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FEDERAL ENERGY REGULATORY COMMISSION

SCOPING MEETING

WICKIUP PROJECT

La Pine Senior Center
16450 Victory Way
La Pine, OR 97739
AUGUST 19, 2008

1 PROCEEDINGS

2 7:10 p.m.

3 MR. PUGLISI: Okay. I think we're about ready to
4 start. I'd like to welcome everybody and make sure
5 everybody's here for the Wickiup Scoping Meeting. This is
6 for the FERC project. Next slide.

7 Basically, we have a small crowd here tonight.
8 Most people were here this afternoon at the site visit, but
9 we'll go through everything again, and this is the agenda
10 for tonight's meeting.

11 Basically, we'll start off with some
12 introductions and go over some procedures, and we'll talk
13 about the purpose of the scoping meeting and the ILP
14 process. We will then go over major milestones, and then
15 Symbiotics will present a project description.

16 Then we'll talk about -- next we'll take comments
17 from you all and talk about issues and proposed studies and
18 study request criteria. The last item is we'll see how it's
19 going and where we need to go from there, okay.

20 So oh yes. Let's go ahead right now. Anyways,
21 my name is Jim Puglisi. I'm with FERC. I'm a civil
22 engineer and I'm the team lead for this project. With me
23 tonight we have Kate Zengion with our Office of General
24 Counsel; Steve Hocking, Office of Energy Projects,
25 Environmental Resources; and Matt Cutlip in the Portland

1 office, Office of Energy Projects, fishery biologist.

2 Also presenting tonight will be Erik Steimle.

3 Once he gets up, whoever he has presenting he'll introduce
4 his staff at that time. I'd also like you to be aware that
5 we have a court reporter here tonight, who's recording
6 everything that's being said. That's why I'm kind of wired
7 here and moving cautiously.

8 So we do have a microphone that when anybody has
9 any questions or comments, we ask for you to speak into the
10 microphone. It's not an amplifier. It just goes to the
11 recorder. State your name and your affiliation with your
12 comment. We'd appreciate that.

13 And also, when you came in here, I assume
14 everyone got a sign-in sheet and everyone has filled that
15 out. If not, then make sure you fill it out before you go
16 please, and check the appropriate boxes in the sign-in
17 sheet.

18 In addition, on the sign-up sheet here, you'll
19 notice that there's a check box here. If you have any
20 written comments or documents that you want to submit
21 tonight, check that box, so we know, we'll be looking for
22 that, and hand those documents into us.

23 If there's something that you want to file later,
24 you can do that via mail or online, which we'll go over that
25 in a few minutes. Also, the other important box here that

1 you may not have noticed is the box for the mailing list.

2 If you want to be on the mailing list to get
3 paper hard copies of stuff, please check the mailing list
4 box, and make sure you have your address on there, okay.

5 The documents that you should have picked up this
6 evening are the pre-application or some of you may have
7 picked up the pre-application documents, submitted by
8 Symbiotics. There is a preliminary study plan, which was
9 just filed today or yesterday, which we'll go over that
10 later; a map, a large-scale map of the project so we can
11 talk about the project itself, and the scoping document that
12 was issued by FERC last month.

13 Next slide there. Okay. So I just want to go
14 over a couple of housekeeping items here that are important
15 for you to know. Basically, the FERC website has a lot of
16 information about hydropower projects and this project in
17 particular, but also all projects. You'll have a lot of
18 information at www.ferc.gov.

19 The key thing with the website is our E-Library
20 service, and on the main page of the website, in the upper
21 right corner, you'll see a tab for E-Library. E-Library is
22 the source for all documents submitted to FERC and issued
23 from FERC are filed in E-Library. So that's the database of
24 all documents for this project and other projects.

25 In addition to E-Library, in E-Library you'll see

1 you could also E-subscribe. E-subscription is very
2 important because if you e-subscribe, you will be on the
3 mailing list, the email notification list of all documents
4 that are submitted and issued from FERC. An email will pop
5 up and in that way, you'll be notified immediately when
6 something is filed.

7 Also, in this process, since we're on quick time
8 frames, it's kind of good to be aware of what's happening.
9 Also, when you go to E-Library or the e-subscription, make
10 sure you type in the project or docket number for this
11 project, which is P-12965. That will bring up all those
12 documents.

13 Okay. So I want to just quickly go over the
14 purpose of scoping. Basically, the Federal Power Act states
15 that FERC has the right or has the responsibility, thank
16 you, to issue licenses for all non-federal hydropower
17 projects, okay.

18 Part of that process is through the NEPA
19 document, the National Environmental Policy Act, which
20 requires that we look at all issues and concerns and review
21 them, and make sure that everything is -- all questions are
22 answered.

23 Part of that process for the NEPA process is
24 tonight's meeting, going over the scoping, and finding out
25 what the issues are as they stand now. Through that, we

1 will create study plans and further documents based on
2 tonight's meeting.

3 Okay. So the process we're using for this filing
4 is the integrated licensing process. I'm not sure how many
5 of you are aware of that process. It's a rather new process
6 at FERC, and basically it has a lot of very tight time
7 frames.

8 The advantage of this process is that it's
9 integrated. So there's a lot of up-front interaction like
10 tonight's meeting, to get the issues resolved early in the
11 game. What you see here is the simplified version of the
12 process.

13 You go on the FERC website under the documents
14 and you can see the actual process itself, with all the
15 blocks. There's several blocks here. So I'm just going to
16 quickly go over -- these are the key steps where they are.
17 So the top row is the pre-application activities, and the
18 bottom row is once the application is filed.

19 So let me hit the button here. So so far, the
20 Notice of Intent and the pre-application document was filed
21 by Wickiup Hydro in January of this year, and January 22nd,
22 they filed the document. It was put on hold until they
23 received a permit. They received a permit in May, so the
24 project started up again May 29th was I'm pretty sure it's
25 the letter. It's in the back of the document.

1 So that restarted the process. So that was the
2 first step. Then the next step here -- so now we're in the
3 second block here, which is the scoping process, and with
4 that, you have in front of you is the scoping document,
5 which FERC issued the scoping document July 25th of last
6 month.

7 Basically, this is a preliminary list of issues
8 that we see with the project, and a preliminary list of
9 study plans that need to be done. In the back of this
10 scoping document, you will see the schedule, which the dates
11 here, this is generally the same thing that's on the screen
12 here. This is a more detailed version.

13 So that's where you are today, is in the process,
14 scoping process plan. The next step now will be developing
15 study plans. So that process is where we will determine
16 what studies need to be done to look at the issues and
17 concerns with the project, and once that's, the study plan
18 is developed, then the next step will be Wickiup Hydro will
19 go out and do the studies over the next year.

20 So the next step is the study plan. Once a final
21 plan is developed, they'll do the studies next year and
22 they'll start developing the application. This will take
23 place in 2009, summer or fall of 2009. After that, they
24 will do a preliminary license proposal and then a final
25 license proposal.

1 The final license application will be filed. It
2 is now scheduled for March 7th, 2011. So that gives you a
3 general idea of where we are there. Once the application is
4 filed and we determine that it's adequate, we will issue an
5 Environmental Analysis Notice, asking for terms and
6 conditions and descriptions, and any -- for intervenors at
7 that point.

8 So that's the point where people who want to
9 intervene at this point after the notice has been issued.
10 Then we will prepare the environmental assessment, and once
11 that's issued, there will be a comment period for that and
12 then the final process will be a license order, which that
13 would be the final step. That would occur, as a process,
14 the schedule right now, that's about 2012, late 2012 I
15 believe will be when that will take place.

16 The key thing to note here is that no
17 construction will start until the license order is issued.
18 So once again, this is the major milestones that are the
19 blocks I just showed you there. The key one here is the
20 comments on the pre-application document and on the scoping
21 document, and any study requests, which we'll go over later.

22 Those are all due September 23rd. That's our
23 first key date that we ask people to file; this is an
24 important date for everyone to realize. Then after
25 basically all the comments are submitted and the study

1 requests are submitted, Wickiup Hydro will prepare a
2 proposed study plan, and they will issue that on November
3 7th.

4 Then intermediate steps there, they will have a
5 meeting, a proposed planning meeting to go over the thing,
6 and there will be comment periods and what-not. Then
7 finally, the study plan determination from FERC will be
8 issued on April 8th, 2009. Once that's issued, that means
9 the study process, the study period begins, and that's when
10 Wickiup Hydro will start doing their studies.

11 That will be summer of 2009, and if needed, it
12 could go into 2010. That's why I have the first study
13 season, because right now with the tentative issues, there
14 will be one study season. But when we go through our
15 scoping process, we'll see if two study seasons are needed.

16 Then as mentioned before, the preliminary license
17 proposal will be submitted on September 6, 2010, with
18 comment periods in between, and then the final license
19 application will be filed on March 7th, 2011. That's a
20 really quick -- I know it was very fast there, but I think
21 most people are familiar with the process. Does anybody
22 have any questions on anything I kind of covered quickly
23 there?

24 (No response.)

25 MR. PUGLISI: No questions? Okay. I guess now

1 we'll just have Erik Steimle here talk about the project,
2 give a little description of what's been happening.

3 MR. STEIMLE: All right. Got a leash on, okay.
4 I'm not going to be able to get too close to the screen. As
5 Jim said, my name's Erik Steimle and I work for Symbiotics
6 out of our Portland, Oregon offices. I have a short
7 presentation about the project.

8 First, I'll introduce some of our staff that's
9 here this evening. Dave Boyter is our Director of
10 Engineering and Operations out of our Rigby, Idaho office.
11 Brian Cole aids us with government relations. He's out of
12 our Baker City office. Kai Steimle is our aquatic
13 ecologist, also out of our Portland office.

14 So I've divided this presentation up a little
15 bit. First, I'd like to talk about the relationship between
16 Wickiup Hydro Group, LLC, who is the applicant, and
17 Symbiotics, and then I'd like to go into a little discussion
18 about who Symbiotics and the types of hydro projects we
19 proposed.

20 Then I'll go over some background about the dam
21 itself, some of which will be reviewed, for those of you who
22 were out at the dam today, and then I'll move in
23 specifically and talk about proposed operations and project
24 features.

25 After that, I'll talk about some of the issues

1 that were reviewed or outlined in the preliminary
2 application document, and then I'll talk about some specific
3 studies that we have outlined thus far.

4 At the end, I'll give you some contact
5 information for our offices in Portland, but also the
6 website, Symbiotics' website, where you can download copies
7 of all the documents as we proceed through the ILP process.
8 But you can also find out more information about our other
9 projects in our company.

10 So Wickiup Hydro Group, LLC is a wholly-owned
11 subsidiary of Symbiotics, and Symbiotics is a hydroelectric
12 development company that was started in 2001. We have a
13 number of projects throughout the United States, but we were
14 started to license, construct and operate hydro projects
15 that could be considered both economic and environmental
16 assets in a given local area.

17 The primary way that we do that we propose these
18 run of river or what are often titled run of reservoir
19 retrofit projects, and Wickiup dam is just one of those
20 projects. What we do is we propose a new project on an
21 existing diversion, but we do not propose to alter the
22 operations of that specific diversion for the purposes of
23 power generation.

24 Many of these diversions are operated from
25 municipal or agricultural or flood control purposes or a

1 combination of all three, and we just capture a range of the
2 flows under their current management strategy and produce
3 power from that.

4 As I said, we have a number of projects
5 throughout the U.S. In Oregon, we have three active
6 projects right now. We have two in Lane County, Dorena Dam
7 and the Fall Creek Dam Project, and the Applegate Dam
8 Hydroelectric Project in Jackson County in southern Oregon.

9 Sure. No, that's all right. That's all right.
10 Again, I'll provide the website at the end if you want some
11 more information about some of our other projects here in
12 Oregon.

13 Most of you know the dam was constructed about 60
14 years ago. It's owned by the Bureau of Reclamation and it's
15 managed by the North Unit Irrigation District. It's a earth
16 fill dam, 100 feet tall, 13,000 feet long. It has a crest
17 width of just over 400 feet.

18 Specific modifications that we would propose to
19 retrofit for the hydro include the bifurcation of the
20 current twin outlet conduit. We talked about some of that
21 today during the site visit. Leading out of that would be
22 two new 96-inch diameter penstocks that would feed into a
23 single 120-inch diameter penstock, that would feed into the
24 new powerhouse. That will make a little more sense in a
25 second here when I show you a diagram of the project.

1 There would be the addition of the unit itself, a
2 7.15 megawatt Kaplan unit. Some of you may be familiar with
3 the Kaplan turbines. They're often referred to as fish-
4 friendly turbines. We can have a discussion about that at
5 the end.

6 They'll be the addition of a 50 by 50 foot
7 powerhouse, and the installation of 110 feet of new
8 transmission lines that would tie in with the existing
9 distribution line owned by the Mid-State Electrical
10 Cooperative just north of the project.

11 This is the same diagram that hopefully you
12 picked up on your way in. Everything that you see in it in
13 black is currently at the dam itself, and everything that's
14 delineated in red is a feature that we would add for the
15 project.

16 Just for a little orientation, I don't know if I
17 can get close enough there, but the dotted line that runs
18 through the center in black is the access road across the
19 top of the dam. So to the left of your screen there, that
20 is Wickiup Reservoir.

21 The rectangular object you see just to the right
22 of the road is the large concrete block structure that you
23 may be familiar with at the existing outlet facility. The
24 Deschutes River is below there.

25 So right away, you see where we've proposed to

1 bifurcate and put in the two new 96-inch diameter penstocks
2 that would lead into a single penstock going into the new
3 powerhouse.

4 The new powerhouse itself there is delineated by
5 that red square there, and there would be the addition of a
6 new outlet facility as well into the Deschutes River, just
7 north of the current outlet facility that's there now.

8 Then you can also see illustrated in red there's
9 a dotted line, of where the transmission tie-in would be.
10 That might be a little too dark to see, but this is an
11 artists' rendition of the completed project. It's also on
12 the front page of the preliminary application document.

13 This is what the project would look like if you
14 were on the crest of the dam, looking down into the
15 Deschutes River. That concrete block structure that you see
16 in the foreground there is currently there on site. So
17 right away, the most visual addition you would see from the
18 completion of our project would be the powerhouse structure
19 itself.

20 Can everyone see that powerhouse structure?
21 Okay. As I mentioned earlier, we propose or we pursue
22 primarily run of reservoir, run of river projects, and
23 Wickiup is just one of those projects. So because of that,
24 the Bureau of Reclamations management of the reservoir, in
25 cooperation of North Unit Irrigation District, they would

1 actually dictate how much power we could generate from this
2 project, because there would be no additional storage or
3 alteration of that regime for hydropower.

4 So if you take a look at this graph on the screen
5 here, you've got months of a calendar year along the X axis,
6 and discharge in cubic feet per second along the Y axis.

7 There is a wet year, 1997, illustrated by a
8 single yellow line and the dotted yellow line is a
9 relatively wet year, 1997, as many of you, some of you may
10 remember. The red line is median discharge from the dam
11 itself, and that's based on 58 years of data.

12 As you can see from the graph, the highest
13 average capacity would occur during July, and conversely the
14 lowest would be during the winter months. What you'll see
15 in my next slide how the project would actually be offline a
16 decent percentage of the time during the winter.

17 So right now, the project is set up to operate
18 between 400 and or excuse me, between 420 and 1,400 cubic
19 feet per second when those releases are coming out of the
20 dam. So if you were out at the project today, I believe
21 there was 16, just under 17 hundred cubic feet per second
22 coming out.

23 If the project was built and you were looking at
24 it today, you would see flows coming out of the normal
25 outlet facility, and you would also see flows coming out of

1 the new outlet from the powerhouse, because the total
2 exceeded 1,400.

3 Between 420 and 1,400, if the project was online,
4 all new flows or all flows going into the Deschutes River
5 would come through our project and into the Deschutes River.
6 Below 420 cfs, the project would be offline and all flows
7 would be going through the normal outlets.

8 The graph you see is a flow exceedance curve for
9 the project. You've got exceedance probability expressed in
10 percentile along the X axis, and discharge in cubic feet per
11 second along the Y axis. As I mentioned about the project,
12 any time there's flows under 420 cfs it would be offline.

13 So if you find the yellow line, lower yellow line
14 illustrates 420. So if you follow that across -- I
15 apologize; I can't get that close, but you end up at about
16 60 percent. So what that means is that based on this
17 historical flow information, about 60 percent of the time
18 flows would be at 420 cfs and the project would be online.

19 Conversely, about 40 percent of the time, the
20 project would be offline, because the flows were below 420.
21 As you saw from the previous slide, that would be primarily
22 during the winter months.

23 On average, we project that the project would
24 produce 21.15 gigawatt hours of electricity, or roughly
25 enough to power 2,700 homes.

1 That's good. So I've talked just a little bit
2 about proposed operations and features. I'd like to
3 transition now and talk just a little bit about how this
4 project fits in with the local landscape. This is the list
5 of resources that were reviewed in the preliminary
6 application document.

7 In the interest of time, I'm not going to go
8 through each one of those, as they're outlined in the
9 document. But I'd be happy to come back and talk about any
10 of them afterwards, as far as information that's in the PAD,
11 or perhaps information that should have been in the PAD, so
12 that a potential impact could have been realized and it
13 wasn't.

14 But you can see from the list that we reviewed
15 cultural, socio-economic as well as environmental resources.
16 Also in the preliminary application document there is a
17 rudimentary list of studies that we propose to carry out
18 during the one or two-year study period of the integrated
19 licensing process.

20 That list is not much more than a list, but as
21 hopefully you picked up today, we have put out a preliminary
22 study plan that basically includes additional information
23 about the studies we proposed at this point, including
24 methods, references for those methods and a proposed time
25 line.

1 This by no means is the final list of studies, as
2 we're about to just start dynamic scoping process for those.
3 By putting out this preliminary study plan, I should add it
4 by no means speeds up FERC's process. We still have to put
5 out that additional study plan in November.

6 Rather, we just feel that by putting one out in
7 this preliminary manner, aids in getting better feedback and
8 comments, since that deadline is -- the September 23rd
9 deadline is very close. It will aid is in putting together
10 a better plan in November.

11 So that's all I have for this evening. I've
12 listed some contact information for our offices in Portland,
13 and also our web address on the website. Again, you can
14 find out more information about our company or about any of
15 our other projects in the U.S., and you can also download a
16 copy of the preliminary study plan that was filed with FERC
17 today, and there will be additional documentation on there
18 as well as we proceed through the process.

19 MR. PUGLISI: All right. Thank you very much
20 Eric. Does anybody have any -- I guess we'll start now. Is
21 there any general comments or questions for FERC or
22 Symbiotics? Does anybody have any?

23 (Off the mike.)

24 MR. ROSS: Robert Ross with the Bureau of
25 Reclamation, FERC Coordinator out of the regional office at

1 Boise. I have a question for Eric. Of the projects that
2 you showed up there, have licenses been issued on any of
3 those?

4 MR. STEIMLE: This is Erik Steimle. Of the list
5 in Oregon, no, licenses have not been issued. The furthest
6 one along is Dorena. We expect determination on the
7 issuance of a license in the next 90 days, and right now
8 we're on schedule to start construction in the summer of
9 2009.

10 Applegate's close behind that, a little bit
11 further along. We expect determination of the issuance of
12 license late 2008 but probably more like early 2009. We're
13 still waiting on the buyout for that project, and right now
14 the construction schedule starts in early 2010.

15 MR. PUGLISI: I have a question that we'd like to
16 ask you, Eric, about the operations, basically, the
17 discharge. Is this project going to be operating in the
18 winter months, when the flows are -- you said it cannot
19 operate below 420 cfs; correct?

20 MR. STEIMLE: Yes. Do I need to repeat my name
21 again or -- okay. That's correct. The project will not
22 operate when flows are below 420 cfs.

23 MR. PUGLISI: Then the question I have then is on
24 Table 4 in the pre-application document. It has generation
25 during these months where the flow is below 420. Oh, I'm

1 sorry. On page 13 of the pre-application document, it shows
2 the average monthly energy production.

3 If you look at page 20 of the pre-application
4 document, there's -- you can see for January, February,
5 March, November, December, the winter months, the maximum
6 median flow is much below 420 cfs. So I'm just curious on
7 how these numbers are generated for generation when the
8 project's not operating.

9 MR. STEIMLE: Sure.

10 MR. PUGLISI: Page 13 for the generation and page
11 20 for the flows.

12 MR. STEIMLE: I can follow up on that, and then I
13 may have Kai follow up as well. But my first take on that
14 is that there are some flows. Like if you look at the
15 illustrated wet year from 1997, there are years where there
16 are flows exceeding 420 cfs during the winter months.

17 MR. PUGLISI: In certain years?

18 MR. STEIMLE: Certain years. So that's all built
19 into this average calculation.

20 MR. PUGLISI: What is the average -- do know what
21 the average (off mike).

22 MR. STEIMLE: It's 55 or 58 years of records.

23 (Off mike discussion.)

24 MS. STEIMLE: This is Kai Steimle with
25 Symbiotics. If you look at page 19, it has the seasonal

1 flow patterns, and you can see in 1997, a wet year, that
2 there were flows -- it's the next one -- yes.

3 You can see in a wet year like '97, that there
4 were winter flows. One more up. So I believe that's where
5 those averages come from.

6 MR. PUGLISI: But I see that the median flow from
7 the chart, for January, February, March, November-December,
8 looks well below 420 cfs. So how -- if the project doesn't
9 operate, if the median is below zero, how could the average
10 energy production be --

11 MS. STEIMLE: This is Kai, and my understanding
12 of the way that the average energy production is calculated
13 is that they calculate energy production of that month for
14 every year, given the real flows for that year, and then
15 take the average across all years.

16 So that even though many years would have zero
17 energy production, some years would have some. So that
18 would drive the average above zero.

19 MR. PUGLISI: (off mike discussion) The fact
20 that the median flow is so low, it just seems kind of --
21 it's so much below 420 cfs that I think we're -- exactly,
22 right. So the peak flow is going to through it way off.

23 MS. STEIMLE: Actually, the average (off mike
24 discussion).

25 MR. PUGLISI: Right, right. So why maybe this

1 should be the median generation production.

2 MR. ROSS: This is Bob Ross, Bureau of
3 Reclamation again. On the studies that we've done, we feel
4 that the shape of the exceedance curve is reasonable for
5 what comes out, if you take the downstream gauge there.

6 I do have a question for Eric, and that is in
7 your analysis, did you consider the effect of net head, and
8 the effect of the tow drain that may not be included in that
9 downstream gauge?

10 MR. STEIMLE: Now that Dave's here, I wouldn't
11 mind if he answered that. But as far as the extra flow that
12 we talked about today, from --

13 MR. ROSS: That may not be included.

14 MR. STEIMLE: That is not included, that is
15 correct.

16 MR. ROSS: So you actually have less flow.

17 MR. STEIMLE: That's correct, about 30 to 50 cfs,
18 and we re-looked at some of those numbers this afternoon,
19 based on what we learned at the site visit today. I can let
20 Dave follow up a little bit more on that.

21 MR. BOYTER: This is Dave Boyter, Symbiotics.
22 Yeah, we did look at net head. We didn't just look at
23 average monthly flows; we took an average daily flow and
24 daily elevation, and compared it with tailwater elevation to
25 give a net head for a daily reading.

1 That's what we used for this preliminary
2 generation analysis. Yeah, we started doing the analysis of
3 that tow drain, and I guess the question I had for Leo as
4 you keep records of what those flows are, and are they on
5 the Hydronet?

6 MR. BUSH: Leo Bush, Bureau of Reclamation. We
7 do have those flows available for the last six or seven
8 years now, and they do range up to 50 cfs at full flow is
9 the max, 50, 51, somewhere in there.

10 MR. BOYTER: Is that on the Hydronet or --

11 MR. BUSH: (off mike discussion) It's not
12 available on the Internet, but you can get it from our
13 regional office in Boise, Idaho.

14 MR. BOYTER: Thank you.

15 MR. ROSS: I have a quick question. It's a
16 technical question, since I've got an engineer. This is Bob
17 Ross. What did you use for tailwater elevation? Did you
18 just use a mean elevation?

19 MR. BOYTER: I don't remember what we used on
20 this project in particular. Usually we try to get a
21 tailwater rating curve, to give us a better estimate of what
22 that is at different flows.

23 I can get back to you on what exactly we used,
24 and if we did use a water rating curve, that's something we
25 definitely want to see if we can get from the USGS, or

1 anyone who has that information.

2 MR. ROSS: Okay.

3 MR. PUGLISI: Are there any other questions for
4 FERC or Symbiotics?

5 MR. HOCKING: This is Steve Hocking. This is
6 your chance to let us know, you know, what the issues are,
7 as you see them. So we do have a meeting tomorrow, but
8 tonight --

9 MR. GILLETTE: Okay. I'm Austin Gillette. I'm a
10 resident of La Pine, and presently, I'm you know, can you
11 hear me? Okay. I'm just wondering with the turbine
12 addition, is there going to be or is there a mesh or a
13 screen to keep the fish from going into the turbines?

14 I know this is supposedly a fish-friendly turbine
15 that you're planning to put in, and while somebody -- but is
16 there going to be any like covering of the outlet from the
17 reservoir, in addition to what's there now, to keep or
18 alleviate the fish being sucked in?

19 MR. PUGLISI: Are you saying on the inlet or the
20 outlet?

21 MR. GILLETTE: Inlet. The outlet would be
22 chopped fish, okay, you know, like the garbage grinder, you
23 know. Oversimplification. Anyways, that's just a question
24 on my part.

25 MR. PUGLISI: That's one of the issues they're

1 looking at, but I don't know if Erik wants to answer to
2 that.

3 MR. STEIMLE: Sure. At this point in time, we
4 have not proposed a screen beyond a one-inch trash rack,
5 which is a common thing that we usually put on our intake
6 structures. But again, we're at the very beginning of this
7 process.

8 We proposed the Kaplan turbine instead of like a
9 Francis-type turbine that we've proposed in some of our
10 other projects, where we have had to do some screening,
11 because it does have a really high survival rate with fish.

12
13 We don't know what the exact survival rate is of
14 fish that are currently out-migrating through that facility
15 right now. We do have some data from other projects here in
16 Oregon, where ODF&W has done studies, where you know,
17 mortalities on some systems. Whether or not they can be
18 exactly compared to this, I'm not sure. It's as high as 70
19 percent.

20 But we were out at the facility today and I think
21 most people walked away from there feeling that current
22 mortality of fish coming out of there in that current system
23 is pretty high.

24 So we feel right off the batt that by putting
25 this turbine in there, fish that became entrained from the

1 reservoir coming through our project would stand a
2 potentially better chance of surviving than it would just
3 coming through what's there right now.

4 But to answer your question directly, we have not
5 proposed direct screens or bypass at this point in time.
6 But it is not off the table.

7 MR. ROSS: Eric, when you're complete there, I do
8 have a statement from the Bureau of Reclamation.

9 MR. PUGLISI: Yes, please proceed.

10 MR. ROSS: I want to let him.

11 MR. PUGLISI: We'll see if there are any other
12 specific questions about the project. Any others?

13 MR. CRISS: My name is Ed Criss. I'm a resident
14 of La Pine, Wild River, representative of the Upper
15 Deschutes River Coalition, a citizens action group here in
16 La Pine.

17 My question to you is what would the effects of
18 temperature change be from this project on the river,
19 considering that in the lower part of the Deschutes River,
20 Pelton Dam, we're doing a \$120 million fish introduction
21 program down there.

22 Now those fish aren't going to be swimming up
23 here, from what I understand. However, there is an extreme
24 concern about the temperature changes along the river. We
25 have a number of other projects that are going in, i.e., the

1 Thornburg Destination Resort in Redmond, and the Crescent
2 Destination Resort, which of course is further south of us,
3 but it is at the headwaters here.

4 Have those been taken into consideration about as
5 far as what your effect would be on the temperature of the
6 river, for this big river, for the fish project?

7 MR. STEIMLE: The intake for our project will be
8 at the exact same elevation as the current intake, where
9 waters move from the reservoir into the lower river. So as
10 far as immediate impacts on temperature, as far as you know,
11 taking water from a portion of the reservoir that's warmer
12 and putting in lower river, you know, there's no direct
13 impacts from that.

14 But that being said, on top of that, this project
15 has to receive 401 water quality certification in the state
16 of Oregon, and all phases of construction and operation have
17 to adhere with Oregon's anti-degradation standards.

18 So we cannot change, we can't degrade water
19 temperature at all basically, or the project can't be
20 constructed, it can't operate. So it's in our best interest
21 to design a project that's going to meet those
22 specifications right off the batt, because we're investing,
23 you know, a lot of money to build this facility.

24 That being said, one of the studies that we have
25 proposed is to collect more baseline water quality

1 information. There is some information available in the
2 river, but there's a general posse of information in the
3 reservoir itself.

4 So we are definitely going to complete a
5 comprehensive, at least one year of comprehensive water
6 quality, data-gathering in the reservoir and also in the
7 river, so that we can put together this application for the
8 project for DEQ. Does that answer your question?

9 MR. CRISS: Yes, it does. My other question is
10 how will this project affect the pH and the oxygen in the
11 river? We're having a number of issues in this region. We
12 have something called the local rule that was just recently
13 passed about septic tanks up here, and they're trying to say
14 that all the algae blooms in the river, of course, is
15 because of the septic systems.

16 So if you're changing the pH and the oxygen, we
17 may have some situations where the algae blooms will be
18 affected. What effect is your dam project going to have on
19 that?

20 MR. STEIMLE: No, that's a good question. Again,
21 the short term answer to that is we have to be within these
22 state standards. But as far as our actual effect, would you
23 like to add a little bit to that?

24 MS. STEIMLE: This is Kai Steimle, Symbiotics.
25 There is the potential for our turbines to reduce oxygen as

1 the water moves through, because the outlet right now is
2 very turbulent, and a lot of water or a lot of oxygen is
3 entrained into the water through the current outlet
4 structure.

5 So it's a potential that by running the water
6 through a turbine, there would be less turbulence and less
7 oxygen added. But as Erik mentioned, we can't degrade water
8 quality, and that would include reducing oxygen.

9 So that if we're going to do this monitoring to
10 establish what the current oxygen levels are, and if it
11 looked like our project was reducing oxygen, we would then
12 introduce oxygen at the -- in the tailrace, to maintain
13 current oxygen levels.

14 MR. PUGLISI: Are there any other specific or
15 general questions of the project or the process?

16 MR. CUTLIP: This is Matt Cutlip with FERC. Kai,
17 could you -- Matt Cutlip, FERC. Could you address the pH
18 issue that he just brought up? Do you see any potential for
19 the project to affect, adversely affect pH? The reason why
20 I ask is because, I mean that was basically a request to add
21 an issue that's not already in the scoping document.

22 We've addressed the DO issue, but we haven't
23 addressed the pH. So I guess I just want to spend a little
24 more time clarifying that request.

25 MS. STEIMLE: Our monitoring plan does include

1 monitoring for pH in the reservoir and in the river, and we
2 would not expect our project to alter pH. But we would
3 monitor before any activities took place, and again be held
4 to an anti-degradation standard. Does that answer your
5 question?

6 MR. STEIMLE: Is it the grout that's usually the
7 pH issue during construction, when you could potentially
8 have a -- okay.

9 MR. PUGLISI: Any other questions? Okay. Oh.

10 MR. RIEBER: Rick Rieber with the Bureau of
11 Reclamation, and I was wondering if any of your modeling has
12 considered climate change?

13 I know as a fishery biologist there have been
14 some recent papers in the Pacific Northwest about the
15 potential impact of climate change, and it has a potential
16 to affect the amount of runoff into these reservoirs quite
17 dramatically, from what I've been seeing.

18 I've looked through the PAD and haven't seen
19 anything about it. I know it's something fairly new, but it
20 is out there.

21 MR. CUTLIP: This is Matt Cutlip with FERC.
22 Since FERC would actually be -- since that's technically, as
23 I perceive it, an issue that we would be addressing
24 potentially in the NEPA document, how climate change would
25 affect the project, which in turn would affect environmental

1 resources, we at this time have not been analyzing climate
2 change, given the state of science at this time, because we
3 can't -- there's no proven scientific method to assess the
4 effects of climate change on a hydro project.

5 The way that we've been encouraging applicants to
6 sort of address the issue or capture the potential issue is
7 to look at both, you know, extremely dry years, extremely
8 wet years and then we can consider the potential effects,
9 you know, based on that hydrograph.

10 But there really -- we don't -- this isn't a
11 proven scientific method to basically model climate change
12 that we're aware of.

13 MS. STEIMLE: This is Kai Steimle of Symbiotics.
14 If I can add to that, I think this system would be
15 relatively less susceptible to changes due to runoff,
16 because of the groundwater influence that dominates the
17 hydrology in this system.

18 So given the importance of springs and ground
19 water, I think we have less potential impact for this
20 particular project, in terms of the hydrology.

21 MR. PUGLISI: Are there any other questions?
22 Okay, go ahead Bob.

23 MR. ROSS: This is Bob Ross, Bureau of
24 Reclamation. Again, I'm the regional FERC coordinator for
25 the Bureau of Reclamation. I want to give a couple of

1 comments on -- a little louder? Okay. I can be loud. I've
2 learned that. I have teenagers.

3 Anyway, I want to give a couple of comments from
4 the Bureau of Reclamation. I wanted to start off with a
5 statement that Erik made on the Kaplan turbine being a fish-
6 friendly turbine. Industry-wide, Kaplans in general are not
7 considered fish-friendly.

8 They may have a higher and in some sizes they
9 have a higher survivability of fish that pass through them
10 than possibly Francis. I do agree with that.

11 But they're a class of turbines, such as are
12 being installed at Bonneville Dam on the Columbia, and it's
13 a screw type design. So anyway, I do appreciate FERC
14 setting up these scoping meetings, and investigating the
15 issues of a reclamation dam.

16 Wickiup Dam was authorized by Congress and a
17 finding of feasibility by the Secretary of the Interior on
18 September 24th, 1937, approved by the President on November
19 1st, 1937, pursuant to Section 4 of the Act of June 25th,
20 1910.

21 Irrigation is the only authorized federal use of
22 the project, although Congress, through other acts,
23 supplemental acts, has opened up federal facilities for
24 private development. So we certainly don't oppose the
25 installation of the hydroelectric plant, and feel that in

1 general, this type of development can be an essential
2 supplement to the nation's energy supply.

3 That's one of the tenets of FERC as well, is to
4 make sure that public interests are served, while enhancing
5 the electric supply. So we applaud them for that.

6 As far as the management status of Wickiup Dam,
7 Reclamation and the Forest Service entered into a memorandum
8 of understanding on September 8th, 1971, for administration
9 of forest resources, recreational facilities, lands, water
10 and reclamation works in the Wickiup Reservoir area, Central
11 Deschutes Project, and Deschutes National Forest, to
12 establish the general responsibility for management of the
13 area.

14 Part of the MOA zones, as well as the primary
15 administration by Reclamation were established and
16 collectively referred to as the reclamation zone. These are
17 areas of primary administration by Reclamation, which
18 include the dam and associated dike along the northeastern
19 part of the reservoir, and the dike and spillway along the
20 eastern part of the reservoir.

21 Identification of these areas of management
22 responsibility with the Forest Service in no way diminishes
23 Reclamation's interest in the underlying property. As such,
24 that is the source of our 4(a) authority and 10(a) authority
25 in specifying terms, mandatory terms and conditions later on

1 in the project.

2 The two agencies have overlapping
3 responsibilities in the management of the resources.
4 Reclamation has the jurisdiction on the waters and
5 operations of the Wickiup Reservoir as part of the Deschutes
6 project. These are areas for which reclamation will take
7 the lead in specifying those 10(a) and 4(a) conditions as
8 appropriate.

9 The Forest Service has the responsibility for
10 recreation and management of natural resources and lands,
11 and I will say the staff of both agencies work together very
12 regularly, for cooperative melding of their different
13 missions. So we work well with them.

14 Unfortunately, I think Forest Service did not get
15 a chance to attend this scoping meeting due to forest fires,
16 and we want to make sure that their interests are also
17 preserved through the scoping meetings and through the FERC
18 process.

19 So there may be issues identified by them that I
20 cannot really -- I'm not going to address, but we want to
21 make sure their interests are preserved.

22 The primary use are our concerns and issues, and
23 many of them are covered in the PAD or addressed in one
24 shape or form and in the comments that Erik had made. But
25 we want to reiterate what our interests are in the

1 management of the reservoir, and what our interests are in
2 the reservoir.

3 Number one, is the unimpaired operation of the
4 dam and delivery of water to the North Unit Irrigation
5 District. Erik indicated there would be no difference, no
6 change or intended change of operation of the dam, but we
7 want to make sure that there are sufficient protections in
8 place.

9 If they get a turbine tripoff, that we get a
10 smooth transition of flow, that they deliver the flow at all
11 times to North Unit, okay. We want to make sure that
12 there's a good coordination of the operation of the dam and
13 the power plant with North Unit Irrigation District, so that
14 the flows are delivered, and also that we don't -- if there
15 are any minimum stream flows established downstream, that we
16 don't have any significant ramping of the flows up or down.

17 Obviously today we saw kayakers using the
18 reservoir, the outflow for recreation, and we don't want to
19 -- we want to make sure that no situations occur that would
20 jeopardize boating or personal safety downstream. We also
21 saw people using the fishing in the upper reservoir. So
22 it's a viable recreation asset.

23 The last thing is Reclamation has a public trust
24 responsibility to ensure dam safety. That's overriding, I
25 think, anything we do. Some of the structures are getting

1 old and dam safety and equipment safety include such things
2 as some very old turbine valves that are approaching 70
3 years old.

4 As such, Reclamation must have approval authority
5 for all facilities that might affect the integrity of
6 federal facilities. So it has to be a cooperative
7 arrangement agreement in how the project is designed.

8 This approval includes the design review and
9 approval, and construction inspections for the power plant
10 construction. Again, such approval will not relieve the
11 licensee of the basic responsibility or the liability of
12 project operation and for the integrity of their facilities
13 that might in some way affect the delivery of water.

14 Okay. As such, we're going to ask -- at some
15 point we're going to ask the Commission to require the
16 licensee to enter into contracts for coordination,
17 construction and completion of the Wickiup Hydroelectric
18 Project, and prior to first water operations enter into a
19 contract for operation of the hydroelectric project.

20 Such license -- at some point, such contracts
21 will require the licensee to reimburse Reclamation for
22 additional staff time and expenses. We have no falling
23 water charges or charges for use of the dam facilities.

24 But since this is additional effort by
25 Reclamation, we will enter into contracts that will

1 reimburse the U.S. government for our time and staff effort,
2 okay.

3 Again, on specific comments, some of these issues
4 were covered in Erik's comment, but I think that we need to
5 reinforce them. The studies that Reclamation would feel
6 would be appropriate are dissolved oxygen, acidity and water
7 quality, temperature and baseline studies required to
8 support study of the turbine-induced mortality and injury of
9 fish.

10 The studies that you have proposed are associated
11 with upstream migration of fish and not downstream migration
12 of fish. We feel that there's a much higher potential for
13 mortality of fish being entrained, and although we agree
14 they don't -- there's a significant survival of fish to the
15 turbine, but there is some impact and we can expect some
16 impact from the project on that.

17 So we would recommend that the turbine strike
18 studies include downstream migration, as well as the
19 potential for upstream migration. There's going to be
20 significantly greater effort on your part to accomplish
21 those studies, okay.

22 Again, once those studies are complete, that were
23 have proper mitigation for the impacts of the project.
24 Specific operation-related issues that have been related to
25 me by the Reclamation staff that's of primary concern to us

1 is that we have the two valves in there that everyone saw
2 today.

3 Those valves are old. They typically get fully
4 exercised, opened and closed once a year. They'll be opened
5 incrementally through the season, to max flow and come back
6 down to a minimum flow as required for irrigation delivery.

7 The installation of the power plant will require
8 the valves to be exercised, possibly from full flows to full
9 open regularly if the turbine shuts down. That's on a long
10 distribution level transmission line, and that every time
11 you get a power bump or a lightening strike, and we do have
12 lightening in this area as we all found out the other day,
13 typically those lines trip off.

14 So any time that happens, you'll get those two
15 valves being exercised from whatever percent opening. The
16 indication that I have from the staff is periodically those
17 valves stick, and without someone there to make sure that
18 they open and close, they're 87 years old. They're somewhat
19 finicky. We are going to an annual inspection of at least
20 one of those valves per year over B water.

21 So again the design of the power plant, although
22 we have a schematic drawing, I've gone over it with your
23 engineering staff for recommendations that will be included,
24 and where those valves are located. But we cannot lose the
25 capability to maintain those valves, because they're a

1 critical part of our dam and water delivery system.

2 We need to make sure that if there are failures,
3 that we have proper notification to North Unit, if the
4 irrigation flow is interrupted. Also in the case of any
5 failure of their equipment that would affect the public,
6 that the emergency action plan be coordinated with
7 Reclamation's emergency action plan. That they have proper
8 environmental plans in place and proper procedures to --
9 proper procedures in place to notify the public, okay.

10 We note that the power plant will require a wider
11 tailrace, and there will be changed flows in the patterns of
12 the water exiting the turbine. So you'll want to monitor
13 the tailrace for additional scour, and make sure it's
14 properly armored. One of the aspects of Kaplans is you get
15 more of a rolling water pattern out of the tailrace than the
16 direct shooting out of water that currently occurs.

17 Other comments, we noticed that the power lines
18 that went out to the plant is a single-phase line, and
19 although you'll be contracting with the local utility, that
20 that will require significant upgrades, well outside of the
21 project boundary. I don't know how many miles, but it is
22 quite a number of miles that you'll have to go.

23 So we're going to recommend to the Commission
24 that they draft a protection plan in accordance with the
25 current standards for raptor protection.

1 Some of that will in fact be part of the project,
2 but we encourage the Oregon departments to ensure that the
3 remainder of the transmission line is properly upgraded for
4 raptor protection.

5 Being that there are bald eagles directly in the
6 area, we think that that's very important. Okay. We
7 mentioned the adult fish strike analysis be included, to be
8 expanded to include any data acquisition that may be
9 required for further studies after the project is in
10 operation, of the turbine mortality and injury of fish.
11 Rick, do you have any additional comments?

12 MR. RIEBER: Rick Rieber from Reclamation. In
13 addition to the turbine-induced mortality injury studies, I
14 think it's important that a monitoring program should be
15 developed, in consultation with reclamation, Oregon
16 Department of Fish and Wildlife and others, others being
17 Fish and Wildlife Service and perhaps the Confederated
18 Tribes of Warm Springs, in design to determine the magnitude
19 of injuries and mortality on entrained fish.

20 Monitoring results will determine the need for
21 additional studies, project operation modifications, or
22 additional monitoring compensation for turbine-induced fish
23 injury and mortality. I think that consultation will need
24 to occur annually. I'm sure that's got to be fleshed out.
25 That's all I have.

1 MR. ROSS: Again, we're pledged to work with the
2 licensee to develop a good project. That completes the
3 Reclamation's comments.

4 MR. PUGLISI: Great. Well thank you very much,
5 Bob. You gave us a lot of insight there from Reclamation.
6 We appreciate all the comments, and we'll be anxious to see
7 the transcript, to review all this that you brought up
8 today.

9 It's a lot of very important and good
10 information. We appreciate the Bureau being here tonight.
11 As Bob mentioned, the Forest Service obviously is not here
12 tonight because of the fires. Therefore, they're obviously
13 a key player in this project, with it being on their land.

14 That being said, that kind of reminds me too that
15 a little housekeeping announcement I wanted to make, is that
16 tomorrow, there's a meeting tomorrow, another scoping
17 meeting. This is more of an agency-driven scoping meeting,
18 which most people here tonight are.

19 But tomorrow's meeting, the location has been
20 changed. It was at -- in the scoping document, you'll see
21 it says it was at the Forest Service Building, but they need
22 their facilities for the fires. So therefore the new
23 location for tomorrow's meeting is at the Boyle Education
24 Center Board Room at the Central Oregon Community College.

25 The address is 2600 Northwest College Way, and

1 it's in Bend, Oregon. That's at 9:00 a.m. There will be a
2 note on the door at the Forest Service Building, to let
3 everybody know to go over there.

4 So the meeting -- some people will get there
5 late, but the meeting's probably going to be held back for
6 15 minutes or so, just to make sure anybody who arrives at
7 9:00 at the Forest Service Building has a chance to get over
8 to the community college.

9 Also, I just want to reiterate once again, I know
10 we quickly went through the schedule at the beginning here.
11 But the D date for everyone in this room is September 23rd.
12 That's when all comments on the pre-application document and
13 the scoping document are due, as well as a list of study
14 requests.

15 So I strongly encourage people to submit any
16 comments they have written. Are there any other comments
17 anyone would like to make?

18 Yes. The back page of the SD-1 has the dates,
19 and please keep in mind that these are dates as of today.
20 If something on the schedule -- the schedule could change.
21 So periodically, you need to check to make sure, go onto
22 FERC's website in the E-Library under this project, to check
23 up to see how things are going.

24 I'm assuming Symbiotics will have dates on their
25 website, or should I --

1 MR. STEIMLE: We don't as of yet.

2 MR. PUGLISI: Well, I mean okay. Well, I'm
3 sorry. I didn't mean to -- but it's definitely in the E-
4 Library at FERC. So like I said, just please keep aware.
5 If you e-subscribe, that's the best way to be notified of
6 any changes. So are there any other questions or comments
7 this evening?

8 (No response.)

9 MR. PUGLISI: Okay. I don't see any others. So
10 I'd just like to thank you all once again for coming to this
11 meeting, and I guess we will now adjourn the meeting, and
12 hopefully I'll see you all tomorrow morning, to discuss this
13 again. Thank you.

14 (Whereupon, at 8:10 p.m., the meeting was
15 adjourned.)

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