

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 35 feet below spillway crest and 42 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

The construction application filed on July 11, 2022, is progressing through the design phase, and is expected to break ground in the summer of 2025. The application work consists of removing this dam, Syphon Canyon Dam, and constructing a new larger dam (Syphon Dam, No. 1029-5) in its place.

Because this dam is expected to be replaced in the next year, the following maintenance items, observed during this inspection, will not need to be addressed:

- Repair ruts in the dam crest
- Repair cracked and deteriorating sections of gunite lining in the spillway channel.
- Remove woody vegetation encroaching on the spillway approach and side walls of the downstream channel.
- Clear debris from the spillway weepholes.
- Investigate and determine the condition of piezometers VBW/2-A and VBW/2-B.

However, if the construction project is significantly delayed, these maintenance items will need to be addressed during routine maintenance work.

Conclusions

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

Observations and Comments

<u>Dam</u>	The gravel crest appeared level and well-aligned. There are some ruts in the crest, but they do not pose an immediate dam safety concern. However, if the construction project to replace the dam is significantly delayed, the ruts will need to be repaired. The visible portions of the upstream face and groins appeared to be uniform and stable. The downstream face, groins, and toe appeared to be in satisfactory condition with no signs of instability or distress. Vegetation control was satisfactory. No significant rodent activity was observed.
<u>Spillway</u>	The approach, control section, and downstream channel were clear and unobstructed. The gunite-lined channel was in serviceable condition; however, there is some longstanding cracking, signs of deterioration, and debris in some of the weepholes. Additionally, there is woody vegetation beginning to encroach on the spillway approach and the side walls of the downstream channel. If the dam construction project is significantly delayed, the spillway channel will need to be repaired and the woody vegetation will need to be removed.
<u>Outlet</u>	The low-level outlet controls consist of one upstream 12-inch butterfly valve and two downstream 16-inch butterfly 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 6/20/2024

INSPECTION OF DAM AND RESERVOIR IN CERTIFIED STATUSName of Dam Syphon CanyonDam No. 1029-4Date of Inspection 3/25/24**Observations and Comments**Seepage

No signs of seepage were observed on the downstream face, groins, or toe of the dam. There is one subdrain that outfalls into a seepage vault downstream of the dam. The outfall was dripping, and the minimal seepage appeared to be clear. Seepage conditions were consistent with past inspections at similar reservoir elevations.

Inst

Instrumentation at this dam consists of 12 piezometers, and a seepage subdrain. 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 10, 2023, inspection report, which concluded that the data shows the dam is performing satisfactorily.

As previously requested, future instrumentation reports need to include rainfall data for the piezometer data plots. Additionally, piezometers VBW/2-A and VBW/2-B were having issues with the datalogger. If the dam construction project is significantly delayed, the piezometers and datalogger will need to be investigated to determine their condition.



Photo 1. Downstream face of the dam.

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Photo 2. Upstream face of the dam.



Photo 3. Spillway control section and downstream channel.

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Photo 4. Subdrain outfall.