# MORGAN FALLS HYDRO

## INTEGRATED LICENSING PROCESS

## STUDY RESULTS MEETING

April 17, 2006

8:45 a.m.

J.K. Davis Conference Center
Georgia Power Company
241 Ralph McGill Boulevard, N.E.
Atlanta, Georgia

Linda E. Cheek, CCR-A-752

LIST OF ATTENDEES

Facilitator:

Tom Sullivan - Gomez & Sullivan Engineers

David M. Moore, Esq. - Troutman Sanders
Hallie Meushaw, Esq. - Troutman Sanders

George Martin - Georgia Power Company - Project Manager - Hydro Relicensing

Brett Estep - Georgia Power Company
Steve Carr - Georgia Power Company
Larry Wall - Georgia Power Company
Greg Boortz - Georgia Power Company
Tom Broadwell - Georgia Power Company
Michael Abney - Georgia Power Company
Scott Hendricks - Georgia Power Company
Nancy DeShazo - Georgia Power Company
Wayne Hardie - Georgia Power Company
Mike Nichols - Georgia Power Company
Glenn Ivie - Georgia Power Company
Eldon Watts - Georgia Power Company

Alexandra Adams - Upper Chattahoochee Riverkeeper
Betsy Nicholas - Upper Chattahoochee Riverkeeper

Jim Long - National Park Service

George McMahon - Arcadis, Atlanta Regional Commission
Pat Stevens - Atlanta Regional Commission
Jim Santo - Atlanta Regional Commission

Alice Lawrence - U.S. Fish & Wildlife Service

Gregory Hogue - Department of the Interior

Lee Emery - FERC
Janet Hutzel - FERC
Elizabeth Molloy - FERC

Winnie Simpson, Esq. - Independent Consultant
L.G. Byrnes - Independent Consultant

Steve Layman - GeoSyntec Consultants

Jim Scarbrough - Gwinnett County Public Utilities

Sally Mills - City of Atlanta

Lewis Jones, Esq. - King & Spalding

Fred Cox - Southern Company, Hydro Services
Courtenay O'Mara - Southern Company, Hydro Services

(Reporter disclosure made pursuant to Article 8.B. of the Rules and Regulations of the Board of Court Reporting of the Judicial Council of Georgia.)

GEORGE MARTIN: I'd like to welcome everybody to Georgia Power's offices. I'm sure you-all know that we are here today for the Morgan Falls study results meeting. And what I'd like to do since there are so many of us in the room is to go around and introduce ourselves, although we probably know one another from prior meetings and whatnot.

And then while we do that I do want to put up the next slide, just to remind you where we are today and where we started from back in January of 2004, and there is quite a few milestones on the timeline and I'm not going to stand here and read them to you. Everybody can certainly look through them as we go around and introduce one another. And then I'm just going to turn it over to Tom Sullivan who is going to facilitate our study results meetings.

And Tom, you'll be the last person to introduce yourself, if you would, and then you can pick up from the timeline and we'll move ahead.

I'm George Martin, I'm with Georgia

Power's Environmental Affairs Department. And I function as the project manager for Hydro Relicensing and currently my focus is on Morgan Falls. And with that, why don't we just start over here with Winnie.

WINNIE SIMPSON: I'm Winnie Simpson. I'm an independent consultant to Georgia Power.

GREGORY HOGUE: Gregory Hogue with the Department of the Interior here in Atlanta.

ALICE LAWRENCE: Alice Lawrence, U.S. Fish and Wildlife Service out of our Athens office.

PAT STEVENS: I'm Pat Stevens with the Atlanta Regional Commission.

GEORGE McMAHON: George McMahon, Arcadis, consultant to the Atlanta Regional Commission.

JIM LONG: Jim Long, National Park Service.

BETSY NICHOLAS: Betsy Nicholas, Upper Chattahoochee Riverkeeper.

ALEXANDRA ADAMS: Alexandra Adams, Upper Chattanooga Riverkeeper.

HALLIE MEUSHAW: Hallie Meushaw with Troutman Sanders.

JIM SCARBROUGH: Jim Scarbrough with Gwinnett County Public Utilities.

DAVID MOORE: I'm David Moore, Troutman

Sanders.

MIKE NICHOLS: I'm Mike Nichols, I work at the Environmental Lab and we have worked on a number of the studies.

BRET ESTEP: Bret Estep, Georgia Power, Environmental Affairs.

STEVE LAYMAN: Steve Layman, GeoSyntec Consultants. We have been supporting Georgia Power in the environmental studies.

STEVE SANTO: Steve Santo with the Atlanta Regional Commission.

JANET HUTZEL: Janet Hutzel, FERC.

LEE EMERY: Lee Emery, FERC.

MICHAEL ABNEY: Fisheries biologist Georgia Power Company.

COURTENAY O'MARA: Courtenay O'Mara, Southern Company, Hydro Services.

WAYNE HARDIE: Wayne Hardie, Morgan Falls plant supervisor.

ELDON WATTS: I'm Eldon Watts, Morgan Falls plant mechanic.

LARRY WALL: I'm Larry Wall, Georgia Power Company, land department.

GLENN IVIE: Bill Ivie, Georgia Power Company.

FRED COX: Fred Cox, Southern Company, Hydro Services.

NANCY DeSHAZO: Nancy DeShazo, Georgia Power Environmental Affairs.

SCOTT HENDRICKS: Scott Hendricks, Georgia Power Land Department.

L.G. BYRNES: L.G. Byrnes, independent contractor.

GREG BOORTZ: And I'm Greg Boortz, Georgia Power land.

TOM BROADWELL: And I'm Tom Broadwell with Georgia Power's Environmental Affairs.

GEORGE MARTIN: And if that's it, I'm going to turn it right over to Tom.

TOM SULLIVAN: Good morning. My name is Tom Sullivan. I'm with Gomez and Sullivan Engineers. I have been hired to facilitate today's ILP study meeting. I want to go over a couple things with you, I want to give you a little bit of background on me so that you know who the fellow is standing up in front. And then go over a few things for today's meeting specifically.

As I said, I have been hired to facilitate the ILP study report meeting. My background is I'm a water resources engineer by training. I have

25 years of experience in FERC licensing, mostly in the Northeast. I have been involved in fishery studies, recreation studies, pretty much managing all aspects of licensing. For the last five to ten years my role has shifted from one of project manager for licensing to one of doing this type of thing, to facilitating licensing proceedings and/or in some cases mediating licensing proceedings.

George gave you a little bit of background about where we are in the process and really he gave you a historic perspective about where we are today. Today is the study results meeting. It is the point in the process that you started over two years ago now where you are going to go over the study reports that have been circulated within the last month.

There are a number of steps beyond this and George will go over those with you today, but probably the three most important steps from my perspective looking at your process are that in July you have license proposal meetings scheduled for the 24th through the 26th. In October Georgia Power needs to file their preliminary license proposal with FERC. And then next February, February 28th, they need to file their license application with FERC.

So there are still a number of steps in

front of us. Obviously, there has been a lot of work that has got us to where we are today. But today's mission, or today's, and the next couple of days is to go over the study reports.

Goals for the meeting. We are going to discuss the study results. We are going to talk about whether the studies met the approved study plan. And then we are going to discuss proposals, if any, for new studies.

The way that we are going to do this in terms of recording the meeting we are going to do it a couple of different ways. Linda is going to transcribe the meeting. That will be the part of the official filing with FERC, will be the transcription. I think all of you have probably been in transcribed meetings before and you probably know the rules of the road, but it helps her tremendously if you can say your name and your affiliation the first couple of times that you talk. Then after that I think we tend to get it and we'll be all set with that.

In addition to that, Winnie and I are going to keep areas of agreement and action items. And what we'll do is at the end of the day we will review those areas of agreement and action items with you. See if we can get closure on those.

Those areas of agreement together with what will be a number of PowerPoint presentations on the studies today will form a meeting summary which Georgia Power will also file with the Commission.

Just a couple of things about my role today. As I said, I'm here to facilitate the meeting which means I'm here to kind of help everybody keep the meeting on agenda, to be able to talk and to be heard. To get through the presentations. That role is significantly different than a number of roles people play that stand up here.

It's different than an arbitration role. It's different than a mediation role. And those really are neither one of my roles today, my role simply is to make sure that you can carry on the discussion and be heard.

Along those lines at this point in the proceedings a number of facilitators roll out ground rules and we spend a lot of times talking about ground rules, and I'm not proposing to do that today. I think the grounds rules are pretty basic for the next three days of meetings. There will be a number of presentations on study results.

I would ask -- the presentations typically are 15, I think, or 10 to 20 minutes, I guess is what

I heard. I would ask, if you could, to hold your questions till we get through the entire presentations. I have found in these things that a lot of times it is better to actually get through that and a number of the questions get answered as we get through the presentations.

That being said, you know, we are going to kind of see how that all goes relative to the complexity of some of the presentations and the studies themselves. We will be taking some breaks as we feel that we need them. You know, right now the agenda for today is broken into several blocks relative to studies.

The studies that we are scheduled to go over today are the wildlife and botanical resources studies first, the wetlands, Riparian and Littoral habitat study next. The rare, threatened and endangered species study last this morning. Then break for lunch. And this afternoon we're scheduled to review the fisheries study.

I believe this was an agenda that was published for everyone quite sometime ago as well as the agendas for the next two days beyond this. That's really all that I have to start. As you can probably tell, when I say words like start, I am from

New England, I put an R in everything, so if you can't understand what I'm saying, stop me. I'm kind of used to that.

The other thing is, today is tax day so just remember. If you have to leave, that's okay. One last thing, and this is just a housekeeping thing, if you have Blackberries or cell phones, I would ask that you put them on stun. I would ask, actually, you turn them off, if you can; but if you can't, put them on stun, please. I feel like the guy or the lady on the airplane last night.

Before we get started, does anybody have any questions for me about the logistics of what we are going to do today? Very good.

The first study that we are going to review today is the wildlife and botanical study, and I believe, Bret, you are going to take us through that; is that correct?

BRET ESTEP: That's right. Good morning. While Greg is getting this pulled up just wanted to say a couple of things, not necessarily an amendment to the agenda but just to let you know how we are going approach these three sections. The wildlife and botanical, the wetlands, and the RTE studies were all performed by the same team of biologists and for

the most part conducted over the same field visits.

So, what we are going to do is describe a common set of field methods and then go into each of those three study results with breaks in between there that are on the agenda. So what we'll see first is the combined methods.

Just tell you again, relate quick what we are going to do. I'm going to orient you to the study area since this is the kickoff presentation, just talk about Morgan Falls, where it is, all that kind of stuff. Generally you are going to know all that, I'm sure, but talk a little bit about our scales of analysis and some of the other details that you are going to hear and terms you are going to hear through the presentations.

Again, like I said, we are going to talk about the combined methods for all three areas and then we are going to hit the separate study plan objectives and results. We'll stop, take a break for the facilitated discussion and then go through the other two sections as well.

Briefly describing the study area, Morgan Falls reservoir; again the FERC project boundary is outlined in black in this map. It's the 868 elevation contour around the reservoir. Outside of

that you see a yellow line. That's a 2000-foot buffer around the reservoir which encompasses our study area.

Now, start using three terms here and just so you know, these should be repeated through all the resource reports. We have the project boundary, that's the FERC boundary, the 868 elevation in the black there. We have a study area which is defined by that 2000-foot corridor out of that 868 elevation. Also can be referred to as project area, you may hear that referred to study area, project area.

The third scale of analysis is project vicinity, and the project vicinity would be Cobb and Fulton counties. And so those are our areas that we are studying spatially. Also, just to orient you, Morgan Falls dam. And then the three units of the Chattahoochee River National Recreation Center, Island Ford on the east side of 400, Gold Branch, Vickery Creek. And keep wanting to call it Victory -- and then Gold Branch.

So those three units obviously in the wildlife and botanical RTE are going to feature prominently. Let's see, what else?

Other details, approximately a 7-mile stretch of the river is encompassed by Morgan Falls

reservoir. Again highlighting the three national recreation area units.

Now, the common methods that were used here that are more or less interchangeable across the three study areas. There was a substantial review of existing information. One of the great things about this area and one of the unique features having the national recreation area there buffering and up against our reservoir is that this area is well studied and it's almost like we have had a team of ecologists and botanists and wildlife folks out there for years, both amateur and professional.

We have got bird watching records from amateur naturalists. We have got folks that visit the Chattahoochee River -- I mean the Chattahoochee Nature Center. We have got folks that come to the park and they have kept detailed records, and we have reviewed all this off-the-shelf information, these previously published reports. I'm going to list some of those in a minute.

But again, those are in detail in your resource reports. The three resource reports that you have go into a lot more detail about those. But there has been a substantial review of the existing literature on the area.

We have performed, like I mentioned earlier, concurrent reconnaissance level field surveys. These were performed in the spring of 2005, a team of Georgia Power biologists and also some consultant biologists from GeoSyntec performed that work.

Also there was a fair amount of GIS, Geographic Information System analysis performed, analysis performed in these studies. We are going to talk about in a minute some of the change detection analysis looking at trends over time for both the wetlands and the vegetation mapping.

And again, there it is again, we looked at two in particular spacial analyses. One was the change of vegetation and land use from '72 to 2003. '72 is a key date there because it predates the Metropolitan Rivers Protection Act which established that 2000-foot corridor. It also predates the recreation area. Conveniently there is some good aerial photography in '72 so that facilitated our study.

And then the second temporal analysis that we performed was in the wetlands survey and that was between 1979 and 2004. And in '79 you have the NWI, National Wetland Inventory mapping for this area.

Now key sources of existing information. This overlaps all of our surveys here.

And this is, again, just a highlight. You have got the full detail in your resource reports but we have got the several park service studies. The management plan. You have got a detailed survey of the vascular flora of the area by Heiman in 2000. You got a Park Service vascular plant survey. You have got then an aquatic plant survey. You have got a checklist of reptiles and amphibians that's recent.

You also have fresh water mussel surveys. We have exotic plants surveys. Again, just a wealth of information and a great resource for us performing the studies. Like I said, also have a lot of amateur naturalists in the area that have kept pretty detailed notes on their field forays.

We also coordinated with the Heritage Program from the Georgia DNR and the U.S. Fish and Wildlife Service to get their published list for Fulton and Cobb County.

Now, that's the sort of combined overall outline and common field methods, study methods. Now we are going to hit each of the three study reports that you have, starting off with wildlife and botanical. We'll stop and take a break and we'll

field any questions at that time.

Study objectives for wildlife and botanical would be summarized in the three bullets. First, we want to describe the wildlife and botanical resources occurring in the project area. That's the 2000-foot area that we are talking about.

We want to produce a master list of those plant and animal species that are representative of those upland habitats, specifically uplands because we are going to capture the wetland riparian species in the other study report.

And then, thirdly, identify invasive species found in the project area. Generally we are talking about southern Piedmont, typical kind of suburban natural landscape for Morgan Falls, characterized by the upland forest. And those are three general types. You have some mixed hardwood and pine associations.

Again, you have typical plant species you would see in the Piedmont, oak, hickory associations, a lot of pine plantation that's left over and kind of intermingled, mostly shortleaf and loblolly.

You have some stands of reasonably good size hardwoods that are either on steep slopes or down in the flood plain that weren't harvested

previously. Almost all of this is second growth. And then you have some pockets of former pine plantation that have persisted and haven't been developed.

As far as vegetation community types for wetlands, again you have the three that you expect in the Piedmont and those would be generally forested wetlands scrub/shrub wetlands and some emergent wetlands that occur in the mud flats or on the periphery of the reservoir itself.

Now, the Heiman 2000 study was a great resource for us. Again, we visited Gold Branch, Vickery and Island Ford, but what's important here is we had this baseline of data to work from and a great resource. So Island Ford had the highest species richness of any land unit in the CRNRA, 293 species, just a neat resource. You have got some neat slope communities there on the side of the river and just a neat place. Gets a fair amount of recreational use. You have got the visitors center that's right there.

Vickery Creek heading up on towards Roswell and the Big Creek water shed, also a unique area. You have got some cliff communities back in through there. Again gets a fair amount of trail usage but do have some neat flora that's back in that

area.

And we did have one location of a new population of Cypripedium, pink ladyslipper that was discovered by five individuals right on the side of a trail, pretty heavily used trail back in there but a nice little find during our surveys in the spring.

And then Gold Branch, also a high species richness, it's a bigger area. You have got a nice block of natural community back in there. And we also have power line right-of-way there. And in this disturbance habitat we have a population of Georgia aster, federally listed candidate species. But again, interestingly Georgia Power has three places on its right-of-way we have Georgia aster; probably previously a fire dependent species but our sort of regular mowing of those areas provides that early successional habitat that's been really kind of a nice place for Georgia aster to thrive.

Now, one of the things we are charged with in the study plan was to develop a vegetative cover map of the study area. Again, it's the same layout that you saw before, Morgan Falls Dam, the 2000-foot buffer. And what's important to see here this is really not meant for us dissect on screen but it's in your resource reports, if you want to look in detail.

But in general, your wetlands communities are in the purple to light purple color range. Forest canopy are in the green range. And then the gray are the developed land that you can see in here.

So you have got pockets of golf course, you have got pockets of the recreation area that you see that are the big forest blocks. And then you have got a pretty well, a patchwork community in a suburban environment. But for north Fulton County it's really kind of a nice natural community and a good place for folks to both go and enjoy wildlife and then also just a good inherent place for a natural community to exist.

Now, just looking at some detail about the breakdown through our spacial analysis again, that coverage was taken from an existing land use land cover theme or layer from the USGS, and what we did is field troop that, update it. It was about, three years old, so we went through, ground trooped that, took our field notes, took those blocks and then performed a GIS analysis to bring that up to date.

And it's sort of what you expect in a suburban environment. Like we said before, mixed pine hardwood in the Piedmont where you don't have a lot of pine plantation; you are going to have a fair

amount of that. Got a lot of hardwoods that's still out there that are mostly on those sleep slopes that either weren't harvested or weren't harvested as recently.

And then again, this is a suburban area, so you have about 18 percent developed land either suburban, meaning medium density residential or there is some commercial in there as well.

Other prominent feature, obviously, the open water is the reservoir itself and that stands out. One other thing to note, the 2000-foot buffer encompassed about a 5600-acre study area, project area. Land use land cover, this sort of will provide the base of our change analysis over time.

This is a 2003 simplified land use land cover that we used, I believe this is ARC data. And again, you see areas of golf course in the purple there. And then you have got some other blocks. Again, the codes here are not really the detail you want to look at on screen, they are in your resource report. But what we are going to show is what our analysis over time looked like.

The '72 land cover, and again, this was black and white photography versus true color photography from the '72 to 2003, but it still

provides a good baseline for us to do this change analysis. And it revealed a few things that aren't necessarily earth shattering but they are pertinent to what we are talking about here. And that is -- and I'm just going to highlight a few things here for us to look at.

Forested area in '72, about 59 percent of the total project area. Now, you are looking about a 30-year period and over that time you have seen a reduction in forest area by about 35 percent. Again, not necessarily unexpected but kind of interesting. Most of that conversion has been from forested blocks to medium density residential, and that's played out by what you see here on the next line, medium density -- actually, you could combine those together, there is not very much high density in that part of Fulton County.

But if you look at the change in medium to low density residential, that almost accounts for all of your change in forested cover. And that's not unexpected for anybody that's lived in the metro area for the last 30 years, you have seen a push to the northern suburbs, you have see a push up 400 and you have got that medium density residential development in there.

Now, that being said, from an ecological effect on wildlife, yes, we don't have those large contiguous forest blocks that we had in there before. These are non-park service lands primarily. But you do still have that matrix that most of the wildlife and botanical resources that we see in this area are still able to navigate. Those, that type medium density residential that's now about 30 years old still provides a pretty good corridor for the three main branches or three main units of the Park Service land to be connected.

Now, we are going to go through in detail all of these lines. No, I'm just kidding, it's a little too close-up for us to look at; but really, this is just meant to capture some of the detail that are in your study reports, and I would encourage you to go through there. Some of the things we are charged with out of the study plan are to develop master species list of plant communities, master species list of invasives, master species list of herbs and all these types of things. These are all in your study reports, as well as some of the off the shelf data is reprinted in there as well.

While we are here I'll just tell you real quick for the invasives and exotics what we found out

there are sort of the usual cast of criminals. You have got a lot of kudzu. You have got a lot of English Ivy in sort of this 30-year old suburban type of area. You have got Russian olive. You have got a substantial amount of privet in the floodplain. Again, the same kind of things you would see in the Piedmont. You have got some interesting stands of bamboo on some portions of the reservoir as well. And those might be opportunities for us to do some enhancements through the project.

Finally, to summarize the wildlife and botanical. Since the '70s land use land cover has changed. We have seen that. Again, not earth shattering but nice for us to be able to quantify that predating some of the things that are key in the study area. A big shift between forested blocks and medium density residential. Medium and low density residential.

And what you had there is almost a direct exchange. With exception of the national recreation area, the general community can be considered a patchwork. You have got three of those big blocks that we are talking about and then the rest of the area is a sort of forested suburban area. So it still provides a patchwork, a matrix that we can have

a pretty good diversity of wildlife and botanical resources but it is broken up a little bit.

Finally, the recreation area and the 2000-foot buffers established by the Metropolitan River Protection Act; that provided a role in protecting these remaining forest blocks. Having these big blocks undoubtedly in this part of Fulton County they would be developed, they would be residential at a minimum but because of these protections we have been able to have these anchors in this community.

And the undeveloped shoreline and adjoining forest and wetlands provide a habitat for this relatively diverse community and also a linkage for those. And the reservoir itself and the wetland communities that are supported by that; again a key component in this Matrix.

Now, that's our wildlife and botanical. I think we'll stop there before we move into the next two resource sessions and field some questions.

TOM SULLIVAN: I think what we'll do is we'll go through questions on this report. I would remind everybody for Linda's sake if you could just state your name and who you are with when you ask the questions. Clarifying questions, comments on the

report, you know, now is the time to do it for that report.

BRET ESTEP: Yes, ma'am.

ALICE LAWRENCE: Alice Lawrence with U.S. Fish and Wildlife Service. My question that I had that I think I know the answer but I just want to make sure I understand. The, like, the invasive species that you just mentioned in the wildlife and botanical resources report, those are all outside the FERC boundary?

BRET ESTEP: No. They can be in both. Absolutely.

ALICE LAWRENCE: So that's the full pool contour, 868 full pool contour is the FERC project boundary, but there are some kind of upland areas that are just not inundated but certain areas --

BRET ESTEP: I don't know if I understand the last statement you said but let me explain to you how we did that and maybe that will answer your question. We didn't draw a hard boundary between the project boundary, the 868 contour and the project area, the 2000-foot buffer for the invasive species. Certainly within that 868, say from the 868 down to the full pool elevation, there are mostly wetlands and shoreline habitat. But as you would expect, in

that area there is a fair amount of privet, there is a fair amount of the bamboo that's in certain places in there. So the invasive species for uplands are not restricted just to the 2000 but they primarily occur in that area. So...

ALICE LAWRENCE: That was my question for both of those reports, I wasn't sure kind of that divisive line.

BRET ESTEP: I didn't mean to interrupt you there. For the submerged aquatics that we talk about in the next study we also identified some exotics there, the Myriophyllum and alligator weeds, certainly those are confined primarily to that 868 just based on habitat but not exclusively.

Now, one thing we did do on that one, the study plan calls for us to map those and take those sample points. The study plan for upland invasives wasn't really requiring a mapping per se but, you know, you can highlight those areas and they are as you would expect more or less distributed throughout.

ALICE LAWRENCE: My second question is, does Georgia Power own any uplands adjacent to the full pool 868 contour besides the power house?

BRET ESTEP: I'm going to defer to the land department on that one for details, maybe Scott

knows. But I would say outside the power plant there is probably not any.

SCOTT HENDRICKS: Alice, the only thing that Georgia Power really owns outside that 868 is right there around the power house in the project corridor.

BRET ESTEP: I think there were some land holdings historically and those had been either transferred or donated to provide some park units over time, I think. Is that right, Scott?

SCOTT HENDRICKS: That's right.

BRET ESTEP: Other questions? Again, I'll be around all morning, if there are some side questions or if you get into the resource reports and you have other questions, please feel free to contact me.

TOM SULLIVAN: One question I'm going to have for the group as we go through each of these, and we should deal with it now, as to whether you are prepared to answer this or not is whether or not your feeling is that the study met the revised study plan, you know, the accepted study plan or not.

You know, obviously there is a comment period that George will go over at the end of the day, too, but I mean if we know it does, I'd just as

soon take care of it now, too. So what's the group's feeling about that? I mean have you had an adequate opportunity to review this? Do you believe that it has met the study plan objectives or do you need more time in terms of the written time frame?

BRET ESTEP: Am I allowed to comment on that?

TOM SULLIVAN: No.

ALICE LAWRENCE: I'd probably just like to run over the study plan.

BRET ESTEP: Absolutely.

ALICE LAWRENCE: What was outlined beforehand.

BRET ESTEP: Again, these are just summaries, it's ten minutes of what's going in there.

ALICE LAWRENCE: I have read the reports but --

TOM SULLIVAN: That's fair. You want to go on to the next one?

BRET ESTEP: So, the second resource study -- and again, we outlined the common study areas and general methods that we used for this, but what now you have are wetlands, riparian and littoral habitats in the project area. Again, we'll hit the objectives and then we'll talk about the results.

So, primary objective, describe the floodplain, wetlands, riparian and littoral habitat occurring in the project area. Similar to vegetation and wildlife we want to develop some species lists of representative plant and animal species.

Again, also following the theme there we want to identify the invasives that are found in the project area. And finally prepare a wetland, riparian and littoral habitat map for the project area. Again, project area, that's the 2000-foot buffer encompassing at that point additive of the FERC project boundary.

So, three main types of wetland deep water habitat that occur in the study area. This follows the Cowardin system which I'm sure you are familiar with. Riverine, Lacustrine and Palustrine systems not unexpected in the Piedmont. Sort of typical of what you would see in the Piedmont but not necessarily typical of what you would see in a metro area.

The lake in and of itself and the Park Service combination there have actually provided an amount of protection for us to have some wetlands there that we wouldn't necessarily have otherwise. The Riverine system is open channel without emergent

vegetation. Obviously prominent feature here, the river in itself confined within the river banks on the upper part of the project area. And again, that extends on up to Buford Dam.

The Lacustrine system that's in there, the deep water habitat, the permanently flooded -- these are the open water areas. Some of the backwater that is a little deeper. And then the main body of the reservoir itself and then the Palustrine wetlands. And again, these are your forested emergent and shrub/scrub wetlands that occur in the project area.

When we get to the map you'll see that most of this is again immediately adjacent to the reservoir because you have for the Piedmont generally a pretty steep slope that occurs straight off of the river bank. There are some pockets in there, some spring-fed wetland pockets and little cove seeps that are around but mostly the wetlands are confined to the periphery of the reservoir itself.

Now, orient you again, Morgan Falls Dam project area boundary, the 2000-foot corridor and what you have here is the NWI coverage, that's the National Wetland Inventory mapping provided by the U.S. Fish and Wildlife Service. And what we have done, we have taken that mapping and updated it

through field reconnaissance. So, that was the charge here, to map those. The charge and the study plan was not to do a core delineation for 5600 acres, but it was generally to say on this landscape level what do the wetlands look like. So what we have done is taken that NWI mapping as a baseline and gone out and field trooped it.

Again, something you'll want to review in the resource study, you have got your Riverine wetlands, the Palustrine system is in green, what we would typically think of as wetlands. Then you have got the lake or deep water habitats as well in the browns and orange. You have got some of these pockets of ponds that are out here and mostly those are associated with -- those are golf course ponds primarily that you see through the landscape.

One other thing on this map that you'll notice, you'll see some numbers and arrows pointed. And what these are are sample sites for our submerged aquatic and emergent aquatic plant survey that was done as well. Developed a species list from those and in particular looked for invasives that would occur in the reservoir itself.

Now, let's look at the Palustrine wetlands that occur within the project boundary. Now, this is

within the 868. That's a good dividing line. You see the project area wetlands are also here but the project boundary because most of those occur right immediately adjacent to the reservoir itself, it's a good frame for us to talk against right there.

But as far as percentages, obviously Lacustrine unconsolidated bottom -- that's the lake, that's just a fancy way or jargon way to say that's the lake itself, that's the primary feature. But outside of that you have got some aquatic beds and those are those deep enough areas where we have got some emergent vegetation that's coming up poking through the water.

Now, other than that you have got the Palustrine areas that typically if you are a non-wetland scientist or non-wetland biologist you walk in and say that's a wetland, those are the Palustrine areas that you are normally talking about. And that's the prominent feature that's out there otherwise.

These are some of the backwaters, some of the fringes, some of the areas that are adjacent to the reservoir itself that have matured over time and provide pretty good wetland habitat and some nice actually wading bird habitat that we'll talk about

here in a minute.

Again, like I mentioned on the vegetation community analysis, we also performed a change detection for wetlands from the '79 NWI mapping to the 2003 mapping that we have aerial photography, 2003-2004.

In general, you have seen a lack or we saw a lack of pronounced changes in the shape or even the extent of wetlands. Again, not necessarily unexpected, this has been a generally protected area. There have been no major events to either remove or develop wetlands in the project area.

But what you have seen is a maturation in community types. So, some of those areas that 30 years ago were scrub/shrub have now sort of grown up into forested areas, and some of the emergents are now more scrub/shrub with black willow or buttonbush, that kind of thing.

There has been some sediment deposition on some of the shorelines, some of that has shifted. Again, not necessarily unexpected in a dynamic environment. One area we did notice in particular immediately downstream of the convergence of Big Creek with the reservoir there was a shallow side water that now has filled in with sediment, and what

used to be passable is now a small wetland. We'll see that when we zoom in on one of the maps.

Again, like we talked about in vegetation and wildlife, both MRPA and the Park itself have provided some protection in addition to the reservoir have provided a means for these wetlands to persist in this area and there is a fair amount of wildlife value associated with that.

Same slide or a similar slide to what we had in wildlife and botanical and this is just to remind you, in your resource reports is a lot more detail. Master species list for wetland and aquatic species, invasives, wildlife that's associated with these areas, they were counted in the field surveys and also from previous studies. Again, wetlands are well studied out there.

Summary for the wetlands, riparian and littoral habitat. Forested and shrub/scrub and emergent wetlands cover about 18 percent of the project boundary. That's inside the 868. So that fringe of what is outside normal pool elevation and then the FERC boundary are there is a fair amount of wetlands in there. And that's again what we want to talk about as having that protection, having that stability.

We have a relatively diverse community. Again this is a prominent feature in north Fulton County. It provides an area where we have been able to or just, you know, I don't know if it's providence or what, but you have had this preservation of large forested blocks in a few places plus the reservoir and this fringe of wetlands and you have got a nice matrix community that supports pretty good diversity for a metro area.

At least 35 species of aquatics. These are our submerged aquatics or emergent aquatics. Some of those invasives that we were talking about before, you have got Brazilian waterweed in there, you have got alligator weed, you have got some milfoil; again, none of the terribly exotic deep water plants that you would be concerned about in reservoir management. But you do have, you know, some of these invasive aquatics and none of them are at a density level that would be a concern.

But this, again, like we talked about before, probably an opportunity for some enhancement for us to do what we can along those shorelines to encourage the natives to come back in there.

Land use change in the area, accompanied by relatively little change in the extent of

wetlands, but there has been some change in the maturity and community composition. And again, the recreation area and MRPA have provided a means by which we have been able to preserve those wetland and riparian communities.

The wetlands study report pretty specific, generally focused at developing those species lists, mapping those resources, also examining off-the-shelf data and existing reports, some of the studies that have previously occurred in the area.

So, all that is in your study report. Again, I would encourage you to get in there and take a look at that.

And we are at the point of another question session, Tom.

TOM SULLIVAN: Yes. And actually same type of thing, if you have questions on this report, if you could just identify yourself and your question. And then what we are going to do is take a short minute and introduce new folks that came into the room.

And I actually skipped an agenda item which was FERC's presentation on their take of the purpose of today's meeting. And I apologize for that. So, we'll go to that after this. But let's

finish up questions on the wetlands, riparian and littoral habitat before we do that. Questions?

ALICE LAWRENCE: Alice Lawrence, U.S. Fish and Wildlife. I had a question about two of the exotics that were in the wetlands.

BRET ESTEP: Yes

ALICE LAWRENCE: Do you remember how extensive the yellow flag and the wartremoving herb occurrences?

BRET ESTEP: What's the genius for the wartremoving herb? You have to forgive me, the common names I don't -- I don't even especially for aquatics, I don't even think of those.

ALICE LAWRENCE: I'll tell you in a second if you want to take another question.

BRET ESTEP: The yellow flag was confined, it was more in the Gold Branch area, some of the backwaters. I don't know how familiar you are with that. But on the west side of the reservoir there are a couple backwaters that go up through there, and it was just on some of the sand bars that are out in front of a couple of the little knolls that poke out in there, not extensive at all.

ALICE LAWRENCE: Because those two species I think can be controlled, you know, with kind of

hand pulling.

BRET ESTEP: Absolutely.

ALICE LAWRENCE: So, if it's a small area, that's pretty doable.

BRET ESTEP: Yes, that would be a good opportunity. You could wipe those out in a day Give me the genius for the other. Or Tom do you know it off the top of your head?

TOM BROADWELL: I didn't hear what she said.

ALICE LAWRENCE: The wartremoving herb.

BRET ESTEP: Wartremoving herb.

ALICE LAWRENCE: I'll find it in here. I mean the common name, that just sticks --

STEVE LAYMAN: It's Murdannia.

BRET ESTEP: Tom, do you remember the extent of that one?

TOM BROADWELL: Pretty limited.

BRET ESTEP: Pretty limited as well. Tom is our chief aquatic plant guy so I'd defer to Tom on that one. I guess alligator weed was probably the biggest on some of the shorelines. Some of the myriophyllum.

TOM BROADWELL: Some myriophyllum, alligator weed, Brazilian Elodea or egeria densa.

There is some of that in some of the mudflats and up the river channels.

BRET ESTEP: None of the -- just a general assessment, Tom, none of the submerged aquatics and some of the things we run into as far as reservoir management and hydro production and also recreation boater use, homeowner use, we don't have a lot of those issues on Morgan Falls, but some of our other reservoirs we have a big aquatic plant program taking care of things like milfoil and other really invasive aquatics.

In general, Morgan Falls doesn't have a lot of those issues and primarily I think that's due to the rate of flow through there.

TOM BROADWELL: I think the rate of flow back when there was -- when we had a drought period, that some of those species were more abundant. Then you get these big flows and it just flushes it right on through

ALICE LAWRENCE: Because I know a lot of those other species they spread are by fragment, so once you have got them they are real hard to get rid of.

TOM BROADWELL: Yeah, once you have got them you are not going to get rid of them.

BRET ESTEP: But I mean like water hyacinth or some of those that really just take over, we haven't had those, thankfully. But you are right; again, I think these invasives that we have are some good areas that we might be able to do some enhancements through this process. And I think some of these would be pretty good sort of bang for your buck kind of labor, you know, kind of sweat equity type of enhancements.

Yes, sir.

JIM LONG: This is Jim Long with the National Park Service. And I guess as good a play as any but there is a wildlife disease that is associated with Hydrilla, Avian Vacuolar Myelinopathy.

BRET ESTEP: Yes, AVM.

JIM LONG: And I'm wondering if you guys have looked for any incidences of that in the project boundary or --

BRET ESTEP: To my knowledge, haven't been any specific sort of directed efforts to look for that. But what we have, again this sort of network of a highly used area is we generally queue in on those reports that we would get, and that would be sort of birds, water birds or eagles behaving

erratically, swimming in circles or flapping one wing or doing very odd things. Haven't had any of those.

We don't have Hydrilla out there. I may have mentioned Hydrilla earlier but we definitely don't have Hydrilla out there. So, that's a good one. But we are always on the watch. Tom, again, is our expert on that and has worked with some researchers out of Charleston, South Carolina on that issue so I'll let Tom say a little bit more about that.

TOM BROADWELL: I'm Tom Broadwell. That particular disease is caused by a Cyanobacterium which is, common name, I guess, a blue-green algae and which has yet to be named as a species, although they have got it isolated and they pretty much have it nailed down to that, that's the organism. It likes to grow on the underneath side of a Hydrilla leaf, underneath it. It can be found on Brazilian Elodea and other plants and it has been found in some of our other reservoirs, Lake Juliette being one place.

But the occurrence of the particular organism, they haven't yet figured out what triggers it to produce this toxin. And that's something they are working on, they have been working on now for at

least ten years. But it's primarily found on Hydrilla leaves, although it can be found on other including milfoil and other Brazilian Elodea and Egeria leaves.

But as far as we know we haven't seen, as Bret mentioned, any occurrence of eagles doing strange things, flying into trees, or other organisms that are susceptible to that.

JIM LONG: I haven't either, but I didn't know if there was more extensive search to kind of look for that.

BRET ESTEP: We haven't looked specifically for it and we -- again, I guess it's one of the benefits and challenges of Morgan Falls of being heavily used and sort of easily accessible to a large group of people. We get a lot of phone calls about a lot of strange things, haven't had that one yet but, you know, it could happen. But that is a -- it's been a -- something we have been in tune with, like Tom said, on some of our other reservoirs and it's a strange disease.

TOM BROADWELL: So far I think it's been found mostly on reservoirs with fairly long detention times and that stratify thermally. And this one doesn't do that

JIM LONG: I heard a presentation on it a couple of weeks ago. We had an invasive species meeting, somebody from University of South Carolina who had been working on isolating, you know, the toxin. And they are doing all sorts of stuff with that; but yeah, there is like a belt in the fault line in big reservoirs and they are trying to find out when does it become toxic, why does it become toxic.

BRET ESTEP: Right. Sorry, go ahead, Tom.

TOM SULLIVAN: Other questions for Bret on summary? If we could, then, what I'd like to do is -- what I'd like to do is there are a few new people that came in who I'm sure don't know who I am, so I'll introduce myself. And I don't know, if you don't know the other folks, I will ask you to introduce yourselves in a minute. And if you don't know everybody I'll -- we'll go around one more time.

My name is Tom Sullivan, I'm with Gomez and Sullivan Engineers. I have been asked to facilitate the study report meeting. So that will be my job for the next couple of days. Would you folks mind introducing yourselves.

ELIZABETH MOLLOY: I'm Elizabeth Molloy from FERC. I flew in this morning with only a

mechanical difficulty, weather challenges and a medical emergency. Off to an exciting start.

LEWIS JONES: I'm Lewis Jones with King & Spalding. I'm here representing Atlanta Regional Commission.

STEVE CARR: I'm Steve Carr, Georgia Power Company.

TOM SULLIVAN: Steve. Anybody else new since we started? Okay. I guess for Liz or Lewis or Steve, are you pretty well familiar with everyone here? Do we need to go around?

ELIZABETH MOLLOY: Let's go around again.

TOM SULLIVAN: I introduced myself. This is Linda, she is doing our transcription today. And you --

BRET ESTEP: Bret Estep, Georgia Power Company, Environmental Affairs.

TOM BROADWELL: I'm Tom Broadwell with Georgia Power Company, Environmental Affairs.

MICHAEL ABNEY: Michael Abney, Fisheries biologist Georgia Power.

LEE EMERY: Lee Emery from FERC.

JANET HUTZEL: Janet Hutzel, FERC.

JIM SANTO: Jim Santo with ARC, Atlanta Regional Commission.

STEVE LAYMAN: Steve Layman, GeoSyntec Consultants.

MIKE NICHOLS: Mike Nichols, I'm with Georgia Power, Environmental Affairs.

GEORGE MARTIN: I'm George Martin. I'm Morgan Falls' Relicensing Project Manager.

DAVID MOORE: I'm David Moore with Troutman Sanders.

NANCY DeSHAZO: Nancy DeShazo, Environmental Affairs, Georgia Power.

HALLIE MEUSHAW: Hallie Meushaw, Troutman Sanders.

SCOTT HENDRICKS: Scott Hendricks, Georgia Power, Land Department.

ALEX ADAMS: Alex Adams, Upper Chattahoochee Riverkeeper.

BETSY NICHOLAS: Betsy Nicholas, Upper Chattahoochee Riverkeeper.

JIM LONG: Jim Long, National Park Service.

GEORGE McMAHON: George McMahon, Arcadis, consultant to ARC.

PAT STEVENS: Pat Stevens, Atlanta Regional Commission.

ALICE LAWRENCE: Alice Lawrence, U.S. Fish

and Wildlife Service.

GREGORY HOGUE: Gregory Hogue, Department of the Interior.

GREG BOORTZ: Greg Boortz, Georgia Power, Land.

WINNIE SIMPSON: Winnie Simpson, consultant to Georgia Power.

COURTENAY O'MARA: Courtenay O'Mara, Southern Company, Hydro Services.

WAYNE HARDIE: Wayne Hardie, Georgia Power, Morgan Falls plant supervisor.

ELDON WATTS: Eldon Watts, Morgan Falls plant mechanic.

LARRY WALL: Larry Wall, Georgia Power Company, land department.

FRED COX: Fred Cox, Southern Company, Hydro Services.

L.G. BYRNES: L.G. Byrnes, independent consultant.

TOM SULLIVAN: Jim, we were introducing ourselves again.

JIM SCARBROUGH: Jim Scarbrough, Gwinnett County Public Utilities.

TOM SULLIVAN: All right. I did inadvertently skip over the meeting purpose on the

agenda this morning. Which is never a great way to start a meeting. So, Liz or Janet or Lee, if you want to take a second and kind of talk about the meeting from FERC's perspective.

JANET HUTZEL: This is Janet Hutzel. You pretty much went over it. I mean our meeting is basically this is the study results meeting to go over everything that's happened so far with the studies. And I think you have done -- you have pretty much said what we were going to say.

TOM SULLIVAN: Maybe that's why I skipped over it. I don't know.

JANET HUTZEL: There was nothing earth shattering.

TOM SULLIVAN: What I'd like to do is have Bret take us through the last of these three reports, the RTE report. And then I do kind of want to revisit the pertinent questions. After we have done the clarifying questions I do want to revisit how well did it meet the study plan to the extent we know, are there additional studies in this area that people feel that are needed. And we'll talk a little bit about those. So...

BRET ESTEP: Okay. Our final section, rare, threatened and endangered species. And again,

just like on the vegetation and wildlife, the riparian and wetlands, the RTE shares the same set of methods, the general methodologies, obviously some differences unique to the RTE survey, but these were performed concurrently with the other studies.

And again, utilized a fair amount of off-the-shelf data and existing information from both Park Service, Chattahoochee Nature Center, area naturalists and so on.

Study objectives for the RTE survey and resource area. Examine the list of known occurrences of federal and state listed species with a known occurrence, like I said, within the project vicinity. That would be Cobb and Fulton County. So we are going out to the broad range there. Identify their habitat requirements and describe the distributions and habitat use of RTE species presently occurring in the project vicinity.

Now, you know, these bullet points, you can almost wrap them up in together. But in general, for the non biologists a lot of times what we do for rare, threatened, endangered species surveys is with the exception of plants, which are very good about staying put, you have to go out and survey for habitat. Because the day you are out there or the

days you are out there or even the years that you are out there you may not see a particular species, but you can identify potential habitat and then either assess whether it's occupied or unoccupied.

So, those are our three main goals. Sort of the benchmark of what we would do on any rare, threatened or endangered species survey is look at that information. What are the known occurrence in the area that have been studied over the years, and then work from there and say, you know, do these exist there? Do we have habitat there?

Seven federally listed species have been documented in the project vicinity, that's in the two-county area. Aster georgianus -- and again, you'll see we are considering the candidate species here, but aster georgianus, it is reported from Gold Branch and does require disturbed early successional habitat.

So, most of the areas within the project boundary and within the project area are not great habitat, but the right-of-way in and of itself that we have out there is pretty good habitat. Generally you'll find aster georgianus on railroad rights-of-way, cemeteries, power lines right-of-way, roadsides, and the common theme there is sort of that

regular disturbance that is assumed to have been previously performed by fire and the landscape that we don't have now.

Flatanthera, white fringeless orchid, not known in the project vicinity, it's more of a forest interior species, does have some wetland requirements as well. Again, it is a candidate not discovered during any of the field surveys.

There is some habitat out there. But again, not expected that the project proposal in and of itself which is the relicensing, there will be no change in activity so there is no reason to think we would have any effect on that.

Finally, as far as plants go, Rhus michauxii. That is Michaux's sumac, there is only one known occurrence in Georgia, not in the project area. Probably again an associate with Georgia aster; requires that disturbance, probably fire dependent. We performed regular surveys on our rights-of-way because I think that would be a good place for it to occur. I think we'll find more populations in Georgia but probably not in the Morgan Falls area. More of a disturbance species again.

Two mussel species with historic records in the project vicinity. Shinyrayed pocketbook and

Gulf moccasinshell both apparently extirpated from the project vicinity, no recent records in Cobb or Fulton County, certainly no recent records in Morgan Falls.

Not going to go into great detail on those. The fishery section this afternoon, we'll talk in more detail about the mussel communities in Morgan Falls. But just know those are on the federal list, they are both listed as endangered, obviously very low population numbers.

From a bird standpoint skip down and talk about the eagle real quick, bald eagle. Again, great success story for the Department of Interior and the Fish and Wildlife Service. I mentioned before we do have some sightings. We have got the nature center out there. We have got a lot of avid amateur naturalists in the project area. We have some sighting of bald eagles in the project area.

No known records of nesting but certainly not outside the realm of possibilities. There is a good foraging habitat there. Certainly eagles are a lot more tolerant than we used to give them credit for of human disturbance, particularly if they sort of come into an area and already used to that.

We have a number of nesting eagles on our

other reservoirs and they intermix with our operations well, but I think it's just a matter of time as that population continues to rebound before we have some residents at Morgan Falls but right now we have just got some kind of wandering and I think probably disbursing juveniles coming through the area.

And finally, the whooping crane just last month we had several whooping cranes sort of stop over from their flight from Florida back to Wisconsin. And that NEP may not be an acronym you are used to. That's a non-essential experimental population. That's how the Fish and Wildlife Service is characterizing that population, this population segment of the whooping crane.

It is listed endangered on the western part of its range. For this eastern group that is making that reintroduced flight back and forth from Florida to Wisconsin it's a nonessential population and nonessential experimental population, treated a little bit different by the Department of Interior but certainly a great sighting out there at the lake, created quite a stir and an article in the paper we had about that and it's kind of neat.

You know, you have got last year you had

the same site, generally these mudflats out at Morgan Falls visited by migrant sandhills. And it's just a neat habitat in the metro area, to have these broad sort of mudflats, good wading birds habitats. We have got a number of wading birds that come through there and kind of a neat thing for all those amateur bird watchers that come through there to be able to go out and see that, it was pretty cool.

Now, the Georgia protected species, again, that we have out in the project area. There are six with known occurrences. I mentioned before, the Cypripedium, the pink ladyslipper that we found that we saw in Gold Branch -- I'm sorry, in Vickery Creek. There was also a previous documented population in Island Ford.

State listed as usual, probably never was a very widespread species. Or maybe it was more widespread but didn't -- it's probably never occurred in great numbers as most native orchids are not very extensive. They have received some collection pressure over time, local people that like to have pretty flowers in their gardens are prone to go out and dig these things up and take them in their gardens. And that's kind of where the State is coming from, in most cases, with the unusual

designation not critical but again something that both the Park Service and Georgia Power probably discourage folk from going out and doing anything with those other than just taking pictures.

Cypripedium parviflorum, small-flowered yellow ladyslipper, also in Island Ford. Again listed as unusual. Bay starvine, we have got a recent record of that from CNC staff member. It was on a road side. Kind of nondescript vine that you would expect to see, not a very specific habitat requirement. But just sort of a -- one of those naturally sort of low population level occurring species.

Fish species. Bluestripe shiner and Highscale shiner both with previous records, one relatively recently in Big Creek, the Highscale shiner. Bluestripe shiner, we haven't seen in about 50 years. Both out of Big Creek. Obviously Water Resources is going to talk more about the Big Creek watershed in and of itself wrapping all up to Alpharetta, a huge amount of sedimentation and development pressure there may be driving some of that also.

The fisheries this afternoon is going to talk in more detail about what sort of fish

populations we have seen both from previous studies and from some shocking events we have had out there. But those are listed.

And then finally, Peregrine falcon, it's listed here as a probable sighting. Again, we have got a lot of amateur bird watchers out there in addition to our biologists that go out routinely. I have one record of a guy saying, I probably saw a Peregrine. You know, a good source but he took his own record and said I'm not confident 100 percent. So, we are going to list that not outside the realm of possibilities.

We have got several individuals downtown. Peregrine is another great success story for the Fish and Wildlife Service and the Interior but generally not great habitat at Morgan Falls for Peregrines. So, may or may not occur there.

Listed as endangered still on the State list. The State is in the middle of reviewing their species list right now and designations, so thinking that one may get downgraded before too long.

So, to summarize the RTE species. Now, remember our objectives were to sort of evaluate the species that have known to occur there. Look at potential habitat against the species and not the

other way around. Develop those master species list, review existing information and what we have seen out there, one federally listed species, the bald eagle, has been definitely sighted in the project area; do have the habitat requirements for that.

Whooping crane, non essential experimental population, recently sighted in the project area, and again, good habitat for wading birds. Georgia aster occurs in right-of-way outside of the project boundary but within the project area.

Again, no change in the reservoir is proposed and I don't really anticipate any changes there. Might be a good opportunity for enhancement in how we deal with our rights-of-way, which incidentally we do have a right-of-way management program where we manage specifically for rare species plants in particular in our maintenance schedule. So that's another one that sort of piqued my interest.

And then finally six Georgia protected species in the project area based on current or recent sightings. So...

TOM SULLIVAN: Are there questions for Bret about the RTE report?

ALICE LAWRENCE: Alice Lawrence. With the Georgia aster I was thinking the same way you were

thinking and that's why I'm kind of wondering about the mowing schedule and the extent of the use of herbicides in that area. So...

BRET ESTEP: I can just tell you briefly since we have a minute here, we are running pretty well. What we have done over the last five years, Georgia Power Company, and this is sort of stepping out of the relicensing process, but just in general, we have partnered with the Georgia Botanical Gardens out of Athens and the Natural Heritage Program, botanists in particular. And the Native Plant Society and Georgia Plant Conservation Alliance.

Those groups and us sat down particularly, you know, Tom Patrick, I'm sure, and we sat down and said, okay, there are a handful of these species that are obviously disturbance dependent species, what can we do. And they occur in our rights-of-way, what can we do to sort of make sure that this maintenance that we have really been doing to maintain electrical reliability also is going to allow those to both thrive or maybe even work toward recovery. And we have had a successful program.

We have got about 15 sites statewide all across the state all the way down to Early County, all the way up to north Georgia with purple cone

flower and a number of different species.

It's been a successful program for us and we are always looking for sort of opportunities to add another species. It's been a challenge a little bit to sort of work with our right-of-way maintenance folks to say, let's talk about how we are doing this. The timing, if it's a late flowering species, we don't want to mow maybe until December or January, something well after seed set. If it's something that flowers in the spring, we want to adjust.

We have tried in several areas specifically with herbicides where we have said let's pull back, not use the herbicides. And what we have seen is the woodies have come in and really kind of overwhelmed. The purple cone flower has been a great example; we pulled off of there and the sweetgums and loblollies have just taken over.

So, what we do for herbicides on our rights-of-way is only backpack spraying, we do not do any broadcast spraying of our herbicides. So we go out and it's a cut/stump treatment or it's a spray of a sapling that's this tall, very little side spray, very little wind drift. And it's been an effective program

ALICE LAWRENCE: Our office was thinking,

too, with this population if there was any way to maybe not mow between, like, late summer, fall.

BRET ESTEP: Absolutely. That's something we do --

ALICE LAWRENCE: So I don't know if that would be within the FERC arena or outside this kind of arena, but I would like to talk to someone about it.

BRET ESTEP: It may be outside of it but we are certainly interested in doing that. And if it gets wrapped up in this, that's outside of my decision, but we are interested regardless of whether it's in this or not, working on these rights-of-way where we can work towards recovery.

Yes, sir

JIM LONG: Jim long with the Park Service. I guess I have one kind of process question. And that's how to add the whooping crane sighting into the report? Is that like going to be an addendum or --

BRET ESTEP: It's in the revised. If you didn't get the revised one there was a --

JIM LONG: I didn't. Last one I didn't, I didn't see it.

GEORGE MARTIN: It was posted on the web

site, the new March version, and it's also been filed with FERC.

TOM SULLIVAN: I had the same issue. It is on the web site. I got it off there on Thursday.

JIM LONG: And another question I had, and I'm wondering about Shoal bass as a State species because I think the State considers it rare. I don't know, Steve, if you know more about it or not. But I mean, would it be appropriate to put in this document or --

BRET ESTEP: Shoal bass is going to be treated in the fishery section this afternoon. As far as its actual listing status, is it listed as rare currently, Mike, and does it occur?

JIM LONG: But it's a game fish, I mean, it's one of those odd things.

BRET ESTEP: It is a rare game fish.

JIM LONG: Of course it's like all the salmon out on the West Coast.

BRET ESTEP: I may defer to the fishery guys for this one, Steve, if you have a comment.

STEVE LAYMAN: I don't think it's listed by the State unless it's something recent but it's tracked. It's got global and State rankings, so it kind of falls in the species of concern category.

JIM LONG: Whenever I get the Georgia Heritage records I get Shoal bass, and if you go to their web site, it's there, it's considered rare I think the last time I saw it.

STEVE LAYMAN: It's listed -- well, we discuss it, I believe, in the rare, threatened, endangered species report and we probably picked it up off that list. Its global and State rankings are I think stable in that report.

BRET ESTEP: Actually that's funny, as recently as last Thursday we were meeting talking about these presentations and Shoal bass was originally in there, and then we decided to take it out and let it be treated in fisheries. But it may be in the report. That's certainly something we can talk about.

And if it's in -- we have a coordination letter with the Heritage Program, I believe, that's in the project record. Is that right? That has the submittal for data requests from Greg Krakow. So it if it's listed it will be captured in the project record that way.

But as far as enhancements or anything like that, probably will be discussed this afternoon.

STEVE LAYMAN: Yeah. I'll just briefly

mention that it was collected downstream of the dam, we have not collected any in the boundary.

TOM SULLIVAN: Any more questions for Bret?

ALICE LAWRENCE: I just have one more. With the whooping crane, I guess this would benefit them as well as bald eagles, but something that's in the recovery plan for that species is that one of the major threats to the species is collision with power lines during migration. What's the likelihood that in the next license term that you-all would be adding new additional power lines? Is that something that --

BRET ESTEP: New lines across the reservoir? Let me answer the Avian interaction question two ways. Georgia Power has an Avian Protection Program, and so the natural standard that was adopted by the director of the service, I guess -- is Steve Williams still the -- okay. The former director of the service, so Steve and APLIC which is the industry side, Avian Power Line Interaction Committee is the acronym. That's the Audubon Society, the Nature Conservancy and then all of the major utilities nationwide have for the last ten years been working on this issue of both Avian

electrocutions and collisions, both with the transmission lines and with wind turbines.

Cooperatively with the Fish and Wildlife Service we developed a plan on how to mitigate those interactions, how to track them, how to sort of work towards minimizing those where we can.

Georgia Power has an Avian Protection Program in place. And so when new transmission lines are developed or sighted/routed statewide, that program is integrated and considered into those.

So, if that means spacing out the conductors so there is no wing tip to wing tip. If it means the floater balls, if it means vibration dampers on the lines, there are a number of tools that we use to do that.

I can't sit here today any more than anybody else and say there will never be another transmission line across Morgan Falls. I do know that in addition to the reservoir itself it's very difficult to get a transmission line through that part of Fulton County. There are so many homes, residences, businesses, transportation corridors, it would seem to me to be unlikely.

But, you know, I can't promise that. If it did go across the reservoir it would probably be

adjacent to an existing transmission line because it would likely tie into the substation. And it would be considered under that program. But...

ALICE LAWRENCE: Could you tell me the name of the program again?

BRET ESTEP: Avian Protection Program. Her name just jumped out of my head, who is your migratory bird program?

ALICE LAWRENCE: Head person? It's a whole different department than -- someone out of the Atlanta probably.

BRET ESTEP: Yes, she is in the regional office, so we work with her. Steve, do you remember? Tom, do you remember? Anyway, we have that and we have it in place and something we work actively towards.

But those types of migration measures are more of an issue for the larger birds. So whooping cranes issues out on the coast and then in Florida with wood storks, great blue herons, those type things. But there are a number of sort of mitigating things we can do particularly for collisions.

It's the vibration, when they vibrate in the wind it almost hides them and so we put vibration dampers to hold them still. We can put the floater

balls. Anything we can do to put on there to help the birds be able to visualize those, those would absolutely be considered.

ALICE LAWRENCE: Because even though you know if what, two or three birds that came by one time, the likelihood is high that in the next license term that this could be a stopover.

BRET ESTEP: Absolutely. See, it's in our best interests not to have the article in the paper, not to show whooping cranes that have collided with the transmission lines, so we are very interested in making sure those are minimized and eliminated.

BRET ESTEP: E.J. Williams.

TOM SULLIVAN: In addition to Georgia Power's program if there are any new power lines built, they go through their own regulatory proceedings.

BRET ESTEP: Oh, absolutely. Yeah, our process for routing new transmission lines goes through the State Title 22 process which is review of environmental conditions, review of community impact, public meetings, all these types of things. We have a team that environmental is a piece of. I sit on those committees.

In fact, I'll be in Augusta tomorrow for

transmission line routing meetings. But it's done in a committee format with environmental, economic, engineering, all these factors involved and just knowing what I know from getting transmission lines through, I personally would avoid north Fulton County like the plague. It just would be very difficult to sight a transmission line through there.

And our grid through there is probably in pretty good shape. Because you have a generator right there, you know, you have the generation. We have a lot of bulk power that's moving across the north part of the state right now, new transmission lines that are much above Fulton so --

TOM SULLIVAN: Other questions for Bret? All right. We are zooming ahead of schedule on the agenda. What I'm going to suggest at this point is that we take a break. There is coffee over here. George, bathrooms are right out this way; is that right?

GEORGE MARTIN: Right out here, just down the hall to the left.

TOM SULLIVAN: Why don't we take 15 minutes and we'll reconvene at 10:15. Now, before you go when we come back we'll want to wrap up these three reports for today. And it kind of goes back to

the purposes of the meetings relative to the study plan, relative to new studies to the extent that you know them today. And we'll wrap that up.

And, George, a question for the Georgia Power folks, are we prepared to move on to fisheries now?

GEORGE MARTIN: That's something we can talk about as a group. I don't know that anybody else is coming this afternoon that's not here this morning. And perhaps with some nods around the table if you-all want to go head and plow on into fisheries, we can do that. And then stop at some point when our lunch comes, and conclude after lunch. But that's up to the group.

TOM SULLIVAN: Why don't you think about that and what we'll do is when we come back we'll deal with that question as well. 10, 15, please.

(Recess at 10:00 a.m. until 10:15 a.m.)

TOM SULLIVAN: There was a question on the floor about whether or not the Shoal bass material was actually in the RTE report, and I have to confess listening to it I was a little confused as to whether it was or it wasn't. But, Steve, I think you had some insights on that, right?

STEVE LAYMAN: Yes. The Shoal bass is

discussed on, beginning on page 12 and summarized in table 1. The RTE report does not have a State status but it has the global and State ranking and it's discussed where it's found in the project.

TOM SULLIVAN: All right. The three reports that we have gone over, the RTE report, the wetlands, riparian and littoral habitat report, and the wildlife and botanical report. Are there any additional questions about those or comments about those reports?

PAT STEVENS: Not really a comment on your report. Pat Stevens with the Atlanta Regional Commission. I would like to say something about the Metropolitan River Protection Act because you keep bringing it up and I found it very interesting, some of your comments, about what you think the benefits of that Act have been, and maybe sometime in the future I'd like to follow up on that.

As we come up to the 35th anniversary of the Metropolitan River Protection Act I think it would be helpful to try to illustrate to folks what the benefits of that Act are. And what that Act did was require the Atlanta Regional Commission to prepare a protection plan for the river.

The primary driving force behind it was

water supply. And that was the legal basis for being able to even do it, really. And what it says is in the 50 feet on either side of the river it's a vegetative river buffer, 150-foot building setback and the remainder of the 2000 feet, there is limits on the amount of clearing and impervious surface you can put in that corridor. That was passed in 1973.

And Jim Santo has spent most of his career answering the phone explaining to people why they can't clear their lot, why they can't have that big pool and driveway on their property and why they can't cut all the trees down to the river for a view of the river, because everybody wants to do that. Everybody wants a view of the river.

And we have taken it to the Georgia Supreme Court twice to defend it and, you know, it's -- I'm -- as somebody who really fought hard to keep that intact for the last 20 years and it's been a struggle because people don't like being told what to do on their property, I'm really glad to hear that you think it's made a difference.

BRET ESTEP: Sure. Well, actually not just as a Georgia Power ecologist but just as an ecologist in general, a suburban environment that has those type of restrictions provides a nice -- again,

keep beating a dead horse -- but that sort of matrix between where the big blocks of habitat are and relatively speaking for Fulton County, but take those units of the national recreation area and then if you can have some limits on impervious surfaces and amount of tree clearing, then you can still provide -- there may be homes there. There may be development. There is certainly a lot of development that predated '73.

PAT STEVENS: You can see it in the aerials.

BRET ESTEP: Sure. But you still have that ability for wildlife and vegetation, and then just the overall more or less natural community to exist on that spacial scale. I think it's effective and there certainly are challenges.

PAT STEVENS: And it took a lot to have this corridor and have the Park Service unit being the pearls in the necklace contributed by this partarian corridor and so it's really good to hear that you think it's made a difference in the number of species --

BRET ESTEP: Sure.

PAT STEVENS: -- and just the habitat protection there. Because there wouldn't be many

trees left if it hadn't been for that. People want that view.

BRET ESTEP: Yeah. I think particularly here, you know, you got the park, you got MRPA and then you also have the reservoir itself. So the reservoir provides some of that habitat, the park provides the habitat and then MRPA sort of comes in and allows that to be tied together; so it's great.

TOM SULLIVAN: Any other questions or comments on these three studies? Any questions or comments in these three study areas regarding additional or new studies? Hearing none, what we'll do is we'll move on to the fisheries report and go through that. Steve, are you going to take us through that?

STEVE LAYMAN: Yeah.

GEORGE MARTIN: Tom, if we could, I want to make sure that everybody is okay with moving ahead because we are breaking from the agenda a little bit and we'll probably get out a little bit early. We can't go to Tuesday because I have other people who RSVP'd that they will be participating in tomorrow's meeting.

So, everybody is in agreement to move ahead to fisheries as a group?

TOM SULLIVAN: And does anyone know of anybody missing that wanted to be here for the fisheries discussion?

GEORGE MARTIN: Everybody that RSVP'd is here.

TOM SULLIVAN: All right. Why don't we move ahead to that then.

GEORGE MARTIN: That's okay with FERC, too, right?

JANET HUTZEL: Yes. Sorry.

ELIZABETH MOLLOY: One thing I just wanted to make sure. On these three studies this was -- these are the final reports so there is not another update on these?

GEORGE MARTIN: That's correct.

ELIZABETH MOLLOY: So everyone understands that? Good. I just like to close up. All right. Now I'm fine with fisheries.

STEVE LAYMAN: Okay. This is the fish and aquatic resources study that was conducted by Georgia Power's Environmental Lab and GeoSyntec Consultants. We provide you an overview of the report. There is a lot of information in it so don't rely on this as your only source of information in the report.

The study objectives were to characterize

the existing fish and aquatic resources in the Morgan Falls impoundment and the Chattahoochee River. To develop information for evaluating the effects of continued project operations on the trout fishery downstream of the project. Warm water fish populations and native mussels in the downstream river. Also to characterize the potential for fish entrainment and turbine induced mortality at the Morgan Falls power house.

This is the study area which included the Morgan Falls impoundment and the downstream river to Peachtree Creek, a segment of about 12 miles. Note upstream is Lake Lanier, much larger water body, about 32,500 acres or so and the source of cold water for this reach of river through Atlanta which creates conditions suitable for the stock trout fishery.

Georgia Power's fishery's biologist Michael Abney led the fish surveys in the study area. Fish were sampled in representative habitats in two seasons, spring and fall 2005. Boat electrofishing was used as the primary technique, 30 minutes of sampling at each survey location supplemented by the use of backpack electrofishing and seining where possible.

The information gathered was used to

characterize species composition, relative abundance, distribution, biomass and overall health of the fish populations. And population data were developed for several key species including length-frequency information, catch per unit efforts and relative condition.

These species were sport fish species. There was a list of about nine we had interest in including two trout species, three black bass species, two sunfish, yellow perch and chain pickerel.

These are the fisheries survey locations. They were selected to sample representative habitats. There were six in the Morgan Falls impoundment. The impoundment itself was delineated into six different reaches down through the whole length of the impoundment, and then sampling was conducted a minimum of 30 minutes electrofishing time in each segment.

You'll notice that the upstream area is more Riverine like in its channel length and depth, and as you go downstream you pick up tributaries. This Big Creek which was included in section two. By the time you get to section four you start to pick up adjacent shallow flats next to the main channel. And

as we talk today and tomorrow about water resources we are going to get more into talking about these shallow flats features. They occur mainly in the lower half of the impoundment.

Section five included shallow flats and other tributaries. I think that's Willeo Creek somewhere around in there. And No. 6 included the Sullivan Creek embayment as well as the main channel downstream to the dam.

The downstream river included three sampling reaches including the tailrace area. You'll see that this reservoir area translates onto this map right here in the gray area. So we are looking downstream in relationship to these Chattahoochee River National Recreation Area units. Sampling station 7 was in the tailrace.

Station 8 was in the Cochran Shoals area from Soap Creek down through Cochran Shoals. And station 9 was in the Paces Mill down to West Paces Ferry Road area. These latter two stations were selected in consultation with resource agency biologists.

As in the other studies we have used existing information to the maximum extent practical. We have looked at numerous fishery investigations

conducted by the Georgia Department of Natural Resources in its Wildlife Resources Division from the 1970s up to the present. We considered a comprehensive instream flow study conducted by the Corps and published in 1986 for this reach of the river.

Baseline aquatic resource studies have been and are being conducted by the National Park Service including a recent mussel survey, an ongoing fish inventory, monitoring of an exotic Asian rice eel, a species that's in the Chattahoochee nature center pond. And analysis of benthic macroinvertebrate data that have been collected in the river by the Chattahoochee Cold Water Fishery Foundation. Other sources included literature, texts, technical reports.

Our methods for the fish entrainment evaluation were based on a desktop Lyncher based study. We applied trends and data from numerous other studied sites in the eastern U.S. Over the past decade or so there have been numerous studies of entrainment at hydroelectric projects. So we applied those data from about 46 sites for entrainment.

Those 46 sites are summarized by the Electric Power Research Institute or EPRI, as well as

FERC has a database that includes some of this information. We also looked at turbine passage survival studies for 12 sites that have Francis turbines, the same type of turbine in use at Morgan Falls.

With this information then we characterized potential entrainment at Morgan Falls based on its site specific characteristics. And we looked at the potential size distribution of entrained fish. The species composition and the relative abundance. Their seasonal distribution or the expected seasonal peaks of entrainment. Then we looked at the potential mortality rates of entrained fish that actually passed through the turbines into the downstream reach.

Study results. I want to start out by saying that the Chattahoochee River in this project vicinity was historically a warm water river and it was turned into an artificially cool water stream with the construction and completion of Buford Dam in the late 1950s. The tributaries to this system remain as warm water streams.

The Wildlife Resources Division of the Georgia DNR manages the Chattahoochee River trout fishery in two segments; an upstream Buford Dam

tailwater segment about 30 miles long and the downstream Morgan Falls tailwater segment below our project about 12 miles long.

This is just a snapshot summary of recent stocking of trout upstream and downstream. Trout stocked upstream are catchable size trout. It is a put and take trout fishery. Trout stocked downstream of Morgan Falls include fingerling trout and catchable size fish for a put, grow and take fishery. WRD has found that brown trout reproduce now in the Buford Dam tailwater, the upstream section. They are very interested in that, the wild naturally spawned fish. And the Morgan Falls tailwater which is a little warmer, a little wider is managed as a transition zone between cold and warm water fisheries.

And evidence of this further is a stocking program that's underway for Shoal bass, a native warm water species in this basin endemic to the Appalachicola-Chattahoochee-Flint basin. And they are in the midst of a five-year stocking program to restore the species and offer a more diverse fishing opportunity in the section downstream of Morgan Falls.

Our literature review and studies to date

summarized that about 55 species of mostly warm water fishes have been collected in the project vicinity, the reach of the Chattahoochee River from Buford Dam downstream to Peachtree Creek. Most of these are warm water fishes. The most abundant families or species groups are the minnows, sunfishes and bass, suckers and catfish is generally the most diverse native family of fishes in this area.

Upstream of the project about 37 species have been documented since 1970. You pick up an additional five or so downstream in the two tributaries to the project impoundment, Willeo Creek and Big Creek together have about 26 warm water species. And in the project area about 55 species total.

The most important game species in the project vicinity both upstream and downstream have been trout over the last couple of decades. Warm water fisheries predominant, though in the project impoundment you can find trout; in the upper reaches trout were collected during the study. But warm water fish are diverse and widespread in the impoundment.

Georgia Power collected 34 fish species in the Morgan Falls study area in 2005. This again is a

summary of the number of species collected by family at each station. So you can see that for the six stations here in the Morgan Falls impoundment how the species were distributed, and here are the downstream river station 7, 8 and 9. There was a longitudinal gradient in habitat in the Morgan Falls impoundment, the upstream end is narrow channel more Riverine like.

The only area that has rocky substrates Island Ford area, the very upstream portion of Big Creek in the impoundment area. So there were more species at this site included some things that you typically find in Riverine habitats. Alabama hog suckers, brown trout, sculpins, that sort of thing.

There were fewer species collected in the main body of the impoundment, a more typical of a lake like or Lacustrine habitat of sunfish and bass and various species. Total of 26 species were collected in the impoundment. 31 species downstream which had 24 species collected at each of the three stations included a larger number of Riverine specialist species.

Warm water fishes dominated the catch in the Morgan Falls impoundment. The top four species were Bluegill, Blueback herring, yellow perch and

Redbreast sunfish. And what this table shows is the number of fish collected in spring, in fall, their percent contribution to the weight. And this is the total number. And this is just the top most numerically abundant species.

So you see the top numerically abundant species, the warm water species Bluegill, Blueback herring, yellow perch and redbreast sunfish, they dominated by number. The fish that dominated by weight, however, were Gizzard shad, largemouth bass, white sucker and common carp.

I did want to mention earlier that there were no rare threatened endangered species that is state or federally listed collected during the survey. Although Shoal bass, which we have talked about, it has been collected in the downstream reach.

The numerical distribution among the dominant species was relatively even in the downstream river. Here the top six or seven species comprised about 65 percent of all the fish collected. Good mix of suckers, shads, Shoal bass, Bluegill, rainbow trout, quite a variety of fishes in the downstream reach including warm water and cold water fishes.

Trout comprised about 9.6 percent of the

catch between rainbow trout and brown trout. Shoal bass about similar level, 9.3 percent. Interestingly, striped bass were also collected in the tailwater, about 3 percent of the catch. Again, the usual cast of characters on biomass, Gizzard shad, white sucker, common carp, large mouth bass.

The study report presents population data for a number of the key sport fishes. And we did that for the ones where the sample sizes were large enough to be meaningful to present length-frequency distributions. In the Morgan Falls impoundment it was these four warm water species and in downstream river included a mix of warm water and cool water species, Shoal bass, rainbow trout, large mouth bass, yellow perch.

I'm not going to go into all these plots, I mean they are in the report and they document characteristics of these key sport fish population. But just an example. This is a length-frequency distribution of Bluegill represented by 438 individuals, the number of each in size classes of 2-centimeter size groups.

This line here represents the relative condition factor of the population by size group. This was the average condition. And that is an index

that expresses the relative fatness or well-being of a fish compared to a reference population.

So, if you are in Georgia and you are a Bluegill and you are above one, the reference of one, that means you are above average. This line is the one, the average condition for the reference population. If you fall below that line you are below average, your robustness is below average.

Next I want to just give you a brief overview of the Riverine and aquatic habitat and flow analysis. The Corps project upstream Lake Lanier drives the flow through the project study area. Buford releases comprise about 76 percent of the project inflow. Normal minimum flows coming out of Buford during off-peak generation are about 600 cfs and peaking releases vary up to 10,000 cfs.

So quite a bit of fluctuation comes out of Lake Lanier or Buford Dam. And Morgan Falls re-regulates that flow and produces a smoother distribution of flow downstream of the project.

There is quite a bit of information on project operation that's been presented to date in the operations primer and there is a lot more of it in water resources and you'll find a lot of it in the temperature plots that are provided in there in the

back. Appendixes A, B and C shows flow and temperature and you can really get a good feel for how this project Morgan Falls attenuates the peak flows from upstream Buford Dam.

The minimum flow releases from Morgan Falls vary from about 850 to 1165 cfs as requested by the Atlanta Regional Commission as part of the water management system for the Chattahoochee River. Which I'm -- which is described in a water resources.

The Chattahoochee River contains three major habitat types based on channel morphology and substrate in the downstream area including shoal, run and pool habitat. The Corps conducted an IFIM, or instream flow incremental methodology, type study and published it in the 1980s that identified trends in habitat and flow characteristics below Morgan Falls.

They found that the best trout habitat was concentrated in shoals. That the bedrock shoals comprise about 40 percent of the habitat downstream of Morgan Falls. That a change in flow between 1,000 and 7,000 cfs results in a small change in wetted width. Typically less than 10 percent.

And a change in stage with a change in flow decreases downstream as the river widens and the gradient increases. And what that means is that the

fluctuations downstream are not nearly as pronounced below Morgan Falls as they are upstream in the Buford tailwater fishery.

This is one of the summary plots of habitat versus discharge that was presented in the end stream flow study for trout including brown trout, rainbow trout, brook trout. We are going to ignore brook trout, they are no longer stocked in the Chattahoochee River, but both brown trout and rainbow trout juveniles and adults are stocked.

What the study shows is that the approximate Morgan Falls minimum flow, and I put it around a thousand cfs optimizes habitat between trout species in life stages. What does that mean? Well, this flow aligns with the peak habitat suitability for brown trout adults. And it balances habitat area between rainbow trout adults and brown trout juveniles that were part of the study. And you can see here one of them is decreasing as the other is increasing. And all I mean by optimizing it's that balance, the striking a balance optimizing it or maximizing it for both of them while neither one is maximized at a given time.

The minimum flow from Morgan Falls also nearly optimizes wade and tube fishing in shoal

areas. Here we see the thousand cfs where it crosses the wade fishing, pretty high up in its suitability, and it's approximately the peak for -- that symbol got changed. That should be the tube fishing here, I believe. It doesn't like the font.

An instream flow study, flow preference study was done by the Park Service in 2000 which more or less verified these flow ranges and their suitability based on user group interviews for recreational purposes.

Shoal bass is also a species of interest in the downstream reach. WRD is in the midst of a five-year stocking program, as I mentioned. The study report summarizes what's known about the life history and habitat requirements of Shoal bass. I'm going to focus here a little bit on a slide of habitat use measurements that was developed by Georgia Power through an instream flow study in the Ocmulgee River.

And this was conducted by EA Engineering and Science, and it looked at the habitat use of various life stages of Shoal bass and basically found that they also have a strong affinity for bedrock, boulder, cobble, gravel substrates generally found in slow to moderate current and also would be likely to

associate very strongly with the bedrock shoals downstream of Morgan Falls Dam.

Mussel survey was conducted in 2003 for the National Park Service. It indicated an absence of native mussel fauna in the upper Chattahoochee River. The study researched 18 sites in the project vicinity including the Chattahoochee River at Island Ford. That's at the very upstream end of the project where it comes into the impoundment. Big Creek at the upstream of the project boundary. The Morgan Falls impoundment at Gold Branch and four sites on the river downstream of Morgan Falls Dam. They didn't find any live native mussels. They did find the exotic Asian clam at Island Ford, Big Creek and the four main stem sites downstream of Morgan Falls.

Relative to invertebrates the Park Service also examined macroinvertebrate data collected by Chattahoochee River Cold Water Fishery Foundation. It looked at the biotic index that characterized the general health of the macroinvertebrate community at six sites on the river including four upstream of the project and two downstream of Morgan Falls. And they found that the highest quality indices were for Morgan Falls, below Morgan Falls and in the Cochran shoals area probably in relation in part to the rocky

substrates downstream of the project.

Now I'll just provide you an overview of the fish entrainment evaluation. The report gives you a bit of background on factors that affect fish entrainment mortality, what kind of studies are done to quantify entrainment and survival studies. It also describes some of the mechanisms of injury of fish that pass through turbines.

And generally speaking, the slower the speed of the turbine the fewer the number of blades and moving parts, the larger the gaps, the higher the survival of fish. Makes sense. Small fish tend to survive better than large fish moving through turbines.

The report summarizes some of the turbine characteristics for Morgan Falls. There is seven turbines, Francis turbines, rated head of 48 feet. They each have about 12 to 14 runner blades or buckets. And this indicates the speeds that they rotate at, the hydraulic capacity which is general indication of the gap sizes and passageways. Peripheral runner velocity. This trash rack spacing is out at the front of the intake. They are designed to do just that, stop trash. They have a spacing of about 2.5 inches in front of them.

So what does entrainment look like at Morgan Falls? Small and/or younger year fish likely comprise the majority of entrainment. We looked at 42 sites in the EPRI database, and of those the vast majority of entrained fish were less than 4 inches and most also were less than 6 inches long. They are much smaller than the length of fish to be physically excluded by trash racks. There is a table in the report showing the size of fish that would be excluded by 2-1/2 inch trash rack and it's 17 to 21 inches depending on what species was examined and how wide that species typically is.

But, nevertheless, entrainment almost always consists of a majority of small fish even if the trash rack spacing gets up to 10-inches, it can pass almost anything. But small fish dominate entrainment typically because of their relative abundance. They start moving around after spawning and rearing in the impoundment and are more easily transported downstream.

Herrings, sunfishes and/or catfishes likely numerically dominate the entrainment. This is the relative abundance of the top five entrained species at nine Southeastern projects. And it puts the species in their family. You can see that

sunfishes and bass were among the top five species entrained in all of the projects. Herrings and shad like gizzard shads or Blueback herring were also prevalent, as well as catfishes, perches, and then you get a little less common but minnows, suckers and other families.

At Morgan Falls it's likely to be these top three families that are -- that represent most of the entrainment. Time of year that you expect most of the entrainment, it's typically between the spring and fall after the reproductive seasons of sunfish, shad, catfishes. When you have got a lot of small fish around, they move from the spawning/rearing areas into their habitats as they age.

Here this shows the monthly entrainment rate of sunfishes, and I think there are eight Southeastern projects. And you can see these peaks really starting in the March, April time frame and continued toward the fall depending on in some instances probably some of these are multiple spawning species.

At Morgan Falls it's a much colder water body for a Southeastern reservoir, so it might be delayed somewhat relative to what this plot shows. Herrings and shads when they are present in large

numbers can dominate entrainment.

This is the Buzzard's Roost project in South Carolina which shows a huge peak of threadfin shad entrainment in the winter. That was due to a thermal shock, a cold water event where they become comatose and moribund and move downstream and drift through the power house. That's common on lakes that have large populations of shad that are subject to cold stress. We don't believe that it's quite as susceptible at Morgan Falls at this magnitude. This was probably more of an unusually large event.

The vast majority of entrained fish likely survive turbine passage. Of the 12 studies that we looked at in detail of turbine passage survival studies average survival of small fish less than 6 inches was about 91 percent through Francis turbines. And for moderate sized and large fish from 6 to over 10-inches, it was 83 to 85 percent.

This was immediate survival. If you look at latent survival, that is over a period of 48 hours or so, some studies indicate that the survival may be 3 to 4 percent lower than these numbers.

And then there also can be indirect mortality occurring as fish become disoriented passing through the turbines. If there is striped

bass waiting in the tailrace area or shoal bass or predation and that sort of thing, is typically one means of indirect mortality.

In summary, the Morgan Falls impoundment supports a healthy fish community of about 26 species. Common sport fishes were Bluegill, yellow perch, Redbreast, sunfish, large mouth bass. Warm water community. Trout comprised less than one percent of the catch and they were found mainly in the upstream end of the impoundment. Certainly brown trouts were found only up there. There was a rainbow trout found in the middle area somewhere.

The downstream river supports a generally healthy fish community of at least 31 species. It's transitional between cold and warm water fisheries. So, in some ways it's not perfect for warm water species and it's not perfect for cold water either because of some of the summer thermal increases seen in recent years.

But we have got a good mix of trout, Shoal bass and a variety of other sport fishes including large mouth, striped bass and sunfishes.

Current Morgan Falls minimum flow releases support generally favorable habitat conditions for trout and Riverine species downstream of the project.

The peak stream flows really are what drives the habitat. And as the flows go way up, the habitat suitability starts to decline rapidly. Those are driven primarily by Buford Dam.

The native fresh water mussel fauna appears to be extirpated from the upper Chattahoochee River. And the majority of entrained fish because of their small size likely survive turbine passage into the downstream river. The adverse effects of entrainment are likely to be minor at this project.

I will say there is one distinguishing feature of this project compared to some of the other Southeastern ones relative to entrainment. The others don't have trout present in the river, we are a little unusual here. The EPRI database contains 32 sites entrained trout and that included sites in the Northeast, in the upper Midwest, and trout comprised less than 1 percent of entrainment on average at those projects.

So, we don't believe that they are especially susceptible to entrainment at Morgan Falls. And also combined with the fact that their best habitat is toward the upstream end of the impoundment. And that's it.

TOM SULLIVAN: All right. Steve. Thank

you. Questions for Steve? Jim.

JIM LONG: Wondering about the Blueback herrings, are they going to -- because that's a new critter for that area, right?

STEVE LAYMAN: We got Blueback herring just in one of the seasons interestingly. I believe it's probably coming out of Lake Lanier.

JIM LONG: Yeah.

STEVE LAYMAN: It's not a diadromous type of population and there have been stocks, so --

JIM LONG: I wonder if it's going to persist. That was my impression, that they came through in some cold snap event. I don't remember what Chris Martin called it, he called it some kind of bubble because they got caught in some bubble, came through, went downstream.

STEVE LAYMAN: I mean that's possible. Michael, what are your observations on their condition or anything like that?

MICHAEL ABNEY: I mean, when we caught them of course there was lots of them, even though it was only that one season they were in great condition, they looked good. But we have not been back shocking since then so maybe it was just that one-time event, just as Chris has described that

bubble going by.

JIM LONG: Are they likely to stay, or do you know?

MICHAEL ABNEY: I mean my personal feeling is that they are not going to be able to find the range, that kind of ecological range that they prefer. But they can be pretty hardy species, they might be able to find little pockets where they persist. DNR will be going out there quite a bit in spring, so I'll be curious to see if they shock any up.

STEVE LAYMAN: I mean Gizzard shad are the more persistent species in there. I mean they were collected in both species. But Blueback herring, yeah, they just showed up in, I think it was the fall.

JIM LONG: I know Bluebacks in a lot of parts of the Southeast are considered invasive because they get stocked in reservoirs and they take over. There is no more of the gizzard shad. And so, you know. So, that was my wondering is that if this Blueback is a sporadic event that happens every once in a blue moon, they come downstream and then don't persist? Would be interesting to know.

STEVE LAYMAN: Yeah, it would. And it may

be that the cold releases from Buford clip them off, you know, periodically, too, if they are --

JIM LONG: Right. Because you got them in the impoundment, right?

STEVE LAYMAN: Right.

JIM LONG: Were they below the impoundment in the tailrace?

MICHAEL ABNEY: Yeah, we got some of them --

STEVE LAYMAN: I think so.

JIM LONG: So they pass through there, too, right?

MICHAEL ABNEY: Yeah, they'll pass through the turbines just fine. Being such a productive impoundment and tailrace, I don't know if you are going to see the effect that the Bluebacks have had like on, you know, less productive reservoirs like up in northeast Georgia. But it will be something to watch just to see what happens.

STEVE LAYMAN: Table 6 and 7 in the report lists the species that were found in the impoundment and downstream, they were much more prevalent in the impoundment. It showed 139 in the impoundment, 8 downstream.

JIM LONG: That was what, at the fall, you

said?

STEVE LAYMAN: Yes, fall.

TOM SULLIVAN: Any other questions?

ALICE LAWRENCE: Usually for these desktop analyses type reports I have seen it where it has your estimates of survival for immediate survival and then also latent survival. And I saw, you know, in your report you have the immediate but I didn't see any information on latent as I know you talked about it in here, 3 to 4 percent on different -- is that something that can be included in the report?

STEVE LAYMAN: There is a section on latent survival, I'll try to point you to it. Late mortality. Yeah, section 4.4.2.

ALICE LAWRENCE: Do you have a page number?

STEVE LAYMAN: 46. And some of the problems with latent mortality studies are their survival of control fish.

ALICE LAWRENCE: Right, I saw that. Talked about --

STEVE LAYMAN: So, when the control fish survival isn't very high, then it's not a very good read on what mortality is occurring due to passage. And we summarized in there a review that was done by

Winchall et al. looking at latent survival in the EPRI database, and they concluded it was about a 3 to 4 percent additional mortality over maybe a 48-hour period.

ALICE LAWRENCE: Yeah. I missed that in there. So thanks. And then you also mentioned about some lesions on 18 suckers, white suckers. Were those like open sores? That's kind of what I'm picturing in my head, what it looked like.

STEVE LAYMAN: Yes. They were open sores. They were on white suckers in Big Creek in the spring season and it was mostly larger fish, and they probably had just been through spawning and reproducing up Big Creek.

ALICE LAWRENCE: And that was some other species, too --

STEVE LAYMAN: They were pretty banged up.

ALICE LAWRENCE: -- but mainly the white suckers?

STEVE LAYMAN: It was mainly the white suckers. The incident overall when you look at the whole fishery was pretty low but --

ALICE LAWRENCE: Right. And then my last question is, do you-all send these reports to Georgia DNR Heritage for information for their occurrence

records? Is that something that you-all will do?

MICHAEL ABNEY: Yes.

STEVE LAYMAN: Yes. Yes. They -- well, Georgia DNR definitely gets the reports. And the connection made with Heritage, Bret or Michael, you have to comment on that.

ALICE LAWRENCE: I know some other reports for FERC relicensing they haven't gotten, so if they don't have some occurrence records that they probably should have, I passed it on but --

MICHAEL ABNEY: We provide kind of the master copy to John Biagi and Chris Martin and -- but we have already assured Brett Albinese that they'll be sharing that with his group.

ALICE LAWRENCE: Okay. Sounds good.

MICHAEL ABNEY: With regards to the white sucker, that's actually an exotic species in that area.

ALICE LAWRENCE: Yeah. Right.

JIM LONG: How far up Big Creek did you go?

STEVE LAYMAN: To the upstream end of the impounded area as it started to get into the rocky portion.

JIM LONG: Oh, okay. Okay. And you

didn't pick up any shell bines in there?

STEVE LAYMAN: No shell bines.

MICHAEL ABNEY: We got a little beyond the old mill that's there.

JIM LONG: The one that's -- that dam that's been breached?

MICHAEL ABNEY: And we got right up to where the --

JIM LONG: Right where the shoals begin?

MICHAEL ABNEY: Shoals begin but no Shoal bass.

JIM LONG: I have one more and that I'm wondering like downstream of the tailrace when you are picking up black basses, are you seeing anything that might be two kinds in one? Are you seeing anything that might be hybrids?

MICHAEL ABNEY: There was -- not in the tailrace, I don't recall seeing it. I recall though at Soap Creek where we were collecting we got -- that's just a hot bed for black basses. I do recall getting one where we looked at it for awhile thinking it was a cross between a spotted and a large mouth. But I didn't -- there weren't any that we saw that looked like a cross between a Shoal bass and anything.

JIM LONG: Because I have been out with Chris Martin with DNR and we have been wondering about that because we get these fish, like, what is it?

STEVE LAYMAN: You know, in the table A-4 in the appendix, there is a hybridized bass listed for site 7 and that would be the tailrace area. So that may be one of the --

JIM LONG: I didn't know if it jumped out at you or not.

BETSY NICHOLAS: Betsy Nicholas, Upper Chattahoochee Riverkeeper. This may be a three part or may be the same answer for all three, but I note a lot of the data, the existing information reviewed, like the Nessler, is pretty old, from the early '80s, and you used information from the Ocmulgee River and the national database. Can you explain a little bit what you did to make sure that was applicable to current data and also to the Morgan Falls area?

STEVE LAYMAN: In terms of the instream flow study, we examined that quite a bit during study plan development and looked at the distribution of habitat types or at least the types of habitat found downstream in consideration of the protection provided by MRPA. The fact that a lot of the bedrock

substrates are fairly permanent and have been in place over time, we didn't have any indication that there was a substantial change in the reach where these general trends wouldn't apply to the downstream fishery.

In terms of the EPRI database, time is not really a factor in the applicability of those for the entrainment study. It's whether they were collected at a similar site that had similar fisheries characteristics or if the turbine passage study, it's whether the turbines have similar characteristic, speed, blades, rated head and that sort of thing.

So, yes, we considered those aspects in applying the data. As far as the Ocmulgee River data, Georgia Power's, again it was a pretty decent study of looking at the habitat use of Shoal bass, and it's well documented by the numbers of observations they made and such, and believe it was pretty representative of their use in that system.

We also looked at a Shoal bass study in the Chipola River in the panhandle of Florida and habitat use of Shoal bass there. That was probably in the late 1990s or something like that. So we looked at a variety of sources. Certainly tried to get as much recent stuff as we could.

TOM SULLIVAN: Other questions on the fisheries study? Yes.

JIM SCARBROUGH: The data -- this is Jim Scarbrough, Gwinnett County. The data on the front end of your presentation looked like the DNR trout stock had been cut in about half. Why are they doing that, do you know? Or does anybody else know?

STEVE LAYMAN: Yeah, they are -- they have decreased the stocking, I believe it was in relation to fishing pressure. There is a publication cited in here by Kline, I think 2003, a WRD biologist, who had maybe some creel data to support lower numbers of stocked fish.

It's also our understanding that starting in 2005 they are doing a little bit of an experiment with brown trout, and they have stopped stocking brown trout to see how well natural reproduction will sustain that population. And at the same time I think they are stocking about a 150,000 rainbows.

So they have decreased the amount of stocking. I believe that's in relation to fishing pressure, and they have presently at least temporarily stopped stocking brown trout to see how native reproduction responds.

JIM SCARBROUGH: Does that mean the

fishing pressure is less or --

STEVE LAYMAN: We haven't provided a detailed analysis of that report in here. I don't recall necessarily if it was because fishing pressure was less. I presume -- I believe that's part of it. But I'm not sure.

JIM LONG: DNR is not here but --

ALICE LAWRENCE: They'll be here tomorrow.

JIM LONG: -- but from what I have talked to them about about the trout stocking is that they basically found they were going over carrying capacity for stocking, so they reduced it way back. And then, yeah, you know, with the brown trout that's a good thing. They think they have got enough, they want to see if there is enough natural reproduction to make a wild brown trout fishery. So, yeah, they have adjusted those numbers left and right, yeah, they have cut it back a lot.

TOM SULLIVAN: Questions for Steve? Any comments on the study relative to the study plan or any requests for additional studies?

JIM LONG: I'll throw one out. You love me, don't you, Steve.

I guess my comment is that I was a little disappointed in the Shoal bass habitat use curves. I

mean from what I recall from the study plan was to apply general trends, and while I think you have done that I expected something different. And I think that's probably the vagueness of the study plan, is that general trends will be applied.

What I expected to see was a graph of area versus discharge, like, the trout with Shoal bass stuck on it. That's what I expected to see; and I didn't see that. I can't necessarily argue that it was not what the study plan said it was going to do but I expected to see it.

STEVE LAYMAN: Well, we did not plan to do a full-blown instream flow study, field-based study.

JIM LONG: I know that.

STEVE LAYMAN: I believe you would need to --

JIM LONG: See but I expected you to take the data from the Crisp County which has all the habitat suitability, and plug it into the old Nester IFIM and there it is. That's what I expected. Like I said, I can't -- I can't argue and say that the study result was not according to study plan because I think it was worded vaguely enough that you could say the objectives were met; but it's less than what I expected.

ALICE LAWRENCE: Actually that's what I was thinking. I wrote that down, I didn't know if that could be workable but --

JIM LONG: I went back and looked at the study plan, I looked at the results and, you know, yeah, I -- you know, I can't argue that you did not do what you said you were going to do. Although I do think it can be said that nobody -- I was not sure what you were going to do. I had an expectation and it just didn't meet it.

STEVE LAYMAN: Well, our goal was to provide a literature review and to bring forward the recent studies and the data from Georgia Power. The projects really can affect changes in downstream flows in a major way. So, was not our intent to do that level of a modeling of the habitat of Shoal bass.

JIM LONG: I understand that, but just understand that my expectation was different than what yours was and that's just where it lays.

TOM SULLIVAN: Jim, just a follow-up question for that. And this is actually kind of a similar question I would have for any of these. If you had that would it -- do you need that to make your regulatory decision or do you need that for the

next phase of this, which is the preliminary license proposal phase? Or is the information you have enough to be able to move into those?

JIM LONG: We have argued prior to this proceeding that it is necessary and we went through a lot of extra proceedings to try to --

TOM SULLIVAN: I saw all the paper on that.

JIM LONG: So I'll have to stick to my original answer in that, yeah, I think it's -- it's worthwhile data.

TOM SULLIVAN: But the stuff that's in the report now, the characterization of the depth preferences and the velocity preferences and the substrate, I mean you can't draw that same conclusion from that data as is presented in the report now?

JIM LONG: The way I interpret the report was that there was a bunch of graphs and some data from somewhere else to support the fact that Shoal bass live in shoals. Which is kind of unnecessary. We kind of know that.

TOM SULLIVAN: Right. Okay.

JIM LONG: So, I was looking for a little more quantification. And, again, I'll reiterate, I mean I just had a different expectation. I expected

to see something different and that wasn't --

TOM SULLIVAN: Fair enough.

JIM LONG: -- and that wasn't delivered. So --

TOM SULLIVAN: Okay. Lee.

LEE EMERY: Lee Emery from FERC. Have you seen, Jim, some of the preliminary work for Lake Blackshear, Flint River, Crisp County on Shoal bass, IFIM.

JIM LONG: I have seen some of that stuff. And I mean it's great data.

LEE EMERY: We just got a preliminary draft on that particular project.

JIM LONG: Yeah, yeah. I mean the thing about Shoal bass is that if you go into a search engine to find out what kind of research has been done, like Cambridge Scientific Abstracts, you get 12 results. And that's the thing about Shoal bass, you do one for large mouth bass, you get 48,000.

LEE EMERY: Well, there has been a lot of work and some pretty good work done there.

JIM LONG: I agree. I would have had like to have some of that good work down here, but we had decided earlier through a lot of proceedings that it wasn't, you know, that it wasn't going to happen.

So, but yeah, I mean I try to keep up with what's going on with the species.

LEE EMERY: I just happen to have both of these projects, this one and that one.

JIM LONG: Oh, do you really?

JANET HUTZEL: Actually, I'm the coordinator for both.

LEE EMERY: Some interesting things I think in the IFIM that were done and the research that's been done by the State there.

JIM LONG: What -- the guy that I deal with mostly is Jim Peterson with the co-op unit at Georgia. Because he's got two or three students that were doing stuff, they were doing some native fish and some other stuff. So, I know I get a smattering, I don't get arrogant.

LEE EMERY: I happen to have both projects. So...

TOM SULLIVAN: Jim, I want to make sure I understand what you have said. You had an expectation it would be in the study, it wasn't in the study. Do you expect that this will come up as an additional information request from your organization?

JIM LONG: No, I don't anticipate that.

TOM SULLIVAN: Okay. Other questions or comments on the report? Okay. We have whizzed through the day's agenda in less than two and a half hours. I know that lunch is here, I know it's also early for lunch. And I do need to spend a little bit of time with Winnie in terms of what exactly to summarize from this morning. I know George wants to give a summary of dates. But I would suggest, if we can, does anybody mind taking an early lunch as long as it's here and then we'll convene after that? Is that all right with everybody? Okay. It's 11:15.

GEORGE MARTIN: Everybody is nodding yes.

TOM SULLIVAN: Yes, I think we have agreement on that. We have become our parents, we are going to eat lunch at 11:15 in the morning. Why don't we break for lunch. 45 minutes fine for lunch? We'll reconvene at noontime. Does that work okay?

(Lunch recess at 11:11 a.m. until 12:00 p.m.)

TOM SULLIVAN: All right, folks. A couple of things left before we break for the day. We have gone over the wildlife and botanical, the wetlands, riparian, littoral habitat, RTE species and fish study reports.

One last call, any additional comments or

questions about those reports at all? Okay. This makes a summary for the morning easy or really manufactured depending on how you say it. Normally at this point in the proceeding, and we probably will tomorrow and the day after we would put up areas of agreement and action items. It really doesn't seem like that's warranted today.

It strikes me that Georgia Power has to put it in a summary and I think the summary will probably say today that there was a presentation on each of the studies, there were technical questions on each of the studies, and at this point during the meeting there were no requests for additional information, further studies. And I think that will be what the summary will say. So, not really much more complicated than that.

One last thing to do for today before we talk about logistics for tomorrow, is that George is going to summarize kind of where the process goes from here for those of you that aren't going to be in attendance the next couple of days just so that you have an understanding of what the dates and the deadlines are. So, George.

GEORGE MARTIN: Greg, if you want to put that one slide up that I gave to you. Yeah, we want

to end each day with next steps because the attendees may change from day to day. So that's what I want to do. Let's go to the next slide. Of course, this week we are going to continue and conclude the study results meetings and that's all, everybody participates in that.

By April the 30th, Georgia Power will file the study results meeting summary with FERC. And by the way, this is all in your process plan and schedule in your PAD other than the one July 24th, 25th, blue line which is just an enhancement to the process.

In response to Georgia Power's April 30th filing of the study results meeting summary, all stakeholders may file any disagreements with the meeting summary or comments otherwise that you may have in regard to the study results. And that would include any recommendations that you might have for further evaluation.

By June the 29th we will respond to the disagreements and comments that may be filed. And then here again, the next scheduled meeting for us today is July 24th, 25th and 26th, if necessary. As we get closer and we get a better handle on what's left to be done with regard to developing a licensing

proposal, we will modify that three-day opportunity accordingly. Like, I don't want us to take up three days of time if we can do it in a day or in a day and a half. But we'll do that together.

July 29th FERC will resolve any study results meeting disagreements or bless the lack thereof.

Then by October the 2nd of this year we will file a preliminary licensing proposal, and that again undergoes a round of comments by December 31st of this year. And then by February the 28th of 2007 we will file our license application. And then the ball is in FERC's court two years out from current license expiration, that being February the 28th of '09.

So, those are the next steps. And like I said, this is in your process plan and schedule in your PAD. I'm sure you-all all kept that and it's on your shelf gathering dust. So, any questions or comments on that, I guess?

TOM SULLIVAN: Anything else anybody wants to discuss today at all? Just logistics for tomorrow, we are going to reconvene at 8:30 in this same room. We have two studies on the agenda for tomorrow, the water resources study in the morning

and the geology and soils study in the afternoon. It will be a very similar format to what today is. Tomorrow remind me we'll go over this. The third day of meetings are actually in a different room than this one but tomorrow we are here again.

With that, thank you all for coming and we'll see you tomorrow morning.

(Meeting concluded at 12:05 p.m.)

C E R T I F I C A T E

STATE OF GEORGIA:

COUNTY OF FULTON:

I hereby certify that the foregoing proceedings were taken down, as stated in the caption, and reduced to typewriting under my direction, and that the foregoing pages 1 through 116 represent a true, complete, and correct transcript of said proceedings.

This, the 21st day of April, 2003.

LINDA E. CHEEK, CCR-A-752