

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 21.1 feet below spillway crest and 27.1 feet below dam crest.  
 Weather Conditions Sunny  
 Contacts Made Danielle Drake with IRWD and Richard Sanchez with GEI  
 Reason for Inspection Maintenance Inspection

### Important Observations, Recommendations or Actions Taken

As requested, vegetation was satisfactorily removed from joints in the spillway and at the spillway exit since the last inspection.

Per our letter, dated May 13, 2024, the low-level outlet pipe interior has moderate to severe corrosion, and the owner proposed to install cathodic protection and inspection the pipe with a remotely operated vehicle (ROV) every two years. This is acceptable to DSOD.

As previously requested, future instrumentation reports need to include rain data for the piezometer data plots. Additionally, piezometer P-63 needs to be monitored for increasing trends past historical highs in the data.

The alteration application filed on October 27, 2022, and approved on July 11, 2023, consisted of geotechnical site investigations regarding the embankment dam and its foundation. I observed all completed work associated with the applications, and the work appeared to be completed satisfactorily (Photos 6, 7, and 8). This will serve as the final inspection for the application work.

### Conclusions

From the known information and visual inspection, the dam, reservoir, and the appurtenances are judged safe for continued use, at or below the restricted elevation of 406 feet.

### Observations and Comments

<u>Dam</u>	The asphalt-lined crest appeared level and well-aligned. The visible portions of the upstream asphalt-lined face and groins appeared to be uniform and stable. There is some cracking in the asphalt lining on the crest and upstream face; however, it is expected with age and does not pose a dam safety concern at this time. The downstream face, groins, and toe appeared to be in satisfactory condition with no signs of instability or distress. Vegetation control was satisfactory. Clusters of rodent activity were observed on the downstream face and toe. The burrows were being gassed with carbon monoxide during the inspection as part of the owner's rodent abatement program. Existing burrows need to be collapsed, backfilled, and collapsed during routine maintenance following the gassing.
<u>Spillway</u>	The approach, control section, and downstream channel were clear and unobstructed. The concrete surfaces appeared to be in satisfactory condition with no significant cracks or spalls observed. As requested, vegetation was satisfactorily removed from joints in the spillway and at the spillway exit since the last inspection.
<u>Outlet</u>	The low-level outlet controls consist of four upstream gate valves and two downstream valves. All of the controls were last fully cycled in our presence on April 19, 2023, with no issues encountered.

Photos taken? Yes  No   
 cc for Owner/Book

Inspected by C. M. Lancaster *CML* 6/26/2024  
 Date of Inspection 3/25/2024  
 Date of Report 6/19/2024

**INSPECTION OF DAM AND RESERVOIR IN CERTIFIED STATUS**Name of Dam Rattlesnake CanyonDam No. 1029-3Date of Inspection 3/25/24**Observations and Comments**

	<p>Per our letter, dated May 13, 2024, the low-level outlet pipe interior has moderate to severe corrosion, and the owner proposed to install cathodic protection and inspection the pipe with a remotely operated vehicle (ROV) every two years. This is acceptable to DSOD.</p>																
<u>Seepage</u>	<p>No signs of seepage were observed on the downstream face, groins, or toe of the dam. There are six subdrains (Drains 2, 3, 4, 5, 8, and 11) that outfall into a seepage vault in the downstream channel of the spillway and another two subdrains (FP North and FP South) that outfall into another seepage vault further downstream in the channel. The following flows were estimated during the inspection:</p> <table data-bbox="264 709 1026 940"> <tr> <td>Drain 2:</td> <td>Dry</td> <td>Drain 8:</td> <td>Dry</td> </tr> <tr> <td>Drain 3:</td> <td>0.5 gpm</td> <td>Drain 11:</td> <td>Dry</td> </tr> <tr> <td>Drain 4:</td> <td>0.25 gpm</td> <td>FP North:</td> <td>1 gpm</td> </tr> <tr> <td>Drain 5:</td> <td>Dry</td> <td>FP South:</td> <td>0.5 gpm</td> </tr> </table> <p>Seepage was clear and conditions were consistent with past inspections at similar reservoir elevations.</p>	Drain 2:	Dry	Drain 8:	Dry	Drain 3:	0.5 gpm	Drain 11:	Dry	Drain 4:	0.25 gpm	FP North:	1 gpm	Drain 5:	Dry	FP South:	0.5 gpm
Drain 2:	Dry	Drain 8:	Dry														
Drain 3:	0.5 gpm	Drain 11:	Dry														
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Drain 5:	Dry	FP South:	0.5 gpm														
<u>Inst</u>	<p>Instrumentation at this dam consists of 7 survey monuments, 16 open well piezometers, and 8 seepage drains. The latest instrumentation report was transmitted to DSOD on May 31, 2023, covering data through calendar year 2022. The instrumentation data was reviewed in our July 27, 2023, inspection report, which concluded that the data shows the dam is performing satisfactorily.</p> <p>As previously requested, future instrumentation reports need to include rain data for the piezometer data plots. Additionally, piezometer P-63 needs to be monitored for increasing trends past historical highs in the data.</p>																

# INSPECTION OF DAM AND RESERVOIR IN CERTIFIED STATUS

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Photo 1. Downstream face of the dam.



Photo 2. Upstream face of the dam.



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Photo 3. Spillway approach and side channel.



Photo 4. Location of drain outfalls 2, 3, 4, 5, 8, and 11.



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Photo 5. Location of drain outfalls FP North and FP South.



Photo 6. Example of boring in the downstream face of the embankment.



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Photo 7. Example of backfilled boring in the spillway.



Photo 8. Example of backfilled boring in the crest.