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BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

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IN THE MATTER OF: :

DESABLA-CENTERVILLE HYDROELECTRIC : Docket Number

PROJECT : P-803-087-CA

PACIFIC GAS AND ELECTRIC COMPANY :

- - - - - x

Conference Room 62-26

Federal Energy Regulatory Commission

888 First Street, N.E.

Washington, D. C. 20426

Friday, November 14, 2008

The above-entitled matter came on for
teleconference, pursuant to notice, at 1:00 p.m., Aaron
Liberty, presiding.

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

2 (1:04 p.m.)

3 MR. LIBERTY: This is Aaron Liberty with FERC. I
4 think we will go ahead and get started. I just first wanted
5 to remind everybody that we do have a court reporter here
6 today, so before you speak if you could just please state
7 your name and your agency and that will make things easier
8 for the court reporter and for everybody else on the phone.

9 First I would just like to go around and get
10 everybody's names and who they are representing, if anybody.
11 So I will go ahead and start.

12 This is Aaron Liberty with FERC.

13 MR. JEREB: This is Tom Jereb with Pacific Gas &
14 Electric.

15 MR. LIBERTY: Sorry, what was that again?

16 MR. JEREB: Tom Jereb. It's spelled J-E-R-E-B,
17 with PG&E.

18 MR. LIBERTY: Thank you.

19 MR. JOHNSON: This is Todd Johnson from PG&E.

20 MR. CHESLAK: This is Ed Cheslak from PG&E.
21 C-H-E-S-L-A-K.

22 MR. HARTHORN: Allen Harthorn, Friends of Butte
23 Creek, A-L-L-E-N, H-A-R-T-H-O-R-N.

24 MR. FOSTER: This is Bill Foster, U.S. Fish &
25 Wildlife Service.

1 MR. BOWES: Steve Bowes, National Park Service.
2 That's B-O-W-E-S.

3 MR. LIBERTY: Sorry, what was that again? We're
4 having a hard time hearing you.

5 MR. BOWES: Steve Bowes, National Park Service.
6 B-O-W-E-S.

7 MR. BRENNAN SMITH: Brennan Smith with Oak Ridge
8 National Lab.

9 MR. BEVELHIMER: Mark Bevelhimer with Oak Ridge,
10 and that's spelled B-E-V-E-L-H-I-M-E-R.

11 MR. HOLZMER: This is Fred Holzmer with Devine
12 Tarbell & Associates. Last name is H-O-L-Z, as in Zebra, M,
13 as in Mary, E-R.

14 MR. WILCOX: Scott Wilcox, Stillwater Sciences,
15 Consultant to PG&E. W-I-L-C-O-X.

16 MR. SWANEY: And Wayne Swaney, Stillwater
17 Sciences. That's spelled S-W-A-N-E-Y.

18 MS. PAWLEY: Anitra Pawley with Stillwater
19 Sciences. A-N-I-T-R-A. Last name is P-A-W-L-E-Y.

20 MR. RICK JONES: Rick Jones with Devine Tarbell &
21 Associates, a consultant to PG&E.

22 MR. BERGER: Chris Berger with Scott Wells &
23 Associates for PG&E.

24 MR. SHUTES: Chris Shutes with the California
25 Sport Fishing Protection Alliance. That's S-H-U-T-E-S.

1 MR. KANZ: Russ Kanz with the State Water
2 Resources Control Board.

3 MS. LAWSON: Beth Lawson with the Department of
4 Fish & Game.

5 MR. LIBERTY: Did we get everybody?

6 MR. STEITZ: Curtis Steitz with PG&E.
7 S-T-E-I-T-Z.

8 MR. LIBERTY: Okay, it sounds like we've got
9 everybody. This is Aaron with FERC. Hopefully everybody
10 got Ken Hogan's e-mail yesterday just kind of laying out the
11 purpose of this meeting and the ground rules for the
12 teleconference, but just briefly to go over those:

13 The objective of this meeting today is for
14 Commission staff and our contractor, Oak Ridge, to get some
15 clarification on a few aspects of how PG&E ran some of their
16 water temperature models.

17 However, after each question is answered by PG&E
18 we are going to provide an opportunity for the other
19 participants on the phone to comment, if need be. However,
20 I do want to urge the other participants when commenting to
21 please try to stay on topic, and to be brief, and to not
22 discuss any merits today.

23 We only have this conference line for a limited
24 amount of time. I just want to make sure we get through all
25 the issues we have outlined today.

1 Does anybody have any questions before we get
2 started?

3 (No response.)

4 MR. LIBERTY: All right. Hopefully everybody saw
5 the notice we issued on November 5th that kind of outlined
6 the questions we were going to be discussing here today. I
7 think there are probably a dozen or so questions to get
8 through.

9 So with that, I am going to go ahead and hand it
10 off to either Mark or Brennan over at Oak Ridge to go ahead
11 and just start from the top with our questions.

12 MR. BRENNAN SMITH: Okay, thanks, Aaron. This is
13 Brennan Smith.

14 In the notice that came out from Ken, the first
15 set of questions A through E are specifically related to the
16 scenario runs outlined in Appendix 6.2.2.3-G on page G-80,
17 and these are the runs where there was 2005 meteorology run
18 with 2001 hydrology.

19 So the first question we have is that when you
20 consider 2001 hydrology in terms of both the inflows to the
21 watershed for Round Valley, Philbrook, and then how that is
22 routed down to DeSabra to the Four Bay, what was the
23 rationale used to establish what the releases from those
24 storage projects would be as inputs to the CE-QUAL W-2
25 modeling for those scenario runs?

1 MR. CHESLAK: Brennan, this is Ed Cheslak. I was
2 the sort of technical lead for the modeling for W-2
3 modeling. The rationale that was used for the 2001 was the
4 Operations Model. We used 2001 unimpaired hydrology and the
5 Operations Model was used to represent how we would use
6 that, run the project currently--that is, in 2007 Operating
7 Rules--and those were applied to the 2001 hydrology in
8 combination with the 2005 meteorology.

9 And that Operations Model was then used to
10 develop hydrology time series that were transferred as
11 boundary conditions to the various water quality models.
12 And those water quality models are--the W-2 model was run
13 with those inputs to obtain temperature outputs.

14 MR. BRENNAN SMITH: Okay. Thanks.

15 We have reviewed the filings and as far as we can
16 tell do not have the input files for those 2001 management
17 scenario runs. Are we--is it possible to get those?

18 MR. CHESLAK: Absolutely.

19 MR. BRENNAN SMITH: Okay.

20 MR. CHESLAK: I'm making some notes here. Input
21 files. So you need both--I mean, all the input files, both
22 hydrology as well as temperature?

23 MR. BRENNAN SMITH: Yes.

24 MR. CHESLAK: Well, you have the meteorology,
25 obviously.

1 MR. BRENNAN SMITH: Yes. We would prefer to have
2 a complete set for each run in this appendix for these
3 management scenarios, but, yes, we have the hydrology and
4 would like to see exactly what you put in from the hydrology
5 input files.

6 MR. CHESLAK: Okay.

7 MR. BERGER: This is Chris Berger, Portland
8 State. I have those files, and I can provide those to you
9 fairly easily.

10 MR. BRENNAN SMITH: Thank you. Aaron, that's all
11 I have on Question A.

12 MR. LIBERTY: Okay. This is Aaron with FERC.
13 This is for PG&E, I guess. How soon could you guys provide
14 that information to us?

15 MR. BERGER: I could provide it today.

16 MR. LIBERTY: Who is that?

17 MR. BERGER: This is Chris, yes.

18 MR. LIBERTY: Excellent. Anybody else on the
19 phone have any comments on that?

20 MR. JOHNSON: Hey, Aaron, do we want to wait and
21 find out what the deliverables are going to be as a result
22 of this meeting and provide them all together?

23 MR. LIBERTY: Yes, we can go ahead and do that at
24 the end, Todd.

25 MR. JOHNSON: And I guess we're all keeping a

1 list of what type of follow-ups there are, but we ought to
2 review those at the end of the meeting, as well.

3 MR. LIBERTY: Okay. Anybody else have anything
4 for that?

5 (No response.)

6 MR. LIBERTY: All right, we can go ahead and move
7 on. Mark? Brennan?

8 MR. BRENNAN SMITH: Okay, this is Brennan again.
9 Can you describe how--Question B is how the SNTMP outputs
10 were, and specifically here temperature and perhaps flow,
11 were transferred as inputs to the CE-QUAL W-2 components of
12 the modeling system, and then vice versa, there are also
13 some points within the modeling system where CE-QUAL W-2 may
14 have informed SNTMP inputs.

15 MR. CHESLAK: This is Ed Cheslak again. We did
16 not create any linkages between SNTMP and W-2. So both of
17 those models were run independently. SNTMP was run on a
18 daily time step over a variety of release scenarios to just
19 describe the relationship between release and temperatures
20 at various locations within the stream being looked at,
21 which is Butte Creek, Upper Butte Creek and the West Branch
22 of the river below Hendricks Diversion Dam.

23 And CE-QUAL was an independent model that we ran
24 on a variable time step looking at different operational
25 scenarios that would affect Chinook Salmon in Lower Butte

1 Creek.

2 MR. BRENNAN SMITH: Okay. So for example the
3 SNTMP Model of flow and temperature in Butte Canal did not
4 influence the inputs into Models 7 and 8 of the--described
5 in the Appendix in CE-QUAL W-2 Models?

6 MR. CHESLAK: That is correct. Chris, I believe
7 that we may have, when we looked at some of the extractions
8 from Butte Creek with all of the resource agencies'
9 recommendations combined, we may have used the SNTMP output
10 from that model. But I can't quite recall.

11 We may have also just reduced the flow and not
12 bothered with the temperature, because the relationship
13 between stream flow and temperature in the canal was very
14 minor. And so with the 4 cfs reduction in flow that came
15 from the reduction in feeder diversion flow, there was very
16 little change in average daily temperature. So I believe we
17 just changed the magnitude of the flow.

18 Isn't that correct, Chris?

19 MR. BERGER: I believe so.

20 MR. CHESLAK: Yes. So we didn't change the
21 temperature of the inflow at Butte Canal that came into
22 Hendricks. We just changed the magnitude of the flow.

23 MR. BRENNAN SMITH: Okay. Thanks.

24 And as one more example question, the output from
25 Model 6, the W-2 model for the Upper WBFR for the river, did

1 that provide any input information to the SNTEMP Model of
2 the Lower River?

3 MR. CHESLAK: No, it didn't. Again we ran the
4 SNTEMP Model at Hendricks down independently to define the
5 relationship between stream flow and water temperature
6 independently of whatever the temperatures were above.

7 Now the reason we did that--let me sort of expand
8 on that if you will--early on in our analysis we ran the
9 Operations Model and determined that if we were going to
10 supply more flow to the West Branch of the Feather River
11 below the Hendricks Diversion through additional releases
12 from Philbrook Reservoir that we in fact didn't have
13 sufficient water in Philbrook Reservoir to do that and
14 maintain the cold water pool that we use to protect salmon
15 over at Butte Creek.

16 So the Operations Model informed us that changing
17 the operations of Philbrook by releasing more Philbrook
18 water down Philbrook Creek and down into the West Branch of
19 the Feather River would not be an effective strategy for
20 providing additional flow below Hendricks Diversion Dam.

21 Consequently, any time we were looking at
22 increased flow below Hendricks Diversion Dam it would come
23 out of the transfer of flow from the Hendricks Diversion Dam
24 via Hendricks Canal over to DeSabra Four Bay. That is it
25 would come out of generation.

1 And because of that, there was no flow change, or
2 operational change, that occurred in the Round Valley or
3 Philbrook or Upper West Branch Feather River system, and
4 therefore there would have been no change in temperature for
5 any of the scenarios that we looked at.

6 MR. WILCOX: This is Scott Wilcox with
7 Stillwater. So as a result you end up with the start
8 temperatures at Hendricks Diversion for the SNTEMP Model
9 that are consistent with the monitored temperatures that we
10 got there during the period of study.

11 So it would simply be a question of whether more
12 or less water got released from Hendricks down, not a change
13 in temperature. So the alternatives where more or less
14 water was released were modeled in the SNTEMP model and
15 presented in the License Application under varying flow
16 scenarios, but they don't need to use varying start
17 temperature scenario.

18 MR. BRENNAN SMITH: Okay. Thank you.

19 Aaron, that's all we have on Part B.

20 MR. LIBERTY: Okay, thanks, Brennan. Does
21 anybody else have any comments?

22 MS. LAWSON: Yes, I just wanted to point out one
23 thing--

24 MR. LIBERTY: Sorry? Who's speaking?

25 MS. LAWSON: Beth Lawson from the Department of

1 Fish & Game.

2 MR. LIBERTY: Okay.

3 MS. LAWSON: The one thing I wanted to point out
4 is on the Butte Creek System the water temperature modeling,
5 the SNTEMP Modeling that was done in the river, cannot feed
6 the downstream CE-QUAL W-2 Models because in between there's
7 the Fork of Butte Project, and PG&E does not operate that
8 project so they did not do water temperature modeling in
9 that one mile or so reach. So we can't necessarily
10 connect--there isn't a way to connect the upstream SNTEMP
11 with the downstream CE-QUAL W-2 modeling in the river.

12 MR. BEVELHIMER: This is Mark Bevelhimer from Oak
13 Ridge. I had that as an extra question at the end kind of
14 with a little more explanation on that Forks of Butte
15 Project. I know it's pretty small and I've tried to dig in
16 and learn some stuff but I haven't found a lot.

17 In just a few sentences can somebody tell me how
18 that works?

19 (Pause.)

20 UNIDENTIFIED SPEAKER: Well I will attempt to--

21 THE REPORTER: Who is that?

22 UNIDENTIFIED SPEAKER: --to describe it.

23 MR. LIBERTY: Is this Curtis?

24 UNIDENTIFIED SPEAKER: Oh, Curtis? Oh, this is
25 Ed Cheslak.

1 MR. LIBERTY: Sorry, Ed.

2 MR. CHESLAK: There is a diversion dam below the
3 confluence of the West Fork of Butte Creek that can divert I
4 believe a maximum diversion is 200-or-so cfs. That's a
5 guess that I'd have to check on, but it's a substantial
6 amount of flow through a canal, through--actually, it's a
7 conduit drilled right through the mountain, so it's not an
8 open canal but it's a--

9 UNIDENTIFIED SPEAKER: A tunnel.

10 MR. CHESLAK: --a tunnel, thank you, and it
11 delivers water down to the Forks of Butte Powerhouse. I
12 usually have a little cheat sheet here that tells me the
13 distances of those various structures, but I think it might
14 be greater than a mile, Beth, but I can't quite remember.
15 And then the water is returned.

16 They do have a minimum in-stream flow of 40 cfs
17 in the stream. Is that correct, Curtis?

18 UNIDENTIFIED SPEAKER: This is Allan. Yes, it
19 is, 47, yes.

20 UNIDENTIFIED SPEAKER: 47.

21 UNIDENTIFIED SPEAKER: Yes.

22 THE REPORTER: Could people please identify
23 themselves?

24 MR. CHESLAK: Whenever the incoming flow to that
25 diversion dam is equal to or less than 47, then they

1 obviously stop their diversion. Now what that operationally
2 means is that they usually stop at around 57 or so cfs.

3 MR. LIBERTY: This is Aaron with FERC. Can I
4 just remind you guys to please state your name before you
5 speak? The court reporter is having a difficult time
6 figuring out who is speaking on this end.

7 MR. CHESLAK: Okay.

8 MR. LIBERTY: Thanks.

9 MR. CHESLAK: This is still Ed Cheslak. So one
10 of the reasons we didn't try to model that is that any
11 additional flow that we released from--in Upper Butte Creek
12 at the Head Dam, the Forks of Butte Diversion has the
13 capacity to take that entire amount and divert it for power
14 production.

15 So we did not want to get into the intricacies of
16 how they operate their project, and when they would stop
17 diverting and all of that. So that was the justification
18 for stopping our modeling at the Forks of Butte Diversion
19 Dam.

20 Does that help?

21 UNIDENTIFIED SPEAKER: Yes, it does. And so the
22 SNTMP Model for that Upper Butte then is past the Diversion
23 Dam.

24 UNIDENTIFIED SPEAKER: Okay.

25 MR. BEVELHIMER(?): And that explains I guess why

1 then it also makes it difficult to link the Upper Butte
2 Creek SNTMP Model to the Model 9, I guess it is, in the W-2
3 Model.

4 MR. CHESLAK: Yes, it does. And the kind of
5 modeling scenarios--Ed Cheslak again--the kind of modeling
6 scenarios we were investigating for extractions from the
7 Butte Canal re-releases back into Butte Creek were
8 relatively small.

9 The feeder diversions, the total number of feeder
10 diversions are relatively small, and the agencies had asked
11 for a totality of 4 cfs to be released, increased release
12 from those feeder diversions into Butte Creek, and there's
13 just not much of a change probably in temperature that would
14 occur way down at DeSabra Power House as a result of that 4
15 cfs. So we just endured that subtlety.

16 MR. BEVELHIMER(?): Okay.

17 MR. LIBERTY: Anything else?

18 MR. CHESLAK: Let's see--this is Ed Cheslak
19 again--the one final thing that led us to not develop a
20 model was that early on when we were doing our
21 investigations of the amount of water that could come out of
22 the Hendricks Towtown Canal, we did two simulations, one at
23 5 cfs and one at 15 cfs. When we removed 15 cfs it was our
24 conclusion that that had a fairly substantial effect on the
25 temperatures in Lower Butte Creek which could put the salmon

1 at greater risk.

2 So we concluded that there wasn't a lot of water
3 available for additional releases in Butte Creek, and so we
4 looked at that 15 cfs as total, and it could be
5 partitioned--well, we concluded that 5 cfs could be
6 released, but that was a total release. So it was either
7 going to be down the West Banks of the Feather River, or it
8 was going to be down Butte Creek, but not both. And that
9 further kind of verified that the importance of developing a
10 model, SNTMP Model, that would connect the Butte Creek
11 segment there was probably not value added.

12 Did that make sense?

13 (Pause.)

14 MR. LIBERTY: Thank you, Ed.

15 MR. CHESLAK: Okay.

16 MR. LIBERTY: Brennan, go ahead.

17 MR. BRENNAN SMITH: Okay, Part C. This relates
18 to again to the management scenarios, specifically number
19 five on page G-80, of the 50 percent reduction in thermal
20 loading in DeSabra Four Bay. We would just like for you to
21 describe how you define the thermal loading, and then
22 correspondingly how you would produce inputs to models 8, 9,
23 and 10, or actually 8, to implement the reduction in the
24 defined thermal loading.

25 MR. CHESLAK: This is Ed Cheslak. I'll let Chris

1 Berger go ahead and explain how that was accomplished.

2 MR. BERGER: This is Chris Berger. What we did
3 is we took the outflow temperature and inflow temperature
4 for DeSabra Model 8, and took the base case simulation,
5 inflow temperature and outflow temperature for DeSabra, and
6 reduced the temperature difference between the inflow and
7 the outflow by 50 percent.

8 So if there is a temperature increase of let's
9 say half a degree Celsius, that was reduced to .25 degree
10 Celsius. At certain times the temperature actually
11 decreased passing through the reservoir and that decrease
12 was like minus point 2 degrees Celsius. That 50 percent
13 reduction scenario released that minus to .1 degrees
14 Celsius.

15 MR. BRENNAN SMITH: This is Brennan Smith. That
16 halving was applied at whatever time step of input data to
17 model?

18 MR. BERGER: Yes, it was straight across.

19 MR. BRENNAN SMITH: Okay.

20 MR. LIBERTY: This is Aaron Liberty with FERC.
21 Anybody else have any other comments on that?

22 (No response.)

23 MR. LIBERTY: Okay, go ahead Brennan. I guess we
24 can move on to D.

25 MR. BRENNAN SMITH: Okay, Part D I think Chris

1 answered that question with his previous answer, that the
2 baseline in this case would have been the--well, Chris,
3 could you repeat the baseline?

4 MR. BERGER: Yes, the baseline that was used, of
5 the model scenarios, was a 50 percent reduction, and then an
6 80 percent reduction of the model, from the base case
7 simulations.

8 MR. CHESLAK: This is Ed Cheslak. The baseline
9 is the hydrology, the current hydrology in operations that
10 create that hydrology, without any adjustments. So for 2005
11 it was our current operations in hydrology, and in 2001 it
12 was the hydrology obtained from the Operations Model. That
13 was the baseline.

14 MR. BRENNAN SMITH: Okay. And that was--this is
15 Brennan Smith again--and the baseline would be your current
16 License conditions, correct?

17 MR. CHESLAK: This is Ed Cheslak, and that is
18 correct.

19 MR. BRENNAN SMITH: That's all for D, Aaron.

20 MR. LIBERTY: Thanks, Brennan. Anyone else?

21 MR. SHUTES: This is Chris Shutes with CFSPA, and
22 I would point out for the benefit of the folks from Oak
23 Ridge that there are current License conditions, but just
24 remember the operating rules for the model and for the base
25 case the model, there are rules over and above what is given

1 in the License.

2 MR. BRENNAN SMITH: This is Brennan Smith. By
3 "the model," the model you just referred to is the
4 Operations Model?

5 MR. SHUTES: Correct.

6 MR. BRENNAN SMITH: Okay.

7 MR. LIBERTY: Thanks, Chris. Brennan, do you
8 have anything else with that?

9 MR. BRENNAN SMITH: No, that's all for Part D.

10 MR. LIBERTY: Okay. Anyone else? Any comments?

11 (No response.)

12 MR. LIBERTY: Okay, I guess we can move on, then.

13 MR. BRENNAN SMITH: Okay, this is Brennan Smith.
14 On Part E, when you're running low flows 2001 hydrology,
15 were any adjustments to the model required in terms of--and
16 I gave examples there of rough cementing in values, or
17 slopes in the segments, or any other parameters, including
18 for example the maximum time steps to allow those cases to
19 run in W-2.

20 MR. BERGER: This is Chris Berger. Yes, I think
21 for the scenarios that you're reducing 5 cfs and 15 cfs from
22 Hendricks Head Dam, we did reduce the maximum time step and
23 when we provide you the file soon you will be able to see
24 that.

25 Also, for I guess it's Model 7, the Hendricks

1 Canal Model, when we took water out of Hendricks Canal, I
2 did adjust the bottom-most layer width to keep the model
3 from drying up. I apologize for not documenting that in the
4 report, but I did narrow up the bottom-most layer maybe say
5 for instance from 1.2 to 1.0 in some of the branches in the
6 Hendricks Canal Model. And also on one of the branches--
7 there's like 13 branches total--I increased mannings end
8 from .037 to .040.

9 Also, I also did a check to make sure there
10 wasn't a significant temperature difference between the
11 model that slightly altered dosimetry and the original base
12 model and the difference was like about a hundredths of a
13 degree Celsius, or so.

14 MR. BRENNAN SMITH: Okay, thank you. And those
15 changes will be reflected in the model files we're getting
16 from you?

17 MR. BERGER: Yes.

18 MR. BRENNAN SMITH: Okay. Thank you.

19 Aaron, that's all I've got on E.

20 MR. LIBERTY: Okay, thanks, Brennan. Anyone
21 else?

22 (No response.)

23 MR. LIBERTY: I guess with that we can go ahead
24 and move on to the SNTEMP Model questions.

25 MR. SHUTES: Aaron, before you do--this is Chris

1 Shutes from CFSPA. I did have something on point B
2 regarding something that Ed said about the operations of
3 Forks of Butte.

4 MR. LIBERTY: Okay.

5 MR. SHUTES: I believe that there is an
6 operational need at Forks of Butte to have something on the
7 order of 60 cfs to make it either functional or practical to
8 function, 60 cfs running through the pipe, so that Ed said
9 something like when they get down to 57 cfs or so they shut
10 it off. My understanding is--and perhaps Allan can correct
11 me if I'm wrong--is that it's actually more on the order of
12 a little more than 100 cfs you need to have compliance flow
13 coming in to that diversion dam for Forks of Butte before
14 they operate.

15 MR. HARTHORN: Chris, this is Allen Harthorn.
16 I'm actually looking at the Forks of the Butte Water Rights
17 Application and it does indicate that it will operate at a
18 minimum of 12 cfs.

19 MR. SHUTES: Okay.

20 MR. HARTHORN: So I was incorrect in that number
21 previously, and it appears that they can run it down to 12 .
22 So that would be about 60 cfs that they shut off at.

23 MR. SHUTES: Thank you. And excuse me for
24 interrupting.

25 MR. LIBERTY: Thanks, guys. Go ahead, Brennan.

1 MR. BEVELHIMER: This is Mark. I'm going to take
2 over here for the SNTMP question.

3 MR. LIBERTY: Mark Bevelhimer.

4 MR. BEVELHIMER: The first question just mentions
5 that there were some different years used for the
6 simulations for the different (word cut off) river, and they
7 don't also always match up with what was used in the W-2
8 Model, but I was just curious whether or not there were
9 other SNTMP files that might be available for other years.

10 MR. LIBERTY: Mark, this is Aaron with FERC.
11 Could you repeat that? We didn't get that on this end.
12 Please.

13 MR. BEVELHIMER: The--let me move a little closer
14 to the phone here.

15 Okay, in the Butte Creek Model there were model
16 runs for 2004 and 2005, and for the Lower West Branch of the
17 Feather River there's 2005, 2006 and 2007. And for the W-2
18 modeling in the other reaches of the rivers there were some
19 different years, as well. And so we were just wondering if
20 there were any other years of data for the SNTMP models
21 that might have been run that are available?

22 MR. WILCOX: This is Scott Wilcox with
23 Stillwater. The short answer, Mark, is no. The Butte Creek
24 Model, as you indicated, was run for 2004 and 2005. That
25 was what we had data for at that time and allowed the

1 calibration and validation of that model.

2 And then similarly for the Lower West Branch
3 there wasn't sufficient information from 2004, so we needed
4 to calibrate and validate the 2005, and then
5 subsequently--validate it to 2006 after those data were
6 available.

7 On the Lower West Branch side, at the request of
8 the participants an additional model ended up being
9 developed for dryer-year conditions and calibrated for that
10 scenario, and that was the 2007 model.

11 MR. BEVELHIMER: This is Mark. Okay. So that's
12 what I kind of figured, but I thought I'd ask.

13 The second question relates a little bit to the
14 question we talked about earlier on Item B above, and that
15 was whether or not the releases--well, let me see if I can
16 read this here--well, the question is: Were the simulations
17 with the Butte Canal and the Upper Butte Creek coordinated
18 in any way such that during a dry year if you're trying to
19 simulate a minimum flow in Upper Butte Creek that that water
20 then was put into the Canal to simulate a dry year there,
21 and sort of vice versa? And it appears that there's not any
22 really linkages there, certainly not with the W-2 model
23 anyway.

24 MR. WILCOX: This is Scott Wilcox. And that is
25 correct for the SNTEMP model as well. The two Upper Butte

1 models for the canal and the creek are independent of one
2 another. So from an effective minimum flow standpoint, one
3 would just need to be sure that any flows put into the
4 canal, plus the flows that are released down the river,
5 equal the total inflow to the system.

6 MR. BEVELHIMER: Okay. And this is Mark again.
7 Is there a maximum flow for the canal?

8 MR. WILCOX: Yes, there is. I think Curtis or Ed
9 might know that off the top of their heads.

10 (Pause.)

11 Or not.

12 MR. CHESLAK: This is Ed Cheslak. I would just
13 have to guess. If my memory serves me, it's about 120 cfs I
14 think, but I'm not absolutely sure about that.

15 MR. WILCOX: Curtis, are you there that you might
16 be able to look that up?

17 MR. STEITZ: Yes. This is Curtis Steitz. I
18 think the maximum flow for Butte Canal is--I'm kind of
19 thumbing through some pages here--I think it's about 96 cfs.
20 Todd, or Tom, do you know that off the top of your head?

21 UNIDENTIFIED SPEAKER: I'm looking that up here.
22 It's--

23 MR. LIBERTY: Who is speaking?

24 MR. JEREB: This is Tom Jereb.

25 MR. LIBERTY: Thanks, Tom.

1 MR. JEREB: Yeah. On Butte Creek Canal, my
2 records are showing 90 cfs as the capacity of that Canal.
3 Let me look up on another table here and I'll try and--if
4 you want to continue, I'll try and get that number.

5 MR. WILCOX: This is Scott Wilcox. I'd like to
6 clarify, and this might be relevant, Tom, to the numbers
7 you're looking up, that the capacity of that Canal at the
8 bottom or downstream end needs to be and is larger than its
9 capacity, or what they put into it at the top end, because
10 you do have the addition of the feeder trib.

11 So with regard to Mark's original question, in
12 terms of doing any mass balance up at the top end, the
13 relevant number would be the amount put in at the top. But
14 just to be clear, that wouldn't necessarily be the amount
15 that you're getting out of the bottom of Butte Canal.

16 MR. LIBERTY: This is Aaron with FERC. I am
17 looking at the License Application right now and I see a 91
18 cfs for Butte Canal at the top. Does that sound about
19 right?

20 MR. JEREB: That sounds about right. This is Tom
21 Jereb.

22 MR. BEVELHIMER: Okay, we can move on--

23 MR. LIBERTY: Who is this? Is that you, Mark?

24 MR. BEVELHIMER: Yes, I'm sorry.

25 MR. LIBERTY: Did somebody else join us? I

1 thought I heard somebody call in. Anybody?

2 (No response.)

3 MR. LIBERTY: Guess not. Go ahead, now, Mark.

4 MR. BEVELHIMER: Yes, I was just saying that's
5 fine, we'll go with that number. If anybody finds something
6 different, they can let us know.

7 MS. LAWSON: This is Beth Lawson with Fish &
8 Game, and I'm opening up the Operations Model right now, and
9 I think Rick Jones probably has this in front of him, too.
10 The Operations Model shows how much water is released into
11 those, so I think the maximum capacity might be 91 there,
12 but I don't think they ever actually put that much into
13 there because there's probably some flow coming down the
14 side of the hills and from the tributaries, so they don't
15 want the canal to fail. So I don't think they actually put
16 that much in. It looks like at the top they put in about
17 75.

18 MR. RICK JONES: This is Rick Jones. Beth, I
19 agree with that based on the modeling.

20 MR. HOLZMER: This is Fred Holzmer. I agree with
21 that, as well. I worked with Jim Bundy, the Generation
22 Supervisor, on coming up with those flow rules in the upper
23 part of that. They don't load that canal to the maximum
24 because, as you said, Beth, for stability issues. So they
25 operate it more conservatively.

1 MR. BEVELHIMER: This is Mark again. That's what
2 I saw in the files we got, that it never exceeded 70 to 75.
3 So pretty much that's as much as they would put it in? Is
4 that right?

5 UNIDENTIFIED SPEAKER: Yes.

6 MR. LIBERTY: Did somebody else just join us?

7 MS. MULDER: This is Cheryl Mulder from the
8 Pumice. I'm doing another PG&E meeting here in my office.

9 MR. LIBERTY: Could you spell your name again for
10 the court reporter, please?

11 MS. MULDER: M-U-L-D-E-R.

12 MR. LIBERTY: And who are you with?

13 MS. MULDER: Pumice National Forest.

14 MR. LIBERTY: Thank you. Does anybody else have
15 anything to add on that?

16 (No response.)

17 MR. LIBERTY: All right, excellent. Go ahead,
18 Mark.

19 MR. BEVELHIMER: The last question are on both
20 the Upper Butte Creek and the Lower West Branch of Feather.
21 There are some tributary streams that are not regulated, or
22 at least not under control of the project. And at times
23 those can have relatively high flow.

24 And so my question is, in some of the low-flow
25 simulations that you did I don't believe--I'm asking, I

1 guess--whether or not those tributaries, for example the
2 West Branch of the Butte Creek and Cold Creek I think was
3 another one, whether or not you reduced those any to reflect
4 dry-year conditions, or if that's a reasonable thing to do?

5 MR. WILCOX: This is Scott Wilcox with
6 Stillwater. The answer is, yes, those are reduced
7 because--and particularly in dry-year conditions it is
8 important that they are for I think the reasons you're
9 inferring--there needs to be a mass balance between the
10 flows up at the top of the reach, what comes in via the
11 tributaries or lateral flow throughout the reach, and then
12 subsequently the flow at the bottom end.

13 So under dry-year conditions we have reduced flow
14 at the bottom end of the reach because of the decrease in
15 the tributary inflows, and so that's factored into the
16 model.

17 MR. BEVELHIMER: This is Mark. So they were
18 reduced during calibration, but if you were to simulate then
19 a lower flow than what they were calibrator-validated at, in
20 some of the simulations where you have a series of base
21 flows, were they reduced any for those?

22 MR. WILCOX: No, because those are baseload
23 releases at the upper end, at the release point, at say
24 Hendricks Canal, or the Upper Butte Diversion. So the
25 tributaries would continue to provide whatever additional

1 flow they do, whether it's a dry year or some other year, as
2 normal.

3 So the change in flow reflected in the output is
4 simply the change in release flow.

5 MR. BEVELHIMER: And I guess my question is then
6 that those are--

7 (An additional telephonic conversation is going
8 on in the background.)

9 MR. BEVELHIMER: --I'm sorry, I'm trying to--

10 MR. LIBERTY: Sorry, we're getting somebody else
11 here. I can hear somebody's conversation.

12 UNIDENTIFIED SPEAKER: Could somebody's
13 background conversation be muted, please?

14 MR. BEVELHIMER: There we go. This is Mark.

15 I guess then my concern is that since the years
16 that were calibrated/validated weren't necessarily dry
17 years, that if we then try to simulate a dry year as minimum
18 flow we're not really capturing what a dry year would be
19 like because we've got moderate flows coming in from those
20 tributary streams.

21 MR. WILCOX: In the--this is Scott Wilcox
22 again--in the Lower West Branch Feather River in particular
23 you have the 2007 calibrator model to reflect exactly that
24 concern. Because you do have a difference in inflows from
25 the tribs in that dryer year versus some other year.

1 MR. BEVELHIMER: That's fine. And there are
2 other ways to handle that for some of those other years, so
3 I just wanted to make sure that there hadn't been any
4 adjustments that I was missing or anything.

5 MR. WILCOX: No. If you were to run the models
6 for some completely different year type, you could account
7 for tributary changes some other way. One way to do that
8 would be, or to at least get an indication of what the
9 effects might be, would be to look at the different
10 simulations at the different times of the year that are
11 already in the License Application output. Because as you
12 go later in the summer, that tributary flow would be
13 decreased and essentially that would be indicative of a dry-
14 year type condition under that scenario, would be one way of
15 looking at it.

16 MR. BEVELHIMER: Okay.

17 MR. CHESLAK: Mark, this is Ed Cheslak. The
18 reason we had these different years is that when we first
19 started into the re-licensing on PG&E's own cognizance we
20 set out additional temperature locations in 2004. That was
21 even before we really officially started the ILP process.

22 And then in 2005 we had the new study plans in
23 place, and those study plans asked for additional sites to
24 be included. And on the West Branch of the Feather River
25 some of that was on private property, and so we were unable

1 to get permission to sample on that private property until
2 2006 and 2007.

3 So that's why you see the different years that we
4 have here, because it was different abilities to monitor the
5 systems of interest.

6 MR. BEVELHIMER: Okay. This is Mark. Aaron, I
7 think that completes my questions.

8 MR. LIBERTY: Okay. Both you and Brennan are all
9 set with all the questions, then? Anything else you guys
10 need?

11 MR. BRENNAN SMITH: I've got one more question
12 here--

13 MR. LIBERTY: Is this Brennan?

14 MR. BRENNAN SMITH: Yes, this is Brennan.

15 MR. LIBERTY: Okay, go ahead.

16 MR. BRENNAN SMITH: The operations model itself,
17 was that a part of the filings? I expose my--I heard one of
18 the agencies describing having that available and running.
19 Is that model available?

20 MR. RICK JONES: This is Rick Jones with Devine
21 Tarbell & Associates. Yes, it was part of the filing.

22 MR. BRENNAN SMITH: Okay. Thank you.

23 MR. LIBERTY: Has anybody else joined us? I keep
24 hearing people click in.

25 (No response.)

1 MR. LIBERTY: Guess not.

2 MR. CHESLAK: This is Ed Cheslak. I wanted to
3 point out something else. In your questions you had
4 referred to the Appendix 6.2.2.3-G, and your questions came
5 from that. I also wanted to point out to you that the
6 Licensee in their reply to the preliminary conditions and
7 recommendations had included an Attachment 8 with that
8 submittal, which had water temperature simulation results
9 from the W-2 model.

10 In that particular submittal there were 31
11 different simulations that were done, because after we
12 completed the initial five that you saw there the
13 re-licensing participants asked for a variety of more
14 simulations. So I just wanted to make sure you were aware
15 of those additional simulations that were done and were in
16 Attachment 8.

17 MR. BEVELHIMER: Okay. Thanks, Ed.

18 MR. BRENNAN SMITH: Ed, this is Brennan Smith.
19 What was the date of that? Do you have the date of that
20 filing?

21 MR. CHESLAK: That's the one thing I don't have
22 in front of me here.

23 MR. LIBERTY: Brennan, this is Aaron. I can get
24 you that. I have that in my office.

25 MR. BRENNAN SMITH: Okay.

1 MR. LIBERTY: I don't have it on hand, but.

2 MR. BRENNAN SMITH: We can follow up on that.

3 MR. LIBERTY: Sure.

4 MR. CHESLAK: Also, just for your information, in
5 the Licensee's reply to preliminary conditions and
6 recommendations, we did discuss these particular
7 alternatives, and what we felt was the relative benefit and
8 risk associated with each of the various ones, and so that
9 is part of our reply comments. So I direct you to that, as
10 well.

11 MR. BRENNAN SMITH: This is Brennan. Yes, we
12 have those.

13 MS. LAWSON: This is Beth Lawson. Can you hear
14 me?

15 MR. LIBERTY: Yes, we can hear you.

16 MS. LAWSON: I just wanted to point out that,
17 like Ed said, they had commented on that. And I think the
18 agencies also filed two memos, Fish & Game filed two memos
19 about this, and I'm assuming you have those there as part of
20 the record?

21 MR. LIBERTY: This is Aaron, yes, we have those
22 and I will provide those to Brennan and Mark.

23 MS. LAWSON: Great. Thanks.

24 MR. BEVELHIMER: Yes, this is Mark. We think we
25 have everything and have looked at it all, but there is so

1 much and so many different model runs that sometimes we got
2 lost. But we think we've seen everything, but we appreciate
3 you bringing other things to our attention and we will
4 doublecheck.

5 MR. FOSTER: This is Bill Foster, U.S. Fish &
6 Wildlife Service. I gather that from a hydrology point of
7 view when there's dry years and wet years within that system
8 there's a way to estimate how the spring-fed streams and
9 tributaries vary? I would think sometimes the springs may
10 not be as dry as other areas, but I just trust you guys sort
11 of have got a handle on that? I'm not a hydrologist, so my
12 question would be, if it is a dry year and you reduce the
13 inflows from springs somewhat uniformly, how do you know
14 that really happens?

15 But, anyways, that's why you calibrate it to a
16 dry year, I guess. But I just wanted to mention that.

17 MR. BEVELHIMER: This is Mark. And that is a
18 good question and a good point, and it is real hard to do,
19 and I guess their thing is that what defines a dry year is
20 not the conditions at the time. And so those aren't
21 necessarily completely linked, I think, with the snow pack
22 and the actual flows necessarily at the time in June or
23 July. So it all is difficult and you can run an infinite
24 number of simulations.

25 MR. WILCOX: This is Scott Wilcox with

1 Stillwater. Bill, one of the main ways that that is
2 accommodated is, as I had mentioned before, there is a mass
3 balance between the top and the bottom of the reach.
4 Meaning that the flow at the top, plus whatever comes in in
5 the middle, has to equal the flow at the bottom.

6 So when those year types change, there's less
7 accretion and that is reflected in a lower flow at the
8 bottom of the reach. You then have to apportion that
9 accretion to the various tributaries, some of which you may
10 have major flows for and others which may just be
11 proportioned out based on the size of the watershed or other
12 factors.

13 So you will get a balance of how much flow is
14 coming in those other year-types. And if you were to say
15 the difference between springs or other tributaries and not
16 get it exactly right, your model wouldn't--or sufficiently
17 right--your model wouldn't calibrate. But in fact it did.
18 So I think that particular issue is covered.

19 MR. FOSTER: Thanks.

20 MR. LIBERTY: This is Aaron with FERC. Does
21 anybody else have any other comments today, or anything that
22 was discussed previously?

23 MR. HARTHORN: This is Allen Harthorn and I'm
24 once again looking at the Water Rights Application for the
25 Forks of the Butte Project. It indicates that with the mean

1 monthly flows such as they are, that the project does not
2 operate five months out of the year, and looking at the
3 flows that they show it is almost never operational in July,
4 almost certainly never in August or September, and only when
5 sufficient flows are available in June. And of course keep
6 in mind that 60 cfs at their diversion is actually minus the
7 water that PG&E has diverted up at the Butte Head Dam.

8 So the actual flow in the Creek is quite a bit
9 higher, but when it's only 60 at their diversion then they
10 have to stop operating. So most of the critical times of
11 the year that project is not in operation on Butte Creek.

12 MR. LIBERTY: Thanks, Allen.

13 MR. HARTHORN: You're welcome.

14 MR. LIBERTY: Anyone else?

15 (No response.)

16 MR. LIBERTY: All right, Todd, I guess we should
17 discuss deliverables then. Are you there?

18 MR. JOHNSON: This is Todd. I am here.

19 MR. LIBERTY: So what kind of time frame were we
20 looking at to get this information?

21 MR. JOHNSON: Can you kind of summarize what the
22 information is that we need to provide?

23 MR. LIBERTY: Maybe Mark, Brennan?

24 MR. BRENNAN SMITH: This is Brennan. The first
25 thing we discussed were the modified input files for the

1 2001 hydrology that informed the management scenarios that
2 were run. And I heard Chris say that there were some
3 modifications to parameters, and that those files were
4 available.

5 What I'm not clear on is that Ed then mentioned
6 later that there were some filings of additional scenarios
7 in files. Are those one and the same? Or are they
8 different?

9 MR. CHESLAK: This is Ed Cheslak. I don't know,
10 but what we can do is make an independent filing of the 2001
11 input files for W-2 that you requested, and that way we can
12 be sure that you have what you need.

13 MR. BRENNAN SMITH: That would be sufficient for
14 us. This is Brennan. Thank you.

15 MR. CHESLAK: Okay, Brennan.

16 MR. JOHNSON: Ed, those are readily available?

17 MR. CHESLAK: Yes.

18 MR. JOHNSON: Okay.

19 MR. CHESLAK: So just a procedural thing here,
20 Chris, you would I guess package them up and then transmit
21 them to Todd Johnson with a cc to me?

22 UNIDENTIFIED SPEAKER: Yes. The files are pretty
23 big, so if they had an FPP site or something I could put it
24 on.

25 MR. LIBERTY: Sorry? Who's speaking?

1 MR. BERGER: This is Chris Berger. The model
2 input files would be too--the file would be too large for an
3 e-mail. So I can perhaps put it on an FTP site where I'm
4 at, or if they have an FTP site I can upload them to, that
5 would be great.

6 MR. JOHNSON: Would a CD work as well?

7 MR. BERGER: Yes, I can mail a CD, too.

8 MR. JOHNSON: Mail us a CD and we can send
9 something to FERC.

10 MR. LIBERTY: That would be great. Thank you,
11 Todd. I can go ahead and get that filed onto the record as
12 soon as that arrives here.

13 MR. JOHNSON: What other items do we have?

14 MR. BRENNAN SMITH: This is Brennan. That was
15 the only item I had that we needed to get.

16 MR. CHESLAK: Brennan, this is Ed Cheslak. Just
17 for clarity, do you want the 2001 base case files, plus all
18 of the simulations? Or just the base case? Would you
19 clarify that for me?

20 MR. BRENNAN SMITH: We would like the base case
21 input files and the management scenario input files. The
22 resulting output files from both of those would also be
23 useful for us to make sure that we're reproducing those same
24 results.

25 MR. CHESLAK: All right.

1 MR. LIBERTY: That's Brennan, right? Was that
2 you speaking, Brennan?

3 MR. BRENNAN SMITH: Yes.

4 MR. CHESLAK: This is Ed Cheslak again. So when
5 we transmit that to you, since the management cases that
6 we've run with the 2001 input files, have expanded from the
7 submittal that you had talked about, that Appendix 6, blah,
8 blah, blah, G, we will include all of the input files that
9 we used to create Attachment 8 that I referred to earlier.
10 Okay?

11 MR. BRENNAN SMITH: Okay. I need to review
12 Attachment 8 to understand what the scope of that was. I
13 apologize, I don't have that in front of me.

14 MR. CHESLAK: Okay. This is Ed Cheslak.
15 Attachment 8 has the five cases that you have in Appendix,
16 that Appendix G, plus the additional simulations that were
17 requested, both in 2001 hydrology as well as the 2001
18 hydrology. So it's just a more robust set of simulations.
19 So we'll include the more robust set.

20 MR. BRENNAN SMITH: This is Brennan. Thank you.
21 I think that will be fine.

22 MR. CHESLAK: Okay.

23 MR. JOHNSON: This is Todd. We can have those
24 for you by the end of next week. We'll express them once we
25 get them from Portland.

1 MR. LIBERTY: Thank you, Todd. That should be
2 great.

3 MR. JOHNSON: Okay.

4 MR. LIBERTY: Well I guess if nobody else has
5 anything, we can go ahead and conclude this meeting. This
6 is going to be one of the shortest meetings we've ever had,
7 I think. I was expecting to spend my Friday night here.

8 (Laughter.)

9 MR. CHESLAK: You can if you want.

10 (Laughter.)

11 MR. CHESLAK: We can tell modeling stories, if
12 you want.

13 MR. LIBERTY: Well that's all right. Maybe
14 another time.

15 (Laughter.)

16 MR. LIBERTY: I would like to thank everybody for
17 attending on such short notice, also. And the transcripts
18 from this will be posted on E-Library shortly.

19 UNIDENTIFIED SPEAKER: Thank you.

20 MR. LIBERTY: Thanks, guys.

21 (Whereupon, at 2:06 p.m., Friday, November 14,
22 2008, the meeting in the above-entitled matter was
23 adjourned.)

24

25