

FRRR Letterhead

Draft letter to FERC and the US Corps of Engineers

Dear

The Feather River Recovery Alliance continues to encourage the DWR to take steps that will reduce the risks associated with the Oroville Dam consistent with the expressed wishes of the 6,500 local citizen who signed the petition to FERC to Hold the DWR Accountable after the broken spillway incident five years ago.

While assessing the value of the flawed Comprehensive Needs Assessment (CNA), the subject of our filing with FERC on October 5th 2020, we have been made aware of the lack of recent assessments of the impacts of high releases from the Dam. These are required by regulations, for instance:

Part 12 of the FERC manual covers 'Safety of Water Power and Project Works states:

Unless provided with a written exemption.....everylicensee must develop and file with the Regional Engineer.....three copies of an emergency action plan.....(which) must be developed in consultation and co-operation with appropriate Federal, State and local agenciesand designed to provide early warning to upstream and downstream inhabitants, property owners, operators of water related facilities, recreation users and other persons in the vicinity who might be affected by the project.

Section 38 in Chapter 8 – Operational Controls – of Water Code Manual states:

*The Director, Department of Water Resources Is responsible for (inter alia)
(3) Annually inspecting channel conditions to determine if any deterioration in flow capacity has occurred that could inhibit release of water corresponding to flows of 150,000 cfs below Oroville Dam or 180,000 cfs in the Feather River above Yuba River, 300,000cfs below Yuba River and 320,000 below Bear River.*

There is no public evidence that either of these requirements have been met.

Also, neither the original assessment of the impact of releases made when the Dam was originally licensed, nor any references to the risk of high releases since then, took into account the possibility that high releases would occur during a period of high rainfall which would add to the burden on the levees.

There is also a question as to whether 150,000cfs is the appropriate rate for assessing the impact of high releases. The standard project flood is 182,000 cfs, dam professionals advise a margin of error of at least 50%, in 1989, releases reached over 160,000 cfs which caused significant damage down stream while inflows to the lake approached 300,000cfs which would have flowed over the dam had the rain continued for another 12 hours and climate change increases the likelihood of extreme weather events. Moreover, the condition of the spillway head gates makes uncontrolled flows more probable.

Dr. Rune Storesund proposed a study of the impacts of high releases over a year ago – see attachment. This was discussed with the DWR. He made a presentation to the Oroville Dam Citizens' Advisory Committee in May. The study was briefly discussed in the August and November meetings but was kept off the agendas. The value of the study will depend on the co-operation of the DWR.

Managers of the Butte, Sutter and Yuba counties levees districts confirm the need for such a study which is supported by the Butte County sheriff's Department which bore the brunt of the unforeseen evacuation in 2017.

In these circumstances, we request that FERC require the DWR to co-operate in this study of the impact of high releases or commission one from another totally independent qualified source before any further license is issued. This should include a repeat of a one-year license on which the DWR has operated for the past decade. Allowing a dam to be operated for many years on automatically reissued one-year licenses without conditions does not increase the confidence of the downstream communities in either the operator or the regulator.

The lack of appreciation of the impact of likely high-level releases contributes to the failure to provide the resources that are needed to make the Dam and levee system safe. Unless there is a realistic appreciation of the dangers arising from the Dam in today's circumstances, there will be a much more serious incident and evacuation than those in 1998 and 2017.

Sincerely,

Dick Thompson, Chairman, Robert Bateman, Secretary Genoa Northern, Director

Feather River Recovery Alliance

Questions relevant to the need for a study of the Impacts of Higher Releases

Does the Central Valley Flood Protection Program account for elevated (more than the 'authorized' release) dam releases?

- 1. Have inundation maps been developed for elevated flows (150,000 cfs up to the discharge associated with the Probable Maximum Flood)?*
- 2. Has anyone identified which levees would breach when elevated flows are released from Oroville Dam?*
- 3. Have evacuation zones been identified to aid the Sherriff (in the various impacted counties) to identify who to evacuate and when?*
- 4. Have evacuation routes been identified and communicated to the impacted communities for cases of elevated flows?*
- 5. The current inundation maps on the DSOD website appear to be largely developed for 'sunny day' failures/releases. How would these maps look if the releases occurred during storm conditions when the channels were already full?*
- 6. Has anyone ascertained the cost of improving the flood conveyance system to provide an appropriate level of protection for the impacted communities (such as a release of 275,00 cfs from Oroville; where Standard Project Flood is 183,000 cfs x Safety Factor of 1.5 ~ 275,000 cfs)*
- 7. Has anyone ascertained the economic and life-loss costs with discharges from Oroville Dam above 150,000 cfs?*

8. *USACE authorized the release of 150,000 cfs from Oroville as a 'routine' release. If these 'routine releases' result in damages, who is responsible for the cost? If the downstream communities, have they been explicitly alerted to this obligation (ie risk transfer)?*
9. *If no damage assessments have been made for downstream impacts due to elevated releases, then the 'risk' of downstream damage has not been characterized. How can any meaningful 'cost/benefit' analyses be performed to identify 'high risk' areas if no cost or benefit values have been developed?*
10. *If no damage assessments have been made for downstream impacts due to elevated releases, then the risk of downstream damage has not been characterized. How can meaningful 'cost/benefit' analysis be performed to identify 'high risk' areas?*