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 Bon Tempe Dam No. 33-6 County Marin
Type of Dam ERTH Type of Spillway Concrete weir and chute
Water is 0.4 feet above the spillway crest and 5.6 feet below the dam crest.

Weather Conditions Moderate to heavy rain
Contacts Made Lucy Croy, Trinity Leonard, Carl Sanders, and Ronnie Chasteen during the inspection
Reason for Inspection Periodic Evaluation

Important Observations, Recommendations or Actions Taken

As discussed in the April 25, 2013 inspection report, the upstream face is armored with large riprap that remains in generally satisfactory condition, but that shows signs of local deterioration. I've asked Ms. Croy to repair damaged areas of riprap as soon as is reasonably practical.

Vegetation control continues to improve, and tall and dense vegetation within the right downstream groin has been cleared as requested. Some additional vegetation clearing within the left downstream groin is still required to improve the effectiveness of monitoring for seepage and other defects within this important location.

Conclusions

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

Observations and Comments

Dam

The visible portions of the upstream face, crest, downstream face, and abutments are in satisfactory condition, with no indication of surficial distress or instability.

The upstream face is armored with large riprap that remains in generally satisfactory condition, but that shows signs of local deterioration due primarily to mechanical degradation. I've asked Ms. Croy to repair damaged areas of riprap as soon as is reasonably practical.

Vegetation control continues to improve, and tall and dense vegetation within the right downstream groin has been cleared as requested. Some additional vegetation clearing within the left downstream groin is still required to improve the effectiveness of monitoring for seepage and other defects within this important location.

Similar to recent past inspections rodent control also remains satisfactory, and few to no indications of rodent activity were observed.

Spillway

The approach, control section, and exit channel were open and clear. Approximately 0.4' of water was flowing through the spillway control section. The concrete lined spillway channel remains in satisfactory condition and the side walls are free of significant cracks or spalls indicative of excessive stress or deterioration. Flow within the channel is free of excessive turbulence and gives no evidence of significant flaws within the invert.

The current design storm, prepared in 1952, is for a 1000 year return period producing 2360 cfs (~871 cfs / sq mi) from the 2.71 square mile drainage area. The spillway capacity is ~4110 cfs which is greater than the peak inflow. Total freeboard is 6 feet and the residual freeboard for the design

Photos taken? Yes X No
cc for Owner/Book

Inspected by J. Lowe
Date of Inspection 8 February 2017
Date of Report 21 February 2017

21 Feb 2017
2/21/17
Feb 2/21/17

Observations and Comments

storm is 1.7 feet. Freeboard is satisfactory.

Outlet

Two 20-inch hydraulically operated butterfly valves provide upstream outlet control for the fully encased normally pressurized outlet. Downstream control is provided by three 12-inch mechanically operated butterfly valves. A fourth 8-inch gate valve controls flow to an irrigation supply line.

All upstream and downstream controls were fully cycled and found to be in good operating condition.

Seepage

Rainfall prevented evaluation for minor seepage. No evidence of significant seepage was observed within the downstream face, groins, or abutments.

Clear seepage from the left abutment was approximately 1 gpm to 2 gpm as measured at the outflow pipe below the downstream groin; the right groin seepage collection pipe was flowing approximately 1 gpm. Seepage at both locations is within historical values.

Instr.

Instrumentation consists of the following:

- Twelve (12) survey monuments installed to monitor settlement and displacement of the embankment. Five (5) benchmarks or reference points are used to locate and monitor the survey monuments. Monuments are read at roughly five year intervals.
- Two (2) seepage measurement locations installed to monitor seepage from the left and right abutments. Seepage from the left abutment is measured at an iron pipe below the left groin. Seepage from the right abutment is measured at a corrugated culvert pipe near the right-center toe of the embankment.

The latest instrumentation data was received from the owner on December 16, 2015, and no new data has been received since that time. The last instrumentation review is presented in the 7 April 2016 inspection report, and is not repeated here; I direct the reader to the earlier report for a detailed explanation of the instrumentation monitoring the dam, and the performance of the dam as reflected in the 16 December 2015 submittal. The conclusion of the April 2016 review was that, "Based on the data submitted the dam appears to be performing satisfactorily, and no additional instrumentation is believed necessary at this time".

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As discussed in the April 25, 2013 inspection report, the upstream face (above) is armored with large riprap that remains in generally satisfactory condition, but that shows signs of local deterioration.

Vegetation control along the downstream face continues to improve, and is now quite good.

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Approximately 0.4' of water was flowing through the spillway control section. Flow within the channel is free of excessive turbulence and gives no evidence of significant flaws within the invert.

All upstream and downstream controls were fully cycled and found to be in good operating condition. The three recently replaced downstream control gate valves are shown below.