

OROVILLE DAM CITIZENS ADVISORY COMMISSION
Meeting No. 10 on 03/25/2022

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OROVILLE DAM

CITIZENS ADVISORY COMMISSION

MEETING NO. 10

DATE & TIME: Friday, March 25, 2022
10:06 a.m. - 12:06 p.m.
LOCATION: Zoom videoconference
REPORTER: Eugene Lin, CSR
Certificate No. 14109

1 Meeting transcript of the Oroville Dam Citizens
2 Advisory Commission Meeting, taken before Eugene Lin,
3 CSR, a Certified Shorthand Reporter for the State of
4 California, with principal office in the County of
5 Orange, commencing on Friday, March 25, 2022, 10:06
6 a.m., via Zoom videoconference.

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8 ROLL CALL:

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10 Lieutenant Collins
11 Supervisor Connelly
12 Supervisor Conant
13 Secretary Crowfoot
14 Chief Deputy Director Curry
15 Supervisor Flores
16 Supervisor Fuhrer
17 Assemblyman Gallagher
18 Supervisor Kimmelshue
19 Deputy Licon
20 Captain Million
21 Director Nemeth
22 Senator Nielsen
23 Councilmember Pittman
24 Mayor Reynolds
25 Lieutenant Stokes
Superintendent Teague
Supervisor Vasquez
Commissioner Northern

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MR. CROWFOOT: Great. Well, thanks so much all
3 for being here, both members of the commission, and
4 community members, members of the public. This is our
5 10th meeting of the Oroville Dam Citizens Advisory
6 Commission.

7

As you recall, our first few handful of
8 meetings was in person, and then we had to shift to the
9 virtual format given the pandemic. I'm hopeful that our
10 next meeting in June, we'll be able to do in person. I
11 strongly prefer that, being actually around a table in
12 Oroville or nearby the Oroville community. So stay
13 tuned on that. But thanks for your ongoing patience on
14 Zoom in the meantime.

15

We have two hours for today's meeting. And I'm
16 going to respect everybody's time, and we'll conclude by
17 noon. We've got some good conversations queued up for
18 today. We'll have, as always, an update on action items
19 that we've identified in last meetings, the meetings
20 road map moving forward, and the commission report that
21 we owe the legislature.

22

We'll have an opportunity to hear from DWR on
23 the Palermo Tunnel and the piezometers which has been a
24 subject of questions in the past. We'll hear a
25 presentation on flood risk planning from Rune Storesund

1 who is joining us today. And then we'll have
2 presentations from CalOES, our Office of Emergency
3 Services, and DWR, and our public safety partnerships.
4 And then, as always, we'll conclude with an important
5 time for public comment.

6 Before we dive into today's agenda, I would
7 like to note or observe that these public meetings don't
8 always allow the time for a deep dive on some issues
9 that are of great priority to members of the commission.
10 Given that, we have organized on April 22nd a three-hour
11 technical workshop on flood safety really focused for
12 stakeholders on doing a deep dive on the safety aspects
13 of Oroville and the efforts on flood safety.

14 So again, that's going to be on April 22nd,
15 just about a month from now. And everybody on the
16 commission will get notice of that if you haven't
17 already. And then that will be on the website. And
18 we'll make sure that that's well-known in the community.
19 And there will be an opportunity to do a deeper dive.
20 Rune is going to be providing a 10-minute summary of his
21 work today. And I know he and others are going to
22 really benefit from the opportunity to go deeper on that
23 technical workshop.

24 The workshop is going to be open to the public,
25 and more details next week on the commission website

1 about that. And then we'll actually receive a briefing
2 in the summary meeting on the discussion that took place
3 at that workshop.

4 At this time, I want to give Karla Nemeth, our
5 Director of the Department of Water Resources, an
6 opportunity to talk about Oroville and, specifically,
7 water supply and the drought. But as always, I want to
8 give an opportunity for Senator Nielsen and Assemblyman
9 Gallagher to share their thoughts that they have.

10 As we talked about in the past, frankly, we're
11 here because they stepped up and created this commission
12 to ensure that we were paying attention to these
13 communities' concerns. So always want to get them on
14 this platform to help frame the discussion today.

15 So why don't we move to Senator Nielsen first.

16 MR. NIELSEN: Well, first off, Secretary and
17 Director Nemeth, I want to thank you both. This has
18 turned out that the legislation and the commission far
19 exceeded my expectations and I believe yours as well.
20 It's built, as you know, on a plan I did way back in the
21 mid '80s, the Sacramento River Conservation Forum. This
22 forum is the same, but it's been extraordinarily
23 successful in keeping people involved and informed. And
24 I'm delighted and very appreciative of your leadership
25 Mr. Secretary and Nemeth.

1 MR. CROWFOOT: Thank you so much Mr. Nielsen.

2 MR. NIELSEN: Yeah, welcome everybody. And I
3 just want to thank everybody for the continued
4 participation in the commission.

5 I've heard that there is community involvement.
6 And it is such an important part of our water supply and
7 flood control for the region and for the entire state as
8 we all know. And so I am looking forward to the
9 discussion today. I appreciate the deeper dive on the
10 flood control aspects, technical aspects. And I think
11 that will be a good -- and I thank the deputy -- I'm
12 sorry -- the secretary for setting that up. And I think
13 that will be really beneficial as we look at how we are
14 comprehensively providing for the greater protection of
15 the region.

16 And so looking forward to the presentations
17 today. And thank you all for joining.

18 MR. CROWFOOT: Thank you. So I want to turn to
19 Director Nemeth now.

20 And if you would, Karla, can you give us an
21 update in sort of real time around Oroville, and how
22 it's being used, and what the drought conditions are,
23 and what the community members should be aware of as it
24 relates to the reservoir and dam given the current
25 conditions.

1 MS. NEMETH: Definitely.

2 Good morning everyone. It's good to be with my
3 fellow commissioners and members of the public. I don't
4 think I need to tell you that we are experiencing
5 extremely dry conditions this year. We had that
6 record-setting December even in the Feather watershed.
7 But that basically rolled right into a record-dry
8 January, February, and now March.

9 That is also accompanied by very high ambient
10 air temperatures, which is one of the things we learned
11 last year is the really important effect that
12 higher-than-average ambient air temperatures have on our
13 snowmelt and how that does or does not translate into
14 runoff into rivers, streams, and reservoirs. So we are
15 very much back in drought planning.

16 As of Wednesday of this week, Lake Oroville was
17 at 46 percent of total capacity, which is just about
18 67 percent of its historical average for this time of
19 year. I would also say, to me, one of the very wake-up
20 call stats, I should say, about Oroville this year is
21 that we actually believe that inflow into the reservoir
22 will probably have peaked in February, which has never
23 occurred before. And that is an outcome of these very
24 dry conditions.

25 As you know, we usually see those inflow

1 conditions rise and rise throughout the spring as
2 snowmelt occurs at a more attenuated pace. That is not
3 the case this year.

4 So there's quite a bit that the department is
5 doing to keep as much water in the reservoir as we can
6 to plan for the potential for a dry year next year. So
7 our overall priorities for the reservoir are health and
8 safety needs including, and in particular, health and
9 safety needs for some of our surrounding communities
10 like Yuba City, and others, and Plumas County. But
11 also, dealing with what we need to do to protect such
12 critical threshold needs for endangered species and then
13 meet our settlement contractor needs here in the
14 community. That's our river settlement contractors.

15 So to do all of that, the department has sought
16 from the Water Resources Control Board a permit to relax
17 some of the water quality standards downstream of
18 Oroville. And we are also putting in our drought
19 emergency barrier, which is something that we did last
20 year as well. So when it gets this dry, how we manage
21 the system is to limit our need to release water from
22 Oroville, to repel salinity in the Delta by using a
23 physical barrier in the Delta, and then relaxing certain
24 water quality standards in the western part of the
25 Delta. That's what helps us keep as much water in

1 Oroville as we can.

2 I want to be really clear that the department
3 has also reduced our allocation to our State Water
4 Project contractors from 15 percent in January to
5 5 percent now. Again, that 5 percent will largely be
6 met by stored water in San Luis Reservoir, not water
7 that we have up in Oroville.

8 Overall, our goal is to maintain the lake at
9 860,000 acre-feet of water for end-of-year storage in
10 September. And we are going to be working with all of
11 our partners along the Feather River to understand the
12 availability of their water supplies this year. That's
13 something that we make a determination on by middle of
14 April.

15 And we're going to be managing locally in the
16 basin for multiple purposes, doing what we can to
17 provide water supply to those senior water rights
18 holders, ensuring that how we use these limited supplies
19 which can also support water formed in the system as you
20 all know. That's an important part of the Pacific
21 Flyway.

22 And we're going to be taking this year as
23 really on a week-by-week basis working with our
24 colleagues at the Water Board, water usage in the system
25 to continue to track what water is coming into Oroville

1 as inflow, and ensuring that it meets our expectations.

2 And when it doesn't, making adjustments in real time.

3 And then lastly, Secretary, I'll add that we
4 did institute this year some new ways of forecasting how
5 snowpack turns into runoff into rivers, streams, and
6 reservoirs. As you may know, we have snow sensors that
7 go up the Feather watershed.

8 This year, in addition to that, we did aerial
9 snow observatories. That's when we fly over the
10 watershed and can measure in 3-meter grids the snow
11 water content all the way up the slopes of the Sierra
12 Nevada. That's going to be really important for
13 California, not just in the Feather watershed, but to
14 improve our accuracy over time when we know that given
15 the changing climate, we anticipate snowpack to recede
16 up the slope.

17 And so we need to be ready with our
18 instrumentation that can capture further up the Sierra
19 Nevada what the snow water content is so that we can
20 prepare everyone for water availability for that year.
21 So that's something new that we did this year. And we
22 are looking at different ways with a lot of our partner
23 agencies.

24 This is not a California-specific challenge.
25 We have drought in the west side. And there's a lot of

1 important work happening to improve forecasting with our
2 federal partner at the Bureau of Reclamation, U.S.
3 Geological Survey, and NASA, and other entities. And we
4 look forward to continuing to update this group around
5 these really important improvements to water supply
6 forecasting.

7 MR. CROWFOOT: Thanks so much Director Nemeth.

8 I would like to give an opportunity to
9 commissioners who have questions about Karla's overview.
10 Feel free to raise your hand if you're interested in
11 asking any questions or sharing observations on her
12 report. And if you're on the phone, you can simply
13 speak up.

14 MR. CONNELLY: Can you hear me? Can you guys
15 hear me?

16 MR. CROWFOOT: I can hear you very vaguely.

17 So if you share your thought or your question,
18 then I can repeat it.

19 MR. CONNELLY: All right. First off, I really
20 appreciate having the meetings and so forth.

21 But would you consider, in the future, if the
22 Secretary, and Director, and the Senator, and
23 Assemblymen have to leave, leaving the facilitator and
24 staff -- this is for future consideration, not this
25 meeting -- so we can stay after, a half hour to an hour,

1 if we have unfinished business?

2 The next thing is: Reading old documents, I
3 saw a proposal to share the salinity problem with the
4 federal facilities. So there's some sort of drawdown
5 with parity which impacts local recreation and the
6 operations. I still think that's worthy of
7 considerations.

8 Those are the couple of thoughts I had. Thank
9 you for the report. And I really appreciate that we're
10 getting into this century on weather forecast and
11 snowmelt. Thank you.

12 MR. CROWFOOT: Thanks so much.

13 So Supervisor Connelly, his first suggestion is
14 for us to consider the possibility that a facilitator,
15 like Nick, could continue a meeting beyond sort of the
16 end time if there's unfinished business or ongoing
17 discussion if indeed the elected and appointed officials
18 need to leave. So that's a suggestion we'll need to
19 respond to.

20 And I think the supervisor was talking about
21 the discussion that had happened around the -- Karla,
22 did you hear that? -- working with the state and Federal
23 Government on salinity control and, I think, as I heard
24 it, its impacts on recreation and other community
25 amenities.

1 MS. NEMETH: Yeah, so that's a good question
2 Supervisor. And for clarity, DWR does partner with
3 Reclamation on managing for salinity control.

4 This year, Reclamation will be really using the
5 Folsom Reservoir for their connections to salinity
6 management. And that's because that watershed also got
7 more of the December storms like the Feather and the
8 Yuba watershed. The area that did not get that big slug
9 of weather in December was the Sacramento River
10 watershed and up behind Shasta.

11 So Shasta is in a critical condition. They've
12 been in a critical condition all year. That reservoir
13 is not in a position and has not been -- we have not
14 been using that reservoir jointly to repel salinity in
15 the Delta which is why getting that barrier in place is
16 really important as is this urgency change request that
17 we have in front of the Water Board that will provide
18 some relief to Oroville so that we can do the best we
19 can to maintain recreational amenities as long as we can
20 in the reservoir.

21 And that's where things sit. You know, I know
22 this isn't great comfort for folks. But when we do have
23 these dry conditions, it does give us an opportunity --
24 and I'll check with my team and I can report at our next
25 meeting -- if there's ways in which we can accelerate

1 projects because of the low lake levels. You know, that
2 there is a small opportunity in there when it's so dry.

3 And we will look to take advantage of that
4 because we know we are going to get rain again in
5 California. And if we can have those recreational
6 amenities in place and those improvements in place,
7 that's really good for everybody.

8 MR. CONNELLY: Thank you.

9 MR. CROWFOOT: Thank you. Thank you for the
10 suggestions and questions Supervisor.

11 Seeing no other hands, let's move to Nick who
12 is going to give us an update on some of the key kind of
13 action items and points of accounting in the last
14 meeting. It's a really important thing that we do in
15 the meeting so we make sure that this conversation isn't
16 just discussion that then doesn't lead to anything else.

17 So Nick, why don't you give us your update.

18 MR. NIELSEN: Let me jump in real quick because
19 it fits right into Karla's comments.

20 I want to thank DWR and the Water Commission.
21 Finally, there is some movement on Sites. That's kind
22 of a long-term thing for our water needs in California.
23 But finally, with the commission apportioning some of
24 the bond money and a substantial commitment of federal
25 funding, \$2.5 billion I think, that is going to begin to

1 move. And I'm frankly surprised and delighted by that.
2 But for the 10-year plan, that's significant.

3 Thank you.

4 MR. CROWFOOT: Well, thank you Senator. And
5 you've been a really strong voice on moving forward on
6 that. And so appreciate those comments.

7 And for those that don't know, a big
8 advancement for the project, even in the last few days
9 as the Senator noted, that the U.S. EPA is providing a
10 loan of over \$2 billion to the project to help
11 facilitate it. And that plus funding from the state is
12 really a really, really big step forward. So more work
13 to come.

14 But definitely recognize the urgency that
15 you're bringing to actually getting more smart supply
16 online.

17 Over to you Nick.

18 MR. SAFFOLD: Great. Thank you Secretary.

19 James, let's go to the next slide.

20 And just as a reminder to everyone, all meeting
21 materials, transcripts, and the meeting summary notes
22 are posted online on the commission website.

23 Yeah, so I'm just going to briefly provide a
24 few updates on our "Action Items," our meeting road map,
25 and then the commission report. Let's see here. Okay.

1 Great. So we're in the "Action Items" slide. You know,
2 everyone has kind of seen these previously. We just
3 have a few new items at the end here. So all of these
4 you'll be familiar with.

5 Item Number 1: Report out on instrumentation
6 during winter operations. It's, again, just an ongoing
7 item.

8 Regular updates and milestones on FIRO as well
9 as New Bullards Bar Water Control Manual processes. We
10 have this as an ongoing item.

11 Number 3 here: Follow up on the status of the
12 FERC relicensing. So we're on track here. And here's
13 hoping to provide an update at the 2022 meeting this
14 year.

15 An update on FEMA reimbursement. This is,
16 again, an ongoing item that we'll share when we have
17 anything new.

18 Item Number 5: Discussion to help state
19 agencies and local partners address homeless encampments
20 around the Feather River. So this is an item that we
21 have for future commission consideration. No movement
22 just yet on that item.

23 Item 6 is a DWR update on debris and storm
24 inflows. Again, kind of a monitoring item. And DWR
25 will alert the commission if there's anything new there.

1 Number 7: Agendize discussion on lessons
2 learned from 1986 to 1997 water events. This item is on
3 track. And we're hoping to discuss some of that at the
4 stakeholder technical workshop.

5 Go to the next slide James.

6 Okay. So Item 8 is: Respond to commission
7 questions regarding what constitutes failure. And also,
8 this item has been completed, but we're going to keep it
9 on the list because it's an important topic. And we're
10 hoping to have ongoing discussions and dialogue around
11 that one.

12 Number 9: Develop a single tracking log
13 cataloging ongoing or future safety projects. And also,
14 this is ongoing item. And we're also going to try to
15 address some of that at the annual dam safety and
16 project updates at the next meeting.

17 Item Number 10: Continue to discuss risk
18 assessment and hear from outside experts. We're going
19 to be hearing from outside experts today. So again,
20 this is an ongoing item that we want to hear not just
21 from DWR but hear from a variety of viewpoints and
22 experts.

23 Item 11 here: Update on water theft
24 prevention. So this is something that came up at
25 meeting 8. And it's just something for future

1 commission consideration.

2 Item 12 here: Resources for sediment removal.
3 Again, another meeting, an item that we'll consider for
4 a future meeting topic.

5 There was a request at meeting 8 for Capital
6 Improvement Projects discussion and expenditure chart.
7 And also, I believe all of that has been shared to the
8 appropriate commissioners. And so that one is
9 completed. And we'll take that one off our list. Let's
10 see.

11 Item 14 here: Recreation expansion project
12 updates. Not this meeting, but we're hoping at some
13 2022 meeting, we'll have an update on that item.

14 Item Number 15: Update on Proposition 1 and
15 the Sites Reservoir. This item has been completed. The
16 resources agency has provided an update to Senator
17 Nielsen's office on that one. That came out of meeting
18 9.

19 And then these are new items: 16, 17, 18. You
20 know, the Secretary mentioned, but we're going to be
21 hearing an update on the Palermo Tunnel and piezometers.
22 And those are items 16 and 17. So that will be covered
23 at today's meeting.

24 And then Item 18: Update on flood control
25 outlets. We're hoping to address that at the July 2022

1 meeting.

2 So that's sort of our action list.

3 And James, you can go to the next slide.

4 MS. NEMETH: Not a comment on that list. It's
5 not a comment on that list. It's a separate comment.

6 Thanks. Yeah.

7 MR. CROWFOOT: Got it.

8 Over to you Nick. We'll have her add a comment
9 after you're done.

10 MR. SAFFOLD: Yeah, that sounds great.

11 So we're looking at the kind of meetings road
12 map. And again, just looking at what our future
13 meetings will look like in terms of content and to
14 kind of -- you know, these are kind of subject to change
15 based on commissioner feedback of these meetings.

16 But as you can see -- the Secretary sort of
17 touched on this -- but we'll have a three-hour workshop
18 on April 22nd. And this is kind of intended to discuss
19 at the detailed level many aspects of flood safety. And
20 as the Secretary already mentioned, it's kind of an
21 opportunity for stakeholders, community members to join
22 that, and ask lots of questions, and provide their
23 perspectives as well.

24 And then we have projected out a July 2022
25 meeting, July 29th, and this will be largely focused on

1 facilities and safety. So like the Secretary said, we,
2 again, are going to do a recap of the April workshop and
3 then talk about the commission report a little bit. But
4 the bulk of the time will be spent really on facilities
5 and safety.

6 And also, as you can see, the commission will
7 essentially receive a dam safety and annual maintenance
8 plan presentations from DWR similar to years past.

9 And then we're hoping to have a meeting kind of
10 in the October, November time frame, but that hasn't
11 been determined or scheduled yet.

12 Okay. Next slide please James.

13 All right. We've all seen this before. This
14 is kind of the OCAC report the commission report
15 development timeline. And like a quick status update
16 here on the report. The commission, again, has seen
17 this. And we're going to continue to show this and just
18 show kind of where we're at in developing the report.

19 But if you recall at the August meeting of last
20 year, we talked about this and kind of laid out the
21 milestones. And then last December, we provided a
22 high-level report outline. And then since then, we've
23 developed a more detailed outline.

24 And we've had a chance to discuss it with
25 Supervisor Connelly, and Collins, and Senator Nielsen's

1 office. And so just a big and huge thanks to them for
2 their time and their input there. We went over the
3 content, and the topics, and how we're building that
4 out, and what we covered in the detailed outline. And
5 they sort of generally approved of the general structure
6 and direction that is all headed in. And that's been
7 shared around.

8 And then you can see on kind of that next
9 milestone, we're hoping to have the first draft of the
10 report to share at our July meeting. And so that will
11 be circulated around the commission ahead of time. But
12 also, we'll talk about that in a little more detail
13 since we'll have a first draft. But I think that's
14 headed in a really good direction.

15 And again, appreciate everyone's feedback there
16 and kind of the subcommittee's support on that progress.

17 So Secretary, I think that kind of does it for
18 me. I'll turn it back over to you.

19 MR. CROWFOOT: I appreciate that.

20 Director Nemeth and then Senator Nielsen.

21 MS. NEMETH: Yeah, I just wanted to follow up
22 with one or two more specifics on Supervisor Connelly's
23 comments about summer operations and recreation.

24 So with our target end-of-year storage, that
25 will drop the level of the lake almost about 100 feet

1 once we get to September 30th. We've extended the boat
2 launch at Loafer Creek. That's going to enable access
3 much deeper into the season, basically, down to 675 feet
4 as the elevation of the lake. People will still be able
5 to access Loafer Creek boat launch. So that's an
6 improvement that's in place to extend the capability of
7 recreation.

8 And then this fall, we're going to go ahead and
9 extend that boat ramp deeper into the lake to about
10 640 feet so we can handle recreation at the lake even
11 when the level drops to 640 feet in the future,
12 Supervisor. So I know how important that is for you and
13 the community. And I want to be clear about that here
14 this morning.

15 MR. CROWFOOT: Thanks so much.

16 Senator, I think you're on mute.

17 MR. NIELSEN: There we go. Kind of a
18 historical observation and then a question for Director
19 Nemeth.

20 The barrier, way back in the '80s as a Delta
21 senator, we were looking into what was called the Reber
22 Plan. This barrier is the same thing that that was
23 intended to be; is that correct? The barrier? For
24 salinization?

25 MS. NEMETH: I don't know how it relates to

1 that particular plan, Senator, but I can certainly find
2 out. But I can say it does serve the same function
3 which is to repel salinity as best we can.

4 MR. NIELSEN: That's just a curiosity.

5 MS. NEMETH: Okay.

6 MR. NIELSEN: And here's another that has some
7 type of merit to consider.

8 I think it was in 2010, we were coming up with
9 a new water plan for California. A whole bunch of us
10 were meeting regularly. I'll never forget the guy's
11 name, it was Dr. Trask. And he commented on our need in
12 the river was more salt, more salinization coming up the
13 river. And I was stunned.

14 Is that any part of any discussion now? To
15 have more salinization rather than less?

16 MS. NEMETH: It's not part of the discussion
17 now. And I'm familiar there's been some debates about
18 how you restore the system back to and the function of
19 salinity intrusion going more deeply pre- "any dams in
20 the system." But it isn't a part of how we discuss
21 managing our current system given the balancing of all
22 the needs.

23 MR. NIELSEN: Well, thank you. That's an
24 important observation. And I'm glad that -- well, I'm
25 not surprised. I'm glad you're aware of it though and

1 that you folks are staying in touch with it. Thank you.

2 MR. CROWFOOT: Thank you very much.

3 Any other questions for Nick? If not, then
4 let's move to the next item which is an update from DWR
5 and Dave Sarkisian on Palermo Tunnel and the status of
6 the piezometers.

7 MR. SARKISIAN: Great. Good morning. David
8 Sarkisian. Is my audio coming across okay? So let's go
9 ahead and advance to the next slide.

10 Yeah, I'm David Sarkisian. I manage our State
11 Water Project Dam Safety Program. And I'm happy to
12 report some progress on our piezometers in Palermo.

13 So let's advance.

14 And also, you might recall some new piezometers
15 were identified through the Oroville Dam Safety
16 Comprehensive Needs Assessment project, and they were
17 endorsed by the CNA Independent Review Board, and also
18 Part 12D Independent Consulting Board and grouped them
19 as Early Implementation Projects. We have the flood
20 control outlet piezometers, the Oroville Dam Toe
21 piezometers, and also, Oroville Dam Core Block and Grout
22 Gallery. We put together a plan that will be submitted
23 to FERC and the California Division of Safety of Dams
24 for review and approval prior to installation.

25 Next.

1 So quickly look at the FCO piezometers. We
2 installed four in 2020. And each of those were
3 outfitted with two vibrating wire instruments for
4 redundancy. So those are the actual instruments that
5 are inserted into the core holes. These instruments
6 replaced original instruments that reached their useful
7 life in the mid 2000s. And, of course, these provide
8 information on uplift pressures and the effectiveness of
9 the grout curtain and drains that were installed for the
10 structure.

11 Since installation, as you obviously know,
12 we've had really low reservoir levels less than
13 800 feet. And that's really the elevation where these
14 instruments are located. And also, we haven't yet have
15 the lake come up to really gather the information that
16 these instruments are intended to gather. We did see
17 one piezometer show a modest response to precipitation.
18 And also, that the rain structure gets into the
19 fractures of the rock and ultimately was detected by one
20 of those instruments. And the figure on the right just
21 illustrates how we install these. We actually installed
22 them through the structure and down into the rock
23 beneath the structure.

24 Any quick questions on this installation? I
25 see the Senator has his hand up.

1 MR. CROWFOOT: It looks like you're on mute
2 Senator.

3 MR. NIELSEN: This is an important point.

4 I remember when we had the initial problem,
5 there were discussions about the dam and had there been
6 piezometers. And I think there hadn't been but one. I
7 really am pleased to see that we're having some
8 installed. And even this one example you have just
9 given, this here, this is proof of the merit.

10 So again, the whole team is really on top of
11 things. And I'm very impressed.

12 MR. SARKISIAN: Thank you. Appreciate the
13 support.

14 Yeah, let's advance to the next slide.

15 So over at the dam toe, we installed eight
16 piezometers in 2020. And again, outfitted those with
17 real-time vibrating wire instruments. These instruments
18 are intended to enhance that surveillance for the
19 internal erosion-related potential failure modes and
20 also informs seepage analyzes and modeling.

21 We did collect some data this past fall if you
22 remember the October rains and December rains. These
23 instruments really reacted to that rain as it passes
24 through the shell of the dam and gets into what we call
25 that seepage collection pool kind of depicted in the

1 figure there. And so, again, recommendation coming out
2 of the CNA that was taken to be implemented here.

3 Next slide.

4 And then lastly, our Core Block and grout
5 gallery piezometers. Again, eight piezometers planned
6 as well as some improvement to the seepage weir
7 instrumentation within the grout galleries. These are
8 also focused on monitoring for our internal
9 erosion-related failure modes and will help us also
10 refine that seepage analyses.

11 This past fall, we got started on the
12 preparation for these installations because we are in
13 these very confined areas within these concrete grout
14 galleries and the Core Block. They're very tough to get
15 access to.

16 And also, we've been working hard with our
17 contractor to get each location prepared in terms of
18 concrete demolition, and also, a lot of logistics in
19 getting specialized drilling rigs to get to these
20 locations. We do plan to have the installations occur
21 this fall. We want to do it when the lake is low, and
22 that's something we worked out with the regulators as
23 well to make it as safe as possible when we make these
24 installations.

25 You might recall the estimated risks here for

1 potential failure modes related to internal erosions. A
2 lot of them are down in the bottom-right corner. So
3 that's what these instruments are targeting.

4 Next slide. Palermo.

5 We started working on this Palermo project back
6 in 2016. What we did back then was use a ROV to inspect
7 the facility but then also remove the bulkhead. And
8 that picture in the top right, that's actually the
9 intake structure. That's down at elevation 575 in the
10 lake, so obviously submerged. And that top piece there
11 is like a chimney, and within it is a bulkhead. And so
12 in order to dewater this tunnel, that bulkhead will be
13 lowered down and basically block the intake.

14 And also, what we did is that we pulled that
15 bulkhead up. It's never had to be used. And so pulling
16 that out of the water, it had been refurbished in 2017
17 and 2018. And so that involved recoating the bulkhead,
18 giving it new seals. And then when we were in a
19 position to reinstall the bulkhead, gets it staged
20 again. And as part of that, we also had a plan to
21 install a new pulley system that would kind of help its
22 installation because it would take quite a diver to come
23 over to get this installed. And so we're making
24 improvements to make it easier to install should we need
25 to.

1 We were able to get out there on the lake in
2 September with the low level. And the chart on the
3 right there kind of depicts the lake conditions
4 throughout this past fall. We were able to locate the
5 intake, do some cleaning of the silts, remove the trash
6 rack.

7 And also, we've developed a template,
8 basically, like a false bulkhead to install first to
9 make sure that all the dimensions would fit well. We
10 installed the pully system. And then also, actually
11 lowered the bulkhead into place. That worked out well.
12 We call that commissioning and restaged it right where
13 it needs to be right in that chimney slot.

14 The last challenge was getting off the lake
15 with the rising lake and with all the crane work we
16 needed to implement to get things off the lake. We were
17 really watching lake levels rise and lucked out with a
18 period on December 20th and 21st where the lake was in a
19 good spot. And we had a good shot at the shoreline to
20 pull all of the equipment off the lake.

21 So for those of you who aren't familiar with
22 the intake structure, it's there kind of by the Hyatt
23 intake structure, but again, down at elevation 575. So
24 when we were doing this work, we had about 80, 90 feet
25 of water over the intake. And it basically supplies

1 water through the left abutment rock to the canal
2 through preexisting water rights that were in existence
3 prior to construction of Oroville Dam.

4 Next slide.

5 And here's just some photos to get a feel for
6 what was out there. I imagine some of you saw this work
7 out there on the lake. So the top left is our barge
8 with all the equipment on it. You can see the crane,
9 the little office, and everything. Quite an effort to
10 get that put together and ready to launch.

11 And then we staged it over at the intake
12 structure, as you can see, on the top-right photo. And
13 the bottom-left photo is a picture of the bulkhead with
14 that nice white coating. And on top of that is the
15 template.

16 So basically, we sent that down in first,
17 because we figured if that wouldn't cut right, we could
18 cut it out with torches. We didn't want to send the
19 bulkhead down and find out that the dimensions didn't
20 fit. So it fit nicely. And on the bottom right there,
21 you can see the bulkhead being lifted by the crane. So
22 quite an effort.

23 I'm proud of our team that put this together.
24 A lot of safety planning and a lot of help from
25 Oroville, our contractor, Division of Engineering, and

1 it really -- I think it ended up being a great project
2 for us.

3 So I think that's it. And maybe next slide and
4 take any questions.

5 MR. CROWFOOT: We've got a couple of questions.

6 So Senator Nielsen and then Supervisor
7 Connelly.

8 MR. NIELSEN: I have one? Excuse me.

9 MR. CROWFOOT: Got it. Okay. I think Senator
10 Nielsen, maybe that hand was a legacy from his last
11 question.

12 So let's move to Supervisor Connelly.

13 MR. CONNELLY: Thank you for telling us what
14 was going on. The locals were out there recreating and
15 watching that. And we're curious. So I understand
16 that's a temporary slide that's down there that dewater
17 the tunnel and then you can inspect it.

18 What is the condition of the tunnel? And what
19 is the condition of the -- there must be a valve on the
20 downstream side or facing the dam; is that correct? Is
21 that how it operates?

22 MR. CROWFOOT: David, can you repeat for the
23 folks that can't hear.

24 MR. SARKISIAN: Yeah, is my audio okay?

25 Supervisor was asking the condition of the

1 tunnel and configuration of valves downstream. So
2 in 2016, when we pulled the bulkhead out, we sent the
3 ROV to swim into that tunnel all the way to where the
4 valves are. So that was about 2,000 feet. And that
5 effort took a big barge like what you just saw.

6 Conditions are great. It's really surprisingly
7 in good condition. There was about anywhere from 6 to
8 12 inches of silt kind of at the portal. And it thinned
9 out as expected. And then downstream, there's a tunnel
10 plug, and then there's a steel pipe within that which
11 goes to a valve. And it's a 30-inch butterfly valve and
12 goes into a fixed valve where we make the releases.

13 So that equipment is original equipment. It's
14 in good shape, but we do have plans in the future to
15 make some valve replacements at that location. And
16 also, this project really kind of gets us in a position
17 to be able to perform that work.

18 MR. CONNELLY: I guess the follow-up question
19 is: Are you sure there's no seepage from the tunnel?
20 Because not being an engineer, it just seems like when
21 the lake is full, there's a tremendous amount of head
22 pressure on that tunnel. I mean, if it's at 900 feet
23 and the valves are on the downstream side, I can
24 understand why. But that's a lot of pressure.

25 Are you sure that tunnel doesn't leak?

1 MR. SARKISIAN: So the question was the
2 condition of the tunnel and is it having seepage?

3 And so the answer is: It does have some
4 seepage, but that's to be expected. That tunnel plug
5 was provided with a grout print around that tunnel plug,
6 so kind of like a circumference. And it's right there
7 in the same location of the abutment. And the designers
8 put a lot of thought in trying to create that
9 impermeable barrier at that location.

10 And also, what we've seen in the tunnel where
11 we can actually go into the valve chamber and people can
12 walk in there and perform maintenance, there are drain
13 holes that alleviate pressure or any seepage that might
14 have gotten past that grout curtain. There's some
15 seepage, but it's really very minor. And so from what
16 we've seen, all that work during construction was really
17 effective in creating that impermeable barrier.

18 MR. CONNELLY: I think the concern is seepage
19 along the tunnel itself because it does go through the
20 dam. And it's been brought up by people that are
21 supposedly much more educated than I am.

22 Is there any way to make sure there is none?

23 I'm just curious because there are people that
24 are concerned that there -- I mean, it's a liability to
25 the dam. It has a life. And maybe I don't know what

1 the life expectancy is, and I don't know how to give the
2 proper answer.

3 I appreciate you're trying to give me the
4 proper answers to that. And maybe we should look for a
5 viable alternative in the future, maybe not in our
6 lifetime, but simply pump the water up from below the
7 dam and put it in a ditch.

8 MR. SARKISIAN: Yeah, so what I can say is
9 through our condition assessment and maintenance, what
10 we can see when we come in from the downstream side and
11 walk into the tunnel, what we see is that this facility
12 is performing as designed and intended.

13 But you're right. Everything has a certain
14 service life. And so certainly, planning for the longer
15 term for this particular part of the Oroville Dam could
16 be something we look into.

17 MR. CROWFOOT: Thank you so much Supervisor.

18 Let's go to Supervisor Conant. And then we'll
19 circle back to Senator Nielsen and see if he has a
20 question.

21 MR. CONANT: Back to the piezometers if we
22 don't mind. So originally, if I'm not mistaken, 52
23 piezometers; is that correct? And now we put in eight.
24 And I think two are functioning still or something of
25 that nature.

1 Can you maybe address that and tell us why you
2 think eight is adequate.

3 MR. SARKISIAN: Well, the original piezometers
4 were installed largely to evaluate that early life of
5 the facility under that initial reservoir loading and to
6 verify that the expectations of the design team were
7 met. And so we kept reading those. And over time, they
8 started failing as expected with the nature of the
9 period construction.

10 So through that needs assessment, this question
11 has come up quite a bit: How many piezometers should we
12 have moving forward? With that we've identified so far,
13 we just kind of walked through. And from my
14 perspective, we've got probably a couple of years to get
15 data out of these piezometers, understand what they're
16 telling us. And we need hydrology to help us here to
17 give us these levels and see how everything reacts.

18 And then I think, at that point, we would
19 address that question: Do we have enough? Do we need
20 some more? Are there some areas that we wanted better
21 coverage? And also, I think what we presented here
22 really helps us advance that conversation. And I would
23 not be surprised -- and we identified some additional
24 locations in the future to further inform our
25 understanding of the seepage.

1 MR. CONANT: Okay. That's okay. My concern is
2 that do we have enough? And it sounds like we'll be
3 adding more down the road if need be.

4 MR. SARKISIAN: It's possible. And when we
5 propose new piezometers, we have dialogue with our
6 regulators because there's risks installing new
7 instruments as well. So we have to take that into
8 consideration too.

9 MR. CONANT: Thank you.

10 MR. CROWFOOT: Anybody want to raise their
11 virtual or actual hand? Or take yourself off mute and
12 ask questions for Dave on the piezometers or the tunnel?

13 All right. Well, thanks Dave. And again, I
14 believe -- well, not only will this meeting be recorded,
15 but the materials that Dave provided will be on the
16 website too. And Dave will be available for more
17 conversation over subsequent meetings. All right.

18 Let's turn to Dr. Rune with UC Berkeley Center
19 for Catastrophic Risk Management. And we've asked Rune
20 to present a summary here over the next 10 minutes or so
21 on risk scenarios, and then looking forward to that
22 deeper dive on April 22nd.

23 So over to you Rune. Welcome.

24 MR. STORESUND: All right. Thank you. I look
25 very similar with the uniform, the white shirt, and blue

1 tie. All right. Well, hello everyone. And good
2 morning.

3 I want to thank the Oroville Dam Citizens
4 Advisory Commission and Secretary Crowfoot for allowing
5 me the opportunity to share with you what I consider to
6 be an exciting risk reduction opportunity for the
7 downstream communities for Oroville Dam.

8 Today, I'm going to wear the hat as executive
9 director and consultant for my nonprofit, Safer3, which
10 is focused on safety, resilience, reliability.

11 And next slide here.

12 So as part of my previous work on the
13 Comprehensive Needs Assessment ad hoc committee and
14 combined with two previous evacuation events, one in
15 1997 and the other one in 2017, it seemed to me that
16 there was an existing hazard with regards to elevated
17 releases from Oroville Dam.

18 Now I understand and appreciate that the
19 maximum release from the dam is on the order of
20 150,000 cubic feet per second. But there's little
21 information to better understand the potential
22 consequences associated with any possible elevated
23 releases. And I think understanding the impacts of the
24 elevated releases is important to understand any
25 potential benefit/cost of risk reduction evaluation.

1 I did submit my notice of intent in to CalOES
2 to help provide funding to gain an understanding of
3 inundation augmentation expenses of what I call elevated
4 releases.

5 The next slide here.

6 So the aim here is to provide inundation
7 mapping to be included in the next update of the local
8 hazard mitigation plans for downstream counties.

9 And here, I show a page from the Butte County
10 Mitigation Plan. And what caught my eye was the
11 occasional occurrence of catastrophic dam failure. And
12 I think this highlights an opportunity for us to have a
13 structured conversation between the dam owner/operator,
14 and the community as to the experience downstream
15 impacts.

16 Now the dam has actually never failed. In
17 1997, there was an elevated release which was greater
18 than the 150,000 cubic feet per second. And in 2017,
19 the primary spillway fail, but the dam did not fail.

20 Next slide.

21 So from a hazard perspective, the elevated
22 flows fall into the realm of likely to unlikely. There
23 are a number of very unlikely events considered. So my
24 question is: Well, why not also consider these elevated
25 releases to fall within the likely to unlikely spectrum?

1 We see mapped a sunny day failure of Oroville Dam. Why
2 not map the inundation with a probable maximum flood?
3 We can use this information to ask questions related to
4 evacuation planning, land use, and mitigation projects.

5 Next slide.

6 So I did receive a redacted version of the
7 Oroville Dam Flood Control Manual from the Corps of
8 Engineers. And one of the scenarios presented was the
9 release of over 620,000 cubic feet per second. I wasn't
10 able to find any mapping showing the expense of that
11 inundation. And then, I also want to point out that a
12 lot of the downstream consequence evaluations that were
13 done in the late 1960s may actually be quite different
14 from the downstream consequences today just due to
15 development and planned use change over time.

16 Next slide.

17 So my request to this group is to offer
18 collaborative support if the commission finds value in
19 delineating the different degrees of inundation from
20 these elevated releases. The outcome of the effort
21 would be a series of inundation maps for flows between
22 the standard project flood and the probable maximum
23 flood. And then these maps can be used for future
24 initiatives to inform discussions and planning related
25 to things like evacuation, economic and environmental

1 impacts.

2 And I just want to point out that these
3 subapplications is due to CalOES on April 8th. So we
4 have a few weeks in front of us but not necessarily a
5 whole lot of time. And I think there were three areas
6 where help would be greatly welcomed.

7 So number one would be to help recruit letters
8 of support from the downstream communities.

9 Number two would be helping to meet those
10 25 percent local partner cost share through either
11 financial or in-kind service contributions.

12 And finally, number three, working with the
13 Department of Water Resources and the State Water
14 Project. They do have existing models that could be
15 used for this mapping. Those models were used in part
16 for developing the sunny day future inundation. And I
17 think we could use the same model to evaluate inundation
18 associated with the elevated releases.

19 Now it may be that the department has done some
20 of this modeling or all of the modeling. Then the
21 question would be, "Hey, would you be willing to share
22 those inundation maps with the local emergency services
23 officials? And if the modeling hasn't been done, would
24 you be willing to perform the modeling and make those
25 maps available?" And I think that's it.

1 So next slide should be the -- yeah, thank you.

2 So yeah, I look forward to working with
3 everyone to really make this a win, win, win across the
4 board. So thanks for your time. And definitely, thanks
5 for the opportunity to present to the commission.

6 MR. CROWFOOT: Rune, thank you.

7 And I want to call on Deputy Director Curry,
8 who helps to lead the Governor's Office of Emergency
9 Services or OES.

10 MS. CURRY: Thank you Wade. Thank you Dr.
11 Storesund for that presentation and good news. CalOES
12 is on the advisory commission, so consider that input
13 taken in terms of endorsing this idea of better data
14 analyzes that goes into the local hazard mitigation
15 plans.

16 And I want to lift up and appreciate the
17 highlighting of the local hazard mitigation plan. We
18 do, at OES, have funding opportunities to help this
19 funding taking place. But more so, we're all constantly
20 working with the counties and cities who file these
21 plans well before their expiration date. They have a
22 five-year kind of life span so that we make sure we're
23 matching funding opportunities, not letting those plans
24 lapse. But what makes them effective is the data that
25 feeds into them to accurately update the risk analysis.

1 So I just wanted to offer and just punctuate
2 that point that there's this spending opportunity. We
3 will have others behind it. And the importance of these
4 planning updates, and our communities, and the help that
5 we can provide to make those plans happen financially as
6 well as with technical assistance. So I just wanted to
7 add that point.

8 Thanks Wade.

9 MR. CROWFOOT: Yeah, thank you. And I'll just
10 say the Department of Water Resources, obviously, is a
11 large focus of the discussion given its management of
12 the dam and the reservoir.

13 But huge thanks to OES and Tina because you
14 guys are really the point of the spear on the mitigation
15 hazard mitigation planning but then also the response.
16 And whether it's wildfire, or drought, or a terrorist
17 attack -- God forbid -- it's always OES. So really
18 appreciate Deputy Director Curry's participation here in
19 these meetings.

20 I see Ms. Widener has her hand up. And so, why
21 don't I turn to you again.

22 MS. NORTHERN: It's Northern. I'm Mrs.
23 Northern. I've been married.

24 MR. CROWFOOT: Oh, my gosh. Wonderful.
25 Congrats.

1 MS. NORTHERN: Thank you. I just want to speak
2 up and say how important this work really is to the
3 community.

4 During the 2017 spillway evacuation and the
5 days leading up to the actual evacuation, it was really
6 hard to find inundation maps for the Oroville Dam and
7 Lake Oroville if there were a failure. I'm sure
8 everybody knows by now, I really like the DWR website.
9 I have done a lot of research on it. I know how to
10 Google. I had to help a lot of older friends find
11 information as far as evacuation.

12 You know, having these tools, if something were
13 to happen or knowing that we have them, is really so
14 important to the community. I think this needs to be --
15 personally, I would love to endorse this project. And
16 as a group, I think that we should as well.

17 I saw he needed letters of endorsement or
18 support. And I just think that this is one of the most
19 important things that we can do as a commission is to
20 try and push forward these kinds of projects for our
21 community.

22 MR. CROWFOOT: Thank you very much. And one of
23 the things to unpack -- I don't want to take too much
24 time on this -- is I believe the application to OES.
25 And OES sits on the commission. So it's a little

1 unprecedented for me to try to understand sort of what
2 would be the formal position on the application that our
3 state commission would take that OES is part of.

4 But point well-taken from you as a community
5 leader. That your voice is critically important as a
6 member of the public that's part of this. That this
7 would be important. And also, for Tina to hear that
8 from OES and for you to make that clear. It helps.

9 Let's go to Supervisor Connelly.

10 MR. CONNELLY: First, Rune, how much short are
11 you on funding to complete this project? And what is
12 the total cost?

13 MR. STORESUND: It's not a shortage per se. My
14 understanding is that the federal government would
15 provide about 75 percent of the funding, and then the
16 local community has to come up with 25 percent. I
17 believe the ask was on the order of 330,000. So the
18 25 percent is like 85,000. And that can be financial
19 contributions. My understanding is that it can also
20 include in-kind services.

21 The motivation for my ask here is more on
22 engaging the community, and doing outreach, and getting
23 everyone engaged and part of the process. I can
24 probably even donate the 85,000 in local cost share
25 myself personally, but that kind of defeats the purpose.

1 What we're trying to do is we're trying to
2 start a conversation on understanding our vulnerability
3 and our hazards. And I think alerting people to this
4 cost share and having them be part of the solution is an
5 important element moving forward.

6 MR. CONNELLY: Could you in-kind with DWR? I
7 mean, really partner with you? Because I think it's
8 very necessary to do these studies so we don't
9 over-evacuate like we did during the spillway incident
10 which put more people at risk than was necessary because
11 we didn't have this. And would DWR do in-kind or even
12 help you with money? Why not ask? I think that's why
13 this group exists.

14 MR. STORESUND: So the question was on the
15 local 25 percent match. Is that something that the
16 Department of Water Resources could provide? This is my
17 first time applying for this grant, and I am not an
18 expert in the FEMA, and grant structures, and rules, and
19 regulations.

20 But my understanding is that it likely would
21 qualify. And I think that would be a wonderful
22 contribution. Again, if we already have the models, why
23 recreate new models? I think that's a waste of energy.
24 There are so many problems for us to tackle out there in
25 the world. Let's leverage the resources that we have so

1 that we're answering as many questions as possible as
2 opposed to answering the same question 10 times.

3 MR. CROWFOOT: Yeah, I appreciate that. And
4 why don't I consider that a suggestion. My
5 understanding is this was -- I didn't have a full
6 understanding of Rune's presentation here today and
7 totally understand that he's asking for the support of
8 the members of this as we move forward. Again, I want
9 to be thoughtful about just maintaining the protocol of
10 the application to one of the state agencies that's on
11 this commission.

12 But Supervisor Connelly, point taken in terms
13 of your suggestion, our request that DWR consider it or
14 how it could provide local match.

15 Supervisor Conant.

16 MR. CONANT: Yes, Rune thank you for the
17 presentation you gave.

18 And I assume that part of the presentation will
19 be answers to questions like "Is this a 'once in a
20 hundred years' event for the spillway?" Or "Once in a
21 thousand years"? So this would help for planning issues
22 as well in our counties. Thank you.

23 MR. STORESUND: Yeah, so when it comes to the
24 recurrence interval of these releases, we can definitely
25 put numbers to it. I just want to point out that most

1 of these recurrence intervals are based on past data.
2 As climate change enters the picture, yesterday's
3 information may not be a perfect predictor of tomorrow's
4 reality. So we're going to be hampered to some degree.
5 But yeah, there's a spectrum of occurrences. And we can
6 give some indication as to where on the spectrum would
7 these scenarios fall.

8 MR. CROWFOOT: Very helpful. Thank you.

9 Senator Nielsen and then Director Nemeth.

10 MR. NIELSEN: This is a shout-out for Office of
11 Emergency Services. This goes back a few years when OES
12 was launching a new upgrade of the 911 system.

13 For the longest time, I've had huge problems
14 and was very critical of the billions of dollars the
15 state has squandered in technological upgrades, IT. And
16 also, I had some major concerns with OES about their
17 portion of this implementation of the new 911 upgrade.

18 And usually, an agency will give you a brief
19 answer and then just put you off figuring you're going
20 to forget about it. This is the first time in my career
21 I've had an agency go to the extent that OES has to be
22 on top of this 911 upgrade. And quarterly, we get
23 together on the phone, and I get an update. I've never
24 had that happen before by any agency. And I really want
25 to give them a shout-out.

1 Reggie Salvador has been the fellow that I've
2 worked with on that. Done a fantastic job. And the
3 Director has been wonderful too. It's a deserved kudos
4 to an agency of government that is very critical and is
5 doing a great job moving us ahead in the future. So
6 just a pat on the back to the good folks at OES.

7 MR. CROWFOOT: Well, they'll take that pat on
8 the back; right?

9 MS. CURRY: Thank you for your contribution on
10 this important, massive problem. And we'll look forward
11 to working on the success of this for really just an
12 important safety feature for all of our communities to
13 modernize the systems. So appreciate your support. And
14 it all interrelates to the topic at hand of Oroville and
15 the importance of our public safety systems and
16 communications.

17 MR. NIELSEN: And thank you.

18 MR. CROWFOOT: Over to Director Nemeth.

19 MS. NEMETH: Well, obviously, one of the things
20 that the department learned in 2017 and then with the
21 legislation passed by Senator Nielsen and Assemblymember
22 Gallagher in response to that is how critical it is that
23 the department and CalOES be engaging with county OES.
24 And that's something that we're doing at all of our DWR
25 facilities from Ventura, to Butte County, everywhere.

1 And that's a real improvement thanks to the proactive
2 legislation by Senator Nielsen and Assemblymember
3 Gallagher.

4 I can't tell in the participants list if we
5 have Butte County here, and I don't want to put them on
6 the spot. But Butte County Sheriff's Office have been
7 really important partners with the department in really
8 honing in on what emergency response looks like. So to
9 the extent that we move towards some kind of a workshop,
10 I want to make sure that they are fully engaged. And
11 then Supervisor Conant, I think, also mentioned their
12 need to know. So all the effected counties.

13 I think the real value here is to make sure
14 that we're -- you know, to kind of quote
15 Dr. Storesund -- is really making sure we're asking the
16 right questions. And so I want to be sure that the
17 questions that we're asking are important for the local
18 county emergency services since it's those folks that
19 protect their communities when we do have a problem.
20 And we would certainly want their guidance on usefulness
21 of information and planning scenarios here.

22 MR. CROWFOOT: That's really helpful. Okay.
23 Anybody else? Comments? Questions?

24 MR. CONANT: So I guess it would be appropriate
25 for the next meeting to have our Office of Emergency

1 Services sign onto this meeting as well; correct?

2 MR. CROWFOOT: That's a good question. I think
3 it kind of brings us --

4 MR. CONANT: If you're not a member of the
5 community, but you can do it as a citizen; correct?

6 MR. CROWFOOT: They would certainly be welcome
7 to join the meeting. And maybe for Tina and Nick, I
8 suggest that we put on the -- you know, as an action
9 item, identify a way to integrate CalOES in the
10 discussion just around the integration of state OES, and
11 county OES, and DWR. It sounds like it's happening.
12 And it's good. We just want to make sure that everybody
13 understands how it's happening, et cetera. So we'll
14 figure out whether it's a regular invitation or we do a
15 presentation.

16 Does that make sense?

17 MS. CURRY: Yeah, that sounds good.

18 MR. CROWFOOT: Great.

19 And I noticed that Dr. Storesund's hand is up
20 as well.

21 MR. STORESUND: Yeah, if I can make a quick
22 comment.

23 As part of the original notice of intent, I was
24 able to get a letter of support from Butte County OES.
25 I'm still looking for an engagement or some letter from

1 Glenn-Colusa, Yuba, those sorts of counties, the Office
2 of Emergency Services saying, "Hey, if these maps are
3 made available, we would consider including them in our
4 county local hazard mitigation plans until the next
5 update."

6 I don't think that's been directed specifically
7 at the commission. But if you know folks at these
8 Offices of Emergency Services, I'd love to connect with
9 them and include them in the effort.

10 MR. CROWFOOT: Great. Really good suggestion.

11 I want to move us along in just a bit because
12 we want to make sure we have ample time for public
13 comment, but also want to make sure every one has a
14 opportunity to ask questions or share any other
15 thoughts.

16 All right. Then let's move on.

17 MR. NIELSEN: Sorry. This is kind of a
18 conclusive observation. And no decision being made at
19 all today but a consideration for the commission. This
20 has been so successful for those of us who are
21 participating. What I'm wondering:

22 Would it be helpful to have some kind of a
23 communication to let the broad public, through a
24 prefaced conference of some of us, of the commissioners,
25 to give them an update of the existence of this

1 commission and the progress it's making on their behalf?
2 It's just so significant what we're doing. It's just a
3 thought. Ponder it and we can talk about it in the
4 future.

5 MR. CROWFOOT: Yeah, I like that. And make
6 sure there's an opportunity later in the year as we have
7 that draft report from the commission whether we want to
8 actually use it as a moment to mark a milestone.
9 Obviously, the work never stops. And I think that's the
10 point of the commission. But to your point, identify
11 what has been accomplished over the last couple of years
12 and where we're at.

13 So Nick, if you can include that suggestion on
14 your tracker. And we'll be back at the next meeting and
15 how we would address that.

16 MR. SAFFOLD: Sure Secretary.

17 MR. NIELSEN: Great.

18 MR. CROWFOOT: Then let's move on to Lori from
19 CalOES and Dave Sarkisian from DWR to talk to us about
20 public safety partnerships. Give us the lay of the land
21 in terms of what's actually happening on this front
22 germane to what we just talked about. And they'll be
23 covering the emergency action plans, and inundation
24 maps, and what we've learned in the process since 2017.

25 So over to you Lori and Dave.

1 MR. NEZHURA: Thanks Secretary. And thanks
2 everybody for the robust conversation. So hopefully,
3 what we discussed today can help kind of inform that
4 conversation we just had.

5 My name is Lori Nezhura. And I'm the Deputy
6 Director of Planning, Preparedness, and Prevention at
7 CalOES. Let's just jump right in.

8 Next slide.

9 And just a little bit of a history lesson.
10 Most of you are very familiar with this. In 2017, SB 92
11 was passed making changes to government code and water
12 code related to dam safety planning and inundation
13 mapping. So my part of the presentation will be on the
14 emergency action plans.

15 Next slide. My apologies. Please go back.

16 These are the changes that were made in the
17 water code. So owners of state-regulated jurisdiction
18 dams must now submit EAPs, emergency action plans, to
19 CalOES and the Division of Safety of Dams. It's
20 classified as an extremely high or significant hazard
21 dam. So that's a good portion of all the dams in the
22 State of California. And I'll lay them out in another
23 slide.

24 Those EAPs must include the DSOD-approved
25 inundation maps. And the statute also provides

1 deadlines for submission. CalOES review time lines are
2 also given.

3 What that means is when an EAP is submitted to
4 CalOES, an initial EAP, we are given 60 days to turn
5 around our review and get that back to the owner. And
6 that would then conclude with either an approved EAP or
7 with recommended changes. And then each subsequent time
8 a draft EAP is resubmitted, we have 30 days at CalOES to
9 turn that around with our review and recommendations or
10 approval.

11 And once an EAP is approved, then owners must
12 update it at a minimum of every 10 years. There are
13 other instances in which it might be updated sooner than
14 that depending on whether or not the inundation maps
15 have changed or there's been changes to the dam itself.

16 Next slide.

17 So government code is where it discusses what
18 should be in the EAP. And first and foremost, I'd like
19 to point out that it must be developed in consulting
20 with local public safety agencies. And I'll talk a
21 little bit more about that in a few moments.

22 It must adhere to FEMA's guidelines. So that
23 means that there are six main elements of an EAP that we
24 have listed here: Emergency notification flowcharts,
25 their preparedness or their surveillance activities,

1 response process, responsibilities of not only the dam
2 owner but also the individuals and agencies, and the
3 impacted areas. It must include approved inundation
4 maps. And then there's additional information that is
5 recommended to be put into appendices.

6 And then following the approval of an EAP, dam
7 owners must conduct annual notification exercises with
8 the local public safety agencies identified in the EAP.

9 Next slide.

10 So though these numbers can change as dam
11 classifications occasionally change, here's kind of the
12 breakdown of the California jurisdictional dam: 264
13 extremely high, 440 high classification, 171
14 significant, and 367 low. This is as of March 1st of
15 this year. And the statute does not require low
16 classification dams to submit EAPs, although
17 occasionally, they do. And we'll go through the review
18 process with them and provide recommendations for them
19 as well.

20 Next slide.

21 Now let's look at a couple of the key purposes
22 of the EAPs. First of all, that it identifies potential
23 emergency conditions. So I think early on, we had
24 discusses about sunny day failures. But there's various
25 scenarios that are included within the EAP. And then it

1 also talked about specific actions that need to be
2 followed to minimize property damage or loss of life.
3 It is based on, as I said before, approved inundation
4 maps. And so these maps will show those areas that
5 would be impacted by inundation. And therefore, it
6 informs evacuation in case of a dam emergency.

7 Next slide.

8 So this is where one of the key purposes then
9 is the collaboration with the downstream public safety
10 agencies. So we provide guidance on this area more than
11 any other in our review of EAPs. We require the dam
12 owner to reach out to local law enforcement, fire, and
13 OES, and then state and federal organizations.

14 The consistent ones are listed here: The
15 National Weather Service, Department of Water Resources
16 through the DSOD and their Flood Operations Center, and
17 then CalOES 24:7 Warning Center.

18 And there's a variety of ways that they can do
19 this outreach: They can hold workshops, work groups,
20 phone calls, through email. And then we do recommend
21 that they do it early on in the process. But after
22 they've already developed kind of a core or a first
23 draft so that they have something to share with these
24 groups, something for them to review, provide comment
25 on, and inform, and expand.

1 Next slide.

2 And then the dam owners can incorporate the
3 result of their outreach into their plan through a
4 variety of means. They do have to actually show CalOES,
5 through the approval process, that they have conducted
6 these meetings or that they have received this feedback
7 from each of the public safety agencies that's in any
8 one of those downstream-impacted jurisdictions.

9 They can provide us narratives about which
10 agencies were consulted and what their contributions
11 are. They can provide us actual agendas and sign-in
12 rosters, minutes, et cetera from particular meetings.
13 And then within the EAP, they include the agency's role,
14 like their responsibilities, and the response, and any
15 of these potential failure scenarios.

16 Next slide.

17 And one of the ways that one of the parties
18 that is informed through these meetings is the
19 notification flowcharts. And it will identify who is to
20 be notified of a dam safety incident and prioritizes the
21 order.

22 Part of our process is to ensure that the
23 flowcharts represent the quickest possible notifications
24 and include automated systems, such as you would find in
25 various law enforcement agencies, as well as personal

1 phone calls. And so we make sure that the scope of any
2 one individual or any one office is limited to maybe
3 four to eight phone calls so that those phone calls can
4 happen in rapid succession.

5 The flowcharts show the order. So it literally
6 says, "This will be the first phone call, the office
7 will be the second," et cetera. And it prioritizes the
8 initial or the first potentially impacted jurisdictions,
9 and then goes down the list with those that have more
10 time or are a little bit further down on the
11 notification flowchart.

12 In some of the smaller, privately owned dams,
13 they may only have say four or five households that are
14 in the downstream inundation area. And I've actually
15 seen their notification charts include those four or
16 five households. Of course, for the larger populations,
17 the notification chart includes really is limited to
18 just the response agencies in those jurisdictions giving
19 them the responsibility then to reach out to the public.

20 Next slide.

21 I would like to say here in conclusion that the
22 Oroville Dam EAP -- and I actually have a copy of it
23 right here -- I don't know if you can -- darn, I can't
24 see it. That's the disadvantage of the virtual. It's
25 about 8 inches thick. It was approved in 2019 of

1 February. And Oroville Dam has conducted annual
2 notification exercises as required. And they've held
3 EAP seminars in October 2020 and a seminar with
4 Thermalito dams on September 2021.

5 I will leave you with this: In the emergency
6 planning world, we have a saying that the planning
7 process is the number one benefit of publishing a plan.
8 And that is as true for dam EAPs as it is for any
9 emergency plan. And California is safer for the work
10 that has been put into all of these documents.

11 I'll stop there. Open for any questions later
12 on or now, whichever you prefer Secretary.

13 MR. CROWFOOT: Appreciate it Lori, your work,
14 and the really cogent presentation.

15 Let's hear from Dave and get through this
16 presentation and then open up for questions.

17 MR. SARKISIAN: Great. Thank you. So yeah,
18 let's advance to the next slide. And I'll try and work
19 through these quickly.

20 As you all know, these inundation maps
21 illustrate flooding that could result from a
22 hypothetical failure of a dam. And they're included in
23 the EAP just for that purpose to inform not only
24 ourselves, the owner, but downstream public safety
25 agencies of the limitations of the inundation. And they

1 really are the foundation of the EAP communicating what
2 the hazard looks like.

3 So prior to 2017, of course, we did have an
4 EAP, we have had inundation maps, and they were driven
5 by the FERC requirements. We also did some other
6 mapping efforts besides that required for that EAP to
7 inform ourselves. Those included in 2015, hypothetical
8 gate failure inundation maps for Oroville and Thermalito
9 Diversion Dam.

10 And so, as Lori mentioned, there's all sorts of
11 scenarios that could be considered for inundation
12 mapping. And so we've done a little bit of this
13 internally over the years to better inform ourselves.

14 Next slide please.

15 With Senate Bill 92 in 2017, that certainly
16 raised the bar in terms of inundation mapping and EAP
17 requirements. As Lori mentioned, Division of Safety
18 Dams approves the inundation maps. So for us, just like
19 any other dam owner, the State Water Project developed
20 our maps and submitted them to DSOD for review.

21 Thereafter, once approved, submitted our EAPs to CalOES.

22 And that really significant change through the
23 legislation was incorporation of the critical
24 appurtenant structures. So in the case of Oroville,
25 that was the emergency spillway, flood control outlet,

1 Parish Camp Saddle Dam, and Bidwell Bar Canyon Saddle
2 Dam. All Oroville facilities that can be the origin of
3 an uncontrolled release.

4 And so that really led to the growth of the
5 EAP, the 8-inch binder. It is now largely all those
6 maps. The other key thing, as was referred to earlier,
7 inundation maps that are approved are on a publicly
8 available website hosted by DSOD.

9 Next slide.

10 You know, the mapping done today is far better
11 than it was even 10 years ago. And I think with the
12 regulations, it's really helped standardized what needs
13 to be in the mapping. Not only that, but for a single
14 scenario, different map sets are created: One for the
15 initial wave arrival time where one foot of water
16 arrives.

17 So if that information is key, you can refer to
18 that set of maps for maximum depth. You can also get
19 maximum velocity information which is important for life
20 safety. And all of this deflood time and all this
21 information is intended to inform our public safety
22 agency partners of the hazard and really help them plan
23 evacuations.

24 Kind of bottom right here. With the legend,
25 you can see the kind of information that's on the maps,

1 really geared towards the public safety agencies to
2 understand what's at risk.

3 Next slide.

4 We've also been working on our Thermalito
5 facilities. And so for Diversion Dam fair weather
6 failure as well as radial gate failures. And also, the
7 forebay dam and afterbay dam. And each of these
8 facilities have DSOD-approved inundation maps that are,
9 again, publicly available.

10 Next.

11 We also did some work in 2017 very similar to
12 what Dr. Storesund was describing. We call them
13 incremental flow inundation maps. And we did that to
14 get a better understanding of downstream channel
15 capacity.

16 One of the assumptions that we had in that
17 series of maps is that downstream levees would overtop
18 but would not fail. And we really did that to simplify
19 the study. So obviously, one can choose a multitude of
20 levee breach locations. And we looked at two different
21 hydrograph patterns and developed maps at those flows
22 that you can see there, anywhere from 100k to 400k.

23 And from that mapping, this question, which is
24 kind of of interest to many: What's the capacity right
25 here in the City of Oroville? And that image here is

1 for the 250,000 cfs flow down the Feather River. And
2 that's pretty well contained within the bounds of the
3 river heading down through the main part of the city.

4 Next slide.

5 So just in summary, the legislation has really
6 enhanced public safety and awareness in terms of
7 dam-related flood hazards. Something to keep in mind,
8 there are numerous inputs, numerous parameters to
9 consider in the hydraulic modeling. So each inundation
10 map is kind of unique and applies to a specific
11 scenario. So it's very important that our partners
12 understand what scenario is being depicted in each map.

13 Also, these models that were used to generate
14 the fair weather failure maps required for the EAPs,
15 they can be leveraged, as Dr. Storesund mentioned, to
16 answer other questions and other scenarios. And one of
17 the pieces of feedback we've had from our partners is
18 that the GIS shapefiles from these maps are very useful.
19 That they take those and overlay them with their GIS
20 layers at the different Offices of Emergency Services.
21 And so that's been of great benefit to generate those
22 with these new maps.

23 And so with that, I'll pass it back. Thank
24 you.

25 MR. CROWFOOT: Dave, thanks to you and Lori.

1 That's a lot of important content. And you guys did a
2 great job summarizing it.

3 And again, that your presentations will be
4 available on the website as well as on the recording and
5 questions from our commission as it relates to either
6 presentation.

7 MR. CONNELLY: Quick one: The Feather River,
8 that 250,000 cfs, I don't think that map is accurate.
9 We've had less than that. And just below where this map
10 is, it back-flooded over Feather River Boulevard clear
11 back into our sewer plants. So I don't know if it's
12 just not showing it or it's -- I don't know. It's just
13 not right. That's why we need to lower the levee
14 downstream where it bends back.

15 MR. SARKISIAN: So we can certainly look into
16 that. And maybe it was off the map there perhaps at
17 least off --

18 MR. CONNELLY: David, I appreciate your
19 demeanor and how proficient you are.

20 Yeah, it could be just below that. But I got a
21 feeling it floods more to the east than the one you're
22 showing there.

23 MR. SARKISIAN: Okay. And that sort of
24 grounded truth thing is absolutely the kind of
25 information we need. Sometimes, all it takes is a

1 culvert to pass water to a new area. And also, we can
2 do more work there certainly if there's some experiences
3 and history there that we need to collect.

4 MR. CROWFOOT: Okay. Oh, you changed your
5 name. I'll call you by your married name, Ms. Northern.

6 MS. NORTHERN: Thank you.

7 I just wanted to say thank you to
8 Mr. Sarkisian, David because that link that you provided
9 with the maps, I will pass that onto -- you know, I run
10 a Facebook page about the dam. And I do have a lot of
11 followers there. I can post it on that and get it out
12 to more people. So I do appreciate you adding that into
13 your slides. Sometimes, it's just easier to find things
14 on Facebook than to try and search through internet
15 pages yourself.

16 And then I wanted to just clarify with Lori.
17 The new legislation requires EAPs for dams that are
18 hazardous -- sorry, I was looking for it in my notes
19 there. It's hazardous, or extremely high, high, and
20 significant.

21 What does Oroville Dam rate on those levels?
22 Is it extremely high, high, or significant? Does
23 anybody know? And it doesn't have to be specifically
24 Lori to answer that.

25 MR. NEZHURA: Yes, thank you for that question.

1 It is extremely high.

2 MS. NORTHERN: Okay. I thought so.

3 MR. CROWFOOT: That's helpful.

4 I want to recognize you and thank you for
5 helping make the information accessible on Facebook.
6 And, I mean, that's huge and greatly appreciated.

7 I think DWR has been making real progress in
8 terms of trying to provide information that a nonexpert
9 can understand. But huge thanks for going one step
10 further.

11 MS. NORTHERN: Yeah, no problem. Thank you.

12 MR. CROWFOOT: Good. I know we want to get to
13 public comment. And I don't see anybody else with hands
14 raised at this point.

15 So I'm going to turn it back to you, Nick, and
16 ask you to repeat the instructions for those that want
17 to provide comment at this time.

18 MR. SAFFOLD: Yeah, thank you Secretary.

19 Yeah, so we're going to take questions and
20 comments from the public now. Again, for those on the
21 Zoom platform, you can raise your hand by clicking the
22 hand icon to speak. And for those on the phone, press
23 "Pound, two" to indicate that you'd like to speak.
24 Please note that if you're on the phone, you may have to
25 manually unmute your phone call as well.

1 So why don't we get started. Yeah, the first
2 hand raised is Tony Davis.

3 Tony, you should be able to unmute yourself
4 now.

5 MR. DAVIS: Tony Davis here up in Paradise.

6 I just have a couple of questions. Obviously,
7 going through this drought has been tough on everyone,
8 not just ourselves here. And I just had a couple of
9 questions. We're doing some -- it looks like extension
10 of Loafer Ramp over there on the other end of lake.

11 Has there been any conversation or open
12 dialogue on possibly extending our ramp? Or there's
13 kind of a foot trail that we refer to as the Goat Trail
14 at about 730 elevation. That is dirt, gravel. I know
15 that there was potentially a project that was supposed
16 to be completed previously. I haven't really heard too
17 much about it. I was just kind of opening a dialogue on
18 something on this side of the lake.

19 MR. CROWFOOT: Tony, I appreciate that.

20 We have Matt Teague or somebody from State
21 Parks that can answer that. Just see if you have any
22 other questions before I turn to someone on the
23 commission.

24 MR. DAVIS: I did have one more question.

25 Looking at the Oroville Dam outflow/inflow

1 chart. It was a quick question, one I get asked by
2 customers all the time. As far as the inflow/outflow, I
3 see it looks like we're kind of pulsing that outflow --
4 I see 8,000 at 6:00 p.m. last night, 13,000 at 7:00 p.m.

5 Are we just kind of testing that power plant?
6 Or what's the reasoning for that if you don't mind me
7 asking?

8 MR. CROWFOOT: Thanks so much Tony.

9 So maybe Karla or one of her team members on
10 the second question actually. Let's do that first
11 around what's the purpose or reasoning behind the
12 different flows at different times? What drives that?

13 MS. NEMETH: What drives that are downstream
14 water quality requirements that the department needs to
15 meet. Part of what we're doing with this temporary
16 urgency change petition in front of the Water Board, and
17 I think they have committed to issuing something, I
18 think right around the first week in April. What that
19 will effectively do is enable DWR to reduce the amount
20 of diversions from the lake in order to preserve
21 storage.

22 But John Leahigh can add anything there that
23 I've missed.

24 John?

25 MR. LEAHIGH: Yeah, thanks Karla.

1 So if we're talking about the time frame of
2 changes, days and weeks, what Director Nemeth mentioned
3 is exactly point on. My interpretation of possibly what
4 the question was also is on the website.

5 We have outflow that's based on an hourly
6 basis. And those would be changes in outflow contained
7 within the Oroville Complex itself, which is driven by
8 needs for power production from Hyatt Powerplant. So
9 you will often see large variation in the outflow
10 through the course of the day, but that has to do with
11 the power generation function of the dam.

12 MR. CROWFOOT: And that's really helpful. And
13 the way I describe sort of the longer term flow needs is
14 that there needs to be enough water flowing in the
15 rivers below the dams to ensure a certain level of water
16 quality.

17 And the Oroville Complex, and DWR, and the
18 State Water Project is regulated by a sister agency
19 called the Water Board. And so, as Karla notes, while
20 the dam really exists there for flood safety as well as
21 water supply, it also has to have enough flow coming out
22 of it to maintain certain environmental standards. So
23 that, as Karla pointed out, drives how much water goes
24 out on sort of a longer term, a daily, a weekly basis.

25 And John, appreciate the rationale for kind of

1 the hourly differences around the needs to produce power
2 at different times of day.

3 And then over to -- I think it's Supervisor
4 Teague from State Parks.

5 Can you talk about Tony's question regarding
6 the boat ramp on that side of the lake or any sort of
7 efforts around trying to provide some access?

8 MR. TEAGUE: Yeah. Tony, thanks for the
9 comment.

10 I would have to refer to local DWR. I don't
11 know if Director Nemeth has anybody to answer that.
12 It's a project that DWR is underway that starts
13 construction. And I will defer to the last update on
14 that construction project.

15 MS. NEMETH: Yeah, can you give us a quick
16 update.

17 MR. YARBROUGH: So thank you for the question.

18 We're really focused on the work at Loafer and
19 extending that ramp down. But down at Lime Saddle, what
20 we're looking to do is improve the foot paths. So we do
21 have a plan in the works to make some foot access
22 improvements at Lime Saddle that will be happening later
23 in the summer as we're able to take advantage of these
24 really low lake elevations. So that's the work we have
25 in line for Lime Saddle.

1 MR. CROWFOOT: Thanks John. And maybe you can
2 identify for Tony someone's email if he has more
3 questions on specifically that project.

4 Let's move to the next person if we could.

5 MR. PEARCE: Michael Bessette.

6 Michael, you should be able to unmute yourself.

7 MR. BESSETTE: Good morning everyone. Michael
8 Bessette. I'm the Director for the Butte Flood Control
9 Agency.

10 I want to thank you all for the presentation
11 this morning. It's been very helpful and informative.
12 But I want to go back to Rune Storesund's request for
13 the inundation studies. He's proposing through CalOES.
14 And then we had the presentation from CalOES on the
15 emergency action plan and the inundation maps that are
16 already produced by the department or the state.

17 And I'm wondering, my question is: The
18 information already out there that Rune is looking for,
19 that would really benefit the downstream folks to
20 understand what the inundation maps look like under
21 various flow scenarios.

22 MR. CROWFOOT: I really appreciate you
23 connecting those dots. And I should have done that.
24 It's a great question.

25 DWR probably is best positioned to answer that.

1 MS. NEMETH: Yeah, and I would ask
2 Mr. Sarkisian to do that.

3 MR. SARKISIAN: Sure.

4 I think we've got the start of what
5 Dr. Storesund is seeking to produce. We've got some
6 maps that are in the magnitude of what he's proposed,
7 and of course, the model which would make sense to
8 leverage. And so I think we've got a part of it but not
9 all of it. I think he's got a broader scope than what
10 we've accomplished thus far.

11 MR. CROWFOOT: Is that helpful to answer your
12 question Mike?

13 MR. BESSETTE: Yes, it is. Thank you very
14 much.

15 MR. CROWFOOT: Thank you.

16 Next person.

17 MR. PEARCE: The next hand raised is Robert
18 Bateman.

19 MR. BATEMAN: Yes, I have a couple of
20 questions: One to do with licensing, and the other with
21 the release maps or inundation maps.

22 You know, I stood on the levees in Oroville in
23 '97, and the water was very close to the top. And I
24 think the maximum outflow then was something like
25 165,000 cubic feet per second. But I can't believe that

1 225, it's not -- the map isn't quite different from what
2 I understood in what was shown. I don't know whether
3 that sounds -- if it is accurate, but I reinforce
4 Commissioner Connelly's comments about questioning that
5 map regarding Oroville.

6 Secondly, regarding the licensing, what is the
7 justification for issuing a one-year, unconditional
8 license for over -- what? -- 12 years now? And if
9 therefore, the original ALP, alternative licensing
10 process, is still the basis for relicensing. Thank you.

11 MR. CROWFOOT: Thanks so much Robert.

12 Would that be a question for DWR?

13 MS. NEMETH: It is.

14 We can provide an update as to what we've heard
15 from FERC on our license. As everyone knows, it's now
16 been quite a long time since the department completed
17 that process and completed all the permitting necessary
18 for that license. FERC has not granted it yet. We are
19 ever hopeful that they will be able to do that. And
20 what happens is that in the interim, to keep us
21 operating, they just grant these one-year temporary
22 licenses.

23 So Ted or John Yarbrough, do you have any
24 recent update from FERC as to when we think they're
25 going to get to a decision?

1 MR. CRADDOCK: So we do check in with FERC
2 periodically. One of the challenges in getting a
3 specific timeline from FERC is that they do have ex
4 parte requirements. And so they're not able to talk to
5 us specifically regarding their internal process and
6 timing for issuing the license. And so we continue to,
7 I guess, request interest in completing the process, but
8 they have their process that they need to go through.
9 And so we don't have a lot of details on timing because
10 of the ex parte rules that they follow.

11 MR. CROWFOOT: It sounds like we're all curious
12 as to when this can happen.

13 Well, thanks so much Robert.

14 James, can we move on to the next raised hand.

15 MR. PEARCE: Yes. The next raised hand is just
16 somebody named Jackie.

17 Jackie unmute yourself if you can. Say your
18 full name. That will be helpful.

19 MR. MICHAEL S.: Hello? Can you hear me?

20 MR. CROWFOOT: We can.

21 MR. MICHAEL S.: Great. My name is Michael S.
22 I'm talking to you under Jackie's login here at Lime
23 Saddle.

24 I want to thank you folks for having this
25 meeting and communicating some important information.

1 I would like to advocate as a concerned boat owner and
2 recreational boat user here at Lime Saddle to try to
3 give us some usability to the extent possible this
4 summer.

5 And I think I heard some appetite for that
6 under the banner of this emergency action that you're
7 taking, if I understood it correctly. I think I missed
8 a little bit of it, but it came up a couple of times.
9 And it appeared that the intent of that is to preserve
10 more of the water in Oroville this summer.

11 Did I understand that correctly?

12 MR. CROWFOOT: Hey, thank you Michael.

13 Yes, I know that Karla -- we're working to keep
14 as much water behind the dam as possible for the
15 purposes of water supply given the worsening drought.
16 And Michael, I get your point around making the case for
17 boat access up there on Lime Saddle.

18 Karla or team, anybody can comment on that.
19 But maybe more importantly, Nick could maybe try to
20 identify someone that Michael -- and I think it was Tony
21 before -- can connect with just to make their case and
22 to see if there's anything that can be done around boat
23 access on that side of the reservoir.

24 So Nick, I don't know if, by the end of the
25 meeting here, you can identify somebody to be able to do

1 that? Or somebody can come online and identify who
2 would be best?

3 MR. MICHAEL S.: Yeah, that would be very
4 helpful. And I know I've looked at DWR's most updated
5 graph forecasting the level. And it looks like it would
6 take us up to just under 800.

7 Is that still the forecast at this point in mid
8 May?

9 MR. CROWFOOT: John, maybe you would be the guy
10 to answer that.

11 MR. LEAHIGH: Yeah, so this is John Leahigh
12 again.

13 The information we possess is the best
14 available that we have currently, but we will be
15 periodically updating that information. As you know,
16 Oroville being part of the larger system of reservoirs
17 between the Central Valley Project and the State Water
18 Project and the dynamics of whether or not an approval
19 of our petition request in front of the board, all of
20 these are factors that play into where the storage is
21 and projections land.

22 But yes, the information we have posted is the
23 latest that's available.

24 MR. CROWFOOT: Yeah, I'll just say it's super
25 complicated because DWR would like permission from the

1 regulator on the water quality to store more above the
2 dam. But it needs permission, and it has to be based on
3 a bunch of different considerations. So it's hard to
4 predict, it sounds like, what the exact level will be.

5 DWR or State Parks, who best from you for
6 Michael to contact if he has other questions?

7 MS. NEMETH: I think DWR. That's John
8 Yarbrough.

9 And I will say the way that we think about
10 balancing all of these needs when we have drought and
11 the way in which we seek to preserve recreational
12 opportunities is to essentially construct these boat
13 ramps so that they continue to be functional as lake
14 levels drop. We do know, over time, we're going to have
15 more extreme conditions in California. And so we view
16 that as a really important investment, kind of a -- for
17 lack of a better phrasing -- a climate reinvestment in
18 our recreation commitments up at Oroville. And John can
19 fill you in on where we are with the timing for similar
20 projects over at Lime Saddle.

21 And I would just observe -- you know, again,
22 we're all very interested in when we get that darn
23 license from FERC because a lot of what we do is tied up
24 into that license, especially when it's within FERC
25 boundaries, and unlocks a lot of funding for us to do

1 it. And we've been trying to lean in and do everything
2 we can in advance of actually securing the license. But
3 that is going to help us. But John Yarbrough is the
4 contact for the department.

5 MR. CROWFOOT: Great.

6 John, can you come on real quick and give your
7 number.

8 MR. YARBROUGH: Sure. The number is
9 (916)803-9203. One more time. (916)803-9203.

10 MR. CROWFOOT: Excellent. Mike, thanks for
11 coming on with those questions.

12 MR. TEAGUE: I would also offer my number for
13 any questions he had related to fee collection for our
14 facilities. Best number is (530)538-2210.

15 MR. CROWFOOT: Great. And that is Matt Teague
16 from State Parks. Excellent.

17 Next hand James.

18 MR. PEARCE: Next hand is from Matt Mentink.

19 Matt, you should be able to unmute yourself.

20 MR. MENTINK: Great discussions today.

21 Inundation maps. Office of Emergency Services.

22 I'd like to change the narrative a little bit
23 here on all that discussion on inundation maps and
24 property loss, human life loss, and look at maybe
25 proposing recommending a study on the direct economic

1 impact of evacuation.

2 Maybe we only have a 140,000 running down the
3 river, and we issue a mandatory evacuation. We had that
4 in 2017. And there's probably some litigation still
5 pending on that, so I don't want to dive too deep into
6 it. But if you have 188,000 people, half of them
7 earning \$25 an hour. You know, that's \$75 million --
8 excuse me -- \$57 million. The cost of evacuating two
9 per car, another \$5.6 million lost in sales tax. Those
10 are direct effects on the downstream communities. Then
11 there's indirect effects like zoning, building,
12 insurance, property value.

13 I propose that we create a cost of evaluation
14 of the economic impact of evacuating so that we can then
15 use that as we start moving into a FIRO water operation
16 manual. The beauty about FIRO is that we're going to be
17 able to send more water down south than what we're
18 currently doing. We'll break away from mandatory
19 20 percent storage and go to a floating needle based
20 upon these new airplanes flying over and taking snow
21 surveys.

22 Our science will get better. And there will be
23 that temptation to play it close to the edge. That
24 we're going to build this confidence, "Oh, our accuracy
25 is 95 percent right now." And then we'll miss, and

1 we'll move into 95 or 140,000 releases, cause mandatory
2 evacuations, and the downstream community will take a
3 \$75 million hit on a three-day evacuation.

4 \$75 million may not seem like a lot compared to
5 what we spend on the spillway or what have you. But
6 \$75 million is what Alameda and Santa Clara pay for
7 their water on an average annual basis.

8 So let's just not look at property loss and
9 life loss. Let's look at economic impact every time a
10 Water Control Manual decision throws us into an
11 evacuation. And it's the money and time spent could be
12 appreciated.

13 No need for an answer right now. I think that
14 belongs on the recommendation log. Thank you.

15 MR. CROWFOOT: Matt, thank you. Point taken.
16 And that's something I know that the folks are listening
17 too, and will consider, and that we can also follow up
18 on.

19 I know we're getting to noon. And I promised
20 everybody that you would get to your next meeting on
21 time. But, obviously, getting through this important
22 public comment is critical. So I'm here as long as I
23 need to be and recognize that we might have some
24 commission members that have to drop on the way.

25 With that said, James, over to you.

1 MR. PEARCE: Next caller is a caller with the
2 last digit of 4277.

3 If you could announce yourself and unmute
4 yourself please.

5 MR. DOSSEY: Caller 4277. Thank you. This is
6 Kevin Dossey, retired DWR Oroville division employee.

7 Can you hear me okay?

8 MR. CROWFOOT: Sure can.

9 MR. DOSSEY: Great. Just a comment on the
10 forecast of lake levels.

11 I know the question was: Is it still predicted
12 to get to near 800? There was an update posted on the
13 OCAC website or through the operations office update
14 three days ago that shows the lake only rising about to
15 elevation 747 or so, about what it is today, kind of
16 hovering in there, and then starting to drop.

17 And that's a 90 percent exceedance anyways, not
18 looking as good as it did a month ago. And with the
19 drought in March, it may not even look that good. But
20 that is kind of the bottom line on that. It is looking
21 more bleak than it was a month ago. So maximum won't
22 get over 750. And on that note, it shows the lake level
23 dropping off.

24 And this question is related to public safety,
25 the access for fire, and rescue squads getting on the

1 lake, up on the boat ramps. The lake level forecast
2 shows it would be dropping below 660 by the end of July.
3 That's four months away. And there would be no concrete
4 boat ramp access to get on the lake for rescues or,
5 obviously, for recreational launching too. So my
6 question is related to all that.

7 Has there been any discussion with going ahead
8 to extend Bidwell Stage 3? I submitted an email to John
9 Yarbrough at DWR about the 2008 FERC order that amended
10 the recreation plan to include, under the current
11 license, the extension of Bidwell all the way to
12 elevation 640. And then in 2016, FERC was notified by
13 DWR about the partial completion of that boat ramp at
14 Bidwell. And they stated that it would likely be
15 finished at the next low water opportunity, low lake
16 level opportunity. And I understand that's been
17 postponed until we're getting a new license or FERC is
18 issuing a new license for Lake Oroville. And I just
19 wondered how that will fly with FERC given that the FERC
20 order in '08 amended the direct plan, and that it is a
21 current license requirement.

22 Is there any progress or forward motion? And
23 before you answer, or John, or someone from DWR answers,
24 I'd like to point out that in 2008 when that project was
25 started, there was no approval to go forth with the

1 project until about April of '08. So all of the
2 surveys, permitting, designing, and construction got
3 done with about an April start date. So I think with
4 designs in place, there will be plenty of time when this
5 decision was made to not postpone that project and go
6 forth with it. Thank you.

7 MR. CROWFOOT: Got it. Thank you.

8 John, thoughts?

9 MR. YARBROUGH: Sure. As we talked about in
10 previous meetings, so our focus this time will be on
11 completing the work at the Loafer Ramp. So we have the
12 permits, the ability to get in and complete that work
13 there. So that's really where we'll be focusing.

14 Over at Bidwell, we are looking, if we do as
15 the lake drops down, based on the survey down there,
16 that will be an important step to feed into the permits
17 to extend the ramp at Bidwell. It is still our plan to
18 do that. It's not our plan to do that this year since
19 we're focusing on Loafer.

20 MR. CROWFOOT: Probably not the ideal answer.
21 But I appreciate your honest answer. It's helpful to
22 control expectations on that James.

23 MR. PEARCE: Michael is wanting to make a
24 comment.

25 MR. CROWFOOT: I'm going to let you jump on for

1 comment. But I'm going to ask that everybody
2 understands that it's really important to respect
3 everybody's time.

4 MR. MICHAEL S.: Sure. Can you hear me?

5 MR. CROWFOOT: Yeah, I can.

6 MR. MICHAEL S.: I just want to give a quick
7 follow up. This is an important session because of the
8 communication element between the public, and
9 government, et cetera. I just wanted to draw your
10 attention to a Facebook group called "California Water
11 for Food and People Movement."

12 And the reason I bring this up is that it's
13 21,000, roughly, of your constituents that voice their
14 concern, significant concerns about water management.
15 And it's beyond just the Oroville scope rather. But I
16 think it's a very important thing to the extent that
17 your organizations want to have a very good, updated
18 representation of significant concerns these
19 constituents have in a lot of areas of water. And
20 please look at it.

21 Please understand, you'll get a better idea on
22 a daily basis of where our hearts and minds are on many
23 of these very important and complex issues. So I just
24 wanted to bring that up with you. Thanks for the follow
25 up. Appreciate your time.

1 MR. CROWFOOT: Got it. "California Water for
2 Food and People" on Facebook. I noted it.

3 James?

4 MR. PEARCE: That was the last hand raised.

5 MR. CROWFOOT: Well, listen, thanks for
6 everybody's patience on the commission. I think it's
7 really important to try to get those questions answered.
8 And I'm really gratified that folks that are impacted by
9 the lake came onto the meeting to ask those questions.
10 So big thanks there.

11 As Senator Nielsen said, and certainly
12 Assemblymember Gallagher, this is the function of this
13 commission. So appreciate folks staying on a little bit
14 longer.

15 MR. SAFFOLD: We'll be back together in late
16 July. And in the meantime, you'll have all the
17 materials that we talked about and shared today on the
18 website.

19 Huge thanks to you all. And have a good and
20 safe weekend and a good rest of your spring and early
21 summer until we're next together. Take care.

22 (Meeting concluded at 12:06 p.m.)

23 * * *

24

25

1 STATE OF CALIFORNIA)
 : SS
2 COUNTY OF LOS ANGELES)

3

4 I, the undersigned, a Certified Shorthand
5 Reporter of the State of California, do hereby certify:

6 That the foregoing proceedings were taken
7 before me at the time and place herein set forth; that a
8 verbatim record of the proceedings was made by me using
9 machine shorthand which was thereafter transcribed under
10 my direction; further, that the foregoing is an accurate
11 transcription thereof.

12 I further certify that I am neither financially
13 interested in the action nor a relative or employee of
14 any attorney of any of the parties.

15 IN WITNESS WHEREOF, I have this date subscribed
16 my name.

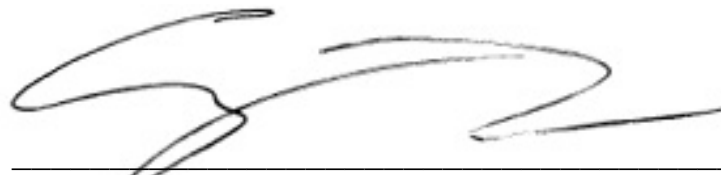
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25

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