

DEPARTMENT OF WATER RESOURCES

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October 23, 2018

The Honorable Jim Nielsen, Senator, 4th District
State Capitol, Room 2068
Sacramento, CA 95814

The Honorable James Gallagher, Assembly Member, 3rd District
State Capitol, Room 2518
Sacramento, CA 95814

Dear Senator Nielsen and Assembly Member Gallagher:

Thank you for your August 2, 2018, letter containing comments and questions following the July 18, 2018, meeting of the Oroville Dam Safety Comprehensive Needs Assessment Project Ad-Hoc Committee. We appreciate the spirit of collaboration you have brought to the project and the opportunity to work with you and the committee. The California Department of Water Resources (DWR) shares your commitment to the safety of residents downstream of Oroville Dam, and we consider the Comprehensive Needs Assessment a necessary and important step toward ensuring the long-term safety and performance of the Oroville Dam complex.

This letter includes our responses to your comments and questions. As your letter notes, some of the issues raised are outside the scope of the CNA or are being addressed through other efforts. At your suggestion, our response includes a table indicating the process or venue where those issues are being addressed.

Also per your suggestion, DWR will create and maintain a comment log that includes all Independent Review Board (IRB) comments, our actions or planned actions in response to the comments, and the IRB's concurrence that the comment is either "open" or "closed." This log will be provided to the Ad-Hoc Committee.

One issue discussed at the July 18 meeting and highlighted in your August 2 letter is modification of the Water Control Manual (WCM), which includes operational rules for dam safety and flood risk management. The WCM is under the authority of the United States Army Corps of Engineers (USACE), and therefore a formal update would require a separate process with USACE. A formal update will take multiple years and will incorporate potential physical and non-physical changes resulting from the CNA process. During the interim period, DWR, in consultation with the USACE, intends to operate in a manner that improves on rules specified in the existing 1970 USACE Water Control Manual. These interim operations will inform the assessment of alternatives developed in the CNA process, as well as the formal update of the WCM. The Ad-Hoc Committee meetings will provide an opportunity to discuss this interim operations plan.

DWR's response to your comments are below.

Comment No. 1

The use of the term "Comprehensive Needs Assessment" implies a more thorough examination of needs than currently proposed via the identified six (6) tasks and may be interpreted by the public as misleading.

DWR Response

From its inception, the Comprehensive Needs Assessment (CNA) project has been an evaluation of the safety and reliability of the Oroville Dam and Reservoir Complex infrastructure, including operations associated with existing or future infrastructure components. The "Comprehensive Needs Assessment" title is commonly used by DWR's Division of Operations and Maintenance for projects that thoroughly assess infrastructure conditions. Following the February 2017 spillway incident, the title was selected and forwarded to the Federal Energy Regulatory Commission (FERC) and the Division of Safety of Dams (DSOD) to communicate our plan to investigate and evaluate the Oroville Dam infrastructure and appurtenant structures with respect to modern dam safety requirements.

Your "Basis for Comment" section provides helpful context and includes points of interest that are beyond the scope of this project. The table below provides information on where these topics are being addressed:

General Organizational, Regulatory, and Industry Factors	DWR has provided its response to the General Organizational, Regulatory, and Industry Factors identified by the Independent Forensics Team in three separate letters to FERC. In these letters, DWR outlines immediate, near-term, and long-term initiatives to advance the SWP Dam Safety Program. This advancement will be a multi-year, continuous improvement effort, and will be captured in annual updates to the SWP Owner's Dam Safety Program documents that are filed at FERC.
Water Control Manual	A formal update to the WCM is under the authority of the USACE. It is anticipated that the process for updating the WCM will take multiple years and is dependent upon the adoption of potential infrastructural changes resulting from the CNA process.

Forecast Informed Reservoir Operations	DWR has been engaged with the USACE and Yuba County Water Agency on a Forecast Informed Operations Program and all three agencies will consider adopting some aspects of Forecast Informed Operations during the development of the WCM updates.
Facility Security	DWR closely coordinates efforts to ensure the security of the facility with appropriate agencies such as the Department of Homeland Security, the California Office of Emergency Services, the California Highway Patrol, the Butte County Sheriff, and California Department of Parks and Recreation law enforcement personnel. All security protocols meet the requirements of these agencies. As required by these agencies, details about these efforts are not made available to the public.

Comment No. 2

Proposed Criteria by which to evaluate "safety" and "reliability" have not been provided, thus precluding the Ad-Hoc Committee from communicating to the public the proposed thresholds between safe/not safe and reliable/not reliable.

DWR Response

The CNA project will include several steps in which safety and reliability are defined, assessed, and evaluated. The IRB also made recommendations regarding project integration and the evaluation process, which we find closely linked to Comment No. 2, including:

- M1-1 The IRB recommends that the CNA Project Team develop a plan for execution of project integration, perhaps under a Task 7. As part of this new task, interdependencies between the tasks and between Tasks 1-6 and Task 7 (or project integration) should be mapped out and reflected in the project schedules for all tasks.
- M1-3 The IRB recommends the CNA Project Team establish evaluation criteria for alternative selection prior to formulating alternatives.
- M1-5 The IRB recommends that the CNA Project Team include gain or loss of project benefits among the consequence categories to be considered in evaluating risk reduction.
- M1-9 The IRB recommends that an effort be undertaken to define a common understanding of terminology to be used across all tasks.
- M1-13 The IRB recommends that any risk assessment, whether at the task level or project level, include an explicit statement of assumptions that form the contextual basis of that assessment.
- M1-15 The IRB recommends that the CNA Project Team question previous assumptions regarding downstream consequence thresholds and take advantage of the new

incremental dam breach hydraulic analyses to develop accurate consequence information.

DWR provided presentations on - "Project Integration" and "Evaluation Criteria" to the IRB at its most recent meeting, that included the planned use of risk assessments along with the process for formulating project recommendation alternatives. These presentations showed that safety and reliability are the primary objectives and that the evaluation criteria will include heavily weighted safety and reliability factors. Per the established process for the CNA, DWR will also present this information to the Ad Hoc Committee.

One planned outcome of the CNA is the development of a set of alternative recommendations for DWR management to consider for implementation. These recommendations will consist of measures to ensure and bolster the safety and reliability of Oroville Dam and its appurtenant structures. These measures are expected to be enhancements such as: new or modified structures, surveillance and instrumentation enhancement, and operational modifications. These measures and recommendations will be submitted to DSOD and FERC, who will make evaluations based on their safety and reliability criteria. Decisions regarding implementation will be agreed upon by DWR, DSOD, and FERC.

Comment No. 3

Timely public dissemination of select relevant documentation will aid the Ad-Hoc Committee to fulfill its role of ensuring the comprehensiveness of items under study, communicating accurate information and context about the current needs assessment for Oroville Dam and appurtenant structures initiative.

Response

As was done after the first meeting, DWR will continue to make all CNA reports, presentations, and documents publicly available on our website. This is done to help keep the general public informed and to ensure the Ad Hoc group has the access it needs to track developments and progress of the CNA. DWR will share each of the IRB meeting reports and the presentations made at the IRB meetings that can be made available to the public, but as was previously discussed and agreed to within our charter, there are some documents that cannot be shared due to their sensitivity regarding facility security. Of the documents you listed under Comment No. 3, the unredacted PFMA Reports, Ninth FERC Part 12D Report, and the 2014 Director's Safety Review Report, are not publicly available. However, the redacted versions with security information removed are available.

Question No. 1 was directed to the IRB.

Question No. 2

Will the monitoring program include a developed program for security of the entire facility while still providing access to the public to the Spillway Launch facility and access across the Dam for vehicles and walkers? (Task 6)

Response

While not part of the scope of the CNA, security monitoring is very important and is managed by DWR through regular interaction with the appropriate law enforcement agencies. The monitoring program included in the CNA is a separate program to monitor the engineering performance of the Oroville facilities, including the embankment and appurtenant structures such as the saddle dams and the spillways. Apart from the CNA, DWR is working with the Department of Homeland Security, California Office of Emergency Services, California Highway Patrol, the Butte County Sheriff's Office, and California Department of Parks and Recreation law enforcement personnel to develop a plan for public access to the Spillway Boat Launch Facility and the Dam Crest. DWR expects that a plan will be in place in 2019.

Question No. 3

If it is determined an additional lower level outlet is required, what will it be used for other than for safely releasing water during high inflow periods?

Response

The potential use(s) for any additional low-level outlet capacity that is identified through the CNA effort will be evaluated as part of the Operations Needs Assessment (Task 2) of the CNA effort.

Question No. 4

The use of the term "Independent Review Board" implies a degree of freedom from conflicts of interest that may not be reflective of the Review Board Panel Members. Use of the term "independent" may be interpreted by the public as misleading. Should the IRB be renamed "External Review Board?"

Response

"Independent" is an accurate term to use to describe the CNA review board. DWR's use and application of independent consulting boards is consistent with pages 18 and 19 of the Federal Guidelines for Dam Safety (FEMA 2004 <https://www.fema.gov/media-library-data/20130726-1502-20490-5785/fema-93.pdf>). This section of the guidelines describes "external" reviews as being performed by "independent" experts from outside the agency.

Again, we thank you for participation in this important effort and look forward to the second meeting of the Ad-Hoc group on October 30, 2018.

Senator Nielsen
Assembly Member Gallagher

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Sincerely,

A handwritten signature in black ink that reads "Joel Ledesma". The signature is written in a cursive style with a large, prominent initial "J".

Joel Ledesma
Deputy Director
State Water Project