August 13, 2023

Water Control Manual Objectives

Background

This document was submitted to California Natural Resources Agency (CNRA) to help shape Meeting 15 of the Commission. It written by Matt Mentink, a community member who has been studying the operation of Oroville Dam and local river management, and Commissioner Robert Bateman on behalf of a group of downstream Commissioners, Supervisors Bill Connelly, Tod Kimmelshue, Seth Fuhrer, and Mat Conant. The document was sent by Robert Bateman to Nancy Vogel, Deputy Secretary for Water Resources with CNRA. The authors have given CNRA permission to share this draft document with the full Commission and the public to inform the discussion on the Water Control Manual process at the OCAC meeting 15 on November 15, 2023.

Agenda topics for the November OCAC meeting presentations by Scripps / USACE

It was proposed earlier that the accuracy of weather forecasting models and their margin of error for the March 2023 events be shared with the OCAC. And although that information is still of interest, it is only a single variable in the development of the language and operational rule changes in the new WCM process. It's the Language and Rules Changes being considered during the development of the new Water Control Manual (WCM) that needs to be shared and negotiated with the downstream stakeholders and the Oroville Citizen Advisory Commission This should be an urgent priority for the next OCAC meeting before said language and WCM Rule changes become non-negotiable.

OCAC Charter F. 2. The commission will act as a unified voice from the communities surrounding Oroville Dam to provide public feedback and advice on best practices to the dam operator.

The generational concerns of the downstream communities has not been the size of the 1986, 1997, and 2017 storms, but the rules of operation and human decision making that governed the downstream flows. The new Water Control Manual process is advancing simultaneously with the FIRO Viability studies being conducted by independent experts and the OCAC has yet to be invented into the discussion. Therefore the downstream stakeholders are developing a set of objectives for consideration in the development of language and rule changes for the new WCM.

The November OCAC agenda should focus heavily on the Downstream Stakeholder Objectives for the WCM process. These objectives or Lessons Learned from past events should guide the presentation and Q&A for USACE and Scripts who are scheduled to present. And it's precisely these regulators and independent experts who should be addressing our concerns. To "Eat up the Clock" by DWR drilling down into new advancement of weather forecasting models would deny the OCAC of meaningful "Best Method" feedback, and breach our intended purpose as stated within the charter. Although receiving public feedback on the new WCM is a requirement at the end of the WCM process, it's unrealistic to believe any meaningful adjustments to the objectives and rules of dam operation will happen at that late stage, therefore the current urgency within the November OCAC process.

At the last meeting Secretary Crowfoot made the suggestion for another "workshop" if needed, and that could be another avenue to satisfy this OCAC requirement. But such a workshop should not be conducted like the last one, which was a "workshop" in name only. There were plenty of subject matter experts and presentations chosen by DWR and little time for public feedback, although originally proposed as an opportunity to break into subgroups for meaningful collaboration:

> ***"the Commission is planning to sponsor a Stakeholder Technical Workshop on Friday, April 22 from 9am – noon. The purpose of the workshop is to allow the Resources Agency, DWR and other government officials to hear directly from and speak directly to stakeholders about their goals, interests and concerns related to flood safety and downstream communities."***

August 13, 2023
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Downstream Stakeholders Objectives for Yuba-Feather Water Control Manual

Following is a preliminary draft of the Downstream Stakeholders Objective for the new WCM development process that should guide November's OCAC meeting or future Workshop.

Reservoir Design Flood: The Reservoir Design Flood is a hypothetical flood hydrograph used to characterize the maximum flood water management performance of a project

Please provide the objective of the FIRO manual update. Is it meeting the requirements of existing Reservoir Design Flood (peak inflow of 440,000 cfs and a 72-hour volume of 1,520,000 acre-feet.) or should there be plans to update to a larger Reservoir Design Flood- Future?

Account for the 260,000 af of storage Marysville Reservoir was to provide.

Much like Yuba Water's new spillway, Oroville should make its share of recommended infrastructure enhancements to obtain the capacity for FIRO's operational objective of Reservoir Design Flood-Future.

Sizing of the Probable Maximum Flood (PMF) gets routinely updated as new data becomes available, possibly every 5 years or 10 years under two proposed congressional bills. The Standard Project Flood (SPF) and corresponding Rules of Operation within the new Water Control Manual should follow the same schedule.

Regulate the downstream river capacity 3 feet below the levee's crest as demonstrated in the USACE FIRO model as new downstream objectives for both above and below the confluence of the Yuba River to reduce the risk of levee failures.

Include Englebright Lake into the Yuba-Feather coordinated flood operations for both it's uncontrolled outflows and uncontrolled down-ramping/ levee slouching risks to the lower Feather River levee system.

Downramping regulations should be measured at river gauge below the confluence of the Yuba (Boyd's Pump) instead of by spillway releases that lack any consideration of uncontrolled down ramping from Englebright Lake.

Include the combined watershed's accumulated Snow Water Equivalent into the soil wetness index calculations that regulates the size of the flood pools.

The calculations and raw data for the Soil Index and Snowmelt should be made available on CA Data Exchange (CDE) for public verification and adherence to flood pool requirements.
The spring refill curve should have variable levels to account for spring snowmelt based on the existing water equivalency of the snowpack.

Forecasting skill and the "Margin of Error" percentage should be established and used in determining the start and size of early releases ahead of flood events. The higher the margin of error the sooner the start of early releases.

The margins of error and early release guidance should be available for public verification.

The water control manual should regulate most aspects of "situational decision-making" versus assumptions of "Good Faith" decision making by dam operators, who must deal with the competing objectives of public safety and water delivery.

The "wear and tear" on the Feather River levees system from the frequency, volume and duration of spillway releases conducted by a FIRO WCM should be understood and mitigated as much as possible.

The frequency, volume and duration of spillway releases conducted by a FIRO WCM that exceed the natural river channel will have a negative effect on the farming practices within the downstream levee system. This needs to be understood and mitigated where possible

When flows are projected to exceed the natural river channel, a notification system should be developed to reach those affected..

Other objectives

The effects that FIRO spillway releases have on the various life-cycle stages of the river fisheries must be understood and mitigated as much as possible.

Real time river temperatures should be monitored and posted on (CDE) for public review, along with the corresponding requirement for fisheries

The effects that FIRO spillway releases have on both lake and river recreation need to be understood and mitigated as much as possible

The long-term effects of the storage and channeling of the watershed runoff has on the valley's groundwater needs to be understood and mitigated as much as possible through various groundwater recharge projects such as flooding rice fields during excess river flows.

The FIRO Viability process has made recommendations on several of these objectives, but getting them adapted as objectives in the actual WCM process is the concern.

Therefore the November OCAC presentations and Q&A should be with this concern in mind.