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PACKWOOD HYDROELECTRIC PROJECT

(P-2244-022)

PACKWOOD MEETING

April 27, 2009

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BE IT REMEMBERED THAT, pursuant to the Washington Rules of Civil Procedure, the Packwood Hydroelectric Project meeting, was taken before Tia B. Reidt, #2798, a Certified Shorthand Reporter, and a Notary Public for the State of Washington, on April 27, 2009, commencing at the hour of 9:14 a.m., the proceedings being reported at Washington Public Utility District Association, 212 Union Avenue SE, Olympia, Washington.

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APPEARANCES

Ken Hogan, FERC
Dan Ross, Energy Northwest
Bill Kiel, Energy Northwest
Cory Wornock, EES Consulting
John Blum, EES Consulting
Mike Gerdes, Forest Service
Kristie Miller, Cowlitz Valley Ranger District
Ruth Tracy, Gifford Pinchot National Forest
Steve Wotruba, Energy Northwest
Randy Crawford, Energy Northwest
Fred Mitchell, Clallam PUD
Alicia Bishop, NOAA Fisheries
Michelle Day, NOAA Fisheries
George Lee, Yakima Nation
Eric Schlorff, Department of Ecology
Bill Frymire, Washington Attorney General's office
Mark Hunter, Washington Department of Fish and Wildlife
John Hart, FERC contractor
George Gilmour, FERC contractor
Eileen McLanahan, FERC contractor team

1 PACKWOOD HYDROELECTRIC PROJECT MEETING

2 Monday, April 27, 2009

3 9:14 a.m.

4

5 KEN HOGAN: Ken Hogan. I would like to thank
6 everybody for coming today. This has been a great project
7 for me and a testament to the ILP. I think everybody in this
8 room has worked extremely well together, and it really shows
9 and makes our life a lot easier at the Commission, so I'd
10 like to thank you for that.

11 As you know, we've issued our Draft
12 Environmental Assessment, and we're now preparing our final
13 EA for the project, and we just want to get some feedback and
14 discuss a few of the outstanding issues that we've had with
15 our draft and based on the comments that we've received.

16 If I could start by doing introductions
17 around the room. We'll start over here with Dan.

18 MR. ROSS: Dan Ross, Energy Northwest, Project
19 manager for Packwood Hydro.

20 BILL KEIL: Bill Kiel, Energy Northwest.

21 CORY WORNOCK: Cory Wornock, fisheries biologist
22 for EES Consulting.

23 JOHN BLUM: John Blum, fisheries biologist, EES
24 Consulting.

25 MIKE GERDES: I'm Mike Gerdes. I'm the hydropower

1 coordinator for the Forest Service.

2 KRISTIE MILLER: Kristie Miller. I'm the district
3 ranger at the Cowlitz Valley Ranger District.

4 RUTH TRACY: I'm Ruth Tracy, soil and water
5 program manager on the Gifford Pinchot National Forest.

6 STEVE WOTRUBA: Steve Wotruba, Energy Northwest.

7 RANDY CRAWFORD: Randy Crawford, project lead,
8 Energy Northwest.

9 FRED MITCHELL: Fred Mitchell, Clallam PUD.

10 ALICIA BISHOP: Alicia Bishop, NOAA Fisheries.

11 MICHELLE DAY: Michelle Day, National Marine
12 Fisheries Service. Same thing, NOAA Fisheries.

13 GEORGE LEE: George Lee, Yakima Nation.

14 ERIC SCHLORFF: Eric Schlorff, Department of
15 Ecology.

16 BILL FRYMIRE: I'm Bill Frymire. I'm with the
17 Washington Attorney General's office, and I represent the
18 Washington Department of Fish and Wildlife.

19 MARK HUNTER: Mark Hunter, Washington Department
20 of Fish and Wildlife.

21 JOHN HART: I'm John Hart. I'm a FERC contractor
22 and a hydrologist.

23 GEORGE GILMOUR: My name is George Gilmour. I'm a
24 FERC contractor. I'm the fish biologist on the project.

25 EILEEN MCLANAHAN: Eileen McLanahan, directorial

1 biologist on the project with the FERC contractor team.

2 KEN HOGAN: I'm Ken Hogan. I'm a fishery
3 biologist with the commission. And up until the draft EA, I
4 was coordinating this project. By this meeting, I'm
5 announcing that the coordination has been transferred to
6 Carolyn Templeton, who also worked on the draft. So if you
7 have any questions, just send them to Carolyn.

8 Well, it was felt that since I was close to
9 the project that I should come to the meeting. She was going
10 to be here, but they decided to do some budget cuts, so...

11 UNIDENTIFIED SPEAKER: So Ken, will you send us an
12 e-mail contact for Carolyn?

13 MR. HOGAN: Yeah. Yeah. And it's
14 CarolynTempleton@FERC.gov. And if you want her phone number,
15 I can give that to you right now. It's (202) 502-8785.

16 MIKE GERDES: I'm Mike Gerdes with the Forest
17 Service.

18 So Ken, are you just restructuring at FERC or
19 are you just shifting projects or...?

20 KEN HOGAN: It's just a workload issue.

21 MIKE GERDES: Okay.

22 KEN HOGAN: I'm still assigned to the project as
23 the fishery person. I'm just not coordinating all of the
24 resources.

25 MIKE GERDES: Okay.

1 KEN HOGAN: Okay?

2 All right. With that, I'd like to go through
3 some of my ground rules. At my last meeting, I had to tell
4 people no punching. I don't think I have to do that here
5 with this group. But I do ask that, you know, folks respect
6 everybody's opinions and just allow people to say what
7 they've got to say, and I think we're going to have a pretty
8 good meeting.

9 We have one outstanding 10(j) issue with the
10 Washington Department of Fish and Wildlife regarding the fish
11 screens. And to this -- to talk about our 10(j) process,
12 we issued the Draft EA and then a Letter of Inconsistency
13 with Section 10(j) to the Washington Department of Fish and
14 Wildlife. And what that does is that initiates our 10(j)
15 process of trying to resolve the 10(j) issues.

16 And that process -- this meeting as requested
17 is part of that process, and it doesn't -- it doesn't
18 conclude until the Commission actually makes a final
19 determination on -- on the licensing applications. So if we
20 don't get the resolution here today, don't think that we're
21 done. We can continue to try and resolve the issues. Okay?
22 Like I said, it's only finalized once the Commission takes
23 action.

24 With that, onto the discussion issues. The
25 first item I have is --

1 Well, actually, before I get to the
2 discussion issues, is there anything anybody would like to
3 add to the discussion issues, a specific topic that they
4 would like to discuss?

5 MIKE GERDES: I'll just -- Mike Gerdes with the
6 Forest Service.

7 I'll just add one, and that is the letter
8 that you wrote the Forest Service, or regional forests, are
9 talking about the final issuance of the 4(e) and the terms
10 and conditions.

11 KEN HOGAN: Okay. Can we add that to Item 3 under
12 C, "Other Issues and" -- after we --

13 MIKE GERDES: That will work.

14 KEN HOGAN: Okay. I'm glad you brought that up,
15 because I realized I had forgot to put that on here myself.

16 Anything else anybody else would like to get
17 specific about?

18 (No response.)

19 KEN HOGAN: Okay.

20 Well, with that, George?

21 GEORGE GILMOUR: Okay. My name is George Gilmour,
22 and I think what I'll do is I'll just start off with a review
23 of kind of how we got where we are on the entrainment issue.
24 And after that, we can have a real open discussion about
25 recent study findings, the different positions you guys have

1 regarding the need for screening facilities and your
2 approaches.

3 Does that work for everybody?

4 (No response.)

5 GEORGE GILMOUR: I'll start off with a history.

6 So I think everybody knows that in the FLA,
7 Energy Northwest proposed to address entrainment of the
8 project intake using a three-phased adaptive plan.

9 In Phase I of that plan, they proposed to
10 basically remove the existing debris screens with better
11 fitting screens and then to monitor the site for entrainment.
12 And what they proposed to do was -- they had a proposed
13 threshold. If monitoring showed that entrainment levels were
14 below 450 fish total, and I believe that was 400 on the outer
15 screen and 50 on the inner screen, then that measure would be
16 deemed adequate or acceptable for protecting fish. If
17 biological monitoring found that numbers of fish that were
18 entrained exceeded 450 fish, it would move on to what they
19 called the Phase II approach.

20 And under Phase II, that would involve
21 removing the existing screens from the trash racks and
22 developing another approach to deal with trash on the intake
23 structure and then to monitor again for entrainment to see if
24 levels were either above or below the biological threshold
25 they developed.

1 If they were below the threshold, everything
2 was fine, that would be deemed acceptable. If numbers of
3 fish entrained or impinged exceeded the 450 fish criteria,
4 then they would move on to what they called Phase III.

5 Phase III was essentially negotiating with
6 the resource agencies and the parties involved in the
7 licensing to come up with alternative approaches to address
8 entraining. So Phase III was, if that was deemed necessary,
9 Energy Northwest proposed to talk with the resource agencies
10 to develop an alternative plan to address entrainment at the
11 project intake, and that was pretty undefined in the FLA.

12 And then, as all of you know, WDFW in their
13 preliminary Section 10(j)s, and Forest Service in their
14 preliminary 4(e)s, recommended a different approach to
15 address entrainment at the project intake. And that approach
16 was based on meeting a state velocity criteria. The criteria
17 was not the more restrictive fry criteria, but it still -- I
18 believe it was called a fingerling criteria or the adult
19 criteria.

20 MARK HUNTER: If you want to call it that, yes.

21 MR. GILMOUR: Okay.

22 MARK HUNTER: 150 millimeter (inaudible).

23 GEORGE GILMOUR: Right, right.

24 And then in our analysis, we certainly
25 acknowledge that screens that were designed to meet or modify

1 to meet that criteria would be protective of the fish, but we
2 felt that the costs associated with actually designing or
3 rebuilding the screens to strictly meet that criteria, if
4 they were unwarranted, would be -- would outweigh really the
5 incremental benefit you'd receive from the approach that
6 Energy Northwest took. That was our conclusion in the DEA.

7 I know that subsequent to filing our DEA,
8 there have been ongoing discussions with the Forest Service,
9 there's been ongoing studies, a lot has happened, and WDFW
10 still maintains that they would like to see the screens meet
11 criteria where Energy Northwest and the Forest Service are on
12 the side of doing more of a biological monitoring approach
13 and making modifications as needed.

14 And I guess with that said, I'd certainly
15 like to hear more about the positions that both of you guys
16 have regarding the issue and why you feel criteria screens
17 are necessary and why Energy Northwest and the Forest Service
18 feel that their biological monitoring approach coupled with
19 these modifications would be more appropriate.

20 So with that said --

21 KEN HOGAN: Mark?

22 MARK HUNTER: We made our position based on state
23 law. As you know, there's a long history in this state
24 concerning the damage of hydropower and irrigation to birds
25 and to fish. So going way back, we have laws dating into the

1 early part of the 20th century to protect fish.

2 Subsequent evaluation of fish approaching the
3 screen velocity -- and these were done under test equations,
4 and I actually participated in one back in the late -- in the
5 '80s, where they actually tested hatchery fish to see how --
6 if they could avoid impingement on the screen surface. We
7 came up with an engineering criteria and a mesh size
8 necessary to protect fry in various stages of the -- various
9 life stages of fish.

10 Now, most of the time, in fact almost
11 uniformly, we apply a fry standard, as you state, for fish
12 passage. And currently the current facilities don't meet
13 that fry standard. I personally made a judgment call early
14 on that a fry standard may not be appropriate for this site.
15 Whether I should have done that or not, I don't know, but I'm
16 on paper saying that, so I've stuck with that.

17 My thinking at the time was that the fry that
18 passed over the dam had had no chance of getting back to the
19 lake and were unlikely to contribute to a fishery, and thus
20 it wasn't that important. Furthermore, the fry entering the
21 lake, most of the fry enter the lake at the far end of the
22 lake. They're likely to stay in the stream or along the
23 water's edge as long as possible. My thinking was that it
24 probably wouldn't get down to the far end of the lake that
25 often.

1 Now, those are judgment calls I made. In
2 fact, the forest service biologist disputes this, so I'll
3 leave it at that.

4 We rely on physical criteria almost
5 exclusively now simply because of the cost of evaluating --
6 we're continually reevaluating what the criteria should be.
7 If the option of doing a very formal research type situation
8 to reevaluating is there, but it's certainly not something
9 that most hydropower proponents want to pursue. The proposal
10 being put out there to assess screen impingement is more of
11 an assessment, and we just don't want to go there right now.
12 I also want to emphasize current screening on the facility is
13 30 years old. What did we say, 30 or 40 years old?

14 DAN ROSS: Well, since the project was built,
15 since '64. We have done some repairs, but...

16 MARK HUNTER: So in our mind, relicense is time to
17 upgrade the physical facilities, make the capital improvement
18 needed to make this work for a long period of time. This is
19 our shot at it. We'd like to get it done right the first
20 time.

21 As far as the assessment being proposed by
22 the forest service, and Mike will get into that, it appears
23 to be an involved process. It's assessment rather than
24 research, and we're not sure that it's going to get the true
25 protection we want to see.

1 So we would like to see the physical criteria
2 apply to the project and just get on with upgrading the
3 facility as needed.

4 KEN HOGAN: So from our position, we haven't done
5 this -- we don't see information demonstrating that level of
6 protection that WDFW is requesting is being required by the
7 resources that the fish populate -- to protect the fish
8 population in Packwood lake. And that's kind of where our
9 concern is.

10 You know, if we were showing that the project
11 was decimating or negatively impacting the population of the
12 fishery in Packwood Lake, the level of protection that WDFW
13 is wanting would be more warranted. But here we don't have
14 that biological nexus to warrant the screen. We have a
15 little trouble with that.

16 MARK HUNTER: It's just clear that during certain
17 time periods that substantial numbers of fish end up impinged
18 on the screen surface.

19 KEN HOGAN: But that's not showing a negative
20 effect on the fishery.

21 MARK HUNTER: Yes. If -- we're not approaching it
22 as a -- as a -- we're not taking a population level approach.
23 We're trying to save as many fish as possible for the sport
24 of fishery and for the preservation of the species, so it's
25 not the approach that we take towards these hydro projects.

1 We certainly don't do it at other facilities. We want to see
2 an overwhelming protection for the resources.

3 GEORGE GILMOUR: Yeah. I think as FERC staff, our
4 rule is to look not only at the resource and what's impacting
5 the resource but to also make a call as to the degree of the
6 impact versus the cost of addressing that impact. This is a
7 relatively small, 26 megawatt project. We have a population
8 of 20- to 30,000 fish in the lake. They're a genetically
9 unique stock, which is important.

10 The level of entrainment, I guess you can
11 argue what it is on an annual basis. I think we have three
12 years' data now. A couple years it was 50 or 60 fish, it
13 looked like, based on their assessment. One year it was
14 about 350 fish.

15 A lot of those fish appear to be entering or
16 getting impinged on the intakes during what we would consider
17 to be a post-spawning period. That would lead me to think or
18 at least assume that a good percentage of those might be
19 post-spawn mortalities. And I think ultimately, you know,
20 there's 20 different -- their assessments of the populations
21 in the lake show 20- to 30,000 fish, a fairly large viable
22 population. It appears to have remained pretty viable for
23 the last X number of years the project's been in place.

24 There's a fairly popular recreational fishery
25 on the lake. The bag limit happens to be five fish per

1 angler. The lake seems to have supported that with the
2 existing streams and lakes. And again, just the incremental
3 cost of going to that criteria we felt were not necessary
4 over what could be achieved by doing the biological
5 monitoring coupled with some not-so-extensive modifications
6 to the intake facility.

7 Do you understand what I'm getting at?

8 MARK HUNTER: Well, we looked at -- observed
9 impingement. I guess the argument could be made that some of
10 these fish were dead before hitting the screen, but that's
11 something that we don't know.

12 KEN HOGAN: Right. Right. Yeah.

13 MARK HUNTER: Some of these fish can recover and
14 return to the lake and help provide for the sport fishery.
15 The counts that were made were taken at wide intervals, so we
16 don't -- we don't know the exact accuracy of that count on
17 the screen surface.

18 Do crayfish, other fish, scavenge those
19 carcasses? And in the case of the -- not the studies last
20 fall but the earlier studies, a lot of the fish were impinged
21 on the outer screen. There's a second screen that's
22 vulnerable to otter, mink, stuff like that. There's little
23 doubt in my mind that there (cell phone interruption).

24 The point is -- the point I'm trying to make
25 is --

1 KEN HOGAN: Hold on a second.

2 MARK HUNTER: The point is -- the point I'm trying
3 to make is we don't have a real accurate measure of what
4 impingement is. How to get that, again, I question how much
5 weight -- how accurate an assessment can get. Our preference
6 is very much to get the structure working to criteria that we
7 are familiar with and we know will work.

8 KEN HOGAN: I recognize that's the ultimate
9 perfect response for you, I mean, is to have screens that
10 will meet state criteria put in place.

11 But absent that, is there information through
12 some of the assessment work being proposed that would help
13 you to better define whether or not something less is
14 acceptable, meaning we really would like to have our -- the
15 mitigation measures biologically triggered, you know, where
16 there's a demonstrated effect as opposed to simply policy.

17 And that's what we're going after. We want
18 to know what does the resource need to be protected, not just
19 it's state law we've got to do it.

20 MARK HUNTER: The state criteria are based on
21 high-quality research.

22 KEN HOGAN: And I understand that. But it's not
23 based on site-specific information. And we feel that we have
24 the information at this site to demonstrate the project's not
25 having a meaningful impact on the population in the lake. So

1 is there information that -- you said that the assessment
2 that's being proposed is inadequate to help you with your
3 judgement.

4 What would make it more adequate?

5 MARK HUNTER: You're asking me to add to the
6 assessment something that's...?

7 KEN HOGAN: What I'm saying is that we're not
8 fully against putting in screens that meet the criteria. We
9 just have -- but before we can support that, we have to
10 demonstrate that there's a need. And if you feel that the
11 assessment to demonstrate that need is inadequate, we'd like
12 to know how you would like to see -- what about it is not
13 cutting the mustard. And you don't -- you don't need to --

14 MR. GILMOUR: Is that a biological term, "cutting
15 the mustard"?

16 KEN HOGAN: Yeah.

17 I mean, you don't need to say something here
18 at the table because obviously, you know, I'm just putting it
19 out there, and it's food for thought, but...

20 MARK HUNTER: I can't say I have a magic
21 assessment that would resolve all the concerns. We're just
22 not there.

23 KEN HOGAN: Bill?

24 BILL FRYMIRE: Bill Frymire, for the record.

25 Mark, when you started sort of your summary

1 of where the Department came from to get to where it is, you
2 talked about state law. And it's my understanding that we're
3 not -- the Department isn't asserting state law is the reason
4 that the Department is advocating the position it is. But
5 Mark's, I think, reference to state law shows that the
6 Washington legislature and Washington State government have
7 for a long long time found screens and screen criteria to be
8 an important issue and that they have protected public
9 resources.

10 And so I think the Department is using that
11 history and that, you know, application in other forms to
12 show that they're not treating these systems differently.
13 It's that same protection, that same bout, so it's not that
14 we're trying to apply state law here. It's the value. So I
15 just want to make sure that -- sometimes when FERC hears
16 "state law," they say, okay, well, this isn't a state law
17 problem, and that's not what I think the Department is
18 advocating.

19 KEN HOGAN: I guess, you know, from the FERC
20 perspective, we want to know what is needed to protect the
21 resource that's there. And the level of protection needs to
22 be associated with the level of the impact. And we don't
23 feel that 450 fish being entrained annually is demonstrating
24 a need and the result that that 450 fish has on the
25 population of the reservoir demonstrates the need of the

1 level of protection the State is wanting to -- is
2 recommending.

3 BILL FRYMIRE: Yeah. I understand what you're
4 saying.

5 KEN HOGAN: Okay.

6 JOHN BLUM: John Blum with EES Consulting.

7 Just to clarify a couple of things, Mark,
8 when you talked before about the fish being on the outer
9 screen. In the previous year, we actually never found any
10 fish on the outer screen. What had happened is that screen
11 was not seated correctly, so there was a gap in it, so fish
12 were able to get into the well. But then with all the flow
13 going around, they weren't able to find their way out, and
14 that was the year we had quite a few fish in there.

15 What we did this last fall is we completely
16 removed those trash screens so we could see how they
17 interacted in the wells. And we have video on this when we
18 ran the project up to full bore to see highest velocity. And
19 the fish not only were able to stay off of the screens, but
20 they actually moved in and out of those wells completely. So
21 we didn't have -- we didn't show much of that sort of impact.
22 So the screen was actually -- nothing got on that outer
23 screen. It was all what got through that screen and then
24 couldn't get back out.

25 And you addressed that issue of frequency of

1 checking the screens, and you've got a good point. You know,
2 some of those were done during the summer at one-week
3 intervals. And things can happen in that one week. Like you
4 mentioned, crayfish can eat them. So part of what we talked
5 about on the biological plan was almost doing a mark and
6 recapture where we place some fish on there and we'd find out
7 their decay rate so that we could basically, almost like a
8 mark and recapture study, then, to see was the impact just
9 those fish we saw or was there a 25 percent decay rate so
10 that we'd need to evaluate that with a different number.

11 So we tried to, at least what was being
12 proposed, address that issue of what's happening in between
13 the two visits to the site.

14 GEORGE GILMOUR: This is George Gilmour.

15 A quick question for -- I guess for John and
16 for the Forest Service as well. In the Revised Condition 9
17 that was prepared by the Forest Service - I'm assuming it was
18 prepared collaboratively to some extent - it talked about
19 developing a plan to address entrainment at the project
20 intake. There weren't that many specifics regarding the
21 plan. And I guess I had a couple of questions.

22 For example, you talked about threshold
23 numbers. I don't think that they were clearly defined in
24 Condition 9, and I'm just wondering if you have those
25 developed or if you thought about those other than what's

1 been proposed by Energy Northwest.

2 MIKE GERDES: Mike Gerdes, Forest Service.

3 In Condition 9 what we tried to look at was
4 one and a half percent of the lake population as far as being
5 entrained as a threshold that would trigger some type of
6 action, and that action could be some type of refinement of
7 the project screens, whether it's a baffling system -- or you
8 know, if we made the decision collaboratively, to go with a
9 major project we design. But we tried to base the threshold
10 really on the lake population.

11 And in Condition 9, we put a fair amount of
12 emphasis on trying to monitor within the initial five years
13 and get a very good handle on what the current density is in
14 the lake. And based on the adult and fry within the lake,
15 then we would base that entrainment criteria within one and a
16 half percent.

17 So the plan's not built. You know, we just
18 tried to put some side boards on it to give it some, I guess,
19 guidance and triggers to go forward and develop this.

20 Dan, maybe you can help me. I think it was
21 back in January, something like that, we met -- February, I
22 can't remember the month, where we talked about some of the
23 elements for the monitoring plan, and we knew we'd just be
24 able to put side boards there and then develop it once we
25 said go with this.

1 And we haven't put the effort in since the
2 go, but we knew that if we had the go with this that between
3 now and hopefully licensed issuance we would get a jump start
4 in developing this plan.

5 DAN ROSS: Dan Ross, Energy Northwest. What we
6 decided at that time was we set our side boards or parameters
7 for this. Our biggest concern was not really how many fish
8 we may impinge, although that was one element, but how many
9 fish are in the lake, what's the population in the lake. So
10 if you impinge 50 fish on the screens, have you affected
11 population in the lake?

12 And our initial hydroacoustic surveys, which
13 we proposed hydroacoustic studies for the first three years,
14 I think is what we were talking about, and along with the
15 entrainment monitoring, try to determine if we were affecting
16 the lake populations. And then we would have a period of, I
17 think, three years, and then we would do this again. And
18 then if we're not causing serious damage to the populations,
19 then we would suspend that activity. But if we found we were
20 going to -- we were causing harm to the populations, then we
21 would go into the Phase II thing.

22 And we also talked about going -- within the
23 first three months of the issuance of the license, that we
24 would have the plan in place and implemented. And so we
25 would -- our attempt was to continue working on this

1 biological monitoring plan and then implement it the first
2 season the license was issued so that we get our start-off
3 the first three years. And that's my recollection, but my
4 memory is not as good as it used to be.

5 So -- I mean, that was the whole thing, was
6 we talked about needing to know the fish population as the
7 most important element of the whole entrainment study and
8 making sure that remains a viable population.

9 KEN HOGAN: Ken Hogan with FERC.

10 You would be monitoring the impingement
11 level --

12 DAN ROSS: As well, yes.

13 KEN HOGAN: -- continuously?

14 DAN ROSS: Yeah, right. That's a critical
15 element, too. See, in our studies -- and we have some
16 overheads if anybody is interested. John made an illusion to
17 we have films that actually -- when we did our velocity
18 testing, where we would increase from 60 cfs to 220 cfs, and
19 we had underwater cameras on the fish, and they didn't --
20 they weren't impinged. They weren't even stressed. And
21 that's in the intake well, so right in front of the screen.

22 KEN HOGAN: Have you filed this?

23 DAN ROSS: We sent you the report. We didn't
24 file -- I don't believe we filed officially the --

25 KEN HOGAN: The video?

1 DAN ROSS: You don't have the --

2 KEN HOGAN: Do we want the video?

3 GEORGE GILMOUR: Yeah. The video is on your
4 website, I believe, right?

5 DAN ROSS: Yeah. And I have a copy, actually, if
6 you'd like it. And we can show -- we've showed that at our
7 meetings and stuff, and Mark has seen that as well.

8 MARK HUNTER: This is Mark Hunter, Department of
9 Fish and wildlife.

10 I did observe the film. It is for a limited
11 period in October, right?

12 DAN ROSS: In October. Actually, was it
13 September?

14 MARK HUNTER: It was under the modified condition
15 that John referred to. The outside screen is off so the fish
16 could move in and out of the screen cage area. And for
17 periods of time, there were schools of fish that appeared to
18 move in and out, and some of their behavior would be
19 consistent with feeding, so that's what I observed. And I
20 believe that for the limited time period, it was a valid
21 observation.

22 DAN ROSS: Dan Ross, Energy Northwest.

23 We also have some, if anybody wants to see,
24 when the onscreen mortalities were discovered were.

25 Generally it was after spawning, so for a short period of

1 time. And as far as, you know, degradation on the screens,
2 what we found -- and Randy, my operator, can back me up on
3 this because him and Jerry did most of the fish counts on the
4 screens in their routine rounds, is that we never saw -- I'm
5 trying to figure out how to put this. We never saw a fish
6 that wasn't there.

7 In other words, there was always a skeleton
8 there. The crawdad could have, you know, eaten the fish, but
9 there was always a skeleton. So we counted skeletons as well
10 as, you know, whole fish. And most of the fish that came
11 into the screens looked degraded. They had mold on them or
12 something. And whether that happened after the screen or
13 after they floated in or whatever, it's hard to tell, like
14 Mark said.

15 KEN HOGAN: Mike?

16 MIKE GERDES: Mike Gerdes, Forest Service.

17 The modified term and condition, the
18 entrainment monitoring is like Dan suggested, is a
19 multifaceted, I guess, monitoring plan. And he's right. You
20 know, we need to really get a good handle on the density of
21 the adult and fry population in the lake. And then based on
22 that population level, we can make a determination of what an
23 acceptable impingement rate is.

24 Concurrently with that, we would be
25 monitoring decay rates of fish within the intake wells and

1 what level of impingement is occurring there and monitoring
2 of movement of fish in and out of the intake wells with those
3 outer debris screens not removed but at least elevated off of
4 the floor of the lake several feet so that they have free
5 movement in and out of the intake well.

6 So hopefully what we captured is a real, I
7 guess, good picture look of the entire population in the lake
8 and if the intake wells or the screens do affect the
9 population at any kind of level.

10 And then based on that, if there isn't the
11 level of impingement -- and we based it at one and a half
12 percent. That goes back to the initial estimates of 450 fish
13 that we had in the FLA. You know, that's a very low level,
14 so if there's -- we don't hit that level, then the intake
15 screens are not having an effect and we don't need to do
16 anything with the screens.

17 However, if we exceed that threshold, then
18 there's modifications that need to be made to those project
19 screens, so we went back to the physical criteria if the
20 monitoring shows that there's an impact.

21 GEORGE GILMOUR: This is George Gilmour, FERC.

22 I note that you guys probably have some
23 pretty good engineers working for you on this project. Have
24 you done any kind of assessments regarding the use of baffles
25 and how that would affect velocities? Is there a feeling

1 that if the trigger was hit or you exceeded it, would a
2 relatively minor modification bring those screens to within
3 criteria?

4 DAN ROSS: No. Dan Ross, I'm sorry.

5 In looking at them in their configuration,
6 the intake portion of the building is 10 by -- a 9-by-10 area
7 where the water comes in, and it goes straight through to the
8 outfall, to the end stock, to the tunnel. And so just by
9 baffling, we don't believe we can distribute, because there's
10 a whole -- there's about seven or eight feet of screen
11 above -- can you get that picture of it? That will help me.

12 It's hard to describe because -- but without
13 a major modification, let's say cutting concrete or something
14 like that, we don't think we can distribute the water over
15 the whole screen. And so -- and we actually -- in our
16 velocity testing, we found that below 12 megawatts, which is,
17 what, 90, 90 cfs? Below that, we met the screen criteria on
18 every -- at every elevation, you know.

19 GEORGE GILMOUR: And the percentage of time --
20 yeah, the percentage of time, 12 -- I remember it was written
21 down in one of the -- the percentage of time or the
22 percentage of the year you're generating at that level or
23 below is about --

24 DAN ROSS: Right. And we did various elevations.
25 I thinks that's all in the report, but...

1 GEORGE GILMOUR: Okay.

2 DAN ROSS: But because once we got below the
3 screen criteria on the whole screen, we didn't test any lower
4 elevations of the lake, because if you meet it at 2856,
5 you're going to meet it at 2855 (elevation). But this is the
6 -- this is where the water comes in, right here (indicating).
7 Do you see this shelf right here? Okay. The water comes in
8 right here, and the actual screen elevation we run the plant
9 about 2856 and a half (elevation) or 2857 (elevation) up
10 here.

11 So what happens is the water comes in this
12 opening and then equalizes up here. And there's the --
13 there's the outfall right there. So what the water has a
14 tendency to do is come through here and go straight out, and
15 this just kind of swirls around a little bit, this stuff up
16 in here.

17 So when we're doing the velocity testing,
18 when we went above that ledge, we would drop off to like
19 .015 feet per second and above. You know, just very very
20 low. So in order -- the only thing we could think of, you
21 know, we thought about baffles and worked with the screen
22 shop and talked to them about baffles, but we don't think we
23 could distribute that velocity above without cutting things
24 out here.

25 MARK HUNTER: This is Mark Hunter, Department of

1 Fish and Wildlife.

2 The key problem we have with meeting criteria
3 is that there's a concrete wall in front of the intake
4 screen, and that forces the flow under it. And the screening
5 just under that wall greatly exceeds velocity criteria. I
6 just want to point out that the power -- the screening
7 facility wasn't built right to start with. And, one more
8 time, now is the time to get it fixed.

9 DAN ROSS: Do you want to show the entrainment
10 numbers so that everybody has an idea --

11 CORY WORNOCK: Yeah. I'll have to do some looking
12 for that. I don't think those numbers are specific to this
13 presentation.

14 Do you just want to see a curve? I can do
15 that.

16 DAN ROSS: Yeah, a curve where they -- a curve,
17 please, Dan.

18 JOHN BLUM: This is John Blum with -- actually, if
19 you could go to the other one first.

20 We did the entrainment study over a three-
21 year period. And in '07, we -- we tried to get out there in
22 '06 every week to do some water surveys, and the water was so
23 high that it didn't do us any good.

24 2007 was a perfect summer, and we actually
25 got up there every week in order to index spawning. 2007 was

1 also the summer after the big flood in November of '06, and
2 something up on Lake Creek came down, and the lake turned to
3 the consistency of chocolate. And it just kind of migrated
4 down to the lake, and we think it kind of coerced the fish
5 down there. So that was the year that we had the most fish
6 entrained on the screens.

7 The year before and the year after was
8 roughly 60. This year, there were about 360 fish.

9 But what we did and we're able to do, and
10 you'll see on this graph, is we can track the individual
11 timing of the spawning in the tributaries, which is the black
12 line, and the red line is scaled accordingly, the entrainment
13 on the screens.

14 What we noticed -- and Bob Lucas and Chilco,
15 when they put together their genetic report in '82, talked
16 about a lot of these rainbow died after they spawned. You
17 see them in the streams. You see them off in the deltas.

18 And what we noticed empirically the year
19 before was, gee, we didn't seem to see these fish until after
20 spawning occurred. This was the first year we had really new
21 data. And as you can see, they track pretty well. Again,
22 this was a much larger number than the years before and
23 after. One of the reasons we did the hydroacoustics is we
24 wanted to see what impact this was having on the fish. If
25 there were 360 fish on the screen and only 1,000 in the lake,

1 well, we were in big trouble.

2 So we did two hydroacoustic surveys. One
3 showed about 20,000 early in the year. The later one showed
4 30,000. And that's where we came up with a little bit over
5 1 percent impact. On the normal year when we get 60 fish,
6 from in '07 and in '08 -- excuse me, '06 and '08, we're
7 talking about an impact between two-tenths of a percent and
8 three-tenths of a percent of the population.

9 But part of what Mike is talking about is
10 that we would be doing hydroacoustics concurrent with this
11 thing to keep assessing what's the population in the lake and
12 what's the impact on this population here.

13 KEN HOGAN: Ken Hogan with FERC.

14 Mark, I'm of the impression that your
15 department feels that there's only one solution here, and
16 that's -- you're going hold tight to that.

17 MARK HUNTER: Mark Hunter, Department of Fish and
18 Wildlife.

19 We're concerned about a protracted assessment
20 phase, reliability of the assessment, and our ability to
21 participate in that assessment phase.

22 Specific to hydroacoustic methods, you've got
23 to remember that the hydroacoustic estimation reflects off
24 air bubbles, including air bladders from fish, but the other
25 bubbles, sometimes pieces of wood in the water, and so forth.

1 So we have some concerns about the reliability of the method.

2 KEN HOGAN: Well, when you say your ability to be
3 involved in the assessment, do you mean...

4 MARK HUNTER: Agency consultation.

5 KEN HOGAN: Yeah. From the Commission's
6 perspective --

7 MARK HUNTER: Yes.

8 KEN HOGAN: -- you would be a consulted agency if
9 that was -- typically the Commission were to require this
10 type of assessment, Washington Department of Fish and
11 Wildlife would be consulted and a required consultant.

12 MARK HUNTER: Yes, but it's a matter of spreading
13 our resources --

14 KEN HOGAN: Okay.

15 MARK HUNTER: -- across the state and prioritizing
16 them.

17 KEN HOGAN: Okay.

18 MARK HUNTER: We just can't participate in that
19 reform anymore.

20 KEN HOGAN: Okay.

21 MIKE GERDES: Mike Gerdes with the Forest Service.

22 Mark, your statement about hydroacoustics,
23 about the level of accuracy of hydroacoustics, I agree a
24 hundred percent. And that was why we had suggested that in
25 this assessment we have so much monitoring using

1 hydroacoustic, so that we have a better or a very good
2 accuracy on lake population and not target population.

3 And, you know, this is a question for you
4 two, is, you know, this 20- and 30,000 fish, what's the
5 reliability of that estimate? Is it really fish? Is it air
6 bladders? Is it targets in the lake? And the reason I
7 suggest this is in other hydroacoustic monitoring I've seen,
8 there's an order of magnitude difference between what the
9 target numbers are from hydroacoustic to actually what the
10 population is. So that's why within this condition we put so
11 much emphasis on let's get a handle on the lake population,
12 because we don't know if it's really 20- or 30,000 or 1,000
13 or 2,000.

14 JOHN BLUM: John Blum.

15 If I could address that. I've been doing
16 hydroacoustics off and on for about 35 years now. I did a
17 lot for my graduate work, and then recently we've done a lot
18 at Fox Canyon and here.

19 In certain situations like where you're
20 talking about in fast running water, hydroacoustics can be
21 kind of suspect. We use it with a grain of salt. But if
22 you're looking for a perfect condition to run hydroacoustics,
23 it's Packwood Lake. You know, it's water that's clear. It's
24 got varied -- it's oligotrophic. It does target swim
25 bladders, so that's what it targets on. That's what

1 hydroacoustics does.

2 But you also set threshold levels. It has to
3 be a minus -- minus 70 DV is as small as we go. So air
4 bubbles, zooplankton, productivity, that sort of thing is
5 screened out and they're taken out of the equation when they
6 start to analyze it.

7 Part of what we do when we do the analysis -
8 and we use biosonics to help us with this because this is
9 what they do - is you go through and you take a look, and you
10 see those air bubbles or those pieces of wood that it's
11 targeting off of, you take those out, so that's part of your
12 calibration when you do that.

13 So I'm a lot more confident of hydroacoustics
14 in this situation than I would be at a dam where you're
15 measuring fish coming in and out of a really fast flowing
16 area where bubbles and velocities and stuff in the water can
17 really diffuse the signal. This one's pretty good. In fact,
18 it's the best I've ever seen.

19 KEN HOGAN: Well, I don't think we're going to
20 resolve this today between our agencies, but certainly, you
21 know, if there's things that your agency feels lacking in the
22 assessment that they're proposing, we'd like to hear that.
23 And I understand that you're going to continue to feel that
24 the screens that -- as described are warranted and necessary.

25 MARK HUNTER: Well, we set standards, and we apply

1 these standards to irrigation diversions and municipal
2 diversions and so forth. We don't want -- it works against
3 us to have different standards applied elsewhere.

4 KEN HOGAN: I understand.

5 With that, is there any other comments
6 regarding fish screens and entrainment at the project?

7 (No response.)

8 KEN HOGAN: No response? Okay. We'll move on to
9 down-ramping.

10 GEORGE GILMOUR: This is George Gilmour with FERC.

11 I'll be completely honest with all of you.
12 The discussion of down-ramping in our DEA basically, in my
13 mind, came out of a lack of discussion of down-ramping in the
14 FLA. Typically ramping rates are a concern on projects,
15 hydro projects, particularly projects that have (inaudible)
16 fish species in a portion of the project area.

17 So in preparing my discussion in the DEA, I
18 was concerned about down-ramping, but I also wanted to
19 understand the level of concern that was -- the people in the
20 group had. And again, that wasn't very clear in the FLA or
21 the consultation record. I know that there was some
22 discussion of down-ramping rates associated with the studies
23 that went on early in the licensing process.

24 Subsequent to doing the DEA, we received
25 comments from a number of you, including from Energy

1 Northwest, and it sounds to me like their position is the
2 project really has no ability to create down-ramping rates
3 that are greater than about an inch an hour. And I think,
4 you know, my goal at this meeting is to understand the level
5 of concern regarding ramping rates and the different parties'
6 position on ramping rates and whether or not it's really
7 necessary to enforce a strict criteria based on what we know
8 about how the project operates.

9 And I think, you know, having Mark here is
10 probably quite an asset. He wrote the book on the subject,
11 basically, so I certainly respect what he has to say
12 regarding the issue.

13 MARK HUNTER: Are you done?

14 GEORGE GILMOUR: Yes.

15 MARK HUNTER: This is Mark Hunter, Washington
16 Department of Fisheries.

17 During my work in a small hydropower boom in
18 the early '80s, I took the time to try and understand the
19 ramping issue. The issue was out there for discussion, and a
20 lot of it -- it should be clear that a lot of it, through the
21 detailed research, originates from large hydropower projects.

22 It originally caught attention because
23 steelhead fishermen were on the Skagit River, Cowlitz River,
24 Lewis River, during fry emergence, and they would see
25 thousands and thousands of dead fish when the flow dropped.

1 And in fact, when small fish emerge from the
2 gravel, they tend to cling along the shoreline, sometimes in
3 brush or sometimes just in the gravel substrate. It's likely
4 a behavior to get out of the current so they aren't flushed
5 down river so fast, and also the behavior to avoid predation.

6 The issue is how do we carry this original
7 study and apply it to the small hydro - in this case, we're
8 not dealing with anadromous fish but resident fish primarily
9 - and what is appropriate. I want to emphasize that the
10 research, and I state this in my original document that's 15
11 years old now, 18 years old, the research as it applies to
12 small mountain streams for small hydro projects has never
13 been done. There's a lot of speculative documents in its
14 synthesis and so forth, but it just hasn't been done.

15 On a more observational basis, I have seen
16 stranding of resident trout in mountain streams, not -- it's
17 anecdotal rather than research, but I have seen it on
18 multiple occasions.

19 Now, I've been out of the hydropower business
20 for nine years, and I come back and I see this standard being
21 applied everywhere, and I have some mixed feelings about it.
22 As a conservative measure to apply until the research has
23 been done, it is probably a good idea for many facilities.

24 At this particular site, I'm looking at
25 several things: the frequency at which down-ramping occurs;

1 the contour of the channels downstream of the location; and
2 the gradient of the -- both the channel but also the gravel
3 bar within the channel; finally, the frequency of side
4 channels.

5 Now, at this site, first and most of all, the
6 proponent can only derive down-ramping at several times
7 during the year. It's just discharging a constant discharge
8 from their outlet most of the year. We have requested
9 process flows which would release a large volume of flow to
10 help process wood and create more channel dynamics
11 downstream.

12 And that's the key point at which granting an
13 accessible -- the criteria I set out many years ago is likely
14 to occur. It's only happening once, maybe twice a year. In
15 some years, it will not happen. The rest of the time, the
16 proponent doesn't have control over it nor does it appear
17 likely that it's going to happen naturally. The lake will
18 just kind of flatten out, and any hydraulic that comes into
19 the lake.

20 The channel. The channel is a moderately
21 steep to very steep mountain channel. It's single thread.
22 It's confined. It is not my notion of a channel that's going
23 to be very vulnerable to ramping.

24 Finally, I want to break the channel into two
25 segments: the channel that's being restored for anadromous

1 production through terms available on this license and the
2 channel that's upstream of that that's for resident fish
3 production.

4 With regard to the resident fish channel --
5 I'm trying to collect my thoughts here. There may be some
6 stranding, but keep in mind that the discharge -- the
7 processing flow discharges are occurring in the winter. The
8 fry emerge in the summer. The type of population that would
9 exist in that type of channel is a very low nutrient mixed
10 pools, a lot of them shallow. In my read, the population is
11 going to be more limited by adult production than fry
12 production. The bottleneck for production is the adult
13 stage. The adults don't get big enough to lay a lot of eggs
14 and so forth. So I don't see a big issue there.

15 Down in the anadromous reach, there's a
16 chance for stranding. When you're dealing with anadromous
17 populations, the fresh water bottleneck is the fry production
18 and smelt production, especially for coho and then in
19 steelhead. But there's no bottleneck out in the ocean, so we
20 want to try to keep as many fry and juvenile fish alive as
21 possible.

22 The channel is still small. They're still
23 not analogous to the large channels that the original studies
24 were done on. However, fry may emerge during the time period
25 in which these process flows occur. And I'll go back to the

1 fact that the core research still hasn't been done; core
2 validation of what you need to protect the fish.

3 In talking to the proponent of the project,
4 he didn't think it was a big deal to measure that flow
5 fluctuation down in the anadromous zone and try and meet
6 those criteria. He doesn't have any need to do this
7 research, obviously, so that's fine with me.

8 KEN HOGAN: Okay. I think one of our concerns,
9 recognizing that really Energy Northwest doesn't have control
10 over spill flow so much on the project operations and that
11 even at full capacity of the project, the ramping would only
12 be a half an inch an hour for spill flows. That really
13 wasn't a concern for us.

14 The concern was when we were changing minimum
15 flows through the minimum flow release, and I think the
16 largest change being about 5 cfs, that's where one of my
17 concerns came in. And recognizing that most of the channel's
18 very steep and, you know, single thread would not be very
19 effective.

20 But I was wondering about that upper
21 1,300 feet right below the drop structure, how would 5 cfs
22 drop the minimum flows through that reach affect ramping.
23 And I think John has done some research on this since the
24 comments. But yours looked mostly down below, right?

25 JOHN HART: John Hart.

1 Yes. Most of the studies were done in the
2 lower mile. And the ramping study was planned in 2005, so
3 that cross Study Site 1 and cross-section 2, I believe, had
4 the -- was the most susceptible to changing in the ramping
5 rates. And that's located down in the lowest mile and in the
6 upper 1,300 feet. There was normally less than an inch per
7 hour in change. To correct that, the most change is in the
8 bottom mile.

9 JOHN BLUM: John Blum.

10 We looked at that lower reach because it was
11 anadromous, and transit to Study Site 1 was the most
12 sensitive to change. I didn't look at -- we have 13
13 transects right below the drop structure in that 1,400 foot
14 reach. And I happen to have all of the data here. I could
15 tell us within an hour what that 5 cfs change equates to when
16 it's as far as the changing stage. So maybe I can give you
17 an answer for that here pretty quickly.

18 KEN HOGAN: That would be great. I mean, it's
19 something we're certainly -- you saw our decision -- or
20 recommendation on the draft EA. We've got a lot of comments
21 on it, and we're certainly flexible and would like to revisit
22 it, so any information that could help us with that
23 revisiting would be helpful.

24 JOHN BLUM: Sure.

25 KEN HOGAN: Again, you know, my concern was,

1 looking at that 5 cfs drop, just what would that impact be.

2 JOHN BLUM: Yeah. It looked like the biggest
3 there was a drop from 20 to 15 on September 15th, and then
4 from 15 to 10. So I'll run those two scenarios on those 13
5 transects, and I'll get back to us here.

6 KEN HOGAN: Okay. Thanks, John.

7 MICHELLE DAY: Michelle Day, National Marine
8 Fisheries Services.

9 KEN HOGAN: Yes, Michelle.

10 MICHELLE DAY: Being new to the project, I have a
11 couple of questions just to make sure I'm understanding the
12 conversation.

13 The habitat forming flows, what's the level
14 of cfs change during that? Is that the 5?

15 MARK HUNTER: No. I don't have the specific
16 numbers.

17 JOHN BLUM: 285.

18 MARK HUNTER: 285. So it's a big jump in flow.
19 Tenfold.

20 MICHELLE DAY: So your -- the information we will
21 get from the change in 5 cfs isn't going to address the
22 change when we're having these habitat-forming flows.

23 KEN HOGAN: John, and you can correct me if I'm
24 wrong, or Dan, the habitat-forming flows are going to be
25 produced over the spillway, and basically through a shutdown

1 of the project or natural -- it's a natural event that's much
2 greater than the project hydraulic capacity.

3 With the size of the reservoir and the size
4 of the spillway, if the project were running at full
5 capacity, 260 cfs, that could only result in a ramping rate
6 of a half-inch per hour, which we felt was fine beyond --
7 they can only influence. I mean, the natural ramp would be
8 whatever it is.

9 JOHN HART: John Hart.

10 And that effect is also not accounting for
11 inflow to the lake. So in actuality, it would be less than
12 that, because it's very likely that during any habitat-
13 forming flows, you would have high inflows to a lake.

14 KEN HOGAN: Also, that half-inch per hour, I
15 think, is measured at the drop structure. And where the
16 anadromous reaches down at the first reach down below, you're
17 obviously also going to be having accretion that's occurring
18 through there, so it's going to be attenuated even more in
19 that first reach.

20 MICHELLE DAY: Okay.

21 DAN ROSS: Dan Ross.

22 Michelle, you do understand we have a drop
23 structure and no spillway gates or anything, right? We just
24 have a --

25 MICHELLE DAY: I believe so.

1 DAN ROSS: Yeah, a static drop structure that when
2 we -- you know, when the lake levels rise, that's how we get
3 our overtopping, we call them overtopping flows. And so we
4 get those, I don't know, usually a couple times a year, where
5 we can just get so much inflow we can't cross that.

6 MICHELLE DAY: And that's what you're calling
7 habitat-forming flows?

8 DAN ROSS: Yes. We call it habitat-forming flows
9 because -- it used to be overtopping, now it's habitat
10 forming because we're required to do it. Okay?

11 KEN HOGAN: Also, if it doesn't occur naturally,
12 then you'd have to make it happen, right?

13 DAN ROSS: Then we'd have to induce the flow.

14 RANDY CRAWFORD: Randy Crawford with Energy
15 Northwest.

16 The flow that they were talking about that's
17 going to go from 20 cfs to 15 is our bypass around the drop
18 structure. The flows are regulated between 3 to 5 cfs, and
19 now there's proposals to increase that to -- they're going to
20 be larger numbers. So when we have that 20 cfs in the upper
21 reach that he was talking about, you're going have a 5 cfs
22 change. It would go from a 20 to a 15.

23 GEORGE GILMOUR: This is George Gilmour.

24 The maximum adjustment that they're going to
25 see for the minimum floor regime, whether it's a step up or

1 step down, is 5 cfs at any point in change.

2 MICHELLE DAY: Okay. Yeah, that's helpful.

3 ERIC SCHLORFF: Eric Schlorff, Department of
4 Ecology.

5 As I understand the -- these type of flows,
6 the need to have ramping rates is more important for
7 facilities to do load following, but in this facility, even
8 more of a steady state during the whole season. But Ecology
9 would still think it's important to have it in there for
10 those, you know, times if there's going to be changes to the
11 way things are operating in the future. It would be good to
12 still have it in there.

13 GEORGE GILMOUR: There's also -- there's a gauge
14 that's going to be placed in the lower river too -- river
15 mouth too, I believe. And then a 15-minute or a quarter mile
16 from mile one. That's a 15-minute continuously recording
17 USGS style gauge, and that would also probably provide a
18 means of at least -- would have the resolution to determine
19 ramping rates, do you think?

20 JOHN BLUM: Absolutely. What it -- John Blum.

21 It records the stage, and the (inaudible) we
22 use are good to 1/100th of a foot with their accuracy, so
23 yeah, you could be able to determine that.

24 BILL KIEL: Bill Kiel, Energy Northwest.

25 Just to comment on your comment, Eric. You

1 know, we don't release water when we change power levels up
2 at the lake. That water is not released into Lake Creek
3 because it goes down through the pipeline and stop system
4 too, and that comes out through the tailrace canals where you
5 see the changes in power output.

6 When they increase or decrease the power in
7 the plant, then that will change the tailrace flow, which is
8 some miles downstream from the Lake Creek. And the Lake
9 Creek flow itself is just through a 24-inch bypass, but
10 that's controlled by a belt, so it stays constant regardless
11 of the power conditions.

12 MARK HUNTER: That does open a potential for flow
13 fluctuations in the Cowlitz River.

14 BILL KIEL: Yes.

15 MARK HUNTER: That goes to load following.

16 MR. HOGAN: Can we take a break for a few minutes
17 and allow the court reporter to relocate?

18 (Pause in the proceedings.)

19 KEN HOGAN: Well, before the break what I said is
20 that we'd come back to the down-ramping, but I thought maybe
21 -- because John said that he could get us the information
22 about the 1,300 foot reach in a little bit. Maybe we'll wait
23 to come back to down-ramping until we have that information
24 from John, and we can go on to the project boundary issues.

25 Regarding project boundaries, Energy

1 Northwest provided us with comments that they did not like
2 our decisions as to what should be put into the project
3 boundary. And my response to you, Dan, is "tough." The
4 Commission makes a decision as to what's necessary for
5 project operations and what needs to be included in the
6 boundary.

7 And the best way for you to inform our
8 decision or to make us change our minds is to provide us with
9 information as to why it shouldn't be in the boundary based
10 on project specifics.

11 But we do have some clarifications that we'd
12 like to ask where we got some information wrong, particularly
13 to the Dyson Pass Cutoff Trail, and so we'd like to get some
14 clarification on that. And the way -- I'm bouncing around
15 here a little bit. But the way that we did do our analysis
16 on the roads and trails that should be in the project
17 boundary, we said, okay, does Energy Northwest have access to
18 these facilities that the public does not, and do they have
19 special access? And that's how we kind of came to -- and is
20 it necessary for them to access the project?

21 And that's how we looked at redrawing the
22 boundaries to what we did with -- down the Latch Road to the
23 Forest Service gate where Energy Northwest has access beyond
24 the gate -- vehicular access beyond the gate to access the
25 project, and they also use it half of the year.

1 And obviously Pipeline Trail goes on top of
2 the pipe and is used the other half of the year, and then it
3 deviates around the pipe where I guess it's a tunnel and
4 things of that nature. So we felt that that was -- the trail
5 that was not already on top of the pipe needed to be included
6 into the project boundary because of the need for access to
7 the project by that trail.

8 So with that understanding or with that
9 explanation, do you have an understanding of where we made
10 our calls on those trails and roads?

11 DAN ROSS: Yeah. Dan Ross.

12 I don't think we -- you know, we didn't take
13 too much exception to, you know, the stuff that's already in
14 the project boundaries. However, on like Latch Road, you
15 know, traditionally that was a Forest Service road and we --
16 when we were going through our negotiations, we said, you
17 know, Forest Service was kind of an opinion that, well, boy,
18 we don't even want to take care of this road anymore. So we
19 said we'll take care of the road. We fixed the slide down
20 there. And we said we'll take care of that road for
21 continued access. And so I was kind of surprised that your
22 assessment said let's include it in the boundary.

23 Dyson Pass is another situation where we use
24 the access, the small trail over Dyson Pass, and we maintain
25 all of those. Randy and Jerry maintain those trails so that

1 they have passage. And so, you know, I don't see Dyson as
2 being a big issue.

3 Where we started worrying about this is once
4 we understood the fee schedule, at first we thought it was
5 just the mass acreage, but then we found out -- apparently I
6 was the only person on earth that didn't know that the
7 Commission doubles that annual fee laid out in the map
8 schedule.

9 So you know, it increased our -- the boundary
10 fees from, if you added all the property that you had there,
11 from 69,000 this year to 110,000 in 2015 and beyond. So, you
12 know, it does put another economic burden on the project to
13 include those.

14 And then Snyder Road was -- we were real
15 surprised that that was put in, because we're like a
16 1 percent user of Snyder Road. We did our recreational
17 studies. What was it, 1 percent? 1.5 percent or something?
18 And the public used it the rest of the time. And that's the
19 paved road that actually goes up to the parking lot, and so
20 that one was kind of surprising to us as well.

21 KEN HOGAN: Could we pull those maps up?

22 BILL KIEL: Bill Kiel, Energy Northwest.

23 Can you explain again, your criteria is one
24 of exclusive use by the project? I mean, in most of these
25 trails, they're all open to the public.

1 KEN HOGAN: Not exclusive use; use that's
2 specialized use -- you know, we recognize that everybody can
3 hike in. But for like Latch Road, Energy Northwest has
4 access beyond the gate by vehicle.

5 BILL KIEL: Correct.

6 KEN HOGAN: So that's a special use that's
7 provided to Energy Northwest that's not available to the
8 public. So that was one of the things that we took into
9 consideration, and that's why we drew the line at the gate,
10 not...

11 DAN ROSS: At the turnoff.

12 KEN HOGAN: Right. Right.

13 DAN ROSS: John was just up there. Everybody give
14 John a hand. Him and his wife snowshoed all the way to
15 Packwood Lake this weekend.

16 KEN HOGAN: That's our dedicated.

17 DAN ROSS: Randy's never even done that.

18 RANDY CRAWFORD: More than once a week.

19 DAN ROSS: Yeah, only once a week.

20 JOHN HART: And we had to start walking about two
21 and a half miles before the parking lot. And Packwood Lake
22 is still frozen over. There's probably five or six feet of
23 snow up there.

24 DAN ROSS: Yep. Okay. The map, the roadmap?

25 KEN HOGAN: So Snyder Road, do we have a close-up

1 of Snyder?

2 DAN ROSS: There's a recreation map in here
3 somewhere. Keep going. Keep going.

4 Here is -- this is Snyder Road here, if you
5 follow the bouncing ball. This goes all the way up here
6 to --

7 BILL KIEL: The parking lot is the star.

8 DAN ROSS: Yeah. There's the parking lot to --
9 the main parking lot, that's the trailhead for 78. And this
10 is strictly Forest Service trail. We don't do anything on
11 78. It comes down here.

12 KEN HOGAN: Okay.

13 DAN ROSS: And I never go up 78 because it's too
14 far of a hike. So then this is the Latch Road that we're
15 talking about up here. And Ken said they included from the
16 gate, and I'm suspecting the gate's about right in there
17 somewhere, Randy?

18 BILL KEIL: No. Further down.

19 DAN ROSS: Further down here?

20 BILL KIEL: Yeah. It's about halfway.

21 DAN ROSS: Okay. So this is the part that you
22 included in the boundaries proposed. And that goes up to 74,
23 and this is a trail. And you get bicyclers and four-wheel
24 drive guys and stuff going up this road, Latch Road.

25 Now, this is Pipeline Bench, which this has

1 always been in the boundaries and continues to be in our
2 boundaries. This is the drivable part of the road, and then
3 this is the trail that goes into Packwood Lake, Trail 74.

4 KEN HOGAN: Okay. Now, you said that we included
5 Snyder Road in the brush boundary? From what point?

6 DAN ROSS: County Line Road. There's a county
7 line sign somewhere down in here. Right here. Yeah. Right
8 at the Forest Service boundary. And it says the end of
9 county road probably right there. Okay?

10 So then you included Snyder Road all the way
11 up the trailhead.

12 KEN HOGAN: We'll take a look at that. I don't
13 think that was our intent. I think our intent -- and I'll
14 double-check so I'm not making any commitments.

15 DAN ROSS: I already wrote it down.

16 KEN HOGAN: I know Snyder is not gated, so you
17 don't have any special use up to that parking lot that...

18 DAN ROSS: No. Right.

19 KEN HOGAN: So John, do you have any recollection
20 on that?

21 JOHN HART: Let me look at that now, and I'll get
22 it.

23 KEN HOGAN: Okay. So we will revisit Snyder and
24 what we said on it.

25 DAN ROSS: Okay.

1 KEN HOGAN: Latch Road, that's exactly as we --
2 what I recall it being described, is from the gate up to the
3 lake, well, including Latch Trail, and then up to Trail 74.

4 The Dyson Pass cutoff we apparently described
5 incorrectly in our draft NEPA document. I was wondering if
6 you can clarify exactly where that is, and is that necessary
7 for project operations or not.

8 DAN ROSS: Go back. I had it.

9 BILL KIEL: Bill Kiel, Energy Northwest.

10 Trail 74 that's shown --

11 DAN ROSS: It comes up right here.

12 BILL KIEL: No. It's going down a little bit.

13 That's the Dyson Pass, what we call Dyson Pass.

14 KEN HOGAN: Okay.

15 BILL KIEL: There's another main Trail 74 that
16 runs down below the pipeline there that's not shown on this
17 map.

18 DAN ROSS: This isn't exactly correct.

19 BILL KIEL: So the trail splits into two trails
20 and then recombines in a section we call the Tunnel 1 here.

21 DAN ROSS: Actually, 74 goes along this tunnel,
22 and Dyson Pass is this.

23 KEN HOGAN: So it goes like up over the tunnel
24 or...?

25 DAN ROSS: It goes up over a little rise in the

1 mountain.

2 KEN HOGAN: And you use what's shown here on the
3 map?

4 DAN ROSS: We use both.

5 KEN HOGAN: You use both?

6 DAN ROSS: Yeah, depending on which one is
7 accessible.

8 BILL KIEL: But primarily we use trail -- the one
9 that's shown here.

10 And here, this is an example of where the
11 project boundary as originally drawn there, you can see the
12 label there says ten feet each side of centerline.

13 KEN HOGAN: Yeah.

14 BILL KIEL: So that sticks right on the alignment
15 of the tunnel.

16 KEN HOGAN: Right.

17 BILL KIEL: Of course then the trail -- because
18 the topography is so steep there, the trail routes way up
19 over the top.

20 KEN HOGAN: Both Dyson and this obviously here?
21 Okay.

22 BILL KIEL: And a similar thing happens at Tunnel
23 2.

24 DAN ROSS: Dan Ross, Energy Northwest.

25 Now, we can provide these clarified drawings.

1 They're in the recreation plan, is where we included Dyson
2 Pass. Because when we did our recreation plan with Forest
3 Service and everybody, we updated those maps, so we'll
4 provide those to you.

5 EILEEN MCLANAHAN: So there's a map that's labeled
6 with Dyson Pass on it.

7 KEN HOGAN: Yeah. This Trail 74 is where -- see
8 Tunnel 1 here? It's Dyson Pass.

9 EILEEN MCLANAHAN: But I didn't know if it was
10 labelled in the drawings we had in the license application.

11 DAN ROSS: Yeah. I believe that in our recreation
12 plan, because we had some talks about that showing where
13 Dyson Pass was, so we'll dig out the recreation plan.

14 KEN HOGAN: All right.

15 BILL KIEL: Bill Kiel, Energy Northwest.

16 I mean, this map shows, up in the upper left
17 there, several places where the trail, as drawn there, goes
18 outside of project boundary. I think that's what you're
19 talking about. And if we include the trail, we end up trying
20 to include all of those little pieces.

21 KEN HOGAN: Yeah. Right now, right, the way --
22 our recommendation is that Trail 74 and apparently Dyson Pass
23 are both needed to access the project at least through
24 portions of the year.

25 So our recommendation, if we apply our

1 current thought process, is to incorporate those into the
2 project boundary.

3 DAN ROSS: Dan Ross, Energy Northwest.

4 This is another fear of ours, is that to what
5 level does "incorporate into the project boundaries" mean in
6 the way of surveying and the cost of surveying, preparing
7 maps and submittal maps?

8 You know, we have a -- there's a great deal
9 of cost included in going back and resurveying trails and
10 moving project boundaries and things like that, and I don't
11 believe in my research that like the Forest Service has --
12 you know, has explicit, you know, maps like this with
13 markings -- surveyed markings and things like that. I don't
14 know. I have a contact that Kristie gave me down in
15 Vancouver that I can contact.

16 But that was the other part of it, is if you
17 start putting in little bits and pieces of trail, then you've
18 got to update all the drawings and things like that, and we'd
19 like the communication to consider those things before we
20 move on.

21 KEN HOGAN: Okay. To answer your question, which
22 I can't, we do have standards as far as how things are
23 mapped. And John might be an engineer and have a better
24 knowledge than I do, being a fish person.

25 But the regulations specify exactly what the

1 maps have to show. We can certainly talk to you about it,
2 and then if you want us to -- and we look at the costs or
3 give better consideration of the costs, you can tell us what
4 you estimate that's going to cost you.

5 DAN ROSS: Yeah. Dan Ross again.

6 And to answer Ken's question, we will do
7 that. We have looked at -- because during a relicensing, we
8 have to resurvey lower parts of the project and the tailrace
9 and things like that. And I know I can get a pretty good
10 idea of what the costs are. And you guys require GIS maps
11 and various things submitted in quadruple and things like
12 that, so I know what those requirements are. But we'll try
13 to work up some numbers.

14 And like I said, just the -- the land use
15 fees didn't scare us. When you start considering what it
16 would take to get the project boundaries and adding these
17 pieces and stuff like that, that's kind of what scared us. I
18 can give you that for some information.

19 KEN HOGAN: When you submit those costs, if you
20 could break out Snyder Road from the rest of it, or even if
21 you want to break it down by trail section, that's helpful,
22 but I know that might be getting kind of tedious.

23 DAN ROSS: So Ken said take out Snyder Road; is
24 that what I...

25 JOHN HART: And speaking of Snyder Road, on the

1 bottom of Page 207 of the DEA, we specify that Snyder Road
2 would not be in the project boundary. And I'll let Ken read
3 the text down at the bottom.

4 DAN ROSS: You are on Page 207, right?

5 JOHN HART: Correct.

6 KEN HOGAN: Yeah, the last line. "Snyder Road,
7 Taurus Road 1260, is not used primarily for project purposes
8 and access. Therefore while entering Northwest's proposals,
9 maintenance measures may be beneficial. We do not recommend
10 that these measures be included in the license requirements
11 or that the road be included in the project boundary."

12 So if we made a mistake somewhere else in the
13 document, let us know and we'll correct it.

14 BILL KIEL: Okay.

15 MIKE GERDES: Mike Gerdes with the Forest Service.

16 I mean, that's how I read the DEA, is that
17 Snyder Road was not recommended to be within the project area
18 boundary nor was Dyson Pass.

19 The question I have really relates to the
20 restoration reach of Lower Lake Creek. That was not included
21 in the project area boundary, that lower mile, mile .2,
22 something like that. In our comments back to you folks, we
23 recommended that be within the project area boundary.

24 Thoughts?

25 KEN HOGAN: Typically we don't incorporate the

1 bypass reaches into the project boundaries. And where we
2 have restoration measures, if it's something that's going to
3 require ongoing annual maintenance, building habitat
4 structures, things of that nature, we would give greater
5 consideration as to whether it needs to be in a project
6 boundary or not.

7 But if it's a one-time thing or periodic, you
8 know, a couple times through the license term or three or
9 four times through the license term, typically we don't
10 necessarily think that it's going to warrant being
11 incorporated into the project boundary. It's not a facility
12 necessary for project operations. It is a requirement of
13 license, but that -- but it's not needed for the project to
14 operate.

15 It's certainly something that we will look
16 into based on your comments. If there's a better
17 understanding of why you think it should be in, like it's
18 going to require annual maintenance, things of that nature,
19 that's something you can let us know. But I think right now,
20 we weren't feeling that it was going to be an annual issue
21 for the restoration down there.

22 MIKE GERDES: Mike Gerdes again.

23 I'd have to go back to the condition that we
24 had recommended. You know, there's site-specific work to
25 start off with to get a real feel for what restoration needs

1 to be in there, and then there was the monitoring component
2 with that, and I don't remember the frequency of that
3 monitoring.

4 But you know, given the level of work that
5 we're going to be doing down there, whether it's annual or
6 every couple years, something like that -- because it's not a
7 one-time shot. It's for the life of the license. That's why
8 we had recommended that.

9 KEN HOGAN: Okay. Well, we'll take another look
10 at it, Mike.

11 MIKE GERDES: Okay. Sounds good. Thanks.

12 DAN ROSS: Dan Ross, Energy Northwest.

13 I think this is one of the few things that
14 Mike and I agree to disagree on, was the inclusion of Lower
15 Lake Creek. I have to deal with -- in order to get access, I
16 have to deal with private landowners on both sides. It's
17 encompassed by Manassas Lumber. And so trying to define a
18 project boundary on a stream that's, you know -- I mean, you
19 take the stream high water mark at 50 odd feet or something,
20 you know. So we commented back that we didn't feel like
21 Lower Lake Creek should be included. So that's my two cents.

22 KEN HOGAN: So we'll revisit it.

23 All right. Anything else we need to cover on
24 project boundaries? Is that it?

25 Any other comments on how we evaluated the

1 project boundaries and necessary project facilities?

2 (No response.)

3 KEN HOGAN: No? Okay.

4 DAN ROSS: One more. Dan Ross.

5 We agree with you on Snyder Road. I don't
6 know how we got across --

7 KEN HOGAN: Yeah, you know, when you said that, I
8 was starting to think, well, I don't think we did that.

9 BILL KIEL: We didn't comment either.

10 KEN HOGAN: All right.

11 I guess we can move on to clarifications of
12 our alternatives discussed in the DEA.

13 JOHN BLUM: We got this done if you want us to --

14 KEN HOGAN: Okay. Let's do down-ramping rates,
15 then.

16 You're up.

17 JOHN BLUM: Okay. So people know where this came
18 from, we did an instream flow study on the lake stream.

19 There were four different study sites. The upper one, study

20 Site 4, had 11 transects. These went from immediately

21 downstream of the drop structure down about 1,000 feet. We

22 did three calibration flows with different stage of discharge

23 relationships for each one. The mean error on stage

24 discharge are all less than 5 percent.

25 So what I did is I went back into the model

1 and calculated in this first group of data what the water
2 surface elevation would be for each one of these transects.
3 They're all modelled independently. They're not all tied to
4 a benchmark. So differences between transects doesn't mean
5 anything.

6 But I was able then to calculate what would
7 be the stage, the water surface elevation on these 11
8 transects at flows of 20, 15 and 10 cfs. And those are the
9 numbers that you see in that first group there.

10 What I did then down below is I looked at
11 what was the change in stage in feet from, say, 20 to 15 and
12 then from 15 to 10. So you can see at transect 1, the change
13 in stage was 15/100 of a foot when you went from 20 cfs to
14 15, and it was 2/10 of a foot when you went from 15 to 10.

15 And then what I did is I calculated what that
16 change in stage was by inches in the last series of columns
17 there. So you can see that again transect 1, there's a
18 change in stage of 1.85 inches as you went from 20 to 15 and
19 a change of about 2.4 inches when you went from 15 to 10, so
20 I made those calculations for all the transects.

21 And down below there, you can see that the
22 mean change stage in inches was about 1.6 inches for that
23 study site when you went from 20 to 15 and just a little over
24 2 inches when you went from 15 to 10. I started looking at
25 the other study sites, then, and factoring in some inflow.

1 And this is the one that's most sensitive.

2 KEN HOGAN: And this study site is...?

3 JOHN BLUM: Right below the draw structure.

4 KEN HOGAN: Okay.

5 JOHN BLUM: Because there's no inflow up here.

6 Everything comes from the dam at this point.

7 KEN HOGAN: Has this been filed, John?

8 JOHN BLUM: This information -- all the
9 information was filed with the Instream Flow Report, but this
10 analysis here was the first time anyone asked me to do that,
11 so this is the first time we've seen this, the first time
12 I've seen this.

13 KEN HOGAN: Okay. Can it be filed?

14 JOHN BLUM: Sure.

15 KEN HOGAN: Okay.

16 Anybody have any comments on this? Mark?

17 MARK HUNTER: I would like to just go over the
18 times of the year in which those changes occur. I don't have
19 it in my memory, John.

20 JOHN BLUM: Okay. I've got it right here. From
21 September 15th you're at 20 cfs. And on September 16th, it
22 changes to 15. And then from September 30th, you're still at
23 15. And October 1, it goes to 10.

24 MARK HUNTER: Okay. So we're not in fry emergence
25 for the anadromous fish.

1 JOHN BLUM: No.

2 MARK HUNTER: And that's borderline for the
3 residence fish.

4 JOHN BLUM: Right.

5 KEN HOGAN: So with this new information, folks
6 feel that ramping rates are needed or not needed?

7 You want to get back to me on it?

8 MIKE GERDES: This is Mike Gerdes with the Forest
9 Service.

10 I'd like a chance to look at this data and
11 talk with our fish biologist and then go from there.

12 KEN HOGAN: That sounds great.

13 MIKE GERDES: I guess I have one question for
14 John. With the change in stage that your mean there is, is
15 that dewatering that reach? Is there still cover on that
16 reach? I know it shows stage change, but is it dry? Is
17 it -- do you have any idea?

18 JOHN BLUM: I can bring up the cross-sections for
19 you, but that's more water than it has currently, so it
20 doesn't dry out. But it will -- the banks will be somewhat
21 more exposed. There will be more water than there is now,
22 though.

23 MIKE GERDES: Right. No, I understand that.

24 GEORGE GILMOUR: But you're not talking about like
25 a couple tenths of a foot, or a tenth of a foot, at most with

1 a stage change in your transect that you talked about? Is
2 that what you said?

3 KEN HOGAN: Two point.

4 JOHN BLUM: If you go back. So this is the change
5 in stage. I can look at what the change in what areas, too.

6 MIKE GERDES: Okay. That would be good. I think
7 Ken would like that.

8 BILL KIEL: That's instantaneous change?

9 MIKE GERDES: Right.

10 RUTH TRACY: This is Ruth Tracy from the Forest
11 Service.

12 Am I understanding this right, John, that one
13 and a half inches is the change between changing from 20 to
14 15 total? Not on an hourly basis.

15 JOHN BLUM: Correct. No. That's just what that
16 absolute change in stage is.

17 BILL KIEL: Instantaneous?

18 JOHN BLUM: Yeah, instantaneous.

19 KEN HOGAN: And it looks like worst-case scenario
20 is two and a half inches -- or tenths?

21 JOHN BLUM: Yeah. 2.45 inches. Yeah, two and a
22 half. These are wider transects, too, from the top, so
23 that's why you see those.

24 MICHELLE DAY: Michelle Day, National Marine
25 Fisheries Services.

1 So when you say it's instantaneous, is that
2 what occurs out on the project, or is there a timeline? So
3 this is not necessarily worst-case scenario, or is it?

4 JOHN BLUM: Well, this is saying what would happen
5 if everything stays the same in that cross-sectional area,
6 which it should out there, what would that change of stage be
7 if you lowered it from 20 to 15 cfs. So that's kind of
8 the -- it's not a worst case. It's what actually happens on
9 those transects.

10 MICHELLE DAY: And how quickly is that project
11 able to make that change?

12 JOHN BLUM: Is that something that could be done
13 like right away, Dan?

14 DAN ROSS: From the bypass?

15 JOHN BLUM: Yeah.

16 DAN ROSS: Yeah. Randy can control that.

17 MICHELLE DAY: I'm not actually encouraging you to
18 do it right away. I'm just trying to understand what this
19 means. If it takes you awhile to decrease flows from 20 to
20 15 -- and you're shaking your head no?

21 KEN HOGAN: It's just a matter of closing a valve.

22 MICHELLE DAY: Okay.

23 (Simultaneous cross-talk.)

24 RANDY CRAWFORD: -- and then it has a motor
25 operator in it, so you pull it as you try to get it back

1 down.

2 MICHELLE DAY: Okay. Then I understand these
3 numbers.

4 UNIDENTIFIED SPEAKER: And Randy's getting older,
5 so it takes longer to move that.

6 RANDY CRAWFORD: It's hard to do.

7 MICHELLE DAY: Yeah. Where it used to take 30
8 seconds, now it takes a minute?

9 So the other point I wanted to say is we also
10 would like to take in this information and get back to you on
11 what we think about the down-ramping.

12 KEN HOGAN: Okay.

13 MARK HUNTER: And just looking at this, there are
14 only two down-ramping periods of concern. And it's that
15 September 15th and then again at the end of September.

16 DAN ROSS: Correct. And May.

17 MARK HUNTER: Other than having someone set up the
18 power at the intake structure for three hours to ramp it down
19 three steps, it's not a great hardship, so I don't -- we
20 can -- I guess you can look at the effects of the -- at the
21 gauge down in the anadromous reach, or you can just make --
22 stage it in three steps over two hours.

23 DAN ROSS: Dan Ross.

24 Remember, the configuration up there, Mark,
25 we have kind of a little stilling basin below the drop

1 structure that that bypass valve goes into. So it's kind of
2 like a bathtub, you know, kind of like slowing the flow down
3 in your bathtub. You're still getting flow over the top, but
4 it -- you know, it will equalize eventually.

5 MARK HUNTER: The rest of the ridge is narrow and
6 confined --

7 DAN ROSS: Right.

8 MARK HUNTER: -- which will generally stay --
9 which will generally propagate fluctuation pretty far. Until
10 we have the data, it's hard to say how much.

11 DAN ROSS: Yeah. Like you say, there's only two
12 instances where we'll, you know, have any potential for that,
13 so we can work out something to watch that.

14 MICHELLE DAY: Michelle Day, National Marine
15 Fisheries Service.

16 So there's only three, right? There's one in
17 May and then there's the one --

18 DAN ROSS: May, June --

19 MARK HUNTER: I would argue that the inflow is
20 fairly consistently high at that time of year. Now, when you
21 get into September and October, it's likely to be dry in most
22 years, not all years. But it's more of an issue then.

23 MICHELLE DAY: That's helpful.

24 KEN HOGAN: So Mark, in May, you feel that where
25 they're down-ramping from 15 to 10 that there's going to be

1 spill flow in there anyway.

2 MARK HUNTER: What is that?

3 KEN HOGAN: In May where they're down-ramping from
4 15 to 10, you feel that there's probably spill flow occurring
5 there anyway?

6 MARK HUNTER: There's enough -- I'm going to argue
7 there's probably enough inflow to kind of neutralize any
8 ineffective ramping.

9 What do you think, John?

10 JOHN HART: I would agree in the bottom mile. But
11 in the upper 1,400 feet or so, the spill does not happen
12 to -- it happens about every other year, plus or minus, and
13 the upper 1,400 feet would be largely dependent on flow
14 released.

15 DAN ROSS: Dan Ross, Energy Northwest.

16 So we can do -- it wouldn't be difficult to
17 do incremental changes when we lower the flow. You know, do
18 incremental changes over a period of time, a couple cfs an
19 hour or something until you reach 5.

20 MARK HUNTER: (Nods head affirmatively.)

21 KEN HOGAN: John?

22 JOHN BLUM: John Blum.

23 I just looked at the hydrology for the reach.
24 And in May, the 50 percent exceedance flow there is 3 and a
25 half cfs down to Study Site 3, and you have as much as 29 cfs

1 down at Study Site 1. So pretty much you've gained
2 everything you've lost plus some by the bottom there.

3 KEN HOGAN: I think we'll look forward to any
4 comments the agencies want to provide, but I think we've got
5 the information. And if you'd file that, John, I would
6 appreciate it.

7 JOHN BLUM: Okay.

8 KEN HOGAN: We will certainly look at the need for
9 the down-ramping and, you know, if so, how it should be done.
10 Okay?

11 All right. Next is for us to clarify our
12 alternatives discussed in the draft EA.

13 Forest Service, in their comments, correctly
14 pointed out that we had in one section of the EA said that we
15 were looking at a "no action," the "proposed actions," the
16 "staff recommended," and "recommended with mandatory
17 conditions." And that's how we started out, but when we
18 realized that our recommendation was so close to the
19 "recommended with mandatory conditions," we decided to drop
20 that alternative and just kind of do a couple outliers as a
21 standalone. So rather than carry four alternatives all the
22 way through, we wanted to just carry through the three. And
23 we erred in leaving in reference to it.

24 The Forest Service has asked that we carry
25 all four through, but we would rather not. It seems like a

1 lot of extra paper for us and -- because there were only a
2 couple of outliers where we deviated from the "recommended
3 with mandatory conditions."

4 And then would that be okay to Forest
5 Service?

6 MIKE GERDES: Yeah. Mike Gerdes, Forest Service.

7 That's fine as long as you just clarify the
8 course that you took.

9 KEN HOGAN: We will fix it.

10 MIKE GERDES: Now, my entire intent there was
11 that, you know, with the interagency task force that occurred
12 here awhile ago --

13 KEN HOGAN: Yeah.

14 MIKE GERDES: -- the Forest Service dropped its
15 independent NEPA analysis of its terms and conditions and is
16 relying on FERC to do that analyzing inside the NEPA
17 document. That was the intent behind our very pointed
18 comments, was that for us to feel that our terms and
19 conditions are adequately analyzed within this document.
20 That's why I was being so specific here.

21 That way, then, we don't have to do another
22 decision document. We can just say FERC's analysis is
23 adequate. It looked at all of our terms and conditions, gave
24 a good reference within the document, you know, used the same
25 public scoping process that FERC has done here, and then

1 we're done.

2 KEN HOGAN: Okay. So Mike, given the analysis
3 that we have in there, if we clarify what our alternatives
4 are to be the three, does the document suit your needs?

5 MIKE GERDES: Okay. Now you're going to put me on
6 the spot.

7 KEN HOGAN: Well, do you think it does?

8 MIKE GERDES: I think for the most part, it does,
9 yes.

10 I think there's a couple very specific areas
11 that I think the analysis could be more detailed to really
12 dovetail and identify the specific terms and conditions, but
13 I'd have to go back in my notes here. I don't remember
14 everything that I wrote.

15 KEN HOGAN: Okay. Well, we would be happy to hear
16 that, because anything that we can do to facilitate your
17 process and the overall process, we would like to do.

18 MIKE GERDES: Okay. Well, let me go back and
19 review what I wrote, because there were some very specific
20 points that I felt need clarification inside the document.

21 KEN HOGAN: Okay.

22 GEORGE GILMOUR: This is George Gilmour.

23 You know, I remember reading your comments,
24 and certainly I think we're willing to address some of those
25 specific points and to expand our analyses where you

1 identified you'd like to see an expansion. I think we're
2 trying to avoid a complete restructuring of the document,
3 though, and that's -- we don't necessarily want to go there.

4 MIKE GERDES: No. I understand that. I think
5 that clarifying that we're going to stick with a narrower
6 scope of alternatives and then more specific analysis within
7 the context that you have there, I think we'll be fine.

8 KEN HOGAN: Okay.

9 KRISTIE MILLER: This is Kristie Miller with the
10 Forest Service.

11 Just so I understand, which are the three?
12 The "no action" alternative, the Energy Northwest proposal,
13 and which one is the other one?

14 KEN HOGAN: The "staff recommended."

15 KRISTIE MILLER: Okay. The one that you called
16 No. 3?

17 KEN HOGAN: Yeah.

18 KRISTIE MILLER: Or the "staff alternative with
19 mandatory conditions"?

20 KEN HOGAN: No. We're not doing the "staff
21 alternative with mandatory conditions."

22 KRISTIE MILLER: Okay.

23 KEN HOGAN: Because they were so similar, we
24 didn't feel the need to carry through with four alternatives
25 all the way through.

1 KRISTIE MILLER: I absolutely agree with you.

2 KEN HOGAN: Okay. We're moving right along here.

3 We're on to open discussion with DEA. Does
4 anybody here have any questions about what we did or have
5 concerns with what we're recommending?

6 (No response.)

7 KEN HOGAN: That good, huh?

8 MIKE GERDES: I've got to look.

9 DAN ROSS: I think you have -- Dan Ross.

10 I think that we addressed everything in our
11 responses from the Energy Northwest side.

12 KEN HOGAN: Well, we wanted to try and tease out
13 the main points that we saw, but we just wanted to throw this
14 in there as a catch-all, so...

15 GEORGE GILMOUR: This is George Gilmour from FERC.

16 I guess a quick question for Mike, the Forest
17 Service, regarding Condition 9, the entrainment condition.

18 When you put together your revised condition,
19 we talked about already you put some side boards and some
20 direction that you identified. Any way that could be
21 clarified or any of the steps could be clarified in the -- I
22 don't know, is there an opportunity for another filing? I
23 guess there is.

24 KEN HOGAN: Sure. They can file whatever they
25 want whenever they want.

1 GEORGE GILMOUR: We appreciate detail. Let's put
2 it that way. It's a lot easier for us to analyze something
3 that's fairly specific and outlines the direction you're
4 moving in: What happens if this happens; what happens if
5 that happens.

6 It's the challenge for FERC staff to simply
7 analyze a plan, and we've been running into that a fair
8 amount.

9 KEN HOGAN: Yeah. I think that, you know, knowing
10 about the one and a half percent of the population of the
11 lake, how often that the lake population would get monitored,
12 it's those types of things --

13 GEORGE GILMOUR: That helps, yeah.

14 KEN HOGAN: -- we're really looking for.

15 MIKE GERDES: Mike Gerdes, Forest Service.

16 I understand that need. When we drafted this
17 modified, we had a very narrow window to meet the timeframes,
18 and our conversation with the workgroup here was that we
19 would put this in with, you know, these side boards today,
20 knowing full well that between now and license issuance, we
21 would start drafting that plan, so we put some meat on the
22 bones there. And, you know, we have not talked about our
23 next meeting date, when we actually will sit down and start
24 writing this.

25 But by putting that within three months of

1 license issuance that the plan would be implemented, we were
2 hedging the bet that we would have the plan written long
3 before license issuance. It won't probably be timely for the
4 final analysis that you're looking for, but we intended to do
5 all this pre work.

6 GEORGE GILMOUR: Okay. So it would be provided in
7 the level of detail that probably would help with -- well,
8 license article preparation is going to be part of the --

9 KEN HOGAN: Well, we won't have a license article
10 if it's a 4(e), so...

11 GEORGE GILMOUR: Yeah, that's true. Okay. I
12 think -- I mean, I think --

13 MIKE GERDES: I know you like to see the plans
14 prior to this, and, you know, just with the time constraints,
15 we haven't done it yet.

16 KEN HOGAN: I guess what would help us, or where
17 we're going with this, is we need to evaluate why your
18 recommended alternative or measure is better or as good as
19 the State's recommendation for the full-blown screen, so we
20 need to be able to have the information so we can do those
21 comparisons and do that analysis.

22 Does that make sense?

23 MIKE GERDES: Mike Gerdes.

24 Yes, it makes sense. I would have to go back
25 in the justification statement that we supplied with the

1 terms and conditions. I can't remember the level of
2 specificity we put in the actual justification itself. We
3 might take a look at it. It won't put any more meat on the
4 bones, but it gives our rationale of why we went this way.

5 KEN HOGAN: Okay. All right.

6 DAN ROSS: Dan Ross, Energy Northwest.

7 I think we got pretty -- relatively specific,
8 Mike, in the final draft of your Condition 9. I think we
9 were -- I looked at it the other day, and it says we will do
10 this and we'll do, you know, hydroacoustics, and we'll do
11 fish counts and things like that. It's just, we gave
12 ourselves the leeway to do -- to sit down as an aquatics
13 group and put the specific details into those monitoring
14 programs. But the basic overall monitoring is pretty clear
15 in the Condition 9.

16 KEN HOGAN: And what we would be looking for is
17 the frequency. I'm not sure if you've got it or not in
18 there, and the side boards, the one and a half percent. And
19 I read your comments awhile ago, so I'm not sure if it was in
20 there or if I just missed it or have forgotten it.

21 You know, that was interesting to me, okay,
22 one and a half percent based on the population. If that's
23 all in there, great.

24 MIKE GERDES: Mike Gerdes with the Forest Service.

25 When -- we -- yes, we had a narrow window,

1 but we tried to add a lot of specific bullets in there to the
2 lake monitoring, not only for hydroacoustic but the spawning
3 surveys to relate back to the hydroacoustics. We did put in
4 the one and a half percent as a threshold for impingement
5 based on lake population.

6 KEN HOGAN: Okay.

7 MIKE GERDES: So those specific elements are
8 there. It's just, you know, I don't know that we actually
9 said how many days a week we're going to be out there. We
10 haven't agreed to that yet.

11 KEN HOGAN: Okay.

12 MIKE GERDES: But I think the structure is there
13 to do so.

14 GEORGE GILMOUR: Okay.

15 KEN HOGAN: That will work for us. We'll make it
16 work.

17 Any other --

18 JOHN HART: And as for Condition No. 9 modified,
19 is there any cost estimates available or ideas of...

20 MIKE GERDES: Mike Gerdes with the Forest Service.

21 No. We did not put a cost estimate with
22 that.

23 GEORGE GILMOUR: This is George Gilmour with FERC.

24 John, I think he provided a cost -- or Energy
25 Northwest did. Someone did.

1 DAN ROSS: We did.

2 GEORGE GILMOUR: Okay.

3 DAN ROSS: We did provide some estimated cost. We
4 know what hydroacoustics based on performance of those
5 already, and then some spawner surveys, which we didn't
6 really support spawner surveys because of the cost of the
7 spawner surveys as opposed to the hydroacoustics.

8 So anyway, there's some numbers out there for
9 you, and our response to the DEA.

10 KEN HOGAN: Okay. So any other comments,
11 concerns, or compliments on the draft document?

12 (No response.)

13 KEN HOGAN: None at all? Okay. That's a win in
14 my book.

15 MICHELLE DAY: Michelle Day, National Marine
16 Fisheries Service.

17 I do want to ask a clarifying question on the
18 discussion about the four alternatives and the three
19 alternatives.

20 KEN HOGAN: Okay.

21 MICHELLE DAY: What you were saying is -- is this
22 correct: You're saying that the one identified on 3, being
23 Energy Northwest proposal with staff modifications, and then
24 it says a staff alternative, that's the one that is going to
25 be -- that is in the DEA and which is going to be carried

1 forward.

2 The one that's not is the "staff alternative
3 with mandatory conditions," although it's not exactly
4 accurate to say it's not being carried forward. It's
5 specifically not named as it's being addressed, but it's
6 equivalent to No. 3 and that's why you're not doing it.

7 KEN HOGAN: Okay. It's not equivalent, but it's
8 so close -- and I'm not sure which -- well, originally it was
9 the fish screens. And what was the other item?

10 JOHN HART: Ramping.

11 KEN HOGAN: And ramping where our alternative
12 differed from the "staff alternative with mandatory
13 conditions."

14 So everywhere else, we were the same with
15 what was being recommended by the mandatory conditioning
16 agencies. So because there was only those two items, when we
17 set up the document originally, we had all four, because
18 that's just kind of our standard practice. And when we
19 started drafting, we said, well, this doesn't make sense,
20 it's just these two items, so we didn't want to carry forward
21 all four alternatives.

22 We could analyze those two outliers kind of
23 independently of the three alternatives. And then what we
24 erred in is we didn't take out the reference to the fourth
25 alternative in that introduction area.

1 MICHELLE DAY: So how you're going to proceed is
2 you're going to explain what you just explained in the final?

3 KEN HOGAN: I don't think we'll admit to having
4 made any errors.

5 MICHELLE DAY: Not that there was an error, but
6 just to explain that all of the pieces have been analyzed.

7 KEN HOGAN: Yes, yes. We will do that, right,
8 John?

9 JOHN HART: In what will probably be Appendix D,
10 we will be summarizing some of the comments. And in that
11 section, we will explain our mistake on Page 1 or so.

12 MICHELLE DAY: And my purpose isn't to point out a
13 mistake. It's just to make sure it's clear in the end that
14 all of the measures were addressed.

15 KEN HOGAN: We will set it up in Section 2 where
16 we specify that we'll clarify that the staff recommended
17 alternative is the same except for wherever we fall out. I
18 mean, it's still a draft, so we could go with fish screens or
19 we could go with ramping rates or get rid of them, and then
20 it's all the same. So wherever we come out, we'll clarify in
21 that section.

22 MICHELLE DAY: Okay.

23 KEN HOGAN: Okay? Any other questions or
24 comments? George?

25 GEORGE LEE: Yeah. In previous discussions --

1 George Lee with the Yakima Nation.

2 In previous discussions that we had, the
3 Yakima Nation had talked about the boundary and that Lower
4 Lake Creek be included as part of the boundary because it
5 affects Lake Creek. It affects the anadromous species that
6 are being reintroduced back into the system, and so we would
7 like to agree with Forest Service that -- and FERC looks into
8 this as being a part of the process.

9 KEN HOGAN: Okay. Well, I'm going to propose that
10 we move on to our next three items and then, you know, if we
11 have to postpone lunch a little bit, do so, and then get out
12 early.

13 Does that work for everybody else?

14 (No response.)

15 KEN HOGAN: All right. So our next item is under
16 "Other Issues." It's status of the 401 Water Quality
17 Certificate. And with that, Eric, I would like to hear a
18 status report, and if you need -- and let us know if you need
19 any information from us that will facilitate your processing.

20 ERIC SCHLORFF: Eric Schlorff with Department of
21 Ecology.

22 Let's see. I think it was -- was it
23 Thursday? Yeah. Last Thursday I sent a draft for a two-week
24 review to Energy Northwest. And after that, we'll get it
25 back, look at it, and then release it to a one-month public

1 review. So it depends on how long -- you know, whether
2 there's a bunch of changes to make, hopefully not a lot, and
3 be able to get things together.

4 I've got the list ready to go to send to --
5 it's a public mailing, but it's mainly these people and
6 whoever else was on the FERC list and on the Energy Northwest
7 list. So coming up soon, we're going to get this thing out.

8 KEN HOGAN: So you don't need anything from us to
9 facilitate that or...?

10 ERIC SCHLORFF: No. Our deadline is -- we've got
11 to have this thing out by August 7th.

12 KEN HOGAN: So that -- after your one-month public
13 review, do you have -- typically how long does it take you to
14 turn these around?

15 ERICH GAEDEKE: Depends on how many changes there
16 are if needed, so we're hoping there's not a lot and...

17 KEN HOGAN: Just rubber-stamp it, cross out
18 "draft" and put "final" on it?

19 ERICH GAEDEKE: That's right.

20 KEN HOGAN: Okay. Great. NMFS with their
21 biological opinion?

22 MICHELLE DAY: What was the question again?

23 I'm kidding.

24 ALICIA BISHOP: I started on the biological
25 opinion and was looking forward to meeting all of you so I

1 know who to address as questions arise. So far we're on
2 track, but it's hard to tell with the amount of internal
3 review, that we didn't really go into it.

4 KEN HOGAN: Okay. So right now we've got your
5 letter that basically says you've got all the information you
6 need, and you started the clock. And that was a month, two
7 months ago.

8 Have you come up with any new
9 information needs that --

10 ALICIA BISHOP: Not yet.

11 KEN HOGAN: -- we can facilitate with?

12 Great. Now, I told you I've got a bet with
13 my boss. We bet lunch, so...

14 We get to buy up in 135 days. He took the
15 opposite approach. We look forward to that.

16 MICHELLE DAY: And when did your 135 days start?

17 KEN HOGAN: You guys set the clock.

18 MICHELLE DAY: Yeah, but when did you receive the
19 letter? I am kidding again.

20 KEN HOGAN: I think the date was June 22nd. Does
21 that sound right?

22 All right. Now, something we didn't have on
23 the agenda that we added was the Commission issued a letter
24 to the Forest Service clarifying our regulations on the ILP,
25 integrated licensing process.

1 The ILP does not have provisions for final
2 terms and conditions. It has preliminary and modified. And
3 the Forest Service's schedule for their 4(e)s was
4 preliminaries, modifies, and finals.

5 So with that, Mike, you wanted to kind of
6 talk about that letter?

7 MIKE GERDES: Mike Gerdes, Forest Service.

8 At this point, the Forest Service is very
9 satisfied with its modifies and preliminaries that we
10 submitted both at the REA and at the Draft Environmental
11 Document, and we do not anticipate filing any final terms and
12 conditions unless, unless there's new information that's
13 provided in the final environmental document that differs
14 significantly.

15 That would be the only change for filing any
16 finals. And we have a response letter for you. We can give
17 you a copy of that today, but I'll be e-filing that probably
18 next week.

19 KEN HOGAN: I think that's fine. If I got a copy,
20 then I've got to give it to the court reporter, and they get
21 lost.

22 Nothing on you.

23 MIKE GERDES: So we'll just anticipate that we'll
24 be filing that letter next week.

25 KEN HOGAN: Okay.

1 MIKE GERDES: And it says the same thing, we're
2 satisfied with our preliminaries and modifies everything
3 we've seen to date. We don't anticipate a change unless
4 there's a major shift in the final environmental document.

5 KEN HOGAN: Great. Okay.

6 Well, with that, is there anything anybody
7 wants to discuss? Mike?

8 MIKE GERDES: Mike Gerdes, Forest Service.

9 In our comments that we submitted at the EPA,
10 through the different sections that I had in there, I was
11 very specific on those areas that needed a little bit more
12 analysis for our terms and conditions.

13 Specifically, on Page 9 of the 28-page
14 document, I look at things like the kiosk construction and
15 toilet construction, the screen gauge installation, Snyder
16 Creek fish passage channel reroute. It's those specific
17 elements that, because we had them in a term and condition,
18 needed to be highlighted.

19 KEN HOGAN: What do you mean by "highlighted"?

20 MIKE GERDES: Well, more discussion on any
21 potential effects.

22 KEN HOGAN: Of the actual construction on --

23 MIKE GERDES: Yeah, on the action itself. They
24 were mentioned inside the document, but there wasn't really
25 an analysis of it of what the effects could be by

1 implementing those actions, and that's what we're looking
2 for.

3 KEN HOGAN: The short term, you know,
4 sedimentation with the gauge and construction, that type of
5 stuff?

6 MIKE GERDES: Yes. And any relation to heritage
7 resources, if there's any conflict there.

8 KEN HOGAN: So requiring site surveys prior, that
9 type of...

10 MIKE GERDES: Mm-hm.

11 KEN HOGAN: Okay.

12 MIKE GERDES: You had asked me where I had the
13 specifics, and that was some of the stuff I was looking at.

14 KEN HOGAN: Yep. All right.

15 Well, I think with that -- am I forgetting to
16 go back to anything that we said we'll revisit?

17 (No response.)

18 KEN HOGAN: Great. I'd like to bring the meeting
19 to a close and thank everybody for coming and working so well
20 together. This has really been a great project to work on,
21 and I probably won't be back to see you again, but it's been
22 a lot of fun for me and just a pleasure. I wish they all
23 went this well. So thank you.

24 (Whereupon, the meeting was concluded at
25 11:46 a.m.)

CERTIFICATE

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I, Tia B. Reidt, do hereby certify that pursuant to the Rules of Civil Procedure, the witness named herein appeared before me at the time and place set forth in the caption herein; that at the said time and place, I reported in stenotype all testimony adduced and other oral proceedings had in the foregoing matter; and that the foregoing transcript pages constitute a full, true and correct record of such testimony adduced and oral proceeding had and of the whole thereof.

IN WITNESS HEREOF, I have hereunto set my hand this 4th day of May, 2009.

/Signed

Tia B. Reidt

Commission Expiration: June 03, 2010