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- 2 ITEM 1: Welcome and Introductions
- 3 ITEM 2: Action Items, Meetings Roadmap and Reporting
- 4 ITEM 3: Joint Operations Center Tour Recap
- 5 ITEM 4: Winter Operations Plan
- 6 ITEM 5: Downstream Flood Management and Preparedness
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1 P R O C E E D I N G S

2 Friday, December 3, 2021, 10:01 A.M.

3 (Court Reporter's access to Zoom hearing begins.)

4 MR. SAFFOLD: -- following today's presentation.
5 Today's meeting is being conducted over a Zoom webinar.
6 A meeting guide with user instructions can be found on
7 the Oroville commission web page if needed. If this
8 resource does not address your issues, our colleague Eva
9 is available to help troubleshoot. Her phone number is
10 (530) 400-9068.

11 Members of the public will be muted and in
12 listen-only mode until we reach the public comment
13 period. For members of the public joining us on the
14 Zoom platform, there are two ways to ask a question or
15 make a comment.

16 You can raise your hand to indicate you would
17 like to provide public comment. To do so, you'll want
18 to click the hand icon which should be located at the
19 bottom of your screen. If you wish to submit a written
20 question or comment, you may do so by clicking "Q & A"
21 icon during public comment.

22 If you're participating by phone instead of
23 Zoom, you'll need to press pound two to raise your hand
24 to speak during the public comment period. Each speaker
25 will have three minutes, and your time will be shown on

1 a timer on the screen.

2 This meeting is being recorded, and a transcript
3 will be posted at a later date to the commission web
4 page.

5 So now, commissioners, if you wouldn't mind just
6 unmuting yourselves, I'm going to do a quick roll call
7 as it appears on the screen.

8 And so, James, you can go to the next slide.

9 Okay. Lieutenant Collins.

10 LIEUTENANT COLLINS: Present.

11 MR. SAFFOLD: Supervisor Connelly.

12 (No verbal response.)

13 MR. SAFFOLD: Supervisor Connelly.

14 (No verbal response.)

15 MR. SAFFOLD: Okay.

16 Supervisor Conant.

17 (No verbal response.)

18 MR. SAFFOLD: Supervisor Conant, are you with
19 us?

20 (No verbal response.)

21 MR. SAFFOLD: Secretary Crowfoot.

22 SECRETARY CROWFOOT: Yes, here.

23 MR. SAFFOLD: Chief Deputy Director Curry.

24 CHIEF DEPUTY DIRECTOR CURRY: Here.

25 MR. SAFFOLD: Supervisor Flores.

1 SUPERVISOR FLORES: Present.
2 MR. SAFFOLD: Supervisor Fuhrer.
3 SUPERVISOR FUHRER: Also present.
4 MR. SAFFOLD: Okay. Thank you.
5 Assemblyman Gallagher.
6 ASSEMBLYMAN GALLAGHER: Here.
7 MR. SAFFOLD: Supervisor Kimmelshue.
8 SUPERVISOR KIMMELSHUE: I'm here.
9 MR. SAFFOLD: Deputy Licon.
10 (No verbal response.)
11 MR. SAFFOLD: Deputy, are you with us?
12 Okay. Captain Million.
13 (No verbal response.)
14 MR. SAFFOLD: Captain?
15 (No verbal response.)
16 MR. SAFFOLD: Director Nemeth.
17 DIRECTOR NEMETH: Here.
18 MR. SAFFOLD: Senator Nielsen.
19 SENATOR NIELSEN: Here.
20 MR. SAFFOLD: Councilmember Pittman.
21 COUNCILMEMBER PITTMAN: Present.
22 MR. SAFFOLD: Mayor Reynolds.
23 (No verbal response.)
24 MR. SAFFOLD: Mayor Reynolds.
25 (No verbal response.)

1 MR. SAFFOLD: Lieutenant Commander Stokes.

2 LIEUTENANT COMMANDER STOKES: Here.

3 MR. SAFFOLD: Superintendent Teague.

4 SUPERINTENDENT TEAGUE: Here. Good morning.

5 MR. SAFFOLD: Good morning.

6 Supervisor Vasquez.

7 (No verbal response.)

8 MR. SAFFOLD: Supervisor?

9 (No verbal response.)

10 MR. SAFFOLD: Okay. Commissioner Widener.

11 COMMISSIONER WIDENER: Here.

12 MR. SAFFOLD: Great. Thank you so much.

13 James, I'll let you go to the next slide.

14 And, Secretary, take it from here.

15 SECRETARY CROWFOOT: Well, thanks so much, Nick,
16 for all of your organizational support.

17 And good morning everyone. Happy holidays. I
18 hope this meeting finds you and your families healthy
19 and safe as we get into December.

20 We are here at the ninth Oroville Dam Citizens
21 Advisory Commission, and for those of you who may not
22 know, this is a body that is a statutory body in State
23 law, meaning Senator Nielsen Assemblymember Gallagher
24 and others actually passed a law to establish this body
25 to ensure that we in State government are communicating

1 quality with local leaders and local communities and
2 that we are all working together to share information on
3 the Oroville Dam and the reservoir and to address
4 issues, opportunities, and challenges that the dam and
5 the reservoir have. We have two hours today for our
6 meeting, and we will conclude at noon.

7 Today we've got an action-packed agenda. We'll
8 start out with some updates on action items, point out
9 the road map for coming meetings, and then, of course,
10 have a commission report. It's really important for, I
11 think, all of us that we circle back and ensure that
12 we're making progress on certain commitments that we've
13 made in past meetings.

14 We're quite fortunate to have Director Nemeth,
15 Karla Nemeth from Department of Water Resources, who
16 will share where we stand with our and operations in the
17 State and how that impacts the Oroville are facilities.
18 We'll hear a recap from a tour of the joint operations
19 center which is, of course, our flood emergency response
20 statement from is that many at least some of us toured
21 all together several weeks ago.

22 Department of water resources will provide an
23 update on downstream flood management and preparedness
24 which has been a priority raced in past meetings, and so
25 we'll welcome our colleague Gary Lippner from DWR to

1 share on overview on that we're also joined by leaders
2 of the army core of engineers to provide us an update on
3 the work to update our water -- or its water control
4 manual. In other words, how they operate the reservoir
5 for flood control flood management. And, lastly, as
6 always, we'll hear from members of the public in our
7 public comment period.

8 Before I turn it over to Director Nemeth, I
9 wanted to welcome back Valerie Pryor who is general
10 manager of the Zone 7 Water Agency. In previous
11 meetings, leaders on the commission expressed an
12 interest in ensuring that state water contractors that
13 use water from the Oroville facility are part of this
14 discussion around the current operation and the future
15 of the facility, and we're really thanks -- we're
16 appreciate that director prior participated in a past
17 meeting and is coming pack to participate in these
18 meetings.

19 You may know that Zone 7 provides water to a
20 quarter million bay air residents in the Tri-Valley
21 area, that's the Dublin Pleasanton Livermore area, and
22 so they are one of -- an agency that derives water from
23 our State water project ultimately that serves 27
24 million Californians. So appreciate Valerie your being
25 here.

1 I'll also share with you that since last meeting
2 we lost one of our team members at agency Lizzy
3 Norvell [sic]. Lizzy was really my right hand on
4 ensuring this commission did meeting it's mandate.

5 Lizzy was recruited by a colleague who leads the
6 Department of General Services and serves on her
7 executive team. And so we welcome Nancy Vogel who is
8 our Deputy Secretary for all things water, and she's
9 really kind of the organizational glue along with Nick
10 and Kearns & West.

11 So I want to turn it over to Director Nemeth to
12 talk about conditions as which bin the new year 37 I
13 think a lot of us were very excited about the very large
14 storm that we experienced several weeks ago at this
15 point. I think we were worried about potential
16 localized flooding given the watershed instability from
17 the fires but obviously also thankful for the water
18 splay but as Karla are share with us we are in a deep
19 hole after the last two years on water splay. And while
20 the atmospheric river storm was surgery welcome, it
21 doesn't change the situation with our serious and
22 worsening drought conditions.

23 So, Director Nemeth, let me turn it over to you.

24 Oh, you know what? Can I actually pause, and a
25 tradition that I think is really important is to provide

1 Senator Nielsen and Assemblymember Gallagher -- who,
2 again, are sort of the godfathers of this commission --
3 a chance to share any high-level thoughts before we dive
4 in.

5 So let me turn it over to Senator Nielsen for
6 any thoughts you have first.

7 SENATOR NIELSEN: Well, thank you,
8 Mr. Secretary. And I want to thank you very personally
9 and Director Nemeth for your with continued
10 participation.

11 Folks, this is an extraordinarily unique and
12 successful effort that we have launched here a long time
13 ago, and that it continues on is the merit.

14 One thing I'd have to confess as we begin is my
15 concern about proposition 1 and six reservoir. It's no
16 news that it's taken so long to get anything done, but
17 when you're seven years since the people of California
18 said yes and not a shovel has been turned. We almost
19 all of us know why that's happened but it is intolerable
20 as we proceed to the future. And legislatively several
21 of us are going to try and proceed in manners and ways
22 to get this reservoir moving along. It's
23 unconscionable. And the JPA doesn't even have a good
24 fix on when we might be able to have water in there.
25 They think as much as six more years. So over two decades

1 after the people of California said yes, it's utter
2 embarrassment. And then we have come now upon our next
3 brought. And when what we did it ten years being was
4 try to be anticipating and prepared for that brought.
5 We are not, and again, that's government, but folks it's
6 our job to make our government work to serve the people
7 and the will of the people, and we have a bit of a
8 challenge there. Let me preface it with that, but I
9 also want to thank all of you for your continued
10 participation and dedication. The feedback I get has
11 always been favorable for this opportunity for the
12 citizens to have direct input into their future.

13 Thank you, Mr. Secretary.

14 SECRETARY CROWFOOT: Thank you, Senator Nielsen.

15 And I'll just share that later this month, our
16 State Water Commission will meet, and we'll receive an
17 update on all of the projects that are being planned and
18 advancing that are funded by Proposition 1, which is
19 that water bond in 2014.

20 And just last month, the expansion of the Los
21 Vaqueros Reservoir in the Bay Area and the Harvest Water
22 Project in the Sacramento region, which is going to
23 improve groundwater storage and enable the replacement
24 of groundwater and surface storage both announced that
25 they're moving forward to the next phase and are nearing

1 ground break basically.

2 But totally hear your concern around the Sites
3 Reservoir, which is one of those seven projects. And
4 we'll be glad to provide an update, you know, to you
5 directly and/or the group here in -- whenever needed.

6 Once again, thank you all for your leadership
7 and collaboration.

8 SENATOR NIELSEN: Thank you.

9 SECRETARY CROWFOOT: Assemblymember Gallagher.

10 ASSEMBLYMEMBER GALLAGHER: Yeah, thank you
11 Secretary. It's good to be with you all again looking
12 forward to the information today and the presentations.
13 I did attend the joint operations center tour that I
14 thought was very informative to see. You know, I knew
15 this was going on, and I think it's been a good
16 partnership to really ensure that we're, you know,
17 working with all the different reservoirs to help manage
18 our reservoir and especially during flood season.
19 There's always that concern of, you know, ensuring that
20 we don't, you know, release too much water that's going
21 to impact levies downstream and kind of imagining those
22 flows. But also ensuring that, you know, we're watching
23 our reservoirs and making sure that they are safe, you
24 know, during those conditions.

25 The other good news that, you know, I heard out

1 of that tour and the discussion with Army Corps and
2 others was that it seems like we are actually making
3 good progress on forecasts-based operations and a new
4 manual for Oroville; you know, significant funding
5 continuing to be appropriated towards that goal.

6 And I think the -- what I -- and maybe someone
7 will correct me if I am wrong on this, but we could
8 maybe even as soon as five years have an updated manual
9 for Oroville, which I think would be huge considering
10 our current dynamic of, you know, in drought years, you
11 know, seeing a lot less run-off and then in flood years
12 seeing the significant amount of water come, you know,
13 surging, and that's going to -- it's going to require us
14 to change how we operate, you know, water and releases
15 from Oroville, you know.

16 Hopefully the goal there would be that we
17 would -- you know, when we're seeing drought conditions,
18 hold more water out of Oroville so that we have plenty
19 of water to make it through and that when we are seeing
20 these, you know, atmospheric river conditions, that
21 we're releasing water to make room, you know. And I
22 think there's great opportunities there if we can make
23 that happen and change how we, you know, manage water at
24 Oroville. So I think that is all really good news.

25 Just for our future meetings one thing I think

1 so wanted to highlight and maybe I can bring it up at
2 the end as well maybe worked that we're doing -- I
3 understand that there is some work being done while the
4 water levels are really low at Oroville and you know one
5 question I had was about the Palermo tunnel which is
6 something that's come up several times in our meetings.
7 Are we doing any work there to ensure that tunnel and
8 the safety concerns associated with that are addressed?
9 And then also, you know, from the forensic report there
10 was issues, you know, talking about how we change kind
11 of our human operations at the dam, you know, and
12 improving that. Would be good to maybe just Getty
13 report on that like what have been some of the changes
14 that we've -- that DWR has implemented at that level to
15 help address, you know, those concerns that were brought
16 up in that forensic report.

17 So all those -- (Technical interference) -- I
18 hope we can get some reports on in the future, and maybe
19 there will even be some discussion of that today. But
20 looking forward to it. Thank you guys all, again, for
21 your cooperation in this. I think it's been a great,
22 informative commission and to continue this dialogue and
23 ensure that the people understand what is going on and
24 that we're ensuring the ultimate safety and maximizing
25 the operations at Oroville.

1 SECRETARY CROWFOOT: Thanks so much,
2 Assemblymember, and duly noted on those points, those
3 topics that you want to make sure that we cover. And I
4 know Nick is copying that down; so if we don't -- if
5 it's not germane to get to those today, we'll make sure
6 that we add them to the agenda for the next meeting or
7 meeting here in the near future.

8 So huge thanks, Director Nemeth. Just I want to
9 share my appreciation. You know, you've been leading
10 much of the State's drought planning and drought
11 response and this is a great opportunity for you to
12 update us on water conditions and how it impacts the
13 Oroville facilities.

14 DIRECTOR NEMETH: You bet and good morning
15 everyone it's good to be here. And I think
16 Assemblymember Gallagher, it's a great launching off
17 point be in terms of the collective I think support and
18 interest we all have in implementing forecast informed
19 reservoir operations as quickly as we can. And so
20 Assemblymember, you're correct. We did propose
21 strategies for the water -- or the army Corps water
22 operations control manual that includes that forecast
23 informed reservoir operations; so we are on a path to
24 have that updated manual in the next five years. And,
25 you know, to senator Nielsen's earlier comment related

1 to frustration with storage funding, you know, this
2 does, you know, provide I think just you smarter
3 management across the board that's going to help us
4 manage through both drought and flood better. So I'm
5 excited about that, and it's really been all of us
6 collectively really, on the same age and leaning in. Ix
7 emphasize how helpful that's been to go the Corps's
8 attention to guess this work done.

9 But as the secretary said, we are in a very
10 intense drought. We were grateful for the atmospheric
11 river in October. A little perspective on that, I think
12 it was probably three weeks even two weeks before we had
13 that incredible atmospheric river record breaking rain
14 fall for October and record breaking single day rain
15 fall in October, but really just two weeks before that,
16 we got the final data in on the dryness of last year,
17 and what we learned was that this last your year was the
18 driest on record since 1924, and 2020 and 2021 combined
19 were drier than '76 and '77.

20 So that's a really big deal because if you can
21 imagine what California was like those many decades ago,
22 we have a lot more people and a more complicated system
23 and climate is just applying a lot of pressure to manage
24 through, but also frankly opportunity.

25 But the atmospheric river was good for Oroville.

1 And it just shows, you know, the -- some maybe fickle
2 nature of how we get these storms in California. It was
3 really go for Oroville. I think it bumped up our or
4 storage by almost 200,000 acre feet, but just our
5 neighbors to the north at Shasta, it was kind of a goose
6 egg frankly. Just very limited improvements into
7 Shasta, and it just shows the variability of how those
8 storm events translate into actual water supply
9 availability.

10 So even though we had that great storm event and
11 we were able to bump water -- stored water in Oroville,
12 it went right back to very dry conditions in November.
13 If you're someone who's in Waltham county in Washington
14 state or British Columbia, you're getting a lot of rain,
15 too much rain, that would typically be coming into
16 Northern California. So we've really seen things dry
17 out. We're seeing these ambient temperatures increase
18 kind of same signals as last year, and so we're -- what
19 we're starting to do is manage for that at the front end
20 of our planning for the water year.

21 So what that means, this year the State water
22 project made news with its first ever initial allocation
23 of zero percent water supplies to our 29 state water
24 contractors. We typically make an allocation
25 December 1st in every single water year. That part

1 isn't new, and they tend to be more conservative, and
2 they're based on water that's stored in reservoirs and
3 some very uncertain forecasts because we're too early in
4 the season.

5 So given where we are with Oroville storage and
6 San Lewis storage and the conditions that are just
7 continuing around us just you in terms of high ambient
8 temperatures and just exceedingly dry conditions, the
9 department did sort of issue this initial zero
10 allocation to our 29 State water contractors.

11 It doesn't mean that we will deliver no water.
12 For those water contractors that have human health and
13 safety need, and that's seven of your 29 state water
14 contractors made a request to the department for human
15 health and safety water. And so that water, we will be
16 providing. It's up to 55 gallons per capita per day,
17 which covers indoor water uses: cooking, drinking,
18 sanitation -- also critical community safety needs, like
19 water for fire suppression, hospitals, those sorts of
20 things.

21 So all of our state our contractors have
22 different water supply portfolios if you will, and so
23 they lean on those. They can lean on stored state water
24 project from previous years but they also lean on in
25 you're in imSouthern California or if you're leaning on

1 recycled water projects and just other kinds of water
2 supplies that are available. Sometimes it's
3 groundwater.

4 With you we do have two corroboration in this
5 area: Yuba City and Plumas county -- that have
6 requested and will receive human health and safety
7 water. But really for all of our other -- our 22
8 contractors won't get water this year at this point in
9 time.

10 I also want to make the point that for the --
11 for the water contractors that are south of the delta
12 that need health and human statement water, all that
13 water is coming from stored water in San Lewis
14 reservoir, not Oroville, and what we're working to do
15 with Oroville is conserve storage for a coupling of key
16 purposes. One is maintaining a degree of salinity
17 control down in the delta. Because once we fowl -- if
18 seawater intrusion gets all the way into the delta and
19 fouls that water supply, it can take at a minimum six
20 months to move that salinity out of the system. But
21 when we have dry conditions we have no water to move it
22 out of the system. And so that would essentially mean
23 we wouldn't have water available for human health and
24 safety.

25 So it's critically important that we use

1 available stored water in Oroville to help that
2 situation down this the delta.

3 The other thing that helps that situation down
4 in the delta is brought bar year. We put a drought
5 barrier in this summer. We're not removing it this
6 year. We've made some assumptions to it to make sure
7 that it can stay through the winter season without
8 harming migrating salmon and other navigating needs down
9 in the delta, but really that's just an cater of how dry
10 it continues to be. We've never left one in through the
11 winter, but we've -- we're really slur that we're going
12 to need it to help deal with the salinity conditions
13 down in the delta.

14 The other thing that the department did earlier
15 this week together with the Bureau of Reclamation is we
16 submitted to the Water Resources Control Board a
17 petition to waive certain water quality requirements.
18 Again, that would help us retain water in upstream
19 reservoirs; so that is a plan to help conserve water in
20 Shasta, Oroville, and Folsom. All those systems work
21 together on behalf of the State and federal water
22 projects.

23 So the water board will have a public process
24 associated with that petition and make a decision in
25 February.

1 I do want to say a little bit about our feather
2 river settlement contractors. So when the dam was
3 constructed, the department entered into a settlement
4 agreement with senior water right holders on the feather
5 river. There's a benefit to them in terms of having the
6 dam in place in that it stores water for them that they
7 otherwise wouldn't have. But what it also means it they
8 are first in line for water available from Oroville.

9 By contract when we have very dry conditions,
10 that water is -- while the south of delta water
11 contractors get, you know, 80, 90, 95 percent cuts -- in
12 this year they'll get one hundred percent cut. The
13 Feather River settlement contractors are reduced to
14 50 percent of their allotted supplies. That is
15 typically what happens.

16 We do not make a decision on Feather River --
17 water available for those contractors until February.
18 That gives us an opportunity to have the hydrology play
19 out a little bit more. The longer we go in the season
20 with, our ability -- our accuracy around forecasting
21 tends to improve. So that's a decision we'll be making
22 in a couple of months. We're working very closely with
23 those water users. They were very helpful last year.
24 We had a challenge later in the season when runoff
25 conditions didn't materialize and put water into storage

1 that we had been planning for, and those settlement
2 contractors, those rice is growers really, really
3 helpful if backing off on some of their deliveries or
4 timing some of their deliveries just to help us manage
5 the system.

6 Two things around environmental management up
7 here. One is that the administration did provide
8 funding for rice growers to flood up their fields to
9 help support the pacific flyway. That's something that
10 we're grateful to the rice commission. That has been
11 the administrator of those funds. It's been kind of a
12 proposal grant program, and rice growers from the area
13 have been applying for those dollars to do that.

14 And then secondly, we are bolstering salmon
15 species by elevating -- increasing the number of salmon
16 we produce in the hatchery by about one and three
17 quarter million and working with our colleagues that run
18 the hatchery and help us manage the Feather River system
19 to adjust to the extent that we can the timing of the
20 flows that we would release from Oroville so that it we
21 get as many benefits from it as possible relative to
22 salmon needs in-stream and then downstream salinity
23 control needs.

24 So that's where we are relative to operations of
25 Oroville. If it does rain, you know, we'll have

1 different conversations later in the season about water
2 that's available for supplies. But, you know, when
3 we're in this tight a year, you know, which really lean
4 on our water rights system and this is a year
5 potentially where, you know, all parties that have
6 legitimate water rights, the hydrology just may not be
7 able to provide an ability for us to o if you feel all
8 those needs.

9 So it's going to be a challenging year, but we
10 are working intensely in advance to plan so that we can
11 make the best decisions across the board to balance all
12 the various water use needs that we have, not just
13 locally here in this area in Butte County but other
14 places as well.

15 So with that secretary maybe I'll hand it back
16 over to you.

17 Thank you.

18 SECRETARY CROWFOOT: Thank you, Karla for that
19 thorough update. I just want to pause and invite any
20 questions that commissioners may have on Karla's update.

21 ASSEMBLYMAN GALLAGHER: Yeah quick questioning
22 Karla you had mentioned there's seven contractors. Who
23 are the other contractors I guess that would also be
24 getting, you know, an allocation of water? I know you
25 said Yuba City and Plumas but are there others as well.

1 DIRECTOR NEMETH: Yeah. Oh, it's Santa Clara
2 Valley Water District, Napa County Metropolitan Water
3 District. And then, maybe, I think Ted Craddock's on
4 the phone. He can fill in the couple others that I'm
5 not thinking about.

6 DEPUTY DIRECTOR CRADDOCK: Thank you, Karla.

7 Also Kings County and Antelope Valley Kern
8 County Water District.

9 SECRETARY CROWFOOT: Thanks so much for
10 answering that.

11 Senator Nielsen.

12 SENATOR NIELSEN: I'd like to add here a "thank
13 you" and a kudo. In the new water plan that we did a
14 decade ago and then the ensuing Prop 1, for the first
15 time I was able to get language that asserted a human
16 water right; and for a number of years, that kind of
17 wasn't talked about, and now it's being talked about;
18 and pursuant to the Karla's report, it's obviously being
19 respected and implemented.

20 That is of huge significance, and the regulatory
21 authorities and the legislature I'm going to beg must
22 respect that provision that there is a human water
23 right. To me, it's very historic that we are
24 acknowledging. Might seem absurd that you would have
25 to, but we now have communities that are already

1 benefitting, and members of both parties now in their
2 communications related to water issues are mentioning
3 that. So it's now got legs and is being implemented and
4 respected, and I think that's very significant.

5 SECRETARY CROWFOOT: Absolutely. Thanks so
6 much, Senator. Really good point there.

7 SUPERVISOR KIMMELSHUE: Director, this is Tod
8 Kimmelshue, Supervisor in Butte County. And I just
9 wanted to thank the director. She came to the -- Sutter
10 Butte's Flood Control Agency celebration we had for a
11 completion of the dam and levy repair -- well, excuse
12 me, the levy repairs along the Feather River.

13 And I just had a quick question for her as to --
14 you know, we'd like to request additional funding for
15 sediment removal at the confluence of the Feather and
16 Yuba rivers to assist salmon migration and boating
17 safety.

18 The SBFCA, or the Sutter Butte's Flood Control
19 Agency, we have permits to do work on the Feather River
20 through 2026. Is that something that could be on your
21 radar or maybe something you could look into?

22 DIRECTOR NEMETH: Consider it on my radar and we
23 can connect over the course of the next couple weeks,
24 Supervisor. Thank you.

25 SUPERVISOR KIMMELSHUE: Thank you very much,

1 Director.

2 SECRETARY CROWFOOT: Excellent. Well, let's
3 move on to -- back to Nick who serves at Kearns & West,
4 really, as our organizational secretariat or glue that
5 holds us together. And as you recall, one really good
6 suggestion of commissioners is to keep a tracker of
7 actions that are coming out of these commission
8 meetings.

9 So, Nick, I think you're going to give us an
10 update on recent actions on the roadmap for meetings in
11 2022 and then also some follow-up in recent meetings and
12 processes. So over to you.

13 MR. SAFFOLD: Thanks, Secretary.

14 And I'll first just say, Assemblymember, that
15 the item that you brought up earlier, if it's not
16 discussed today, we will make sure it's on the tracker
17 and put into a future meeting; so --

18 So let's go -- okay. Great. We're on slide 2,
19 item 2.

20 Yeah, so just before we dive in, as a reminder
21 to everyone -- all the meeting materials, transcripts,
22 and the meeting summary notes are posted online. So if
23 anyone wants to find those, they're on the Oroville
24 website.

25 I'm going to just touch on, like the Secretary

1 said, the action items, meeting roadmap, and then talk
2 about our commission report for 2022.

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

4 And, again, this is the action items tracker.
5 It's a living document. It's updated quarterly. You
6 know, we've seen this at every meeting, and most of you
7 are quite familiar with it. Some of these items are now
8 marked complete and are in green. And so this first one
9 that has already been mentioned the tour of the joint
10 operations center, that was done on November 1st, and
11 we're going to get a little presentation on that as a
12 recap today.

13 This is an ongoing item, Item 2, report out on
14 how instrumentation performed and was managed during
15 winter operations; so that's just, again, an ongoing
16 item.

17 Secretary mentioned this: Valerie Prior is here
18 today with the State water contractors, and so that
19 item, we're marking complete.

20 Item Number 4, provide regular updates and
21 milestones regarding FIRO, Forecast Informed Reservoir
22 Operations; and so I think we'll be hearing about that
23 more today.

24 And then Item 5, Federal Energy Regulatory
25 Commission licensing update, that's on track; and we're

1 planning for that in kind of Q1 of next year.

2 So we can go to the next slide, James.

3 Okay. So Item 6, follow-up on the status of
4 FEMA reimbursement for spillway reconstruction. This is
5 just, again, an ongoing item.

6 And then Item 7, discuss kind of State agency
7 help and local partner help to address homelessness.
8 This was an item that was brought up at meeting 3, so a
9 little while back now, but we'll keep on our radar and
10 consider that as a topic for future meetings.

11 DWR updates on debris and storm inflows, this is
12 sort of just an ongoing DWR monitoring item. If there's
13 a need to present on this, we'll make sure to do so.

14 Item Number 9, agendize discussions on lessons
15 learned from the 1986 and 1987 water events; and so I
16 think we'll be hearing about that today during the
17 presentations as well.

18 Item Number 10, DWR to respond to commissioner
19 questions regarding what constitutes a failure. And so
20 this item has been answered, but I know this is an
21 important one, and we'll keep talking about it and make
22 sure it keeps getting kind of infused into all the
23 future discussions and dialogues.

24 So, James, we can go to the next slide.

25 Okay. So Item Number 11, request 20 develop

1 sing the tracking log cataloging ongoing or future
2 safety projects. And so we're marking this as August
3 gong this is something that DWR has been working on and
4 talking about with the stale hold early that brought
5 this up but we're going to continue to address this item
6 during kind of our annual dam safety and project
7 updates.

8 Item 12 kind of just continuing to talk about
9 risk assessment, and so we have this as an ongoing item
10 and would like to hear from additional outside experts
11 in the future.

12 I think the senator may have brought this up at
13 meeting 8 but just providing an update on water theft
14 prevention so this is very much on our radar and an item
15 you we'd like to cover at a future meeting.

16 Resources for sediment removal, I think this was
17 also at meeting 8 and so, again, very much on our radar
18 and would like to talk about that more.

19 Capital improvement projects discussion is
20 Item 15 and expenditure chart. I believe that chart has
21 been shared around with commissioners and we'll keep
22 this -- we feel like we're on track with this, and we'll
23 continue to talk about capital improvement projects.

24 And then recreation updates around expanding
25 projects and the BIDwell ramp. Again, we're planning to

1 kind of touch on that in 2022.

2 So those are our action item tracker items.

3 We can go to the next slide here, James.

4 Okay. Great.

5 And then this is -- like the Secretary
6 mentioned, this is our just kind of brief roadmap kind
7 of projecting out, if you will, two meetings ahead.
8 Again, these are kind of future meeting topics, but
9 they're not set in stone. They're subject to change
10 based on conditions and also just kind of the feedback
11 we hear from the commissioners.

12 And so at the Q1 meeting for next year, we're
13 hoping to get an update on the Federal Energy Regulatory
14 Commission relicensing process that we just mentioned;
15 and then we're hoping to hear from some of the
16 facilities public safety partners and kind of discuss
17 topics like evacuation routes and inundation routes.

18 And so those are kind of two main items we'll
19 talk about at Q1.

20 And then Q2 looking ahead to kind of 2022 Q2 or
21 Q3, we're planning to talk about facilities and safety.
22 And so you can kind of see from this snapshot this we'd
23 like to plan presentation or presentations and then
24 we're also interested in seeing if we could get a
25 presentation from the Sutter Butte's Flood Control

1 Agency. So, again, we'll have a few more meetings
2 likely after that in 2022, but those are kind of the
3 topics we're thinking about for next year kind of more
4 near term.

5 Okay. Next slide, James.

6 All right. And so we are -- let's see here.
7 Okay so this slide everyone has seen here before too
8 opinion the last time we met in August, we discussed the
9 kind of commission report that we owe at the end of 022,
10 and so as you'll see, this is kind of our report
11 development timeline is what I call it, and you can see
12 we've completed that top line kind of, you know, review
13 of kind of what's in SB955 and kind of the road map, if
14 you will, which we're looking at now. And then today
15 I'm going to talk a little bit more about kind ever the
16 high level outline which you can see there marked at
17 aDecember meeting which is today. And then our hope is
18 to have a version one draft in Q2 of next year of the
19 report and then a version 2 draft in Q3 and so on so
20 that we can meet that Q4 confined of finalize of the
21 report.

22 James, next slide, please.

23 Okay. So following that last meeting, we had a
24 chance to connect with Supervisor Connelly,
25 Lieutenant Collins, and Rob Olmstead in

1 Senator Nielsen's office. We discussed the report
2 outline which you'll see on the next three slides here;
3 and, again, a big thank you to them for their time and
4 their input here.

5 And so what you'll be seeing here is very much
6 just a high-level framework for our report in 2022 and
7 what I'd ask commissioners today to consider kind of
8 between now and our next meeting; so feel free to raise
9 items today, or we can talk offline or email about it.
10 But, you know, if there's any kind of major sections or
11 topics that you feel like are missing, I think that
12 would be a really helpful kind of next step here.

13 And so as you can see here, this is sort of
14 our -- basically our introduction; so we're laying out
15 the introduction to the report in this slide. And the
16 three kind of components of this section would be just
17 kind of commission background; so talking about the, you
18 know, spillway incident from February 2017 and then
19 talking about that legislation SB955 that Nielsen and
20 Gallagher introduced and created this commission, of
21 course, and then talking about, you know, this is really
22 a forum for input and information, and it's not a
23 regulatory body.

24 And I think everyone has seen this before but
25 the three bullets of commission can purpose, and so

1 those are laid out here. Folks have seen these and
2 we've talked about this previously. And then I think I
3 think the third leg of this section is really kind of
4 just, you know, talking about the report and the content
5 that's mandated, the legislation. And the fact that we
6 have to produce one of these once every three years.

7 Okay. James, next slide, please.

8 Okay. Thank you.

9 And then on this slide we really get to the
10 executive summary and really dive deeper into the report
11 content as mandated by the legislation simulation. And
12 so as you can see, kind of the three aspects that we're
13 thickening for the executive summary ask an overview of
14 the public meetings, an overview of presentation topics
15 provided to the commission, and then commission actions
16 to indicate.

17 And then the heart of it really is the content;
18 right? And these are the items that are mandated,
19 again, by the legislation and folks have seen this
20 overview of ongoing maintenance and improvement,
21 register of communications from the State and other
22 parties, notice of upcoming plans for the dam, overview
23 of flood management projects, public safety progress,
24 those sorts of things. So that would really be the
25 heart of it.

1 And the next slide, please, James.

2 Okay.

3 And then on this slide we have just kind of
4 three short report elements. The report conclusion
5 section. We'll do a commissioners signature page
6 similar to how we have in the charter for the
7 commission, and then just a simple appendix page -- or
8 section, excuse me.

9 And we're thinking within the conclusion we'll
10 just put some sort of, you know, acknowledgement of
11 accomplishments to date from the commission, and then
12 we'll have a little bit of language around forward
13 looking and what the commission hopes to achieve.

14 And then I mentioned the commission signatures
15 page, and then the appendix which is just kind of public
16 meetings summaries, reference presentations, anything
17 that kind of ties back into the rest of the report,
18 requests and communications to the commission from
19 stakeholders and state agencies and that sort of thing.

20 So that's sort of it. Again, I'm hope to things
21 that folks are -- think are missing now or again
22 offline, happy to kind of take concepts or ideas here if
23 folks think things are missing. But, again, this is
24 very high level and we'll continue to report out to the
25 commission and work with Lieutenant Collins and

1 Supervisor Connelly and the Senator's staff.

2 SECRETARY CROWFOOT: Thanks so much, Nick. I
3 want to ask commissioners if you have any questions or
4 input either on the actions tracker, the schedule and
5 agenda topic for meetings next year, or the commission
6 report outline which we're going to ask you to noodle on
7 and provide any feedback before the next meeting.

8 MR. SAFFOLD: And we can -- Secretary, if it's
9 helpful, we can send these three slides -- or -- oh, it
10 looks like --

11 SECRETARY CROWFOOT: Yeah, I do think that would
12 be helpful, sending them to the commissioners just so
13 they have it in their inbox.

14 I see Supervisor Conant has his hand up.

15 SUPERVISOR CONANT: Forgot to demute, sorry.

16 Thank you, Wade. I was just curious. You know,
17 we had mentioned piezometer, and I realize that they're
18 talking and planning on replacing them.

19 Do we have more reports on that as well?

20 SECRETARY CROWFOOT: Yeah. I mean, that seems
21 reasonable to me.

22 Nick, can we build that into perhaps the next
23 meeting?

24 MR. SAFFOLD: Yeah, absolutely. We'll make sure
25 to get that covered at the next meeting.

1 SECRETARY CROWFOOT: Great.

2 SUPERVISOR CONANT: Thank you.

3 SECRETARY CROWFOOT: Okay. Folks can pipe in by
4 either raising their hand virtually or simply unmuting
5 and sharing any thoughts.

6 Seeing none, let's move to Mike Mierzwa of DWR
7 who's going to provide a brief recap on the tour of the
8 joint operations center that took place several weeks
9 ago.

10 MR. MIERZWA: Okay. Thank you, Secretary
11 Crowfoot. My name is Mike Mierzwa. I am the State
12 floodplain manager.

13 And, Nick, if you could advance to the title
14 slide there.

15 I'm going to try and make up some time here so
16 there's more time for comments and questions to just
17 give you a little overview of the state federal joint
18 operations center tour that we had on November 1st.
19 What you're looking at is a photo Liz Bryson, who is the
20 lead for our Flood Operations Center. She becomes
21 really the team lead during any flood emergency for all
22 the information that's coming into the JOC and all the
23 information that's going out.

24 Nick, could you move to the next slide, please.

25 So I wanted to, first, thank all of the

1 commission members who were able to join us on the 1st.
2 You can see they're listed there. So we had
3 Senator Nielson, Assemblyman Gallagher,
4 Lieutenant Collins, Mat Teague from State Parks, as well
5 as Supervisor Connelly and Supervisor Kimmelshue, both
6 from Butte County.

7 Agencies that were represented around the table
8 in our tour included the National Weather Service, the
9 US Army Corps of Engineers, the California Office of
10 Emergency Services, the California Natural Resources
11 Agency, and different groups from the Department of
12 Water Resources including members of our executive
13 division, the State Water Project Team, and then where I
14 am housed within DWR at our Division of Flood
15 Management.

16 Nick, could you go to my last slide here.

17 So we had really robust discussion. It was --
18 the meeting went a little over time because there were a
19 lot of engaged questions we went through. Two thirds of
20 the meeting was on the second floor of the JOC in what
21 we call the State-Federal Flood Operations Center, and
22 the remaining one third of the tour was located on the
23 third floor which is the State Water Project and Central
24 Valley Projects' collective project operations centers.

25 So topics that we discussed were the preseason

1 coordination meetings, general forecasting procedures,
2 the real-time coordination and operations work
3 associated with all that information, the long-term
4 reservoir coordination including some control manual
5 update discussions.

6 We talked about the importance of data,
7 particularly the networks engaging and informing both
8 short- and long-term operations; and then, of course,
9 public notifications of forecasts and a discussion of
10 dam inundation maps and how that information is conveyed
11 and used by different parties.

12 That was the basis of two thirds of our meeting,
13 and then we advanced upstairs to talk about project
14 information, and there we had a general discussion of
15 the overview of both the State Water Project and the
16 Central Valley Projects, their physical layouts. We
17 talked about the staffing requirements and the 24/7
18 nature of the operations there where there's people on
19 hand all the time to monitor the movement of water
20 across the state.

21 We talked about really this process of
22 scheduling and using real-time information coming from
23 the Flood Operations Center up into and form the
24 operations for the two projects and how that information
25 flows back down. And we also talked about some of the

1 coordination between these two large projects and the
2 numerous local water management entities that rely on
3 both the state water project and the Central Valley
4 project for their water supply needs.

5 So with that, I wanted to open it up briefly for
6 any of the participants from the commission, if there
7 was anything else that you wanted to bring up or say and
8 give you the floor for a sec or two.

9 SECRETARY CROWFOOT: Thanks so much I see
10 Supervisor Kimmelshue took himself off mute.

11 SUPERVISOR KIMMELSHUE: Yeah. Mike, this is Tod
12 Kimmelshue.

13 I just want to thank you, you and your staff.
14 It was a fantastic experience for me. Had no idea that
15 that type of operation existed with the Department of
16 Water Resources, and it was just -- it was fascinating,
17 and so I want to thank you for that. And just -- I
18 appreciate everything you're doing for flood control.

19 We have an issue, of course, in
20 Northern California with some of those issues, and I've
21 talked to Director Nemeth about one issue which is the
22 Cherokee Canal, which is a flood control mechanism
23 that's overgrown with trees and brush, and we're having
24 a hard time getting that cleared out; so just wanted to
25 throw that in and -- but, again, thank you very much for

1 what you did and taking the time to educate us.

2 MR. MIERZWA: You're welcome.

3 SECRETARY CROWFOOT: Well, thanks so much, and
4 I'll note that Senator Nielsen and Assemblymember
5 Gallagher's thoughts at the top of the meeting around
6 the constructiveness of the tour. So glad it happened.
7 Big thanks to you all for managing it Mike and team.

8 We're going to move now to John Leahigh, and
9 John's presented to this commission before on -- and
10 he's going to talk about winter operations in Oroville
11 which, of course, we're right in the middle of right
12 now.

13 So over to John.

14 MR. LEAHIGH: Yes, thank you.

15 Thank you, Secretary. Trying to get my video
16 there.

17 Yes, thank you all. Good morning commissioners.
18 Yes, again, my name's John Leahigh. I serve as the lead
19 water operations manager for State Water Project.
20 Looking forward to providing some information to you.

21 Next slide, please.

22 Just real briefly, what I'm going to cover very
23 briefly is just a short recap of 2021 flood pool
24 requirements going into this coming winter and the water
25 year 2022 outlook.

1 Next slide, please.

2 So in the interest of time, I will attempt to
3 keep my discussion here short since Director Nemeth has
4 already covered, you know, much of this. Has it was the
5 third driest on record in 2021. Despite the October AR,
6 we find ourselves with the same high-soil moisture
7 deficit going into this coming year, which will continue
8 to influence the resulting run-off that we received in
9 the winter's precipitation event.

10 We also observed the lowest recorded lake
11 elevation, as the director noted, which is only
12 22 percent of the lake's capacity back at the very last
13 day of the water year.

14 The AR, as the director noted, did have some --
15 produced some record 24-hour totals for much of the
16 California. In fact, some of that was up to 13 inches
17 of rain in the Feather basin. To put that in context,
18 that one-day total was equal to half the entire annual
19 precipitation that we saw in 2021.

20 So I will want to note that because this -- the
21 extreme example here is very relevant. It's one that
22 exemplifies the challenges to water management in the
23 state. Only a handful of storms each year are
24 responsible for the majority of that water supply
25 production. The condition of the watershed is key to

1 the run identify response because of the parched soil
2 conditions. When that AR hit we only did see about a
3 6 percent increase in the capacity of the lake and
4 storage in the lake. In a storm of is that magnitude if
5 it were to hit later in the winter with saturated soil
6 condition, the inflows would be many times greater than
7 what we experienced in October. So this was a good
8 start, but we need much more rain as we continue to try
9 to dig ourselves out of these devastating drought
10 conditions.

11 Next slide, please.

12 So now here just graphically is what I presented
13 on the previous slide. Although we're off to a very
14 good start, it is not as meaningful as, you know, coming
15 after the two previous dry years that we've seen which
16 were one of the driest two-year period on record. Only
17 '76-'77 was drier two-year period by most metrics.

18 Next slide, please.

19 And on the reservoir storage front, again,
20 context is important. Although we have seen the gain
21 from October event, we are still lower in storage for
22 this time of year than we were back in '77 or 2014. We
23 are currently at 30 percent of the capacity of the lake
24 which is 60 percent of where we typically are for this
25 time of year.

1 The only positive here is the trajectory of the
2 storage levels is better-than-typical for this time of
3 the year. You know, part of the reason, of course, is
4 that October AR but also, as Director Nemeth had
5 mentioned, the collaborative efforts that we have worked
6 with our local Feather River rice farmers in order to
7 moderate their diversions this fall has been a big help.
8 And we have also been minimizing our releases downstream
9 of the Feather River, to the extent that we can, for
10 delta need. Unfortunately, the system has been drying
11 out; and in recent days, we have had to make some slight
12 increases to those releases for those delta conditions.

13 Next slide, please.

14 So as a reminder, this is the current
15 requirements under the Corps's manual, that the
16 Department keep a certain amount of vacant space in the
17 reservoir during the winter months prior to a storm
18 event hitting the Feather Basin. So the amount of that
19 vacant space that is required on any given month as we
20 go through the year is also dependent upon the
21 conditions of the watershed; so how saturated are those
22 soils?

23 The wetter the soils in the upper water shed,
24 the more vacant space we're required to leave in the
25 lake. That required space varies from 11 percent to

1 22 percent of the lake's capacity. As a reminder, the
2 reason for that vacant space is to absorb the peak
3 inflows from large storm events so that they can be
4 released at much lower rates downstream to the river.

5 The process for how to manage this space and
6 into the future and to better leverage the improvements
7 in forecasting skill is the subject of the ongoing
8 Forecast Informed Reservoir Operations efforts, or FIRO,
9 and also the Water Control Manual update process that
10 you will be hearing from Mr. Joe Forbis here in a
11 subsequent presentation.

12 Next slide, please.

13 In the interim, and since 2018 and continuing
14 into next year, the Department will continue to provide
15 an enhanced flood pool of up to an additional 13
16 vertical feet or 170,000 acre feet of vacant space as
17 conditions warrant.

18 Next slide, please.

19 This graph illustrates the relationship between
20 the actual storage in blue and the required vacant flood
21 pool in red. The varying of this required flood space
22 illustrates the effect of that soil moisture condition
23 of the watershed, and this is for so far this year's
24 your year and it basically shows how the flood pool
25 requirement varied in response to that October storm.

1 Now, this flood water control requirement has
2 had no effect on the operations this year because the
3 actual storage has been 1 and a half to 2 million acre
4 feet below the required line. However, because
5 California has the most varied annual precipitation of
6 any state in the U.S., the application of historical
7 statistical models would indicate that there is still a
8 25 to 30 percent chance that the flood curves could
9 become relevant before the end of this winter.

10 Next slide, please.

11 So here's the outlook for the coming year. This
12 is from NOAA's climate prediction center. This is the
13 classic La Niña signal where, because of the
14 cooler-than-normal conditions in the Eastern Pacific,
15 the tendency is for storms to generally focus on the
16 northwest and British Columbia and bypass much of
17 California, specifically Southern California.

18 So this wraps up a brief presentation here on
19 the outlook for this coming winter.

20 So I'll turn it back to you, Secretary.

21 SECRETARY CROWFOOT: Thanks John.

22 Questions for John about the winter ops plan?

23 All right then we will move to Gary Lippner, our
24 colleague at Department of Water Resources to talk about
25 the flood management downstream from the reservoir. We

1 focused a lot around the safety of the dam and the
2 reservoir for good reason given the 2017 incident, but
3 there was an interest in understanding what DWR is doing
4 about downstream flood risk.

5 And so, Gary, you're going to provide us an
6 overview and I think an update.

7 MR. LIPPNER: You bet. Thank you.

8 Thank you, Nick, for that opening slide.

9 Secretary Crowfoot, commissioners, and members
10 of the public, I'm Gary Lippner, DWR's Director of Flood
11 Management and Dam Safety.

12 Thank you for the opportunity to present today.
13 Today's presentation will cover new material as well as
14 touch upon some content from my previous presentations
15 where I talked about some on-the-ground DRW-led flood
16 management activities, our integrated flood management
17 public safety activities, and our commitment to
18 partnerships.

19 Next slide, please.

20 Here's a presentation road map. I'll share the
21 way we organize our flood risk management programs into
22 a portfolio, a reminder of some key flood emergency
23 response coordination services, a discussion how the
24 Central Valley Flood Protection Plan updates inform our
25 portfolio of programs, describe the flood risk reduction

1 projects moving from large- to smaller-scale activities,
2 how the flood plan management services align with FEMA's
3 implementation of the National Flood Insurance Program,
4 and finally introduce the role residual risk plays in
5 the ongoing implementation of the above programs.

6 Next slide, please.

7 Wanted to start with how DWR flood management
8 programs are organized. First, if you look at that
9 innermost doughnut, DWR organizes its flood management
10 programs into three broad areas: Responsive services
11 that occur before and during events, proactive services
12 are designed to enhance local capacity to avoid or
13 respond to flood events, and active services which
14 function to reduce losses during events.

15 Secondly, with these areas, we have five
16 thematic program areas shown to the outer doughnut, if
17 you will. Planning programs focuses on developing
18 comprehensive strategies for mitigating risk, floodplain
19 management family sizes low cost none structural
20 measures to keep people away from water and leverage
21 federal resources.

22 Flood risk reduction projects emphasize
23 structural approaches through shared local state and
24 federal cost shared projects, systemwide maintenance
25 focuses on maintaining the central valley's state plan

1 of flood control system, and flood emergency responses
2 programs includes providing data and technical support
3 services to assist local, state, and federal partners
4 during flood events.

5 Next slide, please.

6 Mike Mierzwa provided a recap of the
7 State-Federal Flood Operations Center tour. The Flood
8 Operations Center and its dedicated staff provide a huge
9 public safety benefit to our communities. The Flood
10 Operation Center provides situational awareness,
11 technical and direct assistance, and is a conduit for
12 federal assistance via Public Law 8499.

13 One note about the emergency response, it starts
14 at the local agency level. Key decisions like declaring
15 an emergency, ordering evacuations, making repairs are
16 not executed at the FOC. The FOC is really the nerve
17 center during an emergency and is there to share
18 information and help situations to help bring higher
19 levels of resources if needed.

20 Next slide, please.

21 In addition to providing detailed, real-time
22 data to the public through the California Data Exchange
23 Center, CDEC, the FOC has a separate GIS-based service
24 called FERIX, the Flood Emergency Information Exchange
25 for Emergency Responders.

1 This and other data services serve as such as
2 forecast informed reservoir operations or FIRO are all
3 provided before, during, and after events through the
4 Flood Operations Center.

5 It's important to note that the Flood Operations
6 Center provides training to local emergency responders
7 in order to maintain a high level of readiness as well
8 as facilitates several coordination meetings with
9 partners. These include preseason coordination meetings
10 and many other local and federal agency meetings.

11 Next slide, please.

12 Wanted to move into planning. Regarding
13 planning, one key flood management document is the
14 central valley flood protection plan. It's updated
15 every five years, and the plan serve as the State's
16 long-range blueprint for the State Central Valley flood
17 management vision as well as integrates with local
18 agency input through the development of their regional
19 flood management plans.

20 The document is -- it's descriptive, not
21 decisional, meaning it sets policies and priorities but
22 allows flexibility for specific projects to achieve
23 outcomes, and the plan does not permit projects.

24 Central Valley Flood Protection Plan does
25 promote multi-benefit projects along with identifying

1 approaches to integrate ecosystem services into helping
2 to reduce flood risk. With the 2022 update to the
3 Central Valley Flood Protection Plan, we're focusing on
4 three central themes: building flood system climate
5 resilience, alignment with other State planning efforts,
6 and accountability and performance tracking.

7 Climate change is an overarching theme and
8 incorporated into all of the flood plan recommendations.
9 One note: A public draft of the 2022 update is expected
10 early next year, and we welcome comments about it as
11 it's foundational to providing your blueprint for the
12 central valley flood management.

13 Next slide, please.

14 So moving around the flood wheel into flood risk
15 reduction projects. Flood risk reduction projects are
16 the State-led, systemwide improvements. That's
17 certainly one of them. And an example of this is
18 showing to the right the Yolo Bypass.

19 The goal here is to increase the flood capacity
20 in the bypass while also incorporating ecosystem
21 improvements. Together this serves to reduce water
22 levels in the Sacramento River, and also delays the
23 flood peak, which helps areas downstream of the Yolo
24 Bypass and areas upstream of the Yolo Bypass.

25 We need these improvements to address climate

1 change resiliency, and these need to be completed first
2 to avoid upstream projects inducing increased flooding
3 downstream and to prevent backwater from creating
4 flooding up disagreement of the projects.

5 Next slide, please.

6 The next major example of flood risk reduction
7 projects are our urban flood improvement projects. In
8 the Feather Yuba system, there are three major projects
9 along the Feather River: the Sutter basin, Marysville
10 ring levy, and the Yuba basin.

11 Next slide, please.

12 Here you can see some data, including the total
13 project cost and percentage complete. And, you know,
14 it's great to see that two of these projects are now
15 completed for the Sutter Basin and the Yuba Basin. In
16 fact, it came up earlier. The celebratory board meeting
17 in October at SBFCA, and I'd like to congratulate the
18 Sutter Butte Flood Control Agency for achieving 200-year
19 level of protection and being the first local agency to
20 meet this goal set back in 2008 with the Central Valley
21 Flood Protection Act, Senate Bill 5. Flood projects can
22 take many years to execute, and it was really great to
23 join SBFCA's board in October to celebrate their
24 significant accomplishments.

25 While acknowledging the significant work done to

1 date, we recognize there is more work to get done, and
2 especially in the rural areas. And I'm consistently
3 reminded of this by the Sutter Butte Flood Control
4 Agency and their Sutter Bypass east levy project need.
5 And we have, you know, a program to address rural needs
6 but also need to prioritize downstream systemwide and
7 urban needs. A little bit more about our program we do
8 have four rural --

9 Next slide, please.

10 The, you know, next example of flood risk
11 reduction projects is the Small Community Flood Risk
12 Reduction Program. This program was created by the 2012
13 Central Valley Flood Plan, and the goal was for the
14 State to help communities that never had the financial
15 resources to compete with larger urban areas and to
16 really get a head start via State-funded feasibility
17 studies and have a dedicated State local financial
18 assistance program.

19 DWR has spent 50 million of Prop 1E small
20 community funds to date with 17 million allocated for 35
21 Central Valley communities to complete feasibility
22 studies and 28 million allocated to three of these
23 communities that had completed their studies.

24 Next slide, please.

25 Here this slide is more focused map showing the

1 35 communities funded with this small communities
2 program. 13 of the communities have completed studies,
3 and nine more of these studies should be completed in
4 the next few months. In fact our team is currently
5 reviewing these right now, some of these feasibility
6 studies. The remaining studies will be completed by
7 local agencies by January 2023.

8 The second phase of this program is to move into
9 design and construction which includes land acquisition
10 and these are scheduled for completion by March of 2023.
11 With the current solicitations, we do not have current
12 funding for future solicitations, but hopefully that
13 will be forthcoming in future budget years, and there
14 will be other opportunities.

15 Next slide, please.

16 The fourth category of flood risk reduction
17 projects focuses on rural areas as well. The Central
18 Valley Flood Protection Plan describes two key programs
19 that the State would establish for rural areas. First,
20 in order to address the need to repair levies damaged
21 from following high water events that are not eligible
22 for the Corps public law PL 84-99 rehabilitation
23 program -- repair funds, if you will.

24 DWR created the storm damage DWR Emergency
25 Repair Program in 2017. With that program over

1 140 million and 76 different sites ineligible for
2 federal repair funds have been identified for erosion,
3 seepage, and stability repairs.

4 Second, sometimes levies need repairs due to
5 cumulative long-term impacts that aren't easily
6 associated with a single event, including development of
7 better practices or simply addressing aging
8 infrastructure.

9 Over 90 million and 43 different sites have
10 proactively been addressed and addressed issues before a
11 flood emergency through DWR's flood system repair
12 projects. Types of projects include access roads,
13 erosion repairs, and construction of seepage berms and
14 some limited slurry walls and other flood control
15 structure repairs.

16 Next slide, please.

17 Outside of structural projects and in regards to
18 floodplain risk management, since the National Flood
19 Insurance Program was created back in 1968, DWR has been
20 the lead agency in California for promoting floodplain
21 management and implementing the National Flood Insurance
22 Program, better known as NFIP.

23 The NFIP is more than just an insurance program,
24 and it really focuses on four key areas: risk
25 assessments that are often associated with mapping

1 activities; risk awareness, which includes extensive
2 communication often focused on local land use
3 regulations; financial assistance, including management
4 of State grant programs like the above-mentioned small
5 community flood risk reduction program; and coordination
6 with Cal OES and FIMA on various FIMA grant programs;
7 and flood planning, which includes preparing best
8 practice guides, training local floodplain managers and
9 insurance agents, and supporting integration of planning
10 efforts.

11 One note: Even before the NFIP National Flood
12 Insurance Act of 1986, rather, DWR's floodplain managers
13 were responsible for providing data -- maps and
14 hydrologic data primarily -- and technical assistance
15 upon requests from local communities to help prepare for
16 their general plans. And now we continue to do that
17 through the local hazard mitigation planning process
18 that I've spoke to the commission before about.

19 Next slide, please.

20 So despite all the hard work we collectively
21 take to reduce floods, there will always be a residual
22 risk, and we must always be prepared for floods. And
23 this graphic was adopt -- is adopted from a conceptual
24 concept introduced by the U.S. Army Corps of Engineers.
25 And the basic idea here is that you start with some base

1 level of risk, and through a course of different
2 actions, we slowly buy down the risk. No one type of
3 action can buy down the risk. In fact, you need a
4 diverse set of actions similar to our portfolio of
5 programs to truly reduce and buy down the risk. In
6 other words, there's no silver bullet to reduce the risk
7 of flood -- flooding.

8 Across the bottom of this graphic, there are
9 three key areas: Risk assessment, planning and
10 preparedness, and response and recovery. DWR's
11 comprehensive portfolio programs address all of these
12 areas.

13 Next slide, please.

14 So a few final thoughts. DWR actively manages a
15 portfolio of programs to address comprehensive flood
16 management needs. Although residual risk will always
17 remain, maintenance, floodplain management and emergency
18 response can manage this risk. And we use the Central
19 Valley Flood Protection Plan as a blueprint to help us
20 manage all of the programs and to integrate into other
21 planning efforts.

22 And lastly, but probably most important, is
23 partnerships are paramount to advancing our flood
24 protection and our integrated flood management public
25 safety campaign in the Feather, Yuba, and other

1 watersheds.

2 So thank you again for this opportunity, and I
3 welcome any questions.

4 SECRETARY CROWFOOT: Thanks, Gary, for that
5 thorough update; and, again, his slide presentation, it
6 will be available on our website for the commission.

7 Do any members of the commission have questions
8 for Gary?

9 SUPERVISOR KIMMELSHUE: Yeah, this is Tod
10 Kimmelshue again, and I know I'm asking too many
11 questions today.

12 SECRETARY CROWFOOT: No such thing, Supervisor,
13 honestly.

14 SUPERVISOR KIMMELSHUE: Anyway, Gary, hey thanks
15 a lot for the great shoutout for Sutter Butte's Flood
16 Control Agency, SBFCA. Yeah, we're pretty proud of what
17 we did there on the Feather River, and we're looking for
18 our next project because we're very good at repairing
19 levies. And I know you're going to meet on the 14th
20 with our management group led by Michael Bassett, and I
21 just hope we can find some funds to work on the Sutter
22 Bypass next.

23 Like I said, we're doggone good at repairing
24 levies. We've proven that. We can do it on time and
25 hopefully under budget. And I wouldn't be doing my job

1 as the chairman of SBFCA if I didn't just bring that to
2 your attention and ask you to help us try to find some
3 funds to continue our job of repairing levies in
4 Northern California.

5 So thanks a lot, Gary. Appreciate it very much.

6 MR. LIPPNER: Thank you, Supervisor Kimmelshue.

7 SECRETARY CROWFOOT: Okay. Over to
8 Supervisor Conant.

9 SUPERVISOR CONANT: I would like to ditto what
10 Tod said. That's a critical piece of infrastructure.
11 If it fails, 99 will be lost for a significant period of
12 time which would drastically cut the ability for people
13 to do commerce, and there are many lively -- and
14 people's livelihood would be interrupted as well, and
15 some localized flooding even into Yuba city possibly.

16 So, you know, it's critical that we get that
17 repaired.

18 Thank you.

19 SECRETARY CROWFOOT: Thank you.

20 MR. LIPPNER: Thank you, Supervisor Conant. You
21 know, we are looking forward to meeting with your team
22 on the 14th and trying to move forward with a solution
23 to that Sutter Bypass east levy. Thank you.

24 SECRETARY CROWFOOT: Excellent.

25 Well, let's shift to Joe Forbis who is a great

1 partner of state agencies serving at the --

2 MR. SAFFOLD: Secretary?

3 SECRETARY CROWFOOT: Oh, yes.

4 MR. SAFFOLD: I apologize. It looks like
5 Commissioner Widener had a question.

6 SECRETARY CROWFOOT: Oh, sorry. Yep,
7 Commissioner Widener. Sorry, I didn't see that.

8 COMMISSIONER WIDENER: I actually have a
9 question. When you're doing the risk assessments for
10 flood -- the floodplain management, what levels of
11 releases from the Oroville dam are you looking at to
12 make those assessments?

13 MR. LIPPNER: Genoa, I think that we have
14 Mr. Michael Mierzwa on participating as well, and Mike
15 is the lead of our floodplain management office; and I
16 think I would lean that question to Mike to talk about
17 some of the risk and the -- answer your question.

18 Thank you.

19 MR. MIERZWA: So thank you, Gary. Again, my
20 name's Mike Mierzwa. I'm with the Department of Water
21 Resources, and I'm the State floodplain manager.

22 And there's -- it's a pretty complex question
23 because there's a variety of types of risk assessments
24 that we conduct. And I don't completely, you know,
25 understand exactly in the question what you're wanting;

1 so I'm going to ask you to, you know, correct me as I go
2 through, but I'm going to talk about a couple of them
3 real quick, going back to that wheel that Gary had.

4 And, Nick, maybe if you could go back to the
5 slide so everyone could see that wheel, I'll show where
6 some of those risk assessments sit out there because
7 there is a variety.

8 Okay. So, first, in sort of these
9 responsive-types activities, we do go through and use
10 information to conduct, like, emergency exercises. So
11 the risk information comes from somewhere else, but we
12 use that literally to go through and train for
13 readiness. And that's usually with emergency managers.

14 So that -- there's, like, two levels of
15 emergency exercise that will happen out there. There
16 will be exercises that are conducted with the agencies
17 and entities that I listed off that participated in the
18 Joint Operation Center. So that would like the Weather
19 Service, Army Corps, DWR, and it will be, like, the
20 flood and the state water project team; so those are
21 kind of system level.

22 Sometimes we go and do tabletop exercises; so
23 that's where you have, like, a sheet that walks you
24 through what you're going to talk about. And other
25 times we'll have, like, a functional where there's

1 actual controllers who then do what they call injects,
2 and they're like scenarios, and you kind of role play
3 out what you would do, and you don't know what's
4 happening. But it's really to train our coordination.

5 That same model of functionals or tabletops
6 sometimes go down to where we interact with the local
7 communities. It's not as often, but in the case of the
8 forecast coordinated operations program -- which is a
9 predecessor to FIRO, the Forecast Informed Reservoir
10 Operations -- we would go through and work with not only
11 the State and federal entities, but the Yuba County
12 Water Agency. So the agency's responsible for operating
13 the dams and reservoirs.

14 And then the next level you can get into these
15 tabletop or functional exercises would then be working
16 actually with now the emergency responders; so the
17 county level, the county office emergency services would
18 often participate in those.

19 Now, moving up the wheel -- and I'm going to not
20 go through everything here -- we also do in the --
21 really the flood plain risk management, my area, we work
22 with FEMA to basically go through and generate the maps.
23 And the flood plain maps that we're generating aren't
24 really predicated on the operations of the dam, but
25 they're predicated really on the strength and

1 reliability of the levies as well as really extreme
2 rainfall events. And this is where we're talking about
3 a 100-year flood event, a 200-year flood event, or a
4 500-year flood event.

5 And based off of these, we would go through and
6 come up with an assessment of what properties would be
7 inundated and that's the product that most people are
8 used to seeing in a risk assessment. And we also can go
9 through and to specialized risk assessments where we
10 come up with slightly different assumptions, but those
11 are kind of a range.

12 But I'm going to ask you to maybe see if I
13 addressed your concern or question.

14 COMMISSIONER WIDENER: Well, I guess so. It's
15 difficult when, you know, I know that the language that
16 you guys use like one hundred year events or storms
17 or -- but several of those have happened in my lifetime,
18 and I'm not yet 100. So when we're -- it -- it's easier
19 to talk about the actual amount of water that is flowing
20 to understand those different events, but I understand,
21 you know, that's not how it's worded in your guys's
22 business, I guess.

23 MR. LIPPNER: Well, it -- I --

24 SECRETARY CROWFOOT: But I will say -- you know,
25 just jumping in, Mike -- I think she --

1 Commissioner Widener introduces a really good point,
2 particularly given climate change and, you know, what a
3 100-year or 200-year flood may mean 10 years from now.

4 And I know Director Nemeth has her hand up; so
5 maybe she wants to jump in.

6 DIRECTOR NEMETH: Yeah, I do.

7 So, thanks, Genoa. You always have really
8 spot-on questions; so --

9 You know, so where we are right now, if you
10 remember, when we release from Oroville, the real
11 limit -- when we have these big events, the real
12 limitation is the downstream levies.

13 So while the gated spillway, I think it's got a
14 design capacity of, like, 290. Folks can correct me on
15 my team. We're more like down at 150 when we get to the
16 actual levies, and so those are some of the base
17 assumptions that we carry forward relative to Oroville
18 operations.

19 There's also this thing when we get those really
20 big storm events. The other kind of key piece of it is
21 how we communicate and coordinate with the flood control
22 system on the Yuba River because we're managing inputs
23 from multiple places.

24 So, you know, in terms of how it fits with the
25 long-term one, it is partly why the forecast informed

1 reservoir operations and the is updated flood manual is
2 going to be really important, and it's also important
3 when we look at, you know, the whole system kind of
4 systemwide, we think about, you know, what are the
5 pertinences on other facilities as well in terms of how
6 we cooperate pretty big reservoirs in terms of
7 attenuating flood flows further down the system flute
8 leave approximates.

9 So, you know, but functionally right now I think
10 we're at a basement assumption out of Oroville of about
11 150,000 acre feet -- or 150,000 rather. But John or
12 Ted, please correct.

13 DEPUTY DIRECTOR CRADDOCK: Director Nemeth, you
14 are correct. That was a very good summary.

15 MR. MIERZWA: And I just want to add one last
16 thing, Genoa. I totally agree that the 100-year, 200,
17 500-year, those really don't make sense. And it's
18 common in the floodplain management world, and the
19 communication specialists really question why we call
20 things those numbers. It's -- there's a historical
21 context I'd be happy to talk about, but I just wanted to
22 reaffirm what you said. It is very confusing.

23 One last product that we have is the Department
24 of Water Resources prepares a thing called a "Levy Flood
25 Protection Zone Map," and it doesn't have a number

1 attached with it. It just shows you how far the
2 flooding might get, and we use that to send out to
3 people within these areas every year a flood risk
4 notification flyer. And the idea is to re-message to
5 people that you should have an evacuation route. You
6 should have really a go bag, supplies ready to go in
7 case there's an evacuation.

8 And, finally, we encourage everybody always to
9 get some form of flood insurance -- if not through the
10 federal policy, private insurance -- so that if
11 something does happen, that you can have a quick
12 recovery; but your sentiment is completely spot-on and
13 right.

14 Thank you.

15 ASSEMBLYMAN GALLAGHER: Assemblyman Gallagher
16 here, and if I'm remembering correctly, under the
17 manual, you know, the -- I call it the "old manual"
18 because it is old; but it's currently in place. You
19 guys, in an emergency event, you can go up to 200,000 --
20 is that right? -- on releases out of the gated spillway.

21 But obviously for us downstream, really anything
22 that gets out -- I think -- I'm trying to remember this
23 right. Like, anything that goes over 150,000 becomes a
24 pretty big problem, you know, for the levied system
25 downstream.

1 Is that right?

2 DIRECTOR NEMETH: Yes.

3 ASSEMBLYMAN GALLAGHER: And then, you know, this
4 question is maybe just a -- I mean, these are hard
5 things to figure out, but it's something that -- you
6 know, we're -- this is maybe good year to have this
7 discussion. You know, we're in a drought; right? And
8 we still have plans to have the enhanced flood space at
9 Oroville at this point as Mr. Leahigh pointed out; so
10 that's in place for this year.

11 We know what this system can do, especially when
12 we get an atmospheric river on snow and on snow pack; so
13 that -- I mean, that's always a concern in our minds,
14 but as -- that's why, I mean, going into this season, I
15 think we've really got to be looking at what are -- what
16 is really going on in real time because, on the one
17 hand, I think you almost want to say because we're in
18 such a drought condition and the reservoir is so low,
19 maybe you don't go to that enhanced flood space because
20 you're trying to ensure that we have water for the year.

21 I mean, is that kind of planning to manage
22 really low when maybe -- maybe we really don't have that
23 threat on the horizon. At least we don't know that
24 right now, but as we get closer in, if we're not seeing
25 a huge snow pack and that threat is not as much of a

1 factor, do we change that storage capacity?

2 SECRETARY CROWFOOT: Karla.

3 DIRECTOR NEMETH: These are all the flood manual
4 questions that we're answering, Assemblyman, and they're
5 spot-on, and this is exactly what we're grappling with;
6 so, you know --

7 We can do a presentation on that topic, a status
8 update on that topic, but you are -- that's exactly the
9 kinds of things that we are grappling with.

10 ASSEMBLYMAN GALLAGHER: Right. I guess I'm just
11 saying just for this particular season.

12 DIRECTOR NEMETH: Oh, for this particular
13 season.

14 ASSEMBLYMAN GALLAGHER: Yeah -- (Technical
15 interference) -- at all about maybe changing that if we
16 don't see the kind of, you know, snow pack threat in --
17 and obviously that is a big red flag that, man, we're --

18 DIRECTOR NEMETH: Right.

19 ASSEMBLYMAN GALLAGHER: -- we're going to have
20 serious drought problems. Would we change that enhanced
21 flood space factor that we're -- that we have in place
22 right now?

23 DIRECTOR NEMETH: So, John Leahigh, I'm sure
24 you've got an answer to the rules on that; but, you
25 know, I would just say, Secretary, I think, you know,

1 our minds are very open to making a run at things that
2 make sense to manage during this extraordinary year.

3 So I wouldn't necessarily take it off the table,
4 but I would imagine that there are pretty prescriptive
5 rules about that, and we would really need to lean in
6 and -- with our federal partners to try and get that
7 done.

8 DEPUTY DIRECTOR CRADDOCK: Director, if it's
9 helpful, I could make a couple of comments.

10 DIRECTOR NEMETH: Please.

11 DEPUTY DIRECTOR CRADDOCK: And so, Assemblyman,
12 the flood curves that John Leahigh showed earlier show a
13 range in flood control space in the reservoir based upon
14 whether the watershed is wet or dry. And so for this
15 current year's operations, given the dry conditions,
16 what you'll notice is that we would be using the
17 upper-bound curve until the watershed gets very
18 saturated. So in some regards, under the current rule
19 curve that addresses your question, but as we do update
20 the flood control manual, as you pointed out, there will
21 be a real good opportunity to address these type of
22 scenarios in greater detail.

23 SECRETARY CROWFOOT: That's helpful. I want to
24 get to Supervisor Conant, but I just want to make sure.
25 Commissioner Widener, I saw you take yourself off mute,

1 and feel free to share any final thoughts.

2 I do think your input around the use of more
3 understandable vocabulary on the scale of these floods
4 is one that we'll follow-up on, and it'll be a good
5 forcing function for our DWR colleagues to, you know,
6 modify or update vocabulary here in terms of describing
7 scale of floods.

8 COMMISSIONER WIDENER: Yeah, I just was going to
9 say that I'm glad I'm not the only one --

10 SECRETARY CROWFOOT: I hear you.

11 All right. Supervisor Conant.

12 COMMISSIONER WIDENER: -- that had some
13 confusion with that. Thank you.

14 SUPERVISOR CONANT: I just wanted to add to what
15 James was saying. It not only matters what Oroville's
16 doing but also the timing and the input from Shasta,
17 Yuba County Water Agency and their two projects.

18 You know, if everybody starts dumping, and let's
19 say Shasta starts dumping two days before we do, and
20 Oroville starts dumping two days later, and same with --
21 you know, the impacts will be much greater, and I just
22 want to add that.

23 Thank you.

24 SECRETARY CROWFOOT: Thank you. Appreciate that
25 point.

1 Director Nemeth, your hand is still raised, but
2 I think that may be an artifact of responding to
3 somebody else.

4 So this is all really helpful, and I think,
5 Nick, you're taking good notes around follow-up here.

6 I want to move then to Joe Forbis who's our
7 colleague from the US Army Corps of Engineers that's
8 going to update on the Water Control Manual update -- or
9 the Water Control Manual, and note that this is a topic
10 that Assemblymember Gallagher and others have raised
11 earlier in the meeting.

12 Over to you Joe.

13 MR. FORBIS: Thank you, Secretary.

14 Yes. Great questions and perfect segue into the
15 presentation I have.

16 So the -- what -- just real quick, I'm Joe
17 Forbis. I'm the chief of the Water Management section
18 for the Corps of Engineers in Sacramento, and what our
19 team does is oversee flood control operations for a
20 subset of California reservoirs. Well, and other states
21 as well; but for you guys, you probably care more about
22 the California ones. And in Oroville and New Bullards
23 Bar dams are included in that, and so I'm going to be
24 mentioning both because we're actually updating both
25 water control manuals, the one for New Bullards Bar Dam

1 and also for Oroville Dam. And some of you have already
2 eluded to why it's important to keep in mind the
3 operations of other projects that are going on in the
4 region that are not too far from Oroville because of the
5 impacts that come from that.

6 So can we go on to the next slide, please.

7 So just to make sure that people understand the
8 role that the Corps has here, I wanted to talk just reel
9 briefly about what water management means to us in the
10 Corps of Engineers.

11 So there's three basic objectives that go along
12 with water management or water control management.
13 That's the term that our regulations and guidance
14 documents use.

15 We want to make sure that we're operating to the
16 authorized purposes of a dam or project, multiple
17 projects. We want to make sure that we're maintaining
18 the integrity of the project both structural and
19 operational and then what is probably obviously obvious
20 to most of you, avoiding risk to public health and
21 safety, life, and property in both upstream and
22 downstream.

23 So the Corps is responsible for water management
24 for Corps-owned facilities, but we're also responsible
25 for prescribing the rules, the flood control

1 regulations, for other projects that aren't owned and
2 operated by the corps of Engineers.

3 And there's a few different, like, categories of
4 those types of projects. The one that applies in this
5 case for Oroville is what we call "Section 7 Projects."
6 That references Section 7 of the 1944 Flood Control Act
7 that says that if federal funds are used for
8 construction, even only partially, and there's an
9 authorized purpose of flood control or navigation at
10 that project, then the Corps of Engineers prescribes how
11 that project should operate for flood control or
12 navigation in the case of Oroville and New Bullards Bar.
13 It's just the flood control piece of the operation that
14 the Corps oversees and has prescribed those regulations.

15 Next slide.

16 So the form that those regulations take is in a
17 water control plan, which is the set of rules that are
18 included in the water control manual. The flood control
19 manual, control manual, water control manual, all that's
20 the same thing; so it's the book that has the
21 information on how to operate for flood control
22 purposes.

23 Next slide.

24 I actually shared this slide at that -- a
25 previous meeting here with the commission in

1 February of 2020, and this is just a reminder of just
2 looking at a high-level, simplified view of the water
3 control manual update process that we experience out
4 here on the West Coast is that it's a multiyear, like,
5 multi -- and variable activity effort.

6 And so there's, like, some main categories of
7 activities that go into updating the water control
8 manual like establishing the project management plan at
9 the beginning, ensuring that the public and stakeholder
10 outreach and communication and coordination is done
11 throughout the majority of the project, setting up the
12 baseline hydrology, understanding existing conditions,
13 developing alternatives, reviewing and approving the
14 proposed manual update.

15 So it's a -- spans over multiple years, and it's
16 a fairly extensive process. And as you can manage,
17 doing so at one project is -- will be comprehensive in
18 nature, but doing so at two at the same time like for
19 Oroville new bull afterwards bar, there's more to
20 operate and more to manage. But the intent is to make
21 sure that you're making changes that are -- that are
22 recognized by both projects at the same time. So you're
23 not just ask updating one and not the other and having
24 the other project, like, deal with ramifications. So
25 the benefit in this region, in the Yuba Feather

1 watershed, is to do both and ensure that these
2 activities are done in a coordinated fashion.

3 Next slide.

4 So we've been mentioning FIRO and water control
5 manual updates already this morning, and so what we've
6 done is been making a concerted effort, not just us at
7 the Corps but DWR and Yuba Water Agency as well, to
8 align the two efforts: the FIRO effort and the Water
9 Control Manual update effort. They are different, but
10 they are looking at very similar things at the same
11 time. Both are ongoing right now.

12 So for the FIRO effort, for those that aren't
13 super familiar, it's really a research and development
14 effort of looking at what are the current conditions of
15 the rules of operation and the forecast skill and what
16 can be done to improve forecast skill, what reason needs
17 to be done in order to result in improvements to
18 operations for whatever metrics are decided to be used
19 to measure that.

20 So the output from the FIRO project in the Yuba
21 Feather water shed will feed into the update to the
22 water control manual. The intent and the recognition is
23 that whatever comes from the FIRO projects will be
24 incorporated and used beneficially in the water control
25 manual update.

1 Having both go on at the same time is not
2 something we've done before with other FIRO projects,
3 but we're finding it's looking to be the optimal way to
4 do it because as you research and investigate things
5 within FIRO, you can directly incorporate some of those
6 results from the FIRO analyses into the water control
7 manual update process and then vice versa.

8 So there's a built-in feedback loop that --
9 like, oh, we're figuring out we need to look into this
10 more than in the water control manual side so the FIRO
11 side can, like, dive into it. And that's an opportunity
12 that usually isn't afforded when you're updating a water
13 control manual so we're signal in benefits from having
14 this alignment, and there's been a very intentional,
15 concerted effort to put into aligning the two.

16 So right now within the water control manual
17 project, we're finishing up what you see in these gray
18 bars at the bottom. Phase one we're wrapping that up
19 we've already started and phase two on the next slide
20 I'm going to talk a little bit more what calms in phase
21 one baseline category of activity.

22 So next slide.

23 So in order establish the baseline, it includes
24 developing the plans that we will be following as we
25 execute the work for updating the water control manual

1 and then ensuring that the various data sets and tools
2 used for the future analyses are set up and available.

3 So we are -- have nearly finalized the project
4 management plan. We have finalized a data management
5 plan, and that essentially just says how do we handling
6 the data that are coming from multiple reservoir,
7 multiple forecast points for different purposes,
8 deficient type of analyses, how do we make sure that
9 it's visible by the different technical teams that what
10 to use it?

11 The hydrologic engineering management plan, the
12 third bullet there, that outlines the -- like, the water
13 resources and hydrologic technical work that's being
14 performed for the Water Control Manual update. So it
15 establishes that framework so we have identified what
16 needs to be done, like, and then within the project
17 management plan, it's, like, identifying when is it done
18 in coordination with other activities.

19 So we have this he's three basic foundational
20 plans that we've established. We're setting up the
21 hydrology data set that's going to be used for
22 evaluating the potential alternatives for each dam.
23 We've also been reviewing existing probable maximum
24 flood information for both projects to ensure that
25 the -- you know, the largest reasonable flood that --

1 for analysis purposes for what kind of, like, the
2 top-end highest-risk event, that we've got that
3 available so we can test proposed alternatives with
4 these extreme events.

5 And then the last one that we're going to get
6 started here pretty soon on is reviewing existing
7 reservoir simulation models that will be used for
8 analysis. So we have some that already exist from
9 different studies and also including from the Forecast
10 Coordinator operations Program. There is ResSIM models
11 that already exist from that, and then so we've got a
12 great launching-off point for the future analysis that
13 we're going to be performing.

14 Next slide.

15 So I'll just stay on this one really just for a
16 little bit of time just to highlight what I've mentioned
17 before is that there's -- though the FIRO project and
18 the water control manual project are different, there is
19 a whole lot of similarities and overlap. And so we have
20 identified some common tasks between the efforts, and so
21 we -- I'm going to go into a little bit more detail
22 about the recently completed or ongoing ones that we
23 have underway right now.

24 So next slide, please.

25 So what we've completed now is the first task

1 which is establishing and defining the flood operation
2 objectives and performance metrics for each project.
3 The FIRO project and the Water Control Manual update
4 project actually have different ones. Now, they are
5 relevant to each other; but for FIRO, as you all
6 probably well know that the Marysville Dam and
7 reservoir, like, never was built but it is mentioned in
8 the Water Control Manual for Oroville.

9 And so what was identified as a appropriate
10 target for the FIRO project was to see if operationally
11 we can develop a functional equivalent to the flood
12 control protection that was going to be provided by
13 Marysville Dam and reservoir.

14 The preliminary designs of the operations for
15 that dam assumed a maximum flood control space
16 requirement of 260,000 acre feet. And so we are trying,
17 within the FIRO context, to see if we can develop an
18 alternative that can provide a similar or better level
19 of protection really just by making operational changes,
20 by using forecast information better or -- yeah, better
21 than what the 1970 manual for Oroville does or the 1972
22 manual for New Bullards Bar does.

23 For the Water Control Manual, the performance
24 objectives for that project really are ensuring that
25 the -- that the selected alternatives would not produce

1 worse flood control performance. So that's really --
2 it's tied to the various, like, objective flow targets
3 at different points downstream.

4 So whether it's 150,000 cfs downstream of
5 Oroville, 300,000 cfs downstream of the confluence,
6 there's different existing performance flow objectives
7 that we want to make sure that, as we're moving forward
8 with our analyses, that we're not developing or going
9 towards an alternative that performs worse than what we
10 have now. We fully expect that it will be better in
11 multiple ways, but the -- like, the deal breaker is it
12 can't be worse than it is now; so -- and making sure
13 that the two projects are communicating with each other
14 on how those are developing is of the utmost importance.

15 Next slide.

16 So there's going to be different alternatives
17 developed for -- within FIRO versus within the water
18 control manual update. And one of the main reasons for
19 that is since FIRO is a research and development effort,
20 it's going to be looking at things -- or it can be
21 looking at things that although maybe, like,
22 procedurally- or policy- or regulatory-wise wouldn't be,
23 like, feasible or would be harder to achieve, from a
24 technical scientific aspect, we would still want to look
25 at it and see if there's components that could be used

1 and implemented elsewhere, like, within the Water
2 Control Manual update.

3 So there's a little bit more freedom to try out
4 things that may not be wholly implementable but could be
5 partially within the FIRO project. So though there's
6 going to be a lot of similarities between the
7 alternatives for each effort, there are going to be some
8 differences.

9 And so ensuring that those are coordinated
10 appropriately, that's the theme through this whole
11 presentation really is the -- it's really important.
12 And so we have different deadlines in the schedule to
13 ensure that what FIRO's doing provides deliverables to
14 Water Control Manual project and then vice versa, and so
15 that is underway right now.

16 Next slide.

17 This is one where it's -- it likely is, like,
18 almost identical between the two which is establishing
19 the existing condition information so that way the
20 developed alternatives can be compared to something
21 that -- compared to a baseline. So the existing
22 conditions for both projects would be the same, what are
23 the operations now, what are the -- what's the
24 performance now, and then therefore do any of the
25 proposed or potential alternatives improve upon what's

1 going on now; so that is also underway.

2 Next slide.

3 And then one thing that's -- that we're -- that
4 we have -- are very fortunate to benefit from, the
5 development of other projects within the watershed, is
6 the hydrology prepared for the CNA -- the Cental Valley
7 Flood Protection Plan -- and other studies that have
8 been done within the watershed that we have a lot of
9 hydrology already to choose from.

10 We're developing some -- ensuring that we're
11 completing the period of records hydrology but then also
12 working with the RFC as they help produce hindcast
13 ensembles which really are just forecasts that would
14 have been made back, say, during, like, the '86 event or
15 '97 event if they had the skills that forecasters have
16 today. So that helps us test the proposed alternatives
17 as well, and that's going to be used by both projects.

18 Next slide.

19 This kind of talks to what Ms. Widener was
20 mentioning about the how to communicate the size of
21 floods or events that were -- that can be examined
22 during, like, different assessments or analyses. And so
23 preparing the hydrology includes updating the frequency
24 curves which is how often do certain flows occur within
25 the watershed and doing that will help us better fine

1 tune the operations as we work on developing those
2 alternatives.

3 All right. Next slide.

4 SECRETARY CROWFOOT: And, Joe, I just want to
5 reflect on the time, and I want to make sure anyone that
6 has to leave from the commission at noon has the benefit
7 of hearing public comment; so I would just ask you to
8 conclude just as soon as you can.

9 MR. FORBIS: Yes. Yeah, thanks for the
10 reminder. I've got only two more slides, but I think I
11 can wrap up just after this one because I think this
12 would be of the most interest to those attending today.

13 So we've had some kickoff meetings with Yuba
14 Water and DWR for planning the environmental modeling
15 that would be required for the Water Control Manual
16 update. But the second bullet here, it's scheduling
17 workshops with upstream and downstream stakeholders for
18 research into potential operational constraints.

19 So this isn't part of the required outreach for
20 the NIPA -- following the NIPA process. This is in
21 addition to that. We have our first one with a smaller
22 group of stakeholders middle of this month, but we have
23 a larger one that we're looking to schedule in January
24 and February where we just want to make sure that, as
25 we're developing these alternatives, that we're aware of

1 specific concerns or constraints that would occur at
2 various, like, release amounts or pool elevation.

3 So we are going to be -- if people haven't
4 already been contacted or made aware of this we're going
5 to be working with DWR and Yuba water to ensure that the
6 stakeholders that can provide this sort of information
7 for this development are invited.

8 And so the December one, like I said this is a
9 smaller group but January and February looks took --
10 would be a much larger group so representatives from
11 cities and counties and reclamation districts and things
12 would be invited to -- invited to that one. So and in
13 consideration of the time I think I'll go ahead and stop
14 there and see if there's any specific questions I can
15 answer and move on to the comment portion as secretary
16 Crowfoot referred to.

17 Thanks for your time.

18 SECRETARY CROWFOOT: Joe, thanks for your time.
19 Obviously a really complicated complex thoughtful
20 fastidious process. I recognize that these workshops
21 are a good opportunity for stakeholders today -- here
22 today either on the commissioner or members of the
23 public to dig peeper with you.

24 And so I want to make sure, Nick, you're able to
25 share the, you know, as appropriate, information on

1 those workshops with commissioners and if appropriate
2 add that to the website of the commission. That would
3 be real helpful.

4 MR. SAFFOLD: Yeah, absolutely.

5 SECRETARY CROWFOOT: Sensitive of time -- I'll
6 certainly stay to moderate this as long as we need, but
7 I'd like to move to public comment fairly quickly. I
8 just want to see if there are any information requests
9 or high-level thoughts that commissioners have on Joe's
10 update.

11 All right then. Nick, let's move to public
12 comment.

13 MR. SAFFOLD: Great. Yeah, let's move quickly
14 to that.

15 Again, for those on the Zoom platform, you can
16 raise your hand by clicking the hand icon to speak; or
17 if you'd like to write a comment, you can click the Q&A
18 icon.

19 And then just a reminder for those on the phone,
20 please press pound 2 to indicate you'd like to speak.

21 James, do we have anyone in the queue?

22 MR. PEARCE: Yeah, the first hand raised is
23 Robert Bateman.

24 Robert, I'll allow you to speak.

25 You should be able to unmute yourself, Robert.

1 MR. BATEMAN: Can you hear me?

2 MR. PEARCE: Yes, we can.

3 MR. BATEMEN: Okay. I'm wondering why
4 150,000 cubic feet per second released from Oroville is
5 being used for the flood protection planning when the
6 standard project flood is I think over 180 cubic feet
7 per second. With climate change welcome he could expect
8 even higher releases. Has anyone studies higher
9 releases, and will the commission endorse Dr. Sorison's
10 proposal which he made at the May meeting, I think, that
11 he will he studies releases up to 400,000 cubic feet per
12 second incrementally and request that the DWR give him
13 his -- their full support.

14 SECRETARY CROWFOOT: Thanks so much. What I'll
15 do is we'll certainly pose that question, but I want to
16 give you the opportunity to provide any other questions
17 or comments you have before doing that.

18 MR. BATEMEN: Well, that's sufficient.

19 SECRETARY CROWFOOT: Okay.

20 MR. BATEMEN: I think.

21 SECRETARY CROWFOOT: Okay. Great. Thanks so
22 much. Appreciate that public comment.

23 And DWR team as it relates to modeling the
24 150,000 Cfs versus the 180 and upwards, any brief
25 responses that you want to be able to provide now?

1 DIRECTOR NEMETH: Ted? John?

2 DEPUTY DIRECTOR CRADDOCK: Yeah, thank you
3 Secretary; and thank you, Mr. Bateman, for the question.

4 The 150 is the release that our target is in the
5 flood control manual with the downstream levy capacity
6 that we're targeting. There is some incremental flow
7 that, you know, we're able to rely upon, but the current
8 manual describes 150,000 cubic feet per second as our
9 target.

10 During those flood control operations, we do
11 work closely with the Corps of Engineers in operating,
12 you know, Oroville Dam with the other reservoirs in the
13 system.

14 I think maybe the key point to make as we move
15 forward with the Water Control Manual update, it's
16 really going to provide us the opportunity to take a
17 closer look at this and make updates to both Lake
18 Orville's operation and in the operation of the flood
19 control system.

20 And I see Mr. Forbis from the Corp has his hand
21 up, and maybe he'll add a little information to that.

22 MR. FORBIS: Yeah, just real quick. Yeah, the
23 180,000 cfs is a good thing to recognize because there
24 is recognition in the currently manuals for both
25 Oroville and new bull afterwards bar dams that the

1 relationship between the two and the battling releases
2 between the two reservoirs can be increased or decreased
3 to where 150 from the feather could good up to 1 online
4 and therefore from, like, the Yuba would be withheld as
5 best as possible to 120 so that 300,000 CFS isn't
6 exceeded and vice versa. So the forecast coordinated
7 operations program is really valuable in that because it
8 gets all the parties speaking and looking at the same
9 information to where if a call is needed to increase
10 above what is -- would be, like, a normal maximum, that
11 the -- where the increases are coming from are done
12 intelligently and as responsibly as possible.

13 SECRETARY CROWFOOT: Thank you, Joe. Thank you,
14 Ted.

15 Let's move on with public comment.

16 MR. PEARCE: Robert's the only one with his hand
17 raised again. I believe you want -- well, Matt Mentink.
18 Let's go to Matt since he's the first new one.

19 So, Matt, you should be able to unmute yourself.

20 MR. MENTINK: Yeah, this is Matt. Great meeting
21 presentations today. I think a lot was covered.

22 In some of the ground rules that we established
23 going into this meeting to make it more effective were
24 post questions, advance questions that would be
25 presented to the presenters that they could work it into

1 their presentation; and if not possible, that those
2 advance questions would then become post questions.

3 And there were quite a few post questions put
4 into today's meeting that not all were covered, and I
5 request that those get moved over to the post questions
6 answered as part of the official record.

7 Some of the post questions from the previous
8 meeting did not make it into the recommendation log.
9 There was a request that was in the appendix of the last
10 meetings, and they didn't find their way into that.

11 So, Nick, if you could go back and look at the
12 appendix from the August meeting to make sure those get
13 included as well.

14 One of the requests that was in the log that was
15 to be addressed today was the reverse engineering of the
16 1986, '97 flood. And the reverse engineering of that
17 would, in a sense, change the narrative.

18 For too many years, 35 now to be exact, the
19 reason of the failure was a levy broke. Your levies
20 were in bad shape. But when you reverse engineer or
21 even do a fault tree analysis, what you do is you break
22 it into several branches. Well, why did it break?
23 Because there was 150,000 cubic feet running down the
24 river. You know, the three time -- four times that
25 we've had 150,000 run down the river, we've had three

1 levy failures.

2 So you've got to question what's the risk
3 involved when you use that number as a permissible
4 amount down the river system. Further down the fault
5 tree, you say, "Well, why was the 150 sent down?"
6 Because we didn't know the water content of the snow
7 pack or we didn't have the forecasting.

8 So submitted before this meeting was suggested
9 human points of intervention that could have taken place
10 in both of those floods but were not because we simply
11 relied on regulatory permissibility.

12 And so if we would go back and look at the
13 advance questions submitted for this meeting on creating
14 that -- excuse me, that were supposed to be part of this
15 meeting, the reverse engineering or fault tree analysis,
16 I think it would be a very useful tool to be covered in
17 the next meeting that we have, and I appreciate the
18 follow-up on that.

19 Thank you.

20 SECRETARY CROWFOOT: Thanks, Matt.

21 And, you know, this commission has been really
22 working hard to make sure that there's clear information
23 flow in both directions, and for our part from DWR and
24 state agencies. So big thanks to DWR for investing time
25 and energy in this. And I know some of the DWR team

1 have had off-line conversations with you about just how
2 to provide as much detailed information as possible.

3 I do hear that pending request with Nick to go
4 into last meeting's appendix to make sure that questions
5 are actions that may not have been captured get
6 captured, and I'll also just given the time, I think we
7 won't have time to discuss it here, but hear your
8 request around the reverse engineering, and we'll talk
9 to the DWR team around if we think that's possible and
10 appropriate and will get back to the directly on that
11 and then also just report back out at the next meeting
12 on that request.

13 James is there any other public comment oh,
14 sorry Supervisor Conant.

15 SUPERVISOR CONANT: Just one last comment, and
16 it kind of goes to what other people were talking about,
17 some items that were left off; and I don't know if we've
18 totally ruled out or not.

19 Have we totally ruled out an alternative
20 spillway and/or an alternate powerhouse that we could
21 get lower flow water out of the reservoir to make a hole
22 during a critical storm event? Like an atmospheric
23 river coming in, like, next week or something, let's
24 say.

25 SECRETARY CROWFOOT: That may be a large

1 question to unpack here, but why don't I -- and so if
2 it's too large to unpack here, I think we'll put it on
3 the, you know, agenda for that discussion. Or I think
4 the next meeting is -- one of the next two meetings is
5 on flood safety and the dam.

6 But any initial response from DWR?

7 DEPUTY DIRECTOR CRADDOCK: Yeah. Hi, Secretary.
8 Hi, Supervisor. Ted Craddock again.

9 I'll just say that as part of our infrastructure
10 risk program at Oroville, that is one of the items both
11 those items are on our list to evaluate so in
12 conjunction with the water control manual update and our
13 current stability study of the existing flood control
14 gate instructor at Oroville, as we complete those
15 assessments, they'll provide information that will
16 informant before additional spillway capacity is needed.
17 So I think as the sector mentioned, future prevention on
18 that will be helpful.

19 SUPERVISOR CONANT: Well, that would be good
20 because we haven't talked about it for a significant
21 period of time, and I don't want that to just kind of go
22 away. Thank you.

23 SECRETARY CROWFOOT: Thank you. James, any
24 other public comment?

25 MR. PEARCE: It's just Mr. Bateman that has

1 raised his hand again to make another comment if you'd
2 like to take it.

3 SECRETARY CROWFOOT: I will just very quickly,
4 though, and that's the reason I asked for, you know, the
5 consolidated comment. But why don't we go to
6 Mr. Bateman for a quick, you know, 20-second question or
7 follow-up.

8 MR. BATEMAN: It will be less than that.

9 We didn't answer the question about
10 Dr. Sorison's project which really is it addressed the
11 commissioners if they think this would be worthwhile.

12 SECRETARY CROWFOOT: Okay. I, for one, don't
13 have context on exactly what the project is; so what
14 I'll suggest for the commission, if it's okay, is that
15 that be an open question that we will answer or address
16 in the next meeting so that we can be transparent in
17 responding to Mr. Bateman's question or at least
18 addressing it, certainly addressing it, but not do so
19 here without sort of the context needed.

20 Nick?

21 MR. PEARCE: That was the last public hand
22 raised.

23 SECRETARY CROWFOOT: I will note that Ron Stork,
24 our colleague from Friends of the River, just made two
25 written comments that are worth noting. And he

1 complimented the presentation by the Corps.

2 He says:

3 [Reading] Good to have the planning
4 objective to at least not worsen projects like
5 control performance as defined by the
6 reservoir design flood.

7 And then he said:

8 [Reading] For Matt, the Corps had
9 downgraded the flow reliability of the levies
10 downstream. The Yuba 15 percent in 1992.
11 Somehow the target flow releases in 1997 don't
12 seem to reflect the Corps levy assessment.

13 So I just want to make -- I just wanted to draw
14 your attention to both of those because that's another
15 way we're getting communication by those who are
16 watching.

17 So, look, this has been a packed meeting. I
18 appreciate everyone's attention. If we need to slightly
19 extend the future meetings given the content, we will;
20 but I do think we've covered a whole heck of a lot.

21 Big thanks to Nick and to my colleague Nancy for
22 tracking all -- everything that we're talking about and
23 holding us accountable for answering questions and
24 actually taking action we discuss here.

25 We are a little over the hour; so I'll suggest

1 that we end it here, but I do want to provide the next
2 scheduled meeting is March 18th coming up. Hope we can
3 do that in person in Oroville depending on the state of
4 the pandemic. And, again, really appreciate everyone's
5 participation over these nine meetings of the
6 commission.

7 Just want to see if anybody has any final
8 thoughts as we move to adjourn.

9 Senator Nielsen.

10 SENATOR NEILSEN: I just want to thank everybody
11 and particularly you, Secretary Crowfoot, and your whole
12 organization. This has been extraordinarily helpful. I
13 believe the public is feeling very well-informed and
14 that they -- that you're all accessible to them; so I
15 want to thank you from the bottom of my heart the
16 attention you devote to this.

17 SECRETARY CROWFOOT: Well, thanks.

18 SENATOR NEILSEN: And merry Christmas.

19 SECRETARY CROWFOOT: Yes, indeed. And thank you
20 for the vision to bring us all together. We're only
21 here because of your leadership and th Assemblymember's
22 leadership; so thank you.

23 And with that we will adjourn. As
24 Senator Nielsen said, merry Christmas. Happy Holidays.
25 Happy Hanukah for those who celebrate. Please do enjoy

1 a safe and restful holidays with your family, and we'll
2 be -- we'll see you again hopefully in person but
3 certainly if -- virtually if needed in March. In the
4 meantime, take care.

5 (Proceedings adjourned at 12:09 P.M.)

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