



1 APPEARANCES

2 DISPUTE RESOLUTION PANEL

3 Aaron Liberty, Chairperson

4 Federal Energy Regulatory Commission

5 Larry Thompson

6 National Marine Fisheries Service

7 Bob Deibel

8 United States Forest Service

9 AGENCIES and APPLICANTS PRESENT

10 Matt Buhyoff

11 Federal Energy Regulatory Commission

12 Russ J. Kanz

13 David Rose

14 Jennifer Watts

15 State Water Resources Control Board

16 Michael McCarty

17 Brickfield, Burchette, Ritts and Stone

18 David A. Vogel

19 Natural Resource Scientists, Inc.

20 James Lynch

21 HDR/DTA, Inc.

22 Geoffrey L. Rabone

23 Merced Irrigation District

24 Kenneth M. Robbins

25 Arthur F. Godwin

1 APPEARANCES

2 Mason, Robbins, Browning and Godwin

3 Lee G. Bergfeld

4 MBK Engineers

5 Merced Irrigation District

6 Kerry O'Hara

7 Office of the Regional Solicitor

8 Ramon Martin

9 Michelle Workman

10 U.S. Fish and Wildlife Service

11 United States Department of the Interior

12

13 AGENCIES and APPLICANTS PRESENT

14 Erin Strange

15 National Marine Fisheries Service

16 Kathryn L. Kempton

17 William Foster

18 National Oceanic and Atmospheric Administration

19 Richard Wantuck

20 National Marine Fisheries Service

21 United States Department of Commerce

22 ALSO PRESENT

23 Michael Martin

24 Merced River Conservation Committee

25 on behalf of National Marine Fisheries Service

1 APPEARANCES  
2 Chris Shutes  
3 California Sportfishing Protection Alliance  
4 Robert Hughes  
5 California Department of Fish and Game  
6 on behalf of National Marine Fisheries Service  
7 Edward J. Tiedemann  
8 Kronick, Moskovitz, Tiedemann and Girard  
9 on behalf of Mariposa County  
10 Ronald Stork  
11 Friends of the River  
12 Brian J. Johnson  
13 Trout Unlimited  
14 Dennis E. Smith  
15 United States Forest Service  
16 Curtis E. Steitz  
17 Steve Nevares  
18 Brett M. Foreman  
19 Mary Richardson  
20 Pacific Gas and Electric Company  
21 Ian Chan  
22 Garcia and Associates  
23  
24

1       ALSO PRESENT  
2       Kenneth Petruzzelli  
3       O'Laughlin & Paris, LLP  
4       San Joaquin River Group  
5       William R. Johnston  
6       Modesto Irrigation District  
7       Jeff Barton  
8       Robert M. Nees  
9       Turlock Irrigation District  
10      Annie Manji  
11      Tim Heyne  
12      California Department of Fish and Game  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24

I N D E X

1		
2		Page
3	Proceedings	7
4	Opening Remarks	7
5	Introductions	8
6	Statement: Meeting Purpose and Ground Rules	11
7	Questions by Panel Members	15
8	Afternoon Session	156
9	Questions by Panel Members - continued	156
10	Comments from Attendees	272
11	Closing Remarks	280
12	State Water Resources Control Board	286
13	Merced Irrigation District	286
14	Fish and Wildlife Service	287
15	National Marine Fisheries Service	287
16	Schedule/Next Steps	296
17	Adjournment	298
18		
19		
20		
21		
22		
23		
24		

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

8:35 a.m.

CHAIRPERSON LIBERTY: I'd like to welcome everybody to the dispute resolution and technical conference for the Merced River project.

My name's Aaron Liberty; I'm a biologist with FERC, and I've been selected as the lead panel member for this particular dispute resolution.

Joining me today are Bob Deibel to my far right, who is with the Forest Service out of Fort Collins, Colorado. He's panel member number three.

And also Larry Thompson with NMFS, who is out of this office here in Sacramento. He is panel member number two, representing the agency's interests.

We do have a court reporter here today, so I'd please ask that folks speak one at a time. Speak clearly, and before saying anything please state your name and who you're representing. That'll make things easier for the court reporter here today.

I'd like to first off start by going around the room, maybe doing introductions. Please state your name, who you're representing and also if you could spell your last name that will be helpful.

So I'll start, I guess we'll go this way.  
Aaron Liberty with FERC, Federal Energy Regulatory

1 Commission. That's L-i-b-e-r-t-y.

2 MR. THOMPSON: Larry Thompson, National  
3 Marine Fisheries Service.

4 MR. DEIBEL: Bob Deibel, U.S. Forest Service.

5 MR. BUHYOFF: Matt Buhyoff with FERC.

6 MR. KANZ: Russ Kanz, State Water Board. K-  
7 a-n-z.

8 MR. ROSE: David Rose, State Water Board.

9 DR. WATTS: Jennifer Watts, State Water  
10 Board.

11 MR. McCARTY: Michael McCarty with the firm  
12 Brickfield, Burchette, Ritts and Stone in Washington,  
13 D.C., for Merced Irrigation District.

14 MR. VOGEL: Dave Vogel, V, as in victor,  
15 -o-g-e-l with Natural Resource Scientists, a fisheries  
16 consultant for Merced ID.

17 MR. LYNCH: Jim Lynch, L-y-n-c-h, with HDR,  
18 consultant to Merced ID.

19 MR. RABONE: Geoff Rabone, R-a-b-o-n-e, with  
20 Merced Irrigation District.

21 MR. ROBBINS: Ken Robbins, R-o-b-b-i-n-s. I'm  
22 the general counsel for the District.

23 MR. GODWIN: Art Godwin, G-o-d-w-i-n, with  
24 Merced Irrigation District.

25 MR. BERGFELD: Lee Bergfeld,

1 B-e-r-g-f-e-l-d, Merced Irrigation District.

2 MS. O'HARA: Kerry O'Hara, O-'-H-a-r-a,  
3 Department of the Interior Solicitor's Office.

4 MR. MARTIN: Ramon Martin, Ramon,  
5 R-a-m-o-n, with the U.S. Fish and Wildlife Service.

6 MS. WORKMAN: Michelle Workman, U.S. Fish and  
7 Wildlife Service. W-o-r-k-m-a-n.

8 MS. STRANGE: Erin Strange,  
9 S-t-r-a-n-g-e, with National Marine Fisheries Service.

10 MS. KEMPTON: Kathryn Kempton,  
11 Kempton. The NOAA office of the general counsel.

12 MR. FOSTER: William Foster, National Marine  
13 Fisheries Service. F-o-s-t-e-r.

14 CHAIRPERSON LIBERTY: How about the folks out  
15 back. Can we give roll call, also. Start here.

16 MR. TIEDEMANN: Ed Tiedemann for Mariposa  
17 County.

18 MR. STORK: Ronald Stork, Friends of the  
19 River.

20 MR. JOHNSON: Brian Johnson, Trout Unlimited.

21 MR. SHUTES: Chris Shutes, S-h-u-t-e-s,  
22 California Sportfishing Protection Alliance.

23 DR. MARTIN: Michael Martin, Merced River  
24 Conservation Committee. M-a-r-t-i-n.

25 MR. SMITH: Dennis Smith, U.S. Forest

1 Service. S-m-i-t-h.

2 MR. STEITZ: Curtis Steitz, S-t-e-i-t-z;  
3 PG&E.

4 MR. NEVARES: Steve Nevares, PG&E.  
5 N-e-v-a-r-e-s.

6 MR. FOREMAN: Brett Foreman,  
7 F-o-r-e-m-a-n, PG&E.

8 MS. RICHARDSON: Mary Richardson,  
9 R-i-c-h-a-r-d-s-o-n; PG&E.

10 MR. CHAN: Ian Chan, C-h-a-n, Garcia and  
11 Associates.

12 MR. PETRUZZELLI: Kenneth Petruzzelli for the  
13 San Joaquin River Group.

14 MR. JOHNSTON: William Johnston;  
15 J-o-h-n-s-t-o-n. Merced Irrigation District.

16 MR. BARTON: Jeff Barton, B-a-r-t-o-n,  
17 Turlock Irrigation District.

18 MR. NEES: Robert Nees, N-e-e-s, Turlock  
19 Irrigation District.

20 MR. HUGHES: Robert Hughes with the  
21 Department of Fish and Game.

22 MS. MANJI: Annie Manji, M-a-n-j-i,  
23 California Department of Fish and Game.

24 CHAIRPERSON LIBERTY: Is that everybody?  
25 Okay. If you guys notice, on the back table there by

1 the door I do have a sign-up sheet. So if sometime  
2 today you could please write your name down, we'll make  
3 sure we get everybody accounted for who's here today.

4 I've also put some handouts back there;  
5 hopefully we have enough. I think I only made 35  
6 copies. But in that handout I have a copy of the  
7 agenda that we're going to go through today; a copy of  
8 the ground rules; statement of meeting purpose; panel  
9 expectations.

10 And I put a couple copies of the ILP  
11 regulations in there that we'll probably be talking  
12 about a lot today. Specifically 5.14, which Larry has  
13 up on the projector here, which goes through the actual  
14 formal study dispute resolution process.

15 And I've also included a copy of 5.9 in that  
16 handout, as well, which everybody here is probably  
17 pretty well familiar with by now. Which is the actual  
18 study plan criteria.

19 So, I'd like to, real briefly, just state  
20 what the purpose of the meeting is here today. The  
21 purpose of this meeting is for us, the panel, myself,  
22 Larry and Bob, to ask clarifying questions of the  
23 matters in dispute.

24 And I want to be very clear that the topics  
25 that we're going to discuss today are only going to be

1 those matters in dispute. I realize there's probably a  
2 lot of other issues still on the table that are perhaps  
3 being discussed, but we want to try and stay away from  
4 those today.

5 And our obligations, as a panel, are  
6 specifically laid out in this section 5.14, which is  
7 why I included that in your handouts. If you're not  
8 familiar with that, maybe you can take a look at it at  
9 some point today.

10 Things we are going to be discussing today  
11 are things that the panel members aren't really going  
12 to be taking into consideration are legal issues,  
13 procedural issues, or Commission policy. These are  
14 things that will be taken into consideration by Jeff  
15 Wright, the Director of OEP, when he makes his final  
16 decision in about 25, 30 days from now, I guess.

17 So what we're going to be doing is looking at  
18 these issues. We're going to try to look at these  
19 issues purely from a technical standpoint. And that is  
20 we're going to be evaluating each of these particular  
21 disputes based on 5.9, the study plan criteria.

22 So the types of questions that we might ask  
23 today are we might ask for some clarification on study  
24 objectives from the agencies. We might also ask for a  
25 little bit of clarification on the nexus between

1 project operations and effects.

2 And I also wanted to mention if, at some  
3 point today, the agencies or anybody else in attendance  
4 has some sort of information that you think might be  
5 helpful for the panel members to look at, please  
6 provide that to me at some point today or in the near  
7 future. And I'll make sure that information gets into  
8 the record.

9 Unfortunately, we don't have a lot of time  
10 for this process, so we're facing a real time crunch  
11 here.

12 So after today what's going to happen is the  
13 three panel members are going to get together. We're  
14 going to submit a report, which is going to contain our  
15 recommendations on each of these matters of dispute.

16 And this report, again, is going to be  
17 submitted to the OEP Director, Jeff Wright. And he's  
18 going to make a final decision on each of these matters  
19 in dispute.

20 Also in this handout I've provided a copy of  
21 the ground rules. I'd just ask that folks speak one at  
22 a time so everything gets in the record clearly. And  
23 also wait to be acknowledged by one of the panel  
24 members before speaking. If you all could raise your  
25 hands, we'll keep this moving as efficiently as

1 possible.

2 And during the course of the meeting today  
3 I'd also like to limit responses from folks, questions  
4 or comments, to only FERC, MID and the disputing  
5 agencies. If you look at the schedule at the end of  
6 today we are going to leave some time for others in  
7 attendance, NGOs, other folks here, to ask questions or  
8 submit comments or anything of that nature.

9 But we have a lot to get through today, and I  
10 just want to make sure the panel members here have time  
11 to get through their questions.

12 Yeah, go ahead.

13 MR. THOMPSON: I want to make a quick point  
14 on that. The way we understand this, it's a dispute  
15 between FERC, who made a determination, and the  
16 agencies who made the requests.

17 So, I agree, we can't have too many, you  
18 know, comments from the crowd. However, the Irrigation  
19 District's here obviously to answer technical questions  
20 or any questions that FERC or anybody might want to ask  
21 them.

22 But similarly, the agencies may want to call  
23 on one of the NGOs to provide some clarification to a  
24 study they were involved in the development of.

25 So, again, just to repeat: When called on,

1 identify yourself to the reporter and --

2 CHAIRPERSON LIBERTY: Yeah, we're just  
3 concerned, we have a lot of information to get through  
4 today. As everybody knows, we have 16 studies to talk  
5 about. Also we just want to make sure we have time to  
6 get our questions answered.

7 So, again, before anyone speaks today, please  
8 state your name and who you're representing. Larry,  
9 Bob, you guys have anything else to add?

10 MR. DEIBEL: Not at this point.

11 CHAIRPERSON LIBERTY: Okay. Go ahead.

12 MR. THOMPSON: Yeah, I might want to say  
13 something about the room here, and the building. We  
14 had a drill yesterday, evacuation drill; so you need to  
15 know how to get out of here in case we have a drill or  
16 a real emergency.

17 Go out those doors; make a right. Obviously  
18 there are other exits if you need to use them, but  
19 basically go out into the foyer here; make a right.  
20 There's some doors that go out into the parking lot.

21 And then we're really to convene across the  
22 street, sort of kitty-corner. There's an area where we  
23 cross the street and everybody assembles, in the case  
24 of an emergency.

25 Also, the restrooms are out the doors, toward

1 those back doors and then off to your left. And to get  
2 in you need to use a code, which is on the -- it's  
3 posted right there on the door as you go out. Memorize  
4 that code, or you can't get in.

5 There's a little cafeteria right up by the  
6 front doors as you go out, make an angle to the left  
7 toward the front. There's a little place there to get  
8 some drinks. And that's about it.

9 CHAIRPERSON LIBERTY: Okay.

10 MR. THOMPSON: Thanks.

11 CHAIRPERSON LIBERTY: So does everybody here  
12 understand what it is we're trying to do here today?  
13 Does anybody have any questions, that sort of thing,  
14 before we start off?

15 Great.

16 MR. ROSE: Yeah, I have a couple questions,  
17 Aaron. David Rose from the State Water Board. The  
18 State Water Board prepared a brief written submittal  
19 just to track what we intend to say here, mainly in  
20 response to questions. Do you have a preference when  
21 we hand that out? We did make a bunch of copies, so if  
22 anybody needs them. Also, we intend to efile at the  
23 end of the day. We just ran out of time to do it  
24 beforehand. We could do it at the end, we could do it  
25 now. It's just your --

1 CHAIRPERSON LIBERTY: Wait till the end.

2 We'll get to review things, then maybe we'll --

3 MR. ROSE: No problem, --

4 CHAIRPERSON LIBERTY: -- if that's all right?

5 MR. ROSE: It's really just to have something  
6 to refer to, to track what we intend to say.

7 CHAIRPERSON LIBERTY: Okay.

8 MR. ROSE: So you can take it home.

9 CHAIRPERSON LIBERTY: Okay, thank you. So I  
10 guess we'd like to first start off today with asking  
11 everybody here present, are there any issues that are  
12 off the table or that are no longer in dispute? I'm  
13 not sure if anything has been resolved, that sort of  
14 thing.

15 You guys aren't going to make this easy for  
16 us, are you? We're hoping to whittle this down to  
17 maybe five or six studies. That's not going to happen,  
18 huh?

19 Okay, sure.

20 MR. DEIBEL: So there's no potential  
21 agreement or deals that may it really close to  
22 resolving one of those 16?

23 MR. FOSTER: Bill Foster, National Marine  
24 Fisheries Service. In the process of looking over the  
25 study plans that were in FERC's final study plan, it's

1           come to our attention that National Marine Fisheries  
2           Service may not need to dispute the IHA study. I think  
3           it was 2.1 hydrologic alteration.

4                     Study 2.1, reservoir fish population study,  
5           or the study 6.1 riparian habitat wetland study. And  
6           this is primarily because in reviewing all of the  
7           pertinent and relevant information we feel that those  
8           studies would be adequate in addition to some of the  
9           existing information.

10                    MR. THOMPSON: Bill, can you identify on this  
11           list, so you're talking about study number 1 on this  
12           list?

13                    MR. FOSTER: Yeah, the --

14                    MR. THOMPSON: Study number 6?

15                    MR. FOSTER: The numbering conventions were  
16           originally adopted --

17                    MR. THOMPSON: Right, just the ones we have  
18           listed here.

19                    MR. FOSTER: Yeah, --

20                    MR. THOMPSON: Number 1?

21                    MR. FOSTER: -- number 1.

22                    MR. THOMPSON: Number 6?

23                    MR. FOSTER: Yeah, number 6.

24                    MR. THOMPSON: And then the third one was  
25           reservoir fish?

1 MR. FOSTER: Well, yeah, that wasn't --

2 MR. THOMPSON: That wasn't in dispute?

3 MR. FOSTER: That wasn't there, because we  
4 didn't dispute that one.

5 MR. THOMPSON: Okay. So there's two studies  
6 then right now that you've --

7 MR. FOSTER: Right. We would -- there's  
8 those two, and again the reservoir fish population  
9 study we had not disputed in our letter.

10 We do, however, in our letter we had thought  
11 that the fish entrainment study might have been okay.  
12 But in retrospect we are still disputing the  
13 entrainment into the water canal at Crocker Huffman  
14 because how we feel that that is part of a project.  
15 The water that goes into that canal helps satisfy a  
16 license condition for getting water to a Merced  
17 National Wildlife Refuge.

18 CHAIRPERSON LIBERTY: I guess I have a  
19 question regarding, was that particular dispute laid  
20 out in your letter of dispute to the Commission?

21 MR. FOSTER: In our previous filings, we had  
22 mentioned why we were disputing the entrainment should  
23 be included in that particular water canal, in addition  
24 to some other areas.

25 And I would reference the August 31st filing

1 that was also made on our behalf, filed by Fish and  
2 Game and the conservation groups, which updated that  
3 particular study.

4 And we had pointed previously to the -- to  
5 achieve the license requirement compliance water has to  
6 leave Crocker Huffman Dam down the water canal to get  
7 ultimately to, you know, the wildlife refuge.

8 So because of that nexus that is why we would  
9 still find that particular facet of this entrainment  
10 study should be looked into.

11 CHAIRPERSON LIBERTY: Okay, thank you, Bill.  
12 I think that's something we'll probably, maybe we'll  
13 have a few questions of FERC regarding this particular  
14 study when we get into the individual studies. I'm not  
15 sure we want to spend a lot of time on that particular  
16 study right now. But that's something I think we could  
17 probably have some questions about later on in the day.

18 MR. ROBBINS: How do you want us to proceed  
19 with respect to being recognized?

20 CHAIRPERSON LIBERTY: State your name,  
21 please.

22 MR. ROBBINS: Pardon me?

23 CHAIRPERSON LIBERTY: State your name,  
24 please.

25 MR. ROBBINS: Kenneth Robbins with MID. Do

1       you want us just to raise hands, or should we just,  
2       when there's an opportunity, speak up?

3               I would just like to remind the panel that  
4       although that subject certainly came up during our  
5       discussions leading up to this dispute, it was not part  
6       of the actual dispute. It did not file that as part of  
7       the dispute, so, it's not before you.

8               CHAIRPERSON LIBERTY: Yeah, like I said, I  
9       have a couple questions, I guess, regarding that  
10      particular study, and whether or not it's actually been  
11      formally disputed. But, again, I think we can probably  
12      revisit this issue later today. I'll just make a note  
13      that we'll go back and talk about this particular  
14      study.

15              Yes, go ahead.

16              MR. WANTUCK: Aaron, this is Rick Wantuck  
17      with National Marine Fisheries Service. And I think  
18      what we're saying here is that in these areas that Bill  
19      Foster just pointed out, we're willing to discuss with  
20      the other agencies that are also in dispute, and the  
21      District's, that there may be room here to resolve some  
22      of these three areas that Bill pointed out.

23              We're not immediately saying that we're  
24      prepared to drop the dispute in that area. We would  
25      definitely like to hear from other disputing parties as

1 to whether they would agree that perhaps maybe these  
2 areas could be resolved.

3 CHAIRPERSON LIBERTY: Okay.

4 MR. DEIBEL: So just for clarity, then, you  
5 filed a formal study dispute on fish entrainment at  
6 Crocker Huffman, is that what you're saying? Or you  
7 did not? That's -- I'm confused.

8 MR. FOSTER: In a filing that we submitted  
9 approximately November 5th, I believe, where we filed  
10 comments on both the Merced River Project and the  
11 Merced Falls Project, we did, in fact, submit a fish  
12 entrainment study plan that involved exploring fish  
13 entrainment in all parts of both projects.

14 But that was filed after, because of the  
15 actual schedule of that particular Merced Falls Project  
16 was running after when we filed our dispute letter.

17 MR. DEIBEL: So, I guess my question back  
18 to -- I don't recall the deadline for filing formal  
19 disputes, do you, Matt?

20 MR. BUHYOFF: I can look that up if you'd  
21 like.

22 MR. McCARTY: Excuse me, this is Mike  
23 McCarty. It was October 5, and that study was not  
24 disputed in NMFS' October 5 filing. The short answer  
25 to your question.

1                   MR. SPEAKER: Or Fish and Wildlife or the  
2 State Board.

3                   MR. McCARTY: Or Fish and Wildlife or the  
4 State Board, correct.

5                   MR. DEIBEL: Okay, so that's information  
6 that's not before this panel. That's to talk to the  
7 group of potential resolution among the group, but not  
8 part of our scope of work at this time, correct?

9                   MR. FOSTER: But we have filed information in  
10 the FERC record up to this point in time that does  
11 dispute that.

12                   MR. THOMPSON: I understand that, but we've  
13 got 16 studies we listed out here that were disputed by  
14 the agencies. So, this is our understanding of those  
15 16. I'm sorry I can't get them all up there at once.

16                   But I do not see -- I was going to ask the  
17 question if fish entrainment was a component of one of  
18 these studies, or if it was a separate study. I  
19 believe it was dealt with in FERC's study plan  
20 determination separately as a fish entrainment study.

21                   But I think I would agree with Bob that if  
22 it's not one that was filed in dispute by the deadline,  
23 we may not be able -- the panel may not be able to take  
24 --

25                   CHAIRPERSON LIBERTY: Yeah, I'm pretty sure

1 the panel hasn't prepared for that particular study  
2 because I mean I didn't see that study listed, either,  
3 in the formal dispute letters from the agencies.

4 MR. DEIBEL: And I also want to reiterate to  
5 follow up what Aaron said at the beginning. We are  
6 tasked to review the FERC record by the dates and the  
7 information in the record. And it's tied to two  
8 things.

9 One is the section 18, as I understand it,  
10 and the panel members can correct me if I'm wrong, but  
11 it's focused on mandatory conditioning agencies. And  
12 the motivation for that for the Fish and Wildlife  
13 Service and National Marine Fisheries Service is tied  
14 to section 18 of the Federal Power Act, so things  
15 dealing with fish passage.

16 And for the State Water Resources Control  
17 Board, it's tied to the information studies needed to  
18 support issuance of a 401 water quality certificate,  
19 which is tied to the promulgated beneficial uses, is  
20 that correct?

21 MR. ROSE: Yeah.

22 MR. DEIBEL: Okay, so that's the focus of  
23 this hearing, or this panel, the discussion today. And  
24 for example, if the Endangered Species Act comes up,  
25 that's got to be somehow linked directly into section

1 18 authority, because that's our charge, is to review  
2 that. It's not an Endangered Species Act proceeding,  
3 and so information that tiers and follows into that,  
4 we're going to consider that within the scope of the  
5 authorities under section 18.

6 Because this is clearly -- it's a complex  
7 issue. We've got to get through the day and we have to  
8 keep our focus to FERC procedures, the authorities the  
9 agencies come into, tied to their study request to make  
10 a panel decision.

11 So, that's my perception of our job. And  
12 some of these things, these are nice and hopefully it  
13 would be ideal if everybody could sit down and sing  
14 "Kumbaya" and work it out; make our life easy. But  
15 that's obviously not going to happen, so that's our  
16 charge right now.

17 CHAIRPERSON LIBERTY: Yeah, we just don't  
18 want to go off on too many tangents today. Again, we  
19 just have a lot to work through, and again, that's kind  
20 of why I included that section 5.14 in the handout.

21 Our duties as a panel are pretty well laid  
22 out for what it is we have to do here today and in the  
23 coming weeks.

24 So I guess I'd like to keep moving. I think,  
25 Larry, you had that slide to put up with the 16

1 individual studies. Jim, go ahead.

2 MR. LYNCH: This is Jim Lynch. Just a point  
3 of clarification. I think Bill's initial point was  
4 that the two studies, the hydraulic alteration and  
5 bioaccumulation, they felt -- are they withdrawing  
6 those disputes? Are they going to send a letter to  
7 FERC?

8 CHAIRPERSON LIBERTY: I think we're going to  
9 get into that right now, if everybody just hold off  
10 just a second. We want to go through each of these  
11 studies and see which ones are still actually being  
12 disputed.

13 So, what Larry has here on the screen is each  
14 of the 16 studies, as we understand it, today that are  
15 being formally disputed. So we'd like to go around and  
16 ask each of the disputing agencies whether these  
17 studies are, in fact, still in dispute. And if so,  
18 under what authority? Section 18, 401. Just for our  
19 clarification purposes, I guess just kind of go through  
20 the list, whittle some of these down.

21 MR. DEIBEL: And this is a simple yes or no?

22 CHAIRPERSON LIBERTY: Yeah.

23 MR. DEIBEL: Right now.

24 CHAIRPERSON LIBERTY: -- get into each  
25 individual study --

1 MR. DEIBEL: Yeah, --

2 CHAIRPERSON LIBERTY: -- later today.

3 MR. DEIBEL: -- we'll get to them later in  
4 more detail.

5 CHAIRPERSON LIBERTY: This is to just help  
6 clarify things for us because there's just so much on  
7 the table.

8 So I guess I'd like to first start with NMFS,  
9 since they're first up on the slide. And if they are  
10 still all being disputed, please yes or no. And if so,  
11 under what authority.

12 Do you guys understand what it is?

13 MR. FOSTER: Yeah, yeah, I'm just trying to  
14 read the screen.

15 MR. WANTUCK: Well, I can see it, so I guess  
16 I'll start. Study 2.1, hydrologic alteration, yes,  
17 section 18 authority. Study 2.2, water balance  
18 operation, yes, section 18 authority.

19 Study 2.3, water quality monitoring, yes,  
20 section 18 authority. Study 2.4, yes, section 18  
21 authority.

22 I'm going to pass on 2.5 at this point. Want  
23 to confer with --

24 CHAIRPERSON LIBERTY: Okay, we'll come back.

1                   MR. WANTUCK: Study 2.6, reservoir  
2 temperature management feasibility, section 18  
3 authority. Study G-1, gravel sediment budget and  
4 mobility, section 18 authority.

5                   Study 3.1(a) upper river fish populations and  
6 habitat, section 18 authority. 3.1(b) anadromous  
7 salmonid habitat, section 18 authority.

8                   Study 3.3, anadromous conservation hatchery,  
9 section 18 authority. Study 3.4, anadromous fish  
10 passage, section 18 authority. Study 3.5, anadromous  
11 fish passage facility, section 18 authority.

12                   Study 3.6, flood plane study, section 18  
13 authority. Study 3.7, examine egg viability study,  
14 section 18 authority. And study 3.8, mid-stream flow  
15 study -- section 18 authority.

16                   CHAIRPERSON LIBERTY: Excellent, thank you.  
17 So I believe Fish and Wildlife Service is up next on  
18 the list. Is that right?

19                   MR. DEIBEL: Are there any no's?

20                   MR. MARTIN: Yeah, this is Ramon Martin with  
21 the U.S. Fish and Wildlife Service.

22                   CHAIRPERSON LIBERTY: Um-hum.

23                   MR. MARTIN: Under section 18 authority we're  
24 still disputing all the studies that are on notice of  
25 dispute.

1 CHAIRPERSON LIBERTY: All 16?

2 MR. MARTIN: Except the hydrologic alteration  
3 study, the riparian habitat and wetlands study and the  
4 reservoir fish population studies.

5 CHAIRPERSON LIBERTY: I'm sorry, what was the  
6 second one?

7 MR. MARTIN: The riparian habitat and wetland  
8 study.

9 MR. DEIBEL: So we could put -- so, it's no,  
10 you're no longer disputing 2.1 hydrologic alteration.  
11 Where's the riparian?

12 MR. MARTIN: 3.1, I believe.

13 MR. FOSTER: Riparian is 6.1, I don't know  
14 where it is on the --

15 MR. MARTIN: It'll be down farther.

16 MR. THOMPSON: If I can put up this other  
17 list that's a little larger, maybe you could see it a  
18 little easier.

19 I have it on --

20 MR. SPEAKER: There you go. Riparian is 6.1.

21 MR. THOMPSON: -- the study --

22 MS. STRANGE: It's number 6, Larry.

23 MR. THOMPSON: Oh, number 6. Sorry. Yeah,  
24 number 6.

25 MR. DEIBEL: So that's no for study 2.1,

1 hydrologic alteration; no for study 6.1 riparian  
2 habitat; and what was the other one, I'm sorry?

3 MR. MARTIN: Reservoir fish populations  
4 study. That's on the list.

5 CHAIRPERSON LIBERTY: It's one we discussed  
6 earlier. And was that one that you disputed?

7 MR. SPEAKER: It was. It's 3.1(a).

8 CHAIRPERSON LIBERTY: Okay.

9 MS. STRANGE: No, that was --

10 (Parties speaking simultaneously.)

11 CHAIRPERSON LIBERTY: This is the one we were  
12 discussing earlier, right?

13 MR. MARTIN: Yeah.

14 CHAIRPERSON LIBERTY: Okay. Thank you, and -  
15 -

16 MR. MARTIN: No, we didn't dispute that. We  
17 did not dispute the reservoir fish study.

18 CHAIRPERSON LIBERTY: Okay. Excellent. And  
19 the Water Board, please.

20 MR. ROSE: The State Water Board is still  
21 disputing all of the studies at issue. But if the  
22 other Fish and Wildlife agency and NMFS drop their  
23 dispute as to the two that Fish and Wildlife Service  
24 just identified, then we would be amenable to dropping  
25 that, as well.

1                   MR. ROBBINS: Ken Robbins with Merced  
2 Irrigation District. We actually need to ask the State  
3 Board a question. We had a settlement conference  
4 earlier in the month where the State Board, at that  
5 point, made its position clear that it, in fact, did  
6 not dispute the issues of fishery passage that are set  
7 out in the studies.

8                   They were concentrated on water quality.  
9 Although in their filing they did indicate that they  
10 supported the disputes raised by National Marine  
11 Fisheries Service and Fish and Wildlife.

12                   And they indicated actually at that point  
13 that they had not, in fact, disputed those fishery  
14 issues. And my question is on the record at this  
15 point. Is that still true or not?

16                   CHAIRPERSON LIBERTY: I guess I'd probably  
17 have a similar question, I guess, to the Water Board.  
18 I guess when I read through your formal dispute letter,  
19 when I got to the second half of the studies I think  
20 that dealt with anadromous fish, it didn't seem to me  
21 like those studies were being formally disputed.

22                   MR. ROSE: I'd be happy to respond to that.

23                   CHAIRPERSON LIBERTY: Yes, please.

24                   MR. ROSE: Again, David Rose with the State  
25 Water Board. The State Water Board relies on fisheries

1 agencies, natural resource agencies to make  
2 recommendation for studies that will inform us for our  
3 conditioning.

4 We are formally disputing the fisheries-  
5 related studies. We were essentially incorporating  
6 those studies by reference because the two other  
7 agencies with specific authority for those fish-related  
8 areas, their authority is limited to that. Whereas  
9 ours is broader.

10 They're already presenting study disputes as  
11 to those issues. So we thought it would just be  
12 duplicative to provide the same information. We did  
13 work collaboratively in preparing these disputes.

14 So we are formally disputing them, but we  
15 were under the impression that it would essentially be  
16 of no substantive difference whether it was us formally  
17 disputing or them, because they're involved, as well.

18 So my response in the settlement conference,  
19 I think, was not clear. And that was that we are  
20 formally disputing the fishery studies, but we feel no  
21 need to take the lead on those because there's two  
22 other agencies with the exact same authority over those  
23 resource areas that are disputing those.

24 Is that clear?

25 CHAIRPERSON LIBERTY: Yes, that is clear. I

1       guess it was just unclear to me, and I think Bob and  
2       Larry had similar concerns, I guess, when we read  
3       through your letter. It just wasn't clear to us  
4       whether or not those are actually being formally  
5       disputed.

6               MR. ROSE: Yeah, I'm sorry if I was unclear  
7       with that. It seemed to us duplicative to provide the  
8       exact same information. We do have authority under 401  
9       certification, authority to address those resource  
10      issues. But since Fish and Wildlife Service and NMFS  
11      are taking the lead, we are formally disputing but  
12      we're going to let them talk about it.

13             CHAIRPERSON LIBERTY: Thank you.

14             MR. ROBBINS: Just for the record, I realize  
15      you're just looking for technical information, but I'll  
16      lodge a protest. I don't believe those were, in fact,  
17      included in the study disputes that were, in fact,  
18      filed, which limits the jurisdiction of the panel.  
19      Thanks.

20             CHAIRPERSON LIBERTY: Well, this is  
21      definitely something, I think, we, as a panel, will  
22      probably address in our recommendations. We'll take a  
23      look at it. I'm not sure what else to say about these  
24      particular studies.

25             So, I guess next on the agenda -- I think

1        what we want to do is for an hour, maybe an hour and a  
2        half or so, is just have some -- go ahead, Bill.

3                MR. FOSTER: I have a real quick  
4        clarification. When we were going through all of the  
5        studies that we are disputing, we need that information  
6        to help inform our section 18 decisions.

7                We are not disputing the hydrologic  
8        alteration study nor the riparian habitat wetland  
9        study. Nor are we disputing a study that's not up  
10       there, the fish population, reservoir fish population  
11       study. Nor at this time, the fish entrainment study,  
12       because at the time we filed our letter we did not  
13       include that.

14               We have a different opinion now based on  
15       newer information and more recent filings. But we will  
16       address that at a future time.

17               CHAIRPERSON LIBERTY: Thank you, Bill. So I  
18       think for the next hour what we want to do is just ask  
19       some, I guess, more or less generalized questions.

20               And obviously there are a few issues that  
21       have common themes that run throughout all 16 of the  
22       studies in dispute.

23               So I guess our general question is mainly  
24       aimed at getting some clarification from FERC on the  
25       study plan determination, itself. The agency's

1 mandatory conditioning authority. And perhaps some  
2 questions to MID, project operations, those sorts of  
3 things. Just to give us, as a panel, a little bit more  
4 clarification.

5 And then again we're going to plan on moving  
6 into the individual studies, one by one, later on  
7 today.

8 So, I think I'd like to start off with  
9 perhaps a question of FERC. Throughout the study plan  
10 determination, many of the requests made by the  
11 agencies to extend monitoring or to extend studies to  
12 the current compliance point were dismissed because of  
13 a lack of direct effects.

14 However, if you look at the study plan  
15 criteria, specifically 5.9(b)(5), it references not  
16 only direct, but also indirect and cumulative effects.

17 I guess I would just like to get a little bit  
18 of an explanation from FERC as to the rationale for  
19 dismissing the studies solely based on a lack of direct  
20 effects.

21 MR. BUHYOFF: Sure. I believe, I mean, in  
22 general, my concept was that there is an abundance of  
23 information in lower Merced River, below Crocker  
24 Huffman. And I think the concept was really there's --  
25 it's troubling to try to parse the effects of the

1 project, which are the two power projects undergoing  
2 licensing, and the water delivery system.

3 And so I believe we tried to indicate that,  
4 you know, we believe that obviously there are  
5 cumulative effects, a synergistic effect of the water  
6 delivery system and the power system undergoing  
7 relicensing.

8 But in order to inform license requirements,  
9 it would be difficult to conduct a study that would do  
10 just that.

11 MR. DEIBEL: So you're saying that the  
12 difficulty of the analysis makes it hard to link the  
13 projects and the effects? So it's an analytical  
14 problem?

15 MR. BUHYOFF: I guess, generally speaking,  
16 sure.

17 CHAIRPERSON LIBERTY: And could you, I guess,  
18 describe to the panel exactly which resources you  
19 defined in the study plan determination as being  
20 cumulatively effected downstream of Crocker Huffman.

21 MR. BUHYOFF: Sure. Identified water quality  
22 earlier --

23 (Pause.)

24 MR. BUHYOFF: Water resources, aquatic  
25 resources and threatened and endangered species.

1                   MR. DEIBEL: Which document are you referring  
2 to?

3                   MR. BUHYOFF: Scoping document number two.  
4 That's April 17th filing.

5                   MR. THOMPSON: I want to go back and ask  
6 again about the direct, indirect and cumulative aspect  
7 of that. The regulations, I have them up here, do  
8 require that the nexus be explained to project  
9 operations and the resource to be studied.           And  
10 all three of these are mentioned in the regulations and  
11 need to be studied.

12                   Now, as a general point, I think Aaron is  
13 correct that in many cases, we are looking through your  
14 September 14th determination, yes or no on the study,  
15 and we're seeing that you're making the point that  
16 direct effects could not be assessed by that study.  
17 Therefore, you're using that as part of the rationale  
18 for not adopting the study.

19                   And now you have just mentioned that water  
20 resources, aquatic resources and threatened and  
21 endangered species are potentially cumulatively  
22 affected by the project. And you have outlined that in  
23 scoping document two.

24                   And those categories are quite broad. Water  
25 resources would be the quality of the water, I think.

1 Aquatic resources would be fish, aquatic insects, et  
2 cetera.

3 So I guess I'll go back to Aaron's question  
4 about the need to assess all three of these in the  
5 studies. And it seems like you've given a lot more  
6 weight to direct in your decisionmaking. Can you  
7 explain that?

8 MR. BUHYOFF: Sure. I believe, after reading  
9 over the document, that it would come across that way.  
10 I think that point may have been overstated.

11 It's not that I was putting any weight  
12 towards studying a direct or a cumulative effect. I  
13 think the problem more was in the studies that I was  
14 reviewing, there didn't seem to be a recognition of  
15 what we were trying to study, i.e., it seemed more like  
16 we were studying the water delivery and power system.  
17 Rather than trying to get at parsing the effects of  
18 what we were licensing versus the irrigation system --  
19 versus the effects of the irrigation system.

20 MR. DEIBEL: How would you parse out -- I  
21 mean, this is a FERC license project. You've got a  
22 facility that's the largest facility in the basin. It  
23 can alter flows 50 percent in the high end, and over  
24 ten times the magnitude at the low end. Is that a  
25 direct or indirect effect?

1                   MR. BUHYOFF: I understand what you're  
2 saying, but I think once you get below Crocker Huffman,  
3 it's a synergistic effect between those two.

4                   And so the presence of the irrigation  
5 delivery system --

6                   MR. DEIBEL: At Crocker Huffman.

7                   MR. BUHYOFF: -- at Crocker Huffman, and as  
8 well as above Merced Falls, inherently confounds the  
9 effects of the power.

10                  MR. DEIBEL: Well, would you agree that a  
11 project of that size and magnitude, to alter flows  
12 frankly on a very large magnitude of flow deliveries on  
13 a snow or rainfall runoff delivery system that alters  
14 flows to maintain flows higher, that could maintain  
15 flows higher than above natural below Crocker Huffman,  
16 is that direct or indirect?

17                  MR. BUHYOFF: I believe it's indirect. I  
18 believe it's cumulative.

19                  MR. DEIBEL: So you're saying an indirect  
20 effect is something due to massive changes in the  
21 hydrography, that's indirect?

22                  MR. BUHYOFF: No, but if we're speaking  
23 sitting below Crocker Huffman, I believe that those  
24 massive changes are also inherently affected by the  
25 water delivery system.

1                   MR. DEIBEL: So if there's a compliance issue  
2 at the gauge at Shaffer Bridge, where does that water  
3 come from?

4                   MR. BUHYOFF: In part it comes from the  
5 hydropower system. And also lack of water also comes  
6 from the irrigation delivery, or irrigation wing dams  
7 below Crocker Huffman.

8                   MR. DEIBEL: So the source water is not New  
9 Exchequer?

10                  MR. BUHYOFF: Sure, it's New Exchequer.

11                  MR. DEIBEL: So the source water is New  
12 Exchequer, but it's not directly tied to New Exchequer?

13                  MR. BUHYOFF: In that sense, yes,  
14 it's --

15                  MR. DEIBEL: Yes, it is tied. But FERC has  
16 made a call to focus on direct, and you've declined  
17 studies -- these are general, just to help us ferret  
18 this down -- so you agree that the source water is New  
19 Exchequer, to maintain a compliance point, but that's  
20 an indirect effect?

21                  MR. BUHYOFF: Yes.

22                  MR. DEIBEL: Okay. And just hang with me  
23 here a minute, I want to work on baseline here for a  
24 second. Does it take a Commission decision to change a  
25 license condition?

1 MR. BUHYOFF: In -- as far as I'm -- yeah.

2 MR. DEIBEL: Right. Is the baseline  
3 condition the existing project, as configured including  
4 flow releases and operations?

5 MR. BUHYOFF: Yes.

6 MR. DEIBEL: Is that consistent with the  
7 baseline?

8 MR. BUHYOFF: Yes.

9 MR. DEIBEL: Are there studies that FERC has  
10 denied downstream of Crocker Huffman based on the  
11 baseline condition -- that is counter to that baseline  
12 condition?

13 MR. BUHYOFF: Yes.

14 MR. DEIBEL: So your study denial is based on  
15 your answer, they are inconsistent with the  
16 Commission's baseline determination?

17 MR. BUHYOFF: I'm not sure I understand the  
18 question.

19 MR. DEIBEL: Are the target flow -- the  
20 baseline condition is flows as measured 20 miles  
21 downstream of Crocker Huffman, correct?

22 MR. BUHYOFF: Um-hum.

23 MR. DEIBEL: Ramping rates at Crocker  
24 Huffman?

25 MR. BUHYOFF: Okay.

1                   MR. DEIBEL: Diversions to the refuge at  
2 Crocker Huffman?

3                   MR. BUHYOFF: Um-hum.

4                   MR. DEIBEL: Yet some studies have been  
5 denied downstream of Crocker Huffman citing no nexus.

6                   MR. BUHYOFF: Okay. I think I understand  
7 what you're saying. I think you're referring to the  
8 current compliance point for the current license.

9                   MR. DEIBEL: Sure.

10                  MR. BUHYOFF: You know, in my review of that  
11 license, which was done pre-NEPA, I couldn't find any  
12 rationale for the placement of that compliance point.

13                  MR. DEIBEL: Okay.

14                  MR. BUHYOFF: So, in absence of that, you  
15 know, I think it's our responsibility to analyze with  
16 whatever existing information we have, as well as the  
17 information we collect.

18                  So, I think what I'm trying to say is we're  
19 not tied to that current compliance point until we  
20 analyze the need for a compliance point that  
21 analytically makes sense.

22                  MR. DEIBEL: Does that predetermine a FERC  
23 Commission decision to move the compliance point?

24                  MR. BUHYOFF: No. I don't think it does.

25                  CHAIRPERSON LIBERTY: Do you think there's

1 any biological significance to putting that gauge where  
2 it is?

3 MR. BUHYOFF: At a compliance point? I don't  
4 think I'm in a position to say at this point. It would  
5 depend on existing data and the data that we'd be  
6 collecting.

7 CHAIRPERSON LIBERTY: Because it's hard for  
8 me, I also tried to go back through the record and see  
9 why some of these conditions are put in the license  
10 back in 1964. And I guess it was difficult, of course,  
11 -- but find any reasoning for what was done. And I  
12 guess that compliance point downstream of Crocker  
13 Huffman is kind of a sticking point, I guess, for the  
14 panel.

15 It's hard for us to, I guess, see why certain  
16 studies weren't extended downstream of Crocker Huffman  
17 Dam, given that compliance point at Shaffer Bridge.

18 Again, it's just been -- it's been tough for  
19 us to kind of wrap our heads around that.

20 MR. DEIBEL: I guess what I'm getting is  
21 you're taking a fresh look at it, you know, this 1964  
22 license that just says, do this, do that. But it  
23 appears to me that FERC Staff have made a early  
24 judgment that that compliance point will be modified.  
25 And it may or may not be.

1           It takes a Commission order to change a  
2 compliance point. So the scope of the project effects  
3 go from the upstream project boundary on New Exchequer  
4 down to the compliance point, correct?

5           MR. BUHYOFF: Sure, um-hum.

6           MR. DEIBEL: Yet studies have been not denied  
7 to assess the effects of potential flow changes below  
8 Crocker Huffman to Shaffer Bridge, correct?

9           MR. BUHYOFF: Well, in my assessment I  
10 believe that the existing information would be suitable  
11 enough to get at --

12          MR. DEIBEL: So, okay. So let me ask this  
13 question, though. You have enough information in the  
14 record now that you have before you, when you looked at  
15 these studies, to know whether that channel could be  
16 de-watered, correct?

17          MR. BUHYOFF: In conjunction with the  
18 information that will be collected.

19          MR. DEIBEL: But you've made a call, based on  
20 the record before you, of denying certain studies. So  
21 presumably you've got information that assesses effects  
22 to fish habitat over a range of flows, since you can't  
23 predict exactly what's being down there, right?

24          MR. BUHYOFF: We're -- correct.

25          MR. DEIBEL: So you -- presumably you've got

1 enough information to conduct a fish habitat  
2 assessment, the hydrological assessment will take that  
3 out, will address all that. So you can conduct an  
4 assessment to define the existing baseline and the  
5 effects to fish habitat in that 20 miles downstream of  
6 Crocker Huffman if the Commission chooses to alter that  
7 compliance point?

8 MR. BUHYOFF: Yes, but I -- the Commission  
9 compliance points don't have any biological  
10 significance. They're just a way for us to make sure  
11 that a licensee is complying with, you know, a certain  
12 aspect of the license.

13 MR. DEIBEL: Right. But it is the baseline  
14 condition, we've established that, right?

15 MR. BUHYOFF: That the compliance point  
16 exists?

17 MR. DEIBEL: If flows in the reach, and the  
18 effects of those flows to whatever resources are a  
19 baseline condition, that is your -- from your NEPA  
20 standpoint, you will analyze any changes to that  
21 baseline condition?

22 MR. BUHYOFF: Right.

23 MR. DEIBEL: And that includes flows as  
24 measured at the compliance point.

25 MR. BUHYOFF: Sure.

1                   MR. DEIBEL: And you have enough information  
2                   in the record at this point to deny additional studies  
3                   to assess the effects to anadromous fish?

4                   MR. BUHYOFF: I believe that with the  
5                   information in the record and with the information that  
6                   will be collected, we'd be able to assess that,  
7                   correct.

8                   MR. DEIBEL: What would be the fish studies  
9                   that would -- that you plan to be collected that will  
10                  help you?

11                  MR. BUHYOFF: I -- again, when you're talking  
12                  about the synergistic effect of the water power, the  
13                  water power system, as opposed to the FERC power  
14                  system, the FERC relicensing, I think it had more --

15                  MR. DEIBEL: I guess, Matt, I'm obviously I'm  
16                  struggling with this.

17                  MR. BUHYOFF: Sure.

18                  MR. DEIBEL: And I think what I'm -- the  
19                  question -- well, let me ask the agencies. The NMFS  
20                  Staff, are there existing information in the record,  
21                  and with what's been currently approved, that you could  
22                  assess the changes to habitat with future flow regimes  
23                  between Crocker Huffman and Shaffer Bridge?

24                  MR. FOSTER: I would say that the primary  
25                  reason that we submitted originally 18 studies to

1 assess, you know, aquatic habitat upstream, within and  
2 below the project is that we don't feel that there is  
3 adequate information.

4 The purpose of the studies in the relicensing  
5 process is to gather information, not only to inform  
6 our section 18 authority how we might exercise that in  
7 the future, but to help develop PM&E types of terms and  
8 conditions for the license.

9 It's to inform our mandatory obligations  
10 under the Endangered Species Act to produce and consult  
11 with FERC and inform them in the licensing, to produce  
12 biological opinions, for instance.

13 That's why we need the information. And we  
14 need it, again, it's too early for us to presume how we  
15 would exercise our section 18 authority. But however  
16 we exercise it, we need information to base it on.

17 MR. WANTUCK: Bob, this is Rick Wantuck with  
18 NMFS. And I'll just add to that by saying that NMFS  
19 takes its mandatory conditioning authorities very  
20 seriously. A decision to exercise section 18 authority  
21 would obviously come with significant costs to be borne  
22 by the project proponent, by the licensees.

23 And therefore, we feel like at this stage  
24 it's not only reasonable, but prudent to ask for these  
25 sorts of studies. Because of the magnitude of the

1 decision that we're facing probably four, four and a  
2 half years from now, I guess.

3 MR. DEIBEL: Let me ask the same question of  
4 the state. Do you think there's existing information  
5 in the record to adequately assess change flow --  
6 potentially change flow regimes if that compliance  
7 point is moved?

8 DR. WATTS: No, I don't think we do.

9 MR. DEIBEL: Okay. Geoff, you have a  
10 question?

11 MR. RABONE: Well, yeah, I have a few  
12 comments and a question. I think, in direct answer to  
13 your last question, the reservoir fish population  
14 studies, which it's unclear from our discussion this  
15 morning about whether the agencies are truly disputing  
16 those studies or not, it seems as though they're not,  
17 but they're waiting to pull that trigger.

18 Those will demonstrate whether there are  
19 listed anadromous fish in the reservoir at Crocker  
20 Huffman, and at the McSwain Dam, which is the limit of  
21 the FERC's authority, and which is enough information  
22 to tell you if anadromous fish are present at McSwain  
23 Dam.

24 And that is enough information to determine  
25 whether the agencies should exercise or not exercise

1 their section 18 authority.

2 We're getting all mixed up about direct,  
3 indirect, cumulative effects. Merced has never  
4 disputed that the project has direct effects. But  
5 where it all gets confusing is when you go downstream  
6 and there are all these hundreds of additional  
7 diversions unrelated to FERC's jurisdiction of the  
8 hydroelectric project that affect flows, timing,  
9 amounts, all that.

10 And at that point it's no longer a direct  
11 effect. And therefore, as a license practitioner, it's  
12 very difficult for us to go out and spend millions of  
13 dollars on studies to determine our little piece of the  
14 effect.

15 And then try to write a report that  
16 illustrates that, and illuminates how the project --  
17 how the FERC should determine a project license that  
18 affects the only thing we can control, those flows at  
19 McSwain.

20 MR. DEIBEL: But do you agree that FERC has  
21 control downstream to 20 miles below Crocker Huffman?

22 MR. RABONE: The FERC has control at McSwain  
23 Dam. That --

24 MR. DEIBEL: Where's your compliance point?

25 MR. RABONE: Our compliance point currently

1 in the license is down at Shaffer Bridge.

2 MR. DEIBEL: Right.

3 MR. RABONE: There's no evidence in the  
4 record that shows why it's there. We think that's  
5 inappropriate because we have no control, no direct  
6 control of the total flows at that point.

7 So we would argue for a more rational  
8 measuring point where we're not put in a position of  
9 trying to be the policemen for people over which we  
10 have no control downstream.

11 CHAIRPERSON LIBERTY: Have there been  
12 compliance issues at that gauge, the Shaffer Bridge  
13 gauge?

14 MR. RABONE: Well, we're in the position  
15 where we have to over, you know, try to overcome  
16 whatever we think may be happening at any particular  
17 time. So it's very difficult for us.

18 We have to make sure that the flows,  
19 regardless of what people are doing downstream, are  
20 adequate for our compliance measurement.

21 MR. ROBBINS: Ken Robbins. Let me answer the  
22 question. There have been compliance issues. There  
23 have not been any recently. When I say recently,  
24 within the last ten years or so.

25 The license was amended so that there was an

1 immediate requirement as opposed to a 24-hour running  
2 average. Because intervening diverters on the river  
3 were pulling off water that was otherwise aiming for  
4 Shaffer over which we had no control.

5 So, now we have an instantaneous flow  
6 compliance issue and we have to try to police what's  
7 going on in there with no authority.

8 And on top of that, we have to over-release  
9 in order to try to make compliance happen. And it's a  
10 real conundrum down there. It's like the Wild West.

11 MR. THOMPSON: So you -- I want to jump in on  
12 that point. In addition to these additional diversions  
13 downstream of Crocker Huffman, you might need diverts  
14 at Crocker Huffman, so you are considering the  
15 diversion amounts there in your release.

16 So there is a nexus, you're stating, between  
17 the releases made at New Exchequer and McSwain, and the  
18 volume of diversion that MID is taking at Crocker  
19 Huffman, as well as at Merced Falls Reservoir?

20 MR. ROBBINS: Every reservoir in California,  
21 that releases water for purposes other than just power,  
22 has a water column that they -- a water stack that they  
23 have for downstream requirements.

24 Some of them are in fisheries or in streams;  
25 some of them are other water rights; some of them are

1 diversion; some of them are downstream. Reservoir  
2 demands, but every single reservoir in California has a  
3 release column that they use.

4 So to some extent the downstream irrigation  
5 demands, not all of which are for MID, are taken into  
6 account.

7 MR. THOMPSON: Thank you. I wanted to weigh  
8 in a little on this, on the NEPA issue. I think what  
9 Bob's onto is an important point. And that's that  
10 FERC, in their NEPA analysis, will need to establish  
11 baseline so that any potential new license conditions  
12 can be measured against that baseline in their NEPA.

13 And the current baseline, in part, is  
14 determined by compliance with existing license  
15 conditions, which include flows down at Shaffer Bridge.

16 And I want to ask Matt then, you will  
17 acknowledge, then, that you not only need to establish  
18 the baseline conditions for direct effects under NEPA,  
19 but also for indirect and cumulative effects?

20 MR. BUHYOFF: Yes.

21 MR. ROBBINS: Can I ask if we are going to  
22 talk about the issue of the section 18 passage?  
23 Because we have, so far, been concentrating on the  
24 effects that might come from NEPA.

25 But the purpose of today's hearing, as I

1 understand it, is to ferret out the specific technical  
2 requests, particularly from the agencies, under fish  
3 passage --

4 CHAIRPERSON LIBERTY: Yeah, we just had a few  
5 generalized questions, I guess, we wanted to get to  
6 first, just to help clarify things for us.

7 We do plan on talking about section 18 and  
8 the anadromous fish studies later in the day, probably  
9 when we start addressing each individual study.

10 But, again, there were just certain issues  
11 that we wanted to put out there and discuss a little  
12 bit beforehand.

13 MR. ROBBINS: Well, the --

14 CHAIRPERSON LIBERTY: But we do plan on  
15 discussing that.

16 MR. ROBBINS: -- point I'm trying to make is  
17 that there are lots of different kinds of studies that  
18 are going on on the river. They're not all related to  
19 FERC. MID's doing its own anadromous fishery studies  
20 for other processes.

21 There's a ton of things going on and they're  
22 all very nice, but they're not necessarily pertinent to  
23 what we're doing today. That was my point.

24 MR. DEIBEL: Well, I guess -- I mean, my  
25 point is if you look at the FERC letter, the September

1 14th letter, there's very -- there's not a lot of  
2 reasons, other than nexus, tied to baseline, tied to  
3 direct and indirect.

4 And that's why, to understand the mindset and  
5 the basis for that, from a global perspective,  
6 understanding where it's at, and then move into the  
7 specific studies, that's our intent, because I was  
8 really struggling with this.

9 Because it appears to me that when FERC Staff  
10 denied the study, they focused on nexus and direct.  
11 Well, there's indirect and cumulative. And some of the  
12 cumulative stuff was mentioned.

13 And the presumption behind that that, you  
14 know, I'm hearing from Matt, is that there's already a  
15 body of evidence to conduct that analysis. And that's  
16 what I was trying to get at.

17 MR. BUHYOFF: We're also speaking very  
18 generally at this point. And until we, you know, get  
19 into the minutia, then the studies, you know, I kind of  
20 want to speak generally.

21 MR. ROBBINS: I fully understand that  
22 question. And I can certainly appreciate the need for  
23 the answer. But my concern is it is leading us into  
24 discussions about what the scope is, what scoping  
25 document two says, what the Director's order says.

1       Rather than the basis that this panel has for it, for  
2       which I might recommend a reversal of that decision.

3               Those bases are not scope, they are not other  
4       issues. They are whether or not the requests from the  
5       agencies, at least with respect to NMFS and Fish and  
6       Wildlife, are based upon fish passage.

7               In the absence of fish passage, there's  
8       little the panel does with the studies. I understand  
9       there's --

10              MR. THOMPSON: Earlier Aaron put up the  
11       regulations we have to follow by 2014. And we have  
12       here been talking about the regulations at 5.9(e)(5),  
13       discussing direct and indirect and cumulative. So we  
14       do have to address those issues.

15              And before we get off this I had another  
16       question for Matt, and that was --

17              MR. MARTIN: Larry, before you move on, I'd  
18       like the Fish and Wildlife Service to put on the  
19       record, and ask the same question that you asked NMFS  
20       and the State Water Board, --

21              MR. THOMPSON: Okay, I'm sorry.

22              MR. MARTIN: -- is that no, there is not  
23       information. We don't believe that there's enough  
24       information to address the question.

25              MR. THOMPSON: Thank you.

1                   MR. DEIBEL:  Whether there's enough  
2 information to assess the effects if they change their  
3 compliance point.

4                   MR. MARTIN:  That's correct.

5                   MR. THOMPSON:  I want to include T&E species  
6 in the question for Matt.  And I don't want to go off  
7 on a tangent on T&E.  I do, however, want to point out  
8 that I'm struggling with the fact that FERC has  
9 identified T&E species as potentially cumulatively  
10 affected in scoping document two.

11                   The regulations require, and I'm putting them  
12 up here, at 5.9(a) that all study requests, and this is  
13 required by the agencies that provide study requests,  
14 the requests must include information and studies  
15 needed for the mandatory conditioning authority that  
16 the Water Board has, and for consultation needs under  
17 section 7.

18                   So, I guess I want to ask, I kind of want to  
19 go around, I'd like to ask, Matt, if you think you have  
20 sufficient information to assess the cumulative effects  
21 to T&E species based on the study requests that you've  
22 approved and the ones you've not adopted, and the  
23 existing information?  Do you believe you have enough?

24                   MR. BUHYOFF:  At this point, yes.  And I  
25 believe that the information that we would get could

1 potentially identify any holes in that. And there is  
2 room in our process to undergo more studies if we, you  
3 know, if we find a need for those.

4 MR. THOMPSON: NMFS, could I ask that  
5 question of you? Do you believe there's sufficient  
6 information to assess the cumulative effects to all the  
7 resources defined by FERC in their scoping document?

8 MS. STRANGE: No.

9 MR. THOMPSON: Do you want to elaborate or --  
10 a simple no is okay. I guess we should go around --

11 MS. STRANGE: Well, the main that we're  
12 concerned with are steelhead, and there isn't a lot of  
13 information regarding steelhead, habitat use, flow  
14 requirements and so forth in the lower section of the  
15 river. So that's one area where we need a lot more  
16 information.

17 MR. MARTIN: No, there's not enough  
18 information to address section 7 or any of the other  
19 requirements or authorities for any of the anadromous  
20 fish species.

21 MR. THOMPSON: Board?

22 DR. WATTS: There's not enough information  
23 for the section 401. I mean we don't have ESA  
24 authority, but certainly for the section 401 water  
25 quality cert.

1                   MR. DEIBEL: I just also add again, and I'll  
2 get off beating this dead horse, so to speak. In  
3 response to the MID and some of the questions.

4                   The reason -- I mean I appreciate wanting to  
5 get into the technical details, but I personally,  
6 that's one of the struggles I'm having is the scope of  
7 this.

8                   And the reason I'm saying that is under the  
9 bioaccumulation study FERC says no new information is  
10 needed because under the existing baseline analysis  
11 there's no change in project operations, correct?

12                   Are you proposing to change operations below  
13 Crocker Huffman?

14                   MR. ROBBINS: I think the answer to that is  
15 it's in the application. But, once again, we're having  
16 trouble following this process. Because our  
17 understanding of the panel's -- I mean, you're the  
18 panel, so you tell us -- but our understanding of your  
19 mandate is that the Director has issued an order.

20                   And there are requests or protests from three  
21 mandatory conditioning authorities to change that  
22 order. And that order -- those requests are based upon  
23 an authorization, a legal authorization, that gives  
24 them the right to make that change.

25                   Outside of the scope of that process, you

1 know, we started off by saying we're not talking about  
2 ESA, or we're not talking about -- but that's all we've  
3 talked about here.

4 And I'm just having trouble --

5 MR. DEIBEL: Well, I --

6 MR. ROBBINS: Yeah, we do propose to make  
7 changes. And we are going to be doing some studies.  
8 And the Director's already said that these studies are  
9 sufficient.

10 And then there's a protest based upon fish  
11 passage, and let's talk about that.

12 MR. RABONE: This is Geoff Rabone. Could I  
13 just make a quick comment? I've been doing this for a  
14 long time. And we've gone through the traditional  
15 licensing process to the ALP, to the ILP.

16 And in the traditional process we used to  
17 fight about this for up to 25 years over which studies  
18 were necessary. And the agencies would traditionally  
19 rely on a generalized statement that says, we need it.  
20 We need that information.

21 However, the FERC is responsible for doing  
22 their own independent analysis at the end of the day.  
23 They determine what information they need to satisfy  
24 NEPA.

25 And the way the relicensing process has

1 migrated over the years, we've tried to try to put some  
2 limits on the request for studies based on the fact  
3 that we need more information.

4 Well, the FERC has now, in the ILP, set out a  
5 process where they finally make a determination. And  
6 they determine what they need for that independent  
7 analysis.

8 The agencies are still going back to the same  
9 playbook saying, we need the information; we need more  
10 information. Well, we always need -- we always need  
11 more information. That's okay.

12 But in this process it's strictly limited to  
13 what you can dispute under that Director's order. What  
14 authority you get to dispute it. And that's the reason  
15 why only these agencies are sitting at this table, and  
16 they have strictly limited authority. And it's not to  
17 redetermine what the definition of baseline is in NEPA.  
18 It's to determine --

19 CHAIRPERSON LIBERTY: Well, let me ask this -  
20 -

21 MR. WANTUCK: I'd like to respond to that,  
22 Bob, if I could.

23 CHAIRPERSON LIBERTY: Hold on. Go ahead,  
24 Jim, you've been very patient.

25 MR. LYNCH: Just going to answer Ron's

1 question -- you asked bioaccumulation. Actually FERC  
2 said the licensing didn't propose any activities that  
3 would lead to an increase --

4 MR. DEIBEL: Right.

5 MR. LYNCH: They didn't say they didn't  
6 propose any changes. They said that and that was true,  
7 we don't propose any activities --

8 MR. DEIBEL: Right.

9 MR. LYNCH: -- that would lead to an increase  
10 in bioaccumulation.

11 CHAIRPERSON LIBERTY: Again, we plan --

12 MR. DEIBEL: Right.

13 CHAIRPERSON LIBERTY: -- studies afterwards -  
14 -

15 MR. LYNCH: Well, he asked a specific  
16 question.

17 MR. DEIBEL: Well, but, right, and that's in  
18 the letter. What's important here, I think, I mean,  
19 Jeff, I hear what you're saying, but the ILP rates do  
20 allow the agencies to formally protest, and hence  
21 that's why we're here.

22 The motivation for FERC's denial of a study,  
23 to me, is important and the basis for that. The  
24 bioaccumulation, for example, I mean here's the  
25 yin/yang. On the bioaccumulative FERC Staff said,

1 well, they're not proposing any changes; that's  
2 consistent with FERC's baseline. Therefore we have  
3 enough information, we're good to go.

4 Yet I'm hearing or reading in these denial of  
5 some study requests, we don't believe -- and I'm going  
6 to paraphrase here, they cannot find a motivation for  
7 the Shaffer compliance point 20 miles downstream,  
8 therefore no studies are needed. That's what I'm  
9 reading into this.

10 And presumably behind that, that's why I  
11 asked the question, is that there's sufficient  
12 information to assess the effects of changing that  
13 compliance point and potential flow changes, which is  
14 alteration of the baseline. And the baseline is a NEPA  
15 baseline, it's an analytical baseline, it's not an  
16 outcome.

17 So, if the nexus and the baseline issue is  
18 adequate to justify one part of the study, why is it  
19 not adequate to -- why is it adequate, or how do you  
20 decline that or deny that in denying the study. And  
21 that's what I'm struggling with right here obviously.

22 So, you can't use it on one side and then not  
23 use it on the other in terms of scope of studies, in my  
24 opinion, as I assess this. And that's where I'm coming  
25 from. Because that honestly, as I read this, and this

1 is a huge record and I'm trying, you know, with my day-  
2 job, trying to get up to speed on all this stuff, to me  
3 the keys are baseline nexus, and it ties back to the  
4 authority that we will get to, I promise you.

5 So, that's why we're trying to talk globally  
6 here and then, as we move into the technical details,  
7 that'll happen. So I don't think nexus and baseline  
8 are just a trivial NEPA, because that is the motivation  
9 for the denial of some of these studies.

10 MR. THOMPSON: We wanted to spend some time  
11 talking about these general issues because there was so  
12 much overlap in a lot of the reasoning for adopting or  
13 not adopting specific studies.

14 But we knew this might happen. But I want to  
15 point out that I just pulled up the water balance Ops  
16 model. We went through the FERC determination  
17 September 14th, and I agree, we need to get back to it  
18 and focus on it.

19 And you can see the conclusion was that the  
20 modifications would not be adopted. These are the  
21 conclusions. And you can see, you know, it does  
22 speak -- it's to the regulations about nexus, it's with  
23 the information informed license conditions, and the  
24 direct effects versus also indirect and cumulative  
25 effects.

1           I could go through. I have all 16 studies  
2 here. I tried to identify FERC's basis for saying yes  
3 or no on each 16. And I have these here.

4           And I think when we come back and go into  
5 each study plan individually we'll see that. So I just  
6 want to say, that's why we went with a little general  
7 discussion first, because there's a lot of repetitive,  
8 you know, there's a lot of repetition here in terms of  
9 FERC's rationale for making a decision.

10           CHAIRPERSON LIBERTY: Right, there's just a  
11 lot of over-arching issues, I guess, that were kind of  
12 common themes that ran throughout the 16 studies, and  
13 that's kind of why we came up with these generalized  
14 questions. Because we know if we don't talk about them  
15 now, they're going to come up during the course of the  
16 day.

17           But we are going to touch on each of these 16  
18 studies, and we're going to start getting into the  
19 nexus issue, the study plan criteria, the stuff that  
20 we're going to be weighing in on when we put together  
21 our report and our recommendation.

22           So, I mean, these are all things we are going  
23 to be looking at. And we have a really good idea of  
24 what it is we're supposed to be doing.

25           MR. RABONE: No, we don't argue with you that

1 it's confusing when you start talking about indirect  
2 and cumulative effects. That's the way the  
3 regulation's worded. So, of course, you have to  
4 consider that when you do the NEPA analysis.

5 But to do specific studies geared towards  
6 cumulative and indirect effects, that's -- you're  
7 chasing your tail --

8 (Parties speaking simultaneously.)

9 MR. DEIBEL: Wait a minute, Geoff. Geoff,  
10 yeah, Geoff, I'm not going to -- I don't want to debate  
11 you here, but if you change the baseline and close  
12 change between Crocker Huffman and Shaffer Point, is  
13 that not direct?

14 MR. RABONE: If the licensee does not change  
15 their releases, and those flows change at Shaffer, is  
16 it the licensee's fault?

17 MR. DEIBEL: Right, now you've got a  
18 compliance point.

19 MR. RABONE: So, is that appropriate in the  
20 law, that MID should be put in that position?

21 MR. DEIBEL: Well, all I'm saying is, as I  
22 understand the FERC baseline, is that it's the  
23 conditions as they exist. And when I went around and  
24 asked the question, was there enough information to  
25 assess potential changes in flows between Shaffer

1 Bridge and Crocker Huffman, some of the agencies said  
2 no. FERC Staff obviously believed they have enough  
3 information.

4 You know, for example, on the point on the  
5 project operations. And I fully -- I've worked on  
6 enough projects, too -- I fully appreciate the  
7 difficulty in tracking this with this kind of plumbing  
8 out here in the west slope Sierra.

9 But what would be informative in that water  
10 balance operation study is to track a unit of water,  
11 for example, 200 cfs, how does it move through the  
12 system. Questions that if I was an agency staff, I  
13 would ask, are you releasing flows in excess of your  
14 turbine capacity. What happens as it flows through  
15 PG&E's facilities, because there's probably a pretty  
16 good link on how PG&E operates their project and  
17 releases from the big bucket upstream at New Exchequer.  
18 They may not be one-to-one, but they're going to be  
19 connected.

20 And so what would inform the decisionmakers  
21 and the parties is how does this water flow through the  
22 system, and what were the releases made. Do they  
23 exceed the turbine capacities. Are you making releases  
24 to the irrigators downstream.

25 It'll be very hard to tease that out. But

1 that's how you track the effects downstream. Right now  
2 FERC is making a call that says there are no direct  
3 effects, that those flows cannot be tied up to New  
4 Exchequer, therefore no studies are needed.

5 MR. ROBBINS: But that study actually is in,  
6 the operations and the water model was actually in  
7 the --

8 MR. DEIBEL: I agree; it's up for debate.  
9 The point of which you take it downstream, I think,  
10 because that's part of the debate. So that was an  
11 illustrative example, hopefully, that that's the type  
12 of information that would help daylight effects.

13 MR. RABONE: Actually, it's not even that.  
14 It's can we calibrate it downstream of our project.

15 MR. DEIBEL: Right. I saw the capacity of  
16 the gauge and stuff, so --

17 MR. WANTUCK: May I have a word here?

18 CHAIRPERSON LIBERTY: Let's have one more  
19 question and maybe we'll take a short break.

20 MR. WANTUCK: I just have a statement for the  
21 panel. This is Rick Wantuck. It's my understanding  
22 that this proceeding is to resolve disputes between the  
23 disputing agencies and FERC.

24 While we respect the District's point of view  
25 here, and welcome them at the table, I've counted at

1       least six times that they have interrupted to question  
2       the panel's approach.

3               I do not believe it's appropriate for the  
4       District to filibuster in this proceeding and try to  
5       stymie the panel's approach. So, we welcome you here,  
6       but please accept the panel's leadership unless --

7               CHAIRPERSON LIBERTY: When we start getting  
8       into the individual studies, the majority of our  
9       questions are going to be directed towards the agencies  
10      --

11              MR. WANTUCK: That's right.

12              CHAIRPERSON LIBERTY: -- and FERC Staff.

13              MR. WANTUCK: And we will be prepared to talk  
14      about --

15              CHAIRPERSON LIBERTY: However, we may have a  
16      few questions for MID. But, you're exactly right. I  
17      mean the disputed area is between FERC and the  
18      agencies, and we're trying to see both sides of the  
19      issues here.

20              However, we will probably have a few  
21      questions for MID, but I'd say probably, you know, 75  
22      percent of our questions this afternoon will be  
23      directed towards NMFS, Fish and Wildlife Service, FERC  
24      and the Water Board.

25              But right now let's take a quick ten-minute

1 break, and we can reconvene then. And I think then  
2 we'd probably like to start getting into the individual  
3 studies.

4 (Brief recess.)

5 CHAIRPERSON LIBERTY: Like we said before,  
6 we'd like to kind of get into the individual studies.  
7 We'd like to go for maybe another two hours and break  
8 for lunch at 12:30. Hopefully we can get through at  
9 least a few of these studies.

10 So, we're going to go right down the line  
11 with these studies. We're going to start with the  
12 hydrologic alteration study, study 2.1. And again, a  
13 majority of these questions are going to be directed  
14 towards FERC and the agencies, so we get a clear  
15 understanding of what the dispute is.

16 MR. ROSE: Aaron. David Rose, State Water  
17 Board. I'd just clarify, and I'm probably going to  
18 clarify exactly what MID wants to clarify. Did NMFS  
19 say that they're not disputing the study anymore?

20 CHAIRPERSON LIBERTY: That's a question we  
21 want to make sure we have this clear in the record, --

22 MR. ROSE: Because we're just, you know, if  
23 nobody else is disputing that, then --

24 CHAIRPERSON LIBERTY: Right, I mean if  
25 something is resolved there's no need for us to discuss

1 it as a panel, and we can move on --

2 MR. ROSE: Right.

3 CHAIRPERSON LIBERTY: -- that'll leave the  
4 other studies to discuss, 14.

5 (Laughter.)

6 CHAIRPERSON LIBERTY: So, yeah, I guess that  
7 would be our first question. We're going to make sure,  
8 is it the agency's proposal to take this study off of  
9 the table. And I guess I would first direct my  
10 question to NMFS.

11 MR. FOSTER: Yeah, it is important to have an  
12 IHA study, because it will inform how we might exercise  
13 our section 18. And IHA study does try and get at how  
14 the project has changed the hydrological features of  
15 the watershed.

16 Frequently hydropower projects switch out the  
17 higher winter and spring flows and move them to other  
18 parts of the year, which, in our opinion, is somewhat  
19 not advantageous to the species we're trying to  
20 protect, the species who have evolved to respond to  
21 those types of flow peaks and stuff like that. And  
22 when they're taken away they don't do as well.

23 However, we are not disputing the current  
24 study in FERC's study plan, because we feel the  
25 existing information to be adequate.

1                   CHAIRPERSON LIBERTY: All right, excellent.  
2 Fish and Wildlife Service?

3                   MR. MARTIN: We're not disputing the study  
4 plan.

5                   CHAIRPERSON LIBERTY: Okay. Excellent. And  
6 the Water Board?

7                   DR. WATTS: Yeah, we're not disputing it.

8                   (Parties speaking simultaneously.)

9                   MR. DEIBEL: It's lunchtime.

10                  (Laughter.)

11                  CHAIRPERSON LIBERTY: So let's move on to our  
12 second study, I guess, it would be study 2.2, the water  
13 balance operations model. So this one is under dispute  
14 by all agencies present here today, is my  
15 understanding.

16                  So, I guess the way we're going to handle  
17 these individual studies is first we'll go to FERC and  
18 ask them why they did not adopt the particular study or  
19 the agencies' requests to modify the study. And then  
20 we'd like to hear from the agencies why they feel they  
21 have met particular study plan criteria.

22                  So the water balance operations model study,  
23 I guess, again, Matt, why is it FERC dismissed this  
24 study?

25                  MR. BUHYOFF: I think primarily our reasoning

1 was there's a model in existence, the SJR5Q model  
2 that's -- based. And from the information in the  
3 record, as well as from my understanding at study plan  
4 meetings, that model would be able to assess the  
5 information. So there'd be no reason to build a new  
6 model for that.

7 CHAIRPERSON LIBERTY: So, the study was not  
8 adopted based on was it nexus, am I remembering that  
9 right?

10 MR. BUHYOFF: It was because the requested  
11 information would not inform.

12 CHAIRPERSON LIBERTY: So, criteria number 5.

13 MR. BUHYOFF: And also I don't know if it's  
14 in there, but why the existing information was not  
15 adequate.

16 CHAIRPERSON LIBERTY: And I guess I'd like to  
17 hear a little bit of follow-up, I guess, from the  
18 agencies. How you think you have met that study plan  
19 criteria number 5, and specifically why I guess this  
20 existing model that Matt mentioned isn't sufficient for  
21 your needs.

22 MR. FOSTER: We need information from the  
23 water balance operations model study to help support  
24 our decision for how we might exercise our section 18  
25 authority.

1           The main issue we have with the study is that  
2           it does not model flows farther enough downstream of  
3           the project. It stops short of assessing that  
4           information, I believe, below Crocker Huffman Dam and  
5           down to the confluence of the, you know, Merced and San  
6           Joaquin Rivers, and perhaps beyond.

7           In addition, I believe that the Merced had  
8           suggested that the San Joaquin River water temperature  
9           model might be used to evaluate some effects  
10          downstream. However, that doesn't appear to stimulate  
11          hydropower generation very well.

12          The other issue with the water balance  
13          operations model is that we have not really seen the  
14          actual details of the model yet. I mean that would be  
15          developed as part of the study to help share that  
16          information and utilize that.

17          But I think our main concern is that one  
18          needs to be able to model all types of parameters and  
19          how flow changes from coming out of the project all the  
20          way downstream to the best that they can.

21          We understand that the model, and you can  
22          only calibrate it to a certain degree, but you still  
23          need that information in order to assess how much water  
24          is where at what point in time downstream. Because  
25          there's a big species downstream.

1           MR. WANTUCK: This is Rick Wantuck. Just to  
2 add to that. National Marine Fisheries Service, in our  
3 comments on -- pointed out that we believe that there  
4 are effects that extend far downstream of the project.  
5 Certainly much farther than the established compliance  
6 point.

7           And in FERC's scoping document, indeed, it  
8 was acknowledged that there are effects of this project  
9 throughout the Merced River, downstream through the San  
10 Joaquin River, to the confluence with the Sacramento  
11 River.

12           And when we saw that determination we felt  
13 like this was FERC's acknowledgement that these effects  
14 do extend far downstream.

15           Now, to try to connect this with a fish  
16 passage concept, we have to be aware of the anadromous  
17 fish lifecycle and the fact that these fish are  
18 beginning their homeward migration from the ocean to  
19 even navigate through the delta.

20           But as they get into the San Joaquin system,  
21 and certainly the Merced system, flows need to be  
22 suitable to attract them up to the point of the  
23 project, at which point then presumably prescribed fish  
24 passage facilities would be successful in moving fish  
25 into the project or above the project.

1                   My point here is that unless we have some  
2                   knowledge of the hydrology of this system, we cannot  
3                   predict with a great degree of confidence how well  
4                   adult anadromous salmonids, and for that matter  
5                   anadromous lamprey, will be attracted to the point of  
6                   the fish passage facilities that we might choose to  
7                   prescribe.

8                   MR. FOSTER:   And in addition we would want  
9                   fish to be able to escape out of the system and get  
10                  back out to the ocean.

11                  MR. WANTUCK:   And vice versa, yes.

12                  MR. FOSTER:   Right.   And then that goes again  
13                  towards part of the -- there's no one study that's  
14                  going to answer all of our questions.   We need an  
15                  entire suite of studies to understand all the common  
16                  interrelated factors.

17                  How the hydrology in the system has been  
18                  changed by the project dictates essentially what those  
19                  fish and other aquatic life and other riparian habitats  
20                  and such may be affected by the hydrological  
21                  conditions.

22                  CHAIRPERSON LIBERTY:   Bob, go ahead.   Oh,  
23                  Matt, sorry.

24                  MR. BUHYOFF:   Just that based upon the  
25                  information that's in the record, my understanding, the

1 SJR model can model parameters to the confluence of the  
2 San Joaquin River.

3 MR. DEIBEL: So in terms of scope, are you  
4 suggesting that to have water operations modeling  
5 downstream at Shaffer Bridge, are you saying into the  
6 San Joaquin? Or just the Merced proper?

7 MR. FOSTER: Yeah, we would like that  
8 information for our section 18 decision, to go as far  
9 down as possible through the Merced River. As accurate  
10 as the model can, you know, portray it.

11 Because certainly we need fish to get into  
12 the Merced River in order to, you know, help recover  
13 them and stuff like that.

14 This type of modeling would be used in tandem  
15 with the water temperature model, as well. And I think  
16 our main issue with that study and the water operation  
17 study is they do not model, or at least the licensee  
18 was unwilling to model, far enough downstream.

19 CHAIRPERSON LIBERTY: Correct -- sorry.

20 MR. DEIBEL: Into the San Joaquin.

21 MR. FOSTER: To the San Joaquin, yes.

22 MR. DEIBEL: To the San Joaquin.

23 MR. FOSTER: And perhaps beyond it. I don't  
24 know -- I personally do not know the capabilities of  
25 the model.

1                   MR. WANTUCK: We're willing to accept to the  
2 confluence with the San Joaquin.

3                   CHAIRPERSON LIBERTY: Correct me if I'm  
4 wrong, but I saw it in your dispute letter that the  
5 agencies were only asking that the scope be expanded to  
6 the current compliance point, which would be Shaffer  
7 Bridge over river mile 32. I didn't see any reference  
8 in the letter asking for the model to go beyond that  
9 down to the confluence of the San Joaquin.

10                  MR. FOSTER: I believe we said that at least  
11 to the current compliance point, and conform to FERC's  
12 SD2 geographic scope, which extends down -- actually --

13                  CHAIRPERSON LIBERTY: Which was to Shaffer  
14 Bridge, right?

15                  MR. FOSTER: -- actually to the delta.

16                  CHAIRPERSON LIBERTY: I thought the -- I  
17 guess is a question for FERC, I thought --

18                  MR. FOSTER: Okay, the geographic scope in  
19 SD2, the scoping document 2, extended down actually  
20 through the Merced River, through the confluence of the  
21 Merced River and the San Joaquin River, to the  
22 confluence of the San Joaquin River and Sacramento  
23 River, which is in the San Joaquin/ Sacramento delta.

24                  CHAIRPERSON LIBERTY: I thought that was the  
25 geographic scope for anadromous fish, not necessarily,

1 I guess, water resources or -- what you're saying is  
2 this information would be used for section 18, and  
3 therefore relates to anadromous fish, is that correct?

4 MR. FOSTER: Well, exactly. We need the  
5 information to know how that water -- how much water's  
6 there, what time, what amount, quality.

7 MR. WANTUCK: We need certain flows from this  
8 project to guarantee successful perpetuation of the  
9 anadromous lifecycle. For instance, we need a strong  
10 enough pulse flow in the fall to attract fall-run  
11 Chinook salmon into the project.

12 We need strong enough pulse flows to attract  
13 steelhead in the winter. We need flows for emigration  
14 of smolts to get out of the system. In terms of adults  
15 again, for purposes of tracking into the Merced River,  
16 there needs to be a strong enough detectable signal for  
17 these fish to be able to home in on the Merced River.

18 So all these reasons we see as being tied to  
19 our decisionmaking for a section 18 prescription. If  
20 you cannot get them into the river you can't pass them  
21 anywhere.

22 MR. FOSTER: In addition to that, it's been  
23 my experience that water operation models, temperature  
24 models should go, be robust enough to be able to -- and  
25 user friendly enough to be able to go down below the

1 project a sufficient distance.

2 Some of the projects that I've worked on have  
3 gone down 20, 30 miles downstream, if not more. In  
4 order to have that information so that you can I guess  
5 essentially have a book-end with what you could or  
6 could not do; or what could or could not happen.

7 MR. THOMPSON: I have projected up on the  
8 screen three bullets that sort of condense page 5 of  
9 FERC's September 14th determination. These are the  
10 three points they made, they said that they relied on  
11 for their conclusion not to adopt the study.

12 So I guess starting with NMFS I'd like to  
13 know, are you saying you're disputing all or any of  
14 these, starting with the top one. Are you saying  
15 that -- I think you're saying that anadromous fish need  
16 to be assessed, those that would be cumulatively  
17 affected resources. So if you could speak to those  
18 three, please, that would help.

19 And then I also want to point out that Matt  
20 has added some rationale that existing studies,  
21 existing information is sufficient, is that correct?

22 MR. BUHYOFF: Yeah, that's correct.

23 MR. THOMPSON: And then we'll follow up with  
24 that. But, NMFS?

25 MR. FOSTER: Well, we believe that we need

1 studies downstream in order to inform us of how the  
2 project affects the species and the habitat all  
3 downstream.

4 We feel that there's direct, indirect and  
5 cumulative effects from the project that has to release  
6 from its huge reservoir a million acrefeet or so. That  
7 water has to go downstream for whatever reason.

8 Currently it has a compliance point, a FERC  
9 compliance point 20 miles downstream. But any other  
10 reaches of that water is released, it has to go through  
11 the power facilities in order to get downstream first.

12 MR. THOMPSON: Okay, so that speaks to the  
13 first one. You're saying --

14 MR. WANTUCK: Yeah, and I'd like to add to  
15 that. I think this goes back to earlier, the line of  
16 questioning that Bob was pursuing about direct effects  
17 as they relate to an established compliance point  
18 downstream.

19 Bill pointed out that this reservoir is on  
20 the order of a million acrefeet. That's a huge amount  
21 of water that the districts are in control of. And the  
22 compliance point issue, I think, establishes a direct  
23 effect, otherwise really why is it there. That doesn't  
24 make sense to me why a compliance point would be  
25 established if there were no acknowledged direct

1 effects.

2 So that's our answer to point one.

3 I'll go to point two here, lack of a nexus  
4 between project operation and resource to be studied.  
5 I guess on this one we're looking at this argument that  
6 whether or not fish are in the project area. Or is  
7 that necessary for establishment of a project. And  
8 that's the nexus.

9 And I guess to this point there are several  
10 issues that can be brought up. I'd like to call on Dr.  
11 Michael Martin, who's in the audience here, to talk  
12 about what is known about anadromous fish above Crocker  
13 Huffman Dam.

14 Michael, could you address that, please?

15 DR. MARTIN: Thank you, Rick. Members of the  
16 Panel, I'm Michael Martin. And just for a brief bio,  
17 I'm an American Fisheries Society certified fisheries  
18 biologist. I studied Modoc suckers; I was in the Pitt  
19 River Drainage for my masters thesis. And I'm  
20 currently an adjunct professor in the Department of  
21 Biology and Chemistry at City University of Hong Kong.  
22 I'm a long ways from home.

23 There really are few data to demonstrate the  
24 presence or absence of anadromous fish above Crocker  
25 Huffman. There have been no direct studies to date,

1 period, in the stretch from Crocker Huffman upstream.

2 Mike Cozart, the hatchery manager at DFG has  
3 reported salmon jumping over the Crocker Huffman Dam  
4 under certain flows.

5 In 1970, when the fish spawning channel was  
6 constructed, fish escaped and salmon were reported  
7 above Crocker Huffman Falls. And the Stillwater 2005  
8 survey stated that Pacific lamprey, an anadromous fish,  
9 occurs. Apparently have better capabilities of getting  
10 over the structure.

11 On the con side, everybody readily admits the  
12 1907 ladder was poorly designed. And it functions  
13 poorly, at best. So there's some scientists that have  
14 stated that they believe it has some function.

15 The flows are inadequate obviously. And  
16 there's currently few steelhead in the river. And so  
17 we really don't know the bottomline. Do anadromous  
18 fish, or don't they get over the current Crocker  
19 Huffman facility.

20 CHAIRPERSON LIBERTY: Thank you. I think I'd  
21 like to -- I hate to cut you off, but we really need to  
22 hear from Fish and Wildlife Service and the Water Board  
23 on this particular issue, if you guys have anything  
24 else to add specifically on this particular study.

25 We're going to get into the anadromous fish

1 discussions later today. I intend to revisit this  
2 issue.

3 MR. MARTIN: Okay. This is Ramon Martin with  
4 the U.S. Fish and Wildlife Service. To address your  
5 first bullet there of the direct effects of the project  
6 operations study criterion 5 and how this study  
7 addresses that, the project  
8 -- high flows greater than 3000 cfs that would occur  
9 during unimpaired conditions -- project captures water  
10 from Lake McClure to prevent either downstream flooding  
11 and for water supply purposes from February through  
12 June.

13 The project also augment flows from July  
14 through October. And they have little effect or  
15 -- augments flows in November through January. And  
16 that's only during normal and wet years. In dry years  
17 the -- flows greater than 1000 cfs.

18 So, again, we're talking about a million  
19 acrefeet reservoir, how those flows are managed, and  
20 get down through the system, all the way down to not  
21 just Crocker Huffman, but below and to the lower Merced  
22 River down to San Joaquin River.

23 What the studies, the water operations  
24 models, will give us the information needed for us to  
25 prescribe, you know, for section 18 authority to not

1 just give -- of what flows. Fish could get at least  
2 two Crocker Huffman, but above Crocker Huffman, and you  
3 know, all the way up to, you know, potentially to  
4 Merced Falls project, which is a FERC jurisdictional  
5 project under current licensing right now. And also  
6 all the way up to the McSwain project that we're  
7 disputing right now.

8 So we hope to be able to utilize that  
9 information of how the whole system is managed, whether  
10 or not the flows are available to pass fish over  
11 Crocker Huffman Dam. Dr. Martin mentioned that there  
12 is some evidence of certain flow conditions that salmon  
13 are able to jump over Crocker Huffman Dam.

14 Also there's some reports, Stillwater Science  
15 reports, I think it's 2008, that mentioned or cite the  
16 Pacific lamprey being present upstream of Crocker  
17 Huffman Dam.

18 So there is some anecdotal evidence, but  
19 again, we don't have the information that we need so  
20 that we'd be able to address or exercise the section 18  
21 authority of what's needed whether fish are present,  
22 anadromous fish are present, above Crocker Huffman.  
23 And what are the conditions or the flows needed to be  
24 able to get fish all the way up to there, and above.

25 CHAIRPERSON LIBERTY: Thank you. Water Board

1 -- oh, sorry.

2 MR. THOMPSON: One more. On the last bullet,  
3 then, do you dispute -- you believe that the  
4 information you requested would inform the development  
5 of a licensed condition or requirement?

6 MR. MARTIN: Yes, right now currently the  
7 compliance points, the current license has the  
8 compliance point at Shaffer Bridge. There's articles  
9 40 through 42 in the current license that address, you  
10 know, how -- flows should be administered all the way  
11 down to the compliance point at Shaffer Bridge, which  
12 is downstream of Crocker Huffman.

13 There's also license articles in the Merced  
14 Falls project stating that flows need to be coordinated  
15 with the Merced River Hydroelectric Project to maintain  
16 those compliance points flows down in Shaffer Bridge,  
17 as well.

18 So there are baseline existing license  
19 conditions in the current license that address where  
20 the compliance point should be all the way downstream  
21 of Crocker Huffman.

22 And, again, I think we're stressing the point  
23 that we need the information from the water balance  
24 operation models to give us our -- to address the  
25 baseline conditions, but any potential change in those

1 license conditions in the future.

2 CHAIRPERSON LIBERTY: Board?

3 MR. MARTIN: Yeah, section 8, fish -- again,  
4 just for a cross-view, get that information for section  
5 8 --

6 DR. WATTS: This is Jennifer Watts from the  
7 Water Board. And, again, the same way that Ramon was  
8 describing the compliance point, the fact that the  
9 water balance model would provide us with a way to look  
10 at different new operating scenarios as we go through  
11 this process. So it needs to be able to include the  
12 scope down to the compliance point to be able to assess  
13 any changes that might occur in new license conditions.

14 And in my mind the fact that there is that  
15 compliance point there implies that there are direct  
16 effects in the lower part of the river related to water  
17 resources and the flows that come from the project.

18 So there certainly is, in my mind, a nexus  
19 between the project operation and the water resources.

20 There may be some possibility that the San  
21 Joaquin temperature model also provides some  
22 information. And we're still not exactly clear because  
23 I believe that they're planning that the operations  
24 model would link into the temperature model.

25 But because we haven't really had a chance to

1 see how these are put together, it's hard to know  
2 whether the operations model would give us the  
3 information that we need down to that compliance point.

4 MR. DEIBEL: Can somebody develop a reliable  
5 operations model? For example, does the state have a  
6 good accounting of all diversions downstream of Crocker  
7 Huffman?

8 DR. WATTS: I would have to say no to that,  
9 although I think that's something they're trying to  
10 address with the recent legislation.

11 MR. ROSE: Let me make one point is that it  
12 might go to what you're getting at. MID has talked  
13 about a number of diversions downstream, whether you  
14 include Crocker Huffman or not.

15 But in preparing for this we came across a  
16 lot of data that shows a pretty striking correlation  
17 between water releases below Crocker Huffman that track  
18 very significantly down as far as at least the vernalis  
19 point. So below the confluence with the San Joaquin  
20 River.

21 And this is a pretty striking correlation for  
22 how the water tracks. Because I think it's been said  
23 before, almost all the water in this river is coming  
24 from the New Exchequer Dam, from these project  
25 releases.

1           And in the written submittal that's going to  
2 track our comments here -- which we'll provide  
3 whenever, but you know, at least at the end of this --  
4 we have a few charts that show that. And it's a pretty  
5 striking correlation.

6           So, I mean, that's to directly answer your  
7 first point, the direct effects of the project's  
8 operations.

9           As to -- and Jennifer mentioned the nexus  
10 point. As to the last point, we think that the  
11 information that we're asking for would inform the  
12 development of the license requirements, but we're not  
13 making any claims as to what those requirements will be  
14 at this point.

15           We're just asking for the information. It's  
16 kind of putting the cart before the horse to say that  
17 we cannot create license requirements or certification  
18 requirements when we don't have the information yet.

19           And that takes us back to that first point,  
20 which it really appears that there a clear nexus and  
21 that the project is having these effects. We'd like to  
22 get the information.

23           MR. WANTUCK: I believe there may be an  
24 inventory of water diversions. In the late 1990s the  
25 Department of Fish and Game conducted a Central Valley-

1 wide inventory of water diversions. I believe it also  
2 covered the Merced River.

3 That study, as I recall, found that there are  
4 over 5000, at that time, unscreened diversions in the  
5 Central Valley and in the delta. As I remember the  
6 map, the Merced River was included. So we could use  
7 that information.

8 MR. DEIBEL: And as was brought up -- from  
9 the State Water Board, as it was brought up pending or  
10 proposed legislation might address that. But since  
11 we're dealing with a long license term, we certainly  
12 want to make sure that we have the information.

13 And then we get to the conditioning stage,  
14 license requirements, I don't think anybody's claiming  
15 that we would make MID responsible for everybody else's  
16 effects.

17 But we needed to get the information that  
18 shows what their effects are. And that's what our data  
19 seems to show, is that as of right now it tracks pretty  
20 far down from what they release below Crocker Huffman  
21 through the entire Merced and below.

22 MR. DEIBEL: Okay, now, terms of section 18  
23 authority, I assume that that's tied to attraction  
24 flows for adults over a finite period of time or some  
25 predetermined period of time in the downstream out-

1 migrant flows, right? So, for section 18 you don't  
2 necessarily need to know an annual accounting of water?  
3 Or you think you do?

4 MR. WANTUCK: Oh, I think we do in the sense  
5 that in order to maintain a healthy anadromous  
6 population in this river, we have to look at all the  
7 lifecycle stages and how the hydrology within the river  
8 either support or fail to support those lifecycle  
9 stages.

10 So, we generally take a holistic, you know,  
11 year-round approach to how the water's being, you know,  
12 discharged from the project.

13 MR. FOSTER: The way that the models would  
14 give us that information and reasonably help support  
15 our section 18 decisions as to how we would exercise  
16 it. It goes to the quality of the habitat, quality of  
17 other rearing habitats. It helps, it might explain the  
18 state of -- as other studies might explain the state of  
19 the channels; whether there's riparian flood plane  
20 rearing habitat that might be supplied by flows at a  
21 certain time or not, because of the way the project is  
22 operating.

23 All of that is necessary quality of habitat  
24 that supports the anadromous fish, the foods they live  
25 on, the shelter that they gain. That's all a function

1 of the hydrology.

2 MR. DEIBEL: So could you, Fish and Wildlife  
3 Service and NMFS, could you see using section 18  
4 authority, the steelhead have come in, assuming they  
5 come in, they're coming in February, March; they spawn;  
6 and the fall Chinook have not shown up yet. Could you  
7 use section 18 authority to inform a decision for flow  
8 issues in July?

9 MR. FOSTER: I think we need to know how the  
10 project has changed the hydrology from what would be a  
11 normal hydrology that anadromous fish would benefit  
12 from, as well as the rest of their habitat that they're  
13 interrelated with.

14 And once we know that, then we can explore,  
15 perhaps, how certain operational changes might be able  
16 to enhance the current habitat.

17 See, the thing is we need to know the quality  
18 of the migration corridor and the status of the species  
19 and what supports them.

20 MR. DEIBEL: So does that inform your  
21 decision, or is that part of your section 18 --

22 MR. FOSTER: It informs -- yeah, --

23 MR. DEIBEL: -- potential prescription?

24 Because that's what --

25 MR. FOSTER: It informs our decision at one

1 piece of the information we need to make that decision.  
2 Because it does us no good to -- and this applies  
3 upstream within the downstream of the project, it does  
4 us no good to build a ladder to nowhere, or to build a  
5 ladder and have nobody show up.

6 MR. DEIBEL: Right.

7 MR. FOSTER: Okay. And it's too early, at  
8 this point, for us to presume how we would exercise our  
9 authority.

10 MR. DEIBEL: See, what I was getting at is  
11 the legal construct of a section 18, which, as I  
12 understand it and correct me if I'm wrong, ties to a  
13 prescription of how to either a facility or operations,  
14 to move fish up or move them downstream.

15 And so that's, I think it's different than  
16 the scope of authority that the state has. And your  
17 scope is a little bit more narrow, as I understand, but  
18 correct if I'm wrong.

19 MS. KEMPTON: Kathryn Kempton for NMFS. And  
20 I'll be happy to supply for the panel the case that I  
21 look at for this question, which holds that while  
22 Congress has made clear that the purpose of section 18  
23 is to provide for safe and timely fish passage, the  
24 legislative history underlying that statute indicates  
25 that this includes, as well, other fish and wildlife

1 benefits, both downstream and upstream, of a project.

2 And the case we're referring to, at this  
3 point is Wisconsin Power and Light, 363F.3d.453, a D.C.  
4 Circuit decision from 2004.

5 I'm respectful, of course, as is my agency,  
6 of the panel's desire not to get deeply into legal  
7 issues today. But should the panel require or request  
8 information regarding those legal issues, and the scope  
9 about section 18 authority, we'd be happy to supply  
10 those in a timely fashion following the conclusion of  
11 the technical conference.

12 CHAIRPERSON LIBERTY: Thank you.

13 MR. WANTUCK: May I add that part of the  
14 definition of what constitutes a fishway incorporates  
15 the flows necessary to make the facilities work.

16 We interpret that to mean that, you know, if  
17 flows in the entire system fail to bring fish up  
18 through the, let's say a fish ladder or some sort of  
19 upstream passage device, then the facility's failed to  
20 operate successfully.

21 And we have to take this into account if the  
22 conditions in the river are not conducive to a  
23 successful fish passage, then why would we decide to  
24 prescribe that passage in the first place.

25 And so what we're looking at is more of a

1 holistic interpretation, I think, of the potential --  
2 there's a difference between the potential facilities  
3 that we are authorized to prescribe versus the degree  
4 of success we can expect to achieve from such  
5 facilities if there are aspects of the river that cause  
6 an inadequate flow that don't support the passage,  
7 itself.

8 CHAIRPERSON LIBERTY: I think we have one  
9 more question maybe for Matt. I think after the  
10 question we'd like to move on maybe to the next study.

11 MR. THOMPSON: So, Matt, I have tried to  
12 summarize the three points that FERC made in their  
13 determination.

14 First of all, have I correctly summarized  
15 those, that those were three of the points you used for  
16 determining not to adopt the study?

17 MR. BUHYOFF: Yes. there was a final point, I  
18 think, I'd written in the determination, and said that  
19 we agreed with MID's assessment, that output from the  
20 SJR5Q I listed here as the water temperature model may  
21 be -- in providing information.

22 MR. THOMPSON: So that information, you were  
23 saying, I had heard you earlier say existing  
24 information. I'd summarize it as, is sufficient.

25 So you're saying this water temperature model

1 that you talked about would be the information you're  
2 identifying?

3 MR. BUHYOFF: Right. Again, from my  
4 understanding, based upon information in the record, it  
5 seemed that the SJR5Q could provide information on all  
6 the parameters of interest, all the way down to the  
7 confluence of the San Joaquin.

8 MR. THOMPSON: And that's for water  
9 temperature? Or is that an operational --

10 MR. BUHYOFF: Again, from my understanding,  
11 it's a -- based model, so I believe, you know, it  
12 provides information on temperature flow. And based  
13 upon the operational parameters.

14 MR. ROBBINS: I do have a supplemental  
15 question.

16 CHAIRPERSON LIBERTY: Keep it brief, promise?

17 MR. ROBBINS: Yeah, notwithstanding the  
18 potential filibuster. The issue here, I think, is not  
19 about fish passage at the project. Everybody's been  
20 talking about the fish passage at Crocker Huffman.  
21 That's just not jurisdictional to FERC. So, keep that  
22 in mind as you're looking at this.

23 Secondly, you're absolutely correct in the  
24 idea that the concept of fishways, as they've been  
25 described by NMFS, at least in our view, have been

1 abrogated. In fact, Congress vacated them and  
2 specifically said they were limited to structures or  
3 the operations of the structures. And we'd be happy to  
4 brief that, as well. If you invite briefs, we'll  
5 certainly participate in that process.

6 CHAIRPERSON LIBERTY: Thank you. I think  
7 we'll take one more question from the Water Board, and  
8 then I think if the panel's all set, we might go on to  
9 the next study.

10 DR. WATTS: Okay, it's more of a  
11 clarification about the need for the operations model  
12 to go downstream, which has to do with the ability to  
13 quantify the generation that you might get with  
14 different scenarios as you're using the model.

15 And from my understanding from other people  
16 here, that the temperature model, which also has  
17 aspects of flow in the lower river wouldn't allow you  
18 to do that.

19 So, that's information that will be needed by  
20 FERC, as well, to be able to quantify --

21 CHAIRPERSON LIBERTY: Thank you.

22 MR. DEIBEL: I have one quick follow-up  
23 question. Is there any -- in the theoretical or  
24 abstract, if a target volume of water is released to  
25 attract fish or move smolts downstream, are there any

1 options or remedies under the state to protect that  
2 block of water as it moves downstream, from diversions.

3 So, could -- you know, if X is released at a  
4 point, let's say it's 500 cfs, would you expect 500 cfs  
5 to show up at the confluence of the San Joaquin?

6 MR. ROSE: I'm sure MID would point out that  
7 those are sort of two different questions, because MID  
8 has mentioned a number of times that there are legal  
9 and illegal diversions. Of course, the State Water  
10 Board intends to deal with illegal diversions as best  
11 they can.

12 It's our understanding that the total amount  
13 of water diversions authorized, and potentially even  
14 unauthorized, in the lower reaches of the Merced River  
15 are relatively insignificant compared to the Crocker  
16 Huffman diversions and the water released.

17 And that's what our data, it seems to  
18 correlate very strongly that water release below  
19 Crocker Huffman, that the peaks and valleys of that  
20 water tracks all the way down below the confluence with  
21 the San Joaquin River.

22 So, it's hard to say exactly how much because  
23 there are legal and illegal diversions. Certainly  
24 water released, from a legal perspective, water  
25 released from storage is not authorized to be diverted

1 by the lower downstream users.

2 And that's where MID brings out that somebody  
3 might take it anyway. You know, we would need to study  
4 that.

5 MR. ROBBINS: The data correlation that the  
6 State Board has reported to you they see between the  
7 releases and the appearance that analysis occurs  
8 during a project called VAMP, where the State Board has  
9 issued something called a 1707 petition protection; and  
10 will protect that water as far as the Board says it  
11 goes.

12 But that's specifically stored water of MID.  
13 If we're bypassing flows into the river you have all  
14 sorts of other water rights to come into play. And  
15 getting that protected is a whole different story.

16 And I might take issue with what was just  
17 said. Earlier this year in early June we reported to  
18 the State Board that the Merced connection to San  
19 Joaquin had been severed.

20 We were releasing a significant amount of  
21 water and it was being illegally diverted on the  
22 Merced. And essentially to the point where it dried up  
23 the river.

24 MR. DEIBEL: Well, would a -- given that  
25 these issues are out there, is this SJ, what is it, R5

1 or RQ, is it sensitive enough to daylight, when he just  
2 explained, in terms of this modeling scenario shows  
3 that at this flow release with these diversions down  
4 there, it has no -- again, this is in the theoretical -  
5 - is it sensitive enough to address at the confluence  
6 of the San Joaquin to show, to affirm what you just  
7 said,  
8 or --

9 MR. BERGFELD: Lee Bergfeld with MID. The  
10 model, the existing San Joaquin River temperature model  
11 downstream from Crocker Huffman makes assumptions as to  
12 how much water is diverted, as any model would have to.

13 And it would provide you a number. If you  
14 said X amount of water is released from the project,  
15 and X amount of water continues downriver from Crocker  
16 Huffman, it would give you a number of Y amount of  
17 water shows up at the confluence of the San Joaquin  
18 River for any given day in the simulation.

19 MR. SHUTES: Could I point out something in  
20 one sentence? Sure. Chris Shutes, CSPA. And that is  
21 that for about five months out of the year there is  
22 very little diversion out of the river. That's  
23 something that seems to get overlooked when we're  
24 talking about all these diversions. There just aren't  
25 any from sometime around November 1st to sometime

1 around the beginning of March. That needs to be taken  
2 into account.

3 CHAIRPERSON LIBERTY: Thank you, Chris. I  
4 think we're ready to move on to our next study. If  
5 we're going to get through all these today, we need to  
6 move along.

7 So, I think the next study on our list is  
8 water quality monitoring. I guess my first question  
9 I'd like to pose to the agencies, and I think we'll  
10 start with the Water Board this time around.

11 When I looked at the revised study plan it  
12 looked like MID had made a proposal to review some  
13 historic and water quality monitoring data. And then  
14 to decide if there's a constituent of interest that  
15 needs to be studied, that they would do so.

16 I guess I didn't see any response from any of  
17 the agencies regarding this proposal from MID. And I  
18 guess I'd just like to hear a little bit from the  
19 agencies, starting with the Water Board, what they  
20 think of that proposal, or why that isn't sufficient, I  
21 guess.

22 DR. WATTS: This is Jennifer Watts. Well, we  
23 felt like there should be sampling in those lower -- in  
24 the lower river. And that simply is not seen what's  
25 coming out of the project, itself, wouldn't be

1       adequate.

2                       And that there should be data collected in  
3       that lower section down to the compliance point.  
4       Because in my mind that's part of the project. I mean  
5       it's not officially the project boundary, but it's  
6       certainly within the project.

7                       CHAIRPERSON LIBERTY: Fish and Wildlife  
8       Service, NMFS, do you guys have anything to add?

9                       MR. MARTIN: Yes. For our section 18  
10       authority I want to reiterate same things that were  
11       mentioned by NMFS and us, as well, as the previous  
12       study, is that we need to look at the environmental  
13       conditions, the habitat, and make sure that there are  
14       good quality habitat and good environmental conditions  
15       downstream as well as upstream, so that we're able to  
16       use that information and take that into consideration,  
17       as we do our section 18 conversions.

18                      So, in that regard, some of the water  
19       quality, we don't want to pass fish upstream in areas  
20       where, you know, reservoirs or areas upstream where  
21       there may be some either temperature or DO issues.

22                      Same thing as downstream, we don't want  
23       juveniles emigrating downstream into areas where, you  
24       know, maybe we don't have the flows, and consequently  
25       the temperatures that impact survival of those fish.

1           So, yet the information from the water  
2           quality study will be taken into consideration as we  
3           make our section 18, or we address and try to see  
4           whether or not we can access section 18 authorities.

5           MR. DEIBEL: So, Ramon, you mentioned  
6           temperature and dissolved oxygen. Are those the two  
7           principal constituents of your interest to have fish  
8           move upstream or downstream?

9           MR. MARTIN: Temperature and DO are one of  
10          the main issues obviously for not only juvenile  
11          salmonids, but also for adult salmonids. And, you  
12          know, relatively correlated with flow, as well.

13          And so the impacts of the impoundment  
14          upstream on how that water's released and the timing is  
15          going to impact, it could impact temperature and DO.  
16          Temperatures more downstream, obviously. If you reduce  
17          the minimum flows certain conditions, especially later,  
18          sometime in the summer, there may be some temperature  
19          effects. And I don't know if Michelle can add to that.

20          MS. WORKMAN: Yeah, this is Michelle Workman,  
21          Fish and Wildlife Service. I'd just like to add that  
22          the Service is also -- there are other water quality  
23          constituents that have direct impacts on fish that we  
24          would need to use to prescribe section 18, whether or  
25          not conditions were suitable upstream or downstream of

1 certain facilities.

2 And those would include total suspended  
3 solids, nitrates, pollution input, and, you know, the  
4 occurrence of those and the timing of the occurrences  
5 of those in the system, as well.

6 CHAIRPERSON LIBERTY: NMFS, do you guys have  
7 anything to add?

8 MR. FOSTER: Well, obviously fish live in  
9 water and they need quality water in order to survive,  
10 as does their food sources, as does the rest of the  
11 constituents of their habitat.

12 So, good water quality aids in the survival  
13 of all things aquatic, including the anadromous fish  
14 that we're trying to protect and endangered species  
15 we're trying to recover.

16 So I would say that we need this information  
17 to help exercise our section 18 authority by virtue of  
18 the quality of the conditions that these fish have to  
19 undergo throughout the year.

20 There are different times of the year where  
21 fish are coming in, smolts are moving out, they're  
22 rearing; eggs are, you know, deposited; eggs need to  
23 hatch. They're very dependent on good quality  
24 conditions. And the most stringent of those are  
25 temperature and oxygen.

1                   MR. DEIBEL: So, how would water quality,  
2                   assuming dissolved oxygen and temperature meet the  
3                   state criteria, how would water quality downstream  
4                   influence your decision to get fish possibly above New  
5                   Exchequer?

6                   MR. FOSTER: It goes to the quality of the  
7                   migration corridors that we're talking about here. The  
8                   ability to have healthy fish to pass. Healthy smolts  
9                   be able to survive escapement.

10                  It's one additional factor that they, you  
11                  know, all life stages of the anadromous fish that we're  
12                  trying to protect or recover require good water  
13                  quality.

14                  We need to know the extent of that water  
15                  quality. We need to understand the habitat, as it  
16                  currently is now, in order to ascertain could there be  
17                  things done to adjust that.

18                  MR. WANTUCK: I'd like to add to that, this  
19                  is Rick Wantuck, National Marine Fisheries Service,  
20                  that it's quite well established that anadromous fish  
21                  in the Merced River have struggled in comparison to the  
22                  historical runs before the project was constructed.

23                  And when we look at the prospect of fish  
24                  passage we have to take two things into account. One  
25                  is we're trying to prevent future extinction

1 possibilities. But more than that, the Endangered  
2 Species Act requires NMFS to attempt to recover the  
3 species.

4 And so I'm wondering if our biologist, Erin  
5 Strange, might speak to our recovery plan as it relates  
6 to the Merced River. And we could talk about how fish  
7 passage plays into that.

8 But, first, let's talk about the recovery  
9 aspect.

10 MS. STRANGE: As Rick said, we are required,  
11 under ESA to develop recovery plans for anadromous fish  
12 species that are listed as threatened or endangered.

13 In the Merced River that applies to the  
14 steelhead, as well as spring-run Chinook, which do not  
15 occur there now because they've been extricated from  
16 the entire San Joaquin Basin.

17 We released a public draft recovery plan last  
18 month. And in that we defined the various threats to  
19 the species that occurred in the Merced River.

20 The three primary threats were poor water  
21 quality, low flows and fish passage, passage barriers  
22 blocking their access to historical habitats upstream.

23 So, one of the recovery actions identified in  
24 the recovery plans for the Merced River is to evaluate  
25 fish passage. And to look at habitat conditions

1 upstream, look at feasibility of getting fish past all  
2 these barriers, this project being one of those.

3 So that is certainly an impetus for us to  
4 prescribe our section 18 authority here to look at  
5 trying to reestablish spring run Chinook salmon system,  
6 and also provide conditions to recover steelhead.

7 CHAIRPERSON LIBERTY: Thank you. I have a  
8 couple questions I guess I'd like to maybe direct to  
9 FERC. I think we kind of visited this issue earlier  
10 today. I guess I'd just like to hear a little bit from  
11 FERC as to why they didn't support the agency's request  
12 to conduct some of this water quality monitoring  
13 downstream of Crocker Huffman.

14 MR. BUHYOFF: I believe most of it, I think  
15 MID just had a reasonable design, in that they would  
16 study water quality parameters below Merced Falls. And  
17 then, you know, if they determined there was a  
18 constituent of interest then they would study that  
19 below Crocker Huffman.

20 I think, again, the point was, you know,  
21 we're interested in the project's effects below Crocker  
22 Huffman, but, you know, I believe that the presence of  
23 that diversion can confound water quality, direct water  
24 quality effects of the project.

25 CHAIRPERSON LIBERTY: I guess I have a kind

1 of a follow-up question to that. Say MID does their  
2 first year of studies and they determine a couple water  
3 quality parameters that maybe they need to study  
4 further.

5 How would that be built into the process, I  
6 guess, is it some sort of a phased approach or, I guess  
7 I'm a little unclear on how that would be done within  
8 that two-year timeframe for the ILP?

9 MR. BUHYOFF: As I understood it, that's the  
10 way the proposed study plan is written. It would be a  
11 phased approach.

12 MR. DEIBEL: Because I believe, and I'm  
13 trying to find it here, MID mentioned that if there is  
14 a constituent of interest -- yeah, okay, there it is --  
15 a constituent of interest that's undefined at this  
16 time, correct? That if that meets some undefined  
17 threshold that they would be doing additional studies,  
18 correct?

19 Is it possible to define that constituent of  
20 interest, include a threshold in that study that would  
21 be nested in this phased approach that Erin talked  
22 about, that would be nested in these first season study  
23 approval?

24 Because the reason I ask that is current FERC  
25 practice has been to -- they've not been real generous

1 with second study seasons formally approved.

2 So I guess I'll go back to my question, if  
3 MID could define a constituent of interest with a  
4 threshold that triggers the next phase of studies, is  
5 that something that might satisfy the agencies?

6 CHAIRPERSON LIBERTY: Jim.

7 MR. LYNCH: Actually the study plan does  
8 exactly that. It compares the data to benchmarks that  
9 identify that. Also, I'd like to point out that we did  
10 the water quality study plan the first year prior to  
11 determination in 2008. And we did find low DO right  
12 below Merced Falls. But we didn't find any other  
13 constituent that was an issue. So, we had agreed to do  
14 it again. But we did have data from just a year ago.

15 And the study plan, to go to your question,  
16 it has the benchmarks we would look at and evaluate.  
17 And those are benchmarks the State Board agreed to when  
18 we developed the study plan. It's broader than just  
19 the basic plan; it has Cal data and other data in  
20 there.

21 MR. DEIBEL: So is that in your April 17?

22 MR. LYNCH: It's in our study plan that we  
23 filed in our revised study plan.

24 MR. DEIBEL: Which date is that? I'm sorry.

25 MR. LYNCH: Revised study plan was August.

1 (Pause.)

2 MR. LYNCH: That's in the study plan that was  
3 filed. What we agreed to was if we found a constituent  
4 of interest, and I believe we'd find it as one that  
5 exceeds these benchmarks, something that the project is  
6 releasing, that could continue downstream, we would  
7 look at it.

8 I have the revised study plan here. I'll  
9 find the page. For the benchmarks.

10 MR. DEIBEL: Okay.

11 MS. WORKMAN: If I could take a moment while  
12 he's looking. This is Michelle Workman with Fish and  
13 Wildlife Service.

14 I just wanted to reiterate that the  
15 modification requested by the agencies was to expand  
16 the scope to include the compliance point downstream.

17 And, Bob, you asked a specific question  
18 earlier, how water quality constituents monitoring  
19 might affect a decision for section 18 authority.

20 And if I may, I just think that if we're  
21 looking at a situation where fish are confined to a low  
22 quality situation and they're experiencing high  
23 suspended solids, high turbidity among the inputs,  
24 within the compliance point, and we can also -- we have  
25 constituents monitoring above that compliance point

1 that shows there is good, higher quality habitat, then  
2 that may very well lead to prescription --

3 MR. BUHYOFF: I think there's a bit of a  
4 misunderstanding of the compliance point. As the  
5 current license has it, the compliance point only  
6 measures flow. It's not a compliance point for  
7 measuring the water quality, as well.

8 So it's not like a point source type  
9 compliance point.

10 MR. MARTIN: But the compliance point, the  
11 minimum flows -- compliance flows are correlated to  
12 temperature and DO levels, as well. So the amount of  
13 flow coming out of the reservoirs, temperatures could  
14 be correlated with that.

15 DR. WATTS: Yeah, I would like to also add  
16 that the flows do influence constituent concentrations  
17 in the section between -- below Crocker Huffman.

18 MR. BUHYOFF: Right, but the terms and  
19 conditions where we measure to measure water quality  
20 compliance point would dictate where that compliance  
21 point would be.

22 MS. WORKMAN: Well, but the fact that there's  
23 a flow compliance point and flow interacts with water  
24 quality concentrations of constituents that are in the  
25 water, so I think that certainly

1       that -- I mean, you know, I still think that's a direct  
2       link.

3                 MR. ROSE:  Yeah, that's our concern, is that  
4       the change in the compliance point makes the geographic  
5       scope of the studies that they've done.  That's the  
6       issue.

7                 MR. DEIBEL:  So, Matt, do you have enough  
8       information, if this was to go down to the current  
9       baseline scope of the project, which includes Shaffer  
10      Bridge, that if that is move and there's no flow  
11      targets down there, that you have enough information to  
12      assess water -- you know, for example, to make an  
13      indirect or cumulative effects analysis, -- to direct,  
14      that there's no dissolved oxygen barrier, and the fish  
15      could make it to Crocker Huffman?

16                MR. BUHYOFF:  Well, again, I'm sorry, maybe  
17      I'm not understanding how the flow compliance point is  
18      in any way related to the measurement of water quality  
19      requirement.

20                Because we would determine -- I mean I  
21      understand there's, you know, there are flow water  
22      quality relationships.  But, again, based upon the  
23      analysis, the studies, if, you know, we determine some  
24      compliance point for water quality parameters, that  
25      would be based upon analysis of the data that was

1 collected.

2 MR. DEIBEL: Let me restate this. If you  
3 have flow there and the existing conditions of water  
4 quality, temperature, flows, between Crocker Huffman  
5 and Shaffer Bridge, do you have information to show  
6 what the effects to water quality will be in your NEPA  
7 analysis, because that's your baseline condition that  
8 you conduct all other analyses and assessments on, do  
9 you have enough water quality information below Crocker  
10 Huffman to conduct that assessment?

11 MR. BUHYOFF: Yes. And with the study  
12 design, again if they can determine that there's a  
13 constituent of interest that's passing below Merced  
14 Falls, then, you know, they'd be required to study that  
15 constituent of interest below Crocker Huffman.

16 MR. DEIBEL: And do the agencies agree  
17 there's enough information to assess down to Shaffer  
18 Bridge?

19 DR. WATTS: No, we don't. I mean remember  
20 that we need to be able to certify that the project  
21 meets water quality standards below the project. And  
22 so there needs to be more information.

23 MR. FOSTER: Bill Foster from National Marine  
24 Fisheries Service. Assuming we perhaps get a water  
25 operations model, I mean water temperature model, and

1 can model water flow, and at least the temperature  
2 constituent of it, down to the confluence of the San  
3 Joaquin River, it logically follows that the rest of  
4 the water quality would be needed to help inform our  
5 section 18 decision.

6 Because if we do not know the quality of the  
7 water that our aquatic species of interest would be  
8 subjected to, we will not know if anything could be  
9 done to change those conditions.

10 It may very well turn out that the project  
11 cannot perhaps influence water quality conditions. But  
12 at least we will know what those water quality  
13 conditions are. We'll have information as to  
14 seasonally perhaps what they are.

15 And then better be able to plan how best to  
16 not only save the current species that are there, but  
17 to recover them.

18 CHAIRPERSON LIBERTY: Anything else?

19 MR. MARTIN: Just from Fish and Wildlife  
20 Service perspective. We don't believe we have the  
21 information right now to be able to establish or  
22 justify changing compliance points in any new condition  
23 for water quality.

24 Mainly because, again, if you change the  
25 compliance point and, you know, -- flows, those flows

1       may be affected by that. It may not only affect the  
2       fishery resources, but also the aquatic resources as  
3       well.

4               We are also talking about juvenile rearing  
5       habitat, food resources, invertebrate -- macro-  
6       invertebrates. And so we're talking about, again,  
7       things that may impact the fishery resources. Not just  
8       the water quality, itself, but from the water quality,  
9       it will impact those resources. There would be  
10      pollution, DO, temperature.

11              MR. ROSE: David Rose from the State Water  
12      Board. We think it's also relevant that FERC does seem  
13      to require these studies significantly further  
14      downriver in a number of other projects like the  
15      Klamath and McCloud than they are here.

16              So, you know, saying that FERC can't do it  
17      strikes us as odd.

18              CHAIRPERSON LIBERTY: We'll take one more  
19      comment from MID.

20              MR. LYNCH: Just responding to David's  
21      comment on other relicensings where there's a major  
22      diversion downstream, FERC does not require those  
23      studies because the major diversion confounds water  
24      quality's cumulative effects analysis. So it's not  
25      exactly accurate.

1                   CHAIRPERSON LIBERTY: Thank you. I think we  
2 have a pretty good idea where the agencies and  
3 everybody stands on this particular study. I think the  
4 panel needs to go back and perhaps revisit the revised  
5 study plan, look at that a little more deeply. And so  
6 I think we're probably all set with that study and we'd  
7 like to move on, if you have nothing further, Bob.

8                   MR. DEIBEL: So we're assuming they're all in  
9 agreement?

10                  CHAIRPERSON LIBERTY: Yeah, all 16.

11                  MR. DEIBEL: Strike that.

12                  (Laughter.)

13                  CHAIRPERSON LIBERTY: So I believe the next  
14 study on our list is with the water temperature model.  
15 So, again, I'd like to first go to FERC and just get  
16 their thoughts just for clarification purposes, why  
17 they didn't adopt the agencies' requests for this  
18 particular study.

19                  (Pause.)

20                  MR. BUHYOFF: Oh, I'm sorry.

21                  CHAIRPERSON LIBERTY: Yeah. I realize some  
22 of this is kind of repetitive, but --

23                  MR. BUHYOFF: Sure, again.

24                  CHAIRPERSON LIBERTY: -- again, just for  
25 clarification purposes, just why did FERC not adopt the

1 agencies' requests.

2 MR. BUHYOFF: This existing SJR5Q model,  
3 based upon my understanding, given MID's explanation  
4 and I believe that this model was suitable to get at  
5 all the parameters that were of interest. So there was  
6 no need to develop an additional model.

7 CHAIRPERSON LIBERTY: And so this particular  
8 study, or I guess study modifications were dismissed  
9 based on the criterion number 5 nexus?

10 MR. THOMPSON: Page 8, three that we  
11 identified. I think you just spoke to the third one  
12 there, Matt, the bottom one. You believe that the  
13 existing model has adequate information. You've got  
14 two more up here that we were identifying.

15 CHAIRPERSON LIBERTY: Nexus and would not  
16 involve -- climates, I guess. So, again, I guess I'd  
17 just like to turn to the agencies and perhaps get their  
18 thoughts on this particular issue and specifically how  
19 you feel that you have met these particular study plan  
20 criteria that FERC seems to think that you have not.

21 I guess we'll start with NMFS.

22 MR. WANTUCK: Well, we'd want to hear from  
23 the Department of Fish and Game, Robert Hughes, as to  
24 the adequacy of the model.

25 Robert, can you address some of the issues

1 connected with this model? I don't want to put you on  
2 the spot --

3 (Laughter.)

4 MR. WANTUCK: I guess I did.

5 MR. HUGHES: I am Robert Hughes; I'm a  
6 hydrologic engineer with the California Department of  
7 Fish and Game.

8 Just make a couple -- I think for the  
9 purposes of this study plan I think the primary issue  
10 has to do with the responsibility for the calibration  
11 of the HEC5Q temperature model, what geographic extent  
12 that covers.

13 There is an existing HEC5Q model, the water  
14 temperature model, of the Merced River. And it's part  
15 of a larger suite of models that encompass the San  
16 Joaquin River Basin.

17 And as I said, I believe the primary issue is  
18 what is that geographic extent that the licensee would  
19 be required to calibrate that model to downstream in  
20 the lower Merced River.

21 MR. THOMPSON: Then, Bob, how would that, you  
22 speak to the second bullet here. They're saying adding  
23 additional information to that model would not inform  
24 the development of license requirements.

25 MR. HUGHES: Actually, I mean the addition of

1 the five additional water temperature monitoring  
2 recorders will help fine-tune and better calibrate that  
3 water temperature model.

4 MR. THOMPSON: Okay.

5 MR. HUGHES: Did I get at what you're looking  
6 for?

7 MR. WANTUCK: Yeah, that's fine, Robert. I  
8 think just in general terms some of the issues that the  
9 agencies have with these sorts of models has to do with  
10 the extent of the modeling effort, the calibration  
11 issues that go into it; what assumptions are made.

12 And unless we feel comfortable that this  
13 particular model is going to yield objective, realistic  
14 answers, then we tend to have a problem, you know,  
15 buying the results. And I don't think that in this  
16 case, in particular, because of the shortened extent of  
17 this particular model, we aren't really comfortable  
18 with this.

19 MR. BUHYOFF: Right, and I understand that.  
20 But, the information comments from you all, I didn't  
21 see a real technical analysis of why you were  
22 uncomfortable with the model.

23 DR. WATTS: Well, we haven't had a chance to  
24 really use the model or see the model. So, it's hard  
25 to, it's hard to --

1           MR. BUHYOFF: I guess that would probably be  
2 a question I have, is why is that existing model not  
3 suitable for your needs. Or what would be gained, in  
4 addition to this model that's already on the table, by  
5 using some --

6           MR. FOSTER: Again, the existing issue is the  
7 degree of scope. How far the licensee is willing to  
8 calibrate and utilize the model of it, itself. It's  
9 capable, from what I understand, of modeling the water  
10 all the way down through the Merced River into the San  
11 Joaquin River, for that matter.

12           The reason we would need that information to  
13 help exercise our section 18 authority decisions is  
14 because temperature is a very vital cue, it's a very  
15 vital component of what our aquatic species, their  
16 foods and all life stages need particular temperatures,  
17 sometimes different temperatures at different points in  
18 their life stages.

19           Not only do we want our fish to somehow make  
20 it into the Merced River, but we want them to be able  
21 to spawn there; we want them to be able to survive.  
22 That's very temperature dependent.

23           It's our goal of our recovery plan to move  
24 fish higher up into the watershed because of potential  
25 global warming scenarios in the future where there may

1 be less habitat available on the valley floor. And so  
2 we -- by moving them up into upper watersheds.

3 We also need to know how their water  
4 temperatures are, because again, that goes to the  
5 quality of the habitat, of getting fish in, having them  
6 reproduce, getting them back out.

7 CHAIRPERSON LIBERTY: I guess correct me if  
8 I'm wrong, but when I went back and looked at the  
9 revised study plan that MID provided, it looked like  
10 they were willing to provide the results of this  
11 existing model from the current compliance zone, I  
12 guess, which is Snelling Road Bridge all the way down  
13 to the confluence of the San Joaquin River.

14 And I guess I didn't see -- is this correct,  
15 MID?

16 MR. ROBBINS: Yes.

17 CHAIRPERSON LIBERTY: I guess I didn't see  
18 the agency's comment on that. It looked  
19 like --

20 MR. FOSTER: It was not clear to me the  
21 extent to which they would want, wish to, you know,  
22 calibrate and run the model. In my past experiences  
23 in other relicensings, the licensee is usually takes it  
24 upon themselves to develop a model. And it needs to be  
25 a robust model, that it's user-friendly, that will

1 model, frequently many many tens of miles downstream  
2 from their project.

3 So that we have an idea of what the extent of  
4 which the project may or may not influence that. And  
5 in large reservoirs with -- large, deep reservoirs, the  
6 amount of cold water that they start with can only  
7 exist so far downstream.

8 You need a way to model how far that extent  
9 of that water might go, depending on how they operate  
10 the releases and what the seasonality is, and the  
11 different water years and all of those things are  
12 factors.

13 Because it goes to the quality of the habitat  
14 that we need to understand in order to, you know, make  
15 our section 18 decisions.

16 MR. DEIBEL: So those additional five points,  
17 they're downstream of Snelling Bridge between Snelling  
18 Bridge and the confluence with the San Joaquin?

19 DR. WATTS: Pardon me?

20 MR. DEIBEL: Those additional five data  
21 points, or calibration points, the nodes, do they occur  
22 downstream of Snelling Bridge down to the San Joaquin  
23 in that lower 50-some miles?

24 DR. WATTS: Well, we really don't know where  
25 the output nodes are in the current model. I mean I

1       guess the current model already is structured that it  
2       has the nodes in it. I don't really know where they  
3       are.

4               MR. DEIBEL: Because I guess what I'm  
5       struggling with, you know, first question. Is there an  
6       -- is this existing H San Joaquin 5Q go from the top of  
7       the reservoir at river mile 85, or whatever it is,  
8       downstream to the mouth of the San Joaquin? Does it  
9       cover that right now?

10              MR. McCARTY: Yes.

11              MR. DEIBEL: Okay.

12              MR. McCARTY: Yeah, it's all the way to the  
13       delta.

14              MR. DEIBEL: Okay, so it goes to the delta.  
15       Are those five nodes intended to provide more detail  
16       and certainty or reliability and acceptance of the  
17       model?

18              DR. WATTS: It's to provide us with output in  
19       that lower section of the river below Crocker Huffman.  
20       We don't know where the nodes are.

21              MR. HUGHES: I believe the additional  
22       temperature monitoring data would -- the intent is to  
23       have that information be used to help further calibrate  
24       the model.

25              There's an existing framework --

1 MR. DEIBEL: Right.

2 MR. HUGHES: -- and that HEC5Q model, as  
3 MID's consultants have pointed out, does cover the  
4 geographic extent from the project downstream to the  
5 confluence with the San Joaquin River. There are other  
6 sitings that expand that.

7 These additional temperature monitoring  
8 locations would be used to help further calibrate that  
9 existing framework to a level that's acceptable to the  
10 relicensing participants, or the agencies of licensing  
11 participants.

12 DR. WATTS: Right, and the temperature data  
13 also just provides us with information about whether  
14 they're meeting the temperature objectives in the  
15 river. So in this current time period during the  
16 relicensing.

17 MR. DEIBEL: Who's they?

18 DR. WATTS: Well, whether the river  
19 is -- well, what the temperature conditions are in the  
20 river, in other words. In that lower section of the  
21 river.

22 MR. THOMPSON: So, Bob Hughes, regardless of  
23 where the nodes are, you can predict -- the model can  
24 be used to predict the temperature at any point within  
25 the geographic scope of the model? Or do you need a

1 node at the point where you want to predict  
2 temperature?

3 MR. HUGHES: I have not had an opportunity to  
4 review the model in that detail to have a clear  
5 understanding of the exact locations on where the  
6 output nodes are.

7 MR. THOMPSON: Then I guess a question for  
8 Matt. You've stated that this model should be  
9 adequate, this was part of your basis, FERC, it should  
10 be adequate to assess cumulative effects on the water  
11 temperature.

12 I mean there seem to be some uncertainties  
13 here about what it can do. Do you want to speak to  
14 that?

15 MR. BUHYOFF: I mean, like I said, given the  
16 information presented, it seems like all the  
17 information the agencies requesting could be supplied  
18 by the model that's available.

19 And so I, you know, --

20 CHAIRPERSON LIBERTY: I'm not a modeler, so a  
21 lot of this is very confusing to me. But it sounds  
22 like almost there's a little bit of confusion there,  
23 what it is MID is actually proposing to do. So I guess  
24 I'd like to hear from that group, maybe on this model,  
25 maybe help clear up some of this. Go ahead.

1                   MR. BERGFELD: Sure. This is Lee Bergfeld  
2 from Merced Irrigation District. Getting to your  
3 question that you just asked, what is MID proposing to  
4 do.

5                   MID is proposing to use the existing model  
6 with modifications from the inflow to Lake McClure,  
7 down to Crocker Huffman Diversion Dam. And essentially  
8 verify that that model adequately simulates temperature  
9 in the reservoir and the river reaches between those  
10 two points.

11                  And then use the existing San Joaquin River  
12 model, which has been calibrated through a CalFed  
13 project, that some of the agencies were participants in  
14 over the past few years, and for determining the  
15 temperatures downstream of Crocker Huffman Dam.

16                  And that is, I think it was stated, coming  
17 out of the study plan that FERC approved, that MID  
18 agreed to run that model and provide that temperature  
19 data from the existing model downstream to the  
20 confluence with the San Joaquin River.

21                  There was a question earlier that said  
22 exactly where can you determine the temperature. Do  
23 you need these nodes such that you can only determine  
24 the temperature at Snelling Bridge or at Shaffer  
25 Bridge.

1           The model segments downstream from Crocker  
2 Huffman Dam are approximately every half mile in the  
3 river. And you can extract output from the model at  
4 approximately every half mile.

5           MR. LYNCH: If I could add, the reason we  
6 took that approach is because the model, itself, didn't  
7 allow for what-if scenarios very effectively for  
8 project operations.

9           So that allows us to do what-if models and  
10 use this as a tool in the relicensing for changes in  
11 project operations.

12           What we didn't propose was to go downstream  
13 at Crocker Huffman where we do not have authority, nor  
14 does FERC, on diversions and with returns -- and there  
15 are a lot of returns -- and try to calibrate the model  
16 down there beyond the CalFed.

17           Given that it's a real-time, it's a mean  
18 daily flow, the returns are variable, we have no  
19 control over the timing, the duration, whatever. So  
20 that calibration issue downstream is, from our  
21 standpoint, nothing we have control over. And would be  
22 extremely difficult to do, if it could be done at all.

23           (Parties speaking simultaneously.)

24           CHAIRPERSON LIBERTY: Do you guys have a  
25 question, comment?

1                   MR. FOSTER: I was just, again, under the  
2                   impression that a perfectly -- and I'm not a modeler,  
3                   but I was under the impression that there's a perfectly  
4                   good model that existed, and the licensee was willing  
5                   to use it to a certain point. And then hand it off to  
6                   everyone else to play with as they wished.

7                   Because, I feel that because the large amount  
8                   of water that the project controls, that it should be  
9                   the relicensee's responsibility to see how that water  
10                  is modeled, temperature-wise, operational-wise as far  
11                  downstream as possible, including through the  
12                  confluence of the San Joaquin River.

13                  So that we have some idea if the project  
14                  could be reoperated, does that change water  
15                  temperatures. Does seasonality change water  
16                  temperatures? How can that be gained? How can inputs  
17                  be put in to adjust things downstream, even if they  
18                  aren't things that would reasonably be done in the  
19                  future, you would want to know how a model can be put  
20                  through its paces, so to speak.

21                  To understand, again, the quality of the  
22                  habitat that we want to protect and help recover our  
23                  endangered species in those regions. As well as  
24                  upstream, too. We need that information to help our  
25                  future, you know, section 18 decisions.

1                   MR. ROSE: David Rose, the State Water Board.  
2                   Essentially just kind of back to where we started, our  
3                   point is we are disputing this to FERC, and we're  
4                   disputing this model based on the calibration  
5                   information and what we had is not adequate because we  
6                   didn't have all the information to verify that it was  
7                   sufficient for us.

8                   And we didn't see that FERC had the  
9                   information. So I mean if you -- did FERC calibrate  
10                  this model, verify the outputs, validate it? We didn't  
11                  get the opportunity to make sure that the model ran the  
12                  way we wanted. And we're disputing with FERC because  
13                  we didn't think you had more information that we did,  
14                  and it wasn't sufficient to us.

15                  CHAIRPERSON LIBERTY: I -- sorry, go ahead,  
16                  Matt.

17                  MR. BUHYOFF: It would be your responsibility  
18                  to determine whether or not the model sufficiently  
19                  suited your needs. Any information you provided us,  
20                  you didn't provide us with any technical information to  
21                  why that model didn't suit your needs.

22                  CHAIRPERSON LIBERTY: I guess I have one  
23                  other thing to add that it looked like the FERC study  
24                  plan determination letter, that they had required that  
25                  MID perhaps do some sort of tutorial, I guess, on this

1 SJR5 model.

2           Again, I didn't see that addressed by the  
3 agencies. I mean, is this something, a step in the  
4 right direction? Or is this totally off-base? I mean  
5 for everybody to get together and discuss the model.

6           I guess I didn't see that addressed at all by  
7 the agencies, and I guess I'd just like to hear your  
8 thoughts on that particular issue. Water Board.

9           DR. WATTS: Well, I think it's a step in the  
10 right direction. I mean, we still -- that doesn't help  
11 us right now to know that the model is adequate for us.  
12 So that's looking into the future and already making  
13 that determination at this point. So it's difficult to  
14 know.

15           MR. ROSE: We can't say, without having done  
16 that, that it's adequate. And so that was reason  
17 enough for us to say that we needed to know before we  
18 said that we were okay with it.

19           That seems like, you know, putting the cart  
20 before the horse. And we're trying not to do that at  
21 this study phase.

22           DR. WATTS: Right, I mean we need to be able  
23 to -- we need to know that predictions made by the  
24 model are valid in that section of the river downstream  
25 from the point that they are willing to provide us with

1 that assurance.

2 MR. DEIBEL: From a FERC process perspective,  
3 I assume these studies are the first season studies and  
4 they'll come in in a year or so, correct? And that's  
5 the end of season one.

6 Let's say an interested party runs out near  
7 Shaffer Bridge, model predicts 18 degrees C. And they  
8 stick a thermometer in the water and it shows 22  
9 degrees C.

10 Is that adequate, plus or minus 20 percent or  
11 something, for you to conduct a cumulative effects  
12 analysis?

13 MR. BUHYOFF: It's my understanding that  
14 currently there are plenty of continuous data  
15 temperature logging recorders currently.

16 MR. DEIBEL: Downstream at Crocker Huffman?

17 MR. BUHYOFF: Yes.

18 MR. DEIBEL: And will those be used to inform  
19 this broader off-the-shelf model that currently exists  
20 below Crocker Huffman?

21 MR. ROSE: They have been used to inform that  
22 model.

23 MR. RABONE: And the addition of additional  
24 sampling points downstream can only be used to try to  
25 vary your assumptions to make those measured

1 temperature points match what the model ran in the  
2 sampling period.

3 But the problem, the crux of the issue is  
4 that that won't be predictive of the future, because  
5 neither the FERC nor MID has any control over the  
6 people diverting water downstream of Crocker Huffman.

7 And so there we can't -- even though you can  
8 get the model to match what you measured on the  
9 sampling period, you can't predict what it's going to  
10 do tomorrow, because you have no -- FERC or MID have no  
11 control over those downstream diverters, and there's  
12 hundreds of them.

13 MR. ROSE: I think that's ignoring the point  
14 that they proposing to move the compliance point. I  
15 mean if it weren't for that, then there's something to  
16 that.

17 But, you know, we're talking about moving the  
18 compliance point. That 's something FERC is doing.  
19 And that poses the potential for significant change if  
20 there's no compliance point for water quantity down to  
21 a certain point, you know, then that changes the game.

22 MR. DEIBEL: So, as I understand it, there's  
23 a current model below Crocker Huffman that's based on a  
24 lot of data loggers out in the Merced River that will  
25 be used to develop a model that FERC says they don't

1 need.

2 Because you're saying that you're stopping at  
3 Crocker Huffman, correct?

4 MR. ROBBINS: Well, again, if I could maybe  
5 just sort of answer that question. MID is not new to  
6 studying the river. We've had biologist Dave Vogel's  
7 been in the river for 15 years or so on our behalf.  
8 And he's had thermal graphs out there for a lot of  
9 different reasons.

10 The State Board is processing a TMDL relative  
11 to temperature on many streams and rivers. And, of  
12 course, we're going to try to be prepared for all of  
13 these different processes that are going to be ongoing.

14 So we took that data and it's in the model.  
15 And you began to say, I think, what is a very  
16 appropriate comment, was I think the appropriate thing  
17 for this is to -- I mean I don't know how we could  
18 satisfy everybody today on a model that hasn't been  
19 looked at over a year.

20 So the appropriate thing would be a look at  
21 this model over the year; check it out. We've offered  
22 to do tutorials. That's why the Director actually put  
23 that in his letter. We've actually offered to run the  
24 models for folks. But also give them copies so they  
25 could run it.

1           And if it doesn't work, then we'll address it  
2           in the second year. I mean that's --

3           MR. DEIBEL: Isn't this the scope? I mean I  
4           hear what you're saying. And then, you know, and I  
5           think, you know, the advice to sit everybody down and  
6           engage participants is great.

7           But isn't the scope, you know, down to  
8           whether it goes below Crocker Huffman or not?

9           MR. RABONE: Everything here we're talking  
10          about is the scope.

11          MR. DEIBEL: Right.

12          MR. RABONE: And even when we're talking  
13          water quality, the State Board, if I can speak for  
14          them, is responsible for certifying that the project is  
15          in compliance with the Clean Water Act. Not that the  
16          entire Merced River is in compliance with the Clean  
17          Water Act.

18          That's the crux of this issue here for all of  
19          these discussions.

20          MR. DEIBEL: Right. And that's why we had  
21          those discussions this morning. And I'll come back to  
22          do the current license requirements affect decisions  
23          down to Shaffer Bridge?

24          MR. RABONE: They affect decisions upstream.  
25          That's all we have control over.

1                   MR. DEIBEL: So the 200 cfs required at  
2 Shaffer Bridge, if you take that away, could it  
3 potentially have an effect on temperature or not?

4                   MR. RABONE: It would be released at wherever  
5 that new gauging station would be. It would be the  
6 same. The effects of other people, unrelated to either  
7 project, irresponsible to FERC, would be doing what  
8 they're doing today. Doing whatever they want.

9                   MR. DEIBEL: Well, I --

10                  MR. RABONE: Or whatever their water rights  
11 allow them to do.

12                  MR. DEIBEL: Okay.

13                  MR. THOMPSON: Could I ask the Board, the  
14 magnitude of the diversions we're talking about  
15 downstream, relative to the diversion at Crocker  
16 Huffman or at Merced Falls Reservoir, do you have --  
17 could you just ballpark it for the panel so we know?

18                         We've heard a lot about the several  
19 diversions downstream of Crocker Huffman they have no  
20 control over. I'm just trying to get a feel for the  
21 volumes there.

22                         (Parties speaking simultaneously.)

23                  MR. ROSE: -- the other downstream  
24 diversions, I don't have the data on it, are relatively  
25 insignificant. I heard numbers in the area of 5000

1 acrefeet, and I know that MID has diversion rights to  
2 100-plus-thousand acrefeet.

3 So, you know, maybe 5 percent to 95 percent,  
4 maybe that's an exaggeration --

5 MR. ROBBINS: Actually that's not even close,  
6 if I might. Ken Robbins, MID. The 5000 has to do with  
7 a transfer issue we doing at the State Board. It's not  
8 what the underlying CAD right is.

9 It's about 250 cfs from March through  
10 September, depending upon what the year type is.  
11 There's a little -- it's a little lower, a little  
12 higher in some areas -- is what they're legally  
13 entitled to take.

14 MR. ROSE: But that's just the CAD, there are  
15 others.

16 MR. RABONE: No, CADs is right. What the  
17 riparian diverters are taking is anybody's guess.

18 MR. THOMPSON: And just for comparison, your  
19 diversion at Crocker Huffman?

20 MR. ROBBINS: Crocker Huffman is up to 2000  
21 cfs.

22 MR. THOMPSON: How about at Merced Falls?

23 MR. ROBBINS: It's 100, up to 200 --

24 (Parties speaking simultaneously.)

25 MR. THOMPSON: One hundred there. The other

1 one was 2000?

2 MR. DEIBEL: What is the hydrolic capacity of  
3 McSwain?

4 MR. LYNCH: What do you mean by hydrolic  
5 capacity?

6 MR. DEIBEL: What is the rated hydrolic  
7 capacity of McSwain?

8 MR. LYNCH: The powerhouse release?

9 MR. ROBBINS: 2700 cfs.

10 MR. LYNCH: 2700 --

11 MR. DEIBEL: 2700 cfs. So let's say you were  
12 running full bore, people were taking their maximum  
13 flow, or their maximum allowable diversions and the  
14 riparian guys are, would you have enough, just a simple  
15 spreadsheet, would there be 200 cfs to meet the flow  
16 requirements at Shaffer?

17 MR. ROBBINS: We have past 6000 there from  
18 time to time.

19 MR. DEIBEL: Right.

20 MR. ROBBINS: But, yes, you can bypass the  
21 turbines and put additional water, if we have to.

22 MR. DEIBEL: On a low-flow run where you  
23 don't have, you know, let's say it's later in the fall  
24 and there's still irrigation deliveries, is that 2700  
25 enough to meet the downstream compliance point in

1 irrigation diversion so that below Shaffer Bridge there  
2 would be 200, and everybody's been satisfied upstream?

3 MR. ROBBINS: Your premise is late in the  
4 fall, the answer is yes. The constriction points occur  
5 in July. But other than that, there are always  
6 adequate flows available.

7 MR. DEIBEL: Can I ask PG&E what is the rated  
8 hydrolic capacity at your plant there at Merced Falls?

9 MR. NEVARES: I believe through the units,  
10 750 -- Steve Nevares with PG&E. I believe that  
11 capacity, I don't want to be quoted here, but I think  
12 it's about 750 through the unit.

13 And since we don't have any effect on timing  
14 or delivery, anything over 750 we would then pass  
15 through the radial gates.

16 MR. DEIBEL: Okay.

17 MR. NEVARES: So whatever's coming in  
18 basically there's no retention time. It either goes  
19 through the unit up to 750 or it's released through the  
20 radial gates.

21 And under, I believe the minimum through the  
22 unit is around 150, 200 cfs. So under that would be  
23 just releasing it.

24 MR. DEIBEL: Let me ask this. If 2700 is  
25 coming out of McSwain, and you have free board in your

1 reservoir, can you store that? And only release 750?  
2 Or do you have to spill that?

3 MR. NEVARES: We run 750 through the unit and  
4 then the gates, we don't spill, we release from the  
5 bottom of the gates. So the rest of it, 750 less than  
6 2700, what is that, the 1950, would be going through  
7 the gates.

8 MR. DEIBEL: Okay.

9 MR. ROSE: I don't know if it's helpful to  
10 the panel, but I don't want to get into this in detail,  
11 but there is a seniority versus a, you know, junior  
12 appropriative rights. So it's not strictly by the  
13 numbers, and MID does hold the most significant rights  
14 and the more senior rights.

15 And they do hold some rights that are senior  
16 to this project. And they hold some rights that are  
17 dependent on the enlargement of New Exchequer Dam.

18 So, you know, inasmuch as the numbers don't  
19 give you the entire picture, I just wanted to express  
20 that there are some other wrinkles in that.

21 MR. MARTIN: Also, Fish and Wildlife Service,  
22 Ramon Martin. I wanted to add that there's two  
23 powerhouses here in this project proceeding, and New  
24 Exchequer Dam capacity is 3700 cfs. That's the  
25 upstream -- I'm sorry, 3200.

1                   CHAIRPERSON LIBERTY: Do you have any more  
2 questions?

3                   MR. DEIBEL: No, that's fine.

4                   CHAIRPERSON LIBERTY: I think we're ready to  
5 move on. I'd like to really cover these next two  
6 studies before we break for lunch and maybe save the  
7 anadromous fish studies for after lunch. It might be a  
8 good breaking point.

9                   Yeah, so the next study on our list is  
10 bioaccumulation. I guess my first question regarding  
11 this study I would direct towards NMFS or Fish and  
12 Wildlife Service.

13                   And I guess I'm having a hard time seeing the  
14 nexus between this bioaccumulation study and the  
15 project. And also how this information would relate to  
16 the need for pursuing fish passage. Maybe you guys  
17 could explain that a little bit to the panel.

18                   MR. MARTIN: For Fish and Wildlife Service  
19 again, Ramon Martin. Our project nexus is, again,  
20 section 18 authority is we don't want to prescribe  
21 passage into any potential areas where there might be  
22 pollution issues. And this creates, you know, mercury.

23                   So, again, if we're passing fish upstream to  
24 lower dams, we want to take that into consideration, if  
25 there's mercury issues upstream. And as well as if

1       there's pollution issues downstream of Crocker Huffman,  
2       we want to take that into account for -- migration  
3       issues, stuff like that.

4               CHAIRPERSON LIBERTY:   So if mercury were an  
5       issue, you guys wouldn't pursue fish passage, is that  
6       correct?

7               MR. MARTIN:   I'm not saying that; I'm saying  
8       we will take that into consideration, as we analyze the  
9       information and see how that impacts our --

10              CHAIRPERSON LIBERTY:   I guess as I was kind  
11       of going through and reviewing the study, looking back  
12       through the record, I mean I didn't get into a lot of  
13       detail, but it seemed like there was already a pretty  
14       good, I guess, body of data regarding mercury in the  
15       system.  I guess I had seen it, the system is already  
16       listed as impaired for mercury.

17              So, I guess another question I would have is  
18       what would be gained by doing this particular study, in  
19       addition to what is already known regarding mercury in  
20       the system?

21              I mean it's hard for me to believe that this  
22       hasn't been studied in the past for this particular  
23       watershed.

24              MR. FOSTER:   Primarily -- this is Bill  
25       Foster, National Marine Fisheries Service.  Primarily

1 we would defer some of the water quality  
2 bioaccumulation analysis need to the Water Board,  
3 because they will definitely need that for their 401  
4 mandatory authority certification.

5 The reason we would need that type of  
6 information to consider our section 18 decisions. If  
7 it goes to an additional component of water quality,  
8 primarily.

9 There are -- the amount of contamination that  
10 may exist in sediments and are in the water column,  
11 what might or might not be bio-available could affect  
12 the habitat in terms of the food sources. It could  
13 bioaccumulate in through the fish, itself, and become a  
14 human health hazard. It could also affect  
15 other species that eat, you know, the fish.

16 There's a risk that we have to evaluate in  
17 terms of habitat quality and water quality that all  
18 life stages of anadromous fish have to endure. And we  
19 have to ascertain if that risk is something we have to  
20 consider. We have to consider it. And by not knowing  
21 it, we could, you know, potentially have fish that  
22 aren't as healthy as we would like.

23 CHAIRPERSON LIBERTY: So I guess, taking it  
24 one step further, if say the study was done and mercury  
25 was found to be a problem, what sort of license

1 conditions do you envision arising from conducting the  
2 study? I guess my question is what would be done? I  
3 guess I'm having a hard time trying to see that  
4 connection.

5 MR. FOSTER: Well, without having, right now,  
6 very many sources of information from many of the other  
7 studies to compare, it would be premature of me to  
8 ascertain what PM&E would be in that particular  
9 situation. Because I don't have enough information to  
10 begin to form those, let alone decide how I would  
11 exercise my section 18 authority.

12 But I do know that it's an important factor  
13 because it does go to water quality issues. And I know  
14 that mercury, especially, as well as other  
15 contaminants, can bioaccumulate through the food chain  
16 and affect particularly the more sensitive life species  
17 in the stages of the species, what we're concerned  
18 with.

19 And if we're going to be trying to ascertain  
20 whether we want to pass fish to various places or not,  
21 we need to know where they're going and what they've  
22 been subjected to on their way there.

23 MR. WANTUCK: Aaron, there's a growing body  
24 of evidence about aquatic toxicology and its effects on  
25 salmonids in the various life stages. So, and it's not

1 a question of fish fitness in the face of whatever  
2 contaminants are out there.

3 We do not see merely mercury bioaccumulation  
4 as being the only question to be examined here. The  
5 whole range of aquatic pollutants and how they might be  
6 transmitted through the food chain to anadromous  
7 salmonids is an issue for us.

8 If fish are not fit, they presumably can't be  
9 passed and thrive in these environments.

10 MR. FOSTER: And in addition there could be  
11 habitat reasons downstream caused by the way the  
12 project had been operating in the past that may help  
13 promote certain contaminants concentrating in certain  
14 areas.

15 CHAIRPERSON LIBERTY: Does the Water Board  
16 have anything to add, because we'd like to hear from  
17 you guys.

18 DR. WATTS: Well, the other aspect of it is  
19 public health. And recognizing that collecting  
20 additional information would allow us to know whether,  
21 especially in that part below, between Crocker Huffman  
22 and the compliance point, if there are problems with  
23 mercury in fish that people might be consuming when  
24 they're fishing.

25 As well as in the reservoir, because that was

1 something that we're concerned about, too.

2 CHAIRPERSON LIBERTY: Right, but again, I  
3 guess I'm having a hard time seeing what -- I'm trying  
4 to just look ahead and see what sort of license  
5 conditions I would write to address this if it were a  
6 problem. And I guess that's the --

7 MR. ROSE: Well, that's the simple answer to  
8 your question is some sort of public notification as to  
9 the issues of mercury and eating mercury-laden fish.

10 So if we have information that there is  
11 significantly bioaccumulated mercury in the fish here,  
12 then, you know, we're not talking about dramatic  
13 project changes. We're talking about as the simplest  
14 means of creating license conditions, some sort of  
15 public notification.

16 MR. DEIBEL: What fish are you talking about?

17 DR. WATTS: Well, there are data showing that  
18 there's mercury in the bass, the large-mouth bass. And  
19 in the lower river, you know, we  
20 have -- we don't know, there's no information.

21 MR. DEIBEL: Right, because that's, as I read  
22 things, and again obviously it's no secret the west  
23 slope of the Sierra has been placer mined extensively.

24 DR. WATTS: Right.

25 MR. DEIBEL: It's not, you know, -- it would

1 not be unreasonable for anybody to assume that  
2 mercury's going to be a problem in reservoirs,  
3 especially as it bioaccumulates in fish such as bass.

4 DR. WATTS: Right.

5 MR. DEIBEL: So the question I have is  
6 there -- and, again, the focus, as I see, is  
7 methylmercury, unless you, I think, Bill, you mentioned  
8 some other constituents. But that appears to be the  
9 focus.

10 DR. WATTS: That's the focus.

11 MR. DEIBEL: Are there records that would  
12 show steelhead smolt that lives there for a year or two  
13 years that's eating insects that there are mercury --  
14 are there peer-reviewed literature out there that shows  
15 that's a problem. Because  
16 I --

17 DR. WATTS: Well, that's part of the question  
18 is we don't know.

19 MR. DEIBEL: Right.

20 DR. WATTS: There hasn't been any information  
21 collected.

22 CHAIRPERSON LIBERTY: There's been no  
23 information collected on mercury in the lower Merced?

24 DR. WATTS: Except a few isolated studies,  
25 but not in that same geographic area. I think there

1       were some samples collected below Merced Falls by the  
2       Stillwater, the work that Stillwater did.

3               MR. DEIBEL:  Yeah, because the peer-  
4       reviewed --

5               DR. WATTS:  Nothing in that lower river, to  
6       my knowledge, I don't --

7               MR. DEIBEL:  Right.  The peer-reviewed  
8       literature I looked at that was, I mean it was if you  
9       ate little fish, the odds are you're going to get a lot  
10      of mercury in that, on the studies that occurred on --

11              DR. WATTS:  Um-hum.

12              MR. DEIBEL:  -- the west slopes of the  
13      Sierra.

14              CHAIRPERSON LIBERTY:  Yeah, it's hard for me  
15      to believe that mercury wouldn't be a problem.  I mean  
16      I haven't visited the site, but I pulled up the  
17      watershed on, you know, Google Earth.  And you can see  
18      just, I mean the extensive mining --

19              DR. WATTS:  Right.

20              CHAIRPERSON LIBERTY:  -- that happened along  
21      that lower Merced from Crocker Huffman down.  I mean  
22      it's just hard to believe that it wouldn't be an issue.

23              I think MID had something they wanted to say  
24      real quick.

25              MR. RABONE:  Well, yeah, it goes beyond

1 placer mining. That lower Merced River was dredge-  
2 mined for gold for years and years and years. The  
3 entire bank is confined by these dredger tailings.

4 And so there are estimates that Dave Vogel  
5 could provide where it was something like they estimate  
6 that 1000 years of the normal bed load of sediment has  
7 been removed from the bed of that river and processed  
8 for gold, you know.

9 And so how is a few samples for mercury going  
10 to determine what the effect of the project, which  
11 doesn't process mercury, is contributing to the  
12 downstream presence of mercury where there's been these  
13 ongoing processes since the late 1880s, you know.

14 MR. DEIBEL: Well, could you see an effect?  
15 I mean obviously --

16 MR. RABONE: And how are we going to fix  
17 that?

18 MR. DEIBEL: Well, yeah, --

19 MR. RABONE: With floats, you know.

20 MR. DEIBEL: -- I think what the state said,  
21 I mean the fix is not to go in and re-till up all the  
22 soil, gravel and you find out the mercury. I don't  
23 even know if that's possible.

24 But large-mouth bass probably would not be  
25 there in the absence of these reservoirs, correct?

1 Right. So, those are --

2 MR. RABONE: No, there's all kinds of side  
3 channels from this gravel mining and placer mining  
4 where there are stranded huge pools of warm water. And  
5 those bass are going to be there. It has nothing to do  
6 with the project.

7 MR. ROSE: From a quantity perspective the  
8 project holds most of the water on the river. And so  
9 we were just asking for some studies as to that.

10 And like you said, we're not talking about  
11 significant project changes --

12 MR. DEIBEL: Right.

13 MR. ROSE: -- as potential conditions once we  
14 get some information.

15 MR. DEIBEL: That's a little different than  
16 the federal agencies on the section 18, because it  
17 sounds like a reasonable license condition would be  
18 public information, you know, warning if you pull a  
19 bass out of here it could contain mercury. And I'm  
20 sure it's already in the Fish and Game regs.

21 DR. WATTS: That what?

22 MR. DEIBEL: Don't eat so many pounds of  
23 flesh per year or something, in terms of the fish in  
24 the central valley --

25 DR. WATTS: Oh, how you decide when

1 the --

2 MR. DEIBEL: Yeah.

3 DR. WATTS: There are -- yeah, there are  
4 standards.

5 MR. DEIBEL: But that's a little bit  
6 different need than the federal agencies are  
7 requesting.

8 Is there information out there that we could  
9 look up that talks about bioaccumulation of mercury in  
10 anadromous, juvenile anadromous fish rearing in --

11 MR. FOSTER: I'm sure there could be  
12 information out there. I used to run an aquatic  
13 toxicology lab that did nothing but test, you know,  
14 various materials on aquatic fish -- of the, you know,  
15 O.Mykiss, rainbow trout.

16 But the point being is that, you know, there  
17 are water quality standards for aquatic life. And as  
18 long as those standards are met, then we have less  
19 concern over the general, you know, water quality and  
20 the habitat that the fish are in.

21 If we have no idea what the water quality and  
22 habitat is like, then we have to make, you know, more  
23 conservative assumptions as to what we can do to  
24 protect those species.

25 And the type of, you know, again, without

1 sufficient information it's hard to envision what a  
2 PM&E might be, but in addition to supporting, you know,  
3 various, you know, even health concerns, I would, you  
4 know, probably wonder how one could, you know, protect  
5 the habitat. I mean --

6 MR. THOMPSON: Did I heard that there was a  
7 possibility the reservoir could be expanded through a  
8 new license term?

9 MR. LYNCH: You did, and there are --

10 MR. THOMPSON: And could that inundate a new  
11 vegetation in the --

12 MR. LYNCH: But no, there is no areas where  
13 there's mercury concentration except the higher  
14 elevations, McClure. It's not in the lower elevations.

15 MR. RABONE: It will literally take an Act of  
16 Congress to do that, so I wouldn't hold out for that.

17 MR. SPEAKER: And if it did, it would happen  
18 for a maximum --

19 (Parties speaking simultaneously.)

20 MR. BUHYOFF: It is mentioned in the scoping  
21 document --

22 MR. DEIBEL: Just something that's commonly  
23 on the table, is that correct?

24 MR. BUHYOFF: That's correct.

25 MR. DEIBEL: So if it goes proposals, let's

1 say they got an Act of Congress, that would re-  
2 initiated in the ILP a second round -- okay.

3 So, one of the things, and again, I've read a  
4 lot of material, probably retained less, but I think in  
5 the MID filing there was a discussion that there's  
6 ongoing studies, or there was a two-year study with the  
7 state. Did I mis-read something?

8 MR. LYNCH: I think I'll let the state talk  
9 about it. There is a state study ongoing. There's  
10 been data collected. Also, we agreed to collect data  
11 outside relicensing, that we have collected and provide  
12 to the State Board. We've agreed to do that.

13 It is not downstream or -- oh, I'm sorry, I  
14 apologize. This is Jim Lynch, HDR. There is an  
15 ongoing state study that I think the state should talk  
16 about.

17 MID did agree to collect samples in the  
18 reservoirs because that ongoing study didn't collect  
19 certain type of species. And we've already collected  
20 those data and said we'd provide it to them, probably  
21 in December is when we'll get it from the lab.

22 MR. DEIBEL: Okay, are those adequate to  
23 address the state's needs?

24 DR. WATTS: Well, they are collecting some  
25 additional sampling fish in the reservoirs to provide

1 additional species that weren't included in the  
2 original study that the state did.

3 And that is to provide the correct dataset  
4 that -- it's actually another agency that determines  
5 whether the threshold for human health concerns has  
6 been reached. And that's the Office of Environmental  
7 Health Hazards Assessment.

8 So I consulted with them to find out what  
9 additional fish needs to be -- species and how many  
10 fish needed to be sampled. And they are actually doing  
11 that.

12 And that's what was in the study plan. But  
13 we also added sampling sites downstream, because there  
14 is no information in that lower part.

15 And the study by the state was only looking  
16 at lakes and reservoirs. It wasn't focusing on in-  
17 stream mercury issues.

18 MR. LYNCH: I don't want -- I believe this is  
19 the study, also, where the disputed issue is dredging  
20 sediment in the bottom of Lake McClure, McSwain and  
21 Crocker Huffman, and analyzing it.

22 We didn't propose it because we don't propose  
23 to disturb the sediment in the very bottom of Lake  
24 McClure, McSwain or Crocker Huffman.

25 MR. DEIBEL: As I've read, is it doesn't

1 necessarily take a rototilling of the sediments to  
2 provide for this bioaccumulation of mercury on existing  
3 reservoirs. Clearly, what Larry was asking is about,  
4 you know, when you flood new land it's a lot more  
5 manifested.

6 But just the annual reservoir fluctuations  
7 and -- or those insects that just get moved up the food  
8 chain in the bass, so you don't necessarily need to  
9 have a sediment-disturbing event to bioaccumulate,  
10 correct?

11 MR. LYNCH: No, you don't, --

12 MR. DEIBEL: Right.

13 MR. LYNCH: -- and again, that's something  
14 for the project, as you pointed out earlier, the  
15 baseline.

16 I will say that we are doing water quality  
17 samples. We are collecting in the reservoirs and  
18 downstream of them, samples for methylmercury and  
19 mercury.

20 CHAIRPERSON LIBERTY: You guys have anything  
21 else for the study?

22 MR. THOMPSON: I guess I would just add water  
23 quality samples for methylmercury are one thing, but  
24 the bioaccumulation in fish tissues are quite another.

25 I just want to point out the Water Board made

1       that point, that they were interested in that, the  
2       health effects.

3               But I think we're ready to move on.

4               CHAIRPERSON LIBERTY:  Yeah, let's move.  We  
5       have one more to go through.  I'm getting hungry and  
6       want to go to lunch.

7               It's the riparian habitat wetlands.  Again,  
8       is this -- just for clarification purposes, this is one  
9       of the studies that's now off the table, I guess?  No  
10      longer in dispute, is that correct?

11              MR. FOSTER:  That's correct.

12              DR. WATTS:  Yeah.

13              MR. MARTIN:  That's correct.

14              CHAIRPERSON LIBERTY:  This study was -- all  
15      three agencies?

16              MR. MARTIN:  Yes, Fish and Wildlife Service,  
17      Ramon Martin.  Yes, that's correct.  No longer  
18      disputed.

19              CHAIRPERSON LIBERTY:  Okay.

20              MR. ROSE:  Same for the State Board.

21              DR. WATTS:  Yeah, same for us.

22              CHAIRPERSON LIBERTY:  Same for the Water  
23      Board?

24              MR. ROSE:  Yes.

25              CHAIRPERSON LIBERTY:  Okay.  I think now is

1       probably a good time to take a break for lunch.  Maybe  
2       we can get into the anadromous fish studies after  
3       lunch.

4                   Do you guys want to take an hour, I guess,  
5       for lunch.  Maybe meet back here at quarter past one.

6                   (Whereupon, at 12:06 p.m., the Conference was  
7       adjourned, to reconvene at 1:15 p.m., this  
8       same day.)

9   --o0o--

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

## 1 AFTERNOON SESSION

2 1:24 p.m.

3 CHAIRPERSON LIBERTY: We've had a request to  
4 kind of alter how we go through these studies this  
5 afternoon. I just wanted to take the one we haven't  
6 addressed first. And that's going to be the anadromous  
7 fish passage facility study.

8 And I guess I'd like first to lead off with a  
9 question of FERC. I guess I didn't see this particular  
10 study addressed in the study plan determination, so I  
11 guess I would like to hear a little bit from FERC as to  
12 why that particular study wasn't addressed in the study  
13 plan determination. Unless I overlooked it somehow.

14 MR. BUHYOFF: I believe I did address that in  
15 the --

16 CHAIRPERSON LIBERTY: It was addressed?

17 MR. BUHYOFF: Yeah. It's on page 13 of the  
18 study plan determination. And my reasoning was that  
19 both the anadromous fish passage study and another  
20 study, I had the same reasoning that they were  
21 assessments of potential production mitigation  
22 enhancement measures, rather than studies of project  
23 effects.

24 MR. THOMPSON: So just for clarification  
25 then, Matt, you lumped it with the anadromous fish

1 passage study?

2 MR. BUHYOFF: Correct.

3 MR. THOMPSON: Okay.

4 CHAIRPERSON LIBERTY: Which is that study,  
5 3.4.

6 MR. THOMPSON: I want to pull up the basis  
7 for --

8 (Pause.)

9 MR. THOMPSON: So you did not go through the  
10 anadromous fish passage facilities study, is that --  
11 Matt? Did FERC Staff overlook that one?

12 CHAIRPERSON LIBERTY: I think we have two  
13 studies on the table here, an anadromous fish passage  
14 and anadromous fish passage facilities. I think maybe  
15 that's creating a little confusion.

16 MR. BUHYOFF: Right. That was probably a  
17 typo. I do believe -- I'd have to go back and just  
18 make absolutely sure, but that second paragraph under  
19 the study is not adopted, on page 13, probably should  
20 have read anadromous fish passage facility study.

21 Because I see in the first paragraph that  
22 I've addressed anadromous fish passage study, in the  
23 above paragraph on page 13 of the determination.

24 CHAIRPERSON LIBERTY: I guess we'll go to  
25 NMFS. Some of you guys had something to say regarding

1 the study?

2 MS. KEMPTON: Kathryn Kempton from the Office  
3 of General Counsel. Yeah, I do have one matter I'd  
4 like to introduce.

5 Under 18 in our section 5-15(j), of course  
6 the panel is entitled to receive any information that  
7 it deems appropriate to consider at the technical  
8 conference.

9 And, of course, we don't want to delve too  
10 deeply into a legal interpretation of matters here in  
11 the technical conference, but the applicant has called  
12 the potential for fish passage at Crocker Huffman, in  
13 its motion to dismiss, speculative and highly  
14 uncertain.

15 And urges the interpretation that there's  
16 very little chance of fish passage at the Crocker  
17 Huffman.

18 Today I received a letter from California  
19 Fish and Game addressing just that issue. I want to  
20 give this to the panel. We'll make copies available.

21 And I'd like to introduce testimony from Fish  
22 and Game, who are the authors of the letter.

23 CHAIRPERSON LIBERTY: And so you guys have  
24 filed this into the record, correct? As of yesterday,  
25 is that right?

1 MS. MANJI: If I could answer this. Annie  
2 Manji with the Department of Fish and Game. We mailed  
3 this letter out. It's regarding a facility that is not  
4 a FERC facility, so we mailed it to the Merced  
5 Irrigation District, and we cc'd Tim Welch. And we  
6 would be happy to cc the entire FERC service list.

7 But we basically wanted the -- it being a  
8 nonFERC project, it went to an audience that was  
9 specifically interested in passage at Crocker Huffman.  
10 And we did not actually file it to the complete service  
11 list.

12 MS. KEMPTON: And NMFS is asking that it be  
13 made part of the record of these proceedings, and to  
14 the extent Ms. Manji wishes to elaborate on this  
15 November 16th letter, we'd be thrilled to yield time.

16 MS. MANJI: As Kathryn was indicating, the  
17 lack of -- the difficulty of passage at Crocker Huffman  
18 was a reoccurring theme in the study plan discussions.

19 And the department had, in the past, actually  
20 recommended that the ladder at Crocker Huffman be  
21 closed. This was around 1970, '71. In our opinion, at  
22 that time, the ladder was doing more harm than good.

23 We felt there was some other options with  
24 perhaps flow, instream flow requirements from the  
25 upstream FERC project, in conjunction with a farming

1 channel. Could be some of the best actions for  
2 restoring the fishery downstream. And so we actually  
3 asked Merced Irrigation to close the ladder.

4 In the meantime, the spawning channel was not  
5 successful. And the status of the fishery downstream  
6 has continued to decline very dramatically. So we're  
7 revisiting the issue of whether or not to provide  
8 passage there.

9 We feel, under Fish and Game Code, there are  
10 provisions that passage should be provided there, if we  
11 so deem. And we do believe at this time passage over  
12 Crocker Huffman is in the interest of the fishery.

13 We acknowledge it's not going to be opening a  
14 gate and, voila, you're done. It's something we want  
15 to work with the Irrigation District on in terms of  
16 when, how, what's the best way to proceed on that.

17 But we felt that we needed to get this out  
18 onto the record so that this didn't become some sort of  
19 stumbling block for going forward in terms of passage  
20 and anadromous fish habitat.

21 Passage at Crocker Huffman is within our  
22 objectives and goals, providing that. And we look  
23 forward to trying to restore anadromy above Crocker  
24 Huffman.

25 And we did want that to be clearly in the

1 record so that the studies don't rely on something from  
2 1971 as our ideal proposed way forward. Providing  
3 passage there is what we are recommending at this time.

4 CHAIRPERSON LIBERTY: Thank you. Are there  
5 any questions on this?

6 MR. THOMPSON: Well, I guess I just need some  
7 clarification from FERC Staff. It was not -- I guess  
8 the agencies, I'm assuming, are still disputing this  
9 study. They want an anadromous fish passage facility  
10 study. I guess I'm confused about how we perform our  
11 duties here, as far as making a suggestion of the  
12 latter to FERC.

13 CHAIRPERSON LIBERTY: Yeah, I guess this is  
14 something we'll probably have to visit together as a  
15 panel. I guess I do have one question kind of related  
16 to this particular study.

17 And I guess that question would be -- the  
18 agencies, and how is this particular study trying to  
19 assess the project-related effects?

20 MR. FOSTER: The fish passage feasibility,  
21 facility feasibility study works in concert with the  
22 fish passage study. And that the projects, you know,  
23 historically fish went past where the project's dams  
24 are now, and higher up into the south fork of the  
25 Merced River and upper main Merced River. And so once

1 the projects were, you know, constructed, they blocked  
2 that available habitat.

3 Basically there's a couple parts to that  
4 passage facility feasibility study, and basically you  
5 want to perform more kind of like desk-top review, our  
6 engineering standards that we would want in terms of  
7 passage facilities; onsite reconnaissances; conceptual  
8 design to the actual facilities provides cost  
9 estimates.

10 In addition, you want to address the  
11 migration of the salmon and steelhead smolts downstream  
12 of Crocker Huffman Dam, and to develop a migration  
13 corridor protection plan, for instance, that would, you  
14 know, help enable fish to get into and then know where  
15 they might -- or where there might be feasible places  
16 to put those.

17 The actual fish passage study gets more  
18 towards the modeling and the potential habitats that  
19 are there, and how you would deal with the, you know,  
20 the potential concepts of moving the fish and that sort  
21 of thing.

22 Whereas, the facilities gets more at kind of  
23 the engineering concepts of it. Getting more at the  
24 concepts of costs, types of drawings, types of  
25 procedures. Do you collect them at some point and

1 bring them to another. How do you collect them and  
2 bring them back down, that sort of thing.

3 There are -- whereas the other facility fish  
4 passage one looks at currently available models and try  
5 and assess the potential of current habitat that may be  
6 upstream that fish could go to. Helps assess the types  
7 of habitat, quality of the habitat of downstream, in  
8 addition to the general presence and health of the fish  
9 that you would want to move.

10 MR. WANTUCK: I'd like to add to that. This  
11 is Rick Wantuck from National Marine Fisheries.

12 Our best information at this point indicates  
13 that the projects block approximately 193 miles of  
14 upstream salmonid habitat, primarily steelhead.

15 MR. DEIBEL: Is that upstream of Lake  
16 McClure?

17 MR. WANTUCK: Upstream of Lake McClure.

18 MR. DEIBEL: Okay.

19 MR. WANTUCK: And also the projects block 39  
20 miles of spring-run Chinook salmon habitat. This is  
21 based on modeling from our Southwest Fisheries Science  
22 Center, Dr. Steve Lindley, in 2006, who took  
23 information from Yoshiama and essentially modeled what  
24 is called intrinsic salmonid habitat potential.

25 And I have this map that I'd like to present

1 to the panel as an exhibit.

2 So from a facilities standpoint, the upstream  
3 habitat potential has been lost due to blockage by  
4 these projects.

5 We have asked, in our facility study, for  
6 examination of how to get fish into the project area,  
7 how to get anadromous fish above the project area, and  
8 also what would a passage facilities combination look  
9 like for both into the project and above the project.

10 So what we're looking at is the engineering  
11 and technical feasibility within the study of moving  
12 the fish successfully up and back within and above the  
13 project.

14 MR. FOSTER: And there's also elements to, in  
15 the second part of the -- at least the fish passage  
16 feasibility study, to utilize calibration flows, track  
17 out migration of smolts, collect new rotary trap data,  
18 things like that. Which is another way of enumerating  
19 how smolt might get out of the system.

20 MR. WANTUCK: I would also like to add that  
21 we fully support the letter by the Department of Fish  
22 and Game that was just presented a few moments ago.  
23 And that also NMFS shares this goal of passage at  
24 Crocker Huffman facility.

25 It's our understanding, based on some limited

1 information, that anadromous fish can make it over  
2 Crocker Huffman even though the fish ladder facility is  
3 not operating under some circumstances. And also that  
4 anadromous lamprey are making it into the project area,  
5 which is another species of concern of ours.

6 NMFS intends to do some engineering and  
7 technical review of the conditions of the Crocker  
8 Huffman ladder to determine functionality, or how,  
9 perhaps, it can be rehabilitated. So, this fits in  
10 with our recovery goals in the National Marine  
11 Fisheries Service Central Valley Recovery Plan, which  
12 call the Merced River a core two population for  
13 recovery action.

14 And this means that we do have a  
15 comprehensive plan that we will be filing on the FERC  
16 record that calls for re-establishment of anadromous  
17 fish in the project area and above the project area.

18 MR. DEIBEL: Is that the biological opinion  
19 or the recovery --

20 MR. WANTUCK: No, this is our recovery plan  
21 that will be presumably made final soon. It's in final  
22 draft review. As soon as that is finalized it will be  
23 placed on the FERC record as a comprehensive plan for  
24 the watershed.

25 MR. DEIBEL: Based on -- let me ask FERC,

1 Matt, a question. If a plan or additional information,  
2 and I don't know if this constitutes a comprehensive  
3 plan or not, but it's -- Fish and Game Code, or let's  
4 say this recovery plan gets signed a year from now.

5 What are the steps in the ILP? Are you aware  
6 of other processes under the ILP where they've re-  
7 initiated studies based on supplemental filings of  
8 comprehensive plans?

9 MR. BUHYOFF: In the ILP regulations, first  
10 off, there are criteria for any new studies. Such as  
11 why the goals and objectives of any improved studies  
12 cannot be met with the preceding methodology, or if  
13 there are significant changes in the project proposal,  
14 or significant new information material to the study  
15 objectives has become available. So.

16 MR. DEIBEL: What part is that?

17 MR. BUHYOFF: I'm sorry, that's B26 of the  
18 ILP regulations. So I know that there are mechanisms  
19 in the ILP which will allow for that.

20 I'm also fairly sure, I imagine legal counsel  
21 -- tell me this, but I'm almost fairly sure that in our  
22 order we have a standard reopener for such situations.  
23 If, you know, new information comes late, such as  
24 anadromous fish become viable in the project area,  
25 that, you know, we'll study the effects of that. And

1 study the feasibility of, you know, facilities that,  
2 you know, need to be warranted.

3 MR. THOMPSON: Well, to clarify, is that  
4 information that NMFS mentioned that indicates that  
5 anadromous fish already get over Crocker Huffman, has  
6 that been filed in the FERC record? Can you point us  
7 to where that information --

8 MR. FOSTER: It's been filed in a filing that  
9 I made under both Merced Falls and Merced River's  
10 filing just recently, in our comments on Merced Falls  
11 study plan. But it also is applicable to the Merced  
12 River Project, in that Stillwater scientists have noted  
13 Pacific lamprey anadromous fish within the reach of  
14 Crocker Huffman.

15 MR. THOMPSON: So it was filed --

16 MR. FOSTER: There is other --

17 MR. THOMPSON: -- recently?

18 MR. FOSTER: Yeah, and then I believe also  
19 conservation groups have filed information in that  
20 regard, as well, as far as the FERC record for  
21 projects.

22 And that goes to both the enumerations by the  
23 Stillwater Sciences report, as well as observations  
24 made by a California Department of Fish and Game  
25 hatchery manager, who's been presumably sitting at the

1 base of Crocker Huffman Dam for the last 30 years,  
2 running a Fish and Game hatchery.

3 CHAIRPERSON LIBERTY: I guess I have a  
4 question. I mean, say that this information is on the  
5 record and it says, all right, these anadromous fish  
6 can be past Crocker Huffman. Can they get upstream of  
7 Merced Falls Project?

8 MR. FOSTER: Currently the Merced --

9 CHAIRPERSON LIBERTY: Currently?

10 MR. FOSTER: -- Falls Project has an  
11 inoperable fish ladder.

12 CHAIRPERSON LIBERTY: Are they probably there  
13 now, though? Can they get past Merced Falls? I guess  
14 that's my question. They can?

15 MR. THOMPSON: You mean all that --

16 MR. WANTUCK: Let me ask Dr. Martin to  
17 address this, please.

18 CHAIRPERSON LIBERTY: Briefly.

19 DR. MARTIN: Very briefly. There's not  
20 available information. Merced Falls Dam is blocked.  
21 But a study to determine composition of fish in that  
22 stretch of the river would answer that question.

23 MR. ROBBINS: I assume that when you folks  
24 look at the material that's in the record you will  
25 weigh it for its value. I believe that the information

1       that's in the record, not an observation, but a  
2       speculation, about the potential for fish to jump a 22-  
3       foot dam.

4                I think that's what you will find. It's not  
5       evidence at all.

6                CHAIRPERSON LIBERTY: I guess I really have  
7       to go back and revisit some of this information that  
8       was submitted into the record. But it seems like I've  
9       also run across some statements coming from National  
10      Marine Fisheries that that is an anadromous fish  
11      barrier, Crocker Huffman; that anadromous fish cannot  
12      get past that point. I mean I'm fairly certain I've  
13      seen that in some of your filings.

14              MR. WANTUCK: Under some hydrolic conditions  
15      there's some evidence that anadromous fish are  
16      surmounting that, as is -- we would acknowledge that  
17      there are few anadromous fish making it over Crocker  
18      Huffman at this stage.

19              We intend to study during the course of this  
20      relicensing, rehabilitating the fishways both at  
21      Crocker Huffman and Merced Falls, which is, as you  
22      know, in licensing contemporaneously with this  
23      licensing.

24              Both of those fishways were constructed for a  
25      reason, that was to pass fish upstream, anadromous

1 fish, at the time. And we believe that these fish  
2 waves most likely can be made to function again.

3 MR. FOSTER: We also believe that over the,  
4 you know, obviously historically there was available  
5 habitat the fish could access. And as historical  
6 conditions changed, with the creation of the projects,  
7 different operational capabilities of the projects, or  
8 different operational regimes of the various dams,  
9 passage became less and less likely.

10 In the past when there was a smaller -- old  
11 Shephard Dam, I guess, it would tend to spill more, and  
12 those higher flows may have enabled fish to ascend  
13 Crocker Huffman Dam, particularly if flash boards were  
14 removed during high flow periods.

15 And so what has happened is that the projects  
16 have been both re-engineered and re-operated to  
17 eliminate both advantageous flows that fish might be  
18 able to use, both to get into the system and get out of  
19 the system, and operational changes in how, you know,  
20 the dam facilities are operated has changed.

21 MR. WANTUCK: Just to make a quick note about  
22 the point about the dam being 25 feet. Certain flows,  
23 hydrologically speaking, that drop becomes diminished  
24 because the level of tailwater comes up nearer the  
25 level of the headwater. And presumably some of the

1 unique hydrolic features in and around the dam might  
2 allow fish to get over the dam under certain unique  
3 circumstances.

4 MR. DEIBEL: Does that dam spill straight  
5 down? Or is it a sloped spillway? I mean is there any  
6 return flow, do you know?

7 MR. RABONE: I'm disappointed that we didn't  
8 get to do a project description. We had some slides,  
9 pictures of the dam. The dam spills very short steps  
10 of about 22 feet.

11 It's not like a long, you know, 30-foot-long  
12 cascade of 22 feet. It's a boom.

13 MR. ROBBINS: And it's not a narrow dam that  
14 would concentrate the flow. It's 300 yards wide or  
15 something of that sort. Not going to create those  
16 conditions.

17 MR. DEIBEL: Has National Marine Fisheries  
18 Service or the Fish and Wildlife Service, are you aware  
19 of cases where you exercised your authority, not  
20 reserved it, where fish don't currently get to? Where  
21 you've required a passage facility in the absence of  
22 fish being there? Are you currently --

23 MR. WANTUCK: Well, this is a unique  
24 situation here in California, so we have not prescribed  
25 under those circumstances. We believe the authority

1 does exist.

2 MR. DEIBEL: But in other cases you've  
3 reserved your authority?

4 MR. WANTUCK: Yes. And we also believe that  
5 the decision to prescribe or to reserve is an exercise  
6 of our section 18 authority at the time, and that we  
7 need this information to make those decisions.

8 MR. FOSTER: And in addition, there's a wide  
9 range of ways things can be prescribed. One could  
10 prescribe to move fish from one point in the river  
11 system to another point in the river system, and  
12 effectively have fish passage.

13 But that entails collecting fish at some  
14 point to move them upstream. And collecting them at  
15 another point to move them, the smolts, downstream.

16 And whatever is in the best interest of the  
17 species is usually, you know, what is decided.

18 So one could, in order to pass a particular  
19 project, one does not -- I would think, just my own  
20 personal thing, one does not -- I could think of one  
21 particular fish up in some point that's convenient, to  
22 facilitate their safe collection. And then move them  
23 beyond that point in question.

24 MR. WANTUCK: In other words, collection and  
25 transport across the New Exchequer Dam does not require

1 fish passage at Crocker Huffman. You could collect  
2 them at that point with the existing facilities; move  
3 the adults above the dam; collect the juveniles and  
4 bring them back down below the project.

5 We believe that our authority extends to  
6 making such a prescription when the time comes.

7 MR. FOSTER: But, again, we don't have the  
8 information yet to decide how to exercise that  
9 authority. That's why we need the study.

10 MR. DEIBEL: In the facility study proposal,  
11 given the configuration of this system, as I understand  
12 it, and, folks, correct me if I'm wrong, you  
13 essentially have three miles downstream of Merced Falls  
14 to Crocker Huffman, correct?

15 And you essentially have reservoir for the  
16 next, what, 40 miles? Something like that?

17 MR. WANTUCK: You mean at Lake McClure?

18 MR. DEIBEL: Well, basically, as I understand  
19 it, from Merced Falls it goes reservoir to release of  
20 McSwain, to the base of new New Exchequer to river mile  
21 84.5 or something.

22 So what you're looking at is three miles of  
23 flowing river, 40 miles of reservoir, and that  
24 potential for 100-plus miles upstream.

25 And so if you were looking at facilities it

1 would seem to me that -- again, this is not a decision  
2 on my part or any -- that I'm not aware of cases right  
3 now where people have passed fish volitionally. You're  
4 really looking at a truck-and-haul, is, I guess, what  
5 I'm looking at.

6 So in terms that --

7 MR. WANTUCK: Which is a legitimate form of  
8 fish passage.

9 MR. DEIBEL: Right. And I'm just saying in  
10 terms of focusing in on an approach, from a study  
11 standpoint, rather than saying study fish facilities,  
12 wouldn't it be to focus down?

13 Because like I said, it's really difficult to  
14 move fish.

15 MR. WANTUCK: Well, this is why we're asking  
16 for these studies. We realize it's a complicated  
17 determination. Therefore, we're asking for the studies  
18 to inform that decision.

19 MR. FOSTER: There's an existing project up,  
20 I think, at Baker Lake -- up in Oregon --

21 MR. WANTUCK: Well, yeah, certainly there are  
22 precedents --

23 MR. FOSTER: -- there are possibilities that  
24 fish can make it down reservoirs and be collected and  
25 then moved downstream below the dam.

1                   But, again, that's all speculation at this  
2 point because we don't have the study information with  
3 which to start to analyze, to begin to make, you know,  
4 decisions. Let alone other, you know, terms and  
5 conditions of the license.

6                   MR. THOMPSON: Well, FERC did not, in their  
7 study determination, make a call on this one that we're  
8 talking about. But I guess I'd like to ask FERC Staff  
9 if they have a view they could share with us now.

10                  I thought I heard NMFS say that section 18  
11 prescription would not require passage facilities at  
12 Crocker Huffman or Merced Falls, that fish collection  
13 could occur downstream of Crocker Huffman. And  
14 therefore, they're passing fish over project dams by  
15 collecting them below Crocker Huffman and transporting  
16 them above New Exchequer Dam.

17                  So I guess I wanted to hear FERC Staff weigh  
18 in on that. Will you consider that point when you  
19 review this study?

20                  MR. BUHYOFF: Yes. I mean, you know, that's  
21 something certainly that we can consider.

22                  MR. THOMPSON: Do you have any view, I mean  
23 as to whether or not you would approve studies that  
24 would inform that kind of a potential action?

25                  MR. BUHYOFF: I'm sorry, I'm just not

1 familiar with, you know, previously if we've ever been  
2 confronted with that type of issue. That's something  
3 I'd have to think about.

4 MR. THOMPSON: Okay. Well, I don't think we  
5 know what to do with this one.

6 CHAIRPERSON LIBERTY: Yeah, we probably need  
7 to talk about this study, I guess, as a panel. I don't  
8 really have any other questions regarding this  
9 particular study. I guess --

10 MR. DEIBEL: Well, I do have a kind of a  
11 broader question. And this to Matt. Some of the  
12 reasons that studies were declined is saying they do  
13 not address project operation and effects. And they  
14 tend to target a specific PM&E measure.

15 MR. BUHYOFF: Um-hum.

16 MR. DEIBEL: At what point in the ILP process  
17 are there opportunities to design mitigation measures,  
18 if it's not at this study phase?

19 MR. BUHYOFF: Well, again, we can review the  
20 information. Obviously we will review that in the NEPA  
21 process.

22 And then during the order phase, again, to my  
23 knowledge, this is typically done. We can require a  
24 feasibility study if we determine that there's a need  
25 for a PM&E measure.

1           MR. DEIBEL: One of the things as a mandatory  
2           conditioning agency they're subject to a trial-type  
3           hearing based on facts. If a mandatory conditioning  
4           agency prescribes a certain measure, and some of that  
5           stuff is not in the record because FERC declined the  
6           study, it seems to me that an agency could be put on a  
7           bad footing because they're being challenged on their  
8           specific measure.

9           And that's why I'm asking the question of  
10          what point, given some of the -- that the Energy Policy  
11          Act of '05 allowed for these trial-type hearings. How  
12          is that information -- does FERC expect the agencies to  
13          put that stuff in the record? Or the licensee to  
14          generate that information?

15          Where does that come in, because a plan at  
16          the license order is after all that happens. So.

17          MR. BUHYOFF: I'm sorry, I guess I can't  
18          speak to that.

19          MR. ROBBINS: That process has its own  
20          evidentiary proceedings, including discovery,  
21          depositions and new witnesses and new material. It has  
22          its own process.

23          MS. KEMPTON: Which is an extremely expedited  
24          proceeding.

25          MR. DEIBEL: But, yes. What I'm getting at

1 is if these studies aren't designed to generate  
2 information to develop an explicit PM&E, at what point  
3 in the ILP does that come in? Because the trial-type  
4 hearing occurs before the license order. And so the  
5 FERC process, it sounds like, doesn't provide the  
6 opportunity to develop explicit PM&E measures.

7 Because right in this study plan  
8 determination it says, this is not a supported study  
9 because it may lead to a PM&E measure, correct?

10 MR. BUHYOFF: It's a study of potential PM&E  
11 measure, of which we haven't documented there's an  
12 effect yet to support that PM&E measure.

13 MR. DEIBEL: Okay.

14 CHAIRPERSON LIBERTY: Yeah, I think the panel has  
15 enough information on the study. We'd probably like to  
16 move on. We've got a lot more to cover this afternoon.

17 So I think we're going to jump back a little  
18 bit. I think the next one up would be the reservoir  
19 water temperature management feasibility study, study  
20 2.6, I think.

21 I guess I didn't come up with any specific  
22 questions for a couple of these studies, and this was  
23 one of those. So I guess I'd hand it off to either  
24 Larry or Bob, if you guys have any questions regarding  
25 this particular study.

1           MR. THOMPSON: I guess the question I have I  
2 just would try to verify with FERC, is it correct that  
3 you determined not to adopt this study based on the  
4 fact it does not address the nexus between project  
5 operations and effects?

6           MR. BUHYOFF: I didn't address the study  
7 because, again, it's a study of an PM&E measure for  
8 which there hasn't been a demonstrated effect of a need  
9 for yet.

10          MR. DEIBEL: And that was tied to the water  
11 temperature model study?

12          MR. BUHYOFF: Right.

13          MR. DEIBEL: What would an output in t hat  
14 model trigger the need for this other study? Which way  
15 or does that suggest a phased approach?

16          MR. BUHYOFF: Sure. Again, if in our  
17 analysis we determine there was some type of water  
18 temperature effect based upon analysis of the data that  
19 will be collected and made available to the Commission,  
20 then we could require a PM&E measure.

21                 And if that PM&E measure required some type  
22 of study, we can require that, as well, to my  
23 knowledge.

24          MR. DEIBEL: You would require the study as  
25 part of the ILP or in a plan under the license?

1 MR. BUHYOFF: In a plan under the license.

2 MR. THOMPSON: I guess, on page 15 of your  
3 determination, Matt, you say that the requested study  
4 does not address the next new project operations and --  
5 and it appears that that is the basis for not adopting  
6 the study.

7 MR. BUHYOFF: We also indicate that the study  
8 represents the assessment of potential PM&E measures.  
9 The assessment is premature and there's not been  
10 established that the PM&E measures would be needed.

11 MR. THOMPSON: Okay. Well, where in the  
12 regulations does it discuss PM&E measures? I'm  
13 confused about the basis for the rejection here. I want  
14 to clarify it so then the agencies can each respond.

15 MR. BUHYOFF: Well, I think it does address  
16 the nexus, because --

17 MR. THOMPSON: So it's connected to the  
18 nexus?

19 MR. BUHYOFF: Yeah, sure.

20 MR. FOSTER: The --

21 MR. THOMPSON: You believe there is a nexus?

22 MR. FOSTER: We believe there is a nexus.

23 And --

24 MR. THOMPSON: How so?

25 MR. FOSTER: In conjunction, again, with the

1 water temperature model and the other studies, we need  
2 this type of information to help exercise our mandatory  
3 conditioning authority, how we might do that.

4 And in this particular case you have a  
5 reservoir that has a very deep presumably cold water  
6 pool. It can only release out of the bottom at any  
7 time of the year when it does so.

8 Based on other ways that the project could be  
9 operated, other ways that the temperature model could  
10 show some sort of changes based on variations in  
11 operations, that's all based on a bottom release from a  
12 reservoir.

13 And our experience is in other projects,  
14 sometimes in order to conserve that water, that cooler  
15 water, it may be necessary to release water higher up  
16 in the water column such that you could still get  
17 adequate water, but not necessarily exhaust your cold  
18 water pool before you need to.

19 In the DeSabra-Centerville Project, one  
20 aspect of that particular project studied potential  
21 engineering alternatives reducing heat gain. And that  
22 information was useful towards potentially forming  
23 terms and conditions to try and achieve those ends.

24 And, again, temperature and the maintenance  
25 of maximizing the amount of extent downstream that we

1       could provide cold water temperatures that would be  
2       suitable for life stages of anadromous fish, goes to  
3       improving the water quality and improving the habitat  
4       to enable those fish to get to where we want them to  
5       be, in order to keep them alive, moving down there.  
6       And, again, to get --

7                 But, again, if you wait too late in the game  
8       to actually study alternatives of what could we do to  
9       fix something, if we suddenly decide that there's  
10      something that needs fixing, you only get two years to  
11      try and collect the information in the ILP process.  
12      It's very fast-moving. That's why we're asking for  
13      these things now.

14                CHAIRPERSON LIBERTY: Matt, and then we'll go  
15      to Jim.

16                MR. BUHYOFF: I don't disagree with what Bill  
17      was saying, in essence, except I think the point is we  
18      have to demonstrate that there is an effect before we  
19      can determine there's a need to study any mitigation to  
20      that effect.

21                CHAIRPERSON LIBERTY: Jim.

22                MR. LYNCH: I'd like to point out that by the  
23      agency's estimate this is a \$300,000 study. And if  
24      you've ever done an engineering study you know the  
25      criteria you design it on can drive the cost. So until

1       you know what you're trying to do, you're kind of  
2       shooting in the dark.

3               Secondly, the water temperature model that  
4       we're proposing can simulate withdrawals from different  
5       elevations in the reservoir. So we could assess  
6       through the model if we you have a higher elevation or  
7       dual elevations, that that effect would be downstream.

8               Third, the DeSabra Centerville, there was a  
9       biological opinion, I believe, that predated the  
10      relicensing that required the licensee to look at a  
11      one-half degree reduction in temperature through  
12      DeSabra Forebay.

13              And the reason was included in the  
14      relicensing is because that was an outstanding  
15      condition before they even started relicensing.

16              CHAIRPERSON LIBERTY: Thank you, Jim.

17              MR. LYNCH: We don't have that situation  
18      here.

19              MR. DEIBEL: So given what Jim just said, if  
20      the current model can tie back to different reservoir  
21      elevations, would that satisfy the need of this study  
22      request?

23              MR. FOSTER: I do not think it would.

24              MR. WANTUCK: No, it would not.

25              CHAIRPERSON LIBERTY: Why is that?

1                   MR. WANTUCK: Well, we are not prepared to  
2 accept that as an alternative to a carefully thought  
3 out study at this point.

4                   I have the same concerns as we discussed  
5 about modeling this morning. The modeling needs to be  
6 collaborative, transparent. The assumptions going into  
7 the modeling need to be brought to the agencies as a  
8 collaborative decisionmaking.

9                   And everyone knows that models can be a tool  
10 for decisionmaking, or perhaps a tool for confusion and  
11 obfuscation.

12                   And in this case, I do not believe that a  
13 modeling of this sort is a good substitute for the  
14 water quality and temperature model studies that were  
15 being asked for.

16                   MR. THOMPSON: Did the water temperature  
17 model look at volumes of cold water pool that would be  
18 available under various water year types and scenarios?  
19 Or was that requested in this study?

20                   MR. WANTUCK: That -- well, Jim has his hand  
21 up.

22                   MR. BERGFELD: That's an output from the  
23 existing water temperature model. You can determine  
24 the volume of water below a certain degree, whatever  
25 you'd like to set that at, at any point in time in the

1 hydrologic cycle that is simulated.

2 MR. DEIBEL: So, is that --

3 MR. LYNCH: And I would like to say that the  
4 water temperature model for the system, the operations,  
5 that is a water temperature model that we said would be  
6 collaboratively developed.

7 When it ties into the downstream one, that's  
8 one that's an existing model.

9 But the upstream one would be fully  
10 collaborative and calibrated.

11 MR. DEIBEL: Any input from the State on  
12 this?

13 DR. WATTS: Well, Bob was reminding me that  
14 the study is an opportunity to look at the feasibility  
15 of different options that could be used to draw the  
16 water out. And the modeling, itself, doesn't provide  
17 that.

18 So, I think -- and I think the questions that  
19 you were asking before about when in this process you  
20 actually start looking at those types of options is  
21 important. And for that reason it would seem logical  
22 that you should start now to look at it.

23 I mean the river is being proposed for  
24 listing for temperature, for a 303(d) listing.

25 MR. LYNCH: The reason it's difficult is that

1       until you know your design criteria, until you know  
2       what you're trying to do, having an engineering firm  
3       design a selective withdrawal when you don't know what  
4       you're trying to accomplish is virtually -- you spend a  
5       lot of money.

6               And if you say to design something so it will  
7       meet any requirement, it'll be so general you won't  
8       have any specificity to it.

9               MR. DEIBEL:   Would State Water promulgated  
10       beneficial uses under the state rules; would those be  
11       the adequate criteria to maintain like a cold water  
12       fishery?   Would those be specific enough criteria to  
13       simulate?

14              MR. LYNCH:   There aren't numerical criteria  
15       in the basin plan, so that is something that would have  
16       to be discussed.   And also you'd run into the situation  
17       of upstream situations.

18              Right now if you look at the water flowing  
19       into the project for most of the summer and into the  
20       fall, the water coming out of the project is much  
21       colder than the water coming in.

22              So, there's a question on the basin plan, are  
23       you required to make it better than Mother Nature would  
24       make it.   And that's certainly a discussion that the  
25       State Board and the licensee will have to have.

1                   But again, trying to design a study, an  
2                   engineering study, for something that you don't know  
3                   what your criteria are, or you're just shooting in the  
4                   dark, you're kind of throwing money away.

5                   MR. DEIBEL:   Okay.   Maybe this is too  
6                   arbitrary --

7                   MR. WANTUCK:   I certainly respectfully  
8                   disagree with that viewpoint.   As I understand it, the  
9                   whole principle around these studies is to be able to  
10                  meet compliance points and temperature targets  
11                  downstream.

12                  So I'm a little bit confused about why we're  
13                  talking in terms of throwing money away for projects  
14                  that might increase the flexibility of the project via  
15                  engineering things like temperature control devices.

16                  It's very clear that this area of the San  
17                  Joaquin Valley has a limiting factor, has the ability  
18                  to produce discharge cold water downstream.

19                  So what we're asking for in the study is  
20                  whether there are some engineering approaches as one  
21                  element that can maximize our ability to consistently  
22                  discharge water downstream that is cold enough to  
23                  support these target species.

24                  MR. FOSTER:   It's conceivable that other  
25                  engineering alternatives, storing water at a different

1 level through some sort of engineering device, could  
2 also be part of some additional power generation. It's  
3 possible that the range could not be lost based on how  
4 things are designed.

5 But you don't even start thinking about that  
6 possibility, and then you have nothing to go on. The  
7 idea is to work through these types of concepts while  
8 you're gathering information from your other studies to  
9 help inform you as you're moving forward.

10 CHAIRPERSON LIBERTY: I think we'll take two  
11 more comments. I don't know if we have any more  
12 questions. Jim, and then Matt.

13 MR. LYNCH: Well, I'd just go back to a  
14 discussion this morning. One of the issues, of course,  
15 that is in front of this panel is if you did release  
16 cold water from the system, and you do have the  
17 withdrawals and the returns downstream, what do you  
18 tell the licensee to do. What's in the license  
19 requirement. Does it inform the license requirement  
20 that the licensee can implement.

21 And secondly, from the section 18, at least  
22 looking at it from that way, again it would have to be  
23 tied back to -- right now there's been speculation  
24 there will be fish past there, and there may well be.  
25 But there isn't right now. And they still have to get

1 past Merced Falls.

2 So any study that would be tied to section 18  
3 for releases from the reservoir for water temperature  
4 for fishway devices and facility, I don't quite see the  
5 link.

6 CHAIRPERSON LIBERTY: Matt, go ahead.

7 MR. BUHYOFF: I don't have any comment  
8 actually. I think I --

9 CHAIRPERSON LIBERTY: Okay.

10 MR. DEIBEL: Just one last comment, but as I  
11 understand, based on communication, I believe isn't  
12 FERC going to do one NEPA analysis because of these  
13 joints projects?

14 MR. BUHYOFF: Correct.

15 MR. DEIBEL: Okay.

16 CHAIRPERSON LIBERTY: All right, I think we'd  
17 probably like to move on to our next study. I think  
18 that's the gravel sediment load transport mobility  
19 study.

20 I think we'd like to go to FERC first. Just  
21 get a little explanation from them on why it is they  
22 rejected this particular study specifically based on  
23 what study -- criteria.

24 MR. BUHYOFF: Again, I guess the idea gets  
25 down to baseline where talking about the projects as

1 exist.

2 So, there were two things. One, there is  
3 existing data, including a model performed by  
4 Stillwater Scientists that gets at sediment transport  
5 below Crocker Huffman.

6 Also there's existing -- data that under our  
7 analysis indicates that there's not significant amount  
8 of sediment storage at these projects.

9 So, I argued that it didn't present an  
10 argument as to why the additional information is  
11 needed, given the information that exists. Or how the  
12 project, as being realized since the project would  
13 affect the sediment storage or sediment transport.

14 CHAIRPERSON LIBERTY: Let's go to the Water  
15 Board first, I guess. Get your response to that.

16 DR. WATTS: I'm sorry, I wasn't listening.

17 (Laughter.)

18 CHAIRPERSON LIBERTY: I guess we just kind of  
19 wanted to hear from the Water Board. FERC just  
20 explained, I guess, why they didn't adopt this study.  
21 And I guess we just kind of wanted to hear from the  
22 agencies, starting with the Water Board.

23 DR. WATTS: Well, I think part of t he  
24 objective for that study is to understand what the flow  
25 requirements are to mobilize the sediment and gravel

1 downstream. And the fact that the project influences  
2 the stream flows and reduces the peak flows is  
3 indication of the impact the project has on the  
4 downstream --

5 MR. DEIBEL: When you say downstream, are you  
6 talking below Merced Falls to Crocker Huffman, or below  
7 --

8 DR. WATTS: Below Crocker Huffman.

9 MR. DEIBEL: Have you ever issued a 401  
10 requiring gravel mobility before, as --

11 DR. WATTS: Flows that -- we do have --  
12 (Parties speaking simultaneously.)

13 DR. WATTS: -- things that are determined  
14 based on these sorts of studies that address what flow  
15 requirements are needed to move sediment and --

16 MR. ROSE: We've done flows for --

17 DR. WATTS: For geomorphic --

18 MR. ROSE: Yeah, channel --

19 DR. WATTS: Sure.

20 MR. ROSE: -- mobilization, things like that.  
21 Definitely.

22 MR. DEIBEL: Okay.

23 CHAIRPERSON LIBERTY: How about Fish and  
24 Wildlife Service and then see if you guys have anything  
25 to add to this particular study.

1                   MR. MARTIN: Yeah, just want to add to that.  
2           Earlier -- Ramon Martin, Fish and Wildlife Service.  
3           Obviously the FERC study plan determination they're  
4           mentioning what the nexus is for this, what are the  
5           direct effects of this project or this study may be.

6                   Earlier mentioned, you know, this project  
7           continuous high flows that occur under conditions.  
8           What it does is it ends up in a situation where we  
9           don't have the big freshets anymore in the winter and  
10          springtime. We don't have the flood storm events. All  
11          that water's retained back.

12                   So, some other reports that FERC mentioned,  
13          the water sciences report and as well as some of the  
14          U.S. Fish and Wildlife Service reports or studies that  
15          we've done were very site-specific to restoration  
16          action. So projects that we were doing in the river,  
17          itself.

18                   So they weren't creating a sediment budget  
19          for the river, per se. But they were just only looking  
20          at pre- and post-project gravel augmentation or flow --  
21          projects that we were doing in the river.

22                   And, again, what we're declining in some of  
23          these studies is mainly that the river doesn't have the  
24          energy anymore to be able to mobilize gravel. The  
25          flows have attenuated so much that the channel's

1 becoming sized; vegetation has grown into the channel.  
2 And we don't have the flood flows anymore to get out of  
3 the channel into the flood plane.

4 MR. DEIBEL: So your concern is compaction,  
5 not --

6 MR. MARTIN: Right, compaction or bed armory,  
7 or gravel armory where we've got a lot of coarse  
8 material there, and so there's not anymore adequate  
9 spawning gravels.

10 MR. DEIBEL: So isn't that indicative that  
11 the stuff's being exported out versus --

12 MR. MARTIN: It's indicative of stuff that's  
13 not coming out -- or, yeah, it's not coming into the  
14 lower reaches anymore because of the dams.

15 MR. DEIBEL: Right. So it's not just a high-  
16 flow issue; it's --

17 MR. MARTIN: Supply.

18 MR. DEIBEL: Right, so I guess let me ask  
19 this again, back to the water -- the State. You  
20 mentioned you prescribed geomorphic flows.

21 DR. WATTS: Um-hum.

22 MR. DEIBEL: If you have a, I mean clearly  
23 three dams in a series of that size stop the transport  
24 of material, have you required moving material in  
25 addition to the flows necessary to transport it, is

1 moving gravel part of a beneficial use under the Clean  
2 Water Act?

3 DR. WATTS: Well, there have been situations  
4 where they want to add gravel below a dam. Is that  
5 what you're asking?

6 MR. DEIBEL: Have you prescribed that? I  
7 mean I see the flow issues.

8 DR. WATTS: Um-hum.

9 MR. DEIBEL: But have you prescribed gravel  
10 quantities and volumes in a 401 water quality  
11 certificate?

12 DR. WATTS: Well, I'm actually writing one  
13 that does involve some of that, but it's not actually  
14 issued yet.

15 MR. DEIBEL: Okay.

16 DR. WATTS: Sometimes these are things that  
17 are agreed upon in a collaborative setting that are --

18 MR. DEIBEL: Right.

19 DR. WATTS: -- it's not simply us --

20 MR. DEIBEL: No, I understand that. That's  
21 why --

22 (Parties speaking simultaneously.)

23 MR. DEIBEL: -- the use of your  
24 authority --

25 DR. WATTS: Yeah.

1 MR. DEIBEL: -- as a conditioning agency.

2 So, --

3 MR. FOSTER: This is Bill Foster, National  
4 Marine Fisheries Service. There's lots of, you know,  
5 preferences -- how dams stop the mobility of gravel  
6 moving downstream.

7 There is dynamic systems, they move gravel  
8 downstream all the time. The gravel, specific spawning  
9 gravel requirements for salmon and steelhead are  
10 different.

11 The nature of what the -- the purpose of the  
12 study is to establish, and somehow quantify, what the  
13 project has done to what would normally be a normal  
14 sediment load transport process going down through the  
15 Merced River.

16 In addition, that helps us get at what  
17 possible way we could help augment that lack of gravel  
18 inputs. When you don't have gravel coming into a  
19 system, whatever's there gets washed out. And that is,  
20 again, the bed armoring concept.

21 What some of the other studies done in the  
22 past have failed to do, is they failed to do some  
23 studies at higher flows. Say, like greater than 3000  
24 cfs. They've failed to inform how the channel may have  
25 to come inside or narrow. These geomorphic processes

1 help -- a normal geomorphic process helps keep the  
2 flood plane connected with the habitat of the  
3 mainstream of the river.

4 As gravels are moved out the river deepens  
5 and incises. And then normal flood plane habitats  
6 become unavailable for anadromous fish and other  
7 aquatic life.

8 The availability of that flood plane habitat,  
9 and there's another study we proposed for that, helps  
10 provide better juvenile salmonid survival, which leads  
11 to better escapement, better rearing habitat.

12 Some of these other studies did not consider  
13 coarse sediment storage, balancing bed texture with  
14 sediment transport competence. Potentially removing  
15 dredger tailings to create diverse flood plane surfaces  
16 at other functional elevations.

17 There's lots of possibilities you could do,  
18 but you have to begin with some sort of concept of what  
19 effort we're capable of moving without the dams. And  
20 what's been potentially held up.

21 And we understand, you know, that you're  
22 never going to be able to add, in some cases, enough  
23 gravel that was historically there. But the point is  
24 you have to add gravel if nothing's coming in.

25 And a better way to quantify that is to

1 understand how this -- you know, what types of flows  
2 does it take to move gravel in the way that not only  
3 helps provide spawning habitat, but reestablishes flood  
4 plane activity.

5 We have similar projects like the Oroville  
6 Project. It had a sediment budget habitat, you know,  
7 modeled to help examine that. And they went as far as  
8 looking to removing cobbles and sediments in areas, and  
9 removing the flood plane down to make the flood plane  
10 more accessible. Anyways.

11 MR. DEIBEL: So, you know, there's this, I  
12 have not seen or looked at the Stillwater's 2004  
13 report. I believe it cites Vogel from 2007, that the  
14 channel is armored downstream of Merced Falls.

15 What additional information -- if it's  
16 armored, what additional information do you need to  
17 confirm that these three huge facilities have stopped  
18 the gravel and have caused the logical progression  
19 which happened below dams of armoring.

20 I mean do you need additional information,  
21 sticking in transects and doing pebble counts,  
22 substrate things, confirm that for you?

23 I guess I'm looking at the existing  
24 information and I've not seen Stillwater -- we've got a  
25 citation by Vogel that, yes, it is armored. That's not

1 an extraordinary outcome below dams.

2 MR. MARTIN: I think, if I want to weigh in -  
3 - Fish and Wildlife Service -- some of these studies,  
4 reached specific, have addressed and said yes, that  
5 there is poor gravel -- there's armoring going on,  
6 there's a lot of material out there.

7 What we don't have, and the information that  
8 we lack, is again, relative to the projects. Since  
9 1926, sediments from the upper 81 percent of the  
10 watershed have been blocked off by the dams.

11 So we don't know what amounts the sediment  
12 budget of the whole of the Merced River is. So don't  
13 have a quantifiable amount of how much material, during  
14 the flow conditions, that are available there. How  
15 much that material could be mobilized to the system.

16 CHAIRPERSON LIBERTY: Jim, go ahead.

17 MR. LYNCH: First of all I'd like the panel,  
18 if they haven't, to take a look at some aerial  
19 photographs. This is the system below Crocker Huffman  
20 that has been extensively dredger mined.

21 And the question is, is the system -- is  
22 there reservoirs providing the gravel stopping it, or  
23 is it a gravel system that if it weren't for this other  
24 activities, would there be plenty of gravel there.

25 In a lower elevation alluvial system, a lot

1 of times the gravel into the system comes from the  
2 surrounding areas. It doesn't flow downstream as much.  
3 That's one possibility here.

4 I'd come back to the earlier comment, knowing  
5 this, knowing this gravel sediment in a system that  
6 is -- has been extensively, extensively mined, and if  
7 you look at the photographs you'll see that, how would  
8 that inform whether to put a fishway at McSwain and New  
9 Exchequer Dam?

10 I don't know how that information you would  
11 feed back in and say, yes, we should do a fishway, or  
12 no, we shouldn't. Or we should reserve our fishway  
13 prescription. I don't understand how that would inform  
14 their section 18 authority.

15 MR. MARTIN: I could weigh into it towards  
16 that. If we don't have the material and the conditions  
17 in the spawning channels downstream of Merced Falls  
18 aren't enough to support the recovery of some of these  
19 anadromous species, and we could look upstream to try  
20 to determine whether maybe upstream conditions are  
21 there.

22 And so we don't have a sediment budget where  
23 we could look at it, okay, well, what's in fact  
24 immediate or how much materials would be lost due to  
25 these reservoirs.

1           And then maybe we could look upstream and see  
2 if we have the gravel and the spawning habitat to be  
3 able to maintain those or pass fish upstream.

4           So we're looking at localized conditions  
5 downstream, whether there's enough spawning habitat  
6 there. And, if not, maybe looking upstream at the  
7 reservoirs and see if the habitat is there available.

8           The total sediment budget would give us that  
9 information. Say, okay, so how much is being lost to  
10 the reservoirs, and how much energy, during the current  
11 flow conditions, how much of that material would be  
12 mobilized downstream and create new spawning habitats.  
13 And flood planes, as well.

14           MR. FOSTER: The study gets to the  
15 geomorphological state that the river, both upstream  
16 and downstream, has become with the presence of  
17 projects. At least to the quality of the habitat that  
18 we want to be able to have available for anadromous  
19 fish so they can get in, survive, get out, or get to  
20 where we can then perhaps pass them.

21           It goes directly to the type of information  
22 we need to understand so that we can make a better  
23 decision towards how we exercise our mandatory  
24 authority.

25           And that goes, again, to the availability of

1 spawning gravels, the availability of flood plane  
2 habitat. What, if anything, can be done to help  
3 restore some of that, those functions.

4 It may be that some things are so screwed up  
5 we can't restore it completely. Or it may take a long  
6 time to do that. But we won't know that if we don't  
7 try and find out about it.

8 CHAIRPERSON LIBERTY: Yeah, we have a  
9 question.

10 MR. VOGEL: Yeah, this Dave Vogel, natural  
11 resource scientist. I've been conducting studies on  
12 central valley rivers and streams for over 30 years.

13 And the Merced River, -- this discussion has  
14 taken place here, is probably the most studied in terms  
15 of this geomorphic character, than any other central  
16 valley river or stream.

17 Contrary to what everything I'm hearing,  
18 there's an enormous amount of information on the  
19 geomorphology of the Merced River. There have already  
20 been prior estimates of the loss of sediment, the  
21 estimates attributable to just gold dredging alone was  
22 7- to 14-million tons of coarse sediment.

23 Geoff Rabone mentioned earlier, there's a  
24 prior study that estimated the loss attributable solely  
25 to the gravel mining, or excuse me, the gold dredging

1 prior to the construction of the Merced River  
2 Hydroelectric Project, was 350 to 1350 times the annual  
3 bed lode from above the project.

4 The lower Merced River has been extensively  
5 mined. It's depleted. In many places it's scoured  
6 down to bedrock. There's deep pools. The area where  
7 salmon presently exist, about 35 percent of the river  
8 corridor is composed of in-channel gravel mining pits.  
9 Further downstream there's been enormous aggregate  
10 extraction.

11 So there's a huge amount of information out  
12 there. Surprisingly, I didn't see any of the comments  
13 referring to the 2002 Merced River Corridor Restoration  
14 Plan. That describes that in explicit detail. There's  
15 only one tiny reference to an appendix, in all the  
16 comments I've read so far.

17 CHAIRPERSON LIBERTY: Has all this  
18 information been provided? I mean, is it in the  
19 existing record?

20 MR. VOGEL: Yes.

21 MR. THOMPSON: Does it adequately estimate  
22 supplies from the Merced River Channel to the  
23 reservoir, to New Exchequer, to --

24 MR. VOGEL: It's more of an issue of what's  
25 left. There's almost nothing left in the river channel

1 downstream.

2 MR. THOMPSON: Well, I understand that. But  
3 I think the agencies want to understand how the dam now  
4 interrupts continued supply. I mean if they were  
5 mining all this gravel downstream, it got down there  
6 somehow in the past. Supplied from the river to the  
7 flood plane downstream.

8 So, I mean I think we've still got this issue  
9 of supply. And I think what I'm hearing is FERC is  
10 drawing a conclusion that based on these bathymetry  
11 studies, they did not speak to the 2002 restoration  
12 plan you're referring to, Dave. They refer to the  
13 existing bathymetry studies and say, based on those  
14 alone there's not an appreciable sediment storage,  
15 indicating there isn't an appreciable supply from the  
16 river.

17 I guess I need to have FERC explain a little  
18 more on that.

19 MR. BUHYOFF: Yeah, that's not true. I did  
20 indicate that there's an abundance of available  
21 information. Granted, I didn't feel there was a need  
22 to point out every study that they listed in the PAD  
23 that refers to this kind of information.

24 But that was a big point of deciding that  
25 this additional information wasn't needed. So simply

1 indicated that the bathymetry studies do indicate that,  
2 again, the project effect, the project action, that  
3 these studies aren't addressing the project action.

4 MR. THOMPSON: Is that bathymetry accurate  
5 enough to indicate the volume of sediments that are  
6 stored behind the dam?

7 I mean what I'm struggling with, I guess, is  
8 does FERC, are you asserting that there is information  
9 about the supply of coarse sediment and gravel  
10 downstream. That we know how much supply is coming  
11 down that river that is being trapped behind the dam.

12 MR. BUHYOFF: Again, I guess that gets to the  
13 baseline issue. I'm sorry --

14 MR. MARTIN: I'd like to -- U.S. Fish and  
15 Wildlife Service, project improvement sediment budgets  
16 for Sacramento River and the American River, the  
17 Stanislaus River is something that, you know, is  
18 needed. Not only to assess what the direct effects of  
19 the projects are for this purpose, but also the  
20 information that's needed to see and assess, you know,  
21 any potential restoration of those lower watersheds, as  
22 well as look at overall what the spawning habitat is  
23 for anadromous fish.

24 MR. DEIBEL: Well, let me just paint the  
25 picture I'm seeing right now. The channel's armored

1 downstream, correct? Or again, that's not, you know,  
2 new news, per se.

3 It --

4 MR. MARTIN: In sections where we have not  
5 done retroactive actions, yes.

6 MR. DEIBEL: Okay. So it's armored  
7 downstream. You have a relatively undisturbed channel  
8 upstream of New Exchequer. Most of it comes out of  
9 Yosemite and such, correct? There's not a lot of dams  
10 stopping the movement.

11 So the assumption is you have a -- it's in  
12 balance upstream. Do you need more information to  
13 inform you of whether to do a section 18 mandatory  
14 prescription to pass fish if you already know, based on  
15 it sounds like extensive studies and conclusions of  
16 armoring are not an unreasonable conclusion, and you  
17 have a natural functioning system upstream. You've got  
18 these studies that show there's a 100 miles of  
19 potential steelhead and Chinook, do you need a gravel  
20 mobility study downstream of Merced Falls to make that  
21 call?

22 MR. FOSTER: I think that we do because --  
23 and I would refer the panel to page 22 of an August  
24 31st filing that the conservation groups and the Fish  
25 and Game and we also endorsed. Regarding, you know,

1 their comments on the gravel sediment. But in the  
2 motility study, you know, we're not denying that  
3 studies weren't done down in there, but certain studies  
4 did not completely cover certain things that would be  
5 of value to us.

6 And I think that we also need to understand  
7 the types of, oh, the determination of sediment loads  
8 both quantitatively and qualitatively that are required  
9 to maintain or enhance good migratory fish and benthic  
10 organism habitats in the lower river. To see if that's  
11 even possible anymore, for one thing.

12 Because that goes directly to getting fish up  
13 into the vicinity of say, passage facility, or some  
14 passage program. Or goes to the information that we  
15 need to how we would exercise our conditioning.

16 There's just, you know, parts of the studies  
17 didn't consider, you know, increasing core sediment  
18 storage or reconstructing a channel, a portion say of  
19 the dredger channeling reach.

20 MR. DEIBEL: Where is that reach?

21 MR. FOSTER: Other things like that. I mean  
22 there's other options that one could do once you know  
23 the existing state and the actual budget that could  
24 potentially come in there. Not to mention the types of  
25 geomorphic processes that are going on upstream of the

1 project where we might want to pass fish.

2 MR. DEIBEL: But I guess what I'm struggling  
3 with, this targets gravel.

4 MR. FOSTER: Oh, the dredger channeling  
5 reach, I believe, is one of the reaches almost directly  
6 below, I think it's one of the first. They have names  
7 for these various reaches. I think that's one of the  
8 first ones downstream of Crocker Huffman Dam.

9 MR. DEIBEL: Okay, so would sediment plots  
10 transects that show D-84, D-50s downstream that are too  
11 large for salmon and steelhead spawning, would that be  
12 enough to make the call?

13 Because I guess what I'm struggling with here  
14 is to develop a gravel budget for downstream of the  
15 project that you want to pass the fish around, that's  
16 more tied to maybe beneficial uses downstream of the  
17 project, rather than passage.

18 MR. FOSTER: Well, it's actually both because  
19 we need to get fish, we need to establish a healthy  
20 dynamic migration corridor to get fish up in the  
21 vicinity, to get them into the Merced River and keep  
22 them alive while they're in there.

23 Not to mention that, you know, in some  
24 particular cases they may even be able to spawn and  
25 reproduce there as well as going upstream.

1                   But, again, with future potential global  
2 warming scenarios and water temperatures increasing,  
3 the better habitat is going to be higher up in  
4 elevation.

5                   And so we may still have to move fish  
6 upstream to better habitats. But, again, the quality  
7 of our migration corridor is important. And the  
8 connectivity of that.

9                   CHAIRPERSON LIBERTY: Matt, do you have a  
10 comment?

11                  MR. BUHYOFF: Again, I think that gets to the  
12 potential mitigation measures. I mean we're saying  
13 that the information does exist to identify which  
14 potential mitigation measures that would be something  
15 we can address as a measure, as a plan in the order.

16                  MR. DEIBEL: I guess, man, I'm confused now.  
17 It's because -- well, my experience in FERC  
18 proceedings, we've been advised to resolve things ahead  
19 of time so there aren't post-licensing plans.

20                  Now I'm hearing you that the advice of the  
21 Commission is to do post-licensing plans. I thought  
22 the intent of studies was to develop information to  
23 conduct an assessment, and to develop mitigation so you  
24 can have full disclosure during the time of the license  
25 order.

1                   So that's what I'm struggling with now. I  
2 mean, post-licensing plans, you know, we were told to  
3 stay away from.

4                   MR. BUHYOFF: I can't speak to greater FERC  
5 policy, but at the same time, you know, I mean, as I  
6 take it, our direction is to determine the effect of  
7 the project action.

8                   MR. DEIBEL: So how does staff develop  
9 mitigation measures. You punt to plants. I shouldn't  
10 say punt, you rely on plants?

11                   MR. BUHYOFF: I guess I --

12                   CHAIRPERSON LIBERTY: Jim, go ahead.

13                   MR. LYNCH: At least in my experience where  
14 the effects and the PM&E have not been finally  
15 determined, and for instance, we can do a great study  
16 that says this is what's to do with gravel. And then  
17 one of the agencies come in with a section 18 and  
18 change the whole thing. We go back out and have to re-  
19 do the entire PM&E.

20                   So it's kind of difficult on the more complex  
21 PM&Es until you know what the effects and what the PM&E  
22 is. Because the design of the measure, until you know  
23 what it is, it's hard to do it.

24                   That's not true in every case. But it is  
25 like temperature of withdrawal devices, until you know

1        what temperature you're trying to hit, where, how big  
2        the shutters have to be, do they have to be shutters,  
3        can they be a curtain.  Until you know all that, until  
4        that comes out at the end of having a licensee design  
5        it, you may be right and you may be wrong.

6                    And it's pretty expensive.

7                    MR. THOMPSON:  But we've asked FERC what is -  
8        - do you know what the existing supply of sediment is,  
9        and the answer was I do not know what it is.

10                   MR. LYNCH:  I think what you asked --

11                   MR. THOMPSON:  And the study is asking for  
12        that information.

13                   MR. LYNCH:  I think what you wanted was to  
14        have existing information so we could do a cumulative  
15        effects analysis basically, and I think the answer was  
16        yes.

17                   MR. THOMPSON:  No, I asked him if he knew how  
18        much sediment supply was coming down the river to --

19                   MR. LYNCH:  And we do, through the bathymetry  
20        studies we do.

21                   MR. THOMPSON:  -- and being retained behind  
22        the dam.

23                   MR. LYNCH:  And between the bathymetry  
24        studies, which were done, I think, two years ago, we  
25        do.  We have a very good estimate of that.  As good as

1       you're going to get.

2                   MR. THOMPSON: Well, let me --

3                   MR. FOSTER: And I think that the agencies,  
4       conservation groups, took into account existing study  
5       information when we designed this particular study to  
6       help fill in the gaps that some of the other studies  
7       may not have provided, to bring up more updated  
8       information.

9                   Because we need that type of information to  
10      identify the quality of the habitat that our anadromous  
11      fish are currently trying to survive in. In order to  
12      establish a quality, you know, migration corridor by  
13      which they could get to our passage facilities, or so  
14      that they could reproduce, you know, in that area, as  
15      well, if possible.

16                  MR. DEIBEL: Okay, I'll go back to my other  
17      question. Do you need to know the gravel budget or  
18      determine or enough sampling sites to say, yes, it is  
19      armored and there's not enough gravel there currently?

20                  I mean, if you're talking about restoring the  
21      whole geomorphic processes, I think this study didn't  
22      address that completely. So if you're talking about  
23      just assessing the current condition of the habitat,  
24      the habitat survey or -- pebble counts, whatever, to  
25      manage to show you that the sizes have become armored,

1 I don't know what the reference stream is here.

2 I'm assuming that upstream it starts  
3 changing; the river's made a change in gradient and  
4 stuff.

5 So if it's a gravel armoring issue, do you  
6 need more than -- do you need to know the gravel  
7 budget, or the validation that it's armored?

8 MR. MARTIN: We need -- the Fish and Wildlife  
9 Service has done a lot of restoration in the Merced  
10 River. What we need is an evaluation of the flows and  
11 the mobility and the energy of the river to make sure  
12 that the projects that we've designed, the existing  
13 projects right now that we're designing, and they're  
14 ongoing, are going to still be able to ecologically  
15 move and continue to have geomorphic process so we can  
16 design them as such.

17 So if the flows change, or if the license  
18 condition change the flows in the river, itself, and we  
19 don't have the sediment budget and the mobility study,  
20 and we don't know how those flows will impact current  
21 existing conditions in the river. And then, you know,  
22 we won't be able to say what the direct effects of  
23 those projects is going to be.

24 So, like I said, we have -- there's a lot of  
25 restoration projects that have been designed currently

1 in the river to augment flow, to augment gravel, I'm  
2 sorry, to augment gravel and to restore the flood  
3 plane.

4 So if the existing license conditions and  
5 flows change, we got to know how those are going to  
6 impact the flood plane; how they're going to impact  
7 habitat, how they're going to impact gravel mobility in  
8 those restored areas, as well as any other areas  
9 downstream of Crocker Huffman.

10 If we know that there's armoring, there is a  
11 lot of -- of the channel, the issue is obviously is  
12 whether or not, how much sediment we need downstream;  
13 what's being blocked by the dams, themselves; what are  
14 the direct effects of those.

15 And if there's any changes in the flow  
16 conditions, whether it be the compliance point or any  
17 other changes in the energy of the river, how that's  
18 going to impact downstream the current baseline  
19 conditions.

20 CHAIRPERSON LIBERTY: I think we've probably  
21 spent enough time on this particular study. I propose  
22 we move on to the next study. Perhaps we'll get  
23 through this one and then maybe take a short break.  
24 And then hopefully we can tackle the remaining studies  
25 by 5:00 or maybe we'll go a little over.

1 I guess the next study on our list is the  
2 upper river fish populations and habitat study, 3.1(a).

3 Again, I'd like to first kind of go to FERC  
4 to get a brief explanation of why the study was not  
5 conducted, specifically referencing, I guess, the study  
6 plan criteria.

7 MR. BUHYOFF: Again, our primary reasoning  
8 was that there's no proposal to introduce anadromous  
9 fish species in the project reservoirs currently.

10 There aren't any projects --

11 MR. THOMPSON: I can't hear you. Could you  
12 speak up a little bit?

13 MR. BUHYOFF: I apologize. There's no  
14 proposal to introduce fish species in the project  
15 reservoirs at this time.

16 There are no project structures upstream of  
17 Lake McClure, and therefore no structures that risk  
18 oppose entrainment.

19 Currently MID is not proposing any actions  
20 that would alter habitat parameters upstream of Lake  
21 McClure.

22 Finally, there are no known anadromous fish  
23 populations in the upper Merced River. And the  
24 information we collected in the reservoir fish  
25 populations will give us an assessment of what species

1 and assemblages exist in the project area.

2 CHAIRPERSON LIBERTY: Thank you. I guess  
3 we'll go to NMFS next, I guess, and get your thoughts  
4 on the particular study, or how you guys think you've  
5 met the study plan criteria.

6 MR. WANTUCK: I'd like to ask Matt, the  
7 reason why there are currently few, if any, anadromous  
8 fish in these project reaches is because the Commission  
9 issued a long-term license that extirpated them from  
10 the area.

11 So are you saying that in the relicensing  
12 phase, that unless there are fish or existing proposals  
13 to put fish above these dams or within the project,  
14 that you don't consider that? That there's no project  
15 nexus because we've survived say 45 years of  
16 extirpation that we're not looking toward the future  
17 with any hope of reestablishing these runs?

18 MR. BUHYOFF: No. We performed a NEPA  
19 analysis on the effects of the proposed project. And,  
20 again, this gets -- so we're analyzing the effects as  
21 this baseline. That is the projects currently exist in  
22 their current form. So we're analyzing the effects of  
23 relicensing.

24 Like I stated before, to my knowledge there  
25 are mechanisms that should there ever be anadromous

1 fish, or there ever, you know, be a reason to study  
2 that possibility, to my knowledge there's a mechanism  
3 that addresses that in all licenses.

4 MR. WANTUCK: And you are aware that on the  
5 record we have brought to the Commission's attention  
6 that NMFS has a draft recovery plan that speaks of the  
7 introduction of fish in the project areas?

8 MR. BUHYOFF: Yes.

9 MR. WANTUCK: So that would be a proposal to  
10 put fish within the project and above the project?

11 MR. BUHYOFF: It is -- as far as I know it's  
12 not MID's proposal.

13 MR. WANTUCK: So the proposal has to  
14 originate from the licensee to actually voluntarily do  
15 this?

16 MR. BUHYOFF: I'm not sure.

17 MR. WANTUCK: Okay.

18 CHAIRPERSON LIBERTY: Fish and Wildlife  
19 Service, you guys have anything to add?

20 MR. MARTIN: For section 18 authority and  
21 project nexus, I have not been aware of any project  
22 where you have not done a upper project population  
23 study, downstream from the project, a study or a haz  
24 assessment. I mean that's needed for a section 18  
25 prescription.

1                   You have to first establish what the baseline  
2                   is before you could evaluate what the direct effects  
3                   are going to be.

4                   So, again, if you don't know what the habitat  
5                   is upstream of McClure or McSwain Dam, we won't be able  
6                   to assess how we can exercise our authority.

7                   MR. WANTUCK: Just for the record, it is  
8                   NMFS' intention to explore these upper habitats, both  
9                   their historical and current potential for the express  
10                  purpose of trying to decide whether or not to invoke a  
11                  section 18 prescription at the appropriate point in the  
12                  process.

13                  MR. DEIBEL: If you've got -- I don't know  
14                  the motivation of that for the source, when you say  
15                  there's X miles of steelhead, X miles of spring  
16                  Chinook. If that was the historical habitat or  
17                  whatever's behind that, is that sufficient to say that  
18                  if we put fish up there, that there's adequate habitat?

19                  I mean why would you assume that if that's  
20                  the range of them, are there other factors? Did the  
21                  gold mining occur up there and such? I don't know.  
22                  So.

23                  MR. WANTUCK: That's the information that we  
24                  have to this point. The reason why we would ask for  
25                  additional study would be to determine the current

1 status in more detail, the habitat conditions that  
2 exist up there.

3 We'd want to take another hard look at the  
4 hydrology, you know, that support anadromous fish.  
5 Whether it is supportive, and to what degree. And all  
6 the other habitat conditions that are up there.

7 This map that you're holding, Bob, has been  
8 generated from a modeling assessment. But it was based  
9 on Yoshiama's landmark study of habitat conditions in  
10 the central valley.

11 So, I guess what this means to us is this is  
12 the state of our knowledge at this point. We believe  
13 that be -- to do a proven job in our decision of making  
14 a section 18 authority, we need to do further  
15 investigation of that habitat potential upstream.

16 It's a very very important aspect. As I  
17 pointed out earlier, we have asked in our fish passage  
18 study to look at the potential of putting fish over  
19 Crocker Huffman and Merced Falls into the project,  
20 what's the potential there.

21 And then now we're looking at the possibility  
22 of transporting fish above Lake McClure, what's the  
23 potential there.

24 And we need to balance these potentials, I  
25 guess you'd say, and come up with do we want to do

1 either, just one, or both.

2 CHAIRPERSON LIBERTY: Water Board, do you  
3 guys want to weigh in with anything?

4 DR. WATTS: Well, I just wanted to also point  
5 out that in the scoping document that they  
6 -- I guess it was scoping document two, that they  
7 acknowledge impacts on habitat fragmentation as one of  
8 the issues that needs to be addressed. And this is a  
9 study that would address that.

10 MR. ROBBINS: I did have a comment I think  
11 that needs to be made here, particularly with respect  
12 to this study.

13 The watershed of the Merced River is the  
14 Yosemite National Park, both the main stem and the  
15 south fork. And both the main stem and the south fork  
16 are also wild and scenic, essentially undisturbed,  
17 rivers.

18 That habitat is whatever it is. And the  
19 project does certainly not have any impact on that with  
20 potential exception of the allegations that anadromous  
21 fish previously inhabited that area.

22 But, again, that is a matter of fish passage.  
23 Once again, I just call the panel's attention to the  
24 prescription of fishways relative to fish passage, and  
25 since there aren't anadromous fish bumping their noses

1 on these dams, that's not an issue we have here.

2 I've also heard a reference to spring run  
3 reintroductions. And that should not be part of your  
4 consideration because the federal law actually exempts,  
5 prohibits FERC from considering spring run on the San  
6 Joaquin River until after 2027. That's the San Joaquin  
7 River Restoration Act.

8 MR. MARTIN: That's only above the Merced  
9 River confluence where that's exempted.

10 MR. ROBBINS: No, it's the whole system. You  
11 actually look at --

12 CHAIRPERSON LIBERTY: I think we're kind of  
13 getting off on a tangent here. I'm not sure a lot of  
14 this information is relevant to what we, as a panel,  
15 need.

16 Bob and Larry, do you guys have any more  
17 questions?

18 MR. WANTUCK: Can I ask the panel to  
19 recognize Dr. Martin for a moment?

20 DR. MARTIN: Very short.

21 CHAIRPERSON LIBERTY: Go ahead.

22 DR. MARTIN: In addition to -- Michael  
23 Martin. In addition to the discussion about the future  
24 anadromous modifications that might occur, the baseline  
25 is the current condition in Lake McClure.

1                   Lake McClure contains rainbow trout,  
2                   anadromous or nonanadromous; it contains  
3                   Chinook salmon, anadromous or nonanadromous. And those  
4                   are questions. And it contains kokanees.

5                   These fish interact amongst themselves and  
6                   with warm water fishes. And so there is a life history  
7                   in the lake that causes effects upon the existing  
8                   population.

9                   Secondly, we don't know the genetic makeup of  
10                  those fish in the upper river. Are they anadromous or  
11                  are they resident, nobody knows, because nobody's  
12                  studied that.

13                  So the existent current conditions in the  
14                  lake control -- lake levels controlled by the project,  
15                  will affect the success of reproduction of those fish.  
16                  Can they get into the upper stream, can they not.  
17                  That's the baseline.

18                  Then when you go to the next stage and start  
19                  introducing other anadromous fish, getting them around  
20                  the project, reconnectedness, is the habitat suitability  
21                  available; do they know the temperature, refugia,  
22                  global warming, NMFS planning. Global warming is going  
23                  to change the upper river dramatically. And is there  
24                  competition amongst the fish.

25                  And those questions needs to be answered if

1       you're going to manage it.

2                   CHAIRPERSON LIBERTY: Thank you. I think we  
3 probably need a little break here, maybe 10-, 15-minute  
4 break. And then we'll reconvene. I don't know what  
5 time it is. Meet up again at five past three.

6                   (Brief recess.)

7                   MR. DEIBEL: Quick question for Matt, the  
8 trooper. This letter dated November 16, 2009, from  
9 Fish and Game, it ties back to Fish and Game Code. Do  
10 you know if this constitutes a comprehensive plan?

11                   Under FERC's definition this letter that says  
12 they want to pass fish past Crocker Huffman, is this  
13 something that FERC considers a comprehensive plan?

14                   MR. BUHYOFF: I'm sorry, I'm not aware.

15                   MR. DEIBEL: You don't know if they do or  
16 not?

17                   MR. BUHYOFF: No.

18                   MR. DEIBEL: Okay.

19                   MR. LYNCH: If I could, comprehensive plans  
20 have to be filed with FERC, and then they're put on the  
21 comprehensive list that's on FERC's site.

22                   MR. RABONE: There's a list.

23                   MR. LYNCH: Yeah, there's a specific list.  
24 The qualifying comprehensive plan list.

25                   MS. KEMPTON: Obviously that would have had

1 time to (inaudible).

2 (Parties speaking simultaneously.)

3 MR. DEIBEL: Right. Has the state filed the  
4 Fish and Game Code, I mean, or your beneficial uses  
5 qualifications, is that filed at FERC, do you know?

6 DR. WATTS: Beneficial uses are.

7 MR. LYNCH: The basin plan is filed with  
8 FERC.

9 MR. DEIBEL: The basin plan is filed with  
10 FERC.

11 MR. FOSTER: There's a steelhead recovery  
12 plan that's on file with FERC that the state put  
13 together, I believe. The California Department of Fish  
14 and Game, I think, and other have filed that --

15 MR. LYNCH: So the thing's a 1983 document,  
16 as I recall.

17 MR. DEIBEL: Okay.

18 CHAIRPERSON LIBERTY: We still have five or  
19 six more studies to go through. Seems like a lot of  
20 the stuff is kind of getting redundant, however. And  
21 I'm not sure really how else to approach these studies.

22 We still need to kind of go through each and  
23 every one. I'm not sure if we'll hear anything  
24 groundbreaking from here on out. Seems like  
25 everybody's kind of stated what they have to say. And,

1       again, it's just, you know, not a lot of new  
2       information.

3                   But at the same time, I guess we could  
4       probably make an effort to try to go through and touch  
5       one each and every one of these studies that we have  
6       remaining here today.

7                   So, I think we had left off with the anadromy  
8       salmonid habitat. I'm not sure, I think we kind of  
9       know why FERC has not adopted some of these studies.  
10      I'm not sure we have to go back --

11                   MR. BUHYOFF: Actually, I --

12                   CHAIRPERSON LIBERTY: -- go ahead, Matt.

13                   MR. BUHYOFF: -- I'd like to speak to that  
14      actually. I think the several studies we have listed,  
15      the anadromous fish passage study, anadromy salmonid  
16      habitat study, salmonid -- I have them all listed on  
17      the study plan determination on page 13. We grouped  
18      them together.

19                   Admittedly, these studies were difficult  
20      because they really, they center around flow below  
21      Crocker Huffman. And, you know, this is definitely one  
22      of the more difficult aspects to try to get our head  
23      around.

24                   And I think, you know, we're still discussing  
25      whether we should address these in a kind of more step-

1 wise manner.

2 But I can give you the basic logic behind  
3 what we did. Was just based upon information in the  
4 PAD, if you do a basic water balance of the system.  
5 See that on average there's about a million acrefeet of  
6 inflow into the project reservoirs.

7 And correct me if I'm wrong, there's -- you  
8 have a fall carryover target of about 500,000 acrefeet  
9 dependent. And that's largely set by the Bureau of  
10 Reclamation for --

11 MR. ROBBINS: I didn't correct that. The  
12 actual maximum carryover is 675. It's set by the Army  
13 Corps of Engineers.

14 MR. BUHYOFF: Oh, excuse me, Army Corps.

15 MR. ROBBINS: It averages about 450.

16 MR. BUHYOFF: For flood control purposes.  
17 And then your consumptive deliveries, that is the water  
18 irrigation part of your demands, are about 500,000  
19 acrefeet. Which, again, per year, doesn't leave you  
20 with a lot of water operationally to play with, once  
21 you get below Crocker Huffman.

22 At least, again, this is kind of our  
23 understanding. So I think, you know, it wasn't  
24 explicitly stated in our determination, but we're very  
25 concerned about how the studies can inform the license

1 requirements.

2           And, you know, I think just basically looking  
3 at the basic water balance, our thinking was that with  
4 the operations model and development, that it would be  
5 first important to determine exactly what are your  
6 operational parameters before you can do assessments  
7 based upon flow-related parameters below Crocker  
8 Huffman.

9           Because, again, it's not that we don't  
10 believe there are effects below Crocker Huffman. We  
11 just believe that, you know, obviously they're  
12 confounded by the irrigation nature of MID.

13           And so we have to make sure that the studies  
14 we're performing can provide data that will inform  
15 license requirements on the project, not the irrigation  
16 project.

17           So, you know, our thought was, you know, it's  
18 important to determine what's the range of possible  
19 parameters based upon operations, the output of the  
20 operation models. You know, instead of performing some  
21 flow-related study where, you know, you're performing  
22 with a variable that can't possibly be exercised  
23 through FERC.

24           So, you know, again that's something we're  
25 looking at. I think, you know, that's something that

1 we didn't explicitly state, that, you know, one could  
2 lead into the other in terms of, you know, determining  
3 first your parameters, and then determining what's, you  
4 know, once you determine what FERC controls, you can  
5 determine, you know, how to study that.

6 MR. WANTUCK: A question to Matt.

7 CHAIRPERSON LIBERTY: Sorry, Bob, go ahead.

8 MR. DEIBEL: I was just saying, so, Matt, are  
9 you saying that if the operational study shows  
10 something may be different that you believe, or that  
11 you've assumed when you've reviewed these studies, that  
12 might trigger additional studies?

13 MR. BUHYOFF: Yes.

14 MR. DEIBEL: But that wasn't explicitly clear  
15 in this?

16 MR. BUHYOFF: Correct. And that's what I'm  
17 saying.

18 MR. DEIBEL: Is there a way to follow up,  
19 say, after the panel recommendation and then the  
20 Director's ultimate disposition of the panel's  
21 recommendation, to clarify some of that?

22 Could you clarify that if it shows that this  
23 effect is at X percent, or something, or there is a  
24 link, then these studies will be --

25 MR. BUHYOFF: Yeah, absolutely.

1 MR. DEIBEL: Okay.

2 MR. WANTUCK: And I have a question of you,  
3 Matt. Maybe, Larry, you could page up one time back to  
4 that?

5 MR. THOMPSON: Sure.

6 MR. WANTUCK: This is something I guess we  
7 talked a little bit about this morning, but I really  
8 need to understand it a little bit better.

9 Study criteria 5 of section 5.9(b). It says  
10 explain any nexus between the project operations and  
11 effects. And then in parentheses says, direct,  
12 indirect and/or cumulative -- the study. And if I'm  
13 reading this basis of conclusion correctly, you're only  
14 citing direct effects.

15 So is it our understanding now that FERC does  
16 not take into account anything other than direct  
17 effects? And ignores indirect and cumulative effects?

18 MR. BUHYOFF: No. I believe that we stated  
19 all along that we examined cumulative effects below  
20 Crocker Huffman.

21 CHAIRPERSON LIBERTY: I thought I'd read that  
22 in the study plan determination. It seemed like  
23 everybody had acknowledged there was some indirect or  
24 cumulative effects downstream of Crocker Huffman Dam.  
25 I thought I had seen that in the study plan

1 determination. I mean correct me if I'm wrong, Matt, I  
2 thought I had seen that in there. I guess --

3 MR. WANTUCK: I'm assuming that this slide is  
4 not correct, then, is that right? The basis of the  
5 conclusion, on the record.

6 MR. BUHYOFF: Right. And, again, I think  
7 that's what I was getting to and what I was talking  
8 about earlier. Is, you know, it's -- that reasoning,  
9 especially at it appears there, is probably overstated.

10 In fact, you know, going back over this, I  
11 think a lot of it was really just more a typographical  
12 error, because I would list study criterion number 5,  
13 which is -- it's really two different things. It's a  
14 nexus and how the study results would inform the  
15 development of license requirements.

16 And, you know, it's my mistake. I think I  
17 listed them both, when, you know, nexus might not  
18 actually apply, when I actually meant that I didn't  
19 believe that the study informed the development of  
20 license requirements.

21 MR. THOMPSON: But I think what NMFS is  
22 asking is that it appears that you placed this on page  
23 13 under studies not adopted. And underneath,  
24 discussion of fish passage study, the study we're  
25 talking about now, anadromous salmonid habitat, et

1 cetera.

2 And you're saying, I think, that this study  
3 cannot inform FERC or the relicensing participants  
4 about the direct effects of the project.

5 And what we're asking is that seems to be a  
6 point you're making to say I'm not going to adopt this  
7 study. But, the regulations say that you also need to  
8 consider indirect and cumulative effects.

9 If you say you're going to do that, why is  
10 this listed repeatedly throughout the document as a  
11 basis for rejecting a study that's proposed?

12 MR. BUHYOFF: Yeah, you know, I understand.  
13 You know, I guess if I could rephrase the document now  
14 to make it more representative of the point we were  
15 trying to get across.

16 It was more that, you know, again we have  
17 to -- just trying to focus discussions on the analysis  
18 of project effects. And understand that we have -- we  
19 don't exert control at Crocker Huffman, and that's --  
20 it was just an important --

21 CHAIRPERSON LIBERTY: I just kind of --  
22 sorry, go ahead, Matt.

23 MR. BUHYOFF: Oh, no, I'm --

24 CHAIRPERSON LIBERTY: I think this kind of  
25 brings up a good point. It seems like from the panel's

1 perspective, as we've gone back through some of these  
2 studies, it seems to me that we've encountered kind of  
3 two problems, or I guess two areas that had they been  
4 done a little bit differently perhaps could have made  
5 our jobs a little bit easier.

6 The first being FERC needing to perhaps do a  
7 better job in the study plan determination, spelling  
8 out exactly why it is they're not adopting whole  
9 studies or portions of the studies.

10 And also, that being said, I think the  
11 agencies, perhaps, have to do a better job of  
12 describing exactly what it is they are or are not  
13 disputing.

14 I mean, having no knowledge of this project,  
15 and all three of us kind of coming to this blind, it  
16 kind of made our jobs difficult, to say the least, to  
17 try to really flesh out these issues and try to  
18 understand where everybody was, kind of where everyone  
19 sat on these particular issues. It just made our jobs  
20 difficult.

21 That's something we've kind of talked about,  
22 and it seems like we keep, you know, account of this as  
23 we go through the studies. But just something to keep  
24 in mind, I guess, for later on --

25 MR. WANTUCK: Could I make a comment? You

1       said the agencies could have done a better job on  
2       exactly what they're disputing.

3                   CHAIRPERSON LIBERTY: Well, for instance, the  
4       first one that comes to mind is the Water Board's  
5       letter. I mean, still that is unclear to me when you  
6       go back through, you read the second half of that  
7       letter, and there is five or six studies that are just  
8       bulleted.

9                   And to me that isn't a good enough job of  
10      telling us, okay, maybe you are or are not formally  
11      disputing those studies. But if you are, I think the  
12      agencies, or in this case the Water Board, has to do a  
13      better job of specifically stating, you know, why it is  
14      they're disputing these particular studies.

15                  And, you know, point to the study plan  
16      criteria. FERC says, you know, that it meets study  
17      plan criteria 5. Then, you know, it would have been  
18      nice to have seen the Water Board come back and say,  
19      hey, here's study plan criteria 5, we believe that we  
20      have met this because of X, Y and Z.

21                  And that's just one instance. I mean, it's  
22      something we've come across going back through the  
23      filings, and it's just kind of made our lives a little  
24      bit difficult.

25                  MR. WANTUCK: But I'd like to point out, at

1 least from NMFS' standpoint, that we have participated  
2 in the ILP process since its outset.

3 We went through the rounds of scoping and  
4 made what we believe to be a strong case that the scope  
5 of the project affects down through the San Joaquin  
6 River to the delta. FERC adopted that and endorsed  
7 that view.

8 And it was astounding to us to then see that  
9 the package of studies that we feel are necessary for  
10 anadromous fish were rejected wholesale. On the face  
11 of it that seems like FERC has contradicted itself.

12 MR. FOSTER: Those studies were designed as a  
13 package collaboratively by, you know, many parties.

14 CHAIRPERSON LIBERTY: Right.

15 MR. FOSTER: And they're trying to get at  
16 examining what the direct, indirect and cumulative  
17 effects of the projects are. Focusing, from our point  
18 of view, information that would help us exercise our  
19 section 18 authority; information that would help us  
20 develop PM&E measures later on; information that would  
21 help us prescribe terms and conditions, as well as  
22 information that would inform our ESA consultations and  
23 biological opinions, which, you know, right now is like  
24 three, four years away still.

25 MR. DEIBEL: Well, I'll just -- I mean one

1        thing that clearly -- I mean I agree with what Aaron  
2        says. I mean there wasn't, you know, there could have  
3        been some better specificity on some of the pushbacks.

4  
5                    But I also, I mean I'm struggling with this  
6        informing on license requirements. I had that  
7        discussion with Matt earlier. But one of the, you  
8        know, -- one of the things, there's that little do-loop  
9        in this process between studies and the NEPA document,  
10       called a trial-type hearing, mandatory conditioning  
11       agencies, the federal agencies have to defend  
12       something.

13                    And what's of interest is if, let's say fish  
14       do pass over Crocker Huffman, or this Fish and Game  
15       letter becomes reality, and these anadromous fish  
16       studies are done. If it's determined that the studies  
17       are okay, and one of the section 18 agencies prescribe  
18       section 18, I guess I could envision a world, you know,  
19       maybe in the abstract, where the licensee would say,  
20       wait, you don't have enough information to justify  
21       that. Yet they ask for the question.

22                    And so this becomes the really tough part,  
23       and it doesn't appear to me that FERC is administering  
24       that in that context.

25                    And so when I see the ILP regulations saying

1       necessary to inform license requirements, that's beyond  
2       just assessing effects.

3               And so I'm, you know, I'm struggling with  
4       that right now, on how some of these do that. And,  
5       I've, you know, taken a broader view on how it informs  
6       folks.

7               So, you know, that's what I think we were  
8       trying to get at with some of these questions.

9               MR. RABONE: Well, in a trial-type hearing,  
10       following your train of thought, how are the agencies  
11       going to justify claiming jurisdiction on species that  
12       are not present in the project area?

13               You know, dancing around the issue of  
14       nonjurisdictional intervening projects and barriers,  
15       you know. That's all going to come out in a trial-type  
16       hearing, as well.

17               And, you know, we're being very legalistic on  
18       trying to address direct, indirect and cumulative. But  
19       when it comes to jurisdiction we're just kind of  
20       closing our eyes.

21               MR. DEIBEL: But a trial-type hearing's on  
22       facts, not jurisdiction. And clearly, if this, you  
23       know, I could --

24               MR. RABONE: Facts like presence of species.

25               MR. DEIBEL: Well, --

1 MR. RABONE: Presence or absence.

2 MR. DEIBEL: -- I said, you know, in the  
3 abstract or not abstract, that assuming a fish got up  
4 there, in the absence of some of this information,  
5 that, you know, maybe the, you know, what if the  
6 director wrote in their response saying, okay,  
7 anadromous fish don't exist there, but should they ever  
8 show up at the base of Merced Falls and the agencies,  
9 you know, clearly have section 18 authority, does that  
10 then -- it comes to the question I asked earlier, does  
11 that then trigger, under the ILP, a second round of  
12 studies.

13 MR. RABONE: No, that's a standard re-opener  
14 in any license, that if conditions change. That's why  
15 the agencies would reserve their authority. So if  
16 conditions would change to reflect that changed  
17 condition, --

18 MR. DEIBEL: But under the current --

19 MR. RABONE: -- they would reopen the  
20 license.

21 MR. DEIBEL: -- process, the current process,  
22 it sounds like, you know, we're in what, year one,  
23 right, of the ILP?

24 MR. SPEAKER: No, year two.

25 MR. DEIBEL: We're in year two. It takes

1 about five years, as I understand it. So, if this  
2 biological opinion comes in and it's new information,  
3 they re-initiate consultation would occur under the  
4 current ILP. And it wouldn't be a reopener of the  
5 current license or the future license, whatever.

6 So that's why I asked the question. At what  
7 point in the process does it automatically trigger a  
8 second season of studies.

9 MR. ROBBINS: We certainly share the  
10 conundrum. And I'll tell you, everyone in the room  
11 knows that we are, in fact, conducting anadromous  
12 fishery studies. We're doing them below Crocker  
13 Huffman. But we're doing them for other proceedings  
14 that are ongoing. Just like we're doing other water  
15 quality things for other proceedings.

16 California is moving forward on so many  
17 fronts relative to water, which our project finds  
18 itself, that trying to figure out what's going to  
19 happen when and where, and in what jurisdiction, and on  
20 what level of investigation, there's no question it's a  
21 conundrum.

22 I can only offer our discussion on this point  
23 has been that before the final license is issued if a  
24 basic condition under consideration has changed, our  
25 guess is that FERC would, in fact, cause us to go

1       revisit that and simply extend the process.

2                   I know that's, you know, sort of the death  
3 knell for the ILP. No one wants to hear that. But,  
4 you know, as this process works itself out, what other  
5 alternatives are there?

6                   MR. DEIBEL: Well, could you see these groups  
7 -- I guess one question, you know, it sounds like, you  
8 know, what Matt said in opening up this late afternoon  
9 session.

10                   He said that, you know, there could be some  
11 things that could trigger. Could folks sit down, these  
12 parties, and say what would those triggers be to -- you  
13 know, we've got to go off and we've got to write  
14 immediately. But in between there's like 20, 25 days  
15 or something before the director will issue, you know,  
16 the final dispensation of this study dispute.

17                   Could folks sit down and say define what  
18 those triggers are. And say, okay, if the water  
19 temperature model shows this, then that path goes no  
20 new additional information needed for this.

21                   If the gravel study shows that, you know,  
22 that it's armored, then we will -- you know. Are there  
23 ramps that you guys, as a group, agree on that you can  
24 come in and then inform them to get to the Director,  
25 you know?

1                   Because that's what it sounds like. It  
2 sounds like FERC's going to struggle with this.  
3 Clearly folks in this room are struggling -- I know I'm  
4 struggling with that. So is that something folks could  
5 try to get in --

6                   MR. FOSTER: The problem, as I see it, in  
7 addition to needing this information to make a better  
8 informed mandatory conditioning authority decision,  
9 it's the only real practical opportunity in this two-  
10 year window to gather information on project effects  
11 that we would then use to help perhaps condition, you  
12 know, the current license.

13                   And we are, you know, my agency is vested in  
14 trying to recover and protect, you know, species in  
15 that river. And the extent of the information that we  
16 have available at the time when, for instance, we have  
17 to consult under, you know, the Endangered Species Act  
18 and provide biological opinions, will depend on the  
19 quality of information we have. We have to be  
20 conservative.

21                   And I think Erin could probably give a little  
22 more detail than me in this. But it would seem to me  
23 that both in that process and in the Water Board 401  
24 certification process, as well as the actual, you know,  
25 biological opinions that go along with that, that

1           unfortunately comes rather late in the process.

2                       And there's frequently, you know, it's going  
3           to potentially impact and point to what the project --  
4           how the project affects the species of concern.

5                       And if there's issues or conditions or  
6           processes within that are prescribed, for instance, for  
7           the project, or terms and conditions to help benefit  
8           the species, then that helps, you know, alleviate,  
9           mitigate for the project's effects.

10                      And the more, you know, mitigation or other,  
11           you know, things that help save the species that the  
12           project can do, or that's in the conditions of the  
13           license, the less likely there is to have a, you know,  
14           biological opinion that, you know, holds up the actual  
15           issuance of the license.

16                      MR. DEIBEL: Yeah, I probably misspoke. I  
17           should have said the recovery plan that sounds like  
18           it's in draft. So I mean that's earlier in the  
19           process.

20                      MR. FOSTER: I mean there will be a recovery  
21           plan.

22                      MR. DEIBEL: Right.

23                      MR. FOSTER: That's true. The goal --

24                      MR. DEIBEL: I just throw that out there is  
25           if folks can agree on a trigger on some of these

1 studies.

2 MR. FOSTER: I'm just concerned that, you  
3 know, two, three years from now we'll have whatever  
4 information we have. And if we don't have enough  
5 adequate information we still have to rule to  
6 conservatively protect the species that we're trusted  
7 to protect.

8 And that may mean terms and conditions that,  
9 you know, could be harder for FERC to deal with.

10 MR. THOMPSON: And those won't just be  
11 section 18 --

12 MR. FOSTER: They won't just be section 18.

13 MR. THOMPSON: Right.

14 MR. FOSTER: Section 18, you know, a  
15 reasonable section 18 prescription could potentially go  
16 a long way towards helping recovery of the species and  
17 mitigating project effects.

18 And then, of course, is also going to feed  
19 information into the 401 water quality certification  
20 process, which is also required.

21 Of course, FERC can always decide not to  
22 issue a license. But, you know, that's -- they are the  
23 ones that have to decide if they have enough  
24 information to do that.

25 But agencies, such as ours, us, you know,

1 NOAA, we have to decide. And we decide what type of  
2 information we need for our ESA consultation and for  
3 our section 18 authority decisions.

4 MR. THOMPSON: Well, can I ask FERC, the NEPA  
5 analysis is going to require that you -- well, for NEPA  
6 you've scoped cumulative effects down to the delta for  
7 T&E species. So in your NEPA document you'll have a  
8 T&E evaluation section.

9 But you have rejected many studies that would  
10 affect T&E species down there, like water temperature,  
11 water quality, gravel, et cetera.

12 Will you have enough information to do your  
13 NEPA document? Do you feel you have sufficient  
14 existing information halting the studies at Crocker  
15 Huffman Dam, when you have identified the scoping T&E  
16 species that need to be assessed, down to the delta?

17 MR. BUHYOFF: I mean we, of course we felt  
18 like we had suitable information, given the wealth of  
19 information that's available, in conjunction with the  
20 studies that are going to be conducted.

21 MR. THOMPSON: Well, to add to what Aaron  
22 said earlier about the determination that you guys have  
23 issued, I've got to add then I think, you know,  
24 obviously we've all looked through binders and binders  
25 of information here. And your determination is 30

1 pages long, total.

2 And in that 30 pages you evaluated 16 studies  
3 and gave us your rationale for failing to adopt 16 of  
4 them. And it just seems like that is not a very  
5 complete analysis.

6 And it seems to me, also, that if FERC  
7 identifies that there is existing information that's  
8 out there that's sufficient, that you should at least  
9 identify what it is. Or state why you think what is  
10 out there is sufficient for your later analysis.

11 And I think that is -- I'll just kind of  
12 second what Aaron said earlier, I think it goes to the  
13 other side, as well. I think the agencies, in our  
14 dispute letters, could probably do some more cutting  
15 and pasting from our earlier documents. And make sure  
16 that we lay out very clearly what we're disputing and  
17 what our authorities are. And how we are providing  
18 nexus and give examples of license conditions that  
19 could potentially come of the study to answer some of  
20 these questions.

21 But I really think FERC, really, the burden  
22 is on you when you make a determination on someone  
23 else's study plan, you need to do it more thoroughly  
24 than you are right now.

25 I'm sorry I have to say that, but I think

1 that's just the fact.

2 CHAIRPERSON LIBERTY: You guys ready to move  
3 on to the next study? I think our next one is the  
4 anadromous conservation hatchery, study 3.3, I believe,  
5 unless I've gotten out of order here.

6 MR. RABONE: Aaron, there's just one more  
7 point. Before the FERC issues their ready-for-analysis  
8 order, in other words, before they pull that trigger  
9 that they're really going to do their independent  
10 analysis, they will request additional studies one more  
11 time at that point, which will be a year or two from  
12 now, right?

13 CHAIRPERSON LIBERTY: Yes.

14 MR. RABONE: So this is not your last chance,  
15 this is a process.

16 CHAIRPERSON LIBERTY: Thank you. Anadromous  
17 conservation hatchery. I actually don't have a whole  
18 lot of questions again on this study. I think it's  
19 pretty clear where FERC stands on this. Matt said it  
20 earlier. FERC views it as a PM&E measure, and  
21 therefore they're not -- they don't support this  
22 particular study.

23 And, again, I guess I'd like to direct my  
24 question to the agencies, specifically. And I'd just  
25 like to get some feedback from you guys on how this

1 study is attempting to assess project-related effects.

2

3 I guess I had a hard time reading through the  
4 goals and objectives of this study, and seeing how this  
5 particular study would really try to nail down project-  
6 related effects. So, start with NMFS, if you like.

7 MR. FOSTER: Well, again, this is another  
8 piece of the information that we need to help exercise  
9 our authority. And it -- the study, you know, under  
10 section.

11 It did propose existing facilities for  
12 possible re-use, the feasibility of that. The  
13 feasibility of constructing new facilities. The  
14 feasibility of Merced River steelhead trout  
15 supplementation; environmental compliance evaluation.  
16 And developing of, you know, a hatchery management  
17 plan.

18 And the concept here is that this is a  
19 feasibility, should it be necessary to potentially  
20 prescribe something, or to move fish up in the upper  
21 watershed, or to get a better understanding of the  
22 genetics of steelhead. It may be necessary to aid them  
23 in the -- by developing a conservation hatchery.

24 And, again, this is, you know, one of, you  
25 know, many possible scenarios that could be done to

1 help recover the species.

2 It's completely different from say any type  
3 of other existing hatchery. It's very strict protocol,  
4 you know, methods in order to try and, you know,  
5 propagate the species that you want to save basically.

6 And more importantly, it may involve  
7 potentially, you know, finding -- make analysis of  
8 species in the upper watershed. And then, you know,  
9 developing a stock to then be used.

10 But the point is it's a feasibility study.  
11 And the reason we might need it for section 18  
12 authority decisions is because that may be part of a  
13 potential prescription, or some aspect of that.

14 MR. DEIBEL: So you're -- is that a new  
15 construct of section 18, a hatchery?

16 MR. FOSTER: You know, the conservation  
17 hatchery concept is just another means of trying to  
18 protect a species where there are very low numbers,  
19 you're not sure of their vitality, you know. They  
20 struggling to survive, as it is.

21 And so if it's done in a correct genetically  
22 managed focused way, you can actually, you know, help  
23 the species recover from that point. It's actually a  
24 rather drastic measure, because at that point you have  
25 few fish that you're actually finding to use. And so

1 they have to propagate them in that sense.

2 But it is a concept that's, you know, viable,  
3 you know, methodology.

4 MR. DEIBEL: Has the state ever prescribed a  
5 hatchery under 401?

6 DR. WATTS: Well, I think we've prescribed  
7 stocking in water bodies and things, but I --

8 MR. DEIBEL: Under 401?

9 MR. ROSE: I believe so. I'm not  
10 sure --

11 MR. ROBBINS: Why don't you research that for  
12 us.

13 MR. SPEAKER: I think we need to see that.

14 (Laughter.)

15 MR. WANTUCK: Well, I'd like to comment that  
16 a conservation hatchery, in my view, would fall under  
17 the definition of a physical structure facility or  
18 device necessary to maintain all the life stages of  
19 such fish and project operations. And measures related  
20 to such structures, facilities or devices, which are  
21 necessary to insure effectiveness of these facilities  
22 or such fish.

23 The reason why we would go that far in these  
24 instances is because of the status of the species.  
25 Steelhead are a threatened species, which means they

1 are likely to become endangered in the foreseeable  
2 future. There's not that many of them. They need  
3 assistance for recovery.

4 Similarly, Chinook are a species of concern  
5 and in low abundance. So, we see this as a tool to use  
6 in conjunction with fish, other fish facilities, to  
7 assure the effectiveness of the fish passage  
8 prescription.

9 MR. FOSTER: And they're also used for,  
10 again, preserving critical, threatened genetic stocks  
11 to provide root stock or planning stocks, or  
12 introducing expatriated species.

13 And one example that's been sited in the past  
14 is, for instance, is Pyramid Lake in Nevada, was  
15 repopulated for the particular species of trout.

16 Again, we want to add all the options  
17 available to you, you know, when you're considering  
18 doing this. So that's why it's just another kind of  
19 proposal to do that. To assess what, you know, --

20 And it's definitely relevant because our goal  
21 is to, you know, recover steelhead. We have a goal to,  
22 you know, move them up higher into the watershed, as  
23 well.

24 CHAIRPERSON LIBERTY: I guess the next two  
25 studies on my list are anadromous fish passage, which

1 we kind of already addressed, I guess, via the  
2 anadromous fish passage facility study.

3 I'm not sure the panel needs to go back and  
4 revisit those two studies.

5 MR. DEIBEL: Just really quick on that, it's  
6 not --

7 CHAIRPERSON LIBERTY: Okay.

8 MR. DEIBEL: -- to dig into it. You've made  
9 the case, or you're making the case that all these  
10 studies are intended to inform and provide this body of  
11 evidence on whether to go/no-go on section 18.

12 What is different about this specific study  
13 that's independent of this whole body of work, the  
14 gravel study, the water temperature study, the channel  
15 morphology study? Isn't that the whole intent of those  
16 studies, to come up with a body of evidence to choose  
17 to go with a section 18 or not?

18 MR. FOSTER: This particular -- the fish  
19 passage study was originally designed to like kind of  
20 develop assessment models, to assess fish passage  
21 conditions, interactions and available upstream  
22 spawning habitat, perhaps. The feasibility options for  
23 upstream and downstream fish passage.

24 It kind of goes a lot -- hand in hand with  
25 the facility study, because the facility study is

1 getting at more the engineering facility processes,  
2 that sort of thing.

3           Whereas the actual, you know, the other  
4 study, the fish passage one, goes to, you know, what  
5 migration barriers are there coming up out of the  
6 reservoirs, upstream, things that, you know, other, you  
7 know, how the facilities -- fish passage facilities  
8 could function within the, you know, the project or  
9 upstream of the project. That sort of thing.

10           MR. MARTIN: Some of these models would kind  
11 of give us production estimates of the current habitat  
12 available upstream of these dams.

13           So if you prescribe passage, you know, what  
14 are going to be your gains in the whole population.  
15 Just kind of add to that.

16           MR. THOMPSON: So if somebody were to ask you  
17 how many fish do you want to pass, you'd have some idea  
18 --

19           MR. MARTIN: And I'd just add that how many  
20 fish are going to be produced, juvenile-wise, from that  
21 number of fish passed upstream. And what's the  
22 survival of those all the way down into the -- below  
23 the projects.

24           MR. WANTUCK: I would add to that my view of  
25 a conservation hatchery is not simply to reproduce and

1 propagate the fish. It allows for management of the  
2 resource by virtue of the physical facility.

3 And, again, in the situation where fish are  
4 in very low abundance, a facility like this may be  
5 necessary for the management of the fish passage  
6 prescription to make it successful.

7 CHAIRPERSON LIBERTY: I think we have three  
8 left. Is that possible? Two left? Three left.

9 Next study up is the salmonid flood plane  
10 rearing study. Get my notes straight here; I did have  
11 a few questions on that.

12 I guess I'd like to direct my first question  
13 to, again, the agencies. And I guess I would like a  
14 little -- I apologize, I know some of these questions  
15 I'm asking are redundant, but, again, help me explain  
16 how conducting this study would relate to the need for  
17 fish passage at New Exchequer or McSwain Dam.

18 MR. FOSTER: Well, again, both of these  
19 studies go to the quality of the operation of corridor  
20 habitat and/or existing spawning and rearing habitat  
21 that exists in the lower river.

22 Flood plane habitat availability is, there's  
23 a strong correlation between juvenile survival and  
24 escapement when there's a high availability of flood  
25 plane habitat.

1           It helps produce more food. It gives them  
2 more cover. It helps them get, you know, bigger,  
3 faster, in which case they can have a better chance to  
4 escape. And then hopefully come back next year or two,  
5 whenever, you know, they come back.

6           But the point of the flood plane habitat  
7 rearing study is to, you know, examine what does it  
8 take to actually re-establish flood plane habitat.

9           And, again, you can use some of the other  
10 information from the geomorphology type studies and the  
11 flow modeling studies to get an idea of, you know, what  
12 flow do we have to even create that.

13           As an example, in the Oroville Project, we  
14 realized that, okay, the river had incised quite a bit,  
15 but we could reconnect flood plane habitat by, you  
16 know, essentially digging down the gravel barriers and  
17 allowing the river to reflood those areas.

18           And in the Chinook salmon viability studies  
19 is, again, you got enough flow, adequate flow in the  
20 river, that's going to equate with perhaps better  
21 gravel lossages -- a better egg survivability, which,  
22 you know, is rather crucial for them to survive.

23           So, again, both of those go to quality of  
24 habitat in a migration corridor manner that would help  
25 us make a decision on section 18 authority.

1 DR. WATTS: And I think that --

2 MR. DEIBEL: Go ahead.

3 DR. WATTS: -- it would also provide us with  
4 information about the flows required to maximize the  
5 habitat value for different life stages, since part of  
6 our management mandate is to protect the beneficial  
7 uses, which includes all of the state fish -- all the  
8 life stages, including spawning and migration in that  
9 lower part of the river.

10 MR. DEIBEL: And that's independent of the  
11 flow habitat study that we have --

12 DR. WATTS: Well, I mean I guess there's some  
13 -- I don't know if there may be some overlap with this.  
14 But it's a similar rationale for why this is important  
15 for us to --

16 MR. DEIBEL: Again, just throwing this  
17 hypothetically in terms of if you did a PHABSIM study  
18 or a habitat flow relationship study that covered the  
19 range of flows, that addresses over-bank flooding and  
20 rearing in the margin, would that -- could the two  
21 studies be potentially melded?

22 DR. WATTS: Yeah, it has to do with the  
23 timing, too, the right time of year. I'm not sure.

24 MR. DEIBEL: You could target --

25 DR. WATTS: Potentially.

1 MR. DEIBEL: -- the, you know, -- right.

2 Again, that's not, it's just for folks --

3 DR. WATTS: Yeah, yeah, --

4 MR. DEIBEL: -- it's not a decision, it's not  
5 a recommendation. I'm just throwing that out there for  
6 discussion.

7 DR. WATTS: Yeah, well, that would be  
8 something to discuss.

9 CHAIRPERSON LIBERTY: Go ahead.

10 MR. VOGEL: Dave Vogel. Other than the issue  
11 we don't understand how that relates to section 18.

12 Point out in this study, and this is  
13 perplexing to me, to do the study would require killing  
14 up to 21,600 salmon. Now, I've been trapping salmon on  
15 the Merced River for the last 11 years. That equates  
16 to every single salmon we've captured in our fish traps  
17 over the last four years.

18 You know, we can't do that. And I don't  
19 understand how the three fish agencies thoroughly  
20 endorse that. I've never heard of that.

21 MR. DEIBEL: Why would that kill them, Dave?

22 MR. VOGEL: Food habit study.

23 My section 10 permit that just expired, I'm  
24 only allowed to kill one steelhead. If I kill two  
25 steelhead the project shuts down.

1 (Parties speaking simultaneously.)

2 MR. DEIBEL: The second report --

3 MR. VOGEL: I kill one it shuts down.

4 (Laughter.)

5 MR. VOGEL: That's true. Good point.

6 MR. DEIBEL: The second report -- right?

7 (Parties speaking simultaneously.)

8 MR. WANTUCK: David, that information --

9 MR. VOGEL: Pardon?

10 MR. WANTUCK: Would you repeat the numbers of  
11 fish they're saying --

12 MR. VOGEL: Yeah, it's out of your study  
13 plan. It was to kill up to 5400 salmon over a four-  
14 year period, which comes out to 21,600 fish.

15 MR. ROBBINS: I mean it's easy to understand  
16 how that happens because many of the studies that are  
17 proposed are sort of being crafted or re-adapted from  
18 the Northwest or other places where that might be  
19 viable. But on the Merced it's just not.

20 MR. WANTUCK: And this is one element of the  
21 flood plane rearing study, right? It's not the entire  
22 study.

23 MR. VOGEL: Well, there's other issues. For  
24 example, it calls for extension of the rotary screw  
25 trap period. Like I say, we've been doing this for 11

1 years. If you want to extend the rotary screw trap  
2 period, you're into water temperatures in the summer.

3 We've already empirically adequately  
4 demonstrated, there are no fish present there at that  
5 time.

6 MR. DEIBEL: I recall reading in one of the  
7 documents, again I don't remember much of these, but I  
8 think, Jim, you mentioned there's existing studies or  
9 information where they release Chinook or steelhead at  
10 different flow regimes out there.

11 Is the scope of that effort -- Dave, so the  
12 scope of that effort, is that enough that an agency  
13 could take, based on these results, here's the  
14 relationship and flow X looks like the magic flow?

15 Is it detailed enough to say that it's  
16 adequate to make a call? Because presumably the flow  
17 ties to the survivability of the fish throughout that  
18 corridor from Crocker Huffman down.

19 MR. VOGEL: That's an excellent question.  
20 Because Fish and Game and Merced ID recognized over 15  
21 years ago, because of the severely degraded physical  
22 habitat of standard IFIM, can't give you that answer.

23 There has already been two, three, perhaps  
24 four IFIM studies conducted in the lower Merced River.  
25 They're sitting on the shelf, gathering dust, for a

1 very good reason. You can't do anything with them.  
2 Because of the dredger tailings, the mining pits, the  
3 encroached channel by levees.

4 And so Fish and Game and Merced embarked on a  
5 different approach, which is an excellent approach, by  
6 studying the actual relationships between flow and fish  
7 survival.

8 Since 1994 Merced ID and Fish and Game, in a  
9 cooperative program, have released over 5 million clear  
10 white tag salmon in replicates of 100 fish in the upper  
11 river in groups of 25,000 individually coded wire  
12 tags --

13 MR. DEIBEL: Upper river --

14 MR. VOGEL: Excuse me, just downstream of  
15 Crocker Huffman Dam. And 75,000, again in 25,000  
16 groups, under different flow regimes over the last 14  
17 years.

18 Huge amount of excellent empirical data just  
19 to get at what you're describing.

20 MR. DEIBEL: Is that data, is that something  
21 that folks could -- did the parties who are proceeding  
22 could use to make a flow call?

23 MR. VOGEL: Absolutely.

24 MR. DEIBEL: I mean, have the other agencies  
25 looked at this data or information?

1                   MR. HEYNE: Well, the only thing, and Dave's  
2 right about the --

3                   MR. DEIBEL: Could you say who you are? I'm  
4 sorry.

5                   MR. HEYNE: Oh, sorry, my name's Tim Heyne  
6 with the Department of Food and Ag. The only -- what  
7 Dave said basically was true about the coded wire tag  
8 studies, as we refer to them.

9                   The problem there is that it does evaluate  
10 how fish that are ready to migrate survive through the  
11 river system under different flows. Does not assess  
12 how they're utilizing the flood plane. And it does not  
13 address the issue of how fish smaller than the smolt  
14 size utilize or need that for, you know, like he said,  
15 food studies, et cetera.

16                   And generally, and this is mostly been a  
17 discussion between Fish and Game and Fish and Wildlife  
18 Service, were generally viewing on the river system in  
19 the San Joaquin, and it's probably true in the  
20 Sacramento River system, the most significant data gap  
21 in the system is understanding the young fish and the  
22 relationship they have to flood planes. And what their  
23 life history has -- what life history strategies they  
24 have that utilize those systems that were available  
25 under, you know, essentially a system the world as they

1 evolved, which does not exist anymore. They do not  
2 have those large flows in the springtime.

3 And so that's, I mean that's where a lot of  
4 the study plan came from. I think, if I remember right  
5 in this process, this was actually proposed by Carl  
6 (inaudible) initially, and developed among the  
7 agencies. And that's been an ongoing discussion in the  
8 flood plane issues.

9 MR. VOGEL: You know, have to really  
10 emphasize this. The discussion on flood plane in a  
11 natural river system is not the Merced River. You  
12 really need to look at the 2002 Merced River Corridor  
13 Plan.

14 That has some excellent graphics. It talks  
15 about physical habitat restoration measures to pull  
16 back levees, to pull back the dredger fields, to  
17 reconfigure these mining pits, to reestablish the flood  
18 plane.

19 I agree, the flood plane's important, but it  
20 doesn't exist in the fashion that is the traditional  
21 sense you think for the Merced River. It's a  
22 radically, I mean I can't -- I have to put bold letters  
23 on it -- a radically altered physical ecosystem. You  
24 need to look at the Merced River Corridor Plan.

25 MR. HEYNE: So, Dave, you don't feel the

1 three miles above highway 59 have flood plane habitat?

2 MR. VOGEL: Well, the problem is a lot of it  
3 gets dumped into the mining pits where they're eaten by  
4 predators.

5 That's the other point, too, is that there  
6 are massive multi-million-dollar restoration projects  
7 that have recently been implemented, are ongoing and  
8 soon to be planned to try to reconfigure the geomorphic  
9 character of the Merced River.

10 And one of the ones he's talking about is one  
11 of the brand new ones. It hasn't gotten an  
12 equilibrium, though. It's good for salmon spawning,  
13 but it's a biological desert for juvenile fish right  
14 now.

15 MR. THOMPSON: But when we have high flow  
16 years where we have water up on that impaired flood  
17 plane, and then you count two or three years later, you  
18 get pretty good returns.

19 And whether it's due to the flood plane  
20 inundation solely or not is unclear. But there are a  
21 lot of conclusions drawn about this impaired flood  
22 plane that may not be true.

23 MR. DEIBEL: Is that the degradation or the  
24 current status of the channel is the reason that you  
25 say the three to four PHABSIM studies are just sitting

1 collecting dust?

2 MR. VOGEL: It's that, and there's a whole  
3 host of other reasons. There are better ways. You  
4 don't have to do a standard PHABSIM or IFIM study to  
5 give you a flow setting standard. There are other  
6 techniques of doing that.

7 And we believe, we've taken a much more  
8 practical powerful empirical approach.

9 MR. DEIBEL: Have the other agencies reviewed  
10 this coded wire tagging flow release study to see if  
11 that would meet your needs?

12 MR. VOGEL: They've recommended it.

13 MR. MARTIN: Yeah, we've looked at some of  
14 the back studies and some juvenile survival studies in  
15 the past. But still, I mean, there's still the returns  
16 collected from the coded wire tags. I mean it's  
17 minimal. The number of fish that we get returned from,  
18 that survive, is very minimal.

19 So it's very hard empirically to be able to  
20 analyze that information.

21 MR. DEIBEL: Do they check for coded wire  
22 tags at the delta pumps?

23 MR. VOGEL: Yes. There are whole host of  
24 studies further down in the delta trying to get at this  
25 problem with salmon survival. The delta's a big black

1 hole.

2 MR. DEIBEL: So is there a tie-back to this  
3 study to say that we released 500,000 fish and 400,000  
4 end up headed towards Los Angeles or something?

5 (Laughter.)

6 MR. VOGEL: In part, yes.

7 MR. DEIBEL: I mean is that data available?

8 MR. VOGEL: Yes.

9 MR. MARTIN: It is, but again because of the  
10 statistics involved and the numbers, recaptures  
11 involved, it's very minimal, so it's very hard to be  
12 able to tease out and do any analysis with.

13 And that's why right now the fact that the  
14 Fish and Wildlife Service are doing more specific  
15 hydroacoustic studies --

16 MR. DEIBEL: And what's the --

17 MR. MARTIN: Vernalis --

18 MR. DEIBEL: -- vernalis.

19 (Parties speaking simultaneously.)

20 MR. MARTIN: Right now they're doing some  
21 hydroacoustic studies to try to evaluate survival down  
22 in the delta. But for this proceeding, we're trying to  
23 direct project nexus to flows and conditions in the  
24 Merced River.

25 And so we don't have the energy, the way the

1 direct effects of the project do not provide the  
2 energy, efficient energy, to move any, period, -- the  
3 condition of the flows from the dams.

4 MR. DEIBEL: And is the scope of this study  
5 below Shaffer Bridge?

6 MR. FOSTER: I think --

7 MR. MARTIN: It's below Crocker Huffman, but  
8 up from Merced Falls. I mean, -- from Merced Falls all  
9 the way down to the confluence with the San Joaquin.

10 MR. FOSTER: I'd like to ask Dr. Martin, who,  
11 you know, has a lot of local knowledge of the river and  
12 helped develop these studies, too. I think he has  
13 something he'd like to say.

14 DR. MARTIN: Just a question and -- a  
15 clarifying question. The studies that have been done,  
16 this is directed to Tim, have been solely on fall-run  
17 Chinook salmon, if I'm not mistaken. And this study  
18 would expand into another species, O.Mykiss possibly.  
19 Is that true?

20 MR. HEYNE: That's correct. That's the plan,  
21 although you know, O.Mykiss presents a problem due to  
22 low numbers.

23 MR. VOGEL: I have to speak of the O.Mykiss,  
24 as well. The other study, anadromy habitat also  
25 requires killing O.Mykiss to get the otoliths, which I

1 don't believe NMFS would give us a permit to do so.

2 DR. MARTIN: I would point out, Dave, that  
3 the Department of Fish and Game has done surveys in  
4 conjunction with federal fisheries agencies on the  
5 Merced and other rivers, the San Joaquin.

6 MR. VOGEL: Prior to the listing of  
7 steelhead.

8 DR. MARTIN: Prior to the listing of  
9 steelhead.

10 MR. VOGEL: Right.

11 CHAIRPERSON LIBERTY: We'll take one more  
12 comment or question --

13 MR. JOHNSON: This is Brian Johnson from  
14 Trout Unlimited. And another question for the state,  
15 the Water Board and Fish and Game.

16 What are the other -- my understanding is  
17 that along with studies on steelhead, one of the other  
18 differences between the studies proposed and the  
19 existing studies was the existing studies tended to  
20 evaluate habitat at the flows that the project is  
21 currently operated.

22 And some of the studies proposed would  
23 prescribe a series of other flows to evaluate these  
24 conditions, and that that was something that was  
25 different.

1                   But perhaps Fish and Game or NOAA could tell  
2 us exactly which ones those are. They're in our  
3 filing, the conservation group filings, if you wanted  
4 to look.

5                   CHAIRPERSON LIBERTY: Thank you. We'll  
6 definitely take a look at those.

7                   I think this is probably a good segue into  
8 the PHABSIM study. I guess my first question, I'd like  
9 to lead off with FERC. Just get, again, a little  
10 explanation why FERC decided not to adopt this study.

11                   Again, I know this is pretty redundant, but -  
12 -

13                   MR. BUHYOFF: Yeah, I think I mentioned in  
14 the beginning regarding flow-related studies, we're  
15 looking more towards a phased approach where it would  
16 be sensible to first determine what your operating  
17 parameters are under a FERC license below Crocker  
18 Huffman.

19                   MR. DEIBEL: Did you address whether a flow  
20 habitat study was needed below Merced Falls and Crocker  
21 Huffman, or just below Crocker Huffman?

22                   MR. BUHYOFF: No, we didn't. Just below  
23 Crocker Huffman, I believe.

24                   MR. DEIBEL: So do you have enough  
25 information to look at the effects of alternative flow

1 scenarios below Merced Falls and Crocker Huffman?

2 MR. BUHYOFF: That is something I think that  
3 we believe we're considering doing in conjunction with  
4 Merced Falls for licensing

5 MR. DEIBEL: Okay. I mean, because that does  
6 -- it does make this process a little difficult.  
7 Because we're looking at one, FERC's considering two,  
8 and they're obviously not completely independent  
9 efforts. So.

10 So, I'm not sure, as a panel, how to take  
11 this. FERC's thinking about doing one --

12 CHAIRPERSON LIBERTY: I have no idea what to  
13 do, to be quite honest.

14 (Laughter.)

15 MR. MARTIN: I want to add to that that in  
16 the --

17 CHAIRPERSON LIBERTY: I'm at a complete loss.

18 MR. MARTIN: I want to add to that, Bob, you  
19 said that even though they're not being considered by  
20 FERC, but the licensees do consider them independent.  
21 At least from what their filings dictate.

22 CHAIRPERSON LIBERTY: Jim, go ahead.

23 MR. LYNCH: I'd say that's true to a degree.  
24 But when we discussed cumulative effects we actually  
25 are looking at doing data gathering between Merced

1 Falls and Crocker Huffman. Because we recognize at  
2 times the flows released by the project exceed the  
3 ability of Merced Falls to handle. Then we get to  
4 Crocker Huffman that flow's pretty much gone out of the  
5 system.

6 But we are looking at that, so, even though  
7 we didn't join the relicensings, the studies do  
8 overlap.

9 By the way, most times that Crocker Huffman  
10 backs up, it's about a mile of river between the two.  
11 And it's usually pretty fast --

12 MR. DEIBEL: So the amount of free-flowing --  
13 it's not --

14 MR. LYNCH: It's about a mile --

15 MR. DEIBEL: -- free-flowing.

16 MR. LYNCH: -- in that three-mile reach it's  
17 about a mile.

18 MR. DEIBEL: -- flowing water between Merced  
19 Falls and the impoundment at Crocker Huffman is about a  
20 mile?

21 MR. LYNCH: About a mile.

22 MR. VOGEL: Mile and a half.

23 MR. SHUTES: During irrigation season.

24 MR. SPEAKER: No, --

25 MR. SHUTES: All year?

1 (Parties speaking simultaneously.)

2 MR. SPEAKER: It's year-round.

3 THE REPORTER: You'll have to come to a mic;  
4 I can't really see who's talking back there.

5 MR. SHUTES: Clarifying question, Chris  
6 Shutes, CSPA. Is that true all year long, or is that  
7 true only during irrigation season?

8 MR. LYNCH: It's pretty much true all -- this  
9 is Jim Lynch -- all year long because Crocker Huffman  
10 stays high. So it backs up the same amount of water  
11 regardless. It backs up a little bit more when it's  
12 higher, obviously.

13 MR. SPEAKER: Over the top release -- all we  
14 got.

15 MR. LYNCH: It's about a mile and a half.

16 MR. DEIBEL: Would folks see value, would the  
17 parties see value in conducting some sort of flow  
18 habitat study downstream of Merced Falls to Crocker  
19 Huffman? Would that be informative?

20 DR. WATTS: You mean only that?

21 MR. DEIBEL: I'm sorry?

22 DR. WATTS: Are you saying just that  
23 segment --

24 MR. DEIBEL: Yeah, in lieu of --

25 DR. WATTS: -- and not the rest of --

1 MR. DEIBEL: -- going downstream.

2 DR. WATTS: Well, that in combination with  
3 the lower river --

4 MR. SPEAKER: Not in lieu of.

5 MR. VOGEL: Yeah, I don't believe you've seen  
6 the study. Perhaps you've heard of it, but I applied  
7 for a grant through CalFed working on behalf of the  
8 state and federal agencies to do a feasibility analysis  
9 of reintroduction of anadromous fish upstream of  
10 Crocker Huffman.

11 In that three-mile reach from Merced Falls  
12 down to Crocker Huffman, I mean -- years of research, I  
13 think it's like a \$160,000 study, extremely detailed  
14 habitat surveys were reconducted in that reach there.

15 And that's available to you if you want it.

16 MR. THOMPSON: You concluded that the habitat  
17 was suitable, is that correct?

18 MR. VOGEL: You have to read the report,  
19 because it's a big thick report. It's --

20 MR. THOMPSON: I have, but it's been awhile.

21 MR. VOGEL: Okay. Yeah, it's a mixed bag.  
22 In some areas, perhaps; other areas, not. There's some  
23 opportunities and constraints, as well. So.

24 MR. THOMPSON: I mean a mile and a half isn't  
25 -- doesn't seem like a lot of habitat. But when you

1 consider what is downstream of there, with where the  
2 flows are not full flow like they would be up there.  
3 And so you may have a very limited amount of steelhead  
4 habitat downstream of the dam at Crocker Huffman. And  
5 getting a mile and a half above may not sound like a  
6 lot, but it may be appreciable at that point.

7 MR. LYNCH: Just one last comment on it,  
8 again with the idea of that information, that type of a  
9 study, would advance section 18 prescription.

10 Any study, on its own merit, sounds  
11 attractive. When you figure what am I going to do with  
12 it, then you start saying criteria 7. Is there  
13 something as good out there at a lot less price, things  
14 like that. That's why criteria 7 is pretty important.

15 MR. THOMPSON: Well, when you do it wouldn't  
16 you weigh then, if you have let's say outside of a  
17 licensing you had fish passage or steelhead occur over  
18 Crocker Huffman, wouldn't you weigh how well that  
19 worked, how good that habitat was in your section 18  
20 decision?

21 MR. LYNCH: I think it would be an excellent  
22 question to ask PG&E.

23 MR. THOMPSON: Well, they don't have the  
24 authority. But the agencies that have the section 18  
25 authority --

1 MR. LYNCH: Absolutely.

2 MR. THOMPSON: Do you want to weigh in?

3 MR. FOSTER: Well, the history -- study, as  
4 it's proposed, is a way to try and get some sort of  
5 estimate what type of available habitat might be  
6 available based on what the variable amounts of flows  
7 might be available.

8 It may, you know, -- it's another way of  
9 quantifying what potential habitat downstream there  
10 might be. It's not something that one can, you know,  
11 it's a modeling exercise. It's not something that you  
12 can hang your entire, you know, prescription on, or  
13 terms and conditions on.

14 You have to take into account other factors  
15 like, you know, what are the temperatures that might go  
16 along with those flows; what the seasonality aspects of  
17 that. Is it even possible to, you know, utilize, a  
18 flow/habitat relationship.

19 But it is still information that's standardly  
20 collected on these projects. And it's information that  
21 we're used to seeing, to having available at least to  
22 consider when we make any sort of decision, including  
23 our section 18 mandatory conditioning authority.

24 And that applies to wherever it's done in the  
25 system. It's an obvious tool that's, you know, well

1       understood. And only by conducting it are we going to  
2       be able to tell, in comparing it with the other  
3       information in the package of studies, are we going to  
4       be able to tell how, you know, completely useful it is  
5       in the end.

6                But I think if we don't ask for it, if we  
7       don't try and, you know, assess that, or, you know,  
8       come up with information that's equivalent to it, we  
9       won't have that information.

10               MR. DEIBEL: But clearly the state would use  
11       a study such as that under 401.

12               DR. WATTS: Yes. It's important to recognize  
13       that the beneficial uses it implies water quality and  
14       quantity for the protection of beneficial uses. So, we  
15       certainly have reasons to collect that sort of  
16       information.

17               MR. MARTIN: Or else for -- Fish and Wildlife  
18       Service, Ramon Martin -- the nexus obviously whether  
19       the conditions change from the  
20       -- compliance conditions change from the Shaffer Bridge  
21       upstream, and how we're going to evaluate the flows  
22       downstream of that.

23               But relative to our authority, section 18  
24       authority, is to try to determine the maximum usable  
25       area, or the maximum habitat available under those

1 changes of potential flow conditions. And see if  
2 that's going to support the population downstream of  
3 Crocker Huffman, or the other Merced Falls Project, or  
4 McSwain Dam.

5 And whether or not -- prescribed fish passage  
6 upstream of those to make more habitat available for  
7 these fish. So that's how we would use that  
8 information.

9 MR. FOSTER: And in addition, it goes to  
10 again assessing, you know, existing habitat and a  
11 migration corridor habitat. Another factor that can be  
12 put into that analysis.

13 MR. DEIBEL: Okay, so does FERC Staff have --  
14 if this study is not supported, or the Director doesn't  
15 support the PHABSIM study, does FERC Staff have enough  
16 information to tie to the project operations modeling  
17 study to assess changes to fish habitat characteristics  
18 downstream to Shaffer Bridge?

19 MR. BUHYOFF: You know, in my review of the  
20 existing information it sounds like there's a lot of  
21 information regarding flow and habitat characteristics.

22

23 That being said, I do advocate the phased  
24 approach, really trying to get at how do project  
25 effects correlate below Crocker Huffman. You know,

1       what are your range of operating parameters.

2               And then determining if any of that  
3       information could be used.

4               MR. DEIBEL:  Could the study you referenced,  
5       Dave Vogel, after this flow operations modeling study  
6       is completed, could that be integrated into that, and  
7       say, oh, it's at the high end of smolt production, low  
8       end of smolt production?

9               MR. VOGEL:  That was the whole intent of the  
10       ten-year studies between Fish and Game and Merced ID.  
11       When all the study results were done, Fish and Game and  
12       Merced ID were going to sit down and were going to  
13       discuss a flow regime during the fall.

14               For example, we have experimental pulse  
15       flows, depending on the timing or magnitude, to attract  
16       fish in the river.  We have the spawning flows that  
17       Fish and Game has been monitoring, the spawning  
18       population, since the 1950s.

19               They have information on egg viability  
20       already at the hatchery.  We have the huge project is  
21       the VAMP flows and the pulse flows in the spring.  I  
22       mean that's always been, for the last say five to ten  
23       years, the big mantra is to try to figure out how we  
24       can improve salmon survival through these springtime  
25       pulse flows.

1                   Now, summertime flows for steelhead is a  
2 whole different issue, because, you know, allegedly  
3 there's one steelhead that's ever been found in the  
4 Merced River. So that's never really -- to be frank,  
5 that's never been a focus of the research.

6                   MR. DEIBEL: So was that study just targeting  
7 pulse flows? Because I have not seen it, but I mean,  
8 other rearing folks, because it sounds like -- I've  
9 forgotten your name, I'm sorry.

10                  MR. HEYNE: Tim Heyne.

11                  MR. DEIBEL: Tim Heyne. It sounds like it  
12 focused on the out-migrants, the smolts. Was that  
13 study just on pulse flows to get them out, or was it  
14 tied to rearing in the river --

15                  MR. VOGEL: It's mostly on smolt pulse flows.

16                  MR. MARTIN: Smolt -- you know, salmon only.

17                  MR. DEIBEL: Right.

18                  MR. WANTUCK: I'd like to ask, is it true  
19 that this ten-year study, which was entered into by an  
20 MOU between the District and Fish and Game, is it true  
21 that many or most of those studies were never  
22 completed, or have yet to be completed?

23                  MR. VOGEL: Yeah, that's true. It's still  
24 got a couple more years to go. Sometimes we've had  
25 occasions where we can't get, or we didn't get permits.

1

2                   Right now we're at a big roadblock with your  
3 agency. We can't get a section 10 permit to continue  
4 the studies.

5

6                   We've had opportunities to try to apply for  
7 grant requests to CalFed and the Anadromous Fish  
8 Restoration Program. Those studies were denied because  
9 the Merced River is considered low priority.

10

11                   There's a whole host of reasons, that's just  
12 a few of them.

13

14                   MR. HEYNE: This is Tim Heyne again. I see  
15 it a little different than Dave, although to some  
16 degree the same.

17

18                   My assessment was we've done about half of  
19 them. And part of the reason why that's true is that  
20 some of the studies were standard ones that were  
21 already ongoing. So, for instance, one of them is to  
22 track spawning escapements. Well, that was sort of a  
23 done deal in a sense.

24

25                   So, I looked through them. About half of  
26 them have been performed, or in the process of being  
27 performed. But some pretty significant  
28 ones --

29

30                   MR. WANTUCK: Just suggesting that the  
31 studies that are in question here presumably need to be

1 done in a timeframe that could inform license  
2 decisions. And at this point, many or most of these  
3 outside studies have not been accomplished.

4 MR. RABONE: And we also didn't get funding,  
5 as anticipated, from Department of Fish and Game, but  
6 I've gone before our board and received approval and  
7 funding, and it is budgeted, to complete those studies  
8 in the next two years, if we can get our permits and  
9 get our people in the river.

10 MR. WANTUCK: Is it the District's position  
11 that the government should pay for all these studies in  
12 the course of gathering information for --

13 MR. RABONE: If it's a part of an MOU --

14 MR. WANTUCK: -- a private FERC relicensing  
15 process?

16 CHAIRPERSON LIBERTY: Jim, go ahead.

17 MR. LYNCH: I just want to bring us back  
18 again to the section 18, at least, with NMFS and Fish  
19 and Wildlife Service, bring back the need for the  
20 information to advance section 18 prescriptions.

21 CHAIRPERSON LIBERTY: Yeah, I think we're  
22 definitely starting to get off topic here. I think we,  
23 as a panel, have concluded kind of our study-specific  
24 questions for today. I know I'm pretty tired.

25 But like I said earlier, those folks sitting

1 on the edges here, they've been very patient. So I  
2 guess I'd kind of like to open it up to those folks, if  
3 anybody has any comments regarding some of the things  
4 you've talked about today.

5 Like I said, I'd like to open it up to them  
6 at this point. Of course, if there's nothing that  
7 would be all right with us, too.

8 MR. SHUTES: Well, I'll take a stab at a few  
9 things. Chris Shutes, CSPA.

10 A lot's gone on today. Chris Shutes,  
11 California Sportfishing Protection Alliance. A lot's  
12 gone on today. And we can't get to, you know, I can't  
13 even begin to sort of resume everything that's going  
14 through my mind.

15 It does strike me that there's a few basic  
16 over-arching things that we'd like to point out, sort  
17 of going not only to what's happening here, but kind of  
18 as a matter of policy on how FERC deals with some of  
19 these issues.

20 One is that mostly what we've dealt with is  
21 that these studies that have been proposed by the  
22 agencies and by some of the conservation groups, have  
23 been refused basically on a programmatic basis.

24 And so some of the discussions that have sort  
25 of been tentatively entered into today about whether

1 this is reasonable or that's reasonable, and whether  
2 there's a problem with this study or that study, those  
3 discussions were never had in the process of the  
4 relicensing.

5 Because the idea they'd actually even be  
6 considered to be done was never really on the table.  
7 And that's really been one of the problems with the  
8 process.

9 So what we're left with is dealing with a  
10 study plan determination, and some sort of basic over-  
11 arching issues that didn't allow us to get to that  
12 point of discussing specifics.

13 MR. THOMPSON: Chris, can I interrupt, just  
14 ask a quick question --

15 MR. SHUTES: Yes.

16 MR. THOMPSON: -- that I think is relevant  
17 there. How much participation in this study  
18 development process did you have from the FERC Staff?

19 I think you were involved in a lot of the  
20 studies on -- excuse me, the meetings on study design.  
21 The ILP is set up for, reportedly for early and  
22 continued involvement by FERC in the process.

23 Did you have FERC Staff involved in the study  
24 plan process so that you sort of had input from them  
25 along the road, not just the study planning process,

1 and then a determination that kind of clubbed you over  
2 the head later.

3 MR. SHUTES: I think on some occasions Matt  
4 was on the phone. On several occasions he was present  
5 physically. My recollection was that mostly the  
6 presence was during the scoping and some of those other  
7 stages.

8 But I haven't been at all the relicensing  
9 meetings, myself, so I can't really state --

10 MR. THOMPSON: Well, Matt, maybe I should ask  
11 you that, just if you could throw in. Did you -- do  
12 you think FERC had adequate involvement in the study  
13 development process to understand? As I've said, I  
14 think your study determination's a little thin. It's  
15 20 pages. It's 20 pages or so and evaluates 16  
16 studies. And yea or nay on them.

17 So, do you believe that you guys were  
18 involved adequately in the process as it went through?  
19 I mean I think it speaks to Chris' point that he stated  
20 these studies seem to be refused on a programmatic  
21 basis, not on a study-by-study investigation or  
22 evaluation. That's the contention.

23 MR. BUHYOFF: I don't see how this relates to  
24 study criterion. I --

25 CHAIRPERSON LIBERTY: Yeah, I'm afraid I do

1 have to agree with Matt. I mean, all this stuff is  
2 well and good, and I mean if you have comments, you  
3 know, regarding how the process has worked to date, I  
4 mean this is all stuff that would be good to file into  
5 the record.

6 But I guess, unless any of this stuff would  
7 help us make our decision on, you know, things related  
8 to nexus and that sort of thing on each of these  
9 individual studies, I'm not sure this information is  
10 going to help us as a panel.

11 MR. THOMPSON: We do have to look at the  
12 thoroughness of FERC's determination document, however.

13 CHAIRPERSON LIBERTY: Right, but it's hard  
14 now to go back and say, you know, things could have --

15 MR. SHUTES: Whatever I'm saying is  
16 not --

17 CHAIRPERSON LIBERTY: I'm not saying --

18 MR. SHUTES: -- meant as a criticism of  
19 Matt's participation or anything like that in any way.  
20 I'm just trying to characterize what I see we have  
21 before us, and how we respond to that.

22 And I'll try to keep it brief. I mean it  
23 really has boiled down to nexus and whether studies  
24 will inform license conditions or not.

25 I think the discussion this morning of direct

1 and nondirect effects was essential. And I believe  
2 that at least for five months out of the year the flows  
3 through the project and the flows going down the river  
4 are pretty much the same. And that's a direct  
5 effect.

6 And the idea that they're simply cumulative  
7 effects is a misstatement and tends to confuse.

8 I think that, as I believe Mr. Robbins said  
9 at the beginning, toward the beginning of the meeting,  
10 the licensees have what, I think he called it a stack  
11 of water, or an amount of water that they plan to  
12 release out of the project to meet not only their  
13 agricultural diversions, but instream flow  
14 requirements, requirements for other downstream users  
15 and so forth.

16 And that seems to us to be a part of the way  
17 you have to do business if you have a large reservoir  
18 upstream of the project. And we just don't understand  
19 what's confounding about that. The confusion and  
20 confounding-ness of it doesn't seem -- seems to have  
21 been overstated.

22 We do believe that one of the issues here is  
23 project effects, and also whether it's reasonable to  
24 base studies on reasonably likely or reasonably  
25 foreseeable mitigations. That's something that's been

1 discussed here extensively.

2 In some cases I don't think there's a  
3 difference, whether you look at it as we need to  
4 evaluate whether we're going to have conditions upstream  
5 of the project in order to see if we should have fish  
6 upstream, i.e., mitigation. If we should exercise such  
7 an 18 authority.

8 Or whether you're looking at the situation of  
9 it blocks passage to habitat that is good habitat or  
10 bad habitat, which therefore you could look at as a  
11 project effect. A lot of times the two are sort of  
12 similar.

13 And it seems to us that that's been one of  
14 the issues here that really ought to be considered by  
15 the panel, and in the end, by the Commission.

16 There's been significant question about how  
17 the resource agencies define their authorities. And we  
18 think that the resource agencies should be the ones to  
19 define that and determine that.

20 And finally, I think we did get to an  
21 interesting and important point, and that is that the  
22 cumulative impacts and how you approach fish passage in  
23 a practical way on this project is different.

24 And if you are looking at a trap-and-haul  
25 situation, which is likely, that presents different

1 opportunities and conditions that might be looked at in  
2 a traditional or otherwise difference scenario where  
3 you didn't have other features downstream.

4 And it's the comprehensive development of a  
5 waterway is going to mean something. And I think that  
6 it's important to look at the whole picture and look at  
7 the opportunities, and not just suggest that because,  
8 for example, Merced Falls is downstream of Merced River  
9 Hydroelectric Project, and it blocks passage and you  
10 shouldn't address that in the Merced River Project.

11 On the other hand if you didn't have that big  
12 project upstream, you would be easily able to address  
13 passage past Merced Falls.

14 But really, it's a cumulative situation. And  
15 specifically, especially for the situation where you  
16 have a two-jurisdictional facilities, the Commission  
17 needs to look at those together. And not just do one  
18 of these endless Mobius strips of chicken-and-egg where  
19 you're just going back and forth, trying to figure out  
20 where it all begins and where it ends.

21 You clearly have a project effect from both  
22 projects, which is fish passage is blocked. And  
23 somehow you need to find a way to address that.

24 So, I think those are some of the things that  
25 I'd like to say. And if there's any questions I'd be

1 glad to answer them.

2 CHAIRPERSON LIBERTY: Go ahead.

3 MR. JOHNSON: Hi, Brian Johnson, Trout  
4 Unlimited. I have I think what is an observation and  
5 possibly a suggestion for the panel.

6 I thought that one of the more interesting  
7 exchanges and probably critical points of conversation  
8 that we had today was over the discussion of whether  
9 the study is to evaluate a direct effect or an indirect  
10 or cumulative effect, or a PM&E. And the meaning of  
11 the -- study requirement.

12 And I would say that I thought it was clear  
13 that what the regulation says is that there has to be a  
14 connection, a nexus between the project operation and  
15 the effect. And that the study has to be able to  
16 inform license conditions.

17 And what I thought I heard possibly Matt  
18 saying was that the purpose of the study was only to  
19 evaluate the project's effects.

20 And so, for example, if the project effect is  
21 that it's a dam and that it blocks fish passage, and  
22 the study is to inform the development of a license  
23 requirement for fish passage, and whether it's possible  
24 to ameliorate that effect. And how and what, you know,  
25 the best ways of doing that, that that would be fair

1 game for a study. And, in fact, you know, in other  
2 proceedings that is how we've done it.

3 And, you know, I think we can probably agree.  
4 If we can't agree on anything else, that people may  
5 have a different view about the meaning of that  
6 requirement.

7 But I would suggest to the panel that you  
8 might want to focus on that and make your call about  
9 what you think it means. And set it up in a way that  
10 the Director, and eventually the Commission, can  
11 clarify what that is all about.

12 CHAIRPERSON LIBERTY: Anyone else?

13 MR. ROSE: Yeah. David Rose, State Water  
14 Board. I just wanted to, as a closing, direct you, the  
15 panel, to the submittal that we handed you. It  
16 essentially deals with a lot of the issues that we  
17 brought up here.

18 In part I'm pointing you to this, and for  
19 everybody who didn't get a copy, we're going to efile  
20 this today or tomorrow morning -- part of my bringing  
21 this to your attention right now is because you had  
22 brought up earlier that you wished that the State Water  
23 Board and some of the other agencies had been a little  
24 bit more clear as to some of the technical issues.

25 So I wanted to apologize for that. This

1       submittal and our notice, in general, I think we  
2       intended those to address what we saw from FERC. And  
3       what we were disputing from FERC. And that was more of  
4       the threshold issue.

5               And, again, that's what this submittal does  
6       go to some of those same threshold issues. It also  
7       does address the issue that I think came up as to  
8       whether the State Water Board formally disputed the  
9       fishery studies or not. So I wanted to point you back  
10      to this. And the attachments that I had mentioned  
11      about the correlation in flows.

12             But really I wanted to take this opportunity  
13      to thank you for the feedback, since we haven't done  
14      many of these. I know a lot of people haven't. So we  
15      will definitely take that advice for the future,  
16      regardless of how the FERC determination is  
17      structured -- and no impugning Matt in any way --  
18      regardless of how that's structured, we will definitely  
19      ties this more towards the technical aspects, as well.

20             So, thank you for that.

21             CHAIRPERSON LIBERTY: Thank you. All right,  
22      we'll take one more comment, I guess, from MID. And  
23      then perhaps I think NMFS and Fish and Wildlife has a  
24      closing comment. Go ahead, MID.

25             MR. ROBBINS: Yeah, just a couple of things

1 to remind us that the purpose of this process today was  
2 to look at disputes that were filed under  
3 jurisdictional authorizations.

4 I don't want to play that too much, but  
5 understand that it's at least our view that is  
6 different than that of NMFS, that fishways doesn't just  
7 mean flows or access. It actually means physical  
8 structures. The law was, in fact, specifically changed  
9 for that. And the operation of those structures.

10 With respect to the Fish and Game letter we  
11 got today, that letter quotes Fish and Game Code  
12 section 5901. It misses the first phrase in that code  
13 section, which says: except as otherwise permitted in  
14 the code. Just keep that in mind, because it is  
15 permitted where we stand today.

16 I'm sure we're going to have a lot of  
17 discussions with Fish and Game over the years. This is  
18 obviously a program decision that Fish and Game will  
19 end up making within their discretion, assuming that  
20 they're authorized to do that. It'll have CEQA run on  
21 it, it'll have its own cost and mitigations. It'll be  
22 awhile before that happens.

23 And with respect to the State Board's  
24 requests for water quality matters, I believe that the  
25 Director's letter indicated in that, that a phased

1 approach was the appropriate way to process this.  
2 That, in fact, looking at water quality matters between  
3 McSwain and Crocker Huffman, and indeed, even below  
4 Crocker Huffman to Snelling Bridge, would identify  
5 whether or not water quality issues outside of  
6 temperature, water quality issues were moving into the  
7 river from the project. And if none were identified  
8 there, it would be reasonable to assume the project  
9 wouldn't be responsible for anything below that.  
10 Temperature has its own set of studies.

11 So it seems to us that the Director was right  
12 on in this process.

13 CHAIRPERSON LIBERTY: Fish and Wildlife  
14 Service, you guys have any closing comments?

15 MR. MARTIN: Most of the information, again  
16 we have put on the record in our notice of dispute.  
17 Again, we got new information today addressing the  
18 project nexus and criterion 5. While whether or not  
19 Crocker Huffman is a complete barrier or partial  
20 barrier. Or new information from DFG saying they're  
21 going to readdress that issue.

22 There is existing license conditions right  
23 now on the current license where there is a compliance  
24 point downstream of Crocker Huffman by Shaffer Bridge,  
25 which MID has suggested moving. And so I think that's

1 another project nexus.

2 And for our section 18 authorities, you know,  
3 we're trying to look at all the information available  
4 to us. The current baseline conditions of the  
5 project's direct effects, of how they attenuate flows,  
6 all flows during normal years, wet years and dry years.  
7 And how they impact the habitat, not only downstream,  
8 but also the available habitat and condition of that  
9 habitat upstream of these projects.

10 So I think that today we had a lot of  
11 discussion in those terms, and hopefully the panel will  
12 be able to consider and look at the record, look at the  
13 notice of disputes, and then look at all the reference  
14 materials that's in the record.

15 CHAIRPERSON LIBERTY: NMFS, you guys have  
16 anything?

17 MR. WANTUCK: Yes, Rick Wantuck for National  
18 Marine Fisheries Service. First of all we'd like to  
19 thank the Commission for assembling the panel, giving  
20 us an opportunity to air some of these issues and seek  
21 resolution. Thank you very much for that.

22 With respect to one of the core issues of  
23 whether there is a nexus between our study requests and  
24 mandatory conditioning authorities, NMFS does believe  
25 at this stage that at the appropriate point in the

1 process, mandatory section 18 authority will exist.

2 This is different from the question of  
3 whether we will choose to prescribe as an appropriate  
4 measure. And I think that's the difference right now  
5 between the District's perspective and our perspective.

6 And the question of whether we will choose to  
7 prescribe depends on the answers that come from  
8 necessary studies.

9 If the Commission chooses to either deny the  
10 entire package of studies, or use some sort of phased  
11 approach that will result in information a day late and  
12 a dollar short, we will be compromised, at the time of  
13 prescription, by the information that's available.

14 And we will, at that point, have to make a  
15 decision. But the decision may be based on a  
16 precautionary principle relying on our authorities  
17 under the Endangered Species Act, which is another  
18 major regulatory issue in play here.

19 So, I want to emphasize to the Commission  
20 that when one considers the idea of successful fish  
21 passage, one has to have a health river in which  
22 anadromous fish can survive not only within the project  
23 reach, but far downstream and upstream.

24 And so without those elements to be able to  
25 evaluate, we really would struggle a bit to understand

1 what's really going on here.

2 If the Commission decides that these studies  
3 are not appropriate, then it seems to me the process is  
4 biased in the direction toward no anadromous fish  
5 passage at the outset.

6 Just some final points I'd like to make that  
7 were covered earlier. There is some evidence that  
8 anadromous fish can and do pass over Crocker Huffman  
9 Dam under some conditions.

10 Ladders were originally constructed on both  
11 the Merced River and Crocker Huffman Projects,  
12 indicating that in the past there was passage and it  
13 was a management objective.

14 Both Crocker Huffman and Merced Falls Dams  
15 can be made passable again. And as you saw in evidence  
16 the Department of Fish and Game's letter, that is a  
17 goal of the resource agencies.

18 NMFS' best information at this point is that  
19 there are approximately 193 anadromous salmonid habitat  
20 miles above the project dams. That mainly is a  
21 steelhead estimate. Chinook salmon would be 39 miles  
22 above the New Exchequer Dam and Lake McClure.

23 And then the final two points are that NMFS  
24 is about to release soon a Central Valley Recovery Plan  
25 that calls for both the maintenance of the downstream

1 habitats and passage to upstream habitats as a recovery  
2 action. This will be filed with FERC as a  
3 comprehensive plan.

4 And finally, NMFS and other resource agencies  
5 have indicated and are serious about moving forward to  
6 reestablish flows and passage at both Crocker Huffman  
7 and Merced River -- Merced Falls, I'm sorry.

8 Thank you very much for this forum. And  
9 we'll be looking forward to hearing the result of the  
10 panel.

11 MR. DEIBEL: I just have one other --

12 CHAIRPERSON LIBERTY: Sure, go ahead, Bob.

13 MR. DEIBEL: One of the things that I'm  
14 seeing in this, and some of it gets to the FERC's  
15 determination, and there's debate and discussion out  
16 there. Is it not appropriate at times to conduct a  
17 study just to -- that may reach a conclusion of no  
18 effect or something. Sometimes studies can be used to  
19 say, is there a direct or nondirect effect.

20 I mean it seems that some of these studies at  
21 this point, rather than completely saying they're off  
22 the table, there may be some of these in here that may  
23 not split the baby, but just say, hey, everybody can  
24 have a sigh of relief, there isn't an effect.

25 I don't know exactly what those are, but not

1 all studies have to lead to a negative outcome. And  
2 those might be some, just thinking of working with the  
3 panel here, there might be some in there that may lead  
4 to inform the Director, hey, some of these are going to  
5 be important to -- in terms of hydrologic effects, you  
6 know.

7 If what Chris says is that there's five  
8 months of the year that the flows are not being  
9 diverted to Crocker Huffman that could lead to a  
10 conclusion that maybe FERC revisits its conclusion that  
11 there is no direct effect.

12 So, there could be a class of studies in this  
13 suite of 16 that could inform FERC, and that it might  
14 be advisable to FERC, to the Director, for his  
15 consideration to say, yeah, it is appropriate to do a  
16 phased approach.

17 And I will say that I participated in two  
18 projects where there's been agreement to do phased  
19 studies as part of season one, so you avoid the  
20 protracted issues.

21 So, I mean I'm just throwing that out there,  
22 that it sounds like you know, as Matt in the afternoon  
23 has said, there may be some things here that could be  
24 right for a phased approach.

25 Clearly some of the broader water temp

1 hydrologic modeling may lead to alternative  
2 conclusions. And I'm just -- quickly if folks think  
3 that that's maybe an appropriate -- I'm not trying to  
4 punt, honestly.

5 It just seems that some of -- the perceptions  
6 -- people have taken obviously positions, boom, boom,  
7 boom. There could be something out there to say, okay,  
8 we all agree that there is this point or that point.

9 So I'm just throwing that out on the table,  
10 that that may be an approach that makes sense.

11 MR. FOSTER: I would think that we would be  
12 remiss if we did not ask for such information early in  
13 the process.

14 MR. DEIBEL: Right, the process forces you to  
15 come up with some of this stuff. And so this phased  
16 approach, like I said, I've participated in two  
17 proceedings within the last year where that's gone on.  
18 And actually FERC Staff has agreed to that.

19 So it's almost a little addendum to the ILP  
20 that we're willing to not be just yea or nay, go/no-go,  
21 or something. So.

22 CHAIRPERSON LIBERTY: Thanks, Bob. So I  
23 guess our next steps, believe it or not, our report is  
24 due November 24th, Tuesday. So, -- yeah, actually that  
25 deadline unfortunately is set by the regs.

1 (Parties speaking simultaneously.)

2 CHAIRPERSON LIBERTY: Fifty days from the  
3 date of the dispute letters, which isn't going to be  
4 fun for us.

5 And so then after that the Director, who  
6 would be again, Jeff Wright, has 20 days to issue his  
7 final determination on these matters of dispute. So  
8 that will be December 14th.

9 So I think that's all we have here today.

10 MR. ROBBINS: Just procedurally, several  
11 folks have indicated they're going to be filing with  
12 you. Should they file that with you or on the website  
13 or --

14 CHAIRPERSON LIBERTY: Well, if you guys  
15 have -- we've received stuff today, I believe, from the  
16 Water Board, Cal Fish and Game, NMFS. If you guys have  
17 stuff in hand now, like I said, this report is supposed  
18 to be due on the 24th. We're going to get together  
19 tomorrow and try to start hashing some of this stuff  
20 out.

21 So, if this stuff is filed into the record,  
22 you know, a week from today, we'll never see it. So it  
23 kind of has to be in our hands ASAP.

24 MR. ROBBINS: Got it.

25 CHAIRPERSON LIBERTY: Ultimately if it's

1 filed in the record, you know, it's something the  
2 Director --

3 MR. SHUTES: And how ASAP is ASAP, and just  
4 what physically should we do if we have a document  
5 that's ready in a day or two?

6 CHAIRPERSON LIBERTY: If you have it now,  
7 provide it to us now. Like I said, we're going to try  
8 to work on this stuff tomorrow. Hopefully this -- this  
9 report will be done by the 24th, whenever that is, next  
10 Monday or Tuesday.

11 A lot of times when you file stuff with FERC  
12 it'll take a day or two or more to kind of work its way  
13 through the system.

14 If you have something, you want to email it  
15 to me, that will work as well.

16 MR. SHUTES: Okay.

17 CHAIRPERSON LIBERTY: At least the panel will  
18 have it to look at.

19 So, again, I'd like to thank everybody for  
20 attending today. I'm not sure if things were  
21 clarified, or may -- for the panel. We certainly have  
22 some, I think, -- to look at and go through.

23 But, again, thank you. And I guess with  
24 that, we'll conclude the meeting.

25 (Whereupon, at 4:48 p.m., the Conference

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