UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION
Office of Energy Projects

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TransCanada Hydro Northeast, Inc.
Vernon : Project No. 1904-073
FirstLight Hydro : Project Nos. P-1889-081 and
Generating Company : P-2485-063

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VERNON PROJECT,
NORTHFIELD MOUNTAIN PUMPED STORAGE PROJECT, and
TURNERS FALLS HYDROELECTRIC PROJECT

Great Falls Discovery Center
2 Avenue A
Turners Falls, MA 01376
Wednesday, January 30, 2013

The joint daytime scoping meeting, pursuant to notice, convened at 9 a.m., before a Staff Panel:

KENNETH HOGAN, Project Coordinator, FERC
MARY GREEN, Geology and soils, FERC
RALPH NELSON, Geology and soils, FERC
MARY McCANN, Endangered species and macroinvertebrates, FERC
BRETT BATTAGLIA, Terrestrial resources, FERC
ADAM BEECO, Recreation, land use and aesthetics, FERC

ANGIE SCANGAS, Water resources, FERC
ROBERT QUIGGLE, Archaeological and cultural resources, FERC.
With: JOHN RAGONESE, FERC License Manager, US Northeast Hydro Region, TransCanada
Accompanied by EDWIN NASON and EARL BRISSETTE, TransCanada
With: JOHN HOWARD, Director, FERC Hydro Compliance, FirstLight Power Resources, Inc.
Accompanied by MARK J. WAMSER, P.E., Gomez and Sullivan

P R O C E E D I N G S

MR. HOGAN: Good morning.

We got a pretty good turnout today, and I'm really appreciative for that. I was a little worried that our space might be too small, but I think we're okay.

My name is Ken Hogan. I'm with the Federal Energy Regulatory Commission, and we're here today to discuss the licensings of the Turners Falls, Northfield Mountain and Vernon hydroelectric projects.

The process here today will be, we're going to discuss a little bit about FERC and who we are. We're going to get the presentation from the licensees on what their proposals are for their hydroelectric projects, and then we will be going through the resource areas identified in our Scoping Document 1, which is one of our handouts you can grab; it's the one with the bars across the top and the bottom. At each resource area we'll seek comments from the folks here in attendance on any concerns or compliments they may have regarding the hydros and their environmental effects or enhancements that they provide.

I heard from many folks this morning that they have presentations that they'd like to give. Could I get a show of hands just to see how many we may have?

(Show of hands)

AUDIENCE: What's the question?

MR. HOGAN: How many folks would like to give a presentation today.

AUDIENCE: I thought you said a presentation, statement.

MR. HOGAN: Or a statement.

(Show of hands.)

MR. HOGAN: About ten or eleven folks.

What I'd like to do is, after we go through our resource areas and identify the potential issues or concerns that we have specific to the resource areas, we'll then open up the meeting for public comments and statements. Does that sound like a fair approach to everybody? Okay.

Again, my name's Ken Hogan. I'm the Project Coordinator for FERC. I'd like to introduce my team here today. Come on over, ladies.

MS. McCANN: I'm Mary McCann, I'm with the FERC, and my specialty is going to be working with the endangered species and macroinvertebrates and mussels.

MS. SCANGAS: Angie Scangas with FERC, for water resources and hydrology and hydraulics.

MR. SEARS: Mike Sears with FERC. Fisheries and aquatic resources.

MR. NELSON: Ralph Nelson with FERC. Soils and geology.

MR. BATTAGLIA: Brett Battaglia, also with FERC.

Terrestrial resources.

MR. QUIGGLE: Rob Quiggle with FERC, cultural, archaeological and historical resources.

MS. GREEN: Mary Green with FERC. Geology and soils, and I'm from FERC.

MR. BEECO: I'm Adam Beeco with FERC. Recreation, land use and aesthetics.

MR. HOGAN: Thank you.

Mary, would you like to give a little background on the Commission and who we are?

MS. GREEN: Good morning. So FERC, or the Federal Energy Regulatory Commission is an independent agency that regulates the interstate transmission of electricity, natural gas and oil. We have five Commissioners appointed by the President. We are under the Office of Energy Projects for Hydropower Licensing. Our hydropower jurisdiction comes from the Federal Power Act. Our Commission authorization is required for non-federal hydro projects that are located on navigable waters, located on public lands of the U.S., using surplus water from a federal dam, or located on Commerce Clause waters, constructed after 1935 and connected to the grid.

MR. HOGAN: So as part of our responsibility in hydropower licensing, we have to comply with the National Environmental Policy Act. That Act requires us to develop a

NEPA document -- National Environmental Policy Act -- and its an environmental review of potential project effects and concerns; and that document will become the recommendation to the Commission on what types of conditions or any new license that it determines to issue should have in it.

This meeting today is our scoping meeting, where we identify those issues that our environmental document must review and analyze. So it's really critical, and I really appreciate your attendance here today to help FERC do a better job in making sure that its document will address the relevant issues associated with the hydros.

I'd like to go over our process a little bit. This is not the only public meeting that we're going to have. We've had several already this week, we've got a few more later on in the week. But our licensing process is an extremely public and open process, it's very transparent, and there are opportunities throughout the next five years for public involvement. So I want folks not to think that this as your only chance to voice your concerns. This is the first chance to voice your concerns. So I want to make that clear.

Another handout that we proposed, with the nice colored boxes on it, you'll note that this is the integrated licensing process, and we're in that first row at box 4, where the Commission holds its scoping meetings. Box 4 is

today. Our next step in the process is for you folks to submit written comments or study requests that you may have that you would like to have considered by the licensee to request studies. In comments on the projects, your again concerns, you get to verbalize them today, but we've also provided an opportunity for written responses.

Once those comments come in and study requests come in, what happens is the licensees will digest these and develop what's called a Proposed Study Plan. That study plan is intended to develop, it's the studies that the Applicant will propose to do that will fill information gaps that may exist. Basically we are identifying issues. There may be existing information regarding those issues that can be used to evaluate the issues and concerns, but where there isn't existing information, studies will need to be done to provide that information so that an informed decision may be made by the Commission.

Once the licensees produce the Proposed Study Plan, that's a public document; it's open to comment. There's a 90-day period of time where stakeholders and the Applicants can work together to craft that Proposed Study Plan into a better document.

After that 90-day period of time, there's a written comment period on that proposed study plan, where you all get to tell FERC what you think. After the close of

that comment period, the licensees will then prepare a revised study plan and file that with the Commission. Again, that's a public document, and there's another comment period after that revised study plan for issues that you feel still have not been resolved or concerns that you think that study plan is not addressing that still need to be addressed.

Once we have the public comments on the revised study plan, the Commission will then issue a study plan determination, and that determination is an order to the licensees to implement the revised study plan as is or as modified, including new studies -- whatever the Commission feels is necessary to provide the information that it needs to do its environmental review of the proposed licensees.

Everyone with me so far?

AUDIENCE: Yup.

MR. HOGAN: Okay.

So once they have these study plan determinations, then there's a one, two or sometimes even longer study plan period -- one, two or sometimes longer years -- for the Applicants to actually conduct the studies. I don't want to go too much further into that, because now we're three years down the road and you'll all forget it by then.

So if I could, I'd like to have TransCanada

start. We're going to go from upstream to downstream. We're going to have the licensees present, by project, their proposals for the relicensings, and give a little project description. We'll start with Vernon Dam, and then we'll move to Northfield Mountain and then Turners Falls.

MR. NASON: Good morning.

My name is Edwin Nason. I work for TransCanada as an operations coordinator, and I'll go over, a very quick hydro overview, and then a description of the flow timing between the stations, and then the facility facts for Vernon and our operations for Vernon.

TransCanada has hydro facilities on the Deerfield River and the Connecticut River; and on the Connecticut River they have six hydro stations. Starting all the way upstream, they have Moore Station and down from there it's Comerford, and below there it's McIndoes Falls. Those three stations together we call Fifteen Mile Falls. Below that is the Wilder station.

[Microphone adjustment]

MR. NASON: Oh, I'm sorry.

Is that okay? This is not a very good mic.

(Laughter.)

MR. NASON: I don't know what you heard, but I'll start at the top again. All the way upstream is Moore station, and below that is the Comerford hydro station, and

below that is the McIndoes Falls hydro station. Those three stations together are known as Fifteen Mile Falls.

Then below that is Wilder hydro station, and downstream from there is the Bellows Falls hydro station, and downstream from there is the Vernon hydro station. Wilder, Bellows and Vernon are the stations that are up for relicense.

So for river timing, what we consider the river timing is, when there is a change in discharge from one station -- how long does it take before those effects are felt at the next station downstream. So between Moore and Comerford, that's about an hour. And then Comerford to McIndoes is about an hour; So those three stations are very close together.

Between McIndoes Falls and Wilder it is eight hours, approximately. And then from Wilder down to Bellows Falls is another eight hours, and Bellows Falls down to Vernon is approximately four hours.

All the hydro stations that TransCanada has on the Connecticut River are remote-controlled. They're controlled from the Connecticut River control center in the Wilder hydro office in Wilder, Vermont. And that office is staffed 24/7.

So for facility facts, the Vernon station was put into service in 1909. It has a normal average head of 35

feet. Vernon has ten units with a total authorized capacity of 32.4 megawatts. On the dam, we have one skimmer gate, eight floodgates, four tainter gates, two stanchion bays and ten hydraulic flashboard panels.

The total project discharge capacity is 127,600 cfs. Total generation capacity is 17,000 cfs. The flood of record in March 1936 is 176,000 cfs.

Vernon had some station upgrades. There is a fish ladder that was completed in 1981. The reconstruction of the spillway crest was completed in 1986. That's when all the skimmer gates, tainter gates and all that was added. The downstream diversion barrier was completed in 1995. The station was automated and made remote-controlled in 1998. And then in 2008, four more units were added; those are units 5 through 8.

For the reservoir, Vernon has a drainage area of 6,266 square miles. The reservoir is 26 miles long, and the total usable storage volume in the five feet that we use is 18,300 acre-feet.

Vernon has approximately 2,700 cfsh per tenth of elevation in the reservoir. That's a tenth of a foot of elevation. An example of that: if the inflow into the Vernon reservoir is 2700 cfs greater than the discharge for one hour, then the reservoir elevation will go up one-tenth of a foot.

For the constraints at Vernon, we have a min_flow constraint that's sustaining around; it's 12,500 cfs. We have downstream fish passage that is April 1 through December 31. That's done through a fish pipe and a fish tube for a total of 390 cfs. There's a fish ladder for upstream fish passage that's 260 cfs, and that's operated from approximately April 15 to July 15. That's operated more as an as-needed basis.

For the reservoir, we have an operating range of 212.6 feet above sea level to 220.1 feet above sea level. We have a drawdown limit of three-tenths per hour; that's three-tenths per foot elevation of the reservoir. That's the limit. We typically draw down one- to two-tenths an hour.

For the reservoir, we have weekend rec limits. So weekends and holidays during the summer, we bring up the low limit of the elevation of the reservoir for boat launching, mostly. Because of the reservoir being a long reservoir and the upstream end of the reservoir is a higher elevation than the downstream end, this is what we call the river profile. And during high flows, we have a river profile operation, which means the higher the flow is, the lower we can take maximum elevation down at the dam in order to keep the river inside the banks at the other end of the reservoir.

So that starts at about a min_flow of 15,000 cubic feet per second, and all the way up to 45,000 cubic feet per second, where we hold the elevation at 218.6. That's the end of -- oh, I have one more thing.

When we schedule the megawatts for Vernon station, we do it every morning for the next day. And the way the operators do this, the first priority is the license constraints, so the min_flows and their elevation constraints for the reservoir. And then the second consideration is the hours where they put the megawatts. They always put the megawatts during the best hours or the high-priced hours. This is during normal flows, normal day. Of course, during high-flows or floods, that's not -- the first consideration will be the flows.

So, that's the end of my presentation. Does anyone have questions?

SPEAKER: I have a question about the rec limits on the at summer weekend.

MR. HOGAN: This meeting is being recorded, so could we state our name and affiliation before speaking? That would be great, so we can maintain a good public record.

MS. DONLON: My name is Andrea Donlon, and I work for the Connecticut River Watershed Council.

My question is: My question is the rec limits. I

thought I heard you say that your license required that?

MR. NASON: No, we do that, that's voluntary.

MR. HOGAN: Any other questions?

(No response.)

MR. NASON: Thank you.

MR. HOGAN: First Light?

MR. HOWARD: Good morning.

My name is John Howard. I'm the relicensing project manager for FirstLight, and I'd like to go through a dozen and a half slides or so here to explain a little bit about the operation of the Turners Falls and Northfield Mountain projects.

The first slide here is just our website that set up for relicensing. I just wanted everyone to take note of that. Like FERC, they have an e-library where you can subscribe and everything that gets filed in our docket is public, and you'll get notified with an e-mail when it hits the FERC docket.

Also, if you go to this website, you can join our mailing list, and everything that we then file on our website, you'll get notified of any documents that show up on the website.

So here is just an overview of the Connecticut River main stem. Circled in gray up there are the projects. Just where we show, the Vernon, Bellows Falls and Wilder

projects owned by TransCanada upstream of our projects. And then downstream you see the Northfield Mountain and Turners Falls projects.

So the project features: Vernon Dam up above the Massachusetts line. Turners Falls impoundment starts at the base of the Vernon Dam, goes downstream to Northfield Mountain. It goes through the French King Gorge and we end up down at the Turners Falls Dam. Where at the beginning of our power canal starts adjacent to where we're sitting this morning. The canal goes for about two and a half miles. We have two stations off the Turner Falls power canal. Station No. 1 was the original termination of the canal when it was originally constructed. There's five horizontal wheels there existing today. The station capacity is a little over 6 megawatts.

The canal was widened and lengthened in the early 1900s. Went down to Cabot station, constructed in 1916. And then below the Cabot station, you see the confluence of the Deerfield River and then down through the Route 116 bridge in Sunderland, And down at the bottom of the screen is the Holyoke Dam.

So the facility features for Northfield: a nice aerial view there of the upper reservoir, about 296 acres when full. Intake channel on the bottom left side of the upper reservoir, the dotted line is the pressure shaft.

It's a 31-foot, circular, concrete-lined shaft down to the power house cavern. The cavern houses four reversible pump turbines which discharge through about a 33-foot equivalent diameter horseshoe-shaped tunnel out to the Connecticut River. And then when we pump, the same activity, just in the opposite direction. No natural inflow at all to the Northfield upper reservoir.

Here's a photograph of the upper reservoir. The main dam is on the upper right-hand side, you're looking, facing east over Erving towards Boston. And then the intake channel is in the lower right-hand side.

The tailrace where we discharge when we're generating and where intakes when we're pumping, the flow from the Connecticut River is from your left to your right. You can see our boat barrier and log boom there and our tailrace; and our riverview picnic area is to the left, in amongst those trees to the left.

So the Turners Falls project facility layout starts at the Turners Falls Dam. You see the Turners Falls power canal, station number 1. The spillway fish ladder here at the base of the Turners Falls dam brings the fish up into the gatehouse fish ladder underneath our gatehouse up into the Turners Falls impoundment. There is the Cabot fish ladder down at Cabot station, and then the bypass reach from the Turners Falls Dam down to Cabot station.

So there's an aerial of the Turners Falls Dam. The Connecticut River is flowing from the top down to the bottom of that photograph. We're spilling water at our tainter gates on the Gill side of the Montague Dam or Turners Falls dam, and some spill there on our Bascule gates on the right hand side, and the flow down through the bypass reach in addition to the flow in the power canal.

Station No. 1, as I mentioned earlier, was the end of the original canal when it was constructed. And you can kind of see the end of that. So the head pond here, and then the canal when it ended, it used to come down through here and back down into the Connecticut River. And then there's the No. 1 station there.

Cabot station, six vertical units built in 1916 went into commercial operation. To the north side of the station is the Cabot station fish ladder. The fish ladders at Turners Falls, also at Cabot, a spillway and gatehouse were constructed in the late 1970s, went into operation in early 1980s. Flow in the Connecticut River again is from left to right here.

A little background on these two projects. I'll start in on the right hand side first. The Turners Falls project. The dam and the canal originally constructed in the late 1700s, a timber crib dam. We have two facilities off the canal with Station No. 1 and Cabot station, as I

mentioned. The total generating capacity of the facility is just under 68 megawatts. Average annual generation of the No. 1 station is around 18,000 megawatt hours a year, and Cabot around 351,000 megawatt hours a year.

The hydraulic capacity of those facilities, 2200 cfs at No. 1 station, and a little under 14,000 at Cabot station. The minimum flow volumes are 1433 through the project. In addition, we spill an additional 400 cfs over the No. 1 Bascule gates, which is the Bascule gate closest to the gatehouse, during the fish passage season from April to June. And then we continue to spill 120 cfs for shortnosed sturgeon habitat up through about the middle of November, or when the water temperature gets down to about 7 degrees Centigrade.

The FERC license for the project expires April 30 of 2018, the same as the three projects upstream of us, and the Northfield project.

So on the left-hand side, the Northfield Mountain project began commercial operation with Unit 4 in 1972. The other three units started in 1973. There are four units that are reversible pump turbines, in that they spin in a clockwise direction when we're generating through the same tunnel system. When the units reverse, the water then goes from the Connecticut River to the mountaintop reservoir.

The generating capacity is 1119.2 megawatts.

Average annual generation for those years mentioned there is about a million megawatt hours a year. Hydraulic capacity of the units at full output is 20,000 cfs, and pumping is 15,200 cfs. There is no minimum flow, obviously, for the project, and again its license terminates in 2018.

So Northfield Mountain's upper reservoir operating range, 62 and a half feet from 1000.5 feet above sea level down to a minimum elevation of 938 feet above sea level. And then the lower reservoir operating range measured at the Turners Falls Dam is approximately 9 feet from elevation 176 feet above sea level to 185 feet above sea level.

Station No. 1, the small station, about 6.4 megawatts. It generally operates as a baseload plant when our flows are greater than 13,728, and we also operate it for minimum flow where the flows are very low, for those few weeks in the summer when we're passing about 1600-1700 cfs.

And then Cabot station operates as a peaking facility. When the flow are below the hydraulic capacity of the facility, it comes on and off during the day; and then it's a baseload plant when the flows exceed its hydraulic capacity of 32,780 cfs.

So some of the modifications that we're evaluating as part of the relicensing process is upgrading Station No. 1 with new or rehabilitated turbines. We're

also looking at closing No. 1 station and adding a turbine generator at Cabot with a similar hydraulic capacity as Station No. 1; utilizing the full hydraulic capacity of the Cabot turbines that currently exist but we're not using; utilizing more storage in the Northfield Mountain project's upper reservoir.

As many of you know, the project, when it was conceived in the 1960s, Northeast Utilities and the State of Massachusetts -- well, I should say the State approached Northeast Utilities to construct a reservoir larger than it needed to be as a transfer point for water from the Connecticut River. And that transfer never took place, but there is additional storage built there. And then, increasing the unit and the station capacity at the Northfield Mountain project.

Some of our recreation facilities that we have, Bennett Meadow up by the Route 10 bridge, The Munns Ferry boat camping area, our boat tour and riverview picnic area, our tour and trail center at the Northfield Mountain project; our mountaintop observation area up at our upper reservoir, and about 26 miles of trail -- unfortunately, not open currently for cross-country skiing. We've got a fishway viewing area here at the Turners Falls fish ladder. We have fishing access at the branch canal area at No. 1 station, and then there's also Unity Park just at the stream

of the dam.

The Barton Cove nature area is a campground, and we also rent canoes and kayaks. We have a picnic area there, and some trails. There's the State boat launch at Gill, and the Barton Cove canoe and kayak rental area. Cabot Camp is a facility right at the confluence of the Millers River, an old toll house that has some historic meaning. Pachaug Wildlife Management Area and State boat launch area was donated to the Commonwealth after the project was constructed up in the Northfield area, just up of the old Northfield school.

Cabot Woods, fishing access down along Migratory Way by the Conti Lab; and then the canal side trail bike path on land that was leased to the Commonwealth for the two and a half mile bike path along our power canal.

And then our canoe portage, if you're canoeing down and take out in Barton Cove, we'll transport you down and put you back in downstream of Cabot station.

So there is just kind of an overview of what I spoke of from the Pachaug Wildlife Management Area up in the upper right-hand side, and then the State boat ramp down through our Bennett Wildlife Management Area, Munns Ferry, a boat tour and riverview picnic area -- I won't go through them all again. Quite a bit of recreation in the 22 miles -- actually in probably only about 17 miles of river.

Any questions on what I just went over? Yes.

MR. CONWAY: Peter Conway.

You mentioned that after the licensing period you're going to utilize more of the storage up in the pool. Maybe I'm not saying it right, but you said you're going to utilize -- I'll read it here: More storage in the Northfield Mountain storage area? Are you going to bring it up higher?

MR. HOWARD: That is one of several listed on that slide of items that we are just going to study. I don't know whether we're going to use it or not. It's something that we wanted to look at.

MR. CONWAY: So it will be an increase over the level you're going up to right now?

MR. HOWARD: That's right. It could go higher. We could do that.

MR. CONWAY: It could go higher, and it could go therefore lower?

MR. HOWARD: Four feet higher and maybe about 18 feet lower.

MR. CONWAY: So that means that a greater rush through the river at that time?

MR. HOWARD: No. I wouldn't equate the storage of water to a rush coming down.

MR. CONWAY: But getting back then to pulling the

water up, that would also mean a lower level in the river as you're drawing water up, since you're going higher than it is now.

MR. HOWARD: Again, that's something that we need to look at. I can't say for certain what the impact would be on the lower reservoir.

MR. CONWAY: That is a big impact.

MR. HOWARD: If what you say were to occur, it would be.

MR. CONWAY: Okay, thank you.

MR. HOWARD: Yes.

MR. SUPRENANT: Jeff Suprenant, I'm a resident of Riverside Gill for 60 years.

Since I've lived in this area, I've noticed significant changes on this river. And banks are eroded on the riverside, there was river at there at one time. That has even washed away. I guess you would make calls to the FirstLight or Northeast Utilities delegate, they all said they'd fix it.

Just when the reservoir went down, or when Northfield Mountain shut down because of their (inaudible), the water stayed high most of the summer; there wasn't much fluctuation. We noticed in that time, it was open in one area, a four foot embankment was lost on that side of the river.

There's an area on Riverview Drive, the guard rails, if you drive down that way you'll notice they're chipped out. I attribute that to undermining of water, that roadway, all along Riverview Drive is built up. And you and Northeast Utilities increased the level of the hydro dam; and there are some problems there on that section of the river.

Also, in the Barton Cove area --

MR. HOGAN: If I could interrupt you real quick, these are the exact types of comments that we are interested in, and concerns. Right now, we're curious to know if there any questions about the presentation. We're going to go through -- the meeting format is resource by resource, geology and soils, these erosion issues and things of that nature, and we will, just to help of the transcript.

MR. SUPRENANT: One more question on --

The reservoir up on top, the reservoir on the mountain, has the controller been operating the last ten years? And if so, is it documented?

MR. HOWARD: The connection with the Quabbin Reservoir, the Metropolitan District Commission?

MR. SUPRENANT: Yes.

MR. HOWARD: That has never gone into service since the plan was constructed.

MR. SUPRENANT: So that's never been operated or

anything?

MR. HOWARD: No. There is no water conveyance between the upper reservoir and Quabbin.

MR. SUPRENANT: So is this part of your housing - -

MR. HOWARD: No.

MR. SUPRENANT: Okay. Thank you.

MR. HOGAN: Yes, Sam.

MR. LOVEJOY: Sam Lovejoy. I just wonder if could make a statement about the generation use of Northfield pumped storage; it was designed as a peak power plant; seems to sort of changed. Just like you were referring to Cabot station as peak at times and baseload at times. I just wonder if you could make a couple of comments about its power generation at Northfield.

MR. HOWARD: So Northfield is primarily a peaking facility. They try to capture the high-priced hours during the day for generation, and the low-priced hours for pumping in the evening to refill the upper reservoir. That's in general its scheme. That hasn't changed.

MR. SUPRENANT: So it's not being used for intermediate load?

MR. HOWARD: No.

MR. HOGAN: Yes, Carl.

MR. MEYER: Carl Meyer.

This is from -- the question was, you got an increase, mid-license increase in 1985. 5,000 cfs was mentioned at (inaudible) And I believe you only have to keep 1,200 cfs in there.

The question was, what effect will this have -- on the part of the Connecticut River which is bypassed by the canal, and which (inaudible) 5,000 cfs reduction in flow?

Have there been any other mid-license increases? That's a huge amount of water that's (inaudible) to the tailrace.

MR. HOWARD: I'm not aware of any mid-license increase in flow in the Turners Falls canal.

MR. SUPRENANT: So you don't know about this. This is a matter of public record.

MR. HOWARD: No, I don't know about that.

MR. SUPRENANT: So there is 25 percent more water being taken out of the river.

MR. HOWARD: The hydraulic capacity of the canal is maybe 18,000. And we can't put in any more water than that, because we'll overtop the canal walls. And the hydraulic capacity of Cabot has remained consistent. The hydraulic capacity of No. 1 station has remained consistent.

There's two smaller wheels. The Turners Falls Hydro Company and Southworth Paper each have a small wheel

on the canal. And that all adds up, when you get up there around 17-, 18,000. There's been absolutely no change there.

MR. JAHNIGE: Paul Jahnige, Department of Conservation and Recreation.

One of your slides indicated the annual generation at the Northfield pumped storage. That station obviously also uses electricity. Do you have a figure for the annual energy use as well?

MR. HOWARD: Sure.

The question, if you didn't hear it: I have a slide up that showed the average annual generation out of Northfield at a million megawatt hours a year. So the station has an efficiency of about 75-78 percent. So it consumes more energy than it produces. So the pumped energy is just a ratio of that. For a million, on average it would be about 1.3 million for pumped.

Yes?

MR. PUGH: Don Pugh. I was wondering -- I recognized all the recreation areas except for branch fishing area. Could you explain where that is?

MR. HOWARD: Yes, sure.

You go along the power street there by our No. 1 station and up into the parking lot area, you know, the old railroad road salvage building; along that fence line

there's some benches and yellow protection along the top of the chain link. So if you want to drop a pole in there, you're more than welcome.

Yes.

MR. DAPPLE: (ph) David Dapple.

What's your generating capacity of Cabot Station? I didn't hear you mentioned that. What do you hope to increase it to?

MR. HOWARD: The generating capacity of Cabot is 61.8 megawatts. And I don't know what I hope to increase it to, or if I'll be able to increase it. That's one of the issues that we need to look at.

Any other questions?

SPEAKER: Since you put your solar farm up there, at the Northfield Mountain, I thought that would decrease the number -- pump the river. But apparently not, if you are wanting to add four feet on top of the reservoir, correct?

MR. HOWARD: No, the only thing the solar farm has decreased is the amount of golfing that goes on across the road. So the solar farm is 2 megawatts, and it feeds out into the 13 E distribution system on Route 63. It's completely independent of the project.

MR. HOGAN: Thank you, John.

John's first slide reminded me of a little bit of

information that I neglected to give, and that's how to get information from FERC. In our blue brochure that we passed out, on page 12, there's a whole section on getting information. We have a very usable electronic service that can help you to see anything that's filed or issued by the Commission. Two services; one is called eLibrary, and you can actually log into FERC's website and search eLibrary and you put in the project number and a date range. And anything that's been filed with the Commission or issued by the Commission, there will be a catalog of that. You can click on an actual PDF of the document and actually read the document, so if you want to follow it manually and track the licensing process or see how your comments were actually entered into the public record, you can do that right there.

The other service that we have is called eSubscription. You would set up an account with FERC's on-line support team, which is all very automated, and put in your e-mail. And when any document is issued by the Commission or filed by any other party, you will receive an e-mail with a link to that document. You get the e-mail, you click on the link, and you can open up the document on your web site or on your screen and read the document. It's just a great way to all stay engaged in the process and know everything that is going on with the project. There are no surprises. It's clear that this room is very interested in

staying engaged, and I really encourage the use of those services.

Again, the information on how to do this is on page 12 of this brochure. It's fairly simple, but there's also some phone numbers here that if you get stuck that you can call. Don't call me, because I don't do this.

(Laughter.)

MR. HOGAN: But we do have support services that, if you have concerns or issues, you call FERC and they can walk you through the process.

The other thing that I neglected to discuss -- I had mentioned study requests, and I didn't tell you what those are. Study requests are, if you see information that the Applicant should be gathering for this relicensing process to inform the environmental document, we want to know about it.

The Commission also has a very strict set of criteria that we use to evaluate study requests. Those are on the last page of this handout that I passed out. There's seven of them. However, you only have to address six, as study criteria 2 and 3 are mutually exclusive, depending on whether you're a resource agency or a member of the public. If you're planning to prepare a study request, take a look at the criteria and follow the criteria step by step.

We also have new guidance this year -- well, last

year, March of 2012. This is a guide to understanding the Commission's study criteria. I highly suggest you take a look through this document; it's a great tool. This came about as the result of lots of public comment; you know, eight or nine years of implementing the integrated licensing process. How Come My Studies Weren't Accepted at FERC? Well, we developed this guidance to help us get better study requests, so we have a better understanding of information we need, and can give you the tools to understand what we're looking for in study requests.

Like I said, the criteria are designed to be a litmus test to evaluate whether a study request is appropriate or not. So if folks weren't addressing the criteria correctly or sufficiently, we may have been rejecting study requests that in some cases maybe we shouldn't have. but hopefully that's not the case.

Anyway, it's a tool. I suggest you use it. It'll help you provide the information that we need to evaluate the study requests.

So with that, I'd like to go into what FERC has identified by resource area as potential issues.

We have a question in the back. Yes, sir?

MR. CONEMEYER: (ph) Ken Conemeyer. Just a quick question.

March 1 is the deadline for study requests?

MR. HOGAN: Correct.

MR. CONEMEYER: Is there a deadline for submitting written comments from the scoping sessions?

MR. HOGAN: It's also for March 1.

The deadline for filing study requests or comments on the pre-application document, or comments on our Scoping Document 1, is March 1. Thank you for that.

Now what I'd like to do is go from resource to resource. FERC staff will identify -- I'm sorry, the folks I brought with me from FERC, helping me -- a lot of them are contractor status -- will go through and identify what we incorporated into our Scoping Document 1. And you can follow along; I believe it starts on page 24 of Scoping Document 1. We'll start with geology and soils. Then we'll get feedback from the group on concerns or issues with that particular resource area, and then we'll move to each separate resource area.

I do request that when you are providing comments on a resource area, that because we are discussing three different projects here today, you specify one, two or all three projects; which project are you talking about. If you're talking about all three projects, just say, you know, this is in reference to all the projects. Let us know to help keep our record clear where your comments are pertaining to.

Any questions?

(No response.)

Geology and Soil Resources

MR. NELSON: Good morning.

My name, again, is Ralph Nelson. I'll be discussing the scoping document you all have a copy of, on page 24. There's an initial listing of issues, and I'll start off with the Vernon project. Section 4.2.1 is geology and soil resources. The identified initial listing is the effect of project's operation and maintenance on riverbank erosion, including the potential effect on protected species, cultural resources, or the structural integrity of adjacent facilities. In this case of Vernon, we're talking about the narrow neck of land separating the Vernon impoundment from the tailwater on the east side of the power house.

For Northfield and Turners Falls, on page 27, 4.3.1, geology and soil resource issues we have identified are the effects of project-induced water level fluctuations in the Turners Falls impoundment, on the shoreline stability of riverbank erosion, particularly where erosion might impact protected plant species, critical wildlife habitat, adjacent structures, recreational use facilities, and/or private landowners within the project boundary.

The second bullet is the effects of the Turners

Falls project operation on riverbank erosion in the bypass reach, and downstream of Cabot station. John Ragonese is going to present the licensee's plans.

MR. RAGONESE: Good morning.

In terms of how I'd like to just kind of go through and respond on the resources effects and resource issues, I'd like to just sort of identify what we may have put in our pre-application document, the PAD, and then other studies that we've performed on our own and in consultation with the agencies in the pre-scoping, or basically before we filed the PAD or initiated them. And then, any of the planned studies that either may be going on -- planned for various different purposes, or what we're considering since we've filed the PAD.

So in terms of geology and soils, several years ago we performed a shoreline survey that included identification of erosion locations, and this would be basically on all three of our impoundments that were up for relicensing, Vernon in particular. I might add that, similar to FirstLight, there is a web site that's associated with our relicensings. It is www.Transcanada-Relicensing.com.

What we maintain on the web site is a public information library, which you can access. So it's really on the overview tab. Then look for public information

library, and there's a whole slew of documents that are finally on that site -- took a while to get them all up there. But many of the documents were supporting studies that were identified in the PAD, as well as anything going forward that other than those that are correspondence are filing that will be with the FERC. That's actually under a different tab on the same overview page, sort of formal documents.

So anyway, the shoreline study has a summary report that's on the web, and we will shortly be posting -- because primarily the shoreline study survey is a map-based resource document and/or analysis. So it will be sort of a published map filed in a GIS reader format, similar to -- you get a PDF sent to you in e-mail and you open up Adobe Reader, there's a GIS reader that is available to look at all the information. You can turn on and turn off and select different layers of pieces of information. But the erosion locations are all mapped on that map as well as summarized in the report.

A number of years ago, we amended our license for Vernon. We refurbished four units. We increased the capacity, increased efficiency in the use of water. As part of that amendment process, there were a number of studies that were done. One in particular that has a lot of bearing on what needs to be done for relicensing, and that's a Phase

1A cultural resource, or basically an archaeology survey of the reservoir and for project impact areas. And that was performed and completed, submitted to the State Historic Preservation Officer.

We also have a cultural resources management plan associated with the Vernon project. That's all been completed, so I consider that to be a pre-scoping study. It's very much required for going forward in our relicensing, but it was already completed about four years ago.

We also conducted a thorough survey of rare, threatened and endangered species in the impoundments and/or downstream areas of our project, although in this case with the Vernon project it was primarily associated with the impoundments. These are areas that are affected by project operations. A lot of them were identified from the erosion locations that were identified in the survey, but we didn't restrict ourselves to just those locations that were mapped in the previous survey. We basically did a full-blown analysis of all the shorelines for both archaeological, prehistoric type of things, and/or historic resources.

We also, as part of an ongoing survey requirement for Vernon, there's an embankment on the left side of Vernon Dam on the downstream side. It's on project land, and it's a fairly large erosional scar that has been there for many

years. It was noted quite a number of years ago, and we were requested to do some monitoring of it; and then there's an updated sort of monitoring requirement that came out of the amendment process in our 401.

So we complete that survey every two years. The latest one has just gotten filed with the FERC. As Ken mentioned, you can get a link to that report through the e-library, download it and take a look at it. I will note that in 2012 -- and that survey shows the differences as time has marched on with pretty good service. And I will note that we experienced two major flow events -- major for Vernon is essentially above 70,000 cfs spill -- one was the Irene event in 2011 and then the spring was actually fairly high flow as well. And basically, there was very little change in that erosion and movement of the whole topography and hydrology below it.

I want to note that in previous relicensings for the Vernon project, erosion was an issue similar to what it is and will be, I'm sure, this year in this process. And I want to refer to our Army Corps 1979 Connecticut River Basin Erosion Study. We think that was a very, very well-done study and has a lot of merit. It had some mechanics associated with erosion and the project operation or high flow and other naturally-occurring operations in the river.

In terms of planned studies, there was one of the

items that talked about sort of the structural integrity of such as the Vernon Neck. So just to be clear, this erosion face that we've been pondering -- is really nowhere near the narrow portion of Vernon Neck. The real concern area for Vernon Neck for, you know, the FERC or those that are concerned about stability of our facility, is really a narrow section, it's a natural narrow section associated with Vernon Neck. This is actually a requirement that comes out of our dam safety side of the house, with the folks in the New York regional office with the FERC.

We're going to be performing a survey to get another baseline survey of the Vernon Neck, especially the narrow area. We'll be doing some geotechnical evaluations of the structure of the Neck, and really the issue here is in under extreme high flow, beyond what we saw with Irene, the question is whether or not water can get to a certain level and essentially pipe through this embanked earthen structure. And that's really what we're trying to identify, is whether or not there's some potential threat there that is not known at this time.

We're also reevaluating the hazard classification for Vernon, and this is basically something we do periodically. We look for houses and downstream development that may change, and whether or not that changes the hazard classification should the dam fail and impact resources or

private property or lives. That's a periodic evaluation and we're doing that again this coming year.

That's it.

MR. HOGAN: Mark's going to present ongoing studies or proposed studies for the FirstLight projects.

MR. WAMSER: Hello, I'm Mark Wamser, I'm with Gomez & Sullivan, engineers. We're assisting FirstLight in their relicensing process, and I'll be talking about the geology and soils.

If you read the PAD, we did not include any specific studies for geology and soils. We were going to rely on existing information. As many of you know, there's been many years of surveys done on the Turners Falls impoundment; and I'll just go through what studies have been done more recently, and studies that we are now proposing that weren't in the PAD.

The first one is as part of the existing license, FirstLight is required to conduct what's called full river reconnaissance surveys. In talking to FERC ahead of these meetings, what they would like to do, the next survey is scheduled for 2013, in the November timeframe. And because the study plan determination letter would be issued before the timing of this study would be done, they would like to include this study as part of the relicensing process. So we are working right now with the Connecticut Streambank

Erosion Committee and others on a QAPP, a quality assurance project plan, for that study.

A new one that we're adding is a hydrologic, hydraulic and geomorphic analysis of erosion in the Turners Falls impoundment. We're going to be looking at hydraulics in the Turners Falls impoundment. There is a hydraulic model, and we'll talk about this a little bit later; there is a hydraulic model that was developed of this impoundment, and we're going to be looking at that, as well as the hydrology.

The last two were studies of the Route 10 bridge. The Route 10 bridge traverses the Turners Falls impoundment, and there was an evaluation of the erosion that's occurring in that area. And then the last one is a riverbank erosion comparison study along the entire Connecticut River. Both of these studies were filed with FERC recently.

In addition, just last week, we also filed -- there are some long-term monitoring cross-sections in the Turners Falls impoundment since roughly the late 1990s to current. Every year they resurvey roughly 20 cross-sections. So you can see the change that occurs over time.

That's it for us.

MR. HOGAN: At this point in time, I'd like to turn to the public, the important part of the meeting, to get your feedback, concerns, what your -- what have you guys

identified as issues or concerns about the operations and maintenance of the project, the project's existence?

Yes, sir.

MR. CAMPANY: Chris Campany, one of the regional commissioners for the Connecticut River Joint Commission.

John, the prior study, what did you guys identify as far as the (inaudible) besides the impact of erosion on those.

MR. HOGAN: Hold on. When you turn your back to us, it's hard for the court reporter --.

MR. RAGONESE: So the question was, to what extent -- and I guess this can be for FirstLight, too -- one of the things that haven't identified or known brownfield sites and the impact of erosion on those.

MR. CAMPANY: One of the things we'd like to have identified are known brownfields identified and the impact of erosion on those.

MR. RAGONESE: Along the reservoirs?

MR. CAMPANY: Yes.

MR. RAGONESE: Chris, I'm not aware of any investigations or correlations beyond shoreline survey work on brownfield sites that --. What we attempted to do was go and identify a lot of information from various public planning agencies, and reading the report, I'm not aware of any notations on association with brownfields within our

project boundary.

MR. WAMSER: I think that's the same case with us. What we could do an overlay on the GIS map any brownfield sites that are reported to the State, to see where if there was erosion is occurring, if there are in the same locations. But I'm not aware of any.

MR. CAMPANY: Okay.

MR. HOGAN: Other comments regarding geology and soils erosion issues?

Yes, sir, in the back.

AUDIENCE: Yes. I have a brief presentation.

MR. HOGAN: Is it specific to erosion, or is it more broad-based?

AUDIENCE: Specific. I can wait; whatever you prefer.

MR. HOGAN: I'd like to do presentations at the end after we go through the resource areas.

AUDIENCE: Sure.

MR. HOGAN: Yes, sir.

MR. LOVEJOY: Sam Lovejoy. I just wondered if there could be any effort made by FERC or the various applicants to compare erosion between the pools, between the impoundments, so that we could get some read on what's going on with Northfield pumped storage in the Turners impoundment versus no pumped storage in the Vernon impoundment?

Is there a way to compare the erosion studies between the impoundments themselves? They're being done by different people maybe using different methodologies. If we could come up with one methodology, perhaps we could actually get a better read on what's going on in each of the impoundments.

MR. HOGAN: And you're looking for an answer right now, right?

(Laughter.)

MR. LOVEJOY: No, I just --

MR. HOGAN: We'll take that into consideration. Yes, sir.

MR. COHEN: Russ Cohen, same agency as Sam Lovejoy; Mass Fish & Game Department. A similar question. Will the Vernon project be looking at any erosion downstream of the dam and any potential connections between the operations of that facility and any erosion that's occurring downstream?

MR. HOGAN: I'm going to turn that around. Should the Vernon project be looking at any potential erosion issues downstream of the dam?

MR. COHEN: I think so.

MR. HOGAN: Thank you.

(Laughter.)

MR. HOGAN: That's why we're here. We want to

know your feedback. I can't tell you what we're going to do until we hear what the concerns are.

MR. CONWAY: This goes along with Sam's question. I'm Peter Conway.

As you go from Vernon down to here, you've got a stretch of 20 some miles that has kind of pooling areas, and you've got a drop in elevation. And I would hope that the people that study erosion get together on this, so that they can compare notes and make adjustments. Because there is a difference in the way the elevation of the river drops as to how much erosion goes on. I think that's maybe along the same lines, but maybe not.

MR. HOGAN: So you identified varying rates of erosion based on the slope of the reservoir?

MR. CONWAY: Yes, that's correct.

MR. HOGAN: Thank you. Yes?

MS. DONLON: This is Andrea Donlon from the Connecticut River Watershed Council.

I'd be interested to hear a little bit more about the details about the proposed study for erosion that (inaudible)

MR. HOGAN: Mark, do you have any more details that you can offer?

MR. WAMSER: We haven't scoped it out, really. But what we're looking at is the -- and I'll get into this a

little bit later, but there's a hydraulic model that's been done on these impoundments. We're going to be looking at that information, as well as hydrology and relying on some of the past fluvial (inaudible) We'll try and pull it all together. So ideally look at a causation study.

MS. DONLON: And you didn't put the (inaudible) 2007 and look for it up there as an available. I certainly hope that (inaudible) not looking at (inaudible) very well done or not. Beside the 2012 report. I'm not sure why it was done, but it has some sort of thing about the methodology is fairly qualitative.

MR. HOGAN: For everybody, I know you want to speak to somebody else in the audience, it's natural to turn to them. But if you could project your voices this way, so we can maintain a public record. The microphones are up here, and I know he's having a hard time hearing everything.

MS. DONLON: Should I repeat it?

MR. WAMSER: That would be great.

MR. HOGAN: I think so.

MS. DONLON: Okay. The question was, kind of a comment then a question; but I did not see the report listed up on the screen related to, it was a field, 2007, study commissioned by the power company. I hope that the lack of it listing there doesn't mean that you're not referring to it as a resource. I was curious what -- whether the 2012

Simon study somehow replacing that. It was very qualitatively done; I'm not sure why it was done; there was a footer in the document that (inaudible) I'm just curious what the background is of that study.

MR. WAMSER: The study that I put up there, I only listed ones that were, occurred more recently. As you know, there are many older -- the Wisconsin surveys, an erosion control plan; there's the Corps of Engineers that have done studies. We have done studies; we're going to look at all that as part of this.

What I put up there was not meant to narrow it down to just looking at those. There is a long record of years of data at this project; so we're going to be looking at all that.

MR. HOGAN: If there is existing information, whether it be studies or surveys that you're aware of and know about, have available to you and you think the Commission should be aware of and know about and have available to us, I'd encourage you to file it with the Commission in the record so that -- when we make any recommendations to the Commission, it has to be based on our public record and information that's in the record.

So if you think we should have information available to us to inform our decisions, I strongly encourage you to provide it into our public record.

Other comments regarding geology, soils, erosion concerns?

(No response.)

MR. HOGAN: Okay.

Water Resources

MS. SCANGAS: Angie Scangas with FERC.

The preliminary water resources that have been identified in the scoping document are the same for all three facilities, and it's the effects of current and proposed operations on water quantity and quality. In particular, dissolved oxygen and temperature have been identified.

John?

MR. RAGONESE: Again, under water resources, essentially there's a couple of different aspects.

In our PAD, we identified that we are going to be evaluating the impacts of current or proposed operations on water quantity and probably other metrics as well. We'll be accomplishing that through a comprehensive Connecticut River operations model that we have. We've used this model for many years on different projects. It's an extremely sophisticated model, it has long-term and short-term planning aspects associated with it to make sure we don't do something in the short term that affects something we need in the long term, like a full river in the spring, et

cetera.

There will be inputs into the model. It's an hourly dispatch model. It'll encompass headwaters of the main stem all the way down through the discharge at Vernon. There'll be some activity with our neighboring facilities downstream, but essentially the models will not be -- they will be tied in terms of, the outputs of our model will be provided to FirstLight as inputs to any analysis that they do.

We will, however, be able to evaluate impacts that are associated with proposed operations for the FirstLight plants, and how that might impact upstream projects which we own and operate.

So as I said these are hourly inputs. These are primarily naturalized inflows. We'll have a different percentile of natural inflows based on essentially trying to capture medium, high, low water years -- these are going to be actual water years -- as well as encompass all the various constraints that are associated with the projects or inflow, or other aspects, whether it be operating constraints or simply physical constraints of the projects themselves.

There'll also be energy prices in the model, because we are in a deregulated energy market in New England. Many of you like that. Many of us don't. But it

is what it is, and so the model has to be able to be a dynamic model to respond to changing energy prices, as well as to be able to evaluate how the projects would or would not operate in the context of where it is today in New England

So just to give you a sense of how that will work, as time marches on and we look at different operating scenarios that are proposed to us, or we look at operating scenarios that are proposed to FirstLight, you know, we'll run the models. There'll be a working group. I'm sure we'll be sharing the results of the model and discussing whether or not those operational changes are restricted based on, you can or can't do that because there's not enough water in the river to do things that people might think there is at certain times of the year, or whether or not there is an intolerable -- in our view -- unbalanced impact on generation that's associated with a particular water resource.

We'll obviously be sharing those results, not only with the stakeholders that are in the working group, but also with FERC. The idea behind that is just really identify what are working operational alternatives versus those that are unreasonable.

We also, as part of sort of a pre-scoping aspect, we did do a lot of water quality investigation of our

projects, including the downstream discharge at Vernon and the reservoir itself. These include continuous monitoring for DO and temperature, other nutrients and other chemical parameters. The reservoir has had continuous monitoring as well as profile samples at different locations upstream of Vernon Reservoir.

Also, as part of our amendment of Vernon a number of years ago, we had a monitoring requirement associated with the impact of the new units on water quality. And that's also an ongoing, and has been an ongoing study for the past few years. Both of these reports from the water quality aspects will shortly be provided to the agencies. They're just being finalized right now, and they're also be available on our web site, as I said earlier. Thanks.

Mark?

MR. WAMSER: So in the FirstLight PAD, we have a couple issues that we've listed for conducting studies. The first one is development of an operations model on an hourly time set. John Ragonese talked to this. We're doing an operations model using the model called HAC REZ SIM. We've partnered with the Nature Conservancy on this, where we exchange data between them. It's a simulation model, and we figured if they had gotten out ahead of us a little bit on it, it make sense to partner on this. That way, we're not arguing about what flows are in the model, how we operate

the model. So it'll be pretty transparent as to what we're doing.

By the way, the model that they have developed that we're using goes from 1960 to 2003. It's a long-term model. Ours will be on an hourly time step because of the peaking nature of the system.

We did propose a water quality study, which is pretty standard. We'll be taking DO and temperature measurements continuously at key locations starting probably in the Vernon tailrace through the Turners Falls impoundment at various locations within the canal, probably, within the bypass, and then below the Cabot facility, as well as monthly profiles. Typically, you take DO and temperature profiles. These would occur in the Turners Falls impoundment.

The last thing I want to mention here is, this wasn't in our PAD. We're going to -- we've developed a hydraulic model. We use somebody else's hydraulic model that was done for the John Field study, actually, and we're looking at the impact of project operations and how far that impact extends upstream to Vernon. We will be filing something on this, probably in a month or so. But the preliminary finding that we see is, the impact of the project, although it's always been said to go up the Vernon tailrace, we're finding that it actually is further

downstream from the Vernon tailrace. That the backwater effect of the project under various flows does not extend as far upstream. So we will be sending that out or filing that.

As John mentioned earlier, the Northfield-Relicensing.com web site -- do join the mailing list, because this presentation and anything we file with FERC will automatically be put up there. If you're on the mailing list, you'll be sent an e-mail. It's very simple.

MR. HOGAN: Do we have comments or concerns regarding water resources, flows, water quality, the quantity of water?

MS. CAMPELL: Elise Campbell. I don't understand how the temperature, particularly temperature effects of the nuclear power plant, get -- I know this is not a hearing about the nuclear power plant, but it's there. It's on the water, it's near the dams, and how does all that get integrated into the study?

MR. HOGAN: That's a very good question.

We do recognize the presence of Vermont Yankee, and we will be looking at what we call cumulative effects of project operations with the presence of Vermont Yankee. We will do an analysis of how do the hydro projects affect water temperature, I think is the main component here. How does it cumulatively affect water temperature with the

discharge and presence of Vermont Yankee?

MR. LOVEJOY: Sam Lovejoy again.

I don't know whether in your water analysis whether you're looking at silt. But I know a lot of the recreation people think that -- Barton Cove and just above the Turners Dam is silting in, and I just didn't know whether -- you know, you're sort of agitating the pool, and pump and down and flow through; and I didn't know whether you're enhancing silt deposits and erosion.

I just wanted to know if there was going to be anything done with regard to analyzing silt deposits or silt movement.

MR. HOGAN: Should we be analyzing silt deposits or silt movement?

MR. LOVEJOY: I think that's what I was just saying.

(Laughter.)

MR. HOGAN: Very well done.

MR. HOGAN: And this is in Barton's Cove specifically?

MR. LOVEJOY: Well, Barton's Cove is the place where we're seeing it. But I'm wondering whether the impoundments in general are also suffering from this and obviously silt is a key factor with dams.

MR. HOGAN: Okay. Thank you.

MR. CONWAY: Peter Conway again.

This is in regard to the model, the model --.

This is about the model, the hydraulic model, and one of the statements that you made is in regard to the fact that the backwater effects -- the model goes from Vernon to Turners Falls, but you said the effect of backwater in the model would show up more for Turners Falls than Vernon. Is that what you said?

MR. WAMSER: Yes.

What we're finding is that it goes still a ways upstream, but it doesn't go all the way to the Vernon tailrace. It is quite a ways further upstream.

MR. CONWAY: I understand that. But the impact would be more down here than up there as far as your model will show?

MR. HOGAN: I think, if I can -- the model that they're currently working on is to evaluate how far the Turners Falls pool extends upstream under various flow conditions. It's not necessarily an impact assessment at this point in time. They're trying to identify the appropriate project boundary, and what's the most upstream extent of their project reservoir.

MR. CONWAY: To add to that, how much it doesn't when there's no water.

MR. HOGAN: I don't think the model will go

there. It's how much do they inundate at this point in time? And I don't know that it will look at, under low-flow scenarios, the lowest extent of the reservoir. So it will show that?

MR. CONWAY: You'll look at that also?

MR. WAMSER: Yes, we looked at low flows and high flows in the model, as well as different conditions found at the dam, whether it's up at the top of the pool or at the bottom.

MR. CONWAY: Okay, thank you.

What's your name again?

MR. WAMSER: Mark Wamser.

MR. CONWAY: Thank you.

MR. HOGAN: Karl.

MR. MEYER: Karl Meyer.

Mark, you said you were partnering with TNC and using the models from 1960 to 2002. Energy deregulation didn't really hit Northfield until around 2000, so those effects might not capture it in any significant way the effects of deregulation on Northfield, which -- in a deregulated market more than it used to; and then if you have only a single year, 2006 that you're looking at.

What I would suggest is you need a broader scale to sort of look at the effects of the deregulated river over several years. (inaudible) in a single year.

So I would say that that's a significant thing to try to tease out and the studies that you guys have done.

MR. HOGAN: So the river, as managed under a deregulated energy market? Is that what you're referring to?

MR. MEYER: Right. You should be able -- you're capturing almost none of it in the early TNC model there. And then you have only a single year; so what I'm suggesting that in order to get the information to the public that's useful, you would actually have to capture more years to understand the effects of deregulation.

MR. WAMSER: Thank you, Karl.

MS. TUFTS: My name is Jennie Tufts, and I'm with the Greater Northfield Watershed Association.

I'm wondering if this study of water quality goes into any human health issues. I haven't observed them, or I didn't recognize them if they were up there. Both as a recreational issue for boating, swimming, fishing. At the moment the levels of PCBs are very high in the river; we can't eat the fish safely. It's questionable whether we can swim in the river safely.

I would like to see that as a part of the scoping process, and I don't know if it is.

MR. HOGAN: You're looking for a study that would basically evaluate the water quality against state water

quality standards?

MS. TUFTS: I would like that in the study,

SPEAKER: So will there be any recommendations from FERC in these studies regarding the silt problem, the buildup of silt in several areas. There have been some drastic changes in some of the channels on the river; in Barton Cove and the vegetation buildup in there. I believe that at one time I thought there was something that was going to be done with that vegetation control; and I don't know if anybody knows about that; if it's worth a study, or there's going to be anything happening with that.

MR. HOGAN: Regarding FERC study requests; like you, we will be submitting study requests to the Applicants on March 1. We have the same deadline as everybody else here.

We're still evaluating, and part of our evaluation process, in this meeting and hearing what the concerns are. I can't tell you what our study requests will be because we don't know right now for sure.

Regarding any potential mitigation or enhancement measures that may come out of the relicensing process, the first opportunity that you'll see as to what the Commission may be recommending for let's say siltation or any changes that may be appropriate or not appropriate will be identified in our draft environmental NEPA document or

environmental document, which will come out three or four years from now. Right now, we're identifying the study needs to address essential issues or effects of the projects. Those studies will generate information that we will use to evaluate these issues and concerns.

Then, when the license applications come in, we'll seek recommendations for how do you mitigate or address issues that have been identified as being project effects. We'll do an environmental document that will evaluate the issue and the recommendations to fix the problem, and then the environmental document will be our recommendation: will we do this, do we do it with quantifications, or do we not do it?

MR. PUGH: Don Pugh. I'd like to follow up on Sam's question a little bit about sediment.

The dam here at Turners is not only causing the buildup of sediment in Barton's Cove, but it's restricting deposition of sand, gravel, cobble, et cetera in the bypass reach. And I think that that should be considered in the scope of the studies.

We're currently looking at a situation out here, particularly in the upper reach of the bypass, where it's basically bedrock.

MR. HOGAN: So gravel recruitment in the bypass reach.

VOICE: Gravel, cobble, et cetera, all the things that would be naturally occurring downriver in an undammed river system are not being deposited in the bypass reach.

MR. HOGAN: Thank you.

MR. OKHOWSKI: Charlie Okhowski. I have a general question relative to this whole process, and it may reflect on how we conduct ourselves.

How much weight do you give to an individual like Sam Lovejoy or Ms. Tufts of Northfield saying about one specific point relative to a question or comment from an agency person, an organization? Are they all given equal weight, or do you write things off depending on the source of the comment?

MR. HOGAN: We don't write anything off initially. Our analysis may say that this is not a project effect or a study is going to show that it's not a project effect, but every comment we receive will be looked at and evaluated; doesn't matter the source.

MR. OKHOWSKI: So, equal weight?

MR. HOGAN: Yes. And as we go through our analysis, we're going to be evaluating the issues and -- we may have a very specific comment about siltation in a cove where recreation is affected. But we may be addressing that under a larger, broader scale type of measure, not necessarily, specifically that one finite spot.

Does that make sense?

MR. OKHOWSKI: Thank you.

MS. KENNEDY: Katie Kennedy with the Nature Conservancy.

I think we talked about this yesterday, so I'll just have to make the statement again for this.

But we'd still like to have the water quantity defined with the five parameters for a defined flow, an attidude, frequency, timing and change as those particular effects impact other objectors (inaudible)

And then when it comes to water quality, we're interested in particular in the (inaudible) and possibility, if there is an imbalance, for restoring that vegetated part.

MR. HOGAN: Thank you, Katie.

Other comments regarding water quantity or quality?

(No response.)

MR. HOGAN: Aquatic resources and fisheries.

Aquatic Resources and Fisheries

MR. SEARS: Mike Sears with FERC.

Aquatic resources -- i.e., fisheries and macroinvertebrates and their habitats, we identified three bullets, and it's the same for all three projects.

The first one is, effects of project operation and maintenance, including fluctuations in water levels and

downstream releases on aquatic habitat and resources in the project's vicinity; for example, resident and migratory fish populations; fish spawning, rearing, feeding and overwintering habitats, as well as mussels and macroinvertebrate populations and habitat.

The second bullet is the effects of project facilities and operations, including reservoir fluctuations and generation releases on upstream and downstream fish migration through and within project fishways, reservoirs and the downstream riverine corridors.

The last one is, effects on both entrainment on fish populations at each project.

MR. RAGONESE: In terms of TransCanada's Vernon project, we did not at this point identify in the PAD specific studies that we are proposing at this time for aquatic resources. We know there will be many, I guess is a good word. But we felt we'll get through the scoping process first, and then we'll identify studies in our proposal.

Just add a mention in terms of project mitigation and continued enhancement, we don't anticipate any change -- or we intend to continue to operate, I should say perhaps more clearly, both our upstream and downstream passage facilities that are located at Vernon presently for American shad and Atlantic salmon. We did perform a few pre-scoping

studies. One in particular, though, relates to Vernon, and that is, we've been working with USGS to evaluate the effectiveness of the ladder on the passage of American shad. We've been doing that over the last couple years. And that report is actually going to be something that will be produced out of the USGS folks, out of the Conti lab, and I'm not exactly sure of the time of the release of that, but I believe it's probably going to come out fairly shortly.

That's it.

MR. WAMSER: For FirstLight's fish and aquatic resources, we had done this past year habitat mapping of the bypass channel and below Cabot. And real brief, what that means is that we go out and collect data on the depths, widths of ripples, runs and pools in all these locations.

So that has been developed. It was incorporated in our PAD. There was also a mussel survey done, and it was done at the bypass. What's not up there was also done in the canal, and it was done of the Turners Falls impoundment. So that was done in 2012, and also was referenced in the PAD.

In terms of studies that we are proposing to do, we are proposing an in-stream flow study of the bypass reach and below Cabot, and I want to put folks on notice that we're trying to actually expedite this study, conduct this actually in 2013, ideally in the summertime. So those

people that are probably here today, and also anybody that signed up on our mailing list or on the PAD distribution list, we're going to be sending out a study plan on this one issue in advance of the others, because of the importance of the study in this particular issue. So I just want to let everybody know about that.

The other thing we did propose in our PAD was assess the impact of project operations on sturgeon spawning near Cabot. I think that may end up being roped into the third bullet. We'll probably look at impacts on sturgeon as part of the in-stream flow study.

MR. RAGONESE: I just wanted to make a suggestion.

We did conduct a fairly intensive survey of all impoundments, including our Vernon impoundment for federally-endangered species; the dwarf wedge mussel plus a number of other important freshwater mussel species as well. That report -- that one was published, so that is on the web site. You can find that on the web site. That was just released a little while ago.

MR. HOGAN: Thank you.

Do we have comments regarding concerns or compliments about fisheries or aquatic resources?

Yes, sir.

AUDIENCE: Yes. On the raising of the river for

spawning rules, along the shores. For instance, in 2012 the river was sucked down so low that actually people could walk across parts of the river, that's how low it was; especially in the Barton's Cove area up towards the Rod and Gun Run area; and I believe this was documented on Channel 22 News, showing how low the water was.

The comment in the paper from FirstLight was that it was a peak time generation of electricity because of the high temperatures that we had. Well, you don't have to be a rocket scientist to figure out the next day, the water's back up. Come on; we're not stupid. I mean, somebody fell asleep at the switch up here, as far as I'm concerned.

Just, here's these spawning pools sitting there in the baking sun, you know, the bass or whatever wanted to spawn there, -- and this doesn't just happen once a year; I mean, they draw it down low enough need drawdowns low enough where there's several of the spawning pools, you can see all along the shoreline, being ruined by this because the water's so low.

MR. HOGAN: Do you have a time frame that you're seeing this occurring?

AUDIENCE: July 29, 2012. If you want to call Channel 22, maybe -- I believe it was on the news that night, and it was in The Recorder also. And that was their comment. And thank you for bringing that.

But I mean, this happens, and you couldn't get -- there was no boat traffic or anything on the river at all because it was so low. I'm sure they received several complaints up at FirstLight about this, and I know personally I called one time and they said, "Well, we can draw it lower." Well, thank you very much.

MR. HOGAN: In summary, although they may have been operating within the current license requirements --

AUDIENCE: I can just wave -- And furthermore, there used to be a water level gauge that was on the river side of the pier. All of a sudden, this year, that thing has disappeared. I don't know what they think. Don't they want anybody to know what the water level is?

MR. HOGAN: So you'd like to see the installation of a gauge that would --

AUDIENCE: Yes, why should that be bad?

MR. HOGAN: Okay. Thank you.

MR. CONWAY: I think we can back up Jeff on this.

Peter Conway. I live on Riverview Drive. My house is about 50 yards from the water, and I see the eagles' nest -- actually when the eagles nest you can see it. And it's a little more than just what Jeff is talking about, because I live there year round. And this goes up and down a lot. Sometimes my house is 50 feet from the water's edge, sometimes it's more than 100. It all depends

on what the water is doing.

The time he talked about just then, the pools he's talking about, this happens in May and June and July when these fish come in to nest in this area, because of slope, and they called it is just right for nestling, and the fish are too dumb to know that the water's going to leave after a few days. So they come in, they build their nests, and they DP their guarding and everything else; and then suddenly the water goes down and they're left high and dry, for sometimes 20-48 hours, depending on what's going on up the river.

As a result, the nesting pools, they dry up. And this is that section of the river where, if you go up to the red bridge, which is where I fish from over to the public boat dock, that's my shoreline fishing range, and I'm on the river a lot. So I eyeball this all the time, and it's really annoying to see this happen. And I'm shedding a tear for the fish right now, by the way. And it just goes on and on and on.

And Jeff referred to one instance. There's a lot more than just one instance. This happens a lot. I know we have to generate power, and I'm want electricity, by the way; I'm not knocking electricity. But you know, we need a little more control in the fluctuation. And as far as you said, Mark, you have a model here going. You've got to

address this part, too. How low do you want to drop back the flow in the rest of the river in order to generate power? There has to be a little more control over it than what we've got. And we don't have it right now, okay?

I was going to save this until I got up to speak, but maybe I'll do it again in a different way. Thank you.

MR. HOGAN: Thank you.

AUDIENCE: One other quick sighting that I observed -- I'm sure Peter has observed it also -- the riverside, is these swans. They come up, they think they're laying their eggs at the high-water mark, but then the water goes two or three feet higher than that, and here's the swan sitting there on these eggs on the water, trying to keep them alive and hoping that they'll hatch.

And this is right by Peter's house. This happened two or three times, where the swans kept building their nest at the high water mark, and then the water comes up and ruins that. Well, you know, the wildlife that is very much disturbed by this.

MR. HOGAN: Thank you.

MS. NEWCOMB: I'm Leena and I have a cottage on the river on the Montague side, and I'm very interested in what Jeff just said.

I'm a nature lover, and I watch the animal life on the river. And I know the swans are not native; I know

there's a huge controversy about them being here, and know they've been here a long time. But I think that's a good register for what is happening to the habitat, because I haven't seen any cygnets for three or four summers now. Maybe someone else has, but I haven't, and I'm on the river from May til October into November. And the last time I saw cygnets was in 2009.

So whether you love the swans or hate the swans, the point is, habitat is so buried that possibly they're not reproducing. And if they're not, who else isn't?

MR. HOGAN: Good point. Thank you.

MR. PUGH: Don Pugh. I had a question for Mark about the sturgeon study. Are you planning field work?

MR. WAMSER: Yes. There will be field work associated with data collection (inaudible)

MR. HOGAN: Karl?

MR. MEYER: Who is going to have the license to work with sturgeon? There's only a single license to actually handle the sturgeon (inaudible) USGS right now.

MR. WAMSER: We don't know at this point, but we'll resolve that.

MR. HOGAN: Are you actually going to be handling sturgeon?

MR. WAMSER: No.

MR. PUGH: So what was the field work, then,

Mark?

MR. HOGAN: Can you speak up?

MR. PUGH: Don Pugh. So I asked Mark what the field work would be, if they're not going to actually handle sturgeon.

MR. WAMSER: The field work would entail collecting habitat data in the areas where the surgeon are known to be spawning, and assessment would by the project (inaudible) spawning habitat.

MR. COHEN: Russ Cohen, Mass Fish & Game.

So just to -- the comments -- comments that were made better addressing the issue of -- you know, these projects to some extent are chasing power prices and seeking to generate at the time when the prices are the highest. The question is, to what extent does that deviation from the natural run of river cause adverse impacts to the fisheries and habitat and the biota?

Maybe I should have brought this up earlier, but this might be a good time to say that in both cases, the project operators mention that they have a specific pool height that they're allowed to operate under, under their existing license. And the question is, is that number a correct number, or should it be revisited? Is it actually too large in terms of the damage to the fish, habitat, biota because there's too much fluctuation is allowed to occur

within that eight or nine feet or whatever it is, and should that be shrunk to a smaller figure to reduce the fluctuations, to reduce the adverse effects on the fish habitat?

MR. HOGAN: I can tell you that that will be part of our analysis.

Other comments?

(Inaudible) Fish & Wildlife Service.

This is more, I guess, a generic question related to across resources areas specific to FirstLight. So what they are doing is developing study requests to evaluate impacts under existing operating conditions, yet FirstLight has said they're evaluating a number, four to six different developmental scenarios.

So how does that work, and is it appropriate then as they hone in on what developmental changes they may be making through the relicensing process, to come in and be able to say in Year 2, when we know actually what they're proposing to submit additional study requests based on this new information?

MR. HOGAN: Yes, if an applicant were to change a proposal, mid-stride, in the prefiling process, that would be cause for supporting evidence for a new study request. As you know, in the relicensing process, the bar gets higher each time around. But if the proposal changes, that bar

kind of gets reset.

Now, we get something new to look at, unless we feel that the studies that have already been done are also usable for the new proposal, 'no harm no foul.' But if it's something completely different, it is warrant for a new study request.

Similarly, if in conducting existing studies that are required, if they uncover a new endangered species, then we'll have a new study to evaluate the project effects on an endangered species that wasn't known to exist in that area before. So it is -- the integrated licensing process does contemplate those situations, and that's why we encourage applicants to put their proposals in the PAD. So that any proposal that's out there now, we can be developing study requests and then trying to evaluate those ahead of the game rather than trying to do it later on.

AUDIENCE: Even if they don't hone in on any potential new developmental scenario until after the Year 2 of license studies has expired?

MR. HOGAN: When you mean new, you mean something that hadn't been contemplated at this point in time?

AUDIENCE: Well, again, I think that the development of scenarios that have been laid out are somewhat vague. We don't really know the specifics, and so we can't really anticipate what difference might be. And so

until we have more specifics on what a particular scenario would mean, it's hard to generate study requests.

MR. HOGAN: Broad scope study requests.

AUDIENCE: Right.

MR. HOGAN: And hopefully we can work out getting the specificity that you're looking for through the study plan development phase from the Applicants. Because they're going to want to narrow the scope of their studies through the study plan development phase, just for cost purposes. That's the reason we have that 90-day period.

The agency, FERC's going to come in and say, we're going to need this information and you have to provide it based on what we understand the realm of your proposal is. And then we're going to try and narrow that down. And they are either going to provide all the information to cover the broad gamut of potential operations and facilities that they need, are proposing, or they're going to try to narrow their scope down so that they can be very specific with their studies.

AUDIENCE: So to cover the bases, then, our study request should say, not only should this study cover the existing operational conditions, but any anticipated under your four to six developmental scenarios?

MR. HOGAN: That's what we're going to do.

AUDIENCE: Okay.

MR. HOGAN: For example, not to pick on FirstLight here, but they're looking at raising the upper reservoir by potentially four feet. Did I get that correct, four feet? Well, we would be interested in what are the concerns environmentally with that potential increase? That could be studied.

I think we got a comment earlier during the presentation that, if you're going to do that, you're putting more water in the upper reservoir, how is that affecting the lower reservoir? That's a legitimate question. Is that storage available, and that would be something that we would want to look at?

MR. SLATER: Cale Slater, Mass Fish & Wildlife.

Yes, but you picked the only proposal they have that has numbers on it. Their other three are adding a unit at Cabot. Well, what would that mean? Adding or subtracting units at Station 1, what does that mean? For people trying to write study requests, those are pretty vague. What's another unit at Cabot going to add for flows and potential changes in flows? What's adding generation at Northfield -- what does that mean? I mean, there's no specifics there.

MR. HOGAN: But Cale, you're interested, as FERC is, about the environment. So don't we want to design our study requests to identify what does the environment need

for flows, and then we can look at when they do --

MR. SLATER: Well, yes, when you talk about the effects of project operations. If we don't know what the project operations are going to be, it makes it pretty hard.

AUDIENCE: Say example, for entrainment. How is that entrainment risk going to change with increased hydraulic capacity, how is traction to the tailrace (inaudible) increase and decrease with that change in hydraulic capacity? Those things -- obviously they don't have the capacity now, so they can't study it. Yet, the way licensing proceeds, we have them study what they can study, and then what happens down the road is they say, 'Well, we decided we do want to increase.' Then what?

MR. HOGAN: Typically, if we get a proposal, let's use your false attraction, Sarah. And if the proposal doesn't come in early enough; let's say it came in with the license application.

AUDIENCE: Please use the mic.

MR. HOGAN: I'm sorry.

Typically, the way we've handled a situation where, let's say, all the studies have been completed and the Applicant comes in with a license application with a proposal to increase capacity, it may not have been exactly contemplated throughout our licensing process. We have two venues that we can take.

We can then, at that point in time, instruct them that a them to conduct the studies that will be necessary to provide that analysis. The other option would be to handle those studies post-licensing to file a plan to do these studies, and not approve any of the increases in capacity until the analysis could be done after the license was issued.

So we do have two approaches. Does that get at your questions? But we don't make blind decisions. If they're going to increase capacity, and that's just okay. We're going to want to know the environmental effects of any of any of the proposals.

And I hate working in the hypotheticals. But clearly, my message to the licensees here is, get as specific as you can as early as possible, and I think you're going to hear that from the agencies as well.

MR. SLATER: Cale Slater again.

Yes, I think what Melissa was trying to say, though, is you can't study the effect of increased capacity until it's been increased.

MR. HOGAN: You can model a lot of things.

SPEAKER: Could you just explain to me what happens on April 1, 2018, if everybody's thinking they've got a rush to a license. Can FERC say, 'We're giving you a six-month extension on your license, because we're not

bashing the door down and we're not thinking that the paper's got to get done tomorrow,' so we're not all rushing through the door?

MR. HOGAN: That's a very good question. No, it can't, and there's a reason for that.

The deadline for filing a license application is statutory. So it's by law, and it's in the Federal Power Act. What we can do is not issue our ready for environmental analysis notice, which would trigger the actual environmental review process.

So if we get an application in that we feel is incomplete, we would not start our environmental review until that application was made complete. But we can't tell them or grant an extension of time to file the license application. That is a statutory deadline.

MR. PUGH: Don Pugh again.

I'm confused about one thing I've been wondering about for a number of years, as I watched walking out in the cold, and I'm thinking about the three areas that have an effect on the generation and the canal at Cabot, the generation by Northfield pumped storage, and also whatever Vernon wants to generate. Sometimes I want to think there could have been a little better coordination between the three; because if Vernon decides to hold the water back and Northfield decides to suck the water out, and Cabot decides

to pull it through, the water goes flying right down real quick.

That's my thoughts on it, but maybe that's not true. Similar to what the man in the front row asked the question about what would be the environmental effects as far as Cabot, a new approach to generating more power with whatever units they're going to put in down there.

And I don't know if drawing water through the canal has as much of an effect as the Northfield pumped storage does. Those are things I've often wondered about. I don't know if there's an answer to that, nor would it through a model, so to speak.

MR. HOGAN: So if we identify that there are concerns with reservoir operations through our analysis, what are the opportunities for better communication between the facilities to limit those concerns?

MR. PUGH: Thank you.

MR. HOGAN: Thank you.

No questions or comments about the fish passage or fisheries issues associated with the projects?

MR. COHEN: Russ Cohen, Mass Fish & Game.

I would like there to be a study of the survivability of juvenile fish passing downstream in the -- basically, the waterfall that's adjacent to the Cabot station, the hydroelectric project.

MR. HOGAN: Okay, so the Cabot station downstream fish passage mortality study.

VOICE: Yes. There's a, you know, discharge next the building there that's like a 40-plus foot drop, very precipitous. I was just wondering how the juvenile fish survive that.

MR. HOGAN: And is Mass Fish & Game planning to provide a study request?

MR. COHEN: I don't know. I'm just saying that.

MR. HOGAN: I'm going to -- for my benefit, I'm going to ask the question of Ken Sprankel with Fish and Wildlife Service:

You've done some telemetry studies on the shad passage at Turners Falls. Would you be willing to give me and my team a quick overview of what you've found at those facilities? Or are they not done yet?

MR. SPRANKEL: Well, the data's preliminary.

MR. HOGAN: Okay.

MR. SPRANKEL: We're finding, I guess, that some of the preliminary results are, concerns relative to cumulative effects; and that relates to delays -- the fish that we looked at -- again, this is preliminary. Or that the fish generally proceed fairly rapidly from one barrier to the next. Once they reach a dam, they're proceeding upstream or downstream, because we're also concerned about

getting the adult fish back out to the ocean; there are delays associated with (inaudible) through our analysis, to the extent of those delays.

Particularly for shad, for those of you that don't know.

They don't actively feed on their spawning run migration. So the concern is they have a limited amount of energy to complete the process. So we're concerned with the ways -- they won't have enough energy to get back out to the ocean.

MR. HOGAN: Do you have a predicted timeline for when your preliminary results will be final?

MR. SPRANKEL: We'd like to publish it, of course, in a peer-reviewed journal. So we should have a draft possibly by the summer, more rigorous reviews that we would want to have for a peer reviewed publication --

MR. HOGAN: Thank you, Ken.

MR. PUGH; Don Pugh. I had a question of what the FERC -- or how the FERC would try to integrate telemetry studies that consist of one species, one fish migrating through several projects. That the two companies are, so to speak, on the same page.

MR. HOGAN: Yes, we're trying to figure that out, too. We don't know whether we're going to require telemetry studies at this point in time. It's clearly a tool that is available to look at species migrations through the system

that we've identified in our Scoping Document 1.

We're having to deal with two different applicants, and we're going to try to figure that out.

MS. KENNEDY: Katie Kennedy, Nature Conservancy. I have a related comment, that under the FERC resources, (inaudible) that fish migration bullet should be an analysis.

MR. HOGAN: The fish migration -- analysis.

MS. KENNEDY: Yes.

MR. HOGAN: Thank you. I agree.

MR. RAGONESE: I am going to just mention -- John Ragonese from TransCanada.

AUDIENCE: Would you repeat that? I didn't hear.

MR. RAGONESE: You spoke earlier about a shad study that we did working with USGS, associated with what Ken was -- to get out, but to sort of respond to Don's comment.

This is exactly what he did; Don wanted to have a sense of getting involved in a presentation that looks at the effects more than just right at the base. So he's -- we are looking at it.

They're associated with catch through Turners Falls (inaudible) and that is combining information --.

MS. DONLON: Andrea Donlon, Connecticut River Watershed Council.

We certainly are concerned about upstream and downstream passage at Turners Falls Dam.

The project maintenance activities that are also concerned, and aquatic resources would be the annual draining of the Turners Falls canal and what kind of impacts there are on downstream migratory fish' and then what habitat are you (inaudible) are killed. And then the (inaudible) for about a week, and then when Northfield Mountain has to drain their upper reservoir, that's also a concern; they don't do it on a set schedule right now, but obviously the last time was problematic.

They're currently looking into -- maintenance activities.

MR. HOGAN: John, a question for you. I don't know if you heard the comment.

Do you know the schedule for maintenance of the canal, draining of the canal, whatever maintenance you may do; and also, the time of the year and frequency, and also for the upper reservoir, just so we have that information?

JOHN: For the Turners Falls canal, we typically drain once a year for a week. We close the head gates on Sunday night to have the canal full of water for Monday morning. We refill it up Saturday. I'm trying to think: this year's schedule, the original schedule, second week of

September. (inaudible) out for late in September. We've done that. And I don't have that right off the top of my head.

MR. HOGAN: Typically September-ish?

JOHN: Yes. We're not allowed to take the capacity scheduled off line in New England between June 1st and September 15th.

MR. HOGAN: Okay.

JOHN: And then the (inaudible) upper reservoir?

MR. HOGAN: Yes.

JOHN: There are no plans, currently, for the upper reservoir in the near term. Obviously, everyone's interested that (inaudible)

MR. HOGAN: Thank you.

MS. CAMPBELL: Elise Campbell. A couple weeks ago, some U-Mass scientists announced a study they've done on main stem rivers, and they say that it shows that fish ladders don't work. Is that study going to be one of the things that's looked at in this process, or should I send you a link when I get back to my computer?

MR. SEARS: I have that study.

MS. CAMPBELL: You have that, good. Okay.

MR. HOGAN: It will be looked at. He's already on it.

MS. CAMPBELL: Okay.

MR. HOGAN: Yes, sir?

AUDIENCE: Does FERC take a tour of the areas that have been relicensed before that?

MR. HOGAN: We did take a tour of the facilities in October. We scheduled that in October before the PADs were filed, purely because we knew we weren't going to have access to some of the facilities now in January and February.

AUDIENCE: I know, take it further, an actual tour of the (inaudible) in the areas that are affected. A boat tour?

MR. HOGAN: We did take boat tours during those facility on each of the reservoirs. We did not see the entire reservoirs. Each boat tour was approximately two hours on the tours; starting at the dam. For everything except for Turners -- the TransCanada projects, we started at the dam and went upstream. For the FirstLight projects, we started at --

JOHN: Riverview picnic area, down through Barton's Cove and went out to --

MR. HOGAN: John, could you repeat that louder for the court reporter?

JOHN: We started at the Riverview picnic area, we traveled south to Barton Cove, then we turned around and went north up to just south of the Route 10 bridge.

MR. HOGAN: Thank you.

JOHN: You know, like the areas that we're speaking of, but for effect (inaudible) you hear about today, will you take another visual tour of that or not?

MR. HOGAN: I'm going to say that that depends, but we do have, I know FERC Compliance staff that has toured the Turners Falls reservoir extensively on several occasions. What we generally do is, when we craft the studies, specific things are going to be targeted and looked at, and licensing staff is going to utilize the actual study reports and evaluations that are incorporated into that report to inform its analysis and decision-making process.

If we find a need that we feel that we need to see something, it's certainly within the realm of our capabilities

JOHN: During that tour, what was the height of that water? Was it high, medium, low?

MR. HOGAN: If I had to give an assessment, it looked like it was probably about 18 inches below bank full.

AUDIENCE: We were above 179 to probably 180.

Typically, the pond 181-3. It can go down to 176 -- so we're probably --. I don't know the exact number; probably 180-, 181.

AUDIENCE: I will personally invite you to tour on my boat.

MR. HOGAN: Shall I bring some fishing rods?

AUDIENCE: Whatever you want.

MR. HOGAN: Yes, sir.

TOM MINER: There was a second tour by FERC staff and representatives of the Streambank Erosion Committee at the beginning of November, from the Pachaug boat ramp up to the Vernon Dam, and back down.

MR. HOGAN: Yes, when I was FERC staff, I was on that tour; it was Chris Cheney with our Division of Hydropower Compliance; and that's what I was referring to. I know that our Compliance Division has been much more -- has much more intimacy with the reservoir at this point in time.

MR. RAGONESE: Unfortunately, the October tour you mentioned was before we --

MR. HOGAN: And that's important because --

MR. RAGONESE: You can't see the riverbanks.

MR. HOGAN: Thank you.

Other comments about fishery resources or concerns?

(No response.)

AUDIENCE: Quick question. I wondered what your schedule was going forward in terms of today.

MR. HOGAN: I want to take a poll. We've got terrestrial resources, threatened and endangered species,

recreation, land use, aesthetic, socioeconomics and cultural resources.

AUDIENCE: We have got presentations on there?

MR. HOGAN: We've got presentations that are going to be done. I'm going to assume we want to take a break for lunch. I'm hearing yes.

So it's 11:30 right now. Let's try to get through a couple more resources, we'll take a break for lunch at noon. Anybody have a preference on a half hour or an hour? Half hour break for lunch would seem to be the goal.

What I'd like to do is try to get through -- we'll stop wherever we are at noon and we'll take a lunch break. We'll come back, finish up the resource areas, and do presentations.

SPEAKER: Based on a question that I heard from the back, I'm wondering if there were people who weren't planning on spending the whole day here like other people were, and would they want to get those presentations over with and then leave?

MR. HOGAN: I'm seeing a lot of nodding heads Yes.

The question is, would folks rather give their presentations now and then pick up with the resources concerns after lunch? Show of hands.

(Show of hands)

MR. HOGAN: Why don't we do that. I'm pretty flexible.

Who would like to go first? Step right up.

(Pause.)

MR. BATHORY: I'll read the first part so I can be brief.

I'm Michael Bathory, one of four landowners of 2300 feet of riverfront conservation land in Gill. Our conservation restrictions are held by the Mass. Department of Conservation and Recreation. We are members of Landowners and Concerned Citizens for License Compliance, and the Connecticut River Streambank Erosion Committee. We are assisted by the Connecticut River Watershed Council, which serves as a nonprofit umbrella organization for our landowner's group.

The last FRR -- full river reconnaissance -- stated that the rate of erosion is decreasing in the Turners Falls pool. FirstLight continues to maintain this in Section 4.2.4.1 of the PAD under FRR Studies. This is in spite of thorough challenges in FERC filings by the Streambank Erosion Committee and studies commissioned by our landowner's group, also filed with FERC.

Clearly, FirstLight and their consultant were not looking at the erosion on our land. So rather than repeat

the information that we have already sent to you, here is the opportunity to briefly look at photos of the erosion on our riverbanks, and to lobby for a standard FRR methodology going forward that is repeatable and comparable from one FRR to the next, rather than a new one being used each time.

We want to demonstrate why the current and previous owners of this conservation land have been so persistent in trying to get your attention about the severity of erosion of our riverbanks, and why the current restoration is several decades too late. Unfortunately, I don't have a PowerPoint, but if anyone would like a PDF, leave me your e-mail address and I can get that to you.

I just gave packets of information to all the FERC reps. If you look at page 2, that map shows the location of our section of riverbank upstream from the tailrace and the picnic area. That's on page 2.

If you turn to page 3, it shows the beginning of the restoration of this section, or these sections, starting in December 2012. And the bottom picture shows the view of the construction road that you would have seen on the boat tour in October. Unfortunately, as I said before, before they got conditioned.

If you look at page 4, again it shows some of the beginning stages of the restoration of our banks and creation of the construction road. This is year one of the

project in December 2012. Year two will be completed in the fall of 2013.

If you'll look at page 5, new attempts to buttress eroding banks in this first year. There will be additional efforts in the second year, but you can see root rods and run ins (**) driven into the bank there, the first two pictures. On the bottom, it shows some trees that have slumped down to the bank and had to be cut off in the near picture and in the far picture there. The contractor felt they had to cut these off for safety.

Go to page 6. Looking up, that tree root was exposed to erosion at the top of our 17-foot banks. It's a tall oak tree there on the upper right, and below that you see some areas, surface damage, slumping that has occurred on our land for years, leaving root rods exposed on the tree on the upper corner of that picture.

Larger wooden structures will be installed in the second year. We're hoping that some of these areas pictured here will be buttressed by those, and some of these large soil blocks will fall and be supported by the structures, rather than washing downstream as they have over the years.

Look at page 7. Again, trees and root rods cantilevered out over the top of the bank. You can see from the construction road in December 2012. The bottom picture shows a typical tree that has begun to slump. Sometimes

these trees slump and stand up straight for awhile, and sometimes they lean like that one. It gets undermined at the top of the bank.

If you look at page 8, these are large trees. They used to be at the top of the bank, and began to slump, and eventually they were too large to be held up standing up, and collapsed onto the river, onto the bay. If you look at the arrows, you'll see a stump sort of darkly highlighted there.

If you turn to page 9, the last page, that stump again is in the lower photograph. These are photos of the tree at the top -- the top picture, the tree at the toe of the bank in 1960, and the stump of the same tree in 2012, demonstrating erosion that has occurred over 52 years. The former owners of our property always maintained two markers on our bank, at the stump and the oak tree at the downstream end of our property.

The picture, with John Kofel and a buddy sitting on the top, that was at the base of what used to be a secondary terrace. This lower terrace we got to with a six- or eight-foot drop at about a 30-degree angle, down to where they were sitting in 1960. The oak tree at the downstream end of our property was one of the licensee cross-section sites for monitoring erosion. This tree -- we don't have a photo of this -- but this tree used to be over 30 feet,

actually, from the edge of the bank, and is now less than six feet.

So an information request that I might make is to have this cross-section 8A, the information of this, as far back as possible to actually demonstrate the amount of erosion that has occurred.

I don't have photos for everyone to look at, but if there are any questions based on not having seen the photos?

(No response.)

Okay. Thank you.

MR. HOGAN: Thank you. We've included a copy for the record.

MR. BATHORY: Thank you.

[The document follows:]

MR. HOGAN: Who would like to speak next?

Yes, sir. Come on up.

(Pause.)

MR. WETTLER: Hi. My name is Tom Wettler (ph) I'm from the Social and Environmental Research Institute. It's in Greenfield. I just want a second.

I'm a sociologist. I study public engagement processes. I learned about this process just the other day. I e-mailed Ken here to tell him that I would be here.

I just have some questions. I have a survey questionnaire. It would be great if people would fill it out. I have some cards with a URL, and on the back, if you want to take it on your cell phone. All I'm doing -- I'm not evaluating this process. You can fill out the survey whenever you want -- after one meeting, after ten meetings. I'm just looking for correlations between variables to test a theoretical model of how communication in public engagement processes happens, and how people perceive what's going on.

I'm not going to write a report about this process. All my data from multiple cases gets thrown together, and it'll contribute to theory. It's funded by the National Science Foundation.

So if you have time to fill out a short survey some time during this process, I'd appreciate it. Thank

you.

(Pause.)

MS. NEWCOMB: I actually don't think I need the mic. You can let me know. Somebody raise their hand in the back if they can't hear me.

I've never done this type of meeting. Okay. My name is Leena Newcomb, and I own a cottage on the Horse Race section of the river up here in Montague. I've been asked to speak on behalf of the River Residents Association. The River Residents Association is dedicated to preserving a life worth living on a river worth loving.

The Association is comprised of people who own camps, cottages, homes and land, and also are members of private clubs that recreate on the Connecticut River within the Turners Falls and Northfield pools. We are very concerned for the future of this beautiful natural resource, as well as our existence along the riverbank. As many of us live on the river, we see things changing, sometimes on a daily basis.

Our major concern is the negative effects we see occurring from extreme erratic water level fluctuation. And I know it's what's being talked about a lot, and we have to talk about it too.

The following are observations by people who live and recreate along the river. Many of us have been here

for decades. We prepared poster boards with images purposely, because we could feel it's more tangible. It's more hands-on. It's more personal. I will reformat that into paper handouts and on a CD to get it to the Commission more conveniently, because you probably want to carry those home with you, but you can't.

Some of the observations that we have seen include, but aren't limited to: shifts in the shoreline and the riverbed, erosion along the shores, loss of recreation areas that allow boat access that now have no shoreline, only steep banks to climb up for access to the shore. Sediment, silt builds up in the coves. We see it in shallow backwaters along shorelines, near marshes, at the low tide. Sandbars that come and go, algae growth in Barton's Cove, damage to personal property at low tide, meaning our doors become torqued (**), our boats stranded on rocks and stuck in the mud.

Wetland area, the cattail marshes, those different kinds of habitat. These keep changing. We see some of them damaged. Land mass lost around the islands, sandbanks and the swallows that are now gone. Beaches appear and disappear within hours or days. The backwaters, the shallows, the coves, those depths changing and/or diminishing, less heron, osprey and kingfisher sightings, less dragonflies seen, and changes in the fish families.

Also, as others have mentioned, nests of fish eggs in the coves and shallow areas getting exposed at low tide.

We believe everyone here wants to work together to ask the right questions, and to find effective solutions. And we feel that we, the river residents, are an integral part of this process. Is there a way to create moderation, or even eliminate altogether, the water level fluctuation? That's my question. Can it be regulated and should it be regulated?

Cynthia has been holding up some of the different images. They'll be there for you to look at during the lunch break. I'll be back tomorrow evening as well, for other people to look at.

Our second concern is about our continued existence as river residents along the river. Most of us in this Association are camp owners with a license agreement allowing us to occupy the land. Our existing structures are a historical use that began back in the early 1920s, and the previous licensees for these projects issued permits to manage their use.

However, prior to 2008, the previous licensors did not seek Commission approval for these uses and occupancies on project property. Someone dropped the ball along the way. And we owe a great thanks to Mr. John Howard of Northfield Mountain Pumped Storage Facility for noticing

this oversight. He realized there was no mention of the existing residential and private structures, and took action to correct this.

An application was filed in October 2008 requesting Commission authorization to issue revocable five-year licenses, as well as life use licenses known as permits, for us on land at the Northfield Mountain and Turners Falls hydroelectric project. The Commission granted an order modifying and approving non-project use of project lands and water. It was issued October 28, 2009.

As the licensees, we are mandated to do certain things. We're expected once every year, and be in compliance with terms just like hydro generating companies set forth. As you can imagine, it's unsettling to not know if all our love, sweat and money spent on our river homes will be for naught at the end of the five-year license.

The power company reaps many rewards using the river to generate power, as does the community. For nearly 100 years, our families have been living and recreating on this stretch of the river. My grandchildren are now fifth generation to grow up at our cottage. They're two years old and seven years old. We've been here a long time.

We see ourselves as an asset for this majestic waterway, and yet we have no reassurance that we'll have any future on it past five years. It's a very one-sided

situation and tenuous position to be in.

We act as caretakers. We are self-appointed stewards. We are the eyes and ears of the woods and the water. We investigate smoke sightings in the woods and have aborted forest fires. We provide shelter and rides to people in canoes who are caught in storms. We tow boaters out of gas or with broken engines and props. We rescue anglers who fall overboard, believe it or not -- some of them can't swim; rescue kayakers during cold water months, pick up countless amounts of trash after the weekend warriors. We assist novice boaters and escort weary paddlers, rescue women in labor off the water and get them to the hospital. And sadly, we even help search for bodies.

As proprietors of our footprint, we take very seriously our investment, both financially and emotionally. Our lifestyles on the Connecticut River, we take them seriously. The majority of us have remodeled and made improvements to our property. We've taken great pride in bettering our environment. We've given gladly, and we're gifted by the beauty, serenity and solitude the river offers. We delight in her recreational diversity. We celebrate family and friends generation after generation, and we continue on year after year in blind faith that our five-year licenses will be renewed. Does it seem equitable?

We'd like a clearer understanding of how the

licenses are administered. We were under the impression that FERC governs over the use of the land, and according to the language in the order approving use of project lands, dated October 2009, it appears that FirstLight Hydro Generation Company makes the decision governing the licensor.

We ask, does FERC have any say in our interest? Is there a liaison within the FERC organization that can work with our association in helping us better understand our rights and our responsibilities? How can we alter the current arrangement to meet our present and future needs?

We respectfully ask consideration in lengthening the license term commensurate to the number of years approved for FirstLight Hydro's new license to operate, beginning in 2018. What is the procedure to effectuate this?

We endeavor to continue to assist and promote ongoing cooperative relationships with all parties' interests in mind. We thank you for your time, and we respectfully submit this inquiry and these photographs to the Commission. Thank you.

MR. HOGAN: Thank you.

Who would like to go next? We have about a dozen hands.

MR. LOVEJOY: My name is Sam Lovejoy. I just

want to bring up two broad-brush points. I'll try to figure out how to do a study request, but I think that at some point the mission of FERC should give FERC the opportunity to make some requests, and that'll be the end of it.

The first one is, we've got two Applicants, two corporations, several projects, and they don't talk to each other. I mean, literally, Vernon can be dumping water and Turners can be keeping water. I mean, it's nuts. And there's got to be a way in this license process for FERC to look at these two Applicants and these projects, as well as probably the rest of the projects up the Connecticut River -- I mean, there's got to be a way to tell these corporations that get licenses to operate these water resources to talk to each other and coordinate their uses so that there's not this idiocy which now and then breaks out in each of the pools.

The second point, I think: 50 years ago, the Turners Falls dam, which creates a pool, and the pool was allowed to be used to run the Northfield pumped storage facility. And every now and then, you'll hear people refer to the Turners Falls pool as the lower reservoir of the Northfield pumped storage facility.

Now, I always thought this was the Connecticut River myself. Then I sort of realized they've got a dam there, and we've got a pool. I sort of get that. But by

the time we're talking about it as a reservoir, I sort of feel like we're not using it as a river anymore. We kind of like have twisted the attitude.

So I'd like to say to FERC, FERC ought to say to themselves that, 50 years ago, you allowed the Turners Falls pool -- an experimental use for the Northfield pumped storage facility. And now, I would like you to pull the plug on that experiment, and I would like you to actually analyze, and request the utilities to analyze, what it would cost to create a closed loop.

Now, I've brought this up before, and everybody goes, whoa, that's expensive, and there's no room, and this and that. I'm sorry. If you give them a 30-, 40-, 50-year license, and you amortize the cost of this pool, what you're going to do is, you're going to buy huge goodwill. You're going to end all the arguments related to this Northfield pumped storage causing these problems, and you will have a closed loop so that we don't have to worry about what you're doing, you know, generating power. Is it peak, is it base, what's going on? You'll just have a project.

I understand New England needs this power. Northfield definitely creates peak power. But I'm requesting that FERC requests of the utilities that they actually analyze what it would cost to create a closed loop and amortize it over the length of its license period. And

I don't care if other utilities are forced to, like, join in and help pay for it. I think you ought to analyze the closed loop.

Yes, Turners Pool was the easy way to go. Now's the time to say, the experiment's over. We're going to move forward with a project with a closed loop, no more Turners Falls lower reservoir. Let's have our river back.

And then I just have to bring up, because I have several people who asked me to do this -- sort of the purposes of negotiation. It was suggested that perhaps we not just ask for a closed loop, but we actually ask for the removal of the Turners Falls dam as a negotiating message. We would give up asking to get rid of the dam in trade for, for instance, the closed loop.

But I understand that was a little tongue in cheek suggestion. But, you know, on your way home to Washington, maybe you can laugh.

(Laughter.)

MR. LOVEJOY: The fact of the matter is, there's got to be an economic analysis, which is more important than any environmental analysis right now, to tell us: is this the logical thing to do? Thank you very much.

(Applause.)

MR. HOGAN: Thank you.

Next speaker. Nobody?

MS. TUFTS: My name is Jennie Tufts. I'm here representing two entities, actually, but mostly the Greater Northfield Watershed Association today. I'm also on the Open Space Committee for the town of Northfield.

How many people here are from Northfield? I'm not sure.

(Show of hands.)

MS. TUFTS: Great. There will be someone here tomorrow night also representing the Open Space Committee, who seems to be taking the lead right now for the town of Northfield.

The Greater Northfield Watershed Association is a 501(c)(3) nonprofit organization devoted to protecting the tributary watersheds of the Connecticut River in the area of Northfield, Mass., and preservation of surface and groundwater resources. I am writing and speaking on behalf of our membership, which consists right now of 79 families and individuals who are members.

Our town borders three states, and is the only town along the Connecticut River with lands on both sides of the river. Northfield is acutely affected by and extremely interested in what happens during the scoping and relicensing process for Northfield Mountain Pumped Storage Project and the hydroelectric facilities at Vernon and Turners Falls. This river is critical to our members, both

as a recreational and an economic resource.

Since 2005, the Greater Northfield Watershed Association has partnered with the Open Space Committee and the Conservation Commission in Northfield to preserve land and water essential to maintaining the forested landscape, to connect people to the recreational assets of the town, and to protect the rural character of our community. Local farms and businesses depend on these natural resources, and access to the river remains key to the future identity of our community, just as it was to the history of our community.

The people of Northfield, especially our members, value our natural resources and believe they will become more, not less, critical to our health and well-being over the next 30 to 50 years of this relicensing period. The river and its tributaries have defined this town as sources of power, transportation, boating and swimming, river views, wildlife and game, not to mention valuable sources of water and food.

Water quality, as I said earlier, must be a priority of the corporations that harvest water for power generation. We call for a good-faith sharing of the profits from hydroelectric power generation to be reinvested locally, to fund programs to modernize sewage treatment plants and stop the preventable dumping of pollutants into

the river.

This is not a wealthy community in economic terms. Franklin County is the poorest county in this state, but its true wealth lies in the natural resources of this river valley. This is exactly the time for bold planning and investment in the future of the river.

Therefore, GNWA wants to support Sam's comments, the Connecticut River Watershed Council, the Connecticut River Stream Bank Erosion Committee, in the call for serious studies on the feasibility for a closed loop reservoir system, and other mitigating systems that will cause less disruption to the natural flow of the Connecticut River, and protect its fertile flood plain from erosion or pollution.

Large infrastructure projects have served this country well in the past, and must not be ruled out as solutions to the problems of today. We call upon regulators to require a state-of-the-art and thorough environmental impact study of the basin towards its relicensing. Anything less is not good enough for our members.

Our concerns include the effects of the dam, constant but unpredictable water fluctuation, barriers to migratory and resident fish, as well as warming of the river from Vermont Yankee nuclear power facility, which is dependent on Northfield Mountain Pumped Storage Project as a consumer for its electric power generation.

Our riverbanks provide essential habitat for scores of aquatic species. Specifically, we would like to see a more vigorous effort from FirstLight Hydro Generating Company and TransCanada Hydro Northeast to improve the Turner Falls fish ladder and canal, and the conditions in the river that will benefit spawning habits of shad and other native species.

In terms of recreation, the lack of predictability in the drawdown of water by the pump station, as well as heavy silt, are a major impediment to boating at the Northfield Patchaug state boat ramp. GMWA would like to see a deepening commitment to recreation, including funding and development of riverside trails and additional boat launches.

While I wish to commend Northfield Mountain for its existing recreational and wildlife programs, I would also like to see them establish a more frequent mechanism for regular updates and dialogue with local officials and NGOs to determine the optimal use of those resources dedicated to public programs.

GNWA views the scoping and relicensing process as an opportunity to plan for a better quality of life along the Connecticut River over the next 50 years and beyond. Provisions will need to be in place to deal with increasingly severe weather events that are now the norm.

Climate change threatens to challenge us in ways we can hardly imagine. It is impossible to predict the demand our residents may have for precious local natural resources, as fuel costs climb and demand for food and water grows nationwide. Government and power suppliers will need to be more flexible in responding to changes at the local level.

These debates can't be every 30 or 50 years anymore. They have to be regular, even every five years, in my opinion. Where we have the chance to speak to both the federal government and the utility companies, whose headquarters and personnel are often very removed from our town and our state, even, the public wants reassurance that management of these power systems will be responsive to local needs and concerns.

We will be following these negotiations closely in the months and years ahead, and urge the development of creative and responsible initiatives that will serve the public good well into this century. I do thank you for the opportunity to address the Commission with our concerns.

I just wanted to point out, my grandfather was involved in developing flood control measures following the 1936-1938 storms that flooded this river. It's just really interesting for me to be here in this position when I look ahead at the potential for serious flooding and serious drought from global warming. I don't want to let an

opportunity pass to say, we have to think big in this process.

Thank you.

(Applause.)

MR. HOGAN: Thanks.

It's now 5 after 12:00. I need to see a show of hands of folks who'd still like to speak.

(Show of hands.)

MR. HOGAN: One? Come on up, and after that we'll take a 30-minute break for lunch. When we reconvene I'll pick up on the resource issues.

MR. CONWAY: I don't have anything prepared, so I'm probably going to fumble along on this. For one reason, what Sam said -- he stole my thunder. I had all this stuff ready in my brain, but I'm going to agree with most of what he said, and our lady from Northfield the same way, too.

I have my finger here up on December. This is at the use of going below the Turners Falls dam to try to find the hole to keep the water from flowing out of the reservoir. But I'm giving up on that too.

I'm Peter Conway. I live at 47 Riverview Drive in Gill. I live in a 1910 farmhouse bought just about ten years ago, so I'm not a longtime river person. But being on the river is something I've done all my life, since I used to fish the Green River. Caught my first fish at three. I

didn't throw it back, Charlie. It was not a catch and release, by the way. I want you to know that, I kept it.

So as far as the Connecticut River is concerned, and what I've seen over ten years, it's really amazing how that water goes up and down. And I'm concerned about the future, as far as Northfield is concerned; about the increase in putting more water into the reservoir and dropping it down even lower. I think there needs to be coordination as we've already mentioned between the three areas. I hope that FERC can address that with a good bit of force.

As far as the loop system, which I think would resolve a lot of problems here, the loop system, as far as FERC addressing these different entities and so forth, it's really the investors that are going to look at it and say, yeah, we don't want to put that kind of money in. Because once we get this license, in a couple years, wait a few years, we're going to turn it over anyway. We're going to improve that place.

As far as the people that run all of these dams and hydro plants and Northfield pumped storage and everything, they're workers. They do what they're supposed to do. They're not the real issue here. It's the investors who say, this is what we want, this is how we want you to operate it, and hang on.

So our real force here is FERC. And addressing the issues we have today, I'm concerned about what I see in front of me all the time since I've been watching them for ten years. I no longer have the eagle's nest to look at, because the tree fell over. But I see the cove and the way light changes. I watch the way the fish have to change their habitats, and how these fish survive -- I mean, they lay their eggs, and the eggs become food for other kinds of things, and so forth. But when the water goes down and all of these nests dry up and they stay high and dry for several days sometimes, that's the end of that game as far as the bass population and pumpkinseed population coming in. They just dry up.

There are times when -- they cannot leave the cove, by the way. The water is too low for them to get out. They can't do it. And if you want to take a trip and show your price off, you know how to manage the river(**). So this is something I'm not going to see 50 years from now. I'm not going to be here. If you're 20 years old, probably you are, but in 50 years from now or 30 or 40, changes are going to be immense in that period of time. Changes are going to take place.

You're going to have a license that is going to be granted in five years. You're going to have different situations in what you feel the power companies should do.

Certainly coordination is a big issue here with these three levels, as this 20-plus miles of the river is concerned. They've got to get together on this.

And so, I hope that will come about. I won't see it happen. I'll hear about it in 2018, I hope. But I do enjoy my place on the river. It's a real peaceful place, and I know that all the people up and down the river who go up and down the river in boats or camp sites or everything else enjoy that, too. I don't like seeing these people on the weekends when they show up to have their fishing derbies just go out there and recreate, go out in the morning at 9:00 in the morning, and come back at 3:00 and can't get their boats on the ramp because it's changed that much. And they don't know any different anyway, some of them. Some of them, the first time out on the boat, for example, they put that boat in when the water's going down. By the time they get back, forget the problem and everything else. It's gone. You could do cartoons about that part.

So I appreciate being able to get up here. Most everybody has said what I want to say. I hope that this goes somewhere, as I said to you.

MR. HOGAN: Yes, it will.

MR. CONWAY: Thank you very much.

(Applause.)

MR. HOGAN: It's almost quarter after 12:00. Why

don't we reconvene at quarter of 1:00? Thank you.

Real quick, before we take a break, if you didn't sign the sign-in sheet when you came in, please sign it on your way out. We just want to make sure we capture everybody who was here. It will help the court reporter with writing down names and making sure the spelling is correct.

(Whereupon, at 12:15 p.m., a lunch recess was taken.)

A F T E R N O O N S E S S I O N

(1 p.m.)

MR. HOGAN: All right. We're going to get started again.

(Pause.)

MR. HOGAN: If we could just take our seats, please.

Thank you very much. Hope everybody had a good, quick lunch. Some of us are still having it.

We left off going through the resource areas we've identified and would like a few comments on. Terrestrial resources, I'd like to start there.

Terrestrial Resources

MR. BATTAGLIA: Hello. I'm Brett Battaglia with FERC. I'll go over the initial FERC issues identified for terrestrial resources. They are the same for all three projects that we're discussing today.

First is effects of project fluctuations in water levels and flow releases from the projects on riparian wetland and littoral vegetation community types, and the spread of invasive species as a result of project operations along the shoreline of the projects; effects of project operation and maintenance activities, for example road and facilities maintenance, and project-related recreation, on wildlife habitat and wildlife; effects of project operation

and maintenance on river bank integrity and shoreline erosion along the project reservoirs and stream reaches, and its potential effects on riparian vegetation; effects of the frequency, timing, amplitude and duration of reservoir fluctuations on the water flow and on riparian and wetland habitat. And lastly, the effects of project operation and maintenance and project-related recreation on bald eagles and their habitat.

MR. HOGAN: I'd like to know -- we did hear one comment earlier about project effects on reservoir fluctuations and waterfowl. I'm glad to hear that we got that one right.

Oh, we're missing TransCanada. Come on up.

(Laughter.)

MR. RAGONESE: I just filed an extension.

MR. HOGAN: Denied.

(Laughter.)

MR. HOGAN: We'll do FirstLight first, and then we'll switch to TransCanada.

MR. HOWARD: Okay.

In our PAD, we did propose a study. This is kind of a baseline, background study that incorporates several resources under one. But a baseline inventory of botanical resources in the Turners Falls bypass, versus the impoundment, and the bypass, and below Cabot. And what

we'll be looking at when we do this survey work is wetlands, wildlife, threatened and endangered species. SAV stands for Submerged Aquatic Vegetation, and emergent aquatic vegetation, and the littoral zone. We did hear this morning concerns about fish spawning, and then if the reservoir elevation would drop, what the impact is. This is the type of study that would look at the littoral zone and those habitats.

That's what we have.

MR. RAGONESE: Hi. My apologies for being a little late. It was those extra fries.

In our PAD, we did not identify particular proposed studies. Similarly, we didn't have any specified mitigation measures regarding terrestrial resources. And as I mentioned earlier, we did a shoreline survey, and as part of that shoreline survey we did identify wetlands, tried to confirm those were in the National Wetlands Inventory, mapping riparian vegetative types, and to the extent from a timing standpoint we're out in the field, identification of invasive species. This would include all three impoundments, in particular for the topic today, the Vernon impoundment.

Then we also conducted, as I mentioned earlier, the rare, threatened and endangered species survey. In all cases, all three impoundments that we did that, the basis of

that were lists that were provided. When I say rare, threatened and endangered species, I'm talking about state-listed species, not just the federal species, of course.

We had asked for the list to encompass a thousand feet either side of the river. And then we prioritized those into different categories, depending on whether or not they were likely to be impacted or potentially impacted by project operations, versus those that weren't. And then we conducted the full survey of the ones that were likely to be, and those that were potentially. And those that were far beyond, we did not conduct any further investigations. They were out of the project.

We probably found about, of the total sites we ended up recording, maybe about 40 percent of those were new locations, new sightings. Again, this will be in a report that will be out soon. The specific locational information is not probably going to be available. You'll have to request that through the states of Vermont and New Hampshire for the inventory information, and they may have some sort of confidentiality statements for that.

That's it.

MR. HOGAN: I'd like to seek comments on potential project effects, concerns or compliments regarding terrestrial resources, wildlife habitat, vegetative communities, things of that nature.

AUDIENCE: I do, yes. I'm trying to figure out the way things go from here on out. Because I think that a lot of the comments we had earlier cover a lot of what's coming up right now.

MR. HOGAN: There's certainly been a lot of overlap.

AUDIENCE: So there's been some overlap, so I didn't want to go into that area.

I didn't know about the -- I think when the gentleman from TransCanada there just spoke about showing a thousand feet on each side of the river. Is that what's happening there?

MR. RAGONESE: You need to request information from state agencies -- the National Heritage folks. It's either a request about a range, some sort of range, you know, some delineation of what you want for their list. And then we have lists. -- not affected by the project.

We want to make sure we encompassed areas and other adjacent areas besides just the river corridor.

AUDIENCE: So you get an overlay from them and then you look at it --

MR. RAGONESE: It's not an overlay. It's a list that will have the locations identified; some case on a map, some cases an area, it's a reported area that might have been a sighting back in 1920, or whatever it might be. Some

of them are very specific, some of them are very broad. So you spend a lot of time actually looking for the records linked.

AUDIENCE: Thank you.

MR. HOGAN: Any other comments or questions?

MR. JAHNIGE: Just a question. Paul Jahnige, from the Department of Conservation and Recreation.

For FirstLight, I can't remember if your list included the whole of the Northfield Project lands in your baseline inventory.

MR. HOGAN: Was your list all-encompassing of all the lands in the Northfield Mountain project area?

AUDIENCE: It was lands adjacent to the Turners Falls impoundment, the bypass below Cabot.

MR. JAHNIGE: So that would not include the rest of the Northfield Project lands; and I would note that there be schedule impacts from O&M of the Northfield Mountain on that end; also project-related recreation on various terrestrial resources, natural communities.

MR. HOGAN: So we should be looking at terrestrial effects basically on Northfield Mountain?

MR. JAHNIGE: In terms of baseline inventory, they should definitely expand that to include the full extent of the project lands.

MR. HOGAN: Thank you.

Other comments regarding terrestrial resources?

(No response.)

MR .HOGAN: Okay.

Threatened and Endangered Species

MR. HOGAN: Threatened and endangered species, it sounds like we've kind of touched on. Do we want to go into more detail about threatened and endangered species, or we can we call that one covered already?

MR. RAGONESE: I think it would be important to note the discussion we had in one of the earlier meetings this week on whether or not some of these are cumulative impact, or not.

MR. HOGAN: Thank you, John.

I'm going to let Mary McCANN actually address the comment about the beetles and cumulative impacts.

MS. McCANN: I'm sorry, you're asking about what is under the cumulative impacts?

MR. HOGAN: Tiger beetle.

VOICE: Oh, the puritan tiger beetle? If that's identified within a project area, then that would be something we'd be evaluating. That includes downstream of the project. It could have cumulative impacts from multiple projects in the way the flows go downstream.

MR. HOGAN: Our Scoping Document 1 identified this threatened tiger beetle as being in the TransCanada

project facilities, but what we learned through our scoping meetings is that it's actually located downstream in the Turners Falls project area.

MS. McCANN: So we'd be clarifying that in the Scoping Document 2.

MR. HOGAN: Right. Sp we're going to provide clarification, but we also recognize that flow fluctuations that are coming down from the TransCanada projects and being perpetuated through the system may provide a cumulative effect to the tiger beetle or its habitat that we would be addressing.

So I think that's the clarification you were asking for, John?

MR. RAGONESE: Yes. Two parts. Yes, because in our list of threatened and endangered species, we only have one that has a cumulative impact aspect versus the other two, but it mentions tyrian tiger beetles. Whereas I don't think the puritan tiger beetle is mentioned at all in the FirstLight resources, regardless of whether or not they're cumulative impacts or not.

MR. HOGAN: It sounds like they're going to get on top of that. I'm getting nods.

MR. RAGONESE: Well, I know you are. I was more thinking of that scoping document.

(Laughter.)

MR. HOGAN: And we will fixing the scoping document.

MR. JAHNIGE: Paul Jahnige again.

Am I correct that your interest in threatened and endangered species at the FERC is relative to federally-listed?

MR. HOGAN: No. We're interested in all species. Different species carry different weights. When we set up our environmental analysis, we will have a threatened and endangered species section that carries with it the federal authority. But we will address state species of concern, and things of that nature.

MR. JAHNIGE: And I don't know if it's listed or not, and I don't actually know what the current status in, but I do know that there's peregrine nesting within the Northfield project lands as well.

VOICE: Peregrine nesting?

VOICE: Yes.

VOICE: Nesting, okay.

MR. HOGAN: In Northfield?

VOICE: At the Northfield project, and specifically I think the ledges, the top of which is within the Northfield project lands.

MR. HOGAN: Other comments regarding wildlife or wildlife habitat and project effects, or threatened and

endangered species?

(No response.)

MR. HOGAN: I'm going to have Adam present: Recreation, Land Use and Aesthetics

MR. BEECO: As far as recreation, land use and aesthetics is concerned, it's the same issues, opportunities and concerns that have been identified for all three projects. I'm just going to read through these.

The adequacy of existing recreation and public use facilities in meeting existing and future public use and river access needs. Effects of project operations on quality and availability of flow-dependent and water level-dependent recreation opportunities, including boating; adequacy of structural integrity, physical capacity, and/or management methods to support recreation use at existing facilities. And under land use, the adequacy of existing shoreline management policies and programs to control non-project use, project lands, and the adequacy of shoreline management buffers to achieve project purposes in compliance with local and state requirements.

Under aesthetic resources, at this time we have not identified any aesthetic resource issues.

MR. HOGAN: We have a question. Leena?

MS. NEWCOMB: What does that mean, you haven't identified any aesthetic --

MR. HOGAN: What that means is that currently we haven't identified any aesthetic resource concerns. We're here to be told that we're wrong. So if you have concerns that affect the natural viewshed -- you don't like your mudflats or some other thing that we've already heard, or something new -- we want to hear it.

MS. NEWCOMB: Well, I don't want to repeat things that have already been said. A lot of it has been covered in the photographs I brought.

MR. HOGAN: Okay.

MR. BEECO: And there are other things in past meetings that we acknowledged; but for this purpose, we just read from the scoping document. So we are, been made aware.

MS. NEWCOMB: Okay.

MR. HOGAN: But if you have something that hasn't been raised, and want you to raise it in a minute here.

MS. NEWCOMB: Always petty things.

(Laughter)

MR. HOGAN: They're all important.

MR. RAGONESE: Again, in referencing the PAD that we filed, we did not specify any particular recreational study. We know that we'll be doing some analyses, and we didn't specify particularly any mitigation or enhancement measures, propose any.

I will make a note that in the part of the

shoreline survey that we performed, we did take notes of public and private recreation opportunities, as well as in the PAD there's quite a bit of information about public and private recreational resources that are already adjacent to the project areas; and we refer you to those.

Again similarly for land use and esthetics, we did not propose any particular studies or have a particular PM&E measure proposed in the pre-application document.

MS. BURGO: My name is Sara Burgo. I work with TRC. I'm assisting FirstLight in the relicensing of its projects. TRC specifically is going to be working on recreational and cultural resources issues.

With respect to recreation, the first thing I wanted to note is that in 2011-2012, we started an inventory of FirstLight's recreational facilities and recreational opportunities within those two project areas. We've done that on a seasonal basis, and we've completed the fall, summer and winter portions of that inventory. The results of that inventory is the information that you see in the PAD and the figures there.

We have not been able to do the winter inventory for two winters because of lack of good snow conditions. We're hoping we're going to be able to complete it this winter, so hopefully we'll get a big flood of snow.

So that's one proposed study is just finishing up

that baseline inventory, which as I said sort of catalogues what's out there, what kind of amenities are at each recreation area, and for the weather conditions, what condition these amenities are in.

We also in the PAD have proposed a couple of studies. One is sort of a recreation/user contact study. The objective of this is to figure out whether current recreational facilities are accommodating the amount of use that they're receiving, and determining what other needs are out there that aren't being met, if any.

We are going to do a land-use classification inventory. That's really sort of a survey to figure out what land activity is going on within the project boundary, and then how to appropriately manage those during the term of the new license. That also means non-project uses versus project uses.

And then finally, we're going to take the results of a lot of the different studies and determine whether or not project operations, water level fluctuations, are impacting recreational use within the projects; getting to some of the concerns that we heard this morning with regard to whether you can actually launch a boat at a boat ramp, whether a site is eroding, et cetera.

We did not specifically propose anything for aesthetic resources.

MS. NEWCOMB: Hi, Leena Newcomb, River Residents.

Can you tell me what's available for tenting upriver besides the Barton Cove campground?

SPEAKER: The only other location in our project boundary would be the Munns Ferry.

MS. NEWCOMB: And there's a facility there for overnight tenting?

SPEAKER: Yes.

MS. NEWCOMB: And what does the facility consist of?

SPEAKER: There's about a dozen campsites, right along the river's edge. And it's accessible by boaters only.

So if you canoe or kayak down the river, and make reservations in advance, you can spend the night there.

MS. NEWCOMB: Okay. And is there anything upriver from that one? Is there anything else available?

SPEAKER: Not that we're in control of. And I'm not aware of any.

MS. NEWCOMB: Okay. But that has been a question and a concern that I've heard through the community, through the boating community and the other recreational water users, is that there's not enough available. And there seems to be so much rural land not being used for anything else, is it possible that there should be another site to

accommodate people.

And concern about the fee at $22 a night to sleep in a tent.

MR. RAGONESE: Just to carry that, just a little more information.

It's TransCanada project land, that actually below Vernon, there's a canoe campsite that's a privy, that type of thing. And there's another one north of Yankee somewhere in on the Vermont side there another campsite there. And then I'm not sure if there's any more at Vernon.

Some of the ones that we maintain as part of our network, that's maintained by the canoe -- Connecticut River canoe, powers, -- or something like that. We maintain six or seven.

AUDIENCE: Abott's Trail. (ph)

MR. RAGONESE: Abott's Trail. It has many names, but it's the same issue.

MS. NEWCOMB: So that's above Vernon Dam?

MR. RAGONESE: No, the first one I mentioned is below Vernon Dam.

MS. NEWCOMB: And the other ones are upstream from that? Okay.

The other concern I've heard recreational users talk about is better, more effective portage for canoeing and kayaking to get around the dams? I don't know

technically how it would be done, or what is available through Northfield Mountain, or through the hydro company, but I've heard people say it's not very accessible, and they'd like to see a better system put in place so that people could portage and use the entire stretch of the river system.

MR. HOGAN: The portage around Turners Falls and Vernon?

MS. NEWCOMB: Yes, and whatever else is downstream; people don't want to canoe the entire length of the Connecticut. I'm just sharing what other people have asked me to bring up about recreation.

MR. HOGAN: Right.

John, that's a good question. Is there a portage already available at Turners Falls?

MR. RAGONESE: Yes.

MR. HOGAN: Well, we'll get to it. John Ragonese.

MR. RAGONESE: The exit is right above the debris barrier.

AUDIENCE: (inaudible) at Barton Cove, and then we'll transport you and your canoe or kayaks downstream. There's a put-in at Copper Street, which is downstream of Cabot Station.

MR. HOGAN: You say that you'll actually

transport.

AUDIENCE: Yes.

MR. HOGAN: Is that a --

MS. NEWCOMB: People have to call ahead?

AUDIENCE: Yes, they can call ahead; or once they get there (inaudible)

MS. NEWCOMB: Where you actually rent canoes and kayaks?

AUDIENCE: Yes.

MS. NEWCOMB: How often is that (inaudible) seven days a week?

AUDIENCE: In the summer, during the summer period, seven days a week. We end up portaging maybe a dozen, two dozen trips a week.

MS. NEWCOMB: Okay.

MR. HOGAN: Yes, sir.

MR. CHRISTOPHER: Tom Christopher, from New England FLOW, and American Whitewater. I'm here with my colleague, (inaudible), American Whitewater. We do have (inaudible) on Corps projects, and I'd like to start out with Vernon first.

Essentially, the Vernon project is a 900-foot wide dam that blocks flows completely, and any natural whitewater flows have been eliminated because of the installation of these dams.

MR. HOGAN: We're having a real hard time hearing you. I'm sorry. So if you could project and come closer. Use the mic if you want.

MR. CHRISTOPHER: I'll start again?

MR. HOGAN: Please.

MR. CHRISTOPHER: Okay. The Vernon Dam, basically we lost all the flows of the river, and it has eliminated any possible whitewater opportunities.

One of the studies that we're asking the FERC to undertake -- and this is going to be somewhat repetitious -- is an economic analysis. The flow, the operations and management of the Vernon Dam have significant negative recreational impacts, and related socioeconomic impacts. And no change of the operation scenario of the Vernon Dam is going to create any relief from this loss.

In other words, there's no amount of water in the Vernon Dam that's going to provide us with any sort of whitewater opportunity. And in this particular case, because there is no relief, we would ask FERC to weigh particularly the economic values associated with whitewater use by looking at various alternatives. And you've heard a little bit about this early in some of our prior testimony.

Essentially, what we're looking for is compensation for the loss of this whitewater opportunity. The goal of the study is to assess the presence, quality,

access needs, flow information needs, and preferred flow ranges for other regional offsite whitewater boating resources that could provide compensation for the loss of whitewater recreation beneath the Vernon Dam.

Offsite mitigation is a term that is used in this business in many different ways, but this is perhaps a unique opportunity to do offsite mitigation. What this would require would be participation from, in all likelihood, multiple state and federal agencies. And agreement of this type of mitigation would balance the objectives to offset the loss of whitewater that we have had at the Vernon Dam.

Since the values of this lost whitewater recreation are unknown, and because the problem is there's no whitewater activity at the Vernon site, we request the study be compiled using the contingent valuation method of study, which would measure an individual -- if this was available; and this should be measured against the value of the generation power of the Vernon Dam.

Now, Turners Falls. Turners Falls is a little different. Turners Falls actually has the ability to offer whitewater paddling opportunities. So the Turner Falls project is a 2.7-mile diversion that essentially reduces flows, leaving only minimum flows, or those flows for standards developed by the Department of Fish & Wildlife.

Since the whitewater opportunities have been eliminated by this project, and whether they are in water stable or predictable operational flows, we think that we should have the full flow study relative to flows that could be provided.

One of the other issues that is a problem here at Turners Falls here is public access directly below the Turners Falls Dam Station No. 1. There is currently no form of public access or parking that would be provided by the licensee, to our knowledge. And it is our understanding access for access during whitewater flows that could occur below Cabot Station, parking for boaters and multiple vehicles is somewhat --.

Again, just to review, we certainly would like to see a controlled whitewater flow study of the bypass reach. We currently do not know the relationship between specific low and moderate flows and any type of experience they would provide. And until we obtain this information, we can't really define the project in those terms and we really can't really come up with any proposal until we have this type of information.

Again, we would like to see a study on public access through these different points, or they could just be discussed. And finally, -- almost finally. As we have in other projects, we do request an economic analysis of the

site. And again, the goal of this particular recreational economic analysis is to examine the regional economic benefits of various flow alternatives that could be provided by restoring flows to the Turners Falls bypass reach.

And again, as we have described in all of our other projects, we would like to see this study go forward using the contingent valuation method of study; it will be much more predictive.

In this project, if it is determined that we cannot have suitable whitewater flows, we would want the licensee to also look at some type of other offsite mitigation. But I feel confident that there is enough structure in the river, in the bypass reach, that could provide consistent whitewater. And I don't think it will be necessary to go much beyond that.

Thank you very much.

MR. HOGAN: Thank you.

We have a comment over here, and then over here.

MR. CONWAY: Peter Conway, Gill resident. A couple things.

First of all, I want to speak to the Northfield Mountain recreation area. I really want to compliment John Howard on the great job they do up there providing that area for recreation to anyone who wants to use it, whether it's fall, or summer. We have cross-country meets up there in

the fall. And they do a great job. So far, we have a negative side as far as that is concerned; but this is really a positive part of how we manage that facility.

And the other thing has to do with these canoeists. Many canoeists get into the river at some point along the river and just say, 'Let's go 100 miles.' And so they come down. They didn't research anything. I think half a dozen times since I've lived where I live, I've woke up in the morning, heard conversation. I looked down there, there's a kink on the riverbank with a canoe pulled up. I go down there and say Hi, they say, "How do we get to the next park?" And they haven't even researched what they're doing. Just fly by the night kind of thing.

So I load up there canoe, I get in the car, we drive over the one-way bridge, I stop at Shady Glen, I give them breakfast, and ride them down to the other end where people are down underneath the bike path goes over the old railroad bridge; and I say, "This is where you go, guys. Good luck." And off they go.

So it's a matter of research, and it's not a matter of they don't know where to go, because these people don't bother to find out. So the place is there. If they want to plan a trip and call ahead, then they'll know what to do. So think ahead. Right?

Thank you.

MR. HOGAN: Thank you.

VOICE:

SPEAKER: Bob (inaudible), American Whitewater. I want to echo and expand on Tom's comments.

We represent the interests of kayakers, canoeists and rafters who enjoy the whitewater industries; and here in Turners Falls, we're sitting in kind of the cradle of two important whitewater resources. To our east is the Millers River, and it's a series of Class II, Class IV there that are always boated in the springtime. To our west is the Deerfield River, which throughout the late spring, throughout the summer into the early fall is where boaters in Massachusetts and New England really enjoy the recreation. TransCanada is here, and I really want to credit them for the agreements they've reached on that river that's providing an important resource. And I think that's really a model for what could happen here in Turners Falls.

Which is want I want to speak to.

There's a 2.7-mile stretch that, only the minimum flows go through it -- could be and should be a tremendous resource for the boating community. And we support the call for controlled flow studies on that reach so we can see exactly what are the resources that are there. A few people have paddled it when there's been surplus water that has gone in that reach, and we have great reason to believe that

there are resources there that could be enjoyed, that would be enjoyed.

We certainly want to urge FERC to study this issue. We'll be submitting formal comments and study requests on that issue, the issue of access and economic analysis, and we're optimistic that we can open up this boating opportunity to kayakers throughout the region.

Thank you.

MR. SIMS: My name is Norm Sims, and I'm with the Appalachian Mountain Club, and we'll be representing the America interests in these relicensings, along with Dr. Ken Kimball.

The AMC is the largest conservation and recreation organization in New England. It's been here since 1876. The majority of our members live in Massachusetts, New Hampshire and Connecticut, and currently there are 90,000 members of the AMC.

I'd like to start by mentioning to Adam that we do have an aesthetic issue in the dryway. Bare rock where there ought to be a river is an aesthetic issue that needs to be addressed.

I want to mention several things, starting with the Turners Falls facility, and then moving on to Vernon.

We do have an interest in boating in the 2.7, 2.5 mile bypass reach -- however long it is -- and we agree with

American Whitewater that there should be controlled flow studies. A number of people have traveled this reach because of flood flows; it creates some fairly interesting surfing waves immediately below the dam. So people have experience with this. We know it's paddle-able. We know it's a valuable resource. We think we ought to have controlled flows, with a standard controlled flow study, which has been done on many, many rivers that have been licensed by FERC.

Along with that study, there should be a cogent valuation study about the value of that resource. Contingent valuation allows us to compare values -- not necessarily dollars, but values -- of a recreational use versus the value of the power generation from the facility.

Secondly -- and I want to thank Peter for his comments about people portaging through his property or camping on his property. The AMC has a broad interest in all of the recreational facilities on the river. We are going to file a request for a study on the quantity, quality and adequacy of those facilities for the proposed 30-year life of the license. This should include put-in and take-out facilities. I think some of those ought to be modified so that they're more usable for canoes and kayaks.

Portage routes. In my opinion, there is no portage route around the Turners Falls dam, because there is

no pathway. The three facilities, and the TransCanada that's relicensing, they all three have pathways, you can call them.

Now one of those follows a high-speed highway. I don't think it's adequate at all. But at least there is a pathway you can walk. I'm not going to call a truck from FirstLight to come pick up my wooden canvas canoe. That's not going to work for me at all. They have to address this -- I can't imagine FERC relicensing a dam on a major river that does not have a portage pathway around it.

This could result in the construction of more trails. There could be a historic and scenic trail along the lip of the river around here, where there are some major historical connections, going back to colonial times. These facilities could be matched up to create a portage route.

We're also interested in the number of campsites, in parking, in road access, seasons of operation, maintenance, and sanitary facilities along the river. In my research of this and talking to through boaters, the campsites, once you cross the Massachusetts border, are inadequate. We're told that the islands are posted so nobody can use them; those are the natural places for through canoeists to camp. They end up sometimes camping on mudflats. I'm sure they've been camping on Peter's property, because they don't really have other

opportunities.

So that's one reason why I think the study of the adequacy of the facilities provided by the licensee should take place.

This might also include the suggestion that the licensee buy the land from willing sellers in order to create additional campsites, particularly for canoeists on the river.

I'd like to say a word, too, about Northfield Mountain, and start by congratulating them on creating what has been at times a spectacular recreational resource, particularly for cross-country skiing during winter. I hear that the facility has been compromised somewhat in recent years, not just by the weather but by lack of staff.

There is currently a discussion about the trails, particularly the New England Trail that passes through the Northfield Mountain property, and I believe there are discussions taking place about possibly buying some additional land to relocate the trail down from where the pumped storage is, at a little bit lower level.

Mark, is that approximately correct?

AUDIENCE: (Inaudible).

MR. SIMS; I'll share a map with you later. Anyhow, that discussion needs to take place if those trails are going to be relocated.

MR. HOGAN: Can you give me a quick definition of what the New England Trail is?

MR. SIMS; I can't tell you how far it goes.

MR. HOGAN: What is it?

MR. SIMS: Go ahead.

AUDIENCE: The New England Trail is the New England National Scenic Trail. It's a National Scenic Trail, federally designated. It goes through the Northfield Project area. It's the former, also Metacomet-Monadnock Trail, also known by the name, Metacomet-Monadnock; a 220-mile trail from Long Island Sound to Mount Monadnock. And it is Massachusetts' second National Scenic Trail, in New England.

MR. HOGAN: And it goes right through the Northfield Mountain project?

SPEAKER: It goes on the back side of the reservoir, Ken. Forest land, and touches on the back side/

MR. HOGAN: Thank you.

AUDIENCE: Ken, we actually have a unigrid for it, so I can get you a copy of that.

MR. HOGAN: Okay.

MR. SIMS: This trail recently acquired, as Congressman John Alper was very active in doing that; and portions of the trail were relocated as that went through.

AMC, which manages thousands of miles of trails

in New England, is interested in the location of those trails; and we're also interested in perhaps linking up some of those trails through project lands with other systems of trails.

As I mentioned, the recreational and educational benefits of Northfield Mountain have been nice. With global warming -- particularly last year there wasn't much snow; maybe this year will be better, but we don't know. One thing we would like to have studied, and looked into is the possibility of using some snow making at Northfield Mountain.

As I mentioned in the other meetings, the AMC has a strong interest in the opportunities for multiple-day canoe trips on the Connecticut River. I mention this in relationship to all the TransCanada dams, and I'd like to repeat it a little for the FirstLight people.

There are a number of people that would do multiple-day canoe trips on the river if there were adequate campsites and portages. The biggest problem for someone coming downriver and trying to spend more than one day on the river is simply the existence of the dams, complicated campsite arrangements, and making portages that are not of the best quality.

The Connecticut River Paddlers Trail -- as I guess it's called now -- is pretty extensive in the northern

reaches of the river, and that's going to be extended through the southern reaches of the river. So I hope the licensees can get involved in improving the situation, particularly there needs to be more campsites, in my opinion, that we could study that and see how many there need to be.

As Tom mentioned, there's a real whitewater opportunity below Turners Falls, but there were whitewater opportunities at the dam and above as well which have been drowned by the dam. Nobody's talking about taking the dam out, so we would like to see offsite mitigation for the loss of those recreational opportunities.

I would particularly suggest that the licensee look at the National Blueway System, which frequently named the Connecticut River watershed as the first National Blueway River. They may be able to find offsite mitigation and whitewater opportunities elsewhere within the watershed.

If I could make just a couple of comments about Vernon, and then I'll be done. In a similar way, I think the facilities at Vernon ought to be examined from the Stebbins Island campsite below Vernon dam all the way up to Bellows Falls: the adequacy and the number of campsites, the opportunities for put-ins and take-outs, and the quality of those should be assessed in the study, and we will be making a request for that.

There has been a study done by the National Paddlers Trails for four or five of the primitive campsites on the Connecticut River, one of which was Stebbins Island, and it is found to be fairly seriously deficient.

Also, I think opportunities for most of the day trips can be addressed at Vernon, and I'm sure TransCanada will be looking into that for all three of their properties up there; and we also want them to look into the opportunity with American Whitewater mentioned, of providing offsite mitigation for the loss of recreational resources because of the dams.

Thank you.

MR. HOGAN: Thank you.

Do we have other comments? Kevin.

MR. MENDIK: Kevin Mendik, National Park Service.

I think one of the things that's important to evaluate when you're doing these studies is a comprehensive look at the whole river, not just in terms of what recreational use is occurring and what you're observing on your various surveys and onsite days; but to reach out to all the different organizations and individuals and agencies that have been here in the last couple of days.

Funding for their membership was to their members and find out why a lot of these people are either using these resources or not using these resources based on the

condition, the available facilities. Because you may find there's a lot more desire to use some of these resources, but they don't because of the conditions and lack of certain facilities. That would give you a better picture of what's happening and what's not happening. You may find the resources allegedly

A lot of them are either underused or underutilized, but there may be a lot more desire to use that resource.

MR. HOGAN: Are you going to be present during the study plan development phase between proposal and revised?

MR. MENDIK: Yes, I'll be here.

MR. HOGAN: So you might be a resource tool for us to utilize.

MR. MENDIK: Yes, there's a lot more communication, judging by the number of people in organizations that are here now. You've got project websites -- all these organizations have websites that could be gathering that type of information. It's a lot easier than it used to be, passing out surveys to residents by mail.

MR. HOGAN: Thank you.

MS. DONLON: Andrea Donlon, Connecticut River Watershed Council.

We have published a boating guide for the

Connecticut River that lists all the facilities and at the different reaches; and it's been said by many people, but since the scoping document didn't put a little star next to the recreational resources as being sort of cumulative, I hope FERC's getting the sense that there is kind of a cumulative, in a sense, of that the river runs 410 miles; there are people who want to paddle the entire distance, much like they want to hike the Appalachian Trail

So it's important to provide recreational opportunities that would allow for a full paddling trip down the river, or boating trip.

MR. HOGAN: So for the record, you'd like us to do a cumulative effects analysis of projects' effects on recreational resources, specifically boating, canoeing, kayaking. Yes?

MS. DONLON: Okay.

AUDIENCE: Well said.

MR. HOGAN: Gotcha.

MS. DONLON: And in terms of the portage at Turners Falls, the Poplar Street ramp, the company hired the Conway School of Landscape Design to look at various options for improving that facility, gosh, it was probably seven years ago.

I don't know if any of those were ever implemented. It's a tough site, there's almost no parking, the neighbors are

pretty mean, I guess -- they really don't want -- I think they've been impacted by partyers stopping there and just assuming that it's okay to use their property. But it's not exactly a friendly spot to park a car at. It's difficult; a very steep bank, and it's eroding, and it's hard to get there.

And then to the aesthetics issue, it is related to streambank erosion. The projects that have been done to sort of protects the bank also do have an aesthetic effect on the river.

MR. HOGAN: We're talking about Turners Falls impoundment right now?

MS. DONLON: Yes, the impoundment.

So I think as projects goes forward, the most recent projects have been, I think, more aesthetically pleasing in that there's more natural vegetation left along the banks; the types of things that get put in there are rootwas (ph) and things that look natural. But there are areas where there's tires placed along the river. They've held up great, but it's not exactly a natural-looking riverbank. So I think that is an aesthetic impact that's come as a result of the operations. Same with rock rip-rap; we wouldn't want to rip-rap the entire 20-odd miles of river.

MR. HOGAN: We were thinking about asphalt.

Joking.

(Laughter.)

MR. HOGAN: Andrea, you made a comment about a boater's guide that you've produced. Is that available on line somewhere?

MS. DONLON: It is not. It is something that we sell as a book, so you can buy it online. But it's not published online.

MR. HOGAN: Okay.

MS. DONLON: But we do get a lot of phone calls from people who are planning trips. Not everyone is like Peter Conway described, which I'm sure does exist; but there are people who really want to plan multi-day trips. They call us up. We tell them about websites where they can learn about the portages and things like that.

MR. HOGAN: Do you have a citation for the book? We may want to buy it.

MS. DONLON: Yes. I can even bring you a copy.

(Laughter.)

MS. DONLON: Stop by our office or I can send you a link.

MR. HOGAN: Okay. Thank you.

MR. JAHNIGE: Paul Jahnige, Department of Conservation and Recreation.

I guess the meeting's almost over, as one of the

hosts of this building here, our organization manages this building. I welcome everybody to the Great Falls Discovery Center, and also the bike trail that we manage out here is noted as one of the project facilities, recreational facilities; the canal side bike path is on the property.

I'll also draw attention to the FERC and to the licensees about Commonwealth Connections, which is the Massachusetts Greenway plan, and suggest that it ought to be listed as one of those statewide plans in the resources, and look at that. It highlights the Connecticut River Greenway as an important greenway. It also highlights the New England National Scenic Trail as one of our critical, long-distance statewide trails. Both of those are within the project, and through the project area.

I would note in terms of aesthetics, you noted already that the FERC hadn't identified issues there, and clearly some of those are coming up; clearly there are some esthetic issues within the lower reservoir -- I'm sorry, where's Sam: River. The raising and lowering of the water does have aesthetic impacts as well as the other impacts that have been noted.

With respect to another big impact that was mentioned, the bare rock where there might be a river, and then the upper reservoir I think also has some potential visual impacts related to high-ground views, and also

related specifically to the National Scenic Trail, which does go right near the upper dam.

In terms of recreational use studies that FERC might particularly propose, I saw a user contact study and maybe some user counts of existing uses. I'd suggest that if we're really trying to identify the adequacy of existing recreational and public use facilities, and meeting both existing and future regional needs, we probably need to look at some kind of sample survey study which reaches out to population within the region to look at what the needs are, what the desires are, and what the potential future needs are for recreation.

I think it was mentioned in the scoping document that the SCORPS for all three states perhaps identify hiking as one of the most needed recreational opportunities, and obviously Northfield Mountain provides some important opportunities there. And the New England National Scenic Trail is an important opportunity, but really connecting and recognizing those opportunities will be important in addition to some of the paddling opportunities.

With respect to the National Scenic Trail, which is also mentioned with respect to paddling opportunities, the importance of camping and overnight camping within the National Scenic Trail -- again, it's a 220-mile trail. People are looking to do through hiking and looking for

overnight facilities on that, and there may be an opportunity for the projects to provide that kind of amenity as well.

Then, as has been mentioned that the Connecticut River Paddlers Trail, if that's what it's called, currently is in the northern reach of the river, in New Hampshire and Vermont. It does not currently extend into Massachusetts, but I think we've got a meeting next week to discuss the opportunities for bringing the Paddlers Trail into Massachusetts and Connecticut, and so that will be an important consideration for the projects.

MR. HOGAN: Thank you.

MS. NEWCOMB: Leena Newcomb, I live on the river.

John Howard, can you tell me what determines the length of a boating season when you decide, or how you decide to put the buoys in front of the dam, the safety buoys.

(Laughter)

as it takes the length of the boating season, whether you're a canoer or a kayaker or a power boater, angler, how that's done and determined.

MR. BATTAGLIA: So the Federal Energy Regulatory Commission through the New York Regional Office sent out a letter quite a little while ago --

MR. RAGONESE: '85.

MR. BATTAGLIA: '85, thank you. Saying the boat barriers have to be in by, and they can't be removed before that period of time.

May 15 to November 30, I think it is.

MR. HOGAN: I'm sorry?

(Simultaneous discussion)

MS. NEWCOMB: November 30?

They're out in October.

AUDIENCE: We don't take them out in October.

MS. NEWCOMB: Really? Okay. Is there a way of extending the season, with a change in the weather pattern? We often have reasonable weather on May 1.

AUDIENCE: There was some request for that last year; and I guess we didn't do that, because of the potential for high flows during the spring, and we look at that floweration curve, and high drafts in this area.

We can get some fairly high flows. I've had some people during high flows wind surf and get hung up on the bulk barrier. We also, we almost lost a fireman over the dam a couple of years ago, trying to rescue someone trying to go through the area.

So in the interests of public safety.

MS. NEWCOMB: Okay, Thank you.

MR. HOGAN: Let me just ask a clarifying question for my benefit.

If the prayer breeds (ph) are not installed, does that mean that boating is prevented on the reservoir?

AUDIENCE: We lock them. The State boat ramp. That gate is closed until that whole pier goes in, and we notify the State, and they open up the gate for the summer boating season.

MR. HOGAN: Thank you.

You first.

MR. RAMSEY: Walter Ramsey. (inaudible)

Montague has an open space and recreation plan, and one of the priorities in it is to improve access to the river, it was started on the two sides of the river, again, Montague; with very limited opportunity for access. That's still a priority for the residents here.

Regarding historic and aesthetic impacts, there is a historic district here in Turners Falls. It encompasses the building that we're in and also encompasses most of downtown as what we call the historic mill district, which is essentially an island that's sandwiched in between the canal and the river.

The FirstLight resources on both sides of this, basically an island. It's five former mill sites in various states of disrepair. The sites are hindered by lack of access; and FirstLight owns two bridges to these sites, and they're in various states of not being used or not having

access. And those bridges are on the Historic Register.

MR. HOGAN: So are you asking for those bridges to be made accessible so repairs can be done? I'm not sure.

MR. RAMSEY: This is important. It seems to me development of that land --

MR. HOGAN: On the river access, are we talking both above the dam and below the dam, or below dam, or just above the dam?

MR. RAMSEY: Both. I guess below the dam would be more realistic for actual use of the water, as far as the swimming area.

MR. HOGAN: Thank you.

MR. SIMS: Norman Sims, AMC again. Just one additional comment, concerning what John Howard said about closing facilities at certain times. For example, at Barton Cove, the gate out by the road is closed.

That's a facility that's usually used primarily for motorboat access. It has a concrete ramp, and there is a dock that runs out during summer that makes it possible to launch a canoe, a little bit more conveniently.

But once that gate is closed and the dock is removed, it's very difficult to use for car top canoe access.

I tried to take a canoe out in November, and I had to drive all the way up to Northfield Mountain -- I mean the town of

Northfield, to find an open route to the river. And that was still a concrete ramp.

As part of our study request, we're going to request that the facilities consider better access for canoes and kayaks, as opposed to motorboats on the trail. We'll be saying the same things to TransCanada, although at the Vernon portage trail, those facilities were decent for canoes. But some of the other access points up in New Hampshire and Vermont are essentially the same; they're designed for motorboats on trailers.

MR. JAHNIGE: Paul Jahnige again. I forgot to mention one recreational resource that's within the Northfield Mountain project area, and that's climbing. There are two important ledges there, Farley Ledges and Rose Ledges, both of which are used by climbers. I believe climbing was not mentioned in the pre-application document as a recreational activity. I want to make sure that gets on the record.

MR. HOGAN: Paul, you had also mentioned Commonwealth plan for--?

MR. JAHNIGE: The Commonwealth Connections. Massachusetts Greenway plan.

MR. HOGAN: And you ask that the Commission consider it as a comprehensive plan on the state list?

MR. JAHNIGE: I'll send that.

MR. HOGAN: You also have to ask that it be evaluated as a comprehensive plan in the Commission. It's got to go through an approval process. I think it's just filed with the Commission with a letter requesting that it be considered an amendment.

Other comments regarding recreational resources, land use, or aesthetics?

(No response.)

MR. HOGAN: I'm not seeing any.

Socioeconomic resources. We've heard several times today and this week about a proposed economic analysis regarding recreational opportunities and recreational effects in and around the project lands in the Connecticut River Basin.

Are their other economic resource concerns that we should be considering in our analysis?

(No response.)

MR. HOGAN: Okay.

Cultural resources?

MR. QUIGGLE: Good afternoon. I'm Rob Quibble with FERC.

Our Scoping Document 1 identifies cultural resources issues, and the same issues for all three projects. Those are: project effects on archaeologic or historic resources listed in or eligible for inclusion in

the National Register of Historic Places, including properties of traditional religious or cultural significance.

MR. RAGONESE: With respect to the Vernon project, again, as I mentioned earlier, in 2008 we redeveloped the Vernon project, and part of the application and determination by FERC in the order allowing us to amend the project was the requirement -- and we were planning on doing that when we proposed it -- to do a Phase 1A survey. We signed a programmatic agreement with the state SHPOs and the FERC and ourselves; and we have a cultural resources management plan.

We are not anticipating doing particularly anything more than what we already have in place. We have plans to deal with impacts and project effects on historic and archaeological resources; it's in place already, and it's pretty much the general model that is used in new licenses; it's in place at Vernon.

We are implementing -- you know, we'll be putting those forth on the other two projects, but we didn't initiate those at the same time.

SPEAKER: We had proposed to do both archaeological and historic structure surveys. We'll start out doing the standard Phase 1A archaeological survey: literature search, consultation with the historic

preservation officers from the three states, probably develop sensitivity models which determine which areas might be sensitive to the presence of prehistoric and post-historic resources, and then do some field reconnaissance.

We'll do further studies, Phase 1B testing, depending on the results of the Phase 1A archaeological surveys. Also, we're going to do a historic structure survey. We're going to do a reconnaissance-level survey of the area, from which Turners Falls and Northfield projects may be visible to any existing historic resources, as well as evaluate the facilities themselves for eligibility.

MR. HOGAN: Yes, sir.

AUDIENCE: (inaudible) Montague.

I'd like the study do address the impact on the Native American cultural landscape.

They've all been listed on the National Register in the past few years. The town has been working with Native American tribes on development of the Native Cultural Park. That would involve parts of Turners Falls. Actually, three towns. Montague, Greenfield, Gill and Deerfield submitted an application for a downfield grant application for the area around the Turners Falls Dam. That was an area that was significant -- in 1675, I believe it was. And we're having a battlefield study done. They are hopefully

getting funding for that.

We want to extend our cultural bid, American cultural process to include the area below the dam, possibly, or whatever, and having public access to that.

MR. HOGAN: Thank you.

Could you tell us what tribes you are working with on that?

VOICE: We're working with the Narragansett Tribe, and (inaudible)

MR. HOGAN: Thank you.

MR. SIMS: Norm Sims from the AMC again.

We're going to be requesting a historical survey of a slightly different kind. This is a nationally significant historical site at Turners Falls, as is Deerfield, where there was an attack in 1704. But I'm more concerned about the structures in the river. These are actually fabulous structures. They were built by great engineers. They stood since -- when was Turner built, John?

MR. RAGONESE: 1909.

MR. SIMS: They've had some tremendous impacts of floods. These were good engineers. They were careful. They constructed valuable historical records about the facilities, about the land forms around the historic --.

It was in the age of photography; they took photographs, and what I'm concerned about now is that with

multiple changes of ownership; from New England Power to--help me witness this.

MR. RAGONESE: Whatever.

(Simultaneous discussion.)

(Laughter.)

MR. SIMS: Similarly at Turners Falls, the facility has been owned by several different companies recently, and it's now owned by a French company, G.E. (inaudible)

MR. HOWARD: Correct.

MR. SIMS: I'm worried that the historical engineering and photographic records of the facilities may be mislocated or lost in the process of transferring ownership. I don't know what FirstLight may have or where they may have those records stored. I'd like to find that out.

I tried to find out what TransCanada has, and I learned that there are at least a couple of dozen scrapbooks, two or three inches thick, filled with mostly photographs, but also detailed engineering records on onionskin dating from the 1920s and earlier. Those two dozen scrapbooks, each one of them is numbered, and they have various numbers; there's a suggestion that there may be as many as 300 of those notebooks. Where they are, nobody knows.

I think as part of this process, as part of the archaeological and historical aspect of that, all of those records ought to be located, and if possible placed in a secure location such as a library, if the companies don't need active access to them.

MR. RAGONESE: We still manufacture parts from those onionskin drawings, because you can't get them anywhere.

MR. HOGAN: Sounds like CEII.

(Laughter.)

MR. HOGAN: That's Critical Energy Infrastructure Information, for those of you who may not know.

(Laughter.)

MR. HOGAN: Other comments? Yes, sir.

MR. DETWOLD: My name is David Detwold, and I live a few blocks from here, on 4th Street.

Just two things on the historical front: One, I think the Cabot camp is a historical resource of this community that should be made more accessible to the people of this community, and I'd like to encourage that to be considered by the Applicant here.

MR. HOGAN: Could I interrupt you? The Cabot --

MR. DETWOLD: The Cabot camp, which is on the river right where the Millers Falls River joins the Connecticut. I believe it's owned by GFE Suez - Northfield

Mountain. But it's got a long history, an interesting history that I think the people of this community should have more access to it if it could be made more available. And it's right on a lake at the bike path as well. So potentially it could have a lot more use than it's getting right now.

The other thing is that the town manager mentioned that we have been encouraged by at least three federally-recognized Indian tribes to think about ways in which this community, with its 10,000-year history of Native American use -- it is one of the longest continually-occupied areas where the archaeological and cultural record shows that Native Americans would have been present -- they have encouraged us to think about ways that we could build on this rich past to bring more tourism, historic tourism to the town. And one thing that they've proposed -- and I noticed on your time line that you had a meeting with the tribes, perhaps already -- is the idea of an international and intertribal canoe race down the river, which would have great economic benefits for our community if we were to host one leg of that.

So I don't know whether you could comment on whether the tribes have already brought this to your attention. I think it could certainly be part of the relicensing to see how such an important event could be

facilitated. Thank you.

MR. HOGAN: Thank you.

Regarding the Commission's consultation with the tribes -- as you indicated, our process does incorporate that. I believe it was in November, we sent two tribes a letter -- both the Wampanoag Gay Head and Mashpee, I believe it was -- the letter was inquiring about their interest in the relicensing process. That letter didn't get any response.

I followed up twice with phone calls and e-mails, providing additional information to one of them, and I'm not sure which one. Through the middle of January, I've still had no response from either tribe, and no indication of any interest. Any time that the tribes indicate that they would be interested in consulting with FERC on the relicensing, our doors are always open. But at this point, I don't want to bug them any more.

MR. DETWOLD: If I were able to put you in touch with the Narragansett Indian Tribe's historic preservation officer here, for that purpose would that be of use to you? Because I know that he'd be particularly interested in talking to you about this.

MR. HOGAN: Yes. Clarification. Are they a federally-recognized tribe?

MR. DETWOLD: Absolutely.

MR. HOGAN: If they are interested, we would certainly engage with them.

AUDIENCE: The Narragansett Tribe was very involved in this battle here. They were the protector of members of Indian tribes who were relocated, who were refugees. So they're very much involved in the history of Turners Falls.

MR. HOGAN: Okay. We'll take contact information. Rob, you're writing this down, and we'll reach out to them.

Other comments on cultural resources or historic properties? No?

(No response.)

MR. HOGAN: The last resource area that the Commission considers is Developmental Resources. We're not really taking any input on this, but I just wanted to -- you see it here, and I'll kind of let you know what that is.

When the Commission staff makes its recommendations in its environmental document to the Commission -- the Commission being the five great Americans appointed by the President of the United States -- that analysis has to consider both the environment and the economics of the projects, and it's a balancing act. It's basically so we're making an informed decision on any environmental recommendations that we're making in the

context of the project. That's what that analysis incorporates. And just to be open, that's what we do.

Any questions about that?

(No response.)

MR. HOGAN: Any questions about the licensing process?

(No response.)

MR. HOGAN: We've all been here for a very long day. Melissa?

MELISSA: I think I didn't hear it or perhaps you didn't go over it, the part of the scoping document that gives alternatives considered. I guess this gets more to a pet peeve of mine about these scoping documents with the IFP; it's probably the hard facts of the IFP, where you're trying to put out a document when you really haven't had any opportunity to solicit public input. So of course no party has probably suggested decommissioning yet, because there hasn't been the opportunity.

So I guess I would just recommend that the Commission, in future scoping documents, change that language to be more reflective. Because the way it reads, people might think that door is shut.

MR. HOGAN: That's Scoping Document 1. We'll shut it in Scoping Document 2. No.

(Laughter.)

MELISSA: You give the impression that the Commission won't consider it, and I just think the language in somewhat --

MR. HOGAN: That's a fair comment. I'll say that nothing is off the table. We consider everything until there's no reason to consider any further.

Am I forgetting anything?

(No response)

MR. HOGAN: Well, thank everybody.

Oop, we get two hands with that.

AUDIENCE: Ken could you give just a snapshot of what the cumulative impacts may be?

MR. HOGAN: Sure.

Tomorrow morning we're having a meeting -- which we rarely do. In fact, I'm only aware of one situation where we've ever done this in the past. It's to address cumulative effects and cumulative resources that may be -- resources that may be cumulatively affected throughout all five of the hydroelectric projects. And it can be resources that are, the effects between each of the hydros, or it could be outside influences such as Vermont Yankee and water temperature, and just to use this as an example: how the water temperature is affected because you're impounding water in the reservoir, and there may be some solar warming. Plus you have Vermont Yankee adding to the reservoir, adding

to the temperature of the reservoir. That's a cumulative effect. And you have another reservoir downstream, more solar effect and potential warming of a reservoir, more cumulative effects.

It's not just -- it can be very broad scope. We're looking for information. What are the activities that are planned within the watershed, within the basin, in these areas of the projects that may also warrant some kind of analysis that we -- it could be sewage treatment plants, it could be planned roads or highways that are construction plans that would be implemented. We may be looking at turbidity and sedimentation as a result of construction activities, or fish passage, upstream or downstream fish entrainment.

These are all resources that could be affected from one dam to the next and incrementally. So that's the goal, so I understand what's going on within the watershed in the vicinity of these projects, and to define a geographic scope for the resources of how far we need to be looking. Temperature, how far downstream or upstream do we need to be looking? Fish passage, how far downstream or upstream? Things of that nature; and basically other activities that are not just the hydros within the basin.

Does that answer your question? It's a good question. Thank you.

Like I said, we haven't done this meeting before, so it's --I'm only aware of one. I've never done this meeting before, so I'm hoping for your attendance to really steer discussion. We can do it by resource area or however we want to do it, but I want to be real flexible.

AUDIENCE: Ken, where was the other cumulative effects meeting?

MR. HOGAN: The one I'm aware of was Snake River in Idaho, where we had multiple dams going through relicensing at the same time.

AUDIENCE: You also had one on the Ohio.

MR. HOGAN: Someone did his homework.

(Laughter.)

MR. HOGAN: Way before my time.

Any other questions?

(No response.)

MR. HOGAN: Well, thank you. We really appreciate the input. We'll have a much better product with it. Thank you very much. And I want to thank our host.

(Applause.)

(Whereupon, the meeting was concluded.)

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