

**Susitna-Watana Hydroelectric Project
(FERC No. 14241)**

Initial Study Report Meetings

October 23, 2014

Part A – Transcripts

**Alaska Energy Authority - Board Room
813 West Northern Lights Blvd.
Anchorage, Alaska 99503**

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SUSITNA-WATANA HYDRO

Agenda and Schedule

Initial Study Report (ISR) Meetings

Economics (Study 15.5), Socioeconomics (Study 15.6),
Air Quality (Study 15.9), Transportation (Study 15.7),
Health Impact Assessment (Study 15.8), Recreation Resources
(Study 12.5), Aesthetics (Study 12.6), Recreation River Flow (Study 12.7)

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ATTENDEES

Julie Anderson, Alaska Energy Authority

Nate Anderson, Alaska Energy Authority

Martin Bozeman, Alaska Energy Authority

Michael Bruen, MWH

Justin Crowther, Alaska Energy Authority

Phil DeVita, Harris, Miller, Miller & Hansen

Wayne Dyok, Alaska Energy Authority

Jessica Evans, URS

Mark Fink, Alaska Department of Fish and Game

Andrew Fraiser, AEA

John Gangemi, Environmental Resources Management

Kirby Gilbert, MWH

John Haapala, MWH

Bretwood Higman, Ground Truth Trekking

John Jangala, BLM

Jonathan King, Northern Economics
Louise Kling, URS
Jan Konigsberg, Alaska Hydro Project
Tim Kramer, URS
David Kroto, Tyonek Native Corporation
Donna Logan, McDowell Group
Becky Long, Susitna River Coalition
Matt Love, Van Ness Feldman
Paul Makowski, Federal Energy Regulatory Commission
Andrew Mattox, Ground Truth Trekking
Terri McCoy, Northern Economics
Betsy McGregor, Alaska Energy Authority
Suzanne Novak, FERC
Kim Nguyen, Federal Energy Regulatory Commission
Steve Padula, McMillen
Dirk Pedersen, Stillwater Sciences
Dudley Reiser, R2
Adison Smith, DOWL HKM
Jay Stallman, Stillwater Sciences
Erik Steimle, ERM
Marie Steele, Alaska Department of Natural Resources
Miranda Studstill, Accu-Type Depositions
Karl Swanson, Federal Energy Regulatory Commission
Cassie Thomas, National Park Service
Ryan Thomas, DNR-DPOR
Rachel Thompson, Alaska Energy Authority
Maryellen Tuttell, DOWL HKM
Ken Wilcox, Federal Energy Regulatory Commission
Heather Williams, MWH
Harry Williamson, National Park Service Contractor
Fred Winchell, Louis Berger Group
Whitney Wolff, Talkeetna Community Council
Mike Wood, Susitna River Coalition
Sarah Yoder, DHSS-HIA

Lyle Zevenbergen, Tetra Tech
Jon Zufelt, HDR

INTRODUCTION

MR. GILBERT: It's 8:30 here. So I think we'll get started.

Everybody, be sure to sign in, if you haven't. I appreciate that.

I am Kirby Gilbert. This is the second series of Susitna-Watana ISR meetings, and we'll go around and do introductions here in just a minute, both here in the room and on the phone.

This is the last of the series. Today is about social sciences and recreation this afternoon. Yesterday we did physical sciences and subsistence and cultural resources, and the day before we did wildlife and botanical resources. Last week we did aquatic resources and geomorphology.

Just real quick, we've been doing this every day just to make sure if there's an emergency or anything, we go up the stairs and gathering in the north parking lot, if we have to evacuate the building. And the bathrooms are right outside. But for a lot of us, you need to know they've been

remodeled, and they've switched the men's and women's. So be sure to watch that.

MR. GILBERT: And now we'll have introductions, but I wanted to point out Miranda is back here transcribing these meetings, so we'll have a nice transcript of them afterwards also.

I'm Kirby Gilbert -- we'll go around the room, MWH for AEA. We'll just start at the table.

MS. TUTTELL: Maryellen Tuttell, DOWL HKM.

MR. KING: Jonathan King, Northern Economics.

MS. YODER: Sarah Yoder, Department of Health and Social Services.

MS. MCGREGOR: Betsy McGregor, AEA.

MR. SENSIBA: Chuck Sensiba, Van Ness Feldman, on behalf of AEA.

MR. DYOK: Good morning, Wayne Dyok, Alaska Energy Authority.

MS. STEELE: Marie Steele, Department of Natural Resources.

MS. WILLIAMS: Heather Williams, MWH.

MR. FRAISER: Andrew Fraiser, AEA.

MR. CROWTHER: Justin Crowther, AEA.

MR. KRAMER: Tim Kramer, DRS.

MS. THOMPSON: Rachel Thompson, Alaska Energy Authority.

MR. ANDERSON: Nate Anderson, AEA.

MS. SMITH: Adison Smith, DOWL HKM.

MS. MCCOY: Terri McCoy, Northern Economics.

MS. ANDERSON: Julie Anderson, AEA.

MR. GILBERT: Okay. Can those on the phone hear us?

UNIDENTIFIED SPEAKERS: Yes.

MR. GILBERT: Okay. We'll try to speak up, and that is a good reminder. And also for our court reporter, everybody, be sure today to try to say your name before you have any comments, so we can get it. And the people on the phone can hear. And if you're in the back, you just got to stand up and come to the table otherwise.

So who do we have on the phone?

MS. LONG: Hi. This is Becky Long from the Susitna River Coalition. I hope you guys are doing okay.

MR. GILBERT: We're doing great. Thanks, Becky.

MS. NOVAK: Suzanne Novak, FERC.

MR. BURDEN: Pat Burden, Northern Economics.

MR. KONIGSBERG: Jan Konigsberg, Alaska Hydro Project.

MS. THOMAS: Cassie Thomas, National Park Service. And I want to remind everyone about the eclipse early this afternoon.

MR. GILBERT: Thanks, Cassie.

MR. KONIGSBERG: Jan Konigsberg.

MR. GILBERT: Okay.

MR. WINCHELL: Fred Winchell, Louis Berger on behalf of FERC.

MS. WOLFF: Whitney Wolf, Talkeetna Community Council.

MR. GILBERT: Okay. Well, we'll probably do a check in later as the study shift, especially recreation.

And just a reminder as usual, those on the phone, please don't put us on hold so we don't get elevator music. Just call back in if you have to

take another call or something. That would be great.

Well, I'll go through a few.....

MS. NGUYEN: I'm sorry, Kirby. This is Kim Nguyen at FERC.

I'm sorry.

MR. GILBERT: Okay, Kim. Thanks.

I'll go through a few introductory slides. We've been doing these throughout all the meetings, and some of you may have seen it. But we'll go through because there's some new faces and all, and we'll try to keep the same order. And then we'll start going through the presentations.

All right. Yeah (affirmative), the ISR meetings are part of the formal FERC ILP process required. They're a mid-point check-in here on the studies and a chance to look at the results so far and discuss going ahead with study and any changes that might be needed, from learning about the first year.

Did I do that?

MR. DYOK: No, I did.

MR. GILBERT: So that's what these are. It's a good chance to do

this. And we are trying to discuss the ISR, which was the formal document that reported on the first year of studies. The Initial Study Report is the document that did this, and it was filed June 3rd for all 58 studies, a considerable document, almost 9,000 pages. And there's been a lot of review time. FERC extended the review time because of the concerns in volume of material.

So it's important to note that we hope and the expectation today is that people have read it because we've had a lot of time, and then we can discuss it and everything about the plans going ahead. So we will be summarizing -- trying to summarize it today, but hopefully people have had a good chance to digest it and run through it.

But there has been work done since that time. Those June 3rd studies have been proceeding at different rates. There were -- 14 of the 58 studies had technical memorandums issued by AEA filed in September, and those were for the aquatic studies mostly. There were 21 technical memorandums studies, and with that FERC went ahead and updated the schedule for the ILP and added some additional time now in this period

before they make a study plan determination for the formal second year of studies.

So the current schedule now given that is finishing these meetings. AEA is to prepare meeting summary notes, and those are to be filed on January 22nd. AEA will be hosting some other meetings early January on those aquatic studies that have the technical memorandums in particular.

And then one month after the meeting summaries are filed is the deadline for the licensing participants to file comments on the ISR and discussions about any proposed modifications for the studies or any modifications the participants might wish to have FERC consider.

Then a month later, AEA and others can write back comments about those comments, and then FERC will make its determination to continue the studies for the next season at the end of April.

The remaining part of the schedule is still the same. The studies will continue into 2015, and an Updated Study Report with the completion of the studies is planned for February 2016.

I've touched on this briefly. These are a chance to discuss the results

from the first year, discuss the variances that might have been employed -- a lot of the studies had small or other types of variances -- and then the plans to complete the study for next year and any modifications or continuing changes to the study methods. We always refer back to the study plan, and we do have those documents today to pull up as needed so we can have a good discussion.

The ISR, just briefly, to remind everybody how that was configured, it was -- actually a draft ISR was published February 3rd of this year, and then the final ISR was published June 3rd. It was broken into parts. So Part A of that filing was exactly what was filed in February for people that had reviewed it, and then a Part B was provided to show any errata from that original February filing. And Part C is really a lot of what we want to kind of discuss about today too. It's the plans for completing the study and any modifications.

So, just briefly, the approach today, we've had a lot of feedback, and so I'm trying not to do it exactly like the traditional TWG meetings. So we want to have plenty of opportunity for discussion because that's what

we've heard in most of the study areas. And we expect that people have read the ISR, so a lot of the slides -- the presentations we're going to keep to 10 minutes, no more than 10 minutes. A lot of the slides in those are summaries of what's in the ISR. So if everybody has read them, they're there for reference, and they've been on the website for a couple weeks now. So hopefully people have had that chance to look at them, and we can focus on the things that have happened since the ISR because there is work that has progressed in 2014 in various pieces of the studies; and we can focus on the plans for completing the studies and any modifications we're asking FERC to approve. So hopefully that's the approach that will happen.

The last three slides I have are right out of the regulations. That's FERC's criteria for modifying or approving a study plan from the original study plan determination. Those are in the room here. We have them on the wall, but those are for reference for people to look at.

That's what I have. Are there any questions on that so far?

Well, good. We want to try to keep on our schedule and allow

plenty of time, and we are going to try to stick to the schedule. If we happen to finish early this morning, we're still going to leave recreation for this afternoon so people know at 1 o'clock we'll be able to start up on that.

So, Wayne, would you like to make a few comments?

MR. DYOK: Well, thanks, Kirby. I'm just going to welcome everyone. Those on the phone heard my introductory remarks yesterday, so I'm not going to bore everybody this morning. We'll just get right into the discussions, but for those that are here in the room that want to understand a little bit more about the basis of why we're doing these studies, I'd be happy to talk to you about that at a break, but you can also read it in the past notes when we get those -- the transcripts published.

So let's just get going.

MR. GILBERT: Well, good. We do have a lot of studies and a variety of presenters. Some are remote. So there is a little delay, I know, on the slides when we do it, but we'll start with Regional Economics and Social Conditions, Public Goods. So, Jonathan, from Northern Economics will run that with Pat Burden.

REGIONAL ECONOMICS EVALUATION STUDY (STUDY 15.5)

MR. BURDEN: Good morning, everybody. Kirby, I don't have go-
to meeting, so I'll just ask to turn the next slide and turn to the number of
that page as we go through.

MR. GILBERT: Okay.

MR. BURDEN: We're going to start today with Study 15.5, which
is the Regional Economic Evaluation. And next slide.

MR. GILBERT: Go ahead, Pat.

MR. BURDEN: The study objectives are shown here on slide 2.
Essentially it's describing the effects of the project on a regional economy,
the stability of electric prices over time, developed by the project and the
economics effects of the projects power over time.

Next slide. This is what we're doing. Data collection and analysis
of one of the components.

Next slide. Variances, there's none at this time. We haven't had
any. We don't expect any going forward.

Next slide, slide 5, is Summary of Results. And again, we hope

everyone has read the ISR. This is just summarizing what we've provided to date. A lot of the information on current power generation, transmission, and demand, information from each of the major Railbelt utilities, and, you know, progress in developing running model assumptions for the future work we're going to be completing.

Next slide, slide 6. This is just an example of some of the work that's in the ISR. It shows the amount and cost of power sold by Golden Valley Electric over time, both residential, commercial, and industrial and the average rates. And we have that information for all the utilities in the Railbelt.

Next slide, slide 7. Again, this is just another example of some of the information. It's the base rate and fuel and purchase power components of residential electric bill to the Railbelt utilities in the fourth quarter, 2009 to 2012. We've collected a good deal of information, and we're going to be working through that as we complete the study.

Slide 8, Summary of Results since ISR. We've obtained information on planned generation for each of the Railbelt utilities at this point. So

instead of looking at what the baseline is, we're now looking at what the future portion, both with and without Watana. And work is continued on production cost modeling. We're continuing to work on that.

Next slide, slide 9, Proposed Modifications. No modifications are anticipated to complete the study and meet the objectives. We're looking okay on that.

Slide 10, Current Status and Steps to Complete 15.5. The REMI analysis will be moving forward and completing in 2015, incorporating the available engineering data. The next steps are to complete the model inputs for the without project alternative and then develop inputs for the with project alternative and review those with the engineering consultants and AEA.

Steps to Complete the Study. So AEA will continue to implement the study in 2014 and 2015 as it says here. We don't expect any changes to the study plan. We'll be completing the REMI modeling and conducting some additional interviews this year to help flush out some of the assumptions that we have.

Next slide, slide 12, is Kirby's.

MR. GILBERT: Thanks, Pat. That was very efficient. That was a great overview, and hopefully, again, people have some familiarity with the study. And now it's a chance to have some discussion and ask questions.

So we just want to ask anybody and everybody what they want to talk about on this study with Patrick or Jonathan here in terms of the results. Importantly, we're interested in anything you have to say about the study. There are no modifications or variances. So the study is working ahead and scoped and as planned, but this is a chance to have any discussion about it. So with that I'll open it up for questions or comments.

MS. LONG: Do you have to be a federal agency to comment?

MR. GILBERT: No, go ahead.

MS. LONG: This Becky Long from the Susitna River Coalition, and I just want to enter into the public record. And I'm sorry. I had a battery malfunction, so I might have missed something like this in the presentation data.

But in the October 2014 Chugach Electric Newsletter, the headline was *Railbelt Wide Residential Usage Decline*, and it was just a little article. But it was five different utilities have showed that the average monthly consumption of residential customers has declined since 2004. I read that 2004 from the chart. So there's been like a year's long decline in the monthly residential electrical use in the Railbelt, and this data was from USDA Rural Utility Service, Form 7, and FERC's Form 1.

So I just want to get that entered into the public record. Thank you.

MR. GILBERT: Okay. So other questions, comments? This is your chance. We've got Jonathan and Patrick here. Any questions about their study, the REMI model, the RUM work?

MS. NGUYEN: This is Kim Nguyen with FERC. I just wanted to make sure that -- I know all the data are up to 2012. And I just want to make sure that you're going to properly include or encompass 2013 or go as far out into the future as you can when you are doing the study or finishing up your REMI model.

MR. GILBERT: Could you hear that, Patrick?

MR. BURDEN: Yeah, yeah (affirmative), we'll take that under consideration and talk to AEA about it. Our model does go out 50 years, so we'll be incorporating the latest data that are available that we have, you know, consistently across all of the resources.

MS. NGUYEN: Very good.

MR. GILBERT: Yeah (affirmative), a lot of the reports are based on 2012 and into 2013 because they were done in -- it was published on June 3rd, so halfway through this year.

MS. WOLFF: Kirby, I've got a question. This is Whitney.

MR. GILBERT: Okay, Whitney.

MS. WOLFF: Just along those same lines, when you said you had projected somewhat into the future -- I'm getting a feedback here. Are you guys getting that?

MR. GILBERT: No.

MS. WOLFF: Yeah (affirmative), it's a buzz coming over the phone system. But as far as projecting into the future, are you taking into account any changes that are projected for how the intertie is managed. There's

some dynamic policy going on right now with independent power suppliers and joint ownership of the intertie that could affect different rates. I'm wondering if you've incorporated that into any of this, or if you plan to?

MR. BURDEN: Good question. Essentially, we're monitoring what's going on. At some point we'll have to make a decision as to what our assumptions are going to be about the future of the intertie, and how that's going to tie in with the rest of the system. But we'll be coordinating those assumptions with AEA, and as we get closer to completing the REMI modeling, we'll be making those final decisions and determining what to evaluate.

MS. WOLFF: So let me get that straight. If policy goes on, for instance in this session, would that be included, or you're going to confer with AEA to see whether that would be included?

MR. BURDEN: We wouldn't -- we have to make an assumption as to what the future is going to look like, and we may not have all of the information, you know. Maybe a final decision hasn't been made yet.

Well, if the final decision hasn't been made, we'll have to make an assumption as to how we think that policy will finally end up. And we'll confer with AEA to make sure that we understand the situation and come up with the best assumption that we can make at the current time.

MS. WOLFF: Thank you.

MR. DYOK: Whitney, this is Wayne Dyok with Alaska Energy Authority. Just to add what Pat is saying, he's right on the money, but you know, right now we're assuming what's called economic dispatch, all right. So that means that you look at the with Susitna and without Susitna and the most cost effective way to do that, which means the resources being pulled together.

We can also, at some point, look at individual utilities if we want to sub-optimize the operation. So we're trying to look at what's the most favorable for the state, but we have the ability to look at it on a utility by utility basis and operate it that way too.

MS. WOLFF: Yeah (affirmative), thanks, Wayne. I think more what I was getting at was that you could have another array of providers in

the mix in the future, and I'm making sure that would be part of this projection.

MR. DYOK: Right. And as Pat said, we are always, you know, monitoring the situation. We know what studies are being done in the state by the RCA. And as that information becomes available, of course, we're going to use that.

MS. WOLFF: Thank you.

MS. LONG: This is Becky Long again. I have another comment. I would like to make a request of FERC that, you know, this study is really, really important because coming from the study are assumptions that are driving the whole momentum of this project on the state and federal level. I would like these assumptions to be peer reviewed, or the FERC consultants review them as (indiscernible - interference with speakerphone) on this because these are so important. Thank you.

MR. WOOD: Excuse me. This is Mike Wood. Can you hear me?

MR. GILBERT: Okay, Mike. Sure.

MR. WOOD: When you're going through all this analysis, are you

also looking into the seven different power companies along the Railbelt that produces power? Is that mixed in with that?

MR. BURDEN: Could you repeat the question again, please?

MR. WOOD: In the assumption, are you looking at -- or in the modeling rather, are you looking at the seven different power companies who agreed to buy the power from Susitna? Like we know right now there's a couple different plants being built right now by ML&P and [Matanuska Electric Association], you know, gas operated turbines. And down the road when you're looking at this, when you come up with a cost, will the power companies actually be buying the power? Will they agree to buy the power from the Susitna Hydro Project?

MR. BURDEN: As Wayne indicated, the modeling, you know, right now is kind of based upon economic dispatch, which means that the cheapest energy sources get brought on first, and that's kind of the assumption at the moment. But it is capable of looking at purchases by each of the individual utilities as well.

And as to whether the utilities will purchase power is really a

decision by the utility. The economic dispatch model will just make it available.

MR. WOOD: Thank you.

MS. WOLFF: I want to ask one more question on the economic dispatch model. So I'm assuming you're using then the 7 percent number so that -- what percentage are you assuming with the economic dispatch model? Does that assume that -- just the largest percentage of the purchase is the cheapest? I understand that. I know that I need to look more at your graph again, but you are basing it on that number; is that correct, for a retail price?

MR. BURDEN: Well, there's different prices.

MS. WOLFF: Right. What price are you using? That's probably how I should phrase the question.

MR. BURDEN: That's -- the current year we would be doing production cost modeling out into the future as well. So we won't be just using what the 2012 or '13 numbers are but anticipating changes in fuel prices, O&M costs, and other changes like that into the future.

MS. WOLFF: Thanks.

MS. LONG: This is Becky Long again. Just to add on to that, you know, there is a whole graph of over the next 25 to 50 years how much the retail price cost is going to be. It starts out higher and then gets lower. So you're saying you are taking that into consideration by using different retail pricing?

MR. BURDEN: Yeah (affirmative), well, it's driven by, you know, changes in fuel prices, changes in inflation for O&M, and other factors. So we will be looking at that into the future going forward.

MS. LONG: And so just to followup, so will you also be factoring in downtime, like the trend of the residential electrical consumption in the Railbelt going down because who knows? They did not say why, energy efficiency or if it's wind. And as more wind and perhaps tidal comes online, which means the need for -- the figures are going to change. Are you taking that into account also?

MR. BURDEN: Yes, we are.

MR. KONIGSBERG: This is Jan Konigsberg, Pat. I have a

question about some of your assumptions on the long-term modeling on the.....

MR. BURDEN: Yeah (affirmative), Jan.

MR. KONIGSBERG:the memo, the December 13, 2013. Are those assumptions still the primary ones you're making for the model?

MR. BURDEN: They're still the primary ones, but, as I indicated earlier, we're constantly monitoring what's going on; and when we get ready to do the final modeling efforts, we'll be looking at those assumptions to see whether they're still valid.....

MR. KONIGSBERG: Right.

MR. BURDEN:and changing them if we need to.

MR. KONIGSBERG: Well, I guess my concern is that the assumption relies heavily on -- or the model relies, at this point, on the assumption there's going to be an Alaska LNG project; is that correct?

MR. BURDEN: Yes, that's correct.

MR. KONIGSBERG: And there was no mention of another alternative the utilities have been seriously considering, which is imported

LNG, unless I missed it. I don't see that as part of the modeling assumption -- LNG imported into Alaska in the event that LNG or natural gas from instate is unavailable.

MR. BURDEN: Yeah (affirmative), I guess the assumption at this time is that Alaska LNG would be cheaper than imported LNG. So imported LNG would not be needed.

MR. KONIGSBERG: Right. And I would -- I mean, I think this is a real moving target in terms of LNG pricing. I mean, Russia is just -- I guess I would suggest, and I assume you will, look at these assumptions because the Russia, at least the preliminary contract prices for Russia LNG to China is \$10 a million BTUs. Spot market prices have fallen in the Asian market in the last few months, and the Alaska Stand Alone Pipeline Project manager recently stated the possibility that if imported -- if Alaska LNG is higher than Asia LNG prices, it wouldn't be built, the Alaska Stand Alone Pipeline.

So, I mean, it seems to me the assumptions that are being made, at least that were made last year are more tenuous than (indiscernible -

interference with speakerphone).

MR. BURDEN: Good point. Yeah (affirmative), as indicated earlier. We're monitoring the situation, and we'll be making changes if needed.

MR. KONIGSBERG: Okay. Yeah (affirmative), I just -- at least reading those assumptions, there wasn't any caveat in there with the option of importing LNG.

MR. GILBERT: Those are good comments. Others for Pat?

Well, then, if not, we'll go on to the Social Conditions and Public Goods Study that does have their own model. So Pat is going to do this with you?

So Pat will go through the Study 15.6 here, and then we'll go to questions.

SOCIAL CONDITIONS AND PUBLIC GOODS (STUDY 15.6)

MR. KING: All right. Pat, we're loaded up on slide 1 on 15.6.

MR. BURDEN: Good. So again, Study 15.6 is Social Conditions

and Public Goods and Services. And if we go to the second slide, you'll see that the objectives are substantially different than the previous study, right.

Here we're looking at socioeconomic conditions, and the socioeconomic effects of the project. And a lot of the objectives that you see here, on this slide and the next slide, really come from the FERC guidance on what they want the study to show and to evaluate.

So if we go to the next slide, slide 3, you'll see that the objectives are continued and, you know, talks about housing and residences.

Then the last slide is really -- or the last bullet is really a study of what the changes in the river system might be and what it means to fishing, and mining, and agricultural mining, and other activities, recreation, quality of life, community use patterns, even extending the non-use environmental values, and the social conditions. So a much different set of objectives in this study than the 15.5.

We go to slide 4. Here are some of the components of 15.6 and some of the data we've collected and are evaluating. Demographics of the

area, of the economy, and a number of different types of economic metrics.

Looking at some specific economic sectors and, of course, housing. We talked about local infrastructure and public services, local government finances, ecosystem services, and quality of life. So a wide range of issues and items to cover.

If we go to slide 5, we talk about variances, and we do have a variance in this study. Based upon the information that was in the Transportation Resources Study, which describes the primary origins and destinations of project-related traffic, we've added Seward, Point MacKenzie, Whittier, Wasilla, and Houston to the list of potentially affected communities because of the movement of transportation of project related materials, supplies, and equipment through -- potentially through those communities.

If we go to slide 6, Summary of the Results in the ISR, baseline socioeconomics and a number of different items there. We've collected that data.

And we also have a random utility model, and for those who haven't

participated before, basically a random utility model is used to help us value recreation, and Jonathan can provide more detail on that if people have questions. But we've provided a detailed methodology and also processed mail survey data that was collected by the McDowell Group for recreation.

Slide 7 shows just some of the information that's presented in the ISR. This table is really the Utilities Industry Employment, Income, and Output in the Study Area. By output, we're talking about, you know, essentially sales. Millions in dollars and employment in thousands. So you can kind of get an idea for what happens in each of the boroughs that are shown here, the employment levels, the compensation of payroll, and then the output for the utilities industry.

We go to slide 8, again, just another example of some of the information that's in the ISR. This is monthly unemployment rate in the study area. It just shows the changes that go on in the boroughs within the Railbelt.

We go to slide 9, Proposed Modifications to 15.6. We have no

modifications to the study plan methods to complete the study and meet the objectives that were outlined. And as I indicated before, we are adding some communities to the list of potentially affected communities, and we've collected information for them at this time.

Current Status and Steps to Complete. We'll be moving forward in 2015 by incorporating the best available engineering data to start the REMI modeling and a quality of life analysis.

We're updating the RUM report appendices, which will include the final of recreation sites included in the model after we get the second round of McDowell mail survey data. And then finalizing visitation predictions to model sites under the without project alternatives.

So if we go to Completing the Study, again, the REMI model -- we'll have two separate REMI models because we're looking at different factors, but they'll have the same assumptions. They'll be consistent across them, but we'll be developing this model to really forecast the socioeconomic conditions rather than the economic effects of power. And the socioeconomic conditions will be based upon the economic impact of the

project during construction and operations.

We'll also be looking at the regional economic impact of changes in recreation and subsistence expenditures and changes in the level of economic activity in various industry sectors in the study area.

The RUM, or random utility model, will be developed to predict changes in recreation site visitation and aggregated economic welfare. In other words, what's the value of the consumers' satisfaction and well-being?

And changes in non-use values will be described based on predicted direction and degree of changes to the ecosystem and habitat based on the other studies that are being conducted for the project.

We go to slide 12. This is just continuing the Completion. We'll be looking at potential changes in property uses and changes in property values to the extent that can be quantified.

We'll be looking at changes in annual government expenditures and revenues for the state, and the boroughs, and communities, partly from the REMI model and partly from fiscal models for each of those entities.

The socioeconomic effects of changes in transportation will be described in -- to the extent they can be quantified, we'll do so. If not, it may be a qualitative assessment.

Potential changes to the quality of life will be identified based on some interviews that we'll be conducting along with other information that was collected for recreation and some of the other studies that are being undertaken for the project.

And slide 13 is Kirby's.

MR. GILBERT: Thanks, Pat. Good overview of that study that has a lot of components and a couple models. Some progress you've made, a lot of things to do to complete the study, and a lot of interaction with other studies.

So we'll open it up for comments, questions.

MS. THOMAS: This is Cassie, and I do have a question about the (unintelligible) and especially with respect to the need for input from other studies. And just as an example, I'm thinking about things like caribou, moose, fish, et cetera, the value of those fish and wildlife resources for

recreation and also subsistence.

It seems to me that until we can agree on what the project impacts or effects on those populations are likely to be, or what the range of effects are likely to be, we can't really complete this economic model. And I'm just wondering whether that's actually going to be possible within the next year and a half?

MR. BURDEN: Good question. To the extent that we could provide some quantitative data, we would do so for, you know, wildlife or ecosystem services and such. But it may be that rather than trying to quantify it, we'll have to rely upon a qualitative assessment, but you are correct in that we will be dependent upon the other studies that are completed to -- for us to be able to describe the potential effects. And surely if we could provide any quantitative data, it would be necessary.

So we are dependent upon the other work that needs to be done, and to the extent we can provide quantitative information, we'll do so. Otherwise, it will be a qualitative assessment.

MS. THOMAS: Does that mean that the USR might be based on

that qualitative kind of data? I mean, I wouldn't really view that as being (indiscernible - interference with speakerphone) if that's the case.

MR. BURDEN: Essentially, we'll do the best job that we can do, but in some of the resources there's very limited information available that we can use. And sometimes an event that's transfer approach, using the lower 48 numbers just isn't applicable in Alaska.

So we're aware of the ability to use benefits transfer approaches, but we're also cognizant of the pitfalls of it. So where we can provide quantitative data, we'll do so, but it may be a qualitative assessment.

MS. THOMAS: Thanks.

MR. GILBERT: Other.....

MS. LONG: Hi. This is Becky Long again just following up on that. So perhaps in the ILP studies it would be a qualitative assessment, but just like some other factors in different studies, are you perhaps going to make it more quantitative as you get to the license application stage?

MS. MCGREGOR: Yes. This is Betsy with AEA. Yes, we will.

MR. BURDEN: I'm not sure that I can answer that because, I mean,

if we're focused on the ISR and the USR, I'm not sure what the license application stage will go to. Maybe, Kirby, if you could address that?

MR. GILBERT: Yeah (affirmative), Betsy, go ahead. We'll follow.

MS. MCGREGOR: Yes, Becky, we will. This is Betsy from AEA. We will continue in the license application. It is phased, and we will continue to use the best available information as it becomes available.

MR. GILBERT: Yeah (affirmative), and I'll just add, I think a lot of these studies, they're developing tools to be able to do further analysis, and this study is no exception. It's developing tools, and I think that's the fundamental thing. It's certainly true in a lot of the aquatic resources, tools for evaluation that can be used as the project moves along.

Other questions, comments?

MS. WOLFF: This is Whitney. Can you guys hear me?

MR. GILBERT: Yeah (affirmative), go ahead, Whitney.

MS. WOLFF: Can you hear me, Kirby?

MR. GILBERT: Yeah (affirmative), we can. Can you hear us?

MS. WOLFF: There you guys are. Okay. I was glad to see your

ecosystem services section, 5.1.6, and I appreciated the literature review that you did.

I had a question just on some of your -- you had identified some -- during the discussion of the natural assets, unique natural assets, you had identified, for instance, Susitna Flats to be a unique asset. I'm wondering what studies you're going to be able to use to assess that, since the rec study doesn't go that far in any of the biological studies? I mean, some go there but many don't. So I'm just wondering what the nexus is of studies for the Lower River?

MR. BURDEN: Good question. I think we're just going to have to depend upon whatever the available literature is and just rely upon existing sources.

MS. WOLFF: Would this be something like executive interviews or just burning guides? What do you think the literature on that would be? Have you considered it?

MR. BURDEN: We really haven't gotten that far. I mean, we've acknowledged it, but we still aren't through doing all the research.

MS. WOLFF: Okay. All right. And then I'm just wondering about the analysis of Fish Harvest. You -- in the ISR you have a section on commercial, and I wasn't clear on whether there was a sport harvest there or not.

MR. BURDEN: That's being done by another study.

MS. WOLFF: So it's probably the commercial harvest being done by another study as well. I'm just wondering, you don't make any mention of incorporating any of that data.

MR. KING: Whitney, this is.....

MR. BURDEN: Yeah (affirmative).

MR. KING: Go ahead, Pat. Then I'll follow up if needed.

MR. BURDEN: Go ahead, Jon.

MR. KING: Whitney, the recreational activities and their social welfare values are included a major part of the RUM model. So as we incorporate the RUM into that section, we will have more discussion of the recreational activity in that area, and we'll have to integrate that discussion with the individuals who are responsible with recreation so there is that

cross-transfer between the two areas.

MS. WOLFF: So that lies ahead. I didn't see it in any of the detailed Part C, so that's why I'm asking.

Could I go on?

MR. GILBERT: Yeah (affirmative), keep going. Good questions, keep going.

MS. WOLFF: The other question I had is as part of the ecosystem services section and the valuation of benefits. You said that there's perhaps other valuation methods you were going to use. I was unclear on what those were with the RUM model. And then my last thing, you just mentioned in the presentation that you were considering adding more communities, and I wonder if you could expand on that.

MR. BURDEN: We indicated for the communities anyway -- I'll let Jonathan talk about the RUM model, but for the communities we added the communities that we listed, which was Seward, Whittier, Point MacKenzie, Wasilla, and Houston. We added those because of information that was contained in the transportation study ISR.

MS. WOLFF: Right.

MR. BURDEN: We don't have.....

MS. WOLFF: (Indiscernible - people speaking simultaneously).

MR. BURDEN:any plans to add additional communities at this time.

MS. WOLFF: I'm specifically wondering about the community of Willow.

MR. BURDEN: Okay.

MS. WOLFF: And whether you've done any analysis there. I understand they're part of the Mat-Su Borough, and some of this takes in the entire borough, but you're not specifically citing that community as one that is of high impact.

MR. BURDEN: Correct. Yeah (affirmative), that's a good point. I guess we can go back and reevaluate or consider it.

MS. WOLFF: Well, I'm sure we'll talk more about this in the Recreation Study that feeds yours. So that's a topic I'm sure we'll revisit.

MR. BURDEN: And what specific effects are there for Willow? Is

it primarily recreation-oriented?

MS. WOLFF: Yeah (affirmative), it's recreation-oriented, just considering that it's a town site that's fairly well populated right on the river there, close to the river. I'm just surprised it hasn't gotten more attention in this economic study.

MR. BURDEN: Okay.

MS. WOLFF: But we can talk about that during the rec because I understand that's what feeds you, and you don't have any control about that study area.

MR. BURDEN: Correct.

MS. WOLFF: Thank you. And then I'll listen to Jonathan on the RUM for those valuation methods.

MR. KING: Well, Whitney, if I'm understanding your question, I mean, the RUM is and of itself is a valuation method or a means to getting toward valuation and changes in the values that are provided. And so the RUMs, and there's multiple of them, we're looking at four main recreation types, and that's hunting, fishing, power boating, and non-power boating

are the four areas that we're looking at.

So for those we will be using the RUMs themselves to look at changes in activity and also changes in overall welfare associated with those activities.

For other activities, which are less quantifiable, we will have to rely on qualitative literature discussions about changes, integrating in, you know, what we know about the project and what the potential effects of the project are going to be.

MS. WOLFF: Yeah (affirmative), I'm only asking because you say we will be using other valuation methods. So I just didn't know what those were.

MR. KING: I think.....

MS. WOLFF: That's straight out of the ISR.

MR. KING: Yeah (affirmative), it will be a discussion of -- I think in those cases we'll be talking about literature review and discussing what comes out of the literature in terms of what the value of those benefits are. And one of the challenges being in Alaska is that there's, you know,

relatively few of those studies, and so we'll be relying on what is out there and, you know, what we believe is applicable.

MS. WOLFF: Thanks.

MR. KONIGSBERG: This is Jan Konigsberg. Just a followup, Jonathan. Are you saying that you're not -- I know this wasn't in the study plan, but I guess I'm wondering whether or not it should be modified; that you're not going to do any contingent valuations quantitatively for those values that you're currently saying you're going to look at the literature to determine those (indiscernible - interference with speakerphone).

MR. KING: Yeah (affirmative), early in the process it was decided that we wouldn't be doing, you know, CV or a holistic valuation; that we would be targeting down on to the most documentable recreation activities.

MR. KONIGSBERG: I'm sorry, just a followup. But in the process of doing the first year's work you found no reason to change that orientation to the study?

MR. KING: No, in the course of the first year's work, we haven't found a reason to change that orientation.

MR. KONIGSBERG: Thank you.

MS. WOLFF: Can I just clarify something? Whitney again. What I'm seeing in here, use benefits include river recreation, near river recreation subsistence, commercial natural resources extracted used, and aesthetic enjoyment.

So I mean, I recognize the recreation might be easier to quantify, but maybe the aesthetic enjoyment -- do you intend to get some of that from the aesthetic study, or how are you going to value that? What's the valuation method for that, property values? That's what it says here.

MR. KING: That's going to have to come over largely from the aesthetic study. It's not part of the random utility model.

MS. WOLFF: Okay.

MR. KONIGSBERG: But the aesthetic study is not going to provide a value?

MR. KING: I would think that, that would have to be coordinated into property value changes, would be the large place that, that would come in, that and qualitative discussions.

MS. LONG: Hi. This is Becky Long ago. I think one more use benefit -- I guess that's what we're calling it -- that has been ignored in a lot of these studies, and it made me think of it when Whitney brought up Willow -- is -- as a backcountry resident, I know about this. Is these population centers like Willow, Talkeetna, they are the jumping off spot for the backcountry people. They are spots where people go to get their groceries, and they get their postal mail, et cetera, et cetera. You get your small engine repair. You buy a new snow machine or whatever. You go to the hardware.

And you know, recreation is great, but you know, the same recreational trails are being used as access to backcountry residents and property owners, just not recreation. And Willow, I think you need to take a second look at that and make this an important community to consider because I think there's more there than is apparent.

MR. KING: Thanks, Becky.

MR. BURDEN: Yeah (affirmative), okay.

MR. WOOD: This is Mike Wood. Can you hear me?

MR. GILBERT: Yeah (affirmative), sure, Mike. Go ahead.

MR. WOOD: I'd like to emphasize Becky and Whitney's point. I mean, Willow and Deshka Landing is the greatest point of use on the Susitna River anywhere for the people that are accessing Susitna to travel down to Yentna to access cabins all the way up the Yentna River. The Iditarod crosses right at Deshka, and throughout the summer that boat line is used incessantly to supply communities all the way up, Lake Creek lodges.

And the Deshka launch area is just a side channel of Susitna River 60 miles below Talkeetna, and I think, again, these assumptions that, that area won't be impacted by this project are incorrect. At least we need to be open to the idea that 60 miles below Talkeetna, this area, this boat launch area and the community surrounding it could be impacted.

And the people down there are definitely concerned about it. I know for a fact because I'm down there all summer long with my boat accessing the mouth of the river and getting stuff repaired down there. And to them it's a huge economic factor, all that goes in and out of that boat launch at

Deshka Landing in Willow, not only for the people of Willow, but for the Anchorage and beyond, Mat Valley because of the remote cabins.

MR. KING: Mike, this is Jonathan from Northern. We are picking up those activities in the recreation surveys that were done by McDowell. We are looking at motorized -- the mail survey picked up those people as they launched to head down to Yentna. We asked people in the mail survey where they launched from, where they went to, and I can tell you from having seen the recreation mail survey data, that we are picking up people who are leaving from Deshka Landing and going down to Yentna in the boat survey or who are leaving from the Willow area, the Long Lake area, and using the river to cross to go up to the Petersville area.

So with respect to capturing people who are using those recreational vehicles to access those areas, we are grabbing them and have grabbed them in the recreational mail survey, and they will be documented in the RUM survey. So if there was an effect in terms of not being able to use that access, that would be modelable within the RUM survey.

MR. WOOD: And so this might be in the recreation survey, but do

the people of Willow and Deshka get that McDowell survey to fill out?

MR. KING: It was a statewide -- Donna, may speak to this more this afternoon, but this was a statewide distribution of....

MS. LOGAN: It wasn't statewide.

MR. KING: Oh, not statewide, excuse me. It was a Railbelt, correct?

MS. LOGAN: It was largely -- this is Donna Logan from McDowell Group. And just to answer your question, the mail survey was a broad geographic area, stretching roughly, if you can kind of imagine, from Fairbanks, North Star Borough, over through -- you know, down to Glen Allen, down to -- I'm just being rough here -- including the Mat-Su Borough. All of the Mat-Su Borough was part of the mailing territory as well as the municipality of Anchorage and back up to Fairbanks. So it's the Railbelt and a little bit more.

MR. KING: Yeah (affirmative), so they would have been in that group.

MS. THOMAS: This is Cassie, and I do understand that those areas

were part of the McDowell survey; and so there will be some information about users of the Lower River, at least getting the ability to perhaps count the levels of use from a survey. But it isn't an area that is included in the geographical scope of the river recreation study, and the decision has been proposed to continue to limit that river rec study to the river upstream of Sunshine.

So I share a concern that, if there are project-related changes to the ability to use the Lower River for recreation and for transportation navigation, other than the McDowell survey, we're not going to have the data to plug into the economic value of those lost services. And, although I understand the reasoning that the HEC-RAS model doesn't show significant change in river stage downstream of Sunshine, I think that -- I am still skeptical with the inability to use the ice model for that part of the river and the lack of data from things riparian veg right now for the Lower River. I'm still skeptical that there will not be changes. I guess I remain to be convinced that there will not be changes to the Lower River.

And so I just want to say, and certainly we'll be putting this in our

comments, that I think AEA is running a risk by not including the Lower River in the river rec survey. AEA is running the risk of being unable to quantify the effective changes that would then, you know, plug into the economic model.

MR. GILBERT: Thanks, Cassie. How about other questions, anything else? Comments?

Well, I think we're going to.....

MS. WOLFF: I'm sorry, Kirby.

MR. GILBERT: Go ahead.

MS. WOLFF: Sorry. I was having a mute malfunction. It's Whitney. One last question on valuation. I'm just trying to nail this down. It does say that you'll be taking measures to include the fullest extent that they can be usefully estimated. Quantify, difficult to quantify, qualitative. I just wanted to finish that discussion on this valuation subject, but I can do my further reading and get any questions later. Okay.

MR. GILBERT: Well, if you had any -- if you have anything else, you got the people here. They might not be here this afternoon.

MS. WOLFF: I guess I'm having trouble in the ISR. You spent pages and pages on a discussion of, you know, culture review and ecosystem valuation, but it's just not clear what you're going to do with it to me and how you're going to evaluate the benefits of quality of life and such, other than property values. It seems weak to me.

MR. KING: Whitney, this is Jonathan. There is a quality of life survey that is scheduled to go forward as we get a better idea of what the end project looks like, and that is included in there and will be included.

MS. WOLFF: Where would I have seen that survey?

MR. KING: I don't believe that the survey has been -- I'd have to go back and look, actually, to see if we have developed the survey instrument for that yet.

MR. GILBERT: Yeah (affirmative), it would be in the study plan.

MR. KING: It would be in the study plan, yeah (affirmative).

MS. WOLFF: I'll keep looking for that because that would help.

MR. KING: Yeah (affirmative), there is a quality of life survey that is on the board to be done, but we need a better picture of what the end

project looks like before we can go out and do that survey.

MS. WOLFF: Yeah (affirmative), I mean, what you've done here is good. All of the points of community, and rural life, and pace. You've done a good job gathering it all. I'm just unclear how you're going to go forward with it.

MR. KING: Well, it is definitely one of the tougher nuts to crack for us.

MS. WOLFF: But it's also one of the most important, so thank you.

MR. KING: Thank you.

MR. GILBERT: Any others?

Well, I think we've got some of the other studies here. Maryellen will have certain people on the phone and so on, but to make sure that they're -- I don't want to start those too early. We're going to go ahead and take a break now, and then I think we'll start up at the top of the hour. Is that okay? Would that work, Maryellen? I think we'll have time.

MS. TUTTELL: Phil, are you on the phone?

MR. DEVITA: Yes, can you hear me?

MS. TUTTELL: Yep.

MR. GILBERT: Yeah (affirmative).

MS. TUTTELL: So we can.....

MR. GILBERT: So, Phil, we'll start at the top of the hour, okay.

MR. DEVITA: Sure.

MR. GILBERT: We'll start sharp. So everybody be back, be ready to go at 10 o'clock.

MS. WHITNEY: So, Kirby, am I right, you guys are taking a 25-minute break; is that right?

MR. GILBERT: Yeah (affirmative), 20-1/2, yeah (affirmative).

MS. WHITNEY: Okay.

MR. GILBERT: That way we keep people going.

MS. WHITNEY: Fine.

MR. GILBERT: I don't want to go too fast because we had a problem a little bit yesterday, people expecting to join in on the phone or something, okay.

MS. THOMAS: Kirby, this is Cassie, and I appreciate that. I am

planning to come down in person for the afternoon. So it would mess me up considerably if we started on the Recreation Study before 1 o'clock.

MR. GILBERT: I agree, Cassie. And that's why, for sure, we're going to take lunch, and we'll start Recreation right at 1:00 because there could be other people dialing in too.

MS. THOMAS: Okay, Great.

MR. GILBERT: We've got a lot of phone commuters here that are using the agenda to base their time on today. So we're going to try to stick with it.

MS. THOMAS: Exactly.

MR. GILBERT: Yeah (affirmative).

MS. THOMAS: Thank you.

MR. GILBERT: Thanks. So we'll be back on.....

MS. SMITH: Hello. Just one more comment. This is Corrine Smith, and, yeah (affirmative), unfortunately, I'm one of the people who is going by the agenda. And I'm impressed you guys have gotten through things so quickly this morning. So, unfortunately, I missed most of that

last presentation.

But I might suggest that on the WebEx you put a note up on there that says when the next session is going to start, so that there's something for people who are signing into the WebEx to know that things are ahead of schedule or behind schedule if that happens later in the day.

MR. GILBERT: Yeah (affirmative), we just did that. So hopefully that's refreshing for you.

MS. SMITH: Okay.

MR. GILBERT: Good idea.

MS. SMITH: Great.

MR. GILBERT: Thanks. Okay. Thanks, you guys.

9:37:38

(Off record)

(On record)

9:59:26

MR. GILBERT: I think we have everybody back who we're going to have back here on our end, and hopefully everybody on the phone is

ready. We're going to start in on -- we're going to cover three more studies here before a lunch break. We should have plenty of time. So be ready with your comments or questions.

Maryellen Tuttell is going to oversee these, and she has some study leads that will be talking about each one. We'll start with Air Quality.

STUDY OF AIR QUALITY (STUDY 15.9)

MS. TUTTELL: Phil, are you on?

MR. DEVITA: Yes, I'm here, Maryellen.

MS. TUTTELL: So Phil DeVita from Harris, Miller, Miller & Hansen is the study lead for Air Quality. So I'll let him go through the slides.

MR. DEVITA: I don't really have control of them. So if I could just say click next slide, that would be great.

MR. GILBERT: She's running it for you.

MS. TUTTELL: There we go. We're on objectives.

MR. DEVITA: Well, let's start. So the objectives of the Air Quality Study were, you know, multiple to assess the current conditions of the area

against applicable Alaska and national air quality standards; review and summarize existing air monitoring data in the area using ambient monitoring data from Alaska DEC and the National Parks Service; determine attainment status of the study area based on EPA designations of the area.

We also looked at quantifying short-term construction related and long-term operational emissions. We also were scoped to analyze mobile and stationary sources and evaluate ground level impact from such sources; compare project criteria and greenhouse gas emissions to the without project alternative, which was the alternative where the generation of electricity would be generated from the Railbelt facility; as well as evaluating the potential emission reductions from the Railbelt plant, if the project was operating. So that would be the potential offset, and develop some information to be used to identify potential mitigation measures from construction operations to reduce emissions during those operations.

So next slide.

MS. TUTTELL: Okay.

MR. DEVITA: There are five main study components. The first one was to document the existing conditions, which are in ISR, Part A, Section 4.1, which has the summary of the climate meteorological background ambient level and attainment status.

We also had a qualitative discussion to estimate project emissions from construction, transportation, fugitive dust and operational emissions, which are in ISR, Part A. Section 4.2.

We summarized the baseline fossil fuel generation emissions from the Southern Railbelt facilities based on the 2011 emissions and generations data. And that's in ISR, Part A, Section 4.3.

We analyzed and compared those emissions. So we had two scenarios with the project and the potential offset and without the project, which was the additional emissions associated with Railbelt generation, and those are contained in ISR, Part A, Section 4.4.

And then also identify best management practices for both construction and fugitive dust emissions, and those are in ISR, Part A, Section 4.5.

The variances, the only area where there was a slight variance was quantitative analysis of future emissions associated with the project was deferred in 2013 due to ongoing work associated with other licensing studies and investigations necessary to complete this work.

The study plan objectives were met by completing this assessment -- or will be met by completing this assessment when those such studies become available. So therefore, instead of doing a quantitative analysis, we did a qualitative analysis to evaluate the project construction emissions.

A Summary of Results, the study, as we said, is well advanced. The existing meteorological and air quality information were reviewed, and summarized, and documented for the study area.

The attainment designation was reviewed and summarized and the area made it unclassifiable in attainment.

Project emissions were qualitatively summarized, as we said before, for construction fugitive dust transportation and operational emissions.

Railbelt fossil fuel generation emissions were summarized. This was based on the 2011 emissions and generations data for the Railbelt

facility.

Those electrical generation emissions were compared with the project and without the project based on anticipated offset emissions with the project and generation of additional electricity from the Railbelt without the project. So we looked at both scenarios.

Again, we identified some best management practices based on similar types of operations that are being conducted elsewhere.

Next slide. No additional results have been completed since the ISR was filed.

No modifications to the FERC-approved study plan are needed to complete the study and meet the study plan objectives.

As we said, the study is well advanced, and all components have been initiated. An additional analysis will occur in 2014 and 2015 to update baseline studies with more current measurement data from state and federal agencies and incorporate results from other licensing studies and investigations when such information becomes available.

Next slide. Thank you.

In order to -- steps left to complete the study, as we just said, we're going to use the latest project data when it becomes available to finalize the study. We'll refine and update the comparison of with project emissions to without project emissions using revised admissions and generation data from the Railbelt facility and supplement the identification of best management practices using the latest project data when that becomes available. So we'll be defining that as well.

That's it.

MR. GILBERT: Great. Thanks, Phil. That was good overview of the study with, again, no variances or modifications needed, and quite a bit of work in the ISR but then things left to be done.

So we'll open that up to comments, or questions, or anything else for Phil and his team.

MS. LONG: I have some questions, but you want me to wait until the agencies go?

MR. GILBERT: No, today we're just letting people have at it. We don't have any -- very many people in the room today. So, yeah

(affirmative), no, feel free, Becky. Go. Yeah (affirmative), go ahead.

MS. LONG: This is Becky Long. Regarding the meteorologic section and climate change, I would just like to enter into the public record information from the draft EIS, Appendix G, Page G-3, May 1983 from FERC, Office of Electric Power Regulations. This is from the previous proposed Devil's Canyon Watana-Hydro Project with the Alaska Power Authority.

What they state is, "An important feature characteristic of Alaska in the project area, in particular in terms of air quality, is so called extreme meteorology. Because of the dramatic topographical and meteorological conditions in Alaska, the potential for air pollution is far greater than in the rest of the US. The winter inversions in Alaska are among the strongest anywhere in the world.

Strong inversions occur when ground surface cools faster than the overlying air, a condition that is common in the arctic winter when there is little sunlight to heat the ground surface. These long winter nights prolong these inversion periods, and a strong potential for air pollution may last

several weeks."

I propose a modification of -- well, in the ISR it's 5.2, Project Emissions. I don't know what it is in the RSP. This modification would be a quantification of greenhouse gas emissions from reservoir inundation, permafrost melting and development, and a Portland cement plant onsite. I have mentioned this at previous TWG meetings, so it's not anything that I haven't been talking about.

And the reason for the modification is because the project manager in his presentation in meetings and the Railbelt into the media quotes the quantification of carbon dioxide emissions that supposedly will be displaced by the proposed dam. This figure he got from the study, although the study has not been finished and the data accepted by FERC. The figure is now out there. The figure does not tell the whole story about air emissions. The public has the right to know the whole picture.

Both FERC's February 1, 2013, study plan determination and in the TWG -- and AEA has stated that they intend to assess the greenhouse gas emissions in the license application. I get that. Both FERC and AEA state

that existing information shows that methane and carbon dioxide emissions from reservoirs and boreal regions are low. That greenhouse gas emissions initially increase in their construction. Within 10 years, they return to levels similar to natural water bodies. These statements come from one study, which is Tremblay 2009.

There are three major pathways of reservoir-emitted greenhouse gas emissions, diffusion at the reservoir surface, bubbles produced at the sediment water interface, which migrates through the water column into the atmosphere, diffusion in turbulent waters downstream of a generating station, and a process called (unintelligible).

Tremblay did indeed include the above-conclusion about after 10 years the levels would go back to natural levels, but he also states in his study -- and I want to get this into the public record, the following because this study is being used as like the boilerplate data. There must be further measurements in the Eastman 1 hydroelectric reservoir in Quebec to confirm this trend because I don't think FERC and AEA should state the assumption as fact.

Tremblay also states that the value presented has significant uncertainty due to the biological nature of organic matter degradation, sample method diversity, and spatial and temporal variation of emissions.

Models to prevent greenhouse gas emissions are being developed by a few specialized grounds, which will help evaluate any uncertainty about total greenhouse gas reservoir emissions.

And also that was from Tremblay, but we know from a lot of the articles in the media that the science of determining reservoir emissions are still young, and there is starting to be a plethora of media in the scientific and general population media regarding the dam reservoir greenhouse gas emissions.

In separate studies, researchers have seen methane jump 20 and 36 fold during reservoir draw down.

And finally, also there needs to be a quantitative analysis of permafrost degradation in the project area, which (unintelligible) is the greenhouse gas emissions of methane and carbon dioxide based on the aerobic or anaerobic conditions.

We know from 7.7 study in the draft Watana Transportation Analysis that the whole project area, including all the access alternatives, are underlying continuous permafrost. There is also significant permafrost evident at the wetlands of the dam site. This was found in the 80s and is currently being quantified. Permafrost structure needs to be quantified as an air quality emission.

The quantitative analysis of emissions from the Portland cement plant in the project area is also to be put off until the license application due to the lack of knowledge of where the cement will be made. I think this must be analyzed in this ILP study.

Section 3.3.1.1 of applicant's preliminary application document states that there will be 5.2 million cubic yards total volume of concrete in the dam structure. This does not include the 35-foot diversion tunnel and 1,800 foot concrete-lined tunnel, and also the spillway. This a lot of concrete to not be talking about in the Air Quality Study.

And that's it.

MR. GILBERT: Wow.

MS. MCGREGOR: Becky, can I ask you -- this is Betsy with AEA. Can I just ask you a question? When you're here in person, you give us your comments in writing, and the other day you indicated you're going to file your comments with FERC. When do you plan on filing those with FERC?

MS. LONG: Probably this weekend.

MS. MCGREGOR: Thank you.

MR. GILBERT: That's an interesting point. Any questions about that or other questions for Phil in the Air Quality Study?

MS. WOLFF: I had a couple questions. It's Whitney.

MR. GILBERT: Okay, Whitney. Sure.

MS. WOLFF: So I had similar followup to what Becky asked about temperature inversions at the project site, which you did a study under your 5.1.1, meteorology and climate. And you say it characterize that site to the climate and meteorology. You used a "nearby weather station," and I'm wondering where that is. You cite Talkeetna, Gulkana, Denali Park Headquarters, Palmer, and Delta as places where NOAA has got data, but

I'm wondering what this nearby weather station is.

MR. GILBERT: Phil, do you recall?

MR. DEVITA: What are you citing exactly?

MS. TUTTELL: Which section.....

MS. WOLFF: Can you repeat that?

MS. TUTTELL: What section of the report are you reading that from, Whitney?

MS. WOLFF: I'm in 5.1.1 Meteorology and Climate. It's basically a narrative of the remote location of the site and the geographic importance of the Alaska range and temperature inversions, similar to what Becky was talking about in her comment.

MS. TUTTELL: This is Maryellen. Phil, you can correct me if I'm wrong, but I believe the nearby weather stations are the ones that you mentioned that are listed, Talkeetna.....

MR. DEVITA: I think what was in there, in order to characterize the climate meteorology, a review the nearby weather stations data was conducted.

MS. WOLFF: But the only one that I would consider nearby even remotely is Denali Park Headquarters, but it seems like there needs to be something closer to the project site.

MS. TUTTELL: So we were using the existing weather stations that are available, where there's published data.

MR. GILBERT: Yeah (affirmative), so that's the way the study was planned. So you're suggesting there should be something else, Whitney?

MS. WOLFF: Yeah (affirmative), I'm suggesting there should be some kind of weather station at the project site.....

MS. MCGREGOR: This is Betsy.

MS. WOLFF: to tally any kind of -- I mean, you're citing quite a bit of narrative and inversion and geographic features. It just seems pertinent if you're going to go into that detail to have to have an actual weather station where you're talking about.

MS. MCGREGOR: This is Betsy McGregor with AEA. We have several weather stations throughout the study area that we can use that data.

MS. WOLFF: Well, yeah (affirmative), I mean, I know the one at the Oshetna and other places, but I'm asking if there's one right at the project site?

MS. MCGREGOR: We have two at the dam site, one down by the river and one at the higher elevation.

MS. WOLFF: Okay. That might be something you guys would want to update and have in this study as well.

MR. GILBERT: Yeah (affirmative).

MS. WOLFF: I would suggest.

MR. GILBERT: Yeah (affirmative), good point.

MS. WOLFF: And then the other question I had, had to do with the best practice. Is that available or not? Is that in -- did I not see it on an attachment?

MR. DEVITA: So basically that's in Section 5.5.

MS. WOLFF: Great. And lastly, you said that there were no variances, but I thought as you were giving the presentation you said you were not able to attain certain studies so you went qualitative instead of

quantitative. And I'm wondering were those studies -- are they in the RSP, or how do we know which studies you weren't able to attain? I can go back and look at that. I just wondered if that's where I need to look to the reference you just gave in the presentation.

MS. TUTTELL: So this is Maryellen. I think the variance was that some of what was anticipated to be done in terms of evaluation of potential emissions related to the project were not done in in the first Initial Study Report because we're waiting to get more updated project information from the design team to update it in the Updated Study Report.

MS. WOLFF: Okay. So there were the studies you were referencing? Are they engineering studies?

MS. TUTTELL: Right. So we want to make sure we're using the latest engineering data as we prepare the study report that will go in, in early 2016.

MS. WOLFF: Thank you.

MR. GILBERT: Good questions.

MR. KONIGSBERG: Jan Konigsberg, Kirby.

MR. GILBERT: Okay.

MR. KONIGSBERG: A couple of comments.

MR. GILBERT: Sure.

MR. KONIGSBERG: I understand the parameters for the current emissions study. I'd like just to offer a couple of other indirect pathways for emissions that, at least in the analytic portion of the license application, I think should be included and our dependent on other studies.

The first one is an add-on to some of the comments that Becky made, which is I think it's important to look at the carbon sink in the project area in terms of change in vegetation, both in the reservoir inundation zone and downstream. I don't know what, if any, change there might be, but given that you're going to inundate a considerable amount of vegetation in the project, the CO₂ by the forest is not going to be there for the life of the dam as well as any material changes in vegetation in the specific plant cover downstream. Whether or not that affects the carbon sink in that area, I don't know, but I think if you're calculating cost benefits of the project relative to no project in terms of emissions in the region, I

think that ought to at least be analyzed.

The other, I think, calculation that needs to be made is if the project were to increase economic activity in the region above what would have been the baseline without the project due to changes in energy pricing because of the project, then the question is whether or not that increased economic activity generated emissions that wouldn't have occurred otherwise.

And I think, you know, obviously dependent on the socioeconomic analysis to determine whether or not there's an increase in economic activity. But I think that ought to be a factor in what the net emissions calculus is for the Railbelt with the project or without the project.

MR. GILBERT: Good thoughts. Other questions, comments?

MS. WOLFF: I had one more quick question, Kirby. It's Whitney. Just to followup on what Becky asked. It does seem like production of cement onsite would be something that would need to be in the EIS. Is that projected to be a decision that's going to be made by the time the EIS is built, or can you guys comment on that?

MR. DYOK: Whitney, this is Wayne Dyok. The issue of cement is -- your question is really in the emission related to the -- to the manufacturer of cement; is that correct? Because the.....

MS. WOLFF: Yeah, yeah (affirmative), that's correct.

MR. DYOK:emissions at the site are not -- it's just going to be mixing the cement with the aggregate and then, you know, placing it. So, yes, there will be an assessment in the license application on the amount of emissions that are related to the cement production as part of the total, you know, picture. So we'll have that.

MS. WOLFF: That's a yes. It will be in the EIS?

MR. DYOK: I can't speak to what FERC will put in the EIS.

MR. GILBERT: Right.

MR. DYOK: It will be in our license application.

MS. WOLFF: Good. All right. Thanks, Wayne.

MR. GILBERT: Good question. Anybody else for Air Quality?

Then we'll move on to Transportation.

STUDY OF TRANSPORTATION RESOURCES (STUDY 15.7)

MS. TUTTELL: So this is Maryellen Tuttell with DOWL HKM. So the objectives of the Transportation Study were really to look at what are the current transportation systems in the study area, the condition of those systems, how they're operating, capacity and safety issues. And then to look at the future and what the conditions of all those different systems would be in the future, both with the project and without the project.

So the components of the study were to, of course, collect and review data on existing infrastructure and use; produce an inventory to identify all of those uses; document existing conditions, including safety data, capacity data, plans for future improvements. And then, again, to look at the future conditions, both with and without the project.

So the variances, as was mentioned before, the initial study plan didn't really mention Seward, and Whittier, and in doing the interviews with some of the infrastructure providers, it was suggested we add those in, and so we did.

Bridge data, we really just focused on those bridges where there was information that might limit their use or have some type of restriction on

weights or sizes and that type of information.

The river travel data was not completed in the Initial Study Report, and again, as you've heard earlier, there's been a lot of surveys going on through the recreation studies and the socioeconomic studies, and so we're going to be working with those teams to evaluate the data that's already been brought with those before we finish that up in this upcoming development of the final report.

We've documented forecasts for the existing transportation facilities, and again, we haven't yet documented the information on project-specific facilities; and we'll be using the project teams' latest project information and design information to do that in the coming season. And again, the potential effects then from the project on the transportation systems and on river use is, again, has been put back from the Initial Study Report to the Final Study Report.

So just a summary of what we've done. Again, we've inventoried the roads throughout the study area and collected information on several different factors; looked at the major airports, both the larger international

airport as well as some of the other commercial airports; collected data from the railroad and the ports on their facilities, kind of how they're being used now, which portions of their facilities are best used for what types of activities, what their plans are for future improvements; and documented the easement information.

Again, a lot of this overlaps with information that's collected in the recreation studies, and so we have been looking at their studies and incorporating as relevant information from those as well.

So again, we collected a lot of really detailed information. There's a number of different appendices that summarize all of the current daily traffic and use of all of these different facilities.

We've also collected forecasts for future activity levels for all the different modes of transportation, and where needed we've looked at the forecast methodologies and projected those out to 2030.

So again, the modifications, as we mentioned, was really kind of what we talked about in the beginning with adding Seward and Whittier, focusing on the bridges that had any type of restrictions, using the existing

forecast data that's available for the different modes.

And the one modification that we're looking at is, again, some of the effects on some transportation modes may be evaluated more qualitatively versus quantitatively depending on the level of information that's available on the specifics for use of those facilities.

So the current status is that the existing data has all been collected, documented, analyzed. The forecast data that's available for each mode has been documented.

What's really left to be done over the next 12 months or so is to document the river use, and again, we're starting with the information that's already been collected from the other studies; but then we will be supplementing that with specific interviews to better document transportation use of the river.

And then we will be working with the latest project information from the design team to complete the section on the transportation facilities that are part of the project and then how the effects of project operation would impact the overall transportation systems, taking into

account the proposed changes to transportation infrastructure.

MR. GILBERT: Good. Thanks, Maryellen. Good overview.

So transportation, questions, comments?

MS. NOVAK: Suzanne Novak with FERC. I just wanted some clarification I guess. In the social conditions study that was modified to include Seward, Whittier, Wasilla, Houston, and Port MacKenzie because those were identified as transportation centers, I guess, in the Transportation Study --

I'm just looking through it right now. It looks like, you know, Seward, Whittier, and Port MacKenzie are discussed, but I'm not sure I see where Wasilla and Houston are brought into; and maybe I'm just missing it. I've read through this thing several times, but there's a lot of information. So I might have just missed it.

Is Wasilla and Houston -- are those considered kind of hubs, or errant destination, or origin areas for these people? Is it being looked at, those two places, Wasilla and Houston?

MS. TUTTELL: If you look in the general aviation airports, we did

talk about Willow there, and of course, they're both on the road system right near -- you know, in the vicinity of the project. So we are looking at those. We didn't call them out specifically, but impacts on them would be looked at because these transportation systems all kind of flow through there.

MS. NOVAK: Thank you.

MR. GILBERT: Yeah (affirmative), and wasn't the origin of the modification a little different? The ones you tried to identify were new places, ports that could be used that were outside the previous circle of study you had, right?

MS. TUTTELL: Uh-huh (affirmative), yeah (affirmative).

MS. STUDSTILL: Just to clarify, she had said Wasilla and you said Willow. Which one did you mean?

MS. MCGREGOR: It's Wasilla and Houston are the communities that were added to the social conditions.

MR. DYOK: Right. But Maryellen did say Willow.

MS. TUTTELL: Yes. And Wasilla is also looked at because, of

course.....

MS. NOVAK: Okay.

MS. TUTTELL: Yeah (affirmative), the major road systems go through Wasilla, and the airport at Wasilla is included on the list. So, yeah (affirmative), Wasilla is addressed.

MS. NOVAK: Okay. Thank you.

MR. GILBERT: Other questions? Becky?

MS. WOLFF: I've got a question. It's Whitney.

MR. GILBERT: Okay, Whitney. Sure.

MS. WOLFF: I'm wondering about Section 5.2, the inventory assets and field studies, and I'm wondering boat launches weren't included in that. Was it just too small of a factor? I was just thinking of freighting and river travel. I see roadways, ports, airports, that sort of thing.

MS. TUTTELL: Right.

MS. WOLFF: And I'm wondering if you considered boat launches?

MS. TUTTELL: Well, again, we talked about that we were going to document use, and so as the boat launches are part of the river use, that

will be addressed through the river use. We didn't list it as a separate mode specifically, but, you know, a lot of information on that has been collected through the recreation studies; and so we will be incorporating that information as well.

MS. WOLFF: But we've already begun some discussions where the river rec flow and access study that you cite is limited to certain areas. So I'm just wondering if you plan on including boat launches that are not in those particular studies that would be in your data.

MS. TUTTELL: I would -- I guess I would suggest if you think there's ones that you want to make sure are included, that you suggest those as modifications.

MS. WOLFF: Yeah (affirmative), I will be doing that. I just always like to find out if it's on your radar before I launch into that. I mean, I'm looking at Part 5.3.5 Susitna River Transportation, and that's where I would have assumed to see reference to it; and I'm not seeing it specifically in there. So I would propose that particular section, Susitna River Transportation, is modified to include those boat launch sites that

provide access for freighting and lodges and such, and I'll go into more detail than that in my written comments; but that's the section that I would expect to see it, 5.3.5 Susitna River Transportation.

MS. TUTTELL: Right. And as we do the interviews -- again, first we're going to look at the data that was collected by the recreation resources, and they've got a huge database of information. And then as we do the interviews to follow up after that, I would assume that we will be gathering that sort of data to go into the study.

MS. WOLFF: So those interviews you're supplementing. It says no work on evaluation was completed, but those interviews, I would think, isn't just evaluation. That would be part of the baseline data. So is that projected for this season?

MS. TUTTELL: Correct, yes.

MS. WOLFF: The interviews?

MS. TUTTELL: Right. Yeah (affirmative), that was one of the modifications. Was that instead of doing the full documentation of river use in the Initial Study Report, that got moved to the Updated Study

Report so that we could take advantage of all the data that's been collected by the other studies prior to going out and doing our interviews because we want to use that information to inform our interviews.

MS. WOLFF: Sure, of course. Okay. Is there any parameters to those interviews that would target -- without naming specific individuals, that you have a target list for those interviews or.....

MS. TUTTELL: Yeah (affirmative), that is.....

MS. WOLFF:plan to?

MS. TUTTELL: Yeah (affirmative), that was included in the Revised Study Plan, and it included the state troopers, the Denali State Park Rangers, DNR folks over in mining land and water, other federal agency personnel like BLM, and the Mat-Su Borough planners, the local community councils, Alaska Native corporations that own land nearby, Alaska Railroad staff, as well as talking to some of the natural resource companies that have been doing stuff in the West Susitna area.

And then, again, overlapping with some of the recreation-type information that's been collected in terms of people using snow machines

on the river and boats, the guides at lodges that have been interviewed, and also some of the remote cabin owners. So that's the list. If you look back at the Revised Study Plan, that's kind of our thought.

MS. WOLFF: Great. I'll go back and review that one more time, and I'm glad to see that you'll be filling in what could be, you know, data gaps from those two rec studies with all that information. Thank you.

MR. GILBERT: Good questions. Anybody else?

Great. Well, we'll go ahead then, absent any other questions or comments on Transportation, we'll go to health impact assessment.

So, Sarah, are you going to give this?

MS. YODER: Cassie will be. She should be online.

MR. GILBERT: Cassie, are you online?

MS. KIRK: Hi. Yes. This is Cassie. I'm here ready to go.

MR. GILBERT: Great. You want to advance it for her, Maryellen?

MS. TUTTELL: Sure.

MR. GILBERT: Keep you working. So Maryellen will advance it for you. Go ahead, Cassie. Go ahead.

HEALTH IMPACT ASSESSMENT (STUDY 15.8)

MS. KIRK: Shown here are the study objectives which range from the identification of potentially affected communities through preparation of the HI baseline data report.

Next. The components of the study included the overview of issues summary as well as the baseline data collected to date.

Next. And there were no variances from the study plan.

Next. The ISR continues to get a collected baseline from a number of sources including literature, databases, observation, and interviews.

Next. Further results are communities and populations that may potentially be affected from a health perspective, which are identified in Part A, Section 5, according to the following parameters, including proximity, exposure to hazards, construction camp communities, transportation corridors, railway corridor, subsistence use populations, and downstream communities and populations, as well as port facility areas.

Next. Here are some of the key areas discussed in Part A, Section 5 related to the Social Determinants of Health and Accidents and Injuries.

The key areas covered included life expectancy, paternal or child health, suicide rates, substance abuse, and economic indicators.

We anticipate data gaps will be filled by the Social Conditions in the Public Group Services Study as well as project workforce data.

Next. Other key areas covered in the ISR include sources of existing contamination, existing micronutrient deficiencies, subsistence, food, security, and food costs at baseline. And a description of information expected to be attained from the interdependent studies that will serve as input to the HIA.

Next. Sexually transmitted infections, and water and sanitation are important issues to consider, particularly related to the project workforce and potential in-migration.

Next. Further results summary include that cancer was found to be the leading cause of death in the study area for 2007 and 2009 and throughout the previous decade.

Major cardiovascular disease mortality rates are higher in the Mat-Su, Kenai Peninsula Borough, and the Valdez-Cordova census area than as

the state as a whole.

In particular, project employment bases are target areas to evaluate when considering the spatial health issues related to chronic non-communicable diseases. Health services in the project area are provided by public, private, and native health organizations. In some areas, volunteer personnel are the only source of emergency response services.

Identified gaps will be filled via community visits and interviews with healthcare practitioners.

Next. Results since the ISR was developed include activities such as collaborative work that's been done with Fish and Game or survey work as well as community observations and key important interviews.

The AEA proposed modifications in the ISR include that specific health impacts of the project will be identified when specific components of the project have been defined to be included in AEA's proposal for the project and its license application to FERC. This information will not be available in 2014 or 2015, but will be available in 2016.

Therefore, the HIA Phase 3 work will identify general impacts and

mechanisms that may provide input to the overall product design, construction, transportation selection, worker housing plans, et cetera. Health impacts will then be further assessed in the license application phase once the project proposal is available.

The USR, therefore, will not describe specific impacts or include a ranking and rating, but will include a high-level overview of potential impact mechanisms on effect.

Next. The next steps needed to complete the study include additional key informant interviews, evaluation of interdependent studies and the data developed, and filling baseline data gaps, and identification of potential impact mechanisms and potential health effects to provide input into the project design construction, transportation routes, and housing.

Next.

MR. GILBERT: Okay. Thanks. Good overview. That study has quite a bit, but this is one of these studies that does have to wait toward the end because it depends on a lot of results from a lot of other studies and the project definition.

So with that, we'll open it up for questions. Does that all make sense? Anything from Whitney, Becky, Jan?

MS. WOLFF: Yeah (affirmative), this is Whitney. I have a couple questions.

MR. GILBERT: Okay.

MS. WOLFF: I'm just going back through some of the objectives in the ISR, and I'm wondering about this establishing community engagement plans where relevant. I'm wondering if you've done any of those or planned to?

MS. KIRK: We have done key informant interviews. Is that what you're referring to?

MS. WOLFF: No, it's in one of our objectives. It says establish a community engagement plan where relevant right in that first section there.

MS. KIRK: Okay.

MS. WOLFF: It's the first study objective. Identify potentially affected communities and established community engagement plan where relevant. And I'm wondering what that engagement plan is and whether

you've instigated that in any communities.

MS. KIRK: Basically what we've done is we've gone into communities, and we have a format developed for how we will ask questions. That is essentially the community engagement plan.

MS. YODER: This is Sarah Yoder. I can provide some additional details. So some communities, we have a structure to meet with the councils. You know, like with certain tribes, we will meet with a council, and if it's a different community, we can also meet with the government there at the borough. So our community engagement, it really evolves based on feedback from the communities, you know. If they feel like they've been engaged properly or not, but we do have contacts in the identified communities.

MS. WOLFF: And I'm assuming that most of those contacts would also be like clinics and health care providers?

MS. YODER: Yes, that's correct.

MS. WOLFF: So, you know, I'm representing the Talkeetna Community Council. I'm curious whether we've not had any outreach from

you or any contact whatsoever. I'm assuming you've contacted Sunshine Community Health Clinic in regard to our potentially affected community?

MS. YODER: Well -- Cassie, go ahead.

MS. KIRK: Go ahead, Sarah.

MS. YODER: I was just going to say has Talkeetna been surveyed, Cassie? It's all running together right now in my mind.

MS. KIRK: Yeah (affirmative), that was done last year.

MS. YODER: Okay.

MS. WOLFF: And our contact.....

MS. KIRK: So I don't know whether this was in conjunction when the Department of Fish and Game was doing their subsistence surveys. There was somebody also visiting the clinics in Talkeetna and interviewing the health practitioners there at that time, and at the same time that we were helping Fish and Game administer the subsistence surveys.

MS. WOLFF: Uh-huh (affirmative). Okay. I'm aware of the subsistence surveys, but I don't recall having anybody from the Health

Impact present for that.

MR. GILBERT: That was the original design, Whitney, to combine them for efficiency and other interdisciplinary coordination. So that's like when she showed the slide of the work this year. They went out with the household surveys that ADF&G subsistence unit was doing. So they go in and do the health component at the same time.

MS. WOLFF: I mean, I actually was a participant in that survey for the subsistence and do not at all recall any of the health -- but if you're just referring to a question or two in there. But there wasn't anybody representing a particular study. ADF&G was actually administering your part of the study.

MS. KIRK: There was actually somebody there from Newfields (sp) as well.

MS. YODER: So there were some questions in that survey that were put in there for the Health Impact Assessment. Additionally, the Newfield representative did go to the clinic and did some surveys of the health facilities in the community and various other facilities in the

community, you know, the grocery store availability, that type of thing. So we did a lot of community observations.

MS. WOLFF: I just want to note on the record that the council was never contacted directly by you guys, and I'm surprised. That's all I had.

MR. GILBERT: Okay. Other questions for Sarah or Cassie on the HIA work? Did I hear one more? You're kind of breaking up. Can you start again?

MS. WOLFF: I didn't have any more questions.

MR. GILBERT: Okay. If there's not anything else, we're going to wrap up this segment of the morning, and we will take a break right through until -- through lunch until 1 o'clock, and that way everybody knows and everybody that is planning to join can join. And we're going to talk about Recreation, Aesthetics, and the River Recreation Study after lunch. So we'll be turning the phone off, but you guys can just dial back in at the top of the hour, 1 o'clock Alaska time, and we'll start up again. Okay?

UNIDENTIFIED SPEAKER: We come back at 1:00?

MR. GILBERT: Right. Just dial back in because we're going to hang the phone up so AEA doesn't get charged extra, okay. Thanks, you guys.

10:51:19

(Off record)

(On record)

1:00:13

MR. GILBERT: So we'll start the afternoon. We did the other social sciences and got finished a little bit early, but we're here now to do Recreation, Aesthetics, and River Recreation Studies. But before we start so we have the study team here, let's just make sure we do introductions again because there could be different people on the phone and so on. It's just better -- even in the room.

So I'm Kirby Gilbert, MWH. We'll just go this way.

MS. LOGAN: Sure. I'm Donna Logan with McDowell Group.

MR. KRAMER: Tim Kramer with URS.

MR. KROTO: David Kroto with Tyonek Native Corporation.

MR. DYOK: Wayne Dyok, Alaska Energy Authority.

MR. FELDMAN: Chuck Sensiba, Van Ness Feldman on behalf of
AEA.

MS. MCGREGOR: Betsy McGregor, Alaska Energy Authority.

MS. THOMAS: Cassie Thomas, National Park Service.

MR. CROWTHER: Justin Crowther, Alaska Energy Authority.

MS. WILLIAMS: Heather Williams, MWH.

MS. TUTTELL: Maryellen Tuttell, DOWL HKM.

MS. KIRK: Jonathan King, Northern Economics.

MR. FINK: Mark Fink, Department Fish and Game.

MS. ANDERSON: Julie Anderson, AEA.

MR. BOZEMAN: Marty Bozeman, AEA.

MR. OTT: Doug Ott, AEA.

MR. ZUFELT: Jon Zufelt with HDR.

MS. EVANS: Jessica Evans, URS.

MR. THOMAS: Brian Thomas, DNR, Division of Parks and
Recreation.

MS. THOMPSON: Rachel Thompson, Alaska Energy Authority.

MR. FRAISER: Andrew Fraiser, Alaska Energy Authority.

MR. GILBERT: So on the phone, could you all hear that?

MS. WOLFF: We could hear that pretty well.

MR. GILBERT: So just to remind people, we do have the court reporter, Miranda. She's doing a transcript. So if you talk, be sure to state your name first so that she can get it in the record, and the same on the phone.

So let's hear who all is on the phone.

MS. LONG: Becky Long, Susitna River Coalition.

MS. WOLFF: Whitney Wolff, Talkeetna Community Council.

MR. WILLIAMSON: Harry Williamson, Contractor with National Park Service.

MR. ZEVENBERGEN: Lyle Zevenbergen, Tetra Tech.

MR. WILCOX: Ken Wilcox with FERC.

MS. KLING: Louise Kling with URS.

MR. STEIMLE: Eric Steimle with ERM.

MR. GILBERT: Okay. Good. Thank you. So we'll get right to it, and we do have the study plans and everything that we can bring up on line as needed, the study plan determinations and other things if we need them. But each of the presenters, we've asked them to try to limit the presentations to 10 minutes. Hopefully everybody has read the ISR. We've had a lot of time to do so, and so we're trying to focus on plans to complete the study and modifications that might be proposed. If others have ideas on modifications, that's the intent of these meetings.

So we are trying to get through these quickly. There's a lot of information in the presentations, but they've been up on the website too; and most of them are a summary of what's in the ISR. But we'll go ahead and get started, unless anybody has any other questions right now.

MS. WOLFF: I had a question, Kirby. This is Whitney. If I wanted to submit something with my comments, is there an email where you'd be able to receive it there?

MS. MCGREGOR: Are you referring to comments that you want to discuss at this meeting?

MS. WOLFF: Yes. It's a simple visual aid. I'll just send it in. It's not essential, but I tried to catch Kirby as he was hanging up before lunch, but.....

MR. GILBERT: Sorry. Well, you could either -- Justin could put it up.

MS. MCGREGOR: You can email it to.....

MS. WOLFF: Excuse me.

MS. MCGREGOR: You can email it to Justin Crowther, and he could put it up. It's JCROWTHER@AIDEA.org.

MS. WOLFF: Thank you.

MR. GILBERT: So we'll take these one at a time, 12.5, Recreation, and then we'll do Aesthetics and River Recreation because that's the order we've had them always. We'll do it that way. And Tim Kramer is here, the lead of the team, and then we've got others specialists on the phone or like Donna is right here too. So he'll work that out. So go ahead, Tim.

STUDY OF RECREATION RESOURCES (STUDY 12.5)

MR. KRAMER: Good afternoon, everybody. As Kirby just

mentioned. My name is Tim Kramer. I'm with URS. I'm the lead on the Recreation Study, and Donna Logan with McDowell Group has been helping with the surveys. And so we'll kind of walk through the summary of the ISR.

So to start with, just a quick overview of the objectives. The main one is identifying/documenting recreational resources and facilities, followed by identifying types and levels of current recreation use, and then evaluating potential impacts. And then developing data to inform the development of a recreation management plan.

The components of this, as they're laid out in the study plan, are the regional recreational analysis, trails, recreational use areas, recreational supply, demand, and use, recreational facility and carrying capacity, survey data, and then GIS maps, which are just supplementing most of the above.

So there were a few variances. One of them here is we decided to include state-issued Tier 1 and Tier II subsistence permits in the analysis of hunting and trapping effort. We'll go over this in a little bit more detail later.

There was adjustment to a few intercept survey locations and the tally locations based on -- as we kind of went through the study, we decided we needed to add a few. And then the regional household mailing survey was divided in two, one in June and one in October.

So kind of a Summary of Results from the ISR. In the first year we completed the regional recreation analysis. We analyzed all the plans identified in the study plan and added a few extra.

For trails, we identified summer and winter trails and mapped them at a scale greater than 1:24,000. This figure right here is just an example of the trail mapping that we did. You'll see a lot of the trails that are identified there in like a dark maroon color, showing the 1:24,000 mapping for trails that are close to the project area.

The regional recreational use areas, these were identified and described in the ISR. For recreational supply, demand, and use we reviewed secondary data and then analyzed the ADF&G wildlife harvest reports and the sport fishing survey database.

Recreational facilities, we mapped and inventoried public

recreational facilities throughout the study area and then mapped dispersed recreation areas along the Denali Highway. Reviewed agency information and collected information from the inventory: the signage, fees, and conditions, and capacity.

This is an example of the mapping of recreational facilities that occurred. This is one of four quadrants that we've mapped out that are in the ISR, just kind of providing this example of the level of detail which we're doing.

I'll pass this off to Donna.

MS. LOGAN: Sure. So we also -- it was stated a little bit earlier in the presentation that we looked at existing survey data. So some of the things we looked at included some of the work being done by Dr. Fix up at UAF and some of the work on the Alaska Residence Statistics Program. And also looking at the Alaska Visitor Statistics Program, which is work that's been done by McDowell Group on understanding visitor volumes in the state and patterns and such.

MR. GILBERT: Sorry.

MS. LONG: Yeah (affirmative), thanks.

MS. LOGAN: So we had new survey research as well that we conducted. We have an incidental observational survey that is the contractors were contacted at the beginning of the field seasons to make them aware that if they have an opportunity to complete an incidental observation survey while they're in the field of any kind of observed recreation activity, that's one thing we did.

We also, as many of you know, we did a year-long intercept survey where we completed over 1,000 surveys. And of that 1,118 surveys, there were some online survey completions as well because we gave people the opportunity to complete it online as well if they chose to.

Regional Household Recreation Survey, as Tim said, we did it in two mailings, and we had a response rate, when you combine the two mailings, of 27.4 percent, which we're very, very pleased with that response rate, in particular since it was such a long survey as some of you may recall. It was a 16-page survey.

And then we also conducted two nonresponse bias telephone

surveys to be able to assess if there was any bias in the mail survey response.

This is just a chart that just shows some of the details around the two mail surveys that we conducted, just to see the scope of them and the returns that we received. I don't think I need to say anything more about that.

And then this is just, again, an example -- I should add, on that last slide and this slide as well, preliminary data was included in the ISR. This has actually been updated because we had the actual, you know, numbers and we had closed out the survey. So these are numbers that have been updated, but there were preliminary numbers in the ISR. So this is just to show kind of the scope of the intercept survey, just to see the coverage during times of day, days of the week, weekends, the effort by the surveyors and so and so forth, and the number of sample days spread out over the months.

MS. THOMAS: Can I ask a question?

MS. LOGAN: Yeah (affirmative).

MS. THOMAS: There were a couple of little things in the presentation that -- I can't remember if they were in the actual report or not, but, for example, for the January numbers, the total surveys was seven. And then you've got three weekend, four weekday, but only six in the timeslots.

MS. LOGAN: Hang on.

MS. THOMAS: I mean, are those just glitches or -- I mean, there were a few things like that, that I saw that I wondered about.

MS. LOGAN: There are sample days. I'll have to go back and look at that. That one is one that.....

MS. THOMAS: That just kind of popped out at me for some reason.

MS. LOGAN: Yeah (affirmative), I'll have to go back and look at that one.

MS. THOMAS: In the previous slide I wondered whether you had any idea why so many of the October surveys were returned undeliverable compared? Why the proportion zoomed up?

MS. LOGAN: The nature of the mails, I guess.

MS. THOMAS: Okay.

MS. LOGAN: Sometimes they say the lists are -- we buy all the lists at the same time.

MS. THOMAS: It's the same list.

MS. LOGAN: And we just pulled out, you know, half a list went first, and then the other half went the second; and it was just the nature of the list.

MS. THOMAS: Okay.

MS. LOGAN: You know, the other thing is too that the second mailing -- we purchased the list all at once and early. And I don't know, but I suspect, that because the further you get away from the purchase list.....

MS. THOMAS: The last time it was updated.

MS. LOGAN:then you get more people moving and such.

MS. THOMAS: Exactly. Yeah, yeah (affirmative).

MS. LOGAN: So I think probably explains it, but I don't know that for sure.

MS. THOMAS: All right. Thanks.

MS. LOGAN: Yeah.

MR. GILBERT: Cassie, just to make sure.

MS. THOMAS: Oh, yeah (affirmative). I'm Cassie Thomas, sorry.

MS. STUDSTILL: Well, actually, if you could just make sure that you're only talking one at a time, that will be clear.

MS. LOGAN: Oh, yeah (affirmative), sorry about that.

MR. GILBERT: Yeah (affirmative), you guys were having a conversation there. It's all right.

MS. LOGAN: Yes, next slide, please.

MR. KRAMER: Okay. This is me. So proposed modifications to Study 12.5. The first one is the addition of the Denali East option road. This is just a spur off the Denali corridor, and what this meant for us is that we had expanded our recreational effects analysis area once we put the buffer on it. So in detail we're going to add the Butte Lake Trail, which we identified during the first study. So we expanded the recreational effects analysis area to include the Butte Lake Trail, and then we also expanded

the recreational effects analysis area to include Goose Lake Trail, which is just south of Vee Canyon and actually extends all the way down to the Denali Highway -- to the Glen Highway. So we just added that bit to it, to make sure we caught that in detail.

And then the second one was the inclusion of state-issued registration Tier I and Tier II subsistence permits in the hunting effort. As outlined in the ISR, the reason for this is to capture the recreational value of hunting activities by hunters from populated urban areas that weren't being captured in the subsistence harvest studies, which only focused on rural areas.

Since the ISR, there hasn't been any modifications to Study 12.5.

So the next slide, Decision Points from the Study Plan. This is an extension of the study area in the Lower Susitna. We've coordinated extensively with various studies, the instream flow, geomorphology, river recreation, aesthetics. We've conducted executive interviews with various user groups and informal consultations, which have indicated no recreational needs between Parks Highway Bridge and Susitna Landing.

Usually what they're citing is the lack of resources, access consideration, safety, costs of getting there and -- yeah (affirmative). These are the main reasons for the -- for the low use in that area.

But down in Susitna Landing, there's some winter recreation travel occurring in that area, primarily snow machines that are using the Susitna River to cross to the west. So we've identified a few of the trails there.

In terms of recreational activity that's occurring on the river, we'll talk about that more in Study 12.7.

Steps to Complete Study 12.5: regional recreation analysis, it was completed in 2013, but if we identify different plans, we'll update it.

Trails, we're going to, again, update trails as we identify them, but I think we got the majority of them. So we don't expect to see a lot there. And then we're going to work on classifying trails using the National Trail Classification System.

Recreation use areas, we're going to apply the recreational opportunity spectrum to pre-impose project conditions. That's in the study plan.

Recreational supply and demand, we're going to update the wildlife harvest reports, incorporate the surveys and tally data.

Recreational facilities and carrying capacity, we'll finalize inventory and then develop carrying capacity as per the inventory sites.

And then survey data, Donna, that's you.

MS. LOGAN: Yeah (affirmative), we have a few more executive interviews that we need to do, including some local representatives that live in the area, Talkeetna area, for instance, or other areas, as well as some of the Alaska Native stakeholders. So that has yet to be completed, and that's something that would be done throughout the team, the URS team.

Also, as any field season starts up again, you know, making sure people are aware that there's the incidental observation survey. So that's still ongoing.

The Recreation User Intercept Survey, since the ISR came out, there was completion of the survey, sample fielding, and that the data is being cleaned and coded, looking at the data, looking at just a lot of different ways. I would say we're up to our elbows in data right now.

And then observational tallies, again, up to our elbows in that as well, cleaning and coding the data, summarizing it, and then sharing it with the URS team for similar analysis on their access points and other things, how they may use it.

The Regional Household Mail Survey, you know, since the ISR, finished cleaning and coding some of that, preparing it, sending it to some other disciplines for their use for their analysis, that type of thing.

And we completed the nonresponse, the second Nonresponse Bias Telephone Survey that came after the second mail survey was closed.

I think that's it.

MR. KRAMER: That's it, yeah (affirmative).

MS. LOGAN: Yeah (affirmative).

MR. GILBERT: Good overview of a big study with a lot of parts.

MS. LOGAN: A lot of moving parts and pieces.

MR. GILBERT: So now is a chance to open this up and get some discussion going, and I'm sure there's comments and information, especially about the plans to complete the studies, where we're at, what we

have left; and it's a good check-in point. And we can start with you, Cassie, if you want. We're kind of going through the federal state agencies first.....

MS. THOMAS: Yeah (affirmative), and I hate to be first just because I am with a Federal agency.

MR. GILBERT: We don't have to do it that way. We just want to make sure we give all parties a chance to comment.

MS. THOMAS: I don't view myself as being more important than others.

MR. GILBERT: No, we just wanted to make sure that we don't miss anybody, give everybody a chance, if they're present or not.

MS. THOMAS: Well, thanks. And I think I'll probably have comments and questions as I hear from other people too.

So I'm Cassie for the transcriptionist, and I just want to say Harry and I have talked, and all three studies, the two Recreation and the Aesthetics studies, are really wonderful pieces of work.

MS. LONG: That's nice to hear.

MR. KRAMER: Thanks.

MS. THOMAS: I don't know another project in the country -- you know, not that I'm familiar with all of them, but this is really sort of state of the art and really high quality. So it's -- and some of them, like the Aesthetics Study, we don't know if we see those being done. They're often just a little piece of the Recreation Study, and I think it really -- you know, Louise knocked it out of the park. So I hope you're on the phone, Louise.

MR. GILBERT: She is.

MS. THOMAS: So anyway, that being said, of course I have some questions.

MR. GILBERT: Sure.

MS. THOMAS: And some of them are like just more questions. The first thing I want to make sure I understand, and I know we're not finished with these studies. So we didn't have access to the Cook Inlet Regional Working Group lands until sometime mid-spring. So for the trail work, I assume there's ground-truthing going on because in order to classify the trail, you were looking at things like tread, and obstacles, and

other things. So explain what's happening there.

MR. KRAMER: So what happened in the first study year was -- the biggest thing was just figuring out what was out there. It was a big empty spot on the map. People told us there was trails, but we couldn't -- well, we had to figure out where they were at.

So we started executive interviews. We identified where people thought they were. We kind of drew squiggly lines on maps, and then we acquired the high resolution imagery, which we then used to identify trails.

For those lands which you did have access to, we flew those in a helicopter. We looked at them. We landed. We kind of -- we had a trail classification system set up. We tested it out to see if it worked. We collected some of the data, but it's only for a portion of the trails. We have to finish that up in the second study year.

MS. THOMAS: Okay.

MR. KRAMER: So it's in process. We're thinking about it. We have some data, but we need to finish that for all study -- for all lands for the trails where the coverage is, for those trails at the nexus of the project.

MS. THOMAS: And did you already have the data for the Denali East, or is that -- do you have to go back into the field to start from scratch?

MR. KRAMER: We have the majority of it.

MS. THOMAS: Okay.

MR. KRAMER: There's a little bit of -- which I think is we're either -- it shouldn't be a problem.

MS. THOMAS: So that's doable in the next field season?

MR. KRAMER: It's very doable, yeah (affirmative).

MS. THOMAS: Yeah (affirmative), okay. Thanks. I guess, you know, one of my biggest questions is over the decision to keep the focus upstream of Sunshine, and you guys knew I was going to say that. And maybe this is more relevant to the discussion of the river rec, but it kind of applies to all three studies to a certain extent. And I understand that it's done, the information that you have now. You're not seeing high levels of rec use on the river downstream, but yet we know that the river is used for sport fishing as at least transportation access to some of the tributaries like

the Deshka and so on.

So it does seem to me that, you know, having read some of the other biophysical ISR and been to the meetings last week and heard from Jon that the ice -- the 2D ice model doesn't work on a braided river, you know. And HEC-RAS gives us an indication that probably there won't be a huge change in stage, but it's a 1D model and it's not -- there may be some questions about it.

I just wonder whether that decision is really something we can make for sure at this point because it just seems to me that at finer scale than HEC-RAS can give us, there may be changes to everything from fish habitat, to riparian vegetation, and channel morphology, and so on, and even ice in the braided section with operations. So, you know, I said this, this morning, but I kind of remain to be convinced that there will not be physical and sport fish availability related changes in the Lower River.

If we don't do the field work -- if it turns out that there would be changes and we won't know some of these other models. We don't have the results yet. So we won't really know what those results tell us for sure.

But if we don't collect the rec and aesthetics data this coming summer, then that's going to push things into another year or so. You know, you guys may totally disagree, but that's kind of what I see the situation as right now.

MS. MCGREGOR: This is Betsy with AEA. So we do have on the phone, Dudley to talk about the open water flow routing model results.

MS. THOMAS: Uh-huh (affirmative).

MS. MCGREGOR: So we do have results. The Version 2 modeling results were reported in the ISR. We do have results from the geomorphology modeling, River Model 29.9. So Lyle is on the phone as well if we have any questions related to that, and Jon is -- while he's not doing the 1D or the 2D modeling in the Lower River, he still looking at ice processes all the way down the (unintelligible). So given any questions related to physical aspect of things, they're here.

MS. THOMAS: And also riparian veg and fish habitat would be the other. I mean, it's kind of like -- with recreation, aesthetics, everything matters. I'll go back and reread the ISRs and the TMs as well, but that's --

I guess I'm still skeptical that we really know for sure based on the models.

MS. MCGREGOR: So Lyle or Dudley, could you speak to the amount of change, you know, based on the maximum load following scenario and at the lower extent that change occurs? I guess what you're modeling -- one second. I'm getting clarification. Right now Sunshine is around river mile 80, right? Is that how far down the river?

MR. DYOK: I don't know the exact number.

MS. MCGREGOR: About 87. Okay. So maybe if you guys could talk about the changes that are going on below Sunshine.

MR. ZEVENBERGEN: And this is Lyle Zevenbergen. You know, we completed our initial models of the Lower River and have used those models in our decision to not extend that modeling below 29.9. But since we do have the model results that are for the Lower River upstream of 29.9 and up to Three Rivers confluence, what we're seeing in those models is that the -- that the river, which has in plan form. It's very braided, multi-channel, aggradational trends in the modeling and what you'd see, you know, just based on knowing the kind of river plan forms and river

processes.

For the OS-1B scenario, we're seeing slightly lower rates of aggradation, so that basically our conclusion is, in that Middle River area that you're concerned about, that the river would be pretty much the same as it is now, slightly smaller because of the flows being reduced, slightly lower rates of transport, slightly less aggradational. But that the character of the river, which is really dominated by the Chulitna, is going to be very similar in the future with the project.

So from a geomorphic aspect, you know, which incorporates the sediments, the flows, we're not seeing that there would be much change.

MR. REISER: Yeah (affirmative), this is Dudley Reiser with R2. Stuart Beck is not with me right now, but I can tell you that the work that we've been doing on the lower portion of the river down through 29.9 indicated that as you progress down below Three Rivers, you're getting less and less of a signature of any project effects as you move downstream. That is you end up having more and more flow attenuation progressing downstream, so that your stage changes that you would see, pre versus post

during the open water period. And I need to qualify that. That's the work that we're doing is the open water flow routing model. So we haven't looked at the ice cover period.

But by the time you get down to 29.9, you know, you're stage changes that you're seeing down there -- I can give you a couple of statistics or a couple of examples here, modeling two different water year types, a dry year and a wet year type -- you're looking at ranges of stage change that would occur between 0 to 3 feet under pre-project conditions and 0 to 3.1 under post-project conditions. That's the prediction by the model, and then under a wet year scenario, it would be from 0 to 4.4 and 0 to 4.3 respectively.

So you see that by the time you get down to that lower portion, down at the Susitna Station, this flow attenuation really brings home the point that you're just not seeing the project effects during that open water period to any significant degree. Therefore, progressing on downstream below that, you know, doesn't make a lot of sense from the perspective of, you know, the changes in state. So you get such an effect of the three

rivers confluence as you move downstream.

MS. MCGREGOR: Do you want to discuss the ice?

MR. ZUFELT: Sure. Jon Zufelt with HDR. And as far as the ice-covered period, presently below Sunshine -- the big changes below Sunshine will be during more or less the mid-winter period. During the freeze-up period, the flow is still receding. During the mid-winter and, you know, the height of the winter, typically with pre-project conditions, we have flows that recede pretty low down to 2,000 CFS at Gold Creek and more than that at Sunshine and Susitna Station. But, again, much lower than they would be -- or lower than they would be with the post-project conditions and operation under the OS-1B.

As far as the ice goes at Susitna Station, I don't think we're going to see hardly any difference in ice thickness, the ice formation process because in the cover formation period, presently, pre-project, the flow conditions are still fairly high, and they can be fairly variable.

At Sunshine, we're getting to sort of near the hinge point where it's possible that, you know, just with the natural variability, some years we

see freeze-up flow conditions that are higher than what would occur during post-project, and some years we're seeing what would be lower than post-project. So we're sort of in that variation.

I could see that at Sunshine we might see a little delay in the formation of the ice cover. Perhaps the ice cover would form at a little higher stage in this chart, so they'll probably be a little bit thicker at Sunshine.

MS. THOMAS: And the increased flows due to winter operations -- and I understand that there's attenuation of that signal as you go all the way downstream -- but in an ice-constrained environment, is there no potential for those flows to destabilize the ice, in other words the more frequent ramping up and down?

MR. ZUFELT: The de-stabilizing of any ice cover would occur at the furthest upstream edge of the ice cover. So again, depending on the degree of cold of the winter, or if we have an increase in the average temperature over the next 50 years because of climate change, we'll probably see the most change in the upstream edge of the cover, which,

again, I don't have the model working yet; but if we go back to the 80's studies, the ICECAL model during the 80's study indicated that the upstream edge of the ice cover would be somewhere in the area of Gold Creek.

MS. THOMAS: So it's going to move -- that's the point at which there'd be a difference due to project operations?

MR. ZUFELT: Yeah (affirmative), you could definitely see some differences out there, and probably some of the larger differences will just be from the temperature variations because we'll have warmer water coming past PRM 187.2 than we do now, because it would be coming out of the reservoir.

MS. THOMAS: Right.

MR. Kramer: And I'll just add to that a little bit. And Jon will talk about this with the Study 12.7 River Recreation, but, I mean, from our perspective, what we're looking at is we don't see much of an effect on recreation downstream of the Parks Highway Bridge from all the conversations we've had, and looking at the data, the technical memos;

that's what we're focusing on.

MS. THOMAS: Yeah (affirmative), and I get the -- let the phone go.

MS. WOLFF: Is Cassie finished?

MS. THOMAS: I am for now. Thanks, Whitney.

MS. WOLFF: I appreciate all the additional study teams coming in to address this. I think what's most important to point out to those of us that feel that the study should be extended is that this assumption that just stage and CFS is the only effect that we're looking at overlooks that geomorphic effect, which has mentioned of slightly smaller amenities, access points, and recreational sites are far to the east over there by Delta Islands and over in the farthest to the (unintelligible) and slightly smaller -- could easily -- any type of channel change, narrow island formation, sediment deposition, even slightly smaller could quickly change these locations. So I think that's important to consider.

MR. ZEVENBERGEN: This is Lyle Zevenbergen again. I'd really like to touch on that because, you know, when I'm saying "slightly

smaller," it is relative to a stream or a river that is very dynamic as well.

So if you look at the aerial photography from the 50s, the 1980s, and more recently, you do see, you know, a thousand foot of channel shift from one decade or one series of photos to the next.

So the channel is extremely dynamic. It's shifting in many areas by large amounts, and the sediment inputs from -- you know, the primary source is the Chulitna being the main driver, is also going to be highly variable. So, you know, a slightly smaller channel within an extremely dynamic, highly variable system. People are already having to deal with access points that are abandoned, or moved, or what have you, and I think you see that in this river all the time.

MS. WOLFF: Yeah (affirmative), I see what you're saying, but if it's project-induced, it's still relevant versus just natural induced. So, you know, I sat through all the geomorphology TWGs, and when they extended that, there was a lot of talk of the union effect and single channeling. And I think those are all still relevant factors here.

MR. ZEVENBERGEN: Yeah (affirmative), but again, it's really

dominated by the Chulitna. If you look at this river, you see that the form of the river follows the form of the Chulitna. So again, the effects of the dam are really minor compared to the just natural range of variability that's already out there. So with any of these things, you do have to put it in context, and the context is an extremely variable river.

MS. WOLFF: Right. Yeah (affirmative), what I would add to this too is that, as far as the council is concerned, we do support modifying this and extending the study, you know. I understand that to 29.9 may be more significant than just below the Sunshine, but one of our main points that we see missing is that the Montana Creek Fishery and the recreational uses there are just slightly below Sunshine. It was referred to here as a hinge point or something.

We're not talking about sites that far down in the Lower River, you know. The Willow area definitely represents the hub of lower Susitna access for both summer and winter use, and several sites, such as the Montana Creek area, are already included in this study, the upland streams on the (unintelligible) Trail and such are already included in the study. It

represents a fairly extensive recreational days facility, and this is not down at 29.9 again. This is fairly close to Sunshine.

So some of these sites are well within that area that we discussed that could see some effects like you mentioned at Sunshine. Montana Creek also supports the Montana Creek Dog Musers Association. One of FERC's modification of the study was to include that club in the forthcoming discussion groups.

And, you know, I think we really need to take a close look at some of the Willow north to Sunshine areas. As we witnessed today in this morning's ISR presentation, this Rec Study, the principal data collection tool for several important studies that was discussed this morning, you know, both economic and transportation in the IHA. And it feels to me like we've sort of got this donut hole there where this Willow area has relevant baseline data that's just not being collected.

And one other thing, on your slide you talk about low use, and within the ISR you note conversations with Deshka Landing saying that there's low use; but that's misleading because their comments to you were

regarding access from those points north into the current study area. So there is tremendous amount of use of those sites in that vicinity itself, and I feel like that comment is somewhat disingenuous. It alludes that there's low use. It's just low use heading north back up into the current study area.

And when I went back and looked at first modifications here after the study plan determination, this was supposed to be based on the first year of data, studying use on the Lower River, the Lower River uses, and I'm not seeing that you've, you know, met that objective. I see you got the winter trails, but I'm not seeing any of the fisheries or any of the other recreational uses down there by Musers or any other user groups.

MR. KING: Well, thanks for that. That's a good comment. Just to clarify, our study area stops at the junction point between the Talkeetna Road and the Parks Highway. So that's the reason why there's -- we haven't collected data on that. We've tried to look at -- through conducting executive interviews and informal conversations with the people at Susitna Landing, we've asked them about it, and that's -- so we tried to present the information that we did have. But since it wasn't part of our study area,

there wasn't the same level of detail collected on that area.

MS. WOLFF: Right. But this modification states in here that data is going to be looked at, the first year's data, after identified Lower River uses are found as well as they hydrology and the ice. So we've got the hydrology folks there and the ice process guides there, but we're not getting your data back on the Lower River uses to substantiate or quantify that.

MS. LOGAN: My interpretation of what we were asked to do is to include two intercept points for our intercept survey work, and one was Doshka Landing and the other one was Susitna Landing, which we did. And we also conducted interviews with the managers of those two areas to determine if there was access from those points going into the study area, and the determination was there may be some, but it's very nominal, and we couldn't find it. And they really couldn't support either, but they couldn't say there wasn't any. So that was -- that was something that we said we would do as including those intercept points to make sure and determine that there was an access into our study area from those other

intercept sites.

MS. WOLFF: Right. Actually, I remember the TWG when we recommended that you use those to catch anybody coming in, but to me that's not identifying Lower River uses. That's identifying an access point to access Middle River, and so I'm not seeing a quantified look at Lower River uses that could be affected.

And, you know, like I said, I actually sent in to Justin that list of the extensive winter trails that it sounds like he's looked at a little bit.

(Unintelligible) snow pack, snow machine, registration-funded trails right on the Susitna River, you know, as well as the maintained and assisted by the Willow Trails Committee and the Montana Creek Dog Musers Association. Those are some of the highest used on this river, and it's invisible here I feel like in the study. And like Cassie said, you know, in an effort to get all the baseline data, I just find it hard to believe that we're not accessing some of these popular sites, primarily this Willow area and Montana Creek.

MR. WOOD: This is Mike Wood. Can you hear me?

MR. GILBERT: Sure. Go ahead, Mike.

MR. WOOD: Hi. Again, I'm glad I'm able to listen to Jon and Dudley on the phone here again. I just want to say, when you look at the Susitna River below the confluence of the Chulitna, the Talkeetna, and the Susitna, obviously the character of the river is much more like the Chulitna, and throughout the summer the effects are mostly influenced by the Chulitna. But it's a completely different river system in the winter time.

When the Chulitna shuts down and the Talkeetna shuts down, the predominant flow is coming out of the Susitna River throughout the wintertime. Under project operations you increase water temperature and volume in that river. The Susitna will have a much larger impact on the river system below the Talkeetna than either the Chulitna or the Talkeetna River.

And I think Jon is probably the leading expert in the world on ice, so I'm not going to argue with him about the nuances at all, but I believe that when you start looking at how the ice freezes and jams down lower in the

river, if you are only looking as far as the Sunshine Bridge, which is just a short 10 miles below Talkeetna, and say that's the effects -- project operations will only go to there, that's not far enough down river. And if you're dealing with open water situations because of higher volumes and warmer water due to operations, I think, as far as transportation goes, you need to consider the fact that, that water is flowing under the Parks Highway Bridge, and if there is more open water there throughout the winter, you're going to have a lot of fogging conditions right under the highway there due to open water. And I think that the extent -- so making it more dangerous for traffic crossing the bridge in that foggy area. Anybody going across the Knik River Bridge knows what that's like.

So I think that's a consideration when it comes to transportation. It's just what that open water at the bridge could do as far as the Parks Highway goes.

The model that I have in my brain, and I know it differs from Jon, is that the water in the system could be open further down the river below the Parks Highway Bridge. How far down, what extent it will go, I really

think it's important that the models are calibrated correctly to know how far that goes so it's not just up to Jon's gut instinct or Mike Wood's gut instinct. So I think that's super important.

But to overlook the importance of Willow, which is only 60 miles below the Talkeetna, I think it's -- you can't do that with a project of this magnitude, especially when you look at the amount of that side channel of Deshka. It's such a shallow side channel slough that barely works throughout the year. It wouldn't take much to change that access point in summer or winter.

And the amount of commerce, not to mention recreation, but the commerce that leaves from Deshka Landing to supply all the lodges up on the Yentna, all the private homes up there, all the way to the Yentna Roadhouse and up to Ridugle (sp) and Skwentna. There's recreation and then there's the economy and commerce on that river, and when you watch these barges go out with thousands of gallons of fuel on them running four outboard engines with props, they need as much water as they can possibly get to get out of Deshka Landing. And that's in the summertime.

I think in the wintertime that's, again, a key access point for the entire Susitna River and for the crossing of the Iditarod and all those homes up to Skwentna. And we really need to prove that the winter conditions will not impact that in any way, whether that's thinner ice or open water leads. It can't just be a gut feeling, and I know with Jon it's not. But I think you need to expand it to that point and show on the model why it won't be affected.

MR. GILBERT: Yeah (affirmative), no, we hear what you're saying. I think we got input on that.

Go ahead. This is a good discussion. Jan?

MR. KONIGSBERG: Yep. Yeah (affirmative), Jan Konigsberg. Listening to this, I'm getting very confused. I remember Robin Beebee's presentation after the 2012 -- I believe it was the 2012 winter season, 2012-2013 or 2011-2012. I can't remember. But, if I remember correctly, that since the ice process in terms of formation of ice on the Susitna was atypical for most rivers, yet it formed at the mouth of the river and moved upriver. And she attributed that to, again, if I remember correctly, some

frazil ice formation in Devil's Canyon.

That assumption was that if you -- with the project, it wasn't just a question of temperature increases in the water delaying ice formation. I thought there was a real question about whether or not frazil ice would form in Devil's Canyon, and therefore, what kind of ice cover and ice formation you actually get throughout the river if it disrupted the natural pattern of ice cover formation at the mouth, where the frazil ice drifted down river, and then froze up the mouth, and then moved up river.

Am I not understanding that correctly, or has it changed since then?

MR. ZUFELT: This is Jon Zufelt. The typical formation of an ice cover in the Susitna River is where it begins a cover forming at the mouth and then progresses upstream is very typical of rivers because the mouth is the lowest slope, the lowest energy point of the river. It's where the ice, you know, comes to a halt and then begins to build up and just works its way upstream.

Frazil ice is produced anywhere in a river where you have open water, cold air temperatures, and faster velocities, of course, are a help

because it just fully mixes the water; and it gets more heat exchange to the atmosphere.

So one of the big sources of frazil ice that feed the formation of the cover at the mouth and then progresses upstream, of course, is the Yentna River, and typically we see, once the Yentna really starts pumping out frazil ice, that the cover forms at the mouth pretty quickly and just begins to progress upstream.

There will likely be changes with the project. That's like a no-brainer. There's going to be some changes, but passing the point of the -- like if we say the dam is at PRM 187.2, right now a lot of frazil passes that point on its way down through Devil's Canyon. In the future, under a with-project scenario, the water passing river mile 187.2 has a potential of being 0 degrees up to a maximum of probably 4 degrees C. We're still going to get a lot of heat transfer in the open water area downstream of the dam, especially through the well-mixed Devil's Canyon, and we will probably end up with, by the time you reach, you know, Curry or something, you'll probably not even be able to tell the difference between

conditions pre-project and post-project in terms of frazil concentration in the river.

There's likely going to be some changes in the timing. For instance, right now the ice cover progresses up to Talkeetna -- we'll just use Talkeetna. The ice cover progresses from the mouth up to Talkeetna, reaches Talkeetna anywhere from, oh, I'd say, early November to early January by the time it reaches Talkeetna. We'll probably likely see changes in that, you know, a week to three weeks later potentially.

MR. KONIGSBERG: So would frazil ice from the Yentna in terms of timing at the mouth of the Susitna then be essentially the same as it is now.....

MR. ZUFELT: Pretty much.

MR. KONIGSBERG:post-project?

MR. ZUFELT: You know, there may be just a slight delay, but, like I said, near the mouth one of the big contributors is the frazil ice coming down the Yentna.

MR. KONIGSBERG: Uh-huh (affirmative). Okay. Thanks.

MR. GILBERT: So I think that's been a great conversation on the type of effect. That was a great download. So we know there's physical changes, some. I think there was a variety of terms used to describe that in the description.

I think we've got some information. It's a matter of how much information do you need to be able to evaluate the future, and I think that was the question, how much more recreation information because you do have recreation information. It was in the PAD. It was in 2012, and you've a got a little bit more now. There's existing information out there. So the question is more about what more information is needed for this level of impact I think; is recreation affected?

You know, we want to keep going. We want to talk about Aesthetics and leave time for River Recreation, which is some of the issues, I know. But who else has comments on that, since we've got this all teed up right now?

Cassie, you got some more on that?

MS. THOMAS: I have another question on sort of an unrelated

issue. It's page 5 of the ISR. The sport fishing data that you collected from ADF&G omitted surveys where there were fewer than 30 responses.

MR. KRAMER: Yeah (affirmative).

MS. THOMAS: And I'm just wondering, as we know that a lot of sport fishing in this area might be kind of more disbursed. It's not the combat fishing you see on the Kenai. So you might have folks who, like Jan, like to fly fish and kind of like solitude, and so there could be a lot of disbursed, low-level sport fishing. But are we risking not capturing that information, and is there another way to get that information, given the ADF&G cutoff?

MR. KRAMER: Well, I'll talk about the data that we do have. I mean, we're using ADF&G sport fishing database, which is a survey, and when you get really low responses in any survey, there's huge confidence intervals.

MS. THOMAS: Yeah (affirmative).

MR. KRAMER: And so we took ADF&G's recommendation that you take with caution anything that has less than 30 responses, and that led

to the analysis that we did do. We did try to show all the disbursed recreation that is occurring on the figure that we presented, and you'll see like spots showing activities where people reported catching fish. But we didn't want to use the estimates because it sometimes it was misleading or just inaccurate.

And so therefore, that's the data that we do have and the analysis that we're conducting with that. But then there's also the survey data that we're going to be looking at, and I can let Donna talk more about the sport fishing that is occurring. But it is something that -- with intercept surveys and mail surveys.....

MS. LOGAN: Yeah (affirmative), we don't have the level of detail that you would have in the Fish and Game survey because it's -- as you may recall when we were doing the mail survey and the intercept survey, we were referring to grids.....

MS. THOMAS: Right.

MS. LOGAN:and people, if they were doing certain types of activities within grids, just to be practical, to be honest. And so there will

be some data there that may be helpful.

MR. KRAMER: I think between the combination of the two, like having the intercept surveys and the mail surveys telling us roughly how many people are conducting a certain activity, and then ADF&G data telling us where those activities are occurring -- they can't tell us how much activity is occurring at each spot, but they can say that something did occur there and we can kind of combine the two.

MS. THOMAS: Does that also make it difficult -- this is Cassie again -- to describe trends when you're trying to eventually project out into the future and knowing what the trends have been might be helpful to that?

MS. LOGAN: I think it does. Whenever you're dealing with survey data that's -- you know, when you get down to sample sizes that are so low, it is difficult. Absolutely.

MR. KRAMER: But I would say that we can say that it's low. That it's been low. It continues to be low.

MS. LOGAN: Yeah (affirmative).

MR. KRAMER: For me, when I look at this, I see when it passes

that 30 responses threshold, then it moves into a different category of a high level of use, and then we can track that level of use with more detail. But when it's below it, we're essentially saying that it's low level use, and has been low level use, and will continue to be.

MS. THOMAS: You know, and I understand that. I just wouldn't want us to fall into the trap of assuming that since a level of use is low that the importance of use is also low, and that's the challenge.

MS. LOGAN: No. Yeah (affirmative), that's definitely not.....

MR. KRAMER: That's a different issue. We're not -- that's when you fall into the recreational opportunity spectrum.....

MS. THOMAS: Yeah (affirmative).

MR. KRAMER:and different users that value different things about their experience.

MS. THOMAS: Exactly. Thank you.

And I also have a little bit of problem reading the legends on some of the figures in the PDF of 12.5, like 12.5.2.

MR. KRAMER: Are these in the appendix or the.....

MS. THOMAS: Well, I thought they were within the body. I thought that one was within the body. I had some problem with Part A, the pages in the 90s too, and I tried enlarging my PDF. It's really hard because it's a huge mapping area, and I ended up with a very blurry legend. I mean, I kind of know what the legend says, but if I didn't, I would not be able to read to make it out.

MR. KRAMER: Yeah (affirmative), that's the problem. Which one?

MS. THOMAS: I thought it was.....

MS. LOGAN: There's one with the intercept.

MR. KRAMER: The intercept survey locations?

MS. THOMAS: 12.5-2 is what I've got in my notes, and now I'm trying to navigate to it. And, I mean, you don't have to fix this today.

MR. KRAMER: Yeah (affirmative).

MS. THOMAS: I'm just a little concerned that it's going to be hard for some folks to comment on if they can't read it.

MR. GILBERT: And that should be a fixable problem.

MR. KRAMER: That's very fixable.

MS. THOMAS: Yeah (affirmative).

MR. GILBERT: If you could make it available too.

MR. KRAMER: Well, sure. And also I'd like to say that these are --
if it's the one I'm thinking of, the intercept survey locations.....

MS. THOMAS: With the long narrow -- yes, that's it.

MR. KRAMER: Yeah (affirmative), these are all listed in the ISR
texts as well.

MS. THOMAS: Okay.

MR. KRAMER: But we can fix that.

MS. THOMAS: And, I mean, I know where those things are on the
map, but I'm not sure that all reviewers would. Yes, that's it.

MR. KRAMER: Okay.

MS. LOGAN: Yeah (affirmative).

MS. MCGREGOR: So that's Figure 4.6-1 in the ISR.

MS. THOMAS: Yeah (affirmative), it must also appear as a.....

MS. MCGREGOR: It probably is in the RSP or something too.

MS. THOMAS:probably different -- yeah (affirmative), I don't know.

MR. KRAMER: That's understandable.

MS. THOMAS: Yeah (affirmative).

MR. KRAMER: I'm sorry for that. We'll fix that.

MS. LOGAN: It's not just the usual I'm getting old. I need glasses.

MS. THOMAS: Well, that too.

MS. LOGAN: No, it's hard.

MR. GILBERT: And there is a balancing that goes on here because you have huge documents. You got file limits, and you got people that want to download things that aren't 50 megabytes. So sometimes they do get downsized, not the fault of the original program leads. Sometimes they get downsized.

MS. THOMAS: And I downloaded the GIS data. I just haven't had time to play with it yet.

MR. GILBERT: This ought to be fixable. This is not really -- it's more of a procedural thing.

MS. THOMAS: Yes, it is.

MR. KRAMER: Yeah (affirmative), it's an easy thing.

MS. THOMAS: So if those maps -- I mean, with some of the other maps, you show them -- you actually presented them in chunks.

MR. KRAMER: Uh-huh (affirmative).

MS. THOMAS: I don't know if that's something that could be done.

MR. KRAMER: Yeah (affirmative), we could do that.

MS. THOMAS: That might be quite helpful.

MR. KRAMER: We'll look into it.

MS. THOMAS: Thanks.

MR. WOOD: This is Mike Wood. When you guys are doing the studies for sport fishing and whatnot, do you take into consideration the closures and the seasons in the last few years? Like with Chinook, it's been closed or catch-and-release restricted in that way and same with Coho, the reduced numbers of ways people catch them and the numbers you can keep. So overall it would reflect kind of a -- there's been fewer people fishing because you haven't been allowed to fish or keep the fish,

especially with the Chinook?

MR. KRAMER: So you're interested in the Chinook and if we're taking the Chinook restrictions, and if we're taking that into consideration? Did I get that right?

MR. WOOD: Yeah, yeah (affirmative). When your survey is for fishing users and whatnot, does it recognize the fact that the returns have been low, and there's been restrictions on even being able to fish? Because they've closed so many of the fisheries from Deshka all the way up through Montana Creek and to the Talkeetna in the last couple of years. There's been a way lower amount of sport fishers going out because of that, and I just wondered if that's factored in your interviews and in the model?

MS. LOGAN: The answer is yes. The simple answer is yes. We're aware of those changes and we also are -- and Tim's group is looking at some of the policy changes, not just around fishing but around hunting as well. And the intercept surveys, you know, trying to capture what people are doing and recognizing that without a king season on the Talkeetna and such, you're not going to run into as many fisherman as you would have

maybe a few years back. So, yes, we're aware.....

MR. WOOD: Yeah (affirmative).

MS. LONG:and those conditions and factoring that into.....

MR. WOOD: Cool. Thanks.

MS. LONG: We'll be factoring that into our modeling as well.

MR. GILBERT: Yeah (affirmative).

MR. WOOD: Okay, thank you.

MR. FINK: Mark Fink, Fish and Game. I would comment that you're -- you're saying your sport fishing. Actually, you're hunting too. You're taking the average like a 10-year average, which is the appropriate way to do to take out some of that variability he's talking about.

MS. LOGAN: Right.

MR. FINK: Whether you -- how you want to capture that Chinook collapse, if you will, right now for a project that may be built in 10 years, I'm not sure how you do that. But, I mean, I assume what -- I'm familiar with the data you used, and I think what you've done is reasonable, given the type of information we can collect out there.

Oh, and I was going to ask, did you actually do the sport fish harvest analysis, or was that another project? I thought it was the aquatics project to do that analysis, or was that you guys?

MR. KRAMER: It's not with us. There are two others, another study, for wildlife harvest, and I forgot the names. It's sport fish and wildlife harvest.

MS. LOGAN: Yes, there's two different.....

MR. FINK: Yeah (affirmative), I assumed that's where you got the information. They analyze it for you, and you use it in your report. It was interesting. I noticed the wildlife report didn't get it done yet, so didn't have anything to report. And I saw you had the data they would have.....

MR. KRAMER: Yeah (affirmative).

MR. FINK:prepared in your report.

MR. KRAMER: Yeah (affirmative).

MR. FINK: So at least you pulled that out. That's good.

MR. KRAMER: And we're working closely with ADF&G to talk to them about the data and make sure that we're understanding it correctly

and applying it correctly.

MS. LOGAN: And when you mapped the data as well, it was in consultation with them on how to do that.

MR. KRAMER: For wildlife harvest, yes.

MS. LOGAN: For wildlife harvest, sorry.

MR. KRAMER: Yeah (affirmative).

MR. FINK: So it wasn't ABR that put that together; that was actually your group doing that?

MR. KRAMER: If you look in the Initial Study Report we have a distribution of hunting effort across our study area, and there's restrictions associated with how we can present that data. And so we had to work closely with ADF&G to make sure that we presented it in a way that met their standards and that they were comfortable with essentially.

MR. FINK: So you guys directly worked with this group?

MR. KRAMER: Yeah, yeah (affirmative). Oh, yeah (affirmative), I'm sorry.

MR. FINK: Yeah (affirmative), because I thought -- I was talking

to some of our people that gave the data out, and I thought they had given it to ABR. So I assumed you were working with ABR on that work for the harvest report and study.

MR. KRAMER: Yeah (affirmative), there are a few efforts that are ongoing, and I can't give you the name of the person that we were talking with. But, yeah (affirmative), that's what we were doing.

And then this is the map that I was referring to that kind of shows generalized hunting effort across the study area. There was a couple versions produced of this, and we have to be very general. We have to generalize it because people don't -- ADF&G doesn't want everyone to know, oh, this is the place where everyone is shooting their prize caribou, or their prize moose, or whatever. And so there's all these restrictions, and we had to do the best with what we had. But we think this definitely meets the needs of the study plan.

MS. WOLFF: Yeah (affirmative), this is Whitney. I had a question following up that ADF&G question, which we had a little bit hard time hearing. So the Appendix E in Part A, that's the fish harvest data. I'm

going to it now, but that's based -- is this the one with the purple circles?

(Indiscernible - interference with speakerphone).

MR. KRAMER: Are you talking about the figure?

MS. WOLFF: Yeah (affirmative).

MR. KRAMER: There is.....

MS. LOGAN: It's Appendix E.

MS. WOLFF: I'm getting to it. I'm almost there.

MR. GILBERT: Is she asking about this here?

MS. MCGREGOR: She's asking about Appendix E.

MR. KRAMER: I think she's talking about this. This is actually in the ISR. This is Figure No. 5.4-3.

MS. LONG: Oh, it's just in the ISR?

MR. KRAMER: It's in the ISR.

MS. WOLFF: Yes, okay. I just was on that, 5.4-3.

MR. KRAMER: This is showing fishing effort, and it has purple circles for levels of fishing.

MS. WOLFF: Yes, that's the one.

MR. KRAMER: And then it has some orange dots that show sites that had less than 30 responses.

MS. WOLFF: Right.

MR. KRAMER: Yeah (affirmative).

MS. WOLFF: And this if from ADF&G harvest, not from any of your intercept information?

MR. KRAMER: Correct.

MS. WOLFF: Okay. Did you then somehow interface a harvest analysis with any of the sites you got on your intercept, or, no, they're completely separate?

MR. KRAMER: At this point they're completely separate. This is just.....

MS. WOLFF: Okay.

MR. KRAMER:showing the baseline data collected from the ADF&G Sport Harvest Survey. And as I explained, the responses that are less than are shown as orange dots, and the ones that are above 30 are shown -- the size of the circle is proportional to the number of reported

angular days. So but it's not connected to the intercept surveys or anything along those lines. This is just the data from them.

Does that answer your question?

MS. WOLFF: It does. Yeah (affirmative), this is actually the figure that really impressed upon me that Montana Creek was missing. But, yeah (affirmative), so that answers my question. Thank you.

MR. KRAMER: Yeah (affirmative), and if you look at that figure, you can see the study area boundary, which is in red. And that will kind of show you.....

MS. WOLFF: Oh, yeah (affirmative). I can see it quite clearly.

MR. KRAMER: Sometimes people.....

MS. WOLFF: I'm not confused where the boundary is.

MR. KRAMER: Okay.

MS. WOLFF: I just don't agree with it.

MR. KRAMER: Okay.

MR. GILBERT: Other questions for Tim in Recreation, and I'm sure we'll circle back into some of this with River Rec. Well, they're also

related, but we want to make sure we give Aesthetics a chance here too.

But I don't want to cut off comments if you guys still have more.

Yeah (affirmative), go ahead, please.

MR. FINK: A minor one, kind of an age thing, kind of like Cassie's. I'm partly color blind, so your 17B easement sometimes is a little hard to see, and actually more difficult are the RSTs were hard to see. If you could just define those lines a little bit better. And there were a few maps -- and I'll send this in my comments. There were a few maps that were missing some RST numbers, but you had most of it on the maps.

MR. KRAMER: Okay.

MR. FINK: Minor. And also you're missing some side easements, which may not be affected by the project, but since you've already included them on the maps, there's a few -- at least two I know -- that didn't have side easements.

MR. KRAMER: That would be helpful.

MS. THOMAS: And related to that, when I was looking at some of the 17B's, I wondered if it might be helpful to have -- and you'd probably

have to segment the maps to do this rather than just have the one master map, but it might be helpful to land status to sort of understand how those 17Bs function, given that they're access from one public land to another. And if you don't already know who owns the lands in the area, you don't really understand how they function.

MR. KRAMER: Right.

MS. THOMAS: But I don't know if that's something you guys were planning to do.

MR. KRAMER: Well, we tried to be as clear as possible, but there's -- when you try to put too many things on a map.....

MS. THOMAS: I know.

MR. KRAMER:it gets very, very cluttered, and so we try to do the best, focusing on the things that were within the study plan that we needed to present. But, yeah (affirmative), you're right. Like we can look at trying to improve that.

MS. THOMAS: Is that something that's in the GIS layers because I haven't opened all of those?

MR. KRAMER: We certainly have the data.

MS. THOMAS: All right.

MS. MCGREGOR: Yes, and that's what I was just going to let you know as well. I don't know if you use GIS, but all this data is available through GIS.

MR. FINK: Yeah (affirmative), I was just spot checking some of your maps, and I go, oh, these look great. And I checked a couple. It's like darn it. There's something missing here. I got to look some more, and so I did. No, you're not going to get land status on those maps and be able to make them user friendly.

MR. KRAMER: Yeah (affirmative). That's the problem.

MR. KROTO: I'm sorry. This is David. You said all the GIS data was available on GINA?

MS. LOGAN: Uh-huh (affirmative).

MR. KROTO: And not the state data clearinghouse?

MS. LOGAN: No, we've shipped it from the DNR and the state clearinghouse to consolidate everything on GINA.

MR. KROTO: I wasn't aware of that.

MS. WOLFF: This is Whitney. I had one last quick question. I know.....

MR. GILBERT: Sure.

MS. WOLFF:you were discussing in your presentation just that you were accumulating the last of trails. You just had a couple missed. And I just wondered what's the best method to get those to you?

MS. MCGREGOR: Send them to me. This is Betsy with AEA. If you could send them to me, that would be great, Whitney.

MS. WOLFF: Okay. Will do.

MS. MCGREGOR: Thank you.

MR. GILBERT: Well, we've got Tim here, and I think we have Donna here too as we go. So if something else comes up because they're so related. So maybe we should just turn to Aesthetics now. Louise is on.

Louise, you still on?

MS. KLING: Yes, I'm still here. Thanks.

MR. GILBERT: So if that's good with everybody, let's go through

the Aesthetics presentation and then open that discussion.

MR. KRAMER: And, Louise, just let me know when you want to change slides.

STUDY OF AESTHETIC RESOURCES (STUDY 12.6)

MS. KLING: Well, this is Louise Kling here with URS, and I'm the study lead on the Aesthetic Resources Study. And we'll just kick it off.

So just to recap. I know that many of you who are on the line or are present in person with AEA have attended the TWG meetings throughout the course of the project and testified. It's really great input along the way. So I'll be really brief running through some of the accomplishments of 2013.

Again, the objectives of the study were to inventory and document a baseline characteristic for the area and set it up to evaluate the potential effects that could result from the project. It sounds like there's some feedback.

MS. MCGREGOR: There is feedback. If people could put their phones on mute, that would be helpful.

MS. KLING: Okay, Tim. You can go on to the next slide. Just to let you know what's coming for today's presentation, we'll just give you an update or a status report. Some of the pieces of the study that were completed during this first study year includes the viewshed modeling, the selection and implementation of analysis locations, baseline data collections, and the beginning of the production of the photosimulations, and that included the baseline photography collection. And then for soundscape, the baseline data collection.

Next slide. The overviews of the viewshed modeling. We prepared viewshed models for the project components based on the project footprint available to us at that time. So that was the Denali corridor, the Gold Creek corridor, the reservoir, and then a portion of the Susitna River downriver from the proposed dam site. No variance occurred in either of the methods that were used in developing the viewshed models.

According to RSP, we will revise updates on these viewshed models based on more recent developments in the project layout. So you can expect that to come as part of our upcoming work.

Next slide. Analysis Locations. This should be a familiar map to many of you. We identified analysis locations that were well distributed across each of the project components and also included a distribution across various land status of landscape type areas.

Next slide. And no variances occurred in these methods.

Baseline Data Collection included a combination of desktop and field-based work. The desktop focused on identifying the federal, states, and local land use plans and reviewing those documents to determine whether or not there were provisions contained in those plans that contained management provisions of the scenic resources or aesthetics.

So the big one for us included the BLM and management plans, the resource management plans, and (unintelligible) associated with the Denali State Park.

MR. GILBERT: Louise, can you be just a little bit louder?

MS. KLING: Oh, sure.

MR. GILBERT: Yeah (affirmative), thanks.

MS. KLING: Next slide. And then to continue or I guess refine a

little bit more on the baseline data collection, this is just a snapshot of some of the desktop data we collected from the BLM, resource management plans, showing the results of their baseline visual resource inventory for the area. That included characterization and mapping attributes such as scenic quality, visual sensitivity, and distance zones. So we were able to obtain those data and include those in our mapping of the project area. As you can see, there's a higher sensitivity associated or attributed to areas along the Denali corridor, and no variance occurred in these methods.

Tim, next slide. And this is just sort a snapshot of the types of data that we collected when we were onsite at each of the analysis locations. So we don't have to dig into the weeds of this text, but it's just to kind of give you a sense of the type of information that we collected to cover baseline characteristics and then the type of photography that was collected to support potential future simulations or inferences about the appearance of project features on the landscape.

We made a real effort to make sure that our photography represented

the accurate human field of view, both in terms of the horizontal and vertical field of view. So you'll see each of the analysis locations was documented in a full panoramic.

Next slide, Tim. And at each of the analysis locations we also collected soundscape data, baseline data, using both long-term and short-term monitors. We implemented this baseline data collection over all four seasons and, again, at sights well distributed across the project area or the analysis area. And there were no variances that occurred in these methods.

Next slide, Tim. Finally, our work included an assessment of the downriver study area. This was done to support a decision point on within normal limits to extend our study area to the Lower River. We approached this in a question-answer approach where we focused on three main subject areas.

So the first was to look at potential changes in landscape character that could be invoked by changes in river morphology, riparian community distribution and extent, price distribution and extent, and also seasonality.

We looked at -- we considered aesthetic flow, the changes in more

turbidity and potential changes in aesthetic attributes of the river channel that could occur from reduced summer flow or increased winter flows.

And then we also coordinated with the flow based recreation group to understand potential changes in viewer groups. And based on the information that we were able to obtain through coordination with geomorphology, riparian veg, and ice processes, we made a decision that the overall landscape character attributes of the Lower River would not be changed to warrant an extent of the study area to the down river area.

MR. KRAMER: Louise, what slide are you on?

MS. KLING: I'm on 10, but I think you can go to 11.

MR. KRAMER: Okay. You're on 11.

MS. KLING: Yeah (affirmative), so based on the OS-1 and OS-1B model, we determined that the changes to river flow stage, sediment load, and ice cover, that those would occur. However, they're considered to be within the normal range of variability, and what we expect in terms of our assessment of overall river character would be that the Lower River segment was expected to remain a wide and low-gradient, braided, and

turbid river.

And river uses are not expected to change. I'm not really going to touch on that. You'll hear from the River Recreation Flow Group on that. But our conclusion was that based on the information we have to date, extending the Aesthetic Resource Study downstream of Talkeetna is not warranted at this time.

And, Tim, next slide. So Steps to Complete the Aesthetic Study. We will be refining the viewshed models based on the most recent project layout. We will be continuing the baseline data collection. We will complete focus groups. We have three focus groups planned. Produce photo simulations to illustrate the anticipated visibility of project components, and we will complete the modeling of project sound levels to support the soundscape analysis.

Next slide. Next slide, Tim.

MR. KRAMER: It's on 13.

MS. KLING: There we go. There's a little delay. No modifications to the study plan methods were needed to meet the objectives of the study,

but as you heard from Tim, the study area has changed from that described in the RSP with the addition of the Denali East option road and transmission line corridor.

So we have completed a preliminary viewshed analysis for that corridor and incorporated that into our primary study area, and we also have taken a look at the extent to which our -- the analysis locations that we have established to date, the extent to which they can be used to assess that corridor. And so our upcoming baseline work will include some new analysis locations to address that new options that. We will also be making use of analysis locations established to date.

Next slide.

MR. KRAMER: That's it.

MR. GILBERT: Good. Thanks, Louise. It sounds like a lot of work has been accomplished; that soundscape data collection is completed and so on.

So with that, let's open it up, questions, comments to Louise's status, results, approach.

MS. THOMAS: Louise, this is Cassie Thomas, and I'm wondering, as we move forward and start working on some of the photosimulations, obviously a goal of collecting all this data and doing the simulations would be to try to cite some of the project facilities in a way that minimizes their impacts on aesthetics.

So I'm wondering whether -- you know, what you're actually going to do when you do, say, a photosimulation of the new East Denali route where there would be an access road and also a transmission line that be co-located with what right now are a couple of fairly important regional trails. Is there -- are you just going to be -- from the ISR, it looks like you're just centering those facilities on a kind of right-of-way of a certain width, but I'm wondering if you're going to get to the point where you could actually, for the transmission line especially, hide it a little bit, whether you're following contours or, you know, using landforms to make it less obtrusive? And I know there's a lot of other factors that go into deciding exactly where a transmission line might be located. But, you know, are we going to be able to do that at this point, or are we going to

have to wait until much later in the process to do that kind of fine detail?

MS. KLING: The work that we will -- the information that we'll provide through the ISR is really the information that's needed to inform those types of decisions.

Kirby, jump in if I'm misrepresenting the process at all.

But what we will really be focusing is identifying the mechanisms of change, and those will be certainly site-specific, where we've identified certain areas that may be more sensitive than others based on input we received from the focus groups. So there will be very much a sort of attention focusing on those, you know, more sensitive areas.

But the goal of the simulations is also to be able to extrapolate information to, you know, the very large number of analysis locations that we survey. So you look for similarities in what we call analysis factors, which are things like distance, the angle of observations, that sort of relationship between the viewer and the project components, the type of activities, the user (unintelligible).

So there's sort of a whole suite of analysis factors that we consider

that we -- then we don't re-simulate a subset of analysis locations. We really apply those inferences to the project area as a whole, and from that what we can provide in the ISR is a really thorough understanding of those impact mechanisms and then move into those discussions from there.

MR. GILBERT: I would.....

MS. KLING: You want to add to that?

MR. GILBERT: Yeah (affirmative), well, I would just add that I think, you know, right now we've got these corridors and we have road and transmission line alignments that are sort of centered and engineered. They're engineered basic alignments. But all these studies, I think of into a project like this, even to models we were talking about earlier, a couple runs, but they're all tools. So as long as this study can build a tool, and Louise is building these photosimulations; the points, the tools, things can be adjusted, but typically transmission lines -- tower spotting happens after we complete a lot of the inventory studies and build the tools. And then we can work out -- because sometimes you're spotting them based on wetlands. So that has to be factored in with aesthetics, but we'll have the

tools to do that.

MR. DYOK: Yeah (affirmative), I think, Cassie, you hit the nail in the head when you said there are a lot of factors. There's cultural resources. There's wetlands. And so our goal is to get the baseline information done, look at the impact assessment. I think, you know, specific siting is really not going to be a part of the, you know, license application. We're going to have the tools and the mechanisms after that to be able to refine exactly where things go within that, the general alignment that we're going to present.

MS. THOMAS: So just to be clear, these photosimulations are going to be fairly general and might be tools for comparing two or more different access routes, but they're not going to be simulations that really are used for project decision decisions other than comparing big things like.....

MR. GILBERT: Well, we'll try to get to that though.

MS. THOMAS: Yeah (affirmative), no, I understand ultimately, but at the study report completion phase.

MR. GILBERT: Yeah (affirmative), because we're still in feasibility really.

MS. THOMAS: Yeah, yeah (affirmative), right.

MR. GILBERT: Until you create a proposal that's more specific. Then we can start narrowing it down, the choices that are amongst cultural wetlands, straight-offs to improve -- make the best design possible.

MS. THOMAS: I guess -- you know, and maybe I'm not asking the question right. I guess what I want to know is whether we're collecting all the data we will need to do that kind of really site-specific, move that pole 200 feet to the west, or is that going to require going back and revisiting some of this?

MR. DYOK: I think generally we're going to have the information in all the different, you know, areas. We'll have the wetlands information. We'll -- have some general engineering information, and so we'll have a general, you know, sense of where this -- but, a specific pole is going to be in this spot.....

MS. THOMAS: Yeah (affirmative).

MR. DYOK:that's really a detailed design.

MS. THOMAS: And I know we're not there yet, it's just whether we have the baseline information to assist us, do the simulation and focus group work or whatever we do at that point.

MS. KLING: I think the answer to that is yes. There will be plenty to have a conversation about -- you know, about certain areas and the ability of that landscape to absorb project components. And so we'll have - - you know, we have an understanding in each area with each collection of analysis locations that might target a larger geographic area and sort of what the attributes are of that landscape. Is there a lot of topography? Is there a lot of veg? You know, is there short tundra veg versus forested veg? So we'll have a lot of the sort of, you know, more general and sort of basic screening and sort of landscape factors that are available to us to think about, you know, the types of inputs that you would put into any of that kind of micro-siting exercise that would occur in conjunction with consideration of all those other resources.

So I think the short answer to your question is yes. It's not going to

be, you know, back to the drawing board. I think anytime you identify a pitch point or a site that's particularly sensitive, there's always, you know, a fair amount of thought and, you know, return visit to a site like that, but at a much later stage when we're up to that.

MR. GILBERT: So it's probably sort of coarse now, coarse with sensitivity areas. It's the same with the wetlands cultural that we narrow down to try to nail it at that point. But the study should provide the tools, at least for that first screen and more, as much as possible.

MS. KLING: Yeah (affirmative), and the simulations will give us, you know, a very good understanding of those impact mechanisms, and that really does give you a lot of information about, you know, where to focus on and how to focus on that in terms of that micro-siting ramification; and that is part of our study plan. So that part will be included in the USR.

MR. GILBERT: Other questions, comments?

MS. WOLFF: I had a question. It's Whitney from the council. I want to commend Louise on this extensive study, and I wondered if you

could just help me to navigate it with the analysis locations and the acronyms here. This reference to OCs that are the most abundant.

MS. KLING: Yes.

MS. WOLFF: Do all of them represent travel corridors, or I'm missing the connection between travel corridors and the OC acronym?

MS. KLING: So the OC acronym -- so the analysis locations were categorized as observation points, and so those are specific points where, you know, a particular viewer may stand and -- you know, some type of prolonged experience with that view and observation area where, you know, there's sort of a larger geography where the viewer may be sort of moving through the landscape but not tied to any sort of established trail or route. So that's -- you know, if you can think in terms of just for recreation.

Observation corridors, they represent linear viewing platforms, and in this case we considered those to be existing corridors. So the Denali Highway is an obvious one. So that represents an area where the viewer is moving through the landscape, and, you know, notwithstanding, you

know, touching, stopping at interpretative signs or stopping at, you know, various campsites along that corridor. But in general, those viewer positions are considered transient or people sort of moving through the landscape, and the same would apply to trails or, you know, any of the off-road trails that are within the study area.

The other way that we expanded our thinking about observation corridors was also to think in terms of the potential access routes as future observation corridors, and we did this so that we would be able to provide AEA with information on future potential viewing opportunities, should the project be constructed. So there's, you know, sort of an existing observation corridor, and then there's also the, you know, potential future observation corridor.

MS. WOLFF: Great. That's really helpful. Yeah (affirmative), that's all. I mean, I see the list of the abbreviations way in the beginning. It's just I had to go back to be able to.....

MS. KLING: Yeah (affirmative).

MS. WOLFF:begin back here at the actual location. And then

just as far as the photo that Cassie was talking about, the projected photo.

MS. KLING: Uh-huh (affirmative), the simulations?

MS. WOLFF: Yeah (affirmative), the simulations. Those would then be in 2015, or when is that; do you know?

MS. KLING: Those are scheduled for 2015, correct.

MS. WOLFF: Okay.

MS. KLING: So they'll be included in the updated -- in the Updated Study Report.

MS. WOLFF: In the USR, okay.

MS. KLING: Yeah (affirmative).

MS. WOLFF: Great, thanks.

MS. KLING: And we do have in the study plan a provision that a subset of the photosimulations will be available at the focus groups.

MS. WOLFF: That would be great.

MS. KLING: Yeah (affirmative), so we won't produce all of them in advance of those meetings because we expect to get input from those focus group participants on areas that are particularly sensitive or.....

MS. WOLFF: And so also those focus groups go on in 2015 also?

MS. KLING: 2015 as well.

MS. WOLFF: Yeah (affirmative), okay.

MS. KLING: Uh-huh (affirmative).

MS. WOLFF: All right. Thank you.

MS. KLING: Yeah (affirmative), so those ones will be more of a conversation starter than

MR. GILBERT: Other comments, questions out there?

Cassie, do you have anything more for this one?

MS. THOMAS: No.

MR. GILBERT: We can go probably to River Recreation.

MR. DYOK: I'm wondering if we could suggest a 10-minute break?

MR. GILBERT: You want to go to break? Okay.

MR. DYOK: I mean, it's a long time.....

MR. GILBERT: Sure.

MR. DYOK:to go through from 1:00 to 4:00.

MR. GILBERT: Yeah (affirmative), because then it will start up on

the agenda time, which is 3:45. So, okay, let's take.....

MS. KLING: Thank you very much.

MR. GILBERT: Let's just take a break until a quarter til. That gets us back on the agenda time. We're pretty close. So we'll put you on mute and start up at a quarter to for River Recreation.

MS. KLING: Okay.

2:38:58

(Off record)

(On record)

2:49:41

MR. GILBERT: So, John, you're on?

MR. GANGEMI: Yes, I'm on the call. Can you hear me, Kirby?

MR. GILBERT: John Gangemi -- yeah (affirmative) -- from ERM.

Okay. So he's going to present. Tim is going to work the slides for the River Recreation Flow and Access Study.

Go ahead.

STUDY OF RIVER RECREATION FLOW AND ACCESS

(STUDY 12.7)

MR. DYOK: Go ahead, John.

MR. GANGEMI: Yes, this is John Gangemi with Environmental Resources Management. Can everybody hear me okay?

MR. GILBERT: Sure.

MR. DYOK: Yeah (affirmative), we can hear you.

MR. GANGEMI: I take that as a yes?

MR. DYOK: Yes.

MR. GANGEMI: Yes. Okay. Thank you for your patience, everybody. I know it's late in the day, and some of you have been at meetings all week for this project. So I appreciate your patience and attention. This will be our last presentation today. I'll make it brief so we can go to questions from you and comments.

Go to slide 2, Tim.

MR. KRAMER: There you go. Okay.

MR. GANGEMI: We had four study objectives for this. You've seen these in the ISR as well as the RSP. The first objective was to

document river recreation use and experience; the second was to describe potential effects of altered flows; and then the third, understanding river ice preferences; and the fourth, describing new boating opportunities that would be associated with project construction.

Next slide, please. The River Recreation Flow and Access Study. We divided the area into three river regions, and those were based on river gradient, which also affects the whitewater difficulty or river difficulty in a reach as well as access. And so we have river reach 1, 2, and 3.

Next slide. Before investigating River Recreation Flow and Access and winter recreation, we really relied on three approaches in addition to doing desktop analysis and field inventories. We put together an internet survey. We did executive interviews for both folks that use the river in the summer as well as in the winter, and then we are planning to do focus group discussions. The internet survey launched in June of 2013 and ran through August 1, 2014.

Next slide, please. And as I said, the focus groups will be done in 2015 as part of our second year of study.

Next slide. So I'm going to briefly go over how we did some of the data analysis for the internet study, and I'm just going to use an example from Reach 1. In our internet study, we had a number of questions that allowed us to get demographic information from respondents, and then we were able to sort that information based on their age, the gender, whether they were residents of Alaska or non-residents, what type of watercraft used, et cetera. All this information is available in tables in the ISR for each river reach that helps with understanding who some of the respondents were and what types of reaches they used.

Next slide, please. Similarly, we also asked people for each reach where they were putting in on the river and where they were taking out. And the way that internet survey was designed, you had drop-down menus where locations were specified out there on the landscape, and we also allowed people to write in locations and, if they could, include the nearest river mile or other adjacent location. So it allowed us to track where people were putting in and taking out on the river.

Next slide, please. And then one of the questions we asked was

what the primary purpose of the recreation was out there, and then we also had drop-down lists where people could choose from the type of recreation. And those questions were developed with stakeholder input.

Next slide, please. In the survey, we also asked people to indicate when they had actually recreated out on the Susitna River. And one of the beauties of an internet survey, it's not restricted to the current year of activity. We collected data that actually dated back to 1977 where folks were on the river. We were able to get a long-term data set, and this graph shows the hydrograph at Gold Creek correlated with when people were actually recreating on the river and whether that was motorized, non-motorized, or another group called air trips.

Next slide, please. And then this is the same type of data but just looking at the 2013 study year alone in Reach 1, and again, basing that off the Gold Creek gauge, the Gold Creek gauge was the preferred gauge from stakeholders that responded on the internet survey where they said that's what they used as their reference. Although there are other gauges that are available in there, we also looked at those.

Next slide, please. And then switching gears for the River Ice Dependent Recreation on the river corridor, we did executive interviews, and one of the things that we found with those executive interviews is that people don't go out usually for just a single purpose. They're often doing more than one activity out there and can be using motorized and non-motorized in the same trip. For example, they might be on a snow mobile to access the area, and then switch to snowshoes to go check traps or have that with them as a safety mechanism.

So we felt the pie chart was the best way to present that data to show how people were using the area for different activities.

Next slide, please. So for the first year of study, so far we've done the internet survey data collection, and that, as I said, collected through August 1, 2014. And then we'll take that data and analyze that in the USR.

Next slide, please. And at this point we don't propose any modifications in the second study year for the River Recreation Flow and Access Study Plan.

Next slide, please. And then we have had some discussion with

both the recreation and the aesthetics group on a presentation on the downriver study area. Similarly for us, we looked at flows downstream of the study area, using the HEC-RAS modeling, using the OS-1B -- OS-1 and OS-1B. Those cover a regular water year, a dry water year, as well as a wet water year, and based on the natural variation that was out there from a river recreation standpoint, the data was showing that the variance would be within the existing natural variation and felt it wasn't necessary to extend the study boundary downstream.

We also coordinated with the ice processes group, the geomorphology group, and then coordinated internally with our recreation team, both for recreation resources and aesthetic resources to discuss the downstream study boundary.

Next slide, please. So I basically went over this already. In terms of the downstream river -- downstream study boundaries, discussed the flow regime not changing within the -- staying within the natural variability that's out there.

The sediment load and channel shape downstream of the confluence

of the Chulitna remain relatively the same, and channel shape, as a result, is going to remain consistent from a river recreation standpoint.

The longitudinal ice cover downstream remains largely unchanged in the Lower River.

Next slide, please. So for us to complete the second year of study we will be analyzing the internet survey data that was collected through August 2014.

We'll be supplementing our existing executive interviews for both river and winter ice with more interviews.

And then we will be conducting the focus group discussions for both Devil's Canyon and a winter ice and snow travel group in 2015.

Next slide, please.

MR. GILBERT: Okay.

MR. GANGEMI: Open to comments and questions.

MR. GILBERT: Yeah (affirmative), thanks, John. Good summary. Some of that is similar on the down river, but we could do more discussion of that as needed. So you made some good progress, and yet there's some

things to do.

So, yeah (affirmative), let's open it up for comments and questions.

MS. THOMAS: John, this is Cassie, and I'm wondering how many more responses you got from the internet survey through the end of last summer compared to what's reported in the ISR. Do you have a ballpark figure for that?

MR. GANGEMI: Yes, I do. Thanks for asking that question, Cassie. We got a total count of 204 responses by August 1st.

MS. THOMAS: So that's in addition to what's in the ISR?

MR. GANGEMI: No, that's the total count at this point in time. So at the ISR we had 88 completed responses. So in addition would be another 116.

MS. THOMAS: Wow. Good, thanks.

MR. GANGEMI: I hope I didn't put myself in a spot there with my math skills.

(Laughter)

Other questions?

MR. GILBERT: Yeah (affirmative).

MR. GANGEMI: Thomas?

MR. GILBERT: I don't know who's left on the phone, but feel free, you guys.

MS. WOLFF: I am. Hi. This is Whitney with (unintelligible). I had a question, back again to this same subject of the extension. I'm reading more in detail. Obviously, you guys all used the same page there for your decision point, and I'm looking at the discussion of which gauge you used. And I've got some of the OS-1 flow in front of me. I'm curious if you did both. Did you base the study on the Sunshine gauge and compare that, and then you based it on this lower gauge that you felt gave you a more representative data set; or did you do both? Or just -- if you could review how you came to that decision that you opted not to use the gauge there, and you went down river to the more braided section.

MR. GANGEMI: I want to clarify what your question is, Whitney, to make sure I'm going to respond correctly. Are you referring to a gauge for the transect downstream that we were referencing?

MS. WOLFF: No, there was in the decision point discussion. It said that the part of the geomorphic and other project studies that came into play with that decision that were based not on the gauge at the bridge because it was felt to be too narrow; that they chose to go down river a bit to where they felt it was more representative of a braided river.

MR. GANGEMI: And are you referring to our ISR report or the slide presentation I just gave you?

MS. WOLFF: The ISR report.

MR. GANGEMI: So our Section 7?

MS. WOLFF: Yep.

MR. GANGEMI: Yeah (affirmative), that reference wasn't to a gauge downstream. It was actually to a transect that had been used for cross-sections in the river where they're actually able to measure elevations, and they can also measure flow at that location if they need to. But it's not a regularly maintained gauge like down at Susitna Station, if that's what your question is. But that (indiscernible - people speaking simultaneously).....

MS. WOLFF: Well, yeah (affirmative), that is what my question is, but thank you. The reason I'm asking is because we all have the Susitna River, Sunshine gauge information. I mean, I have it here in my hand for OS-1, and we don't have that data that you're basing the decision on. And I'm wondering if we could have it.

MS. MCGREGOR: I'm confused about that, Whitney, and I don't know if Dudley is still online. I believe it's in Appendix.....

MS. MCGREGOR:K of the Instream Flow ISR.

MS. WOLFF: Okay, great. Appendix A under.....

MS. MCGREGOR: K.

MR. GANGEMI: K.

MS. WOLFF: Okay.

MS. MCGREGOR: K of Study 8.5.

MS. WOLFF: And that transect.....

MR. GANGEMI: (Indiscernible - people speaking simultaneously)
what's available.

MS. WOLFF: And that transect is noted there.

MR. GANGEMI: That transect was included in the analysis that's presented in Appendix K, and it includes OS-1B.

MS. WOLFF: Because what I'm looking at was, you know, a figure of -- you know, the highest figure of a flow increase that was in the month of February, and it's up from 3,260 CFS to 8,340 -- I'm sorry -- to 11.6, giving you 8,340 increase. And I'm just wondering -- you know, it would be nice to compare that to the transect point. So I appreciate you telling me where it is, so we can view that.

MR. GILBERT: Sure. Yeah (affirmative), there's a lot of information. So it's important to look in other studies sometimes. And, you guys should cite it too. I guess, it's good to reference directly.

MR. KRAMER: Okay. We can.....

MS. WOLFF: Yeah (affirmative), that would be helpful. Since the actual Appendix isn't in this particular study, that helps to know where to find it.

MR. GILBERT: Yeah (affirmative). Other questions for John and his study team?

MR. WILCOX: Yeah (affirmative), this is Kevin Wilcox with FERC. Can you hear me all right?

MR. GILBERT: Yeah (affirmative), sure, Ken. Go ahead.

MR. GANGEMI: Yes, Ken. Thank you.

MR. WILCOX: Yeah (affirmative), I don't have the Revised Study Plan in front of me. I just got some notes here, but one of the items, study plan elements was the inventory of potential recreation opportunities of the reservoir area. And I didn't see that addressed here, and I didn't see it mentioned in the list of work remaining to be done. I assume that it's out there, but I just wanted to double check on that.

MR. GANGEMI: Good point, Ken. Yes, that's something that's still outstanding, and as we get more information on the actual footprints of what the reservoir will look like and the elevations, we will be doing that project.

MR. WILCOX: Great. Thank you.

MR. GILBERT: Yeah (affirmative), thanks.

MS. WOLFF: Could I ask one more question? It's Whitney again.

MR. GILBERT: Of course.

MS. WOLFF: And I'm just -- you know, I just have to keep hammering this decision point. I'm just curious what's the main thrust? Is it an economic thrust why you wouldn't want to include these other locations that we've brought up today that would provide some baseline data? Is it an economic decision on AEA's part? Just trying to understand the fairly, what I would consider, significant resistance to doing more recreational studies when they do feed so many other important ones, like we stated already with economics and health. I just want to understand this decision point and

MR. GANGEMI: I guess several people could try to....speak to that... probably for Kirby or Betsy, yeah (affirmative). several people could probably try to help.

MS. WOLFF: No, this is great.

MR. GILBERT: I guess, Whitney, the thing is this is about, again, additional information beyond information that's already out there, characterizing the recreation use and resource, and I think that's the way,

you know, it was put in the study plan determination, you know. I pulled it up here. FERC talked about requiring that applicant would not expend resources needlessly.

So we got resources; we got time, focus, and energy on what they're going to do to collect this additional information because we do have a lot of information in the literature; and this is additional information needed to complete the impact assessment. So I think it's just a question of time, and focus here, and resources, just as FERC put it in the study plan determination.

MS. MCGREGOR: And this is Betsy with AEA, just to answer that part broadly. Yes, as an agency spending state dollars, we need to be fiscally responsible, and, you know, we went through the study planning process looking at resource by resource, what the potential impact area was. That's how we established the study area for each of the studies, and these are quite expensive studies. You can see they're pretty robust. It's a very large study area, and we wanted to limit the amount of the study that we do for the overall program, which is just basically to assess baseline

conditions for impact assessments and development of PME's; and it is a guiding principle in this. And, yes, finances do come into play.

But with that said, I mean, that's why we've taken a triggered approach on many of these and said let's see what we find for the first year. Let's see what the use is. Let's see what the impacts potentially are, and then we can alter the second year, moving forward if we need to.

MR. GILBERT: Yes.

MS. WOLFF: Right. Yeah (affirmative), I mean, I would -- obviously, you have all of your A team there. I see that you've addressed the impact part. I'll just reiterate that I don't think you took a good hard look at the uses you're excluding to the risk of disenfranchising, you know, a good deal of Alaskans who are the funders of the studies.

And, you know, I do think that you'll hear about it. For the record, these people have meetings. They're organized. They recreate, and it's hard for them to, I think, believe that they're not part of this study. So I just want to impress that.

If there are ways you can include several of these groups in an

economic manner, I think you should really consider it, even if they happen to be -- if everybody doesn't get this study extended all the way down, that's not essential. The most important thing is to pick up uses and real uses that are easy to document, that I don't think would cost a lot of money. So I just want to reiterate that one last time.

MS. MCGREGOR: And they appreciate that.

MS. WOLFF: You've got a fishery three miles away from your project boundary that is full of economic value with facilities that should be a part of the study, and I just am amazed it's not included. So just something to consider if there's other ways, you know, that participants can figure out how to do it economically without too much effort. I would think it would be worth being a little creative, and that's the last thing I'll say about it. I appreciate you taking the time to listen.

MS. MCGREGOR: And we appreciate that. I think what we have to ask ourselves is how would the project potentially impact those users, and if it wouldn't impact them, then that's kind of what's defining our study area. So, I mean, just to think about that.

MR. GILBERT: Yeah (affirmative), and I think it's also about collecting additional information. We do have information. There's information out there for FERC to do NEPA and so on. It's just a question of how much more information. It's not black or white that they're not going to be ever evaluated. That's not the question. It's just how much more in a primary data collection sense needs to be done because there is information out there that has been used, as I mentioned the PAD. The study plan was based on existing information. How much more needs to be collected? And I think that's the real discussion here is how much more needs to be collected. It's not black or white.

MS. WOLFF: Right. Or I think where I was trying to phrase mine is what -- and that's why I was calling this kind of a donut hole. What small areas seems to have -- with all these overlapping studies, seems to have kind of missed the boat? You know, when I hear an economic study say, oh, I don't even know about Willow, you know, that's a little alarming.

You know, and maybe that might be that we need to make more effort to include it in the transportation study that looks at river travel, or

we need to make sure that the economic study, you know, puts it on the radar, if it's not in this study. But I do think we've identified a gap, and that in whatever form, just it needs to be assured its part of the overall study effort.

MS. MCGREGOR: Yeah (affirmative), and I just asked Maryellen if she would come to the table to clarify the Willow issue because it's not that Willow was excluded, and she can clarify that.

MS. TUTTELL: Yeah (affirmative), this is Maryellen Tuttell with DOWL HKM, and in terms of the study area discussion we had earlier, I know there was some confusion about the fact that we didn't have, in the transportation presentation, some of the communities that maybe Jonathan had mentioned or Pat. But that was because our change to the study area, our variance, was to add in things that weren't already in our study area. And our transportation study area had already included most of the maps along the road system and the trails, and things.

So it's not that Willow, and Houston, and those areas weren't included in the study area. They were included in the study area from the

beginning for the transportation study, and it was just that we hadn't included Whittier, and Seward, and some of the ones that were further south and further away. And so.....

MS. WOLFF: Yeah (affirmative), I think you misunderstood me. I was seeing you guys as a place that potentially was going to look at it. It was the economic study that I felt hadn't. Because they were being fed the recreational data just from these two studies, as far as economics, that was not included. So I'm hoping maybe the transportation study can pick up some of that flax.

MS. MCGREGOR: And again, I think the socioeconomic study does include the Mat-Su borough communities. So it would be picked up in there as well.

MR. KRAMER: Yeah (affirmative), and I was going to say.....

MS. WOLFF: But not on a recreational economic level, not on recreation-based particularly economics because that's being fed with these two studies.

MS. KIRK: Whitney, this is Tim Kramer. So I'm just going to

clarify that the surveys, what was actually sent to the Socioeconomic Study. So within the survey instruction, there's two parts to it. One includes -- it's a statewide assessment of recreational activities, and that was specifically put in there for the Socioeconomic Study. And that would include Montana Creek; that would include the Lower River.

And then there's a separate part that was specifically designed to look at recreational use within the recreation use study area, and that also included additional information; but it was more specific to the needs of the recreation study.

So there is information coming from the Recreation Study that's going to the Socioeconomic Study that covers the area that we're referencing and we're talking about.

MS. WOLFF: Right. I actually understand that. I went over the whole review of the tools, and I understand where they're going.

MR. KRAMER: Okay.

MS. WOLFF: It just -- that doesn't seem as extensively mapped or shared with the bulk of the other one, but I do understand.

MR. KRAMER: Okay.

MR. GILBERT: That's a good discussion, Whitney. It's important to look at them all, and the ISR gives us a chance to look at all the studies and the data they've collected and look at that. So people are taking notes.

MS. WOLFF: Yeah (affirmative).

MR. GILBERT: So this is good.

MS. WOLFF: Yeah (affirmative), I do appreciate it. I think it's -- I'm just trying to plug these local communities, you know. None of the councils in any of these five community councils have been contacted by URS as of yet. I know it's on your agenda later this year. It's a matter of just making sure that these people are included, and I'm hoping that will happen on whatever level that is.

MR. GILBERT: Okay.

MR. KRAMER: Thank you for that comment.

MS. WOLFF: Thank you guys for addressing it.

MR. GILBERT: Yeah (affirmative), good.

MS. MCGREGOR: Well, thanks for attending for six days.

MR. GILBERT: Anything else for John and his team? These are some good comments. Good.

Anything from the state?

Cassie, anything that you can think of right now?

MS. THOMAS: Nothing. I mean, I've got little, little stuff but nothing Earth shattering.

MR. GILBERT: Well, gosh, this has been really good.

Betsy, do you want to say anything?

MS. MCGREGOR: I just want to appreciate everybody's participation in these meetings. I think overall they were pretty productive, especially since people came prepared and able to discuss the materials. That was very helpful.

Where we are in the process right now, in January we will have another set of ISR meetings to cover the 22 tech memos that were distributed in September on 14 of the studies, mostly aquatic riverine studies.

January 22nd I believe.....

MR. GILBERT: Yes.

MS. MCGREGOR:end of January, AEA will file the meeting summary. We have had a court recorder at these meetings. We will provide those as they're available as we correct and make them available to everybody, but we will file them again as part of the meeting summary in January.

Then the licensing participants have the ability to file disagreements to the meeting summary or additional proposed modifications, proposals for new studies meeting the criteria that FERC has laid out -- that's in the introduction set of slides -- on February 21st.

MR. GILBERT: Right.

MS. MCGREGOR: And then the last round, at the end of March. AEA will file their response to the disagreements, and then we'll wait for FERC's study plan determination in April.

I don't know if anybody has any questions about that process, where we are. I would like to add too, you know, we have some unknowns as we wait for FERC's study plan determination and budget. So after the

legislative session, we'll be able to put out a schedule on how we plan on proceeding in 2015 and starting back up with the technical workgroup meetings.

MS. THOMAS: So no TWGs between now and, say, June?

MS. MCGREGOR: We plan on -- based on the comments we received in the meetings we had last week, we plan on having very targeted technical team meetings about specific topics the first couple weeks of December, in that time frame.

And then the Fish Passage Feasibility Study would like to have a workshop. We need to now figure out the best time now that FERC's schedule changed. But other than that, I don't believe we're going to have any more technical work group meetings probably until after FERC's study plan determination. Now that said, you know, I need to confer with our contractors and see if something makes sense. If there's something we want to get input from prior to starting the field season.

MS. THOMAS: I'd just be interested -- I know we've got focus groups planned for a couple of the different Rec and Aesthetic Studies, and

I don't know exactly when we're planning to do that. But I'd love to be a fly on the wall at those. So if there's a chance, I don't know if we need to talk about methodology before that, probably not. So I don't know if a TWG is needed, but I don't know if that's part of the standard meeting notification content.

MS. MCGREGOR: For the focus groups?

MS. THOMAS: Yeah (affirmative), but I'd be very interested in trying to attend if I wouldn't be biasing results by sitting quietly.

MR. GANGEMI: Cassie, we would like to have you be part of our focus groups.

MS. THOMAS: Thank you. So do you know when they're going to be, John?

MR. GANGEMI: No, we haven't scheduled them yet. This is John Gangemi over the phone. Yeah (affirmative), we will let you know ahead of time. You'll definitely be notified.

MS. THOMAS: I thought we had originally talked about trying to -- and your thoughts may have evolved since then. But I thought we had

talked about trying to do something virtual, you know, a web-based focus group that be during the off season for whitewater boating in particular because that's when you're more likely to get folks. But I don't know if you've thought more about that.

MR. GANGEMI: We definitely want to try and do it virtual so that we can pull in people, particularly for the whitewater group that might be more calling in from elsewhere outside of the state of Alaska that have experience in Devil's Canyon. We'd want to make that available to them. The timing though hasn't been set in stone yet.

MS. KLING: Cassie, this is Louise Kling. I would just also want to add that one of our three focus groups is specifically targeted towards public land managers, and so you would certainly be included in that.

MS. THOMAS: Although we don't manage any land within the project area, but thank you.

MS. KLING: I think you're within our secondary study.

MS. THOMAS: Maybe, yeah (affirmative).

MS. KLING: Yeah (affirmative).

MR. GILBERT: Good. Well, thanks.

MS. LONG: Hi. This is Becky Long and this will be the last thing I have to say. I just want to thank Kirby, and Steve, and AEA. I think these meetings have been very good, and very productive, and very transparent. So thank you.

MS. MCGREGOR: Thanks, Becky. We appreciate, by the way, how prepared you were.

MR. GILBERT: Yes, thanks for being real prepared. Really appreciate it. Helps a lot.

We'll close out then. Thank you very much, everybody.

3:21:37

(Off record)

SESSION RECESSED