

SUMMARY OF FERC RECOMMENDATIONS AND DWR ACTION ITEMS FERC PART 12D 2005 INSPECTION REPORT

Note: Selected recommendations have been edited to protect Critical Energy Infrastructure Information.

All Part 12D reports for Oroville Dam ended with the conclusion that the project was suitable for continued operation.

The process for a Part 12D report is iterative. The Independent Consulting Board, required by FERC every five years, provides an independent inspection and evaluation of the facility, and provides recommendations to DWR in their Part 12D report. DWR then submits a plan and schedule to address those recommendations based on priority and risk. In some cases FERC provides feedback to DWR's plan and DWR responds with additional information and planned actions.

The summary provided for each Part 12D report is DWR's plan, approved by FERC, to address recommendations. It provides the latest action from DWR in response to the recommendations in the inspection process.

Summary of Recommendations – Oroville Dam (11 Total)

R-1. The cutoff instrument tubing in Terminal S should be kept open.

Status: Completed.

R-2. Continue monitoring the turbidity in Terminal S, House T, and the toe drain but the method of taking turbidity measurements; the methodology was questioned in the last Performance Report.

Status: Completed (On-going activity). DWR changed to qualitative assessments of turbidity in 2011 in response to a 2010 Part 12D Board recommendation.

R-3. Monitoring of turbidity at weirs should continue.

Status: Completed (On-going activity).

R-4. All instrumentation should be reviewed and officially abandoned if no longer providing useful information, especially those where the data is not plotted or analyzed.

Status: Completed. DWR now documents active versus abandoned instrumentation in the Dam Safety Surveillance and Monitoring Plan format as mandated by the Federal Energy Regulatory Commission.

R-5. Monitoring of the spalled concrete at the ends of the roadway bridge deck should continue.

***Status: Completed (On-going activity).** Most recently, DWR engineers and Caltrans bridge engineers inspected the bridge and the areas that have experienced spalls on February 15, 2017 and again on March 30, 2017 with the benefit of a Caltrans under-bridge inspection truck. Measures have been taken to minimize the impact of heavy construction equipment on the bridge during the Spillway Emergency and Recovery efforts.*

- R-6.** Monitoring of the condition of the radial gates should continue.

Status: Completed (On-going activity).

- R-7.** The impact of the parking lot and security fencing on the capacity of the emergency spillway should be reviewed.

***Status: Completed.** The fencing design was reviewed to address concerns over it restricting flow over the emergency spillway. The fencing was deemed to be sacrificial during flows of consequence over the emergency spillway. The fencing was ultimately removed prior to the February 2017 flows over the emergency spillway.*

- R-8.** The stability analyses of Oroville Dam and the Bidwell Canyon and Parish Camp Saddle Dams should be completed and the results summarized in the STID.

***Status: Completed.** Analyses completed in 2006. DWR incorporated the results of the analyses in the STID in 2009.*

- R-9.** Continue to limit the River Outlet releases to 1,500 cfs and to inspect and exercise the valves twice a year.

***Status: Completed.** However, the repairs since 2016 have allowed DWR to increase the maximum release to 4,000 cfs when necessary to meet downstream temperature criteria and drought releases.*

- R-10.** The possibility of vibration induced metal fatigue in penstock No. 1 should be investigated in the next scheduled inspection.

***Status: Completed.** Further, DWR maintains sensitive equipment for each Hyatt generation unit that monitors valve and pipe vibration (auto-oscillation). When activated, the equipment initiates operations that disrupt the auto-oscillation.*

- R-11.** The ability to close the intake gate at Palermo Outlet should be verified.

***Status: Completed.** DWR located the Palermo intake with a remotely operated vehicle in November 2009. In 2016, DWR utilized a remotely operated vehicle to inspect the intake structure and the interior of the Palermo tunnel and extracted the intake bulkhead gate for refurbishment. The inspection confirmed the gate operable; its refurbishment will enhance its sealing for future tunnel dewatering as necessary for maintenance. DWR anticipates the intake bulkhead gate to be refurbished by early 2018.*

