

**Meeting Summary**  
**Oroville Dam Citizens Advisory Commission**  
**Meeting #20: June 13, 2025**  
**10:00 a.m.– Noon**  
**Virtual Meeting**

This summary provides an overview of the June 13, 2025, Oroville Dam Citizens Advisory Commission (OCAC) 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. Related materials, including the slide deck and a video recording, are available on the [OCAC Website](#).

**Meeting Agenda**

- Welcome and Introductions
- OCAC Legislative Report Update
- Yuba-Feather FIRO Final Viability Assessment
- CNRFC's River and Reservoir Inflow Forecasting
- Public Comments & Questions
- Adjournment

**Action Items**

- **Commissioners** to review the report outline and submit any feedback to **Samantha Arthur** at CNRA by **Wednesday, July 9**. Feedback may include comments on the report's organization and proposed content.
- **CNRA** will circulate the proposed Action Item Tracker updates and the draft Meeting 21 Agenda by **June 20**. Commissioners to provide feedback by **July 9**. Following that, Commissioners will be notified at least one month in advance of Meeting 21 when the final agenda is posted on the Commission's website.
- **DWR** will schedule a meeting with **Commissioner Bateman, Matt Mentink, and any other interested parties** to address any unanswered questions from their recent memo.

**Rollcall**

As mandated by the requirements set forth in Senate Bill 955 (2018, Nielsen), the Commission comprises representatives from the following agencies and public bodies. Attendance at Meeting 20 on June 13, 2025, is noted in the table below.

<b>Agency or Public Body</b>	<b>Commissioner (or Designee)</b>	<b>Attendance</b>
California Natural Resources Agency	(Chair) Secretary Wade Crowfoot (represented by Deputy Secretary Samantha Arthur)	Yes
California State Senate	Senator Brian Dahle (represented by Bruce Ross)	Yes
California State Assembly	(Vice Chair) Assemblymember James Gallagher (represented by Juleah Cordi)	Yes
Department of Parks and Recreation (DPR)	Director Armando Quintero (represented by Superintendent Aaron Wright)	Yes
Department of Water Resources (DWR)	Director Karla Nemeth (represented by Deputy Director John Yarbrough)	Yes

<b>Agency or Public Body</b>	<b>Commissioner (or Designee)</b>	<b>Attendance</b>
California Governor's Office of Emergency Services (Cal OES)	Chief Deputy Director Nancy Ward (represented by Deputy Director Lori Nezhura)	Yes
Oroville City Council	Mayor David Pittman	Yes
Oroville City Council	Vice Mayor Eric Smith	No
Butte County Board of Supervisors	Supervisor Tod Kimmelshue	Yes
Butte County Board of Supervisors	Supervisor Bill Connelly	Yes
Representative on behalf of Butte County Board of Supervisors	Robert Bateman	Yes
Yuba County Board of Supervisors	Supervisor Seth Fuhrer	No
Yuba Office of Emergency Services	OES Manager Oscar Marin	No
Sutter County Board of Supervisors	Supervisor Jeff Boone	Yes
Sutter County Board of Supervisors	Supervisor Jeff Stevens	Yes
California Highway Patrol	Lieutenant Patrick Leach	Yes
Butte County Sheriff's Office	Lieutenant James Beller	Yes
Yuba County Sheriff's Office	Operations Captain Nathan Lybarger	Yes
Sutter County Sheriff's Office	Deputy Andre Licon	No

### **Welcome and Opening Remarks**

Samantha Arthur, Deputy Secretary of the California Natural Resources Agency (CNRA) and designee for Commission Chair Secretary Wade Crowfoot, welcomed commissioners, presenters, and members of the public to the twentieth meeting of the Oroville Dam Citizens Advisory Commission (OCAC). Deputy Secretary Arthur reviewed the meeting guidelines and informed participants that the next OCAC meeting will be held in-person on October 24 and will be followed by a floating classroom tour for commissioners.

Terra Alpaugh from Kearns & West conducted roll call.

Deputy Secretary Arthur provided opening remarks, thanked commissioners for their willingness to collaborate in this forum, and reviewed the agenda. She reminded participants about the action tracker that informs meeting topics.

Deputy Secretary Arthur invited Deputy Director of the State Water Project, John Yarbrough, to provide remarks on behalf of the California Department of Water Resources (DWR). Deputy Director Yarbrough thanked Mayor Pittman and the City of Oroville team for their leadership and contributions during the recent U.S. Army Corps of Engineers' two-day levee screening of the Oroville levee, which also included representatives from the Army Corps, the Sutter Butte Flood Control Agency (SBFCA), and DWR Division of Flood Management. He also thanked

Commissioner Bateman for his participation in the effort. The Army Corps will compile their findings in a report and have offered to present to the Commission once complete, with the goal of supporting future improvements to the City of Oroville's levee performance.

Oroville City Mayor David Pittman thanked DWR staff, the Army Corps, contractors, city engineers, and the City Administrator for the collaborative efforts during the two-day levee assessment. He highlighted the valuable insights gained about the condition and importance of the levee, noting the city's intent to establish a dedicated levee manager position in response. Mayor Pittman shared that the levee was officially renamed from "Levee 51" to "Oroville, California Levee 1" in the national database to avoid confusion with Oroville, Washington.

Deputy Director Yarbrough provided an update on the newly implemented Golden Mussel inspection program at Lake Oroville. Yarbrough thanked boaters for their patience, local agencies for their support, and elected officials for helping raise awareness. During the first two weeks, over 2,000 watercrafts were inspected and nearly 600 decontaminated, including one boat found with golden mussels prior to launch. Supervisor Bill Connelly expressed appreciation for the program but relayed constituent concerns about the inconvenience of limited inspection sites, asking the State to allocate more resources to improve local access.

Bruce Ross from the Office of Senator Megan Dahle acknowledged the rapid rollout of the Golden Mussel inspection program; going forward, he emphasized the need for greater coordination and clearer, more unified best practices among agencies managing nearby lakes. Deputy Director Yarbrough agreed and explained that the program continues to evolve based on public feedback, including adjustments to inspection hours and a review of potential new inspection sites. He emphasized ongoing efforts to increase reciprocity among regional water bodies while maintaining the dual goals of protecting Lake Oroville and supporting recreational access.

Commissioners had no further updates when invited to speak by Deputy Secretary Arthur. She invited commissioners to review the action item tracker and provide any topics they would like to see discussed at future Commission meetings.

### **Legislative Report Process**

Terra Alpaugh from Kearns & West provided a presentation on the development of the Commission's second legislatively mandated report, which is scheduled for completion by the end of 2025 or early 2026. She introduced the draft outline, which had been shared with commissioners ahead of the meeting and requested feedback by July 9.

For more details, please refer to the meeting recording and presentation materials online.

### **Yuba-Feather FIRO Final Viability Assessment**

Dr. Marty Ralph, Director of the Center for Western Weather and Water Extremes at Scripps Institution of Oceanography, delivered a presentation on Forecast-Informed Reservoir Operations (FIRO). He shared the final results of the Yuba-Feather FIRO Viability Assessment, a multi-year research effort involving federal, state, and local agencies. He provided an overview of the FIRO strategy, which aims to optimize reservoir operations by integrating advanced weather and hydrologic forecasting with existing management policies.

The Final Viability Assessment found forecast skill to be sufficient to support FIRO implementation at Oroville, with the potential to improve both flood risk management and water

supply reliability. Dr. Ralph noted this research will inform the Army Corps of Engineers' forthcoming Water Control Manual update for Oroville.

Dr. Ralph explained the distinction between FIRO Viability Assessments and Water Control Manual (WCM) updates. The FIRO process is research-focused and designed to assess the feasibility of using forecasts to guide reservoir operations but is not a decision-making activity. Instead, its analysis can inform the Corps of Engineers' WCM updates which are formal, regulatory documents used to guide dam operations.

Dr. Marty Ralph continued his presentation by reviewing the broader scope and status of Forecast-Informed Reservoir Operations (FIRO) projects across the western U.S. Examples of reservoirs where FIRO is being explored or implemented, include Lake Mendocino, Prado Dam, Howard Hanson Dam in Washington, and the Willamette River basin in Oregon. He emphasized that three Final Viability Assessments (FVAs) have been completed so far, including for the Yuba-Feather region, and that the FIRO program continues to grow.

Dr. Marty Ralph highlighted significant advances in forecast skill, especially for extreme atmospheric river (AR) events, where data from targeted storm reconnaissance missions which deploy specialized aircraft and sensors to gather [real-time data on ARs while they are still over the ocean](#), can yield improvements equivalent to a decade of model refinement. He introduced a forecast visualization tool available through the California Data Exchange Center (CDEC), which provides 5–7 day lead times for AR probability and intensity at various California locations.

Commissioners asked Dr. Ralph follow-up questions, including whether FIRO can predict if a storm will stall and if there have ever been instances when FIRO did not work effectively. Dr. Marty Ralph stated that stalling is a critical factor in West Coast flooding and is a major focus of ongoing forecasting improvements. He explained that AR reconnaissance missions significantly enhance the ability to predict stalling by capturing data over the ocean. He also explained that FIRO is reliable and consistently performs well in studies. He attributed this success to two key factors: the relatively high predictability of ARs compared to other storm types like hurricanes and tropical storms, and the presence of mountains on the West Coast which reliably force uplift and precipitation.

Commissioner Robert Bateman inquired whether the historical “wetness index” used at Oroville Dam plays a role in the FIRO system. Dr. Marty Ralph stated that the wetness index is not an explicit parameter in FIRO methods; instead, they use hydrologic models to predict inflow into the reservoir, which include soil moisture from prior storms, making the index unnecessary as a standalone parameter. The FIRO report does not make any recommendations with respect to use

Mr. Bateman also asked if the FIRO final report recommends advancing the reservoir fill date from April 1 to March 1. Dr. Bateman expressed concern that March typically brings significantly more rainfall than April, potentially increasing risk. Dr. Ralph acknowledged the concern and emphasized that FIRO's reliance on accurate weather forecasts enables proactive water management to reduce such risks.

For a full summary of this presentation section, please refer to the meeting recording and presentation materials online.

### **CNRFC's River and Reservoir Inflow Forecasting**

Bibek Joshi, Manager of the River Forecasting Unit at DWR, provided a presentation about river and reservoir inflow forecasting from the California Nevada River Forecast Center (CNRFC), focusing on the joint-State and federal partnership between DWR and the National Weather Service.

Mr. Joshi detailed how forecasting is a year-round operation, with increased forecast frequency and staffing during winter and flood events. He explained the models used in forecasting: SNOW-17 for snow accumulation and melt (including rain-on-snow events) and the Sacramento Soil Moisture Accounting (SAC-SMA) model for translating precipitation into runoff. These models are supported by a vast network of sensors and gauges collecting real-time data on precipitation, temperature, snowpack, river stages, and reservoir levels.

Mr. Joshi emphasized how the SNOW-17 model allows forecasters to "tune" or calibrate it based on real-time field data from snow pillows and snow courses. This adaptability ensures forecasts remain closely aligned with observed conditions. Forecasters routinely validate and update the model, particularly during winter months, to ensure it reflects actual snowpack and melt behavior, helping maintain forecast accuracy and reliability.

Mr. Joshi also explained Snow-17's two operational modes: non-rain (or "dry") melt and rain-on-snow melt. Simulations have shown that snowmelt during rain-on-snow events can contribute up to 25% additional runoff relative to rainfall only events, and possibly more under warmer and wetter conditions. Mr. Joshi cautioned that rain on snow does not always lead to melt and emphasized the importance of understanding local conditions.

For a full summary of the presentation, please refer to the meeting recording and presentation materials online.

Mayor David Pittman shared a personal story from the 1997 flood event involving his family's cabin near the first lake on the South Fork of the Feather River, recalling how a warm rainstorm rapidly melted about 5 feet of snow in under a day causing significant flooding. He noted the Snow-17 model's consideration of multiple factors that contribute to such events. He asked about whether adding more stream gauges in upper river systems could help improve flood forecasting by providing real-time data on snowmelt and streamflow.

Mr. Joshi responded by confirming that the Feather River watershed is already well-equipped with numerous stream gauges.

Commissioner Robert Bateman then asked if there are other methods of measuring the accuracy of snowmelt forecasts and whether those results are publicly reported.

Mr. Joshi directed him to the CNRFC website, noting that it includes a forecast verification section where the public can view historical forecast performance with data going back to 2011.

Supervisor Jeff Stephens remarked on the relevance of Mr. Joshi's presentation to Dr. Ralph's work (from the previous presentation) and inquired whether the two groups collaborate on model development.

Mr. Joshi explained that DWR and CNRFC maintain a strong partnership with CW3E (Center for Western Weather and Water Extremes), noting that while CW3E focuses primarily on research, DWR and CNRFC concentrate on operational forecasting. This relationship enables operational

teams to benefit from cutting-edge research and integrate new technologies into daily forecasting workflows.

Dr. Ralph added that collaboration with DWR and CNRFC is essential to CW3E's mission and emphasized that their teams not only exchange knowledge but also embed CW3E staff directly within operational units, allowing for real-time feedback, hands-on support, and streamlined integration of innovations.

### **Meeting 21 Agenda**

Deputy Secretary Arthur reminded the Commission about how agenda topics would continue to be pulled from the action tracker. For the October meeting, two proposed topics have been identified thus far: the annual budget and project prioritization update, and the dam safety update—both of which are regularly scheduled reports requested by the Commission. Feedback on the proposed agenda is being solicited.

Supervisor Bill Connelly requested that the agenda be shared at least a week in advance to allow for adequate review. It was clarified that while the draft agenda is typically circulated a week after the current meeting with the goal of posting the final version online more than a month in advance, the team will improve its communication by consistently notifying members via email once the agenda is posted.

### **Public Comment**

Deputy Secretary Arthur opened the floor for public comment.

#### *Comment One:*

Matt Mentink raised concerns about how the Commission addresses community-submitted questions. He acknowledged the complexity of the material and then asked if Dr. Ralph had received a detailed memo containing numerous questions derived from extensive research into the Final Viability Report.

In response, Deputy Secretary Arthur clarified that the questions had been distributed to presenters in advance to help guide their remarks and noted the possibility for follow-up after the meeting.

Mr. Mentink called for the 37 submitted questions focused on the Water Control Manual update to be answered publicly before final decisions are made by the Army Corps of Engineers, noting the difficulty of influencing outcomes after that point.

Deputy Director Yarbrough decided a separate follow-up meeting would be appropriate for deeper discussion and committed to clarifying any unanswered questions through continued dialogue.

Matt Mentink requested that submitted questions be the explicit focus of presentations in the future.

There were no more public comments.

Commissioner Bateman stated that while DWR had offered a separate follow-up meeting to address questions related to the Water Control Manual, he believes those meetings should occur under the Commission's purview and be included in the official record. He emphasized



the importance of waiting for a promised response from the Army Corps of Engineers—expected the following week—before scheduling such a session, ideally in two to three weeks with relevant experts present.

Supervisor Bill Connelly expressed support for both Matt Mentink and Commissioner Bateman, calling for more meaningful change in how the Commission engages with local stakeholders, emphasizing the importance of public safety.

Deputy Secretary Arthur thanked everyone for their comments and affirmed the Commission's shared prioritization of public safety and commitment to open communication.

Supervisor Jeff Stephens asked which agency is responsible for grading dam safety and specifically asked about Oroville Dam's status.

Deputy Director Yarbrough explained that dam safety in California is assessed by the Division of Safety of Dams (DSOD), which issues annual ratings for dams statewide. Oroville Dam is still at "Fair" which is the second highest rating out of four. The ability of the Emergency Spillway to safely pass its portion of the Probable Maximum Flood is the outstanding topic on which the Division of Safety of Dams is seeking further analysis. To address that question, DWR performed the Oroville Dam Emergency Spillway Erodibility Study which was submitted to DSOD last month. The results are positive and indicate ability to satisfactorily pass the probable maximum flood. DWR is expecting to present the results of this study to the OCAC in the Fall, if time allows. DSOD is reviewing this study and then will make their independent assessment. If DSOD agrees with the analysis, DWR anticipates they will upgrade Oroville to "Satisfactory". Until then, the Condition Assessment rating documented in DSOD's [Dams within Jurisdiction of the State of California publication](#) (updated annually and posted on their website) will remain at "Fair."<sup>1</sup>

For more details on the public comment and the discussion that followed, please refer to the meeting recording online.

### **Adjournment**

Deputy Secretary Arthur adjourned the meeting by thanking the public, the presenters, and commissioners for their engagement at OCAC Meeting 20.

The next Commission meeting will be in-person and is scheduled for October 2025 followed by a DWR-led floating classroom for commissioners.

All meeting materials can be found on the [Commission's website here](#).

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<sup>1</sup> After the meeting, DWR staff issued a follow-up email clarifying their in-meeting statements about Oroville Dam's safety status. This summary reflects that correction, as the meeting recording does not accurately represent the dam's current safety rating.