UNITED STATES OF AMERICA 1 FEDERAL ENERGY REGULATORY COMMISSION 2 3 Office of Energy Projects 4 - - - - - - - - - - - - x 5 TransCanada Hydro Northeast, Inc. б Wilder Project No. 1892-026 -7 Bellows Falls Project No. 1855-0145 8 Vernon Project No. 1904-073 9 New Hampshire/Vermont 10 - - - - - - - - - - - - - x 11 WILDER PROJECT - Evening Meeting Kilton Public Library 12 80 Main Street 13 14 West Lebanon, New Hampshire 03784 15 Monday, January 28, 2013 The evening scoping meeting, pursuant to notice, 16 convened at 7:20 p.m., before a Staff Panel: weather delays 17 18 19 20 21 22 23 24 25

1		KEN HOGAN, Project Coordinator, FERC
2		MARY GREEN, Geology and soils, FERC
3		RALPH NELSON, Geology and soils, FERC
4		MARY McCANN, Endangered species and
5	macroinver	tebrates, FERC
б		MICHAEL SEARS, Fisheries and aquatic resources,
7	FERC	
8		BRETT BATTAGLIA, Terrestrial resources, FERC
9		ADAM BEECO, Recreation, land use and aesthetics,
10	FERC	
11		ANGIE SCANGAS, Water resources, FERC
12		ROBERT QUIGGLE, Archaeological and cultural
13	resources,	FERC.
14	With:	
15		JOHN RAGONESE, FERC License Manager,
16		US Northeast Hydro Region,
17	TransCanad	a Accompanied by EDWIN NASON and EARL BRISSETTE
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LIST OF COMMENTERS Geology and Soils or Erosion Concerns O. ROSS McINTYRE, M.D., Landowner, Lyme, NH LINDA FOWLER, Town Trustee, Hanover, NH MARSELIS PARSONS, Landowner, Lyme, NH б JOHN MUDGE, Landowner, Lyme, NH GREG LEWIS, City Manager of Lebanon, NH ROGER BLAKE, Norwich, VT Water Resources - Water Quantity and Quality GREG LEWIS, City Manager of Lebanon, NH Fishery or Aquatic Resources Terrestrial Resources Threatened and Endangered Species Recreation TOM CHRISTOPHER, New England FLOW & American Whitewater TAD NUNEZ, Municipal Government, Town of Hartford NORMAN SIMS, Ph.D., Appalachian Mountain Club JOHN MUDGE, Landowner, Lyme, NH GREG LEWIS, City Manager, Lebanon, NH ROGER BLAKE, Norwich, VT Land Use and Aesthetic Resources NORMAN SIMS, Ph.D., Appalachian Mountain Club TAD NUNEZ, Municipal Government, Town of Hartford SARA CAVIN, Upper Valley Land Trust

ROGER BLAKE, Norwich, VT KEVIN GEIGER, Two Rivers-Ottauquechee Regional Commission 98 Socioeconomic Resources Cultural Resources JOHN MUDGE, Landowner, Lyme, NH Developmental Resources KEVIN GEIGER, Two Rivers

1 PROCEEDINGS 2 MR. HOGAN: Tonight's meeting is being recorded 3 by a court reporter, so I ask that you speak your name, 4 affiliation if you're with some organization, and so we can 5 capture it on the record. We're definitely interested in б your comments. 7 My name is Ken Hogan, I'm with the Federal Energy 8 Regulatory Commission, and I am the Project Coordinator for 9 the relicensing of the Wilder project and the other four 10 projects on the Connecticut River down to Turners Falls. 11 I want to turn your attention for thank you all for being here tonight. The intent of this meeting tonight 12 13 is for us to hear your comments and concerns, your 14 compliments about the Wilder project, and we're really here 15 to hear your thoughts on the project. 16 The format of the meeting is we're going to have 17 Mary Green here, with FERC also, give a little bit of a 18 background of FERC and who we are; and then I'm going to 19 talk a little bit about the FERC licensing process that 20 we're going to be engaged in now for the next five years or 21 so. And then we're going to go through the issues that FERC 22 has identified, resource by resource, in the scoping 23 document; which is this document here. And when we get to that point, I'll tell you what pages we're on. 24 25 Before we get to the scoping issues, TransCanada

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will give a presentation of what their proposal is for the project; and then while we're doing the resource issues, they will also inform of us of what studies they've already done regarding each individual resource, if any.

5 At the end of each resource area, we're going to б turn to the public and ask for any comments or concerns with 7 the specific resource, and give you an opportunity to let us 8 know what your specific concerns are with that resource 9 area. When we get done with the resource areas, we have six 10 people who signed up to speak. They'll come up to the mic for anybody who wants to come up and talk, we'll call you by 11 12 name.

13That sound like a plan?And I'm flexible.So14if you don't like it, we can do something different.

All right. So Mary, if you want to start with FERC and who we are.

17 MS. GREEN: All right.

18 AUDIENCE: So I assume at some point in time 19 we're going to be introduced to this wonderful panel of 20 people here--

MR. HOGAN: You know what? That's a great idea.
AUDIENCE: -- at the table, taking notes.
MS. SCANGAS: Angie Scangas, water resources.
MR. QUIGGLE: Rob Quiggle, archaeological and
cultural resources.

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1 MR. SEARS: Michael Sears, aquatic fisheries 2 resources. 3 MS. McCANN: Mary McCann, aquatic ESA and 4 macroinvertebrates, mussels. 5 MR. BATTAGLIA: Brett Battaglia, terrestrial б resources and threatened and endangered species. 7 MR. BEECO: Adam Beeco, recreation and land use. 8 MR. NELSON: Ralph Nelson, soils and geology. 9 MR. HOGAN: And I have with me my attorney. 10 MR. BEECO: The very back of the room. 11 MR. HOGAN: Why don't you stand up, Elizabeth? MS. BLADEN: Elizabeth Bladen with FERC. I'm the 12 13 attorney for the project. 14 MS. GREEN: I'm Mary Green again, I'm also doing 15 geology and soils. FERC, the Federal Energy Regulatory Commission. 16 17 We are an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. For our 18 19 organizational structure, we have five commissioners that 20 are appointed by the president. Our division is under the Office of Energy Projects; we are Hydropower Licensing, 21 22 which includes relicensing existing projects and licenses 23 for new construction. Our hydropower jurisdiction comes from the FPA. 24

25 Commission authorization is required for nonfederal hydro

1 projects that are located on navigable waters, located on 2 public lands of the U.S., using surplus water from a federal 3 dam and located on commerce clause waters constructed after 4 1935 and connected to the grid. 5 So who we are and what we do, in going through б the licensing process. 7 MR. HOGAN: Quick show of hands; who has heard of 8 FERC before? 9 (Show of hands) 10 MR. HOGAN: Room full of experts. 11 MS. GREEN: And you learned it all from my 12 presentation. 13 (Laughter) MR. HOGAN: How many of you are familiar with the 14 15 Integrated Licensing Process, so I can figure out -- most? 16 We've got a few folks here who are not. 17 The handout at the table up front, with the colorful flow chart, did everybody get a copy of that? 18 19 This is the Commission's Integrated Licensing 20 Process. And I'm not going to go into any detail on the 21 green boxes; in fact, I'm probably just going to cover the 22 first row here, is that okay? Carries through pretty much 23 the next year. 24 So I want to, it's the next few months that are 25 kind of critical to us in this stage; currently we are on

Box 4, where the Commission holds its NEPA scoping meetings;
 that's what we're doing tonight.

And again, we're interested in your comments. And again, we're interested in your comments. Box 5 is an opportunity to file written comments, study requests, and comments on the PAD. So comments on the proposal, comments on the PAD and study requests. And I'm going to get into study requests and comments in just a second.

9 Once those comments and the transcripts from 10 these meetings that we have are in the Commission's record. 11 The next step is for TransCanada to put together a study 12 plan or to address these specific issues that have been 13 raised throughout the scoping process; and wherever 14 information gaps may exist, they need to be filled.

After that process, once that proposed study plan comes out, there will be a public document, and there's a 90-day period of time where stakeholders can engage with TransCanada to develop what we call a revised study plan. So we have a draft and then a final.

The Commission's regulations do require one meeting, after they provide a proposed study plan, and then again we have this window of time where we try to -- we call it the informal dispute resolution process on the studies; try to work out the various with the applicant and FERC, and things of that nature.

1 So John, I'm assuming that you're planning to 2 have multiple meetings? 3 MR. RAGONESE: Just one. 4 MR. HOGAN: Just one? Okay. 5 MR. RAGONESE: Really, we are not setting a lot б of expectations as to the number; we really want to take 7 issues, get them organized, get our hands around them, and 8 then in addition probably, at some point I'm going to want 9 to identify stakeholders that have a particular interest in 10 a resource, so that we don't have a multitude of people all 11 trying to help develop and revise a study plan, really get more of a working group approach to developing a final study 12

13 plan.

MR. HOGAN: This is John Ragonese withTransCanada.

16 So after the revised study plan gets filed, there's another comment period for stakeholders to say 'hey, 17 my issue hasn't been addressed' or 'I thought my issue was 18 19 addressed but apparently it wasn't' and that those comments 20 come into FERC. And once we receive those comments, the 21 Commission will make a ruling on the study plan, on the revised study plan, and we will issue a study plan 22 23 determination, which is an order to TransCanada to implement 24 the study plan as is or as modified, or with additional 25 studies. And that's a direct Commission order to

1 TransCanada to do so.

2 There is a formal dispute resolution process. If 3 a federal or state mandatory commissioning industry 4 disagrees with the Commission's ruling on a study plan 5 determination, if we think that we should have required a б study that we didn't or a component of a study and we 7 didn't, there is a process available to them to petition 8 FERC to revisit it. I know that's not going to be the case 9 here, so I'm not going to get into too much detail; also I 10 don't think there are any federal or state agency folks 11 here.

12 Are there?

No. Okay, so. Once that determination comes 13 out, like I said that's a directive to TransCanada to 14 15 implement their study plan and then typically it's a year or 16 two years of studies that would be undertaken, and that's 17 why I'm not going to go beyond that point tonight. It is a very lengthy process; there are going to be multiple 18 19 opportunities for public input and involvement, and this is 20 just the first step in the process; so I want to make sure 21 everybody understands that.

Page 2 of this colorful handout is the schedule we've got laid out. This one actually has the dates for this process. We just put it there as a tool, a quick reference tool for you. That schedule is also in the

1 scoping document. So I'm not going to go through every 2 step. Except comments are due, for written comments, study 3 requests and comments on the PAD, March 1st is a critical 4 deadline for everybody, and I want to make sure -- if you 5 want to file written comments, you know that March 1st is б that deadline. 7 AUDIENCE: That seems like a pretty short time frame for those of us in local government. 8 9 MR. HOGAN: Short time frame from when? 10 AUDIENCE: Today. MR. HOGAN: That's why we noticed it December 11 12 17th. AUDIENCE: I'll revise my comments; it's a short 13 14 time frame from December 17th for those of us in local 15 government. 16 (Laughter) 17 Town government moves slowly. 18 MR. HOGAN: Name? 19 MR. FULTON: Neil Fulton, from Norwich. 20 MR. HOGAN: We get lots of criticism about our 21 deadlines; I hate them myself, but we also had lots of 22 criticisms about other licensing processes that the 23 Commission has, it took too long, so when we developed the Integrated Licensing Process in 2003, we were being 24 25 responsive to stakeholder's concerns about how long the

1 licensing process took. And that's why the deadlines and 2 the rigid time frames are set. But appreciate the comment. 3 I mentioned study requests are due on March 1st. 4 The third sheet of that handout that I put out is the Study 5 Plan Criteria or Study Request Criteria. These are seven б criteria that if you plan to prepare a study request, you 7 ought to be able to answer these questions and address them 8 in your request.

9 This is a litmus test that the Commission will 10 use to evaluate each study request, whether it's a 11 justifiable request and should be done or -- as it has 12 nothing to do with the project or whatever. But it's our 13 test. And Questions 2 and 3 or Criteria 2 and 3 are 14 mutually exclusive, so there are really six criteria that 15 need to be addressed.

I encourage you to do so; if you don't know, if 16 17 you're not a resource area expert and you don't know methodologies for sampling something, you know, a lot of 18 19 times we'll say, use scientifically approved practices. You know, that will answer A, B, C, D and E. What are the 20 21 questions that you're trying to get answered. And I've done 22 that, even at FERC we'll say "I don't want to tie an applicant's hands and say 'you have to do it this way.'" 23 24 I'm going to let you do it however you want, but I need the 25 answers to these questions. And whatever you propose has to

1 answer these questions.

2 So that is a perfectly acceptable method as far 3 as I am concerned, and that's Criteria 6, by the way, on 4 methodology. One thing that you should all be able to 5 answer, if you're asking for a study is: What is the nexus 6 of the project and what are the goals and objectives of the 7 study?

8 What do you want from the study and how is it 9 related to the project; two very key things for us.

10 The other thing that we want to know, to the 11 extent that you know it, what is the existing information on 12 that issue already, and why is that information not already 13 sufficient? What do we know about it and what don't we know 14 about it?

So the study is to answer what we don't know about it. So I want to stress that to you. And you may or may not be planning a study request, but these criteria are very important to the Commission, and I can't stress that enough.

20 Does anybody have any questions thus far?
21 MR. RAGONESE: Ken -- John Ragonese.

Just to answer the question or the comment about the short time frame. Without being familiar with how this works, it's a little overwhelming to get that sense that your deadline is March 1 and that's all we want to hear from

1 you.

But we will have a proposed study plan, and then there is a period of time where you can comment on how we approached the issues in our study plans. And that will carry beyond the March 1st period of time. So it's not your only comment period; I just didn't want to give you the sense that, you know, there's a very short window of opportunity to comment in this process.

9 MR. HOGAN: But if you do have study requests, 10 it's important to meet that March 1st deadline, because when 11 we look at our determination, and when you evaluate the revised study plan and we look at the comments that we 12 13 received and the outlying issues, we go back to the study 14 requests. If there wasn't a study request and you're 15 raising the issue after the revised study plan has been 16 filed, for us it was a non-issue, so it's coming up late.

17 So I am stressing that March 1st deadline, and I 18 appreciate John's clarification that they want to work with 19 everybody throughout the process, as do we. But we do keep a very strict public record, and we make all of our 20 21 decisions based on that public record. So that's -- and our 22 process is extremely transparent; we can't be making 23 decisions based on anecdotal evidence that was off the record; that's why everything that's said here tonight is 24 25 being recorded, and it's going to be clear, when Commission

Staff makes its recommendation to the Commission,
 it's going to be very clear how we came to that decision.
 MR. RAGONESE: Ken, briefly, one follow-up.
 Again, John Ragonese.
 In the schedule there's a box for, FERC issues

Scoping Document 2 if necessary. What would be the criteria
that would warrant a revision or versus not, I guess.
MR. HOGAN: Good question. Scoping Document 2
will be produced if we miss something, if we did not

10 incorporate in our Scoping Document 1 which was issued 11 December 17th.

Throughout this scoping process, if we are 12 13 enlightened to new issues or that we got an issue wrong and 14 it doesn't belong there, we'll issue a Scoping Document 2. 15 I anticipate that we will have a Scoping Document 2 issued 16 purely because we're not perfect, and there's going to be 17 several meetings here that we're going to learn information, that's why we're here. It's rare that we would not issue a 18 19 Scoping Document 2.

And at that point -- and the idea behind the scoping document and these scoping meetings is, the Commission has to prepare an environmental document, an environmental review of all the Connecticut River license projects. We're planning to prepare one environmental impact statement that looks at all five of the projects

being relicensed here. And the scoping document, and the reason we're all here today, drives that analysis. So you're identifying what the issues are and telling us, telling FERC what we need to look at in our environmental review. Nobody better could tell us that than the folks who live with these projects day-in-and-day-out and are here on the ground and understand the issues.

8 I can make all kinds of decisions back in D.C. in 9 a vacuum, but nobody's going to like them; so I really do 10 need your input. And we want it.

One other quick thing before I start getting into
 the resource areas. I had a blue brochure here.

13 This is a brochure that we put out from the Division of hydropower licensing; it says, Get Involved, A 14 15 Guide for the Public. I recommend everybody grab one of 16 these on your way out if you haven't already; take it home, read through it, it has a lot of information about FERC, it 17 has a lot of terminology that's used in hydropower licensing 18 19 that you may not be familiar with. But most importantly, on 20 page 12, it has a section on Get Information. And the 21 Commission maintains, like I said, a very public record. We have a system called eLibrary where anything that is filed 22 23 with the Commission or issued by the Commission gets placed 24 in the eLibrary. That's an electronic library, an actual copy of the document, is downloadable in PDF form or 25

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1 whatever format it was loaded up on; it can be a PIF file, 2 but you can read the actual letter, not just the notation 3 that TransCanada filed a letter on such-and-such a date; 4 it's the actual document, you can go and read it. You send 5 us a letter, you'll be able to read it. б There's also a system called eSubscription. And 7 if you -- and there's instructions of how to sign up for that. If you sign up for eSubscription, when the Commission 8 9 issues a document, whether it be a notice or a scoping 10 document, doesn't matter what it is, or any other entity 11 files a document with FERC on a p recommendation that you're interested in, you'll receive an e-mail with a link to that 12 13 document. 14 So it's a really handy tool. If you're 15 interested and want to stay engaged, I encourage you to 16 check out page 12 and go through the instructions. If you don't have a computer, those systems aren't available to 17 18 you. 19 Any questions so far? 20 Yes, sir. 21 MR. COUTERMARSH: My name is Mark Coutermarsh. 22 My wife Martha and I live four miles downriver. You're going on and on; I don't know -- our problem is erosion. 23 24 Ever since TransCanada took over, that water goes

up and down, up and down, up and down three times a day. It

1 seems ridiculous. And she has called and e-mailed and can't 2 get any word -- you know, they just blame it on something 3 else; but we know it's the dam right there above us, it's 4 four miles up. 5 Where in this process will we voice our concerns? б MR. HOGAN: In about -- there's going to be 7 multiple opportunities for that, but in about ten minutes, 8 we're actually going to ask you, okay, where are you on the 9 river and what kind of erosion are you seeing. 10 But that's exactly why we're here tonight. MR. COUTERMARSH: Okay. I just don't know when--11 12 MR. HOGAN: Right. Like I said, our goal is to 13 really get the information from you; and I know I've been 14 15 going on. I just want to make sure people understand the 16 process so that they can be engaged. And with that, I am 17 going to turn it over to the resource teams to identify in our scoping document --18 19 MR. BATTAGLIA: I think TransCanada --20 MR. HOGAN: Oh. 21 Who would like to hear what TransCanada is 22 proposing? I'll take a vote. 23 Okay. TransCanada is going to give a quick 24 presentation on what the actual proposal is that we're here 25 to discuss tonight.

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1 MR. NASON: Actually, we're just going to do the 2 overview, back to the current operations. 3 MR. HOGAN: Okay. And that's your proposal, is 4 the current operation. 5 MR. NASON: Yes, that's true. б MR. HOGAN: So that's the clarification. 7 MR. NASON: I'm Edwin Nason. 8 MR. BRISSETTE: Earl Brissette. 9 MR. NASON: We work with TransCanada, and as 10 we've already said to Ken, we're going to go over the hydro overview, then facility facts, and then operational; how 11 Wilder is operated. 12 For the hydro overview, TransCanada has dams on 13 the Connecticut River and also hydro facilities on the 14 15 Deerfield River; and on the Connecticut River there are six 16 hydro facilities. Starting at the top, Littleton, New 17 Hampshire is the Moore dam and just downstream of that is the Comerford Dam, and downstream of that is the McIndoes 18 19 Falls Dam. And those three together are, we call Fifteen 20 Mile Falls. 21 Downstream from that of course is Wilder, and 22 then Bellows Falls, and then Vernon; and those are the three 23 projects up for relicense. One of the things we talk about in operations is 24 25 river timing, and when I say timing I'm talking about when

1 there's a change at one station,

2 and discharge from one plant, how long does it take for 3 that, the effects of that change are felt downstream at the 4 next station. And between Moore and Comerford that's about 5 an hour; and between Comerford and McIndoes it's about б another hour. So those three stations are really very close 7 together. From McIndoes Falls down to Wilder it's about 8 eight hours, and from Wilder down to Bellows is another 9 eight hours; and then from Bellows Falls down to Vernon is 10 about four hours.

All the hydro stations on the Connecticut River are remote controlled, and they're all controlled from the Connecticut River control center in the hydro office in Wilder.

15 Earl?

16 MR. BRISSETTE: I'll go through a couple of the 17 Wilder facility facts.

18 Wilder Station is located just downstream of the 19 original dam; it was just upstream of that, Alcott Dam, which was built in 1926. 20 Wilder was put into service in 21 1950. Wilder has a normal, average head of 53 feet; it has 22 three generators with a total authorized installed capacity 23 of 35.6 megawatts. One of those generators is in Vermont, 24 the other two in New Hampshire, so the state line goes right 25 down between number one and number two generators.

They have six tainter gates, they're 30x36 feet with a total spill capacity of 16,900 cfs each, and that's per gate. Two skimmer gates, 20 feet by 15 feet wide each, and then on the New Hampshire side there are four stanchion bays, which are 17 feet high and 50 feet wide, and those are just boards.

7 The total project discharge capacity is 157,600, 8 and the generators can do another 10,000 cfs. The flood of 9 record is 91,000 cfs, and that was in March of 1936. The 10 1927 flood record was downstream.

Major projects that have been completed since 12 1979. At Wilder, the fish ladder which was installed in 13 1987, and that's when the third generator was also 14 installed; No. 3 unit. And this generator has two purposes: 15 One, it produces electricity, of course; and it's a minimum 16 flow unit; but it also provides the attraction water for the 17 fish ladder.

AUDIENCE: Is that No. 3? 18 19 MR. BRISSETTE: It's No. 3, yes. 20 AUDIENCE: That's a Francis? 21 MR. BRISSETTE: It's a Francis wheel. 22 AUDIENCE: And that's in New Hampshire? 23 MR. BRISSETTE: It's in New Hampshire, yes. 24 AUDIENCE: Thank you. 25 MR. BRISSETTE: And the station was automated, 1 remote, and that was done in 1998. Of course, that's run
2 out of Wilder.

3 MR. NASON: So back to the operations for Wilder, 4 I'll start with the reservoir. Wilder's reservoir has a 5 drainage area of 3,375 square miles. The reservoir is 45 6 miles long, goes all the way up to Haverhill, New Hampshire 7 and Barre, Vermont.

8 The usable storage volume, that's within our five 9 feet of operation. is 13,350 acre-feet. And the reservoir 10 has approximately 3,000 cfsh per tenth of elevation. That's 11 per tenth of foot of elevation in the reservoir.

12 The best way to explain this is with an example. 13 If your inflow into the reserve was is 3,000 cubic feet per 14 second greater than your discharge for one hour, then the 15 reservoir elevation will go up one tenth of a foot.

For the Wilder constraints, Wilder has an min 16 17 flow that's the same year round of 675 cfs, and that's almost always done through that Unit No. 3, which actually 18 19 discharges 700 cfs. Wilder has a downstream fish passage; it's April 1st through June 15th, 512 cfs. And in the fall 20 21 there's also a downstream fish passage but that's only done 22 as needed. And there's an upstream fish passage through a fish ladder, May 15th through July 15th, and in the fall, 23 September 15 through November 15; and those dates are a 24 25 little more flexible, kind of as an as-needed basis.

1 The reservoir has an operating limit of elevation 2 of 308 feet above sea level to 395 feet above sea level. We 3 also have an operations limit of .3 of a foot per hour draw, 4 so we don't draw the pond down more than .3 of a foot in any 5 one hour. And we also maintain recreation, б rec limits for the elevation of the reservoir in the 7 summertime, just on weekends and holidays. That's where we 8 change our low limit to 382.5 feet.

9 Also because of the long, long length of the 10 reservoir, we have what we call a high flow reservoir 11 profile operation. Basically the inflow end of the reservoir is a higher elevation than the discharge end, the 12 13 downstream end. And when the flows are high, this elevation 14 difference is greater; so in order to maintain proper 15 elevation at the upstream end of the reservoir, when the 16 flows go up we keep the lower end lower. And this starts at about 10,000 cfs inflow and then it goes all the way up to 17 20,000. And at 20,000 cfs inflow and greater, we maintain 18 19 the elevation at 380 feet, and that's it.

As far as scheduling the river, running the reservoir -- (interruption) -- so each day the hydro operators will schedule the megawatt run for the next day; and basically their priority, when they're making the schedule is first the license compliance, and then the second is to put the generation in the best hours, meaning

1 the best high high priced hours; and this is during normal 2 flows in a regular day. For water management we do, you 3 know, we do review the flows daily and sometimes hourly 4 during high flows to make decisions about storage reservoirs 5 upstream. And during high flows the schedule is just water б management; there is no regard for generation because 7 typically there's enough flow to just generate around the 8 clock anyway. 9 And I guess that's all we have, unless there are 10 questions. I guess we did a good job. 11 (Laughter) 12 MR. HOGAN: How about a round of applause? 13 14 (Applause) 15 MR. HOGAN: Thank you. Yes, sir. 16 17 AUDIENCE: Just a quick question about your study requests. I don't see anyplace where those are to be 18 19 mailed. 20 MR. HOGAN: In our scoping document, which I 21 passed out, there is a -- through page -- last paragraph on 22 page 4, through page 5, there are instructions on how to 23 file study requests. AUDIENCE: Page 33 has an address. 24 25 MR. HOGAN: I'm in the wrong spot.Section 6,

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starting on page 32 through 33 gives instructions on how to
 file comments and study requests with the Commission. I can
 give you the address right now if you like.

Good question. Thank you.

5 For this part of the meeting, I would like to б start by going through the resource areas, by each resource 7 the items that we've identified as potential project 8 effects; and TransCanada is going to give us on each 9 resource identified the studies that they've already done to 10 address potential information gaps for that specific 11 resource area; and then we're going to ask you folks if you have any specific concerns with a given resource area; for 12 13 example with the gentleman in the back with erosion we would 14 cover that under geology and soils, so when we talk about 15 geology and soils I'm going to seek your input. That's 16 going to give us some more detail about your concerns. 17 If you want to follow along, we are on -- I had

18 my thumb on it.

19 Page 24 of the scoping document. And geology and20 soils.

21 Geology and Soil Resources.

22 MR. NELSON: Ralph Nelson.

23 So page 24, 4.2.1 is our initial list of issues 24 or concerns with geology and soils, and I'm just going to 25 read from this bullet.

1 Specifically, we're looking at the effect of 2 project operation and maintenance on river bank erosion, 3 including the potential effect on protected species, 4 cultural resources or the structural integrity of adjacent 5 facilities or critical structures. And that's the first б issue that we have. 7 One of the things we wanted to point out to you, 8 too, is you'll note that in the list in that table, there 9 are asterisks identifying several ones, and those identify 10 issues and concerns that will be analyzed for both cumulative and project effects. 11 12 AUDIENCE: Does that include roads? MR. NELSON: Yes. 13 14 MR. HOGAN: Yes, I don't know if you caught that. 15 The question was, does it include roads? And the name? MS. MacKENZIE: Susan MacKenzie. 16 17 MR. HOGAN: And do you mean facility roads or municipal roads, or --18 19 AUDIENCE: Adjacent structures --MS. MacKENZIE: Town roads. 20 21 Town roads. 22 MR. HOGAN: Town roads? Yes. If there's a 23 project effect on town roads, that would be an interest of 24 ours. 25 MR. RAGONESE: Ken, do you want me to just chime

1 in after each one of these?

2 MR. HOGAN: Yes, if you have studies that you've 3 conducted.

4 MR. RAGONESE: Okay. Again, my name is John
5 Ragonese. I'm the Project Manager for Relicensing for
6 TransCanada.

7 I'm going to look at these in sort of different 8 categories. We have a pre application document that we 9 prepared, which was basically project information, or 10 information on any studies that might have been available at 11 the time to provide for specific information in different resources. And at the time of developing the PAD, we did 12 13 not -- or there is a portion in the PAD where a licensee or 14 an applicant can propose a study, and we did not propose any 15 specific study on geology and soil resources in the PAD.

16 Again, our thinking is we want to hear what 17 people's issues are before we necessarily propose what a study might necessarily be required or should be. However, 18 19 we have done a lot of preliminary studies on aspects of the 20 scope of the issues identified by FERC under geology and 21 soils. For example, we did a shoreline survey of all of the project reservoirs, which we tried to identify the most 22 23 active erosion locations; those generally being greater than 25 feet. I know we probably missed some out there, 24 25 generally speaking; but we try to capture them all. But

1 those are primarily in the reservoir, the project boundary, 2 so those are in a GIS layer, and they're identified on a map 3 in terms of length, location, and there is some other 4 shoreline information as well included with that survey. 5 We also did a -- we had completed, several years б ago, a historic or an archaeological survey of our projects 7 downstream in Vernon for cultural resources, and we just 8 completed one in the past couple years for the Wilder 9 project as well as Bellows. Again, these are within the 10 project boundary, which is primarily from the dam, 11 encompasses the reservoir upstream. We completed last year an assessment of our 12 13 impact of flows on an endangered species, federally

14 endangered species called jessup's milk vetch. What we were 15 trying to do is a response to an agency request to develop a 16 flow, a stage flow relationship at these sites for the 17 endangered species; and so we have completed that. The 18 report is just pending to go to the --. We're just 19 finishing that up, final draft to go to the agencies. These 20 are four sites downstream of Wilder. In those cases we were 21 able to determine that it's only a very significant high 22 flow, far above our operational flows, that can impact the lowest member of the various populations that reside at 23 these four locations. So they're talking about flood flows, 24 25 but not station operations.

1 We did a very intensive survey of rare, 2 threatened and endangered species throughout all of the 3 project boundary. Our reservoir, our shorelines that 4 essentially are areas -- and areas downstream that are 5 affected by either project fluctuations of the reservoir or б project affected flows downstream. That's a study that is 7 just getting, again, just being finalized; it will be going 8 to the agencies this week. Essentially identifying or 9 reexamining any known or historic locations for rare and 10 endangered species. It was a very, very intensive study and 11 we actually found many more -- some species that had never been found before, and many locations that had never been 12 13 documented of existing species on those lists.

14 We conduct every other year a survey of erosion, 15 a downstream project at Vernon; that has just been completed and has been submitted to FERC. 16 And I guess I want to 17 mention that the issue of soil and geology -- this is not a new issue for anyone that was part of the 1970s relicensing 18 19 of the Wilder project; geology, soils, erosion were a big 20 issue back then. There's a very pertinent study that was 21 done during that relicensing; it's very pertinent to this 22 study, this period of time as well, and it's a 1979 Army Corps study that was done out of Prell on Connecticut River 23 Basin erosion, and we feel that that's a very, very 24 25 important study that should be considered part of the

1 existing record on erosion on the Connecticut River. 2 Some of the planned studies we're thinking of and 3 looking at, we haven't compiled these into a formal 4 proposal; but these are actually studies that are ongoing 5 from our dam safety perspective; these are all taking place б at our Vernon project, but we're not on those today. 7 MR. HOGAN: John -- we're talking about Wilder 8 today. 9 MR. RAGONESE: That's it. 10 Yes, it's not really clear to me if that's just 11 for Wilder. These are just for Wilder or not, just curious. MR. HOGAN: As far as the studies you're 12 proposing, you're not clear if they're --13 14 MR. RAGONESE: The scoping meeting. 15 MR. HOGAN: This meeting tonight is Wilder; tomorrow morning is, we're in Bellows Falls. 16 17 MR. RAGONESE: Okay, just want to be sure. MR. HOGAN: Now I know we have a question in the 18 19 back or a comment in the back about geology and soils and 20 erosion on property. Would you please state your name and 21 tell us your concern. 22 MR. COUTERMARSH: Mark Coutermarsh (spelling). 23 MR. HOGAN: Thank you. MR. COUTERMARSH: We live four miles south of the 24 25 dam, right where the Ottauquechee River comes in, and we

have a boat right on the water there. We do more with the river than I think anybody around, because we can go out and I have a motor that is a jet ride so I can go all the way to Wilder Dam and all the way to Hartman Rapids.

5 And in talking with the farmers and stuff on the б river, and landowners, everybody is very concerned about, 7 since TransCanada took over, they go up and down with the water so many times a day. Now I realize it's dollars that 8 9 determine what they're after, but somewhere in this process 10 of relicensing, it seems to me that there should be a little 11 key put in there so that when there's erosion, there'd be some money to fix it. 12

13 It's a real pain, because when you start doing 14 it, the you run into the State of New Hampshire and the 15 State of Vermont or with Natural Resources. They all say 16 you can't do anything without a engineer coming in. Well, a 17 poor little guy living in a little house on the side of the 18 river cannot afford to go out and hire engineers to come in 19 just because his bank is washing.

The simple solution would be to dump some rock on the thing like the town does when it starts bothering one of their roads. Somewhere along in this process, I wish you'd bring up the issue of that and how you can either stop the up-and-down so much or -- I mean, you just stop and think, because down to 700 cubic feet per second in the morning --

1 all night, I mean. Then in the morning they put it up to 2 God-knows-what. It can go to 15 or 20,000, and it's an 3 awful rush of water. And it's very, very bad. 4 Thank you. 5 MR. HOGAN: So just for my own benefit, you're б saying that you have identified through speaking with other 7 landowners downstream of Wilder and upstream of the Bellows 8 Falls reservoir? 9 MR. COUTERMARSH: We just know about as far as 10 the Hartman Rapids, that's as far down as I go. 11 MR. HOGAN: Help me; where's Hartman Rapids? MRS. COUTERMARSH: A quarter mile --12 MR. HOGAN: So it's above Bellows Falls. 13 14 AUDIENCE: Sumner Falls 15 AUDIENCE: Seven miles from --16 MR. COUTERMARSH: -- miles below where the 17 Ottauquechee River comes in. 18 MR. HOGAN: Thank you. 19 We had a question about town roads and erosion 20 issues. Do you know of issues that raise that question, or? 21 MS. MacKENZIE: Yes. Susan McKenzie again. 22 Lyme has had several issues, and has severe issues that are about to wash into the river. One was just 23 repaired; a section was just repaired south of the North 24 25 Fetford --. But the south end of the river road next to the

1 Hanover line is in bad shape; and there is a half mile 2 section there that needs to be completely redone. The road 3 is sort of floating at the moment. There's no way to 4 maintain it as it is. 5 And there are several other areas, I can think of б about six right now that are just, they're straight drops 7 down to the river, 20 or 30 feet from the pavement, straight 8 down. Any erosion, undermining of that, pretty soon the 9 road is going to be in the river. 10 MR. HOGAN: This is upstream of the dam? MS. MacKENZIE: Correct. 11 MR. HOGAN: John, in your studies, did you guys 12 13 identify any erosion areas or potential erosion areas that 14 you looked at, others, the infrastructure? Or did you 15 consider other existing infrastructures? 16 MR. RAGONESE: The survey we did was from the river. We did not look at, you know, walk everybody's 17 fields, walk everybody's roads. It was a survey from the 18 19 river to look at basically apparent, active erosion 20 processes on the banks. 21 I can't say whether or not we captured these, but 22 we do all these marked on the GIS map. 23 MR. HOGAN: Yes, sir. DR. McINTYRE: I have rather lengthy remarks. 24 25 I'm Ross McIntyre.

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MR. HOGAN: Ross, are they about geology and soils? DR. McINTYRE: Yes.

4 MR. HOGAN: Okay.

5 DR. McINTYRE: I think it's important -- as I б looked over the pre application document, there are synopses 7 of studies in that by Simmons in 1979 that were just mentioned, and Kleinschmidt in 2011. And in that document, 8 9 it's clear that none of these studies have involved any 10 quantitative measurements of erosions in terms of grams of 11 soil or tons of soil, or relating this in any way to river levels or the rate of change in river levels. 12

13 And it's clear that up and down the river the landowners have this feeling that when the water is high and 14 15 then drains suddenly down, or at the rate that it goes down, 16 at I guess .2 of a foot per hour, that the water that's been 17 absorbed by the soil then exits the soil and carries with it soil into the river, or at least down the bank onto this new 18 19 berm that is reported in the studies that are mentioned in 20 the pre application.

Now when one reads the studies that are in the pre application document, one gets the feeling, distinct feeling that the opinion of these people that have looked at this is to discount this possibility that there is in fact soil being carried out when the water level drops and the

1 soil has been saturated at the time of higher water.

So we have this problem of the landowners complaining about this theoretical possibility of what's going on, and the pre application document saying it doesn't happen. And I think we really need to get some information on this, one way or the other that can be quantitated in pounds of soil and gallons of water, or however you wish to measure it.

9 I find other things related to this in the 10 document. I first of all want to mention that the benefits 11 of hydropower are increasingly important as renewable energy becomes a national priority; but the value of the project to 12 the operators as well as the community will best be served 13 14 by ensuring that the useful life of the project is not 15 compromised by preventable loss of reservoir capacity, which 16 would occur should large amounts of siltation occur over the 17 years as river banks crumble.

18 Page 314 in the pre application document, the 19 statement is made that the project is operated on a daily 20 cycle run-of-the-river mode where the daily inflow matches 21 the daily outflow. This may result in modest daily pond 22 fluctuations due to upstream project-related generation, mainly at the downstream end of the Wilder reservoir due to 23 the pitch of the river. But relatively constant water 24 25 levels are maintained.
I paddled my canoe on the Connecticut River in
 1949, prior to the closure of Wilder Dam, and I find this
 statement outrageous.

4 Current Wilder Lake levels are not a run-of-the-5 river situation, and it's fortunate that the applicant can б be able to blame the upstream dams if it isn't. A rise or 7 fall of one or two feet during a single day prior to the 8 presence of the dam would have signified a major 9 meteorological event. The words 'relatively constant' used 10 to denote changes of a foot or more in water levels in 24 11 hours could only be used by a person wishing to escape the effects of water level changes, and the statement should be 12 removed from the document. No unbiased person walking the 13 14 river bank on even an occasional basis could agree that the 15 river levels are quote, "relatively constant" end quotes. 16 So I think that this dam is a wonderful resource; we need to maintain it; it's good to have clean energy. But 17

18 we've got to look at this problem and find out first of all 19 where there is a problem and put some numbers on it, and be 20 able to estimate how much soil is being eroded by changes in 21 water level, and design changes in water level, if possible, 22 that diminish the risk of river bank collapse. Thank you 23 very much.

24 MR. HOGAN: Thank you. Ross, did you have a25 prepared statement that you'd like to have included in the

1	record?									
2		DR.	McINTYRE:	Yes.	I	will	prepare	this	and	hand
3	it in.									
4		(The	statement	follo	ws	:)				
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1 MR. HOGAN: (Pointing) Yes, ma'am, and then 2 we'll go to the back and we'll come over here after. 3 MS. FOWLER: My name is Linda Fowler; I'm the 4 Town Trustee for Hanover for Pine Park, which is a 91 acre 5 preserve located on the New Hampshire side, just above the б Dartmouth boat house and rowing facility about 7500 feet. I 7 also have a prepared statement for you and for the 8 TransCanada people.

9 We have concerns about erosion. We're losing 10 really big trees. Not saplings, but really big trees into 11 the river, and there are many -- we've got about eight down 12 now; and then there are probably 12 to 15 that look like 13 they're going, where the roots are pulling out, and we don't 14 really know why; but we do know that this has been a 15 phenomenon that's happened over the last ten years.

The Trustees were in touch with TransCanada, with a representative in Wilder. We started in 2010, that person left; then we were dealing with Matt Cole. We had a couple of meetings with him where we did walk the banks and pointed out the concerns, and we were under the impression that some studies were being done, but we haven't heard anything. Our last communication with TransCanada was in 2011.

23 What's interesting about our situation is that we 24 have a flowage agreement, which many landowners probably 25 have; but we actually have the one from 1944 in which

1 TransCanada very specifically says it has an obligation to 2 abate erosion of our property. And in 1979 a very 3 extensive amount of riprap was done, and much of it still in 4 place and doing a very good job. But the north end of the 5 park probably, the 500 feet north, has really gotten quite 6 bad. And they're bad enough now that riprap isn't going to 7 do it.

8 We've talking about cutting the trees and leaving 9 the stumps and place and doing some other kinds of things; 10 but of course the longer it goes and the idea of waiting 11 until the permit is actually issued in five years means we're losing a lot more of these big old trees. The park 12 has been a park since 1905. It's a major resource in the 13 14 Town of Hanover. It's a place where the track teams 15 practice, where people cross country ski, where people run, 16 and it's an incredibly beautiful spot. And to see these trees coming down is breaking a lot of hearts in our 17 18 community.

So we're interested in having TransCanada
maintain its contractual agreement with us as well as
maintaining its overall permit responsibility for mitigating
erosion that occurs because of the operation of this
project.

24 One of the things that is missing is contact 25 information. You know, it's nice to hear that -- is part of

this, but there isn't any way to reach him, and we've found a it almost impossible to get ahold of people at TransCanada; you get a recording, you get moved around; and there's no contact information in your documents, either, except for a secretary where we can mail things.

6 So if you would all have business cards or 7 whatever, so people like me who are new to this process 8 could call, and I don't know whether, for example, we should 9 put in a request for a study. It seems to me that just on 10 the face of it that TransCanada should have included 11 mitigation for our shoreline as part of its study plan, and 12 obviously, they said it wasn't in there.

I don't know what we're supposed to do next.
MR. HOGAN: First, and I clearly haven't read
your prepared statement, but I'm sure it identifies your
concern.

17 MS. FOWLER: Yes.

18 MR. HOGAN: We will definitely --

19 MS. FOWLER: It has a lot of documentation.

20 MR. HOGAN: Okay. So the next step for you, and 21 that can satisfy as your comments, they're going to be filed 22 with the Commission right now, so if you have more comments 23 you want to add to it by March 1st, you're welcome to do 24 that. Or --

25 MS. FOWLER: This could suffice.

1 MR. HOGAN: Yes. 2 MS. FOWLER: How do I find out if it's viewed as 3 being sufficient? 4 MR. HOGAN: They're your comments and they're in 5 the record now. You mean -б MS. FOWLER: We haven't requested anything other 7 than TransCanada be obligated to do what it's supposed to 8 do. That doesn't seem to require a study, as far as we're 9 concerned, but maybe that area needs to be studied. That's 10 what I'm a little confused about. MR. HOGAN: And I can't advise you whether or not 11 that specific area needs to be studied or not. It's an 12 issue. If you'd like it studied, that's a study request and 13 14 you can prepare a study request and we'll review it and raise it. 15 MS. FOWLER: So it sounds like I should do it 16 17 even though I've gotten pretty detailed. 18 MR. HOGAN: Most of what you provided will 19 probably support your study request. Okay? MS. FOWLER: Okay, thank you. 20 21 MR. HOGAN: Again, I haven't reviewed it. If the 22 information that you've said is in there is in there, then 23 that would -- probably you can take that and apply it right 24 to your study criteria. 25 MS. FOWLER: Thank you.

1	(The	statement	follows:)
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1	MR. BEECO: Ken, your contact information is on
2	page 5. She was asking about your contact information.
3	It's on page 5 of the scoping document.
4	MR. HOGAN: Thank you.
5	MR. BEECO: Phone and e-mail.
6	MR. RAGONESE: The notice of the meetings have
7	all of our addresses on the second page.
8	MR. HOGAN: Yes. And I didn't bring a copy of
9	the notice, but did everybody gather that? On page 5 of
10	the scoping document is my contact information.
11	MS. GREEN: So there's almost two sections of
12	pages, so in the Introduction section there's a page 5.
13	MS. FOWLER: It says Comments in Scoping
14	Meetings. And you go where it says, Purposes of Scoping.
15	MR. HOGAN: It's technically
16	MR. BEECO: It's a cover letter.
17	MR. HOGAN: There are two page 5s in there?
18	Inside this document there's a transmittal
19	letter.
20	MS. FOWLER: Yes. I saw that.
21	MR. HOGAN: And it's on page 5 of the transmittal
22	letter.
23	MS. FOWLER: On the transmittal. Thank you.
24	MR. HOGAN: And my contact information is there,
25	phone number and e-mail address.

MS. GREEN: And it's in a paragraph form, so you
 kind of have to pull it out; it's not separated out.
 MR. HOGAN: And then -- did everybody find that?
 Okay. So we have here, then there, then back
 there. (Pointing) Yes, sir.
 MR. PARSONS: My name is Marselis Parsons

7 (spelling). I am an owner of about 1500 feet of property 8 along the river in Lyme, New Hampshire. My family has owned 9 the farm there for 50 years. My father noticed erosion 10 starting almost after we bought, almost immediately after we 11 bought the property. He asked to put in riprap and the 12 State of New Hampshire said 'no, we don't like riprap.'

I have noticed in the last three or four years, especially with the rapid rise and fall of the river, which I measured last summer at approximately 18 inches to two feet over a period of just 48 hours sometimes on a Friday and Saturday, that there appears to be more erosion.

18 I would suggest two things: About 600 feet of my 19 property was taken by the Town of Lyme for the road project 20 that was referred to earlier at a cost of what, \$800,000 the 21 town repaired the River Road, which is an historic road. 22 Just as an aside, it used to be the main coaching road from Boston to Montreal. But it started to sink into the river. 23 I would suggest you contact Holden Engineering of 24 25 I believe Concord, which did the study for Lyme, saying that

the river bank was being eroded. It was evident when trees started to fall into the river. There is no erosion on my property from any other source; there are no streams and the land slopes, if anything, away from the river, not into the river; and yet the bank was eroded at the bottom. Clearly visible during the summer from people who went by in boats. Clearly some erosion due to boats; water skiers, recreation.

8 But I support Dr. McIntyre's call for a study 9 that would measure the amount of erosion due to the rapid 10 rise and fall of the river. I'm not a scientist, but I 11 certainly believe that that's part of the cause, and I'd 12 like to see a scientific study that either refutes it or 13 confirms it.

14 I'm told that there are a few organizations, most 15 notably Dartmouth College, that insisted on abatement from 16 the Bellows Falls Hydroelectric Company when they gave them flowage rights 50, 60 years ago. I don't know if that's 17 true; I'm sure there are people here who may know that. 18 19 Unfortunately, the predecessors on my property were not 20 smart enough to make that kind of an arrangement. 21 But anyway, at the very least, I'd like to see a 22 study as Dr. McIntyre suggested. Thank you. 23 I'm afraid I don't have a prepared statement, so. MR. HOGAN: That's okay. 24

25 You mentioned three to four years. I've have

1 also heard the last ten years from Linda.

2 John, have you changed operations in the last ten 3 years? 4 MR. RAGONESE: No, we have not changed our 5 operations in the last -- I couldn't tell you. Except to б say that there is a competitive market going on so there are 7 potentially differences in the discharge that you might have seen over historic periods of time. I would say certainly 8 9 not within the last ten years, but something going back. 10 But in terms of the reservoir, I would say that there is probably less fluctuation over the course of the last period 11 of the license than more, just because of the minimum flows 12 13 that are operating upstream were not there before, and so 14 there's a constant flow now coming into Wilder that wasn't 15 there previously. when the upstream licenses were mandated 16 to higher flows. 17 MR. HOGAN: When was that? 18 MR. RAGONESE: 2004, we started minimum flows?

19 2002, 2004, somewhere in that range.

I think, it would have been the last ten years that you would have had the minimum flows coming into Wilder, that they weren't there prior to. MR. HOGAN: Gentleman has a question.

AUDIENCE: How many years has TransCanada had theWilder Dam?

1 MR. RAGONESE: TransCanada acquired these in 2 2005. And the competitive market --3 AUDIENCE: How many years, 5 to 13? 5 to 12? 4 MR. RAGONESE: Well, TransCanada has owned the 5 project since 2005, so that's about seven or eight years. б I'm trying to think when the competitive market started. 7 '98 about. So that's been around for about 14 8 years. And that is the world, all generators working. As 9 much as we would like to schedule up for generation, it's 10 scheduled by what the region demands for prices and quantity 11 of electricity. 12 AUDIENCE: It's dollars. MR. RAGONESE: It is driven by dollars. 13 14 AUDIENCE: It's dollars. 15 MR. RAGONESE: Driven by values, energy values. 16 AUDIENCE: And those dollars should be, some of 17 them put into controlling the erosion. 18 MR. HOGAN: We had a question over here, or a 19 comment? 20 MR. MUDGE: Just two brief comments. My name is 21 John Mudge, M u d g e, property owner in Lyme, New 22 Hampshire. My family bought that land in 1962; we own 23 approximately three-quarters of a mile of frontage along the Connecticut River; beautiful farmland. 24 25 We have put all of that land under conservation

easement with the Department of Agriculture in New Hampshire and with the Upper Valley Land Trust because we think it's important to preserve that as agricultural land. I wish I could say that I felt TransCanada felt it was important, or the previous operators of the dam, it was important to preserve that agricultural land.

7 I am told that we are the only landowners, as 8 somebody who is very familiar with the Connecticut River 9 Valley and land with two surveys of our land, one done in 10 1960, one done in 1989. Those documents clearly show that in that period of time we lost 1.9 acres of land. 11 There's one line on the survey which is 24 feet shorter in 1989 than 12 it was in 1960. There's one enormous amount of erosion 13 14 taking place on this river. That soil, that silt is being 15 washed right down --(interruption)-- and we would like to 16 see something done in order to protect that.

The earliest known photograph that I have of our land dates from before 1896, an old photograph obviously. We can date that because the old covered bridge from East Thetford to Lyme is in that photograph, and that bridge washed out in 1826.

Photographs of our land appeared in numerous publications, including a full page photograph in the 1940s in the National Geographic. All of these old photographs show beautiful vegetation along the Connecticut River.

It's the right buffer, it protects the land from erosion.
 The construction of the dam and the management of the dam
 has resulted in massive erosion, and I will submit a study
 request to have this done.

5 Last November, I think it was November 30th, I б noticed that the water was very, very low. I could walk the 7 entire three-quarters of a mile of our property on the mud 8 flats. I took a lot of pictures then of a huge amount of 9 trees about to come in, trees standing up here just for 10 their roots hanging in the air, about to come in. The 11 erosion is undercutting the bank to a tremendous amount. And I'll echo part of the previous comments, but 12 13 the New Hampshire department of whatever it is, DES, is most 14 inhospitable and unfriendly in trying to protect the land. 15 And that's a separate issue, I realize. But an effort has 16 to be made to protect this land. Thank you. 17 MR. HOGAN: John, you said you had survey

18 documentation and --

19 MR. MUDGE: I have it at home, yes.

20 I can easily make that available to FERC.

21 MR. HOGAN: That would be great. We appreciate22 that. Thank you.

And I also heard that there was study done by the
Town of Lyme for the road repair by an engineering firm?
AUDIENCE: Holman.

1 MR. HOGAN: If you're able to, if you plan to 2 file written comments, and you want to append that or make 3 that available that to FERC, that would be helpful.

Yes, sir.

5 MR. LEWIS: Greg Lewis, City Manager of Lebanon,6 New Hampshire.

7 On behalf of the City, I'm going to read a 8 statement. I don't know if I want to be negative because 9 part of the statement is that the City, for the length of 10 the water park and the river banks, the river front, along 11 the line to Hanover, on down as we border the Connecticut River, we think that the form of the bank and interface of 12 the water and the ebb and flow of the water and the soils 13 along that bank, along that front, need to be studied. 14

15 We are clearly unanimous here in the City of 16 Lebanon, and I am the Chief Executive Officer of the City 17 and speak up on their behalf; that we think that that is important, and that needs to be a current -- but this is 18 19 needed to making formal requests for a study we'll examine 20 that; we'll also make a formal comment by the March 1st 21 deadline. But we want a study; that's clearly something we must know. That is something that can't be left unknown, 22 23 because in the development of our City from all aspects of it, from the logical point of view, we need to know the 24 25 functioning that is going on along that bank; and that's of

1 critical importance to us for all, for many, many reasons. 2 We pride ourselves as an environmentally sound 3 community. We also pride ourselves on proper use of natural 4 resources and a balancing with our residents who are along 5 that area. And there is some more development in there, б namely a River Park. But that's a new development along 7 there. 8 Another aspect of that soil is there's as very 9 large brownfield, the Westboro's railway yard. And that's 10 adjacent to this area. Now, I'm not talking about the water

11 coming off that, but I'm talking about some of the migration of sediment and soil, comes into that area as well. 12 13 So there are these reasons that we feel very 14 strongly that there needs to be a current study, 15 understanding the way that's functioning geomorphically, and 16 we need the fluvial understanding of that water going 17 through that area. Thank you. 18 MR. HOGAN: Yes, sir. 19 MR. BLAKE: My name is Roger Blake, Norwich, 20 Vermont.

21 We've owned our property for about 26 years, and 22 of the last five, eight years we've noticed a tremendous 23 acceleration in the rate of erosion, such that the 24 neighbors, conferring with one another from both sides of 25 the river: "How are you coping with this? How are you

1 dealing with this erosion?" Because it's become a major 2 concern.

3 And as the erosion takes away any vegetation from 4 the banks, it leaves these vertical banks riverside, and 5 there's no consistency in the soil. And as the river -б which we've also noticed -- rises and falls at a much faster 7 rate from what it did years ago, it creates this tongue 8 effect: the water soaks in to the bank, and when the water 9 leaves, rapidly due to the foam, it draws the dirt with it. 10 The bank sinks, there's nothing to hold the tree roots, the 11 trees fall in. And as this happens, it works further into the property, and you take vertical walls like this that are 12 eaten out at the bottom because of this rapid flow of water 13 in and out; there's no protection for the banks. 14

Throwing stones over the bank, in various sizes, acts as a buffer to try to filter that soil so it doesn't be drawn from the bank quite as quickly; acts as a wave break, but it doesn't prevent the water from going in the bank.

A private research project I've done; since I've been there, every fall I take a small rowboat and a little motor and I go as far as I can up the river, and I make mental notes of where there's erosion, and it's unbelievable the difference. Some of these banks are vertical now and they're 20 to 30 feet high. And they don't stand a chance. We see numerous corn stalks come down by our

1 dock. Farmers are losing acres and acres of land. It's 2 something that we've seen accelerate within the last few 3 years, and we feel helpless; there's only so much we can do 4 manually; we can't put equipment in the river, and getting 5 rocks down there and placing it, it seems it's just too б little. Thank you. 7 AUDIENCE: Have you consulted with the Department 8 of Agriculture up in Norfolk? 9 MR. HOGAN: I have not. 10 AUDIENCE: I should point out we have, we have 11 had three federal grants for repairing our property. The group in Hartford is very familiar with the erosion on the 12 13 river. 14 MR. HOGAN: Do you have a contact? 15 AUDIENCE: Stu Schmidt. Carl. MR. HOGAN: Carl. 16 17 The Department of Agriculture was invited to our meetings, and they may attend tomorrow; it's done through 18 19 our public notice and our Federal Register Notice that goes 20 out to all federal agencies. 21 Certainly any source of existing information that 22 folks know is out there that they think is pertinent to the issue and is something that FERC should be aware of, I 23 encourage you to file it or tell us where that information 24 25 is.

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1 Any other questions or comments about geology and 2 soils or erosion concerns? 3 AUDIENCE: One of the things that these people 4 should think about -- Kevin Keyer (ph) from the Natural 5 Resources Council sends out -б MR. HOGAN: I'm sorry? Kevin who? AUDIENCE: Kevin Keyer. He works for the Natural 7 And he has brought me limbs from willows, and 8 Resources. 9 he rightfully says, and it works: You take those pieces, 10 and all you've got to do is stick them in the water just 11 above where the high water mark is. They won't grow right in the water, but if you can get them going, and it would be 12 a nice project for anybody wanting to do something along the 13 river, it helps. The bad part of it is it's beavers work to 14 15 get them --16 (Laughter) 17 That's inexpensive. MR. HOGAN: Thank you. And I have seen that 18 19 work, also. Any other comments about erosion or geology and 20 soils? 21 We've been going for almost two hours. Do we 22 want to take a five, ten minute break, or keep going? 23 Okay, I'm seeing yes for a break. So let's make

it a ten minute break, use the rest rooms, and then when we

come back we'll move on to water resources.

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(Break) MR. HOGAN: All right, let's reconvene. Thank you. Our next resource area that we've identified potential project effects on is water resources. And Angie, I'll let you go through what we've identified. Water Resources - Water Quantity and Quality MS. SCANGAS: So this is Section 4.2.2, following Ralph. Also on page 24. So the effects of current and proposed project operations on water quantity as well as water quality, and particularly called out is dissolved oxygen and temperature, and then including cumulative effects of the operations of Vermont Nuclear, or Vermont Yankee nuclear power plant. MR. HOGAN: That's when we move downstream, though. MS. SCANGAS: Yes. MR. HOGAN: Before we go on to TransCanada, identify any studies that they've conducted? MR. RAGONESE: Yes. Well, a couple things. So along these lines, in our PAD we describe that we will have a river model that will basically be able to evaluate the impact of a lot of different scenarios on not only generation or ability to do it, flows, but it can also develop -- you know, you can evaluate the quantity of water.

1 There are things that may get proposed, but there really 2 isn't enough water in the river at certain times to do that. 3 So the model will be able to identify those constraining 4 elements of a particular scenario. 5 So we have a very large optimization model that б we will use to evaluate the various proposals. 7 MR. HOGAN: Let me interrupt real quick. So when 8 we talk about water quantity, we're not only talking about 9 reservoir fluctuations potentially that the model would be 10 able to predict, but also downstream discharges --MR. RAGONESE: Yes. 11 MR. HOGAN: -- and basically stream elevations 12 and flows? 13 14 MR. RAGONESE: It will not predict downstream 15 flow elevations. 16 MR. HOGAN: Okay. 17 MR. RAGONESE: We do have some information from other studies about that; but the model does not model 18 19 downstream flow elevations. It does quantity, flows, but it 20 doesn't do elevations. 21 MR. HOGAN: Okay, but it does do reservoir 22 elevations. 23 MR. RAGONESE: Correct. 24 MR. HOGAN: Thank you. 25 AUDIENCE: So you don't have stage discharge

1 information downstream of the dam?

2 MR. RAGONESE: For the six miles below Wilder, 3 but not at every location, no. It's not in the project, so 4 we don't have -- the model will be able to develop flow, and 5 there's information that has some stage discharge б information. And we have some studies where there's some 7 rare species that we have stage discharge information. But 8 generally speaking, our models don't produce those results. 9 It could be a post-process in certain locations, 10 but the model is not designed, not intended to. 11 The other, more on the water quality side of the house, we did conduct baseline water quality assessments 12 13 this past year; those are just again -- they'll be filed with the Commission as well as with the agencies shortly; 14 15 there is a final, second draft. Actually -- this is Jennifer Griffin, she works 16 with TransCanada. Can you just speak to the water quality 17 one? You have a little more familiarity with some of the 18 19 elements and where the locations were. But with respect to 20 Wilder, what did we measure? 21 MS. GRIFFIN: We measured dissolved oxygen, temperature, and there were some chemical areas -- I don't 22 23 know what you call, so I don't know what all of those were.

24 But it's also in the PAD, and information on what was

25 monitored there.

1	MR. RAGONESE: And the preliminary results?
2	MS. GRIFFIN: And the preliminary results, yes.
3	So just above the dam there was a continuous
4	monitor that was looking at dissolved oxygen and
5	temperature. There were two stations above that in the
6	reservoir, not continuous. They were checked on every week.
7	Once a week they were
8	MR. RAGONESE: Profiled?
9	MS. GRIFFIN: measured, profiled. And then
10	downstream.
11	AUDIENCE: So you do that vertical profile at
12	these locations on DO and temperature?
13	MS. GRIFFIN: Yes.
14	And then just downstream in the tailrace. There
15	is a continuous monitor in the tailrace.
16	MR. RAGONESE: And as all these studies
17	although I can't say all of them exactly the rare and
18	endangered species, locations of critical information,
19	cultural resources, some of those are going to be redacted
20	versions because we have to protect those by virtue of what
21	they are, and the agencies don't want that information out
22	there. But things like water quality, we have a website:
23	www.TransCanada-Relicensing.com
24	and has the documents and the section and the public
25	information library sections there are either going to be

1 some formal documents that we filed with FERC, there will be 2 the documents in all the information such as studies like 3 this this will be in the public information library on the 4 web. So they will be up as well. 5 MR. HOGAN: So that's it for the studies? б MR. RAGONESE: Those are it for the studies. 7 Yes, sir. 8 DR. McINTYRE: Some of the discussion this evening 9 has to do with people's opinions about whether the water is 10 rising faster, dropping faster, rising more or less than it 11 was 5 years ago, 20 years ago, 10 years ago. And at least in the documentation I've been able 12 to find so far, I don't see any way of expressing that. For 13 instance, one could show daily levels per hour, per minute, 14 15 whatever; real-time levels at the dam or other sites in the 16 Wilder Lake. But pretty soon if you do that, you'll have a tremendous amount of data that is hard for the public and 17 even experts to understand, until you get a good 18 19 statistician to look at it and figure out a way to express the variability in that data. And to ask the question, what 20 is a significant change from five years ago or ten years 21 ago. And this has to be done. 22 23 MR. HOGAN: John, will the model be capable of looking at historical conditions and model what it was five 24 25 years ago or ten years ago? Based on period of record.

2 AUDIENCE: This is an instantaneous --3 MR. RAGONESE: Let me think about this for a 4 second, because I'm kind of --. So my answer is yes and 5 no, I guess. б What the model is, is meant to represent. It 7 isn't -- I mean, we have historic data, but I don't have 8 historic data as Dr. McIntyre may -- I don't have historic 9 data at the Orford Bridge, which is really what he's getting 10 at. For example, if there were 15 gauges in the 11 Wilder Reservoir, we'd be able to correlate what's either 12 13 going on in the dam, what's coming in freakin flows, and 14 what's coming in from upstream to what's happening in the 15 reservoir. But our data is at the dam. 16 So just as we mentioned earlier, every time inflow is above our station capacity, which is 9,000 -- not 17 20 or whatever you might have heard -- 9,600 or something 18 19 like that; or 10,000 let's just say, round up. When flows 20 are above 10,000 we have to start dropping the reservoir at 21 the dam to keep it in its banks, of the stream. 22 That's what people may be seeing just as much as 23 operations due to generation schedule. I don't know what 24 they all are, but it's a systematic evaluation of 25 relationships, and the model doesn't do that. You can make

MR. RAGONESE: Well --

1 a model probably to do that, but our model is designed 2 around evaluating impacts from baseline conditions, which is 3 what we do today. We can go back and say 'get rid of all 4 the minimum flow requirements, all' -- you could go back and 5 model -б MR. HOGAN: You've answered my question. I was 7 just curious to know if the model was designed to look at 8 that question or not. 9 Yes, sir? 10 AUDIENCE: On the subject of water quality, this 11 is the second --12 MR. HOGAN: Name again. 13 MR. LEWIS: Greg Lewis, City Manager of Lebanon. The Lebanon -- from the city's perspective, we're 14 15 very sensitive to the Westboro rail yards; it's a very large 16 brownfield. And it's approximate to the river, and as I mentioned earlier about the soil, something about water. 17 There's no interface between any of the water with regard to 18 19 that very large brownfield, and the river end -- and there's 20 no nexus as to the dam, water dam. 21 You know, we want to make sure that's clarified 22 and clear, because I know we have concerns about soils and 23 sediments coming off that brownfield, and they likewise have concerns about water coming off that brownfield, where it's 24

going and how it's impacting. And that's of concern to us;

that's an unknown for us. But that's one concern that we 1 2 will mention in our comments as well. Thank you. 3 MR. HOGAN: Thank you very much. 4 Other comments about water quantity or water 5 quality? б That one was fast. 7 So we'll move on to aquatic resources. 8 Fishery or Aquatic Resources 9 MR. SEARS: Mike Sears, and this is Section 10 4.2.3, issues for aquatic resources. Include effects of 11 project operations and maintenance, including fluctuations in water levels and flow releases on aquatic habit and 12 13 resources in the project vicinity. For example, resident 14 and migratory fish populations, fish spawning, rearing, 15 feeding and overwintering habitats, mussels and 16 macroinvertebrate populations and habitat. 17 The next one is effects of project facilities and operations, including reservoir fluctuations and generation 18 19 releases on fish migration through and within project 20 fishways, reservoirs, and the downstream riverine corridor, 21 which is also considered a cumulative effect on project 22 effect. As well as effects on entrainment of fish populations, which is a project cumulative effect. 23 24 MR. HOGAN: Any --25 MR. RAGONESE: Yes. Just a couple things that we

1 have either worked on.

2 In terms of the PAD, we didn't have a specific 3 study that we identified in the PAD to assess habit and 4 relationships to project operation on various habitats. We 5 did identify that pretty obvious or likely PM&E or б mitigation that's going forward, and we will continue to 7 operate the fish ladders as required; and there is a fish 8 ladder at Wilder Dam. And there are requirements for 9 downstream passage at Wilder Dam, and we continue to expect 10 that there will be use of both of those for one purpose or another. Currently they are for anadromous fish, Atlantic 11 salmon at Wilder Dam. 12

In terms of a couple pre-scoping -- well, there 13 are a couple; one of them applies downstream, but the one 14 15 pre-scoping study that we did do two years ago was evaluate 16 the presence and survey for dwarf wedgemussel; it's a 17 federally-endangered species of mussels; it's been located and identified in all three impoundments. So we did a FARS 18 19 (ph), we did a fairly extensive survey of the impoundments 20 and portions downstream of the projects for mussels, and 21 that report has been submitted to the state agencies, and we will be posting that study. 22

23 And that's all that would be related to Wilder24 that we've done this past year.

25 MR. HOGAN: Any comments regarding fishery or

1 aquatic resources, and project effects? 2 None. That's a first for me. 3 AUDIENCE: Wait until tomorrow; they'll come get 4 you. 5 (Laughter) б MR. HOGAN: Okay. Terrestrial Resources. 7 Terrestrial Resources MR. BATTAGLIA: All right, moving on. Section 8 9 4.2.4, Terrestrial Resources. 10 Some of the initial issues identified are the effects of project fluctuations in water levels and flow 11 releases from the project on riparian, wetland and littoral 12 vegetation community types, and the spread of invasive 13 14 species as a result of project operations along the 15 shoreline of the project. Effects of project operation and maintenance activities, for example, road and facility 16 17 maintenance, and project-related recreation on wildlife 18 habitat and wildlife. The effects of project operation and maintenance 19 20 on river bank integrity and shoreline erosion along the 21 project reservoir and the stream reaches, and its potential 22 effects on riparian vegetation. 23 Effects of the frequency, timing, amplitude and duration of reservoir fluctuations on waterfowl and on 24 25 riparian and wetland habitats.

1 The effects of project operation and maintenance 2 and project-related recreation on bald eagles and their 3 habitat.

4 MR. RAGONESE: So in the PAD we did not identify 5 any specific future study that we were proposing, and we 6 didn't identify any particular identification or enhancement 7 measure in the PAD as well.

8 As mentioned before, in some of the pre-scoping 9 type studies, we did perform a shoreline survey. So in 10 addition to identifying erosion we were identifying wetlands 11 and riparian types or habitats along the shorelines. Downstream of Wilder we performed, at those four jessup's 12 milk vetch sites, essentially trying to develop stage flow 13 14 relationships and identify the impacts of our operational 15 flows for, or flood flows on those endangered species. 16 And then as I mentioned, as well, the rare, threatened and endangered species study, which also looked 17 at the riparian location of -- well, I shouldn't say all of 18 19 these species were located on the buffer or the shoreline; 20 some were aquatic, some were above. But we identified the 21 association between project operation and the various rare, threatened and endangered species that we either searched 22 for or identified. 23

24 MR. HOGAN: John, regarding all these studies,25 did they all occur within the project boundary?

1 MR. RAGONESE: The jessup's milk vetch are not in 2 the project boundary. The rare, threatened and endangered 3 species surveys were in the impoundments; they were within 4 the project boundary; and the shoreline surveys were also in 5 the project boundary. б MR. HOGAN: Comments about terrestrial resources? 7 MR. RAGONESE: I'm not sure people understand 8 what the project boundary is. Do you want me to explain 9 what it is? It didn't really come out. 10 There have been a number of locations described 11 here that are clearly outside the project boundary. Does it matter to you or not? 12 AUDIENCE: I think it would be good if you 13 explained the project boundaries. 14 15 MR. HOGAN: Okay. Project boundary is an 16 administrative line that is proposed by the applicant and

18 required to encompass all facilities necessary to operate 19 the project.

approved by FERC, or approved with amendment, and it's

20 So typically that is the reservoir, powerhouse 21 facilities, recreation facilities that are required by the 22 license and any structures, primary transmission line 23 corridor if there is one; and that's what is required to be 24 inside the project boundary.

25 The project boundary does not tie to

1 environmental resource effects or study areas. The reason I 2 asked the question was I know that they've done a lot of 3 studies, and I just didn't know if TransCanada limited it to 4 inside the project boundary because FERC does not 5 necessarily do that. And I just wanted clarification. б AUDIENCE: But the project boundary does or does 7 not go up 45 miles to the reach of the pool? 8 MR. HOGAN: It does because it encompasses the 9 reservoir. But it typically --10 AUDIENCE: But downstream? 11 MR. HOGAN: -- typically ends -- the downstream reach is no longer needed for project operations, so beyond 12 the tailrace would be outside the project boundary. 13 AUDIENCE: Even though there's clearly -- and 14 15 this is for information even though it may sound -- even 16 though there are impacts beyond the tailrace downstream --17 MR. HOGAN: Again, we don't define the scope of environmental effects or resources to be studied by the 18 19 project boundary. It's simply an administrative line that 20 FERC authorizes the licensee to take, to have control over 21 this area; and it's for all facilities that are necessary to 22 operate the project. 23 If we found that there was some area that needed

23 If we found that there was some area that needed 24 to be maintained or protected on a regular basis throughout 25 the term of the license and is downstream, we could

1 incorporate that into a project boundary.

2 MR. RAGONESE: Ken, one clarification: Our rare, 3 threatened and endangered species study did include 4 downstream reaches.

MR. HOGAN: Yes.

6 MR. RAGONESE: That are affected by project 7 operation, not just the impoundments.

8 MR. HOGAN: And I was just asking the question, 9 because I was curious to know whether they limited the scope 10 of the studies that they've conducted pre-scoping to a 11 geographic area that was within the project boundary or not, and John explained that in some cases yes, but that is not 12 because of the project boundary, just because of where they 13 14 were doing it; meaning the riparian edge, which happens to 15 be inside the project boundary; and then in other cases they 16 looked at essential project effects downstream on -- vetch? 17 MR. RAGONESE: Jessup's milk vetch and all the rare and endangered species. We looked -- and when I say 18 19 downstream reaches, it would be basically from Wilder's 20 perspective, anything below Wilder Dam to where it's 21 impounded, somewhere around the -- the bridge. 22 MR. HOGAN: That river end reach.

23 MR. RAGONESE: Around the bridge. But then we 24 continued with the same survey, which is now called the 25 Bellows Falls impoundment reach. So everything from North

1 Haverhill to the Vernon Dam has been investigated for rare, 2 threatened and endangered species. 3 MR. HOGAN: Does that help? 4 AUDIENCE: I think that was a good clarification. 5 Thank you. б MR. HOGAN: And I'm sorry this didn't come up 7 earlier. We don't tie the scope of studies to the project 8 boundaries. 9 Yes, sir. 10 MR. BLAKE: An example of the loss of habitat, seven miles north of the Wilder Dam is where the 11 Ompompanoosuc comes in. For 100 yards both north and south 12 of where the Ompompanoosuc enters the Connecticut, used to 13 14 be quite deep and was excellent bass fishing. When the 15 water is low, you can walk back to higher area. 16 The erosion we talked about earlier has settled 17 into this pocket. There's one narrow path where the 18 Ompompanoosuc continues to drain out; otherwise, that all would be filled in with mud, and a loss of habitat. 19 MR. HOGAN: So that's an aquatic issue. Okay. 20 21 MR. RAGONESE: The Ompompanoosuc is a flood full 22 tributary. 23 MR. HOGAN: And just for the record, can I get 24 you to state your name again? 25 MR. BLAKE: Roger Blake.

1 MR. HOGAN: Thank you, Roger. 2 And you said it was a deep water pool that's --3 MR. BLAKE: Yes. 4 MR. HOGAN: Other comments regarding terrestrial 5 resources, riparian vegetation? We heard some comments б earlier about bank sloughing and the perching of trees and things of that nature. I think we've kind of got that 7 8 covered. But are there other concerns that haven't been 9 verbalized yet? 10 (No response.) 11 Okay. Threatened and Endangered Species 12 MS. McCANN: Mary McCann. Similar to some of the 13 14 other aquatic resources for threatened and endangered 15 species, some preliminary resource issue that was identified, and I've just kind of summarized the three 16 17 bullets in one. 18 Effects of project operations or maintenance 19 activities, including the reservoir and downstream flow fluctuations on aquatic, wildlife and plant species listed 20 21 as threatened or endangered under the federal Endangered 22 Species Act. And John has already mentioned a few of these; 23 the dwarf wedgemussel and the jessup's milk vetch as examples, and the puritan tiger beetle is another one. And 24 25 this would also be evaluated for a cumulative effects as

1 well.

2 MR. HOGAN: Any comments on threatened and 3 endangered species?

4 Oh, I'm sorry, John. Have you covered all your5 studies on T&E already?

6 MR. RAGONESE: Just. I just re-mention, we did 7 evaluate jessup's milk vetch locations; we did do a full 8 assessment for rare, threatened and endangered species, we 9 did look and did a survey for the other federal endangered 10 species in our project area, the dwarf wedgemussel.

11 I would note that the puritan tiger beetle is not in our project; it's a species that is in Massachusetts, not 12 13 in our area. So there are -- as I read the scoping 14 document, as it was just mentioned, the first note was a 15 cumulative effect but the other two were not noted as 16 cumulative effects; and they do include the puritan tiger 17 beetle in their -- so I just want to make note of that, that that is not in our projects. 18

MS. McCANN: You mean not at Wilder?
MR. RAGONESE: Not at Wilder, Bellows or Vernon.
MS. McCANN: It's down at Sumner Falls.
MR. RAGONESE: No, that is a cobblestone tiger
beetle.
MS. McCANN: Cobblestone tiger beetle.
MR. RAGONESE: And that is not a federally
1 endangered species. MR. HOGAN: We will modify, for Scoping Document 2 3 2 accordingly. But there is potential for cumulative 4 effects of the TransCanada projects downstream. Mary? 5 MS. McCANN: Yes. Yes. б MR. RAGONESE: Yes, we presumed that. 7 MR. HOGAN: Thank you, John. 8 Along those lines, does anybody know of any 9 species that we may have missed or should be added to the 10 list? And clearly, we'll be talking with Fish & Wildlife service tomorrow. 11 Any other comments regarding T&E species in the 12 projects effects? 13 14 Okay. Recreation. 15 Recreation MR. BEECO: So Section 4.2.6, Recreation. 16 17 The adequacy of existing recreation and public use facilities in meeting existing and future regional 18 19 public use and river access needs. 20 Effects of project operations on quality and 21 availability of flow-dependent and water level-dependent 22 recreation opportunities, including boating. 23 And adequacy of structural integrity, physical capacity, and/or management methods to support recreation 24 25 use at existing facilities.

MR. RAGONESE: And then in our PAD, we did not
 identify a specific recreation-type study or requirement.
 We don't typically; there are some, but we didn't
 necessarily propose them in our PAD.

5 In terms PM&E measures proposed, the only б relevant one beyond our continuing to manage our recreation 7 plans that are currently in our licenses, we do plan to 8 continue our recreational reservoir weekend summer boating, 9 higher reservoir levels to assist in recreational boating on 10 the reservoirs. And then our shoreline survey did include a survey of public and private recreation noted; again it's 11 primarily GIS-based. However, we would note that that 12 13 survey was done just beyond the recreation season, so we 14 might have missed something.

MR. HOGAN: Anybody have any comments about recreation opportunities or facilities that TransCanada provides?

18 Sir.

MR. CHRISTOPHER: Good evening. My name is Tom Christopher. I represent the New England FLOW, American Whitewater, and I'm also here with one of my colleagues, Bob Nasdorf, from American Whitewater.

I'd like to start out by acknowledging some of the previous testimony that we've heard about bank erosion and some of the problems that were discussed tonight, and I

would like to compliment those people who spoke on the
 quality of their presentation and the specificity of their
 presentation; it was very good and very impressive.

And clearly, the erosion is a most important problem to these people; and it is not to be -- I guess, it has to be taken very seriously. But on the other hand, so does recreation. Even though these people are very specific about their concern, we are just as concerned about the recreation, the opportunities that we have or do not have.

And primarily we're talking whitewater recreation and canoeing, and seven miles downstream from Wilder Dam, located in half of Vermont, lies a river reach known as Sumner Falls. It's sometimes called Hartland Rapids, and a series of ledges that are sprawled across the river, and Whitewater Run is about a quarter mile.

Where the dam was built, that was the original Olcott Rapids at the site of the dam. And they've been completely drowned by the project, thereby eliminating any opportunity for whitewater paddling to take place.

20 And if regularly scheduled flows that were 21 consistent were provided, the recreational use of the 22 resources, particularly at Sumner Falls, would certainly 23 increase substantially and provide a significant economic 24 benefit to this region.

I want to talk about some impacts, and I'm going

1 to talk about some issues. The most important issue to us 2 right now is the fact that the Wilder Dam has drowned out 3 three rapids over the stretch of one mile, plus what has 4 happened over there at Sumner Falls

5 The second issue that I'd like to talk about, and б although it may not seem germane to some of the other 7 testimony that we've heard here earlier today, I'd like to 8 talk a little bit about economics analysis, because of the 9 real value of the Connecticut River to recreationists can 10 only be measured with some significant measure of economic 11 analysis and related socioeconomic impacts, by the fact that we don't have this resource available to us. 12

The other issue that I'd like to talk about is the concept of offsite mitigation. I don't think any of us here this evening thinks that the dam is going to be removed. More than likely it will get relicensed; but the fact of the matter is relative to whitewater paddling, there's no way that we're probably going to be able to replace that on this site.

However, there are other rivers within the region of this dam that would be available if some sort of offsite mitigation package that could be developed on those other rivers. Particularly where you have other federal agencies that have a range of influence such as the West River with the Army Corps of Engineers.

So we would ask FERC to look at the concept of offsite mitigation relative to whitewater paddling in the case where there is very little that they can do to replace what we have already lost here. And I'm not suggesting that they do that, but we are suggesting that they at least take a look at some sort of offsite mitigation.

7 Relative to the kind of studies that we will be looking at for Sumner Rapids or what is left of it, we would 8 9 like to see a controlled whitewater flow study. FERC is 10 very familiar with that and the methodology that's been used 11 for a long, long time. We would like an economic analysis done for this particular region, and we would like the 12 13 economic analysis relative to recreation and whitewater 14 pattern and camping and canoeing be based on a contingent 15 valuation method of study, which will indicate the 16 willingness to pay for additional recreational resources. 17 And finally, we would -- again getting back to

18 the concept of offsite mitigation, we would like a study, or 19 FERC could conduct a study or the applicant could conduct a 20 study relative to how this might possibly happen in 21 conjunction with other resources or with other federal 22 agencies.

I would like to compliment the applicant for the amount of time they did put into the PAD; we have worked with them in the past and it is good to be working with them

1	again, and we hope that we will continue the collaborative
2	manner of working with them to solve some issues on Wilder
3	Thank you.
4	MR. HOGAN: Thank you, Tom.
5	MR. CHRISTOPHER: I'll have written stuff for
6	you.
7	(Statement follows:)
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2 MR. NUNEZ: Tad Nunez, Town of Hartford. 3 Director of Parks and Recreation. 4 I'm here to compliment the Applicant. Several 5 years back we worked into the lease back in New England, and б so forth, was watching the property deteriorate, the 7 recreation site appalling. Two years into it with 8 TransCanada, the relationship with the staff, we now have a 9 wonderful partnership, a lease, and my department manages 10 that property, to which now we have a five year Master Plan that is infused each year with several dollars of grants and 11 donations and the like. 12

MR. HOGAN: Sir?

13 What's important here is the access to your 14 river. Not a lot about the river. And even on your own 15 property, or their property, you're losing slumps of 16 property due to this problem that was talked about earlier. 17 I'm here to talk about recreation.

18 And with that said, the number of people in the 19 neighborhood, the number of people in the regional area who 20 have embraced Kilowatt North and South, or what used to be 21 the picnic area, Kilowatt picnic area, or the ball field --22 but the generations of families that are coming back to that 23 property and seeing what is occurring because of the FERC 24 licensing, and was the responsibility of the Applicant, we 25 in the town take that very seriously and put together the

lease. If we did invest any funds; state, federal or local,
 that would be managed well. So we have very much an
 interest in retaining this license.

4 But more importantly, its integrity of the 5 Connecticut River and the public access to the river. And б that is one means that two large parcels of property with 7 paths in between, we now host one of our largest fireworks 8 displays in the Upper Valley there. Many, many different 9 nonprofit organizations use it as a destination for on and 10 off the river, flotillas coming down. But I have to say, I 11 did not chime in earlier, but there is a direct correlation somewhere between the rising and the lowering, the 12 13 consistency of the river even in the park properties that I 14 manage today.

15 That's including downriver at Radcliffe Park 16 where there's a bit of an irony. Many of the towns 17 including Hartford have very strict riparian buffer setback regulations to construction. We are putting in more 18 19 seedlings and plantings in these park places and 20 conservation areas to sustain the embankment; but it's a 21 difficult tussle because we do see the constant up and flow. And I'm not talking about Tropical Storm Irene; that just 22 23 happened to be more a kick in the butt.

But I applaud the Applicant for the recreationuse of the Kilowatt North and South parks. Thank you.

1 MR. HOGAN: Yes, sir? 2 MR. SIMS: Hi, my name is Norman Sims. I'm here 3 representing the Appalachian Mountain Club. My colleague, 4 Dr. Ken Kimball, will also be representing the AMC, and some 5 of you may have met him in the past. б If I could, I'd like to make several comments 7 about recreation on the river, and then a couple additional 8 comments that I don't know where else to put, and I do have 9 some written documents. 10 The Appalachian Mountain Club dates from 1876, 11 and it's currently the largest recreation and conservation organization in the Northeast. We have about 90,000 12 13 members. 14 Our interest in hydropower relicensing, and we 15 have worked on a number of projects in the past including the folks from TransCanada. It was mostly related to 16 17 conservation and recreation. 18 So our interests in Wilder have to do first of 19 all with the controlled flow study that Tom mentioned 20 earlier downstream at the Sumner Falls rapid. This has been 21 done a lot, the procedures are fairly standardized now. I 22 think the first ones were done on Deerfield River relicensing, starting in about '98. Sumner Falls is a 23 24 popular kayak place, and it's used widely in the region. 25 We also have an interest in the offsite

mitigation to make up for the loss of the Olcott Falls and other things that cannot be replaced as long as the facility remains. We think that offsite mitigation ought to be in line with a watershed point of view on the river, such as has been taken by the Department of Interior in designating the Connecticut River and its watershed as the first National Blueway.

8 Other federal agencies that signed onto that 9 National Blueway concept including the U.S. Army Corps of 10 Engineers, which signed an MOU with the Department of 11 Interior, saying that they would contribute to the 12 recreational development of the watershed.

13 Something Tom didn't mention is that we have an interest in improved recreational opportunities for 14 15 multiple-day canoe trips on the Connecticut River. In the 16 Northeast if you want to spend two or three days camping in a continuous canoe trip, about the only place you can do 17 that is the St. John River or the Allagash in Northern 18 19 Maine; you're going to drive seven or eight hours to get 20 there. It's hundreds and hundreds of miles 21 from the nearest population center.

The Connecticut River is a prime candidate for that kind of multiple day canoe trip within easy driving distance, like three hours, of millions and millions of people. The primary difficulty with making those trips is 1 the stopper dams in the river.

2 And so in relation to that, we will suggest a 3 study of the quantity, quality and adequacy of the land-4 based facilities associated with the Wilder facility. This 5 study should examine the put-ins, the takeout, the б facilities for canoeing and kayaking, portage routes, 7 campsites, parking and road access, seasons of operation, maintenance and sanitary facilities and project lands. The 8 9 portage trail, for example, around Wilder Dam is terrible 10 and needs to be relocated.

We also think that these kinds of studies should include a projection of usage over the proposed 30-year license. And where necessary, the opportunities for project owners to buy additional land in order to provide necessary facilities.

16 If I might mention three other things, and I 17 don't quite know where to put them. There was someone on the panel named Bob who had to with cultural resources? 18 19 That's you. I'm sorry. (Referring to Bob 20 Quiggle) 21 We have an interest in the historical study of the river as 22 it existed prior to the construction of the dams, including photographs of the natural riverbed. We would like to 23

24 request additional information on that.

25 I have learned that there may be as many as 300

large scrapbooks of photographs and engineering reports on
 the original construction of the dams, including photographs
 of how the river looked before the dams were there, and
 during the construction process. Perhaps only 25 or 30 of
 these remain. The others may be scattered around in
 different facilities.

7 I'm a professor at the University of
8 Massachusetts and a historian. I think this is a valuable
9 historical resource that should be recovered. There's been
10 some changes in ownership, and some of these documents may
11 have been scattered over the years.

We also have an interest, the AMC also has an 12 13 interest in the educational benefits provided by the project 14 owners to the public. Can they support leadership training 15 and outdoor recreation in area schools? Can there be 16 informational signage and kiosks and project facilities promoting education about invasive species, water flows, the 17 history of the area, who to call with problems, and how to 18 19 get involved.

Two items lastly. We have an interest in the economic health of the owners of all the hydropower dams on the river that are being relicensed. Are they being managed in a profitable way that will permit them to continue providing appropriate maintenance and provide the public benefits as required in the licenses? We would like to see

a study of the financial production at each individual
 facility that is being relicensed.

3 In association with that request, we would 4 recommend that the EIS and FERC look into creating an escrow 5 decommissioning fund for the Wilder Dam. In an age of б international finance, deregulation, changing ownership, and 7 global warming, the financial health of the ownership can be 8 brought into jeopardy by distant events or by catastrophic 9 events, such as a couple Hurricane Irene storms rolling up 10 the valley.

11 With the catastrophic failure of the dam and the 12 financial failure of an ownership, the public should not be 13 burdened with decommissioning costs. So an escrow 14 decommissioning fund might be very beneficial. Thank you. 15 (Prepared statement follows:)

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MR. HOGAN: Thank you, Norman.

2 Other comments regarding recreation facilities? 3 MR. MUDGE: John Mudge, again, landowner in Lyme. 4 As a landowner on the river, and others who own 5 land on the river, we use it a lot for recreation. Over the 6 years, we've permitted any number of people to camp on our 7 land if they're coming down in a canoe.

8 My question that comes back to the erosion issue. 9 They maintain the water at a high level over the weekend for 10 the summer users. I think that the erosion that is caused 11 by that, there may be excessive erosion that is caused by 12 maintaining that high level. So I think that's part of the 13 erosion study that has to be undertaken.

14 MR. HOGAN: So take into consideration in any 15 erosion study the effects of maintaining that pool. You 16 said to do that on the weekends during the summer vacation 17 system?

MR. RAGONESE: We don't maintain the high level; we maintain the low level higher. Follow me? Instead of having it go to say 382, we don't go lower than 382.5. That's what that is. You maintain the low level limit, higher, for boating access. MR. HOGAN: Yes, sir. MR. LEWIS: Greg Lewis, the City Manager of

25 Lebanon.

A third focus, and this goes to the statement I was going to make, so I had to waive that statement. This is the last one from our perspective, to look at all the issues, and that's recreation.

5 And that the City, in its Master Plan that it 6 completed last year, on file, on record, and it is a 7 question of bikeability, walkability, and access to a water 8 experience. And there's some comments made earlier about 9 being able to do access to water for water experience; 10 kayaks, canoeing, other things.

11 The activity levels in recreation areas all are related to the river; and the river, walking the river, 12 keeping the river experience. There are pieces along the 13 14 river where there is excellent opportunity for river 15 experience; but the facilities along the river with regard 16 to recreation where it's appropriate environmentally are not 17 well-developed. There are pieces of them, but they are not 18 well-developed.

19 There are some very close, proximate areas to the 20 conservation land directly above the dam itself that has 21 increased using by persons going into that area; they're 22 parking in a parking lot next to the dam in the West Lebanon 23 area.

24 There's a new development, the river park
25 development I mentioned earlier where there's going to be a

1 recreational, opportunities that -- a very large development 2 for that area along 10, going up toward Hanover. We have a 3 bike ped committee that works on the river walk, either 4 river -- capacity along the river between Hanover and with 5 regard to West Lebanon. And then across the river to б Hartford and to White River Junction, and we're looking at 7 opportunities as to how to improve walkability and 8 bikeability prospects. There's a new bridge going into West 9 Lebanon and over to Hartford, and that new bridge is in 10 development; and there's a lot of discussion and there's 11 plans about what to do with that bridge by the river.

There is also a greenway that is proposed, on the 12 13 books, with regard to development by the state in 14 conjunction with the city, where we would develop a pathway 15 from downtown Lebanon to West Lebanon, right to the river. 16 And that river junction there is of course -- once again 17 I'll mention the Westboro railway yard, which is a brownfield, a blighted area that has aesthetic issues as 18 19 well as the lack of taking advantage of an area that's 20 probably, its best highest use may be for recreational types 21 use; and that this area of recreation is all proximate to rivers, all could be part of river -- and join in an 22 23 experience in preserving the river, and the riverfront and 24 the river bank.

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So this recreation area is the third focus for

1 the Lebanon definition, and so that's our summary, as I 2 talked about earlier to preserve the bank, the erosion issue 3 which was mentioned; look and deal lastly with this 4 recreation concern; and then this water quality concern that 5 we have coming out at one particular area. б MR. HOGAN: Thank you, Greg. 7 MR. BLAKE: Roger Blake, Norwich. 8 This effort to attract people on the weekends by 9 holding the water level up is a wonderful thing; it does 10 attract a lot of people. Two of the things that occur is 11 that the water quality goes down terribly, because the water is in (loud noise). 12 It doesn't take any of the sediment and work it along; it 13 14 just makes the water very muddy. 15 Also, where can riprap has been done along these banks, we put it there, we think gives us adequate 16 17 protection, but when the water is high, boat traffic produces waves which seep through riprap, and will go over 18 19 it and start it going down the bank on the riprap. 20 One of the things that Dartmouth has done, from 21 Light Yard bridge north for 2500 feet is a no-wake zone. 22 And with that, they've eliminated, or they're hoping, some 23 of the erosion from the boats and also perhaps those that 24 might be swimming or kayaking or canoeing along their 25 property.

1 MR. HOGAN: Any other comments regarding 2 recreational opportunities or facilities in the project 3 area? 4 No? Okay. 5 Land Use and Aesthetic Resources. б MR. BEECO: All right. Land use. Again the 7 boiler points are: Adequacy of existing shoreline management 8 policies and programs to control non-project use on project 9 lands. And adequacy of shoreline buffers to achieve project 10 purposes and compliance with local and state requirements. 11 MR. RAGONESE: In the PAD we had no proposed studies or PM&E measures that we had identified. And to 12 date we have not had a specific study or any pre-scoping 13 14 studies other than the shoreline surveys, and what not that 15 we had done prior to. I will note that the project boundary, and the 16 17 Wilder project is probably 95 percent private land with full conversion rights, and the fee land that we have is 18 19 primarily immediately adjacent to the Wilder Dam itself, on 20 both sides of the dam. 21 We do have, just the mention earlier of thinking 22 of, there are a few items that are upstream; one is in the Town of Hanover; half of it is leased to the Dartmouth 23 Diving Club; the other half, we have a canoe, through-canoe 24 25 rest, camping site that is a non-project recreation, but it

1 is something that we -- and we maintain, we maintain several 2 throughout the projects, including Wilder Dam. That's all I 3 have on land use. 4 MR. HOGAN: Any comments regarding current land 5 use practices or protection measures? б Land Use and Aesthetic Resources 7 MR. HOGAN: Okay. We didn't identify anything 8 for, any concerns for aesthetic resources. Does anybody in 9 the public have any concerns about the aesthetic resources 10 of the area associated with the project? 11 (No response.) 12 Socioeconomic Resources MR. HOGAN: Regarding socioeconomic resources, 13 14 we've heard today socioeconomics associated with 15 recreational opportunities with flow recreation downstream 16 of the project; is it Sumner Rapids? 17 MR. RAGONESE: Sumner Falls. MR. HOGAN: Sumner Falls. 18 19 MR. RAGONESE: We visited that on the site visit, 20 you recall. 21 MR. HOGAN: Yes. I remember -- it's the names. 22 Any other socioeconomic-type resources that 23 should be evaluated in our analysis, beyond recreation? 24 Yes, sir. 25 MR. SIMS: Norman Sims again.

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I hope that in analyzing these things there's a careful distinction made between the economics of the project and the values of the project. A canoeist that comes down river passes beyond three or four dams, has a valuable experience but may not spend a dime in doing so.

6 And the contingent valuation studies of 7 recreation tend to figure out what the value is. And I only 8 bring that up because you mentioned aesthetics. What is the 9 value of aesthetics? You can determine that with a 10 contingent valuation study. What's the value of having fish 11 in the river or trees along the bank? But they don't spend 12 any money.

The economic impact of a project is actually 13 something quite different from the values of the project. 14 15 And I think the values are more important. They do lead to 16 economics, but the values are where we're coming from. 17 MR. HOGAN: When we talk about socioeconomics, we're talking about the potential money that may be raised 18 19 within the economy as a result of providing a certain type 20 of recreational opportunity or things of that nature; but we 21 also look separately at the economics of the project; and 22 they are kept separate.

23 DR. McINTYRE: Just point out that as the former 24 director of the Norris Cotton Cancer Center, our annual bike 25 ride brings in now \$2.5 million of money from people around

1 the countryside here who come to ride in this valley. And 2 part of the attraction of riding in this valley is to ride 3 alongside a lovely reservoir.

4 There are economic implications of what is going5 on here that go far beyond generating electricity.

6 MR. NUNEZ: Tad with the Town of Hartford. I 7 guess that's what I was trying to emphasize; that since the 8 town took over the management of the park, the number of 9 people using the park is a direct correlation to what is 10 happening with visitors coming to that location and their 11 awareness of TransCanada, the work they have done, being a 12 partnership.

And when I say nonprofits, there are nonprofits 13 doing their fund raising events on the property, because 14 15 we've been allowing them to do with certain site amenities, 16 but this gentleman has mentioned the fact that AMC, that 17 there be Port-a-Potties that are cleaned, water, parking, things of that nature and well managed. But he's also 18 19 seeing economic benefits to the Wilder Village, to the 20 Hartford, and as he mentioned earlier, to other large events 21 that come up.

22 So these are things that are spun off from 23 TransCanada doing a good job, to energy; but not necessarily 24 being good park stewards. They're good park stewards. We 25 partner. It's been a great relationship, and I hope we will

continue. And very responsible. But it is a direct
 socioeconomic benefit to the Upper Valley, because we've had
 an infusion of new docks, new paths, new picnic tables,
 keeping it clean. We had a new path put in by the Vermont
 Corps of Engineers or Youth Corps of Engineers.

б So there's been a whole lot of new energy in the 7 past five years. It has been a significant impact on the 8 socioeconomics. I have to tell you, there was one spin 9 where they thought they were going to build a boathouse, a 10 very elite boathouse. And the neighborhood became very 11 clear that this was not going to happen. And it didn't happen. I'm very happy to say it didn't; I think the 12 neighbors understood what was best to happen now. 13

But TransCanada did not pay a role in a sense what should or should not be. They understood their role with FERC licensing. And having it open to the public and not have it provincial to who could go through the doors of a clubhouse.

MR. HOGAN: So this is the Kilowatt Parks, north and south?

21 MR. NUNEZ: This would be Kilowatt South. Two 22 properties.

23 MR. HOGAN: And these are TransCanada rec24 facilities.

25 MR. NUNEZ: Correct, that are leased to the town

1 to manage as park facilities called Kilowatt South and 2 Kilowatt North. 3 MR. HOGAN: And required by the license, the rec 4 facilities? 5 MR. RAGONESE: Yes, these are. б MR. HOGAN: And basically you fund the town for 7 the management of --8 MR. NUNEZ: They don't fund this at all. 9 MR. RAGONESE: It's management. 10 MR. NUNEZ: We manage it entirely, including 11 mowing, grading, and the infrastructure that is necessary to maintain, including a full master plan. That's something we 12 13 decided to embrace in the lease agreement, to sustain it. 14 MR. RAGONESE: Yes. We never had a -- there's a 15 large ball field there. We don't have a soccer field in our 16 recreation plan, but their use of the field, the area 17 included expanding opportunities; it made perfect sense; the land was there, so there's a soccer field there as well for 18 19 the Town's use. 20 We have had proposals, as was mentioned, for a very, very swanky boat house for skull, you know, rowing for 21 22 example; and again when we were looking at that we made it 23 very clear that this is an area that has to appeal to the 24 public, and I think that's what Mr. Nunez is talking about, 25 that the community came to look at this in the same way; how

1	can we better use this for the public as opposed to leasing
2	it out or potentially restricting it in some way. But
3	again, these were people coming to us, this was the better
4	end result of what came out of it.
5	MR. HOGAN: Thank you for the clarification.
б	Go ahead.
7	MR. SIMS: Just one other point about the
8	socioeconomic. The importance of using contingent valuation
9	is that it will identify a number of resources, well let's
10	say revenue generators throughout the economy, the local
11	economy, whether it is a nonprofit or if it's a club, if
12	it's a for-profit. But the survey should, on this
13	particular reach of the river, should certainly include
14	reaching out to hadras
15	groups, community groups and things like that to get a true
16	picture of what the potential economic value will be.
17	MR. HOGAN: Is AMC going to be coming forward
18	with the study requests for the contingent valuation?
19	MR. SIMS; Yes.
20	MR. HOGAN: Thank you. I wrote it down.
21	Okay, great. Look forward to it.
22	MS. CAVIN: I am Sara Cavin, I work at the Upper
23	Valley Land Trust. One thing was tying in with
24	socioeconomic, and also back to land use a little bit.
25	We've worked with a lot of landowners like John

1 Mudge to protect agricultural resources along the river, and 2 the Connecticut River is one of the most agriculturally 3 prime areas in the country, actually, with soils that are 4 really valuable. I think in the past some of the 5 TransCanada lands in Charleston and Rockingham south of the б Wilder Dam have been leased to farmers, and I think that's 7 commendable that TransCanada would allow that resource to be 8 used.

9 So one thought I had was just socioeconomics 10 related to local agriculture and the industry is pretty 11 important; and the loss of our equivalent because of all the issues we've touched on already today, is something that 12 13 should be kept in mind in the bigger picture of management, 14 because it is all, a lot of private lands that are farmed, 15 and facing some of the consequences of river management or 16 damage.

17 MR. BLAKE: Roger Blake, Norwich.

Socioeconomic, or quality of life -- I speak for 18 19 the landowners here. We're very proud to own land along the 20 Connecticut River; it's a wonderful place. We just want a 21 good working relationship with this institution which has a 22 dam on the river, and we want them to realize that they're 23 dealing with people and people's lives; and it isn't just 24 how much money they can make by generating power, it's how 25 they're going about it that's affecting the lives of many

1 people.

2 MR. HOGAN: Thank you, Roger. 3 MR. GEIGER: Kevin Geiger, Two Rivers-4 Ottauquechee Regional Commission. 5 Mine is more of a process question than anything б else here; but if there are no issues identified and there are no proposed studies by the applicant, then would 7 8 comments at this meeting generate FERC to decide that a 9 study is needed? 10 MR. HOGAN: Possibly. MR. GEIGER: So it can be that level or people 11 could say 'actually, we think this study is needed' and go 12 through a list of why you need the study and the seven part 13 14 list. 15 MR. HOGAN: Just like all of you, any study requests that FERC feels are appropriate, we have to file 16 17 study requests as well by March 1st. And we are working on 18 those. 19 So comments that we receive here today, and to 20 the extent that we understand them, we can generate our own 21 study requests for various issues. But we have to 22 understand them; and like I said, we may not come up with a 23 study request that you think is germane; so don't rely on FERC to do it, you know. It's important that if you feel 24

25 that you need a study you tell us. Put in your request, and

1 you may see that FERC also does it, too.

2 MR. GEIGER: I'm just thinking ahead, that March 3 deadline comes and goes, if people have given you a comment 4 and they think 'Oh, that's taken care of.' Post-March 1 5 we'll find out one way or the other, if it's in that 6 document that comes out after March 1.

7 There's kind of no draft between now and March 1
8 to go 'Oops, you know, I made a comment at the meeting, it's
9 being taken into account.'

10 MR. HOGAN: We're talking about two different 11 things here. Comments and study requests are two separate things. Comments that address issue that we have not 12 13 identified in Scoping Document 1 should get captured in 14 Scoping Document 2. So issues that you know are germane to 15 erosion that we haven't identified or have been identified 16 adequately, we will modify the document to say we are also 17 going to look at these additional things that we did not cover in SD1, and when SD2 comes out, SD1 is -- Scoping 18 19 Document 1 and Scoping Document 2 -- when SD2 comes out, all 20 of the changes will be in bold italic print.

So it will be almost a carbon copy except for the bold italic print where we've added everything; and if we take something out, I believe we strike it. So you'll see where the changes have been made.

25 Regarding study requests, you know, just because

1 FERC doesn't necessarily ask for a study after these 2 meetings that you think is important, those study requests 3 are going to the applicant. And the applicant is going to 4 prepare a proposed study plan. And then there's 90 days 5 after that proposed study plan comes out to work with the б applicant, FERC, to convince us why that study is 7 appropriate, at least the applicant will say is appropriate; 8 what needs to be done, how it needs to be done, and the 9 information that we're looking for.

10 In the end, if the applicant remains unconvinced, 11 we're going to take all the information, we're going to become a judge and make a decision, is this study 12 13 appropriate or isn't it? I've sat in on lots of study plan 14 meetings where I have said to an applicant, 'I think we're 15 going to need this information.' I've also said to 16 requestors, 'I'm not convinced how this is a project effect. If you can convince me, that's what you need to do. You 17 need to explain to me why this is a project effect, that 18 19 it's appropriate for the licensee to be looking at.

20 MR. GEIGER: But if you've already raised it, and 21 your document as you know -- this is an issue, people can be 22 confident that that's going to get asked and try to get 23 answers.

24 MR. HOGAN: Well, not necessarily. Because we 25 also deal with the criteria. So if we feel that there's

1 existing information that's sufficient on the record or 2 available to address an issue, we may not have a study 3 request. 4 But you may feel differently and you may say that 5 the information is not sufficient, and this is why; you can б convince us that 'okay, we were wrong.' 7 Did that answer your question? 8 MR. GEIGER: Yes. 9 MR. HOGAN: Okay. 10 Any other questions on process? 11 All right. MR. RAGONESE: And people do know that there are 12 the booklets for the study criteria. 13 14 MR. HOGAN: I was actually going to mention that. 15 We have a couple of guides for addressing the 16 study -- well, there is one guide out on the table, it's for 17 addressing study criteria; it's a new document that we prepared this past year. Basically gives you examples, 18 19 gives you what FERC is looking for in each of the criteria, 20 and should really help coach you along on how to address the 21 study criteria. 22 There's another handout out there that's Tips and 23 Ideas for Implementing the Integrated Licensing Process. Things that we have found in polling stakeholders such as 24 25 yourselves and licensees, how different licensees have taken

1 different approaches, stakeholders have taken different 2 approaches; what has worked, what hasn't. 3 So it's a tool for everybody involved to think 4 about how do you want to work through the process? Here's 5 what's worked, here's what hasn't. But like I said, the б criteria, and we do have a new guide on implementing the 7 criteria; so the study is a key component for FERC and I 8 highly suggest if you're planning to write a study request, 9 you read the guide on applying the study criteria and you 10 apply it. So we've covered socioeconomics. Any other 11 comments in socioeconomics? 12 Okay. Cultural resources. 13 14 Cultural Resources 15 MR. QUIGGLE: Section 4.2.10 of SD1 describes the issues we've identified in association with cultural 16 17 resources. And those are project effects on historic and archaeological resources, including traditional cultural 18 properties listed in or eligible for inclusion in the 19 20 National Register of Historic Places. 21 MR. HOGAN: We had comments earlier from AMC 22 asking for historical records of the project construction 23 and overtime being documented. MR. MUDGE: John Mudge from Lyme, again. 24 25 Are you aware of the Native American gravesites

1 that have been exposed through the erosion up in Haverill? 2 MR. HOGAN: We were made aware that there were 3 some Native American sites that were riprapped. Is it 4 Wilder that I'm thinking of when we took the site visit? 5 MR. RAGONESE: The ones you're thinking of I б think are Bellows Falls. 7 MR. HOGAN: Okay, sorry. 8 My answer is no. 9 (Laughter) 10 MR. MUDGE: I'll have to dig that up. MR. RAGONESE: Well, as I said earlier, we have 11 done an entire Phase 1A assessment of the Wilder project, 12 including the April. So any. And many unknown and first 13 discovered potential sites were identified in our study. 14 15 So I can't speak to the site you're talking 16 about. 17 MR. MUDGE: There was an article some time ago in the Valley News -- I'll have to figure out how to find it 18 19 again -- where Native American bones were exposed as a 20 result of the erosion caused by the operation of Wilder Dam. 21 MR. HOGAN: And that's upstream. 22 MR. MUDGE: That's upstream. That's at about at the end of the 45 miles. 23 MR. HOGAN: Quick question, John. I know you've 24 25 done erosion surveys and you've done the Culture Resources

1 1A surveys. Have you done any overlap, comparison.

2 MR. RAGONESE: That's where the -- yes. The 1A. 3 The 1A was not limited to what we -- but that's why we did 4 the survey first, so that there was some basis for 5 identifying the scope of what would need to be done when we б sent the archaeologist out. They weren't limited to only 7 looking at that erosion because we mapped it, and not that 8 erosion because it happened last week. They looked at it 9 all.

But they did use the -- the primary thing they were looking for were exposed banks that they looked at. So they looked at every exposed bank on the project, or archives. And they did this actually post-Irene. So it's fairly current.

MR. HOGAN: Other comments regarding culturalresources in the area, potential project effects?

Okay. Developmental Resources. This is where the Commission will look at the potential project changes in operation or the cost of potential enhancement measures in the new license versus the economic benefit of the project from the project power.

22 So it's what we take into consideration. So if 23 we're looking at a change in stream flows because of, either 24 for recreational opportunities or protection of aquatic 25 habitats or any other reason, we would look at the cost of

what does that mean in generation, or the effects on
 generation.

And so for developmental resources, this is what the Commission does. We look at the benefits of the power and the power resources versus the protection of the environmental resources and so forth; and it's a balancing act that we do.

8 So if you have comments on the Commission's 9 evaluation of developmental resources, I'd love to hear 10 them.

11 MR. RAGONESE: Ken, I just would add that I think this is where a part of the river model comes in as well, 12 because the model does look at the economics impacts as well 13 14 as the generational water quantity as well. It will have 15 real-time New England energy prices for which the impacts or 16 alternative operating scenarios, or whatever it might be, habit stabilization, consequences that you can equate to an 17 operational change that will be encompassed, and you'll be 18 19 able to evaluate what the impact is economically.

20 MR. HOGAN: Okay. Those are the resource areas 21 we identified. I note that there are a handful of people 22 who signed up to provide spoken testimony. Have we covered 23 that already, or do folks have statements that they now want 24 to read into the record? I don't want to cut anybody short. 25 Everybody's happy?

1 AUDIENCE: I have a question. 2 MR. HOGAN: Yes, sir. 3 AUDIENCE: Sorry if it seems redundant. A lot of 4 talk about how you can get a study brought forward. If the 5 consensus of this room or of this particular meeting, has б somewhat of a consensus as you said the stakeholders, of the 7 ebb and flow of the river and what was perceived of an 8 erosion concern, would that not capitulate a study? Or 9 does it -- I know this was sort of asked already, but if 10 tomorrow you go to the site and you go away, you say "Geez, these folks have said there's something going on in the 11 river, that rising and lowering and erosion." 12 13 Does somebody have to by March 1st ring the bell to make sure that is brought to the forefront? 14 15 MR. HOGAN: The issue has been brought to the 16 forefront, and something that we will definitely consider. 17 I can't guarantee you that we're going to ask for it, because we're going to be looking at multiple things. 18 19 We're going to be looking at the study criteria; can we 20 address the study criteria that supports the need for this 21 study? You know, we seek your input to help inform us on 22 the study criteria. 23 So like I said, we're down in Washington, D.C. You know, we're not the most educated people about this area 24

and this spot; you guys know the information that's

available that's out there; the engineering study that was done on the road, I had no idea that that existed; but tonight we learned about it. I've asked for it to be placed on the record.

5 So there's -- it's why we're here. You have a 6 key knowledge that we don't possess, and it could be that 7 we're going to go back and we're going to look at what we 8 know, and we may decide 'yes, it's appropriate for us to ask 9 for an erosion study.'

But if we feel -- if in the absence of what we do know we feel that the existing information seems appropriate for us to do our analysis, we may not ask for that erosion study. So we have to be told why that erosion study needs to be done; and that's what the criteria do.

MR. GEIGER: Again Kevin Geiger, Two Rivers.
Should for some bizarre reason that not get asked
for, then when that comes out, the proposed study plan comes
out, then that kind of goes through its own wash cycle,

19 correct?

20

MR. HOGAN: Exactly.

21 MR. GEIGER: And then people again get to go,22 well why, or not.

23 MR. HOGAN: And if FERC then asks for something 24 and we're all sitting around the table talking about erosion 25 studies, and you know, it's another opportunity for you to

1 convince TransCanada and FERC why this erosion study is 2 appropriate, and maybe we have some questions why we didn't 3 ask for it right up front, and that clarification process 4 can come through at 90 days. 5 MR. GEIGER: Okay, so that's in that kind of б Block 7 on the chart. 7 MR. HOGAN: Can I take your word for it? 8 MR. GEIGER: Well, there's 90 days. 9 MR. HOGAN: Yes. It's between Box 6 and 8, and 10 it's a 90 day window. As I said, the regulations require one meeting, but I'm expecting and I think John has 11 indicated that they want to address the issues --12 MR. RAGONESE: It will be one long meeting. 13 14 (Laughter) MR. HOGAN: Sounds like, in my talkings with 15 16 John, that TransCanada wants to work collaboratively to some 17 end. Can't say that they're going to agree with everything, 18 and can't say that they're going to disagree with anything, 19 so. Is that fair, John? 20 21 MR. RAGONESE: Yes. I mean, we like the science, 22 too, but we do like it tied to project operations, not other 23 factors. MR. HOGAN: Any other questions? 24 25 Process, open house, right now.
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1		AUDIENCE:	Good	job.		
2		MR. HOGAN	I: Thanł	x you.		
3		(Whereupo	on, at 10):24 p.m.	, the eve	ning scoping
4	meeting co	oncluded.)				
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1 UNITED STATES OF AMERICA 2 FEDERAL ENERGY REGULATORY COMMISSION Office of Energy Projects 3 4 - - - - - - - x 5 TransCanada Hydro Northeast, Inc. 6 Wilder Project No. 1892-026 -7 Bellows Falls Project No. 1855-0145 Project No. 1904-073 8 Vernon 9 New Hampshire/Vermont 10 - - - - - - - - x _ _ _ _ _ _ 11 WILDER PROJECT - Evening Meeting 12 Kilton Public Library 13 80 Main Street 14 West Lebanon, New Hampshire 03784 15 Monday, January 28, 2013 16 The evening scoping meeting, pursuant to notice, 17 convened at 7:20 p.m., before a Staff Panel: weather delays 18 19 20 21 22 23 24 25

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2 MARY GREEN, Geology and soils, FERC 3 RALPH NELSON, Geology and soils, FERC MARY McCANN, Endangered species and 4 5 macroinvertebrates, FERC MICHAEL SEARS, Fisheries and aquatic resources, 7 FERC BRETT BATTAGLIA, Terrestrial resources, FERC ADAM BEECO, Recreation, land use and aesthetics, 10 FERC 11 ANGIE SCANGAS, Water resources, FERC 12 ROBERT QUIGGLE, Archaeological and cultural 13 resources, FERC. 14 With: 15 JOHN RAGONESE, FERC License Manager, 16 US Northeast Hydro Region, 17 TransCanada Accompanied by EDWIN NASON and EARL BRISSETTE 18 21 22 23 24

KEN HOGAN, Project Coordinator, FERC

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LIST OF COMMENTERS Geology and Soils or Erosion Concerns O. ROSS McINTYRE, M.D., Landowner, Lyme, NH LINDA FOWLER, Town Trustee, Hanover, NH MARSELIS PARSONS, Landowner, Lyme, NH JOHN MUDGE, Landowner, Lyme, NH GREG LEWIS, City Manager of Lebanon, NH ROGER BLAKE, Norwich, VT Water Resources - Water Quantity and Quality GREG LEWIS, City Manager of Lebanon, NH Fishery or Aquatic Resources Terrestrial Resources Threatened and Endangered Species Recreation TOM CHRISTOPHER, New England FLOW & American Whitewater TAD NUNEZ, Municipal Government, Town of Hartford NORMAN SIMS, Ph.D., Appalachian Mountain Club JOHN MUDGE, Landowner, Lyme, NH GREG LEWIS, City Manager, Lebanon, NH ROGER BLAKE, Norwich, VT Land Use and Aesthetic Resources NORMAN SIMS, Ph.D., Appalachian Mountain Club TAD NUNEZ, Municipal Government, Town of Hartford SARA CAVIN, Upper Valley Land Trust

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PROCEEDINGS 1 2 MR. HOGAN: Tonight's meeting is being recorded 3 by a court reporter, so I ask that you speak your name, 4 affiliation if you're with some organization, and so we can 5 capture it on the record. We're definitely interested in 6 your comments. 7 My name is Ken Hogan, I'm with the Federal Energy 8 Regulatory Commission, and I am the Project Coordinator for the relicensing of the Wilder project and the other four 9 projects on the Connecticut River down to Turners Falls. 10 11 I want to turn your attention for thank you all 12 for being here tonight. The intent of this meeting tonight 13 is for us to hear your comments and concerns, your compliments about the Wilder project, and we're really here 14 15 to hear your thoughts on the project. The format of the meeting is we're going to have 16 17 Mary Green here, with FERC also, give a little bit of a 18 background of FERC and who we are; and then I'm going to 19 talk a little bit about the FERC licensing process that we're going to be engaged in now for the next five years or 20 21 And then we're going to go through the issues that FERC so. 22 has identified, resource by resource, in the scoping document; which is this document here. And when we get to 23 24 that point, I'll tell you what pages we're on. 25 Before we get to the scoping issues, TransCanada

1 will give a presentation of what their proposal is for the 2 project; and then while we're doing the resource issues, they will also inform of us of what studies they've already 3 4 done regarding each individual resource, if any. 5 At the end of each resource area, we're going to 6 turn to the public and ask for any comments or concerns with 7 the specific resource, and give you an opportunity to let us 8 know what your specific concerns are with that resource When we get done with the resource areas, we have six 9 area. 10 people who signed up to speak. They'll come up to the mic 11 for anybody who wants to come up and talk, we'll call you by 12 name. 13 That sound like a plan? And I'm flexible. So if you don't like it, we can do something different. 14 15 All right. So Mary, if you want to start with FERC and who we are. 16 17 MS. GREEN: All right. 18 AUDIENCE: So I assume at some point in time 19 we're going to be introduced to this wonderful panel of 20 people here--21 MR. HOGAN: You know what? That's a great idea.

AUDIENCE: -- at the table, taking notes.
MS. SCANGAS: Angie Scangas, water resources.
MR. QUIGGLE: Rob Quiggle, archaeological and
cultural resources.

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1 MR. SEARS: Michael Sears, aquatic fisheries 2 resources. 3 MS. McCANN: Mary McCann, aquatic ESA and macroinvertebrates, mussels. 4 5 MR. BATTAGLIA: Brett Battaglia, terrestrial 6 resources and threatened and endangered species. 7 MR. BEECO: Adam Beeco, recreation and land use. MR. NELSON: Ralph Nelson, soils and geology. 8 MR. HOGAN: And I have with me my attorney. 9 10 MR. BEECO: The very back of the room. MR. HOGAN: Why don't you stand up, Elizabeth? 11 12 MS. BLADEN: Elizabeth Bladen with FERC. I'm the attorney for the project. 13 14 MS. GREEN: I'm Mary Green again, I'm also doing 15 geology and soils. FERC, the Federal Energy Regulatory Commission. 16 17 We are an independent agency that regulates the interstate 18 transmission of electricity, natural gas, and oil. For our 19 organizational structure, we have five commissioners that are appointed by the president. Our division is under the 20 21 Office of Energy Projects; we are Hydropower Licensing, 22 which includes relicensing existing projects and licenses for new construction. 23 24 Our hydropower jurisdiction comes from the FPA. Commission authorization is required for nonfederal hydro 25

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1 projects that are located on navigable waters, located on 2 public lands of the U.S., using surplus water from a federal dam and located on commerce clause waters constructed after 3 4 1935 and connected to the grid. So who we are and what we do, in going through the licensing process. 7 MR. HOGAN: Quick show of hands; who has heard of FERC before? 8 (Show of hands) Room full of experts. 10 MR. HOGAN: 11 MS. GREEN: And you learned it all from my 12 presentation. 13 (Laughter) How many of you are familiar with the 14 MR. HOGAN: Integrated Licensing Process, so I can figure out -- most? 15 We've got a few folks here who are not. 17 The handout at the table up front, with the 18 colorful flow chart, did everybody get a copy of that? This is the Commission's Integrated Licensing And I'm not going to go into any detail on the 20 Process. 21 green boxes; in fact, I'm probably just going to cover the 22 first row here, is that okay? Carries through pretty much 23 the next year. 24 So I want to, it's the next few months that are kind of critical to us in this stage; currently we are on 25

Box 4, where the Commission holds its NEPA scoping meetings;
 that's what we're doing tonight.

And again, we're interested in your comments. Box 5 is an opportunity to file written comments, study requests, and comments on the PAD. So comments on the proposal, comments on the PAD and study requests. And I'm going to get into study requests and comments in just a second.

9 Once those comments and the transcripts from 10 these meetings that we have are in the Commission's record. 11 The next step is for TransCanada to put together a study 12 plan or to address these specific issues that have been 13 raised throughout the scoping process; and wherever 14 information gaps may exist, they need to be filled.

After that process, once that proposed study plan comes out, there will be a public document, and there's a 90-day period of time where stakeholders can engage with TransCanada to develop what we call a revised study plan. So we have a draft and then a final.

The Commission's regulations do require one meeting, after they provide a proposed study plan, and then again we have this window of time where we try to -- we call it the informal dispute resolution process on the studies; try to work out the various with the applicant and FERC, and things of that nature.

1 So John, I'm assuming that you're planning to 2 have multiple meetings? 3 MR. RAGONESE: Just one. 4 MR. HOGAN: Just one? Okay. 5 MR. RAGONESE: Really, we are not setting a lot 6 of expectations as to the number; we really want to take 7 issues, get them organized, get our hands around them, and 8 then in addition probably, at some point I'm going to want to identify stakeholders that have a particular interest in 9 10 a resource, so that we don't have a multitude of people all trying to help develop and revise a study plan, really get 11 12 more of a working group approach to developing a final study 13 plan. 14 MR. HOGAN: This is John Ragonese with 15 TransCanada. So after the revised study plan gets filed, 16 17 there's another comment period for stakeholders to say 'hey, 18 my issue hasn't been addressed' or 'I thought my issue was 19 addressed but apparently it wasn't' and that those comments 20 come into FERC. And once we receive those comments, the 21 Commission will make a ruling on the study plan, on the 22 revised study plan, and we will issue a study plan determination, which is an order to TransCanada to implement 23 24 the study plan as is or as modified, or with additional 25 studies. And that's a direct Commission order to

1 TransCanada to do so.

2 There is a formal dispute resolution process. Ιf a federal or state mandatory commissioning industry 3 4 disagrees with the Commission's ruling on a study plan 5 determination, if we think that we should have required a 6 study that we didn't or a component of a study and we 7 didn't, there is a process available to them to petition 8 FERC to revisit it. I know that's not going to be the case here, so I'm not going to get into too much detail; also I 9 10 don't think there are any federal or state agency folks 11 here. 12 Are there?

13 Once that determination comes No. Okay, so. out, like I said that's a directive to TransCanada to 14 15 implement their study plan and then typically it's a year or two years of studies that would be undertaken, and that's 16 17 why I'm not going to go beyond that point tonight. It is a 18 very lengthy process; there are going to be multiple 19 opportunities for public input and involvement, and this is 20 just the first step in the process; so I want to make sure 21 everybody understands that.

Page 2 of this colorful handout is the schedule we've got laid out. This one actually has the dates for this process. We just put it there as a tool, a quick reference tool for you. That schedule is also in the

1	scoping document. So I'm not going to go through every					
2	step. Except comments are due, for written comments, study					
3	requests and comments on the PAD, March 1st is a critical					
4	deadline for everybody, and I want to make sure if you					
5	want to file written comments, you know that March 1st is					
6	that deadline.					
7	AUDIENCE: That seems like a pretty short time					
8	frame for those of us in local government.					
9	MR. HOGAN: Short time frame from when?					
10	AUDIENCE: Today.					
11	MR. HOGAN: That's why we noticed it December					
12	17th.					
13	AUDIENCE: I'll revise my comments; it's a short					
14	time frame from December 17th for those of us in local					
15	government.					
16	(Laughter)					
17	Town government moves slowly.					
18	MR. HOGAN: Name?					
19	MR. FULTON: Neil Fulton, from Norwich.					
20	MR. HOGAN: We get lots of criticism about our					
21	deadlines; I hate them myself, but we also had lots of					
22	criticisms about other licensing processes that the					
23	Commission has, it took too long, so when we developed the					
24	Integrated Licensing Process in 2003, we were being					
25	responsive to stakeholder's concerns about how long the					

licensing process took. And that's why the deadlines and 1 2 the rigid time frames are set. But appreciate the comment. 3 I mentioned study requests are due on March 1st. 4 The third sheet of that handout that I put out is the Study 5 Plan Criteria or Study Request Criteria. These are seven 6 criteria that if you plan to prepare a study request, you 7 ought to be able to answer these questions and address them 8 in your request.

9 This is a litmus test that the Commission will 10 use to evaluate each study request, whether it's a 11 justifiable request and should be done or -- as it has 12 nothing to do with the project or whatever. But it's our 13 test. And Questions 2 and 3 or Criteria 2 and 3 are 14 mutually exclusive, so there are really six criteria that 15 need to be addressed.

I encourage you to do so; if you don't know, if 16 17 you're not a resource area expert and you don't know 18 methodologies for sampling something, you know, a lot of 19 times we'll say, use scientifically approved practices. You know, that will answer A, B, C, D and E. What are the 20 21 questions that you're trying to get answered. And I've done 22 that, even at FERC we'll say "I don't want to tie an applicant's hands and say 'you have to do it this way.'" 23 24 I'm going to let you do it however you want, but I need the answers to these questions. And whatever you propose has to 25

1 answer these questions.

2 So that is a perfectly acceptable method as far as I am concerned, and that's Criteria 6, by the way, on 3 4 methodology. One thing that you should all be able to 5 answer, if you're asking for a study is: What is the nexus 6 of the project and what are the goals and objectives of the 7 study? 8 What do you want from the study and how is it related to the project; two very key things for us. 9 10 The other thing that we want to know, to the 11 extent that you know it, what is the existing information on 12 that issue already, and why is that information not already 13 sufficient? What do we know about it and what don't we know 14 about it? 15 So the study is to answer what we don't know So I want to stress that to you. And you may or 16 about it. 17 may not be planning a study request, but these criteria are 18 very important to the Commission, and I can't stress that 19 enough. Does anybody have any questions thus far? 20 21 MR. RAGONESE: Ken -- John Ragonese. 22 Just to answer the question or the comment about 23 the short time frame. Without being familiar with how this 24 works, it's a little overwhelming to get that sense that 25 your deadline is March 1 and that's all we want to hear from

1 you.

But we will have a proposed study plan, and then there is a period of time where you can comment on how we approached the issues in our study plans. And that will carry beyond the March 1st period of time. So it's not your only comment period; I just didn't want to give you the sense that, you know, there's a very short window of opportunity to comment in this process.

9 MR. HOGAN: But if you do have study requests, 10 it's important to meet that March 1st deadline, because when 11 we look at our determination, and when you evaluate the 12 revised study plan and we look at the comments that we 13 received and the outlying issues, we go back to the study requests. If there wasn't a study request and you're 14 15 raising the issue after the revised study plan has been filed, for us it was a non-issue, so it's coming up late. 16

17 So I am stressing that March 1st deadline, and I 18 appreciate John's clarification that they want to work with 19 everybody throughout the process, as do we. But we do keep a very strict public record, and we make all of our 20 21 decisions based on that public record. So that's -- and our 22 process is extremely transparent; we can't be making decisions based on anecdotal evidence that was off the 23 24 record; that's why everything that's said here tonight is 25 being recorded, and it's going to be clear, when Commission

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Staff makes its recommendation to the 1 Commission, 2 it's going to be very clear how we came to that decision. 3 MR. RAGONESE: Ken, briefly, one follow-up. 4 Again, John Ragonese. 5 In the schedule there's a box for, FERC issues 6 Scoping Document 2 if necessary. What would be the criteria 7 that would warrant a revision or versus not, I guess. 8 MR. HOGAN: Good question. Scoping Document 2 9 will be produced if we miss something, if we did not 10 incorporate in our Scoping Document 1 which was issued 11 December 17th. 12 Throughout this scoping process, if we are 13 enlightened to new issues or that we got an issue wrong and it doesn't belong there, we'll issue a Scoping Document 2. 14 15 I anticipate that we will have a Scoping Document 2 issued purely because we're not perfect, and there's going to be 16 17 several meetings here that we're going to learn information, 18 that's why we're here. It's rare that we would not issue a 19 Scoping Document 2. And at that point -- and the idea behind the 20 21 scoping document and these scoping meetings is, the 22 Commission has to prepare an environmental document, an environmental review of all the Connecticut River license 23

25 impact statement that looks at all five of the projects

projects. We're planning to prepare one environmental

being relicensed here. And the scoping document, and the reason we're all here today, drives that analysis. So you're identifying what the issues are and telling us, telling FERC what we need to look at in our environmental review. Nobody better could tell us that than the folks who live with these projects day-in-and-day-out and are here on the ground and understand the issues.

8 I can make all kinds of decisions back in D.C. in 9 a vacuum, but nobody's going to like them; so I really do 10 need your input. And we want it.

11 One other quick thing before I start getting into 12 the resource areas. I had a blue brochure here.

13 This is a brochure that we put out from the 14 Division of hydropower licensing; it says, Get Involved, A 15 Guide for the Public. I recommend everybody grab one of these on your way out if you haven't already; take it home, 16 17 read through it, it has a lot of information about FERC, it 18 has a lot of terminology that's used in hydropower licensing 19 that you may not be familiar with. But most importantly, on page 12, it has a section on Get Information. And the 20 21 Commission maintains, like I said, a very public record. We 22 have a system called eLibrary where anything that is filed 23 with the Commission or issued by the Commission gets placed 24 in the eLibrary. That's an electronic library, an actual 25 copy of the document, is downloadable in PDF form or

whatever format it was loaded up on; it can be a PIF file, but you can read the actual letter, not just the notation that TransCanada filed a letter on such-and-such a date; it's the actual document, you can go and read it. You send us a letter, you'll be able to read it.

6 There's also a system called eSubscription. And 7 if you -- and there's instructions of how to sign up for 8 If you sign up for eSubscription, when the Commission that. 9 issues a document, whether it be a notice or a scoping 10 document, doesn't matter what it is, or any other entity 11 files a document with FERC on a p recommendation that you're 12 interested in, you'll receive an e-mail with a link to that 13 document.

So it's a really handy tool. If you're interested and want to stay engaged, I encourage you to check out page 12 and go through the instructions. If you don't have a computer, those systems aren't available to you.

19 Any questions so far?

20 Yes, sir.

21 MR. COUTERMARSH: My name is Mark Coutermarsh. 22 My wife Martha and I live four miles downriver. You're 23 going on and on; I don't know -- our problem is erosion. 24 Ever since TransCanada took over, that water goes 25 up and down, up and down, up and down three times a day. It

seems ridiculous. And she has called and e-mailed and can't 1 2 get any word -- you know, they just blame it on something else; but we know it's the dam right there above us, it's 3 four miles up. 4 5 Where in this process will we voice our concerns? 6 MR. HOGAN: In about -- there's going to be 7 multiple opportunities for that, but in about ten minutes, 8 we're actually going to ask you, okay, where are you on the river and what kind of erosion are you seeing. 9 10 But that's exactly why we're here tonight. MR. COUTERMARSH: Okay. I just don't know when--11 12 13 MR. HOGAN: Right. Like I said, our goal is to really get the information from you; and I know I've been 14 15 I just want to make sure people understand the going on. 16 process so that they can be engaged. And with that, I am 17 going to turn it over to the resource teams to identify in 18 our scoping document --19 MR. BATTAGLIA: I think TransCanada --MR. HOGAN: 20 Oh. Who would like to hear what TransCanada is 21 proposing? I'll take a vote. 22 23 Okay. TransCanada is going to give a quick 24 presentation on what the actual proposal is that we're here 25 to discuss tonight.

1 MR. NASON: Actually, we're just going to do the 2 overview, back to the current operations. 3 MR. HOGAN: Okay. And that's your proposal, is 4 the current operation. 5 MR. NASON: Yes, that's true. MR. HOGAN: So that's the clarification. 6 7 MR. NASON: I'm Edwin Nason. 8 MR. BRISSETTE: Earl Brissette. We work with TransCanada, and as 9 MR. NASON: 10 we've already said to Ken, we're going to go over the hydro 11 overview, then facility facts, and then operational; how 12 Wilder is operated. 13 For the hydro overview, TransCanada has dams on 14 the Connecticut River and also hydro facilities on the Deerfield River; and on the Connecticut River there are six 15 hydro facilities. Starting at the top, Littleton, New 16 17 Hampshire is the Moore dam and just downstream of that is 18 the Comerford Dam, and downstream of that is the McIndoes 19 Falls Dam. And those three together are, we call Fifteen Mile Falls. 20 Downstream from that of course is Wilder, and 21 22 then Bellows Falls, and then Vernon; and those are the three projects up for relicense. 23 24 One of the things we talk about in operations is 25 river timing, and when I say timing I'm talking about when

1 there's a change at one station,

2 and discharge from one plant, how long does it take for 3 that, the effects of that change are felt downstream at the 4 next station. And between Moore and Comerford that's about 5 an hour; and between Comerford and McIndoes it's about 6 another hour. So those three stations are really very close 7 together. From McIndoes Falls down to Wilder it's about 8 eight hours, and from Wilder down to Bellows is another eight hours; and then from Bellows Falls down to Vernon is 9 about four hours. 10

All the hydro stations on the Connecticut River are remote controlled, and they're all controlled from the Connecticut River control center in the hydro office in Wilder.

15

Earl?

16 MR. BRISSETTE: I'll go through a couple of the17 Wilder facility facts.

18 Wilder Station is located just downstream of the 19 original dam; it was just upstream of that, Alcott Dam, which was built in 1926. Wilder was put into service in 20 21 1950. Wilder has a normal, average head of 53 feet; it has 22 three generators with a total authorized installed capacity 23 of 35.6 megawatts. One of those generators is in Vermont, 24 the other two in New Hampshire, so the state line goes right 25 down between number one and number two generators.

1 They have six tainter gates, they're 30x36 feet 2 with a total spill capacity of 16,900 cfs each, and that's per gate. Two skimmer gates, 20 feet by 15 feet wide each, 3 4 and then on the New Hampshire side there are four stanchion 5 bays, which are 17 feet high and 50 feet wide, and those are 6 just boards. 7 The total project discharge capacity is 157,600, 8 and the generators can do another 10,000 cfs. The flood of record is 91,000 cfs, and that was in March of 1936. 9 The 1927 flood record was downstream. 10 11 Major projects that have been completed since 12 1979. At Wilder, the fish ladder which was installed in 13 1987, and that's when the third generator was also installed; No. 3 unit. And this generator has two purposes: 14 15 One, it produces electricity, of course; and it's a minimum flow unit; but it also provides the attraction water for the 16 fish ladder. 17 AUDIENCE: 18 Is that No. 3? 19 It's No. 3, yes. MR. BRISSETTE: 20 AUDIENCE: That's a Francis? 21 MR. BRISSETTE: It's a Francis wheel. 22 AUDIENCE: And that's in New Hampshire? 23 MR. BRISSETTE: It's in New Hampshire, yes. 24 AUDIENCE: Thank you.

25 MR. BRISSETTE: And the station was automated,

remote, and that was done in 1998. Of course, that's run
 out of Wilder.

3 MR. NASON: So back to the operations for Wilder, 4 I'll start with the reservoir. Wilder's reservoir has a 5 drainage area of 3,375 square miles. The reservoir is 45 6 miles long, goes all the way up to Haverhill, New Hampshire 7 and Barre, Vermont.

8 The usable storage volume, that's within our five 9 feet of operation. is 13,350 acre-feet. And the reservoir 10 has approximately 3,000 cfsh per tenth of elevation. That's 11 per tenth of foot of elevation in the reservoir.

12 The best way to explain this is with an example. 13 If your inflow into the reserve was is 3,000 cubic feet per 14 second greater than your discharge for one hour, then the 15 reservoir elevation will go up one tenth of a foot.

For the Wilder constraints, Wilder has an min 16 17 flow that's the same year round of 675 cfs, and that's 18 almost always done through that Unit No. 3, which actually 19 discharges 700 cfs. Wilder has a downstream fish passage; it's April 1st through June 15th, 512 cfs. And in the fall 20 21 there's also a downstream fish passage but that's only done 22 as needed. And there's an upstream fish passage through a 23 fish ladder, May 15th through July 15th, and in the fall, 24 September 15 through November 15; and those dates are a little more flexible, kind of as an as-needed basis. 25

The reservoir has an operating limit of elevation 1 2 of 308 feet above sea level to 395 feet above sea level. We also have an operations limit of .3 of a foot per hour draw, 3 4 so we don't draw the pond down more than .3 of a foot in any 5 one hour. And we also maintain recreation, rec limits for the elevation of the reservoir in the 6 7 summertime, just on weekends and holidays. That's where we 8 change our low limit to 382.5 feet.

Also because of the long, long length of the 9 reservoir, we have what we call a high flow reservoir 10 profile operation. Basically the inflow end of the 11 12 reservoir is a higher elevation than the discharge end, the downstream end. And when the flows are high, this elevation 13 difference is greater; so in order to maintain proper 14 15 elevation at the upstream end of the reservoir, when the flows go up we keep the lower end lower. And this starts at 16 17 about 10,000 cfs inflow and then it goes all the way up to 18 20,000. And at 20,000 cfs inflow and greater, we maintain 19 the elevation at 380 feet, and that's it.

As far as scheduling the river, running the reservoir -- (interruption) -- so each day the hydro operators will schedule the megawatt run for the next day; and basically their priority, when they're making the schedule is first the license compliance, and then the second is to put the generation in the best hours, meaning

the best high high priced hours; and this is during normal 1 2 flows in a regular day. For water management we do, you 3 know, we do review the flows daily and sometimes hourly 4 during high flows to make decisions about storage reservoirs 5 upstream. And during high flows the schedule is just water 6 management; there is no regard for generation because 7 typically there's enough flow to just generate around the 8 clock anyway. 9 And I guess that's all we have, unless there are 10 questions. 11 I guess we did a good job. 12 (Laughter) 13 MR. HOGAN: How about a round of applause? 14 (Applause) 15 MR. HOGAN: Thank you. Yes, sir. 16 17 AUDIENCE: Just a quick question about your study 18 I don't see anyplace where those are to be requests. 19 mailed. 20 MR. HOGAN: In our scoping document, which I 21 passed out, there is a -- through page -- last paragraph on 22 page 4, through page 5, there are instructions on how to 23 file study requests. 24 AUDIENCE: Page 33 has an address. 25 MR. HOGAN: I'm in the wrong spot.Section 6,

starting on page 32 through 33 gives instructions on how to
 file comments and study requests with the Commission. I can
 give you the address right now if you like.

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4 Good question. Thank you.
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5 For this part of the meeting, I would like to 6 start by going through the resource areas, by each resource 7 the items that we've identified as potential project 8 effects; and TransCanada is going to give us on each resource identified the studies that they've already done to 9 10 address potential information gaps for that specific 11 resource area; and then we're going to ask you folks if you 12 have any specific concerns with a given resource area; for 13 example with the gentleman in the back with erosion we would cover that under geology and soils, so when we talk about 14 15 geology and soils I'm going to seek your input. That's going to give us some more detail about your concerns. 16 17 If you want to follow along, we are on -- I had

18 my thumb on it.

19Page 24 of the scoping document. And geology and20soils.

21 Geology and Soil Resources.

22 MR. NELSON: Ralph Nelson.

23 So page 24, 4.2.1 is our initial list of issues 24 or concerns with geology and soils, and I'm just going to 25 read from this bullet.

1 Specifically, we're looking at the effect of 2 project operation and maintenance on river bank erosion, 3 including the potential effect on protected species, 4 cultural resources or the structural integrity of adjacent 5 facilities or critical structures. And that's the first issue that we have. 6 7 One of the things we wanted to point out to you, 8 too, is you'll note that in the list in that table, there 9 are asterisks identifying several ones, and those identify issues and concerns that will be analyzed for both 10 11 cumulative and project effects. 12 AUDIENCE: Does that include roads? 13 MR. NELSON: Yes. MR. HOGAN: Yes, I don't know if you caught that. 14 The question was, does it include roads? And the name? 15 MS. MacKENZIE: Susan MacKenzie. 16 17 MR. HOGAN: And do you mean facility roads or municipal roads, or --18 19 AUDIENCE: Adjacent structures --20 MS. MacKENZIE: Town roads. 21 Town roads. 22 MR. HOGAN: Town roads? Yes. If there's a project effect on town roads, that would be an interest of 23 24 ours. 25 MR. RAGONESE: Ken, do you want me to just chime

1 in after each one of these?

2 MR. HOGAN: Yes, if you have studies that you've 3 conducted.

4 MR. RAGONESE: Okay. Again, my name is John 5 Ragonese. I'm the Project Manager for Relicensing for 6 TransCanada.

7 I'm going to look at these in sort of different 8 categories. We have a pre application document that we prepared, which was basically project information, or 9 10 information on any studies that might have been available at 11 the time to provide for specific information in different 12 resources. And at the time of developing the PAD, we did not -- or there is a portion in the PAD where a licensee or 13 an applicant can propose a study, and we did not propose any 14 15 specific study on geology and soil resources in the PAD.

Again, our thinking is we want to hear what 16 17 people's issues are before we necessarily propose what a 18 study might necessarily be required or should be. However, 19 we have done a lot of preliminary studies on aspects of the scope of the issues identified by FERC under geology and 20 21 soils. For example, we did a shoreline survey of all of the 22 project reservoirs, which we tried to identify the most active erosion locations; those generally being greater than 23 24 25 feet. I know we probably missed some out there, 25 generally speaking; but we try to capture them all. But

those are primarily in the reservoir, the project boundary,
so those are in a GIS layer, and they're identified on a map
in terms of length, location, and there is some other
shoreline information as well included with that survey.
We also did a -- we had completed, several years
ago, a historic or an archaeological survey of our projects
downstream in Vernon for cultural resources, and we just

8 completed one in the past couple years for the Wilder 9 project as well as Bellows. Again, these are within the 10 project boundary, which is primarily from the dam, 11 encompasses the reservoir upstream.

12 We completed last year an assessment of our 13 impact of flows on an endangered species, federally endangered species called jessup's milk vetch. What we were 14 15 trying to do is a response to an agency request to develop a flow, a stage flow relationship at these sites for the 16 17 endangered species; and so we have completed that. The 18 report is just pending to go to the --. We're just 19 finishing that up, final draft to go to the agencies. These are four sites downstream of Wilder. In those cases we were 20 21 able to determine that it's only a very significant high 22 flow, far above our operational flows, that can impact the lowest member of the various populations that reside at 23 24 these four locations. So they're talking about flood flows, 25 but not station operations.

1 We did a very intensive survey of rare, 2 threatened and endangered species throughout all of the project boundary. Our reservoir, our shorelines that 3 4 essentially are areas -- and areas downstream that are 5 affected by either project fluctuations of the reservoir or 6 project affected flows downstream. That's a study that is 7 just getting, again, just being finalized; it will be going to the agencies this week. Essentially identifying or 8 reexamining any known or historic locations for rare and 9 10 endangered species. It was a very, very intensive study and we actually found many more -- some species that had never 11 12 been found before, and many locations that had never been 13 documented of existing species on those lists.

14 We conduct every other year a survey of erosion, a downstream project at Vernon; that has just been completed 15 and has been submitted to FERC. 16 And I guess I want to 17 mention that the issue of soil and geology -- this is not a 18 new issue for anyone that was part of the 1970s relicensing 19 of the Wilder project; geology, soils, erosion were a big 20 issue back then. There's a very pertinent study that was 21 done during that relicensing; it's very pertinent to this 22 study, this period of time as well, and it's a 1979 Army Corps study that was done out of Prell on Connecticut River 23 24 Basin erosion, and we feel that that's a very, very 25 important study that should be considered part of the

existing record on erosion on the Connecticut River. 1 2 Some of the planned studies we're thinking of and 3 looking at, we haven't compiled these into a formal 4 proposal; but these are actually studies that are ongoing 5 from our dam safety perspective; these are all taking place 6 at our Vernon project, but we're not on those today. 7 MR. HOGAN: John -- we're talking about Wilder 8 today. 9 MR. RAGONESE: That's it. 10 Yes, it's not really clear to me if that's just 11 for Wilder. These are just for Wilder or not, just curious. 12 MR. HOGAN: As far as the studies you're 13 proposing, you're not clear if they're --14 MR. RAGONESE: The scoping meeting. 15 MR. HOGAN: This meeting tonight is Wilder; tomorrow morning is, we're in Bellows Falls. 16 17 MR. RAGONESE: Okay, just want to be sure. 18 MR. HOGAN: Now I know we have a question in the 19 back or a comment in the back about geology and soils and erosion on property. Would you please state your name and 20 21 tell us your concern. 22 MR. COUTERMARSH: Mark Coutermarsh (spelling). 23 MR. HOGAN: Thank you. MR. COUTERMARSH: We live four miles south of the 24 25 dam, right where the Ottauquechee River comes in, and we

have a boat right on the water there. We do more with the river than I think anybody around, because we can go out and I have a motor that is a jet ride so I can go all the way to Wilder Dam and all the way to Hartman Rapids.

5 And in talking with the farmers and stuff on the 6 river, and landowners, everybody is very concerned about, 7 since TransCanada took over, they go up and down with the water so many times a day. Now I realize it's dollars that 8 determine what they're after, but somewhere in this process 9 10 of relicensing, it seems to me that there should be a little key put in there so that when there's erosion, there'd be 11 12 some money to fix it.

13 It's a real pain, because when you start doing 14 it, the you run into the State of New Hampshire and the 15 State of Vermont or with Natural Resources. They all say 16 you can't do anything without a engineer coming in. Well, a 17 poor little guy living in a little house on the side of the 18 river cannot afford to go out and hire engineers to come in 19 just because his bank is washing.

The simple solution would be to dump some rock on the thing like the town does when it starts bothering one of their roads. Somewhere along in this process, I wish you'd bring up the issue of that and how you can either stop the up-and-down so much or -- I mean, you just stop and think, because down to 700 cubic feet per second in the morning --

1 all night, I mean. Then in the morning they put it up to 2 God-knows-what. It can go to 15 or 20,000, and it's an awful rush of water. And it's very, very bad. 3 4 Thank you. 5 MR. HOGAN: So just for my own benefit, you're 6 saying that you have identified through speaking with other 7 landowners downstream of Wilder and upstream of the Bellows 8 Falls reservoir? 9 MR. COUTERMARSH: We just know about as far as 10 the Hartman Rapids, that's as far down as I go. 11 MR. HOGAN: Help me; where's Hartman Rapids? 12 MRS. COUTERMARSH: A quarter mile --13 MR. HOGAN: So it's above Bellows Falls. 14 AUDIENCE: Sumner Falls 15 Seven miles from --AUDIENCE: MR. COUTERMARSH: -- miles below where the 16 17 Ottauquechee River comes in. 18 MR. HOGAN: Thank you. 19 We had a question about town roads and erosion Do you know of issues that raise that question, or? 20 issues. 21 MS. MacKENZIE: Yes. Susan McKenzie again. 22 Lyme has had several issues, and has severe issues that are about to wash into the river. One was just 23 24 repaired; a section was just repaired south of the North Fetford --. But the south end of the river road next to the 25

1 Hanover line is in bad shape; and there is a half mile 2 section there that needs to be completely redone. The road 3 is sort of floating at the moment. There's no way to maintain it as it is. 4 5 And there are several other areas, I can think of 6 about six right now that are just, they're straight drops 7 down to the river, 20 or 30 feet from the pavement, straight 8 down. Any erosion, undermining of that, pretty soon the road is going to be in the river. 9 MR. HOGAN: 10 This is upstream of the dam? 11 MS. MacKENZIE: Correct. 12 MR. HOGAN: John, in your studies, did you guys 13 identify any erosion areas or potential erosion areas that you looked at, others, the infrastructure? Or did you 14 15 consider other existing infrastructures? MR. RAGONESE: The survey we did was from the 16 17 river. We did not look at, you know, walk everybody's 18 fields, walk everybody's roads. It was a survey from the 19 river to look at basically apparent, active erosion 20 processes on the banks. 21 I can't say whether or not we captured these, but 22 we do all these marked on the GIS map. 23 MR. HOGAN: Yes, sir. 24 DR. McINTYRE: I have rather lengthy remarks. 25 I'm Ross McIntyre.
MR. HOGAN: Ross, are they about geology and
 soils?
 DR. McINTYRE: Yes.

4 MR. HOGAN: Okay.

5 I think it's important -- as I DR. MCINTYRE: 6 looked over the pre application document, there are synopses 7 of studies in that by Simmons in 1979 that were just 8 mentioned, and Kleinschmidt in 2011. And in that document, it's clear that none of these studies have involved any 9 quantitative measurements of erosions in terms of grams of 10 11 soil or tons of soil, or relating this in any way to river 12 levels or the rate of change in river levels.

13 And it's clear that up and down the river the 14 landowners have this feeling that when the water is high and then drains suddenly down, or at the rate that it goes down, 15 at I guess .2 of a foot per hour, that the water that's been 16 absorbed by the soil then exits the soil and carries with it 17 18 soil into the river, or at least down the bank onto this new 19 berm that is reported in the studies that are mentioned in the pre application. 20

Now when one reads the studies that are in the pre application document, one gets the feeling, distinct feeling that the opinion of these people that have looked at this is to discount this possibility that there is in fact soil being carried out when the water level drops and the

soil has been saturated at the time of higher water. 1 2 So we have this problem of the landowners complaining about this theoretical possibility of what's 3 4 going on, and the pre application document saying it doesn't 5 happen. And I think we really need to get some information 6 on this, one way or the other that can be quantitated in 7 pounds of soil and gallons of water, or however you wish to 8 measure it.

9 I find other things related to this in the I first of all want to mention that the benefits 10 document. 11 of hydropower are increasingly important as renewable energy 12 becomes a national priority; but the value of the project to 13 the operators as well as the community will best be served by ensuring that the useful life of the project is not 14 15 compromised by preventable loss of reservoir capacity, which would occur should large amounts of siltation occur over the 16 17 years as river banks crumble.

18 Page 314 in the pre application document, the 19 statement is made that the project is operated on a daily cycle run-of-the-river mode where the daily inflow matches 20 21 the daily outflow. This may result in modest daily pond 22 fluctuations due to upstream project-related generation, mainly at the downstream end of the Wilder reservoir due to 23 24 the pitch of the river. But relatively constant water levels are maintained. 25

I paddled my canoe on the Connecticut River in 1949, prior to the closure of Wilder Dam, and I find this 3 statement outrageous.

Current Wilder Lake levels are not a run-of-the-4 5 river situation, and it's fortunate that the applicant can be able to blame the upstream dams if it isn't. A rise or 6 7 fall of one or two feet during a single day prior to the 8 presence of the dam would have signified a major meteorological event. The words 'relatively constant' used 9 to denote changes of a foot or more in water levels in 24 10 11 hours could only be used by a person wishing to escape the 12 effects of water level changes, and the statement should be removed from the document. No unbiased person walking the 13 river bank on even an occasional basis could agree that the 14 river levels are quote, "relatively constant" end quotes. 15

So I think that this dam is a wonderful resource; 16 17 we need to maintain it; it's good to have clean energy. But 18 we've got to look at this problem and find out first of all 19 where there is a problem and put some numbers on it, and be able to estimate how much soil is being eroded by changes in 20 21 water level, and design changes in water level, if possible, 22 that diminish the risk of river bank collapse. Thank you 23 very much.

24 MR. HOGAN: Thank you. Ross, did you have a 25 prepared statement that you'd like to have included in the

1	record?									
2		DR.	McINTYRE:	Yes.	I	will	prepare	this	and	hand
3	it in.									
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1 MR. HOGAN: (Pointing) Yes, ma'am, and then 2 we'll go to the back and we'll come over here after. MS. FOWLER: My name is Linda Fowler; I'm the 3 4 Town Trustee for Hanover for Pine Park, which is a 91 acre 5 preserve located on the New Hampshire side, just above the 6 Dartmouth boat house and rowing facility about 7500 feet. I 7 also have a prepared statement for you and for the 8 TransCanada people.

9 We have concerns about erosion. We're losing 10 really big trees. Not saplings, but really big trees into 11 the river, and there are many -- we've got about eight down 12 now; and then there are probably 12 to 15 that look like 13 they're going, where the roots are pulling out, and we don't 14 really know why; but we do know that this has been a 15 phenomenon that's happened over the last ten years.

The Trustees were in touch with TransCanada, with a representative in Wilder. We started in 2010, that person left; then we were dealing with Matt Cole. We had a couple of meetings with him where we did walk the banks and pointed out the concerns, and we were under the impression that some studies were being done, but we haven't heard anything. Our last communication with TransCanada was in 2011.

23 What's interesting about our situation is that we 24 have a flowage agreement, which many landowners probably 25 have; but we actually have the one from 1944 in which

1 TransCanada very specifically says it has an obligation to 2 abate erosion of our property. And in 1979 a very 3 extensive amount of riprap was done, and much of it still in 4 place and doing a very good job. But the north end of the 5 park probably, the 500 feet north, has really gotten quite 6 bad. And they're bad enough now that riprap isn't going to 7 do it.

8 We've talking about cutting the trees and leaving the stumps and place and doing some other kinds of things; 9 10 but of course the longer it goes and the idea of waiting 11 until the permit is actually issued in five years means 12 we're losing a lot more of these big old trees. The park has been a park since 1905. It's a major resource in the 13 14 Town of Hanover. It's a place where the track teams 15 practice, where people cross country ski, where people run, and it's an incredibly beautiful spot. And to see these 16 17 trees coming down is breaking a lot of hearts in our 18 community.

So we're interested in having TransCanada maintain its contractual agreement with us as well as maintaining its overall permit responsibility for mitigating erosion that occurs because of the operation of this project.

24 One of the things that is missing is contact 25 information. You know, it's nice to hear that -- is part of

this, but there isn't any way to reach him, and we've found it almost impossible to get ahold of people at TransCanada; you get a recording, you get moved around; and there's no contact information in your documents, either, except for a secretary where we can mail things.

6 So if you would all have business cards or 7 whatever, so people like me who are new to this process 8 could call, and I don't know whether, for example, we should 9 put in a request for a study. It seems to me that just on 10 the face of it that TransCanada should have included 11 mitigation for our shoreline as part of its study plan, and 12 obviously, they said it wasn't in there.

I don't know what we're supposed to do next.
MR. HOGAN: First, and I clearly haven't read
your prepared statement, but I'm sure it identifies your
concern.

17 MS. FOWLER: Yes.

18 MR. HOGAN: We will definitely --

19 MS. FOWLER: It has a lot of documentation.

20 MR. HOGAN: Okay. So the next step for you, and 21 that can satisfy as your comments, they're going to be filed 22 with the Commission right now, so if you have more comments 23 you want to add to it by March 1st, you're welcome to do 24 that. Or --

25 MS. FOWLER: This could suffice.

1 MR. HOGAN: Yes. 2 MS. FOWLER: How do I find out if it's viewed as being sufficient? 3 4 MR. HOGAN: They're your comments and they're in 5 the record now. You mean --6 MS. FOWLER: We haven't requested anything other 7 than TransCanada be obligated to do what it's supposed to 8 That doesn't seem to require a study, as far as we're do. 9 concerned, but maybe that area needs to be studied. That's what I'm a little confused about. 10 11 MR. HOGAN: And I can't advise you whether or not 12 that specific area needs to be studied or not. It's an 13 If you'd like it studied, that's a study request and issue. 14 you can prepare a study request and we'll review it and 15 raise it. So it sounds like I should do it 16 MS. FOWLER: 17 even though I've gotten pretty detailed. 18 MR. HOGAN: Most of what you provided will 19 probably support your study request. Okay? 20 MS. FOWLER: Okay, thank you. 21 MR. HOGAN: Again, I haven't reviewed it. If the 22 information that you've said is in there is in there, then 23 that would -- probably you can take that and apply it right 24 to your study criteria. 25 MS. FOWLER: Thank you.

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1 MR. BEECO: Ken, your contact information is on 2 page 5. She was asking about your contact information. 3 It's on page 5 of the scoping document. 4 MR. HOGAN: Thank you. 5 MR. BEECO: Phone and e-mail. The notice of the meetings have 6 MR. RAGONESE: 7 all of our addresses on the second page. 8 MR. HOGAN: Yes. And I didn't bring a copy of 9 the notice, but -- did everybody gather that? On page 5 of the scoping document is my contact information. 10 MS. GREEN: So there's almost two sections of 11 12 pages, so in the Introduction section there's a page 5. 13 MS. FOWLER: It says Comments in Scoping 14 And you go where it says, Purposes of Scoping. Meetings. 15 MR. HOGAN: It's technically --MR. BEECO: It's a cover letter. 16 17 MR. HOGAN: There are two page 5s in there? 18 Inside this document there's a transmittal 19 letter. 20 MS. FOWLER: Yes. I saw that. 21 MR. HOGAN: And it's on page 5 of the transmittal 22 letter. 23 MS. FOWLER: On the transmittal. Thank you. 24 MR. HOGAN: And my contact information is there, phone number and e-mail address. 25

1 MS. GREEN: And it's in a paragraph form, so you 2 kind of have to pull it out; it's not separated out. MR. HOGAN: And then -- did everybody find that? 3 Okay. So we have here, then there, then back 4 (Pointing) Yes, sir. 5 there. 6 MR. PARSONS: My name is Marselis Parsons 7 (spelling). I am an owner of about 1500 feet of property 8 along the river in Lyme, New Hampshire. My family has owned the farm there for 50 years. My father noticed erosion 9 10 starting almost after we bought, almost immediately after we 11 bought the property. He asked to put in riprap and the 12 State of New Hampshire said 'no, we don't like riprap.' I have noticed in the last three or four years, 13 especially with the rapid rise and fall of the river, which 14 15 I measured last summer at approximately 18 inches to two feet over a period of just 48 hours sometimes on a Friday 16 17 and Saturday, that there appears to be more erosion. 18 I would suggest two things: About 600 feet of my 19 property was taken by the Town of Lyme for the road project that was referred to earlier at a cost of what, \$800,000 the 20 town repaired the River Road, which is an historic road. 21 22 Just as an aside, it used to be the main coaching road from Boston to Montreal. But it started to sink into the river. 23 24 I would suggest you contact Holden Engineering of 25 I believe Concord, which did the study for Lyme, saying that

the river bank was being eroded. It was evident when trees started to fall into the river. There is no erosion on my property from any other source; there are no streams and the land slopes, if anything, away from the river, not into the river; and yet the bank was eroded at the bottom. Clearly visible during the summer from people who went by in boats. Clearly some erosion due to boats; water skiers, recreation.

8 But I support Dr. McIntyre's call for a study 9 that would measure the amount of erosion due to the rapid 10 rise and fall of the river. I'm not a scientist, but I 11 certainly believe that that's part of the cause, and I'd 12 like to see a scientific study that either refutes it or 13 confirms it.

14 I'm told that there are a few organizations, most 15 notably Dartmouth College, that insisted on abatement from 16 the Bellows Falls Hydroelectric Company when they gave them 17 flowage rights 50, 60 years ago. I don't know if that's 18 true; I'm sure there are people here who may know that. 19 Unfortunately, the predecessors on my property were not 20 smart enough to make that kind of an arrangement.

21 But anyway, at the very least, I'd like to see a 22 study as Dr. McIntyre suggested. Thank you.

23 I'm afraid I don't have a prepared statement, so.24 MR. HOGAN: That's okay.

25 You mentioned three to four years. I've have

1 also heard the last ten years from Linda.

2 John, have you changed operations in the last ten 3 years?

4 MR. RAGONESE: No, we have not changed our 5 operations in the last -- I couldn't tell you. Except to 6 say that there is a competitive market going on so there are 7 potentially differences in the discharge that you might have 8 seen over historic periods of time. I would say certainly not within the last ten years, but something going back. 9 reservoir, I would say that there is 10 But in terms of the 11 probably less fluctuation over the course of the last period 12 of the license than more, just because of the minimum flows 13 that are operating upstream were not there before, and so there's a constant flow now coming into Wilder that wasn't 14 15 there previously. when the upstream licenses were mandated to higher flows. 16 17 MR. HOGAN: When was that? 18 MR. RAGONESE: 2004, we started minimum flows? 19 2002, 2004, somewhere in that range.

I think, it would have been the last ten years that you would have had the minimum flows coming into Wilder, that they weren't there prior to.

23 MR. HOGAN: Gentleman has a question.

AUDIENCE: How many years has TransCanada had the Wilder Dam?

1 MR. RAGONESE: TransCanada acquired these in 2 2005. And the competitive market --AUDIENCE: How many years, 5 to 13? 5 to 12? 3 Well, TransCanada has owned the 4 MR. RAGONESE: 5 project since 2005, so that's about seven or eight years. I'm trying to think when the competitive market started. 6 '98 about. So that's been around for about 14 7 8 And that is the world, all generators working. As years. 9 much as we would like to schedule up for generation, it's 10 scheduled by what the region demands for prices and quantity 11 of electricity. 12 AUDIENCE: It's dollars. 13 MR. RAGONESE: It is driven by dollars. 14 It's dollars. AUDIENCE: 15 MR. RAGONESE: Driven by values, energy values. And those dollars should be, some of 16 AUDIENCE: 17 them put into controlling the erosion. 18 MR. HOGAN: We had a question over here, or a 19 comment? MR. MUDGE: Just two brief comments. My name is 20 21 John Mudge, M u d g e, property owner in Lyme, New 22 Hampshire. My family bought that land in 1962; we own approximately three-quarters of a mile of frontage along the 23 24 Connecticut River; beautiful farmland. 25 We have put all of that land under conservation

easement with the Department of Agriculture in New Hampshire and with the Upper Valley Land Trust because we think it's important to preserve that as agricultural land. I wish I could say that I felt TransCanada felt it was important, or the previous operators of the dam, it was important to preserve that agricultural land.

7 I am told that we are the only landowners, as 8 somebody who is very familiar with the Connecticut River 9 Valley and land with two surveys of our land, one done in 1960, one done in 1989. Those documents clearly show that 10 in that period of time we lost 1.9 acres of land. 11 There's 12 one line on the survey which is 24 feet shorter in 1989 than it was in 1960. There's one enormous amount of erosion 13 taking place on this river. That soil, that silt is being 14 15 washed right down --(interruption)-- and we would like to see something done in order to protect that. 16

The earliest known photograph that I have of our land dates from before 1896, an old photograph obviously. We can date that because the old covered bridge from East Thetford to Lyme is in that photograph, and that bridge washed out in 1826.

22 Photographs of our land appeared in numerous 23 publications, including a full page photograph in the 1940s 24 in the National Geographic. All of these old photographs 25 show beautiful vegetation along the Connecticut River.

1 It's the right buffer, it protects the land from erosion. 2 The construction of the dam and the management of the dam 3 has resulted in massive erosion, and I will submit a study 4 request to have this done.

5 Last November, I think it was November 30th, I 6 noticed that the water was very, very low. I could walk the 7 entire three-quarters of a mile of our property on the mud 8 I took a lot of pictures then of a huge amount of flats. trees about to come in, trees standing up here just for 9 10 their roots hanging in the air, about to come in. The 11 erosion is undercutting the bank to a tremendous amount.

And I'll echo part of the previous comments, but the New Hampshire department of whatever it is, DES, is most inhospitable and unfriendly in trying to protect the land. And that's a separate issue, I realize. But an effort has to be made to protect this land. Thank you. MR. HOGAN: John, you said you had survey documentation and --

19 MR. MUDGE: I have it at home, yes.

20 I can easily make that available to FERC.

21 MR. HOGAN: That would be great. We appreciate 22 that. Thank you.

And I also heard that there was study done by the Town of Lyme for the road repair by an engineering firm? AUDIENCE: Holman.

If you're able to, if you plan to 1 MR. HOGAN: 2 file written comments, and you want to append that or make that available that to FERC, that would be helpful. 3 Yes, sir. 4 5 MR. LEWIS: Greg Lewis, City Manager of Lebanon, 6 New Hampshire. 7 On behalf of the City, I'm going to read a 8 statement. I don't know if I want to be negative because part of the statement is that the City, for the length of 9 10 the water park and the river banks, the river front, along 11 the line to Hanover, on down as we border the Connecticut 12 River, we think that the form of the bank and interface of the water and the ebb and flow of the water and the soils 13 along that bank, along that front, need to be studied. 14 15 We are clearly unanimous here in the City of Lebanon, and I am the Chief Executive Officer of the City 16 17 and speak up on their behalf; that we think that that is 18 important, and that needs to be a current -- but this is 19 needed to making formal requests for a study we'll examine that; we'll also make a formal comment by the March 1st 20 21 deadline. But we want a study; that's clearly something we 22 must know. That is something that can't be left unknown, 23 because in the development of our City from all aspects of 24 it, from the logical point of view, we need to know the 25 functioning that is going on along that bank; and that's of

critical importance to us for all, for many, many reasons. 1 2 We pride ourselves as an environmentally sound community. We also pride ourselves on proper use of natural 3 4 resources and a balancing with our residents who are along 5 that area. And there is some more development in there, 6 namely a River Park. But that's a new development along 7 there. 8 Another aspect of that soil is there's as very 9 large brownfield, the Westboro's railway yard. And that's adjacent to this area. Now, I'm not talking about the water 10 11 coming off that, but I'm talking about some of the migration 12 of sediment and soil, comes into that area as well. 13 So there are these reasons that we feel very 14 strongly that there needs to be a current study, 15 understanding the way that's functioning geomorphically, and we need the fluvial understanding of that water going 16 17 through that area. Thank you. 18 MR. HOGAN: Yes, sir. 19 MR. BLAKE: My name is Roger Blake, Norwich, 20 Vermont. 21 We've owned our property for about 26 years, and 22 of the last five, eight years we've noticed a tremendous acceleration in the rate of erosion, such that the 23 24 neighbors, conferring with one another from both sides of 25 the river: "How are you coping with this? How are you

1 dealing with this erosion?" Because it's become a major 2 concern.

And as the erosion takes away any vegetation from 3 the banks, it leaves these vertical banks riverside, and 4 5 there's no consistency in the soil. And as the river -which we've also noticed -- rises and falls at a much faster 6 7 rate from what it did years ago, it creates this tongue 8 effect: the water soaks in to the bank, and when the water leaves, rapidly due to the foam, it draws the dirt with it. 9 10 The bank sinks, there's nothing to hold the tree roots, the 11 trees fall in. And as this happens, it works further into 12 the property, and you take vertical walls like this that are eaten out at the bottom because of this rapid flow of water 13 in and out; there's no protection for the banks. 14

Throwing stones over the bank, in various sizes, acts as a buffer to try to filter that soil so it doesn't be drawn from the bank quite as quickly; acts as a wave break, but it doesn't prevent the water from going in the bank.

A private research project I've done; since I've been there, every fall I take a small rowboat and a little motor and I go as far as I can up the river, and I make mental notes of where there's erosion, and it's unbelievable the difference. Some of these banks are vertical now and they're 20 to 30 feet high. And they don't stand a chance. We see numerous corn stalks come down by our

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1 Farmers are losing acres and acres of land. dock. It's 2 something that we've seen accelerate within the last few 3 years, and we feel helpless; there's only so much we can do 4 manually; we can't put equipment in the river, and getting 5 rocks down there and placing it, it seems it's just too 6 little. Thank you. 7 Have you consulted with the Department AUDIENCE: 8 of Agriculture up in Norfolk? 9 MR. HOGAN: I have not. 10 AUDIENCE: I should point out we have, we have 11 had three federal grants for repairing our property. The 12 group in Hartford is very familiar with the erosion on the 13 river. 14 MR. HOGAN: Do you have a contact? 15 AUDIENCE: Stu Schmidt. Carl. 16 MR. HOGAN: Carl. 17 The Department of Agriculture was invited to our 18 meetings, and they may attend tomorrow; it's done through 19 our public notice and our Federal Register Notice that goes out to all federal agencies. 20 Certainly any source of existing information that 21 22 folks know is out there that they think is pertinent to the issue and is something that FERC should be aware of, I 23 24 encourage you to file it or tell us where that information 25 is.

1 Any other questions or comments about geology and 2 soils or erosion concerns? AUDIENCE: One of the things that these people 3 4 should think about -- Kevin Keyer (ph) from the Natural 5 Resources Council sends out --6 MR. HOGAN: I'm sorry? Kevin who? 7 AUDIENCE: Kevin Keyer. He works for the Natural 8 And he has brought me limbs from willows, and Resources. 9 he rightfully says, and it works: You take those pieces, and all you've got to do is stick them in the water just 10 11 above where the high water mark is. They won't grow right 12 in the water, but if you can get them going, and it would be a nice project for anybody wanting to do something along the 13 river, it helps. The bad part of it is it's beavers work to 14 15 get them --16 (Laughter) 17 That's inexpensive. 18 MR. HOGAN: Thank you. And I have seen that 19 work, also. Any other comments about erosion or geology and soils? 20 21 We've been going for almost two hours. Do we 22 want to take a five, ten minute break, or keep going? 23 Okay, I'm seeing yes for a break. So let's make 24 it a ten minute break, use the rest rooms, and then when we 25 come back we'll move on to water resources.

1 (Break) 2 MR. HOGAN: All right, let's reconvene. 3 Thank you. Our next resource area that we've 4 identified potential project effects on is water resources. 5 And Angie, I'll let you go through what we've identified. 6 7 Water Resources - Water Quantity and Quality 8 MS. SCANGAS: So this is Section 4.2.2, following 9 Also on page 24. So the effects of current and Ralph. 10 proposed project operations on water quantity as well as 11 water quality, and particularly called out is dissolved 12 oxygen and temperature, and then including cumulative 13 effects of the operations of Vermont Nuclear, or Vermont 14 Yankee nuclear power plant. 15 MR. HOGAN: That's when we move downstream, though. 16 17 MS. SCANGAS: Yes. 18 MR. HOGAN: Before we go on to TransCanada, 19 identify any studies that they've conducted? 20 Yes. Well, a couple things. MR. RAGONESE: So 21 along these lines, in our PAD we describe that we will have 22 a river model that will basically be able to evaluate the impact of a lot of different scenarios on not only 23 24 generation or ability to do it, flows, but it can also 25 develop -- you know, you can evaluate the quantity of water.

1 There are things that may get proposed, but there really 2 isn't enough water in the river at certain times to do that. So the model will be able to identify those constraining 3 elements of a particular scenario. 4 5 So we have a very large optimization model that 6 we will use to evaluate the various proposals. 7 MR. HOGAN: Let me interrupt real quick. So when 8 we talk about water quantity, we're not only talking about reservoir fluctuations potentially that the model would be 9 able to predict, but also downstream discharges --10 11 MR. RAGONESE: Yes. 12 MR. HOGAN: -- and basically stream elevations 13 and flows? 14 MR. RAGONESE: It will not predict downstream 15 flow elevations. 16 MR. HOGAN: Okay. 17 MR. RAGONESE: We do have some information from 18 other studies about that; but the model does not model 19 downstream flow elevations. It does quantity, flows, but it doesn't do elevations. 20 MR. HOGAN: Okay, but it does do reservoir 21 22 elevations. 23 MR. RAGONESE: Correct. 24 MR. HOGAN: Thank you. 25 AUDIENCE: So you don't have stage discharge

1 information downstream of the dam?

2 MR. RAGONESE: For the six miles below Wilder, but not at every location, no. It's not in the project, so 3 4 we don't have -- the model will be able to develop flow, and 5 there's information that has some stage discharge information. And we have some studies where there's some 6 7 rare species that we have stage discharge information. But generally speaking, our models don't produce those results. 8 9 It could be a post-process in certain locations, 10 but the model is not designed, not intended to. The other, more on the water quality side of the 11 12 house, we did conduct baseline water quality assessments this past year; those are just again -- they'll be filed 13 with the Commission as well as with the agencies shortly; 14 there is a final, second draft. 15 Actually -- this is Jennifer Griffin, she works 16 17 with TransCanada. Can you just speak to the water quality 18 one? You have a little more familiarity with some of the 19 elements and where the locations were. But with respect to Wilder, what did we measure? 20 21 MS. GRIFFIN: We measured dissolved oxygen, 22 temperature, and there were some chemical areas -- I don't 23 know what you call, so I don't know what all of those were. 24 But it's also in the PAD, and information on what was 25 monitored there.

1 MR. RAGONESE: And the preliminary results? 2 MS. GRIFFIN: And the preliminary results, yes. 3 So just above the dam there was a continuous 4 monitor that was looking at dissolved oxygen and 5 temperature. There were two stations above that in the reservoir, not continuous. They were checked on every week. 6 7 Once a week they were --8 MR. RAGONESE: Profiled? 9 MS. GRIFFIN: -- measured, profiled. And then downstream. 10 11 So you do that vertical profile at AUDIENCE: 12 these locations on DO and temperature? 13 MS. GRIFFIN: Yes. And then just downstream in the tailrace. 14 There 15 is a continuous monitor in the tailrace. MR. RAGONESE: And as all these studies --16 17 although I can't say all of them exactly -- the rare and endangered species, locations of critical information, 18 19 cultural resources, some of those are going to be redacted versions because we have to protect those by virtue of what 20 21 they are, and the agencies don't want that information out 22 there. But things like water quality, we have a website: www.TransCanada-Relicensing.com 23 24 and has the documents and the section and the public 25 information library sections there are either going to be

some formal documents that we filed with FERC, there will be 1 2 the documents in all the information such as studies like this this will be in the public information library on the 3 4 web. So they will be up as well. 5 So that's it for the studies? MR. HOGAN: Those are it for the studies. 6 MR. RAGONESE: 7 Yes, sir. DR. McINTYRE: Some of the discussion this evening 8 has to do with people's opinions about whether the water is 9 10 rising faster, dropping faster, rising more or less than it 11 was 5 years ago, 20 years ago, 10 years ago. 12 And at least in the documentation I've been able to find so far, I don't see any way of expressing that. For 13 instance, one could show daily levels per hour, per minute, 14 15 whatever; real-time levels at the dam or other sites in the Wilder Lake. But pretty soon if you do that, you'll have a 16 17 tremendous amount of data that is hard for the public and 18 even experts to understand, until you get a good 19 statistician to look at it and figure out a way to express the variability in that data. And to ask the question, what 20 21 is a significant change from five years ago or ten years 22 ago. And this has to be done. 23 MR. HOGAN: John, will the model be capable of 24 looking at historical conditions and model what it was five

25 years ago or ten years ago? Based on period of record.

1 MR. RAGONESE: Well --2 AUDIENCE: This is an instantaneous --MR. RAGONESE: Let me think about this for a 3 4 second, because I'm kind of --. So my answer is yes and 5 no, I guess. What the model is, is meant to represent. 6 Ιt 7 isn't -- I mean, we have historic data, but I don't have historic data as Dr. McIntyre may -- I don't have historic 8 data at the Orford Bridge, which is really what he's getting 9 10 at. For example, if there were 15 gauges in the 11 12 Wilder Reservoir, we'd be able to correlate what's either going on in the dam, what's coming in freakin flows, and 13 14 what's coming in from upstream to what's happening in the 15 reservoir. But our data is at the dam. So just as we mentioned earlier, every time 16 17 inflow is above our station capacity, which is 9,000 -- not 18 20 or whatever you might have heard -- 9,600 or something 19 like that; or 10,000 let's just say, round up. When flows are above 10,000 we have to start dropping the reservoir at 20 21 the dam to keep it in its banks, of the stream. 22 That's what people may be seeing just as much as 23 operations due to generation schedule. I don't know what 24 they all are, but it's a systematic evaluation of 25 relationships, and the model doesn't do that. You can make

a model probably to do that, but our model is designed 1 2 around evaluating impacts from baseline conditions, which is what we do today. We can go back and say 'get rid of all 3 the minimum flow requirements, all' -- you could go back and 4 5 model --6 MR. HOGAN: You've answered my question. I was 7 just curious to know if the model was designed to look at that question or not. 8 Yes, sir? 9 10 AUDIENCE: On the subject of water quality, this is the second --11 12 MR. HOGAN: Name again. 13 MR. LEWIS: Greg Lewis, City Manager of Lebanon. 14 The Lebanon -- from the city's perspective, we're very sensitive to the Westboro rail yards; it's a very large 15 16 brownfield. And it's approximate to the river, and as I 17 mentioned earlier about the soil, something about water. 18 There's no interface between any of the water with regard to 19 that very large brownfield, and the river end -- and there's 20 no nexus as to the dam, water dam. 21 You know, we want to make sure that's clarified 22 and clear, because I know we have concerns about soils and sediments coming off that brownfield, and they likewise have 23 24 concerns about water coming off that brownfield, where it's 25 going and how it's impacting. And that's of concern to us;

1 that's an unknown for us. But that's one concern that we 2 will mention in our comments as well. Thank you. 3 MR. HOGAN: Thank you very much. 4 Other comments about water quantity or water 5 quality? That one was fast. 6 7 So we'll move on to aquatic resources. 8 Fishery or Aquatic Resources MR. SEARS: Mike Sears, and this is Section 9 4.2.3, issues for aquatic resources. Include effects of 10 11 project operations and maintenance, including fluctuations 12 in water levels and flow releases on aquatic habit and 13 resources in the project vicinity. For example, resident and migratory fish populations, fish spawning, rearing, 14 15 feeding and overwintering habitats, mussels and macroinvertebrate populations and habitat. 16 17 The next one is effects of project facilities and 18 operations, including reservoir fluctuations and generation 19 releases on fish migration through and within project fishways, reservoirs, and the downstream riverine corridor, 20 which is also considered a cumulative effect on project 21 effect. As well as effects on entrainment of fish 22 populations, which is a project cumulative effect. 23 24 MR. HOGAN: Any --25 MR. RAGONESE: Yes. Just a couple things that we

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1 have either worked on.

2 In terms of the PAD, we didn't have a specific study that we identified in the PAD to assess habit and 3 4 relationships to project operation on various habitats. We 5 did identify that pretty obvious or likely PM&E or mitigation that's going forward, and we will continue to 6 7 operate the fish ladders as required; and there is a fish 8 ladder at Wilder Dam. And there are requirements for downstream passage at Wilder Dam, and we continue to expect 9 that there will be use of both of those for one purpose or 10 11 another. Currently they are for anadromous fish, Atlantic 12 salmon at Wilder Dam.

13 In terms of a couple pre-scoping -- well, there 14 are a couple; one of them applies downstream, but the one 15 pre-scoping study that we did do two years ago was evaluate the presence and survey for dwarf wedgemussel; it's a 16 17 federally-endangered species of mussels; it's been located 18 and identified in all three impoundments. So we did a FARS 19 (ph), we did a fairly extensive survey of the impoundments and portions downstream of the projects for mussels, and 20 21 that report has been submitted to the state agencies, and we 22 will be posting that study.

And that's all that would be related to Wilderthat we've done this past year.

MR. HOGAN: Any comments regarding fishery or

aquatic resources, and project effects? 1 2 None. That's a first for me. Wait until tomorrow; they'll come get 3 AUDIENCE: 4 you. 5 (Laughter) Okay. Terrestrial Resources. 6 MR. HOGAN: 7 Terrestrial Resources 8 MR. BATTAGLIA: All right, moving on. Section 9 4.2.4, Terrestrial Resources. Some of the initial issues identified are the 10 11 effects of project fluctuations in water levels and flow 12 releases from the project on riparian, wetland and littoral 13 vegetation community types, and the spread of invasive species as a result of project operations along the 14 shoreline of the project. Effects of project operation and 15 maintenance activities, for example, road and facility 16 17 maintenance, and project-related recreation on wildlife habitat and wildlife. 18 19 The effects of project operation and maintenance 20 on river bank integrity and shoreline erosion along the 21 project reservoir and the stream reaches, and its potential 22 effects on riparian vegetation. 23 Effects of the frequency, timing, amplitude and

24 duration of reservoir fluctuations on waterfowl and on 25 riparian and wetland habitats. 1 The effects of project operation and maintenance 2 and project-related recreation on bald eagles and their 3 habitat.

4 MR. RAGONESE: So in the PAD we did not identify 5 any specific future study that we were proposing, and we 6 didn't identify any particular identification or enhancement 7 measure in the PAD as well.

8 As mentioned before, in some of the pre-scoping type studies, we did perform a shoreline survey. So in 9 10 addition to identifying erosion we were identifying wetlands and riparian types or habitats along the shorelines. 11 12 Downstream of Wilder we performed, at those four jessup's milk vetch sites, essentially trying to develop stage flow 13 14 relationships and identify the impacts of our operational 15 flows for, or flood flows on those endangered species.

And then as I mentioned, as well, the rare, 16 17 threatened and endangered species study, which also looked 18 at the riparian location of -- well, I shouldn't say all of 19 these species were located on the buffer or the shoreline; some were aquatic, some were above. But we identified the 20 21 association between project operation and the various rare, 22 threatened and endangered species that we either searched for or identified. 23

24 MR. HOGAN: John, regarding all these studies,
25 did they all occur within the project boundary?

1 MR. RAGONESE: The jessup's milk vetch are not in 2 the project boundary. The rare, threatened and endangered 3 species surveys were in the impoundments; they were within 4 the project boundary; and the shoreline surveys were also in 5 the project boundary. MR. HOGAN: Comments about terrestrial resources? 6 7 MR. RAGONESE: I'm not sure people understand what the project boundary is. Do you want me to explain 8 what it is? It didn't really come out. 9 There have been a number of locations described 10 11 here that are clearly outside the project boundary. Does it 12 matter to you or not? 13 AUDIENCE: I think it would be good if you 14 explained the project boundaries. 15 MR. HOGAN: Okay. Project boundary is an administrative line that is proposed by the applicant and 16 17 approved by FERC, or approved with amendment, and it's 18 required to encompass all facilities necessary to operate 19 the project. So typically that is the reservoir, powerhouse 20 21 facilities, recreation facilities that are required by the 22 license and any structures, primary transmission line corridor if there is one; and that's what is required to be 23 24 inside the project boundary. The project boundary does not tie to 25

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environmental resource effects or study areas. 1 The reason I 2 asked the question was I know that they've done a lot of studies, and I just didn't know if TransCanada limited it to 3 4 inside the project boundary because FERC does not 5 necessarily do that. And I just wanted clarification. 6 AUDIENCE: But the project boundary does or does 7 not go up 45 miles to the reach of the pool? MR. HOGAN: It does because it encompasses the 8 reservoir. But it typically --9 10 AUDIENCE: But downstream? MR. HOGAN: -- typically ends -- the downstream 11 12 reach is no longer needed for project operations, so beyond the tailrace would be outside the project boundary. 13 14 AUDIENCE: Even though there's clearly -- and 15 this is for information even though it may sound -- even though there are impacts beyond the tailrace downstream --16 17 MR. HOGAN: Again, we don't define the scope of 18 environmental effects or resources to be studied by the 19 project boundary. It's simply an administrative line that FERC authorizes the licensee to take, to have control over 20 this area; and it's for all facilities that are necessary to 21 22 operate the project. If we found that there was some area that needed 23 24 to be maintained or protected on a regular basis throughout

the term of the license and is downstream, we could

1 incorporate that into a project boundary.

2 MR. RAGONESE: Ken, one clarification: Our rare, 3 threatened and endangered species study did include 4 downstream reaches. 5 MR. HOGAN: Yes. MR. RAGONESE: That are affected by project 6 7 operation, not just the impoundments. 8 MR. HOGAN: And I was just asking the question, because I was curious to know whether they limited the scope 9 10 of the studies that they've conducted pre-scoping to a 11 geographic area that was within the project boundary or not, 12 and John explained that in some cases yes, but that is not because of the project boundary, just because of where they 13 14 were doing it; meaning the riparian edge, which happens to 15 be inside the project boundary; and then in other cases they looked at essential project effects downstream on -- vetch? 16 17 MR. RAGONESE: Jessup's milk vetch and all the 18 rare and endangered species. We looked -- and when I say 19 downstream reaches, it would be basically from Wilder's perspective, anything below Wilder Dam to where it's 20 21 impounded, somewhere around the -- the bridge. 22 MR. HOGAN: That river end reach. 23 MR. RAGONESE: Around the bridge. But then we 24 continued with the same survey, which is now called the

25 Bellows Falls impoundment reach. So everything from North

1 Haverhill to the Vernon Dam has been investigated for rare, 2 threatened and endangered species. 3 MR. HOGAN: Does that help? I think that was a good clarification. 4 AUDIENCE: 5 Thank you. MR. HOGAN: And I'm sorry this didn't come up 6 7 earlier. We don't tie the scope of studies to the project 8 boundaries. 9 Yes, sir. 10 MR. BLAKE: An example of the loss of habitat, seven miles north of the Wilder Dam is where the 11 12 Ompompanoosuc comes in. For 100 yards both north and south 13 of where the Ompompanoosuc enters the Connecticut, used to be quite deep and was excellent bass fishing. When the 14 15 water is low, you can walk back to higher area. The erosion we talked about earlier has settled 16 17 into this pocket. There's one narrow path where the 18 Ompompanoosuc continues to drain out; otherwise, that all 19 would be filled in with mud, and a loss of habitat. 20 So that's an aquatic issue. Okay. MR. HOGAN: 21 MR. RAGONESE: The Ompompanoosuc is a flood full 22 tributary. 23 MR. HOGAN: And just for the record, can I get 24 you to state your name again? 25 MR. BLAKE: Roger Blake.
1 MR. HOGAN: Thank you, Roger. 2 And you said it was a deep water pool that's --3 MR. BLAKE: Yes. 4 MR. HOGAN: Other comments regarding terrestrial 5 resources, riparian vegetation? We heard some comments 6 earlier about bank sloughing and the perching of trees and 7 things of that nature. I think we've kind of got that 8 But are there other concerns that haven't been covered. verbalized yet? 9 10 (No response.) 11 Okay. 12 Threatened and Endangered Species 13 MS. McCANN: Mary McCann. Similar to some of the other aquatic resources for threatened and endangered 14 15 species, some preliminary resource issue that was identified, and I've just kind of summarized the three 16 17 bullets in one. 18 Effects of project operations or maintenance 19 activities, including the reservoir and downstream flow fluctuations on aquatic, wildlife and plant species listed 20 21 as threatened or endangered under the federal Endangered 22 Species Act. And John has already mentioned a few of these; the dwarf wedgemussel and the jessup's milk vetch as 23 24 examples, and the puritan tiger beetle is another one. And this would also be evaluated for a cumulative effects as 25

well. 1 2 MR. HOGAN: Any comments on threatened and 3 endangered species? 4 Oh, I'm sorry, John. Have you covered all your 5 studies on T&E already? MR. RAGONESE: Just. I just re-mention, we did 6 7 evaluate jessup's milk vetch locations; we did do a full 8 assessment for rare, threatened and endangered species, we 9 did look and did a survey for the other federal endangered species in our project area, the dwarf wedgemussel. 10 11 I would note that the puritan tiger beetle is not 12 in our project; it's a species that is in Massachusetts, not 13 in our area. So there are -- as I read the scoping document, as it was just mentioned, the first note was a 14 cumulative effect but the other two were not noted as 15 cumulative effects; and they do include the puritan tiger 16 17 beetle in their -- so I just want to make note of that, that 18 that is not in our projects. 19 MS. McCANN: You mean not at Wilder? MR. RAGONESE: Not at Wilder, Bellows or Vernon. 20 21 MS. McCANN: It's down at Sumner Falls. 22 MR. RAGONESE: No, that is a cobblestone tiger beetle. 23 24 MS. McCANN: Cobblestone tiger beetle. 25 MR. RAGONESE: And that is not a federally

1 endangered species.

2 MR. HOGAN: We will modify, for Scoping Document 2 accordingly. But there is potential for cumulative 3 4 effects of the TransCanada projects downstream. Mary? 5 MS. McCANN: Yes. Yes. 6 MR. RAGONESE: Yes, we presumed that. 7 MR. HOGAN: Thank you, John. 8 Along those lines, does anybody know of any species that we may have missed or should be added to the 9 list? And clearly, we'll be talking with Fish & Wildlife 10 11 service tomorrow. 12 Any other comments regarding T&E species in the 13 projects effects? 14 Okay. Recreation. 15 Recreation So Section 4.2.6, Recreation. 16 MR. BEECO: 17 The adequacy of existing recreation and public 18 use facilities in meeting existing and future regional 19 public use and river access needs. 20 Effects of project operations on quality and 21 availability of flow-dependent and water level-dependent 22 recreation opportunities, including boating. 23 And adequacy of structural integrity, physical 24 capacity, and/or management methods to support recreation use at existing facilities. 25

1 MR. RAGONESE: And then in our PAD, we did not 2 identify a specific recreation-type study or requirement. 3 We don't typically; there are some, but we didn't 4 necessarily propose them in our PAD.

5 In terms PM&E measures proposed, the only 6 relevant one beyond our continuing to manage our recreation 7 plans that are currently in our licenses, we do plan to 8 continue our recreational reservoir weekend summer boating, 9 higher reservoir levels to assist in recreational boating on 10 the reservoirs. And then our shoreline survey did include a 11 survey of public and private recreation noted; again it's 12 primarily GIS-based. However, we would note that that 13 survey was done just beyond the recreation season, so we 14 might have missed something.

MR. HOGAN: Anybody have any comments about recreation opportunities or facilities that TransCanada provides?

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Sir.

19 MR. CHRISTOPHER: Good evening. My name is Tom 20 Christopher. I represent the New England FLOW, American 21 Whitewater, and I'm also here with one of my colleagues, Bob 22 Nasdorf, from American Whitewater.

I'd like to start out by acknowledging some of the previous testimony that we've heard about bank erosion and some of the problems that were discussed tonight, and I

would like to compliment those people who spoke on the
 quality of their presentation and the specificity of their
 presentation; it was very good and very impressive.

And clearly, the erosion is a most important problem to these people; and it is not to be -- I guess, it has to be taken very seriously. But on the other hand, so does recreation. Even though these people are very specific about their concern, we are just as concerned about the recreation, the opportunities that we have or do not have.

And primarily we're talking whitewater recreation and canoeing, and seven miles downstream from Wilder Dam, located in half of Vermont, lies a river reach known as Sumner Falls. It's sometimes called Hartland Rapids, and a series of ledges that are sprawled across the river, and Whitewater Run is about a quarter mile.

Where the dam was built, that was the original Olcott Rapids at the site of the dam. And they've been completely drowned by the project, thereby eliminating any opportunity for whitewater paddling to take place.

20 And if regularly scheduled flows that were 21 consistent were provided, the recreational use of the 22 resources, particularly at Sumner Falls, would certainly 23 increase substantially and provide a significant economic 24 benefit to this region.

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I want to talk about some impacts, and I'm going

to talk about some issues. The most important issue to us right now is the fact that the Wilder Dam has drowned out three rapids over the stretch of one mile, plus what has happened over there at Sumner Falls

5 The second issue that I'd like to talk about, and 6 although it may not seem germane to some of the other 7 testimony that we've heard here earlier today, I'd like to 8 talk a little bit about economics analysis, because of the real value of the Connecticut River to recreationists can 9 10 only be measured with some significant measure of economic 11 analysis and related socioeconomic impacts, by the fact that 12 we don't have this resource available to us.

13 The other issue that I'd like to talk about is 14 the concept of offsite mitigation. I don't think any of us 15 here this evening thinks that the dam is going to be 16 removed. More than likely it will get relicensed; but the 17 fact of the matter is relative to whitewater paddling, 18 there's no way that we're probably going to be able to 19 replace that on this site.

However, there are other rivers within the region of this dam that would be available if some sort of offsite mitigation package that could be developed on those other rivers. Particularly where you have other federal agencies that have a range of influence such as the West River with the Army Corps of Engineers.

So we would ask FERC to look at the concept of offsite mitigation relative to whitewater paddling in the case where there is very little that they can do to replace what we have already lost here. And I'm not suggesting that they do that, but we are suggesting that they at least take a look at some sort of offsite mitigation.

7 Relative to the kind of studies that we will be 8 looking at for Sumner Rapids or what is left of it, we would 9 like to see a controlled whitewater flow study. FERC is very familiar with that and the methodology that's been used 10 11 for a long, long time. We would like an economic analysis 12 done for this particular region, and we would like the economic analysis relative to recreation and whitewater 13 14 pattern and camping and canoeing be based on a contingent 15 valuation method of study, which will indicate the willingness to pay for additional recreational resources. 16

And finally, we would -- again getting back to the concept of offsite mitigation, we would like a study, or FERC could conduct a study or the applicant could conduct a study relative to how this might possibly happen in conjunction with other resources or with other federal agencies.

I would like to compliment the applicant for the amount of time they did put into the PAD; we have worked with them in the past and it is good to be working with them

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        again, and we hope that we will continue the collaborative
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        manner of working with them to solve some issues on Wilder.
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        Thank you.
                   MR. HOGAN: Thank you, Tom.
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                   MR. CHRISTOPHER: I'll have written stuff for
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        you.
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                   (Statement follows:)
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1 MR. HOGAN: Sir? 2 MR. NUNEZ: Tad Nunez, Town of Hartford. Director of Parks and Recreation. 3 4 I'm here to compliment the Applicant. Several 5 years back we worked into the lease back in New England, and 6 so forth, was watching the property deteriorate, the 7 recreation site appalling. Two years into it with TransCanada, the relationship with the staff, we now have a 8 wonderful partnership, a lease, and my department manages 9 10 that property, to which now we have a five year Master Plan 11 that is infused each year with several dollars of grants and 12 donations and the like.

13 What's important here is the access to your 14 river. Not a lot about the river. And even on your own 15 property, or their property, you're losing slumps of 16 property due to this problem that was talked about earlier. 17 I'm here to talk about recreation.

18 And with that said, the number of people in the 19 neighborhood, the number of people in the regional area who have embraced Kilowatt North and South, or what used to be 20 21 the picnic area, Kilowatt picnic area, or the ball field --22 but the generations of families that are coming back to that 23 property and seeing what is occurring because of the FERC 24 licensing, and was the responsibility of the Applicant, we 25 in the town take that very seriously and put together the

lease. If we did invest any funds; state, federal or local,
 that would be managed well. So we have very much an
 interest in retaining this license.

4 But more importantly, its integrity of the 5 Connecticut River and the public access to the river. And 6 that is one means that two large parcels of property with 7 paths in between, we now host one of our largest fireworks 8 displays in the Upper Valley there. Many, many different nonprofit organizations use it as a destination for on and 9 10 off the river, flotillas coming down. But I have to say, I 11 did not chime in earlier, but there is a direct correlation 12 somewhere between the rising and the lowering, the consistency of the river even in the park properties that I 13 14 manage today.

15 That's including downriver at Radcliffe Park where there's a bit of an irony. Many of the towns 16 17 including Hartford have very strict riparian buffer setback 18 regulations to construction. We are putting in more 19 seedlings and plantings in these park places and conservation areas to sustain the embankment; but it's a 20 21 difficult tussle because we do see the constant up and flow. 22 And I'm not talking about Tropical Storm Irene; that just happened to be more a kick in the butt. 23

24 But I applaud the Applicant for the recreation 25 use of the Kilowatt North and South parks. Thank you.

1 MR. HOGAN: Yes, sir? 2 MR. SIMS: Hi, my name is Norman Sims. I'm here 3 representing the Appalachian Mountain Club. My colleague, 4 Dr. Ken Kimball, will also be representing the AMC, and some 5 of you may have met him in the past. If I could, I'd like to make several comments 6 7 about recreation on the river, and then a couple additional 8 comments that I don't know where else to put, and I do have some written documents. 9 10 The Appalachian Mountain Club dates from 1876, and it's currently the largest recreation and conservation 11 12 organization in the Northeast. We have about 90,000 13 members. Our interest in hydropower relicensing, and we 14 15 have worked on a number of projects in the past including the folks from TransCanada. It was mostly related to 16 17 conservation and recreation. So our interests in Wilder have to do first of 18 19 all with the controlled flow study that Tom mentioned earlier downstream at the Sumner Falls rapid. 20 This has been 21 done a lot, the procedures are fairly standardized now. I 22 think the first ones were done on Deerfield River relicensing, starting in about '98. Sumner Falls is a 23 24 popular kayak place, and it's used widely in the region. We also have an interest in the offsite 25

1 mitigation to make up for the loss of the Olcott Falls and 2 other things that cannot be replaced as long as the facility 3 remains. We think that offsite mitigation ought to be in 4 line with a watershed point of view on the river, such as 5 has been taken by the Department of Interior in designating 6 the Connecticut River and its watershed as the first 7 National Blueway.

8 Other federal agencies that signed onto that 9 National Blueway concept including the U.S. Army Corps of 10 Engineers, which signed an MOU with the Department of 11 Interior, saying that they would contribute to the 12 recreational development of the watershed.

13 Something Tom didn't mention is that we have an 14 interest in improved recreational opportunities for 15 multiple-day canoe trips on the Connecticut River. In the Northeast if you want to spend two or three days camping in 16 17 a continuous canoe trip, about the only place you can do 18 that is the St. John River or the Allagash in Northern 19 Maine; you're going to drive seven or eight hours to get there. It's hundreds and hundreds of miles 20 21 from the nearest population center.

The Connecticut River is a prime candidate for that kind of multiple day canoe trip within easy driving distance, like three hours, of millions and millions of people. The primary difficulty with making those trips is

1 the stopper dams in the river.

2 And so in relation to that, we will suggest a study of the quantity, quality and adequacy of the land-3 4 based facilities associated with the Wilder facility. This 5 study should examine the put-ins, the takeout, the 6 facilities for canoeing and kayaking, portage routes, 7 campsites, parking and road access, seasons of operation, 8 maintenance and sanitary facilities and project lands. The portage trail, for example, around Wilder Dam is terrible 9 and needs to be relocated. 10

We also think that these kinds of studies should include a projection of usage over the proposed 30-year license. And where necessary, the opportunities for project owners to buy additional land in order to provide necessary facilities.

16 If I might mention three other things, and I 17 don't quite know where to put them. There was someone on 18 the panel named Bob who had to with cultural resources?

19That's you. I'm sorry. (Referring to Bob20Quiggle)

We have an interest in the historical study of the river as it existed prior to the construction of the dams, including photographs of the natural riverbed. We would like to request additional information on that.

25 I have learned that there may be as many as 300

large scrapbooks of photographs and engineering reports on the original construction of the dams, including photographs of how the river looked before the dams were there, and during the construction process. Perhaps only 25 or 30 of these remain. The others may be scattered around in different facilities.

7 I'm a professor at the University of
8 Massachusetts and a historian. I think this is a valuable
9 historical resource that should be recovered. There's been
10 some changes in ownership, and some of these documents may
11 have been scattered over the years.

12 We also have an interest, the AMC also has an 13 interest in the educational benefits provided by the project owners to the public. Can they support leadership training 14 15 and outdoor recreation in area schools? Can there be informational signage and kiosks and project facilities 16 17 promoting education about invasive species, water flows, the 18 history of the area, who to call with problems, and how to 19 get involved.

Two items lastly. We have an interest in the economic health of the owners of all the hydropower dams on the river that are being relicensed. Are they being managed in a profitable way that will permit them to continue providing appropriate maintenance and provide the public benefits as required in the licenses? We would like to see

a study of the financial production at each individual
 facility that is being relicensed.

3 In association with that request, we would recommend that the EIS and FERC look into creating an escrow 4 5 decommissioning fund for the Wilder Dam. In an age of international finance, deregulation, changing ownership, and б 7 global warming, the financial health of the ownership can be 8 brought into jeopardy by distant events or by catastrophic 9 events, such as a couple Hurricane Irene storms rolling up the valley. 10 With the catastrophic failure of the dam and the 11 12 financial failure of an ownership, the public should not be 13 burdened with decommissioning costs. So an escrow 14 decommissioning fund might be very beneficial. Thank you. 15 (Prepared statement follows:) 16 17 18 19 20 21 22

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1 MR. HOGAN: Thank you, Norman. 2 Other comments regarding recreation facilities? John Mudge, again, landowner in Lyme. 3 MR. MUDGE: As a landowner on the river, and others who own 4 5 land on the river, we use it a lot for recreation. Over the years, we've permitted any number of people to camp on our 6 7 land if they're coming down in a canoe. 8 My question that comes back to the erosion issue. 9 They maintain the water at a high level over the weekend for the summer users. I think that the erosion that is caused 10 11 by that, there may be excessive erosion that is caused by 12 maintaining that high level. So I think that's part of the 13 erosion study that has to be undertaken. So take into consideration in any 14 MR. HOGAN: 15 erosion study the effects of maintaining that pool. You said to do that on the weekends during the summer vacation 16 17 system? 18 MR. RAGONESE: We don't maintain the high level; 19 we maintain the low level higher. Follow me? Instead of having it go to say 382, we don't go lower than 382.5. 20 21 That's what that is. You maintain the low level limit, 22 higher, for boating access. 23 MR. HOGAN: Yes, sir. 24 MR. LEWIS: Greg Lewis, the City Manager of Lebanon. 25

A third focus, and this goes to the statement I was going to make, so I had to waive that statement. This is the last one from our perspective, to look at all the issues, and that's recreation.

5 And that the City, in its Master Plan that it 6 completed last year, on file, on record, and it is a 7 question of bikeability, walkability, and access to a water 8 experience. And there's some comments made earlier about 9 being able to do access to water for water experience; 10 kayaks, canoeing, other things.

11 The activity levels in recreation areas all are 12 related to the river; and the river, walking the river, 13 keeping the river experience. There are pieces along the river where there is excellent opportunity for river 14 15 experience; but the facilities along the river with regard to recreation where it's appropriate environmentally are not 16 17 well-developed. There are pieces of them, but they are not 18 well-developed.

There are some very close, proximate areas to the conservation land directly above the dam itself that has increased using by persons going into that area; they're parking in a parking lot next to the dam in the West Lebanon area.

There's a new development, the river park
development I mentioned earlier where there's going to be a

1 recreational, opportunities that -- a very large development 2 for that area along 10, going up toward Hanover. We have a 3 bike ped committee that works on the river walk, either 4 river -- capacity along the river between Hanover and with 5 And then across the river to regard to West Lebanon. Hartford and to White River Junction, and we're looking at 6 7 opportunities as to how to improve walkability and 8 bikeability prospects. There's a new bridge going into West Lebanon and over to Hartford, and that new bridge is in 9 development; and there's a lot of discussion and there's 10 11 plans about what to do with that bridge by the river.

12 There is also a greenway that is proposed, on the 13 books, with regard to development by the state in conjunction with the city, where we would develop a pathway 14 15 from downtown Lebanon to West Lebanon, right to the river. And that river junction there is of course -- once again 16 17 I'll mention the Westboro railway yard, which is a 18 brownfield, a blighted area that has aesthetic issues as 19 well as the lack of taking advantage of an area that's probably, its best highest use may be for recreational types 20 21 use; and that this area of recreation is all proximate to 22 rivers, all could be part of river -- and join in an 23 experience in preserving the river, and the riverfront and 24 the river bank.

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So this recreation area is the third focus for

1 the Lebanon definition, and so that's our summary, as I 2 talked about earlier to preserve the bank, the erosion issue which was mentioned; look and deal lastly with this 3 4 recreation concern; and then this water quality concern that we have coming out at one particular area. 5 6 MR. HOGAN: Thank you, Greg. 7 MR. BLAKE: Roger Blake, Norwich. This effort to attract people on the weekends by 8 holding the water level up is a wonderful thing; it does 9 10 attract a lot of people. Two of the things that occur is 11 that the water quality goes down terribly, because the water 12 is in (loud noise). It doesn't take any of the sediment and work it along; it 13 14 just makes the water very muddy. 15 Also, where can riprap has been done along these banks, we put it there, we think gives us adequate 16 protection, but when the water is high, boat traffic 17 18 produces waves which seep through riprap, and will go over 19 it and start it going down the bank on the riprap. One of the things that Dartmouth has done, from 20 21 Light Yard bridge north for 2500 feet is a no-wake zone. 22 And with that, they've eliminated, or they're hoping, some 23 of the erosion from the boats and also perhaps those that 24 might be swimming or kayaking or canoeing along their 25 property.

1 MR. HOGAN: Any other comments regarding 2 recreational opportunities or facilities in the project 3 area? 4 No? Okay. 5 Land Use and Aesthetic Resources. 6 MR. BEECO: All right. Land use. Again the 7 boiler points are: Adequacy of existing shoreline management 8 policies and programs to control non-project use on project lands. And adequacy of shoreline buffers to achieve project 9 purposes and compliance with local and state requirements. 10 11 In the PAD we had no proposed MR. RAGONESE: 12 studies or PM&E measures that we had identified. And to 13 date we have not had a specific study or any pre-scoping 14 studies other than the shoreline surveys, and what not that 15 we had done prior to. I will note that the project boundary, and the 16 17 Wilder project is probably 95 percent private land with full 18 conversion rights, and the fee land that we have is 19 primarily immediately adjacent to the Wilder Dam itself, on both sides of the dam. 20 21 We do have, just the mention earlier of thinking 22 of, there are a few items that are upstream; one is in the Town of Hanover; half of it is leased to the Dartmouth 23 24 Diving Club; the other half, we have a canoe, through-canoe 25 rest, camping site that is a non-project recreation, but it

1 is something that we -- and we maintain, we maintain several throughout the projects, including Wilder Dam. That's all I 2 3 have on land use. 4 MR. HOGAN: Any comments regarding current land 5 use practices or protection measures? б Land Use and Aesthetic Resources 7 MR. HOGAN: Okay. We didn't identify anything 8 for, any concerns for aesthetic resources. Does anybody in 9 the public have any concerns about the aesthetic resources of the area associated with the project? 10 11 (No response.) 12 Socioeconomic Resources 13 MR. HOGAN: Regarding socioeconomic resources, we've heard today socioeconomics associated with 14 15 recreational opportunities with flow recreation downstream of the project; is it Sumner Rapids? 16 17 MR. RAGONESE: Sumner Falls. 18 MR. HOGAN: Sumner Falls. 19 MR. RAGONESE: We visited that on the site visit, you recall. 20 I remember -- it's the names. 21 MR. HOGAN: Yes. 22 Any other socioeconomic-type resources that should be evaluated in our analysis, beyond recreation? 23 24 Yes, sir. MR. SIMS: Norman Sims again. 25

I hope that in analyzing these things there's a careful distinction made between the economics of the project and the values of the project. A canoeist that comes down river passes beyond three or four dams, has a valuable experience but may not spend a dime in doing so.

And the contingent valuation studies of recreation tend to figure out what the value is. And I only bring that up because you mentioned aesthetics. What is the value of aesthetics? You can determine that with a contingent valuation study. What's the value of having fish in the river or trees along the bank? But they don't spend any money.

13 The economic impact of a project is actually 14 something quite different from the values of the project. 15 And I think the values are more important. They do lead to 16 economics, but the values are where we're coming from.

MR. HOGAN: When we talk about socioeconomics, we're talking about the potential money that may be raised within the economy as a result of providing a certain type of recreational opportunity or things of that nature; but we also look separately at the economics of the project; and they are kept separate.

DR. McINTYRE: Just point out that as the former director of the Norris Cotton Cancer Center, our annual bike ride brings in now \$2.5 million of money from people around the countryside here who come to ride in this valley. And part of the attraction of riding in this valley is to ride alongside a lovely reservoir.

4 There are economic implications of what is going 5 on here that go far beyond generating electricity.

Tad with the Town of Hartford. 6 MR. NUNEZ: Ι 7 guess that's what I was trying to emphasize; that since the 8 town took over the management of the park, the number of people using the park is a direct correlation to what is 9 happening with visitors coming to that location and their 10 11 awareness of TransCanada, the work they have done, being a 12 partnership.

13 And when I say nonprofits, there are nonprofits 14 doing their fund raising events on the property, because 15 we've been allowing them to do with certain site amenities, but this gentleman has mentioned the fact that AMC, that 16 17 there be Port-a-Potties that are cleaned, water, parking, 18 things of that nature and well managed. But he's also 19 seeing economic benefits to the Wilder Village, to the Hartford, and as he mentioned earlier, to other large events 20 21 that come up.

22 So these are things that are spun off from 23 TransCanada doing a good job, to energy; but not necessarily 24 being good park stewards. They're good park stewards. We 25 partner. It's been a great relationship, and I hope we will

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continue. And very responsible. But it is a direct
 socioeconomic benefit to the Upper Valley, because we've had
 an infusion of new docks, new paths, new picnic tables,
 keeping it clean. We had a new path put in by the Vermont
 Corps of Engineers or Youth Corps of Engineers.

So there's been a whole lot of new energy in the 6 7 past five years. It has been a significant impact on the 8 socioeconomics. I have to tell you, there was one spin where they thought they were going to build a boathouse, a 9 10 very elite boathouse. And the neighborhood became very 11 clear that this was not going to happen. And it didn't 12 I'm very happy to say it didn't; I think the happen. 13 neighbors understood what was best to happen now.

But TransCanada did not pay a role in a sense what should or should not be. They understood their role with FERC licensing. And having it open to the public and not have it provincial to who could go through the doors of a clubhouse.

19MR. HOGAN: So this is the Kilowatt Parks, north20and south?

21 MR. NUNEZ: This would be Kilowatt South. Two 22 properties.

MR. HOGAN: And these are TransCanada rec
facilities.

MR. NUNEZ: Correct, that are leased to the town

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to manage as park facilities called Kilowatt South and 1 2 Kilowatt North. 3 MR. HOGAN: And required by the license, the rec 4 facilities? 5 MR. RAGONESE: Yes, these are. 6 MR. HOGAN: And basically you fund the town for 7 the management of --8 MR. NUNEZ: They don't fund this at all. 9 MR. RAGONESE: It's management. 10 MR. NUNEZ: We manage it entirely, including 11 mowing, grading, and the infrastructure that is necessary to 12 maintain, including a full master plan. That's something we 13 decided to embrace in the lease agreement, to sustain it. We never had a -- there's a 14 MR. RAGONESE: Yes. 15 large ball field there. We don't have a soccer field in our recreation plan, but their use of the field, the area 16 17 included expanding opportunities; it made perfect sense; the 18 land was there, so there's a soccer field there as well for 19 the Town's use. 20 We have had proposals, as was mentioned, for a 21 very, very swanky boat house for skull, you know, rowing for 22 example; and again when we were looking at that we made it 23 very clear that this is an area that has to appeal to the 24 public, and I think that's what Mr. Nunez is talking about, 25 that the community came to look at this in the same way; how

1 can we better use this for the public as opposed to leasing 2 it out or potentially restricting it in some way. But again, these were people coming to us, this was the better 3 4 end result of what came out of it. 5 Thank you for the clarification. MR. HOGAN: Go ahead. 6 7 MR. SIMS: Just one other point about the 8 socioeconomic. The importance of using contingent valuation is that it will identify a number of resources, well let's 9 10 say revenue generators throughout the economy, the local 11 economy, whether it is a nonprofit or if it's a club, if 12 it's a for-profit. But the survey should, on this 13 particular reach of the river, should certainly include 14 reaching out to hadras 15 groups, community groups and things like that to get a true picture of what the potential economic value will be. 16 17 MR. HOGAN: Is AMC going to be coming forward 18 with the study requests for the contingent valuation? 19 MR. SIMS; Yes. Thank you. I wrote it down. 20 MR. HOGAN: 21 Okay, great. Look forward to it. 22 MS. CAVIN: I am Sara Cavin, I work at the Upper 23 Valley Land Trust. One thing was tying in with 24 socioeconomic, and also back to land use a little bit. We've worked with a lot of landowners like John 25

1 Mudge to protect agricultural resources along the river, and 2 the Connecticut River is one of the most agriculturally prime areas in the country, actually, with soils that are 3 4 really valuable. I think in the past some of the 5 TransCanada lands in Charleston and Rockingham south of the Wilder Dam have been leased to farmers, and I think that's 6 7 commendable that TransCanada would allow that resource to be 8 used.

9 So one thought I had was just socioeconomics 10 related to local agriculture and the industry is pretty 11 important; and the loss of our equivalent because of all the 12 issues we've touched on already today, is something that 13 should be kept in mind in the bigger picture of management, because it is all, a lot of private lands that are farmed, 14 15 and facing some of the consequences of river management or 16 damage.

17 MR. BLAKE: Roger Blake, Norwich.

18 Socioeconomic, or quality of life -- I speak for 19 the landowners here. We're very proud to own land along the Connecticut River; it's a wonderful place. We just want a 20 21 good working relationship with this institution which has a 22 dam on the river, and we want them to realize that they're 23 dealing with people and people's lives; and it isn't just 24 how much money they can make by generating power, it's how they're going about it that's affecting the lives of many 25

1 people. 2 MR. HOGAN: Thank you, Roger. MR. GEIGER: Kevin Geiger, Two Rivers-3 4 Ottauquechee Regional Commission. 5 Mine is more of a process question than anything else here; but if there are no issues identified and there 6 7 are no proposed studies by the applicant, then would 8 comments at this meeting generate FERC to decide that a study is needed? 9 10 MR. HOGAN: Possibly. 11 MR. GEIGER: So it can be that level or people 12 could say 'actually, we think this study is needed' and go 13 through a list of why you need the study and the seven part 14 list. 15 Just like all of you, any study MR. HOGAN: requests that FERC feels are appropriate, we have to file 16 17 study requests as well by March 1st. And we are working on 18 those. 19 So comments that we receive here today, and to 20 the extent that we understand them, we can generate our own 21 study requests for various issues. But we have to 22 understand them; and like I said, we may not come up with a 23 study request that you think is germane; so don't rely on 24 FERC to do it, you know. It's important that if you feel 25 that you need a study you tell us. Put in your request, and

1 you may see that FERC also does it, too. 2 MR. GEIGER: I'm just thinking ahead, that March deadline comes and goes, if people have given you a comment 3 4 and they think 'Oh, that's taken care of.' Post-March 1 5 we'll find out one way or the other, if it's in that document that comes out after March 1. 6 7 There's kind of no draft between now and March 1 8 to go 'Oops, you know, I made a comment at the meeting, it's being taken into account.' 9 10 MR. HOGAN: We're talking about two different 11 things here. Comments and study requests are two separate 12 Comments that address issue that we have not things. 13 identified in Scoping Document 1 should get captured in 14 Scoping Document 2. So issues that you know are germane to 15 erosion that we haven't identified or have been identified adequately, we will modify the document to say we are also 16 17 going to look at these additional things that we did not 18 cover in SD1, and when SD2 comes out, SD1 is -- Scoping 19 Document 1 and Scoping Document 2 -- when SD2 comes out, all of the changes will be in bold italic print. 20 21 So it will be almost a carbon copy except for the 22 bold italic print where we've added everything; and if we take something out, I believe we strike it. So you'll see 23 24 where the changes have been made. Regarding study requests, you know, just because 25

1 FERC doesn't necessarily ask for a study after these 2 meetings that you think is important, those study requests 3 are going to the applicant. And the applicant is going to 4 prepare a proposed study plan. And then there's 90 days 5 after that proposed study plan comes out to work with the 6 applicant, FERC, to convince us why that study is 7 appropriate, at least the applicant will say is appropriate; what needs to be done, how it needs to be done, and the 8 information that we're looking for. 9

10 In the end, if the applicant remains unconvinced, we're going to take all the information, we're going to 11 12 become a judge and make a decision, is this study appropriate or isn't it? I've sat in on lots of study plan 13 14 meetings where I have said to an applicant, 'I think we're going to need this information.' I've also said to 15 requestors, 'I'm not convinced how this is a project effect. 16 17 If you can convince me, that's what you need to do. You 18 need to explain to me why this is a project effect, that 19 it's appropriate for the licensee to be looking at.

20 MR. GEIGER: But if you've already raised it, and 21 your document as you know -- this is an issue, people can be 22 confident that that's going to get asked and try to get 23 answers.

24 MR. HOGAN: Well, not necessarily. Because we 25 also deal with the criteria. So if we feel that there's

existing information that's sufficient on the record or 1 2 available to address an issue, we may not have a study 3 request. 4 But you may feel differently and you may say that 5 the information is not sufficient, and this is why; you can convince us that 'okay, we were wrong.' 6 7 Did that answer your question? 8 MR. GEIGER: Yes. MR. HOGAN: 9 Okay. 10 Any other questions on process? 11 All right. 12 MR. RAGONESE: And people do know that there are 13 the booklets for the study criteria. 14 I was actually going to mention that. MR. HOGAN: 15 We have a couple of guides for addressing the study -- well, there is one guide out on the table, it's for 16 17 addressing study criteria; it's a new document that we 18 prepared this past year. Basically gives you examples, 19 gives you what FERC is looking for in each of the criteria, and should really help coach you along on how to address the 20 study criteria. 21 22 There's another handout out there that's Tips and 23 Ideas for Implementing the Integrated Licensing Process. 24 Things that we have found in polling stakeholders such as yourselves and licensees, how different licensees have taken 25

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different approaches, stakeholders have taken different 1 approaches; what has worked, what hasn't. 2 3 So it's a tool for everybody involved to think 4 about how do you want to work through the process? Here's 5 what's worked, here's what hasn't. But like I said, the 6 criteria, and we do have a new guide on implementing the 7 criteria; so the study is a key component for FERC and I 8 highly suggest if you're planning to write a study request, you read the guide on applying the study criteria and you 9 10 apply it. 11 So we've covered socioeconomics. Any other 12 comments in socioeconomics? 13 Okay. Cultural resources. 14 Cultural Resources MR. OUIGGLE: Section 4.2.10 of SD1 describes the 15 issues we've identified in association with cultural 16 17 resources. And those are project effects on historic and 18 archaeological resources, including traditional cultural 19 properties listed in or eligible for inclusion in the National Register of Historic Places. 20 MR. HOGAN: We had comments earlier from AMC 21 22 asking for historical records of the project construction and overtime being documented. 23 24 MR. MUDGE: John Mudge from Lyme, again. 25 Are you aware of the Native American gravesites

1 that have been exposed through the erosion up in Haverill? 2 MR. HOGAN: We were made aware that there were some Native American sites that were riprapped. Is it 3 4 Wilder that I'm thinking of when we took the site visit? 5 MR. RAGONESE: The ones you're thinking of I think are Bellows Falls. 6 7 MR. HOGAN: Okay, sorry. 8 My answer is no. 9 (Laughter) 10 MR. MUDGE: I'll have to dig that up. 11 MR. RAGONESE: Well, as I said earlier, we have 12 done an entire Phase 1A assessment of the Wilder project, 13 including the April. So any. And many unknown and first discovered potential sites were identified in our study. 14 15 So I can't speak to the site you're talking about. 16 17 MR. MUDGE: There was an article some time ago in 18 the Valley News -- I'll have to figure out how to find it 19 again -- where Native American bones were exposed as a result of the erosion caused by the operation of Wilder Dam. 20 21 MR. HOGAN: And that's upstream. 22 MR. MUDGE: That's upstream. That's at about at the end of the 45 miles. 23 24 MR. HOGAN: Quick question, John. I know you've 25 done erosion surveys and you've done the Culture Resources

1 1A surveys. Have you done any overlap, comparison. 2 MR. RAGONESE: That's where the -- yes. The 1A. The 1A was not limited to what we -- but that's why we did 3 4 the survey first, so that there was some basis for 5 identifying the scope of what would need to be done when we 6 sent the archaeologist out. They weren't limited to only 7 looking at that erosion because we mapped it, and not that 8 erosion because it happened last week. They looked at it all. 9 10 But they did use the -- the primary thing they were looking for were exposed banks that they looked at. So 11 12 they looked at every exposed bank on the project, or archives. And they did this actually post-Irene. So it's 13 14 fairly current. 15 MR. HOGAN: Other comments regarding cultural resources in the area, potential project effects? 16 17 Okay. Developmental Resources. This is where 18 the Commission will look at the potential project changes in 19 operation or the cost of potential enhancement measures in 20 the new license versus the economic benefit of the project 21 from the project power. 22 So it's what we take into consideration. So if 23 we're looking at a change in stream flows because of, either 24 for recreational opportunities or protection of aquatic 25 habitats or any other reason, we would look at the cost of

what does that mean in generation, or the effects on
 generation.

And so for developmental resources, this is what the Commission does. We look at the benefits of the power and the power resources versus the protection of the environmental resources and so forth; and it's a balancing act that we do.

8 So if you have comments on the Commission's 9 evaluation of developmental resources, I'd love to hear 10 them.

11 MR. RAGONESE: Ken, I just would add that I think 12 this is where a part of the river model comes in as well, 13 because the model does look at the economics impacts as well as the generational water quantity as well. 14 It will have 15 real-time New England energy prices for which the impacts or alternative operating scenarios, or whatever it might be, 16 17 habit stabilization, consequences that you can equate to an 18 operational change that will be encompassed, and you'll be 19 able to evaluate what the impact is economically.

20 MR. HOGAN: Okay. Those are the resource areas 21 we identified. I note that there are a handful of people 22 who signed up to provide spoken testimony. Have we covered 23 that already, or do folks have statements that they now want 24 to read into the record? I don't want to cut anybody short. 25 Everybody's happy?

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1 AUDIENCE: I have a question.

MR. HOGAN: Yes, sir.

Sorry if it seems redundant. A lot of 3 AUDIENCE: 4 talk about how you can get a study brought forward. If the 5 consensus of this room or of this particular meeting, has 6 somewhat of a consensus as you said the stakeholders, of the 7 ebb and flow of the river and what was perceived of an erosion concern, would that not capitulate a study? Or 8 does it -- I know this was sort of asked already, but if 9 10 tomorrow you go to the site and you go away, you say "Geez, these folks have said there's something going on in the 11 12 river, that rising and lowering and erosion."

13Does somebody have to by March 1st ring the bell14to make sure that is brought to the forefront?

MR. HOGAN: The issue has been brought to the
forefront, and something that we will definitely consider.

I can't guarantee you that we're going to ask for it, because we're going to be looking at multiple things. We're going to be looking at the study criteria; can we address the study criteria that supports the need for this study? You know, we seek your input to help inform us on the study criteria.

23 So like I said, we're down in Washington, D.C. 24 You know, we're not the most educated people about this area 25 and this spot; you guys know the information that's
available that's out there; the engineering study that was done on the road, I had no idea that that existed; but tonight we learned about it. I've asked for it to be placed on the record.

5 So there's -- it's why we're here. You have a 6 key knowledge that we don't possess, and it could be that 7 we're going to go back and we're going to look at what we 8 know, and we may decide 'yes, it's appropriate for us to ask 9 for an erosion study.'

But if we feel -- if in the absence of what we do know we feel that the existing information seems appropriate for us to do our analysis, we may not ask for that erosion study. So we have to be told why that erosion study needs to be done; and that's what the criteria do.

15 MR. GEIGER: Again Kevin Geiger, Two Rivers.

16 Should for some bizarre reason that not get asked 17 for, then when that comes out, the proposed study plan comes 18 out, then that kind of goes through its own wash cycle,

19 correct?

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MR. HOGAN: Exactly.

21 MR. GEIGER: And then people again get to go,
22 well why, or not.

23 MR. HOGAN: And if FERC then asks for something 24 and we're all sitting around the table talking about erosion 25 studies, and you know, it's another opportunity for you to

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convince TransCanada and FERC why this erosion study is 1 2 appropriate, and maybe we have some questions why we didn't ask for it right up front, and that clarification process 3 4 can come through at 90 days. 5 MR. GEIGER: Okay, so that's in that kind of 6 Block 7 on the chart. 7 MR. HOGAN: Can I take your word for it? 8 MR. GEIGER: Well, there's 90 days. 9 MR. HOGAN: Yes. It's between Box 6 and 8, and 10 it's a 90 day window. As I said, the regulations require 11 one meeting, but I'm expecting and I think John has 12 indicated that they want to address the issues --13 MR. RAGONESE: It will be one long meeting. 14 (Laughter) 15 MR. HOGAN: Sounds like, in my talkings with John, that TransCanada wants to work collaboratively to some 16 17 end. Can't say that they're going to agree with everything, 18 and can't say that they're going to disagree with anything, 19 so. 20 Is that fair, John? 21 MR. RAGONESE: Yes. I mean, we like the science, 22 too, but we do like it tied to project operations, not other factors. 23 Any other questions? 24 MR. HOGAN: Process, open house, right now. 25

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1	AUDIENCE: Good job.
2	MR. HOGAN: Thank you.
3	(Whereupon, at 10:24 p.m., the evening scoping
4	meeting concluded.)
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