

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 Sand Canyon Dam No. 1029-2 County Orange
 Type of Dam Earth Type of Spillway Concrete weir and channel
 Water is 11.5 feet below spillway crest and 20 feet below dam crest.

Weather Conditions Humid and overcast
 Contacts Made Jacob Moeder, Steve Habiger, and Danielle Drake with IRWD
 Reason for Inspection Periodic Maintenance Inspection

Important Observations, Recommendations or Actions Taken

- As repeatedly requested in our past inspection reports since 2016, the exit to the outlet is obstructed and choked with vegetation. The outlet is an integral component to dam safety and must be maintained clear. The outlet exit portal needs to be uncovered and the surrounding exit area needs to be cleared by November 1, 2022.
- All the outlet valves need to be operated during our next inspection.
- Updated instrumentation data was submitted and reviewed.

Conclusions

From the known information and the visual inspection, the dam, reservoir, and the appurtenances are judged marginally satisfactory for interim use pending clearing the outlet exit area.

Observations and Comments

<u>Dam</u>	The asphalt road, curb, and parapet wall on the crest of the dam appeared to be well-aligned, level, and in satisfactory condition. The visible portion of the upstream asphalt-lined slope appeared stable and in satisfactory condition. The downstream slope appeared to be uniform, stable, and in satisfactory condition. Vegetation and rodent control appeared satisfactory with bait traps strategically placed on the embankment. The downstream toe area was dry and appeared normal.
<u>Spillway</u>	The approach, weir, downstream channel, and tailworks of the spillway were open and clear. The concrete weir and walls appeared to remain in satisfactory condition. The unlined rock channel with filled in areas of dental concrete appeared to be in satisfactory condition.
<u>Outlet</u>	The outlet consists of four upstream gates and three downstream valves. According to the logs, all the valves were last operated on April 14, 2022. We last witnessed the operation of all the outlet valves during the January 14, 2020, inspection with no difficulties encountered. All the outlet valves are due to be operated during our next inspection. The downstream outlet exit portal could not be detected and is choked with vegetation. The outlet is an integral component for dam safety and must be maintained clear. DSOD has repeatedly requested the exit to the outlet be cleared in our inspection reports since 2016.
<u>Seepage</u>	There were no visual signs of seepage located on the downstream slope, groins, or toe of the dam. The seepage located at the collection vault showed the right drain was wet with no flow and the left drain was flowing approximately 2 gpm. The seepage was flowing clear and is normal for this dam.
<u>Instr.</u>	Instrumentation for this dam consists of 18 open well piezometers, 6 survey monuments, and 2 subdrains. The latest instrumentation report was submitted on April 24, 2021, and includes data through December 2020. The piezometers and subdrains are read on a monthly basis, and the monuments are surveyed annually.

Photos taken? Yes No *CMJ* 7/29/2022 Inspected by Joe Boyce *JB* 7/29/2022
 Date of Inspection 06/13/2022
 cc for Owner/Files Date of Report 07/12/2022 *RD* 7/29/2022

INSPECTION OF DAM AND RESERVOIR IN CERTIFIED STATUSName of Dam Sand CanyonDam No. 1029-2Date of Inspection 06/13/2022**Observations and Comments**

All the piezometers (excluding the vibrating wire piezometers), appear to be functioning and responding normally to reservoir levels and precipitation. There were no signs of any adverse trends or conditions to these piezometers. Vibrating wire piezometers 9 through 13 all are recording erroneous data since 2019. It was reported that there is a problem with the data logger and the owner is in the process of trying to fix the problem.

The survey monuments show small movements in the vertical and horizontal directions. During the monitoring period, horizontal movements were within 0.035 feet, and vertical movements were within 0.01 feet comparing the 2019 and 2020 surveys. Surveying data over the last decade show the dam remains stable with no unusual trends or conditions.

The right subdrain was dry throughout the monitoring period and the left subdrain flows did not exceed a peak flow of 5 gpm. The seepage data continues to show low seepage flows that are normal for this dam.

The instrumentation data shows the dam is performing satisfactorily and the instrumentation is judged adequate at this time.



View of the crest and downstream slope.

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Name of Dam Sand Canyon Dam No. 1029-2

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Looking downstream the spillway channel.



The outlet exit portal is obstructed and the surrounding area needs to be cleared.