FEDERAL ENERGY REGULATOR COMMISSION

PUBLIC SCOPING MEETING FOR

SUSITNA-WATANA HYDROELECTRIC PROJECT

Held at:

Menard Memorial Sports Center

1001 S. Mack Drive

Wasilla, AK

March 27, 2012

6:05 p.m.

MR. TURNER: My name's David Turner. I'm with the Federal Energy Regulatory Commission, I'm a wildlife biologist and team lead for this project, for Susitna for the Commission. I'll let my colleagues here introduce themselves.

MS. HILL: Jennifer Hill, chief of the northwest branch for hydropower licensing.

MR. CUTLIP: I'm Matt Cutlip. I'm a fisheries biologist, Portland, Oregon. And I'm also in the northwest branch.

MR. WINCHELL: Frank Winchell. I'm an archeologist with FERC. I work on pretty much most of the hydroelectric projects in the west.

MS. CLARKSON: My name is Katie Clarkson. And I'm a civil engineer with the Division of Dam Safety and Inspections out of the Portland Regional Office.

MS. NGUYEN: I'm Kim Nguyen. I'm also a civil engineer, but I'm in Jennifer's branch, northwest branch for licensing.

MS. FERNANDES: My name is Jesse Fernandes. And I'm an outdoor recreation planner for the northwest branch.

MS. MCDONALD: And I'm Lisa McDonald. I'm with the Louis-Berger Group, and we'll be supporting the project on socioeconomics and subsistence issues.

MR. TURNER: Well, again, welcome. A little bit about what we're going to go through tonight, and over the next couple years. We have a very brief presentation, we're not going to take a whole lot of your time. But we do want to make sure you have a good idea about what's happening over the next several years, and didn't -- decision-making process. And a good understanding of the projects.

So I've got a brief presentation; I'll talk about the process, the licensing process. And we'll talk about the reasons for the -- tonight's scoping for -- for our compliance with the National Environmental Policy Act. And then I'll turn the floor over to Wayne Dyok to give a brief presentation and overview of the project. And then we'll get into a discussion of the issues. And really what that is, is your opportunity to tell us what your concerns are about the project; whether you're for it or against; but also more importantly, about what the -- your interests are in association with this project; why are you for it or why are you against it; or what -- what is that -- about this project and those effects have you concerned the most.

Then we'll wrap up with a few important dates and finally conclude the meeting. This is being recorded for -- by a stenographer over here. So we're going to ask

you to give your name and affiliation before you speak, and will ask you to come up to the podium to make sure that she can hear you appropriately and attribute your comments. And this been will be on the Commission's record, which will support our decision-making process.

We asked you to sign in in the back when you came in, and looks like we've got plenty of time tonight to cover your concerns. So feel free to keep going as long as you feel necessary. And as we get closer to the evening, maybe we'll have to shorten some of it; but we have plenty of time it looks like. If you don't want to make an oral statement tonight for the record, you're welcome to file written comments, or even if you do want make a statement and you think of something later or have additional comments you want to file, you can do so in writing by April 27th.

We've got an extension of time request by several agencies with the support of AEA for extending that comment deadline to May 31st. It is likely we will be granting that, so all the dates that we'll be talking about later in this process will probably be moved back about one month; so just keep that in mind. In the back of the scoping document you'll see a mailing list. This went out to everybody on the Commission's official mailing list for the project. If your name is not there and you

want to be on the Commission's mailing list, follow the instructions in the -- in the scoping document on how to get your name on the mailing list.

Now, another point of -- of real value here is the Commission's eLibrary system. It's our way of electronically tracking documents and provides an opportunity for you to register your -- to receive e-mail notifications of any filings that the Commission receives, or any issuances that we may provide in relation to this project. And to do so, you just have to go in and register for project number 14241. And there's instructions in the scoping document on where to go on the FERC's Web page to do that.

And there's also a handout in the back on how the public might get involved, and then it also has some good information on how you might get engaged in -- stay abreast of what's going on in this project. AEA is going to be using the integrated licensing process to develop their license application. It began with their filing of the notice of intent to develop a license application for the Susitna project, and their filing of a pre-application document or a PAD, that laid the foundation for everything that -- that pulled together all the information that we know about on this project and the effects on the resources and it -- it's the foundation on which we will

build.

We're at the scoping phase right knew, which is the period which we're trying to get, again, your input on, your concerns. We're going to take those -- those issues that you identify and try to define studies that will help us gather the information necessary to address those concerns. And that's the study development phase. At the end of that phase, there'll be a Commission-approved study plan that AEA will have to implement to gather the data that we're looking for that we believe we need to do -- process this application. And that's the study -- the development phase and the application phase of the last box there.

And if all goes well, that's going to be occurring through 2012 and 2015. And ultimately they'll file a license application. That bottom box is basically the post-filing process. Once we review the application and find that it's complete, it meets all the requirements of our regulations and all the -- provides all the necessary information to do our environmental analysis, we'll issue what's called a "ready for environmental analysis notice." And that's another opportunity for you to provide comments on the project and the information that's been gathered and recommend how the project should be constructed and operate to address your concerns.

There'll also be a notice listing motions to intervene in which you can become a party to this proceeding and ask -- that gives you the right to ask for a rehearings of FERC matters on the Commission's final decision. We'll take that information, once we have it, and then produce a draft and finally environmental impact statement; the draft impact statements will be available for your review and comment as well.

And that -- those documents will be the basis for any licensing decision that the Commission may ultimately issue. This is a little bit more detailed flow chart of the steps of the integrated licensing process, some important dates outlined on there. Again, they -- the filing and the notice of intent and the pre-application document was [sic] issued back in the end of December.

We issued the scoping document towards the end of February. We've -- we're now in the middle of scoping. This week we had just held meetings up in Anchorage; we're holding them in Glennallen and Cantwell and Sunshine and Fairbanks this week. Comments are due, again, at the -- towards the end of April, unless we extend the time frame to May 31st.

With that information, AEA will develop a proposed study plans to address the issues that have been identified. And over about a 90-day period, we'll work

with all the study folders to resolve any disagreements on the level of effort and studies that need to be addressed there. And ultimately at the end of September, AEA will file a revised study plan -- or I'm sorry, in October.

Then the Commission will review that revised study plan and resolve any disagreements and issuance determination on the studies, letting them know what they need to complete in November, or ultimately December with the month extension. Ultimately they will then carry forward and conduct those studies. There'll be opportunities to review and provide input on the scope of the results of those studies; in other words, periodic check-ins to make sure those study plans are being conducted appropriately and the information that we expected to be gathered is being gathered and that there doesn't need to be any tweaks to the -- to the study plans.

Then they will take that information and develop a draft and final license application in probably 2015, according to their schedule and if all goes according to that schedule. The reason for tonight's meeting is the Commission issues licenses for hydroelectric -- for nonfederal hydroelectric projects. And part of that, we are obligated under the National Environmental Policy Act to disclose the environmental effects of those actions.

And this is the scoping progress in which we need -- the first step in that process, in which we need to figure out just what the issues are and to gather that information, and we're soliciting that input from you tonight. The kinds of information that we're looking for is spelled out in the scoping document; but it includes, you know, the geographical and temporal scope of analysis for those issues.

Any data about existing environment or the effects or other developmental activities that might -- developmental meaning timber sales, mining, whatever else that may be going on in the area that may influence how the project is constructed and operated and it might influence the effects that are -- that the project has on those resources in conjunction with those other actions.

We're looking for any information on State and federal and local land management plans or resource plans in that area that may conflict or be consistent with or enhanced by the project. And we're already -- again, looking for your input on the issues of -- that have been identified in the document. And we're not intending to read those to you tonight. But they're spelled out, beginning on page 11 of the scoping document. And if you didn't -- don't have one of those, we have some extra in the back; feel free to take those, as many as you want.

Pass them out to your neighbors or whatever.

And there's the issues that we've identified. We're also looking for study requests that you believe AEA needs to conduct to address your concerns. And those have to be filed by the 27th as well. When we developed the integrated licensing process with a number of State and federal agencies, nongovernmental organizations, tribes, and others, we came up with a set of study criteria that are help -- that are intended to help you craft those study requests. And you need to -- by following these criteria, they help explain to the Commission and to the applicant, the basis of your concerns; the basis for those study needs; and -- and why you think the -- that you need to conduct these efforts in this particular fashion.

So it's important to follow these criteria, and they're also listed in the back of your scoping document. Again, requests for information on your issues and your studies are due by April 27th. All filings must clearly, to make sure that it gets put in the right docket, must -- on the cover page of your document, indicate the project name, Susitna-Watana, and the project number, 14241.

You can file them, your comments, electronically through the eLibrary system I talked about earlier. Or you can file them in hard copy with the Commission by sending them to the address that's on your screen. All

this information is also included in the scoping document.

With that I'll turn it over to Wayne for a brief overview of the project.

MR. DYOK: Thank you, David; and thank you all for attending tonight, taking time our of your busy schedules to be here. For the record, my name is Wayne Dyok, D-y-o-k. I'm with the Alaska Energy Authority. I am the Susitna-Watana, you know, project manager. I'm going to give a brief overview of the project and how we would anticipate operating it.

First of all, the product is 184 miles upstream of the mouth of the Susitna River, upstream of Devil's Canyon. People from Wasilla here probably have a pretty good idea of the location of the project. One of the important points about being upstream of Devil's Canyon is that Devil's Canyon really prevents all but king salmon from, you know, getting upstream. But even those king salmon we're very concerned about, and we're planning to do appropriate studies for them.

We're looking at building a project that is around 700 to 800 feet high. In the pre-application document, the information is really for a 700-foot-high dam, but we're also evaluating heights up to about a -- up to approximately 800 feet high. That would back up a reservoir around 39 miles long, two miles wide at its

widest point.

And if you looked at the 800-foot high dam, it'd be another four miles; so it'd be about 43 mile long, you know, reservoir. The project would have a capacity of around 600, you know, megawatts. We're looking at three, 200-megawatt units, or possibly four, 150-megawatt units. But that also is potentially subject to change. The project would provide about 2-and-a-half million megawatt hours of energy annually.

And I know that means nothing to most of us, but maybe in the context of -- of our annual consumption in the Railbelt -- we use about 5.4 million megawatt hours annually. So it's almost half of the amount of energy, electrical energy needs that we have here within the Railbelt. One of the real important things for the project is to be able to provide energy in the wintertime when we need it most. And we want a high amount of reliability for that.

So we're looking at a project that would provide reliability for 49 out of 50 years. And that minimum amount of energy is 250 megawatts of continuous energy. And I'll talk a little bit about how we might distribute that energy in a further slide. If we can go to the next slide. Okay.

This is the reservoir, and this is about the

upstream elevation of the reservoir with a 700-foot high dam. If we go up to 800 feet high, it'd be around here just downstream of the confluence with the Oshetna River. We're looking at three access corridors right now. The first one is an access corridor that would come from Cantwell along the Denali Highway, and then it would cut south to the project site here.

This piece here would be around 43 -- 43 miles, you know, long. And you see two routes here; this route would be -- if we -- if we use the road, this is a road corridor, the road would go here and the transmission line would go -- would go along the route. Another corridor that we're looking at comes from the railroad and proceeds east, and we're calling this the Chulitna Corridor.

That corridor is, you know, 45 miles long; and then the Gold Creek Corridor, which also connects with the railroad and goes along this route here, and that's a 50-mile long corridor. Again, it's the same sort of thing. This would be the road that would come this way, and there's a number of gullies here that we can cross relatively easily with the transmission line. But they're pretty major bridges, so we're taking a slightly different, the more -- securest path to go there, if we ended up selecting that particular corridor.

So we would have one road access, and then along

that road access that's pegged, we would have a transmission line as well. And we probably will need for reliability reasons, another transmission line, either along this corridor or this corridor. Okay.

So we're just kind of going from the 40,000-foot view down closer to the dam. This shows the reservoir here. This would be the dam. And this is the 2,200-foot contour line. And that -- that we're studying everything within that zone. And then areas where we would have potentially construction or operation effects. So we would need to build a -- a temporary camp, and that camp would house an average of 800 people, with the peak work force of a thousand people over the seven-year construction period.

Once that construction is done, this camp would be dismantled, and we would have a permanent camp built over here; and that might house somewhere between 20 and 30 people overall. We would need an airstrip, so we'd build that here. And then you see some other areas, quarry areas and bouy areas. And that's, you know, to allow us to build a dam as cost effectively as possible. And you can see the corridors coming in here.

Okay. To build the dam you have to follow a construction sequence. So the first thing you have to do is get your road system, you know, in place. So you can

see that there's a road, you know, coming in here. So you get that in here, and probably one of the most important things is to get a road here and here; because the next thing that you have to do, is you have to build a diversion tunnel. And that's this piece right now. And you're looking from the air coming down here.

So we need to build a diversion tunnel here, because we can't afford to shut the water off in the river. Once you build that, then you can put your upstream diversion dam in, your downstream diversion dam. And then once you've got that -- you know, once you've got these done, then you start putting water around here through this diversion tunnel.

Once you have the diversion structures done, you can start building the dam, which is this piece here. What you see here is a -- a design for what's called "the roller-compacted concrete dam." Back in the 1980s when the Alaska Energy -- or the Alaska Power Authority, I should say -- was looking at this, they had a rock-filled dam with earth core. It requires a tremendous volume of material. In the last 25 to 30 years, there's been a lot of research and a lot of projects constructed with roller-compacted concrete.

It allows you to build the projects quicker; it's easier to place this material; it holds up just as well.

There's some built in -- in northern climates. And, you know, most importantly, to keep the costs down. And so what you see here is an RCC type -- type of dam. Another dam that was used on the Bradley Lake, you know, project, is a concrete-faced-rock-filled dam. And we haven't made a final selection. But it's probably going to be between the concrete faced or the RCC.

In addition to looking at the elevation of the dam -- what's the optimal elevation for us -- we're looking at the optimal design of the dam itself. What you see here is a straight dam. We're looking at put a little arch, it'd be kind of something like this; I'm exaggerating it a little bit. But it would come out a little bit like this. And then with that arch, we can save about a million cubic yards of material; because you're taking the load on the embankments, and that reduces the amount of gravity material that you need in a dam.

We are putting the powerhouse down here. It's a little bit downstream; so that if in the future we want to raise the height of the dam, we can do that without affecting the operation of the project. So this project will be designed so that in the -- in the future if -- if the State elects to move forward with a larger project, we can do so.

Okay. How is this project going to operate? So let me tell you, like the first big-picture perspective. So what we -- as I said earlier, what we want to try and do is push as much energy as we can into the wintertime when we need it most. So in the springtime when we have the snow melt, we would have the reservoir at its lowest level; and then we would try to fill it with the excess water during the course of the spring, you know, snow melt, during the glacier melt, a little bit later in the summer, and during rainfall, you know, runoff events.

So that by the time we get into the fall, we want to have the reservoir, you know, full for wintertime operation. And then during the wintertime, we would slowly, you know, decrease the elevation in the reservoir to pull the energy out when we needed it, okay. And then by the springtime, you're down at the low pool again. And we're looking at a water level change in that reservoir that might be -- we're studying it, somewhere between 150 to 200 feet of elevation change in the water over the course of the wintertime, and then of course you would fill that up in the -- in the summer.

So that's the annual operation. Then we have the daily operation. How would we operate this project on a daily operation? The first thing I want to say is, you need to have environmental flow. So it's very important.

So we need to look at the aquatic resources, what flows do they need; what flows do we need for recreation purposes. And there were a tremendous amount of studies done in the 1980s, and we're using that as a start point for our energy calculations.

So we're saying that we need a minimum flow in the months of June, July, and August of 9,000 cubic feet per second in the river at Gold Creek, okay. And Gold Creek is halfway -- it's closer than half -- it's more than halfway, but it's between Talkeetna and Devil's Canyon, closer to Devil's Canyon. It's in a constricted part of the -- of the reach that would be affected most by the -- by the project.

So we have that, you know, minimum flow. And in the winter -- and just kind of give you a flavor for how much flow, typically in the summertime in those months, you have around 23,000 cubic feet per second. So we're going to be reducing the -- you know, the flow, the average flow, from around 23 to around 9,000. But that minimum still needs to be vetted through, you know, additional studies with -- on the resources.

So in addition to having, you know, minimum flows during the course of the year -- and that will change over the course of the year -- we want to be able to operate this project so it's the most value to the Railbelt

utilities. We've had a number of meetings with Railbelt utility managers and their technical staff. And they're asking us to protect the flexibility for operations as much as possible.

So we know that there may be some, you know, limitations; because we have to, first and foremost, you know, make sure we don't adversely affect the environment. So what I'm showing here in this particular graphic is a potential operation. We're looking out another 13 years into the future to 2025. And this would be a typical January day in 2025.

Here on the bottom here -- so here is the hours of the day, from midnight to midnight the next day. Here is the number of megawatts of demand. This is sort of an instantaneous, you know, demand. And if you take an hour of that demand, that gives you the megawatt hours. So typically we're going to be looking at around, you know, midnight, we have around 600 megawatts. And everybody's going to bed, or most people should be in bed, sleep.

So we need some energy, obviously; but, you know, as much as you're going to need when you wake up and start turning appliances on. So you get up in the morning and you have a peak around breakfast time. And then during the day, people head off to work and they work, so we have a fairly significant energy need. And then come home at

night, you're going to come home at night and you turn your appliances on, you're going to have another peak.

So our system typically has a peak towards the late afternoon or evening hours, and then it falls off as people, you know, get ready for bed. So that would be a typical day. Now, we have a lot of other generation in the -- in the system. So there's a lot of gas-fired, you know, projects here. There's some coal-fired projects, you know, north of here. We're looking at bringing other renewables on.

There's a Fire Island wind project that's forecasted; Golden Valley is bringing on the Eva Creek wind project. We've got Bradley Lake, which is 126, you know, megawatts. We've got a couple of other small hydros. And so we've idealized this thing and we're saying, "Okay, we're going to assume for the purposes of our calculations here, that all those add up to approximately this amount of energy, about 400, you know, megawatts here."

And so what we're saying is, the Susitna-Watana project would provide the difference between this amount of energy and here. So you can see that at the minimum, you're looking at a little less than 200 megawatts here, so maybe around 175. And at a maximum, you're looking at around, you know, 400 megawatts. But the reality is, you

may -- you want to have that flexibility for 600, because what if a unit trips off quickly, we want to be able to operate Susitna-Watana to keep your power on. That's very important to be able to do that. And hydro has a huge advantage over pretty much every other type of generation, and that it's pretty responsive to the -- to the system needs. So that's a real added value.

So in this particular case, we're going from a little less than 200 to 400. And just to give you an idea of what that really means in terms of water, with the 600 megawatts of energy generation, that takes about 14,500 cubic feet of water per second to generate that amount of -- at our project to generate that, the 600 megawatts. So at the -- the largest peak that we would ever have, we we'd have 14,500 CFS, you know, going through the system.

And if you look at 400, that's two thirds, so that's maybe 10,000 cubic feet per second. And down here would be, you know, something on the order of 4- to 5,000, you know, cubic feet per second. So we want to be able to look at that. So our studies are going to allow us to understand that, you know, load, you know -- load following. The worst-case, you know, scenario for us and for the utilities, would be if we didn't have that ability to do any load following. And we're gonna look at that as well.

Now, I try to think in terms of car fuel. What does that 14,000, you know, CFS mean? Most of you I'm sure, have already been on the Susitna River. So if you're looking at the Gold Creek station, which is the station that we have very good information and very good current information from the U.S. Geological, you know, Services, that change from the 14,500 CFS to say a minimum flow of 3,000, you know, CFS, which would be the lowest that we would have, and this is non-ice conditions for the moment.

That would translate to a water level change at Gold Creek of about 2.8 feet. So -- and that's the worst case, because you pick those gauging stations where it's the most sensitive. So upstream or downstream to that, the water level change would be less than, you know, than 2.8 -- 8 feet with that maximum change. So our studies need to be able to bracket that.

In the summertime, the variation would be less from load following; because you -- like I said earlier, we'd have a 9,000 CFS, you know, minimum flow. So, you know, there we're looking at maybe a two-foot, you know, water level change at the -- at max. But still, you know that's important; that's something that we have to evaluate as we go forward. Those are in non-ice conditions.

We also have to look at what the effects of changing the flows during ice conditions are. And we don't have the -- the luxury here of saying, this is what it is in the Susitna River. But there are a lot of other projects that operate in North America and elsewhere in the world where they do have, you know, similar cold, you know, climates; and they operate the projects in a load following mode during ice conditions.

And normally what you do there, is you operate at a little bit higher flows to get the ice cover. And a lot of times they just keep it a constant level when you get those first really cold temperatures, so you get a very stabilized cover. And then you operate the project under that. So those are the things that -- some of the things that we're going to be, you know, looking at.

So David said -- they're very interested in hearing what you have to say about the resource issues, we too at the Alaska Energy Authority are extremely interested in the issues that are important to you, so that we can do a better job of providing a complete application for the Federal Energy Regulatory Commission that reflects the concerns that you have.

Thank you very much for your time this evening.

MR. TURNER: Okay. You've gotten a lot to digest real quickly, including both an overview of the licensing

process and the operations. We've, as I've said, identified the list of issues that I think we need to look at in detail in the EIS. It's based on the record that we've had before us. And we're looking to you tonight to let us know if we've missed some things, or if there's some things that you don't see to be issues at all.

So now is the time that we're looking to you to give us your feedback. And again, when you do so, we'd ask for you to come up here and speak into the mic. So make sure that -- and give us your name and affiliation before so that we can attribute those comments to you. So it's -- somebody would like to go first?

MR. SYKES: Thank you. And for the record, my name is Jim Sykes. I live east of Palmer. And I welcome all of you here tonight. I'm really glad that you came to pay us a visit; and I'm really glad that you're here to listen; and I really appreciate that. You're interested in hearing if we're for or against the project. Well, actually, I kind of have mixed feelings about it. Over many years I've dealt with Susitna.

I dealt with it the last time the dam project was being proposed. And I've used the river to transport my family and myself from my trailhead about 12 miles north of Talkeetna, into Talkeetna, for most of the past 30 years. And I also sat on the public advisory board to

the Alaska Energy Authority. About three years ago we did something called "the Railbelt energy grid assessment." And then about two years ago we did the Railbelt integrated resource plan; which was an attempt to look out 50 years.

And I agreed with everybody else pretty much on the advisory that we should take a two-track process to go ahead and license -- or at least start licensing Susitna; and also to keep an open mind to the other alternatives; because I think there's a very real possibility that before you can build a dam with a combination of energy efficiency, which is already having on its own, and other alternatives that may come up, that stem will not be needed.

The first reason I think that's true, is that about a year and a half ago, they came to the advisory group -- DNR came, from natural resources and said, we've done an update on the assessment of Cook Inlet gas, and we believe that there's as much in the untapped secondary and tertiary fields as has come out of there and since the mid-1960s. There's a lot of gas in Cook Inlet.

And people in Fairbanks are getting real antsy about getting some cheap energy. Their energy costs are very high there. And so I think that there's going to be a gas pipeline to Fairbanks before you can possibly build

a dam. And I don't think -- well, all the gas is gonna be much more expensive than the old gas. It still might be pretty cost-effective, and I think it's gonna kill the dam again, just like it did in 1982.

So I'm not sure it's needed. The Energy Authority had some excellent consultants. It was a joy to work with them, Black & Veatch, top engineers, wonderful firm. But we did do some little battles with them over the course of their study, which I'm sure you'll take a look at. I'm troubled by a few things. The hundred-year life of the project is what really makes this cost-effective.

The 50-year time horizon -- you know, the energy source is free, you know that, so that's always an advantage; but not so much. It's not going to be as cost effective. I believe there was really a gross underestimate of energy efficiency, which contributes to an overestimate of demand load. And I'll be specific about that. Here, even at MEA, over the past few years the hook-ups have continued at a pretty good clip. But the need of overall power has actually decreased, even though hook-ups have increased.

And there's been a very aggressive energy efficiency program by the Alaska Housing Finance Corporation, and people get it. They understand that it

works; that less energy leaves more money, creates jobs doing the energy efficiency, and leaves jobs on the other hand. I'm also troubled by the very fast-track rehashing of the early 1980s studies that were done.

Again, qualified consultants doing it; we got some presentations when I was on the advisory board; and I also looked in on it on my own a couple of times; and I said, "What about seismic? Good shape. What about fish? Going to be better. What about glacier melt? You know, it's a glacier-fed river. Oh, no problem." And, you know, in a former life I was a salesman, and when I had a client and they asked me questions and if I thought I could handle that, I'd always say, "No problem." No problem.

And so I hope that you do some more looking into the -- to all of these things that people think they have in hand; and I'm not sure that they do. To a more personal note, in the summer when I make my trip from my trailhead to Talkeetna, takes about, anywhere from two-and-a-half to four hours, depending on water levels.

So if the water level is going to be lower, and we know that for a fact, it doesn't take a lot more -- at the four-hour trips kind of -- already kind of fraught with more obstructions -- there's going to be a lot more obstructions in the river. And that does concern me. And

even though it's just a little bump I'm assured now; if a lot of water comes down all of a sudden, and I happen to be on the river in my raft, it's not a motorized vehicle, it's a raft, if I survive the surge of water, and I'm going to be fighting standing waves, along with all these other obstacles -- that are rocks and trees and stuff that crop up in the lower river there.

So I'm a little bit concerned about that. And I hadn't really thought about the winter until the weekend before last. I was actually up in my place; we skied down to the railroad, which is at the river there. And there were a lot of moose tracks across the river, from the east side to the west. We were on east side. And, you know, if you miss the train it's another 12 miles; it's kind of a pain.

But I sometimes go across the river just to kill time. And I got to thinking about water being poured over the dam during these peak times, what effect that would be. And I really want to understand that, because I don't think I want to be out there on the ice -- and the river doesn't freeze solid like it does on the Nenana River, there's open leads all the way up and down the river. So you can't just lift the ice by having a slightly higher level of water than is normal in the river. Some of the ice is going to lift, and some of it's not.

And so I don't know what effect that's going to have, but it does worry me. And as the guy who designed and put the radio station on the -- the community Radio station in 1993, Talkeetna can flood; it's on a floodplain. I put all the electrical circuits 3 feet off the ground in case the grid didn't fail and the cabin didn't float off its foundation, so we'd stay on the air a little longer.

And so I think there needs to be a lot more studies on the effects of ice movement, because it -- it seems to me it could move fish eggs; it could scour the banks if you get -- you know, the ice just doesn't lift up gracefully, it piles up and it roars when the jam breaks. And there's, you know, three rivers coming in about Susitna; ice jams are a problem. So -- and the other thing that I know you don't want to discuss, is worst-case scenarios.

But one of the last dams was licensed, I think it was in Montana, they did have a dam failure; and so I -- I believe NEPA still requires you do worst-case scenarios. And originally my impression was that this version of the dam, which really moved up and down and river, and up and down in height until they got the cost under 5 billion. We don't really know if we're getting the best project.

And so I really want you to study what -- what

happens if you do have a dam failure. Because as -- as much as I have trust in the abilities of the engineers and all the professional people that deal with this, if they make a wrong guess, they don't have to live with the consequence of it. And when it came to the assurances of good fish, it was explained to me about the -- more constant water flow, more light, more food, whatever; but if just one of those things isn't right, in all the ifs to get from the improvement in fisheries, it doesn't work.

And the -- the in-river fishery in the Talkeetna, Chulitna, Yentna River system is already at the tipping point. So please look at all cumulative impacts: The ice, potential dam failure, and the moose. I didn't really think about the moose, because they're not gonna go across a river that's jumbled in ice as much as they do with the frozen one. So I'm not necessarily against the project, but I think there's a lot more questions out there, and the -- and the one that really sticks in my mind is: Is it going to be needed?

Because I don't think that the State, or anybody else, not the utilities certainly, are going to spend $5 billion to just do peaking power if you don't really have a great deal of demand. And I don't really think it's out there. But I -- I urge you to investigate it further. And thanks a lot. And I hope to have some

actual figures to write to you, but I wasn't able to pull them together for tonight. Thank you.

MR. TURNER: Thank you for your comments. Someone else?

MR. KENNEDY: Thank you. My name's Dan Kennedy. I'm a certified public accountant. And I'll give you my address and my resume when I'm done with my very brief testimony. And I know there's a number of people wanting to speak, so I'm going to keep my comments relatively brief.

I've been a certified public accountant in Alaska for over 30 years, 15 years as president of the Chamber of Commerce here locally. And we are just thrilled to have FERC in our community. This is a first for us and please accept our sincere welcome. Thank you for coming and listening to all the residents of the local area.

My brief testimony is in two themes. The first theme I want to address is the socioeconomic issues, which I'll refer to as economic stimulus. Hydropower is a proven, generally accepted renewable energy source. And as a CPA over the last couple years, we have just cringed watching this Administration, this Federal Administration, waste millions of dollars on guesses and failures of renewable energy.

The dockets are clearly documented with a number

of economic failures. So I'm here tonight testifying in support of the tremendous economic opportunities that the Susitna hydro project will bring to our community. My second theme is a very specific case study that I'd like FERC to look at. And it is in 1952 in Hungry Horse, Montana. A very similar project was built. This is a project that I believe is 420 megawatts. However, I think it was just restructured in the generation of it, and maybe somebody from the Portland Office, maybe one of the engineers knows what is being produced at Hungry Horse right now.

When that project was built -- or finished in 1952, it backs up a reservoir of about 90 miles that is nestled between the Bob Marshall Wilderness Area and now -- which is now the Great Bear Wilderness Area in Northwest Montana. And just over Great Northern Mountain is Glacier National Park. And so this is a real similar, in terms of how the proposed Susitna hydro project will be nestled in between a mountain range in -- in wilderness area.

And I kindly ask that you look at some comparisons, as a 60-year-old case study of Hungry Horse now -- in fact, that project was so successful, just two decades later, they built a similar project in Libby, Montana, in which Lake Koocanusa is backed up from Libby

Dam all the way up into Alberta and British Columbia in Canada.

Those projects are both very successful, and they created a tremendous recreational opportunities as well as socioeconomic issues. And what I'd like to do is also volunteer -- I'll leave all my contact information with FERC, and I will volunteer my professional time; if you have any other questions, wanting my opinions as to what I think, questions and answers on socioeconomic issues in our region. And with that I'm going to bow out, 'cause I'm going to get back to work.

MR. TURNER: Thank you. Next person?

MR. BURCHELL: I'm Peter Burchell. I'm here tonight because I look forward to the dam project. I'm glad you have all these things you're gonna be studying, because I don't want some kind of half-baked plan that would fail, effect the lifestyle of the people who live in Talkeetna and for all of us that recreate in that area.

I think back to Bradley Lake when it was constructed, and we're part of the tri-part agreement. And in fact, Bradley Lake was 4.6 cents a kilowatt hour when the construction was completed. And today in 2012, it is still 4.6 cents a kilowatt hour. I've lived at the Fort Peck Dam in Montana. I lived in the northwest with Bonneville Dam and -- and they come with problems.

People here know that -- we are in the electrical business, are building a new plant at Eklutna, gas-fired plant. And ML&P and Chugach Electric is [sic] building a gas-fired plant. Homer Electric is proposing another mini dam and a gas project. I agree with Jim Sykes, that in fact we are conserving energy. We're finally waking up to the fact that the cheapest power is the power that we don't use. It's just that simple.

The State of Alaska thought forward to what can we do to stimulate that, we had the energy audit program, that reimbursed homeowners up to $10,000 for increasing efficiencies in their home. Another side light to that is, yes, we're conserving more; but as an ex-educator, maybe a lifetime educator, if there's anything I know about the Valley is, we keep making more kids to replace the ones that are here now.

My little school had five students in 1988, and this year there's three alternative schools with over 800 students. I know that they'll want to have lights on to have it safe, reliable; but done in a way that improves the Valley; not detracts from the Valley. I'm gonna hold you very accountable. I've been a part of a lot of studies. And I'll agree with Mr. Sykes, sometimes the difference between the rhetoric of the planners and the reality of implementation is so far apart, it's kind of

like when you drive off the curb with a new car, and, oh, this is really a lemon. And that salesperson made it sound like a viable automobile that was good, till it got off the curb.

So I thank you for your effort; welcome you to the Valley. And you'll find out on your little travails, we are called the mad zoo for a reason. We're proud; we're independent; and we are very strong in our opinions. So welcome aboard.

MR. TURNER: Thank you. Anybody else like to step up?

MR. WERNER: Yeah, my name is Dave Werner. I'm a local citizen. I'm a doctor by trade. I don't use the Big Su drainage for anything, but I do have a friend who runs their river business up out of Talkeetna. And he takes his jet boat up through Devil's Canyon. He says, "You know, when you stop that boat, you can just hear that grit grinding on the side of your boat." And I said, "Well, that must mean there's a lot of silt." He says, "Yes, it's glacial fed."

And I said, "Well, how do you think -- how long do you think a dam reservoir will stay -- will keep the amount of water that you need before it silts up?" And I think, you know, some of your Lower 48 dams are on clear water rivers I believe -- or relatively clear water

rivers, and they don't have the silt burden that the Susitna does. So I think that would be a very -- a very important thing to study. And would this affect the lifetime of the dam and the reservoir, and if so, will it still be cost-effective to build a dam? And the other thing of course is, is this on a seismically active zone.

Because, you know, Fukashima thought they had it made in Japan; well, guess what. And they had the best engineers thinking about this. But they weren't ready for the big one. And it made the engineers look like fools. And are we ready for, as Jim Sykes says, "the worst-case scenario"? And -- 'cause that's going to be a lot of water released all of a sudden.

So seismic activity, silt burden, I think these are things that need to be thought about. Thank you very much.

MR. TURNER: Thank you. Next person?

MR. SPANGLER: Hi, my name is Kirby Spangler, resident of Palmer. And I have several concerns I'd like to share. I worked as a whitewater and river guide for many years here in Alaska. And I'm also a avid fish man and river runner in my own personal life. And from that perspective, the Devil's Canyon of the Susitna is one of the three premier whitewater kayak runs in North America.

You have the Alaska River and the Grand Canyon of

the Satkeen being the other two. And they're not run by a -- very many people. These are the -- some of the very most difficult big water -- whitewater runs for kayakers. But they are highly regarded, and a managed flow on the Susitna would forever remove the Susitna River from that list. It's possible that more people would actually run the river if there were better access. But it would not have the wild character and the same characteristics.

Another concern I have is with the downstream sedimentation. There are many sections of the Susitna that are very braided out. And I'm wondering what happens to those sections of the river if much of the sediment is trapped in the reservoir upstream? How does that change the character of the river itself? And then I have several concerns with the salmon.

Where -- you know, I wonder if you've studied where are the juvenile salmon in the winter. Are they actually in the main flow of the Susitna where they would be subject to this fluctuating flow? And how does that impact the salmon? And I think that, you know, if we look at the -- the salmon historically since the beginning of the industrial revolution, four fifths of the world's wild salmon are gone.

And here in Alaska we basically have the -- the remaining one fifth. And I think that the cumulative

impacts of current industrial projects, and proposed industrial projects in Alaska, on that resource, if you want to call it that, that that should be renewable forever, should be taken into consideration. And I'm not just talking about the Susitna River drainage. I think that, you know, right now we're proposing to build a giant gold mine in the Bristol Bay watershed.

There -- there's a coal strip mine proposed to strip mine through 11 miles of the Chulitna -- tributary to the Chulitna River. And where are we headed with this? I think, you know, if we don't consider the possibility that these projects, one stream at a time, will extricate the last remaining wild salmon stocks, we might just be crazy if we think that.

And then my last concern is with the ice in the winter, because the river is a corridor for travel, not just in the summer on boats, but also in the -- the winter for people on skis and on snow machines. And how safe is it to have a hollow ice or ice that's not supported by water underneath? I know I've been out on many rivers in the wintertime where ice conditions are hard to read and hard to predict in the -- in their natural state, and it seems like what you're going to be creating is a potential hazard for wintertime travelers. That's it.

MR. TURNER: Can I ask a quick question?

MR. SPANGLER: Yeah.

MR. TURNER: And what -- you were talking about use for whitewater boating. Could you kind of clarify? How do you get access to Devil's Canyon for that? And are there particular flows that you're targeting? And what periods of time you're targeting them?

MR. SPANGLER: Right. Yeah. On the -- on so -- I've never run any -- any of these whitewater runs. I've sat around the campfire and listened to stories of people who have. I have friends who've run them. So I don't have the firsthand experience. But a -- the Susitna's a fly-in trip. Or you can start, you know, up off the Denali Highway and paddle down.

But the people who I've known to do it have flown in, and -- and paddled it. And you're looking at running them -- that Devil's Canyon at a fairly low flow, I think; not at the summertime peak. But I don't know what the ideal water levels are. But there's some great stories. Who's the pilot in Talkeetna who landed in the Devil's Canyon on floats? I can't remember his name. Or Jerry -- did Don Sheldon do it? Okay. To rescue somebody, right? Yeah.

Anyway, so I think that people have flown in, both in helicopters and on float planes to above the canyon to land somewhere. So I mean, I think what you're

talking about is not something that's done often; but it's -- has in certain circles a fairly large significance.

MR. TURNER: Thank you. Somebody else?

MR. BUCARIA: My name is Garvan Bucaria. I'm a private citizen; former employee of the Federal -- Federal Power -- FPC, federal Power Commission in the hydro division. And in 1975 I think basically, I worked on the Chakachamna project in 1961, with the branch of river basin studies, Fish and Wildlife Service.

In 1962 I worked on the Rampart project dam as a wildlife biologist, waterfowl, particularly waterfowl surveys. During my time with the Federal Power Commission, we sat in green rooms; and they're usually two people to a room, no windows. And during the approximately year I was there, I was the 20th or 21st to leave. And there were some 300 projects that needed DISs.

I visited three projects. One was the Duke Power Company, JoCassee project, which was a pump storage project. And it's been awhile, excuse me. I believe it's in North -- South Carolina. And they're also -- they also had -- that was the Bad Creek project, that was the pump storage project. And then there was Lake JoCassee, and then of course Duke had nuclear facilities there. And this is a three-pronged effort basically.

But the one thing at the time folks didn't

consider, was that in -- in cleaning their reservoir for Lake JoCassee, they exposed cinnabar, which is the pardoor for mercury. And I believe there were limitations on consumption to the extent of they didn't recommend pregnant women eat any of those fish. There were brown trout, and I believe bass, and a number of other warm water fishes there.

And that I think the average consumption maximum there was something in the order of a few -- a meal or two a week or so. On the Rampart project dam there was the potential of flooding the entire floodplain of the Yukon River within the Yukon Flats. And they were going to bring in bauxite ore from South America and process it with this cheap power.

I worked on the Cooper Lake project, which is on the Kenai. And during the filling of that project, there were a tremendous number of, what we now know to be arctic char, they were thought to be dolly varden then. And the people from Anchorage went in there, and they just cleaned up. And a lot of them didn't use too many -- weren't too concerned with fish regulations, and they caught multiple limits.

And I was doing creel checking at the time, and corroborated this. But the problem with -- with Cooper Lake was they diverted the flow from Cooper Creek, which

fed directly into the Kenai River to Kenai Lake, and the -- that left, and they -- they raised the reservoir; I'm not sure how many feet. But in order to make that diversion and provide enough flow to generate power at the Kenai power facility.

And in the process that left the water coming into Cooper Creek to be somewhat colder than it ordinarily would. It did not benefit from the -- the water in the thermocline and above, which was fairly warm. And I did fish surveys in Cooper Creek prior to this project, during the filling of Cooper Lake, with River Basin Studies. It used to be a run of pink salmon at the mouth of that stream.

They were no longer there after they started generating power. There were a few king salmon spawning in the pools, the deep pools in the upper areas of Cooper Creek. And those are pretty much no longer present based on the water temperature changes. The -- I believe some of those bad effects have been ameliorated by some changes in the power generation and the operation of that facility.

But the point I'm trying to make here is that there are a lot of unanticipated circumstances. And I have a couple of questions here. One basic one, and I'll make that right immediate, is that, why has not the Alaska

Energy Authority or the project generators, considered the necessity of a reregulating reservoir? So that you can ameliorate flows and a number of other things. But it hadn't even been a consideration at least from -- from my perspective in its recent concerns.

And let me -- let me then quick go to these other questions I have. Most folks are pro electric power. It's seen as a clean renewable energy source. But let me tell you from my experience, there is no perfect dam. There is no hydro facility that does not have some rather significant implications on the natural flows or the original regime. How could it not?

You're putting a block in front of stream which provides nutrients to every -- every biological resource downstream. And for the geological sources, it provides the gravels, the cobble, the sands, and other sediments which make up the -- the spawning areas for some species and/or provides for changes in the terrestrial organisms that occupy those areas.

The question is: What would be the cost of the project? First of all, for the project, the dollar cost. The dollar cost of energy to the consumer; the dollar cost of resources in the dam pool, both physical and biological. The downstream resources within the Susitna River and within Cook Inlet.

I have concerns that State resource analysts, will they be freely represented to express their concerns for their respective resource specialties, given the Governor's political influence and wrist slapping of certain Fish & Game employees? I just might also add that it's -- it's human nature to support the area of interest that you are employed with or that you -- your avocation is with; that's the normal human nature.

So it's pretty hard to get an unbiassed expression that's -- and certainly it's not going to satisfy everyone. But the big question: Why no reregulating dam. To minimize altering the river's hydrological regime; to reduce the problem of nitrogen supersaturation, or the potential of it; to offer the possibility of pump storage; to minimize changes in the natural river flow; to provide for periodic simulated flood flows to rejuvenated -- rejuvenate the natural scheme of the river, particularly rejuvenating Native moose browse.

If anyone has seen a river at breakup, the Yentna River, which is a tributary to the Yukon above -- about 45 miles, went in there in 1966, I believe it was, and with Fish and Wildlife Service river basin studies, and it was -- we ran boats down Nenana and hauled in our gas, and we had the Yentna barge lines cache that fuel at the mouth

of the river; and then we later ran it up-river to our camp. But we did -- the river basin analysis there, and it was striking to see the effect of ice break-up on the Native vegetation. It just looks like it's disastrous.

But that is the lifeblood of rejuvenating moose browse. I recently cut down some willow on my place over here in Wasilla to allow the moose to get at something; and the next day the cow and a bull calf that were in the -- in our area, came in and really hit that stuff. And you might consider that. The Fish & Game says, "Don't feed the moose." Well, if you cut some willow, some of these tall out-of-reach willows and it falls down, it's available for them. Some of you might want to practice that.

Okay. The possibility of a pump storage to minimize change in natural river flows. That's got to be a major concern. And that I believe would be the major consideration, if this project were to be approved. Then the other question is: What is[sic] the competitive energy sources at what dollar cost? And that brings up the question of gas and maybe wind.

And let me tell you, these wind machines, anything mechanical has to be maintained, and not all of them work all the time. In the Altamont Pass in California, I believe they had some limitations due to the

mortality experiences by raptors in trying to pass through that area, or at least in the region.

What happens downstream in Cook Inlet when you significantly curtail nutrient flows to the river and to Cook Inlet? What happens to the genetic stock, particularly king salmon above the impoundment? Escapement versus natural ocean predation, Lower Cook Inlet interception of fish and upper Cook Inlet catch? Not to mention the escapement -- the subsistence catch?

So the point being, the escapement that arise in those areas above the impoundment site, I'm told -- I know -- I've read 50 fish; other people have said a hundred. We have no idea what the magnitude of the total run was as it entered Cook Inlet. There are multi-flow -- multi-fold more fish resulting from the above impoundment spawning stock. And that's the question.

The mineral resources, particularly heavy metals that may be leeched within the impoundment. We're talking from 100 to 200 feet of fluctuation. Now, I'm originally from California; and I know a little bit about impoundments and fluctuations in the reservoir. And let me tell you, those wave lines and the lapping of the waves along the shore, it just totally wipes out any non-mineral -- non-rock substrates. And you see those wave lines for -- for fantastic distances.

We see this in Cooper Lake, those who've seen that since its impoundment was draw down. The concern's there. Now, I don't know what those mineral resources up there are; but I'll tell you one thing, we have an awful lot of -- of problems with -- I can't think of it. Well, mercury in some areas. But particularly -- arsenic. A-s. I couldn't remember that. Thank you very much.

That's the problem with getting a little older. We have to use mental minutes. Anyway, the point I want to make is, we all like the power; but there's no free lunch. And I like salmon; I like to catch salmon; I like to eat salmon. And I've done surveys in the Chena River for king salmon. Seen those fish down in those deep pools. I've seen chum salmon in that Chena River right through Fairbanks, a hundred miles upriver, spawning in upwelling zones, natural upwelling zones.

Question is: How -- what upwelling zones in the upper river will be affected? And the other question is: Will the flooding during winter, and whatever flows happen to emerge as the result of power generation to maximize -- the maximum you get out of the system, what will that effect have upon those natural rearing areas in the lower river? I could go on and on; I won't.

But I hope you consider these points, and I'll try and submit some comments to you folks. And it's -- it

was kind of like old home week. I remember some of our experiences at the Federal Power Commission, that I was telling one fellow, one new hydrologist that came onto the hydro division and in the noontime, well, he went back to his car to check it. He had a station wagon with a TV in it, 'cause he was moving to an apartment, and the old building it was broken into and the guy lost his TV. He went back from work, and he came out that evening, and one of the locals decided he was a soft touch; and he mugged him. With -- so much for my experiences with the Federal Power Commission. Thank you.

MR. TURNER: Thank you. Next person?

MR. THEODORE: (Speaking Native tongue.) What I said was, I'm the Kalahe Fish Tail People. This Wasilla was my grandfather's place. His brother was Eklutna; his other brother was Talkeetna. I'm the last traditional chief trained by all the chiefs here. They know all the history dating back long before when the whole earth was flooded, and the ground was underwater where we had to climb the mountains to save our people.

You guys are newcomers here, just like the Russians were. You pushed us out of our mountains and our lands here, and pushed us way up in the mountains where our land is. You have no knowledge of this land; of its use; or its ways that it treat us and help us. You know

if you need help, you can call me.

One of my elders, Tony Saganoff, was the first one to run a donkey down the middle of Susitna River, when the first hydroelectric power project studied. I did the last one when the Susitna Dam project is general form and I constructed the Susitna Dam project, ran it for 10 years; took it down, put it at Bradley Lake across from Homer there.

You know, we have lots of cultural sites you guys keep destroying. And I don't like that. I don't like the way you guys destroy our graveyards, our traditional hunting sites, our fishing sites, our game, our belugas, our lifestyle. Oil company pollute all of the whole inlet. There's no more ducks. Nothing here left after you guys came. No more salmon. Was so thick of every kind, that took care of our people for thousands and thousands of years.

There's no more seals. No more sea lion. No more killer whale. That's what you and your ancestor did to us and our land. And I want you to know that as you rear the children of them immigrants that came from across the ocean. And I want you to tell your kids that too. What took our people thousands and thousands of years, you guys destroyed it in 30.

Now, you want to come and destroy the rest of it.

To put your coin in your pocket and get job. Why don't you guys get back in that boat, go back across the ocean where you come from, visit your grandpas' graves. We built this railroad here; we built these roads here. My grandpa worked on this railroad. My daddy cut the first road from Anchorage to Eklutna in 1920 with a sweet saw and an ax.

Then we're -- don't get no jobs with you guys people, and then guys treat us like we're just nothing to you; in our own lands; in our own homeland. My grandpa owned all these lakes here. He had a house right over there, in the end of Wasilla Lake. They buried him there. It took me over 30 years to get his grave back. Right here, all the people from all Alaska come to visit our people; and share and live with us.

Chief Northway, Chief Andrew Isaac, his people walk all the way down, hundreds of miles to visit and have potlatch with our people, and share with us. The people from Illiamna, Nondalton, walked across the -- road across and visited us. You guys destroyed that place too. I've watched you; saw you. If you guys want to, I'll work with you guys. I want to preserve historic sites of our people. I want to do a study for our own -- our people.

You guys got job over there, put me on head of that for your Native cultural people. I flew that land 10

years, helicopter. I knew that country like the back of my hand. My daddy used to mine, walk out of there in the '50s. I want to ask you some questions. What you going to do when that dam freeze solid as ice, one big block, when it's 80 below?

The other question is: Is what you gonna do when the hundred year flood come and it goes over the top of that? What you gonna do when the earthquake hit and bust down the river and bust the dam in two pieces? Ain't nothing you guys gonna do. You're gonna be sitting down there in your fancy place where you came from. All them things, the game, the ocean fish, everything, hooligan, beluga going to be gone. Nothing left.

The migrations of the animal going to be destroyed. That's what you guys going to leave us and our future children? Your plans are no good. Thank you for nothing.

MR. TURNER: Any other comments?

MR. ENGEL: I'm not sure I want to be next. Anyhow, my name is Larry Engel. I'm a resident of Palmer, and I'm here speaking on my own behalf. I am a member of the Mat-Su Borough Fish and Wildlife Commission -- never been a member here. I guess my background is in fisheries. I've been associated working on the Susitna River or around it since the first year Alaska was a

state, as a technician. Been retired for many years since. I'm not representing any kind of a consulting business or any of that kind of thing.

PUBLIC SPEAKER: Have him speak into the mic.

MR. ENGEL: Excuse me?

PUBLIC SPEAKER: Speak into the mike so we can hear you.

MR. ENGEL: All right, I'm sorry. I guess there's a couple things that I would like to share with you that I've heard from a number of sources, including some in government, some stakeholders that fish, hunt in the Susitna area. And that is: We went through very elaborate studies in the '80s, as you all know, looking at this area site as a hydroelectric power source.

And there certainly might be a danger in that. And the thinking could be, that I hear, is that we may short shrift or move too fast in the permitting process, they've got all this fast background from a previous studies; or we may short shrift some of the many studies that were conducted back in the '80s, simply because they preceded this, and there'd be a tendency to cut money and think we got the answers.

Well, I won't speak to all the different studies that perhaps are lacking now. But I will speak to some of the fishery studies. We learned a great deal back in the

'80s. But some of those studies created more questions than answers I might add. And I would also say back in the '80s, the technology, the ability to study fish, we've increased that -- about those abilities light years since then with Redhill telemetry and genetics and many other things that we have developed in those times.

So I certainly would encourage you to start off looking at the permitting process and the types of studies that need to be -- with a very open mind, that we don't have the answers to everything because we went through this back 20 years go; that would be a horrible mistake I feel in the eyes of many. And I'll just touch on a couple other things real quickly, 'cause there's a lot of people I'm sure want to speak tonight.

But when we did those studies back in those days, we focused an awful lot on adults. You know, how many king salmon, how many sockeye salmon, how many pink salmon, chum salmon and so forth. And where they spawn, and this sort of thing. Where we really, and it's been touched on a number of times this evening, probably have really lacking in our studies was during the winter months.

And we heard about what this winter month, the dynamics, this is when we want the power. These are the uncertainties of what kind of discharges we're going to

allow to pass through during those months. And there's really not a lot of good information, I don't believe, to compare some of these type issues with the Susitna and other dams. Right now if you were to go out to the Susitna River, you'd find that crystal clear water in the main stem. Crystal Clear. A very relatively stable flow, and as people said, ice covered with leads. And that water is very, very cold. That's all going to change with this dam.

We're going to be releasing, you know, more water. It's going to be different thermal quality. The turbidity is going to be substantially different. And these fish that may be affected by this -- and let me tell you, there's been some studies done, not necessarily associated with the hydroelectric power; and the previous study in the Susitna is that some of these lateral tributaries, like Indian Creek, which is the first tributary below the Devil's Canyon; but that is very lucrative, very good rearing spawning habitant for many species of salmon.

And it's relatively easy to go in and study those, count the salmon, trap -- like capture the juveniles. But what happens in those streams is that that wonderful, beautiful summer and fall habitat is horrible for fish during the wintertime. I mean, it is -- ice is

frozen clear to the bottom. I've ruined so many ice augers trying to find running water under these creeks, find gravel there.

The water's running through the gravel of course; but anyhow, it's a very difficult, difficult place for fish to move. And in most of those tributaries, the great majority of them, move out into this main stem river and winter there someplace, exposed to these conditions I just touched on. And we don't know very much about that. And I would hope that this go-around that we would look at this very, very seriously.

The other thing I would say is, we've heard a little bit about -- you've heard a little bit about the king salmon that go above the dam. And in this case, we're fairly fortunate, this is not a hydroelectric dam proposal like somewhere like Columbia River or elsewhere where we have to pass salmon both upstream and juveniles going back downstream. Yes, there are a few king salmon that do go up above the dam site and above -- and Devil's Canyon.

But you might count those on your fingers and toes; it's in the 20 or 30, maybe a hundred. I've looked for them for many years myself up there, and there aren't very many. So it's not to say -- not to quantify that even better, even though it has been. I would hope that

we don't spend a lot -- a huge amount of money trying to understand what discharge rates or whatever it is or these unique stalk or something like that, and that sort of the studies in the main stem, winter studies, for example, not be conducted.

And in I think closing, I'll -- I'll just say that there's a big void of information relative to fisheries, concerning the resident species and how they utilize the Susitna River. There is a fair amount of fairly good information on rainbow trout. I would agree with that. And they do use the main, because they can't coexist. How could an 18 incher or a 6 inch rainbow live in some of these places while the water is frozen? I mean, it's unbelievably difficult conditions; they move out. And they move to other locations and they do a different thing. Some in the main stem; some probably go into lakes and this sort of thing.

But we have some information on those resident species; we have essentially none. I'd ask somebody to tell where are the grayling spawn or rear in the wintertime? What's their migration pattern? What about dolly varden? Anybody know anything about them? No. What about hooligan? Well, hooligan aren't too critical up in that area up there. That's further downriver. But whitefish, barb, all these things are locked into this

winter conditioning somewhere in that -- that river, the main stem.

And we don't know hardly anything about that. And then of course, we know very little about how the reservoir might affect other fish up above there. So I would hope that we -- future studies, that your Commission would insist upon, that we fill some of these data gaps; and the people like myself, I'm sure others will soon -- will try to continue to encourage you, that if we are going to have a dam, that we do it with the least amount of negative impact, hopefully -- impact for some of these species.

But we're going to have to evaluate things through, you know, current -- or the best available study techniques. And we haven't done that. And then finally -- I said I was closing -- the salmon stocks of today in the Susitna River, and not the salmon stocks of the '80s. We have king salmon right now its at its lowest levels we have ever seen. We have them -- some of them, three stocks are declared stock of concern.

The stock of concern is developed by the Alaska Board of Fisheries, our regulatory body. And there's only a handful that fit this category. There's certain standards you have to, you know -- and it has to curl over a number of years. Well, our king salmon, we've already

got several stocks in that category here. The entire Susitna sockeye run is in that category and has been for a number of years, which doesn't show any real significant improvement in recent years.

So there's a number of things that are not the same as they were in the '80s. And then to try to compare studies or do this, we have a different -- you know, different situation. With that I think I'll let -- conclude. Again, thank you. Encourage you to think seriously about some of these data gaps, at least with fisheries. And I'm sure others -- there's room to talk about data gaps with other social and economic issues as well. Thank you.

MR. TURNER: Thank you.

MS. JONES: Hi, my name is Kathleen Jones. And my husband and I are both teachers in Palmer. And we are life-long Alaskans. I'm a third-generation Alaskan. I grew up on the Kenai with a cabin at Cooper Landing for about 50 years with my parents. We lived in Anchorage for a bit, and then we've lived in the Valley for about almost 30 years.

And I just have a couple of aspects for it, and it's just basically out of being here for so long. Three things basically. One is, I think it's very ironic today is the 48th anniversary of the 1964 earthquake. And I

very well remember it; all my family members remember it. And to sit and think that I did the same speech actually when they were talking to -- about the Knik Arm Crossing, and knowing the tides as well as we do; knowing what -- what happened outside of Anchorage; knowing the seismic activity that can be done up in the Talkeetna area; there's quake zones all over the place.

The Talkeetna Mountains for one, is one huge quake zone. So that's -- it's just -- my concern is that be careful. You be careful with what you choose to do; you be careful where you put things; because everything ciphers down. The third -- or the second thing is the Native, when he came up and spoke, I teach -- when I taught third grade, the fourth grade we cover Alaska. And you're hard-pressed as a teacher, even in the Valley, to come up with commonplace things that are available now that have to do with -- with the Native population in Alaska.

Nordic stuff is real readable -- readable. The Athabaskans from this area, not so much. It's very, very hard to find stuff on them. Their mittens and their houses that have been destroyed over the years by different things, they're gone; and they won't be back. And it takes an awful lot of push to have the Native corporations, or someone local, to save those things. The

Valley is a perfect example; all of the -- the areas, a lot of this are named after Athabaskan names.

The Wasilla, Wasilla chiefs, Wasilla warriors, all became from an Athabaskan chief. So that's the second aspect. The third aspect is the fish. My husband was a fishing guide on Little Su for a long, long time. And we were just told the other night that they changed all the regulations for king salmon, and dropped them by quite a bit. You don't -- he's no longer a guide, but we still fish all the rivers in the Valley.

We've taken that Devil's Canyon run up with Mahaz before to Devil's Canyon. And, you know, there's parts like the one spoke -- the kayaker spoke, there's parts of Alaska that will never be again. Never, ever. When I lived on the Kenai, we would go to Homer; and as a child we would camp on the beach, and you would -- you would not see another car for about three or four days. And you can't do that in Homer now. You don't do a lot of stuff here.

So the fish, when I teach, I'm a harvest stream project with Fish & Game for over 10 years. Where I take my student out and we get eggs from a local river; we grow them in a tank; we ice fish; we do -- we do a fish tank. We take our fish back to the same place we found them. We do a dissection every year. And in that time, the whole

message is to be careful.

We talk about horses going through streams, and ATVs going through streams. And my experience of being in Talkeetna and watching the Little/Big Susitna River with the ice in the winter, it's very little; it's like a huge volcano compared to a little campfire with what would happen to the fish as -- when they're first -- or before they become fry, lots and lots of problems. So again, my message with all of those areas is just to be careful; once it's done it's done. So take it easy on it, and take it easy on us. Thank you.

MR. KNOWLES: I'm Bruce Knowles, and I've lived in the Valley since 1982. I've served on the Fish & Game advisory committees for about 18 to 20 years. I'm a chairman of the Mat-Su Borough Fish & Game Commission, formerly known as Blue Ribbon. And sportfishing brings $150 million a year into the Valley. The majority of it is generated by the Susitna River.

And as Larry said while ago -- Larry's probably the most knowledgeable person on salmons in this state as far as I'm concerned. Our -- we have just found out, in the last five years, that 40 percent of the sockeye salmon run in the Susitna drainage, spawn in back channels and well-ups. The chum, the majority -- a lot of the chum spawn there. But we have no idea what numbers they are.

I do know this, from 1986 until last year, there's a 1.1 million drop in the number of chum salmon harvested in Cook Inlet. There's 10 out of 16 king salmon strings have missed their returns. Coho returns were the worst they've been in 25 years this last summer. And like they said, they've reduced the king catch from five to two in the whole Susitna drainage.

So what I'm saying is, if you're going to build this dam, please get new data. The data that was generated in the '80s is no good. We're at the lowest point we've been in recorded history right now, in our salmon returns. So we need studies to verify where our fish are and what we have and we have to do to rebuilt them. And the Mat-Su Borough is working to form a commission to work with the people that's going to be building this dam.

Hopefully at the next meeting they will finalize it and we'll be able to get with y'all and work with you and provide local input to you. Thank you.

MR. TURNER: Thank you. Would anybody else like to make a statement?

MS. CHAMBRONE: Hi, my name is Maureen Chambrone. I was wondering where you guys all from? How do you like it up here? Pretty state, huh? Are you guys gonna be driving up north to Talkeetna and Fairbanks?

MR. WINCHELL: Yes.

MS. CHAMBRONE: Well, you'll be blown away at how beautiful this state is, if the weather is clear. Take note that every river and creek you cross on your way there from Wasilla is completely unimpeded by a dam. Take special note of the big beautiful Susitna River, which means sand river in Dena'ina. A major artery of South-central Alaska, and shows up in many of our business, government, and place names along the Matanuska.

You would be hard-pressed in the Lower 48 to drive your car 300 miles and cross so many undammed rivers. Most likely, they would all be dammed in at least one place, maybe more. That's what makes Alaska special. There's some dams here and there, but there are no major dams. Let's keep Alaska special. No dam on the Susitna River. What happened in the western U.S. with huge dams virtually destroying what were once unbelievably large salmon returns, and taking away much of the wild spirit of the place, makes me embarrassed to be an American.

The fact that fish managers and biologists, from a so-called intelligent species, have for over 100 years, and still to this very day, claimed hatcheries were the answer to the decline in salmon runs. When in reality, they have done little good for the salmon species; but have just been a complete waste of time and taxpayers'

money. This fact makes me embarrassed to be human. The fact that a dam of such huge magnitude has even been proposed in Alaska, makes me embarrassed to be an Alaskan.

And the fact that it would be the fifth tallest dam in the world and only produce a maximum of 600 megawatts of power, less than half of the Railbelt's needs and costs $4-and-a-half billion, just makes me laugh. Dams were a major contributor to the ending of the western frontier image. Alaska really is the last frontier. There's nowhere to go from here. Let's keep Alaska special.

I speak for many who need to be Alaska to be that last vestige of wildness, connecting us deeply to our roots; keeping a little bit of our spirit wild in the modern insanity of civilization. Let's keep Alaska a frontier; let's keep her rivers wild and free. The dam is not worth it. I've been working and living in Alaska for 16 years. I've built my own log cabin off the grid in the Susitna Valley.

I speak against the dam as an Alaskan, and a river lover. The Susitna and many other rivers in this state still run free. Maybe I will paddle the Susitna someday, and maybe I won't; but either way it's critical to my spirit to know that Alaska's rivers are unimpeded by manmade obstructions. That's one of the reasons I chose

this place to live. I am concerned about the salmon and other fish in the Susitna.

The dam will affect water temperature, water level, and sediment and nutrient loads, which will have an impact on all anorgasmies species of the Susitna Valley. The salmon are struggling enough right now. They don't need anymore pressure; especially one of this magnitude. In addition, most of the Susitna ecosystem, from algae and insects, to bears and caribou, are dependent on the nutrients from salmon carcasses.

Plus there are too many unknowns when building a dam at this latitude on a glacial river. I often drive from Talkeetna to Fairbanks. I'm concerned about increased traffic on the road, making the drive more dangerous, as well as the noise from construction. And a construction camp atmosphere, and even more habitat destruction. The studies to be undertaken need to be seven years, based on the life cycle of the chinook salmon, one of the species in jeopardy.

There's no way accurate conclusions can be drawn in two years. And in case you haven't heard, they're starting to remove dams in the Lower 48. Examples include the Kanva, Rogue, and Hood. They learned from past mistakes. Let's show the country how smart Alaska can be. Let's demonstrate how we can learn from others' mistakes,

and not make them in the first place. Not spend billions of dollars making a mistake, and then spend billions of dollars fixing the mistake.

Let's set a precedent for this country in how we get our energy. Instead of making electricity from an expensive, destructive dam; let's save electricity instead. Let's look at the maximum electricity the dam would produce, and let's see how much of that the Railbelt could save instead. Not only would we be saving energy; we'd be saving money too. It's worth a try. Alaska could lead the way for our country.

I'm proud to be an Alaskan, to have chosen this place as my home. This place of wild rivers and wildlife running free. A glimpse of what the rest of the country must have once been like. I say, "No dam." But request that you do studies for seven years to gain knowledge about the ecosystem, and figure out how to increase energy efficiency in the Railbelt. But I repeat, no dam in the Susitna River. Thank you.

MR. DONNELLAN: Well, I figured I'd never come to these things. I read about them later, and this is to save my neighbor from having to listen to my gripe. Couple things everybody's hit on them, but -- Robert Donnellan; affiliation, Alaska. Well, it'll be a 32 years construction, commercial fishing, tribal administrator,

whatever. Worked from Catachan to Catablu. Live in Willow.

The last person just spoke -- and I heard a quote from a comedian one time: Humans kind of love technology, technological solutions and so on; and he said, we create a problem and then start -- instead of stopping that problem, we then do something that allows us to continue this problem, but it causes another problem. And then he quoted a comedian who said, "Eat less pork or genetically modify the pig, yeah."

Couple notes, and I've got random stuff. But it's real easy to -- the Native guy -- the Native fellow that stood up here, it's kind of easy to chuckle. But you start looking at it from his perspective. And I went down to -- had a daughter going to UNLV, never been to Vegas in my life. Went down there, and I found myself standing on the hotel roof, there's a parking garage, and I did have a little epiphany where I looked around, and Vegas, you know. As I -- so this is what it was all about, the pinnacle of American culture; that this is what we did to this country; and this is where it's headed.

But back to the dam. Number one, jobs. I've dealt with people at Juneau over the years; whenever you hear any project being pushed through and the idea of jobs; there is no legal backbone to any local hire law.

So it's a lie when they say it provides jobs to locals in the sense of the companies can hire whoever they want. You get on the plane, you've all seen them leaving from the Slope; go out to Bristol Bay, 80 percent, 70 percent, not a Lower 48, Monterey, California; wherever. So the job issue.

If it does hire locals, it's the -- a huge amount to move up here to get the job. And sure they might build a house to contribute to the economy. In terms of trusting the experts: Fish & Game, the fellow noted Fish & Game studies; I call it Fish & Game habitat; 'cause they're a habitat. Have -- want to take a D9 across Willow Creek; you can't do that. Oh, I want to take a D3; you can't do that. Well, I want to drive my ATV across; you can't do that. Oh, but I can take a 24-foot jet boat sucking up gravel all up and down those little two-inch streams.

In Alaska we've kind of got this mixed view. The old school kind of is, we've got plenty of wild and it's to be developed, and it's still real prevalent. And there's some need for some of that providing jobs. But I talked with habitat about this idea of in the Lower 48, some of these things we have, the Little Su was mentioned, Willow Creek, and so on; if those were the Lower 48, Yellowstone River, they'd be prized possessions. It would

be float trip only, whatever. And dories.

But we allow -- the experts allow -- and when I talked to habitat they said, you know, they don't have the authority. Well, what's the water cooler conversation, you know, when you guys talk about this? Dead silence. There is no conversation. So I went all the way up to the director in Juneau. "We don't have the authority." I understand that, but you can initiate some studies.

And a friend of mine that was with Fish & Game, he's now with DNR. He said, "You don't understand, habitat is a permitting agency. You can have the permit or you can't." But Fish & Game within itself does not -- it takes grassroots movements, harass you the legislator to get anything done. The experts on their own, are not looking at this saying, "Gee, this should be done or not done." And I'm sure there's individuals with all those organizations that do that.

I think it was from a movie, I didn't know the quote as far as the experts; the -- it took FEMA five days to get water to the Superdome. So in terms of all the preventive stuff with the dam, there's no guarantees. And I'm just going to read some notes I scribbled. All concerns being noted are not the issue; all developmental -- all development projects, note issues and impacts, but the development occurs, and the impact happens.

The issue is that, how many times it seems the impact is considered without regards to halting the development. Again, you know, we look at a lot of these things with the Kenai. I mean, they were able to reduce outboard size and so on. So there is ability to do that. We looked at oversight and environmental damage. You go down to Southeast Alaska, they have to set buffer zones for logging. You can hike streams down there and see where they left the slash right across the creek; the last runs of the humpies that weren't going to make it up, stranded down there.

We all know the Exxon, Prince William Sound, Gulf of Mexico, the North Sea right now today, they have a leak, Everglades, et cetera, et cetera. Appalachian Mountains, leveling them. So there are always promises, but guarantees are impossible. Just checking a few more notes. I think back to what the Native gentleman was talking about. We're all here, we all need a job and so on; but when I look at some of these projects, and then we look at where mostly looks like middle class Americans, what other people see as our conspicuous consumption.

So we'd rather -- you know, bulldoze all the land for the roads, build the dams, and so on, instead of maybe driving one less vehicle, SUV, the big mansion craze, all that stuff; and sometimes it just seems nuts. This amount

of environmental degradation to maintain, you know, a level of consumption to support the Valley's power needs; when -- I think the woman over there mentioned, you know, looking at, again, levels of consumption we're powering what.

And I talked with the woman from a -- the energy board, for example, in Juneau when they had the avalanche, they managed to cut their energy level down to like nothing, because they had to. And the minute the power came back, it went right back up. And there's some balance in between those extremes; but as Americans, we seem not to really want to go there. I mean, we can go to war over oil, so -- one last comment.

When I -- that conversation with Fish & Game habitat, they do know silver studies on the hostess on the drainage; maybe a few minimal ones, but negligible. And I had asked them this issue about, why aren't you guys proposing to at least just do some studies and so on. And his final comment was, "Well, we're busy." So I said, "Okay, well, wait a minute. The whole Su drainage --" you've got the Matanuska River, doesn't really have any fish. You've got Kink River with Jim Creek, not going to count the tail raise. On the other side you got Alexander, that's shot. You got Destram, which is Coney Island.

So now 95 percent of the -- I'm making up these numbers, but 95 percent of the numbers, fishes on the eastside streams. So we're talking Little Su, but specifically Willow, Little Willow, right on up -- so that's 95 percent of the impact on the whole Susitna Basin in the Valley; and you're not dealing with that. And you're too busy to do it. What are you working on? And so it's amazing to me that that stuff does get ignored, and I'm done.

MR. TURNER: Thank you. Anybody else?

MR. JONES: Hi, good evening. My name is Chris Jones. I'm from Palmer. I'm an educator in the Valley. And having listened to everyone this evening; I've only heard one speak up in favor of this dam. And that's the socioeconomic factor. Now, I can speak to that directly. I grew up in Alaska, moved here in the '50s. I used to fish in Cooper Creek; can't do that anymore.

But I also worked on Bradley Lake; I worked in Terror Lake. So I got the direct effects of that socio and economic value. But, I also was a guide for over 10 years in the Little Susitna River. So there's the other side of that socioeconomic effect that I also have direct result from.

So I'm thinking, if there's going to be big socioeconomic effect from this dam that's going to be

positive for the Valley, there's going to be some kind of net decrease, because the salmon habitat from these rivers being dammed up, is going to be hugely effective. It'll go down; it'll never be the same once this dam is built.

So I think there's a negative net effect in the fact that fishing's going to go down; the guides are going to be out of business; the sports fisheries that are supported by those guides are going to be out of business; the people that buy tackle and lures and boats and motors to access these rivers, that socio and economic factors are going to be impacted hugely. So I don't think there's going to be much net effect from this dam for a positive socioeconomic factor in this Valley; I really, really don't.

And having read what I know about salmon habitat and having followed it, being a guide; it's clear to me that there's never been a dam built in the world that doesn't affect fish habitat. There's not been one. I would challenge anyone in this room to show me one. Any of you people right here, show me a river that has not been impacted by a dam, and I'll give you my year's pay, okay.

Because there is -- it's not going to happen, folks. To believe that a dam of this size is not going to impact the fisheries in the Mat-Su Valley and the Big

Susitna River drainage is folly; it is pure simple folly. To allow this project to go forward, as these people suggest and promote, is detrimental to the Valley. Now, you look at this lake it's going to create, 43 miles long.

I know that there's caribou migration that go across that area all the time. What's going to happen to that? They're going to have to cross a lake that fluctuates in the wintertime. Come on; give me break. Everybody knows it's not going to happen. Lots of people hunt up there; I don't hunt up there. Okay. But I know plenty of people that do. Where they going to go now? I mean, you're forcing fisheries, fishermen, and hunters into a very narrow channel which they're going to be forced to fish in or hunt in because of the impact of this dam.

Won't be able to go to the Big Su drainage anymore. Where you going to go to fish? You won't be able to go on the Denali Highway to hunt anymore. Where are the caribou going to go? They're going to get wiped out on the north side of that lake; totally wiped out. Because they've hunted -- they've narrowed down the hunting area for that part of the state. So this dam is not very a positive thing.

I don't know if you need the electricity; it doesn't sound like you do to me. But there's plenty of

other things that we could emphasize in this state besides this dam, and put money into, besides this dam. $4.5 billion, surly there's got to be something better to invest our money in as citizens of this state. Thank you.

MS. HARTS: My name's Kathleen Harts, and I'm from Big Lake. And I'm sure you've noticed; but I will point it out anyway, there hasn't been a single person here who's spoken tonight who wasn't all about fish. Fish, fish, fish. That is what every Alaskan has in common with every other Alaskan, no matter whether they've been here for a thousand years or two years. Fish. That is everything to an Alaskan.

For 60 years my family has been fishing, hunting, and dog mushing; not to speak of living and breathing; in the area where the proposed Susitna-Watana Dam would be. As well as up and down the Susitna River and its tributaries, all the way to the sea. This is our country; it is the foundation of our life. We depend on it completely, and we treasure it above all else. Accordingly, we are responsible for the well-being of this land and these waters and the wild creatures that inhabit it with us.

We would not violate the health and integrity -- its health and integrity for any but the very most critical value for human survival. Less than half of the

electric needs of the rather meager population of the Alaskan Railbelt, is a pittance. It does not even begin to be a critical value on the scale of this massive intervention in the rare, exquisite, priceless ecosystem of the Susitna River, of which all of us here are a part.

If this is to be the tallest dam in the western hemisphere, then to justify it requires a proportional benefit. Not just the small benefit of satisfying a mere, less than half of the electric needs of a few Alaskans; and we are very few indeed amongst the teeming world billions. Less than half of that of which could very easily be eliminated altogether with full commitment to energy efficiency alone.

If this is to be the tallest dam in the western hemisphere, then to justify it requires it to be of critical survival importance to at least all the human beings of the western hemisphere. Not just to some of its energy-loving Alaskans looking for a quick 20th century fix to our 21st century energy issues. If this is to be the tallest dam in the western hemisphere, it will be using, at least in some respects, the most resources of all the dams in the western hemisphere. And doing the most damage to Mother Earth of all the dams in the western hemisphere.

And in the most active earthquake zone in the

western hemisphere, it will be having the highest risks. So it certainly should be doing the most good of all the dams in the western hemisphere. But it would only be providing a pittance of benefit. And to do that insignificant pittance, it would be destroying the integrity and the health of one of the western hemisphere's few remaining completely wild and clean places.

It would be destroying the integrity and health of Alaska's most crucial wildlife resource. I know that you figured out what that is; wild Alaska salmon. That is depended upon, not just by my family -- who cares about my family -- but by all Alaskans of all times, past, present, and future. An Alaskan wildlife resource that is also coming to be depended upon by millions of people in more populated areas of the world; as we sell our fish quite a bit.

It would be damaging or destroying the integrity and health of the wilderness; and in the process, altering Alaska's best hope for a 21st century cash cow. Our business of welcoming visitors, who come to share in the wonders of our part of the world. Hurting Alaska would hurt the United States and the western hemisphere, for whom Alaska is a crowning jewel. A mecca for pilgrims seeking the heart of our connection with nature and the

divine imagination. A last frontier of discovery and renewal, which I hope you also will experience while you're here.

We need to study alternatives much more thoroughly. And just remember, fish first.

MR. TURNER: Is there anyone else?

MS. WITT: I'd like to speak. Hello. Hi, my name is Diane Witt. I'm a life-long Alaskan. I was born in Fairbanks. I've lived in the Valley for about 10 years. From Anchorage; it took a little bit of adjustment, but now I would never go back. I agree with everyone who spoke about the fish. Fish in Alaska, and salmon in particular, are religion here. They bind all of us all together. I am -- I own a small contracting company with my husband; so we certainly get a twinkle in our eye when we hear big projects.

But we are also mindful of, and probably why we're small, of the true public use of these projects; and whether we would like to be involved in them or not. This is not one of these projects. I'm also a senior economics student at UAA, been going through all the classes, including energy economics. And I have grave concerns about the claims and promises of this dam. For one, 4-and-a-half billion is an incredible lowball.

And I don't see how -- it doesn't make any sense

to me that spending $4-and-a-half billion is going to maybe save every household 50 bucks on their electricity bill. I'm happy to pay that 50 bucks to avoid this boondoggle. Also, one of the things that really deeply concerns me, is that part of the way that this dam has been promoted, is that we are in crisis mode for running out of natural gas. I think that is a lie.

I think it is part of a pattern of disaster capitalism. If anybody is familiar with how Enron operated, with how they supplied power to California and other western states, they literally switched the switch on, on and off whenever the prices were high, leading to those brownouts. And I think that that's what's happening with natural gas in this state.

I was really impressed by the Alaska Native gentleman, and what he was speaking about. Because there is a pattern in Alaska of federal policy coming between Alaskan's natural resources. And I don't mean, kick the feds out whatever, that's not what I'm talking about, that kind of rhetoric. But the federal fisheries policy is enabling, promoting, under the guise of economic efficiency, the massive trawling up and down Western Alaska; which is decimating those salmon fisheries.

Those salmon fisheries were cultural anchors where every summer there was fish camp. We don't have

camp here where you go and canoe around in a lake; there's fish camp where you harvest camp -- you harvest fish and dry it to last you through the whole season. And that is -- that's dying in Western Alaska. And I think that has everything to do with why they -- there's so many social problems in these remote areas.

Because some of the most basic needs they have, are -- they're being separated from them. Where the pollock trawlers are intercepting the chinook by by-catch, and they're not making it up the rivers. And I wanted to draw a parallel to that with the natural gas in Alaska. I think this dam is meant to get all these greedy Alaskans off of natural gas-powered electricity; so that natural gas can get exported for phenomenal profit to Asia and beyond. And I'm not against that, but it's our gas.

We were here first; we're not excessive users of it. And I think that it is unreasonable to try to push us off onto something with claims of savings that will never happen. Nothing that they've ever built in Alaska has ever benefited the public or saved us any money. The cost of living just goes up here; it doesn't go down. Never goes down. And my concern is that for the scale of this dam that they're putting in, that's not for residential and general commercial use. That's for major mine operations.

If they can get this dam in here, they can get a major mine in here. And that will radically alter the character of the Valley, which is by and large, not a transient community. People who are here, out here, live here; pay rent here, buy houses here, send their kids to school here. And while our State government is diverting massive amounts of funds in hundred-million-dollar blocks to this project or that project, that school, Iditarod Elementary, entire grade levels are being taught in portables in the parking lot. And I find that ridiculous.

For the amount of natural resource wealth that this state has, we should have a quality of life on par with some of the most wealthiest European nations. But it's being diverted for ex -- the profits are being exported for these multinational companies and these large national companies. And another thing I would add, is there's no such thing as a conflict of interest in Alaska politics, planning, or construction.

So by definition, you cannot get a good public product out of that. You can't get something that benefits the public at large when backroom deals and all kinds of things are happening behind the scenes. And that's our problem; that's not your problem. But I would ask that you not build this dam. I don't think we need it. I think that here we are talking about Valley

electricity needs; up in Fairbanks has a completely unregulated energy market, where there are people paying a thousand dollars a month to heat their modest homes. That's a problem.

And it's a similar problem -- and what they're trying to do, is they're trying to get Alaskans off petroleum products so that those can be sold wholesale out of the state with as little benefit to the actual Alaskans that live here. And there's only 700,000 of us. So to call us greedy, that we want more for ourselves, just doesn't wash. We want basic quality of life, and that's not happening right now; it's eroding quickly.

And to -- back to the fish, we used to be able to drive up to Willow Creek, maybe put in a weekend or two, and catch a nice king. We -- and it used to be shoulder to shoulder combat fishing. Lots of raw feelings and jokes, and lots of cheers too. Now, you go out there, there's nothing. Nothing out there. These fish -- these salmon fisheries are dying. I blame Federal Fisheries Policy for, A, not paying any attention to it; and I certainly blame Alaska's Fish & Game, which has been turned over to who knows who, who are not studying -- who are not protecting the salmon; they're completely abdicating their role there.

Because salmon is a low commercial value

resource, high to the people that live here, but such low and commercial value, that it should be replaced by oil, gas, mining, pollock, fish sticks, whatever that is. But certainly not for the common use of the common people here in Alaska. So that's all I had to say.

MS. HOLMQUIST: Welcome to Alaska. My name is Mary Ann Holmquist. And I'm a resident of Palmer, Alaska. My husband and I spend much of our summers floating wild rivers here in Alaska by canoe. I am an advocate for wilderness. And I oppose building the Susitna River Dam. On one level, I believe the $4.5 billion cost of building this dam is not an efficient use of our money. I think it could be better used to develop natural gas in the state.

And I also have concerns spoken by this group, of this dam being build near a major earthquake zone. But mostly, I find myself turning 60 this year. A time of prioritizing one's life and seriously reflecting on what we leave behind. I find myself thinking that protecting the last of the great free-flowing rivers on this planet may not be a bad legacy to leave for my great-great-grandchildren.

So I stand here now supporting this wild river, and opposing building the Susitna River Dam.

MR. TURNER: Thank you. Is there anybody else like to add anything? Come on.

MS. DELAY: This is very brief. I'm Carol Delay from Big Lake. I just think it's too much money for too much dam for too little benefit. Thank you.

MS. CIOSTEK: I'm all Alice Ciostek. I was born and raised in Alaska. And I want to support everything that folks are saying. I'm totally opposed to this dam. There's a lot of industry that's being taken on at this time. And this area is really being stressed. There's about 40 miles of coal mining that is being proposed on the opposite side of the Talkeetna range. And that mining is going to be impacting, should it go through, the moose population, the caribou -- or all the wildlife that's going to be avoiding all that industry.

Now, you have animals that are moving up mountains and going into this other area; and they're going to be displaced. It's a large state, but this is going to have a huge environmental impact. And so even if you're looking at how this dam would be affected, you need to be looking also at the other industries and how they are impacting the environment as well. We're all hearing on the news and the degradation of the environment, use your common sense; listen to the people, what we're saying. You know, there's -- there's good science out there that we need to be protecting the environment.

And this dam is not helping to protect the

environment. Thank you.

MR. SEELA: Yeah, my name is Frank Seela. I'm a local business owner. Also I do fish -- and I travel the rivers quite often. Not that far north, but on the lower end on the Susitna. And we can see when the tide comes, how much an effect that has, and it's -- we're talking not the high tides, when it's quite far into the river and the ice is completely unusable for travel. So if you would do that far up north in the river, I think that has probably the same effects.

And also when you say about 2 feet, it don't [sic] sound much; I don't have just experience from river traveling between Deshka Landing and the Susitna, Susitna landing there, and it's quite spread out far. So there's a lot of low channels. And when I fly myself over the Matanuska River, I see all the spawning salmon. And probably not more standing as 2 feet of water. But the thing is, it's so silted, they will not stay in the silt, so they go to the sides in the little streams where it clears. And there they can sit and pick paddles and pool and spawn.

So if you say you raise and lower that by 2 feet, then a lot of this ground cannot even be reached by the fish anymore. So I think -- at least my family, we are a small one; just my wife and me. We eat entirely only fish

in the wintertime. We catch them dip netting or go just local fish. But if the fish is gone, we would need to go to the shop and buy; it's more expensive. I cannot afford to buy salmon in the store. It's outrageous high priced.

So our cheapest source, and the best source of food, is going in the river, spend a couple days there, fish what we need; and then we probably can stock up our winter supply. So that's my 5 cents to it. Thanks a lot.

MR. MILLER: Hello. My name is Steve Miller. And I am a 28-year resident of Wasilla. And my wife and I own, I think 74 acres of property here in the Mat-Su Borough, which isn't a lot. But about 73-and-a-half of those acres is wild land. And 66 of those acres is on the Big Susitna River, just south of Trapper Creek on the west side. So I feel like we do have some skin in the game here.

And I just want to ask: How many people in this room got involved here, three or four years ago, when MEA was proposing to build a coal-fired power plant? How many people stepped up and -- I am conflicted about this project, because it -- it makes me sick when Bruce Knowles and these other people stand up and tell us what's happened to our salmon run.

But I also -- I went -- I was at the 5th Avenue Mall a couple weeks ago. And I just look at the people in

the 5th Avenue Mall, and they just seem like they're from another planet. And I have a hard time imagining that all of those people are going to build log cabins and live off the grid; it's not going to happen; people are not going to go back to living in wigwams; and, you know, completely subsistence lifestyles.

And so as much as I'm concerned about the fishery, I think that we need to give this project a chance. Because I do not want to see coal-fired power in the Valley. And I constantly hear this propaganda on the radio from Usibelli Coal Mine; coal is this clean fuel; we should be looking at coal; we should be -- America's clean fuel. And I'm sorry, but if I had a choice of coal from -- to produce my electricity or hydroelectric, as much as I'm concerned about the impacts, I personally will vote for the hydro.

And, you know, saying this project doesn't pencil out. I -- I think it does; I think the State has a history of building hydroelectric projects, successful hydroelectric. It's not a shame. Terror Lake, Bradley Lake; there's more; I just can't think of them right now. So just be careful what you wish for. And I'll just say one other thing here, I'll just -- I don't have any notes or anything.

So I'm just kind of going off the top of my head.

But what something like this allows, is it allows other forms of alternative energy, such as wind power; and, you know, maybe you don't like wind power; maybe you don't like hydro; maybe you don't like coal; maybe you just don't like power at all, okay. There's nothing I can say to you. But what this project could do, is allow our wind-power resources here in the Valley, and we have huge wind-power resources. It could allow them to be developed, because the wind doesn't blow all the time; we all know that.

And -- but hydro is -- is a more or less steady form of electric generation. So I've learned a lot tonight. I appreciate all the comments. Thank you, for -- everybody for sharing your thoughts.

MS. DONEGAN: My name is Judy Donegan. I live in Palmer. And I think of all the people in this room, I'm the person who's been here the least amount of time. I came two-and-a-half years ago. And I came -- for the gentleman that just talked, from living in a high-rise on Lake Michigan; to live off the grid in Palmer; and it's not that hard. It's not that hard to do it. And I know it takes resources to build the power. My solar panels for instance.

But maybe I agree that we should be putting our power to use to develop alternative energy sources. The

other thing is, that one of my fears about this dam -- pardon me, I get nervous. But is that it's going to increase the power somewhat in the Valley; and will that help the development of those 40 miles of coal mines in my neighborhood? So one thing everyone talks about fish, and that's really important to Alaskans; and I take your word for it. I've enjoyed the salmon.

But it seems to me what's really important to the power structure in this state, is huge, the bigger the better industrial developments. And that seems amazing to me. In Chicago they just closed a coal plant in the middle of the city; which was a stupid place for it; but they're closing it. We shouldn't be going down that path. So I'm a newcomer, but -- thank you.

MR. POWELL: My name is Gary Powell. I'm a property owner in the Chulitna development corridor. That's my specific concern is the access to the dam site. For those who don't know where that is, it's only about -- less than 10 miles off the Parks Highway where that would come out, closer to five miles. And within that area there are probably 150 to 200 property owners. Specifically in Indian River subdivision, it's ASLS, Alaska State Land Survey, 80-131; and numerous remote parcels, new Miami Lake and the Chulitna area; all the way down to Gold Creek.

And in the paperwork it says that the access road and the power line would end at the inter-tie connection and the Alaska Railroad; but they're going to have to have public access to the recreation area that's planned in the reservoir. And it's only logical, if that were the preferred alternative, that it would be an easy connection on the Parks Highway down to Chulitna. And on the old Chulitna there's the trail that goes out to Portage Creek.

And that area has some home sites and homesteads from the federal home site program. And it would have a huge impact, because right now that area's for recreation and subsistence use for the owners. I've been there about 29 years. And very few people know about it. And so everybody ignores it. But I'm concerned that if that were the preferred route, and I'm told it's the least preferred route, but if it were constructed that way, it would have a huge impact on the local population in that area. Thank you.

MR. CHOTICK: Good evening. My name is Andre Chotick. And I'm 20 years resident of the Mat-Su Valley. I came from Poland; little country in Europe. But was amazed how beautiful Alaska is, and fell in love with that; and I want to stay here. I welcome you guys to come here and spend your precious time to listen to us. And there was a great testimonies along the evening.

And I would like to add my comments to it. From it experience that we have in the Mat-Su Valley being active citizen and fulfilling our civic duties, we go to numerous meetings with the Borough Assembly. And we see how many times our elected officials disregard the regulatory process, which was set up probably long time ago. And we came to conclusion, that this regulatory process, or licensing process, is badly broken or dysfunctional.

And I hope that you guys take the time and maybe reconsider our input here. That there's more to it than just creating another white elephant in the Mat-Su Valley. We have already our ferry floating someplace without a port. We have competing ports, you know, with the Seward -- with the Anchorage port. We have the -- another port over here building, because they want to make that colony to export natural resources to Asia markets.

And the -- in the process, totally destroy environment and the natural resources that we have, instead of enhancing them and preserving for the future generations. We just trade one precious resource for some pebble or coal, and destroying our livelihoods. So I would like you guys to consider other aspects, or all the aspects, and gain new data how this dam gonna help us to regain the -- our energy independence. Thank you very

much.

MR. TURNER: Anyone else like to make a statement?

MR. ENGEL: I've already spoken, but I've got one question that has not been brought up. My name again is Larry Engel. Virtually every hydroelectric dam that has salmon, so it's significant salmon associated with the project, somewhere along in the discussion, because as we've heard repeatedly tonight, dams are almost always going to have some kind of a negative, if not a very serious negative effect on fish. I think that's the feeling of most of the public here this evening.

And salmon are very important to Alaska's lifestyle, economy, and all these -- subsistence and whatnot. One of the ways to mitigate in the eyes of political people is to say, "Okay, yes, this dam is going to impact your salmon run; and our studies have indicated it will reduce the salmon runs in the Upper Susitna by some percent, 40 percent, which represents this much fish."

"What we're going to do for you, we're going to replace them with hatchery fish." And somewhere in this discussion, somewhere in your scoping, somewhere in looking at all the different alternatives to the stem, that issue is going to come up. And it should be done in

a manner that's not one of those last things that you do at the very end to mitigate, to compromise, to do whatever it takes to pass this -- you know, to ensure that the dam gets built.

I'm not saying that's bad, but I say that I've watched this approach being used throughout the Pacific Northwest. I grew up as a young boy when Grand Coulee was built and cut off thousands of miles of salmon habitat. We said, "We're going to build you the largest salmon hatchery in the world; and we did to mitigate this loss and we'll produce even more salmon below the dam."

Well, the Leavenworth Hatchery was a failure; we didn't have the expertise that -- to grow the fish. It's very easy to say, "We'll build more fishing; we can do that to mitigate all of these concerns about salmon." It may not totally mitigate the idea of wild salmon. But I could probably paint you a picture of how I'm going to propagate these fish, so we're going keep all this wild genetic capabilities of these fish available; and we run into this wild problem.

But -- and producing fish with the hatchery, you got to be very, very careful. I'm not going to go into all the details, because they can change all kinds of things besides, you know, the spawning behavior, inter-facing with wild fish, harvest rates, and these

things. So I think right at the very get-go on a project like this, and we're considering it, and whether it's viable or not, that the issue of what role might salmon hatcheries play in mitigating any potential lost salmon relative to the dam.

So I would hope that that issue was brought up early on in the discussion, the public have a chance to talk about it and see whether it's a reasonable approach. Thank you.

MS. KILKENNY: My name is Anne Kilkenny. I just want to say, don't think that this is -- that salmon is just a lifestyle thing, or something that Native Alaskans do. I worked in the seafood industry for one of the biggest salmon processors in Alaska. And even while I was working there, I couldn't afford to buy fish. Many of us depend on salmon and moose to live. It's not what we do on Saturdays for fun.

I mean, my husband's cousin says, "I need 120 fish a year to feed my family. I have to get 120 fish a year." This is how we live. It's not just fun and what we do for pleasure. It is our life, it is not a lifestyle. It is about living. Thank you.

MR. BUCARIA: I just had one other comment. It would be really -- oh, yes. Garvan Bucaria; number two comment. Mr. Engel has mentioned he would like to see

some coverage of the cost of replacing fish that might be lost; that will be lost I would say. And there are very few king salmon hatcheries around, because of the life cycle of the king salmon. Pink salmon migrate right after they emerge from the gravel, so do chum salmon. Sockeye salmon, a couple years in freshwater, then they're gone out for a couple years we'll say in salt-water and return.

But king salmon, king salmon it takes a -- it'll take quite a resource to feed those fish that are being raised in the hatchery for one, two, three, three years maybe; maybe more depending on the water temperature. And that's another thing, you just don't find hatcheries everywhere that work. I think the Fish & Game is building a hatchery up in Fairbanks; they've been doing it for a couple, three years. Got some problems. Water quality; so it's not so simple.

And I'd like to reiterate the point that if -- if you start messing around with the natural regime and the water flow of the Susitna River, those upwelling areas, those side channels, which I observed at Cachuma Lake and elsewhere in Alaska that are the lifeblood of spawning salmon, will not be accessible; I'd like to reiterate that point. That's a major point.

And you'll have natural loss of habitat in very -- in the natural regime. But if you start

artificializing the thing, I don't think a man dances to the same drum as in the natural system. So there would be perhaps even greater problems. And then, of course, the disease factor in hatcheries. These are all problems that we with our super technology haven't seemed to find answers to. Thank you.

MR. TURNER: One more back there.

MR. ERICKSON: Thank you. I'm Rick Erickson. And I'm a property owner up at Gold Creek, Alaska my -- holding in State Park. Been up there for about 20 years, and I've seen many fish. I've got one of those in -- upwellings, if you will, of -- right off the -- right off the main stem of the Susitna. I fish that entire river all the way from about Portage Creek, which is at the mouth of the canyon, all the way down to the headwater -- or not headwaters, the mouth of the Susitna.

I pretty much follow the fish as they migrate up. And I've seen a great reduction of those fish over the years. I used to have a silver run that would come into my upwelling, that would -- it'd tail on around November. That run never comes in anymore. And I believe that somebody here already mentioned the fact that the biomass out in the ocean is being affected more than the man is affecting the streams in our Susitna.

I believe that the dam will pencil out in terms

of where our fossil fuel was going. I don't like fossil fuel; i just don't. I believe that the hydroelectric is a good, efficient resource, if properly managed. I do have concerns about the winter flows though because that winter flow will affect my upwelling and will affect all of those tributary streams coming into the Susitna.

Will it go up and will it come down at two feet? Or will it stay at a steady 2 feet? Do we have that answer?

MR. TURNER: It's one of the things we'll be looking at in terms of their operations.

MR. ERICKSON: Well -- and one person mentioned a seven-year study. I don't know if seven years is required, but a study for the winter flow is imperative in my view. But personally I think the dam would be an asset in the summertime -- that river changes up and down in the summertime. I've been up there when there's been thousands of chums in a side channel stranded, because the water's gone down.

And there's Mr. Grizzly out there, and he's fish -- he's having a great time. So the river changes, that's a given. In the summertime -- one thing that I do know, is that we'll have a green water stream from the canyon all the way down to the confluence of the tri-rivers. From there those nutrients will start coming in, again,

and there won't be a total loss in nutrients I do not believe. I don't know about the nitrogen issue.

The overwhelming nitrogen coming into the streams because of the dam. I'm not informed on that. That's all I have to say. Thank you.

MR. HARRIS: Hello. (Speaking Native tongue.) The greeting comes to you from before the flood. We don't have stories from the flood down; we have stories when the oceans were 200 feet below where they are now. My name is Tom Harris. Thank you. For IRA purposes. How many members of the Ish tribe here? Raise your hand; Ish tribe? No English here? English? Irish? Frankish? Scottish? Polish?

You are also tribal people. And our people recognize you from before the flood. We recognize the word ish, as Ira, son of Ish. Engel, son of Ish; grandson of Ish. All these family names. So when we talk about how this world works and stories, it's not from one lifetime, it's not from two lifetime; it's millennium generations. We have names for places that are now under the ocean. We have stories that occurred there.

And there are salmon there, and so forth. We want you to know that you are stronger than you think. It's important that when you look at this world, you don't look at it in one microgram; you don't look at what's

happening right now. That you look at it over the cycles of many cycles. Many of you are studding Mayan; studying what's happening there.

We ask you to broaden your mind to understand what's happening. There's been a lot of discussion on the importance of fish and salmon, yes, believe us. And we've heard that it's a lifestyle. Do you know as an example that you are the fastest growing Native community in the state? Do you know why those people are leaving their homes? For the same reason that was said here; they can no longer feed themselves from their land.

They can no longer feed themselves from their land. So they're coming here. At this moment in time, this community, the Native community, is the largest minority voting block in this community, and growing larger day by day; within 24 months there will be an additional 400 showing up here, living here. Some of the other things we would ask you to be aware of is to open your eyes as to what is happening in the planet and wildlife.

How many of you know that Alaska's the least productive wildlife state in the nation? Okay. We heard somebody here from Michigan. How many know that Michigan outproduces Alaska in -- to -- wildlife a hundred to one on a per acre basis? A hundred to one. And it's one of

four states that do that. How many know that within 50 miles of Washington, D.C., more wildlife was harvested than in all of Alaska? And it's an issue of management.

We are stewards; that means management. We know the Setech River. You know it as natural; we know it as managed. We have the stories of one that was managed and how it was managed. There was a process you call "moist air incubation systems." Moist air incubation systems are designed recently based on technology derived from the stories of Elders.

You know, for those of you who are in the Ketchikan, you know that downtown Ketchikan there's a totem called the fog women pole. That is the story of moist air incubation. From time and memorial. We encourage, that as we look at these projects, that we don't advocate to the experts. Some at fish and game; some at Fish and Wildlife. We don't abdicate to them the management of our resource. It is ours as a people.

And we celebrate the fact that 49 states have a better wildlife production rate than we do. Because that means there's hope for us. What we've got to do is follow that path and understand it. We don't have to copy it. We just have to take what fits us. We're very concerned that this last year with the moose die-off, that we're going to see another catastrophe. From 2001 to 2008

Alaska lost 23 percent of its wildlife harvest, hooved wildlife harvest, documented by Department of Fish & Game.

No other place in the nation lost that; no other. So as we look at projects like this, we can't blame the project -- this project for the loss of Alexander Creek from 30,000 kings to 800. Can't blame them. That's us. Sometimes that's jet boat operations; sometimes that's other. But we can learn from the past and rebuild that resource. But it's up to us. It's up to us as a community to examine it.

You've done terrific research from what I've heard today about all the bad things that could happen. There are lots of opportunities for all the good things that can happen. I'm here as an agent for Kinikata. And they are preparing for the largest community -- Native community in this state. And the subsistence foods that they need to feed themselves and feed their families.

We are looking at those models; and saying, "How can we bring that model back to Alaska?" We know from research that was done here recently, that 67 acres of new habitat can create a 20-fold increase in moose harvest on 47,000 acres. What can we do with salmon? Remember the sea tech, with its two kings -- two steelhead runs and all the other species that run, you count as natural; we know that it was managed. And we encourage consideration of

these resources.

We encourage you to look at -- beyond this generation. Look at the multiple generations. Look to the millennium. Look to what's happening outside. There are opportunities here for us. I'm reminded of two salesmen, both arriving in Africa, steamship days. First, they were both selling shoes for competing companies. They run off the boat and look around, and immediately run to the telegram office. First one says, "I'm on the next boat back; nobody wears shoes here." The next one sends the message, "I'm staying here, send two boatloads of shoes; nobody wears shoes here." Okay.

So if we're in the land with no shoes, what do we do? So I'm not willing, nor are we as Alaskan Natives, willing to abdicate this. We ask you as the tribes of Ish, please don't advocate this. Let's find a way to be a part of nature and make it work as our ancestors, in both the tribes of Ish and the tribes here have shown us in the past. Thank you.

MR. TURNER: Is there anybody else that would want to make a comment?

MR. SMITH: I didn't mean to speak or raise ruckus. I don't have any credentials. I mush dogs from -- Bud Smith. I mushed dog from Great Slave Lake to Nome, and from Barrow to Valdez. Anyplace there was

enough snow that stayed long enough. And I don't know -- there's a lot of -- a lot of talk about -- there are people that are getting so -- so prolific that they're coming out of the ground, yeah.

I think that's probably got to stop. If you have a food supply that's limited, and sooner or later everything is going to be limited. So I don't think that -- that enters into it much. I don't think that our -- our economy is kind of not really real. It's based on something that belongs to season. And I think that there's all sorts of ways of solving the fish problem.

Maybe one of them is to go ahead and build the dam, and then we'll have -- we'll probably have a whole -- the best pike fishing in -- in Northern America. That's for all that -- that ground up above the -- all the way up to Tyone Lake into Lake Louise, Susitna, Tyone. All that stuff up in McLaren, all over. And you guys that make a lot of money, compared to me, or what I ever made, you can have -- you can find a -- a big corporation that's willing to chop them pike up, and can 'em; and you could probably find a pencil-pushing job that would pay you in that corporation.

I'm pretty sure you could. You look like kids that could get along. The only thing is, you'd probably go back to some center of population when it gets pretty

rugged to live up here. And then -- then you'd forget where the fish did come from, and it wouldn't matter to you. But there's -- there's an alternative, and that word is used enough and not understood enough.

I was reading in Farm Show about all these different farmers and entrepreneurs who do little things like -- well, they -- some of the things they used to do was paint their -- their panel -- or their SUV with flowers and burn Crisco -- or burn doughnut oil and go around and see how -- show us how easy it is to burn oil in our diesel.

But Farm Show now has a lot of entrepreneurs that are using little solar collector and that at the bottom of it they got a little hydrogen tank that is produced from the solar collector. And they -- some of them strap them on the back of their tractors, and some of them just use it for their generator, that they electrify their whole farm with. It can be done on a large scale like that or -- or one guy took a three-quarter-ton pickup and a wood-burning gasifier, that wood gasifier. And -- well, two of them actually.

He put one on his truck, he put one on his trailer behind him, behind his truck; he loaded up from the lumberyard a full load of -- on the truck and a full load on the trailer, just the scrap ends. He went

7,000-some miles with that stopping and gasifying oil that he ran through -- gasifying gas that wood that he ran the generator with to give demonstrations of how it would produce electricity. And you can -- every one of us can -- can do that.

If you want to get on the Web you can find out how to make a gasifier; you can get all the plans free, and you don't have to do nothing with it. All you got to do is that -- promise that if you come up with something good, that you'll give it back free so that everybody can use it. And everybody -- somebody said something about, they're not gonna -- you know, they're not gonna -- that you see all those people in Anchorage who aren't going to have a -- go out here and have a place to put a cabin; they don't need to.

There's all sorts of things that you can. I've lived on solar. I've lived without solar. I lived on $10 worth of white gas in a month for three years. And everybody can do it. We can't all live on -- now, the guy that was talking just a little bit ago about managing our resources; he's right. Norway has three times as many moose as we do, and they don't even kill them with cars much. But we could do it up here.

We could loosen up -- we could have a good economy raising moose. Everybody could have -- industry

doesn't have to be something that you don't do any work for; that you don't sweat for. It can be something that you can do in your own house. You can add value to anything. And you can make a living adding value. You don't have to go back to New York or wherever.

And everybody can -- in a single way, in their own household, whether it's through solar or a little windmill, that our gasifier that burns wood, garbage -- or garbage; or cities that are supporting themselves, energy wise by taking what used to go into the sewer and burning it. It's really happening; if you close your eyes to what -- and how much you can make. Because you only need so much. You don't need an awful lot.

You can only sleep on about piece -- about 6-foot long and about 3-foot wide. And everybody deserves to have that, and everybody can have a hell of a lot more than that right now; but not in 50 years; if we keep on like we are. If we keep on doing this artificial thing from New York and from -- now, there's nothing wrong with -- everybody has to have a pencil. You can't figure nothing out without a pencil; especially when you get my age.

But if you don't do everything by pushing pencils, and have this false economy, totally false, I don't know what -- well, I don't -- I guess I better not

get into -- and -- but I've gone too far already. I think that we just need to look at life and enjoy it and work for what we got, by really doing some work and thinking; and if we do that, we can all come out with our own power.

And we all come out with -- in a few years, with enough to -- right now the technology is available for us to burn hydrogen using the -- a boron solution with it. That makes it safe, and it's somewhat -- somehow the patent must have gotten bought; because all of a sudden it went out of sight. They had -- they had it all laid out, how everybody could be doing this burning water in their car; and this -- I guess this is just a year or two ago.

And they had it laid out how you can have the service stations collecting the used boron to send back to the bulk plant where they put the -- put it in water or where they recombined the boron so that it -- with their solar collectors; so that it can be used; and then they give it to you in your car again, when they pump it into the service station.

There's no end to what we can do with your minds and a pencil. If we do -- if we work it in the right direction. Now, I don't know -- I'm all for this dam if -- if the first thing they build is a fish ladder that works where the dam is gonna be. If they start from the bottom, the bottom of the river, and they prove that they

can -- that they can put salmon up there through a fish ladder, enough fish ladders -- I've looked at -- I've looked at the king salmon -- the hatcheries. They don't work.

You go up on the upper Columbia and you find in -- in the little offshoots, and you'll see these dams that -- where they're having the fish hatcheries right there in the dam. There's a lot of sick looking kings there. King salmon. There was a -- it just doesn't really work that good. This -- the whole planet is built to do something, and -- or do something that we probably can't figure out a better way to do it in just a few hundred years like we're saying we can.

I think the earth does its own thing its own way, and we've got to live with that. On the Indian reservation, Klamath Indian Reservation, when I was a kid there was -- it was like a paradise. They had no hunting rules. Nothing like that. There were fish all over. And it -- and the reservation wasn't overpopulated. Except some thought it might be overpopulated by white guys, but it was -- it was really not that dense.

They didn't -- they didn't live on just money. And when you put an animal in a population and you let it breed, and you don't restrict its feed, but you keep bringing in artificial feed; it doesn't have to be good

feed. If people can live on -- well, anybody can live -- any animal, any rat, can live on carbohydrate or maybe potato chips, whatever. And they can breed on it.

And you keep putting stuff into the -- into the system, the mouths of all the people and all the animals, they'll all keep procreating until they just can't -- until you cut the food off. And then the population goes back down. We -- that's -- that's the problem. But you ain't going to solve it by stopping the dam, but you should do the dam so that we don't stop the earth.

MR. TURNER: Thank you.

MR. WITT: My name's Cory Witt. And I'm a civil contractor here in the Valley. And I've done a lot of research on this dam, and I've read through -- R & M Consultants is the one who pretty much put this together for Alaska Energy Association. And we're pretty much selling this dam as a $4.4 billion dam, off of 2009 numbers. If you read through their 200-page geotechnical report, they have a section in there which they have a billion dollars set-aside just for a contingency on this project.

So I would kind of like for the State of Alaska, and whoever else is going to help fund this dam, to kind of give us an honest opinion on what this dam is actually going to cost. From what I can see, there's a couple

other issues involved in this; is that, you know, as our -- as our United States is going through a recession and we're talking about buying all American-built products, nothing on this dam is American built.

The steel is not American built; the fly ash is coming from overseas; the concrete comes from overseas. And I just don't understand why we want to invest in a project that's not giving back to -- you know, this kind of dollar given back to our communities. Right now we have another big project going on up north for the Salt River -- the Salt River project.

There's another almost -- what is it now? Almost $300 million we're spending on that, and it's all Chinese steel. It's not even American-built products. I mean, if we're going to look at this dam and be realistic about it, let's put an American-made stamp on it. I mean, this is what they did when they built all the dams back in the '50s. They put that stamp on it, because that's what we represented back then; it was, you know, American built.

My other issue is; that this is going to be the tallest roller concrete compacted dam built anywhere in the world. And we're going to build it in our backyard. And who has the qualifications in our state to build something of this kind of structure in our backyard? Well, right now, the only one who they're looking at is

Kiewit. And Kiewit might be able to do that.

But on the other hand, this is sitting on a fault zone that has earthquakes up there all the times. You read through their geotechnical report, it says right there in their geotechnical report, that this is a concern, to the consultants are writing this in there; this is a concern. So a 7.3 earthquake could crack that dam. Plus it's a roller-compacted concrete dam, which are known to leak anyway. So now we're -- we're not even using a hundred percent solid concrete on this dam.

Why? Because we can't afford to do it that way. We can't afford to move the earth -- to move it as an earth dam, so this is going to be the most feasible possibility, is with this roller-compacted concrete. Yes, this has been a great thing since the '80s roughly; and, yeah, they do have some 200-foot dams in the Lower 48; which is great. But we're talking like 780 feet at finish.

I mean, we're three times the size of any other dam in the -- in the northern hemisphere are -- in the U.S., that has built something to this size. And I think that's all stuff that needs to be looked at and addressed prior to us just keep on handing out money to people and saying, "Okay, that's a great idea." I mean, we're spending tons and tons on Alaska Energy to put together

all this, and put all their fancy fliers together, but there is facts behind it.

I mean, I want to know how safe we are. This is in my backyard. If this dam comes down, this wipes out everything all the way to Anchorage. I mean, this is -- this is a no joke thing. I mean, we need to have a handle on, you know, what happens if this does break. I mean, we need to have some kind of contingency in line or, you know, what-ifs.

I mean, when they did the report in 2009, like I said, if you read -- it's online, if you read their geotechnical report. They have earthquakes up there about every three days. You know, from all kinds of magnitude earthquakes; that's concerning to me. Just on a structural basis on -- on, you know, what -- what could happen with this dam. That's just some of my concerns I have, and I appreciate your time. Thank you.

MS. FREID: My name is Beth Freid. I am a member of a lot of things, but I'm affiliated and representing anybody but myself right now. My mom and I have owned an 80 percent passive solar home for 30 years. We have -- 10 years ago we installed the solar converter, so that we could sell power back to the State of California. Now, Mom's bills instead of $400 a month for electricity; they're $200 a month for electricity.

But they don't let you build anything in California to generate more electricity. And so her bills aren't going to go down any time soon. There's a lot of sun on top of her mountain, and we could probably replace the power if we covered the mountain with solar panels. Wind is not feasible. Although there are a few windy days, we can't use windmills on our mountain. We have redwood trees all the way around, and we prefer to keep the redwood trees than put in windmills.

The Railbelt utility structure is the spine for our home to stay lighted and heated. Whether or not we're heating them with natural gas right now; the electricity allows everything to stay online. It is becoming marginal. MEA is going to put in $10,000,000 worth of new generators and build a whole new plant, I can't remember how much it is. And it's still not going to provide us with enough power, if there's natural gas to feed the generators.

This is the only renewable energy source that we truly have in Alaska, besides wind. The only place I've ever been where there's as much wind as there is in Palmer, is Palm Springs, California. They have a massive, massive windmill generation area in the middle of town. During the week that I was in Palm Springs, in the windy part of spring, driving by the windmills every hour of

every day, I maybe saw 25 percent of those windmills functioning, maybe.

The only time that the windmills are functioning all at once, is one percent of the time. Wind doesn't work yet. For 30 years I've been investing in passive solar for my home; active solar for my home. We can't use windmills; we're doing solar conversion. It -- we're still paying $200 a month in electricity in California. This is my mother's home, not my home; but, you know, I own a half of it.

Nobody can afford -- nobody I know can afford the $10,000 we put into maintaining this property every 10 years. I want to know one person in this room that puts $10,000 a year into -- every 10 years; a thousand dollars a year just to maintain the energy for heating, cooling, and boiling water, and taking a shower. I'm sorry, no, no, no. Just for the heating and cooling. I'm not talking about decks and the roofs and the walkways and the windows and the doors.

I'm talking about just maintaining the energy in your home. Not many people do that. My mother does it. We need a stable energy source that will continue to go on. We have the regulation to check and find out. Are there going to be too many earthquakes? Is there a way to mitigate fish? I'm asking you, don't stop the process

until you find an insurmountable obstacle.

We need this energy going up and down the current communities that we have. We need the businesses that are active right now to maintain their activity. Because Mr. Harris is right. The people in the remote villages are moving into these central areas; they can no longer maintain subsistence lifestyles. We need to keep the fish. We need to keep the moose. People live off of those here in our area, but don't stop researching this.

Don't stop checking the potential of it until you come to an insurmountable point. This is something that this community and this state needs in my opinion. And I may not be as educated as I should be on this stuff. But I do have 30 years of experience; and I know that there is no alternative energy source beyond the ones we are currently using that is mature enough to support our current lifestyles, including my mother's Prius.

MR. TURNER: Any other comments? Well, if there's nothing else I'll try to wrap things up real quickly here. Just some reviews for -- appreciate your extending all of your comments tonight. I think it was somebody had said, I learned a lot; and I can understand the passion and -- which you live here. It's in the passion for the resources, and we're not going to take those things lightly.

We've got a lot to learn and study yet before we make any kind of decisions, and that's got a number of years ahead in which to do that. But the first steps in here is basically to get a good handle on the issues that we need to be looking at. And you've given us some real food for thought, and we're going to continue to do that. But if there's anything else to come to mind, study request and study comments are due April 27th, unless we extend the time, which we probably will, to May 31st.

We'll be developing a study plan, or AEA will be developing a study plan in which to address these issues that you've raised tonight; that's coming out in June or July. The study -- we'll have a number of study plan meetings over the next 90 days to try to resolve those studies and study needs. And those will come out and ultimately result in a revised study plan produced by the end of October or November -- or beginning of October or November.

And ultimately a decision by the Commission on all those studies in December or -- November or December. Again, unless there's somebody else that has any other questions or comments, we're -- that they want to make, we'll adjourn the meeting.

MR. SMITH: Bud Smith. We're talking about money, $200 electric bill; with $200 electrical bill for

10 years, you got $24,000 to put into your solar.

MR. TURNER: Unless there is something else, we'll adjourn the meeting; and again, thanks for your time and your comments.