

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

In the Matter of)	August 8, 2017
)	
State of California)	
Department of Water Resources)	Project No. 2100
)	
New Major License)	
Oroville Division, State Water Facilities)	
“Oroville Facilities”)	

**COMMENTS ON PENDING LICENSE ISSUANCE
BY**

Assemblyman James Gallagher, Senator Jim Nielsen, Oroville Chamber of Commerce, Oroville Recreation Advisory Committee, Town of Paradise, American Whitewater, Oroville Downtown Business Association, Citizens for Fair and Equitable Recreation, Feather River Low Flow Alliance, Oroville Rotary Club, Lake Oroville Bicyclists Organization, Butte County, Sutter County, City of Marysville, City of Gridley, City of Wheatland, City of Yuba City, City of Live Oak, Norcal Fishing Guides and Sportsmen’s Association, California Sportsfishing Protection Alliance, Friends of the River, Yuba-Sutter Chamber of Commerce, Yuba-Sutter Economic Development Corp., Oroville Association of Realtors, Sutter-Yuba Association of Realtors, Sacramento Valley Landowners’ Association, Yuba-Sutter Farm Bureau, Live Oak District Chamber of Commerce, South Yuba Citizens League, AquAlliance, Christopher Tellis, Victoria Smith, Janet Goodson, Linda Draper, Plumbers, Pipefitters and HVAC LU228, City of Biggs.

Ms. Kimberley Bose, Secretary
Federal Energy Regulatory Commission
Via e-mail

Dear Ms. Bose:

The undersigned Alternative Licensing Process settling parties, entities and Intervenor in the above referenced matter, respectfully submit the following comments concerning the reconstruction of Oroville Dam and the pending issuance of the new project license for the Oroville Facilities, FERC No. 2100.

SUMMARY OF THE COMMENTS

On February 9, 2017 the flood control outlet (FCO) spillway at Oroville Dam collapsed and failed while releasing water at a fraction of its capacity. This ultimately led to the use of the emergency spillway which also nearly failed due to cutback erosion moving quickly toward the ogee weir, and ultimately necessitating the evacuation of approximately 188,000 people in Oroville and downstream communities such as Intervenor Sutter County and the City of Yuba City. Reconstruction at the Oroville Facilities is underway. This incident and reconstruction effort comes late in the relicensing of Project No. 2100. As a result of the incident, licensing issues that were expected or could have been made by the Commission's Office of Energy Projects in relicensing are being made by the Commission's Division of Dam Safety and Inspections in a largely CEII reconstruction effort.

The undersigned entities, many of whom are parties to the licensing proceeding, and some of whom were settling parties in the Alternative Licensing Process, request that the Commission delay relicensing until the parties and the licensee can better understand the causes of this incident and how it may change the underlying assumptions of the pending license. A Board of Consultants and Forensic Team have been tasked by FERC with determining the cause of the spillway collapse and informing the reconstruction effort. The work of the Board of Consultants and Forensic Team has not yet been completed. Until this work is completed and reviewed by the licensee and undersigned entities, it is impossible to understand the full breadth of what is being relicensed.

Before issuing the new project license for Project No. 2100, the Commission must resolve key matters highlighted by the spillway incident and raised by some of the undersigned entities during the relicensing process. The Commission, local entities and other relicensing participants should understand the project being relicensed, how the facility will be put back into a proper and safe function, how damages will be compensated and impacts addressed, and whether the Commission's analysis and preferred alternative need to be reassessed in light of the changed conditions at the Oroville Dam complex and the downstream levees and conveyance facilities.

BACKGROUND

Butte County is the host community for the Department of Water Resources' (DWR) Oroville Facilities Project on the Feather River (Project no. 2100), with 762 megawatts of hydroelectric generation capacity. Project no. 2100 covers 41,000 acres and is wholly located within the unincorporated area of Butte County. Butte County is a primary service provider to Project no. 2100 providing a broad range of "first responder" and other government services. These services include roads, traffic control, law enforcement, fire protection and rescue, and the communication systems relied on by Project no. 2100, its employees, and the many recreational visitors to Project no. 2100.

Butte County participated in the multi-year Alternative Licensing Process. Butte County is a party to the proceeding. In its Motion to Intervene on April 21, 2005, Butte County stated: "Butte County will be directly affected by many of the environmental, economic, power

allocation, socioeconomic and recreation facility issues associated with this Project.”¹ On April 22, 2005, Butte County filed a “Motion of Butte County, California for Order Requiring Conduct of Socio-Economic Impact Studies,” which argued that DWR’s socio-economic analysis in its Preliminary Draft Environmental Assessment was “only 12 pages long” and “wholly inadequate to support a license application or order.”²

The spillways that failed on or about February 9, 2017 had the very real potential to cause the deaths of thousands of Butte County’s 230,000 residents. The crisis also damaged roads and caused flooding along the Feather River. The first responder and related services provided by Butte County were stretched to their limits and beyond. As Butte County pointed out in a petition it filed with the Commission on February 15, 2017, Butte County is presently in an untenable position with respect to the requirements of Project no. 2100 for future demands for Butte County’s services and the safety of its residents.³

Friends of the River (FOR), Sierra Club, and the South Yuba River Citizens League (SYRCL) are parties to the Oroville Dam relicensing proceeding.⁴ The primary issue raised by these parties was for the Commission to address the physical deficiencies at the Oroville Dam complex needed to accomplish the operational requirements to conduct (when necessary) floodwater-management surcharge operations over the dam’s emergency/auxiliary spillway. The California Sportfishing Protection Alliance (CSPA) is also an intervenor supporting FOR’s arguments in relation to flood-related facilities modifications.⁵ American Whitewater (AW) intervened as well, citing the FOR *et al.* intervention and recommended that the licensee respond and that the Commission analyze concerns relating to the ungated spillway at Oroville Dam.⁶

In their intervention in the relicensing proceeding, Sutter County, the City of Yuba City, and Levee District 1 (Sutter County *et al.*) asked the Commission for the following:

A relicensing order should be issued, consistent with the Commission’s duty under section 10(a) of the Federal Power Act, which directs the licensee to investigate the adequacy and structural integrity of Oroville Dam’s ungated auxiliary spillway that may currently pose a risk to the Project facilities and downstream levees in Sutter

¹ Motion of County of Butte, California, for Leave to Intervene, Project No. 2100, (filed April 21, 2005). eLibrary no. 20050421-5003 (Butte County Intervention)

² Motion of Butte County, California for Order Requiring Conduct of Socio-Economic Impact Studies, project No. 2100, (filed April 22, 2005), eLibrary no. 20050422-0022, p. 2.

³ Emergency Petition of Butte County, California to Require Licensee to Correct Safety Deficiencies and Establish a Public Safety Program, Project No. 2100-000 (filed February 15, 2017), eLibrary no. 20170215-5102.

⁴ Motion to Intervene of Friends of the River, Sierra Club, South Yuba River Citizen’s League , Project No. 2100-052 (filed Oct. 17, 2005), eLibrary no. 20051017- 5033 (FOR *et al.* Intervention).

⁵ Comments and Motion to Intervene, Draft Environmental Impact for the Oroville Facilities (filed December 19, 2006), eLibrary no. 20061219-5001, p. 3. (CSPA Intervention)

⁶ Motion to Intervene of American Rivers, American Whitewater and Chico Paddleheads (filed march 31, 2006), eLibrary no. 20060331-5090, p. 5 (AW Intervention).

County in the event extreme flood releases are required, as recently experienced in flood release events of 1986 and 1997, and to take all necessary actions to correct any identified deficiencies, in this regard.⁷

FERC's Office of Energy Projects (OEP) issued a Final EIS for the relicensing of the Oroville Facilities on May 27, 2007.⁸ The State Water Quality Control Board, issued water quality certification for the project on December 15, 2010.⁹ The Board did not take up the request of FOR *et al.* that it address water quality problems associated with the use of a hillside rather than a spillway to conduct surcharge operations, although in light of recent events, that decision now seems ill-advised.¹⁰ A Biological Opinion was issued for the project on December 5, 2016.

In February 2017, both Oroville Dam complex spillways experienced significant damage causing a major dam safety incident. The very real possibility of the ogee weir failure and potential for catastrophic flooding resulted in the evacuation of 188,000 residents in the Feather River Basin, including Butte County, Sutter County, Yuba County and the cities of Oroville, Biggs, Gridley, Yuba City, Live Oak, Marysville and Wheatland. Major hillside erosion occurred when the emergency spillway was activated. Subsequent drastic changes in Feather River flows due to managing the crisis led to unprecedented sloughing of riverbanks. All of this combined to cause large-scale water quality and sedimentation issues downstream. The incident gained worldwide attention. On February 13, the Washington D.C. office of Division of Dam Safety and Inspections required DWR to appoint an outside review panel to help guide the Department and the Commission in the reconstruction effort. The letter also ordered the creation of an independent Forensic Team to determine the causes of the spillway failure.¹¹

On April 19, 2017, FOR *et al.*, CSPA, and AW asked the Commission to clarify what decisions of concern to relicensing participants were being made in the apparent Dam Safety reconstruction process, what decisions were being made in the licensing process, and for the Commission to devise a transparent and expeditious process to make these decisions with the involvement of an informed public.¹² State legislators have also emphasized the importance of transparency at oversight hearings following the spillway failures.

⁷ Amended Motion to Intervene of the County of Sutter, the City of Yuba City, and Levee District No. 1 of Sutter County, p. 8, March 4, 2006. (Sutter County *et al.* intervention)

⁸ Federal Energy Regulatory Commission *Final Environmental Impact Statement for the Oroville Facilities Project* Docket No. P-2100-052, May 18, 2007, eLibrary no. 20070518-4001. (FERC Oroville FEIS)

⁹ State of California State Water Resources Control Board Order WQ 2010-0016, Dec. 15, 2010.

¹⁰ Joint comments of Friends of the River, Sierra Club, and South Yuba River Citizens League on Oroville Facilities Relicensing, FERC Project 2100, draft EIR, August 20, 2007.

¹¹ See <https://www.ferc.gov/industries/hydropower/safety/projects/oroville/2-13-17.pdf>; February 13, 2017 Letter from FERC Acting Director of Division of Dam Safety and Inspections David Capka to Acting Director of DWR William Croyle.

¹² FOR, Sierra Club, SYRCL, CSPA, and American Whitewater Request for Clarification and Public Process, Project 2100, April 19, 2017, eLibrary no. 20170419-5231 (FOR *et al.* April 2017 request).

To date, the Commission has not clarified these issues. The reconstruction phase has begun.¹³ There is no evidence that DWR or the Division of Safety of Dams and Inspections supports or intends to build a complete emergency/auxiliary spillway not subject to major hillside erosion if used. The license has not been issued.

COMMENTS

At this writing, the reconstruction plan appears to envision construction through at least 2017 and 2018, in addition to emergency work already completed.¹⁴ This redesign and reconstruction will result in a physically different project than the project proposed in the license application and analyzed as the Commission's preferred alternative in the FEIS for the relicensing of Project no. 2100. The reconstruction effort may also affect other licensing issues, including but not limited to recreation and power generation. However, information regarding the actions that DWR is taking under direction from FERC's Division of Dam Safety and Inspections is classified as Critical Energy Infrastructure Information (CEII) and thus has limited public availability. In addition, events in 2017 have conclusively demonstrated that some of the assumptions that the Commission and licensing participants made during relicensing were unfounded, most notably that the project's "emergency spillway" was a viable flood release infrastructure.¹⁵

¹³ "Reconstruction begins at Oroville Dam. Will it be different this time?" Sacramento Bee, May 24, 2017. <http://www.sacbee.com/news/state/california/water-and-drought/article152381522.html>

¹⁴ <http://www.capradio.org/articles/2017/05/24/oroville-spillway-repair-project-moves-into-heavy-construction-phase/>

¹⁵ The susceptibility of the hillside to erosion, as noted in FOR *et al.* April 2017 request filing group and Sutter County *et al.* filings with the Commission and the State Water Resources Control Board (SWRCB), can cause downstream water-quality problems, disrupt project operations, and damage project works and lands. Although the reality of FOR *et al.*/Sutter County *et al.* concerns are apparent now, in 2005, FERC staff was dismissive. According the FERC San Francisco regional office (SFRO) of its Division of Safety of Dams, "Emergency spillway flows would flow down a channel consisting of soil, bushes, and trees covering bedrock. Erosion of one to four feet of soil cover, and debris flow including bushes, and trees would occur during a large release in the emergency spillway." Erosion of an order of magnitude or two greater was experienced at the main spillway break in 2017. Judging from the vegetation cover, there is little reason to expect that a significant emergency/auxiliary spillway discharge would not cause similar hillside erosion. But there were more problems. The SFRO limited its analysis to the PMF/spillway design flood (characterizing it as a 350,000 cfs discharge). The SFRO failed to note that use of the auxiliary spillway in a standard project flood (SPF), the flood-control design flood for Oroville Dam, is required in the Army Corps of Engineers (ACE) Oroville Dam Reservoir Regulation Manual, a discharge that would result in a reservoir surcharge of 9.7 feet (charts 16 and 32). The SFRO failed to appreciate that "interim" (in place since Oroville Dam operations began a half a century ago) operations requirements by the Corps would require DWR to limit downstream releases to protect downstream levees by surcharging the reservoir if required. The SFRO failed to consider the operational consequences of operator reluctance to damage the hillside and cause problems with project works and project lands even for events smaller than the SPF. The SFRO failed to consider that the auxiliary spillway might be needed because of operational problems with the main service spillway as just happened in the 2017 Oroville Dam incident. The SFRO accepted DWR's Project Geology Section analysis that the limited

If, for example, hillside discharges from the emergency/auxiliary spillway remain part of the project, the recently demonstrated water quality and operational problems associated with such a decision should expand the zone of project influence and the nature of the proposed new license. In 2017, there were downstream impacts from bank erosion and associated water quality impacts of the initial spillway failure and subsequent discharge operations. Potential impacts that diverse entities raised in comments during relicensing became real. These changes may warrant recirculation of the EIS and potentially the adoption of different decisions. At minimum, the Commission should exercise caution in basing a relicensing order on previous assumptions.

There may even be changes in the Corps of Engineers' Reservoir Regulation Manual for Oroville Dam as have been requested by the Governor of California.¹⁶ While the nature and schedule of such changes are speculative, the manual does describe duties that the Commission-licensed physical structures need to accomplish and thus may have some bearing on the shape of the relicensed project.¹⁷

The Forensic Team tasked with determining the cause of the spillway collapse is still conducting its work. It is our understanding that this work will also inform the reconstruction efforts to ensure that any deficiencies are properly addressed.¹⁸ Until this work is completed, the parties have no way of understanding the full scope of what is being relicensed and whether reconstruction efforts have addressed the problems that may have led to the incident in the first place.

erosion that might be expected from the use of the auxiliary spillway would not “compromise the integrity of the emergency [auxiliary] spillway.” There was no evidence the SFRO conducted an independent investigation. See memo from John Onderdonk, Senior Civil Engineer, San Francisco Regional Office, Division of Dam Safety and Inspections Emergency Spillway Safety Questions related to Intervention Motion, Proj. No. 2100, Letter to John Mudre, FERC Division of Hydropower Licensing, July 27, 2006. (Onderdonk Memo), eLibrary no. 20060801-0158.

¹⁶ See https://www.gov.ca.gov/docs/2.24.17_Letters.pdf; February 24, 2017 Letter from California Natural Resources Secretary John Laird to the Army Corps of Engineers, Bureau of Reclamation, and FEMA.

¹⁷ As an important side note, there was some confusion and controversy in the relicensing proceeding about whether the Corps of Engineers manual required using the emergency/auxiliary spillway to make regulated flood-control (as opposed to dam-safety) releases. However, the FERC Oroville Facilities FEIS accepted our description of the surcharge storage capacity of the reservoir (p. C-19). Moreover, DWR operations staff (Joel Ledesma and John Leahigh) at the May 3 and 15, 2017, DWR Oroville Spillway Incident public meetings conceded that the Corps of Engineers manual requires such operations as described by FOR *et al.*, and at the May 15 meeting John Leahigh encouraged FOR *et al.* to continue to raise the issue of the operational binds that DWR finds itself in as long as use of the emergency/auxiliary spillway involves erosive overland flows.

¹⁸ <https://www.ferc.gov/industries/hydropower/safety/projects/oroville/02-21-17.pdf> February 21, 2017 Letter from FERC Acting Director of Division of Dam Safety and Inspections to DWR Acting Director William Croyle.

Finally, the parties also wish to have adequate time to discuss the implications of the February incident with the licensee and determine what efforts and actions will be taken to address and mitigate damage to Oroville and the downstream communities.

It also may be quite likely that the short turn-arounds in decision-making during reconstruction may make it difficult for the Commission to predict what decisions it wishes to undertake in the current dam-safety “proceeding” and what it wishes to undertake or reconsider in the licensing proceeding.

In the 11 years since the licensee reached an agreement intended to quantify and compensate for such impacts, Oroville and the downstream communities have experienced disappointing and inadequate performance by DWR with regard to the kinds of commitments that agreement memorialized. The issues and questions described above clearly demonstrate that DWR’s commitments will need to be revisited and substantially revised in light of the spillway failures.

CONCLUSION

It is unusual and undesirable for the Commission to relicense major hydroelectric dams with so many unresolved questions and issues. Considerable uncertainties face relicensing participants, the licensee, and the Commission’s dam-safety and relicensing staff. It would be prudent for the Commission to issue a new license only when there is clarity on both the configuration of the project and its potential effects and how the damage from the February incident will be addressed by the licensee.


Relicensing participants expended considerable time and energy during the relicensing of the Oroville Facilities. The events of 2017 have strained relationships between DWR, local communities, and other relicensing participants. DWR has not systematically evaluated the impacts to local communities of the incidents of 2017, and needs to do so. While there have been initial discussions relating to the impacts of spillway failures and appropriate mitigations, more time is needed to fully address these issues and to fully identify and evaluate all impacts of any changes to the relicensed Oroville Facilities. For these reasons, along with deficiencies in the FEIS, we request that FERC delay the issuance of the new license for Project no. 2100.



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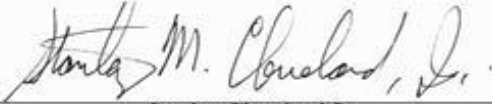
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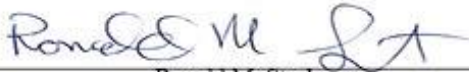
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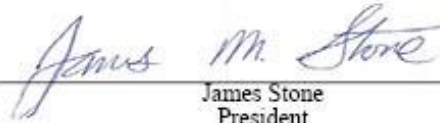
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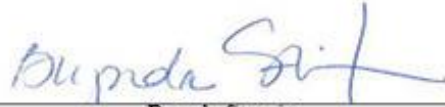
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