

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

In the Matter of ) June 22, 2017  
)  
State of California )  
Department of Water Resources ) Project No. 2100-180  
)  
Non-Capacity Amendment of License )  
Oroville Division, State Water Facilities )  
“Oroville Facilities” )

**MOTION TO INTERVENE  
BY FRIENDS OF THE RIVER, SIERRA CLUB  
SOUTH YUBA RIVER CITIZENS LEAGUE,  
CALIFORNIA SPORTFISHING PROTECTION ALLIANCE,  
AND AMERICAN WHITEWATER**

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

Dear Ms. Bose:

Pursuant to Rule 214 of the Federal Energy Regulatory Commission’s (hereinafter “FERC” or “Commission”) Rules of Practice and Procedure, 18CFR 385.214, Friends of the River, Sierra Club, the South Yuba River Citizen’s League, California Sportfishing Protection Alliance, and American Whitewater move to intervene in the above captioned proceeding.

**DESCRIPTION OF THE INTERVENORS**

Friends of the River (FOR) is a nonprofit 501(c)3 organization headquartered in Sacramento, California, working to protect, preserve, and restore California rivers and streams for both environmental and recreational purposes. Friends of the River has approximately 3,000

members in the state of California, some of whom live in the Feather River basin. Friends of the River's conservation staff have served on advisory committees for the Corps of Engineers Comprehensive Plan for improvements to the San Joaquin/Sacramento Valley flood system, the Department of Water Resources Floodplain Management Task Force, and the Department's Independent Review Panel for Central Valley Flooding. Friends of the River has also been a frequent commentor on the state's 2012 and 2107 Central Valley Flood Protection Plan. Friends of the River was a member of the CALFED-funded Yuba-Feather River Workgroup that sought to improve flood safety and the riverine environments of the basin.

Sierra Club is a nonprofit 501(c)4 organization working to protect the national and world environment. The Sierra Club has more than 2,000,000 members in the United States, and 17,000 members in the Mother Lode Chapter, where the project is located. The Sierra Club maintains an office in Sacramento, California. The Sierra Club was a member of the CALFED-funded Yuba-Feather River Workgroup that sought to improve flood safety and the riverine environments of the basin.

The South Yuba River Citizens League (SYRCL) is a nonprofit 501(c)3 organization working to protect the Yuba River (a major tributary of the Feather River) and its immediate environments. SYRCL maintains offices in Nevada City, Nevada County, California, and has approximately 10,000 members, most of whom live in the Feather, Yuba, and Bear River watersheds. SYRCL chaired the CALFED-funded Yuba-Feather River Workgroup that sought to improve flood safety and the riverine environments of the basin.

California Sportfishing Protection Alliance (CSPA) is a 501(c)(3) nonprofit, public benefit fishery conservation organization incorporated under the laws of the State of California in 1983 to protect, restore, and enhance fishery resources and their aquatic ecosystems. CSPA works to ensure that public fishery resources are conserved to enable public sport fishing activity. As an alliance, CSPA represents more than five hundred members. CSPA is a member of the steering committee of the national Hydropower Reform Coalition and has worked over the past three decades to improve hydropower licensing in substance and in process. Over the past decade,

CSPA has sought to clarify jurisdictional and procedural issues and disputes in multiple hydropower licensing and associated water quality certification proceedings.

American Whitewater (AW) is a national non-profit 501(c)(3) river conservation organization founded in 1954 with more than 5,600 members and 100 local-based affiliate clubs, representing whitewater paddlers across the nation. American Whitewater's mission is to conserve and restore America's whitewater resources and to enhance opportunities to enjoy them safely. AW members chair both the Hydropower Reform Coalition and the California Hydropower Reform Coalition.

## **BACKGROUND**

Friends of the River (FOR), Sierra Club, and the South Yuba River Citizens League (SYRCL) are parties to the Oroville Dam relicensing proceeding.<sup>1</sup> FOR, Sierra Club, and SYRCL requested that the physical deficiencies at the Oroville Facilities be addressed, particularly those needed 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.<sup>2</sup> 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.<sup>3</sup>

The FOR *et al.* intervention described the damage that could result if the spillway hillside was used for a spillway discharge, including the problems to transmission towers, power lines, and backwater conditions that would prevent operation of the Hyatt Powerhouse.

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<sup>1</sup> 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).

<sup>2</sup> Comments and Motion to Intervene, Draft Environmental Impact for the Oroville Facilities (filed December 19, 2006), eLibrary no. 20061219-5001, p. 3. (CSPA Intervention)

<sup>3</sup> Motion to Intervene of American Rivers, American Whitewater and Chico Paddleheads (filed March 31, 2017), eLibrary no. 20060331-5090, p. 5 (AW Intervention).

FERC's Office of Energy Projects (OEP) issued a Final EIS for the relicensing of the Oroville Facilities on May 27, 2007.<sup>4</sup> The State Water Quality Control Board, issued water quality certification for the project on December 15, 2010.<sup>5</sup> The Board did not take up the request of FOR *et al.* that it address water qualities problems associated with the use of a hillside to conduct surcharge operations.<sup>6</sup> 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 that resulted in the evacuation of 188,000 residents in the Feather River Basin. Major hillside erosion occurred. The incident gained worldwide attention. On February 13, the Washington DC office of Division of Safety of Dams and Inspections required DWR to appoint an outside review panel to help guide the Department and the Commission in the reconstruction effort and, in the process, appeared to become the major federal regulator of the reconstruction of the Oroville Facilities.<sup>7</sup>

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 involvement by an informed public.<sup>8</sup>

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<sup>4</sup> 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 Facilities FEIS)

<sup>5</sup> State of California State Water Resources Control Board Order WQ 2010-0016, Dec. 15, 2010.

<sup>6</sup> 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.

<sup>7</sup> Letter to William B. Croyle, Emergency Repair and Board of Consultants for Oroville Dam Spillway, from David E. Capka, PE, Acting Director, FERC Division of Dam Safety and Inspections, February 13, 2014, eLibrary no. 20170213-3006

<sup>8</sup> 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.* Request for Clarification)

The Commission has not clarified these issues. The reconstruction phase has begun.<sup>9</sup> There is no evidence that DWR or the Division of Safety of Dams and Inspections intends to build or require a complete emergency/auxiliary spillway not subject to major hillside erosion if used. The license has not been issued.

At this writing, the broad outlines of reconstruction plans have emerged with at least a 2017 and perhaps the 2018 reconstruction season plan,<sup>10</sup> in addition to emergency work already undertaken, which may also have future work planned.<sup>11</sup> These two seasons of reconstruction and perhaps additional seasons may result in a notably different project than what was considered in the license application and Commission preferred alternative in the FEIS for Project #2100. Clearly, some licensing issues may be affected by already and yet-to-be-undertaken dam-safety decisions taken in the largely CEII-secrecy-cloaked reconstruction effort. In addition, some of the licensing assumptions, such as the prescience of a largely sound, resistant-to-spillway-discharge hilltop and hillside or the so-called extreme unlikelihood of actual or potentially needed surcharge operations have been demonstrated to be erroneous by operations in 1997 and 2017.<sup>12</sup> If, for example, hillside discharges from the emergency/auxiliary

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<sup>9</sup> “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>

<sup>10</sup> <http://www.cpradio.org/articles/2017/05/24/oroville-spillway-repair-project-moves-into-heavy-construction-phase/>

<sup>11</sup> For example, PG&E is temporarily relocating its transmission lines that cross the “emergency” spillway, followed by a permanent transmission link, to escape potential gated and ungated spillway hillside discharges. This may or may not be a jurisdictional matter for the Commission, but it will clearly influence operational reliability, just as the DWR proposed relocations in this proceeding. We did not receive any notice of any FERC proceeding concerning PG&E’s action—although the relocation is clearly warranted. <http://www.gridleyherald.com/article/20170426/NEWS/170429740>, <http://www.krcrtv.com/news/local/butte/pge-power-lines-being-re-routed-near-oroville-dam-spillway/458288934>

<sup>12</sup> The susceptibility of the hillside to erosion, as noted in FOR *et al.* April 2017 Request for Clarification filing group 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.* concerns are apparent now, in 2005 FERC staff were 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.”

spillway remain part of the project, the recently demonstrated water quality and operational problems that may be associated with such a decision should expand the zone of project influence and potentially the nature of the proposed new license.

## POWERLINE RELOCATIONS

The filings from FOR *et al.* in this licensing proceeding demonstrate that operational surcharge operations required by the U.S. Army Corps of Engineers will cause damage to project lands, disrupt project operations, and perhaps threaten the loss of crest control at the reservoir. As noted in our request for clarification and public process, the FERC Oroville Facilities EIS accepted that surcharge storage and accompanying regulated releases limited to the objective release was part of the U.S. Army Corps of Engineers flood control manual.<sup>13</sup> Failure to have

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However, 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 would happen in the 2017 Oroville Dam incident. The SFRO accepted DWR’s Project Geology Section analysis that the limited 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.

<sup>13</sup> FOR *et al.* Request for Clarification, p. 7. Also, 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 Dam 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.

spillways that prevent the above operational consequences may limit the willingness of dam operators to follow Corps of Engineers operational requirements—or cause unacceptable consequences if followed under the current and apparently planned future conditions at the emergency/auxiliary spillway.<sup>14</sup> The 2017 Oroville Dam spillway incident demonstrated all three consequences outlined in the FOR *et al.* filings.

One of those consequences is to threaten the loss of transmission towers, accompanying power lines, and making operation of the Hyatt Powerhouse impossible. Relocation of these lines would be prudent in the event that DWR does not construct a complete emergency/auxiliary spillway. It would be prudent in the event of another main service spillway break that resulted in large discharges over the extensive highly erodible weathered-rock hillside. It would also be prudent to have these powerlines and transmission towers relocated before the next rainy season.

Strangely though, press accounts fairly consistently say that, quoting from one recent article, “State officials say they don’t plan to use the emergency spillway ever again.”<sup>15</sup> We have followed press accounts carefully and are unaware of how DWR plans to avoid use of the emergency/auxiliary spillway if hydrological events or dam mishaps surcharge the reservoir. But, as noted in our earlier filings, surcharge operations are required for the standard project flood, the reservoir design flood (the largest design hydrograph with no operational requirement to exceed the objective release or encroaching into levee or Oroville Facilities freeboard). This is not an unusual flood-control planning requirement for Corps-regulated dams in the Sacramento Valley. As noted in our earlier filings, this was the planning goal for the joint operation of the Yuba and Feather River systems in the Corps of Engineers flood manuals for these rivers. Indeed, the earlier Folsom Dam was planned for the similar predecessor methodology for the early standard project flood method (transposing a record regional storm over the watershed) and has recently been upgraded to have a reservoir design flood inflow hydrograph with a peak of

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<sup>14</sup> FOR *et al.* Intervention.

<sup>15</sup> “Oroville Dam repair is huge, but so is residents’ mistrust,” San Francisco Chronicle, June 18, 2017. <http://www.sfchronicle.com/bayarea/article/Oroville-Dam-repair-is-huge-but-so-is-11227869.php>

450,000– 500,000 cfs, considerably greater than standard project flood estimates around the time of its construction.<sup>16</sup>

These operations are part of the Corps of Engineers reservoir regulation manual. Failure to follow the manual would violate federal law and the proposed FERC license. Failure to plan for required operational and even emergency uses of the Oroville Facilities is imprudent. Moreover, we doubt that DWR has filed CEII plans hidden from public view that would change the project sufficiently to prevent the use of the emergency/auxiliary spillway. As the 2017 events have demonstrated, erosive flows down the hillside could raise the Thermolito Diversion Pool water levels enough to require a Hyatt powerhouse shutdown and other disruptive and dam-safety concerns. If DWR has made such filings, this would be a matter of major interest to the public and relicensing participants, and we would urge that they be made public if such filings have been made.

Obviously, the statement that DWR does not plan to use the emergency spillway again is belied by the proposed action here. After all, the need to relocate transmission lines and towers that could or would find themselves in the path of erosive flows from emergency/auxiliary

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<sup>16</sup> “In the design of Folsom Reservoir, the Corps of Engineers recognized the need to provide protection against a very large winter rain flood. The flood of January 1862 was thought to be the largest experienced flood for which estimates could be made, and those estimates were initially considered by the local Corps of Engineers’ staff for the Folsom flood control design operation plan. Objections raised by higher echelons of the Corps of Engineers, based on flood control experience throughout the United States, resulting [sic] in discarding the estimated 1862 flood hydrograph and preparing a revision of the design flood to assure that a higher or “project design” degree of protection would be provided by the flood control operation under consideration, when allowance for unforeseen contingencies was included.” Corps of Engineers Comments on Draft of USBR ‘Amendment to the Final Environmental Statement and Supplement on Auburn-Folsom South Unit,’ Dated July 11, 1974, Amendment to the Final Environmental Statement and Supplement on Auburn-Folsom South Unit, American River Division, Central Valley Project-California, Volume 2, Department of the Interior, USBR, p. 248. The reservoir design flood for Folsom Dam was developed from statistically centering the 1937 large regional flood over the American River Basin and computing its outflow—developing a peak inflow of 340,000 cfs at the design hydrograph used at the time. A Preliminary Study of Flood Control Alternatives on the Lower American River. California Department of Water Resources, Central District, September 1982, p. 7. “Standard Project Flood Flow Estimates — American River Basin,” Friends of the River, April 15, 2002. The standard project flood methodology was the subject of a Corps engineering manual: USACE, ER 1105-2-101, 1952 revised 1965. It has been updated subsequently but is no longer the centerpiece of Corps floodwater management planning efforts now occupied by the National Economic Development methodology (NED), a planning tool with a costs and benefits focus.



spillway discharges if the discharges don't or are unlikely to happen again is not particularly consistent with DWR's idea that they do not intend (or will not need) to conduct surcharge operations again. Indeed, we agree with DWR's proposed action and the reasonable assumptions about its necessity: unless and until a complete emergency/auxiliary spillway can be constructed, this powerline infrastructure should be relocated.

We also note that even with transmission tower and powerline relocations, the damage to project lands, disruption of project operations, and the potential for erosive flows to erode the hillside in ways of concern to the functioning of the project and safe operations remain good reasons for the construction of a complete emergency/auxiliary spillway.

CEII security information blackout and uncertainty about what issues and decisions are matters for the relicensing proceeding and what are being subsumed by decisions outside of any apparent public proceeding being overseen by the FERC Division of Safety of Dams and Inspections make it difficult for public intervenors to participate as fully informed participants in this proceeding or the relicensing or the dam-safety process(es). We again renew our request April 17, 2017 request for clarification and public process. But for now, and with the foregoing caveats, we support the proposed powerline and transmission tower relocation proposed in this proceeding and thank the Commission for starting this expedited proceeding and allowing for some public participation in it.

By \_\_\_\_\_/s/\_\_\_\_\_  
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## CERTIFICATE OF SERVICE

I hereby certify that I have e-filed this document in the Commission's e-library for Project 2100-180, and have this day served this document on each person designated on the official service list compiled by the Secretary in this proceeding, via e-mail or surface mail as directed on the service list.

Dated this 22nd day of June 2017.

/s/

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