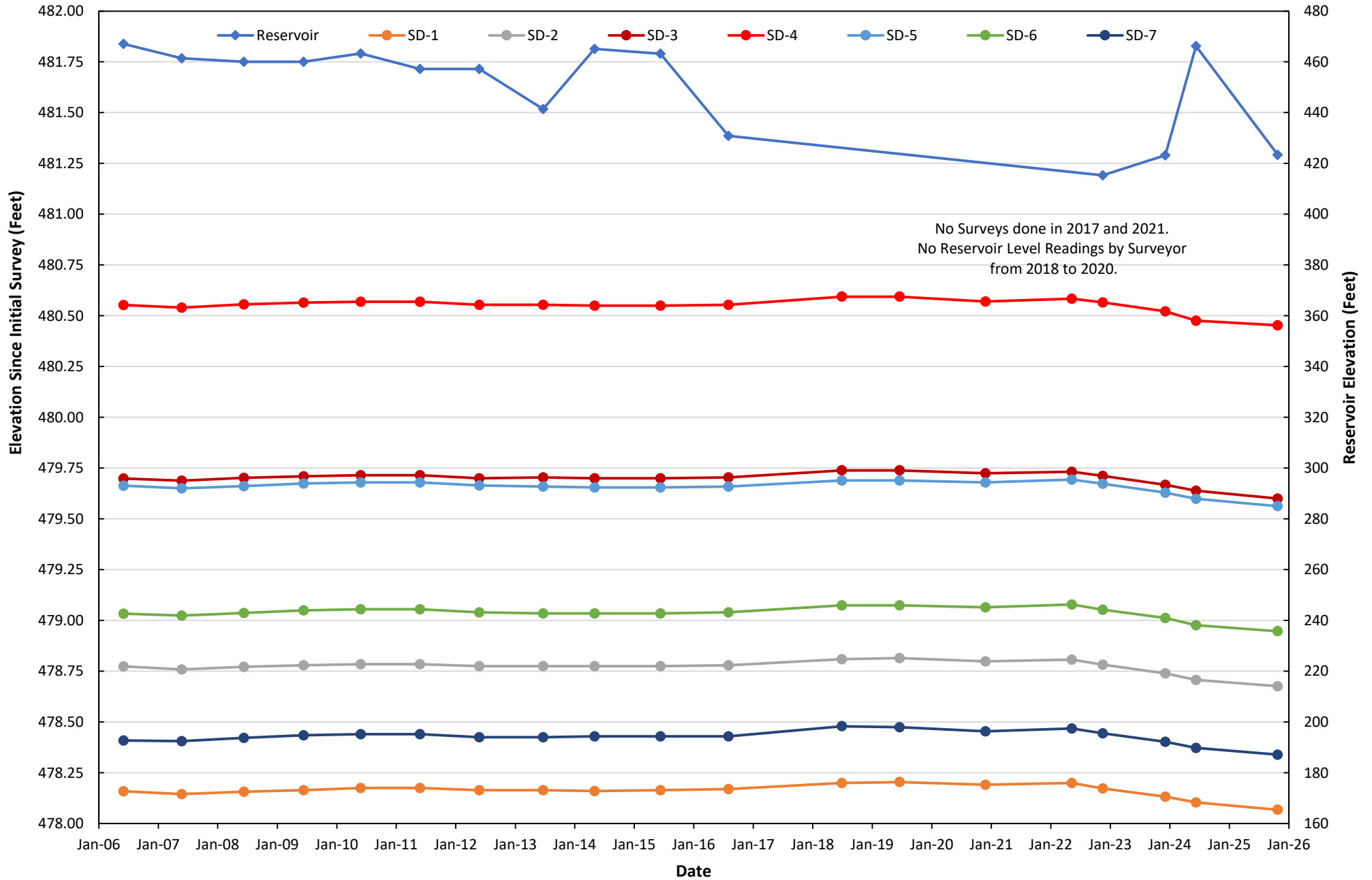


Figure 35
SAN JOAQUIN DAM
HISTORICAL HORIZONTAL MOVEMENT
SURVEY MONUMENTS SA-1, SA-2, SA-3, AND SA-4R
2006 THROUGH 2025

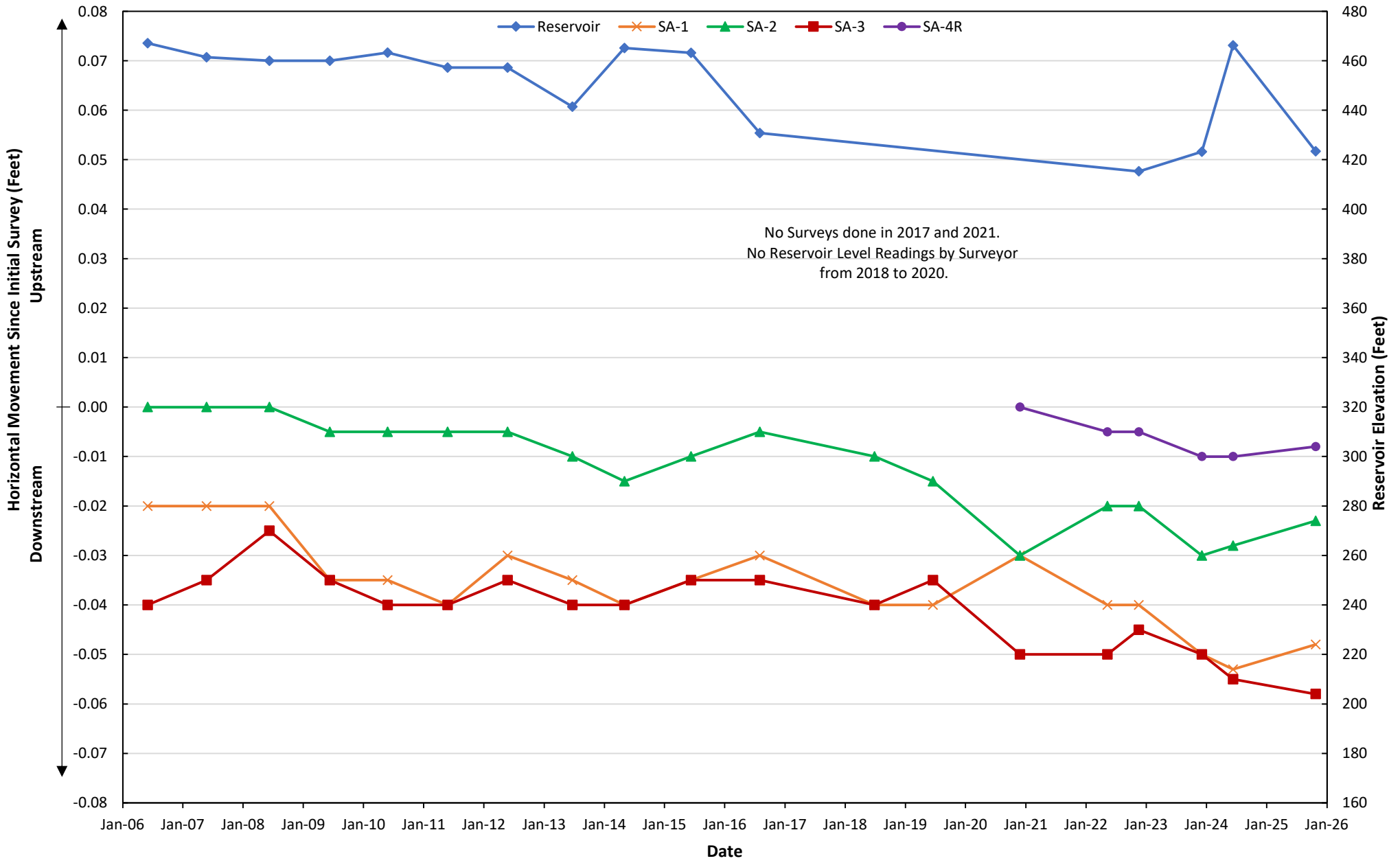


Figure 36
SAN JOAQUIN DAM
HISTORICAL HORIZONTAL MOVEMENT
SURVEY MONUMENTS SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, AND SB-7
2006 THROUGH 2025

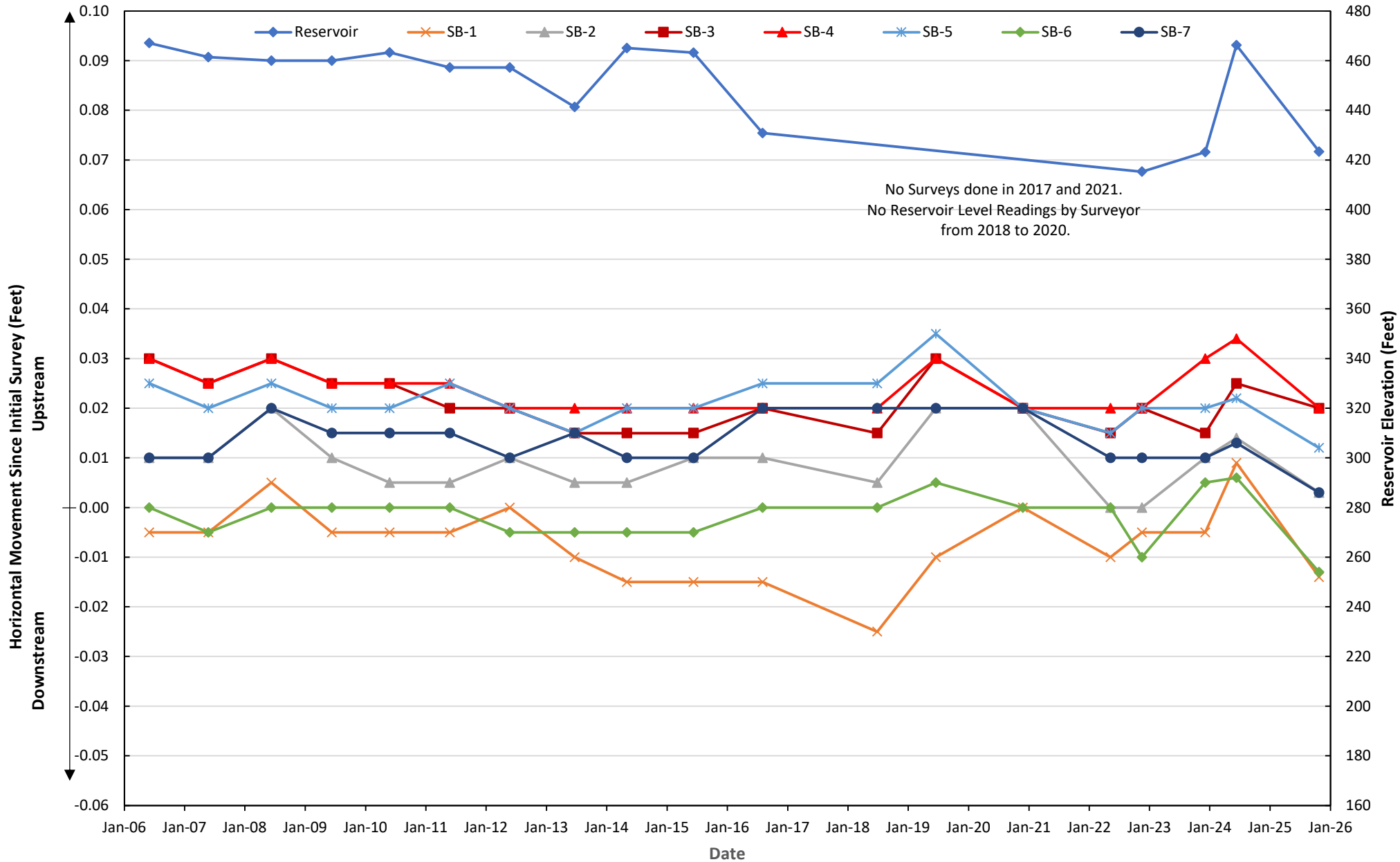


Figure 37
SAN JOAQUIN DAM
HISTORICAL HORIZONTAL MOVEMENT
SURVEY MONUMENTS SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-7, AND SC-8
2006 THROUGH 2025

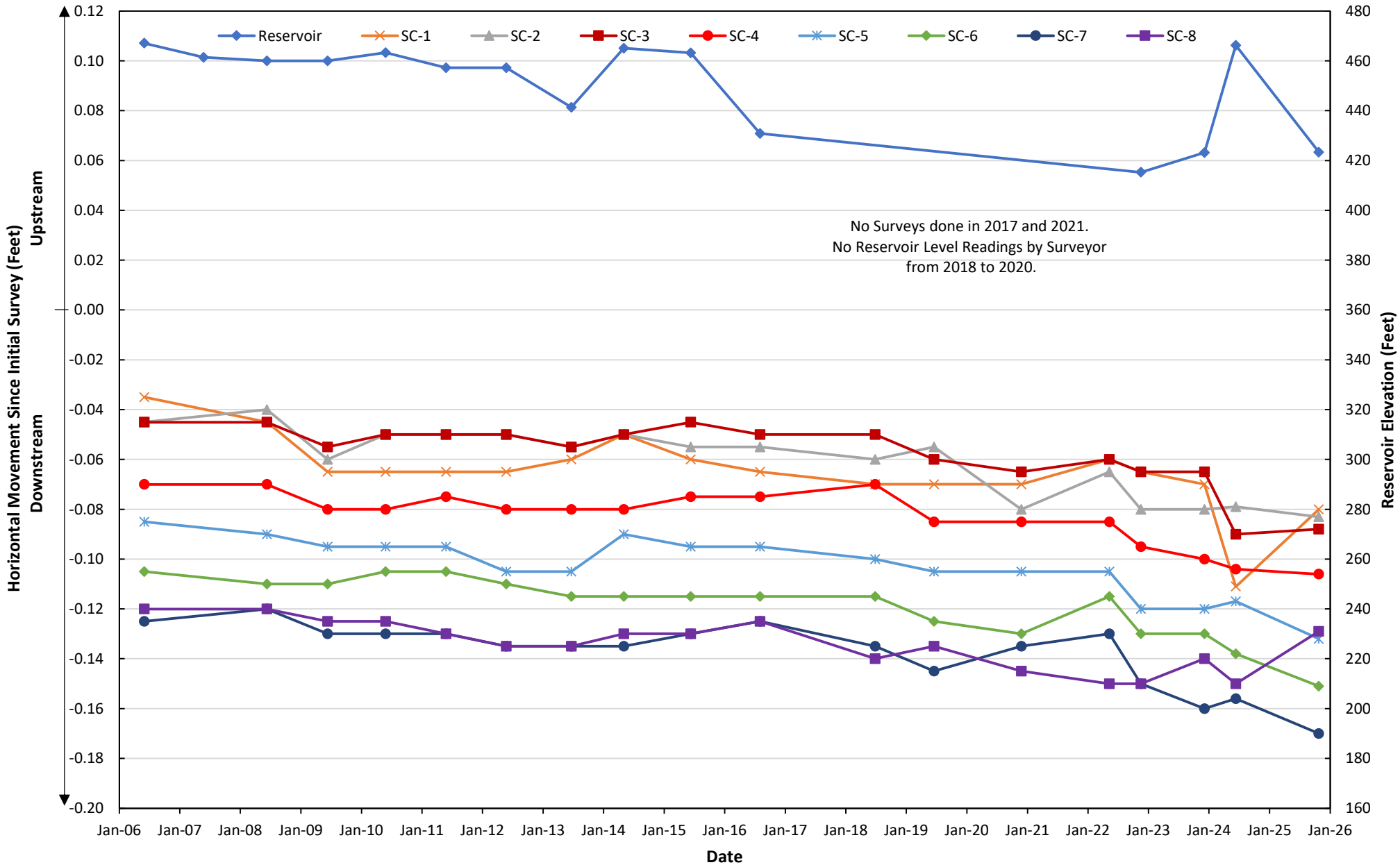


Figure 38
SAN JOAQUIN DAM
HISTORICAL HORIZONTAL MOVEMENT
SURVEY MONUMENTS SD-1, SD-2, SD-3, SD-4, SD-5, SD-6, AND SD-7
2006 THROUGH 2025

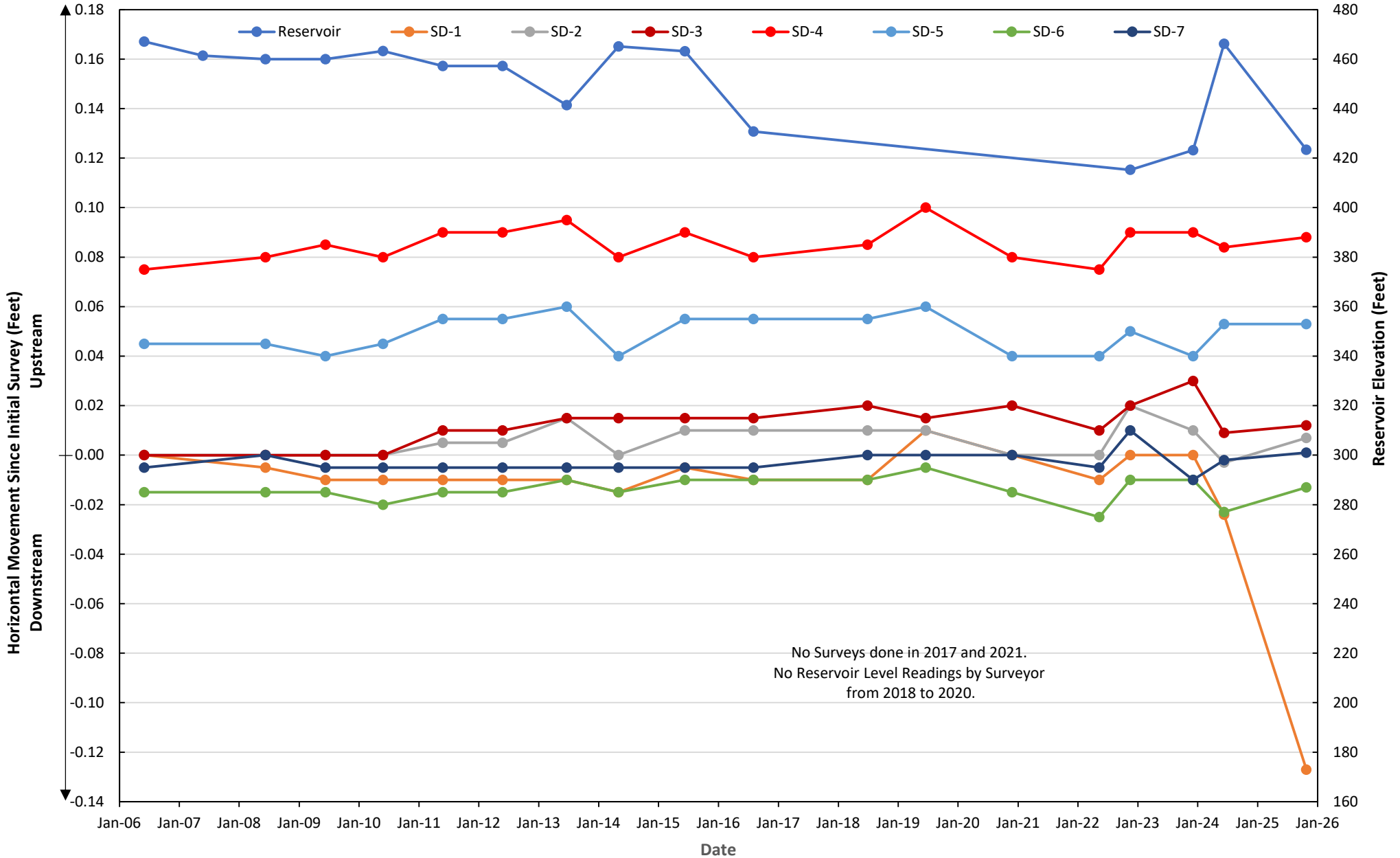


Figure 39
SAN JOAQUIN DAM
HISTORICAL ELEVATIONS
SURVEY MONUMENTS SA-1, SA-2, SA-3, AND SA-4R
2006 THROUGH 2025

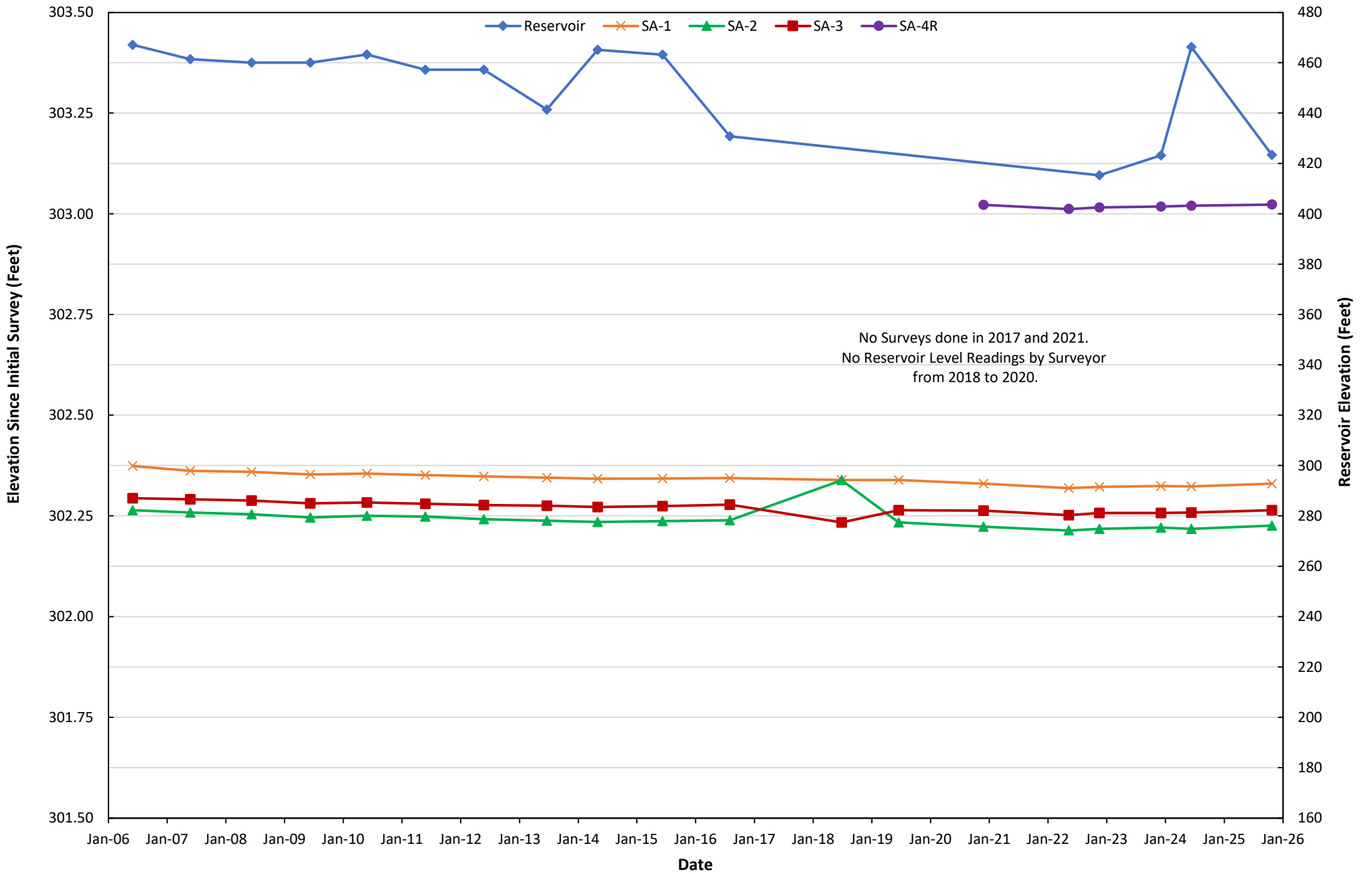


Figure 40
SAN JOAQUIN DAM
HISTORICAL ELEVATIONS
SURVEY MONUMENTS SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, AND SB-7
2006 THROUGH 2025

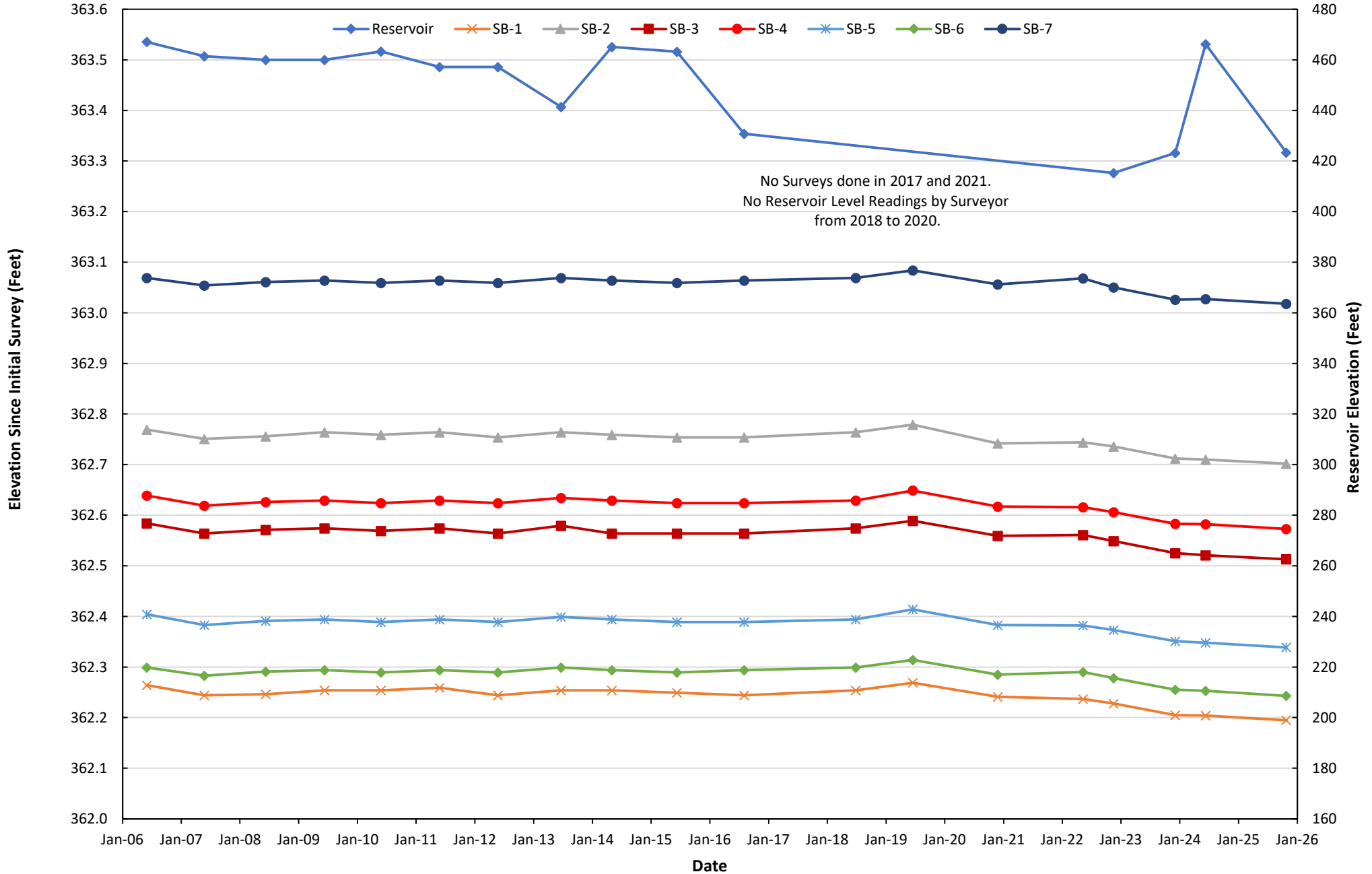


Figure 41
SAN JOAQUIN DAM
HISTORICAL ELEVATIONS
SURVEY MONUMENTS SC-1, SC-2, SC-3, SC-4, SC-5, SC-6, SC-7, AND SC-8
2006 THROUGH 2025

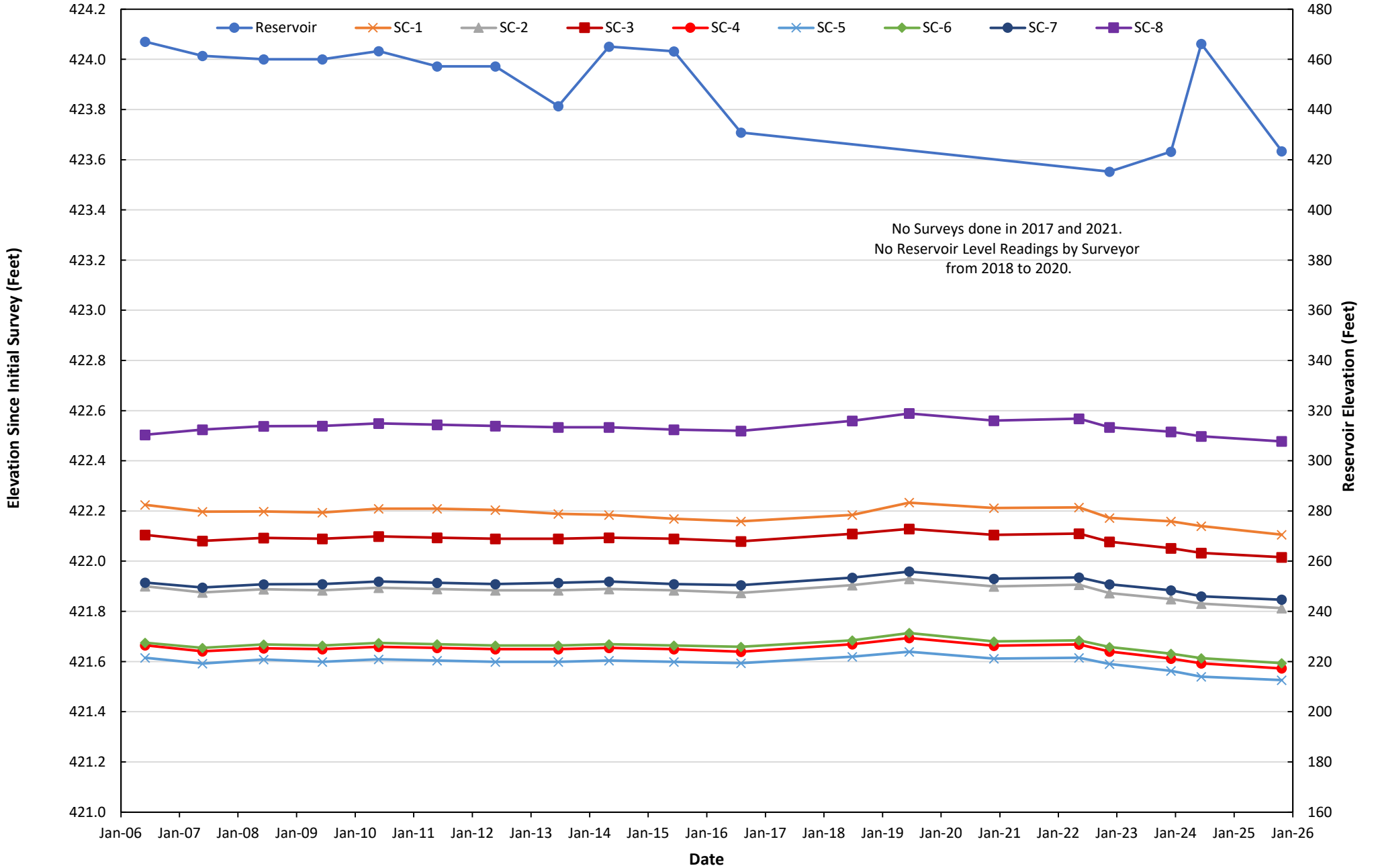
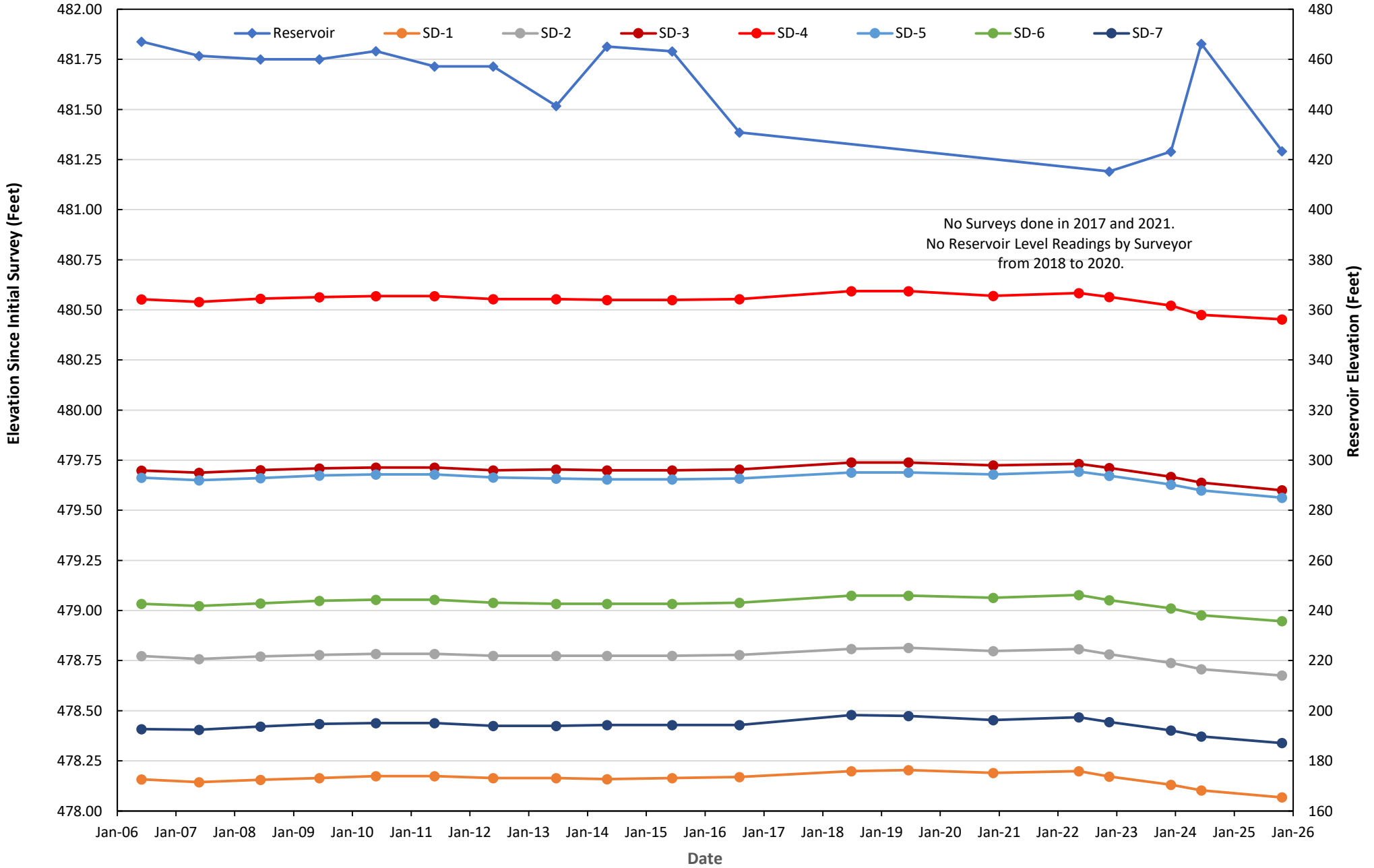


Figure 42
SAN JOAQUIN DAM
HISTORICAL ELEVATIONS
SURVEY MONUMENTS SD-1, SD-2, SD-3, SD-4, SD-5, SD-6, AND SD-7
2006 THROUGH 2025



Appendix A

Inspection Photographs of San Joaquin Dam – June 16, 2025



Photo 1) AC-lined upstream face looking towards left abutment.



Photo 2) AC-lined upstream face looking towards left abutment.



Photo 3) AC pavement on crest looking towards the right abutment.



Photo 4) Recent repair of AC pavement cracking on crest looking towards the left abutment.



Photo 5) Minor cracks and spalling at concrete curb joints.



Photo 6) Downstream face looking towards left abutment.



Photo 7) Downstream face looking towards left abutment from the top downstream bench.



Photo 8) Downstream face looking towards left abutment from middle downstream bench.



Photo 9) Minor rill erosion along the left groin between the top downstream bench and the dam crest.



Photo 10) Minor rill erosion on the downstream face.

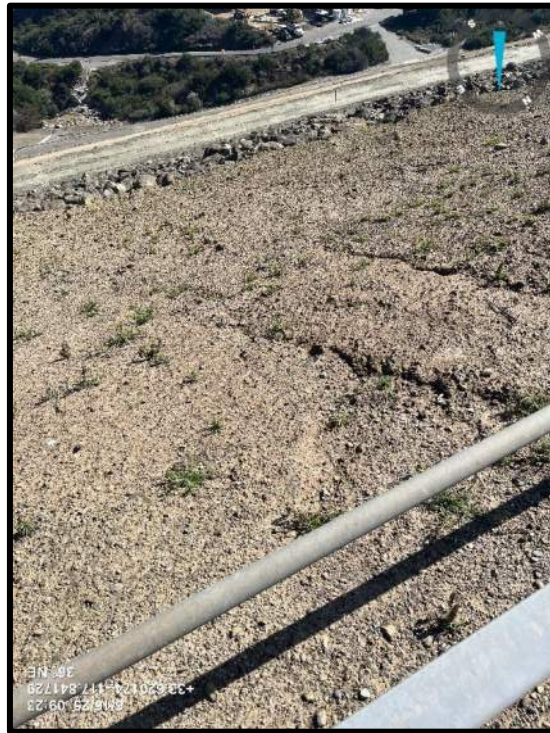


Photo 11) Minor rill erosion on the downstream face.

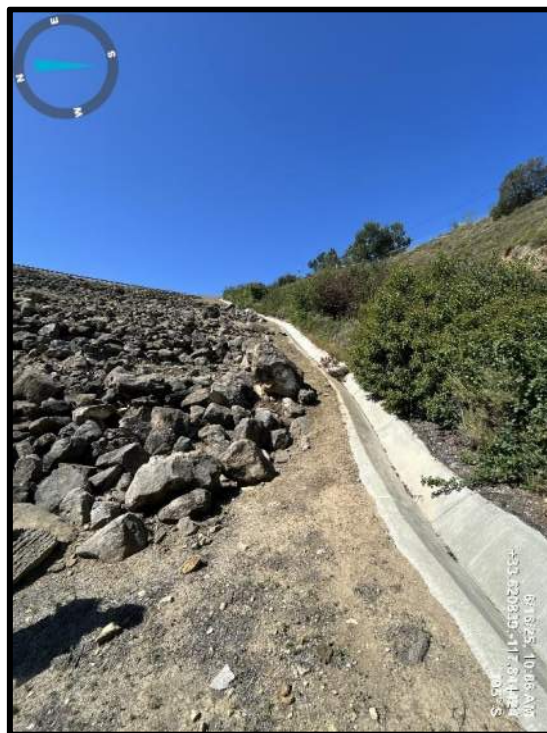


Photo 12) V-ditch at left groin. View looking upstream from the middle downstream bench.



Photo 13) V-ditch at left groin. View looking downstream from the middle downstream bench.



Photo 14) Looking at downstream slope from the toe of dam. Note minor rill erosion.



Photo 15) Energy dissipator structure. Note significant corrosion on handrails and ladder. Note the D/S Toe and Floor Drain outflow pipe.

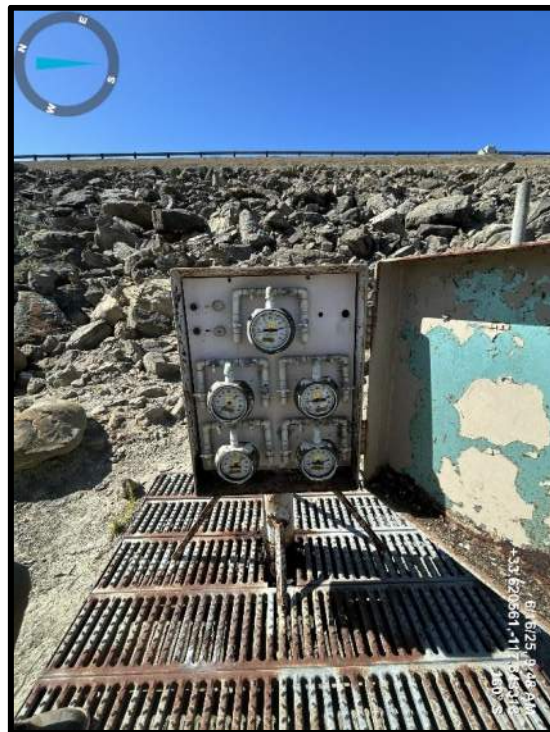


Photo 16) Pneumatic piezometer terminal box. Note significant corrosion throughout vault box.



Photo 17) Relief valve gauge behind pneumatic piezometer terminal box. Note significant corrosion.



Photo 18) Exposed pneumatic piezometer tubing. Note significant corrosion and severed tube.



Photo 19) Wet spot observed on downstream face of dam.



Photo 20) Cracks in the upstream portion of the reservoir liner filled with cold patch asphalt.



Photo 21) Cracks in the upstream portion of the reservoir liner filled with cold patch asphalt.



Photo 22) Cracks in the upstream portion of the reservoir liner filled with cold patch asphalt.



Photo 23) Bottom of right spillway drop inlet. Note water stain.



Photo 24) Minor seepage at the right spillway drop inlet.



Photo 25) U/S Collector Drain #1 (left) and #2 (right). Note leakage underneath v-notch weirs.



Photo 26) Taking seepage reading at Right Groin Drain.

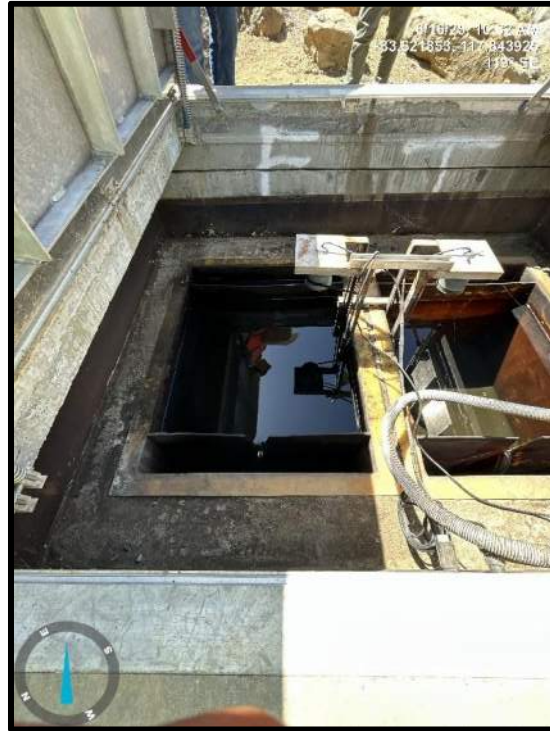


Photo 27) D/S Toe and Floor Drain V-notch weirs.



Photo 28) Newly identified wet spot with stakes marking original bounds.

Appendix B

IRWD Dam Outlet Valve Exercising Log



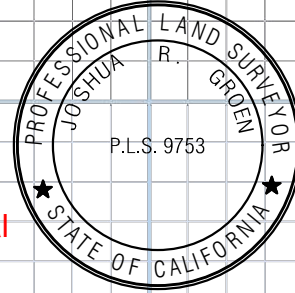
DAM OUTLET VALVE EXERCISING LOG

SAN JOAQUIN DAM VALVE EXERCISING													
DATE	INITIALS	24" VALVE	48" VALVE 450'	48" VALVE 415'	48" VALVE 380'	60" MAIN VALVE	18" EMERGENCY VALVE #1	18" EMERGENCY VALVE #2	18" EMERGENCY VALVE FLOW(1&2) (CFS)	TIME (MIN)	TOTAL GALLONS	REASON	COMMENT
10/10/2013		Exercised	Exercised	Exercised	Exercised	Exercised					0		
4/22/2014		Exercised	Exercised	Exercised	Exercised	Exercised					0		
4/20/2015		Exercised	Off Line	Exercised	Exercised	Exercised					0	DSOD	
8/25/2015		Exercised	Exercised	Exercised	Exercised	Exercised					0		
5/26/2016		Exercised	Exercised	Exercised	Exercised	Exercised					0		
6/6/2016		Exercised	Exercised	Exercised	Exercised	Exercised					0		All valves inspected by divers
7/19/2016							100%				0		
4/5/2017							100%				0	DSOD	
4/18/2017		Exercised	Exercised	Exercised	Exercised	Exercised					0	DSOD	
5/2/2018		Exercised	Exercised	Exercised	Exercised	Exercised					0	DSOD	
9/20/2018							100%				0		
4/1/2019							100%				0		
3/28/2019		Exercised	Exercised	Exercised	Exercised	Exercised					0	DSOD	
1/14/2020		Exercised	Exercised	Exercised	Exercised	Exercised	100%				0	DSOD	
4/27/2021		Exercised	Exercised	Exercised	Exercised	Exercised	100%				0		
5/25/2022		Exercised	Exercised	Exercised	Exercised	Exercised	100%				0		
4/18/2023		Exercised	Exercised	Exercised	Exercised	Exercised	100%				0	DSOD	
10/26/2023		Exercised	Exercised	Exercised	Exercised	Exercised	100%				0		
3/25/2023	CK	Exercised	Exercised	Exercised	Exercised	Not exercised	100%				0		
3/25/2024	CK	Exercised	Exercised	Exercised	Exercised	Not exercised	100%				0	DSOD	
5/7/2025	SH,AL,NP	Not Exercised	Not Exercised	Not Exercised	Not Exercised	Not Exercised	Not Exercised	Not Exercised			0	DSOD	Repairs 11/2025
											0		
											0		
											0		
											0		

Appendix C

GUIDA Survey Report

RESERVOIR MONITORING LAND SURVEYING NOTES



N.T.S.
 RPSD HOLD FOR LINE BOTTOM OF SLOPE
 RPSC HOLD FOR LINE WITHIN SLOPE AREA
 RPSB HOLD FOR LINE OUTSIDE FENCE AREA

Please provide the vertical and horizontal datums used

JOSHUA R. GROEN PLS 9753
 NOTES:

- REPRESENTS 1-3/4" BRASS DISC PUNCHED AT ENDS OF MONITORING CONTROL LINE.

∧ INSTRUMENT SETUP

WEATHER CONDITIONS:

TEMP 70° F

SUNNY

HUMIDITY 84%

BAROMETRIC PRESSURE (INHG) 30.00

RESERVOIR WATER ELEVATION=4233.8 +/-

423.38?

RPSA HOLD FOR LINE WITHIN SLOPE AREA

DOWNSTREAM TOE

LINE D TOP

RESERVOIR CREST

LINE C IN SLOPE

LINE B IN SLOPE

LINE A
 BOTTOM RESERVOIR

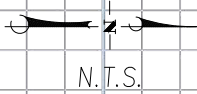
RPSD HOLD FOR LINE

RPSC HOLD FOR LINE WITHIN SLOPE AREA

RPSB HOLD FOR LINE

RPSA HOLD FOR LINE

RESERVOIR MONITORING LAND SURVEYING NOTES



LINE A

WITHIN SLOPE AREA
RPSA
HOLD FOR LINE

NAME STATION
RPSA 5+26.248
1-3/4" BRASS DISC IN CONCRETE
1.5' EAST OF PADDLEBOARD

OFFSET



NOTES:



ALL "SA" POINTS ARE 1-3/4" BRASS DISC W/PUNCH MARK SET IN CONCRETE AT F.S. 1.0' SOUTH OF YELLOW POST.



RPSA REPRESENTS 1-3/4" BRASS DISC PUNCHED AT ENDS OF MONITORING CONTROL LINE.



INSTRUMENT SETUP

SEE WEATHER CONDITIONS ON SHEET 1.

SA1 3+80.774

0.048'



SA2 2+80.656

0.023'

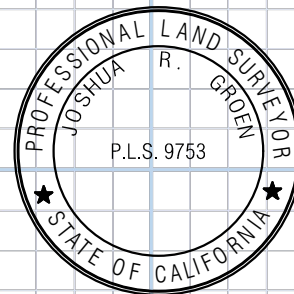


LANE A

BOTTOM RESERVOIR

SA3 1+80.644

0.058'



SA4R 0+84.839

0.008'



JOSHUA R. GROEN PLS 9753

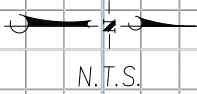
RPSA 0+00.00
1-3/4" BRASS DISC IN CONCRETE
2.5' EAST OF PADDLEBOARD



RPSA
HOLD FOR LINE
WITHIN SLOPE AREA



RESERVOIR MONITORING LAND SURVEYING NOTES



LINE B

RPSB OUTSIDE FENCE AREA
 HOLD FOR LINE

NAME STATION
 RPSB 9+56.98
 1-3/4" BRASS DISC IN CONCRETE
 1.7' EAST OF PADDLEBOARD AT TOP
 OF SLOPE TROU GATES (OUTSIDE
 FENCE AREA)

NOTES:

ALL "SB" POINTS ARE 1-3/4" BRASS DISC
 W/PUNCH MARK SET IN CONCRETE AT F.S.
 1.0' SOUTH OF YELLOW POST.

RPSA REPRESENTS 1-3/4" BRASS DISC PUNCHED
 AT ENDS OF MONITORING CONTROL LINE.

INSTRUMENT SETUP
 SEE WEATHER CONDITIONS ON SHEET 1.

SB1 7+10.657 0.014'

SB2 6+10.636 0.003'

SB3 5+10.651 0.020'

SB4 4+10.609 0.020'

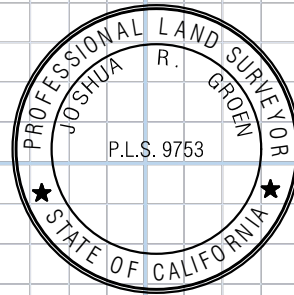
SB5 3+10.621 0.012'

SB6 2+10.493 0.013'

SB7 1+10.531 0.003'

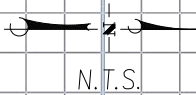
RPSB 0+00.00
 1-3/4" BRASS DISC IN CONCRETE
 2.7' WEST OF PADDLEBOARD
 RPSB HOLD FOR LINE

LANE B



JOSHUA R. GROEN PLS 9753

RESERVOIR MONITORING LAND SURVEYING NOTES



LINE C

RPSC WITHIN SLOPE AREA
HOLD FOR LINE

NAME STATION
RPSC 9+77.554
1-3/4" BRASS DISC IN CONCRETE
2.5' EAST OF PADDLEBOARD.

NOTES:

ALL "SC" POINTS ARE 1-3/4" BRASS DISC W/PUNCH MARK SET IN CONCRETE AT F.S. 1.0' SOUTH OF YELLOW POST.

SC1 8+72.395 0.080'

● RPSC REPRESENTS 1-3/4" BRASS DISC PUNCHED AT ENDS OF MONITORING CONTROL LINE.

SC2 7+72.115 0.083'



INSTRUMENT SETUP

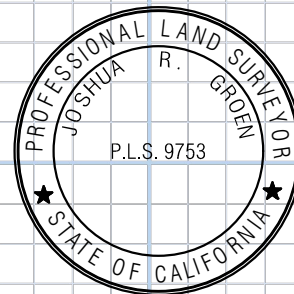
SEE WEATHER CONDITIONS ON SHEET 1.

SC3 6+72.119 0.088'

SC4 5+72.152 0.106'

LANE C

SC5 4+72.127 0.132'



SC6 3+72.111 0.151'

SC7 2+71.595 0.170'

JOSHUA R. GROEN PLS 9753

SC8 1+72.165 0.129'

RPSC 0+00.00
1-3/4" BRASS DISC IN CONCRETE
2.7' WEST OF PADDLEBOARD

RPSC HOLD FOR LINE

RESERVOIR MONITORING LAND SURVEYING NOTES



LINE D
RPSD
HOLD FOR LINE
BOTTOM OF SLOPE

NAME STATION
RPSD 10+02.164
1-3/4" BRASS DISC IN CONCRETE
2.5' EAST OF PADDLEBOARD.

Confirm reading. This is a historical high and a big jump compared to previous surveys. Reading is also in Alarm Level!!!
NOTES:

ALL "SD" POINTS ARE 1-3/4" BRASS DISC W/PUNCH MARK SET IN CONCRETE AT F.S. BETWEEN AC BERM AND GUARD RAIL AT PADDLEBOARD.

SD1 7+85.650

0.127'

RPSA

REPRESENTS 1-3/4" BRASS DISC PUNCHED AT ENDS OF MONITORING CONTROL LINE.

SD2 6+85.845

0.007'



INSTRUMENT SETUP

SEE WEATHER CONDITIONS ON SHEET 1.

SD3 5+85.699

0.012'

LANE D

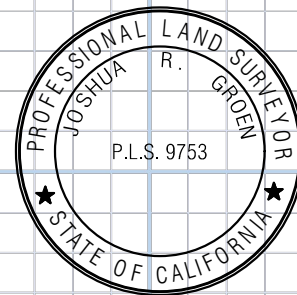
TOP RESERVOIR CREST

SD4 4+85.711

0.088'

SD5 3+85.787

0.053'



SD6 2+85.814

0.013'

JOSHUA R. GROEN PLS 9753

SD7 1+85.755

0.001'

RPSD 0+00.00
1-3/4" BRASS DISC IN CONCRETE

RPSD
HOLD FOR LINE
TOP OF SLOPE

Please confirm weather data. This is conflicting with information on sheet 1.



GUIDA LEVEL NOTES

PAGE 6 OF 11

DATE: 2025-10-24

GUIDA JOB

CREW: J. GROEN/ C. MAURIER

NUMBER: 0123-02577

CLIENT

PROJECT NAME: IRWD ANNUAL DAM MONITORING

NAME: IRWD

PROJECT LOCATION: 0123-02577 SAN JOAQUIN DAM

INSTRUMENT S/N:

DIN1 759095

WEATHER

OVERCAST

PRESSURE

29.9

TEMP

60° F

STATION	BS	HI	FS	ELEV	ADJUSTED ELEVATION	DESCRIPTION/NOTES
SJR21					315.824	MWD STR21 1994
	12.238	328.062				
TP1			0.392	327.671	327.671	
	12.356	340.026				
TP2			0.426	339.600	339.599	
	12.691	352.291				
TP3			0.308	351.983	351.982	
	12.754	364.736				
TP4			0.443	364.294	364.293	
	12.359	376.652				
TP5			0.528	376.124	376.123	LINE C BEGIN
	11.789	387.913				
TP6			0.931	386.982	386.980	
	12.195	399.178				
TP7			0.586	398.592	398.590	
	12.306	410.898				
TP8			0.612	410.286	410.284	
	12.653	422.939				
TP9			0.446	422.493	422.491	
	12.361	434.854				
TP10			0.536	434.318	434.315	
	12.353	446.617				
TP11			0.571	446.100	446.097	
	11.980	458.080				
TP12			0.411	457.669	457.666	
	11.536					
TP13			0.594	468.611	468.608	
	11.411	480.022				



GUIDA LEVEL NOTES

CONTINUATION PAGE

STATION	BS	HI	FS	ELEV	ADJUSTED ELEVATION	DESCRIPTION/NOTES
TP14			1.588	478.434	478.430	
	5.548	483.982				
TP15			4.871	479.111	479.107	MWD E BEGIN SD LINE
	4.869	483.980				
TP14			5.546	478.434	478.431	
	1.365	479.799				
TP13			11.187	468.612	468.607	
	0.500	469.112				
TP12			11.441	457.671	457.666	
	0.416	458.086				
TP11			11.984	446.103	446.098	
	0.365	446.467				
TP10			12.146	434.322	434.317	
	0.341	434.662				
TP9			12.166	422.496	422.490	
	0.348	422.845				
TP8			12.556	410.288	410.282	
	0.439	410.727				
TP7			12.132	398.595	398.589	
	0.498	399.093				
TP6			12.107	386.986	386.980	
	0.926	387.912				
TP5			11.784	376.128	376.121	
TP4			12.573	364.298	364.291	
TP3			12.659	351.989	351.982	
	0.254	352.243				
TP2			12.636	339.607	339.600	
	0.408	340.015				
TP1			12.337	327.678	327.670	
	0.238	327.916				
SJR21			12.084	315.832	315.824	



GUIDA LEVEL NOTES

PAGE 9 OF 11

DATE: 2025-10-24

GUIDA JOB

CREW: J. GROEN/ C. MAURIER

NUMBER: 0123-02577

CLIENT

PROJECT NAME: IRWD ANNUAL DAM MONITORING

NAME: IRWD

PROJECT LOCATION: 0123-02577 SAN JOAQUIN DAM

INSTRUMENT S/N:

D1N1 759095

WEATHER

OVERCAST

PRESSURE

29.9

TEMP

60° F

STATION	BS	HI	FS	ELEV	ADJUSTED ELEVATION	DESCRIPTION/NOTES
TP2					339.600	FROM AC LEVEL RUN
	9.412	349.012				
TP1			0.361	348.651	348.651	
	10.422	359.074				
TP2			1.588	357.486	357.487	
	8.893	366.379				
SB7			3.361	363.017	363.018	
	4.370	367.387				
SB5			5.049	362.338	362.339	
	5.135	367.413				
SB3			4.962	362.511	362.513	
	4.684	367.194				
SB1			5.002	362.193	362.195	
	4.798	366.991				
SB2			4.291	362.700	362.702	
	4.451	367.151				
SB4			4.582	362.570	362.573	
	4.690	367.259				
SB6			5.019	362.240	362.243	
	4.169	366.409				
TP2			8.925	357.483	357.486	
	1.519	359.002				
TP1			10.353	348.649	348.653	
	0.344	348.992				
TP2			9.396	339.596	339.600	



GUIDA LEVEL NOTES

PAGE 11 OF 11

DATE: 2025-10-24

GUIDA JOB

CREW: J. GROEN/ C. MAURIER

NUMBER: 0123-02577

CLIENT

PROJECT NAME: IRWD ANNUAL DAM MONITORING

NAME: IRWD

PROJECT LOCATION: 0123-02577 SAN JOAQUIN DAM LINE D

INSTRUMENT S/N:

D1N1 759095

WEATHER

OVERCAST

PRESSURE

29.9

TEMP

60° F

STATION	BS	HI	FS	ELEV	ADJUSTED ELEVATION	DESCRIPTION/NOTES
MWD8					479.107	
	4.136	483.243				
SD7			4.904	478.339	478.339	
	5.794	484.133				
SD6			5.186	478.947	478.947	
	6.047	484.994				
SD5			5.432	479.562	549.563	479.563?
	6.214	485.776				
SD4			5.324	480.452	480.453	
	5.319	485.771				
SD3			6.172	479.599	479.600	
	5.069	484.668				
SD2			5.993	478.675	478.676	
	5.210	483.886				
SD1			5.819	478.067	478.068	
	4.840	482.906				
MWD W			4.859	478.047	478.048	
	5.987	484.034				
RPSD			3.521	480.513	480.515	
	2.490	483.002				
SD3			3.404	479.598	479.600	
	5.644	486.242				
SD7			6.904	478.338	478.340	
	5.168	483.506				
MWD8			4.400	479.105	479.107	

Appendix D

Instrumentation Maintenance

Memorandum

To: Terry Shreiner – Irvine Ranch Water District

CC: Steve Habiger – Irvine Ranch Water District
Esteban Rendon – Irvine Ranch Water District

From: Douglas Wahl, PE, GE
James Heins, EIT

Date: March 30, 2023

Re: Site Visit Memorandum – Piezometer Instrumentation System Inspection – San Joaquin Reservoir

This memorandum documents our site visit on Monday, March 27, 2023. This work was performed in accordance with Irvine Ranch Water District's (IRWD's) Purchase Order No. 634622 dated March 10, 2023, and our proposal dated February 24, 2023, for piezometer instrumentation system inspection services at IRWD's San Joaquin Reservoir.

On March 27, 2023 (Monday), Doug Wahl and James Heins from GeoPentech visited the site and met with Terry Schreiner (Instrumentation Supervisor), Steve Habiger (Water Operations), and Esteban Rendon (Electrical/Instrumentation), all from the (IRWD). The primary purpose of our visit was to perform an inspection of vibrating-wire piezometers (VWPs) to evaluate their current functionality. We understand that the recent performance of the current piezometer system has been inconsistent. The reservoir level at the time of our visit was approximately elevation 471.1 ft.

VWP System Visual Inspection

Based on our discussions with you and our observations at the site, the VWP system currently in operation at the dam consists of eight (8) DGSI VWP transducer sensors, two (2) junction boxes, and a main datalogger/multiplexer. The eight VWP sensors are buried below ground surface in the upstream side of the main embankment at varying locations and depths below the dam and reservoir ground surface. They are numbered VB-1 through VB-8 and are arranged in two lines perpendicular to the dam crest. The cabling from the sensors extends in conduit up to the dam crest where it is gathered into two junction boxes and then directed to a single main collection point at roughly the center of the dam on the north side of the reservoir. Attachment 1 (site plan) shows the layout of the sensors as well as top and bottom elevations (i.e. ground surface and sensor elevation). We understand that these VWP sensors, associated cabling, junction boxes, and datalogger were installed in 2004.

The main collection box, containing the VWP datalogger and multiplexer, is located on the dam crest at approximately the transverse centerline. The two junction boxes are located on the crest on either side of

the main box, either toward the left abutment or toward the right abutment. The main box appeared to be in good condition and contains a 16-channel Geokon unit (Figure 1). The unit is powered by a 12-volt battery charged by a solar panel. Steve Habiger connected his computer running LogView to the datalogger during our visit and showed us real-time VWP readings collected by the system. Because the installed multiplexer terminal board covers the datalogger board behind it, we could not directly observe the datalogger board. The multiplexer appeared to be operating correctly and switching between the sensor channels appropriately. We noted that the box's earth ground post was not connected to any outgoing grounding rod or other connection.

The right abutment junction box (VB-1 thru VB-4, Figure 2) and the left abutment junction box (VB-5 thru VB-8, Figure 3), both contain four VWP transient protection modules (i.e. isolators) and connect the sensor cables from the dam to the datalogger box at the center of the dam. The right abutment junction box appears to be in reasonable condition with some minor contamination of an apparent elastic waterproofing material that has degraded overtime (Figure 2). The ground posts on the isolators in the right abutment junction box (VB-1 thru VB-4) did not appear to be connected to a ground connection.

However, the left abutment junction box is in poor condition (Figure 3). The components contained in the left abutment station box were almost entirely surrounded by the same degraded elastic waterproofing material, making it difficult to determine the condition of the underlying electronics. We were not able to see any evidence of ground connections for this location. It should be noted that the three VWPs indicated by Steve Habiger to not be working properly (VB-6, VB-7, and VB-8) all run through the left abutment junction box.

Electronics Troubleshooting/Data Collection

After performing a visual inspection of the three electronics boxes along the dam crest, Doug Wahl and James Heins attempted to collect manual measurements of the VWP sensors from the main box location to assess functionality. The resistance of each VWP was measured using a digital multimeter. Resistances were measured between the two VW wires and between the two temperature sensor wires. According to the VW Piezometer 52611099 manual, typical values for these resistances are roughly 300 ohms and 3,000 ohms, respectively. Instrument measurements were taken from each VWP using a Geokon Model GK-404 Vibrating Wire Readout unit. The Geokon Model GK-404 reports readings of temperature, in degrees Celsius, and frequency, in Hz, that can be converted to psi based on the VWP calibration reports. All values collected at the main box for each VWP are summarized in Table 1. To perform VWP readings, the cable ends were removed from their terminals, manually read using the GK-404, and then replaced. At the main station box, valid temperature readings for VWP-5 and VWP-7 and valid pressure readings at VWP-6, VWP-7, and VWP-8 could not be obtained perhaps due to VWP system malfunction, but all other readings were successful (See Table 1).

After testing the electronics in the main box, measurements were also collected at the junction boxes. All measurements were taken on the sensor side of the junction box isolators (i.e. measurements were taken directly from sensor wires). The measurements recorded at the left abutment junction box and the right abutment junction box are also summarized in Table 1. Due to the waterproof coating covering the VWP-4 sensor wires, no measurements could be taken with the Geokon Model GK-404 instrument.

Data Validation

For data validation purposes, the field measurements collected during our site visit were compared with historic values recorded at times when the reservoir was at about the same water level (i.e. elevations 470-472 ft). Table 2 summarizes historic data available from past VWP sensor measurements and Figure 4 shows a comparison of the historic data with the GeoPentech measurements taken in the field on March 27, 2023. Note that the field measurements shown are the ones taken from the junction boxes (i.e. directly from the sensor leads). Also, note that historic data shown for comparison in Figure 4 do not include any measurements after 2018. Based on this comparison, the field measurements obtained during our visit appear to be reasonably consistent with past values. The temperature values appear to have a slightly higher deviation from historic values than the pressure/frequency readings.

Conclusions

- Based on our observations and testing, it appears that all eight VWP sensors are still operational.
 - When the sensors are read manually at the junction boxes on the sensor side of the isolators, they produce measurements that are reasonably consistent with historical values collect when the reservoir was at a similar water level.
 - In addition, the measured resistances across the sensor wires are also reasonably consistent with expected values based on information from DGSI.
 - Temperature values appear to have slightly more variation from historic data than the pressure/frequency. Note that this is consistent with our experience that thermistors tend to be less reliable over time.
- Measured values at the datalogger terminal indicate potential problems with the connections to sensors VB-5 through VB-8.
 - Could be due to either malfunction of cabling extending from the datalogger box or wiring/modules in the junction boxes.
- It looks like the transient protection modules (isolators) in the two junction boxes may not be protecting the datalogger.
 - There are small gauge wires connected to the metal backing panel, but it appears that the grounding lugs on the protection modules are not connected to the box (see Figures 2 and 3).
 - It is also not clear whether the appropriate grounding cables were buried with the VWP sensors at the time of installation (see Attachment 2).
- There does not appear to be any lightning protection or grounding rod for the datalogger box.

Recommendations

Based on our observations and testing, we do not recommend replacing the VWP sensors at this time. Instead, we recommend the following steps before considering sensor replacement.

1. Switch the sensor input locations within the datalogger/multiplexer to new channels (i.e. switch from current positions 1-8 to positions 9-16. Note that the configuration of logview and/or the code running on the datalogger may need to be updated to ensure the data is properly logged.

2. Collect measurements from the VWPs with the sensor input locations changed for at least 2-4 months to establish whether the sensors and collection system can now be considered reliable.
3. If switching the positions of the sensor inputs in the datalogger is not successful, both junction boxes should be replaced. Based on readings at the datalogger terminal, either the transient protection modules or the cabling from the junction boxes to the datalogger may be causing system malfunction and data collection problems. We suggest that the cables be spliced at the junction box locations to provide a direct connection to the datalogger and minimize connection problems. Alternatively, they could be replaced with new modules and properly grounded to protect the datalogger.
4. Collect measurements from the VWPs with the junction boxes replaced for at least 2-4 months to establish whether the sensors and collection system can now be considered reliable.
5. If replacing the junction boxes does not resolve the problem, consider replacing the datalogger and/or the multiplexer.

If it becomes necessary to replace the datalogger or multiplexer, there may be further considerations such as the desire for new functionality, standardization across your system portfolio, etc. It may be possible to replace only the datalogger, to replace both components, or to replace the entire collection system. Note that replacing the existing hardware with newer versions may also allow upgrades for new features such as wireless transmission or connection to your SCADA system. If you would like to discuss these potential tradeoffs, we would be happy to give you further feedback.

Please call if you have any questions or comments.

Attachments

Attachment 1: Genterra Consultants, “San Joaquin Reservoir Drawdown Study - Site Plan: Figure 1”, dated December 2, 2011.

Attachment 2: Durham Geo Slope Indicator (DGSI), “Transient Protection Module” Data Sheet.

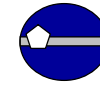


Table 1: Measurements Taken by GeoPentech on March 27, 2023

Sensor Measured	Measurements Taken at Main Box				Measurements Taken at Junction Boxes			
	Resistance Between Temperature Sensor Wires (ohms)	Resistance Between VW Wires (ohms)	Temperature (°C)	Frequency (Hz)	Resistance Between Temperature Sensor Wires (ohms)	Resistance Between VW Wires (ohms)	Temperature (°C)	Frequency (Hz)
VWP-1	3620	315	20.9	2971.7	3620	305.4	20.7	2971.7
VWP-2	3600	311.4	20.9	2887	3596	301.4	20.9	2887
VWP-3	3455	310	21.5	3161.5	3493	299	21.5	3161.5
VWP-4	3910	305.1	20.9	2972.9	3900	394.3	N/A**	N/A**
VWP-5	*	309.5	*	2790	3860	299.6	19.4***	2790
VWP-6	3590	*	20.9	*	3584	298.4	20.9	2919.4
VWP-7	*	*	*	*	3491	295.8	21.5	3081
VWP-8	3600	*	20.8	*	3600	293.3	20.9	2995

Notes:

*Valid measurement could not be obtained, possibly due to VWP system malfunction.

**No measurement could be taken due to surficial waterproofing

***When shield wire is connected, temperature measures 5.6

Table 2: Summary of Historic VWP Measurements

Date	Reservoir Elevation	VB-1 Frequency (Hz)	VB-1 Temp. (°C)	VB-2 Frequency (Hz)	VB-2 Temp. (°C)	VB-3 Frequency (Hz)	VB-3 Temp. (°C)	VB-4 Frequency (Hz)	VB-4 Temp. (°C)	VB-5 Frequency (Hz)	VB-5 Temp. (°C)	VB-6 Frequency (Hz)	VB-6 Temp. (°C)	VB-7 Frequency (Hz)	VB-7 Temp. (°C)	VB-8 Frequency (Hz)	VB-8 Temp. (°C)
2/25/2009	470.10	2988.80	22.30	2912.40	23.0	3162.90	21.30	2965.70	20.80	2774.50	20.50	2946.10	22.40	3083.30	22.4	3035.40	21.80
2/25/2010	470.20	2957.30	22.30	2899.70	23.0	3162.80	21.20	2961.30	20.60	2772.60	20.40	2936.00	20.50	3083.30	20.70	3029.40	21.60
3/29/2011	470.30	2956.90	22.30	2891.90	23.0	3162.90	20.70	2957.70	20.60	2770.70	19.80	2931.60	19.70	3082.90	19.80	3014.70	19.90
3/27/2023	471.10	2971.7	20.7	2887	20.9	3161.5	21.5	2972.9	20.9	2790	19.4	2919.4	20.9	3081	21.5	2995	20.90
1/26/2017	471.60	3011.61	21.30	2900.67	22.00	3159.30	22.00	2976.99	21.80	2771.84	21.10	2953.45	22.00	3081.10	22.30	3014.56	23.20
2/28/2017	471.90	3007.02	21.10	2871.54	21.60	3160.84	21.90	2972.98	20.60	2768.30	20.40	2923.73	21.70	3081.21	22.10	2998.07	22.30
3/1/2017	471.90	3007.11	21.10	2871.54	21.60	3160.24	21.90	2971.86	20.07	2767.52	20.40	2924.67	21.80	3081.14	22.10	2996.94	22.40
3/2/2017	471.90	3006.69	21.10	2870.57	21.60	3159.45	21.90	2971.67	20.50	2767.23	20.40	2922.65	21.70	3080.93	22.10	2997.18	22.20
2/25/2017	472.00	3007.04	21.10	2872.45	21.70	3159.68	21.90	2971.58	20.70	2767.01	20.50	2924.57	21.80	3081.08	22.10	2998.95	22.40
2/26/2017	472.00	3007.17	21.10	2872.02	21.60	3160.09	21.90	2971.99	20.70	2767.46	20.40	2924.16	21.70	3081.09	22.10	2992.11	22.30
2/27/2017	472.00	3007.06	21.10	2872.13	21.60	3160.10	21.90	2971.99	20.07	2767.31	20.40	2924.02	21.80	3081.09	22.10	2992.67	22.30
2/24/2017	472.05	3007.20	21.10	2872.81	21.60	3160.02	22.00	2971.88	20.70	2767.24	20.50	2925.06	21.70	3081.04	22.10	2999.46	22.40

Notes:

- Only historic data collected prior to 2020 considered for comparison
- Blue highlight indicates measurements collected by GeoPentech on March 27, 2023

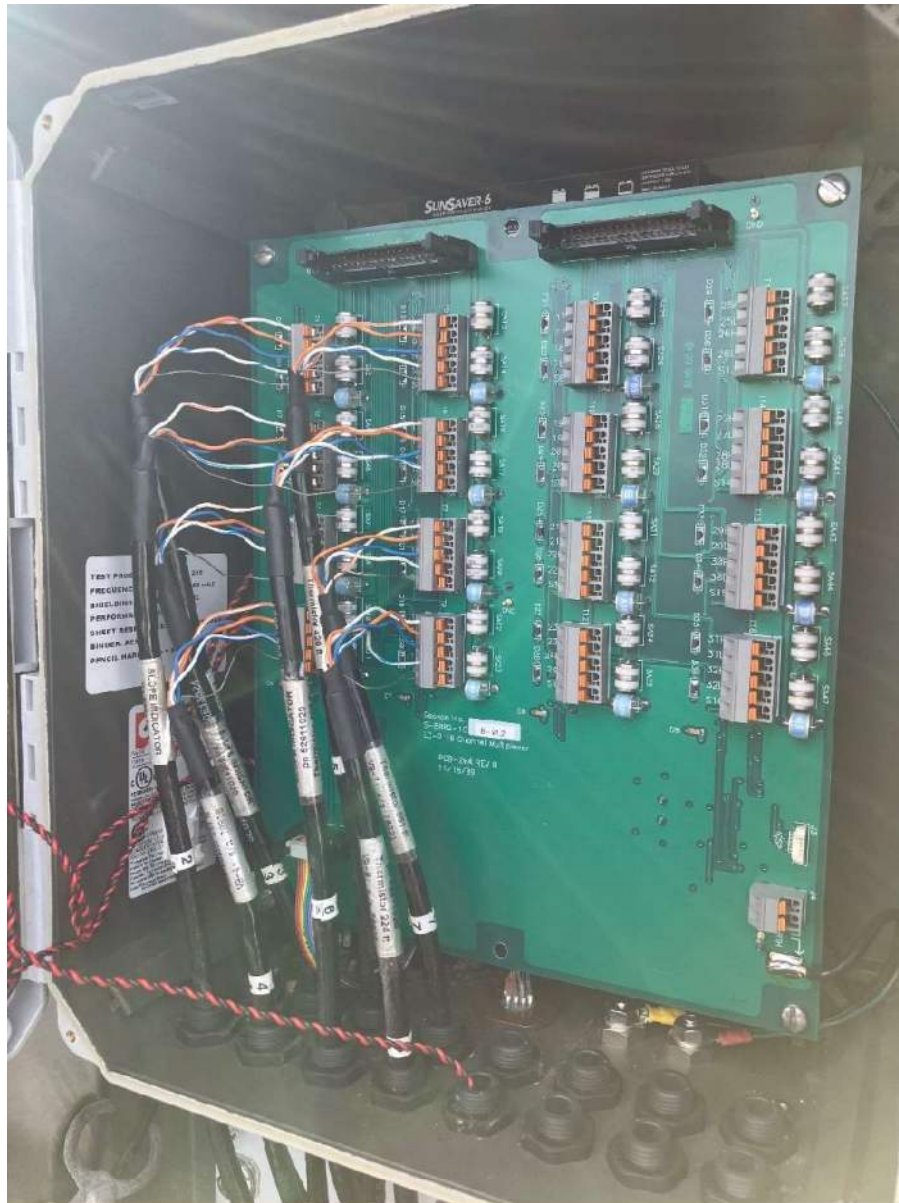


Figure 1: Condition of Main Box, containing datalogger, on March 27th, 2023.

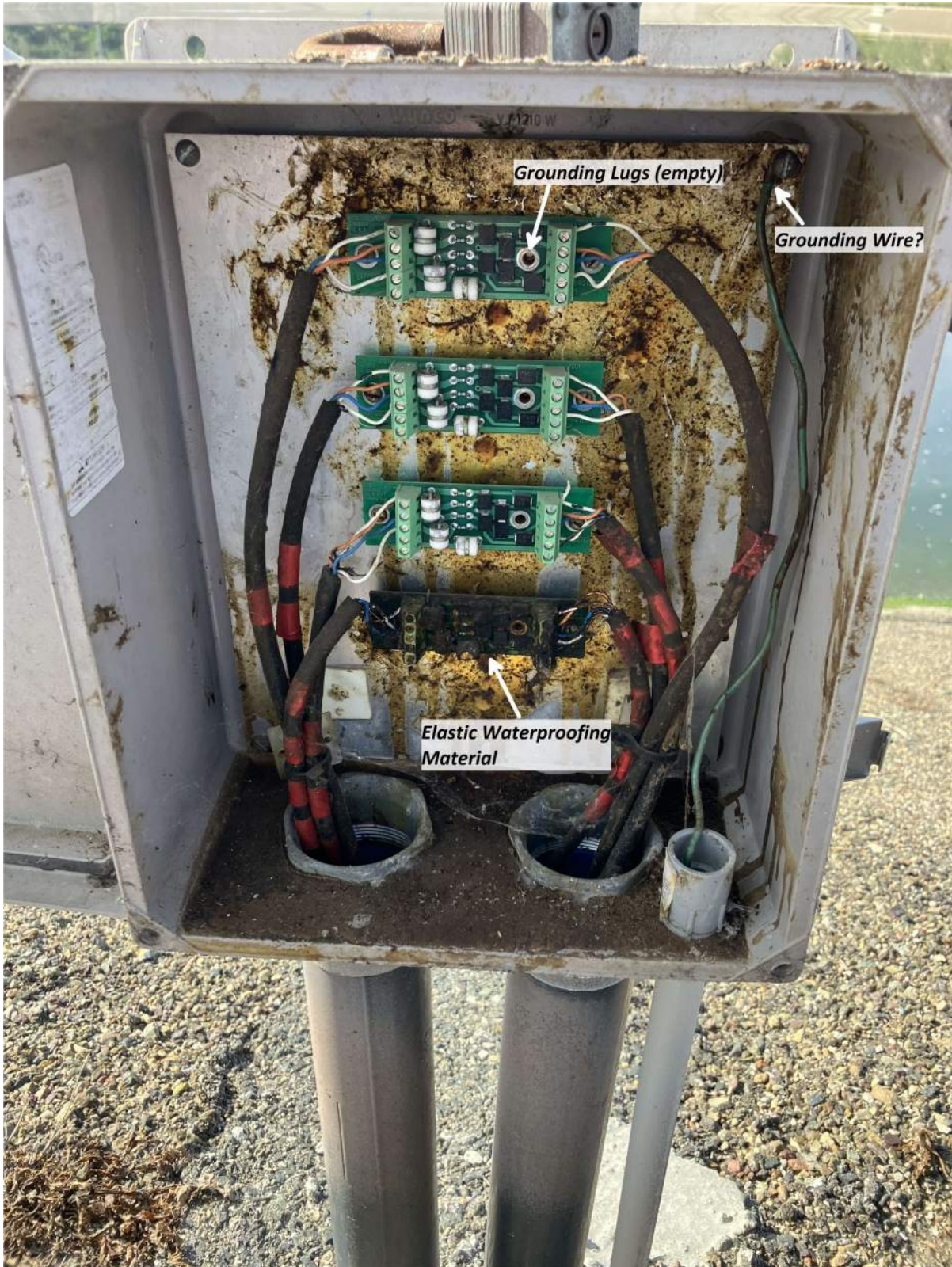


Figure 2: Condition of Right Abutment Junction Box (VB-1 through VB-4) on March 27th, 2023

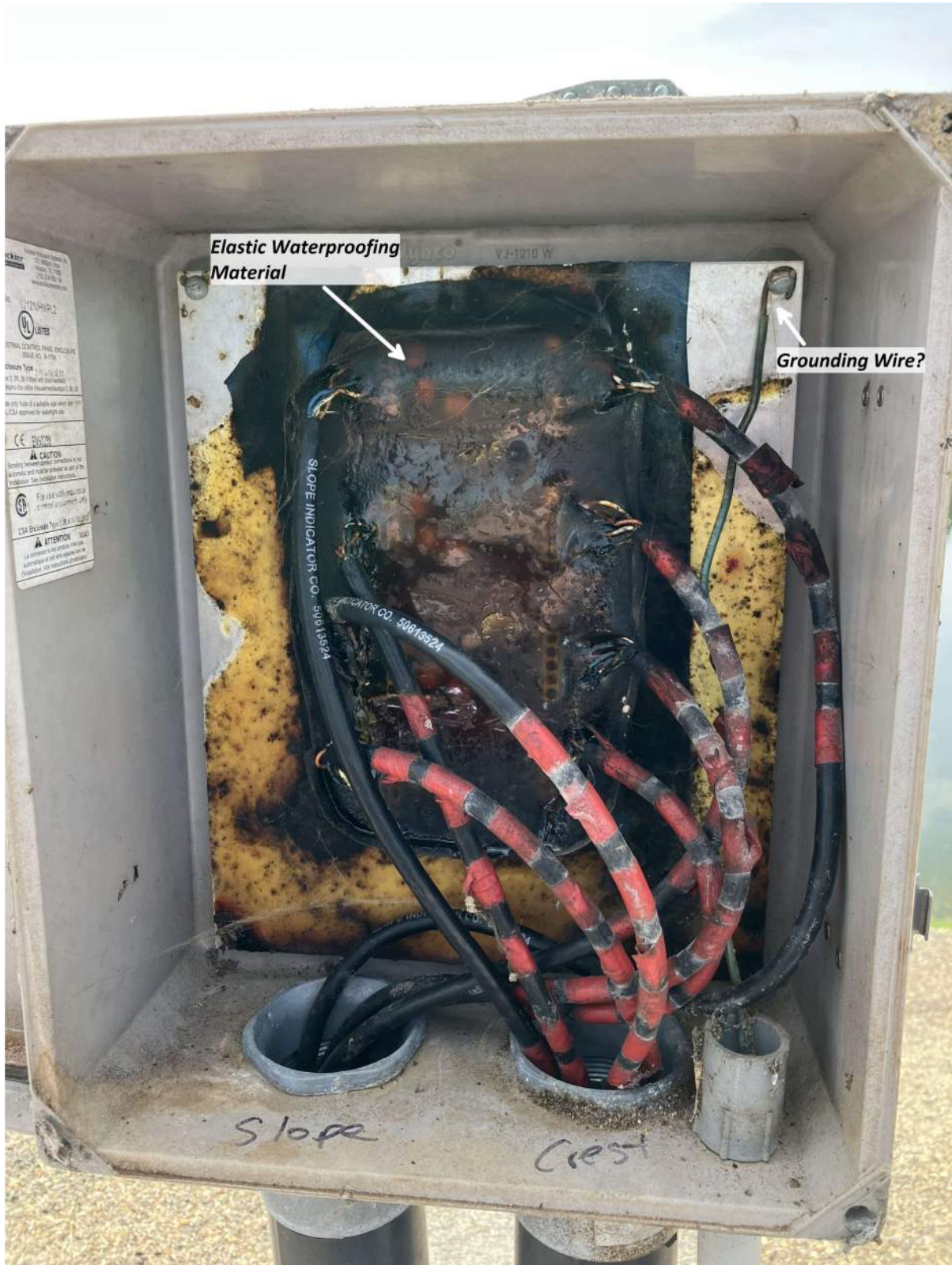
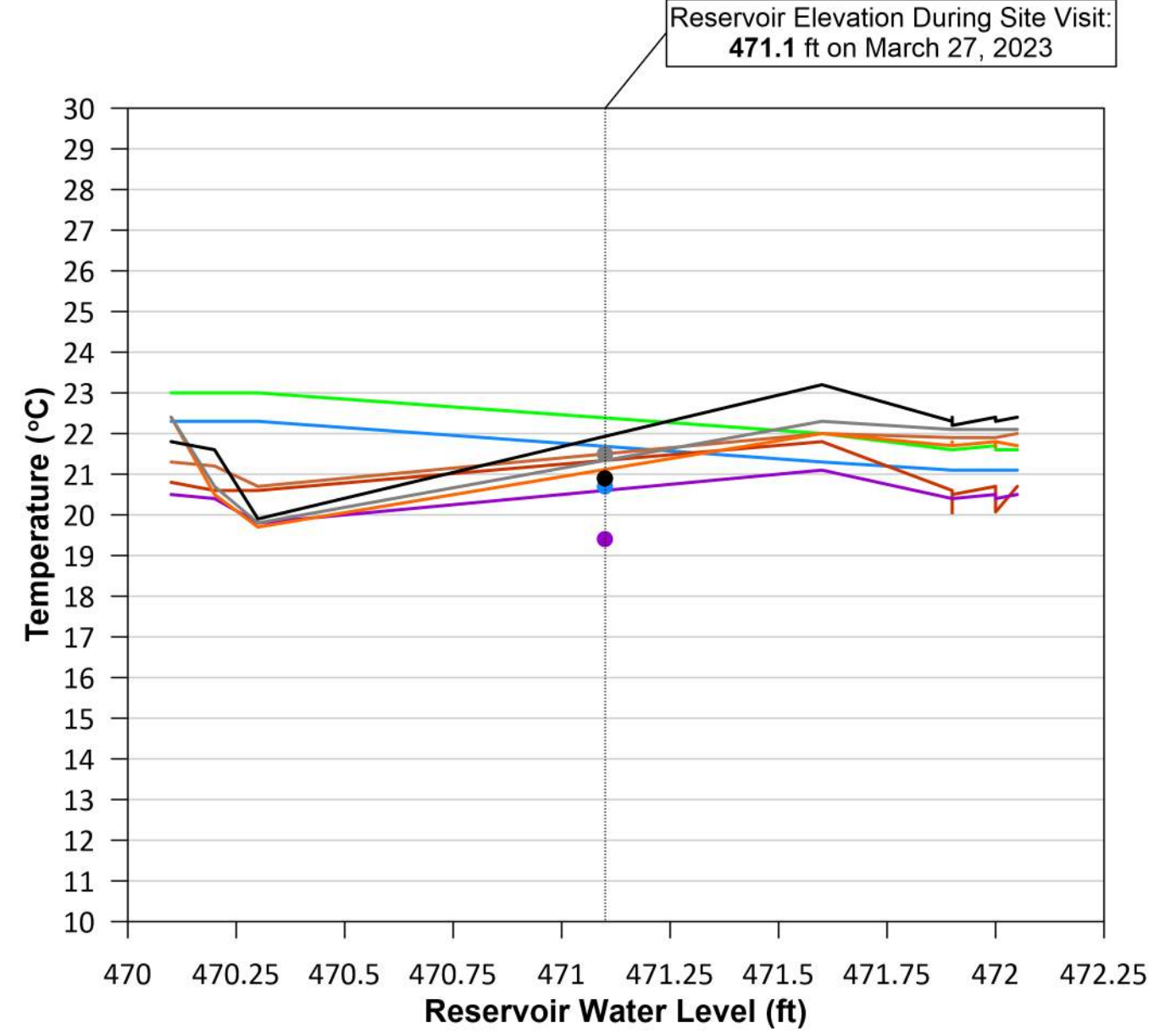
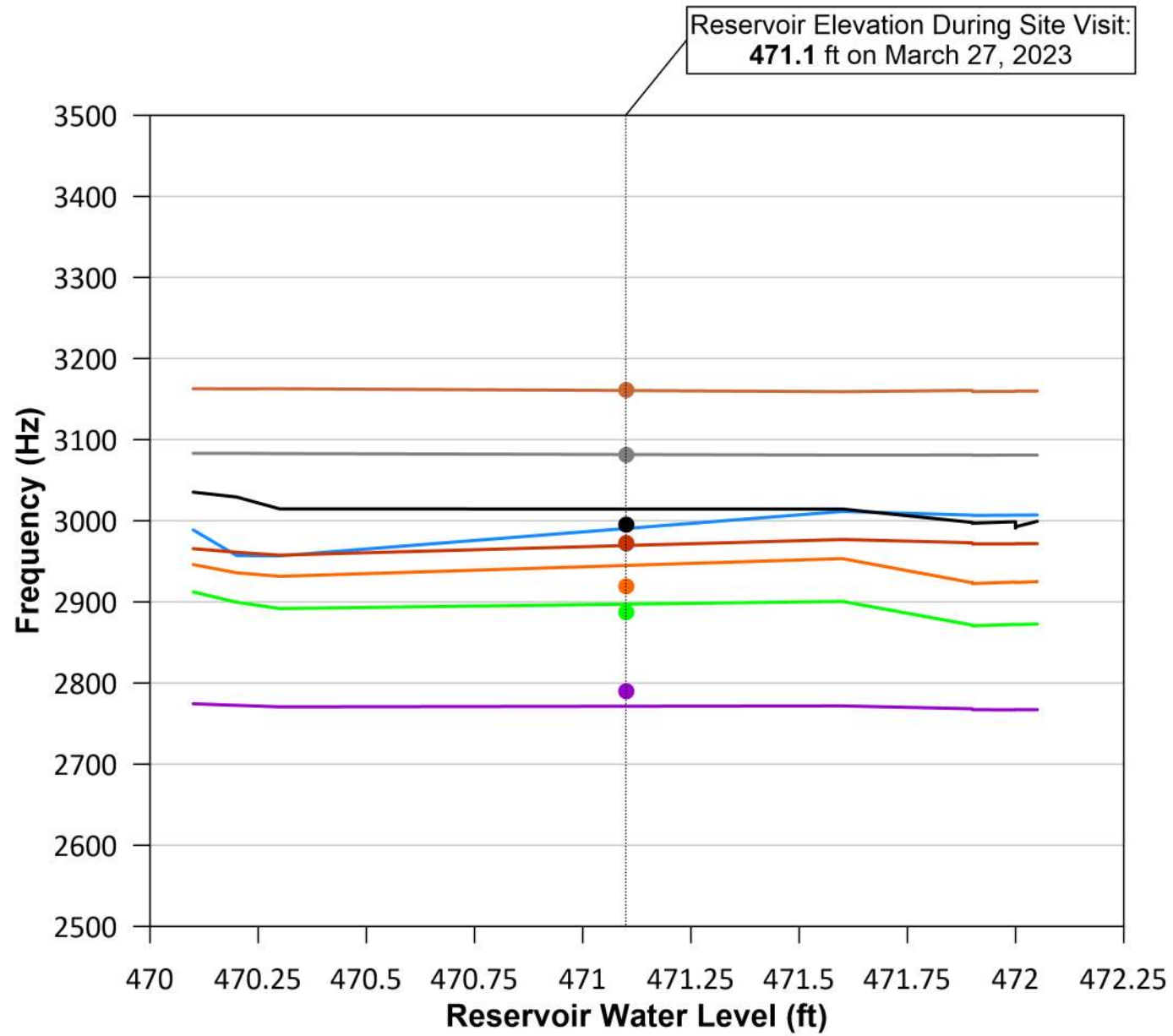


Figure 3: Condition of Left Abutment Junction Box (VB-5 through VB-8) on March 27th, 2023

VWP Data Validation



<u>Legend</u>	
— VB-1 Historic Data	● VB-1 GeoPentech Measurement
— VB-2 Historic Data	● VB-2 GeoPentech Measurement
— VB-3 Historic Data	● VB-3 GeoPentech Measurement
— VB-4 Historic Data	● VB-4 GeoPentech Measurement
— VB-5 Historic Data	● VB-5 GeoPentech Measurement
— VB-6 Historic Data	● VB-6 GeoPentech Measurement
— VB-7 Historic Data	● VB-7 GeoPentech Measurement
— VB-8 Historic Data	● VB-8 GeoPentech Measurement

Notes:
 -Only Historic Data recorded prior to 2020 is shown
 -GeoPentech measurements taken at junction boxes



VWP DATA VALIDATION		
Project: IRWD - San Joaquin Reservoir VWP		Figure 4
Project No.: 23016A	Date: MAR 2023	

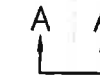
Attachment 1

Genterra Consultants, “San Joaquin Reservoir Drawdown Study - Site Plan: Figure 1”, dated December 2, 2011.



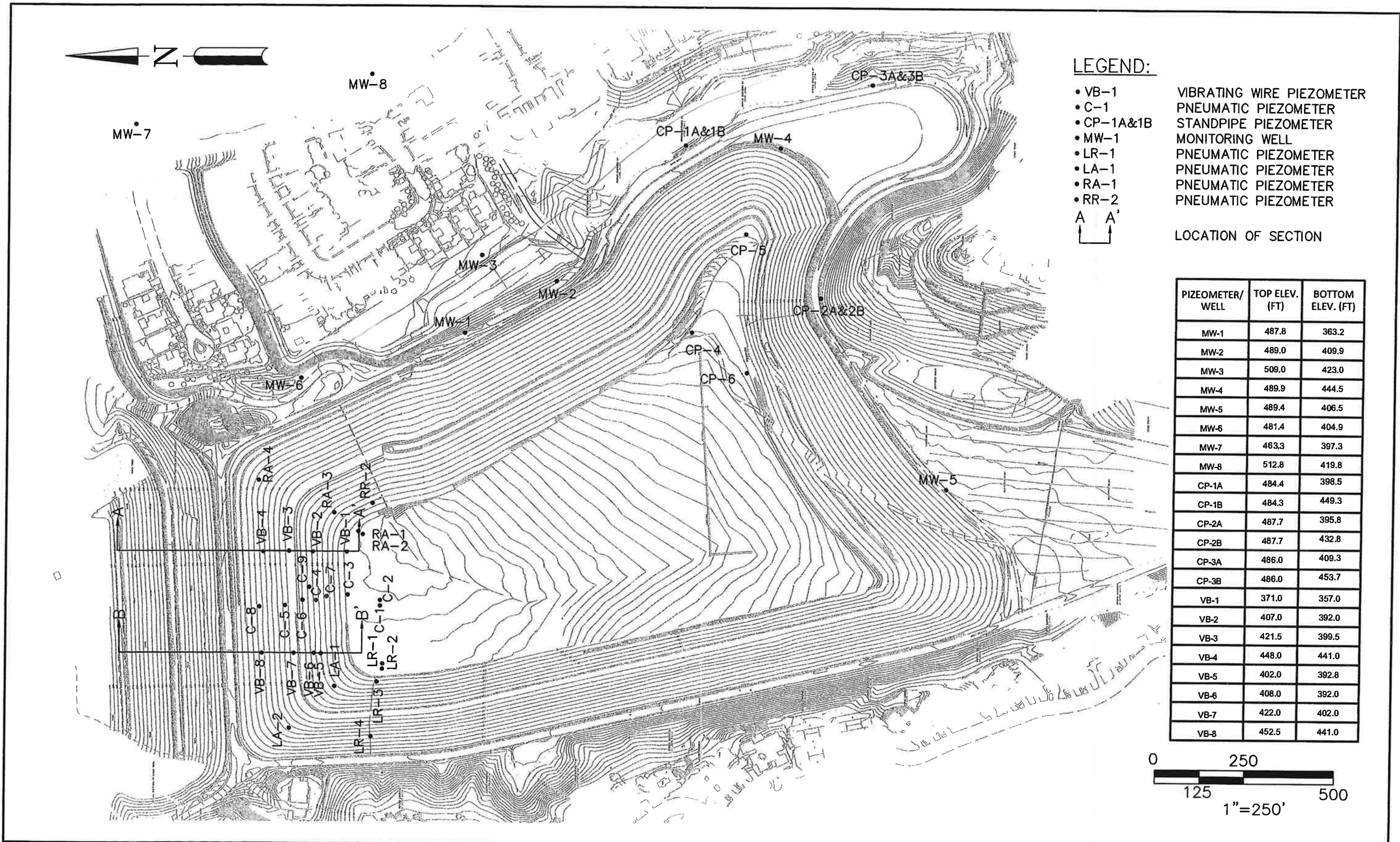
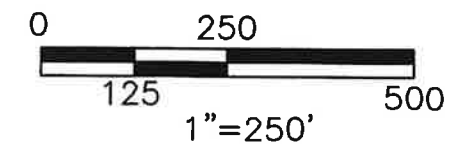
LEGEND:

- VB-1 VIBRATING WIRE PIEZOMETER
- C-1 PNEUMATIC PIEZOMETER
- CP-1A&1B STANDPIPE PIEZOMETER
- MW-1 MONITORING WELL
- LR-1 PNEUMATIC PIEZOMETER
- LA-1 PNEUMATIC PIEZOMETER
- RA-1 PNEUMATIC PIEZOMETER
- RR-2 PNEUMATIC PIEZOMETER



LOCATION OF SECTION

PIEZOMETER/ WELL	TOP ELEV. (FT)	BOTTOM ELEV. (FT)
MW-1	487.8	363.2
MW-2	489.0	409.9
MW-3	509.0	423.0
MW-4	489.9	444.5
MW-5	489.4	406.5
MW-6	481.4	404.9
MW-7	463.3	397.3
MW-8	512.8	419.8
CP-1A	484.4	398.5
CP-1B	484.3	449.3
CP-2A	487.7	395.8
CP-2B	487.7	432.8
CP-3A	486.0	409.3
CP-3B	486.0	453.7
VB-1	371.0	357.0
VB-2	407.0	392.0
VB-3	421.5	399.5
VB-4	448.0	441.0
VB-5	402.0	392.8
VB-6	408.0	392.0
VB-7	422.0	402.0
VB-8	452.5	441.0



DESIGNED BY: SB	IRVINE RANCH WATER DISTRICT	SAN JOAQUIN RESERVOIR DRAWDOWN STUDY	 GENTERRA CONSULTANTS, INC. <small>Engineering & Geotechnical Services Irvine, California</small>	PROJECT NUMBER	DATE	SITE PLAN
DRAWN BY: JDD				354-IRW	DECEMBER 2, 2011	FIGURE 1
DATE DRAWN: DEC 2011						
CHECKED BY: SB						

Attachment 2

Durham Geo Slope Indicator (DGSI), “Transient Protection Module” Data Sheet.

Transient Protection Module

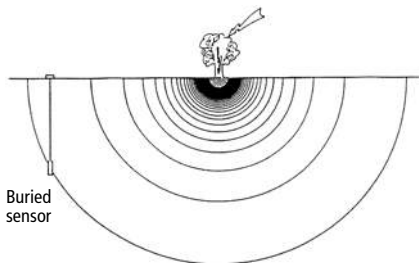
Application

Problems with noisy readings and bad sensors are more likely to be caused by voltage transients (such as lightning) than by poor quality or poor installation techniques.

Transient protection modules, when combined with other measures, such as minimizing the lengths of horizontal runs of cable, can help prevent these problems.

Transients and Buried Sensors

The drawing below shows lightning striking a tree. The concentric lines are iso-voltage levels at the instant of the strike. Each line represents a voltage difference of about 50 kV.



In the drawing above, the cable to the sensor cuts across part of one level, so there is about a 10 to 20 kV voltage gradient between the surface and the sensor.

Sensors and cables cannot withstand such high voltage differences. The typical result is arcing that can destroy the sensor and cable.

Even if the sensor is not destroyed, the cable jacket will have pinhole punctures. Water will enter through these punctures later, causing all the symptoms of a seal failure and a significant increase in noise and interference.

Protecting Buried Sensors

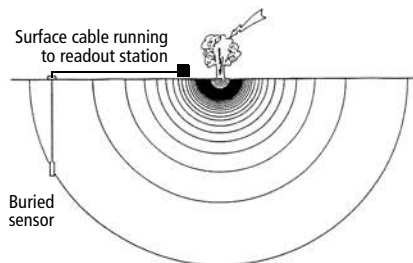
To protect buried sensors, we must try to eliminate voltage gradients that would affect the sensor and cable.

In the drawing above, the sensor cable is terminated at the surface and we must eliminate any gradient developing between the surface and



the sensor. This can be achieved by running a heavy gauge, bare grounding wire down the borehole, parallel to the sensor signal cable. The wire should extend several feet deeper than the sensor and should be isolated from the signal cable.

When signal cable is not terminated at the top of the borehole, but instead runs horizontally to a readout station or data logger, the simple grounding wire technique above is no longer effective. Now we must try to eliminate the voltage gradient between the readout station and the sensor.



One way to eliminate this gradient is to run a ground wire parallel to the horizontal signal cable and connect it to the grounding wire in the borehole. This is generally not cost-effective unless an existing grounding grid can be used.

One alternative is to place a transient protection module at the top of the borehole, between the horizontal and vertical runs of signal cable. The grounding lug of the protection mod-

ule is then connected to the grounding wire in the borehole.

With the protection module in place, transients on the horizontal run of signal cable are intercepted and shunted to the grounding wire in the borehole. This instantly raises the voltage levels around the sensor and signal cable, eliminating the voltage gradient that causes damage.

Note that the transient protection suggested above does not protect the horizontal runs of signal cable. These runs can be protected only by a conductor, such as grounding wire, a grounding grid, or a pipeline that runs parallel to the signal cable over its full length.

Protecting Data Loggers

Transient protection modules placed between signal cable and the data logger can protect the logger from transients arriving on the signal cable. In this case, the grounding lug on the module should be connected to the local facility ground, probably the same ground that the data logger is connected to.

Other measures to protect surface equipment include the use of isolated power supplies and optical isolation of communications lines.

TRANSIENT PROTECTION MODULE

Transient Protection Module. . . .52612520

Module includes 3-stage transient protection board and an enclosure with cable glands and grounding lug. Module protects four leads and shield.

Gas Discharge Tubes: Three tripolar gas discharge tubes with simultaneous sparkover of three electrodes for maximum efficiency. Sparkover at nominal 250 volts with impulse sparkover less than 600 volts. Handles 20 kA current.

Fast Response Transient Suppressors: Four 40V 1500 Watt suppressors protect four leads. Also two 15V 1500 Watt suppressors protect against voltage between leads.

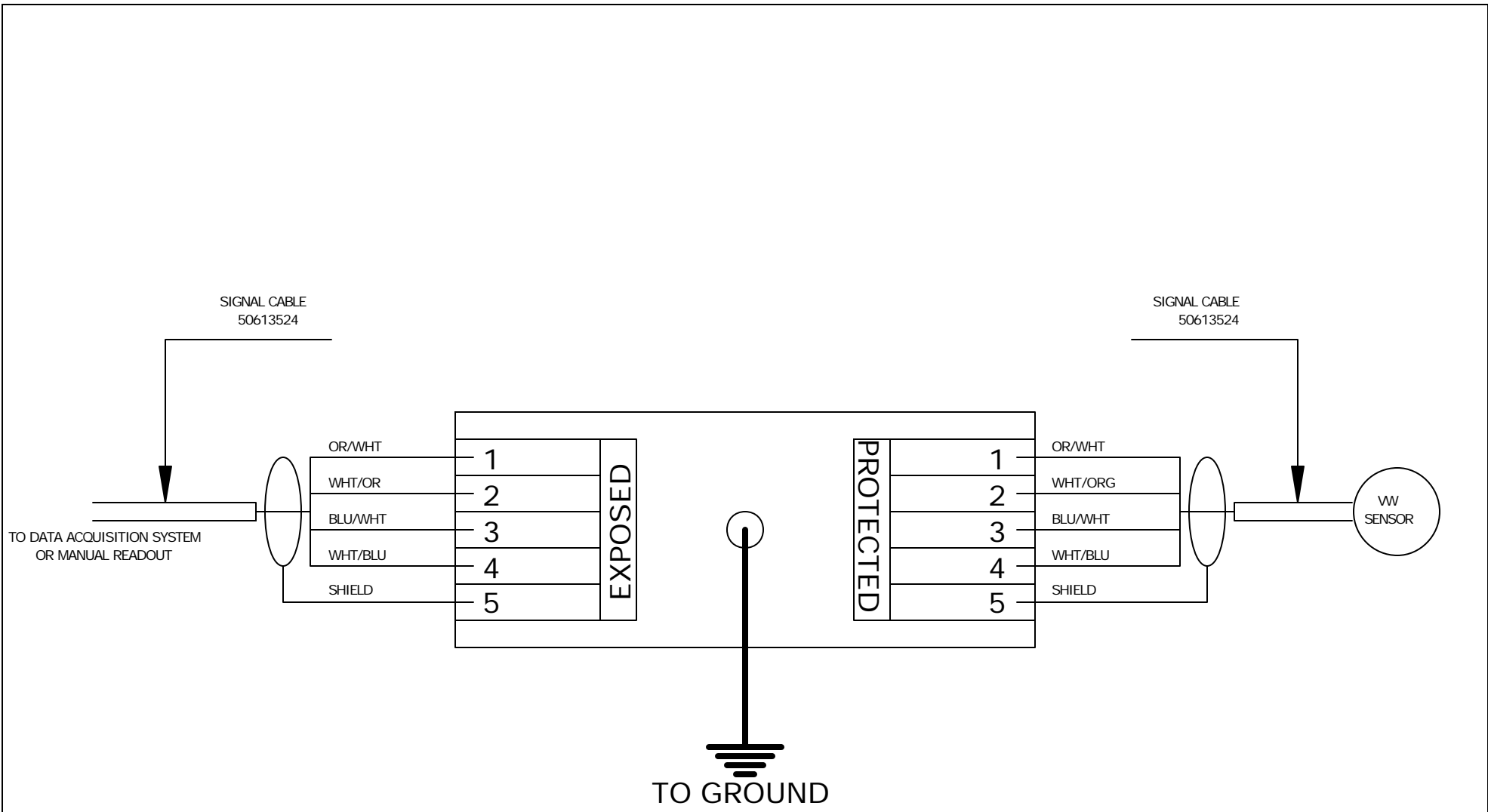
Isolation Fusing Resistors: Replaceable fusing resistors, nominally rated for 100 mA, provide isolation for sensor and cable if other devices are overpowered.

DISCLAIMER

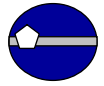
The suggestions in this datasheet for protecting sensors and cables are based the ideas presented in a paper by Dale Shoup titled "Sensors in the Real World," which is available on Slope Indicator's website.

Although there has been much research conducted on protection of buildings and equipment at the surface, there has not been much research conducted on protecting buried sensors. A search of the internet will verify this.

It is difficult to imagine all the variables that affect a particular site, and even more difficult to prescribe a sure solution that protects all buried sensors. Thus the suggestions in this datasheet should be viewed as an effort to be helpful, not as expert advice.



NOTE: Locate surge arrester module as close to VW sensor as possible.
 For borehole applications locate surge arrester module at top of borehole.



Memorandum

To: Terry Shreiner – Irvine Ranch Water District

CC: Esteban Rendon – Irvine Ranch Water District

From: Douglas Wahl, PE, GE

Date: May 31, 2023

Re: Site Visit Memorandum – Piezometer Instrumentation System Repair – San Joaquin Reservoir

This memorandum documents our site visit on Wednesday, May 31, 2023. This work was performed in accordance with Irvine Ranch Water District's (IRWD's) Purchase Order No. 635364 dated April 27, 2023, and our proposal dated April 21, 2023, for piezometer instrumentation system repair services at IRWD's San Joaquin Reservoir.

On May 31, 2023 (Wednesday), Doug Wahl from GeoPentech visited the site and met with Terry Schreiner (Instrumentation Supervisor), and Esteban Rendon (Electrical/Instrumentation), both from the IRWD. The primary purpose of our visit was to perform repairs of part of the instrumentation system, specifically replacing a series of eight (8) surge arrestors in two existing enclosures at the crest of the dam. During our previous visit in March of 2023, we were able to inspect the system and identified potential problems with these components and recommended that they be replaced.

During our visit, we replaced the previous modules with new equipment within the existing enclosures. The new modules are manufactured by Geokon and are a functional equivalent to the previous (instruction manual can be accessed online: [https://www.geokon.com/content/manuals/4999-12L-LE\(LAB3\)_Surge_Module.pdf](https://www.geokon.com/content/manuals/4999-12L-LE(LAB3)_Surge_Module.pdf)). All eight instruments (two sensors per instrument) were reconnected to the new surge modules (photos attached). Resistance readings were taken of the vibrating wire sensors and ranged from about 294 ohms to 304 ohms, within the expected range indicating they are likely functional. We did not have a way to connect to the datalogger during our visit to verify function.

Note that the previous transient modules did not appear to be connected to earth ground, whereas the new modules have been connected to the ground wires entering each enclosure. It is not clear where these ground wires terminate. Furthermore, it does not appear that the main datalogger enclosure has a connection to earth ground.

Mr. Terry Shreiner
Site Visit Memorandum
Piezometer Instrumentation System Repair – San Joaquin Reservoir
May 31, 2023
Page 2

Recommendations

At this time, we recommend allowing the system to collect measurements with the new equipment in place for at least a week or two and then re-evaluating the collected information to determine if further work may be necessary. We also suggest that installing a ground rod for the main datalogger may be beneficial to reduce some noise, though unlikely to be the main cause of previous system inconsistency. Note that this could also be combined with further troubleshooting of the datalogger itself if it is deemed necessary.

Please call if you have any questions or comments.

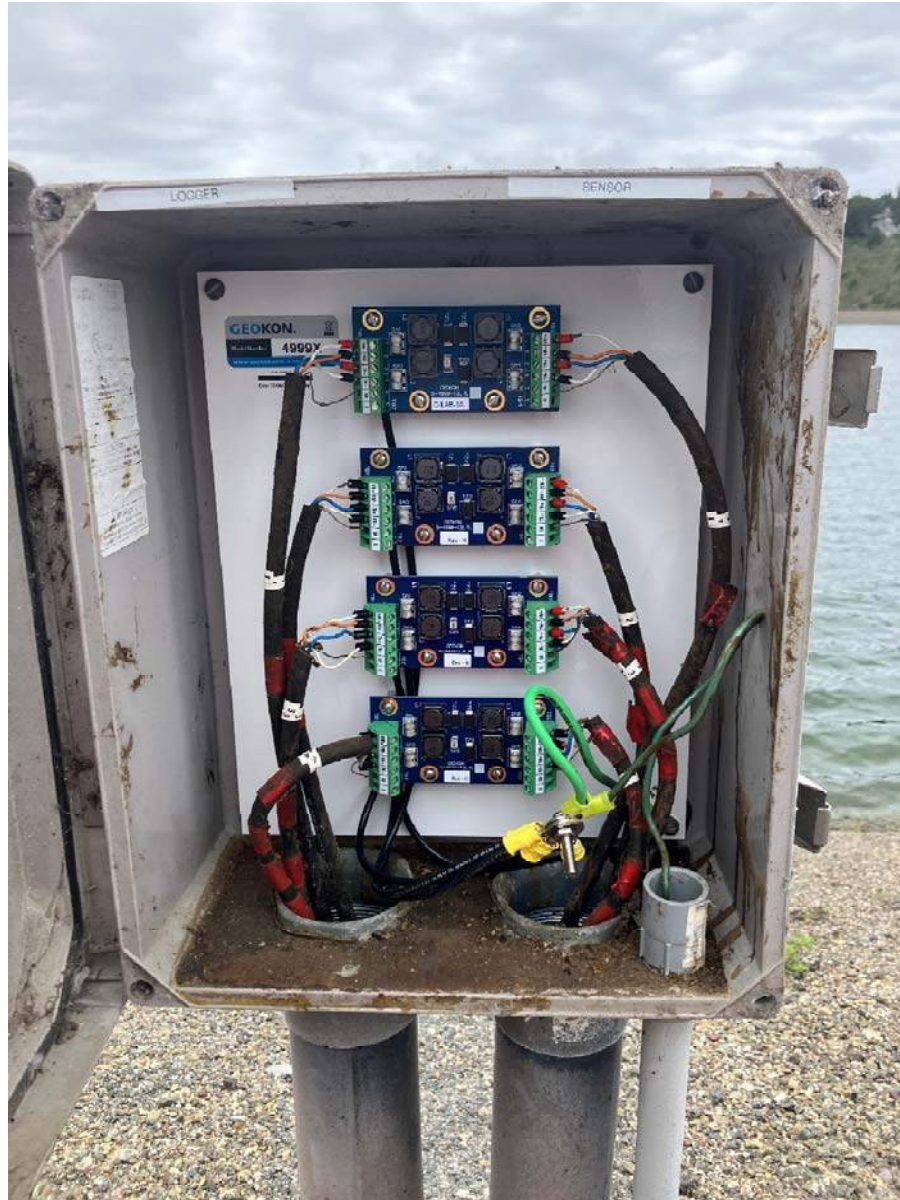
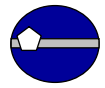


Figure 1: Newly Installed Modules at Left Abutment Junction Box (VB-1 through VB-4).



Figure 2: Newly Installed Modules at Right Abutment Junction Box (VB-5 through VB-8).

Mr. Terry Shreiner
Site Visit Memorandum
Piezometer Instrumentation System Repair – San Joaquin Reservoir
May 31, 2023
Page 5

Attachment 1

Geokon, “Model 4999-12L/LE (LAB3)”, Instruction Manual.

Appendix E

San Joaquin Subdrain Condition Assessment – Vector Cleaning and CCTV

Appendix F

San Joaquin Reservoir Existing Seepage Return Pipeline Abandonment Plan

V&A Project No. 24-0165

July 12, 2024

Brandon Joseph
Assistant Engineer
Irvine Ranch Water District
3512 Michelson Drive
Irvine, CA 92612

Subject: Irvine Ranch San Joaquin Drain Condition Assessment – Vector Cleaning and CCTV

Dear Brandon Joseph:

Irvine Ranch Water District (IRWD) owns and operates subdrains for the San Joaquin Reservoir in Newport Beach, California. IRWD contracted V&A Consulting Engineers, Inc. (V&A) to perform condition assessment services of seven (7) separate subdrain pipes by obtaining and evaluating closed-circuit television (CCTV) video. The assessment aims to understand the composition of the existing subdrain system and determine whether rehabilitation is necessary. The seven (7) drainpipes include the following:

1. 6-inch toe drain
2. 6-inch foot drain
3. 6-inch upstream No. 1 drain
4. 6-inch upstream No. 2 drain
5. 36-inch spillway drain
6. 36-inch emergency dump drain
7. 3-in V-ditch drain.

After reviewing site conditions, V&A prepared to perform a condition assessment of the subdrain system using a remotely operated vehicle (ROV) and push camera with CCTV recording capabilities. On May 29 and June 4, 2024, V&A arrived onsite, where they were accompanied by IRWD and Performance Pipeline Technologies, Inc., who were subcontracted by V&A to assist in capturing CCTV video.

On May 29, the toe and foot drains, upstream drains Nos. 1 and 2, and the V-ditch drain were surveyed. The 36-inch spillway and emergency dump drain required an auxiliary ladder and were surveyed on June 4. The spillway drain was successfully assessed, but the emergency dump drain could not be safely surveyed with the ROV due to steep and slippery conditions. The upstream drains Nos. 1 and 2 and the spillway drain were surveyed with an ROV. The toe, foot, and V-ditch drain were surveyed with a push camera. IRWD was responsible for preparing the access points for entry, which included unlocking vault lids and removing outlet bend pieces.

On May 29, the 6-inch toe and foot drains were underwater and had to be assessed with a push camera. During the assessment, the toe and foot drains were flagged at ground level to identify where the pipes were located underground. Initially, on May 29, the 3-inch V-ditch drain was assessed with a push camera, and it was found to have a significant mineral encrustation layer on the bottom of the pipe and a root ball 154 feet inside the pipe. On June 4, a Vector truck was deployed on the V-ditch drain to clean the mineral layer and remove the root ball from the pipe.

Background

V&A previously assessed upstream drains Nos. 1 and 2 with an ROV in November 2022. No major obstructions were found, and the pipes were in good condition.

The as-built drawings verified that upstream drains Nos. 1 and 2 are each approximately 550 feet long and comprise of concrete mortar and lined steel pipe. The steel pipes are also encased in 6-inches of concrete. However, as-built drawings could not be located to verify the materials and lengths of the spillway, foot, toe, and V-ditch drains. The toe, foot, and V-ditch drains comprised of what appeared to be PVC pipes. The spillway and emergency dump drain appeared to be concrete-lined pipes.

Figure 1 details the pipe alignments for this condition assessment report.

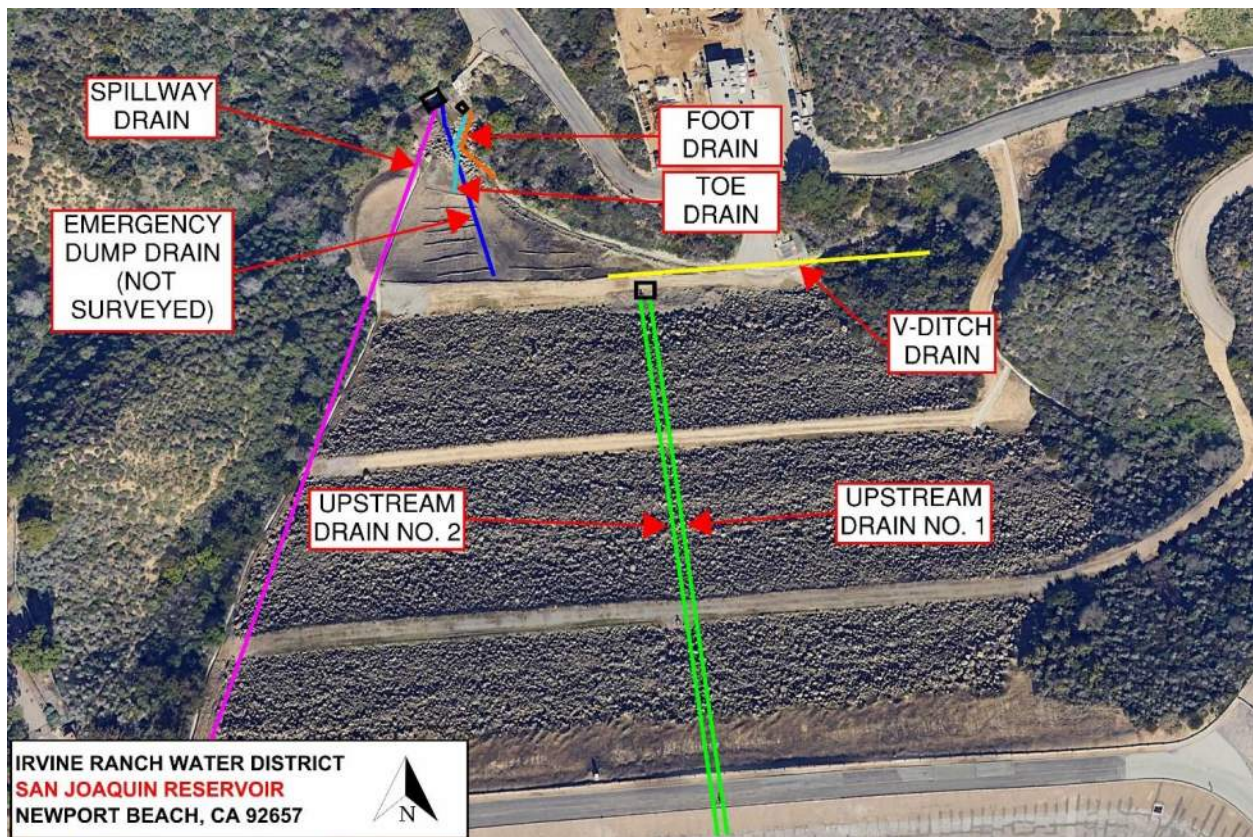


Figure 1 – San Joaquin Drain Pipes Alignments.

Assessment

Six (6) sections of drains were assessed, which included the following:

1. 6-inch foot drain
 - a. Vault box to the end of the push camera's capabilities
2. 6-inch toe drain
 - a. Vault box to the end of the push camera's capabilities
3. 6-inch upstream drain No. 1
 - a. Vault box to the end of the pipe
4. 6-inch upstream drain No. 2
 - a. Vault box to the end of the pipe
5. 3-inch V ditch drain

- a. End of the pipe to the end of the push camera length
- 6. 36-inch spillway drain
 - a. End of the pipe to the top of the reservoir

The drains were all assessed in the upstream direction. The drains were accessed to the maximum length based on site conditions. The maximum push camera length is 200 feet. The upstream drain No. 1 could not traverse the last 30 feet of pipe because of the steep slope and slippery terrain.

A summary of observations from V&A's review of the CCTV footage is provided in the following sections below. The PACP reports (per NASSCO) are provided at the end of this letter report.

Foot Drain

The foot drain was assessed from the vault box to 94.5 feet when the push camera could not go any further because of bends in the pipe. The following is a summary of the observations:

- STA 00+37 - Bend in the pipe
- STA 00+47 - Bend in the pipe
- STA 00+54 - Staining of the joint
- STA 00+56 - Staining on the ceiling of the pipe
- STA 00+78 - Offset joint
- STA 00+94 - End of the survey

Refer to Photo 1 through Photo 6 below for general observations.



Photo 1 - STA 00+14: Pipe is in good condition (typical).

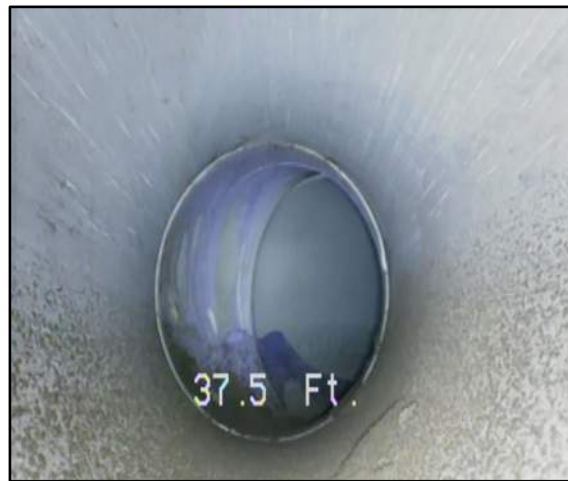


Photo 2 - STA 00+37: Bend in the pipe.



Photo 3 – STA 00+47: Bend in the pipe.



Photo 4 – STA 00+54: Staining of the joint.



Photo 5 – STA 00+56: Staining on the pipe ceiling.

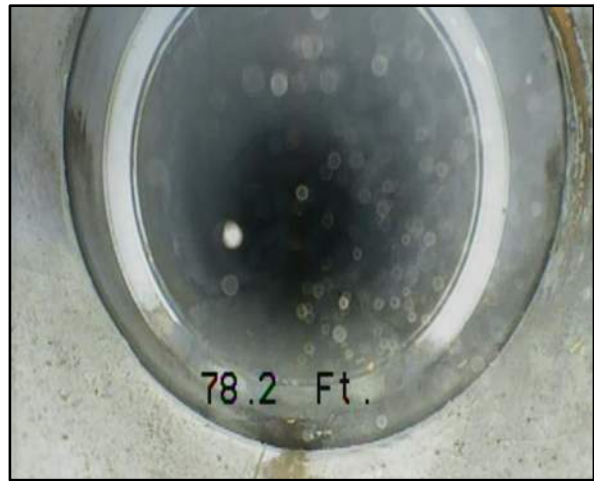


Photo 6 – STA 00+78: Offset joint.

Toe Drain

The toe drain was assessed from the vault box to 86.5 feet, after which the push camera could not go any further because of bends in the pipe. The following is a summary of the observations:

- STA 00+11 – Possible coating damage
- STA 00+20 – Rock on the bottom of the pipe
- STA 00+21 – Excess weld material at the pipe seam
- STA 00+30 – Bend in the pipe
- STA 00+47 – Sand debris on the bottom of the pipe
- STA 00+80 – Air bubble in the pipe
- STA 00+86 – Tee section and the end of the survey

Refer to Photo 7 through Photo 14 below for general observations.

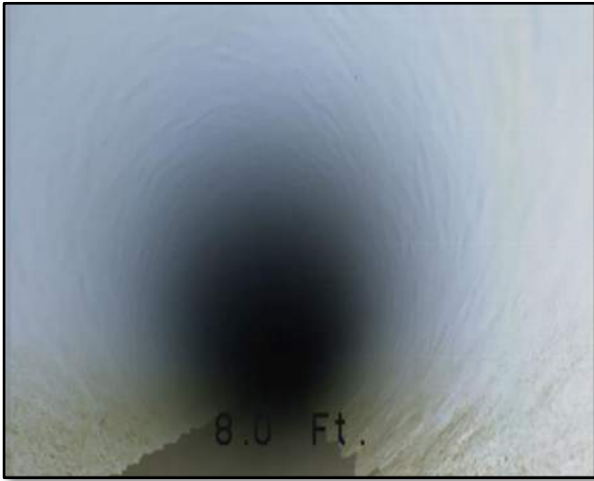


Photo 7 – STA 00+08: Pipe is in good condition (typical).

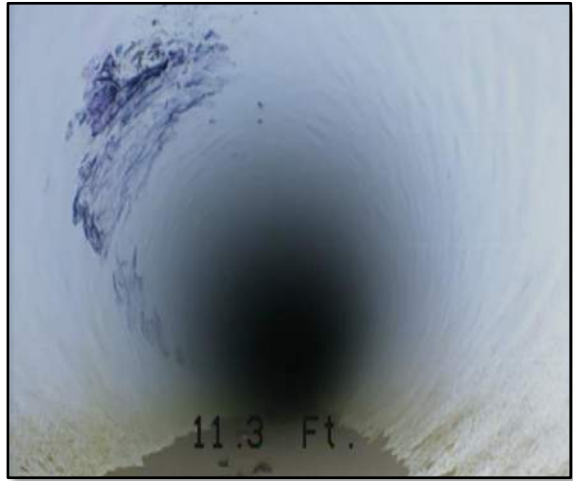


Photo 8 – STA 00+11: Possible coating damage.



Photo 9 – STA 00+20: Rock on the bottom of the pipe.

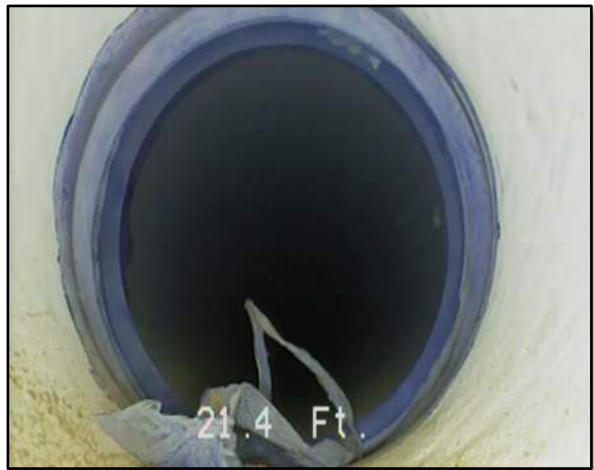


Photo 10 – STA 00+21: Excess weld material at the seam.

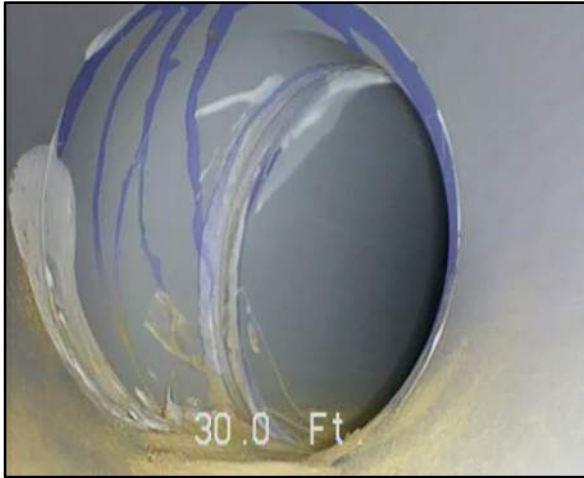


Photo 11 – STA 00+30: Bend in the pipe is in good condition.



Photo 12 – STA 00+04: Sand debris on the bottom of the pipe.



Photo 13 – STA 00+80: Air bubble and staining on the walls of the pipe.

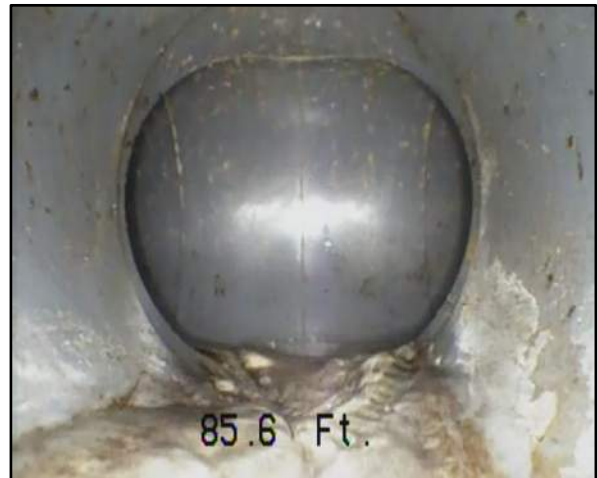


Photo 14 – STA 00+85: Tee section, the end of the survey.

Upstream Drain No. 1

The 6-inch upstream drain No. 1 was determined to have a total length of 489.8 feet. Because of the steep terrain and conditions, the last 30 feet of pipe could not be surveyed. The PACP Report is provided in Appendix A. The following is a summary and pictures of the observations:

- STA 00+00 – Failed liner and liner material collected at bottom of the pipe
- STA 02+27 – Debris on the bottom of the pipe
- STA 03+27 – Debris on the bottom of the pipe
- STA 04+44 – Rock on the bottom of the pipe
- STA 04+89 – End of the survey because of steep terrain

Refer to Photo 15 through Photo 20 below for general observations.



Photo 15 – STA 00+00: Failed liner.



Photo 16 – STA 00+28: Pipe is in good condition



Photo 17 – STA 02+07: Debris on the bottom of the pipe.



Photo 18 – STA 03+27: Debris on the bottom of the pipe.



Photo 19 – STA 04+44: Rock at bottom of the pipe.



Photo 20 – STA 04+89: End of survey.

Upstream Drain No. 2

The 6-inch upstream drain No. 2 was assessed for a total length of 532.9 feet. The survey ended at the pipe's tee connection. The PACP Report is provided in Appendix A. The following is a summary and pictures of the observations:

- STA 00+49 – Offset joint (0.25")
- STA 01+29 – Lining damaged from 5 to 7 o'clock
- STA 01+66 – Lining failure and possible corrosion from 6 to 9 o'clock
- STA 01+69 – Cracks in lining
- STA 02+49 – Corrosion at pipe joint
- STA 05+32 – End of the survey

Refer to Photo 21 through Photo 27 below for general observations.



Photo 21 – STA 00+49: Pipe is in good condition (typical).



Photo 22 – STA 01+29: Lining damaged from 5 to 7 o'clock.



Photo 23 – STA 01+66: Lining failure and possible corrosion from 6 to 9 o'clock.



Photo 24 – STA 01+69: Cracks in lining at 11 o'clock.



Photo 25 – STA 02+49: Corrosion at pipe joint.



Photo 26 – STA 02+49: Closeup of corrosion at pipe joint.



Photo 27 – STA 05+32: Tee connection and the end of the survey.

V-Ditch Drain

The 3-inch V-ditch drain was assessed with a push camera. It was initially surveyed with the push camera on May 29, 2024. The initial survey revealed a mineral encrustation layer on the bottom of the pipe and a root ball at 154 feet. The V-drain was cleaned with the Vactor truck and then resurveyed on June 4, 2024, to ensure the root ball and mineral encrustations were removed. The following is a summary of the observations taken on May 29, 2024:

- STA 00+00 – Mineral encrustation scale layer in the pipe
- STA 00+27 – Indentation in the pipe
- STA 01+54 – Root ball inside of the pipe
- STA 01+64 – Debris in the pipe and the end of the survey

Refer to Photo 28 through Photo 31 below for general observations.



Photo 28 – Mineral encrustation layer on the bottom of the pipe.

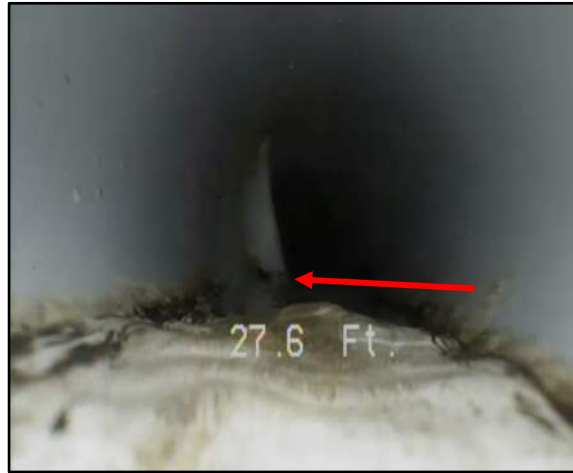


Photo 29 – STA 00+27: Indentation in the pipe.



Photo 30 – STA 01+54: Root ball in the pipe.



Photo 31 – STA 01+64: Debris in the pipe and the end of the survey.

Spillway Drain

The 36-inch spillway drain was surveyed with an ROV for a total length of 500.1 feet. Water flowed out of the pipe throughout the survey, causing slippery conditions. At the end of the survey, the slippery condition and steepness of the pipe caused the ROV camera to lose traction and the exit could not be controlled. Therefore, it was not safe to survey the 36-inch emergency dump drain. The PACP Report is provided in Appendix A. A summary of the observations is given below:

- STA 00+00 – Water level 5%
- STA 00+06 – Lateral tap at 12 o'clock
- STA 05+05 – End of the survey

Refer to Photo 32 through Photo 35 below for general observations.



Photo 32 – STA 00+00: Water flowing out of the pipe.



Photo 33 – STA 00+06: Tap into the pipe at 12 o'clock.



Photo 34 – STA 01+17: Pipe is in good condition (typical).



Photo 35 – STA 05+05: End of the survey due to the steepness and slipperiness of the pipe.

Conclusions and Recommendations

Foot Drain, Toe Drain, V-Ditch Drain, and Spillway Drain:

1. Perform CCTV and vactor clean pipes every two years to ensure the integrity of the subdrain system.

Upstream Drain No. 1 and No. 2:

1. Repair cement mortar lining at failed liner locations. Repair can be performed by remote spincasting system or other remote technologies.
2. Perform CCTV and vactor clean pipes every two years to ensure the integrity of the subdrain system.

On behalf of our staff and myself, I would like to thank you for the opportunity to be of service to you and the Irvine Ranch Water District.

Sincerely,

V&A Consulting Engineers, Inc.



Brian Briones, P.E.
Southwest Regional Manager

Appendix PACP Reports

Project Information

Surveyor Name	J.ALEJOS	Certificate Number	U-805-2423
Owner	IRWD	Customer	V&A
Drainage Area		PO Number	
Pipe Segment Reference	DRAIN C #1	Date	5/29/2024 12:17
Street	SAN JOAQUIN RESERVOIR	City	NEWPORT BEACH

Comments

Manhole

Upstream MH	RESERVOIR	Rim to Invert (U)	
Grade to Invert (U)		Rim to Grade (U)	
Downstream MH	DRAIN C #1	Rim to Invert (D)	
Grade to Invert (D)		Rim to Grade (D)	
Pipe Use	Other	Direction of Survey	Upstream

Pipe

Height (Diameter)	6	Width	
Shape	Circular	Material	Cast Iron
Lining Method		Pipe Joint Length	
Total Length		Length Surveyed	489.8
Year Constructed		Year Renewed	

Misc

Flow Control	Not Controlled	Media Label	DVD
Purpose	Routine Assessment	Consequence of Failure	
Pre-Cleaning	No Pre-Cleaning	Date Cleaned	
Weather	Dry - No Precipitation During Survey	Location Code	Other

Additional Info

Location Details

Custom

Custom 1		Custom 2	
Custom 3		Custom 4	
Custom 5		Custom 6	
Custom 7		Custom 8	
Custom 9		Custom 10	

Project

Reverse Setup ID		Sheet (Group) Number	
Imperial Units (US)	True	Pressure Value	
Work Order		Project	V&A-SAN JOAQUIN RESERVOIR
Coating Method		Completed	No

Insp Tech Used

CCTV	No	Laser	No
Sidewall	No	Sonar	No
Zoom	No	Other	No

Inspection

Inspection Status Complete Inspection

Reviewed By

**Reviewer Certificate
Number**

Count Groups

Taps	0	Roots	0
Cracks / Fractures	0	Broken / Holes / Collapse	0
Deposits	0	Obstruction	0
Abandoned Survey	1		

Scores

Structure Peak Score	0	Structure Peak Grade	1
Structure Mean Score	0	Structure Mean Grade	1
Service Peak Score	0	Service Peak Grade	1
Service Mean Score	0	Service Mean Grade	1

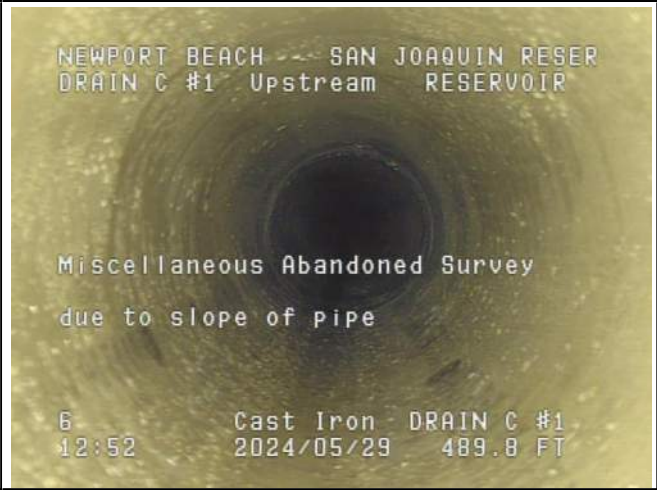
Created with the  report generator

Project: V&A-SAN JOAQUIN RESERVOIR

Date: 5/29/2024 12:17:00 PM
 Street: SAN JOAQUIN RESERVOIR
 Length Surveyed: 489.8
 Run Number:
 Height (Diameter): 6

Pipe Segment Reference: DRAIN C #1
 Upstream MH: RESERVOIR
 Downstream MH: DRAIN C #1
 Direction of Survey: Upstream
 Material: Cast Iron

Distance	Fault Observation	Time	Picture
0.0	<p>Access Point Other Severity: None Remarks: DRAIN C #1</p>	<p>00:01:01 00:01:01</p>	
0.0	<p>Miscellaneous Water Level Severity: None Percent: 0</p>	<p>00:1:10 00:1:10</p>	
0.0	<p>Surface Damage Other Position: 6 To 1 Severity: None Remarks: COATING MISSING</p>	<p>00:02:15 00:02:15</p>	

Distance	Fault Observation	Time	Picture
489.8	<p align="center">Miscellaneous Abandoned Survey</p> <p align="center">Severity: None</p> <p align="center">Remarks: due to slope of pipe</p>	<p align="center">00:29:21</p> <p align="center">00:29:21</p>	 <p>NEWPORT BEACH --- SAN JOAQUIN RESER DRAIN C #1 Upstream RESERVOIR</p> <p>Miscellaneous Abandoned Survey due to slope of pipe</p> <p>B Cast Iron DRAIN C #1 12:52 2024/05/29 489.8 FT</p>

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Project: V&A-SAN JOAQUIN RESERVOIR

Severity
Light-1
Moderate-2
Average-3
Heavy-4
Severe-5

Date: 5/29/2024 12:17:00 PM

Pipe Segment Reference: DRAIN C #1

Street: SAN JOAQUIN RESERVOIR

Upstream MH: RESERVOIR

Length Surveyed: 489.8

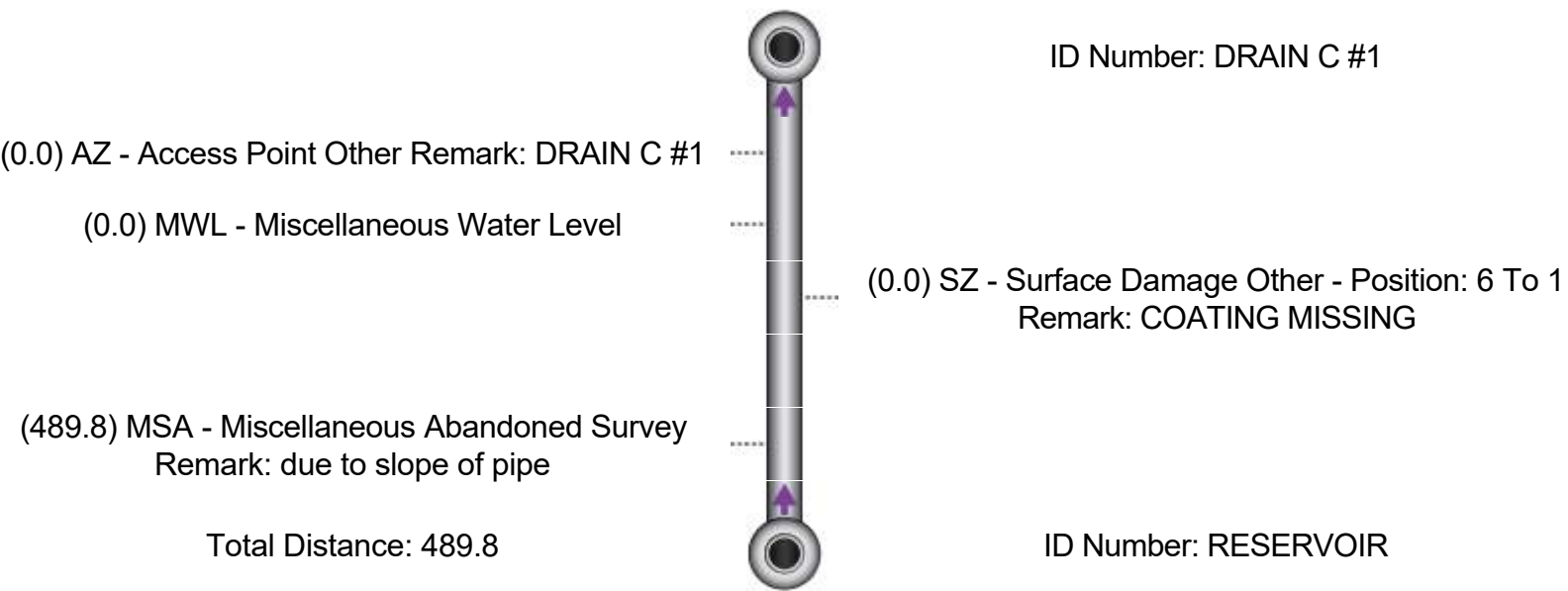
Downstream MH: DRAIN C #1

Run Number:

Direction of Survey: Upstream

Height (Diameter): 6

Material: Cast Iron



Created with the  report generator

Nassco C.C.T.V. Defect Code Information

Grade	Structural	O&M	Overall
5	0	0	0
4	0	0	0
3	0	0	0
2	0	0	0
1	0	0	0
Overall	0	0	0
Number of Defects	0	0	0
Pipe Rating	0000	0000	0000
Pipe Ratings Index	0	0	0

Nassco C.C.T.V. Defect Code Information

Distance	Video Ref	Code	Cont Defect	Value			Joint	Circumferential Location	
				Dimension		%		At / From	To
				1st	2nd				
0	00:01:01 61	AZ - Access Point Other							
		DRAIN C #1							
0	00:1:10 70	MWL - Miscellaneous Water Level			0				
0	00:02:15 135	SZ - Surface Damage Other					6	1	
		COATING MISSING							
489.8	00:29:21 1761	MSA - Miscellaneous Abandoned Survey							
		due to slope of pipe							

Additional Reports for Session V&A-SAN JOAQUIN RESERVOIR

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Insp Tech Used

CCTV	No	Laser	No
Sidewall	No	Sonar	No
Zoom	No	Other	No

Inspection

Inspection Status Complete Inspection

Reviewed By

**Reviewer Certificate
Number**

Count Groups

Taps	0	Roots	0
Cracks / Fractures	0	Broken / Holes / Collapse	0
Deposits	0	Obstruction	0
Abandoned Survey	0		

Scores




Structure Peak Score	3	Structure Peak Grade	2
Structure Mean Score	0.01	Structure Mean Grade	1
Service Peak Score	0	Service Peak Grade	1
Service Mean Score	0	Service Mean Grade	1

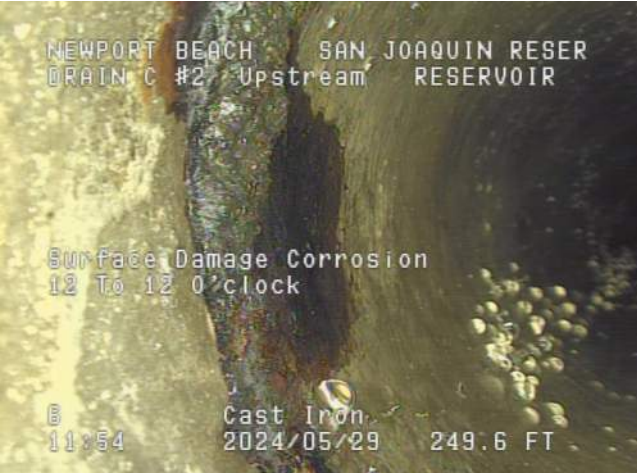


Project: V&A-SAN JOAQUIN RESERVOIR

Date: 5/29/2024 11:35:00 AM
 Street: SAN JOAQUIN RESERVOIR
 Length Surveyed: 532.7
 Run Number:
 Height (Diameter): 6

Pipe Segment Reference: DRAIN C #2
 Upstream MH: RESERVOIR
 Downstream MH: DRAIN C #2
 Direction of Survey: Upstream
 Material: Cast Iron

Distance	Fault Observation	Time	Picture
0.0	<p>Access Point Other Severity: None Remarks: DRAIN C #2</p>	<p>00:00:46 00:00:46</p>	<p>NEWPORT BEACH SAN JOAQUIN RESER DRAIN C #2 Upstream RESERVOIR</p> <p>Access Point Other DRAIN C #2</p> <p>6 Cast Iron 11:37 2024/05/29 0.0 FT</p>
0.0	<p>Miscellaneous Water Level Severity: None Percent: 10</p>	<p>00:01:16 00:01:16</p>	<p>NEWPORT BEACH SAN JOAQUIN RESER DRAIN C #2 Upstream RESERVOIR</p> <p>Miscellaneous Water Level</p> <p>10</p> <p>6 Cast Iron 11:38 2024/05/29 0.0 FT</p>
129.4	<p>Miscellaneous General Photo Position: 5 To 7 Severity: None</p>	<p>00:09:01 00:09:01</p>	<p>NEWPORT BEACH SAN JOAQUIN RESER DRAIN C #2 Upstream RESERVOIR</p> <p>Miscellaneous General Photo 5 To 7 O'clock</p> <p>6 Cast Iron 11:46 2024/05/29 129.4 FT</p>

Distance	Fault Observation	Time	Picture
166.8	Surface Damage Corrosion Position: 8 To 9 Severity: None Struct Weight: 3	00:11:39 00:11:39	
166.8	Picture Number: 2 Surface Damage Corrosion Position: 8 To 9	00:00:00	
169.0	Surface Damage Other Position: 11 Severity: None Remarks: COATING CHIPPED	00:13:15 00:13:15	

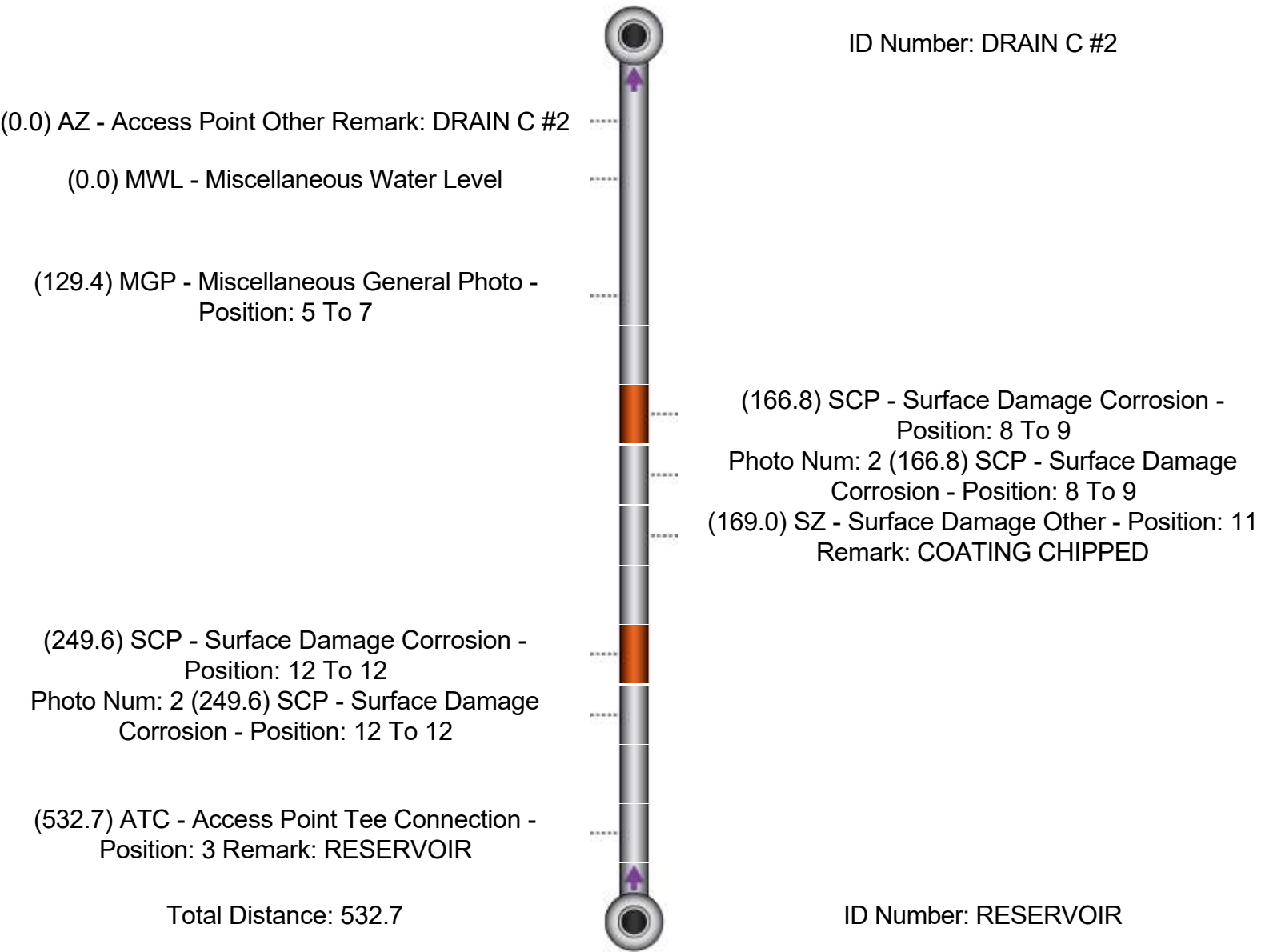
Distance	Fault Observation	Time	Picture
249.6	Surface Damage Corrosion Position: 12 To 12 Severity: None Struct Weight: 3	00:17:21 00:17:21	 <p>NEWPORT BEACH SAN JOAQUIN RESER DRAIN C #2 Upstream RESERVOIR</p> <p>Surface Damage Corrosion 12 To 12 0'clock</p> <p>6 11:54 Cast Iron 2024/05/29 249.6 FT</p>
249.6	Picture Number: 2 Surface Damage Corrosion Position: 12 To 12	00:00:00	 <p>NEWPORT BEACH SAN JOAQUIN RESER DRAIN C #2 Upstream RESERVOIR</p> <p>6 11:55 Cast Iron 2024/05/29 249.6 FT</p>
532.7	Access Point Tee Connection Position: 3 Severity: None Remarks: RESERVOIR	00:29:45 00:29:45	 <p>NEWPORT BEACH SAN JOAQUIN RESER DRAIN C #2 Upstream RESERVOIR</p> <p>Access Point Tee Connection 3 To 9 0'clock RESERVOIR</p> <p>6 12:07 Cast Iron 2024/05/29 532.7 FT</p>

Project: V&A-SAN JOAQUIN RESERVOIR

Severity
Light-1
Moderate-2
Average-3
Heavy-4
Severe-5

Date: 5/29/2024 11:35:00 AM
Street: SAN JOAQUIN RESERVOIR
Length Surveyed: 532.7
Run Number:
Height (Diameter): 6

Pipe Segment Reference: DRAIN C #2
Upstream MH: RESERVOIR
Downstream MH: DRAIN C #2
Direction of Survey: Upstream
Material: Cast Iron



Nassco C.C.T.V. Defect Code Information

Grade	Structural	O&M	Overall
5	0	0	0
4	0	0	0
3	6	0	6
2	0	0	0
1	0	0	0
Overall	6	0	6
Number of Defects	2	0	2
Pipe Rating	3200	0000	3200
Pipe Ratings Index	3	0	3

Nassco C.C.T.V. Defect Code Information

Distance	Video Ref	Code	Cont Defect	Value			Joint	Circumferential Location	
				Dimension		%		At / From	To
				1st	2nd				
0	00:00:46 46	AZ - Access Point Other							
		DRAIN C #2							
0	00:01:16 76	MWL - Miscellaneous Water Level			10				
129.4	00:09:01 541	MGP - Miscellaneous General Photo					5	7	
166.8	00:11:39 699	SCP - Surface Damage Corrosion					8	9	
169	00:13:15 795	SZ - Surface Damage Other					11		
		COATING CHIPPED							
249.6	00:17:21 1041	SCP - Surface Damage Corrosion					12	12	
532.7	00:29:45 1785	ATC - Access Point Tee Connection					3		
		RESERVOIR							

Additional Reports for Session V&A-SAN JOAQUIN RESERVOIR

Created with the  report generator

Project Information

Surveyor Name	J.ALEJOS	Certificate Number	U-805-2423
Owner	IRWD	Customer	V&A
Drainage Area		PO Number	
Pipe Segment Reference	WEST SPILLWAY DRAIN	Date	6/4/2024 11:17
Street	SAN JOAQUIN RESERVOIR	City	NEWPORT BEACH

Comments

Manhole

Upstream MH	DAM	Rim to Invert (U)	
Grade to Invert (U)		Rim to Grade (U)	
Downstream MH	SPILLWAY DRAIN	Rim to Invert (D)	
Grade to Invert (D)		Rim to Grade (D)	
Pipe Use	Other	Direction of Survey	Upstream

Pipe

Height (Diameter)	36	Width	
Shape	Circular	Material	Reinforced Concrete Pipe
Lining Method		Pipe Joint Length	
Total Length		Length Surveyed	500.1
Year Constructed		Year Renewed	

Misc

Flow Control	Not Controlled	Media Label	DVD
Purpose	Routine Assessment	Consequence of Failure	
Pre-Cleaning	No Pre-Cleaning	Date Cleaned	
Weather	Dry - No Precipitation During Survey	Location Code	Other

Additional Info

Location Details

Custom

Custom 1		Custom 2	
Custom 3		Custom 4	
Custom 5		Custom 6	
Custom 7		Custom 8	
Custom 9		Custom 10	

Project

Reverse Setup ID		Sheet (Group) Number	
Imperial Units (US)	True	Pressure Value	
Work Order		Project	V&A-SAN JOAQUIN RESERVOIR
Coating Method		Completed	No

Insp Tech Used

CCTV	No	Laser	No
Sidewall	No	Sonar	No
Zoom	No	Other	No

Inspection

Inspection Status Complete Inspection

Reviewed By

**Reviewer Certificate
Number**

Count Groups

Taps	1	Roots	0
Cracks / Fractures	0	Broken / Holes / Collapse	0
Deposits	0	Obstruction	0
Abandoned Survey	1		

Scores

Structure Peak Score	0	Structure Peak Grade	1
Structure Mean Score	0	Structure Mean Grade	1
Service Peak Score	4	Service Peak Grade	2
Service Mean Score	0.02	Service Mean Grade	1

Created with the  report generator

Project: V&A-SAN JOAQUIN RESERVOIR

Date: 6/4/2024 11:17:00 AM

Street: SAN JOAQUIN RESERVOIR

Length Surveyed: 500.1

Run Number:

Height (Diameter): 36

Pipe Segment Reference: WEST SPILLWAY DRAIN




Upstream MH: DAM

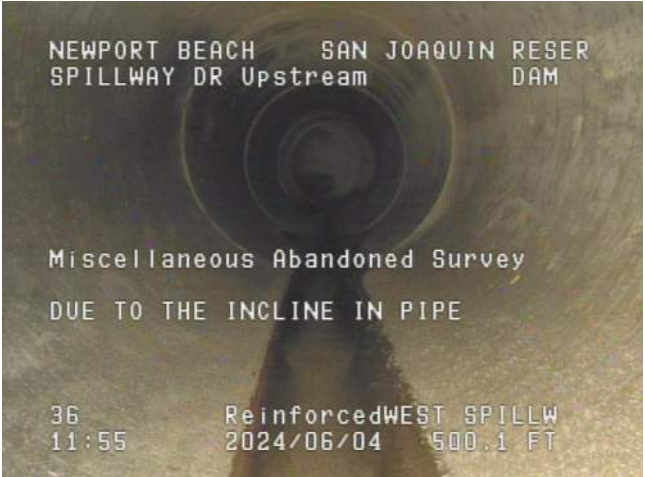
Downstream MH: SPILLWAY DRAIN

Direction of Survey: Upstream

Material: Reinforced Concrete Pipe

Distance	Fault Observation	Time	Picture
0.0	<p>Access Point Other Severity: None Remarks: SPILLWAY DRAIN</p>	<p>00:00:40 00:00:40</p>	
0.0	<p>Miscellaneous Water Level Severity: None Percent: 5</p>	<p>00:01:45 00:01:45</p>	
0.0	<p>Picture Number: 2 Miscellaneous Water Level</p>	<p>00:00:00</p>	

Distance	Fault Observation	Time	Picture
6.0	Tap Factory Activity Position: 12 Severity: None Size: 2	00:04:41 00:04:41	
16.0	Line Right Severity: None Percent: 45 Maint Weight: 4	00:05:50 00:05:50	
119.4	Line Left Severity: None Percent: 25 Maint Weight: 4	00:09:24 00:09:24	

Distance	Fault Observation	Time	Picture
500.1	<p>Miscellaneous Abandoned Survey Severity: None Remarks: DUE TO THE INCLINE IN PIPE</p>	<p>00:26:30 00:26:30</p>	 <p>NEWPORT BEACH SAN JOAQUIN RESER SPILLWAY DR Upstream DAM</p> <p>Miscellaneous Abandoned Survey DUE TO THE INCLINE IN PIPE</p> <p>36 11:55 ReinforcedWEST SPILLW 2024/06/04 500.1 FT</p>

Created with the  report generator

Project: V&A-SAN JOAQUIN RESERVOIR

Severity
Light-1
Moderate-2
Average-3
Heavy-4
Severe-5

Date: 6/4/2024 11:17:00 AM

Pipe Segment Reference: WEST SPILLWAY DRAIN

Street: SAN JOAQUIN RESERVOIR

Upstream MH: DAM

Length Surveyed: 500.1

Downstream MH: SPILLWAY DRAIN

Run Number:

Direction of Survey: Upstream

Height (Diameter): 36

Material: Reinforced Concrete Pipe

ID Number: SPILLWAY DRAIN

(0.0) AZ - Access Point Other Remark: SPILLWAY DRAIN

(0.0) MWL - Miscellaneous Water Level

Photo Num: 2 (0.0) MWL - Miscellaneous Water Level

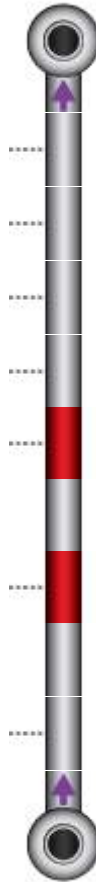
(6.0) TFA - Tap Factory Activity - Position: 12

(16.0) LR - Line Right

(119.4) LL - Line Left

(500.1) MSA - Miscellaneous Abandoned Survey Remark: DUE TO THE INCLINE IN PIPE

Total Distance: 500.1



ID Number: DAM

Nassco C.C.T.V. Defect Code Information

Grade	Structural	O&M	Overall
5	0	0	0
4	0	8	8
3	0	0	0
2	0	0	0
1	0	0	0
Overall	0	8	8
Number of Defects	0	2	2
Pipe Rating	0000	4200	4200
Pipe Ratings Index	0	4	4

Nassco C.C.T.V. Defect Code Information

Distance	Video Ref	Code	Cont Defect	Value			Joint	Circumferential Location	
				Dimension		%		At / From	To
				1st	2nd				
0	00:00:40 40	AZ - Access Point Other							
SPILLWAY DRAIN									
0	00:01:45 105	MWL - Miscellaneous Water Level				5			
6	00:04:41 281	TFA - Tap Factory Activity	2					12	
16	00:05:50 350	LR - Line Right				45			
119.4	00:09:24 564	LL - Line Left				25			
500.1	00:26:30 1590	MSA - Miscellaneous Abandoned Survey							
DUE TO THE INCLINE IN PIPE									

Created with the  report generator

Additional Reports for Session V&A-SAN JOAQUIN RESERVOIR

Created with the  report generator

Appendix G

San Joaquin Reservoir Drain Sediment Hydrometer Analysis

453+A1:P3

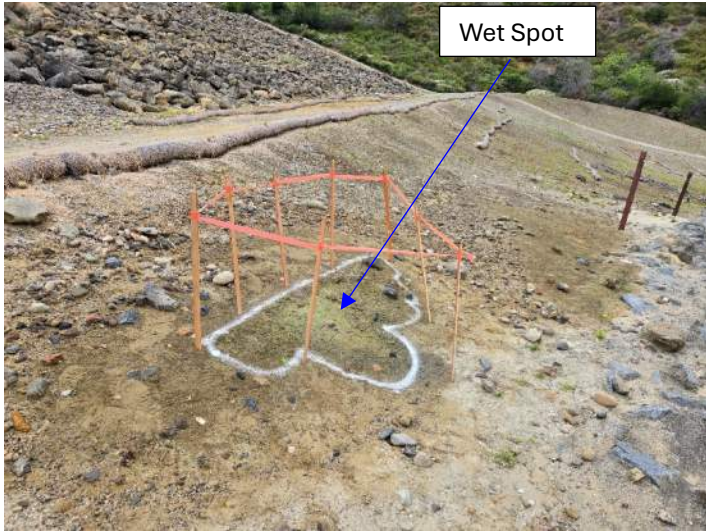
453+A1:P3													
SJ		West Drain				East Drain				Filter Drain			
Date	Reservoir Level	Silt Depth	Silt Volume (lbs) total	Flow (gpm)	Comments	Silt Depth	Silt Volume	Flow (gpm)	Comments	Silt Depth	Silt Volume	Flow (gpm)	Comments
4/30/14	465.3	1.5"	6.47lb	57	CK/MD	0	0	50		0	0	9	
5/28/14	450.6	.5"	1.85lb	46.03	BW/MC	0	0	34.05		0	0	8.23	
7/17/14	436.4	1-5/8"	5.14lb	36.19	10 day hold 7/1/14 to 7/11/14 @ 438' CK/MC	0	0	27.4		0	0	7.94	
7/29/14	431.2	.5"	2.69lb	33.88	SH/MD	0	0	24.97		0	0	8.16	
8/28/14	419.5	1/8"	3.54lb	27.02	CK/MD	0	0	19.12		0	0	8.02	
9/23/14	405.3	1/4"	3.14lb	21.32	BW/MD	0	0	13.04		0	0	8	
10/30/14	400.9	1/8"	3.21lb	18.5	West Drain Has a lot of Foam. TC/SH	0	0	10.06		0	0	7.85	
11/25/14	410.9	1/8"	3.88lb	18.6	CK/TC	0	0	10.75		0	0	7	
12/30/14	430.6	1/4"	3.61lb	26.64	SH	0	0	23.26		0	0	7.54	
1/27/15	466.7	1/2"	8.71lb	60.49	SH/MC	0	0	61.45		0	0	8.24	
3/5/15	470.1	1/4"	4.30	64.1	MD/CK	0	0	64.2		0	0	8	
3/26/15	465.9	1/8"	2.73	63.4	SH/MC	0	0	62.14		0	0	9.04	
4/28/15	465.7	1/8"	2.41	59.6	MD/MC	0	0	60.1		0	0	9.85	
5/28/15	466.4	1/8"	2.33	49.61	SH/CK	0	0	54.04		0	0	7.35	
6/30/15	454.5	1/4"	2.47	43.46	MD/TC	0	0	44.81		0	0	8.25	
7/28/15	445.6	1/8"	2.08	35.9	MC/BW	0	0	35.4		0	0	6.7	
8/28/15	473.6	1/4"	2.13	30.4	CK/MC	0	0	29.2		0	0	7.09	

Date	Reservoir Level	Silt Depth	Silt Volume (lbs) total	Flow (gpm)	Comments	Silt Depth	Silt Volume	Flow (gpm)	Comments	Silt Depth	Silt Volume	Flow (gpm)	Comments
9/24/15	426.9	1/8"	2.04	25.1	MC/JG	0	0	23.5		0	0	7.10	
10/27/15	415.4	1/4"	2.11	18.7	JG/CK	0	0	16.9		0	0	6.90	
11/19/15	412.9	1/8"	2.02	16.38	JG/MD	0	0	14.23		0	0	6.42	
12/22/15	425.5	1/8"	2.04	19.4	CK/MD	0	0	19.5		0	0	6.68	
1/27/16	463.6	1/4"	2.47	42.08	SH	0	0	53.2		0	0	6.53	
2/25/16	468.9	1/2"	3.72	50.05	MD	0	0	53.37		0	0	6.58	
3/30/16	468	1/4"	2.61	50.9	CC	0	0	56.4		0	0	6.2	
4/28/16	461.3	1/4"	2.43	46.75	SH	0	0	50.83		0	0	6.73	
5/25/15	451.3	1/8"	2.09	40.29	MD	0	0	43.06		0	0	7.17	
6/28/16	414.1	1/8"	2.11	34.83	AW	0	0	34.98		0	0	6.68	
7/27/16	434.2	1/8"	2.27	29.3	CK	0	0	28.2		0	0	6.6	10 day hold 7/11-7/21/16
8/23/16	418.6	1/8"	2.04	20.95	JM	0	0	18.96		0	0	6.53	5 day hold 8/23-8/28/16
9/27/16	406.4	1/8"	2.06	15.91	JM	0	0	13.04		0	0	5.7	10 day hold 9/30-10/10/16
10/26/16	404	1/4"	2.07	13.95	MC	0	0	10.92		0	0	5.85	
11/22/16	413.6	1/4"	2.13	14.8	SH	0	0	12.01		0	0	6.17	
12/29/16	451.6	1/2"	6.13	25.63	SH	0	0	29.72		0	0	6.15	
2/3/19	471.6	1/4"	3.04	51.4	SH	0	0	58.7		0	0	6.5	
3/27/19	463.3	1/4"	3.66	48.88	BW	0	0	47.06		0	0	7.16	
4/29/19	453	1/8"	2.12	42.48	SH	0	0	38.7		0	0	7.35	
5/30/19	451.8	1/4"	2.04	40.8	CK	0	0	38.1		0	0	7.8	
6/26/19	446.2	1/8"	2.08	38.7	CK	0	0	36.33		0	0	7.19	

Date	Reservoir Level	Silt Depth	Silt Volume (lbs) total	Flow (gpm)	Comments	Silt Depth	Silt Volume	Flow (gpm)	Comments	Silt Depth	Silt Volume	Flow (gpm)	Comments
7/30/19	434.8	1/8"	2.21	32.54	MD	0	0	31.49		0	0	7.8	
8/27/19	424.4	1/4"	2.13	26.39	AL	0	0	23.74		0	0	8.19	
9/26/19	405.6	1/4"	1.97	19.42	AZ	0	0	15.51		0	0	7.57	10 Day Hold 9/26 to 10/5
10/22/19	400.5	1/4"	1.81	16.33	MD	0	0	12.42		0	0	7.02	
11/26/19	412.8	1/4"	1.96	17.34	BW	0	0	13.27		0	0	6.67	
12/18/19	447.4	1/8"	2.03	30.36	JV	0	0	32.88		0	0	6.52	
1/28/20	465.4	1/2"	3.42	47.62	BW	0	0	49.22		0	0	6.67	
2/26/20	459.6	1/2"	2.61	43.84	JM	0	0	42.43		0	0	6.77	
3/24/20	470.7	1/4"	2.93	50.87	JM	0	0	49.77		0	0	7.73	
													Covid 19 Protocol
9/1/21	404.7	3/4"	4.24	20.8	CK	0	0	12.62		0	0	6.64	
10/28/21	419.8	1/8"	2.16	18.86	MD	0	0	12.15		0	0	5.86	
11/22/21	427.8	1/8"	2.08	24.56	MD	0	0	18.62		0	0	3.13	
													Covid 19 Protocol
3/23/22	464.4	1/2"	3.59	38.2		0	0	39.7		0	0	6.7	
4/26/22	467.1	1/4"	3.04	43.23	CK	0	0	40.26		0	0	6.97	
5/26/22	464.8	1/4"	2.84	41.89	AL	0	0	37.36		0	0	7.12	
													Covid 19 Protocol
9/28/22	410.6	1	39.96	19.2	CK	0	0	12.35		0	0	7.82	5 Day Hold 9/9 to 9/14
11/24/22	407.4	3/4"	13.40	19.65	CK	0	0	13.8		0	0	7.22	
1/26/23	470.4	3/4"	11.20	40.15	CK	0	0	42.16		0	0	6.99	

Appendix H

San Joaquin Toe Seepage



Wet Spot



Wet Spot before exposed

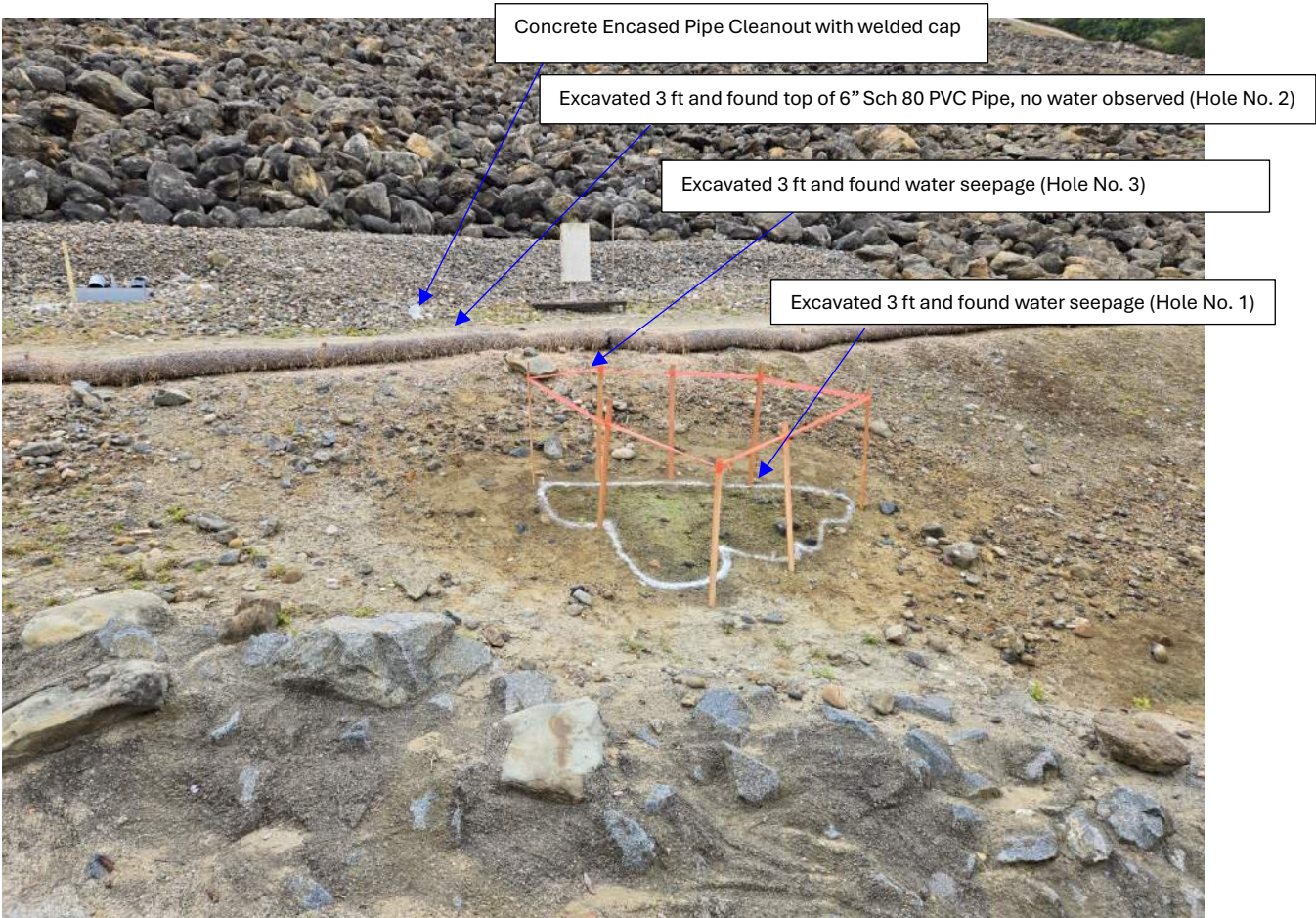


Investigation Hole No. 1

Investigation Hole No. 1 was exposed on 8/6/25: Staff visually estimated the flow rate to be 2 gpm.



Close-up of Investigation Hole No.



Investigation Hole No. 3



Inside of Investigation Hole No. 3



Investigation Hole No. 3 was exposed on 8/7/25: Staff visually estimated 2 gpm of seepage flow.

Hole No. 3 – backfilled with gravel

Hole No. 1 – backfilled with dirt

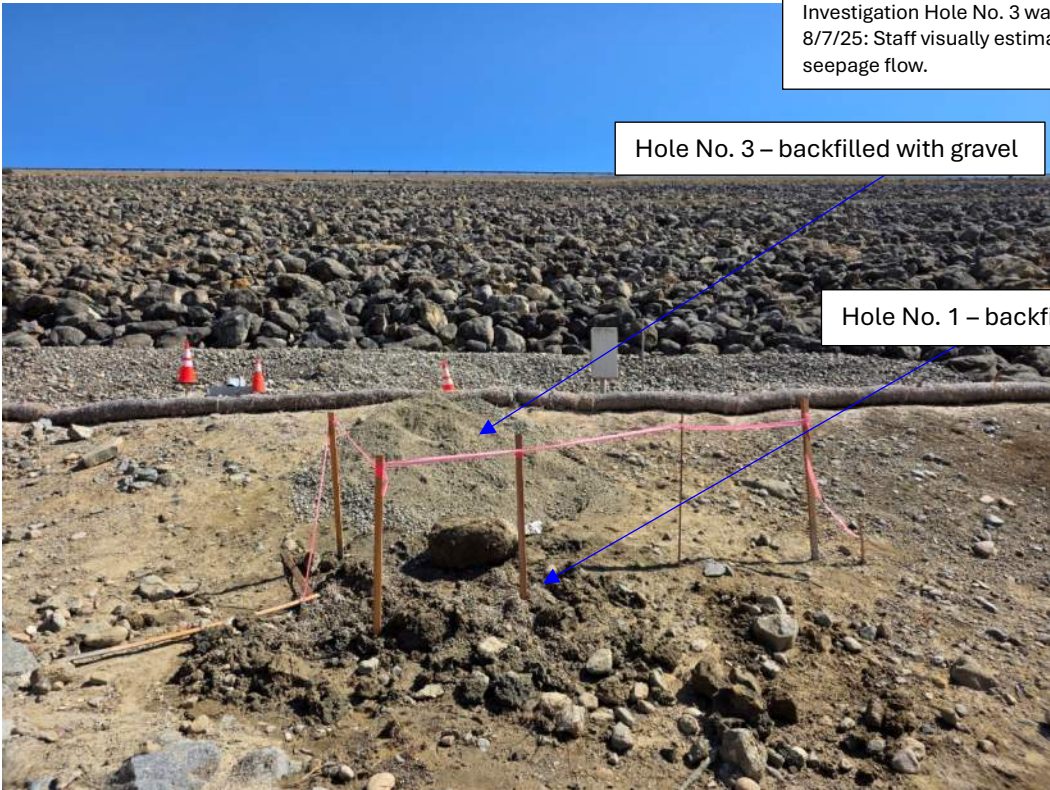




Image of completed New Flow Drain (right) looking upstream.



Image of completed New Flow Drain (right) looking downstream.

Appendix I

Piezometer Cleaning Report – Genterra Consultants, Inc. (2023)

June 20, 2023

Project No. 471-IRW

Mr. Jacob J. Moeder P.E.
Engineering Manager – Dams & Storage
Irvine Ranch Water District
P. O. Box 57000
Irvine, CA 92619-7000

Subject: Summary Letter of Results
Maintenance Cleaning of Selected Piezometers at San Joaquin Dam
DSOD Dam No. 1029-000
Newport Beach, California

Dear Mr. Moeder:

GENTERRA Consultants, Inc. (GENTERRA) is pleased to submit this summary letter of results to the Irvine Ranch Water District (IRWD), which contains a description of the maintenance cleaning of three (3) piezometers at San Joaquin Dam. The three (3) piezometers are identified as CP-1B, CP-2B, and CP-3B. The work described in this summary letter was performed as described in the proposal for “Maintenance Cleaning of Selected Piezometers at San Joaquin Dam”, dated December 30, 2022, that had been prepared by GENTERRA and submitted per the request of IRWD, and as approved by Mr. Bill Wesson of the IRWD in February 2023.

BACKGROUND

San Joaquin Dam is a zoned rockfill embankment dam located in Newport Beach, California. The dam crest is at an elevation of 476.0 feet (NGVD 29), with a crest width of 30 feet. The height of the dam is 224 feet with a crest length of 873 feet. The dam crest is lined with asphalt. The upstream face of the dam is lined with asphalt concrete, has a slope gradient of 3H:1V (Horizontal:Vertical), and a bench at Elevation 420.0 feet (NGVD 29). The downstream face has a slope gradient of 2.25H:1V with three benches at Elevations 420.0 feet, 360.0 feet, and 300.0 feet (NGVD 29).

The reservoir has a storage capacity of 3,036 acre-feet. The reservoir has a drainage area of about 0.3 square miles. The reservoir storage capacity is reported as 3,036 acre-feet in the 2018 document titled “Dams within the Jurisdiction of the State of California” (DSOD, 2018).

Several types of instrumentation are being monitored at the dam and reservoir, including vibrating wire piezometers, pneumatic piezometers, open-well (standpipe) piezometers, monitoring wells, seepage monitoring stations, and survey monuments. Six open-well piezometers, identified as CP-1A and CP-1B, CP-2A and CP-2B, and CP-3A and CP-3B, were installed in 1977.

GENTERRA is not aware of any previous maintenance cleaning performed for Piezometers CP-1B, CP-2B, and CP-3B. These piezometers were not functioning or responding as expected and were selected for maintenance cleaning.

There are two areas within a piezometer where blockage can occur: (1) at the tip of the piezometer, or (2) within the standpipe portion of the piezometer, typically at a joint. Blockage at the tip of the piezometer is often caused by pore water pressure in the surrounding soil forcing fine-grained materials into the filter pack around the bottom portion of the piezometer, which creates a seal that prevents water from flowing freely into and out of the piezometer itself. Blockage within the standpipe portion of the piezometer is often caused by pore water pressure in the surrounding soil forcing fine-grained materials through the joints in the piezometer and forming a blockage in the standpipe.

WORK PERFORMED

GENTERRA started this project by performing a review of the layout of Piezometers CP-1B, CP-2B, and CP-3B at San Joaquin Dam. This involved reviewing the piezometer details, including the total depth of the piezometer, the elevations of the top and tip of the piezometer, the elevation of the screened portion(s) of the piezometer, and the geologic and groundwater conditions surrounding these piezometers.

Following the completion of the review of the available information, GENTERRA field personnel J. Will Kulikowski and Tyler Kulikowski were on-site on February 7, 2023, to take initial readings of water levels within the three (3) piezometers and reservoir level before work begins. Piezometer cleaning was performed from February 8 to February 10, 2023, by performing the cleaning, bailing, and flushing of the three (3) piezometers that are located around the perimeter of the reservoir. The final water level readings in these three (3) piezometers were made on February 13, 2023, after the piezometers were allowed to drain or recharge and stabilize. No personnel from IRWD were on-site to observe the piezometer cleaning operation. The process included the following steps:

1. Initial water level within the standpipe and depth to bottom of standpipe or blockage level were measured at each piezometer; also, the reservoir water level was observed and documented.
2. Bailing to remove any of the existing water out of the piezometer and loosening or unblocking of any potential blockage in the piezometer. Removing the water and clearing any blockage allowed access to the entire inside of the piezometer, including the screened portion which was cleaned during the flushing of the piezometer. Photograph 1 shows the type of bailer that was used to remove the water from the piezometer.



Photograph 1: View of a small diameter stainless steel bailer used for bailing.

3. After bailing the piezometer multiple times to remove all water, the next step was to flush the piezometer. This consisted of sending clean water using a small tube to the bottom or blockage location and allowing the water to loosen the blockage and carry away sediments and solids that may have settled at the bottom of the piezometer. This flushing method was repeated multiple times. This process also helped to remove any build-up of debris or fine-grained materials in the screened (perforated) portion of the piezometer, which may have prevented water from freely flowing into and out of the piezometer. Photograph 2, which was taken during the piezometer cleaning field work at the San Joaquin Dam, shows an example of the flushing process at one of the piezometers.



Photograph 2: View of flushing process being performed in Piezometer CP-3B at San Joaquin Dam.

4. Upon completion of the flushing and bailing of the piezometer, the depth to water level and the depth to the bottom of the standpipe were obtained using a water-level meter. The piezometer was then given time to recharge and stabilize before additional measurements of the depth to water were taken to monitor the recharge. Photograph 3, which was taken during the piezometer cleaning field work at San Joaquin Dam, shows the water-level meter being used for measuring depth to water levels at one of the piezometers.



Photograph 3: View of water level meter used to take readings in Piezometer CP-1B at San Joaquin Dam.

DETAILS OF PIEZOMETERS AND OBSERVATIONS DURING CLEANING

The reservoir water surface elevation was at 470.8 feet (NAVD 1988) at San Joaquin Dam on February 7, 2023, during the initial site visit to take baseline readings. Piezometer cleaning was performed from February 8 to February 10, 2023. The following sections provide information about the three (3) piezometers and observations made during the maintenance cleaning of Piezometers CP-1B, CP-2B, and CP-3B.

Piezometer CP-1B

Piezometers CP-1A & CP-1B had been installed within the same well cover and are located Southeast of the dam on the East side of the perimeter road and North of Canyon “C”. For Piezometer CP-1A, the top elevation is 484.4 feet, and the tip elevation is 363.2 feet, resulting in a total depth of 121.2 feet. The tip is situated within the bedrock. At piezometer CP-1B, the top elevation is 484.3 feet, and the tip elevation is 447.1 feet, resulting in a total depth of 37.2 feet. The tip is situated within the alluvium. The standpipes for both piezometers are one-inch-diameter PVC (Photograph 4).

Historical depth-to-water level readings in Piezometer CP-1B were around 37 feet and were mostly dry readings.

The initial water level reading was measured to be “dry”, with a depth to bottom reading of 37.1 feet. The piezometer was flushed several times with clean water. Water added to the piezometer drained slowly initially but with additional water added over several days the water drained very quickly through the piezometer on the final days. Accumulations of dead bugs and sediment were removed from Piezometer CP-1B during the maintenance cleaning operation. Water had drained quickly through the piezometer and was reported “dry” by the end of the second day. The cleaning process was performed several times over a few days from February 8 through 10, 2023. The water level in this piezometer, which was taken on February 13, 2023, a few days after the final flushing day on February 10, 2023, had drained quickly to a “dry” condition and the depth to bottom reading was at 37.2 feet.

GENTERRA attempted to clean Piezometer CP-1B. Since the water that was added into the standpipe after removal of dead bugs and sediment drained very quickly and reached the dry condition, GENTERRA believes that this cleaning is reasonably successful to restore the functionality of Piezometer CP-1B. Considering that this Piezometer CP-1B has been historically dry, GENTERRA believes that this Piezometer CP-1B will remain predominantly dry. Water level readings in Piezometer CP-1B should be monitored over the next several months to evaluate any difference in the piezometer’s performance.



Photograph 4: View of 1-inch diameter PVC Standpipe Piezometers CP-1A & CP-1B at San Joaquin Dam.

Piezometer CP-2B

Piezometers CP-2A & CP-2B had been installed within the same well cover and are located Southeast of the dam on the South side of the perimeter road and North of Claystone Hill. At Piezometer CP-2A, the top elevation is 487.7 feet, and the tip elevation is 363.2 feet, resulting in a total depth of 124.5 feet. The tip is situated within the bedrock. At Piezometer CP-2B, the top elevation is 487.7 feet, and the tip elevation is 423.1 feet, resulting in a total depth of 64.6 feet. The tip is situated within the alluvium. The standpipes for both piezometers are one-inch-diameter PVC (Photograph 5). Historical depth-to-water level readings in Piezometer CP-2B were about 36 feet. The initial water level reading was measured at 34.6 feet and with a depth to bottom reading of 55.6 feet. Accumulations of dead bugs and sediment were removed from Piezometer CP-2B during the maintenance cleaning operation. Water drained quickly through the piezometer and was measured at 41.0 feet at the end of the first day of cleaning. The cleaning process was performed several times over a few days from February 8 through 10, 2023. The water level in this piezometer, which was taken on February 13, 2013, a few days after the final flushing and bailing day on February 10, 2023, had recharged quickly to 34.5 feet and the bottom reading was 55.6 feet.

GENTERRA attempted to clean Piezometer CP-2B. Since the water recharged quickly after removal of dead bugs and sediment, GENTERRA believes that this cleaning is reasonably successful to restore the functionality of Piezometer CP-2B. The water level in this Piezometer CP-2B is predicted to fluctuate between Elevation 447.7 feet and Elevation 453.7 feet. Water level readings in Piezometer CP-2B should be monitored over the next several months to evaluate the any difference in the piezometer's performance.



Photograph 5: View of 1-inch diameter PVC Standpipe Piezometers CP-2A & CP-2B at San Joaquin Dam.

Piezometer CP-3B

Piezometers CP-3A & CP-3B had been installed within the same well cover and are located Southeast of the dam on the East side of the perimeter road and East of Canyon “C”. At Piezometer CP-3A, the top elevation is 486.0 feet, and the tip elevation is 363.2 feet, resulting in a total depth of 122.8 feet. The tip is situated within the bedrock. At Piezometer CP-3B, the top elevation is 486.0 feet, and the tip elevation is 452.6 feet, resulting in a total depth of 33.4 feet. The tip is situated within the alluvium. The standpipes for both piezometers are one-inch-diameter PVC (Photograph 6). Historical water level readings in Piezometer CP-3B were about 20 feet.

The initial water level reading was measured at 18.0 feet and with a depth to bottom reading of 33.3 feet. Accumulations of dead bugs and sediment were removed from Piezometer CP-3B during the maintenance cleaning operation (Photograph 7). Bailing and removing water from the piezometer and monitoring of recharge indicated that water drained and recharged slowly through the piezometer, and it was determined that a good amount of water was required to recharge at the end of the first and second days. The cleaning process was performed several times over a few days from February 8 through 10, 2023. The water level in this piezometer, which was taken on February 13, 2013, a few days after the final flushing and bailing day on February 10, 2023, had recharged quickly to 17.9 feet and the bottom reading was 33.4 feet.

GENTERRA attempted to clean Piezometer CP-3B. Since the water recharged quickly after removal of dead bugs and sediment, GENTERRA believes that this attempted cleaning is reasonably successful to restore the functionality of Piezometer CP-3B. The water level in this Piezometer CP-

3B is predicted to fluctuate between Elevation 462.7 feet and Elevation 470.5 feet. Water level readings in Piezometer CP-3B should be monitored over the next several months to evaluate the any difference in the piezometer's performance.



Photograph 5: View of Piezometers CP-3A & CP-3B.



Photograph 6: View of flushing water with bug & sediment removed at Piezometer CP-3B at San Joaquin Dam.

CLOSURE

Water level readings in Piezometers CP-1B, CP-2B and CP-3B should be monitored over the next several months to evaluate the effectiveness of the cleaning of the screened portions.

As stated in our proposal for this work, these piezometers may clog again in the future. This is because there is a potential for accumulation of solid materials and/or dead bucks into the standpipes. If additional blockage occurs, the piezometers may have to be bailed and flushed again to improve their functionality. That additional work, if needed, would be discussed and agreed-upon with IRWD prior to making arrangements to return to the site.

Thank you for allowing us to provide IRWD with these important services. If you have any questions or need additional information, please contact J. Will Kulikowski, Joseph J. Kulikowski or me with any questions.

Sincerely,
GENTERRA CONSULTANTS, INC.



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