

**OROVILLE DAM CITIZENS ADVISORY COMMISSION
Meeting on 11/20/2019**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

STATE OF CALIFORNIA
OROVILLE DAM CITIZENS ADVISORY COMMISSION MEETING
WEDNESDAY NOVEMBER 20, 2019

1 P R O C E E D I N G S

2

3 MR. CROWFOOT: Thank you very much everyone
4 here today for joining us. My name is Wade Crowfoot,
5 and I serve as secretary of The California Natural
6 Resources Agency. And by a law passed by Senator
7 Nielson, I served as chair of the Oroville Dam citizen's
8 Advisory Commission. This is our second meeting. We're
9 very glad to be here, and thank all those who are on the
10 commission for your attendance here today, and your
11 service. And we have many members of the community here
12 today, too, that we look forward to hearing from. Let's
13 start this meeting by stating the Pledge of Allegiance.
14 So I'd ask you to stand up while we do that.

15 (Pledge of Allegiance was recited.)

16 MR. CROWFOOT: So at our first meeting, which
17 was about two months ago, we started the meeting by
18 asking everybody to introduce themselves. I think in
19 subsequent meetings we will simply do a roll call. But
20 I think because -- I'll speak for myself -- I'm still
21 certainly getting to know everybody. We can just do the
22 same thing, which will serve as roll call. And
23 supervisor -- start with Supervisor Conant. And if you
24 could just introduce yourself and your affiliation.

25 MR. CONANT: I'm Matt Conant. Supervisor for

1 Sutter County, District 5.

2 MR. FLORES: I'm Dan Flores. Sutter County
3 Supervisor, District 2.

4 MR. DOWLING: Steve Dowling. Assistant Chief
5 California Highway Patrol out of Valley Division.

6 MS. WIDENER: Genoa Widener. Appointee for
7 Butte County.

8 MR. CONNLEY: Bill Connelly. Supervisor, Butte
9 County.

10 MR. GALLAGHER: James Gallagher. State
11 Assemblyman.

12 MR. NIELSEN: Jim Nielsen. Fourth Senate
13 District.

14 MS. NEMETH: Karla Nemeth. Director of
15 Department of Water Resources.

16 MR. TEAGUE: Matt Teague. District
17 Superintendent for State Parks. I'm sitting in today as
18 a designee for Director Lisa Mangat.

19 MR. COLLINS: Steve Collins from the town of
20 Butte County Sheriff's Office.

21 MR. REYNOLDS: Chuck Reynolds. Mayor of
22 Oroville.

23 MR. MILLION: Joe Million, lieutenant, Yuba
24 County Sheriff's Department.

25 MR. BRADFORD: Gary Bradford. Yuba County

1 Supervisor, Fourth District.

2 MR. PITTMAN: Oroville City Councilman David
3 Pittman.

4 MR. LICON: Andre Licon. Sutter County
5 Sheriff's Office.

6 MR. CROWFOOT: Thanks so much. And again,
7 thanks for your service on this commission. In just a
8 moment I'll ask the senator and assemblyman to open up
9 our meeting with some remarks. But I just want to go
10 over some necessary announcements as we begin.

11 Just first of all, safety announcement. You
12 see the exits around you. If we need to evacuate,
13 please take note. Ask you to mute your cell phones
14 while we have this meeting. That goes for us up here,
15 as well as folks out in the audience.

16 This is a public meeting, subject to open
17 meeting laws, which is quite important. And that
18 includes getting an agenda up in advance, sharing
19 information in a transparent way. It also means that
20 there is a transcript being developed for the meeting
21 and meeting summary notes. As we talked about in our
22 last meeting, the process of creating a meeting summary
23 involves members of the commission so that we could make
24 sure that the meeting summaries are accurate.

25 We also have a web page dedicated to this

1 commission at our Natural Resources Agency website. You
2 should just feel free to Google the name of the
3 commission and -- and the Natural Resource Agency, and
4 you'll see an updated website dedicated to the work of
5 the commission. Goes without saying, but as we share
6 comments and observations with each other, just ask you
7 to be direct and respectful. And then obviously give
8 each other time and space to talk. We have
9 two-and-a-half hours for today's meeting, and we want to
10 make sure we hear from members of the community and
11 members of the public.

12 We have a little bit of the housekeeping to do
13 organizationally first. The bulk of the meeting is
14 really the discussion of winter operations and
15 discussion of the safety of our winter operations. So
16 we've asked for several presentations, and members of
17 the commission will have an opportunity to ask questions
18 and share observations. Also critical are opportunities
19 for the public or members of the community to comment.
20 Many of us had an opportunity to get up to the dam
21 before this meeting, and to get an overview and actually
22 eyes on what we're talking about.

23 Important to note that comments were not being
24 recorded during that tour. So if you had some comment
25 or a question, you should be encouraged to ask it here

1 on the record just so it's part of the record of our
2 discussion. And we'll make sure that there's enough
3 time for that comment. So let me turn it over to
4 Senator Nielsen and then Assemblyman Gallagher just for
5 your opening thoughts.

6 MR. NIELSEN: Well, Senator Crowfoot, my
7 opening thought is thank you to the agency, to Karla, to
8 your participation. This is a dream yet again realized.
9 I've spoken about the Sacramento River Conservation Forum
10 that I statutorily created in the '80s. And Jane
11 Dowman, the current head of that, is here with us. And
12 that is still around after some 35 years.

13 And the whole purpose is the same purpose that
14 we have here, to inform and involve the communities, the
15 elected officials in decisions related that affect their
16 lives. To involve the state and federal agencies so
17 that they can speak and talk together. And as this
18 thing developed, Senator Gallagher and I, and others of
19 the office, felt that we needed to do a lot of things
20 that were sustaining and long run. And this is that,
21 for our purposes related to the operation, the state
22 water project. Hugely important.

23 And I just deeply appreciate the cooperation
24 of the agencies, including having Parks and Recreation
25 now engaged in the talk, because they have a big

1 footprint in what we're doing here, too. So this
2 involves all of those agencies, all of the local
3 governments, state government, federal government, and
4 the citizens. And I believe what I -- the feedback I'm
5 getting is people are liking this, they're aware of it,
6 and it's working. And again, I thank the administration
7 for all hands on deck, for their coordination and their
8 best serve to be able to coordinate these meetings.

9 But it also ensures that the information gets
10 to all of those who need to make decisions that affect
11 all our lives. Wade, thank you for your leadership. We
12 are honored to work with you.

13 MR. CROWFOOT: Thank you much.

14 MR. GALLAGHER: I will just say thank you to
15 everybody for making the time here this morning. This
16 is an important commission. I'm really looking forward
17 to the work that we're going to do together. And with
18 that, I'll say, hey, let's get down to business.

19 MR. CROWFOOT: Good.

20 MR. GALLAGHER: Mr. Chairman?

21 MR. CROWFOOT: Well, thanks so much. So the
22 first order of business is adopting a commission
23 charter, which is, in essence, the rules that we use to
24 conduct these meetings, and conduct our work. If you
25 recall that our first commission meeting, we were

1 presented a charter, straightforward, really based on
2 the principals and the requirements of the senate bill
3 that formed this commission. There was one question, a
4 request for clarification as it relates to terms of
5 members of this commission. And so rather than
6 approving at that first meeting, we ask for more time to
7 resolve that question.

8 I want to ask Nick to just come to the
9 lectern. As you remember, if you were joined the first
10 meeting, we have a consultant that is helping us
11 facilitate this meeting. I just want to ask you again
12 about the specific clarification that was made regarding
13 our terms, which was the single question that got asked
14 about the charter at the last meeting.

15 MR. SAFFOLD: Thank you, Secretary. And
16 again, my name is Nick Saffold. I'm with Kearns and
17 West. So as you'll recall at the first meeting in
18 September, this commission reviewed and presented
19 details -- was presented details -- a detailed overview
20 of the draft charter.

21 Once again, this charter derives largely from
22 Senate Bill 955. The version of the chart that we're
23 seeking to adopt today has been slightly modified since
24 the first meeting, specifically adding some clarifying
25 language around Section 80. So I'm just going to read

1 that now. And so we've added the second sentence to
2 sectioning in terms of the terms. "The term of office
3 of all commission members shall be three years, except
4 those who are members of the legislation representing
the
5 city of Oroville, who shall serve for the duration of
6 their term in office. Removal or replacement of the
7 commissioner is up to the discretion of the appointing
8 authority consistent with their own rules and policies."
9

10 So that's the only change to the charter since
the first meeting. So, Secretary, I think at this time,
11 if there are no questions or comments, if you want to
12 ask for a motion.

13 MR. CROWFOOT: Yeah. First I would ask if
14 they are any questions regarding the existing proposed
15 charter? And if not, I would ask for a motion to
16 approve the charter.

17 MR. NIELSON: I move to adopt the charter.

18 UNIDENTIFIED SPEAKER: I'll second the motion.

19 MR. CONANT: Right. And can that be -- can
20 this vote be taken by voice, or do we need to do a role
21 call?

22 MR. SAFFOLD: We can do a voice vote.

23 MR. CONANT: Okay. So then let's do a voice
24 vote. All in favor of the commission charter as
25 proposed, please say "aye."

1 (Unanimous Agreement.)

2 MR. CROWFOOT: All opposed? Any abstentions?
3 Okay. Thank you. We will consider the charter.

4 MR. SAFFOLD: So I am going to pass this
5 around now. This is the final version of the charter.
6 If you are a commissioner, please sign it. If you are
7 not, if you are a designated alternate, please refrain
8 from signing it, and we will get the commissioner's
9 signature after the fact. And then we're going to post
10 the final version online, on the website.

11 MR. CROWFOOT: Okay. Good. So if you are a
12 named member of the commission, sign. If you're an
13 alternate, please hold off and we'll get the named
14 member to sign. So now we're into the real meat of the
15 meeting. And that is an updated presentation on this
16 coming winter's operations of the dam and reservoir,
17 with the specific focus on safety.

18 It's clear that there remain, you know, a
19 range of concerns around safety of the facility and the
20 facilities. And that was voices at our first meeting.
21 I think we collectively decided to use this next meeting
22 to really talk about going into the winter, going into
23 flood season, how The Department of Water Resource and
24 related agencies plan to operate the facility. And we
25 actually moved up our planned meeting, actually, to take

1 place now before, what we hope to be, a wet season.

2 So I wanted to introduce Gary Lippner and the
3 Department of Water Resources staff. We've got about
4 three presentations. And after each -- or even during
5 each -- if there are commission members that have
6 questions, simply raise your hand, and we'll -- we want
7 to make it as interactive as possible. And, of course,
8 members of the community and public will have an
9 opportunity to raise questions or observations when they
10 speak during public comment. Gary?

11 MR. LIPPNER: Great. Thank you.

12 MR. CROWFOOT: And just so -- so there's a
13 screen behind us. And for commission members, there's a
14 small screen in front of us, too.

15 MR. LIPPNER: Secretary Crowfoot, members of
16 the commission, and members of the public, my name is
17 Gary Lippner, and I am the newly appointed deputy
18 director of flood management and dam safety at the
19 Department of Water Resources. Thank you for the
20 opportunity to share an overview of the Feather River
21 flood management system. Here's a road map of what I'll
22 be covering in today's overview of the Feather River
23 system.

24 And the first section, the history and
25 flooding, and our response to flood losses has directly

1 led to our collective roles and responsibilities to work
2 together to manage and prepare for future flooding. So
3 it really is important to grab the history that lends
4 itself to the roles and responsibility of how the
5 Feather River system is managed today. I want to share
6 recent flood risk reduction projects, some of the
7 maintenance activities that are undertaken on the
8 Feather River, certainly share some flood preparedness
9 activities, and then share about looking into the future
10 and future activities we have, and information we would
11 like to share. The Feather River system consists of the
12 Oroville complex, including Lake Oroville, the
13 Thermalito Afterbay, and the waterways in between. That
14 is up in the top portion of this graphing where it says
15 "State Water Project," between the two top red lines.

16 The -- then downstream, it consists of rivers
17 with many miles of levees and channels that make up the
18 flood management system. Water is released from the
19 Oroville complex, as well as the New Bullards Bar
20 Reservoir, and works its way through a system of levees
21 and channels down through the system. The focus of my
22 presentation today will be on the flood management
23 system on the Feather River, downstream of the Oroville
24 complex. John Leahigh will follow with a presentation
25 and present on Lake Oroville flood operations

1 specifically.

2 Again, history of flooding in the central
3 valley has certainly shaped our roles and
4 responsibilities. I would like to describe the history
5 in a series of errors each defined by a different
6 approach to managing flood risk. These approaches have
7 slowly evolved over time. Before the gold rush and
8 statehood, periodic floods would inundate large
9 portions of the central valley into what has referred
10 to by historians as the vast inland sea. Evidence of
11 meandering rivers and lost (unintelligible) remains
12 hidden under today's Red Rivers and levees.

13 In the next error, the focus was lead by local
14 landowners to build levees to protect their homes and
15 farms from frequent flooding. While these efforts had
16 successes and failures, there was little coordination
17 and almost no involvement with the state and the federal
18 government to manage floods. Then came the large floods
19 of 1907 and 1909. And that illustrated that something
20 more was needed kneed than just a system of levees
21 itself.

22 By 1910, Captain Jackson of the United States
23 Army Corps of Engineers embraced the concept of
24 utilizing river bypasses with the levee system to
25 protect communities near rivers. The first major weirs,

1 which are entrances to the bypass systems, was completed
2 by the City of Sacramento in coordination with the
3 United States Army Corps of Engineers in 1917. This
4 started the system -- started our flood system that is
5 managed by, both the levees, as well as the flood
6 bypass, the Sutter bypass, as well as the Yolo bypass
7 system. By the 1940s, it was recognized the dams and
8 reservoirs would be needed to provide water supply for a
9 growing population.

10 The flood management community quickly
11 recognized the dedicated flood control space in the
12 winter months these reservoirs could provide additional
13 protection to the region's levees. And many
14 multipurpose reservoirs were built during this era.
15 Moving forward to the current era, the 60s to the
16 present. In this current era, we have experienced
17 record-setting droughts and floods. These events
18 highlight the need for increased coordination between
19 both water supply, and flood management communities, and
20 between local, state, and federal entities to move
21 forward.

22 An absolute critical piece of flood management
23 is the fact that residual risk cannot be eliminated, and
24 we must always be prepared for floods. With that in
25 mind, I will summarize our current Yuba/Feather flood

1 management roles and responsibilities. And at the top
2 level it's very important to note, in California, flood
3 management is a shared responsibility among federal,
4 state, and local agencies. At the federal level, we
5 have the United States Army Corps of Engineering, the
6 United States Bureau of Reclamation, the National
7 Weather Service, and FEMA, the Federal Emergency
8 Management Agency.

9 I'd like to describe in a little more detail
10 about the role of the U.S. Army Corps of Engineers,
11 which I'll refer to as The Corps. Most of the levees
12 along the Feather River are designated by Corps
13 standards. These levees are periodically inspected to
14 make sure that these standards are being met. These
15 standards are also subject to change as a society.
16 Lessons learned from New Orleans and Hurricane Katrina
17 influenced how we construct and maintained levees here
18 in California.

19 The Corps also owns the flood storage space in
20 Lake Oroville, as well as New Bullards Bar Reservoir.
21 John will talk more about the Oroville and how it's
22 operated. But it's important to recognize the
23 partnership between the reservoir owners and The Corps.
24 The Corps is also the lead agency for repairing damage
25 to federal levees through its Public Law 8499 program.

1 At the state level, we have, of course, DWR, Department
2 of Water Resources, the Governor's Office of Emergency
3 Services, and the Central Valley Flood Protection Board.

4 The Central Valley Flood Protection Board
5 plays an important role in oversight and coordination
6 between local, state, and federal management agencies.
7 There is ample opportunity to watch and attend the
8 board's monthly meetings and work with people working on
9 levees, river forecasts, and emergency response in the
10 region. These meetings help DWR with many of the local
11 agencies I'll talk about in a minute to outline the
12 Central Valley Flood protection plan and its 2017
13 update. In addition to the cities and counties at the
14 local level, we also have several levee districts,
15 reclamation districts, the Marysville Levee Commission,
16 Three Rivers Levee Improvement Authority, and Yuba
17 County Water Agency as partners in the Feather/Yuba
18 flood management system.

19 During the past 15 years, DWR has been working
20 with the Sutter Butte Flood Control Agency, Three Rivers
21 Levee Improvement authority, as well as the Marysville
22 Levee Commission to build and improve critical levees
23 along the Feather, Yuba, and Bear rivers. Collectively,
24 over \$900 million has been invested by state, local
25 agencies, and the United States Army Corps of Engineers.

1 This also includes smaller projects underway for smaller
2 communities in the region as well. Collectively, our
3 work has improved flood protection for other 147,000
4 citizens, as well as reduced flood risk for 8.4 billion
5 in assets within the region. And this table shows the
6 three big projects that we've been working on with the
7 benefits and status that I've mentioned in terms of
8 protecting.

9 One key thing to know, these projects take a
10 long time. So, for instance, in the Sutter basins,
11 we -- these 40 miles, when finished, will represent
12 200-year level of protection. And it has taken a long
13 time to go through the design and construction. We have
14 35 miles done, and a little -- five miles to go on that.
15 About a few more miles to go on the Yuba Basin, and in
16 Marysville as well. The length of these projects is
17 very lengthy. But when all of the project is completed,
18 those miles of levee will, again, bring 200-year level
19 of flood protection in the urban areas.

20 This graphic is for the three big projects
21 that I previously mentioned the slide. You can see the
22 Feather River region where these projects are located.
23 There's the Marysville Ring Levee that protects the city
24 of Marysville itself. The Sutter Butte levee
25 improvement projects and flood improvement projects that

1 go north-south along the waterways. And then the Yuba
2 Basin project is highlighted in green here. And it's
3 also important to note that these are large improvement
4 projects.

5 We also, after the winter storms of 2017, made
6 many repair projects to the existing levee systems.
7 There were about \$14 million spent on nine repair
8 projects in the region that repairs were needed after
9 the winter storms of 2017. In addition to improving the
10 levees, DWR also serves to maintain some of these
11 levees. The Feather River and its major tributaries
12 have 225 miles of levees, with one 160 being the state
13 plan of flood control. Those were authorized by Corps
14 of Engineers.

15 The proper maintenance of the levee system is
16 key in reducing flood risk. DWR and local agencies
17 continue our collective efforts in investing in
18 operation and maintenance of the flood control
19 facilities and the basins, including recent maintenance,
20 improvements, and investments in Maintenance Area 3, 7,
21 and 16 on the Feather River to improve 22-and-a-half
22 miles of levee in that area. The operation and
23 maintenance activities consistent of a variety of
24 actions, as shown in the slide. And these actions are
25 taken by maintainers to ensure a system is in good

1 condition before every flood season. Even after
2 improving levees and maintaining levees, mother nature
3 will throw new and powerful storms our way.

4 So I said it in the first few slides, we
5 always need to be prepared for future floods. And we
6 should learn from the successes and failures of the
7 other areas in addressing flooding. With that in mind,
8 flood preparedness is really about practicing
9 partnerships. DWR's flood preparedness role in the
10 region, DWR stockpiles flood fight materials in various
11 places for ease and quick access during flood
12 emergencies. The quick access availability of these
13 materials on-site plays just a critical role in
14 successfully fighting erosion boils and other levee
15 issues during high water events that could potentially
16 result in a levee failure if it were not fixed quickly.

17 DWR continues to work with local agencies to
18 enhance flood preparedness so we can respond to the
19 threats of floods quickly. In addition to flood
20 preparedness, we also encouraging homeowners to purchase
21 flood insurance, which is not included in most insurance
22 policies. Few of the other DWR programs and activities,
23 we have flood emergency response grants, awarded with
24 Butte, Sutter, and Yuba County. And they fund things
25 like, for instance, the flood safety plan that you see

1 in the slide here.

2 We have flood fight training classes provided
3 in Butte, Sutter, and Yuba Counties as well. We also,
4 as I mentioned, have flood fight material stockpiles
5 within or near Butte, Sutter, and Yuba Counties to be
6 prepared when mother nature bring us that large storm
7 event. One example of flood preparedness partnerships
8 is the forecast coordinated operation program. We've
9 learned that rain is not evenly distributed under
10 watersheds, one river can be hit very hard while
11 neighboring watersheds may still have some capacity to
12 slow down and store some peak runoff.

13 The forecast coordinated operations program is
14 based off the principle that if everyone uses the same
15 information, they can make shared decisions that help
16 everybody. You were looking at the graphic of a shared
17 user interface of reservoir operations, and the graphic
18 here, the larger graphic, that interface for reservoir
19 operations, river forecast, and U.S. Army Corps of
20 Engineer reservoir regulatory team uses that. The
21 smaller graphic on the bottom right is an example of
22 forecast precipitation that will include both rain and
23 snow, recent and forecasted runoff flow for each
24 specific location. So the point here is if one
25 reservoir operation makes a change and releases,

1 everyone can remotely see the entire system so they can
2 collectively discuss what the best option is moving
3 forward.

4 Participating agencies in the flood
5 coordinated operations in this basin include the
6 Department of Water Resources, State Water Project's
7 Operation Scheduling Team, DWR River and Reservoir
8 Forecasters, Yuba County Water Agency, Army Corps of
9 Engineer Water Management Section based in Sacramento.
10 The Army Corps (unintelligible) Engineering Center is
11 really the think tank of the United States for model
12 development, and is located in Davis, as well as NOAA,
13 The National Weather -- NOAA's national weather service
14 in the California-Nevada River forecast center. The
15 Yuba Feather forecast coordinated program has
16 contributed to many actions to enhance flood management
17 along the Yuba Feather River, including installing
18 gauges, gauges for rainfall, snow, river stage,
19 developing new forecast runoff models, developing new
20 reservoir modeling tools, improvements in the National
21 Weather Service and Alert products, conducting annual
22 training and exercises between partner agencies. The
23 Departments of Water Resources and its partners have
24 been using forecast coordinated program effectively for
25 the last decade. DWR has now initiated work on forecast

1 informed reservoir operations, which is an innovative
2 use of improved runoff forecasting that John Leahigh
3 will share more about in the next presentation as well.

4 Looking to the future, DWR will coordinate its
5 cooperation department agencies in sharing essential
6 data, securing funds for improvements and maintenance of
7 the flood management system, and enhancing both natural
8 and human environment. DWR will continue to provide
9 updates on the Feather River flood management
10 activities, including silent briefings, visits, and
11 briefings. In closing, a couple of final thoughts, the
12 flood of 1997, many of us remember that was only a
13 hundred-year event. The risk of a larger flood always
14 exists, and management of floods will continue to be a
15 challenge for all of us in the partnership that we have
16 to manage the flood systems in the Yuba Feather River
17 area.

18 We need to continue our partnership to improve
19 and maintain the flood management system and its
20 operations. We need to enhance our flood emergency
21 preparedness and response to better -- be better
22 prepared and continue to educate people about the flood
23 risk in the region. Also, we need to have better land
24 management policies to ensure existing people at risk of
25 flooding are properly insured with flood insurance.

1 Thank you, again, for the opportunity to share flood
2 management overview of the system. I thought it was
3 just important to kind of set the history, the stage,
4 the roles and responsibilities, some of the programs,
5 the improvements and activities that we are conducting.
6 Don't know if there's any questions at this time. Thank
7 you.

8 MR. CROWFOOT: Thank you so much, Gary. At
9 this time, we do want to entertain any questions or
10 thoughts. Maybe I'll start off and ask you a question
11 about emergency planning, giving that we're headed into
12 the winter. Is it the Department of Water Resources or
13 the State Office of Emergency Services that
14 would be responsible for things like emergency drills,
15 or tabletop exercise -- exercises with local
16 authorities; to what extent are we're doing those?

17 MR. LIPPNER: Yeah, great question, Secretary
18 Crowfoot. And thank you. Again, it's a partnership.
19 We worked absolutely hand-in-hand with Office of
20 Emergency Services and prepare for flood season in
21 September and October. We -- the department works with
22 locals as kind of the facilitator to conduct flood
23 preparedness meetings to get the communications going to
24 get the proper phone numbers at all of the local areas,
25 the local counties. We work with the Governor's Office

1 of Emergency Services on that. We also work at the
2 local levels. And we will, during the months of
3 September and October, really get out to all of the
4 locals to make sure we are all on the same page, we are
5 all prepared, we know the communications, we know the
6 amounts of supplies on the ground, and stockpile to be
7 more prepared for the flood season insurance. So it's
8 absolutely a partnership is how we work with the
9 governor's office, and OES, and DWR, and the locals.

10 MR. GALLAGHER: Real quick, I'll just add a couple
11 of things to your overview as I was listening to it.
12 One is the bypass system, I always like to point out,
13 was initially envisioned by Will Green, a Colusa native
14 and layman. And I think that points to the bedrock of
15 this commission that it's really, you know, ultimately
16 Captain Jackson adopted that method of improving flood
17 infrastructure and reducing flood risk. But it was
18 really, you know, a layman who, based on his experience
19 living on the Sacramento River, had said, hey, this is
20 what we need to do.

21 And ultimately the engineering community
22 adopted that. Army Corps was hesitant to do so at
23 first, but that's where I think a lot of our discussion
24 of people who have experienced this river, in addition
25 to the experts who are working on this every day, can

1 help better inform how we do things in the future. So I
2 think that's one part of the history that I think is
3 worth mentioning for our purposes today. I also point
4 out, you know, I think you used the word "record
5 floods," certainly we've had some big flood, '97 being
6 the biggest one.

7 I always like to point out that '97 was double
8 the size of what we experienced in 2017. So 2017 wasn't
9 anywhere close to what we have seen, but 1862, which I
10 don't think we could -- we ever measured, but historical
11 accounts talk about that being from one mountain range
12 to the other. The coastal to the Sierra Nevadas, that
13 was a huge event. And that shows us that we know, as
14 you said, this system can produce a lot of water down
15 that watershed. And we must always be on-guard
16 accordingly for those events. So I think that -- you
17 know, as we're talking about these things, you know,
18 putting them in that big historical context as you've
19 done, I think, are important.

20 And forecast-based operation, which I think we
21 are going to be hearing more about, I think, is
22 important. And in the 2017 event, one of the reasons we
23 didn't, at least, additionally -- initially, DWR didn't
24 think we were getting emergency spillway is because the
25 forecast that we were looking at didn't show us having

1 the kind of inflow that would reach emergency spillway.
2 That turned out to be wrong. So the more, you know,
3 increase that we can have in technology, and better
4 forecast, you know, what the wetness is, and what the
5 inflows are going to be, the better we can be prepared
6 in the future. So I think that's another -- that's a
7 probably very pressing issue for. And I know John will
8 be getting into that next, so thank you.

9 MR. LIPPNER: Thank you so much.

10 MR. NIELSEN: Thank you. There's a great book
11 about this history. It's more a history book than a
12 water book, but it's called Battle of the Inland Sea,
13 written many years ago. It's worthy of perusing.

14 One thing I would bring to our attention that
15 is not often talked about, but it is an integral part of
16 this Colusa Basin drain. I authored legislation many
17 years ago to create the drainage district for that
18 Colusa Basin drain at (Unintelligible) down in
19 (Unintelligible) County. It is worthy of some
20 consideration, and -- just keep that in mind.

21 Another thing is the problems of the homeless
22 population. They have gravitated now to our levees. I
23 took a boat tour here several weeks ago on the Yuba
24 River and Feather River. I was somewhat surprised by
25 the volume of residence on these levees, and how they

1 are living on these levees, and the degradation that is
2 beginning to be asserted on those levees, which I think
3 is in danger of weakening them.

4 This is complicated, but it is something
5 that's worthy of our attention. And lastly, the bypass
6 system. I'm a big student of bypasses levees, and I
7 like to emphasize that bypasses are storage facilities.
8 They are not havens for habitat, and parks, and
9 walkways, and recreation.

10 If you ever needed to emphasize the magnitude
11 of that, would be the Yellow Bypass. Many years ago,
12 the County of Yellow coveted that bypass and wanted to
13 buy it and convert it all kinds of lovely uses totally
14 inappropriate for the purpose of that bypass. And one
15 of the great examples is driving between Davis and
16 Sacramento on I-80, and you have a railroad trestle, you
17 have I-80, and framing that you have the wildlife area.
18 Now, that's a wonderful thing, but that is the tail end
19 of the bypass, and you put a cork in it.

20 Of all of these impediments where silt can
21 accumulate, stags can accumulate in that are. You
22 cannot have too many problems down there thus far, but
23 even the community of Davis has begun to worry about it.
24 These are other elements of the system is, and you have
25 to look at it system-wide. Thank you.

1 MR. NIELSEN: Yes, thank you for your report.
2 You mentioned the '97 event, and, you know, we almost
3 had -- if I remember correctly -- uncontrolled flows of
4 the Oroville Dam. And that system -- if I remember
5 correctly -- was forecasted almost a week before. And I
6 know it was bigger than they had planned on originally,
7 but that just goes to show the need for alternate
8 spillway that's slower. And I know that we're still
9 going to look at that, but I just want to emphasize that
10 point that, if we would have been able to release the
11 water out of the reservoir, a lot of water earlier,
12 maybe we wouldn't have had that almost catastrophic
13 event. We only dodged that by, like, two hours. Thank
14 you.

15 MR. CROWFOOT: Thank you. Gary, just really
16 quick on the Senator's question regarding the homeless
17 population, homeless encampments on the levees.
18 Obviously, a complicated topic. But thoughts from a
19 flood protection standpoint or a Department of Water
20 Resources standpoint?

21 MR. BRADFORD: Yeah, I mean, it's absolutely
22 on our radar. It is a very sensitive topic. We feel
23 for those people, their needs, and so forth. From --
24 also, though, from a technical perspective, from an
25 engineering perspective, and public safety, it is an

1 encroachment on the levees, and can affect the integrity
2 of the levees. So I don't have any answers, but we need
3 to work through solutions for that to address that
4 issue.

5 MS. WIDENER: And simply to add, the Central
6 Valley Flood Protection Board is really digging into
7 that issue in particular. And I know they've done a
8 couple of levee sight tours. Because, to me, it is a
9 quintessential area where it's going to be a state and
10 local partnership to be dealing with the effects of
11 homeless populations into the levees. Again, I don't
12 think we've identified what the exact strategy is, but
13 they're not a member of this body, but the Central
14 Valley Protection Board is absolutely our partner in
15 this discussion.

16 MR. FLORES: Just to add really quickly as --
17 I know you and Sutter County have just passed ordinances
18 saying, you know, prohibiting -- you can't be on the
19 levees themselves. So that's -- the locals are working
20 on it in conjunction with the state.

21 MR. BRADFORD: Let me add to that, too, what
22 we need is protection from the legal action that will be
23 coming as we're passing those ordinances. Because, you
24 know, we do believe it's in the name of public safety,
25 and especially with the protection of the levees. But

1 we're already getting letters and, you know, we're about
2 to get sued, I'm sure. So I don't know how we can get
3 those protections in place when we're doing this for the
4 good of public safety for both the homeless population,
5 and for all of the surrounding population. If there's
6 anything that can be done through our partnerships, that
7 can be really, really helpful.

8 MR. CROWFOOT: That's helpful to understand.
9 Councilmember?

10 MR. PITTMAN: Thank you. Gary, I appreciate
11 your conversation and presentation. I come from
12 management -- fire management field, and in California
13 we have two facilities called north ops and south ops.
14 And that's how we manager the fire resources up and down
15 the state. Does flood management or your office have
16 something similar to that in terms of an office, or
17 center, or maybe it's a desk in OES. Something like
18 that that we often look at. Because you've got a huge
19 job in coordinating -- I mean, you've got hundreds of
20 agencies to look at. And I'm looking from the small
21 local government perspective.

22 Some place that we can go to, to find out, you
23 know, the numbers, the expectations, the projections,
24 whatever the case may be. But also to be able to
25 operate like we do in the fire service with north ops

1 and south ops, those are, you know, our critical.
2 That's how we move our resources around. I'm just
3 curious if you have something like that, or something
4 similar.

5 MR. CROWFOOT: Yes. Great. Thank you for
6 asking. It's all about being prepared. And Department
7 of Water Resources has the flood operation center that
8 is in Sacramento. And it's at the joint operation
9 center facility.

10 So the National Weather Service is there,
11 there's federal partners, and then there's also state
12 partners there. And in any high water event, we might
13 activate the facility, the flood operation center, to be
14 activated during monitoring and worse flood events. We
15 certainly have an entire incident command team. As you
16 well know from managing fires, the incident command team
17 follows the (unintelligible) scale of nature.

18 We have three complete teams that can operate
19 the flood operation center. In addition to that, we put
20 flood expert at the state operation center any time
21 there's a -- at a certain level of activation. So we
22 work the department -- Governor's Office of Emergency
23 Services, and have the representative from flood at the
24 state operation center. And then going out a little bit
25 further, as you mentioned the north and south, it's a

1 very large state.

2 The Department of Water Resources staffs six
3 incident command teams throughout the state of
4 California that is tied into the flood center to be able
5 to work with the locals. And if the locals -- if it's a
6 flood issue or activity, that can be handled at the
7 local level, then they will work with locals to contact
8 the flood operation center to bring in more state
9 resources. So we have many resources out there. And
10 really, it's our flood operation center at the joint
11 operation center that is akin to that -- one of the key
12 core pieces to have that central command, if you will,
13 of information and so forth, and then can scale out
14 throughout the state of California, depending on the
15 level of emergency, and depending on what local needs
16 there might be.

17 MR. PITTMAN: Well, I appreciate that. And
18 his comments about the '97 event, I was -- in the fire
19 service, I was the coordinator when evacuations were
20 done in Oroville that night. And he is very right. We
21 were a couple of hours from a big problem. And we did
22 empty the town in about four hours, 12,000 people. But
23 one of the reasons that we did that is we had
24 face-to-face communications with the local DWR folks.
25 And that was a big help for us, because, you know, we

1 didn't have a picture of what was going on with the
2 reservoir, other than what was coming up every hour.
3 And that was a big help. So having these other
4 coordination teams throughout, I think is going to be
5 the big asset to all our local governments to be able to
6 contact folks, and get the information. So thank you.
7 Appreciate that.

8 MS. NEMETH: I would offer for the
9 commission's consideration, DWR would be glad to provide
10 a tour of the joint operations center if people have an
11 interest in seeing that, how that operates.

12 MR. PITTMAN: Absolutely.

13 MR. CROWFOOT: Yeah, and I'll just say, I
14 mean, I had a chance to do that when I worked with
15 Governor Brown, and it's impressive. It's like a state
16 operation center that OBS runs, but for flood. So I'd
17 recommend we do that. An open invitation, do a tour as
18 soon as possible in 2020. And then maybe actually have
19 the leaders of incident command team for this region and
20 join us in that.

21 MR. LIPPNER: Absolutely thank you for that
22 opportunity and asking for that. I think that would be
23 wonderful, and we will facility that.

24 MR. CROWFOOT: Good. Other questions? Then
25 let's move on to John. And John is going to give us an

1 overview of flood operations actually within the
2 reservoir, or at the reservoir.

3 MR. LEAHIGH: Yes. Good morning, cochairs,
4 commissioners. Yes, again, my name is John Leahigh. I
5 am with the Department of Water Resources, state water
6 projects operations manager. And I am going to dig in
7 more specifically on the Lake Oroville operations as it
8 relates to reducing flood risk.

9 So an overview of what I am going to provide
10 this morning is just kind of basic reservoir flood
11 control operations one-on-one, if you will. Kind of
12 what The Corps' role is in terms of overseeing the flood
13 control benefits of the dam. We are going to talk a
14 little but more specifically about what we have in place
15 for this coming year in terms of an enhanced flood pool.
16 I am going to then touch on the forecast and reservoir
17 operations, and then how that might relate to other
18 activities into the future.

19 So for any flood control reservoir, the basic
20 function is to reduce those flood flows to downstream.
21 So, you know, especially this Feather basin, as we've
22 already talked, we see very high inflow events from
23 atmospheric rivers through the winter. The purpose
24 for vacant -- part of the federal government's
25 investment in the dam was to hold 11 to 22 percent of

1 that lake vacant during the most at-risk months during
2 the winter. So essentially, the December -- well,
3 starting late November, the three most critical months
4 are December, January, February, and then start tailing
5 off in April, May. But that -- the purpose of this
6 space is to absorb these very large inflow events so
7 that we can maintain the outflow out of this facility
8 within the channel capacities downstream.

9 MS. NEMETH: If the levee is 22 percent, how
10 many acres does that equal out to?

11 MR. LEAHIGH: Yeah, that is anywhere from to
12 375,000 cubic feet to 750,000 cubic feet. What I have
13 in front of you right now is a graph of historical
14 Oroville inflows. And the calendar is a little bit
15 skewed here, starting in April, if you will, April, May
16 to June and July. But what you can see is that it is
17 these atmospheric river events that produce the big
18 inflow events.

19 You see the big one there in December,
20 January, February periods. And those are going to be --
21 the very highest events are going to be based on very
22 warm atmospheric rivers that the entire watershed would
23 be covered by the precipitation fall as rainfall. So
24 you get the direct runoff from the entire watershed.
25 There is some aspect of snow, there's snow covers.

1 Some of the snow will come off in those big
2 events. Those look to be about ten to 15 percent of
3 adding to the total of those big events. But the
4 primary reason is that the entire watershed is covered
5 with rainfall, rather than a mix of rain and snow. As
6 you can see, as you get into kind of the late spring
7 periods at the beginning of this graph, April, May,
8 that's where we start to see reduced risk in terms of
9 these atmospheric rivers.

10 We still do see a potential for snow, snow
11 melt into the reservoir. But those rates of snow melt
12 are much less than what we would get from an atmospheric
13 river. So it's a very small percentage of what we see
14 from the very large events. And those can more than be
15 met capably by the outflow of facilitates of the dam.

16 So this is the flood control diagram that we
17 have been referring to this morning. And under Lake
18 Oroville, is what's called a Section 7 Dam under the
19 1944 Federal Flood Control Act, where the Corps engineer
20 has the flood control oversight of the facility. As I
21 said, they did invest in that space. And this is the
22 actual diagram from the 1970 water control management
23 that shows that everything from 375,000 to 750,000 cubic
24 feet of required vacant storage.

25 Now we will encroach into this space during a

1 flood event, a large flood event. By the nature of it,
2 that is the attenuation of those peak inflows.

3 MR. CROWFOOT: And, John, this is a unique
4 looking graph. So can you walk us through what we are
5 actually looking at?

6 MR. LEAHIGH: Yeah. And so this is the -- on
7 the left-hand -- it's hard to see. Again, this is the
8 actual -- the actual print taken from the water control
9 manual. So on the left-hand axis is the amount -- I
10 don't know if you can make it out very well, but that
11 does show you the flood control space that needs to be
12 vacant. And that does very -- at the top end line,
13 that's 375,000 all the way to 750,000 at the very
14 bottom.

15 So that represents the space that needs to be
16 left vacant to absorb very large storms during the
17 high-risk months. You can see months across the X-axis
18 there. And so starting, actually, in October --
19 starting in October, we would need to start providing
20 that space. Now, that's typically not an issue in
21 October because the lake is typically well below these
22 levels as we are today.

23 So, you know, the lake today is about
24 777 feet. The very bottom of this is 848 feet. So we
25 are well below the bottom that's required currently.

1 And the reason this varies is that it's based on the
2 wetness -- what's called wetness index of the watershed.
3 So the more saturated the soil is in the water basin --
4 for a like amount of -- the more saturated it is, the
5 more runoff is expected.

6 So if we've seen a lot of recent rains, we
7 need to increase that vacant space to absorb bigger
8 storms. That's why this varies. And the numbers here
9 are the wetness parameters that dictate how much space
10 is required. As we get into March, the threat of the
11 atmospheric rivers lessens, and so we can then start to
12 refill the reservoir with that snowmelt through the
13 snowmelt process for water supply, recreational benefits
14 as we get into late spring, early summer. This next
15 graphic actually might help -- help show this little.

16 MR. CROWFOOT: Can you -- just briefly,
17 when -- this has been in effect since what year?

18 MR. LEAHIGH: 1970.

19 MR. CROWFOOT: Got it. Older than me.

20 MR. LEAHIGH: The lake -- this is actual
21 storage in Lake Oroville. So for this last year, last
22 water year -- which, water year is from October 1st
23 through September 30th -- the solid blue line is the
24 actual storage in the lake. So this is a full
25 3.5 million here on the Y-axis. And what's shown here

1 in the dash lines, the black dash lines, that's the same
2 space that I showed you in the previous diagram. And
3 this red line tells us on any given day what the
4 required vacant storage is required in the lake.

5 So that's based on that wetness index, as I
6 indicated. So this tells us, then, around somewhere in
7 late November, we had enough rain that it started
8 triggering the requirement for more vacant space. So
9 you can see how that goes down, and it goes down to the
10 maximum here by the time we got to late January. It was
11 a wet year last year, so there was a long period where
12 we were required to allow for the maximum amount of
13 vacant space. Right here at April is -- you can see
14 that we started to encroach. We were -- at that point,
15 we were unable to manage the inflows with just the
16 high -- power plant at that point.

17 And so in order to get out of that
18 encroachment, that's when we triggered -- that triggered
19 the use of the gated spillway. And that was the first
20 use after reconstruction. So that was -- this shows you
21 visually what was going on in terms of -- of what
22 triggered the use of that. So if we stay below the red
23 line there as we went, you can see a pretty dry spring.
24 We did have a decent snowpack, so that was providing the
25 good inflows which allowed us to refill the lake,

1 essentially, as we got an early summer.

2 MR. CONNELLY: If I may? This would be a much
3 more effective chart for the public if you had the
4 elevations on the other side of the chart, from 900 feet
5 down.

6 MR. LEAHIGH: That's a very good suggestion.
7 Okay. We'll look and see if we can add that. And this
8 is a chart that is available. It is posted. So we can
9 look to make that.

10 MR. GALLAGHER: And, John, just really
11 quickly, the lower -- the lowest dotted line is showing
12 where we actually adjusted the flood bumper; right? For
13 this last ops year. So normally, you would have to keep
14 it below that -- that second line, but we kept it even
15 below that third line this last year. Can you explain
16 that?

17 MR. LEAHIGH: Yeah. I haven't introduced that
18 yet, it's later in the presentation. But you're right,
19 Assemblyman. This is actually includes the enhanced
20 flood pool that we put into place this last year, and
21 which we are -- will do this coming winter as well.

22 The actual 1970 flood control diagram you see
23 right here at about just below 2.8 million, it flatlines
24 across the entire winter until we get to this point here
25 in April. So this also shows the enhanced flood pool

1 that DWR has done unilaterally going through the proper
2 approval processes through the Corps to provide some
3 enhancement to that flood protection. And so that is
4 depicted here. I am going into that little bit more
5 detailed later in the presentation. So this is just to
6 look at, again, that continuation of the inflows.

7 So look at some comparisons here to historical
8 events, and then what's called the standard project
9 flood, which is essentially the design flood for sizing
10 that flood pool. And so you can see that an inflow of
11 close to -- that design flood has a peak inflow of close
12 to 450,000 acre feet. And so the design is to be able
13 to absorb a flood of that magnitude and have a release
14 of only 150,000 from the lake. So that's the
15 attenuation that that space is designed to serve in
16 terms of the risk reduction. This you can see here,
17 other years, prior to the construction of the dam, what
18 came in through the dam in 1955 was 200,000 cfs inflow.
19 Of course there's no dam, so we had 200,000 cfs down the
20 channel.

21 Post Oroville, you can see the continuation
22 effects that have occurred to make use of that vacant
23 space. 1964, '86, we talked a lot here about '97 peaked
24 at over 300,000. The lake was just over 150,000. And
25 then here in 2017, we had a peak close to 200,000. The

1 most we released was 100,000 out of lake. So that shows
2 you the attenuation effect of that vacant space.

3 Here's another graphic just putting in context
4 what these storms look like. So this is hours of the
5 event on the bottom. This is the inflow in hundreds of
6 thousands of CFS. The design event I was about, the
7 standard project flood, is in red here, and that shows
8 it peaking out at about 450,000 CFS. To put in context,
9 the yellowish line here is the 1997 event that we've
10 been talking about that peaked at 300,000. Somewhat
11 unusually shaped hydrograph in that it did plateau out
12 at that 300,000 CFS mark.

13 Here's the 2017 event, February, in blue. And
14 so as Assemblyman correctly pointed out, '97 event, much
15 larger event than what we saw in 2017. And design flood
16 is even larger, still, than what we saw in 1997.

17 MR. GALLAGHER: And, likewise, it would be
18 helpful, if you could, to not include the reservoir
19 elevations on this, too.

20 MR. LEAHIGH: So that -- unfortunately, the
21 flood control picture is even more complicated than
22 that. Because, if it was just one reservoir we were
23 managing to, it would be pretty cut-and-dry in terms of
24 what I just presented. There's another element to it in
25 that it is a system, it is a Yuba Feather system that

1 we're talking about. So, most important benefit of --
2 flood control benefit of these dams is to minimize the
3 flow downstream, not exceed these channel capacities.

4 What's shown here is also part of our flood
5 control manual at the core. Do not exceed these --
6 these flow rates at various locations downstream. Just
7 upstream of Yuba City on Feather River, on the Yuba
8 River, there are also downstream controls. Downstream
9 of the confluence with the Yuba, 300,000. So the flood
10 control operations for Oroville and Bullards Bar are
11 definitely integrated in terms of, we have a shared
12 responsibility in maintaining those levee capacities
13 downstream.

14 Now, this is -- this is an important item in
15 terms of that coordination. In the original 1970 flood
16 control manual, there was an assumption that Marysville
17 Dam would be built, which would have been a flood
18 control reservoir, would add part of its purpose as
19 flood control, which would have been able to manage all
20 the branches -- I apologize, the other branches in the
21 Yuba River didn't come up very well on the slide. But
22 essentially, the Bullards Bar only manages one of three
23 major branches of the Yuba River. The other two will
24 essentially be unregulated flows. And so because of
25 that, the fact that it's a Yuba water agency, or those

1 other flows are not controlled, we would need to cut
2 back on releases to the Feather River to ensure that the
3 downstream control below the confluence at 300,000 is
4 maintained. And so although the 1970 manual did
5 contemplate Marysville Dam to be built, it also had some
6 alternative flood routings that assumes it was not
7 built. And that cutback on releases from Oroville were
8 causing surcharge of the lake because we can't store
9 water above (unintelligible) for a big flood event. But
10 that would activate the emergency spillway in a process
11 such as that. So I'm giving you that background because
12 that feeds into what we've talked -- to what I've just
13 talked about earlier, the enhanced flood pool. So
14 because of the -- because of the work that is being done
15 on the Marysville spillway during the recovery process,
16 we had a need to limit the risk of that surcharge-type
17 operation. So in recognition of the fact that
18 Marysville Dam does not exist, we wanted to be able to
19 pass that standard project flood without activation of
20 the emergency spillway. And so that requires digging a
21 little deeper in that flood pool in order to maintain
22 that same level of flood risk that -- absent to
23 Marysville Dam. And so what we put in place, as you can
24 see here, we just added in red, we have further drawdown
25 of the -- so black is the 1970 flood control

1 requirements. Again, this is the dry watershed. This
2 is the wet watershed down here. And so we added
3 several -- about a 170,000 in feet to the wet
4 requirement, and a lesser amount here on the dry. But
5 it has the same sort of progression from a -- the dry
6 wetness index to a wet index, especially to compensate
7 for the fact that Marysville Dam is not there to ensure
8 the same level of risk and not activate the emergency
9 spillway under that standard project flow. So now I am
10 going to talk a little bit about the --

11 MR. CROWFOOT: Maybe just go back. So then --
12 so then, essentially, that standard curve been in place
13 for 45, 50 years was adjusted, in part, because of the
14 emergency -- or the standard spillway was being
15 reconstructed. So ultimately, is this the expectation
16 going forward, or would it be modified back now that
17 we're back to normal operation?

18 MR. LEAHIGH: Yeah, I'm sorry. So that was
19 during construction. So we have recent improvements on
20 the emergency spillway. Thus meaning those improvements
21 and performance has been assessed as part of this
22 comprehensive needs assessment program. We don't have
23 an analysis yet. So we are going to continue to operate
24 with this enhanced flood pool until we get more
25 information on the risk assessment.

1 MR. CROWFOOT: Got it.

2 MR. CONNELLY: I got to point out
3 historically, though, if the Marysville dam was built in
4 the original operations, the lake would have been held
5 lower, and Oroville Lake wouldn't have been held as high
6 because you wouldn't have the water delivery pressures
7 that were promised under the Bond Act. So there is an
8 another backstory to this. I mean, without the
9 Marysville dam, the new norm became attainable at
10 900 feet. And if you read way back, it was right at the
11 Spillway 813. There's water delivery pressures. People
12 mind this.

13 MR. LEAHIGH: I can only speak as to as far as
14 how it was treated (Unintelligible) water. Excuse me.
15 So now I am going to touch a little bit on the Yuba
16 Feather forecast informed water operations initiative.
17 So this would represent the third official FIRO project.
18 The Corps has officially endorsed and adopted this FIRO
19 program. There are two other -- Lake Mendocino was the
20 first lake to start down this path for (Unintelligible)
21 reservoir operations. And Lake Prado down in southern
22 California is a dry dam essentially, by they've --
23 that's the second dam. So the Yuba Feather system is
24 kind of unique because it is a coordinated system. And
25 looking for the use of that FIRO project, you can see --

1 the agencies of the leads are the Department of Water
2 Resource, Yuba Water Agency, and other major partner is
3 Scripps Institute, and there's Center for Western
4 Weather and Water Extremes. Dr. Marty Ralph is one of
5 the foremost experts in atmospheric rivers, so he's one
6 of the co-chairs of this Yuba Feather FIRO project. And
7 you can see the other members here with the Corps, we
8 have both on their engineering and research development
9 side of the house, plus our operations folks who are the
10 ones that develop water control manuals. For NOAA, we
11 have National Weather Service, and we also have National
12 Marine and Fishery Service. So they are involved in the
13 process and are aware of it as it moves forward. And,
14 of course, the water -- state water project operations.
15 Yes, we have Sonoma County is part of team here to
16 provide some insight from some of their experience in
17 the Mendocino FIRO program. And to me, what it really
18 boils down to is two components of FIRO; one is to
19 invest in the instrumentation and research into
20 improving those forecasts. That was pretty much a
21 no-brainer. The second component is can our skill level
22 at forecast be applied to operational changes in how we
23 manage the dam in terms of how we get more out of the
24 flood control and water supply benefits that the dams
25 provide. And so I think the jury's still out on that

1 one. We need to go through the process. But certainly,
2 I think there's a lot of potential there. Lake
3 Mendocino has demonstrated that, at least for their
4 reservoir, it's potentially a good fit. And -- so Yuba
5 Water Agency in Bullards, I'm very interested in it as
6 it related to their new infrastructure that they are
7 looking at. And there certainly would be some aspect
8 related to any update of the water control manual as it
9 relates to Lake Oroville as well.

10 MR.GALLAGHER: Just a question as it relates to 2017,
because
11 it sounds like the concern has been that we didn't -- we
12 weren't able to anticipate that the storm was going to
13 be as big and move like it did, or sit over the
14 watershed like it did. So is one hope for this forecast
15 and form reservoir operation that we're going to improve
16 our ability to forecast such storms?

17 MR. LEAHIGH: Yes. That is -- that is the
18 hope. I will say the operations in 2017, as we probably
19 know, was not -- it was an unusual, because it was an
20 emergency situation. We have deviations from that water
21 control diagram in coordination the Corps because of the
22 emergency on the failure of the main spillway. So we
23 were operating at a level much higher than -- so we were
24 not providing that -- that buffer. And so inherently
25 there was additional because of that, because we were

1 balancing the various risks occurring at the time. But,
2 generally, yes, that is correct. We are looking for
3 improvements in those forecasts to better manage both
4 the water supply benefit, and the -- certainly the
5 (Unintelligible) side of it.

6 MS. NEMETH: John, can you say a little bit
7 more about the no-brainer instrumentation that you were
8 describing, and some of the work that DWR has done?
9 Maybe, Ted, you could add to it. But some of the new
10 things we've put into place to more accurately forecast
11 for watershed.

12 MR. LEAHIGH: Yeah. So we've already made a
13 number of investments in new instrumentation. So for
14 example, one thing that's very important in terms of the
15 research on these atmospheric rivers is getting a better
16 handle on where is the -- essentially, where's the
17 freezing line in the atmosphere? So the department has
18 invested in a couple of these upward -- upward-looking
19 Doppler radar that will give us a good read. We have at
20 Thermalito. We also have on the coast because you want
21 to track these things as they come inland. And this
22 will be a huge benefit to the research on getting a
23 better understanding of these -- of these systems as
24 they come in. And that is one -- that is probably one
25 of the key uncertainties to pin down is, where is that

1 freezing line in the atmosphere. Because, like I said,
2 the biggest risk events are those atmospheric rivers
3 that -- where the freezing line is above the elevation
4 of the highest pointed watershed, and so rainfall is on
5 the entire watershed. So the other thing we've invested
6 in, the state has partnered with others -- the federal
7 government -- in terms of during the next few years of
8 the FIRO program where the Air Force flies what's called
9 these hurricane hunters in the -- in the -- during the
10 hurricane season, which is essentially June,
11 July through November. And fortunately for us, that's
12 the exact opposite time of the year of when we have the
13 atmospheric river risks. So we are funding these
14 hurricane hunters to act as atmospheric river hunters,
15 if you will, on the west coast. So we have a number of
16 flights that will be getting ocean observations that
17 will be flying into these atmospheric rivers as they
18 develop over the Pacific. So that's just a couple of
19 examples. We are also going to be funding new
20 monitoring within the watersheds in both the Yuba River,
21 and the Feather River, soil moisture climate station
22 facilities. So all of these will be benefits as part of
23 that program.

24 MR. GALLAGHER: Just really quick on that. I mean, so this
25 --this should significantly improve the data and

1 information we have that -- that we have to help kind of
2 see what these events are going to do that we did have
3 in 2017; right?

4 MR. LEAHIGH: That is -- that is certainly the
5 hope, yes. We talked to Dr. Marty Ralph, and he feels
6 very confident that -- that improvements can be made. I
7 personally would caution that, you know, science takes
8 time. Takes time to get data. Takes time to utilize
9 that data to improve forecasts. But that is -- that is
10 certainly the -- what our expectations would be.

11

12

13 MS. NEMETH: And that's really what we'll be
14 bringing to the table when we're working with the Corps
15 to update the flood manual. We want to make sure we're
16 doing as much investment as we can now with some of
17 these new technologies. Because, ultimately, you know,
18 we need the Corps to, you know, find them, be
19 comfortable with them. And we need their agreement to
20 help us use this new data to shape a new flood curve
21 that everyone has confidence in.

22 MR. CONANT: I'd like to say that Butte County
23 is really attuned to this and agree with you. The Corps
24 has been very linear in their thoughts, and not very
25 flexible. And as the science develops, it may be that

1 the fluctuation of the reservoir putting public safety
2 first will have to be greater. So we would like to
3 cooperate with you in any endeavor to change the Corps'
4 mind by whatever means. Thank you.

5 MR. CROWFOOT: And, John, you mentioned, you
6 know, a lot of this takes a while to develop. But
7 then -- Director Nemeth mentioned that there's some
8 instrumentation that's already been put in place. So
9 when we have our next meeting, or the following meeting
10 after the wet season, it will be helpful to get an
11 update from DWR in terms of how that instrumentation
12 performed like this winter.

13 MR. LEAHIGH: Absolutely.

14 MR. CROWFOOT: Good. Let's move --

15 MR. LEAHIGH: Just a final slide. It kind of
16 touches on what Karla just mentioned. So all of these
17 things that I just covered, the work that we've done in
18 terms of developing this interim flood control operation
19 strategy, including the enhanced flood pool. So flood
20 engineering went behind that. The comprehensive needs
21 assessment for dam safety, that program, and the FIRO
22 program, all of those we see as components to how
23 informed these -- these are components that the Corps
24 can use when they go through that update process at the
25 water control management. So we're laying the

1 groundwork here for The Corps to use. And we're taking
2 some initiatives to -- prior to an update taking place.

3 MR. CROWFOOT: That's really helpful. I want
4 to do a time check. I want to make sure we have at
5 least 45 minutes for public comment.

6 UNIDENTIFIED SPEAKER: John, I appreciate your
7 discussion, especially '97. Our family have property up
8 at the 5,000-foot level, we have four-and-a-half foot of
9 snow. And then morning by 3:00, we had no snow. And
10 how do you, you know, track that, and how do you see
11 that? Now, we knew that because of a very strange
12 (Unintelligible). You made a -- mentioned about having
13 Doppler and more Doppler information. Oroville does
14 have a Doppler that's operated by Beale Air Force Base.
15 I'm wondering if maybe a Doppler, a DWR Doppler, in the
16 Feather River Basin watershed might be the better idea
17 to get more specific information. Because, when those
18 cells come running through -- and we all watch them when
19 we see the colors -- that would probably be a great way
20 for you to get direct information. And there's a lot of
21 mountaintops that probably could well be suited to that
22 operation.

23 MR. LEAHIGH: Yeah. And I -- so that's
24 exactly what the, you know, purpose of these
25 upward-facing Dopplers is. And so that -- that

1 installation already occurred a couple of years ago,
2 both at the (Unintelligible) which is -- that's at the
3 direction of which the storms are coming. So that would
4 give us a very good idea of how much of the watershed is
5 going to be impacted by rain versus snow effect, which
6 is incorporated from The National Weather Service, and
7 the California Nevada Corps Cast Center in terms of
8 developing those forecasts. So they're looking at more
9 components. They're looking at snowmelt that would be
10 occurring during these events, as well as the direct
11 runoff.

12 UNIDENTIFIED SPEAKER: That was a very strange
13 day to see all that gone in one day.

14 MR. LEAHIGH: That is an area of a lot of
15 research is, exactly how much is the snowmelt during
16 these events contributing to runoff. You know, early
17 indications are, there's about a 10 to 15 percent
18 increase in those events. But that is definitely an
19 area of a lot of research.

20 One last question. As I understand it, we're
21 seeing warming winter temperatures. That means more of
22 our precipitation will be, you know, rain and snow over
23 time. So as you plan for the, you know, future of flood
24 protection in this watershed, are you all considering
25 what that trajectory looks like, you know, rain versus

1 snow in incoming decades?

2 MR. LEAHIGH: Yes. That's a big part of it.
3 So the Central Valley Flood Protection Plan is looked at
4 at the climate change effects on individual basins. The
5 one take home is that -- not the standard project
6 flood-type events. They are already making assumptions
7 of very warm storms and much of the watershed. So they
8 are already kind of on the extreme end. But it's these
9 more intermediate-type storms that they think they would
10 occur more frequently. But certainly, they still fit
11 within the design parameters of the flood control
12 diagram as it exists today.

13 MR CROWFOOT: Got it.

14 MR. LEAHIGH: But that's an active area of
15 investigation as well.

16 MR CROWFOOT: Thanks so much.

17 MS. NEMETH: Your flood control, you know,
18 presentation is great. I guess the only thing that I
19 wonder about is how it relates to water delivery. I
20 think that, you know, it's such a balance between flood
21 control and water delivery in this reservoir. It would
22 be helpful for the public to understand a little bit
23 better how those things are managed. I know that last
24 spring, when we did (Unintelligible) for the first time,
25 there was a lot of concern from the community. You

1 know, rightly so; it was the first time using it. When
2 we were approaching that encroachment, a lot of people
3 in the community were wondering why releases weren't
4 being made -- high releases weren't being made before we
5 got into it. So I think it would be helpful for people
6 to understand that balance more of water delivery and
7 flood control

8 MR. LEAHIGH: Yeah, good -- good comment. And
9 I think maybe that does pretty well with the next topic,
10 perhaps, which is communications. But essentially, the
11 flood control diagram shows where that boundary is
12 between conservation and flood control protection.

13 UNIDENTIFIED SPEAKER: That's the point there.
14 It's the inverse; right? Like, you're looking at,
15 obviously, the flood protection. But the other side of
16 that is how much you're trying to keep in the reservoir
17 for water deliveries later in the year; right?

18 A. That's right, yep.

19 UNIDENTIFIED SPEAKER: I would just add that
20 in this case, you have, you know -- you know, looking
21 over your shoulder at the Army Corps of Engineers,
22 right, which has a statutory, you know, flood control
23 flood or flood risk reduction responsibility that's, you
24 know, has a reputation of being very conservative as it
25 relates to flood risk. So you know, the way I would put

1 it -- and DWR, obviously, does have a (unintelligible)
2 flood protection water supply, but you also have, you
3 know, The Federal Flood Agency ensuring that you're
4 operating in terms of flood safety parameters.

5 MR. LEAHIGH: Yeah, that's fair. I mean, that
6 was -- the federal investment in the dam is for flood
7 protection, and it's the basin storage. So that's what
8 they've invested in, that's what they oversee to ensure
9 that we operate.

10 MR. GALLAGHER: And I don't think anybody is
11 saying that you're not following those guidelines. I
12 don't want to be misunderstood there. But what I'm
13 saying is that curve that we were looking at, the first
14 one, the Army Corps flood manual curve, is, one,
15 outdated. I think pretty much everybody up here agrees.
16 And if you look at that curve, what is -- you're
17 measuring for that flood pool that they established;
18 right? But on the inverse, the other side of that,
19 you're managing to maximize the amount of water that you
20 keep in there below the flood curve for water
21 deliveries.

22 MR. LEAHIGH: That's right.

23 MR CROWFOOT: So it's the inverse.

24 MR. LEAHIGH: Yeah, it's important.

25 Multipurpose.

1 UNIDENTIFIED SPEAKER: I guess what the
2 Assemblyman is saying -- I'm Mr. Blunt -- we were in
3 Washington D.C. talking to the Army Corps, and they
4 were -- I think we got to change their minds about some
5 things. I mean, they're attitude was, well, if we, you
6 know, almost flood you every ten years, we're doing our
7 jobs. "Don't build in a floodplain." And I think the
8 Assemblymen tried to do an eloquent job of changing
9 their mind. I did a less than effective job of changing
10 their mind. So we did have an issue here that, as a
11 local representative, I think we want absolutely public
12 safety first. And I understand the unspoken pressures
13 of water delivery, because that's what this reservoir
14 was built for. Thank you for your question, gentleman.
15 But we're going to have to work together to change the
16 Army Corps' attitude and put that safety in front of
17 water delivery. Thank you. How was that?

18 MR. CROWFOOT: So let's do this. John, thank
19 you. I want to take -- we have an update on
20 communications, and I want to spend 15 minutes on that,
21 and then move to public comment, if we could.

22 MS. MELLON: I'll try to be efficient so that
23 we make sure we get enough time for public comment. I'm
24 Erin Mellon. I am the assistant director of public
25 affairs office with the Department of Water Resources.

1 I came onboard soon after the February 2017 incident. I
2 helped out with the reconstruction communication, so
3 I've met many of you. And for those who I haven't met
4 personally, thank you for having us today, and thank you
5 for your participation in this. I was told how to
6 advance a slide, but I forgot. It's not that one. I
7 only have one slide, so it should have been easier than
8 it was. I think, you know, a lot of the information
9 that we provided today -- obviously, what's really
10 important to you all is getting that information, having
11 it in an accessible, easy-to-understand way that you can
12 share with your communities, your constituents, and also
13 having a direct line of communication with the general
14 public. And I think we are continuing to learn about
15 how to do that. And we really appreciate your feedback
16 and guidance. Because, as we make those attempts,
17 sometimes we miss the mark, and it helps to hear from
18 you about how we can adjust that, either in how we're
19 talking about those things, or the tactics and tools
20 we're using in order to deliver those communication
21 tools. So I am going to give you kind of an overview on
22 some of the resources that we have available now. And I
23 am going to talk specifically about some of the
24 communication efforts that we want to put in place in
25 this -- and for every future -- wet season. I'll start

1 off with the slide that's up on the board. Liza
2 Whitmore. So before February 2017, we didn't have a
3 communications public affairs person in Oroville. We
4 created that position. We hired Liza Whitmore, who's
5 here raising her hand. Liza is a resident of the area.
6 She was a resident of Paradise. Unfortunately, lost her
7 home to the fire, as many of your constituents, and
8 friends and family, I'm sure, did, too. So now she's in
9 Chico. She is going to be our point person. She, I'm
10 sure, has met a lot of you. She's available to come to
11 meetings, present about DWR, or facilitate those
12 conversations when we need the experts like John, and
13 Gary, and folks. So her contact information is up on
14 the board. Also up there are the e-mail address and
15 phone number that we sent up after the February 2017
16 incident. We don't get nearly as many calls as we did
17 over the last two years, so we're feeling a little
18 lonely. So if you want to pick up the line and give us
19 a call, that's the best way to reach us. You'll get an
20 automated voice mail, but we will call you back in
21 person. The e-mail address is also really helpful.
22 That's where we want to consolidate all of your
23 questions, because it's where we can track and make sure
24 that we're getting back to you. It's also where you
25 would -- I know there's a question on -- the topic dam

1 (Unintelligible) earlier today about how get
2 information. That e-mail address sends out weekly
3 updates about all things that we're doing up in Oroville
4 field division, it gives traffic updates. We work with
5 our partners at Parks, Fish and Wildlife, also the CHP
6 as well, and Butte County Sheriff to make sure that
7 we're communicating information about public safety.
8 It's also where we post information about operational
9 changes, and reservoir levels, and (Unintelligible).
10 That actually -- so we send that electronically every
11 Friday. And we are also running that information in an
12 advertisement in The Chico Enterprise Record, and that
13 comes out on the weekends. I think an important tool
14 that we're employing are meetings like this. And I
15 thank you, Senator Nielsen, for setting this up, because
16 I do think the most effective way is a conversation.
17 This kind of meeting facilitates that. There was a
18 question, also, at the site visit this morning about the
19 comprehensive needs assessment, which I know many of you
20 participated in as well. There's a community ad hoc
21 group that we meet with on a regular basis and walk
22 through that process of looking at that facility as a
23 whole. It's your point, Supervisor Conant, that's kind
24 of where the discussions about potential needs for
25 additional ways of releasing water from the reservoir

1 and, you know, addition outlets. That information and
2 those meetings are videotaped and they're on our
3 website, and people can engage in the department through
4 that. Our website, of course, is a fantastic resource
5 that I really encourage you all to check out. It's
6 where we put our reports. We made a very significant
7 effort to increase our transparency, so that's where
8 information about use of the spillway is used, and
9 inspection reports, and stored information as well. We
10 have, obviously, press releases. And we do pretty
11 regular blogs, and will be doing a blog specifically
12 about winter operations, and have done that for the last
13 two years. Social media, of course, I don't have that
14 on my slide, but Gary Lippner did on his. We are on
15 Twitter, and Facebook, and Instagram, and LinkedIn, and
16 YouTube, and all of the instants, and things, and
17 filters, and whatever else it does. That's a really
18 handy way for us to put out short bits of information
19 that are maybe, you know, more timely. We also post a
20 lot of videos and photos, have a couple million hours of
21 video footage of the reconstruction effort, and things
22 like that. So I would encourage subscribing to our
23 YouTube channels. As far as the winter operations -- or
24 operations generally -- what we've worked on doing is
25 identifying what I'm calling "trigger points" of when

1 there's activity happening where folks are -- increased
2 questions about what's happening with lake levels and
3 operations come into play. To your point, Genoa,
4 allocation. That's a big thing that there's a
5 connection point between what's happening at the
6 reservoir, and decisions made about allocations. The
7 department tries to communicate about all these
8 different things. What I think we don't do well, that
9 we need to work on, is breaking down the silos between
10 these different kinds of parallel efforts. Because, we
11 talk about allocations, but you don't necessarily talk
12 about allocations as it relates to Oroville. We talk
13 about our snow surveys, but we don't necessarily talk
14 about snow surveys and the water content in those snow
15 surveys as it relates to runoff into the reservoir. And
16 that's where I think we need to a better job of
17 connecting those dots. So some of those triggers, like
18 I said, allocations or changes to lake levels due to
19 either deliveries for water supply, or environmental
20 water quality releases. Obviously, water storms. When
21 we see atmospheric rivers upon the horizontal, we want
22 to be communicating a lot, often, early, and frequent.
23 Similarly, dry weather. You know, when we're seeing a
24 pattern of many days or months of no water, that
25 obviously has an impact of recreation, like ramp

1 availability and things like that. Another thing that I
2 identify as a trigger are our lake reports. So when we
3 are issuing a report about the performance of the
4 spillway, or when there's independent review of that
5 report, we want to make sure that we are getting them
6 into folks' hands so they can review it in real time. I
7 talked about snow surveys and snowpack, that's another
8 good example of trying to be more specific about how
9 that information informs the decisions that folks on
10 John Leahigh's team made for Oroville. And then
11 lastly -- there's a whole list of these, but one that I
12 will touch on is construction. I am going to steal a
13 bottle of water. Sorry. Thank you. Obviously, the
14 last two years have been a lot of construction. We've
15 had to make adjustments to the operations, and like John
16 was talking about, the enhanced flood pool, which is
17 related to the operations. And now, as we move into
18 implementation of the comprehensive needs assessment,
19 and the lake that (Unintelligible) that, there may be
20 adjustments to lake levels. So that's another thing
21 that we want to make sure we're connecting those dots
22 on. What I've heard from you all -- and specifically
23 thank you to Senator Nielsen's office, and Assemblyman
24 Gallagher, your staff has been very communicative about
25 what you guys need from us. Timeliness is really

1 important. Excuse me. I'm getting over a cold. We
2 want to be very proactive for our communication. Like I
3 said, we want to come out ahead of these things. We do
4 try to do that. We make the commitment to keep trying
5 to do that. Sometimes we will do it better than other
6 times. I think another one is "show not tell." And
7 some of the data that John Leahigh presented, and the
8 suggestion to add elevation levels, that's a really
9 helpful suggestion. Giving you guys that data, and not
10 trying to describe it, but actually just provide it and
11 maybe give our assessment of it and explain how we use
12 it. But let you guys see it as well so that you can
13 make your own conclusions. I also think -- excuse me --
14 giving you all more access to our experts. So we have
15 John Leahigh here in the office. We have Gary Lippner
16 and his (Unintelligible) team. We also have a state
17 climatologist. Providing more opportunities like this
18 to present, videotaping their presentations, pushing
19 that information out, doing Q and As, and answering some
20 of the most common questions; these are some of the
21 tactics that we are going to be using moving forward,
22 including all of the other communication tactics that I
23 kind of went through. So that's a broad overview of
24 what we're thinking about. Like I said, I'm going be --
25 I'm committed, and our team is very committed in

1 (Unintelligible) direction to open, transparent, and
2 frequent communication. So -- excuse me. Thank you for
3 this opportunity. And I'm about sorry about the cough.

4 MR CROWFOOT: No worries. Just one key take
5 away, to me, when we were up at the dam this morning,
6 somebody said, hey, how do I -- how can I actually sort
7 of stay in the loop on what the DWR is doing? And it
8 sounds like you have a Listserv that people can sign up
9 for that puts out an update every Friday?

10 MS. MELLON: That's right.

11 MR CROWFOOT: And then presumably, this
12 winter, if they are big storms coming through, or what
13 have you, and you want to provide, you know, more
14 information, you'll use that Listserv?

15 MS. MELLON: That's exactly right. And the
16 way to get logged onto that is by e-mailing that
17 (Unintelligible). And like I said, the Friday is like a
18 standing e-mail. But to your point, Secretary, as these
19 triggers happen, and as things change, we see weather
20 patterns, we will increase that communication on all of
21 these -- through all these platforms.

22 MR. CROWFOOT: Great. Thank you.
23 Assemblyman?

24 MR. GALLAGHER: So this is big issue for me.
25 And I know Erin has heard plenty from me and my chief on

1 this issue. We have to do a better job. I am just
2 going to say very quickly, DWR has to do a better job of
3 communicating during -- you know, during the flood
4 season, during the winter periods. I mean, there's
5 several things that you brought up, but what I really
6 want to hear -- and I am just going emphasize that
7 again -- is that not that we have to communicate. I
8 mean, we are trying to communicate. But DWR has to
9 communicate, otherwise there's going to be a vacuum
10 that's going to get filled by something. And so I'll
11 just give an example. This last time, there was a lot
12 of people wondering, hey, why aren't you doing more
13 releases? Why are you allowing the lake level to rise?
14 We see that there's a snowpack up there, that, you know,
15 this could lead to a significant situation. DWR said
16 nothing. There was nothing out there on social media,
17 on any -- any method of communication. I had to --
18 ultimately, I got on the phone, I talked with you guys.
19 And our office literally had to relay what I got from
20 and you the state climatologist. We did that on May
21 16th. You wouldn't believe the amount of things I got
22 back from people like, thank you for finally somebody
23 saying something about what's going on, why they're
24 doing this. And it was just getting out factual
25 information. So you guys have to do that. Like -- and

1 I'm not looking just at you, Erin -- you have to have a
2 way of communicating. Here's why we're doing these
3 things at the dam, and explaining some of that
4 information in a simple way, you know, to the public.
5 Because when there's nothing out there then people --
6 you know, all they can do is speculate. You know, or
7 all they can do is go off what they're seeing
8 themselves, or maybe what somebody else is saying. And
9 that information may not be correct. And it could
10 cause, you know, kind of a hysteria. So we do need to
11 hear directly from DWR. Certainly, you can help us and
12 provide people to us. And we'll help communicate that,
13 too. But it has to be DWR. You guys are the ones
14 running, operating, maintaining, doing all the, you
15 know, things up there. So the communication has to come
16 directly to the public. So I mean, I just want to
17 really emphasize that point, and make sure that we do a
18 lot better this season on that issue.

19 MS. NEMETH: So I am in 1,000 percent
20 agreement. And sort of in that spirit, I think a lot of
21 what Erin described today needs to be written and known.
22 So to me, predictability is really important in terms of
23 communication so people understand more readily what
24 these triggers are. And we can establish more
25 predictable communications around these decision points,

1 be it an allocation, be it heading into a series of
2 storms, be it where we are in our flood curve in terms
3 of things that could, for example, activate the gated
4 spillway. So point noted, Assemblymember. I think
5 it's an excellent point, and I'm in complete agreement.
6 And we are going to make some continuous improvements in
7 that department. So thank you.

8 MS. WIDENER: If I could add some constructive
9 criticism. I get those e-mails every week. I see the
10 ad in the paper. A lot of it reads like an
11 advertisement for DWR rather than facts for the
12 community. It's just -- I know that there is a certain
13 amount of, you know, trying to get back the reputation
14 of DWR, but I think the best way to do that is just
15 simply give the people the facts and how it relates to
16 them.

17 MR. CROWFOOT: That's really helpful. I mean,
18 this commission is all about direct, candid feedback and
19 honest talks. So I appreciate that. I think we also
20 have an opportunity with this commission to hold
21 ourselves accountable. So you can let us know how we're
22 actually doing this winter. And then, obviously, having
23 (Unintelligible) on the ground here is going to be
24 another important improvement. So Erin, thank you very
25 much. I want to move to public comment, if we could.

1 MS. MELLON: Thank you for your comments. I
2 absolutely take them to heart.

3 MR. CROWFOOT: Good. So we have a number of
4 folks. What I'll ask everyone to do, if you're going to
5 speak is -- to keep your comment within three minutes so
6 we can make sure that we hear from everybody here today.
7 We'll start off with Tony Catalano from Feather River
8 Center. And following Tony will be Shawn Rohrbacker from
9 the Feather River Recreation and Park District.

10 MR. CATALANO: Hi. Thank you for seeing us,
11 today. I want to thank you for doing this today. My
12 name is Tony Catalano. I'm the executive director of
13 the Feather River Center. We do -- we're the concession
14 here at the (Unintelligible). We do boating, water
15 safety programs, recreational boating, field trips for
16 elementary kids; we served 3,000 kids this past year.
17 We do equipment rentals in the summer. And we're here
18 because we've done a lot of collaboration with Water
19 Resources, and the state parks, and the City of
20 Oroville, and Feather River Rec and Park District for
21 economical development, recreational development, and
22 educational development in this -- for the City of
23 Oroville. I want -- the SBF board had been great to us.
24 Mr. Pittman is on that board, and Chuck Reynolds is
25 also. They've been very helpful. We appreciate the

1 time that we've received from Matt Teague at state
2 parks, and from Eric (unintelligible) and Liza Whitmore,
3 and Jason (unintelligible), and Andy (unintelligible) at
4 Water Resources. We're working on a lot of development
5 projects, and they have been very helpful with those.
6 In fact, we have one going now on courtesy of the
7 supplemental benefits fund. Mr. Connelly and the board
8 supervisors have been very helpful. We've spoken with
9 board supervisors about our recreational plans.
10 Mr. Nielsen's office has met with us. We met with Mr.
11 Gallagher on a couple of occasions. We just wanted to
12 say we look forward to working with this committee -- or
13 this commission. And when you get to the point of
14 development of recreational projects, we will work with
15 you on that. Our goal is to make Oroville a recreation
16 destination. So when it comes time to talk about
17 recreation projects, we'll be at that meeting. So thank
18 you very much. Good luck.

19 MR. CROWFOOT: Thank you very much. The tail
20 end of this meeting we will be talking about future
21 topics for this commission, one of which might be
22 recreation. So next, we will hear from Shawn, followed
23 by Tasha Levinson.

24 MR. ROHRBACKER: Hello. Good afternoon.
25 just wanted^I to introduce myself as the general manager

1 for the Feather River Recreation and Park District here
2 in Oroville. And similar to Tony, any time there are
3 recreation-type elements tied to this commission,
4 especially directly downriver through the city, we
5 manage a trail system that's on that levee, right near
6 downtown, 210 Acre Riverbend Park, it's right along the
7 river. I was also curious if this commission plans to
8 address any sort of restoration of the river, downstream
9 of the dam, in sort of mitigation through the river
10 corridor for future flooding?

11 MR. CROWFOOT: I think it's a fair question.
12 And as we conclude the meeting, we'll talk about future
13 topics. I think we really want commissioners to
14 identify the topic as priorities to discuss. And so if
15 our commissioners deem that as a priority, the
16 restoration discussion, we will certainly address that.

17 MR. ROHRBACKER: Thank you.

18 MR CROWFOOT: Thank you very much. Tasha,
19 followed by Hellen Dennis.

20 MS. LEVINSON: Hi. I'm just a local citizen,
21 not any particular group. And I -- while I enjoy and
22 appreciate this meeting, I think you've missed the main
23 point, which is the 2017. This was caused by poor
24 maintenance that had gone on for decades. You've got
25 all kinds of security so people can't see what's going

1 on. DWR has had several life-threatening events over
2 the last few decades. They've refused to learn from
3 that to really improve their maintenance. They're
4 always making decision to try to please the water
5 contractors down south, and really not for safety of us.
6 I'd love to see just a different attitude towards your
7 jobs. Thank you.

8 MR. CROWFOOT: Thank you very much, Tasha.
9 Helen Dunce, followed by Robert Bateman. And Hellen's
10 going to make her way up. If you could give her the
11 mic.

12 MS. DENNIS: I just have a couple of questions.
13 One, I want to know if -- when we had the 2017 incident,
14 we had -- we were told that there is -- the turbines
15 weren't working, that most of them were down, and that
16 was causing flooding there in that turbine area. I want
17 to know if that's been fixed and it's going to continue
18 to be maintained so that we do not have to worry about
19 that flooding, and then causing damages to the dam and
20 our lives. Now, I know mine's as valuable as somebody
21 who is only 20, but there is still value, because I am
22 going to be a 105 or older. And then I am -- you know,
23 I'm going to reevaluate. So I really want you guys to
24 think about this. This is a very important thing for
25 all of us. I think about a little baby. They can't

1 save themselves. A child is not going to be able to.
2 They all think they're tough enough. We can't save
3 ourselves if that dam breaks, or if we have another one
4 of these catastrophic events, which I'm not sure we
5 won't in my lifetime. So I want you to really think
6 about that; that's important. And the other thing I
7 want to ask about is, you know, this secrecy that is
8 going on. I know there's -- I was told 9/11. But
9 before 2017, we didn't have all that barbed wire or
10 wire, whatever you call it. I felt like I was in prison
11 this morning up there. Even the other side of spillway
12 at the boat ramp, there was so much of it, it wasn't
13 funny. I mean, it's very -- I really have told you
14 guys, I feel like it's a blight on our city, because --
15 someone from DWR who was explaining recreation
16 departments, what -- what they have going on, was -- was
17 telling us that, oh, isn't this beautiful? Well, look
18 up at the dam from any place -- any place around here,
19 and all you see is this massive structure of cement.
20 It's not beautiful. It is not. And I know they
21 (Unintelligible), but how long is that going to take?
22 And I did drive through Loafer Creek at another time,
23 and found lots and lots of woods gone. I'm not really
24 for that. Woods, trees, and things to be moved or
25 killed off. That's what it was. They were killed off.

1 Just bulldozed, or cut, or whatever. And that's not --
2 that's not great. That was -- Loafer Creek was supposed
3 to be a recreational area we can go to and enjoy. In
4 fact, I used to swim there, and take my children all the
5 time for barbecues. So I don't think that's beautiful.
6 You know, I think DWR says, okay, we are going to make
7 safety our component that we're going to talk about.
8 But you need to do more than that. You need to think
9 about -- and I understand the dirt, and not being good
10 soil, but you need to stop and think about the picture
11 you get from the other end, not just the one from the
12 top.

13 MR. CROWFOOT: Hellen, thank you. Ted, do you
14 mind answering the two specific questions she asked?
15 One on the so-called turbines, and the other is on sort
16 of the barbed wire fencing around some of the facilities
17 that we saw up there this morning.

18 MR. CRADDOCK: Yeah. Good morning.
19 Commissioners Ted Craddock with DWR. Helen, thank you
20 for the questions and comments. In regards to the
21 turbines and power plants, the way that plant operates
22 when the water is a certain in the merging pool, it
23 creates what's called a tailwater effect on the
24 turbines. So during the incident, as the water level
25 rised (sic), the turbines just weren't able operate

1 because of the tailwater level. But then in regards to
2 our program for maintenance on turbines, currently,
3 we're going through a -- basically a refurbishment
4 program where we're systematically going through all the
5 turbines. And this is, you know, a long-term process
6 where we'll go one by one through the turbines. We
7 currently have five that are operational. One is out of
8 service. We have the turbine being refurbished and
9 readied to be put back in place, I believe, later this
10 spring. So that hopefully addresses that first question.
11 And the other question was regarding security. So after
12 9/11, you know, throughout the United States, there's
13 been an emphasis on protecting infrastructure from those
14 who would like to do potential harm to the facilities.
15 So the Department of Water Resources' work is working
16 with, you know, partners in law enforcement, and the
17 Department of Homeland Security to identify which are
18 the important facilities that we need to protect. So
19 the fencing that's up around the radial gate structure
20 and the spillway is one of those key areas that it's
21 important for us to protect, as well as a few others.

22 MR. CROWFOOT: Got it. I will say that a
23 comment I thought was a really good one up on the dam
24 today that I just want to make sure gets discussed here,
25 and ask a question about it. Since the 2017 incident,

1 there have been a number of independent reviews, and
2 independent experts coming in and helping understand
3 what's needed. And what I heard is the desire to really
4 institutionalize those recommendations into the
5 operations moving forward, and continuing to have those
6 third party, you know, experts actually ensuring that
7 we're doing what we need to be doing. Can you speak to
8 that?

9 MR. CRADDOCK: Yeah. Thank you for the
10 question, Secretary. So, you know, as part of a DWR in
11 the broader dam industry in the United States, it's been
12 recognized that it's important for operators of dams to
13 bring in expert panels to really take a close look at
14 the facilities. So in the case of Oroville and other
15 parts of the state water project system throughout the
16 state, we bring in a panel of three to five reviewers to
17 look at our facilities as part of a five-year review
18 process. So that's an important element. You know,
19 after the incident, it really is highlighted an area for
20 all dam owners in the United States, and actually
21 throughout the world, to look at as the importance of
22 taking a deeper dive, and to really look at the
23 facilities from a comprehensive review. And so what
24 we're doing as part of the comprehensive needs
25 assessment is bringing another panel separate from those

1 five-year reviews to take a close look at the
2 facilities, and see what level of, you know, possible
3 enhancements are needed to the facility. So that's one
4 example of what we're doing. We're starting to expand
5 that throughout the rest of the state water project
6 system as well.

7 MR. CROWFOOT: Got it. It will be helpful to
8 hear updates on that.

9 MS. NEMETH: Can I add to that?

10 MR. CROWFOOT: Sure.

11 MS. NEMETH: This CNA also has an ad hoc
12 committee that also meets, which I'm a part of. That's
13 very appreciated. The CNA is a one time thing. So
14 looking forward, it would be nice if there could be ad
15 hoc committees where the community could be more
16 involved in those five-year studies, or, you know, those
17 different inspections in the future.

18 MR. CRADDOCK: Yeah, thank you for the
19 comment, Commissioner. I think that's one of the real
20 benefits we see of this commission, is that it's going
21 to provide a forum moving forward to share that
22 information. So once we complete the comprehensive
23 needs assessment, this will be a vehicle that I think we
24 see, and hopefully the commission sees, as a useful tool
25 to help us share that information.

1 MR. CROWFOOT: And we'll have to make sure
2 that's really substantive in meetings, because it sounds
3 like the CNA had been really substantive, the ad hoc
4 group. Let's move on to Robert Bateman from Feather
5 River Recovery Alliance, followed by Shannon Long.

6 MR. BATEMAN: I'm secretary of the Feather
7 River Recovery Alliance, and a local businessman. I
8 started a business here 30 years ago. And from your
9 slides, it appears that we've traded a regular
10 controllable -- more or less controllable floods for the
11 occasional inundation, which is much more difficult for
12 a business to handle. We've had two of those, and we
13 want to make sure there are no more. This is actually
14 an elephant that's not in the room -- a very big
15 elephant -- and that's the state-ordered contractors.
16 They -- we need to balance safety against the
17 (Unintelligible). And it's a very uneven balance of
18 people seeking (Unintelligible). State contractors are
19 very powerful, very wealthy, have lobbying in Sacramento
20 and Washington. And we have -- until this commission,
21 we had a disjointed community with no money to fight
22 their battles. So this commission has a great
23 opportunity, I think, to help a lot in reconciling that
24 balance. I would like to know what paths the commission
25 will be given to counteract the pressure of water

1 contractors, and what action it intends to take. Unless
2 the respective action, in that regard, the commission is
3 likely to be seen as a publicity relations exercise for
4 the DWR. Thank you.

5 MR. CROWFOOT: Thank you very much. Let me
6 just say that the secretary of our agency, you know, we
7 have a responsibility to protect people from flood, and
8 provide water. It's a balance. I think what we want to
9 make sure is that there's transparency on this
10 commission, and that the local voices representing the
11 commission can identify what we need to talk about, and
12 then actually discuss those topics. You know, from my
13 perspective, actually, on a lot of water topics, we're
14 working to get away from us versus them, and sort of the
15 polarization on these topics, but understand where
16 people are coming from. So from my perspective, let's
17 deal with those issues, you know, head-on on this
18 commission to make sure you understand how we're making
19 decisions within state government.

20 MR. BATEMAN: May I just make one comment?

21 MR. CROWFOOT: Yes.

22 MR. BATEMAN: It would be helpful if the state
23 would order contractors who had formally involved in
24 this process, I would think.

25 MR. CROWFOOT: Yeah, that's helpful. And, you

1 know, at some point, it would be helpful to actually
2 invite them to come and talk about their role. You
3 know, we work with these folks every day. They actually
4 look a lot like people here. They, you know, have day
5 jobs and families to feed. And they are not, you know
6 (Unintelligible) from Southern California or the Central
7 Valley. So it would be helpful to actually have the
8 conversations. And that would be -- might be a good
9 opportunity to hear more around what's the relationship
10 between the contractors and DWR.

11 MS. NEMETH: Yeah, and I think the gentlemen
12 made a great suggestion about including a more detailed
13 presentation about how we make decisions around Oroville
14 operations as it relates to water supply as kind of a
15 companion piece, if you will, to the flood aspects. And
16 then we can all get all that information together,
17 understand it better, and hopefully have more productive
18 dialogue. I think your point is well taken about, you
19 know, where the state water contractors are in all of
20 these discussions. And I don't think it serves anyone
21 to sort of have them kind of hidden or shielded from the
22 conversations here today. We can take that point and
23 think a little bit more about it.

24 MR. CROWFOOT: Yeah. So, Nick, if you would
25 just make a note that that would be a good topic for a

1 future conversation. Let's hear from Shannon, followed
2 by Robert Armstrong.

3 MR. LONG: Last time I was here, I was told I
4 was in the wrong spot. And I just want to make it clear
5 that I don't think this is a conservative or liberal
6 issue. Ronald Reagan said in his 1984 State of the
7 Union Address that, "When it comes to the protection of
8 our environment, essentially, it's not a liberal or
9 conservative concern, it's common sense." What you have
10 in front of you is downtown Oroville. That's directly
11 above the park, Bedrock Park, where our kids are
12 supposed to swim. People say the homeless are most
13 vulnerable, I disagree. I think our children are the
14 most vulnerable. I wasn't blessed with any of them, but
15 I'm sure a lot of you folks were. So that is directly
16 where we're supposed to recreate. The commission on
17 your web page says you will discuss public safety
18 activities at Oroville dam and its facilities. It came
19 to my attention that you just had a meeting with Fish
20 Hatchery personnel with regards to their safety because
21 of what's going on down in our river. First question,
22 when's the public going to be notified of that? Second
23 question, it also mentions that you guys deal with flood
24 and elements issues on the Feather River. So obviously,
25 that's a problem when it floods. Right now, it's up to

1 me and some friends to go down there and pick it up. It
2 took us multiple days to pick that up. My question to
3 you is, what is the flood management issue of garbage
4 being flushed down this our river have to do with this
5 commission? I think it's a great place to discuss it,
6 basically. I also would like to say, I adamantly
7 disagree with flood management facilities not being able
8 to be used as recreational facilities. Fishing is a
9 recreation, and it's perfectly acceptable. I don't
10 think that has anything to do with blocking our
11 waterways with trees and such when there is a flood. So
12 you guys can answer the questions about the public
13 safety. Also, I had a couple suggestions real quick.
14 With the heightened security at the dam, there's a ton
15 of CHP officers around here. They're a fabulous force,
16 and they really provide security. That's why they're
17 securing the -- not the White House -- our capital and
18 also the Governor. I see them all the time. I'm also a
19 docent at the Feather River Nature Center, which
20 currently, our doors are being busted open with axes at
21 night. Maybe if we have those officers, on the way to
22 and from the dam, patrol our levees, drop into Bedrock
23 Park, that may make a difference just having an extra
24 security force there. And also, I think that Butte
25 County and the state should align with Yuba County and

1 Sutter County, and make this an issue, and unite and
2 stand together saying that enough is enough. It's not a
3 matter of homeless. It's a matter of other things that
4 are being done to our rivers and streams. Thank you.

5 MR. CROWFOOT: Thank you very much for coming
6 to both meetings. And let me just say that, you know,
7 we are a new commission. So I think we are still trying
8 to understand what the scope of our work is. I'm really
9 sympathetic to the concerns he raises. You know, at the
10 same time, we obviously focused on public safety in the
11 reservoir. But I'll just say for myself as chair, if it
12 is appropriate to, you know, address, you know, some of
13 these public safety issues within the flood volunteer
14 system underneath the dam, I think that's something we
15 can do. It's just up to the commission to do that when
16 we talked about future priorities for topics. Let's
17 hear from --

18 UNIDENTIFIED SPEAKER: Deputy has a --

19 MR. CROWFOOT: Oh, yeah. Sorry.

20 MR. LICON: I'm sorry, the gentlemen that was
21 just up, your name again?

22 MR. LONG: Shannon.

23 MR. LICON: Shannon. I just wanted to touch
24 on what you had said. I wanted to let you know that the
25 issues you have here are not exclusive to Oroville. I

1 know -- I feel like I can speak on behalf of Yuba County
2 as well, we have a neighboring relationship with each
3 other and kind of the same issues. But it's an issue
4 we're working with to try to alleviate on a local level
5 as well. So it's something that I think is consistent,
6 not just in Oroville, but everywhere downstream.

7 MR. MILLION: If I could add to that? It was
8 mentioned earlier that in Yuba County we had recently
9 adopted an ordinance. It's not an anti-homeless
10 ordinance, it's a camping and storage of property not
11 permitted within our waterway system. And it addressed
12 specifically about potential damage to levee systems
13 that they're camping on the levee using a 50-foot toe
14 from the toe of the levee. You can't camp within that
15 area and 250 feet within the waterway, or any
16 contributory waterway, whether it's a lake or
17 (Unintelligible) within the river system. And it's for
18 that specific reason, because we have seen that.
19 Unfortunately, it does appear that it targets people
20 that are homeless in that situation because those are
21 the people that are down there. It's not intended for
22 that. The intent is to keep the quiet and keep the
23 river systems from having waste, biohazard waste, pushed
24 into a (Unintelligible) preserve for the safety of flood
25 control, and that's what it's directed towards. That's

1 mainly affecting the Feather River and the Yuba -- the
2 Yuba Sutter area. So we are aware of that. To address
3 it -- and it's kind of not with this committee -- but in
4 the situation like that, we do have resources that we
5 frequently use down there. We do (Unintelligible)
6 cleanups. I think over the last year, we moved,
7 probably, a hundred abandoned vehicles out of our system
8 to prevent that from being contaminated, the oils and
9 everything into the system. But that also goes into how
10 it affects flood control. One thing we focus with the
11 homeless issue, and it is a flood control issue, is that
12 last year we had different four different high water
13 events, and we had a total of 700 people live inside
14 that levee system in the Riverwalk area, in our area.
15 So we have to go down and take the personnel to go down
16 and help -- hope they self-evacuate. The ones that
17 don't because they're stubborn, we end up doing --
18 arresting them. So the flooding, which is inevitable --
19 the levee systems work for that purpose; to prevent
20 flooding into the residential areas. But sometimes
21 people aren't recognizing. If you don't see it until
22 the (Unintelligible), then you see how many homeless are
23 in sight of the areas in the levee. But that's a direct
24 reflect, and that's one of the reasons why we have that
25 ordinance. And it is a public safety thing because, no

1 matter what people think, they are part of the public,
2 and we have to provide a safe environment for them as
3 well. But we also have to manage that, so that is a
4 direct reflect from flood control. The information we
5 get, the information that was provided by all the
6 partners joining to make sure that we have the
7 information to evacuate people out of those areas.

8 MR. CROWFOOT: That's really helpful
9 information. Let's hear, next, from Robert Armstrong.
10 And if anybody would like to speak that didn't fill out
11 a speaker card, please do so.

12 MR. ARMSTRONG: A couple of my questions have
13 kind of been asked already. I'm a big -- I want to
14 thank you guys for all doing this, too. But I'm a big
15 sporting fisherman, and I also do hunting and stuff.
16 And since '97, I've seen the Yuba and the Sutter pretty
17 much kind of ruin from all the silt that washes down
18 with these flood controls. And every time I've asked
19 and talked about people about these rivers and how we're
20 are going to maintain them for not only recreation use,
21 but for water flow, I'm always told it's an
22 environmental issue, we're tied up, we can't get stuff
23 to get in there and clean it out. So that's kind of my
24 challenge to ask DWR to get more information out there
25 and, like, what their plans are to maintain that river

1 infrastructure, and help to kind of help allow that
2 water flow be easier. Because I know where I live, out
3 in Yuba County, we have a pretty good swap between the
4 two levees there that would be -- dredge that out, or
5 simply take it out and maintain that, you can have
6 actually a good flow for that extra acreage of water and
7 how much you can fit through there to kind of store it
8 between when it flows down the river. So that's kind of
9 my question.

10 MR. CROWFOOT: That's helpful. Who from the
11 DWR would be best to answer the questions of silting of
12 the river system downstream from dams? If we don't have
13 the right person, too, we can talk about -- Supervisor?

14 MR. BRADFORD: I serve on Sutter Butte -- or
15 (Unintelligible) improve the levee from the outlet to
16 Yuba City. And we're looking for funding and guidance
17 to help with that problem. So you might want to call
18 (Unintelligible), the director there, and see where that
19 is. I missed the last meeting, so I don't know exactly
20 where we're at on that subject. But it is complicated
21 because there are always environmental concerns when you
22 enter a river. Our take on it is it's restricting and
23 inhibiting flood protection, right? Because it's
24 filling up with silt, so your freeboard is going away.
25 And beyond that, I know you want to get your boat up and

1 down the river and let the fish flow. So might try
2 that.

3 MR. LIPPNER: Question, Secretary Crowfoot.
4 Gary Lippner with Department of Water Resources. I just
5 want to say, you know, I came from a, you know, local
6 person's partnership. Again, the state maintains, in
7 terms of Department of Water Resources, about ten
8 percent of the system. So this is an issue that would
9 be with the partners, with the local, the state, and the
10 federal. We are typically looking at channel capacity,
11 so where the sediment is, isn't as -- it's a priority.
12 We need to understand the sediment. But if channel
13 capacity isn't impaired, and the levees are repaired
14 from flood damage, that's our primary authority that we
15 have to work within the system and maintain the capacity
16 of the system. So we focus primarily on that.

17 MS. NEMETH: I also wanted to add, Senator
18 Nielsen, Assemblymember Gallagher, did put some money in
19 a budget that was passed -- I think it was about
20 \$5 million -- to do some sedimentation removal in this
21 area. And that's something that the department is
22 working on together with the natural resources agency as
23 the grant-making agency. And so that's a good example
24 of the department communicating with the electives that
25 represent this area, and coming up with solutions that

1 can help us actually get the work done. So thank you to
2 both of you for doing that.

3 MR. NIELSEN: There's another aspect
4 of the sedimentation, too, and that's snags. If you
5 watch high weather times that we have so many snags from
6 downriver. The snags hang up, and they become the basis
7 of a dam. That couple with the silt and other things
8 that come down the river, that is a problem. So now
9 getting snags out is really a challenge. But at least
10 there's a start at this. It's nothing new. It always
11 has been. Siltation, I represented all the Sacramento
12 River's watershed into north and central delta. We have
13 lots of problems with snags. So to me, what's happening
14 is an elevated attention to this issue. Other times in
15 history -- and I've been dealing with this for a lot of
16 years -- there was a lot more attention paid -- paid at
17 any given time, and then it kind of diminishes. Not a
18 problem anyone, we don't think about it. I think
19 they're becoming much more on minds of policy makers,
20 and agencies, and citizens. So I'm encouraged that
21 progress, at least, is being made.

22 MR. CROWFOOT: Well, that's great. And I know
23 that, of the \$5 million that Director Nemeth talked
24 about, there may have been a bureaucratic snag with
25 working on getting that out the door that your office

1 reached out to us about. So let's hold ourselves
2 accountable at the next meeting for giving an update in
3 terms of where that \$5 million is in terms of silt
4 removal and management. Thanks so much. Let's here,
5 next, from Matt Mentink.
6 MR. MENTINK: Matt Mentink. Yuba City resident,
7 four-time evacuee. A family business was flooded in
8 '86, took (Unintelligible) Yuba County. Laid off dozens
9 of employees as all machinery in Louisville was stripped
10 down to (Unintelligible). I appreciate the effort the
11 DWR has made since the (Unintelligible) incident. The
12 ad hoc committee was something you did not have to do,
13 you chose to do. I appreciate having the opportunity to
14 serve as a member on that. I think there's been no
15 expense spared in the studies and investigations that
16 have been done to come up with the plans going forward
17 on how Oroville can sustain the next 50 years. And
18 that's (Unintelligible). I look forward to the
19 information coming up the next two meetings. But after
20 those meetings, I think the biggest hurdles are yet to
21 come. And that's the part in which public communication
22 and transparency has been lacking in the past. Let me
23 just read a few bullet points that I shared with John
24 here. In our previous meeting here, he asked for some
25 comments, you know, what's it going to take for the

1 public to feel that we've really crossed that hurdle of
2 public transparency? And yesterday I sent him off some
3 bullet points. And looks like today might be a good
4 opportunity to elaborate on some of those publicly.
5 When communicating the plan selections, it's equally
6 important to share the plans not selected, and why;
7 especially those that were ruled out for physical
8 feasibility. During the proposed state water contract
9 extension, state water contractor proposal asked for
10 one, an increase in a contractors rate reduction to \$48
11 million, and two, to create the nonpublic financial
12 oversight committee with 50/50 membership and power
13 sharing to a state water contractor and DWR.
14 (Unintelligible) members are public membership on when
15 they talk to (Unintelligible). So you got to wonder
16 just how much influence the state water contractors have
17 during the plan selection process. And is there any
18 membership representing public interest during that plan
19 selection? Much of the work that -- much of the work
20 for the CNA and the math log of deferred
21 (Unintelligible) within the state water project started
22 before the spillway incident. And there was
23 appropriation of a 2016 extraordinary fund that was
24 going to start working on that. It'd be interesting to
25 elaborate on what the annual physical constraints are

1 that created the deed for an extraordinary fund. Why
2 can't these backlogs be handled on an annual basis? It
3 appears the backlog within the state water contractors
4 due to funding has created the need to privatize these
5 new identified issues coming out of the CNA, with
6 lingering issues from the past. Now, we've got known
7 issues in southern California, the (Unintelligible) has
8 probably worse issues than Oroville does. But we've
9 known about them for a long time. And funding seems to
10 be a constraint that stopped us from being current
11 within this. So I think what would be a good way to be
12 transparent about this is to provide the public with
13 copies of your two-year annual budget for ONM, the
14 five-year capital plan, and the long-term investment
15 plan showing where CNA landed. How far behind are some
16 of our (Unintelligible) being put because, you know, the
17 deferred maintenance that's been created along the way?
18 And then within that, giving us those two-year ONM
19 budgets, the five-year capital of the long-term
20 investment, you should include the dates of when those
21 recommendations were first proposed. We were presented
22 at the CNA meeting last time, a new quick response to
23 identified issues to put new instrumentation within the
24 dam. That recommendation came out in 2009, ten years
25 earlier, and you're just now calling it a rush for a

1 quick response, action to the CNA. So when you
2 communicate those budgets, tell us when everything on
3 that budget was first recommended. And that's, I think,
4 the type of transparency that public citizens have been
5 denied. In the past, I think the could get more
6 information on budgets and projects by going to the
7 state water contractor's website that I had the DWR.
8 And if you could explain the terms of the original state
9 water contractor when it comes to timely funding of ONM
10 and Cal expenditures, and look at where we are in the
11 current backlog. Was that the vision? Was that the
12 essence of the obligations of the water contractor to
13 stay current on ONM, the state of where we are today? I
14 don't think so. And I don't think that we should be
15 quick to rush into a new water contract with them until
16 we clearly state what the addition of maintenance is in
17 our system.

18 MR. CROWFOOT: Yeah.

19 MS. NEMETH: So those are really good
20 comments. And I agree that the state water project, in
21 and of itself, is not as transparent as it needs to be.
22 There are a couple of changes that are underway that are
23 really important to me, and that is -- one important
24 role that the California Water Commission plays in sort
25 of oversight of the state water project, and that's a

1 public body that meets, I believe, every month, but I'll
2 have to double check. But that's where the department
3 is putting out a lot more information on the operations
4 of the state water project, the positions of the state
5 water project. We have been putting together an asset
6 management plan for the next 20-some-odd years that
7 looks at the system in total. And that's going to be
8 really important place for us to establish some more
9 predictable transparency and providing information about
10 the decisions that are being made relative to what
11 essentially amounts to reinvestment in the state water
12 project. To the extent that we can incorporate, you
13 know, some of those things here I think -- Matt, one,
14 thank you for spending a significant amount of time with
15 the ad hoc committee. Because I realize we have people
16 who, you know, get paid to do that, but it really is
17 critical that we have folks from the community who are
18 essentially donating their time and making our product
19 better. So thank you for that. I probably should have
20 started with that. But I do think there are some issues
21 that we can table, potentially, for this group to take
22 up around, you know, more of the financial picture
23 associated with the state water project, in addition to
24 some of the specifics around how we manage Oroville for
25 water supply needs as well.

1 MR. CROWFOOT: Yeah, I think -- certainly --
2 well, let me just make sure you can conclude your
3 remarks, because I want to segue very soon into a
4 discussion around topics for next meeting, and it will
5 directly address what you've shared. So thank you. Any
6 concluding remarks?

7 MR. MENTINK: No. Just how much I appreciate
8 the efforts that's been done since the spillway
9 incident. I think the independent (Unintelligible) team
10 did a very good job of lessons learned. The responses
11 to all the recommendations that were put out in that
12 area, too. DWR is like a battleship; it doesn't turn on
13 a dime but there is sincere effort being made of the
14 public. So I appreciate working with you going forward.

15 MR. CROWFOOT: Thank you so much. I appreciate
16 you acknowledging that. A lot of hard -- hard work at
17 DWR since 2017. Let me do this, we're going to move
18 into our last agenda item, and we should finish this on
19 time. But Eric Smith from the Oroville Chamber of
20 Commerce wasn't able to stay, but he ask that I read a
21 short statement which is: "The economic outlook for
22 Oroville is strong. Strong development, for example, is
23 preparing to break ground on 70-plus homes in Oroville.
24 Tourism is a growing industry in our state, adding \$79
25 billion to the state's GDP. The Oroville Area Chamber

1 of Commerce thinks that our community has a real
2 opportunity to significantly contribute to this
3 industry. This is why your work is so important to our
4 future. Safe damage critical to our ability to
5 encourage this burgeoning industry in the Oroville area.
6 Thanks for all you're doing. Eric Smith." So for the
7 last agenda item we have is a review of topics for
8 future commission meetings. And I've noted at least
9 three priorities. The first is a live discussion with
10 the Army Corps of Engineers to really discuss how we can
11 work more closely with them on the future operation of
12 the dam. And I think we can, from our agency, reach out
13 to them directly and ask them to join us in a meeting
14 for a deep-dive discussion. Secondly, I've heard
15 significant interest in understanding more about the
16 state water contractors, and DWR, and the funding
17 decisions that are made for the state water structure at
18 large, and how it impacts Oroville. I think it would be
19 great to have the general manager from the state water
20 contractors join us, and share her perspective on the
21 work and then have a presentation from DWR on the
22 long-term funding needs. Really getting to some of
23 Matt's direct questions around really what -- what is
24 the budget for operations of maintenance? How is that
25 derived? What is the level of public transparency in

1 those budget decisions, etc. So I think that is No. 2.
2 And then No. 3 would be hearing from sort of the update,
3 or sort of the takeaways, or the move forward at the CNA
4 ad hoc group recommendations, as well as the forensic
5 team's recommendations. So those are three topics we
6 could tackle in 2020. I think we should have a regular
7 standing item for just sort of communications and, you
8 know, sort of -- maybe from Liza or Erin, you know,
9 what you're hearing from the community on, sort of, a
10 weekly basis so we're up to speed. Other topics that we
11 want to tackle in 2020. And this isn't the only
12 opportunity to share those, it's kind of a rolling
13 agenda setting.

14 MR. PITTMAN: I'd like to add the
15 issue of the powerhouse and mechanics of the facility,
16 both at the high powerhouse, and maybe the
17 (Unintelligible) powerhouse, just so that the commission
18 has a first person awareness of it. Bill and I, we went
19 there in high school on tours to those facilities. And
20 I'm not suggesting you're going to open it up for tours,
21 but maybe a video tour so that you have an understanding
22 of the turbines, the valves, and the whole menagerie of
23 things. And I think it's important for (Unintelligible)
24 to understand that. Would be a great presentation to
25 have.

1 MR. CROWFOOT: That's great. So why don't we
2 consider that as recommendation? A tour, if possible,
3 and/or some type of presentation. Let me also suggest
4 as a follow-up, an invitation to the counsel members --
5 commission members, I should say -- this winter to tour
6 the flood operation center in Sacramento. I think you
7 will find it really illuminating, particularly those
8 public safety members on our commission. So let's go
9 ahead and set that up as well. Any other topics moving
10 into 2020?

11 MR. CONANT: So I was hoping we can also,
12 when we do the mechanics of the infrastructure possible
13 improvements to the project itself, like an alternate
14 spillway. And also, somewhere online, we need to
15 really -- because the 2017 may have caused you siltation
16 problems in the river, which haven't been removed. And
17 I don't know if that's really up our belly way, but
18 somewhere along the way, I'd address that. And possibly
19 some help with the homeless.

20 MR. CROWFOOT: Say that last piece again.

21 MR. CONANT: Possibly some help with the
22 homeless. I think both counties are kind of concerned
23 at the ramifications their actions took. We felt, for
24 public safety, and their public benefit, that we had to
25 do something. And don't forget, there has been a

1 fatality from this in -- excuse me -- 1997, I believe,
2 during that water event. One person didn't get. Out
3 they didn't even discover the body for another six
4 months.

5 MR. CROWFOOT: Yeah. I appreciate that.
6 Maybe, you know, to address Shannon's point, you know,
7 we can -- we're addressing so the homeless issue. You
8 know, the human activity within the levees and its
9 impact on the flood control system and the community as
10 an opportunity. So what I'll suggest is that my office
11 work together with Senator Nielson's office as the
12 cochair of this committee, and that we then identify
13 clearly in our meeting summary proposed topics for
14 meetings in 2020. And that we structure them so we can
15 have really meaningful conversations on each of those
16 topics.

17 MS. WIDENER: I have one other topic.
18 Recreation. I know that there's some future recreation
19 planned with the new license that is kind of on hold
20 right now. And some of those things were accelerated
21 after the 2017 incident. I think it will be really
22 important for the community to understand what those
23 future recreation improvements are. And also, there
24 is -- I don't know any other word, but to say a kind of
25 bitterness that a lot of people in the community have

1 over past recreation promises, (Unintelligible). Being
2 able to look into that and explain why some of those
3 things never came to fruition, I think would be really
4 important for the community as well.

5 MR. CROWFOOT: Good. That's a great
6 suggestion.

7 UNIDENTIFIED SPEAKER: I'm deeply involved in
8 the recreation, and probably something that I'd like to
9 talk about a lot. But I think I really appreciate
10 Genoa's comment, but I think we should try to get the
11 safety aspects of relationship with the community moving
12 forward. So if you could put the recreation behind the
13 other things that were brought up today, and then we can
14 really get in depth on -- does that make sense?

15 MS. WIDENER: Yeah.

16 MR. CONNELLY: Let's get a foundation
17 under us before we get into some really contentious.

18 MR. PITTMAN: I would like to add,
19 too, that -- some prior comments about the river as a
20 controlled mechanism. And also, the topic of
21 jurisdictions from one town to the other, because I hear
22 some interesting things being done here in our partner
23 counties and our cities. It might be a great
24 opportunity for us all to have and see what's going, so
25 what one county does doesn't throw the folks into the

1 next county, and we have a little bit of continuation of
2 that. And who's actually responsible on the river,
3 would be a good topic to understand, because I know our
4 city, we're dealing with -- literally (Unintelligible)
5 month is taken off the river by our crews and our
6 special operation teams. So I think if we all share
7 what we're doing on the river, might be a great
8 opportunity for us all to understand that, and then make
9 it safer in the river for us all. And the flood issues
10 that come about that. So...

11 MR. CROWFOOT: Yeah. That seems like an
12 excellent question to ask when we're having the
13 discussion around and human activity in the river.

14 MR. BRADFORD: So I just wanted to
15 kind of follow up on that a little bit from a
16 (Unintelligible) perspective that our cities and our
17 counties are all involved, and we all are passing a
18 similar ordinance to avoid exactly that. The
19 individuals that are camping just moving from one
20 jurisdiction to another, you know, crosses the city
21 limit sign, or, in our case, walking across the bridge
22 to another county or another city. So having all four
23 cities and both counties in our area essentially
24 adopting a similar ordinance would something that would
25 be very important.

1 MR. CONANT: Yeah, I'd like to say also,
2 another player in this that played a critical role, the
3 (Unintelligible). And whether I see (Unintelligible.)
4 Just make a note that they're not present here.

5 MR. CROWFOOT: That's really helpful, Matt. So
6 I might suggest that since we started with the
7 discussion of the Army Corps at the first meeting, and
8 it's central to safety for Supervisor Dowling's
9 statement -- or suggestion that we -- if we can, see if
10 we can agendize (sic) that discussion around the Army
11 Corps, and flood safety oversight, and how it can inform
12 reservoir operations at our next meeting, if that's
13 okay. And we'll work with our facilitators to figure
14 out how much we can fit in the next meeting. But I
15 think the goal is to ensure that, in 2020, we're
16 addressing each of those priority areas. And, again,
17 working with our co-chair, Senator Nielsen, to make sure
18 that that agenda reflects the priorities of the
19 commission. Nick, if you can remind is, do we have a
20 date set for our next meeting, or a general trajectory
21 sort of around when we are going to do our next meeting?

22 MR. SAFFOLD: Correct me if I'm wrong, but we
23 have February 21st as the next meeting.

24 MR. CROWFOOT: Good. So for folks here, and
25 folks watching, February 21st will be the next

1 commission meeting. And we will shoot to have a focus
2 on a partnership with the Army Corps of Engineers, as
3 well as a status report on winter operations and safety.
4 And hopefully, we'll be able to tell really strong story
5 as it relates to communications of this winter. Senator
6 Nielsen, any final words to close us up?

7 MR. NIELSEN: No, thank you.

8 MR. CROWFOOT: Oh, one last thought. Sir, you
9 may have the final word here.

10 MR. ANTONETTI: I apologize, I did not
11 make out a speaking list because I was kind of hoping
12 that the item that I brought up to the last meeting we
13 had, and then you framed that as a deep dive for this, I
14 was just hoping that I wasn't the only one complaining
15 about or bringing that issue to your review. I want to
16 thank Director Nemeth for sending me an e-mail, getting
17 me in contact with Ted Craddock, and a couple of other
18 people on a conference phone call about the items that I
19 brought to your attention about the 2,400-foot, six-foot
20 diameter tunnel, that is on the left groin of the dam,
21 that is only providing 40-foot per second to the contour
22 ditch that holding up the ID Feather River water
23 (Unintelligible). I was assured at the time that your
24 people are looking into it. And I asked specifically
25 about what was the legal requirements involved in

1 setting up the original agreement between DWR and
2 Oroville Dam -- this is 60 years ago -- to provide a
3 tunnel through that groin over there, exposing the dam
4 to a potential blowout situation, and to only provide
5 40CFS on the contour ditch. And at the time, the
6 constructors provided a valve on that pin stock that
7 comes off the hill up there that you saw coming down the
8 road. That should something happen, that they could use
9 that valve to provide water for irrigation for the --
10 and it seems to me like an odd investment, and a
11 terrible exposure to a potential blowout on something
12 that has 300-foot of head on it in that tunnel going
13 through dam. Now, possibly, the legal requirements
14 originally were such that, you know, they gut you over a
15 barrel. I don't know. I don't know if that value is
16 still operable on that pin stop to provide the 40 CFS.
17 And I brought this up to (Unintelligible) to look into
18 it. I was hoping they would bring it up and bring it
19 into this deep-dive, Secretary, that you brought would
20 be the situation. And I haven't heard anything. And
21 that's why I've been reluctant to bring this up. So
22 now, here you got a meeting coming up in February 21st,
23 and I would think that something that is potentially
24 catastrophic to blow out -- if it does blow out, it's
25 going to flood the power plant, because the outlet is

1 just above the entryway into the power plant. That's a
2 situation where you need that power plant to work,
3 because you only have a river value outlet that's only
4 5,500CFS as the water's increasing into the lake. And
5 then you have to still lay that (Unintelligible) to
6 control it even more. So you got a situation where, if
7 you flood that power plant out, we're screwed big time.
8 And at the exposure to that tunnel through the haunch of
9 that dam over there is 60 years old, and in our lifetime
10 is expected to be possibly work. But I'm talking 50,
11 60, 100, 200 years from now, do you still need that
12 thing there? And why not just get rid of it? And look
13 into the possibility of doing that. That's my question.

14 MR. CROWFOOT: That's very helpful. Karla, you
15 know, recognizing that we're out of time, I want to make
16 sure that we provide an update in response to the
17 question that is not rushed. So I'll leave it to you
18 whether you -- what you want to say, and what we
19 actually come back to and address in the February
20 meeting.

21 MR. ANTONETTI: Well, Karla, I was told
22 that Ted Craddock's people -- I can't pronounce the
23 gentlemen's name there -- but a very extensive
24 conversation. And I brought these items up to him. And
25 I said, first of all, let's look at the legal

1 requirements that Feather River Recreation -- old WIB --
2 got with DWR to put the thing through to begin with.
3 That tunnel was built before the dam. Because that
4 contour ditch that come from Enterprise Dam is now
5 flooded, so the contour ditch is no longer used up at
6 that point. So they need a water input into that
7 irrigation system. In the meantime, old WIB built their
8 facilities; they have that (Unintelligible) that comes
9 off the hill. And in the notes -- I gave those to
10 you -- they have a valve there that is -- will provide
11 the 40CFS. To take care of that leak. Now, 40CFS is
12 nothing --

13 MR. CROWFOOT: Can I --

14 UNIDENTIFIED SPEAKER: -- hold yourself to
15 that liability.

16 MR. CROWFOOT: Can I just suggest this, it
17 sounds like there's a conversation taking place, but
18 it's not yet clear what the resolution is in terms of
19 having a clear answer to the question. So why don't we
20 just take time, Ted, Karla, myself, and you, sir, to
21 just have a discussion right after this, right now. And
22 then we can figure out how we report back on this
23 publicly.

24 MR. ANTONETTI: Okay. That's fair
25 enough.

1 MR. CROWFOOT: Make sense?

2 MR. ANTONETTI: I apologize again for
3 being so late.

4 MR. CROWFOOT: No, don't apologize. Thanks,
5 Commissioners. We will see you in February.

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1 R E P O R T E R ' S C E R T I F I C A T E
2 I, Scott A. Huseby, Court Reporter,
3 do hereby certify that this transcript
4 is a true and accurate record of the
5 electronically recorded proceedings,
6 transcribed under my direction
7 this the 9th day of December, 2019.

8

9

10



11

12 SCOTT A. HUSEBY

13

14

15

16

17

18

19

20

21

22

23

24

25

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: \$14..45

	1909	13:19	200-year	
<hr/>				<hr/>
\$	1910	13:22	17:12,18	3
<hr/>				<hr/>
\$14	1917	14:3	2009 93:24	3 18:20
\$48	1940s	14:7	2016 92:23	98:2
\$5	1944	36:19	2017 16:12	3,000 70:16
89:20			18:5,9	3.5 38:25
90:23 91:3	1955	41:18	25:8,22	30 79:8
\$79	1964	41:23	41:25	300,000
\$900	1970	36:22	42:13,15	41:24
<hr/>		38:18	48:10,18	42:10 43:9
1		40:22	51:3 59:1	44:3
<hr/>		43:15	60:2,15	
1,000		44:4,25	72:23	300,000CFS
10	1984	82:6	73:13 74:9	42:12
100	1997	22:12	76:25	300-foot
100,000		42:9,16	96:17	105:12
105		100:1	99:15	30th 38:23
11	1st	38:22	100:21	35 6:12
12,000			2020 33:18	17:14
147,000	<hr/>		98:6,11	
	2		99:10	375,000
15	2	3:3 98:1	100:14	35:12
36:2 54:17	2,400-foot		103:15	36:23
58:20	104:19		210 72:6	37:13
150,000	2.8	40:23	21st	3:00 53:9
41:14,24	20	73:21	103:23,25	<hr/>
16			105:22	4
18:21	20-some-odd		22 34:25	<hr/>
160	95:6		35:9	40 17:11
16th	200	106:11	22-and-a-half	40-foot
170,000	200,000		18:21	104:21
45:3	41:25		225 18:12	40CFS 105:5,
1862	200,000CFS		250 85:15	16 107:11
25:9	41:18,19			45 45:13
1907				53:5
13:19				

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: 450,000..activity

450,000	37:13	absent	44:22	96:16
41:12	777 37:24	absolute		acre 41:12
450,000CFS		14:22		72:6
42:8	<u>8</u>	absolutely		acreage 88:6
		23:19 24:8		acres 35:10
<u>5</u>	8.4 17:4	28:21		act 36:19
	80 8:25	29:14		46:7 50:14
5 3:1	80s 6:10	33:12,21		action 29:22
5,000-foot	813 46:11	52:13		80:1,2
53:8	848 37:24	58:11 70:2		94:1
5,500CFS	8499 15:25	absorb 35:6		actions
106:4	86 41:23	37:16 38:7		18:24
50 45:13	91:8	41:13		21:16
91:17		accelerated		99:23
106:10	<u>9</u>	100:20		activate
50-foot	9/11 74:8	acceptable		31:13
85:13	76:12	83:9		44:10 45:8
50/50 92:12	900 40:4	access		69:3
	46:10	19:11,12		activated
<u>6</u>	955 8:22	65:14		31:14
	97 25:5,7	accessible		activation
60 105:2	28:2 32:18	59:11		31:21
106:9,11	41:23	accountable		44:19
60s 14:15	42:14 53:7	69:21 91:2		active 55:14
	87:16	accounts		activities
<u>7</u>		25:11		12:7,9,10
7 18:20	<u>A</u>	accumulate		18:23
36:18	Aaron 98:8	27:21		19:22
70-plus	abandoned	accurate		22:10 23:5
96:23	86:7	4:24		34:18
700 86:13	ability	accurately		82:18
	48:16 97:4	49:10		activity
750,000		acknowledging		32:6 63:1
35:12				100:8
36:23				

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: actual..allocation

102:13	61:25	advance 4:18	21:8 43:25
actual 36:22	additionally	59:6	47:2 48:5
37:8	25:23	advertisement	57:3 80:6
38:20,24	address 29:3	61:12	89:22,23
40:22	60:14,21	69:11	97:12
ad 61:20	61:2 72:8,	Advisory 2:8	agenda 4:18
69:10	16 82:7	affairs	96:18 97:7
78:11,14	84:12 86:2	58:25 60:3	98:13
79:3 91:12	96:5 99:18	affect 6:15	103:18
95:15 98:4	100:6	7:10 29:1	agendize
adamantly	106:19	affecting	103:10
83:6	addressed	86:1	agree 51:23
add 24:10	85:11	affects	94:20
29:5,16,21	addresses	86:10	agreement
40:7 43:18	76:10	affiliation	10:1 51:19
49:9 56:19	addressing	2:24	68:20 69:5
65:8 69:8	19:7 100:7	Afterbay	105:1
78:9 85:7	103:16	12:13	agrees 57:15
89:17	adjust 59:18	afternoon	ahead 65:3
98:14	adjusted	71:24	99:9
101:18	40:12	agencies	Air 50:8
added 9:1	45:13	6:16,24	53:14
44:24 45:2	adjustments	7:2 10:24	akin 32:11
adding 8:24	64:15,20	15:4 16:6,	Alert 21:21
36:3 96:24	administration	11,25	align 83:25
addition	7:6	18:16	Allegiance
16:13 18:9	adopt 8:23	19:17	2:13,15
19:19	9:17	21:4,22	alleviate
24:24	adopted	22:5 30:20	85:4
31:19 62:1	24:16,22	47:1 90:20	Alliance
94:16	46:18 85:9	agency 2:6	79:5,7
95:23	adopting	5:1,3 6:7	allocation
additional	7:22	15:8,24	63:4 69:1
14:12	102:24	16:17,20	
48:25			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: allocations..assessment

allocations 63:6,11, 12,18	answering 65:19 75:14	approval 41:2	24:22 56:21 57:14
allowed 39:25	answers 29:2	approve 9:16	58:3,16 97:10
allowing 67:13	anti-homeless 85:9	8:6	103:7,10 104:2
alternate 10:7,13 28:7 99:13	anticipate 48:12	April 35:5, 15 36:7 39:13 40:25	arresting 86:18
alternative 44:6	apologize 43:20 104:10 108:2,4	area 18:20, 22 22:17 27:17 29:9 54:14,19 55:14 60:5 73:16 75:3	aspect 35:25 48:7 90:3
amount 37:9 38:4 39:12 45:4 57:19 67:21 69:13 95:14	appears 79:9 93:3	77:19 85:15 86:2,14 89:21,25 96:12,25 97:5 102:23	aspects 81:15 101:11
amounts 24:6 95:11	applied 47:22	Assembly 69:4	
ample 16:7	appointed 11:17	assemblyman 3:11 4:8 6:4 40:19 42:14 58:2 64:23 66:23	
analysis 45:23	Appointee 3:6	areas 17:19 19:7 23:24 76:20 86:20,23 87:7 103:16	Assemblymember 89:18
and/or 99:3	appointing 9:7	Assembliesmen 58:8	
Andre 4:4	appreciated 78:13	asserted 27:2	
Andy 71:3	approach 13:6	assessed 45:21	
announcement 4:11	approaches 13:6	assessment 45:22,25 52:21 61:19	
announcements 4:10	approaching 56:2	Armstrong 82:2 87:9, 12	
annual 21:21 92:25 93:2,13	appropriation 92:23	Army 13:23 14:3 15:5, 10 16:25 20:19 21:8,10	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: asset..battleship

64:18	2:10	98:18	75:5
65:11	attention	axes 83:20	barbed 74:9
77:25	26:14 27:5	axis 37:9	75:16
78:23	82:19	aye 9:25	barrel
asset 33:5	90:14,16		105:15
95:5	104:19	<hr/> B <hr/>	Base 53:14
assets 17:5	attenuation		based 8:1
assistant	37:2 41:15	baby 73:25	20:14 21:9
3:4 58:24	42:2	back 44:2	24:18
assumes 44:6	attitude	45:11,16,	35:21 38:1
assumption	58:5,16	17 46:10	39:5
43:16	73:6	60:20,24	basic 34:10,
assumptions	attuned	67:22	19
55:6	51:23	69:13 76:9	basically
assured	audience	106:19	76:3 83:6
104:23	4:15	107:22	basin 17:15
at-risk 35:1	authorities	background	18:2 21:5
atmosphere	23:16	44:11	26:16,18
49:17 50:1	authority	backlog 93:3	34:21 38:3
atmospheric	9:8 16:16,	94:11	53:16 57:7
35:17,22	21 89:14	backlogs	basins 17:10
36:9,12	authorized	93:2	18:19 55:4
38:11 47:5	18:13	backstory	basis 61:21
49:15	automated	46:8	90:6 93:2
50:2,13,	60:20	balance	98:10
14,17	availability	55:20 56:6	Bateman 73:9
63:21	19:12 64:1	79:16,17,	79:4,6
attainable	avoid 102:18	24 80:8	80:20,22
46:9	awarded	balancing	Battle 26:12
attempts	19:23	49:1	battles
59:16	aware 7:5	Bar 12:19	79:22
attend 16:7	47:13 86:2	15:20	battleship
attendance	awareness	43:10,22	96:12
		barbecues	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: Beale..brought

Beale 53:14	44:9 48:13	blocking	boundary
Bear 16:23	55:2 63:4	83:10	56:11
beautiful	66:12,24	blog 62:11	Bradford
74:17,20	79:14	blogs 62:11	3:25 28:21
75:5	87:13,14	blow 105:24	29:21
	106:7		88:14
bedrock	bigger 28:6	blowout	branches
24:14	38:7	105:4,11	43:20,23
82:11	biggest 25:6	blue 38:23	break 96:23
83:22	50:2 91:20	42:13	breaking
begin 4:10	bill 3:8	Blunt 58:2	63:9
107:2	8:2,22	board 16:3,4	breaks 74:3
beginning	98:18	29:6,14	bridge
27:2 36:7	billion 17:4	60:1,14	102:21
begun 27:23	96:25	70:23,24	briefings
behalf 85:1	biohazard	71:7,9	22:10,11
belly 99:17	85:23	board's 16:8	briefly
benefit	bit 5:12	boat 26:23	38:16
43:1,2	31:24	74:12	bring 17:18
49:4,22	35:14 41:4	88:25	20:6 26:14
99:24	45:10	boating	32:8
benefits	46:15 49:6	70:14,15	77:13,16
17:7 34:13	55:22	body 29:13	105:18,21
38:13	81:23	95:1 100:3	bringing
47:24	102:1,15	boils 19:14	51:14
50:22 71:7	bits 62:18	47:18	77:25
78:20	bitterness	Bond 46:7	104:15
big 6:25	100:25	book 26:10,	broad 65:23
17:6,20	black 39:1	11,12	broader
25:5,18	44:25	bottle 64:13	77:11
27:6	blessed	bottom 20:21	brought 67:5
32:21,25	82:14	37:14,24,	101:13
33:3,5	blight 74:14	25 42:5	104:12,19
35:17,19			
36:1,3			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: Brown..center

105:17,19	business	32:4,14	15
106:24	7:18,22	46:22 54:7	capital
Brown 33:15	79:8,12	81:6 93:7	83:17
budges 94:2	91:7	94:24	93:14,19
budget 89:19	businessman	California-	Captain
93:13 94:3	79:7	nevada 21:14	13:22
97:24 98:1	busted 83:20	call 2:19,	24:16
budgets	Butte 3:7,8,	22 9:21	card 87:11
93:19 94:6	20 16:20	60:19,20	care 107:11
buffer 48:24	17:24	74:10	case 30:24
build 13:14	19:24	88:17	56:20
16:22 58:7	20:3,5	104:18	77:14
built 14:14	51:22 61:6	called 26:12	102:21
43:17	83:24	30:13	Cast 54:7
44:5,7	88:14	36:18 38:2	catastrophic
46:3 58:14	buy 27:13	41:8 50:8	28:12 74:4
107:3,7	bypass 14:1,	75:23	105:24
bulk 5:13	6 24:12	calling	caused 72:23
Bullards	27:5,11,	62:25	99:15
12:19	12,14,19	93:25	causing 44:8
15:20	bypasses	calls 60:16	73:16,19
43:10,22	13:24	camp 85:14	caution 51:7
48:5	27:6,7	camping	cell 4:13
bulldozed	C	85:10,13	cells 53:18
75:1	Cal 94:10	102:19	cement 74:19
bullet 91:23	Calalano	candid 69:18	center
92:3	70:7,10,12	capably	21:10,14
bumper 40:12	calendar	36:15	30:17
Bureau 15:6	35:14	capacities	31:7,9,13,
bureaucratic	California	35:8 43:3,	12
90:24	2:5 3:5	12	19,20,24
burgeoning	15:2,18	capacity	32:4,8,10,
97:5	30:12	20:11	11 33:10,
		89:10,13,	16 47:3

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: comments..comprehensive

69:25 70:5	103:19	61:7 63:22	98:9
76:23	104:1	67:3 68:2	100:9,22,
78:19	commission's	89:24 92:5	25 101:4,
80:20	33:9	communication	11
101:10	commissioner	59:2,13,	companion
comments	9:7 10:6	20,24	81:15
5:6,23	78:19	65:2,22	comparisons
9:11 32:18	commissioner's	66:2,20	41:7
70:1 75:20	10:8	67:17	compensate
91:25	commissioners	68:15,23	45:6
94:20	34:4	91:21	complaining
101:19	72:13,15	communications	104:14
Commerce	75:19	23:23 24:5	complete
96:20 97:1	108:5	32:24	31:18 69:5
commission	commitment	56:10	78:22
2:8,10	65:4	58:20 60:3	completed
4:7,23	committed	68:25 98:7	14:1 17:17
5:1,3,5,17	65:25	104:5	complex
7:16,22,25	committee	communicative	12:12,19,
8:3,5,18	71:12	64:24	24
9:3,24	78:12 86:3	communities	complicated
10:12	91:12	6:14 13:25	27:4 28:18
11:5,13,16	92:12	14:19 17:2	42:21
16:15,22	95:15	59:12	88:20
24:15	100:12	community	component
69:18,20	committees	2:11 5:10,	47:21 75:7
71:13,21	78:15	19 11:8	components
72:3,7	common 65:20	14:10	47:18
78:20,24	82:9	24:21	52:22,23
79:20,22,	communicate	27:23	54:9
24 80:2,	63:7 67:7,	55:25 56:3	comprehensive
10,11,18	8,9 68:12	61:20	45:22
82:16 83:5	94:2	69:12	52:20
84:7,15	communicating	78:15	61:19
94:24 97:8		79:21	
98:17		95:17 97:1	
99:5,8			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: Conant..contributed

64:18	conference	constraint	18:17
77:23,24	104:18	93:10	22:8,14,
78:22	confidence	constraints	18,22
Conant 2:25	51:21	92:25	45:23
9:19,23	confident	construct	73:17
51:22	51:6	15:17	continues
61:23	confluence	construction	19:17
103:1	43:9 44:3	17:13	continuing
concept	conjunction	41:17	59:14 77:5
13:23	29:20	45:19	continuous
concern	connecting	64:12,14	69:6
48:11	63:17	constructive	contour
55:25 82:9	64:21	69:8	104:21
concerned	connection	constructors	105:5
99:22	63:5	105:6	107:4,5
concerns	Connely 71:7	consultant	contract
10:19 84:9	Connley 3:8	8:10	92:8 94:15
88:21	conservation	contact 32:7	contractor
concession	6:9 56:12	33:6 60:13	92:9,13
70:13	conservative	104:17	94:9,12
conclude	56:24	contaminated	contractor's
72:12 96:2	82:5,9	86:8	94:7
concluding	consideration	contemplate	contractors
96:6	26:20 33:9	44:5	73:5
conclusions	consistent	content	79:15,18
65:13	9:8 18:23	63:14	80:1,23
Condit 2:23	85:5	context	81:10,19
condition	consists	25:18	92:10,16
19:1	12:11,16	42:3,8	93:3
conduct 7:24	consolidate	continuation	97:16,20
23:22	60:22	41:6,21	contribute
conducting	constituents	102:1	97:2
21:21 23:5	59:12 60:7	continue	contributed
			21:16

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: contributing..couple

contributing	61:16 82:1	Corps 13:23	counsel 99:4
54:16	106:24	14:3 15:5,	counteract
contributory	107:17	10,11,12,	79:25
85:16	conversations	19,23,24	counties
control	60:12	16:25	16:13
14:11	81:8,22	18:13	20:3,5
16:20	100:15	20:19	23:25
18:13,18	convert	21:8,10	99:22
34:11,13,	27:13	24:22	101:23
19 36:16,	cooperate	36:19 41:2	102:17,23
19,20,22	52:3	46:18 47:7	county 3:1,
37:8,11	cooperation	48:21	2,7,9,20,
40:22	6:23 22:5	51:14,18,	24,25 4:4
42:21	coordinate	23 52:23	16:17
43:2,5,10,	7:8 22:4	53:1 54:7	19:24 21:8
16,18,19	coordinated	56:21	26:19
44:3,25	20:8,13	57:14 58:3	27:12
47:10,24	21:5,15,24	97:10	29:17
48:8,21	46:24	103:7,11	47:15
52:18,25	coordinating	104:2	51:22 61:6
55:11,17,	30:19	Corps' 34:12	83:25 84:1
21 56:7,	coordination	52:3 58:16	85:1,8
11,12,22	7:7 13:16	correct 49:2	88:3 91:8
85:25	14:2,18	68:9	101:25
86:10,11	16:5 33:4	103:22	102:1,22
87:4 100:9	43:15	correctly	couple 22:11
106:6	48:21	28:3,5	24:10 29:8
controllable	coordinator	42:14	32:21
79:10	32:19	corridor	49:18
controlled	copies 93:13	72:10	50:18 54:1
44:1	core 32:12	cost 49:20	62:20
101:20	43:5	cough 66:3	71:11
controls	cork 27:19	Council 30:9	73:12
43:8 87:18			83:13
conversation		Councilman	87:12 90:7
30:11		4:2	94:22
			104:17

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: courtesy..dash

courtesy	97:4 103:2	94:18	34:13,25
71:6		96:1,15	36:15,18
covered	69:9	99:1,20	41:17,18,
35:23 36:4		100:5	19 43:17
52:17	crossed 92:1	101:5	44:5,18,23
covering	crosses	102:11	45:7 46:3,
11:22	102:20	103:5,24	9,22,23
covers 35:25	Crowfoot	104:8	47:23
	2:3,4,16	106:14	52:21 57:6
coveted	4:6 6:6	107:13,16	60:25 66:5
27:12	7:13,19,21	108:1,4	68:3 72:9
Craddock	9:13 10:2,	cubic 35:12	73:19
75:18,19	11 11:12,	36:23	74:3,18
77:9 78:18	15 23:8,18	curious 31:3	76:23
104:17	28:15 30:8	72:7	77:11,20
Craddock's	31:5	current 6:11	82:18
106:22	33:13,24	14:15,16,	83:14,22
create 26:17	37:3	25 93:10	84:14 90:7
92:11	38:16,19	94:11,13	93:24
created 6:10	40:2 45:11	curve 45:12	97:12
60:4 93:1,	46:1 52:5,	51:20	104:20
4,17	14 53:3	57:13,14,	105:2,3,13
creates	55:13,16	16,20 69:2	106:9
75:23	57:23	cut 44:1	107:3,4
creating	58:18	75:1	damage 15:24
4:22	66:4,11,22	cut-and-dry	85:12
Creek 74:22	69:17 70:3	42:23	89:14 97:4
75:2	71:19	cutback 44:7	damages
crews 102:5	72:11,18		73:19
critical	73:8 75:13		dams 14:7
5:18 14:22	76:22		43:2 47:24
16:22	78:7,10		77:12
19:13 31:1	79:1 80:5,	D	88:12
35:3 95:17	21,25	D.C. 58:3	Dan 3:2
	81:24	dam 2:7	danger 27:3
	84:5,19	5:20 10:16	dash 39:1
	87:8 88:10	11:18 28:4	
	89:3 90:22		

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: data..developed

data 22:6 50:25 51:8,9,20 65:7,9	64:9 80:19 81:13 95:10 97:17 98:1	56:6 58:13,17 delta 90:12 demonstrated 48:3 Dence 72:19 73:12 denied 94:5 department 3:15,24 10:23 11:3,19 16:1 21:6 22:5 23:12,21 28:19 31:6,22 32:2 34:5 47:1 49:17 58:25 62:3 63:7 69:7 76:15,17 89:4,7,21, 24 95:2	derived 97:25 derives 8:21 describe 13:4 15:9 65:10 describing 49:8 design 17:13 41:9,11,12 42:6,15 55:11 designated 10:7 15:12 designed 41:15 designee 3:18 desire 77:3 desk 30:17 destination 71:16 detail 15:9 detailed 8:19 41:5 81:12 details 8:19 develop 47:10 50:18 52:6 developed 4:20 6:18
date 103:20	deck 7:7		
dates 93:20	dedicated 4:25 5:4 14:11		
David 4:2			
Davis 21:12 27:15,23	deed 93:1		
day 24:25 39:3 54:13 81:3,4	deem 72:15 deep 104:13 deep-dive 97:14 105:19		
days 63:24 83:2			
deal 80:17 82:23	deeper 44:21 77:22		
dealing 29:10 90:15 102:4	deeply 6:23 101:7 deferred 92:20 93:17		
decade 21:25			
decades 55:1 72:24 73:2	defined 13:5		
December 35:2,4,19	degradation 27:1		
decent 39:24	deliver 59:20		
decided 10:21	deliveries 56:17 57:21 63:19		
decision 68:25 73:4			
decisions 6:15 7:10 20:15 63:6	delivery 46:6,11 55:19,21		
		departments 21:23 74:16 depending 32:14,15 depicted 41:4 depth 101:14 deputy 11:17 84:18	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: developing..downstream

developing	direct 5:7	80:12	division 3:5
21:19	35:24	82:17 83:5	61:4
52:18 54:8	53:20	97:10	docent 83:19
development	54:10	discussed	dodged 28:13
21:12 47:8	59:13	76:24	donating
70:21,22	69:18	discussion	95:18
71:4,14	86:23 87:4	5:14,15	door 90:25
96:22	97:23	6:2 24:23	doors 83:20
develops	directed	29:15 53:7	Doppler
51:25	85:25	72:16 96:4	49:19
deviations	direction	97:9,14	53:13,14,
48:20	54:3 66:1	102:13	15
diagram	directly	103:7,10	Dopplers
36:16,22	11:25	107:21	53:25
39:2 40:22	68:11,16	discussions	dots 63:17
48:21	72:4	61:24	64:21
55:12	82:10,15	81:20	dotted 40:11
56:11	96:5 97:13	disjointed	double 25:7
dialogue	director	79:21	95:2
81:18	3:14,18	distributed	Dowling 3:4
diameter	11:18 52:7	20:9	Dowling's
104:20	58:24	district	103:8
dictate 38:9	70:12	3:1,3,13,	Dowman 6:11
difference	88:18	16 4:1	downriver
83:23	90:23	26:17	72:4 90:6
difficult	104:16	70:9,20	downstream
79:11	dirt 75:9	72:1	12:16,23
dig 34:6	disagree	districts	34:20 35:8
digging 29:6	82:13 83:7	16:14,15	43:3,6,8,
44:20	discover	ditch 104:22	13 44:3
dime 96:13	100:3	105:5	72:8 85:6
diminishes	discretion	107:4,5	88:12
90:17	9:7	dive 77:22	
	discuss 21:2	104:13	
	72:14		

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: downtown..embraced

downtown	22:4,8	early	38:14	efforts
72:6 82:10	24:9 25:23	40:1 54:16		13:15
dozens	91:8	32:24 33:9	63:22	18:17
draft	8:20	41:1 49:8	ease	19:11
		52:11		63:10 96:8
drain	26:16,	53:15 57:1	easier	59:7
18		60:11 66:7	88:2	elaborate
drainage		67:2,8,15	easy-to-	92:4,25
26:17		68:11,13	understand	elected
drawdown		69:11,14	59:11	6:15
44:24		73:1 74:15	economic	electives
dream	6:8	75:6,19	96:21	89:24
		77:10 80:4	economical	electronically
dredge	88:4	81:10	70:21	61:10
		87:24	educate	element
drills	23:14	88:11	22:22	42:24
drive	74:22	91:11	educational	77:18
		92:13 94:7	70:22	elementary
driving		96:12,17	effect	70:16
27:15		97:16,21	38:17	elements
drop	83:22	105:1	42:2 54:5	27:24 72:3
		107:2	75:23	82:24
droughts		DWR's	19:9	elephant
14:17				79:14,15
dry	39:23	<hr/> E <hr/>		
45:1,4,5		e-mail	effective	elevated
46:22		60:14,21	40:3 58:9	90:14
63:23		61:2 66:18	61:16	elevation
due	63:18	104:16	effectively	50:3 65:8
93:4		e-mailing	21:24	elevations
Dunce	73:9	66:16	effects	40:4 42:19
		e-mails	29:10	eliminated
duration	9:5	69:9	41:22 55:4	14:23
DWR	16:1,	earlier	efficient	eloquent
10,19		28:11	58:22	58:8
18:10,16		44:13 61:1	effort	embraced
19:10,17,		85:8 93:25	62:7,	
22 21:7,25			21 91:10	
			96:13	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: emergencies..erosion

13:23	19:20	97:10	entire 21:1
emergencies	encroach	104:2	31:15
19:12	36:25	enhance	35:22,24
emergency	39:14	19:18	36:4 40:24
15:7 16:2,	encroachment	21:16	50:5
9 19:23	29:1 39:18	22:20	entities
22:20	56:2	enhanced	14:20
23:11,13,	end 27:18	34:15	entrances
14,20 24:1	37:12 55:8	40:19,25	14:1
25:24 26:1	71:20	44:13	entryway
31:22	75:11	45:24	106:1
32:15	86:17	52:19	environment
44:10,20	endeavor	64:16	22:8 82:8
45:8,14,20	52:3	enhancement	87:2
48:20,22	endorsed	41:3	environmental
emphasis	46:18	enhancements	63:19
76:13	enforcement	78:3	87:22
emphasize	76:16	enhancing	88:21
27:7,10	engage 62:3	22:7	envisioned
28:9 67:6	engaged 6:25	enjoy 72:21	24:13
68:17	engineer	75:3	equal 35:10
employees	20:20 21:9	ensure 18:25	equally 92:5
91:9	36:19	22:24 44:2	equipment
employing	engineering	45:7 57:8	70:17
61:14	15:5 21:10	103:15	era 14:14,
empty 32:22	24:21	ensures 7:9	15,16
encampments	28:25 47:8	ensuring	Eric 71:2
28:17	52:20	57:3 77:6	96:19 97:6
encourage	Engineers	enter 88:22	Erin 58:24
62:5,22	13:23 14:3	Enterprise	66:25
97:5	15:10	61:12	68:1,21
encouraged	16:25	107:4	69:24
5:25 90:20	18:14	entertain	erosion
encouraging	56:21	23:9	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: error..Extremes

19:14	42:5,6,9,	executive	expert 31:20
error 13:13	13,14,15	70:12	77:13
errors 13:5	44:9 100:2	exercise	experts
essence 7:23	events 14:17	23:15 80:3	24:25 47:5
94:12	19:15	exercises	60:12
essential	25:16	21:22	65:14
22:5	31:14	23:15	77:2,6
essentially	34:22	exist 44:18	explain
35:2 40:1	35:6,17,	existing	40:15
41:9	18,21	9:14 18:6	65:11 94:8
43:22,24	36:2,3,14	22:24	101:2
45:12	41:8 50:2	exists 22:14	explaining
46:22	51:2	55:12	68:3 74:15
49:16	54:10,16,	exits 4:12	exposing
50:10	18 55:6	expand 78:4	105:3
56:10 82:8	73:1 74:4	expectation	exposure
95:11,18	86:13	45:15	105:11
102:23	Evidence	expectations	106:8
establish	13:10	30:23	extension
68:24 95:8	evolved 13:7	51:10	92:9
established	exact 29:12	expected	extensions
57:17	50:12	38:5	10:2
evacuate	examples	106:10	extensive
4:12 87:7	27:15	expenditures	106:23
evacuations	50:19	94:10	extent 23:16
32:19	exceed 43:3,	expense	95:12
evacuee 91:7	5	91:15	extra 83:23
evenly 20:9	excellent	experience	88:6
event 20:7	69:5	24:18	extraordinary
22:13	102:12	47:16	92:23 93:1
25:13,22	exclusive	experienced	extreme 55:8
28:2,13	84:25	14:16	Extremes
31:12	excuse 46:14	24:24 25:8	47:4
32:18 37:1	65:1,13		
	66:2 100:1		

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: eyes..field

eyes 5:22	33:23 35:7	92:8	15:3,4,7,
	36:20		25 16:6
<hr/> F <hr/>	61:22 78:3	feather	31:11
	98:15	11:20,22	34:24
fabulous		12:5,8,11,	36:19 50:6
83:15	fact 10:9	23 15:12	57:3,6
	14:23	16:23	89:10
face-to-face	43:25	17:22	
32:24	44:17 45:7	18:11,21	feed 81:5
	71:6 75:4	21:15,17	
Facebook		22:9,16	feedback 7:4
62:15	facts 69:11,	26:24	59:15
	15	34:21	69:18
facilitate		42:25 43:7	feeds 44:12
8:11 60:11	factual	44:2	feel 5:2
	67:24	46:16,23	28:22
facilitates		47:6 50:21	74:14 85:1
36:15	failure	53:16	92:1
61:17	19:16	70:7,9,13,	
	48:22	20 72:1	feeling
facilitator		79:4,6	60:17
23:22	failures	82:24	feels 51:5
	13:16 19:6	83:19 86:1	feet 35:12
facilitators		104:22	36:24
103:13	fair 57:5	107:1	37:24 40:4
	72:11	Feather/yuba	41:12 45:3
facilities	107:24	16:17	46:10
10:20		February	85:15
18:19 27:7	fall 35:23	35:4,20	felt 6:19
30:13		42:13 59:1	74:10
50:22	families	60:2,15	99:23
75:16	81:5	103:23,25	FEMA 15:7
76:14,18	family 53:7	105:22	
77:14,17,	60:8 91:7	106:19	fencing
23 78:2		108:5	75:16
82:18	fantastic		76:19
83:7,8	62:4	federal 6:16	field 30:12
98:19	farms 13:15	7:3 13:17	61:4 70:15
107:8	fatality	14:20	
	100:1		
facility			
10:19,24	favor 9:24		
31:9,13	feasibility		

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: fight..flooding

fight 19:10	FIRO 46:17,	15:2,19	51:15,20
20:2,4	18,25	16:3,4,12,	52:18,19
79:21	47:6,17,18	18,20	54:23
fighting	50:8 52:21	17:3,4,19,	55:3,11,
19:14	fish 61:5	25 18:13,	17,20
figure	82:19 89:1	16,18	56:7,11,
103:13	fisherman	19:1,8,9,	12,15,22,
107:22	87:15	10,11,18,	23,25
fill 87:10	Fishery	19,21,23,	57:2,3,4,
filled 67:10	47:12	25 20:2,4,	6,14,17,20
filling	Fishing 83:8	7 21:4,16	58:6 64:16
88:24	fit 48:4	22:7,9,12,	67:3 69:2
filters	55:10 88:7	13,16,19,	80:7 81:15
62:17	103:14	20,22,25	82:23
final 10:5,	five-year	23:1,20,22	83:3,7,11
10 22:11	77:17	24:7,16,17	84:13
52:15	78:1,16	25:5 28:19	85:24
104:6,9	93:14,19	29:6 30:15	86:10,11
finally	fixed 19:16	31:7,13,	87:4,18
67:22	73:17	14,19,20,	88:23
financial	flatlines	23 32:4,6,	89:14 99:6
92:11	40:23	8,10 33:16	100:9
95:22	flexible	34:1,8,10,	102:9
find 30:22	51:25	12,15,19,	103:11
51:18 99:7	flies 50:8	20 36:16,	105:25
finish 96:18	flights	19,20	106:7
finished	50:16	37:1,11	flood-type
17:11	flood 10:23	40:12,20,	55:6
fire 30:12,	11:18,21,	22,25	flooded 91:7
14,25	25 12:6,8,	41:3,9,10,	107:5
32:18 60:7	18,22,25	11,13	flooding
fires 31:16	13:6 14:4,	42:7,15,21	11:25 12:2
	5,10,11,	43:2,4,9,	13:2,15
	19,22,25	15,17,19	19:7 22:25
		44:6,9,13,	72:10
		19,21,22,	73:16,19
		25 45:24	86:18,20
		47:24	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: floodplain..front

floodplain	63:1 64:9	Forecasters	found 74:23
58:7	70:4 81:3	21:8	foundation
floods 13:8,	82:15	forecasting	101:16
18 14:17,	95:17	22:2	four-and-a-
24 19:5,19	101:25	forecasts	half 53:8
22:14 25:5	103:24,25	16:9 47:20	four-time
79:10	folks' 64:6	49:3 51:9	91:7
82:25	follow 12:24	54:8	Fourth 3:12
Flores 3:2	102:15	foremost	4:1
29:16	follow-up	47:5	framed
flow 20:23	99:4	forensic	104:13
43:3,6	foot 53:8	98:4	framing
45:9 87:21	footage	forget 99:25	27:17
88:2,6	62:21	forgot 59:6	free 5:2
89:1	footprint	form 6:9	freeboard
flows 28:3	7:1	48:15	88:24
34:20	force 50:8	formally	freezing
43:24 44:1	53:14	80:23	49:17
88:8	83:15,24	formed 8:3	50:1,3
fluctuation	forecast	fortunately	frequent
52:1	20:8,13,	50:11	13:15
flushed 83:4	19,22	forum 78:21	63:22 66:2
flying 50:17	21:14,15,	forward 2:12	frequently
focus 10:17	19,24,25	7:16	55:10 86:5
12:21	25:25 26:4	14:15,21	Friday 61:11
13:13	34:16	21:3 45:16	66:9,17
86:10	46:16	47:13	friends 60:8
89:16	47:22	65:21	83:1
104:1	48:14,16	71:12 77:5	front 11:14
focused	49:10	78:14,21	35:13
84:10	forecast-based	91:16,18	58:16
folks 4:15	25:20	96:14 98:3	82:10
32:24 33:6	forecasted	101:12	
47:9 60:13	20:23 28:5		

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: fruition..graphic

fruition	57:10	81:11	76:23
101:3	64:24	84:20	81:8,25
full 38:24	66:24	gentlemen's	88:3,6
	71:11	106:23	89:23 92:3
function	89:18		93:11
34:20	garbage 83:3	get all	94:19
fund 19:24	Gary 3:25	81:16	96:10
71:7 92:23	11:2,10,17	give 5:7	101:5
93:1	23:8 28:15	33:25	102:3
funding	30:10	49:19 54:4	103:24
50:13,19	60:13	59:21	Google 5:2
88:16	62:14	60:18	government
93:4,9	65:15 89:4	65:11	7:3 13:18
94:9	gate 76:19	67:11	30:21 50:7
97:16,22	gated 39:19	69:15	80:19
funds 22:6	69:3	73:10	government's
funny 74:13	gauges 21:18	giving 23:11	34:24
future 12:2,	gave 107:9	44:11	governments
9,10 19:5	GDP 96:25	65:9,14	7:3 33:5
22:4 25:1	general	91:2 93:18	Governor
26:6 34:18	59:13	glad 2:9	33:15
54:23	71:25	33:9	83:18
59:25	97:19	goal 71:15	governor's
71:20	103:20	103:15	16:2 23:25
72:10,12	generally	gold 13:7	24:9 31:22
78:17 82:1	49:2 62:24	good 7:19	grab 12:3
84:16	Genoa 3:6	10:11	grant-making
97:4,8,11	63:3	18:25 30:4	89:23
100:18,23	Genoa's	33:24 34:3	grants 19:23
	101:10	39:25 40:6	graph 35:13
G		48:4 49:19	36:7 37:4
Gallagher	gentleman	52:14 54:4	graphic
3:10 6:4,	58:14	56:8 64:8	17:20
18 7:14,20	gentlemen	70:3	20:16,17,
40:10		71:18,24	
42:17		75:9,18	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: graphing..hey

18,21	growing 14:9	hang 90:6	98:2,9
38:15 42:3	96:24	happen 66:19	heart 70:2
graphing	guess 55:18	105:8	heightened
12:14	58:1	happening	83:14
gravitated	guidance	63:1,2,5	held 46:4,5
26:22	59:16	90:13	Helen 72:19
great 11:11	88:16	hard 20:10	73:9
23:17	guidelines	37:7 96:16	75:13,19
26:10	57:11	harm 76:14	Helen's 73:9
27:15 31:5	gut 105:14	hat 76:10	helped 59:2
53:19	guys 64:25	Hatchery	helpful
55:18	65:9,12	82:20	30:7,8
66:22	67:18,25	haunch 106:8	42:18
70:23 75:2	68:13	havens 27:8	52:10 53:3
79:22	73:23	head 6:11	55:22 56:5
81:12 83:5	74:14	105:12	60:21 65:9
90:22	82:23	head-on	69:17
97:19	83:12	80:17	70:25
98:24 99:1	87:14	headed 23:11	71:5,8
101:5,23	<hr/> H <hr/>	heading 69:1	78:7
102:7		hear 5:10	80:22,25
greater 52:2	habitat 27:8	59:17 67:6	81:1,7
green 18:2	hand 11:6	68:11 70:6	87:8 88:10
24:13	60:5	71:22 78:8	103:5
groin 104:20	hand-in-hand	81:9 82:1	106:14
105:3	23:19	84:17 87:9	helping 8:10
ground 24:6	handle 49:16	101:21	77:2
69:23	79:12	heard 64:22	helps 59:17
96:23	handled 32:6	66:25 77:3	hesitant
groundwork	93:2	97:14	24:22
53:1	hands 7:7	105:20	hey 7:18
group 61:21	64:6	hearing 2:12	24:19 66:6
72:21 79:4	handy 62:18	25:21	67:12
95:21 98:4			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: hidden..impact

hidden 13:12 81:21	26:11 90:15	hope 11:1 48:14,18 51:5 86:16	hurdle 92:1 hurdles 91:20
high 19:15 31:12 34:22 39:16 46:5 56:4 86:12 90:5 98:16,19	hit 20:10 hoc 61:20 78:11,15 79:3 91:12 95:15 98:4 hold 10:13 34:25 69:20 91:1 100:19 107:14	hoping 99:11 104:11,14 105:18 horizontal 63:21 hour 33:2 hours 5:9 28:13 32:21,22 42:4 62:20	hurricane 15:16 50:9,10,14 hydrograph 42:11 hysteria 68:10
high-risk 37:17			<hr/> I <hr/>
higher 48:23	holding 104:22	house 47:9 83:17	I-80 27:16, 17
highest 35:21 50:4	home 55:5 60:7	housekeeping 5:12	ID 104:22
highlight 14:18	Homeland 76:17	huge 25:13 30:18 49:22	idea 53:16 54:4
highlighted 18:2 77:19	homeless 26:21 28:16,17 29:11 30:4 82:12 84:3 85:20 86:11,22 99:19,22 100:7	Hugely 6:22 human 22:8 100:8 102:13	identified 29:12 93:5,23
Highway 3:5	homeowners 19:20	hundred 86:7	identify 64:2 72:14 76:17 80:11 100:12
hill 105:7 107:9	homes 13:14 96:23	hundred-year 22:13	identifying 62:25
hired 60:4	honest 69:19	hundreds 30:19 42:5	illuminating 99:7
historians 13:10	honored 7:12	hunters 50:9,14	illustrated 13:19
historical 25:10,18 35:13 41:7		hunting 87:15	impact 63:25 100:9
historically 46:3			
history 11:24 12:3 13:2,4 23:3 25:2			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: impacted..inform

impacted 54:5	impressive 33:15	76:25 77:19 91:11	increasing 106:4
impacts 97:18	improve 16:22 18:21	92:22 96:9 100:21	independent 64:4 77:1, 2 96:9
impaired 89:13	22:18 48:15	include 20:22 21:5	index 38:2 39:5 45:6
impediments 27:20	50:25 51:9 73:3 88:15	42:18 93:20	indications 54:17
implementation 64:18	improved 17:3 22:2	included 19:21	individual 55:4
importance 77:21	improvement 16:16,21 17:25 18:3	includes 4:18 17:1 40:19	individuals 102:19
important 4:17 5:23 6:22 7:16 12:3 15:2, 22 16:5 18:3 23:3 25:19,22 43:1,14 49:14 57:24 59:10 61:13 65:1 68:22 69:24 73:24 74:6 76:18,21 77:12,18 92:6 94:23 95:8 97:3 98:23 100:22 101:4 102:25	69:24 improvements 18:20 21:20 22:6 23:5 45:19,20 49:3 51:6 69:6 99:13 100:23 improving 18:9 19:2 24:16 47:20 inappropriate 27:14 incident 31:15,16 32:3 33:19 59:1 60:16 73:13 75:24	including 6:24 12:12 18:19 21:17 22:10 52:19 65:22 81:12 incoming 55:1 incorporate 95:12 incorporated 54:6 increase 26:3 38:7 54:18 62:7 66:20 92:10 increased 14:18 63:1	industry 77:11 96:24 97:3,5 inevitable 86:18 inflow 26:1 34:22 35:6,18 41:10,11, 18 42:5 inflows 26:5 35:14 37:2 39:15,25 41:6 influence 92:16 influenced 15:17 inform 6:14 25:1

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: information..investing

103:11	initially	instants	48:5
information	24:13	62:16	interesting
4:19 7:9	25:23	Institute	92:24
12:10	initiated	47:3	101:22
20:15	21:25	institutionali	interface
32:13 33:6	initiative	ze 77:4	20:17,18
45:25 51:1	46:16	instrumentatio	interim
53:13,17,	initiatives	n 47:19	52:18
20 59:8,10	53:2	49:7,13	intermediate-
60:13	inland 13:10	52:8,11	type 55:9
61:2,7,8,	26:12	93:23	introduce
11 62:1,8,	49:21	insurance	2:18,24
9,18 64:9	innovative	19:21	11:2 71:25
65:19	22:1	22:25 24:7	introduced
66:14	input 107:6	insured	40:17
67:25	inside 86:13	22:25	inundate
68:4,9	insight	integral	13:8
78:22,25	47:16	26:15	inundation
81:16	inspected	integrated	79:11
87:4,5,7,	15:13	43:11	inverse
9,24 91:19	inspection	integrity	56:14
94:6 95:3,	62:9	29:1	57:18,23
9	inspections	intended	invest 36:21
informed	78:17	85:21	47:19
22:1 46:16	Instagram	intends 80:1	invested
52:23	62:15	intent 85:22	16:24
informs 64:9	installation	interactive	49:18 50:5
infrastructure	54:1	11:7	57:8
24:17 48:6	installing	interest	investigation
76:13 88:1	21:17	33:11	55:15
99:12	instance	92:18	investigations
inherently	17:10	97:15	91:15
48:24	19:25	interested	investing
inhibiting			
88:23			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: investment..kind

18:17	83:3 84:1	job 30:19	101:21
investment	85:3 86:11	58:8,9	jury's 47:25
34:25	87:22 89:8	63:16	
51:16 57:6	90:14	67:1,2	<hr/> K <hr/>
93:14,20	98:15	96:10	
105:10	100:7	jobs 58:7	Karla 3:14
	104:15	73:7 81:5	6:7 52:16
investments	issues 19:15	Joe 3:23	106:14,21
18:20	80:17	John 12:24	107:20
49:13	82:24	15:21 22:2	Katrina
invitation	84:13,25	26:7 33:25	15:16
33:17 99:4	85:3 93:5,	34:4 37:3	Kearns 8:16
invite 81:2	6,7,8,23	40:10 49:6	key 17:9
involve	95:20	52:5 53:6	18:16
6:14,16	102:9	58:18	32:11
involved	issuing 64:3	60:12	49:25 66:4
47:12	item 43:14	64:10,15	76:20
78:16	96:18 97:7	65:7,15	
80:23	98:7	91:23	kids 70:16
101:7	104:12	join 33:20	82:11
102:17	items 104:18	97:13,20	killed 74:25
104:25	106:24	joined 8:9	kind 23:3,
involvement	<hr/> J <hr/>	joining 2:4	22 26:1
13:17		87:6	34:10,11
involves	Jackson	joint 31:8	36:6 46:24
4:23 7:2	13:22	32:10	51:1 52:15
irrigation	24:16	33:10	55:8 59:21
105:9	James 3:10	July 35:16	61:17,23
107:7	Jane 6:10	50:11	65:23
issue 26:7	January	June 35:16	68:10
29:4,7	35:4,20	50:10	81:14,21
32:6 37:20	39:10	jurisdiction	85:3 86:3
58:10	Jason 71:3	102:20	87:13,17,
66:24 67:1	Jim 3:12	jurisdictions	23 88:1,7,
68:18 82:6			8 90:17
			98:12
			99:22

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: kinds..levee

100:19,24	language	leads 47:1	37:7,9
102:15	8:25	Leahigh	legal 29:22
104:11	large 13:8,	12:24 22:2	104:25
kinds 27:13	18 18:3	26:10	105:13
63:10	20:6 32:1	34:3,4	106:25
72:25	35:6 36:14	35:11 37:6	legislation
knead 13:20	37:1,16	38:18,20	26:16
knew 53:11	97:18	40:6,17	legislator
	largely 8:21	42:20	9:4
	larger 20:18	45:18	lends 12:3
<hr/> L <hr/>	22:13	46:13	length 17:16
lacking	42:15,16	48:17	lengthy
91:22	lastly 27:5	49:12 51:4	17:17
Laid 91:8	64:11	52:13,15	lessens
lake 12:12,	late 35:3	53:23	38:11
25 15:20	36:6 38:14	54:14	lesser 45:4
34:7 35:1	39:7,10	55:2,14	lessons
36:17	108:3	56:8 57:5,	15:16
37:21,23	law 2:6	22,24	96:10
38:20,21,	15:25	65:7,15	letters 30:1
24 39:4,25	76:16	Leahigh's	levee 13:24
41:14,24	laws 4:17	64:10	16:14,15,
42:1 44:8	lay 106:5	leak 107:11	16,21,22
46:4,5,19,	laying 52:25	learn 19:6	17:18,23,
20,21	layman	59:14 73:2	24 18:6,
48:2,9	24:14,18	learned	15,22
63:2,18	lead 13:13	15:16 20:9	19:14,16
64:2,19,20	15:24	96:10	29:8 35:9
67:13	67:15	leave 106:17	43:12 72:5
85:16	leaders	lectern 8:9	85:12,13,
106:4	33:19	led 12:1	14 86:14,
land 22:23	leadership	left 37:16	19,23
landed 93:15	7:11	104:20	88:15
landowners		left-hand	
13:14			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: levees..looked

levees	liability	65:15	29:10
12:17,20	107:15	89:3,4	30:21
13:12,14,	liberal	Lisa 3:18	32:7,15,24
20 14:5,13	82:5,8	list 64:11	33:5 58:11
15:11,13,	license	104:11	72:20 79:7
17,25	100:19	listening	80:10 85:4
16:9,22	Licon 4:4	24:11	89:5,9
18:10,11,	84:20,23	listserv	locals 23:22
12 19:2	lieutenant	66:8,14	24:4,9
26:22,25	3:23	literally	29:19
27:1,2,6	life-	67:19	32:5,7
28:17	threatening	102:4	located
29:1,2,11,	73:1	live 86:13	17:22
19,25	lifetime	88:2 97:9	21:12
83:22 88:4	74:5 106:9	lives 6:16	location
89:13	likewise	7:11 73:20	20:24
100:8	42:17	living 24:19	locations
level 15:2,4	liking 7:5	27:1	43:6
16:1,14	limit 44:16	Liza 60:1,	log 92:20
17:12,18	102:21	4,5 71:2	logged 66:16
31:21	linear 51:24	98:8	lonely 60:18
32:7,15	lines 12:15	Loafer 74:22	long 6:20
44:22 45:8	39:1	75:2	17:10,12
47:21	lingering	lobbying	39:11
48:23 53:8	93:6	79:19	74:21 79:5
67:13	LinkedIn	local 7:2	82:3 84:22
75:24 76:1	62:15	13:13	93:9
78:2 85:4	Lippner	14:20 15:4	long-term
97:25	11:2,11,	16:6,10,	76:5
levels 24:2	15,17	14,24	93:14,19
37:22 61:9	23:17 26:9	18:16	97:22
63:2,18	33:21	19:17	longer 107:5
64:20 65:8	62:14	23:15,24,	looked 55:3
Levinson		25 24:2	
71:23			
72:20			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: loop..management

loop 66:7	lowest 40:11	maintaining	81:13,25
losses 11:25	luck 71:18	19:2 43:12	82:4 83:23
lost 13:11		68:14	84:1 87:6
60:6	M	maintains	96:2
lot 6:19	machinery	89:6	101:14
24:23	91:9	maintenance	102:8
25:14		12:7	103:4,17
28:11 38:6	made 8:12	18:15,18,	104:11
41:23 48:2	18:5 49:12	19,20,23	106:15
52:6 53:20	51:6 53:12	22:6 72:24	108:1
54:14,19	56:4 62:6	73:3 76:2	makers 90:19
55:25 56:2	63:6 64:10	93:17	makes 20:25
59:8 60:10	81:12	94:16	making 7:15
62:20	90:21	97:24	55:6 73:4
63:22	91:11	major 13:25	80:18
64:14	95:10	18:11	95:18
67:11	96:13	43:23 47:2	manage 12:2
68:18,20	97:17	make 4:23	13:18
69:10	magnitude	5:10 6:2	22:16
70:18 71:4	27:10	7:10 11:7	39:15
79:23	41:13	12:17	43:19
80:13 81:4	mail 60:20	15:14	47:23 49:3
82:15	main 48:22	20:15 24:4	72:5 87:3
90:15,16	72:22	37:10 40:9	95:24
95:3 96:16	maintain	41:22	managed 12:5
100:25	18:10	51:15 53:4	14:5 55:23
101:9	22:19 35:7	58:23	management
lots 74:23	44:21	59:16	11:18,21
90:13	87:20,25	60:23 61:6	12:18,22
Louisville	88:5 89:15	64:5,15,21	14:10,19,
91:9	maintained	65:4,13	22 15:1,3,
love 73:6	15:17 44:4	68:17 69:6	8 16:6,18
lovely 27:13	73:18	70:6 71:15	21:9,16
lower 40:11	maintainers	73:10 75:6	22:7,9,14,
46:5	18:25	76:24	19,24 23:2
		79:1,13	30:12,15
		80:9,18,20	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: manager..membership

36:22	18,23 45:7	measured	23 104:1,
52:25	46:3,9	25:10	12 105:22
83:3,7			106:20
91:4 95:6	massive	measuring	
	74:19	57:17	meetings
manager			2:19 7:8,
30:14 34:6	material	meat 10:14	24 16:8,10
71:25	20:4		
97:19	materials	mechanics	23:23
	19:10,13	98:15	60:11
manages		99:12	61:14 62:2
43:22	math 92:20	mechanism	79:2 84:6
		101:20	91:19,20
managing	Matt 2:25		97:8
13:6 31:16	3:16 71:1	media 62:13	100:14
42:23	91:5,6	67:16	
57:19	95:13	meet 61:21	meets 78:12
	103:5		95:1
Mangat 3:18		meeting 2:8,	
	Matt's 97:23	13,16,17	Mellon
manual 37:9		4:9,14,16,	58:22,24
43:5,16	matter 84:3	17,20,21,	66:10,15
44:4 48:8	87:1	22,24 5:9,	70:1
51:15	maximize	13,21 7:25	melt 36:11
57:14	57:19	8:6,10,11,	
manuals	maximum	14,17,24	member
47:10	39:10,12	9:10	10:12,14
map 11:21	Mayor 3:21	10:15,20,	29:13 30:9
		21,25 52:9	69:4 91:14
March 38:10	meandering	61:17	members 2:11
	13:11	71:17,20	4:23 5:10,
Marine 47:12		72:12,22	11,16,19
mark 42:12	meaning	82:19	8:5 9:3,4
59:17	45:20	88:19	11:5,8,13,
Marty 47:4	meaningful	91:2,24	15,16 47:7
51:5	100:15	93:22 96:4	92:14
		97:13	99:4,5,8
Marysville	means 4:19	100:13	membership
16:15,21	52:4 54:21	103:7,12,	92:12,14,
17:16,23,	meantime	14,20,21,	18
24 43:16	107:7		
44:5,15,			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: menagerie..nature

menagerie	62:20 85:7	moment	4:8	58:21
98:22	89:20	money	79:21	64:17
Mendocino	90:23 91:3	89:18		69:25 79:4
46:19	92:11	monitoring		96:17 98:3
47:17 48:3	mind 14:25	31:14		moved 10:25
Menteg 91:5,	19:7 26:20	50:20		74:24 86:6
6 96:7	46:12 52:4	month 95:1		moves 47:13
mentioned	58:9,10	102:5		moving 14:15
17:7,21	75:14	monthly 16:8		21:2 65:21
20:4 28:2	minds 58:4	months 2:17		77:5 78:21
31:25	90:19	14:12 24:2		99:9
52:5,7,16	mine's 73:20	35:1,3		101:11
53:12 85:8	minimize	37:17		102:19
mentioning	43:2	63:24		multiple
25:3	minute 16:11	100:4		83:2
mentions	minutes 53:5	morning 7:15		multipurpose
82:23	58:20 70:5	34:3,10		14:14
merging	missed 72:22	36:17 53:9		57:25
75:22	88:19	61:18 66:5		mute 4:13
met 15:14	misunderstood	74:11		
36:15 59:3	57:12	75:17,18		<hr/> N <hr/>
60:10	mitigation	mother 19:2		named 10:12,
71:10	72:9	20:6		13
method 24:16	mix 36:5	motion 9:12,		national
67:17	model 21:11	15,18		15:6
mic 73:11	modeling	mountain		21:13,20
miles 12:17	21:20	25:11		31:10
17:11,14,	models 21:19	mountaintops		47:11 54:6
15,18	modified	53:21		native 24:13
18:12,22	8:23 45:16	move 9:17		natural 2:5
million 3:23		14:20 31:2		5:1,3 22:7
16:24 18:7	moisture	33:25		89:22
38:25	50:21	48:13		nature 19:2
40:23		52:14		20:6 31:17

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: necessarily..on-site

37:1 83:19	Nielson'	50:11	30:17
necessarily	100:11	number 49:13	offer 33:8
63:11,13	Nielson's	50:15	offered
needed 6:19	64:23	60:15 70:3	26:16
13:20 14:8	71:10	77:1	office 3:20
18:8 27:10	night 32:20	numbers	4:5 6:19
77:3 78:3	83:21	23:24	9:2,6 16:2
neighboring	no-brainer	30:23 38:8	23:19,25
20:11 85:2	47:21 49:7	_____	24:9
Nemeth 3:14	NOAA 21:12	o	30:15,16
33:8 35:9	47:10	obligations	31:22
49:6 51:13	NOAA's 21:13	94:12	58:25
52:7 55:17	nonpublic	OBS 33:16	64:23
69:8 78:9,	92:11	observations	65:15
11 81:11	norm 46:9	5:6,18	67:19
89:17	normal 45:17	11:9 50:16	71:10
90:23	north 30:13,	occasional	90:25
94:19	25 31:25	79:11	100:10,11
104:16	90:12	occasions	officers
Nevada 54:7	north-south	71:11	83:15,21
Nevadas	18:1	occur 55:10	official
25:12	note 4:13	occurred	46:17
newly 11:17	5:23 15:2	41:22 54:1	officially
nice 78:14	18:3 81:25	occurring	46:18
Nick 8:8,16	103:4	49:1 54:10	officials
81:24	noted 69:4	ocean 50:16	6:15
103:19	97:8	October	oils 86:8
Nielson 2:7	notes 4:21	23:21 24:3	older 38:19
3:12 6:4,6	107:9	37:18,19,	73:22
9:17 24:10	notified	21 38:22	on-guard
28:1 61:15	82:22	odd 105:10	25:15
89:18	November	OES 24:9	on-site
103:17	35:3 39:7		19:13
104:6,7			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: onboard..Oroville

onboard 59:1	21:7 25:20	77:12	organizational
one-on-one	31:7,8,13,	opportunities	ly 5:13
34:11	19,20,24	5:18 65:17	original
online 10:10	32:8,10,11	opportunity	43:15 46:4
99:14	33:16	5:17,20	94:8 105:1
ONM 93:13,	44:17	11:9,20	originally
18 94:9,13	45:17	16:7 23:1	28:6
open 4:8,16	48:15	33:22 66:3	105:14
33:17 66:1	52:18	69:20	Orleans
83:20	53:22	79:23 81:9	15:16
98:20	97:11 99:6	91:13 92:4	Oroville 2:7
opening 6:5,	102:6	97:2 98:12	3:22 4:2
7	operational	100:10	9:5 12:12,
operable	47:22 61:8	101:24	19,23,25
105:16	76:7	102:8	15:20,21
operate	operations	opposed 10:2	28:4 32:20
10:24	5:14,15	opposite	34:7 35:14
30:25	10:16	50:12	36:18
31:18	12:25	ops 30:13,	38:21
45:23 57:9	20:13,17,	25 31:1	41:21
75:25	19 21:5	40:13	43:10 44:7
operated	22:1,20	option 21:2	46:5 48:9
15:22	33:10	order 7:22	53:13 60:3
53:14	34:1,6,7,	39:17	61:3 63:12
operates	11,17	44:21	64:10
33:11	43:10	59:20	70:20,23
75:21	46:4,16,21	80:23	71:15 72:2
operating	47:9,14	ordinance	77:14
48:23 57:4	48:18	85:9,10	81:13
68:14	62:12,23,	86:25	82:10,18
operation	24 63:3	102:18,24	84:25 85:6
6:21	64:15,17	ordinances	91:17 93:8
18:18,22	77:5 81:14	29:17,23	95:24
20:8,25	95:3 97:24	operators	96:19,22,
	103:12		23,25
	104:3		97:5,18
			105:2

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: os..people

os 72:14		87:1 91:21	89:19
	P		
outdated 57:15	Pacific	participated 61:20	passing 29:23
outflow 35:7 36:15	50:18 paid 90:16	Participating 21:4	102:17 past 16:19
outlet 88:15 105:25 106:3	95:16 panel 77:16, 25	participation 6:8 59:5	70:16 91:22 93:6 94:5 101:1
outlets 62:1	panels 77:13	partner 21:22	path 46:20
outline 16:11	paper 69:10	29:14 47:2 101:22	paths 79:24
outlook 96:21	Paradise 60:6	partnered 50:6	patrol 3:5 83:22
oversee 57:8	parallel 63:10	partners 16:17	pattern 63:24
overseeing 34:12	parameters 38:9 55:11	21:23 31:11,12	patterns 66:20
oversight 16:5 36:20 92:12 94:25 103:11	57:4 park 70:9, 20 72:1,6 82:11 83:23	61:5 76:16 87:6 89:9	peak 20:12 37:2 41:11,25
overview 5:21 8:19 11:20,22 23:2 24:11 34:1,9 59:21 65:23	parks 3:17 6:24 27:8 61:5 70:19 71:2	partnership 15:23 22:15,18 23:18 24:8 29:10 89:6 104:2	peaked 41:23 42:10
owners 15:23 77:20	part 6:1 25:2 26:15 34:24 43:4,18 45:13,21	19:9 20:7 30:6	peaking 42:8
owns 15:19	47:15 50:22 55:2 77:10,17, 24 78:12	partnerships 19:9 20:7 30:6 parts 77:15 party 77:6	people 7:5 16:8 22:22,24 24:24 28:23 32:22 33:10 46:11
		pass 10:4 44:19	56:2,5 62:3 66:8 67:12,22 68:5,12,23
		passed 2:6 29:17	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: percent..point

69:15	person 60:3,	piece 14:22	23:11
72:25	9,21 88:13	81:15	plans 71:9
79:18	98:18	99:20	72:7 87:25
80:7,16	100:2	pieces 32:12	91:16 92:6
81:4 82:12	person's	pin 49:25	plant 39:16
85:19,21	89:6	105:6,16	75:21
86:13,21	personally	Pittman 4:2,	105:25
87:1,7,19	51:7 59:4	3 30:10	106:1,2,7
95:15	personnel	32:17	plants 75:21
100:25	82:20	33:12	plateau
104:18,24	86:15	70:24	42:11
106:22			
percent	perspective	place 11:1	platforms
34:25 35:9	28:24,25	30:3,22	66:21
36:2 54:17	30:21	34:14	play 63:3
68:19 89:8	80:13,16	40:20	played 103:2
percentage	97:20	44:23	player 103:2
36:13	102:16	45:12	plays 16:5
perfectly	perusing	49:10 52:8	19:13
83:9	26:13	53:2 59:24	94:24
performance	phone 23:24	74:18 76:9	pledge 2:13,
45:21 64:3	60:15	83:5 95:8	15
performed	67:18	107:17	plenty 66:25
52:12	104:18	places 19:11	point 20:24
period 39:11	phones 4:13	plan 10:24	24:12
periodic	photos 62:20	16:12	25:3,7
13:8	physical	18:13	28:10
periodically	92:7,25	19:25	39:14,16
15:13	pick 60:18	54:23 55:3	40:24 46:2
periods	83:1,2	92:5,17,18	56:13 60:9
35:20 36:7	picture 33:1	93:14,15	61:23
67:4	42:21	95:6	63:3,5
permitted	75:10	planned	66:18
85:11	95:22	10:25 28:6	68:17
		100:19	69:4,5
		planning	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: pointed..pretty

71:13	12:14	powerhouse	presentation
72:23		98:15,16,	10:15
81:1,18,22	portioners	17	12:22,24
100:6	13:9		22:3 30:11
107:6	position	practicing	40:18 41:5
	60:4	19:8	55:18
pointed		Prado 46:21	81:13
42:14 50:4	positions		97:21
	95:4	precipitation	98:24 99:3
points 24:14		20:22	
62:25	possibility	35:23	presentations
68:25	106:13	54:22	5:16 11:4
91:23 92:3	possibly		65:18
	99:18,21	predictability	
polarization	105:13	68:22	presented
80:15	106:10		8:1,18,19
		predictable	42:24 65:7
policies 9:8		68:25 95:9	93:21
19:22	post 10:9		
22:24	41:21 61:8	prepare 12:2	
	62:19	23:20	preserve
policy 90:19			85:24
	posted 40:8	prepared	
pool 34:15		14:24 19:5	press 62:10
40:20,25	potential	20:6 22:22	
41:10	36:10 48:2	24:5,7	pressing
44:13,21	61:24	26:5 31:6	26:7
45:24	76:14		pressure
52:19	85:12	preparedness	79:25
57:17	105:4,11	12:8 19:8,	
64:16		9,18,20	pressures
75:22	potentially	20:7 22:21	46:6,11
	19:15 48:4	23:23	58:12
poor 72:23	95:21		
	105:23	preparing	pretentious
population		96:23	101:17
14:9 26:22	power 39:16		
28:17	75:21	present	pretty 39:23
30:4,5	92:12	12:25	42:23
	105:25	14:16	47:20 56:9
populations	106:1,2,7	60:11	57:15
29:11		65:18	62:10
	powerful	103:4	87:16 88:3
portion	19:3 79:19		

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: prevent..protection

prevent	82:25	50:8,23	promised
86:8,19	88:17	52:21,22	46:7
	90:8,18	76:2,4	
previous			promises
39:2 91:24	problems	programs	101:1
	26:21	19:22 23:4	
previously	27:22	70:15	pronounce
17:21	90:13		106:22
	99:16	progress	
primarily		90:21	proper 18:15
89:16	process 4:22		23:24 41:1
	38:13	progression	
primary 36:4	44:10,15	45:5	properly
89:14	47:13 48:1		22:25
	52:24	prohibiting	
principals	61:22 76:5	29:18	property
8:2	77:18		53:7 85:10
	80:24	project 6:22	
principle	92:17	12:15	proposal
20:14		17:17 18:2	92:9
		41:8 42:7	
print 37:8		44:19 45:9	proposed
	processes	46:17,25	9:14,25
prior 41:17	41:2	47:6,14	92:8 93:21
53:2		55:5 77:15	100:13
101:19	produce	78:5 92:21	
	25:14	94:20,25	protect
priorities	35:17	95:4,5,12,	13:14,25
72:14		23 99:13	76:18,21
84:16 97:9	product		80:7
103:18	95:18		
		Project's	protecting
priority	productive	21:6	17:8 76:13
72:15	81:17		
89:11		projections	protection
103:16	products	30:23	14:13
	21:21		16:3,4,12
prison 74:10		projects	17:3,12,19
	program	12:6 17:1,	28:19
privatize	15:25	6,9,16,20,	29:6,14,
93:4	20:8,13	22,25	22,25 41:3
	21:15,24	18:4,6,8	54:24 55:3
proactive	45:22	34:6 71:5,	56:12,15
65:2	46:19	14,17 94:6	57:2,7
	47:17		
problem			
32:21			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: protections..quintessential

82:7 88:23	58:11,21,	31:19	83:2 88:9
protections	23,24	40:20 42:8	89:3
30:3	59:14 60:3	44:23	102:12
protects	61:7 68:4,	49:10 52:8	106:13,17
17:23	16 69:25	56:25	107:19
provide	82:17,22	58:16	questions
14:8,12	83:12	59:24	5:17 9:11,
22:8 33:9	84:10,13	62:6,18	14 11:6,9
34:9 41:2	86:25 87:1	76:9 89:18	23:6,9
47:16,25	91:21	93:16,23	33:24
65:10	92:1,2,14,	96:11	60:23 63:2
66:13	18 93:12	101:12	65:20
68:12	94:4 95:1	107:2	73:12
78:21 80:8	96:14	puts 66:9	75:14,20
83:16 87:2	97:25	putting	83:12
93:12	99:8,24	25:18 42:3	87:12
105:2,4,9,	publicity	52:1 95:3,	88:11
16 106:16	80:3	5	97:23
107:10	publicly		quick 19:11,
provided	92:4	<u>Q</u>	12 24:10
20:2 59:9	107:23		28:16
87:5 105:6	purchase	quality	50:24
providing	19:20	63:20	83:13
37:19	purpose 6:13	question	93:22
39:24	27:14	5:25 8:3,	94:1,15
48:24	34:23 35:5	7,13	quickly
65:17 95:9	43:18	23:10,17	14:10
104:21	53:24	28:16	19:16,19
public 4:16	86:19	48:10	29:16
5:11,19	purposes	54:20	40:11 67:2
11:8,10,16	6:21 25:3	58:14	quiet 85:22
15:25	pushed 85:23	60:25	quintessential
28:25	pushing	61:18	29:9
29:24 30:4	65:18	72:11	
40:3 52:1	put 27:19	76:10,11,	
53:5 55:22		25 77:10	
		82:21,23	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: radar..red

	reach	26:1	20:23	38:6	39:20	59:2
R		60:19	45:19		62:21	
		97:12				
radar	28:22		recently		record	6:1
	49:19	reached	91:1	85:8	25:4	61:12
radial	76:19	read	8:25	recited	2:15	record-setting
Raegan	82:6		46:10	reclamation		14:17
			49:19	15:6	16:15	recorded
railroad			91:23	recognition		5:24
	27:16		96:20	44:17		recovery
rain	20:9,	readied	76:9	recognize		44:15
	22 36:5	readily		15:22		79:5,7
	39:7 54:5,	68:23		recognized		recreate
	22,25	reads	69:10	14:7,11		82:16
rainfall		real	10:14	77:12		recreation
	21:18	24:10	64:6	recognizing		6:24 27:9
	35:23 36:5	78:19		86:21		63:25 70:9
	50:4	83:13	97:1	106:15		71:15,17,
rains	38:6	realize		recommend		22 72:1
raise	11:6,9	95:15		33:17		74:15 83:9
raises	84:9	realized	6:8	recommendation		87:20
raising	60:5	reason	36:4	93:24	99:2	100:18,23
Ralph	47:4	38:1	85:18	recommendation		101:1,8,12
	51:5	reasons		s 77:4		107:1
ramifications		25:22		93:21		recreation-
	99:23	32:23		96:11		type
ramp	63:25	86:24		98:4,5		72:3
	74:12	Rec	70:20	recommended		recreational
range	10:19	recall	7:25	94:3		38:13
	25:11	8:17		reconciling		70:15,21
rate	92:10	received		79:23		71:9,14
rates	36:11	71:1		reconstructed		75:3 83:8
	43:6	recent	12:6	45:15		red
		18:19		reconstruction		12:15

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: reduce..reputation

reduce 34:20	18:8 19:10	relay 67:19	rentals
reduced 17:4	22:23	release	70:17
36:8	33:19	28:10	repair 18:6,
reducing	region's	41:13	7
18:16	14:13	released	repaired
24:17 34:8	regular	12:18 42:1	89:13
reduction	61:21	releases	repairing
12:6 41:16	62:11 79:9	20:25	15:24
56:23	98:6	44:2,7	repairs 18:8
92:10	regulatory	56:3,4	replacement
reevaluate	20:20	62:10	9:6
73:23	reinvestment	63:20	report 28:1
refer 15:11	95:11	67:13	64:3,5
referred	relate 34:17	releasing	104:3
13:9	related	61:25	107:22
referring	6:15,21	reluctant	reports
36:17	10:24	105:21	62:6,9
refill 38:12	48:6,8	remain 10:18	64:2
39:25	64:17	remains	represent
reflect	relates 8:4	13:11	17:11
86:24 87:4	34:8 48:9,	remarks 4:9	46:17
reflects	10 55:19	96:3,6	89:25
103:18	56:25	remember 8:9	representative
refrain 10:7	63:12,15	22:12	31:23
refurbished	69:15	28:3,4	58:11
76:8	81:14	remind	represented
refurbishment	104:5	103:19	90:11
76:3	relations	remotely	representing
refused 73:2	80:3	21:1	9:4 80:10
regard 80:2	relationship	removal 9:6	92:18
region 16:10	81:9 85:2	89:20 91:4	represents
17:2,5,22	101:11	removed	37:15
	relative	99:16	reputation
	95:10		

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: request..risk

56:24	46:21	32:2,9	restoration
69:13	48:4,15	34:5 58:25	72:8,16
request 8:4	52:1 55:21	59:22	restricting
required	56:16	70:19 71:4	88:22
36:24	58:13	86:4 89:4,	result 19:16
37:25	61:9,25	7,22	review 64:4,
38:10	63:6,15	Resources'	6 77:17,23
39:4,12	84:11	76:15	97:7
requirement	103:12	respectful	104:15
39:8 45:4	reservoirs	5:7	reviewed
requirements	14:8,12,14	respective	8:18
8:2 45:1	residence	80:2	reviewers
104:25	26:25	respond	77:16
105:13	resident	19:18	reviews 77:1
107:1	60:5,6	response	78:1
requires	91:6	11:25 16:9	Reynolds
44:20	residential	19:23	3:21 70:24
research	86:20	22:21	rid 106:12
47:8,19	residual	93:22 94:1	rightly 56:1
49:15,22	14:23	106:16	Ring 17:23
54:15,19	resolution	responses	rise 67:13
reservoir	107:18	96:10	rised 75:25
10:16	resolve 8:7	responsibiliti	risk 12:6
12:20	resource 5:3	es 12:1	13:6 14:23
15:20,23	10:23 47:2	13:4 15:1	17:4 18:16
20:17,18,	62:4	23:4	22:13,23,
20,25	resources	responsibility	24 24:17
21:7,20	2:6 3:15	12:4 15:3	34:8 36:8
22:1 28:11	5:1 11:3,	43:12	41:16
33:2 34:2,	19 16:2	56:23 80:7	44:16,22
10,16,19	21:6,23	responsible	45:8,25
36:11	23:12	23:14	50:2
38:12	28:20	102:2	rest 78:5
42:18,22	30:14	rest 78:5	56:23,25
43:18	31:2,7		

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: risks..scale

risks 49:1 50:13	River's 90:12	Ronald 82:6 room 79:14	safe 87:2 97:4
river 6:9 11:20,22 12:5,8,11, 23 13:24 15:12 16:9 17:22 18:11,21 20:10,19 21:7,14, 17,18 22:9,16 24:19,24 26:24 35:17 36:13 43:7,8,21, 23 44:2 50:13,14, 20,21 53:16 70:7,9,13, 20 72:1,7, 8,9 79:5,7 82:21,24 83:4,19 85:17,23 86:1 87:25 88:8,12,22 89:1 90:8 99:16 101:19 102:2,5,7, 9,13 104:22 106:3 107:1	Riverbend 72:6 rivers 12:16 13:11,12, 25 16:16, 20,23 34:23 35:22 36:9 38:11 47:5 49:15 50:2,17 63:21 84:4 87:19 Riverwalk 86:14 road 11:21 105:8 Robert 73:9 79:4 82:2 87:9 role 9:20 15:10 16:5 19:9,13 34:12 81:2 94:24 103:2 roles 12:1,4 13:3 15:1 23:4 roll 2:19, 22 rolling 98:12	routings 44:6 ruin 87:17 ruled 92:7 rules 7:23 9:8 run 6:20 running 53:18 61:11 68:14 runoff 20:12,23 21:19 22:2 35:24 38:5 54:11,16 63:15 runs 33:16 rush 13:7 93:25 94:15 rushed 106:17 <hr/> s <hr/> Sacramento 6:9 14:2 21:9 24:19 27:16 31:8 79:19 90:11 99:6	safer 102:9 safety 4:11 5:15 10:17,19 11:18 19:25 28:25 29:24 30:4 52:1,21 57:4 58:12,16 61:7 70:15 73:5 75:7 79:16 82:17,20 83:13 84:10,13 85:24 86:25 99:8,24 101:11 103:8,11 104:3 Saffold 8:15,16 9:22 10:4 99:11,21 103:22 saturated 38:3,4 save 74:1,2 SBF 70:23 scale 31:17 32:13

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: Scheduling..shared

Scheduling 21:7	securing 22:6 83:17	Senator's 28:16	32:19 47:11,12 54:6 76:8
school 98:19	security 72:25 76:11,17 83:14,16, 24	send 61:10	services 16:3 23:13,20 24:1 31:23
science 51:7,25		sending 104:16	
scope 84:8		sends 61:2	
screen 11:13,14	sediment 89:11,12	sense 82:9 101:14 108:1	set 23:3 99:9 103:20
screwed 106:7	sedimentation 89:20 90:4	sensitive 28:22	setting 61:15 98:13 105:1
Scripps 47:3	seeking 8:23 79:18	sentence 9:1	
sea 13:10 26:12	sees 78:24	separate 77:25	Shannon 79:5 82:1 84:22,23
season 10:23 11:1 19:1 23:20 24:7 50:10 52:10 59:25 67:4 68:18	segue 96:3	September 8:18 23:21 24:3 38:23	Shannon's 100:6
secrecy 74:7	selection 92:17,19	series 13:5 69:1	shape 51:20
secretary 2:5 8:15 9:10 11:15 23:17 66:18 77:10 79:6 80:6 89:3 105:19	selections 92:5	serve 2:5,22 7:8 9:5 41:15 88:14 91:14	shaped 13:3 42:11
	self-evacuate 86:16		share 5:5,18 11:20 12:5,8,9, 11 22:3 23:1 59:12 78:21,25 92:6 97:20 98:12 102:6
	senate 3:12 8:2,22	served 2:7 70:16	
	senator 2:6 4:8 6:4,6, 18 61:15 64:23 89:17 100:11 103:17 104:5	serves 18:10 81:20	
section 8:25 11:24 21:9 36:18		service 2:11 4:7 15:7 21:13,21 30:25 31:10	shared 15:3 20:15,16 43:11 91:23 96:5
sectioning 9:2			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: sharing..snowpack

sharing 4:18	side 40:4	72:2	59:6,7
22:5 92:13	47:9 49:5	102:18,24	60:1 62:14
Shawn 70:8	56:15	Similarly	slides 19:4
71:22	57:18	63:23	79:9
Sheriff 61:6	74:11	simple 68:4	slightly
Sheriff's	Sierra 25:12	simply 2:19	8:23
3:20,24	sight 29:8	11:6 29:5	slow 20:12
4:5	86:23	69:15 88:5	slower 28:8
shielded	sign 10:6,	sincere	slowly 13:7
81:21	12,14 66:8	96:13	small 11:14
shoot 104:1	102:21	single 8:13	30:20
short 62:18	signature	sir 104:8	36:13
96:21	10:9	107:20	smaller 17:1
shoulder	significant	sit 48:13	20:21
56:21	62:6 67:15	site 61:18	Smith 96:19
show 25:25	95:14	sitting 3:17	97:6
28:7 37:11	97:15	situation	snag 90:24
38:15 65:6	significantly	48:20	snags 90:4,
showed 39:2	50:25 97:2	67:15	5,6,9,13
showing	signing 10:8	85:20 86:4	snow 20:23
40:11	silent 22:10	105:4,20	21:18
93:15	silos 63:9	106:2,6	35:25
shown 18:24	silt 27:20	six-foot	36:1,5,10,
38:25 43:4	87:17	104:19	11 53:9
shows 17:5	88:24 90:7	size 25:8	54:5,22
25:13	91:3	sizing 41:9	55:1
36:23	siltation	skewed 35:15	63:13,14
39:20	90:11	skill 47:21	snowmelt
40:25	99:15	slide 17:21	38:12,13
42:1,7	silting	18:24 20:1	54:9,15
56:11	88:11	43:21	snowpack
sic 75:25	similar	52:15	39:24 64:7
103:10	30:16 31:4		

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: so-called..start

67:14	15:19 35:6	specifically	87:15
so-called	36:21,25	8:24 13:1	spot 82:4
75:15	37:11,15,	34:7,14	spring 36:6
social 62:13	20 38:7,9	59:23	38:14
67:16	39:2,8,13	62:11	39:23
society	41:15,23	64:22	55:24
15:15	42:2	85:12	76:10
soil 38:3	spared 91:15	104:24	staff 11:3
50:21	speak 2:20	specifics	64:24
75:10	6:17 11:10	95:24	staffs 32:2
solid 38:23	46:13 70:5	speculate	stage 21:18
solutions	77:7 85:1	68:6	23:3
29:3 89:25	87:10	speed 98:10	stags 27:21
Sonoma 47:15	speaker 9:18	spend 58:20	stand 2:14
sort 45:5	46:2 53:6	spending	84:2
66:6 68:20	54:12	95:14	standard
72:8,9	56:13,19	spent 18:7	41:8 42:7
75:15	58:1 84:18	spillway	44:19
80:14	87:11 90:3	25:24 26:1	45:9,12,14
81:21	98:14	28:8 39:19	55:5
81:21	101:7,16,	44:10,15,	standards
94:24	18 102:14	20 45:9,	15:13,14,
98:2,3,7,	104:10	14,20	15
8,9 103:21	106:21	46:11	standing
sounds 48:11	107:14,24	48:22 62:8	66:18 98:7
66:8 79:2	108:2	64:4 69:4	standpoint
107:17	speaking	74:11	28:19,20
south 30:13	104:11	76:20	start 2:13,
31:1,25	special	92:22 96:8	23 23:10
73:5	102:6	99:14	35:4 36:8
southern	specific	spirit 68:20	37:19
46:21 81:6	8:12 10:17	spoken 6:9	38:11
93:7	20:24	71:8	46:20
space 5:8	53:17 64:8	sporting	59:25 70:7
14:11	75:14		
	85:18		

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: started..successes

90:10	94:7,8,13,	steal 64:12	53:11
92:24	16,20,25	Steve 3:4,19	54:12
started 2:17	95:4,11,23	stock 105:6	strategy
14:4 39:7,	96:24	stockpile	29:12
14 79:8	97:16,17,	24:6	52:19
92:21	19	stockpiles	streams 84:4
95:20	state's	19:10 20:4	stripped
103:6	96:25	stop 75:10	91:9
starting	state-ordered	105:16	strong 96:22
35:3,15	79:15	stopped	104:4
37:18,19	statehood	93:10	structure
78:4	13:8	storage	74:19
state 3:10,	statement	15:19 27:7	76:19
17 6:16,21	96:21	36:24	97:17
7:3 12:15	103:9	38:21,24	100:14
13:17	States 13:22	39:4 57:7	stubborn
14:20 15:4	14:3 15:5,	85:10	86:17
16:1,6,24	6 16:25	store 20:12	student 27:6
18:12 21:6	21:11	44:8 88:7	studies
23:13	76:12	stored 62:9	78:16
29:9,20	77:11,20	storm 20:6	91:15
30:15	stating 2:13	48:12	stuff 87:15,
31:11,20,	station	storms 18:5,	22
24 32:1,3,	50:21	9 19:3	subject 4:16
8,14 33:15	status 17:7	37:16 38:8	15:15
34:5 47:14	104:3	42:4 48:16	88:20
50:6 65:16	statutorily	54:3 55:7,	subscribing
67:20	6:10	9 63:20	62:22
70:19 71:1	statutory	66:12 69:2	subsequent
77:15,16	56:22	story 104:4	2:19
78:5 79:18	stay 39:22	straightforwar	substantive
80:19,22	66:7 94:13	d 8:1	79:2,3
81:19 82:6	96:20	strange	successes
83:25			
89:6,9			
92:8,9,13,			
16,21 93:3			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: successfully..taking

13:16 19:6	88:13	4:4 14:6	system-wide
successfully	103:8	16:20	27:25
19:14	supervisors	17:10,24	systematically
sued 30:2	71:8,9	19:24	76:4
suggest 99:3	supplemental	20:3,5	systems 14:1
100:10	71:7	29:17 84:1	18:6 22:16
103:6	supplies	86:2 87:16	49:23
107:16	24:6	88:14	85:12,23
suggesting	supply 14:8,	swap 88:3	86:19
98:20	19 38:13	swim 75:4	
suggestion	47:24 49:4	82:12	<hr/> T <hr/>
40:6 65:8,	57:2 63:19	sympathetic	table 17:5
9 81:12	81:14	84:9	51:14
101:6	95:25	system	95:21
103:9	supposed	11:21,23	tabletop
suggestions	75:2	12:5,11,	23:15
83:13	82:12,16	18,20,21,	tackle 98:6,
suit 53:21	surcharge	23 13:20,	11
summaries	44:8	24 14:4,7	tactics
4:24	surcharge-type	16:18	59:19
summarize	44:16	18:15,25	65:21,22
14:25	surprised	21:1 22:7,	tail 27:18
summary	26:24	19 23:2	71:19
4:21,22	surrounding	24:12	tailing 35:4
100:13	30:5	25:14	tailwater
summer 38:14	surveys	27:6,24	75:23 76:1
40:1 70:17	63:13,14,	28:4 42:25	takeaways
Superintendent	15 64:7	46:23,24	98:3
3:17	sustain	72:5 77:15	takes 51:7,8
supervisor	91:17	78:6 84:14	52:6
2:23,25	sustaining	85:11,17	taking 53:1,
3:3,8 4:1	6:20	86:7,9,14	2 77:22
61:23	Sutter 3:1,2	88:12	107:17
		89:8,15,16	
		94:17 95:7	
		100:9	
		107:7	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: talk..thousands

talk 5:8	85:19	ten 36:2	107:2
6:17,25	Tasha 71:23	58:6 89:7	things 6:19
10:22	72:18 73:8	93:24	19:24
15:21	Teague 3:16	term 9:2,6	23:14
16:11	71:1	terms 8:4,13	24:11
25:11	team 20:20	9:2 17:7	25:1,17
34:13	21:7	30:16	49:10,21
45:10	31:15,16	34:12,15	52:17
59:23	33:19	36:8 39:21	55:23 58:5
63:11,12,	47:15	41:16	59:19 61:3
13 71:16	64:10	42:23	62:16,21
72:12 75:7	65:16,25	43:11,15	63:8 64:1
80:11 81:2	96:9	47:23	65:3 66:19
88:13	team's 98:5	49:14 50:7	67:5,21
92:15	teams 31:18	52:11,18	68:3,15
101:9	32:3 33:4	54:7 57:4	69:3 74:24
talked 4:21	102:6	68:22 69:2	84:3 90:7
26:15	technical	89:7 91:3	95:13
34:22	28:24	94:8	98:23
41:23	technologies	107:18	100:20
44:12,13	51:17	terrible	101:3,13,
51:5 64:7	technology	105:11	22
67:18	26:3	Thermalito	thinking
84:16	Ted 49:9	12:13	65:24
87:19	75:13,19	49:20	thinks 97:1
90:23	104:17	thing 2:22	thought 6:7
talking 5:22	106:22	6:18 17:9	23:2 76:23
25:17	107:20	26:14,21	104:8
42:10 43:1	telling	27:18	thoughts 6:5
58:3 59:19	74:17	49:14 50:5	22:11
64:16	tells 39:3,6	55:18 63:4	23:10
71:20	temperatures	64:1,20	28:18
106:10	54:21	73:24 74:6	51:24
talks 69:19		78:13	thousands
tank 21:11		86:10,25	42:6
targets		106:12	

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: threat..trees

threat 38:10	timely 62:19	top 12:14,	99:2,5
	94:9	15 15:1	
threats			Tourism
19:19	times 65:6	37:12	96:24
	90:5,14	75:12	
throw 19:3		topic 28:18,	tours 29:8
101:25	today 2:4,	22 56:9	98:19,20
	10,12 3:17	60:25	town 3:19
tied 32:4	8:23 12:5,	72:14	32:22
72:3 87:22	22 25:3	81:25	101:21
	37:22,23	100:17	
time 5:8	55:12	101:20	track 49:21
6:3 7:15	59:4,9	102:3	53:10
8:6 9:10	61:1 68:21		60:23
13:7	70:6,11	topics 71:21	traded 79:9
17:10,13	76:24	72:13	traffic 61:4
23:6,9	81:22 92:3	80:12,13,	trail 72:5
31:20	94:13	15 84:16	
39:10 49:1	101:13	96:4 97:7	training
50:12 51:8	today's 5:9	98:5,10	20:2 21:22
53:4 54:23	11:22	99:9	
55:24 56:1	13:12	100:13,16	trajectory
58:23 64:6			54:25
67:11	toe 85:13,	total 36:3	103:20
71:1,16	14	86:13 95:7	
72:2 74:22			transcript
75:5 78:13	told 59:5	totally	4:20
82:3 83:18	73:14	27:13	
84:10	74:8,13	touch 34:16	transparency
87:18	82:3 87:21	46:15	62:7 80:9
90:17	106:21	64:12	91:22 92:2
93:9,22		84:23	94:4 95:9
95:14,18	ton 83:14		97:25
96:19	Tony 70:7,	touches	transparent
104:23	8,12 72:2	52:16	4:19 66:1
105:5			93:12
106:7,15	tool 61:13	tough 74:2	94:21
107:20	78:24	tour 5:24	
		26:23	treated
Timeliness	tools 21:20	33:10,17	46:14
64:25	59:19,21	98:21	trees 74:24

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: trestle..United

83:11	62:15	77:2	31:17
trestle	two-and-a-half	80:15,18	34:23 44:9
27:16	5:9	81:17 84:8	46:14,20
		89:12	49:5 53:12
tributaries	two-year	98:24	54:2 55:24
18:11	93:13,18	100:22	57:1 61:1,
trigger	type 94:4	102:3,8	9 64:19
62:25 64:2	99:3	understanding	65:16
triggered	typically	49:23	66:1,17
39:18,22	37:20,21	97:15	69:23
	89:10	98:21	70:14
triggering			71:2,3
39:8		undertaken	74:21
	<u>U</u>	12:7	79:17,18
triggers		underway	81:6
63:17	U.S. 15:10	17:1 94:22	85:17,24
66:19	20:19		86:5,22
68:24	ultimately	uneven 79:17	88:15,18
trips 70:15	24:15,21	UNIDENTIFIED	91:8,10,
	45:15	9:18 46:2	11,18
tunnel	51:17	53:6 54:12	92:14,15,
104:20	67:18	56:13,19	21 93:7,16
105:3,12		58:1 84:18	96:9
106:8	unable 39:15	90:3 98:14	98:17,23
107:3	unanimous	101:7,16,	101:1
turbine	10:1	18 102:14	102:4,16
73:16 76:8	uncertainties	104:10	103:3
	49:25	106:21	104:23
turbines		107:14,24	105:17
73:14	uncontrolled	108:2	106:5
75:15,21,	28:3	unilaterally	107:8
24,25	underneath	41:1	Union 82:7
76:2,5,6	84:14	unintelligible	unique 37:3
98:22	understand	13:11	46:24
turn 6:3	30:8 54:20	21:10	unite 84:1
96:12	55:22 56:6	23:13	United 13:22
turned 26:2	58:12	26:18,19	14:3 15:5,
Twitter	68:23 75:9		

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: unregulated..water

6 16:25	utilize 51:8	72:17	walking
21:11	utilizing	version 8:22	102:21
76:12	13:24	10:5,10	walkways
77:11,20	<hr/>	versus 54:5,	27:9
unregulated	v	25 80:14	wanted 11:2
43:24	vacant 34:24	video 62:21	27:12
unspoken	35:1 36:24	98:21	44:18
58:12	37:12,16	videos 62:20	71:11,25
unusual	38:7 39:4,	vision 94:11	84:23,24
48:19	8,13 41:22	visit 61:18	89:17
unusually	42:2	visits 22:10	102:14
42:11	vacuum 67:9	visually	warm 35:22
update 16:13	valley 3:5	39:21	55:7
48:8 51:15	13:3,9	voice 9:20,	warming
52:11,24	16:3,4,12	22,23	54:21
53:2 58:19	29:6,14	60:20	washes 87:17
66:9 91:2	55:3 81:7	voices 10:20	Washington
98:2	valuable	80:10	58:3 79:20
106:16	73:20	volume 26:25	waste 85:23
updated 5:4	valve 105:6,	volunteer	watch 16:7
10:15	9 107:10	84:13	53:18 90:5
updates 22:9	valves 98:22	vote 9:20,	watching
61:3,4	varies 38:1,	22,24	103:25
78:8	8	vulnerable	water 3:15
upstream	variety	82:13,14	6:22 10:23
43:7	18:23	<hr/>	11:3,19
upward 49:18	vast 13:10	w	12:15,18
upward-facing	vehicle	<hr/>	14:8,19
53:25	78:23	Wade 2:4	16:2,17
upward-looking	vehicles	7:11	19:15
49:18	86:7	walk 37:4	21:6,8,9,
urban 17:19	Verbacker	61:21	23 23:12
user 20:17	70:8 71:24		25:14
			26:12

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: water's..word

28:11,19	97:16,17,	47:4,11	WIB 107:1,7
31:7,12	19 100:2	54:6 63:23	Widener 3:6
32:2 34:5	104:22	66:19 90:5	29:5 68:19
36:22 37:8	105:9	web 4:25	100:17
38:3,13,22	107:6	82:17	101:15
43:25 44:9	water's	website 5:1,	wildlife
46:6,11,	106:4	4 10:10	27:17 61:5
14,16	watershed	62:3,4	winter 5:14,
47:1,2,4,	25:15	94:7	15 10:22
10,14,24	35:22,24	week 28:5	14:12
48:5,8,20	36:4 38:2	69:9	18:5,9
49:4 52:25	45:1,2	weekends	23:12
55:19,21	48:14	61:13	34:23 35:2
56:6,17	49:11	weekly 61:2	40:21,24
57:2,19,20	50:4,5	98:10	52:12
58:13,17,	53:16	weeks 26:23	54:21
25 61:25	54:4,24	weirs 13:25	62:12,23
63:14,19,	55:7 90:12	west 8:17	66:12 67:4
20,24	watersheds	50:15	69:22 99:5
64:13	20:10,11	Western 47:3	104:3,5
70:14,18	50:20	wet 11:1	winter's
71:4 73:4	waterway	39:11	10:16
75:22,24	85:11,15,	45:2,3,6	wire 74:9,
76:15	16	52:10	10 75:16
77:15 78:5	waterways	59:25	wonderful
79:25	12:13 18:1	wetness 26:4	27:18
80:8,13	83:11	38:2,9	33:23
81:14,19	ways 61:25	39:5 45:6	wondering
86:12	weakening	when's 82:22	53:15 56:3
87:21	27:3	White 83:17	67:12
88:2,6	wealthy	Whitmore	woods 74:23,
89:4,7	79:19	60:2,4	24
92:8,9,13,	weather 15:7	71:2	word 25:4
16,21 93:3	21:13,21		100:24
94:7,9,12,	31:10		104:9
15,20,24,			
25 95:4,5,			
11,23,25			

OROVILLE DAM CITIZENS ADVISORY COMMISSION

Meeting on 11/20/2019

Index: words..Yuba/feather

words 104:6	92:24	70:16	43:7,9,21,
work 5:4	96:14	86:6,12	23,25
7:12,17,24	103:17	years 6:12	46:15,23
12:1 16:8	works 12:20	9:3 16:19	47:2,6
17:3 19:17	23:21	26:13,17	48:4 50:20
21:25	world 77:21	27:11	83:25
23:25	worries 66:4	41:17	85:1,8
24:1,8	worry 27:23	45:13 50:7	86:1,2
29:3 31:22	73:18	54:1 58:6	87:16
32:5,7	worse 31:14	60:17	88:3,16
44:14 49:8	93:8	62:13	91:6,8
52:17	worth 25:3	64:14 79:8	Yuba/feather
58:15 61:4	worthy	90:16	14:25
63:9 71:14	26:13,19	91:17	
76:15 81:3	27:5	93:24 95:6	
84:8 86:19	written	105:2	
89:15 90:1	26:13	106:9,11	
92:19	68:21	Yellow	
96:16	wrong 26:2	27:11,12	
97:3,11,21	82:4	yellowish	
100:11	103:22	42:9	
103:13		yesterday	
106:2,10		92:2	
worked 23:19		Yolo 14:6	
33:14	X	Youtube	
62:24		62:16,23	
working 7:6	X-AXIS 37:17	Yuba 3:23,	
16:8,19		25 16:16,	
17:6 24:25	Y	23 17:15	
29:19		18:1 19:24	
51:14	Y-AXIS 38:25	20:3,5	
71:4,12	year 34:15	21:8,15,17	
73:15	38:17,21,	22:16	
76:15	22 39:11	26:23	
80:14 85:4	40:13,15,	42:25	
89:22	20 50:12		
90:25	56:17		