BEFORE THE

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

Douglas and Heidi Cole and Marble Mountain Ranch	)
Stanshaw Creek in Siskiyou County	)
Public Hearing	)

REGION 5 AUDITORIUM

CENTRAL VALLEY WATER QUALITY CONTROL BOARD

11020 SUN CENTER DRIVE, SUITE 200

RANCHO CORDOVA, CA

Wednesday, November 15, 2017

9:30 A.M.

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Pages 1 – 274

Reported by: Peter Petty

APPEARANCES

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

Division of Water Rights

Board Members Present:

Steven Moore, Vice Chair (Hearing Officer)

Hearing Team Members Present:

Lily Weaver, Staff Counsel
Mara Irby, Staff Environmental Scientist
Jean McCue, Staff Engineer
Connie Mitterhofer, Senior Water Resource Control Engineer
Jane Farwell-Jensen, Staff Environmental Scientist
Michael Buckman, Hearing Unit Chief

Prosecution Team Members Present:

Kenneth Petruzzelli, Attorney III, Office of Enforcement
Heather Mapes, Attorney I

INTERESTED PARTIES

For Douglas and Heidi Cole, Marble Mountain Ranch (MMR)

Barbara A. Brenner, Partner, Churchwell White, LLP
Kerry Fuller, Attorney

For California Department of Fish & Wildlife (CDFW)

Stephen Puccini, Senior Staff Counsel
Nathan Voegeli, Staff Counsel

For Karuk Tribe

Drevet J. Hunt, Attorney, Lawyers for Clean Water

For Old Man River Trust

Konrad Fisher

For National Marine Fisheries Service (NMFS)

Christopher Keifer

APPEARANCES (Cont.)

WITNESSES:

Douglas Taylor Cole, for Douglas and Heidi Cole, Marble Mountain Ranch (MMR)

Witness Panel for National Marine Fishery Service (NMFS)

Shari Whitmore
Margaret Tauzer

Witness Panel for California Department of Fish and Wildlife (CDFW)

Jennifer Bull
Caitlin Bean
Curt Babcock

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P R O C E E D I N G S

9:30 A.M.

RANCHO CORDOVA, CALIFORNIA

WEDNESDAY, NOVEMBER 15, 2017

HEARING OFFICER MOORE: Good morning and welcome back to the Marble Mountain Ranch hearing. Appreciate everyone returning in a prompt manner. I'm Steven Moore, Vice Chair of the State Water Board and the Hearing Officer for this proceeding. I will be assisted by Staff Counsel Lily Weaver, Staff Environmental Scientist Mara Irby, and Staff Engineer Jean McCue. And we also have other Staff assisting us today.

Once again, before we get started, in case you hear a fire alarm or emergency sound, please proceed in an orderly fashion toward the exits to my left, to your right, and we'll meet out in the parking lot before we get the all clear to come back in.

We're broadcasting this hearing on the internet and recording both audio and video.

In addition, a Court Reporter, Peter, is present to prepare a transcript of the proceeding. Anyone who would like an expedited

copy of the transcript must make separate arrangements with the Court Reporter.

When you speak, please be sure to use the microphone so everyone can hear you here in the room and on the internet.

Please take a moment to turn off or mute your cell phones. Even if you think it's already off or muted, please double check, and we appreciate that.

Some housekeeping items. Today we'll resume cross-examination of Marble Mountain Ranch's remaining witness, Doug Cole, by the Karuk Tribe. Then we continue with direct testimony from the National Marine Fishery Service, California Department of Fish and Wildlife, and remaining witnesses from the Karuk Tribe and Old Man River Trust.

And a couple of housekeeping items. The tables that Mr. Cramer discussed on Monday are now posted and labeled as MMR-22. We have hard copies, if any of the parties would like them. Also, we will be posting Staff Exhibit 1, labeled as SWRCB-1, which was the diagram from Mr. Anderson with approximate flow measurement locations, as discussed yesterday.

Are there any questions or other housekeeping items before we continue?

Mr. Petruzzelli?

MR. PETRUZZELLI: Do we have another hard stop for time for later today?

HEARING OFFICER MOORE: I'm going to propose a 4:30 stop time today.

MR. PETRUZZELLI: Okay. Thank you.

HEARING OFFICER MOORE: Yes. So we'll do our best to be as efficient as possible. Okay.

MR. FISHER: One question?

HEARING OFFICER MOORE: Yes, Mr. Fisher?

MR. FISHER: Am I able to question Mr. Cole? That was one of the things you said.

HEARING OFFICER MOORE: Yes.

MR. FISHER: Okay. And then direct testimony at some point in this process? We talked about that yesterday.

HEARING OFFICER MOORE: Yes.

MR. FISHER: Okay. Thanks.

HEARING OFFICER MOORE: Okay. Would Mr. Cole, Ms. Brenner and Mr. Hunt please come back up? And we have Mr. Hunt up here. And we can get underway as soon as you're comfortable and ready to go. Thank you.

MR. HUNT: Good morning everyone.

Good morning, Mr. Cole.

WITNESS COLE: Good morning.

DOUGLAS TAYLOR COLE,

called as a witness for Marble Mountain Ranch, having been previously duly sworn, was examined and testified as follows:

CONTINUED CROSS-EXAMINATION BY

MR. HUNT: Do you measure the amount of water that you divert from your -- at the diversion point?

WITNESS COLE: There's no measuring device at the diversion point. There is a measuring device, rudimentary though it is, further down ditch.

MR. HUNT: So at the point of diversion, you don't have a way of measuring the diversion?

WITNESS COLE: It's a rock and rubble berm. There's no structure in that rock and rubble berm.

MR. HUNT: And the measuring device that you talked about further down the ditch, what is that?

WITNESS COLE: Hash marks placed on the side of a retaining culvert that the captured

flow passes through so that it acts as a stream site, the equivalent to what you would see at a stream measuring station where you have a stadia rod that has a conversion table attached, to CFS flows. So I have arbitrary units that I call Stanshaw units marked on the side of a culvert in an automotive paint pen. And based on any given year and the condition of the ditch at that point, I have the capacity to convert that to a rough CFS flow. I also have several points along the ditch line where I routinely measure flows using a swoofer.

MR. HUNT: Have you ever filed with the State Water Board, made a filing with the State Water Board stating that you comply with the diversion measurement regulations?

WITNESS COLE: Do you know?

MR. HUNT: Are you conferring with your counsel on the answer to this?

WITNESS COLE: I -- a lot of what I do that's relative to the State Water Board, I refer to our attorneys. So -- and prior to my engaging Churchwell White, I filed some annual reports. Is that what you're referring to?

MR. HUNT: I'm just wondering whether you

filed anything with the State Water Board stating that you comply with diversion measurement regulations?

WITNESS COLE: Historically, I've turned in annual reports that were requested by State Water Board, asking for summaries of flows in the ditch line. So on that point, yes.

MR. HUNT: But you're not sure whether those are --

WITNESS COLE: I don't know if --

MR. HUNT: -- in compliance with --

WITNESS COLE: -- those are in compliance with the regulation that you're citing.

MR. HUNT: All right. I'd like to pull up MMR-11 Exhibit, and we can look at page one.

(Document displayed on screen)

And in your testimony yesterday, and written testimony, you indicate that the fire crews divert up to three CFS for fire suppression?

WITNESS COLE: I did not state that. I said they divert from the -- from the ditch line, but the ditch is conveying three CFS. The capacity at the ditch is three CFS, and so they withdrew from the ditch for fire suppression.

MR. HUNT: Is there any actual measurement of the amount of water that they're withdrawing?

WITNESS COLE: No.

MR. HUNT: So looking here at Exhibit MMR-11, it -- I can't turn that. Sorry, I was trying to turn the screen and it didn't work.

Looking at this Exhibit MMR-11, which is a -- it looks like a statement from David Markin, who is -- who is a -- who is David Markin?

WITNESS COLE: David Markin is a --

MR. HUNT: Oh, here he is.

WITNESS COLE: Yeah.

MR. HUNT: The District Fire Management Officer for the United States --

WITNESS COLE: Correct.

MR. HUNT: -- Forest Service? And in it, it says,

> "As part of those activities, we use water from the diversion ditch that provides water to the ranch at its full capacity of three cubic feet per second."

Does this document state that the Forest Service uses three cubic feet per second from the ditch for fire suppression service?

WITNESS COLE: No, that's a characterization of what the ditch is. He's stating that he's diverting water for fire suppression on a routine basis, and that the ditch provides a total availability of three cubic feet per second, which is my position all along, that that's the capacity -- capacity of the ditch, of three cubic feet per second. This document isn't saying how much they've diverted out of the ditch at any given time.

MR. HUNT: Okay. Thank you. Do you know that the United States Forest Service has a policy of not allowing the filling of fire trucks from areas that service thermal refugia along the Klamath River?

WITNESS COLE: I don't have any knowledge of any U.S. Forest Service policies on those points.

MR. HUNT: Do you know that the United States Forest Service has a method for using water from the mainstem of the Klamath River to fill up the fire trucks in order to avoid using water from thermal refugia areas?

WITNESS COLE: I've seen that.

MR. HUNT: And what is that, that you've

seen?

WITNESS COLE: Water tenders back up into the river and pump water directly from the river.

MR. HUNT: It's just a little cleanup item.

I'm curious if you can direct us to the place in your written testimony where you indicate that you increase -- increased the capacity of your penstock?

WITNESS COLE: I didn't increase the capacity of my penstock. I've replaced a section of the penstock, upgraded it. There was a section that was leaky, but it is not an increase in capacity.

MR. HUNT: Okay. I believe yesterday during your testimony that you mentioned that fish end up in the ditch at times?

WITNESS COLE: That's correct.

MR. HUNT: So those fish that end up in the ditch, where -- where do they subsequently end up?

WITNESS COLE: They reside -- they -- from my observation, the ditch is used for habitat, refugia, and especially in the deeper sections. Especially in the sections that have

cover over the top, there are places where I've got protection over the ditch, and so they'll reside in areas that -- that is a little bit deeper than the normal flow of the ditch, and that there's cover, and that's where they reside.

MR. HUNT: And once they're in the ditch, is there any way for them to get out of the ditch?

WITNESS COLE: They can easily swim back up. There's no obstructions to an outward flow.

MR. HUNT: Would that be the same under all hydrologic conditions?

WITNESS COLE: The ditch is pretty constant in its flow, based on our best management practices. And so they could do that at any given time.

MR. HUNT: I'd also like to clarify a little bit on the cost of alternative electricity sources from your testimony yesterday. I wasn't clear, so maybe you can help us.

How much are you actually spending on diesel fuel on an annual basis?

WITNESS COLE: I'm going to need to look at my documents, if that's okay?

MR. HUNT: Sure.

WITNESS COLE: I have 2016 receipts here. I don't have a total. I could run that, given time, five minutes.

MR. HUNT: Are these receipts something that's in the record?

WITNESS COLE: I'm not aware that they are.

MR. HUNT: Okay.

WITNESS COLE: I can -- I can run down these numbers, if you'd like.

MR. HUNT: And this is just like monthly numbers --

WITNESS COLE: Correct.

MR. HUNT: -- for 2016? Sure.

WITNESS COLE: In 2016: December 9th, $2,781; 11/22, $2,318; 11/01, $1,392; 10/06, $1,174; 9 of 12; $1,559; 8 of 30, $1,818; 8 of 08, $2,098; 8 of 17, $1,290; 7 of 20, $2,173; 6 of 28, $1,764; 6 of 16, $1,496. And then my numbers stop, so I'm going to have to look at the rest of my --

MR. HUNT: Did you --

WITNESS COLE: Yeah.

MR. HUNT: And this --

WITNESS COLE: That's a half a year.

MR. HUNT: This is 2016, so this is a year --

WITNESS COLE: That's correct.

MR. HUNT: -- where you've indicated you did not divert water from the stream during --

WITNESS COLE: This is correct.

MR. HUNT: -- the summer?

WITNESS COLE: Right. No water diversion for hydro -- for hydro plant generation. This is running the ranch. This is a half-year figure.

MR. HUNT: Okay. Do you deduct the diesel fuel costs from your taxes?

WITNESS COLE: They're an operating expense.

MR. HUNT: So does that mean you deduct them?

WITNESS COLE: Yes.

MR. HUNT: I have a couple questions about your wet season diversion management. So this is Exhibit MMR-1. I think it has a small A next to it, as well. No. She's -- somebody will pull it up here. Oh, there it is. For some reason, when I saved the .pdf, it shows MMR-1a on my file name. That's my fault.

Can we turn to page 11? That's -- there

we go. Heading 6. Let's see, I can control this. All right.

Can you -- do you see the third sentence that begins, "Since;" can you read that for us?

WITNESS COLE: I'm not there yet. Are you able to highlight it?

MR. HUNT: Maybe.

WITNESS COLE: Okay, I'm there now.

MR. HUNT: Okay. Can you read it aloud?

WITNESS COLE: "Since I took ownership of the ranch in 1994, I have been deepening and improving the diversion ditch by removing sediment from the ditch bed and placing that material along the berm for reinforcement. The maintenance effort has proven to be successful to avoid erosion and overtopping."

MR. HUNT: By deepening the diversion ditch, have you increased its capacity?

WITNESS COLE: The capacity is determined at the point of diversion by how much I entrain at the head. The successful conveyance is dependent on the amount of freeboard and the stability of the berm. So my efforts in the -- in the body of the ditch line to reinforce the berm by removing accumulated sediment doesn't

affect captured water. It affects the amount of water that can be safely conveyed without failure of the berm.

MR. HUNT: So how do you know that you haven't increased the capacity at the point of diversion? Do you do maintenance activity there?

WITNESS COLE: Well, the point of diversion is an evolutionary thing. It changes season by season because it's a primitive rock and rubble berm that evolves from high season -- high flow season through low flow season.

So how do I know that I haven't captured more water than what the ditch can carry?

MR. HUNT: No, that's not my question.

How do you know you haven't increased the capacity of the amount of water you can divert?

WITNESS COLE: Because in 25 years of operation the amount of water available at the downstream sections that are fixed and more stable has not overtopped. I haven't exceeded its capacity. The capacity of my hydro plant has been actually diminished when I improved the power plant from the larger World War II era generator. The anecdotal observations, which I can line out, but primarily based on fixed points

in the ditch which have remained the same historically over two-and-a-half decades.

MR. HUNT: But you can't actually measure the amount of water that's being diverted; is that correct?

WITNESS COLE: I've already answered that. I can measure it using those points along the ditch where I have swoofer measurements and where I have a culvert that's been there for the 25 years I've been there with measurement points on it.

So when we bought the ranch 25 years ago there was a culvert at a crossing where an access road goes over the ditch. That culvert is a 24-inch culvert. It hasn't been replaced. It has a fixed capacity. I put measurements on it soon after we arrived at the ranch, and I've watched how much water flows by that point as an easy, accessible point to see how much water is in the ditch. It is an arbitrary unit of measure I call Stanshaw units, but it is a point -- it's a point of management that I use to observe how much water is in the ditch.

So improving maintenance -- or conveyance efficiency, improving stability of the ditch is

the goal of what I'm doing. Incidental increase in conveyance capacity, I don't think is possible based on work that I'm doing mid-ditch when I have limiting point of capture, and also limiting point of consumption in passage at several points along the ditch.

MR. HUNT: At each of those points, though, there's not an actual measurement of how many CFS are traveling down the ditch?

WITNESS COLE: There is a Stanshaw unit measurement that I installed when we first moved there.

MR. HUNT: Right. I understand that.

WITNESS COLE: Yeah.

MR. HUNT: That's not my question.

So actual CFS, ability to measure actual CFS in the ditch --

WITNESS COLE: There is the ability --

MR. HUNT: -- you don't do that?

WITNESS COLE: -- to convert those --

MR. HUNT: But you don't do that?

WITNESS COLE: -- the Stanshaw unit or do the swoofer measurements and convert velocity to flow.

MR. HUNT: Yesterday you mentioned that

after storms, you go to dig out material from the ditch?

WITNESS COLE: I did mention that.

MR. HUNT: And if you failed to do this in a timely manner after storms, what would happen?

WITNESS COLE: As I mentioned, the ditch acts as a natural entraining device to capture sediment normally carried in Stanshaw Creek. So without removing the debris, the first thing that happens is the top end of the ditch line, most close to the point of diversion, will capture the larger rubble. That remains in place and impedes the capturing of water into the ditch, so that the main body of Stanshaw Creek continues downstream towards the main Klamath. If I don't go up and clean out the ditch as it fills up, the ditch becomes occluded and won't capture any water at all. So not removing sediment is a maintenance issue if I want to have drinking water.

It's a density gradient, the ditch line, just like a sluice box would be if you were a miner. So the larger, denser material gets entrained at the head of the ditch. The farther

downstream you go --

MR. HUNT: Yeah. I understand that. We -- and you testified to that yesterday.

WITNESS COLE: Okay. So the -- it stops --

MR. HUNT: I think you've actually answered.

WITNESS COLE: -- the ditch functioning.

MR. HUNT: You've actually answered the question.

WITNESS COLE: Okay.

MR. HUNT: All right, let's turn to Exhibit WR-83. And these are the notes from the December 14th, 2017 meeting.

Can you explain to me why the Lennihan Report was prepared?

WITNESS COLE: Sure. Earlier attempts to gain funding to do improvements on the ranch, such as the 2004 proposal to completely pipe the ditch and the return flow to the main body of the Klamath River above the anadromous stretch were prohibited because funders were under threat of lawsuit if they funded a project which didn't have a verified water right.

And so there was an effort, in order to

enable funding for improvements for physical solutions that we had to have an independent third party visit the topic of water rights in order to enable funders to successfully fund projects. This was an example of our early on, ongoing -- and ongoing cooperation with stakeholders to look for solutions. This, in fact, failed because at the time when we had this short window of opportunity to --

MR. HUNT: I didn't ask that. I asked --

WITNESS COLE: Okay.

MR. HUNT: I asked, what was the purpose of the report? And I think --

WITNESS COLE: Yeah. To try to get --

MR. HUNT: -- you answered that.

WITNESS COLE: Try to get a statement from an independent, non-vested party in an analysis of our water right so that we could obtain funding to find physical solutions.

MR. HUNT: Okay. Thank you. And at the point -- the time that this meeting, had the State issued an opinion regarding the scope of your right?

WITNESS COLE: I'm not aware that they had.

MR. HUNT: Okay. So if we can go to Bates 2475 on this exhibit, which I know the internal pagination number of it? It looks like it's going to be about the fifth or sixth page. I can scroll, too. It seems like I have control. So this is Bates 2475, and we were looking at this yesterday, also.

So there's -- sorry. I don't know if it's Taro or Taro, my apologies, but he says, "We can render an opinion, a staff finding in the matter. That's what we intend to do."

So that's, just to be clear, that's what I just asked, whether the State had -- made an opinion at that point, and his answer seems to be that it has. But based on what he's saying here, it seemed that they hadn't.

So just for context, I just want to read it quickly. Oh, my god. This will work better.

HEARING OFFICER MOORE: The Central Valley Board is already a little grumpy. Try not to break anything.

MR. HUNT: Sorry. I knocked the screen over again.

"The State Water Resources Control Board says that there's a pending complaint currently.

A likely next step would be an investigation report, as there was in 1998 and 2002. I'd expect to be able to make findings on whether there would be an enforcement action. This would determine the level of pre-1914 right. Get concerns about Martha's report to the State Water Resources Control Board now. Will probably make a report in the next few months."

So what's Martha's report?

WITNESS COLE: What is Martha's report?

MR. HUNT: Yeah.

WITNESS COLE: It's her analysis of the extent of our pre-1914 water right and whether or not it was a valid water right at all.

MR. HUNT: So is that -- Martha's report is the Lennihan Report?

WITNESS COLE: Martha Lennihan is the full name, so Martha is Martha Lennihan.

MR. HUNT: Okay. Thanks.

"Barbara," which I believe is Barbara Brenner, "did the Water Board not yet have the opportunity to comment on the report," presumably referring to Martha's report; would you agree with that?

WITNESS COLE: That sounds like that's the correct context.

MR. HUNT: Right. And then Taro says, "This is the first time we've had a chance to look at the report;" again, we're talking about Martha's report?

WITNESS COLE: Uh-huh.

MR. HUNT: And Barbara says,

> "We're still of the opinion this is a three CFS water right. The question is: Can we agree to some kind of physical solution?"

Taro says, "I don't think we can get to the final stage without us giving an opinion."

Konrad says, "What do NFWF and NOAA need to fund a solution?"

Are NW -- NFWF and NOAA the funders that you were referring to when you were describing the purpose of the Lennihan Report with the -- provide a figure so that the funders --

WITNESS COLE: As I'm recalling, those were two of the potential funders.

MR. HUNT: Okay. And then Bob says -- Bob is with NOAA, I believe; is that true?

WITNESS COLE: I don't know.

MR. HUNT: We'll correct that in a

second.

But anyways, Bob says,

"We need a number to move forward with a solution. We don't want to revisit in 10 or 15 years. We have money set aside. We need a number that's going to make everyone feel comfortable."

And then Doug says, and that's you, "What's wrong with the number in the report?"

And are you referring to the Lennihan Report when you say this?

WITNESS COLE: I probably was at that point.

MR. HUNT: Would you agree that at this point this suggests you were agreeing to move forward with the solution that provided you with the water amount identified in the Lennihan Report?

WITNESS COLE: My position has always been that the bottom line for me is the physical survival of Marble Mountain Ranch fiscally and the environmental survival of the resources. There is common ground there. If money is available to do remediation for whatever the project of the day is that makes the resource

preserved, and we are preserved fiscally and with our business and family heritage, that's acceptable. If the funding from NOAA and NFWF is dependent on a number from the Lennihan Report that is acceptable and can allow for the survival of my business, any number is acceptable. If NOAA and NFWF --

MR. HUNT: Okay.

WITNESS COLE: -- can fund --

MR. HUNT: I understand.

WITNESS COLE: You understand what I'm saying?

MR. HUNT: I understand.

WITNESS COLE: The bottom line is our survival, regardless of whatever number that is.

MR. HUNT: So just yes or no, do you agree that this suggests you are agreeing to move forward with the solution that provided with you the water in the amount identified in the Lennihan Report?

WITNESS COLE: Yes, presuming funding is available for --

MR. HUNT: Okay. That --

WITNESS COLE: -- and improvements are made.

MR. HUNT: Thank you. So do you recall the diversion rate described in the Lennihan Report, whether it included --

WITNESS COLE: I do not at this point.

MR. HUNT: -- ditch losses?

WITNESS COLE: I do not at this point.

MR. HUNT: Can we bring up Water Rights 80 Exhibit? And turning to Bates pages, if I have control -- oh, I don't, oh, I do -- 25 -- let's see, 2430 and 2431, this looks like it's a section on the conclusion.

So the question was: Do you recall whether the diversion rate described in the Lennihan Report included ditch losses? And if you look at the sentence that goes from page 2430 to 2431, it says,

> "The pre-1914 appropriative water rights supports diversion and use of up to 0.35 CFS for domestic and irrigation, 0.31 CFS for power generation, plus reasonable losses in the range of 0.5 CFS, for a total water right of 1.16 CFS."

Does that help you recall whether the Lennihan Report discussion of the diversion rate included ditch losses?

WITNESS COLE: Well, that sentence does mention ditch losses, yes.

MR. HUNT: And so that's -- that -- and in the quantification of the water right, they included the ditch loss as a 0.5 CFS?

WITNESS COLE: Can we go back to the sentences prior to that?

MR. HUNT: Sure. Take your time. How about we start -- you can --

WITNESS COLE: Yeah.

MR. HUNT: Let me know if you need me to scroll.

WITNESS COLE: "On balance documentation provided supports the conclusion that there is a viable pre-1914 appropriative water right that has and continues to be exercised on the Marble Mountain Ranch. However, there was a period from the 19" -- oh, I'm sorry.

MS. BRENNER: Can you repeat the question pending?

MR. HUNT: Yeah. I'm going to let Doug finish reading and then I'll ask him, if that's okay?

WITNESS COLE: Okay. Go ahead.

MR. HUNT: Do you feel like you have the

context now?

WITNESS COLE: Yeah, I do.

MR. HUNT: Okay. So the question was whether the Lennihan Report's quantification of the water right included ditch loss?

WITNESS COLE: It does mention ditch loss.

MR. HUNT: And it mentions it as how much?

WITNESS COLE: A half a CFS.

MR. HUNT: Okay. So according to the Lennihan Report, the total beneficial use would be 0.66 CFS?

WITNESS COLE: Under that analysis, that's what she's stating.

MR. HUNT: Okay.

(Pause in proceedings)

MR. HUNT: Can I take one -- excuse me, Mr. Moore. Can I take just one moment to confer with my client?

HEARING OFFICER MOORE: Yes, you may. Let's stop time.

(Pause in proceedings)

MR. HUNT: Thank you. I think this is -- this will be the last of it.

So did you not propose a schedule and a process for moving forward to comply with the Cleanup and Abatement Order?

WITNESS COLE: I'm not sure I can identify which Cleanup and Abatement Order and what my response had been. Can you -- apparently, you've got a response you want to bring up. Can you --

MR. HUNT: No, I don't, actually. I don't. It's just I wanted to -- I wanted to know something, just generally related to it, not specific to a document. But let me get the number of the Cleanup and Abatement Order. It was -- it was issued by the Regional Board.

WITNESS COLE: Okay.

MR. HUNT: Do you know which one I'm talking about now? Is there some other Cleanup and Abatement Order that I'm not aware of related to your --

WITNESS COLE: To be honest with you --

MR. HUNT: -- diversions?

WITNESS COLE: -- there's been so much dialogue back and forth, I don't recall exactly which document you're talking about.

MR. HUNT: Okay. Well, did you -- did

you propose a schedule in order to comply with directions from the Regional Board about what needed to be done to --

WITNESS COLE: Can I consult with my counsel on this? Because I'm -- I'd like to give you an accurate answer. Okay.

I would presume that we did.

MS. BRENNER: You need to indicate whether you recall or not.

WITNESS COLE: I don't recall exactly.

MR. HUNT: Have you -- have you set out a schedule for addressing the complaints in the -- that the Regional Board has made regarding the condition of your ditch and fixing those problems?

WITNESS COLE: I'm remembering a proposal which was rejected by the Water Board.

MR. HUNT: Okay. You -- but you didn't make -- did you make commitments to do something in order to address what the Water Board wanted you to do? You made a proposal?

WITNESS COLE: I'm recalling that we made a proposal and made some improvements and did our most recent -- all I'm remembering is that our most recent proposal has been rejected by Water

Board.

MR. HUNT: Okay. So -- and in terms of complying with what the Water Board wants you to do, are you on schedule with that?

WITNESS COLE: I don't think that I am in compliance with what the Water Board wants. And it's impossible --

MR. HUNT: And why --

WITNESS COLE: -- for me.

MR. HUNT: Why is that?

WITNESS COLE: It's impossible for me to meet most of the requirements. Some of them I can and have met, and others I haven't. It's impossible for me to meet.

MR. HUNT: Okay. Let's take a look at -- back to MMR-1, and this is it. I just want to quickly understand what this says. It's not totally clear to me about -- in Section 8, which begins on page 13 of the document, it says, "Continuing diversion improvement efforts." And then the second sentence -- no, first sentence, last -- well, you're describing that these are the projects that you plan to complete. And it says, "provided the outcome of the public hearing results in the continued use of my full pre-1914

three CFS water right."

What will you do if it doesn't result in that?

WITNESS COLE: So are you asking me what I will do if I cannot -- I'm sorry, can you repeat your question?

MR. HUNT: Well, I'm just trying to understand what you mean when you say that you plan on completing a number of projects, "provided the outcome of the public hearing results in the continued use of my full pre-1914 three CFS water right."

WITNESS COLE: Presuming I have access to use the full three CFS, which is what's required for me to operate the hydroelectric plant in the winter, I would improve -- continue to make ongoing improvements in the ditch so that it is more stable. I would pipe sections of the ditch. I would prefer not to pipe the entire ditch for reasons I mentioned previously about sediment conveyance in a pipe. So my approach has been spot reinforcements and repairs to the ditch line, improvements to the hydroelectric plant, improvements to the ranch, electrical infrastructures to become more efficient, all

these things would be happening were I not distracted by trying to fund defensive maneuvers in court and hiring consultants to provide analyses of sediment loading in the ditch and neighboring drainages. My resources are redirected to other areas right now, rather than improvements to the infrastructure of the ranch and the ditch conveyance capacities.

So presuming that there's a resolution that can come -- come to fruition with the Water Board, and presuming we have an agreed allowance to run the hydroelectric plant and stop, I'm going to use the word persecution, and so please don't take offense to that, but that's the sense that I have and the -- and the feeling that we have as a family and business. If I'm allowed to my job as a facility manager and steward of this resource, my intent is to continue to improve our operations so that our impact and the resource is minimized. It's to my benefit and my business to have a successful resource in the area, as much as it is to any other individual that resides in the area or in the larger human population.

I want this resource to be preserved as much as Water Board does, as much as Karuk Tribe

does, as much as Old Man River. This is my home. My intent is to improve the resource. In order for me to do that, I have to be enabled to fiscally and emotionally and with personal energy to make that happen. And that's my intent when I say, presuming this comes to a successful fruition, then that's my plan. That's what I have been doing prior to all of this and what I intend to continue.

MR. HUNT: Those are all --

WITNESS COLE: My willingness to cooperate --

MR. HUNT: Those are all --

WITNESS COLE: -- has been made clear.

MR. HUNT: Okay. Thank you. Those are all the questions I have.

HEARING OFFICER MOORE: Okay. Thank you, Mr. Hunt.

Next, I would invite Old Man River Trust to ask questions under cross-examination.

CONTINUED CROSS-EXAMINATION BY

MR. FISHER: Mr. Cole, before you purchased Marble Mountain Ranch, had you had experience living off the grid or maintaining diversions from creeks?

WITNESS COLE: No. I lived in an urban setting, but had my profession in the wilderness as an outfitter and guide. However, I did not reside in an off-grid situation.

MR. FISHER: Okay. And before that had you stayed at a business, like a tourist business or any form of hospitality business that existed off of the power grid?

WITNESS COLE: I may have, but I can't say for certain.

MR. FISHER: Before you purchased the property, did you evaluate other such properties off the grid to see what it entailed?

WITNESS COLE: I wasn't in the market to purchase Marble Mountain Ranch when the -- when we first were solicited to purchase the property. We were using the facility for a number of years as a white water rafting outfitter. And so we became familiar with it in the course of outfitting and guiding out of Young's Ranch Resort.

So does that answer your question?

MR. FISHER: I think so. I'm just trying to get an idea of how much you investigated what it takes to run a gravity water system and a

hydro -- and a hydropower system off the grid before you decided to spend the money to purchase the property?

WITNESS COLE: I didn't investigate anything at all for hydroelectric generation. I knew nothing about it at all.

MR. FISHER: Okay. Since -- and how about of the specific property before you purchased it, did you evaluate the hydro system, maybe ask -- did you ask any third parties what they thought of it, about the practicality of it?

WITNESS COLE: No.

MR. FISHER: And how -- same question for the water conveyance system, did you ask any third parties if this method of diversion was either in keeping with the local norms or practical from a management standpoint?

WITNESS COLE: No.

MR. FISHER: The cost estimates you mentioned yesterday, a half million dollars for solar, that is based on a presumed need of how much power?

WITNESS COLE: I'm assuming you're asking about how Hal Slater's sales pitch for his product, which is roughly a half million dollars.

And that was based on his distant evaluation of what our energy needs are based on what I told him our power generation plant currently produced.

MR. FISHER: Okay. Of all the estimates in the record submitted by Marble Mountain Ranch, were they all essentially based on the starting point of your stated need of power -- power output?

WITNESS COLE: I wouldn't solicit an estimate for anything less than what we were currently using.

MR. FISHER: You're -- okay. I'm trying to decipher between your stated need versus actual. You've also said you don't measure -- yesterday, that you don't measure power usage at your houses, so I'm trying to get at actual need as opposed to, perhaps, stated need.

WITNESS COLE: In the case of Hal Slater, as I recall, he asked me to do an appliance summary, taking a look at amperage requirements for each of the major appliances, typical household appliance needs in the homes. And so there was an evaluation done by him to take a look at what his estimate would be to operate the

ranch in its current configuration for electrical needs based on existing infrastructure, so he came up with his proposal for an installation based on those kinds of numbers.

MR. FISHER: So I'm trying to get at who is deciding the primary basic power need. The California Water Board in its -- has requested that you conduct an energy audit, which I would presume means determining actual normal, reasonable power consumption.

WITNESS COLE: Yeah. This is Hal's attempt at that. And as you recall, Joey Howard also did look at that. And so an energy evaluation, this is one version of it.

MR. FISHER: So I guess I'll go back to this question.

Did Joey Howard calculate based on standard protocols or based on your statement of power need?

WITNESS COLE: On a physical summary of the ranch, similar to what I did for Hal, if I can recall correctly.

MR. FISHER: Okay. Have you conducted what would be considered an energy audit, as requested by the California Water Board?

WITNESS COLE: Would you consider this to be an energy audit?

MR. FISHER: It depends, honestly, on how -- on who determines needs by -- in the same we calculate consumptive water needs based on this is standard per household, it's the same. The same goes for energy.

WITNESS COLE: So I would reply, we did do that. And the efforts of Joey Howard, Hal Slater and the electrician, three individuals who have looked at the ranch, the needs of the ranch, the consumptive energy patterns, the distribution on the ranch, and so I would call that an energy audit.

MR. FISHER: Okay. What's the manufacturer date on the Pelton wheel you currently use?

WITNESS COLE: I don't know when it was manufactured.

MR. FISHER: All right. Well --

WITNESS COLE: We installed it roughly 20 years ago.

MR. FISHER: Okay. So it's about 20 years old. And the maximum output of the Pelton wheel, I think you said was 40 kW?

WITNESS COLE:- Yes. That's based on the generator that it's attached to right now.

MR. FISHER: Okay. When you chose to upgrade this, I know you spent a lot of money.

Did you consider a system that would be -- that would have had a battery bank and higher efficiency in terms of water use per power output?

WITNESS COLE: Twenty years ago, battery technology was pretty inefficient for storage. That wasn't even a consideration. We looked for a hydroelectric plant that fit the system and was appropriate for the needs of the moment.

MR. FISHER: By fit the system, you mean utilize current point of diversion?

WITNESS COLE: Available head to drive a generator.

MR. FISHER: Available -- and who determined available head?

WITNESS COLE: Who determined?

MR. FISHER: How do you determine --

WITNESS COLE: The head is an existing --

MR. FISHER: How do you -- how do you determine available head?

WITNESS COLE: You take a vertical

measurement from the top to the bottom of a pipe and you measure the diameter of the pipe and the available flow moving into the penstock, and you can create a hypothetical energy production based on how much kinetic energy can be transferred down that system.

So imagine a straw. You have a skinny straw that's filled to the top of 12 inches. You can produce so much power. You lengthen the straw, you can produce more power. You widen the straw, for the same width you can produce more power. The Kinetic energy is going to be dependent on the volume of flow and the head pressure, which is determined by the elevation from top to bottom of the penstock.

MR. FISHER: So elevation from top to bottom of the penstock. If you look at this map, there's a dot for the current point of diversion and a potential point of diversion.

Would the potential point diversion provide you with considerable more head?

MS. BRENNER: Can you please identify what you're referring to?

MR. FISHER: This.

MS. BRENNER: You need to identify it,

not just by this.

MR. FISHER: Exhibit 1, OMRT-1.

MS. BRENNER: Thank you.

WITNESS COLE: I can see a potential point of diversion.

Konrad, you need to understand that I will never agree to relocating the point of diversion another 1,000, 2,000 feet up and reinstituting a new intrusion with new ditch lines and unstable conveyances and new access roads. I will never go there. And this ditch in its current location has been stabilizing for 150 years. A minimal impact has got to be a piece of the solution.

An intrusion like this is beyond comprehension for me. I don't want to go there.

MR. FISHER: Okay. Can we speak about impacts for a minute --

WITNESS COLE: Sure.

MR. FISHER: -- on my diversion and my property?

Do you -- are you -- you said, in your previous testimony, that the ditch captures rubble that would otherwise flow down Stanshaw Creek?

WITNESS COLE: It does.

MR. FISHER: Does it catch rubble infinitely, or does that rubble sometimes get released?

WITNESS COLE: I'm not sure of the question you're asking. Does it capture rubble infinitely?

MR. FISHER: It captures rubble. I assume the rubble stacks up?

WITNESS COLE: Correct.

MR. FISHER: Does it stack up forever, or does it sometimes get released into the creek?

WITNESS COLE: It will be the same as any piece of Stanshaw Creek drainage. It will fill up to a point. Imagine a riffle in Stanshaw Creek. Gravel is going to fill it up, and then it will be blown down to another spot lower and then it will fill up. So as slides happen alongside of the Stanshaw drainage, there's an infinite amount of gravel and sand and sediment that can be put into Stanshaw Creek.

So does it capture gravel infinitely? I would say, yes, because there's an infinite amount of sediment that can be captured in Stanshaw Creek.

MR. FISHER: We're talking about the ditch versus the creek.

Are you aware of mudslides that have occurred in the winter, sending a plume of mud down the creek, into my water system and into the Klamath River?

WITNESS COLE: Stanshaw Creek has regular sloughs under every single winter year. If you -- when I go to maintain the ditch and shut it off in anticipation of a storm, I can, at times, see, looking downstream and on the opposite side of the river, entire hillsides that have moved. Stanshaw Creek routinely flows muddy. It routinely carries sediment. I've made that point over and over again. There's an infinite amount of -- yes, there's infinite sediment that it carries, and it happens naturally, regardless of the ditch existence.

MR. FISHER: The video that was shown on Monday showed evidence of historic mudslides on the ditch into Stanshaw Creek.

WITNESS COLE: It did not show mudslides entering into Stanshaw Creek.

MR. FISHER: The -- okay. I guess we would characterize what we saw differently. A

break in the ditch with a plume of mud going down, I would -- I would consider a mudslide.

When the Klamath -- the mouth of Stanshaw Creek looks like you see in the photo, have you ever examined the mouths of other creeks at times when this is occurring?

WITNESS COLE: I've lived on the Klamath for 25 years. As I drive the highway, in a large storm I see muddy creeks all up and down the highway, Stanshaw, Ti Bar, every single tributary will flow muddy, given the right storm.

MR. FISHER: And driving down 96, I'm not -- or being at your house, I'm not certain that's possible.

When the mouth of a creek looks like what you see in this photo, have you actually gone to the mouth of Sandy Bar Creek or Irving Creek or any other creeks?

WITNESS COLE: When I've seen Stanshaw muddy, have I gone to other creeks; is that what you're asking?

MR. FISHER: Yeah, to see if -- to see what impacts your diversion may be having relative to other watersheds?

WITNESS COLE: I'm not sure what Stanshaw

Creek's impact has on other creeks' watersheds.

MR. FISHER: I'm speaking to --

WITNESS COLE: That's confluence.

MR. FISHER: I'm speaking to the impact of your diversion ditch on Stanshaw Creek. The photo shows a washout from your ditch filling the Klamath River with mud at the time when the other --

WITNESS COLE: It doesn't show that.

MR. FISHER: -- okay -- at the time this happens. Go ahead.

At the time this happens, have you or have you not examined other creeks to see if they look the same way?

WITNESS COLE: Konrad, I see mudslides routinely on Stanshaw Creek, regardless of whether they're creek right, creek left, up ditch, down ditch. Stanshaw Creek is a high gradient stream. It always has mudslides and it always will have mudslides. And I capture that mud in my ditch on occasion if I don't shut the ditch off.

MR. FISHER: Okay.

WITNESS COLE: So my ditch gets shut off in high-flow scenarios to prevent overtopping.

When you see mud entering the Klamath River from Stanshaw Creek, that mud is a naturally-occurring slide in the drainage of Stanshaw Creek. My ditch is off.

MR. FISHER: One more question.

When there are -- when there's mud going out of the mouth of Stanshaw Creek, have you walked above your point of -- above your diversion, and below, to see where the mud is actually coming from?

WITNESS COLE: I have to say that when Stanshaw Creek is flowing like that, I stay as far away as possible from getting in Stanshaw Creek. It's fairly risky.

MR. FISHER: So, no, you haven't been able to check everything?

WITNESS COLE: I have not walked up Stanshaw Creek in flood stage.

MR. FISHER: Okay.

MS. WEAVER: Mr. Fisher, could you identify the exhibit you're -- you have up on the screen, just for the record?

MR. FISHER: Yes. If the mouse -- if the mouse worked, I could. There. OMRT-5.

MS. WEAVER: Thank you.

MR. FISHER: Are you aware of the impact -- or you stated in your earlier testimony that to manage the ditch, to manage your diversion, you must sometimes cease diverting completely to maintain the ditch; is that right?

WITNESS COLE: I do.

MR. FISHER: And does that sometimes happen in the summer and the winter, or mostly summer?

WITNESS COLE: And --

MR. FISHER: Well, does that happen all times of year? Is that required all times of year?

WITNESS COLE: It's not required all times of year, as far as to prevent overtopping. But I do shut it off periodically for maintenance.

MR. FISHER: Okay. Are you aware of the impact that that has on my downstream diversion, that it has had in the past when you've shut off the diversion, thereby increasing the flow rapidly?

WITNESS COLE: I thought your diversion was from a tertiary point off the site.

MR. FISHER: Two points of diversion, one

from the mainstem, one from the tributary.

WITNESS COLE: Okay. I have not consulted with you. When I shut the ditch off, my agenda is to maintain the ditch and to prevent erosive of events.

MR. FISHER: And when I have told you there's mud coming out of my kitchen sink as a result of your management, how have you responded?

WITNESS COLE: Can you prove to me that mud from your kitchen sink has arrived from my ditch?

MR. FISHER: Can you prove that it hasn't?

WITNESS COLE: Excuse me.

MS. BRENNER: Do you have a question? Arguing --

MR. FISHER: I'm asking how --

MS. BRENNER: Your arguing with the witness.

MR. FISHER: It's -- sorry. It's about more. It's getting to corrective actions and remedies that would meet both of our needs as water right holders.

MS. BRENNER: I'm not asking the purpose

of the question. I'm asking, what is the question?

MR. FISHER: Are you aware that when you cease diverting completely, particularly in the summer, and the flow of Stanshaw Creek increases exponentially, that it adversely impacts downstream diversions?

MS. BRENNER: That was asked and answered.

MR. FISHER: Back to my initial question, are you aware of the impact on downstream diversions when you cease diverting rapidly?

WITNESS COLE: I have not ceased diverting in graduated increments, other than to -- let me explain the process of how I shut the ditch off, and maybe that will give you some insight.

The first step is to go to my most downstream weir, which is used as a flow control point, and remove the freeboard boards which entrain the ditch water. So there is a partial exit of ditch water at that point. I then walk upstream, do the same thing at the second weir, and then move upstream to the point of diversion and move rocks into the ditch, out of the berm,

to the stop water there. That process to completely shut off the ditch is about, well, probably 45 minutes to an hour process by the time I get into the ditch and move enough rocks to stop the flow.

So on that point, if that's considered an instantaneous shutoff, that's what I do.

MR. FISHER: During the forest fire last summer, did the U.S. Forest Service fill its trucks on your land, using water diverted from Stanshaw Creek?

WITNESS COLE: They did.

MR. FISHER: And was that out of your ditch or out of the pond?

WITNESS COLE: All of the above.

MR. FISHER: And are you -- do you know where that fire started?

WITNESS COLE: I do not. Which fire are we talking about, the --

MR. FISHER: The fire that happened last summer.

WITNESS COLE: The Haypress fire --

MR. FISHER: No, the Marble fire that happened last summer.

WITNESS COLE: I do not.

MR. FISHER: You're not aware of where it started? Okay.

Are you aware of how it started?

WITNESS COLE: No.

MR. FISHER: Are you aware that it burned the upper portion of my water system?

WITNESS COLE: It burned my water system, as well, Konrad.

MR. FISHER: Okay. Is there an investigation to determine how that fire started?

WITNESS COLE: There was.

MR. FISHER: Was it completed?

WITNESS COLE: Yes.

MR. FISHER: When determining your consumptive water use -- when determining consumptive water use in her report, on -- where did Martha Lennihan arrive at the number for irrigated acres? Where did Martha Lennihan get the -- get her estimate for irrigated acres to come to her calculation for consumptive water use?

WITNESS COLE: I can't speak for Martha Lennihan.

MR. FISHER: her report assumes 40 acres of irrigated alfalfa. You're not -- you don't

know where she got that number?

WITNESS COLE: She -- I can provide hearsay or conjecture on this point of how she did her evaluation. I don't recall.

MS. BRENNER: If you don't know the answer --

WITNESS COLE: I don't know.

MR. FISHER: Do you know where historic water use occurred, pursuant to the Stanshaw mining claim?

MS. BRENNER: I'm going to object to continued line of questions on historic pre-1914 water rights. It's not at issue in this hearing.

HEARING OFFICER MOORE: Can you explain why this line of questioning is relevant?

MR. FISHER: It gets -- it relates to historic versus current water use and the reliance on a ditch that's, in Marble Mountain Ranch's statements, is carrying a level that is in keeping with what was historically diverted for mining. So the capacity of their ditch, if it is based on the full use of Sam Stanshaw's original allotment, it would have been constructed differently than if it was only for a portion of or none of the Stanshaw allotment.

It's about the capacity of the ditch.

HEARING OFFICER MOORE: I'm struggling to see --

MR. FISHER: Okay.

HEARING OFFICER MOORE: -- the connection to the key issues of this proceeding.

MR. FISHER: Okay. So in the considerable analysis that has gone into corrective actions or remedies, and during this period of cooperation, have any of the third party reports evaluated standalone solar systems or, again, hydro systems that rely on less water and higher head?

MS. BRENNER: Can you be more specific? Third party reports?

MR. FISHER: Any of the reports that are in the record for this hearing that speak to hydropower production and water consumption, Cascade Stream Solutions or the Lennihan Report or any of the ones submitted to this record.

MS. BRENNER: I'd still object as vague.

HEARING OFFICER MOORE: Try again. Try to phrase that question a little more directly so that --

MR. FISHER: Okay.

HEARING OFFICER MOORE: -- to facilitate an answer.

MR. FISHER: Mr. Cole, do you recall our conversation the day before the meeting in Orleans that was referenced in this -- in the previous testimony?

MS. BRENNER: Can you give me a date of the Orleans --

MR. FISHER: I'm looking for it --

MS. BRENNER: -- meeting?

MR. FISHER: -- right now. The --

MS. BRENNER: Are you talking about the 12/17/2014 meeting, the stakeholder meeting?

MR. FISHER: Yes.

MS. BRENNER: Okay.

MR. FISHER: Do you recall our discussion approximately 24 or 48 hours before that about whether we could agree to three classifications of potential remedies, standalone solar, hydro using current point of diversion, and hydro using a higher point of diversion, those three general --

WITNESS COLE: I remember you sent me a document with your proposals trifurcating some sort of an energy system.

MR. FISHER: Do you remember us meeting?

WITNESS COLE: I don't remember.

MR. FISHER: Okay. Do you remember us meeting and going for a long walk and ultimately talking about three paths of solutions that we had agreed to --

WITNESS COLE: I remember.

MR. FISHER: -- go forward with the --

WITNESS COLE: Yes, I remember going on a walk with you.

MR. FISHER: Do you remember tentatively agreeing to -- that we would both agree to three solutions, standalone solar, hydro using current point of diversion, and then hydro using higher point of diversion, and that we would go into the meeting in Orleans with that shared agreement?

WITNESS COLE: My position then and now has always been any solution that protects the resource and enables Marble Mountain Ranch's survival is an option to consider, whether it's one of your three, one of -- or any other solution. That's my bottom line. I am less concerned about the technicalities of it. It has to be a manageable system. Whatever physical solutions come in place has to minimize the

impact. I'm not going to move the point of diversion higher up, as per your suggestion, so that leg of your trifurcation of solutions is out, in my opinion.

Again, preserve the resource, easily manageable and long-term viability, Marble Mountain Ranch survives and anything is on the table.

MR. FISHER: And in this list of requirements for a proposed solution, where does downstream -- where does my exercise of my water right, my -- my livelihood come in, the impact on my downstream --

MS. BRENNER: I'm going to object as outside the scope of --

COURT REPORTER: You're microphone is not on there.

MS. BRENNER: Sorry.

I'm going to object on the -- outside of the scope of this hearing.

MR. FISHER: Within the reasonable use doctrine, is it relevant whether a diversion impedes other beneficial uses and users of water?

HEARING OFFICER MOORE: On -- yeah. I'll allow the question in terms -- you know, narrow

the question so it can be a yes or no or --

MR. FISHER: Okay.

HEARING OFFICER MOORE: -- you know, something. You know, be straightforward --

MR. FISHER: Okay.

HEARING OFFICER MOORE: -- with the question.

MR. FISHER: You've listed the parameters that you'd require for a proposed solution.

Will you also -- how would you also address protecting downstream beneficial uses and users of water?

MR. FISHER: Unfortunately, Konrad, one of those answers is that by utilizing hydro plant generation on Marble Mountain Ranch, the downstream user, Blue Heron, can survive. Removal of hydro plant generation eliminates that downstream user's capacity to utilize their permitted and authorized hydroelectric plant.

I have nothing against your survival, Konrad. My point of concern in this hearing is whether or not I have -- I've been accused of wasteful use of the water. And in my opinion, how you survive is outside the scope of this hearing. I hope you do survive. I hope you can

find a way to find a viable source of water for your operations. That doesn't have an impact on what we're discussing here today.

MR. FISHER: How I survive is outside the scope of this hearing? Okay.

Is infringement upon other legal users of water and instream uses of water outside the scope of this hearing?

WITNESS COLE: Konrad, I'm being accused of wasteful use of water. That's what this hearing is about.

MR. FISHER: I'm trying to get --

MS. BRENNER: I'm going to object. This line of questioning has just become an argument between two parties.

HEARING OFFICER MOORE: No. While empathetic to the objection, I will remind everyone here that in any proceeding with respect to waste and unreasonable use or unreasonable diversion, et cetera, the downstream water users' interests are relevant.

WITNESS COLE: Okay. Then I'll expand.

MS. BRENNER: Wait for a question to answer.

WITNESS COLE: Okay.

Ask me a question, Konrad.

MR. FISHER: What remedies would you propose to protect my ability to divert water for domestic use, fruit trees, and to protect instream beneficial uses of water from, yeah, from your diversion?

WITNESS COLE: I'm not understanding how my diversion impacts your survival or your operation there, so I have a difficult time answering that. Mud in Stanshaw Creek is not caused by the diversion of Marble Mountain Ranch. A lack of water to you is -- if I have bypass flows at the diversion, you have water at your diversion.

MR. FISHER: From our conversations over the last 20 years, are you aware of the impact of, one, diverting the vast majority of Stanshaw Creek, or two, rapid fluctuations of your diversion when you maintain your ditch or rapid -- or rapid fluctuations toward the beginning of the summer when you fortify your diversion, thereby decreasing flows rapidly in Stanshaw Creek when there are fish in it; are you aware of those impacts?

WITNESS COLE: I do recall you calling me

and asking that I not divert some much water because you were having a swim party at the refugial pool and you wanted to make sure there was sufficient water for the swim party.

I do recall a phone call where you said that the ditch was creating mud in the stream and what was I doing when Stanshaw Creek was flowing muddy above the diversion and below the diversion. And I was capturing muddy water, as well. So many of the times when you've accused me of creating muddy water, I have also been trying to filter muddy water, which is why I have designed a system to shut off my ditch to allow major storm -- storm pulses to pass before I have to capture water. That's what my storage system is about, so that I can live for a brief period on un-muddied water.

I would suggest that you invest in a storage system, as well, and that your intake system has something equivalent to what I've designed. That would be an intake system with a filter system and some sort of storage device. I'd be happy to talk with you about that and show you what I've got going, if that would help you.

MR. FISHER: And how would you propose

accommodating hydropower production on both lands, yours and mine?

WITNESS COLE: I don't know anything at all about producing hydropower generation on your property, other than that you want to establish it. What's available -- I'm limited by what I can do at my point of diversion by my survival and by minimum bypass flows. What you have available for you at Old Man River, I just -- I hope you can succeed. I'm not in a position to offer editorial on it.

MR. FISHER: Would you agree that the bypass reach of Stanshaw Creek used by a hydro system of yours and a hydro system of mine would be relevant to a potential remedy? By bypass reach, I mean point of diversion and point of return flow for hydro system. Is that not relevant, which bypass reach you have versus which one I have? Is that not relevant to a proposed remedy?

WITNESS COLE: Well, the first remedy we had, which was to pipe all of our effluent back to the anadromous stretch would have provided you two-and-a-half to three CFS of water, pressurized at probably 120 psi, and you could generate more

power than I do. That system was lost when that grant was -- when that grant application failed.

Again, I have no problem with anything you do for your survival. And I'm happy to --

MS. BRENNER: Just answer the question.

WITNESS COLE: Yeah.

MR. FISHER: By bypass reach that you're currently using, I'm referring to this point of diversion.

MS. WEAVER: Can you state the exhibit number please?

MR. FISHER: OMRT-1 again. Sorry.

The current bypass reach you use, Mr. Cole, correct me if I'm wrong, is this the current bypass reach you use as point of diversion, returning to Irving Creek?

WITNESS COLE: I can't see topographical elevation lines on this, but I would presume that it is if you've gone ahead and done that.

MR. FISHER: Okay.

WITNESS COLE: We're roughly at 1,200 feet.

MR. FISHER: For there to be two hydro systems on this creek without adversely impacting this stretch of creek on my land, which is where

anadromous fish use, would you not agree that this is -- the bypass reach that it must share is that which is above Highway 96, or bypass reaches that must be shared are above Highway 96?

MS. BRENNER: I'm sorry, the question is vague. I'm not understanding your question. Could you repeat it or reword it? I'm not following you.

MR. FISHER: Okay. Again, this is getting to potential remedies and protection of uses.

So my question is, okay, which bypass reach do you currently use, Mr. Cole? Where does it begin?

WITNESS COLE: Well, the point of diversion is marked on your map. I would presume that you would have ability to utilize riparian water rights, or you could make an application for appropriative water rights and use the mainstem of Stanshaw, or this tributary which comes in downstream of my point of diversion and before the anadromous stretch.

MR. FISHER: Okay.

WITNESS COLE: So hypothetically, there appears to be about three-quarters of a mile

worth of water and head that you could use to generate some hydro plant system for yourself based on either the main tributary of Stanshaw or that secondary leg, which we see.

The details of that, other than what I'm seeing on the map here, I can't do anything but offer conjecture on.

MR. FISHER: You said earlier, if you had gotten the grant to return the flow to Stanshaw Creek, is it correct that your bypass reach would have, well, yeah, your bypass reach -- would your bypass reach have been from the current point of diversion to the highway, had that grant come through?

MS. BRENNER: Again --

MR. FISHER: Again, bypass reach is the portion of creek that has less water as a result of a hydro system.

MS. BRENNER: I'm sorry. I'm not understanding the actual question.

MR. FISHER: What's the current bypass reach right now?

MS. BRENNER: Of whom?

MR. FISHER: Of Marble Mountain Ranch's hydro system.

WITNESS COLE: Bypass reach? I'm guessing your definition of that is the length of the tributary downstream of our point of diversion. Is that what you're calling it?

MR. FISHER: Again, my definition is, yeah, the portion of the creek that has less water as a result of a non-consumptive hydro use. That is -- that's the bypass reach. So if you return it, then the bypass reach would be at the point of diversion and the point of return flow. That's the bypass reach.

WITNESS COLE: Okay. So had that grant been approved, you would have had all of our hydro plant effluent piped back to your property, and you could have installed the hydroelectric plant that would have been higher pressure and more head. You would have had more capacity to generate electricity than Marble Mountain Ranch. So the bypass reach question, I don't know how to answer that.

MR. FISHER: Okay.

WITNESS COLE: Is that what you're -- because, yes, you would have had, had that been approved, beneficial use on top of -- you would have robbed Blue Heron of their beneficial use,

but you would have gained beneficial use at your location.

MR. FISHER: Is it true that under this scenario, my bypass reach would have been limited to Highway 96 to the mouth of Stanshaw Creek?

WITNESS COLE: No. It would have been rerouted through the piping system.

MR. FISHER: What would my bypass reach have been if I built a hydro system after you were able to install the proposal -- my bypass -- again it's back to what my bypass reach would have been under this proposed solution.

WITNESS COLE: If we're talking hydroelectric plants at Old Man River, you would have been able to install one at the end of the return pipe.

MR. FISHER: Which is, yes or no, at the confluence, at the -- where Stanshaw Creek meets Highway 96?

WITNESS COLE: It's above that. It's above the anadromous stretch.

MR. FISHER: Okay. For clarification, your return flow would have been roughly where -- where Stanshaw Creek crosses the Klamath River and --

WITNESS COLE: Upstream of it.

MR. FISHER: Okay.

WITNESS COLE: Above the anadromous stretch.

MR. FISHER: Yes -- yes or no, my -- under this scenario, my bypass reach would have had to dewater the portion of the stream on my land that is Cojo habitat?

WITNESS COLE: No.

MR. FISHER: Okay.

WITNESS COLE: Bypass flow -- bypass flows from my point of diversion would have been maintained. The water returning to Stanshaw -- the water that we diverted would have been returned to Stanshaw above the point of anadromy. So your refugial pool would have been renovated or rejuvenated by the flows. That was the purpose of the return.

MR. FISHER: Where -- where would my point of diversion be under this scenario?

WITNESS COLE: I don’t know how to answer this question.

MR. FISHER: Is it that my point of diversion could not have been any higher than your point of return flow?

MS. BRENNER: I'm going to object to this line of questioning, continued line of questioning. It's not really at issue. It's beyond the scope of anybody's testimony.

MR. FISHER: Okay. That's fine. I would ask --

HEARING OFFICER MOORE: I'll sustain the objection this time. And the reason is, you know, it feels like you're doing a pop quiz, you know?

MR. FISHER: Okay.

HEARING OFFICER MOORE: Okay, answer this question, you know?

MR. FISHER: So --

HEARING OFFICER MOORE: Is the point of your --

MR. FISHER: Yes, I apologize. I'm trying -- I'm trying to get at proposed remedies, and this has been going on for nearly two decades, so, like, that's all. I'm trying to get at proposed remedies.

HEARING OFFICER MOORE: Yeah. But you're --

MR. FISHER: That's --

HEARING OFFICER MOORE: -- referring to

something that was a proposal 13 years ago.

WITNESS COLE: 2004.

HEARING OFFICER MOORE: Right. And so these are hypothetical.

MR. FISHER: Okay.

HEARING OFFICER MOORE: I'm struggling to see --

MR. FISHER: Do you have any new proposals, proposals newer than this one, to meet -- that would satisfy?

MS. BRENNER: Satisfy what? Meet what?

MR. FISHER: Downstream water rights and instream beneficial uses.

MS. BRENNER: Are you saying a new hydropower used for you? Are you talking about a new use?

MR. FISHER: In part a new use, and also existing domestic uses, and also instream beneficial uses for fisheries.

MS. BRENNER: Well, you've been talking about hydropower.

MR. FISHER: Okay.

MS. BRENNER: So are you -- what are you asking for?

MR. FISHER: You said the Cascade Stream

Solutions report -- or solution is old. I am asking what solutions you would propose? Let's make it broader. What solutions are you willing to agree to in this proceeding? Yesterday you did say foregoing hydro use in the summer. And again, this is to meet all downstream uses, instream beneficial domestic, and unexercised rights.

WITNESS COLE: To --

MS. BRENNER: Unexercised rights? What are those?

MR. FISHER: They are the rights that would ultimately build a hydro system for my land.

MS. BRENNER: So you're asking for a solution for a new use --

MR. FISHER: Well, I've been asking this --

MS. BRENNER: -- your hydro use?

MR. FISHER: I've been asking for this all along.

How about this, Mr. Cole, just to the public trust impacts --

MS. BRENNER: I'm going to again object. Any -- the issue of your new hydro use on Klamath

is not an issue for this hearing.

MR. FISHER: I'm trying. A remedy that meets --

HEARING OFFICER MOORE: So I'm going to make a suggestion --

MR. FISHER: Yes.

HEARING OFFICER MOORE: -- because it feels a little bit like a cart-horse situation here.

MR. FISHER: Okay.

HEARING OFFICER MOORE: A lot of what you're bringing up probably is best brought up with your direct testimony --

MR. FISHER: Okay.

HEARING OFFICER MOORE: -- or opening statement. That's the best I can do for this --

MR. FISHER: That sounds good. Okay.

HEARING OFFICER MOORE: -- because it sounds like, you know, you're leading down a path that wasn't part -- it wasn't noticed.

MR. FISHER: Okay.

HEARING OFFICER MOORE: But I have acknowledged --

MR. FISHER: Yeah.

HEARING OFFICER MOORE: -- in my comments

that the downstream water rights are always pertinent to these type of discussions.

MR. FISHER: Okay.

HEARING OFFICER MOORE: But you are taking it --

MR. FISHER: Let --

HEARING OFFICER MOORE: -- in a different direction. And maybe you can provide some clarity with your direct testimony.

MR. FISHER: Okay. Thank you. Yes, I'm trying to get to proposed remedies.

So, Mr. Cole, yesterday you indicated that you were willing to -- I guess, are you willing to comply with NMFS bypass flow recommendations?

WITNESS COLE: I'll restate what I just said earlier. My bottom line is survival of Marble Mountain Ranch, beneficial uses continuing, minimized impact on the resources, manageable physical solutions that don't fail in the first storm of other natural event, such as wildfire. So I'm looking for physical solutions that can be maintained and that have a longevity that I can predict, and that are also easily managed. I don't want to change points of

diversion. I don't want to install some physical solution which is going to cost a lot of money, fail in the first seasonal change. And so that's my bottom line.

I have a water right that we claim for three CFS. I have stated previously and will state again, the exact number of what I divert for beneficial use is not the bottom line for me. The bottom line for me is can we survive in a reasonable fashion, protect the resource, and find solutions? I have been operating on the presumption that that's out there.

MR. FISHER: Yeah. I understand.

WITNESS COLE: And --

MR. FISHER: This is --

WITNESS COLE: And they aren't mutually exclusive to you, only to the sense that they become mutually exclusive to who gets any effluent out of our hydroelectric plant, which is currently being beneficially used when we run it by --

MR. FISHER: Yeah.

WITNESS COLE: -- Blue Heron.

MR. FISHER: Okay. And are you willing to calculate -- to divert for domestic purposes

an amount limited to that which is based on the State of California standard calculations that were described in earlier testimony?

WITNESS COLE: I have to keep pastures green --

MR. FISHER: It's --

WITNESS COLE: -- dust abated, laundry washed, toilets flushed.

MR. FISHER: Right.

WITNESS COLE: It's a very --

MR. FISHER: Right. There's --

WITNESS COLE: It's -- that's what I need.

MR. FISHER: There's standard calculations for each of those uses.

WITNESS COLE: Yeah.

MR. FISHER: Are you willing to comply with those?

WITNESS COLE: Those numbers that were generated by both ECORP and by Joey are similar --

MR. FISHER: Okay.

WITNESS COLE: -- and I accept those. I mean, that's the standard.

MR. FISHER: Okay. And again, trying to

get at remedies, what, in your mind, went wrong when grant money was available to have a remedy?

WITNESS COLE: Which grant are we talking about, the --

MS. BRENNER: Time period?

MR. FISHER: The grant that would have implemented the Cascade Stream Solutions proposal, return flow, grants that would have --

MS. BRENNER: 2003? 2010? 2012?

MR. FISHER: I'm speaking -- this was over many years, the proposal to return the flow. What went wrong with the grant proposals?

WITNESS COLE: There have been several -- there's been an ongoing effort to utilize grant monies for beneficial solutions and win-win alternatives.

The first failure was the 2004 grant which was going to return all of the hydro plant effluent to the Stanshaw Creek drainage above the point of anadromy, filling rewatering the refugial pool and, incidentally, providing you with pressurized power. That failed because funders did not want to put themselves at risk of suit with funding a project which, in their minds, had an undetermined water right validity.

That was the purpose of the Martha Lennihan Report.

We later then had a second substantial failure when we were trying to fund a piping of consumptive and domestic use water with a six-inch pipe, and on the day of funding were informed that, should we accept the money, that we would be required to relinquish any hydro plant diversions. This last-hour addition to the proposal was unsatisfactory. We denied the grant based on this surprise revelation that it was going to require us to abandon our pre-1914 water right, allowing us to use hydro plant, you know, hydro plant-generated electricity.

So -- and then we had our ongoing failures with staff abandoning the grant process because of the constant issuance of Cleanup and Abatement Orders or Streamside Solutions left us because of their unwillingness to get involved in mitigations and litigation. Our Mid Klamath Watershed projects were abandoned because of Cleanup and Abatement Order issues. So the regulatory process has, in a large regard, been detrimental to our process because grant funders apparently, I didn’t know this, but apparently

they are, by policy, unable to fund projects which are in the middle of a cleanup order, abatement, or some sort of remediation that's --

MR. FISHER: Were you warned by the funding agencies that if this became an enforcement action, then public money would be off the table?

WITNESS COLE: No. This is something that was a surprise to me as it came out. We --

MR. FISHER: The --

WITNESS COLE: We got Cleanup and Abatement Orders immediately after the release of the final designation from -- as I recall, it was like the day after we got the evaluation on what our water right was. Funders can't get involved --

MR. FISHER: So grant --

WITNESS COLE: -- in grant proposals --

MR. FISHER: Okay.

WITNESS COLE: -- when we're under a Cleanup and Abatement Order.

MR. FISHER: So can you just explain a bit more? You rejected, you ultimately rejected or you at some point pushed -- rejected a proposal because it would require you to give up

your pre-‘14 water right or --

WITNESS COLE: I was given a binary proposal: Accept a six-inch pipe being funded to install in our ditch line to convey domestic and consumptive water and reject our hydro plant generation uses, or do whatever I’m going to do to improve the ditch on my own and argue for ongoing hydro plant generation and the preservation of the full water right. It was an untenable situation. I can’t accept -- even though it was free money, it would be free money to pipe something that was a partial solution, I mean free in the sense of I didn’t have to come up with the money for the pipe, but it wasn’t a full solution. And where that came from, I can’t tell you.

MR. FISHER: What would have -- what would have made it complete, a full solution?

WITNESS COLE: Well, a consideration of the rest of the needs of the ranch, power generation. And that’s my position. The hydro plant is a viable option for us, especially in high-flow times. Acceptance of a funding project or a grant funding for installation of a pipe that’s going to require me to abandon my winter

hydro plant uses is an untenable solution. It had nothing to do with you --

MR. FISHER: Okay.

WITNESS COLE: -- that I'm aware of.

MR. FISHER: Well, I mean, I feel like we were trying, but thank you.

WITNESS COLE: Okay.

HEARING OFFICER MOORE: Okay. I'm under the impression, there probably won't be any more cross-examiners, but I'll just, for due diligence, check.

Klamath River Keeper? California Sportfishing Protection Alliance? No? PCFFA? No?

So I think you could use a break.

WITNESS COLE: Yeah.

HEARING OFFICER MOORE: And so I think all of us could.

So what I was going to propose is you'll have the opportunity to redirect testimony after we take a 15-minute break.

MS. BRENNER: Thank you.

HEARING OFFICER MOORE: You're welcome.

(Off the record at 11:05 a.m.)

(On the record at 11:25 a.m.)

HEARING OFFICER MOORE: It's been a little longer than 15 minutes. Our apologies, and thanks.

We'll now reconvene the proceeding, and we'll hand it over to Ms. Brenner for redirect testimony of Mr. Cole.

MS. BRENNER: Thank you.

REDIRECT EXAMINATION BY

MS. BRENNER: Doug, do you recall the conversations you've had regarding the Lennihan Report referencing a 1.16 CFS?

WITNESS COLE: I do.

MS. BRENNER: And the 12 -- December 14th, 2017, do I have that -- no, December 17th, 2014 stakeholder meeting in Orleans?

WITNESS COLE: I do recall it.

MS. BRENNER: And you had -- there was some conversation during that meeting regarding the 1.16 CFS; correct?

WITNESS COLE: Right.

MS. BRENNER: Does that rate allow Marble Mountain Ranch to function?

WITNESS COLE: Absolutely not.

MS. BRENNER: Were you trying to cooperate and come up with a physical solution

that day as part of the stakeholder process?

WITNESS COLE: Yes.

MS. BRENNER: Was any number ultimately agreed to during that meeting?

WITNESS COLE: No.

MS. BRENNER: Did the NMFS bypass flow recommendation come after that meeting?

WITNESS COLE: Yes.

MS. BRENNER: During Mr. Fisher's cross-examination, you indicated that you do not travel up and down Stanshaw Creek during high storm events, flood events; correct?

WITNESS COLE: That's correct.

MS. BRENNER: How do you know there are mudslides on Stanshaw Creek during or after storm events?

WITNESS COLE: Because the water coming into the ditch during those events arrives at the ditch in a muddy, sediment-carrying condition prior to its contact with our point of diversion. That's the first point.

The second point is on one occasion I, while working on the point of diversion, was watching as the hillside on the opposite side of Stanshaw Creek and downstream of the point of

diversion sloughed in front of me at that moment. That slough is still there and remains to be inspected, if Water Board wants to look at it.

A third point is that I have watched the ditch at times of low flow, most recently with the inspection done by Steve Cramer, and at other times and can observe and have observed numerous sloughs on both sides of the creek, but predominantly on the creek's right side which tends to have a steeper slope of inclination than the left -- than the left bank does.

So bank sloughs are observable by anybody that would choose to look at them and walk the ditch. I've seen them happen in the moment. I've seen them happen after the moment. And I've seen the effects of it at times when I've been on the ditch during high flows.

MS. BRENNER: During storm events and after large storm events, does Klamath River run brown?

WITNESS COLE: It's probably brown as we speak. It was brown the week that I left to come up here from the recent storms. And it's a piece of my survival for fishing is working around routine muddying of the Stanshaw -- or the

Klamath River because I cannot fish guide with a blown river, as we call it.

MS. BRENNER: Thank you. Are you able to currently comply with NMFS bypass flow recommendation?

WITNESS COLE: No.

MS. BRENNER: Can you return hydro water use back to the Klamath or back to the Stanshaw?

WITNESS COLE: There's no route for it to get back to Stanshaw.

MS. BRENNER: And you testified yesterday that in order to do that, it would be in excess of $1 million?

WITNESS COLE: Yes.

MS. BRENNER: But you have agreed to the portion of the bypass recommendation of 2 CFS?

WITNESS COLE: Given other conditions, I can accept that.

MS. BRENNER: Okay. I'm going to go back to your responses to Mr. Petruzzelli yesterday.

You've indicated several times the bottom line is to enable your survival. Any solution has to enable your survival at Marble Mountain Ranch; correct?

WITNESS COLE: That's correct.

MS. BRENNER: And some of those suggested solutions are a hybrid solar-hydro system; correct?

WITNESS COLE: That's correct.

MS. BRENNER: Will a solar-hydro system alone meet all your energy demands, or do you need to also rely on diesel?

WITNESS COLE: Diesel has to be available for maintenance times and for emergency times when a system fails, but if solar, in a hypothetical world, solar, when the sun's out, i.e. summer, great hydro when the streams are flowing, i.e. winter, great, they mesh together. But in reality, there's times when they don't, so I might still have to have some backup diesel.

MS. BRENNER: And that would -- that hybrid solar-hydro would still require you to use the hydro?

WITNESS COLE: That's correct because the -- there's a lot of complications.

One is we don't have a guarantee that there's enough capacity on the ranch to place solar panels efficiently and number to run the system large enough that we're talking about.

Secondly, we have the issue of fog and

cloud cover which diminishes the capacity of the solar plant.

So there's complications that are not addressed in some of these preliminary estimates that we presented as evidence.

MS. BRENNER: So the solar installation costs could actually be more than estimated by Mr. Slater, just --

WITNESS COLE: I would expect them to be significantly higher.

MR. PETRUZZELLI: Quick administrative question. Should there be a time on the clock for this?

MS. BRENNER: No.

MR. PETRUZZELLI: Okay. Just checking.

WITNESS COLE: I would expect the actual installation to be significantly higher than what Hal Slater approximated for the purpose of his sale.

MS. BRENNER: And there was some discussion yesterday about warranties, correct, on the solar --

WITNESS COLE: Right.

MS. BRENNER: -- and batteries?

WITNESS COLE: Right.

MS. BRENNER: Are there also additional O&M expenses associated with such a system?

WITNESS COLE: I would presume so. You can't ever install something and have it be absent maintenance costs or operational costs.

MS. BRENNER: And the battery system that was suggested by Mr. Slater, it would be contained in what?

WITNESS COLE: You'd have to bring in a large cargo container, one of the shipping containers that you see, build a pad for it, establish an organizational system for the batteries in the cargo container, redistribute power lines through the ranch so that you could access the grid of the ranch from a different location, rather than the existing heart of the power plant which is one location for both diesel and hydro plant. So he's talking about an offsite, well, yeah, a third power source which it's -- with its own separate location.

MS. BRENNER: Okay.

WITNESS COLE: The integration would be fairly complicated.

MS. BRENNER: The integration of the various energy --

WITNESS COLE: Right.

MS. BRENNER: -- sources?

WITNESS COLE: Right.

MS. BRENNER: And just the integration of those various energy sources have been estimated at a minimum of another half a million dollars?

WITNESS COLE: That's what the electrician was getting at with his proposal.

MS. BRENNER: Are your efforts currently focused on lining or piping the first portion of your ditch so you can install a measuring device?

WITNESS COLE: Yes.

MS. BRENNER: Do you have any idea of the cost of that effort?

WITNESS COLE: Everything I look at seems to be around the magic number of a half a million. I don't know why that is. And these are all numbers that people throw out with these, and seeming impunity, plan on at least a half a million. We had an engineer's proposal to look at it, and the engineer's expected costs were going to be $30,000 just for the analysis.

MS. BRENNER: Just for the design?

WITNESS COLE: Right.

MS. BRENNER: Do you recall if that

engineer's estimate was for the lining of the -- the design to line the entire ditch, or just a portion?

WITNESS COLE: I don't.

MS. BRENNER: Okay. Would that effort require a 1600 Permit, do you know?

WITNESS COLE: I believe it would.

MS. BRENNER: Has CDFW been -- issued your Operations and Maintenance 1600 Application this last year?

WITNESS COLE: No.

MS. BRENNER: Does it make any sense to you to commit to a minimum of $1 million-plus outlay for the electrical and solar system when you have no idea of the status of your ability to use the water for hydro?

WITNESS COLE: It doesn't make any sense at all. There's an open-ended, seemingly unending set of demands that are coming at me, and there's no seeming end to the -- to the issues that are here. So if I commit to a million-and-a-half or whatever and try to get that funded, that doesn't mean that all of the issues or concerns are going to be addressed.

MS. BRENNER: Do you have continued

disagreement with the Regional Board regarding the geoscientific evaluation of the ditch system?

WITNESS COLE: I do. They asked that we provide a professional survey of the facility for sedimentation. We did that. And from my understanding, the Water Board has disagreed with his professional evaluation, in spite of spending extended periods of time on the ditch and on the ranch, and his very thorough, professional evaluation.

MS. BRENNER: And are you referring to the Fiori report?

WITNESS COLE: I am.

MS. BRENNER: And did -- how many days did Mr. Fiori spend out at the ranch?

WITNESS COLE: Probably four or five full days of time, walking the ditch and exploring the geology in and around, below and above the ditch.

MS. BRENNER: Did he have additional people with him?

WITNESS COLE: He did.

MS. BRENNER: Do you recall Mr. Fiori prepared a LiDAR view of the ditch system?

WITNESS COLE: I do.

MS. BRENNER: And yesterday during your

cross-exam, you were asked where does any flow off the side of the penstock go using that LiDAR exhibit, Marble Mountain Ranch-12?

WITNESS COLE: I recall that.

MS. BRENNER: Where does that water go?

WITNESS COLE: The excess flow that does not enter the penstock, when it happens, proceeds down alongside the penstock in a legacy ravine and gets captured in an overflow pond, as we call it. So any gravel or sediment that might have been picked up along that line is captured there, and then that flow proceeds on down across the back of the ranch where it enters the pond. And any remaining sediment in that flow is captured again.

MS. BRENNER: Okay. Do you recall a photo of -- well, let’s strike that.

When did you replace your water storage tanks on this -- on the ranch?

WITNESS COLE: 2016.

MS. BRENNER: Do you recall the cost of doing that?

WITNESS COLE: I have numbers here; $33,503, those are hard costs. They do not reflect the labor to install it.

MS. BRENNER: Okay. Is that considered a capital cost?

WITNESS COLE: It is.

MS. BRENNER: Are capital costs depreciated?

WITNESS COLE: They are.

MS. BRENNER: Under the federal tax rules?

WITNESS COLE: Standard practices.

MS. BRENNER: Okay. So let's go back to the line of questioning by Mr. Petruzzelli regarding your tax returns.

WITNESS COLE: Okay.

MS. BRENNER: Do you recall that line of questioning?

WITNESS COLE: I do.

MS. BRENNER: Who prepares your taxes?

WITNESS COLE: Al Dorf, a CPA.

MS. BRENNER: Did, at some point, he suggest that you transition from a sole proprietor-type accounting system to a C Corp or an S Corp?

WITNESS COLE: To an S Corp, yes.

MS. BRENNER: And S Corp. And that's -- your current accounting practices are in line

with an S Corp --

WITNESS COLE: Yes.

MS. BRENNER: -- system? Okay.

Do you recall, Mr. Petruzzelli pointed to several line items on your 2014 to 2016 federal tax returns; correct?

WITNESS COLE: Yes.

MS. BRENNER: Each time he noted the amount depreciated; correct?

WITNESS COLE: Yes.

MS. BRENNER: So when you purchase a piece of equipment or you construct something, like your filtration system, is that considered a capital asset --

WITNESS COLE: It is.

MS. BRENNER: -- for tax purposes?

WITNESS COLE: It is.

MS. BRENNER: So the direct expense of that particular asset, capital asset, it not detected in that year's tax return; correct?

WITNESS COLE: That's correct.

MS. BRENNER: Instead, it's depreciated over a number of years?

WITNESS COLE: That's correct.

MS. BRENNER: Do you recall what capital

expenses you did incur in 2016 that are not deducted from your taxable income on your federal tax form?

WITNESS COLE: Are you -- can I clarify? Are you asking what other expenses we had that are in the same category of capital expenses, such as the filter system?

MS. BRENNER: Yes.

WITNESS COLE: Yes. We bought several horses to replace some that had aged and had to be taken out of service. We had a vehicle failure. We had to purchase a new vehicle. We did an improvement on staff housing. We purchased a mini excavator so that we could do ongoing maintenance on the ranch property. Those are all expensed out.

MS. BRENNER: Those were expenses incurred that weren't fully --

WITNESS COLE: Oh, they were depreciated.

MS. BRENNER: They were depreciated --

WITNESS COLE: Right.

MS. BRENNER: -- expenses --

WITNESS COLE: Right.

MS. BRENNER: -- or they will be depreciated --

WITNESS COLE: Right.

MS. BRENNER: -- expenses? They weren't line item expenses --

WITNESS COLE: No.

MS. BRENNER: -- in your expense sheet?

In order to make the record clear, you've got to wait for me to finish my question.

WITNESS COLE: I'll wait.

MS. BRENNER: Do you know the total of those particular capital expenditures for 2016?

WITNESS COLE: Approximately $70,000.

MS. BRENNER: Are loan payments for capital expenses deducted from your taxable income? In other words, you make loans on certain capital assets; correct?

WITNESS COLE: Right.

MS. BRENNER: And those capital assets, again, are depreciated over time; correct?

WITNESS COLE: Right.

MS. BRENNER: So the loan payments that are made on an annual basis are not -- are not deductible expenses; correct?

WITNESS COLE: That's correct.

MS. BRENNER: Do you know approximately how much loan payment you made during 2016 that

was not deducted from your tax return?

WITNESS COLE: Again, approximately $70,000.

MS. BRENNER: Can you name a few of those items that compile that number?

WITNESS COLE: Ranch mortgage, ranch second mortgage, equipment payments, vehicles.

MS. BRENNER: Do you also have medical expenses that are not deducted from your tax return?

WITNESS COLE: I do.

MS. BRENNER: And what are those annual payments, or monthly payments?

WITNESS COLE: Roughly $17,000 -- or $1,700.

MS. BRENNER: So you have various other expenses that you incur over a year that are not reflected in your tax return?

WITNESS COLE: That's correct. The tax returns as presented here are a partial picture of my finances.

MS. BRENNER: Okay. You testified that the winter storm this past winter, 2016-17 winter, there was severe storm activity on the -- in your area?

WITNESS COLE: I do.

MS. BRENNER: Can you give just a brief summary of the major damage Marble Mountain Ranch incurred during that storm season?

WITNESS COLE: Yes. We had an a-typical snow event, so literally thousands of trees were blown down by a heavy snow after a long series of rains when the trees are weakened, and after a long series of drought years. So we had five large Doug firs hit one structure, totally demolishing it. I had another large Doug fir hit one of our homes, peeling off the carport, requiring that building to be repaired and the roof to be replaced. Our barn left wing was collapsed under the weight of the snow. Doug firs lining the perimeter of our pasture were toppled, crushing fence lines on both sides of the pasture.

The ditch line itself was fully impacted by down trees. To illustrate the degree of impact, it took three-and-a-half hours to walk through the jackstraw (phonetic). Massive trees from -- from car access point to the point of diversion when we first went up to survey the ditch after the storm -- we had to turn the ditch

off prior to the storm -- so in our walk up to survey, it was a three-and-a-half hour walk to go three-quarters of a mile.

MS. BRENNER: So you'll need to incur capital expenses --

WITNESS COLE: Yes.

MS. BRENNER: -- in order to repair those?

WITNESS COLE: Yes.

MS. BRENNER: And that layout of capital, or that layout of finances, won't be reflected in your next year's tax return? Those assets will be, then, depreciated again; correct?

WITNESS COLE: That's correct.

MS. BRENNER: Can Coho reach Marble Mountain point of diversion coming from the Klamath?

WITNESS COLE: No.

MS. BRENNER: Are there lakes above your point of diversion?

WITNESS COLE: There are wilderness lakes above, yes.

MS. BRENNER: Can I just take a quick second? I think I'm -- I think I'm done, but let me take a quick second.

(Pause in proceedings)

MS. BRENNER: Just a couple more.

Do you recall being asked by California Department of Fish and Wildlife's counsel about a site visit by Ms. Bull?

WITNESS COLE: I do.

MS. BRENNER: And that she observed fish in the pond?

WITNESS COLE: I do.

MS. BRENNER: Do you stock those -- that pond?

WITNESS COLE: Not at the time Ms. Bull was there. I have, in the 2016 year, stocked with triploid trout from the hatchery.

MS. BRENNER: Prior to stocking the pond, was it -- where would the fish come from? They're not coming from the Klamath; correct?

WITNESS COLE: No.

MS. BRENNER: So it's not Coho in the pond?

WITNESS COLE: No.

MS. BRENNER: I don't have anything further.

HEARING OFFICER MOORE: All right. Thank you, Ms. Brenner.

And at this time we open the proceeding to recross examination. We can begin with the Prosecution Team. A reminder that recross examination is limited to the scope of the redirect testimony.

RECROSS EXAMINATION BY

MR. PETRUZZELLI: So, Mr. Cole, I just have one set of questions for you.

Ms. Brenner wrapped up asking you about where fish would have come from -- where fish in your pond would have come from prior to stocking; do you recall that?

WITNESS COLE: I do recall.

MR. PETRUZZELLI: Okay. My question is, once a fish is in the pond, where would it go?

WITNESS COLE: Under current configurations, it would go nowhere. There's no exit, unless it goes up and enters a long set of culverts and enters -- goes out towards my pasture. Right now there's no connectivity with any -- any tributary.

MR. PETRUZZELLI: Swimming through culverts out to your pasture, is that good habitat for fish? Is that a good --

WITNESS COLE: I'm not sure what you're

asking.

MS. BRENNER: I think you mischaracterized his statement. He indicated there was no connectivity.

MR. PETRUZZELLI: No. I'm just -- no, he indicated that there's -- the only potential pathway out of the pond, I think he said, is swimming through some culverts and towards your pasture; was that -- was that correct?

WITNESS COLE: That's correct.

MR. PETRUZZELLI: Yeah. Would that be a good direction for a fish to swim to your pasture?

WITNESS COLE: It would be a lethal thing to do.

MR. PETRUZZELLI: I had a hard time hearing that.

WITNESS COLE: It would be lethal if --

MR. PETRUZZELLI: Lethal for the fish?

WITNESS COLE: -- and difficult to do because I rerouted the lower ditch line to avoid passage through the pond to address the long series of demands for testing on effluent water, which was prohibitive and costly. So I've now got a ditch line system which comes up and has a

bifurcation to take water into the pond, and then the mainstem of the lower ditch line proceeds through a long set of culverts, down towards the Irving Creek Outfall, so that there is no flow-through from the pond. There's a flow in --

MR. PETRUZZELLI: Uh-huh.

WITNESS COLE: -- and no flow out.

MR. PETRUZZELLI: So if a fish swam into the pond, as it may have done before stocking --

WITNESS COLE: Uh-huh.

MR. PETRUZZELLI: -- there was likely no way for that fish to escape the pond and survive?

WITNESS COLE: Correct.

MR. PETRUZZELLI: Okay. Thank you.

WITNESS COLE: Okay.

HEARING OFFICER MOORE: Thank you.

Next we're going to open up recross to -- wait -- oh, okay, the National Marine Fishery Service.

MR. KEIFER: May I have a moment?

HEARING OFFICER MOORE: Yes, you may have a moment.

(Pause in proceedings)

RECROSS EXAMINATION BY

MR. KEIFER: Okay. I just have one or

two questions for you, Mr. Cole.

Do you recall testifying on redirect that you're concerned with enabling your survival and the survival of the ranch?

WITNESS COLE: I do recall that.

MR. KEIFER: How do you define survival?

WITNESS COLE: Not negatively adversing (phonetic) the operations, the finances, the essentially essence of or the general nature of the ranch. Survival under that term, for me, means not being forced to change business models drastically, and that the existing financial structure can be preserved.

MR. KEIFER: So if compliance with state water and wildlife laws would force you to change your business model, that would mean that the ranch would not survive?

WITNESS COLE: Well, you're asking for some hypotheticals here. So I consider changing my business model regularly in ways to benefit the ranch, such as do I need to add a new service, do I need to eliminate a service, do I need to change capacity, all these parameters. The essential nature of a dude ranch, the guide service, organic farm, those features need to be

preserved.

I'm not willing to, under my stewardship at the ranch, do a drastic change in business model to something that would, for hypothetical cases, take it to the green industry.

MR. KEIFER: That's all I have.

HEARING OFFICER MOORE: Thank you.

Department of Fish and Wildlife?

RECROSS EXAMINATION BY

MR. PUCCINI: Still good morning, Mr. Cole.

WITNESS COLE: Good morning.

MR. PUCCINI: You stated that fish from Stanshaw Creek get into and use your ditch and can move between your ditch and Stanshaw Creek.

What happens to the fish that are in the ditch when you dewater it in anticipation of storm events or for maintenance purposes?

WITNESS COLE: There are -- there are several locations where the -- where the ditch has a deeper -- it's a pool, and the fish migrate there.

MR. PUCCINI: Okay. Is it possible that some of the fish will be flushed out of the ditch to the two outfalls that you described?

WITNESS COLE: If they did, they'd return back to Stanshaw Creek. It's direct connectively to Stanshaw Creek. So, yes, if they can get into the ditch, they can get back. If they can enter the ditch from Stanshaw, they can return to Stanshaw three places, at the point of diversion, at one of -- at the first outfall, or at the second outfall. All those are in direct connectively to Stanshaw Creek.

MR. PUCCINI: So under normal conditions, without manipulating the outfalls or the weirs, they still have the ability to get through the outfall, or do you have to actually, for lack of a better description, lift the flashboard, open up that outfall for those fish to have access?

WITNESS COLE: That would depend on the specifics of that day. There are days when there is no water flowing over the outfall, the flashboards. There are days when there is. And it depends on what the flow up to that point is, so there could be anywhere from one, two or three points for fish to return to Stanshaw, if they were entrained in the -- in the ditch line.

MR. PUCCINI: Is it conceivable or have you experienced or witnessed -- is it conceivable

that some of the fish that end up in the ditch perish as a result of that, quote unquote, trip into the ditch, either because they've left the outfall and it wasn't a happy return, or something in the ditch itself has caused --

MS. BRENNER: I'm going to object as hypothetical; vague.

MR. PUCCINI: I was asking if it's conceivable --

HEARING OFFICER MOORE: Do you --

MR. PUCCINI: -- based on his experience and knowledge of the ditch.

MS. BRENNER: Still object as hypothetical.

MR. PUCCINI:

Have you ever witnessed any dead fish in your ditch?

WITNESS COLE: No.

MR. PUCCINI: Okay. Thank you.

HEARING OFFICER MOORE: I'm going to -- so that was a rephrase of the question --

MR. PUCCINI: Correct.

HEARING OFFICER MOORE: -- in response to the objection?

MR. PUCCINI: Correct.

HEARING OFFICER MOORE: So I'll overrule the objection.

MR. PUCCINI: Thank you.

Ms. Brenner made passing reference in her redirect on a permit from the Department of Fish and Wildlife for operation and maintenance of your ditch.

Is it your understanding that you need a permit from the Department to do maintenance work in your ditch?

WITNESS COLE: My understanding is that a permit to do maintenance and work in the ditch depends on where in the ditch I'm working. So if I'm within the bed and banks or somewhere outside that realm, then the permit structure is different or absent.

MR. PUCCINI: Are you aware that the section in the Fish and Game Code that governs issuance of that permit, which I'll represent as Fish and Game Code section 1602 applies to work that could, in some way, generally speaking, alter a river, stream or lake?

WITNESS COLE: Yeah.

MR. PUCCINI: Do you -- is it your opinion that your ditch is a river, stream or

lake?

WITNESS COLE: I don't know how to answer that. It's not a -- my ditch is not a river, stream or lake in its definition of a natural occurrence, but it does provide habitat.

MR. PUCCINI: Let me rephrase it. The question I'm asking is --

WITNESS COLE: Yeah.

MR. PUCCINI: -- if you did not have a permit from the Department, pursuant to the Fish and Game Code section, that specifically authorizes you to conduct maintenance work in your ditch, do you think you're precluded as a matter of law from doing that?

WITNESS COLE: My understanding is I can maintain the ditch outside the bed and banks of Stanshaw at my discretion. And my predecessors have and I continue to do that to -- under best management practices.

MR. PUCCINI: Okay. Thank you. That's great.

Can we queue up Exhibit WR-82? And can we go to page six, which I believe is Bate stamp number 2440? And move down just a little bit. Can I control this at this point or -- yes.

Okay.

You mentioned you're measuring culvert, where you measure the flow in Stanshaw units, is the maximum amount of water that you regulate at that measuring culvert three CFS?

MS. BRENNER: I'm going to object. It goes beyond the redirect questions.

MR. PUCCINI: Ms. Brenner mentioned excess flow into the pond, so I think it's within the scope of the redirect.

MS. BRENNER: I mentioned the -- where the outfall goes, under certain occasions, from the penstock. That's it.

HEARING OFFICER MOORE: This may be an outgrowth of the cross and not the redirect.

Was there -- was there something in the redirect you can connect this line of questioning to?

MR. PUCCINI: It overall has to do with the ditch capacity and the function.

MS. BRENNER: I didn't ask anything about the ditch capacity and function.

HEARING OFFICER MOORE: All right. I'll sustain the objection.

MR. PUCCINI: Okay. No further

questions. Thank you.

HEARING OFFICER MOORE: Thank you.

Next for recross will be the Karuk Tribe. Mr. Hunt?

MR. HUNT: No. Nothing.

HEARING OFFICER MOORE: No? Okay.

And next for recross will be Old Man River Trust.

RECROSS EXAMINATION BY

MR. FISHER: Was the Lennihan Report conducted to resolve disputes between parties?

MS. BRENNER: Objection. Goes beyond the scope of the redirect.

HEARING OFFICER MOORE: Your redirect did discuss the Lennihan Report.

MR. FISHER: Specifically, whether -- you asked specifically whether its conclusions would allow Marble Mountain Ranch to stay in business.

MS. BRENNER: I asked about the 1.16 CFS discussion on 12/14/2017.

MR. FISHER: In the Lennihan Report.

HEARING OFFICER MOORE: Okay. Is this line of questioning related to the minimum flow rate?

MR. FISHER: It’s related to --

HEARING OFFICER MOORE: What she asked about?

MR. FISHER: -- the Lennihan Report. It's related to the Lennihan Report, whether or not --

HEARING OFFICER MOORE: Yeah. Her line --

MR. FISHER: -- its conclusions would allow him to stay in business. Okay. That's --

HEARING OFFICER MOORE: Her line of questioning had more to do with his, you know, understanding of --

MR. FISHER: Okay. You --

HEARING OFFICER MOORE: -- those conclusions and the discussion at the time of a physical solution; am I right, Ms. Brenner? Yeah. That was really the context of that line of questioning.

MR. FISHER: Okay. So your question was, and correct me if -- your answer to the question posed to you, does one -- does 0.11 CFS cited in the Lennihan Report allow you to manage your ranch, and your answer was, no; is that correct?

WITNESS COLE: That's correct.

MR. FISHER: Could you manage your ranch

if you had an integrated solar and fossil fuel generator system without hydro if you had solar and generator, or just solar?

WITNESS COLE: It's a hypothetical. I don't have enough information to give you a concrete answer on.

MR. FISHER: You don't have enough info on solar systems to give an answer? Okay.

Could we -- could we pull up --

WITNESS COLE: I'd need the hydro to be operating regardless.

MR. FISHER: You have to have -- okay. So no matter what kind of solar system you have --

WITNESS COLE: We need the hydro in order --

MR. FISHER: -- you must have hydro?

Must you have hydro, even if you have solar and fossil fuel generator?

WITNESS COLE: Yes.

MR. FISHER: Okay. Could we pull up three hydro, OMR -- I'm sorry, OMRT-3? I would do it, but this mouse is not working very well.

MS. BRENNER: I'm going to object to this line of questioning. It goes beyond the

redirect.

HEARING OFFICER MOORE: Do you --

MR. FISHER: Your question was specifically about circumstances under which he could stay in business, quantity of water to stay in business. This is related directly to quantity of water to preserve his business, quantity of water necessary for hydro to preserve his business. I'll drop it. That's fine. I'll say it later.

HEARING OFFICER MOORE: Yeah. Again, I think your -- I mean, conjecture, but I feel like you're getting into your own direct testimony by bringing up your exhibit.

MR. FISHER: Thank you. Okay. Sorry.

Do you know what kind of fish are in the portion of your ditch on Forest Service land?

WITNESS COLE: Salmonids of undetermined species.

MR. FISHER: Do you know if your point of diversion in Stanshaw Creek is currently in compliance with Fish and Game Code section 1600?

WITNESS COLE: You'll have to forgive me, Konrad. I don't know what 1600 says.

MR. FISHER: When Brian Boyd came out and

told us, you've got to let water through to have fish passage, that's --

WITNESS COLE: It is.

MR. FISHER: -- Fish and Game Code section 1600. It is? Okay.

WITNESS COLE: It is in compliance.

MR. FISHER: Thanks.

HEARING OFFICER MOORE: Okay. And I believe Klamath River Keeper, CSPA and PCFFA are not present? I keep confirming this. Okay.

And at this point, I would actually open it up to Staff, if you have any questions. Do you want to take time or --

MS. WEAVER: Give me one second.

HEARING OFFICER MOORE: Okay. We're going to take just a moment.

(Pause in proceedings)

EXAMINATION BY

MS. WEAVER: I think we're ready. So I have a couple questions.

I want to ask you first, I recall you saying yesterday that this is your first time appearing in court.

WITNESS COLE: Uh-huh.

MS. WEAVER: Is that correct?

WITNESS COLE: Uh-huh.

MS. WEAVER: Okay. So let me just go over what Staff's role is here, because it's a little different from being cross-examined by other parties who may be adverse.

So we advise the Hearing Officer. We're neutral.

WITNESS COLE: Uh-huh.

MS. WEAVER: We ask our questions just to -- you know, if we thought something was interesting, or to fill in gaps in our understanding --

WITNESS COLE: Sure.

MS. WEAVER: -- just so you know.

WITNESS COLE: Sure.

MS. WEAVER: So -- and if you or your counsel have any concerns with our questions, then we'll figure out a way to ask a better question. Does that sound okay?

WITNESS COLE: Yes.

MS. WEAVER: Okay. I wanted to start by asking you, who visits the ranch? Where do they come from?

WITNESS COLE: We have a global audience. Thanks to the modern technology of the internet,

we have a reach that literally covers the globe. So a typical week at Marble Mountain Ranch might have California residents from L.A., San Diego, northern residents of Oregon and Washington, so West Coast visitors. We get a lot of East Coast visitors, Chicago, Florida. And then we have, almost every week, some portion of visitors from the UK. The Brits, for whatever reason, are keen on the Western culture --

MS. WEAVER: Okay.

WITNESS COLE: -- and cowboying up. Germany, likewise. So it's a global reach. And almost all European nations are represented in the guest profile, and to some degree some Asian nations.

MS. WEAVER: Are you competing in a global marketplace then, or primarily with local ranches?

WITNESS COLE: There are not -- if -- in the Dude Ranchers Association, those -- those ranches, California is represented by four ranches out of 120, by my recollection, ranches in the association, which cover Wyoming, Montana, Colorado and other classic western locations.

MS. WEAVER: Okay.

WITNESS COLE: I compete with them. And then I compete with the global audience for other non-ranch-related venues. So if somebody wants to take a cruise rather than a dude ranch, that's a competition. If they want to go to Club Med, Club Med versus visit Marble Mountain Ranch, that is a global competitor. So I have ranch competition and other recreational venues of different types that are also competition.

MS. WEAVER: Okay. Thank you. That's helpful.

WITNESS COLE: Uh-huh.

MS. WEAVER: You testified yesterday that, I mean, you're an owner-operator. You have a number of different roles on the ranch; correct?

WITNESS COLE: Can you clarify?

MS. WEAVER: Well, I think you mentioned you guide fly fishing.

WITNESS COLE: Oh, right.

MS. WEAVER: You're a short-order cook.

WITNESS COLE: Uh-huh.

MS. WEAVER: So you regularly interact with your visitors?

WITNESS COLE: That's our signature. We

are one of the rare small venues with authentic western experiences where the proprietors are face-to-face with the visiting guests, and that's our -- that's our claim to fame, in part. We are not a large venue. Some of the ranches, such as the Alisal near Solvang, host 200 guests. We host a small venue, so that we can have that personal interaction and be a, what we advertise, family operated ranch in the true sense.

MS. WEAVER: All right. Do visitors ever ask you about the ditch or the history of the ditch or the hydropower system?

WITNESS COLE: It's a very interesting point to visitors. Our guests are intrigued by the very concept of being off the grid. It's an inconceivable point for a lot of people to get onto the ranch and realize that they can't turn on their cell phone. And the idea that they can be in a location with no cell coverage, with no police force, with no power grid supply, it's a novel concept which some people can't handle, and so they choose to go elsewhere.

Other people consider that to be a desirable effect, and the need to disconnect is a marketing point to where families come, they take

advantage of the solitude. They become a part of the western culture and the natural resources of that environment.

The history and the specifics of the power plant are always an intriguing point to visitors to try to understand what's happening.

MS. WEAVER: Okay. So we've talked today and yesterday about it's important for you to ensure the survival of your business to maintain its character as a dude ranch.

WITNESS COLE: Right.

MS. WEAVER: Is having the ditch as -- you know, it's old, it has this interesting history, is that -- do you see that as being part of the character of your ranch as a dude ranch, or is the ditch is a way to get power and water?

WITNESS COLE: Well, yes, it is a piece of the culture. I have a page on the history of the ranch on our website, which people are directed to, so that they can read about the evolution of the ranch business and the related cultural changes over the last two centuries. So our visitors, when they come from distant locations, are getting there in the hopes of seeing and experiencing and understanding the

history, the Gold Rush. People are fascinated by the Gold Rush, which is the -- what the -- what the ditch is all about. I can take them to the last remaining mining pit, and we ride right through it on horseback.

And so that's a piece of the experience, is the cultural edification and connect with the western history and the experience there in the Klamath National Forest.

MS. WEAVER: Thank you. How many hours do you work in a typical week during the visitor's season?

WITNESS COLE: Sunup until sundown every single day. I don't know if you can understand this without being an entrepreneur, I don't know your background, but I literally get up at 5:30 and am on the job until my head hits the pillow somewhere 10:30 and 11:00. All of that time is in preparation for guests arrival when they wake up and come to their first meal or activity, followed by direct guest interactions, teaching shooting at the shooting range, white water rafting with them on the river, leading a trail ride, instructing them in how to fly fish.

So I'm in the public eye and on the job

from the minute my eyes open until they shut, and that's the true -- the scenario for all of my family. And that's part of the life that we enjoy and live. I mean, it's pretty rugged in season, and we catch our breath in the off season, now, as we're entering into it. And that's the time when we market the business, do our repairs and improvements as needed for the anticipated coming season.

So it's kind of a throwback to a 150-year-old nuclear family on a ranch out on the plains. You had to work from sunup until sundown as 100-year-old ranching family if you wanted to have food to survive the winter.

MS. WEAVER: What percentage of your time in a typical week would you say that you spend on the issues we've been talking about today, so water right issues, meeting with government agencies or other parties who have concerns about --

WITNESS COLE: Recently it's been almost an unbearable intrusion. The intrusion has diminished my capacity to operate my business because I have to sit on the phone and counsel with my attorney, respond to the latest threat,

plan on how we can respond, figure out what we're going to do to try to mitigate whatever that issue is. And so I have time expenses that are a significant intrusion, fiscal expenses.

And the emotional expense, there's no cost to put on that. My health is diminished. My family's health is diminished. My family are in anxiety about their future. My children and my grandchildren are in anxiety about the future of the ranch because it's a piece of their family history. So the impact is far, far beyond what you might expect by looking at a balance sheet and the cost.

If I have one threat to my life that is the most -- I can endure natural forces, snow downs and firefighters -- forest fires, easier than I can endure this process. I would rather be in the middle of a forest fire. I know what I'm dealing with then. I can see where it's likely going to go. I have no way to calculate how this is going to go or if ever it will end, and that has an incalculable cost on our family's psyche and our capacity to survive.

Early on in my career if somebody offered to buy my ranch, I would have flatly said, no.

As time evolves, my capacity to withstand this process is withered and I start to fantasize about maybe there's an alternate for me and my family. Shall we find another place to be? Shall we give this up? Can I survive.

I've been here -- as soon as the doors opened, because I can't sleep. And I'm sitting my chair, waiting for this meeting to start so that I can hurry up and get it done. I have to have an end.

MS. WEAVER: I appreciate that. And thank you for being here today to answer our questions.

I have a quick housekeeping item before we get to that.

You had mentioned, I think, there's a mortgage and second mortgage, and those constitute part of your expenses. Do you -- and if you don't know, that's fine, but do you happen to know what year those are anticipated to be paid off?

WITNESS COLE: I recently refinanced the mortgage to a 15-year loan. I believe that was a year-and-a-half to two years ago. So if things go successfully, I might have my mortgage paid

off in 13 years.

MS. WEAVER: And for the second mortgage?

WITNESS COLE: I don't recall.

MS. WEAVER: That's fine.

So if we could pull up MMR-12, page 4? It's the -- it should be the LiDAR images.

(Document displayed on screen)

So do you recall yesterday, Mr. Petruzzelli asking you questions about the penstock, and then a mark near the penstock that you described as a legacy ravine?

WITNESS COLE: Yes, I do recall.

MS. WEAVER: Okay. Thank you. What I'm going to do, this is just to have a clear record because you had indicated it with the mouse, so I'm going to bring down a printout of this exact page. And then if -- after confirming that it's the same thing, if you could just mark what you indicated yesterday to the best of your recollection?

WITNESS COLE: Sure.

MS. WEAVER: Let me come down.

(Pause in proceedings)

MS. WEAVER: So let me know when you're ready.

WITNESS COLE: Okay. Go ahead.

MS. WEAVER: Does this look like the exhibit that you talked about?

WITNESS COLE: Yes.

MS. WEAVER: Okay. Can you mark in blue -- if you could just circle the penstock and the ravine feature that you were talking about?

(Pause in proceedings)

WITNESS COLE: Okay.

MS. WEAVER: Okay. And if you could just give that to Mr. Buckman, we'll mark that as SWRCB-2, just for clarity, in case it comes up.

(SWRCB Exhibit 2 is marked.)

MS. WEAVER: Thank you.

WITNESS COLE: Okay. I marked on that sheet the ravine, as well as the capture pond which is noted on this LiDAR map and not identified. If you'll look right above the capital M for the word Marble, you can see a feature which is right at the approximate 90-degree angle of the penstock blue with the lower ditch line blue. And if you can -- I marked it on the page that I gave you.

MS. WEAVER: I can see it.

WITNESS COLE: Okay.

MS. WEAVER: Thank you.

WITNESS COLE: That is a capture pond, so that any overflow that moves down our property prior to entering into the lower ditch line has an opportunity for settling of any captured sediment. It's a feature not identified, but is significant to this discussion.

MS. WEAVER: Thank you. I'm going to -- that's it for my questions. I'm going to pass to Ms. Irby.

MS. IRBY: Good afternoon, Mr. Cole.

WITNESS COLE: Good afternoon.

MS. IRBY: I have just a few questions.

EXAMINATION BY

MS. IRBY: Do you recall in your testimony describing a hydropower system at Blue Heron Ranch?

WITNESS COLE: I do.

MS. IRBY: Could you give us a little more detail about how that works and where they connect into your system?

WITNESS COLE: Yes. If you look at the same LiDAR image that we have on display right now and look to the edge of that, you can see the outfall point that's under discussion in previous

testimony where the ditch line drops off and heads towards a tertiary stream, which ultimately connects with Irving. So the Blue Heron has a capture point right at the base of that outfall. And the water is captured in storage tanks and then transferred through a ground-laid PVC pipe, and then ultimately carried across Irving Creek in an aerial-suspended pipe, and then it continues on over to the Blue Heron Ranch across the highway, underneath -- I believe it goes underneath the Highway 96 bridge.

And so effluent that leaves Marble Mountain Ranch continues into that permitted system and provides beneficial use to the Blue Heron via their hydroelectric plant.

MS. IRBY: So the water is picked up directly following the headcut outfall?

WITNESS COLE: That's correct.

MS. IRBY: Okay. Thank you. Do you recall stating that the capacity of your ditch is three CFS?

WITNESS COLE: I do.

MS. IRBY: How did you come to that conclusion?

WITNESS COLE: Measurements over a long

series of time, you know, checking it at the point where I have the Stanshaw diversions, checking it for various other purposes in response to Water Board requests, measurement of the size and shape of the ditch geology and measuring velocities. I have a swoofer meter and I use that regularly in determining flows.

MS. IRBY: But this isn't correlated with the Stanshaw units you described?

WITNESS COLE: Not -- the Stanshaw unit system I created as a quick assessment tool, so I can drive to the point on a moment's, excuse me, on a moment's notice, see what I have in Stanshaw units, and have an understanding of what we're capturing. That's separate from taking the time to fire up and run a swoofer and do a calculation and come up -- come up with a more accurate number. That's a daily operational tool, the Stanshaw unit.

MS. IRBY: Would you consider three CFS to be the maximum capacity of the ditch?

WITNESS COLE: I would. If I start to get beyond three CFS, then I'm at risk of overtopping, so I don't go there. That's what the ditch has carried historically and that's

what we claim as our right.

MS. IRBY: Okay. Thank you.

WITNESS COLE: All right.

HEARING OFFICER MOORE: On this point, Ms. Irby, I just, I appreciate your answer to the question, but I would like to know if that measurement of the ditch capacity has ever been confirmed by an engineer and otherwise qualified professional?

WITNESS COLE: That's been measured by stream -- Cascade Stream Solutions, I believe, as well as Mid Klamath Watershed Council has looked at the ditch and the outflow -- the measurements of the intake. So there was a period where, under grant funding, Mid Klamath Watershed Council was doing flow measurements at the point of diversion and below the point of diversion, getting data for what we were capturing during that year. So they have, as an independent party, got that data.

HEARING OFFICER MOORE: Okay. Thank you.

WITNESS COLE: All right.

MS. IRBY: In your testimony you mentioned considering possibly expanding the ranch?

WITNESS COLE: Correct.

MS. IRBY: Have you looked into other alternatives, such as raising rates for your guests?

WITNESS COLE: Raising rates?

MS. IRBY: To raise funds for improvements at the ranch?

WITNESS COLE: The rate structure for the ranch is a constant thought process for us as we try to find out niche in the world of competition. So a high-end luxury ranch, such as Brush Creek Ranch, if I can remember correctly, they have an equivalent daily rate of, I'd say several hundred dollars a day per person. I cannot exceed my competitors price without having some arguable return to the potential investor.

So my rate -- my rate structure is evaluated based on an analysis of what we think we can ask from the public and the cost of our services. We have a high-value service and we do regularly raise the prices based on inflation and on competition.

So that's -- the answer is, yes. Now, I analyze that. We did just raise our price, which is published on the website, so that people can

see what the 2018 rate will be. And that's not based on an attempt to capture more money for water rights improvements. It's based on my existing expense profile and, you know, competitive pressures.

MS. IRBY: Okay. One last question.

Do you recall testifying to the use of power in winter to heat buildings on the property?

WITNESS COLE: I do.

MS. IRBY: Are those only occupied buildings?

WITNESS COLE: Typically, when we go into a winter, we do a shutdown mode. So if Cabins 1 through 5, hypothetically, are not going to be used, we will shut off the water to avoid freezing issues, and electricity is not required for them.

If we decide that we want to keep Quails Nest and Sleepy Hollow, our deluxe homes, open and available for a B&B experience, then those need to be heated. And guests that visit during that time frame might want to have a wood stove experience to have a piece of the, you know, the experience of being in the woods, and so they

burn wood. But that's typically an adjunct to propane or electrical heat in the cabin.

And then as we go through the winter, our dining lodge and other facilities need to be heated by electricity because we don't have wood heat or propane heat available in all of the structures.

MS. IRBY: Okay. Thank you.

WITNESS COLE: It's also a cost issue. You know, when the hydro plant is available the point is it doesn't require me to burn propane.

MS. IRBY: Thank you. That's all my questions.

HEARING OFFICER MOORE: Okay. We don't have any further questions. Thanks for your patience with us --

WITNESS COLE: Sure.

HEARING OFFICER MOORE: -- in our questioning. We appreciate you being here. And we hear you as far as, you know, the human aspects of all of this.

WITNESS COLE: Thank you for that.

HEARING OFFICER MOORE: And thank you for your commitment to working with the neighbors. It's been evident in your testimony, and that's

the way all of our water rights issues around the state are best worked out. And so I applaud your efforts to work with folks.

So with that, I wanted to request that Douglas and Heidi Cole and Marble Mountain Ranch offer exhibits into evidence.

MS. BRENNER: Yes. We'd like to offer all the exhibits submitted into evidence.

HEARING OFFICER MOORE: And for the parties here present, does anyone have any objections? No objections.

So now, for the record, the exhibits from MMR are entered into the record.

(All MMR Exhibits are received.)

HEARING OFFICER MOORE: And with that, we're going to -- okay. Well, we've gone a little late this morning. It's about 12:32. And I'm going to suggest, before we go to National Marine Fishery Service's opening statement and direct testimony, we take a break for lunch. As we've said in the notice, we'll take 60 minutes. If you -- if we could be back here at 1:30, it's 58 minutes, but I hope you understand. We're trying to get through this.

So, yes?

MS. BRENNER: Could I address some housekeeping?

HEARING OFFICER MOORE: Yes, before we break?

MS. BRENNER: My understanding --

HEARING OFFICER MOORE: Yes.

MS. BRENNER: Yeah. My understanding, once we get back we'll have three hours remaining?

HEARING OFFICER MOORE: Yes.

MS. BRENNER: Can we get any estimate of the time period for the remaining direct testimony?

HEARING OFFICER MOORE: Sure. Let's see. My script, I'll have to -- it looks like we've set aside an hour on National Marine Fishery Service, but as we've seen, we don't always take that much time, so that would be an hour. But, yeah, you know, we could -- would you like us to come back with a more definitive answer?

MS. BRENNER: Yeah. We can discuss it at the end -- when we return.

HEARING OFFICER MOORE: Okay.

MS. BRENNER: I have a concern. I have another hearing about five hours from here

tomorrow.

HEARING OFFICER MOORE: Okay.

MS. BRENNER: So -- on a schedule that I did not have any control over, so --

HEARING OFFICER MOORE: Sure. And, yes, we're all -- we want to accommodate folks' schedules, so -- to the extent practicable.

So we'll, Hearing Team, we'll figure -- we'll come up with some estimates of time. We have placeholders in our script, but we can refine them, maybe discuss with the parties your estimates of time. But it's not an exact science. Okay.

All right, well let's break for lunch and we'll reconvene at 1:30 p.m. Thank you.

(Off the record at 12:33 p.m.)

(On the record at the 1:30 p.m.)

HEARING OFFICER MOORE: We're doing our level best to stay on track. And I was just telling Ms. Brenner, as an answer to her question, we calculated four hours based on allowances that are within the proceedings, so for the three -- four hours for the three hours. But as we've learned, not everybody takes all of their time.

But -- so, yes, Ms. Brenner?

MS. BRENNER: Yeah. But then we also have rebuttal.

HEARING OFFICER MOORE: Right.

MS. BRENNER: So it's not likely we'll be concluding today?

HEARING OFFICER MOORE: Not likely.

MS. BRENNER: And so I've got a conflict with tomorrow. So if we have a hard stop at 4:30, I don't know if we need some time to talk about scheduling beyond today?

HEARING OFFICER MOORE: Okay. We have -- and how about Friday?

MS. BRENNER: Friday, I can be back here. It will be a strain, but a late start Friday would be helpful, since I've got so much -- I've got eight, nine hours traveling time involved here.

HEARING OFFICER MOORE: Yeah. So, you know, we have the room Thursday and Friday, if we need it. And, you know, there's a logistics angle to all this in terms of getting a venue, which we went through, and even getting this room for this time.

Well, we can -- I'll confer with my team,

you know, about that. You know, if -- is there -- so you can't have someone stand in for you?

MS. BRENNER: No.

HEARING OFFICER MOORE: Because, I mean, you know, we noticed these days. You know, we want to be able to work with you.

MS. BRENNER: Yeah. And like I said, I wasn't -- I had no control over this other hearing. Yeah, I wish I could.

HEARING OFFICER MOORE: Uh-huh. Well, we have Friday.

So, you know, I don't know if the Hearing Team, if you want to confer about this right now?

(Whereupon, Hearing Team confers in sidebar.)

HEARING OFFICER MOORE: Yeah.

MR. PUCCINI: Can I just say something really quickly on behalf of the Department?

HEARING OFFICER MOORE: Sure.

MR. PUCCINI: We understand the situation for Ms. Brenner. It is important to our witnesses that they not have to stay over, for example, until Friday. We were hoping to be done today because they have hardships as well in terms of travel.

HEARING OFFICER MOORE: Right.

MR. PUCCINI: So were DFW to be finished today, that would be terrific. We'll do our best.

HEARING OFFICER MOORE: Uh-huh.

MR. PUCCINI: But it would be a hardship if we had to have them either go back and come, you know, et cetera.

HEARING OFFICER MOORE: Right.

MR. PUCCINI: Not to -- so, thank you.

HEARING OFFICER MOORE: Right. Thank you for giving us that statement.

Mr. Hunt?

MR. HUNT: The same scenario applies for Karuk Tribe.

HEARING OFFICER MOORE: Yeah.

MR. HUNT: I'm sure it applies for others, as well. And I understand Ms. Brenner's issues, but as -- whatever decision you make I just -- you know, keep -- bear all of that in mind, including a late start Friday doesn't necessarily -- you know, my people want to get back to where they're going, which is the seven-, eight-hour drive that you're talking about --

HEARING OFFICER MOORE: Uh-huh.

MR. HUNT: -- having to do. And so then we're talking into Saturday, and like all kinds of other issues that come up.

HEARING OFFICER MOORE: Okay.

MR. FISHER: The same would apply for me. Holding pattern tomorrow would make my work life on Friday very difficult --

HEARING OFFICER MOORE: Uh-huh.

MR. FISHER: -- to come down that early.

HEARING OFFICER MOORE: Okay. Yeah, I think we need a little more information about changing the schedule that was noticed in terms of how long did you -- you know, when did you become aware of this schedule change? You know, could we not have been briefed on this sooner than now, given that we've had this scheduled for many months? And why can't you have somebody stand in for you?

MS. BRENNER: That's a client preference. It's a long case that I've been directly involved in. I will see what I can accommodate in that regard, but can't make any promises.

And based on some of the initial time frames, et cetera, and discussions on this hearing, it was contemplated first as a day, two

days. I thought three, plenty of time, frankly.

Again, this was scheduled about a couple weeks ago, and by folks that I have no control over. In other words, it's another administrative body that sets that schedule, just as you had set that schedule, which we had wanted to be done at a different time period, as well. So it's a hardship for Mr. Cole to be here in the first place.

HEARING OFFICER MOORE: Yeah.

MS. BRENNER: So --

HEARING OFFICER MOORE: I'm sorry, that's not relevant.

MS. BRENNER: So, I mean, we've been -- you know, I've been dealing with several schedule issues --

HEARING OFFICER MOORE: Yeah.

MS. BRENNER: -- along this hearing. So let me see what I can do on the other end --

HEARING OFFICER MOORE: Okay.

MS. BRENNER: -- during a break, and we can go from there.

HEARING OFFICER MOORE: Okay. We want to work with you, it's just a lot of moving parts, a lot of people, a lot of schedules and sacrifices,

not just Mr. Cole. Okay.

Yes?

MS. WEAVER: Just out of curiosity, is your co-counsel licensed in California?

MS. BRENNER: For which case?

MS. WEAVER: The woman sitting next to you.

MS. BRENNER: Yes. Ms. Fuller is a licensed attorney in California. However, she has never done a hearing like this. She has never cross-examined, direct examined any witness. This is her first time being in any hearing process like this.

MS. WEAVER: That's helpful. Thank you.

MR. FISHER: Just -- I just want to say, I've blocked out five days of my life. I've hoped it would be done sooner, but that's what was on the notice, and it's a hardship for me, as well.

HEARING OFFICER MOORE: Okay. Well, let's move along. And we'll continue to take that matter into consideration.

So we'll now hear the National Marine Fishery Service's opening statement and direct testimony, followed by any cross-examination in

the order I previously identified. Redirect and recross examination of the witnesses may then be permitted.

And at this point, Mr. Keifer, please approach. And there's -- we have witnesses. And so --

(Whereupon, SWRCB Panel confers in sidebar.)

HEARING OFFICER MOORE: So please proceed with your opening statement.

OPENING STATEMENT BY

MR. KEIFER: Just a couple of very brief remarks before we get to testimony.

Death of a thousand cuts. Conservation biologists like to describe the decline of species headed towards extinction as suffering slow death from a thousand cuts. There's no doubt that there are some cuts that are deeper than others. This is true in the Klamath Trinity System, but that's of no consequence to the issues before the Board.

We're here to discuss whether the Marble Mountain Ranch, their diversions and operations, are having an impact on public trust resources. And the evidence that we have submitted thus far and are going to summarize in a few moments will

establish that there are adverse impacts, not only to Coho that are listed under the Federal Endangered Species Act which are our responsibility, but also to other public trust resources, fish that are not currently listed under the Federal ESA.

Our first witness -- you're going to go first, Shari?

Shari is going to discuss those impacts from the perspective of her professional biological expertise.

And our second witness, Margaret Tauzer, who was the principal author, although it was a collaborative effort, of the recommendations outlined in our August 2016 letter, which is both a NMFS exhibit and an MMR exhibit. Margaret is going to explain them from the perspective of her engineering perspective.

Because there's a significant overlap and melding of the two, they'll be available for cross as a panel.

So with that --

HEARING OFFICER MOORE: Okay. And we're going to get into direct testimony now?

MR. KEIFER: Yes.

HEARING OFFICER MOORE: So I would -- will the witnesses testifying please stand?

(Witnesses are sworn.)

WITNESS WHITMORE: Yes, I do.

WITNESS TAUZER: Yes, I do.

HEARING OFFICER MOORE: Thank you. You may be seated.

And, Counsel, please proceed.

SHARI WHITMORE,

called as a witness for National Marine Fishery Service, having been previously duly sworn, was examined and testified as follows:

DIRECT TESTIMONY BY

MR. KEIFER: There we go. Shari, since you're going first, actually, I don't recall other witnesses doing that, but let's do it anyway, is NMFS-9, which is labeled -- or not 9, excuse me.

NMFS-7, your testimony, is that a true and correct copy of your testimony here today?

WITNESS WHITMORE: Yes, it is.

MR. KEIFER: With that, you can summarize for the Board.

WITNESS WHITMORE: Okay. Thank you. Thank you for having me here. My name is Shari

Whitmore and I have been an employee of NOAA Fisheries for over nine years. I am a current -- I'm currently a Fish Biologist in the Klamath Branch, and have a Bachelor's of Science, Morgan State, in Fisheries Biology, as well as a Master's Degree from Humboldt University in Fishery Science.

For my Master's Degree, I studied Coho salmon in the Mid Klamath and evaluated different off-channel habitats for juvenile rearing. I had ten study sites, one of which was actually the Stanshaw Creek refugial pool that we've been discussing. I have continued to work in the field in the Klamath Basin as part of my regular job duties. And I continue to tag fish and study fish behavior in the basin, and I'm quite familiar with their movement and life history strategies.

So my testimony will focus on the Coho use and behavior of the Stanshaw Creek refugia habitat, but I wanted to start by describing some of the general life history strategies of fish in the basin, just to provide a context for the importance of the habitat.

So the Klamath Basin is unique because it

is often referred to as an upside down river system where fish, who are actually spawning in the upper tributaries, like the Scott and the Shasta River, the Upper Klamath, these tributaries are more impacted and water is diverted up there. And as the flows recede and the temperatures rise during the summertime, those locations where fish are spawned are not suitable for the juveniles to be rearing.

So we see, in the spring, a large spring redistribution period where the juvenile Coho salmon must move to new locations to seek cold-water refugia for their over-summer rearing period.

Because Coho salmon stay for a full year in fresh water, they also are exposed to environmental stressors in the winter, such as high velocity flows of the mainstem.

At this point we see another redistribution period in the fall where fish will often have to move again to seek a slow water, slow velocity refugia to avoid those high velocity flows in the mainstem.

And then we know that every time a fish is forced to move and seek a new habitat, that

risk of mortality increases. And it's unknown if they'll be able to find the refugia they are seeking, or if they will essentially perish due to the environmental stressors that they may run into, such as during the summer the high temperatures or disease that exist in the mainstem Klamath River, or if they are swept away by the high velocity flows when unable to find these refugia habitats.

So my thesis work focused on studying juvenile Coho salmon in the Mid Klamath. And during that time I tagged hundreds of juvenile Coho salmon and showed that large portions of the juvenile Coho salmon population move many times during their freshwater rearing period. For example, I've tagged fish that I have found located in at least four different habitats. And these are just places where I was able to detect them through antennas, locations that are many miles away from each other, up different tributaries and different off-channel ponds. This shows the juvenile Coho salmon have exploratory behavior and work to find the suitable habitat that they require.

So because these fish move so often and

that we see these lethal conditions in the mainstem Klamath, these fish rely on the refugias, like Stanshaw Creek. And Stanshaw Creek is exceptional because it provides both over winter and cold-water, summer refugia habitat.

During my thesis work, another movement pattern that I detected as a diurnal migration pattern. And since my thesis work, I have detected this in other locations. Essentially, anywhere that I look I have found that fish are moving, migrating on a diurnal time scale where they will leave a tributary.

For example, I discovered this on Tom Martin Creek with the help of the Karuk Tribe, and found that these fish, while using the cold-water tributaries, such as Tom Martin Creek, during the day as refugia, at night, right at dusk, they will migrate into the mainstem Klamath, when many people think that it is lethal and unsuitable for use of Coho salmon. However, they are able to access the food resources there and benefit from that additional food resource. And then they migrate back at dawn, into that cold-water refugia.

So a connection during the summer, when the Klamath River is often considered inhospitable, can still benefit a fish when it has this cold-water refugia.

So now I just want to talk about Stanshaw Creek, and that refugial pond specifically.

During my time there, marking and studying the fish there, I worked closely with the Karuk Tribe. Their fishery staff assisted me in data collection and, essentially, mentored me on the history of the -- of that habitat and the other study sites that I had, since they have the long-term relationship with these sites. So I understand that Stanshaw Creek has very limited and likely no successful spawning activity from Coho salmon, but these fish do use this habitat as a critical over-winter and summer refugia, as mentioned.

So in the year that I was capturing fish here, it was 2012, I started in the summer of 2012, and it was a fairly good water year. And I noticed that the habitat was supporting healthy growth of the Coho salmon that were there in that habitat. I tracked these fish. I tagged them and watched their behavior, their movement

strategies through that summer, and noticed that a portion of the fish that were tagged during the summer overwintered and stayed in that habitat through the -- through the winter, capitalizing on that slow water, low-velocity refugia habitat.

So that portion of fish that remain there for the entire year had the highest growth rates of fish that I found in any other habitat in any other season. And I attribute this to the fact that these fish were not forced to move or seek another habitat or be exposed to any sort of risks or poor habitat quality in another location. Instead, they were able to stay in that habitat and benefit from the high-quality habitat there for an entire year.

Stanshaw Creek refugial pool is extremely unique and special because it is located in proximity to the mainstem Klamath, so it is on the floodplain and just adjacent to the mainstem Klamath during low flows, but in the winter, Stanshaw Creek pond is inundated by the mainstem Klamath River. And this is extremely valuable because it essentially provides a flushing and a refreshing of that habitat. It brings nutrients from the mainstem in and provides these food

resources to the fish that are rearing there through the winter. And that's when I was seeing the especially high growth rates, was during the winter period.

So just to further impress upon you the value of this habitat, during my time at NOAA Fisheries, I was one of the primary authors of the Coho Salmon Recovery Plan that our agency issued in 2014. And here we had -- we described the population of Coho salmon in the Mid Klamath Watershed as being limited in the juvenile life stage, so this is essentially where the bottleneck occurs to recovery of the species of that population. And the habitats that were limiting recovery there were described as off-channel complexity or off-channel ponds, such as Stanshaw Creek pond, that function as this winter refugia. And then we also called out water quality as a limiting factor. And here we are looking for the cold-water refugia for the summer.

So Stanshaw Creek refugial pond is extremely valuable to the recovery of Coho salmon in the Klamath Basin because it contributes both of these limiting habitats and supports a

limiting life stage of Coho salmon. And it's not just the Mid Klamath population that is benefitting from the use of this habitat. All populations upstream, such as the Shasta population, Scott River, Upper Klamath, all of these populations are forced to migrate through the mainstem Klamath and can benefit from this habitat if they are able to detect it and move into that habitat.

So the fish that are occupying that habitat and have an opportunity to go there, since I have shown that these fish have high rates of growth, I would argue that they are -- they have a higher value to the populations that they come from. We know that smolt, the fish that are out migrating into the ocean, when they are a larger size they have a higher rate of survival in ocean conditions. And larger smolt produce larger adults. And larger adults are important to a population because they are more fecund and more successful at spawning and reproduction for the next generation.

So it's extremely important that this habitat have a strong cold-water connection during the summer to the mainstem Klamath. The

more cold water that is available and creating a plume into the mainstem Klamath River makes it easier for fish migrating past and seeking out this habitat to detect that cold water and then move into the habitat and benefit from its value.

Further, in the summer, a connection to this, to the mainstem, would still be valuable since I've shown that fish can move during the summertime into the mainstem and benefit from the resources there. So a connection would still be beneficial to the fish that are rearing there through the summer.

And then finally, it's important that there's a good connection through the fall so that fish can out-migrate if they choose to.

So in summary, I just want to -- I just want to close by saying that Stanshaw Creek does represent the most important habitat type that we are looking for in the Mid Klamath River, and that is supports a limiting life stage of Coho salmon for not just the Mid Klamath population, but for four different populations within the Klamath Basin, and that the fish there that are able to occupy that habitat, they are a higher -- of a higher value than the fish that are not able

to grow and to obtain a larger size, as a fish that may not be able to reach a habitat like that are often -- you know, they may be smaller.

And that's all I have. Thank you.

MR. KEIFER: You ready, Margaret?

WITNESS TAUZER: Sure.

MARGARET TAUZER,

called as a witness for National Marine Fishery Service, having been previously duly sworn, was examined and testified as follows:

DIRECT TESTIMONY BY

MR. KEIFER: Okay. Before we start, I guess I'll just roll this in, is the Exhibit marked NMFS-1 a true and correct copy of your testimony today?

WITNESS TAUZER: It is a true copy. I did leave the word draft in there by accident, but that is a final and true copy.

MR. KEIFER: So with the exception of this artifact word draft, this is your testimony today?

WITNESS TAUZER: Yes.

MR. KEIFER: Take it away, Margaret.

WITNESS TAUZER: My name is Margaret Tauzer. I'm a Hydrologist at the National Marine

Fishery Service. I've been with the National Marine Fishery Service for over 17 years. I have a Master's of Science Degree in Civil Engineering with an emphasis in water resources and river mechanics. I have a Bachelor's of Science Degree in Environmental Resources Engineering.

I mostly spend my time at NMFS, providing technical support to Staff for any projects that have hydraulic -- hydrologic or hydraulic issues. I work on gravel mining, fish passage projects, and water right protests and water policy issues. And before my -- before working at NMFS, I worked for about seven years at consulting engineering companies doing physical and mathematical river models.

So our NMFS Exhibit 3 is the letter that we sent to the Water Board on August 3rd, 2016, with our recommendation for a bypass flow to help preserve Coho salmon in their habitat as a public trust resource. The letter explains how we evaluated the hydrograph and the reasonableness of our recommendation.

And our recommendation consists of several parts, but it's primarily focused on preserving 90 percent of the natural flow in the

anadromous reach. The 90 percent recommendation was based on a study by Richter in 2011 where a 90 percent bypass is recommended as a bypass flow that will preserve a high level of ecological function. And that's what we think is necessary in Stanshaw Creek because of its uniqueness as a cold-water refugia, as a method of producing a food supply to the cold-water refugia and downstream. We are interested in protecting the inter-year variability of the stream because of the water functions that are provided by it, providing the passage of food supply, just the formation of the geomorphic values that water forms the stream, and as the flow recedes in the spring, keeping the channel open to the Klamath is important.

Our recommendation also allows for a nonconsumptive diversion, as long as at least two CFS is bypassed at the point of diversion into the non anadromous reach and returned to Stanshaw Creek above the anadromous reach. The intent of this two CFS bypass was to -- minimum bypass was to keep the channel in the non anadromous reach at least wetted. And so I used -- let's see, that was -- that was for providing -- keeping the

channel wet, it would provide the food supply downstream, and also, you know, just keep the channel, in the lowest condition, wet.

The reason for -- I mean, the way that I had done that was using a hydraulic analysis I had put together back in 2001, taking some cross-section up in that area in a reach I considered representative of the non anadromous reach. And the low flow was just evaluated by finding a break point as I increased flows. So as you increase flows, the channel -- the width of the channel becomes more and more, until it starts to become deeper. And so the two CFS represented that break point which defined that minimum.

Our Exhibit 4 contains a spreadsheet that we used to evaluate what we were recommending. The spreadsheet contains nine tabs that show estimates, how we estimated Stanshaw Creek flows, since it's ungauged. There's also tabs there to evaluate the diversion, the return flow, just mostly for visualization and understanding the -- all the return -- the diversions and flows in the stream.

The spreadsheet, because we used that -- had gone through a few iterations, and this final

Exhibit 4 version includes a section for user input to -- that we used to talk about different ideas or questions.

I also included, in my declaration, a timeline of our correspondence with our recommendations and how they changed over time. Since our original bypass recommendation in 2001, there has been much research about the importance of cold-water tributary input and off-channel habitat for the Klamath River, for example, the Coho Recovery Plan that Shari was mentioning, and Shari's thesis work, and others, including the Richter Study in 2011. The Richter-type studies are showing more and more the importance of preserving this natural variability of the hydrograph.

And because our goal was to make a bypass flow recommendation protective of fish and their habitat as a public trust resource and because of the new information, we reevaluated the hydrologic conditions of Stanshaw Creek and our hydraulic analysis that we had original done.

Then our next one was the 2015 draft recommendations. They were based on 90 percent bypass recommendation, but included termination

dates for nonconsumptive diversion to protect the summer low flow, and a minimum bypass below which there would be no diversion.

And our final recommendation that was a letter in Exhibit 3, we removed the date limits for the hydroelectric operation and based it more on the hydrologic conditions, and removed the minimum threshold, allowing a consumptive diversion year-round based on input from Marble Mountain Ranch. We agreed to this change because the nonconsumptive return with -- if we -- when we had the nonconsumptive return, we can maintain the 90 percent bypass in the anadromous reach.

So our final recommendation allowed a year-round diversion, as long as 90 percent of the natural flow is bypassed in the anadromous reach, and two CFS is bypassed at the point of diversion during times of nonconsumptive diversion, as long as it's returned back into the anadromous reach. So this means that during times of consumptive diversion there would be 90 percent bypass at the point of diversion, allowing for 10 percent diversion, even as the natural flows recede below two CFS. And when I'm saying natural flow, I'm -- we assumed the

natural flow would be the flow above the point of diversion, even though we knew there was another small diversion upstream, and there is also other effects that have happened to that watershed over time, like mining activities and road development.

So since the reported upstream diversion was only about two percent of the Marble Mountain Ranch diversion, we considered the stream above that, the point of diversion, as natural flow.

So our Exhibit 4 includes the estimated Stanshaw Creek flow, based on Ti Creek, scaled by watershed area. The values -- Ti Creek is the best watershed -- I mean, data available for that kind of analysis because it is adjacent, or just upstream of Stanshaw Creek and is in the same orientation and relatively the same size, same vegetative-type cover, same aspects. So it's the type of watershed to use. It just only had four years of data. So I spent a considerable time that I wrote about in the letter, explaining how we verified that Ti Creek was actually giving us some reasonable answers and that it represented a period. Even though it was only four years, the flow years that occurred in that time were

representative of a fairly wide range of water year types.

I also used the available stream flow measurements that I had taken. I had a few from the Karuk and the Orleans Ranger District to show -- to just help verify that, that the Ti Creek data was producing good estimates of Stanshaw Creek, since they were -- our minimum flows on a dry year were approximately the same as what we were measuring.

I also compared the flow years of the last 15 years to the historic record to show that the flow measurements that were taken during these last 15 years were all taken during a time that spanned all types of water years.

So we believe that this recommendation that we're making is with -- the nonconsumptive diversion return to Stanshaw Creek would provide the requested diversion, essentially, in all but the extreme dry years. Even then, the shortage would be of short duration and substantial portion of the consumptive use could still be diverted.

We think that storage, both water and batteries, should be utilized whenever possible

to try and maintain a lower steady rate of diversion from the stream to meet the higher daytime demands and to avoid intermittent on and off to the stream, on and off of the diversion to the stream.

And that's all I have.

MR. KEIFER: I believe we're ready for cross.

HEARING OFFICER MOORE: Thank you, Ms. Tauzer and Ms. Whitmore, and Mr. Keifer.

So with that, let me get back on my script.

So for cross-examination, first, Diversion of Water Rights Prosecution Team, do you have any questions for the witnesses?

This is a matter of an accurate record. To the extent you can address to specific members of the panel, it would be appreciated, but not required.

CROSS-EXAMINATION BY

MR. PETRUZZELLI: To the extent I can understand, like who is the best person to pose a question to, I will -- I will do so.

Ms. Whitmore, this is probably a better question for you, but if it's not, Ms. Tauzer, go

ahead and answer.

Are Coho listed under the ESA? And if they are, can you, you know, explain what that listing status is?

WITNESS WHITMORE: Yes. They're listed under the ESA as threatened.

MR. PETRUZZELLI: Okay. And what does that mean?

WITNESS WHITMORE: It means that there's a reasonable likelihood that they may go extinct.

MR. PETRUZZELLI: Okay. And are steelhead listed?

WITNESS WHITMORE: No.

MR. PETRUZZELLI: Okay. And, Ms. Whitmore, this is another question for you.

I noticed a reference to one of your papers in Mr. Cramer's written testimony. Does he reference a publication authored by you in his testimony?

WITNESS WHITMORE: Yes. I read that.

MR. PETRUZZELLI: And do you believe he accurately characterizes your publication?

WITNESS WHITMORE: Not always. I would want to think about which statements it was --

MR. PETRUZZELLI: Okay.

WITNESS WHITMORE: -- that you're --

MR. PETRUZZELLI: And, unfortunately, I don't have that immediately available.

Have you been to Stanshaw Creek?

WITNESS WHITMORE: Yes, many times.

MR. PETRUZZELLI: Do you have an idea, how many times?

WITNESS WHITMORE: No. During my study, my sampling framework was such that, from -- I think it was starting in May through the end of September, I visited at a minimum of every -- once every two weeks, and then a number of times through the fall and into the winter.

MR. PETRUZZELLI: Okay. And so what times of years were you there?

WITNESS WHITMORE: I think May was probably my first visit. And I was there frequently throughout the entire summer, and into the fall a little less frequently, and into the winter.

MR. PETRUZZELLI: Okay. So you've been there a lot?

WITNESS WHITMORE: Yeah. Yeah. Yeah.

MR. PETRUZZELLI: And have you -- did you swim around in the pool?

WITNESS WHITMORE: Yes. I have snorkeled it numerous times and captured fish there, tagged fish there, observed that habitat, taken habitat surveys. I'm very familiar with it.

MR. PETRUZZELLI: Okay. So you've been there enough that you feel you could have a generalized picture of, you know, how it functions year-round?

WITNESS WHITMORE: Yes.

MR. PETRUZZELLI: Okay. Do you think one site visit is sufficient --

WITNESS WHITMORE: No.

MR. PETRUZZELLI: -- for (indiscernible)?

WITNESS WHITMORE: In fact, the reason that I was there for an entire year is to see the -- how the site functions and differs throughout an entire year, which it is dramatically different season to season and is -- I think somebody else pointed out, whatever you see there at one moment is just a snapshot of, for example, the fish that are utilizing that habitat, whereas like somebody described it as like a rest stop where fish --

MR. PETRUZZELLI: Uh-huh.

WITNESS WHITMORE: -- there's a high

turnover, and fish move in and out. And it could be thousands of fish in a year that utilize and benefit from that habitat.

MR. PETRUZZELLI: So a single visit just in October is probably not sufficient?

WITNESS WHITMORE: No.

MR. PETRUZZELLI: Okay. And that's all the questions I have for now.

HEARING OFFICER MOORE: Okay. Thank you.

Next, Marble Mountain Ranch, any cross-examination?

CROSS-EXAMINATION BY

MS. BRENNER: Thank you. I'm going to address specific questions to each of you, make it easier.

So I'm going to start with Ms. Whitmore. You indicated you observed juvenile salmon rearing in Stanshaw during the summer of 2012 through spring 2013; correct?

WITNESS WHITMORE: That's correct.

MS. BRENNER: And you indicated that those fish were present in a relatively robust and healthy condition; correct?

WITNESS WHITMORE: Yes, that's correct.

MS. BRENNER: So the -- in your estimate,

was the pool functioning effectively as a cold-water refuge for juvenile salmon and steelhead at that time?

WITNESS WHITMORE: Yes.

MS. BRENNER: During the summer, during September 20th, 2012, NMFS measured the flow on Stanshaw Creek above the Cole's point of diversion at 2.5 CFS; do you recall that?

WITNESS WHITMORE: I wasn't part of that measurement. That would probably be best directed to Margaret.

MS. BRENNER: Do you recall that, Margaret?

WITNESS TAUZER: Yes.

MS. BRENNER: Okay. On October 4th, 2012, Forest Service measured the flow on Stanshaw Creek above the Cole's point of diversion at two CFS; is that correct?

WITNESS TAUZER: Yes.

MS. BRENNER: And, Ms. Whitmore, are you aware that during that same period, the Coles were diverting water?

WITNESS WHITMORE: I was not aware of the extent of the Cole's diversion.

MS. BRENNER: And you indicated, 2012 was

a robust water year; was that what you indicated?

WITNESS WHITMORE: Yeah, it was a fairly good water year.

MS. BRENNER: It wasn't a drought year?

WITNESS WHITMORE: No.

MS. BRENNER: You indicated in your -- in Exhibit 9, your thesis, that Stanshaw Creek pond was beaver-influenced?

WITNESS WHITMORE: Yes.

MS. BRENNER: Could you just tell me what you meant by that?

WITNESS WHITMORE: There's evidence of beaver activity, chewed sticks. They were clearly using the pond. And beavers often find these slow-water habitats to store food resources through the winter. So there was definitely evidence of their activity, and chewed beaver sticks.

MS. BRENNER: Is that a good thing for the fishery resources?

WITNESS WHITMORE: Yes, absolutely.

MS. BRENNER: Do you know whether that's been sustained in recent years, the beaver influence?

WITNESS WHITMORE: I'm not sure.

MS. BRENNER: You indicate it's a dynamic system, things change year to year?

WITNESS WHITMORE: Yes, and that's actually what makes it so valuable.

MS. BRENNER: Okay. You indicated that you observed juveniles leaving the cold-water refuge and entering back into the mainstem of the Klamath; correct?

WITNESS WHITMORE: Are you speaking to the diurnal migration pattern?

MS. BRENNER: Yes.

WITNESS WHITMORE: Yes.

MS. BRENNER: And what refuges did you commonly observe these types of behaviors, when you're -- in this 2012, '13?

WITNESS WHITMORE: In the 2012 year, I noticed that at Tom Martin Creek, which is downstream of the Scott River. And I also detected it at Lower Seiad Pond, also named CalTrans Pond in my thesis, them moving in and out of Caltrans Pond into Lower Seiad Creek, and back and forth, that diurnal pattern.

MS. BRENNER: Was that occurring at Stanshaw Creek, as well?

WITNESS WHITMORE: I didn't look for that there.

MS. BRENNER: Okay. And do -- can you describe to me what features of those refuges made that behavior possible?

WITNESS WHITMORE: It was possible by having access, so like an open confluence.

MS. BRENNER: So flow depth is one thing?

WITNESS WHITMORE: Yes.

MS. BRENNER: How about the gradient of the flow? Is a low-gradient flow --

WITNESS WHITMORE: Yes.

MS. BRENNER: -- better than a --

WITNESS WHITMORE: Yes.

MS. BRENNER: -- fast velocity?

WITNESS WHITMORE: I would imagine, yes.

MS. BRENNER: Is it you imagine, or is that your professional opinion?

WITNESS WHITMORE: Low gradient would be preferable, yes.

MS. BRENNER: Okay. And cover for temperature purposes, and just generally cover is a good thing?

WITNESS WHITMORE: In general it is. But

as far as making it possible to access another water body, not necessarily required and often isn't.

MS. BRENNER: Okay.

WITNESS WHITMORE: Yeah.

MS. BRENNER: Can we pull up Marble Mountain Exhibit 21, pages 14 through 16 please?

(Document displayed on screen)

MS. BRENNER: Okay. Scroll down with that picture a little bit. There we go. No, just the picture. I just need the photo. Thank you for that.

Do you recognize that area at all?

WITNESS WHITMORE: Yes.

MS. BRENNER: What is that?

WITNESS WHITMORE: I believe that is the confluence of the -- or the outflow of Stanshaw Creek pond moving towards the Klamath River.

MS. BRENNER: Does that appear the same as when you sampled the creek in 2012 and '13?

WITNESS WHITMORE: You know, it's similar, but that was quite a few years ago, and the access changes frequently. Sometimes there's outflow of the pond on a different edge of the pond into the mainstem Klamath. Other times

there's more of a direct stream channel. Other times it's more of a braided channel. It differs year to year.

MS. BRENNER: Can we go to the next page? Actually, the -- keep going.

Say that again, Kerry? Is that the only photo?

MS. FULLER: No. That was page 16, so we need to go 15 to 14.

MS. BRENNER: Fourteen? Up. Go to page 14 please.

Do you recognize that photo?

WITNESS WHITMORE: I am assuming the pond is behind the man. And the channel there is the outflow of the pond.

MS. BRENNER: Is that the outflow or inflow?

WITNESS WHITMORE: Yeah. I'm not sure which direction we're looking, or if that's the -- that's Stanshaw Creek going into the pond.

MS. BRENNER: So this is a downstream view of the pond outflow.

So let me -- let me just ask you this question, when you were at the Stanshaw Creek and doing your thesis in 2012 and '13, did you see

rock-pile berms, hand -- you know, human-placed rock berms in the system?

WITNESS WHITMORE: I'm not sure.

MS. BRENNER: Did you see anything as uniformed a set of rocks as you see here in this photo along the side of the creek?

WITNESS WHITMORE: I can't remember. I'm sorry.

MS. BRENNER: Can you go to the next -- what's this, page 14? Can you go to -- or is that page 15? Can you go to 14, or if that's 14, go to 15?

Do you see this set of hand-placed rock berms?

WITNESS WHITMORE: Yes.

MS. BRENNER: Was that in place when you were there?

WITNESS WHITMORE: So I have seen this in other tributaries. I cannot remember if I saw it in Stanshaw Creek that year that I was there.

MS. BRENNER: Okay. Would the placement of rock berms preventing the out migration of Stanshaw Creek pond into the Klamath be a good thing?

MR. KEIFER: That question is a little

vague. There are multiple --

MS. BRENNER: I can --

MR. KEIFER: -- species. If you could be a little more specific, that would --

MS. BRENNER: No problem. No problem.

So you indicated earlier that it's a positive factor to allow fishery species, Coho salmon, other salmonids, to go from a cold-refuge pool into the Klamath. And you observed that occurring --

WITNESS WHITMORE: Uh-huh.

MS. BRENNER: -- in, you know, dawn-dusk time period, in and out?

WITNESS WHITMORE: Right. Yeah. So I know what you're -- what you're asking.

There's competing needs for the fish. So, yes, while there's value for a fish to be able to access the mainstem Klamath and take advantage of that resource, it's more valuable that the fish have the cold-water refugia in the first place. I'm not sure what the purpose of the berms are, but if they were something to increase the elevation of the pond to maintain a cold-water refugia for those fish, that's essentially like life support and it would be the

most valuable need of those fish. The ability for them to migrate into the mainstem Klamath and take advantage of those food resources would be a secondary benefit.

MS. BRENNER: Okay. So they don't necessarily need the connectivity during the warm summer months?

WITNESS WHITMORE: No. But it may contribute to higher growth rates and a higher survival rate of the individuals who have that opportunity.

MS. BRENNER: Okay. But at the time that you were at Stanshaw, was there connectivity? You don't recall?

WITNESS WHITMORE: I don't recall.

MS. BRENNER: But they were robust at that time?

WITNESS WHITMORE: Yes. And there was at least seasonal connectivity at the -- at the very minimum.

MS. BRENNER: Seasonal connectivity? In other words, there's connectivity in the fall and winter?

WITNESS WHITMORE: And spring.

MS. BRENNER: And spring?

WITNESS WHITMORE: Yes.

MS. BRENNER: Okay. When there's higher flows, both in the Klamath and the Stanshaw?

WITNESS WHITMORE: Yes.

MS. BRENNER: Okay. I have nothing further. Thank you.

WITNESS WHITMORE: Thank you.

MS. BRENNER: Ms. Tauzer, is your recommendation based on establishing unimpaired flow? Is that -- is that the basic premise of your bypass recommendation for the Stanshaw Creek system or the point of diversion?

WITNESS TAUZER: Our -- I mean, the basis is trying to keep as close as we can to the natural summer flow and the natural variability of water year types.

MS. BRENNER: Okay. Based on hdyrographs?

WITNESS TAUZER: Well, yeah, the stream flow, the hydrographs.

MS. BRENNER: Was the practicality of returning the flow to Stanshaw Creek considered as part of your recommendation?

WITNESS TAUZER: Originally, 2001, that was just -- the recommendation was put it back.

We had -- I mean, so over time, we talked about it since then. In 2004, I think we were still working toward that. I mean, I think I haven't become really aware of the complaint of that until pretty recently.

MS. BRENNER: Okay. Are you aware of the cost associated with returning flow back to Stanshaw Creek?

WITNESS TAUZER: I've heard it in this hearing.

MS. BRENNER: But you never considered -- you didn't consider that when you were making your recommended bypass flow?

WITNESS TAUZER: No. Our job is to try to find out what we would recommend to help preserve the species that are of our concern.

MS. BRENNER: Is your recommendation based on providing the highest level protection of fishery resources in the Klamath?

WITNESS TAUZER: As best as we thought was practical here.

MS. BRENNER: Have you done any analysis to specifically evaluate whether that bypass flow, the return back into Stanshaw, will accomplish more good for fish in Stanshaw than it

will in Irving Creek?

WITNESS TAUZER: I referred to biologists to see if they thought any further increase in the flow of Irving Creek would do anything for the habitat there. And everyone pretty strongly agreed that flow needed to come back to Stanshaw, since it provides a very important cold-water refugia.

MS. BRENNER: So even in high-water flows, the return to Stanshaw provides what benefit?

WITNESS TAUZER: You mean in winter flows? You're talking about --

MS. BRENNER: I'm not --

WITNESS TAUZER: I mean, you're talking about --

MS. BRENNER: -- going to put a date. I'm not going to put a time period. I'm just saying in --

WITNESS TAUZER: You're talking high flows --

MS. BRENNER: -- high water flows.

WITNESS TAUZER: -- on Stanshaw Creek?

MS. BRENNER: Right.

WITNESS TAUZER: Okay.

MS. BRENNER: High-water flows situation in Stanshaw, what's the benefit of returning the nonconsumptive hydro flow diverted by Marble Mountain Ranch back to Stanshaw? Did you evaluate the benefits of that?

WITNESS TAUZER: We didn't completely evaluate the really high flows because we already were knowing we were wanting the bypass flow to be returned in the spring. So if that whole system is set up to bypass back in the spring, then we know there's value because there's always going to be value to stay as close as you can to the natural hydrograph, but I didn't evaluate as closely as we thought about the whole recession curve and all the value of those spring recession back into Stanshaw Creek. And so by then, knowing that that was going to be part of the project, to have the waters returned, then we would prefer that the winter diversions were also returned.

MS. BRENNER: So you didn't consider the -- well, strike that.

You indicated that the two CFS minimum bypass will maintain the wetted flow -- low-flow channel needed to maintain micro invertebrate

production and food transport throughout the non anadromous reach below the point of diversion; correct?

WITNESS TAUZER: Yes.

MS. BRENNER: Do you have specific evidence that growth is impaired in the Stanshaw pond?

WITNESS TAUZER: You mean from --

MS. BRENNER: The micro --

WITNESS TAUZER: -- how does that fit in?

MS. BRENNER: -- invertebrates production is impaired in any way?

WITNESS TAUZER: Well, if you -- you know, we're looking for function. So, I mean, that may be a better question for Shari. But do I personally have data to show you that a few more macroinvertebrates would grow a fish? I mean, the assumption is that, you know, just providing that minimum level of transport of macroinvertebrates is, you know, you have to find some bottom target. We don't want to go to zero in that reach.

MS. BRENNER: Okay. Have you been to the Marble Mountain point of diversion?

WITNESS TAUZER: Yes.

MS. BRENNER: Okay. Have you inspected the diversion channel itself, the diversion ditch?

WITNESS TAUZER: I went and walked down that with the group in 2001, approximately.

MS. BRENNER: Part of the stakeholder efforts?

WITNESS TAUZER: Well, it was part of that appropriative -- the protest.

MS. BRENNER: Oh. Okay. And you're aware then that there's discharge points along the diversion ditch to deliver flow back to the Stanshaw Creek?

WITNESS TAUZER: Yes, I'm aware of it.

MS. BRENNER: Are you aware that there's also other influences below the point of diversion, adding water to the Stanshaw Creek?

WITNESS TAUZER: I mean, I would -- I am sure I saw them when I was out there surveying our cross-sections, but I would assume that would be true. You mean natural --

MS. BRENNER: Uh-huh.

WITNESS TAUZER: -- inflow? Yeah.

MS. BRENNER: Yeah. You've got inflow to Stanshaw Creek below the point of diversion

contributing to the flow in the creek?

WITNESS TAUZER: At certain times of years, yeah.

MS. BRENNER: Yeah. Have you made any inspections of sediment inputs to Stanshaw Creek over the course of the stream?

WITNESS TAUZER: No.

MS. BRENNER: But you state in paragraph nine of your testimony that, “The method of diversion causes large alterations in sediment input to the stream;” is that correct?

WITNESS TAUZER: I was referring just to the dam, you know, the big -- you know, the digging in the stream, pushing up a dam, and then that washing out.

MS. BRENNER: Was that --

WITNESS TAUZER: But --

MS. BRENNER: What time period was that?

WITNESS TAUZER: I -- you mean, when I was there?

MS. BRENNER: When you’re talking about this big push up in the stream, what time period is that?

WITNESS TAUZER: It was each time I visited there, which I’ve been to that point of

diversion probably four times. But we also had Tim Broadman, our enforcement person, who would go up there often. And he came in and complained about that dam being pushed up a lot of times.

MS. BRENNER: What --

WITNESS TAUZER: And so --

MS. BRENNER: Can you give me a time period?

WITNESS TAUZER: It would be during the summers of each year.

MS. BRENNER: I'm sorry. 2001?

WITNESS TAUZER: I think every year.

MS. BRENNER: When's the last visit?

WITNESS TAUZER: Every -- every -- I mean, the times I visited there, it was there. I mean, isn't that your method of diverting -- to divert the flow?

MS. BRENNER: No.

WITNESS TAUZER: I mean, is --

MS. BRENNER: I think you saw some pictures of hand-stacked rocks.

WITNESS TAUZER: No. I'm talking about the diversion into the ditch.

MS. BRENNER: Right. Do you have -- do you have any picture of what you're talking

about?

WITNESS TAUZER: Not with me.

MS. BRENNER: Okay.

WITNESS TAUZER: But, I mean, it --

MS. BRENNER: So how -- how large of a dam are you referring to?

WITNESS TAUZER: Just enough to be the surface of the water, to divert a large amount down the ditch.

MS. BRENNER: So --

WITNESS TAUZER: Yeah, I'm pretty sure that's what Doug was explaining when he said he --

MS. BRENNER: The hand rock piling?

WITNESS TAUZER: Yeah, which is -- it's a pretty big alteration to a channel, compared to what we normally look at, so --

MS. BRENNER: Okay.

WITNESS TAUZER: I mean, in this type a size of a diversion, that's all.

MS. BRENNER: Okay.

WITNESS TAUZER: I'm not sure if that question even --

MS. BRENNER: I think you both agree that the Klamath River can reach lethal water

temperature for fisheries?

WITNESS WHITMORE: If the fish are exposed for a long enough period, yes.

MS. BRENNER: Okay. It gets hot in the Klamath, too hot --

WITNESS WHITMORE: It does.

MS. BRENNER: -- for fish?

WITNESS WHITMORE: Yes.

MS. BRENNER: Okay. So it's not all the time a connectivity from a refuge pool to the Klamath is utilized?

WITNESS WHITMORE: I mean, in 2012, that summer the Klamath River, I believe I have a graph in my thesis, was reaching up to 25, 26 degrees which is considered, in the literature, lethal. However, fish were utilizing it during that time, as long as they could access a cold-water refugia during the daytime.

MS. BRENNER: And that's centigrade?

WITNESS WHITMORE: Yes.

MS. BRENNER: Thanks.

WITNESS WHITMORE: Uh-huh.

MS. BRENNER: Nothing further.

HEARING OFFICER MOORE: Okay. I guess Fahrenheit and centigrade, it gets you every

time.

So next we would like to ask the Karuk Tribe if you have any questions for the witnesses?

MR. VOEGELI: CDFW.

HEARING OFFICER MOORE: Oh, sorry. I forgot about CDFW. I'm on the wrong part of the script here. I'm on your part of the script.

MR. VOEGELI: I know we're trying to speed things up, but --

HEARING OFFICER MOORE: Yeah. No. No. I'm sure you have some good questions for the panel.

CROSS-EXAMINATION BY

MR. VOEGELI: Good afternoon.

WITNESS WHITMORE: Hi.

MR. VOEGELI: So my first few questions, I believe, are probably best directed to Shari. But as I go through them, if somebody -- if Margaret would be more appropriate, please let me know.

So the first question, Shari, on page three of your testimony, and this is NMFS Exhibit 7, you describe how juvenile Coho will migrate and redistribute from spawning areas?

WITNESS WHITMORE: Yes.

MR. VOEGELI: Assuming that Coho don't spawn in Stanshaw Creek, would the creek still be important in the lifecycle of Coho?

WITNESS WHITMORE: Yes.

MR. VOEGELI: In what ways would you expect juvenile Coho to benefit from the Stanshaw Creek flows?

WITNESS WHITMORE: It's the cold water that's maintaining the cold-water pool, the refugia that I described, is so critical for the summer rearing. And it provides the food resources to the fish there that are sometimes isolated in the pool.

MR. VOEGELI: So would you expect the absence of a thermal refugial at Stanshaw Creek to be detrimental to the Coho rearing?

WITNESS WHITMORE: Absolutely. Fish who are seeking out a thermal refugia, and if they were not able to find it, they may perish in the mainstem Klamath when exposed to high temperatures for long periods of time, or exposed to disease. And we know that this is a limiting habitat and a bottleneck to recovery of some Coho salmon in the Klamath Basin. So the habitat's

critical for the recovery and survival of the fish.

MR. VOEGELI: Have there been disease issues in the Mid Klamath River --

WITNESS WHITMORE: Yes, every year.

MR. VOEGELI: -- in the most recent years?

WITNESS WHITMORE: Yes.

MR. VOEGELI: In your testimony, on page one, you state that “juvenile Coho salmon will seek out thermal refugia in the Klamath River mainstem and tributaries?”

WITNESS WHITMORE: Yes.

MR. VOEGELI: Can you explain what you mean by refugia in the mainstem, as opposed to refugia in the tributary?

WITNESS WHITMORE: Yeah. The cold water exiting a tributary will create a plume of cold water in the mainstem. And these areas are valuable to fish who want to take advantage of both the cold water and the extensive food resources in the very productive Klamath River. So those cold-water plumes act as a refugia themselves.

MR. VOEGELI: Are those refugia important

for fish, other than Coho?

WITNESS WHITMORE: Yes, all salmonids.

MR. VOEGELI: Can you describe how Coho and other salmonids, like Chinook and steelhead, may make use of these mainstem refugia?

WITNESS WHITMORE: Yeah. They may -- they may hold just in the mainstem, as long as the water temperatures at that specific location, at the confluence there, maintains a cold temperature. They could be, you know, perfectly situated to be cool enough, but also take advantage of the food resources of the productive Klamath River.

MR. VOEGELI: Are the -- is the importance of these mainstem refugia only at the juvenile stage of the salmonids?

WITNESS WHITMORE: No. As fall Chinook are migrating upstream, often times it's during the fall when -- and late summer when mainstem temperatures are still at high levels. And so they will stopover and hang out in those cold-water mainstem refugias, as well.

MR. VOEGELI: Thank you. And this is a little more specific to Stanshaw Creek now.

When Stanshaw Creek has flows going into

the Klamath River, would you expect to see such thermal refugia in the mainstem?

WITNESS WHITMORE: If the volume of cold water is large enough that it can create a plume and not be easily diluted by the mainstem flows.

MR. VOEGELI: And then on page four of your testimony, you discuss the diurnal movement of Coho, and you talked a little bit about that. But --

WITNESS WHITMORE: Uh-huh.

MR. VOEGELI: -- could you just give me a brief summary again of that behavior?

WITNESS WHITMORE: Yeah. So at a point where fish find their summer refugia habitat, a cold-water habitat, they will remain there during the day. But at night, we see a lot more movement of fish and exploratory behavior and feeding behavior. And so at night, they may exit that cold-water refugia and enter the mainstem Klamath, which many times we think about as being lethal and inhospitable, but it's not. And fish can take advantage of the food resources in the mainstem Klamath which are different than those in Stanshaw Creek.

So it is valuable to a fish to be able to

take advantage of those food resources during the night, and then be able to retreat at dawn into the cold-water refugia so that they can, you know, survive throughout the summer.

MR. VOEGELI: And then do Klamath River juvenile Coho exhibit this behavior particularly in the summer months? Is this unique to the summer months?

WITNESS WHITMORE: It's not unique to the summer months. I found this occurring in the Scott River, Sugar Creek in the winter months, as well. It's basically just an indication that fish are taking advantage of different feeding opportunities, different food resources at night. And they have another preferred location for rearing and metabolizing that food, you know, during the day.

MR. VOEGELI: If there was a flow connection between the pool, Stanshaw Creek pool and the mainstem, would you expect juvenile Coho to make use of Stanshaw Creek for such diurnal movement?

WITNESS WHITMORE: Make use of the mainstem Klamath?

MR. VOEGELI: Traversing between the

mainstem Klamath and Stanshaw Creek, if it's connected?

WITNESS WHITMORE: Yes. If there was a sufficient connection, the characteristics of that connection was such that they could move back and forth freely, yes, I think that they would do that.

MR. VOEGELI: Okay. And when you were testifying earlier you stated that the movement of fish increases the risk of mortality.

WITNESS WHITMORE: Uh-huh.

MR. VOEGELI: And that the Mid Klamath Coho population is limited during the juvenile life stage.

WITNESS WHITMORE: Uh-huh.

MR. VOEGELI: In your opinion, if the Stanshaw Creek pool was lost, would you expect other tributaries to simply absorb these juvenile Coho fish?

WITNESS WHITMORE: Well, because it's a limited habitat, fish have a hard time finding those habitats, so not necessarily. They may not find another refuge.

MR. VOEGELI: You also mentioned in your earlier testimony today that juvenile Coho on

Stanshaw are of a higher value than Coho in other tributaries, primarily better equipped to survive?

WITNESS WHITMORE: Yes.

MR. VOEGELI: Would you expect Coho in the absence of Stanshaw Creek cold-water refugia, that they would migrate to another tributary and be of similar high value?

WITNESS WHITMORE: It depends on the tributary, but it's unlikely. I think my thesis work showed that other -- there's a high difference in growth rates, depending on the habitat that the fish are occupying. So even though they're surviving in a place like Tom Martin Creek or Cade Creek, they may not be growing. In fact, I've seen that a lot of these fish have negative growth rates because they're just barely hanging on and staying alive. But there are not sufficient food resources there for them to grow to such a robust size as they might in a place like Stanshaw Creek.

MR. VOEGELI: So would you expect that juvenile Coho and Coho recovery generally may be harmed by the loss of connection to the Stanshaw Creek pool between the pool and the mainstem

Klamath?

WITNESS WHITMORE: Yes.

MR. VOEGELI: One of the things we heard Ms. Tauzer testify about earlier, and this may be better directed to her, but let me know, she testified that studies, like the Richter Study, have indicated the need to maintain the natural hydrograph.

Would one of you be able to describe the importance in mimicking the natural hydrograph for Stanshaw Creek, particularly in the winter months?

WITNESS WHITMORE: Yeah, I can answer that.

WITNESS TAUZER: Okay.

WITNESS WHITMORE: So in the winter it's important that we have the variability, that we see the high flows. These are channel-shaping flows. It tumbles rocks. It moves sediment around. It prevents riparian vegetation from encroaching. It refreshes the substrate so that it cleans out sands and it makes it a clean, healthy substrate to support a robust benthic macroinvertebrate community, which will then provide the food resources to fish in Stanshaw

Creek pond.

And, you know, a hydrograph that is flat and maintained at a low baseline level, it will essentially turn a creek into something like a ditch where you just have a very simplified channel. It can narrow because of riparian encroachment. So we really look for those high volume, channel-shaping flows to maintain that healthy streambed.

MR. VOEGELI: So having that variation in the winter months is important also?

WITNESS WHITMORE: It is important.

MR. VOEGELI: This next question refers to Ms. Tauzer's report on page ten. And this is Exhibit NMFS-3. She mentions in this report that Upper Stanshaw Creek provides important macroinvertebrate production and a food source to the pool in the mainstem Klamath River.

And, Ms. Whitmore, you touched on this a little bit earlier, as far as the food source. Could you explain how Stanshaw contributes macroinvertebrate production to both the pool and to the mainstem Klamath?

WITNESS WHITMORE: Was this question for me?

MR. VOEGELI: Whoever would be most appropriately situated.

WITNESS WHITMORE: Yeah. Macroinvertebrates that are upstream in Stanshaw Creek are carried downstream and flow into Stanshaw Creek pond, where the fish are waiting. They also -- the macroinvertebrate there emerge, turn into terrestrial insects, like mayflies. And those resources will then, you know, move over the pond, die in the pond, be another source of nutrition for the fish there.

MR. VOEGELI: Okay. One other thing that Ms. Tauzer's report talks about is the importance of maintaining flow about the cross-section and flexion point. And because its importance to macroinvertebrate production and edge rearing habitat, Ms. Whitmore, I believe this is probably best for you, could you describe what is edge rearing habitat?

WITNESS WHITMORE: Yeah. It's important to include the entire width of the streambed. And the edge is a unique feature of a streambed, as far as that's where we see the intersection of vegetation, roots. That's where insects will crawl out and fall in. And it's just -- it's

just -- it contributes that characteristic to the overall production of the -- of the macroinvertebrate community.

MR. VOEGELI: This question is probably better directed to Ms. Tauzer.

Do you -- do you recall in your report your conclusion as to the appropriate CFS bypass to protect the edge rearing habitat and macroinvertebrates?

WITNESS TAUZER: Yes. That was two CFS.

MR. VOEGELI: Thank you. This next question, I think, is probably also best directed to Ms. Tauzer.

On page eight of your August 3rd, 2016 flow recommendation, you site the Richter Study, suggesting that diversions limited to 6 to 20 percent of unimpaired flow are protective of riverine ecology.

Can you -- can you describe for us why you recommended a maximum 10 percent diversion, as opposed to a higher end of 20 percent that Richter spoke about?

WITNESS TAUZER: Yeah. Richter did, through all his studies, found that the studies he looked at that protected the natural

hydrograph from 6 to 20 percent were protective with minimal changes to the ecosystem. And then he finally recommends that, you know, the -- they suggest that ten percent should be the number.

But -- so when I was evaluating this particular diversion, I was thinking that the watershed -- you know, we were going to consider the stream flow above the point of diversion as unimpaired or natural, but it actually has impairments to it. So that was one source of reasoning on it.

The other thing was that when you go to -- you know, it seems difficult to start to think about how you're going to implement a varying diversion, so it's going to have to -- at the time, through some of the stakeholder meetings, we were talking about maybe an average of a week or -- you know, so it wouldn't be every second of the day, varying the flow, it would be some increment. So it seemed conservative to say that if ten percent were diverted, there's going to be some variation around that number. So those were the reasons why ten percent seemed appropriate.

MR. VOEGELI: So in part, ten percent was

chosen to allow for some potential variation?

WITNESS TAUZER: Yeah, but, you know, while still trying to protect the high level of function, ecosystem function.

MR. VOEGELI: No additional questions.

HEARING OFFICER MOORE: Thank you, Mr. Voegeli.

And now, Karuk Tribe can have questions for cross-examination. Would you like to approach?

MR. HUNT: Nothing.

HEARING OFFICER MOORE: No, thanks?

And next, Old Man River Trust? No questions?

And then the three other parties who are not here.

And at this point, I would like to ask Counsel if you have any redirect testimony?

MR. KEIFER: (Off mike.) I believe I have one question.

HEARING OFFICER MOORE: Okay. That was a good catch.

MR. KEIFER: You'd think my boss was here.

HEARING OFFICER MOORE: He was here.

REDIRECT EXAMINATION BY

MR. KEIFER: Shari, you were asked on cross by Counsel for the ranch if during your visit and your observation of the pool, I believe in 2012, it was functioning properly; do you recall that --

WITNESS WHITMORE: Yes.

MR. KEIFER: -- question?

Your answer didn't indicate that diversions by the ranch were having no effect on SONCC, Coho, or any other species in Stanshaw Creek, did it?

WITNESS WHITMORE: Yeah. I can clarify. So during my time there I was unaware of diversions upstream and I was just focused on the habitat that I was seeing at the moment. And in the event that there was additional water in Stanshaw Creek, I don't know how many additional fish may have benefitted from that as far as maybe there would have been a larger plume -- I mean, absolutely, there would be a larger plume of cold water in the mainstem Klamath River. There may have been a connection maintained for a longer period of time with more flows. There may be more fish that were able to detect cold water

and to move into Stanshaw Creek, given that there was a larger volume of water.

So the habitat was functional in the sense that fish were growing at a high rate of growth and had, likely, an increased survival rate throughout the rest of their life.

However, I don't know who was missing out, I guess, if there would be more water.

MR. KEIFER: I think I'll leave that answer at that.

WITNESS WHITMORE: Okay.

MR. KEIFER: That's all I have. Thank you.

HEARING OFFICER MOORE: Okay. And now there's an opportunity for parties to conduct recross examination.

So first, the Prosecution Team, but it's limited to that --

MS. WEAVER: Yeah. No --

HEARING OFFICER MOORE: -- redirect.

MS. WEAVER: No recross.

HEARING OFFICER MOORE: Okay. And Marble Mountain Ranch, recross?

And Department of Fish and Wildlife?

MR. VOEGELI: No, thank you.

HEARING OFFICER MOORE: Okay. And Karuk? Okay. Okay.

At this point, Staff?

UNIDENTIFIED MALE: (Off mike.) (Indiscernible.)

HEARING OFFICER MOORE: Oh, okay. Yeah. Klamath Riverkeeper? CSPA? PCFFA? Okay.

And Staff, do you have any questions for these panelists? You do? Okay.

MS. WEAVER: Do we want to huddle or just go for it?

HEARING OFFICER MOORE: I'm fine. Let's just --

MS. WEAVER: Okay.

HEARING OFFICER MOORE: -- ask your questions.

We'll be right with you.

(Pause in proceedings)

HEARING OFFICER MOORE: Okay. Fire away.

EXAMINATION BY

MS. IRBY: Good afternoon. I have one question for Shari.

At the time that you visited Stanshaw, did you observe the point where Stanshaw Creek meets the Klamath floodplain?

WITNESS WHITMORE: Yes.

MS. IRBY: At that time, how would you characterize it?

WITNESS WHITMORE: So Stanshaw Creek meets the floodplain at the refugial pool. That's where it, you know, spreads out and enters that pool. So there was a bit of an alluvial fan of sediment that comes down the creek because the elevation changes or the gradient changes. And it was spread out and tumbling over the rocks into a deep cold-water pool.

MS. IRBY: So would you say that the majority of flow from Stanshaw Creek was going into the pool at that time?

WITNESS WHITMORE: Yes, at that time it was.

MS. IRBY: Okay. Thank you.

EXAMINATION BY

MR. BUCKMAN: Good afternoon. I have one question -

for you.

Is your minimum bypass flow -- is your recommended bypass flow an absolute minimum that you're recommending? And, in other words, is there like a higher level you would recommend, as

opposed to what you've -- what your recommendation is? Is it like a minimum, or is it like in the middle in terms of a variance of where you would set it? In terms of protection for the fish, what's your actual recommendation set at, if that's clear?

WITNESS TAUZER: Only -- I'm wondering, are you talking about the two CFS non anadromous reach?

MR. BUCKMAN: The 90 percent --

WITNESS TAUZER: Oh.

MR. BUCKMAN: -- and two CFS minimum?

WITNESS TAUZER: The two CFS minimum is the -- is intended to be the minimum, as long as we're talking about a flow that is returned, a nonconsumptive use. Because, you know, if you think about it, if you're going to have a nonconsumptive use, we have said before, 50 percent of the flow is the minimum or other things. But in this case -- but usually we have some minimum. And so the two CFS is the minimum for the biologic reasons of protecting the wetted channel and the macro habitat, food production reasons. The -- and that all depends on the flow coming -- being returned to above the anadromous

reach. The 90 percent minimum in the anadromous reach is the minimum we're recommending.

And when we talked about, you know, the 6 to 20 percent of Richter, I'm just going with what Richter suggests of a 10 percent maximum diversion will maintain good -- how does he put it -- economic function of the river -- I mean, not economic -- ecological function of the river.

EXAMINATION BY

MS. WEAVER: So I have a few questions for the panel.

Ms. Whitmore, in response to a question on cross, I believe you indicated that steelhead were not endangered; is that correct?

WITNESS WHITMORE: That's correct.

MS. WEAVER: And is that limited to the population in the Klamath River?

WITNESS WHITMORE: I'm speaking about the Klamath River population.

MS. WEAVER: Okay. Thank you. Were you here on Monday to hear witness testimony?

WITNESS WHITMORE: Yes.

MS. WEAVER: Do you recall hearing discussion about an event in the pool in Stanshaw Creek in which temperatures exceeded 100 degrees?

WITNESS WHITMORE: Yes.

MS. WEAVER: Did that ever happen while you were there?

WITNESS WHITMORE: No. I have temperature data from that time and it never reached levels like that.

MS. WEAVER: Are you -- I mean, just based on your experience working the Klamath system, are you ever aware of an event like that happening?

WITNESS WHITMORE: Where water temperatures reach 100 degrees?

MS. WEAVER: Something in the pool, something that you would have observed?

WITNESS WHITMORE: No.

MS. WEAVER: Okay. And how many -- during your thesis work and your -- how many different pools have you visited, approximately in the Klamath system?

WITNESS WHITMORE: That year I had ten sites, and I believe four of them were tributaries and six of them were off-channel pools, ponds, that sort of thing.

MS. WEAVER: Okay. And how many -- how much time were you -- were you there in the range

of hours, days, weeks, whatever is easiest is fine, just in the Klamath system doing this --

WITNESS WHITMORE: That --

MS. WEAVER: -- the work that you did --

WITNESS WHITMORE: That year --

MS. WEAVER: -- on your thesis?

WITNESS WHITMORE: --of my thesis study specifically, or just --

MS. WEAVER: Right.

WITNESS WHITMORE: Well, it was over the course of probably nine months, at least biweekly for the majority of that, once every two weeks, maybe four hours at each visit.

MS. WEAVER: Okay. And that's for each site, or for Stanshaw specifically?

WITNESS WHITMORE: Stanshaw Creek.

MS. WEAVER: Okay.

WITNESS WHITMORE: I was thinking of Stanshaw Creek, yeah.

MS. WEAVER: Okay. Thank you. So this next set of questions is for both of you.

Let's start with Ms. Whitmore. We talked about the diurnal migration of Coho. And they -- my understanding from your testimony was that they have specific times that they go out and

come back; is that correct?

WITNESS WHITMORE: Yes.

MS. WEAVER: Are those predictable, or do they change?

WITNESS WHITMORE: Everywhere I've seen it, it's been almost exactly timed with dawn and dusk. They're queued by light, I think.

MS. WEAVER: Okay. So would you need flows to facilitate connectivity at other times for the purposes of allowing this diurnal migration?

WITNESS WHITMORE: I mean, if you're in the season when -- if it's just for the diurnal migration you're talking about, I mean, I guess I don't know what you mean about need.

MS. WEAVER: Well, so, I mean, I'm an attorney, so my understanding of anything is grotesquely --

WITNESS WHITMORE: Yeah.

MS. WEAVER: -- oversimplified. But, I mean, it seems like if you had the, you know, the fish, based on your testimony, I think it was your testimony that the fish had this baseline --

WITNESS WHITMORE: Uh-huh.

MS. WEAVER: -- need to maintain a

thermal refugia --

WITNESS WHITMORE: Uh-huh.

MS. WEAVER: -- as a thermal refuge; is that correct?

WITNESS WHITMORE: Yes.

MS. WEAVER: And then there is an additional benefit if they're able to come and go as part of this diurnal migration --

WITNESS WHITMORE: Yes.

MS. WEAVER: -- and feed in the stream system? So it seems like it would at least be theoretically possible to design a flow regime to facilitate that while using the water for other purposes at other times?

WITNESS WHITMORE: Yeah, so that's what I thought you might be going with it. But there would be other detrimental effects to creating an unnatural hydrograph that would just connect, you know, one or two times per day; you know what I mean?

MS. WEAVER: Okay.

WITNESS WHITMORE: Yeah.

MS. WEAVER: So based on your professional experience, is that something that you're comfortable today saying would not work,

or you would -- you would need more information?

WITNESS WHITMORE: I'm comfortable saying that creating an unnatural hydrograph that fluctuates multiple times in a 24-hour period would be a poor decision, would be detrimental to Coho salmon.

MS. WEAVER: Detrimental, or not as good as having a consistent hydrograph? I mean, is it better to have less water consistently, or to --

WITNESS WHITMORE: You know, I would need to think about the effects.

MS. WEAVER: Okay.

WITNESS WHITMORE: And it would depend on the volumes, the fluctuations, you know, the degree of fluctuation that that would require and what that does to the upstream habitat, macroinvertebrate production and queuing fish.

MS. WEAVER: Okay.

WITNESS WHITMORE: You know, there's a lot of variables to consider with predicting what would happen with a new hydrograph. So --

MS. WEAVER: Okay.

WITNESS WHITMORE: -- I'm sorry, I can't answer that fully.

MS. WEAVER: Fine. Your answer has been

very helpful. Thank you.

Ms. Tauzer, do you -- what's your assessment of this concept? Could we design a flow regime that facilitated diurnal migration while conserving water for their uses at other times?

WITNESS TAUZER: I think theoretically it sounds like, you know, just thinking about the water, that you could do it. But that -- it's not just a faucet, it's a -- it has gravel and groundwater. And so when you just -- when you slow down flow you start to -- for a while the flow doesn't even change. It just sucks out anything that's retained in the bed material. And after time, you get to equilibrium until the flow decreases. And then as you -- so then you'd have that time delay of stopping the flow. And then when you start it back up you're going to have another time delay as it tries to refill those spaces that it emptied when you stopped it. And so you're going to have this strange fluctuation that would take lots of study to try to figure out how it's going to operate and what the effects, what the timing would be to try to match dusk and dawn on the fish. So --

MS. WEAVER: Okay. So --

WITNESS WHITMORE: -- I would say it would be really complicated. It would be something you'd want to avoid if you could.

MS. WEAVER: So would it be correct to conclude, based on your testimony, that it's -- you can't rule out whether it would work as of right now? You'd need additional information to be able to say whether or not --

WITNESS TAUZER: I'm just talking about --

MS. WEAVER: -- it would be possible?

WITNESS TAUZER: -- the flow, you know, would it produce -- if you thought you were going to turn it on and off, is it going to produce the flows that you think it's going to?

MS. WEAVER: Right.

WITNESS TAUZER: So I would say it's not going to produce them, just in an on-off kind of way for sure.

MS. WEAVER: You would need --

WITNESS TAUZER: How big the effects are, you'd have to study.

MS. WEAVER: Okay. Thank you.

HEARING OFFICER MOORE: All right. No

further questions?

So at this point, I'd like request National Marine Fishery Service to offer exhibits into evidence.

MR. KEIFER: We offer.

HEARING OFFICER MOORE: And do any of the parties have any objections to these exhibits being included?

Seeing none, the exhibits are entered into the record.

(All NMFS exhibits are received.)

HEARING OFFICER MOORE: And we will now here the California Fish and Wildlife's opening statement and direct testimony.

Would everybody like maybe a five minute bio break? And then we'll get going again at 3:10. Sound good?

(Off the record at 3:05 p.m.)

(On the record at 3:12 p.m.)

HEARING OFFICER MOORE: Department representatives, for your promptness, the Water Board is trying to catch up to you here. All right. Thank you very much.

And so I'll hand it over to you, Mr. Puccini.

MR. PUCCINI: Thank you.

HEARING OFFICER MOORE: -- for your opening statement and then direct testimony -- okay, or opening statement. And then let me know when you'll start direct testimony, so we can do the oath.

MR. PUCCINI: Will do.

OPENING STATEMENT BY

MR. PUCCINI: The California Department of Fish and Wildlife supports the Prosecution Team's proposed order offered into evidence as Exhibit WR-1. CDFW agrees with the Prosecution Team that the Cole's and Marble Mountain Ranch have misused water in violation of the California Constitution and Water Code, and continue to do so, and have diverted and used water from Stanshaw Creek in a manner that harms public trust resources, and continues to do so. These resources include Coho salmon and other fish species, including steelhead and resident rainbow trout.

Indeed, as early as March 2000 when CDFW filed a protest against Application 29449, CDFW voiced a strong concern that the Cole's and Marble Mountain Ranch's water diversion on

Stanshaw Creek could adversely affect fish resources by reducing stream flows during critical periods, and asserted that maintaining sufficient flows in Stanshaw Creek was important to maintain thermal refuge for salmonids.

After two -- after over two decades of stakeholders working with the Coles to address these and other problems associated with their water diversions and diversions facilities without success, CDFW agrees that it is time for the State Water Board to step in and order the Coles and Marble Mountain Ranch to implement corrective actions on a specific schedule. Doing so would have the added benefit of affording the Coles greater certainty for purposes of planning ranch operations in the coming years.

The Department, in its testimony, has provided facts and information that support the Prosecution Team's proposed order. Jennifer Bull recounts the Department's longstanding position that the Cole's and Marble Mountain Ranch's water diversions from Stanshaw Creek adversely affect Coho salmon and steelhead by increasing water temperature within the creek, reducing thermal refugia for Klamath River fish, and impeding fish

passage during critical periods. For those reasons, the Department has long recommended that the Coles and Marble Mountain Ranch be required to maintain a minimum flow in Stanshaw Creek, very similar to the flow recommendation made by the National Marine Fishery Service in Exhibit NMFS-3.

Caitlin Bean recounts four grant proposals she has reviewed since 2011. As Ms. Bean explains, each proposal emphasized the importance of cold water -- the cold-water pool at the mouth of Stanshaw Creek, and each proposal was intended to address the impacts on Coho salmon caused by the Cole's and Marble Mountain Ranch's water diversion.

Curt Babcock recounts the Cole's and Marble Mountain Ranch's history of noncompliance with Fish and Game Code section 1602 for the diversion of water until this year, and explains that one of the measures in the draft Streambed Alteration Agreement the Department submitted to the Coles and Marble Mountain Ranch in June of this year is consistent with the flow recommendation made by NMFS in Exhibit NMFS-3.

Robert Holmes cannot be here today, but

were he present he would have recounted his review of the flow recommendation made by NMFS in Exhibit NMFS-3 and concur that the flows will provide a high level of protection for over-summering Coho salmon in Stanshaw Creek.

In sum, the Department has long recognized that the Cole's and Marble Mountain Ranch's diversion of water from Stanshaw Creek adversely effects Coho salmon and other fish resources. Based on the Department's experience and knowledge regarding this diversion and its facilities, and consistent with the Department's responsibilities as a state's trustee for the fish and wildlife resources, the Department urges the State Water Board to adopt the Prosecution Team's proposed order.

And with that, I will turn it over to our three witnesses here today.

HEARING OFFICER MOORE: Thank you, Mr. Puccini.

And at this time will the witnesses testifying please stand and raise your right hand?

(Witnesses are sworn.)

HEARING OFFICER MOORE: Thank you.

Please be seated and please begin.

MR. PUCCINI: We'll begin with Jennifer Bull.

JENNIFER BULL,

called as a witness for California Department of Fish and Wildlife, having been previously duly sworn, was examined and testified as follows:

DIRECT TESTIMONY BY

WITNESS BULL: Good afternoon. My name is Jennifer Bull. I am a Senior Environmental Scientist Supervisor for the California Department of Fish and Wildlife's Yreka Fisheries Program. I was previously the Siskiyou County Fisheries district biologist for CDFW for five years, which is one of the positions I currently supervise.

The testimony I prepared is offered into evidence as Exhibit CDFW-1. I have taken the oath, and I have no changes to make to my testimony.

In my testimony, I recount that CDFW has long -- has had a longstanding concern that the Cole's water diversions from Stanshaw Creek could adversely affect fish and other sensitive species by reducing stream flows during critical periods,

that CDFW recommended to the State Water Board that the Cole's bypass a minimum of 2.5 CFS measured at Highway 96; that in May 2000, CDFW concluded that stream flows below two CFS would create a low-flow barrier near the mouth of Stanshaw Creek, and such a barrier would prevent salmonids from accessing Stanshaw Creek and the cool refugia provided by the creek and the off-channel pond; that in CDFW continues to recommend that the Coles return the nonconsumptive portion of the diverted water to Stanshaw Creek; and that CDFW included this as a condition in the draft Streambed Alteration Agreement CDFW submitted to the Coles this last June.

MR. PUCCINI: We'll now hear from Caitlin Bean.

CAITLIN BEAN,

called as a witness for California Department of Fish and Wildlife, having been previously duly sworn, was examined and testified as follows:

DIRECT TESTIMONY BY

WITNESS BEAN: Good afternoon. My name is Caitlin Bean. I'm a Senior Environmental Scientist in the California Department of Fish and Wildlife Northern Region Office, which covers

Siskiyou County. I was hired by the region as the Coho Recovery Coordinator, to work on issues related to the recovery of Coho salmon in Siskiyou County. One of my roles as the Coho Recovery Coordinator has been to participate in the review of grant proposals submitted to the Department's Fisheries Restoration Grant Program.

I've taken the oath and make no changes to my testimony.

In my testimony, I recount that Coho salmon and the Klamath River Watershed is listed as a threatened species under the State and Federal Endangered Species Act; that a report prepared for the Karuk Tribe in January 2015 found that flows in Lower Stanshaw Creek, less than one CFS, coincided with reduced volume, poor water quality, and direct mortality of juvenile Coho salmon in the floodplain pool; that the Department included in the Recovery Strategy for California Coho Salmon, published in 2004, a recovery task specific to Stanshaw Creek, a request to the State Board that they investigate the legality of diversions and the use of water in Stanshaw Creek; that the Coles had proposed in 2005 and the Department supported returning the

effluent from hydroelectric generation to Stanshaw Creek, maintaining minimum instream flows in the creek past the point of diversion, installing a half-round culvert in the ditch to prevent berm failures and improve efficiency, and installing a solar-powered generation system; that I reviewed several grant proposals that variously recognized that the floodplain pool is excellent cold-water, summer refugia and low-velocity winter refugia for juvenile Coho salmon; that the Coles -- excuse me -- water diversion adversely impacts rearing juvenile Coho salmon in Lower Stanshaw Creek through decreased instream flows and sedimentation from ditch failures; and that an investigation was needed to verify the Cole's pre-1914 water right in order to obtain grant funding; that in early 2016 the State Water Board requested that the Department and National Marine Fishery Service work together to estimate bypass flow needs for the Cole's diversion; that I requested Robert Holmes, the Department's Instream Flow Program Coordinator, to review NMFS flow recommendation; and that in a telephone call with myself and Jennifer Bull, Mr. Holmes stated that he supported the methodology and the results

of the NMFS evaluation, and that the Department included the flow prescriptions in NMFS flow recommendations document in the draft Streambed Alteration Agreement that the Department submitted to the Coles in this last June.

MR. PUCCINI: Can I just interrupt really quickly? I need to talk to Curt Babcock ever so quickly.

HEARING OFFICER MOORE: Yes.

MR. PUCCINI: Mr. Babcock.

HEARING OFFICER MOORE: Okay. Please proceed.

CURT BABCOCK,

called as a witness for California Department of Fish and Wildlife, having been previously duly sworn, was examined and testified as follows:

DIRECT TESTIMONY BY

WITNESS BABCOCK: Good afternoon. My name is Curt Babcock. I'm an Environmental Program Manager in the California Department of Fish and Wildlife's Northern Region Office, which cover Siskiyou County.

The testimony I prepared is offered into evidence as Exhibit CDFW-28. I've taken the oath and I have no changes to make to my testimony.

In my testimony, I recount that in 1999, CDFW issued to Marble Mountain Ranch a five-year Streambed Alteration Agreement for maintenance work under former Fish and Game Code section 1603; that CDFW found the Coles violated the maintenance agreement and the Fish and Game Code by maintaining a rock diversion dam that blocked or impeded fish passage in Stanshaw Creek; that in May 2016, CDFW reminded Doug Cole that he would need to notify CDFW under Fish and Game Code section 1602 by the end of the Year 2016 to divert water from Stanshaw Creek; that in March 2017, CDFW received a notification from Mr. Cole for the diversion water from Stanshaw Creek, among other activities; that on June 9th, 2017, CDFW submitted a draft streambed alteration agreement to Mr. Cole; that the draft agreement describes the potential impacts of the Coles' water diversion on fish and wildlife resources, including increased water temperature due to lower stream flows, change in dissolved oxygen, direct impacts on benthic organisms, change in flow depth, width and velocity; and that to avoid and minimize these and other potential impacts described in the draft agreement, CDFW included a

number of protective measures in the draft Streambed Alteration Agreement, including measures consistent with NMFS flow recommendation; that on July 27th, 2017, CDFW and the Coles' Attorney, Barbara Brenner, agreed to postpone a meeting to discuss measures in the draft agreement the Coles disagreed with until after this hearing is finished.

MR. PUCCINI: I have a few questions for Ms. Bull.

HEARING OFFICER MOORE: Yes.

MR. PUCCINI: Thank you.

HEARING OFFICER MOORE: Please proceed.

(Document displayed on screen)

DIRECT EXAMINATION BY

MR. PUCCINI: Jennifer, on the screen is CDFW Exhibit 5, which I'll represent is a memorandum written by former CDFW Employee, Dennis Maria. Do you see the highlighted text?

WITNESS BULL: Uh-huh. Yes.

MR. PUCCINI: It reads,

"Flow in Stanshaw Creek was 2.3 cubic feet per second as measured as the tail end of the relatively large pool immediately downstream of the Highway 96 twin box culverts. This

amount of flow is barely adequate to sustain fish life and to maintain unimpeded access for juvenile steelhead in the creek below Highway 96."

Is it your understanding that the pool Mr. Maria is describing is not the off-channel pool, but instead a pool of water actually in the creek itself?

WITNESS BULL: That's correct.

MS. MCCUE: Could you say what page that was?

MR. PUCCINI: That was page one.

MS. MCCUE: Thank you.

(Document displayed on screen)

MR. PUCCINI: Up on the screen now is CDFW Exhibit 6, which is also a memorandum from Dennis Maria, dated July 31st, 2000. Do you see the text highlighted there, Ms. Bull?

WITNESS BULL: Yes.

MR. PUCCINI: It reads,

"On July 26, 2000, I made a brief electroshocking survey in Lower Stanshaw Creek, beginning from the large pool located immediately below the discharge end of the twin concrete culverts diverting beneath

State Highway 96. Several juvenile steelhead were captured, most of which were young of the year, about two to three inches in length. Approximately 150 feet below this pool a single juvenile Coho was captured, thereby confirming the presence of Coho in this stream."

Do you understand where Mr. Maria uses the word "pool" in both those instances to be not the off-channel pool at the base of Stanshaw Creek, but actually pools in the creek itself?

WITNESS BULL: That's correct.

MR. PUCCINI: You mentioned that you visited Marble Mountain -- Marble Mountain Ranch on two different occasions in your testimony, as CDFW Exhibit 1.

What was the purpose of your visit to the ranch in June 2012?

WITNESS BULL: I was part of the FRGP Field Review Team that was evaluating the proposal for the Marble Mountain Ranch.

MR. PUCCINI: What does FRGP stand for?

WITNESS BULL: I'm sorry. Fisheries Restoration Grant Program.

MR. PUCCINI: Okay. And what was the

purpose of your visit to the ranch in May of 2015?

WITNESS BULL: I was contacted in early May. Mr. Cole did call me and wanted to find out how he could stock his pond. And so I explained the process, which included a field visit to evaluate his pond ahead of time.

MR. PUCCINI: Thank you. That's all the questions I have.

HEARING OFFICER MOORE: Okay. Thank you very much.

And at this time, we're going to move into cross-examination of the witnesses. And first up would be Division of Water Rights Prosecution Team.

CROSS-EXAMINATION BY

MR. PETRUZZELLI: Okay. Ms. Bean, I wanted to -- in your testimony you talk about the various grants that were being evaluated. Before I start asking you more about the grants, since a lot of us aren't familiar with some of these acronyms and organizations, can you explain what the Coho Enhancement Fund is?

WITNESS BEAN: Sure. The Coho Enhancement Fund is an annual funding source that

is derived -- well, it comes from PacifiCorp. It's a requirement in their HCP that they have entered into with NMFS. And it requires that they put up $500,000 a year, specifically for projects on the ground in the Klamath system below the Iron Gate Dam that improve the chances for Coho recovery in the system, potentially mitigating the effects of the dams. The money is provided to National Fish and Wildlife Foundation. And the Review Team includes the Department of Fish and Wildlife, NOAA Fisheries, PacifiCorp, and NFWF.

MR. PETRUZZELLI: And were you a part of the review team?

WITNESS BEAN: Yes.

MR. PETRUZZELLI: Okay.

WITNESS BEAN: And then did you want me to talk about the other grant program?

MR. PETRUZZELLI: Yeah. I was going to ask you about --

WITNESS BEAN: Oh, sorry.

MR. PETRUZZELLI: Well, first, what does HCP stand for?

WITNESS BEAN: Habitat Conservation Plan.

MR. PETRUZZELLI: Okay. And that's

required by the Endangered Species Act?

WITNESS BEAN: Correct.

MR. PETRUZZELLI: Okay. And what is FRGP?

WITNESS BEAN: Fisheries Restoration Grant Program is a program that the Department manages for the implementation of projects that restore aquatic habitat throughout the state. In the past it -- there was an opportunity to receive higher scores if you were improving Coho habitat.

MR. PETRUZZELLI: Okay. And what's NFWF?

WITNESS BEAN: National Fish and Wildlife Foundation.

MR. PETRUZZELLI: Okay. And who are they and what --

WITNESS BEAN: They are an organization that have been structured to manage funds that are identified by agencies. I'm not quite clear on how that all occurred, but they disperse these funds as like a go-between.

MR. PETRUZZELLI: And what are the funds for?

WITNESS BEAN: Restoration Project. Well, they manage all kinds of --

MR. PETRUZZELLI: Okay.

WITNESS BEAN: -- funding programs.

MR. PETRUZZELLI: Okay.

WITNESS BEAN: But this specifically is for Coho habitat restoration.

MR. PETRUZZELLI: Okay. And what is the Mid Klamath Watershed Council?

WITNESS BEAN: They are a nonprofit organization that implements all kinds of restoration projects in the Mid Klamath, including Coho recovery projects.

MR. PETRUZZELLI: Okay. And what was their involvement as it relates to the Coles and Marble Mountain?

WITNESS BEAN: The funding programs require the applicant to be either from a nonprofit organization or a government organization. So I'm -- I don't know what the relationship between MCWC and the Coles was, but MCWC submitted the grants to these two programs to improve habitat on Stanshaw Creek.

MR. PETRUZZELLI: Okay. And what -- and how did all of these organizations fit together into the grant for the Lennihan Report?

WITNESS BEAN: So the Lennihan Report was

funded by the grant -- by a grant that NFWF provided to Mid Klamath Watershed Council. They -- so I don't -- I was not -- so the relationship was between Mid Klamath and NFWF --

MR. PETRUZZELLI: Okay.

WITNESS BEAN: -- although there was a party of government employees that coordinated with NFWF on decision-making regarding the grant.

The -- I believe the way it was structured was that there was a specified amount of money that would be dispersed for the water rights analysis. And then there would be a decision point regarding whether or not there was agreement around the results of that analysis. If there was agreement, there were additional funds in the grant that could be dispersed to implement other measures.

MR. PETRUZZELLI: And can you talk about what the purpose of this report was, why it was -- why it was done?

WITNESS BEAN: The Department cannot fund projects related to the diversion of water without having some verification of the water right. And we recommended to NFWF that they adopt this policy for the Coho Enhancement Fund.

The implication is that you might get down the road with an engineering design --

MR. PETRUZZELLI: Uh-huh.

WITNESS BEAN: -- that was allowing more water to be diverted than the actual right was.

So can you -- I think I got off track.

MR. PETRUZZELLI: No. No, you're fine.

And sort of what was, you know, what was the genesis for, you know, looking at and doing this report? Was it so -- was it to provide kind of a springboard for additional grants and funds for the improvement of the Marble Mountain diversions?

WITNESS BEAN: The Department had been discussing issues related to the impacts of the diversion in Stanshaw Creek for years and was committed to trying to find a way to solve the problem. I was not in this position. I think there was a grant before in -- a grant application before 2005 that I had heard about when I took this position in '05, and the issue being that no funding could be provided until we resolved the water right issue. So it took quite a while to get to the place where that had become a task --

MR. PETRUZZELLI: Okay.

WITNESS BEAN: -- in a grant that was -- you know, where Will, somehow, was able to negotiate that task in that grant application.

MR. PETRUZZELLI: Okay. And were you also involved in the review for the grant application for the six-inch pipe?

WITNESS BEAN: The six-inch pipe, if I recall correctly, the six-inch pipe was a solution that was proposed in the -- within the context of the Coho Enhancement Fund Grant. So the money was spent for Martha and Joey's work. And then there was this additional funding that was available, but we had to decide whether or not it could be dispersed. So there were these conversations that occurred around what that would look like.

The six-inch pipe came as a potential solution to a short -- the short-term issue of impacts due to the diversion of water. The pipe would have allowed the -- was to -- my understanding was the pipe was proposed to provide a temporary solution that would allow a long-term solution to be developed. The grant cycle takes an enormous amount of time. And we

don’t fund implementation projects without having reviewed and approved engineering designs. So the goal was to get some engineering solutions on the table to do the energy audit. And then the next grant would have been to develop engineer designs to a level where the implementation dollars could be applied for.

So that whole thing was going to take many years. And it was my understanding that the six-inch pipe was proposed as an interim solution while all that other stuff was being worked out.

MR. PETRUZZELLI: So how did the energy audit fit into this?

WITNESS BEAN: The energy audit was a part -- if I recall correctly, the energy audit was a part of that CEF Grant proposal, because there was some question regarding whether or not hydropower was the appropriate solution, long-term solution.

MR. PETRUZZELLI: And in the conversations, looking at grant -- the grant applications, what -- to what extent was hydropower seen as, you know, having a future for Marble Mountain?

WITNESS BEAN: Well, I think from the

resources agencies, and, of course, you know, these funding opportunities are specifically to recover Coho, we -- I can speak for myself, I had hoped that there would be another solution, maybe a solar solution.

MR. PETRUZZELLI: Okay. So the grant -- so strike that.

So for these grants, can they be used for mitigation projects?

WITNESS BEAN: No.

MR. PETRUZZELLI: Okay. And what is an enforcement action or an enforcement -- is an enforcement action -- strike that.

Would an enforcement order issued by the State Water Board or the Regional Water Board be considered a mitigation action?

WITNESS BEAN: Absolutely.

MR. PETRUZZELLI: Okay. So actions done to comply with order -- enforcement orders of the State Water Board or the Regional Water Board would be considered mitigation?

WITNESS BEAN: That would not be an appropriate use of public dollars. And, yes, that would be considered mitigation --

MR. PETRUZZELLI: Okay.

WITNESS BEAN: -- mitigation.

MR. PETRUZZELLI: So until the Regional Water Board or the State Water Board issued an enforcement order, those funds remained available?

WITNESS BEAN: Correct.

MR. PETRUZZELLI: Okay. When the Regional Water Board and the State Water Board issued their investigation -- respective Investigation Reports in December of 2015, was, at that point, was it -- were the -- would the grants be considered funding mitigation?

WITNESS BEAN: Say the title of the document one more time?

MR. PETRUZZELLI: Okay. So we're -- the Investigation Reports.

WITNESS BEAN: The Investigation Report --

MR. PETRUZZELLI: Okay.

WITNESS BEAN: -- no, it would not have resulted in mitigation.

MR. PETRUZZELLI: So the Investigation Reports, you know, to the extent they said things like we recommend you undertake these actions, undertaking those recommendations would not be

considered mitigation?

WITNESS BEAN: Recommendations are not considered mitigation.

MR. PETRUZZELLI: Okay. And was the Draft Cleanup and Abatement Order issued by the Regional Water Board considered -- would corrective actions in the Draft Cleanup and Abatement Order be considered mitigation?

WITNESS BEAN: The Draft Order was --

MR. PETRUZZELLI: Remember, it's just a Draft Order.

WITNESS BEAN: -- was not considered requiring mitigation, but there were conversations at that time regarding the fact that if it was finalized, these public dollars would no longer be available.

MR. PETRUZZELLI: Did those conversations include Will Harling?

WITNESS BEAN: Yes.

MR. PETRUZZELLI: Do you remember if those conversations included the Coles or their legal counsel?

WITNESS BEAN: I was not party to a conversation --

MR. PETRUZZELLI: Okay.

WITNESS BEAN: -- like that.

MR. PETRUZZELLI: So after the -- after the Regional Water Board and the State Water Board issued their respective Investigation Reports with the recommendations in those reports in December 2015 there were no mitigation requirements in the context of the grants?

WITNESS BEAN: Correct.

MR. PETRUZZELLI: Okay. So the grant funding was still available for that time?

WITNESS BEAN: Yes.

MR. PETRUZZELLI: Okay. So, Jennifer, I -- Ms. Bull, my next questions are for you.

Are Coho a listed species under the California Endangered Species Act?

WITNESS BULL: Yes.

MR. PETRUZZELLI: And how -- can you explain what their listing status is?

WITNESS BULL: They’re a California threatened.

MR. PETRUZZELLI: Okay. And steelhead?

WITNESS BULL: No.

MR. PETRUZZELLI: Okay. You mentioned Mr. Cole invited you out to the ranch to look at the pond.

Would he have normally needed a permit to stock that pond?

WITNESS BULL: Yes.

MR. PETRUZZELLI: What was he looking to stock the pond with?

WITNESS BULL: The best as I recall would be trout, but I don't recall the exact species. But you have to get a private stocking permit from the Department, which requires a pre-stocking survey. But I'm not absolutely positive. I assume.

MR. PETRUZZELLI: Okay. And, you know, when you need a -- and when you say that a permit is required, you know, I infer that to mean that you don't first stock a pond with trout and then ask for a permit?

WITNESS BULL: Correct.

MR. PETRUZZELLI: Okay. So when Mr. Cole invited you out, what was the purpose of that invitation?

WITNESS BULL: Well, I informed him that I needed to do the pre-stocking evaluation, so we agreed on a time. He wasn't able to meet me out there, but I was -- I went out there to evaluate for what are called decision species in our EIR

which are some listed, some are not, some are candidate. But the main species that I'm looking at impacts to are foothill yellow-legged frog, Cascade frog, willow flycatcher, and steelhead, Chinook and Coho salmon.

MR. PETRUZZELLI: Okay. And was a stocking permit eventually issued?

WITNESS BULL: No.

MR. PETRUZZELLI: Okay. Ms. Bean, I had a couple other questions for you.

To your knowledge, would the grant funding for the six-inch pipe have required Marble Mountain to give up the hydropower portion of its claimed water right?

WITNESS BEAN: Give up temporarily.

MR. PETRUZZELLI: What does -- in what sense temporarily?

WITNESS BEAN: Well, because it would take so long. I explained that grant cycle --

MR. PETRUZZELLI: Okay.

WITNESS BEAN: -- review period and the staged requirement we have for engineered drawings. And then, only then can we provide money for implementation. So it was my understanding that the six-inch pipe would

deliver the consumptive use, and that there would be a -- and temporarily, until these solutions were agreed on, the nonconsumptive water would not be provided.

MR. PETRUZZELLI: Do you recall -- do you recall discussion about eventual installation of a second pipe to support hydropower diversion?

WITNESS BEAN: I do believe there were conversations to that effect.

MR. PETRUZZELLI: Okay. Would that have been eligible for grant funding?

WITNESS BEAN: Highly unlikely.

MR. PETRUZZELLI: Okay. And what was --

WITNESS BEAN: Well, our grants.

MR. PETRUZZELLI: Okay. Was there a contemplated power alternative in the -- for this temporary time period that hydropower potentially would have been unavailable?

WITNESS BEAN: Well, I'm trying to recall the details. I just -- I remember that Joey Howard had implied to me that there was an opportunity for a solar solution. And in my limited involvement at that time, I just thought, oh, great, that sounds good.

MR. PETRUZZELLI: Okay. So you had heard

discussion about, you know, actually trying to bring in some kind of solar power system, or something other than hydropower?

WITNESS BEAN: Yes.

MR. PETRUZZELLI: Okay. All right. Okay. And those are my questions.

HEARING OFFICER MOORE: All right. Thank you, Counsel.

Next, Douglas and Heidi Cole, Marble Mountain Ranch, cross-examination of the witnesses for Department of Fish and Wildlife.

CROSS-EXAMINATION BY

MS. BRENNER: Good afternoon. Ms. Bean, let's just go back to your -- just the most immediate testimony.

You indicated the grant process is quite lengthy. You need to verbalize --

WITNESS BEAN: Yes.

MS. BRENNER: -- your responses. Sorry.

Years?

WITNESS BEAN: it takes about a year from the time you submit an application until you may find out -- until the funds are dispersed.

MS. BRENNER: Okay. And this particular grant -- go ahead.

WITNESS BEAN: For the Fisheries Restoration Grant Program, that's true. For the Coho Enhancement Fund, which the Department does not manage, the grants are dispersed more quickly.

MS. BRENNER: Okay. Do you know what the financial limitations of those grant disbursements are? In other words, can you grant $1 million?

WITNESS BEAN: The Coho Enhancement Fund is limited to $500,000 annually. So --

MS. BRENNER: Total?

WITNESS BEAN: Total. The Fisheries Restoration Grant Program is funded at a much greater limit, which changes each year.

But I can say this, $1 million project would eliminate the chance of doing a number of smaller projects. And so high-cost projects are weighed against other applications, so you're looking for your biggest bang for your buck on the projects.

MS. BRENNER: Right. And you indicated that there has to be final engineered drawings before any grant disbursements; correct?

WITNESS BEAN: For implementation grants

to be applied for, your proposed project would require 100 percent engineered drawings that were reviewed and approved by the Department.

MS. BRENNER: Does that review and approval of engineering drawings often take quite some time?

WITNESS BEAN: I've never -- I've never heard that there was an issue related to the time the Department takes to review them.

MS. BRENNER: Do those implementation grants also require all permitting to be obtained?

WITNESS BEAN: The Department grant program has included permitting, and still does, for --

MS. BRENNER: So -- but before you can implement, you have to have all the permitting in place, as well?

WITNESS BEAN: So when the Department issues money through the Fisheries Restoration Grant Program, they've applied for -- they have standing permits from the Regional Board, NOAA Fisheries. They do their own CEQA analysis. And a Streambed Alteration Agreement might be the only permit that an applicant might require for

implementation.

MS. BRENNER: To implement the return flow on the Marble Mountain diversion, nonconsumptive use, back to Stanshaw would require a number of permits; correct?

WITNESS BEAN: I'm not aware of all the permits. I'm speaking about the public trust, you know, our permitting issuance.

MS. BRENNER: Right. Right. It wouldn't cover things like a pipe down a highway, the permitting requirements to lay a pipe down a highway?

WITNESS BEAN: Yeah. I don't know what all the permits would be for that.

MS. BRENNER: Okay. So you did -- you did confirm that there would not be -- if the six-inch pipe proposal had been granted, if the grant funds were received for that proposal, there would be no hydro use? No water would be allowed to be diverted for hydro until some solution came with regard to that return flow; correct?

WITNESS BEAN: That was my understanding.

MS. BRENNER: That could have taken years to resolve?

WITNESS BEAN: Potentially.

MS. BRENNER: Do you know if -- and this is to either one of you, Ms. Bull or Ms. Bean.

Did CDFW ever consider the inability to meet the NMFS bypass flow requirements when supporting those bypass flow requirements? Did you ever consider the ability to actually meet the requirement by the Coles?

WITNESS BEAN: The flow was estimated to determine the needs for fisheries. And there's no -- it's a mathematical evaluation. There's no way to --

MS. BRENNER: So the answer is no?

WITNESS BEAN: The answer is no. I mean, no, that's not true. I can't actually speak with certainty.

I do believe that Margaret was responsive to concerns that were raised.

MS. BRENNER: Okay.

WITNESS BEAN: I think she revised --

MS. BRENNER: So --

WITNESS BEAN: -- her document because of that.

MS. BRENNER: Did CDFW?

WITNESS BEAN: We didn't prepare a

document. We supported the work that Margaret did.

MS. BRENNER: Okay. You discussed the need for a pool in Stanshaw Creek to provide overwintering habitat for Coho salmon; correct? And this is, again, to either one of you. There's a --

WITNESS BULL: Oh, that it's important? Yes.

MS. BRENNER: Are you aware of any evidence that -- when the pool has been impaired by the Cole's diversion during winter flows?

WITNESS BULL: Not during winter flows.

MS. BRENNER: Okay. Can we go to CDFW Exhibit 13, page 4, and this is, I believe, Ms. Bean's testimony, line 5, start at line 5.

(Document displayed on screen)

MS. BRENNER: Do you see the quoted material on that page?

WITNESS BEAN: Yes.

MS. BRENNER: Does that indicate that the growth rates for Coho overwintering in the Stanshaw pool are high, likely leading to increased survival and numbers of returning spawners?

WITNESS BEAN: No.

MS. BRENNER: Do you see the sentence that says,

"The pool at the mouth of Stanshaw currently provides excellent cold-water refuge, as well as winter refuge for juvenile Coho?"

WITNESS BEAN: Yes.

MS. BRENNER: Okay. Was this based on Coho ecology studies by the Karuk Tribe at this site?

WITNESS BEAN: This is an excerpt of a proposal that was submitted by Mid Klamath Watershed Council. I'm not sure where they -- I'm sure they coordinated with whoever they needed to coordinate with --

MS. BRENNER: Okay.

WITNESS BEAN: -- to get that information.

MS. BRENNER: So based on your review of the application, do you agree that growth rates of the Coho overwintering it the Stanshaw are high in the ten years up to 2012?

WITNESS BEAN: Based on what?

MS. BRENNER: Based on your review of the application?

WITNESS BEAN: Based on my understanding of the research that's been conducted, I believe that the growth rates are higher.

MS. BRENNER: Okay. Can we hang on just -- can you go down to line 27? Okay. Where's page four?

Do you see the reference at line 27 that "A lateral scour pool is formed just upstream of Stanshaw Creek mouth when Klamath flood flows?"

WITNESS BEAN: Yes.

MS. BRENNER: Okay. Can you go to the next page please?

That occurs when the Klamath flood flows are deflected by avulsed alluvium and stream flow from Stanshaw Creek; is that your understanding?

WITNESS BEAN: Yes.

MS. BRENNER: And then the pool is subsequently filled by cold Stanshaw Creek water when flooding subsides?

WITNESS BEAN: Yes.

MS. BRENNER: It creates a high-quality summer and winter rearing habitat for Coho migrating down the Klamath River?

WITNESS BEAN: Yes.

MS. BRENNER: Do you have an

understanding of how that works? Can you describe how that works?

WITNESS BEAN: In --

MS. BRENNER: Let me ask you a different way. Is that a natural phenomenon?

WITNESS BEAN: It's --

MS. BRENNER: Is that a natural occurrence?

WITNESS BEAN: It's my understanding that there's a number of tributaries where this occurs in the Klamath River Watershed.

MS. BRENNER: It's a natural occurrence?

WITNESS BEAN: Yes.

MS. BRENNER: Okay. And that -- that is caused by a lateral scouring upstream of the Stanshaw Creek entry onto the floodplain; is that your understanding --

WITNESS BEAN: That's my understanding.

MS. BRENNER: -- of how that occurs? Okay.

Do you have an understanding of whether that particular circumstance may result in Stanshaw Creek flow away from the natural pond, that in natural circumstances sometimes the Stanshaw Creek flow may not all be directed into

the pond?

WITNESS BEAN: I guess it would depend on the elevation of the Klamath River.

MS. BRENNER: And each year it could be different?

WITNESS BEAN: Correct.

MS. BRENNER: Okay. You -- have you hiked up and down the Stanshaw Creek system?

WITNESS BEAN: No.

MS. BRENNER: Okay. So, Ms. Bull, you heard the question, whether the practicality of the stream flow recommendations was considered by CDFW. Did you agree that that wasn't a consideration?

WITNESS BULL: Correct.

MS. BRENNER: Okay. Are either of you aware that when the grant proposal was made in 2004-2005 to return Stanshaw back to Stanshaw instead of going to Irving, that there was at that time, along Highway 96, fiber optic construction, fiber optic placement along the highway?

WITNESS BEAN: I wasn't in the -- I wasn't in the region at that time.

MS. BRENNER: Okay.

WITNESS BULL: And I wasn't involved in the Fisheries Program then.

MS. BRENNER: Okay. I don't have anything further.

HEARING OFFICER MOORE: Okay. Thank you.

Next, does National Marine Fishery Service have any questions for the witnesses? Thank you.

MR. KEIFER: Yes, just a couple quick questions.

CROSS-EXAMINATION BY

MR. KEIFER: My first question is, and this is anybody in the panel who can respond, are you familiar with both the State listing process under the California Endangered Species Act, as well as the Federal listing process under the Federal Endangered Species Act, just in general?

WITNESS BEAN: In general.

MR. KEIFER: Do you recall what year Coho were listed by the Federal Government as threatened?

WITNESS BEAN: 1996.

MR. KEIFER: 1996? And what year was the State listing?

WITNESS BEAN: 2005.

MR. KEIFER: When National Marine Fishery Service receives a petition to list and it becomes generally publicly known that there is a pending petition to list, does that elicit any response from CDFW in general? Do you start to look at issues with that particular animal more closely in the interim?

WITNESS BEAN: I don't know the answer to that.

MR. KEIFER: Okay. But you're aware that Coho were listed as threatened by the Federal Government in the mid '90s?

WITNESS BEAN: Yes.

MR. KEIFER: Yes. That's all I have. Thank you.

HEARING OFFICER MOORE: Thank you.

And next, Karuk Tribe, any questions for the Fish and Wildlife witnesses? No?

Old Man River Trust? No?

Klamath Riverkeeper? CSPA? PCFFA? No? Okay.

And, Counsel, do you have any redirect testimony?

MR. PUCCINI: Just one question.

HEARING OFFICER MOORE: Okay. Go ahead.

REDIRECT EXAMINATION BY

MR. PUCCINI: Earlier Ms. Brenner, I think, asked you, Caitlin, regarding the CEF Grant and the six-inch pipe and what that would do to the ability for the Coles to divert water for nonconsumptive hydro use. I think she phrased the question that no water would be allowed for hydro or to be used for hydro.

Was your testimony that they would in some way forfeit whatever pre-‘14 right they might have had -- they might have to put that water to hydro use?

WITNESS BEAN: No.

MR. PUCCINI: You were here yesterday; correct?

WITNESS BEAN: Yes.

MR. PUCCINI: Do you remember seeing a video that Ken Petruzzelli presented? I believe it’s WR-76. On Monday, excuse me. Do you recall seeing that video?

WITNESS BEAN: No.

MR. PUCCINI: Okay. We’ll drop that.

That’s all I have. Thank you.

HEARING OFFICER MOORE: Thank you.

And any recross questions based on that

redirect?

MR. PETRUZZELLI: No recross questions. And since the Hearing Team always wants to know what exhibit numbers go with what, I'm pretty sure the video was -- is actually WR-76, but that, I believe, was the Windows Media File or something that the computer wouldn't play. So I think it's actually the YouTube link from -- that's in WR-75 that would play on our system.

HEARING OFFICER MOORE: Okay.

MR. PETRUZZELLI: So --

HEARING OFFICER MOORE: Well, we do want an orderly proceeding.

MR. PETRUZZELLI: Okay.

HEARING OFFICER MOORE: Thank you.

MS. WEAVER: Thank you, Mr. Petruzzelli.

HEARING OFFICER MOORE: Appreciate that. Okay.

Any recross on that question?

MS. BRENNER: No.

HEARING OFFICER MOORE: Okay.

MS. BRENNER: No recross.

HEARING OFFICER MOORE: Please approach.

MS. BRENNER: No. I know the next move is to ask for submittal into evidence. I'm

wondering what we're doing with Mr. Holmes's testimony, since he wasn't available for cross-examination.

HEARING OFFICER MOORE: Yeah. We're going to ask for exhibits to go in and ask for any objections. And if you have any objections at that time, we have options, so --

MS. BRENNER: All right.

HEARING OFFICER MOORE: -- you know, we could hold them -- hold those exhibits in abeyance of some sort. Yeah. So, I mean, we'll come to that --

MS. BRENNER: Okay.

HEARING OFFICER MOORE: -- very shortly. Okay. In fact, well, yeah, here. You're anticipating my next move, Ms. Brenner. This is on the next page. Okay. Very good.

So at this time we would ask the Department of Fish and Wildlife to offer exhibits into evidence.

MR. PUCCINI: Yes, we would like to do so.

HEARING OFFICER MOORE: Okay. And any objections?

MS. BRENNER: Yes. I object to Mr.

Holmes's testimony to be submitted into evidence based on the fact, he's not available for cross-examination. It's prejudicial to the Coles.

HEARING OFFICER MOORE: Okay. So, oh, yeah, that's true. There are Staff questions. Sorry.

MS. WEAVER: We should count that objection now.

HEARING OFFICER MOORE: Okay. We will respond to that.

Does Staff have questions for the panel?

MS. WEAVER: So I just have a couple of quick questions.

EXAMINATION BY

MS. WEAVER: Ms. Bull, I believe it was your testimony that steelhead are not listed under the State or Federal Endangered Species Act; is that correct?

WITNESS BULL: Correct.

MS. WEAVER: What --

WITNESS BULL: Correct. Sorry.

MS. WEAVER: What steelhead population were you describing when you made that statement?

WITNESS BULL: The Klamath population.

MS. WEAVER: Thank you. And then my

other question is regarding an exhibit, I believe CDFW-5. Ms. Bean answered some questions about it.

Could we pull that up? It was the July 26th -- 200.

WITNESS BULL: CDFW-6.

MS. WEAVER: CDFW-6. Ok

MR. PUCCINI: The question was directed to Ms. Bull.

MS. WEAVER: Oh. Okay. My apologies.

(Document displayed on screen)

MS. WEAVER: So if we could scroll down and highlight it?

So, Ms. Bull, just to be unmistakably clear, this looks like a typographical error. What year does this refer to?

WITNESS BULL: According to the header, it's 2001.

MS. WEAVER: 2001?

WITNESS BULL: Wait. I -- actually, it's 2000. Sorry.

MS. WEAVER: 2000? Okay. Thank you.

EXAMINATION BY

MS. IRBY: This question is for Ms. Bull. I apologize if you answered this already.

What would you consider to be the limit of anadromy on Stanshaw?

WITNESS BULL: I have not personally evaluated that, so I can't answer that. But it is, according to other reports, above the Highway 96 culvert crossing --

MS. IRBY: Okay.

WITNESS BULL: -- possibly.

MS. IRBY: Thank you.

Ms. Bean, in your testimony, your written testimony, you referred to sediment bleeds from the ditch on the -- leading to Marble Mountain Ranch. Could you explain the nature of a sediment bleed and how that might affect salmonids?

WITNESS BEAN: That was a quote from a proposal that I reviewed.

MS. IRBY: Okay.

WITNESS BEAN: What I understood that to mean was that the ditch had failed and sediment had been transported into Stanshaw Creek.

MS. IRBY: So it would be an obvious physical change to the ditch itself if there was a bleed?

WITNESS BEAN: Obvious? It could occur

over -- a bleed could occur over time, so it could be a marginal amount of sediment being delivered --

MS. IRBY: Okay.

WITNESS BEAN: -- that was maybe noticeable, not from day to day but over time, or it could be something more dramatic. I'm not -- I'm unaware of what the author --

MS. IRBY: Okay.

WITNESS BEAN: -- was describing --

MS. IRBY: Okay. Thank you.

WITNESS BEAN: -- other than sediment delivery.

MS. IRBY: Okay. One more question for Ms. Bull.

In your written testimony, you write that CDFW recommended that 2.5 CFS would allow passage into Stanshaw Creek from the Klamath River; is that correct?

WITNESS BULL: Yes.

MS. IRBY: Do you believe that that would allow passage during most years, given the dynamic feature of the system?

WITNESS BULL: According to our district Fisheries biologist at the time, it does. I have

not personally been down there.

MS. IRBY: Okay.

HEARING OFFICER MOORE: Thanks. Any more questions from Staff?

So I'd like Ms. Weaver to explain on the exhibits related to Mr. Holmes, which would be entered into evidence or take the objections under submission.

MS. WEAVER: So having reviewed his testimony, I mean, he's not here to be cross-examined, he's not here to -- he hasn't taken the oath, we would treat this as -- for the written testimony, we would treat it as hearsay under our Regulation section 648 of Title 23 of the California Code of Regs, subdivision (b).

We pick up Government Code section 11513 as part of our part of our procedural rules. Under that section, subdivision (d),

> "Hearsay evidence is admissible for the purpose of supplementing or explaining other evidence over timely objection. It shall not be sufficient in itself to support a finding," and we note Ms. Brenner's timely objection, "shall not be sufficient to support a finding unless it would be

admissible over objection in civil actions."

So I think that we're -- within those parameters, I think we're fine here.

HEARING OFFICER MOORE: Did you want to enumerate which exhibits we're talking about? Are they all treated the same or --

MS. WEAVER: So Mr. Holmes's testimony is CDFW-24? CDFW-25 is his curriculum vitae. And then in his written testimony, he describes CDFW-12, CDFW-26 and CDFW-27. These are all, or at least they appear to me to be, public documents, letters, Agency reports, things like that. And I haven't reviewed whether the other CDFW witnesses also speak to these items in their own written testimony or would otherwise be able to authentic them.

MR. PUCCINI: Can I add something? CDFW-12 is part of Jennifer Bull's testimony.

MS. WEAVER: Okay. So it sounds like CDFW-12 is fully spoken for.

MR. PUCCINI: So that would just leave those other two exhibits.

MS. WEAVER: 26 and 27.

MR. PUCCINI: Correct.

MS. WEAVER: So --

WITNESS BEAN: I think 26 was submitted in the NMFS's submittals.

MS. WEAVER: Okay. That was also a NMFS exhibit?

WITNESS BEAN: I think so. Yeah. Yes.

MS. WEAVER: Okay. I saw Ms. Tauzer say yes.

So I think that, you know, that this is a weight of the evidence issue. And, you know, I think we can note the timely objection and move on here.

HEARING OFFICER MOORE: Okay.

MR. PUCCINI: May I add something?

HEARING OFFICER MOORE: Yes.

MR. PUCCINI: Just for the record, so when the -- when we filed the Notice of Intent and identified Robert Holmes as a witness the hearing date was not this hearing date. And so when the hearing date got changed, I believe at the Coles' request, he is already scheduled for important flow studies in Ventura. And I weighed on that because it was my understanding that in almost every other case that I was made familiar with the Board has been able to accommodate witnesses remotely. So this actually seemed to

me to be a bit of a surprise, or perhaps an aberration from -- and I understand the difficulties, of course. You know, you could do -- you can only do what you can do. But the circumstances weren't, obviously, entirely within our control in this situation.

MS. WEAVER: Would you be able to produce him by Friday? I mean, I don't know when he's finishing his work and heading back up.

MR. PUCCINI: That won't -- yeah, he will be actually, probably, traveling back up on Friday. And so it's -- and it's about a six-hour trip, so I don't think that is actually feasible.

MS. WEAVER: Okay.

MR. PUCCINI: But thank you for the offer.

HEARING OFFICER MOORE: Okay. But as you said, these can be entered into evidence with the objection noted?

MS. WEAVER: Right, and these parameters on the weight of the evidence.

HEARING OFFICER MOORE: Okay. Thank you for that clarification.

(All CDFW Exhibits are received.)

HEARING OFFICER MOORE: Now we have 14

minutes left in the day. And here's where, you know, my sense is that the Karuk Tribe, who's next in the queue, would take longer than that.

But I was going to ask the next party, which is Old Man River Trust, if that's enough time for your opening -- right, you did your opening statement, so your direct testimony? If you want more time than that, that's fine, but I wanted to offer you the option of using that time.

MR. FISHER: (Off mike.) I don't know. It seems like (indiscernible), but I can try.

HEARING OFFICER MOORE: It's your choice.

MR. FISHER: Well --

HEARING OFFICER MOORE: Okay. So we're going to switch the order.

MR. FISHER: No. No. I -- is it --

HEARING OFFICER MOORE: Oh.

MR. FISHER: It's like this much time or -- and that's it?

HEARING OFFICER MOORE: Yeah.

MR. FISHER: Then, no.

HEARING OFFICER MOORE: For your direct testimony. It's your choice. If you don't want to, you don't have to.

MR. FISHER: Okay. Yeah, we'll wait.

HEARING OFFICER MOORE: You're going to wait? Okay.

Then -- so back to the Karuk Tribe. I just want to give you a chance to state your preference. If you want to begin now we can go until 4:30, or we can break for tomorrow at 9:30.

MR. HUNT: I think it's unlikely that I would be able to present either Craig Tucker or Tozz Soto in the time we have.

HEARING OFFICER MOORE: Okay. Okay. I can't hear you, really.

(Pause in proceedings)

HEARING OFFICER MOORE: Okay. And we're planning to meet tomorrow, Thursday, as noticed publicly. So we'll be returning here at 9:30. As we do that, I would appreciate if folks could think about the rebuttal part of this hearing and how much time you think you'll require, just so that we can do our best to plan the proceeding in an orderly manner. So I just appreciate that we can informally confer tomorrow morning before we begin the proceeding.

And with that, any other thoughts, input from Staff?

MS. WEAVER: No.

HEARING OFFICER MOORE: Okay. I'm going to recess the proceeding, and we will reconvene tomorrow, Thursday, November 16th at 9:30 a.m.

Thank you.

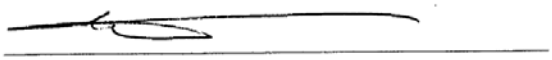
(Whereupon, the Public Hearing was recessed until Thursday, November 16, 2017 at 9:30 a.m.)

REPORTER'S CERTIFICATE

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 30th day of January, 2018.



PETER PETTY
CER**D-493
Notary Public

CERTIFICATE OF TRANSCRIBER

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.

MARTHA L. NELSON, CERT**367

January 31, 2018