

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 Concrete weir and open channel  
Water is 25.7 feet below spillway crest and 32.7 feet below dam crest.

Weather Conditions Humid with overcast

Contacts Made Jacob Moeder, Steve Habiger, and Danielle Drake with IRWD

Reason for Inspection Periodic Maintenance Inspection

### Important Observations, Recommendations or Actions Taken

- I performed the final construction inspection for the alteration application filed on April 24, 2019, and approved on June 20, 2021. The work consisted of exploratory work for the proposed new Syphon Canyon Dam that will be constructed. The alteration application will be closed out by Design Branch.
- All the outlet valves need to be fully cycled during our next inspection.
- Updated instrumentation data was received and reviewed.

### Conclusions

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

### Observations and Comments

<u>Dam</u>	The gravel covered crest appeared to be well-aligned, level, and in satisfactory condition. The visible portion of the upstream slope and downstream slope appeared to be stable, uniform, and in satisfactory condition. Vegetation and rodent control were adequate. The objectionable vegetation requested to be removed during the last inspection was satisfactorily completed. The groins and downstream toe of the dam were dry and appeared normal.
<u>Spillway</u>	The approach, channel, and downstream exit of the spillway were open and clear. The concrete control section and gunite lined channel remains serviceable and in satisfactory condition.
<u>Outlet</u>	The outlet consists of an upstream 12-inch butterfly valve and two downstream 16-inch butterfly valves. According to the logs, all the valves were last operated on April 14, 2022. All the valves were fully cycled in our presence during the January 14, 2020, inspection. The outlet valves will need to be fully cycled during our next inspection. The exit portal that enters the underground storm drain was unobstructed.
<u>Seepage</u>	There were no signs of seepage detected on the downstream slope, groins, or toe of the dam. The seepage from the toe drain was dripping. The seepage was normal for the low reservoir level.
<u>Instr.</u>	Instrumentation for this dam consists of 12 piezometers and 1 seepage point. The piezometers and toe drain are measured on a monthly basis. The latest instrumentation report was submitted on April 24, 2021, and includes data through December 2020.  Piezometers P2A, P2B, P4, P5, P6, P7, P8, and P9 were converted to vibrating wire piezometers in 2015. Piezometers P2B and P4 have shown the most erroneous data. The instrumentation report notes that the owner is having problems with the data logger, and the data logger was in the process of being fixed including a re-calibration. The open well piezometers continue to show predictable trends and respond normally to reservoir levels.

Photos taken? Yes  No   
cc for Owner/Files

*cmf* 7/29/2022

Inspected by Joe Boyce<sup>JB</sup> 7/29/2022  
Date of Inspection 06/13/2022  
Date of Report 07/13/2022 7/29/2022  
*RD*

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Date of Inspection 06/13/2022

### Observations and Comments

The toe drain readings are normal and within historical records. Seepage was below 1 gpm throughout the monitoring period.

Besides the erroneous vibrating wire piezometer data, the instrumentation shows the dam is performing satisfactorily, and the current instrumentation network is judged adequate at this time.



Looking across the crest of the dam.

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View of the downstream slope and toe area.



The spillway was open and clear.



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The exit to the outlet portal was unobstructed.



New piezometer installed during the exploration work.