

STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
DIVISION OF SAFETY OF DAMS

INSPECTION OF DAM AND RESERVOIR IN CERTIFIED STATUS

Name of Dam Syphon Canyon Dam No. 1029-4 County Orange
 Type of Dam Earth Type of Spillway Open Channel
 Water is 32 feet below spillway crest and 39 feet below dam crest.
 Water Surface Elevation EI. 346'
 Weather Conditions Sunny
 Contacts Made Danielle Drake with IRWD
 Reason for Inspection Periodic Maintenance Inspection

Important Observations, Recommendations or Actions Taken

- The owner needs to collapse, backfill, and compact the rodent holes with suitable material as an ongoing maintenance item.
- The owner needs to remove the debris from the spillway weepholes by November 1, 2023.
- The owner needs to investigate and determine the condition of Piezometers VBW/2-A and VBW/2-B.
- For future instrumentation reports, rain data needs to be incorporated into the piezometer data plots.

Conclusion

From the known information and visual inspection, the dam, reservoir, and the appurtenances are judged safe for the continued use.

Observations and Comments

<u>Dam</u>	The crest appeared level and well-aligned. The visible portion of the upstream slope, and the downstream slope appeared uniform, stable, and in satisfactory condition. The groins, downstream toe, and abutments appeared satisfactory with no signs of instability or distress. The vegetation is well managed with periodic vegetation control from the owner. Generally, the rodent control is satisfactory with minimal signs of rodent activity. The owner needs to collapse, backfill, and compact the rodent holes with suitable material as an ongoing maintenance item.
<u>Spillway</u>	The spillway approach, control section, and channel were clear of debris. The concrete elements of the spillway appeared to be in satisfactory condition. Several weepholes in the spillway had debris built up. The owner needs to remove the debris by November 1, 2023.
<u>Outlet</u>	The outlet consists of one upstream 12-inch butterfly valve and two downstream 16-inch butterfly valves. The owner fully cycled all three valves during this inspection with no issues. The exit of the outlet that enters the underground storm drain was clear of debris.
<u>Seepage</u>	No visible seepage from the downstream slope, groins, or toe was noted. There is a seepage monitoring point downstream of the downstream toe. The seepage is reported in the annual instrumentation report.
<u>Instr.</u>	The instrumentation at the dam consists of 12 piezometers and 1 seepage point. The latest instrumentation data report for this dam was transmitted to DSOD on May 31, 2023, and includes updated data for the monitoring period from January 1, 2022, through December 31, 2022. Piezometers: Generally, the levels of the piezometers remain consistent with small fluctuations that correlate with the changes in the reservoir level. Vibrating Wire Piezometer 2-A (VBW/2-A) was showing erroneous data and VBW/2-B is currently malfunctioning. The owner is reportedly having

Photos taken? Yes x No _____
 cc for Owner/Book

Inspected by Tyler Clark TGC 8/1/2023
 Date of Inspection 4/18/2023 CML 8/3/2023
 Date of Report 7/10/2023

BC 8/4/2023
 Sheet 1 of 4

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Date of Inspection 4/18/2023

Observations and Comments

issues with their data logger regarding these two piezometers. The owner will need to investigate both VBW/2-A and VBW/2-B and determine the condition of the piezometers. The remaining piezometer levels appear satisfactory with no adverse trends. For future reports, the owner needs to add rain data into the piezometer data plots.

Seepage: There is 1 seepage point at this dam and seepage during this monitoring period was as expected and followed changes in reservoir level and rainfall. The maximum seepage was less than 5 GPM during this monitoring period and decreased to 0 GPM due to the owner lowering the reservoir.

The instrumentation data shows the dam is performing satisfactorily and no new instrumentation is needed at this time.

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Photo 1: View of debris in one of the spillway weepholes.

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Photo 2: View of minor rodent activity along the crest.



Photo 3: View of the upstream slope from the left abutment.