

Nevada Irrigation District

2016 Dam Safety Activities Report

Nevada Irrigation District (NID) owns and operates 15 dams under the jurisdiction of California Division of Safety of Dams (DSOD). All of these dams, except two (Loma Rica and Deer Creek Diversion Dams), are also under the jurisdiction of Federal Energy Regulatory Commission (FERC). These two regulatory agencies enforce their respective comprehensive dam safety programs on the jurisdictional dams. The Hydroelectric Department is the District's lead in all dam safety issues, with support from the Engineering, Water Operations, and Water Maintenance Departments. In addition to satisfying the regulatory requirements, the Hydroelectric Department has its own ongoing improvements of various dam-safety related facilities and ancillaries. The following summarizes the dam safety activities performed in 2016 by the District:

1. Inspections and Monitoring

In addition to the District's weekly (as conditions permit) and monthly inspections of the dams, DSOD and FERC performed their annual inspections in September 2016. In addition, two Independent Consultants inspected the FERC jurisdictional dams and prepared inspection reports for submittal to FERC for review and approval. The District also submitted its own annual Dam Safety Surveillance Monitoring Reports to FERC and DSOD. (Note: The upper-country dams are inspected approximately monthly from a helicopter when the dams are covered in snow and the access roads are not passable.)

2. Evaluations and Assessments

FERC and DSOD require updates of evaluations regarding seismic stability, probable maximum floods, spillway/radial gates performance, penstock/inlet/outlet/valve condition, and several other subjects. In 2016, the District completed the seismic hazard analysis and ground motion computation study for all of the 15 dams. The results of that study will be used for the seismic stability analyses currently expected to begin in late 2017.

3. Emergency Action Plans (EAPs) and Exercise

As mandated by FERC, the District updated and submitted the EAPs for the dams on the Middle Yuba, South Yuba, and Bear River Watersheds. The EAPs are for emergency notifications to the public in the event of a potential dam failure or other abnormal high flow event. An internal EAP training was provided to involved District staff and an EAP outreach meeting was held on 10/20/2016 with local authorities and several other agencies.

4. Dam Safety Training

An annual dam safety inspection training was provided to 23 District staff members involved in the inspections of District dams.

5. Other Improvements and Activities

In 2016, the District:

- Replaced the coating of the Rollins Outlet Pipe and Penstock to ensure continued performance of the steel pipes.
- Performed an underwater inspection of the inlet tower and tunnel at the Dutch Flat Afterbay in preparation for the fish flow valves replacement to be completed in 2017.
- Performed a mandrel survey (smart pig) of the Loma Rica 24-inch outlet pipe, which is currently scheduled to be rehabilitated using HDPE slip lining method in 2017.
- Began a project to replace the low level outlet valve at the Rollins Dam.

6. Summary of Significant (>\$100,000) Modifications to Dams Completed in 2016

Dam	Type	Year Constructed	Summary of Modification
Rollins	Earth-Rock	1965	Remove exterior coating, prepare exterior surface, and repaint exterior of the penstock, low level outlet pipe, attached joints, bolts, connection devices, supports, and all appurtenant equipment.