AGENCY SCOPING MEETING

CASCADE CREEK HYDROELECTRIC PROJECT

P-12405-002

JUNE 18, 2009

Tides Inn Conference Room

307 North First Street

Petersburg, Alaska 99833

9:00 a.m.

TEAM COORDINATOR: David A. Turner

APPEARANCES:

David A. Turner
FERC
888 First Street, NE
Washington, DC 20246

Chris Spens
Project Manager
Cascade Creek, LLC
3633 Alderwood Avenue
Bellingham, WA 98225

Matthew Cutlip
FERC
805 SW Broadway Avenue
Suite 550
Portland, OR 97205

P R O C E E D I N G

MR. TURNER: It's about 9:00 o'clock by my time. My name's David Turner. I'm with the Federal Energy Regulatory Commission in D.C. Also here with me today is Matt Cutlip. He's our fisheries biologist on this project. We're here to scope the Cascade Creek Hydroelectric Project. Just by a way of introductions and a little housekeeping, this proceeding, or this meeting is being recorded by a court reporter.

So please speak up so we -- all we have is two table microphones here. So speak up, speak your name, give your name and your affiliation. And maybe by way of introductions, and just make sure we have everything first off.

Maybe we'll go around the room and give our names and affiliations for the record. But we still need to do that when we're giving our -- when we're speaking. And if you haven't, please sign in on the sign-in sheet out in the back.

UNIDENTIFIED VOICE: It's being passed around.

MR. TURNER: Oh, it's being passed -- great, great. It's being passed around, that's great.

UNIDENTIFIED VOICE: We have gone down this row.

MR. TURNER: That way, you can sign your names.....

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(Indiscernible - simultaneous speech)

UNIDENTIFIED VOICE: I already got it, pass it on then.

(Indiscernible - simultaneous speech)

MR. TURNER: Why don't we start -- why don't we start with introductions back here in the corner and just kind of go around real quickly for the court reporter. Your name and affiliation?

MR. LONGWORTH: Dick Longworth, no affiliation.

MS. CLEMENS: Mary Clemens, Forest Service.

MR. LEE: Eric Lee, representing myself.

MR. TURNER: I'm sorry, I couldn't hear that. What was your name again? I couldn't hear it.

MR. LEE: Eric Lee.

MR. TURNER: Okay.

MR. FERGUSON: Jim Ferguson.

MR. TURNER: Okay.

MR. EAGLEY: Warren Eagley, Wrangell Borough Assembly.

MR. MITCHELL: Duff Mitchell, Cascade Creek.

MS. SMITH: Martha Smith, Petersburg resident.

MR. NELSON: Joe Nelson, Petersburg Power and Light.

MR. PRUNELLA: Bob Prunella, Manager of the City and Borough of Wrangell.

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MR. UNDERKOFLER: Rich Underkofler, Manager of Petersburg.

MR. LOWELL: I'm Richard Lowell, with the Alaska Department of Fish and Game, I'm a wildlife conservation, basically.

MR. TURNER: Margaret?

MS. BEILHARZ: Margaret Beilharz, with the Forest Service.

MR. BEERS: Russ Beers, with the U.S. Forest Service.

MR. SAVAGE: Chris Savage, District Director of the Petersburg Ranger District, Forest Service.

MR. JOHNSON: Shawn Johnson, Alaska Department of Fish and Game, Sport Fish.

MR. FLEMING: Doug Fleming, Alaska Department of Fish and Game here in Petersburg, with Sport Fish.

MR. FERGUSON: Jim Ferguson, with Fish and Game, Sport Fish, and the state hydro-power coordinator.

MR. KLEIN: Joe Klein, with the Department of Fish and Game.

MS. WOOD: Kelly Wood, Fish and Game, Shellfish Management.

MR. STRATMAN: Joe Stratman, Fish and Game, Shellfish Management.

MR. MINEKI: And Joe Mineki, KFSK Public Radio.

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MR. TURNER: Okay. (Indiscernible).

MR. BELL: Good morning, everyone. Matthew Bell, Kake Tribal Corporation.

MR. TURNER: Thank you, everybody. As I said, we're here to scope the Cascade Creek project. By way of a little bit of a background, this project's been under a preliminary permit for quite a while. We approved what we've termed our alternative licensing process. We have three different processes. The Cascade has chose and got buy-in to use the alternative licensing process. That was approved back in September of 2007.

Part of their purposes under the alternative licensing process is early scoping with the Commission. For our National Environmental Policy Act requirements, we are required to evaluate the effects of any federal action that we may undertake and to solicit comments and make sure we have the issues that are defined, or surrounding this project. And those are the issues that we'll be looking at in our Environmental Impact Statement that we will be producing on this project.

So as part of that, we do early scoping, make sure we have those issues defined. And that's our purpose here today is to make sure that we have those issues at hand. We also want to talk about information gaps and

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what kind of data that need to be addressed to fill those information gaps.

In the -- in way of the format of this meeting, I'll give you a little introduction on what we're doing, accomplishing here today. But then I'm going to turn it over to Chris to talk about their proposals and the changes in their proposals that have occurred since the initial meeting that they had with the agencies about a year or so ago. And then we're going to run through the issues that they have identified based on that record.

We've reviewed that scoping document that was issued back in May, and we're going to issue a revised scoping document based on the content and the comments that we get here at these meetings and those that are filed in response to our notice.

UNIDENTIFIED VOICE: Will you take a question now?

MR. TURNER: Sure.

UNIDENTIFIED VOICE: Was that your document that was circulated for review in May, or was that Cascade Creek's document?

MR. TURNER: It was Cascade -- it was produced by Cascade Creek. We reviewed it, made sure at least it fit our format and our purposes, and so we did have input into it in terms of understanding -- our

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understanding of the project and the proposals and the issues that have been brought forward.

UNIDENTIFIED VOICE: Thank you.

MS. SMITH: I've got a question on alternative licensing procedure.

MR. TURNER: Okay. Give your name first, please. You are?

MS. SMITH: Martha Smith.

MR. TURNER: Okay. Sure.

MS. SMITH: I understand from the FERC website that the -- the ALP procedure is reserved for, number one, noncontroversial projects, and number two, that the request by Cascade Creek, LLC, was to bundle the three projects together, Swan, Ruth, and Scenery. And is -- is that true, both of those things?

MR. TURNER: To the first statement, no, not necessarily.

MS. SMITH: Okay.

MR. TURNER: Alternative licensing procedures can be applied to any project. It is constructed around the concept of trying to, in a collaborative manner, define the issues, work on the issues, define the studies, gather the information. It doesn't mean that there is a controversy around it.

MS. SMITH: Okay.

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MR. TURNER: To the second part, that is true. They have a permit for all three projects. They've since -- permits for Ruth and Scenery Lake have expired. So this is -- this proceeding is only dealing with Cascade Creek.

MS. SMITH: But that alternative licensing process that you approved of, exists for Swan Lake?

MR. TURNER: It existed for Cascade as one of the projects that we approved. There was no need to.....

MS. SMITH: Okay.

MR. TURNER: .....go back and.....

MS. SMITH: Okay.

MR. TURNER: .....redo that.

MS. SMITH: Okay.

MR. TURNER: Any other questions? Okay. With that, I think I'll turn it over to Chris just to kind of walk through their -- the proposals and some of the change in their proposal. And then, into the issues.

MR. SPENS: Okay. Good morning. My name is Chris Spens. I'm the Project Licensing Manager for Cascade Creek. And what I'd like to do this morning is go over schematics to describe the project as well as pictures of the area, aerial photos and similar, in case you're not totally familiar.

I might also make mention, because I didn't hear

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David say, so there's a public meeting this evening at 7:00 p.m., if that suits your schedule better, or you need to leave early this morning.

We presented this project to Petersburg first in September of '07 as a preliminary application document. And at that time, it was three projects combined, and it was our first initial rollout to the public with regard to what we intended. And that project, with regard to Cascade, included a lake tap or siphon of Swan Lake and then delivery through a power conduit, a combination of tunnels and penstocks that would essentially parallel Cascade Creek as it made its way to Thomas Bay, with the powerhouse near the mouth of Cascade Creek.

And the citizenry of Petersburg made it crystal clear to us that that was not acceptable. And likewise, we had considerable agency input and recommendations, and subsequently modified the project such that the powerhouse was now moved approximately a quarter-mile south of the mouth of Cascade Creek. And instead of doing a combination of tunnel and buried conduits, we changed the project to entirely a tunnel project.

Likewise, we originally proposed to fluctuate the lake up to 45 feet, which would provide for storage for

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winter power as well as a range of operating options. Again, it was made clear that that would be not in the community's preference and not agency preference, so we looked at modeling the project to run it essentially as a run of the river project, meaning water would be withdrawn essentially at the same rate that it comes into the system, but nevertheless, still wanted a little bit of extra flexibility with regard to lake level management. So our application, as it stands right now, is for the intent of being able to fluctuate the lake up to 10 feet.

It's our observation, mostly anecdotally at the moment, based on terracing of the inlet, that the lake does naturally fluctuate about six feet.

I'm going to go through a series of schematics here and kind of show you what we intend at this point in time, beginning with connection to transmission in Petersburg at Scow Bay, crossing the airport, debarking the shoreline, and undersea cable on Frederick Sound, over to a headland just north of Brown Cove.

And then for the most part, with the exception about the first quarter-mile, after making shore, utilizing an existing road network that's on the Patterson Delta to one of two alternatives, either continuing as an undersea cable from the existing state

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dock in Thomas Bay, or to the project site, or utilizing a combination of existing road systems that would be rebuilt, including a new bridge over the Patterson River and a new bridge over the mouth of Delta Creek, and then from Delta Creek on what would essentially be a new road system to the powerhouse site.

Now, this is just a schematic crossing the airport, which is an existing utilidor at the moment. And a bit of a closeup here, you'll -- you should notice with this project that there are two alternative routes for both access and transmission, and we'll get to that in a moment here.

UNIDENTIFIED VOICE: Are you taking questions?

MR. SPENS: Not at this time.

UNIDENTIFIED VOICE: Okay.

MR. SPENS: Let me run through the overview, and then you're welcome to jump in. This schematic right here shows to different access alternatives. One would be the existing road system, new bridge, to the mouth of Delta Creek. And then shown in black would be a new road segment to the powerhouse site.

An alternative would be a dock right in front of the site which would be approximately 150 feet long on fixed pile, and 20 feet wide.

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Looking at the powerhouse site plan for the road access alternative, it would be our intent to place the powerhouse as low as possible, at approximately plus 20 to plus 35 feet above sea level, depending on what we find underneath, to create a tailrace that would be embanked on both sides before discharging in a much more natural form through an approximate 200 foot shoreline setback. And the idea here would be to create a discharge that looked as natural as possible within that 200 feet.

Access would come from the road from the south. The powerhouse would be bermed and embanked with tunnel excavation material. The tunnel portal or exit, in this schematic, comes out at elevation about 300 feet. And all the material would be discharged in the surrounding environment, which is topographically depressed or reset compared to what lies adjacent to it.

This would be the dock access version, where there'd be a wharf out in front, an access road to the site. And likewise, the transmission line would cross submarine. There'd be no disturbance and no new road corridor lying south of the site.

This is a cross-section of what the fill system might look like. The powerhouse would be excavated and

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set as low as possible, the tunnel excavation material laid upon the hillside, low-slope hillside around the powerhouse.

This is the intake site up at Swan Lake. This is the plan view looking down at our proposal. The intake would be constructed as a siphon instead of a lake tap. That would be primarily for safety and security reasons, safety and security in that the intake could be shut off, the power conduit tunnel could be dried out and inspected if need be, or altered. And it would also offer some resistence against a seismic event. It would involve a bunkered or embanked gatehouse or valve house set essentially back into a rock face, which you'll see in subsequent pictures.

A lay down area for pipe and materials, and a helicopter landing pad. The siphon would be laid as nine foot diameter steel pipe on the embankment of the lake, extend approximately 60 feet deep at its deepest, and at least 40 feet before the entry, or the screened entry to the system. It would have a substantially secure gatehouse or valve house, with crane and door access, to be able to lift out and replace valving and piping, if needed, and a man tube into the tunnel.

Cross sectional view, essentially, it would be a building face, which could either be screened or

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architecturally blended against the rock face that you'll see in subsequent pictures.

The landing area and lay down area would be necessary for construction, but after completion of construction, it could be reduced in size, but still need to maintain the helicopter landing and some equipment maneuvering area.

This is a cross sectional view of the tunnel system. The first half of it, the western half of it, the powerhouse near sea level, on the left side, rising to about 300 feet in elevation, and then going into the mountain as an approximately 1,300 foot tunnel at a one percent grade, then a vertical shaft of approximately 1,300 feet, which would daylight at the mountain slope top. And this would involve an affected area of approximately 60 to 80 feet in diameter during the construction period. It would require a small helipad and the ability to place a drill system here.

And there would be a horizontal tunnel approximately 13,000 feet long. At this point right here, the direction deflects. And then it would continue to the lake siphon shown in the previous schematic. The tunnel would be a drill and shoot tunnel, roughly 12 feet in diameter, with piping laid where necessary and where entering the exiting the

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tunnel. And this is a composite hydrograph of Cascade Creek, essentially showing the mean discharge over a period of 38 years in heavy, and then the individual water years showing a range of what's been measured or typical so far.

To look at it picture wise, this is a Google Earth, looking down. The outlet of Swan Lake is approximately here, Falls Lake is approximately here. The drainage basin that contributes to Cascade Creek beyond the outlet of Swan Lake is approximately this area, like this.

Could we turn some lights off? I think for these photos, it's going to be a little easier. That works. Thank you.

This is the powerhouse site as you approach by boat. Coming into Thomas Bay, the powerhouse would be located behind these trees, right here. You can see, looking at this hillside, that this is the lowest part, and it's somewhat depressed compared to the areas adjacent. It's also been previously cut or harvested.

This tree line up here is about elevation 700 feet. We checked it twice in the seaplane yesterday. This is looking northeast at the mouth of Cascade Creek, and a small little island, Spray Island, being over to the left or the portside.

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This is the existing Forest Service cabin, near a small creek outlet. This is probably a third of a mile south of the mouth of Cascade Creek. This is the edge of the cut that exists in the area. This is approximately where the tailrace would come out here, and the dock, the powerhouse would be behind all these trees.

This is looking more head on. These trees right here represent the stream that would lie in front of the powerhouse. The tunnel exit, or portal, would come out approximately midway up, between the sea level elevation and the tree line cut where it changes to old growth.

This is the north edge right here of what would be the powerhouse site, in behind these trees. I might also point out that there's two significant drainages on both sides of the powerhouse site that flank it, but there is no drainage as a channel -- a defined channel running through the site.

This is looking northward of the site. The mouth of Cascade Creek is just out of the picture, and this is where the cut feathers into old growth as you begin to go up the Cascade Creek corridor, the mouth of Cascade Creek.

Here's an aerial view coming out of the Cascade

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Creek canyon from Swan Lake. The powerhouse site would be over here. There you see the depressional area, sitting behind a row of existing shoreline trees, with the tunnel coming out about midway upslope, the powerhouse site right in here -- right in here.

This picture shows the drainages on both sides fairly clearly, looking head on from the water. After this facility was constructed, the visual evidence from the water, if the dock access were approved, there'd be a wharf, a tailrace, and an access lane to the powerhouse, but you would not see the powerhouse. All the tunnel excavation materials would be discharged in this vicinity, and it would be replanted over.

This is a view of the intake vicinity, last summer, July. There's a couple very large and significant snow shoots that dump through this area. We were up in the plane yesterday, and we saw that there had been a substantial slide that cut all the way down through the center of it, but not to either side. We would propose that the siphon pipe and valve house be embanked over on this side in the rock wall.

This is looking at the extreme right side of the intake area. This is a ground diorite subridge coming off the main system of the Cosmos Mountain here. This is, essentially, the peak of that, with very little

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evidence of snow storage or snow slide, and quite a bit of maturity to the landscape.

This is the rock wall on the right side of that delta, looking at it. This is where the gate or valve house would be embanked, or placed into. Another general vicinity photo.

This is at the other end of the lake, the Forest Service cabin kind of give you an idea of the -- what seems to be the only other significant inlet with fisheries potential, unless we hear different.

This is looking upstream at Cascade Creek as it comes into Swan Lake, kind of a serpentine channel, the side channels. And this is germane as it relates to lake level fluctuation and potential influences on fisheries life cycles.

This is the primary inlet to Swan Lake, at Cascade Creek, and it shows quite a bit of evidence of terracing due to varied lake level fluctuation.

This is a small pond or elbow catchment on Cascade Creek, downstream of Swan Lake but upstream of Falls Lake Falls, which we're told may contain fish. This is Swan Lake outlet, looking toward the outlet, right here, as it narrows substantially.

This is the outlet of Swan Lake, where part of our proposal would be to place a water barrier, so as to

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prevent leakage through the boulders, and in a variety of different methods. It would also allow, if need be, a continued low flow supplement. But the primary purpose would be to avoid water loss unnecessarily through the boulders. And it's a very narrow, confined channel, as it begins to tumble down the hill.

Summarily, the project is now substantially underground, with the entire power conduct being the tunnel, the gatehouse, and the valve house at Swan Lake being embanked into the bedrock, and the powerhouse being essentially embanked, almost buried with tunnel excavation material, and the surface area around it restored and replanted.

The project would be operated very similar to what this hydrograph shows. Water and energy would be withdrawn at essentially the same rate that it comes into the lake, and that would be predicted and followed through lake level monitoring and discharge gauges, with the request to allow fluctuation up to 10 feet. And we would be fully informed and aware that lake level would be maintained as necessary for fish spawning return to inlets and for recreational uses, access to the cabins. We fully anticipate that.

If you'd turn the lights on again, please? Thank you.

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Prior to the scoping meeting, working essentially with agencies and drawing from comments that we received earlier through the PAD process, the primary issues that we anticipate focusing on include the following, and would begin with geotechnical studies.

MR. TURNER: Chris, do you want to entertain some questions about the project?

MR. SPENS: Oh, sure. Pardon me. That makes sense. If anyone would like to ask questions with regard to what's been presented so far or attempt to clarify any information that I offered, now would be a good time.

MR. NELSON: Chris?

MR. SPENS: Joe, go ahead.

MR. NELSON: Joe Nelson, Petersburg Power and Light. I -- I'm just wondering if FAA had been contacted concerning the overhead transmission line adjacent to the airport? We've had some recent experience about being a distribution line in that area, and I thought it was some pretty stringent requirements, so.....

MR. SPENS: I would imagine. No, we have not specifically contacted the FAA. With regard to how we would lay transmission, generally speaking, on overland areas, it would be overhead where allowed and

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underground where necessary. And I would presume that any airport property would be underground.

MR. NELSON: Thank you.

MR. SPENS: Over here?

MR. TURNER: Margaret.

MS. BEILHARZ: My name's Margaret Beilharz. The outlet elevation and depth, do you know how deep it is? Does your bathymetry show you how deep that outlet is, actually? And at your minus ten foot operating level, would you -- would an outlet structure for in stream flows there be gravity feed or would you have to like get it up over the area there?

MR. SPENS: Like -- what we're aware of right now, based on watermarking at the outlet, is it looks like it goes up and down about six feet. And even at its lowest elevation, it's quite obvious that it's making its way through the boulders substantially. What we don't know is the depth of the boulder field or fluvium there, to get an idea how far would you need to go to get something firm.

It -- our proposal would be one of two or three different forms. It might be a sill. It might be to keep it simple, a grout injection, or chinking between the boulders, I guess you'd say. Whether or not low flows provided by a siphon or a controlled orifice at

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depth, you know, it really depends on just how porous is that boulder field, and how deep does it go.

The objective is to minimize water loss as well as offer any operational necessities, such as low flow requirements. Does that answer your question?

MS. BEILHARZ: Yeah, it does.

MR. SPENS: All right. Yes, sir?

MR. LEE: Yeah. This is Eric Lee. What would happen to Cascade Creek, would it ever dry up? Or how much of the flow would continue going down Cascade Creek after the project was completed?

MR. SPENS: What we anticipate -- so this is my projection -- is that we will be required to maintain low flow, for ecological purposes. That doesn't mean, however, in the winter, when it freezes up, that there would be any flow, because that happens. Sometimes flow gets as little as 30 cfs.

We, through our gauging investigation, are trying to determine how much area and how much flow contributes to Cascade Creek beyond the outlet of Swan Lake, from the remainder of the basin, and how much more water might be necessary, for ecological purposes, to be drawn from Swan Lake.

So the short answer is, we expect a requirement to provide flow, and it will be determined in part by

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seeing what's already available from the rest of the basin beyond the outlet.

MR. LEE: Do you have any idea what the requirement is for minimum flow?

MR. SPENS: Not at this point in time, no. I would add that a component of that will, obviously, have to do with the use and enjoyment of Cascade Creek Falls down below, maintaining aesthetics.

MR. LEE: Uh-huh (affirmative).

MR. SPENS: Anyone else? Please.

MR. UNDERKOFLER: We read -- Rich Underkofler.....

MR. SPENS: Yes, sir.

MR. UNDERKOFLER: .....the Manager of Petersburg. We read in the scoping document that there may be an additional new cabin at Swan Lake. Is that -- is that still your plan?

MR. SPENS: What we anticipate is providing one or two cabins, as the Forest Service might request, because we know that we're going to alter the seascape on Thomas Bay, and the existing cabin there, and it may be, either because of construction activities at Swan Lake, if it occurs, or the perception that it's been changed or altered, that the public might like another equivalent opportunity, or at least acceptable opportunity in the environment. So we anticipate one

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or two cabins.

MR. UNDERKOFLER: Up on the lake?

MR. SPENS: Wherever the Forest Service requests or requires.

MR. UNDERKOFLER: Thank you.

MR. SPENS: It could be on Thomas Bay, it could be a different water body for that matter. I don't know. Anyone else? Yes, ma'am.

MS. SMITH: I have a question. From.....

MR. TURNER: Your name first?

MS. SMITH: Martha Smith, Petersburg resident. From the FERC website, it identifies or describes this scoping process as a process of identifying potential impacts the project would have on the environment or the community. And what I am seeing in your presentation is we've got also the environmental impacts. I'm wondering what efforts you have made to study the impacts on the community of Petersburg?

MR. SPENS: And that is the nature of this process is to find out, from your thoughts and recommendations, what should we look at? What I'm aware of at the moment is, we need to evaluate potential recreational impacts and how the perception of the desirability of the site is viewed, during both a construction period and an operational period. What sort of effect does

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that have on the draw and demand for tourism.

What I recollect from the last visit in Petersburg in September '07 is this is a very valuable and important area for charter and tours and recreation, fish and game harvesting. It is the backyard, the recreational backyard. So I anticipate that we will be doing a recreational use and impact study, with that regard.

MS. SMITH: Could I also request an economic impact study on those people who use that area for your -- for things that you specified -- ecotourism for fishing, for crabbing, or hunting? I think that needs to be included in the economic impact studies.

MR. SPENS: Okay.

MR. TURNER: I think we're kind of getting into the issues that -- they're relevant issues, but they might come out as we start talking about each of the resource areas. Socioeconomic is a resource area that (indiscernible). Anything more on the, you know, changes in the proposal or the operations? I want to jump into the issues.

MR. SPENS: Go ahead, Joe.

MR. NELSON: Just.....

MR. TURNER: Oh, I'm sorry.

MR. NELSON: Joe Nelson, Power and Light. With

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the siphon, as opposed to the lake tap, is that going to impact the output of the plant or the size of the installed capacity?

MR. SPENS: Not that we've identified. That does raise the point that we modified the powerhouse capacity to take advantage of the peaks instead of a more steady flow, or instead of the more steady 400 cfs flow with a managed reservoir, having the capacity to handle, you know, 700 cfs or greater.

With regard to siphon over lake tap, to the best of my awareness -- I'm not an engineer -- it doesn't affect the capacity of the plant.

MR. NELSON: Okay. Thank you.

MR. UNDERKOFLER: Rich Underkofler, the Manager of Petersburg. I don't -- I'm not an engineer either. Could you explain it in simple terms, the difference between a siphon and a lake tap? Is there a diagram or something that.....

MR. SPENS: I regret I don't have a diagram.

MR. UNDERKOFLER: Uh-huh (affirmative).

MR. SPENS: But I can tell you, a lake tap is where you tunnel towards the underwater edge of the lake, and at some distance, anywhere from 20 to 80 feet away, you create at the end of that tunnel a sump or an underground room, which is really preparing for an

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explosion to catch rock.

And the tunnel comes through the mountain, goes up to the lake basin, stops at that distance, creates a large room, a drill is drilled, a charge is set, and it's calculated to explode only that thickness of wall which then, by lake pressure, it tumbles into the room or at the catchment at the end of the tunnel. It is quite literally a one shot deal, and there is, obviously, nobody inside of it whatsoever.

The challenge with that is, is that activity, in and of itself, opens water to the tunnel, so everything down conduit or downstream has to be ready for that. And unless after valving were installed, there'd be no way to dry out the tunnel.

We choose a lake siphon because it is safer to construct, more sure to operate, more predictable with regard to its dimensions and outcome, and it allows the ability to shut off the water entirely and dry out the tunnel.

MR. UNDERKOFLER: Is there a - do you have a diagram of the lake siphon?

MR. SPENS: I do.

MR. UNDERKOFLER: Then maybe you could walk us through how -- the mechanics of how that works?

MR. SPENS: I do. Okay. First of all, this is a

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typical tunneled cross section, approximately 12 feet in diameter, and therein, at least at the ends, the siphon end and the portal end to the powerhouse, pipe is laid and then grouted, filled around it.....

MR. UNDERKOFLER: Uh-huh (affirmative).

MR. SPENS: .....to transition. This is what the siphon looks like. This is the lake level right here. This is all native rock and earth material. The pipe is laid over ground, into the lake, to a depth of approximately 40 feet but not deeper than 60. It's brought up to a gatehouse or a valve house.

The pipe's churned down into a vertical shaft tunnel, through a barrier right here, transitions to a drill and shoot tunnel. It has a -- what's called a man tube, kind of like a straw, with a ladder inside of it, going down into the tunnel, for inspection or examination.

It has a siphon -- air siphon at the top that pulls all the air out of this portion, while this valve is shut off right here. It draws the air out and it draws water in, fills this whole section right here so that this is all filled with water, the entire thing, up here.

And once it's brought up over the lake elevation and back down, this valve is open as a siphon and

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begins to fill the tunnel. Similarly, it can be shut off, and the tunnel drained at the lower end, for inspection or repair, as the case may be.

MR. UNDERKOFLER: So is that -- where you're drawing water out of the lake, is that -- is that like under the surface.....

MR. SPENS: Absolutely.

MR. UNDERKOFLER: .....of the lake, and it's.....

MR. SPENS: Yes. The actual intake of the pipe is about 40 feet below the surface, vertically separated to avoid intake vortex or current surface effects. If you look -- if you think about your bathtub when it's draining -- to avoid any type of current, to avoid debris fields, and for the most part, to avoid the area of greatest fishery utilization.

MR. UNDERKOFLER: So is that pipe that's going under the lake, is that under -- is that buried, or is it.....

MR. SPENS: No.

MR. UNDERKOFLER: .....is it lake on the bottom of the lake or something?

MR. SPENS: It -- it's laid on the shoreline or the embankment of the lake.

MR. UNDERKOFLER: Okay.

MR. SPENS: And then as it comes out, there is the

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opportunity to bury or embank that portion that is above the water elevation, but to bury it below would require drawing down the lake.

MR. UNDERKOFLER: I see.

MR. SPENS: Does that answer your question?

MR. UNDERKOFLER: Yes, sir. Thanks.

MR. SPENS: Okay. Anyone else?

MR. TURNER: One over here.

UNIDENTIFIED VOICE: I'm looking at the fish screen there at the bottom of the siphon pump. Is that going to be adequate to keep fish from being stuck to it? It would seem like it would be a terrific amount of suction involved in the -- in the piping like that.

MR. SPENS: Here -- here's what I'm aware of with intakes and screens, for whatever purpose, is the pipe goes into a screen box. It could be any shape -- rectangular, cylindrical, pyramid. The screen box has surface area that is many times greater than the cross sectional area of the pipe inlet, and that is to reduce the pressure against its surface across its total aerial extent.

And it's slotted or has cutouts or any type of perforation that will allow the maximum of water through, but will not allow whatever you're screening to pass. So if it's small fish, it's sized

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accordingly. If it's debris, it's sized accordingly. We won't know what it will be until we get through this process in part and see what becomes the condition of the project. We anticipate a fishery screen based on the feedback we've received from agencies so far.

MR. TURNER: Why don't you bring up issues.

MR. SPENS: Okay. What I'm going to present are the primary issues that we're aware of to date. That by no means suggests that that's all there is or nothing else will be considered, that's hardly the case. I would call these the big ticket items. And you can follow along on page 16, if you happened to have picked up a scoping document.

And if you look at potential studies -- it's headlined potential studies -- and this is a condensation of all of the issues that might otherwise be possible.

MR. TURNER: I think we ought to go through on page 10.

MR. SPENS: You want to go through the whole.....

MR. TURNER: (Indiscernible - simultaneous speech)

MR. SPENS: Okay. All right.

MR. TURNER: (Indiscernible - simultaneous speech) issues -- those are the studies that address the issues.

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MR. SPENS: All right. All right. Turn to page 10. We'll go through the long list. And it -- I am going to give this a very brief overview, because this really is your meeting, your time.

Now, the project involves looking at cumulative effects, which is not just this project, as proposed, but other projects that it might stimulate or cause to happen or be enjoined with. Those could be other power producing projects, other transmission lines, other marine related activities that might be associated, for instance, with the construction of a dock, ancillary impacts that might include one time construction impacts and ramping up logistics for that. They may be directly or indirectly related to the project, but they're considered as a whole.

To move through the individual issues, I touched a little bit on recreational resources, and our understanding is, it is a choice area. It is heavily used. We've got lots of feedback in that regard. And from day one, when we presented the project, that came to the very top of the list.

With regard to the geographic scope, or the area that studies would occur, what we anticipate is the immediate vicinity of facilities, as well as the transmission corridor to Petersburg. In addition, by

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way of example, if we are looking at mountain goat movement, composition, distribution, that could have a geographic scope that's much bigger than just the project or the project facilities. It might include the ranges around Swan Lake, and possibly some of the adjacent watersheds.

MR. TURNER: Let me stop you here, Chris. Based on what we heard and what we saw in the record, the only cumulative resource that we found, as we understood, is recreation. When we look at cumulative effects, we look at how our actions -- and that is the licensing action -- is going to interact with any other actions that may be taking place in that basin, be it forced reactive needs or sightseeing or any kind of plans for that area. And we look at how those things interact, synergistically or opposed.

Right now, that was the only resources that -- or the only actions that we saw that were having a cumulative effect, and that was recreation related. If there is others, we're looking for that input. Did we miss something we need to be considering? So give us some feedback on that.

UNIDENTIFIED VOICE: Well, you know, preliminary applications are pending for Ruth Lake and Scenery Lake. So is that an example of something you'll need

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to look in the relationship to this project to those projects?

MR. TURNER: It is. In the sense of -- historically, the Commission has not necessarily looked at preliminary permits as a action of themselves, because there's -- historically, there are a very small number of -- actually get built, a very small percentage of them, like on the order of 10 percent actually ever come to fruition and have an application put forth before the Commission.

So to the extent that an application or a process starts to overlap with this one -- Cascade and Ruth -- or Ruth and Scenery Lake would be excellent examples of things we would need to be considering.

The disconnect here may not be as equivalently -- I think there are legitimate issues in this case. It -- it's not like the typical case that we've had over our history at the Federal Power Commission, because, like I said, most projects never come to be.

Unless they come to be, and they're in our process, and we have an application before us, to the extent that they may be overlapping in other applications, they become legitimate issues. But we never really look at them because there's so much unknown. But here, that may be a legitimate fear to be

looking at.

UNIDENTIFIED VOICE: Maybe.

MR. TURNER: Yeah, maybe. I don't know. I'm just going to have to see where -- what falls out and the timing of what falls out in terms of Ruth Lake, how we'll proceed, which applicants are chosen, what time -- timing is underway on those applications, what processes they've used, when they want to get started, and that kind of stuff.

MS. SMITH: Martha Smith. I would like clarification of your definition of recreation. If we have families that operate tour boats, that people who pay for those services are recreating, but the families are not recreating, they are working, that is their employment. So are you including those people under recreation?

MR. TURNER: When we said recreation, we -- after we looked at this and we understood recreation, we think of it more in terms of what actions are going to be affected by our project. Is -- does Cascade -- is there any plans for expanding recreation around the basin.

What you're kind of talking about is a project specific effect on the recreational value, and we would look at that, and that is a legitimate issue to look at

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it. When we think about cumulative effects, what we're talking about here, are there other things going on in the basin? Is there additional plans for flights over the basin? Or are there timber activities that are planned in the basin that would interact with this action to further reduce the recreational value? Those are the kinds of things we're thinking about when we talk about cumulative effects. But the things you're talking about are really more a direct effect of the project on a specific resource.

MR. SPENS: Which we will be getting to.....

MR. TURNER: Right.

MR. SPENS: .....as we continue through the issues.

MS. SMITH: Okay. I just wanted the definition including sightseeing and recreation.....

MR. TURNER: Correct.

MS. SMITH: There are too -- too, there's people involved in sightseeing.

MR. TURNER: Correct.

MS. SMITH: Thank you.

UNIDENTIFIED VOICE: I have just another thing for you to consider. The State Department of Natural Resources has plotted a subdivision over there for a future sale of real estate, and I just.....

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MR. TURNER: Over where?

UNIDENTIFIED VOICE: Where is it?

UNIDENTIFIED VOICE: Thomas Bay, adjacent -- just south - just south of the site.

UNIDENTIFIED VOICE: It -- around Patterson River?

UNIDENTIFIED VOICE: Right, at the Patterson River outlet.

UNIDENTIFIED VOICE: Just -- there's a potential development there that I just want you to know about.

MR. TURNER: Okay.

(Indiscernible - simultaneous speech)

UNIDENTIFIED VOICE: It has roads platted and things like that. Road right of ways.

MR. SPENS: Jim.

MR. FERGUSON: Yes, Jim Ferguson with Fish and Game. I don't know whether to comment on this now or save it for our comments for later, because we have quite a few, but since you're talking about cumulative effects, if you will recall from our comments on the preliminary application document.....

MR. SPENS: Yeah.

MR. FERGUSON: We had extensive reference to possible impacts of the multiple projects on -- in Thomas Bay on the input of fresh water into the bay at

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different times of the year and altering the timing and quantities of flows and thereby altering salinity and freezing in the bay. And I would recommend that if -- I'm not exactly sure how to say this -- if maybe the other projects are being considered as to cumulative effect, then maybe you ought to consider that. And we can get into that in more detail, if you'd like. I thought I should bring it -- at least bring it up now.

MR. SPENS: To move along, if we may. The study and the evaluation of the project takes place within a temporal scope, or a period of time. And that essentially includes near term impacts -- we might consider those construction impacts, midterm of lifetime, such as operational, and very long term impacts, potential scenarios that might occur over time.

Right now, the study is projected to include a period of 30 to 50 years from its inception, which I don't know if, David, you want to speak to whether or not that's typical.

MR. TURNER: It is typical in the sense that because the Commission issues licenses for terms of 30 to 50 years, and that's why the -- we look at that scope of time.

MR. SPENS: Okay. With regard to individual

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issues, because so much of this project is underground, the geology of the area and a study and understanding is essential, not just for environmental impact purposes, but engineering and structural and cost estimating and so forth.

What we're aware of is these are large genetic plutons, granodiorite, exceptionally hard, reasonably stable, but they still include a fractured component. And that's somewhat difficult to map from the surface, but nevertheless, we would evaluate the facilities location with regard to their stability and resistence to reasonably anticipated seismic events or snow slides or debris slides, as the case may be.

We know that there's going to be a fairly extensive evaluation of the water discharge and flow regime, lake level fluctuation. Should the proposal be further modified where discharges would be different than what I'm presenting -- i.e., essentially natural fluctuation, that would be evaluated.

MR. UNDERKOFLER: Would you take another question, please? I'm sorry.

UNIDENTIFIED VOICE: Okay.

MR. UNDERKOFLER: Did I hear you say.....

MR. TURNER: Your name?

MR. UNDERKOFLER: .....that the powerhouse would

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be abutted up against a rock wall of the mountain?

MR. SPENS: The powerhouse, as we anticipate at present, would lie on ground that first would be excavated downward, and then banked or embanked with tunnel excavation material that comes out of the mountain.

So it would be wrapped around by earth material, its roof would be designed to take snow slide over the top of it, and it would essentially be bermed on two sides. It would be open, facing Thomas Bay, but streamed by 200 feet of existing vegetation.

MR. UNDERKOFLER: Well, the reason I'm asking is the -- this is Rich Underkofler, City Manager of Petersburg. And when we did the Tyee Project, we -- the plan was to use the rock wall -- the mountain.....

MR. SPENS: Uh-huh (affirmative).

MR. UNDERKOFLER: .....for one wall of the powerhouse.

MR. SPENS: Uh-huh (affirmative).

MR. UNDERKOFLER: And it turned out the geology wouldn't support that.

MR. SPENS: Yeah, we don't anticipate that opportunity. We.....

MR. UNDERKOFLER: Okay.

MR. SPENS: We believe that this is predominantly

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unconsolidated material at this location. That opportunity does exist, however, at the inlet structure. As you saw in the photos, there was a granitic wall immediately adjacent, and we may very well be able to superimpose the project into that wall.

MR. UNDERKOFLER: We had a big change order, anyway, because we couldn't use that wall.

MR. SPENS: Yeah.

MR. UNDERKOFLER: All right.

MR. SPENS: Oh, we're going for no surprises.

MR. UNDERKOFLER: Okay.

MR. TURNER: Chris, the court reporter just reminded me to please be sure to state your name, so we can actually attribute your comments to you and make sure that we get an accurate transcript. So.....

UNIDENTIFIED VOICE: I got a question.

MR. TURNER: Just a moment.

(Indiscernible - simultaneous speech)

UNIDENTIFIED VOICE: I'm worried about the noise from the powerhouse. I know of one out at Blind Slough is much smaller. We used to have a cabin out there, and that line was audible 24 hours a day the whole time (indiscernible). So I'm wondering, how will you mitigate that, because that would really impact the tourism aspect of experience out there. It would -- it

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would have to be almost silent to really not be obnoxious.

MR. SPENS: Do you want me to respond to individual specifics or.....

MR. TURNER: Yeah.

MR. SPENS: Okay.

MR. TURNER: That's fine.

MR. SPENS: At -- as it's intended right now, again, the powerhouse would be set below the existing ground surface, it would be dug down. And so on three sides, substantially, and to some extent on the fourth side, the Thomas Bay side, it would be surrounded by earth material, due to the fact that it is placed beneath the existing surface.

On the uphill side of the project, it would be embanked with tunnel excavation material -- rock. And the same thing on the north side. It would also have substantially thick cement walls, that they would be thickest on the upslope side, where it functions as a retaining wall, and less than that on the Thomas Bay side.

But nevertheless, all walls of the powerhouse would be concrete, all sides would be bunkered as far as line of site, and hence, line of audible noise by earth material.

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In addition, there would be the 200 foot screen of trees between the bay and the powerhouse. And at this point, we anticipate that the only audible sound is water rushing from the tailrace.

MR. TURNER: But noise is a legitimate issue that we should be looking at. And we'll look at it in the EIS.

MR. SPENS: With regard to aquatic sources [sic] -- and you can turn to page 12 -- aquatic resources, rather -- essentially, what we're going to be looking at here is lake level fluctuation impacts, fisheries populations, and whether or not any of the operation or a manipulation of lake level has the potential to influence these resources.

With regard to terrestrial resources, this is primarily focusing on effects on habitat or both fish, wildlife. It also would involve influences or effects on plant resources. Our approach at the moment would be inventories of what's existing and what's present, and a search for or a screen for threatened or endangered or potentially located extirpated species.

A federally listed threatened and endangered species, when we made application for a stream gauging permit, we got feedback from the Forest Service that geographically, in the large region, there are listed

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species, mostly marine. And at the time the activity was placement of gauges in fresh water system, and there were no identified, threatened, or endangered species, in that regard, specific to Swan Lake or Cascade Creek.

With the introduction of the dock access proposal, we would expect that to change, and there will probably be discussion of marine species that are at least in the vicinity, if not known to frequent Thomas Bay.

A recreation land use, I think we hit on that a couple of times. And basically, we anticipate an evaluation of what is the use, the frequency, the distribution, and the value of that activity.

Aesthetic resources, we take this to mean, what does it look like now, what will it look like during construction and in the future, in its final form. We anticipate doing visual mockups, scaled appropriately, where the project is superimposed on photos of the facilities areas, measured into scale, so you can get an idea what the effects might be.

With regard to cultural resources, so far, no information has come to light that we're aware of, that says that any of the location of the project facilities have a history of use or have a cultural, meaning primarily historical or archeological significance to

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those areas. But nonetheless, we expect to do a thorough search and review of any historical information that may come to light in this process.

MS. ESPOSITO: Can I interject a.....

MR. TURNER: Please do.

MS. ESPOSITO: (Indiscernible).

MR. TURNER: Yes.

MS. ESPOSITO: My name's Gina Esposito, and I'm an archaeologist with the Petersburg Ranger District. There are a couple locations that I have concerns about. And I can say that now or just provide it to you later, but just off the top of my head right now is Sandy Beach, where your proposed transmission corridor come on to that island.

MR. SPENS: Uh-huh (affirmative).

MS. ESPOSITO: There is two significant sites there. And then also where it comes into Frederick Sound from the mainland, off that point there, there's significant -- there's a bunch of petroglyph sites there which are very sensitive, prehistoric and eligible for the National Register, and that would -- so just to throw that out there now and when you -- at some point.

MR. SPENS: But that would be great to know. I might mention that the seaplane pilot yesterday

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informed us of a utilidor coming ashore north of Sandy Beach that had already been screened, already been utilized, and that we should look at and evaluate that access point. And it would involve a very, very short crossing from the intertidal area to the road right of way.

MS. ESPOSITO: Okay.

MR. SPENS: And it was partially for some of the reasons you mentioned.

MS. ESPOSITO: Right. And then -- yeah, the recreation, I forgot to mention the recreation aspect.

MR. UNDERKOFLER: That -- that's a GCI.....

MR. SPENS: Yeah.

MR. UNDERKOFLER: .....submarine cable that comes in there.....

MR. SPENS: Yeah.

MR. UNDERKOFLER: .....fiberoptic.

MR. SPENS: Yeah, that's what he said.

MR. UNDERKOFLER: .....down -- it's down this -- down the road from Sandy Beach.

MR. SPENS: I appreciate that.

MR. UNDERKOFLER: That's Rich Underkofler, the City Manager of Petersburg.

MR. SPENS: Socioeconomics, I think this gal over here mentioned what might be the potential impacts on

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area economies -- tourism, charter operations, that sort of thing. Developmental resources, pretty well spoken as it's written.

MR. TURNER: Why don't we stop here.

MR. SPENS: With regard to proposed protection enhancement measures -- sometimes this is called mitigation -- there are a number of kind of standard protocol items required, probably best represented by a soil erosion control plan would be typical of any substantial project clearing, grading earth.

A spill prevention plan, again, with regard to water quality and quality, I want to emphasize that we're looking at fluctuating the lake not more than 10 feet.

We have had some discussion about the fisheries within Swan Lake, trying to decide what is it, really? All I know to be fact is it was stocked decades ago, it is a sustained population. It is treasured and of great interest locally. We did a lake bathymetry and acoustic mapping, and searched for fish last fall. We got intriguing results, which essentially were less than a few hundred fish, or targets marked within the lake, averaging about four inches in size, which didn't speak to the adult populations, which are presumed to either be near shore, within inlets -- we did find out,

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by the way, that the lake's 580 feet deep, which is remarkable.

UNIDENTIFIED VOICE: Is that deep? Is that deep?

MR. SPENS: That.....

UNIDENTIFIED VOICE: Is that considered deep?

MR. SPENS: Absolutely.

UNIDENTIFIED VOICE: Good.

MR. SPENS: That's astounding.

UNIDENTIFIED VOICE: That's a good thing, then.

MR. SPENS: That's astounding. That's a big tub.

UNIDENTIFIED VOICE: (Indiscernible).

MR. SPENS: So we know we have to kind of blitzkrieg search all of the potential habitat areas within the same few days, to respond to that question. There's a lot of anecdotal information in the cabin, but nothing that's scientifically based.

We would have a revegetation plan for areas disturbed, and most notably, where the tunnel excavation material would be discharged. That includes elements to prevent invasive plant species. And timing and deployment, minimize affect -- disturbance on wildlife.

With regard to the transmission line and terrestrial resources, the best way I can express that is we would go overhead wherever we could, and we would

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go undersea or underground wherever we must. And for overland, overhead line construction, there are specific standards to meet avian species impact avoidance requirements.

I'm expecting that we're going to hear about federally listed threatened and endangered species in the marine environment, now that we've introduced the dock. Again, with regard to recreation, we anticipate providing cabins. We've also had some discussion about if the dock access alternative was selected, providing public access and use to that dock and providing connecting trails, if desired, south to the existing cabin and north to Cascade Creek.

Right now my awareness is the trail system is essentially along the ordinary high watermark, and it was a little bit juicy yesterday. I think that is a reasonable overview.

MR. TURNER: Chris has given a very quick overview of the specific effects of what we intend look at in the EIS. I'd like we open up now, maybe walk you through -- well, I'll leave it to you in terms of specific issues or just talk about it at random. It's up to you what you want -- either way works.

MR. LONGWORTH: Yeah, Dick Longworth. When you say 10 feet of fluctuation, do you mean you've taken a mean

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of the average lake level, you can either go above it five feet or below five feet, or is it from there, going down 10 feet, or take it from that mean and going up 10 feet?

MR. SPENS: What we would anticipate is, if the ordinary high watermark mark at the surface elevation of the lake was 1520, which is what it is on most maps and records, naturally it appears to fluctuate at least six feet, so it would go down to 1514 -- if those turn out to be the elevational standards that are, in fact, accurate, then we wouldn't anticipate drawing it down more than another two feet below 1514.

So it -- we would like to have some operational flexibility. And frankly, it would be mostly for local power needs, that it could be drawn down and utilized as storage, and that scenario would most likely occur in the winter, because at the end of the fall season, as things start to freeze up, and discharge is reduced, and power demand locally increases for heating and whatnot, that's really when that additional two feet becomes the most desirable.

Inversely, it's possible, with an outlet control structure, that it may be non-impactful to add some storage, some minute storage. You know, one feet or two feet over the entire lake surface of 579 acres is a

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lot of storage, with a minimal impact. And there is a watermark signature on the shoreline around that does show some extreme events where that may, in fact, naturally be occurring.

I guess I'd add, yesterday, flying over, there were very dramatic slides and snow shoots and avalanches coming into the lake. It was about halfway frozen. It didn't look at its maximum full, but it was certainly getting ready to do that in another month. So the additional operational range, two feet on either end of what might be natural is winter storage and maximum storage.

MR. LONGWORTH: So it could be 12 feet or 14 feet, then?

MR. SPENS: It would be a total of 10 foot maximum fluctuation from normal plus two feet to normal brimfull minus eight feet. Okay? Not more than 10 feet, under any managed event. That -- that's not to say that there couldn't be something that happened naturally that alters that. And.....

MS. DEMKO: Do you have some data over time?

MR. TURNER: Your name, please.

MS. DEMKO: Oh, this is Kelly Demko. Do you have some data over time? I mean, we're just like -- you're just kind of looking at the shoreline and see where the

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water's coming through?

MR. SPENS: Right.

MS. DEMKO: Have you guys looked at historically? I mean.....

MR. SPENS: We are doing that now with stage gauges installed.

MS. DEMKO: So you're beginning to do that now?

MR. SPENS: Yes.

MS. DEMKO: Okay.

MR. SPENS: The data we have is discharge data, and the data that we need is verified lake elevation stage at different times of the year. Now, it -- in the alternative, we can find the signatures on the shoreline and survey those elevations.

THE REPORTER: Excuse me. I'm not capturing you all's questions, so if you could possibly stand and give your name and then ask a question, probably add a louder voice, it would be greatly appreciated. Thank you.

MS. DEMKO: I'll just repeat that I'm Kelly Demko, and my question was, how much past history knowledge do you have of the level of the lake and its natural events that have caused the lowering and the rising of the lake level? You know, we've been keeping some data in the glacier out here through the high school, and

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some -- I mean, like how many years have we been doing that.....

MR. SPENS: That's in the.....

MS. DEMKO: .....15, 20 years, and they're surprised by some of what they're seeing. So you know, I'm not sure what you'll be able to project in just a years time or -- or I don't know what the time scope.....

MR. SPENS: No, you're.....

MS. DEMKO: (Indiscernible).

MR. SPENS: .....you're correct. This picture, again, just kind of shows you an idea. There are different elevational terraces of sediment, from discharge, in part, and lake level fluctuation, in part. And we did get a bathymetric survey of this inlet delta, reasonably accurate, for forecasting purposes.

And if you look in the water column here, you can see that there is clear marks on the land, showing the effect of lake level fluctuation at it -- and I'm going to say, at least six feet deep, because that's absolutely defensible, but possibly more than that.

So now we have stage gauges established that will measure, over time, continuous monitoring, how it moves, how it fluctuates.

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MS. SMITH: I'm Martha Smith. On Tuesday, the United States -- I believe it's the Council for Climate Studies -- released its comprehensive predictions of climate change impacts in the United States. I have not had time to read that completely. But the predictions for Alaska are for decreased precipitation and gradually declining lake and pond levels. I'm wondering how you plan to incorporate that data in preparing your defense of this project.

MR. SPENS: The way I'd respond to that is what we have is what's been measured up to this point. And forecasting, in most scientific realms, is exactly that, it's forecasting, it's not absolutely certain.

The way I see that playing out is stipulations on a license that says you must maintain lake elevation that X during these months, Y during these months. And if it differs beyond that, and it's outside of our control, then it's outside our control.

But we anticipate that there will be a high and a low that we need to operate within, and that we would only harvest the energy resource to the extent allowable to maintain the lake elevation within those parameters.

I could say that I've been made aware that the snow pack this past winter and the winter before have

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been amongst the highest on record.

UNIDENTIFIED VOICE: Uh-huh (affirmative).

UNIDENTIFIED VOICE: And it disappeared quicker -- I'm sorry to interrupt.

UNIDENTIFIED VOICE: That's okay.

MS. SMITH: This is Martha Smith again. I have a follow up question. Is there a mechanism -- once you have from FERC, or the guidelines for lake level, is there a mechanism for changing that regulation once the license is granted?

MR. TURNER: Okay. This is David Turner with FERC. Yes, they could ask to amend their license, but the license, as Chris said, may specify their operation limits. And if needed, we could ask to amend that license, but that would also go through a environmental review, and ultimately (indiscernible).

MS. SMITH: Thank you.

MR. SPENS: And conversely, wouldn't it be true that FERC could modify the terms if they had disclosed that potential intent in the original condition?

MR. TURNER: Yes, if we had said you wanted to. But we usually define a explicit operational parameter.

MR. SPENS: Right.

MR. TURNER: We're not going to leave it that open to do it, and we're not going to typically do it on --

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unilaterally.

MR. SPENS: I was -- by way of example, I was thinking of some of the hydrokinetics where there are stipulations based on operational monitoring, that.....

MR. TURNER: Hydrokinetics are a unique beast.

MR. SPENS: Yeah.

MR. TURNER: (Indiscernible - simultaneous speech).

MR. SPENS: Yeah. Fair enough.

MR. LEE: This is Eric Lee. If Ruth Lake were developed, what would be the market for the Swan Lake power? Would it be rendered moot -- this project be rendered moot, or how would that work?

MR. SPENS: I really can't speak to Ruth Lake and how it would be built or marketed or distributed. I can tell you that this project is intended to harvest energy in synch with natural discharge, and this project is intended to provide for local power, if needed or desired, and local backup, if needed or desired, but ultimately, to connect to the North American grid.

It serves a near term, calendar wise, purpose as a local resource, if desired. But it -- its power shape, its power curve is really North American.

MR. LEE: So this -- so the scope of this project

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really includes the Bradfield Canal (indiscernible)?

MR. SPENS: No, the scope of this project includes connecting it to Petersburg, this permit application, the way its system is set up.

MR. LEE: But really.....

MR. SPENS: It has other outlets, absolutely.

MR. LEE: Yeah, yeah. Okay.

MR. TURNER: Has anybody got a comment over there? Are there any issues you guys want to raise?

MS. BEILHARZ: Okay. I have a process question. I don't know if you are ready for those, but.....

MR. TURNER: Anything.

MS. BEILHARZ: Are you -- well, did you -- you sort of look through the studies? I'm sorry, this is Margaret Beilharz, with the Forest Service.

MR. TURNER: Why don't we talk about the issues, if there are any issues that we need to be thinking about that haven't been covered in the outline of the issues that we've defined for our EIS. Is there anything we've missed? And then we can turn to information gaps.

(indiscernible - simultaneous speech)

UNIDENTIFIED VOICE: (Indiscernible), Margaret?

MS. BEILHARZ: We had -- we're going to submit written comments, and we already did in more detail.

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And most of them.....

MR. SPENS: Yeah.

MS. BEILHARZ: .....are covered in (indiscernible). There's lots of specifics that can be addressed in the narrative too, under these headings.

MR. SPENS: It -- that reminds me, for the general audience, that this process is open till July 20th to receive written comments, submitted either directly to myself or to FERC. So you don't have to get it all in this opportunity or this evening, you have till July 20th.

MR. TURNER: Do you want to say something Matt?

MR. CUTLIP: Yeah, Jim, are you -- this is Matt Cutlip -- are you going to be submitted written comments on your cumulative effects comment in more detail.....

MR. FERGUSON: Absolutely.

MR. CUTLIP: .....so we can take a look at that and.....

MR. FERGUSON: Absolutely.

MR. CUTLIP: .....we can consider in the scoping document too?

MR. FERGUSON: Absolutely.

MR. CUTLIP: Okay.

MR. FERGUSON: If.....

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MR. CUTLIP: Thanks.

MR. FERGUSON: And I -- and if (indiscernible). But I just thought I -- this is Jim Ferguson with Fish and Game -- I thought I'd go through the document that I've had sitting on my desk since August 21st, 2008, which is the only, at this point, study plan that we have had submitted, and it was, basically, a -- it's the first draft of the detailed study plan for the gauges that were going in, and there's a later draft that we approved.

But it was a -- basically, a bullet point list of studies that we did, and to me, is more extensive than what was in the -- what was presented in the scoping document. And I'd just like to run through it quickly -- and we'll certainly get into more detail on it in our written comments -- but just to give an idea of some of the things that were being looked at.

And this is the document, August 21st, 2008's study plan and draft that we received. It went out to Forest Service, National Marine Fisheries Service, ADF&G, and additional interested parties -- I'm not sure who those would be.

But anyway, there was a section on gauging, which, essentially, we agree with the four location, but it didn't mention lake fluctuations, but I understand that

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you will be monitoring lake fluctuations, and that's good. There's a section on Swan Lake studies that talked about near shore lake bathymetry and tributary delta mapping.

There was a bathymetry study done, and we submitted comments. I have the year of April 10th, 2009. We haven't had any feedback from those comments, but we did have some concerns with the methods. And I think probably this -- just to the point here for the moment -- is that the inlet -- or the inlet screen -- I mean, at the -- Swan Lake -- the profile that was done was done to the nearest meter.

And we think that, given the amount of fluctuation that could potentially happen, there's a -- we would probably need a little bit more detail than that. In other words, finer resolution. And very possibly a more detailed discussion of the substrate in that area, just to understand what would happen if these lake level fluctuations occurred. And now that I'm hearing there might be even greater fluctuations, potentially, based on wanting to make use of storage there, I think that that issue becomes even more pressing.

There was one called shoreline stability. We weren't sure about that one, it must have been a discussion we had that we couldn't bring back to mind.

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There really isn't a discussion in the scoping document on in stream flows. It may be implied, but you know, if we really are going to determine what those should be, we'll need additional study. Now, we're not -- I don't think at this point, we're really proposing we go as far as something like an IFIM study, given the resources in the creek, but I understand we'll be looking at the -- trying to measure the accretion flows below, I don't know about below Swan Lake, below Falls Lake. So potentially, that could help us answer that, but that definitely needs to be one of our study targets.

The next two are potential wetland and watering and ice formation and movement. I'm not -- we weren't 100 percent sure about how we'd study those or what particular studies we would want, so I think we're going to skip over those for the moment.

There was a discussion about wildlife access and movement moving across the lake, when it's open or when it's frozen, and I think that's of interest to us. Obviously, archaeological resources, that's kind of outside our purview, but that will certainly be done.

Then there's a section on Falls Lake studies, talking about flushing rate before and after hydro diversion, which is of interest to us. And

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particularly of interest to us is -- I think was covered at least briefly -- is that if the flows to the creek are reduced, we don't know exactly what the outlet of Falls Lake is like, we understand it might be fairly porous, in which case, if we had a considerable reduction in flows, we could have a considerable reduction in Falls Lake, a decrease in the volume of Falls Lake, and I think that needs to be looked at pretty carefully.

Like double fluctuation and potential influence on temperature, I think there could be some concerns there, but I can't really get too specific on that at this point. We may get more detail in our written scoping comments.

Let's see, fishery studies, Swan Lake, Falls Lake, fish population and size distribution. It says scan, but we -- the scanner that was done in the bathymetry study is really insufficient to really say much about the fish in the lake.

So, if we really want to look at populations in the lake and distribution, we're going to have to get into a much more detailed study, and I think we can probably have some discussions on that and talk about what techniques we might want to use and then -- but one thing that's of great interest, and I believe on of

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the folks over here brought it up is the -- the intake area.

We're going to want to know if juvenile fish are using that area, because that has a huge -- we're talking about that box for the intake screen -- whether you're trying to screen out adults or juveniles has a huge impact on what that box looks like. There's the mesh size and the size of the box, because of the velocity of the currents that might be coming in -- a very important question.

And again, I think, given that we just heard some comments about possible additional draw downs, that is of great concern to this inland area, so we really need to take a very close look at what the potential impacts could be. Are we going to have, you know, a small falls there? Could there be, you know, erosion, could the habitat change, et cetera. And there's more than one little channel there, too, that we'll need to investigate.

There's another one -- let's see, fish access, (indiscernible), I guess I just covered that. Fish passage between Swan Lake and downstream pools. I think our initial assessment is that it's probably a one way trip downstream for the fish, but we're not 100 percent sure about that. Certainly the falls into

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Falls Lake is a one way ride, but we'd want to absolutely confirm that.

The next one was stream channel segment, habitat suitability for fish before and after. And we were going to look at habitat along the creek, perhaps maybe a tier two Forest Service type survey, and I didn't see any evidence of that in there.

Food production sources for resident fish and potential impacts, we weren't a 100 percent certain about that. (Indiscernible) but I'll skip over it for the moment. We may talk about that later.

And there was one on beach (indiscernible) sampling of the saltwater shoreline. I'm not a 100 percent sure that's something we're looking for, but we would like to have a very close look taken at the very bottom of Cascade Creek, basically to confirm what we have in the anadromous waters catalog, which is one of our listed plans in the -- I can't remember what it's exactly called -- it's one of our plans listed at FERC -- to either confirm what we have now or extend it, if we find more information about the extent of anadromous fish use down there.

I think Rich Lowell's going to have a bit more to say about wildlife, but what's in the document that came to us was just aerial mountain goat Falls Spring

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surveys, and I understand that there's been some discussion of -- between Rich and the applicant, and that's good. We would certainly like to see that information.

And then the final one is project design details operational regime, about the intake, the gatehouse, the powerhouse, the tunnel, et cetera. One thing that we could really use as soon as possible is some kind of operations model on the -- you know, how much is the lake going to change, how much water is going to be on the penstock how much is going to be on the creek, and what do you think the inflow to the lake is, and just basically how are we going to produce power? And at the same time, how much water is going to be going down the creek and how much the lake's going to fluctuate.

And those are all -- I think those are all very legitimate. And like I say, this is what I've been looking at before the scoping document came out. And so just to summarize, to date, what we have is an initial bathymetry study that looks at the (indiscernible) position, and we find out it's 580 feet deep, that's impressive. But I think we do need a little more focus on the inlet area of the main tributary.

And we have this -- we have the gauging plan, and

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I understand the gauges are going in. I haven't heard anything formally, but I've heard from some of our local staff that the gauges are going in right now, which is also a good thing. And otherwise, what I have just went down in my list is pretty much what we're looking for.

I wanted to look real care -- just for a moment at -- something else I have here I've put together and see if I've covered everything on this list. I guess I'm having a -- just more of a broad comment, and maybe we can talk about this more later on written comments -- but I'm having trouble with this run of the river concept, if we're actually changing the natural lake level fluctuation, and potentially the impact on the inlet stream, it just -- I don't know, I guess I've worked on a lot of hydro projects around Alaska, and I just had a little trouble with that concept of calling it the run of the river when, in fact, we are going to alter the natural regime there. That's just semantics potentially, but I think maybe we should call it something else, I don't know.

UNIDENTIFIED VOICE: Diversion.

MR. FERGUSON: Diversion (indiscernible) small, small storage, whatever, you know, mini storage, I don't know. And the other thing that I'd like to bring

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up that's just based on what I just heard is that if you're really looking at -- and I think I've already made this point, but I'll reiterate it -- if you're looking at potentially using more storage in that critical period during the winter, what you're hoping for, if you really do that, is that the lake level is going to come back up naturally, due to runoff, in time for the spawners to get up into that area.

And that may not happen. We see this on other projects all over Alaska. You know, if you have a very, very late spring, something goes on like that, the fish are ready to go, they can't access the steam, that's a huge issue here. It's probably the biggest issue on this project for Fish and Game, if I really would pick one.

And that certainly was the issue when we were talking about the 45 foot draw down in the original project proposal. But I think it's still a legitimate issue and it's certainly, if nothing else, should affect your decision however you want to make, you know, the use of storage on this project. But knowledge is power for all of us, so knowing more about exactly how this area is put together, what the elevations are, what the substrate is, how deep is down to bedrock, and would scour out if the water level

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dropped, that kind of thing, very important information for us.

And I invite other Fish and Game folks, if they have additional comments, to add to what I have, because I certainly didn't cover it all. But that's just, like I say, based on the -- what we have seen from Cascade Creek to date. So, I'll quit with that.

MR. STRATMAN: Hi, my name is Joe Stratman, and I work for the Alaska Department of Fish and Game as the Shellfish Management Project Leader for this region, Region 1. I manage the commercial and personal use crab and beam trawl shrimp fisheries in Southeast Alaska.

Thomas Bay supports commercial tanner and dungeness crab fisheries, and also, to a lesser extent, commercial red king crab and beam trawl shrimp fisheries. The tanner crab commercial fishery occurs in mid-February and typically lasts 11 days. The commercial dungeness crab fishery in Thomas Bay has a summer season that runs from June 15th to August 15th, and a fall season which runs from October 1st to November 30th.

With that in mind, the summer dungeness season began this past Monday. Due to the intense effort in the few -- first -- in the first few weeks of this

fishery, it's unlikely that commercial dungeness fishermen will be able to attend tonight's meeting to voice their concerns.

The red king crab fishery opens on November 1st, and it typically lasts one to two weeks. And the beam trawl shrimp commercial fishery opens May 1 and runs through February 28th.

Thomas Bay is also an area used by local residents for personal use dungeness, tanner, and red king crab harvest, as well as personal use trawl shrimp harvest.

Currently, all these personal use fisheries are open year round, with the exception of the red king crab personal use fishery, which is closed, by regulation, the months of April, May, and June. And it's currently closed by emergency order, due to concerns regarding region wide stock health. So that's just a little bit of background information on the shellfish fisheries, both commercial and personal use that occurred in the bay.

Shellfish management staff, the Alaska Department of Fish and Game, has concerns with the proposed -- this proposed hydro electrics project's potential impacts to these commercial and personal use tanner crab, dungeness crab, red king crab, and trawl shrimp fisheries in Thomas Bay, and also in Frederick Sound,

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where some of the power plant developed is slated to take place.

Even though the newest plan detailed in the scoping document mentions that no dam will be constructed, more fresh water in Thomas Bay, at certain times of the year, may have impacts to well established shellfish fisheries in Thomas Bay and also in Frederick Sound, where some power plant development will occur.

This project may have impacts on larval stage crab and shrimp as well as on juvenile and mature crab and shrimp, due to changes in salinity and turbidity. Increasing amounts of surface ice, making traditional tanner crab grounds more difficult to reach, it may affect the prosecution of the tanner crab fisheries, which I mentioned occurs in February.

And the potential development to the south end of Thomas Bay, including both alternatives for dock and power line construction and the proposed new outfall for water used to generate power may affect dungeness habitat in Thomas Bay and would most likely displace some number of dungeness crab fishermen.

Dungeness habitat and fishing effort could also be impacted in Frederick Sound by the power cable construction in the vicinity of Point Agassiz and Brown's Cove. Sunken power cables may also have

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impacts on shrimp trawl fisheries with a long history of targeting pandalus shrimp species in Thomas Bay and also in Frederick Sound.

Over the next couple weeks, shellfish management staff will further review Cascade Creek, LLC's scoping document, and submit more detailed formal comments, including relevant studies required on this project to our agency representative. And that's all I wanted to say. Thank you.

MR. CUTLIP: This is Matt Cutlip. I have a question for Alaska Fish and Game folks. Has there been any water quality investigations out there, or is there any evidence that that lake stratifies or sets up at all in the summertime?

MR. FLEMING: This is Doug Fleming, with Sport Fish, Fish and Game. There's not anything current. My files show that there was some work done back in the mid-seventies, a little bit of when the limnological work that was done to potentially find out that there was some, you know, physical measurements as well for stratification.

MR. CUTLIP: It -- is that data available?

MR. FLEMING: It's not published. It's basically field notes that are on file.

MR. CUTLIP: Okay.

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MR. FLEMING: Yeah, but that will be worthwhile to look through there.

MR. CUTLIP: Is there any way we could get that file into the record?

MR. FLEMING: I don't see why we couldn't.

MR. CUTLIP: Okay.

MR. FLEMING: It would have to require photocopy or handwritten notes, for the most part.

MR. CUTLIP: Okay.

MR. FLEMING: It's not electronic (indiscernible).

MR. CUTLIP: I'm just trying to get a feel for what the affect on the environment might be, especially -- I mean, if it does set up at all, how modifying the lake outlet from a surface withdrawal to a deep withdrawal may affect things like the -- and how that might affect Thomas Bay downstream -- you know, the marine -- the saltwater area downstream.

So I'm not sure exactly what's proposed in the way of water quality data collection, but I think it will be prudent that something is collected up there to assist (indiscernible).

MR. SPENS: You're going to want temperature profiles would be easy to do, and useful and very indicative.

MR. CUTLIP: Sure.

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MR. SPENS: Yeah.

MR. FLEMING: Yeah, Doug Fleming, Fish and Game. Earlier, we did, in our initial comments to the PAD back in 2007, I think we did identify two questions about water quality as relating to the different projects as well.

And I guess sort of a follow up on what your considerations were, and I'm not a expert in LAKE limnology and all, but I believe that other questions could be -- as far as dissolved gases and things, which would be released as -- it wouldn't be free flowing down to Thomas Bay, it would be interned in a conduit and then released there, so there could be higher saturation gases, depending on the depth, I would imagine, at the intake.

MR. CUTLIP: Yeah, I know we identified water temperate DO and TDG as potential parameters that could be affected by the project. So I just want to make sure that there's a means to collect some data, so we have a accurate representation of the existing environment. And then hopefully, we can make some -- do some analysis of how things may work under the proposed project operations of EA.

So at the very least, you would want to collect some data on those parameters, to the extent possible,

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right now. There could also be, you know, protocols in place under our license to do some additional sampling after the project comes online, just to verify that those conclusions reached in the EIS are accurate.

MR. SPENS: Oh, just a comment for Jim Ferguson. It's unfortunate that we couldn't get the state into the lake yesterday when we flew the plane, the cloud cover was there. But when we went back with the Forest Service and FERC, eased right on in. I took aerial pictures that, to me, are quite dramatic of snow and debris slides coming into the system, and especially into the inlet stream system, upper cascade. And I believe those pictures will show just how dynamic that inlet delta can be, and how readily and regularly it's influenced.

We have quite a few photo sets from several years, but nothing that shows that degree of energy and rearrangement. So my thought and comment is, it may be useful, for a season, to very accurately map a geo delta forum, but I'm quite convinced now that it's going to be significantly different than next year. And maybe we need to think a little bit about what is the end game, what is the management ideal, and how could we operate successfully in that dynamic system.

I mean, it's really dramatic logs, swept down. So

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I know what you're getting at, but I'm not sure that a detailed mapping at the moment in time would be the best method. So I'll send you what pictures I have, just to kind of help you think through what else might work.

MR. TURNER: (Indiscernible) Doug Fleming.

MR. FLEMING: Yeah, it's Doug Fleming, Fish and Game again. Yeah, we're -- I was up a week ago in that area and did see your -- the avalanche.....

MR. SPENS: Yeah.

MR. FLEMING: .....debris and all. And I think that that's to be expected in those kind of environments anyway. But I guess part of the -- I guess we've made a lot of comments in the past. This has been going on for a number of years, not everyone may have -- be familiar with it. But anyway, from our perspective -- and we are concerned about that -- the sustainability of that trout population, of course. And certainly, those inlet areas, streams are key to that.

So -- and we did present some comments about the bathymetry work, as far as being one meter resolution, which was not very high and all. But anyway, we just want to reiterate that that's one of our concerns with -- if it was obviously run of the river and there was

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no manipulations in flow, other concerns would be to a lesser degree.

But if there is some manipulation, we do really need to understand those -- the life history of the trout population there, which is -- I would say, at best, poorly understood, for a lot of reasons, where the rearings are going on. We have an indication where some of the spawning is occurring.

The -- but the importance of the potential of the upper liberal zone, around the fringe of the lake, I think you've heard this before, but anyway, it is -- we just don't know the importance of all those areas. And again, as you mentioned -- Matt mentioned as far as the depth of the inlet, the size of the screen, these things, how it would affect the population.

Previously, there have been some trap netting work that's been done in lakes like this, including this lake, and adult rainbow trout caught in hoot traps routinely are taken down to depths of 100 feet or so. So it's not like they're only the upper 30 feet. And like is said, we just feel there's going to need to be adequate studies to prevent -- you know, referencing the potential timing of the operations, and a good knowledge of the life history there, just so there isn't an impact on certain life stages and all.

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So.....

MR. SPENS: It.....

MR. FLEMING: .....and our fisheries -- it is a value fishery. It's one of the places where you can fly to reasonably, a remote setting, it's -- you know, it's got a value as a sport fishery. It's probably the best bang for the buck in the area.

And Thomas Bay is a recreational fishery resource. Joe certainly touched on it with the commercial shellfish, and we have king salmon fishing opportunities in Thomas Bay virtually year round, and not only for recreational, but it's also used for commercial trolling as well.

And there is also subsistence halibut fishing in Thomas Bay, as well as some level of commercial halibut fishing as well. So the bay -- there are resources there that haven't -- that certainly need to be considered or positions -- it's not just a recreational issue, there are fin fish are other uses. So wintertime trawling and access is -- with icing in the bay, can prevent problems to those that are trying to troll in those areas as well.

MR. SPENS: One aspect that I'd appreciate your help on -- this would really be from Fish and Game and the Forest Service -- is understanding, policy wise,

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how the introduced populations are managed or regarded. And what I've heard you say before is rainbow trout have been introduced to Swan Lake, they were historically stocked.

UNIDENTIFIED VOICE: Uh-huh (affirmative).

MR. SPENS: That subsequently ended perhaps decades ago, and what remains, naturally sustains. Our inquiry, really, is to find out whether collectively the state and the Forest Service would be interested in enhancement via stocking, and if not, you know, what is your perspective with regard to stocking fish? You know, are you opposed? Neutral? Open to consideration?

And how does this mesh or interface with Forest Service policy of -- what I'm aware of, in some wilderness areas, introduced populations are now being considered to be exterminated if they weren't naturally occurring.

And what I know everyone's interested in is a good positive fishery, and high quality. And what we'd be interested in is how could we actually enhance what is? And if it is additional stocking, how does that play against access issues for spawning, you know, if there's a steady supply? So we would like to understand what is the policy, what is the preference,

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and most importantly, what is the best bang for the buck enjoyment wise, and move in that direction.

MR. FLEMING: I think I can partially answer that, from the state's perspective. As far as for stocking, we don't have a -- in Southeast Alaska, typically, we're not stocking rainbow trout, we don't have a program. There's a few isolated cases where trout are relocated for fishing derbies and things, but we don't have a large scale stocking program we've gone with, like most of our stocking efforts for dealing with salmon in Southeast Alaska.

Yeah, the population is -- initial stockings were back in the -- 1957 and 1959 into those lakes. And basically, the situation there would -- it would not be likely that we would be looking at a -- enhancing the population or doing a stocking program. It probably would be.....

MR. SPENS: Why would that be? Why would you not want to add.....

MR. FLEMING: And this.....

MR. SPENS: .....additional population?

MR. FLEMING: Well, like I said, this is -- I can answer that -- I probably would have to go deeper into the policy.....

MR. SPENS: Okay.

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MR. FLEMING: .....but I don't think I can answer that. And I can just.....

MR. SPENS: Fair enough.

MR. FLEMING: .....tell you that as an area biologist, you know, if I am interested in going to a lake and doing some stocking, basically, I'd run into a brick wall. We have a high number of trout populations which are naturally occurring, and costs for doing hatcheries and things is quite high. People in the state realize this is a very big dollar item, so we don't have a stocking hatchery program in the Southeast to allow the enhancement of our populations, they already exist.

MR. SPENS: So you don't stock because you don't have a program?

MR. FLEMING: We don't -- that's probably part of it. But I -- like I said, I would not be able to answer all that without checking, you know. But currently, no, we don't have lots of lakes we stock with rainbow trout. Here in, say, South Central Alaska and Interior Alaska, we do provide those opportunities. And one of the reasons is, it takes pressure off some of the resident species which are most susceptible.

MR. SPENS: Okay. I'll follow up with you.....

MR. FLEMING: Sure.

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MR. SPENS: .....when I get a chance. We just want to know if that's an option. We'd certainly like to explore that and, you know, make it the best possible.

MR. TURNER: Pardon me?

MS. SMITH: (Indiscernible).

MR. TURNER: Oh.

MS. SMITH: Martha Smith. I have a question. It's a pretty big tunnel. It's almost three miles long, it's entirely length is 12 foot in diameter. Could you tell me what the estimated volume of rock removed is? What percentage of it will remain on the mountain? Is it going to be put at shoreline? What are your plans for dealing with that debris?

MR. SPENS: 81,000 cubic yards to stay on the mountain, our first preference. Blended into the landscape in the depressional areas along the adjacent hillside and around the powerhouse, affecting a total area calculated in its current form of about 8.3 acres.

MS. SMITH: Okay.

MR. SPENS: Now, if we were -- it varies in depth in some of the depressional areas up to 20 feet. You know, the common approaches to managing tunnel ex are usually to utilize it as a building material on area road networks.

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If the road access option was determined to be the best option, and that's how the license read, then we would utilize a lot of that rock on the existing road network within the Patterson Delta and access to the site. I'm also aware that there is an operating mineral resource pit out there that could be backfilled with it. Or there's also the possibility it -- if there were a need or demand elsewhere, shipping it.

But there's nothing harder to move than rock, and generally speaking, it would be helpful to keep it where it came from and to disperse it in a naturally arranged geo form and cover back over with vegetation.

MS. SMITH: Thank you.

MR. TURNER: Any other comments, questions? Margaret?

MS. BEILHARZ: No, not at this time.

MR. SAVAGE: Chris Savage, with the Forest Service here. I just have a statement I'd like to read for the record. Thank you for the opportunity to comment on Scoping Document 1 for the Cascade Creek Hydropower Proposal. The Forest Service will be submitting written comments that will include more details on our concerns, as they will begin to raise today.

The Forest Service will continue to work collaboratively to provide backup resource information

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and to identify additional city needs, also to identify potential issues and to develop measures for protection, litigation, and an aspect of the resources.

Our letter dated December 12th, 2007, commented on the preapplication document. In that letter, we raised many questions on how the proposed project may affect resources. Most of these questions will fall under the issues headings listed in SD-1.

Right now, recreation, socioeconomics, cultural resources, hydrological flows, and the scenic quality of the area have the most important resource issues for the Forest Service. Impacts to fishes, as well, is a concern to us. However, we will primarily defer to Fish and Game, to make sure that our concerns are consistent with theirs.

One major omission we see in SD-1 is the lack of proposed studies on current and future recreation uses, and those uses are related to socioeconomics, as we've heard today. Additional information on current uses and future trends for both commercial and noncommercial recreation use is needed to analyze the effects of the project and to design appropriate protection, litigation, and hazmat measures.

These studies need to be conducted before Cascade Creek, LLC, submits the preliminary draft EA to FERC.

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We can help you with this in providing what use we know occurs in the basin -- I mean, in the bay -- with our commercial information as well as the use of the three cabins, so we can help you there, and also try to look at trends.

Some other things. We do -- you know, seeing the two alternatives for -- to the access to the powerhouse, we do appreciate that. Right now, the Forest Service does not want to comment on which one of these would be our preferred.

Looking at the two alternatives, I recommend that whatever comes out of it needs to be consistent with other proposals in the bay. If the preferred alternative looks at a submarine cable, I would hope to see that whatever happens with Ruth Lake is also a submarine cable, so that they're both consistent, and that if -- as well, if it's going to be a road and an overhead power line, that there's only one overhead power line in Thomas Bay.

I don't want to see a Cascade Creek power line and then a -- whoever gets the Ruth Lake PAD, another power line. So those two projects have to work together so that there's one consistent corridor along that shoreline.

I also want to say that we do appreciate Cascade

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Creek LLC addressing some of our initial concerns in our December 12th letter by minimizing the draw down on the level. We appreciate you minimizing it to 10 feet rather than the 40 plus feet, and moving the powerhouse away from Cascade Creek.

Again, we will be providing more detailed information in our -- in a written letter. And thank you for the opportunity to comment. And then we'll defer any other additional comments to other Forest Service employees in the room.

MR. SPENS: Well, we greatly appreciate your district office personnel helping shape this project and identify the key priorities, and give us some feedback on some possible alternatives that will be lesser impacting. Everyone who has participate so far needs to know you have absolutely, positively changed this project. It wouldn't be in its current version without those inputs. And that's our best effort to be as collaborative and as responsive as we can be to what we've heard you say so far.

MR. TURNER: Did you have something, Margaret?

MS. BEILHARZ: Margaret Beilharz, Forest Service. Just process -- can we talk about this?

MR. SPENS: Sure.

MS. BEILHARZ: Okay. Currently, there's two

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proposals for transmissions lines and roads. Are you expecting a license application to include multiples, or do you have that resolved?

MR. TURNER: This is David Turner, with FERC. It would be preferable to have it resolved, it is not completely necessary. I think there should be a defined or a preferred alternative out there. And it may be that the Commission makes the ultimate decision. We can look in EIS and lay out the effects and see which one goes, but preferably, I would hope we could reach consensus on what does make the most sense from an environmental cost perspective, from the development point of view. But it's absolutely not necessary, we can look at those alternatives.

And ultimately -- I mean, otherwise, it's going to be left to the Commission and the Forest Service (indiscernible) conditions to dictate those alternatives otherwise.

MR. SPENS: I.....

MR. TURNER: But it does open the question, the need to gather data to answer and evaluate both of those alternatives.

MR. SPENS: Yeah, I would speak on that by saying the alternatives are presented because of the feedback that we got from agencies and the public, and most of

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the time those concerns were in synch, but sometimes they were simply from a different viewpoint, a different preference.

I would wholly anticipate that when it comes time to present the draft environmental assessment and the application for the license that it will be narrowed to a single preferred alternative, especially with what I hear Chris Savage say. I mean, it's going to be -- it -- it's going to be a option that works well for this project, absolutely, very mindful of anything else that mind happen with Ruth Lake or otherwise. So I'd be as sure as you can get at this point in the process, it would be a single version come time of application.

MS. BEILHARZ: So your alternative, licensing the process, meaning management will facilitate some discussion of the study report results and.....

MR. SPENS: Yes.

MS. BEILHARZ: All right.

MR. SPENS: Yeah, we.....

MS. BEILHARZ: (Indiscernible).

MR. SPENS: We expect to look at both alternatives, because they are quite different and have different packages and benefits and results, and try to work through early stage, you know, which one are we going to go with now.

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MS. BEILHARZ: And did you have any more updates on timing of studies before you prepare a draft license application?

MR. SPENS: Our approach at this point in time has been to modify the project with regard to the big issues of concern, to bring it to its current state, to hold and conclude this scoping process, and to immediately launch into the most responsive study planning that is seasonably achievable for the remainder of this year, and do the setup for next year.

And we see that the rate of the change of the project has been so rapid, you know, that we wanted to narrow it and refine it and scope it, really, before embarking on extensive study. And that -- that's why it is what it is right now. We're trying to not be wasteful, and frankly, reduce the range of issues that might be studied by reducing the impacts of the project through revision. And that is our approach, we're trying to make it fit.

MR. UNDERKOFLER: I have a question. I'm Rich Underkofler, the City Manager of Petersburg. I have a limited number of draft comments that I prepared. I'm listening here today to try to see how to revise this, because my Mayor is intending to present this at your meeting tonight.

So I -- I'm hearing this (indiscernible) who I heard talking, and I have a limited number, so (indiscernible). So consider this as a draft. Is there anybody else over here on this side of the room who needs one?

MR. TURNER: Are you intending to read this or make a statement, or were you.....

MR. UNDERKOFLER: No, I was just going to summarize it.

MR. TURNER: Okay.

MR. UNDERKOFLER: And my Mayor's going to -- I'm going to alter this, based upon what I heard today, and then my Mayor's going to submit it tonight at the meeting. But in general, it's an introductory comment, we will provide more detailed written comments as well. We would request that these comments be filed with the clerk and made part of the public record.

We found that the FERC website is not very user friendly. So we'd also like to request for copies of their project documents be provided to our public library, for people to get a -- just in the process of the last six or seven months, our citizenry is having a difficulty getting into the -- getting documents off the FERC website.

So there's really two issues addressed here. One

-- and it hasn't been spoken about yet --about the delivery of the project power to Southeast Alaska, and then social economic conditions.

In first category of -- power delivery to the region. We see that there's potential for problems on SEAPA -- SEAPA is the Southeast Alaska Power Agency generation and transmission system. The power delivered to the SEAPA substation at Scow Bay and Petersburg -- that's where it's going to be going -- we would request that Cascade Creek perform -- when I say Cascade Creek, I mean, Cascade Creek, LLC -- perform system analysis, to identify potential adverse affects on SEAPA's system. How will Cascade Creek ensure that the addition of significant megawatt hours will not cause reliability and frequency problems on the -- on SEAPA's system.

Then, reliability and redundancy requirements regarding power proposed for sale in Southeast. Will Cascade Creek be offering firm or interruptible power sales agreements to the Southeast Alaska utilities? If firm, will Cascade Creek provide backup for any power sold to Southeast Alaska utilities in the event of an outage on the transmission line or at the project?

If firm, who will Cascade Creek contract with, and at what price, to provide backup in the event of

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outages? If it's been a -- if the proposal is to have interruptible power sales, of course, these firm questions don't apply.

The next question is, will Cascade Creek accept rate regulation by the Regulatory Commission of Alaska?

Under its relationship with SEAPA -- that's the Southeast Alaska Power Agency -- what is the current status of Cascade Creek's consultation and negotiations with SEAPA and its members?

How will Cascade Creek ensure that no harm results to SEAPA's system with the addition of power flowing on SEAPA's transmission system? Will Cascade Creek pay SEAPA to update its grid to accommodate the additional load?

Next, the contract with Wrangell. Please provide a signed copy of the power sales agreement with Wrangell for future delivery of the power. Wrangell assembly members report -- and it's been reported in the local media -- that the cost will be 6.8 cents per kilowatt hour. Is this true? A document that we have says there's no guarantee as to what the rate will be, rather, it's based upon the cost of production. So I just wanted to reconcile that.

In terms of its power sales agreement with -- a potential power sales agreement with Petersburg

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Municipal Power and Light, will Cascade Creek enter into a power sales agreement with Petersburg Power and Light for standby generation when power's not available from SEAPA?

Will Cascade Creek pay Petersburg Power and Light for the added cost of diesel generation when upgrade work is in progress on the SEAPA transmission line to handle the higher load?

Next, delivery to Kake. We would appreciate a copy of correspondence and any contract with the Inside Passage Electric Cooperative to sell power from Cascade Creek to IPEC -- that's the acronym for them -- for sale at Kake. We'd like to -- we would -- we ask for correspondence and any contract to transmit power to Kake along the Kake-Petersburg Intertie

Now, as it relates to Angoon. Reference has been made providing payment to Angoon for -- from the sale of Thomas Bay project generated copy. Please provide a copy of correspondence and any agreement with the City of Angoon.

There's been local media that the Cascade Creek will help with the extension of the Southeast Alaska Intertie System. There's a plan in Southeast Alaska that's been promulgated by the Southeast Conference that shows that ultimately, we'd like to have a grid

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going all the way from Petersburg to Kake, on to Angoon, and along the west side of Admiralty Island, to hook up Hoonah, and eventually be a loop to tie into Juneau.

Will Cascade Creek pledge money from project sales for extension of that intertie from Petersburg to Kake, Angoon, Hoonah, and Juneau?

Next topic, use of the existing road systems in proximity to the project. What consultations have you with landowners for upgrading and maintaining roads in the vicinity of the project? This is all existing landowners. P&R probably needs to be consulted with that subdivision that they're planning over there.

Now, as to social and economic concerns, page 3. This has been mentioned before, local recreation outfitters provides services to clientele for trips to Thomas Bay, and excursions on land in the vicinity of the project. These issues were raised during the September 2007 meetings in Juneau and Petersburg.

Please provide copies of correspondence with local recreational outfitters and any proposals that will mitigate loss of revenue due to dislocation associated with construction and operation of the project.

I have another point here, cabin in Swan Lake, I think you've answered that. We note reference to

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additional new cabin at Swan Lake. Please provide documentation of consultation with the Forest Service and any affected landowners.

There's another point here that I want to add. There is interest among the recreational people, and perhaps a trail system could be developed in connection with this project for use by people to hike up there. Could there be a trail for recreational use?

Access during construction and long term operations. Please provide specifics regarding boat docking, airplane access, and road construction in Thomas Bay. I think you've addressed most of that stuff in your graphics.

Please show these proposed project facilities on a map with identification of local landowners. What's missing on your map is a defining who owns what over there, in terms of public, private landowners.

Please be more specific than your response at the September 2007 meeting in Petersburg, that you will use eminent domain under the Federal Power Act. I can tell you, this doesn't fly very well, and any private property owners are going to want some consideration, perhaps some trade out of the retail electricity. That's what we've encountered with Ruth Lake.

Consistency with the local land use plan. Is your

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proposed transmission line alignment from Sandy Beach to Scow Bay consistent with the local land use plan? This is the Petersburg local land use plan. I know it would probably be an issue if you try to tie in there at Sandy Beach Point, and probably one I'd encourage you to.....

MR. SPENS: Drop that message.

MR. UNDERKOFLER: Okay. Now, is there an alternative alignment for the transmission line? We've seen documents that show an alignment coming into Kupreanof Island for transmitting this power. And if -- I didn't see that presented here today. I saw some discussion of that in a draft agreement with Wrangell. It says that that would be much less expensive if we tie into Kupreanof, with a submarine cable over there on the east side of Kupreanof Island, because in terms of its connection with the proposed Petersburg to Kake intertie. If there is an alternative alignment, we'd like to see how that's going to hook up into the SEAPA transmission system.

MR. SPENS: What you saw is what we proposed.

MR. UNDERKOFLER: So there is no alternative alignment going over to Kupreanof?

MR. SPENS: Not at this point in time, because there's nothing to connect to.

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MR. UNDERKOFLER: Okay. Waste management during construction and operation. Please provide a full disclosure regarding how you will manage hazardous waste on this site, solid waste and sewage, spoils disposal. There's probably muskeg over there that, you know, requires special handling, how are you going to get rid of it? And the fuel supply.

And then, finally, impact on air, land, and sea transportation system over here on -- in Petersburg in Mitkof Island. We need a disclosure how this is going to affect our airport, our road system, our ports -- you know, our port facility, bringing -- if there's going to be any impact on Alaska Marine Lines for bringing materials up.

I found I skipped over one. We would also -- I say construction crews and affects on Petersburg, we would -- chances are people would be residing over here during construction operations. We'd like to have -- provide a -- and during the studies -- we'd like to have a disclosure of the proposed study and construction schedule, including the -- any demands, so we can forecast the demands on our local government services.

Now, if you want me to sanitize this before tonight.....

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MR. SPENS: Any way it comes, we'll utilize it.

MR. UNDERKOFLER: Okay.

MR. SPENS: You bet. Just as a general reference comment.....

MR. UNDERKOFLER: Yes,sir.

MR. SPENS: .....with regards to goods and services and labor force and local contractors and so forth, our desire and intent is to utilize and employ local populations wherever feasible. And if you prefer that we avoid you, we could do that too.

MR. UNDERKOFLER: No, we were just talking about housing.....

MR. SPENS: Yeah, we.....

MR. UNDERKOFLER: Housing.....

MR. SPENS: It.....

MR. UNDERKOFLER: Right.

MR. SPENS: The idea is to integrate the project with the community as best we can.

MR. TURNER: This is David Turner. We're going to have to look at those kinds of construction types in the EIS and define the workforce and -- it's some legitimate issues in terms of what kinds of.....

MR. SPENS: Right.

MR. TURNER: .....(indiscernible) you put on the infrastructure. With regards to your e-library or your

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getting stuff off the FERC web page, I can give you my name and number, and if there's folks there that are having problems, we can work through the e-library, which is our documentation system. I can help with you that. But we've been trying to make refinements, and it is a little confusing at times, but it's the best we've got. And it's actually serving a whole lot better than the U.S. Mail is, so.....

MR. SPENS: Yes.

MR. TURNER: And it is reducing, so.....

MR. SPENS: I'd add that the library feedback that we get is they prefer links to our website information than to FERC. And apparently, space is a factor, I don't know. But that's the instruct we got. We were going to provide hard copy, and they said no, we'd actually like to have links.

MR. UNDERKOFLER: Well, and quite frankly, we used your link to get the scoping document.

MR. SPENS: So.....

MR. UNDERKOFLER: We didn't -- we didn't get it from FERC, we got it from his website.

MR. TURNER: Oh, really?

MR. UNDERKOFLER: So -- and we have provided -- we've put it on a link on our website.....

MR. TURNER: Uh-huh (affirmative).

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MR. UNDERKOFLER: .....from the city, and we have it at the library. So.....

MR. TURNER: Maybe after.....

MR. UNDERKOFLER: .....we need to collaborate for public information, planning purposes.

MR. TURNER: Maybe after the meeting, we can talk about what specific problems you're having. Maybe it's -- I mean, it's up there.

MR. UNDERKOFLER: Well, Margaret [sic] could probably -- Margaret?

MS. SMITH: Yeah, I.....

MR. UNDERKOFLER: How did you -- Margaret [sic] has been -- did you navigate there?

MS. SMITH: Martha Smith.

MR. UNDERKOFLER: Or Martha -- sorry.

MS. SMITH: As a private individual, I find the FERC website very intimidating. I think the purpose is to restrict public input, not to facilitate public input. But I would suggest -- I'm also a member of the Library Board -- and I would suggest that while you're in town, you assist the librarian so the library can become a direct recipient of all of the proceedings, and they can print those on and off, as available, in a readable form for the public.

UNIDENTIFIED VOICE: Right.

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MS. SMITH: So not every individual has to have a FERC ID number in order to access FERC documents.

MR. TURNER: Well, just to be clear, you don't have to have an ID to access it. Anybody can go on to e-library and pull things up.

MS. SMITH: Uh-huh (affirmative).

MR. TURNER: To file something electronically is a totally different story.

MS. SMITH: Right.

MR. TURNER: And that may be what you're actually having the biggest problem with, as opposed to actually accessing the data. So maybe after the meeting, we can walk through that, some of your questions.....

MS. SMITH: Uh-huh (affirmative).

MR. TURNER: I've just got to make up time to here.

MR. UNDERKOFLER: And some of these documents were never filed with FERC.

MR. TURNER: That's true.

MR. UNDERKOFLER: You know, so.....

MR. TURNER: Yeah.

MR. UNDERKOFLER: And that's like he was referring to through Fish and Game, and I don't think the scope of that study last year, that -- you know, we -- it wasn't available for public review.

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MR. TURNER: I do have a question for you in regards -- you said that there was some interest in developing a recreation trail. Do you have an idea of where you would be starting from, to, where, what kind of.....

MR. UNDERKOFLER: No, it was a generic idea, and I would yield to the Forest Service, where that might be best. It's an idea that came up on the Ruth Lake application. We would like to have -- if you're going to do something over there, give us something for recreational use.

MR. TURNER: Well, recreation is definitely a issue that we look at for our projects where it makes sense to do. I mean, we expect to provide that kind of recreation for useful public resource. So it is.....

MR. UNDERKOFLER: Because they like to hike. We go in kayaks over there, and they want to make up for that.

MR. TURNER: Okay.

MR. UNDERKOFLER: Okay.

MR. TURNER: Any other questions?

MR. MITCHELL: I do.

MR. TURNER: Yes, sir?

MR. MITCHELL: Yes, I had some questions based on

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this. I'm Duff Mitchell with Cascade Creek. I realize that Petersburg is a member of SEAPA, along with Ketchikan and with Wrangell, they have Wrangell representatives here. The way this is written, it -- is the Mayor or you representing SEAPA in your comments here? I'm just trying to get clarification.

MR. UNDERKOFLER: The Mayor -- this is the Mayor's comments. We draft -- Joe and I drafted it. Joe is a member of the SEAPA board.

MR. MITCHELL: Right. And I'm just --I'm just.....

MR. UNDERKOFLER: So I am -- and I'm out of a job after this month, so you won't have to worry about me anymore.

MR. MITCHELL: Okay. And I was just curious what the other request for contractS with Kake, Wrangell, Angoon, and others, would that seem fitting, since the municipality has direct relationships with those particular municipalities to use that foram also to -- with your amicable relations with them to obtain that information?

MR. UNDERKOFLER: I think it should be a part of public record with FERC. That's what the request is. And our relationships are not that good with some of those people.

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UNIDENTIFIED VOICE: It goes both ways.

MR. MITCHELL: Thank you.

MR. TURNER: Jim?

MR. FERGUSON: Yeah, a couple of -- Jim Ferguson, with Fish and Game, just a couple things. One is if you're out of a job after a month, it might not help, but I'd be happy to sit down with you this afternoon and show you the secret shortcuts on how to use the FERC e-library, because once you know them -- there's a few to know -- once you know them, it's not so hard.

MR. UNDERKOFLER: This -- I'm saying this on behalf of some people in Petersburg that -- I've had -- not have a -- I have a person to get me in there, but.....

MR. FERGUSON: Okay. (Indiscernible). Got it. Now.....

MR. UNDERKOFLER: It's our residents who are having a problem.

MR. FERGUSON: Yeah. I use the thing everyday, so it's.....

MR. UNDERKOFLER: Yeah.

MR. FERGUSON: I know the few, little, you know, things you've got to -- if you don't know them, it's difficult, if you know them, it's easy.

MR. UNDERKOFLER: Yeah.

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MR. FERGUSON: Yeah.

MR. UNDERKOFLER: Sue here handles our access (indiscernible).

MR. FERGUSON: But I'd be happy to.....

MR. UNDERKOFLER: Okay.

MR. FERGUSON: .....sit down. Anyway, and the other is a more process related -- maybe continue on from Margaret Beilharz's comments. The process from here on -- and maybe I'm getting ahead of you -- you're (indiscernible). So we're going to be providing scoping comments around July 20th, I believe is the deadline.

And then my understanding is what's going to come back are detailed study plans from Cascade Creek, LLC. And at that point, we'll probably -- we'll have a dialogue on refining those. And I know that under the ALP, things are a bit looser, but -- and maybe my -- the second part of my question is -- maybe to FERC is, how will it proceed from that point so that we get a complete set of study plans that are supposed to cover all the issues that we're concerned about, or at least what Cascade Creek is interpreting as being our concerns? What happens at that time? You know, can we go back and forth as many times as we need, or do we have one or two rounds, and that sort of thing?

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MR. TURNER: Well, this is David Turner. And that's the advantage, if you will, of the alternative licensing process. We leave it to the applicant and the parties here under the communications protocol to kind of work those things out in terms of the studies.

The next place that you will see us involved formally is in the review of the preliminary draft EA in soliciting a recommendations for -- preliminary recommendations for that licensing. So there's a lot of work, I anticipate, leading up to the development of that PDA -- or preliminary draft of the environmental assessment.

So I would hope that Cascade would have a number of meetings and try to work through those study plans to address all these issues that come out of SD-2. But it's critical, I think, to make sure that we have all those issues defined, and that's what this scoping meeting's all about.

You had another part of that question, I thought, and I (indiscernible).

MR. FERGUSON: Well, I think you've -- this is Jim, again -- I think you've answered my question. It's kind of I expected, but I guess my follow up to that would be the -- maybe I'm saying the obvious, but it may not be considering with -- you know, we've had

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fairly infrequent interactions at this point, but I just want to encourage frequent and very open interaction between Cascade Creek and our department and also with the Forest Service, and that goes for us at the Forest Service too, particularly at this point, because it's very -- you know, what comes out the other end that's obviously very dependent on, you know, just how well we refine this down to where everyone is okay with it. And I just want to encourage that, I'd like to see contact. And will there be a website, Chris?

MR. SPENS: We do have an informational website for the general public.

MR. FERGUSON: And it'll be.....

MR. SPENS: And we will update with whatever comes in, and I believe it is up to the moment, at its current state.

MR. FERGUSON: Uh-huh (affirmative).

MR. SPENS: And just to respond, I think it's safe to say that things will get pretty intense, pretty fast now. I mean, it -- to really defined the target's been important, and to really have a project that we feel solid about that makes sense, that fits a lot of the key concerns reasonably, I think now we have something that we can really launch intensive investigation on.

MR. FERGUSON: Uh-huh (affirmative).

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UNIDENTIFIED VOICE: When does your current permit expire?

MR. SPENS: it will be three years from February 14th, '08.

UNIDENTIFIED VOICE: Okay.

MR. TURNER: February.....

MR. SPENS: Actually, it backs up to the first.

MR. TURNER: Yeah.

MR. SPENS: Yeah, it's a letter issued.....

MR. TURNER: So January 31st, 2011.

MR. SPENS: Yes.

UNIDENTIFIED VOICE: Before we leave the issues, from my perspective, as a trust resource biologist, I wondered if there was any data or issues surrounding wildlife use of that area? Do you have any data? Generally characterize it, and I thought you guys were only proposing sensitive species characterizations, and I just want to make sure that you're going to give us cover type mappings, and some of that other to characterize the habitat you're going to be disturbing.

MR. SPENS: I -- I've got a pretty good feed from ADF&G folks here in Petersburg with regard to what they have in prior studies and what have you. I feel like we've got a pretty good focus with regard to moose and mountain goats, and I have a little bit of information

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about prior habitat enhancement activities.

As far as habitat mapping per se, I think that's going to be a pretty much totally new endeavor.

UNIDENTIFIED VOICE: New endeavor, but one you are going to undertake?

MR. SPENS: Yeah, it's up to their.....

UNIDENTIFIED VOICE: He's been trying to -- he's raised his hand a couple times. But I think this is the man (indiscernible).

UNIDENTIFIED VOICE: Well, yeah. No, I'm (indiscernible).

(Indiscernible - simultaneous speech)

MR. LOWELL: My name is Rich Lowell. I'm a local area wildlife biologist for the Wildlife Conservation Division. And before I get any further divorced from the remainder of staff, we submitted rather substantial comments regard to wildlife concerns in the state's package, which is available to the public. Without belaboring all those, I'll just reiterate here what some of our primary concerns are in the discussions that I've had with Chris with regard to these issues.

I think from a wildlife perspective, our concerns are focused on primarily on the -- what -- intense and chronic disturbance during the construction phase. I think that the actual operation's probably somewhat of

a lesser concern, but it's that intense chronic disturbance during the construction phrase that gives us some concerns.

The potential impacts to both wildlife populations themselves and wildlife user groups, whether they're consumptive users -- hunters, subsistence utilization, or simply viewing. Deer, moose, mountain goats, fur bearers, marine mammals, waterfowl are all likely to be impacted to some degree with regard to at least construction if not operation.

As I said, we're particularly concerned with what's likely to be intense and chronic disturbance -- helicopter flights to get equipment and personnel up to the lake itself, float plane traffic to get personnel up there, drilling, blasting, trucking of the tunnel debris, if that becomes an option that it would be moved by the road system, could that have, you know, additional impact?

Other concerns, there are some old growth reserves established in the area, and we would urge Cascade, LLC [sic], to minimize impacts to those old growth reserves. They were hard fought. You may be pushed conflicting directions with regard to, you know, some people don't want the dock, they want the road. the road would go through an old growth reserve. So I

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understand you're caught between a rock and a hard place.

With regard to the power line corridor, or if it does skirt the delta at the mouth of the Patterson River, there may be some issue with waterfowl raptors, and again, with the alignment of the power corridor. Again, seek to minimize the impacts to those old growth reserves, because under either option, it looks like it would traverse a portion of an OGR on the way to its entry point into Frederick Sound, where it goes underwater.

I have been talking directly with Chris. We are, I think, out in front of many others in that we have been talking about a collaborative Fish and Game and Cascade look at mountain goats. Mountain goats are notoriously sensitive to these types of disturbances -- helicopter over flights. They're very important to the local community, both with regard to commercial guiding activity and subsistence use.

In fact, I leave this meeting, and I go into a meeting with Forest Service to discuss other issues concerning goat management in the area. So that's one of our priorities, we've jumped out in front. Mr. Spens has been very receptive. We're currently putting together a -- collaboratively, a study plan for looking

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at radio collaring some goats in that area, getting some information on seasonable movement patterns.

Are there ways that we can identify areas that are sensitive to goats, important winter range, kidding areas, so that we can mitigate potential flights or into the area, route them around kidding areas? Those types of things where we are currently lacking the information to suggest ways that we might minimize those impacts.

So it's obviously a very important, not just for state, or if you will, recreational hunting, but also federal or subsistence hunting for goats, moose, black bear, and deer. The delta at Patterson -- or the mouth of the Patterson is an important waterfowl area. Impacts to raptors -- there are some actual ospreys nesting there, which is kind of rare for Southeast, because of the high prevalence of bald eagles, which tend to rob ospreys and make them not viable in this area.

Are the things we can do to enhance habitat there for moose? We've discussed this, Chris and I, about doing some thinning in some of the second growth patches that are closing in, reaching **(indiscernible).

Other issues surrounding access, if there is a

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road access, is the preferred route over the dock? How will the increased access by hunters impact wildlife populations, and to the contrary, are there, for security reasons, the possibility that access may be restricted? That areas utilized by hunters and trappers might suddenly become unavailable to them.

With regard to changes in salinity and icing in the bay, Thomas Bay is an important fur bearer trapping area, wolverine, wolves, martin, otter. Access is currently naturally limited by extreme drops in temperature that leave that portion of the bay to freeze over. Is that likely to become more prevalent, as we're dumping more water, fresh water in there during the winter months?

Marine mammals, this is getting a little bit outside my purview, we've got a branch of Fish and Game that deals with marine mammals. But there is a seal haul out adjacent to Ruth Island, straight across from Cascade Creek, what are the potential impacts there?

In -- I -- unless I just -- let me quickly look here and make sure that I haven't overlooked anything. Again, these comments have been provided as a part of the state's initial package. We will continue to evaluate the information that comes out of the proposal, and we'll be commenting further as the

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project takes shape and we get additional information on the operational plan and the selection of specific routes.

As far as the transmission corridor, as it leaves the power plant, from a wildlife perspective, I would favor the underwater route across Thomas Bay. However, that may conflict with other staff -- Commercial Fisheries Division, in particular. So we need to get together in house and decide, all right, here are the tradeoffs on our side with regard to wildlife. What are the tradeoffs with regard to shrimp beam trawling or moorage of boats dropping anchors around that power line, impacts to crabbing, those types of things? So we've got some in house discussion that we need to work on before we can provide solid comments. So we'll feed off any additional information that you provide.

And I'd just like to thank you, from a wildlife perspective, for what appears to be an honest interest in pursuing some of these things that will benefit our ability to manage wildlife, not only with regard to that specific project, but also provide information that will be of utility region wide, for example, with goat management. So.....

And that's basically what I have. If anybody has any questions specifically to me with regard to

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wildlife, then I'll be happy to entertain those. Otherwise, I'll pass it back.

MR. TURNER: This is David again. Not specific to you, but you mentioned the old growth reserves. That kind of goes to what I meant in terms of the cover type mapping and understanding.....

MR. SPENS: Uh-huh (affirmative).

MR. TURNER: .....what kinds of habitat you're going to be disturbing, when you're going to be disturbing them. So we need to be able to know and quantify the overall acreage, but what is the characteristics of those acreages, so -- and the relative value of those. So you need to work with ADF&G to figure out that and then include that in your application as well.

MR. SPENS: Yeah, and I understand you to say that the operational plan is really going to be critical as far as assessing the potential impacts, whether they're freshwater discharge related or people and presence, that sort of thing. But you really need that pretty much first thing.

UNIDENTIFIED VOICE: I have a question about the sea floor of Thomas Bay. Is it primarily sand composition, substrate?

MR. SPENS: Not coming off the beach. Like it --

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at the powerhouse location, it's sedimentary until you get off the shelf, and then it plunges very rapidly. At the deepest point in the route that we would propose, it's about 180 feet deep. So it comes off the shelf, plunges into what looks like a rock sided canyon. And then, as you head toward the mouth of the Patterson, all of a sudden, you hit the fluvial sedimentary front, and it shallows out very dramatically. It's actually a lot of cable to go a fairly short distance because of that.

UNIDENTIFIED VOICE: Is it -- are you planning on burying it in the sand, laying it on the rock, or have you not.....

MR. SPENS: The convention for installation is to bury it beginning at the intertidal area, typically to a depth of 100 or 120 feet, so you get beyond the convenient anchorage depth, and then for the most part, laying on the bottom at the greater depths, and likewise on the return.

We would be very interested in knowing if there's been any significant incidents with undersea cables that exist in the area. You know, the connection to Tyee right now includes an undersea cable, and if there's been any operational incidents with regard to fisheries or anchoring or what have you, we'd certainly

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like to know about that, because we're not able to find any. It doesn't mean there aren't any, it's just that they're not documented and available.

So our awareness is undersea cabling is pretty common throughout the Southeast for various different purposes. We just heard mention of a fiberoptic coming ashore. There are conventions for installation to provide for safety and hazard abatement. And we followed those conventions unless it needed to be modified for some specific reason in Thomas Bay.

MR. TURNER: Any other questions, comments?

MR. DEMKO: Are they evolving to the comments section? Or are we still in the agency questions in this period?

MR. TURNER: You're welcome to insert your comments if you want.

MR. DEMKO: Oh, great, because I've been here a while, and my butt's getting tired. My name is Jim Demko, resident. I've been here for about 20 years. I intend to be here as long as my body holds out. I turned 56 today, and I have longevity in the genes, so I expect to be around for a while, with any luck.

I've explored the entire area of what we're reviewing today, and I'm familiar with that, just a matter of background. Also as a matter of background,

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I've had enough experience in physics and the ecology of the area to come to my personal conclusion that the Cascade Creek will be able to engineer a project that minimizes the impacts to meet the letter of the law -- and I'm sure with technical discussions that we're involved in today will be bypassed eventually, we'll get past those.

And I'm going to jump right past those to frame what I believe is the -- I think we all know what is going to be the big crux of the issue here, and that's the public, not the geological or wildlife issue.

If we were discussing locating this project in Yosemite today, either you people would be laughed out of town, or this discussion would be involved with tens of thousands of folks.

John Dure, a man -- most part of a century ago, compared this area to Yosemite, and I think it -- we need to discuss that -- I think it is indisputable that geologically the comparisons of this scale are similar and relevant, the difference being only in location.

The other aspect of the value of any gem, of course, is rarity. And I think it is also beyond dispute that Thomas Bay and this coastline is rare, infinitesimally rare. I think the only difference between this and Yosemite is that currently, we don't

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have a half a million people visiting this area annually. And the fact is that many of us live here because of that dynamic. And that many of us who live here are willing and have a background in defending that dynamic, and we will continue to do so.

Personally, I will do whatever it takes to defend that dynamic. I will also enlist with any local organization that is formed to oppose this project. If none forms, I will form and personally lead that. I can promise you that we will also engage with any other environmental organization -- (indiscernible) be SEAC, which I have had experience as a board member of, Sierra Club, or whatever national organization is required to oppose this project.

When I was young, my father told me about Bucks Rules, which is kind of an offshoot of, what, shall we say, Murphy's Law. And basically, a Bucks Rule says that men -- those that have the bucks makes the rules, which is the other side of the equation here -- less side, equal side, magnificent limited resource, as it is, intact. On the other side of the equation, we have LLC. I don't care what name you put in front of LLC, the bottom line, the equation it frames, LEC [sic] -- LLC is the same. Bucks Rules.

I have no doubt that you have the background and

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the financial forces to continue this fight as long as it remains profitable. And I have no doubt, under the current situation, the value of alternative sources of energy, that we'll be in this fight as long as it takes.

And I think the other part of the equation, in between the equal signs there, is the big time factor. And part of that, obviously, is public awareness on a grander scale.

So all I'm saying here, in the big, big, is that we will continue to fight this, as a matter of values that are outside of the financial interests of a limited number of individuals. We might be a limited number of individuals right here on this rock, defending this -- our home land at this time, but we will do our best to enlist as many individuals in our cause as we can.

And this is not the way I expected to spend my birthday, by the way, but like I say, I got another 20, 30 years, I'll make up for it somewhere along the line. And I don't know whether I'll be back this evening, but I promise you that I will have a -- formal witness statements to be submitted to you and to the press now, and as long as it takes to pursue this fight. Thank you very much.

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MR. TURNER: Thank you.

MR. DEMKO: I'll see you.

MR. TURNER: Anybody else have any questions, comments, any other issues we need to talk about?

UNIDENTIFIED VOICE: I don't understand, where are you marketing this power? I mean are you going to market the power? I mean, it's 23.....

MR. SPENS: Everything from local to.....

UNIDENTIFIED VOICE: Local -- how much do we use locally. (Indiscernible).

MR. SPENS: You could explore that with your own power providers. What I would tell you is that it's a long term project. It has the ability to provide for local need, local backup. It is, by its power shape, intended primarily for export, and we see that as a project in process coming along in Southeast Alaska as a planning and development and establishing of interties connecting the communities of Southeast Alaska, and ultimately connecting to Canada and the lower United States. And that is a plan and a program and an objective in the legislation, in the local area plans, in the power policies of Southeast.

And whether it's this company or the next company or a public entity, that -- that's really what's underway is an effort to develop renewable energy to

provide locally as well as to provide in the greater sense of geography.

MR. LONGWORTH: I wonder, at what capacity we have to sell it -- 80, 90, 99 percent, to make it feasible -- is there any feasibility there?

MR. SPENS: There's a range of scenarios.....

MR. LONGWORTH: I don't -- I just.....

MR. SPENS: .....all dependent on what evolves next.

MR. LONGWORTH: And who pays -- who's paying for the, you know, transmission lines and the interties and things like that?

MR. SPENS: It's a combination of public and private endeavors.

UNIDENTIFIED VOICE: I don't think you got his name.

MR. LONGWORTH: Oh, Dick Longworth.

UNIDENTIFIED VOICE: Dick Longworth.

MR. TURNER: Any other questions? Well, before I close, I just want to reiterate that you're open to file written comments. We're asking those to be filed with Cascade as well as the Commission by July -- yeah, I'm sorry -- by July 20th, 2009. They will be incorporated and considered into the record. We'll issue a second scoping document, as necessary, to talk

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about those changes.

And if you want to be on the mailing list for the Commission, I encourage you to submit your name to the Commission so that we can put you on our official mailing list.

UNIDENTIFIED VOICE: How do we do that? Do we do that today?

MR. TURNER: No, you need to go and submit a letter to the Commission and ask to be put on the mailing list that way, because what comes -- when you're put on the mailing list, you're there until you ask to be taken off the mailing list. You're going to get everything that's filed with the Commission or issued by the Commission. So.....

UNIDENTIFIED VOICE: (Indiscernible) that's just around the corner.

MR. TURNER: Oh, well, no -- but in any case, it'd be -- there's instructions on -- in the scoping document on how to get on the mailing list, at least, there should be.

MR. UNDERKOFLER: Here it is, it's on page 23.

MR. TURNER: Yeah, on 23. So if you follow those, you can get on the (indiscernible) mailing list.

MR. PRUNELLA: I have another question.

MR. TURNER: Sure.

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MR. PRUNELLA: How do we.....

UNIDENTIFIED VOICE: State your name, please.

MR. PRUNELLA: Bob Prunella of Wrangell. How do we get -- when -- copies of Forest Service comments and Fish and Game comments that relates -- whether to Cascade and to you simultaneously -- in other words, I would like to keep in the loop on their comments.

MR. TURNER: They.....

MR. PRUNELLA: Because they were public, and so are we.

MR. TURNER: Right. The -- anybody that signs up for any e-notification on our e-library system will get anything that's filed with the Commission or is submitted -- or issued by the Commission. In the prefiling stages, participants are not necessarily required to file their information with us. The -- in response to you, studying the comments by Cascade, LLC, they might just correspond directly between the -- those parties. I think Cascade Creek, LLC, is making an attempt to include those on their web page, but I'm not sure about that, what might be the better source. Once they file that license application with us, then that entire record will be submitted on the Commission. But that's kind of late in the game, I understand. So I would work with Chris and them to make sure you're

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getting copies of whatever's filed.

Anything else? Or is everybody concluded? None. All right. Then.....

MS. FLANARY: I just would ask about Chris's mailing list. That's a separate mailing list than the FERC mailing list, correct?

MR. TURNER: Yes, it is.

MS. FLANARY: All right.

MR. SPENS: Yeah, we keep a mailing list on our website.....

MS. FLANARY: Uh-huh (affirmative).

MR. SPENS: .....and we will try to keep that updated, and that's a good cross connect with everyone that's been involved so far.

MS. FLANARY: And is that with -- at the last meeting that you have here when people sign their name, their address, email?

MR. SPENS: Yes, yeah.

MS. FLANARY: So people who sign there should still be on your list, then?

MR. SPENS: They should. I would tell folks coming this evening, you know, please do sign in so we can check and see if anything's changed as far as your contact. You know, I went through it about three months ago, and oh, about five percent of it changed.

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MS. FLANARY: Uh-huh (affirmative).

MR. SPENS: So I'd -- I -- I'm always concerned about someone says, I signed up in September 2007, how come you didn't contact me? Well, your email changed or your address changed.

MR. UNDERKOFER: That's Susan Flannery, Petersburg Power and Light.

MR. TURNER: Anything else? With that, I'll move to adjourn the meeting, and I appreciate everybody's input and time.

(Off record)

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Phone: 907.225.1145
Fax: 907.225.1148