This hearing was held pursuant to Notice at the Calumet Club, Northern Avenue, Augusta, Maine, on March 16, 2007, beginning at 9:00 a.m.
(This hearing was held before the Board of Environmental Protection, at the Calumet Club, Northern Avenue, Augusta Center Drive, Augusta, Maine, on March 16, 2007, beginning at 9:00 a.m.)

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HEARING OFFICER HILTON: Good morning. I now call to order this session of the public hearing on the Maine Hydropower Permits and Water Quality Certifications for the following four dams located on the Kennebec River: The Lockwood, number L-20218-33-C-N; and the Hydro-Kennebec Projects number L-11244-35-A-N, both located in Waterville and Winslow; the Shawmut Project number L-19751-33-A-M, located in Fairfield, Benton and Clinton; and the Weston Project number L-17472-33-C-M, located in Skowhegan, Norridgewock, Starks and Madison.

My name is Ernie Hilton. I'm a member of the Board of Environmental Protection and I am presiding officer for today's hearing. Members of the Board here today are starting at my right Elizabeth Ehrenfeld, microbiologist and instructor at Southern Maine Community College. She's from Falmouth. Starting at my left is Nancy Anderson from Cumberland Foreside, an attorney from
Cumberland Foreside. We have Dick Gould, code enforcement officer, former legislator from Greenville; Don Guimond, a town manager from Fort Kent and a fellow farmer; and Nancy Ziegler, an attorney from South Portland. I hail from the small town of Starks. Other folks seated at the table are Cindy Bertocci, the executive analyst for the Board; Carol Blasi is immediately to my right, the assistant attorney general with us today; Terry Hanson, the administrative assistant for the Board; and Dana Murch, the DEP's hydro coordinator. Our court reporter is Joanne Alley of Alley and Morrissette.

This is day two of the hearing today. We will have testimony from the three agencies, state agencies, and the Atlantic Salmon Commission. We plan to conclude this hearing by noon if at all possible. At this time I'd ask that all persons testifying who have not already been sworn in to stand and raise their right hand. Do you affirm that the testimony you're about to give is the whole truth and nothing but the truth?

(Whereupon, witnesses respond in the affirmative.)

HEARING OFFICER HILTON: Are there any questions, any housekeeping that needs to be
attended to before we begin? Seeing none, Gentleman, we've got -- I think the morning is devoted entirely to you. You have very important testimony for us. There is an allocation of time, I think 15 minutes or thereabouts, in the schedule that Cindy made up but I would certainly welcome you taking however much time you feel is necessary, that much or more, and you can begin.

MR. LAPOINTE: Thank you, Mr. Chairman. My name is George Lapointe. I'm the Commissioner of Marine Resources. I have one housekeeping thing. I have my cell phone on buzz because I have a sick kid at home. So if it buzzes, I just have to see if it's him just so people are aware.

HEARING OFFICER HILTON: I'm glad you said that because I hadn't turned mine off yet.

MR. LAPOINTE: Normally I do turn it off but not this morning. We submitted a letter to the Board dated -- I don't have the date on here -- during the appropriate time period, and so that's got most of our testimony and I just want to add a couple of things and then I will let Pat and Steve add as well. I sit on the Atlantic States Marine Fisheries Commission. I'm currently the chair of that commission and people have
talked about the planning process, the 2000 Fishery Management Plan for American eel, which is now being amended. The other thing that's worth mentioning I think that demonstrates the continued work on American eel on the part of the state is that we are going to begin some bilateral discussions with the Canadians on management measures we can take to protect eels on both sides of the border because, you know, you've heard that this is a panmictic population and I think it demonstrates that the Department and the state have worked -- are working on eel in specific places like the Kennebec River, throughout the state, at an intrastate level and with the Canadians as well, and that's a process we've been taking part in since the commission started its planning process.

The other thing I just want to mention is yesterday there was a question about DMR policy, and our policy in regard to anadromous fish is to restore them to their historic range. I think this was a question from Chairman Hilton to Lou Flagg, and I think that's an important -- just so folks are aware, that's what the Department's policy is in regard to fish restoration, and those
are just the two points I'll add. Obviously I think the questions and answers will get into a lot of other things about what the Department is doing but that's all I wanted to say right now.

HEARING OFFICER HILTON: Thank you, George.

MR. KELIHER: Mr. Chairman, Members of the Board, my name is Pat Keliher. Actually, I don't have anything to add beyond the testimony. I think George did just allude to the fact that as far as the mission of the Department of Marine Resources, just to add to that, the mission of the Maine Atlantic Salmon Commission is to restore Atlantic salmon -- wild Atlantic salmon to their historic range as well, and with that, I'll just pass it back over to Mr. Timpano.

MS. EDWARDS: You're from the Atlantic Salmon Commission?

MR. KELIHER: That's correct.

MR. TIMPANO: Good morning. I'm Steve Timpano, environmental coordinator with the Maine Department of Inland Fisheries and Wildlife, and I have no additional direct statement this morning but I'm here to answer any questions that may come up on inland fisheries management or wildlife
HEARING OFFICER HILTON: Mr. Watts or
Friends, I think it's your chance to do some
cross-examining of these gents. I might also note
that they have placed at our disposal a couple of
their technical staff and if you think you'll be
asking questions of them, I can also swear them in
if there's no objection from either FPL or
Hydro-Kennebec.

MS. VERVILLE: No objection.

MR. THALER: No objection.

MR. NICHOLAS: Commissioner Lapointe, my
name is Dave Nicholas. You wrote a letter to
Florida Power & Light just ten months ago telling
them that you were concerned about significant
injury or mortality at their dams, is that
correct?

MR. LAPOINTE: I believe that's correct.

MR. NICHOLAS: And this has been -- this
letter has been previously marked as Exhibit 19
and it's attached to Ed Friedman's testimony, and
I'm going to show a copy to Commissioner Lapointe
and what I'd like him to do is just read into the
record the bracketed part.

MR. LAPOINTE: I was encouraged to be
slow. Let me read it to myself first. The words
in brackets read as follows, MDMR, that's Maine
Department of Marine Resources, is concerned that
controlled spill via bypass gates will not be an
effective measure for downstream eel passage and
that significant injury or mortality to eels will
occur unless additional measures are taken. In
September and October, river flow exceeds
hydraulic capacity only 5 to 15 percent of the
time at the Weston and Shawmut Projects and 40 to
50 percent of the time at the Lockwood Project,
and it says and in parens, so I don't know what
that's there for. If migrating eels are randomly
distributed in the river, then eels will pass
through the turbines at Weston and Shawmut 85 to
95 percent of the time and through the turbines at
Lockwood 50 to 60 percent of the time. We note
that both FPL Energy and MDMR have observed eel
mortalities below the Shawmut Project. That is
the bracketed language.

MR. NICHOLAS: Thank you.

MR. LAPOINTE: And if there are questions
about that, I'll refer to my technical staff.

MR. NICHOLAS: Now, you are familiar with
the water -- you are familiar with the water
quality certifications that are at issue in this proceeding, correct?

MR. LAPOINTE: I'm familiar with them to the extent that I read the information that's associated with this -- with this hearing, yes.

MR. NICHOLAS: And with respect to the eel passage provisions of the water quality certifications, is there any provision in the certifications that requires anything other than that the dam owners do studies and talk to agencies?

MR. LAPOINTE: I'm not aware of that detail in the certifications specifically. When we deal with fish passage issues cooperatively at the state, we work cooperatively with the DEP I think on water quality certification issues and so it strikes me that the specifics about water quality certifications are best addressed to the subject matter agency rather than us. My technical folks as well may have some information on it.

MR. NICHOLAS: Well, I just want to clarify something. You have actually read the provisions on eel passage in the water quality certifications, right?

MR. LAPOINTE: I have.
MR. NICHOLAS: Okay. I have a copy of it.
I'll just take as an example Lockwood water quality certification, and that's been marked as Exhibit 22. It was attached to Ed's -- Ed's testimony and this might just refresh your recollection if you have it in front of you.

MR. THALER: Is there a certain page?

MR. NICHOLAS: Yes, it would be --

MR. FRIEDMAN: What's the page number on the bottom?

MR. LAPOINTE: The page number on the bottom is nothing. The page number on the top in the water quality certification is page 13 and it's a document that says W, maybe slash or I, FOMB-22.

MR. NICHOLAS: It's Exhibit 22. It's got 177 on the top.

MR. LAPOINTE: On the top right-hand page, yes.

MR. NICHOLAS: And so really -- you can just take a quick look at that but really all my question is, again, there is nothing in the certifications that are at issue here today that required the dam owners to do anything but perform studies and talk to the agencies, correct?
MR. LAPOINTE: That's what it says here, yes.

MR. NICHOLAS: So there's --

MR. LAPOINTE: Well, it also has information saying if agreement is reached on upstream and downstream passage that the applicants shall change the facilities.

MR. NICHOLAS: Right, and I'll get to that in a second. So there's nothing -- there's nothing about a particular fix and there's nothing in the water quality certification that sets any limit on the number of eels that can be killed by the dams, is that right?

MR. LAPOINTE: That's correct, and if I might, I believe that's because we didn't know what the fix was at the time the agreement was signed.

MR. NICHOLAS: And the eel passage studies were to be completed -- there were eel passage studies required and they were to be completed by December 31st -- December 31st of 2001, correct?

MR. LAPOINTE: That's correct.

MR. NICHOLAS: But they -- these studies were, in fact, not completed by December 31st, 2001, correct?
MR. LAPOINTE: There actually was three years of study when this was set up and, again, if we need specifics, we should ask Dr. Wippelhauser because she was here and I was not when this was written, and I believe that the agreement was for three years of study and that that was done and there were issues with how much could be done with the staffing we had and the resources available as well as some weather issues also.

MR. NICHOLAS: There was supposed to be three years of study, weren't there?

MR. LAPOINTE: And I believe there was.

MR. NICHOLAS: So you're saying that, in fact, all the studies were completed that were --

MR. LAPOINTE: Well, I think that there was three years of studies done. I think that it's safe to say that like any new endeavor trying to figure out what studies were feasible or finding out which ones were feasible and then weather related issues as well made the scope of those studies much less than people originally thought, but to say that we didn't do three years of studies I think is incorrect.

MR. NICHOLAS: Three years of studies were not completed, can we agree on that?
MR. LAPointe: I don't agree with that.

MR. NICHOLAS: There are continuing --

there are more studies that need to be done on eel

passage, correct?

MR. LAPointe: Absolutely.

MR. NICHOLAS: Now, the water quality
certification states that if agreement is reached
by all consulting parties on appropriate
downstream eel passage measures, the applicant
shall join the other parties in requesting that
FERC approve the measures, and if no consensus is
reached by June 30, 2002, the applicant or any of
the consulting parties shall be free to petition
DEP or FERC to approve appropriate conditions
relating to eel passage of the project, correct?

MR. LAPointe: That's correct.

MR. NICHOLAS: Now, DEP -- excuse me, no
consensus has been reached, correct?

MR. LAPointe: People have not gone to
FERC, that's correct.

MR. NICHOLAS: Well, that was going to be
my question. No one has petitioned -- there has
been no consensus though, correct? That was my
original question.

MR. LAPointe: I think -- I mean, there
hasn't been consensus because people have been working iteratively to try to figure out what to do with those projects. So I don't think -- in saying that consensus hasn't been reached, it's because folks aren't sure what to do at those projects rather than somebody have a burning idea and having a big disagreement about it. I think that's an important distinction.

MR. NICHOLAS: Right, but my question was really only whether consensus has been reached because my follow-up question is DMR and, in fact, none of the resource agencies, the agencies that are sitting with you today, have petitioned DEP or FERC on eel passage, am I correct about that?

MR. LAPOINTE: That's correct.

MR. NICHOLAS: Am I correct?

MR. LAPOINTE: (Witness nods.)

MR. NICHOLAS: Commissioner Lapointe, are you familiar with the condition compliance orders that DEP issued to the dams?

MR. LAPOINTE: I am not.

MR. NICHOLAS: You are not. So you were not consulted on this at all before it was issued?

MR. LAPOINTE: Let me check with Dr.
Wippelhauser because I suspect she was consulted
but I don't know that. She was.

MR. NICHOLAS: What's that?

MR. LAPOINTE: Dr. Wippelhauser was consulted on those, yes.

MR. NICHOLAS: Well, maybe this ought to be best addressed to Dr. Wippelhauser, but let me show you in the compliance order that's in the DEP file issued to Lockwood and I'm going to look at page 5 of the order. There's been some discussion on this before.

MR. THALER: Was that an exhibit?

HEARING OFFICER HILTON: That's DEP Exhibit 5, the first one.

MR. NICHOLAS: And what I'm going to do is have you read -- DEP included in this compliance order a characterization of DMR's concerns about -- about eel mortality at Lockwood. Would you read this into the record?

MR. LAPOINTE: The language that's highlighted says, finally DMR and U.S. Fish and Wildlife Service have expressed concerns that the controlled spills via bypass gates may not be an effective measure for downstream eel passage and that significant injury or mortality to downstream
migrating eels may occur unless additional measures are taken.

MR. NICHOLAS: Now, can you tell me what the basis -- or perhaps one of your staff can -- can you tell me the basis for DMR's concern as expressed to DEP?

MR. LAPOINTE: Mr. Chairman, can I have Dr. Wippelhauser come up?

HEARING OFFICER HILTON: Yes. Why don't we bring her into the witness pool along with somebody named Norm Dube.

MR. LAPOINTE: Right.

HEARING OFFICER HILTON: Why don't we bring them both up with their chairs, if they wish. Any objection from any of the parties to this?

MR. THALER: No.

MS. VERVILLE: No.

HEARING OFFICER HILTON: Norm, do you affirm that everything you will say before us will be the truth?

(Whereupon, the witnesses respond in the affirmative.)

MR. LAPOINTE: Can I borrow that document so that Dr. Wippelhauser can read that passage?

MR. NICHOLAS: Sure.
HEARING OFFICER HILTON: And, Dr. Wippelhauser, you're going to have to make sure you use the mike. I don't know that we -- we don't have another mike that we can spare I guess.

MR. NICHOLAS: Dr. Wippelhauser, can you just please tell the Board what was the basis of DMR's concern about use of controlled spills via bypass gate and that significant injury or mortality to downstream migrating eels may occur unless additional measures are taken, what was the basis for that?

MS. WIPPELHAUSER: I based that on the limited telemetry study that we had done there for two years where we used five eels and I think we saw two of them go through turbines. That was a very limited study so a difference of one eel going in one direct or another would have made a huge change in the results of that study.

MR. NICHOLAS: And with respect to that study, there were two eels that were -- the fate of the eels were unknown -- excuse me, the passage method was unknown. Did you ever find out what the fate of those eels were?

MS. WIPPELHAUSER: No, we didn't. We were
limited to fixed stations at the hydropower facility. We did some limited boat tracking down below but we didn't go very far down below the project.

MR. NICHOLAS: Commissioner Lapoint -- well, actually --

MR. WATTS: Gail, this came up yesterday, to what extent do we know whether those eels were -- lived or died, those two that we don't know the passage route?

MS. WIPPELHAUSER: We don't know their fate. As I said, the --

MR. WATTS: This came up yesterday. Those two eels, it is at least possible that those eels were injured and did not continue their migration?

MS. WIPPELHAUSER: That's true, we don't know what their fate was.

MR. WATTS: And so it's at least possible that out of the five eels, there potentially were four that were injured enough so as to not migrate?

MS. WIPPELHAUSER: That's true. That's why we think -- beg your pardon -- that's why we think additional studies are needed with larger sample
MR. WATTS: Those two are essentially just question marks?
MS. WIPPELHAUSER: That's right.
MR. WATTS: Thank you.

HEARING OFFICER HILTON: Mr. Watts, it would be best if we had our cross-examination take place by way of the Friends doing theirs and then you doing yours as opposed to just interjecting. I think it might provide a little more orderly course through the day.

MR. NICHOLAS: Dr. Wippelhauser, are you familiar with the compliance order that was issued to the dams?
MS. WIPPELHAUSER: I've read it in the past not recently.

MR. NICHOLAS: Do you have an understanding as to whether it was a finding that, in fact, the dams had violated the law or their permit or something else?
MS. WIPPELHAUSER: I'm not aware of that.
MR. NICHOLAS: And would Dana Murch possibly know the answer to that?
MS. WIPPELHAUSER: I believe so.
MR. NICHOLAS: Commissioner Lapointe, in
1987 your agency and other agencies and the KHDG dam owners, which include the predecessors to the owners of these dams, entered into agreement into which the dam owners agreed to put in permanent upstream and downstream passage at certain dams by 1999, am I correct about that?

MR. LAPOINTE: You're reading it. I wasn't here in 1987, and I have no reason to doubt what you're reading.

MR. NICHOLAS: So are you not familiar with the 1987 KHDG Agreement?

MR. LAPOINTE: That's correct. I became Commissioner about six months after the 1998 agreement was signed, a short number of months.

MR. NICHOLAS: All right. I don't have any further questions. Is Doug here? I think you scared him off.

HEARING OFFICER HILTON: We can move on to Save Our Sebasticook then.

MR. MERRILL: I had some questions for Mr. Keliher.

HEARING OFFICER HILTON: Oh, I'm sorry.

MR. NICHOLAS: I thought we were going to do it by witness.

MR. THALER: Excuse me, I thought Mr.
Nicholas was asking questions for Friends and Mr. Merrill is just co-counsel.

MR. NICHOLAS: No, Mr. Merrill is going to ask questions to Mr. Keliher.

MR. MERRILL: We're just doing it by witness.

MR. THALER: I'm sorry.

HEARING OFFICER HILTON: So you've allocated the various agency witnesses among yourselves?

MR. NICHOLAS: Yes, just brief questioning.

MR. MERRILL: Mr. Keliher, good morning. My name is Bruce Merrill. I want to show you what is an exhibit --

MR. MERRILL: Is this one on? I'm going to show you Friends of Merrymeeting Bay Exhibit 28 and see if you can identify that for us.

MR. KELIHER: Yes, Exhibit 28 is the most recent status review for Atlantic salmon in the United States.

MR. MERRILL: And that was prepared when?
MR. KELIHER: It was finalized in July of '06.

MR. MERRILL: And that is the most recent one that we have?

MR. KELIHER: That is correct.

MR. MERRILL: Now, in the joint testimony that was submitted by your agency and DMR and Inland Fisheries and Wildlife, on page 4, the third full paragraph down, it states that -- do you have that document?

MR. KELIHER: I do.

MR. MERRILL: It states that a program to reintroduce Atlantic salmon in the Kennebec is currently in the early stages with very limited resources. The terms of the project's existing water quality certifications have allowed ASC staff to begin several studies looking at less costly ways of reintroducing salmon compared to the traditional use of hatcheries. The ASC is confident that the interim upstream passage facility at Lockwood is sufficient for capture and subsequent transport of Atlantic salmon over the next few years; however, more work needs to be done to ensure that Atlantic salmon smolts can pass downstream with minimal injury or mortality.
Studies utilizing Atlantic salmon smolts as test animals are set to begin in 2007. Did I read that accurately?

MR. KELIHER: You did.

MR. MERRILL: So the tests aren't to begin until sometime this year and I'm assuming they haven't started yet, correct?

MR. KELIHER: That's correct.

MR. MERRILL: Now, if you can go back to Exhibit 28 --

MS. ANDERSON: Bruce, I'm sorry, before you go on, can you tell us -- the pages we have are 17, 18, 19, so page 4 doesn't show up. Do you have the same pagination?

MR. MERRILL: Which document? I'm talking about their submitted testimony.

MS. ANDERSON: Oh, okay. I thought you were talking about the status review.

MR. MERRILL: No, no, I wanted to go back to the submitted testimony first. That was at page 4. Now, going to Exhibit 28 which is the status review, if you could turn to page 97, which on the exhibit is 019 in the upper right-hand corner.

MR. KELIHER: I have that page.
MR. MERRILL: Do you see the section on entrainment and impingement?

MR. KELIHER: I do.

MR. MERRILL: Could you read that, please?

MR. KELIHER: You could have given me a shorter one to start with.

MR. MERRILL: The section I have marked in pink brackets.

MR. KELIHER: Yes, entrainment and impingement, dams equipped with hydroelectric generating facilities entrain and impinge downstream migrating Atlantic salmon. Entrainment occurs when downstream migrants pass through turbines and die or are injured by direct contact with turbine runners, sheer force, cavitation, turbulence or pressure changes. Impingement occurs when a fish comes -- excuse me -- impingement occurs when a fish comes in contact with a screen, a trash rack or debris at the intake. This causes bruising, descaling and other injuries. Impingement, if prolonged, repeated or occurring at high velocities, also causes mortality. Entrainment mortality for salmonoids ranges near 10 to 30 percent at hydroelectric dams depending upon fish passage -- excuse me --
depending upon fish length. This is juvenile --
in parenthesis, juvenile versus adult. Turbine
type runner speed and head, again in parentheses,
EPIRI, excuse me.

MR. MERRILL: And that stands for the
Electric Power Research Institute, correct?

MR. KELIHER: Yes, that's correct. Passage
through Francis turbines results in the greatest
mortality, again in parentheses, average of 20
percent, followed by Kaplan, parentheses 12
percent, and bulb turbines, parentheses 9 percent,
and again in parentheses, O'Day 1999. Passage
through turbines can also lead to indirect
mortality from increased predation and disease,
O'Day 99. Where multiple dams exist such as on
the Penobscot River, the losses of downstream
migrating smolts from turbine entrainment are
often cumulative and biologically significant
because of their large size, the turbine mortality
of kelts is expected to be significantly greater
than 10 to 30 percent. This is parentheses FERC
1997.

MR. MERRILL: So that information came from
FERC, correct?

MR. KELIHER: That is correct.
MR. MERRILL: So at the time of this latest report in July of 2006, the Atlantic salmon -- I'm sorry -- the status review for anadromous Atlantic salmon in the United States already knew that mortality occurred or serious injuries if the fish were going to go over the turbines, correct?

MR. KELIHER: That is correct.

MR. MERRILL: And you don't have to read it but if you look at the next paragraph, would you agree that they also indicate that delayed mortality of turbine passed smolts was considerably higher ranging from 42 percent in 1993 to 77 percent in 1992 percent?

MR. KELIHER: I will agree that's what it says. Let me read the full paragraph, though. Yes, I mean, as you have highlighted on the exhibit which is numbered 020, within the status review delayed mortality of turbine passed smolts was considerably higher ranging from 42 percent in '93 to 77 percent in 1992, and then it goes on to say that the higher observed delayed mortality in a control group led by Sheppard in '93 was to conclude that comparison of delayed mortality between a controlled and treatment would be unreliable.
MR. MERRILL: As between those two, correct?

MR. KELIHER: That's correct.

MR. MERRILL: So the status review realized that there was injury and mortality from the salmons going over the turbines at the time the report came out in July of 2006, correct?

MR. KELIHER: Yes, it recognizes that fact.

MR. MERRILL: And would you just look at the first page of the status review and tell us the agencies that participated in that, please?

MR. KELIHER: The Penobscot Indian Nation's Department of Natural Resources participated as well as the U.S. Fish and Wildlife Service, the National Marine Fisheries Service and the Maine Atlantic Salmon Commission.

MR. MERRILL: And the Maine Atlantic Salmon Commission is you, correct.

MR. KELIHER: That is correct.

MR. MERRILL: So the information was known that there was this problem at least in July of 2006 but in your report to this Board, tests aren't even going to begin until sometime this year, correct?
MR. KELIHER: I'm sorry, can you repeat the question?

MR. MERRILL: Yes. The information in the status review was gathered prior to its publication in July of 2006, correct?

MR. KELIHER: That is correct.

MR. MERRILL: Acknowledging that there's injuries and mortalities from the fishing going through the turbines, correct?

MR. KELIHER: That is correct.

MR. MERRILL: And in the collective report that was submitted to the Board by DMR and your agency and Inland Fisheries and Wildlife, you indicate that studies utilizing Atlantic salmon smolts as test animals are not even going to begin until later this year?

MR. KELIHER: That is correct.

MR. THALER: Mr. Chairman, can I just inquire while Bruce is pausing, they are at half an hour which was their allocation. If they're going to go over and get extra time, I would just ask that we also get comparable extra time.

HEARING OFFICER HILTON: How much more time do you think you need?

MR. MERRILL: I just need to look at one
thing. I might have one or two more questions if
it's okay with the chair.

HEARING OFFICER HILTON: Mr. Thaler, I'm
going to keep your question under advisement here
for just a couple minutes.

MR. THALER: That's fine.

MR. MERRILL: Mr. Keliher, are you familiar
with the 1998 KHDG Agreement?

MR. KELIHER: Yes, I am familiar with the
agreement.

MR. MERRILL: I want to see if I can direct
him to a specific page. For the record, look at
page 10 of the 1998 KHDG Agreement.

HEARING OFFICER HILTON: What exhibit
would that be?

MR. MERRILL: The section I'm referring to
is also in the direct testimony of FOMB on page
009, rebuttal testimony.

MR. MURCH: It is DEP Exhibit 4, the second
part of that past the blue paper, page 10. The
page numbers are on the bottom.

MR. MERRILL: I'd direct your attention to
the bottom of page 10 of the agreement and ask you
to read the section that I've marked off with
yellow highlighter, please.
MR. KELIHER: In the event that adult shad and/or adult Atlantic salmon begin to inhabit the impoundment above the Lockwood Project and to the extent that the licensee desires to achieve interim downstream passage of out migrating adult Atlantic salmon and/or adult shad by means of passage through turbines, licensee must first demonstrate through site specific quantitative study designs and conducted in consultation with the resource agencies that passage through turbines will not result in significant injury and/or mortality, in parentheses, immediate or delayed, in no event shall licensees be required to make this quantitative demonstration for adult shad and adult Atlantic salmon before May 1st, 2006.

MR. MERRILL: So if they wanted to introduce salmon or adult shade, they didn't have to but they wouldn't be required to do anything before May 1st of 2006, correct?

MR. KELIHER: Can you clarify who they would be?

MR. MERRILL: Any of the dam owners -- I'm sorry, agencies.

MR. KELIHER: So if an agency wanted to --
I'm sorry, can you repeat, please?

MR. MERRILL: Here's my question.

According to the KHDG Agreement, the studies had to be done first before the fish were put in the water, correct?

MR. KELIHER: Before they were put in the impoundment, that's correct.

MR. MERRILL: Correct, but your letter to the Board states you're going to let them put the fish in the water first and begin the studies later this year.

MR. KELIHER: Well, we can't do the studies without fish being in the water.

MR. MERRILL: Does the agreement say you have to do the studies first and demonstrate that there won't be injury or mortality according to the agreement in 1998?

MR. KELIHER: For adults it does but not for smolts.

MR. MERRILL: So you're making the distinction that you can put the smolts in before you do the studies, just not adults?

MR. KELIHER: That's correct.

MR. MERRILL: What about the 15 adults that are in there already?
MR. KELIHER: The 15 adults that are within
the Sandy?

MR. MERRILL: The salmon.

MR. KELIHER: Yes. That was a
determination made by our agency to move forward
with a salmon restoration project within the
Kennebec drainage.

MR. MERRILL: In violation of the 1998
agreement?

MR. THALER: I'll just point out that this
seems to be legal argument which I thought we
weren't supposed to be doing.

HEARING OFFICER HILTON: I wouldn't say
that it's a legal argument.

MR. KELIHER: I'm sorry, Mr. Chairman, I
didn't hear your comment.

HEARING OFFICER HILTON: Oh, you may
respond to the question.

MR. KELIHER: Yes, we put them above the
Lockwood impoundment.

MR. MERRILL: The question is, is it in
violation of the terms of the KHDG Agreement that
said you would do the testing first?

MR. KELIHER: I'm not an attorney, but I
would say that we put them above the Lockwood

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impoundment, not in the Lockwood impoundment. So this paragraph says in the event that adult shad shall begin to inhabit the impoundment above the Lockwood Project.

MR. MERRILL: When you put them in the water they basically have free access, right, you can't control where they go?

MR. KELIHER: That's correct, but we have no idea whether they are inhabiting that impoundment.

MR. MERRILL: They have to swim downstream, though, correct?

MR. KELIHER: That is correct.

MR. MERRILL: So do you agree or disagree that it appears that the actions that were taken in putting them in above the impoundment appear to be in violation of the 1998 agreement that said the studies would be done first?

MR. KELIHER: I would disagree with that because that's only if the dam owners want to pass these fish through the turbines.

MR. MERRILL: Which you've already acknowledged through the status review that that happens, correct?

MR. KELIHER: It could happen, that's
MR. MERRILL: I have no other questions.

Thank you.

HEARING OFFICER HILTON: Mr. Thaler, it appears that the petitioners took another five or six minutes for cross-examination time, which I will allocate equal time to both you and to Hydro-Kennebec.

MR. THALER: Thank you.

MR. NICHOLAS: I think Doug has some questions.

HEARING OFFICER HILTON: Mr. Watts?

MR. NICHOLAS: He'll give you the time.

MR. WATTS: Well, I've been told that we used up all our time.

HEARING OFFICER HILTON: I think the argument that's made is that whatever extra time you folks use, an equal amount goes to the opposition.

MR. NICHOLAS: We have no objection to that.

MR. MERRILL: No objection, no.

MR. THALER: Excuse me, but this isn't open ended I thought. They can coordinate, because we've been coordinating, to try to stay within the
time limits. It's up to them. If now Mr. Watts
is going to go another ten or fifteen minutes --

MS. VERVILLE: I would also note that Mr.
Nicholas was speaking on behalf of his client.

HEARING OFFICER HILTON: I don't think Mr.
Nicholas is representing Mr. Watts. They only
divided witnesses up between the two attorneys.

MR. VERVILLE: I apologize.

MR. WATTS: All right.

HEARING OFFICER HILTON: Everybody keep in
mind here that a couple of the Board members turn
into pumpkins at noon. I think Nancy Anderson and
Elizabeth Ehrenfeld will be leaving at noon.

MS. ANDERSON: And Nancy Ziegler.

HEARING OFFICER HILTON: And Nancy Ziegler,
all three, which means we lose our quorum which
means we all disappear. So you need to keep that
in mind. Noon is our drop-dead time here. So I'd
better understand the schedule here now, and what
I'm -- the petitioners were allocated 30 minutes
for cross-examination, correct?

MR. BERTOCCI: Correct, and they've used
35.

HEARING OFFICER HILTON: And they've used
35 and I'm not counting our wheel-spinning time
here right now. I've already indicated that I'd
give you an extra five, six minutes, whatever. If
Mr. Watts want to take in a little extra time, I
will caution him to be as brief as possible and
whatever time I give them, I will also give you.

MR. WATTS: I have no questions.

HEARING OFFICER HILTON: Mr. Watts? Mr. Watts?

MR. WATTS: The question I have would be
directed to DMR and it references attachment 3 in
their testimony that they supplied to the Board.
I believe it's the last page. It says attachment
three, DMR counts of eels using upstream passage,
and I guess the question I had was, first of all,
is there a reason why counts at Lockwood are not
included here?

MS. WIPPELHAUSER: Yes, because they don't
have upstream passage in yet.

MR. WATTS: Okay. The second question I
have is within the text of the testimony there's a
comparison to eel counts at Hydro-Kennebec which
is the second dam on the Kennebec River and Fort
Halifax which is the first dam on the Sebasticook,
and what I was wondering was is that not an apples
and oranges comparison given that one is -- the
Hydro-Kennebec dam has a dam below it and the Fort Halifax dam does not?

MS. WIPPELHAUSER: I would say it isn't. I didn't include the numbers from Benton Falls which aren't exactly the same as Fort Halifax, but they are often in the tens of thousands or hundreds of thousands and that would compare to Hydro-Kennebec.

MR. WATTS: And we don't have any numbers from Lockwood?

MS. WIPPELHAUSER: That's correct.

MR. WATTS: So we're comparing the first dam on a river with the second dam on another river?

MS. WIPPELHAUSER: That's true.

MR. WATTS: Okay, that's all. Thank you.

HEARING OFFICER HILTON: So, Mr. Thaler, Sarah, between you and Jeff you have 38 minutes.

MR. MERRILL: I believe Save Our Sebasticook has questions.

HEARING OFFICER HILTON: I think they're right after the dam owners.

MS. VERVILLE: Is this on? Hello? This is a question, Mr. Lapointe, and actually it's for all three agencies. What would you like to see
the outcome of these proceedings to be? Do you believe that the petition should be dismissed?

MR. LAPOINTE: Our letter asks that the petitions be dismissed.

MS. VERVILLE: And what do you think the consequences will be if the Board makes a decision to modify the certifications such that there is an impact on the KHDG Agreement?

MR. LAPOINTE: I don't know what the impact would be.

MS. VERVILLE: Can I refer you to page 9 of the agency letter?

MR. LAPOINTE: Yes, and thank you for that clarification.

MS. VERVILLE: Read your last paragraph.

MR. LAPOINTE: Thank you. The last paragraph reads the DMR, DIFW and ASC strongly support the continuation of the 1998 KHDG Agreement without alteration because it has provided a vehicle for substantial progress in the restoration and enhancement of diadromous fish in the Kennebec Watershed and it provides a framework for continued progress. The fisheries management agencies believe -- too fast, sorry, you're the first people to have ever said that to me -- the
second sentence, the fisheries management agencies believe the Board's approval of the requested modifications of the water quality certifications for the Kennebec-Hydro Projects may undermine the KHDG Agreement and jeopardize future progress. The fisheries management agencies are also concerned that a division by the Board -- decision, excuse me, decision by the Board to alter the water quality certifications will discourage all hydropower owners from entering into settlement agreements with the state in the future.

MS. VERVILLE: And do you still believe that today?

MR. LAPOINTE: Yes. I apologize for forgetting that paragraph.

MS. VERVILLE: Mr. Keliher?

MR. KELIHER: Yes, I strongly support that paragraph.

MS. VERVILLE: Mr. Timpano?

MR. TIMPANO: Yes, I would concur with full support of the paragraph.

MS. VERVILLE: Ms. Wippelhauser, a couple of questions. Do you believe that there is significant eel mortality occurring on the
mainstem of the Kennebec resulting from hydropower
projects?

MS. WIPPELHAUSER: We have no data to
indicate that there is significant mortality.

MS. VERVILLE: Do you believe that the
viability of the eel population is being
impaired?

MS. WIPPELHAUSER: No, I don't.

MS. VERVILLE: Do you believe -- and this
is a question to all three agencies -- that the
KHDG Agreement has benefited the restoration of
anadromous and catadromous species on the Kennebec
mainstem?

MR. LAPOINTE: Yes.

MR. KELIHER: Yes.

MR. TIMPANO: Concur.

MS. VERVILLE: Ms. Wippelhauser, as we all
know, Department of Interior determined that the
American eel was -- a listing of threatened or
endangered was not warranted; however, that
decision did say that there were local and
regionalized declines in eel population. Does
that translate to there being significant eel
mortality on the Kennebec resulting from these
hydropower projects?
MS. WIPPELHAUSER: We just -- we do not have any indication that there is significant mortality occurring. There seem to be fewer eels moving up on the mainstem Kennebec as I demonstrated in our counts from the fishways that we've installed. We haven't seen the kind of mortality that was occurring at Benton Falls and we're just not seeing a significant degree of mortality on the river.

MS. VERVILLE: Dr. Wippelhauser, Mr. Watts asked a question with regard to the eel passage counts contained in the exhibit to the agency letter arguing that it was not an apples to apples comparison. Before there was eel passage -- upstream eel passage at the Fort Halifax dam, were you seeing larger eel counts on the Sebasticook River than you were on the Kennebec mainstem?

MS. WIPPELHAUSER: We don't have counts before we put in passageway but there were -- in 1996 there was a moratorium placed on the eel weir fishery, and at that point all of the weir fisheries in the Kennebec occurred on the Sebasticook River at the outlet of lakes.

MS. VERVILLE: Okay. So what you're saying is that before there was upstream eel passage at
the first dam on the Sebasticook River, there was evidence of a significant eel fishery on the Sebasticook as opposed to one on the Kennebec?

MS. WIPPELHAUSER: That's correct.

MS. VERVILLE: Thank you. Mr. Keliher -- Commissioner Keliher, there was testimony yesterday with respect to NOA fisheries 90-day finding with respect to the Atlantic salmon as potentially endangered or threatened. If NOA fisheries ultimately determines that the Atlantic salmon on the Kennebec River is listed as a threatened or endangered species, does that warrant modifying the certifications or the KHDG Agreement to trigger immediate installation of upstream fish passage for Atlantic salmon?

MR. KELIHER: No, it does not.

MS. VERVILLE: Thank you. Dr. Wippelhauser, there was questions regarding the effectiveness studies that Hydro-Kennebec will be conducting of its downstream fish passage facility. Are you confident that those studies will determine whether the facility is effectively passing out migrating eels and whether enhancements to the facility may be necessary and whether Brookfield will make whatever enhancements
are necessary on an expeditious basis?

MS. WIPPELHAUSER: Yes, I think those are very well designed studies. They consulted with all of the agencies. They've been very proactive in working with us and I think those will -- the studies that they're going to be doing this year will help us determine whether or not that passage facility is effective in passing eels and anadromous fishes.

MS. VERVILLE: Okay, thank you. Dr. Wippelhauser, let's assume for the sake of argument that there have been delays in completing studies and implementing downstream eel passage on the Kennebec River. What has been the impact on the American eel? Has there been a significant adverse impact on the American eel?

MS. WIPPELHAUSER: As an entire population?

MS. VERVILLE: Yes.

MS. WIPPELHAUSER: I would say no.

MS. VERVILLE: One last question. I'm going to ask Dr. Wippelhauser to read from the condition compliance order for the Hydro-Kennebec Project. This relates to some questions that Mr. Nicholas asked with respect to whether the
condition compliance orders require the licensees
to do anything. I'm going to ask her to read from
page 6, condition number 2.

MR. NICHOLAS: Sarah, what document is
this?

MS. VERVILLE: This is the condition
compliance order for the Hydro-Kennebec Project.
It's in the DEP Exhibit 5, condition 2. If you
could just read that condition.

MS. WIPPELHAUSER: Effective with the 2006
downstream eel migration season, in the event that
evidence, including the results of visual
observations, reveals that certain interim
downstream measures are needed to avoid
significant downstream turbine injury and/or
mortality, in parentheses, immediate or delayed,
closed parentheses, at the Hydro-Kennebec Project,
Hydro-Kennebec will consult with DMR and NMFS,
National Marine Fisheries Service and U.S. Fish
and Wildlife Service and agree to undertake cost
effective measures designed to minimize mortality
at the site.

MS. VERVILLE: So if there is significant
mortality observed at the site, Hydro-Kennebec has
to do something about it, is that correct?
MS. WIPPELHAUSER: That's correct.

MS. VERRVILLE: I have no more questions.

HEARING OFFICER HILTON: Mr. Thaler.

MR. THALER: Can I have that mike?

MS. VERRVILLE: Oh, sorry.

MR. THALER: Thank you, and, again, I'll try to ask questions from back here and if you could try to answer your questions facing the panel as best you can. Dr. Wippelhauser, just to follow up on the last point on the compliance orders, if the DEP compliance orders for FPL have the same condition as Hydro-Kennebec that you just read, would your answer be the same? Go ahead.

MS. WIPPELHAUSER: Yes.

MR. THALER: Let me ask a couple questions. I guess I'll stay with Dr. Wippelhauser for the moment -- actually let me strike that. I think Mr. Keliher you were asked to read certain passages from the Atlantic salmon status review that had been excerpted in Mr. Friedman's testimony, and that was FMOB Exhibit 28. Also in that report that Mr. Nicholas had not had you read was a paragraph about site variability for evaluating downstream fish passage, and at page 017 in the upper right-hand
corner of that exhibit is a sentence that begins
-- I'll bring it over to you. I'm just going to
stand here and speak loud since that's my only
copy, but it says downstream passage system
collection efficiency, percent of fish arriving at
forebay, slash, spillway that find and use
facility, end paren, and total site passage
survival, paren, total percent survival past dam
regardless of path chosen, end paren, vary widely
among sites within years and across years of the
same study site, paren, USASAC 2005, end paren.
The USASAC is that a national Atlantic salmon
group?

MR. KELIHER: That is a -- it is a
technical advisory group. It's the U.S.
Assessment Committee. It's a group of state
technical people from across New England as well
as the federal services solely for Atlantic
salmon.

MR. THALER: Right, and the paragraph goes
on and in the interest of time I'm not going to
take you through it but it generally goes on to
say how each hydroelectric facility is unique in
design, location of turbines, there are variations
in river flow, et cetera, et cetera. In your
professional experience in Maine, is that

generally true with respect to hydroelectric
facilities in Maine for anadromous fish passage?

MR. KELIHER: Yes, it's absolutely true.

MR. THALER: And I would ask the same
question generally to Dr. Wippelhauser, is the
same true with respect to consideration of
downstream eel passage?

MS. WIPPELHAUSER: I'm sorry, could you
repeat that?

MR. THALER: Sure. In the issue of site
variability, the uniqueness of each site in terms
of efficiency of passage of eels, which are a
fish, generally the same for eels?

MS. WIPPELHAUSER: Yes, it's true.

MR. THALER: Thank you. Let me -- I think,
Mr. Lapointe, you were shown a copy of the
Lockwood water quality certificate. I'm not going
to quiz you on it, just generally, though, Mr.
Nicholas asked you about that and a provision in
there in terms of studies. The water quality
certificate is a document that to your knowledge
is issued not by DMR but by the DEP, correct?

MR. LAPOINTE: That's my understanding.

MR. THALER: Right, and I believe the one
that was shown to you by Mr. Nicholas had a stamp on it showing that it was filed with the Board of Environmental Protection, this Board, on August 26, 2004 and, again, that's not something that DMR or any of the resource agencies do. That's DEP and the BEP who handle that water quality cert, correct?

MR. LAPOINTE: That is my understanding, yes.

MR. THALER: And in terms of the letter that was shown to you by Mr. Nicholas from May of 2006 and then there was also reference to the compliance order about concerns of MDMR, have there -- to your knowledge, let's start with DMR, either Dr. Wippelhauser or Commissioner Lapointe, have there been significant fish mortalities at Lockwood, Weston or Shawmut?

MS. WIPPELHAUSER: Not to our knowledge.

MR. THALER: And in terms of the -- again, the discussion about -- strike that. Let me -- I have the mike. The other mike that you had before -- you only have one, if you could move the mike back to Commissioner Keliher, sorry.

MR. LAPOINTE: He's going to ask for a raise if you keep calling him commissioner so be
careful. He's kicked me twice now.

MR. THALER: I hope you're able to walk out
of here after this case. Mr. Keliher, I'm just
trying to show respect, in terms of the
questioning of you by Attorney Merrill in terms of
Atlantic salmon upstream in the Sandy River and
then the study that's being done this year in a
couple months of salmon smolt, is it generally
true that salmon smolt travel downstream out
migrate in the springtime?

MR. KELIHER: Yes, that's correct.

MR. THALER: And that tends to be when
there's high water flows in the Kennebec River?

MR. KELIHER: Yes, most years, absolutely.

MR. THALER: And in 2006 were there high
waters on the Kennebec River in the springtime?

MR. KELIHER: Yes, the spring freshet was
very high.

MR. THALER: And when the spring freshet is
very high fish tend to generally go over the dams,
is that correct?

MR. KELIHER: Yes, they most certainly do.

MR. THALER: And Dr. -- I'm sorry, the mike
will have to go back to Dr. Wippelhauser now. You
were asked by Doug Watts, I believe, he was
questioning you about attachment 3 to the agencies' comments that was the DMR statistics in terms of eels at different locations, and he said nothing was shown for Lockwood and you indicated that that was because there was no upstream facility at Lockwood yet. That was going to be installed last year but was not because of high water, is that correct?

MS. WIPPENHAUSER: That's correct.

MR. THALER: And the plan is to install it this year, is that correct?

MS. WIPPENHAUSER: Yes.

MR. THALER: But even without the passage, to your knowledge, have eels been able to pass Lockwood?

MS. WIPPENHAUSER: Yes, some are passing Lockwood.

MR. THALER: Let me ask the panel generally, Board Member or Presiding Officer Hilton yesterday when asking questions about what is significant mortality said that, well, for a single eel or a single fish, if you're caught -- if you hit a turbine or are caught by an angler, that's significant from that eel or fish's perspective. How do the agencies administer or
manage the fisheries resource in the state of Maine in terms of population of fishes or any other animals in the waters? Is it by a fish-by-fish basis or some other basis?

MR. LAPOINTE: When -- it's on another basis and that is we're trying to restore -- our goal for our agency and we work cooperatively with the other agencies is to restore fish to their historic rate and this means restoring the populations of fish, and we recognize in that that sources of mortality do occur but, again, it's a -- it's restoring populations in our rivers to their historic range.

MR. KELIHER: I would concur with Commissioner Lapointe. Our goal is to see upward population trends as we move forward with our programs.

MR. THALER: And, in fact, have there been upward increasing trends for the fishery on the Kennebec River?

MR. KELIHER: I'll speak to Atlantic salmon where I have authority. This is the -- this year is the first year we're able to truly assess population levels and move fish up river. So from this -- from that standpoint, I would conclude
that we have had a successful year, and we hope to continue that success into the future.

MS. WIPPELHAUSER: I'll talk about the population levels of the other species. Based on our juvenile abundance index, it looks like populations of American Shad are increasing on the river, it looks like the populations of alewife and blueback herring are also increasing, and I'm not quite sure what the eel population is doing. We're continuing to track the numbers as they move upstream.

MR. THALER: Thank you. Let me just shift for a moment and maybe again this may stay with Dr. Wippelhauser. Did FPLE consult with you or the agency in the development of the proposed radiotelemetry studies of the American eel for Lockwood, Weston and Shawmut?

MS. WIPPELHAUSER: They did.

MR. THALER: And did you and the agency approve those studies?

MS. WIPPELHAUSER: We did.

MR. THALER: Is it your opinion that those studies will provide important information appropriate to support sound decisions on modifications, if any, that would be needed for
fish passage?

MS. WIPPELHAUSER: Yes.

MR. THALER: And I'm asking that question not just for eels but also generally for anadromous fish.

MS. WIPPELHAUSER: Yes, we consulted on all those studies and we think they're well designed.

MR. THALER: And sorry to have the moving mike back and forth, but if you could move that back to Mr. Keliher. Mr. Keliher, Mr. Flagg was here yesterday and answered some questions. Were you present when Mr. Flagg was here?

MR. KELIHER: Yes, I was.

MR. THALER: Presiding Officer Hilton questioned Mr. Flagg about responding to the Atlantic salmon not being present between Lockwood and Weston and Mr. Flagg said that it was biologically appropriate to place the adult salmon in the upstream habitat Sandy River area for purposes of increasing the reproduction of the species. Do you generally agree with that?

MR. KELIHER: I absolutely agree with that assessment.

MR. THALER: And why?

MR. KELIHER: Salmon restoration is heavily
dependent upon quality of habitat. The quality of habitat within the Sandy River is probably some of the very best habitat for Atlantic salmon that we have in the State of Maine for a number of factors that deal with the overall threats to the species. Lack of invasive species or predator species within that system as well as water quality and quality of substrate all add up to high quality habitat.

MR. THALER: And let me -- if you could move the mike back to the DMR folks for a moment. There were questions yesterday by Board Member Anderson and possibly some others about the water quality of these stretches of the Kennebec River where the facilities are located, and she talked about Class B and I know Mr. Murch has this in the record somewhere, but just for the panel's benefit, the Weston Project is on a Class B stretch of the Kennebec River, the other three projects are on a Class C stretch of the Kennebec River. Mr. Murch can verify that for the Board's convenience if need be, and for Class B which, again, is just Weston, the Legislature has talked about whether -- there's supposed to be no significant loss of species attributable to human
activity, and I would ask DMR whether based upon
your professional experience in the Weston area
has there been any significant loss of species
connected with the operation of the Weston
Hydroelectric project?

MS. WIPPELHAUSER: No.

MR. THALER: And with respect to the other
facilities that are in the Class C stretch of the
Kennebec River which does allow for some loss of
fish, Class C talks about maintaining the
structure of the habitat, the biological
community, and the question is with respect to
that stretch of the Kennebec River, have there
been any either anadromous fish species or the eel
species have either of those species been
significantly impaired in terms of their viability
as a population?

MS. WIPPELHAUSER: Not that I'm aware of.

MR. THALER: If you can just give me one
moment, Mr. Presiding officer, I think I might be
done.

HEARING OFFICER HILTON: Certainly, Mr.
Thaler.

MR. THALER: I don't have anything
further. I don't know if Attorney Verville does.
MS. VERVILLE: I'm all set.

MR. THALER: Then we are all set.

HEARING OFFICER HILTON: Thank you, Mr. Thaler, and Save Our Sebasticook is next up, and I understand Mr. Fletcher is here today. Welcome.

MR. FLETCHER: I do appreciate being here but I'm going to allow my good friend, Mr. Vanden Heuvel, to ask the questions.

HEARING OFFICER HILTON: Mr. Vanden Heuvel, welcome to all of you.

MR. VANDEN HEUVEL: You completed the eel studies by 12/31/2001 thousand 1. If completed, where is the report and what is a short summary of the results of the study?

MS. WIPPELHAUSER: The results were put in the annual KHDG Agreement that explains the year's work.

MR. VANDEN HEUVEL: Can you give us a short summary especially regarding eels?

MS. WIPPELHAUSER: Do you want upstream passage, downstream passage, just downstream?

MR. VANDEN HEUVEL: Both.

MS. WIPPELHAUSER: We spent a minimum of three years at sites trying to identify locations of upstream passage. We made recommendations in
2003 I believe on four of the projects. We needed to do additional work at some of the projects, Lockwood being one, Weston being one and Burnham project being another one of the ones that needed additional work. In the latest KHDG report we said we needed to do a little bit of additional work at Burnham because the upstream anadromous passage had been installed and it changed the flow patterns and we wanted to verify that the location we thought eels would be congregating in were, in fact, where they were congregating. Regarding downstream passage, we did two years of studies at Fort Halifax and Benton Falls. The Fort Halifax Project was not generating in either of those two years so we could not comment on the efficiency of their downstream passage, and then we did work at Lockwood Project. We were able to tag five eels in one year. We attempted to do work in the following two years and were unable to -- excuse me -- we were unable to collect eels to tag to continue that study.

MR. VANDEN HEUVEL: How much of the 427,000 did you end up spending?

MS. WIPPELHAUSER: I have no idea.

MR. VANDEN HEUVEL: Mr. Lapointe?
MR. LAPOINTE: I don't know the number specifically, but in the context of how these funds and other KHDG funds have been spent, we have enumerated that in the past and have plans for the remainder of those funds through the future. I don't have those numbers in front of me, but I believe those have been provided to outside groups, including SOS, in the past. I think it's also important when the $427,000 number came up, I asked Dr. Wippelhauser and she can elaborate on this, it was an estimate on what she thought it would take for three years because that's what we needed for the agreement, and so that's I believe where the $427,000 number came from, and she can correct me if I am mistaken in that.

MS. WIPPELHAUSER: That's correct. I was asked to do an estimate of how long it would take to do studies in three years.

MR. VANDEN HEUVEL: Did the DMR initiate discussions for the designs before they were agreed upon?

MS. WIPPELHAUSER: I don't understand your question. Could you --

MR. VANDEN HEUVEL: We'll skip it. How
many American shad were trapped and trucked at
Lockwood in 2006 as compared to the DMR forecast
and the installed capacity?

MS. WIPPELHAUSER: We didn't make a
forecast. There were no American Shad that were
trapped and trucked this year -- sorry -- last
year.

MR. VANDEN HEUVEL: Did you make a forecast
for alewife and how many were trapped?

MS. WIPPELHAUSER: We did not make a
forecast for alewives and I don't have that
number. I can't remember what the number was.

MR. VANDEN HEUVEL: Did you make a forecast
for salmon, and how many were trapped?

MR. KELIHER: We did not make a forecast
for salmon and 15 were trapped.

MR. VANDEN HEUVEL: Has the Atlantic Salmon
Commission developed the multi-agency fisheries
management plan for the river above Lockwood as
well as initiated an Atlantic salmon stocking plan
as specified by the '98 KHDG Agreement to be
completed by 2006?

MR. KELIHER: Last year we wrote an interim
plan but we have not yet initiated a multi-agency
plan as you've asked.
MR. VANDEN HEUVEL: Will Maine continue to allow a commercial harvest of adult eels?

MS. WIPPELHAUSER: Some of the eel harvests -- the eel harvest in coastal water is managed by DMR. The eel harvest in inland waters is managed by Department of Inland Fish and Wildlife. There is a moratorium on the eel weir fishery that was put in place in 1996. At that time I think there were something like 24 fisherman and they had 42 sites. There are now I believe 3 fishermen left in the fishery and they have four sites, and I'll let Steve comment on that. Steve doesn't want to comment.

MR. VANDEN HEUVEL: Will Maine continue to allow a commercial harvest of elvers?

MR. LAPOINTE: Maine -- we've had discussions with Inland Fish and Wildlife and we're discussing it within the context of the Atlantic States Marine Fisheries Commission the right amount of harvest, if any, to allow for both juvenile eels and adult eels as well, and those discussions are ongoing and importantly in the context of both our work and the context of the Atlantic States Marine Fisheries Commission plan, it deals with direct harvest of eels, if that's
appropriate, and it deals with habitat issues on
eels such as has been provided by the KHDG. So we
try to take both of those into account.

MR. VANDEN HEUVEL: Dr. Wippelhauser, you
stated you are not seeing eel mortality on the
Kennebec River. What was your methodology for
determining eel mortality and can you share it
with the dam owners?

MS. WIPPELHAUSER: Yes. Our crew went
out. On a number of occasions they would go out
in a boat, they would go into the tailrace area.
I believe they've done this at Shawmut and
Hydro-Kennebec and Lockwood. Sometimes they take
an underwater camera out and they run transects
across that area, and look for eels. It's not
that we've seen no mortality. We've seen minimum
mortality. I believe we've recorded something
like 11 or 12 dead eels below the projects.

MR. VANDEN HEUVEL: Hydro-Kennebec felt
that only with the construction of permanent
downstream fish passage facilities could the goal
of providing effective downstream passage for
adult American eel, Atlantic salmon and American
Shad be accomplished. What is different about the
state's position?
MR. LAPOINTE: Please repeat the question.

MR. VANDEN HEUVEL: Hydro-Kennebec felt that only with the construction of permanent downstream fish passage facilities could the goal of providing effective downstream passage of adult American eel, Atlantic salmon and American Shad be accomplished. What's different about the state's position?

MR. LAPOINTE: I don't entirely understand the question, but I think that the state's position is that I think downstream passage is consistent with the KHDG. You've discussed that more than we so I don't think our position is that -- differs from Hydro-Kennebec.

MR. VANDEN HEUVEL: Wouldn't you say that turbine passage is acceptable passage for juveniles only?

MS. WIPPELHAUSER: There were -- there were studies done at Hydro-Kennebec and, again, this was just visual observations, and they wanted to pass juvenile -- juvenile shad and juvenile alewives through turbines. They did not observe mortalities of those species below Hydro-Kennebec.

MR. VANDEN HEUVEL: Would you say turbine
passage is acceptable for adult salmon and adult
eels?

MS. WIPPELHAUSER: It's probably not the
preferred method.

MR. VANDEN HEUVEL: Should the state
recommend the replacement of capping the tube
turbines with slower turning models as part of its
long-term fish restoration plans?

MS. WIPPELHAUSER: I don't know the answer
to that.

MR. VANDEN HEUVEL: Mr. Lapointe?

MR. LAPOINTE: I don't know the answer to
it either, but I think I would -- I would respond
by saying that the KHDG provides the partners,
including the state agency partners, with an
iterative process to make changes to accommodate
fish passage through time and so should we arrive
at that conclusion in the future, we would use the
KHDG to do that. Should we arrive at another
conclusion, we'd use the agreement to do that as
well, but I think that for us to presumptively,
you know, put a prescription in or suggest a
prescription is not something we would do.

MR. VANDEN HEUVEL: Thank you. Are
floating baffles on dam sites in front of turbines
MR. LAPOINTE: I would say that was a question we would pose to the folks who put them in place more than us making a judgment on whether they are cost effective or not.

MR. VANDEN HEUVEL: Are metal plates in front of turbines cost effective?

MS. WIPPELHAUSER: We haven't used them and I don't know if they're cost effective.

MR. VANDEN HEUVEL: In fact, aren't they in place in front of Fort Halifax dam and were they cost effective and are they effective?

MR. LAPOINTE: My response would be we work on fish effectiveness in terms of the KHDG and the companies work on cost effectiveness and we try to do that in partnership. So I think we're not the right folks to ask that question. I would think that for those dams that they have put plates in front of the turbines that the companies thought those were cost effective means of trying to improve fish passage efficiency.

MR. VANDEN HEUVEL: Do you feel that there is a lack of engineering design in this process?

MS. WIPPELHAUSER: I'm not sure what you're asking. When we -- we don't tell hydropower
companies what to put in place. There are U.S. Fish and Wildlife Service engineers that make recommendations. They have the expertise to do that. We usually rely on them to make those suggestions.

MR. VANDEN HEUVAL: Why are the Weston downstream studies in 2008 versus 2007; at all the others, why are the upstream studies in 2007 versus 2006? We're behind schedule on information on up and down passage characteristics of fish and eels. Don't we need as much information as possible as soon as possible?

MS. WIPPELHAUSER: We consulted with FPLE on those studies and we agreed that it was impossible to do an adequate study at three sites at the same time. I've tried to do two sites at once and it's very difficult.

MR. VANDEN HEUVEL: Why didn't you strip the salmon eggs and implant them in the Sandy River?

MR. KELIHER: As I answered a previous question, the reason that we are targeting the Sandy River is because of the high value habitat which gives us the most likelihood of a successful restoration project.
MR. VANDEN HEUVEL: Why didn't you strip
the salmon eggs and implant them in the Sandy
River?

MR. KELIHER: Actually I'm going to for the
first time pass that question to Norm.

MR. DUBE: We simply don't have the
facilities to hold the salmon until spawning
because they enter the river anywheres from May
through October.

MR. VANDEN HEUVAL: Can't you still remove
the 15 salmon from the Kennebec River before they
go downstream?

MR. DUBE: No.

HEARING OFFICER HILTON: Mr. Vanden Heuvel,
you were allocated 15 minutes. Now, I gave the
petitioners an extra 8 minutes and I gave the
facility owners an extra 8 minutes and I'll give
you an extra 8 minutes if you wish it.

MR. THALER: I'll just point out that I
didn't use any of the extra 8 minutes.

HEARING OFFICER HILTON: My understanding
was that you -- are you giving that time to Mr.
Vanden Heuval or are you going to give it to the
Board? What's your point?

MR. THALER: I'll reserve it if you want.
He's asking some questions that I certainly would like to follow up on.

HEARING OFFICER HILTON: Mr. Vanden Heuvel, do you have another 8 minutes' worth of questions?

MR. VANDEN HEUVEL: I'll reserve the rest of the questions for the Board.

HEARING OFFICER HILTON: No, you should ask your questions.

MS. EDWARDS: I'd like to ask one of Dr. Wippelhauser, very non-technical.

HEARING OFFICER HILTON: I'm going to allocate another 8 minutes to Sebasticook.

MS. EDWARDS: I've been curious about the role of eels in an ecosystem, okay, and I've been reading about Canada and they're trying desperately to restore eels to certain rivers I understand in Canada. What would happen to the Kennebec River Watershed -- or I guess it would be true of any watershed in Maine -- but what would happen if all the eels gradually died out and we didn't have any eels at all in the ecosystem? Do you know what would be the impact on the river and the rest of the life in the river?

MS. WIPPELHAUSER: I don't know the answer
to that. There have been lots of species that have gone extinct, and usually what happens is other species take their place.

MS. EDWARDS: That's what I was wondering. Maybe I should ask Inland Fisheries and Wildlife because they've had the experience with wolves or they've had other experiences. Is that what happens is that some other species would take their place?

MR. TIMPANO: Yes. I guess I would concur with that thinking of, I mean, the system as a whole, and the niches within that system that support specific species or specific species are adapted to, and you have other species that are marginally proficient in operating within that habitat.

MR. LAPOINTE: If I might -- and if it's inappropriate, Mr. Chairman, please tell me -- but I think an important other facet of that question is I believe that certainly our professional judgment and the science of fish and wildlife management suggests that we not -- we don't know the answer to the question but our professional experience suggests that we want to keep the natural components of the ecosystem in place and
so that's why we try to restore fish species
because we think the absence of those species is
not a good thing for the ecosystem because they
have a place there because they're there now.

MS. EDWARDS: Thank you very much. That's
especially what I was trying to get at. We need
the eels in the ecosystem. Thank you. I guess
we'll reserve -- if there's any of the minutes
left, we'll reserve them.

HEARING OFFICER HILTON: Board questions.

Nancy Ziegler.

MS. ZIEGLER: Mr. Timpano, is that how you
pronounce it? Tell me again what your -- you're
with -- tell me who you're with?

MR. TIMPANO: IF&W.

MS. ZIEGLER: Okay, you're with IF&W, thank
you. So this is also a question to you and to Dr.
Wippelhauser, and I understand that so far you're
not observing eel mortality in any significant
numbers in the mainstem of the Kennebec, right,
and so it's not -- but that doesn't mean that
there isn't significant mortality, you just
haven't observed it, the studies have not shown
any significant mortality, is that sort of what
you're saying? Because you kept saying I don't
know.

MS. WIPPELHAUSER: That's right. We've done limited studies but what we -- but the studies that we've done have not demonstrated huge numbers of eels being killed.

MS. ZIEGLER: Okay, and, Mr. Timpano, would you also concur that you see more eels -- significantly more eels congregating in the lower reaches of the Sebasticook as opposed to where the Kennebec goes up on the mainstem?

MR. TIMPANO: I guess the best way to answer that is that our department, to my knowledge, is not specifically doing any studies or making observations of eels in that sense. That's primarily what DMR does.

MS. ZIEGLER: In terms of the fishery do you manage the fishery? Do you manage the fishery?

MR. TIMPANO: The inland fisheries management, the resident species, correct.

MS. ZIEGLER: Right. So if there are any concerns about -- I gather the goal is a sustainable fishery also, is that correct? I'm just trying to understand this.

MR. TIMPANO: Yes. Inland fisheries
management, and to the degree that we're managing
for cold water species, different segments of the
Kennebec River, for example, depend quite a lot on
our stock fishery, and the sustainable part would
be to the degree that we are able to have natural
reproduction with cold water species, landlocked
salmon and so forth, and the warm water species
are primarily self-reproducing and we manage for
sustainability also, yes.

MS. ZIEGLER: So the commercial harvesting
licenses for eel are those managed by DMR?

MS. WIPPELHAUSER: The commercial fisheries
for eels in coastal waters are handled by DMR so
we license the elver fishery and the coastal eel
pot fishery. Inland Fish and Wildlife licenses --
they actually give permits for the inland pot
fishery and the weir fishery.

MS. ZIEGLER: So those weir fisheries --

MS. WIPPELHAUSER: Right, and the weir
fishery, as I mentioned, was -- a moratorium was
put in place in 1996. That was done by Inland
Fish and Wildlife, and they only allow people in
the fishery that I think had been licensed for the
previous three years.

MS. ZIEGLER: Okay, and if my terminology
is wrong, just correct me, but would you agree
that the whole goal of managing the fisheries is
to have a sustainable fishery?

MS. WIPPELHAUSER: Yes, that's correct.

MS. ZIEGLER: So the question of the fact
that there are kills of various species of these
fish by commercial or recreational fishing is sort
of irrelevant in terms of our question here about
fish passage down the river?

MS. WIPPELHAUSER: Could you --

MS. ZIEGLER: The only reason I'm asking
this question is it's been thrown out there, okay,
we have commercial fishing, they're harvesting the
fish and the eel, and we have both types of
species, anadromous and catadromous fish, and we
have recreational fishing and so we're allowing
fish to be harvested so, you know, the fact that
some of the fish are lost and there's mortality
through the turbines, I don't think that one has
anything to do with the other partly because the
goal is a sustainable fishery, right?

MS. WIPPELHAUSER: All of those things
impact the fishery. They all impact the eel
population. Through ASMFC we're trying to make
improvements in all of those fronts. If you look
at the American Eel Fisheries Management Plan that was adopted by ASMFC in 2000, there is a requirement that all the states improve upstream and downstream eel passage basically through the FERC process when they can do that. We all have -- we have requirements for reporting all of our harvest information so we get very good catch data which we didn't have in the past. There was a requirement when the management plan was first adopted that the eel fishery should not increase, and now we're looking at addendum 2 which would probably put some limitations on the coastal pot fishery because there is a pot fishery in every state on the East Coast.

MS. ZIEGLER: And I understand the need to look at those fishing limits, but does it really have anything to do with the issues that we're dealing with here?

MS. WIPPELHAUSER: No, only that it's another source of mortality to the population.

MS. ZIEGLER: Okay, and my other question is having to do with the -- there's a slight difference in these compliance orders issued by the Department for the various projects depending on what -- and this has to do with the eel passage...
downstream -- depending on what or what is not
happening at each project, is that true?

MS. WIPPELHAUSER: Yes.

MS. ZIEGLER: And in each of the compliance
orders on that Section 5, consultation and review
comments, is that phrase that DMR is concerned
that controlled spill via bypass gates will not be
an effective measure for downstream passage and
that significant injury or mortality to eels will
occur unless other additional measures are taken,
and do you agree with that?

MS. WIPPELHAUSER: Yes, we put that in
there, again, it's "may", we don't have a lot of
data. That's why we agreed to continue two
additional studies that we weren't able to
complete.

MS. ZIEGLER: But I guess my question is
that you have a concern that the controlled spill
via bypass gates is not an effective measure
unless other measures are put in place? Do you
agree with that?

MS. WIPPELHAUSER: Yes.

MS. ZIEGLER: Okay, and then in the
Hydro-Kennebec order, which I'd have to get to
here, they do have this diversionary boom in
place. Is that another type of measure that you think in conjunction with a gate may be more effective?

MS. WIPPELHAUSER: It may be. It's something that -- it's been used, as far as I know, in one other place specifically for downstream anadromous fish. We don't know if it will work with eels, and we think it's worth studying.

MS. ZIEGLER: And I think somebody made the comment, it may have been you, that the studies that Hydro-Kennebec is proposing, both the camera studies and the hydro acoustic studies, are appropriate studies?

MS. WIPPELHAUSER: Yes.

MS. ZIEGLER: Is there any reason why -- and this is my last question -- you have also in the past tried to tag the eel and were only successful once in tagging five eel?

MS. WIPPELHAUSER: That's right.

MS. ZIEGLER: And what happened the other times when you tried to tag them?

MS. WIPPELHAUSER: I believe we were working on that study in the middle of the five-year drought that went from '99 to 2001 or
2002. We had a net. I think it was set in Wesserunsett Stream, there were other fish moving down, we did not catch any eels. We had a net in a couple of places. We just did not catch any eels.

MS. ZIEGLER: So now the studies that are being proposed, these radiotelemetry studies, proposed at Shawmut and Lockwood propose -- they're tagging 30 to 50 eels at each site?

MS. WIPPELHAUSER: Yes.

MS. ZIEGLER: And do you believe that they're going to be successful in catching those numbers of eel to tag?

MS. WIPPELHAUSER: I think they will be because there's now something else going on that wasn't happening when we were doing our studies. Madison Paper Company which is up above the Weston -- there's two hydropower projects above Weston. They're not part of the KHDG Agreement. They were recent -- they went -- underwent their relicensing, they have eel and salmon passage requirements. They will be putting in downstream eel passage. At their second dam there's a place where we can easily trap eels and so we're going to try and use those eels in the studies for
probably Hydro-Kennebec and Shawmut and Weston --
at Shawmut and Lockwood, sorry.

MS. ZIEGLER: So you'll trap them and then
you'll move them and track them?

MS. WIPPELHAUSER: Yes, probably move them
downstream some.

MS. ZIEGLER: Okay, and then follow them?

MS. WIPPELHAUSER: Yes.

MS. ZIEGLER: That was actually a good
clarification to try to understand how that was
going to happen. If you believe -- if the
Department, DMR, believes that downstream passage
via these spillway gates probably won't work, why
would you just study that method without actually
-- if you already have -- if you already feel
it's not going to work, why just study it for
another two years?

MS. WIPPELHAUSER: One thing that they're
going to be doing at Lockwood is using a deep gate
which they did not open when we were doing our
studies.

MS. ZIEGLER: But that's only Lockwood.

What about Shawmut?

MS. WIPPELHAUSER: That's right. We
haven't done anything at Shawmut. We haven't done
any studies at all at Shawmut. We don't know where the eels are going. The flow fields there are entirely different than Lockwood.

MS. ZIEGLER: Okay. That's it.

MS. WIPPELHAUSER: It's very hard to -- it's very hard to try and figure out how to move eels from one place to another if you don't even know where they're going.

MS. ZIEGLER: So I guess your point is that you wouldn't know where to put a boom unless you could -- unless you could get some studies to see where the eel were going?

MS. WIPPELHAUSER: That would be very helpful.

MS. ZIEGLER: Thank you.

HEARING OFFICER HILTON: Do any of the witnesses or anybody else need to take a brief break? Why don't we take a break for just a couple minutes.

(OFF RECORD)

HEARING OFFICER HILTON: Board Members Ehrenfeld, any questions?

MS. EHRENFELD: Yeah, I have a couple more questions about fish counting which I started asking yesterday. Looking at attachment number 3
for DMR counting the eels upstream, on the Shawmut
Project in '06, there were zero eels counted, and
Weston, which is upstream from there, there were
6,800, so obviously --

MS. WIPPELHAUSER: They weren't able to put
the fish passage in at Shawmut in 2006 because of
the high water.

MS. EHRENFELD: Okay, and could you clarify
again how they're actually counting the fish, the
eels going upstream?

MS. WIPPELHAUSER: Yeah, there's traps at
the tops of all the fishways -- well, there's
traps at the tops of the eel passageways. The
eels are trapped in there, they go out the next
morning and they simply count the eels. At Fort
Halifax we did not go one eel, two eel.

MR. EHRENFELD: Okay.

MS. WIPPELHAUSER: We actually weigh them,
take a sub sample and count the sub sample and
calculate how many there are.

MS. EHRENFELD: Thank you. The other
questions relate more to downstream counting.
There's been a lot of discussion about mortality
of the fish downstream from the river and whether
or not there are significant fish kills. I'm
having a hard time understanding what the percent
of mortality that gets measured. So there's a
certain amount of mortality, if you see the dead
fish, and I'm trying to get an idea of the percent
you're actually seeing, so what the sensitivity of
the observation would be.

MS. WIPPELHAUSER: I have no idea. I don't
know.

MS. EHRENFELD: Okay, and then my final
question that we've discussed a little bit but I
wanted to get your opinion on is the difference
between the two study types that were discussed at
the different dams, the radiotelemetry which I
understand is just measuring eel passage going
downstream versus the photo and acoustic
measurements where you're measuring all the fish.
I'm sure there are other differences between the
studies as well.

MS. WIPPELHAUSER: The two methods are the
methods that are being used to address specific
questions or objectives. At Hydro-Kennebec
they're concentrating on a relatively small area.
The hydro acoustics that they're using I believe
has a range of about 24 meters. The
radiotelemetry you may be able to detect a fish a
quarter of a mile away so there's much greater range. There's trade offs on each one of those
types of methods.

MS. EHRENFELD: Thank you.

HEARING OFFICER HILTON: Nancy Anderson.

MS. ANDERSON: I have a couple questions. The first one is for Mr. Keliher. I don't know much about this proposal to declare the Atlantic salmon endangered in the area of the Kennebec. Is it specifically in the Kennebec?

MR. KELIHER: No, the 2006 status review that was referred to earlier is a technical document that from a technical standpoint based on the discreteness of the population has suggested an expansion of the current DPS to include the Androscoggin, the Kennebec and the Penobscot watersheds. Excuse me, yes, Mr. Lapointe reminded me to say what DPS was. The current DPS -- DPS stands for distinct population segment and Atlantic salmon are listed under the Endangered Species Act as a distinct population segment. That current geographical area that is listed is from the Edwards dam site -- the old Edwards dam site on the Kennebec downstream and then to the East all the way to the Dennys River Watershed.
MS. ANDERSON: So then you would be basically saying that these are separate species that need separate kinds of protection? Am I misunderstanding?

MR. KELIHER: The scientific conclusion -- this has not gone through policy review and a rule has not been written -- the scientific conclusion is that the salmon in Androscoggin, Kennebec and Penobscot are of the same discreteness of the current salmon within the existing distinct population segment.

MS. ANDERSON: Got it. You were asked about -- so if this does -- is found to be a distinct population and has gone through the policy review and you were asked wouldn't that trigger an immediate need for everybody having adequate, safe downstream passage and you said no. Can you elaborate why? Because I gather besides the shad trigger there was also this alternative trigger in the Kennebec-Hydropower Agreement that allowed for use of salmon as requiring immediate action.

MR. KELIHER: That's right. There is a trigger alternative. Instead of using shad, we could use salmon if that was needed. We currently
don't know if that is needed. The issue of -- I can't remember exactly how the question was asked, but the federal services, the only way that federal services, I believe, could potentially reopen a license is if there is an issue of take under the Endangered Species Act. Currently this area is not listed under the Endangered Species Act so federal take requirements are not in play here.

MS. ANDERSON: So if it were listed, which is what this is all about, this proposal --

MR. KELIHER: Yes, it would be a consultation process. They'd have to determine the level of take. In a sense they would need a dead fish to determine that there is, in fact, take.

MS. ANDERSON: The mortality levels would have to be determined?

MR. KELIHER: Exactly. The dam owners would need to do efficiency studies.

MS. ANDERSON: Thank you. The other questions I have are about eel mortality because I'm feeling confused by the variety of information we've had. The first thing I wanted to ask Dr. Wippelhauser about is the Federal Register which
is -- well, there's this section in it that says based on the data available we can reasonably assume that where American eels encounter one hydropower facility during out migration there is a typical mortality rate in the range of 25 to 50 percent, and when one or more turbines are encountered, the range of mortality rate increases to 40 to 60 percent for that watershed. So when Doug made his presentation yesterday, we had sort of a numbers description of cumulative impact, if we have X population and this percentage of mortality at the first dam, then there's this amount left, so you get a cumulative impact that builds up. So I wanted your response about that and what the Federal Register says about the 25 percent to 50 percent mortality. Is that a good enough question?

MS. WIPPELHAUSER: I'm not sure what you're looking for.

MS. ANDERSON: Well, do you agree with the 25 to 50 percent mortality and the cumulative impact?

MS. WIPPELHAUSER: I agree that there's cumulative impact. If eels are going down a series -- if there's four or five dams in a row,
there is some mortality at each one of those
projects. I don't know if it's 25 to 40 percent.
I don't know what it would be on these projects.

MS. ANDERSON: Okay, and then the second
question had to do with the letter that was
submitted as part of Doug Watts' original
preliminary testimony on page 23, it's a letter
from Nate Gray and at the bottom of the page it
says the big dams with deep tailraces could hide
an army of the dead and you'd never know, and I
just wanted to know if you agree with that
statement.

MS. WIPPELHAUSER: We don't have data. I
don't know if there's an army of dead down there,
but we haven't seen an army. You would have to
probably use a lot of hydro acoustics to look at
the entire tailrace downstream of a dam and we
haven't done that.

MS. ANDERSON: Right. I can't remember but
it seemed to me that I read something from you as
well, a corroborative -- a statement that sort of
corroborated this and I can't track it down. I've
been looking for it. Oh, well, if I can find it
in between, I'll ask you about it.

HEARING OFFICER HILTON: Anything further?
MS. ANDERSON: No.

HEARING OFFICER HILTON: I have a few here also. Gail, I'll start with you. You've been a very valuable witness today.

MS. WIPPELHAUSER: Thank you.

HEARING OFFICER HILTON: FPL proposes as one of the range of fish passage opportunities turbine passage, the various gates and et cetera, et cetera, and they have turbine passage and the witnesses have mentioned that in every one of their -- all three witnesses proposed that, and, yet, it is their turbines which, as I understand it from yesterday and today, the smaller turbines -- Hydro-Kennebec has the larger, slower moving turbines, FPL has the smaller, and there's already some indication of mortality because they did that little five eel study here a few years ago. What is your -- what is your reaction to that, the fact that they propose in writing that turbine passage is a viable possibility, it's part of their program, part of their plan?

MS. WIPPELHAUSER: They're going to be studying basically the out migration routes, they're going to be as I understand opening up a deep gate which they didn't do before, they're
HEARING OFFICER HILTON: This is part of the studies that they're going to be doing this year?

MS. WIPPELHAUSER: That's right. When we did our study of the five eels, the deep gate was not open. They may be able to change operations on those -- on those turbines. That may change where the eels move in the power canal. Those kinds of details on the study design haven't been worked out yet.

HEARING OFFICER HILTON: Okay. Let me go back to -- you made a response to Doug earlier this morning when he was asking you about the -- he was trying to clarify your answer as to that five eel study. Two of them we know went through the turbine and died, two are unaccounted for and one was found in the backwater somewhere I guess still alive as I understand it, and you said in response to his questions about how much energy I guess or effort had gone into trying to locate this unknown eels, these two, that you were at fixed locations?

MS. WIPPELHAUSER: Yes.

HEARING OFFICER HILTON: You were on the
dam at fixed locations?

MS. WIPPELHAUSER: We had antennas set up in each one of the turbine bays so we could tell if an eel went through there. We had an antenna set up that was looking across the spillway and then we had an antenna set up below the flume that's between the turbines.

HEARING OFFICER HILTON: Okay.

MS. WIPPELHAUSER: Those were the fixed locations. Then we had a separate receiver that we could take out in a boat, and that's the one where we would use to go down below the powerhouse to try and track eels. I'd like to let you know there is one field person working on eels, and if he goes in a boat, he needs a second person with him. So there's not always somebody available.

HEARING OFFICER HILTON: The impression I have from both the readings of the agencies -- the agency writings and also from what you said today is that you speak about mortality and what you don't know about mortality and, yet, there is one study at least that has been done, this five eel study, it had results, it was a scientifically done study and, yet, you seem to treat it as anecdotal information. Can you comment on that?
MS. WIPPELHAUSER: It's not anecdotal. It's very limited. There were five eels. If you had one that's -- let's say it goes from the -- we know it went through a turbine category, we're not sure where it went, that's 20 percent. It's a huge change. That's why I'm saying we need a bigger study, a study with more eels so we get better information.

HEARING OFFICER HILTON: That's correct. None of us ever have enough information. This Board is never going to have enough information about the eels to really know, we are not omniscient, but, yet, you have completed a scientifically devised, carried out -- I mean, at the point where you had five eels, you decided to go forward with it to see what happened and, yet, you had the mortality -- the known mortality that you did and, yet, it seems to be -- it seems almost results oriented in that because you had the mortality that you did, you seem to want to treat it as anecdotal information, even though it seems to line up with what -- what was her name who wrote the --

MR. FRIEDMAN: Heather Bell.

HEARING OFFICER HILTON: Even though it
seems to line up with Heather Bell's overall findings in the 12 month report that she gave in the Federal Register. So I'm kind of curious about this discontinuity here.

MR. LAPOINTE: Trying to draw conclusions from a sample size of five is -- you can draw from it what you will, what you can, but you can't make more of it than it is. Imagine being at the rotary in Augusta and taking observation of five cars going by and talking about traffic patterns in the entire central part of Maine. You can talk about what happened at the rotary in Augusta during that observation period but expanding that to, you know, the other arteries that go into Augusta is -- you can do it but you should be really cautious about it. I think that's what Gail is trying to say. I don't think we're treating it as anecdotal. She used the correct terms. It's very limited.

HEARING OFFICER HILTON: Well, you seem to be dismissing it even though there is an abundance -- even though somebody else has studied over 12 months an abundance of studies of all the arteries and all the roads in central Maine and the results of this study seem to confirm the central Maine
overall study. This is the disconnect here. When I read your report, what I see is a minimizing of what may be the issue. You mentioned that you've only counted 11 dead eel or whatever the number was, and as if you only think there are 11 eels above the dams or just a very minimal number of them. There is Madison Paper now you've indicated is going to be putting in downstream eel passage at a point which is considerably above Lockwood dam or any of these dams. It's going to be above the Sandy River, just below the Carrabassett River and they are investing a certain amount of effort into doing that, and you spoke in terms of gathering enough eels there to conduct these studies so how -- how are we supposed to handle this, these information sources that don't seem to quite come together? That's a rhetorical question really.

MS. WIPPELHAUSER: Well, as I pointed out, the two hydropower projects that are located up above there are not part of the KHDG Agreement.

HEARING OFFICER HILTON: That's correct.

MS. WIPPELHAUSER: Their relicensing came up -- I can't remember when it was but it was after the KHDG Agreement occurred. It was a
completely separate relicensing, and there were only two species involved up there. That's how that came about.

HEARING OFFICER HILTON: Gail, you said -- and I think this is just about a quote -- there is no data indicating significant eel mortality --

MS. WIPPELHAUSER: I -- I'm sorry.

HEARING OFFICER HILTON: -- earlier today, and I think this is a direct quote, you said there is, quote, no data indicating significant eel mortality. Do you stand by that phrase?

MS. WIPPELHAUSER: Yes. DMR has not seen significant eel mortality on the Kennebec River.

HEARING OFFICER HILTON: That's in terms of numbers or percentages? I mean, it seems to me as though 40 percent loss of even this rather poor -- even if you characterize that as a poor study, a 40 percent loss is at least some data indicating significant eel mortality. I don't want to argue with you about it. I'll let it go. I'll ask Commissioner Lapointe, and I guess you also, Pat, were either one of you -- Mr. Lapointe, you weren't I know; Mr. Keliher, I'm not sure about you. Were you involved with the Atlantic Salmon Commission at the time the '98 agreement was --
MR. KELIHER: No, I was not.

HEARING OFFICER HILTON: Okay. Dr. Wippelhauser, I believe you were?

MS. WIPPELHAUSER: I was not. I was asked to do a cost estimate for the three-year study. That was my total involvement.

HEARING OFFICER HILTON: You were with DMR at the time?

MS. WIPPELHAUSER: I was. I was under contract.

HEARING OFFICER HILTON: Oh, okay, and Steve?

MR. TIMPANO: Yes, I was a participant with the development of the agreements.

HEARING OFFICER HILTON: So you were sitting at the table more or less?

MR. TIMPANO: Correct.

HEARING OFFICER HILTON: Okay. I guess I'll pass this on to all of you. Has this progressed on the course that you expected at the time? At the time the agreement was originally negotiated, you each had -- all of you had some sort of a collective sense about what was going to happen and how fast it was going to happen. Has that time line been pretty well adhered to or
MR. TIMPANO: I guess I would defer to whatever DMR's and Salmon Commission's expectations were at that time. Inland Fisheries and Wildlife participated but had little input as far as the issues of anadromous or catadromous restoration. So from my viewpoint, I think as far as I can see, yes, it has progressed, but I'll defer to them for the specifics or particulars.

MR. LAPOINTE: I'll let Gail answer. I mean, I think that the biggest concern of all the partners with the KHDG is the slowness with the resolution on Fort Halifax but that's before the courts and that's something we can't do anything about, and then I think that, you know, the progress might be a little bit slower than we had expected but my overall sense is that the agreement and the spirit of the agreement has allowed us to progress very significantly in terms of fish passage. When you asked the question about the status review and the coast wide numbers on dam mortality, when I meet with my colleagues at the Atlantic States Marine Fisheries Commission, they say Maine is way ahead of other states in terms of what we're doing for eel
conservation and I take a lot of comfort in that.

So I think that looking back at an agreement that
was written in 1998 before I got started and
having inherited it, I am comfortable with how
we're progressing because we're returning fish
species, we're making progress on fish passage and
that's what the agreement was all about.

HEARING OFFICER HILTON: Well, you
understand that the reason why the petitioners are
before us is because they're frustrated, and I
don't know if any of you were here last night when
Nick Bennett was here. I think you all know who
Nick Bennett is with the NRCM. He represented the
Kennebec Coalition last night, and he expressed a
great deal of frustration at how slow things are
progressing, and so I'm kind of curious as to what
your reaction is to the level of frustration, the
frustration by the petitioners and also the
Kennebec Coalition's frustration.

MR. KELIHER: I was here to hear Mr.
Bennett's remarks last night. He tried to
summarize a little bit, but he categorized the
agreement as a legally-binding document, one that
was not perfect and one that was a compromise
between all parties. I think whenever you enter
into such agreements there will be rough spots in
the road, if you will. Nick did talk about I
believe it was with Benton Falls a rough spot
where DEP had to interject dealing with some
compliance and that was done. Overall, I mean, I
thought Nick's points were spot on. It's not
perfect but we are moving forward in what I think
is a very successful restoration project, and as
Nick did last night, I'll remind the Board the big
prize was the Edwards dam removal. We would not
be here if it was not for the removal of the
Edwards dam.

HEARING OFFICER HILTON: To what degree is
the -- you two fellows in particular -- actually
all three of you, are part of the political
establishment, if you will. To what degree are
your feelings as you expressed them here today and
the expression of the agencies' exertions tempered
by your strongest desire that the agreement be
held together as opposed to just a recognition
that things take time? How much of this is based
on -- premised on the fact that we can't push too
hard because we want to keep this agreement
together and how much of it is just, well, this is
just the way things go?
MR. KELIHER: Well, the loss of this agreement -- I'm trying to see if I can figure out a good way to -- the ability for the state agencies to sit down proactively with other hydropower owners to engage them in detailed settlement discussions is very important to our ability to successfully carry out our mission as defined by the Legislature. So I do hold the importance of this agreement and to ensure that it is not impacted at a very high level.

HEARING OFFICER HILTON: Okay. I'm going to take you to your Exhibit 3 which is the eel count thing, and looking at the first column which is the dates, the dates of the Fort Halifax, Hydro-Kennebec, and I note that at Fort Halifax there is interim upstream eel passage, these are all upstream passages, upstream eel passage in 1999, and then as you go down the list and up the river, you go 1999, 2001, 2003, 2004. My understanding is that upstream eel passage only costs $10,000 per dam. That's pretty minor, almost pocket change in some respects, and, yet, there was five years before this upstream eel passage at Weston dam. Now, how much energy and effort does that reflect on the part of the
agencies towards getting something happening here?

MS. WIPPELHAUSER: It represents a great deal of agency. The reason there was passage at Fort Halifax in 1999 was because DMR actually built the passage. The first year we went out sampling -- sorry, we built it in, yeah, 2000. The first year we went out sampling there were so many eels there you couldn't walk on the ledges. We were literally dipping eels, putting them in a bucket and hauling them up over the dam. That was the only thing we were able to do the first year. We weren't able to do our studies at the other sites. At one of the sites we were -- that had not been licensed yet, the company asked us to sign a release, a waiver, an insurance waiver, which the AG's office told us not to do. So we couldn't do studies there for a couple of years. Weston dam we were trying to do studies there. It's a very difficult site to get to. We did some studies one year, they did some resurfacing on their spillway, it changes the flow characteristics, we had to do our studies again to see if, in fact, that had changed where eels were congregating. Just the upstream passage took us
all that time, and we put in a lot of work every single year.

HEARING OFFICER HILTON: I'm not familiar enough with the wording of the agreement to right offhand be able to pose this, but wasn't -- wasn't the upstream eel passage requirement incumbent from day one for each of the dams?

MS. WIPPELHAUSER: It was incumbent on the three-year study. We were supposed to do a three-year study to determine where to put eel passage in. Where to place them, sorry.

HEARING OFFICER HILTON: I see. Gail, looking at this study that FPL has in mind, you spoke about the 30 to 50 eel on the Shawmut dam and Lockwood. You've expressed a certain amount of concern or reluctance to use population wide data, you know, the data that was used by the U.S. Fish and Wildlife Service in the 12-month finding, and, yet, when -- when the 30 to 50 eel study takes place at each of those two dams, there's going to be certain very particular operating characteristics, river characteristics and dam property characteristics, certain gates are going to be open just so much and not more and you're going to take measurements of all of these, how
much these deep gates are open, how much the other
gates are open or closed or whatever and how fast
the turbines are going and how much river flow
there is or CFS, and, yet, you say that you have
to study this because you need to know how it
works specifically because you need to have
specific data, specific studies, and, yet, those
particular operating characteristics will probably
never occur again. The water flow will never be
the same, the sheen on the concrete, you know, at
any particular point in time because you just
talked about the resurfacing they did at the
Weston dam. So aren't these studies really -- do
these studies really have that much specific value
as opposed to just trying to rely on and use
larger population wide or regional wide data?

MS. WIPPELHAUSER: The telemetry studies
will be able to tell us where eels are moving in
the head pond. So we'll know if they're over on
one side or this side or if they're congregating
in specific places. If I look at a study that
tells me there's 25 percent mortality at a dam
that has a similar configuration of turbines, I
don't know anything. I don't know any specifics
about the site.
MR. LAPOINTE: I think another important consideration in terms of your question, Mr. Chairman, is when a study is done at one of the dams under the configurations that you talk about and the configurations -- the conditions will change, an important part of certainly our agency's and I think the other agencies' and the other partners' commitment is to do adaptive management so that, in fact, they try something and if it looks like it's working in one area and not another, they'll tinker with it. When we had the issue of the eel kill at Benton Falls in 2004, as I recall, there was a bucket load of things, a number of things, that were tried before they kind of settled in on where they are now. They tried something, they saw if it worked. If it didn't work, they tried something else, and I think that's an inherent part and a good part of the KHDG Agreement is that it allows that to occur because we can't expect the conditions to stay static.

HEARING OFFICER HILTON: You mentioned earlier this iterative process which seems to be built into the KHDG Agreement.

MR. LAPOINTE: Yup.
HEARING OFFICER HILTON: How many iterations do you go?

MR. LAPOINTE: There's a consultation every year, and Gail should probably speak to this more, that when staff is working with the companies or a dam operator whether it be on the study design or the design of a facility, it's not just one consultation a year. They get together and they work through it, but I'll let her speak more about that.

MS. WIPPELHAUSER: Yes, we usually meet at least once a year on these studies that are done. We may meet a couple of times as the studies are being conducted. It's an iterative process. For instance, Hydro-Kennebec is using the boom. We have no idea if that's going to be effective for eels. If it appears to be effective there, then we may consider recommending that at other places, but at this point we don't know if it's going to work.

HEARING OFFICER HILTON: Dick Gould.

MR. GOULD: I'd like to follow up a little on the uniqueness of this agreement, the '98 agreement. All hydroelectric dams are licensed by FERC, is that correct, in this state or am I --
MS. WIPPELHAUSER: Yes.

MR. GOULD: Okay. In those other dams that are FERC licensed, are you able as a state agency to sit down and change the licensing format with FERC, or is it a uniqueness that is only with this '98 agreement with these dams?

MS. WIPPELHAUSER: When a project comes up for relicensing, there is a -- and this process has actually changed recently -- there's a consultation process that goes on. It used to be first with the agencies and then the hydropower company and then they would submit an application and then we would go through that process again with FERC. Now they're trying to move to something where they get everybody together at the same time. So we have that consultation process during which we identify what species we have concerns about. If we want upstream and downstream passage for eels or salmon or other species, we request studies, we request that they conduct certain studies and then usually what happens is the hydropower company will say, well, here's what we want to do, we want to put in a Deneil fishway and they may send us a drawing and we comment on that, and there's a lot of back and
forth exchange, and then eventually, if you're lucky, FERC accepts all of that and it goes into the license.

MR. GOULD: May I follow-up, Mr. Chair? I guess I didn't explain myself too well. Once the license is done and all the consultation is done, do you have any opportunity -- let's say it's a license for 40 years or whatever it may be, do you have any opportunity to now change the criteria of that license?

MS. WIPPELHAUSER: I believe the state agencies and the federal agencies have the ability to do that if there is a reopener in there. I'm not very familiar with that process.

MR. GOULD: What I'm trying to get at is what is the uniqueness of this '98 agreement that would give you special powers that you wouldn't have in any other FERC license?

HEARING OFFICER HILTON: I think that's probably a question that's a little bit broader than the panel here can answer. I don't know, unless you feel you can answer it.

MR. LAPOINTE: I think one of the things the agreement gave us and what makes it unique is not in what it allows us to do at FERC, but it
deals with the river -- the dams in question, a
number of dams on the river as a package. In the
past there was -- you would deal with a FERC
licensing issue at one dam and then deal with a
separate licensing issue on another dam and then a
separate licensing issue on another, et cetera, et
cetera, et cetera, and so the packaging having a
comprehensive settlement agreement that dealt
with, again, the river unit, the river segments
for which the agreement holds -- is in effect,
that's the uniqueness, that it ties them together
and doesn't treat them separately. We may have
gone slower on the agreement than some of the
written terms in there. We talked about that. We
would be going way slower if we didn't have the
agreement, and we've used this as a template, you
know, we have this thing called the Penobscot
River Restoration Agreement and that was to try to
do the same thing, to deal with a number of dams
at once. We dealt with one recently on the Saco
as well because I think you'll find that folks
believe that's a much better way of moving forward
for the goal we all share of restoring fish to
their native habitat than doing piece by piece.
So I think that's where the uniqueness is.
HEARING OFFICER HILTON: That's what Mr. Bennett said last night. Anything else, Mr. Gould?

MR. GOULD: No, that's fine.

HEARING OFFICER HILTON: Dana?

MR. MURCH: Just a couple of quick questions. One for Gail on eel mortality to try to bring some clarity to some of the questions the Board members asked. Assume I'm at Weston and assume I do a study and I put tagged eels in front of the turbines and I'll find out that I've got X mortality of eels going through those turbines, whatever that number is, but then I go do another study tagging eels and figuring out where they go when they reach this dam which is, in fact, the study that I understand that FPL is proposing to do and I figure out that all of the eels are going to places A, B and C and I've got gates or whatever that I can open there and I pass all the eels downstream through those openings so that no eels go through the turbines. As a result, it doesn't matter -- am I correct that it doesn't matter what the turbine mortality is if all the eels safely pass someplace else?

MS. WIPPELHAUSER: That's true.
MR. MURCH: Okay. So I think that's part of the confusion for Board members. When we talk about mortality in some of these studies that you were reading from Fish and Wildlife Service, they're talking about turbine mortality and, yes, eels going through -- not all eels going through turbines or any other fish is going to successfully pass. What you try to do is get them to not go through, at least get a lot of them to not go through. So I thought that just might be a clarification, and just one other point, Friends of Merrymeeting Bay has asked the Board to modify the certifications for these four dams to require immediate safe and effective upstream and downstream fish passage. Friends of Merrymeeting Bay has defined safe as meaning all fish migrating upstream can pass the dam and no fish migrating downstream are killed or injured by the dam, and fish includes eels. Are any of you aware of any upstream fish passage facilities that could meet that standard? If you could verbalize.

MS. WIPPELHAUSER: No.

MR. MURCH: Are any of you aware of any downstream fish passage facilities that will meet that standard?
MS. WIPPELHAUSER: No.

MR. MURCH: If the Board adopts this standard and I come to you and say how do we meet this standard, what do you tell me?

MR. LAPOINTE: The Edwards dam meets that standard. The only way you can achieve a hundred percent efficiency is, from my understanding, not to have the facility there.

MR. MURCH: Thank you.

HEARING OFFICER HILTON: Nancy Ziegler.

MS. ZIEGLER: The two years of studies -- as I understand it, two years of telemetry studies are going to be done at -- the first year is going to be Shawmut and Lockwood and the second year they're going to add Weston, this is FPLE, am I right about that? Is that correct?

MS. WIPPELHAUSER: Yes.

MS. ZIEGLER: I'm trying to understand why two years at Shawmut and Lockwood if in the first year -- and you do a controlled study where you are able to catch 30 to 50 eel at each site, tag them and release them and watch what happens to them, why not at that point require -- okay, you see the patterns, behaviors of the fish, you see the flows, you see the results, why not require
some form of -- I mean, I understand you're going
to be saying, well, some form of additional
passage devices at those sites -- I mean, I
understand there's a deep gate at Lockwood. I
suspect you think that they're going to need to do
more. That's my suspicion, but why two years if
after the first year it shows that a number of
those fish go through the turbines and you see the
patterns?

MS. WIPPELHAUSER: I think maybe you have
-- you're misunderstanding the study. The first
year they would do a study at Lockwood and Shawmut
and then the next year they would just do Weston.

MS. ZIEGLER: That's fine.

MS. WIPPELHAUSER: We simply -- they simply
couldn't do all three sites at the same time.

MS. ZIEGLER: After that first year of
doing the study at Lockwood and Weston, are they
going to put in interim fish downstream passage
for eel?

MS. WIPPELHAUSER: They may. We may be
able to recommend something at that point. Based
on the results of the study, based on the results
we see at Hydro-Kennebec, there may be something
that we learn in that year that we can recommend.
MS. ZIEGLER: Would they be required to at that point or would they be allowed to wait until 2009 or 2010 as it is?

MS. WIPPELHAUSER: Oh, no, we would probably consult with them and make recommendations as to what they should do.

MS. ZIEGLER: Okay. I guess I would have to ask Dana Murch.

MR. MURCH: Let me just add, I don't want to rehabilitate Gail here, but I think what she's suggesting is the results of the study may be inconclusive so she's hedging her bets here. Could you respond to that?

MS. WIPPELHAUSER: I wasn't trying to hedge my bets. I mean, they may very well be inconclusive, but if we learn something after that first year of study, then we would make recommendations as to what they should do.

MS. ZIEGLER: Yeah, and I guess my question then is more to Dana Murch which maybe he can answer later, you know, whether or not if you make a recommendation, will they provide interim fish passage.

HEARING OFFICER HILTON: We kind of need to move on here. Cindy, one question.
MS. BERTOCCI: The KHDG Agreement reflects a number of fisheries management decisions that you have made for a variety of species that are in a variety of situations with respect to the status of the populations. Can you just say for the Board or express for the Board the types of issues that you have to balance when you enter into one of these agreements?

MS. WIPPELHAUSER: Well one thing is there's three agencies that are managing different species and they all have different requirements. So, for instance, salmon have to get much further up river and probably historically went much further up river than any of the other anadromous species. Eels have to go -- eels may go far up river. Short-nosed sturgeon don't go above Lockwood. So there's different requirements for all these species, and we have to take that into account when we're doing the passage requirements and the timing. I don't know if that's what you were looking for.

MS. BERTOCCI: I guess what I'm trying to get at is the priorities -- I'm assuming there's some sort of balancing that must occur. Is it more important to try to look at an agreement for
the Atlantic salmon given the status of that population or what you know or what you have for information about various populations because when you enter into an agreement, you're obviously negotiating with certain sets of information and certain priorities, and I was wondering if you could somehow describe that for the KHDG Agreement or am I not making any sense?

MR. LAPOINTE: I think you're correct in that some species are of higher priority because of their status or concerns about the population or their legal status in some cases in the context of something like the short-nosed sturgeon. For many of those species, there are regional or interstate fisheries management plans and so you want the agreement to be consistent with the goals of those plans. If you have something like alewife that you know the numbers have been rebounding on, obviously that's an easier thing to work with than something a species for which the population isn't rebounding or we have concerns about and you have less flexibility. So those kinds of things come into play but I think in the end the agreements and the work on the agreements includes all those species because we recognize
they are all important from an ecosystem perspective.

HEARING OFFICER HILTON: We need to move on to any sort of a final opportunity for the various parties to follow up on whatever has been said this morning. So by my chronometer, we've got 12 minutes left before noon and Nancy and Nancy and Elizabeth, you need to leave at noon. Okay, so to the petitioners, I will give you four minutes.

MR. WATTS: Could I ask just one question?

HEARING OFFICER HILTON: Excuse me?

MR. WATTS: Could I ask one question?

HEARING OFFICER HILTON: You've got four minutes.

MR. WATTS: Four minutes, well, I'm not going to take that much. Gail, this is for you. Bob Richter's testimony mentions that FPL found 38 mortalities at Shawmut this year, and in 2005, I'm looking at his testimony, Bob Richter or FPLE, at page 14, in 2005 27 eel mortalities were observed at the Shawmut Project, in 2006 38 eel mortalities were observed below the Shawmut Project. What number of dead eels is significant when you're looking at a place below Shawmut?

MS. WIPPELHAUSER: At Benton Falls we've
said when the count gets up to 50 in a year, we start talking to them.

MR. WATTS: So we're at 38 at Shawmut. You said there was no evidence of significant eel mortalities on the Kennebec River and this past year Bob Richter found 38 below Shawmut.

MS. WIPPELHAUSER: I didn't see that information until he provided it.

MR. WATTS: Does that change your characterization then?

MS. WIPPELHAUSER: I would say then that Shawmut is one of the places that we should -- if we're looking at the Kennebec River, then Shawmut is probably the project that we should concentrate on first.

MR. WATTS: Would the data from 38 this fall -- past fall, 27 the fall before, 2005, at Shawmut, does that data that FPLE collected, does that change your statement that there is no evidence of significant eel mortality on the Kennebec River?

MR. WATTS: I would have to say that it's not significant.

MR. WATTS: What number would be significant?
MS. WIPPELHAUSER: I told you --

MR. WATTS: 50?

MS. WIPPELHAUSER: -- at Benton Falls when we saw 50 eels in a season or in a night, we went to them and started talking to that. They called us up last year when they saw something like 27 on one occasion. So that's when we're starting to get -- talk to them, see if they could change their flow characteristics or their generation.

MR. WATTS: So if there were 12 eels that Bob Richter just couldn't find, that would add up to 50 from 2006?

MS. WIPPELHAUSER: That's true.

MR. WATTS: So in other words, if Bob just couldn't get out there one day or because it was a stormy day and he found 38 rather than 50, in your opinion that changes it from significant mortality to no evidence of significant mortality?

MS. WIPPELHAUSER: Doug, if we're using a number, that's what we've been using.

MR. WATTS: It's 50.

MS. WIPPELHAUSER: So that's what we're using.

MR. WATTS: So 50 is the Department's trigger point for no evidence of significant
mortality or evidence of significant mortality?

MS. WIPPELHAUSER: That's sort of what we've been using, yes.

MR. WATTS: Thank you.

MR. LAPOINTE: That's what we've been using at the Benton Falls dam. One of the difficulties, yes, we can use that number for a discussion and I think Gail's comment that, you know, it suggests we should look at Shawmut is true, but -- so that's a useful surrogate at this point.

HEARING OFFICER HILTON: Jeff or Sarah?

MS. VERVILLE: We have no further questions.

MR. THALER: I do.

HEARING OFFICER HILTON: Mr. Thaler.

MR. THALER: Quickly to George or Gail, in light of the questions from Board Member Ziegler and talking about significant mortality, if the sustainability of the fishery population is the goal, the ultimate goal that was being discussed, and given that fishing is a designated use on the rivers as is hydropower, if the Department wanted to as quickly as possible reduce mortality if it felt that the viability of the eel population, for example, or any other species was being impacted,
would restricting the number of fish or eels that could be taken in a day or a week or a season by recreational or commercial fisherman be quicker and impact more of the population than some of the measures talked about for the hydro facilities?

MR. LAPOINTE: I think it might be quicker but to say that it would impact a greater proportion of the population isn't a statement I'd be willing to make. I think that when we work on the eel population, the Atlantic States Commission plan and this state's efforts importantly include both habitat and the fisheries because they are both important to work on. We can't say it's all one or the other. It's a combination of the two, but I'll go back to the commission plan and our state efforts and I think we're doing that. We've reduced the number of elver fishermen very significantly, and I think the landings would reflect that. We've talked about how old age has gotten rid of a lot of the weir fishermen in inland waters. I think there certainly has been a restriction put on in Maine and elsewhere on the number of eels that somebody can use for bait fishing because that was a significant source of mortality. So we're working on the fish side, and
do we have additional things to do? Yes. I mean, I mentioned the bilateral talks with Canada so that, in fact, we could -- because this is one big bathtub in terms of eel, we want to deal with them as well, and then on the habitat side, we know that we have additional work to do and that's why we continue to work on things like this agreement and other river agreements because we realize that's significant as well.

MR. THALER: So just to clarify, though, from the DMR's perspective, the 50 eel figure right now under the Maine law and regulations an individual -- any individual in this room could take 50 -- up to 50 eels a day and that would still be lawful, correct?

MS. WIPPELHAUSER: Yes, that's correct.

MR. THALER: Just two more questions, Mr. Chairman. I think, Gail, you were responding to a question maybe of Board Member Ehrenfeld and I want to make sure there's no confusion in the record. The radiotelemetry studies that FPL will be doing at the different facilities over the next year or two will not just be eels but will there also be anadromous fish studied as well?

MS. WIPPELHAUSER: Yes, that's correct.
MR. THALER: All right, and the last question was that there was mention at the end of the day yesterday I think by Mr. Stetson about a written U.S. Fish and Wildlife policy that talked about 95 percent efficiency and there was a request made to see if that could be provided. Are any of the agencies at the table aware of such a written policy?

MR. KELIHER: Speaking for the Salmon Commission, we are not aware of any written policy that gives that guidance at all.

MS. WIPPELHAUSER: We're not aware of any written policy on passage efficiency requirements either. In some of our comments on FERC relicensings, we have requested or recommended that we're looking for a goal of 95 percent efficiency and sometimes that gets put in the license but not always.

MR. THALER: Nothing further.

MR. FRIEDMAN: Chairman Hilton, may I ask a question, please?

HEARING OFFICER HILTON: We have to go to SOS at this point. Sorry, Ed. Jeff or Jane?

MR. FRIEDMAN: Can I ask while I'm walking over?
MR. VANDEN HEUVEL: Do you think it is best practice to allow eel or adult salmon to pass through small high-speed turbines?

MS. WIPPELHAUSER: No.

MR. VANDEN HEUVEL: I have further questions, but we'll leave it at no. Are we putting eel passage at all the dams in the state and if you had the money, could you do it in three years?

MS. WIPPELHAUSER: Whenever a hydropower project comes up for relicensing, if it's in an historic habitat route, we require --

MR. VANDEN HEUVEL: Wrong, wrong, wrong. All dams in the state, not hydropower dams, all dams.

MS. WIPPELHAUSER: Oh, sorry. Because there are so many dams in the state, we're not putting upstream passage in at this point.

MR. VANDEN HEUVEL: Is it in your future plans, and if I gave you money, could you get it done in three years?

MS. WIPPELHAUSER: No, I couldn't get it done in three years.

MR. VANDEL HEUVEL: With the right resources?
MS. WIPPELHAUSER: I would talk to you if you had the money, though, and also, not all of the dams are on historical habitat. So we'd have to -- there are some of them that would be so far up in the drainages that eels probably historically never went there so we would not put passage in.

MR. VANDEN HEUVEL: Isn't a $10,000 eel passage in the wrong position better than no eel passage at all?

MR. WIPPELHAUSER: No.

MR. VANDEN HEUVEL: Wouldn't you expect dam owners to continuously improve upon it if it was installed?

MS. WIPPELHAUSER: Could you repeat your question?

MR. VANDEN HEUVEL: I said isn't an initial eel passage -- $10,000 eel passage in the wrong position, even if it's in the wrong position, better than no eel passage at all?

MS. WIPPELHAUSER: No, it isn't, because if it's in the wrong position, the eels aren't going to be going up it. I would rather do a study for two or three years to figure out where to put it than to put it in and have it not work.
MR. VANDEN HEUVEL: Do you feel you have
to do a study for every dam --
MS. WIPPELHAUSER: I do.
MR. VANDEN HEUVEL: -- in the state?
MS. WIPPELHAUSER: I do.
MR. VANDEN HEUVEL: That's it for me.
HEARING OFFICER HILTON: Thank you. I
think we're at the conclusion of the hearing.
(Whereupon, the above-named hearing was concluded
at 12:00 p.m.)
CERTIFICATE

I, Joanne P. Alley, a Notary Public in and for the State of Maine, hereby certify that on the 15th & 16th days of March, 2007, personally appeared before me the within-named witnesses who were sworn to testify to the truth, the whole truth, and nothing but the truth in the aforementioned cause of action and that the foregoing is a true and accurate record as taken by me by means of computer-aided machine shorthand.

I further certify that I am a disinterested person in the event or outcome of the aforementioned cause of action.

IN WITNESS WHEREOF, I have hereunto set my hand this 2nd day of April, 2007.

_______________________________
Joanne P. Alley
Court Reporter/Notary Public

My commission expires: July 18, 2008