

MEETING SUMMARY
Oroville Dam Citizens Advisory Commission
Meeting 4: August 21, 2020

10:00 am – 12:00 pm
Virtual Meeting via Zoom Webinar

This meeting summary provides an overview of the August 21, 2020 Oroville Dam Citizens Advisory Commission meeting and focuses primarily on capturing the comments and questions posed by Commissioners and members of the public. It is organized by agenda topic to assist readers in cross-referencing the meeting materials. This document is not intended to serve as minutes of the meeting or a transcript of the discussion. A transcript and materials from the meeting are available on the Oroville Dam Citizens Advisory Commission website: <http://resources.ca.gov/oroville-dam-citizens-advisory-commission/>

MEETING AGENDA

- Welcome and Introductions
- Comprehensive Needs Assessment Update
- Oroville Recreation Update
- Public Question & Comment

ACTION ITEMS

1. Meeting facilitation consultants, Kearns & West, to produce meeting summary. California Natural Resources Agency (CNRA), Asm. Gallagher, Sen. Nielsen, Sup. Flores (Sutter County), and Sup. Bradford (Yuba County)'s offices to review summary prior to posting on the Oroville Dam Citizens Advisory Commission website.
2. Kearns & West/CNRA to confirm next Commission meeting for November 13, 2020, either virtually or in Oroville as appropriate based on public health guidelines.
3. Kearns & West will add a discussion of the CNA and the FERC Level 2 and Part 12D Assessments' final conclusions to the agenda for the November 13 CAC meeting; DWR will provide materials for that discussion with adequate time for advance review.
4. Ted Craddock and John Yarbrough will follow up with Commissioner Genoa Widener to discuss her questions (shared in agenda item 2 below) prior to finalizing the CNA Report.
5. DWR will include an executive summary in the final CNA report that summarizes the report's high level conclusions clearly and concisely.
6. DWR/CNRA will disseminate a list of Capital Improvement Projects to all the commissioners.

AGENDA ITEM 1: WELCOME AND INTRODUCTIONS

Secretary Wade Crowfoot welcomed attendees to the meeting and expressed his regret that the group cannot meet in person at this time. He stated that, even amidst the challenges currently facing the State – the worst heat wave in decades, wildfires, evacuations, and the ongoing coronavirus pandemic, the Oroville Dam Citizens Advisory Committee (CAC) remains a priority of the Natural Resource Agency and the Newsom administration, and he remains committed to meeting. He thanked the Commissioners for taking time for this meeting amidst their other responsibilities and particularly Senator Jim Nielsen and

Assemblyman James Gallagher for their leadership in ensuring the State is communicating about activities at the dam with local leaders and citizens.

Senator Nielsen in turn thanked the Secretary and Director Karla Nemeth for their personal attention to this topic and Commission, calling it “very significant.”

Director Nemeth thanked CalFire, the Butte County Sheriff’s Office, local CHP, and all the emergency response partners who supported the effort to suppress the Potters fire that came very close to the spillway this week. She reported that the facilities were not damaged and noted that protecting these facilities is essential for local public safety and also for supplying additional power needed to prevent more widespread rolling blackouts. She also shared that DWR has instituted health and safety protocols for COVID at the Oroville Field Division, including wellness checks and expanded cleaning services, to ensure that the staff stay healthy and are able to continue operating the critical facilities. She also thanked Senator Nielsen and Assemblyman Gallagher for setting up the Comprehensive Needs Assessment Ad Hoc Group, which integrated public feedback into the process and ultimately, helped produce a better assessment.

Senator Nielsen expressed his pleasure that all the Commissioners are here working to protect the Oroville facility and its role in the continuity of State Water Project water delivery, which is so important to the local community and to the entire state.

Assemblyman Gallagher described the Commission as making great progress and voiced his hope to see further infrastructure improvements at the Oroville Complex and his own commitment to bringing them to fruition. He noted that such crucial infrastructure needs to be constantly reevaluated in terms of potential improvements and ongoing maintenance.

As mandated by the requirements set forth in Senate Bill 955 (2018, Nielsen), the Commission consists of representatives from the following agencies and public bodies. Attendance at the August 21, 2020 meeting is noted in the table below.

Agency or Public Body	Commissioner (or Alternate)	Present
CA Natural Resources Agency	(Chair) Secretary Wade Crowfoot	X
California State Senate	(Vice Chair) Senator Jim Nielsen	X
Department of Water Resources	Director Karla Nemeth	X
Department of Parks and Recreation	Director Lisa Mangat (represented by Matt Teague)	X
Office of Emergency Services	Director Mark Ghilarducci (represented by Christina Curry)	X
Department of California Highway Patrol	Chief – CHP Valley Division (represented by Lieutenant Commander Marc Stokes)	X

California State Assembly	Assemblyman James Gallagher	X
Oroville City Council	Councilmember David Pittman	X
Oroville City Council	Mayor Chuck Reynolds	
Butte County Board of Supervisors	Supervisor Steve Lambert	X
Butte County Board of Supervisors	Supervisor Bill Connelly	X
Butte County Board of Supervisors	Genoa Widener	X
Yuba County Board of Supervisors	Supervisor Gary Bradford	
Yuba County Board of Supervisors	Supervisor Doug Lofton	
Sutter County Board of Supervisors	Supervisor Mat Conant	X
Sutter County Board of Supervisors	Supervisor Dan Flores	X
Butte County Sheriff's Office	Lieutenant Steve Collins	X
Yuba County Sheriff's Office	Lieutenant Joe Million	X
Sutter County Sheriff's Office	Deputy Andre Licon	

AGENDA ITEM 2: COMPREHENSIVE NEEDS ASSESSMENT UPDATE

Ted Craddock, Deputy Director of the State Water Project, and John Yarbrough, Assistant Deputy Director of the State Water Project, presented on DWR's Comprehensive Needs Assessment (CNA). Their presentation described:

- How the CNA fits in with DWR's other dam safety-related activities, including its Capital Improvement Program, the FERC Level 2 Risk Assessment, the FERC Part 12D Inspection, and the US Army Corps update to the Water Control Manual.
- How the study divided the facility into six different components (e.g., the emergency spillway, operations), each of which was analyzed to determine how it might break or malfunction, the likelihood of those failures, and what the consequences would be
- The method by which DWR developed and prioritized risk-reduction measures
- The roles of the Independent Review Board (IRB) and the Citizens' Ad Hoc Group
- The CNA's preliminary results, i.e., no dam safety issues were identified that needed immediate risk-reduction actions but several measures were identified for near-term implementation and several where additional information is needed
- The plan for finalizing the report by August 31, 2020 and for working on a public version with the Ad Hoc Group in September for release in October

Following the presentation, Commissioners asked for clarification or provided feedback on the presentation and related topics; input included:

- Genoa Widener, Director of the Feather River Recovery Alliance, a non-profit founded after the Spillway Incident to improve the physical and operational safety features related to the Oroville Dam, stated that since 6,500 Oroville citizens signed a petition to FERC to intervene in the Oroville relicensing, there has been great progress. She pointed to the completion of the Level 2 Risk Assessment and the Part 12D inspection, which both included independent subject matter experts; the completion of the CNA, which was advised by a FERC-approved Independent Review Board; and the ongoing update to the Flood Control Manual and the formalization of a temporary Interim Water Control Manual during the reconstruction phase. She is very hopeful that the conversations in the CAC can help address citizens' public safety concerns without the need to disrupt the licensing process. She then voiced her concern around how DWR has quantified risk during past inspections and again in the CNA process. She identified the 2014 Part12D inspection as an example: in that instance, three probable failure modes were discussed as candidates but were ultimately eliminated rather than being further developed. Genoa described them as "nearly identical to the spillway incident that occurred three years later." The first mode was the risk of ten feet of water spilling over the emergency spillway and causing head erosion into the reservoir; it was ruled out because of the competence of the rock and lack of erosion observed to date. The second mode was emergency spillway overflow scouring soil and debris and depositing it into the Feather River, which would then be blocked; that risk was ruled out because the slope below the emergency spillway had relatively little vegetation cover and the underlying bedrock was not seen as subject to significant erosion. The third mode was the loss of the main spillway's channel lining resulting in erosion of the underlying spillway structure or the flood control outlet; this risk was ruled out because DWR had performed repairs to spillway concrete in 2009, and it was viewed as hard and resistant to erosion. Widener acknowledged that independent experts were part of that 2014 inspection but noted that in the Forensic Team Report after the Spillways Incident, that team stated that the number of DWR personnel participating in these risk assessments overwhelmed external participants and that DWR personnel were overrepresented in the potential failure mode voting process. The Forensic Team identified the culture at DWR as one of the reasons staff underestimated the risk of the failures described above. Widener asked if enough time has passed to change that culture. As a member of the CNA Ad Hoc Group, she is not confident in DWR's decisions around risk assessment and which potential failure modes were pursued for additional analysis as part of the CNA. She acknowledged that risk assessment is not an accurate science and shared her observation that those who must implement change may have different motivations than consultants hired to safeguard the public. The IRB recommended that DWR compare the differences between the CNA and Level 2 risk analyses and determine whether there is a systemic reason that the DWR estimates are generally lower. Widener asked whether Oroville has the capacity to pass a probable maximum flood or deal with the impacts of a big earthquake, particularly without a low level outlet. In the initial draft of the final CNA report, DWR stated that Oroville Dam has no safety concerns that require immediate action, language that the IRB recommended they change. Widener requested that the next CAC meeting cover not just the CNA conclusions but also the conclusions from the FERC Level 2 Assessment and the Part 12D inspection. She also asked that the materials for that discussion be provided in advance.

- Secretary Crowfoot thanked Ms. Widener for her recognition that progress has been made and also for her candid expression of concern about some of the CNA results. He said it is important that DWR be able to address those at the next Ad Hoc Group and CAC meetings and that those presentations include a comparison to the Level 2 and Part 12D Assessment results. He asked DWR to commit to providing materials in advance. He also asked DWR to connect with Widener directly to address her questions, so that appropriate revisions can be made to the report before it is finalized this month.
- Director Nemeth agreed her team will prepare a more detailed presentation, including the details that Ms. Widener asked for, at the November meeting. She stated that DWR took the Forensic Report conclusions very seriously and have hired consultants to help them address their agency culture. One of their major foci is how to manage risk into the future, including candid conversations with the community about what level of risk is acceptable. She acknowledged that there is tension and suspicion about DWR's need to manage the project in a fiscally responsible way and also manage for risk. She stated that public safety is always their top priority in terms of how to operate the system. She would like to use the CAC as a venue to have the important and difficult policy conversation about how to use dollars to mitigate risk.
- Ted Craddock reiterated that public safety and safety of the facilities are DWR's top priorities. He appreciate Ms. Widener's comments on the role of independent reviewers; he explained that DWR takes the feedback of the independent reviewers who were part of the IRB, Level 2, and Part 12B processes very seriously, because they help to provide the broadest possible assessment of the facilities. He distinguished the CNA and latest Level 2 Assessments from those that were completed in the past, such as the 2014 Part 12D Assessment: prior to the Spillways Incident, risk assessments focused on failures that could result in the loss of the entire reservoir. After 2017, the dam safety industry pivoted to consider other kinds of failures. The CNA and Level 2 Assessment have looked much more broadly than they would have historically. He committed to answering more specific questions at a follow-up meeting.
- Assemblyman Gallagher asked DWR staff to summarize the high-level takeaways from the CNA, including which areas need more investigation, which measures will be implemented in the near term, and which are being considered for future implementation. John Yarbrough explained that the headworks and the area where the spillway connects to the embankment both need further study to identify the level of risk they may pose. In the near term, DWR will implement a fifth source of electricity to the FCO gates, in order to create another level of redundancy, increase the height of one of the saddle dams by several feet, in order to reduce the risk of overtopping in a flood larger than the probable maximum flood, install additional piezometers to inform the headworks study and conditions at the toe of the embankment, and line the Palermo Canal to reduce the potential for erosion. DWR is considering 34 other measures for future implementation, including installation of a low-level outlet. The need for a low-level outlet will be informed by the conclusions of the headworks investigation and the flood management needs articulated in the revised Flood Control Manual.
 - Secretary Crowfoot seconded the Assemblyman's request that staff provide the bottom line conclusions first. He asked that the final CNA report have an executive summary that provides takeaways that anyone could understand.

- Councilmember Pittman observed that the coordination between State, County, and local staff to bring resources to address the latest fire has been seamless, which has not always been the case. He complimented everyone involved on their responsiveness. He also asked, given the recent fire below the emergency spillway and other fires in the drainage, whether DWR is considering reforestation to prevent erosion in those areas. John Yarbrough explained that revegetation is part of the spillways reconstruction process; DWR is currently working with the US Fish & Wildlife Service to describe what that revegetation will look like and get permits. Assessing fire risk is part of that design process. He expects the planting to occur over the next two to four years. Director Nemeth added that, in addition to the revegetation that is part of the reconstruction process, DWR deploys staff after fires to assess erosion potential, how it might increase flood risk, and whether mitigation is needed. They will be deploying a team after the current fire is totally extinguished.
- Secretary Crowfoot introduced attendees to Christina Curry, Deputy Director, Cal OES, and pointed to her attendance at the meeting even as OES acts as the center of California's emergency response as a testament to OES' commitment to Oroville public safety.
- Senator Nielsen described the CAC as a dream come true – a formal structure in which local, State, and County staff are communicating with citizens in real time about policy. He called the CAC a model for the future for dealing with thorny issues. Nielsen also pointed out that revegetation must be handled carefully, in that prior to the Incident the vegetation had overgrown and impeded access to address problems on the spillway. He also told the story about talking to Sheriff Honea the night of the Spillways Incident as the Sheriff decided to evacuate 188,000 citizens, putting his own staff in danger in the process; Nielsen asked everyone to remember the immense burden emergency responders take on themselves.
- Supervisor Conant asked DWR to list some of the current capital improvement projects, the status of an alternate spillway, and how many piezometers are being added to the dam structure. John Yarbrough listed some of the upcoming capital improvement projects, including refurbishing the intake gate, turbine shutoff valve, and 230 kV lines at Hyatt, installing new turbine runners at Hyatt, upgrading the river valve system, and refurbishing FCO gate structure. There is a list of all capital improvement projects underway that was included in the last CNA Ad Hoc Group presentation posted [here](#). Yarbrough explained that an alternate spillway was considered as part of the CNA, but with the capacity of the main and emergency spillways, they determined they do not need another spillway immediately. However, if the headworks investigation identifies concerns, they will consider alternatives to add outflow capacity like a low-level outlet or an alternate spillway. DWR is almost done adding nine piezometers; they were placed in different locations than those sited during construction and are intended to answer questions about the headworks and the toe of the dam embankment. Ted Craddock explained that the instrumentation installed when dams are built is intended to monitor stability during construction and during the first five to ten years after the reservoir is filled. Any instrumentation added after that must provide enough benefit to justify the risk of drilling additional holes through the dam.

AGENDA ITEM 3: OROVILLE RECREATION UPDATE

Matt Teague, California State Parks, and Eric See, DWR, presented on current recreation access and the recreation improvement projects recently completed and currently underway. Topics included:

- Recreation facilities available at Lake Oroville, including what was closed due to COVID-restrictions, what has reopened, and what remains closed
- Comparative attendance at the Lake Oroville facilities over the last four years
- The impacts of the recent Potters Fire, including damage to the trail system
- The status of 10 recreation projects initiated after the Spillways Incident to offset closures and descriptions of each new facility

Following the presentation, Commissioners asked for clarification or provided feedback on the presentation and related topics; input included:

- Councilmember Pittman noted that the Clay Pit State Vehicle Recreation Area has changed oversight within State Parks and he was curious how it is being managed now. He noted that unless residents have a boat, they cannot enjoy many of the lake facilities; the Clay Pit area allows different forms of recreation. He asked for an update at a future meeting. Matt Teague, State Parks, agreed that there are lots of opportunities at Clay Pit, which just came under State Parks' jurisdiction. They are currently working on real estate annexation issues but he can provide an update at a future meeting.

AGENDA ITEM 5: QUESTION & PUBLIC COMMENT

Members of the public were invited to provide comments or ask questions of the Commissioners and/or DWR and to share specific topics they would like to see addressed at future meetings. Remarks are summarized and shared without attribution below; for a full transcript of the exchanges, see transcription or recording of the meeting posted online.

- Question (Q): I am curious about the status of the underground power plant, which appears to only releasing 3000 cfs, which is what is mandated for downstream commitments, and the Thermolito Pumping-Generating Plant. If they are operational, why are they not being used to offset some of the current power demands? I know water is valuable but with rolling blackouts underway, hydropower should be operational.
 - Response (R) (Director Nemeth, DWR): DWR did generate power at Hyatt to help offset the rolling blackouts, but power generation is limited by requirements related to cold water in the system for fish. Part of the new FERC license is to construct facilities that would better manage temperatures for fish and in turn allow us to increase power production at Hyatt. DWR has refreshed the feasibility studies for those facilities, because after a decade of waiting for the license they were outdated, so we will be ready to implement those plans as soon as the license is issued.
 - R (Ted Craddock, DWR): Hyatt has been operating at low generation early in the day when demand is low and at higher generation during the later peak demand period to support the grid. As part of the Capital Investment Plan, DWR will refurbish the large valves that feed each unit and the generators, but the plant is currently functional. One unit is out while maintenance is done, but given the dry year, that has not impacted the plant's generation capacity. At the Thermalito Plant, DWR has finished refurbishment of all four units; we just submitted the data on the fourth unit to PG&E that is required to return the entire plant to commercial operation. I anticipate the plant will be back online in September.

- Comment (C) (Secretary Crowfoot): I would like to highlight the work DWR and the Bureau of Reclamation have done over the past weeks to maximize power production and reduce demand during peak periods. With 18 percent of California's energy used to move or treat water, these efforts are crucial to reducing stress on the grid.
- Q: What projects are being planned to enhance recreation below the dam to the Forebay?
 - R (Eric See, DWR): The new recreation plan that will come into effect with the new license covers the Afterbay and the Forebay and includes recreation improvements in both areas as well as environmentally-related projects on the Feather River. The license will also trigger access to \$1 million a year in payments from DWR over the course of the 50 year license via the Supplemental Benefits Fund to implement projects selected by the community along the Feather River.
 - R (Matt Teague, Parks Department): The Feather River Aquatic Center is also seeking grant funds to make in-water improvements and facility expansion.
- Comment (C): I am a CNA Ad Hoc Group Member. Thank you for conducting this meeting even during challenging times. With the conclusion of the independent review processes, the consultants will go home and with them, their knowledge and their oversight. Now it is this Commission that will be responsible for providing oversight. This meeting could have just been a community update but instead it was an opportunity for the public to ask tough questions, and the State leadership did not avoid those questions, they embraced them and extended them. With this leadership, we may have turned a corner in terms of reviving the public trust of downstream constituents. It is also an example for the talented engineers at DWR that it is ok to address tough issues and embrace transparency. Thank you.
 - R (Secretary Crowfoot, CNRA): Thank you to the local leadership for devoting their time to this effort and to you for volunteering in the CNA process.

CLOSING COMMENTS

Senator Nielsen shared that as Vice Chairman of the Senate Budget Committee, he has been working with CalOES on upgrading the 911 system in CA; with the improved plan, he has much greater confidence in the functionality and robustness of 911 capabilities in the event of these ongoing emergencies.

Secretary Crowfoot announced that the next meeting will be held on November 13, 2020. He asked Commissioners to reach out to him or Lizzy Williamson at CNRA with additional suggestions for that agenda. He voiced hope that they would be able to meet in person again soon.

The meeting adjourned at 12:05 p.m.