

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 Rattlesnake Canyon Dam No. 1029-3 County Orange
 Type of Dam Earth Type of Spillway Side channel
 Water is 21 feet below spillway crest and 27 feet below dam crest.
 Water Surface Elevation EI. 391'
 Weather Conditions Sunny
 Contacts Made Danielle Drake and Bill Wesson with IRWD
 Reason for Inspection Periodic Maintenance Inspection

Important Observations, Recommendations or Actions Taken

- All valves were fully cycled during this inspection with no issues.
- The owner needs to increase rodent control efforts and collapse, backfill, and compact the rodent holes with suitable material as they appear.
- The owner needs to complete the following by July 1, 2024:
 - Remove the vegetation and seal the cracks and joints of the spillway side channel.
 - Remove the dense vegetation buildup at the exit of the spillway side channel.
- 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 asphalt-covered crest appeared level and well-aligned. The visible portion of the asphalt-lined upstream slope, and the earthen 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. The rodent control efforts need to be increased at this dam as rodent activity appears to have increased at the dam. The owner needs to collapse, backfill, and compact the rodent holes with suitable material as they appear.
<u>Spillway</u>	Overall, the spillway approach, weir, and side channel were clear of debris. There is vegetation growing throughout the cracks and joints of the spillway. The owner needs to remove the vegetation and seal the cracks and joints by July 1, 2024. The concrete elements of the spillway appeared to be in satisfactory condition. The exit of the spillway had dense vegetation growing throughout. The owner needs to remove the dense vegetation by July 1, 2024.
<u>Outlet</u>	The outlet consists of 4 upstream gate valves and 2 downstream valves. All valves were fully cycled during this inspection with no issues. The exit to the outlet was unobstructed. Accompanied with a letter dated May 4, 2023, the owner sent reports reviewing the CCTV inspection of the 24-inch steel outlet pipe and assessing its condition. The owner reported that the pipeline is corroding, and they are currently in the process of investigating the dam and determining possible repairs for the outlet pipe.
<u>Seepage</u>	This dam has 8 seepage points that are reported in the annual instrumentation report. During this inspection, drains 2, 5, 8, and 11 were all dry. Drains 3, 4, FP north, and FP south had flows less

Photos taken? Yes No
 cc for Owner/Book

Inspected by Tyler Clark TGC 8/7/2023
 Date of Inspection 4/19/2023 OML 8/8/2023
 Date of Report 7/27/2023

BC 8/9/2023

INSPECTION OF DAM AND RESERVOIR IN CERTIFIED STATUSName of Dam Rattlesnake Canyon Dam No. 1029-3Date of Inspection 4/19/2023**Observations and Comments**

	<p>than 2 GPM passing through. The water was flowing clear, and the rates are within historical ranges.</p> <p><u>Instr.</u> The instrumentation at the dam consists of 7 survey monuments, 16 open well piezometers, and 8 seepage drains. The latest instrumentation data report, prepared by GEI Consultants on behalf of IRWD, 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.</p> <p>Survey Monuments: The vertical and horizontal displacements show minimal changes during this monitoring period. The max vertical displacement is less than 0.02 feet, and the max horizontal displacement is less than 0.04 feet during this monitoring period. There appears to be no concerning trends or conditions in the data.</p> <p>Piezometers: Generally, the levels of the piezometers remain consistent with small fluctuations that correlate with the changes in the reservoir level. As previously reported, piezometer P-63 continues to increase in elevation from its low point, returning to historical trends. The owner needs to monitor P-63 and ensure that readings do not go above historical highs. For future reports, the owner needs to add rain data into the piezometer data plots.</p> <p>Seepage: There are 8 seepage points at this dam. The seepage levels at this dam have remained consistent and are within historical ranges. Drains 2, 5, 8 and 11 are typically dry. Drains 3 and 4 stay within a range of 0.25 GPM to 2 GPM. The FP North and FP South seepage points have stayed within a range of 0 GPM to 3 GPM during the monitoring period. The seepage points track reservoir levels but are less affected by rainfall. The seepage rates are within historical ranges.</p> <p>The instrumentation data shows the dam is performing satisfactorily and no new instrumentation is needed at this time.</p>
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Photo 1: View of the owner cycling the upstream gates.



Photo 2: View of the spillway exit with dense vegetation growing within the channel.

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Photo 3: View of the vegetation growth in the cracks and joints of the spillway side channel.

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Photo 4: View of the rodent trap buried next to a rodent hole.