



Annual Surveillance Report January 2021 to December 2021 for Syphon Canyon Dam DSOD Dam No. 1029-004

Irvine, California

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



Prepared by:
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September 29, 2022
GEI Project No. 1901888



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

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

**Re: Syphon Canyon Dam, DSOD Dam No. 1029-004,
Annual Surveillance Report from January 2021 to December 2021**

Dear Ms. Drake:

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

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

Sincerely,

GEI CONSULTANTS, INC.



Richard Sanchez, P.E.
Principal Engineer



Emerson Revolorio, P.E.
Project Engineer

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Reservoir Dam Valve Exercising Table

Acronyms and Abbreviations

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

1.0 Introduction and Background

1.1 General

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

This report includes graphical summaries of the field measurements of water levels in the piezometers and seepage flow rates. It includes two-year graphical summaries (short term) of water levels in the piezometers, flow from the subdrain, and reservoir water levels, as well as historical (long term) graphical and tabular summaries of this data. The historical data is used to evaluate the long-term performance of the dam and reservoir and to identify any adverse trends. Water levels in the piezometers and seepage flow rates are presented with corresponding reservoir water surface elevations.

Figure 1 is a plan view of the dam and reservoir and instrumentation locations. Figure 1A is a section of the dam along the maximum section showing piezometers along this plane. As used in this report, the left and right designations are as viewed looking downstream.

The report also contains tabulated data and graphs of the field measurements of water levels in the piezometers and seepage flow rates. Table 2 provides historical readings of each piezometer and seepage flow measuring point.

The vertical datum indicated on the as-built plans and project documents for Syphon Canyon Dam is National Geodetic Vertical Datum of 1929 (NGVD 29). The reservoir water surface elevation and instrumentation data are currently being read based on NGVD 29.

1.2 Dam and Reservoir

Syphon Canyon Dam and Reservoir are located in Orange County, California, and were constructed in 1949 by the Irvine Company. Irvine Ranch Water District (District) took over operation of the dam and reservoir in January of 2010.

Syphon Canyon Dam is a 59-foot-high homogeneous embankment dam. As Built plans show the dam crest is at Elevation of 385 ft, with a crest length of 843 ft and a crest width of 10 ft. The

upstream face of the dam has a slope of 1.2H:1V from the crest to Elevation 378 ft, 1.4H:1V between Elevations 378 and 370 ft, and then a slope of 6H:1V to the upstream toe of the embankment. The downstream face has a uniform slope of 2.25H:1V with a bench at Elevation 340 ft. The upstream face is covered by low height grass cover and riprap, the downstream face is covered by well-maintained low height grass cover and the crest is surfaced with soil and gravel.

The watershed contributing to the reservoir has a drainage area of only 0.3 square miles. The reservoir area is 27 acres, and the reservoir storage capacity is 500 acre-feet at the spillway crest elevation.

1.3 Spillway

The spillway is located within the left abutment of the dam and consists of an approach apron and a broad-crested weir leading to a 12.5-foot-wide open trapezoidal channel and chute. The weir control section and sides of the spillway channel and chute are lined with shotcrete/gunite. Concrete was also placed to form the control section. The spillway crest is at Elevation 378.0 ft, providing 7 ft of total freeboard.

1.4 Outlet Works

The outlet conduit consists of a 15-inch-diameter reinforced concrete pipe (RCP) with upstream and downstream control valves. The outlet is located at the right end of the dam and the manual operating equipment for the upstream control valve is located near the top of dam. In 2015, the 15-inch slide gate at the inlet was replaced with a 12-inch-diameter valve. The invert of the inlet is at approximately Elevation 336.0 ft.

At the downstream side of the dam, the 15-inch-diameter RCP transitions to a 16-inch-diameter metal pipe with a 16-inch butterfly valve controlling the flow in the pipe. The 16-inch metal pipe then joins a 16-inch-diameter, cement-mortar-lined and-coated (CML&C) steel pipe that connects to the Interim Facility, which serves as a reservoir drain line. The interim facility consists of a strainer facility which is used prior to serving recycled water to customers. An emergency blowoff pipe branches off the 16-inch steel pipe and discharges into the underground storm drain water system.

The District provided a Reservoir Dam Valve Exercising summary table which states that 4/27/2021 was the date the valves were exercised during the 2021 reporting period. The table is provided in the Appendix of this report.

1.5 Subdrains

The dam embankment is homogeneous and there was no internal drainage system installed during the original construction of the dam. However, seepage through the dam and/or

foundation is collected and directed to the seepage collection vault located beyond the downstream toe of the dam (Figure 1). The seepage collection vault has just one seepage subdrain outlet.

2.0 Field Measurements

2.1 General

Based on data provided by the District, field measurements at Syphon Canyon Dam have been taken on a regular basis since March 25, 2008. These measurements include the water levels in 12 piezometers and seepage readings starting in 2009. District personnel measure the water levels in the reservoir, piezometers, and the seepage flow monthly. Precipitation is measured by an onsite rain gage. There are no monitored survey monuments at this dam.

Figure 1 is a Site and Instrumentation Plan showing the layout of the dam and appurtenances, as well as the locations of the piezometers and the seepage collection subdrain. Figure 1A shows the piezometer locations along the maximum section of the dam. The left and right designations are as viewed looking downstream.

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.

Based on the ten-year historical data from January 2011 through December 2021, the reservoir water surface elevation varied from a minimum Elevation of 331 ft to a maximum Elevation of 375.9 ft. During the 2021 review period, the reservoir water surface elevation varied between Elevations 343.4 ft and 371.7 ft (34.6 ft to 6.3 ft below the spillway crest elevation of 378.0 ft), so the reservoir did not fill during this review period. The reservoir water surface elevations during the 2021 review period remained within historical limits and appeared normal.

2.2 Piezometers

Originally, the dam had 12 open-well piezometers. An open-well piezometer is a small-diameter well used mainly to measure the water pressure or depth to groundwater. It is typically installed in a casing inside a vertical borehole and has a discrete perforated zone near its bottom to enable monitoring of changes in groundwater levels within that zone. More than one piezometer can be installed within a single, larger-diameter outer well casing. These groups of piezometers are often referred to as multi-stage or nested piezometers.

In December 2015, the District converted Piezometers VBW/2-A, VBW/2-B, VBW/4, VBW/5, VBW/6, VBW/7, VBW/8, and VBW/9 to vibrating wire piezometers. Vibrating wire piezometers contain high tensile steel wire attached at one end to a diaphragm. The frequency of vibration in the wire induces an alternating electrical current in a coil. The magnitude of the

current is detected, and the reading is then converted to a pressure. The pressure fluctuates with changes in water levels in the immediate vicinity of the piezometer tip. Between May 2020 and November 2020, the District was having problems with the vibrating wire piezometer data logger and did not provide readings, as can be seen in the Table 2 data. The District was able to fix the data logger unit with the help of the manufacturer (Geokon) and provided readings for the 2021 review period. The readings appear to be given as depths and in units of feet and seem to follow the historical trends seen before the data logger malfunction. The exception includes vibrating wire piezometers VBW/2A and 2B, which appear to be providing erroneous readings, which is attributed to incorrect data logger conversion settings.

The location of each piezometer is shown in Figure 1. Table 2 lists piezometer water levels from March 2008 through December 2021. Figures 2 through 5 are graphical plots of piezometer water levels and reservoir water surface elevations during the two-year period from January 2020 through December 2021. Figures 6 through 9 are graphical plots of the historical piezometer water levels and reservoir water surface elevations from 2011.

The following is a discussion of each piezometer including the water level measurements during the 12-month review period as well as comparisons with historical trends.

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

Table 1. Piezometers – Maximum and Minimum Water Level Ranges

| Piezometer | Last 10-year Maximum and Minimum Range (ft) | 2021 Review Period Maximum and Minimum Range (ft) | Comment |
|------------|---|---|--|
| P-1A | 0.3 | 0 | Piezometer is dry at elevation 365.7 ft. |
| P-1B | 12.5 | 7.6 | Reading from 8/25/2021 omitted due to isolated spike. Water level returned back to trend and historic range values. Piezometer is dry at elevation 345.7 ft. |
| P-3A | 0.6 | 0 | Piezometer is dry at elevation 362.3 ft. |
| P-3B | 10.3 | 7.8 | Reading from 6/22/2017 was omitted due to isolated spike. Water level returned back to trend and historic range values. Piezometer is dry at elevation 340.3 ft. |
| VBW/4 | 12.9 | 1.8 | Readings from 6/26/2012 to 8/8/2012 omitted due to bad reading. Water level returned back to trend and historic range values. |
| VBW/5 | 18.4 | 5.3 | |
| VBW/6 | 0.9 | 0 | Piezometer is dry at elevation 360.6 ft. |
| VBW/7 | 4.3 | 0 | Reading from 3/28/2011 omitted due to isolated spike. Water level returned back to trend and historic range values. |
| VBW/8 | 4.6 | 2.0 | Piezometer is dry at elevation 336.8 ft. |
| VBW/9 | 5.0 | 0 | Piezometer is dry at elevation 335.4 ft. |

Piezometers P-1, VBW/2 and P-3 are located on the crest of the dam. Piezometer VBW/2 is located near the maximum section of the dam, P-1 is located on the right side of the crest, and P-3 is located on the left side of the crest. Piezometer P-1A is nested in the same well as Piezometer P-1B at the right end of the crest of the dam. The tip of P-1A is located within the dam embankment at Elevation 365.7 ft, while the tip of P-1B is within the dam foundation at Elevation 345.7 ft.

Piezometer P-1A remained dry during the report period. The water levels in P-1B ranged from dry to a depth of 7.6 ft and responded to reservoir water surface fluctuations and were within historical water levels during the review period (Figures 2 and 6).

Piezometer VBW/2-A is nested in the same well as Piezometer VBW/2-B on the crest of the dam, near the maximum section of the dam. The tip of VBW/2-A is located within the dam embankment at Elevation 342.2 ft, while the tip of VBW/2-B is within the dam foundation at Elevation 304 ft. VBW/2-A appears to be providing erroneous readings because on May 26, 2021, the water level elevation rose approximately 20 ft, above the reservoir level, and stayed near this elevation for the rest of the year, see Figure 3. During the inspection, the District told us the data logger was reading data with incorrect conversions for VBW/2-A. No data was available from May 2020 to Nov. 2020 due to data logger problems.

The water level readings in Piezometer VBW2-B have been periodically unreliable (erroneous) since the vibrating wire instrument was installed in December 2015. In 2016, the District determined that the vibrating wire instrument was providing faulty data, which resulted in readings higher than the historic trend. The instrument was repaired, and on February 16, 2017, the District cleaned Piezometer VBW/2-B which resulted in the new reported bottom Elevation of 304.0 ft, which is five ft deeper than prior to the cleaning. From Jan 2018 through Nov. 2019, Jan. 2020 through March 2020, and Dec. 2020, the water levels in Piezometer VBW/2-B appeared to respond normally to the fluctuations in the reservoir levels (Table 2 and Figure 7). Data included in Table 2 for Dec. 2019 and April 2020 is not considered reliable and attributed to the data logger problems. No data was available from May 2020 to Nov. 2020 again due to problems with the data logger. The readings provided for the 2021 review period appear to be erroneous since the water levels measurements are erratic and above the reservoir level, see Figure 3. GEI did not use the readings from VBW/2-A and 2-B for the evaluation of the dam since they are not reliable. The vibrating wire piezometers' data logger instrument is still providing erratic readings at times based on discussions with the District. The District is in the process of fixing and re-calibrating the data logger.

Open well piezometer P-3A is nested in the same well as piezometer P-3B and are located on the far-left portion of the crest of the dam. The tips of both P-3A and P-3B are located within the dam embankment at Elevations 362.3 and 340.3 ft, respectively. P-3A remained dry throughout the review period with very slight differences in the recorded readings. One exception was noted, the Dec 2019 reading (about 50 ft below the bottom of the piezometer tip)

appears to be a typo, (Figures 4 and 8). Piezometer P-3B water levels were responsive to reservoir water level changes during the 2021 review period (Figure 4). The range between maximum and minimum level, during the 2021 review period was within historic trends (Figure 8).

Piezometer VBW/4 is located on the downstream face, near the maximum section of the dam. VBW/5 is located at the downstream toe, also near the maximum section of the dam. The tips of both VBW/4 and VBW/5 are located within the dam foundation at Elevations 314.7 and 314.0 ft, respectively. Available water level data during the review period for VBW/4 and VBW/5 indicates the piezometers responded to reservoir water levels changes (Figure 5). No data was available for these piezometers from May 2020 to November 2020 due to data logger problems. During the review period, both VBW/4 and VBW/5 remained within historical levels (Figure 9).

Piezometers VBW/6, VBW/7 and VBW/8 are located on the downstream face of the dam, near the maximum section. The tips of all three piezometers are located within the dam embankment at Elevations 360.6, 338.1 and 336.8 ft, respectively. On June 23, 2015, the tops of casings for all three piezometers were raised from 1.1 ft to as high as 1.6 ft (Table 2). During 2019-20, all readings for these three piezometers remained constant (at 360.5 ft, 338.8 ft, and 336.90 ft, respectively) and considered dry with no responses to reservoir water levels (Figures 3 and 5). In July 2015, the District cleaned Piezometer VBW/7. Since the vibrating wire instruments were installed in December 2015 in VBW/6, VBW/7 and VBW/8, water level readings have not fluctuated. VBW/6 and VBW/7 are considered dry. The exception was VBW/8, where the water level rose 2 ft on Sept. 28, 2021, and 0.5 ft on Dec. 21, 2021, but remained dry for the rest of the review period. All three piezometers remained within historical levels (Figures 7 and 9).

Piezometer VBW/9 is located on the downstream face of the dam near the right side. The tip of VBW/9 is located within the dam foundation at Elevation 335.4 ft. On June 23, 2015, the top of the casing for VBW/9 was raised 1.5 ft (Table 2). Measurements in VBW/9 remained constant (at 335.40 ft) during 2021 showing no response to reservoir levels (Figure 2). Since the vibrating wire instrument was installed in December 2015 for VBW/9, the level readings have not fluctuated and considered dry (Figure 6). Based on GEI's review of the available piezometer data, the reported levels remained normal and within historical margins. The District is addressing the data logger problems associated with the vibrating wire piezometers that resulted in erratic readings as discussed above. The data did not indicate the presence of any adverse conditions within the dam embankment, abutments, or foundation.

2.3 Seepage Flows

Seepage through the dam and/or foundation is collected in the seepage collection vault, which is located beyond the downstream toe of the dam (Figure 1). The seepage collection vault has one seepage subdrain outlet. Seepage flow is measured monthly by District personnel at that one point.

Historical seepage flow rates measured at the sole seepage flow point are presented in Table 3. Figure 10 displays the seepage flow rates versus the reservoir water levels from January 2020 through December 2021. From January 2020 to March 2020 seepage flow was zero. The range of minimum and maximum flow rate for seepage based on trends from the ten-year historical data from January 2011 through December 2021 was between 0 and 18.2 gallons per minute (gpm).

Between January 2021 and December 2021 seepage flow varied from zero to 1.43 gpm responding to reservoir level changes and within historic amounts (Figure 11). From November 2020 through January 2021 and October 2021 through December 2021 seepage flow was zero. Seepage flows have been observed clear with no signs of any sediment. Based on this review, seepage conditions follow historic trends and have been responding to reservoir level changes.

3.0 Field Evaluations

3.1 Field Evaluation of April 18, 2022

A field evaluation and inspection were performed by Richard Sanchez, Lorena Manriquez and Emerson Revolorio of GEI, Bill Wesson, Danielle Drake and Harry Cho of the District on April 18, 2022. The reservoir water level was at Elevation 369.5 ft during the inspection. Weather conditions were clear and sunny. Photos taken by GEI are included in the Appendix of this report.

3.1.1 Dam

The crest of the dam, downstream slope and groin areas, abutment areas and sections of the upstream slope face were visually inspected, and no adverse signs of movement, significant cracking, or instability were seen, see Photos 1 through 6. The exposed upstream riprap with a grass cover slope face above the low reservoir water level had no unusual conditions. Tule/brush growth is sprouting on the right upstream groin area above the water line, see Photo 4. No other unusual items were observed. The gravel/dirt crest surface was walked for its entire length and no signs of movement, cracking, or instability were seen. The downstream embankment slope looked well maintained. No gopher activity was seen during this inspection. Rodent abatement containers were examined on the slope and had little to no poison. No signs of seepage or unusual wet spots were seen on the downstream slope face or toe area of the dam. During the inspection, GEI encountered rill erosion along the left and right abutment access roads, see Photos 11 and 12. During the inspection, the District stated that vibrating piezometer VBW/2-A was malfunctioning and VBW/5 through VBW/8 were dry. Overall, the dam had no signs of instability or unusual conditions that required further evaluation.

3.1.2 Spillway

The spillway is ungated and consist of a trapezoidal shaped open channel on the left abutment. The spillway was clear of any obstructions. The channel sides and bottom are covered with shotcrete/gunite and concrete. The gunite and concrete is deteriorating in some areas and has significant cracking, see Photos 7 and 8. During the inspection, the District reported that it is moving forward with design work for a project to enlarge and significantly modify the existing dam, reservoir, and the construction of a new spillway. The reservoir will be drained in 2022 and not refilled again until construction of the new dam. Therefore, repairing the existing spillway has not been initiated considering a major replacement would occur in a few years and the watershed drainage area is relatively small.

3.1.3 Outlet Works

The outlet works includes an upstream 12-inch control valve manually operated (hand wheel) from near the top of the dam. The outlet works are located at the right end of the dam, see Photo 9. The upstream outlet valve is at Elevation 336 ft. According to the District, the upstream valve was fully exercised on April 27, 2021. The upstream valve was not exercised during this inspection. The downstream 16-inch control outlet valves are just beyond the right downstream toe area of the dam. Any emergency evacuation flows from this outlet system would go into local storm drain system below the dam.

3.1.4 Seepage

No seepage or wet spots were observed on the dam. Monitored seepage flow rates continue to be measured monthly by District staff. The seepage toe drain vault was examined and found clean, see Photo 10. Seepage was estimated to be approximately 2.0 gpm. This amount is within historical range for this dam and reservoir.

4.0 Conclusions and Recommendations

4.1 Conclusions

- 1) Based on the review of available instrumentation data and the field inspection, the dam does not appear to have signs of structural deficiencies, seepage, and instability.
- 2) Piezometer water levels during the report period were consistent and within historical ranges.
- 3) Seepage flow rates during this review period were within historical values and continue to respond to reservoir level changes.
- 4) Tule/brush growth was seen on the upstream right groin area of the dam.
- 5) No rodent activity was observed on the downstream face of the dam during this inspection. There was a lack of poison at most rodent control feeder boxes.
- 6) The spillway gunite lining cracks and spall areas appeared to be unchanged from the last inspection. Needed spillway repairs are not planned due to major modifications or replacement are currently underway and scheduled to be implemented within the next 3 years.
- 7) Based on District records the outlet valves were exercised on April 27, 2021.
- 8) There were some isolated piezometer readings as discuss in Section 2.2 that were judged to be in error due to the data logger equipment malfunctions.
- 9) Minor rill erosion was observed along the right and left abutment access roads.

4.2 Recommendations

- 1) Vibrating wire manufacturer to be contacted by District to resolve the problems associated with the vibrating wire piezometers' data logger and digital readings.
- 2) Cut down overgrown tule/brush vegetation growth prior to it growing more or extending further along the right upstream groin area of the dam.
- 3) Continue with rodent activity abatement efforts and fill rodent control feeder boxes with poison.
- 4) Outlet valves are to be exercised on an annual basis to ensure these facilities are functioning adequately.
- 5) Rill erosion along access roads to be repaired by backfilling and compacting soils and maintained when necessary.
- 6) Operational staff to observe the condition of the dam and appurtenant structures and look for signs of distress or movement, increased seepage, or other unusual conditions during their regular inspections. Any unusual observations should be reported immediately to a District engineer for evaluation.
- 7) The dam and appurtenant structures to be thoroughly inspected after felt earthquake in the area. GEI recommends an inspection and evaluation of the dam immediately after any earthquake with a Magnitude of 4.0 or greater within a 50-mile radius of the dam.

Syphon Canyon Dam Action Item Summary

| Item | Location | Maintenance | Measures |
|----------------------------------|---|---|---|
| Vibrating Wire Piezometers (VWP) | Dam Crest (VBW/2-A and 2-B) | Providing error readings | Coordinate with manufacture to repair data logger |
| Right upstream groin area | Right upstream groin area | Overgrown vegetation | Clear/Cut overgrown vegetation |
| Rodent control feeder boxes | Throughout dam | Lack of poison in rodent control feeder boxes | Place poison in all the rodent control feeder boxes |
| Access roads | Access roads at left and right abutment | Minor rill erosion | Monitor, repair, and maintain as needed |

5.0 Limitations

This report presents observations made, conclusions drawn, and opinions formed from (1) a visual inspection of the Syphon Canyon Dam and its appurtenant structures, and (2) a review of instrumentation data, including piezometer levels and seepage, 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 safety.

6.0 References

DSOD (California Department of Water Resources, Division of Safety of Dams), Syphon Canyon Dam (No. 1029-004) Inspection of Dam and Reservoir in Certified Status report, October 20, 2020.

Genterra, 2018, Annual Surveillance Report January 2017 through December 2017 Syphon Canyon Dam DSOD Dam No. 1029-004, Irvine, CA, by Genterra Consultants Inc., December 19, 2018.

Tables

TABLE 2
 SYPHON CANYON DAM
 PIEZOMETER DETAILS

| Piezometer ID | Location and Approximate Station | Original | | | Modified Unknown Date | | | 2015 - Current | | | Material at Tip (if known) | Installation or First Reading |
|---------------|----------------------------------|-------------------|-------------------|---------------|-----------------------|-------------------|---------------|-------------------|-------------------|---------------|-------------------------------|----------------------------------|
| | | Top Elev. (ft) | Tip Elev. (ft) | Depth (ft) | Top Elev. (ft) | Tip Elev. (ft) | Depth (ft) | Top Elev. (ft) | Tip Elev. (ft) | Depth (ft) | | |
| P-1A | Dam Crest, Station 6+90 | 385.1 | 365.7 | 19.4 | 385.1 | 365.7 | 19.4 | 385.1 | 365.7 | 19.4 | Dam Embankment | Before 2003 |
| P-1B | Dam Crest, Station 6+90 | 385.1 | 345.7 | 39.4 | 385.1 | 345.7 | 39.4 | 385.1 | 345.7 | 39.4 | Dam Foundation | Before 2003 |
| VBW/2-A | Dam Crest, Station 4+90 | 385.9 | 342.2 | 43.7 | 385.9 | 342.2 | 43.7 | 385.9 | 342.2 | 43.7 | Dam Embankment | Before 2003 |
| VBW/2-B | Dam Crest, Station 4+90 | 385.0 | 309.4 | 75.6 | 385.0 | 309.4 | 75.6 | 385.0 | 304.0 | 81.0 | Dam Foundation | Before 2003 |
| P-3A | Dam Crest, Station 3+00 | 385.6 | 362.3 | 23.3 | 385.6 | 362.3 | 23.3 | 385.6 | 362.3 | 23.3 | Dam Embankment | Before 2003 |
| P-3B | Dam Crest, Station 3+00 | 385.6 | 340.3 | 45.3 | 385.6 | 340.3 | 45.3 | 385.6 | 340.3 | 45.3 | Dam Foundation | Before 2003 |
| VBW/4 | Downstream Slope, Station 5+00 | 340.0 | 314.7 | 25.3 | 340.0 | 314.7 | 25.3 | 342.8 | 314.7 | 28.1 | Dam Embankment | Before 2003 |
| VBW/5 | Downstream Slope, Station 4+60 | 330.7 | 314.0 | 16.7 | 330.7 | 314.0 | 16.7 | 333.7 | 314.0 | 19.7 | Dam Foundation | Before 2003 |
| VBW/6 | Downstream Slope, Station 4+90 | 370.2 | 360.6 | 9.6 | 370.2 | 360.6 | 9.6 | 371.4 | 360.6 | 10.8 | Dam Embankment | 1/19/2011 |
| VBW/7 | Downstream Slope, Station 4+90 | 349.7 | 338.1 | 11.6 | 349.7 | 338.1 | 11.6 | 351.3 | 338.1 | 13.2 | Dam Foundation | 1/19/2011 |
| VBW/8 | Downstream Slope, Station 4+90 | 343.4 | 336.8 | 6.6 | 345.3 | 336.8 | 8.5 | 346.4 | 336.8 | 9.6 | Dam Embankment | 1/19/2011 |
| VBW/9 | Downstream Slope, Station 6+70 | 342.9 | 335.4 | 7.5 | 344.9 | 335.4 | 9.5 | 346.4 | 335.4 | 11.0 | Dam Foundation | 1/19/2011 |

1. Piezometer data based on NGVD 29 datum.

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-1A | | | P-1B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.10 | | | 385.10 | | |
| Bottom of Well Elevation --> | | | 365.70 | | | 345.70 | | |
| Depth of Well | | | 19.40 | | | 39.40 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 1/1/2008 | | | | | | | | |
| 2/1/2008 | | | | | | | | |
| 3/25/2008 | 365.10 | | 19.40 | 365.7 | Dry | 32.40 | 352.7 | |
| 4/25/2008 | 366.40 | | 19.40 | 365.7 | Dry | 32.40 | 352.7 | |
| 5/28/2008 | 365.30 | | 19.40 | 365.7 | Dry | 32.40 | 352.7 | |
| 6/25/2008 | 365.00 | | 19.40 | 365.7 | Dry | 32.40 | 352.7 | |
| 7/18/2008 | 364.50 | | 19.40 | 365.7 | Dry | 32.40 | 352.7 | |
| 8/25/2008 | 363.50 | | 19.40 | 365.7 | Dry | 32.80 | 352.3 | |
| 9/25/2008 | 363.00 | | 19.40 | 365.7 | Dry | 32.80 | 352.3 | |
| 10/21/2008 | 362.00 | | 19.40 | 365.7 | Dry | 33.40 | 351.7 | |
| 11/25/2008 | 365.00 | | 19.40 | 365.7 | Dry | 33.90 | 351.2 | |
| 12/23/2008 | 365.00 | | 19.40 | 365.7 | Dry | 33.90 | 351.2 | |
| 1/26/2009 | 364.50 | | 19.40 | 365.7 | | 33.40 | 351.7 | |
| 2/24/2009 | 364.50 | | 19.40 | 365.7 | | 33.40 | 351.7 | |
| 3/23/2009 | 368.50 | | 19.40 | 365.7 | | 30.80 | 354.3 | |
| 4/27/2009 | 367.50 | | 19.40 | 365.7 | | 30.80 | 354.3 | |
| 5/22/2009 | 367.00 | | 19.40 | 365.7 | | 31.40 | 353.7 | |
| 6/29/2009 | 372.00 | | 19.40 | 365.7 | | 26.80 | 358.3 | |
| 7/31/2009 | 371.00 | | 19.40 | 365.7 | | 28.80 | 356.3 | |
| 8/26/2009 | 370.00 | | 19.40 | 365.7 | | 29.40 | 355.7 | |
| 9/29/2009 | 369.50 | | 19.40 | 365.7 | | 29.80 | 355.3 | |
| 10/30/2009 | 369.00 | | 19.40 | 365.7 | | 29.40 | 355.7 | |
| 11/30/2009 | 368.00 | | 19.40 | 365.7 | | 29.40 | 355.7 | |
| 12/30/2009 | 368.00 | | 19.40 | 365.7 | | 29.40 | 355.7 | |
| 3/1/2010 | 368.00 | | 19.90 | 365.2 | Dry | 28.20 | 356.9 | |
| 3/30/2010 | 368.00 | | 19.90 | 365.2 | Dry | 28.50 | 356.6 | |
| 4/4/2010 | 368.70 | | 19.80 | 365.3 | Dry | 28.50 | 356.6 | |
| 4/27/2010 | 368.40 | | 19.70 | 365.4 | | 28.80 | 356.6 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-1A | | | P-1B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.10 | | | 385.10 | | |
| Bottom of Well Elevation --> | | | 365.70 | | | 345.70 | | |
| Depth of Well | | | 19.40 | | | 39.40 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 5/26/2010 | 367.84 | | 19.90 | 365.2 | Dry | 29.10 | 356.3 | |
| 6/29/2010 | 367.00 | | 19.60 | 365.5 | Dry | 29.50 | 355.6 | |
| 7/27/2010 | 367.00 | | 19.80 | 365.3 | Dry | 29.90 | 355.2 | |
| 8/27/2010 | 366.80 | | 19.60 | 365.3 | Dry | 30.30 | 354.8 | |
| 9/28/2010 | 366.80 | | 19.70 | 365.5 | Dry | 30.70 | 354.4 | |
| 10/26/2010 | 368.50 | | 19.70 | 365.4 | Dry | 31.00 | 354.1 | |
| 11/30/2010 | 371.40 | | 19.60 | 365.4 | | 29.50 | 355.6 | |
| 12/28/2010 | 374.70 | | 19.70 | 365.5 | Dry | 27.20 | 357.9 | |
| 1/4/2011 | 374.80 | | 19.70 | 365.4 | Dry | 27.00 | 358.1 | |
| 1/6/2011 | 374.80 | | 19.50 | 365.4 | Dry | 27.00 | 358.1 | |
| 1/7/2011 | 374.80 | | 19.70 | 365.6 | Dry | 26.90 | 358.2 | |
| 1/8/2011 | 374.80 | | 19.70 | 365.4 | Dry | 27.20 | 357.9 | |
| 1/9/2011 | 374.80 | | 19.70 | 365.4 | Dry | 27.20 | 358.1 | |
| 1/10/2011 | 374.80 | | 19.50 | 365.6 | Dry | 27.00 | 358.1 | |
| 1/11/2011 | 374.80 | | 19.70 | 365.4 | Dry | 27.10 | 358.0 | |
| 1/17/2011 | 374.80 | | 19.60 | 365.5 | Dry | 27.10 | 357.9 | |
| 1/19/2011 | 374.70 | | 19.70 | 365.4 | Dry | 27.20 | 357.9 | |
| 1/21/2011 | 374.80 | | 19.50 | 365.6 | Dry | 27.20 | 357.9 | |
| 1/27/2011 | 374.60 | | 19.70 | 365.4 | Dry | 27.20 | 357.6 | |
| 2/3/2011 | 374.60 | | 19.50 | 365.6 | Dry | 27.50 | 357.6 | |
| 2/8/2011 | 374.70 | | 19.50 | 365.6 | Dry | 27.50 | 357.6 | |
| 2/28/2011 | 374.70 | | 19.70 | 365.4 | Dry | 28.00 | 357.1 | |
| 3/28/2011 | 372.50 | 2.35 | 19.60 | 365.5 | | 28.90 | 356.2 | |
| 4/28/2011 | 372.10 | 0.27 | 19.80 | 365.3 | Dry | 28.80 | 356.3 | |
| 5/18/2011 | 371.80 | 0.03 | 19.70 | 365.4 | Dry | 29.40 | 355.7 | |
| 5/25/2011 | 371.70 | 0.30 | 19.70 | 365.4 | Dry | 29.40 | 355.7 | |
| 6/28/2011 | 370.90 | 0.03 | 19.70 | 365.4 | Dry | 29.70 | 355.4 | |
| 7/26/2011 | 370.30 | 0.03 | 19.70 | 365.4 | Dry | 30.20 | 354.9 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-1A | | | P-1B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.10 | | | 385.10 | | |
| Bottom of Well Elevation --> | | | 365.70 | | | 345.70 | | |
| Depth of Well | | | 19.40 | | | 39.40 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 8/24/2011 | 369.60 | 0.03 | 19.60 | 365.5 | Dry | 30.60 | 354.5 | |
| 8/30/2011 | 369.40 | | 19.90 | 365.2 | | 30.90 | 354.2 | |
| 9/13/2011 | 364.30 | 0.00 | 19.80 | 365.3 | Dry | 33.60 | 351.5 | |
| 9/27/2011 | 361.90 | | 19.70 | 365.4 | Dry | 36.50 | 348.6 | |
| 10/11/2011 | 358.50 | 1.03 | 19.60 | 365.5 | Dry | 39.60 | 345.5 | |
| 10/25/2011 | 356.00 | 1.03 | 19.70 | 365.4 | Dry | 39.60 | 345.5 | |
| 11/29/2011 | 355.00 | 1.51 | 19.70 | 365.4 | Dry | 39.60 | 345.5 | |
| 12/28/2011 | 355.00 | 0.28 | 19.80 | 365.3 | Dry | 39.70 | 345.5 | |
| 1/26/2012 | 355.00 | 1.05 | 19.70 | 365.4 | Dry | 39.50 | 345.6 | |
| 2/28/2012 | 355.00 | 0.73 | 19.70 | 365.4 | Dry | 39.50 | 345.6 | |
| 3/27/2012 | 352.40 | 0.73 | 19.90 | 365.2 | | 39.80 | 345.3 | |
| 4/23/2012 | 352.10 | 1.35 | 19.70 | 365.4 | | 39.60 | 345.5 | |
| 5/30/2012 | 352.20 | 0.07 | 19.70 | 365.4 | | 39.70 | 345.4 | |
| 6/13/2012 | 352.20 | | 19.60 | 365.4 | | 39.60 | 345.5 | |
| 6/26/2012 | 352.20 | 0.00 | 19.70 | 365.4 | | 39.50 | 345.6 | |
| 7/24/2012 | 352.20 | 0.23 | 19.60 | 365.5 | | 39.60 | 345.5 | |
| 8/8/2012 | 352.20 | 0.23 | 19.80 | 365.3 | | 39.80 | 345.3 | |
| 8/28/2012 | 351.80 | 0.00 | 19.60 | 365.5 | | 39.50 | 345.6 | |
| 8/29/2012 | 351.80 | 0.00 | 19.80 | 365.3 | | 39.70 | 345.4 | |
| 9/25/2012 | 351.30 | 0.00 | 19.60 | 365.5 | | 39.50 | 345.6 | |
| 10/31/2012 | 351.00 | 0.09 | 19.60 | 365.5 | | 39.50 | 345.6 | |
| 11/27/2012 | 351.00 | 0.87 | 19.60 | 365.5 | | 39.50 | 345.6 | |
| 12/12/2012 | 351.00 | 1.13 | 19.70 | 365.4 | | 39.60 | 345.5 | |
| 1/29/2013 | 366.10 | 1.30 | 19.80 | 365.3 | | 39.90 | 345.2 | |
| 2/21/2013 | 372.10 | 0.42 | 19.80 | 365.3 | | 35.80 | 349.3 | |
| 3/28/2013 | 371.90 | 0.79 | 19.70 | 365.4 | | 32.90 | 352.2 | |
| 4/25/2013 | 371.40 | 0.00 | 19.60 | 365.5 | | 33.00 | 352.1 | |
| 5/22/2013 | 370.90 | 0.00 | 19.80 | 365.3 | | 32.90 | 352.2 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-1A | | | P-1B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.10 | | | 385.10 | | |
| Bottom of Well Elevation --> | | | 365.70 | | | 345.70 | | |
| Depth of Well | | | 19.40 | | | 39.40 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 6/25/2013 | 370.20 | 0.00 | 19.70 | 365.4 | | 33.20 | 351.9 | |
| 7/23/2013 | 369.40 | 0.00 | 19.70 | 365.4 | Dry | 33.60 | 351.5 | |
| 8/21/2013 | 368.60 | 0.00 | 19.70 | 365.4 | Dry | 34.10 | 351.0 | |
| 9/25/2013 | 367.70 | 0.00 | 19.70 | 365.4 | Dry | 34.60 | 350.5 | |
| 10/30/2013 | 366.90 | 0.00 | 19.70 | 365.4 | Dry | 35.30 | 349.8 | |
| 11/26/2013 | 366.50 | 0.59 | 19.70 | 365.4 | Dry | 35.60 | 349.5 | |
| 12/17/2013 | 366.20 | 0.70 | 19.70 | 365.4 | Dry | 35.80 | 349.3 | |
| 1/28/2014 | 365.50 | 0.00 | 19.70 | 365.4 | Dry | 36.10 | 349.0 | |
| 2/25/2014 | 365.40 | 0.76 | 19.80 | 365.3 | Dry | 36.60 | 348.6 | |
| 3/25/2014 | 365.30 | | 19.80 | 365.3 | Dry | 36.40 | 348.7 | |
| 3/28/2014 | 365.30 | 2.02 | 19.70 | 365.4 | | 36.50 | 348.6 | |
| 4/25/2014 | 364.50 | 0.52 | 19.70 | 365.4 | | 36.60 | 348.5 | |
| 5/28/2014 | 363.80 | 0.00 | 19.80 | 365.3 | Dry | 37.10 | 348.0 | |
| 6/25/2014 | 363.00 | 0.00 | 19.70 | 365.2 | Dry | 37.70 | 351.5 | |
| 7/30/2014 | 361.90 | 0.00 | 19.70 | 365.2 | Dry | 38.00 | 348.6 | |
| 8/27/2014 | 361.10 | 0.04 | 19.70 | 365.4 | Dry | 38.60 | 346.5 | |
| 9/23/2014 | 360.50 | 0.00 | 19.50 | 365.6 | Dry | 39.10 | 346.0 | |
| 10/29/2014 | 359.50 | 0.00 | 19.80 | 365.3 | Dry | 39.70 | 345.4 | |
| 11/24/2014 | 359.40 | 0.32 | 19.70 | 365.4 | Dry | 39.60 | 345.5 | |
| 12/30/2014 | 359.40 | 3.98 | 19.70 | 365.4 | Dry | 39.70 | 345.4 | |
| 1/27/2015 | 359.00 | 1.42 | 19.70 | 365.4 | Dry | 39.80 | 345.3 | |
| 2/26/2015 | 358.60 | 0.46 | 19.70 | 365.4 | Dry | 39.60 | 345.5 | |
| 3/27/2015 | 358.00 | 0.63 | 19.70 | 365.4 | Dry | 39.50 | 345.6 | |
| 4/26/2015 | 331.00 | 0.22 | 19.80 | 365.3 | Dry | 39.60 | 345.5 | Dry |
| 5/27/2015 | 332.00 | 1.79 | 19.80 | 365.3 | Dry | 39.60 | 345.5 | Dry |
| 6/23/2015 | 331.00 | 0.00 | 19.70 | 365.4 | Dry | 39.80 | 345.3 | Dry |
| 7/30/2015 | 331.00 | 0.00 | 19.70 | 365.4 | Dry | 39.60 | 345.5 | Dry |
| 8/25/2015 | 331.00 | 0.00 | 19.60 | 365.5 | Dry | 39.60 | 345.5 | Dry |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-1A | | | P-1B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.10 | | | 385.10 | | |
| Bottom of Well Elevation --> | | | 365.70 | | | 345.70 | | |
| Depth of Well | | | 19.40 | | | 39.40 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 9/30/2015 | 331.00 | 1.97 | 19.10 | 366.0 | Dry | 39.80 | 345.3 | Dry |
| 10/29/2015 | 331.00 | 0.18 | 19.70 | 365.4 | Dry | 39.70 | 345.4 | Dry |
| 11/25/2015 | 331.00 | 0.17 | 19.70 | 365.4 | Dry | 39.70 | 345.4 | Dry |
| 12/30/2015 | 331.00 | 1.42 | 19.70 | 365.4 | Dry | 39.70 | 345.4 | Dry |
| 1/26/2016 | 343.70 | 2.97 | 19.60 | 365.5 | Dry | 39.60 | 345.5 | Dry |
| 2/24/2016 | 363.80 | 0.26 | 20.60 | 364.5 | Dry | 39.60 | 345.5 | Dry |
| 3/29/2016 | 374.90 | 1.50 | 19.60 | 365.5 | Dry | 38.40 | 346.7 | |
| 4/28/2016 | 375.50 | 0.09 | 19.70 | 365.4 | Dry | 32.40 | 352.7 | |
| 5/24/2016 | 374.40 | 0.13 | 19.50 | 365.6 | Dry | 30.80 | 354.3 | |
| 6/29/2016 | 373.70 | 0.00 | 19.50 | 365.6 | Dry | 30.80 | 354.3 | |
| 7/28/2016 | 372.20 | 0.00 | 19.70 | 365.4 | Dry | 30.70 | 354.4 | |
| 8/25/2016 | 367.10 | 0.00 | 19.70 | 365.4 | Dry | 32.20 | 352.9 | |
| 9/27/2016 | 363.30 | 0.00 | 19.60 | 365.5 | | 34.60 | 350.5 | |
| 10/25/2016 | 362.10 | 0.82 | 19.60 | 365.5 | Dry | 35.90 | 349.2 | |
| 11/22/2016 | 361.80 | 1.69 | 19.70 | 365.4 | Dry | 36.90 | 348.2 | |
| 12/28/2016 | 368.55 | 3.61 | 19.70 | 365.4 | Dry | 36.90 | 348.2 | |
| 1/25/2017 | 375.80 | 6.48 | 19.80 | 365.3 | Dry | 32.50 | 352.6 | |
| 2/28/2017 | 375.90 | 3.95 | 19.60 | 365.5 | Dry | 28.20 | 356.9 | |
| 3/15/2017 | 375.80 | 3.61 | 19.80 | 365.3 | Dry | 28.40 | 356.7 | |
| 3/28/2017 | 375.50 | 0.09 | 19.70 | 365.4 | | 27.90 | 357.2 | |
| 4/26/2017 | 375.00 | 0.04 | 19.80 | 365.3 | Dry | 27.60 | 357.5 | |
| 5/23/2017 | 374.60 | 35.00 | 19.70 | 365.4 | Dry | 28.00 | 357.1 | |
| 6/22/2017 | 373.80 | 0.00 | 19.70 | 365.4 | Dry | 28.20 | 356.9 | |
| 7/26/2017 | 371.40 | 0.00 | 19.70 | 365.4 | Dry | 29.70 | 355.4 | |
| 8/30/2017 | 368.60 | 0.00 | 19.70 | 365.4 | Dry | 31.10 | 354.0 | |
| 9/28/2017 | 364.80 | 0.00 | 19.60 | 365.5 | Dry | 33.20 | 351.9 | |
| 10/26/2017 | 359.00 | 0.00 | 19.70 | 365.4 | Dry | 34.40 | 350.7 | |
| 11/29/2017 | 357.80 | 0.15 | 19.50 | 365.6 | Dry | 39.50 | 345.6 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-1A | | | P-1B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.10 | | | 385.10 | | |
| Bottom of Well Elevation --> | | | 365.70 | | | 345.70 | | |
| Depth of Well | | | 19.40 | | | 39.40 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 12/27/2017 | 357.30 | 0.00 | 19.70 | 365.4 | Dry | 39.00 | 346.1 | |
| 1/24/2018 | 357.30 | 1.84 | 19.70 | 365.40 | Dry | 39.30 | 345.80 | |
| 2/21/2018 | 361.00 | 0.18 | 19.40 | 365.70 | Dry | 38.00 | 347.10 | |
| 3/28/2018 | 366.90 | 2.19 | 19.60 | 365.50 | Dry | 33.90 | 351.20 | |
| 4/25/2018 | 367.00 | 0.05 | 19.60 | 365.50 | Dry | 33.30 | 351.80 | |
| 5/30/2018 | 366.40 | 0.36 | 19.40 | 365.70 | Dry | 33.10 | 352.00 | |
| 6/28/2018 | 365.60 | 0.00 | 19.40 | 365.70 | Dry | 33.10 | 352.00 | |
| 7/25/2018 | 363.20 | 0.00 | 19.60 | 365.50 | Dry | 34.50 | 350.60 | |
| 8/28/2018 | 357.30 | 0.00 | 19.60 | 365.50 | Dry | 38.00 | 347.10 | |
| 9/27/2018 | 354.60 | 0.00 | 19.50 | 365.60 | Dry | 39.60 | 345.50 | |
| 10/24/2018 | 351.90 | 1.49 | 19.80 | 365.30 | Dry | 39.60 | 345.50 | |
| 11/28/2018 | 348.60 | 0.56 | 19.60 | 365.50 | Dry | 39.60 | 345.50 | |
| 12/21/2018 | 348.80 | 2.04 | 19.70 | 365.40 | Dry | 39.80 | 345.30 | |
| 1/30/2019 | 348.90 | 4.41 | 19.60 | 365.50 | Dry | 39.60 | 345.50 | |
| 2/27/2019 | 351.70 | 8.05 | 19.50 | 365.60 | Dry | 39.50 | 345.60 | Dry |
| 3/28/2019 | 351.60 | 2.00 | 19.70 | 365.40 | Dry | 39.40 | 345.70 | Dry |
| 4/25/2019 | 348.70 | 0.10 | 19.7 | 365.40 | | 39.7 | 345.40 | |
| 5/30/2019 | 348.30 | 0.99 | 19.6 | 365.50 | | 39.6 | 345.50 | |
| 6/26/2019 | 344.50 | 0.11 | 19.7 | 365.40 | | 39.6 | 345.50 | |
| 7/5/2019 | 343.30 | 0.00 | 19.5 | 365.60 | | 39.5 | 345.60 | |
| 7/30/2019 | 341.00 | 0.00 | 19.6 | 365.50 | | 39.6 | 345.50 | |
| 8/27/2019 | 341.00 | 0.00 | 19.8 | 365.30 | | 39.8 | 345.30 | |
| 9/26/2019 | 341.00 | 0.00 | 19.4 | 365.70 | | 39.8 | 345.30 | |
| 10/24/2019 | 341.00 | 0.00 | 19.6 | 365.50 | | 39.5 | 345.60 | |
| 11/26/2019 | 341.00 | 2.60 | 19.6 | 365.50 | | 39.6 | 345.50 | |
| 12/16/2019 | 341.00 | 4.93 | 19.7 | 365.40 | Dry | 39.7 | 345.40 | Dry |
| 1/28/2020 | 341.00 | 0.21 | 19.6 | 365.50 | Dry | 39.6 | 345.50 | Dry |
| 2/26/2020 | 360.60 | 0.39 | 19.6 | 365.50 | Dry | 39.5 | 345.60 | Dry |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-1A | | | P-1B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.10 | | | 385.10 | | |
| Bottom of Well Elevation --> | | | 365.70 | | | 345.70 | | |
| Depth of Well | | | 19.40 | | | 39.40 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 3/24/2020 | 370.30 | 3.75 | 19.6 | 365.50 | Dry | 39.7 | 345.40 | Dry |
| 4/23/2020 | 375.30 | 4.63 | 19.8 | 365.30 | | 33.1 | 352.00 | |
| 5/28/2020 | 374.80 | 0.04 | 19.6 | 365.50 | | 30.8 | 354.30 | |
| 6/23/2020 | 373.60 | 0.00 | 19.6 | 365.50 | | 30.5 | 354.60 | |
| 7/29/2020 | 370.70 | 0.00 | 19.7 | 365.40 | | 31.4 | 353.70 | |
| 8/27/2020 | 367.80 | 0.00 | 19.6 | 365.50 | | 32.8 | 352.30 | |
| 9/29/2020 | 364.90 | 0.00 | 19.6 | 365.50 | | 34.6 | 350.50 | |
| 10/29/2020 | 354.80 | 0.00 | 19.7 | 365.40 | | 37.9 | 347.20 | |
| 11/24/2020 | 343.00 | 0.32 | 19.5 | 365.60 | | 39.8 | 345.30 | |
| 12/29/2020 | 343.50 | 1.14 | 19.5 | 365.60 | | 39.6 | 345.50 | |
| 1/27/2021 | 355.70 | 2.45 | 19.70 | 365.40 | | 39.60 | 345.50 | |
| 2/25/2021 | 365.90 | 0.03 | 19.80 | 365.30 | | 39.40 | 345.70 | |
| 3/23/2021 | 370.80 | 1.27 | 19.70 | 365.40 | | 34.40 | 350.70 | |
| 4/28/2021 | 371.70 | 0.03 | 19.60 | 365.50 | | 31.80 | 353.30 | |
| 5/26/2021 | 370.00 | 0.05 | 19.60 | 365.50 | | 32.00 | 353.10 | |
| 6/30/2021 | 366.30 | 0.00 | 19.60 | 365.50 | | 33.50 | 351.60 | |
| 7/27/2021 | 361.50 | 0.03 | 19.40 | 365.70 | | 35.90 | 349.20 | |
| 8/25/2021 | 356.30 | 0.00 | 19.60 | 365.50 | | 28.80 | 356.30 | Omitted |
| 9/28/2021 | 350.60 | 0.03 | 19.40 | 365.70 | | 39.40 | 345.70 | |
| 10/27/2021 | 343.50 | 0.79 | 19.40 | 365.70 | | 39.40 | 345.70 | |
| 11/25/2021 | 343.40 | 0.00 | 19.40 | 365.70 | | 39.40 | 345.70 | |
| 12/21/2021 | 348.90 | 6.14 | 19.70 | 365.40 | | 39.60 | 345.50 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/2-A | | | VBW/2-B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 385.90 | | | 385.00 | | |
| Bottom of Well Elevation --> | | | 342.20 | | | 309.40 | 304 | Maint. 2/16/2017 |
| Depth of Well | | | 43.70 | | | 75.60 | 81 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 1/1/2008 | | | | | | | | |
| 2/1/2008 | | | | | | | | |
| 3/25/2008 | 365.10 | | 27.70 | 358.2 | | 45.60 | 339.4 | |
| 4/25/2008 | 366.40 | | 27.70 | 358.2 | | 45.60 | 339.4 | |
| 5/28/2008 | 365.30 | | 27.70 | 358.2 | | 46.60 | 338.4 | |
| 6/25/2008 | 365.00 | | 28.20 | 357.7 | | 46.60 | 338.4 | |
| 7/18/2008 | 364.50 | | 28.80 | 357.1 | | 46.60 | 338.4 | |
| 8/25/2008 | 363.50 | | 28.80 | 357.1 | | 46.60 | 338.4 | |
| 9/25/2008 | 363.00 | | 28.80 | 357.1 | | 46.60 | 338.4 | |
| 10/21/2008 | 362.00 | | 28.20 | 357.7 | | 47.00 | 338.0 | |
| 11/25/2008 | 365.00 | | 28.20 | 357.7 | | 46.10 | 338.9 | |
| 12/23/2008 | 365.00 | | 28.20 | 357.7 | | 46.10 | 338.9 | |
| 1/26/2009 | 364.50 | | 28.70 | 357.2 | | 46.60 | 338.4 | |
| 2/24/2009 | 364.50 | | 28.70 | 357.2 | | 46.60 | 338.4 | |
| 3/23/2009 | 368.50 | | 28.70 | 357.2 | | 44.60 | 340.4 | |
| 4/27/2009 | 367.50 | | 28.70 | 357.2 | | 45.00 | 340.0 | |
| 5/22/2009 | 367.00 | | 28.70 | 357.2 | | 45.00 | 340.0 | |
| 6/29/2009 | 372.00 | | 27.70 | 358.2 | | 43.00 | 342.0 | |
| 7/31/2009 | 371.00 | | 28.70 | 357.2 | | 45.00 | 340.0 | |
| 8/26/2009 | 370.00 | | 28.70 | 357.2 | | 45.60 | 339.4 | |
| 9/29/2009 | 369.50 | | 28.70 | 357.2 | | 46.00 | 339.0 | |
| 10/30/2009 | 369.00 | | 27.70 | 358.2 | | 45.00 | 340.0 | |
| 11/30/2009 | 368.00 | | 27.10 | 358.8 | | 45.00 | 340.0 | |
| 12/30/2009 | 368.00 | | 27.10 | 358.8 | | 45.00 | 340.0 | |
| 3/1/2010 | 368.00 | | 26.30 | 359.6 | | 44.00 | 341.0 | |
| 3/30/2010 | 368.00 | | 26.20 | 359.7 | | 44.20 | 340.8 | |
| 4/4/2010 | 368.70 | | 26.10 | 359.8 | | 44.30 | 340.7 | |
| 4/27/2010 | 368.40 | | 26.00 | 359.9 | | 44.20 | 340.8 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/2-A | | | VBW/2-B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 385.90 | | | 385.00 | | |
| Bottom of Well Elevation --> | | | 342.20 | | | 309.40 | 304 | Maint. 2/16/2017 |
| Depth of Well | | | 43.70 | | | 75.60 | 81 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 5/26/2010 | 367.84 | | 26.10 | 359.8 | | 44.60 | 340.4 | |
| 6/29/2010 | 367.00 | | 26.20 | 359.7 | | 44.80 | 340.2 | |
| 7/27/2010 | 367.00 | | 26.40 | 359.5 | | 45.10 | 339.9 | |
| 8/27/2010 | 366.80 | | 26.60 | 359.3 | | 45.40 | 339.6 | |
| 9/28/2010 | 366.80 | | 26.60 | 359.3 | | 45.60 | 339.4 | |
| 10/26/2010 | 368.50 | | 27.00 | 358.9 | | 45.80 | 339.2 | |
| 11/30/2010 | 371.40 | | 27.20 | 358.7 | | 44.70 | 340.3 | |
| 12/28/2010 | 374.70 | | 27.20 | 358.7 | | 43.10 | 341.9 | |
| 1/4/2011 | 374.80 | | 27.40 | 358.5 | | 43.10 | 341.9 | |
| 1/6/2011 | 374.80 | | 27.10 | 358.8 | | 43.10 | 342.0 | |
| 1/7/2011 | 374.80 | | 27.10 | 358.8 | | 43.00 | 342.0 | |
| 1/8/2011 | 374.80 | | 27.30 | 358.6 | | 43.40 | 341.6 | |
| 1/9/2011 | 374.80 | | 27.30 | 358.6 | | 43.50 | 341.5 | |
| 1/10/2011 | 374.80 | | 27.10 | 358.8 | | 43.30 | 341.7 | |
| 1/11/2011 | 374.80 | | 27.10 | 358.8 | | 43.20 | 341.8 | |
| 1/17/2011 | 374.80 | | 27.00 | 358.9 | | 43.30 | 341.7 | |
| 1/19/2011 | 374.70 | | 27.00 | 358.9 | | 43.40 | 341.6 | |
| 1/21/2011 | 374.80 | | 26.90 | 359.0 | | 43.30 | 341.7 | |
| 1/27/2011 | 374.60 | | 26.80 | 359.1 | | 43.40 | 341.6 | |
| 2/3/2011 | 374.60 | | 26.70 | 359.2 | | 43.60 | 341.4 | |
| 2/8/2011 | 374.70 | | 26.70 | 359.2 | | 43.60 | 341.4 | |
| 2/28/2011 | 374.70 | | 26.20 | 359.7 | | 43.80 | 341.2 | |
| 3/28/2011 | 372.50 | 2.35 | 26.20 | 359.7 | | 44.20 | 340.8 | |
| 4/28/2011 | 372.10 | 0.27 | 24.20 | 361.7 | | 44.60 | 340.4 | |
| 5/18/2011 | 371.80 | 0.03 | 26.40 | 359.5 | | 44.40 | 340.6 | |
| 5/25/2011 | 371.70 | 0.30 | 26.40 | 359.5 | | 44.30 | 340.7 | |
| 6/28/2011 | 370.90 | 0.03 | 26.50 | 359.4 | | 44.50 | 340.5 | |
| 7/26/2011 | 370.30 | 0.03 | | | | | | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/2-A | | | VBW/2-B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 385.90 | | | 385.00 | | |
| Bottom of Well Elevation --> | | | 342.20 | | | 309.40 | 304 | Maint. 2/16/2017 |
| Depth of Well | | | 43.70 | | | 75.60 | 81 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 8/24/2011 | 369.60 | 0.03 | 26.80 | 359.1 | | 44.80 | 340.2 | |
| 8/30/2011 | 369.40 | | 27.10 | 358.8 | | 45.00 | 340.0 | |
| 9/13/2011 | 364.30 | 0.00 | 27.20 | 358.7 | | 47.10 | 337.9 | |
| 9/27/2011 | 361.90 | | 27.20 | 358.7 | | 49.60 | 335.4 | |
| 10/11/2011 | 358.50 | 1.03 | 27.30 | 358.6 | | 51.90 | 333.1 | |
| 10/25/2011 | 356.00 | 1.03 | 27.70 | 358.2 | | 53.20 | 331.8 | |
| 11/29/2011 | 355.00 | 1.51 | 26.30 | 359.6 | | 54.20 | 330.8 | |
| 12/28/2011 | 355.00 | 0.28 | 28.80 | 357.1 | | 54.80 | 330.3 | |
| 1/26/2012 | 355.00 | 1.05 | 29.00 | 356.9 | | 54.90 | 330.1 | |
| 2/28/2012 | 355.00 | 0.73 | 29.30 | 356.6 | | 55.20 | 329.8 | |
| 3/27/2012 | 352.40 | 0.73 | 29.80 | 356.1 | | 55.30 | 329.7 | |
| 4/23/2012 | 352.10 | 1.35 | 29.80 | 356.1 | | 55.20 | 329.8 | |
| 5/30/2012 | 352.20 | 0.07 | 30.00 | 355.9 | | 55.60 | 329.4 | |
| 6/13/2012 | 352.20 | | 30.20 | 355.7 | | 55.40 | 329.3 | |
| 6/26/2012 | 352.20 | 0.00 | 30.30 | 355.6 | | 56.00 | 329.0 | |
| 7/24/2012 | 352.20 | 0.23 | 30.50 | 355.4 | | 53.40 | 331.6 | |
| 8/8/2012 | 352.20 | 0.23 | 30.50 | 355.4 | | 53.60 | 331.4 | |
| 8/28/2012 | 351.80 | 0.00 | 30.60 | 355.3 | | 54.50 | 330.5 | |
| 8/29/2012 | 351.80 | 0.00 | 30.80 | 355.1 | | 54.80 | 330.2 | |
| 9/25/2012 | 351.30 | 0.00 | 30.90 | 355.0 | | 55.10 | 329.9 | |
| 10/31/2012 | 351.00 | 0.09 | 30.90 | 355.0 | | 55.90 | 329.1 | |
| 11/27/2012 | 351.00 | 0.87 | 31.20 | 354.7 | | 56.30 | 328.7 | |
| 12/12/2012 | 351.00 | 1.13 | 31.20 | 354.7 | | 56.30 | 328.7 | |
| 1/29/2013 | 366.10 | 1.30 | 31.20 | 354.7 | | 46.30 | 338.7 | |
| 2/21/2013 | 372.10 | 0.42 | 32.70 | 353.2 | | 43.90 | 341.1 | |
| 3/28/2013 | 371.90 | 0.79 | 31.50 | 354.4 | | 42.20 | 342.8 | |
| 4/25/2013 | 371.40 | 0.00 | 31.40 | 354.5 | | 42.20 | 342.8 | |
| 5/22/2013 | 370.90 | 0.00 | 31.40 | 354.5 | | 42.70 | 342.3 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/2-A | | | VBW/2-B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 385.90 | | | 385.00 | | |
| Bottom of Well Elevation --> | | | 342.20 | | | 309.40 | 304 | Maint. 2/16/2017 |
| Depth of Well | | | 43.70 | | | 75.60 | 81 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 6/25/2013 | 370.20 | 0.00 | 30.70 | 355.2 | | 42.80 | 342.2 | |
| 7/23/2013 | 369.40 | 0.00 | 30.50 | 355.4 | | 43.20 | 341.8 | |
| 8/21/2013 | 368.60 | 0.00 | 30.40 | 355.5 | | 43.80 | 341.3 | |
| 9/25/2013 | 367.70 | 0.00 | 30.20 | 355.7 | | 44.10 | 340.9 | |
| 10/30/2013 | 366.90 | 0.00 | 30.30 | 355.6 | | 44.80 | 340.2 | |
| 11/26/2013 | 366.50 | 0.59 | 30.30 | 355.6 | | 45.10 | 339.9 | |
| 12/17/2013 | 366.20 | 0.70 | 30.40 | 355.5 | | 45.50 | 339.5 | |
| 1/28/2014 | 365.50 | 0.00 | 30.60 | 355.3 | | 45.90 | 339.1 | |
| 2/25/2014 | 365.40 | 0.76 | 30.80 | 355.1 | | 46.20 | 338.9 | |
| 3/25/2014 | 365.30 | | 30.80 | 355.1 | | 45.90 | 339.1 | |
| 3/28/2014 | 365.30 | 2.02 | 30.70 | | | 45.90 | | |
| 4/25/2014 | 364.50 | 0.52 | 30.80 | 355.1 | | 46.10 | 338.9 | |
| 5/28/2014 | 363.80 | 0.00 | 30.90 | 355.0 | | 46.50 | 338.5 | |
| 6/25/2014 | 363.00 | 0.00 | 31.20 | 358.7 | | 47.00 | 337.9 | |
| 7/30/2014 | 361.90 | 0.00 | 31.10 | 358.7 | | 47.20 | 335.4 | |
| 8/27/2014 | 361.10 | 0.04 | 31.30 | 354.6 | | 47.90 | 337.1 | |
| 9/23/2014 | 360.50 | 0.00 | 31.30 | 354.6 | | 48.30 | 336.7 | |
| 10/29/2014 | 359.50 | 0.00 | 31.80 | 354.1 | | 49.00 | 336.0 | |
| 11/24/2014 | 359.40 | 0.32 | 31.60 | 354.3 | | 49.40 | 335.6 | |
| 12/30/2014 | 359.40 | 3.98 | 31.80 | 354.1 | | 49.90 | 335.1 | |
| 1/27/2015 | 359.00 | 1.42 | 32.10 | 353.8 | | 49.80 | 335.2 | |
| 2/26/2015 | 358.60 | 0.46 | 31.80 | 354.1 | | 50.10 | 334.9 | |
| 3/27/2015 | 358.00 | 0.63 | 32.30 | 353.6 | | 51.30 | 333.8 | |
| 4/26/2015 | 331.00 | 0.22 | 32.10 | 353.8 | | 56.50 | 328.5 | |
| 5/27/2015 | 332.00 | 1.79 | 32.20 | 353.7 | | 56.30 | 328.7 | |
| 6/23/2015 | 331.00 | 0.00 | 32.30 | 353.6 | | 60.40 | 324.6 | |
| 7/30/2015 | 331.00 | 0.00 | 31.10 | 354.8 | In July maint. Cleaned | 61.40 | 323.6 | |
| 8/25/2015 | 331.00 | 0.00 | 32.80 | 353.1 | Dry | 62.10 | 322.9 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/2-A | | | VBW/2-B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|--------------------|--------------|----------------|--------------------|
| Top of Well Elevation --> | | | 385.90 | | | 385.00 | | |
| Bottom of Well Elevation --> | | | 342.20 | | | 309.40 | 304 | Maint. 2/16/2017 |
| Depth of Well | | | 43.70 | | | 75.60 | 81 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 9/30/2015 | 331.00 | 1.97 | 32.10 | 353.8 | | 62.40 | 322.6 | |
| 10/29/2015 | 331.00 | 0.18 | 33.20 | 352.7 | | 62.40 | 322.6 | |
| 11/25/2015 | 331.00 | 0.17 | 33.30 | 352.6 | | 63.10 | 321.9 | |
| 12/30/2015 | 331.00 | 1.42 | 33.40 | 352.5 | VW installed | 63.60 | 321.4 | VW installed |
| 1/26/2016 | 343.70 | 2.97 | 32.30 | 353.6 | | 46.10 | 338.9 | |
| 2/24/2016 | 363.80 | 0.26 | 32.50 | 353.5 | | 31.40 | 353.6 | Erroneous |
| 3/29/2016 | 374.90 | 1.50 | 32.70 | 353.2 | | 23.30 | 361.7 | Erroneous |
| 4/28/2016 | 375.50 | 0.09 | 32.60 | 353.3 | | 23.90 | 361.1 | Erroneous |
| 5/24/2016 | 374.40 | 0.13 | 31.70 | 354.2 | | 21.70 | 363.3 | Erroneous |
| 6/29/2016 | 373.70 | 0.00 | 30.60 | 355.3 | | 21.60 | 363.4 | Erroneous |
| 7/28/2016 | 372.20 | 0.00 | 30.00 | 355.9 | | 23.90 | 361.1 | Erroneous |
| 8/25/2016 | 367.10 | 0.00 | 29.50 | 356.4 | | 26.10 | 358.9 | Erroneous |
| 9/27/2016 | 363.30 | 0.00 | 29.70 | 356.2 | | 28.20 | 356.8 | Erroneous |
| 10/25/2016 | 362.10 | 0.82 | 29.50 | 356.4 | | 28.50 | 356.5 | Erroneous |
| 11/22/2016 | 361.80 | 1.69 | | | VW was not logging | | | VW was not logging |
| 12/28/2016 | 368.55 | 3.61 | 30.00 | 355.9 | | 25.00 | 360.0 | Erroneous |
| 1/25/2017 | 375.80 | 6.48 | 29.90 | 356.0 | | 34.20 | 350.8 | Measured w/sounder |
| 2/28/2017 | 375.90 | 3.95 | 29.90 | 356.0 | | 34.00 | 351.0 | Measured w/sounder |
| 3/15/2017 | 375.80 | 3.61 | 28.40 | 357.5 | | 34.20 | 350.8 | Measured w/sounder |
| 3/28/2017 | 375.50 | 0.09 | 28.20 | 357.7 | | 13.20 | 371.8 | Erroneous |
| 4/26/2017 | 375.00 | 0.04 | 27.60 | 358.3 | | 34.00 | 351.0 | Measured w/sounder |
| 5/23/2017 | 374.60 | 35.00 | 27.20 | 358.7 | | 8.30 | 376.7 | Erroneous |
| 6/22/2017 | 373.80 | 0.00 | 27.00 | 358.9 | | 2.00 | 383.0 | Erroneous |
| 7/26/2017 | 371.40 | 0.00 | 26.90 | 359.0 | | 4.10 | 380.9 | Erroneous |
| 8/30/2017 | 368.60 | 0.00 | 27.20 | 358.7 | | 6.00 | 379.0 | Erroneous |
| 9/28/2017 | 364.80 | 0.00 | 27.20 | 358.7 | | 8.10 | 376.9 | Erroneous |
| 10/26/2017 | 359.00 | 0.00 | 27.30 | 358.6 | | 11.60 | 373.4 | Erroneous |
| 11/29/2017 | 357.80 | 0.15 | 28.20 | 357.7 | | 12.90 | 372.1 | Erroneous |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/2-A | | | VBW/2-B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 385.90 | | | 385.00 | | |
| Bottom of Well Elevation --> | | | 342.20 | | | 309.40 | 304 | Maint. 2/16/2017 |
| Depth of Well | | | 43.70 | | | 75.60 | 81 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 12/27/2017 | 357.30 | 0.00 | 28.50 | 357.4 | | 13.30 | 371.7 | Erroneous |
| 1/24/2018 | 357.30 | 1.84 | 28.90 | 357.00 | | 13.50 | 371.50 | |
| 2/21/2018 | 361.00 | 0.18 | 29.20 | 356.70 | | 11.60 | 373.40 | |
| 3/28/2018 | 366.90 | 2.19 | 29.48 | 356.42 | | 9.20 | 375.80 | |
| 4/25/2018 | 367.00 | 0.05 | 29.60 | 356.30 | | 4.00 | 381.00 | |
| 5/30/2018 | 366.40 | 0.36 | 29.70 | 356.20 | | 1.00 | 384.00 | |
| 6/28/2018 | 365.60 | 0.00 | 29.50 | 356.40 | | 1.40 | 383.60 | |
| 7/25/2018 | 363.20 | 0.00 | 29.40 | 356.50 | | 2.70 | 382.30 | |
| 8/28/2018 | 357.30 | 0.00 | 29.44 | 356.46 | | 5.90 | 379.10 | |
| 9/27/2018 | 354.60 | 0.00 | 29.30 | 356.60 | | 7.40 | 377.60 | |
| 10/24/2018 | 351.90 | 1.49 | 29.80 | 356.10 | | 10.40 | 374.60 | |
| 11/28/2018 | 348.60 | 0.56 | 30.10 | 355.80 | | 11.40 | 373.60 | |
| 12/21/2018 | 348.80 | 2.04 | 29.90 | 356.00 | | 11.10 | 373.90 | |
| 1/30/2019 | 348.90 | 4.41 | 30.50 | 355.40 | | 11.60 | 373.40 | |
| 2/27/2019 | 351.70 | 8.05 | 30.40 | 355.50 | | 9.56 | 375.44 | |
| 3/28/2019 | 351.60 | 2.00 | 30.60 | 355.30 | | 10.20 | 374.80 | |
| 4/25/2019 | 348.70 | 0.10 | 30.70 | 355.20 | | 11.70 | 373.30 | |
| 5/30/2019 | 348.30 | 0.99 | 31.00 | 354.90 | | 12.00 | 373.00 | |
| 6/26/2019 | 344.50 | 0.11 | 31.00 | 354.90 | | 14.00 | 371.00 | |
| 7/5/2019 | 343.30 | 0.00 | 31.00 | 354.90 | | 15.20 | 369.80 | |
| 7/30/2019 | 341.00 | 0.00 | 31.20 | 354.70 | | 17.00 | 368.00 | |
| 8/27/2019 | 341.00 | 0.00 | 31.40 | 354.50 | | 19.50 | 365.50 | |
| 9/26/2019 | 341.00 | 0.00 | 31.40 | 354.50 | | 21.10 | 363.90 | |
| 10/24/2019 | 341.00 | 0.00 | 31.40 | 354.50 | | 21.80 | 363.20 | |
| 11/26/2019 | 341.00 | 2.60 | 31.50 | 354.40 | | 22.40 | 362.60 | |
| 12/16/2019 | 341.00 | 4.93 | 40.71 | 345.19 | | 64.50 | 320.50 | |
| 1/28/2020 | 341.00 | 0.21 | 30.40 | 355.50 | | 11.52 | 373.48 | |
| 2/26/2020 | 360.60 | 0.39 | 31.43 | 354.47 | | 6.88 | 378.12 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/2-A | | | VBW/2-B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 385.90 | | | 385.00 | | |
| Bottom of Well Elevation --> | | | 342.20 | | | 309.40 | 304 | Maint. 2/16/2017 |
| Depth of Well | | | 43.70 | | | 75.60 | 81 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 3/24/2020 | 370.30 | 3.75 | 32.10 | 353.80 | | 21.80 | 363.20 | |
| 4/23/2020 | 375.30 | 4.63 | 31.20 | 354.70 | | 75.60 | | |
| 5/28/2020 | 374.80 | 0.04 | | | No data received | | | No data received |
| 6/23/2020 | 373.60 | 0.00 | | | No data received | | | No data received |
| 7/29/2020 | 370.70 | 0.00 | | | No data received | | | No data received |
| 8/27/2020 | 367.80 | 0.00 | | | No data received | | | No data received |
| 9/29/2020 | 364.90 | 0.00 | | | No data received | | | No data received |
| 10/29/2020 | 354.80 | 0.00 | | | No data received | | | No data received |
| 11/24/2020 | 343.00 | 0.32 | | | No data received | | | No data received |
| 12/29/2020 | 343.50 | 1.14 | 30.10 | | | 14.30 | | |
| 1/27/2021 | 355.70 | 2.45 | 30.00 | | | 6.30 | | |
| 2/25/2021 | 365.90 | 0.03 | 30.40 | | | 0.30 | | |
| 3/23/2021 | 370.80 | 1.27 | 30.70 | | | -3.50 | | |
| 4/28/2021 | 371.70 | 0.03 | 30.10 | | | -4.20 | | |
| 5/26/2021 | 370.00 | 0.05 | 9.20 | | | 1.31 | | |
| 6/30/2021 | 366.30 | 0.00 | 9.01 | | | 3.40 | | |
| 7/27/2021 | 361.50 | 0.03 | 8.90 | | | 6.00 | | |
| 8/25/2021 | 356.30 | 0.00 | 9.10 | | | 9.10 | | |
| 9/28/2021 | 350.60 | 0.03 | 9.50 | | | 13.00 | | |
| 10/27/2021 | 343.50 | 0.79 | 9.60 | | | 17.90 | | |
| 11/25/2021 | 343.40 | 0.00 | 9.90 | | | 18.90 | | |
| 12/21/2021 | 348.90 | 6.14 | 10.00 | | | 15.50 | | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-3A | | | P-3B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.60 | | | 385.60 | | |
| Bottom of Well Elevation --> | | | 362.30 | | | 340.30 | | |
| Depth of Well | | | 23.30 | | | 45.30 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 1/1/2008 | | | | | | | | |
| 2/1/2008 | | | | | | | | |
| 3/25/2008 | 365.10 | | 22.70 | 362.9 | | 38.70 | 346.9 | |
| 4/25/2008 | 366.40 | | 22.70 | 362.9 | | 38.70 | 346.9 | |
| 5/28/2008 | 365.30 | | 23.30 | 362.3 | | 39.30 | 346.3 | |
| 6/25/2008 | 365.00 | | 23.30 | 362.3 | | 39.80 | 345.8 | |
| 7/18/2008 | 364.50 | | 23.30 | 362.3 | | 39.80 | 345.8 | |
| 8/25/2008 | 363.50 | | 23.30 | 362.3 | | 40.30 | 345.3 | |
| 9/25/2008 | 363.00 | | 23.30 | 362.3 | | 40.30 | 345.3 | |
| 10/21/2008 | 362.00 | | 23.30 | 362.3 | | 40.30 | 345.3 | |
| 11/25/2008 | 365.00 | | 23.30 | 362.3 | | 39.80 | 345.8 | |
| 12/23/2008 | 365.00 | | 23.30 | 362.3 | | 39.80 | 345.8 | |
| 1/26/2009 | 364.50 | | 23.30 | 362.3 | | 40.30 | 345.3 | |
| 2/24/2009 | 364.50 | | 23.30 | 362.3 | | 40.30 | 345.3 | |
| 3/23/2009 | 368.50 | | 23.30 | 362.3 | | 38.70 | 345.9 | |
| 4/27/2009 | 367.50 | | 23.30 | 362.3 | | 39.30 | 346.3 | |
| 5/22/2009 | 367.00 | | 23.30 | 362.3 | | 39.30 | 346.3 | |
| 6/29/2009 | 372.00 | | 23.30 | 362.3 | | 36.70 | 348.9 | |
| 7/31/2009 | 371.00 | | 23.30 | 362.3 | | 38.30 | 347.3 | |
| 8/26/2009 | 370.00 | | 23.30 | 362.3 | | 38.30 | 347.3 | |
| 9/29/2009 | 369.50 | | 23.30 | 362.3 | | 39.30 | 346.3 | |
| 10/30/2009 | 369.00 | | 23.30 | 362.3 | | 38.30 | 347.3 | |
| 11/30/2009 | 368.00 | | 23.30 | 362.3 | | 38.30 | 347.3 | |
| 12/30/2009 | 368.00 | | 23.30 | 362.3 | | 38.30 | 348.2 | |
| 3/1/2010 | 368.00 | | 23.00 | 362.6 | | 37.40 | 347.9 | |
| 3/30/2010 | 368.00 | | 23.10 | 362.5 | | 37.70 | 347.9 | |
| 4/4/2010 | 368.70 | | 22.80 | 362.7 | | 37.70 | 347.9 | |
| 4/27/2010 | 368.40 | | 22.80 | 362.8 | | 37.80 | 347.8 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-3A | | | P-3B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.60 | | | 385.60 | | |
| Bottom of Well Elevation --> | | | 362.30 | | | 340.30 | | |
| Depth of Well | | | 23.30 | | | 45.30 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 5/26/2010 | 367.84 | | 22.90 | 362.7 | | 37.90 | 347.7 | |
| 6/29/2010 | 367.00 | | 23.00 | 362.6 | | 38.10 | 347.5 | |
| 7/27/2010 | 367.00 | | 23.60 | 362.0 | | 38.30 | 347.3 | |
| 8/27/2010 | 366.80 | | 23.40 | 362.2 | | 38.10 | 347.5 | |
| 9/28/2010 | 366.80 | | 23.00 | 362.6 | | 38.60 | 347.0 | |
| 10/26/2010 | 368.50 | | 23.10 | 362.5 | | 38.70 | 346.9 | |
| 11/30/2010 | 371.40 | | 23.00 | 362.6 | | 37.80 | 347.8 | |
| 12/28/2010 | 374.70 | | 23.20 | 362.4 | | 36.60 | 349.0 | |
| 1/4/2011 | 374.80 | | 23.40 | 362.2 | | 36.50 | 349.1 | |
| 1/6/2011 | 374.80 | | 23.40 | 362.2 | | 36.50 | 349.2 | |
| 1/7/2011 | 374.80 | | 23.40 | 362.2 | | 36.50 | 349.1 | |
| 1/8/2011 | 374.80 | | 23.60 | 362.0 | | 36.80 | 348.8 | |
| 1/9/2011 | 374.80 | | 23.40 | 362.2 | | 36.80 | 348.8 | |
| 1/10/2011 | 374.80 | | 23.40 | 362.2 | | 36.60 | 349.0 | |
| 1/11/2011 | 374.80 | | 23.20 | 362.4 | | 36.80 | 348.8 | |
| 1/17/2011 | 374.80 | | 23.40 | 362.2 | | 36.70 | 348.9 | |
| 1/19/2011 | 374.70 | | 23.40 | 362.2 | | 36.80 | 348.8 | |
| 1/21/2011 | 374.80 | | 23.40 | 362.2 | | 36.90 | 348.7 | |
| 1/27/2011 | 374.60 | | 23.00 | 362.6 | | 37.00 | 348.6 | |
| 2/3/2011 | 374.60 | | 23.40 | 362.2 | | 37.20 | 348.4 | |
| 2/8/2011 | 374.70 | | 23.40 | 362.2 | | 37.20 | 348.4 | |
| 2/28/2011 | 374.70 | | 22.90 | 362.7 | | 37.40 | 348.2 | |
| 3/28/2011 | 372.50 | 2.35 | 23.00 | 362.6 | | 37.50 | 348.1 | |
| 4/28/2011 | 372.10 | 0.27 | 23.20 | 362.4 | | 37.90 | 347.7 | |
| 5/18/2011 | 371.80 | 0.03 | 23.10 | 362.5 | | 37.90 | 347.7 | |
| 5/25/2011 | 371.70 | 0.30 | 23.00 | 362.6 | | 37.90 | 347.7 | |
| 6/28/2011 | 370.90 | 0.03 | 22.90 | 362.7 | | 38.00 | 347.6 | |
| 7/26/2011 | 370.30 | 0.03 | 23.00 | 362.7 | | 38.20 | 347.4 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-3A | | | P-3B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.60 | | | 385.60 | | |
| Bottom of Well Elevation --> | | | 362.30 | | | 340.30 | | |
| Depth of Well | | | 23.30 | | | 45.30 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 8/24/2011 | 369.60 | 0.03 | 23.70 | 361.9 | | 38.30 | 347.3 | |
| 8/30/2011 | 369.40 | | 23.10 | 362.5 | | 38.60 | 347.0 | |
| 9/13/2011 | 364.30 | 0.00 | 23.00 | 362.6 | | 40.40 | 345.2 | |
| 9/27/2011 | 361.90 | | 23.00 | 362.6 | | 43.10 | 342.5 | |
| 10/11/2011 | 358.50 | 1.03 | 23.00 | 362.6 | | 44.10 | 341.5 | |
| 10/25/2011 | 356.00 | 1.03 | 22.90 | 362.7 | | 45.30 | 340.3 | |
| 11/29/2011 | 355.00 | 1.51 | 23.70 | 361.9 | | 45.50 | 340.1 | |
| 12/28/2011 | 355.00 | 0.28 | 23.70 | 361.9 | | 45.60 | 340.0 | |
| 1/26/2012 | 355.00 | 1.05 | 23.60 | 362.0 | | 45.60 | 340.0 | |
| 2/28/2012 | 355.00 | 0.73 | 23.60 | 362.0 | | 45.60 | 340.0 | |
| 3/27/2012 | 352.40 | 0.73 | 23.60 | 362.0 | | 45.70 | 339.9 | |
| 4/23/2012 | 352.10 | 1.35 | 23.60 | 362.0 | | 45.70 | 339.9 | |
| 5/30/2012 | 352.20 | 0.07 | 23.70 | 361.9 | | 45.60 | 340.0 | |
| 6/13/2012 | 352.20 | | 23.70 | 361.9 | | 45.60 | 340.0 | |
| 6/26/2012 | 352.20 | 0.00 | 23.60 | 362.0 | | 45.50 | 340.1 | |
| 7/24/2012 | 352.20 | 0.23 | 23.60 | 362.0 | | 45.60 | 340.0 | |
| 8/8/2012 | 352.20 | 0.23 | 23.70 | 362.9 | | 45.70 | 339.9 | |
| 8/28/2012 | 351.80 | 0.00 | 23.60 | 362.0 | | 45.50 | 340.1 | |
| 8/29/2012 | 351.80 | 0.00 | 23.80 | 361.8 | | 45.70 | 339.9 | |
| 9/25/2012 | 351.30 | 0.00 | 23.70 | 361.9 | | 45.60 | 340.0 | |
| 10/31/2012 | 351.00 | 0.09 | 23.60 | 362.0 | | 45.60 | 340.0 | |
| 11/27/2012 | 351.00 | 0.87 | 23.60 | 362.0 | | 45.50 | 340.1 | |
| 12/12/2012 | 351.00 | 1.13 | 23.60 | 362.0 | | 45.60 | 340.0 | |
| 1/29/2013 | 366.10 | 1.30 | 23.80 | 361.8 | | 46.00 | 339.6 | |
| 2/21/2013 | 372.10 | 0.42 | 23.40 | 362.2 | | 42.90 | 342.7 | |
| 3/28/2013 | 371.90 | 0.79 | 23.70 | 361.9 | | 41.10 | 344.5 | |
| 4/25/2013 | 371.40 | 0.00 | 23.60 | 362.0 | | 41.00 | 344.6 | |
| 5/22/2013 | 370.90 | 0.00 | 23.80 | 361.8 | | 41.10 | 344.5 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-3A | | | P-3B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.60 | | | 385.60 | | |
| Bottom of Well Elevation --> | | | 362.30 | | | 340.30 | | |
| Depth of Well | | | 23.30 | | | 45.30 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 6/25/2013 | 370.20 | 0.00 | 23.60 | 362.0 | | 41.00 | 344.6 | |
| 7/23/2013 | 369.40 | 0.00 | 23.60 | 362.0 | | 41.30 | 344.3 | |
| 8/21/2013 | 368.60 | 0.00 | 23.70 | 361.9 | Dry | 41.70 | 343.9 | |
| 9/25/2013 | 367.70 | 0.00 | 23.70 | 361.9 | Dry | 42.00 | 343.6 | |
| 10/30/2013 | 366.90 | 0.00 | 23.70 | 361.9 | Dry | 42.70 | 342.9 | |
| 11/26/2013 | 366.50 | 0.59 | 23.60 | 362.0 | Dry | 42.60 | 343.0 | |
| 12/17/2013 | 366.20 | 0.70 | 23.70 | 361.9 | Dry | 43.00 | 342.6 | |
| 1/28/2014 | 365.50 | 0.00 | 23.80 | 361.8 | Dry | 43.70 | 341.9 | |
| 2/25/2014 | 365.40 | 0.76 | 23.80 | 361.8 | Dry | 44.00 | 341.6 | |
| 3/25/2014 | 365.30 | | 23.80 | 361.8 | Dry | 43.90 | 341.7 | |
| 3/28/2014 | 365.30 | 2.02 | 23.60 | 362.0 | | 43.90 | 341.7 | |
| 4/25/2014 | 364.50 | 0.52 | 23.60 | 362.0 | | 44.10 | 341.5 | |
| 5/28/2014 | 363.80 | 0.00 | 23.70 | 361.9 | Dry | 44.40 | 341.2 | |
| 6/25/2014 | 363.00 | 0.00 | 23.70 | 361.9 | | 45.00 | 345.2 | |
| 7/30/2014 | 361.90 | 0.00 | 23.70 | 361.9 | Wet | 45.10 | 342.5 | |
| 8/27/2014 | 361.10 | 0.04 | 23.60 | 362.0 | Dry | 45.60 | 340.0 | Wet |
| 9/23/2014 | 360.50 | 0.00 | 23.60 | 362.0 | Wet | 45.50 | 340.1 | Wet |
| 10/29/2014 | 359.50 | 0.00 | 23.60 | 362.0 | Dry | 45.80 | 339.8 | Dry |
| 11/24/2014 | 359.40 | 0.32 | 23.70 | 361.9 | Dry | 45.60 | 340.0 | Dry |
| 12/30/2014 | 359.40 | 3.98 | 23.70 | 361.9 | Dry | 45.80 | 339.8 | Dry |
| 1/27/2015 | 359.00 | 1.42 | 23.60 | 362.0 | Wet | 45.60 | 340.0 | Dry |
| 2/26/2015 | 358.60 | 0.46 | 23.60 | 362.0 | Wet | 45.50 | 340.1 | Wet |
| 3/27/2015 | 358.00 | 0.63 | 23.70 | 361.9 | | 45.90 | 339.7 | Dry |
| 4/26/2015 | 331.00 | 0.22 | 23.60 | 362.0 | | 45.60 | 340.0 | Dry |
| 5/27/2015 | 332.00 | 1.79 | 23.60 | 362.0 | Dry | 45.60 | 340.0 | Dry |
| 6/23/2015 | 331.00 | 0.00 | 23.60 | 362.0 | Wet | 45.70 | 339.9 | Wet |
| 7/30/2015 | 331.00 | 0.00 | 23.70 | 361.9 | Dry | 45.60 | 340.0 | Dry |
| 8/25/2015 | 331.00 | 0.00 | 23.50 | 362.1 | Dry | 45.50 | 340.1 | Dry |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-3A | | | P-3B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|-----------|
| Top of Well Elevation --> | | | 385.60 | | | 385.60 | | |
| Bottom of Well Elevation --> | | | 362.30 | | | 340.30 | | |
| Depth of Well | | | 23.30 | | | 45.30 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 9/30/2015 | 331.00 | 1.97 | 23.70 | 361.9 | Dry | 45.70 | 339.9 | Dry |
| 10/29/2015 | 331.00 | 0.18 | 23.70 | 361.9 | Dry | 45.70 | 339.9 | Dry |
| 11/25/2015 | 331.00 | 0.17 | 23.70 | 361.9 | Dry | 45.50 | 340.1 | Dry |
| 12/30/2015 | 331.00 | 1.42 | 23.70 | 361.9 | Dry | 45.50 | 340.1 | Dry |
| 1/26/2016 | 343.70 | 2.97 | 23.60 | 362.0 | Dry | 45.60 | 340.0 | Dry |
| 2/24/2016 | 363.80 | 0.26 | 23.70 | 361.9 | Dry | 45.70 | 339.9 | Dry |
| 3/29/2016 | 374.90 | 1.50 | 23.60 | 362.0 | | 41.90 | 343.7 | |
| 4/28/2016 | 375.50 | 0.09 | 23.60 | 362.1 | | 37.70 | 347.9 | |
| 5/24/2016 | 374.40 | 0.13 | 23.30 | 362.3 | | 38.00 | 347.6 | |
| 6/29/2016 | 373.70 | 0.00 | 23.30 | 362.3 | | 38.10 | 347.5 | |
| 7/28/2016 | 372.20 | 0.00 | 23.60 | 362.0 | Dry | 38.50 | 347.1 | |
| 8/25/2016 | 367.10 | 0.00 | 23.70 | 361.9 | Dry | 40.90 | 344.7 | |
| 9/27/2016 | 363.30 | 0.00 | 23.80 | 361.8 | | 41.80 | 343.8 | |
| 10/25/2016 | 362.10 | 0.82 | 23.60 | 362.0 | | 42.80 | 342.8 | |
| 11/22/2016 | 361.80 | 1.69 | 23.70 | 361.9 | Dry | 43.00 | 342.6 | |
| 12/28/2016 | 368.55 | 3.61 | 23.70 | 361.9 | | 40.70 | 344.9 | |
| 1/25/2017 | 375.80 | 6.48 | 23.60 | 362.0 | Dry | 36.40 | 349.2 | |
| 2/28/2017 | 375.90 | 3.95 | 23.60 | 362.0 | Dry | 35.30 | 350.4 | |
| 3/15/2017 | 375.80 | 3.61 | 23.70 | 361.9 | Dry | 35.70 | 349.9 | |
| 3/28/2017 | 375.50 | 0.09 | 23.90 | 361.7 | Dry | 35.00 | 350.6 | |
| 4/26/2017 | 375.00 | 0.04 | 23.70 | 361.9 | Dry | 35.20 | 350.4 | |
| 5/23/2017 | 374.60 | 35.00 | 23.60 | 362.0 | | 35.60 | 350.0 | |
| 6/22/2017 | 373.80 | 0.00 | 23.70 | 361.9 | | 28.20 | 357.4 | Erroneous |
| 7/26/2017 | 371.40 | 0.00 | 23.50 | 362.1 | Dry | 36.70 | 348.9 | |
| 8/30/2017 | 368.60 | 0.00 | 23.70 | 361.9 | Dry | 38.10 | 347.5 | |
| 9/28/2017 | 364.80 | 0.00 | 23.50 | 362.1 | Dry | 40.10 | 345.5 | |
| 10/26/2017 | 359.00 | 0.00 | 23.60 | 362.0 | Dry | 42.10 | 343.5 | |
| 11/29/2017 | 357.80 | 0.15 | 23.60 | 362.0 | Dry | 45.60 | 340.0 | Dry |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-3A | | | P-3B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.60 | | | 385.60 | | |
| Bottom of Well Elevation --> | | | 362.30 | | | 340.30 | | |
| Depth of Well | | | 23.30 | | | 45.30 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 12/27/2017 | 357.30 | 0.00 | 23.60 | 362.0 | Dry | 44.60 | 341.0 | |
| 1/24/2018 | 357.30 | 1.84 | 23.60 | 362.00 | Dry | 44.80 | 340.80 | |
| 2/21/2018 | 361.00 | 0.18 | 23.30 | 362.30 | Wet | 43.70 | 341.90 | |
| 3/28/2018 | 366.90 | 2.19 | 23.60 | 362.00 | | 40.70 | 344.90 | |
| 4/25/2018 | 367.00 | 0.05 | 23.60 | 362.00 | Dry | 40.20 | 345.40 | |
| 5/30/2018 | 366.40 | 0.36 | 23.30 | 362.30 | Wet | 40.40 | 345.20 | |
| 6/28/2018 | 365.60 | 0.00 | 23.50 | 362.10 | | 40.70 | 344.90 | |
| 7/25/2018 | 363.20 | 0.00 | 23.70 | 361.90 | Dry | 41.50 | 344.10 | |
| 8/28/2018 | 357.30 | 0.00 | 23.60 | 362.00 | Dry | 44.25 | 341.35 | |
| 9/27/2018 | 354.60 | 0.00 | 23.50 | 362.10 | | 45.40 | 340.20 | |
| 10/24/2018 | 351.90 | 1.49 | 23.60 | 362.00 | Dry | 45.60 | 340.00 | |
| 11/28/2018 | 348.60 | 0.56 | 23.50 | 362.10 | Dry | 45.50 | 340.10 | |
| 12/21/2018 | 348.80 | 2.04 | 23.60 | 362.00 | Dry | 45.70 | 339.90 | Dry |
| 1/30/2019 | 348.90 | 4.41 | 23.50 | 362.10 | Dry | 45.50 | 340.10 | Dry |
| 2/27/2019 | 351.70 | 8.05 | 23.50 | 362.10 | Dry | 45.50 | 340.10 | Dry |
| 3/28/2019 | 351.60 | 2.00 | 23.60 | 362.00 | Dry | 45.70 | 339.90 | Dry |
| 4/25/2019 | 348.70 | 0.10 | 23.7 | 361.90 | | 45.5 | 340.10 | Dry |
| 5/30/2019 | 348.30 | 0.99 | 23.6 | 362.00 | | 45.6 | 340.00 | |
| 6/26/2019 | 344.50 | 0.11 | 26.3 | 359.30 | Omitted | 45.5 | 340.10 | Dry |
| 7/5/2019 | 343.30 | 0.00 | 23.6 | 362.00 | | 45.5 | 340.10 | Dry |
| 7/30/2019 | 341.00 | 0.00 | 23.6 | 362.00 | | 45.6 | 340.00 | Dry |
| 8/27/2019 | 341.00 | 0.00 | 23.7 | 361.90 | | 45.6 | 340.00 | Dry |
| 9/26/2019 | 341.00 | 0.00 | 23.6 | 362.00 | | 45.5 | 340.10 | Dry |
| 10/24/2019 | 341.00 | 0.00 | 23.5 | 362.10 | | 45.5 | 340.10 | Dry |
| 11/26/2019 | 341.00 | 2.60 | 23.6 | 362.00 | | 45.7 | 339.90 | Dry |
| 12/16/2019 | 341.00 | 4.93 | 23.5 | 362.10 | Dry | 45.6 | 340.00 | Dry |
| 1/28/2020 | 341.00 | 0.21 | 23.5 | 362.10 | Dry | 45.5 | 340.10 | Dry |
| 2/26/2020 | 360.60 | 0.39 | 23.4 | 362.20 | | 45.5 | 340.10 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | P-3A | | | P-3B | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|---------|--------------|----------------|---------|
| Top of Well Elevation --> | | | 385.60 | | | 385.60 | | |
| Bottom of Well Elevation --> | | | 362.30 | | | 340.30 | | |
| Depth of Well | | | 23.30 | | | 45.30 | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 3/24/2020 | 370.30 | 3.75 | 23.5 | 362.10 | | 45.6 | 340.00 | |
| 4/23/2020 | 375.30 | 4.63 | 23.7 | 361.90 | | 38.5 | 347.10 | |
| 5/28/2020 | 374.80 | 0.04 | 23.6 | 362.00 | | 37.8 | 347.80 | |
| 6/23/2020 | 373.60 | 0.00 | 23.5 | 362.10 | | 37.8 | 347.80 | |
| 7/29/2020 | 370.70 | 0.00 | 23.6 | 362.00 | | 39 | 346.60 | |
| 8/27/2020 | 367.80 | 0.00 | 23.6 | 362.00 | | 40.3 | 345.30 | |
| 9/29/2020 | 364.90 | 0.00 | 23.6 | 362.00 | | 41.4 | 344.20 | |
| 10/29/2020 | 354.80 | 0.00 | 23.6 | 362.00 | | 43.8 | 341.80 | |
| 11/24/2020 | 343.00 | 0.32 | 23.6 | 362.00 | | 45.6 | 340.00 | |
| 12/29/2020 | 343.50 | 1.14 | 23.5 | 362.10 | | 45.5 | 340.10 | |
| 1/27/2021 | 355.70 | 2.45 | 23.60 | 362.00 | | 45.60 | 340.00 | |
| 2/25/2021 | 365.90 | 0.03 | 23.50 | 362.10 | | 42.50 | 343.10 | |
| 3/23/2021 | 370.80 | 1.27 | 23.60 | 362.00 | | 39.00 | 346.60 | |
| 4/28/2021 | 371.70 | 0.03 | 23.50 | 362.10 | | 37.50 | 348.10 | |
| 5/26/2021 | 370.00 | 0.05 | 23.60 | 362.00 | | 38.10 | 347.50 | |
| 6/30/2021 | 366.30 | 0.00 | 23.60 | 362.00 | | 39.70 | 345.90 | |
| 7/27/2021 | 361.50 | 0.03 | 23.30 | 362.30 | | 41.70 | 343.90 | |
| 8/25/2021 | 356.30 | 0.00 | 23.60 | 362.00 | | 44.10 | 341.50 | |
| 9/28/2021 | 350.60 | 0.03 | 23.40 | 362.20 | | 45.40 | 340.20 | |
| 10/27/2021 | 343.50 | 0.79 | 23.30 | 362.30 | | 45.30 | 340.30 | |
| 11/25/2021 | 343.40 | 0.00 | 23.30 | 362.30 | | 45.30 | 340.30 | |
| 12/21/2021 | 348.90 | 6.14 | 23.60 | 362.00 | | 45.60 | 340.00 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/4 | | | VBW/5 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 340.00 | 342.8 | Raised 6/23/2015 | 330.70 | 333.7 | Raised 8/25/2015 |
| Bottom of Well Elevation --> | | | 314.70 | 314.7 | | 314.00 | 314.0 | |
| Depth of Well | | | 25.30 | 28.1 | | 16.70 | 19.7 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 1/1/2008 | | | | | | | | |
| 2/1/2008 | | | | | | | | |
| 3/25/2008 | 365.10 | | 13.70 | 326.3 | | 5.10 | 325.6 | |
| 4/25/2008 | 366.40 | | 13.70 | 326.3 | | 5.10 | 325.6 | |
| 5/28/2008 | 365.30 | | 13.70 | 326.3 | | 5.10 | 325.6 | |
| 6/25/2008 | 365.00 | | 14.30 | 325.7 | | 5.10 | 325.6 | |
| 7/18/2008 | 364.50 | | 14.30 | 325.7 | | 5.10 | 325.6 | |
| 8/25/2008 | 363.50 | | 14.30 | 325.7 | | 5.70 | 325.0 | |
| 9/25/2008 | 363.00 | | 14.30 | 325.7 | | 5.70 | 325.0 | |
| 10/21/2008 | 362.00 | | 14.30 | 325.7 | | 5.70 | 325.0 | |
| 11/25/2008 | 365.00 | | 14.30 | 325.7 | | 5.70 | 325.0 | |
| 12/23/2008 | 365.00 | | 14.30 | 325.7 | | 5.70 | 325.0 | |
| 1/26/2009 | 364.50 | | 14.30 | 325.7 | | 5.70 | 325.0 | |
| 2/24/2009 | 364.50 | | 14.30 | 325.7 | | 5.70 | 325.0 | |
| 3/23/2009 | 368.50 | | 14.30 | 325.7 | | 5.70 | 325.0 | |
| 4/27/2009 | 367.50 | | 14.30 | 325.7 | | 5.20 | 325.5 | |
| 5/22/2009 | 367.00 | | 14.30 | 325.7 | | 5.20 | 325.5 | |
| 6/29/2009 | 372.00 | | 14.30 | 325.7 | | 4.10 | 326.6 | |
| 7/31/2009 | 371.00 | | 15.30 | 324.7 | | 5.10 | 325.6 | |
| 8/26/2009 | 370.00 | | 15.30 | 324.7 | | 5.10 | 325.6 | |
| 9/29/2009 | 369.50 | | 15.30 | 324.7 | | 5.70 | 325.0 | |
| 10/30/2009 | 369.00 | | 14.30 | 325.7 | | 4.70 | 326.0 | |
| 11/30/2009 | 368.00 | | 14.30 | 325.7 | | 4.10 | 326.6 | |
| 12/30/2009 | 368.00 | | 14.30 | 325.7 | | 4.10 | 326.6 | |
| 3/1/2010 | 368.00 | | 13.50 | 326.5 | | 3.00 | 327.7 | |
| 3/30/2010 | 368.00 | | 13.50 | 326.5 | | 3.20 | 327.5 | |
| 4/4/2010 | 368.70 | | 13.50 | 326.5 | | 3.30 | 327.4 | |
| 4/27/2010 | 368.40 | | 13.40 | 326.6 | | 3.20 | 327.5 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/4 | | | VBW/5 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 340.00 | 342.8 | Raised 6/23/2015 | 330.70 | 333.7 | Raised 8/25/2015 |
| Bottom of Well Elevation --> | | | 314.70 | 314.7 | | 314.00 | 314.0 | |
| Depth of Well | | | 25.30 | 28.1 | | 16.70 | 19.7 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 5/26/2010 | 367.84 | | 13.60 | 326.4 | | 3.40 | 327.3 | |
| 6/29/2010 | 367.00 | | 13.60 | 326.4 | | 3.50 | 327.2 | |
| 7/27/2010 | 367.00 | | 13.60 | 326.4 | | 3.60 | 327.1 | |
| 8/27/2010 | 366.80 | | 13.80 | 326.2 | | 3.60 | 327.1 | |
| 9/28/2010 | 366.80 | | 13.60 | 326.4 | | 3.70 | 327.0 | |
| 10/26/2010 | 368.50 | | 13.60 | 326.4 | | 2.50 | 328.2 | |
| 11/30/2010 | 371.40 | | 13.70 | 326.3 | | 3.30 | 327.4 | |
| 12/28/2010 | 374.70 | | 13.50 | 326.5 | | 2.60 | 328.1 | |
| 1/4/2011 | 374.80 | | 13.40 | 326.6 | | 2.30 | 328.4 | |
| 1/6/2011 | 374.80 | | 13.40 | 326.6 | | 2.50 | 328.2 | |
| 1/7/2011 | 374.80 | | 13.50 | 326.5 | | 2.70 | 328.0 | |
| 1/8/2011 | 374.80 | | 13.60 | 326.3 | | 3.10 | 327.6 | |
| 1/9/2011 | 374.80 | | 13.70 | 326.3 | | 3.10 | 327.6 | |
| 1/10/2011 | 374.80 | | 13.60 | 326.4 | | 3.00 | 327.8 | |
| 1/11/2011 | 374.80 | | 13.40 | 326.6 | | 2.70 | 328.0 | |
| 1/17/2011 | 374.80 | | 13.50 | 326.6 | | 3.00 | 327.8 | |
| 1/19/2011 | 374.70 | | 13.50 | 326.5 | | 2.80 | 327.9 | |
| 1/21/2011 | 374.80 | | 13.50 | 326.5 | | 2.80 | 327.9 | |
| 1/27/2011 | 374.60 | | 13.50 | 326.5 | | 2.90 | 327.8 | |
| 2/3/2011 | 374.60 | | 13.50 | 326.5 | | 3.20 | 327.5 | |
| 2/8/2011 | 374.70 | | 13.50 | 326.5 | | 3.30 | 327.4 | |
| 2/28/2011 | 374.70 | | 13.50 | 326.5 | | 2.90 | 327.8 | |
| 3/28/2011 | 372.50 | 2.35 | 13.50 | 326.5 | | 3.00 | 327.7 | |
| 4/28/2011 | 372.10 | 0.27 | 13.70 | 326.3 | | 3.80 | 326.9 | |
| 5/18/2011 | 371.80 | 0.03 | 13.50 | 326.5 | | 3.40 | 327.3 | |
| 5/25/2011 | 371.70 | 0.30 | 13.70 | 326.3 | | 3.50 | 327.2 | |
| 6/28/2011 | 370.90 | 0.03 | 13.60 | 326.4 | | 3.50 | 327.2 | |
| 7/26/2011 | 370.30 | 0.03 | 13.70 | 326.3 | | 3.90 | 326.8 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/4 | | | VBW/5 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|----------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 340.00 | 342.8 | Raised 6/23/2015 | 330.70 | 333.7 | Raised 8/25/2015 |
| Bottom of Well Elevation --> | | | 314.70 | 314.7 | | 314.00 | 314.0 | |
| Depth of Well | | | 25.30 | 28.1 | | 16.70 | 19.7 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 8/24/2011 | 369.60 | 0.03 | 16.00 | 324.0 | | 3.50 | 327.2 | |
| 8/30/2011 | 369.40 | | 16.00 | 324.0 | | 3.60 | 327.1 | |
| 9/13/2011 | 364.30 | 0.00 | 15.90 | 324.1 | | 4.00 | 326.7 | |
| 9/27/2011 | 361.90 | | 16.10 | 323.9 | | 5.00 | 325.7 | |
| 10/11/2011 | 358.50 | 1.03 | 16.10 | 323.9 | | 5.60 | 325.1 | |
| 10/25/2011 | 356.00 | 1.03 | 16.30 | 323.7 | | 6.50 | 324.2 | |
| 11/29/2011 | 355.00 | 1.51 | 16.80 | 323.2 | | 7.20 | 323.5 | |
| 12/28/2011 | 355.00 | 0.28 | 17.40 | 322.7 | | 7.60 | 323.1 | |
| 1/26/2012 | 355.00 | 1.05 | 17.50 | 322.5 | | 7.80 | 322.9 | |
| 2/28/2012 | 355.00 | 0.73 | 17.90 | 322.1 | | 7.90 | 322.9 | |
| 3/27/2012 | 352.40 | 0.73 | 18.40 | 321.6 | | 8.30 | 322.4 | |
| 4/23/2012 | 352.10 | 1.35 | 18.30 | 321.7 | | 8.10 | 322.6 | |
| 5/30/2012 | 352.20 | 0.07 | 18.60 | 321.4 | | 8.40 | 322.3 | |
| 6/13/2012 | 352.20 | | 18.70 | 321.3 | | 8.60 | 322.1 | |
| 6/26/2012 | 352.20 | 0.00 | 2.80 | 337.2 | Cap was off bad read | 8.70 | 322.0 | |
| 7/24/2012 | 352.20 | 0.23 | 4.20 | 335.8 | Cap was off bad read | 7.75 | 323.0 | |
| 8/8/2012 | 352.20 | 0.23 | 4.70 | 335.3 | Cap was off bad read | 7.50 | 323.2 | |
| 8/28/2012 | 351.80 | 0.00 | 19.20 | 320.8 | | 7.90 | 322.8 | |
| 8/29/2012 | 351.80 | 0.00 | 18.90 | 321.1 | | 8.20 | 322.5 | |
| 9/25/2012 | 351.30 | 0.00 | 19.40 | 320.6 | | 8.40 | 322.3 | |
| 10/31/2012 | 351.00 | 0.09 | 19.60 | 320.4 | | 8.90 | 321.8 | |
| 11/27/2012 | 351.00 | 0.87 | 19.20 | 320.8 | | 9.20 | 321.5 | |
| 12/12/2012 | 351.00 | 1.13 | 19.00 | 321.0 | | 9.20 | 321.5 | |
| 1/29/2013 | 366.10 | 1.30 | 19.00 | 321.0 | | 5.40 | 325.3 | |
| 2/21/2013 | 372.10 | 0.42 | 18.80 | 321.2 | | 4.30 | 326.4 | |
| 3/28/2013 | 371.90 | 0.79 | 18.10 | 321.9 | | 3.10 | 327.6 | |
| 4/25/2013 | 371.40 | 0.00 | 17.80 | 322.2 | | 2.70 | 328.0 | |
| 5/22/2013 | 370.90 | 0.00 | 17.70 | 322.3 | | 2.90 | 327.8 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/4 | | | VBW/5 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 340.00 | 342.8 | Raised 6/23/2015 | 330.70 | 333.7 | Raised 8/25/2015 |
| Bottom of Well Elevation --> | | | 314.70 | 314.7 | | 314.00 | 314.0 | |
| Depth of Well | | | 25.30 | 28.1 | | 16.70 | 19.7 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 6/25/2013 | 370.20 | 0.00 | 17.00 | 323.0 | | 2.50 | 328.2 | |
| 7/23/2013 | 369.40 | 0.00 | 16.80 | 323.2 | | 2.70 | 328.0 | |
| 8/21/2013 | 368.60 | 0.00 | 16.80 | 323.4 | | 2.80 | 327.9 | |
| 9/25/2013 | 367.70 | 0.00 | 16.30 | 323.7 | | 2.80 | 327.9 | |
| 10/30/2013 | 366.90 | 0.00 | 16.10 | 323.9 | | 3.00 | 327.7 | |
| 11/26/2013 | 366.50 | 0.59 | 15.90 | 324.1 | | 3.00 | 327.7 | |
| 12/17/2013 | 366.20 | 0.70 | 15.90 | 324.1 | | 3.20 | 327.5 | |
| 1/28/2014 | 365.50 | 0.00 | 15.70 | 324.3 | | 3.40 | 327.3 | |
| 2/25/2014 | 365.40 | 0.76 | 15.90 | 324.2 | | 3.65 | 327.1 | |
| 3/25/2014 | 365.30 | | 16.00 | 324.0 | | 3.40 | 327.3 | |
| 3/28/2014 | 365.30 | 2.02 | 15.60 | 324.5 | | 3.40 | 327.3 | |
| 4/25/2014 | 364.50 | 0.52 | 15.50 | 324.5 | | 3.50 | 327.2 | |
| 5/28/2014 | 363.80 | 0.00 | 15.50 | 324.5 | | 3.70 | 327.0 | |
| 6/25/2014 | 363.00 | 0.00 | 15.70 | 324.3 | | 3.90 | 326.8 | |
| 7/30/2014 | 361.90 | 0.00 | 15.40 | 324.6 | | 3.90 | 326.8 | |
| 8/27/2014 | 361.10 | 0.04 | 15.50 | 324.5 | | 4.30 | 326.4 | |
| 9/23/2014 | 360.50 | 0.00 | 13.50 | 326.5 | | 4.20 | 326.5 | |
| 10/29/2014 | 359.50 | 0.00 | 15.60 | 324.4 | | 4.50 | 326.2 | |
| 11/24/2014 | 359.40 | 0.32 | 15.70 | 324.3 | | 4.60 | 326.1 | |
| 12/30/2014 | 359.40 | 3.98 | 15.80 | 324.2 | | 4.70 | 326.0 | |
| 1/27/2015 | 359.00 | 1.42 | 15.90 | 324.1 | | 4.70 | 326.0 | |
| 2/26/2015 | 358.60 | 0.46 | 15.90 | 324.1 | | 4.80 | 325.9 | |
| 3/27/2015 | 358.00 | 0.63 | 16.00 | 324.0 | | 5.30 | 325.4 | |
| 4/26/2015 | 331.00 | 0.22 | 16.20 | 323.8 | | 8.00 | 322.7 | |
| 5/27/2015 | 332.00 | 1.79 | 16.10 | 323.9 | | 7.90 | 322.8 | |
| 6/23/2015 | 331.00 | 0.00 | 20.50 | 322.3 | Extended casing | 12.30 | 318.4 | |
| 7/30/2015 | 331.00 | 0.00 | 20.60 | 322.2 | | 13.70 | 317.0 | |
| 8/25/2015 | 331.00 | 0.00 | 21.50 | 321.3 | Wet | 17.60 | 316.1 | Extended Casing |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/4 | | | VBW/5 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|--------------------|--------------|----------------|-------------------|
| Top of Well Elevation --> | | | 340.00 | 342.8 | Raised 6/23/2015 | 330.70 | 333.7 | Raised 8/25/2015 |
| Bottom of Well Elevation --> | | | 314.70 | 314.7 | | 314.00 | 314.0 | |
| Depth of Well | | | 25.30 | 28.1 | | 16.70 | 19.7 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 9/30/2015 | 331.00 | 1.97 | 22.50 | 320.3 | | 18.30 | 315.4 | |
| 10/29/2015 | 331.00 | 0.18 | 22.90 | 319.9 | | 18.40 | 315.3 | |
| 11/25/2015 | 331.00 | 0.17 | 23.40 | 319.4 | | 19.50 | 314.2 | Dry |
| 12/30/2015 | 331.00 | 1.42 | 23.80 | 319.0 | VW installed | 19.50 | 314.2 | Dry; VW Installed |
| 1/26/2016 | 343.70 | 2.97 | 17.90 | 325.0 | | 16.07 | 317.6 | |
| 2/24/2016 | 363.80 | 0.26 | 18.10 | 324.7 | | 9.93 | 323.8 | |
| 3/29/2016 | 374.90 | 1.50 | 17.10 | 325.7 | | 5.40 | 328.3 | |
| 4/28/2016 | 375.50 | 0.09 | 15.60 | 327.2 | | 4.30 | 329.4 | |
| 5/24/2016 | 374.40 | 0.13 | 14.20 | 328.6 | | 4.00 | 329.7 | |
| 6/29/2016 | 373.70 | 0.00 | 14.30 | 328.5 | | 4.10 | 329.6 | |
| 7/28/2016 | 372.20 | 0.00 | 14.40 | 328.4 | | 4.11 | 329.6 | |
| 8/25/2016 | 367.10 | 0.00 | 14.50 | 328.3 | | 4.70 | 329.0 | |
| 9/27/2016 | 363.30 | 0.00 | 14.60 | 328.2 | | 5.30 | 328.4 | |
| 10/25/2016 | 362.10 | 0.82 | 14.10 | 328.7 | | 5.00 | 328.7 | |
| 11/22/2016 | 361.80 | 1.69 | | | VW was not logging | | | |
| 12/28/2016 | 368.55 | 3.61 | 13.50 | 329.3 | | 3.00 | 330.7 | |
| 1/25/2017 | 375.80 | 6.48 | 12.90 | 329.9 | | 1.30 | 332.4 | |
| 2/28/2017 | 375.90 | 3.95 | 12.60 | 330.2 | | 1.20 | 332.5 | |
| 3/15/2017 | 375.80 | 3.61 | 12.20 | 330.6 | | 1.10 | 332.6 | |
| 3/28/2017 | 375.50 | 0.09 | 12.10 | 330.7 | | 1.10 | 332.6 | |
| 4/26/2017 | 375.00 | 0.04 | 11.90 | 330.9 | | 1.10 | 332.6 | |
| 5/23/2017 | 374.60 | 35.00 | 11.50 | 331.3 | | 1.10 | 332.6 | |
| 6/22/2017 | 373.80 | 0.00 | 11.30 | 331.5 | | 1.40 | 332.3 | |
| 7/26/2017 | 371.40 | 0.00 | 11.10 | 331.7 | | 2.00 | 331.7 | |
| 8/30/2017 | 368.60 | 0.00 | 11.10 | 331.7 | | 2.90 | 330.8 | |
| 9/28/2017 | 364.80 | 0.00 | 10.90 | 331.9 | | 3.50 | 330.2 | |
| 10/26/2017 | 359.00 | 0.00 | 11.00 | 331.8 | | 4.80 | 328.9 | |
| 11/29/2017 | 357.80 | 0.15 | 11.00 | 331.8 | | 5.80 | 327.9 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/4 | | | VBW/5 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 340.00 | 342.8 | Raised 6/23/2015 | 330.70 | 333.7 | Raised 8/25/2015 |
| Bottom of Well Elevation --> | | | 314.70 | 314.7 | | 314.00 | 314.0 | |
| Depth of Well | | | 25.30 | 28.1 | | 16.70 | 19.7 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 12/27/2017 | 357.30 | 0.00 | 11.00 | 331.8 | | 5.90 | 327.8 | |
| 1/24/2018 | 357.30 | 1.84 | 11.00 | 331.80 | | 6.10 | 327.60 | |
| 2/21/2018 | 361.00 | 0.18 | 11.00 | 331.80 | | 5.60 | 328.10 | |
| 3/28/2018 | 366.90 | 2.19 | 11.60 | 331.20 | | 5.00 | 328.70 | |
| 4/25/2018 | 367.00 | 0.05 | 11.40 | 331.40 | | 4.90 | 328.80 | |
| 5/30/2018 | 366.40 | 0.36 | 11.60 | 331.20 | | 5.10 | 328.60 | |
| 6/28/2018 | 365.60 | 0.00 | 11.50 | 331.30 | | 5.20 | 328.50 | |
| 7/25/2018 | 363.20 | 0.00 | 11.60 | 331.20 | | 5.50 | 328.20 | |
| 8/28/2018 | 357.30 | 0.00 | 11.70 | 331.10 | | 6.40 | 327.30 | |
| 9/27/2018 | 354.60 | 0.00 | 11.80 | 331.00 | | 6.90 | 326.80 | |
| 10/24/2018 | 351.90 | 1.49 | 12.00 | 330.80 | | 7.60 | 326.10 | |
| 11/28/2018 | 348.60 | 0.56 | 12.30 | 330.50 | | 8.60 | 325.10 | |
| 12/21/2018 | 348.80 | 2.04 | 12.20 | 330.60 | | 8.32 | 325.38 | |
| 1/30/2019 | 348.90 | 4.41 | 12.80 | 330.00 | | 9.00 | 324.70 | |
| 2/27/2019 | 351.70 | 8.05 | 12.70 | 330.10 | | 7.90 | 325.80 | |
| 3/28/2019 | 351.60 | 2.00 | 12.60 | 330.20 | | 8.20 | 325.50 | |
| 4/25/2019 | 348.70 | 0.10 | 12.30 | 330.50 | | 9.20 | 324.50 | |
| 5/30/2019 | 348.30 | 0.99 | 12.30 | 330.50 | | 9.50 | 324.20 | |
| 6/26/2019 | 344.50 | 0.11 | 12.50 | 330.30 | | 16.70 | 317.00 | |
| 7/5/2019 | 343.30 | 0.00 | 12.70 | 330.10 | | 10.60 | 323.10 | |
| 7/30/2019 | 341.00 | 0.00 | 13.80 | 329.00 | | 11.50 | 322.20 | |
| 8/27/2019 | 341.00 | 0.00 | 15.17 | 327.63 | | 14.37 | 319.33 | |
| 9/26/2019 | 341.00 | 0.00 | 15.90 | 326.90 | | 16.40 | 317.30 | |
| 10/24/2019 | 341.00 | 0.00 | 16.50 | 326.30 | | 16.70 | 317.00 | |
| 11/26/2019 | 341.00 | 2.60 | 12.60 | 330.20 | | 16.70 | 317.00 | |
| 12/16/2019 | 341.00 | 4.93 | 13.10 | 329.70 | | 8.70 | 325.00 | |
| 1/28/2020 | 341.00 | 0.21 | 12.80 | 330.00 | | 9.00 | 324.70 | |
| 2/26/2020 | 360.60 | 0.39 | 18.84 | 323.96 | | 11.62 | 322.08 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/4 | | | VBW/5 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 340.00 | 342.8 | Raised 6/23/2015 | 330.70 | 333.7 | Raised 8/25/2015 |
| Bottom of Well Elevation --> | | | 314.70 | 314.7 | | 314.00 | 314.0 | |
| Depth of Well | | | 25.30 | 28.1 | | 16.70 | 19.7 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 3/24/2020 | 370.30 | 3.75 | 14.30 | 328.50 | | 4.10 | 329.60 | |
| 4/23/2020 | 375.30 | 4.63 | 17.20 | 325.60 | | 5.30 | 328.40 | |
| 5/28/2020 | 374.80 | 0.04 | | | No data received | | | No data received |
| 6/23/2020 | 373.60 | 0.00 | | | No data received | | | No data received |
| 7/29/2020 | 370.70 | 0.00 | | | No data received | | | No data received |
| 8/27/2020 | 367.80 | 0.00 | | | No data received | | | No data received |
| 9/29/2020 | 364.90 | 0.00 | | | No data received | | | No data received |
| 10/29/2020 | 354.80 | 0.00 | | | No data received | | | No data received |
| 11/24/2020 | 343.00 | 0.32 | | | No data received | | | No data received |
| 12/29/2020 | 343.50 | 1.14 | 15.20 | 327.60 | | 11.60 | 322.10 | |
| 1/27/2021 | 355.70 | 2.45 | 15.20 | 327.60 | | 8.40 | 325.30 | |
| 2/25/2021 | 365.90 | 0.03 | 15.20 | 327.60 | | 6.20 | 327.50 | |
| 3/23/2021 | 370.80 | 1.27 | 15.00 | 327.80 | | 5.10 | 328.60 | |
| 4/28/2021 | 371.70 | 0.03 | 14.40 | 328.40 | | 4.50 | 329.20 | |
| 5/26/2021 | 370.00 | 0.05 | 14.10 | 328.70 | | 4.50 | 329.20 | |
| 6/30/2021 | 366.30 | 0.00 | 14.00 | 328.80 | | 4.85 | 328.85 | |
| 7/27/2021 | 361.50 | 0.03 | 13.70 | 329.10 | | 5.20 | 328.50 | |
| 8/25/2021 | 356.30 | 0.00 | 13.50 | 329.30 | | 5.70 | 328.00 | |
| 9/28/2021 | 350.60 | 0.03 | 13.90 | 328.90 | | 6.90 | 326.80 | |
| 10/27/2021 | 343.50 | 0.79 | 13.40 | 329.40 | | 9.30 | 324.40 | |
| 11/25/2021 | 343.40 | 0.00 | 13.80 | 329.00 | | 9.80 | 323.90 | |
| 12/21/2021 | 348.90 | 6.14 | 13.90 | 328.90 | | 9.60 | 324.10 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/6 | | | VBW/7 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 370.20 | 371.4 | Raised 8/23/2015 | 349.70 | 351.3 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 360.60 | 360.6 | | 338.10 | 338.1 | |
| Depth of Well | | | 9.50 | 10.8 | | 11.50 | 13.2 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 1/1/2008 | | | | | | | | |
| 2/1/2008 | | | | | | | | |
| 3/25/2008 | 365.10 | | | | | | | |
| 4/25/2008 | 366.40 | | | | | | | |
| 5/28/2008 | 365.30 | | | | | | | |
| 6/25/2008 | 365.00 | | | | | | | |
| 7/18/2008 | 364.50 | | | | | | | |
| 8/25/2008 | 363.50 | | | | | | | |
| 9/25/2008 | 363.00 | | | | | | | |
| 10/21/2008 | 362.00 | | | | | | | |
| 11/25/2008 | 365.00 | | | | | | | |
| 12/23/2008 | 365.00 | | | | | | | |
| 1/26/2009 | 364.50 | | | | | | | |
| 2/24/2009 | 364.50 | | | | | | | |
| 3/23/2009 | 368.50 | | | | | | | |
| 4/27/2009 | 367.50 | | | | | | | |
| 5/22/2009 | 367.00 | | | | | | | |
| 6/29/2009 | 372.00 | | | | | | | |
| 7/31/2009 | 371.00 | | | | | | | |
| 8/26/2009 | 370.00 | | | | | | | |
| 9/29/2009 | 369.50 | | | | | | | |
| 10/30/2009 | 369.00 | | | | | | | |
| 11/30/2009 | 368.00 | | | | | | | |
| 12/30/2009 | 368.00 | | | | | | | |
| 3/1/2010 | 368.00 | | | | | | | |
| 3/30/2010 | 368.00 | | | | | | | |
| 4/4/2010 | 368.70 | | | | | | | |
| 4/27/2010 | 368.40 | | | | | | | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/6 | | | VBW/7 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 370.20 | 371.4 | Raised 8/23/2015 | 349.70 | 351.3 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 360.60 | 360.6 | | 338.10 | 338.1 | |
| Depth of Well | | | 9.50 | 10.8 | | 11.50 | 13.2 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 5/26/2010 | 367.84 | | | | | | | |
| 6/29/2010 | 367.00 | | | | | | | |
| 7/27/2010 | 367.00 | | | | | | | |
| 8/27/2010 | 366.80 | | | | | | | |
| 9/28/2010 | 366.80 | | | | | | | |
| 10/26/2010 | 368.50 | | | | | | | |
| 11/30/2010 | 371.40 | | | | | | | |
| 12/28/2010 | 374.70 | | | | | | | |
| 1/4/2011 | 374.80 | | | | | | | |
| 1/6/2011 | 374.80 | | | | | | | |
| 1/7/2011 | 374.80 | | | | | | | |
| 1/8/2011 | 374.80 | | | | | | | |
| 1/9/2011 | 374.80 | | | | | | | |
| 1/10/2011 | 374.80 | | | | | | | |
| 1/11/2011 | 374.80 | | | | | | | |
| 1/17/2011 | 374.80 | | | | | | | |
| 1/19/2011 | 374.70 | | 9.40 | 360.7 | | 6.90 | 342.8 | |
| 1/21/2011 | 374.80 | | 9.60 | 360.6 | | 7.00 | 342.6 | |
| 1/27/2011 | 374.60 | | 9.50 | 360.7 | | 7.20 | 342.4 | |
| 2/3/2011 | 374.60 | | 9.50 | 360.7 | | 7.70 | 342.0 | |
| 2/8/2011 | 374.70 | | 9.50 | 360.7 | | 7.70 | 342.0 | |
| 2/28/2011 | 374.70 | | 9.70 | 361.5 | Dry | 8.40 | 341.3 | |
| 3/28/2011 | 372.50 | 2.35 | 9.60 | 360.6 | | 5.00 | 344.7 | Omitted |
| 4/28/2011 | 372.10 | 0.27 | 9.60 | 360.6 | | 8.60 | 341.1 | |
| 5/18/2011 | 371.80 | 0.03 | 9.60 | 360.6 | | 8.80 | 340.9 | |
| 5/25/2011 | 371.70 | 0.30 | 9.60 | 360.6 | | 9.10 | 340.6 | |
| 6/28/2011 | 370.90 | 0.03 | 9.50 | 360.7 | | 10.00 | 339.7 | |
| 7/26/2011 | 370.30 | 0.03 | 9.50 | 360.7 | | 9.30 | 340.4 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/6 | | | VBW/7 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 370.20 | 371.4 | Raised 8/23/2015 | 349.70 | 351.3 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 360.60 | 360.6 | | 338.10 | 338.1 | |
| Depth of Well | | | 9.50 | 10.8 | | 11.50 | 13.2 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 8/24/2011 | 369.60 | 0.03 | 9.50 | 360.7 | | 9.20 | 340.5 | |
| 8/30/2011 | 369.40 | | 9.80 | 360.4 | | 10.20 | 339.5 | |
| 9/13/2011 | 364.30 | 0.00 | 9.60 | 360.6 | | 10.10 | 339.6 | |
| 9/27/2011 | 361.90 | | 9.50 | 360.7 | | 10.00 | 339.7 | |
| 10/11/2011 | 358.50 | 1.03 | 9.50 | 360.7 | | 9.50 | 340.2 | |
| 10/25/2011 | 356.00 | 1.03 | 9.50 | 360.7 | | 9.90 | 339.8 | |
| 11/29/2011 | 355.00 | 1.51 | 9.50 | 360.7 | | 9.80 | 339.9 | |
| 12/28/2011 | 355.00 | 0.28 | 9.65 | 360.5 | | 9.40 | 340.3 | |
| 1/26/2012 | 355.00 | 1.05 | 9.45 | 360.7 | | 10.10 | 339.6 | |
| 2/28/2012 | 355.00 | 0.73 | 9.60 | 360.6 | | 10.60 | 339.1 | |
| 3/27/2012 | 352.40 | 0.73 | 9.80 | 360.4 | | 10.30 | 339.4 | |
| 4/23/2012 | 352.10 | 1.35 | 9.65 | 360.5 | | 10.50 | 339.2 | |
| 5/30/2012 | 352.20 | 0.07 | 9.60 | 360.6 | | 9.90 | 339.8 | |
| 6/13/2012 | 352.20 | | 9.70 | 360.5 | | 10.40 | 339.3 | |
| 6/26/2012 | 352.20 | 0.00 | 9.70 | 360.5 | | 10.50 | 339.2 | |
| 7/24/2012 | 352.20 | 0.23 | 9.60 | 360.6 | | 10.50 | 339.2 | |
| 8/8/2012 | 352.20 | 0.23 | 9.80 | 360.4 | | 10.70 | 339.0 | |
| 8/28/2012 | 351.80 | 0.00 | 9.60 | 360.6 | | 10.10 | 339.6 | |
| 8/29/2012 | 351.80 | 0.00 | 9.80 | 360.4 | | 10.30 | 339.4 | |
| 9/25/2012 | 351.30 | 0.00 | 9.50 | 360.7 | | 9.90 | 339.8 | |
| 10/31/2012 | 351.00 | 0.09 | 9.60 | 360.6 | | 10.30 | 339.4 | |
| 11/27/2012 | 351.00 | 0.87 | 9.60 | 360.6 | | 10.20 | 339.5 | |
| 12/12/2012 | 351.00 | 1.13 | 9.50 | 360.7 | | 10.50 | 339.2 | |
| 1/29/2013 | 366.10 | 1.30 | 9.70 | 360.5 | | 11.00 | 338.7 | |
| 2/21/2013 | 372.10 | 0.42 | 9.70 | 360.5 | | 11.20 | 338.5 | |
| 3/28/2013 | 371.90 | 0.79 | 9.60 | 360.6 | | 10.80 | 338.9 | |
| 4/25/2013 | 371.40 | 0.00 | 9.40 | 360.8 | | 10.30 | 339.4 | |
| 5/22/2013 | 370.90 | 0.00 | 9.80 | 360.4 | | 11.20 | 338.5 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/6 | | | VBW/7 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 370.20 | 371.4 | Raised 8/23/2015 | 349.70 | 351.3 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 360.60 | 360.6 | | 338.10 | 338.1 | |
| Depth of Well | | | 9.50 | 10.8 | | 11.50 | 13.2 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 6/25/2013 | 370.20 | 0.00 | 9.70 | 360.5 | | 10.90 | 338.8 | |
| 7/23/2013 | 369.40 | 0.00 | 9.60 | 360.6 | Dry | 11.10 | 338.6 | |
| 8/21/2013 | 368.60 | 0.00 | 9.70 | 360.5 | Dry | 11.00 | 338.7 | |
| 9/25/2013 | 367.70 | 0.00 | 9.60 | 360.6 | Dry | 11.10 | 338.6 | |
| 10/30/2013 | 366.90 | 0.00 | 9.70 | 360.5 | Dry | 11.10 | 338.6 | |
| 11/26/2013 | 366.50 | 0.59 | 9.70 | 360.5 | Dry | 11.10 | 338.6 | Wet |
| 12/17/2013 | 366.20 | 0.70 | 9.70 | 360.5 | Dry | 10.90 | 338.8 | |
| 1/28/2014 | 365.50 | 0.00 | 9.70 | 360.4 | Dry | 10.30 | 339.4 | |
| 2/25/2014 | 365.40 | 0.76 | 9.75 | 360.6 | Dry | 11.20 | 338.5 | Wet |
| 3/25/2014 | 365.30 | | 9.60 | 360.6 | Dry | 10.80 | 338.9 | |
| 3/28/2014 | 365.30 | 2.02 | 9.60 | 360.6 | Dry | 11.10 | 338.6 | |
| 4/25/2014 | 364.50 | 0.52 | 9.60 | 360.5 | Dry | 10.70 | 339.0 | |
| 5/28/2014 | 363.80 | 0.00 | 9.70 | 360.4 | Dry | 10.80 | 338.9 | |
| 6/25/2014 | 363.00 | 0.00 | 9.80 | 360.4 | Dry | 10.30 | 339.4 | |
| 7/30/2014 | 361.90 | 0.00 | 9.80 | 360.4 | Dry | 10.50 | 339.2 | |
| 8/27/2014 | 361.10 | 0.04 | 9.70 | 360.5 | Dry | 11.10 | 338.6 | Wet |
| 9/23/2014 | 360.50 | 0.00 | 9.60 | 360.6 | Dry | 11.10 | 338.6 | Wet |
| 10/29/2014 | 359.50 | 0.00 | 9.70 | 360.5 | Dry | 11.10 | 338.6 | Wet |
| 11/24/2014 | 359.40 | 0.32 | 9.70 | 360.5 | Dry | 10.90 | 338.8 | Wet |
| 12/30/2014 | 359.40 | 3.98 | 9.70 | 360.5 | Dry | 10.50 | 339.2 | Wet |
| 1/27/2015 | 359.00 | 1.42 | 9.70 | 360.5 | Dry | 10.90 | 338.8 | |
| 2/26/2015 | 358.60 | 0.46 | 9.70 | 360.5 | Dry | 11.10 | 338.6 | Wet |
| 3/27/2015 | 358.00 | 0.63 | 9.70 | 360.5 | Dry | 11.20 | 338.5 | Wet |
| 4/26/2015 | 331.00 | 0.22 | 9.60 | 360.6 | Dry | 11.10 | 338.6 | Wet |
| 5/27/2015 | 332.00 | 1.79 | 9.60 | 360.6 | Dry | 11.10 | 338.6 | Wet |
| 6/23/2015 | 331.00 | 0.00 | 9.80 | 360.6 | Dry | 12.30 | 339.0 | |
| 7/30/2015 | 331.00 | 0.00 | 10.40 | 361.0 | Dry | 11.00 | 340.3 | Wet |
| 8/25/2015 | 331.00 | 0.00 | 9.80 | 360.6 | Dry | 12.50 | 338.8 | Wet |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/6 | | | VBW/7 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 370.20 | 371.4 | Raised 8/23/2015 | 349.70 | 351.3 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 360.60 | 360.6 | | 338.10 | 338.1 | |
| Depth of Well | | | 9.50 | 10.8 | | 11.50 | 13.2 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 9/30/2015 | 331.00 | 1.97 | 10.90 | 360.5 | Dry | 12.60 | 338.7 | Wet |
| 10/29/2015 | 331.00 | 0.18 | 9.80 | 360.6 | Dry | 12.50 | 338.8 | |
| 11/25/2015 | 331.00 | 0.17 | 10.90 | 360.5 | Dry | 12.70 | 338.6 | Dry |
| 12/30/2015 | 331.00 | 1.42 | 10.90 | 360.5 | Dry | 12.70 | 338.6 | Dry |
| 1/26/2016 | 343.70 | 2.97 | 9.80 | 360.6 | Dry | 12.50 | 338.8 | |
| 2/24/2016 | 363.80 | 0.26 | 10.90 | 360.5 | Dry | 12.50 | 338.8 | Dry |
| 3/29/2016 | 374.90 | 1.50 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 4/28/2016 | 375.50 | 0.09 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 5/24/2016 | 374.40 | 0.13 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 6/29/2016 | 373.70 | 0.00 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 7/28/2016 | 372.20 | 0.00 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 8/25/2016 | 367.10 | 0.00 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 9/27/2016 | 363.30 | 0.00 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 10/25/2016 | 362.10 | 0.82 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 11/22/2016 | 361.80 | 1.69 | | | | | | |
| 12/28/2016 | 368.55 | 3.61 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 1/25/2017 | 375.80 | 6.48 | 10.80 | 360.5 | | 12.50 | 338.8 | |
| 2/28/2017 | 375.90 | 3.95 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 3/15/2017 | 375.80 | 3.61 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 3/28/2017 | 375.50 | 0.09 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 4/26/2017 | 375.00 | 0.04 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 5/23/2017 | 374.60 | 35.00 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 6/22/2017 | 373.80 | 0.00 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 7/26/2017 | 371.40 | 0.00 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 8/30/2017 | 368.60 | 0.00 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 9/28/2017 | 364.80 | 0.00 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 10/26/2017 | 359.00 | 0.00 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 11/29/2017 | 357.80 | 0.15 | 10.90 | 360.5 | | 12.50 | 338.8 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/6 | | | VBW/7 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 370.20 | 371.4 | Raised 8/23/2015 | 349.70 | 351.3 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 360.60 | 360.6 | | 338.10 | 338.1 | |
| Depth of Well | | | 9.50 | 10.8 | | 11.50 | 13.2 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 12/27/2017 | 357.30 | 0.00 | 10.90 | 360.5 | | 12.50 | 338.8 | |
| 1/24/2018 | 357.30 | 1.84 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 2/21/2018 | 361.00 | 0.18 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 3/28/2018 | 366.90 | 2.19 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 4/25/2018 | 367.00 | 0.05 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 5/30/2018 | 366.40 | 0.36 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 6/28/2018 | 365.60 | 0.00 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 7/25/2018 | 363.20 | 0.00 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 8/28/2018 | 357.30 | 0.00 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 9/27/2018 | 354.60 | 0.00 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 10/24/2018 | 351.90 | 1.49 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 11/28/2018 | 348.60 | 0.56 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 12/21/2018 | 348.80 | 2.04 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 1/30/2019 | 348.90 | 4.41 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 2/27/2019 | 351.70 | 8.05 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 3/28/2019 | 351.60 | 2.00 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 4/25/2019 | 348.70 | 0.10 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 5/30/2019 | 348.30 | 0.99 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 6/26/2019 | 344.50 | 0.11 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 7/5/2019 | 343.30 | 0.00 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 7/30/2019 | 341.00 | 0.00 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 8/27/2019 | 341.00 | 0.00 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 9/26/2019 | 341.00 | 0.00 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 10/24/2019 | 341.00 | 0.00 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 11/26/2019 | 341.00 | 2.60 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 12/16/2019 | 341.00 | 4.93 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 1/28/2020 | 341.00 | 0.21 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 2/26/2020 | 360.60 | 0.39 | 10.90 | 360.50 | | 12.5 | 338.80 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/6 | | | VBW/7 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 370.20 | 371.4 | Raised 8/23/2015 | 349.70 | 351.3 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 360.60 | 360.6 | | 338.10 | 338.1 | |
| Depth of Well | | | 9.50 | 10.8 | | 11.50 | 13.2 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 3/24/2020 | 370.30 | 3.75 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 4/23/2020 | 375.30 | 4.63 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 5/28/2020 | 374.80 | 0.04 | | | No data received | | | No data received |
| 6/23/2020 | 373.60 | 0.00 | | | No data received | | | No data received |
| 7/29/2020 | 370.70 | 0.00 | | | No data received | | | No data received |
| 8/27/2020 | 367.80 | 0.00 | | | No data received | | | No data received |
| 9/29/2020 | 364.90 | 0.00 | | | No data received | | | No data received |
| 10/29/2020 | 354.80 | 0.00 | | | No data received | | | No data received |
| 11/24/2020 | 343.00 | 0.32 | | | No data received | | | No data received |
| 12/29/2020 | 343.50 | 1.14 | 10.90 | 360.50 | | 12.5 | 338.80 | |
| 1/27/2021 | 355.70 | 2.45 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 2/25/2021 | 365.90 | 0.03 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 3/23/2021 | 370.80 | 1.27 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 4/28/2021 | 371.70 | 0.03 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 5/26/2021 | 370.00 | 0.05 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 6/30/2021 | 366.30 | 0.00 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 7/27/2021 | 361.50 | 0.03 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 8/25/2021 | 356.30 | 0.00 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 9/28/2021 | 350.60 | 0.03 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 10/27/2021 | 343.50 | 0.79 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 11/25/2021 | 343.40 | 0.00 | 10.90 | 360.50 | | 12.50 | 338.80 | |
| 12/21/2021 | 348.90 | 6.14 | 10.90 | 360.50 | | 12.50 | 338.80 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/8 | | | VBW/9 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 345.30 | 346.4 | Raised 6/23/2015 | 344.90 | 346.4 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 336.80 | 336.8 | | 335.40 | 335.4 | |
| Depth of Well | | | 8.50 | 9.6 | | 9.50 | 11 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 1/1/2008 | | | | | | | | |
| 2/1/2008 | | | | | | | | |
| 3/25/2008 | 365.10 | | | | | | | |
| 4/25/2008 | 366.40 | | | | | | | |
| 5/28/2008 | 365.30 | | | | | | | |
| 6/25/2008 | 365.00 | | | | | | | |
| 7/18/2008 | 364.50 | | | | | | | |
| 8/25/2008 | 363.50 | | | | | | | |
| 9/25/2008 | 363.00 | | | | | | | |
| 10/21/2008 | 362.00 | | | | | | | |
| 11/25/2008 | 365.00 | | | | | | | |
| 12/23/2008 | 365.00 | | | | | | | |
| 1/26/2009 | 364.50 | | | | | | | |
| 2/24/2009 | 364.50 | | | | | | | |
| 3/23/2009 | 368.50 | | | | | | | |
| 4/27/2009 | 367.50 | | | | | | | |
| 5/22/2009 | 367.00 | | | | | | | |
| 6/29/2009 | 372.00 | | | | | | | |
| 7/31/2009 | 371.00 | | | | | | | |
| 8/26/2009 | 370.00 | | | | | | | |
| 9/29/2009 | 369.50 | | | | | | | |
| 10/30/2009 | 369.00 | | | | | | | |
| 11/30/2009 | 368.00 | | | | | | | |
| 12/30/2009 | 368.00 | | | | | | | |
| 3/1/2010 | 368.00 | | | | | | | |
| 3/30/2010 | 368.00 | | | | | | | |
| 4/4/2010 | 368.70 | | | | | | | |
| 4/27/2010 | 368.40 | | | | | | | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/8 | | | VBW/9 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 345.30 | 346.4 | Raised 6/23/2015 | 344.90 | 346.4 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 336.80 | 336.8 | | 335.40 | 335.4 | |
| Depth of Well | | | 8.50 | 9.6 | | 9.50 | 11 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 5/26/2010 | 367.84 | | | | | | | |
| 6/29/2010 | 367.00 | | | | | | | |
| 7/27/2010 | 367.00 | | | | | | | |
| 8/27/2010 | 366.80 | | | | | | | |
| 9/28/2010 | 366.80 | | | | | | | |
| 10/26/2010 | 368.50 | | | | | | | |
| 11/30/2010 | 371.40 | | | | | | | |
| 12/28/2010 | 374.70 | | | | | | | |
| 1/4/2011 | 374.80 | | | | | | | |
| 1/6/2011 | 374.80 | | | | | | | |
| 1/7/2011 | 374.80 | | | | | | | |
| 1/8/2011 | 374.80 | | | | | | | |
| 1/9/2011 | 374.80 | | | | | | | |
| 1/10/2011 | 374.80 | | | | | | | |
| 1/11/2011 | 374.80 | | | | | | | |
| 1/17/2011 | 374.80 | | | | | | | |
| 1/19/2011 | 374.70 | | 3.90 | 341.4 | | 4.50 | 340.4 | |
| 1/21/2011 | 374.80 | | 4.20 | 341.4 | | 4.80 | 340.1 | |
| 1/27/2011 | 374.60 | | 4.20 | 341.2 | | 4.90 | 340.0 | |
| 2/3/2011 | 374.60 | | 4.40 | 341.1 | | 5.30 | 339.6 | |
| 2/8/2011 | 374.70 | | 4.50 | 340.9 | | 5.30 | 339.6 | |
| 2/28/2011 | 374.70 | | 4.80 | 340.9 | | 5.60 | 339.3 | |
| 3/28/2011 | 372.50 | 2.35 | 4.00 | 340.5 | | 4.90 | 340.0 | |
| 4/28/2011 | 372.10 | 0.27 | 4.50 | 341.3 | | 5.90 | 339.0 | |
| 5/18/2011 | 371.80 | 0.03 | 4.20 | 340.8 | | 6.50 | 338.4 | |
| 5/25/2011 | 371.70 | 0.30 | 4.55 | 340.8 | | 6.90 | 338.0 | |
| 6/28/2011 | 370.90 | 0.03 | 6.10 | 339.2 | | 7.40 | 337.5 | |
| 7/26/2011 | 370.30 | 0.03 | 6.30 | 339.0 | | 7.40 | 337.5 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/8 | | | VBW/9 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 345.30 | 346.4 | Raised 6/23/2015 | 344.90 | 346.4 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 336.80 | 336.8 | | 335.40 | 335.4 | |
| Depth of Well | | | 8.50 | 9.6 | | 9.50 | 11 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 8/24/2011 | 369.60 | 0.03 | 8.40 | 336.9 | | 9.50 | 335.4 | |
| 8/30/2011 | 369.40 | | 8.40 | 336.9 | | 9.50 | 335.4 | |
| 9/13/2011 | 364.30 | 0.00 | 7.70 | 337.6 | | 9.50 | 335.4 | |
| 9/27/2011 | 361.90 | | 7.70 | 337.6 | | 9.50 | 335.4 | |
| 10/11/2011 | 358.50 | 1.03 | 7.00 | 338.3 | | 9.30 | 335.6 | |
| 10/25/2011 | 356.00 | 1.03 | 7.10 | 338.2 | | 9.50 | 335.4 | |
| 11/29/2011 | 355.00 | 1.51 | 7.50 | 337.8 | | 9.60 | 335.3 | |
| 12/28/2011 | 355.00 | 0.28 | 6.90 | 338.4 | | 9.60 | 335.3 | |
| 1/26/2012 | 355.00 | 1.05 | 7.40 | 337.9 | | 9.40 | 335.5 | |
| 2/28/2012 | 355.00 | 0.73 | 7.80 | 337.5 | | 9.40 | 335.5 | |
| 3/27/2012 | 352.40 | 0.73 | 7.90 | 337.4 | | 9.60 | 335.3 | |
| 4/23/2012 | 352.10 | 1.35 | 7.90 | 337.4 | | 9.40 | 335.5 | |
| 5/30/2012 | 352.20 | 0.07 | 7.80 | 337.5 | | 9.40 | 335.5 | |
| 6/13/2012 | 352.20 | | 7.70 | 337.6 | | 9.40 | 335.5 | |
| 6/26/2012 | 352.20 | 0.00 | 7.60 | 337.7 | | 9.50 | 335.4 | |
| 7/24/2012 | 352.20 | 0.23 | 8.10 | 337.2 | | 9.40 | 335.5 | |
| 8/8/2012 | 352.20 | 0.23 | 8.30 | 337.0 | | 9.60 | 335.3 | |
| 8/28/2012 | 351.80 | 0.00 | 7.60 | 337.7 | | 9.40 | 335.5 | |
| 8/29/2012 | 351.80 | 0.00 | 8.00 | 337.3 | | 9.70 | 335.2 | |
| 9/25/2012 | 351.30 | 0.00 | 7.40 | 337.9 | | 9.40 | 335.5 | |
| 10/31/2012 | 351.00 | 0.09 | 7.60 | 337.7 | | 9.40 | 335.5 | |
| 11/27/2012 | 351.00 | 0.87 | 7.50 | 337.8 | | 9.50 | 335.4 | |
| 12/12/2012 | 351.00 | 1.13 | 8.00 | 337.3 | | 9.50 | 335.4 | |
| 1/29/2013 | 366.10 | 1.30 | 8.30 | 337.0 | | 9.50 | 335.4 | |
| 2/21/2013 | 372.10 | 0.42 | 8.10 | 337.2 | | 9.50 | 335.4 | |
| 3/28/2013 | 371.90 | 0.79 | 8.30 | 337.0 | | 9.40 | 335.5 | |
| 4/25/2013 | 371.40 | 0.00 | 7.90 | 337.4 | | 9.40 | 335.5 | |
| 5/22/2013 | 370.90 | 0.00 | 8.50 | 336.8 | | 9.60 | 335.3 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/8 | | | VBW/9 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 345.30 | 346.4 | Raised 6/23/2015 | 344.90 | 346.4 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 336.80 | 336.8 | | 335.40 | 335.4 | |
| Depth of Well | | | 8.50 | 9.6 | | 9.50 | 11 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 6/25/2013 | 370.20 | 0.00 | 8.30 | 337.0 | | 9.40 | 335.5 | |
| 7/23/2013 | 369.40 | 0.00 | 8.30 | 337.0 | | 9.40 | 335.5 | |
| 8/21/2013 | 368.60 | 0.00 | 8.30 | 337.0 | Wet | 9.50 | 335.4 | |
| 9/25/2013 | 367.70 | 0.00 | 8.30 | 337.0 | Dry | 9.45 | 335.5 | |
| 10/30/2013 | 366.90 | 0.00 | 8.40 | 336.9 | Dry | 9.10 | 335.8 | |
| 11/26/2013 | 366.50 | 0.59 | 8.30 | 337.0 | Wet | 10.90 | 334.0 | Wet |
| 12/17/2013 | 366.20 | 0.70 | 8.30 | 337.0 | Wet | 9.50 | 335.4 | |
| 1/28/2014 | 365.50 | 0.00 | 8.40 | 336.9 | | 9.50 | 335.4 | |
| 2/25/2014 | 365.40 | 0.76 | 8.40 | 336.9 | Wet | 9.60 | 335.3 | Dry |
| 3/25/2014 | 365.30 | | 8.30 | 337.0 | | 9.50 | 335.4 | |
| 3/28/2014 | 365.30 | 2.02 | 8.30 | 337.0 | | 9.40 | 335.5 | |
| 4/25/2014 | 364.50 | 0.52 | 8.30 | 337.0 | | 9.50 | 335.4 | |
| 5/28/2014 | 363.80 | 0.00 | 8.10 | 337.2 | | 9.40 | 335.5 | |
| 6/25/2014 | 363.00 | 0.00 | 8.40 | 336.9 | | 9.60 | 335.3 | |
| 7/30/2014 | 361.90 | 0.00 | 8.40 | 336.9 | | 9.60 | 335.3 | |
| 8/27/2014 | 361.10 | 0.04 | 8.30 | 337.0 | | 9.50 | 335.4 | |
| 9/23/2014 | 360.50 | 0.00 | 8.20 | 337.1 | | 9.50 | 335.4 | Wet |
| 10/29/2014 | 359.50 | 0.00 | 8.30 | 337.0 | | 9.40 | 335.5 | |
| 11/24/2014 | 359.40 | 0.32 | 8.20 | 337.1 | | 9.50 | 335.4 | |
| 12/30/2014 | 359.40 | 3.98 | 8.30 | 337.0 | | 9.50 | 335.4 | |
| 1/27/2015 | 359.00 | 1.42 | 8.20 | 337.1 | | 9.50 | 335.4 | |
| 2/26/2015 | 358.60 | 0.46 | 8.30 | 337.0 | | 9.50 | 335.4 | |
| 3/27/2015 | 358.00 | 0.63 | 8.30 | 337.0 | | 9.60 | 335.3 | |
| 4/26/2015 | 331.00 | 0.22 | 8.40 | 336.9 | Wet | 9.60 | 335.3 | Wet |
| 5/27/2015 | 332.00 | 1.79 | 8.40 | 336.9 | Wet | 9.60 | 335.3 | Wet |
| 6/23/2015 | 331.00 | 0.00 | 9.50 | 336.9 | Wet | 11.00 | 335.4 | Dry |
| 7/30/2015 | 331.00 | 0.00 | 8.30 | 338.1 | Dry | 10.90 | 335.5 | Wet |
| 8/25/2015 | 331.00 | 0.00 | 9.50 | 336.9 | Wet | 10.90 | 335.5 | Wet |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/8 | | | VBW/9 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 345.30 | 346.4 | Raised 6/23/2015 | 344.90 | 346.4 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 336.80 | 336.8 | | 335.40 | 335.4 | |
| Depth of Well | | | 8.50 | 9.6 | | 9.50 | 11 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 9/30/2015 | 331.00 | 1.97 | 9.50 | 336.9 | Dry | 11.00 | 335.4 | Wet |
| 10/29/2015 | 331.00 | 0.18 | 9.50 | 336.9 | Dry | 11.00 | 335.4 | Dry |
| 11/25/2015 | 331.00 | 0.17 | 9.50 | 336.9 | Dry | 11.00 | 335.4 | Dry |
| 12/30/2015 | 331.00 | 1.42 | 9.50 | 336.9 | Dry | 11.00 | 335.4 | Dry |
| 1/26/2016 | 343.70 | 2.97 | 9.30 | 337.1 | | 10.75 | 335.6 | |
| 2/24/2016 | 363.80 | 0.26 | 9.50 | 336.9 | Dry | 10.90 | 335.5 | |
| 3/29/2016 | 374.90 | 1.50 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 4/28/2016 | 375.50 | 0.09 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 5/24/2016 | 374.40 | 0.13 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 6/29/2016 | 373.70 | 0.00 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 7/28/2016 | 372.20 | 0.00 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 8/25/2016 | 367.10 | 0.00 | 9.50 | 336.9 | | 10.97 | 335.4 | |
| 9/27/2016 | 363.30 | 0.00 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 10/25/2016 | 362.10 | 0.82 | 9.50 | 336.9 | | 10.90 | 335.5 | |
| 11/22/2016 | 361.80 | 1.69 | | | | | | |
| 12/28/2016 | 368.55 | 3.61 | 9.50 | 336.9 | | 10.95 | 335.4 | |
| 1/25/2017 | 375.80 | 6.48 | 9.50 | 336.9 | | 10.80 | 335.6 | |
| 2/28/2017 | 375.90 | 3.95 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 3/15/2017 | 375.80 | 3.61 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 3/28/2017 | 375.50 | 0.09 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 4/26/2017 | 375.00 | 0.04 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 5/23/2017 | 374.60 | 35.00 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 6/22/2017 | 373.80 | 0.00 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 7/26/2017 | 371.40 | 0.00 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 8/30/2017 | 368.60 | 0.00 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 9/28/2017 | 364.80 | 0.00 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 10/26/2017 | 359.00 | 0.00 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 11/29/2017 | 357.80 | 0.15 | 9.50 | 336.9 | | 11.00 | 335.4 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/8 | | | VBW/9 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 345.30 | 346.4 | Raised 6/23/2015 | 344.90 | 346.4 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 336.80 | 336.8 | | 335.40 | 335.4 | |
| Depth of Well | | | 8.50 | 9.6 | | 9.50 | 11 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 12/27/2017 | 357.30 | 0.00 | 9.50 | 336.9 | | 11.00 | 335.4 | |
| 1/24/2018 | 357.30 | 1.84 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 2/21/2018 | 361.00 | 0.18 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 3/28/2018 | 366.90 | 2.19 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 4/25/2018 | 367.00 | 0.05 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 5/30/2018 | 366.40 | 0.36 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 6/28/2018 | 365.60 | 0.00 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 7/25/2018 | 363.20 | 0.00 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 8/28/2018 | 357.30 | 0.00 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 9/27/2018 | 354.60 | 0.00 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 10/24/2018 | 351.90 | 1.49 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 11/28/2018 | 348.60 | 0.56 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 12/21/2018 | 348.80 | 2.04 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 1/30/2019 | 348.90 | 4.41 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 2/27/2019 | 351.70 | 8.05 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 3/28/2019 | 351.60 | 2.00 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 4/25/2019 | 348.70 | 0.10 | 9.5 | 336.90 | | 11 | 335.40 | |
| 5/30/2019 | 348.30 | 0.99 | 9.5 | 336.90 | | 11 | 335.40 | |
| 6/26/2019 | 344.50 | 0.11 | 9.5 | 336.90 | | 11 | 335.40 | |
| 7/5/2019 | 343.30 | 0.00 | 9.5 | 336.90 | | 11 | 335.40 | |
| 7/30/2019 | 341.00 | 0.00 | 9.5 | 336.90 | | 11 | 335.40 | |
| 8/27/2019 | 341.00 | 0.00 | 9.5 | 336.90 | | 11 | 335.40 | |
| 9/26/2019 | 341.00 | 0.00 | 9.5 | 336.90 | | 11 | 335.40 | |
| 10/24/2019 | 341.00 | 0.00 | 9.5 | 336.90 | | 11 | 335.40 | |
| 11/26/2019 | 341.00 | 2.60 | 9.5 | 336.90 | | 11 | 335.40 | |
| 12/16/2019 | 341.00 | 4.93 | 9.5 | 336.90 | | 11 | 335.40 | |
| 1/28/2020 | 341.00 | 0.21 | 9.8 | 336.60 | | 11 | 335.40 | |
| 2/26/2020 | 360.60 | 0.39 | 9.5 | 336.90 | | 11 | 335.40 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | VBW/8 | | | VBW/9 | | |
|------------------------------|--------------------------|------------------------|--------------|----------------|------------------|--------------|----------------|------------------|
| Top of Well Elevation --> | | | 345.30 | 346.4 | Raised 6/23/2015 | 344.90 | 346.4 | Raised 6/23/2015 |
| Bottom of Well Elevation --> | | | 336.80 | 336.8 | | 335.40 | 335.4 | |
| Depth of Well | | | 8.50 | 9.6 | | 9.50 | 11 | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading (ft) | Elevation (ft) | Comment | Reading (ft) | Elevation (ft) | Comment |
| 3/24/2020 | 370.30 | 3.75 | 9.5 | 336.90 | | 11 | 335.40 | |
| 4/23/2020 | 375.30 | 4.63 | 9.5 | 336.90 | | 11 | 335.40 | |
| 5/28/2020 | 374.80 | 0.04 | | | No data received | | | No data received |
| 6/23/2020 | 373.60 | 0.00 | | | No data received | | | No data received |
| 7/29/2020 | 370.70 | 0.00 | | | No data received | | | No data received |
| 8/27/2020 | 367.80 | 0.00 | | | No data received | | | No data received |
| 9/29/2020 | 364.90 | 0.00 | | | No data received | | | No data received |
| 10/29/2020 | 354.80 | 0.00 | | | No data received | | | No data received |
| 11/24/2020 | 343.00 | 0.32 | | | No data received | | | No data received |
| 12/29/2020 | 343.50 | 1.14 | 9.5 | 336.90 | | 11 | 335.40 | |
| 1/27/2021 | 355.70 | 2.45 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 2/25/2021 | 365.90 | 0.03 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 3/23/2021 | 370.80 | 1.27 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 4/28/2021 | 371.70 | 0.03 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 5/26/2021 | 370.00 | 0.05 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 6/30/2021 | 366.30 | 0.00 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 7/27/2021 | 361.50 | 0.03 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 8/25/2021 | 356.30 | 0.00 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 9/28/2021 | 350.60 | 0.03 | 7.50 | 338.90 | | 11.00 | 335.40 | |
| 10/27/2021 | 343.50 | 0.79 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 11/25/2021 | 343.40 | 0.00 | 9.50 | 336.90 | | 11.00 | 335.40 | |
| 12/21/2021 | 348.90 | 6.14 | 9.00 | 337.40 | | 11.00 | 335.40 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | Seepage Flow Point | | |
|------------------------------|--------------------------|------------------------|--------------------|-----------|---------|
| Top of Well Elevation --> | | | (liter/min) | | |
| Bottom of Well Elevation --> | | | | | |
| Depth of Well | | | | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading | | Comment |
| | | | (liter/min) | (gal/min) | |
| 1/1/2008 | | | | | |
| 2/1/2008 | | | | | |
| 3/25/2008 | 365.10 | | | | |
| 4/25/2008 | 366.40 | | | | |
| 5/28/2008 | 365.30 | | | | |
| 6/25/2008 | 365.00 | | | | |
| 7/18/2008 | 364.50 | | | | |
| 8/25/2008 | 363.50 | | | | |
| 9/25/2008 | 363.00 | | | | |
| 10/21/2008 | 362.00 | | | | |
| 11/25/2008 | 365.00 | | | | |
| 12/23/2008 | 365.00 | | | | |
| 1/26/2009 | 364.50 | | 32.00 | 8.45 | |
| 2/24/2009 | 364.50 | | 32.00 | 8.45 | |
| 3/23/2009 | 368.50 | | 37.85 | 10.00 | |
| 4/27/2009 | 367.50 | | 37.85 | 10.00 | |
| 5/22/2009 | 367.00 | | 32.00 | 8.45 | |
| 6/29/2009 | 372.00 | | 56.78 | 15.00 | |
| 7/31/2009 | 371.00 | | 37.85 | 10.00 | |
| 8/26/2009 | 370.00 | | 56.78 | 15.00 | |
| 9/29/2009 | 369.50 | | 45.42 | 12.00 | |
| 10/30/2009 | 369.00 | | 37.85 | 10.00 | |
| 11/30/2009 | 368.00 | | 37.85 | 10.00 | |
| 12/30/2009 | 368.00 | | 37.85 | 10.00 | |
| 3/1/2010 | 368.00 | | 131.00 | 34.61 | |
| 3/30/2010 | 368.00 | | 46.80 | 12.36 | |
| 4/4/2010 | 368.70 | | 38.40 | 10.14 | |
| 4/27/2010 | 368.40 | | 40.20 | 10.62 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | Seepage Flow Point | | |
|------------------------------|--------------------------|------------------------|--------------------|-----------|---------|
| Top of Well Elevation --> | | | (liter/min) | | |
| Bottom of Well Elevation --> | | | | | |
| Depth of Well | | | | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading | | Comment |
| | | | (liter/min) | (gal/min) | |
| 5/26/2010 | 367.84 | | 37.50 | 9.91 | |
| 6/29/2010 | 367.00 | | 39.00 | 10.30 | |
| 7/27/2010 | 367.00 | | 31.50 | 8.32 | |
| 8/27/2010 | 366.80 | | 31.24 | 8.25 | |
| 9/28/2010 | 366.80 | | 31.57 | 8.34 | |
| 10/26/2010 | 368.50 | | 35.28 | 9.32 | |
| 11/30/2010 | 371.40 | | 37.50 | 9.91 | |
| 12/28/2010 | 374.70 | | 75.00 | 19.81 | |
| 1/4/2011 | 374.80 | | 69.00 | 18.23 | |
| 1/6/2011 | 374.80 | | | | |
| 1/7/2011 | 374.80 | | | | |
| 1/8/2011 | 374.80 | | 30.30 | 8.00 | |
| 1/9/2011 | 374.80 | | 31.20 | 8.24 | |
| 1/10/2011 | 374.80 | | | | |
| 1/11/2011 | 374.80 | | 28.57 | 7.55 | |
| 1/17/2011 | 374.80 | | | | |
| 1/19/2011 | 374.70 | | 33.80 | 8.93 | |
| 1/21/2011 | 374.80 | | | | |
| 1/27/2011 | 374.60 | | 45.00 | 11.89 | |
| 2/3/2011 | 374.60 | | | | |
| 2/8/2011 | 374.70 | | | | |
| 2/28/2011 | 374.70 | | 34.30 | 9.06 | |
| 3/28/2011 | 372.50 | 2.35 | 52.92 | 13.98 | |
| 4/28/2011 | 372.10 | 0.27 | 11.70 | 3.09 | |
| 5/18/2011 | 371.80 | 0.03 | 16.60 | 4.39 | |
| 5/25/2011 | 371.70 | 0.30 | 13.00 | 3.43 | |
| 6/28/2011 | 370.90 | 0.03 | 29.10 | 7.69 | |
| 7/26/2011 | 370.30 | 0.03 | 3.64 | 0.96 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | Seepage Flow Point | | |
|------------------------------|--------------------------|------------------------|--------------------|-----------|-------------------|
| Top of Well Elevation --> | | | (liter/min) | | |
| Bottom of Well Elevation --> | | | | | |
| Depth of Well | | | | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading | | Comment |
| | | | (liter/min) | (gal/min) | |
| 8/24/2011 | 369.60 | 0.03 | 7.00 | 1.85 | |
| 8/30/2011 | 369.40 | | 7.00 | 1.85 | |
| 9/13/2011 | 364.30 | 0.00 | 31.50 | 8.32 | |
| 9/27/2011 | 361.90 | | 0.05 | 0.01 | |
| 10/11/2011 | 358.50 | 1.03 | 0.05 | 0.01 | |
| 10/25/2011 | 356.00 | 1.03 | 0.00 | 0.00 | |
| 11/29/2011 | 355.00 | 1.51 | 0.00 | 0.00 | |
| 12/28/2011 | 355.00 | 0.28 | 0.00 | 0.00 | |
| 1/26/2012 | 355.00 | 1.05 | 0.00 | 0.00 | |
| 2/28/2012 | 355.00 | 0.73 | 0.00 | 0.00 | |
| 3/27/2012 | 352.40 | 0.73 | 0.00 | 0.00 | |
| 4/23/2012 | 352.10 | 1.35 | 0.00 | 0.00 | |
| 5/30/2012 | 352.20 | 0.07 | 0.00 | 0.00 | |
| 6/13/2012 | 352.20 | | 0.00 | 0.00 | |
| 6/26/2012 | 352.20 | 0.00 | 0.00 | 0.00 | |
| 7/24/2012 | 352.20 | 0.23 | 0.00 | 0.00 | |
| 8/8/2012 | 352.20 | 0.23 | 0.00 | 0.00 | |
| 8/28/2012 | 351.80 | 0.00 | 0.00 | 0.00 | |
| 8/29/2012 | 351.80 | 0.00 | 0.00 | 0.00 | |
| 9/25/2012 | 351.30 | 0.00 | 0.00 | 0.00 | |
| 10/31/2012 | 351.00 | 0.09 | 0.00 | 0.00 | reservoir was low |
| 11/27/2012 | 351.00 | 0.87 | 0.00 | 0.00 | reservoir was low |
| 12/12/2012 | 351.00 | 1.13 | 0.00 | 0.00 | reservoir was low |
| 1/29/2013 | 366.10 | 1.30 | | | reservoir was low |
| 2/21/2013 | 372.10 | 0.42 | | | reservoir was low |
| 3/28/2013 | 371.90 | 0.79 | | | reservoir was low |
| 4/25/2013 | 371.40 | 0.00 | | | reservoir was low |
| 5/22/2013 | 370.90 | 0.00 | | | reservoir was low |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | Seepage Flow Point | | |
|------------------------------|--------------------------|------------------------|--------------------|-----------|--------------------------|
| Top of Well Elevation --> | | | (liter/min) | | |
| Bottom of Well Elevation --> | | | | | |
| Depth of Well | | | | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading | | Comment |
| | | | (liter/min) | (gal/min) | |
| 6/25/2013 | 370.20 | 0.00 | | | reservoir was low |
| 7/23/2013 | 369.40 | 0.00 | | | reservoir was low |
| 8/21/2013 | 368.60 | 0.00 | | | reservoir was low |
| 9/25/2013 | 367.70 | 0.00 | | | reservoir was low |
| 10/30/2013 | 366.90 | 0.00 | 23.60 | 6.23 | reservoir was low |
| 11/26/2013 | 366.50 | 0.59 | 22.20 | 5.86 | reservoir was low |
| 12/17/2013 | 366.20 | 0.70 | 23.60 | 6.23 | reservoir was low |
| 1/28/2014 | 365.50 | 0.00 | 18.42 | 4.87 | reservoir was low |
| 2/25/2014 | 365.40 | 0.76 | 15.00 | 3.96 | reservoir was low |
| 3/25/2014 | 365.30 | | 17.28 | 4.56 | reservoir was low |
| 3/28/2014 | 365.30 | 2.02 | 11.82 | 3.12 | vault is being relocated |
| 4/25/2014 | 364.50 | 0.52 | 18.00 | 4.76 | vault is being relocated |
| 5/28/2014 | 363.80 | 0.00 | 14.98 | 3.96 | vault is being relocated |
| 6/25/2014 | 363.00 | 0.00 | 14.19 | 3.75 | vault is being relocated |
| 7/30/2014 | 361.90 | 0.00 | 14.68 | 3.88 | vault is being relocated |
| 8/27/2014 | 361.10 | 0.04 | 15.20 | 4.02 | vault is being relocated |
| 9/23/2014 | 360.50 | 0.00 | 13.20 | 3.49 | vault is being relocated |
| 10/29/2014 | 359.50 | 0.00 | 12.00 | 3.17 | vault is being relocated |
| 11/24/2014 | 359.40 | 0.32 | 8.70 | 2.30 | vault is being relocated |
| 12/30/2014 | 359.40 | 3.98 | 8.10 | 2.14 | seepage point is back |
| 1/27/2015 | 359.00 | 1.42 | 6.90 | 1.82 | |
| 2/26/2015 | 358.60 | 0.46 | 6.40 | 1.69 | |
| 3/27/2015 | 358.00 | 0.63 | 6.10 | 1.61 | |
| 4/26/2015 | 331.00 | 0.22 | 0.00 | 0.00 | |
| 5/27/2015 | 332.00 | 1.79 | 0.00 | 0.00 | |
| 6/23/2015 | 331.00 | 0.00 | 0.00 | 0.00 | |
| 7/30/2015 | 331.00 | 0.00 | 0.00 | 0.00 | |
| 8/25/2015 | 331.00 | 0.00 | 0.00 | 0.00 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | Seepage Flow Point | | |
|------------------------------|--------------------------|------------------------|--------------------|-----------|---------|
| Top of Well Elevation --> | | | (liter/min) | | |
| Bottom of Well Elevation --> | | | | | |
| Depth of Well | | | | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading | | Comment |
| | | | (liter/min) | (gal/min) | |
| 9/30/2015 | 331.00 | 1.97 | 0.00 | 0.00 | |
| 10/29/2015 | 331.00 | 0.18 | 0.00 | 0.00 | |
| 11/25/2015 | 331.00 | 0.17 | 0.00 | 0.00 | |
| 12/30/2015 | 331.00 | 1.42 | 0.00 | 0.00 | |
| 1/26/2016 | 343.70 | 2.97 | 0.00 | 0.00 | |
| 2/24/2016 | 363.80 | 0.26 | 0.00 | 0.00 | |
| 3/29/2016 | 374.90 | 1.50 | 0.85 | 0.22 | |
| 4/28/2016 | 375.50 | 0.09 | 3.90 | 1.03 | |
| 5/24/2016 | 374.40 | 0.13 | 4.20 | 1.11 | |
| 6/29/2016 | 373.70 | 0.00 | 4.60 | 1.22 | |
| 7/28/2016 | 372.20 | 0.00 | 5.10 | 1.35 | |
| 8/25/2016 | 367.10 | 0.00 | 3.84 | 1.01 | |
| 9/27/2016 | 363.30 | 0.00 | 1.80 | 0.48 | |
| 10/25/2016 | 362.10 | 0.82 | 3.40 | 0.90 | |
| 11/22/2016 | 361.80 | 1.69 | 4.86 | 1.28 | |
| 12/28/2016 | 368.55 | 3.61 | 6.12 | 1.62 | |
| 1/25/2017 | 375.80 | 6.48 | 22.00 | 5.81 | |
| 2/28/2017 | 375.90 | 3.95 | 22.30 | 5.89 | |
| 3/15/2017 | 375.80 | 3.61 | 22.30 | 5.89 | |
| 3/28/2017 | 375.50 | 0.09 | 25.70 | 6.79 | |
| 4/26/2017 | 375.00 | 0.04 | 28.00 | 7.40 | |
| 5/23/2017 | 374.60 | 35.00 | 16.32 | 4.31 | |
| 6/22/2017 | 373.80 | 0.00 | 30.12 | 7.96 | |
| 7/26/2017 | 371.40 | 0.00 | 30.60 | 8.08 | |
| 8/30/2017 | 368.60 | 0.00 | 36.00 | 9.51 | |
| 9/28/2017 | 364.80 | 0.00 | 16.00 | 4.23 | |
| 10/26/2017 | 359.00 | 0.00 | 2.80 | 0.74 | |
| 11/29/2017 | 357.80 | 0.15 | 9.20 | 2.43 | |

Notes:

1. Readings in red are classified as erroneous

TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | Seepage Flow Point | | |
|------------------------------|--------------------------|------------------------|--------------------|-----------|---------|
| Top of Well Elevation --> | | | (liter/min) | | |
| Bottom of Well Elevation --> | | | | | |
| Depth of Well | | | | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading | | Comment |
| | | | (liter/min) | (gal/min) | |
| 12/27/2017 | 357.30 | 0.00 | 6.80 | 1.80 | |
| 1/24/2018 | 357.30 | 1.84 | 5.70 | 1.51 | |
| 2/21/2018 | 361.00 | 0.18 | 6.20 | 1.64 | |
| 3/28/2018 | 366.90 | 2.19 | 22.00 | 5.81 | |
| 4/25/2018 | 367.00 | 0.05 | 12.80 | 3.38 | |
| 5/30/2018 | 366.40 | 0.36 | 14.16 | 3.74 | |
| 6/28/2018 | 365.60 | 0.00 | 11.20 | 2.96 | |
| 7/25/2018 | 363.20 | 0.00 | 12.84 | 3.39 | |
| 8/28/2018 | 357.30 | 0.00 | 4.00 | 1.06 | |
| 9/27/2018 | 354.60 | 0.00 | 1.02 | 0.27 | |
| 10/24/2018 | 351.90 | 1.49 | 0.00 | 0.00 | |
| 11/28/2018 | 348.60 | 0.56 | 0.00 | 0.00 | |
| 12/21/2018 | 348.80 | 2.04 | 0.00 | 0.00 | |
| 1/30/2019 | 348.90 | 4.41 | 0.00 | 0.00 | |
| 2/27/2019 | 351.70 | 8.05 | 0.00 | 0.00 | |
| 3/28/2019 | 351.60 | 2.00 | 0.00 | 0.00 | |
| 4/25/2019 | 348.70 | 0.10 | 0.00 | 0.00 | |
| 5/30/2019 | 348.30 | 0.99 | 0.00 | 0.00 | |
| 6/26/2019 | 344.50 | 0.11 | 0.00 | 0.00 | |
| 7/5/2019 | 343.30 | 0.00 | 0.00 | 0.00 | |
| 7/30/2019 | 341.00 | 0.00 | 0.00 | 0.00 | |
| 8/27/2019 | 341.00 | 0.00 | 0.00 | 0.00 | |
| 9/26/2019 | 341.00 | 0.00 | 0.00 | 0.00 | |
| 10/24/2019 | 341.00 | 0.00 | 0.00 | 0.00 | |
| 11/26/2019 | 341.00 | 2.60 | 0.00 | 0.00 | |
| 12/16/2019 | 341.00 | 4.93 | 0.00 | 0.00 | |
| 1/28/2020 | 341.00 | 0.21 | 0.00 | 0.00 | |
| 2/26/2020 | 360.60 | 0.39 | 0.00 | 0.00 | |

Notes:

1. Readings in red are classified as erroneous

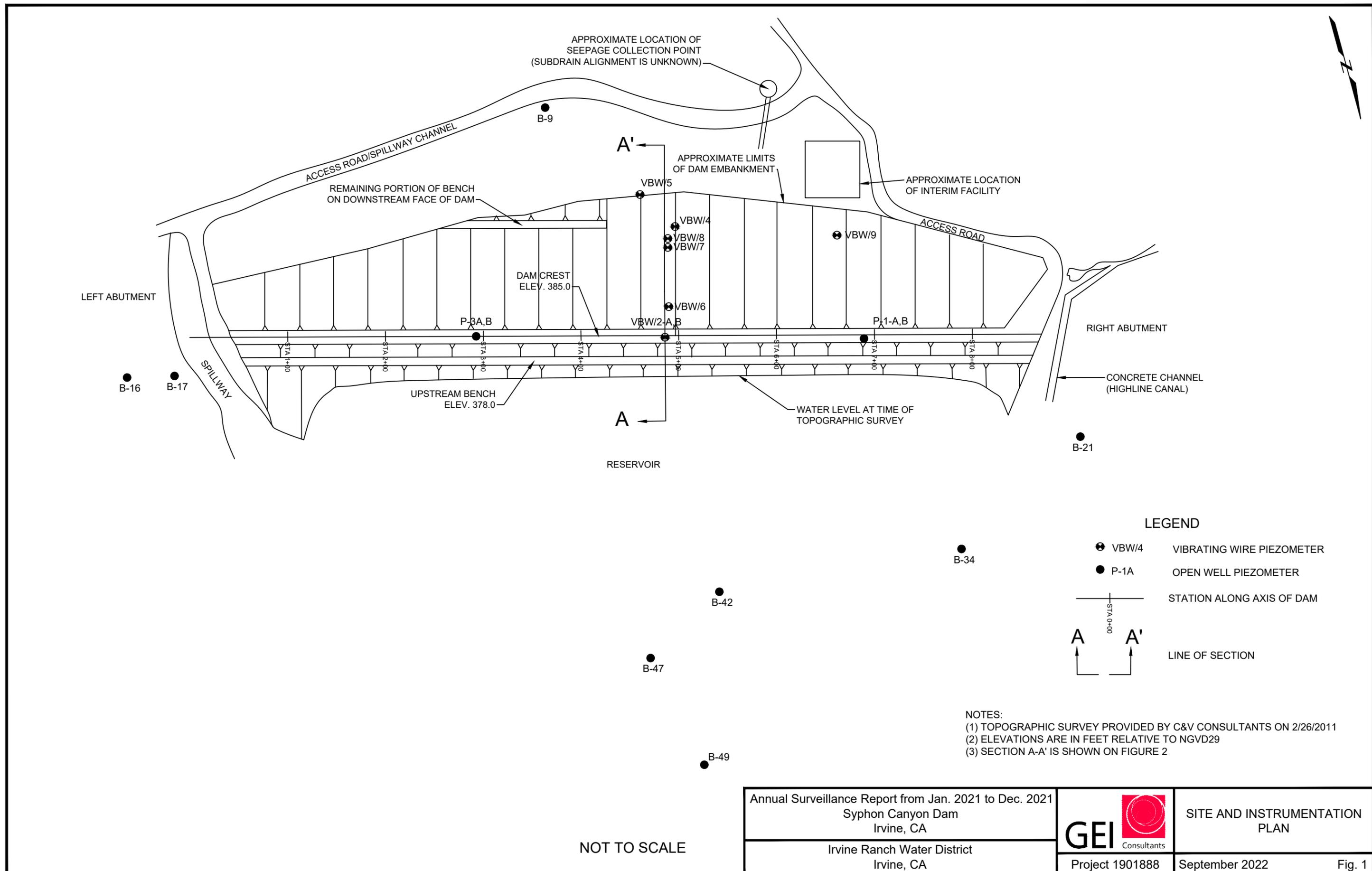
TABLE 3
 SYPHON CANYON DAM
 PIEZOMETER WATER LEVELS AND SEEPAGE MEASUREMENTS
 JANUARY 2008 THROUGH DECEMBER 2021

| Monitoring Well --> | | | Seepage Flow Point | | |
|------------------------------|--------------------------|------------------------|--------------------|-----------|---------|
| Top of Well Elevation --> | | | (liter/min) | | |
| Bottom of Well Elevation --> | | | | | |
| Depth of Well | | | | | |
| Date | Reservoir Elevation (ft) | Monthly Rainfall (in.) | Reading | | Comment |
| | | | (liter/min) | (gal/min) | |
| 3/24/2020 | 370.30 | 3.75 | 0.03 | 0.01 | |
| 4/23/2020 | 375.30 | 4.63 | 0.90 | 0.24 | |
| 5/28/2020 | 374.80 | 0.04 | 1.10 | 0.29 | |
| 6/23/2020 | 373.60 | 0.00 | 2.20 | 0.58 | |
| 7/29/2020 | 370.70 | 0.00 | 1.32 | 0.35 | |
| 8/27/2020 | 367.80 | 0.00 | 0.97 | 0.26 | |
| 9/29/2020 | 364.90 | 0.00 | 0.54 | 0.14 | |
| 10/29/2020 | 354.80 | 0.00 | 0.63 | 0.17 | |
| 11/24/2020 | 343.00 | 0.32 | 0.00 | 0.00 | |
| 12/29/2020 | 343.50 | 1.14 | 0.00 | 0.00 | |
| 1/27/2021 | 355.70 | 2.45 | 0.00 | 0.00 | |
| 2/25/2021 | 365.90 | 0.03 | 1.50 | 0.40 | |
| 3/23/2021 | 370.80 | 1.27 | 3.66 | 0.97 | |
| 4/28/2021 | 371.70 | 0.03 | 4.32 | 1.14 | |
| 5/26/2021 | 370.00 | 0.05 | 4.80 | 1.27 | |
| 6/30/2021 | 366.30 | 0.00 | 5.40 | 1.43 | |
| 7/27/2021 | 361.50 | 0.03 | 4.88 | 1.29 | |
| 8/25/2021 | 356.30 | 0.00 | 3.00 | 0.79 | |
| 9/28/2021 | 350.60 | 0.03 | 1.40 | 0.37 | |
| 10/27/2021 | 343.50 | 0.79 | 0.00 | 0.00 | |
| 11/25/2021 | 343.40 | 0.00 | 0.00 | 0.00 | |
| 12/21/2021 | 348.90 | 6.14 | 0.00 | 0.00 | |

Notes:

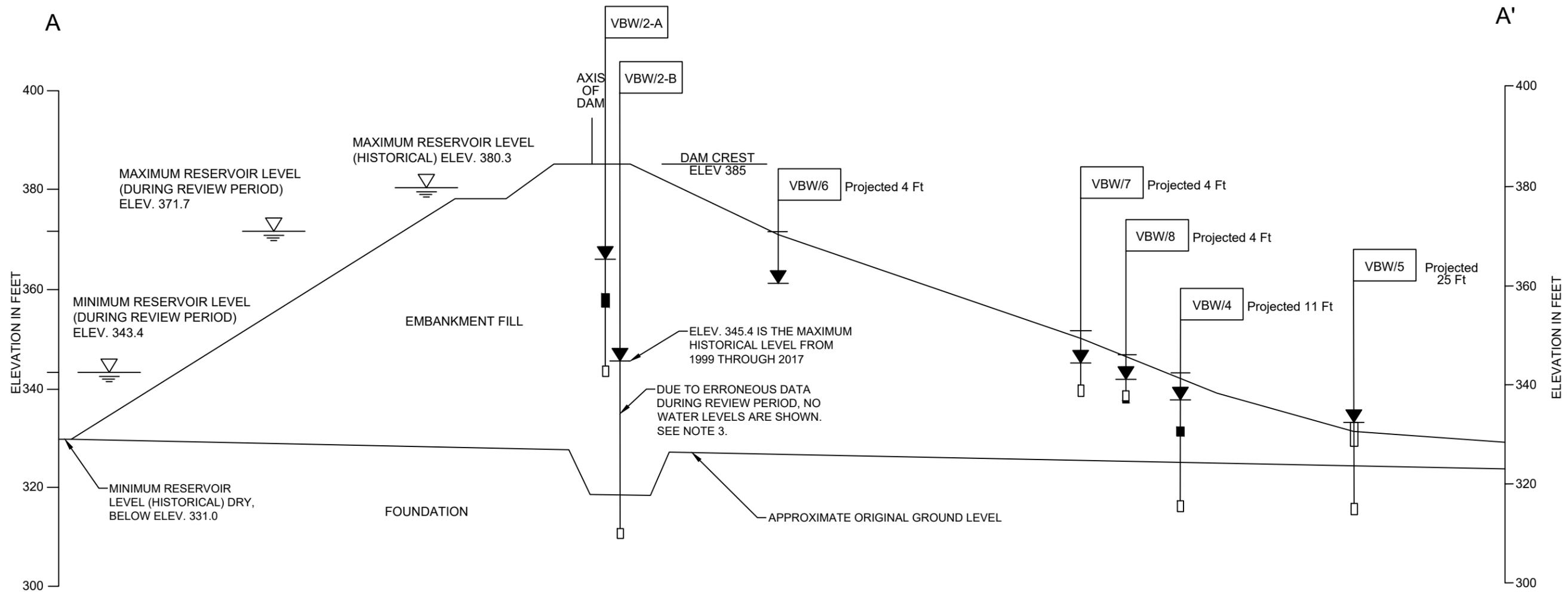
1. Readings in red are classified as erroneous

Figures

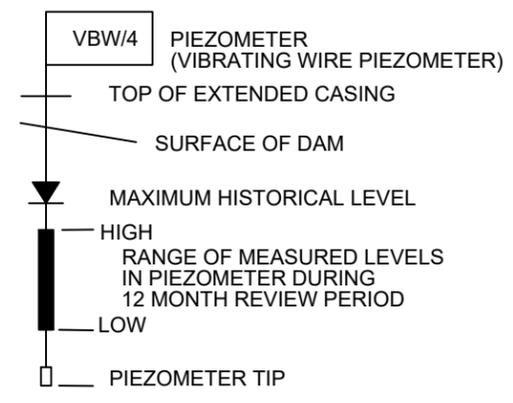


NOT TO SCALE

| | | |
|---|---|--|
| Annual Surveillance Report from Jan. 2021 to Dec. 2021 Syphon Canyon Dam Irvine, CA |  | SITE AND INSTRUMENTATION PLAN |
| Irvine Ranch Water District Irvine, CA | Project 1901888 | September 2022 Fig. 1 |



LEGEND



**SECTION A-A'
(MAXIMUM SECTION)**

- NOTES:**
 (1) LOCATION OF SECTION A-A' IS SHOWN ON FIGURE 1
 (2) ELEVATIONS ARE IN FEET RELATIVE TO NGVD29
 (3) ERRONEOUS READINGS WERE CAUSED BY INCORRECT DATA LOGGER CONVERSION SETTINGS.

NOT TO SCALE

| | | | |
|---|---|-----------------|----------------|
| Annual Surveillance Report from Jan. 2021 to Dec. 2021 Syphon Canyon Dam Irvine, CA |  | SECTION A-A' | |
| Irvine Ranch Water District Irvine, CA | | Project 1901888 | September 2022 |

Fig. 1A

Figure 2
 2-YR OPEN WELL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 OPEN WELL PIEZOMETERS P-1A, P-1B AND VBW/9
 JANUARY 2020 THROUGH DECEMBER 2021

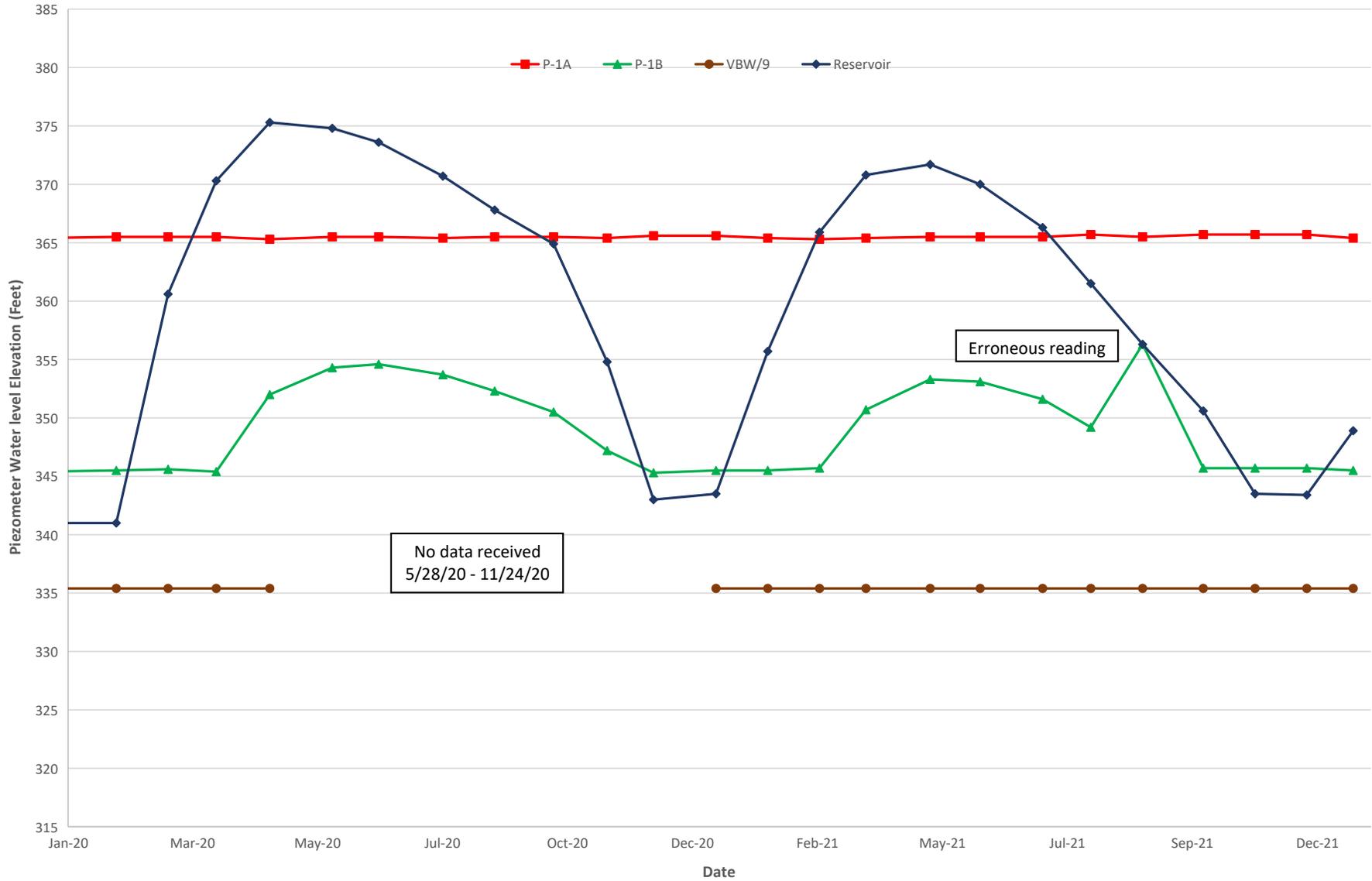


Figure 3
 2-YR VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 VIBRATING WIRE PIEZOMETERS VBW/2-A, VBW/2-B, AND VBW/6
 JANUARY 2020 THROUGH DECEMBER 2021

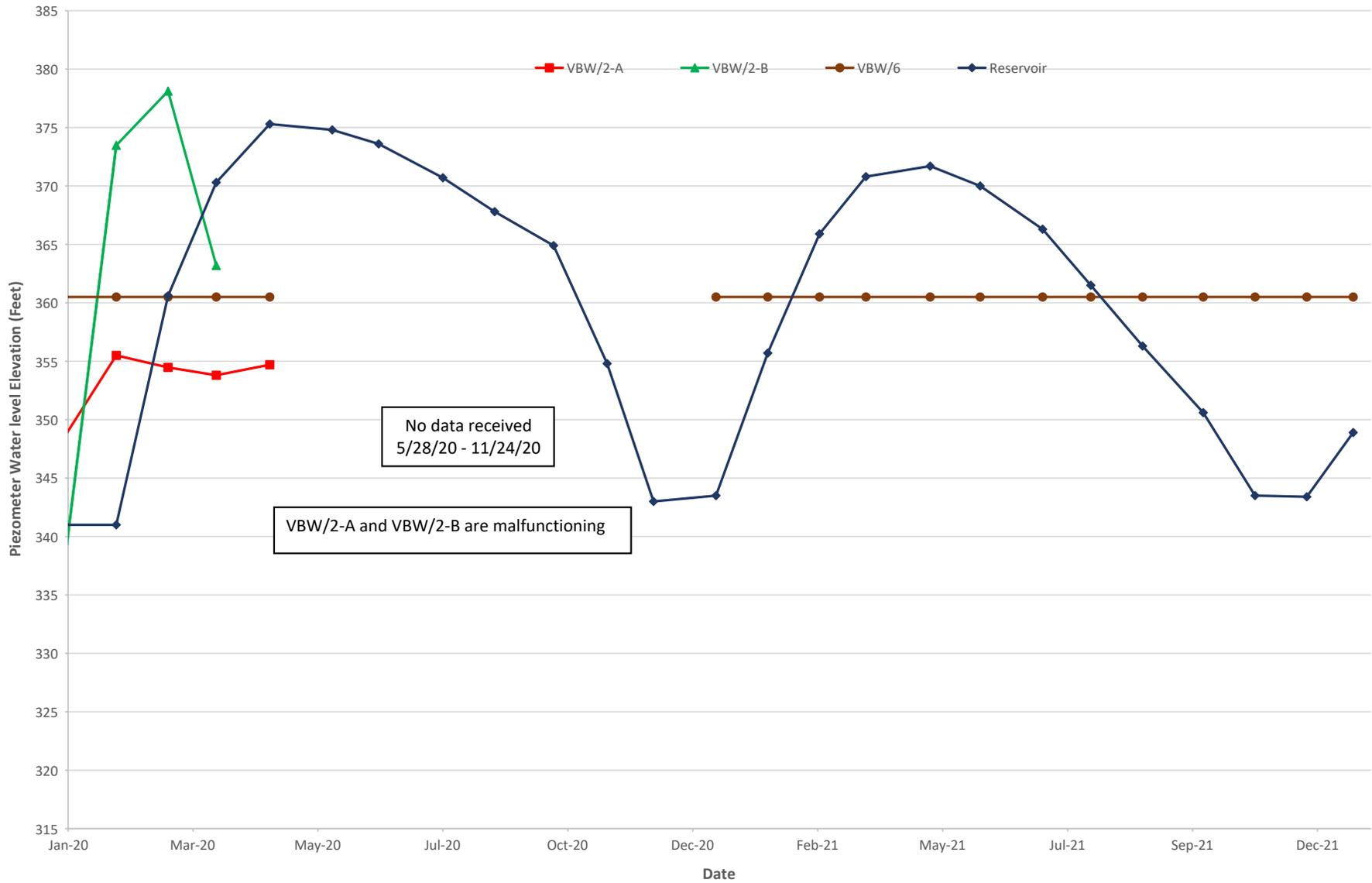


Figure 4
2-YR OPEN WELL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
OPEN WELL PIEZOMETERS P-3A AND P-3B
JANUARY 2020 THROUGH DECEMBER 2021

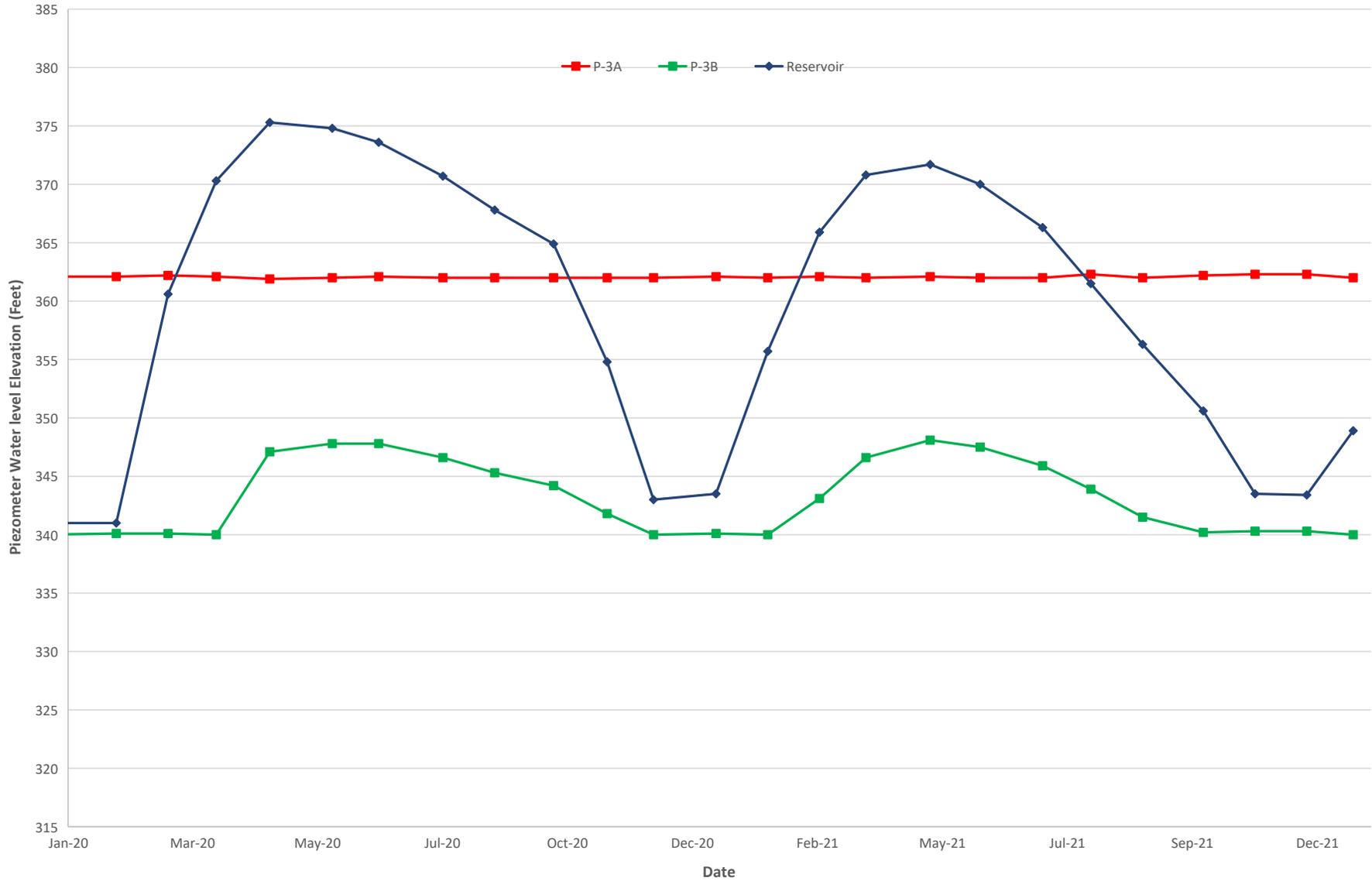


Figure 5
 2-YR VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 VIBRATING WIRE PIEZOMETERS VBW/4, VBW/5, VBW/7, AND VBW/8
 JANUARY 2020 THROUGH DECEMBER 2021

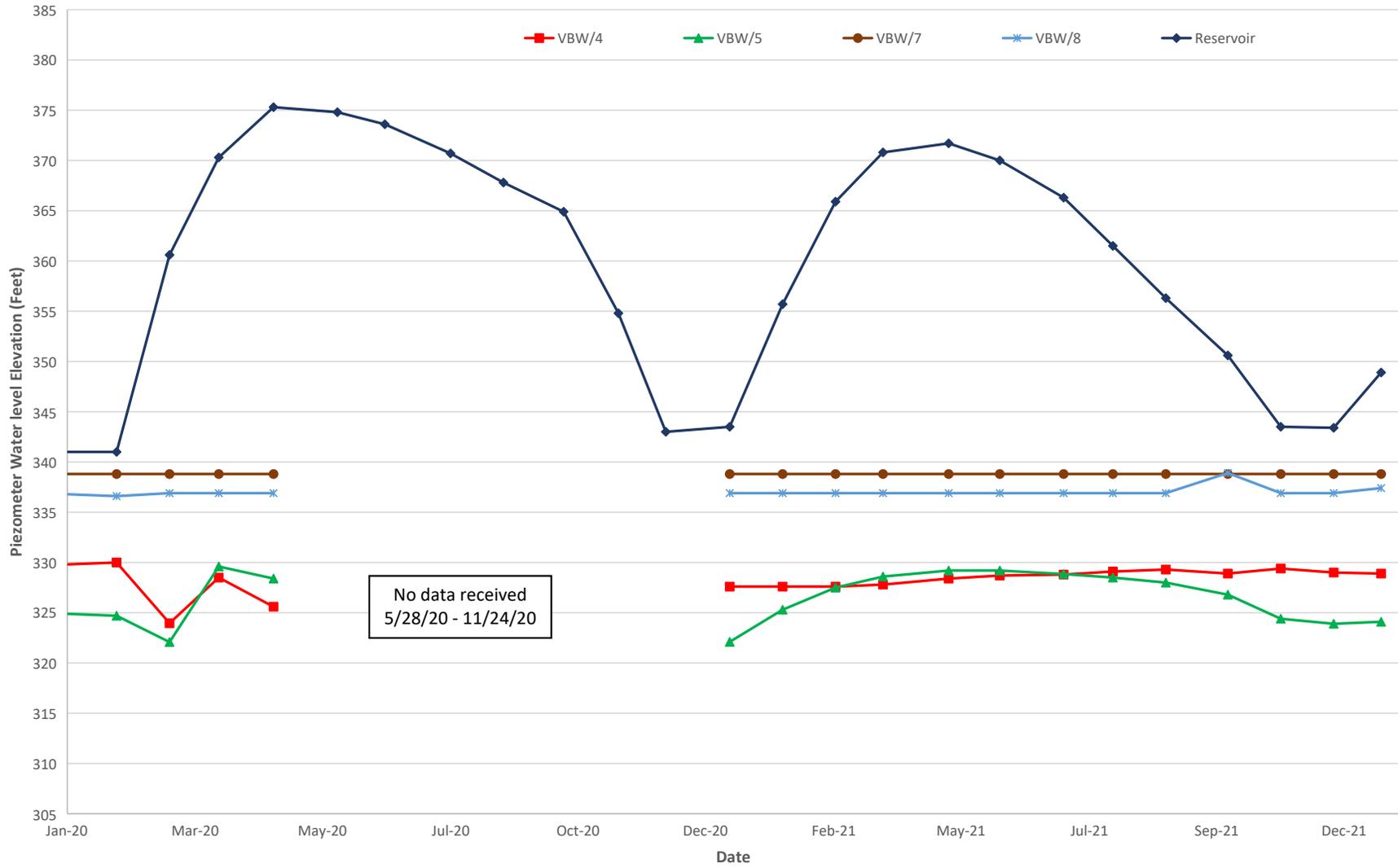


Figure 6
HISTORICAL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
PIEZOMETERS P-1A, P-1B, AND VBW/9
JANUARY 2011 THROUGH DECEMBER 2021

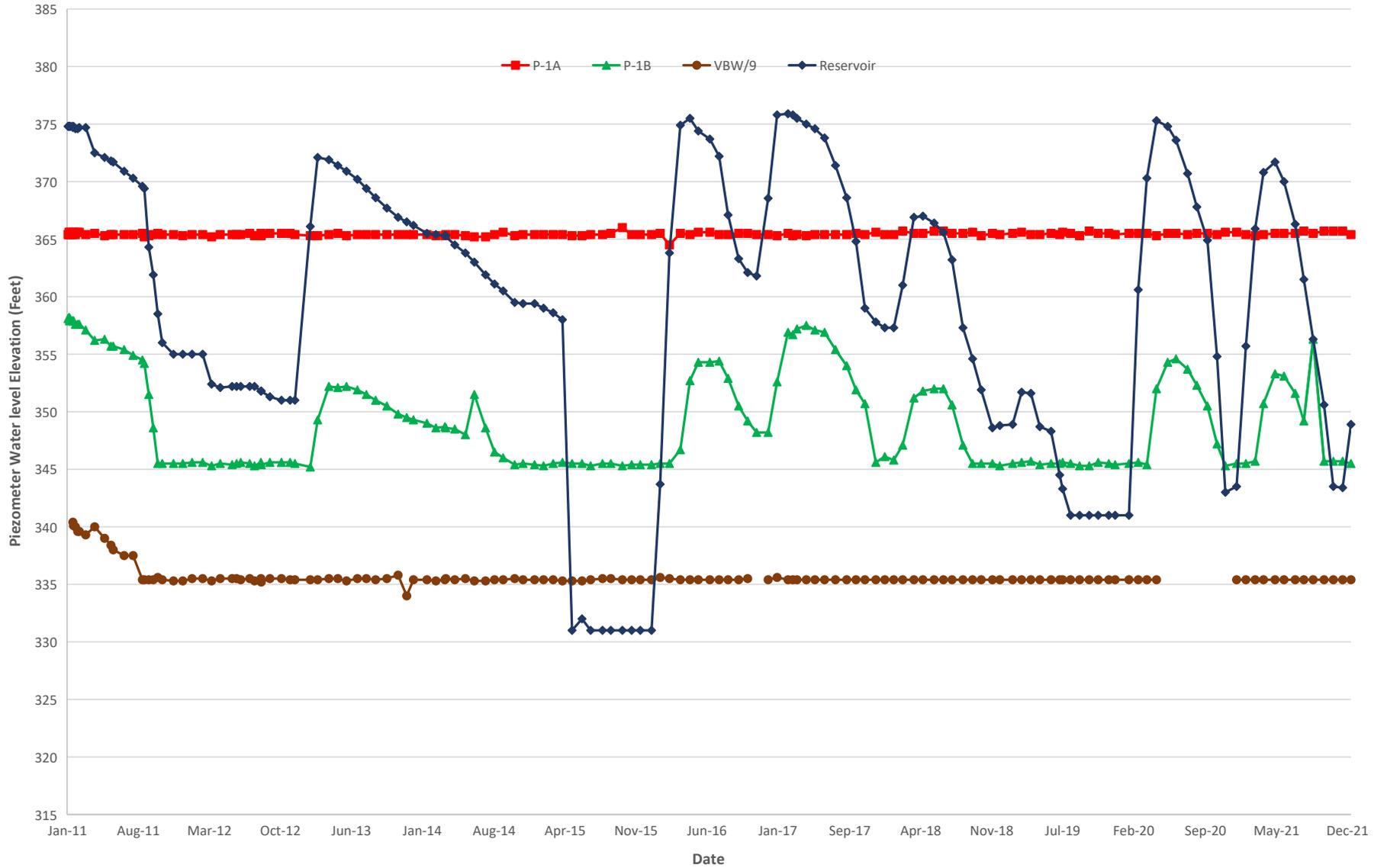


Figure 7
 HISTORICAL VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 VIBRATING WIRE PIEZOMETERS VBW/2-A, VBW/2-B, AND VBW/6
 JANUARY 2011 THROUGH DECEMBER 2021

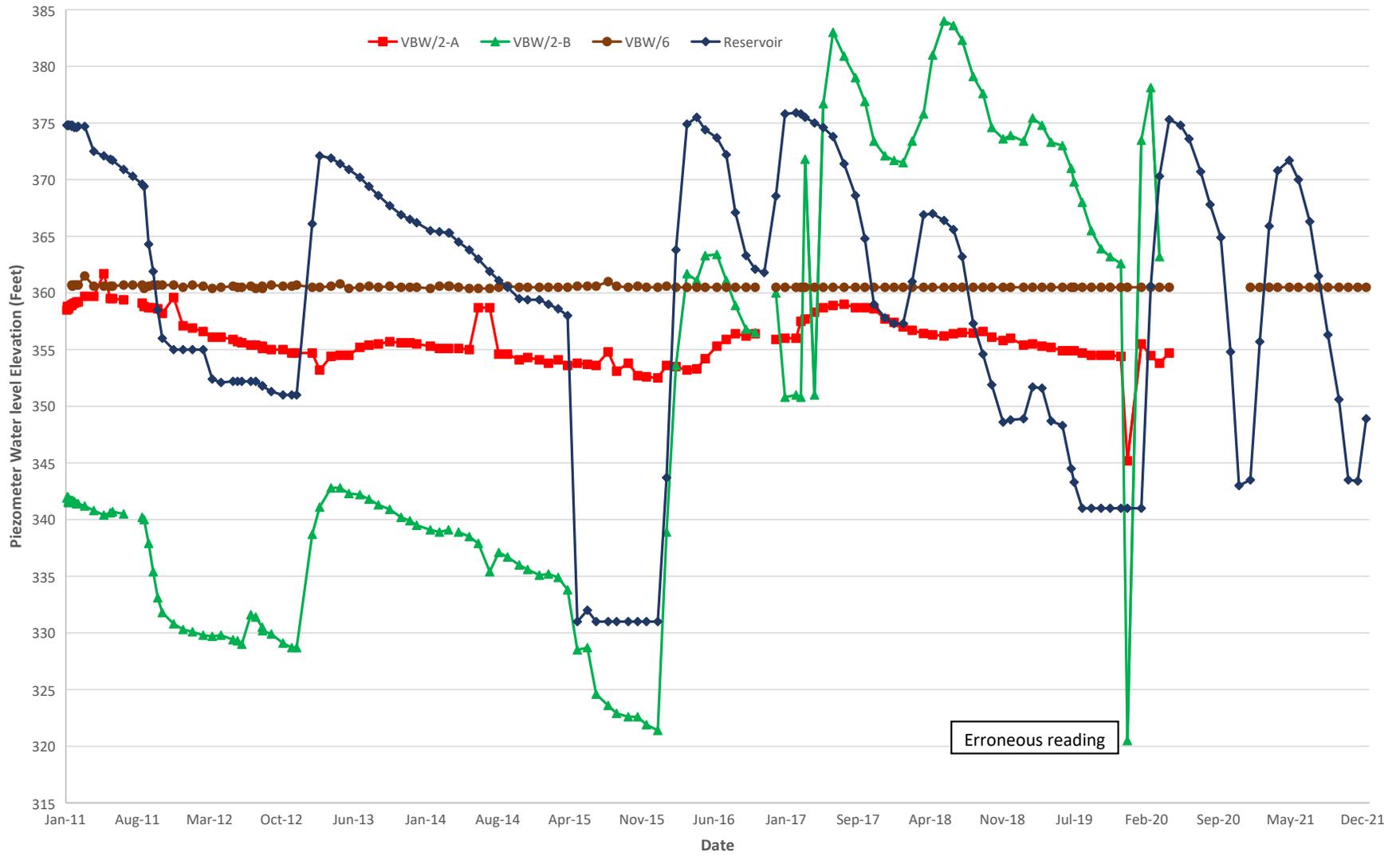


Figure 8
 HISTORICAL PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 PIEZOMETERS P-3A AND P-3B
 JANUARY 2011 THROUGH DECEMBER 2021

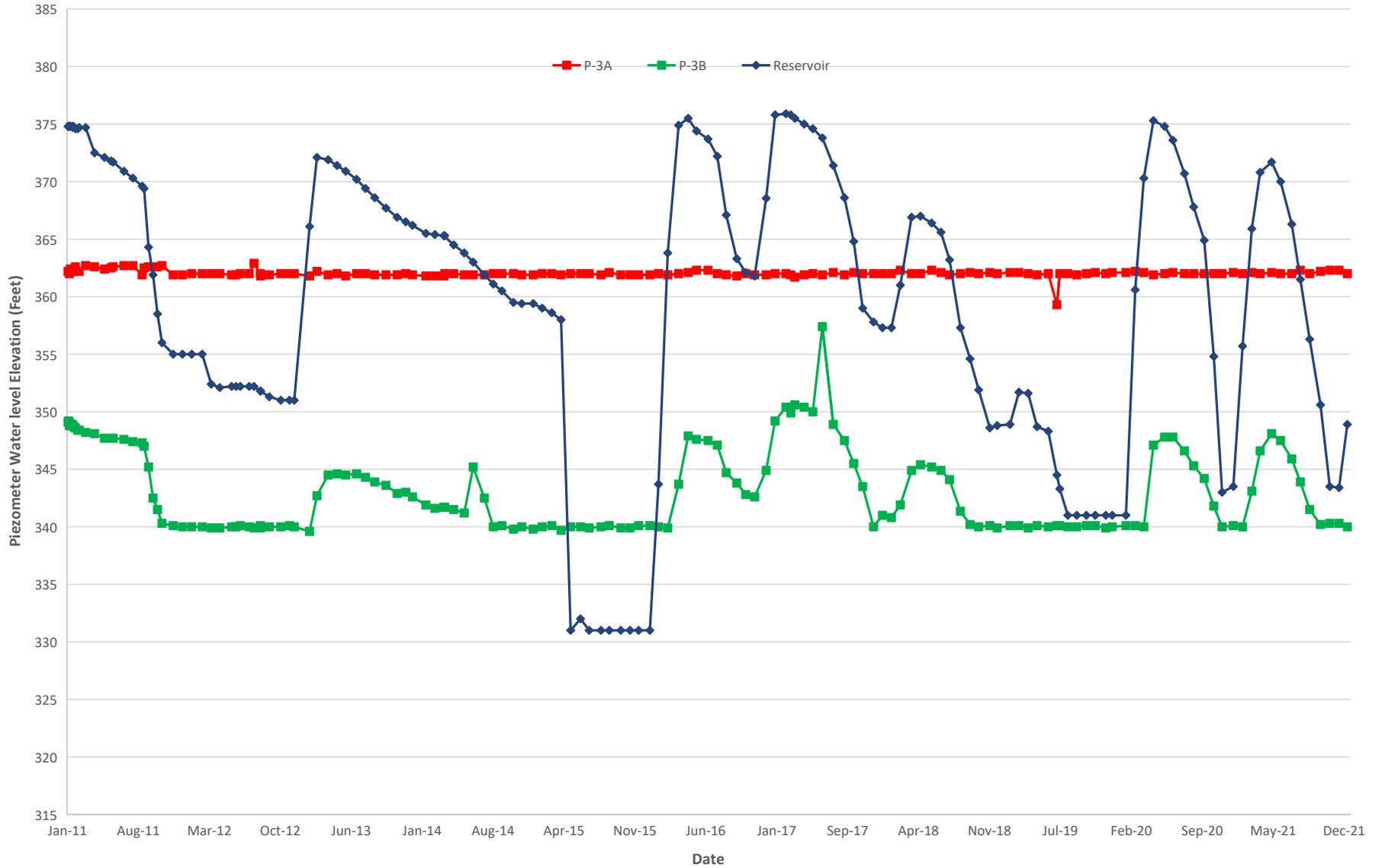


Figure 9
 HISTORICAL VIBRATING WIRE PIEZOMETER AND RESERVOIR WATER SURFACE ELEVATIONS
 VIBRATING WIRE PIEZOMETERS VBW/4, VBW/5, VBW/7, AND VBW/8
 JANUARY 2011 THROUGH DECEMBER 2021

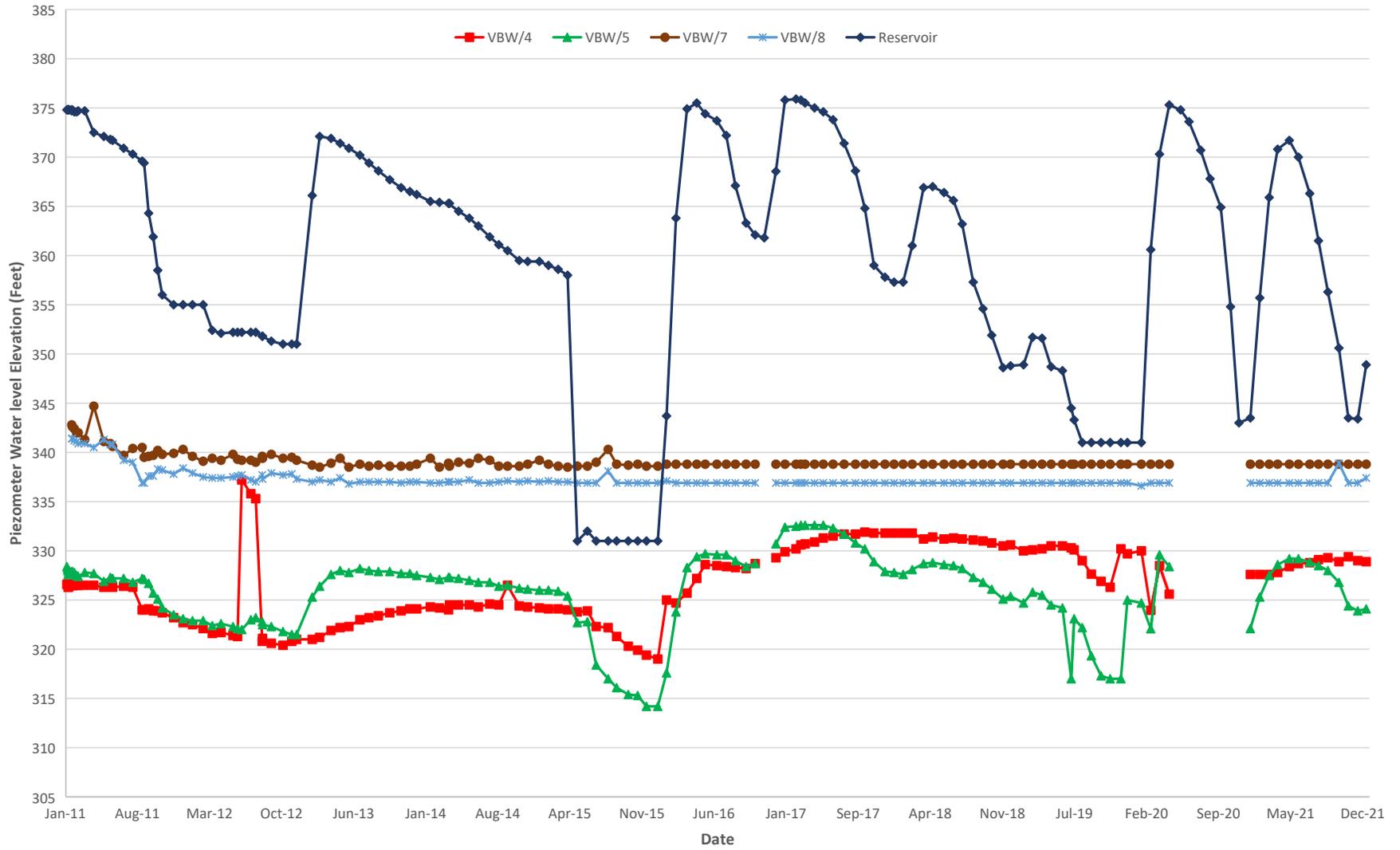


Figure 10
 2-YR SEEPAGE, RESERVOIR WATER SURFACE ELEVATIONS, AND RAINFALL
 SEEPAGE FLOW POINT
 JANUARY 2020 THROUGH DECEMBER 2021

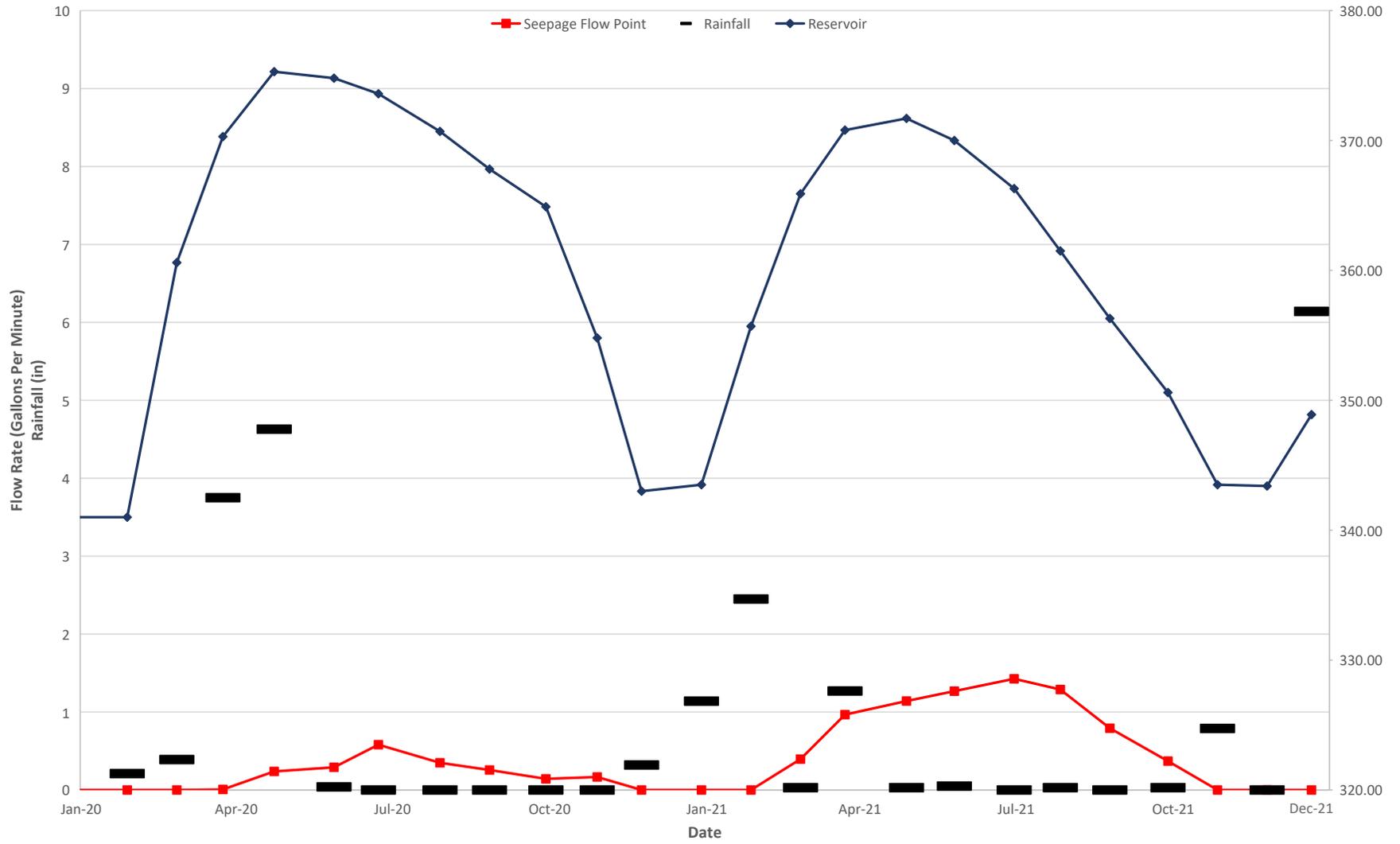
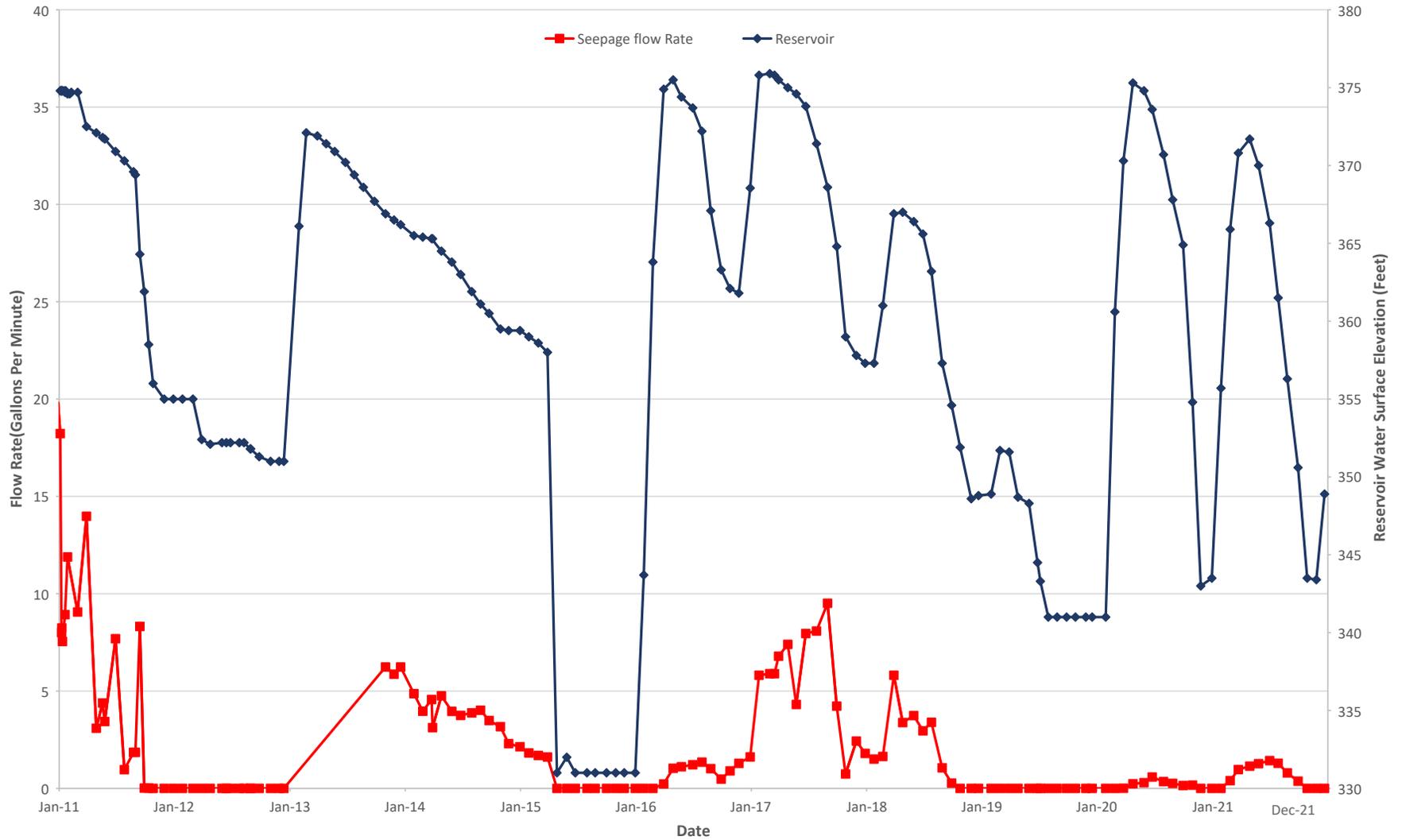


Figure 11
 HISTORICAL SEEPAGE AND RESERVOIR WATER SURFACE ELEVATIONS
 SEEPAGE FLOW POINT
 JANUARY 2011 THROUGH DECEMBER 2021



Appendix

Inspection Photographs of Syphon Canyon Dam April 18, 2022

Reservoir Dam Valve Exercising Table

Inspection Photographs of Syphon Canyon Dam

April 18, 2022



Photo 1) Crest and upstream face looking towards right abutment showing bench.



Photo 2) Crest and downstream face looking towards right abutment.



Photo 3) Crest looking towards left abutment.



Photo 4) Old ditch and vegetation growing on right upstream groin riprap area.



Photo 5) Downstream face looking towards right abutment.



Photo 6) Downstream face looking towards left abutment.



Photo 7) Spillway channel looking downstream.



Photo 8) Deterioration at spillway channel looking east.



Photo 9) Outlet valve wheel and stem and reservoir staff gauge.



Photo 10) Drain outfall inside the seepage vault.



Photo 11) Erosion rills at left abutment access road.



Photo 12) Erosion rills at right abutment access road.



Photo 13) Abandoned irrigation ditch at right abutment looking downstream.

Reservoir Dam Valve Exercising Table

Reservoir Dam Valve Exercising

Syphon Canyon Dam

| Date | 12" Outlet # of Turns | Down Stream Main # of turns | Blow off valve |
|----------------|---------------------------------|--------------------------------|-------------------|
| 4/10/2013 | Exercised | Exercised | Exercised |
| 2014 | Reservoir is off line and empty | | |
| 2015 | Reservoir is off line and empty | | |
| 5/26/2016 DSOD | 36 | 36 | 36 |
| 7/14/2016 | 36 | 36 | 36 |
| 4/18/2017 | 36 | 36 | 36 |
| 5/2/2018 DSOD | 36 | 36 | 36 |
| 4/1/2019 | 36 | 36 | 36 |
| 1/14/2020 DSOD | 36 | 36 | 36 |
| 4/27/2021 | 36 | 36 | 36 |